



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 7, 2024 – 09:28 AM EDT

PDB ID : 4V6E
Title : Crystal structure of the E. coli 70S ribosome in an intermediate state of ratcheting
Authors : Zhang, W.; Dunkle, J.A.; Cate, J.H.D.
Deposited on : 2009-06-28
Resolution : 3.71 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.20.1
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.003 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

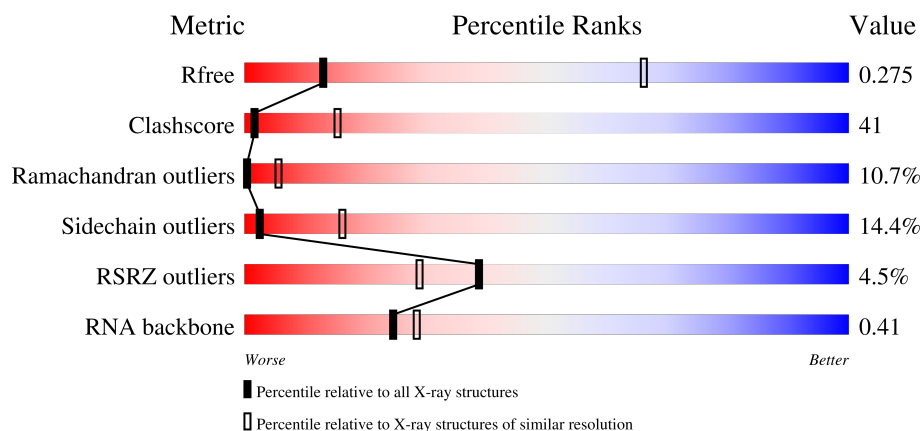
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.71 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	1058 (3.84-3.60)
Clashscore	180529	1114 (3.84-3.60)
Ramachandran outliers	177936	1095 (3.84-3.60)
Sidechain outliers	177891	1091 (3.84-3.60)
RSRZ outliers	164620	1058 (3.84-3.60)
RNA backbone	3690	1122 (4.40-3.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AB	241	
1	CB	241	
2	AC	233	
2	CC	233	

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Mol	Chain	Length	Quality of chain
3	AD	206	
3	CD	206	
4	AE	167	
4	CE	167	
5	AF	135	
5	CF	135	
6	AG	179	
6	CG	179	
7	AH	130	
7	CH	130	
8	AI	130	
8	CI	130	
9	AJ	103	
9	CJ	103	
10	AK	129	
10	CK	129	
11	AL	124	
11	CL	124	
12	AM	118	
12	CM	118	
13	AN	101	
13	CN	101	
14	AO	89	
14	CO	89	
15	AP	82	




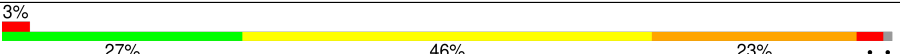
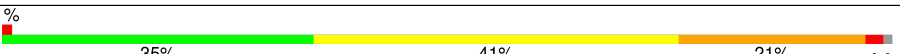
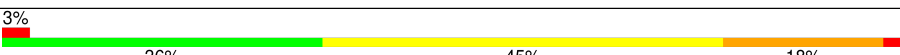
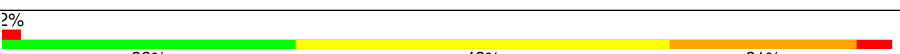
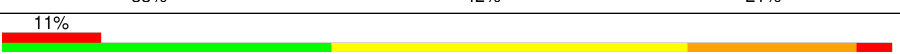
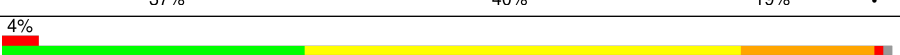
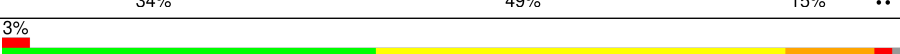
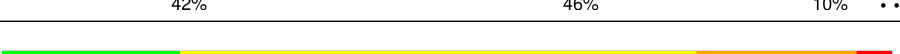
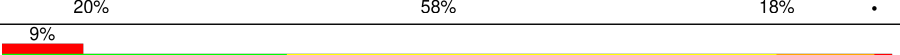
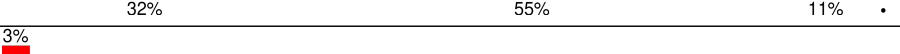
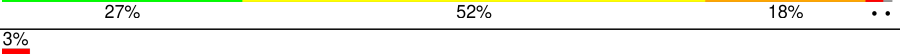
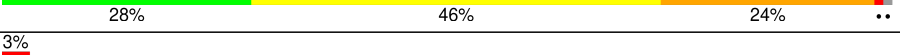
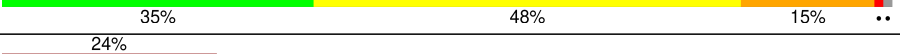
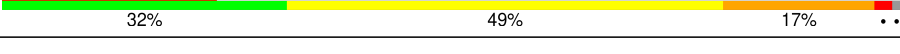
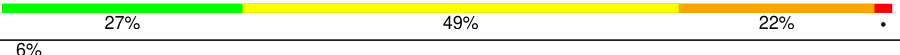
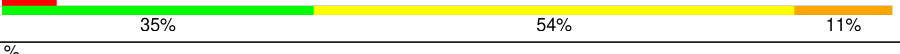
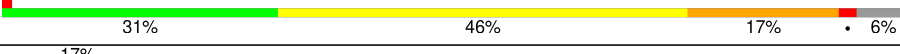
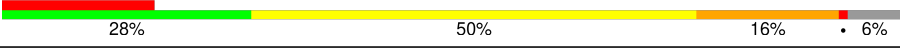
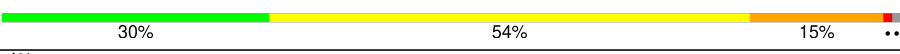

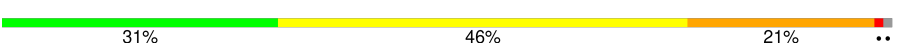

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Mol	Chain	Length	Quality of chain
15	CP	82	
16	AQ	84	
16	CQ	84	
17	AR	75	
17	CR	75	
18	AS	92	
18	CS	92	
19	AT	87	
19	CT	87	
20	AU	71	
20	CU	71	
21	AA	1533	
22	AV	17	
22	AX	17	
22	CV	17	
22	CX	17	
23	AW	6	
23	CW	6	
24	BA	2903	
24	DA	2903	
25	BB	118	
26	BC	273	
26	DC	273	
27	BD	209	
27	DD	209	

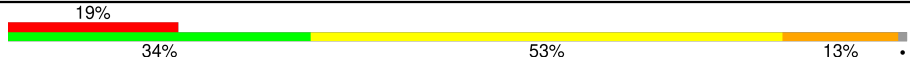

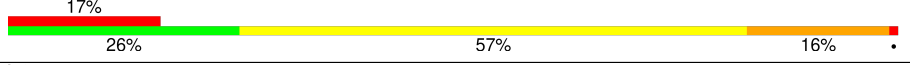
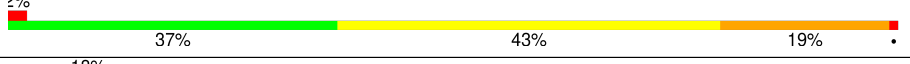
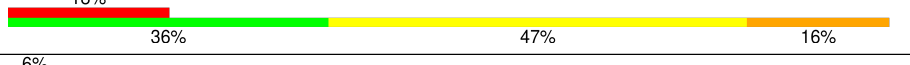
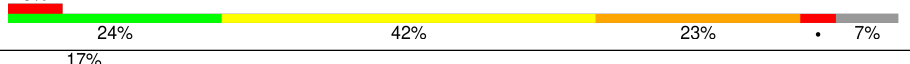
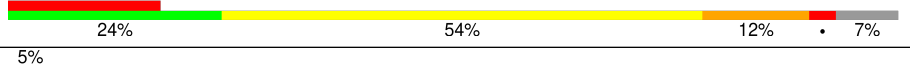
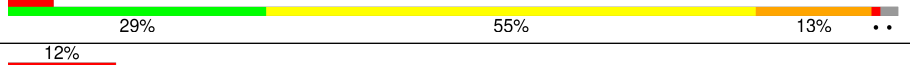
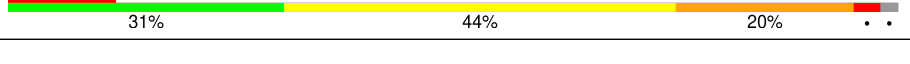


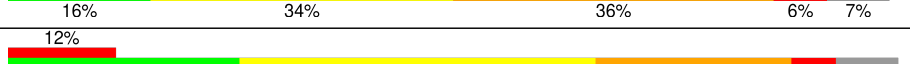
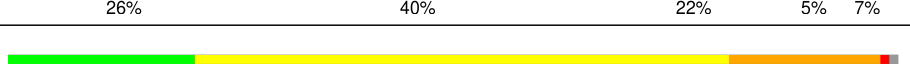
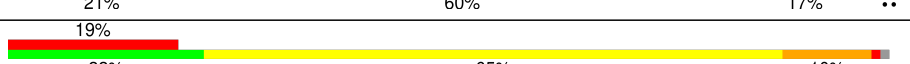
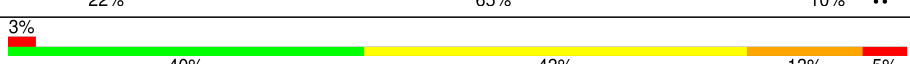
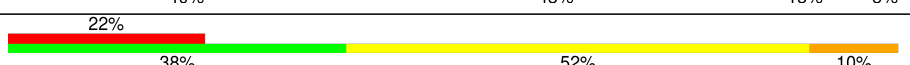
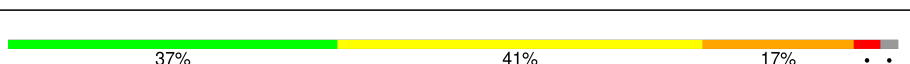
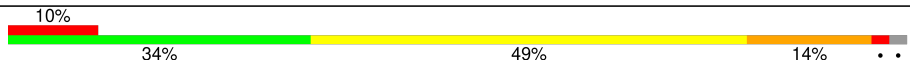
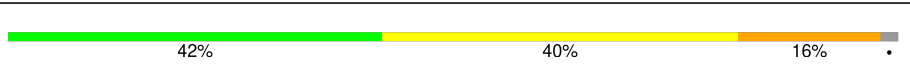

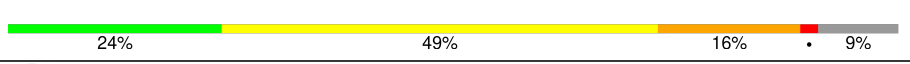
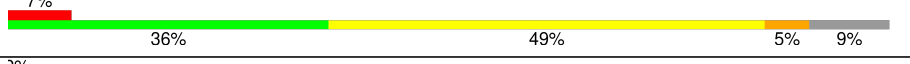



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Mol	Chain	Length	Quality of chain
28	BE	201	
28	DE	201	
29	BF	179	
29	DF	179	
30	BG	177	
30	DG	177	
31	BH	149	
31	DH	149	
32	BI	142	
32	DI	142	
33	BJ	142	
33	DJ	142	
34	BK	123	
34	DK	123	
35	BL	144	
35	DL	144	
36	BM	136	
36	DM	136	
37	BN	127	
37	DN	127	
38	BO	117	
38	DO	117	
39	BP	115	
39	DP	115	
40	BQ	118	

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Mol	Chain	Length	Quality of chain
40	DQ	118	
41	BR	103	
41	DR	103	
42	BS	110	
42	DS	110	
43	BT	100	
43	DT	100	
44	BU	104	
44	DU	104	
45	BV	94	
45	DV	94	
46	BW	85	
46	DW	85	
47	BX	78	
47	DX	78	
48	BY	63	
48	DY	63	
49	BZ	59	
49	DZ	59	
50	B0	57	
50	D0	57	
51	B1	55	
51	D1	55	
52	B2	46	
52	D2	46	

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Mol	Chain	Length	Quality of chain
53	B3	65	
53	D3	65	
54	B4	38	
54	D4	38	
55	CA	1530	
56	DB	117	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	MG	AA	1627	-	-	-	X
57	MG	BA	3058	-	-	-	X
57	MG	BA	3062	-	-	-	X
57	MG	BA	3124	-	-	-	X
57	MG	BA	3131	-	-	-	X
57	MG	CA	1636	-	-	-	X
57	MG	DA	3058	-	-	-	X
57	MG	DA	3060	-	-	-	X
57	MG	DA	3063	-	-	-	X
57	MG	DA	3128	-	-	-	X
57	MG	DA	3129	-	-	-	X

2 Entry composition [i](#)

There are 59 unique types of molecules in this entry. The entry contains 286150 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			
1	CB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			

- Molecule 2 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AC	206	Total	C	N	O	S	0	0	0
			1624	1028	305	288	3			
2	CC	206	Total	C	N	O	S	0	0	0
			1624	1028	305	288	3			

- Molecule 3 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			
3	CD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			

- Molecule 4 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			
4	CE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			

- Molecule 5 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			
5	CF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			

- Molecule 6 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AG	151	Total	C	N	O	S	0	0	0
			1181	735	227	215	4			
6	CG	150	Total	C	N	O	S	0	0	0
			1174	730	226	214	4			

- Molecule 7 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			
7	CH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			

- Molecule 8 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			
8	CI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			

- Molecule 9 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			
9	CJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			

- Molecule 10 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

- Molecule 11 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			
11	CL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			

- Molecule 12 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AM	114	Total	C	N	O	S	0	0	0
			883	546	178	156	3			
12	CM	113	Total	C	N	O	S	0	0	0
			876	541	177	155	3			

- Molecule 13 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			
13	CN	95	Total	C	N	O	S	0	0	0
			769	480	159	127	3			

- Molecule 14 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			
14	CO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			

- Molecule 15 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			
15	CP	80	Total	C	N	O	S	0	0	0
			638	400	126	111	1			

- Molecule 16 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AQ	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			
16	CQ	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			

- Molecule 17 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	AR	55	Total	C	N	O	0	0	0
			455	288	86	81			
17	CR	55	Total	C	N	O	0	0	0
			455	288	86	81			

- Molecule 18 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	AS	79	Total	C	N	O	S	0	0	0
			637	408	120	107	2			
18	CS	79	Total	C	N	O	S	0	0	0
			637	408	120	107	2			

- Molecule 19 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			
19	CT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			

- Molecule 20 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AU	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			
20	CU	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			

- Molecule 21 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AA	1533	Total	C	N	O	P	0	0	0
			32895	14671	6036	10655	1533			

- Molecule 22 is a RNA chain called P-site tRNA ASL fragment.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	17	Total	C	N	O	P	0	0	0
			365	163	68	117	17			
22	AX	17	Total	C	N	O	P	0	0	0
			365	163	68	117	17			
22	CV	17	Total	C	N	O	P	0	0	0
			365	163	68	117	17			
22	CX	17	Total	C	N	O	P	0	0	0
			365	163	68	117	17			

- Molecule 23 is a RNA chain called messenger RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AW	6	Total	C	N	O	P	0	0	0
			120	54	12	48	6			
23	CW	6	Total	C	N	O	P	0	0	0
			120	54	12	48	6			

- Molecule 24 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BA	2854	Total	C	N	O	P	0	0	0
			61274	27334	11279	19807	2854			
24	DA	2841	Total	C	N	O	P	0	0	0
			60995	27210	11229	19715	2841			

- Molecule 25 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			

- Molecule 26 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	DC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			

- Molecule 27 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			
27	DD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

- Molecule 28 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			
28	DE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			

- Molecule 29 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BF	177	Total	C	N	O	S	0	0	0
			1410	899	249	256	6			
29	DF	178	Total	C	N	O	S	0	0	0
			1420	905	251	258	6			

- Molecule 30 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			
30	DG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			

- Molecule 31 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BH	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			
31	DH	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			

- Molecule 32 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			
32	DI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			

- Molecule 33 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			
33	DJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

- Molecule 34 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BK	122	Total	C	N	O	S	0	0	0
			938	587	180	165	6			
34	DK	122	Total	C	N	O	S	0	0	0
			938	587	180	165	6			

- Molecule 35 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			
35	DL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			

- Molecule 36 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	BM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			
36	DM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			

- Molecule 37 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BN	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			
37	DN	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			

- Molecule 38 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BO	116	Total	C	N	O		0	0	0
			892	552	178	162				
38	DO	116	Total	C	N	O		0	0	0
			892	552	178	162				

- Molecule 39 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			
39	DP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			

- Molecule 40 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BQ	117	Total	C	N	O		0	0	0
			947	604	192	151				
40	DQ	117	Total	C	N	O		0	0	0
			947	604	192	151				

- Molecule 41 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			
41	DR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

- Molecule 42 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	DS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			

- Molecule 43 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BT	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			
43	DT	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			

- Molecule 44 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BU	102	Total	C	N	O	S	0	0	0
			779	492	146	141				
44	DU	102	Total	C	N	O	S	0	0	0
			779	492	146	141				

- Molecule 45 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BV	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			
45	DV	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			

- Molecule 46 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BW	79	Total	C	N	O	S	0	0	0
			596	367	120	108	1			
46	DW	79	Total	C	N	O	S	0	0	0
			596	367	120	108	1			

- Molecule 47 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BX	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			
47	DX	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			

- Molecule 48 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			
48	DY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			

- Molecule 49 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	BZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			
49	DZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			

- Molecule 50 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			
50	D0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

- Molecule 51 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
51	B1	50	Total	C	N	O	0	0	0
			409	263	75	71			
51	D1	50	Total	C	N	O	0	0	0
			409	263	75	71			

- Molecule 52 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			
52	D2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 53 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	B3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			
53	D3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

- Molecule 54 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	B4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			
54	D4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

- Molecule 55 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	CA	1530	Total	C	N	O	P	0	0	0
			32831	14642	6024	10635	1530			

- Molecule 56 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	DB	117	Total	C	N	O	P	0	0	0
			2507	1116	459	815	117			

- Molecule 57 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	AA	43	Total	Mg	0	0
			43	43		
57	BA	136	Total	Mg	0	0
			136	136		
57	BB	4	Total	Mg	0	0
			4	4		
57	BD	1	Total	Mg	0	0
			1	1		
57	CA	42	Total	Mg	0	0
			42	42		
57	DA	132	Total	Mg	0	0
			132	132		
57	DB	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	DC	2	Total	Mg	0	0
			2	2		
57	DJ	1	Total	Mg	0	0
			1	1		
57	D4	1	Total	Mg	0	0
			1	1		

- Molecule 58 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	B4	1	Total	Zn	0	0
			1	1		
58	D4	1	Total	Zn	0	0
			1	1		

- Molecule 59 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	AE	1	Total	O	0	0
			1	1		
59	AL	3	Total	O	0	0
			3	3		
59	AN	6	Total	O	0	0
			6	6		
59	AT	1	Total	O	0	0
			1	1		
59	AU	1	Total	O	0	0
			1	1		
59	AA	196	Total	O	0	0
			196	196		
59	BA	615	Total	O	0	0
			615	615		
59	BB	20	Total	O	0	0
			20	20		
59	BC	8	Total	O	0	0
			8	8		
59	BD	3	Total	O	0	0
			3	3		
59	BE	1	Total	O	0	0
			1	1		
59	BL	3	Total	O	0	0
			3	3		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	BN	3	Total 3	O 3	0	0
59	BT	1	Total 1	O 1	0	0
59	B2	1	Total 1	O 1	0	0
59	B3	3	Total 3	O 3	0	0
59	B4	2	Total 2	O 2	0	0
59	CE	4	Total 4	O 4	0	0
59	CI	1	Total 1	O 1	0	0
59	CL	1	Total 1	O 1	0	0
59	CN	2	Total 2	O 2	0	0
59	CT	2	Total 2	O 2	0	0
59	CU	2	Total 2	O 2	0	0
59	CA	195	Total 195	O 195	0	0
59	DA	600	Total 600	O 600	0	0
59	DB	4	Total 4	O 4	0	0
59	DC	12	Total 12	O 12	0	0
59	DD	2	Total 2	O 2	0	0
59	DE	3	Total 3	O 3	0	0
59	DJ	3	Total 3	O 3	0	0
59	DL	6	Total 6	O 6	0	0
59	DN	2	Total 2	O 2	0	0
59	DT	2	Total 2	O 2	0	0

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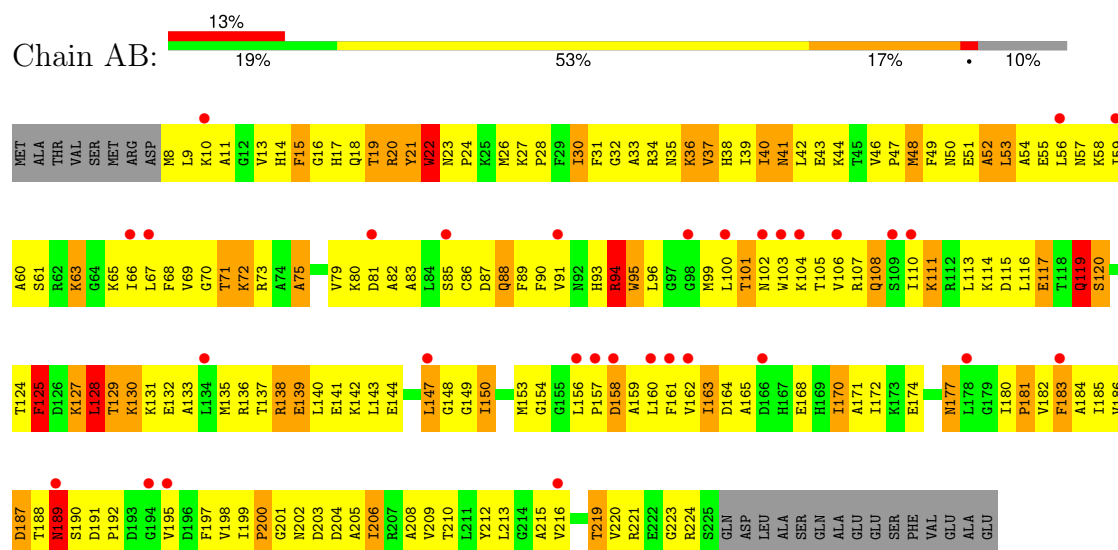
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
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59	DV	1	Total 1	O 1	0	0
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59	D3	1	Total 1	O 1	0	0
59	D4	5	Total 5	O 5	0	0

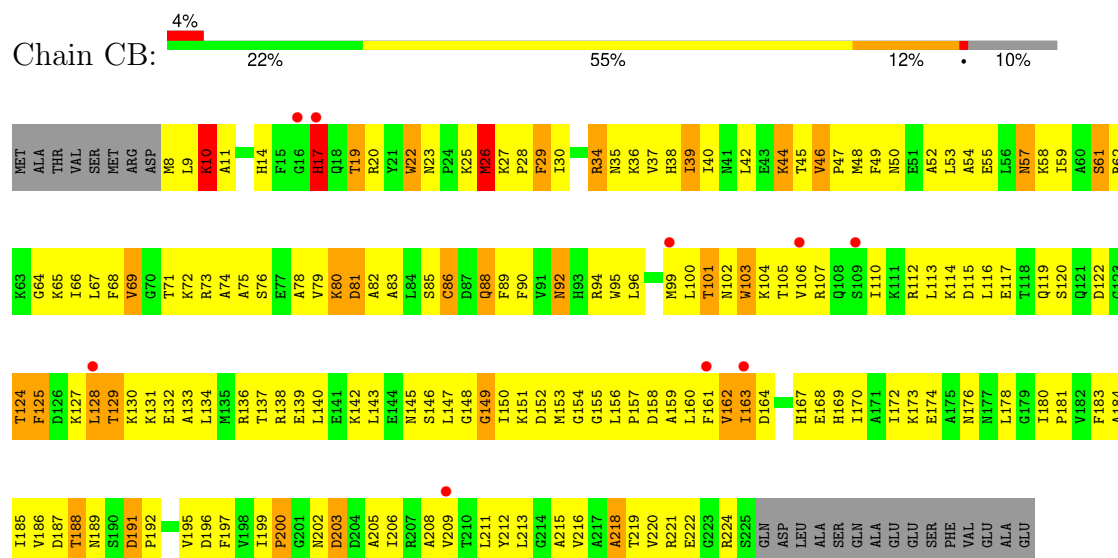
3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

• Molecule 1: 30S ribosomal protein S2

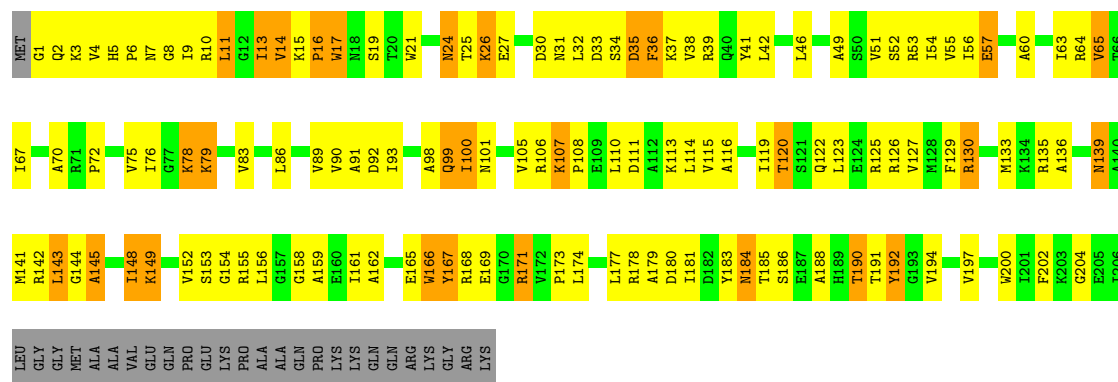


• Molecule 1: 30S ribosomal protein S2

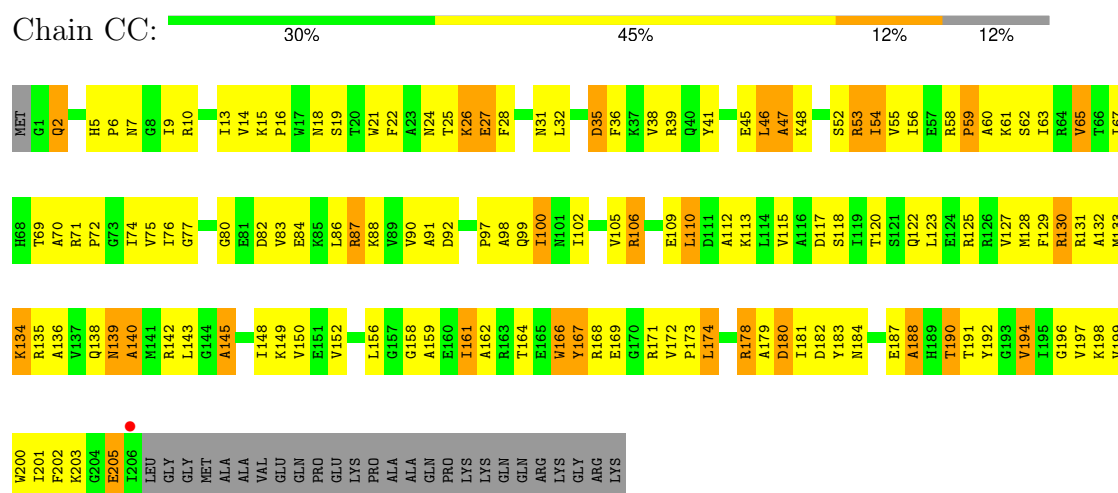


• Molecule 2: 30S ribosomal protein S3

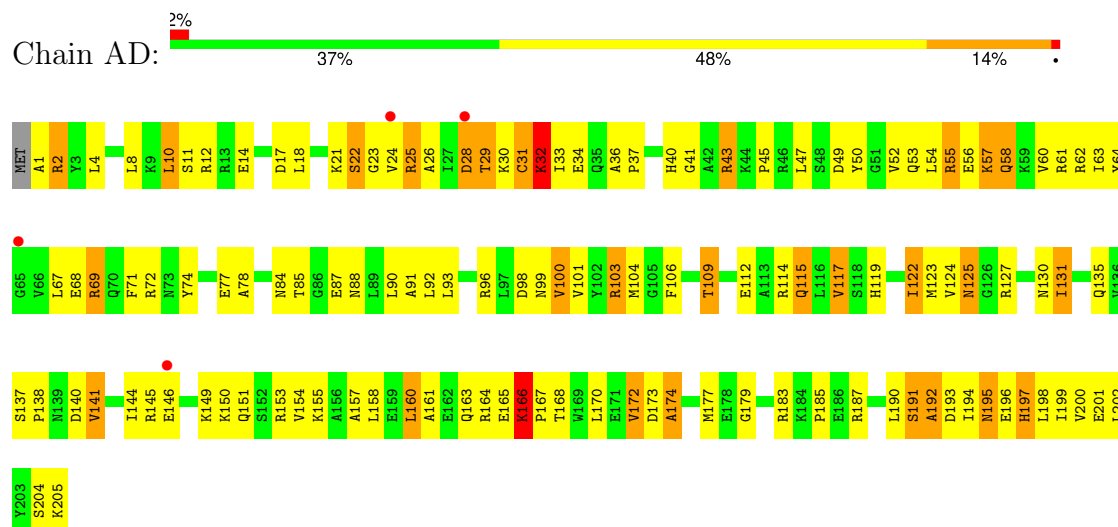




• Molecule 2: 30S ribosomal protein S3

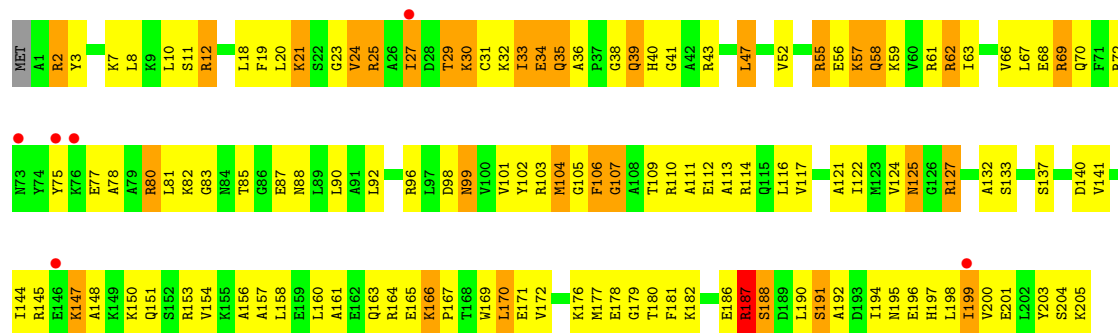


• Molecule 3: 30S ribosomal protein S4

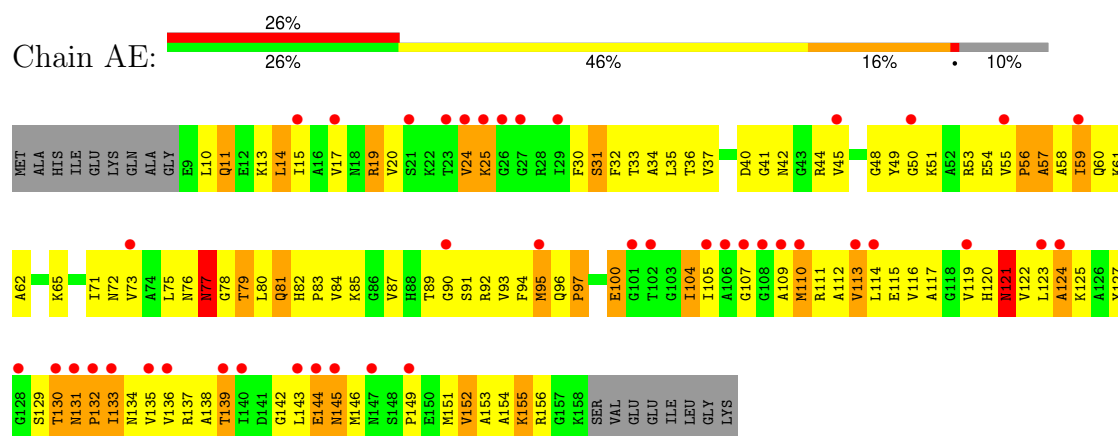


• Molecule 3: 30S ribosomal protein S4

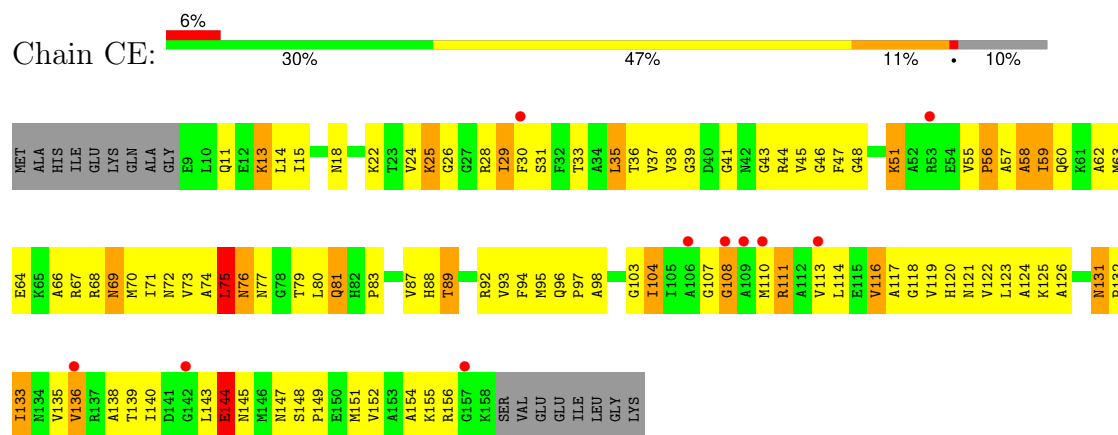




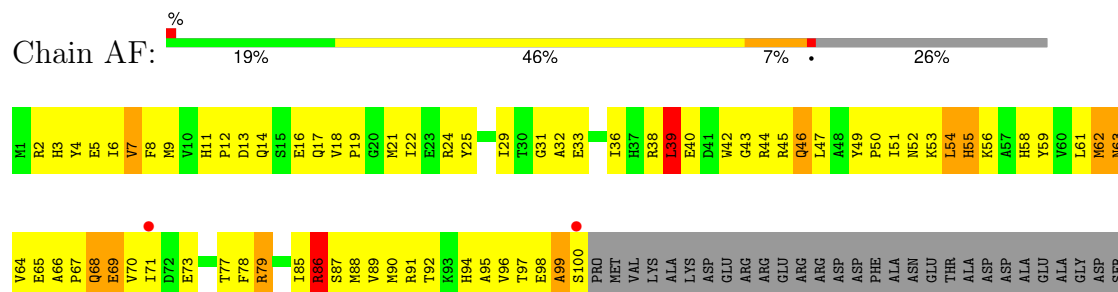
• Molecule 4: 30S ribosomal protein S5

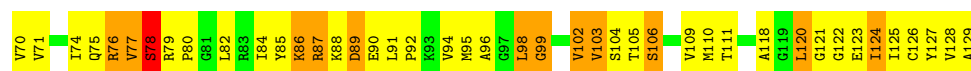


• Molecule 4: 30S ribosomal protein S5

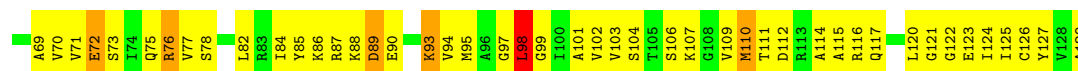


• Molecule 5: 30S ribosomal protein S6

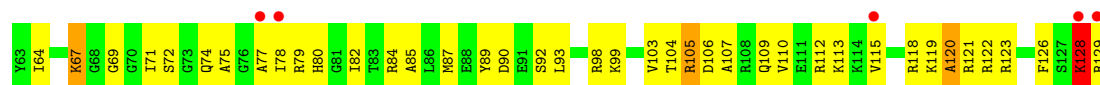
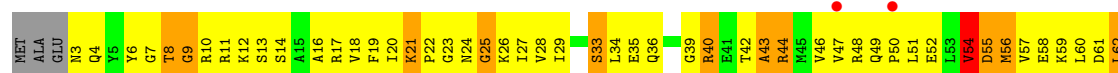




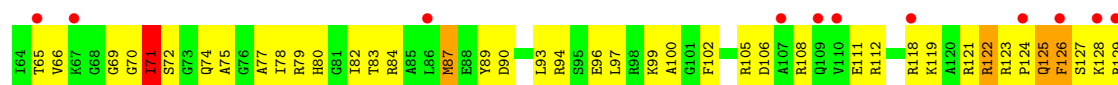
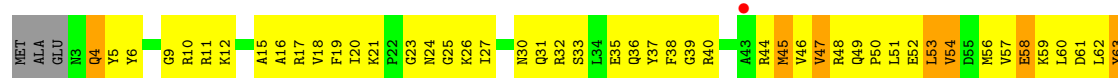
• Molecule 7: 30S ribosomal protein S8



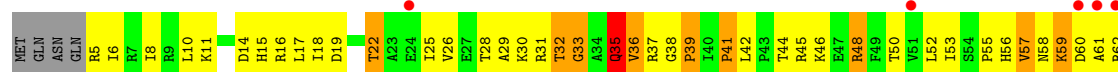
• Molecule 8: 30S ribosomal protein S9



• Molecule 8: 30S ribosomal protein S9



• Molecule 9: 30S ribosomal protein S10



• Molecule 9: 30S ribosomal protein S10

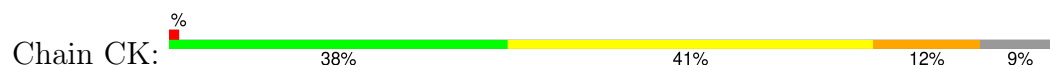




• Molecule 10: 30S ribosomal protein S11



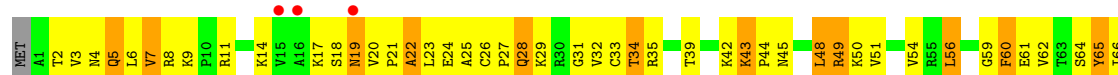
• Molecule 10: 30S ribosomal protein S11



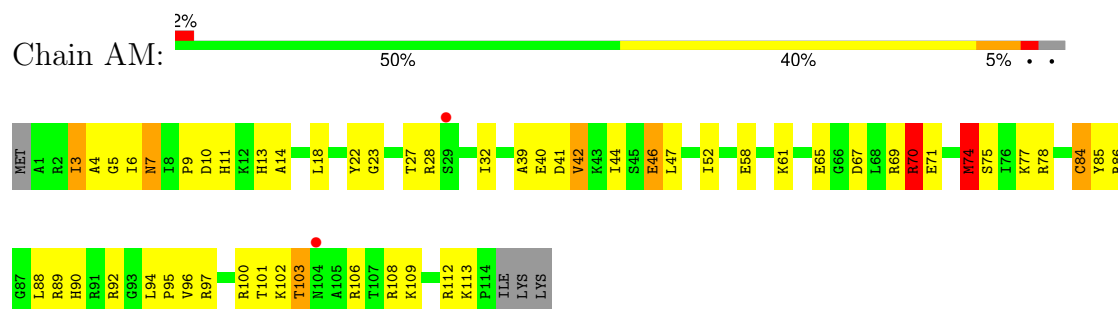
• Molecule 11: 30S ribosomal protein S12



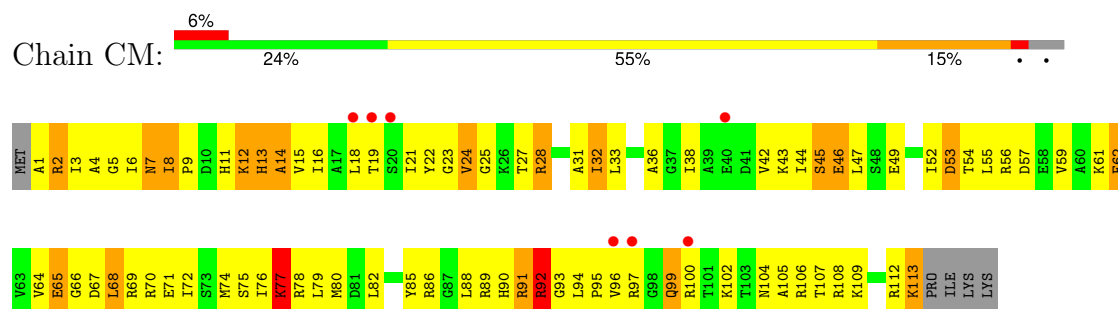
• Molecule 11: 30S ribosomal protein S12



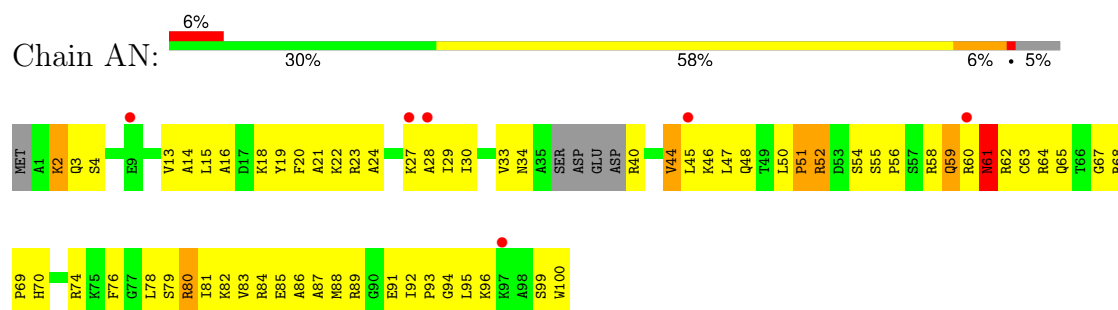
- Molecule 12: 30S ribosomal protein S13



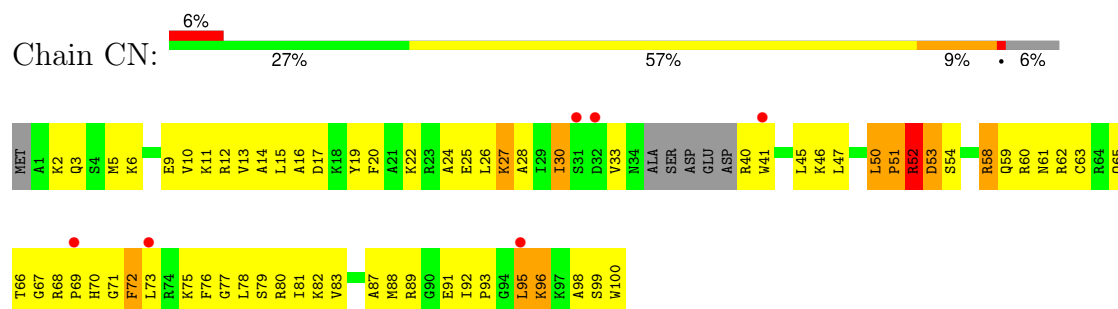
- Molecule 12: 30S ribosomal protein S13



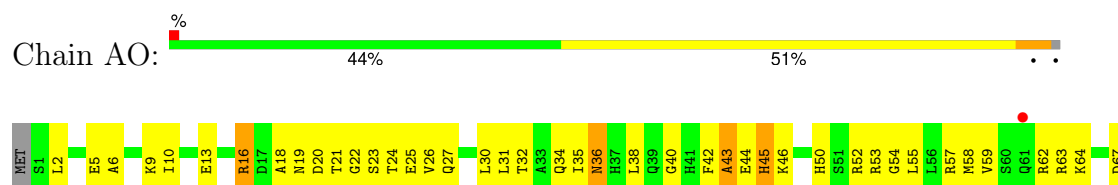
- Molecule 13: 30S ribosomal protein S14



- Molecule 13: 30S ribosomal protein S14



- Molecule 14: 30S ribosomal protein S15

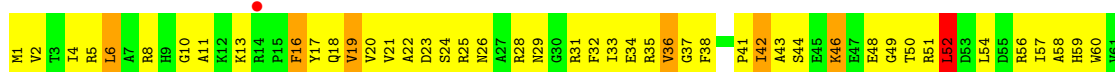




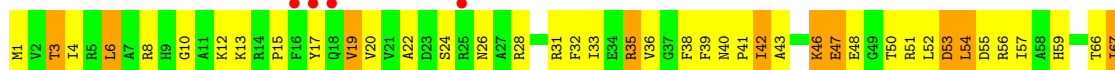
- Molecule 14: 30S ribosomal protein S15



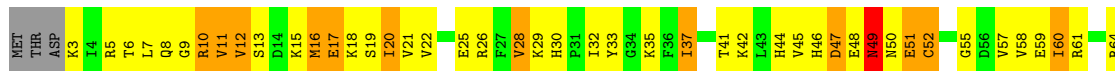
- Molecule 15: 30S ribosomal protein S16



- Molecule 15: 30S ribosomal protein S16

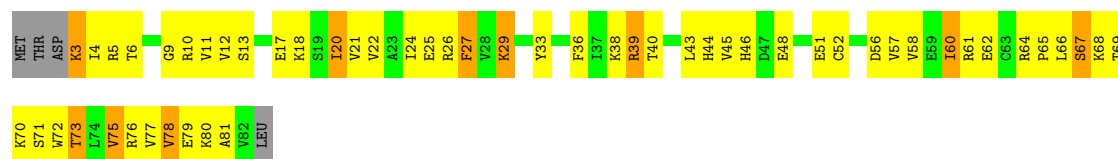


- Molecule 16: 30S ribosomal protein S17

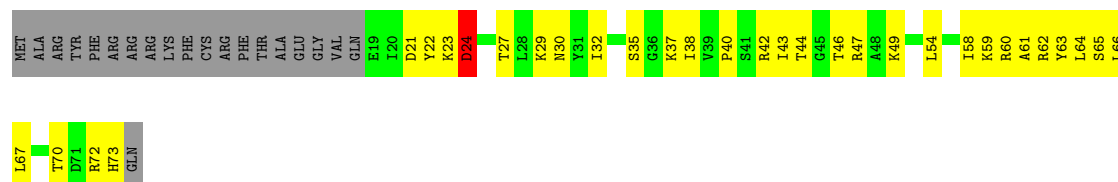


- Molecule 16: 30S ribosomal protein S17

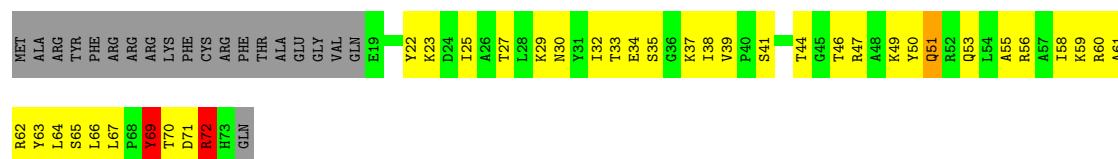




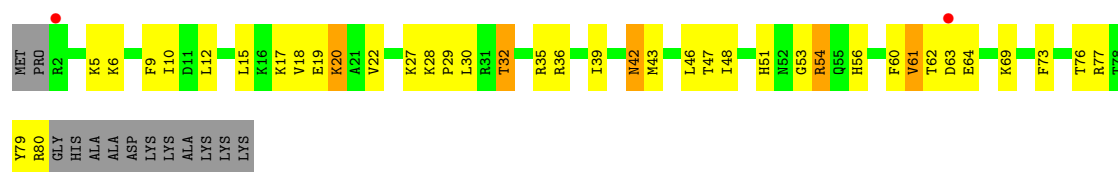
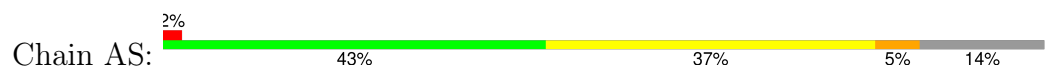
- Molecule 17: 30S ribosomal protein S18



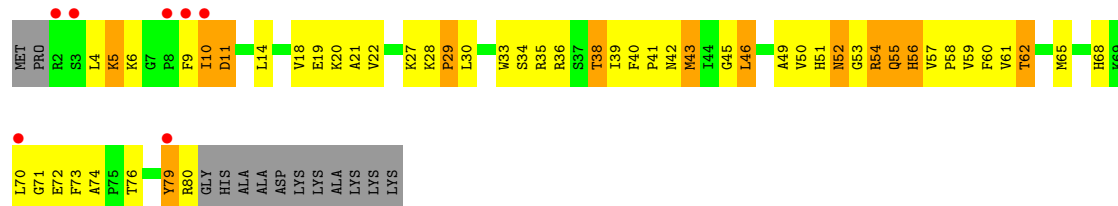
- Molecule 17: 30S ribosomal protein S18



- Molecule 18: 30S ribosomal protein S19

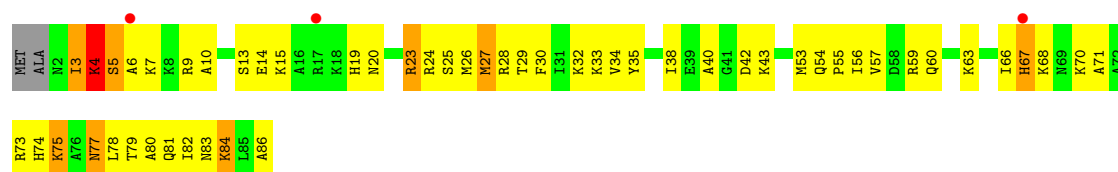


- Molecule 18: 30S ribosomal protein S19

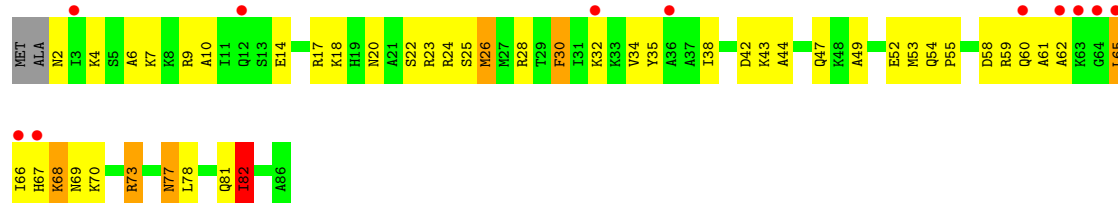


- Molecule 19: 30S ribosomal protein S20

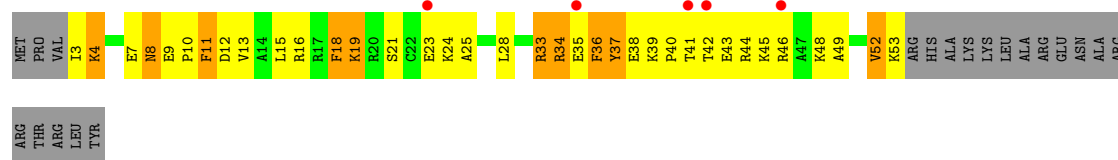
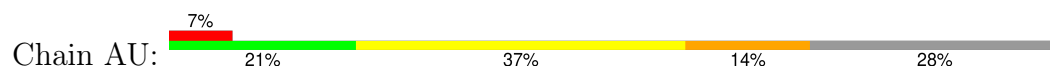




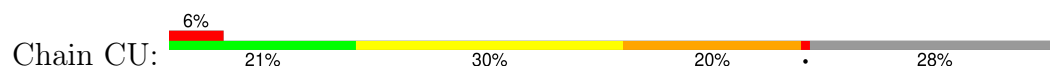
• Molecule 19: 30S ribosomal protein S20



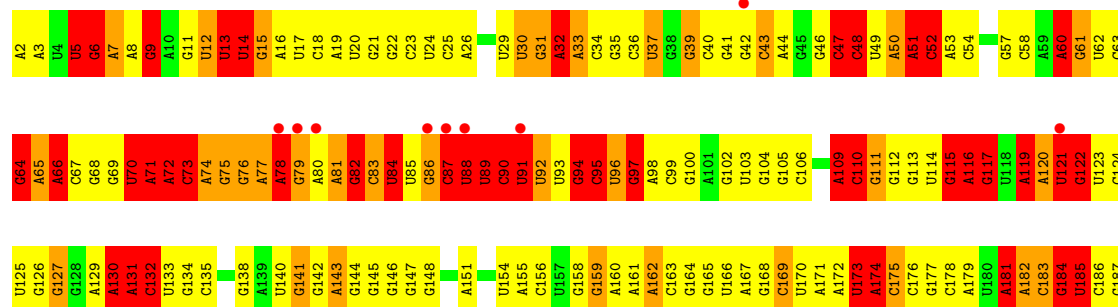
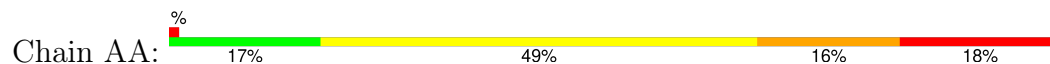
• Molecule 20: 30S ribosomal protein S21



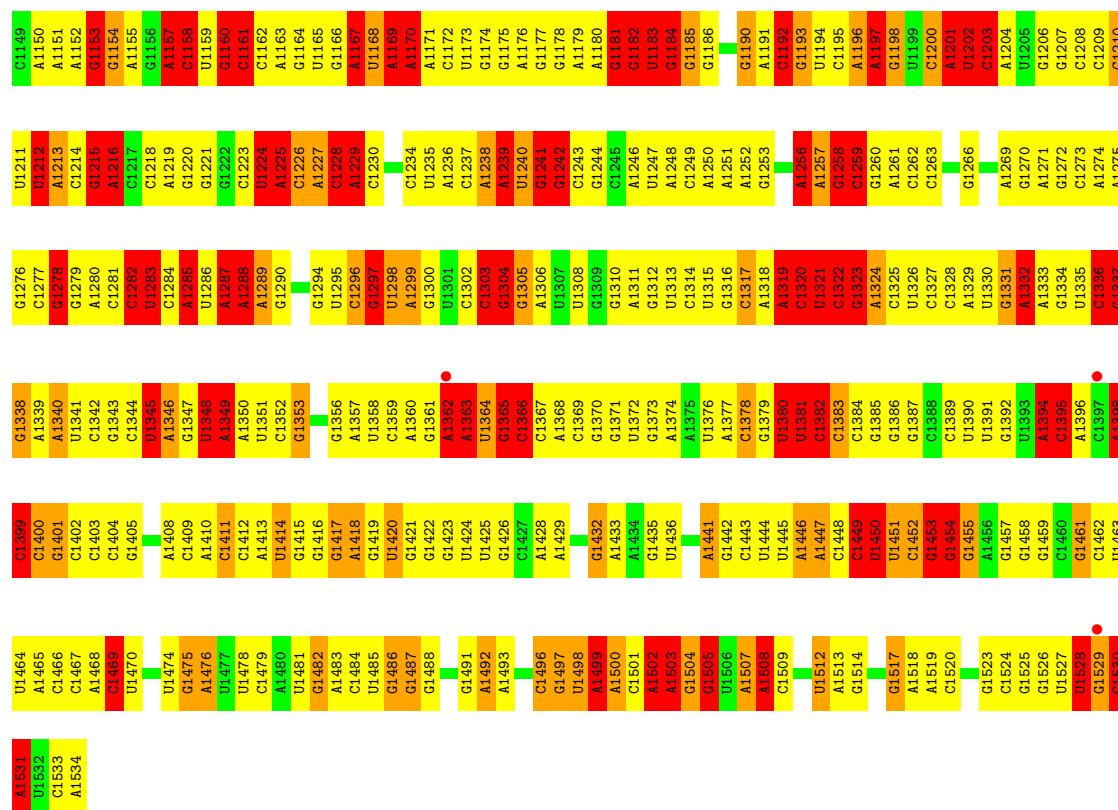
• Molecule 20: 30S ribosomal protein S21



• Molecule 21: 16S rRNA



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G1088	G1089	U1026	G1027	A958	G895	U828	G765	G703	U638	U571	C511	G449	A383	C316	U252	C189
U1027	G1028	C1029	G1028	A959	G896	U829	A766	A704	G639	A572	U512	G450	A384	U317	A253	A190
U1029	G1029	U961	G1028	U960	C897	G830	A767	A705	A640	A573	C513	A451	C385	U318	G254	G191
U1030	U1030	G962	U1030	U961	G898	U831	A768	A706	U641	A574	C514	A452	C386	G319	G255	A192
G1031	G1031	G963	U1030	U962	G899	G832	A769	A707	A642	G575	C515	A453	C387	A320	C193	C194
G1032	G1032	A964	G1032	U963	A900	G833	C770	C708	C643	C576	U516	G454	C388	A321	G256	G195
G1033	G1033	A901	G1033	U964	A901	U834	G774	U709	U644	G577	C517	G455	C389	G324	G259	A196
G1034	G1034	G902	G1034	U965	G902	U835	G775	G710	G645	C578	C518	A456	U390	G325	U261	A197
A1035	A1035	G966	A1035	G967	G903	G836	G776	G711	G646	A579	C519	G457	C391	A327	A262	G198
C1036	C1036	A968	C1036	A969	U904	G838	G778	G712	G647	G581	C520	A458	C392	A328	A263	A199
G1037	G1037	G904	G1037	G905	U905	G839	G779	G713	G648	G582	C522	A459	C393	A329	G200	G201
C1038	C1038	A908	C1038	A909	A908	C840	A780	G714	G649	G583	C523	A460	C394	A330	G202	G202
G1039	G1039	G910	G1039	G911	A909	U842	A781	A715	U652	C586	G524	A461	C395	C331	G203	G203
U1040	U1040	G912	U1040	G913	A910	U843	A782	U717	G654	G587	C525	A462	C396	G332	G204	G204
G1041	G1041	A913	G1041	A914	A913	G844	A783	A718	A655	G588	C526	A463	C401	U333	A205	A205
A1042	A1042	G914	A1042	G915	A914	G845	A784	C719	G656	G589	C527	A464	C402	U334	C206	C206
C1043	C1043	A915	C1043	A916	A915	G846	A785	C720	G657	U589	C528	A465	C403	C335	C207	C207
A1044	A1044	U916	A1044	U917	U916	C847	A786	G721	G658	G590	C529	A466	C404	C336	G208	G208
C1045	C1045	G917	C1045	G918	A917	C848	A787	G722	U662	U594	G530	A468	C405	A337	U209	U209
A1046	A1046	G918	A1046	G919	A918	G849	A788	U723	U663	U595	G531	C469	C406	A338	U210	C210
G1047	G1047	A919	G1047	A920	A919	G850	A789	G724	A663	A596	A532	C470	U407	A339	U211	G211
U1048	U1048	G920	U1048	G921	A920	G851	A790	G725	G664	G597	A533	U471	A408	U340	G212	G212
G1049	G1049	U921	G1049	U922	A921	U854	A791	G726	A665	G598	A534	U472	U409	U341	G213	G213
C1051	C1051	G922	C1051	G923	A922	U855	A792	G727	G666	U599	A535	U473	C410	C341	C214	C214
U1052	U1052	A923	U1052	A924	A923	G856	A793	G728	G667	A600	C536	G474	C411	C342	G215	G215
G1053	G1053	G924	G1053	G925	A924	U857	A794	A729	G668	G601	C537	G475	C412	U343	A279	U216
C1054	C1054	G925	C1054	G926	A925	G858	A795	G730	G669	G602	C538	U476	C413	C344	G280	G280
A1055	A1055	G926	A1055	G927	A926	G859	A796	G731	G670	A603	C539	U477	C414	C345	G281	C217
G1058	G1058	G927	G1058	G928	A927	U860	A797	G732	U671	U604	C540	U480	C415	G346	A282	U218
C1059	C1059	G928	C1059	G929	A928	U861	A798	G733	U672	G604	C541	U481	C416	G347	U219	U219
U1060	U1060	G929	U1060	G930	A929	G862	A799	G734	A673	U605	C542	U482	C417	G348	G283	G220
G1061	G1061	G930	G1061	G931	A930	U863	A800	G735	A674	U606	C543	U483	C418	G349	C285	C285
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C1063	C1063	G932	C1063	G933	A932	U865	A802	G737	A676	A608	C545	U485	C420	C351	U224	U224
G1064	G1064	G933	G1064	G934	A933	G866	A803	G738	U677	U609	C546	U486	C421	C352	G225	G225
U1065	U1065	G934	U1065	G935	A934	U867	A804	G739	U678	U610	C547	U487	C422	A353	G226	G226
C1066	C1066	G935	C1066	G936	A935	U868	A805	G740	G685	U611	C548	U488	C423	G354	G227	G227
A1067	A1067	G936	A1067	G937	A936	U869	A806	G741	U686	U612	C549	U489	C424	C355	A228	A228
G1068	G1068	G937	G1068	G938	A937	U870	A807	G742	A687	U613	C550	U490	C425	A356	U229	U229
C1069	C1069	G938	C1069	G939	A938	U871	A808	G743	A688	U614	C551	U491	C426	G357	U230	U230
U1070	U1070	G939	U1070	G940	A939	U872	A809	G744	G689	U615	C552	U492	C427	G358	U231	U231
C1071	C1071	G940	C1071	G941	A940	U873	A810	G745	U689	U616	C553	U493	C428	G359	G232	G232
G1072	G1072	G941	G1072	G942	A941	U874	A811	G746	G690	U617	C554	U494	C429	A364	C233	C233
U1073	U1073	G942	U1073	G943	A942	U875	A812	G747	U691	U618	C555	U495	C430	U365	C234	C234
G1074	G1074	G943	G1074	G944	A943	U876	A813	G748	G692	U619	C556	U496	C431	A366	G301	G301
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C1076	C1076	G945	C1076	G946	A945	U878	A815	G750	G694	U621	C558	U498	C433	G360	A237	G237
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A1080	A1080	G949	A1080	G950	A949	U882	A819	G754	U698	U625	C562	U502	C437	C372	C307	A243
G1081	G1081	G950	G1081	G951	A950	U883	A820	G755	G699	U626	C563	U503	C438	G373	C308	U244
C1082	C1082	G951	C1082	G952	A951	U884	A821	G756	G700	U627	C564	U504	C439	U367	A309	U245
A1083	A1083	G952	A1083	G953	A952	U885	A822	G757	U699	U628	C565	U505	C440	U368	A309	U245
G1084	G1084	G953	G1084	G954	A953	U886	A823	G758	U700	U629	C566	U506	C441	U369	G247	G247
U1085	U1085	G954	U1085	G955	A954	U887	A824	G759	U701	U630	C567	U507	C442	G376	C311	C311
C1086	C1086	G955	C1086	G956	A955	U888	A825	G760	U702	U631	C568	U508	C443	G377	C312	U248
U1087	U1087	G956	U1087	G957	A956	U889	A826	G761	U703	U632	C569	U509	C444	G378	U249	U249
G1088	G1088	G957	G1088	G958	A957	U890	A827	G762	U704	U633	C570	U510	C445	G379	C313	C313
U1089	U1089	G958	U1089	G959	A958	U891	A828	G763	U705	U634	C571	U511	C446	G380	U250	A250
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C1097	C1097	A966	C1097	A967	A966	U899	A836	G771	U713	U642	C579	U519	C454	G388	C321	C321
G1098	G1098	A967	G1098	A968	A967	U900	A837	G772	U714	U643	C580	U520	C455	G389	C322	C322
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C1100	C1100	A969	C1100	A970	A969	U902	A839	G774	U716	U645	C582	U522	C457	G391	C324	C324
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G1102	G1102	G971	G1102	G972	A971	U904	A841	G776	U718	U647	C584	U524	C459	G393	C326	C326
C1103	C1103	A972	C1103	A973	A972	U905	A842	G777	U719	U648	C585	U525	C460	G394	C327	C327
G1104	G1104	A973	G1104	A974	A973	U906	A843	G778	U720	U649	C586	U526	C461	G395	C328	C328
A1105	A1105	G974	A1105	G975	A974	U907	A844	G779	U721	U650	C587	U527	C462	G396	C329	C329
C1106	C1106	A975	C1106	A976	A975	U908	A845	G780	U722	U651	C588	U528	C463	G397	C330	C330
G1107	G1107	A976	G1107	A977	A976	U909	A846	G781	U723	U652	C589	U529	C464	G398	C331	C331
U1108	U1108	A977	U1108	A978	A977	U910	A847	G782	U724	U653	C590	U530	C465	G399	C332	C332
C1109	C1109	G978	C1109	G979	A978	U911	A848	G783	U725	U654	C591	U531	C466	G400	C333	C333
G1110	G1110	A979	G1110	A980	A979	U912	A849	G784	U726	U655	C592	U532	C467	G401	C334	C334
A1111	A111															



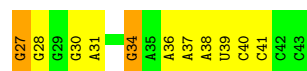
• Molecule 22: P-site tRNA ASL fragment

Chain AV: 24% 53% 24%



• Molecule 22: P-site tRNA ASL fragment

Chain AX: 35% 53% 12%



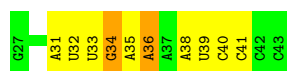
• Molecule 22: P-site tRNA ASL fragment

Chain CV: 6% 18% 59% 24%



• Molecule 22: P-site tRNA ASL fragment

Chain CX: 41% 47% 12%

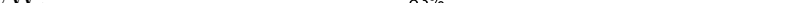


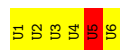
- Molecule 23: messenger RNA

Chain AW:  50% 33% 17%

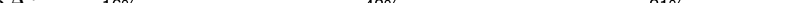


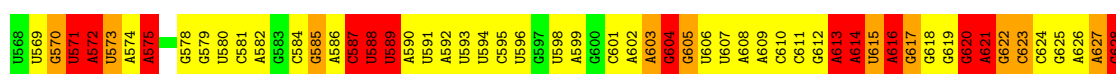
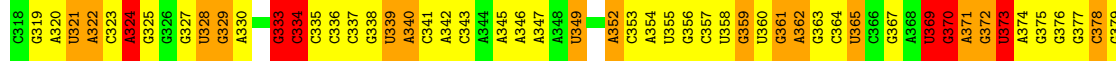
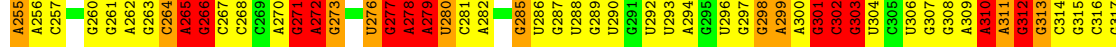
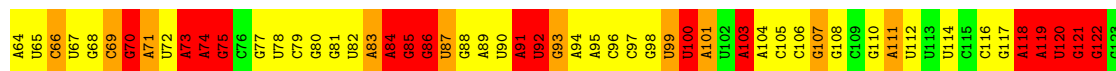
- Molecule 23: messenger RNA

Chain CW:  83% 17%



- Molecule 24: 23S rRNA

Chain BA: 



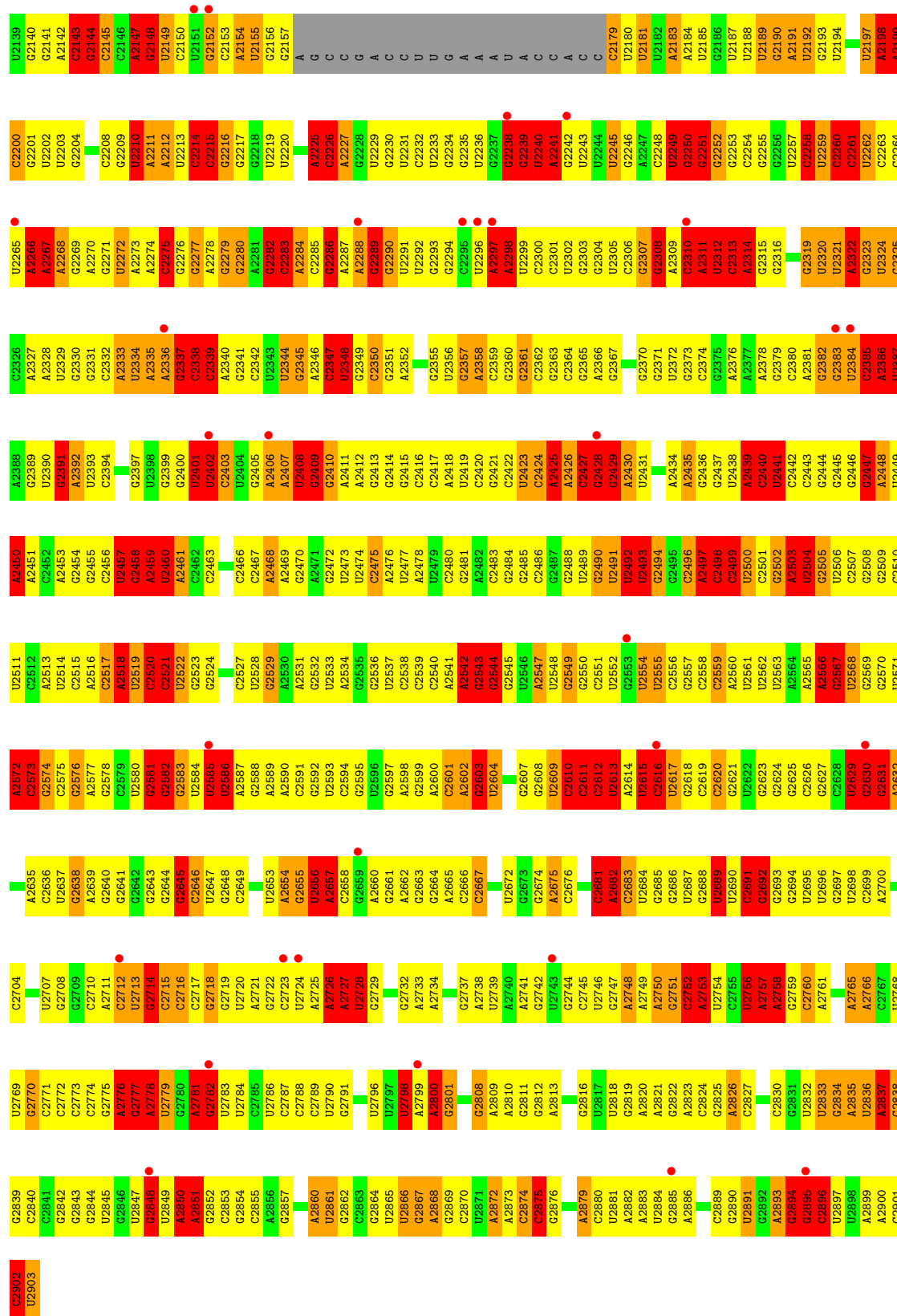
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G1517	G1518	G1452	A1328	A1328	G1266	G1139	C1079	G1016	G956	G	U826	A764	U694	G630
G1519	G1520	A1453	A1329	U1329	A1267	C1140	A1080	G1017	C957	A892	U827	C765	G695	A631
G1521	G1522	A1454	C1330	C1330	A1268	U1141	U1081	U1018	U958	C893	U828	U766	G696	A632
U1523	A1523	G1455	U1394	G1332	A1269	A1142	U1082	U1019	A959	U894	A829	U767	G697	A634
G1524	A1524	G1456	G1331	G1331	G1270	A1143	U1083	A1020	A960	U895	G830	G768	G698	G634
G1525	A1525	U1457	U1396	G1333	G1271	A1144	A1084	A1021	C961	A896	G831	U769	A699	G635
G1526	A1526	U1458	U1397	G1334	A1272	C1145	A1085	G1022	G962	C897	U832	G770	G700	G636
G1527	A1527	U1459	C1398	G1335	A1273	C1146	A1086	U1023	U963	C898	A833	U773	U703	A637
A1528	G1528	U1460	C1399	G1336	A1274	A1147	G1087	G1024	C964	A899	G834	G774	G704	G638
G1529	A1529	G1461	U1400	G1337	A1275	U1148	U1088	G1025	C965	A900	G835	G775	U639	G640
G1530	A1530	G1462	G1338	G1401	A1276	G1149	A1089	G1026	G966	C901	G836	G776	A706	U641
G1531	A1531	G1463	U1402	G1339	G1277	C1150	A1090	A1027	U967	C897	G837	G777	G707	U642
G1532	A1532	G1464	A1403	U1340	C1278	A1151	G1091	A1028	C968	G904	C838	U778	G708	A643
G1533	A1533	G1465	C1404	G1341	G1279	C1152	C1092	A1029	G969	A905	U839	U779	U709	A644
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A1535	G1535	U1468	U1406	G1343	G1281	G1154	A1094	G1031	C971	G907	U841	G781	G711	G646
A1536	G1536	A1469	G1407	U1344	A1282	A1155	A1095	A1032	A972	C908	U842	A782	G713	G647
A1537	G1537	A1470	G1408	C1345	G1283	A1156	A1096	U1033	A973	A909	U843	A783	U714	G651
A1538	G1538	G1471	U1409	G1346	A1284	C1157	A1097	G1034	G974	A910	U844	A784	A715	U652
A1539	G1539	G1472	U1410	A1347	A1285	C1158	A1098	U1035	A975	A911	U845	A785	A716	U653
G1540	G1540	G1475	U1411	C1348	A1286	U1159	G1099	G1036	G976	C912	U846	A786	A717	U654
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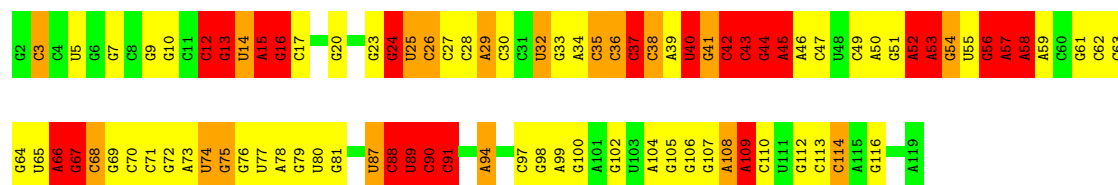
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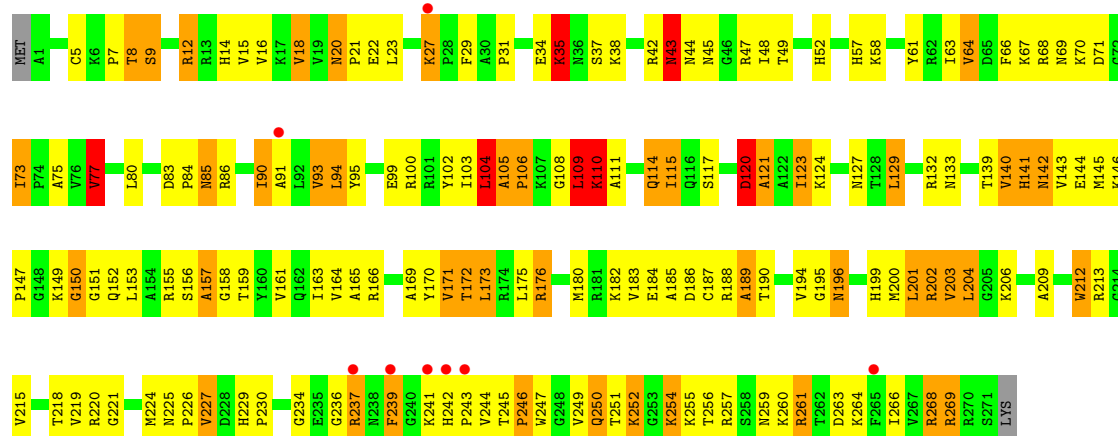


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U	C2069	U2007	G1875	A1811	G1685		C1561	G1435		G1371	A1307
U	A2070	U2007	A1876	C1748	G1686		G1562	G1436		U1372	A1308
A2133	A2071	C2008	A1877	U1812	G1687		U1563	G1501		U1373	G1309
G2134	C2072	A2009	G1878	G1813	G1688		C1564			G1374	G1310
G2135	C2073	G2010	C1879	G1814	A1689		C1565	A1504		U1375	G1311
G2136	U2074	U2011	U1880	A1815	A1690		A1566	A1505		C1376	U1312
U2137	U2075	C2012	G1881	C1816	U1629		G1567	U1440		G1377	U1313
G2138	U2076	A2013	U1882	G1817	G1693			U1506			

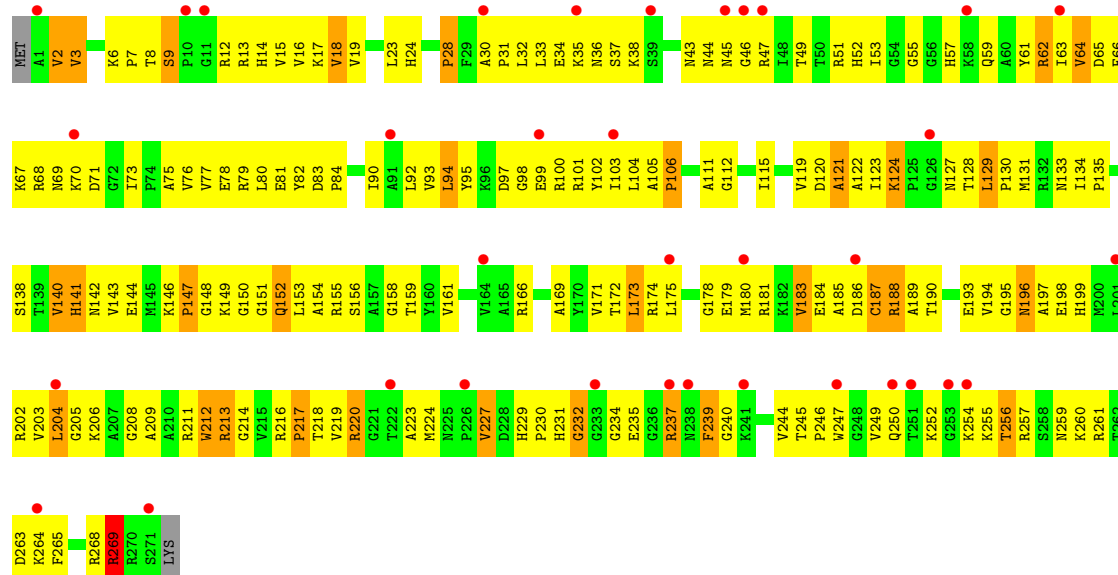




• Molecule 26: 50S ribosomal protein L2

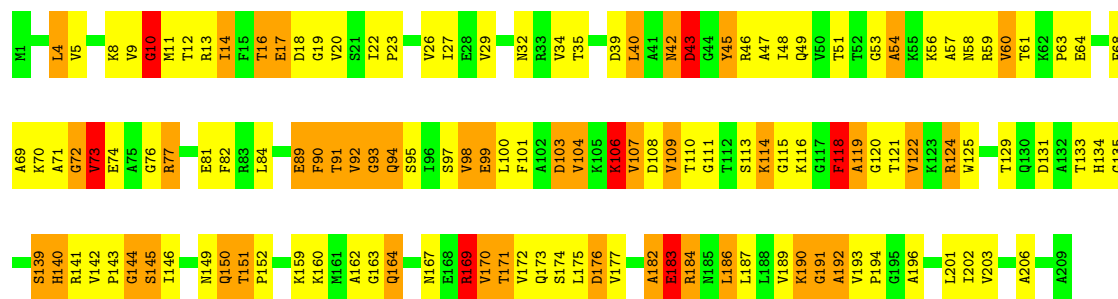


• Molecule 26: 50S ribosomal protein L2

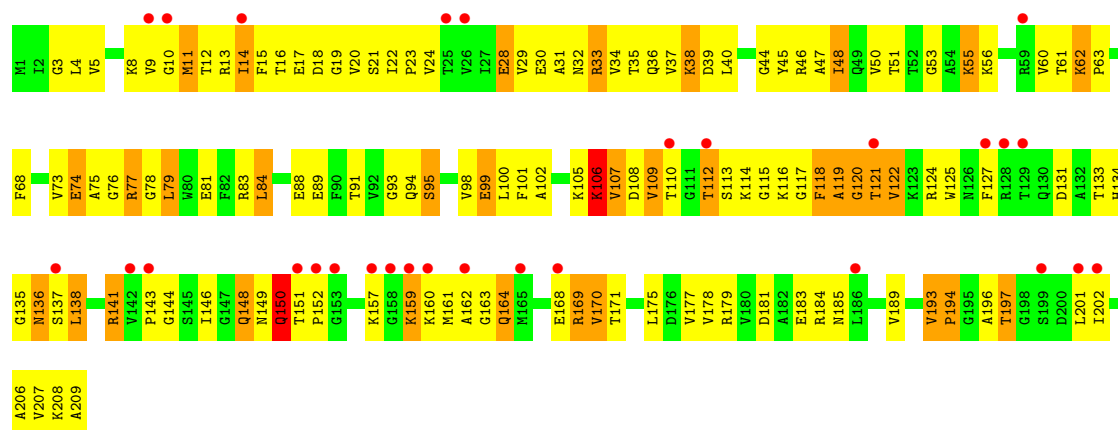


• Molecule 27: 50S ribosomal protein L3

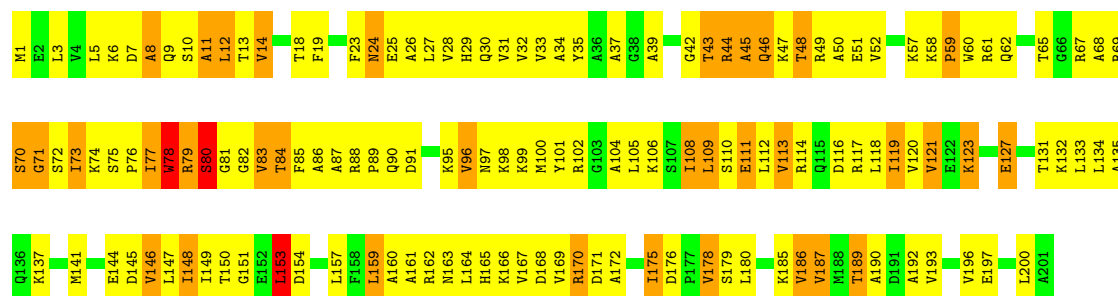




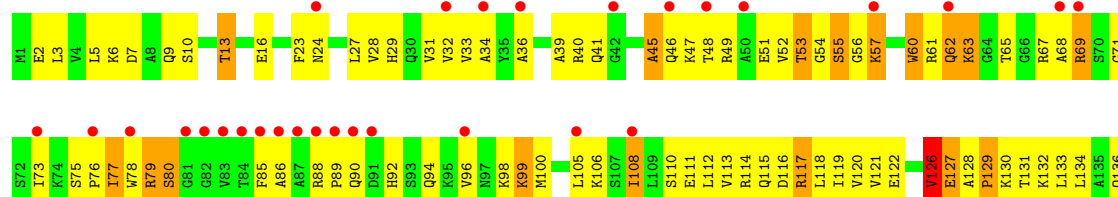
• Molecule 27: 50S ribosomal protein L3



• Molecule 28: 50S ribosomal protein L4

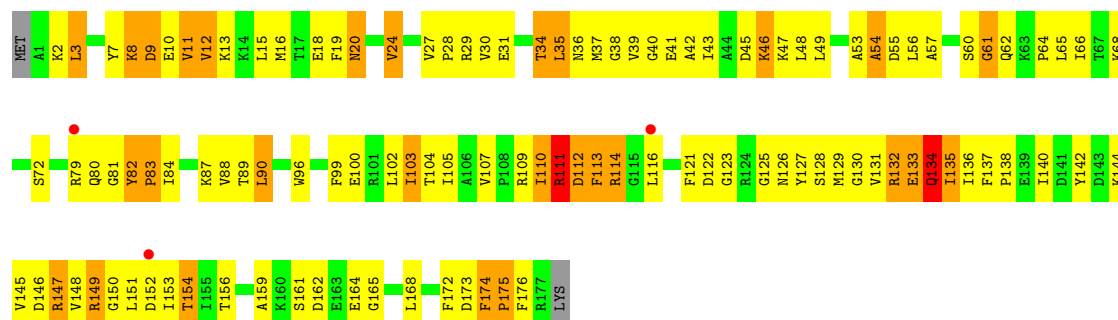


• Molecule 28: 50S ribosomal protein L4

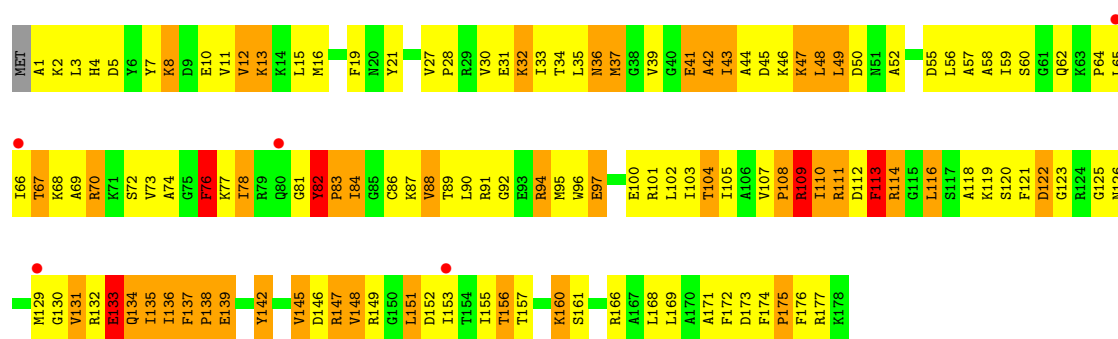




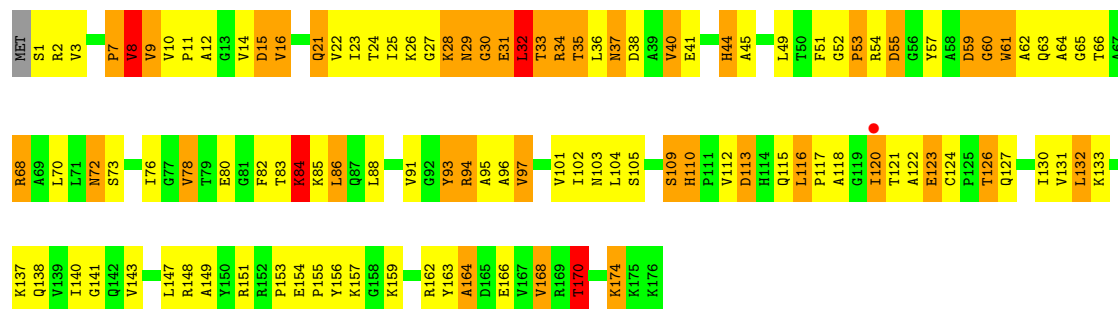
• Molecule 29: 50S ribosomal protein L5



• Molecule 29: 50S ribosomal protein L5

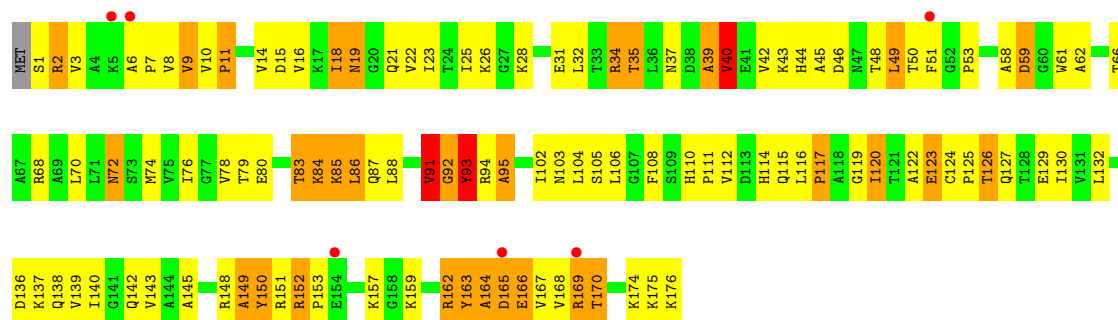


• Molecule 30: 50S ribosomal protein L6

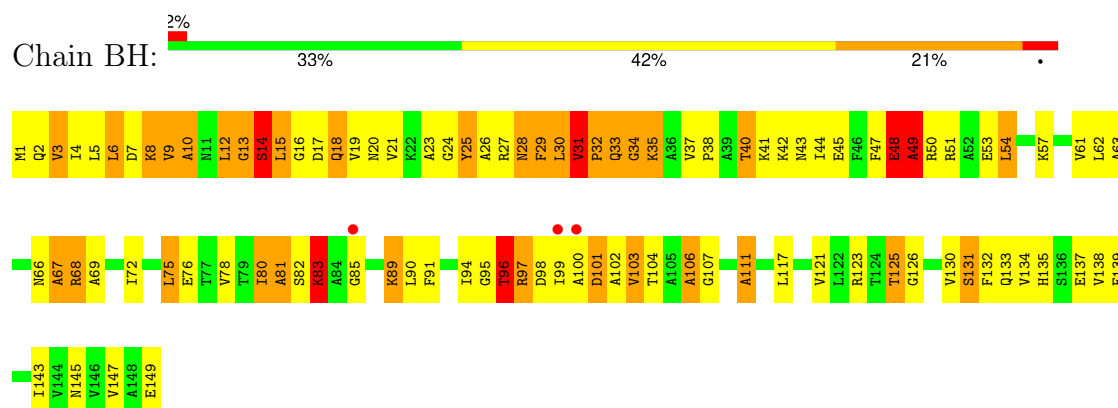


• Molecule 30: 50S ribosomal protein L6

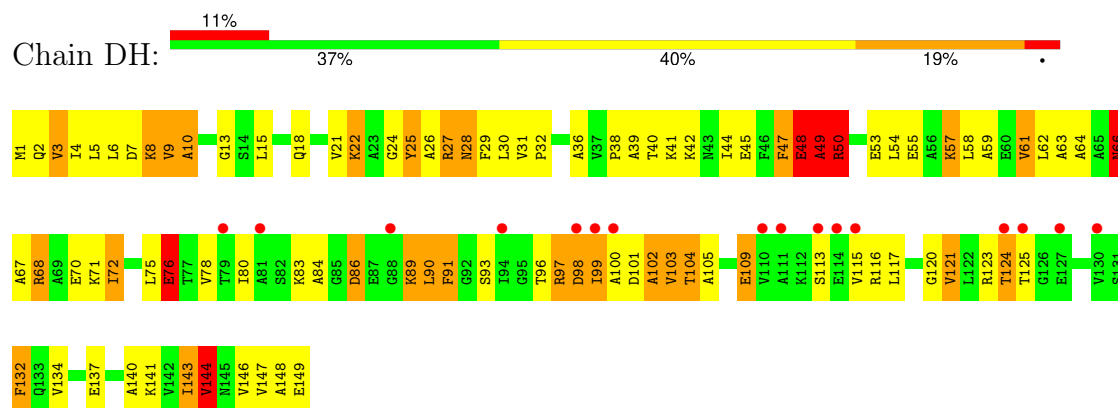




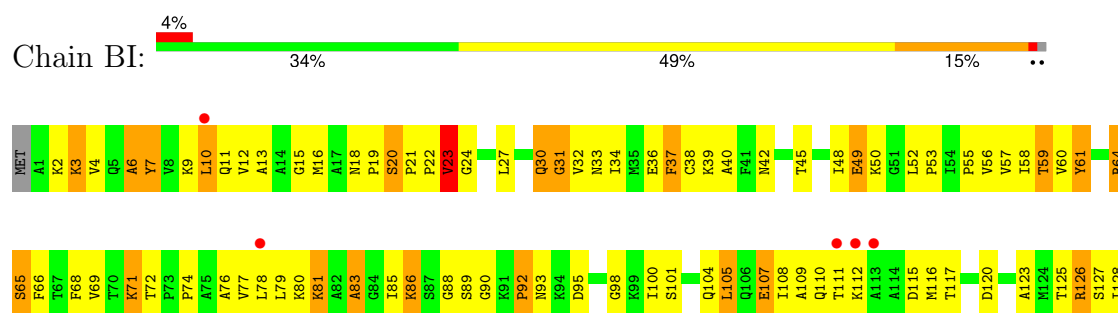
• Molecule 31: 50S ribosomal protein L9



• Molecule 31: 50S ribosomal protein L9

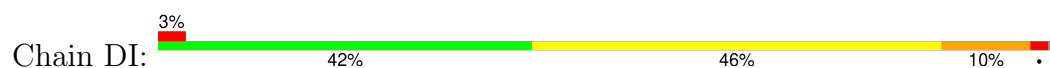


• Molecule 32: 50S ribosomal protein L11

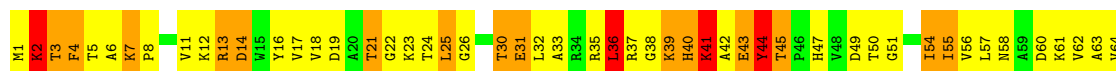
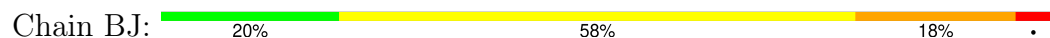




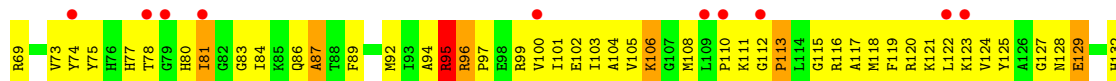
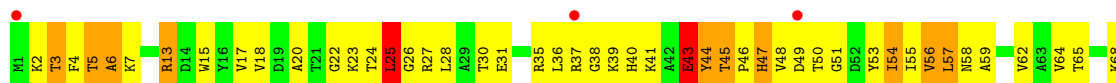
- Molecule 32: 50S ribosomal protein L11



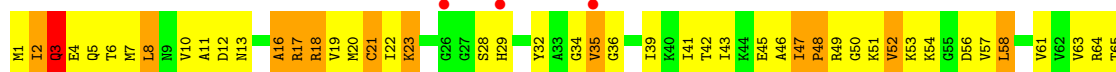
- Molecule 33: 50S ribosomal protein L13

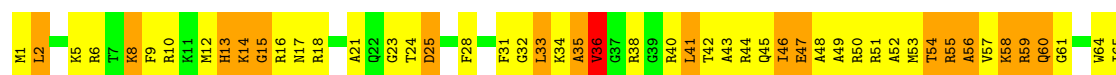


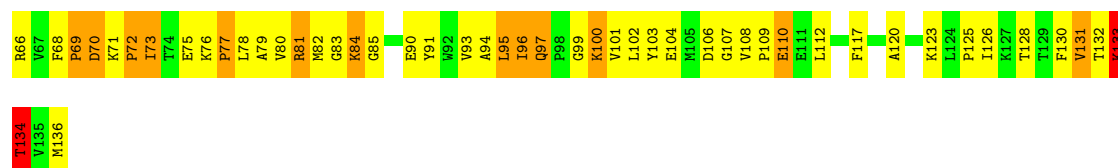
- Molecule 33: 50S ribosomal protein L13



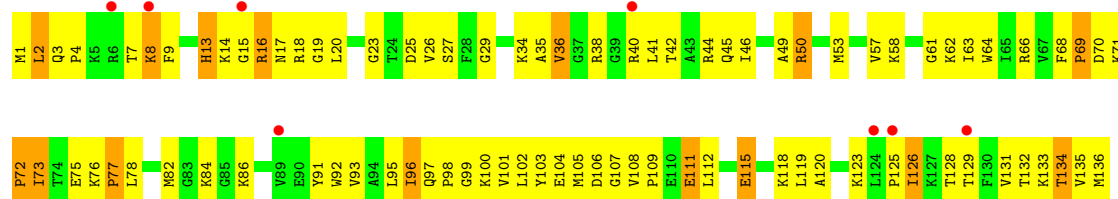
- Molecule 34: 50S ribosomal protein L14



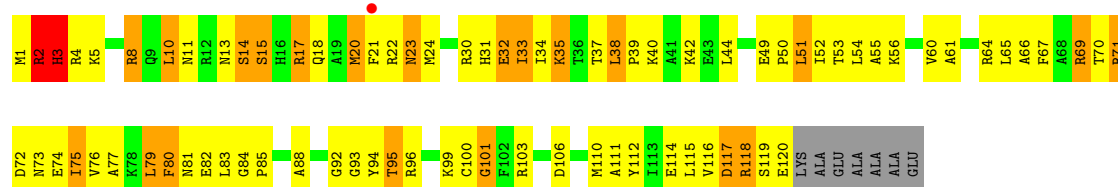




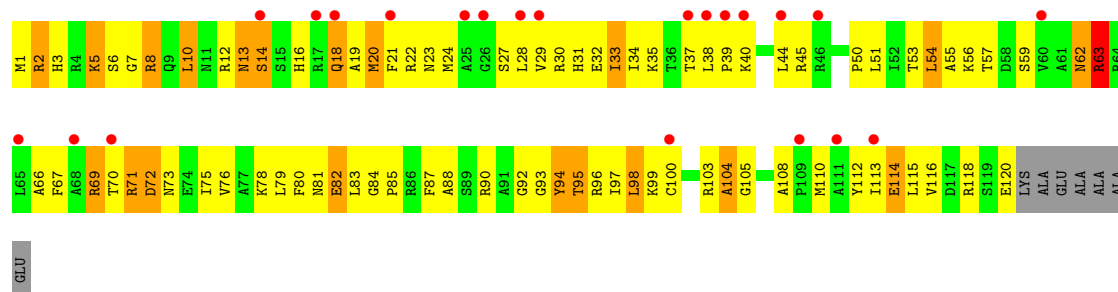
• Molecule 36: 50S ribosomal protein L16



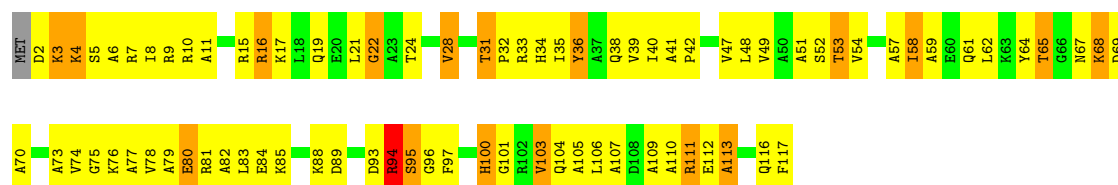
• Molecule 37: 50S ribosomal protein L17



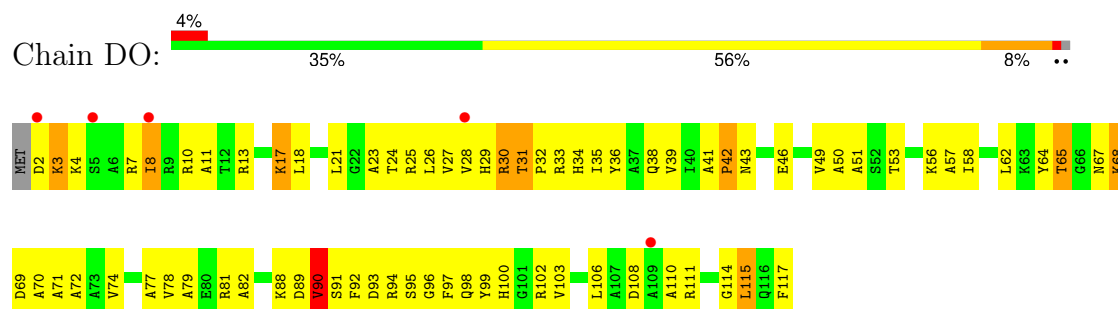
• Molecule 37: 50S ribosomal protein L17



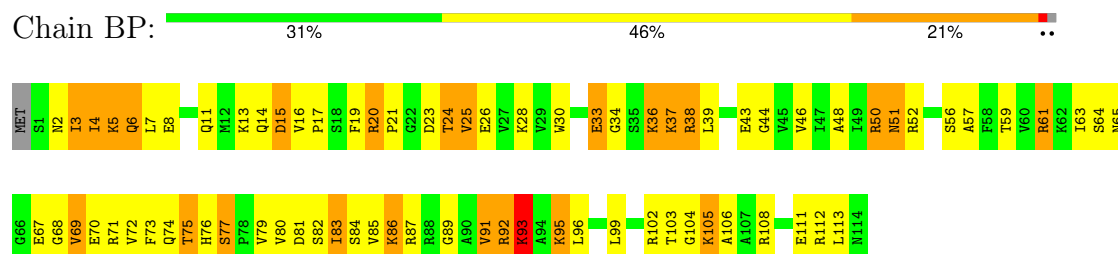
• Molecule 38: 50S ribosomal protein L18



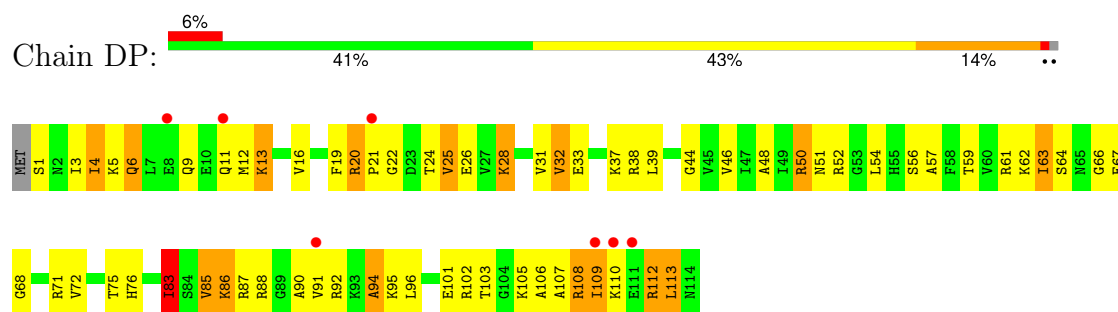
- Molecule 38: 50S ribosomal protein L18



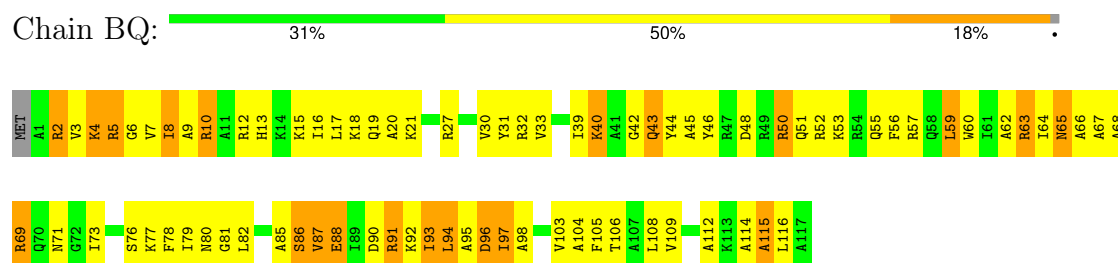
- Molecule 39: 50S ribosomal protein L19



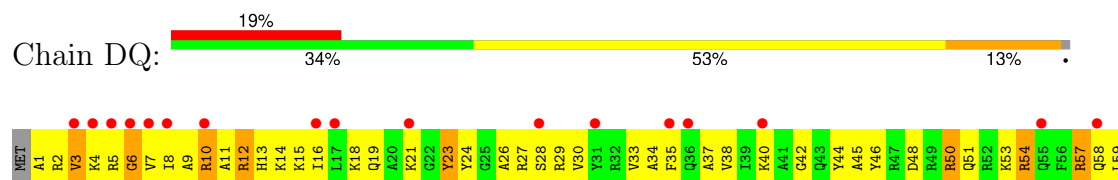
- Molecule 39: 50S ribosomal protein L19

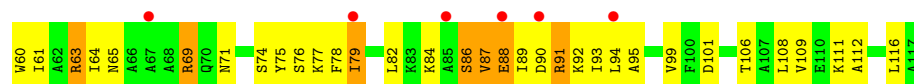


- Molecule 40: 50S ribosomal protein L20

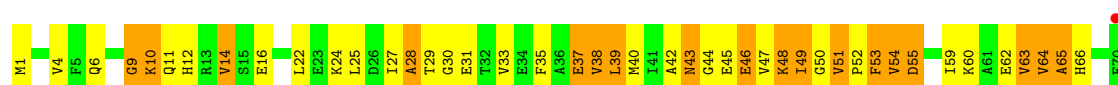


- Molecule 40: 50S ribosomal protein L20

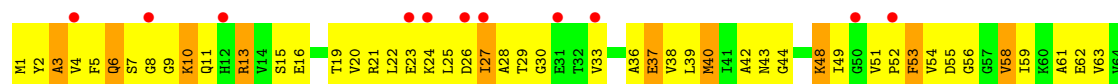




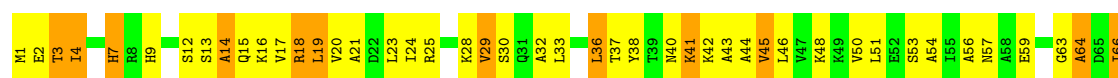
- Molecule 41: 50S ribosomal protein L21



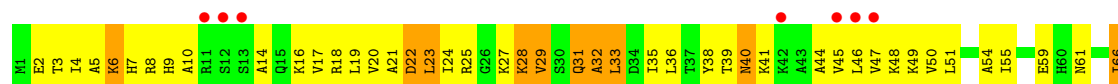
- Molecule 41: 50S ribosomal protein L21



- Molecule 42: 50S ribosomal protein L22

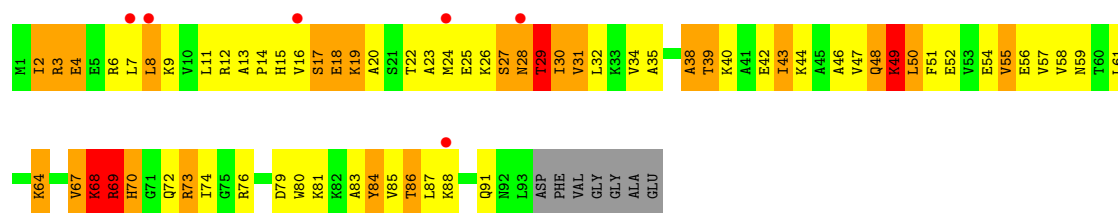


- Molecule 42: 50S ribosomal protein L22



- Molecule 43: 50S ribosomal protein L23





• Molecule 43: 50S ribosomal protein L23



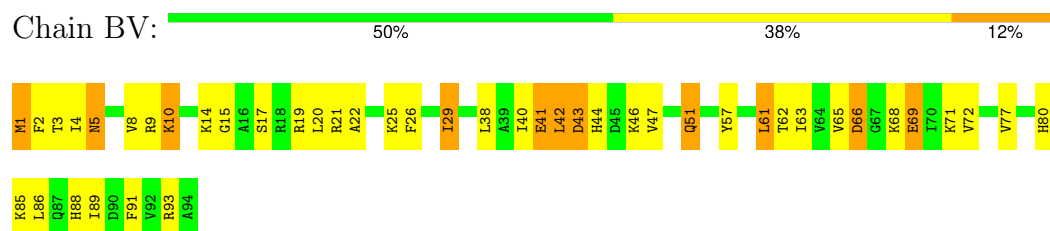
• Molecule 44: 50S ribosomal protein L24



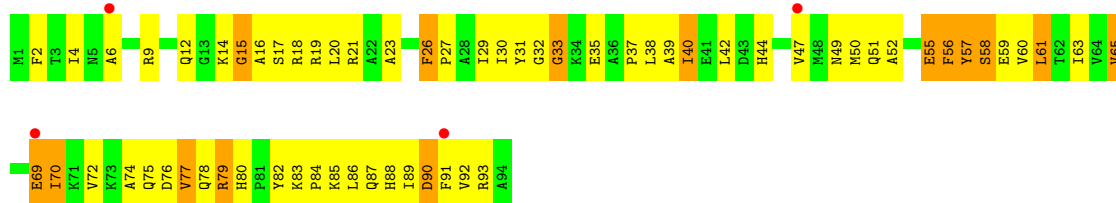
• Molecule 44: 50S ribosomal protein L24



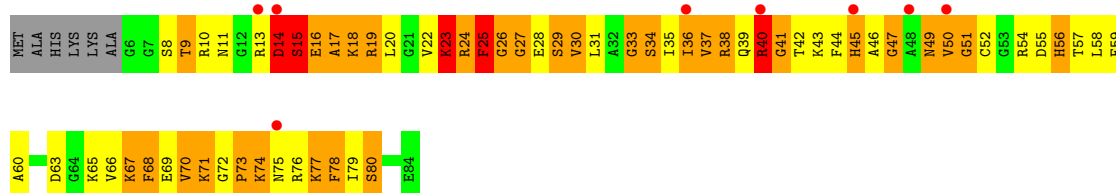
• Molecule 45: 50S ribosomal protein L25



• Molecule 45: 50S ribosomal protein L25



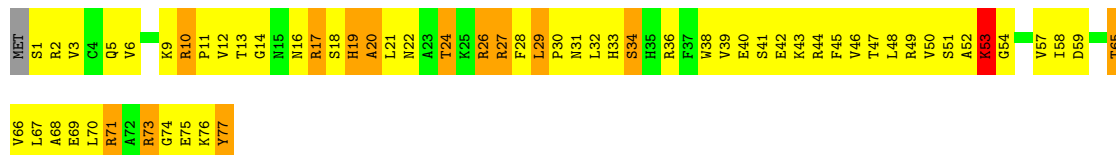
- Molecule 46: 50S ribosomal protein L27



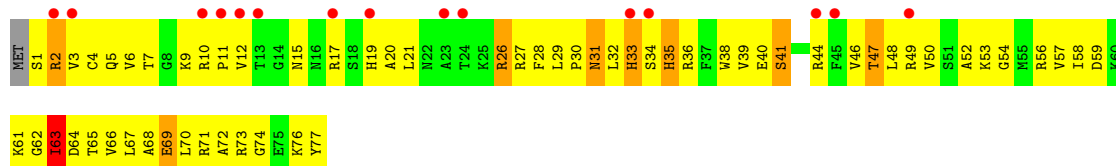
- Molecule 46: 50S ribosomal protein L27



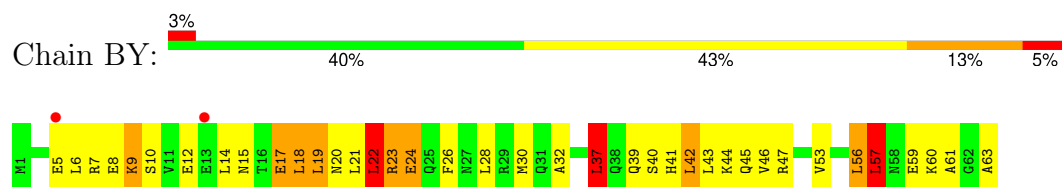
- Molecule 47: 50S ribosomal protein L28



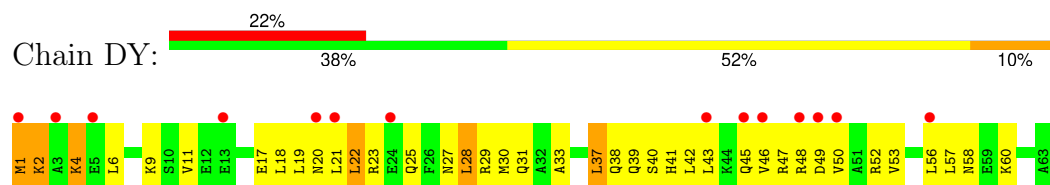
- Molecule 47: 50S ribosomal protein L28



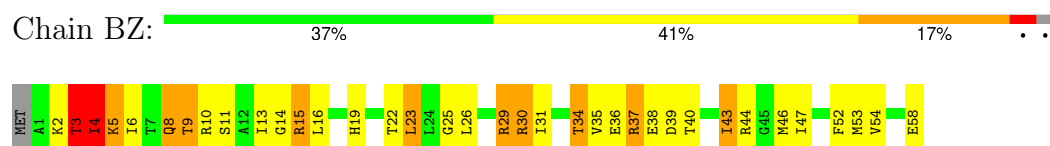
- Molecule 48: 50S ribosomal protein L29



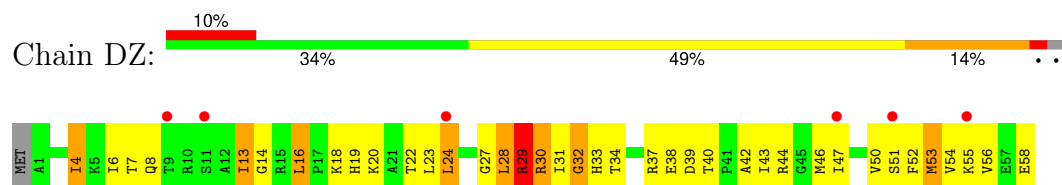
- Molecule 48: 50S ribosomal protein L29



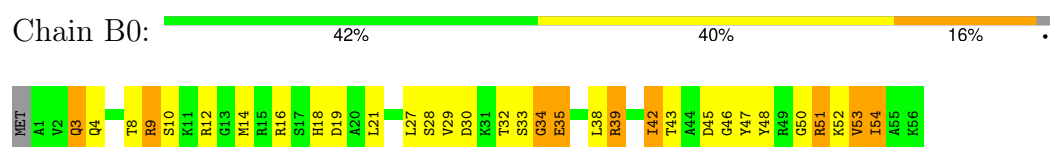
- Molecule 49: 50S ribosomal protein L30



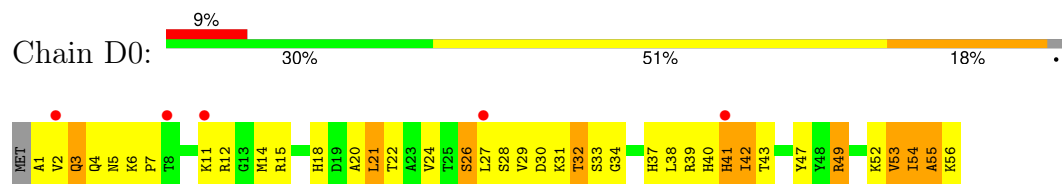
- Molecule 49: 50S ribosomal protein L30



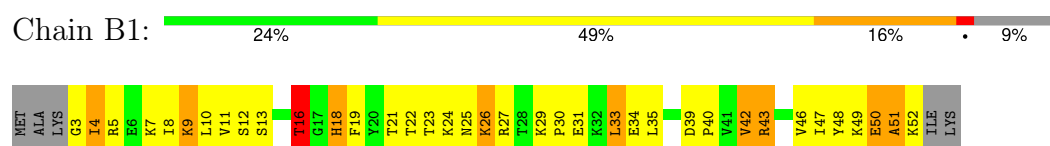
- Molecule 50: 50S ribosomal protein L32



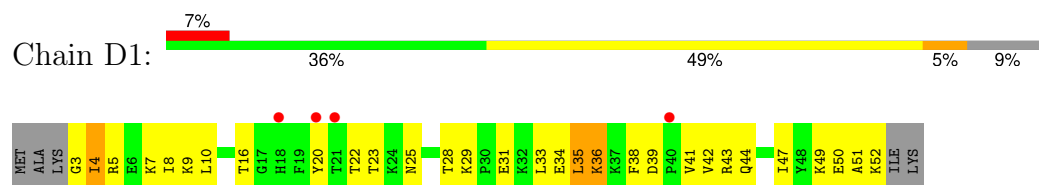
- Molecule 50: 50S ribosomal protein L32



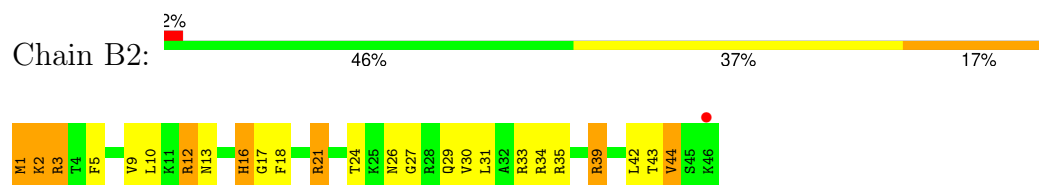
- Molecule 51: 50S ribosomal protein L33



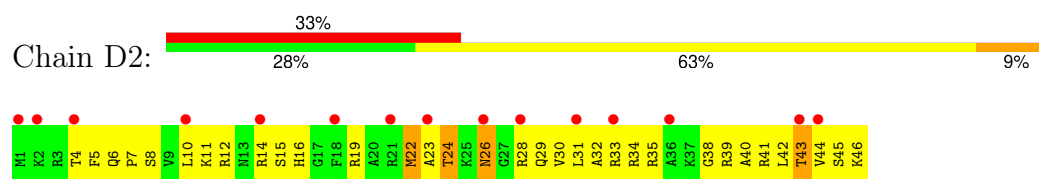
- Molecule 51: 50S ribosomal protein L33



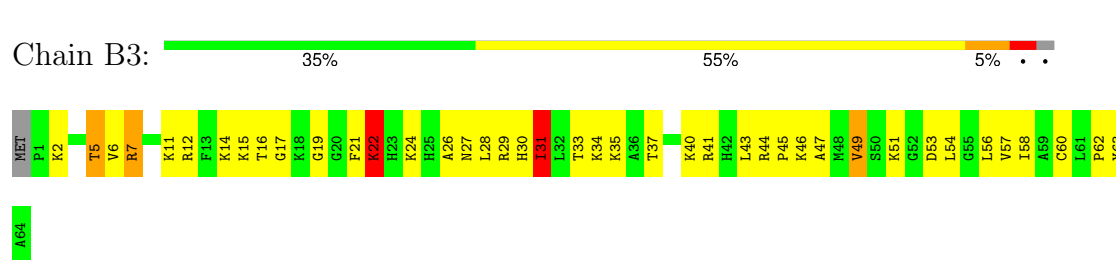
- Molecule 52: 50S ribosomal protein L34



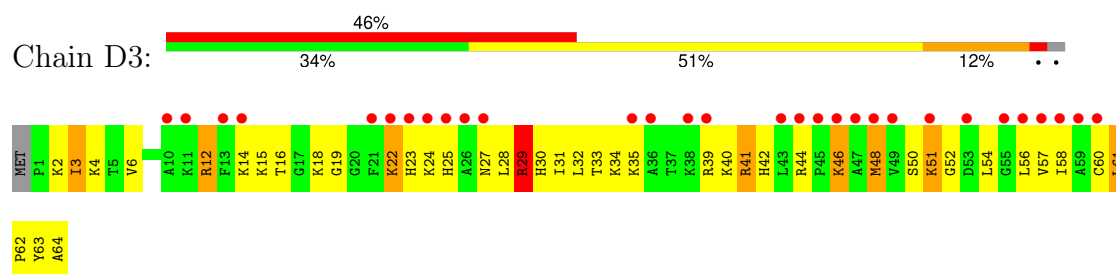
- Molecule 52: 50S ribosomal protein L34



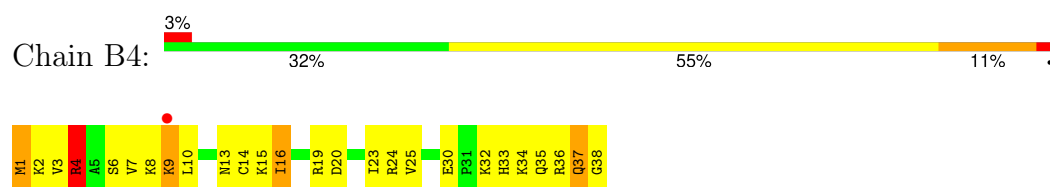
- Molecule 53: 50S ribosomal protein L35



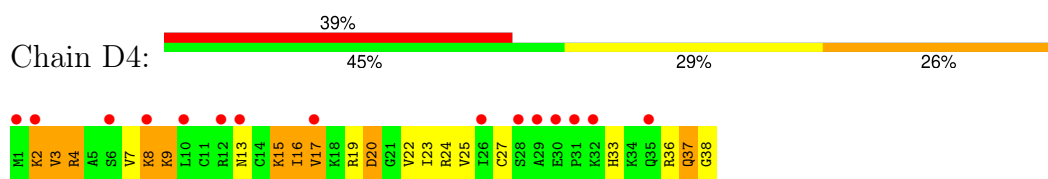
- Molecule 53: 50S ribosomal protein L35



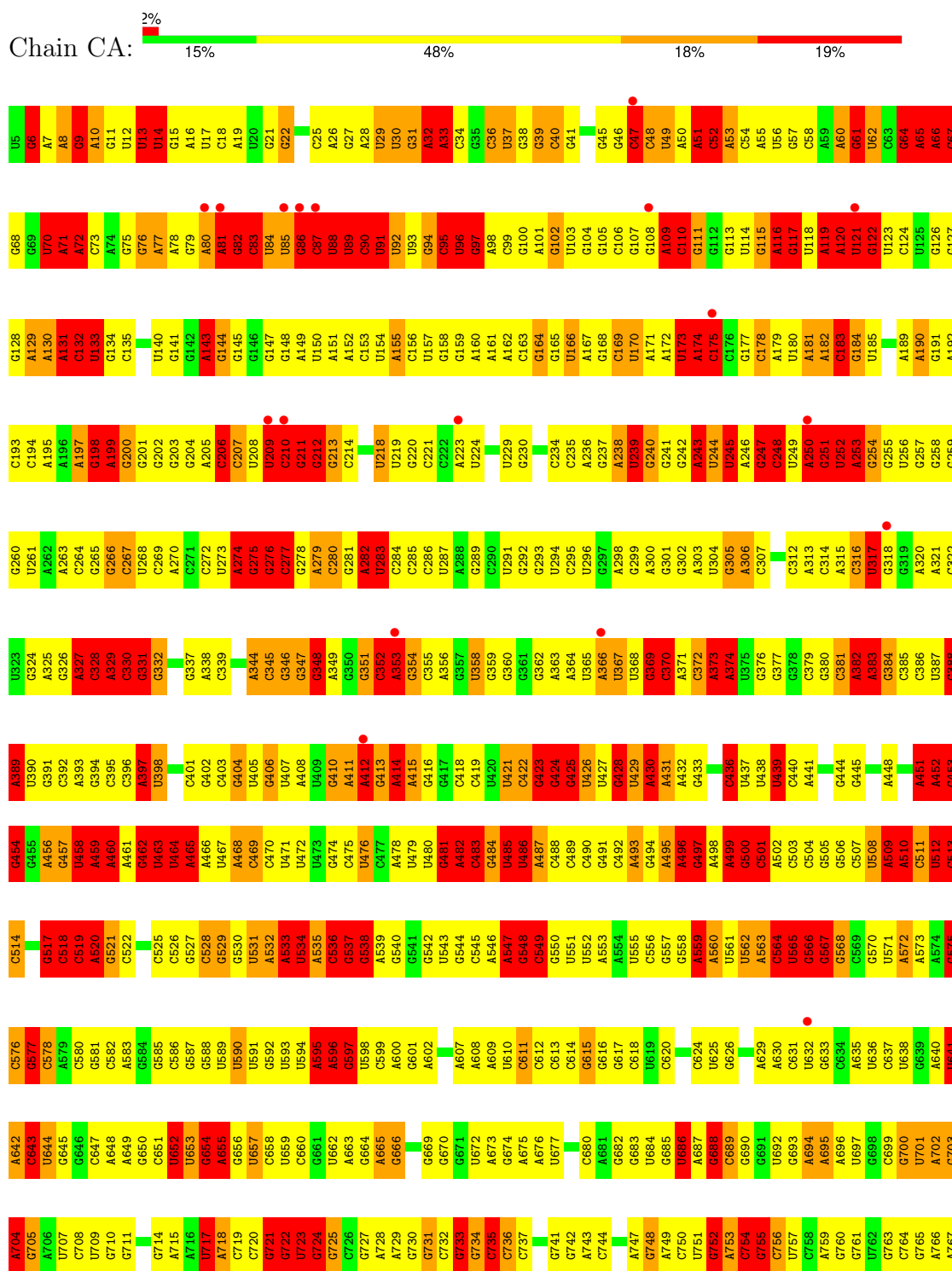
- Molecule 54: 50S ribosomal protein L36

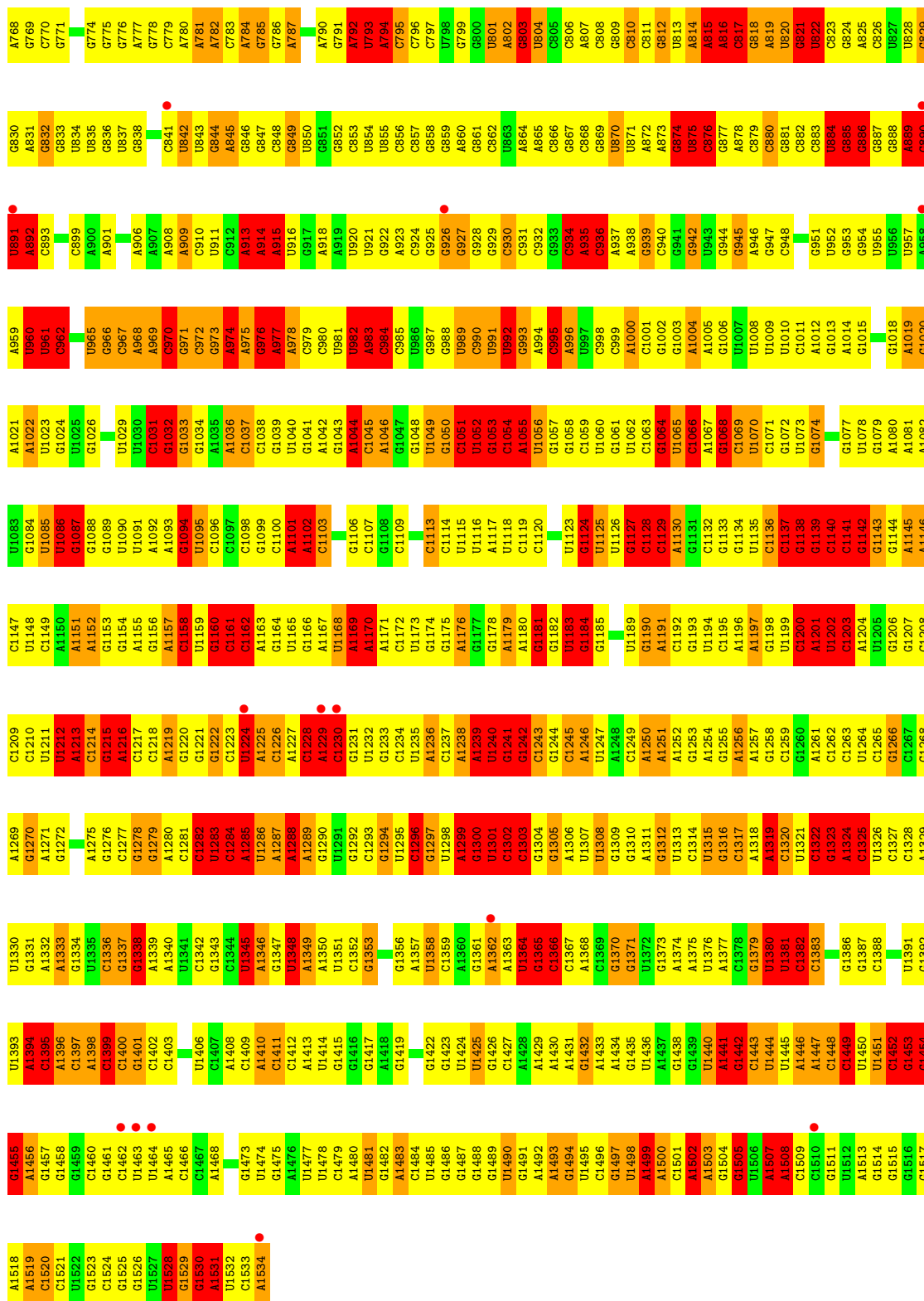


- Molecule 54: 50S ribosomal protein L36

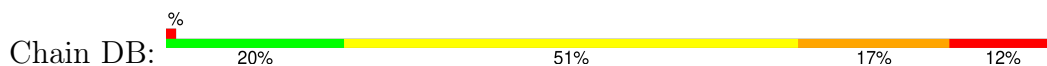


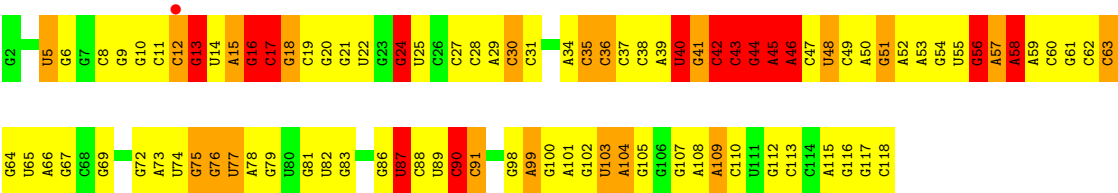
• Molecule 55: 16S rRNA





- Molecule 56: 5S rRNA





4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	210.95Å 433.08Å 624.50Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	73.44 – 3.71 73.44 – 3.71	Depositor EDS
% Data completeness (in resolution range)	75.7 (73.44-3.71) 75.7 (73.44-3.71)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.39 (at 3.67Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.227 , 0.268 0.235 , 0.275	Depositor DCC
R_{free} test set	9161 reflections (2.02%)	wwPDB-VP
Wilson B-factor (Å ²)	109.1	Xtriage
Anisotropy	0.249	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.26 , 87.3	EDS
L-test for twinning ²	$\langle L \rangle = 0.44$, $\langle L^2 \rangle = 0.26$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	286150	wwPDB-VP
Average B, all atoms (Å ²)	163.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.08% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, ZN

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	AB	0.25	0/1735	0.47	0/2338
1	CB	0.25	0/1735	0.46	0/2338
2	AC	0.27	0/1651	0.48	0/2225
2	CC	0.26	0/1651	0.47	0/2225
3	AD	0.27	0/1665	0.48	0/2227
3	CD	0.30	0/1665	0.50	0/2227
4	AE	0.30	0/1118	0.54	0/1504
4	CE	0.29	0/1118	0.53	0/1504
5	AF	0.26	0/835	0.46	0/1128
5	CF	0.26	0/835	0.46	0/1128
6	AG	0.25	0/1195	0.43	0/1602
6	CG	0.27	0/1187	0.50	0/1591
7	AH	0.27	0/989	0.50	0/1326
7	CH	0.25	0/989	0.47	0/1326
8	AI	0.24	0/1034	0.45	0/1375
8	CI	0.25	0/1034	0.47	0/1375
9	AJ	0.25	0/796	0.48	0/1077
9	CJ	0.24	0/796	0.47	0/1077
10	AK	0.26	0/893	0.48	0/1205
10	CK	0.26	0/893	0.50	0/1205
11	AL	0.33	0/969	0.62	0/1300
11	CL	0.31	0/969	0.53	0/1300
12	AM	0.36	0/892	0.64	3/1193 (0.3%)
12	CM	0.38	0/884	0.53	0/1181
13	AN	0.26	0/785	0.48	0/1043
13	CN	0.25	0/780	0.43	0/1036
14	AO	0.26	0/722	0.48	0/964
14	CO	0.24	0/722	0.46	0/964
15	AP	0.27	0/659	0.46	0/884
15	CP	0.27	0/648	0.47	0/870
16	AQ	0.33	0/657	0.55	0/881
16	CQ	0.26	0/657	0.46	0/881

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AR	0.25	0/462	0.48	0/621
17	CR	0.27	0/462	0.49	0/621
18	AS	0.24	0/652	0.43	0/877
18	CS	0.23	0/652	0.46	0/877
19	AT	0.29	0/671	0.51	0/888
19	CT	0.24	0/671	0.44	0/888
20	AU	0.27	0/430	0.46	0/570
20	CU	0.29	0/430	0.54	0/570
21	AA	0.55	1/36834 (0.0%)	1.44	678/57462 (1.2%)
22	AV	0.59	0/408	1.14	1/634 (0.2%)
22	AX	0.52	0/408	1.04	0/634
22	CV	0.56	0/408	1.14	0/634
22	CX	0.41	0/408	0.82	0/634
23	AW	0.88	0/131	1.88	5/200 (2.5%)
23	CW	0.73	0/131	1.93	7/200 (3.5%)
24	BA	0.76	12/68626 (0.0%)	1.69	1758/107056 (1.6%)
24	DA	0.53	1/68314 (0.0%)	1.46	1365/106569 (1.3%)
25	BB	0.66	0/2828	1.67	74/4410 (1.7%)
26	BC	0.45	0/2121	0.72	1/2852 (0.0%)
26	DC	0.33	0/2121	0.54	0/2852
27	BD	0.50	0/1586	0.75	1/2134 (0.0%)
27	DD	0.31	0/1586	0.55	0/2134
28	BE	0.44	0/1571	0.67	0/2113
28	DE	0.25	0/1571	0.47	0/2113
29	BF	0.41	0/1434	0.68	3/1926 (0.2%)
29	DF	0.35	0/1444	0.73	5/1937 (0.3%)
30	BG	0.43	0/1343	0.65	0/1816
30	DG	0.23	0/1343	0.46	0/1816
31	BH	0.70	6/1122 (0.5%)	0.83	6/1515 (0.4%)
31	DH	0.53	3/1122 (0.3%)	0.67	3/1515 (0.2%)
32	BI	0.24	0/1046	0.50	0/1410
32	DI	0.23	0/1046	0.44	0/1410
33	BJ	0.55	0/1152	0.75	0/1551
33	DJ	0.28	0/1152	0.55	0/1551
34	BK	0.55	0/947	0.83	0/1268
34	DK	0.31	0/947	0.54	0/1268
35	BL	0.42	0/1054	0.77	1/1403 (0.1%)
35	DL	0.27	0/1054	0.51	0/1403
36	BM	0.51	0/1093	0.77	1/1460 (0.1%)
36	DM	0.31	0/1093	0.48	0/1460
37	BN	0.55	0/973	0.79	0/1301
37	DN	0.27	0/973	0.49	0/1301
38	BO	0.42	0/902	0.63	0/1209

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DO	0.24	0/902	0.44	0/1209
39	BP	0.51	0/929	0.77	0/1242
39	DP	0.28	0/929	0.49	0/1242
40	BQ	0.60	0/960	0.71	0/1278
40	DQ	0.28	0/960	0.46	0/1278
41	BR	0.56	0/829	0.85	1/1107 (0.1%)
41	DR	0.28	0/829	0.50	0/1107
42	BS	0.50	0/864	0.75	0/1156
42	DS	0.29	0/864	0.54	0/1156
43	BT	0.48	0/744	0.70	0/994
43	DT	0.25	0/744	0.49	0/994
44	BU	0.41	0/787	0.70	0/1051
44	DU	0.25	0/787	0.47	0/1051
45	BV	0.48	0/766	0.66	0/1025
45	DV	0.38	0/766	0.54	0/1025
46	BW	0.51	0/603	0.76	0/797
46	DW	0.26	0/603	0.47	0/797
47	BX	0.42	0/635	0.67	0/848
47	DX	0.30	0/635	0.55	0/848
48	BY	0.40	0/510	0.66	0/677
48	DY	0.23	0/510	0.44	0/677
49	BZ	0.52	0/453	0.77	0/605
49	DZ	0.28	0/453	0.51	0/605
50	B0	0.45	0/450	0.79	0/599
50	D0	0.28	0/450	0.51	0/599
51	B1	0.40	0/416	0.63	0/554
51	D1	0.28	0/416	0.46	0/554
52	B2	0.47	0/380	0.73	0/498
52	D2	0.28	0/380	0.55	0/498
53	B3	0.51	0/513	0.76	0/676
53	D3	0.26	0/513	0.51	0/676
54	B4	0.47	0/303	0.76	0/397
54	D4	0.30	0/303	0.49	0/397
55	CA	0.53	0/36762	1.45	712/57350 (1.2%)
56	DB	0.52	0/2803	1.35	52/4371 (1.2%)
All	All	0.55	23/308631 (0.0%)	1.35	4677/461501 (1.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
12	AM	0	1
27	BD	0	1
31	BH	0	2
31	DH	0	3
37	BN	0	1
All	All	0	8

All (23) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	BA	1142	A	N9-C4	-13.92	1.29	1.37
31	BH	48	GLU	C-O	9.51	1.41	1.23
24	BA	2451	A	C8-N7	9.03	1.37	1.31
31	DH	49	ALA	CA-CB	-7.88	1.35	1.52
31	BH	48	GLU	CA-CB	6.93	1.69	1.53
24	DA	1060	U	C2-N3	6.91	1.42	1.37
31	DH	48	GLU	CB-CG	6.81	1.65	1.52
31	BH	48	GLU	CA-C	-6.56	1.35	1.52
31	BH	49	ALA	N-CA	6.50	1.59	1.46
24	BA	783	A	N9-C4	-6.32	1.34	1.37
24	BA	2447	G	C6-N1	6.31	1.44	1.39
24	BA	2860	A	C6-N6	6.00	1.38	1.33
24	BA	1086	A	N7-C5	-5.74	1.35	1.39
31	BH	47	PHE	CD2-CE2	5.54	1.50	1.39
24	BA	1876	A	N7-C5	5.51	1.42	1.39
31	BH	48	GLU	CD-OE1	5.45	1.31	1.25
21	AA	1097	C	C1'-N1	5.33	1.56	1.48
24	BA	2275	C	C1'-N1	5.32	1.56	1.48
24	BA	1142	A	C8-N7	5.29	1.35	1.31
24	BA	528	A	N7-C5	-5.26	1.36	1.39
31	DH	50	ARG	CB-CG	-5.09	1.38	1.52
24	BA	2857	G	N3-C4	5.05	1.39	1.35
24	BA	2884	U	C1'-N1	5.04	1.56	1.48

All (4677) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	2447	G	C6-N1-C2	-22.51	111.59	125.10
24	BA	2451	A	C5-N7-C8	-17.23	95.28	103.90
24	BA	2347	C	N1-C1'-C2'	-16.79	92.17	114.00
24	BA	790	U	P-O3'-C3'	-16.12	100.36	119.70
25	BB	88	C	O4'-C1'-N1	-15.24	96.01	108.20
24	BA	2447	G	C5-C6-O6	-15.23	119.46	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	2447	G	C5-C6-N1	15.21	119.11	111.50
24	BA	1023	U	N1-C1'-C2'	-15.17	94.28	114.00
24	BA	2424	C	N1-C1'-C2'	-15.08	94.40	114.00
24	BA	812	C	N1-C1'-C2'	-14.96	94.55	114.00
24	BA	740	C	N1-C1'-C2'	-14.69	94.91	114.00
24	BA	1022	G	P-O3'-C3'	14.59	137.21	119.70
24	BA	206	U	N1-C1'-C2'	-14.54	95.09	114.00
24	BA	2752	C	N1-C1'-C2'	-14.37	95.33	114.00
24	BA	1675	C	N1-C1'-C2'	-14.18	95.56	114.00
29	DF	109	ARG	NE-CZ-NH1	-14.18	113.21	120.30
24	DA	2283	C	N1-C1'-C2'	-14.13	95.63	114.00
24	BA	373	U	N1-C1'-C2'	-14.03	95.77	114.00
24	BA	805	G	P-O3'-C3'	14.02	136.52	119.70
21	AA	1103	C	N1-C1'-C2'	-13.98	95.83	114.00
29	BF	112	ASP	CB-CG-OD2	-13.89	105.80	118.30
24	DA	861	A	P-O3'-C3'	-13.83	103.11	119.70
21	AA	117	G	P-O3'-C3'	-13.79	103.16	119.70
24	DA	2586	U	N1-C1'-C2'	-13.74	96.14	114.00
24	BA	1142	A	C5-N7-C8	-13.73	97.04	103.90
55	CA	590	U	N1-C1'-C2'	-13.65	96.26	114.00
21	AA	1259	C	P-O3'-C3'	-13.62	103.36	119.70
21	AA	687	A	P-O3'-C3'	13.62	136.04	119.70
21	AA	795	C	N1-C1'-C2'	-13.59	96.33	114.00
24	BA	1681	G	P-O3'-C3'	13.57	135.98	119.70
24	BA	1461	C	N1-C1'-C2'	-13.54	96.41	114.00
24	BA	946	C	N1-C1'-C2'	-13.52	96.42	114.00
24	BA	435	C	N1-C1'-C2'	-13.49	96.47	114.00
24	DA	1956	U	N1-C1'-C2'	-13.43	96.54	114.00
24	BA	2036	C	N1-C1'-C2'	-13.41	96.57	114.00
24	DA	1499	C	N1-C1'-C2'	-13.40	96.58	114.00
55	CA	960	U	O4'-C1'-N1	13.36	118.89	108.20
24	BA	2504	U	N1-C1'-C2'	-13.29	96.72	114.00
29	DF	109	ARG	NE-CZ-NH2	13.28	126.94	120.30
24	BA	249	C	P-O3'-C3'	13.26	135.62	119.70
24	DA	832	U	N1-C1'-C2'	-13.26	96.76	114.00
21	AA	173	U	O4'-C1'-N1	13.25	118.80	108.20
24	BA	686	U	O4'-C1'-N1	13.24	118.79	108.20
24	DA	1536	C	P-O3'-C3'	13.22	135.57	119.70
24	BA	919	U	N1-C2-O2	13.20	132.04	122.80
24	DA	2441	U	N1-C1'-C2'	-13.20	96.84	114.00
24	DA	1267	U	N1-C1'-C2'	-13.20	96.85	114.00
24	DA	741	U	N1-C1'-C2'	-13.18	96.86	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	891	U	N1-C1'-C2'	-13.17	96.88	114.00
24	DA	2403	C	N1-C1'-C2'	-13.16	96.89	114.00
24	DA	964	C	N1-C1'-C2'	-13.16	96.89	114.00
24	BA	2629	U	P-O3'-C3'	13.16	135.49	119.70
24	DA	1060	U	C5-C4-O4	-13.15	118.01	125.90
55	CA	1302	C	N1-C1'-C2'	-13.11	96.95	114.00
24	DA	1612	C	N1-C1'-C2'	-13.10	96.97	114.00
25	BB	16	G	P-O3'-C3'	-13.09	103.99	119.70
24	BA	1142	A	N3-C4-N9	-13.07	116.95	127.40
21	AA	52	C	N1-C1'-C2'	-13.00	97.09	114.00
55	CA	512	U	N1-C1'-C2'	-13.00	97.10	114.00
21	AA	169	C	O4'-C1'-N1	12.99	118.59	108.20
24	BA	2068	U	N1-C1'-C2'	-12.98	97.12	114.00
24	BA	1815	A	P-O3'-C3'	12.96	135.25	119.70
55	CA	1345	U	O4'-C1'-N1	12.93	118.55	108.20
24	BA	1760	C	N1-C1'-C2'	-12.90	97.22	114.00
24	DA	1556	C	N1-C1'-C2'	-12.85	97.29	114.00
24	BA	1082	U	C2-N3-C4	-12.85	119.29	127.00
24	DA	1023	U	N1-C1'-C2'	-12.83	97.32	114.00
25	BB	90	C	N1-C1'-C2'	-12.82	97.33	114.00
24	BA	2575	C	C2-N3-C4	-12.82	113.49	119.90
24	DA	2061	G	P-O3'-C3'	12.80	135.06	119.70
24	BA	2238	G	P-O3'-C3'	12.76	135.01	119.70
24	DA	2504	U	N1-C1'-C2'	-12.75	97.42	114.00
24	DA	1611	C	N1-C1'-C2'	-12.74	97.43	114.00
24	BA	1019	U	C2-N3-C4	-12.72	119.37	127.00
24	BA	646	U	N1-C1'-C2'	-12.71	97.47	114.00
24	BA	919	U	C2-N1-C1'	12.71	132.95	117.70
24	DA	2063	C	N1-C1'-C2'	-12.71	97.48	114.00
24	BA	302	C	N1-C1'-C2'	-12.68	97.52	114.00
24	BA	919	U	C5-C6-N1	12.66	129.03	122.70
55	CA	936	C	P-O3'-C3'	-12.64	104.53	119.70
55	CA	891	U	N1-C1'-C2'	-12.64	97.57	114.00
24	BA	1210	G	P-O3'-C3'	12.60	134.82	119.70
21	AA	327	A	P-O3'-C3'	12.57	134.79	119.70
24	DA	1963	U	N1-C1'-C2'	-12.55	97.68	114.00
56	DB	90	C	N1-C1'-C2'	-12.52	97.72	114.00
24	BA	2451	A	N7-C8-N9	12.51	120.05	113.80
55	CA	1325	C	N1-C1'-C2'	-12.49	97.76	114.00
24	BA	1396	U	O4'-C1'-N1	12.49	118.19	108.20
24	DA	2493	U	N1-C1'-C2'	-12.48	97.78	114.00
24	BA	2833	U	P-O3'-C3'	12.47	134.66	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	2568	U	N1-C1'-C2'	-12.46	97.80	114.00
24	DA	813	U	N1-C1'-C2'	-12.45	97.82	114.00
24	BA	2225	A	P-O3'-C3'	12.42	134.61	119.70
24	BA	1247	A	P-O3'-C3'	12.42	134.60	119.70
55	CA	1086	U	N1-C1'-C2'	-12.41	97.87	114.00
24	DA	784	G	P-O3'-C3'	12.40	134.58	119.70
24	BA	164	C	P-O3'-C3'	-12.39	104.83	119.70
24	BA	1965	C	P-O3'-C3'	-12.38	104.85	119.70
24	DA	76	C	N1-C1'-C2'	-12.37	97.92	114.00
24	DA	807	U	N1-C1'-C2'	-12.37	97.92	114.00
24	BA	1648	U	N1-C1'-C2'	-12.36	97.93	114.00
24	BA	860	U	N1-C1'-C2'	-12.36	97.94	114.00
55	CA	133	U	N1-C1'-C2'	-12.35	97.95	114.00
24	BA	1914	C	N1-C1'-C2'	-12.33	97.97	114.00
55	CA	483	C	N1-C1'-C2'	-12.32	97.98	114.00
24	BA	2630	G	P-O3'-C3'	-12.32	104.92	119.70
55	CA	1162	C	N1-C1'-C2'	-12.28	98.04	114.00
24	DA	87	U	N1-C1'-C2'	-12.27	98.05	114.00
25	BB	37	C	N1-C1'-C2'	-12.27	98.05	114.00
21	AA	1345	U	P-O3'-C3'	12.21	134.36	119.70
21	AA	915	A	P-O3'-C3'	-12.20	105.06	119.70
24	BA	688	U	N1-C1'-C2'	-12.17	98.17	114.00
24	DA	2520	C	N1-C1'-C2'	-12.17	98.17	114.00
21	AA	590	U	N1-C1'-C2'	-12.16	98.19	114.00
24	DA	658	U	N1-C1'-C2'	-12.14	98.22	114.00
24	DA	375	G	P-O3'-C3'	-12.14	105.14	119.70
55	CA	1213	A	P-O3'-C3'	12.10	134.22	119.70
55	CA	67	C	O4'-C1'-N1	12.07	117.86	108.20
21	AA	725	G	P-O3'-C3'	-12.06	105.23	119.70
24	DA	460	A	P-O3'-C3'	-12.05	105.24	119.70
55	CA	33	A	P-O3'-C3'	-12.04	105.25	119.70
55	CA	565	U	N1-C1'-C2'	-12.02	98.37	114.00
24	BA	1558	C	P-O3'-C3'	12.02	134.12	119.70
21	AA	519	C	N1-C1'-C2'	-11.99	98.41	114.00
21	AA	1203	C	P-O3'-C3'	-11.98	105.32	119.70
24	BA	685	A	P-O3'-C3'	11.98	134.08	119.70
55	CA	348	G	P-O3'-C3'	-11.98	105.32	119.70
24	BA	614	A	P-O3'-C3'	11.97	134.07	119.70
24	BA	1142	A	N3-C4-C5	11.97	135.18	126.80
24	BA	1499	C	N1-C1'-C2'	-11.97	98.44	114.00
55	CA	245	U	N1-C1'-C2'	-11.95	98.46	114.00
24	DA	534	U	N1-C1'-C2'	-11.94	98.48	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	2261	C	N1-C1'-C2'	-11.94	98.48	114.00
24	BA	1145	C	P-O5'-C5'	-11.93	101.82	120.90
24	DA	392	U	N1-C1'-C2'	-11.91	98.51	114.00
24	DA	1539	U	N1-C1'-C2'	-11.91	98.52	114.00
24	BA	1993	U	N1-C1'-C2'	-11.91	98.52	114.00
21	AA	110	C	N1-C1'-C2'	-11.89	98.54	114.00
24	BA	2447	G	P-O3'-C3'	11.89	133.97	119.70
24	BA	2447	G	N3-C4-C5	-11.87	122.66	128.60
21	AA	597	G	P-O3'-C3'	-11.87	105.46	119.70
24	BA	2023	C	N1-C1'-C2'	-11.85	98.60	114.00
24	DA	313	G	P-O3'-C3'	-11.85	105.48	119.70
21	AA	276	G	P-O3'-C3'	-11.84	105.49	119.70
24	BA	2857	G	C2-N3-C4	-11.83	105.98	111.90
24	BA	2283	C	N1-C1'-C2'	-11.83	98.62	114.00
24	DA	1916	A	P-O3'-C3'	-11.83	105.51	119.70
21	AA	1182	G	P-O3'-C3'	11.82	133.88	119.70
55	CA	886	G	P-O3'-C3'	-11.80	105.53	119.70
24	DA	2429	G	P-O3'-C3'	-11.80	105.54	119.70
55	CA	1283	U	N1-C1'-C2'	-11.78	98.68	114.00
24	DA	576	U	N1-C1'-C2'	-11.78	98.69	114.00
24	DA	364	C	N1-C1'-C2'	-11.77	98.70	114.00
24	DA	413	C	N1-C1'-C2'	-11.77	98.71	114.00
24	DA	1655	A	P-O3'-C3'	-11.75	105.60	119.70
21	AA	1348	U	N1-C1'-C2'	-11.73	98.75	114.00
55	CA	1216	A	P-O3'-C3'	-11.73	105.63	119.70
55	CA	132	C	N1-C1'-C2'	-11.72	98.77	114.00
21	AA	1053	G	P-O3'-C3'	11.70	133.74	119.70
24	DA	1462	C	N1-C1'-C2'	-11.68	98.81	114.00
24	DA	437	U	N1-C1'-C2'	-11.67	98.83	114.00
24	BA	1802	A	P-O3'-C3'	-11.66	105.70	119.70
55	CA	876	C	N1-C1'-C2'	-11.66	98.84	114.00
24	DA	1683	U	N1-C1'-C2'	-11.65	98.85	114.00
24	BA	1965	C	N1-C1'-C2'	-11.64	98.87	114.00
21	AA	352	C	N1-C1'-C2'	-11.61	98.91	114.00
21	AA	422	C	P-O3'-C3'	11.60	133.62	119.70
24	BA	2425	A	P-O3'-C3'	11.60	133.62	119.70
24	DA	128	C	N1-C1'-C2'	-11.59	98.93	114.00
24	BA	1962	C	P-O3'-C3'	11.59	133.60	119.70
24	BA	138	U	N1-C1'-C2'	-11.57	98.96	114.00
24	BA	2848	G	P-O3'-C3'	11.54	133.55	119.70
55	CA	352	C	N1-C1'-C2'	-11.54	99.00	114.00
24	BA	2638	G	P-O3'-C3'	11.53	133.54	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1956	U	N1-C1'-C2'	-11.53	99.01	114.00
24	DA	2402	U	N1-C1'-C2'	-11.52	99.03	114.00
55	CA	328	C	P-O3'-C3'	11.50	133.50	119.70
24	DA	225	C	N1-C1'-C2'	-11.47	99.08	114.00
55	CA	1381	U	N1-C1'-C2'	-11.45	99.11	114.00
24	DA	2348	U	N1-C1'-C2'	-11.45	99.11	114.00
24	DA	617	G	P-O3'-C3'	-11.44	105.97	119.70
24	DA	325	G	P-O3'-C3'	-11.44	105.97	119.70
24	DA	672	C	N1-C1'-C2'	-11.44	99.13	114.00
55	CA	792	A	P-O3'-C3'	11.43	133.42	119.70
24	BA	633	A	N1-C6-N6	11.42	125.45	118.60
24	BA	442	G	P-O3'-C3'	11.40	133.38	119.70
24	BA	934	U	N1-C1'-C2'	-11.40	99.19	114.00
24	BA	1142	A	C4-C5-C6	-11.39	111.30	117.00
21	AA	1398	A	P-O3'-C3'	-11.37	106.06	119.70
55	CA	992	U	P-O3'-C3'	11.36	133.34	119.70
24	DA	1799	G	P-O3'-C3'	11.35	133.32	119.70
24	DA	2339	C	N1-C1'-C2'	-11.34	99.25	114.00
55	CA	439	U	N1-C1'-C2'	-11.34	99.26	114.00
55	CA	520	A	P-O3'-C3'	-11.34	106.10	119.70
24	BA	654	A	P-O3'-C3'	-11.33	106.11	119.70
55	CA	1366	C	P-O3'-C3'	-11.33	106.11	119.70
24	BA	200	U	N1-C1'-C2'	-11.31	99.30	114.00
24	DA	2896	C	N1-C1'-C2'	-11.31	99.30	114.00
55	CA	961	U	N1-C1'-C2'	-11.30	99.31	114.00
24	BA	2581	G	P-O3'-C3'	11.29	133.24	119.70
24	DA	1788	C	N1-C1'-C2'	-11.28	99.34	114.00
21	AA	719	C	N1-C1'-C2'	-11.26	99.36	114.00
55	CA	117	G	P-O3'-C3'	-11.25	106.20	119.70
55	CA	65	A	P-O3'-C3'	11.25	133.20	119.70
24	BA	436	C	N1-C1'-C2'	-11.24	99.39	114.00
24	BA	858	G	O4'-C1'-N9	11.24	117.19	108.20
24	BA	1380	G	P-O3'-C3'	-11.20	106.26	119.70
24	BA	1708	C	P-O3'-C3'	-11.18	106.28	119.70
21	AA	984	C	N1-C1'-C2'	-11.18	99.47	114.00
24	BA	489	G	P-O3'-C3'	11.17	133.11	119.70
21	AA	130	A	P-O3'-C3'	11.16	133.10	119.70
21	AA	374	A	P-O3'-C3'	-11.16	106.31	119.70
24	BA	303	G	P-O3'-C3'	-11.16	106.31	119.70
24	BA	957	C	P-O3'-C3'	11.15	133.09	119.70
24	BA	2440	C	N1-C1'-C2'	-11.15	99.50	114.00
24	BA	1971	U	N1-C1'-C2'	-11.15	99.51	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	2691	C	N1-C1'-C2'	-11.13	99.54	114.00
24	DA	2616	C	N1-C1'-C2'	-11.12	99.55	114.00
24	BA	1329	U	N1-C1'-C2'	11.09	128.41	114.00
24	DA	1997	C	N1-C1'-C2'	-11.07	99.61	114.00
21	AA	1168	U	P-O3'-C3'	11.06	132.97	119.70
24	BA	2645	G	O4'-C1'-N9	11.06	117.05	108.20
21	AA	185	U	N1-C1'-C2'	-11.06	99.62	114.00
55	CA	52	C	N1-C1'-C2'	-11.06	99.63	114.00
24	DA	1556	C	P-O3'-C3'	-11.05	106.44	119.70
24	BA	2051	A	P-O3'-C3'	11.05	132.96	119.70
24	BA	783	A	P-O3'-C3'	-11.04	106.45	119.70
24	DA	1046	A	P-O3'-C3'	11.04	132.95	119.70
55	CA	962	C	P-O3'-C3'	-11.04	106.45	119.70
24	BA	2385	C	P-O3'-C3'	-11.03	106.46	119.70
21	AA	109	A	P-O3'-C3'	11.03	132.93	119.70
24	DA	946	C	N1-C1'-C2'	-11.03	99.67	114.00
55	CA	590	U	P-O3'-C3'	-11.02	106.47	119.70
31	BH	49	ALA	CB-CA-C	11.02	126.63	110.10
24	DA	234	U	N1-C1'-C2'	-11.02	99.68	114.00
55	CA	1228	C	N1-C1'-C2'	-11.01	99.69	114.00
24	DA	789	A	P-O3'-C3'	11.01	132.91	119.70
24	DA	1478	G	P-O3'-C3'	-11.01	106.49	119.70
24	BA	2458	G	P-O3'-C3'	11.00	132.90	119.70
24	BA	1344	U	N1-C1'-C2'	-11.00	99.70	114.00
24	BA	671	C	N1-C1'-C2'	-11.00	99.70	114.00
24	DA	991	C	N1-C1'-C2'	-11.00	99.70	114.00
24	BA	1816	C	N1-C1'-C2'	-10.98	99.73	114.00
24	DA	1300	G	P-O3'-C3'	10.98	132.88	119.70
24	DA	2499	C	N1-C1'-C2'	-10.96	99.75	114.00
24	BA	784	G	P-O3'-C3'	10.96	132.85	119.70
24	BA	2866	U	O4'-C1'-N1	10.96	116.96	108.20
24	BA	1250	G	P-O3'-C3'	10.95	132.84	119.70
55	CA	962	C	N1-C1'-C2'	-10.95	99.77	114.00
55	CA	1449	C	N1-C1'-C2'	-10.94	99.77	114.00
55	CA	1045	C	N1-C1'-C2'	-10.94	99.78	114.00
21	AA	967	C	N1-C1'-C2'	-10.94	99.78	114.00
24	DA	765	C	N1-C1'-C2'	-10.93	99.79	114.00
24	DA	311	A	P-O3'-C3'	10.92	132.80	119.70
21	AA	14	U	N1-C1'-C2'	-10.91	99.81	114.00
55	CA	317	U	N1-C1'-C2'	-10.91	99.82	114.00
24	BA	2498	C	P-O5'-C5'	-10.91	103.45	120.90
21	AA	246	A	P-O3'-C3'	10.90	132.78	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	858	G	N1-C6-O6	-10.90	113.36	119.90
24	BA	1072	C	N1-C1'-C2'	-10.90	99.83	114.00
24	BA	1145	C	P-O3'-C3'	-10.90	106.62	119.70
24	BA	1539	U	N1-C1'-C2'	-10.89	99.85	114.00
25	BB	88	C	P-O3'-C3'	10.88	132.76	119.70
24	DA	444	C	N1-C1'-C2'	-10.88	99.85	114.00
24	BA	621	A	P-O3'-C3'	-10.88	106.64	119.70
24	BA	1060	U	C5-C4-O4	-10.88	119.37	125.90
24	BA	1265	A	P-O3'-C3'	10.86	132.73	119.70
56	DB	46	A	P-O3'-C3'	-10.86	106.67	119.70
31	BH	48	GLU	CB-CA-C	-10.85	88.70	110.40
24	DA	775	G	P-O3'-C3'	10.85	132.72	119.70
24	BA	1330	C	N1-C1'-C2'	-10.84	99.90	114.00
24	BA	2609	U	O4'-C1'-N1	10.84	116.87	108.20
24	DA	2612	C	N1-C1'-C2'	-10.84	99.91	114.00
21	AA	1259	C	N1-C1'-C2'	-10.83	99.92	114.00
21	AA	373	A	P-O3'-C3'	-10.81	106.73	119.70
21	AA	969	A	P-O3'-C3'	-10.81	106.73	119.70
24	BA	2451	A	C8-N9-C4	-10.81	101.48	105.80
55	CA	1141	C	N1-C1'-C2'	-10.81	99.95	114.00
24	BA	962	G	P-O3'-C3'	-10.79	106.76	119.70
24	DA	1400	U	N1-C1'-C2'	-10.79	99.98	114.00
24	DA	1552	A	O4'-C1'-N9	10.78	116.82	108.20
24	DA	1439	A	C5-C6-N1	-10.77	112.31	117.70
24	DA	1956	U	O4'-C1'-N1	10.77	116.81	108.20
24	DA	2240	U	O4'-C1'-N1	10.77	116.81	108.20
24	DA	1566	A	P-O3'-C3'	10.76	132.62	119.70
24	BA	1865	U	C2-N3-C4	-10.74	120.56	127.00
24	BA	1758	U	P-O3'-C3'	10.73	132.58	119.70
24	DA	1684	G	P-O3'-C3'	-10.73	106.83	119.70
21	AA	1161	C	O4'-C1'-N1	10.71	116.77	108.20
24	DA	2728	U	O4'-C1'-N1	10.70	116.76	108.20
24	DA	1967	C	N1-C1'-C2'	-10.69	100.10	114.00
24	DA	1013	C	N1-C1'-C2'	-10.69	100.11	114.00
55	CA	1202	U	N1-C1'-C2'	-10.68	100.11	114.00
24	DA	1304	A	P-O3'-C3'	-10.68	106.88	119.70
24	DA	2586	U	P-O3'-C3'	-10.68	106.89	119.70
24	DA	1816	C	N1-C1'-C2'	-10.67	100.13	114.00
24	DA	397	U	N1-C1'-C2'	-10.66	100.14	114.00
24	BA	2681	C	P-O3'-C3'	10.66	132.49	119.70
24	DA	1708	C	N1-C1'-C2'	-10.65	100.16	114.00
21	AA	1170	A	P-O3'-C3'	-10.65	106.92	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	2778	A	P-O3'-C3'	10.64	132.47	119.70
24	DA	2314	A	P-O3'-C3'	-10.63	106.94	119.70
55	CA	1528	U	P-O3'-C3'	10.63	132.46	119.70
24	BA	1126	A	P-O3'-C3'	10.62	132.44	119.70
24	DA	622	G	P-O3'-C3'	-10.61	106.97	119.70
21	AA	1140	C	O4'-C1'-N1	10.60	116.68	108.20
24	BA	1286	A	P-O3'-C3'	10.60	132.41	119.70
24	BA	2428	G	P-O3'-C3'	-10.59	106.99	119.70
24	BA	491	G	P-O3'-C3'	-10.58	107.01	119.70
24	BA	1329	U	P-O3'-C3'	10.57	132.38	119.70
24	DA	1126	A	P-O3'-C3'	10.57	132.39	119.70
21	AA	1141	C	N1-C1'-C2'	-10.54	100.30	114.00
21	AA	1203	C	N1-C1'-C2'	-10.54	100.30	114.00
24	BA	2383	G	P-O3'-C3'	-10.52	107.07	119.70
24	DA	1648	U	N1-C1'-C2'	-10.52	100.33	114.00
24	BA	2573	C	N1-C1'-C2'	-10.51	100.33	114.00
24	BA	1178	C	O4'-C1'-N1	10.51	116.60	108.20
55	CA	72	A	P-O3'-C3'	-10.50	107.10	119.70
24	BA	1717	A	P-O3'-C3'	-10.50	107.10	119.70
24	DA	421	C	P-O3'-C3'	10.49	132.29	119.70
24	BA	687	C	N1-C1'-C2'	-10.48	100.38	114.00
24	BA	1957	C	P-O3'-C3'	-10.47	107.13	119.70
24	BA	2214	C	N1-C1'-C2'	-10.47	100.39	114.00
55	CA	1161	C	N1-C1'-C2'	-10.47	100.39	114.00
21	AA	1283	U	N1-C1'-C2'	-10.46	100.40	114.00
55	CA	97	G	P-O3'-C3'	-10.46	107.15	119.70
21	AA	1366	C	P-O3'-C3'	-10.46	107.15	119.70
21	AA	995	C	N1-C1'-C2'	-10.45	100.41	114.00
23	AW	5	U	N1-C1'-C2'	-10.45	100.42	114.00
24	DA	2267	A	N1-C6-N6	10.43	124.86	118.60
24	BA	2333	A	P-O3'-C3'	10.42	132.21	119.70
24	BA	2200	C	N1-C1'-C2'	-10.42	100.45	114.00
24	DA	964	C	O4'-C1'-N1	10.41	116.53	108.20
55	CA	970	C	P-O3'-C3'	-10.41	107.21	119.70
24	DA	1499	C	O4'-C1'-N1	10.41	116.53	108.20
24	BA	100	U	P-O3'-C3'	10.41	132.19	119.70
24	BA	781	A	P-O3'-C3'	10.41	132.19	119.70
24	DA	321	U	O4'-C1'-N1	10.41	116.53	108.20
24	DA	225	C	O4'-C1'-N1	10.40	116.52	108.20
24	BA	726	G	P-O3'-C3'	10.40	132.18	119.70
55	CA	501	C	O4'-C1'-N1	10.40	116.52	108.20
21	AA	590	U	P-O3'-C3'	-10.39	107.23	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	753	A	P-O3'-C3'	10.39	132.17	119.70
21	AA	1202	U	N1-C1'-C2'	-10.39	100.49	114.00
24	BA	164	C	N1-C1'-C2'	-10.39	100.49	114.00
24	BA	730	A	P-O3'-C3'	-10.39	107.23	119.70
24	DA	2692	G	P-O3'-C3'	-10.38	107.24	119.70
21	AA	87	C	N1-C1'-C2'	-10.38	100.51	114.00
21	AA	122	G	P-O3'-C3'	-10.38	107.25	119.70
24	DA	206	U	N1-C1'-C2'	-10.38	100.51	114.00
24	BA	1490	A	P-O3'-C3'	10.36	132.14	119.70
24	BA	92	U	N1-C1'-C2'	-10.36	100.53	114.00
24	DA	2068	U	N1-C1'-C2'	-10.36	100.53	114.00
55	CA	370	C	N1-C1'-C2'	-10.36	100.53	114.00
24	BA	2326	C	P-O3'-C3'	10.36	132.13	119.70
55	CA	723	U	P-O3'-C3'	-10.36	107.27	119.70
24	DA	436	C	O4'-C1'-N1	10.36	116.48	108.20
24	DA	2261	C	P-O3'-C3'	-10.34	107.29	119.70
55	CA	643	C	N1-C1'-C2'	-10.34	100.56	114.00
24	DA	2226	C	N1-C1'-C2'	-10.33	100.57	114.00
24	DA	2611	C	N1-C1'-C2'	-10.33	100.57	114.00
24	DA	2447	G	P-O3'-C3'	10.32	132.09	119.70
55	CA	519	C	N1-C1'-C2'	-10.31	100.59	114.00
21	AA	1449	C	N1-C1'-C2'	-10.31	100.60	114.00
55	CA	283	U	N1-C1'-C2'	-10.31	100.60	114.00
21	AA	547	A	P-O3'-C3'	10.31	132.07	119.70
24	DA	1315	C	N1-C1'-C2'	-10.31	100.60	114.00
24	BA	1556	C	N1-C1'-C2'	-10.30	100.61	114.00
24	DA	1561	C	N1-C1'-C2'	-10.29	100.62	114.00
21	AA	705	G	P-O3'-C3'	-10.28	107.36	119.70
55	CA	84	U	P-O3'-C3'	10.28	132.04	119.70
24	BA	2336	A	P-O3'-C3'	10.27	132.03	119.70
24	DA	1667	G	P-O3'-C3'	10.27	132.03	119.70
55	CA	936	C	N1-C1'-C2'	-10.26	100.66	114.00
24	DA	2064	C	N1-C1'-C2'	-10.25	100.67	114.00
24	BA	2447	G	N1-C2-N3	10.25	130.05	123.90
24	BA	302	C	O4'-C1'-N1	10.24	116.40	108.20
24	BA	1810	A	P-O3'-C3'	-10.24	107.41	119.70
55	CA	501	C	N1-C1'-C2'	-10.24	100.69	114.00
21	AA	60	A	P-O3'-C3'	10.23	131.98	119.70
21	AA	995	C	P-O3'-C3'	-10.23	107.42	119.70
24	DA	2064	C	P-O3'-C3'	-10.23	107.42	119.70
24	DA	687	C	N1-C1'-C2'	-10.22	100.71	114.00
24	DA	2214	C	N1-C1'-C2'	-10.22	100.71	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	500	G	C2-N3-C4	-10.22	106.79	111.90
21	AA	1196	A	P-O3'-C3'	10.22	131.96	119.70
24	DA	234	U	O4'-C1'-N1	10.21	116.37	108.20
55	CA	1170	A	P-O3'-C3'	-10.20	107.47	119.70
24	BA	1478	G	N3-C4-N9	-10.19	119.88	126.00
24	BA	630	G	C2-N3-C4	-10.18	106.81	111.90
55	CA	508	U	P-O3'-C3'	10.18	131.92	119.70
55	CA	1203	C	N1-C1'-C2'	-10.18	100.77	114.00
24	BA	2880	C	P-O3'-C3'	-10.18	107.49	119.70
24	DA	53	A	P-O3'-C3'	-10.18	107.49	119.70
24	DA	792	A	P-O3'-C3'	10.18	131.91	119.70
24	DA	1049	C	N1-C1'-C2'	-10.16	100.79	114.00
24	BA	2451	A	C5-C6-N1	10.15	122.78	117.70
55	CA	735	C	P-O3'-C3'	-10.15	107.52	119.70
24	BA	2210	U	P-O3'-C3'	10.15	131.88	119.70
24	BA	2880	C	N1-C1'-C2'	-10.15	100.81	114.00
55	CA	96	U	N1-C1'-C2'	-10.14	100.81	114.00
55	CA	248	C	N1-C1'-C2'	-10.14	100.82	114.00
24	BA	86	G	P-O3'-C3'	-10.12	107.55	119.70
24	BA	1511	G	P-O3'-C3'	-10.11	107.57	119.70
55	CA	347	G	P-O3'-C3'	-10.11	107.57	119.70
24	DA	1957	C	P-O3'-C3'	-10.11	107.57	119.70
24	DA	2064	C	O4'-C1'-N1	10.11	116.28	108.20
24	BA	1732	C	P-O3'-C3'	10.10	131.82	119.70
24	BA	142	A	P-O3'-C3'	-10.10	107.58	119.70
24	BA	548	G	P-O3'-C3'	-10.09	107.59	119.70
24	DA	548	G	P-O3'-C3'	-10.09	107.59	119.70
55	CA	1052	U	N1-C1'-C2'	-10.09	100.89	114.00
24	DA	1114	C	N1-C1'-C2'	-10.08	100.90	114.00
21	AA	1366	C	N1-C1'-C2'	-10.07	100.90	114.00
24	DA	2581	G	P-O3'-C3'	10.06	131.77	119.70
24	BA	1475	G	P-O3'-C3'	10.06	131.77	119.70
24	BA	2266	A	P-O3'-C3'	10.05	131.76	119.70
24	DA	459	U	N1-C1'-C2'	-10.05	100.93	114.00
24	DA	2440	C	N1-C1'-C2'	-10.05	100.94	114.00
55	CA	874	G	P-O3'-C3'	-10.03	107.67	119.70
24	DA	997	G	P-O3'-C3'	-10.03	107.67	119.70
24	BA	2645	G	P-O3'-C3'	10.02	131.72	119.70
24	DA	445	C	N1-C1'-C2'	-10.01	100.99	114.00
55	CA	454	G	P-O3'-C3'	-10.00	107.70	119.70
24	BA	279	A	P-O3'-C3'	-10.00	107.70	119.70
24	BA	404	A	P-O3'-C3'	9.99	131.69	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	2023	C	N1-C1'-C2'	-9.99	101.01	112.00
21	AA	655	A	P-O3'-C3'	-9.98	107.73	119.70
24	BA	482	A	P-O3'-C3'	-9.96	107.74	119.70
24	BA	752	A	P-O3'-C3'	9.96	131.65	119.70
24	DA	273	G	P-O3'-C3'	-9.96	107.75	119.70
24	BA	1276	A	P-O3'-C3'	-9.95	107.76	119.70
55	CA	1508	A	P-O3'-C3'	-9.95	107.77	119.70
24	BA	369	U	P-O3'-C3'	9.94	131.63	119.70
24	BA	2732	G	P-O3'-C3'	9.94	131.63	119.70
24	BA	2712	C	N1-C1'-C2'	9.94	126.92	114.00
55	CA	132	C	O4'-C1'-N1	9.94	116.15	108.20
24	DA	179	C	N1-C1'-C2'	-9.93	101.07	112.00
55	CA	892	A	P-O3'-C3'	-9.93	107.79	119.70
24	BA	2226	C	N1-C1'-C2'	-9.92	101.08	112.00
24	BA	301	G	P-O3'-C3'	9.92	131.60	119.70
21	AA	549	C	N1-C1'-C2'	-9.92	101.09	112.00
24	DA	915	C	N1-C1'-C2'	-9.91	101.10	112.00
24	BA	479	A	P-O3'-C3'	9.91	131.59	119.70
24	DA	1265	A	P-O3'-C3'	9.90	131.58	119.70
25	BB	52	A	P-O3'-C3'	9.89	131.57	119.70
55	CA	14	U	N1-C1'-C2'	-9.89	101.12	112.00
24	DA	831	G	P-O3'-C3'	-9.89	107.83	119.70
24	BA	1865	U	O4'-C1'-N1	9.88	116.10	108.20
24	DA	229	C	N1-C1'-C2'	-9.87	101.14	112.00
24	DA	2758	A	P-O3'-C3'	-9.86	107.86	119.70
24	DA	2339	C	O4'-C1'-N1	9.86	116.09	108.20
21	AA	1192	C	N1-C1'-C2'	-9.84	101.17	112.00
55	CA	1455	G	P-O3'-C3'	-9.84	107.89	119.70
24	DA	1819	A	P-O3'-C3'	9.84	131.50	119.70
24	DA	860	U	N1-C1'-C2'	-9.82	101.20	112.00
24	BA	507	A	P-O3'-C3'	-9.82	107.92	119.70
24	DA	392	U	P-O3'-C3'	-9.81	107.92	119.70
24	DA	2215	C	P-O3'-C3'	-9.81	107.92	119.70
25	BB	87	U	P-O3'-C3'	9.81	131.47	119.70
24	DA	916	G	P-O3'-C3'	-9.81	107.93	119.70
24	DA	2347	C	N1-C1'-C2'	-9.81	101.21	112.00
55	CA	67	C	N1-C1'-C2'	-9.81	101.21	112.00
55	CA	32	A	P-O3'-C3'	-9.80	107.93	119.70
55	CA	565	U	P-O3'-C3'	-9.80	107.94	119.70
21	AA	306	A	P-O3'-C3'	-9.78	107.97	119.70
24	DA	1035	U	P-O3'-C3'	-9.78	107.97	119.70
24	DA	2615	U	N1-C1'-C2'	-9.78	101.25	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	510	A	P-O3'-C3'	-9.77	107.97	119.70
24	DA	2568	U	P-O3'-C3'	-9.77	107.97	119.70
21	AA	577	G	P-O3'-C3'	-9.77	107.98	119.70
21	AA	1502	A	P-O3'-C3'	9.77	131.42	119.70
24	DA	1387	A	P-O3'-C3'	-9.76	107.99	119.70
24	DA	2408	U	N1-C1'-C2'	-9.75	101.27	112.00
55	CA	1325	C	P-O3'-C3'	-9.74	108.01	119.70
24	BA	2613	U	P-O3'-C3'	9.74	131.39	119.70
24	BA	2902	C	O4'-C1'-N1	9.74	115.99	108.20
24	DA	1476	U	O4'-C1'-N1	9.74	115.99	108.20
21	AA	1241	G	P-O3'-C3'	-9.74	108.02	119.70
24	DA	2798	U	P-O3'-C3'	9.73	131.38	119.70
24	BA	227	A	P-O3'-C3'	9.73	131.37	119.70
55	CA	890	G	P-O3'-C3'	9.73	131.37	119.70
24	BA	1156	A	P-O3'-C3'	9.72	131.37	119.70
24	DA	1475	G	P-O3'-C3'	9.72	131.37	119.70
21	AA	467	U	N1-C1'-C2'	-9.71	101.32	112.00
24	DA	1119	U	O4'-C1'-N1	9.70	115.96	108.20
24	BA	2835	A	P-O3'-C3'	9.70	131.34	119.70
24	DA	790	U	O4'-C1'-N1	9.69	115.95	108.20
24	DA	1137	G	P-O3'-C3'	-9.69	108.07	119.70
24	DA	1345	C	N1-C1'-C2'	-9.69	101.34	112.00
21	AA	422	C	O4'-C1'-N1	9.68	115.95	108.20
55	CA	822	U	N1-C1'-C2'	-9.68	101.35	112.00
24	BA	2893	A	P-O3'-C3'	9.68	131.31	119.70
24	BA	865	C	P-O3'-C3'	9.67	131.31	119.70
24	DA	2267	A	C5-C6-N6	-9.67	115.97	123.70
24	BA	229	C	N1-C1'-C2'	-9.66	101.37	112.00
24	DA	364	C	P-O3'-C3'	-9.66	108.10	119.70
24	DA	179	C	O4'-C1'-N1	9.66	115.92	108.20
24	DA	1399	C	N1-C1'-C2'	-9.66	101.38	112.00
24	DA	2572	A	P-O3'-C3'	9.66	131.29	119.70
21	AA	812	G	P-O3'-C3'	9.65	131.28	119.70
21	AA	967	C	P-O3'-C3'	-9.65	108.12	119.70
24	BA	1236	G	P-O3'-C3'	9.65	131.28	119.70
24	DA	1982	U	N1-C1'-C2'	-9.65	101.38	112.00
24	BA	1498	C	N1-C1'-C2'	-9.65	101.39	112.00
24	DA	2868	A	P-O3'-C3'	-9.64	108.13	119.70
55	CA	1397	C	N1-C1'-C2'	-9.64	101.39	112.00
24	DA	1020	A	P-O3'-C3'	9.64	131.27	119.70
24	BA	459	U	N1-C1'-C2'	-9.63	101.40	112.00
24	DA	2094	A	P-O3'-C3'	-9.63	108.14	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	766	U	N1-C1'-C2'	-9.63	101.41	112.00
24	DA	217	A	P-O3'-C3'	-9.62	108.16	119.70
24	BA	2384	U	P-O3'-C3'	9.62	131.24	119.70
55	CA	876	C	P-O3'-C3'	-9.60	108.18	119.70
56	DB	104	A	P-O3'-C3'	-9.59	108.19	119.70
21	AA	875	U	O4'-C1'-N1	9.59	115.87	108.20
24	BA	1045	C	P-O3'-C3'	9.59	131.21	119.70
21	AA	316	C	N1-C1'-C2'	-9.58	101.47	112.00
24	BA	125	A	P-O3'-C3'	9.58	131.19	119.70
24	DA	688	U	N1-C1'-C2'	-9.57	101.47	112.00
24	DA	2136	G	P-O3'-C3'	-9.57	108.22	119.70
24	DA	589	U	N1-C1'-C2'	-9.57	101.47	112.00
24	DA	2348	U	O4'-C1'-N1	9.57	115.85	108.20
24	DA	1456	G	P-O3'-C3'	-9.56	108.23	119.70
24	BA	1828	G	P-O3'-C3'	9.56	131.17	119.70
24	BA	2199	A	P-O3'-C3'	-9.56	108.23	119.70
55	CA	252	U	N1-C1'-C2'	-9.56	101.49	112.00
21	AA	438	U	O4'-C1'-N1	9.55	115.84	108.20
21	AA	487	A	P-O3'-C3'	-9.55	108.23	119.70
24	DA	413	C	P-O3'-C3'	-9.55	108.24	119.70
55	CA	344	A	P-O3'-C3'	9.54	131.15	119.70
24	DA	2338	C	O4'-C1'-N1	9.54	115.83	108.20
24	DA	1214	A	P-O3'-C3'	-9.54	108.25	119.70
21	AA	132	C	N1-C1'-C2'	-9.53	101.52	112.00
24	DA	335	C	N1-C1'-C2'	-9.53	101.52	112.00
55	CA	564	C	P-O3'-C3'	-9.52	108.28	119.70
24	DA	688	U	P-O3'-C3'	-9.52	108.28	119.70
24	DA	142	A	P-O3'-C3'	-9.51	108.29	119.70
55	CA	87	C	N1-C1'-C2'	-9.50	101.55	112.00
21	AA	530	G	P-O3'-C3'	9.50	131.10	119.70
24	DA	2498	C	N1-C1'-C2'	-9.50	101.55	112.00
21	AA	961	U	N1-C1'-C2'	-9.49	101.56	112.00
24	BA	861	A	P-O3'-C3'	-9.49	108.31	119.70
24	DA	527	C	O4'-C1'-N1	9.48	115.79	108.20
24	DA	1249	U	N1-C1'-C2'	-9.48	101.57	112.00
24	DA	1708	C	P-O3'-C3'	-9.48	108.33	119.70
24	DA	2875	C	N1-C1'-C2'	-9.48	101.57	112.00
21	AA	199	A	P-O3'-C3'	-9.47	108.33	119.70
24	DA	1498	C	N1-C1'-C2'	-9.47	101.58	112.00
24	BA	1700	A	P-O3'-C3'	-9.47	108.34	119.70
55	CA	1142	G	P-O3'-C3'	-9.46	108.34	119.70
24	DA	1810	A	P-O3'-C3'	-9.47	108.34	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	276	G	P-O3'-C3'	-9.46	108.35	119.70
55	CA	721	G	P-O3'-C3'	9.46	131.05	119.70
21	AA	1283	U	P-O3'-C3'	-9.45	108.36	119.70
24	DA	2657	A	P-O3'-C3'	-9.45	108.36	119.70
24	BA	669	G	P-O3'-C3'	9.45	131.03	119.70
24	BA	1635	A	P-O3'-C3'	-9.45	108.36	119.70
21	AA	480	U	O4'-C1'-N1	9.44	115.75	108.20
55	CA	735	C	N1-C1'-C2'	-9.44	101.62	112.00
24	BA	2860	A	N1-C6-N6	9.43	124.26	118.60
24	BA	620	G	P-O3'-C3'	9.43	131.01	119.70
24	DA	243	U	N1-C1'-C2'	-9.42	101.64	112.00
24	DA	2497	A	P-O3'-C3'	9.41	130.99	119.70
24	BA	914	G	P-O3'-C3'	-9.41	108.41	119.70
24	DA	1980	G	P-O3'-C3'	9.40	130.99	119.70
24	BA	2258	C	P-O3'-C3'	9.40	130.98	119.70
24	DA	1290	C	N1-C1'-C2'	-9.40	101.66	112.00
24	DA	2493	U	P-O3'-C3'	-9.39	108.43	119.70
24	DA	1636	U	P-O3'-C3'	-9.39	108.44	119.70
24	DA	741	U	O4'-C1'-N1	9.38	115.71	108.20
24	DA	1072	C	N1-C1'-C2'	-9.38	101.68	112.00
24	DA	1607	C	P-O3'-C3'	9.38	130.95	119.70
24	BA	2832	U	P-O3'-C3'	9.37	130.95	119.70
24	BA	1082	U	O4'-C1'-N1	9.37	115.69	108.20
24	BA	2725	A	P-O3'-C3'	9.37	130.94	119.70
24	BA	91	A	P-O3'-C3'	9.36	130.93	119.70
21	AA	243	A	P-O3'-C3'	9.36	130.93	119.70
55	CA	1508	A	P-O5'-C5'	-9.36	105.93	120.90
24	DA	1131	G	P-O3'-C3'	9.36	130.93	119.70
21	AA	792	A	P-O3'-C3'	9.36	130.93	119.70
24	DA	1400	U	P-O3'-C3'	-9.36	108.47	119.70
24	DA	104	A	P-O3'-C3'	-9.35	108.48	119.70
24	DA	1867	G	P-O3'-C3'	-9.34	108.49	119.70
24	BA	790	U	N1-C1'-C2'	-9.34	101.72	112.00
24	DA	658	U	O4'-C1'-N1	9.34	115.67	108.20
24	BA	2820	A	P-O3'-C3'	9.34	130.90	119.70
24	DA	1050	A	P-O3'-C3'	-9.33	108.50	119.70
55	CA	931	C	O4'-C1'-N1	9.32	115.66	108.20
24	BA	460	A	P-O3'-C3'	-9.32	108.51	119.70
24	BA	2682	A	P-O3'-C3'	-9.32	108.52	119.70
24	DA	164	C	N1-C1'-C2'	-9.31	101.76	112.00
21	AA	73	C	P-O3'-C3'	-9.31	108.53	119.70
24	BA	49	A	P-O3'-C3'	9.31	130.87	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	2296	U	N1-C1'-C2'	9.31	126.10	114.00
25	BB	42	C	N1-C1'-C2'	-9.31	101.76	112.00
24	BA	788	A	P-O3'-C3'	9.30	130.86	119.70
55	CA	169	C	O4'-C1'-N1	9.30	115.64	108.20
24	BA	1378	A	P-O3'-C3'	9.30	130.86	119.70
24	BA	527	C	P-O3'-C3'	9.29	130.85	119.70
55	CA	535	A	P-O3'-C3'	-9.29	108.55	119.70
24	BA	1716	U	N1-C1'-C2'	-9.28	101.79	112.00
55	CA	95	C	N1-C1'-C2'	-9.28	101.79	112.00
24	BA	1127	A	P-O3'-C3'	-9.28	108.57	119.70
21	AA	51	A	P-O3'-C3'	9.27	130.83	119.70
24	BA	2451	A	C4-C5-N7	9.27	115.33	110.70
24	BA	2423	U	P-O3'-C3'	9.27	130.82	119.70
24	DA	730	A	P-O3'-C3'	-9.27	108.58	119.70
24	DA	2313	C	N1-C1'-C2'	-9.27	101.80	112.00
55	CA	1398	A	N9-C1'-C2'	-9.27	101.81	112.00
24	BA	1158	C	P-O3'-C3'	-9.26	108.58	119.70
55	CA	822	U	P-O3'-C3'	-9.26	108.58	119.70
24	BA	2857	G	N9-C4-C5	-9.26	101.70	105.40
24	BA	2728	U	P-O3'-C3'	-9.25	108.59	119.70
55	CA	175	C	P-O3'-C3'	-9.25	108.60	119.70
21	AA	1528	U	P-O3'-C3'	9.25	130.80	119.70
24	DA	2334	U	P-O3'-C3'	9.25	130.80	119.70
24	DA	945	A	P-O3'-C3'	9.24	130.79	119.70
24	DA	1080	A	P-O3'-C3'	-9.23	108.62	119.70
24	DA	2339	C	P-O3'-C3'	-9.23	108.62	119.70
55	CA	184	G	P-O3'-C3'	-9.23	108.63	119.70
24	BA	1345	C	N1-C1'-C2'	-9.22	101.85	112.00
55	CA	1245	C	O4'-C1'-N1	9.22	115.58	108.20
56	DB	17	C	O4'-C1'-N1	9.22	115.58	108.20
24	BA	512	G	O4'-C1'-N9	9.22	115.58	108.20
21	AA	486	U	N1-C1'-C2'	-9.21	101.87	112.00
24	BA	984	A	P-O3'-C3'	9.21	130.75	119.70
24	BA	2689	U	O4'-C1'-N1	9.20	115.56	108.20
24	BA	1345	C	P-O3'-C3'	-9.19	108.67	119.70
24	DA	1019	U	O4'-C1'-N1	9.19	115.56	108.20
24	DA	1815	A	P-O3'-C3'	9.19	130.73	119.70
24	BA	1272	A	P-O3'-C3'	9.18	130.72	119.70
21	AA	704	A	P-O3'-C3'	-9.18	108.69	119.70
55	CA	110	C	N1-C1'-C2'	-9.18	101.91	112.00
25	BB	66	A	P-O3'-C3'	9.17	130.71	119.70
24	DA	2409	G	P-O3'-C3'	-9.17	108.70	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	91	C	P-O3'-C3'	-9.16	108.70	119.70
24	DA	1289	C	N1-C1'-C2'	-9.16	101.92	112.00
55	CA	1398	A	P-O3'-C3'	-9.16	108.70	119.70
24	DA	1971	U	N1-C1'-C2'	-9.16	101.93	112.00
24	BA	1799	G	P-O3'-C3'	9.15	130.68	119.70
55	CA	1161	C	O4'-C1'-N1	9.15	115.52	108.20
25	BB	13	G	P-O3'-C3'	-9.15	108.72	119.70
24	BA	829	A	P-O3'-C3'	9.15	130.68	119.70
24	DA	1708	C	O4'-C1'-N1	9.14	115.52	108.20
24	BA	2586	U	N1-C1'-C2'	-9.14	101.94	112.00
21	AA	73	C	N1-C1'-C2'	-9.14	101.95	112.00
24	BA	1784	A	P-O3'-C3'	9.14	130.66	119.70
24	DA	424	G	P-O3'-C3'	-9.13	108.74	119.70
21	AA	245	U	N1-C1'-C2'	-9.13	101.95	112.00
24	BA	2520	C	N1-C1'-C2'	-9.13	101.96	112.00
24	BA	2689	U	N1-C1'-C2'	9.12	125.86	114.00
24	BA	1569	A	P-O3'-C3'	-9.12	108.76	119.70
55	CA	1240	U	P-O3'-C3'	9.12	130.64	119.70
24	DA	437	U	O4'-C1'-N1	9.12	115.49	108.20
24	DA	2298	A	P-O3'-C3'	-9.11	108.76	119.70
24	DA	2198	A	P-O3'-C3'	9.11	130.63	119.70
55	CA	486	U	P-O3'-C3'	-9.10	108.78	119.70
55	CA	1380	U	P-O3'-C3'	9.10	130.62	119.70
55	CA	984	C	O4'-C1'-N1	9.10	115.48	108.20
24	DA	483	A	P-O3'-C3'	-9.10	108.78	119.70
24	BA	915	C	N1-C1'-C2'	-9.09	102.00	112.00
24	BA	1993	U	P-O5'-C5'	-9.09	106.36	120.90
24	BA	2500	U	O4'-C1'-N1	9.09	115.47	108.20
55	CA	453	G	P-O3'-C3'	-9.08	108.80	119.70
24	BA	1385	A	P-O3'-C3'	9.08	130.59	119.70
24	BA	2052	A	P-O3'-C3'	-9.07	108.81	119.70
24	DA	1822	C	N1-C1'-C2'	-9.07	102.02	112.00
24	BA	753	A	P-O3'-C3'	-9.07	108.82	119.70
24	DA	77	G	P-O3'-C3'	-9.06	108.83	119.70
24	DA	2215	C	N1-C1'-C2'	-9.06	102.03	112.00
21	AA	1066	C	P-O3'-C3'	-9.06	108.83	119.70
24	BA	1427	A	P-O3'-C3'	9.06	130.57	119.70
24	BA	2451	A	C4-C5-C6	-9.06	112.47	117.00
55	CA	173	U	O4'-C1'-N1	9.05	115.44	108.20
55	CA	1300	G	P-O3'-C3'	-9.05	108.84	119.70
24	BA	1706	C	P-O3'-C3'	9.05	130.56	119.70
21	AA	564	C	P-O3'-C3'	-9.04	108.85	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	913	U	P-O3'-C3'	9.04	130.54	119.70
55	CA	688	G	P-O3'-C3'	-9.03	108.86	119.70
24	DA	1158	C	N1-C1'-C2'	-9.03	102.07	112.00
21	AA	331	G	P-O3'-C3'	-9.03	108.87	119.70
24	DA	73	A	P-O3'-C3'	-9.02	108.87	119.70
21	AA	719	C	P-O3'-C3'	-9.02	108.88	119.70
24	DA	739	A	P-O3'-C3'	9.02	130.53	119.70
55	CA	1031	C	P-O3'-C3'	9.02	130.52	119.70
55	CA	1395	C	N1-C1'-C2'	-9.02	102.08	112.00
24	BA	1082	U	C5-C4-O4	-9.02	120.49	125.90
24	BA	1566	A	P-O3'-C3'	9.02	130.52	119.70
55	CA	1203	C	P-O3'-C3'	-9.02	108.88	119.70
24	DA	867	C	N1-C1'-C2'	-9.02	102.08	112.00
24	DA	1957	C	N1-C1'-C2'	-9.01	102.09	112.00
24	BA	747	U	N1-C1'-C2'	-9.00	102.10	112.00
55	CA	1190	G	P-O3'-C3'	8.99	130.49	119.70
24	DA	1060	U	N3-C4-O4	8.99	125.69	119.40
24	BA	2468	A	P-O3'-C3'	8.99	130.49	119.70
24	BA	1275	A	P-O3'-C3'	8.99	130.48	119.70
24	DA	207	A	P-O3'-C3'	-8.98	108.92	119.70
55	CA	133	U	P-O3'-C3'	-8.98	108.92	119.70
24	BA	2588	G	P-O3'-C3'	8.97	130.47	119.70
24	DA	976	G	P-O3'-C3'	-8.97	108.93	119.70
24	DA	397	U	P-O3'-C3'	-8.97	108.94	119.70
24	BA	243	U	N1-C1'-C2'	-8.96	102.14	112.00
24	BA	2425	A	O4'-C1'-N9	8.96	115.37	108.20
24	BA	2503	A	P-O3'-C3'	8.96	130.45	119.70
24	BA	2609	U	P-O3'-C3'	8.95	130.44	119.70
24	DA	1023	U	P-O5'-C5'	-8.96	106.57	120.90
21	AA	190	A	N1-C6-N6	8.95	123.97	118.60
24	DA	2713	U	N1-C1'-C2'	8.95	125.64	114.00
24	DA	1079	C	N1-C1'-C2'	-8.95	102.16	112.00
21	AA	534	U	N1-C1'-C2'	-8.95	102.16	112.00
24	BA	1142	A	C8-N9-C1'	8.95	143.80	127.70
55	CA	1397	C	P-O3'-C3'	-8.95	108.97	119.70
24	DA	128	C	P-O3'-C3'	-8.94	108.97	119.70
24	BA	2136	G	P-O3'-C3'	-8.94	108.98	119.70
24	DA	2631	G	P-O3'-C3'	-8.93	108.98	119.70
24	BA	1522	A	P-O3'-C3'	8.93	130.41	119.70
24	BA	1915	U	N1-C1'-C2'	-8.93	102.18	112.00
24	DA	1314	C	N1-C1'-C2'	-8.93	102.18	112.00
24	DA	2713	U	P-O3'-C3'	8.93	130.42	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	479	U	O4'-C1'-N1	8.92	115.34	108.20
24	BA	140	C	P-O3'-C3'	8.92	130.41	119.70
24	DA	1914	C	N1-C1'-C2'	-8.92	102.18	112.00
24	DA	1315	C	P-O3'-C3'	-8.92	108.99	119.70
24	BA	14	A	P-O3'-C3'	-8.92	109.00	119.70
55	CA	130	A	P-O3'-C3'	8.91	130.40	119.70
21	AA	169	C	C5-C4-N4	8.91	126.44	120.20
21	AA	1216	A	P-O3'-C3'	-8.91	109.01	119.70
21	AA	564	C	N1-C1'-C2'	-8.91	102.20	112.00
24	BA	958	U	N1-C1'-C2'	-8.91	102.20	112.00
24	BA	647	G	P-O3'-C3'	-8.90	109.02	119.70
24	BA	1606	C	P-O3'-C3'	8.90	130.39	119.70
25	BB	91	C	N1-C1'-C2'	-8.90	102.20	112.00
24	BA	2068	U	P-O3'-C3'	-8.90	109.02	119.70
24	DA	1013	C	P-O3'-C3'	-8.90	109.02	119.70
24	DA	754	U	N1-C1'-C2'	-8.89	102.22	112.00
24	BA	2646	C	N1-C1'-C2'	-8.88	102.23	112.00
55	CA	534	U	N1-C1'-C2'	-8.88	102.23	112.00
21	AA	279	A	P-O3'-C3'	8.88	130.35	119.70
55	CA	1528	U	O4'-C1'-N1	8.88	115.30	108.20
24	DA	2021	C	N1-C1'-C2'	8.87	125.53	114.00
24	DA	140	C	N1-C1'-C2'	8.85	125.51	114.00
55	CA	517	G	P-O3'-C3'	8.85	130.31	119.70
55	CA	590	U	O4'-C1'-N1	8.83	115.27	108.20
24	DA	1271	G	P-O3'-C3'	8.82	130.29	119.70
25	BB	88	C	N1-C1'-C2'	8.82	125.47	114.00
55	CA	513	C	N1-C1'-C2'	-8.82	102.30	112.00
24	DA	2753	A	P-O3'-C3'	-8.82	109.11	119.70
55	CA	973	G	P-O3'-C3'	-8.81	109.12	119.70
55	CA	90	C	N1-C1'-C2'	-8.81	102.31	112.00
24	BA	2517	C	P-O3'-C3'	8.81	130.27	119.70
24	BA	1816	C	O4'-C1'-N1	8.81	115.25	108.20
24	BA	324	A	P-O3'-C3'	-8.80	109.14	119.70
24	BA	919	U	C6-N1-C1'	-8.80	108.88	121.20
24	DA	1076	C	P-O3'-C3'	-8.80	109.14	119.70
55	CA	1229	A	P-O3'-C3'	-8.80	109.14	119.70
55	CA	370	C	P-O3'-C3'	-8.80	109.14	119.70
24	DA	312	G	P-O3'-C3'	-8.79	109.14	119.70
55	CA	723	U	N1-C1'-C2'	-8.79	102.33	112.00
24	DA	1943	U	P-O3'-C3'	8.78	130.24	119.70
55	CA	89	U	N1-C1'-C2'	-8.78	102.34	112.00
24	BA	1653	G	P-O3'-C3'	8.78	130.24	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	2384	U	N1-C1'-C2'	8.77	125.41	114.00
21	AA	1483	A	N1-C6-N6	8.77	123.86	118.60
21	AA	1228	C	N1-C1'-C2'	-8.77	102.36	112.00
21	AA	1161	C	N1-C1'-C2'	-8.77	102.36	112.00
55	CA	388	G	P-O3'-C3'	8.77	130.22	119.70
24	BA	1913	A	P-O3'-C3'	8.76	130.22	119.70
24	DA	2851	A	P-O3'-C3'	-8.76	109.19	119.70
24	DA	510	C	N1-C1'-C2'	-8.76	102.36	112.00
21	AA	115	G	P-O3'-C3'	8.76	130.21	119.70
21	AA	1215	G	P-O3'-C3'	-8.76	109.19	119.70
24	BA	1333	G	P-O3'-C3'	-8.76	109.19	119.70
24	BA	1931	U	N1-C1'-C2'	-8.75	102.38	112.00
24	DA	1239	G	P-O3'-C3'	-8.75	109.20	119.70
24	DA	2387	U	P-O3'-C3'	-8.75	109.20	119.70
24	BA	120	U	O4'-C1'-N1	-8.74	101.20	108.20
21	AA	431	A	P-O3'-C3'	-8.74	109.21	119.70
24	DA	755	U	P-O3'-C3'	-8.74	109.21	119.70
24	BA	1812	U	O4'-C1'-N1	8.74	115.19	108.20
55	CA	81	A	P-O3'-C3'	8.74	130.18	119.70
24	DA	2322	A	P-O3'-C3'	-8.74	109.22	119.70
55	CA	1246	A	P-O3'-C3'	-8.73	109.22	119.70
24	BA	1022	G	N3-C4-N9	-8.73	120.76	126.00
21	AA	1332	A	P-O3'-C3'	-8.73	109.23	119.70
24	DA	2691	C	N1-C1'-C2'	-8.72	102.41	112.00
23	CW	3	U	P-O3'-C3'	8.72	130.16	119.70
24	DA	2728	U	N1-C1'-C2'	-8.71	102.42	112.00
24	BA	1303	G	P-O3'-C3'	-8.71	109.25	119.70
24	DA	1114	C	P-O3'-C3'	-8.71	109.25	119.70
24	BA	919	U	N3-C2-O2	-8.70	116.11	122.20
24	DA	2656	U	N1-C1'-C2'	-8.70	102.43	112.00
24	BA	1788	C	O4'-C1'-N1	-8.70	101.24	108.20
21	AA	1066	C	N1-C1'-C2'	-8.70	102.43	112.00
21	AA	1167	A	P-O3'-C3'	8.70	130.13	119.70
55	CA	1161	C	P-O3'-C3'	-8.70	109.27	119.70
55	CA	1499	A	P-O3'-C3'	-8.70	109.26	119.70
24	BA	2511	U	C2-N3-C4	-8.69	121.79	127.00
24	DA	2837	A	P-O3'-C3'	-8.69	109.28	119.70
24	BA	2781	A	P-O3'-C3'	-8.68	109.28	119.70
21	AA	875	U	N1-C1'-C2'	-8.68	102.45	112.00
24	BA	436	C	O4'-C1'-N1	8.68	115.14	108.20
21	AA	1161	C	P-O3'-C3'	-8.67	109.29	119.70
21	AA	1303	C	N1-C1'-C2'	-8.67	102.46	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	588	U	N1-C1'-C2'	-8.67	102.46	112.00
24	BA	2586	U	P-O3'-C3'	-8.67	109.30	119.70
24	DA	60	G	P-O3'-C3'	8.67	130.10	119.70
24	BA	1461	C	O4'-C1'-N1	8.66	115.13	108.20
21	AA	344	A	O4'-C1'-N9	8.66	115.13	108.20
24	BA	1398	C	N1-C1'-C2'	-8.65	102.48	112.00
24	BA	1997	C	P-O3'-C3'	-8.65	109.32	119.70
24	DA	1993	U	N1-C1'-C2'	-8.64	102.49	112.00
24	DA	1606	C	O4'-C1'-N1	8.64	115.11	108.20
24	BA	2836	U	N1-C1'-C2'	-8.64	102.50	112.00
55	CA	133	U	O4'-C1'-N1	8.64	115.11	108.20
24	DA	1113	U	O4'-C1'-N1	8.64	115.11	108.20
24	BA	509	C	P-O3'-C3'	-8.62	109.36	119.70
24	DA	1274	A	P-O3'-C3'	-8.62	109.36	119.70
24	BA	1539	U	P-O3'-C3'	-8.61	109.36	119.70
24	DA	451	U	O4'-C1'-N1	8.61	115.09	108.20
24	BA	1557	C	N1-C1'-C2'	-8.61	102.53	112.00
24	BA	1013	C	N1-C1'-C2'	-8.60	102.54	112.00
24	BA	1675	C	P-O3'-C3'	-8.59	109.39	119.70
24	BA	835	C	N1-C1'-C2'	-8.59	102.55	112.00
24	DA	766	U	P-O3'-C3'	-8.59	109.40	119.70
24	BA	1478	G	C5-C6-O6	8.58	133.75	128.60
55	CA	175	C	N1-C1'-C2'	-8.58	102.57	112.00
24	BA	84	A	P-O3'-C3'	8.57	129.99	119.70
24	BA	2344	U	P-O3'-C3'	8.57	129.99	119.70
24	DA	2612	C	P-O3'-C3'	-8.57	109.41	119.70
21	AA	453	G	P-O3'-C3'	-8.57	109.42	119.70
24	BA	386	G	P-O3'-C3'	8.57	129.98	119.70
24	BA	443	A	P-O3'-C3'	-8.57	109.42	119.70
24	DA	1681	G	P-O3'-C3'	8.57	129.98	119.70
55	CA	251	G	P-O3'-C3'	8.56	129.98	119.70
21	AA	352	C	P-O3'-C3'	-8.56	109.42	119.70
24	DA	1386	C	N1-C1'-C2'	-8.56	102.58	112.00
21	AA	1242	G	N9-C1'-C2'	-8.56	102.58	112.00
21	AA	984	C	O4'-C1'-N1	8.55	115.04	108.20
24	DA	784	G	O4'-C1'-N9	8.54	115.03	108.20
55	CA	528	C	O4'-C1'-N1	8.53	115.03	108.20
24	DA	791	C	P-O3'-C3'	-8.52	109.47	119.70
24	BA	2585	U	P-O3'-C3'	8.52	129.93	119.70
24	DA	749	A	P-O3'-C3'	-8.52	109.48	119.70
21	AA	575	G	N3-C4-N9	-8.51	120.89	126.00
21	AA	467	U	P-O3'-C3'	-8.51	109.48	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	2513	A	C5-C6-N6	8.51	130.51	123.70
56	DB	104	A	C8-N9-C4	-8.51	102.40	105.80
24	BA	2834	G	P-O5'-C5'	-8.51	107.29	120.90
24	BA	645	C	N1-C1'-C2'	8.50	125.05	114.00
24	BA	746	U	P-O3'-C3'	8.50	129.90	119.70
24	DA	865	C	P-O3'-C3'	8.50	129.90	119.70
24	DA	2348	U	P-O3'-C3'	-8.50	109.50	119.70
55	CA	248	C	O4'-C1'-N1	8.50	115.00	108.20
24	DA	1206	G	P-O3'-C3'	-8.49	109.51	119.70
24	BA	1602	U	P-O3'-C3'	8.49	129.88	119.70
24	BA	1856	U	O4'-C1'-N1	8.49	114.99	108.20
21	AA	1530	G	N9-C1'-C2'	-8.48	102.67	112.00
55	CA	884	U	O4'-C1'-N1	8.48	114.98	108.20
24	DA	100	U	P-O3'-C3'	8.48	129.88	119.70
24	BA	2319	G	P-O3'-C3'	8.47	129.87	119.70
24	DA	1636	U	O4'-C1'-N1	8.47	114.98	108.20
24	BA	531	C	N1-C1'-C2'	8.47	125.01	114.00
24	BA	1287	A	P-O3'-C3'	-8.46	109.54	119.70
56	DB	24	G	P-O3'-C3'	8.46	129.85	119.70
24	DA	774	G	P-O3'-C3'	8.46	129.85	119.70
24	BA	1635	A	N9-C1'-C2'	-8.46	102.70	112.00
24	BA	811	U	P-O3'-C3'	8.46	129.85	119.70
24	DA	1141	U	P-O3'-C3'	8.46	129.85	119.70
55	CA	1051	C	N1-C1'-C2'	-8.45	102.70	112.00
24	BA	506	G	P-O3'-C3'	8.45	129.84	119.70
21	AA	510	A	P-O3'-C3'	-8.45	109.57	119.70
24	DA	2031	A	P-O3'-C3'	8.45	129.83	119.70
21	AA	717	U	P-O3'-C3'	8.44	129.83	119.70
55	CA	995	C	P-O3'-C3'	-8.43	109.58	119.70
21	AA	1153	G	P-O3'-C3'	-8.43	109.58	119.70
24	BA	1174	U	N1-C1'-C2'	-8.43	102.73	112.00
24	BA	2866	U	P-O3'-C3'	8.42	129.81	119.70
55	CA	1502	A	P-O3'-C3'	8.42	129.80	119.70
24	BA	2520	C	O4'-C1'-N1	8.42	114.93	108.20
55	CA	1449	C	O4'-C1'-N1	8.42	114.93	108.20
24	DA	1636	U	N1-C1'-C2'	-8.42	102.74	112.00
55	CA	1087	G	P-O3'-C3'	-8.41	109.60	119.70
24	DA	778	G	P-O3'-C3'	-8.41	109.60	119.70
24	BA	2322	A	P-O3'-C3'	-8.41	109.61	119.70
55	CA	1053	G	P-O3'-C3'	8.41	129.79	119.70
21	AA	91	U	C5-C4-O4	-8.40	120.86	125.90
24	BA	2392	A	P-O3'-C3'	-8.40	109.62	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	315	A	P-O3'-C3'	8.39	129.77	119.70
24	BA	996	A	P-O3'-C3'	-8.38	109.64	119.70
55	CA	875	U	P-O3'-C3'	-8.38	109.64	119.70
21	AA	1449	C	O4'-C1'-N1	8.38	114.91	108.20
55	CA	913	A	P-O3'-C3'	8.38	129.76	119.70
24	BA	301	G	C4-N9-C1'	-8.38	115.61	126.50
24	BA	1020	A	P-O3'-C3'	8.38	129.76	119.70
21	AA	1202	U	O4'-C1'-N1	8.38	114.90	108.20
24	DA	2226	C	O4'-C1'-N1	8.38	114.90	108.20
55	CA	1162	C	P-O3'-C3'	-8.38	109.65	119.70
55	CA	1141	C	P-O3'-C3'	-8.37	109.65	119.70
21	AA	1140	C	N1-C1'-C2'	-8.37	102.80	112.00
24	BA	1013	C	P-O3'-C3'	-8.37	109.66	119.70
24	BA	1141	U	P-O3'-C3'	8.36	129.74	119.70
24	DA	273	G	N9-C1'-C2'	-8.36	102.80	112.00
24	DA	2261	C	O4'-C1'-N1	8.36	114.89	108.20
24	BA	2267	A	P-O3'-C3'	-8.36	109.67	119.70
21	AA	590	U	O4'-C1'-N1	8.36	114.88	108.20
21	AA	721	G	P-O3'-C3'	8.35	129.72	119.70
55	CA	973	G	N9-C1'-C2'	-8.35	102.82	112.00
55	CA	459	A	P-O3'-C3'	8.34	129.71	119.70
55	CA	597	G	P-O3'-C3'	-8.34	109.69	119.70
24	DA	629	G	P-O3'-C3'	-8.34	109.70	119.70
24	DA	1946	U	N1-C1'-C2'	-8.34	102.83	112.00
24	DA	2458	G	P-O3'-C3'	8.34	129.71	119.70
24	BA	671	C	O4'-C1'-N1	8.33	114.87	108.20
24	DA	1954	G	P-O3'-C3'	8.33	129.70	119.70
24	BA	1033	U	P-O3'-C3'	8.33	129.70	119.70
24	DA	503	A	P-O3'-C3'	8.33	129.69	119.70
55	CA	1224	U	P-O3'-C3'	8.32	129.69	119.70
21	AA	985	C	P-O3'-C3'	-8.32	109.72	119.70
24	BA	2490	G	P-O3'-C3'	8.31	129.68	119.70
24	BA	2873	A	O4'-C1'-N9	8.30	114.84	108.20
24	BA	2275	C	P-O3'-C3'	8.30	129.66	119.70
24	DA	957	C	P-O3'-C3'	8.30	129.66	119.70
24	DA	2034	U	N1-C1'-C2'	-8.30	102.87	112.00
24	BA	278	A	P-O3'-C3'	8.29	129.65	119.70
24	BA	2447	G	N3-C4-N9	8.29	130.97	126.00
55	CA	884	U	P-O3'-C3'	8.29	129.64	119.70
24	DA	2612	C	O4'-C1'-N1	8.29	114.83	108.20
24	BA	613	A	P-O3'-C3'	8.28	129.64	119.70
24	BA	1721	G	P-O3'-C3'	8.28	129.64	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1931	U	P-O3'-C3'	-8.28	109.76	119.70
24	BA	749	A	P-O3'-C3'	-8.28	109.76	119.70
24	DA	2492	U	N1-C1'-C2'	-8.28	102.89	112.00
24	DA	445	C	O4'-C1'-N1	8.28	114.82	108.20
21	AA	1101	A	P-O3'-C3'	8.27	129.63	119.70
24	BA	1062	G	P-O3'-C3'	-8.27	109.77	119.70
24	BA	162	U	P-O3'-C3'	8.27	129.62	119.70
24	DA	766	U	O4'-C1'-N1	8.27	114.81	108.20
24	DA	2441	U	P-O3'-C3'	-8.27	109.78	119.70
55	CA	531	U	N1-C1'-C2'	8.26	124.73	114.00
24	BA	2035	G	O4'-C1'-N9	8.26	114.80	108.20
21	AA	344	A	P-O3'-C3'	8.25	129.60	119.70
24	BA	1249	U	N1-C1'-C2'	-8.25	102.93	112.00
24	BA	1019	U	N1-C2-N3	8.24	119.85	114.90
24	DA	389	G	P-O3'-C3'	-8.24	109.81	119.70
24	BA	443	A	P-O5'-C5'	-8.24	107.72	120.90
55	CA	486	U	N1-C1'-C2'	-8.24	102.94	112.00
24	DA	444	C	O4'-C1'-N1	8.24	114.79	108.20
24	BA	645	C	P-O3'-C3'	8.23	129.58	119.70
24	DA	1113	U	N1-C1'-C2'	-8.23	102.94	112.00
21	AA	116	A	N9-C1'-C2'	-8.23	102.95	112.00
24	BA	1668	A	P-O3'-C3'	8.23	129.58	119.70
24	BA	688	U	P-O3'-C3'	-8.22	109.83	119.70
21	AA	1201	A	P-O3'-C3'	8.22	129.57	119.70
24	BA	858	G	P-O3'-C3'	8.22	129.57	119.70
24	DA	1110	G	P-O3'-C3'	8.22	129.56	119.70
24	BA	2492	U	N1-C1'-C2'	-8.22	102.96	112.00
55	CA	1449	C	P-O3'-C3'	-8.22	109.84	119.70
21	AA	1507	A	P-O3'-C3'	-8.21	109.84	119.70
24	DA	2616	C	O4'-C1'-N1	8.21	114.77	108.20
21	AA	1157	A	P-O3'-C3'	8.21	129.55	119.70
24	DA	1760	C	N1-C1'-C2'	-8.21	102.97	112.00
21	AA	275	G	P-O3'-C3'	-8.21	109.85	119.70
24	BA	931	U	P-O3'-C3'	8.20	129.54	119.70
24	BA	1024	G	P-O3'-C3'	-8.20	109.86	119.70
21	AA	95	C	P-O3'-C3'	-8.20	109.86	119.70
24	DA	1334	G	P-O3'-C3'	-8.20	109.86	119.70
21	AA	511	C	O4'-C1'-N1	8.19	114.75	108.20
24	DA	588	U	N1-C1'-C2'	-8.19	102.99	112.00
24	DA	1063	G	P-O3'-C3'	-8.19	109.87	119.70
56	DB	104	A	O4'-C1'-N9	8.19	114.75	108.20
24	BA	1125	G	N9-C4-C5	-8.18	102.13	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	2215	C	N1-C1'-C2'	-8.18	103.00	112.00
24	BA	752	A	N1-C6-N6	8.18	123.51	118.60
21	AA	653	U	P-O3'-C3'	8.18	129.51	119.70
24	BA	748	G	P-O3'-C3'	8.17	129.51	119.70
24	BA	2520	C	P-O3'-C3'	-8.17	109.89	119.70
24	DA	2387	U	N1-C1'-C2'	-8.17	103.01	112.00
24	DA	805	G	P-O3'-C3'	8.17	129.50	119.70
21	AA	974	A	P-O3'-C3'	8.17	129.50	119.70
24	BA	811	U	O4'-C1'-N1	8.17	114.73	108.20
24	BA	1647	U	P-O3'-C3'	8.16	129.50	119.70
24	BA	2895	G	P-O3'-C3'	-8.16	109.90	119.70
55	CA	70	U	P-O3'-C3'	8.16	129.50	119.70
24	BA	2566	A	P-O3'-C3'	8.16	129.49	119.70
21	AA	931	C	O4'-C1'-N1	8.16	114.73	108.20
55	CA	995	C	N1-C1'-C2'	-8.16	103.03	112.00
24	DA	1035	U	N1-C1'-C2'	-8.15	103.03	112.00
21	AA	813	U	N1-C1'-C2'	-8.15	103.03	112.00
24	BA	2497	A	P-O3'-C3'	8.15	129.48	119.70
24	DA	1616	A	P-O3'-C3'	8.15	129.48	119.70
24	BA	976	G	P-O3'-C3'	-8.14	109.93	119.70
24	BA	1996	C	O4'-C1'-N1	8.14	114.71	108.20
24	BA	119	A	P-O3'-C3'	8.14	129.47	119.70
21	AA	874	G	P-O3'-C3'	-8.14	109.93	119.70
24	BA	421	C	P-O3'-C3'	8.14	129.47	119.70
24	BA	2424	C	O4'-C1'-N1	8.14	114.71	108.20
55	CA	1284	C	P-O3'-C3'	-8.14	109.93	119.70
24	DA	492	A	P-O3'-C3'	-8.14	109.93	119.70
24	BA	1698	A	P-O3'-C3'	8.13	129.46	119.70
24	BA	2251	G	P-O3'-C3'	-8.13	109.94	119.70
24	DA	2603	G	P-O3'-C3'	-8.13	109.94	119.70
24	BA	989	G	P-O3'-C3'	8.13	129.45	119.70
55	CA	1032	G	P-O3'-C3'	8.13	129.45	119.70
24	DA	1782	U	N1-C1'-C2'	-8.12	103.06	112.00
24	BA	638	G	P-O3'-C3'	-8.12	109.95	119.70
24	DA	1073	A	P-O3'-C3'	-8.12	109.95	119.70
24	BA	2611	C	N1-C1'-C2'	-8.12	103.07	112.00
24	DA	1415	U	P-O3'-C3'	8.11	129.44	119.70
24	DA	1839	G	P-O3'-C3'	-8.12	109.96	119.70
24	BA	1008	A	P-O3'-C3'	8.11	129.44	119.70
24	BA	2303	G	P-O3'-C3'	-8.11	109.97	119.70
24	DA	2902	C	O4'-C1'-N1	8.11	114.69	108.20
24	DA	1499	C	P-O3'-C3'	-8.11	109.97	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1064	G	P-O3'-C3'	8.11	129.43	119.70
24	BA	2283	C	O4'-C1'-N1	8.11	114.69	108.20
24	DA	755	U	N1-C1'-C2'	-8.11	103.08	112.00
24	DA	1838	C	O4'-C1'-N1	8.10	114.68	108.20
55	CA	1052	U	P-O3'-C3'	-8.10	109.98	119.70
24	BA	1682	G	P-O3'-C3'	-8.10	109.99	119.70
24	DA	2277	G	P-O3'-C3'	-8.10	109.99	119.70
24	BA	945	A	O4'-C1'-N9	8.09	114.67	108.20
21	AA	1278	G	P-O3'-C3'	8.09	129.40	119.70
24	DA	2382	G	P-O3'-C3'	8.07	129.39	119.70
55	CA	934	C	P-O3'-C3'	8.07	129.39	119.70
24	DA	392	U	O4'-C1'-N1	8.07	114.66	108.20
24	BA	2440	C	O4'-C1'-N1	8.06	114.65	108.20
24	BA	2066	C	P-O3'-C3'	-8.06	110.03	119.70
24	BA	199	A	O4'-C1'-N9	8.06	114.65	108.20
21	AA	64	G	P-O3'-C3'	8.06	129.37	119.70
24	BA	1981	A	P-O3'-C3'	-8.06	110.03	119.70
24	BA	2447	G	N3-C2-N2	-8.06	114.26	119.90
55	CA	328	C	O4'-C1'-N1	-8.06	101.75	108.20
55	CA	389	A	P-O3'-C3'	-8.06	110.03	119.70
55	CA	1530	G	P-O3'-C3'	-8.06	110.03	119.70
24	BA	1915	U	P-O3'-C3'	-8.05	110.04	119.70
21	AA	1320	C	N1-C1'-C2'	-8.05	103.14	112.00
24	BA	1876	A	C4-C5-C6	-8.05	112.97	117.00
24	BA	2054	A	C8-N9-C4	-8.05	102.58	105.80
24	BA	241	A	P-O3'-C3'	8.05	129.36	119.70
24	DA	1076	C	O4'-C1'-N1	8.05	114.64	108.20
24	DA	2782	G	P-O3'-C3'	-8.05	110.04	119.70
24	DA	2692	G	N9-C1'-C2'	-8.04	103.15	112.00
24	BA	2834	G	P-O3'-C3'	-8.04	110.06	119.70
55	CA	501	C	P-O3'-C3'	-8.04	110.05	119.70
24	BA	959	A	P-O3'-C3'	-8.04	110.06	119.70
21	AA	267	C	N1-C1'-C2'	-8.03	103.16	112.00
21	AA	1362	A	O4'-C1'-N9	8.03	114.63	108.20
24	BA	13	A	P-O3'-C3'	8.03	129.34	119.70
55	CA	81	A	O4'-C1'-N9	8.03	114.62	108.20
55	CA	722	G	P-O3'-C3'	-8.03	110.07	119.70
55	CA	1033	G	P-O3'-C3'	-8.02	110.08	119.70
24	BA	743	A	P-O3'-C3'	8.02	129.32	119.70
24	BA	2462	C	P-O3'-C3'	-8.02	110.08	119.70
31	BH	48	GLU	CA-C-O	-8.02	103.26	120.10
55	CA	1228	C	O4'-C1'-N1	8.02	114.61	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	184	G	P-O3'-C3'	-8.02	110.08	119.70
24	BA	571	U	P-O3'-C3'	8.01	129.31	119.70
24	BA	1942	C	N1-C1'-C2'	-8.01	103.19	112.00
24	BA	310	A	P-O3'-C3'	8.01	129.31	119.70
21	AA	1408	A	P-O3'-C3'	-8.01	110.09	119.70
21	AA	14	U	P-O3'-C3'	-8.00	110.09	119.70
24	BA	1019	U	C5-C4-O4	-8.00	121.10	125.90
24	BA	1782	U	N1-C1'-C2'	-8.00	103.20	112.00
24	DA	122	G	P-O3'-C3'	-8.00	110.10	119.70
24	DA	411	G	P-O3'-C3'	8.00	129.30	119.70
24	BA	2406	A	P-O3'-C3'	8.00	129.30	119.70
55	CA	697	U	O4'-C1'-N1	8.00	114.60	108.20
24	DA	658	U	P-O3'-C3'	-8.00	110.10	119.70
24	BA	390	U	P-O3'-C3'	7.99	129.29	119.70
56	DB	40	U	P-O3'-C3'	7.99	129.29	119.70
24	BA	2386	A	N9-C1'-C2'	-7.99	103.21	112.00
24	DA	1290	C	O4'-C1'-N1	7.99	114.59	108.20
24	DA	2499	C	P-O3'-C3'	-7.99	110.11	119.70
55	CA	248	C	P-O3'-C3'	-7.99	110.11	119.70
24	BA	1602	U	O4'-C1'-N1	7.98	114.59	108.20
24	BA	2093	G	N9-C1'-C2'	-7.98	103.22	112.00
21	AA	1395	C	N1-C1'-C2'	-7.98	103.22	112.00
24	BA	406	G	P-O3'-C3'	-7.98	110.12	119.70
21	AA	934	C	O4'-C1'-N1	7.98	114.58	108.20
23	AW	3	U	P-O3'-C3'	7.98	129.27	119.70
24	BA	1857	G	P-O3'-C3'	7.98	129.27	119.70
24	DA	50	U	P-O3'-C3'	7.97	129.27	119.70
23	CW	5	U	P-O3'-C3'	-7.97	110.13	119.70
24	DA	2712	C	P-O3'-C3'	7.97	129.27	119.70
21	AA	1451	U	P-O3'-C3'	7.97	129.26	119.70
24	BA	1048	A	P-O3'-C3'	-7.97	110.14	119.70
24	DA	335	C	P-O3'-C3'	-7.97	110.14	119.70
21	AA	451	A	P-O3'-C3'	7.97	129.26	119.70
24	DA	1325	U	P-O3'-C3'	7.97	129.26	119.70
24	BA	301	G	N3-C4-N9	-7.96	121.22	126.00
24	BA	2062	A	N1-C6-N6	7.96	123.38	118.60
24	DA	527	C	P-O3'-C3'	7.96	129.26	119.70
24	DA	2249	U	P-O3'-C3'	7.96	129.26	119.70
24	DA	2503	A	P-O3'-C3'	7.96	129.26	119.70
24	BA	1954	G	P-O3'-C3'	7.96	129.25	119.70
24	BA	1619	G	P-O3'-C3'	-7.96	110.15	119.70
24	DA	1330	C	N1-C1'-C2'	-7.96	103.24	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	2239	G	P-O3'-C3'	-7.96	110.15	119.70
24	BA	2879	A	P-O3'-C3'	7.95	129.25	119.70
24	BA	1967	C	N1-C1'-C2'	-7.95	103.25	112.00
24	BA	2593	U	P-O3'-C3'	-7.95	110.16	119.70
24	DA	605	G	N9-C1'-C2'	-7.95	103.26	112.00
55	CA	1211	U	P-O3'-C3'	7.95	129.23	119.70
24	DA	2024	G	P-O3'-C3'	-7.94	110.18	119.70
55	CA	1365	G	P-O3'-C3'	-7.94	110.18	119.70
24	BA	2513	A	N1-C6-N6	-7.93	113.84	118.60
24	DA	633	A	N1-C6-N6	7.93	123.36	118.60
21	AA	330	C	N1-C1'-C2'	-7.93	103.28	112.00
21	AA	500	G	P-O3'-C3'	-7.93	110.18	119.70
55	CA	755	G	P-O3'-C3'	-7.93	110.18	119.70
24	DA	1440	U	O4'-C1'-N1	7.93	114.55	108.20
24	BA	2734	A	P-O3'-C3'	-7.93	110.19	119.70
24	DA	2728	U	P-O3'-C3'	-7.92	110.19	119.70
55	CA	875	U	O4'-C1'-N1	7.92	114.54	108.20
24	BA	1330	C	O4'-C1'-N1	7.92	114.53	108.20
24	BA	1647	U	O4'-C1'-N1	7.92	114.53	108.20
24	DA	1539	U	P-O3'-C3'	-7.92	110.20	119.70
23	AW	5	U	P-O3'-C3'	-7.92	110.20	119.70
55	CA	462	G	P-O3'-C3'	7.91	129.20	119.70
24	DA	534	U	P-O3'-C3'	-7.91	110.21	119.70
24	DA	2559	C	P-O3'-C3'	-7.90	110.22	119.70
24	BA	1111	A	P-O3'-C3'	7.90	129.18	119.70
24	DA	2505	G	P-O3'-C3'	-7.90	110.22	119.70
24	DA	1942	C	P-O3'-C3'	-7.89	110.23	119.70
55	CA	915	A	P-O3'-C3'	-7.89	110.23	119.70
24	BA	1965	C	P-O5'-C5'	-7.89	108.28	120.90
25	BB	26	C	O4'-C1'-N1	7.89	114.51	108.20
24	DA	2267	A	C6-C5-N7	-7.89	126.78	132.30
21	AA	252	U	N1-C1'-C2'	-7.89	103.33	112.00
21	AA	884	U	P-O3'-C3'	7.88	129.16	119.70
24	DA	2023	C	O4'-C1'-N1	7.88	114.51	108.20
24	DA	2238	G	P-O3'-C3'	7.88	129.16	119.70
24	BA	776	G	O4'-C1'-N9	-7.88	101.90	108.20
24	BA	1971	U	P-O3'-C3'	-7.88	110.25	119.70
24	DA	1430	G	P-O3'-C3'	-7.88	110.25	119.70
24	BA	1865	U	C5-C4-O4	-7.88	121.17	125.90
24	DA	2629	U	P-O3'-C3'	7.88	129.15	119.70
55	CA	822	U	O4'-C1'-N1	7.87	114.50	108.20
24	BA	866	A	N9-C1'-C2'	-7.87	103.34	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1012	U	O4'-C1'-N1	7.87	114.50	108.20
24	BA	656	G	P-O3'-C3'	-7.87	110.26	119.70
21	AA	369	G	P-O3'-C3'	-7.87	110.26	119.70
55	CA	724	G	P-O3'-C3'	-7.87	110.26	119.70
24	DA	61	C	N1-C1'-C2'	-7.86	103.35	112.00
24	BA	1997	C	N1-C1'-C2'	-7.86	103.35	112.00
55	CA	183	C	O4'-C1'-N1	7.86	114.49	108.20
55	CA	1364	U	P-O3'-C3'	7.86	129.13	119.70
24	BA	2518	A	P-O5'-C5'	-7.86	108.33	120.90
24	BA	1029	A	N1-C6-N6	7.85	123.31	118.60
24	DA	811	U	P-O3'-C3'	7.85	129.12	119.70
24	BA	1266	G	P-O3'-C3'	7.84	129.11	119.70
21	AA	1282	C	N1-C1'-C2'	-7.84	103.37	112.00
55	CA	1128	C	N1-C1'-C2'	-7.84	103.37	112.00
55	CA	1087	G	N9-C1'-C2'	-7.83	103.38	112.00
21	AA	194	C	C5-C4-N4	7.83	125.68	120.20
24	BA	2575	C	C5-C6-N1	-7.83	117.08	121.00
24	BA	15	G	C5-C6-O6	7.83	133.30	128.60
24	BA	1649	G	P-O3'-C3'	-7.83	110.31	119.70
24	BA	264	C	O4'-C1'-N1	7.83	114.46	108.20
24	DA	2585	U	P-O3'-C3'	7.83	129.09	119.70
21	AA	372	C	P-O3'-C3'	7.82	129.09	119.70
24	DA	224	U	N1-C1'-C2'	-7.82	103.39	112.00
24	BA	1142	A	C4-N9-C1'	-7.81	112.23	126.30
24	BA	2060	A	P-O3'-C3'	7.81	129.08	119.70
21	AA	1239	A	P-O3'-C3'	7.81	129.07	119.70
24	BA	1147	A	N1-C6-N6	-7.81	113.91	118.60
24	DA	828	U	O4'-C1'-N1	7.81	114.45	108.20
21	AA	1365	G	P-O3'-C3'	-7.80	110.33	119.70
55	CA	428	G	P-O3'-C3'	7.80	129.06	119.70
24	DA	423	A	P-O3'-C3'	-7.80	110.34	119.70
24	BA	1716	U	O4'-C1'-N1	7.80	114.44	108.20
24	DA	646	U	P-O3'-C3'	7.80	129.06	119.70
24	BA	1963	U	N1-C1'-C2'	-7.79	103.43	112.00
25	BB	25	U	P-O3'-C3'	-7.79	110.35	119.70
24	DA	2860	A	N1-C6-N6	7.79	123.28	118.60
24	BA	1112	G	P-O3'-C3'	-7.79	110.35	119.70
55	CA	1162	C	O4'-C1'-N1	7.79	114.43	108.20
24	DA	1462	C	O4'-C1'-N1	7.79	114.43	108.20
24	DA	1913	A	P-O3'-C3'	7.79	129.05	119.70
21	AA	436	C	O4'-C1'-N1	7.79	114.43	108.20
24	BA	531	C	P-O3'-C3'	7.79	129.05	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1810	A	N9-C1'-C2'	-7.79	103.43	112.00
55	CA	330	C	N1-C1'-C2'	-7.78	103.44	112.00
56	DB	17	C	N1-C1'-C2'	-7.78	103.44	112.00
23	CW	5	U	N1-C1'-C2'	-7.78	103.44	112.00
24	BA	1351	C	O4'-C1'-N1	7.78	114.42	108.20
24	BA	1872	A	P-O3'-C3'	-7.78	110.36	119.70
25	BB	12	C	O4'-C1'-N1	7.78	114.42	108.20
21	AA	97	G	P-O3'-C3'	-7.77	110.37	119.70
24	BA	2275	C	N1-C1'-C2'	7.77	124.10	114.00
55	CA	1138	G	P-O3'-C3'	7.77	129.02	119.70
24	BA	2836	U	P-O5'-C5'	-7.77	108.47	120.90
24	DA	2758	A	N9-C1'-C2'	-7.77	103.46	112.00
24	DA	990	A	P-O3'-C3'	-7.76	110.39	119.70
24	BA	449	A	P-O3'-C3'	-7.76	110.39	119.70
24	BA	451	U	O4'-C1'-N1	7.76	114.41	108.20
24	BA	1272	A	O4'-C1'-N9	7.76	114.41	108.20
24	BA	1714	U	N1-C1'-C2'	-7.76	103.47	112.00
24	DA	1463	C	O4'-C1'-N1	7.76	114.41	108.20
24	DA	1674	G	P-O3'-C3'	7.76	129.01	119.70
24	DA	271	G	P-O3'-C3'	7.75	129.01	119.70
21	AA	1200	C	N1-C1'-C2'	7.75	124.08	114.00
24	DA	1088	A	C5-C6-N1	-7.75	113.82	117.70
24	BA	519	U	N1-C1'-C2'	-7.75	103.47	112.00
55	CA	704	A	P-O3'-C3'	-7.75	110.40	119.70
24	DA	1816	C	P-O3'-C3'	-7.75	110.40	119.70
55	CA	481	G	P-O3'-C3'	7.75	129.00	119.70
24	DA	1946	U	P-O3'-C3'	-7.75	110.40	119.70
24	DA	1972	G	P-O3'-C3'	-7.75	110.40	119.70
24	BA	2615	U	P-O3'-C3'	-7.75	110.40	119.70
24	DA	91	A	P-O3'-C3'	7.75	129.00	119.70
55	CA	389	A	N9-C4-C5	7.75	108.90	105.80
24	BA	479	A	O4'-C1'-N9	7.74	114.39	108.20
24	BA	2259	U	N1-C1'-C2'	-7.74	103.49	112.00
55	CA	53	A	P-O3'-C3'	-7.74	110.42	119.70
24	BA	266	G	P-O3'-C3'	-7.74	110.42	119.70
24	BA	2501	C	N1-C1'-C2'	7.73	124.05	114.00
24	BA	2791	G	P-O3'-C3'	-7.73	110.42	119.70
24	DA	1075	C	N1-C1'-C2'	-7.73	103.50	112.00
55	CA	643	C	O4'-C1'-N1	7.72	114.38	108.20
24	BA	2035	G	P-O3'-C3'	7.72	128.97	119.70
24	BA	474	G	P-O3'-C3'	7.72	128.96	119.70
24	BA	1693	U	P-O3'-C3'	7.72	128.96	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	395	U	N1-C1'-C2'	7.71	124.03	114.00
24	DA	1010	A	P-O3'-C3'	-7.71	110.44	119.70
24	BA	1458	U	P-O3'-C3'	7.71	128.95	119.70
24	BA	1957	C	N1-C1'-C2'	-7.71	103.52	112.00
24	BA	791	C	O4'-C1'-N1	7.70	114.36	108.20
24	DA	1089	A	P-O3'-C3'	7.70	128.94	119.70
24	DA	688	U	O4'-C1'-N1	7.69	114.35	108.20
24	DA	2460	U	O4'-C1'-N1	7.69	114.35	108.20
24	BA	2056	G	O4'-C1'-N9	-7.68	102.05	108.20
24	BA	2459	A	P-O3'-C3'	-7.68	110.48	119.70
55	CA	283	U	P-O3'-C3'	-7.68	110.48	119.70
21	AA	575	G	P-O3'-C3'	7.68	128.91	119.70
24	DA	1941	C	N1-C1'-C2'	-7.68	103.55	112.00
21	AA	1323	G	P-O3'-C3'	-7.68	110.49	119.70
25	BB	12	C	P-O3'-C3'	7.68	128.91	119.70
24	BA	481	G	P-O3'-C3'	7.67	128.91	119.70
24	BA	1180	U	P-O3'-C3'	7.67	128.90	119.70
24	DA	1937	A	P-O3'-C3'	7.67	128.90	119.70
24	DA	1971	U	P-O3'-C3'	-7.66	110.51	119.70
24	BA	2250	G	O4'-C1'-N9	-7.66	102.07	108.20
24	BA	2874	C	N1-C1'-C2'	-7.65	103.58	112.00
24	DA	1684	G	N9-C1'-C2'	-7.65	103.58	112.00
24	DA	2143	C	P-O3'-C3'	7.65	128.88	119.70
24	DA	2347	C	P-O3'-C3'	-7.65	110.52	119.70
55	CA	91	U	N1-C1'-C2'	-7.65	103.59	112.00
24	DA	1236	G	P-O3'-C3'	7.64	128.87	119.70
24	DA	2093	G	N9-C1'-C2'	-7.64	103.59	112.00
21	AA	266	G	P-O3'-C3'	7.64	128.87	119.70
24	BA	1021	A	P-O5'-C5'	-7.64	108.68	120.90
24	DA	1963	U	O4'-C1'-N1	7.64	114.31	108.20
24	DA	2726	A	P-O3'-C3'	7.64	128.86	119.70
24	BA	961	C	P-O3'-C3'	7.63	128.86	119.70
55	CA	936	C	O4'-C1'-N1	7.63	114.31	108.20
24	DA	813	U	P-O3'-C3'	-7.63	110.54	119.70
24	DA	2896	C	O4'-C1'-N1	7.63	114.31	108.20
55	CA	655	A	P-O3'-C3'	-7.63	110.54	119.70
21	AA	131	A	P-O3'-C3'	-7.63	110.55	119.70
24	BA	1022	G	N3-C2-N2	-7.63	114.56	119.90
24	DA	1272	A	P-O3'-C3'	7.63	128.85	119.70
24	BA	1996	C	P-O3'-C3'	7.62	128.85	119.70
24	BA	475	C	N1-C1'-C2'	-7.62	103.62	112.00
24	BA	2613	U	N1-C1'-C2'	7.62	123.91	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	373	A	P-O3'-C3'	-7.62	110.56	119.70
55	CA	1201	A	P-O3'-C3'	7.62	128.84	119.70
24	DA	762	U	P-O3'-C3'	7.62	128.84	119.70
24	DA	777	G	N9-C1'-C2'	-7.62	103.62	112.00
24	DA	1565	C	P-O3'-C3'	7.62	128.84	119.70
24	DA	741	U	P-O3'-C3'	-7.62	110.56	119.70
24	DA	958	U	N1-C1'-C2'	-7.61	103.63	112.00
24	BA	2439	A	P-O3'-C3'	7.61	128.83	119.70
24	DA	2210	U	P-O3'-C3'	7.61	128.83	119.70
24	BA	1478	G	C8-N9-C1'	7.61	136.89	127.00
55	CA	480	U	C2-N3-C4	-7.60	122.44	127.00
24	BA	35	G	P-O3'-C3'	-7.60	110.58	119.70
24	BA	2733	A	N9-C1'-C2'	-7.60	103.64	112.00
24	BA	2259	U	P-O3'-C3'	-7.60	110.58	119.70
24	BA	1759	A	P-O3'-C3'	-7.59	110.58	119.70
55	CA	1229	A	N9-C1'-C2'	-7.59	103.65	112.00
24	BA	1006	C	P-O3'-C3'	-7.58	110.60	119.70
55	CA	83	C	O4'-C1'-N1	7.58	114.27	108.20
24	BA	2757	A	P-O3'-C3'	-7.58	110.61	119.70
24	BA	2567	G	P-O3'-C3'	-7.58	110.61	119.70
55	CA	1215	G	P-O3'-C3'	-7.58	110.61	119.70
24	BA	1654	A	P-O3'-C3'	-7.57	110.61	119.70
24	DA	1439	A	C4-C5-C6	7.57	120.79	117.00
24	DA	2035	G	P-O3'-C3'	-7.57	110.61	119.70
24	BA	199	A	P-O3'-C3'	7.57	128.79	119.70
31	BH	49	ALA	N-CA-C	-7.57	90.56	111.00
25	BB	43	C	O4'-C1'-N1	7.57	114.25	108.20
21	AA	968	A	P-O3'-C3'	7.57	128.78	119.70
24	BA	2611	C	P-O3'-C3'	-7.57	110.62	119.70
24	BA	1839	G	P-O3'-C3'	-7.56	110.62	119.70
55	CA	327	A	P-O3'-C3'	7.56	128.77	119.70
24	BA	1615	C	P-O3'-C3'	7.56	128.77	119.70
24	BA	2791	G	N9-C1'-C2'	-7.56	103.69	112.00
21	AA	1184	G	P-O3'-C3'	-7.55	110.64	119.70
24	BA	1964	G	P-O3'-C3'	7.55	128.76	119.70
21	AA	1418	A	N1-C6-N6	7.55	123.13	118.60
24	BA	2555	U	O4'-C1'-N1	7.54	114.24	108.20
24	DA	2850	A	P-O3'-C3'	-7.54	110.65	119.70
56	DB	43	C	P-O3'-C3'	-7.54	110.65	119.70
24	DA	1320	C	P-O3'-C3'	7.54	128.75	119.70
24	BA	301	G	C8-N9-C1'	7.54	136.80	127.00
24	BA	2542	A	O4'-C1'-N9	7.54	114.23	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	739	A	P-O3'-C3'	7.53	128.74	119.70
55	CA	1345	U	P-O3'-C3'	7.53	128.74	119.70
55	CA	1358	U	O4'-C1'-N1	7.53	114.22	108.20
24	DA	2447	G	C6-N1-C2	-7.53	120.58	125.10
24	DA	2566	A	P-O3'-C3'	7.53	128.73	119.70
21	AA	1451	U	N1-C1'-C2'	7.53	123.78	114.00
24	BA	272	A	P-O3'-C3'	-7.53	110.67	119.70
24	DA	480	A	P-O3'-C3'	-7.53	110.67	119.70
24	BA	1478	G	N3-C4-C5	7.52	132.36	128.60
24	DA	1276	A	P-O3'-C3'	-7.52	110.67	119.70
24	DA	93	G	P-O3'-C3'	-7.52	110.67	119.70
25	BB	26	C	N1-C1'-C2'	-7.52	103.73	112.00
25	BB	26	C	P-O3'-C3'	-7.52	110.68	119.70
55	CA	566	G	P-O3'-C3'	7.52	128.72	119.70
55	CA	885	G	P-O3'-C3'	-7.51	110.69	119.70
55	CA	421	U	P-O3'-C3'	7.51	128.71	119.70
24	BA	2777	G	O4'-C1'-N9	-7.50	102.20	108.20
55	CA	1285	A	P-O3'-C3'	7.50	128.70	119.70
21	AA	821	G	P-O3'-C3'	-7.50	110.70	119.70
24	BA	2884	U	O4'-C1'-N1	7.50	114.20	108.20
24	DA	482	A	P-O3'-C3'	-7.50	110.70	119.70
55	CA	1055	A	P-O3'-C3'	-7.50	110.70	119.70
55	CA	977	A	P-O3'-C3'	-7.49	110.72	119.70
24	DA	1326	U	N1-C1'-C2'	-7.48	103.77	112.00
24	DA	1535	A	P-O3'-C3'	7.48	128.68	119.70
24	DA	1674	G	C4-N9-C1'	7.48	136.22	126.50
24	DA	2310	C	N1-C1'-C2'	-7.48	103.77	112.00
24	DA	1782	U	O4'-C1'-N1	7.48	114.18	108.20
24	BA	1557	C	P-O3'-C3'	-7.47	110.73	119.70
56	DB	56	G	P-O3'-C3'	7.47	128.66	119.70
55	CA	13	U	P-O3'-C3'	7.46	128.66	119.70
55	CA	426	U	P-O3'-C3'	-7.46	110.74	119.70
24	DA	1649	G	P-O3'-C3'	-7.46	110.75	119.70
55	CA	500	G	N9-C1'-C2'	-7.46	103.79	112.00
24	BA	1496	A	P-O3'-C3'	-7.46	110.75	119.70
55	CA	984	C	N1-C1'-C2'	-7.46	103.79	112.00
21	AA	1382	C	N1-C1'-C2'	-7.46	103.80	112.00
24	DA	1387	A	N9-C1'-C2'	-7.46	103.80	112.00
24	BA	919	U	C2-N3-C4	7.46	131.47	127.00
24	DA	2713	U	O4'-C1'-N1	-7.46	102.23	108.20
24	BA	1207	C	P-O3'-C3'	-7.45	110.75	119.70
55	CA	1129	C	P-O3'-C3'	7.45	128.64	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	92	U	N1-C1'-C2'	-7.45	103.80	112.00
24	BA	1708	C	N1-C1'-C2'	-7.45	103.80	112.00
24	DA	963	U	O4'-C1'-N1	7.45	114.16	108.20
24	DA	995	C	P-O3'-C3'	7.45	128.64	119.70
24	DA	2716	C	O4'-C1'-N1	7.45	114.16	108.20
24	BA	588	U	P-O3'-C3'	-7.45	110.77	119.70
55	CA	1045	C	P-O3'-C3'	-7.45	110.76	119.70
24	DA	1696	G	P-O3'-C3'	-7.45	110.77	119.70
24	BA	633	A	O4'-C1'-N9	-7.44	102.25	108.20
24	DA	2282	G	P-O3'-C3'	7.44	128.63	119.70
21	AA	985	C	N1-C1'-C2'	-7.44	103.81	112.00
24	BA	764	A	P-O3'-C3'	7.44	128.63	119.70
24	DA	2307	G	P-O3'-C3'	7.44	128.62	119.70
24	BA	139	U	O4'-C1'-N1	7.43	114.15	108.20
21	AA	1190	G	P-O3'-C3'	7.43	128.62	119.70
24	BA	73	A	N9-C1'-C2'	-7.43	103.83	112.00
24	BA	1345	C	P-O5'-C5'	-7.43	109.02	120.90
21	AA	1476	A	P-O3'-C3'	-7.43	110.79	119.70
24	BA	1011	G	P-O3'-C3'	7.43	128.61	119.70
24	BA	2072	C	O4'-C1'-N1	-7.43	102.26	108.20
24	BA	2385	C	N1-C1'-C2'	-7.43	103.83	112.00
24	BA	2572	A	P-O3'-C3'	7.43	128.61	119.70
24	BA	2868	A	P-O3'-C3'	-7.43	110.79	119.70
55	CA	1200	C	P-O3'-C3'	7.43	128.61	119.70
25	BB	43	C	N1-C1'-C2'	-7.42	103.83	112.00
24	DA	1345	C	O4'-C1'-N1	7.42	114.14	108.20
24	BA	855	G	C8-N9-C4	-7.41	103.44	106.40
24	BA	1086	A	N1-C2-N3	7.41	133.01	129.30
24	BA	1499	C	O4'-C1'-N1	7.41	114.13	108.20
24	DA	2874	C	P-O3'-C3'	-7.41	110.81	119.70
24	DA	404	A	P-O3'-C3'	7.41	128.59	119.70
24	DA	989	G	P-O3'-C3'	7.41	128.59	119.70
24	BA	2215	C	P-O3'-C3'	-7.40	110.82	119.70
24	BA	913	U	N1-C1'-C2'	7.39	123.61	114.00
24	DA	1477	A	P-O3'-C3'	-7.39	110.83	119.70
21	AA	1097	C	O4'-C1'-N1	7.39	114.11	108.20
21	AA	913	A	P-O3'-C3'	7.39	128.57	119.70
24	DA	777	G	P-O3'-C3'	-7.39	110.84	119.70
24	BA	279	A	N9-C1'-C2'	-7.38	103.88	112.00
24	BA	1340	U	N1-C1'-C2'	7.38	123.60	114.00
24	BA	2822	G	N1-C6-O6	7.38	124.33	119.90
24	BA	2603	G	P-O3'-C3'	-7.38	110.84	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	1312	U	P-O3'-C3'	7.38	128.56	119.70
24	DA	534	U	O4'-C1'-N1	7.38	114.10	108.20
24	DA	1076	C	N1-C1'-C2'	-7.38	103.89	112.00
55	CA	717	U	P-O3'-C3'	7.38	128.55	119.70
21	AA	1054	C	P-O3'-C3'	7.37	128.55	119.70
24	BA	206	U	P-O3'-C3'	-7.37	110.86	119.70
24	DA	830	G	P-O3'-C3'	7.37	128.54	119.70
21	AA	210	C	P-O3'-C3'	7.37	128.54	119.70
55	CA	317	U	O4'-C1'-N1	7.36	114.09	108.20
24	BA	459	U	P-O5'-C5'	-7.36	109.12	120.90
24	BA	2337	G	P-O5'-C5'	-7.36	109.12	120.90
24	BA	995	C	P-O3'-C3'	7.36	128.53	119.70
24	BA	1268	A	P-O3'-C3'	-7.36	110.87	119.70
24	BA	1086	A	C8-N9-C4	-7.35	102.86	105.80
24	BA	2903	U	O4'-C1'-N1	7.35	114.08	108.20
55	CA	1124	G	P-O3'-C3'	7.34	128.51	119.70
21	AA	934	C	P-O3'-C3'	7.34	128.51	119.70
24	DA	2428	G	P-O3'-C3'	-7.34	110.89	119.70
21	AA	1505	G	P-O3'-C3'	-7.34	110.89	119.70
24	BA	915	C	P-O3'-C3'	-7.33	110.90	119.70
55	CA	1212	U	O4'-C1'-N1	-7.33	102.33	108.20
24	DA	1286	A	P-O3'-C3'	7.33	128.50	119.70
24	BA	763	G	C6-C5-N7	-7.33	126.00	130.40
24	BA	2211	A	P-O3'-C3'	7.33	128.50	119.70
24	DA	86	G	P-O3'-C3'	-7.33	110.90	119.70
21	AA	1053	G	O3'-P-O5'	-7.33	90.08	104.00
24	DA	321	U	P-O3'-C3'	7.33	128.50	119.70
24	DA	325	G	N9-C1'-C2'	-7.32	103.94	112.00
24	BA	454	A	P-O3'-C3'	7.32	128.49	119.70
55	CA	575	G	P-O3'-C3'	7.32	128.48	119.70
21	AA	173	U	P-O3'-C3'	7.31	128.48	119.70
24	DA	958	U	P-O3'-C3'	-7.31	110.92	119.70
24	BA	391	A	P-O3'-C3'	-7.31	110.93	119.70
24	BA	1799	G	O4'-C1'-N9	7.31	114.05	108.20
24	BA	2275	C	O4'-C1'-N1	7.30	114.04	108.20
24	DA	2037	A	P-O3'-C3'	-7.30	110.93	119.70
24	BA	204	A	P-O3'-C3'	7.30	128.46	119.70
24	BA	475	C	P-O5'-C5'	-7.29	109.23	120.90
25	BB	108	A	P-O3'-C3'	7.29	128.45	119.70
24	DA	2069	G	N9-C1'-C2'	-7.29	103.98	112.00
21	AA	1531	A	P-O3'-C3'	-7.29	110.95	119.70
24	DA	2460	U	N1-C1'-C2'	-7.29	103.98	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	465	A	P-O3'-C3'	-7.29	110.95	119.70
24	DA	2283	C	P-O3'-C3'	-7.29	110.95	119.70
24	BA	2007	U	P-O3'-C3'	-7.29	110.96	119.70
24	BA	221	A	P-O3'-C3'	7.28	128.44	119.70
24	BA	1615	C	N1-C1'-C2'	7.28	123.46	114.00
24	DA	991	C	P-O3'-C3'	-7.28	110.96	119.70
21	AA	566	G	P-O3'-C3'	7.28	128.43	119.70
21	AA	724	G	P-O3'-C3'	-7.28	110.97	119.70
55	CA	1202	U	P-O3'-C3'	-7.28	110.97	119.70
24	BA	1072	C	P-O3'-C3'	-7.27	110.97	119.70
55	CA	1337	G	P-O3'-C3'	7.27	128.43	119.70
24	DA	2521	C	N1-C1'-C2'	-7.27	104.00	112.00
55	CA	564	C	N1-C1'-C2'	-7.27	104.00	112.00
21	AA	1085	U	N1-C1'-C2'	7.27	123.45	114.00
55	CA	122	G	N9-C1'-C2'	-7.26	104.01	112.00
55	CA	984	C	P-O3'-C3'	-7.26	110.98	119.70
25	BB	109	A	P-O3'-C3'	-7.26	110.99	119.70
24	DA	2439	A	P-O3'-C3'	7.26	128.41	119.70
21	AA	1046	A	O4'-C1'-N9	7.26	114.00	108.20
24	DA	973	A	P-O3'-C3'	7.26	128.41	119.70
24	BA	1372	U	C2-N3-C4	-7.25	122.65	127.00
24	DA	1936	A	P-O3'-C3'	7.25	128.40	119.70
24	DA	589	U	O4'-C1'-N1	7.25	114.00	108.20
24	DA	603	A	P-O3'-C3'	7.25	128.40	119.70
24	BA	1706	C	N1-C1'-C2'	7.25	123.42	114.00
24	DA	2181	U	O4'-C1'-N1	7.25	114.00	108.20
21	AA	66	A	P-O3'-C3'	-7.25	111.01	119.70
24	BA	2307	G	P-O3'-C3'	7.25	128.40	119.70
24	BA	1732	C	N1-C2-O2	-7.24	114.56	118.90
24	DA	2391	G	P-O3'-C3'	7.23	128.38	119.70
21	AA	1051	C	P-O3'-C3'	-7.23	111.03	119.70
55	CA	430	A	N9-C1'-C2'	-7.23	104.05	112.00
21	AA	1382	C	O4'-C1'-N1	7.23	113.98	108.20
24	DA	445	C	P-O3'-C3'	-7.23	111.03	119.70
55	CA	122	G	P-O3'-C3'	-7.22	111.03	119.70
24	DA	945	A	O4'-C1'-N9	7.22	113.98	108.20
24	DA	1758	U	P-O3'-C3'	7.22	128.37	119.70
24	DA	1965	C	N1-C1'-C2'	-7.22	104.06	112.00
21	AA	1417	G	C5-C6-O6	-7.22	124.27	128.60
24	BA	1082	U	N1-C2-N3	7.21	119.23	114.90
24	BA	2862	G	P-O3'-C3'	-7.21	111.04	119.70
55	CA	1212	U	N1-C1'-C2'	7.21	123.38	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1555	G	P-O5'-C5'	-7.21	109.36	120.90
24	BA	1634	A	P-O3'-C3'	7.21	128.35	119.70
24	DA	1780	A	P-O3'-C3'	7.21	128.35	119.70
55	CA	1228	C	P-O3'-C3'	-7.21	111.05	119.70
21	AA	1336	C	P-O3'-C3'	7.21	128.35	119.70
24	BA	233	A	P-O3'-C3'	-7.20	111.06	119.70
24	DA	396	G	N9-C1'-C2'	-7.20	104.08	112.00
24	BA	125	A	O4'-C1'-N9	7.20	113.96	108.20
24	BA	528	A	P-O3'-C3'	-7.20	111.06	119.70
24	BA	1451	C	N1-C1'-C2'	7.20	123.36	114.00
24	BA	812	C	P-O3'-C3'	-7.20	111.06	119.70
55	CA	597	G	N9-C1'-C2'	-7.20	104.08	112.00
55	CA	64	G	P-O3'-C3'	7.19	128.33	119.70
21	AA	960	U	N1-C1'-C2'	7.19	123.35	114.00
24	DA	1158	C	O4'-C1'-N1	7.19	113.95	108.20
24	DA	436	C	N1-C1'-C2'	-7.19	104.09	112.00
24	BA	616	A	P-O3'-C3'	-7.19	111.07	119.70
24	BA	2053	G	P-O3'-C3'	-7.19	111.07	119.70
24	BA	1213	A	P-O3'-C3'	-7.19	111.07	119.70
24	DA	975	A	P-O3'-C3'	-7.18	111.08	119.70
24	DA	627	A	P-O3'-C3'	7.18	128.31	119.70
21	AA	199	A	N9-C1'-C2'	-7.18	104.11	112.00
24	BA	1714	U	P-O3'-C3'	-7.18	111.09	119.70
24	BA	2595	G	P-O3'-C3'	-7.18	111.09	119.70
24	DA	790	U	P-O3'-C3'	-7.18	111.09	119.70
21	AA	453	G	N9-C1'-C2'	-7.17	104.11	112.00
55	CA	1200	C	O4'-C1'-N1	-7.17	102.46	108.20
55	CA	1137	C	N1-C1'-C2'	7.17	123.33	114.00
21	AA	1531	A	N9-C1'-C2'	-7.17	104.11	112.00
24	BA	2199	A	P-O5'-C5'	-7.17	109.43	120.90
24	BA	2427	C	P-O3'-C3'	-7.17	111.10	119.70
21	AA	1170	A	N9-C1'-C2'	-7.17	104.12	112.00
24	BA	1091	G	P-O3'-C3'	-7.17	111.10	119.70
24	BA	974	G	P-O3'-C3'	7.17	128.30	119.70
24	DA	1946	U	O4'-C1'-N1	7.16	113.93	108.20
55	CA	595	A	P-O3'-C3'	7.16	128.29	119.70
24	DA	1576	U	O4'-C1'-N1	7.16	113.92	108.20
24	BA	2063	C	O4'-C1'-N1	-7.15	102.48	108.20
55	CA	1283	U	P-O3'-C3'	-7.15	111.12	119.70
55	CA	14	U	P-O3'-C3'	-7.15	111.12	119.70
24	DA	1249	U	O4'-C1'-N1	7.15	113.92	108.20
24	BA	1669	A	P-O3'-C3'	-7.14	111.13	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	1931	U	N1-C1'-C2'	-7.14	104.14	112.00
24	BA	1060	U	N3-C4-O4	7.14	124.40	119.40
24	DA	832	U	P-O5'-C5'	-7.14	109.47	120.90
21	AA	885	G	N9-C1'-C2'	-7.14	104.15	112.00
24	BA	1238	G	N9-C1'-C2'	-7.14	104.15	112.00
24	BA	2772	C	C6-N1-C2	7.14	123.16	120.30
24	BA	163	C	P-O3'-C3'	-7.14	111.13	119.70
24	BA	1022	G	N3-C4-C5	7.14	132.17	128.60
55	CA	1336	C	P-O3'-C3'	7.14	128.27	119.70
21	AA	78	A	C6-N1-C2	-7.14	114.32	118.60
21	AA	1169	A	P-O3'-C3'	-7.13	111.14	119.70
55	CA	998	C	O4'-C1'-N1	7.13	113.91	108.20
55	CA	870	U	P-O3'-C3'	7.13	128.26	119.70
24	BA	704	G	P-O3'-C3'	7.13	128.25	119.70
24	DA	647	G	P-O3'-C3'	-7.13	111.15	119.70
24	DA	1569	A	P-O3'-C3'	-7.13	111.14	119.70
24	BA	2821	A	P-O3'-C3'	-7.13	111.15	119.70
24	DA	2350	C	O4'-C1'-N1	7.13	113.90	108.20
56	DB	58	A	P-O3'-C3'	-7.12	111.15	119.70
24	BA	1779	U	C5-C6-N1	-7.12	119.14	122.70
24	BA	301	G	C6-C5-N7	7.12	134.67	130.40
21	AA	533	A	P-O3'-C3'	7.12	128.24	119.70
24	BA	2857	G	C4-C5-N7	7.12	113.65	110.80
21	AA	253	A	N9-C1'-C2'	-7.11	104.17	112.00
55	CA	47	C	P-O3'-C3'	7.11	128.24	119.70
55	CA	212	G	P-O3'-C3'	-7.11	111.16	119.70
24	DA	1304	A	N9-C1'-C2'	-7.11	104.17	112.00
24	DA	1615	C	P-O3'-C3'	7.11	128.24	119.70
21	AA	517	G	P-O3'-C3'	7.11	128.23	119.70
24	BA	1633	G	P-O3'-C3'	7.11	128.23	119.70
24	BA	1664	A	P-O3'-C3'	7.11	128.23	119.70
24	DA	1822	C	O4'-C1'-N1	7.11	113.88	108.20
24	BA	1654	A	N9-C1'-C2'	-7.10	104.19	112.00
55	CA	1382	C	N1-C1'-C2'	-7.10	104.19	112.00
24	BA	1129	A	P-O3'-C3'	-7.10	111.18	119.70
24	BA	61	C	P-O5'-C5'	-7.10	109.54	120.90
55	CA	83	C	P-O3'-C3'	7.10	128.22	119.70
21	AA	1496	C	C6-N1-C2	7.10	123.14	120.30
24	BA	628	G	P-O3'-C3'	-7.10	111.18	119.70
55	CA	374	A	P-O3'-C3'	-7.10	111.18	119.70
24	DA	2069	G	P-O3'-C3'	-7.09	111.19	119.70
24	DA	2267	A	N9-C4-C5	-7.09	102.96	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	2275	C	O4'-C1'-N1	7.09	113.88	108.20
24	BA	907	G	N3-C4-C5	7.09	132.15	128.60
55	CA	1169	A	P-O3'-C3'	7.09	128.21	119.70
24	DA	228	C	O4'-C1'-N1	7.09	113.87	108.20
24	BA	1311	G	P-O3'-C3'	7.09	128.20	119.70
24	DA	2408	U	O4'-C1'-N1	7.09	113.87	108.20
21	AA	81	A	O4'-C1'-N9	7.08	113.87	108.20
55	CA	549	C	N1-C1'-C2'	-7.08	104.21	112.00
55	CA	1240	U	O4'-C1'-N1	7.08	113.86	108.20
21	AA	329	A	O4'-C1'-N9	-7.07	102.54	108.20
24	BA	455	C	O4'-C1'-N1	-7.07	102.54	108.20
24	DA	1287	A	P-O3'-C3'	7.07	128.18	119.70
24	BA	685	A	O3'-P-O5'	7.07	117.43	104.00
24	BA	1805	A	N9-C4-C5	7.07	108.63	105.80
24	BA	2724	U	P-O3'-C3'	7.06	128.18	119.70
55	CA	458	U	P-O3'-C3'	7.06	128.18	119.70
24	BA	774	G	P-O3'-C3'	7.06	128.18	119.70
24	BA	2857	G	C6-C5-N7	-7.06	126.17	130.40
55	CA	1381	U	P-O3'-C3'	-7.06	111.23	119.70
24	BA	1499	C	P-O3'-C3'	-7.06	111.23	119.70
24	BA	919	U	O4'-C1'-N1	-7.05	102.56	108.20
55	CA	210	C	P-O3'-C3'	7.05	128.17	119.70
55	CA	465	A	P-O3'-C3'	-7.05	111.23	119.70
21	AA	549	C	P-O3'-C3'	-7.05	111.24	119.70
24	DA	15	G	P-O3'-C3'	-7.05	111.24	119.70
21	AA	185	U	P-O3'-C3'	-7.05	111.24	119.70
24	BA	2321	U	P-O3'-C3'	-7.05	111.24	119.70
24	DA	1674	G	C8-N9-C1'	-7.05	117.84	127.00
55	CA	1074	G	P-O3'-C3'	-7.04	111.25	119.70
24	DA	933	A	P-O3'-C3'	-7.04	111.25	119.70
21	AA	1131	G	P-O3'-C3'	-7.04	111.25	119.70
24	BA	1298	C	P-O5'-C5'	-7.04	109.63	120.90
55	CA	934	C	O4'-C1'-N1	7.04	113.83	108.20
24	BA	2808	G	P-O3'-C3'	7.04	128.15	119.70
21	AA	567	G	C3'-C2'-C1'	7.04	107.13	101.50
24	DA	2447	G	C5-C6-N1	7.03	115.02	111.50
24	DA	2542	A	P-O3'-C3'	7.03	128.14	119.70
24	BA	621	A	N9-C1'-C2'	-7.03	104.27	112.00
24	BA	2860	A	C5-C6-N1	-7.03	114.19	117.70
24	DA	984	A	P-O3'-C3'	7.03	128.13	119.70
55	CA	1296	C	O4'-C1'-N1	7.03	113.82	108.20
24	BA	1326	U	P-O3'-C3'	-7.02	111.27	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	78	A	C5-C6-N6	-7.02	118.08	123.70
21	AA	1137	C	P-O3'-C3'	7.02	128.13	119.70
24	BA	85	G	P-O3'-C3'	-7.02	111.27	119.70
24	BA	216	A	N9-C1'-C2'	-7.02	104.28	112.00
24	DA	1758	U	N1-C1'-C2'	7.02	123.13	114.00
21	AA	81	A	P-O3'-C3'	7.02	128.12	119.70
24	BA	1936	A	P-O3'-C3'	7.02	128.12	119.70
31	BH	48	GLU	N-CA-CB	-7.02	97.97	110.60
24	DA	265	A	O4'-C1'-N9	7.02	113.81	108.20
21	AA	559	A	P-O3'-C3'	7.02	128.12	119.70
21	AA	1054	C	P-O5'-C5'	-7.01	109.68	120.90
21	AA	1031	C	P-O3'-C3'	7.01	128.11	119.70
24	DA	755	U	O4'-C1'-N1	7.01	113.81	108.20
24	DA	2611	C	P-O3'-C3'	-7.01	111.29	119.70
24	DA	437	U	P-O3'-C3'	-7.00	111.30	119.70
24	DA	1108	U	O4'-C1'-N1	7.00	113.80	108.20
55	CA	464	U	N1-C1'-C2'	-7.00	104.30	112.00
24	DA	775	G	O4'-C1'-N9	6.99	113.80	108.20
24	BA	2044	C	O4'-C1'-N1	-6.99	102.61	108.20
24	DA	1716	U	N1-C1'-C2'	-6.99	104.31	112.00
24	BA	299	A	C5-N7-C8	-6.99	100.41	103.90
24	DA	2613	U	P-O3'-C3'	6.99	128.09	119.70
24	DA	1539	U	O4'-C1'-N1	6.99	113.79	108.20
24	BA	1324	G	P-O3'-C3'	6.99	128.09	119.70
24	DA	740	C	P-O3'-C3'	6.99	128.08	119.70
24	DA	617	G	N9-C1'-C2'	-6.97	104.33	112.00
24	DA	1669	A	P-O3'-C3'	-6.97	111.33	119.70
24	DA	2616	C	P-O3'-C3'	-6.97	111.33	119.70
24	DA	335	C	O4'-C1'-N1	6.97	113.78	108.20
24	BA	752	A	O4'-C1'-N9	6.97	113.78	108.20
24	BA	945	A	P-O3'-C3'	6.97	128.06	119.70
24	BA	396	G	N9-C1'-C2'	-6.96	104.34	112.00
24	BA	868	U	P-O3'-C3'	6.96	128.06	119.70
24	BA	2610	C	P-O3'-C3'	6.96	128.06	119.70
24	DA	302	C	N1-C1'-C2'	-6.96	104.34	112.00
24	BA	530	G	C4-N9-C1'	6.96	135.54	126.50
55	CA	348	G	N9-C1'-C2'	-6.96	104.35	112.00
55	CA	1399	C	P-O3'-C3'	6.96	128.05	119.70
24	DA	2225	A	P-O3'-C3'	6.96	128.05	119.70
24	DA	1256	G	P-O3'-C3'	-6.95	111.36	119.70
24	DA	2334	U	O4'-C1'-N1	6.95	113.76	108.20
24	BA	1073	A	P-O3'-C3'	-6.95	111.36	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	232	G	P-O3'-C3'	6.95	128.04	119.70
25	BB	3	C	P-O3'-C3'	-6.95	111.36	119.70
24	BA	61	C	N1-C1'-C2'	-6.95	104.36	112.00
24	BA	1707	G	P-O3'-C3'	-6.95	111.36	119.70
24	BA	2691	C	P-O3'-C3'	-6.94	111.37	119.70
24	BA	1523	U	O4'-C1'-N1	6.94	113.75	108.20
21	AA	213	G	N9-C1'-C2'	-6.94	104.36	112.00
24	BA	1782	U	P-O3'-C3'	-6.94	111.37	119.70
55	CA	519	C	O4'-C1'-N1	6.94	113.75	108.20
24	DA	807	U	P-O3'-C3'	-6.94	111.37	119.70
24	BA	2069	G	P-O3'-C3'	-6.94	111.38	119.70
55	CA	885	G	N9-C1'-C2'	-6.94	104.37	112.00
24	BA	2034	U	N1-C1'-C2'	-6.93	104.37	112.00
24	BA	468	G	P-O5'-C5'	-6.93	109.81	120.90
24	BA	2296	U	O4'-C1'-N1	-6.93	102.66	108.20
24	DA	2267	A	N3-C4-N9	6.93	132.94	127.40
21	AA	1051	C	N1-C1'-C2'	-6.92	104.39	112.00
24	BA	1273	U	N1-C1'-C2'	-6.92	104.39	112.00
24	BA	1455	G	P-O3'-C3'	-6.92	111.39	119.70
24	DA	1962	C	P-O3'-C3'	6.92	128.00	119.70
24	BA	2576	G	P-O3'-C3'	6.92	128.00	119.70
24	DA	1722	A	P-O3'-C3'	-6.92	111.40	119.70
24	DA	1734	G	P-O3'-C3'	-6.92	111.40	119.70
24	BA	747	U	P-O3'-C3'	-6.92	111.40	119.70
55	CA	1033	G	N9-C1'-C2'	-6.92	104.39	112.00
24	DA	2060	A	P-O3'-C3'	6.92	128.00	119.70
21	AA	1417	G	C4-C5-N7	6.91	113.56	110.80
24	BA	777	G	N9-C1'-C2'	-6.91	104.39	112.00
24	DA	605	G	P-O3'-C3'	-6.91	111.40	119.70
24	BA	1396	U	P-O3'-C3'	6.91	128.00	119.70
24	BA	1526	C	C6-N1-C2	6.91	123.06	120.30
24	BA	1654	A	C3'-C2'-C1'	6.91	107.03	101.50
24	DA	2875	C	P-O3'-C3'	-6.91	111.41	119.70
21	AA	1345	U	O4'-C1'-N1	6.91	113.73	108.20
24	BA	1073	A	N9-C1'-C2'	-6.91	104.40	112.00
55	CA	1366	C	N1-C1'-C2'	-6.91	104.40	112.00
56	DB	76	G	N3-C4-N9	-6.91	121.86	126.00
24	BA	1478	G	C4-N9-C1'	-6.91	117.52	126.50
24	BA	2063	C	P-O3'-C3'	-6.91	111.41	119.70
24	DA	2896	C	P-O3'-C3'	-6.91	111.41	119.70
24	BA	504	A	P-O5'-C5'	-6.91	109.85	120.90
24	BA	1509	A	O4'-C1'-N9	6.91	113.72	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	1382	C	P-O3'-C3'	-6.90	111.42	119.70
21	AA	1349	A	P-O3'-C3'	-6.90	111.42	119.70
24	BA	2382	G	P-O3'-C3'	6.90	127.98	119.70
24	DA	913	U	P-O3'-C3'	6.90	127.98	119.70
24	DA	1460	U	P-O3'-C3'	6.90	127.98	119.70
24	BA	1334	G	P-O3'-C3'	-6.90	111.42	119.70
24	DA	2283	C	O4'-C1'-N1	6.90	113.72	108.20
24	BA	1556	C	O4'-C1'-N1	6.90	113.72	108.20
55	CA	131	A	P-O5'-C5'	-6.90	109.86	120.90
24	DA	1942	C	N1-C1'-C2'	-6.90	104.41	112.00
21	AA	332	G	N9-C1'-C2'	-6.90	104.42	112.00
21	AA	9	G	N9-C1'-C2'	-6.89	104.42	112.00
24	DA	424	G	N9-C1'-C2'	-6.89	104.42	112.00
21	AA	1224	U	C2-N3-C4	-6.89	122.86	127.00
24	DA	2333	A	P-O3'-C3'	6.89	127.97	119.70
24	BA	232	G	P-O3'-C3'	6.89	127.97	119.70
24	BA	2062	A	P-O3'-C3'	-6.89	111.43	119.70
24	BA	2860	A	C4-C5-C6	6.89	120.44	117.00
21	AA	388	G	P-O3'-C3'	6.89	127.97	119.70
55	CA	1288	A	P-O3'-C3'	-6.89	111.43	119.70
24	DA	1511	G	P-O3'-C3'	-6.89	111.44	119.70
24	DA	1683	U	O4'-C1'-N1	6.88	113.71	108.20
24	BA	2815	C	P-O3'-C3'	-6.88	111.44	119.70
55	CA	596	A	P-O3'-C3'	-6.88	111.44	119.70
55	CA	717	U	N1-C1'-C2'	6.88	122.94	114.00
55	CA	752	G	P-O3'-C3'	6.88	127.95	119.70
55	CA	1284	C	O4'-C1'-N1	6.88	113.70	108.20
24	DA	1839	G	N9-C1'-C2'	-6.88	104.43	112.00
24	BA	1142	A	C4-C5-N7	6.87	114.14	110.70
24	BA	1247	A	O4'-C1'-N9	6.87	113.70	108.20
24	BA	2513	A	N9-C4-C5	6.87	108.55	105.80
24	BA	974	G	N7-C8-N9	6.87	116.53	113.10
25	BB	36	C	O4'-C1'-N1	-6.87	102.71	108.20
55	CA	91	U	O4'-C1'-N1	6.87	113.69	108.20
21	AA	794	A	P-O3'-C3'	-6.87	111.46	119.70
24	BA	2822	G	P-O3'-C3'	-6.86	111.47	119.70
24	BA	2229	U	O4'-C1'-N1	6.86	113.69	108.20
55	CA	374	A	N9-C1'-C2'	-6.86	104.46	112.00
21	AA	47	C	N1-C1'-C2'	6.86	122.91	114.00
24	BA	2860	A	N9-C4-C5	-6.86	103.06	105.80
24	BA	800	A	P-O3'-C3'	6.85	127.92	119.70
24	BA	1019	U	N1-C2-O2	-6.85	118.00	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1381	U	N1-C1'-C2'	-6.85	104.47	112.00
24	DA	1970	A	P-O3'-C3'	6.85	127.92	119.70
24	BA	70	G	P-O3'-C3'	6.85	127.92	119.70
24	BA	137	U	O4'-C1'-N1	-6.85	102.72	108.20
24	BA	434	U	P-O3'-C3'	6.85	127.92	119.70
24	BA	1274	A	P-O3'-C3'	-6.85	111.48	119.70
24	BA	1495	A	P-O3'-C3'	-6.85	111.48	119.70
24	BA	1452	G	N3-C4-C5	6.84	132.02	128.60
24	BA	802	A	C3'-C2'-C1'	6.84	106.97	101.50
24	BA	1805	A	N1-C6-N6	-6.84	114.50	118.60
24	DA	1556	C	O4'-C1'-N1	6.84	113.67	108.20
21	AA	687	A	P-O5'-C5'	6.83	131.84	120.90
55	CA	252	U	O4'-C1'-N1	6.83	113.67	108.20
21	AA	1228	C	P-O3'-C3'	-6.83	111.50	119.70
24	DA	2280	G	P-O3'-C3'	-6.83	111.50	119.70
24	DA	2314	A	N9-C1'-C2'	-6.83	104.48	112.00
21	AA	575	G	N3-C4-C5	6.83	132.02	128.60
24	BA	2701	U	C2-N3-C4	-6.83	122.90	127.00
24	BA	2883	A	N1-C6-N6	6.83	122.70	118.60
21	AA	1432	G	P-O3'-C3'	6.83	127.89	119.70
24	DA	746	U	N1-C1'-C2'	6.83	122.88	114.00
24	BA	1868	C	O4'-C1'-N1	6.83	113.66	108.20
24	BA	2542	A	P-O3'-C3'	6.83	127.89	119.70
55	CA	373	A	N9-C1'-C2'	-6.82	104.49	112.00
24	DA	1929	G	P-O3'-C3'	6.82	127.89	119.70
21	AA	1242	G	P-O3'-C3'	-6.82	111.51	119.70
24	BA	1359	A	C5-N7-C8	-6.82	100.49	103.90
24	DA	2143	C	O4'-C1'-N1	6.82	113.65	108.20
56	DB	44	G	P-O3'-C3'	6.82	127.88	119.70
24	BA	1941	C	N1-C1'-C2'	-6.82	104.50	112.00
24	DA	1136	G	N9-C1'-C2'	-6.82	104.50	112.00
24	BA	1334	G	P-O5'-C5'	-6.81	110.00	120.90
21	AA	89	U	O4'-C1'-N1	6.81	113.65	108.20
24	BA	250	G	P-O3'-C3'	-6.81	111.53	119.70
24	BA	1158	C	P-O5'-C5'	-6.81	110.00	120.90
24	BA	1757	A	P-O3'-C3'	6.81	127.87	119.70
24	BA	972	A	P-O3'-C3'	6.80	127.86	119.70
24	DA	2753	A	N9-C1'-C2'	-6.80	104.52	112.00
24	BA	1125	G	C4-C5-N7	6.80	113.52	110.80
21	AA	32	A	P-O3'-C3'	-6.80	111.54	119.70
21	AA	276	G	N9-C1'-C2'	-6.80	104.52	112.00
21	AA	512	U	O4'-C1'-N1	6.80	113.64	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	2496	C	O4'-C1'-N1	6.80	113.64	108.20
24	DA	460	A	N9-C1'-C2'	-6.80	104.52	112.00
55	CA	1452	C	P-O3'-C3'	6.80	127.86	119.70
24	BA	215	G	P-O3'-C3'	6.80	127.86	119.70
24	BA	2005	A	P-O3'-C3'	6.80	127.86	119.70
24	DA	2682	A	C3'-C2'-C1'	6.80	106.94	101.50
31	DH	49	ALA	CB-CA-C	-6.80	99.91	110.10
24	BA	1838	C	P-O3'-C3'	6.79	127.85	119.70
24	DA	531	C	N1-C1'-C2'	6.79	122.83	114.00
21	AA	1087	G	P-O3'-C3'	-6.79	111.55	119.70
21	AA	1183	U	N1-C1'-C2'	-6.79	104.53	112.00
24	DA	2041	U	C2-N3-C4	-6.79	122.92	127.00
35	BL	6	LEU	CA-CB-CG	6.79	130.92	115.30
21	AA	430	A	N9-C1'-C2'	-6.79	104.53	112.00
24	DA	807	U	O4'-C1'-N1	6.79	113.63	108.20
24	DA	729	G	P-O3'-C3'	-6.79	111.55	119.70
24	DA	2021	C	O4'-C1'-N1	6.79	113.63	108.20
24	BA	411	G	P-O3'-C3'	6.78	127.84	119.70
24	DA	2272	U	O4'-C1'-N1	-6.78	102.78	108.20
24	BA	459	U	P-O3'-C3'	-6.78	111.56	119.70
24	BA	2639	A	N9-C1'-C2'	-6.78	104.54	112.00
24	BA	1866	A	P-O3'-C3'	-6.78	111.57	119.70
24	BA	373	U	P-O3'-C3'	-6.77	111.57	119.70
55	CA	1200	C	N1-C1'-C2'	6.77	122.80	114.00
24	DA	1515	A	O4'-C1'-N9	6.77	113.62	108.20
24	BA	974	G	C5-N7-C8	-6.77	100.92	104.30
24	BA	2067	G	P-O3'-C3'	6.76	127.82	119.70
24	BA	2273	A	N1-C6-N6	6.76	122.66	118.60
55	CA	1366	C	O4'-C1'-N1	6.76	113.61	108.20
24	BA	1452	G	N3-C4-N9	-6.76	121.94	126.00
24	DA	2289	G	P-O3'-C3'	-6.76	111.59	119.70
24	BA	1342	A	N1-C6-N6	6.76	122.65	118.60
24	DA	531	C	C2-N1-C1'	-6.76	111.37	118.80
56	DB	16	G	P-O3'-C3'	-6.76	111.59	119.70
21	AA	282	A	P-O3'-C3'	-6.75	111.59	119.70
21	AA	966	G	N9-C1'-C2'	-6.75	104.57	112.00
24	BA	403	U	P-O3'-C3'	6.75	127.81	119.70
24	DA	1554	U	O4'-C1'-N1	6.75	113.60	108.20
24	BA	509	C	N1-C1'-C2'	-6.75	104.57	112.00
24	BA	1118	C	P-O5'-C5'	-6.75	110.09	120.90
24	BA	2772	C	P-O3'-C3'	-6.75	111.60	119.70
24	DA	832	U	O4'-C1'-N1	6.75	113.60	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	1818	U	P-O3'-C3'	6.75	127.80	119.70
55	CA	33	A	N9-C1'-C2'	-6.75	104.58	112.00
24	DA	1451	C	P-O3'-C3'	6.75	127.80	119.70
21	AA	452	A	C5-N7-C8	-6.74	100.53	103.90
24	BA	1142	A	C2-N3-C4	-6.74	107.23	110.60
55	CA	1216	A	N9-C1'-C2'	-6.74	104.58	112.00
21	AA	1303	C	P-O3'-C3'	-6.74	111.62	119.70
55	CA	389	A	N1-C6-N6	-6.74	114.56	118.60
24	DA	1092	C	O4'-C1'-N1	6.74	113.59	108.20
24	BA	1429	G	C3'-C2'-C1'	6.73	106.89	101.50
55	CA	876	C	O4'-C1'-N1	6.73	113.59	108.20
24	DA	1456	G	N9-C1'-C2'	-6.73	104.59	112.00
21	AA	1046	A	N9-C1'-C2'	-6.73	104.60	112.00
24	DA	913	U	N1-C1'-C2'	6.73	122.75	114.00
24	BA	1497	U	N1-C1'-C2'	6.73	122.75	114.00
24	BA	27	G	P-O3'-C3'	6.73	127.77	119.70
24	DA	1738	G	P-O3'-C3'	6.73	127.77	119.70
24	DA	2403	C	P-O3'-C3'	-6.72	111.63	119.70
21	AA	960	U	O4'-C1'-N1	6.72	113.58	108.20
24	BA	2893	A	C8-N9-C4	6.72	108.49	105.80
24	DA	196	A	P-O3'-C3'	6.72	127.77	119.70
21	AA	1332	A	N9-C1'-C2'	-6.72	104.61	112.00
24	BA	2063	C	N1-C1'-C2'	-6.72	104.61	112.00
24	BA	121	G	P-O3'-C3'	-6.72	111.64	119.70
24	BA	824	U	P-O3'-C3'	-6.72	111.64	119.70
24	DA	2053	G	N3-C4-N9	-6.71	121.97	126.00
24	BA	684	G	N9-C4-C5	-6.71	102.72	105.40
21	AA	1417	G	C6-C5-N7	-6.71	126.37	130.40
21	AA	1417	G	N1-C6-O6	6.71	123.93	119.90
24	BA	1901	A	C6-N1-C2	6.71	122.63	118.60
24	DA	1778	U	P-O3'-C3'	6.71	127.75	119.70
24	DA	116	C	O4'-C1'-N1	6.71	113.57	108.20
24	DA	2021	C	P-O3'-C3'	6.71	127.75	119.70
24	BA	1325	U	O4'-C1'-N1	6.70	113.56	108.20
55	CA	247	G	P-O3'-C3'	-6.70	111.66	119.70
55	CA	1212	U	P-O3'-C3'	6.70	127.74	119.70
21	AA	1141	C	P-O3'-C3'	-6.70	111.67	119.70
24	BA	671	C	C3'-C2'-C1'	6.69	106.86	101.50
24	BA	800	A	N1-C6-N6	-6.69	114.59	118.60
21	AA	82	G	C3'-C2'-C1'	6.69	106.85	101.50
24	BA	1019	U	N3-C4-C5	6.69	118.61	114.60
24	BA	1155	A	N1-C2-N3	-6.69	125.96	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	37	U	O4'-C1'-N1	6.68	113.55	108.20
55	CA	512	U	O4'-C1'-N1	6.68	113.55	108.20
24	DA	704	G	P-O3'-C3'	6.68	127.72	119.70
21	AA	351	G	O4'-C1'-N9	6.68	113.55	108.20
24	DA	2498	C	O4'-C1'-N1	6.68	113.55	108.20
24	DA	783	A	C3'-C2'-C1'	6.68	106.84	101.50
56	DB	91	C	O4'-C1'-N1	6.68	113.54	108.20
24	BA	2451	A	N1-C6-N6	-6.68	114.59	118.60
24	DA	2386	A	P-O3'-C3'	-6.68	111.69	119.70
24	DA	1268	A	P-O3'-C3'	-6.68	111.69	119.70
24	BA	396	G	P-O3'-C3'	-6.67	111.69	119.70
55	CA	1094	G	P-O3'-C3'	6.67	127.71	119.70
24	DA	1647	U	P-O3'-C3'	6.67	127.71	119.70
24	DA	60	G	O4'-C1'-N9	6.67	113.54	108.20
24	DA	547	A	P-O3'-C3'	6.67	127.70	119.70
24	BA	73	A	C3'-C2'-C1'	6.67	106.84	101.50
25	BB	77	U	P-O3'-C3'	-6.67	111.70	119.70
55	CA	210	C	N1-C1'-C2'	6.67	122.67	114.00
24	DA	1536	C	O4'-C1'-N1	-6.67	102.87	108.20
24	BA	2093	G	P-O3'-C3'	-6.66	111.70	119.70
24	DA	2312	U	N3-C2-O2	-6.66	117.53	122.20
24	BA	1731	G	N3-C4-N9	-6.66	122.00	126.00
24	DA	1327	A	P-O3'-C3'	-6.66	111.71	119.70
55	CA	1068	G	P-O3'-C3'	-6.66	111.71	119.70
24	DA	1957	C	O4'-C1'-N1	6.66	113.53	108.20
24	BA	634	C	O4'-C1'-N1	-6.66	102.87	108.20
55	CA	1066	C	N1-C1'-C2'	-6.66	104.68	112.00
24	BA	1255	U	O4'-C1'-N1	6.66	113.52	108.20
24	DA	509	C	C2-N1-C1'	6.66	126.12	118.80
56	DB	104	A	C4-C5-C6	6.66	120.33	117.00
55	CA	1364	U	N1-C1'-C2'	6.65	122.65	114.00
21	AA	536	C	N1-C1'-C2'	-6.65	104.68	112.00
24	BA	2200	C	P-O3'-C3'	-6.65	111.72	119.70
25	BB	89	U	C3'-C2'-C1'	6.65	106.82	101.50
21	AA	5	U	P-O3'-C3'	6.65	127.68	119.70
24	DA	931	U	O4'-C1'-N1	6.65	113.52	108.20
21	AA	48	C	O4'-C1'-N1	6.65	113.52	108.20
24	BA	989	G	O4'-C1'-N9	6.65	113.52	108.20
24	BA	142	A	N9-C1'-C2'	-6.64	104.69	112.00
24	BA	1174	U	P-O3'-C3'	-6.64	111.73	119.70
24	BA	1708	C	P-O5'-C5'	-6.64	110.27	120.90
24	BA	2293	G	P-O3'-C3'	-6.64	111.73	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	733	G	P-O3'-C3'	6.64	127.67	119.70
21	AA	70	U	P-O3'-C3'	6.64	127.67	119.70
55	CA	1308	U	O4'-C1'-N1	6.64	113.51	108.20
24	BA	633	A	C4-C5-C6	6.64	120.32	117.00
55	CA	52	C	P-O3'-C3'	-6.64	111.74	119.70
56	DB	51	G	O4'-C1'-N9	6.64	113.51	108.20
24	DA	1653	G	P-O3'-C3'	6.63	127.66	119.70
24	BA	2639	A	N1-C6-N6	6.63	122.58	118.60
55	CA	1490	U	O4'-C1'-N1	6.63	113.51	108.20
21	AA	211	G	P-O3'-C3'	6.63	127.66	119.70
21	AA	575	G	C4-N9-C1'	-6.63	117.88	126.50
24	BA	1945	G	C3'-C2'-C1'	6.63	106.81	101.50
24	DA	301	G	N3-C4-N9	-6.63	122.02	126.00
24	BA	1438	U	C5-C4-O4	-6.63	121.92	125.90
24	DA	1619	G	N9-C1'-C2'	-6.63	104.71	112.00
21	AA	97	G	N9-C1'-C2'	-6.62	104.71	112.00
55	CA	119	A	P-O3'-C3'	6.62	127.65	119.70
24	DA	621	A	P-O3'-C3'	-6.62	111.75	119.70
55	CA	914	A	C3'-C2'-C1'	6.62	106.80	101.50
24	BA	747	U	O5'-P-OP2	-6.62	99.75	105.70
24	BA	1661	G	N3-C4-C5	6.62	131.91	128.60
55	CA	1246	A	N9-C1'-C2'	-6.62	104.72	112.00
55	CA	1441	A	P-O3'-C3'	6.62	127.64	119.70
24	DA	2857	G	C2-N3-C4	-6.62	108.59	111.90
55	CA	1052	U	P-O5'-C5'	-6.62	110.31	120.90
24	BA	567	U	P-O3'-C3'	-6.61	111.77	119.70
24	BA	2575	C	C5-C4-N4	-6.61	115.57	120.20
21	AA	374	A	N9-C1'-C2'	-6.61	104.73	112.00
24	DA	251	A	C3'-C2'-C1'	6.61	106.79	101.50
21	AA	1394	A	P-O3'-C3'	6.61	127.63	119.70
21	AA	250	A	P-O3'-C3'	6.61	127.63	119.70
21	AA	722	G	P-O3'-C3'	-6.61	111.77	119.70
55	CA	381	C	N1-C1'-C2'	6.60	122.58	114.00
24	BA	1145	C	N1-C1'-C2'	-6.60	104.74	112.00
24	DA	915	C	P-O3'-C3'	-6.60	111.78	119.70
55	CA	641	U	P-O3'-C3'	6.60	127.62	119.70
24	BA	249	C	N1-C1'-C2'	6.60	122.58	114.00
21	AA	110	C	P-O3'-C3'	-6.60	111.78	119.70
24	DA	334	C	O4'-C1'-N1	6.60	113.48	108.20
24	BA	1932	A	P-O3'-C3'	-6.59	111.79	119.70
24	DA	1561	C	P-O3'-C3'	-6.59	111.78	119.70
24	BA	2297	A	N9-C1'-C2'	-6.59	104.75	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	74	A	P-O3'-C3'	6.59	127.61	119.70
24	DA	37	C	O4'-C1'-N1	6.59	113.47	108.20
24	BA	628	G	N9-C1'-C2'	-6.59	104.75	112.00
24	DA	427	U	O4'-C1'-N1	6.59	113.47	108.20
24	DA	575	A	P-O3'-C3'	-6.59	111.79	119.70
24	BA	1786	A	O4'-C1'-N9	6.59	113.47	108.20
21	AA	995	C	O4'-C1'-N1	6.59	113.47	108.20
24	BA	633	A	C6-C5-N7	-6.59	127.69	132.30
24	DA	1943	U	N1-C1'-C2'	-6.59	104.75	112.00
24	DA	2258	C	P-O3'-C3'	6.59	127.60	119.70
24	BA	268	C	O4'-C1'-N1	-6.58	102.94	108.20
25	BB	15	A	P-O5'-C5'	-6.58	110.38	120.90
24	BA	349	U	O4'-C1'-N1	-6.58	102.94	108.20
24	BA	1478	G	C6-C5-N7	6.58	134.34	130.40
24	DA	2423	U	N1-C1'-C2'	6.58	122.55	114.00
24	BA	1942	C	P-O3'-C3'	-6.57	111.81	119.70
24	BA	831	G	P-O3'-C3'	-6.57	111.82	119.70
56	DB	43	C	O4'-C1'-N1	6.57	113.45	108.20
24	BA	2391	G	O4'-C1'-N9	6.57	113.45	108.20
24	DA	2266	A	P-O3'-C3'	6.57	127.58	119.70
24	BA	2578	G	N1-C6-O6	-6.56	115.96	119.90
25	BB	16	G	N9-C1'-C2'	-6.56	104.78	112.00
55	CA	890	G	O4'-C1'-N9	6.56	113.45	108.20
24	DA	461	C	C2-N1-C1'	6.56	126.02	118.80
24	DA	1809	A	P-O3'-C3'	-6.56	111.82	119.70
24	BA	2511	U	C5-C4-O4	-6.56	121.97	125.90
24	DA	1214	A	N9-C1'-C2'	-6.56	104.78	112.00
24	DA	976	G	N9-C1'-C2'	-6.56	104.79	112.00
21	AA	991	U	O4'-C1'-N1	6.56	113.44	108.20
24	BA	1867	G	P-O3'-C3'	-6.56	111.83	119.70
25	BB	58	A	P-O3'-C3'	-6.56	111.83	119.70
55	CA	383	A	C3'-C2'-C1'	6.56	106.75	101.50
55	CA	537	G	C3'-C2'-C1'	6.56	106.75	101.50
24	DA	1522	A	N1-C6-N6	6.56	122.53	118.60
24	BA	2504	U	O4'-C1'-N1	6.55	113.44	108.20
24	BA	2881	U	P-O3'-C3'	-6.55	111.84	119.70
21	AA	1141	C	O4'-C1'-N1	6.55	113.44	108.20
24	BA	1554	U	P-O3'-C3'	6.55	127.56	119.70
24	BA	2556	C	O4'-C1'-N1	6.55	113.44	108.20
25	BB	90	C	P-O5'-C5'	-6.55	110.42	120.90
25	BB	57	A	P-O5'-C5'	-6.55	110.42	120.90
55	CA	430	A	P-O3'-C3'	-6.55	111.84	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	AV	35	A	N1-C6-N6	-6.55	114.67	118.60
24	DA	250	G	P-O3'-C3'	-6.55	111.84	119.70
24	BA	178	G	N9-C1'-C2'	-6.54	104.80	112.00
24	DA	1865	U	C2-N3-C4	-6.54	123.07	127.00
24	DA	301	G	C8-N9-C1'	6.54	135.50	127.00
55	CA	73	C	O4'-C1'-N1	6.54	113.43	108.20
24	BA	975	A	N9-C1'-C2'	-6.54	104.81	112.00
24	DA	53	A	N9-C1'-C2'	-6.54	104.81	112.00
24	DA	370	G	N3-C4-N9	-6.54	122.08	126.00
24	DA	861	A	N9-C1'-C2'	-6.54	104.81	112.00
29	BF	110	ILE	CB-CA-C	-6.54	98.53	111.60
55	CA	13	U	N1-C1'-C2'	6.54	122.50	114.00
55	CA	81	A	N1-C6-N6	-6.54	114.68	118.60
55	CA	451	A	P-O3'-C3'	6.54	127.54	119.70
24	DA	334	C	P-O3'-C3'	-6.53	111.86	119.70
55	CA	109	A	P-O3'-C3'	6.53	127.54	119.70
24	DA	1707	G	P-O3'-C3'	6.53	127.54	119.70
24	BA	957	C	O4'-C1'-N1	6.53	113.42	108.20
21	AA	548	G	N9-C1'-C2'	-6.53	104.82	112.00
24	BA	233	A	N9-C1'-C2'	-6.53	104.82	112.00
24	BA	1240	U	N1-C1'-C2'	6.53	122.49	114.00
21	AA	1200	C	P-O3'-C3'	6.53	127.53	119.70
24	DA	685	A	P-O3'-C3'	6.53	127.53	119.70
56	DB	46	A	N9-C1'-C2'	-6.53	104.82	112.00
24	BA	2779	U	O4'-C1'-N1	6.52	113.42	108.20
55	CA	1230	C	O4'-C1'-N1	-6.52	102.98	108.20
24	DA	1275	A	P-O3'-C3'	6.52	127.53	119.70
21	AA	1087	G	C3'-C2'-C1'	6.52	106.72	101.50
24	BA	507	A	P-O5'-C5'	-6.52	110.47	120.90
24	BA	907	G	N3-C4-N9	-6.52	122.09	126.00
24	BA	1695	G	P-O3'-C3'	-6.52	111.88	119.70
55	CA	510	A	P-O5'-C5'	-6.52	110.47	120.90
24	DA	2092	U	P-O3'-C3'	6.52	127.52	119.70
24	BA	62	U	P-O3'-C3'	6.52	127.52	119.70
24	BA	1430	G	C5-C6-O6	6.52	132.51	128.60
24	DA	2493	U	O4'-C1'-N1	6.52	113.41	108.20
24	BA	2148	G	P-O3'-C3'	-6.52	111.88	119.70
24	BA	2894	G	N9-C1'-C2'	-6.52	104.83	112.00
24	DA	2681	C	P-O3'-C3'	6.52	127.52	119.70
24	DA	74	A	P-O3'-C3'	6.51	127.52	119.70
24	BA	510	C	P-O3'-C3'	-6.51	111.89	119.70
24	BA	2363	G	N9-C4-C5	6.51	108.00	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	531	C	C6-N1-C2	6.51	122.90	120.30
24	BA	683	U	N1-C2-N3	6.50	118.80	114.90
24	BA	528	A	N9-C1'-C2'	-6.50	104.85	112.00
24	BA	800	A	C5-C6-N6	6.50	128.90	123.70
24	BA	2728	U	O4'-C1'-N1	6.50	113.40	108.20
24	BA	687	C	C3'-C2'-C1'	6.50	106.70	101.50
24	BA	1213	A	N9-C1'-C2'	-6.50	104.85	112.00
24	BA	2335	A	C3'-C2'-C1'	6.50	106.70	101.50
24	DA	1025	G	P-O3'-C3'	6.50	127.50	119.70
24	BA	1876	A	C5-N7-C8	-6.50	100.65	103.90
31	BH	47	PHE	C-N-CA	-6.50	105.46	121.70
55	CA	615	G	O4'-C1'-N9	6.50	113.40	108.20
21	AA	121	U	O4'-C1'-N1	-6.50	103.00	108.20
21	AA	413	G	P-O3'-C3'	-6.50	111.91	119.70
55	CA	131	A	P-O3'-C3'	6.50	127.49	119.70
24	DA	2581	G	O4'-C1'-N9	6.50	113.40	108.20
55	CA	1348	U	N1-C1'-C2'	-6.49	104.86	112.00
24	DA	1615	C	N1-C1'-C2'	6.49	122.44	114.00
24	BA	2398	U	P-O3'-C3'	-6.49	111.91	119.70
55	CA	283	U	O4'-C1'-N1	6.49	113.39	108.20
21	AA	304	U	O4'-C1'-N1	6.49	113.39	108.20
24	DA	13	A	P-O3'-C3'	6.49	127.49	119.70
24	DA	389	G	N9-C1'-C2'	-6.49	104.86	112.00
24	DA	2790	U	O4'-C1'-N1	6.49	113.39	108.20
24	BA	1247	A	N1-C6-N6	6.49	122.49	118.60
24	BA	23	G	N1-C6-O6	-6.49	116.01	119.90
24	BA	974	G	C8-N9-C4	-6.49	103.81	106.40
24	DA	1478	G	N9-C1'-C2'	-6.49	104.87	112.00
24	BA	1611	C	C3'-C2'-C1'	6.48	106.69	101.50
24	BA	2347	C	C3'-C2'-C1'	6.48	106.69	101.50
24	BA	299	A	N7-C8-N9	6.48	117.04	113.80
24	BA	1760	C	O4'-C1'-N1	6.48	113.39	108.20
24	DA	1674	G	C6-C5-N7	-6.48	126.51	130.40
24	BA	1551	A	P-O3'-C3'	-6.48	111.93	119.70
24	DA	225	C	P-O3'-C3'	-6.48	111.93	119.70
24	DA	931	U	P-O3'-C3'	6.48	127.47	119.70
24	BA	2030	A	P-O3'-C3'	6.48	127.47	119.70
24	BA	2052	A	N9-C1'-C2'	-6.48	104.88	112.00
55	CA	1191	A	P-O3'-C3'	6.48	127.47	119.70
24	DA	1277	G	C3'-C2'-C1'	6.47	106.68	101.50
24	BA	1435	G	P-O3'-C3'	-6.47	111.94	119.70
24	DA	1788	C	P-O3'-C3'	-6.47	111.94	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DH	48	GLU	CA-C-N	-6.47	102.97	117.20
24	BA	919	U	P-O3'-C3'	-6.46	111.94	119.70
55	CA	577	G	N9-C1'-C2'	-6.46	104.89	112.00
24	DA	1717	A	P-O3'-C3'	-6.46	111.94	119.70
21	AA	1197	A	P-O3'-C3'	-6.46	111.95	119.70
24	BA	556	A	P-O3'-C3'	6.46	127.45	119.70
24	BA	1238	G	P-O3'-C3'	-6.46	111.95	119.70
24	DA	1437	C	O4'-C1'-N1	6.46	113.36	108.20
24	BA	503	A	P-O3'-C3'	6.45	127.44	119.70
24	BA	2656	U	N1-C1'-C2'	-6.45	104.90	112.00
55	CA	243	A	N1-C6-N6	-6.45	114.73	118.60
24	DA	2043	C	O4'-C1'-N1	-6.45	103.04	108.20
24	BA	1818	U	P-O3'-C3'	-6.45	111.96	119.70
21	AA	914	A	C3'-C2'-C1'	6.45	106.66	101.50
24	BA	196	A	P-O3'-C3'	6.45	127.44	119.70
24	BA	35	G	C3'-C2'-C1'	6.45	106.66	101.50
24	BA	2307	G	O4'-C1'-N9	6.45	113.36	108.20
24	DA	961	C	P-O3'-C3'	6.45	127.44	119.70
24	BA	587	C	C6-N1-C2	6.44	122.88	120.30
24	BA	2332	C	O4'-C1'-N1	6.44	113.35	108.20
24	DA	239	C	O4'-C1'-N1	6.44	113.35	108.20
24	DA	1962	C	N1-C1'-C2'	6.44	122.38	114.00
24	BA	2249	U	O4'-C1'-N1	6.44	113.35	108.20
24	BA	2447	G	C2-N3-C4	6.44	115.12	111.90
25	BB	68	C	O4'-C1'-N1	6.44	113.35	108.20
55	CA	460	A	P-O3'-C3'	-6.44	111.97	119.70
24	DA	230	G	P-O3'-C3'	-6.44	111.97	119.70
24	DA	1049	C	O4'-C1'-N1	6.44	113.35	108.20
24	BA	1688	U	O4'-C1'-N1	6.44	113.35	108.20
24	DA	1082	U	O4'-C1'-N1	6.44	113.35	108.20
24	BA	505	A	C3'-C2'-C1'	6.43	106.65	101.50
24	BA	265	A	P-O3'-C3'	6.43	127.42	119.70
55	CA	577	G	C3'-C2'-C1'	6.43	106.64	101.50
55	CA	821	G	N9-C1'-C2'	-6.43	104.93	112.00
24	BA	2385	C	O4'-C1'-N1	-6.42	103.06	108.20
24	BA	2546	U	O4'-C1'-N1	-6.42	103.06	108.20
24	DA	302	C	O4'-C1'-N1	6.42	113.34	108.20
56	DB	104	A	N1-C6-N6	6.42	122.45	118.60
24	BA	63	A	P-O3'-C3'	-6.42	112.00	119.70
24	BA	1731	G	N9-C4-C5	6.42	107.97	105.40
24	DA	2199	A	P-O3'-C3'	-6.42	112.00	119.70
24	BA	271	G	P-O3'-C3'	6.42	127.40	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	24	G	P-O3'-C3'	6.42	127.40	119.70
55	CA	67	C	P-O3'-C3'	-6.42	112.00	119.70
24	BA	60	G	P-O3'-C3'	6.42	127.40	119.70
24	BA	633	A	C5-C6-N1	-6.42	114.49	117.70
24	DA	140	C	P-O3'-C3'	6.42	127.40	119.70
21	AA	805	C	O4'-C1'-N1	-6.41	103.07	108.20
55	CA	81	A	C5-C6-N6	6.41	128.83	123.70
21	AA	1395	C	P-O3'-C3'	-6.41	112.01	119.70
21	AA	90	C	N1-C1'-C2'	-6.41	104.95	112.00
24	DA	2573	C	C6-N1-C2	-6.41	117.73	120.30
24	BA	752	A	C4-C5-N7	6.41	113.90	110.70
24	BA	1060	U	C2-N3-C4	-6.41	123.16	127.00
24	DA	1925	C	O4'-C1'-N1	6.41	113.33	108.20
24	DA	2311	A	P-O5'-C5'	6.41	131.15	120.90
21	AA	232	G	P-O3'-C3'	-6.41	112.01	119.70
24	DA	301	G	C4-N9-C1'	-6.41	118.17	126.50
24	BA	995	C	O4'-C1'-N1	-6.40	103.08	108.20
24	BA	2239	G	P-O5'-C5'	-6.40	110.66	120.90
55	CA	452	A	C5-N7-C8	-6.40	100.70	103.90
55	CA	875	U	N1-C1'-C2'	-6.40	104.96	112.00
24	DA	2030	A	P-O3'-C3'	6.40	127.38	119.70
55	CA	1301	U	P-O3'-C3'	6.40	127.38	119.70
55	CA	14	U	O4'-C1'-N1	6.40	113.32	108.20
55	CA	52	C	O4'-C1'-N1	6.39	113.32	108.20
55	CA	1324	A	P-O5'-C5'	-6.39	110.67	120.90
55	CA	1323	G	P-O3'-C3'	6.39	127.37	119.70
24	DA	2352	A	N1-C6-N6	6.39	122.44	118.60
21	AA	808	C	N1-C2-O2	-6.39	115.07	118.90
24	BA	1551	A	C6-N1-C2	6.39	122.43	118.60
24	BA	2528	U	P-O3'-C3'	6.39	127.37	119.70
24	BA	2822	G	C5-C6-O6	-6.39	124.77	128.60
55	CA	90	C	P-O3'-C3'	-6.39	112.04	119.70
24	DA	2094	A	N9-C1'-C2'	-6.39	104.97	112.00
21	AA	132	C	P-O3'-C3'	-6.38	112.04	119.70
24	BA	2543	G	N9-C1'-C2'	-6.38	104.98	112.00
21	AA	368	U	N1-C1'-C2'	-6.38	104.98	112.00
55	CA	436	C	O4'-C1'-N1	-6.38	103.09	108.20
55	CA	1301	U	O4'-C1'-N1	6.38	113.31	108.20
24	DA	964	C	P-O3'-C3'	-6.38	112.04	119.70
24	DA	1867	G	N9-C1'-C2'	-6.38	104.98	112.00
21	AA	1449	C	P-O3'-C3'	-6.38	112.05	119.70
21	AA	1417	G	N9-C4-C5	-6.38	102.85	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	2427	C	C3'-C2'-C1'	6.38	106.60	101.50
55	CA	1053	G	O3'-P-O5'	-6.38	91.88	104.00
55	CA	803	G	P-O3'-C3'	-6.37	112.05	119.70
24	DA	61	C	C3'-C2'-C1'	6.37	106.60	101.50
21	AA	966	G	C3'-C2'-C1'	6.37	106.60	101.50
24	BA	460	A	P-O5'-C5'	-6.37	110.71	120.90
24	BA	1142	A	N7-C8-N9	6.37	116.98	113.80
24	DA	2387	U	O4'-C1'-N1	6.37	113.30	108.20
24	BA	1324	G	O4'-C1'-N9	6.37	113.29	108.20
24	DA	2092	U	O4'-C1'-N1	6.37	113.29	108.20
24	BA	783	A	C5-N7-C8	-6.36	100.72	103.90
24	DA	396	G	C3'-C2'-C1'	6.36	106.59	101.50
24	DA	947	A	P-O3'-C3'	-6.36	112.06	119.70
24	DA	1786	A	O4'-C1'-N9	6.36	113.29	108.20
24	BA	1277	G	P-O3'-C3'	-6.36	112.07	119.70
24	BA	2790	U	N1-C1'-C2'	6.36	122.27	114.00
24	DA	1385	A	C6-N1-C2	6.36	122.42	118.60
24	BA	1491	G	C3'-C2'-C1'	6.36	106.59	101.50
21	AA	169	C	N3-C4-N4	-6.36	113.55	118.00
24	DA	2403	C	O4'-C1'-N1	6.36	113.29	108.20
21	AA	545	C	C6-N1-C2	6.36	122.84	120.30
24	DA	249	C	P-O3'-C3'	6.36	127.33	119.70
24	DA	1079	C	P-O3'-C3'	-6.36	112.07	119.70
55	CA	567	G	C3'-C2'-C1'	6.35	106.58	101.50
24	BA	2857	G	N1-C2-N2	-6.35	110.48	116.20
24	BA	1089	A	P-O3'-C3'	6.35	127.32	119.70
21	AA	688	G	N9-C1'-C2'	-6.35	105.02	112.00
24	BA	496	G	P-O3'-C3'	-6.35	112.08	119.70
21	AA	109	A	O4'-C1'-N9	6.34	113.28	108.20
21	AA	960	U	P-O3'-C3'	6.34	127.31	119.70
21	AA	1256	A	P-O3'-C3'	6.34	127.31	119.70
24	DA	2275	C	P-O3'-C3'	6.34	127.31	119.70
24	BA	958	U	P-O3'-C3'	-6.34	112.09	119.70
24	BA	968	C	N1-C2-O2	6.34	122.70	118.90
55	CA	212	G	N9-C1'-C2'	-6.34	105.02	112.00
24	DA	271	G	C4-N9-C1'	-6.34	118.26	126.50
24	BA	395	U	P-O3'-C3'	6.34	127.31	119.70
24	DA	2800	A	C3'-C2'-C1'	6.34	106.57	101.50
24	BA	2575	C	P-O3'-C3'	6.33	127.30	119.70
55	CA	424	G	P-O3'-C3'	-6.33	112.10	119.70
24	DA	531	C	P-O3'-C3'	6.33	127.30	119.70
24	BA	243	U	C3'-C2'-C1'	6.33	106.57	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	860	U	P-O3'-C3'	-6.33	112.10	119.70
24	DA	1607	C	N1-C1'-C2'	6.33	122.23	114.00
21	AA	1129	C	P-O3'-C3'	6.33	127.30	119.70
24	BA	934	U	P-O3'-C3'	-6.33	112.10	119.70
24	BA	1496	A	N9-C1'-C2'	-6.33	105.04	112.00
24	BA	1805	A	C5-C6-N6	6.33	128.77	123.70
24	DA	1996	C	P-O3'-C3'	6.33	127.30	119.70
24	DA	2401	U	P-O3'-C3'	6.33	127.30	119.70
24	BA	1115	G	O4'-C1'-N9	6.33	113.26	108.20
24	DA	121	G	P-O3'-C3'	-6.33	112.11	119.70
24	BA	2492	U	C3'-C2'-C1'	6.33	106.56	101.50
21	AA	1130	A	P-O3'-C3'	6.33	127.29	119.70
24	BA	229	C	C3'-C2'-C1'	6.33	106.56	101.50
24	DA	216	A	P-O3'-C3'	-6.33	112.11	119.70
21	AA	70	U	N1-C1'-C2'	6.32	122.22	114.00
24	DA	1291	C	O4'-C1'-N1	6.32	113.26	108.20
24	BA	729	G	C3'-C2'-C1'	6.32	106.56	101.50
24	DA	2267	A	C6-N1-C2	-6.32	114.81	118.60
24	BA	2210	U	O4'-C1'-N1	6.32	113.26	108.20
21	AA	560	A	P-O3'-C3'	-6.32	112.12	119.70
24	BA	1619	G	N9-C1'-C2'	-6.32	105.05	112.00
21	AA	119	A	P-O3'-C3'	6.32	127.28	119.70
21	AA	1225	A	P-O3'-C3'	-6.32	112.12	119.70
24	BA	1858	A	C3'-C2'-C1'	6.31	106.55	101.50
24	BA	2272	U	P-O3'-C3'	6.31	127.27	119.70
24	BA	2520	C	C3'-C2'-C1'	6.31	106.55	101.50
24	BA	2850	A	P-O3'-C3'	-6.31	112.12	119.70
24	DA	1802	A	C3'-C2'-C1'	6.31	106.55	101.50
24	DA	1996	C	O4'-C1'-N1	6.31	113.25	108.20
21	AA	890	G	P-O3'-C3'	6.31	127.27	119.70
21	AA	1401	G	P-O3'-C3'	-6.31	112.13	119.70
24	BA	1125	G	C2-N3-C4	-6.31	108.75	111.90
24	DA	749	A	N9-C1'-C2'	-6.31	105.06	112.00
24	BA	2034	U	N3-C2-O2	-6.31	117.78	122.20
55	CA	891	U	C3'-C2'-C1'	6.31	106.55	101.50
24	DA	234	U	P-O3'-C3'	-6.31	112.13	119.70
24	DA	370	G	C4-N9-C1'	-6.31	118.30	126.50
24	BA	302	C	C3'-C2'-C1'	6.30	106.54	101.50
55	CA	512	U	C3'-C2'-C1'	6.30	106.54	101.50
24	DA	1722	A	N9-C1'-C2'	-6.30	105.06	112.00
21	AA	1125	U	P-O3'-C3'	6.30	127.26	119.70
24	BA	1009	A	C3'-C2'-C1'	6.30	106.54	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	1246	A	C6-N1-C2	-6.30	114.82	118.60
24	BA	212	G	P-O3'-C3'	-6.30	112.14	119.70
24	BA	1552	A	P-O3'-C3'	-6.30	112.14	119.70
24	DA	2630	G	C3'-C2'-C1'	6.30	106.54	101.50
55	CA	1139	G	P-O3'-C3'	6.30	127.26	119.70
24	BA	1829	A	C3'-C2'-C1'	6.30	106.54	101.50
24	DA	222	A	P-O3'-C3'	6.30	127.26	119.70
21	AA	1337	G	P-O3'-C3'	6.29	127.25	119.70
21	AA	183	C	O4'-C1'-N1	6.29	113.23	108.20
23	CW	3	U	N1-C1'-C2'	6.29	122.18	114.00
21	AA	47	C	O4'-C1'-N1	6.29	113.23	108.20
55	CA	14	U	C3'-C2'-C1'	6.29	106.53	101.50
55	CA	82	G	C3'-C2'-C1'	6.29	106.53	101.50
24	DA	206	U	P-O3'-C3'	-6.29	112.15	119.70
24	DA	1828	G	P-O3'-C3'	6.29	127.25	119.70
24	DA	1324	G	P-O3'-C3'	6.29	127.25	119.70
24	BA	1816	C	C3'-C2'-C1'	6.29	106.53	101.50
24	DA	1993	U	C3'-C2'-C1'	6.29	106.53	101.50
24	BA	759	G	P-O5'-C5'	-6.28	110.85	120.90
21	AA	368	U	O4'-C1'-N1	6.28	113.23	108.20
21	AA	480	U	C2-N3-C4	-6.28	123.23	127.00
21	AA	116	A	C3'-C2'-C1'	6.28	106.53	101.50
21	AA	575	G	C8-N9-C1'	6.28	135.17	127.00
21	AA	1288	A	C3'-C2'-C1'	6.28	106.53	101.50
21	AA	1366	C	O4'-C1'-N1	6.28	113.22	108.20
21	AA	1399	C	N1-C1'-C2'	6.28	122.16	114.00
24	BA	2545	G	C8-N9-C4	-6.28	103.89	106.40
24	BA	858	G	C5-C6-N1	6.28	114.64	111.50
55	CA	1241	G	C3'-C2'-C1'	6.28	106.52	101.50
24	DA	1945	G	C3'-C2'-C1'	6.28	106.52	101.50
24	DA	1021	A	N9-C1'-C2'	-6.28	105.10	112.00
24	DA	1915	U	N1-C1'-C2'	-6.28	105.10	112.00
24	DA	2260	C	O4'-C1'-N1	6.28	113.22	108.20
24	DA	2457	U	O4'-C1'-N1	6.28	113.22	108.20
21	AA	559	A	O4'-C1'-N9	6.27	113.22	108.20
24	DA	1832	C	O4'-C1'-N1	6.27	113.22	108.20
24	BA	2517	C	O4'-C1'-N1	6.27	113.22	108.20
55	CA	1127	G	P-O3'-C3'	-6.27	112.17	119.70
24	DA	1461	C	P-O3'-C3'	-6.27	112.17	119.70
21	AA	253	A	P-O3'-C3'	-6.27	112.17	119.70
24	BA	740	C	O4'-C1'-N1	6.27	113.22	108.20
55	CA	1531	A	N9-C1'-C2'	-6.27	105.10	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	959	A	P-O3'-C3'	-6.27	112.18	119.70
24	DA	1398	C	P-O3'-C3'	-6.27	112.18	119.70
24	BA	802	A	P-O3'-C3'	-6.27	112.18	119.70
24	BA	946	C	C3'-C2'-C1'	6.27	106.51	101.50
24	BA	763	G	C4-N9-C1'	6.27	134.65	126.50
56	DB	41	G	P-O3'-C3'	-6.27	112.18	119.70
24	BA	1568	G	O4'-C1'-N9	-6.26	103.19	108.20
21	AA	452	A	C3'-C2'-C1'	6.26	106.51	101.50
55	CA	86	G	P-O3'-C3'	6.26	127.22	119.70
24	BA	2036	C	C3'-C2'-C1'	6.26	106.51	101.50
24	BA	2427	C	C6-N1-C2	-6.26	117.80	120.30
24	DA	1816	C	O4'-C1'-N1	6.26	113.21	108.20
24	DA	2214	C	P-O3'-C3'	-6.26	112.19	119.70
21	AA	652	U	P-O3'-C3'	6.26	127.21	119.70
21	AA	935	A	P-O3'-C3'	-6.26	112.19	119.70
24	DA	303	G	C3'-C2'-C1'	6.26	106.50	101.50
24	DA	2277	G	N9-C1'-C2'	-6.26	105.12	112.00
24	BA	1962	C	O4'-C1'-N1	6.25	113.20	108.20
21	AA	655	A	N9-C1'-C2'	-6.25	105.12	112.00
24	DA	2144	G	P-O3'-C3'	6.25	127.20	119.70
24	DA	2460	U	C3'-C2'-C1'	6.25	106.50	101.50
21	AA	1216	A	N9-C1'-C2'	-6.25	105.12	112.00
21	AA	520	A	P-O3'-C3'	-6.25	112.20	119.70
24	BA	1568	G	P-O3'-C3'	-6.25	112.20	119.70
24	DA	1993	U	O4'-C1'-N1	6.25	113.20	108.20
24	BA	119	A	O3'-P-O5'	6.25	115.87	104.00
24	DA	2053	G	N9-C4-C5	6.25	107.90	105.40
24	BA	2511	U	C2-N1-C1'	6.25	125.19	117.70
24	DA	1090	A	C3'-C2'-C1'	6.25	106.50	101.50
21	AA	339	C	O4'-C1'-N1	6.24	113.19	108.20
24	BA	763	G	C3'-C2'-C1'	6.24	106.50	101.50
24	BA	2001	C	P-O3'-C3'	-6.24	112.21	119.70
24	DA	647	G	C3'-C2'-C1'	6.24	106.49	101.50
55	CA	282	A	P-O3'-C3'	-6.24	112.21	119.70
55	CA	209	U	P-O3'-C3'	6.24	127.19	119.70
55	CA	1124	G	O4'-C1'-N9	6.24	113.19	108.20
24	DA	1341	G	C3'-C2'-C1'	6.24	106.49	101.50
24	BA	684	G	N3-C2-N2	6.24	124.27	119.90
24	DA	1733	G	P-O3'-C3'	-6.24	112.22	119.70
55	CA	801	U	P-O3'-C3'	-6.24	112.22	119.70
24	BA	2359	C	C6-N1-C2	6.23	122.79	120.30
55	CA	1326	U	O4'-C1'-N1	6.23	113.19	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1733	G	P-O3'-C3'	-6.23	112.22	119.70
55	CA	1184	G	C3'-C2'-C1'	6.23	106.48	101.50
29	DF	109	ARG	CG-CD-NE	-6.23	98.72	111.80
24	BA	1137	G	P-O3'-C3'	-6.23	112.23	119.70
24	BA	389	G	P-O3'-C3'	-6.22	112.23	119.70
24	DA	2895	G	C3'-C2'-C1'	6.22	106.48	101.50
24	DA	301	G	P-O3'-C3'	6.22	127.17	119.70
21	AA	247	G	N9-C1'-C2'	-6.22	105.16	112.00
24	BA	1142	A	C6-N1-C2	6.22	122.33	118.60
24	BA	2800	A	C3'-C2'-C1'	6.22	106.48	101.50
55	CA	1181	G	P-O3'-C3'	6.22	127.16	119.70
55	CA	410	G	C5-C6-O6	-6.22	124.87	128.60
24	DA	375	G	N9-C1'-C2'	-6.22	105.16	112.00
24	DA	1839	G	C3'-C2'-C1'	6.22	106.47	101.50
24	BA	162	U	O4'-C1'-N1	6.21	113.17	108.20
24	DA	1416	G	O4'-C1'-N9	6.21	113.17	108.20
21	AA	705	G	N9-C1'-C2'	-6.21	105.17	112.00
24	BA	967	U	P-O5'-C5'	-6.21	110.96	120.90
55	CA	1481	U	O4'-C1'-N1	6.21	113.17	108.20
24	DA	1341	G	P-O3'-C3'	6.21	127.15	119.70
24	DA	2447	G	O4'-C1'-N9	6.21	113.17	108.20
24	DA	2656	U	P-O3'-C3'	-6.21	112.25	119.70
24	DA	2610	C	N1-C1'-C2'	6.21	122.07	114.00
24	BA	2780	G	P-O5'-C5'	-6.21	110.97	120.90
55	CA	754	C	N1-C1'-C2'	-6.21	105.17	112.00
21	AA	281	G	P-O3'-C3'	-6.21	112.25	119.70
24	BA	75	G	P-O3'-C3'	-6.21	112.25	119.70
24	BA	2812	G	C4-N9-C1'	6.21	134.57	126.50
24	BA	1809	A	C3'-C2'-C1'	6.20	106.46	101.50
24	BA	2801	G	N9-C1'-C2'	-6.20	105.18	112.00
24	DA	1315	C	P-O5'-C5'	-6.20	110.97	120.90
24	DA	2459	A	C3'-C2'-C1'	6.20	106.46	101.50
24	BA	2750	A	P-O3'-C3'	6.20	127.14	119.70
21	AA	267	C	C3'-C2'-C1'	6.20	106.46	101.50
24	BA	1110	G	P-O3'-C3'	6.20	127.14	119.70
21	AA	110	C	C3'-C2'-C1'	6.20	106.46	101.50
21	AA	1297	G	P-O3'-C3'	6.20	127.14	119.70
55	CA	198	G	C3'-C2'-C1'	6.20	106.46	101.50
55	CA	688	G	N9-C1'-C2'	-6.20	105.19	112.00
21	AA	1212	U	O4'-C1'-N1	-6.19	103.24	108.20
24	BA	1914	C	C3'-C2'-C1'	6.19	106.45	101.50
12	AM	70	ARG	CG-CD-NE	-6.19	98.80	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	94	G	P-O3'-C3'	6.19	127.13	119.70
24	BA	858	G	N3-C4-C5	-6.19	125.50	128.60
24	BA	2066	C	C2-N3-C4	6.19	123.00	119.90
55	CA	97	G	N9-C1'-C2'	-6.19	105.19	112.00
24	DA	763	G	P-O3'-C3'	-6.19	112.27	119.70
24	DA	794	A	C3'-C2'-C1'	6.19	106.45	101.50
21	AA	90	C	P-O3'-C3'	-6.19	112.28	119.70
21	AA	13	U	P-O3'-C3'	6.18	127.12	119.70
24	BA	333	G	C3'-C2'-C1'	6.18	106.45	101.50
24	BA	449	A	C3'-C2'-C1'	6.18	106.45	101.50
24	BA	1915	U	O4'-C1'-N1	6.18	113.15	108.20
21	AA	13	U	O4'-C1'-N1	6.18	113.15	108.20
24	BA	530	G	C3'-C2'-C1'	6.18	106.45	101.50
55	CA	91	U	P-O3'-C3'	-6.18	112.28	119.70
21	AA	884	U	O4'-C1'-N1	6.18	113.14	108.20
24	BA	1733	G	C3'-C2'-C1'	6.18	106.44	101.50
24	BA	1812	U	C5-C4-O4	6.18	129.61	125.90
24	DA	35	G	P-O3'-C3'	-6.18	112.29	119.70
24	BA	858	G	C2-N3-C4	6.17	114.99	111.90
55	CA	275	G	P-O3'-C3'	-6.17	112.29	119.70
21	AA	351	G	C4-N9-C1'	6.17	134.52	126.50
24	BA	1644	C	O4'-C1'-N1	-6.17	103.26	108.20
24	BA	1663	G	P-O3'-C3'	6.17	127.10	119.70
24	BA	2582	G	P-O3'-C3'	-6.17	112.30	119.70
24	BA	2654	A	P-O3'-C3'	6.17	127.10	119.70
24	DA	2492	U	C3'-C2'-C1'	6.17	106.43	101.50
24	BA	2730	C	O4'-C1'-N1	6.17	113.13	108.20
24	BA	301	G	N3-C4-C5	6.16	131.68	128.60
24	BA	1318	U	O4'-C1'-N1	6.16	113.13	108.20
24	BA	1333	G	P-O5'-C5'	-6.16	111.04	120.90
24	BA	2498	C	N1-C1'-C2'	-6.16	105.22	112.00
21	AA	74	A	C6-N1-C2	6.16	122.30	118.60
55	CA	548	G	C3'-C2'-C1'	6.16	106.43	101.50
24	DA	1255	U	O4'-C1'-N1	6.16	113.13	108.20
24	DA	2544	G	C3'-C2'-C1'	6.16	106.43	101.50
24	BA	2607	G	P-O3'-C3'	-6.16	112.31	119.70
24	DA	87	U	O4'-C1'-N1	6.16	113.13	108.20
24	DA	1206	G	N9-C1'-C2'	-6.16	105.22	112.00
21	AA	1098	C	O4'-C1'-N1	6.16	113.12	108.20
24	BA	38	A	P-O3'-C3'	-6.16	112.31	119.70
24	BA	2023	C	P-O3'-C3'	-6.16	112.31	119.70
21	AA	47	C	P-O3'-C3'	6.16	127.09	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1144	A	C3'-C2'-C1'	6.16	106.42	101.50
24	BA	2655	G	P-O3'-C3'	6.16	127.09	119.70
31	DH	48	GLU	CB-CA-C	-6.16	98.09	110.40
24	DA	671	C	N1-C1'-C2'	-6.15	105.23	112.00
24	BA	1273	U	O4'-C1'-N1	6.15	113.12	108.20
25	BB	5	U	O4'-C1'-N1	6.15	113.12	108.20
21	AA	509	A	C3'-C2'-C1'	6.15	106.42	101.50
21	AA	1091	U	O4'-C1'-N1	6.15	113.12	108.20
21	AA	1380	U	P-O3'-C3'	6.15	127.08	119.70
24	BA	1778	U	C2-N3-C4	-6.15	123.31	127.00
55	CA	448	A	O4'-C1'-N9	6.15	113.12	108.20
21	AA	886	G	P-O3'-C3'	-6.15	112.32	119.70
24	BA	378	C	C6-N1-C2	6.15	122.76	120.30
24	BA	1498	C	C3'-C2'-C1'	6.15	106.42	101.50
24	BA	323	C	O4'-C1'-N1	6.14	113.12	108.20
24	BA	747	U	C3'-C2'-C1'	6.14	106.42	101.50
24	DA	1135	C	N1-C1'-C2'	-6.14	105.24	112.00
21	AA	1182	G	C4-N9-C1'	-6.14	118.52	126.50
24	BA	1340	U	P-O3'-C3'	6.14	127.07	119.70
55	CA	891	U	O4'-C1'-N1	6.14	113.11	108.20
55	CA	1303	C	C2-N1-C1'	6.14	125.56	118.80
24	DA	1137	G	N9-C1'-C2'	-6.14	105.24	112.00
24	DA	1739	A	P-O3'-C3'	-6.14	112.33	119.70
21	AA	985	C	O4'-C1'-N1	6.14	113.11	108.20
21	AA	1046	A	P-O5'-C5'	-6.14	111.07	120.90
24	DA	244	A	P-O3'-C3'	-6.14	112.33	119.70
24	BA	411	G	O4'-C1'-N9	6.14	113.11	108.20
24	BA	2641	G	N3-C4-N9	-6.14	122.32	126.00
24	DA	1932	A	N1-C6-N6	6.14	122.28	118.60
24	BA	1728	C	O4'-C1'-N1	6.13	113.11	108.20
24	DA	52	A	P-O3'-C3'	-6.13	112.34	119.70
24	BA	1760	C	C3'-C2'-C1'	6.13	106.41	101.50
24	BA	1885	A	C3'-C2'-C1'	6.13	106.41	101.50
24	BA	1943	U	N1-C1'-C2'	6.13	121.97	114.00
24	BA	181	A	P-O5'-C5'	-6.13	111.09	120.90
21	AA	1032	G	P-O3'-C3'	-6.13	112.35	119.70
24	BA	1305	C	P-O3'-C3'	-6.13	112.35	119.70
24	BA	2046	G	P-O3'-C3'	6.13	127.05	119.70
55	CA	1284	C	N1-C1'-C2'	-6.13	105.26	112.00
24	DA	2689	U	P-O3'-C3'	6.13	127.05	119.70
24	BA	1478	G	C6-N1-C2	6.12	128.78	125.10
24	BA	2566	A	O4'-C1'-N9	6.12	113.10	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	126	A	P-O3'-C3'	-6.12	112.35	119.70
55	CA	1242	G	N9-C1'-C2'	-6.12	105.26	112.00
24	DA	1624	U	O4'-C1'-N1	6.12	113.10	108.20
21	AA	1182	G	O4'-C1'-N9	-6.12	103.30	108.20
24	BA	1380	G	P-O5'-C5'	-6.12	111.11	120.90
55	CA	82	G	P-O3'-C3'	-6.12	112.35	119.70
24	DA	1961	C	O4'-C1'-N1	6.12	113.10	108.20
24	DA	2691	C	C3'-C2'-C1'	6.12	106.40	101.50
56	DB	42	C	P-O3'-C3'	-6.12	112.36	119.70
21	AA	495	A	P-O3'-C3'	6.12	127.04	119.70
24	BA	1944	U	N1-C1'-C2'	6.12	121.95	114.00
24	BA	2450	A	C3'-C2'-C1'	6.12	106.39	101.50
55	CA	37	U	O4'-C1'-N1	6.12	113.09	108.20
24	BA	2514	U	C2-N3-C4	-6.12	123.33	127.00
24	BA	2812	G	N3-C4-C5	-6.12	125.54	128.60
55	CA	1380	U	O4'-C1'-N1	6.12	113.09	108.20
21	AA	885	G	P-O3'-C3'	-6.12	112.36	119.70
24	BA	812	C	C3'-C2'-C1'	6.12	106.39	101.50
55	CA	404	G	P-O3'-C3'	6.12	127.04	119.70
24	DA	1072	C	P-O3'-C3'	-6.12	112.36	119.70
24	DA	2289	G	C3'-C2'-C1'	6.12	106.39	101.50
55	CA	654	G	C3'-C2'-C1'	6.11	106.39	101.50
55	CA	67	C	C6-N1-C2	-6.11	117.86	120.30
24	BA	1643	G	P-O3'-C3'	-6.11	112.37	119.70
55	CA	317	U	P-O3'-C3'	-6.11	112.37	119.70
24	DA	1802	A	P-O3'-C3'	-6.11	112.37	119.70
24	DA	2289	G	N9-C1'-C2'	-6.11	105.28	112.00
24	BA	688	U	P-O5'-C5'	-6.11	111.13	120.90
24	BA	1060	U	N1-C2-O2	-6.11	118.53	122.80
55	CA	71	A	C3'-C2'-C1'	6.11	106.39	101.50
24	DA	1960	A	N1-C6-N6	-6.11	114.94	118.60
24	DA	1142	A	C5-N7-C8	-6.11	100.85	103.90
24	DA	1739	A	C3'-C2'-C1'	6.10	106.38	101.50
21	AA	1046	A	P-O3'-C3'	-6.10	112.38	119.70
24	BA	2504	U	C3'-C2'-C1'	6.10	106.38	101.50
24	DA	446	G	P-O3'-C3'	6.10	127.02	119.70
24	BA	1560	G	C3'-C2'-C1'	6.10	106.38	101.50
24	BA	1792	G	N9-C1'-C2'	-6.10	105.29	112.00
24	BA	2362	C	P-O3'-C3'	-6.10	112.38	119.70
24	DA	1619	G	P-O3'-C3'	-6.10	112.38	119.70
21	AA	719	C	O4'-C1'-N1	6.10	113.08	108.20
24	BA	435	C	P-O3'-C3'	-6.10	112.38	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	2022	U	P-O5'-C5'	-6.10	111.14	120.90
24	BA	2327	A	P-O3'-C3'	-6.10	112.38	119.70
24	DA	1303	G	P-O3'-C3'	-6.10	112.38	119.70
21	AA	1481	U	N1-C2-O2	-6.10	118.53	122.80
24	BA	1015	U	P-O3'-C3'	-6.10	112.38	119.70
24	BA	1359	A	N7-C8-N9	6.10	116.85	113.80
24	BA	1956	U	C3'-C2'-C1'	6.10	106.38	101.50
24	BA	2347	C	O4'-C1'-N1	6.10	113.08	108.20
24	BA	2797	U	P-O3'-C3'	6.10	127.02	119.70
24	DA	2631	G	N9-C1'-C2'	-6.10	105.29	112.00
24	BA	587	C	O4'-C1'-N1	6.09	113.08	108.20
24	DA	2851	A	N9-C1'-C2'	-6.09	105.30	112.00
21	AA	1131	G	C3'-C2'-C1'	6.09	106.37	101.50
21	AA	1282	C	C3'-C2'-C1'	6.09	106.37	101.50
24	DA	1769	U	O4'-C1'-N1	6.09	113.08	108.20
24	BA	1082	U	N3-C4-C5	6.09	118.25	114.60
55	CA	1444	U	O4'-C1'-N1	6.09	113.07	108.20
24	BA	627	A	P-O3'-C3'	6.09	127.01	119.70
24	BA	2061	G	C6-N1-C2	-6.09	121.45	125.10
24	DA	65	U	O4'-C1'-N1	6.09	113.07	108.20
24	DA	2250	G	O4'-C1'-N9	-6.09	103.33	108.20
24	BA	118	A	P-O3'-C3'	6.09	127.00	119.70
24	BA	2297	A	P-O3'-C3'	-6.09	112.40	119.70
55	CA	549	C	O4'-C1'-N1	6.09	113.07	108.20
24	DA	687	C	C3'-C2'-C1'	6.09	106.37	101.50
24	BA	1461	C	C3'-C2'-C1'	6.08	106.37	101.50
21	AA	1320	C	P-O3'-C3'	-6.08	112.40	119.70
55	CA	536	C	N1-C1'-C2'	-6.08	105.31	112.00
24	DA	1395	A	P-O3'-C3'	6.08	127.00	119.70
24	BA	2617	U	C5-C4-O4	6.08	129.55	125.90
24	BA	2810	A	N9-C1'-C2'	-6.08	105.31	112.00
21	AA	486	U	P-O5'-C5'	-6.08	111.17	120.90
24	BA	2573	C	C3'-C2'-C1'	6.08	106.36	101.50
24	BA	2823	A	P-O3'-C3'	6.08	126.99	119.70
24	DA	1649	G	N9-C1'-C2'	-6.08	105.31	112.00
24	BA	1865	U	N1-C2-N3	6.08	118.55	114.90
24	BA	2092	U	N1-C1'-C2'	6.08	121.90	114.00
55	CA	686	U	O4'-C1'-N1	6.08	113.06	108.20
12	AM	70	ARG	NE-CZ-NH2	-6.08	117.26	120.30
21	AA	1285	A	P-O3'-C3'	6.08	126.99	119.70
24	BA	1024	G	P-O5'-C5'	-6.08	111.18	120.90
55	CA	89	U	C5-C4-O4	-6.08	122.25	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	1060	U	C2-N3-C4	-6.08	123.35	127.00
24	DA	1683	U	P-O3'-C3'	-6.08	112.41	119.70
24	BA	1760	C	P-O3'-C3'	-6.07	112.41	119.70
24	BA	1980	G	P-O3'-C3'	6.07	126.99	119.70
24	DA	1241	A	P-O5'-C5'	-6.07	111.18	120.90
21	AA	982	U	P-O3'-C3'	6.07	126.98	119.70
21	AA	1482	G	C2-N3-C4	-6.07	108.86	111.90
24	BA	630	G	N9-C4-C5	-6.07	102.97	105.40
24	BA	1182	G	C3'-C2'-C1'	6.07	106.36	101.50
24	DA	2582	G	C3'-C2'-C1'	6.07	106.36	101.50
21	AA	366	A	P-O3'-C3'	6.07	126.98	119.70
24	BA	1259	G	N3-C4-N9	-6.07	122.36	126.00
24	DA	629	G	N9-C1'-C2'	-6.07	105.33	112.00
24	DA	1786	A	P-O3'-C3'	6.07	126.98	119.70
24	BA	962	G	N3-C4-N9	-6.06	122.36	126.00
24	BA	2578	G	N9-C4-C5	6.06	107.83	105.40
21	AA	1321	U	N1-C1'-C2'	-6.06	105.33	112.00
24	BA	1348	C	C6-N1-C2	6.06	122.72	120.30
21	AA	497	G	P-O3'-C3'	-6.06	112.43	119.70
24	BA	2514	U	N1-C2-O2	-6.06	118.56	122.80
24	BA	529	A	C4-C5-C6	-6.06	113.97	117.00
24	BA	1952	A	C8-N9-C4	-6.06	103.38	105.80
24	DA	1385	A	C5-C6-N6	6.06	128.55	123.70
24	DA	1314	C	C3'-C2'-C1'	6.06	106.34	101.50
24	BA	1611	C	N1-C1'-C2'	-6.05	105.34	112.00
24	BA	1731	G	C8-N9-C1'	6.05	134.87	127.00
55	CA	282	A	C3'-C2'-C1'	6.05	106.34	101.50
24	BA	1667	G	P-O3'-C3'	6.05	126.96	119.70
24	DA	1760	C	C3'-C2'-C1'	6.05	106.34	101.50
24	DA	2440	C	C3'-C2'-C1'	6.05	106.34	101.50
21	AA	935	A	C3'-C2'-C1'	6.05	106.34	101.50
24	BA	2407	A	P-O3'-C3'	-6.05	112.44	119.70
24	DA	1386	C	C3'-C2'-C1'	6.05	106.34	101.50
21	AA	1054	C	N1-C1'-C2'	6.05	121.86	114.00
21	AA	1363	A	P-O3'-C3'	6.05	126.96	119.70
24	BA	58	G	C8-N9-C4	-6.05	103.98	106.40
24	BA	1767	G	C8-N9-C4	-6.05	103.98	106.40
24	BA	2867	G	N3-C4-N9	-6.05	122.37	126.00
24	DA	1477	A	C3'-C2'-C1'	6.05	106.34	101.50
21	AA	654	G	C3'-C2'-C1'	6.05	106.34	101.50
24	BA	513	A	P-O3'-C3'	-6.05	112.44	119.70
24	DA	2312	U	O5'-P-OP1	-6.05	100.26	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	423	G	C3'-C2'-C1'	6.04	106.34	101.50
24	BA	1188	U	C2-N3-C4	6.04	130.63	127.00
24	DA	197	A	C3'-C2'-C1'	6.04	106.33	101.50
24	BA	661	A	P-O3'-C3'	-6.04	112.45	119.70
55	CA	329	A	N1-C6-N6	6.04	122.22	118.60
24	DA	443	A	P-O3'-C3'	-6.04	112.45	119.70
24	DA	397	U	O4'-C1'-N1	6.04	113.03	108.20
21	AA	174	A	P-O3'-C3'	-6.03	112.46	119.70
21	AA	1202	U	P-O3'-C3'	-6.03	112.46	119.70
21	AA	131	A	C5-C6-N6	6.03	128.52	123.70
26	BC	109	LEU	CA-CB-CG	6.03	129.17	115.30
55	CA	464	U	P-O3'-C3'	-6.03	112.46	119.70
24	BA	548	G	N9-C1'-C2'	-6.03	105.37	112.00
24	BA	1770	G	C4-C5-N7	6.03	113.21	110.80
24	BA	177	G	P-O3'-C3'	6.03	126.93	119.70
24	BA	1732	C	O4'-C1'-N1	6.03	113.02	108.20
55	CA	1128	C	O4'-C1'-N1	6.02	113.02	108.20
24	BA	2828	G	P-O3'-C3'	6.02	126.93	119.70
55	CA	116	A	C3'-C2'-C1'	6.02	106.32	101.50
55	CA	547	A	P-O3'-C3'	6.02	126.93	119.70
24	DA	622	G	N9-C1'-C2'	-6.02	105.38	112.00
55	CA	915	A	N9-C1'-C2'	-6.02	105.38	112.00
24	DA	2148	G	P-O3'-C3'	-6.02	112.48	119.70
24	BA	216	A	C3'-C2'-C1'	6.02	106.31	101.50
24	BA	1716	U	C3'-C2'-C1'	6.02	106.31	101.50
24	BA	2148	G	C3'-C2'-C1'	6.02	106.31	101.50
24	BA	1	G	P-O3'-C3'	-6.02	112.48	119.70
24	BA	1787	A	C6-N1-C2	6.02	122.21	118.60
24	BA	1267	U	P-O3'-C3'	-6.01	112.48	119.70
24	BA	1387	A	P-O3'-C3'	-6.01	112.48	119.70
24	DA	482	A	N9-C1'-C2'	-6.01	105.38	112.00
24	BA	389	G	N9-C1'-C2'	-6.01	105.39	112.00
24	BA	1606	C	P-O5'-C5'	-6.01	111.28	120.90
55	CA	1324	A	P-O3'-C3'	6.01	126.92	119.70
56	DB	45	A	P-O3'-C3'	-6.01	112.48	119.70
24	BA	460	A	C3'-C2'-C1'	6.01	106.31	101.50
55	CA	483	C	O4'-C1'-N1	6.01	113.01	108.20
24	DA	2615	U	C3'-C2'-C1'	6.01	106.31	101.50
24	BA	121	G	C3'-C2'-C1'	6.01	106.31	101.50
24	BA	1040	A	O4'-C1'-N9	6.01	113.01	108.20
25	BB	58	A	N9-C1'-C2'	-6.00	105.40	112.00
24	DA	2889	C	O4'-C1'-N1	6.00	113.00	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	934	U	C3'-C2'-C1'	6.00	106.30	101.50
24	BA	1817	G	N9-C1'-C2'	-6.00	105.40	112.00
24	DA	1158	C	C3'-C2'-C1'	6.00	106.30	101.50
55	CA	218	U	O4'-C1'-N1	6.00	113.00	108.20
24	BA	2441	U	O4'-C1'-N1	6.00	113.00	108.20
55	CA	976	G	P-O3'-C3'	-6.00	112.50	119.70
56	DB	42	C	N1-C1'-C2'	-6.00	105.40	112.00
55	CA	173	U	N1-C1'-C2'	6.00	121.80	114.00
21	AA	245	U	P-O3'-C3'	-6.00	112.51	119.70
23	AW	5	U	O4'-C1'-N1	5.99	113.00	108.20
24	BA	2426	A	P-O3'-C3'	5.99	126.89	119.70
24	DA	2251	G	C3'-C2'-C1'	5.99	106.30	101.50
24	DA	2611	C	C3'-C2'-C1'	5.99	106.29	101.50
25	BB	37	C	P-O3'-C3'	-5.99	112.51	119.70
24	DA	2226	C	C3'-C2'-C1'	5.99	106.29	101.50
24	DA	303	G	P-O3'-C3'	-5.99	112.51	119.70
24	BA	994	C	P-O3'-C3'	-5.99	112.51	119.70
24	BA	1157	G	P-O3'-C3'	-5.99	112.51	119.70
24	BA	1960	A	C6-N1-C2	5.99	122.19	118.60
24	DA	406	G	P-O3'-C3'	-5.99	112.52	119.70
24	DA	1787	A	C3'-C2'-C1'	5.99	106.29	101.50
24	BA	1828	G	P-O5'-C5'	5.98	130.47	120.90
55	CA	190	A	N1-C6-N6	5.98	122.19	118.60
55	CA	483	C	P-O3'-C3'	-5.98	112.52	119.70
21	AA	1399	C	N1-C2-O2	-5.98	115.31	118.90
24	DA	1654	A	C3'-C2'-C1'	5.98	106.28	101.50
24	DA	1992	G	P-O3'-C3'	5.98	126.88	119.70
21	AA	686	U	O4'-C1'-N1	5.98	112.98	108.20
24	BA	1135	C	C3'-C2'-C1'	5.98	106.28	101.50
24	DA	459	U	C3'-C2'-C1'	5.98	106.28	101.50
24	DA	1019	U	C2-N3-C4	-5.98	123.41	127.00
24	BA	2543	G	C3'-C2'-C1'	5.98	106.28	101.50
55	CA	803	G	N9-C1'-C2'	-5.98	105.42	112.00
24	DA	2267	A	N9-C1'-C2'	-5.98	105.42	112.00
55	CA	389	A	C6-C5-N7	5.98	136.48	132.30
24	DA	530	G	P-O3'-C3'	-5.98	112.53	119.70
24	DA	2257	U	P-O3'-C3'	5.98	126.87	119.70
21	AA	1454	G	P-O3'-C3'	-5.98	112.53	119.70
21	AA	1399	C	P-O3'-C3'	5.97	126.87	119.70
24	BA	1508	A	P-O3'-C3'	5.97	126.87	119.70
55	CA	1442	G	C3'-C2'-C1'	5.97	106.28	101.50
24	DA	461	C	O4'-C1'-N1	-5.97	103.42	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	1788	C	O4'-C1'-N1	5.97	112.98	108.20
24	BA	1963	U	P-O3'-C3'	-5.97	112.53	119.70
25	BB	44	G	P-O3'-C3'	5.97	126.87	119.70
24	DA	962	G	P-O3'-C3'	5.97	126.87	119.70
55	CA	935	A	P-O3'-C3'	-5.97	112.53	119.70
24	DA	35	G	C3'-C2'-C1'	5.97	106.28	101.50
24	DA	449	A	P-O3'-C3'	-5.97	112.53	119.70
24	BA	61	C	P-O3'-C3'	-5.97	112.54	119.70
21	AA	1258	G	C3'-C2'-C1'	5.97	106.28	101.50
24	DA	14	A	P-O3'-C3'	-5.97	112.54	119.70
24	DA	421	C	N1-C1'-C2'	5.97	121.76	114.00
24	DA	1694	C	N1-C2-O2	5.97	122.48	118.90
21	AA	1102	A	C3'-C2'-C1'	5.97	106.27	101.50
24	BA	1241	A	P-O3'-C3'	5.97	126.86	119.70
24	BA	1399	C	P-O3'-C3'	5.97	126.86	119.70
21	AA	414	A	N9-C1'-C2'	-5.96	105.44	112.00
24	BA	2049	G	C5-C6-O6	5.96	132.18	128.60
55	CA	175	C	O4'-C1'-N1	5.96	112.97	108.20
24	BA	744	U	N1-C2-N3	5.96	118.48	114.90
24	BA	2392	A	P-O5'-C5'	-5.96	111.36	120.90
24	BA	2727	A	P-O3'-C3'	-5.96	112.55	119.70
25	BB	40	U	P-O3'-C3'	5.96	126.85	119.70
55	CA	643	C	C3'-C2'-C1'	5.96	106.27	101.50
55	CA	931	C	N1-C2-O2	-5.96	115.32	118.90
24	DA	244	A	C3'-C2'-C1'	5.96	106.27	101.50
24	DA	1997	C	C3'-C2'-C1'	5.96	106.27	101.50
21	AA	1319	A	P-O3'-C3'	5.96	126.85	119.70
24	BA	1204	A	O4'-C1'-N9	5.96	112.97	108.20
24	DA	576	U	C3'-C2'-C1'	5.96	106.26	101.50
24	DA	269	C	O4'-C1'-N1	5.96	112.96	108.20
24	BA	1386	C	N1-C1'-C2'	-5.95	105.45	112.00
24	BA	1429	G	N9-C1'-C2'	-5.95	105.45	112.00
24	BA	1386	C	C3'-C2'-C1'	5.95	106.26	101.50
24	DA	947	A	C3'-C2'-C1'	5.95	106.26	101.50
21	AA	1283	U	O4'-C1'-N1	5.95	112.96	108.20
24	BA	1585	C	O4'-C1'-N1	-5.95	103.44	108.20
55	CA	358	U	O4'-C1'-N1	5.95	112.96	108.20
55	CA	983	A	C3'-C2'-C1'	5.95	106.26	101.50
24	DA	2214	C	C3'-C2'-C1'	5.95	106.26	101.50
21	AA	1196	A	O4'-C1'-N9	5.95	112.96	108.20
24	BA	1919	A	P-O3'-C3'	-5.95	112.56	119.70
24	BA	2022	U	P-O3'-C3'	-5.95	112.56	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	2575	C	C6-N1-C2	5.95	122.68	120.30
55	CA	66	A	P-O3'-C3'	-5.95	112.56	119.70
24	DA	390	U	P-O3'-C3'	5.95	126.84	119.70
21	AA	808	C	O4'-C1'-N1	5.95	112.96	108.20
24	BA	61	C	C3'-C2'-C1'	5.95	106.26	101.50
24	BA	2197	U	N1-C1'-C2'	5.95	121.73	114.00
24	BA	1733	G	N9-C1'-C2'	-5.95	105.46	112.00
55	CA	30	U	O4'-C1'-N1	5.95	112.96	108.20
55	CA	686	U	N1-C1'-C2'	5.95	121.73	114.00
55	CA	1160	G	N9-C1'-C2'	-5.95	105.46	112.00
55	CA	1296	C	P-O3'-C3'	5.95	126.83	119.70
24	DA	2781	A	C3'-C2'-C1'	5.95	106.26	101.50
24	BA	2752	C	C3'-C2'-C1'	5.94	106.25	101.50
55	CA	531	U	P-O3'-C3'	5.94	126.83	119.70
24	DA	1676	A	C3'-C2'-C1'	5.94	106.25	101.50
24	BA	1026	G	C3'-C2'-C1'	5.94	106.25	101.50
24	BA	1568	G	P-O5'-C5'	-5.94	111.39	120.90
24	DA	1695	G	P-O3'-C3'	-5.94	112.57	119.70
24	DA	1759	A	C3'-C2'-C1'	5.94	106.25	101.50
24	DA	2022	U	O4'-C1'-N1	-5.94	103.45	108.20
24	DA	2245	U	O4'-C1'-N1	5.94	112.95	108.20
56	DB	58	A	C3'-C2'-C1'	5.94	106.25	101.50
24	BA	1838	C	O4'-C1'-N1	5.94	112.95	108.20
24	DA	1330	C	P-O3'-C3'	-5.94	112.57	119.70
24	DA	2093	G	C3'-C2'-C1'	5.94	106.25	101.50
56	DB	87	U	O4'-C1'-N1	5.94	112.95	108.20
24	BA	365	U	C5-C4-O4	-5.93	122.34	125.90
24	BA	633	A	N9-C4-C5	-5.93	103.43	105.80
24	BA	1161	C	N1-C2-O2	-5.93	115.34	118.90
24	BA	1326	U	C3'-C2'-C1'	5.93	106.25	101.50
55	CA	968	A	O4'-C1'-N9	5.93	112.94	108.20
55	CA	1288	A	N9-C1'-C2'	-5.93	105.47	112.00
55	CA	1102	A	C3'-C2'-C1'	5.93	106.25	101.50
55	CA	1507	A	C3'-C2'-C1'	5.93	106.25	101.50
24	BA	1135	C	N1-C1'-C2'	-5.93	105.48	112.00
24	BA	1142	A	N1-C2-N3	-5.93	126.34	129.30
24	DA	1654	A	O4'-C1'-N9	5.93	112.94	108.20
21	AA	595	A	P-O3'-C3'	5.93	126.81	119.70
24	DA	310	A	P-O3'-C3'	5.93	126.81	119.70
24	BA	197	A	N9-C1'-C2'	-5.93	105.48	112.00
24	BA	2199	A	O4'-C1'-N9	-5.93	103.46	108.20
55	CA	143	A	N1-C6-N6	-5.93	115.04	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	794	A	C3'-C2'-C1'	5.93	106.24	101.50
24	DA	1821	A	P-O3'-C3'	-5.92	112.59	119.70
21	AA	52	C	C3'-C2'-C1'	5.92	106.24	101.50
21	AA	1168	U	O3'-P-O5'	-5.92	92.75	104.00
24	DA	230	G	C3'-C2'-C1'	5.92	106.24	101.50
21	AA	1348	U	C3'-C2'-C1'	5.92	106.24	101.50
24	BA	2049	G	C5-C6-N1	-5.92	108.54	111.50
21	AA	1229	A	P-O3'-C3'	-5.92	112.60	119.70
24	BA	2055	C	O4'-C1'-N1	-5.92	103.46	108.20
24	DA	449	A	C3'-C2'-C1'	5.92	106.24	101.50
55	CA	704	A	C3'-C2'-C1'	5.92	106.23	101.50
24	DA	604	G	N9-C1'-C2'	-5.92	105.49	112.00
24	DA	1788	C	C3'-C2'-C1'	5.92	106.23	101.50
24	DA	2630	G	N9-C1'-C2'	-5.92	105.49	112.00
24	BA	265	A	O4'-C1'-N9	5.92	112.93	108.20
21	AA	194	C	O4'-C1'-N1	5.91	112.93	108.20
55	CA	370	C	O4'-C1'-N1	5.91	112.93	108.20
24	DA	60	G	C8-N9-C1'	5.91	134.69	127.00
24	BA	520	G	P-O3'-C3'	-5.91	112.61	119.70
24	DA	1010	A	C3'-C2'-C1'	5.91	106.23	101.50
55	CA	110	C	C3'-C2'-C1'	5.91	106.23	101.50
21	AA	1064	G	O4'-C1'-N9	5.91	112.93	108.20
24	BA	140	C	N1-C1'-C2'	5.91	121.68	114.00
55	CA	497	G	C3'-C2'-C1'	5.91	106.23	101.50
24	DA	1129	A	C3'-C2'-C1'	5.91	106.23	101.50
24	DA	2543	G	C3'-C2'-C1'	5.91	106.23	101.50
21	AA	430	A	P-O3'-C3'	-5.91	112.61	119.70
24	DA	1050	A	N9-C1'-C2'	-5.91	105.50	112.00
21	AA	87	C	C3'-C2'-C1'	5.91	106.22	101.50
21	AA	1160	G	C3'-C2'-C1'	5.91	106.22	101.50
21	AA	1055	A	N9-C1'-C2'	-5.90	105.51	112.00
24	BA	2075	U	C5-C4-O4	5.90	129.44	125.90
24	BA	2857	G	C8-N9-C4	5.90	108.76	106.40
24	BA	2860	A	O4'-C1'-N9	-5.90	103.48	108.20
24	DA	1706	C	O4'-C1'-N1	5.90	112.92	108.20
21	AA	1461	G	N9-C4-C5	-5.90	103.04	105.40
24	DA	2267	A	C4-C5-N7	5.90	113.65	110.70
21	AA	1382	C	C3'-C2'-C1'	5.90	106.22	101.50
24	BA	1130	U	C2-N1-C1'	5.90	124.78	117.70
24	DA	271	G	C8-N9-C1'	5.90	134.67	127.00
24	DA	1555	G	C3'-C2'-C1'	5.90	106.22	101.50
55	CA	1454	G	C3'-C2'-C1'	5.90	106.22	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	390	U	N1-C1'-C2'	5.90	121.67	114.00
24	DA	2521	C	O4'-C1'-N1	5.90	112.92	108.20
21	AA	1323	G	C3'-C2'-C1'	5.89	106.22	101.50
24	BA	1303	G	C3'-C2'-C1'	5.89	106.22	101.50
24	BA	1800	C	O4'-C1'-N1	-5.89	103.48	108.20
24	BA	2574	G	C3'-C2'-C1'	5.89	106.22	101.50
55	CA	425	G	P-O3'-C3'	-5.89	112.63	119.70
24	DA	779	U	O4'-C1'-N1	5.89	112.92	108.20
24	DA	1290	C	C3'-C2'-C1'	5.89	106.22	101.50
24	DA	1626	A	P-O3'-C3'	5.89	126.77	119.70
24	DA	1965	C	P-O3'-C3'	-5.89	112.63	119.70
55	CA	250	A	P-O3'-C3'	5.89	126.77	119.70
24	BA	653	U	P-O3'-C3'	-5.89	112.63	119.70
24	BA	1147	A	N9-C4-C5	5.89	108.16	105.80
24	DA	1303	G	C3'-C2'-C1'	5.89	106.21	101.50
24	BA	2423	U	N1-C1'-C2'	5.89	121.66	114.00
24	BA	2440	C	C3'-C2'-C1'	5.89	106.21	101.50
24	BA	1478	G	N9-C4-C5	5.89	107.75	105.40
24	DA	1507	C	O4'-C1'-N1	-5.89	103.49	108.20
21	AA	723	U	P-O3'-C3'	-5.89	112.64	119.70
24	BA	469	G	P-O3'-C3'	-5.89	112.64	119.70
25	BB	89	U	N1-C1'-C2'	-5.88	105.53	112.00
24	DA	1670	C	P-O3'-C3'	5.88	126.76	119.70
24	DA	1206	G	C3'-C2'-C1'	5.88	106.21	101.50
24	DA	1785	A	C3'-C2'-C1'	5.88	106.21	101.50
21	AA	1530	G	C3'-C2'-C1'	5.88	106.20	101.50
24	DA	1034	G	C3'-C2'-C1'	5.88	106.21	101.50
24	BA	1956	U	O4'-C1'-N1	5.88	112.90	108.20
24	DA	2402	U	P-O3'-C3'	-5.88	112.65	119.70
24	DA	2447	G	C5-C6-O6	-5.88	125.08	128.60
24	BA	1696	G	P-O3'-C3'	-5.87	112.65	119.70
24	DA	374	A	C3'-C2'-C1'	5.87	106.20	101.50
24	DA	2312	U	P-O3'-C3'	-5.87	112.65	119.70
24	DA	2312	U	C6-N1-C2	-5.87	117.47	121.00
24	BA	572	A	C3'-C2'-C1'	5.87	106.20	101.50
24	BA	1238	G	C3'-C2'-C1'	5.87	106.20	101.50
24	BA	1666	G	O4'-C1'-N9	5.87	112.90	108.20
55	CA	982	U	P-O3'-C3'	5.87	126.75	119.70
24	DA	1114	C	O4'-C1'-N1	5.87	112.90	108.20
24	BA	1379	U	C3'-C2'-C1'	5.87	106.20	101.50
55	CA	381	C	P-O3'-C3'	5.87	126.74	119.70
24	DA	2337	G	P-O3'-C3'	-5.87	112.66	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	885	G	C3'-C2'-C1'	5.87	106.19	101.50
24	DA	2903	U	O4'-C1'-N1	5.87	112.89	108.20
21	AA	1349	A	C3'-C2'-C1'	5.87	106.19	101.50
21	AA	1365	G	C3'-C2'-C1'	5.87	106.19	101.50
24	DA	2504	U	C3'-C2'-C1'	5.87	106.19	101.50
24	DA	2620	C	C6-N1-C2	5.87	122.65	120.30
55	CA	970	C	P-O5'-C5'	-5.86	111.52	120.90
55	CA	1242	G	C3'-C2'-C1'	5.86	106.19	101.50
24	DA	413	C	O4'-C1'-N1	5.86	112.89	108.20
24	BA	111	A	P-O3'-C3'	-5.86	112.67	119.70
21	AA	397	A	C6-N1-C2	-5.86	115.08	118.60
24	BA	639	U	O4'-C1'-N1	5.86	112.89	108.20
24	BA	919	U	C4-C5-C6	-5.86	116.18	119.70
24	DA	1363	C	O4'-C1'-N1	-5.86	103.51	108.20
24	DA	1941	C	P-O3'-C3'	-5.86	112.67	119.70
24	BA	460	A	N9-C1'-C2'	-5.86	105.56	112.00
24	BA	1707	G	C3'-C2'-C1'	5.86	106.19	101.50
24	BA	2276	G	P-O3'-C3'	-5.86	112.67	119.70
24	BA	2326	C	N1-C1'-C2'	5.86	121.62	114.00
24	BA	2792	A	P-O3'-C3'	-5.86	112.67	119.70
55	CA	565	U	O4'-C1'-N1	5.86	112.89	108.20
55	CA	1151	A	P-O3'-C3'	5.86	126.73	119.70
24	DA	802	A	C3'-C2'-C1'	5.86	106.19	101.50
24	DA	2727	A	P-O3'-C3'	-5.86	112.67	119.70
24	BA	2868	A	C3'-C2'-C1'	5.85	106.18	101.50
24	BA	645	C	C2-N1-C1'	5.85	125.24	118.80
24	DA	1612	C	O4'-C1'-N1	5.85	112.88	108.20
24	DA	370	G	C8-N9-C1'	5.85	134.61	127.00
24	DA	587	C	P-O3'-C3'	5.85	126.72	119.70
24	DA	1812	U	O4'-C1'-N1	5.85	112.88	108.20
25	BB	15	A	N1-C6-N6	5.85	122.11	118.60
24	DA	197	A	P-O3'-C3'	-5.85	112.68	119.70
21	AA	197	A	P-O3'-C3'	5.84	126.71	119.70
24	BA	1188	U	O4'-C1'-N1	-5.84	103.52	108.20
24	BA	1993	U	C3'-C2'-C1'	5.84	106.18	101.50
21	AA	89	U	N1-C1'-C2'	-5.84	105.57	112.00
24	DA	1607	C	O4'-C1'-N1	-5.84	103.53	108.20
24	BA	86	G	N9-C1'-C2'	-5.84	105.57	112.00
24	BA	2712	C	P-O3'-C3'	5.84	126.71	119.70
55	CA	143	A	C5-C6-N6	5.84	128.37	123.70
24	DA	1157	G	C3'-C2'-C1'	5.84	106.17	101.50
24	BA	860	U	P-O5'-C5'	-5.84	111.56	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1510	G	C3'-C2'-C1'	5.84	106.17	101.50
24	BA	1326	U	N1-C1'-C2'	-5.84	105.58	112.00
24	BA	200	U	O4'-C1'-N1	5.84	112.87	108.20
24	BA	2580	U	P-O3'-C3'	5.84	126.70	119.70
55	CA	1505	G	O4'-C1'-N9	-5.84	103.53	108.20
56	DB	17	C	P-O3'-C3'	-5.84	112.70	119.70
24	BA	1023	U	P-O3'-C3'	-5.83	112.70	119.70
24	DA	2059	A	P-O3'-C3'	5.83	126.70	119.70
24	BA	2281	A	C6-N1-C2	-5.83	115.10	118.60
25	BB	32	U	C6-N1-C2	5.83	124.50	121.00
24	DA	858	G	P-O3'-C3'	5.83	126.70	119.70
24	BA	2424	C	C3'-C2'-C1'	5.83	106.16	101.50
24	DA	990	A	C3'-C2'-C1'	5.83	106.16	101.50
24	DA	1822	C	C3'-C2'-C1'	5.83	106.16	101.50
24	DA	2037	A	C3'-C2'-C1'	5.83	106.16	101.50
24	DA	2267	A	P-O3'-C3'	-5.83	112.70	119.70
24	BA	138	U	P-O3'-C3'	-5.83	112.70	119.70
24	BA	813	U	O4'-C1'-N1	-5.83	103.54	108.20
24	BA	1942	C	C3'-C2'-C1'	5.83	106.16	101.50
24	DA	1716	U	P-O3'-C3'	-5.83	112.71	119.70
24	DA	2434	A	P-O3'-C3'	5.83	126.69	119.70
24	DA	2573	C	N1-C1'-C2'	-5.83	105.59	112.00
56	DB	45	A	C3'-C2'-C1'	5.83	106.16	101.50
21	AA	1102	A	P-O3'-C3'	-5.83	112.71	119.70
24	BA	975	A	C3'-C2'-C1'	5.83	106.16	101.50
55	CA	1183	U	N1-C1'-C2'	-5.83	105.59	112.00
24	BA	1345	C	O4'-C1'-N1	5.82	112.86	108.20
21	AA	548	G	C3'-C2'-C1'	5.82	106.16	101.50
21	AA	653	U	N1-C1'-C2'	5.82	121.57	114.00
21	AA	1087	G	N9-C1'-C2'	-5.82	105.60	112.00
23	AW	3	U	N1-C1'-C2'	5.82	121.57	114.00
24	BA	1254	A	C3'-C2'-C1'	5.82	106.16	101.50
24	BA	1437	C	O4'-C1'-N1	5.82	112.86	108.20
24	BA	2309	A	C3'-C2'-C1'	5.82	106.16	101.50
55	CA	1507	A	P-O3'-C3'	-5.82	112.72	119.70
21	AA	274	A	O4'-C1'-N9	5.82	112.86	108.20
24	DA	52	A	C3'-C2'-C1'	5.82	106.15	101.50
24	BA	395	U	N1-C1'-C2'	5.82	121.56	114.00
24	BA	1229	C	C5-C6-N1	-5.81	118.09	121.00
24	BA	589	U	P-O3'-C3'	-5.81	112.72	119.70
55	CA	816	A	N9-C1'-C2'	-5.81	105.61	112.00
24	DA	2756	U	P-O3'-C3'	5.81	126.68	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	2282	G	N3-C4-N9	-5.81	122.51	126.00
24	BA	2860	A	C6-C5-N7	-5.81	128.23	132.30
24	DA	221	A	P-O3'-C3'	5.81	126.67	119.70
24	DA	1273	U	N1-C1'-C2'	-5.81	105.61	112.00
24	DA	1399	C	C3'-C2'-C1'	5.81	106.15	101.50
21	AA	316	C	C3'-C2'-C1'	5.81	106.14	101.50
24	BA	2639	A	C3'-C2'-C1'	5.81	106.14	101.50
24	DA	1060	U	C2-N1-C1'	5.81	124.67	117.70
24	BA	2896	C	C5-C4-N4	5.81	124.26	120.20
24	BA	1981	A	C3'-C2'-C1'	5.80	106.14	101.50
55	CA	247	G	C3'-C2'-C1'	5.80	106.14	101.50
55	CA	513	C	P-O3'-C3'	-5.80	112.74	119.70
24	BA	12	U	N3-C2-O2	-5.80	118.14	122.20
24	DA	2848	G	P-O3'-C3'	5.80	126.66	119.70
21	AA	84	U	N1-C1'-C2'	5.80	121.54	114.00
24	BA	522	A	P-O3'-C3'	-5.80	112.74	119.70
24	BA	2092	U	P-O3'-C3'	5.80	126.66	119.70
24	DA	785	G	N9-C1'-C2'	-5.80	105.62	112.00
24	DA	1333	G	C3'-C2'-C1'	5.80	106.14	101.50
24	DA	476	G	P-O3'-C3'	-5.80	112.74	119.70
24	BA	436	C	C3'-C2'-C1'	5.80	106.14	101.50
24	BA	2728	U	P-O5'-C5'	-5.80	111.63	120.90
24	DA	832	U	P-O3'-C3'	-5.80	112.74	119.70
24	DA	2136	G	N9-C1'-C2'	-5.80	105.62	112.00
24	DA	2313	C	P-O3'-C3'	-5.80	112.74	119.70
55	CA	253	A	C3'-C2'-C1'	5.79	106.14	101.50
24	BA	818	G	P-O3'-C3'	-5.79	112.75	119.70
24	BA	1060	U	N1-C1'-C2'	5.79	121.53	114.00
24	DA	479	A	O4'-C1'-N9	5.79	112.83	108.20
24	BA	482	A	C3'-C2'-C1'	5.79	106.13	101.50
24	BA	514	A	P-O3'-C3'	-5.79	112.75	119.70
24	BA	1330	C	C3'-C2'-C1'	5.79	106.13	101.50
24	BA	2052	A	C5-C6-N6	5.79	128.33	123.70
24	BA	2797	U	O4'-C1'-N1	5.79	112.83	108.20
55	CA	96	U	P-O3'-C3'	-5.79	112.75	119.70
55	CA	87	C	C3'-C2'-C1'	5.79	106.13	101.50
24	DA	2039	U	O4'-C1'-N1	5.79	112.83	108.20
24	BA	303	G	N9-C1'-C2'	-5.79	105.63	112.00
24	BA	750	A	C8-N9-C4	-5.79	103.48	105.80
24	BA	2554	U	P-O3'-C3'	5.79	126.65	119.70
55	CA	945	G	C6-N1-C2	-5.79	121.63	125.10
24	DA	1553	A	O4'-C1'-N9	5.79	112.83	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	2638	G	P-O3'-C3'	5.79	126.64	119.70
21	AA	78	A	C5-C6-N1	5.79	120.59	117.70
24	BA	370	G	P-O3'-C3'	5.79	126.64	119.70
25	BB	36	C	C2-N1-C1'	5.79	125.17	118.80
24	BA	860	U	C3'-C2'-C1'	5.78	106.13	101.50
55	CA	331	G	C3'-C2'-C1'	5.78	106.13	101.50
55	CA	1302	C	P-O3'-C3'	-5.78	112.76	119.70
24	BA	200	U	P-O3'-C3'	-5.78	112.77	119.70
24	BA	1156	A	N1-C6-N6	5.78	122.07	118.60
24	BA	2650	U	P-O5'-C5'	-5.78	111.65	120.90
21	AA	1502	A	O4'-C1'-N9	5.78	112.82	108.20
24	BA	860	U	C5'-C4'-O4'	-5.78	102.17	109.10
24	DA	672	C	C3'-C2'-C1'	5.78	106.12	101.50
24	DA	2267	A	C8-N9-C1'	-5.78	117.30	127.70
21	AA	1046	A	C3'-C2'-C1'	5.78	106.12	101.50
24	BA	2054	A	N1-C2-N3	5.78	132.19	129.30
55	CA	6	G	C3'-C2'-C1'	5.78	106.12	101.50
24	DA	509	C	N1-C1'-C2'	-5.78	105.64	112.00
24	BA	1350	C	P-O3'-C3'	-5.78	112.77	119.70
55	CA	755	G	C3'-C2'-C1'	5.78	106.12	101.50
56	DB	5	U	O4'-C1'-N1	5.77	112.82	108.20
21	AA	185	U	P-O5'-C5'	-5.77	111.67	120.90
24	BA	1238	G	O4'-C1'-N9	5.77	112.82	108.20
24	DA	250	G	C3'-C2'-C1'	5.77	106.12	101.50
21	AA	794	A	C3'-C2'-C1'	5.77	106.12	101.50
21	AA	411	A	P-O3'-C3'	5.77	126.62	119.70
24	BA	1649	G	C3'-C2'-C1'	5.77	106.11	101.50
55	CA	1395	C	C3'-C2'-C1'	5.77	106.12	101.50
24	DA	656	G	C3'-C2'-C1'	5.77	106.12	101.50
24	DA	1021	A	C3'-C2'-C1'	5.77	106.12	101.50
21	AA	1363	A	O4'-C1'-N9	5.77	112.81	108.20
24	BA	1331	G	P-O3'-C3'	5.77	126.62	119.70
25	BB	43	C	P-O3'-C3'	-5.77	112.78	119.70
55	CA	967	C	C6-N1-C2	5.77	122.61	120.30
24	DA	1008	A	P-O3'-C3'	5.77	126.62	119.70
24	DA	1060	U	C6-N1-C1'	-5.77	113.12	121.20
21	AA	961	U	C3'-C2'-C1'	5.77	106.11	101.50
24	BA	554	U	O4'-C1'-N1	5.77	112.81	108.20
21	AA	282	A	C3'-C2'-C1'	5.76	106.11	101.50
21	AA	536	C	C3'-C2'-C1'	5.76	106.11	101.50
55	CA	870	U	N1-C1'-C2'	5.76	121.49	114.00
55	CA	1160	G	P-O3'-C3'	-5.76	112.78	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	1299	A	P-O3'-C3'	-5.76	112.78	119.70
24	BA	2099	U	O4'-C1'-N1	5.76	112.81	108.20
24	BA	2346	A	P-O3'-C3'	5.76	126.62	119.70
24	DA	434	U	N1-C1'-C2'	5.76	121.49	114.00
24	BA	2682	A	C3'-C2'-C1'	5.76	106.11	101.50
25	BB	26	C	P-O5'-C5'	-5.76	111.68	120.90
55	CA	199	A	C3'-C2'-C1'	5.76	106.11	101.50
55	CA	549	C	C3'-C2'-C1'	5.76	106.11	101.50
24	DA	1455	G	C3'-C2'-C1'	5.76	106.11	101.50
55	CA	382	A	C3'-C2'-C1'	5.76	106.11	101.50
55	CA	499	A	P-O3'-C3'	5.76	126.61	119.70
24	DA	726	G	O4'-C1'-N9	5.76	112.81	108.20
24	DA	1717	A	C3'-C2'-C1'	5.76	106.11	101.50
24	DA	2033	A	C6-N1-C2	5.76	122.06	118.60
56	DB	45	A	N9-C1'-C2'	-5.76	105.67	112.00
24	BA	831	G	N9-C1'-C2'	-5.76	105.67	112.00
24	BA	2777	G	P-O5'-C5'	-5.76	111.69	120.90
25	BB	56	G	O3'-P-O5'	5.76	114.94	104.00
25	BB	90	C	C3'-C2'-C1'	5.76	106.11	101.50
55	CA	439	U	P-O3'-C3'	-5.76	112.79	119.70
55	CA	1239	A	P-O3'-C3'	5.76	126.61	119.70
24	DA	2777	G	C3'-C2'-C1'	5.76	106.10	101.50
56	DB	87	U	P-O3'-C3'	5.76	126.61	119.70
21	AA	1449	C	C3'-C2'-C1'	5.75	106.10	101.50
55	CA	419	C	O4'-C1'-N1	5.75	112.80	108.20
24	BA	92	U	P-O3'-C3'	-5.75	112.80	119.70
24	BA	528	A	C4-C5-C6	5.75	119.88	117.00
24	BA	585	G	O5'-P-OP2	-5.75	100.52	105.70
24	DA	142	A	N9-C1'-C2'	-5.75	105.67	112.00
24	DA	2308	G	P-O3'-C3'	5.75	126.60	119.70
24	DA	2657	A	N9-C1'-C2'	-5.75	105.67	112.00
24	BA	1885	A	N9-C4-C5	5.75	108.10	105.80
24	BA	2226	C	P-O3'-C3'	-5.75	112.80	119.70
24	DA	271	G	N3-C4-N9	-5.75	122.55	126.00
24	DA	1022	G	O4'-C1'-N9	5.75	112.80	108.20
21	AA	1450	U	O4'-C1'-N1	5.75	112.80	108.20
24	BA	369	U	N1-C1'-C2'	5.75	121.47	114.00
24	DA	1647	U	O4'-C1'-N1	5.75	112.80	108.20
24	BA	985	C	O4'-C1'-N1	-5.75	103.60	108.20
24	BA	2447	G	O4'-C1'-N9	5.75	112.80	108.20
21	AA	131	A	C3'-C2'-C1'	5.74	106.09	101.50
24	BA	1289	C	C3'-C2'-C1'	5.74	106.09	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	277	C	O4'-C1'-N1	5.74	112.79	108.20
24	BA	1204	A	P-O3'-C3'	5.74	126.59	119.70
24	BA	2501	C	P-O3'-C3'	5.74	126.59	119.70
24	BA	455	C	P-O3'-C3'	5.74	126.59	119.70
24	BA	763	G	N3-C4-N9	5.74	129.44	126.00
24	BA	1538	G	C3'-C2'-C1'	5.74	106.09	101.50
55	CA	1530	G	C3'-C2'-C1'	5.74	106.09	101.50
24	DA	572	A	C3'-C2'-C1'	5.74	106.09	101.50
24	DA	2549	G	P-O3'-C3'	5.74	126.59	119.70
24	BA	2582	G	N9-C1'-C2'	-5.74	105.69	112.00
24	BA	1372	U	C5-C4-O4	-5.74	122.46	125.90
24	BA	2441	U	C2-N3-C4	-5.74	123.56	127.00
24	BA	2575	C	N3-C4-C5	5.74	124.19	121.90
24	DA	505	A	C3'-C2'-C1'	5.74	106.09	101.50
24	DA	1213	A	C3'-C2'-C1'	5.74	106.09	101.50
21	AA	1335	U	P-O3'-C3'	5.73	126.58	119.70
24	BA	943	A	C8-N9-C4	-5.73	103.51	105.80
24	BA	2727	A	C3'-C2'-C1'	5.73	106.09	101.50
25	BB	90	C	P-O3'-C3'	-5.73	112.82	119.70
24	DA	491	G	P-O3'-C3'	-5.73	112.82	119.70
24	DA	2499	C	C3'-C2'-C1'	5.73	106.09	101.50
21	AA	306	A	C3'-C2'-C1'	5.73	106.08	101.50
25	BB	42	C	P-O3'-C3'	-5.73	112.82	119.70
24	DA	1080	A	N9-C1'-C2'	-5.73	105.70	112.00
24	DA	1325	U	N1-C1'-C2'	5.73	121.45	114.00
21	AA	316	C	P-O3'-C3'	-5.73	112.83	119.70
24	BA	1866	A	C3'-C2'-C1'	5.73	106.08	101.50
55	CA	1348	U	C3'-C2'-C1'	5.73	106.08	101.50
24	BA	2618	G	N9-C4-C5	5.73	107.69	105.40
55	CA	559	A	P-O3'-C3'	5.73	126.57	119.70
21	AA	368	U	C2-N1-C1'	5.72	124.57	117.70
24	BA	1379	U	N1-C1'-C2'	-5.72	105.70	112.00
24	BA	2034	U	C3'-C2'-C1'	5.72	106.08	101.50
21	AA	664	G	P-O3'-C3'	-5.72	112.83	119.70
24	BA	1493	C	O4'-C1'-N1	5.72	112.78	108.20
24	BA	1556	C	P-O3'-C3'	-5.72	112.83	119.70
21	AA	347	G	P-O3'-C3'	5.72	126.57	119.70
55	CA	1127	G	C3'-C2'-C1'	5.72	106.08	101.50
24	DA	1011	G	C4-N9-C1'	-5.72	119.06	126.50
21	AA	1503	A	P-O3'-C3'	5.72	126.56	119.70
24	BA	621	A	C3'-C2'-C1'	5.72	106.08	101.50
24	BA	2511	U	N3-C4-C5	5.72	118.03	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	1683	U	C3'-C2'-C1'	5.72	106.08	101.50
24	BA	1821	A	C5-C6-N1	-5.72	114.84	117.70
24	BA	1829	A	N9-C1'-C2'	-5.72	105.71	112.00
55	CA	480	U	C5-C4-O4	-5.72	122.47	125.90
24	BA	1287	A	C3'-C2'-C1'	5.72	106.07	101.50
24	BA	1884	G	P-O3'-C3'	5.71	126.56	119.70
55	CA	252	U	C3'-C2'-C1'	5.71	106.07	101.50
24	DA	1611	C	P-O3'-C3'	-5.71	112.84	119.70
24	BA	1770	G	C5-C6-O6	-5.71	125.17	128.60
24	DA	1455	G	P-O3'-C3'	-5.71	112.84	119.70
24	DA	2691	C	O4'-C1'-N1	5.71	112.77	108.20
21	AA	994	A	C3'-C2'-C1'	5.71	106.07	101.50
24	BA	871	U	P-O5'-C5'	-5.71	111.76	120.90
24	BA	1731	G	C6-C5-N7	5.71	133.83	130.40
21	AA	251	G	O4'-C1'-N9	-5.71	103.63	108.20
24	BA	223	A	C3'-C2'-C1'	5.71	106.07	101.50
24	DA	1537	G	C3'-C2'-C1'	5.71	106.07	101.50
21	AA	1158	C	N1-C1'-C2'	-5.71	105.72	112.00
24	BA	1821	A	N9-C1'-C2'	-5.71	105.72	112.00
55	CA	275	G	C3'-C2'-C1'	5.71	106.07	101.50
55	CA	423	G	C3'-C2'-C1'	5.71	106.07	101.50
55	CA	1127	G	N9-C1'-C2'	-5.71	105.72	112.00
24	DA	1071	G	C3'-C2'-C1'	5.71	106.07	101.50
21	AA	1192	C	C3'-C2'-C1'	5.71	106.06	101.50
24	BA	2787	C	N1-C2-O2	-5.71	115.48	118.90
24	DA	60	G	C4-N9-C1'	-5.71	119.08	126.50
24	DA	1334	G	N9-C1'-C2'	-5.71	105.72	112.00
24	DA	1635	A	C3'-C2'-C1'	5.71	106.06	101.50
24	BA	2778	A	P-O3'-C3'	5.70	126.55	119.70
24	DA	1315	C	O4'-C1'-N1	5.70	112.76	108.20
24	DA	2324	U	P-O3'-C3'	5.70	126.55	119.70
55	CA	414	A	C3'-C2'-C1'	5.70	106.06	101.50
24	DA	754	U	O4'-C1'-N1	5.70	112.76	108.20
24	DA	2752	C	O4'-C1'-N1	5.70	112.76	108.20
24	BA	866	A	C3'-C2'-C1'	5.70	106.06	101.50
24	BA	2249	U	N1-C1'-C2'	5.70	121.41	114.00
25	BB	43	C	C3'-C2'-C1'	5.70	106.06	101.50
55	CA	537	G	N9-C1'-C2'	-5.70	105.73	112.00
24	DA	529	A	C5-N7-C8	-5.70	101.05	103.90
24	DA	2757	A	C3'-C2'-C1'	5.70	106.06	101.50
21	AA	755	G	C3'-C2'-C1'	5.70	106.06	101.50
21	AA	1184	G	C3'-C2'-C1'	5.70	106.06	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1321	U	C3'-C2'-C1'	5.70	106.06	101.50
24	DA	122	G	C3'-C2'-C1'	5.70	106.06	101.50
24	DA	491	G	C3'-C2'-C1'	5.70	106.06	101.50
24	BA	965	C	O4'-C1'-N1	-5.70	103.64	108.20
24	BA	1385	A	O4'-C1'-N9	5.70	112.76	108.20
24	BA	1693	U	O4'-C1'-N1	5.70	112.76	108.20
24	BA	2135	A	C3'-C2'-C1'	5.69	106.06	101.50
24	DA	1276	A	C3'-C2'-C1'	5.69	106.06	101.50
55	CA	518	C	O4'-C1'-N1	5.69	112.75	108.20
55	CA	1299	A	O3'-P-O5'	5.69	114.82	104.00
24	DA	93	G	C3'-C2'-C1'	5.69	106.06	101.50
24	DA	370	G	C6-C5-N7	5.69	133.81	130.40
24	DA	1439	A	C6-N1-C2	5.69	122.02	118.60
24	BA	683	U	O4'-C1'-N1	5.69	112.75	108.20
24	BA	806	C	N1-C1'-C2'	-5.69	105.74	112.00
24	BA	2324	U	N1-C1'-C2'	5.69	121.40	114.00
55	CA	276	G	C3'-C2'-C1'	5.69	106.05	101.50
55	CA	821	G	C3'-C2'-C1'	5.69	106.05	101.50
55	CA	1215	G	C3'-C2'-C1'	5.69	106.05	101.50
24	DA	646	U	O4'-C1'-N1	-5.69	103.65	108.20
24	DA	224	U	P-O3'-C3'	-5.69	112.87	119.70
24	DA	1700	A	C3'-C2'-C1'	5.69	106.05	101.50
21	AA	985	C	C6-N1-C2	-5.69	118.03	120.30
24	BA	2226	C	C3'-C2'-C1'	5.69	106.05	101.50
24	DA	2215	C	O4'-C1'-N1	5.69	112.75	108.20
24	DA	2752	C	N1-C1'-C2'	-5.69	105.74	112.00
24	DA	1713	A	P-O3'-C3'	5.69	126.52	119.70
21	AA	684	U	O4'-C1'-N1	5.68	112.75	108.20
21	AA	1401	G	N9-C1'-C2'	-5.68	105.75	112.00
24	BA	272	A	C3'-C2'-C1'	5.68	106.05	101.50
24	BA	435	C	C3'-C2'-C1'	5.68	106.05	101.50
24	DA	656	G	P-O3'-C3'	-5.68	112.88	119.70
24	DA	2272	U	N3-C2-O2	5.68	126.18	122.20
21	AA	813	U	C3'-C2'-C1'	5.68	106.05	101.50
55	CA	87	C	O4'-C1'-N1	5.68	112.75	108.20
55	CA	317	U	C3'-C2'-C1'	5.68	106.05	101.50
55	CA	485	U	O4'-C1'-N1	-5.68	103.65	108.20
21	AA	597	G	N9-C1'-C2'	-5.68	105.75	112.00
24	BA	1798	U	C5-C4-O4	5.68	129.31	125.90
55	CA	509	A	C3'-C2'-C1'	5.68	106.05	101.50
55	CA	1336	C	N1-C1'-C2'	5.68	121.39	114.00
24	DA	777	G	C3'-C2'-C1'	5.68	106.05	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	1778	U	C2-N3-C4	-5.68	123.59	127.00
55	CA	184	G	N9-C1'-C2'	-5.68	105.75	112.00
24	DA	1674	G	C4-C5-N7	5.68	113.07	110.80
55	CA	482	A	P-O3'-C3'	-5.68	112.89	119.70
21	AA	162	A	P-O3'-C3'	5.68	126.51	119.70
21	AA	414	A	C3'-C2'-C1'	5.68	106.04	101.50
24	BA	1254	A	P-O5'-C5'	-5.68	111.82	120.90
24	BA	2710	C	O4'-C1'-N1	5.68	112.74	108.20
21	AA	511	C	P-O3'-C3'	5.67	126.51	119.70
24	BA	1133	A	P-O5'-C5'	-5.67	111.82	120.90
24	BA	1617	C	N1-C2-O2	-5.67	115.50	118.90
24	BA	2860	A	C8-N9-C1'	-5.67	117.49	127.70
24	DA	788	A	P-O3'-C3'	5.67	126.51	119.70
24	BA	2035	G	O5'-P-OP2	-5.67	100.59	105.70
55	CA	418	C	O4'-C1'-N1	5.67	112.74	108.20
21	AA	518	C	O4'-C1'-N1	5.67	112.74	108.20
21	AA	891	U	P-O3'-C3'	-5.67	112.89	119.70
21	AA	1197	A	O5'-P-OP2	-5.67	100.60	105.70
24	BA	1009	A	P-O3'-C3'	-5.67	112.89	119.70
24	DA	1568	G	C3'-C2'-C1'	5.67	106.04	101.50
24	DA	2267	A	C4-N9-C1'	5.67	136.51	126.30
27	BD	10	GLY	N-CA-C	5.67	127.27	113.10
24	DA	1313	U	C3'-C2'-C1'	5.67	106.03	101.50
24	DA	2458	G	O4'-C1'-N9	5.67	112.73	108.20
24	DA	2875	C	O4'-C1'-N1	5.67	112.73	108.20
24	BA	1027	A	N9-C1'-C2'	-5.67	105.77	112.00
24	DA	1649	G	C3'-C2'-C1'	5.67	106.03	101.50
24	BA	2517	C	C6-N1-C2	5.67	122.57	120.30
36	BM	41	LEU	CA-CB-CG	5.67	128.33	115.30
24	DA	1027	A	C3'-C2'-C1'	5.67	106.03	101.50
24	DA	1511	G	C3'-C2'-C1'	5.67	106.03	101.50
21	AA	701	U	N1-C1'-C2'	5.66	121.36	114.00
24	BA	1119	U	N1-C1'-C2'	-5.66	105.77	112.00
24	DA	672	C	P-O3'-C3'	-5.66	112.90	119.70
55	CA	61	G	C3'-C2'-C1'	5.66	106.03	101.50
24	BA	765	C	N1-C1'-C2'	-5.66	105.77	112.00
55	CA	1300	G	P-O5'-C5'	5.66	129.96	120.90
55	CA	1452	C	O4'-C1'-N1	5.66	112.73	108.20
55	CA	174	A	C3'-C2'-C1'	5.66	106.03	101.50
55	CA	239	U	O4'-C1'-N1	-5.66	103.67	108.20
55	CA	1086	U	C3'-C2'-C1'	5.66	106.03	101.50
55	CA	1284	C	N3-C2-O2	-5.66	117.94	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	1453	G	C3'-C2'-C1'	5.66	106.03	101.50
21	AA	252	U	P-O3'-C3'	-5.66	112.91	119.70
21	AA	414	A	P-O3'-C3'	-5.66	112.91	119.70
24	BA	19	A	P-O5'-C5'	-5.66	111.85	120.90
24	BA	858	G	C5-C6-O6	5.66	131.99	128.60
24	DA	575	A	C3'-C2'-C1'	5.66	106.03	101.50
24	DA	2714	G	P-O3'-C3'	-5.66	112.91	119.70
21	AA	587	G	P-O3'-C3'	5.66	126.49	119.70
55	CA	735	C	C3'-C2'-C1'	5.66	106.03	101.50
24	DA	225	C	C3'-C2'-C1'	5.66	106.02	101.50
24	DA	699	A	O4'-C1'-N9	-5.66	103.67	108.20
24	DA	1327	A	C3'-C2'-C1'	5.66	106.03	101.50
24	BA	2575	C	C4-C5-C6	5.65	120.23	117.40
55	CA	353	A	C3'-C2'-C1'	5.65	106.02	101.50
24	DA	1462	C	C3'-C2'-C1'	5.65	106.02	101.50
24	BA	2023	C	O4'-C1'-N1	5.65	112.72	108.20
24	DA	2603	G	C3'-C2'-C1'	5.65	106.02	101.50
24	BA	412	A	P-O3'-C3'	-5.65	112.92	119.70
55	CA	832	G	O4'-C1'-N9	5.65	112.72	108.20
24	DA	1634	A	P-O3'-C3'	5.65	126.48	119.70
24	BA	1782	U	O4'-C1'-N1	5.65	112.72	108.20
24	BA	1125	G	C6-C5-N7	-5.65	127.01	130.40
24	BA	2297	A	C3'-C2'-C1'	5.65	106.02	101.50
24	DA	628	G	P-O3'-C3'	5.65	126.48	119.70
24	DA	1512	C	O4'-C1'-N1	5.65	112.72	108.20
55	CA	1054	C	O4'-C1'-N1	5.64	112.72	108.20
24	BA	922	C	P-O3'-C3'	-5.64	112.93	119.70
24	BA	1663	G	C4-C5-N7	-5.64	108.54	110.80
24	BA	2385	C	C3'-C2'-C1'	5.64	106.01	101.50
55	CA	277	C	O4'-C1'-N1	5.64	112.71	108.20
24	DA	637	A	P-O3'-C3'	5.64	126.47	119.70
24	BA	2629	U	N1-C1'-C2'	5.64	121.33	114.00
24	DA	2251	G	P-O3'-C3'	-5.64	112.93	119.70
24	DA	2313	C	C3'-C2'-C1'	5.64	106.01	101.50
24	DA	192	C	P-O3'-C3'	5.64	126.47	119.70
24	DA	1159	U	O4'-C1'-N1	5.64	112.71	108.20
24	BA	2480	C	O4'-C1'-N1	5.64	112.71	108.20
24	DA	442	G	P-O3'-C3'	5.64	126.47	119.70
21	AA	879	C	O4'-C1'-N1	5.64	112.71	108.20
24	BA	1525	A	N1-C6-N6	-5.64	115.22	118.60
55	CA	389	A	C4-C5-N7	-5.64	107.88	110.70
55	CA	1184	G	P-O3'-C3'	-5.64	112.94	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	1425	U	O4'-C1'-N1	5.64	112.71	108.20
24	DA	2189	U	O4'-C1'-N1	5.64	112.71	108.20
24	BA	1637	A	P-O5'-C5'	-5.63	111.88	120.90
55	CA	276	G	N9-C1'-C2'	-5.63	105.80	112.00
55	CA	452	A	C3'-C2'-C1'	5.63	106.01	101.50
24	DA	103	A	C3'-C2'-C1'	5.63	106.01	101.50
24	DA	313	G	N9-C1'-C2'	-5.63	105.80	112.00
24	DA	646	U	N1-C1'-C2'	5.63	121.33	114.00
24	BA	197	A	C3'-C2'-C1'	5.63	106.01	101.50
24	BA	1143	A	P-O3'-C3'	5.63	126.46	119.70
24	DA	461	C	C6-N1-C1'	-5.63	114.04	120.80
24	DA	546	U	P-O3'-C3'	5.63	126.46	119.70
24	DA	671	C	O5'-P-OP2	-5.63	100.63	105.70
24	BA	233	A	C3'-C2'-C1'	5.63	106.00	101.50
24	BA	2716	C	O4'-C1'-N1	5.63	112.70	108.20
55	CA	803	G	C3'-C2'-C1'	5.63	106.00	101.50
24	DA	2312	U	N3-C4-C5	-5.63	111.22	114.60
56	DB	43	C	C3'-C2'-C1'	5.63	106.00	101.50
24	BA	1184	U	N1-C1'-C2'	5.63	121.32	114.00
24	BA	2846	G	C8-N9-C4	-5.63	104.15	106.40
21	AA	91	U	C2-N3-C4	-5.62	123.62	127.00
21	AA	430	A	C3'-C2'-C1'	5.62	106.00	101.50
21	AA	497	G	C3'-C2'-C1'	5.62	106.00	101.50
24	BA	1082	U	N1-C2-O2	-5.62	118.86	122.80
24	BA	2589	A	C5-C6-N6	5.62	128.20	123.70
55	CA	510	A	N9-C1'-C2'	-5.62	105.81	112.00
24	DA	77	G	N9-C1'-C2'	-5.62	105.81	112.00
24	DA	964	C	P-O5'-C5'	-5.62	111.90	120.90
24	BA	2197	U	P-O3'-C3'	5.62	126.45	119.70
24	BA	2733	A	N1-C6-N6	5.62	121.97	118.60
55	CA	206	C	N1-C1'-C2'	-5.62	105.82	112.00
24	DA	2283	C	C3'-C2'-C1'	5.62	106.00	101.50
21	AA	29	U	O4'-C1'-N1	5.62	112.69	108.20
24	BA	1045	C	N1-C1'-C2'	5.62	121.30	114.00
24	BA	2747	G	C2-N3-C4	-5.62	109.09	111.90
24	DA	621	A	C3'-C2'-C1'	5.62	106.00	101.50
24	DA	2380	C	O4'-C1'-N1	5.62	112.69	108.20
24	DA	2409	G	N9-C1'-C2'	-5.62	105.82	112.00
21	AA	752	G	P-O3'-C3'	5.62	126.44	119.70
24	BA	676	A	N1-C6-N6	5.62	121.97	118.60
21	AA	340	U	O4'-C1'-N1	5.62	112.69	108.20
21	AA	1103	C	C3'-C2'-C1'	5.62	105.99	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	892	A	N9-C1'-C2'	-5.62	105.82	112.00
24	DA	164	C	C3'-C2'-C1'	5.62	105.99	101.50
24	DA	763	G	C6-C5-N7	-5.62	127.03	130.40
24	DA	2638	G	N1-C2-N2	5.62	121.25	116.20
21	AA	519	C	C3'-C2'-C1'	5.61	105.99	101.50
24	BA	2200	C	C3'-C2'-C1'	5.61	105.99	101.50
24	BA	528	A	O4'-C1'-N9	-5.61	103.71	108.20
55	CA	961	U	C3'-C2'-C1'	5.61	105.99	101.50
21	AA	245	U	C3'-C2'-C1'	5.61	105.99	101.50
24	BA	2689	U	C2-N1-C1'	-5.61	110.97	117.70
55	CA	369	G	C3'-C2'-C1'	5.61	105.98	101.50
55	CA	1338	G	P-O3'-C3'	-5.61	112.97	119.70
24	DA	1277	G	P-O3'-C3'	-5.61	112.97	119.70
21	AA	1202	U	C3'-C2'-C1'	5.61	105.98	101.50
24	DA	1074	G	P-O3'-C3'	5.61	126.42	119.70
21	AA	1032	G	N9-C1'-C2'	-5.60	105.84	112.00
24	BA	1817	G	C3'-C2'-C1'	5.60	105.98	101.50
24	BA	604	G	P-O3'-C3'	-5.60	112.98	119.70
24	BA	1476	U	C2-N3-C4	-5.60	123.64	127.00
24	BA	2214	C	C3'-C2'-C1'	5.60	105.98	101.50
24	BA	2287	A	P-O3'-C3'	5.60	126.42	119.70
55	CA	915	A	C3'-C2'-C1'	5.60	105.98	101.50
24	BA	1669	A	N9-C4-C5	5.60	108.04	105.80
24	BA	468	G	C5-C6-N1	5.60	114.30	111.50
21	AA	1138	G	P-O3'-C3'	-5.60	112.98	119.70
21	AA	1242	G	P-O5'-C5'	-5.60	111.94	120.90
24	BA	1034	G	N9-C1'-C2'	-5.60	105.84	112.00
24	BA	2656	U	N3-C2-O2	-5.60	118.28	122.20
55	CA	885	G	C3'-C2'-C1'	5.60	105.98	101.50
24	DA	2063	C	C3'-C2'-C1'	5.60	105.98	101.50
24	BA	763	G	C4-C5-N7	5.59	113.04	110.80
24	BA	1131	G	O4'-C1'-N9	-5.59	103.72	108.20
24	BA	2798	U	O4'-C1'-N1	5.59	112.68	108.20
24	BA	2894	G	C4-N9-C1'	5.59	133.77	126.50
55	CA	1128	C	P-O3'-C3'	-5.59	112.99	119.70
21	AA	889	A	P-O3'-C3'	5.59	126.41	119.70
24	BA	373	U	C3'-C2'-C1'	5.59	105.97	101.50
55	CA	465	A	N9-C1'-C2'	-5.59	105.85	112.00
24	DA	1676	A	P-O3'-C3'	-5.59	112.99	119.70
21	AA	54	C	O4'-C1'-N1	5.59	112.67	108.20
24	BA	2220	U	N1-C1'-C2'	-5.59	105.85	112.00
24	BA	2397	G	P-O3'-C3'	-5.59	112.99	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	129	A	P-O3'-C3'	5.59	126.41	119.70
24	DA	301	G	C6-C5-N7	5.59	133.75	130.40
24	DA	1136	G	C3'-C2'-C1'	5.59	105.97	101.50
21	AA	991	U	P-O3'-C3'	5.59	126.41	119.70
55	CA	1176	A	O4'-C1'-N9	5.59	112.67	108.20
24	DA	2215	C	C3'-C2'-C1'	5.59	105.97	101.50
21	AA	274	A	P-O3'-C3'	5.59	126.41	119.70
21	AA	977	A	C3'-C2'-C1'	5.59	105.97	101.50
24	BA	783	A	C4-C5-N7	5.59	113.49	110.70
24	BA	30	G	P-O5'-C5'	-5.58	111.97	120.90
55	CA	131	A	C6-N1-C2	5.58	121.95	118.60
24	DA	1027	A	P-O3'-C3'	-5.58	113.00	119.70
21	AA	935	A	P-O5'-C5'	-5.58	111.97	120.90
21	AA	976	G	C3'-C2'-C1'	5.58	105.97	101.50
24	BA	676	A	C4-C5-N7	5.58	113.49	110.70
24	BA	1820	U	O4'-C1'-N1	5.58	112.67	108.20
24	DA	1136	G	P-O3'-C3'	-5.58	113.00	119.70
55	CA	463	U	P-O3'-C3'	-5.58	113.00	119.70
55	CA	1499	A	N9-C1'-C2'	-5.58	105.86	112.00
24	DA	2520	C	C3'-C2'-C1'	5.58	105.96	101.50
55	CA	453	G	C3'-C2'-C1'	5.58	105.96	101.50
55	CA	961	U	P-O3'-C3'	-5.58	113.01	119.70
24	DA	1698	A	P-O3'-C3'	5.58	126.39	119.70
24	BA	2273	A	P-O3'-C3'	-5.58	113.01	119.70
24	DA	510	C	C3'-C2'-C1'	5.58	105.96	101.50
21	AA	95	C	N1-C1'-C2'	-5.58	105.87	112.00
21	AA	874	G	N9-C1'-C2'	-5.58	105.87	112.00
24	BA	85	G	N9-C1'-C2'	-5.58	105.87	112.00
24	BA	2136	G	N9-C1'-C2'	-5.58	105.87	112.00
24	DA	2518	A	P-O3'-C3'	5.58	126.39	119.70
24	DA	139	U	P-O3'-C3'	5.57	126.39	119.70
24	BA	2003	A	C6-N1-C2	-5.57	115.26	118.60
21	AA	169	C	C2-N1-C1'	-5.57	112.67	118.80
21	AA	856	C	P-O3'-C3'	-5.57	113.02	119.70
55	CA	935	A	C3'-C2'-C1'	5.57	105.96	101.50
21	AA	96	U	O4'-C1'-N1	5.57	112.66	108.20
21	AA	486	U	C3'-C2'-C1'	5.57	105.95	101.50
21	AA	547	A	O4'-C1'-N9	5.57	112.65	108.20
21	AA	1499	A	C3'-C2'-C1'	5.57	105.95	101.50
24	BA	1128	G	P-O3'-C3'	5.57	126.38	119.70
24	BA	1154	G	C8-N9-C4	-5.57	104.17	106.40
24	BA	2189	U	O4'-C1'-N1	5.57	112.66	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	733	G	C4-N9-C1'	-5.57	119.26	126.50
56	DB	75	G	P-O3'-C3'	-5.57	113.02	119.70
21	AA	793	U	O4'-C1'-N1	5.57	112.65	108.20
24	BA	2894	G	C3'-C2'-C1'	5.57	105.95	101.50
55	CA	1054	C	P-O5'-C5'	-5.57	112.00	120.90
24	DA	915	C	C3'-C2'-C1'	5.57	105.95	101.50
24	BA	1524	G	P-O3'-C3'	-5.56	113.02	119.70
25	BB	13	G	C3'-C2'-C1'	5.56	105.95	101.50
25	BB	67	G	P-O5'-C5'	-5.56	112.00	120.90
24	DA	705	A	N1-C6-N6	5.56	121.94	118.60
21	AA	1046	A	N1-C6-N6	-5.56	115.26	118.60
24	BA	325	G	P-O3'-C3'	-5.56	113.03	119.70
24	BA	1495	A	C3'-C2'-C1'	5.56	105.95	101.50
24	BA	2541	A	C8-N9-C4	5.56	108.03	105.80
24	DA	548	G	N9-C1'-C2'	-5.56	105.88	112.00
24	DA	806	C	C6-N1-C2	5.56	122.53	120.30
21	AA	875	U	C3'-C2'-C1'	5.56	105.95	101.50
24	BA	2631	G	N1-C6-O6	-5.56	116.56	119.90
21	AA	859	G	P-O5'-C5'	-5.56	112.01	120.90
24	BA	1759	A	C3'-C2'-C1'	5.56	105.95	101.50
55	CA	67	C	N3-C4-C5	-5.56	119.68	121.90
55	CA	962	C	O4'-C1'-N1	5.56	112.65	108.20
24	DA	2450	A	C3'-C2'-C1'	5.56	105.95	101.50
24	DA	2891	U	O4'-C1'-N1	5.56	112.65	108.20
55	CA	519	C	P-O3'-C3'	-5.56	113.03	119.70
21	AA	1414	U	N1-C2-O2	5.55	126.69	122.80
24	BA	1206	G	C3'-C2'-C1'	5.55	105.94	101.50
24	BA	1695	G	C3'-C2'-C1'	5.55	105.94	101.50
55	CA	29	U	O4'-C1'-N1	5.55	112.64	108.20
55	CA	1303	C	C6-N1-C1'	-5.55	114.13	120.80
24	DA	1213	A	P-O3'-C3'	-5.55	113.03	119.70
24	DA	2056	G	N1-C6-O6	-5.55	116.57	119.90
24	DA	2613	U	O4'-C1'-N1	5.55	112.64	108.20
21	AA	879	C	N1-C1'-C2'	-5.55	105.89	112.00
21	AA	1168	U	N1-C1'-C2'	5.55	121.22	114.00
21	AA	982	U	N1-C1'-C2'	5.55	121.22	114.00
21	AA	1182	G	C8-N9-C1'	5.55	134.22	127.00
24	BA	1373	A	N1-C6-N6	5.55	121.93	118.60
24	BA	2273	A	P-O5'-C5'	-5.55	112.02	120.90
24	DA	1673	G	P-O3'-C3'	5.55	126.36	119.70
24	DA	2240	U	P-O3'-C3'	-5.55	113.04	119.70
12	AM	74	MET	CG-SD-CE	5.55	109.08	100.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	73	A	P-O3'-C3'	-5.55	113.04	119.70
24	BA	1428	C	P-O3'-C3'	5.55	126.36	119.70
24	DA	548	G	C4-N9-C1'	5.55	133.72	126.50
24	BA	1158	C	N3-C4-C5	-5.55	119.68	121.90
24	BA	1499	C	C3'-C2'-C1'	5.55	105.94	101.50
24	DA	2302	U	O4'-C1'-N1	5.55	112.64	108.20
21	AA	465	A	N9-C1'-C2'	-5.55	105.90	112.00
24	BA	980	A	C8-N9-C4	-5.55	103.58	105.80
24	BA	1663	G	N1-C6-O6	-5.55	116.57	119.90
55	CA	1493	A	P-O3'-C3'	5.55	126.36	119.70
24	BA	1022	G	C2-N3-C4	-5.54	109.13	111.90
55	CA	657	U	O4'-C1'-N1	5.54	112.64	108.20
24	DA	92	U	O4'-C1'-N1	5.54	112.63	108.20
24	BA	2339	C	O4'-C1'-N1	5.54	112.63	108.20
55	CA	243	A	C5-C6-N6	5.54	128.13	123.70
55	CA	1128	C	C3'-C2'-C1'	5.54	105.93	101.50
24	DA	630	G	C2-N3-C4	-5.54	109.13	111.90
24	BA	544	C	P-O3'-C3'	5.54	126.35	119.70
24	BA	2224	G	C2-N3-C4	-5.54	109.13	111.90
21	AA	72	A	P-O3'-C3'	-5.54	113.05	119.70
21	AA	994	A	P-O3'-C3'	-5.54	113.05	119.70
55	CA	475	C	P-O3'-C3'	-5.54	113.05	119.70
24	BA	753	A	N1-C6-N6	-5.54	115.28	118.60
24	BA	1568	G	C3'-C2'-C1'	5.54	105.93	101.50
24	BA	2809	A	P-O3'-C3'	-5.54	113.06	119.70
24	DA	1305	C	O4'-C1'-N1	5.54	112.63	108.20
24	DA	1611	C	C3'-C2'-C1'	5.54	105.93	101.50
21	AA	1055	A	P-O3'-C3'	-5.53	113.06	119.70
24	BA	1386	C	C6-N1-C2	-5.53	118.09	120.30
24	BA	2023	C	C3'-C2'-C1'	5.53	105.93	101.50
24	DA	1916	A	N9-C1'-C2'	-5.53	105.91	112.00
21	AA	181	A	P-O3'-C3'	5.53	126.34	119.70
24	BA	831	G	P-O5'-C5'	-5.53	112.05	120.90
24	BA	1457	U	N1-C1'-C2'	5.53	121.19	114.00
24	BA	2578	G	C4-C5-N7	-5.53	108.59	110.80
24	BA	85	G	C3'-C2'-C1'	5.53	105.92	101.50
24	BA	271	G	C4-N9-C1'	-5.53	119.31	126.50
24	BA	846	U	O4'-C1'-N1	5.53	112.62	108.20
24	BA	2799	A	C3'-C2'-C1'	5.53	105.92	101.50
24	DA	1267	U	P-O3'-C3'	-5.53	113.06	119.70
24	DA	1330	C	C3'-C2'-C1'	5.53	105.92	101.50
24	DA	2874	C	C3'-C2'-C1'	5.53	105.92	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	794	A	C3'-C2'-C1'	5.53	105.92	101.50
24	BA	1021	A	C3'-C2'-C1'	5.53	105.92	101.50
24	BA	312	G	P-O3'-C3'	-5.53	113.07	119.70
24	BA	2551	C	O4'-C1'-N1	5.53	112.62	108.20
55	CA	655	A	C3'-C2'-C1'	5.53	105.92	101.50
55	CA	1170	A	N9-C1'-C2'	-5.53	105.92	112.00
24	DA	2896	C	C3'-C2'-C1'	5.53	105.92	101.50
24	DA	2902	C	P-O3'-C3'	5.53	126.33	119.70
24	BA	2857	G	N1-C2-N3	5.52	127.21	123.90
24	DA	2568	U	O4'-C1'-N1	5.52	112.62	108.20
24	BA	1408	G	P-O3'-C3'	5.52	126.33	119.70
24	DA	445	C	C3'-C2'-C1'	5.52	105.92	101.50
24	DA	2572	A	O4'-C1'-N9	5.52	112.62	108.20
21	AA	1052	U	P-O3'-C3'	5.52	126.33	119.70
24	BA	1127	A	C3'-C2'-C1'	5.52	105.92	101.50
24	BA	1537	G	C3'-C2'-C1'	5.52	105.92	101.50
24	BA	1838	C	N1-C1'-C2'	5.52	121.18	114.00
24	BA	2361	G	P-O3'-C3'	-5.52	113.08	119.70
24	BA	2452	C	O4'-C1'-N1	-5.52	103.78	108.20
24	DA	1931	U	C3'-C2'-C1'	5.52	105.92	101.50
56	DB	43	C	N1-C1'-C2'	-5.52	105.93	112.00
24	BA	1144	A	P-O3'-C3'	-5.52	113.08	119.70
24	DA	2498	C	P-O3'-C3'	-5.52	113.08	119.70
21	AA	14	U	C3'-C2'-C1'	5.52	105.92	101.50
24	BA	762	U	P-O3'-C3'	5.52	126.32	119.70
25	BB	23	G	N3-C4-N9	5.52	129.31	126.00
24	DA	963	U	P-O3'-C3'	-5.52	113.08	119.70
24	DA	1023	U	P-O3'-C3'	-5.52	113.08	119.70
24	BA	1309	G	P-O3'-C3'	-5.52	113.08	119.70
24	BA	1865	U	N3-C4-C5	5.52	117.91	114.60
21	AA	96	U	N1-C1'-C2'	-5.51	105.93	112.00
55	CA	1333	A	O4'-C1'-N9	5.51	112.61	108.20
24	DA	460	A	P-O5'-C5'	-5.51	112.08	120.90
21	AA	169	C	C6-N1-C1'	5.51	127.42	120.80
24	DA	388	G	P-O3'-C3'	-5.51	113.08	119.70
55	CA	538	G	P-O3'-C3'	-5.51	113.09	119.70
55	CA	1064	G	P-O3'-C3'	5.51	126.31	119.70
24	DA	1510	G	C3'-C2'-C1'	5.51	105.91	101.50
21	AA	389	A	C3'-C2'-C1'	5.51	105.91	101.50
21	AA	686	U	P-O3'-C3'	5.51	126.31	119.70
24	DA	1551	A	C6-N1-C2	5.51	121.91	118.60
21	AA	373	A	C3'-C2'-C1'	5.51	105.91	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	2255	G	P-O3'-C3'	-5.51	113.09	119.70
55	CA	934	C	C5-C4-N4	5.51	124.06	120.20
24	BA	674	G	P-O3'-C3'	-5.51	113.09	119.70
24	BA	1206	G	P-O3'-C3'	-5.51	113.09	119.70
24	BA	1478	G	N1-C6-O6	-5.51	116.60	119.90
24	BA	2337	G	P-O3'-C3'	-5.51	113.09	119.70
24	BA	2630	G	N9-C1'-C2'	-5.50	105.94	112.00
55	CA	513	C	C3'-C2'-C1'	5.50	105.90	101.50
24	BA	2283	C	C3'-C2'-C1'	5.50	105.90	101.50
55	CA	817	C	P-O3'-C3'	5.50	126.31	119.70
55	CA	1160	G	C3'-C2'-C1'	5.50	105.90	101.50
24	DA	406	G	C3'-C2'-C1'	5.50	105.90	101.50
24	DA	2338	C	N1-C1'-C2'	-5.50	105.95	112.00
21	AA	466	A	P-O3'-C3'	5.50	126.30	119.70
24	DA	1648	U	C3'-C2'-C1'	5.50	105.90	101.50
29	DF	78	ILE	CB-CA-C	-5.50	100.60	111.60
21	AA	72	A	C3'-C2'-C1'	5.50	105.90	101.50
24	BA	250	G	C3'-C2'-C1'	5.50	105.90	101.50
24	BA	1090	A	O4'-C1'-N9	5.50	112.60	108.20
24	BA	2460	U	O4'-C1'-N1	5.50	112.60	108.20
55	CA	1241	G	N9-C1'-C2'	-5.50	105.95	112.00
24	DA	1558	C	P-O3'-C3'	5.50	126.30	119.70
21	AA	403	C	O4'-C1'-N1	5.50	112.60	108.20
24	BA	2266	A	C5-N7-C8	-5.50	101.15	103.90
24	DA	1113	U	P-O3'-C3'	-5.50	113.10	119.70
21	AA	984	C	C3'-C2'-C1'	5.50	105.90	101.50
21	AA	1068	G	P-O3'-C3'	-5.50	113.11	119.70
24	BA	1022	G	C8-N9-C1'	5.50	134.14	127.00
24	DA	207	A	C3'-C2'-C1'	5.50	105.90	101.50
21	AA	610	U	N3-C2-O2	-5.49	118.36	122.20
24	BA	312	G	N9-C1'-C2'	-5.49	105.96	112.00
24	BA	1019	U	O4'-C1'-N1	5.49	112.59	108.20
24	BA	1143	A	N1-C6-N6	5.49	121.90	118.60
24	BA	1411	U	O4'-C1'-N1	5.49	112.59	108.20
24	DA	1669	A	C3'-C2'-C1'	5.49	105.89	101.50
24	DA	1733	G	C3'-C2'-C1'	5.49	105.89	101.50
24	DA	2837	A	C3'-C2'-C1'	5.49	105.89	101.50
21	AA	1103	C	P-O3'-C3'	-5.49	113.11	119.70
24	BA	861	A	C3'-C2'-C1'	5.49	105.89	101.50
55	CA	53	A	C3'-C2'-C1'	5.49	105.89	101.50
55	CA	84	U	N1-C1'-C2'	5.49	121.14	114.00
24	DA	2148	G	C3'-C2'-C1'	5.49	105.89	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	2372	U	P-O5'-C5'	-5.49	112.12	120.90
55	CA	71	A	P-O3'-C3'	-5.49	113.11	119.70
55	CA	534	U	C3'-C2'-C1'	5.49	105.89	101.50
24	DA	373	U	N1-C1'-C2'	-5.49	105.96	112.00
24	DA	1558	C	N1-C1'-C2'	5.49	121.14	114.00
24	DA	2383	G	P-O3'-C3'	-5.49	113.11	119.70
24	BA	1129	A	C3'-C2'-C1'	5.49	105.89	101.50
24	BA	1027	A	C3'-C2'-C1'	5.49	105.89	101.50
55	CA	974	A	P-O3'-C3'	5.49	126.28	119.70
24	DA	2135	A	C3'-C2'-C1'	5.49	105.89	101.50
24	DA	2311	A	C3'-C2'-C1'	5.49	105.89	101.50
24	BA	1112	G	C3'-C2'-C1'	5.48	105.89	101.50
24	BA	2625	G	C8-N9-C4	-5.48	104.21	106.40
24	BA	2656	U	C3'-C2'-C1'	5.48	105.89	101.50
24	BA	944	C	C6-N1-C2	5.48	122.49	120.30
24	BA	2295	C	N1-C1'-C2'	5.48	121.12	114.00
24	DA	2573	C	C3'-C2'-C1'	5.48	105.88	101.50
24	BA	1091	G	C3'-C2'-C1'	5.48	105.88	101.50
24	BA	1343	G	C3'-C2'-C1'	5.48	105.88	101.50
24	BA	1876	A	O4'-C1'-N9	5.48	112.58	108.20
24	BA	1316	U	O4'-C1'-N1	-5.48	103.82	108.20
24	BA	2494	G	C4-C5-N7	-5.48	108.61	110.80
21	AA	122	G	N9-C1'-C2'	-5.47	105.98	112.00
24	BA	765	C	P-O3'-C3'	-5.47	113.13	119.70
24	BA	1491	G	N9-C1'-C2'	-5.47	105.98	112.00
24	BA	1804	C	P-O3'-C3'	-5.47	113.13	119.70
24	BA	2574	G	N1-C6-O6	-5.47	116.62	119.90
25	BB	29	A	P-O5'-C5'	-5.47	112.14	120.90
55	CA	283	U	C3'-C2'-C1'	5.47	105.88	101.50
55	CA	1168	U	P-O3'-C3'	5.47	126.27	119.70
55	CA	1284	C	C3'-C2'-C1'	5.47	105.88	101.50
23	CW	5	U	O4'-C1'-N1	5.47	112.58	108.20
21	AA	500	G	N9-C1'-C2'	-5.47	105.98	112.00
21	AA	1090	U	O4'-C1'-N1	5.47	112.58	108.20
24	BA	500	G	N3-C4-C5	5.47	131.34	128.60
24	BA	1295	C	C5-C4-N4	5.47	124.03	120.20
24	DA	510	C	P-O3'-C3'	-5.47	113.13	119.70
24	DA	2505	G	N9-C1'-C2'	-5.47	105.98	112.00
21	AA	131	A	N1-C6-N6	-5.47	115.32	118.60
55	CA	53	A	N9-C1'-C2'	-5.47	105.98	112.00
24	DA	754	U	C3'-C2'-C1'	5.47	105.88	101.50
24	DA	1695	G	C3'-C2'-C1'	5.47	105.88	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	1838	C	P-O3'-C3'	5.47	126.27	119.70
21	AA	465	A	P-O5'-C5'	-5.47	112.15	120.90
21	AA	874	G	C3'-C2'-C1'	5.47	105.87	101.50
21	AA	1242	G	C3'-C2'-C1'	5.47	105.87	101.50
21	AA	857	C	O4'-C1'-N1	5.47	112.57	108.20
24	BA	503	A	O4'-C1'-N9	5.47	112.57	108.20
24	BA	819	A	P-O3'-C3'	-5.47	113.14	119.70
24	BA	1288	G	O5'-P-OP2	-5.47	100.78	105.70
24	BA	1430	G	C6-N1-C2	5.47	128.38	125.10
24	BA	1560	G	N9-C1'-C2'	-5.47	105.99	112.00
24	BA	1881	C	O4'-C1'-N1	5.47	112.57	108.20
24	BA	2407	A	N1-C6-N6	-5.47	115.32	118.60
25	BB	57	A	O5'-P-OP2	-5.47	100.78	105.70
25	BB	75	G	P-O3'-C3'	-5.47	113.14	119.70
55	CA	1302	C	C3'-C2'-C1'	5.47	105.87	101.50
21	AA	12	U	N1-C2-O2	5.46	126.62	122.80
21	AA	1153	G	C3'-C2'-C1'	5.46	105.87	101.50
24	BA	434	U	N1-C1'-C2'	5.46	121.10	114.00
24	BA	1682	G	C3'-C2'-C1'	5.46	105.87	101.50
24	DA	374	A	P-O3'-C3'	-5.46	113.14	119.70
24	DA	741	U	C3'-C2'-C1'	5.46	105.87	101.50
21	AA	754	C	N1-C1'-C2'	-5.46	105.99	112.00
24	BA	228	C	O4'-C1'-N1	5.46	112.57	108.20
24	BA	2482	A	N1-C6-N6	5.46	121.88	118.60
24	DA	1662	U	O4'-C1'-N1	5.46	112.57	108.20
24	DA	2875	C	C3'-C2'-C1'	5.46	105.87	101.50
55	CA	1055	A	C3'-C2'-C1'	5.46	105.87	101.50
21	AA	187	G	C2-N3-C4	-5.46	109.17	111.90
21	AA	1287	A	C3'-C2'-C1'	5.46	105.87	101.50
24	BA	533	G	C3'-C2'-C1'	5.46	105.87	101.50
24	BA	777	G	P-O3'-C3'	-5.46	113.15	119.70
24	BA	1525	A	C5-C6-N6	5.46	128.07	123.70
24	BA	2894	G	P-O3'-C3'	-5.46	113.15	119.70
24	DA	2034	U	C3'-C2'-C1'	5.46	105.87	101.50
24	BA	746	U	N1-C1'-C2'	5.46	121.09	114.00
55	CA	735	C	O4'-C1'-N1	5.46	112.56	108.20
24	BA	1805	A	C8-N9-C4	-5.45	103.62	105.80
24	BA	2061	G	N3-C4-C5	-5.45	125.87	128.60
24	BA	2386	A	P-O5'-C5'	-5.45	112.18	120.90
24	DA	1560	G	P-O3'-C3'	-5.45	113.16	119.70
56	DB	72	G	C2-N3-C4	-5.45	109.17	111.90
24	BA	114	U	O4'-C1'-N1	-5.45	103.84	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1661	G	P-O5'-C5'	-5.45	112.18	120.90
24	BA	2063	C	C3'-C2'-C1'	5.45	105.86	101.50
55	CA	1365	G	C3'-C2'-C1'	5.45	105.86	101.50
24	DA	2197	U	P-O3'-C3'	5.45	126.24	119.70
21	AA	815	A	P-O3'-C3'	5.45	126.24	119.70
24	BA	22	C	C2-N3-C4	-5.45	117.17	119.90
24	BA	1946	U	C5-C4-O4	5.45	129.17	125.90
24	DA	1144	A	C3'-C2'-C1'	5.45	105.86	101.50
21	AA	431	A	C3'-C2'-C1'	5.45	105.86	101.50
21	AA	1181	G	P-O3'-C3'	5.45	126.24	119.70
24	BA	2791	G	C3'-C2'-C1'	5.45	105.86	101.50
24	DA	1239	G	N9-C1'-C2'	-5.45	106.01	112.00
21	AA	467	U	O4'-C1'-N1	5.45	112.56	108.20
24	BA	1885	A	N1-C6-N6	-5.45	115.33	118.60
25	BB	74	U	P-O5'-C5'	-5.45	112.19	120.90
24	DA	791	C	P-O5'-C5'	-5.45	112.19	120.90
24	DA	1026	G	P-O3'-C3'	-5.45	113.17	119.70
24	DA	1816	C	C3'-C2'-C1'	5.45	105.86	101.50
24	BA	1427	A	O4'-C1'-N9	5.44	112.56	108.20
24	BA	2589	A	P-O5'-C5'	-5.44	112.19	120.90
56	DB	90	C	C3'-C2'-C1'	5.44	105.86	101.50
21	AA	81	A	C5-C6-N6	5.44	128.05	123.70
21	AA	935	A	N9-C1'-C2'	-5.44	106.02	112.00
24	BA	137	U	P-O3'-C3'	5.44	126.23	119.70
24	BA	907	G	C2-N3-C4	-5.44	109.18	111.90
55	CA	422	C	O4'-C1'-N1	-5.44	103.85	108.20
21	AA	1032	G	C3'-C2'-C1'	5.44	105.85	101.50
24	BA	421	C	N1-C1'-C2'	5.44	121.07	114.00
24	BA	693	A	P-O3'-C3'	-5.44	113.17	119.70
24	BA	1875	G	P-O3'-C3'	-5.44	113.18	119.70
24	DA	514	A	N1-C6-N6	5.44	121.86	118.60
24	DA	1779	U	O4'-C1'-N1	5.44	112.55	108.20
24	DA	1888	G	O4'-C1'-N9	5.44	112.55	108.20
25	BB	25	U	C3'-C2'-C1'	5.44	105.85	101.50
55	CA	1394	A	P-O3'-C3'	5.44	126.22	119.70
24	DA	1183	U	O4'-C1'-N1	5.44	112.55	108.20
21	AA	1153	G	N9-C1'-C2'	-5.43	106.02	112.00
24	BA	103	A	C3'-C2'-C1'	5.43	105.85	101.50
24	BA	670	A	C8-N9-C4	5.43	107.97	105.80
24	BA	1956	U	P-O3'-C3'	-5.43	113.18	119.70
24	BA	1965	C	C2-N1-C1'	5.43	124.78	118.80
24	DA	2385	C	P-O3'-C3'	-5.43	113.18	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	887	G	P-O3'-C3'	-5.43	113.18	119.70
24	BA	1091	G	O4'-C1'-N9	5.43	112.55	108.20
24	DA	629	G	C3'-C2'-C1'	5.43	105.85	101.50
24	DA	1829	A	P-O3'-C3'	5.43	126.22	119.70
24	BA	765	C	C3'-C2'-C1'	5.43	105.84	101.50
24	DA	334	C	N1-C1'-C2'	-5.43	106.03	112.00
55	CA	352	C	C3'-C2'-C1'	5.43	105.84	101.50
24	DA	2798	U	O4'-C1'-N1	-5.43	103.86	108.20
24	BA	1872	A	C3'-C2'-C1'	5.43	105.84	101.50
21	AA	213	G	C3'-C2'-C1'	5.43	105.84	101.50
24	BA	302	C	P-O3'-C3'	-5.43	113.19	119.70
24	BA	1320	C	P-O3'-C3'	5.43	126.21	119.70
24	BA	2217	G	P-O3'-C3'	-5.43	113.19	119.70
24	DA	2096	C	O4'-C1'-N1	5.43	112.54	108.20
21	AA	6	G	C3'-C2'-C1'	5.42	105.84	101.50
24	BA	653	U	O4'-C1'-N1	-5.42	103.86	108.20
24	BA	1452	G	O4'-C1'-N9	-5.42	103.86	108.20
24	BA	2582	G	N1-C6-O6	-5.42	116.64	119.90
24	DA	1963	U	P-O3'-C3'	-5.42	113.19	119.70
55	CA	701	U	P-O3'-C3'	5.42	126.21	119.70
21	AA	1215	G	C3'-C2'-C1'	5.42	105.84	101.50
24	BA	2585	U	N1-C1'-C2'	5.42	121.05	114.00
24	DA	139	U	N1-C1'-C2'	5.42	121.05	114.00
24	DA	616	A	P-O3'-C3'	-5.42	113.19	119.70
56	DB	118	C	O4'-C1'-N1	5.42	112.54	108.20
21	AA	1303	C	C3'-C2'-C1'	5.42	105.84	101.50
24	BA	480	A	C2-N3-C4	5.42	113.31	110.60
55	CA	373	A	C3'-C2'-C1'	5.42	105.84	101.50
24	DA	1181	U	P-O3'-C3'	-5.42	113.20	119.70
24	DA	1063	G	N9-C1'-C2'	-5.42	106.04	112.00
24	DA	1498	C	C3'-C2'-C1'	5.42	105.83	101.50
24	DA	2067	G	P-O3'-C3'	5.42	126.20	119.70
21	AA	577	G	C3'-C2'-C1'	5.42	105.83	101.50
24	BA	1148	U	C5-C4-O4	5.42	129.15	125.90
55	CA	454	G	N9-C1'-C2'	-5.42	106.04	112.00
24	DA	967	U	O4'-C1'-N1	5.42	112.53	108.20
24	DA	2800	A	N9-C1'-C2'	-5.42	106.04	112.00
21	AA	52	C	O4'-C1'-N1	5.42	112.53	108.20
24	BA	752	A	OP2-P-O3'	5.42	117.11	105.20
24	DA	476	G	C3'-C2'-C1'	5.42	105.83	101.50
24	BA	829	A	N7-C8-N9	-5.41	111.09	113.80
55	CA	1442	G	P-O3'-C3'	-5.41	113.21	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	487	A	N9-C1'-C2'	-5.41	106.05	112.00
21	AA	575	G	C6-C5-N7	5.41	133.65	130.40
55	CA	513	C	P-O5'-C5'	-5.41	112.24	120.90
24	DA	916	G	N9-C1'-C2'	-5.41	106.05	112.00
24	DA	991	C	O4'-C1'-N1	5.41	112.53	108.20
24	DA	1734	G	C3'-C2'-C1'	5.41	105.83	101.50
21	AA	1158	C	C3'-C2'-C1'	5.41	105.83	101.50
24	BA	677	A	C6-N1-C2	-5.41	115.36	118.60
24	BA	1359	A	C8-N9-C4	-5.41	103.64	105.80
55	CA	114	U	O4'-C1'-N1	5.41	112.53	108.20
21	AA	291	U	O4'-C1'-N1	5.41	112.53	108.20
24	BA	2210	U	N1-C1'-C2'	5.41	121.03	114.00
55	CA	1158	C	N1-C1'-C2'	-5.41	106.05	112.00
24	BA	563	A	P-O3'-C3'	-5.40	113.22	119.70
24	BA	1062	G	C3'-C2'-C1'	5.40	105.82	101.50
55	CA	733	G	N3-C4-N9	-5.40	122.76	126.00
21	AA	816	A	P-O5'-C5'	-5.40	112.26	120.90
24	DA	752	A	P-O3'-C3'	5.40	126.18	119.70
24	DA	763	G	C3'-C2'-C1'	5.40	105.82	101.50
24	DA	2521	C	C3'-C2'-C1'	5.40	105.82	101.50
25	BB	94	A	P-O5'-C5'	-5.40	112.26	120.90
24	DA	783	A	O4'-C1'-N9	5.40	112.52	108.20
21	AA	14	U	P-O5'-C5'	-5.40	112.26	120.90
55	CA	90	C	C3'-C2'-C1'	5.40	105.82	101.50
24	DA	2322	A	N9-C1'-C2'	-5.40	106.06	112.00
21	AA	1224	U	C5-C4-O4	-5.40	122.66	125.90
24	BA	144	A	C6-N1-C2	-5.40	115.36	118.60
24	BA	530	G	C8-N9-C1'	-5.40	119.98	127.00
21	AA	1050	G	P-O3'-C3'	-5.39	113.23	119.70
24	DA	475	C	P-O3'-C3'	-5.39	113.23	119.70
24	DA	2567	G	P-O3'-C3'	5.39	126.17	119.70
24	DA	2576	G	P-O3'-C3'	5.39	126.17	119.70
24	BA	1841	U	C2-N3-C4	5.39	130.23	127.00
55	CA	414	A	P-O3'-C3'	-5.39	113.23	119.70
24	DA	509	C	N1-C2-O2	5.39	122.14	118.90
24	DA	616	A	C3'-C2'-C1'	5.39	105.81	101.50
24	BA	1009	A	P-O5'-C5'	-5.39	112.28	120.90
24	BA	1455	G	N9-C1'-C2'	-5.39	106.07	112.00
24	BA	1964	G	C4-C5-N7	-5.39	108.64	110.80
55	CA	89	U	C3'-C2'-C1'	5.39	105.81	101.50
55	CA	370	C	C5-C4-N4	5.39	123.97	120.20
24	DA	800	A	P-O3'-C3'	5.39	126.17	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	DB	16	G	C3'-C2'-C1'	5.39	105.81	101.50
21	AA	369	G	C3'-C2'-C1'	5.39	105.81	101.50
21	AA	420	U	O4'-C1'-N1	5.39	112.51	108.20
24	BA	752	A	C5-N7-C8	-5.39	101.21	103.90
24	BA	1621	U	N1-C1'-C2'	5.39	121.00	114.00
21	AA	819	A	P-O3'-C3'	5.38	126.16	119.70
21	AA	1127	G	P-O3'-C3'	-5.38	113.24	119.70
21	AA	1469	C	O4'-C1'-N1	-5.38	103.89	108.20
24	BA	1004	U	O4'-C1'-N1	5.38	112.51	108.20
24	DA	1551	A	C5-C6-N6	5.38	128.01	123.70
24	BA	1311	G	N3-C4-C5	5.38	131.29	128.60
24	DA	1395	A	O4'-C1'-N9	5.38	112.51	108.20
24	BA	703	U	C5-C6-N1	-5.38	120.01	122.70
24	BA	1557	C	C3'-C2'-C1'	5.38	105.81	101.50
55	CA	1246	A	C3'-C2'-C1'	5.38	105.81	101.50
24	DA	1508	A	P-O3'-C3'	5.38	126.16	119.70
24	DA	1612	C	C3'-C2'-C1'	5.38	105.80	101.50
24	DA	1865	U	O4'-C1'-N1	5.38	112.50	108.20
21	AA	717	U	N1-C1'-C2'	5.38	120.99	114.00
24	BA	491	G	N9-C1'-C2'	-5.38	106.08	112.00
24	BA	1109	C	C6-N1-C2	-5.38	118.15	120.30
23	CW	4	U	O5'-P-OP2	-5.38	100.86	105.70
24	DA	217	A	N9-C1'-C2'	-5.38	106.08	112.00
21	AA	132	C	C3'-C2'-C1'	5.38	105.80	101.50
24	BA	791	C	N1-C2-O2	5.38	122.13	118.90
24	DA	272	A	P-O3'-C3'	-5.38	113.25	119.70
24	DA	1023	U	C3'-C2'-C1'	5.38	105.80	101.50
24	DA	1914	C	C3'-C2'-C1'	5.38	105.80	101.50
21	AA	351	G	C8-N9-C1'	-5.38	120.01	127.00
24	BA	2874	C	P-O3'-C3'	-5.38	113.25	119.70
55	CA	425	G	N9-C1'-C2'	-5.38	106.08	112.00
55	CA	1531	A	P-O3'-C3'	-5.38	113.25	119.70
24	DA	1029	A	N1-C6-N6	5.38	121.83	118.60
21	AA	1001	C	O4'-C1'-N1	5.38	112.50	108.20
24	BA	2679	A	C5-C6-N6	5.38	128.00	123.70
25	BB	45	A	C3'-C2'-C1'	5.38	105.80	101.50
55	CA	1338	G	N9-C1'-C2'	-5.38	106.09	112.00
21	AA	305	G	P-O3'-C3'	5.37	126.15	119.70
21	AA	1131	G	N9-C1'-C2'	-5.37	106.09	112.00
24	BA	2883	A	C5-C6-N1	-5.37	115.01	117.70
24	DA	1009	A	P-O3'-C3'	-5.37	113.25	119.70
21	AA	891	U	C3'-C2'-C1'	5.37	105.80	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	638	G	C3'-C2'-C1'	5.37	105.80	101.50
24	DA	1345	C	C3'-C2'-C1'	5.37	105.80	101.50
55	CA	816	A	C3'-C2'-C1'	5.37	105.80	101.50
55	CA	1507	A	N9-C1'-C2'	-5.37	106.09	112.00
56	DB	76	G	N3-C4-C5	5.37	131.28	128.60
21	AA	210	C	N1-C1'-C2'	5.37	120.98	114.00
21	AA	795	C	P-O3'-C3'	-5.37	113.26	119.70
24	BA	2619	C	C5-C4-N4	5.37	123.96	120.20
55	CA	210	C	C2-N1-C1'	5.37	124.70	118.80
24	BA	676	A	C5-N7-C8	-5.37	101.22	103.90
24	BA	1635	A	C3'-C2'-C1'	5.37	105.79	101.50
24	BA	2454	G	P-O3'-C3'	-5.37	113.26	119.70
55	CA	875	U	C3'-C2'-C1'	5.37	105.79	101.50
55	CA	1101	A	P-O3'-C3'	5.37	126.14	119.70
24	DA	121	G	C3'-C2'-C1'	5.37	105.79	101.50
21	AA	1132	C	P-O5'-C5'	5.36	129.48	120.90
24	BA	2474	U	O4'-C1'-N1	5.36	112.49	108.20
55	CA	1401	G	N9-C1'-C2'	-5.36	106.10	112.00
21	AA	1296	C	O4'-C1'-N1	5.36	112.49	108.20
55	CA	724	G	C3'-C2'-C1'	5.36	105.79	101.50
24	DA	73	A	C3'-C2'-C1'	5.36	105.79	101.50
24	DA	1480	C	O4'-C1'-N1	5.36	112.49	108.20
24	DA	2699	C	O4'-C1'-N1	5.36	112.49	108.20
21	AA	97	G	C3'-C2'-C1'	5.36	105.79	101.50
21	AA	1094	G	P-O3'-C3'	5.36	126.13	119.70
24	BA	1947	C	P-O3'-C3'	-5.36	113.27	119.70
24	BA	2337	G	C3'-C2'-C1'	5.36	105.79	101.50
24	BA	2450	A	N1-C2-N3	-5.36	126.62	129.30
24	DA	140	C	O4'-C1'-N1	-5.36	103.91	108.20
24	DA	1256	G	C3'-C2'-C1'	5.36	105.79	101.50
24	DA	1561	C	C3'-C2'-C1'	5.36	105.79	101.50
24	BA	725	G	P-O3'-C3'	5.36	126.13	119.70
24	BA	962	G	N3-C4-C5	5.36	131.28	128.60
55	CA	793	U	P-O3'-C3'	-5.35	113.28	119.70
24	DA	929	U	O4'-C1'-N1	5.35	112.48	108.20
24	DA	2868	A	N9-C1'-C2'	-5.35	106.11	112.00
21	AA	1483	A	C5-C6-N6	-5.35	119.42	123.70
24	BA	277	G	P-O3'-C3'	5.35	126.12	119.70
24	BA	2260	C	P-O3'-C3'	-5.35	113.28	119.70
24	BA	2498	C	C3'-C2'-C1'	5.35	105.78	101.50
25	BB	17	C	O4'-C1'-N1	5.35	112.48	108.20
24	DA	365	U	C5-C4-O4	-5.35	122.69	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	2147	A	P-O3'-C3'	-5.35	113.28	119.70
24	BA	2305	U	P-O3'-C3'	-5.35	113.28	119.70
55	CA	1325	C	O4'-C1'-N1	5.35	112.48	108.20
24	DA	2499	C	C2-N1-C1'	5.35	124.68	118.80
24	DA	2610	C	P-O3'-C3'	5.35	126.12	119.70
24	BA	783	A	O5'-P-OP2	-5.35	100.89	105.70
24	BA	2751	G	P-O5'-C5'	-5.35	112.34	120.90
55	CA	102	G	C5-C6-O6	5.35	131.81	128.60
24	DA	86	G	C3'-C2'-C1'	5.35	105.78	101.50
24	DA	1882	U	O4'-C1'-N1	5.35	112.48	108.20
24	BA	521	U	P-O3'-C3'	-5.35	113.28	119.70
24	BA	2650	U	C6-N1-C2	5.35	124.21	121.00
55	CA	9	G	C3'-C2'-C1'	5.35	105.78	101.50
24	BA	809	G	P-O5'-C5'	-5.34	112.35	120.90
24	BA	1871	A	C3'-C2'-C1'	5.34	105.78	101.50
24	DA	763	G	C4-C5-N7	5.34	112.94	110.80
24	BA	2489	U	C2-N3-C4	-5.34	123.79	127.00
21	AA	71	A	P-O3'-C3'	5.34	126.11	119.70
24	BA	727	A	N1-C6-N6	5.34	121.81	118.60
24	BA	1606	C	O4'-C1'-N1	-5.34	103.93	108.20
24	DA	509	C	C3'-C2'-C1'	5.34	105.77	101.50
24	DA	2507	C	O4'-C1'-N1	5.34	112.47	108.20
24	BA	979	A	P-O5'-C5'	-5.34	112.36	120.90
55	CA	81	A	N9-C4-C5	5.34	107.94	105.80
55	CA	1410	A	C5-C6-N6	5.34	127.97	123.70
24	DA	391	A	P-O3'-C3'	-5.34	113.30	119.70
24	DA	1636	U	C3'-C2'-C1'	5.34	105.77	101.50
24	BA	2639	A	C4-C5-N7	5.33	113.37	110.70
55	CA	496	A	P-O3'-C3'	-5.33	113.30	119.70
55	CA	817	C	O4'-C1'-N1	5.33	112.47	108.20
21	AA	754	C	N1-C2-O2	5.33	122.10	118.90
24	BA	505	A	P-O5'-C5'	-5.33	112.37	120.90
55	CA	533	A	P-O3'-C3'	5.33	126.10	119.70
24	DA	103	A	P-O3'-C3'	-5.33	113.30	119.70
55	CA	1137	C	P-O3'-C3'	5.33	126.10	119.70
24	DA	1135	C	P-O3'-C3'	-5.33	113.30	119.70
24	DA	1558	C	O4'-C1'-N1	5.33	112.47	108.20
24	DA	2493	U	C3'-C2'-C1'	5.33	105.77	101.50
24	BA	1970	A	P-O3'-C3'	5.33	126.10	119.70
24	DA	2850	A	C3'-C2'-C1'	5.33	105.76	101.50
24	BA	19	A	P-O3'-C3'	-5.33	113.31	119.70
24	BA	2756	U	C6-N1-C2	5.33	124.20	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	1429	G	C3'-C2'-C1'	5.33	105.76	101.50
24	DA	1669	A	N1-C2-N3	-5.33	126.64	129.30
24	DA	2689	U	N1-C1'-C2'	5.33	120.93	114.00
21	AA	754	C	P-O3'-C3'	-5.33	113.31	119.70
24	DA	401	A	O4'-C1'-N9	5.33	112.46	108.20
24	BA	1261	C	N1-C2-O2	-5.33	115.70	118.90
24	BA	1304	A	C6-N1-C2	5.33	121.80	118.60
24	BA	2062	A	C5-C6-N6	-5.33	119.44	123.70
55	CA	724	G	N9-C1'-C2'	-5.33	106.14	112.00
55	CA	1066	C	O4'-C1'-N1	5.33	112.46	108.20
24	DA	1783	A	C3'-C2'-C1'	5.33	105.76	101.50
21	AA	704	A	C3'-C2'-C1'	5.32	105.76	101.50
21	AA	1123	U	O4'-C1'-N1	5.32	112.46	108.20
55	CA	1440	U	N1-C1'-C2'	5.32	120.92	114.00
24	BA	56	A	P-O3'-C3'	-5.32	113.31	119.70
24	BA	958	U	C3'-C2'-C1'	5.32	105.76	101.50
21	AA	654	G	P-O3'-C3'	-5.32	113.31	119.70
21	AA	884	U	N1-C1'-C2'	5.32	120.92	114.00
24	BA	558	U	P-O3'-C3'	-5.32	113.32	119.70
24	BA	984	A	N1-C6-N6	5.32	121.79	118.60
55	CA	577	G	P-O3'-C3'	-5.32	113.32	119.70
21	AA	194	C	N3-C4-C5	-5.32	119.77	121.90
24	BA	312	G	C3'-C2'-C1'	5.32	105.75	101.50
55	CA	430	A	C3'-C2'-C1'	5.32	105.75	101.50
55	CA	500	G	C3'-C2'-C1'	5.32	105.75	101.50
24	BA	178	G	P-O3'-C3'	-5.32	113.32	119.70
24	BA	1293	C	P-O5'-C5'	-5.32	112.39	120.90
55	CA	992	U	N1-C1'-C2'	5.32	120.91	114.00
55	CA	1505	G	C3'-C2'-C1'	5.32	105.75	101.50
24	DA	1167	C	O4'-C1'-N1	5.31	112.45	108.20
24	DA	1787	A	P-O3'-C3'	-5.31	113.32	119.70
24	BA	1960	A	P-O3'-C3'	-5.31	113.33	119.70
24	DA	2036	C	N1-C1'-C2'	-5.31	106.16	112.00
24	DA	26	G	C2-N3-C4	-5.31	109.24	111.90
24	DA	2830	C	O4'-C1'-N1	5.31	112.45	108.20
21	AA	1508	A	P-O5'-C5'	-5.31	112.41	120.90
24	BA	964	C	O4'-C1'-N1	-5.31	103.95	108.20
24	BA	2902	C	C6-N1-C2	5.31	122.42	120.30
55	CA	1410	A	N1-C6-N6	-5.31	115.41	118.60
55	CA	1483	A	N1-C6-N6	5.31	121.78	118.60
24	DA	586	A	P-O3'-C3'	5.31	126.07	119.70
21	AA	312	C	P-O3'-C3'	5.31	126.07	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1512	U	P-O3'-C3'	5.31	126.07	119.70
24	BA	459	U	C3'-C2'-C1'	5.31	105.75	101.50
24	BA	1313	U	N1-C1'-C2'	-5.31	106.16	112.00
24	BA	1416	G	P-O3'-C3'	5.31	126.07	119.70
24	BA	1521	G	C4-N9-C1'	5.31	133.40	126.50
24	BA	2068	U	C3'-C2'-C1'	5.31	105.75	101.50
55	CA	1140	C	N1-C1'-C2'	-5.31	106.16	112.00
24	DA	480	A	N9-C1'-C2'	-5.31	106.16	112.00
21	AA	97	G	P-O5'-C5'	-5.31	112.41	120.90
24	BA	2282	G	N9-C4-C5	5.31	107.52	105.40
24	BA	339	U	C2-N3-C4	-5.30	123.82	127.00
24	BA	1979	U	P-O5'-C5'	-5.30	112.41	120.90
24	BA	2574	G	P-O3'-C3'	-5.30	113.34	119.70
25	BB	17	C	P-O3'-C3'	-5.30	113.33	119.70
24	DA	1655	A	C3'-C2'-C1'	5.30	105.74	101.50
24	DA	2782	G	N9-C1'-C2'	-5.30	106.17	112.00
21	AA	185	U	O4'-C1'-N1	5.30	112.44	108.20
21	AA	998	C	O4'-C1'-N1	5.30	112.44	108.20
24	BA	1492	G	O4'-C1'-N9	5.30	112.44	108.20
55	CA	815	A	P-O3'-C3'	5.30	126.06	119.70
21	AA	353	A	C3'-C2'-C1'	5.30	105.74	101.50
24	BA	2391	G	P-O3'-C3'	5.30	126.06	119.70
55	CA	891	U	P-O3'-C3'	-5.30	113.34	119.70
24	BA	2389	G	P-O5'-C5'	-5.30	112.42	120.90
24	BA	2679	A	C6-N1-C2	5.30	121.78	118.60
24	DA	533	G	C3'-C2'-C1'	5.30	105.74	101.50
24	DA	2580	U	P-O3'-C3'	5.30	126.06	119.70
24	BA	829	A	C8-N9-C4	5.30	107.92	105.80
24	BA	1206	G	N9-C1'-C2'	-5.30	106.17	112.00
24	BA	2025	C	N1-C1'-C2'	5.30	120.89	114.00
24	BA	1659	G	P-O5'-C5'	-5.30	112.42	120.90
24	BA	2354	C	N3-C2-O2	-5.30	118.19	121.90
24	BA	2430	A	O4'-C1'-N9	5.30	112.44	108.20
21	AA	465	A	C3'-C2'-C1'	5.29	105.74	101.50
55	CA	245	U	C3'-C2'-C1'	5.29	105.74	101.50
21	AA	1197	A	C3'-C2'-C1'	5.29	105.73	101.50
24	BA	933	A	C3'-C2'-C1'	5.29	105.73	101.50
24	BA	962	G	C6-N1-C2	5.29	128.28	125.10
24	DA	530	G	C3'-C2'-C1'	5.29	105.73	101.50
24	BA	1362	C	O4'-C1'-N1	-5.29	103.97	108.20
24	BA	1978	A	C8-N9-C4	5.29	107.92	105.80
55	CA	1033	G	P-O5'-C5'	-5.29	112.43	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	DF	109	ARG	CB-CA-C	5.29	120.98	110.40
24	BA	1292	G	P-O3'-C3'	-5.29	113.35	119.70
24	BA	1313	U	C3'-C2'-C1'	5.29	105.73	101.50
55	CA	397	A	C6-N1-C2	-5.29	115.43	118.60
24	BA	206	U	C3'-C2'-C1'	5.29	105.73	101.50
24	DA	2631	G	C3'-C2'-C1'	5.29	105.73	101.50
24	BA	1144	A	P-O5'-C5'	-5.29	112.44	120.90
21	AA	733	G	P-O3'-C3'	5.29	126.04	119.70
24	BA	1905	C	O4'-C1'-N1	5.29	112.43	108.20
24	BA	1946	U	O4'-C1'-N1	-5.29	103.97	108.20
24	DA	437	U	C3'-C2'-C1'	5.29	105.73	101.50
24	BA	749	A	C3'-C2'-C1'	5.28	105.73	101.50
24	BA	1731	G	C4-C5-N7	-5.28	108.69	110.80
24	BA	1882	U	O4'-C1'-N1	5.28	112.42	108.20
24	BA	2823	A	P-O5'-C5'	-5.28	112.45	120.90
24	BA	919	U	P-O5'-C5'	5.28	129.35	120.90
24	BA	1769	U	O4'-C1'-N1	5.28	112.42	108.20
55	CA	97	G	C3'-C2'-C1'	5.28	105.72	101.50
55	CA	439	U	C3'-C2'-C1'	5.28	105.72	101.50
24	DA	76	C	C3'-C2'-C1'	5.28	105.72	101.50
24	DA	1062	G	P-O3'-C3'	-5.28	113.36	119.70
24	DA	1080	A	C3'-C2'-C1'	5.28	105.72	101.50
21	AA	1216	A	C3'-C2'-C1'	5.28	105.72	101.50
24	DA	1011	G	C8-N9-C1'	5.28	133.86	127.00
24	DA	2555	U	O4'-C1'-N1	5.28	112.42	108.20
21	AA	496	A	C3'-C2'-C1'	5.28	105.72	101.50
24	BA	107	G	N9-C4-C5	5.28	107.51	105.40
24	BA	945	A	N9-C1'-C2'	5.28	120.86	114.00
24	BA	1521	G	N3-C4-N9	5.28	129.17	126.00
55	CA	210	C	O4'-C1'-N1	-5.28	103.98	108.20
24	BA	25	U	P-O3'-C3'	-5.28	113.37	119.70
24	BA	481	G	O4'-C1'-N9	5.28	112.42	108.20
24	BA	388	G	P-O5'-C5'	-5.27	112.46	120.90
24	BA	2713	U	N1-C1'-C2'	5.27	120.86	114.00
24	DA	63	A	P-O3'-C3'	-5.27	113.37	119.70
24	DA	492	A	N9-C1'-C2'	-5.27	106.20	112.00
24	BA	588	U	C3'-C2'-C1'	5.27	105.72	101.50
24	BA	2511	U	C6-N1-C1'	-5.27	113.82	121.20
55	CA	909	A	P-O3'-C3'	5.27	126.03	119.70
24	DA	481	G	N3-C4-C5	-5.27	125.96	128.60
24	DA	782	A	P-O3'-C3'	5.27	126.03	119.70
55	CA	886	G	N9-C1'-C2'	-5.27	106.20	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	247	G	C3'-C2'-C1'	5.27	105.72	101.50
24	BA	2777	G	C3'-C2'-C1'	5.27	105.72	101.50
55	CA	876	C	P-O5'-C5'	5.27	129.33	120.90
24	DA	224	U	C3'-C2'-C1'	5.27	105.72	101.50
24	DA	1049	C	P-O3'-C3'	-5.27	113.38	119.70
24	BA	396	G	P-O5'-C5'	-5.27	112.47	120.90
25	BB	114	C	C6-N1-C2	5.27	122.41	120.30
55	CA	9	G	N9-C1'-C2'	-5.27	106.21	112.00
24	DA	101	A	C3'-C2'-C1'	5.27	105.72	101.50
24	DA	243	U	C3'-C2'-C1'	5.27	105.71	101.50
24	DA	589	U	C3'-C2'-C1'	5.27	105.72	101.50
24	DA	657	U	N1-C1'-C2'	-5.27	106.21	112.00
24	DA	1430	G	C3'-C2'-C1'	5.27	105.71	101.50
24	DA	2726	A	O4'-C1'-N9	5.27	112.42	108.20
21	AA	1453	G	C3'-C2'-C1'	5.27	105.71	101.50
24	BA	806	C	N1-C2-O2	-5.27	115.74	118.90
55	CA	935	A	N9-C1'-C2'	-5.27	106.21	112.00
55	CA	1102	A	P-O3'-C3'	-5.27	113.38	119.70
24	DA	1799	G	N9-C4-C5	5.27	107.51	105.40
24	DA	2297	A	C3'-C2'-C1'	5.27	105.71	101.50
24	BA	1156	A	O3'-P-O5'	-5.26	94.00	104.00
24	BA	2812	G	N3-C4-N9	5.26	129.16	126.00
55	CA	1139	G	C3'-C2'-C1'	5.26	105.71	101.50
24	DA	2262	U	O4'-C1'-N1	5.26	112.41	108.20
21	AA	82	G	N9-C1'-C2'	-5.26	106.21	112.00
24	BA	2809	A	C3'-C2'-C1'	5.26	105.71	101.50
21	AA	1528	U	O4'-C1'-N1	5.26	112.41	108.20
24	BA	415	A	N1-C2-N3	-5.26	126.67	129.30
24	DA	2199	A	C3'-C2'-C1'	5.26	105.71	101.50
21	AA	1107	C	O4'-C1'-N1	5.26	112.41	108.20
24	BA	1700	A	C3'-C2'-C1'	5.26	105.71	101.50
24	DA	406	G	N9-C1'-C2'	-5.26	106.22	112.00
21	AA	174	A	C3'-C2'-C1'	5.26	105.70	101.50
24	BA	1941	C	C3'-C2'-C1'	5.26	105.71	101.50
24	DA	15	G	C3'-C2'-C1'	5.26	105.70	101.50
24	BA	475	C	C3'-C2'-C1'	5.25	105.70	101.50
55	CA	381	C	O4'-C1'-N1	5.25	112.40	108.20
55	CA	1319	A	P-O3'-C3'	5.25	126.01	119.70
24	BA	1051	G	C5-C6-O6	-5.25	125.45	128.60
24	BA	1112	G	N9-C1'-C2'	-5.25	106.22	112.00
24	BA	1289	C	P-O3'-C3'	-5.25	113.40	119.70
24	BA	1694	C	O4'-C1'-N1	5.25	112.40	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1759	A	N9-C1'-C2'	-5.25	106.22	112.00
24	BA	2382	G	N3-C4-C5	5.25	131.23	128.60
55	CA	211	G	C3'-C2'-C1'	5.25	105.70	101.50
55	CA	652	U	P-O3'-C3'	5.25	126.00	119.70
55	CA	1315	U	O4'-C1'-N1	5.25	112.40	108.20
24	DA	1267	U	C3'-C2'-C1'	5.25	105.70	101.50
24	BA	1022	G	C4-N9-C1'	-5.25	119.67	126.50
24	DA	2727	A	C3'-C2'-C1'	5.25	105.70	101.50
55	CA	1132	C	O4'-C1'-N1	5.25	112.40	108.20
24	BA	1510	G	N9-C1'-C2'	-5.25	106.23	112.00
55	CA	1051	C	P-O3'-C3'	-5.25	113.40	119.70
24	DA	324	A	C3'-C2'-C1'	5.25	105.70	101.50
24	DA	1551	A	C5-C6-N1	-5.25	115.08	117.70
55	CA	934	C	C2-N1-C1'	-5.25	113.03	118.80
55	CA	1066	C	C3'-C2'-C1'	5.25	105.70	101.50
24	DA	787	C	C5-C4-N4	5.25	123.87	120.20
24	BA	1311	G	N3-C4-N9	-5.25	122.85	126.00
24	DA	120	U	P-O5'-C5'	-5.25	112.51	120.90
55	CA	212	G	C3'-C2'-C1'	5.24	105.69	101.50
55	CA	482	A	C3'-C2'-C1'	5.24	105.70	101.50
24	DA	529	A	C4-C5-C6	-5.24	114.38	117.00
24	BA	907	G	C5-C6-O6	5.24	131.75	128.60
55	CA	1236	A	C6-N1-C2	-5.24	115.45	118.60
24	BA	918	A	N1-C6-N6	5.24	121.74	118.60
24	BA	2899	A	P-O5'-C5'	-5.24	112.52	120.90
55	CA	874	G	C3'-C2'-C1'	5.24	105.69	101.50
55	CA	960	U	C2-N1-C1'	5.24	123.99	117.70
55	CA	991	U	P-O3'-C3'	5.24	125.99	119.70
24	DA	104	A	N9-C1'-C2'	-5.24	106.23	112.00
24	BA	1276	A	C8-N9-C4	-5.24	103.70	105.80
24	BA	2241	A	P-O3'-C3'	-5.24	113.41	119.70
55	CA	95	C	C3'-C2'-C1'	5.24	105.69	101.50
55	CA	832	G	N3-C4-N9	-5.24	122.86	126.00
21	AA	1160	G	N9-C1'-C2'	-5.24	106.24	112.00
55	CA	536	C	C3'-C2'-C1'	5.24	105.69	101.50
24	BA	509	C	C6-N1-C2	-5.24	118.21	120.30
24	BA	544	C	O4'-C1'-N1	-5.24	104.01	108.20
24	DA	272	A	C3'-C2'-C1'	5.24	105.69	101.50
24	DA	503	A	N1-C6-N6	-5.24	115.46	118.60
24	DA	778	G	C3'-C2'-C1'	5.24	105.69	101.50
24	DA	2386	A	C3'-C2'-C1'	5.24	105.69	101.50
24	DA	750	A	P-O3'-C3'	-5.23	113.42	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1027	A	P-O3'-C3'	-5.23	113.42	119.70
55	CA	436	C	N1-C2-O2	5.23	122.04	118.90
24	DA	150	U	O4'-C1'-N1	5.23	112.39	108.20
24	DA	753	A	C3'-C2'-C1'	5.23	105.69	101.50
24	DA	1818	U	N1-C1'-C2'	5.23	120.80	114.00
21	AA	641	U	N1-C1'-C2'	5.23	120.80	114.00
24	BA	2369	A	N9-C4-C5	5.23	107.89	105.80
24	BA	2615	U	C3'-C2'-C1'	5.23	105.68	101.50
24	DA	412	A	C3'-C2'-C1'	5.23	105.68	101.50
24	DA	963	U	N1-C1'-C2'	-5.23	106.25	112.00
24	DA	2613	U	N1-C1'-C2'	5.23	120.80	114.00
24	DA	2675	A	P-O3'-C3'	-5.23	113.43	119.70
21	AA	119	A	O4'-C1'-N9	5.23	112.38	108.20
21	AA	724	G	C3'-C2'-C1'	5.23	105.68	101.50
25	BB	42	C	C3'-C2'-C1'	5.23	105.68	101.50
55	CA	305	G	P-O3'-C3'	5.23	125.97	119.70
55	CA	376	G	C5-C6-O6	5.23	131.74	128.60
21	AA	117	G	P-O5'-C5'	-5.23	112.54	120.90
24	BA	2268	A	C8-N9-C4	-5.23	103.71	105.80
24	BA	2491	U	O4'-C1'-N1	5.23	112.38	108.20
24	DA	229	C	C3'-C2'-C1'	5.23	105.68	101.50
24	DA	2024	G	C3'-C2'-C1'	5.23	105.68	101.50
21	AA	88	U	C5-C4-O4	5.22	129.03	125.90
21	AA	654	G	N9-C1'-C2'	-5.22	106.25	112.00
24	BA	142	A	C3'-C2'-C1'	5.22	105.68	101.50
24	BA	2054	A	N9-C4-C5	5.22	107.89	105.80
24	BA	682	G	O4'-C1'-N9	-5.22	104.02	108.20
24	BA	1228	G	C2-N3-C4	-5.22	109.29	111.90
24	BA	2383	G	N9-C1'-C2'	-5.22	106.26	112.00
24	DA	492	A	P-O5'-C5'	-5.22	112.55	120.90
24	DA	2611	C	O4'-C1'-N1	5.22	112.38	108.20
21	AA	915	A	O4'-C1'-N9	5.22	112.38	108.20
24	BA	529	A	C8-N9-C4	5.22	107.89	105.80
24	BA	753	A	P-O5'-C5'	-5.22	112.55	120.90
24	BA	1007	C	O4'-C1'-N1	5.22	112.38	108.20
24	BA	1971	U	C3'-C2'-C1'	5.22	105.68	101.50
25	BB	109	A	N9-C1'-C2'	-5.22	106.26	112.00
55	CA	701	U	N1-C1'-C2'	5.22	120.79	114.00
55	CA	1068	G	N9-C1'-C2'	-5.22	106.26	112.00
24	DA	77	G	C3'-C2'-C1'	5.22	105.67	101.50
24	BA	2250	G	P-O3'-C3'	5.22	125.96	119.70
24	DA	1865	U	C5-C4-O4	-5.22	122.77	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	DB	104	A	N3-C4-C5	-5.22	123.15	126.80
21	AA	466	A	O3'-P-O5'	-5.22	94.09	104.00
24	BA	2652	C	O4'-C1'-N1	5.22	112.37	108.20
24	BA	2757	A	N1-C6-N6	5.22	121.73	118.60
55	CA	121	U	N1-C1'-C2'	-5.22	106.26	112.00
21	AA	1051	C	C3'-C2'-C1'	5.21	105.67	101.50
24	BA	509	C	C2-N1-C1'	5.21	124.53	118.80
24	BA	651	G	P-O3'-C3'	-5.21	113.44	119.70
24	BA	1521	G	C6-C5-N7	-5.21	127.27	130.40
55	CA	248	C	C3'-C2'-C1'	5.21	105.67	101.50
24	DA	747	U	O4'-C1'-N1	-5.21	104.03	108.20
24	DA	1048	A	C3'-C2'-C1'	5.21	105.67	101.50
24	DA	2428	G	C3'-C2'-C1'	5.21	105.67	101.50
24	DA	2714	G	C3'-C2'-C1'	5.21	105.67	101.50
24	BA	806	C	C6-N1-C2	-5.21	118.22	120.30
24	BA	1967	C	C3'-C2'-C1'	5.21	105.67	101.50
24	DA	403	U	P-O3'-C3'	5.21	125.95	119.70
24	DA	959	A	C3'-C2'-C1'	5.21	105.67	101.50
24	DA	1112	G	C3'-C2'-C1'	5.21	105.67	101.50
24	DA	1239	G	C3'-C2'-C1'	5.21	105.67	101.50
24	BA	637	A	O4'-C1'-N9	5.21	112.37	108.20
24	BA	548	G	P-O5'-C5'	-5.21	112.57	120.90
24	BA	1644	C	C6-N1-C2	5.21	122.38	120.30
55	CA	460	A	C3'-C2'-C1'	5.21	105.67	101.50
55	CA	889	A	P-O3'-C3'	5.21	125.95	119.70
24	DA	216	A	C3'-C2'-C1'	5.21	105.67	101.50
24	DA	1782	U	P-O3'-C3'	-5.21	113.45	119.70
24	BA	124	G	P-O3'-C3'	5.21	125.95	119.70
24	BA	391	A	N9-C1'-C2'	-5.21	106.27	112.00
24	BA	570	G	P-O3'-C3'	5.21	125.95	119.70
56	DB	44	G	N3-C4-N9	-5.21	122.88	126.00
21	AA	1366	C	C3'-C2'-C1'	5.21	105.66	101.50
24	BA	858	G	C6-N1-C2	-5.21	121.98	125.10
24	BA	1180	U	N1-C1'-C2'	5.20	120.77	114.00
24	BA	1476	U	C5-C4-O4	-5.20	122.78	125.90
24	BA	2639	A	C5-N7-C8	-5.20	101.30	103.90
55	CA	67	C	P-O5'-C5'	-5.20	112.58	120.90
24	DA	479	A	P-O3'-C3'	5.20	125.94	119.70
56	DB	41	G	C3'-C2'-C1'	5.20	105.66	101.50
24	BA	575	A	P-O3'-C3'	-5.20	113.46	119.70
24	BA	2714	G	N9-C1'-C2'	-5.20	106.28	112.00
55	CA	110	C	P-O3'-C3'	-5.20	113.46	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	930	C	O4'-C1'-N1	5.20	112.36	108.20
24	BA	470	A	C8-N9-C4	-5.20	103.72	105.80
24	BA	2497	A	O3'-P-O5'	5.20	113.88	104.00
55	CA	1282	C	N1-C1'-C2'	-5.20	106.28	112.00
24	DA	1144	A	N9-C1'-C2'	-5.20	106.28	112.00
24	DA	1247	A	O4'-C1'-N9	5.20	112.36	108.20
21	AA	212	G	C3'-C2'-C1'	5.20	105.66	101.50
21	AA	549	C	O4'-C1'-N1	5.20	112.36	108.20
21	AA	984	C	P-O3'-C3'	-5.20	113.46	119.70
21	AA	1296	C	P-O3'-C3'	5.20	125.94	119.70
24	BA	1147	A	C4-C5-N7	-5.20	108.10	110.70
24	BA	2890	G	O4'-C1'-N9	-5.20	104.04	108.20
24	DA	1682	G	C3'-C2'-C1'	5.20	105.66	101.50
24	DA	1722	A	C3'-C2'-C1'	5.20	105.66	101.50
24	DA	2052	A	N9-C1'-C2'	-5.20	106.28	112.00
24	DA	2776	A	P-O3'-C3'	5.20	125.94	119.70
24	DA	2781	A	N9-C1'-C2'	-5.20	106.28	112.00
56	DB	40	U	O4'-C1'-N1	5.20	112.36	108.20
21	AA	925	G	C6-N1-C2	5.20	128.22	125.10
24	BA	654	A	N9-C1'-C2'	-5.20	106.28	112.00
24	BA	2269	G	P-O5'-C5'	-5.20	112.59	120.90
21	AA	351	G	N9-C1'-C2'	5.19	120.75	114.00
24	BA	1555	G	C3'-C2'-C1'	5.19	105.66	101.50
24	BA	2570	G	C5-C6-O6	5.19	131.72	128.60
55	CA	1136	C	O4'-C1'-N1	5.19	112.36	108.20
24	DA	1476	U	P-O3'-C3'	5.19	125.93	119.70
24	BA	14	A	P-O5'-C5'	-5.19	112.59	120.90
24	BA	2543	G	C5-C6-O6	5.19	131.72	128.60
25	BB	91	C	N3-C2-O2	-5.19	118.27	121.90
55	CA	199	A	P-O3'-C3'	-5.19	113.47	119.70
24	DA	234	U	C3'-C2'-C1'	5.19	105.65	101.50
24	DA	370	G	P-O3'-C3'	5.19	125.93	119.70
24	DA	604	G	C3'-C2'-C1'	5.19	105.65	101.50
21	AA	352	C	C3'-C2'-C1'	5.19	105.65	101.50
21	AA	688	G	P-O3'-C3'	-5.19	113.47	119.70
21	AA	795	C	O4'-C1'-N1	5.19	112.35	108.20
21	AA	821	G	C3'-C2'-C1'	5.19	105.65	101.50
21	AA	978	A	N9-C1'-C2'	-5.19	106.29	112.00
24	BA	919	U	N3-C4-O4	5.19	123.03	119.40
24	BA	1663	G	C5-C6-O6	5.19	131.71	128.60
24	BA	2656	U	N1-C2-O2	5.19	126.43	122.80
55	CA	66	A	N9-C1'-C2'	-5.19	106.29	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	596	A	C3'-C2'-C1'	5.19	105.65	101.50
24	DA	1635	A	P-O5'-C5'	-5.19	112.59	120.90
24	DA	1956	U	C3'-C2'-C1'	5.19	105.65	101.50
21	AA	339	C	N1-C2-O2	5.19	122.01	118.90
24	BA	1459	G	P-O3'-C3'	-5.19	113.47	119.70
24	BA	1821	A	C6-N1-C2	5.19	121.71	118.60
29	BF	112	ASP	OD1-CG-OD2	5.19	133.16	123.30
55	CA	1052	U	O4'-C1'-N1	5.19	112.35	108.20
24	DA	964	C	C3'-C2'-C1'	5.19	105.65	101.50
24	BA	1669	A	N1-C6-N6	-5.19	115.49	118.60
24	BA	1809	A	P-O3'-C3'	-5.19	113.47	119.70
24	BA	1944	U	O4'-C1'-N1	5.19	112.35	108.20
24	BA	1959	G	P-O5'-C5'	-5.19	112.60	120.90
24	BA	2691	C	C3'-C2'-C1'	5.19	105.65	101.50
24	DA	506	G	P-O3'-C3'	-5.19	113.47	119.70
21	AA	1461	G	C2-N3-C4	-5.19	109.31	111.90
55	CA	480	U	O4'-C1'-N1	5.19	112.35	108.20
24	BA	1955	U	O4'-C1'-N1	5.18	112.35	108.20
55	CA	175	C	C3'-C2'-C1'	5.18	105.65	101.50
55	CA	1098	C	O4'-C1'-N1	5.18	112.35	108.20
55	CA	493	A	O4'-C1'-N9	5.18	112.35	108.20
24	DA	2450	A	P-O3'-C3'	-5.18	113.48	119.70
21	AA	722	G	C3'-C2'-C1'	5.18	105.64	101.50
24	BA	1379	U	O4'-C1'-N1	-5.18	104.06	108.20
24	BA	2282	G	C8-N9-C1'	5.18	133.74	127.00
55	CA	1158	C	C3'-C2'-C1'	5.18	105.64	101.50
21	AA	173	U	N1-C1'-C2'	5.18	120.73	114.00
24	BA	333	G	P-O3'-C3'	-5.18	113.48	119.70
24	BA	484	C	O4'-C1'-N1	-5.18	104.06	108.20
24	BA	727	A	C3'-C2'-C1'	5.18	105.64	101.50
24	BA	1142	A	N9-C4-C5	5.18	107.87	105.80
24	BA	1698	A	N1-C6-N6	5.18	121.71	118.60
55	CA	1051	C	C3'-C2'-C1'	5.18	105.64	101.50
24	DA	2319	G	P-O3'-C3'	5.18	125.92	119.70
24	DA	2610	C	O4'-C1'-N1	-5.18	104.06	108.20
24	BA	1821	A	C3'-C2'-C1'	5.18	105.64	101.50
24	DA	968	C	O4'-C1'-N1	5.18	112.34	108.20
24	BA	1086	A	C6-N1-C2	-5.17	115.50	118.60
24	BA	2052	A	C6-N1-C2	5.17	121.70	118.60
55	CA	412	A	P-O3'-C3'	5.17	125.91	119.70
55	CA	1299	A	C3'-C2'-C1'	5.17	105.64	101.50
24	DA	333	G	C3'-C2'-C1'	5.17	105.64	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	1915	U	C3'-C2'-C1'	5.17	105.64	101.50
24	BA	340	A	N1-C6-N6	5.17	121.70	118.60
24	BA	655	A	P-O3'-C3'	5.17	125.91	119.70
24	DA	2894	G	C3'-C2'-C1'	5.17	105.64	101.50
56	DB	17	C	C3'-C2'-C1'	5.17	105.64	101.50
24	BA	1957	C	N1-C2-O2	5.17	122.00	118.90
21	AA	756	C	P-O3'-C3'	-5.17	113.50	119.70
24	BA	1675	C	C3'-C2'-C1'	5.17	105.64	101.50
24	DA	577	G	N7-C8-N9	5.17	115.68	113.10
24	DA	1415	U	O4'-C1'-N1	5.17	112.33	108.20
24	BA	1731	G	C4-N9-C1'	-5.17	119.78	126.50
24	BA	2135	A	P-O3'-C3'	-5.17	113.50	119.70
24	BA	2136	G	C3'-C2'-C1'	5.17	105.63	101.50
24	BA	2451	A	C6-N1-C2	-5.17	115.50	118.60
25	BB	66	A	P-O5'-C5'	5.17	129.17	120.90
55	CA	52	C	C3'-C2'-C1'	5.17	105.63	101.50
24	BA	100	U	N1-C1'-C2'	5.17	120.71	114.00
24	DA	1554	U	P-O3'-C3'	5.17	125.90	119.70
24	DA	2402	U	C3'-C2'-C1'	5.17	105.63	101.50
21	AA	332	G	C3'-C2'-C1'	5.16	105.63	101.50
21	AA	934	C	O3'-P-O5'	5.16	113.81	104.00
21	AA	1411	C	C2-N1-C1'	5.16	124.48	118.80
24	BA	66	C	O4'-C1'-N1	5.16	112.33	108.20
55	CA	183	C	N1-C1'-C2'	-5.16	106.32	112.00
24	DA	206	U	C3'-C2'-C1'	5.16	105.63	101.50
24	DA	2286	G	P-O3'-C3'	5.16	125.90	119.70
24	BA	299	A	C8-N9-C4	-5.16	103.73	105.80
24	DA	2589	A	N1-C6-N6	-5.16	115.50	118.60
24	BA	791	C	N3-C2-O2	-5.16	118.29	121.90
24	BA	813	U	O5'-P-OP2	-5.16	101.06	105.70
55	CA	1202	U	C3'-C2'-C1'	5.16	105.63	101.50
24	DA	105	C	O4'-C1'-N1	5.16	112.33	108.20
24	DA	832	U	C3'-C2'-C1'	5.16	105.63	101.50
21	AA	1504	G	C4-C5-N7	-5.16	108.74	110.80
24	BA	752	A	N9-C4-C5	-5.16	103.74	105.80
24	DA	589	U	P-O3'-C3'	-5.16	113.51	119.70
24	DA	1386	C	P-O3'-C3'	-5.16	113.51	119.70
24	DA	1560	G	C3'-C2'-C1'	5.16	105.63	101.50
24	BA	324	A	C3'-C2'-C1'	5.16	105.63	101.50
24	BA	2071	A	P-O3'-C3'	5.16	125.89	119.70
24	BA	2322	A	C3'-C2'-C1'	5.16	105.62	101.50
24	BA	2513	A	C8-N9-C4	-5.16	103.74	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	12	U	C2-N1-C1'	5.16	123.89	117.70
24	BA	1925	C	O4'-C1'-N1	5.16	112.32	108.20
24	DA	2427	C	C3'-C2'-C1'	5.16	105.62	101.50
21	AA	1421	G	P-O3'-C3'	-5.15	113.52	119.70
24	BA	1144	A	N9-C1'-C2'	-5.15	106.33	112.00
55	CA	977	A	C3'-C2'-C1'	5.15	105.62	101.50
24	DA	230	G	N9-C1'-C2'	-5.15	106.33	112.00
24	DA	533	G	N9-C1'-C2'	-5.15	106.33	112.00
21	AA	1322	C	P-O3'-C3'	5.15	125.88	119.70
24	BA	663	G	C5-C6-O6	5.15	131.69	128.60
24	BA	2363	G	C8-N9-C4	-5.15	104.34	106.40
55	CA	173	U	P-O3'-C3'	5.15	125.88	119.70
55	CA	425	G	C3'-C2'-C1'	5.15	105.62	101.50
24	DA	483	A	N9-C1'-C2'	-5.15	106.34	112.00
24	DA	1606	C	P-O3'-C3'	5.15	125.88	119.70
21	AA	549	C	C3'-C2'-C1'	5.15	105.62	101.50
21	AA	577	G	N9-C4-C5	5.15	107.46	105.40
21	AA	1259	C	O4'-C1'-N1	5.15	112.32	108.20
24	BA	1058	U	O4'-C1'-N1	5.15	112.32	108.20
24	BA	1370	C	N1-C2-O2	-5.15	115.81	118.90
24	BA	2822	G	C4-C5-N7	5.15	112.86	110.80
24	DA	87	U	C3'-C2'-C1'	5.15	105.62	101.50
24	DA	975	A	C3'-C2'-C1'	5.15	105.62	101.50
24	DA	997	G	N9-C1'-C2'	-5.15	106.34	112.00
24	DA	2477	U	O4'-C1'-N1	5.15	112.32	108.20
24	DA	2267	A	C4-C5-C6	5.15	119.57	117.00
21	AA	930	C	O4'-C1'-N1	5.14	112.31	108.20
21	AA	995	C	C3'-C2'-C1'	5.14	105.61	101.50
55	CA	239	U	P-O3'-C3'	5.14	125.87	119.70
55	CA	723	U	C2-N1-C1'	5.14	123.87	117.70
55	CA	1440	U	P-O3'-C3'	5.14	125.87	119.70
21	AA	819	A	O4'-C1'-N9	-5.14	104.09	108.20
24	BA	1867	G	C3'-C2'-C1'	5.14	105.61	101.50
55	CA	120	A	C3'-C2'-C1'	5.14	105.61	101.50
55	CA	567	G	N9-C1'-C2'	-5.14	106.34	112.00
24	DA	1155	A	O4'-C1'-N9	5.14	112.31	108.20
24	DA	2272	U	C5-C4-O4	-5.14	122.81	125.90
24	BA	753	A	C3'-C2'-C1'	5.14	105.61	101.50
55	CA	984	C	C3'-C2'-C1'	5.14	105.61	101.50
24	DA	92	U	C3'-C2'-C1'	5.14	105.61	101.50
21	AA	1169	A	P-O5'-C5'	-5.14	112.68	120.90
21	AA	1215	G	N9-C1'-C2'	-5.14	106.35	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	86	G	C3'-C2'-C1'	5.14	105.61	101.50
24	BA	2676	C	N1-C2-O2	-5.14	115.82	118.90
24	BA	2894	G	C8-N9-C1'	-5.14	120.32	127.00
55	CA	1170	A	C3'-C2'-C1'	5.14	105.61	101.50
24	DA	2053	G	N1-C6-O6	-5.14	116.82	119.90
24	DA	2408	U	P-O3'-C3'	-5.14	113.53	119.70
21	AA	1203	C	P-O5'-C5'	-5.14	112.68	120.90
24	DA	1963	U	C3'-C2'-C1'	5.14	105.61	101.50
24	BA	1249	U	O4'-C1'-N1	-5.14	104.09	108.20
55	CA	88	U	O4'-C1'-N1	5.14	112.31	108.20
24	BA	645	C	C6-N1-C1'	-5.13	114.64	120.80
24	BA	1247	A	C1'-O4'-C4'	-5.13	105.79	109.90
24	BA	2273	A	C5-N7-C8	-5.13	101.33	103.90
55	CA	1051	C	O4'-C1'-N1	5.13	112.31	108.20
21	AA	1504	G	N9-C4-C5	5.13	107.45	105.40
24	BA	727	A	N9-C1'-C2'	-5.13	106.35	112.00
24	BA	752	A	C5-C6-N6	-5.13	119.59	123.70
24	BA	271	G	C8-N9-C1'	5.13	133.67	127.00
55	CA	1371	G	P-O3'-C3'	-5.13	113.54	119.70
24	DA	1334	G	C3'-C2'-C1'	5.13	105.61	101.50
24	BA	43	G	P-O5'-C5'	-5.13	112.69	120.90
24	BA	2513	A	C4-C5-N7	-5.13	108.14	110.70
55	CA	32	A	N9-C1'-C2'	-5.13	106.36	112.00
21	AA	1420	U	P-O3'-C3'	-5.13	113.55	119.70
24	DA	162	U	N1-C1'-C2'	5.13	120.67	114.00
24	BA	1952	A	N9-C4-C5	5.13	107.85	105.80
24	BA	2225	A	N1-C6-N6	5.13	121.68	118.60
24	DA	480	A	C3'-C2'-C1'	5.13	105.60	101.50
24	DA	1569	A	N9-C1'-C2'	-5.13	106.36	112.00
24	DA	1957	C	N3-C2-O2	-5.13	118.31	121.90
24	DA	2603	G	N9-C1'-C2'	-5.13	106.36	112.00
24	BA	1681	G	O4'-C1'-N9	5.12	112.30	108.20
24	BA	1183	U	N1-C2-O2	5.12	126.39	122.80
24	BA	1476	U	C3'-C2'-C1'	5.12	105.60	101.50
24	BA	1554	U	O3'-P-O5'	-5.12	94.26	104.00
24	BA	2211	A	P-O5'-C5'	5.12	129.10	120.90
24	DA	179	C	C3'-C2'-C1'	5.12	105.60	101.50
24	DA	656	G	N9-C1'-C2'	-5.12	106.36	112.00
24	DA	391	A	C3'-C2'-C1'	5.12	105.60	101.50
24	DA	831	G	C3'-C2'-C1'	5.12	105.60	101.50
24	DA	1696	G	C3'-C2'-C1'	5.12	105.60	101.50
24	DA	2459	A	N9-C1'-C2'	-5.12	106.37	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1033	U	N1-C1'-C2'	5.12	120.66	114.00
24	BA	2250	G	N7-C8-N9	5.12	115.66	113.10
24	DA	444	C	C3'-C2'-C1'	5.12	105.60	101.50
24	BA	1294	U	O4'-C1'-N1	-5.12	104.11	108.20
24	BA	1693	U	O3'-P-O5'	-5.12	94.28	104.00
24	BA	2371	G	N3-C2-N2	-5.12	116.32	119.90
24	BA	2631	G	C5-C6-O6	5.12	131.67	128.60
55	CA	170	U	O4'-C1'-N1	5.12	112.30	108.20
55	CA	529	G	P-O3'-C3'	-5.12	113.56	119.70
24	DA	577	G	N3-C4-N9	5.12	129.07	126.00
21	AA	66	A	C3'-C2'-C1'	5.12	105.59	101.50
24	DA	867	C	C3'-C2'-C1'	5.12	105.59	101.50
24	BA	800	A	N9-C4-C5	5.12	107.85	105.80
24	BA	1313	U	P-O3'-C3'	-5.12	113.56	119.70
24	BA	1657	U	P-O3'-C3'	-5.12	113.56	119.70
55	CA	989	U	O4'-C1'-N1	5.12	112.29	108.20
55	CA	1322	C	P-O3'-C3'	5.12	125.84	119.70
21	AA	978	A	C3'-C2'-C1'	5.11	105.59	101.50
24	BA	688	U	C3'-C2'-C1'	5.11	105.59	101.50
24	BA	1566	A	O4'-C1'-N9	-5.11	104.11	108.20
24	BA	1865	U	C5-C6-N1	-5.11	120.14	122.70
24	BA	2812	G	C8-N9-C1'	-5.11	120.35	127.00
24	DA	1111	A	P-O3'-C3'	-5.11	113.56	119.70
24	BA	1521	G	C8-N9-C1'	-5.11	120.35	127.00
55	CA	1158	C	P-O3'-C3'	-5.11	113.57	119.70
24	DA	64	A	N1-C6-N6	-5.11	115.53	118.60
24	BA	763	G	C8-N9-C1'	-5.11	120.36	127.00
24	BA	2451	A	N9-C4-C5	5.11	107.84	105.80
24	DA	1390	U	O4'-C1'-N1	5.11	112.29	108.20
24	BA	1681	G	O3'-P-O5'	-5.11	94.29	104.00
21	AA	1224	U	P-O3'-C3'	5.11	125.83	119.70
24	BA	2262	U	O4'-C1'-N1	5.11	112.29	108.20
24	BA	2752	C	O4'-C1'-N1	5.11	112.28	108.20
24	BA	2893	A	N7-C8-N9	-5.11	111.25	113.80
24	DA	60	G	N9-C4-C5	5.11	107.44	105.40
24	DA	503	A	O4'-C1'-N9	5.11	112.29	108.20
56	DB	42	C	C3'-C2'-C1'	5.11	105.59	101.50
21	AA	519	C	P-O3'-C3'	-5.11	113.57	119.70
21	AA	562	U	P-O3'-C3'	5.11	125.83	119.70
21	AA	858	G	P-O3'-C3'	5.11	125.83	119.70
24	BA	763	G	N7-C8-N9	5.11	115.65	113.10
24	BA	962	G	C3'-C2'-C1'	5.11	105.58	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1649	G	N9-C1'-C2'	-5.11	106.39	112.00
21	AA	198	G	P-O3'-C3'	-5.10	113.58	119.70
21	AA	1063	C	C6-N1-C2	5.10	122.34	120.30
24	BA	1915	U	C3'-C2'-C1'	5.10	105.58	101.50
24	DA	1634	A	O3'-P-O5'	-5.10	94.30	104.00
24	BA	241	A	O4'-C1'-N9	5.10	112.28	108.20
24	BA	1375	U	C5-C4-O4	5.10	128.96	125.90
24	BA	1915	U	C2-N1-C1'	5.10	123.82	117.70
24	BA	2294	G	C4-C5-N7	5.10	112.84	110.80
25	BB	87	U	N1-C1'-C2'	5.10	120.63	114.00
24	DA	1075	C	P-O3'-C3'	-5.10	113.58	119.70
24	DA	1677	A	P-O3'-C3'	-5.10	113.58	119.70
24	BA	1682	G	N9-C1'-C2'	-5.10	106.39	112.00
55	CA	51	A	P-O3'-C3'	5.10	125.82	119.70
24	DA	783	A	P-O3'-C3'	-5.10	113.58	119.70
21	AA	190	A	C5-C6-N6	-5.10	119.62	123.70
24	BA	1019	U	P-O3'-C3'	5.10	125.82	119.70
24	BA	1332	G	C4-N9-C1'	5.10	133.13	126.50
24	BA	2603	G	N9-C1'-C2'	-5.10	106.39	112.00
41	BR	9	GLY	N-CA-C	-5.10	100.35	113.10
24	DA	318	C	O4'-C1'-N1	5.10	112.28	108.20
21	AA	253	A	P-O5'-C5'	-5.10	112.74	120.90
24	BA	444	C	P-O3'-C3'	-5.10	113.58	119.70
24	BA	446	G	P-O3'-C3'	5.10	125.82	119.70
24	DA	482	A	C3'-C2'-C1'	5.10	105.58	101.50
24	BA	984	A	O4'-C1'-N9	-5.10	104.12	108.20
56	DB	77	U	O4'-C1'-N1	5.10	112.28	108.20
24	BA	985	C	C2-N1-C1'	5.09	124.40	118.80
24	BA	1245	G	N9-C4-C5	5.09	107.44	105.40
24	BA	2650	U	C5-C6-N1	-5.09	120.15	122.70
55	CA	424	G	C3'-C2'-C1'	5.09	105.58	101.50
24	BA	1787	A	N9-C1'-C2'	-5.09	106.40	112.00
24	BA	919	U	N1-C2-N3	-5.09	111.84	114.90
24	BA	2075	U	C2-N3-C4	5.09	130.06	127.00
24	DA	2440	C	O4'-C1'-N1	5.09	112.27	108.20
24	BA	548	G	C4-N9-C1'	5.09	133.12	126.50
24	BA	1442	U	P-O3'-C3'	-5.09	113.59	119.70
55	CA	347	G	C3'-C2'-C1'	5.09	105.57	101.50
55	CA	965	U	N1-C1'-C2'	5.09	120.62	114.00
24	BA	222	A	N1-C6-N6	5.09	121.65	118.60
24	BA	1003	G	C8-N9-C4	-5.09	104.36	106.40
24	BA	1957	C	N3-C2-O2	-5.09	118.34	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1208	C	C5-C6-N1	-5.09	118.46	121.00
24	BA	1344	U	O4'-C1'-N1	5.09	112.27	108.20
24	DA	142	A	C3'-C2'-C1'	5.09	105.57	101.50
24	DA	1063	G	C3'-C2'-C1'	5.08	105.57	101.50
24	DA	1268	A	N9-C1'-C2'	-5.08	106.41	112.00
24	DA	2492	U	O4'-C1'-N1	5.08	112.27	108.20
24	BA	988	A	P-O3'-C3'	5.08	125.80	119.70
24	BA	2312	U	P-O3'-C3'	-5.08	113.60	119.70
21	AA	90	C	C3'-C2'-C1'	5.08	105.56	101.50
21	AA	131	A	N9-C4-C5	5.08	107.83	105.80
24	BA	604	G	C3'-C2'-C1'	5.08	105.57	101.50
24	BA	2066	C	N1-C2-N3	-5.08	115.64	119.20
24	BA	122	G	C3'-C2'-C1'	5.08	105.56	101.50
24	BA	1171	G	N9-C4-C5	5.08	107.43	105.40
24	DA	1942	C	C3'-C2'-C1'	5.08	105.56	101.50
24	BA	1029	A	N9-C4-C5	-5.08	103.77	105.80
24	BA	2259	U	C2-N3-C4	-5.08	123.95	127.00
55	CA	1162	C	C3'-C2'-C1'	5.08	105.56	101.50
24	DA	164	C	P-O3'-C3'	-5.08	113.61	119.70
24	BA	1380	G	N1-C6-O6	-5.08	116.85	119.90
24	BA	2224	G	N9-C4-C5	-5.08	103.37	105.40
24	BA	2792	A	C3'-C2'-C1'	5.08	105.56	101.50
24	BA	434	U	C5-C6-N1	-5.08	120.16	122.70
24	BA	1669	A	C3'-C2'-C1'	5.08	105.56	101.50
24	BA	1865	U	N1-C1'-C2'	5.08	120.60	114.00
24	BA	2359	C	C5-C6-N1	-5.08	118.46	121.00
24	DA	74	A	C3'-C2'-C1'	5.08	105.56	101.50
24	DA	1941	C	C3'-C2'-C1'	5.08	105.56	101.50
24	DA	1965	C	C3'-C2'-C1'	5.08	105.56	101.50
56	DB	103	U	N1-C1'-C2'	5.08	120.60	114.00
24	BA	1286	A	C5-N7-C8	5.07	106.44	103.90
24	DA	312	G	C3'-C2'-C1'	5.07	105.56	101.50
24	DA	1019	U	N1-C2-N3	5.07	117.94	114.90
24	BA	1648	U	C3'-C2'-C1'	5.07	105.56	101.50
24	DA	388	G	C3'-C2'-C1'	5.07	105.56	101.50
24	DA	687	C	P-O3'-C3'	-5.07	113.61	119.70
24	DA	1048	A	P-O3'-C3'	-5.07	113.61	119.70
24	DA	1957	C	C3'-C2'-C1'	5.07	105.56	101.50
24	DA	2337	G	C3'-C2'-C1'	5.07	105.56	101.50
24	BA	2311	A	P-O3'-C3'	5.07	125.78	119.70
24	BA	2326	C	C6-N1-C2	5.07	122.33	120.30
24	DA	1767	G	N1-C6-O6	-5.07	116.86	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	2778	A	C3'-C2'-C1'	5.07	105.55	101.50
21	AA	43	C	C6-N1-C2	5.07	122.33	120.30
21	AA	1382	C	P-O3'-C3'	-5.07	113.62	119.70
24	DA	2425	A	O4'-C1'-N9	5.07	112.25	108.20
24	DA	2832	U	O4'-C1'-N1	5.07	112.25	108.20
24	DA	323	C	O4'-C1'-N1	5.06	112.25	108.20
21	AA	1055	A	N1-C6-N6	5.06	121.64	118.60
21	AA	1486	G	C6-N1-C2	-5.06	122.06	125.10
24	BA	1809	A	N9-C1'-C2'	-5.06	106.43	112.00
25	BB	88	C	C6-N1-C2	5.06	122.33	120.30
24	DA	1972	G	C3'-C2'-C1'	5.06	105.55	101.50
21	AA	1144	G	P-O3'-C3'	5.06	125.77	119.70
24	BA	2093	G	C3'-C2'-C1'	5.06	105.55	101.50
55	CA	1033	G	C3'-C2'-C1'	5.06	105.55	101.50
24	DA	2616	C	C3'-C2'-C1'	5.06	105.55	101.50
24	DA	1082	U	C2-N3-C4	-5.06	123.96	127.00
24	DA	2770	G	C6-C5-N7	-5.06	127.36	130.40
56	DB	13	G	C3'-C2'-C1'	5.06	105.55	101.50
21	AA	1304	G	C8-N9-C4	-5.06	104.38	106.40
24	BA	1782	U	C3'-C2'-C1'	5.06	105.55	101.50
55	CA	96	U	C3'-C2'-C1'	5.06	105.55	101.50
24	BA	58	G	N9-C4-C5	5.05	107.42	105.40
24	BA	463	G	O4'-C1'-N9	5.05	112.24	108.20
24	BA	807	U	P-O5'-C5'	-5.05	112.81	120.90
24	BA	1406	U	N1-C1'-C2'	5.05	120.57	114.00
24	BA	1796	U	O4'-C1'-N1	5.05	112.24	108.20
24	BA	2520	C	N3-C4-C5	-5.05	119.88	121.90
24	DA	1378	A	P-O3'-C3'	5.05	125.77	119.70
24	BA	1029	A	O4'-C1'-N9	-5.05	104.16	108.20
25	BB	53	A	N9-C1'-C2'	-5.05	106.44	112.00
24	DA	1439	A	C6-C5-N7	-5.05	128.76	132.30
56	DB	44	G	C6-C5-N7	5.05	133.43	130.40
21	AA	331	G	C3'-C2'-C1'	5.05	105.54	101.50
24	BA	729	G	P-O3'-C3'	-5.05	113.64	119.70
55	CA	30	U	P-O3'-C3'	5.05	125.76	119.70
24	DA	26	G	P-O3'-C3'	5.05	125.76	119.70
24	DA	1865	U	N1-C1'-C2'	5.05	120.57	114.00
24	DA	2210	U	O3'-P-O5'	5.05	113.60	104.00
21	AA	960	U	C2-N1-C1'	5.05	123.76	117.70
24	BA	1070	A	P-O3'-C3'	5.05	125.76	119.70
24	BA	1777	U	C2-N3-C4	5.05	130.03	127.00
24	BA	2849	U	C5'-C4'-O4'	-5.05	103.04	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	169	C	C5-C4-N4	5.05	123.73	120.20
56	DB	43	C	C6-N1-C2	-5.05	118.28	120.30
21	AA	253	A	C3'-C2'-C1'	5.05	105.54	101.50
24	BA	1958	C	C6-N1-C2	5.05	122.32	120.30
24	BA	2818	U	P-O3'-C3'	-5.05	113.64	119.70
24	DA	1507	C	C2-N3-C4	5.05	122.42	119.90
24	DA	2036	C	P-O3'-C3'	-5.05	113.64	119.70
21	AA	1210	C	P-O3'-C3'	-5.04	113.65	119.70
24	BA	2213	U	P-O3'-C3'	-5.04	113.65	119.70
24	BA	2822	G	C6-C5-N7	-5.04	127.37	130.40
24	BA	105	C	N1-C2-O2	5.04	121.93	118.90
24	BA	1947	C	N1-C2-O2	-5.04	115.87	118.90
24	BA	2491	U	O5'-P-OP2	-5.04	101.16	105.70
24	DA	2260	C	C6-N1-C2	-5.04	118.28	120.30
21	AA	9	G	C3'-C2'-C1'	5.04	105.53	101.50
24	BA	1497	U	P-O3'-C3'	5.04	125.75	119.70
24	BA	2494	G	P-O3'-C3'	-5.04	113.65	119.70
24	DA	657	U	C3'-C2'-C1'	5.04	105.53	101.50
24	DA	783	A	N9-C1'-C2'	-5.04	106.45	112.00
55	CA	1508	A	N9-C1'-C2'	-5.04	106.46	112.00
24	DA	2239	G	C3'-C2'-C1'	5.04	105.53	101.50
24	BA	2219	U	O4'-C1'-N1	5.04	112.23	108.20
25	BB	25	U	N1-C1'-C2'	-5.04	106.46	112.00
24	DA	1900	A	P-O3'-C3'	5.04	125.75	119.70
21	AA	279	A	O4'-C1'-N9	-5.04	104.17	108.20
21	AA	520	A	C3'-C2'-C1'	5.04	105.53	101.50
24	DA	1439	A	N1-C6-N6	5.04	121.62	118.60
21	AA	30	U	N1-C1'-C2'	5.04	120.55	114.00
24	BA	12	U	N1-C2-O2	5.04	126.33	122.80
24	BA	1511	G	C3'-C2'-C1'	5.04	105.53	101.50
24	BA	1844	C	O4'-C1'-N1	-5.04	104.17	108.20
24	DA	813	U	O4'-C1'-N1	5.04	112.23	108.20
24	DA	1062	G	C8-N9-C4	-5.04	104.39	106.40
24	DA	2586	U	C3'-C2'-C1'	5.04	105.53	101.50
24	BA	8	C	P-O5'-C5'	-5.03	112.85	120.90
24	BA	1695	G	C8-N9-C4	-5.03	104.39	106.40
25	BB	26	C	C3'-C2'-C1'	5.03	105.53	101.50
25	BB	53	A	C3'-C2'-C1'	5.03	105.53	101.50
55	CA	1454	G	P-O3'-C3'	-5.03	113.66	119.70
24	DA	2616	C	C6-N1-C2	-5.03	118.29	120.30
24	BA	461	C	C2-N3-C4	-5.03	117.38	119.90
24	BA	2246	G	C6-C5-N7	-5.03	127.38	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	1204	A	P-O3'-C3'	5.03	125.74	119.70
21	AA	509	A	P-O3'-C3'	-5.03	113.66	119.70
24	BA	628	G	C3'-C2'-C1'	5.03	105.52	101.50
21	AA	754	C	O4'-C1'-N1	5.03	112.22	108.20
24	BA	1781	U	P-O5'-C5'	-5.03	112.85	120.90
21	AA	116	A	P-O3'-C3'	-5.03	113.67	119.70
24	BA	2268	A	P-O3'-C3'	-5.03	113.67	119.70
55	CA	83	C	N1-C1'-C2'	5.03	120.54	114.00
55	CA	794	A	N9-C1'-C2'	-5.03	106.47	112.00
55	CA	1139	G	N9-C1'-C2'	-5.03	106.47	112.00
24	DA	6	A	C6-N1-C2	5.03	121.62	118.60
24	DA	373	U	O4'-C1'-N1	5.03	112.22	108.20
24	DA	2312	U	N1-C2-O2	5.03	126.32	122.80
24	BA	754	U	P-O3'-C3'	-5.03	113.67	119.70
25	BB	53	A	P-O3'-C3'	-5.03	113.67	119.70
55	CA	36	C	P-O3'-C3'	-5.03	113.67	119.70
55	CA	91	U	C3'-C2'-C1'	5.03	105.52	101.50
24	DA	2241	A	O4'-C1'-N9	5.03	112.22	108.20
56	DB	104	A	C2-N3-C4	5.03	113.11	110.60
21	AA	1483	A	N9-C4-C5	-5.02	103.79	105.80
24	BA	2451	A	C8-N9-C1'	5.02	136.74	127.70
24	BA	2801	G	P-O3'-C3'	-5.02	113.67	119.70
55	CA	1216	A	C3'-C2'-C1'	5.02	105.52	101.50
24	DA	2496	C	O4'-C1'-N1	5.02	112.22	108.20
24	BA	60	G	OP1-P-O3'	5.02	116.25	105.20
24	BA	1782	U	P-O5'-C5'	-5.02	112.86	120.90
24	BA	1872	A	N9-C1'-C2'	-5.02	106.47	112.00
24	BA	2867	G	C8-N9-C1'	5.02	133.53	127.00
55	CA	971	G	P-O3'-C3'	5.02	125.73	119.70
24	DA	41	C	O4'-C1'-N1	5.02	112.22	108.20
24	BA	1779	U	O4'-C1'-N1	5.02	112.22	108.20
55	CA	962	C	C3'-C2'-C1'	5.02	105.52	101.50
24	DA	1838	C	N1-C1'-C2'	5.02	120.53	114.00
21	AA	500	G	C3'-C2'-C1'	5.02	105.52	101.50
24	BA	69	C	C2-N3-C4	5.02	122.41	119.90
24	BA	71	A	O5'-P-OP2	-5.02	101.18	105.70
55	CA	1055	A	N9-C1'-C2'	-5.02	106.48	112.00
24	BA	468	G	C6-N1-C2	-5.02	122.09	125.10
24	BA	682	G	C4-N9-C1'	5.02	133.02	126.50
24	BA	1667	G	O4'-C1'-N9	5.02	112.21	108.20
24	DA	353	C	N1-C1'-C2'	5.02	120.52	114.00
24	DA	1799	G	C4-C5-N7	-5.02	108.79	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	2322	A	C3'-C2'-C1'	5.02	105.51	101.50
55	CA	274	A	O4'-C1'-N9	5.02	112.21	108.20
24	DA	1507	C	N1-C2-O2	5.02	121.91	118.90
24	BA	514	A	P-O5'-C5'	-5.01	112.88	120.90
24	BA	1539	U	O4'-C1'-N1	5.01	112.21	108.20
55	CA	238	A	P-O3'-C3'	5.01	125.72	119.70
55	CA	520	A	C3'-C2'-C1'	5.01	105.51	101.50
23	CW	5	U	C3'-C2'-C1'	5.01	105.51	101.50
24	DA	1738	G	O4'-C1'-N9	5.01	112.21	108.20
55	CA	688	G	C3'-C2'-C1'	5.01	105.51	101.50
21	AA	972	C	O4'-C1'-N1	5.01	112.21	108.20
24	BA	141	G	C3'-C2'-C1'	5.01	105.51	101.50
24	BA	334	C	O4'-C1'-N1	5.01	112.21	108.20
24	BA	415	A	C6-N1-C2	5.01	121.61	118.60
24	BA	2589	A	N1-C6-N6	-5.01	115.59	118.60
55	CA	1044	A	P-O3'-C3'	5.01	125.71	119.70
55	CA	1338	G	C3'-C2'-C1'	5.01	105.51	101.50
24	DA	1061	U	P-O3'-C3'	-5.01	113.69	119.70
24	BA	200	U	C3'-C2'-C1'	5.01	105.51	101.50
24	BA	623	C	C6-N1-C2	5.01	122.30	120.30
24	BA	783	A	N9-C1'-C2'	-5.01	106.49	112.00
24	BA	1496	A	P-O5'-C5'	-5.01	112.89	120.90
55	CA	719	C	O4'-C1'-N1	5.01	112.21	108.20
55	CA	1168	U	C2-N1-C1'	5.01	123.71	117.70
24	DA	83	A	P-O3'-C3'	5.01	125.71	119.70
24	DA	2277	G	C3'-C2'-C1'	5.01	105.51	101.50
24	DA	335	C	C3'-C2'-C1'	5.01	105.51	101.50
21	AA	723	U	O4'-C1'-N1	-5.01	104.19	108.20
21	AA	1138	G	C3'-C2'-C1'	5.01	105.50	101.50
24	BA	2076	U	P-O3'-C3'	-5.01	113.69	119.70
24	DA	483	A	C3'-C2'-C1'	5.01	105.51	101.50
24	DA	812	C	C6-N1-C2	5.01	122.30	120.30
24	DA	1061	U	C5-C6-N1	5.01	125.20	122.70
24	DA	2033	A	P-O3'-C3'	5.01	125.71	119.70
24	DA	2064	C	C3'-C2'-C1'	5.01	105.51	101.50
24	DA	2312	U	C3'-C2'-C1'	5.01	105.50	101.50
24	BA	1908	C	O4'-C1'-N1	5.00	112.20	108.20
24	BA	2249	U	C4'-C3'-C2'	5.00	107.61	102.60
24	DA	1238	G	P-O3'-C3'	5.00	125.71	119.70
24	DA	2339	C	P-O5'-C5'	-5.00	112.89	120.90
24	BA	684	G	C4-C5-N7	5.00	112.80	110.80
24	BA	1082	U	P-O3'-C3'	5.00	125.70	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1565	C	O4'-C1'-N1	5.00	112.20	108.20
24	BA	2770	G	C2-N3-C4	-5.00	109.40	111.90
24	DA	1311	G	P-O3'-C3'	5.00	125.70	119.70
24	DA	1400	U	C3'-C2'-C1'	5.00	105.50	101.50
24	DA	2441	U	C3'-C2'-C1'	5.00	105.50	101.50
24	DA	2645	G	N3-C4-C5	5.00	131.10	128.60
24	BA	686	U	O5'-P-OP2	-5.00	101.20	105.70
24	BA	1985	C	P-O5'-C5'	-5.00	112.90	120.90
24	DA	1078	U	P-O3'-C3'	5.00	125.70	119.70

There are no chirality outliers.

All (8) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
12	AM	70	ARG	Peptide
27	BD	10	GLY	Peptide
31	BH	48	GLU	Mainchain
31	BH	49	ALA	Mainchain
37	BN	101	GLY	Peptide
31	DH	47	PHE	Peptide
31	DH	48	GLU	Peptide
31	DH	49	ALA	Mainchain

5.2 Too-close contacts [i](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AB	1704	0	1732	253	0
1	CB	1704	0	1732	203	0
2	AC	1624	0	1699	133	0
2	CC	1624	0	1699	149	0
3	AD	1643	0	1710	139	0
3	CD	1643	0	1710	139	0
4	AE	1105	0	1148	196	0
4	CE	1105	0	1148	127	0
5	AF	817	0	808	91	0
5	CF	817	0	808	76	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	AG	1181	0	1240	100	0
6	CG	1174	0	1230	154	0
7	AH	979	0	1034	107	0
7	CH	979	0	1034	95	0
8	AI	1022	0	1070	122	0
8	CI	1022	0	1070	108	0
9	AJ	786	0	828	69	0
9	CJ	786	0	828	114	0
10	AK	877	0	887	103	0
10	CK	877	0	887	82	0
11	AL	955	0	1019	97	0
11	CL	955	0	1019	101	0
12	AM	883	0	944	69	0
12	CM	876	0	937	123	0
13	AN	774	0	827	72	0
13	CN	769	0	822	83	0
14	AO	714	0	737	50	0
14	CO	714	0	737	40	0
15	AP	649	0	666	63	0
15	CP	638	0	656	56	0
16	AQ	648	0	691	70	0
16	CQ	648	0	691	59	0
17	AR	455	0	478	36	0
17	CR	455	0	478	41	0
18	AS	637	0	665	42	0
18	CS	637	0	665	79	0
19	AT	665	0	714	56	0
19	CT	665	0	714	58	0
20	AU	425	0	449	65	0
20	CU	425	0	449	70	0
21	AA	32895	0	16553	1800	0
22	AV	365	0	185	24	0
22	AX	365	0	185	20	0
22	CV	365	0	185	26	0
22	CX	365	0	185	11	0
23	AW	120	0	61	8	0
23	CW	120	0	61	4	0
24	BA	61274	0	30819	3133	0
24	DA	60995	0	30679	3843	0
25	BB	2529	0	1281	109	0
26	BC	2082	0	2157	226	0
26	DC	2082	0	2157	230	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
27	BD	1565	0	1616	200	0
27	DD	1565	0	1616	162	0
28	BE	1552	0	1619	158	0
28	DE	1552	0	1619	170	0
29	BF	1410	0	1447	144	0
29	DF	1420	0	1460	183	0
30	BG	1323	0	1374	149	0
30	DG	1323	0	1374	116	0
31	BH	1111	0	1148	108	0
31	DH	1111	0	1148	100	0
32	BI	1032	0	1088	116	0
32	DI	1032	0	1088	69	0
33	BJ	1129	0	1162	160	0
33	DJ	1129	0	1162	122	0
34	BK	938	0	1012	102	0
34	DK	938	0	1012	114	0
35	BL	1045	0	1117	133	0
35	DL	1045	0	1117	130	0
36	BM	1074	0	1157	129	0
36	DM	1074	0	1157	96	0
37	BN	960	0	1000	102	0
37	DN	960	0	1000	107	0
38	BO	892	0	923	82	0
38	DO	892	0	923	90	0
39	BP	917	0	965	120	0
39	DP	917	0	965	87	0
40	BQ	947	0	1022	147	0
40	DQ	947	0	1022	120	0
41	BR	816	0	839	102	0
41	DR	816	0	839	90	0
42	BS	857	0	922	89	0
42	DS	857	0	922	83	0
43	BT	738	0	807	103	0
43	DT	738	0	807	96	0
44	BU	779	0	834	65	0
44	DU	779	0	834	93	0
45	BV	753	0	780	54	0
45	DV	753	0	780	98	0
46	BW	596	0	610	179	0
46	DW	596	0	610	105	0
47	BX	625	0	655	68	0
47	DX	625	0	655	76	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
48	BY	509	0	543	45	0
48	DY	509	0	543	55	0
49	BZ	449	0	491	41	0
49	DZ	449	0	491	40	0
50	B0	444	0	461	36	0
50	D0	444	0	461	63	0
51	B1	409	0	440	43	0
51	D1	409	0	440	33	0
52	B2	377	0	418	28	0
52	D2	377	0	418	42	0
53	B3	504	0	574	41	0
53	D3	504	0	574	54	0
54	B4	302	0	340	40	0
54	D4	302	0	340	27	0
55	CA	32831	0	16521	2003	0
56	DB	2507	0	1270	160	0
57	AA	43	0	0	0	0
57	BA	136	0	0	0	0
57	BB	4	0	0	0	0
57	BD	1	0	0	0	0
57	CA	42	0	0	0	0
57	D4	1	0	0	0	0
57	DA	132	0	0	0	0
57	DB	1	0	0	0	0
57	DC	2	0	0	0	0
57	DJ	1	0	0	0	0
58	B4	1	0	0	0	0
58	D4	1	0	0	0	0
59	AA	196	0	0	7	0
59	AE	1	0	0	0	0
59	AL	3	0	0	0	0
59	AN	6	0	0	1	0
59	AT	1	0	0	0	0
59	AU	1	0	0	0	0
59	B2	1	0	0	0	0
59	B3	3	0	0	0	0
59	B4	2	0	0	0	0
59	BA	615	0	0	21	0
59	BB	20	0	0	1	0
59	BC	8	0	0	1	0
59	BD	3	0	0	4	0
59	BE	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
59	BL	3	0	0	0	0
59	BN	3	0	0	0	0
59	BT	1	0	0	1	0
59	CA	195	0	0	6	0
59	CE	4	0	0	0	0
59	CI	1	0	0	0	0
59	CL	1	0	0	0	0
59	CN	2	0	0	0	0
59	CT	2	0	0	0	0
59	CU	2	0	0	0	0
59	D2	1	0	0	0	0
59	D3	1	0	0	0	0
59	D4	5	0	0	0	0
59	DA	600	0	0	17	0
59	DB	4	0	0	0	0
59	DC	12	0	0	0	0
59	DD	2	0	0	0	0
59	DE	3	0	0	0	0
59	DJ	3	0	0	0	0
59	DL	6	0	0	0	0
59	DN	2	0	0	1	0
59	DT	2	0	0	0	0
59	DU	1	0	0	0	0
59	DV	1	0	0	0	0
All	All	286150	0	191700	19249	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 41.

All (19249) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:67:ASP:O	12:AM:70:ARG:HD2	1.23	1.31
55:CA:1213:A:O2'	55:CA:1214:C:H5'	1.29	1.25
24:DA:604:G:O2'	24:DA:605:G:H5'	1.40	1.19
40:BQ:63:ARG:NH1	40:BQ:96:ASP:HA	1.56	1.18
24:DA:297:G:H5''	44:DU:84:PHE:HB2	1.26	1.18
24:BA:2197:U:O2'	24:BA:2198:A:H2'	1.44	1.17
26:BC:68:ARG:HD3	26:BC:103:ILE:HD11	1.22	1.15
24:DA:1439:A:N1	24:DA:1552:A:C5	2.13	1.15
29:BF:35:LEU:HB3	29:BF:153:ILE:HG22	1.24	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:74:MET:HA	12:AM:74:MET:CE	1.76	1.13
52:B2:3:ARG:HH21	52:B2:3:ARG:HG2	1.14	1.12
33:BJ:44:TYR:HB2	40:BQ:63:ARG:HB3	1.31	1.11
11:CL:43:LYS:HB3	11:CL:44:PRO:HD2	1.11	1.11
55:CA:453:G:H2'	55:CA:454:G:H8	1.11	1.11
24:DA:1537:G:H2'	24:DA:1538:G:H4'	1.29	1.11
4:AE:81:GLN:HG2	4:AE:149:PRO:HG3	1.28	1.11
24:DA:197:A:H62	24:DA:2430:A:H2'	1.01	1.11
24:DA:1669:A:H2'	24:DA:1669:A:N3	1.59	1.11
55:CA:1031:C:H5'	55:CA:1032:G:H5''	1.31	1.11
29:DF:109:ARG:CZ	29:DF:109:ARG:HB2	1.50	1.11
35:BL:74:THR:HG22	35:BL:107:PHE:HB2	1.28	1.10
40:DQ:61:ILE:HD11	40:DQ:92:LYS:HD3	1.31	1.10
12:CM:2:ARG:CG	12:CM:8:ILE:HG12	1.81	1.10
40:BQ:43:GLN:NE2	41:BR:77:PHE:HB3	1.67	1.10
55:CA:974:A:H5''	55:CA:975:A:H5'	1.24	1.09
24:DA:2313:C:O2'	24:DA:2314:A:H5'	1.52	1.09
6:CG:45:ALA:HB1	6:CG:120:ALA:HB2	1.33	1.09
24:DA:216:A:O2'	24:DA:217:A:H8	1.34	1.09
24:DA:391:A:O2'	24:DA:392:U:H5'	1.52	1.08
46:DW:40:ARG:HH11	46:DW:40:ARG:HG2	0.99	1.08
33:BJ:73:VAL:HG23	33:BJ:74:TYR:H	1.16	1.08
38:BO:31:THR:HG22	38:BO:34:HIS:H	1.13	1.08
12:AM:74:MET:HA	12:AM:74:MET:HE2	1.13	1.07
24:DA:1062:G:O2'	24:DA:1063:G:H8	1.37	1.07
24:DA:2092:U:H4'	24:DA:2093:G:H5''	1.28	1.07
4:AE:96:GLN:O	4:AE:122:VAL:HB	1.55	1.07
6:CG:118:ARG:HH22	55:CA:1239:A:H3'	1.13	1.07
12:CM:2:ARG:HG3	12:CM:8:ILE:CG1	1.85	1.06
18:CS:40:PHE:HB3	18:CS:41:PRO:HD2	1.37	1.06
55:CA:82:G:H2'	55:CA:83:C:H4'	1.35	1.06
19:AT:43:LYS:HB3	19:AT:86:ALA:HB1	1.38	1.06
34:DK:71:ARG:HB3	34:DK:72:PRO:HD3	1.33	1.06
24:BA:1179:G:H3'	24:BA:1180:U:H4'	1.36	1.05
55:CA:1054:C:O2'	55:CA:1055:A:H5''	1.56	1.05
24:DA:2287:A:O2'	24:DA:2288:A:H3'	1.55	1.05
5:AF:16:GLU:HG2	3:CD:191:SER:HB2	1.37	1.05
24:BA:459:U:O2'	24:BA:460:A:H5'	1.56	1.05
27:DD:124:ARG:HD3	27:DD:125:TRP:CD1	1.91	1.05
55:CA:453:G:H2'	55:CA:454:G:C8	1.92	1.05
24:DA:740:C:H5'	24:DA:1784:A:H3'	1.34	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:87:GLY:H	10:AK:113:THR:HG22	1.20	1.04
5:AF:3:HIS:H	5:AF:92:THR:HG23	1.21	1.04
29:DF:109:ARG:CZ	29:DF:109:ARG:CB	2.34	1.04
12:CM:2:ARG:HG3	12:CM:8:ILE:HG12	1.05	1.03
12:AM:67:ASP:O	12:AM:70:ARG:CD	2.05	1.03
47:DX:53:LYS:HA	47:DX:56:ARG:HB3	1.37	1.03
21:AA:414:A:O2'	21:AA:415:A:H5'	1.56	1.03
35:BL:27:LEU:H	35:BL:27:LEU:HD12	1.20	1.03
40:BQ:63:ARG:HH12	40:BQ:96:ASP:HA	1.10	1.03
11:AL:33:CYS:HA	11:AL:54:VAL:HA	1.35	1.03
39:BP:4:ILE:HG22	39:BP:5:LYS:H	1.20	1.03
24:DA:740:C:O2'	24:DA:741:U:H5'	1.57	1.03
24:DA:2517:C:O2'	24:DA:2518:A:H3'	1.58	1.03
56:DB:58:A:H2'	56:DB:59:A:C8	1.93	1.03
46:BW:17:ALA:HA	46:BW:35:ILE:HG23	1.40	1.03
21:AA:1238:A:H5'	21:AA:1336:C:H41	1.24	1.02
1:AB:137:THR:HA	1:AB:140:LEU:HD13	1.41	1.02
40:DQ:87:VAL:HG21	41:DR:52:PRO:HD3	1.38	1.02
24:DA:996:A:H4'	40:DQ:91:ARG:HD2	1.40	1.02
39:BP:50:ARG:HB3	39:BP:57:ALA:H	1.24	1.02
30:BG:84:LYS:HG3	30:BG:132:LEU:H	1.25	1.01
6:CG:101:ARG:HH21	55:CA:940:C:H5'	1.20	1.01
12:CM:2:ARG:HD3	12:CM:2:ARG:N	1.75	1.01
24:BA:825:A:H1'	35:BL:54:GLN:NE2	1.76	1.01
24:DA:302:C:O2'	24:DA:303:G:H8	1.42	1.01
39:BP:50:ARG:CB	39:BP:57:ALA:H	1.73	1.01
43:BT:50:LEU:H	43:BT:50:LEU:HD12	1.22	1.01
14:CO:63:ARG:HH22	24:DA:715:A:H5'	1.21	1.01
55:CA:1450:U:H4'	55:CA:1451:U:H5	1.25	1.01
32:BI:79:LEU:HA	32:BI:83:ALA:HB3	1.36	1.01
24:DA:271:G:O2'	24:DA:272:A:H5''	1.59	1.01
24:DA:1439:A:C2	24:DA:1552:A:C6	2.48	1.01
24:DA:2746:U:H1'	30:DG:138:GLN:HE21	1.25	1.01
36:DM:27:SER:H	36:DM:66:ARG:NH2	1.59	1.01
46:BW:37:VAL:HG12	46:BW:38:ARG:H	1.19	1.00
9:CJ:79:PRO:HA	9:CJ:84:VAL:HG11	1.39	1.00
24:BA:2725:A:O2'	24:BA:2726:A:H2'	1.58	1.00
54:B4:36:ARG:HG2	54:B4:37:GLN:H	1.22	1.00
36:DM:136:MET:OXT	36:DM:136:MET:HG2	1.59	1.00
33:BJ:6:ALA:HB3	33:BJ:45:THR:HG21	1.41	1.00
33:BJ:21:THR:HG22	33:BJ:22:GLY:N	1.76	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DC:15:VAL:HG22	26:DC:205:GLY:HA3	1.43	0.99
55:CA:211:G:H2'	55:CA:211:G:N3	1.74	0.99
27:BD:106:LYS:HB3	27:BD:206:ALA:HB3	1.41	0.99
26:DC:144:GLU:HA	26:DC:151:GLY:HA2	1.42	0.99
27:DD:124:ARG:HD3	27:DD:125:TRP:NE1	1.77	0.99
2:AC:76:ILE:HA	2:AC:83:VAL:HG23	1.43	0.99
24:DA:2886:A:H62	50:D0:39:ARG:HD3	1.25	0.99
12:CM:102:LYS:HA	55:CA:1226:C:H5	1.24	0.99
24:DA:197:A:N6	24:DA:2430:A:H2'	1.77	0.99
24:DA:1439:A:C2	24:DA:1552:A:C5	2.50	0.99
8:AI:129:ARG:NH2	21:AA:966:G:H21	1.59	0.99
46:DW:13:ARG:HG3	46:DW:14:ASP:H	1.28	0.99
11:CL:43:LYS:HB3	11:CL:44:PRO:CD	1.91	0.99
21:AA:982:U:H4'	21:AA:983:A:O5'	1.61	0.99
18:CS:38:THR:HG1	18:CS:40:PHE:HD1	1.04	0.99
55:CA:1278:G:H4'	55:CA:1279:G:O5'	1.60	0.99
24:BA:855:G:H21	46:BW:23:LYS:HG2	1.26	0.98
28:DE:170:ARG:HH22	28:DE:176:ASP:HB2	1.25	0.98
13:AN:20:PHE:HA	13:AN:24:ALA:HB3	1.45	0.98
21:AA:1349:A:H2'	21:AA:1350:A:H8	1.25	0.98
4:AE:156:ARG:HG2	7:AH:63:LYS:HZ1	1.24	0.98
21:AA:1050:G:HO2'	21:AA:1051:C:H6	1.01	0.98
42:BS:96:ILE:O	42:BS:96:ILE:HG13	1.62	0.98
24:DA:1311:G:H21	24:DA:1603:A:H62	1.04	0.98
37:DN:37:THR:HG22	37:DN:39:PRO:HD2	1.44	0.98
55:CA:183:C:O2'	55:CA:184:G:H5'	1.63	0.98
36:BM:35:ALA:O	36:BM:36:VAL:HB	1.64	0.98
24:DA:2748:A:H1'	30:DG:66:THR:HG22	1.45	0.98
21:AA:6:G:N3	21:AA:6:G:H2'	1.79	0.98
55:CA:282:A:H2'	55:CA:283:U:C6	1.97	0.98
24:BA:1079:C:N4	24:BA:1088:A:H2	1.62	0.98
45:BV:80:HIS:HD2	45:BV:83:LYS:H	1.11	0.98
24:DA:2023:C:HO2'	24:DA:2024:G:H8	1.01	0.98
6:AG:14:ASP:HB3	6:AG:18:GLY:H	1.29	0.98
46:BW:9:THR:HG23	46:BW:10:ARG:HD3	1.45	0.98
7:CH:52:GLY:HA3	7:CH:56:PRO:HA	1.43	0.98
24:DA:2324:U:H5'	24:DA:2325:G:H5''	1.45	0.98
24:BA:637:A:H4'	24:BA:638:G:O5'	1.62	0.97
31:BH:31:VAL:HB	31:BH:32:PRO:HD2	1.45	0.97
40:BQ:69:ARG:HH21	40:BQ:69:ARG:HB2	1.23	0.97
1:AB:40:ILE:HD13	1:AB:201:GLY:HA2	1.46	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BR:49:ILE:CD1	41:BR:52:PRO:HA	1.93	0.97
41:BR:49:ILE:HD12	41:BR:52:PRO:HA	0.97	0.97
1:CB:19:THR:HB	1:CB:37:VAL:HA	1.46	0.97
24:DA:616:A:H2'	24:DA:617:G:C8	1.99	0.97
8:AI:129:ARG:HH21	21:AA:966:G:H21	1.12	0.97
24:BA:826:U:O2'	35:BL:53:GLY:HA3	1.64	0.97
55:CA:372:C:H4'	55:CA:373:A:H5'	1.46	0.97
24:DA:475:C:H2'	24:DA:476:G:C8	1.99	0.97
24:DA:491:G:H2'	24:DA:492:A:C8	2.00	0.97
27:BD:5:VAL:H	27:BD:32:ASN:HD21	1.08	0.97
2:CC:2:GLN:HB3	55:CA:1191:A:OP1	1.65	0.97
55:CA:282:A:H2'	55:CA:283:U:H6	1.26	0.97
24:DA:2836:U:HO2'	24:DA:2837:A:H8	0.99	0.97
4:AE:19:ARG:HA	4:AE:31:SER:O	1.64	0.97
8:AI:6:TYR:HE2	8:AI:17:ARG:HB2	1.29	0.97
29:BF:104:THR:HG22	29:BF:105:ILE:HG23	1.47	0.97
24:DA:1552:A:H2'	24:DA:1552:A:N3	1.79	0.97
41:BR:49:ILE:HD12	41:BR:52:PRO:CA	1.94	0.97
55:CA:6:G:H2'	55:CA:6:G:N3	1.80	0.97
24:DA:1429:G:O2'	24:DA:1430:G:H8	1.46	0.97
21:AA:430:A:O2'	21:AA:431:A:H5'	1.63	0.96
24:BA:1179:G:C5	24:BA:1180:U:H1'	2.00	0.96
24:DA:1716:U:O2'	24:DA:1717:A:H8	1.46	0.96
11:AL:23:LEU:HG	11:AL:24:GLU:H	1.28	0.96
24:BA:990:A:H8	24:BA:990:A:H5'	1.30	0.96
24:BA:2136:G:H2'	24:BA:2137:U:C5	1.99	0.96
24:DA:1731:G:O2'	24:DA:1732:C:H5''	1.64	0.96
40:DQ:4:LYS:NZ	40:DQ:6:GLY:HA3	1.79	0.96
43:DT:39:THR:HG21	43:DT:42:GLU:HB2	1.42	0.96
31:DH:97:ARG:O	31:DH:98:ASP:HB2	1.64	0.96
21:AA:1258:G:O2'	21:AA:1259:C:H5'	1.64	0.96
17:CR:72:ARG:HE	17:CR:72:ARG:H	1.01	0.96
21:AA:1046:A:O2'	21:AA:1047:G:H5'	1.65	0.96
11:AL:33:CYS:HB3	11:AL:54:VAL:HG22	1.46	0.96
27:BD:13:ARG:HH12	39:BP:74:GLN:HE21	1.04	0.96
8:CI:125:GLN:H	8:CI:125:GLN:HE21	1.04	0.96
9:CJ:52:LEU:HB2	13:CN:80:ARG:HE	1.30	0.96
24:DA:1283:G:H22	24:DA:1286:A:H5'	1.26	0.96
24:DA:2631:G:H2'	24:DA:2632:A:H5''	1.48	0.96
45:DV:29:ILE:HD13	45:DV:31:TYR:CE2	1.99	0.96
26:BC:251:THR:HG22	26:BC:252:LYS:H	1.26	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BN:33:ILE:HG23	37:BN:114:GLU:HB3	1.47	0.96
6:CG:91:ARG:HG2	6:CG:92:PRO:HD2	1.47	0.96
2:AC:154:GLY:HA2	2:AC:162:ALA:HB1	1.48	0.95
1:CB:104:LYS:HD2	1:CB:104:LYS:H	1.31	0.95
31:BH:31:VAL:HB	31:BH:32:PRO:CD	1.95	0.95
1:AB:22:TRP:HA	1:AB:189:ASN:HA	1.46	0.95
24:DA:1537:G:C2'	24:DA:1538:G:H4'	1.95	0.95
21:AA:1054:C:C5	22:AX:34:G:H1'	2.02	0.95
24:BA:2136:G:H2'	24:BA:2137:U:H5	1.28	0.95
37:BN:38:LEU:O	37:BN:38:LEU:HD12	1.65	0.95
10:CK:115:ILE:HD12	20:CU:23:GLU:HG2	1.47	0.95
24:BA:1073:A:H2'	24:BA:1074:G:H5''	1.46	0.95
8:CI:125:GLN:H	8:CI:125:GLN:NE2	1.63	0.95
24:DA:1476:U:O2'	24:DA:1477:A:O5'	1.84	0.95
24:DA:1931:U:H2'	24:DA:1932:A:H8	1.29	0.95
34:DK:111:LYS:H	34:DK:111:LYS:HE3	1.32	0.95
36:DM:19:GLY:H	36:DM:38:ARG:HH21	1.10	0.95
39:DP:91:VAL:HG22	39:DP:109:ILE:HG21	1.48	0.95
24:BA:2355:G:H4'	46:BW:20:LEU:HD13	1.48	0.95
36:BM:40:ARG:HB2	36:BM:93:VAL:HG21	1.49	0.95
24:DA:1439:A:C6	24:DA:1552:A:N7	2.35	0.95
21:AA:183:C:O2'	21:AA:184:G:H5'	1.67	0.95
30:BG:84:LYS:HG3	30:BG:132:LEU:N	1.80	0.95
20:CU:24:LYS:HG3	20:CU:25:ALA:H	1.31	0.94
55:CA:1213:A:O2'	55:CA:1214:C:C5'	2.14	0.94
24:DA:1784:A:H4'	24:DA:1785:A:O5'	1.66	0.94
6:AG:87:PRO:HG3	6:AG:148:LYS:HA	1.44	0.94
21:AA:204:G:H3'	21:AA:205:A:H5''	1.45	0.94
24:BA:639:U:H2'	24:BA:640:C:C6	2.01	0.94
20:CU:36:PHE:HB3	20:CU:40:PRO:HD3	1.46	0.94
46:DW:27:GLY:HA2	46:DW:31:LEU:HD11	1.47	0.94
7:CH:11:THR:HG22	7:CH:14:ARG:HH12	1.28	0.94
24:DA:491:G:H2'	24:DA:492:A:H8	1.31	0.94
8:AI:50:PRO:HD3	8:AI:79:ARG:HG2	1.48	0.94
28:BE:169:VAL:O	28:BE:170:ARG:HD2	1.67	0.94
12:CM:102:LYS:HA	55:CA:1226:C:C5	2.03	0.94
56:DB:42:C:H2'	56:DB:43:C:C6	2.03	0.94
55:CA:1218:C:H2'	55:CA:1219:A:C8	2.03	0.94
24:DA:96:C:H4'	48:DY:41:HIS:CD2	2.03	0.94
24:DA:1935:G:H1'	24:DA:1964:G:N2	1.83	0.94
31:DH:3:VAL:HG12	31:DH:38:PRO:HA	1.50	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:28:ASN:HD21	10:AK:47:GLY:H	1.11	0.94
33:BJ:81:ILE:HG23	33:BJ:82:GLY:H	1.30	0.94
46:BW:24:ARG:HD2	46:BW:25:PHE:N	1.81	0.94
24:DA:142:A:H2'	24:DA:143:C:C6	2.03	0.94
1:AB:24:PRO:HG3	21:AA:830:G:H5'	1.50	0.93
24:BA:1287:A:O2'	24:BA:1288:G:H5'	1.68	0.93
40:BQ:10:ARG:HB2	40:BQ:10:ARG:NH1	1.83	0.93
36:BM:108:VAL:HG13	36:BM:109:PRO:HD2	1.50	0.93
24:DA:1326:U:HO2'	24:DA:1327:A:H8	0.96	0.93
24:DA:1915:U:H2'	24:DA:1916:A:C8	2.04	0.93
29:DF:137:PHE:HB2	29:DF:138:PRO:HD2	1.49	0.93
24:BA:1056:G:H5''	24:BA:1057:A:H5'	1.47	0.93
9:CJ:84:VAL:HG23	9:CJ:85:ASP:H	1.34	0.93
55:CA:1088:G:H21	55:CA:1167:A:H61	1.14	0.93
1:AB:113:LEU:HD22	1:AB:143:LEU:HG	1.48	0.93
24:DA:364:C:H2'	24:DA:365:U:C6	2.04	0.93
24:DA:589:U:O2'	24:DA:590:A:H8	1.50	0.93
11:AL:43:LYS:HD3	11:AL:43:LYS:H	1.32	0.93
43:BT:30:ILE:HG23	43:BT:85:VAL:HB	1.51	0.93
20:CU:39:LYS:H	20:CU:40:PRO:HD2	1.32	0.93
46:DW:39:GLN:HE22	46:DW:58:LEU:HD23	1.34	0.93
49:BZ:29:ARG:HH21	49:BZ:29:ARG:HG3	1.34	0.93
21:AA:109:A:H2'	21:AA:326:G:H21	1.34	0.92
35:BL:93:ASN:HD22	35:BL:94:THR:N	1.67	0.92
24:DA:1469:A:H2'	24:DA:1470:A:C8	2.03	0.92
55:CA:977:A:H2'	55:CA:1224:U:O4	1.69	0.92
24:DA:15:G:OP1	50:D0:20:ALA:HB2	1.70	0.92
24:DA:33:C:O2'	24:DA:34:U:H5'	1.68	0.92
35:DL:23:ILE:HG13	41:DR:82:HIS:CE1	2.04	0.92
42:BS:73:LYS:HE3	42:BS:74:ILE:H	1.34	0.92
24:DA:802:A:H2'	24:DA:803:U:C6	2.03	0.92
24:BA:802:A:H2'	24:BA:803:U:C6	2.04	0.92
24:BA:1784:A:H4'	24:BA:1785:A:O5'	1.66	0.92
34:BK:111:LYS:HE2	34:BK:111:LYS:H	1.33	0.92
55:CA:512:U:O2'	55:CA:513:C:H5'	1.70	0.92
55:CA:1399:C:H4'	55:CA:1400:C:O5'	1.68	0.92
21:AA:1349:A:H2'	21:AA:1350:A:C8	2.05	0.92
24:BA:2233:U:H2'	24:BA:2234:G:C8	2.04	0.92
42:BS:18:ARG:HG2	42:BS:76:VAL:HG13	1.49	0.92
35:BL:29:LYS:HG2	35:BL:30:THR:HG23	1.50	0.92
38:BO:49:VAL:HG21	38:BO:82:ALA:HA	1.51	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:1255:G:H22	55:CA:1283:U:H3	1.18	0.92
55:CA:1450:U:H4'	55:CA:1451:U:C5	2.04	0.92
24:DA:445:C:O2'	24:DA:446:G:O4'	1.88	0.92
32:BI:23:VAL:HB	32:BI:27:LEU:HB3	1.49	0.92
33:BJ:30:THR:HG22	33:BJ:31:GLU:N	1.85	0.92
38:BO:31:THR:CG2	38:BO:34:HIS:H	1.82	0.92
4:CE:38:VAL:HG12	4:CE:39:GLY:H	1.32	0.92
40:DQ:4:LYS:HZ2	40:DQ:6:GLY:HA3	1.29	0.92
46:DW:28:GLU:H	46:DW:31:LEU:HD21	1.32	0.92
24:DA:2051:A:H4'	24:DA:2052:A:OP1	1.68	0.92
5:AF:50:PRO:HD2	17:AR:73:HIS:HD2	1.35	0.92
30:BG:8:VAL:HG11	30:BG:49:LEU:HB2	1.50	0.92
24:DA:1238:G:H2'	24:DA:1239:G:H8	1.33	0.92
28:DE:130:LYS:HB3	28:DE:133:LEU:HB3	1.52	0.92
24:DA:444:C:HO2'	24:DA:445:C:H6	0.98	0.91
24:DA:647:G:H2'	24:DA:648:G:H8	1.32	0.91
43:DT:29:THR:HB	43:DT:87:LEU:H	1.33	0.91
11:CL:80:LEU:HD23	11:CL:97:VAL:HG21	1.51	0.91
55:CA:132:C:HO2'	55:CA:133:U:H6	0.95	0.91
55:CA:1215:G:O2'	55:CA:1216:A:H5'	1.69	0.91
24:DA:1474:U:H2'	24:DA:1475:G:H5'	1.52	0.91
29:BF:134:GLN:HG2	29:BF:135:ILE:H	1.36	0.91
43:BT:56:GLU:HG2	43:BT:57:VAL:HG12	1.51	0.91
55:CA:547:A:H4'	55:CA:548:G:O5'	1.66	0.91
24:DA:915:C:H2'	24:DA:916:G:C8	2.04	0.91
39:DP:63:ILE:HA	39:DP:68:GLY:HA2	1.52	0.91
21:AA:71:A:H61	21:AA:99:C:H1'	1.34	0.91
21:AA:94:G:H4'	21:AA:95:C:C5'	2.01	0.91
24:DA:1010:A:O2'	24:DA:1011:G:H5''	1.70	0.91
39:DP:20:ARG:HG2	39:DP:112:ARG:HH12	1.33	0.91
8:CI:125:GLN:HE21	8:CI:125:GLN:N	1.69	0.91
24:DA:247:G:H4'	24:DA:386:G:C5	2.05	0.91
24:DA:1565:C:HO2'	24:DA:1566:A:H8	1.05	0.91
24:BA:979:A:H2'	24:BA:982:C:H42	1.33	0.91
21:AA:486:U:H2'	21:AA:487:A:C8	2.05	0.91
29:DF:74:ALA:HB3	29:DF:78:ILE:HG13	1.53	0.91
2:AC:56:ILE:HG12	2:AC:65:VAL:HG22	1.53	0.91
21:AA:496:A:H2'	21:AA:496:A:N3	1.82	0.91
41:BR:42:ALA:HA	41:BR:46:GLU:HB2	1.52	0.91
42:BS:73:LYS:HE3	42:BS:74:ILE:N	1.85	0.91
46:BW:28:GLU:HB3	46:BW:31:LEU:HD21	1.53	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DD:106:LYS:HB3	27:DD:206:ALA:HB3	1.52	0.91
3:AD:68:GLU:HG3	21:AA:545:C:H5'	1.53	0.90
28:DE:47:LYS:HB3	28:DE:51:GLU:HB2	1.53	0.90
46:DW:40:ARG:HG2	46:DW:40:ARG:NH1	1.80	0.90
24:BA:1060:U:H5''	24:BA:1061:U:H5'	1.51	0.90
24:BA:1746:A:H2'	24:BA:1747:U:C6	2.05	0.90
55:CA:1382:C:HO2'	55:CA:1383:C:H6	0.96	0.90
24:DA:616:A:H2'	24:DA:617:G:H8	1.35	0.90
34:BK:21:CYS:HB2	34:BK:39:ILE:HD11	1.53	0.90
40:BQ:65:ASN:HD21	40:BQ:69:ARG:HH22	1.15	0.90
24:DA:2135:A:H2'	24:DA:2136:G:O4'	1.70	0.90
1:AB:89:PHE:HB3	1:AB:149:GLY:HA2	1.54	0.90
1:AB:108:GLN:HE21	1:AB:108:GLN:H	1.17	0.90
32:BI:15:GLY:HA2	32:BI:50:LYS:HB3	1.53	0.90
21:AA:1319:A:H4'	21:AA:1320:C:OP1	1.71	0.90
40:BQ:63:ARG:HH12	40:BQ:96:ASP:CA	1.83	0.90
1:CB:79:VAL:HA	1:CB:213:LEU:HD21	1.51	0.90
24:DA:373:U:HO2'	24:DA:374:A:H8	0.90	0.90
24:BA:859:G:H8	24:BA:859:G:OP2	1.55	0.90
24:DA:915:C:H2'	24:DA:916:G:H8	1.36	0.90
30:DG:93:TYR:H	30:DG:93:TYR:HD2	1.16	0.90
15:AP:73:ALA:O	15:AP:77:GLU:HB2	1.72	0.90
41:BR:16:GLU:HA	41:BR:98:ILE:HG22	1.53	0.90
24:DA:397:U:OP1	47:DX:30:PRO:HA	1.72	0.90
24:DA:647:G:H2'	24:DA:648:G:C8	2.07	0.90
3:AD:109:THR:HG23	3:AD:112:GLU:H	1.33	0.90
21:AA:212:G:O2'	21:AA:213:G:H8	1.52	0.90
24:DA:2036:C:O2'	24:DA:2037:A:C8	2.25	0.90
37:DN:22:ARG:HG3	37:DN:70:THR:HA	1.52	0.90
24:BA:752:A:H62	24:BA:2609:U:H3	1.17	0.90
43:BT:39:THR:HB	43:BT:42:GLU:HB2	1.51	0.90
24:BA:2354:C:H4'	46:BW:31:LEU:HD22	1.54	0.89
24:DA:2311:A:H2'	24:DA:2311:A:N3	1.86	0.89
10:AK:28:ASN:ND2	10:AK:47:GLY:H	1.70	0.89
27:BD:9:VAL:HG22	27:BD:26:VAL:HB	1.54	0.89
55:CA:1241:G:O2'	55:CA:1242:G:H8	1.54	0.89
26:DC:128:THR:HG22	26:DC:188:ARG:HB3	1.54	0.89
24:BA:1563:U:H2'	24:BA:1564:C:H6	1.38	0.89
24:DA:2358:A:H61	35:DL:54:GLN:HE22	1.17	0.89
4:AE:76:ASN:HB3	4:AE:81:GLN:HG3	1.54	0.89
4:AE:94:PHE:HZ	4:AE:96:GLN:HE21	1.17	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:555:U:H2'	21:AA:556:C:H6	1.37	0.89
24:DA:2308:G:O6	24:DA:2311:A:N6	2.06	0.89
38:DO:115:LEU:H	38:DO:115:LEU:HD13	1.36	0.89
13:AN:40:ARG:HH12	13:AN:44:VAL:HG21	1.35	0.89
24:BA:2308:G:HO2'	24:BA:2310:C:H5	0.93	0.89
24:DA:1739:A:H2'	24:DA:1740:G:H8	1.37	0.89
13:CN:89:ARG:HG3	13:CN:91:GLU:HG2	1.54	0.89
21:AA:513:C:H2'	21:AA:514:C:H6	1.37	0.89
27:BD:53:GLY:HA3	27:BD:77:ARG:H	1.38	0.89
5:AF:50:PRO:HD2	17:AR:73:HIS:CD2	2.08	0.89
6:AG:3:ARG:HG3	6:AG:4:ARG:H	1.38	0.89
6:AG:74:VAL:HG21	6:AG:143:MET:HG2	1.51	0.89
24:BA:197:A:H62	24:BA:2430:A:H2'	1.33	0.89
24:BA:860:U:O2'	24:BA:861:A:H5'	1.73	0.89
24:DA:1739:A:H2'	24:DA:1740:G:C8	2.08	0.89
4:AE:76:ASN:HB3	4:AE:81:GLN:CG	2.03	0.89
24:BA:118:A:C8	24:BA:119:A:C8	2.61	0.89
40:BQ:43:GLN:HE21	41:BR:77:PHE:HB3	1.24	0.89
21:AA:1530:G:O2'	21:AA:1531:A:H8	1.56	0.89
26:BC:12:ARG:HH11	26:BC:12:ARG:CG	1.86	0.89
7:CH:73:SER:HB2	7:CH:129:ALA:HB3	1.52	0.89
55:CA:181:A:HO2'	55:CA:182:A:H2	0.94	0.89
27:BD:97:SER:HB3	27:BD:99:GLU:OE1	1.74	0.88
55:CA:1356:G:H2'	55:CA:1357:A:C8	2.08	0.88
24:DA:2259:U:O2'	24:DA:2260:C:H6	1.54	0.88
48:DY:20:ASN:HD22	48:DY:50:VAL:HG22	1.35	0.88
24:DA:946:C:HO2'	24:DA:947:A:H8	0.89	0.88
24:DA:2056:G:H21	50:D0:1:ALA:H3	1.19	0.88
1:CB:67:LEU:HB2	1:CB:160:LEU:HG	1.56	0.88
6:CG:118:ARG:NH2	55:CA:1239:A:H3'	1.88	0.88
7:CH:106:SER:HA	55:CA:642:A:N7	1.88	0.88
28:BE:79:ARG:HG2	28:BE:80:SER:H	1.38	0.88
2:CC:106:ARG:HD3	2:CC:106:ARG:H	1.37	0.88
30:BG:122:ALA:HB2	30:BG:132:LEU:HB3	1.54	0.88
1:CB:114:LYS:HA	1:CB:117:GLU:HG2	1.55	0.88
55:CA:151:A:H2'	55:CA:152:A:O4'	1.74	0.88
55:CA:499:A:O2'	55:CA:500:G:C8	2.25	0.88
24:DA:637:A:H4'	24:DA:638:G:O5'	1.69	0.88
24:DA:668:A:H2'	24:DA:670:A:H62	1.37	0.88
24:BA:1509:A:O2'	24:BA:1510:G:O5'	1.92	0.88
51:B1:47:ILE:HD12	51:B1:47:ILE:H	1.38	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:109:C:H4'	24:DA:348:A:H4'	1.55	0.88
24:DA:575:A:O2'	24:DA:576:U:H5'	1.73	0.88
33:BJ:44:TYR:CD1	40:BQ:59:LEU:HD11	2.08	0.88
46:BW:51:GLY:HA3	46:BW:59:PHE:CE2	2.08	0.88
55:CA:113:G:H1'	55:CA:354:G:H5'	1.56	0.88
24:BA:869:G:H4'	36:BM:8:LYS:HE2	1.56	0.88
55:CA:960:U:O2'	55:CA:1223:C:H5''	1.72	0.88
36:DM:35:ALA:HB3	36:DM:99:GLY:H	1.38	0.88
51:D1:7:LYS:HD3	53:D3:33:THR:HG21	1.55	0.88
24:DA:83:A:H61	24:DA:101:A:H5'	1.37	0.88
24:DA:2838:G:H1'	37:DN:45:ARG:HH22	1.38	0.88
15:CP:20:VAL:HG21	15:CP:32:PHE:HB2	1.53	0.88
24:DA:2385:C:HO2'	24:DA:2386:A:H8	1.22	0.88
41:DR:39:LEU:HA	41:DR:49:ILE:HG21	1.54	0.88
24:BA:954:G:C5	24:BA:955:U:C5	2.61	0.87
24:BA:2197:U:OP1	3:CD:150:LYS:HG3	1.74	0.87
55:CA:654:G:H2'	55:CA:655:A:C8	2.09	0.87
55:CA:1300:G:H22	55:CA:1334:G:H2'	1.37	0.87
24:DA:2024:G:H2'	24:DA:2025:C:C6	2.09	0.87
24:DA:2415:G:H4'	35:DL:66:PHE:HB2	1.53	0.87
7:AH:29:SER:HB3	7:AH:32:LYS:HG3	1.56	0.87
39:BP:20:ARG:HD2	39:BP:112:ARG:NH1	1.89	0.87
10:AK:87:GLY:N	10:AK:113:THR:HG22	1.90	0.87
24:BA:784:G:C6	26:BC:227:VAL:HG11	2.10	0.87
24:BA:1817:G:O2'	24:BA:1818:U:H5'	1.74	0.87
31:BH:45:GLU:O	31:BH:49:ALA:HB2	1.75	0.87
34:BK:18:ARG:HH11	34:BK:18:ARG:HG3	1.39	0.87
37:BN:73:ASN:HA	37:BN:76:VAL:HG12	1.54	0.87
56:DB:38:C:H4'	38:DO:100:HIS:NE2	1.88	0.87
2:AC:166:TRP:H	2:AC:166:TRP:HE3	1.16	0.87
16:AQ:18:LYS:HA	16:AQ:47:ASP:HB2	1.56	0.87
24:BA:370:G:O2'	24:BA:424:G:OP1	1.92	0.87
24:BA:638:G:H2'	24:BA:639:U:C6	2.10	0.87
55:CA:500:G:O2'	55:CA:501:C:H5'	1.74	0.87
24:BA:2327:A:H2'	24:BA:2328:A:C8	2.09	0.87
24:BA:2492:U:O2'	24:BA:2493:U:H5'	1.75	0.87
24:BA:2602:A:H4'	24:BA:2603:G:OP2	1.74	0.87
7:AH:95:MET:HB2	7:AH:98:LEU:O	1.73	0.87
21:AA:82:G:H21	21:AA:84:U:H3	1.20	0.87
24:BA:754:U:H2'	24:BA:755:U:H6	1.38	0.87
24:BA:1026:G:H2'	24:BA:1027:A:C8	2.10	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:32:PRO:HB3	47:BX:38:TRP:HB3	1.56	0.87
8:CI:5:TYR:HB2	8:CI:20:ILE:HG22	1.54	0.87
55:CA:994:A:HO2'	55:CA:995:C:H6	0.89	0.87
55:CA:1157:A:H4'	55:CA:1158:C:O5'	1.72	0.87
31:DH:59:ALA:HA	31:DH:63:ALA:HB3	1.55	0.87
21:AA:967:C:H2'	21:AA:968:A:C8	2.10	0.87
24:BA:860:U:H5'	24:BA:860:U:H6	1.38	0.87
29:BF:132:ARG:O	29:BF:133:GLU:HB3	1.75	0.87
4:CE:148:SER:H	4:CE:151:MET:HE3	1.38	0.87
1:CB:11:ALA:HB1	1:CB:211:LEU:HD21	1.56	0.87
33:DJ:64:VAL:HG22	33:DJ:68:LYS:HE2	1.57	0.87
20:AU:19:LYS:HZ2	20:AU:19:LYS:HA	1.40	0.86
24:DA:272:A:O2'	24:DA:273:G:C8	2.27	0.86
28:BE:161:ALA:HA	28:BE:164:LEU:HB2	1.57	0.86
24:DA:395:U:O2'	24:DA:396:G:H8	1.56	0.86
46:BW:23:LYS:O	46:BW:66:VAL:HB	1.73	0.86
55:CA:977:A:H8	55:CA:1223:C:C2	1.93	0.86
17:AR:22:TYR:HB2	17:AR:61:ALA:HB2	1.56	0.86
17:AR:63:TYR:HE1	21:AA:734:G:H21	1.18	0.86
55:CA:922:G:H2'	55:CA:923:A:C8	2.11	0.86
24:DA:782:A:OP1	24:DA:782:A:H8	1.57	0.86
21:AA:82:G:N2	21:AA:84:U:H3	1.71	0.86
21:AA:946:A:H2'	21:AA:947:G:C8	2.10	0.86
30:DG:120:ILE:HG13	30:DG:140:ILE:HG22	1.57	0.86
46:DW:37:VAL:HG12	46:DW:55:ASP:HB2	1.56	0.86
3:AD:187:ARG:HH12	3:AD:191:SER:HB2	1.36	0.86
39:BP:61:ARG:HG2	39:BP:70:GLU:HG2	1.57	0.86
8:CI:17:ARG:HB2	8:CI:65:THR:HB	1.58	0.86
31:DH:115:VAL:HG12	31:DH:132:PHE:HB2	1.57	0.86
21:AA:94:G:H4'	21:AA:95:C:O5'	1.73	0.86
1:CB:53:LEU:HG	1:CB:219:THR:HG21	1.58	0.86
55:CA:1322:C:O2'	55:CA:1323:G:H5'	1.74	0.86
24:DA:1312:U:O2'	24:DA:1314:C:N4	2.08	0.86
24:DA:2458:G:H2'	24:DA:2490:G:H1	1.38	0.86
24:BA:2023:C:O2'	24:BA:2024:G:H5'	1.75	0.86
46:BW:9:THR:CG2	46:BW:10:ARG:HD3	2.05	0.86
24:DA:206:U:O2'	24:DA:207:A:H5'	1.76	0.86
24:DA:250:G:H2'	24:DA:251:A:C8	2.10	0.86
24:DA:1391:U:H4'	43:DT:19:LYS:HZ1	1.41	0.86
37:DN:62:ASN:O	37:DN:63:ARG:HB2	1.74	0.86
45:DV:31:TYR:OH	45:DV:90:ASP:HB3	1.75	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:198:G:O2'	21:AA:199:A:H8	1.57	0.86
21:AA:484:G:H4'	21:AA:485:U:O5'	1.73	0.86
24:BA:459:U:HO2'	24:BA:460:A:H5'	1.40	0.86
24:BA:636:G:C6	35:BL:111:ILE:HD11	2.11	0.86
6:CG:101:ARG:HH12	55:CA:1375:A:H4'	1.40	0.86
7:CH:106:SER:HA	55:CA:642:A:C5	2.11	0.86
55:CA:197:A:C6	55:CA:221:C:H4'	2.11	0.86
24:DA:1639:C:H2'	24:DA:1640:A:H5''	1.58	0.86
45:DV:77:VAL:HA	45:DV:89:ILE:HG22	1.58	0.86
24:DA:1931:U:H2'	24:DA:1932:A:C8	2.11	0.86
35:DL:47:ARG:HH21	35:DL:47:ARG:HG2	1.38	0.86
6:AG:147:ASN:H	6:AG:147:ASN:HD22	1.24	0.85
21:AA:702:A:O2'	21:AA:703:G:OP1	1.91	0.85
24:BA:271:G:O2'	24:BA:272:A:H5''	1.76	0.85
24:BA:1063:G:H2'	24:BA:1064:C:O4'	1.76	0.85
30:BG:33:THR:HA	30:BG:34:ARG:HH11	1.40	0.85
24:DA:1508:A:H4'	24:DA:1509:A:OP1	1.73	0.85
26:BC:52:HIS:NE2	26:BC:218:THR:HG23	1.91	0.85
55:CA:555:U:H2'	55:CA:556:C:H6	1.41	0.85
32:DI:91:LYS:HB3	32:DI:94:LYS:HB2	1.57	0.85
34:DK:13:ASN:HD21	34:DK:97:THR:H	1.24	0.85
20:AU:19:LYS:HA	20:AU:19:LYS:NZ	1.91	0.85
55:CA:197:A:H4'	55:CA:198:G:O5'	1.72	0.85
55:CA:346:G:H2'	55:CA:346:G:N3	1.88	0.85
24:DA:1245:G:H4'	28:DE:33:VAL:HG11	1.58	0.85
24:DA:1857:G:H1'	24:DA:1884:G:H22	1.41	0.85
4:AE:96:GLN:OE1	4:AE:97:PRO:HD2	1.74	0.85
8:AI:59:LYS:HD2	8:AI:60:LEU:HD22	1.55	0.85
24:BA:669:G:H2'	24:BA:669:G:N3	1.90	0.85
28:BE:44:ARG:HG3	28:BE:44:ARG:NH2	1.90	0.85
6:CG:101:ARG:NH2	55:CA:940:C:H5'	1.90	0.85
24:DA:1654:A:O2'	24:DA:1655:A:H8	1.59	0.85
13:AN:44:VAL:HG23	13:AN:45:LEU:H	1.41	0.85
21:AA:423:G:H2'	21:AA:423:G:N3	1.88	0.85
21:AA:486:U:C6	21:AA:486:U:H5''	2.12	0.85
9:CJ:11:LYS:NZ	9:CJ:99:GLN:HB3	1.91	0.85
24:DA:1819:A:H1'	24:DA:1821:A:C6	2.11	0.85
21:AA:51:A:OP1	21:AA:51:A:H3'	1.76	0.85
21:AA:631:C:H5''	21:AA:632:U:H5'	1.57	0.85
24:BA:1560:G:H2'	24:BA:1561:C:H6	1.39	0.85
24:BA:1847:A:H8	24:BA:1848:A:N7	1.74	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:146:VAL:HG23	28:BE:167:VAL:HG23	1.57	0.85
30:BG:7:PRO:O	30:BG:8:VAL:HB	1.74	0.85
24:DA:604:G:HO2'	24:DA:605:G:H8	0.86	0.85
24:DA:2385:C:O2'	24:DA:2386:A:H8	1.60	0.85
46:DW:40:ARG:HH11	46:DW:40:ARG:CG	1.88	0.85
21:AA:566:G:H4'	21:AA:567:G:OP1	1.76	0.85
24:BA:762:U:H4'	24:BA:763:G:O5'	1.77	0.85
26:BC:14:HIS:O	26:BC:203:VAL:HG11	1.74	0.85
33:BJ:31:GLU:HG3	33:BJ:142:ILE:HG21	1.59	0.85
24:DA:9:G:H1	24:DA:2629:U:H2'	1.42	0.85
46:DW:17:ALA:O	46:DW:18:LYS:HB3	1.74	0.85
54:D4:16:ILE:HG12	54:D4:25:VAL:HG22	1.56	0.85
24:BA:13:A:O2'	24:BA:15:G:N7	2.10	0.85
24:BA:181:A:H2'	24:BA:182:A:C8	2.11	0.85
24:BA:581:C:H2'	24:BA:582:A:H8	1.40	0.85
11:CL:2:THR:HB	11:CL:5:GLN:HB2	1.56	0.85
12:CM:12:LYS:HA	12:CM:12:LYS:HE3	1.56	0.85
24:DA:373:U:O2'	24:DA:374:A:H8	1.59	0.85
30:DG:124:CYS:HB3	30:DG:130:ILE:HA	1.57	0.85
21:AA:575:G:H4'	21:AA:576:C:C5'	2.07	0.85
21:AA:889:A:H4'	21:AA:890:G:OP1	1.77	0.85
21:AA:79:G:H2'	21:AA:80:A:H8	1.40	0.85
24:BA:459:U:H2'	24:BA:460:A:H8	1.40	0.85
34:BK:71:ARG:HB2	34:BK:72:PRO:HD3	1.58	0.85
24:DA:1635:A:O2'	24:DA:1636:U:H5'	1.75	0.85
24:DA:2408:U:O2'	24:DA:2409:G:H8	1.57	0.85
24:BA:931:U:O4	24:BA:1166:G:N2	2.09	0.84
48:BY:56:LEU:O	48:BY:57:LEU:HB3	1.73	0.84
24:DA:510:C:H2'	24:DA:511:U:C6	2.12	0.84
24:DA:2837:A:H2'	24:DA:2838:G:C8	2.12	0.84
27:DD:34:VAL:HG12	27:DD:48:ILE:HD11	1.59	0.84
37:BN:79:LEU:O	37:BN:80:PHE:HB2	1.76	0.84
55:CA:1203:C:H2'	55:CA:1204:A:C8	2.11	0.84
24:DA:1062:G:O4'	24:DA:1088:A:N7	2.10	0.84
34:DK:38:ILE:HG12	34:DK:61:VAL:HG12	1.60	0.84
21:AA:486:U:H5''	21:AA:486:U:H6	1.41	0.84
21:AA:548:G:O2'	21:AA:549:C:H5'	1.77	0.84
21:AA:1157:A:H4'	21:AA:1158:C:O5'	1.76	0.84
10:CK:110:THR:HG22	20:CU:4:LYS:HA	1.60	0.84
24:DA:1996:C:H4'	24:DA:1997:C:OP1	1.75	0.84
21:AA:1236:A:H4'	21:AA:1304:G:H4'	1.57	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:335:C:H5''	44:BU:81:ARG:HD3	1.59	0.84
24:BA:1140:C:P	33:BJ:68:LYS:HZ3	1.99	0.84
47:BX:5:GLN:NE2	47:BX:49:ARG:H	1.75	0.84
5:CF:92:THR:HG22	5:CF:94:HIS:H	1.42	0.84
55:CA:374:A:H5''	55:CA:452:A:N1	1.91	0.84
55:CA:1299:A:H2'	55:CA:1299:A:N3	1.91	0.84
24:DA:2460:U:H2'	24:DA:2461:A:C8	2.12	0.84
27:DD:119:ALA:HB3	27:DD:163:GLY:H	1.41	0.84
55:CA:576:C:H3'	55:CA:577:G:H3'	1.59	0.84
24:DA:2757:A:N1	30:DG:66:THR:HG21	1.93	0.84
30:DG:1:SER:HB2	30:DG:61:TRP:HB3	1.60	0.84
42:DS:8:ARG:O	42:DS:9:HIS:HB2	1.76	0.84
19:AT:6:ALA:HB1	19:AT:9:ARG:HB2	1.58	0.84
22:AX:27:G:H8	22:AX:27:G:H5''	1.42	0.84
24:BA:279:A:O2'	24:BA:280:U:H5'	1.77	0.84
24:BA:320:A:HO2'	24:BA:322:A:H8	1.24	0.84
55:CA:834:U:H2'	55:CA:835:U:C6	2.12	0.84
24:DA:607:U:OP1	28:DE:98:LYS:HB3	1.78	0.84
24:DA:2520:C:O2'	24:DA:2521:C:H6	1.59	0.84
21:AA:1138:G:N3	21:AA:1138:G:H2'	1.92	0.84
24:BA:545:U:H2'	24:BA:546:U:H4'	1.58	0.84
40:BQ:4:LYS:HG3	40:BQ:5:ARG:H	1.42	0.84
24:DA:1069:A:O2'	24:DA:1070:A:H5'	1.76	0.84
24:DA:2825:G:H3'	24:DA:2826:A:H8	1.41	0.84
24:BA:855:G:N2	46:BW:23:LYS:HG2	1.91	0.84
24:BA:860:U:H5'	24:BA:860:U:C6	2.12	0.84
39:BP:33:GLU:HB2	39:BP:38:ARG:HH11	1.43	0.84
1:CB:206:ILE:HA	1:CB:209:VAL:HG22	1.59	0.84
55:CA:913:A:O2'	55:CA:914:A:H5''	1.78	0.84
32:DI:104:GLN:HA	32:DI:107:GLU:HB2	1.60	0.84
9:AJ:35:GLN:HE21	9:AJ:35:GLN:HA	1.43	0.84
21:AA:390:U:H2'	21:AA:391:G:H8	1.42	0.84
29:BF:35:LEU:HB3	29:BF:153:ILE:CG2	2.07	0.84
2:CC:150:VAL:HG12	2:CC:199:VAL:HG12	1.59	0.84
55:CA:704:A:H2'	55:CA:705:G:H8	1.42	0.84
24:DA:919:U:H2'	24:DA:920:A:C8	2.12	0.84
24:DA:1662:U:H2'	24:DA:1663:G:H5''	1.57	0.84
24:BA:796:C:H2'	24:BA:797:G:H8	1.43	0.84
24:BA:2197:U:HO2'	24:BA:2198:A:H8	1.25	0.84
24:BA:2305:U:H2'	24:BA:2306:C:O4'	1.77	0.84
55:CA:496:A:N3	55:CA:496:A:H2'	1.91	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:787:C:H3'	24:DA:791:C:H41	1.43	0.84
24:DA:922:C:H1'	46:DW:22:VAL:HG21	1.59	0.84
24:DA:1563:U:H2'	24:DA:1564:C:C6	2.13	0.84
34:DK:69:VAL:HG11	34:DK:106:GLU:HG2	1.58	0.84
13:AN:50:LEU:HB3	13:AN:51:PRO:HD2	1.60	0.83
21:AA:473:U:H2'	21:AA:474:G:H8	1.42	0.83
24:BA:945:A:H5'	24:BA:946:C:OP2	1.78	0.83
24:BA:1392:A:H2'	24:BA:1393:A:C8	2.13	0.83
36:BM:40:ARG:HB2	36:BM:93:VAL:CG2	2.08	0.83
1:CB:162:VAL:HG13	1:CB:184:ALA:HB2	1.59	0.83
55:CA:1255:G:N2	55:CA:1283:U:H3	1.75	0.83
22:AX:30:G:H2'	22:AX:31:A:H8	1.43	0.83
39:BP:3:ILE:HD13	39:BP:3:ILE:O	1.78	0.83
24:DA:1439:A:N1	24:DA:1552:A:N7	2.24	0.83
28:DE:148:ILE:HD13	28:DE:187:VAL:HG21	1.61	0.83
43:DT:44:LYS:O	43:DT:48:GLN:HG2	1.78	0.83
21:AA:94:G:H4'	21:AA:95:C:H5''	1.60	0.83
27:BD:107:VAL:H	27:BD:206:ALA:H	1.23	0.83
55:CA:1054:C:N4	22:CX:34:G:H1'	1.93	0.83
26:DC:146:LYS:HB2	26:DC:149:LYS:HB2	1.58	0.83
24:DA:654:A:H2'	24:DA:655:A:H5''	1.61	0.83
24:DA:1324:G:O2'	24:DA:1616:A:C6	2.31	0.83
24:DA:2287:A:HO2'	24:DA:2288:A:H3'	1.41	0.83
4:AE:37:VAL:HG21	4:AE:113:VAL:HG12	1.58	0.83
20:AU:52:VAL:HG13	20:AU:53:LYS:H	1.41	0.83
21:AA:1224:U:H4'	21:AA:1225:A:OP2	1.77	0.83
24:BA:404:A:O2'	24:BA:405:U:OP2	1.96	0.83
40:BQ:65:ASN:ND2	40:BQ:69:ARG:HH22	1.75	0.83
9:CJ:11:LYS:HZ1	9:CJ:99:GLN:HB3	1.44	0.83
12:CM:25:GLY:N	55:CA:1329:A:H5''	1.92	0.83
24:DA:16:C:H2'	24:DA:17:G:H8	1.43	0.83
24:DA:2273:A:H2'	24:DA:2274:A:C8	2.12	0.83
5:AF:53:LYS:NZ	21:AA:710:G:H5''	1.94	0.83
24:BA:74:A:H4'	24:BA:75:G:O5'	1.77	0.83
38:BO:51:ALA:HB3	38:BO:78:VAL:HG13	1.60	0.83
43:BT:29:THR:HB	43:BT:86:THR:HG22	1.58	0.83
24:DA:2776:A:H4'	24:DA:2777:G:O5'	1.77	0.83
27:DD:105:LYS:HA	27:DD:177:VAL:HG22	1.60	0.83
46:BW:39:GLN:HG2	46:BW:41:GLY:H	1.43	0.83
55:CA:116:A:H2'	55:CA:117:G:C8	2.14	0.83
55:CA:724:G:H2'	55:CA:725:G:H8	1.40	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:113:LEU:HB2	1:AB:143:LEU:HD11	1.60	0.83
24:BA:2297:A:N1	24:BA:2321:U:H5	1.75	0.83
55:CA:519:C:H2'	55:CA:520:A:C8	2.13	0.83
24:DA:1676:A:C2	24:DA:1993:U:H5'	2.12	0.83
46:DW:27:GLY:CA	46:DW:31:LEU:HD11	2.08	0.83
24:BA:2756:U:H4'	24:BA:2757:A:O5'	1.78	0.83
46:BW:37:VAL:HG12	46:BW:38:ARG:N	1.94	0.83
4:CE:41:GLY:O	4:CE:118:GLY:HA3	1.77	0.83
55:CA:274:A:HO2'	55:CA:275:G:H8	1.25	0.83
24:DA:1283:G:N2	24:DA:1286:A:H5'	1.93	0.83
24:DA:2024:G:H2'	24:DA:2025:C:H6	1.43	0.83
6:AG:147:ASN:HD22	6:AG:147:ASN:N	1.75	0.83
27:BD:16:THR:HG23	27:BD:18:ASP:OD1	1.78	0.83
43:BT:44:LYS:HG3	43:BT:55:VAL:HG11	1.61	0.83
20:CU:16:ARG:HG3	20:CU:19:LYS:HG2	1.57	0.83
24:DA:1674:G:H21	24:DA:1677:A:H61	1.24	0.83
24:BA:1509:A:O2'	24:BA:1510:G:P	2.36	0.82
31:BH:2:GLN:O	31:BH:3:VAL:HG22	1.79	0.82
9:CJ:57:VAL:HG22	9:CJ:58:ASN:H	1.41	0.82
24:BA:2148:G:H2'	24:BA:2149:U:O4'	1.79	0.82
26:BC:246:PRO:HG2	26:BC:247:TRP:CZ3	2.14	0.82
24:DA:2682:A:H61	24:DA:2728:U:H1'	1.44	0.82
24:DA:2798:U:H5'	24:DA:2800:A:C5	2.13	0.82
26:DC:144:GLU:HB3	26:DC:187:CYS:HB2	1.60	0.82
35:DL:124:GLY:H	35:DL:143:GLU:HG3	1.44	0.82
39:DP:50:ARG:HB3	39:DP:56:SER:HB3	1.61	0.82
3:AD:172:VAL:HG22	3:AD:173:ASP:H	1.43	0.82
5:AF:46:GLN:HA	5:AF:56:LYS:HG2	1.61	0.82
9:AJ:57:VAL:HG22	9:AJ:58:ASN:H	1.45	0.82
21:AA:96:U:HO2'	21:AA:97:G:H8	1.27	0.82
21:AA:1386:G:H2'	21:AA:1387:G:H8	1.44	0.82
30:BG:96:ALA:HB3	30:BG:103:ASN:HB3	1.61	0.82
32:BI:100:ILE:HG22	32:BI:101:SER:H	1.45	0.82
53:B3:22:LYS:HA	53:B3:47:ALA:O	1.80	0.82
13:CN:89:ARG:HG3	13:CN:91:GLU:CG	2.09	0.82
19:CT:2:ASN:N	19:CT:7:LYS:HZ3	1.77	0.82
55:CA:82:G:C2'	55:CA:83:C:H4'	2.08	0.82
24:DA:1204:A:H4'	24:DA:1205:A:O5'	1.79	0.82
2:AC:86:LEU:O	2:AC:90:VAL:HG23	1.78	0.82
21:AA:654:G:H2'	21:AA:655:A:C8	2.15	0.82
21:AA:792:A:H4'	21:AA:793:U:O5'	1.79	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:984:C:HO2'	21:AA:985:C:H6	0.85	0.82
24:BA:1673:G:H2'	24:BA:1674:G:H5'	1.61	0.82
32:BI:78:LEU:HD13	32:BI:108:ILE:HG23	1.60	0.82
8:CI:75:ALA:HA	8:CI:78:ILE:HD12	1.60	0.82
24:DA:656:G:H2'	24:DA:657:U:C6	2.13	0.82
56:DB:5:U:H2'	56:DB:6:G:C8	2.14	0.82
39:DP:88:ARG:HE	39:DP:112:ARG:HH21	1.25	0.82
21:AA:306:A:H2'	21:AA:307:C:C6	2.13	0.82
39:BP:50:ARG:CD	39:BP:51:ASN:H	1.93	0.82
46:BW:51:GLY:HA3	46:BW:59:PHE:CZ	2.14	0.82
14:CO:16:ARG:HB2	14:CO:23:SER:HB2	1.61	0.82
17:CR:72:ARG:H	17:CR:72:ARG:NE	1.78	0.82
55:CA:94:G:H4'	55:CA:95:C:OP1	1.79	0.82
24:DA:1809:A:O2'	24:DA:1810:A:H8	1.62	0.82
37:DN:2:ARG:HD2	37:DN:5:LYS:HB3	1.61	0.82
7:AH:6:ILE:HB	7:AH:76:ARG:HH12	1.41	0.82
7:AH:22:ALA:HA	7:AH:62:LEU:HB2	1.59	0.82
21:AA:558:G:OP1	59:AA:1841:HOH:O	1.98	0.82
35:BL:29:LYS:O	35:BL:31:GLY:N	2.12	0.82
55:CA:518:C:H4'	55:CA:519:C:H5''	1.61	0.82
31:DH:90:LEU:HB2	31:DH:123:ARG:HB3	1.61	0.82
32:DI:113:ALA:HB1	32:DI:124:MET:SD	2.18	0.82
11:AL:62:VAL:HG21	11:AL:94:TYR:HE2	1.44	0.82
21:AA:1240:U:H3'	21:AA:1241:G:H5'	1.59	0.82
24:BA:1932:A:H2'	24:BA:1933:G:O4'	1.80	0.82
30:BG:82:PHE:CE2	30:BG:137:LYS:HB2	2.13	0.82
46:BW:72:GLY:O	46:BW:74:LYS:N	2.13	0.82
24:DA:833:A:H2'	24:DA:834:G:C8	2.14	0.82
44:DU:14:THR:HG23	44:DU:15:GLY:H	1.45	0.82
50:D0:12:ARG:HG3	50:D0:15:ARG:HH11	1.44	0.82
10:AK:121:ARG:HE	20:AU:35:GLU:HG3	1.45	0.82
21:AA:198:G:HO2'	21:AA:199:A:H8	0.85	0.82
24:BA:1073:A:C2'	24:BA:1074:G:H5''	2.08	0.82
24:BA:1799:G:H4'	24:BA:1800:C:O5'	1.79	0.82
24:BA:1867:G:O2'	24:BA:1868:C:H5'	1.78	0.82
11:CL:34:THR:HG22	11:CL:35:ARG:HG2	1.62	0.82
18:CS:42:ASN:HB2	18:CS:43:MET:HE2	1.60	0.82
24:DA:2753:A:O2'	24:DA:2754:U:H5'	1.78	0.82
24:DA:2819:G:H2'	24:DA:2821:A:N7	1.95	0.82
35:DL:79:LEU:HB2	35:DL:113:ALA:H	1.42	0.82
1:AB:108:GLN:HA	1:AB:111:LYS:HB3	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1454:C:H41	37:BN:73:ASN:HD21	1.24	0.82
24:DA:2460:U:H2'	24:DA:2461:A:H8	1.43	0.82
36:DM:42:THR:HG22	36:DM:44:ARG:H	1.44	0.82
37:DN:28:LEU:HD21	37:DN:115:LEU:HD21	1.61	0.82
19:CT:81:GLN:NE2	55:CA:258:G:H5'	1.95	0.82
34:DK:61:VAL:HG11	34:DK:112:PHE:HE2	1.45	0.82
4:AE:83:PRO:HB3	4:AE:97:PRO:HD3	1.62	0.81
21:AA:1007:U:H2'	21:AA:1008:U:H5''	1.61	0.81
31:BH:8:LYS:O	31:BH:9:VAL:HB	1.80	0.81
37:BN:23:ASN:N	37:BN:23:ASN:HD22	1.77	0.81
38:BO:31:THR:HG22	38:BO:34:HIS:N	1.93	0.81
55:CA:9:G:H2'	55:CA:10:A:H8	1.45	0.81
55:CA:78:A:H2'	55:CA:79:G:C8	2.14	0.81
55:CA:1038:C:H2'	55:CA:1039:G:C8	2.15	0.81
24:DA:249:C:H5''	24:DA:2394:C:O2'	1.80	0.81
24:DA:1965:C:H5'	24:DA:1966:A:H5''	1.60	0.81
24:DA:2421:G:N7	53:D3:30:HIS:HD2	1.78	0.81
3:AD:115:GLN:HE21	3:AD:115:GLN:HA	1.44	0.81
19:AT:82:ILE:O	19:AT:86:ALA:HB3	1.80	0.81
21:AA:946:A:H2'	21:AA:947:G:H8	1.43	0.81
24:BA:947:A:H2'	24:BA:948:C:C6	2.15	0.81
24:BA:1998:A:OP2	27:BD:141:ARG:NH2	2.13	0.81
26:BC:244:VAL:HG12	26:BC:250:GLN:HA	1.61	0.81
4:CE:98:ALA:HB2	4:CE:123:LEU:HG	1.62	0.81
6:CG:24:LYS:O	6:CG:28:ILE:HG12	1.80	0.81
24:DA:1780:A:H4'	24:DA:1781:U:OP2	1.79	0.81
24:DA:2189:U:H2'	24:DA:2190:G:H5''	1.61	0.81
42:DS:6:LYS:NZ	42:DS:104:THR:HG23	1.95	0.81
2:AC:184:ASN:HD22	2:AC:185:THR:H	1.29	0.81
16:AQ:12:VAL:HG13	16:AQ:13:SER:H	1.45	0.81
21:AA:243:A:H4'	21:AA:244:U:H5''	1.62	0.81
24:BA:990:A:H5'	24:BA:990:A:C8	2.15	0.81
24:BA:1013:C:H2'	24:BA:1014:A:H8	1.45	0.81
24:BA:1368:G:H2'	24:BA:1369:G:H8	1.44	0.81
24:BA:1469:A:H2'	24:BA:1470:A:C8	2.15	0.81
24:BA:2472:G:H2'	24:BA:2475:C:H42	1.46	0.81
26:BC:80:LEU:HD11	26:BC:109:LEU:HG	1.62	0.81
45:BV:10:LYS:HD3	45:BV:10:LYS:H	1.45	0.81
1:CB:116:LEU:HA	1:CB:119:GLN:HB2	1.62	0.81
4:CE:104:ILE:HD13	4:CE:120:HIS:HA	1.62	0.81
8:CI:112:ARG:HH22	9:CJ:64:GLN:HE21	1.24	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:63:CYS:HB3	13:CN:67:GLY:H	1.46	0.81
26:DC:62:ARG:HG2	26:DC:62:ARG:HH21	1.44	0.81
29:DF:64:PRO:HA	29:DF:88:VAL:HG22	1.60	0.81
32:DI:45:THR:HG23	32:DI:54:ILE:HD13	1.61	0.81
38:DO:30:ARG:HH11	38:DO:30:ARG:HG3	1.46	0.81
26:BC:109:LEU:HD23	26:BC:110:LYS:H	1.44	0.81
55:CA:820:U:H4'	55:CA:821:G:OP2	1.79	0.81
24:DA:794:A:H2'	24:DA:795:C:C6	2.15	0.81
24:DA:1558:C:H4'	24:DA:1559:U:H5'	1.62	0.81
28:DE:108:ILE:HD11	28:DE:181:ILE:HB	1.61	0.81
53:D3:41:ARG:HG3	53:D3:41:ARG:HH21	1.45	0.81
21:AA:1050:G:O2'	21:AA:1051:C:H6	1.64	0.81
21:AA:1197:A:O2'	21:AA:1198:G:H5'	1.79	0.81
27:BD:106:LYS:O	27:BD:107:VAL:HB	1.79	0.81
29:BF:35:LEU:HD13	29:BF:56:LEU:HD22	1.62	0.81
41:BR:49:ILE:HB	41:BR:51:VAL:O	1.81	0.81
46:BW:47:GLY:H	46:BW:80:SER:HB3	1.46	0.81
9:CJ:82:LYS:HA	9:CJ:86:ALA:HB3	1.63	0.81
24:DA:762:U:H4'	24:DA:763:G:O5'	1.81	0.81
24:DA:2756:U:O2'	24:DA:2757:A:H5'	1.81	0.81
24:BA:839:U:H2'	24:BA:840:C:C6	2.15	0.81
24:BA:1730:C:H1'	24:BA:1731:G:N2	1.95	0.81
28:BE:44:ARG:HG3	28:BE:44:ARG:HH21	1.44	0.81
29:BF:114:ARG:HD2	29:BF:114:ARG:H	1.46	0.81
55:CA:960:U:O2'	55:CA:1223:C:C5'	2.29	0.81
34:DK:35:VAL:HG23	34:DK:36:GLY:H	1.46	0.81
41:DR:27:ILE:HG22	41:DR:28:ALA:H	1.45	0.81
15:CP:54:LEU:HG	15:CP:55:ASP:H	1.46	0.81
20:CU:25:ALA:HA	20:CU:28:LEU:HB3	1.62	0.81
55:CA:654:G:H2'	55:CA:655:A:H8	1.45	0.81
24:BA:1560:G:H2'	24:BA:1561:C:C6	2.15	0.81
24:BA:2135:A:H2'	24:BA:2136:G:C8	2.16	0.81
44:BU:97:SER:O	44:BU:98:ASN:HB3	1.80	0.81
5:CF:11:HIS:CE1	5:CF:54:LEU:HD21	2.15	0.81
24:DA:1060:U:H4'	24:DA:1061:U:C5'	2.11	0.81
24:DA:1287:A:O2'	24:DA:1288:G:H5'	1.81	0.81
38:DO:67:ASN:H	38:DO:70:ALA:HB3	1.46	0.81
21:AA:939:G:H2'	21:AA:940:C:H6	1.45	0.81
24:BA:1430:G:H2'	24:BA:1431:A:H8	1.45	0.81
24:BA:2756:U:H1'	24:BA:2757:A:H5''	1.62	0.81
40:BQ:63:ARG:HD2	40:BQ:64:ILE:N	1.95	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:196:GLY:H	55:CA:1057:G:H4'	1.46	0.81
24:DA:2056:G:N2	50:D0:1:ALA:H3	1.79	0.81
24:DA:2461:A:H1'	24:DA:2492:U:H3	1.45	0.81
29:DF:74:ALA:HB1	29:DF:76:PHE:CD2	2.15	0.81
44:DU:92:VAL:HB	44:DU:101:THR:HG21	1.63	0.81
49:DZ:16:LEU:H	49:DZ:16:LEU:HD22	1.46	0.81
1:AB:71:THR:HG22	1:AB:72:LYS:H	1.45	0.81
26:BC:166:ARG:O	26:BC:166:ARG:HG3	1.81	0.81
37:BN:73:ASN:HD22	37:BN:76:VAL:HG11	1.46	0.81
26:DC:43:ASN:ND2	26:DC:44:ASN:H	1.78	0.81
7:AH:17:GLN:HE21	7:AH:71:VAL:HG23	1.46	0.80
24:BA:994:C:H1'	41:BR:10:LYS:NZ	1.97	0.80
24:BA:1073:A:H3'	24:BA:1074:G:C5'	2.10	0.80
24:BA:2292:U:H2'	24:BA:2293:G:H8	1.46	0.80
40:BQ:91:ARG:NH2	40:BQ:93:ILE:HD13	1.95	0.80
55:CA:994:A:O2'	55:CA:995:C:H6	1.63	0.80
24:DA:946:C:O2'	24:DA:947:A:H8	1.63	0.80
21:AA:968:A:H4'	21:AA:969:A:OP2	1.82	0.80
21:AA:1135:U:H3	21:AA:1140:C:H42	1.25	0.80
24:BA:1062:G:H1'	32:BI:134:SER:HB3	1.62	0.80
24:BA:1973:G:H2'	24:BA:1974:C:H6	1.46	0.80
33:BJ:21:THR:HG22	33:BJ:22:GLY:H	1.45	0.80
54:B4:33:HIS:O	54:B4:35:GLN:HG3	1.80	0.80
12:CM:102:LYS:HG2	55:CA:1226:C:H41	1.44	0.80
55:CA:559:A:H4'	55:CA:560:A:H5''	1.64	0.80
21:AA:841:C:C2	21:AA:843:U:H5'	2.17	0.80
24:BA:243:U:O2'	24:BA:244:A:H5'	1.80	0.80
24:BA:1872:A:H2'	24:BA:1873:G:O4'	1.81	0.80
39:BP:59:THR:HG23	39:BP:72:VAL:HG12	1.64	0.80
55:CA:373:A:O2'	55:CA:374:A:H5'	1.82	0.80
55:CA:792:A:O2'	55:CA:794:A:N7	2.15	0.80
55:CA:1135:U:H2'	55:CA:1137:C:O2	1.81	0.80
24:DA:2493:U:H2'	24:DA:2494:G:H5''	1.64	0.80
35:DL:79:LEU:HA	35:DL:82:LEU:HD11	1.61	0.80
21:AA:1288:A:O2'	21:AA:1289:A:O4'	1.99	0.80
24:BA:2058:A:H5''	24:BA:2059:A:OP2	1.81	0.80
24:BA:2104:C:H2'	24:BA:2105:U:O4'	1.81	0.80
39:BP:4:ILE:HG22	39:BP:5:LYS:N	1.97	0.80
39:BP:67:GLU:HG3	39:BP:68:GLY:H	1.44	0.80
2:CC:136:ALA:HA	2:CC:139:ASN:HD21	1.46	0.80
15:CP:48:GLU:HG3	15:CP:51:ARG:HH21	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:449:A:O2'	24:DA:450:G:H5'	1.81	0.80
26:DC:119:VAL:HG13	26:DC:133:ASN:HD21	1.45	0.80
8:AI:6:TYR:CE2	8:AI:17:ARG:HB2	2.17	0.80
21:AA:575:G:C6	21:AA:821:G:N7	2.49	0.80
21:AA:984:C:O2'	21:AA:985:C:H6	1.64	0.80
21:AA:1067:A:H1'	21:AA:1068:G:C8	2.17	0.80
24:BA:1746:A:H2'	24:BA:1747:U:H6	1.45	0.80
25:BB:53:A:O2'	25:BB:54:G:H5'	1.81	0.80
24:DA:787:C:H3'	24:DA:791:C:N4	1.96	0.80
24:DA:1951:U:H2'	24:DA:1953:A:OP2	1.80	0.80
24:DA:2574:G:O2'	27:DD:148:GLN:HB2	1.81	0.80
56:DB:45:A:H2'	56:DB:46:A:C8	2.17	0.80
35:DL:92:LEU:HD22	35:DL:124:GLY:HA3	1.63	0.80
24:BA:2787:C:O2'	24:BA:2788:C:H5'	1.80	0.80
27:BD:114:LYS:NZ	27:BD:116:LYS:HE2	1.97	0.80
55:CA:983:A:O2'	55:CA:984:C:H5'	1.82	0.80
24:DA:783:A:O2'	24:DA:784:G:H4'	1.81	0.80
24:DA:915:C:O2'	24:DA:916:G:H5'	1.80	0.80
24:DA:1238:G:H2'	24:DA:1239:G:C8	2.16	0.80
26:DC:147:PRO:HD3	26:DC:184:GLU:HG3	1.63	0.80
41:DR:1:MET:HG3	41:DR:101:ILE:HD12	1.62	0.80
42:DS:73:LYS:HB2	42:DS:106:VAL:HB	1.63	0.80
1:AB:163:ILE:HG23	1:AB:164:ASP:H	1.47	0.80
21:AA:939:G:H2'	21:AA:940:C:C6	2.17	0.80
24:BA:2320:U:H4'	24:BA:2321:U:H5''	1.64	0.80
24:BA:2796:U:H3	24:BA:2799:A:H61	1.28	0.80
27:BD:140:HIS:NE2	59:BD:402:HOH:O	2.13	0.80
35:BL:4:ASN:H	35:BL:4:ASN:HD22	1.30	0.80
20:CU:24:LYS:CG	20:CU:25:ALA:H	1.95	0.80
27:DD:8:LYS:HB2	27:DD:201:LEU:HD11	1.62	0.80
24:BA:1059:G:H5''	24:BA:1060:U:H3'	1.63	0.80
1:CB:47:PRO:HA	1:CB:50:ASN:HB2	1.64	0.80
1:CB:119:GLN:HG2	1:CB:124:THR:HG21	1.64	0.80
4:CE:22:LYS:HD2	55:CA:1081:A:H5'	1.64	0.80
55:CA:404:G:H2'	55:CA:405:U:H6	1.47	0.80
55:CA:1086:U:O2'	55:CA:1087:G:H5'	1.82	0.80
24:DA:533:G:H21	40:DQ:44:TYR:HD1	1.29	0.80
24:DA:1464:G:H2'	24:DA:1465:G:C8	2.16	0.80
56:DB:90:C:H6	56:DB:90:C:H5''	1.46	0.80
31:DH:72:ILE:HD11	31:DH:141:LYS:H	1.47	0.80
8:AI:23:GLY:H	8:AI:60:LEU:HA	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:86:G:O2'	24:BA:87:U:H5'	1.81	0.80
24:BA:636:G:C5	35:BL:111:ILE:HD11	2.17	0.80
27:BD:140:HIS:HE1	59:BD:403:HOH:O	1.62	0.80
30:BG:22:VAL:HG22	30:BG:36:LEU:HD11	1.63	0.80
46:BW:41:GLY:HA2	46:BW:44:PHE:CE2	2.16	0.80
3:CD:25:ARG:HH11	3:CD:30:LYS:HE2	1.46	0.80
24:DA:547:A:H3'	24:DA:548:G:H5'	1.62	0.80
24:DA:2406:A:H4'	24:DA:2407:A:O5'	1.81	0.80
26:DC:122:ALA:HB3	26:DC:127:ASN:ND2	1.96	0.80
44:DU:54:PRO:HG2	44:DU:55:GLY:H	1.47	0.80
52:D2:19:ARG:HH21	52:D2:19:ARG:HB3	1.47	0.80
21:AA:1322:C:O2'	21:AA:1323:G:H5'	1.82	0.80
24:BA:705:A:N6	24:BA:726:G:H1'	1.97	0.80
24:BA:2093:G:C6	24:BA:2225:A:C8	2.70	0.80
24:BA:2757:A:N1	30:BG:66:THR:HG21	1.98	0.80
30:BG:120:ILE:HD11	30:BG:132:LEU:HB2	1.64	0.80
32:BI:115:ASP:O	32:BI:116:MET:HG2	1.82	0.80
39:BP:105:LYS:HA	39:BP:108:ARG:HH21	1.46	0.80
20:CU:39:LYS:N	20:CU:40:PRO:HD2	1.96	0.80
55:CA:1455:G:H2'	55:CA:1456:A:C8	2.17	0.80
24:DA:959:A:H2'	24:DA:960:A:C8	2.17	0.80
24:DA:1438:U:H2'	24:DA:1439:A:O4'	1.82	0.80
24:DA:1819:A:H1'	24:DA:1821:A:N6	1.97	0.80
24:DA:2275:C:O2'	36:DM:84:LYS:HA	1.82	0.80
24:BA:1269:A:OP2	59:BA:3388:HOH:O	2.00	0.79
35:BL:100:ILE:HD12	35:BL:101:ILE:HD13	1.65	0.79
9:CJ:47:GLU:HB2	9:CJ:67:ILE:HG13	1.63	0.79
55:CA:90:C:O2'	55:CA:91:U:H5'	1.82	0.79
24:DA:127:A:N7	52:D2:46:LYS:HE3	1.97	0.79
25:BB:62:C:H2'	25:BB:63:C:H6	1.46	0.79
9:CJ:66:GLU:HB2	13:CN:100:TRP:CZ3	2.17	0.79
19:CT:24:ARG:HD3	19:CT:28:ARG:HH21	1.47	0.79
24:BA:2328:A:H2'	24:BA:2329:U:C6	2.17	0.79
34:BK:21:CYS:HB2	34:BK:39:ILE:CD1	2.11	0.79
9:CJ:52:LEU:HB2	13:CN:80:ARG:NE	1.98	0.79
10:CK:28:ASN:OD1	10:CK:46:ALA:HB3	1.82	0.79
24:DA:1131:G:O2'	24:DA:1133:A:N7	2.15	0.79
24:DA:1802:A:H2'	24:DA:1803:A:C8	2.16	0.79
24:DA:2149:U:H2'	24:DA:2150:C:C6	2.17	0.79
34:DK:2:ILE:HB	34:DK:33:ALA:HB3	1.63	0.79
20:CU:3:ILE:HG21	20:CU:18:PHE:HB3	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DX:52:ALA:O	47:DX:53:LYS:HB3	1.83	0.79
4:AE:79:THR:HA	4:AE:119:VAL:HG12	1.64	0.79
21:AA:1021:A:H2'	21:AA:1022:A:H5''	1.64	0.79
24:BA:1060:U:H4'	24:BA:1061:U:H5'	1.65	0.79
2:CC:18:ASN:HD21	2:CC:53:ARG:NH1	1.80	0.79
8:CI:30:ASN:HD21	8:CI:66:VAL:H	1.27	0.79
55:CA:120:A:C2'	55:CA:121:U:H5''	2.13	0.79
1:AB:43:GLU:O	1:AB:47:PRO:HG2	1.82	0.79
10:AK:19:VAL:HB	10:AK:34:THR:HG23	1.65	0.79
24:BA:1255:U:H5	28:BE:68:ALA:HA	1.47	0.79
24:BA:1794:A:H2'	24:BA:1795:C:H6	1.45	0.79
40:BQ:6:GLY:HA2	40:BQ:9:ALA:HB3	1.65	0.79
3:CD:106:PHE:CD1	3:CD:144:ILE:HD11	2.18	0.79
24:DA:604:G:O2'	24:DA:605:G:H8	1.64	0.79
16:AQ:28:VAL:O	16:AQ:37:ILE:HD12	1.82	0.79
24:BA:1783:A:C2	24:BA:2587:A:C4	2.70	0.79
24:BA:2502:G:H5'	24:BA:2503:A:H5''	1.63	0.79
2:CC:18:ASN:HD21	2:CC:53:ARG:HH11	1.28	0.79
11:CL:49:ARG:NH2	55:CA:522:C:H41	1.81	0.79
24:DA:2582:G:O2'	24:DA:2583:G:H5'	1.83	0.79
28:DE:128:ALA:HB1	28:DE:129:PRO:HD2	1.65	0.79
34:DK:71:ARG:HB3	34:DK:72:PRO:CD	2.08	0.79
36:DM:27:SER:H	36:DM:66:ARG:HH22	1.29	0.79
7:AH:6:ILE:HB	7:AH:76:ARG:NH1	1.98	0.79
21:AA:1395:C:H5'	21:AA:1401:G:H21	1.48	0.79
24:BA:1062:G:H2'	24:BA:1063:G:C8	2.16	0.79
55:CA:61:G:H2'	55:CA:62:U:C6	2.17	0.79
55:CA:1348:U:H2'	55:CA:1349:A:H8	1.48	0.79
29:DF:49:LEU:H	29:DF:49:LEU:HD22	1.46	0.79
40:BQ:78:PHE:CZ	40:BQ:82:LEU:HD11	2.17	0.79
46:BW:67:LYS:O	46:BW:68:PHE:HB2	1.83	0.79
1:CB:9:LEU:HG	1:CB:10:LYS:H	1.46	0.79
4:CE:29:ILE:HG23	4:CE:30:PHE:N	1.98	0.79
55:CA:555:U:H2'	55:CA:556:C:C6	2.17	0.79
24:DA:670:A:O2'	24:DA:671:C:OP2	2.00	0.79
24:DA:2303:G:H2'	24:DA:2304:G:H8	1.48	0.79
29:DF:43:ILE:HG23	29:DF:44:ALA:H	1.48	0.79
33:DJ:18:VAL:HG13	33:DJ:56:VAL:HA	1.65	0.79
24:BA:2868:A:H2'	24:BA:2869:G:C8	2.18	0.79
37:BN:31:HIS:O	37:BN:33:ILE:HD12	1.83	0.79
42:BS:17:VAL:HG12	42:BS:76:VAL:HG11	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:8:ILE:N	12:CM:9:PRO:CD	2.45	0.79
55:CA:202:G:H2'	55:CA:203:G:C8	2.18	0.79
55:CA:283:U:H2'	55:CA:284:C:C6	2.17	0.79
24:DA:141:G:H3'	24:DA:142:A:O4'	1.82	0.79
24:DA:1127:A:O2'	24:DA:1128:G:H5'	1.83	0.79
4:AE:139:THR:O	4:AE:143:LEU:HG	1.83	0.78
7:AH:78:SER:HB3	7:AH:124:ILE:O	1.83	0.78
21:AA:1160:G:O2'	21:AA:1161:C:H5'	1.84	0.78
35:BL:91:ASP:H	35:BL:94:THR:HG21	1.46	0.78
6:CG:148:LYS:NZ	6:CG:148:LYS:HB2	1.98	0.78
10:CK:123:PRO:HB2	10:CK:125:LYS:HG3	1.65	0.78
39:DP:28:LYS:HB2	39:DP:28:LYS:HZ2	1.49	0.78
43:DT:3:ARG:HD2	43:DT:42:GLU:HG2	1.65	0.78
3:AD:173:ASP:CG	3:AD:174:ALA:H	1.85	0.78
4:AE:55:VAL:N	4:AE:56:PRO:HD2	1.97	0.78
21:AA:1101:A:H4'	21:AA:1102:A:O5'	1.83	0.78
55:CA:927:G:H4'	55:CA:1503:A:N7	1.98	0.78
55:CA:982:U:H1'	55:CA:983:A:N7	1.98	0.78
24:DA:479:A:O2'	24:DA:480:A:C5'	2.31	0.78
56:DB:56:G:H4'	56:DB:57:A:O5'	1.83	0.78
13:AN:60:ARG:O	13:AN:61:ASN:HB2	1.81	0.78
21:AA:495:A:H4'	21:AA:496:A:O5'	1.84	0.78
21:AA:1078:U:H2'	21:AA:1079:G:O4'	1.82	0.78
21:AA:1234:C:H1'	21:AA:1364:U:H6	1.47	0.78
24:BA:1309:G:OP1	52:B2:9:VAL:HG12	1.83	0.78
24:BA:2813:A:H2	24:BA:2887:A:N6	1.80	0.78
33:BJ:73:VAL:HG23	33:BJ:74:TYR:N	1.96	0.78
3:CD:2:ARG:HH21	3:CD:114:ARG:HD3	1.48	0.78
20:CU:39:LYS:H	20:CU:40:PRO:CD	1.96	0.78
55:CA:1119:C:H2'	55:CA:1120:C:H6	1.47	0.78
2:AC:39:ARG:CD	2:AC:54:ILE:HD11	2.13	0.78
13:AN:20:PHE:C	13:AN:22:LYS:H	1.85	0.78
21:AA:677:U:H3	21:AA:713:G:H22	1.30	0.78
24:BA:653:U:H3'	24:BA:654:A:C5'	2.12	0.78
24:DA:826:U:H5''	24:DA:2429:G:OP1	1.82	0.78
24:DA:1178:C:H2'	24:DA:1179:G:O4'	1.83	0.78
24:DA:1391:U:H4'	43:DT:19:LYS:NZ	1.97	0.78
33:DJ:99:ARG:HA	33:DJ:102:GLU:HB3	1.64	0.78
45:DV:61:LEU:HD23	45:DV:61:LEU:H	1.47	0.78
15:AP:54:LEU:HD22	15:AP:80:LYS:HG3	1.64	0.78
24:BA:603:A:H4'	24:BA:604:G:O5'	1.83	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2733:A:H8	24:BA:2733:A:O5'	1.66	0.78
28:BE:3:LEU:O	28:BE:11:ALA:HA	1.82	0.78
36:BM:13:HIS:O	36:BM:14:LYS:HB2	1.82	0.78
40:BQ:86:SER:HB2	41:BR:50:GLY:O	1.83	0.78
44:BU:73:ASN:ND2	44:BU:76:THR:HG23	1.98	0.78
3:CD:144:ILE:HD12	3:CD:177:MET:HB3	1.64	0.78
24:DA:83:A:N6	24:DA:101:A:H5'	1.99	0.78
24:DA:923:G:H1'	46:DW:23:LYS:NZ	1.97	0.78
24:DA:1464:G:H2'	24:DA:1465:G:H8	1.48	0.78
21:AA:654:G:H2'	21:AA:655:A:H8	1.48	0.78
24:BA:1997:C:O2'	24:BA:1998:A:H5'	1.84	0.78
25:BB:90:C:H5''	25:BB:90:C:H6	1.46	0.78
40:BQ:91:ARG:HD3	41:BR:11:GLN:HG3	1.66	0.78
55:CA:482:A:O2'	55:CA:483:C:H5'	1.84	0.78
55:CA:890:G:O2'	55:CA:906:A:N6	2.17	0.78
24:DA:1060:U:H4'	24:DA:1061:U:H5''	1.63	0.78
24:DA:1912:A:N6	24:DA:1918:A:H1'	1.98	0.78
24:DA:1965:C:H5''	24:DA:1966:A:H2'	1.66	0.78
24:DA:2386:A:O2'	24:DA:2387:U:C6	2.36	0.78
1:AB:165:ALA:HB3	1:AB:190:SER:HB3	1.65	0.78
24:BA:996:A:N6	24:BA:1160:G:C6	2.51	0.78
24:BA:2391:G:O6	24:BA:2425:A:H8	1.66	0.78
46:BW:19:ARG:HA	46:BW:34:SER:HA	1.65	0.78
55:CA:451:A:H4'	55:CA:452:A:O5'	1.84	0.78
55:CA:1157:A:H1'	55:CA:1181:G:N2	1.98	0.78
24:DA:1785:A:H2'	24:DA:1787:A:N7	1.99	0.78
4:AE:87:VAL:HG12	4:AE:92:ARG:HA	1.65	0.78
11:AL:45:ASN:ND2	21:AA:528:C:H41	1.82	0.78
21:AA:1144:G:H21	21:AA:1146:A:H62	1.31	0.78
24:BA:704:G:H1'	24:BA:727:A:N6	1.99	0.78
24:BA:729:G:H5'	26:BC:206:LYS:NZ	1.99	0.78
24:BA:1327:A:C2'	24:BA:1328:A:H5'	2.12	0.78
9:CJ:39:PRO:HA	9:CJ:74:VAL:H	1.49	0.78
10:CK:118:ASN:OD1	55:CA:718:A:H5'	1.83	0.78
12:CM:104:ASN:HB3	55:CA:948:C:H5''	1.66	0.78
55:CA:764:C:H3'	55:CA:765:G:H21	1.46	0.78
55:CA:1054:C:C4	22:CX:34:G:H1'	2.18	0.78
56:DB:77:U:OP1	45:DV:18:ARG:HG3	1.83	0.78
28:DE:149:ILE:O	28:DE:188:MET:HA	1.82	0.78
45:BV:80:HIS:HD2	45:BV:83:LYS:N	1.81	0.78
28:DE:6:LYS:HB2	28:DE:121:VAL:HG12	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DF:41:GLU:HG2	29:DF:42:ALA:H	1.49	0.78
30:DG:48:THR:O	30:DG:49:LEU:HB2	1.83	0.78
52:D2:5:PHE:HZ	52:D2:12:ARG:HH11	1.28	0.78
10:AK:22:ILE:HD11	10:AK:85:VAL:HG22	1.66	0.78
21:AA:596:A:H2'	21:AA:597:G:H8	1.48	0.78
21:AA:1016:A:C8	21:AA:1017:U:H1'	2.19	0.78
27:BD:108:ASP:OD2	27:BD:173:GLN:HA	1.83	0.78
6:CG:9:ARG:HH12	55:CA:1346:A:N6	1.81	0.78
55:CA:120:A:C3'	55:CA:121:U:H5''	2.14	0.78
55:CA:1481:U:H2'	55:CA:1482:G:H8	1.49	0.78
24:DA:532:A:N1	24:DA:2020:A:H1'	1.99	0.78
24:DA:2429:G:H3'	24:DA:2429:G:OP2	1.83	0.78
45:DV:29:ILE:HD13	45:DV:31:TYR:HE2	1.47	0.78
12:AM:67:ASP:O	12:AM:70:ARG:HB3	1.82	0.77
24:BA:646:U:H3'	24:BA:647:G:H5''	1.65	0.77
24:BA:1818:U:O2'	26:BC:152:GLN:O	1.99	0.77
52:B2:43:THR:O	52:B2:44:VAL:HB	1.81	0.77
18:CS:68:HIS:HB3	18:CS:72:GLU:HG3	1.66	0.77
24:DA:632:A:H2'	24:DA:633:A:C8	2.19	0.77
24:DA:979:A:H2'	24:DA:982:C:H41	1.46	0.77
24:DA:1809:A:O2'	24:DA:1810:A:C8	2.36	0.77
24:BA:529:A:H4'	24:BA:530:G:OP1	1.82	0.77
2:CC:152:VAL:HA	2:CC:197:VAL:HG22	1.66	0.77
9:CJ:42:LEU:HD22	9:CJ:71:LEU:HD23	1.65	0.77
13:CN:52:ARG:NH1	13:CN:52:ARG:HA	1.99	0.77
55:CA:495:A:H4'	55:CA:496:A:O5'	1.83	0.77
24:DA:855:G:H21	46:DW:23:LYS:HZ2	1.32	0.77
24:DA:1563:U:H2'	24:DA:1564:C:H6	1.49	0.77
29:DF:136:ILE:HD13	29:DF:145:VAL:HG11	1.66	0.77
8:AI:128:LYS:CD	8:AI:129:ARG:H	1.97	0.77
21:AA:96:U:O2'	21:AA:97:G:H8	1.67	0.77
24:BA:2253:G:H2'	24:BA:2254:C:H6	1.47	0.77
24:BA:2352:A:C6	46:BW:30:VAL:HG11	2.19	0.77
4:CE:80:LEU:HD12	4:CE:97:PRO:HD3	1.64	0.77
6:CG:74:VAL:HG13	6:CG:140:VAL:HG13	1.67	0.77
24:DA:1432:G:H2'	24:DA:1433:A:C8	2.19	0.77
24:DA:2015:A:C2	50:D0:2:VAL:HG11	2.20	0.77
56:DB:58:A:H2'	56:DB:59:A:H8	1.46	0.77
56:DB:100:G:H2'	56:DB:101:A:O4'	1.84	0.77
21:AA:182:A:C6	21:AA:194:C:N4	2.51	0.77
24:BA:709:U:H2'	24:BA:710:U:C6	2.19	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1181:U:HO2'	24:BA:1182:G:H8	1.29	0.77
24:BA:2305:U:H5''	29:BF:130:GLY:HA3	1.66	0.77
40:BQ:65:ASN:HD21	40:BQ:69:ARG:NH2	1.81	0.77
55:CA:1523:G:H2'	55:CA:1524:C:H6	1.49	0.77
36:DM:72:PRO:O	36:DM:73:ILE:HB	1.83	0.77
40:DQ:57:ARG:NH1	40:DQ:92:LYS:HE2	1.99	0.77
21:AA:1305:G:HO2'	21:AA:1306:A:H8	1.33	0.77
21:AA:1361:G:H2'	21:AA:1362:A:H5'	1.65	0.77
24:BA:859:G:OP2	24:BA:859:G:C8	2.38	0.77
24:BA:1584:U:H2'	24:BA:1585:C:H5'	1.67	0.77
31:BH:94:ILE:HG21	31:BH:99:ILE:HG12	1.67	0.77
4:CE:29:ILE:HG23	4:CE:30:PHE:H	1.49	0.77
55:CA:563:A:H2'	55:CA:563:A:N3	1.99	0.77
55:CA:915:A:O2'	55:CA:916:U:H5'	1.85	0.77
55:CA:1203:C:H2'	55:CA:1204:A:H8	1.48	0.77
29:DF:39:VAL:HA	29:DF:49:LEU:HG	1.67	0.77
1:AB:160:LEU:HG	1:AB:161:PHE:H	1.48	0.77
21:AA:41:G:H2'	21:AA:42:G:H8	1.48	0.77
21:AA:1218:C:H2'	21:AA:1219:A:C8	2.20	0.77
24:BA:319:G:H2'	24:BA:320:A:O4'	1.83	0.77
24:BA:2233:U:H2'	24:BA:2234:G:H8	1.48	0.77
29:BF:134:GLN:HG2	29:BF:135:ILE:N	1.99	0.77
30:BG:3:VAL:O	30:BG:68:ARG:HG3	1.83	0.77
3:CD:109:THR:HG22	3:CD:111:ALA:H	1.48	0.77
18:CS:54:ARG:HG2	18:CS:55:GLN:H	1.48	0.77
55:CA:664:G:H22	55:CA:741:G:H1	1.29	0.77
55:CA:1048:G:H21	55:CA:1214:C:H5	1.32	0.77
55:CA:1508:A:O2'	55:CA:1509:C:O4'	2.02	0.77
1:AB:107:ARG:HE	1:AB:108:GLN:NE2	1.82	0.77
14:AO:27:GLN:HA	14:AO:30:LEU:HD12	1.66	0.77
24:BA:734:A:C5	24:BA:735:A:C8	2.73	0.77
24:BA:1069:A:O2'	24:BA:1070:A:H5''	1.84	0.77
24:BA:1886:U:H2'	24:BA:1887:C:H6	1.49	0.77
27:BD:12:THR:HG22	27:BD:13:ARG:N	2.00	0.77
1:CB:14:HIS:CE1	1:CB:42:LEU:HD21	2.19	0.77
17:CR:72:ARG:HE	17:CR:72:ARG:N	1.82	0.77
24:DA:1429:G:HO2'	24:DA:1430:G:H8	0.79	0.77
41:DR:89:HIS:NE2	41:DR:91:GLN:HB2	2.00	0.77
44:DU:92:VAL:HB	44:DU:101:THR:CG2	2.14	0.77
9:AJ:65:TYR:HB3	13:AN:95:LEU:HD11	1.66	0.77
40:BQ:10:ARG:HB2	40:BQ:10:ARG:HH11	1.48	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:217:A:H2'	24:DA:218:A:C8	2.19	0.77
24:DA:594:U:H2'	24:DA:595:C:C6	2.19	0.77
2:AC:39:ARG:HD3	2:AC:54:ILE:HD11	1.66	0.77
24:BA:513:A:O2'	24:BA:514:A:H5'	1.85	0.77
24:BA:1870:C:H4'	24:BA:1871:A:OP1	1.83	0.77
37:BN:75:ILE:O	37:BN:79:LEU:HD12	1.85	0.77
9:CJ:52:LEU:CB	13:CN:80:ARG:HE	1.98	0.77
55:CA:14:U:H2'	55:CA:16:A:OP2	1.83	0.77
24:DA:1056:G:H21	24:DA:1102:C:H41	1.33	0.77
24:DA:1079:C:N3	24:DA:1088:A:H2	1.83	0.77
24:DA:1760:C:H2'	24:DA:1761:C:C6	2.19	0.77
35:DL:96:LYS:HD3	35:DL:103:ILE:HA	1.66	0.77
2:AC:152:VAL:HG12	2:AC:197:VAL:HG22	1.67	0.77
21:AA:1032:G:H2'	21:AA:1033:G:O4'	1.85	0.77
24:DA:2197:U:O2'	24:DA:2198:A:C8	2.38	0.77
24:DA:2520:C:HO2'	24:DA:2521:C:H6	0.78	0.77
24:BA:633:A:H8	24:BA:633:A:O5'	1.67	0.76
24:BA:687:C:H2'	24:BA:688:U:C6	2.19	0.76
24:BA:919:U:H2'	24:BA:920:A:O4'	1.85	0.76
34:BK:111:LYS:H	34:BK:111:LYS:CE	1.98	0.76
53:B3:54:LEU:O	53:B3:58:ILE:HG13	1.85	0.76
9:CJ:40:ILE:HG22	9:CJ:42:LEU:HD12	1.65	0.76
24:DA:1062:G:C8	24:DA:1088:A:C8	2.73	0.76
24:DA:2023:C:O2'	24:DA:2024:G:H8	1.67	0.76
16:AQ:12:VAL:HG13	16:AQ:13:SER:N	2.00	0.76
3:CD:137:SER:O	3:CD:140:ASP:HB2	1.85	0.76
7:CH:9:MET:HB2	7:CH:32:LYS:HE2	1.67	0.76
13:CN:40:ARG:NH1	18:CS:6:LYS:HB2	2.00	0.76
18:CS:40:PHE:CB	18:CS:41:PRO:HD2	2.15	0.76
55:CA:1194:U:H2'	55:CA:1195:C:C6	2.19	0.76
37:DN:35:LYS:HZ2	37:DN:112:TYR:HE1	1.32	0.76
11:AL:6:LEU:HD23	16:AQ:33:TYR:CE2	2.20	0.76
10:CK:127:ARG:HH21	55:CA:795:C:H5''	1.50	0.76
24:DA:918:A:C5	24:DA:919:U:H1'	2.19	0.76
24:DA:2516:A:C2	24:DA:2569:G:C2	2.73	0.76
43:DT:29:THR:H	43:DT:87:LEU:HB2	1.50	0.76
46:DW:23:LYS:HD2	46:DW:24:ARG:N	2.00	0.76
12:AM:14:ALA:O	12:AM:18:LEU:HD23	1.84	0.76
24:BA:752:A:N6	24:BA:2609:U:H3	1.83	0.76
24:BA:1563:U:H2'	24:BA:1564:C:C6	2.20	0.76
33:BJ:56:VAL:HG12	33:BJ:57:LEU:N	2.01	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BU:10:VAL:HB	44:BU:70:ALA:O	1.85	0.76
1:CB:69:VAL:HB	1:CB:162:VAL:HB	1.66	0.76
55:CA:783:C:O2'	55:CA:784:A:H5'	1.85	0.76
10:AK:21:HIS:CD2	10:AK:34:THR:HG21	2.21	0.76
21:AA:1230:C:H5'	22:AV:30:G:H5''	1.65	0.76
21:AA:1399:C:H4'	21:AA:1400:C:O5'	1.85	0.76
7:CH:86:LYS:HB3	7:CH:90:GLU:HB2	1.67	0.76
12:CM:2:ARG:CD	12:CM:8:ILE:HG12	2.15	0.76
55:CA:974:A:C5'	55:CA:975:A:H5'	2.11	0.76
24:DA:172:A:H2'	24:DA:173:A:C8	2.20	0.76
24:DA:2376:A:H2	38:DO:92:PHE:HB3	1.51	0.76
5:AF:40:GLU:HB2	5:AF:42:TRP:HE1	1.51	0.76
6:AG:78:ARG:HD2	6:AG:83:THR:HA	1.68	0.76
24:BA:1021:A:H61	24:BA:1142:A:N6	1.83	0.76
24:BA:1060:U:C5'	24:BA:1061:U:H5'	2.15	0.76
24:BA:1759:A:O2'	24:BA:1760:C:H5'	1.84	0.76
24:BA:2407:A:H2'	24:BA:2408:U:C6	2.21	0.76
44:BU:3:LYS:HD3	44:BU:82:VAL:HB	1.67	0.76
9:CJ:15:HIS:HA	9:CJ:18:ILE:HG22	1.67	0.76
55:CA:1303:C:H3'	55:CA:1304:G:H8	1.51	0.76
24:DA:532:A:H4'	24:DA:533:G:C8	2.21	0.76
24:DA:673:C:H5''	28:DE:75:SER:HB2	1.68	0.76
24:DA:1490:A:C8	26:DC:73:ILE:HD12	2.20	0.76
24:DA:2623:G:H21	50:D0:18:HIS:CE1	2.03	0.76
45:DV:80:HIS:HD2	45:DV:82:TYR:H	1.31	0.76
10:AK:39:ASN:O	21:AA:684:U:H1'	1.85	0.76
16:AQ:76:ARG:HG2	16:AQ:77:VAL:H	1.50	0.76
21:AA:1227:A:N3	21:AA:1227:A:H2'	2.00	0.76
24:BA:581:C:H2'	24:BA:582:A:C8	2.20	0.76
24:BA:1333:G:O2'	24:BA:1334:G:H5'	1.86	0.76
24:BA:1385:A:H4'	24:BA:1386:C:OP1	1.86	0.76
24:BA:1965:C:H5''	24:BA:1965:C:H6	1.50	0.76
28:BE:79:ARG:CG	28:BE:80:SER:H	1.95	0.76
3:CD:205:LYS:HD3	55:CA:8:A:N6	2.01	0.76
24:DA:775:G:N2	24:DA:794:A:H5'	2.01	0.76
24:DA:857:G:H1'	46:DW:19:ARG:NE	2.01	0.76
24:DA:2726:A:O2'	24:DA:2727:A:H5'	1.85	0.76
30:DG:112:VAL:HG12	30:DG:114:HIS:H	1.50	0.76
21:AA:251:G:N1	21:AA:266:G:O6	2.18	0.76
24:BA:303:G:H2'	24:BA:304:U:H6	1.51	0.76
24:BA:1091:G:O2'	24:BA:1092:C:C6	2.37	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1695:G:H5''	24:BA:1695:G:N3	2.01	0.76
25:BB:28:C:OP1	38:BO:31:THR:HG21	1.85	0.76
27:BD:101:PHE:HE2	27:BD:203:VAL:HG22	1.50	0.76
32:BI:33:ASN:HB3	32:BI:36:GLU:HB2	1.68	0.76
2:CC:166:TRP:O	2:CC:167:TYR:HB2	1.84	0.76
24:DA:1964:G:H4'	24:DA:1965:C:OP2	1.85	0.76
27:DD:184:ARG:HH22	39:DP:6:GLN:HE21	1.31	0.76
13:AN:82:LYS:HE2	13:AN:82:LYS:HA	1.67	0.76
21:AA:486:U:H2'	21:AA:487:A:H8	1.49	0.76
21:AA:519:C:H2'	21:AA:520:A:C8	2.21	0.76
24:BA:1655:A:H2'	24:BA:1656:C:O4'	1.85	0.76
27:BD:5:VAL:N	27:BD:32:ASN:HD21	1.83	0.76
28:BE:149:ILE:HD11	28:BE:172:ALA:HA	1.68	0.76
37:BN:23:ASN:HD22	37:BN:23:ASN:H	1.34	0.76
55:CA:252:U:HO2'	55:CA:253:A:H8	1.33	0.76
55:CA:366:A:O2'	55:CA:394:G:N2	2.19	0.76
55:CA:977:A:H8	55:CA:1223:C:N3	1.84	0.76
55:CA:1296:C:O2'	55:CA:1302:C:C4	2.37	0.76
55:CA:1465:A:H2'	55:CA:1466:C:C6	2.21	0.76
24:DA:172:A:H2'	24:DA:173:A:H8	1.51	0.76
24:DA:1312:U:H4'	24:DA:1313:U:O5'	1.85	0.76
15:AP:52:LEU:HD21	15:AP:75:ILE:HG12	1.66	0.76
21:AA:60:A:H4'	21:AA:61:G:O5'	1.86	0.76
24:BA:371:A:H61	24:BA:401:A:H3'	1.49	0.76
24:BA:714:U:H5'	24:BA:715:A:OP2	1.85	0.76
24:BA:994:C:H1'	41:BR:10:LYS:HZ1	1.51	0.76
24:BA:996:A:O3'	40:BQ:91:ARG:HG2	1.86	0.76
24:BA:1079:C:N4	24:BA:1088:A:C2	2.52	0.76
24:BA:1444:G:H2'	24:BA:1445:G:H8	1.49	0.76
24:BA:1735:A:H2'	24:BA:1736:U:C6	2.21	0.76
24:BA:2267:A:H2'	24:BA:2267:A:N3	2.00	0.76
24:BA:2680:U:P	27:BD:114:LYS:HE2	2.25	0.76
29:BF:9:ASP:O	29:BF:10:GLU:HB2	1.84	0.76
32:BI:74:PRO:O	32:BI:77:VAL:HG22	1.85	0.76
35:BL:78:ARG:HB3	35:BL:113:ALA:CB	2.15	0.76
39:BP:25:VAL:HG11	39:BP:46:VAL:HG23	1.67	0.76
15:CP:20:VAL:CG2	15:CP:32:PHE:HB2	2.16	0.76
46:DW:18:LYS:HD3	46:DW:19:ARG:N	2.00	0.76
52:D2:31:LEU:HA	52:D2:34:ARG:HB2	1.68	0.76
12:AM:70:ARG:HG2	12:AM:71:GLU:CA	2.16	0.75
21:AA:499:A:O2'	21:AA:500:G:C8	2.39	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1555:G:O2'	24:BA:1556:C:H5'	1.85	0.75
24:BA:1842:G:H2'	24:BA:1843:C:H6	1.51	0.75
26:BC:77:VAL:HG22	26:BC:111:ALA:HA	1.69	0.75
32:BI:104:GLN:O	32:BI:105:LEU:HB2	1.86	0.75
34:BK:116:ILE:HD12	34:BK:117:SER:N	2.01	0.75
53:B3:56:LEU:HD22	53:B3:56:LEU:H	1.50	0.75
54:B4:3:VAL:O	54:B4:4:ARG:O	2.03	0.75
12:CM:13:HIS:HB3	12:CM:16:ILE:HD13	1.68	0.75
24:DA:142:A:H2'	24:DA:143:C:H6	1.47	0.75
24:DA:232:G:H4'	24:DA:233:A:OP1	1.84	0.75
24:DA:374:A:H2'	24:DA:375:G:C8	2.21	0.75
24:DA:673:C:H2'	24:DA:674:G:H5'	1.66	0.75
15:AP:18:GLN:HE21	15:AP:35:ARG:HD2	1.50	0.75
21:AA:197:A:H4'	21:AA:198:G:O5'	1.86	0.75
21:AA:513:C:H2'	21:AA:514:C:C6	2.20	0.75
21:AA:563:A:H2'	21:AA:563:A:N3	2.01	0.75
24:BA:1965:C:H6	24:BA:1965:C:C5'	1.99	0.75
33:BJ:101:ILE:O	33:BJ:105:VAL:HG13	1.86	0.75
35:BL:95:LEU:HB3	35:BL:100:ILE:HD11	1.67	0.75
43:BT:29:THR:N	43:BT:91:GLN:HE22	1.83	0.75
47:BX:39:VAL:HG22	47:BX:44:ARG:O	1.86	0.75
14:CO:63:ARG:NH2	24:DA:715:A:H5'	1.99	0.75
24:DA:983:A:N6	24:DA:984:A:N1	2.34	0.75
34:DK:70:ARG:HB3	34:DK:76:VAL:HG22	1.69	0.75
4:AE:84:VAL:HG11	4:AE:143:LEU:HD23	1.67	0.75
21:AA:89:U:O2'	21:AA:90:C:H5''	1.86	0.75
24:BA:306:U:H2'	24:BA:307:G:O4'	1.85	0.75
28:BE:117:ARG:HA	28:BE:185:LYS:HD3	1.68	0.75
51:B1:7:LYS:HE3	53:B3:33:THR:HG21	1.68	0.75
4:CE:131:ASN:O	4:CE:135:VAL:HG23	1.86	0.75
8:CI:6:TYR:HE2	8:CI:17:ARG:HA	1.52	0.75
55:CA:65:A:H2'	55:CA:382:A:H61	1.52	0.75
24:DA:479:A:O2'	24:DA:480:A:H5'	1.86	0.75
24:DA:480:A:H3'	24:DA:481:G:C5'	2.15	0.75
24:DA:2285:C:H5	51:D1:5:ARG:NH2	1.85	0.75
56:DB:16:G:O2'	56:DB:17:C:H5'	1.86	0.75
41:DR:39:LEU:O	41:DR:40:MET:HB2	1.87	0.75
4:AE:105:ILE:O	4:AE:105:ILE:HG13	1.86	0.75
7:AH:105:THR:HG21	7:AH:120:LEU:HD13	1.67	0.75
21:AA:64:G:H4'	21:AA:65:A:O5'	1.86	0.75
21:AA:1533:C:H3'	21:AA:1534:A:H5''	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:754:U:H2'	24:BA:755:U:C6	2.21	0.75
33:BJ:25:LEU:HD22	33:BJ:26:GLY:N	2.02	0.75
8:CI:9:GLY:HA3	8:CI:16:ALA:HB3	1.66	0.75
12:CM:95:PRO:HD3	12:CM:108:ARG:HG2	1.67	0.75
55:CA:1102:A:H2'	55:CA:1103:C:H6	1.51	0.75
24:DA:713:G:H21	24:DA:718:A:H2	1.34	0.75
32:DI:55:PRO:HG2	32:DI:70:THR:HG23	1.66	0.75
43:DT:14:PRO:O	43:DT:15:HIS:HB2	1.87	0.75
21:AA:47:C:H4'	21:AA:48:C:O5'	1.86	0.75
21:AA:580:C:H2'	21:AA:581:G:C8	2.21	0.75
24:BA:62:U:H4'	24:BA:63:A:OP1	1.87	0.75
24:BA:363:G:H2'	24:BA:364:C:C6	2.21	0.75
24:BA:1179:G:C6	24:BA:1180:U:H1'	2.22	0.75
24:BA:1585:C:H2'	24:BA:1586:A:O4'	1.87	0.75
24:BA:2013:A:N3	42:BS:88:ARG:NH1	2.34	0.75
24:BA:2846:G:N2	24:BA:2871:U:H1'	2.02	0.75
28:BE:176:ASP:OD1	28:BE:178:VAL:HG13	1.87	0.75
30:BG:140:ILE:HD12	30:BG:141:GLY:N	2.01	0.75
38:BO:76:LYS:O	38:BO:80:GLU:HG2	1.86	0.75
24:DA:1714:U:H3'	24:DA:1715:G:C5'	2.17	0.75
24:DA:2056:G:N2	50:D0:1:ALA:N	2.34	0.75
24:DA:2886:A:H62	50:D0:39:ARG:CD	1.98	0.75
56:DB:104:A:H2'	56:DB:105:G:O4'	1.87	0.75
36:DM:19:GLY:H	36:DM:38:ARG:NH2	1.83	0.75
51:D1:8:ILE:HD11	51:D1:52:LYS:HE3	1.67	0.75
21:AA:274:A:O2'	21:AA:275:G:C8	2.39	0.75
24:BA:839:U:H2'	24:BA:840:C:H6	1.51	0.75
26:BC:12:ARG:HH11	26:BC:12:ARG:HG3	1.52	0.75
41:BR:4:VAL:HA	41:BR:12:HIS:O	1.86	0.75
55:CA:60:A:H1'	55:CA:61:G:O4'	1.87	0.75
55:CA:383:A:H2'	55:CA:384:G:O4'	1.86	0.75
24:DA:1071:G:O2'	24:DA:1072:C:H5'	1.87	0.75
24:DA:1399:C:O2'	24:DA:1400:U:H5'	1.86	0.75
24:DA:1432:G:H2'	24:DA:1433:A:H8	1.51	0.75
24:DA:2214:C:O2'	24:DA:2215:C:H5'	1.87	0.75
24:DA:2387:U:H1'	46:DW:38:ARG:HH12	1.51	0.75
24:DA:2543:G:H2'	24:DA:2544:G:C8	2.21	0.75
38:DO:53:THR:HB	38:DO:65:THR:HG22	1.67	0.75
21:AA:547:A:H4'	21:AA:548:G:O5'	1.85	0.75
21:AA:1076:U:H2'	21:AA:1077:G:H8	1.51	0.75
24:BA:1798:U:OP1	26:BC:257:ARG:HB2	1.87	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:186:LEU:HD11	39:BP:3:ILE:HD11	1.68	0.75
34:BK:18:ARG:H	34:BK:45:GLU:HB2	1.51	0.75
40:BQ:94:LEU:HD11	41:BR:4:VAL:HG11	1.69	0.75
43:BT:13:ALA:HB1	43:BT:14:PRO:HD2	1.68	0.75
50:B0:39:ARG:HB2	50:B0:39:ARG:HH11	1.51	0.75
9:CJ:11:LYS:HD3	9:CJ:11:LYS:H	1.52	0.75
12:CM:14:ALA:HB1	12:CM:33:LEU:HD13	1.68	0.75
12:CM:102:LYS:HG2	55:CA:1226:C:N4	2.00	0.75
55:CA:268:U:H2'	55:CA:269:C:C6	2.22	0.75
24:DA:1846:G:H5''	24:DA:1847:A:OP2	1.87	0.75
24:DA:2503:A:H4'	24:DA:2504:U:OP1	1.84	0.75
40:DQ:87:VAL:HG11	41:DR:52:PRO:HG3	1.66	0.75
48:DY:1:MET:HE2	48:DY:1:MET:H3	1.52	0.75
5:AF:16:GLU:CG	3:CD:191:SER:HB2	2.15	0.75
11:AL:87:LYS:HE2	21:AA:526:C:OP2	1.86	0.75
24:BA:2144:G:H2'	24:BA:2148:G:O6	1.87	0.75
31:BH:5:LEU:HD13	31:BH:13:GLY:HA2	1.69	0.75
48:BY:45:GLN:O	48:BY:46:VAL:HB	1.87	0.75
9:CJ:45:ARG:NH2	55:CA:1279:G:H5''	2.01	0.75
55:CA:652:U:HO2'	55:CA:653:U:H6	1.33	0.75
24:DA:456:C:O2'	43:DT:73:ARG:HG3	1.85	0.75
1:AB:33:ALA:HA	1:AB:38:HIS:HA	1.69	0.75
6:AG:88:VAL:HG22	6:AG:89:GLU:H	1.50	0.75
7:AH:63:LYS:O	7:AH:70:VAL:HG23	1.87	0.75
21:AA:297:G:H4'	21:AA:557:G:H4'	1.67	0.75
24:BA:1327:A:H2'	24:BA:1328:A:H5'	1.68	0.75
49:BZ:29:ARG:HH21	49:BZ:29:ARG:CG	1.99	0.75
4:CE:14:LEU:HG	4:CE:15:ILE:H	1.50	0.75
18:CS:51:HIS:CD2	18:CS:53:GLY:H	2.04	0.75
24:DA:2304:G:H1	24:DA:2312:U:H3	1.35	0.75
27:DD:9:VAL:O	39:DP:4:ILE:HD11	1.86	0.75
29:DF:91:ARG:HH21	29:DF:91:ARG:HB3	1.51	0.75
31:BH:89:LYS:HG2	31:BH:90:LEU:H	1.50	0.74
36:BM:133:LYS:O	36:BM:134:THR:HB	1.86	0.74
40:BQ:69:ARG:HH21	40:BQ:69:ARG:CB	2.00	0.74
8:CI:15:ALA:O	8:CI:66:VAL:HG23	1.87	0.74
24:DA:92:U:H2'	24:DA:93:G:H8	1.51	0.74
24:DA:1847:A:O2'	24:DA:1848:A:C8	2.38	0.74
21:AA:428:G:H1'	21:AA:430:A:N7	2.02	0.74
24:BA:2747:G:O2'	30:BG:66:THR:HG22	1.87	0.74
29:BF:68:LYS:HD2	29:BF:68:LYS:H	1.49	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:92:ASN:H	1:CB:92:ASN:HD22	1.35	0.74
7:CH:106:SER:HB2	55:CA:640:A:O2'	1.87	0.74
55:CA:1498:U:H2'	23:CW:2:U:OP1	1.87	0.74
24:DA:1458:U:O3'	24:DA:1459:G:H4'	1.86	0.74
24:DA:1570:A:H2'	24:DA:1571:A:C8	2.21	0.74
24:BA:31:C:O3'	24:BA:1238:G:H5''	1.88	0.74
24:BA:276:U:H1'	24:BA:278:A:H62	1.52	0.74
24:BA:2615:U:C2	50:B0:3:GLN:HA	2.22	0.74
24:BA:2707:U:O2	37:BN:71:ARG:NH1	2.20	0.74
37:BN:1:MET:O	37:BN:2:ARG:HB2	1.87	0.74
48:BY:57:LEU:HA	48:BY:60:LYS:HB3	1.67	0.74
8:AI:51:LEU:HD13	8:AI:56:MET:HG2	1.68	0.74
10:AK:66:ALA:HB1	10:AK:99:LEU:HD13	1.68	0.74
21:AA:1338:G:H2'	21:AA:1339:A:C8	2.23	0.74
24:BA:794:A:H2'	24:BA:795:C:C6	2.23	0.74
24:BA:2673:G:C2	24:BA:2674:G:C8	2.76	0.74
27:BD:97:SER:C	27:BD:99:GLU:HG2	2.07	0.74
28:BE:57:LYS:HG3	28:BE:58:LYS:N	2.01	0.74
55:CA:613:C:H2'	55:CA:614:C:H6	1.51	0.74
24:DA:241:A:H1'	24:DA:243:U:C5	2.22	0.74
24:DA:1070:A:N6	32:DI:8:VAL:HG12	2.02	0.74
24:DA:1838:C:H5''	24:DA:1839:G:OP1	1.88	0.74
24:DA:2543:G:C6	24:DA:2765:A:C5	2.76	0.74
56:DB:45:A:H2'	56:DB:46:A:H8	1.51	0.74
56:DB:50:A:OP1	38:DO:68:LYS:N	2.20	0.74
28:DE:170:ARG:NH2	28:DE:176:ASP:HB2	2.02	0.74
30:DG:162:ARG:H	30:DG:162:ARG:HD2	1.52	0.74
32:DI:57:VAL:HG12	32:DI:58:ILE:H	1.50	0.74
18:AS:62:THR:HG22	18:AS:63:ASP:H	1.52	0.74
21:AA:243:A:H4'	21:AA:244:U:C5'	2.17	0.74
21:AA:748:G:H2'	21:AA:749:A:C8	2.23	0.74
21:AA:1279:G:O2'	21:AA:1282:C:N4	2.21	0.74
24:BA:742:A:H2'	24:BA:743:A:C8	2.22	0.74
24:BA:1654:A:H4'	27:BD:118:PHE:CZ	2.23	0.74
24:BA:2358:A:H61	35:BL:54:GLN:HE22	1.33	0.74
24:BA:2783:U:H2'	24:BA:2784:U:H6	1.51	0.74
27:BD:99:GLU:HG3	27:BD:100:LEU:H	1.52	0.74
31:BH:34:GLY:O	31:BH:35:LYS:HG3	1.87	0.74
43:BT:87:LEU:HB2	43:BT:91:GLN:HG2	1.67	0.74
24:DA:2544:G:H5'	24:DA:2645:G:N7	2.01	0.74
29:DF:76:PHE:HD2	29:DF:76:PHE:H	1.33	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DN:38:LEU:HB3	37:DN:39:PRO:HD3	1.68	0.74
24:BA:142:A:H2'	24:BA:143:C:C6	2.22	0.74
24:BA:243:U:OP1	53:B3:5:THR:HG21	1.88	0.74
24:BA:303:G:H2'	24:BA:304:U:C6	2.22	0.74
24:BA:734:A:C5	24:BA:735:A:N7	2.55	0.74
30:BG:126:THR:HG22	30:BG:127:GLN:H	1.51	0.74
46:BW:18:LYS:HA	46:BW:36:ILE:CG1	2.18	0.74
5:CF:66:ALA:HB1	5:CF:70:VAL:HG23	1.70	0.74
11:CL:45:ASN:HA	55:CA:529:G:O6	1.86	0.74
55:CA:116:A:H2'	55:CA:117:G:H8	1.52	0.74
24:DA:1695:G:C8	26:DC:7:PRO:HB2	2.21	0.74
38:DO:11:ALA:HB2	38:DO:96:GLY:N	2.02	0.74
3:AD:60:VAL:O	3:AD:63:ILE:HG22	1.88	0.74
24:BA:571:U:H4'	24:BA:572:A:OP1	1.86	0.74
24:BA:2253:G:H2'	24:BA:2254:C:C6	2.22	0.74
30:BG:60:GLY:O	30:BG:61:TRP:HB2	1.88	0.74
45:BV:80:HIS:CD2	45:BV:83:LYS:H	2.01	0.74
24:DA:247:G:C5	24:DA:249:C:H1'	2.22	0.74
24:DA:1565:C:H5''	26:DC:17:LYS:HE2	1.69	0.74
33:DJ:17:VAL:HG23	33:DJ:137:PRO:HB2	1.70	0.74
1:AB:113:LEU:HD13	1:AB:143:LEU:HD21	1.70	0.74
4:AE:82:HIS:NE2	4:AE:146:MET:HG3	2.03	0.74
6:AG:73:GLU:HA	6:AG:140:VAL:HG12	1.70	0.74
21:AA:874:G:O2'	21:AA:875:U:H5'	1.88	0.74
24:BA:395:U:O2'	24:BA:396:G:C8	2.40	0.74
24:BA:417:C:H2'	24:BA:418:C:H6	1.53	0.74
24:BA:1013:C:H2'	24:BA:1014:A:C8	2.22	0.74
27:BD:193:VAL:HG21	27:BD:201:LEU:HD21	1.70	0.74
31:BH:90:LEU:HB2	31:BH:123:ARG:HB3	1.67	0.74
40:BQ:97:ILE:HD11	40:BQ:105:PHE:CA	2.17	0.74
43:BT:4:GLU:OE1	43:BT:6:ARG:HG3	1.87	0.74
6:CG:75:LYS:HE2	6:CG:76:SER:H	1.50	0.74
55:CA:154:U:H2'	55:CA:155:A:H5'	1.70	0.74
55:CA:459:A:O2'	55:CA:460:A:H5'	1.88	0.74
24:DA:873:C:H4'	36:DM:64:TRP:NE1	2.03	0.74
24:DA:2311:A:N3	24:DA:2311:A:C2'	2.50	0.74
42:DS:17:VAL:HG11	42:DS:103:ILE:HG13	1.68	0.74
24:BA:1027:A:C6	24:BA:1126:A:N3	2.56	0.74
24:BA:2336:A:N6	46:BW:40:ARG:HD2	2.03	0.74
26:BC:104:LEU:O	26:BC:105:ALA:HB2	1.87	0.74
31:BH:48:GLU:HA	31:BH:51:ARG:HG3	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:97:ARG:HG2	31:BH:111:ALA:HB1	1.70	0.74
24:DA:589:U:O2'	24:DA:590:A:H5'	1.88	0.74
24:DA:828:U:H4'	24:DA:831:G:C6	2.23	0.74
24:DA:2868:A:H2'	24:DA:2869:G:C8	2.23	0.74
29:DF:74:ALA:HB3	29:DF:78:ILE:CG1	2.16	0.74
37:DN:5:LYS:HG2	37:DN:6:SER:H	1.52	0.74
21:AA:132:C:H2'	21:AA:133:U:H6	1.52	0.74
24:BA:2353:G:H1'	46:BW:30:VAL:CG1	2.18	0.74
9:CJ:66:GLU:HB2	13:CN:100:TRP:HZ3	1.53	0.74
55:CA:781:A:H2'	55:CA:782:A:H5'	1.70	0.74
55:CA:1508:A:H2'	55:CA:1509:C:C6	2.23	0.74
24:DA:665:U:H2'	24:DA:666:A:H8	1.51	0.74
24:DA:2292:U:H2'	24:DA:2293:G:H8	1.53	0.74
24:DA:2385:C:O2'	24:DA:2386:A:C8	2.37	0.74
28:DE:126:VAL:HG21	28:DE:134:LEU:HD13	1.70	0.74
29:DF:12:VAL:HA	29:DF:15:LEU:HB2	1.70	0.74
43:DT:60:THR:HG22	43:DT:83:ALA:HA	1.70	0.74
54:D4:19:ARG:O	54:D4:20:ASP:HB2	1.87	0.74
24:BA:85:G:OP1	44:BU:27:VAL:HG11	1.88	0.73
24:BA:204:A:H4'	24:BA:205:G:OP1	1.86	0.73
24:BA:2068:U:H6	24:BA:2068:U:H5''	1.52	0.73
24:BA:2654:A:H4'	24:BA:2655:G:OP1	1.86	0.73
34:BK:18:ARG:HH11	34:BK:18:ARG:CG	2.01	0.73
36:BM:17:ASN:O	36:BM:38:ARG:HD3	1.88	0.73
12:CM:8:ILE:HD13	29:DF:136:ILE:HG13	1.67	0.73
55:CA:977:A:H5''	55:CA:977:A:N3	2.03	0.73
24:DA:784:G:O6	26:DC:227:VAL:HG11	1.88	0.73
21:AA:922:G:H2'	21:AA:923:A:C8	2.24	0.73
24:BA:786:C:O2'	24:BA:787:C:H5'	1.88	0.73
24:BA:856:G:H21	46:BW:19:ARG:HH22	1.35	0.73
40:BQ:85:ALA:O	40:BQ:86:SER:C	2.24	0.73
55:CA:1201:A:O2'	55:CA:1202:U:OP2	2.06	0.73
55:CA:1239:A:H62	55:CA:1299:A:N6	1.84	0.73
4:AE:32:PHE:CD2	4:AE:54:GLU:HA	2.24	0.73
4:AE:155:LYS:HD2	4:AE:156:ARG:HG2	1.70	0.73
21:AA:903:G:H2'	21:AA:904:U:C6	2.24	0.73
24:BA:63:A:C2	24:BA:64:A:N7	2.56	0.73
24:BA:802:A:H2'	24:BA:803:U:H6	1.49	0.73
24:BA:1181:U:O2'	24:BA:1182:G:O5'	2.06	0.73
24:BA:1286:A:O2'	24:BA:1288:G:OP2	2.05	0.73
24:BA:1333:G:H2'	24:BA:1334:G:H8	1.52	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2093:G:O2'	24:BA:2094:A:H5'	1.89	0.73
26:BC:180:MET:HG3	26:BC:268:ARG:NH1	2.03	0.73
51:B1:49:LYS:HG2	51:B1:50:GLU:H	1.54	0.73
12:CM:16:ILE:H	12:CM:16:ILE:HD12	1.53	0.73
18:CS:40:PHE:HB3	18:CS:41:PRO:CD	2.17	0.73
55:CA:1160:G:C6	55:CA:1181:G:O6	2.41	0.73
55:CA:1432:G:H1'	55:CA:1468:A:N6	2.03	0.73
55:CA:1446:A:H2'	55:CA:1447:A:H5''	1.68	0.73
24:DA:95:A:H1'	48:DY:40:SER:HB2	1.69	0.73
24:DA:668:A:C5	24:DA:670:A:N7	2.56	0.73
24:DA:1201:U:H2'	24:DA:1202:G:H8	1.53	0.73
24:DA:2895:G:HO2'	24:DA:2896:C:H6	1.31	0.73
8:AI:8:THR:HG23	21:AA:1148:U:H5''	1.70	0.73
34:BK:63:VAL:HG22	34:BK:107:LEU:HD21	1.68	0.73
42:BS:97:LEU:N	42:BS:97:LEU:HD22	2.03	0.73
55:CA:250:A:H1'	55:CA:252:U:N3	2.03	0.73
55:CA:1213:A:HO2'	55:CA:1214:C:H5'	1.53	0.73
24:DA:391:A:O2'	24:DA:392:U:C5'	2.36	0.73
24:DA:412:A:H2'	24:DA:413:C:C6	2.23	0.73
24:DA:506:G:H4'	24:DA:507:A:H5'	1.70	0.73
24:DA:1919:A:H8	24:DA:1919:A:O5'	1.69	0.73
29:DF:28:PRO:HB2	29:DF:168:LEU:HD21	1.70	0.73
14:AO:42:PHE:CE1	14:AO:55:LEU:HD22	2.24	0.73
21:AA:1376:U:H2'	21:AA:1377:A:H8	1.53	0.73
24:BA:979:A:H2'	24:BA:982:C:N4	2.03	0.73
24:BA:1073:A:C3'	24:BA:1074:G:H5''	2.19	0.73
24:BA:1082:U:H5'	32:BI:117:THR:O	1.88	0.73
24:BA:1328:A:H2'	24:BA:1330:C:C5	2.23	0.73
24:BA:1669:A:H2'	24:BA:1669:A:N3	2.01	0.73
31:BH:31:VAL:CB	31:BH:32:PRO:HD2	2.16	0.73
12:CM:77:LYS:HE3	12:CM:77:LYS:O	1.88	0.73
20:CU:38:GLU:HG3	55:CA:1526:G:OP1	1.88	0.73
55:CA:874:G:O2'	55:CA:875:U:H5'	1.88	0.73
55:CA:1124:G:H4'	55:CA:1125:U:OP1	1.89	0.73
24:DA:2063:C:O2'	24:DA:2064:C:H5'	1.89	0.73
43:DT:50:LEU:HD23	43:DT:51:PHE:H	1.54	0.73
48:DY:1:MET:HG2	48:DY:4:LYS:HZ1	1.52	0.73
4:AE:25:LYS:HB3	4:AE:25:LYS:HZ2	1.52	0.73
24:BA:1738:G:HO2'	24:BA:1739:A:H8	1.37	0.73
24:BA:2047:C:O2'	24:BA:2048:G:H5'	1.89	0.73
24:BA:2305:U:C4	24:BA:2306:C:C4	2.76	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:117:LEU:HD11	31:BH:130:VAL:HG11	1.70	0.73
32:BI:79:LEU:HD13	32:BI:135:MET:SD	2.29	0.73
35:BL:27:LEU:HD12	35:BL:27:LEU:N	2.00	0.73
43:BT:29:THR:HB	43:BT:86:THR:CG2	2.18	0.73
44:BU:15:GLY:O	44:BU:17:ASP:N	2.21	0.73
13:CN:62:ARG:HE	13:CN:69:PRO:HA	1.52	0.73
24:DA:1333:G:HO2'	24:DA:1334:G:H8	1.35	0.73
24:DA:1447:C:H2'	24:DA:1448:G:C8	2.23	0.73
56:DB:98:G:H1	45:DV:14:LYS:CB	2.01	0.73
26:DC:140:VAL:HG22	26:DC:161:VAL:O	1.88	0.73
31:DH:78:VAL:HG22	31:DH:100:ALA:HA	1.69	0.73
33:DJ:25:LEU:HD12	33:DJ:64:VAL:HA	1.71	0.73
22:AV:27:G:H5''	22:AV:27:G:H8	1.54	0.73
24:BA:1064:C:H4'	32:BI:90:GLY:H	1.52	0.73
24:BA:1255:U:C5	28:BE:68:ALA:HA	2.23	0.73
24:BA:2092:U:H4'	24:BA:2093:G:O5'	1.88	0.73
24:BA:2275:C:O2'	36:BM:84:LYS:HA	1.88	0.73
24:BA:2896:C:H2'	24:BA:2897:U:H6	1.54	0.73
36:BM:73:ILE:HG21	36:BM:91:TYR:CZ	2.24	0.73
2:CC:122:GLN:HB2	2:CC:127:VAL:HG21	1.71	0.73
2:CC:190:THR:HG22	2:CC:192:TYR:H	1.53	0.73
24:DA:1062:G:C8	24:DA:1088:A:H8	2.06	0.73
24:DA:1258:U:H2'	24:DA:1259:G:C8	2.23	0.73
24:DA:2291:U:H2'	24:DA:2292:U:C6	2.24	0.73
31:DH:41:LYS:HA	31:DH:44:ILE:HG12	1.69	0.73
53:D3:22:LYS:H	53:D3:48:MET:HB3	1.54	0.73
13:AN:46:LYS:HD2	18:AS:12:LEU:HD21	1.69	0.73
18:AS:5:LYS:HD3	21:AA:1314:C:C5	2.24	0.73
21:AA:204:G:H3'	21:AA:205:A:C5'	2.18	0.73
21:AA:1432:G:H1'	21:AA:1468:A:N6	2.03	0.73
24:BA:855:G:N3	46:BW:23:LYS:HD3	2.04	0.73
24:BA:1430:G:H2'	24:BA:1431:A:C8	2.23	0.73
42:BS:13:SER:OG	42:BS:16:LYS:HD2	1.89	0.73
46:BW:23:LYS:CE	46:BW:24:ARG:HG3	2.18	0.73
1:CB:49:PHE:HA	1:CB:52:ALA:HB3	1.71	0.73
6:CG:22:LEU:HA	6:CG:25:PHE:HB3	1.70	0.73
10:CK:70:ALA:HA	10:CK:73:VAL:HG22	1.69	0.73
16:CQ:13:SER:HB3	16:CQ:21:VAL:HB	1.69	0.73
55:CA:864:A:H2'	55:CA:865:A:C8	2.23	0.73
24:DA:729:G:H2'	24:DA:729:G:N3	2.03	0.73
24:DA:1070:A:H5'	24:DA:1071:G:H5''	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1313:U:C6	24:DA:1610:A:C8	2.77	0.73
24:DA:1522:A:H1'	24:DA:1524:G:C5	2.24	0.73
24:DA:2135:A:H3'	24:DA:2136:G:H5''	1.70	0.73
28:DE:122:GLU:HA	28:DE:190:ALA:HB2	1.71	0.73
32:DI:8:VAL:C	32:DI:9:LYS:HG2	2.08	0.73
49:DZ:4:ILE:HD12	49:DZ:58:GLU:HA	1.71	0.73
3:AD:96:ARG:HB3	3:AD:98:ASP:OD1	1.89	0.73
4:AE:15:ILE:HD11	4:AE:37:VAL:HG23	1.71	0.73
4:AE:25:LYS:HB3	4:AE:25:LYS:NZ	2.04	0.73
5:AF:38:ARG:HB3	5:AF:63:ASN:HB2	1.70	0.73
21:AA:205:A:OP1	21:AA:205:A:H4'	1.88	0.73
21:AA:1278:G:H4'	21:AA:1279:G:C8	2.23	0.73
21:AA:1435:G:H2'	21:AA:1436:U:C6	2.23	0.73
24:BA:491:G:N2	24:BA:492:A:H1'	2.02	0.73
40:BQ:39:ILE:O	40:BQ:43:GLN:HG3	1.89	0.73
40:BQ:97:ILE:HD11	40:BQ:105:PHE:HA	1.69	0.73
55:CA:1095:U:H2'	55:CA:1096:C:C6	2.24	0.73
24:DA:274:C:H2'	24:DA:275:C:O4'	1.89	0.73
24:DA:526:A:N6	24:DA:2626:C:H4'	2.04	0.73
24:DA:2197:U:O2'	24:DA:2198:A:H8	1.71	0.73
24:DA:2529:G:H4'	30:DG:174:LYS:HD3	1.70	0.73
27:DD:14:ILE:HG13	39:DP:11:GLN:HE22	1.52	0.73
3:AD:62:ARG:NE	3:AD:62:ARG:HA	2.03	0.73
3:AD:90:LEU:HA	3:AD:93:LEU:HD12	1.70	0.73
11:AL:29:LYS:O	11:AL:81:ILE:HG22	1.89	0.73
24:BA:470:A:H61	43:BT:72:GLN:HE22	1.33	0.73
24:BA:855:G:H1'	46:BW:23:LYS:HD3	1.69	0.73
24:BA:2251:G:H2'	24:BA:2252:G:C8	2.24	0.73
28:BE:44:ARG:HH21	28:BE:44:ARG:CG	2.02	0.73
48:BY:39:GLN:HB2	48:BY:41:HIS:CD2	2.24	0.73
55:CA:47:C:H4'	55:CA:48:C:O5'	1.87	0.73
55:CA:1023:U:H2'	55:CA:1024:G:C8	2.24	0.73
24:DA:61:C:O2'	24:DA:62:U:H5'	1.87	0.73
24:DA:1854:A:N6	24:DA:1888:G:H1'	2.03	0.73
34:DK:60:ALA:HA	34:DK:87:LEU:HD23	1.71	0.73
36:DM:41:LEU:HD23	36:DM:46:ILE:HG22	1.70	0.73
52:D2:19:ARG:HB3	52:D2:19:ARG:NH2	2.03	0.73
27:BD:45:TYR:N	27:BD:45:TYR:CD1	2.57	0.72
8:CI:56:MET:HG3	8:CI:57:VAL:HG23	1.70	0.72
45:DV:9:ARG:HG2	45:DV:39:ALA:O	1.89	0.72
1:AB:41:ASN:HB3	1:AB:44:LYS:HB3	1.69	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:33:U:H5'	22:AV:34:G:OP2	1.89	0.72
24:BA:1681:G:O2'	24:BA:1762:A:O2'	2.06	0.72
24:BA:1962:C:O2'	24:BA:1964:G:OP2	2.07	0.72
37:BN:74:GLU:O	37:BN:77:ALA:HB3	1.89	0.72
40:BQ:63:ARG:HH22	40:BQ:96:ASP:HB3	1.54	0.72
42:BS:69:LEU:HD12	42:BS:108:SER:O	1.89	0.72
6:CG:59:GLU:HB2	6:CG:62:GLU:HB2	1.68	0.72
55:CA:533:A:C2	55:CA:536:C:C5	2.77	0.72
55:CA:736:C:H2'	55:CA:737:C:C6	2.24	0.72
24:DA:303:G:H2'	24:DA:304:U:C6	2.24	0.72
24:DA:395:U:HO2'	24:DA:396:G:H8	0.78	0.72
24:DA:2529:G:H4'	30:DG:174:LYS:CD	2.19	0.72
24:DA:2674:G:H2'	24:DA:2675:A:H8	1.53	0.72
40:DQ:69:ARG:HB2	40:DQ:69:ARG:HH21	1.53	0.72
45:DV:59:GLU:HG2	45:DV:60:VAL:H	1.53	0.72
48:DY:18:LEU:O	48:DY:22:LEU:HD13	1.88	0.72
4:AE:156:ARG:HG2	7:AH:63:LYS:NZ	2.01	0.72
21:AA:116:A:O2'	21:AA:117:G:H5'	1.90	0.72
24:BA:395:U:O2'	24:BA:396:G:N7	2.22	0.72
24:BA:2727:A:O2'	24:BA:2728:U:H5'	1.89	0.72
43:BT:11:LEU:HD11	43:BT:47:VAL:HG22	1.71	0.72
24:DA:223:A:N6	24:DA:422:A:C6	2.57	0.72
56:DB:42:C:H2'	56:DB:43:C:H6	1.51	0.72
43:DT:20:ALA:HB1	43:DT:31:VAL:HG21	1.71	0.72
44:DU:17:ASP:HB2	44:DU:38:ILE:HA	1.70	0.72
47:DX:63:ILE:HD12	47:DX:64:ASP:H	1.54	0.72
1:AB:119:GLN:C	1:AB:119:GLN:HE21	1.93	0.72
4:AE:84:VAL:HB	4:AE:146:MET:HE3	1.70	0.72
9:AJ:52:LEU:HD21	9:AJ:59:LYS:HA	1.72	0.72
21:AA:753:A:H4'	21:AA:754:C:O5'	1.89	0.72
44:BU:73:ASN:ND2	44:BU:75:ALA:HB3	2.05	0.72
4:CE:125:LYS:HG2	4:CE:126:ALA:N	2.05	0.72
19:CT:23:ARG:HB3	19:CT:60:GLN:HE22	1.53	0.72
55:CA:243:A:N3	55:CA:245:U:H2'	2.04	0.72
55:CA:834:U:H2'	55:CA:835:U:H6	1.51	0.72
55:CA:1241:G:HO2'	55:CA:1242:G:H8	0.76	0.72
55:CA:1376:U:H2'	55:CA:1377:A:C8	2.24	0.72
24:DA:85:G:HO2'	24:DA:86:G:H8	1.35	0.72
24:DA:123:G:O3'	24:DA:1376:C:H4'	1.89	0.72
24:DA:1364:G:C5	47:DX:1:SER:HB2	2.25	0.72
24:DA:1450:G:H21	24:DA:1452:G:H1	1.35	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DD:51:THR:CG2	27:DD:76:GLY:HA3	2.20	0.72
6:AG:110:ARG:HH11	6:AG:122:GLU:HG2	1.53	0.72
21:AA:555:U:H2'	21:AA:556:C:C6	2.24	0.72
24:BA:387:U:H4'	24:BA:388:G:H5''	1.70	0.72
24:BA:515:A:H5''	24:BA:516:C:OP2	1.88	0.72
24:BA:588:U:H1'	28:BE:85:PHE:CD1	2.25	0.72
28:BE:95:LYS:O	28:BE:96:VAL:HB	1.89	0.72
30:BG:84:LYS:CG	30:BG:132:LEU:H	2.00	0.72
1:CB:130:LYS:HA	1:CB:133:ALA:HB3	1.72	0.72
2:CC:133:MET:HE2	2:CC:150:VAL:HG23	1.69	0.72
4:CE:95:MET:HA	4:CE:124:ALA:HB2	1.71	0.72
55:CA:372:C:H4'	55:CA:373:A:C5'	2.18	0.72
24:DA:482:A:N6	24:DA:506:G:C4	2.58	0.72
24:DA:538:A:H5''	33:DJ:7:LYS:NZ	2.04	0.72
24:DA:574:A:H4'	24:DA:575:A:H5'	1.71	0.72
24:DA:1565:C:O2'	24:DA:1566:A:H8	1.71	0.72
41:DR:82:HIS:O	41:DR:82:HIS:CG	2.40	0.72
21:AA:415:A:H2'	21:AA:416:G:C8	2.24	0.72
21:AA:895:G:C5	21:AA:896:C:C5	2.78	0.72
24:BA:811:U:O2	24:BA:1250:G:H3'	1.90	0.72
24:BA:1993:U:H4'	27:BD:133:THR:HG21	1.72	0.72
27:BD:110:THR:HG23	27:BD:171:THR:HG22	1.70	0.72
33:BJ:30:THR:CG2	33:BJ:31:GLU:N	2.53	0.72
55:CA:252:U:O2'	55:CA:253:A:H8	1.71	0.72
55:CA:981:U:H2'	55:CA:982:U:C5	2.24	0.72
24:DA:1069:A:H4'	24:DA:1070:A:O5'	1.87	0.72
24:DA:1264:A:H5'	50:D0:7:PRO:HG2	1.72	0.72
24:DA:1271:G:OP2	59:DA:3400:HOH:O	2.06	0.72
24:DA:1737:G:C6	24:DA:1738:G:N1	2.58	0.72
27:DD:107:VAL:HG13	27:DD:109:VAL:HG23	1.71	0.72
47:DX:30:PRO:HG2	47:DX:32:LEU:HD21	1.72	0.72
1:AB:30:ILE:HG12	1:AB:39:ILE:O	1.89	0.72
19:AT:26:MET:HB3	21:AA:1457:G:O3'	1.89	0.72
24:BA:265:A:C8	24:BA:428:A:C2	2.77	0.72
24:BA:811:U:C4	35:BL:21:ARG:NH2	2.57	0.72
24:BA:856:G:H21	46:BW:19:ARG:NH2	1.88	0.72
24:BA:1444:G:H2'	24:BA:1445:G:C8	2.24	0.72
24:BA:1820:U:H4'	24:BA:1821:A:OP2	1.90	0.72
24:BA:2197:U:HO2'	24:BA:2198:A:H2'	1.53	0.72
26:BC:123:ILE:O	26:BC:123:ILE:HG12	1.89	0.72
29:BF:112:ASP:OD1	29:BF:113:PHE:N	2.23	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:965:U:H1'	55:CA:969:A:C6	2.24	0.72
24:DA:379:G:C6	24:DA:396:G:O6	2.43	0.72
24:DA:1223:G:N2	24:DA:1226:A:OP2	2.22	0.72
9:AJ:81:GLU:HA	9:AJ:84:VAL:HG12	1.72	0.72
21:AA:32:A:H2'	21:AA:33:A:C8	2.24	0.72
29:BF:134:GLN:O	29:BF:136:ILE:N	2.21	0.72
4:CE:93:VAL:HG21	4:CE:139:THR:HG22	1.71	0.72
55:CA:198:G:H2'	55:CA:199:A:H8	1.54	0.72
55:CA:599:C:H2'	55:CA:600:A:H8	1.55	0.72
55:CA:1088:G:H21	55:CA:1167:A:N6	1.88	0.72
55:CA:1338:G:H2'	55:CA:1339:A:C8	2.25	0.72
24:DA:333:G:O2'	24:DA:334:C:H5'	1.89	0.72
24:DA:520:G:H2'	24:DA:521:U:C6	2.25	0.72
24:DA:783:A:H2	24:DA:1778:U:H4'	1.54	0.72
24:DA:1565:C:H5''	26:DC:17:LYS:CE	2.19	0.72
21:AA:316:C:H41	21:AA:351:G:N2	1.88	0.72
21:AA:1261:A:N6	21:AA:1274:A:H2'	2.05	0.72
24:BA:734:A:C4	24:BA:735:A:C8	2.77	0.72
27:BD:13:ARG:NH1	39:BP:74:GLN:HE21	1.86	0.72
27:BD:99:GLU:HG3	27:BD:100:LEU:N	2.05	0.72
29:BF:134:GLN:HE22	29:BF:150:GLY:H	1.37	0.72
32:BI:7:TYR:HB3	32:BI:58:ILE:H	1.55	0.72
37:BN:24:MET:HG2	37:BN:44:LEU:HD22	1.70	0.72
8:CI:35:GLU:HA	8:CI:39:GLY:HA3	1.70	0.72
55:CA:721:G:H4'	55:CA:722:G:O5'	1.90	0.72
55:CA:815:A:OP2	55:CA:816:A:H8	1.73	0.72
55:CA:1051:C:O2'	55:CA:1052:U:H6	1.72	0.72
55:CA:1481:U:H2'	55:CA:1482:G:C8	2.25	0.72
24:DA:67:U:H2'	24:DA:68:G:H8	1.55	0.72
24:DA:975:A:O2'	24:DA:976:G:H5'	1.89	0.72
24:DA:1723:G:H2'	24:DA:1724:G:H8	1.55	0.72
24:DA:2615:U:C2	50:D0:3:GLN:HA	2.24	0.72
26:DC:8:THR:O	26:DC:9:SER:HB3	1.89	0.72
4:AE:133:ILE:H	4:AE:133:ILE:HD12	1.53	0.72
6:AG:144:ALA:C	6:AG:146:ALA:H	1.92	0.72
10:AK:21:HIS:CD2	21:AA:707:U:H4'	2.24	0.72
21:AA:132:C:H2'	21:AA:133:U:C6	2.25	0.72
26:BC:106:PRO:HA	26:BC:141:HIS:NE2	2.05	0.72
32:BI:53:PRO:HD2	32:BI:77:VAL:HG21	1.72	0.72
47:BX:34:SER:HA	47:BX:49:ARG:HA	1.71	0.72
24:DA:638:G:H2'	24:DA:639:U:C6	2.25	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1700:A:H2'	24:DA:1701:A:H5'	1.71	0.72
24:DA:1802:A:N6	24:DA:1817:G:N2	2.38	0.72
24:DA:2439:A:H4'	24:DA:2440:C:O5'	1.88	0.72
26:DC:159:THR:O	26:DC:194:VAL:HG12	1.90	0.72
26:DC:166:ARG:HB2	26:DC:171:VAL:HG22	1.72	0.72
29:DF:49:LEU:HA	29:DF:52:ALA:HB3	1.70	0.72
6:AG:100:MET:O	6:AG:104:VAL:HG23	1.90	0.71
24:BA:1181:U:O2'	24:BA:1182:G:H8	1.71	0.71
29:BF:131:VAL:HG22	29:BF:151:LEU:O	1.90	0.71
32:BI:89:SER:HB3	32:BI:92:PRO:HG3	1.72	0.71
35:BL:91:ASP:H	35:BL:94:THR:CG2	2.01	0.71
14:CO:28:VAL:HG11	14:CO:66:LEU:HD21	1.71	0.71
24:DA:1141:U:H4'	24:DA:1142:A:O4'	1.91	0.71
24:DA:1352:U:H5	24:DA:1377:G:C5	2.08	0.71
24:DA:1385:A:H4'	24:DA:1386:C:OP1	1.89	0.71
24:DA:2461:A:H1'	24:DA:2492:U:N3	2.05	0.71
27:DD:106:LYS:HB3	27:DD:206:ALA:CB	2.20	0.71
29:DF:136:ILE:O	29:DF:137:PHE:O	2.07	0.71
20:AU:45:LYS:HA	20:AU:45:LYS:HE3	1.72	0.71
21:AA:1046:A:O2'	21:AA:1047:G:C5'	2.37	0.71
21:AA:1064:G:O2'	21:AA:1190:G:N2	2.24	0.71
24:BA:279:A:H2'	24:BA:280:U:H6	1.55	0.71
24:BA:1027:A:C2	24:BA:1126:A:C4	2.78	0.71
24:BA:2353:G:H1'	46:BW:30:VAL:HG13	1.71	0.71
28:BE:73:ILE:O	28:BE:73:ILE:HG12	1.90	0.71
31:BH:41:LYS:HA	31:BH:44:ILE:HG12	1.72	0.71
6:CG:88:VAL:HG22	6:CG:89:GLU:H	1.54	0.71
55:CA:223:A:H2'	55:CA:224:U:H6	1.53	0.71
55:CA:1054:C:O2'	55:CA:1055:A:C5'	2.37	0.71
55:CA:1242:G:C2	55:CA:1243:C:H1'	2.25	0.71
24:DA:84:A:H4'	24:DA:85:G:O5'	1.89	0.71
24:DA:603:A:H4'	24:DA:604:G:O5'	1.89	0.71
35:DL:64:PHE:HD2	53:D3:24:LYS:HG2	1.53	0.71
24:BA:825:A:C1'	35:BL:54:GLN:NE2	2.52	0.71
24:BA:924:G:H4'	46:BW:24:ARG:HH21	1.54	0.71
32:BI:98:GLY:HA3	32:BI:137:LEU:HD23	1.71	0.71
34:BK:47:ILE:HG13	34:BK:48:PRO:HD2	1.73	0.71
39:BP:4:ILE:CG2	39:BP:5:LYS:H	2.02	0.71
9:CJ:59:LYS:HB2	9:CJ:62:ARG:HH21	1.54	0.71
22:CV:34:G:H2'	22:CV:35:A:H8	1.55	0.71
24:DA:547:A:C3'	24:DA:548:G:H5'	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DF:107:VAL:C	29:DF:109:ARG:H	1.92	0.71
30:DG:126:THR:HG22	30:DG:127:GLN:H	1.55	0.71
5:AF:49:TYR:CE1	17:AR:65:SER:HA	2.25	0.71
9:AJ:55:PRO:HG3	21:AA:1059:C:O2	1.89	0.71
21:AA:697:U:O2	21:AA:798:U:H1'	1.91	0.71
21:AA:1240:U:H3'	21:AA:1241:G:C5'	2.19	0.71
21:AA:1273:C:H2'	21:AA:1274:A:O4'	1.89	0.71
21:AA:1303:C:H2'	21:AA:1304:G:H8	1.54	0.71
55:CA:147:G:H2'	55:CA:148:G:C8	2.26	0.71
55:CA:274:A:O2'	55:CA:275:G:H8	1.74	0.71
55:CA:926:G:H2'	55:CA:1505:G:N3	2.05	0.71
24:DA:609:A:H2'	24:DA:610:C:O4'	1.90	0.71
24:DA:1760:C:H2'	24:DA:1761:C:H6	1.54	0.71
36:DM:61:GLY:HA2	36:DM:107:GLY:HA3	1.72	0.71
51:D1:51:ALA:O	51:D1:52:LYS:HB2	1.89	0.71
1:AB:101:THR:HG23	1:AB:102:ASN:H	1.55	0.71
3:AD:34:GLU:O	3:AD:37:PRO:HD3	1.90	0.71
12:AM:28:ARG:O	12:AM:32:ILE:HG12	1.91	0.71
21:AA:903:G:H2'	21:AA:904:U:H6	1.55	0.71
24:BA:738:G:C6	24:BA:739:A:C2	2.79	0.71
28:BE:5:LEU:HD12	28:BE:10:SER:HB3	1.71	0.71
54:B4:24:ARG:HG2	54:B4:24:ARG:HH21	1.53	0.71
24:DA:828:U:C4	24:DA:829:A:N6	2.58	0.71
21:AA:1386:G:H2'	21:AA:1387:G:C8	2.26	0.71
22:AV:40:C:H2'	22:AV:41:C:C6	2.25	0.71
2:CC:19:SER:HB3	2:CC:21:TRP:NE1	2.05	0.71
55:CA:32:A:H2'	55:CA:33:A:C8	2.25	0.71
55:CA:197:A:O2'	55:CA:198:G:C8	2.44	0.71
24:DA:764:A:H2	26:DC:217:PRO:HG3	1.55	0.71
24:DA:1490:A:H8	26:DC:73:ILE:HD12	1.53	0.71
24:DA:1506:U:H2'	24:DA:1507:C:O4'	1.91	0.71
24:DA:1652:A:H3'	24:DA:1653:G:C8	2.26	0.71
24:DA:2147:A:OP1	24:DA:2147:A:H4'	1.90	0.71
24:DA:2886:A:N6	50:D0:39:ARG:HD3	2.05	0.71
45:DV:9:ARG:HD3	45:DV:39:ALA:HB1	1.71	0.71
11:AL:2:THR:HG22	11:AL:4:ASN:N	2.06	0.71
12:AM:74:MET:SD	12:AM:77:LYS:HD3	2.31	0.71
19:AT:4:LYS:HE2	19:AT:5:SER:HB3	1.71	0.71
21:AA:1234:C:HO2'	21:AA:1364:U:H6	1.38	0.71
25:BB:15:A:O2'	25:BB:16:G:H5'	1.90	0.71
33:BJ:2:LYS:HD3	33:BJ:2:LYS:N	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BM:81:ARG:HG3	36:BM:82:MET:H	1.53	0.71
40:BQ:71:ASN:HB3	40:BQ:109:VAL:HG11	1.73	0.71
46:BW:23:LYS:NZ	46:BW:24:ARG:HG3	2.05	0.71
52:B2:43:THR:O	52:B2:44:VAL:CB	2.37	0.71
12:CM:85:TYR:HE2	12:CM:96:VAL:HG13	1.55	0.71
55:CA:120:A:H3'	55:CA:121:U:H5''	1.71	0.71
55:CA:407:U:H2'	55:CA:408:A:H8	1.54	0.71
55:CA:1256:A:N1	55:CA:1278:G:H2'	2.06	0.71
24:DA:1097:U:H2'	24:DA:1098:A:O4'	1.89	0.71
24:DA:1667:G:H8	24:DA:1667:G:OP2	1.73	0.71
24:DA:1929:G:H4'	24:DA:1930:G:OP1	1.89	0.71
24:DA:2307:G:H1'	24:DA:2308:G:N7	2.05	0.71
24:DA:2757:A:O2'	24:DA:2758:A:H5'	1.90	0.71
43:DT:43:ILE:HG21	43:DT:58:VAL:HG11	1.71	0.71
1:AB:130:LYS:HA	1:AB:130:LYS:NZ	2.06	0.71
8:AI:39:GLY:O	8:AI:40:ARG:HB2	1.91	0.71
21:AA:338:A:N1	21:AA:351:G:O6	2.23	0.71
24:BA:729:G:H5'	26:BC:206:LYS:HZ3	1.53	0.71
24:BA:871:U:OP1	36:BM:5:LYS:HG3	1.91	0.71
24:BA:1553:A:N7	24:BA:1555:G:C5	2.59	0.71
24:BA:1963:U:O5'	24:BA:1963:U:H6	1.72	0.71
26:BC:229:HIS:HD2	26:BC:246:PRO:HB3	1.56	0.71
32:BI:76:ALA:HB2	32:BI:131:THR:HG23	1.73	0.71
39:BP:105:LYS:HA	39:BP:108:ARG:HD3	1.73	0.71
55:CA:890:G:O2'	55:CA:891:U:OP2	2.07	0.71
24:DA:688:U:O2'	24:DA:689:A:H5'	1.90	0.71
28:DE:166:LYS:HE2	28:DE:166:LYS:HA	1.73	0.71
36:DM:7:THR:HG22	36:DM:9:PHE:H	1.56	0.71
43:DT:1:MET:HG2	43:DT:4:GLU:HA	1.70	0.71
2:AC:99:GLN:O	2:AC:100:ILE:HB	1.90	0.71
13:AN:81:ILE:HG21	21:AA:1202:U:C4	2.25	0.71
21:AA:955:U:H2'	21:AA:956:U:H6	1.55	0.71
24:BA:975:A:H2'	24:BA:976:G:H8	1.56	0.71
27:BD:93:GLY:O	27:BD:95:SER:N	2.24	0.71
37:BN:71:ARG:HH21	37:BN:71:ARG:CG	2.04	0.71
3:CD:121:ALA:O	3:CD:122:ILE:HD13	1.90	0.71
6:CG:100:MET:HE2	6:CG:100:MET:H	1.55	0.71
55:CA:317:U:H2'	55:CA:318:G:H8	1.56	0.71
55:CA:1009:U:H2'	55:CA:1010:U:C6	2.26	0.71
55:CA:1376:U:H2'	55:CA:1377:A:H8	1.56	0.71
24:DA:1026:G:O2'	24:DA:1027:A:H5'	1.89	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1272:A:C5	24:DA:1618:A:H1'	2.24	0.71
52:D2:34:ARG:HB3	52:D2:42:LEU:HD11	1.73	0.71
1:AB:59:ILE:HD11	1:AB:220:VAL:HG13	1.72	0.71
3:AD:55:ARG:HA	3:AD:55:ARG:HH11	1.56	0.71
24:BA:729:G:N3	24:BA:729:G:H2'	2.04	0.71
24:BA:1062:G:O2'	24:BA:1063:G:O4'	2.08	0.71
24:BA:1993:U:H4'	27:BD:133:THR:CG2	2.20	0.71
24:BA:2200:C:N4	24:BA:2224:G:N2	2.38	0.71
24:BA:2305:U:H1'	29:BF:132:ARG:H	1.55	0.71
36:BM:132:THR:HG22	36:BM:133:LYS:H	1.55	0.71
44:BU:52:ASN:C	44:BU:54:PRO:HD2	2.12	0.71
19:CT:26:MET:HG2	55:CA:1457:G:O2'	1.91	0.71
55:CA:1324:A:H2'	55:CA:1325:C:H6	1.54	0.71
24:DA:861:A:H2'	24:DA:862:G:H8	1.56	0.71
24:DA:1075:C:O2'	24:DA:1076:C:H5'	1.90	0.71
24:DA:1087:G:N2	24:DA:1103:A:H1'	2.05	0.71
24:DA:1515:A:H2'	24:DA:1516:G:O4'	1.91	0.71
24:DA:1669:A:N3	24:DA:1669:A:C2'	2.48	0.71
24:DA:1936:A:H5''	24:DA:1937:A:O5'	1.91	0.71
34:DK:118:LEU:C	34:DK:120:PRO:HD2	2.11	0.71
4:AE:14:LEU:HD22	4:AE:15:ILE:N	2.06	0.70
18:AS:5:LYS:HD2	21:AA:1314:C:OP2	1.90	0.70
24:BA:1343:G:H2'	24:BA:1344:U:C6	2.26	0.70
39:BP:63:ILE:HA	39:BP:68:GLY:HA2	1.72	0.70
55:CA:1292:G:H2'	55:CA:1293:C:C6	2.26	0.70
24:DA:1947:C:H2'	24:DA:1948:G:H8	1.54	0.70
24:DA:2441:U:O2'	24:DA:2442:C:H5'	1.90	0.70
24:DA:2738:A:H2	24:DA:2766:A:H61	1.36	0.70
24:DA:2867:G:H2'	24:DA:2867:G:N3	2.04	0.70
26:DC:52:HIS:HA	26:DC:216:ARG:HB2	1.73	0.70
30:DG:16:VAL:HG11	30:DG:44:HIS:CD2	2.26	0.70
30:DG:83:THR:C	30:DG:84:LYS:HD3	2.11	0.70
33:DJ:117:ALA:HA	33:DJ:120:ARG:HD2	1.72	0.70
40:DQ:50:ARG:HD2	40:DQ:50:ARG:N	2.05	0.70
45:DV:80:HIS:CD2	45:DV:82:TYR:H	2.08	0.70
10:AK:119:GLY:HA2	21:AA:716:A:H1'	1.73	0.70
18:AS:6:LYS:HE2	18:AS:6:LYS:HA	1.73	0.70
21:AA:1125:U:O2'	21:AA:1126:U:H2'	1.91	0.70
24:BA:394:C:H2'	24:BA:395:U:O4'	1.91	0.70
24:BA:811:U:C2	24:BA:1251:C:C5	2.79	0.70
26:BC:141:HIS:HB2	26:BC:190:THR:HB	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:67:ALA:HA	31:BH:138:VAL:HB	1.74	0.70
7:CH:1:SER:HB3	7:CH:3:GLN:HG3	1.72	0.70
7:CH:11:THR:HG22	7:CH:14:ARG:NH1	2.04	0.70
18:CS:35:ARG:HA	18:CS:70:LEU:HB2	1.71	0.70
55:CA:113:G:C1'	55:CA:354:G:H5'	2.22	0.70
55:CA:1088:G:N2	55:CA:1167:A:H61	1.89	0.70
24:DA:2145:C:H3'	24:DA:2147:A:OP2	1.90	0.70
24:DA:2285:C:OP2	51:D1:5:ARG:HD3	1.91	0.70
24:DA:2303:G:H1'	29:DF:122:ASP:OD2	1.91	0.70
24:DA:2497:A:H1'	24:DA:2498:C:C5	2.26	0.70
24:DA:2746:U:H5''	30:DG:137:LYS:HG2	1.72	0.70
1:AB:53:LEU:HA	1:AB:56:LEU:HB3	1.72	0.70
18:AS:10:ILE:HD11	18:AS:15:LEU:HB2	1.74	0.70
21:AA:268:U:H2'	21:AA:269:C:C6	2.25	0.70
21:AA:967:C:H2'	21:AA:968:A:N7	2.06	0.70
24:BA:1090:A:C2	24:BA:1091:G:C8	2.79	0.70
24:BA:2532:G:C5	24:BA:2533:U:C5	2.79	0.70
24:BA:2583:G:OP2	59:BA:3713:HOH:O	2.09	0.70
27:BD:13:ARG:HH12	39:BP:74:GLN:NE2	1.85	0.70
27:BD:106:LYS:H	27:BD:106:LYS:HD2	1.56	0.70
30:BG:104:LEU:HB2	30:BG:112:VAL:CG2	2.21	0.70
33:BJ:99:ARG:O	33:BJ:103:ILE:HG23	1.91	0.70
34:BK:21:CYS:CB	34:BK:39:ILE:HD11	2.21	0.70
36:BM:46:ILE:HG13	36:BM:47:GLU:H	1.55	0.70
4:CE:103:GLY:HA3	4:CE:121:ASN:HA	1.72	0.70
5:CF:91:ARG:O	5:CF:93:LYS:HE3	1.91	0.70
55:CA:110:C:H2'	55:CA:111:G:C8	2.27	0.70
24:DA:704:G:H2'	24:DA:726:G:H22	1.55	0.70
24:DA:973:A:H1'	24:DA:1188:U:C6	2.26	0.70
56:DB:30:C:H2'	56:DB:31:C:H5'	1.73	0.70
36:DM:34:LYS:HD3	36:DM:131:VAL:HG21	1.74	0.70
1:AB:110:ILE:CD1	1:AB:147:LEU:HD13	2.22	0.70
3:AD:10:LEU:CD2	3:AD:62:ARG:HG3	2.21	0.70
3:AD:32:LYS:HE3	21:AA:413:G:C6	2.26	0.70
21:AA:1062:U:H2'	21:AA:1063:C:C6	2.25	0.70
24:BA:1256:G:H2'	28:BE:77:ILE:HD11	1.74	0.70
24:BA:2038:G:H2'	24:BA:2039:U:O4'	1.91	0.70
26:BC:91:ALA:HB3	26:BC:103:ILE:HG22	1.73	0.70
32:BI:20:SER:HB3	32:BI:21:PRO:HD3	1.73	0.70
46:BW:39:GLN:HE21	46:BW:43:LYS:N	1.88	0.70
20:CU:16:ARG:CG	20:CU:19:LYS:HG2	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1552:A:C2	24:DA:1553:A:C8	2.80	0.70
24:DA:2198:A:HO2'	24:DA:2199:A:H8	1.37	0.70
35:DL:17:LYS:NZ	35:DL:19:LEU:HD22	2.07	0.70
21:AA:79:G:H2'	21:AA:80:A:C8	2.24	0.70
21:AA:1303:C:H2'	21:AA:1304:G:C8	2.27	0.70
24:BA:64:A:H2'	24:BA:65:U:C6	2.26	0.70
24:BA:1810:A:H2'	24:BA:1811:G:O4'	1.92	0.70
39:BP:8:GLU:O	39:BP:11:GLN:HB2	1.91	0.70
42:BS:73:LYS:O	42:BS:106:VAL:N	2.23	0.70
55:CA:1504:G:C4'	55:CA:1505:G:H5'	2.22	0.70
56:DB:77:U:OP2	45:DV:14:LYS:HA	1.91	0.70
44:DU:95:PHE:HD1	44:DU:95:PHE:H	1.39	0.70
1:AB:15:PHE:HB2	1:AB:39:ILE:HG23	1.72	0.70
6:AG:149:ALA:HA	10:AK:60:PHE:HB3	1.73	0.70
17:AR:42:ARG:HG3	17:AR:43:ILE:HG12	1.73	0.70
21:AA:415:A:H2'	21:AA:416:G:H8	1.56	0.70
21:AA:748:G:H2'	21:AA:749:A:H8	1.53	0.70
24:BA:1253:A:N7	59:BA:3337:HOH:O	2.23	0.70
32:BI:42:ASN:HA	32:BI:45:THR:HB	1.74	0.70
45:BV:77:VAL:HG23	45:BV:89:ILE:HG12	1.72	0.70
46:BW:8:SER:O	46:BW:9:THR:HB	1.92	0.70
55:CA:87:C:O2'	55:CA:88:U:H4'	1.91	0.70
55:CA:1234:C:H1'	55:CA:1364:U:C6	2.26	0.70
24:DA:202:U:C4	24:DA:203:A:C6	2.79	0.70
24:DA:571:U:H4'	24:DA:573:U:H5	1.57	0.70
24:DA:684:G:H5'	52:D2:16:HIS:CE1	2.26	0.70
24:DA:1439:A:C6	24:DA:1552:A:C5	2.80	0.70
24:DA:2337:G:H2'	24:DA:2337:G:N3	2.04	0.70
26:DC:173:LEU:H	26:DC:173:LEU:HD22	1.56	0.70
49:DZ:16:LEU:HD23	49:DZ:19:HIS:CD2	2.26	0.70
10:AK:21:HIS:HB2	10:AK:32:THR:O	1.92	0.70
21:AA:367:U:O2'	21:AA:368:U:H4'	1.91	0.70
21:AA:766:A:H2'	21:AA:767:A:C8	2.26	0.70
24:BA:825:A:H1'	35:BL:54:GLN:HE21	1.55	0.70
24:BA:923:G:H1'	46:BW:23:LYS:HE2	1.74	0.70
30:BG:10:VAL:O	30:BG:10:VAL:HG23	1.90	0.70
42:BS:4:ILE:HG22	42:BS:106:VAL:HG13	1.74	0.70
46:BW:39:GLN:NE2	46:BW:43:LYS:H	1.87	0.70
48:BY:9:LYS:HA	48:BY:9:LYS:NZ	2.05	0.70
7:CH:26:MET:HB2	7:CH:27:PRO:HD2	1.72	0.70
10:CK:30:ILE:HG12	10:CK:45:THR:HB	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1552:A:O2'	24:DA:1553:A:H5'	1.92	0.70
24:DA:2285:C:H2'	24:DA:2286:G:H5''	1.74	0.70
27:DD:141:ARG:HH11	27:DD:141:ARG:HB3	1.56	0.70
45:DV:70:ILE:N	45:DV:70:ILE:HD13	2.07	0.70
2:AC:148:ILE:HA	2:AC:200:TRP:O	1.92	0.70
21:AA:450:G:N7	21:AA:481:G:O6	2.24	0.70
21:AA:549:C:O2'	21:AA:550:G:O4'	2.09	0.70
21:AA:765:G:N2	21:AA:812:G:HO2'	1.88	0.70
21:AA:858:G:C2'	21:AA:859:G:H5'	2.21	0.70
21:AA:1306:A:N6	21:AA:1331:G:H1'	2.06	0.70
24:BA:90:U:C2	24:BA:91:A:N7	2.60	0.70
24:BA:811:U:N3	35:BL:21:ARG:NH2	2.40	0.70
24:BA:1210:G:O2'	24:BA:1211:C:OP2	2.07	0.70
24:BA:1339:G:H21	24:BA:1603:A:H1'	1.57	0.70
24:BA:1789:A:OP2	26:BC:220:ARG:NH1	2.25	0.70
24:BA:1956:U:H2'	24:BA:1957:C:H6	1.56	0.70
35:BL:23:ILE:HD12	41:BR:84:ARG:HG2	1.74	0.70
40:BQ:48:ASP:HA	40:BQ:51:GLN:HB2	1.74	0.70
55:CA:260:G:H2'	55:CA:261:U:C6	2.27	0.70
55:CA:1235:U:H2'	55:CA:1236:A:C8	2.26	0.70
24:DA:91:A:H1'	24:DA:92:U:C5	2.27	0.70
24:DA:1807:G:H2'	24:DA:1808:A:H5'	1.74	0.70
24:DA:2233:U:H2'	24:DA:2234:G:H8	1.57	0.70
49:DZ:23:LEU:HD21	49:DZ:53:MET:HE1	1.72	0.70
1:AB:165:ALA:HB2	1:AB:186:VAL:HG12	1.74	0.70
21:AA:332:G:O2'	21:AA:333:U:H5'	1.90	0.70
21:AA:455:G:H2'	21:AA:456:A:H8	1.57	0.70
21:AA:858:G:O2'	21:AA:859:G:H5'	1.91	0.70
24:BA:1278:C:H2'	24:BA:1279:G:H8	1.56	0.70
26:BC:145:MET:SD	26:BC:153:LEU:HD21	2.31	0.70
30:BG:84:LYS:HB3	30:BG:132:LEU:O	1.92	0.70
36:BM:14:LYS:O	36:BM:15:GLY:O	2.09	0.70
1:CB:195:VAL:HG12	1:CB:197:PHE:H	1.57	0.70
3:CD:2:ARG:HH21	3:CD:114:ARG:CD	2.05	0.70
4:CE:75:LEU:HD21	4:CE:80:LEU:HA	1.74	0.70
55:CA:1137:C:H4'	55:CA:1138:G:C2	2.26	0.70
55:CA:1269:A:H2	55:CA:1312:G:H21	1.39	0.70
24:DA:2423:U:H1'	24:DA:2425:A:C5	2.26	0.70
24:DA:2866:U:H4'	24:DA:2867:G:O5'	1.89	0.70
28:DE:46:GLN:HB3	28:DE:86:ALA:HB1	1.72	0.70
32:DI:51:GLY:O	32:DI:52:LEU:HB2	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DJ:106:LYS:HB2	33:DJ:119:PHE:HE2	1.56	0.70
42:DS:70:LYS:H	42:DS:70:LYS:HE3	1.56	0.70
4:AE:100:GLU:HB3	4:AE:121:ASN:HA	1.72	0.70
10:AK:30:ILE:HG22	10:AK:45:THR:HG22	1.73	0.70
24:BA:747:U:C4	24:BA:2613:U:C5	2.79	0.70
24:BA:2333:A:H4'	24:BA:2334:U:O5'	1.92	0.70
26:BC:144:GLU:HA	26:BC:151:GLY:HA2	1.72	0.70
27:BD:69:ALA:HA	27:BD:73:VAL:HG13	1.74	0.70
30:BG:8:VAL:HG12	30:BG:49:LEU:H	1.56	0.70
34:BK:71:ARG:CB	34:BK:72:PRO:HD3	2.21	0.70
38:BO:67:ASN:O	38:BO:69:ASP:N	2.24	0.70
46:BW:39:GLN:HE21	46:BW:43:LYS:H	1.40	0.70
4:CE:39:GLY:HA2	4:CE:44:ARG:O	1.91	0.70
7:CH:13:ILE:HG23	7:CH:62:LEU:HD11	1.73	0.70
12:CM:2:ARG:HD2	12:CM:8:ILE:CG2	2.21	0.70
55:CA:301:G:H2'	55:CA:302:G:H8	1.57	0.70
24:DA:576:U:H2'	24:DA:577:G:C8	2.26	0.70
24:DA:685:A:H5'	24:DA:686:U:OP1	1.92	0.70
24:DA:1012:U:O4	33:DJ:30:THR:HG21	1.91	0.70
24:DA:2356:U:H4'	46:DW:16:GLU:HG3	1.73	0.70
24:DA:2392:A:H2	35:DL:55:MET:SD	2.14	0.70
56:DB:51:G:O6	38:DO:32:PRO:HB3	1.92	0.70
40:DQ:91:ARG:NH1	41:DR:10:LYS:HB3	2.07	0.70
4:AE:81:GLN:CG	4:AE:149:PRO:HG3	2.17	0.69
21:AA:631:C:C5'	21:AA:632:U:H5'	2.21	0.69
21:AA:792:A:N3	21:AA:794:A:C5	2.60	0.69
24:BA:528:A:OP2	33:BJ:116:ARG:NH2	2.24	0.69
24:BA:742:A:H2'	24:BA:743:A:H8	1.56	0.69
24:BA:868:U:C4	24:BA:869:G:N7	2.60	0.69
24:BA:1060:U:H4'	24:BA:1061:U:C5'	2.22	0.69
24:BA:1708:C:O2'	24:BA:1709:U:H5'	1.91	0.69
24:BA:1735:A:H2'	24:BA:1736:U:H6	1.55	0.69
24:BA:2503:A:H4'	24:BA:2504:U:OP1	1.91	0.69
42:BS:25:ARG:HE	42:BS:73:LYS:NZ	1.88	0.69
49:BZ:4:ILE:HG23	49:BZ:37:ARG:O	1.92	0.69
4:CE:103:GLY:O	4:CE:104:ILE:HG22	1.91	0.69
24:DA:379:G:C6	24:DA:396:G:C6	2.80	0.69
24:DA:1201:U:H2'	24:DA:1202:G:C8	2.27	0.69
24:DA:1331:G:O2'	24:DA:1332:G:H5'	1.92	0.69
56:DB:5:U:H2'	56:DB:6:G:H8	1.56	0.69
56:DB:75:G:C2'	56:DB:76:G:H5'	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DK:6:THR:O	34:DK:8:LEU:HD12	1.91	0.69
47:DX:58:ILE:HA	47:DX:66:VAL:HG21	1.74	0.69
4:AE:82:HIS:HB2	7:AH:95:MET:SD	2.32	0.69
4:AE:152:VAL:O	4:AE:156:ARG:HG3	1.93	0.69
11:AL:28:GLN:HB2	11:AL:81:ILE:O	1.92	0.69
21:AA:143:A:N3	21:AA:143:A:H2'	2.05	0.69
24:BA:646:U:C4	24:BA:2368:C:H1'	2.26	0.69
24:BA:2204:G:O5'	26:BC:149:LYS:HE3	1.92	0.69
36:BM:21:ALA:HB1	36:BM:100:LYS:HG2	1.74	0.69
43:BT:50:LEU:HD12	43:BT:50:LEU:N	2.04	0.69
8:CI:24:ASN:HB2	8:CI:26:LYS:NZ	2.07	0.69
18:CS:38:THR:OG1	18:CS:40:PHE:HD1	1.74	0.69
55:CA:589:U:O2'	55:CA:590:U:H5'	1.92	0.69
55:CA:708:C:H2'	55:CA:709:U:H6	1.56	0.69
24:DA:1788:C:O2'	24:DA:1789:A:O4'	2.10	0.69
33:DJ:25:LEU:HD22	33:DJ:26:GLY:N	2.07	0.69
4:AE:19:ARG:HD2	4:AE:30:PHE:HB3	1.73	0.69
6:AG:78:ARG:HH22	6:AG:81:GLY:HA2	1.57	0.69
21:AA:68:G:C5	21:AA:69:G:H1'	2.28	0.69
21:AA:512:U:H2'	21:AA:513:C:H6	1.58	0.69
24:BA:532:A:N7	24:BA:2021:C:H2'	2.06	0.69
24:BA:1538:G:N2	24:BA:1539:U:C2	2.61	0.69
35:BL:77:ILE:O	35:BL:110:VAL:O	2.10	0.69
46:BW:23:LYS:HG3	46:BW:24:ARG:O	1.93	0.69
55:CA:601:G:H2'	55:CA:602:A:H8	1.56	0.69
55:CA:1038:C:H2'	55:CA:1039:G:H8	1.53	0.69
24:DA:1816:C:O3'	24:DA:1817:G:H8	1.74	0.69
27:DD:107:VAL:H	27:DD:206:ALA:H	1.40	0.69
33:DJ:44:TYR:HB2	40:DQ:63:ARG:CZ	2.21	0.69
21:AA:1144:G:N2	21:AA:1146:A:H62	1.90	0.69
24:BA:2292:U:H2'	24:BA:2293:G:C8	2.26	0.69
39:BP:50:ARG:HG2	39:BP:57:ALA:N	2.08	0.69
44:BU:38:ILE:HG22	44:BU:39:ASN:N	2.06	0.69
6:CG:65:LEU:HD21	6:CG:96:ASN:OD1	1.92	0.69
14:CO:47:LYS:N	14:CO:47:LYS:HD2	2.07	0.69
55:CA:1102:A:H2'	55:CA:1103:C:C6	2.26	0.69
55:CA:1234:C:H1'	55:CA:1364:U:H6	1.57	0.69
24:DA:76:C:O2'	24:DA:77:G:H5'	1.91	0.69
24:DA:983:A:N6	24:DA:984:A:C2	2.61	0.69
24:DA:1867:G:H2'	24:DA:1868:C:C6	2.28	0.69
34:DK:80:ASP:HB2	39:DP:67:GLU:OE1	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DX:31:ASN:ND2	47:DX:31:ASN:H	1.89	0.69
19:AT:34:VAL:O	19:AT:38:ILE:HG12	1.93	0.69
24:BA:1936:A:H5''	24:BA:1937:A:H5'	1.74	0.69
29:BF:35:LEU:HD12	29:BF:88:VAL:HB	1.72	0.69
36:BM:108:VAL:HG13	36:BM:109:PRO:CD	2.21	0.69
40:BQ:94:LEU:HD11	41:BR:4:VAL:CG1	2.22	0.69
1:CB:76:SER:O	1:CB:79:VAL:HG12	1.91	0.69
2:CC:25:THR:HG23	13:CN:75:LYS:HD2	1.73	0.69
15:CP:3:THR:HB	15:CP:66:THR:HB	1.73	0.69
55:CA:94:G:O2'	55:CA:95:C:H5'	1.92	0.69
55:CA:992:U:O2'	55:CA:993:G:OP2	2.07	0.69
55:CA:1424:U:H2'	55:CA:1425:U:O4'	1.91	0.69
24:DA:1477:A:H2'	24:DA:1478:G:O4'	1.93	0.69
34:DK:61:VAL:HG11	34:DK:112:PHE:CE2	2.28	0.69
21:AA:109:A:H2'	21:AA:326:G:N2	2.04	0.69
21:AA:1032:G:O2'	21:AA:1033:G:H5'	1.91	0.69
24:BA:1021:A:H61	24:BA:1142:A:H61	1.36	0.69
24:BA:1555:G:H5'	24:BA:1555:G:C8	2.27	0.69
31:BH:68:ARG:NH2	31:BH:72:ILE:HG21	2.07	0.69
35:BL:78:ARG:HB3	35:BL:113:ALA:HB3	1.74	0.69
40:BQ:63:ARG:NH1	40:BQ:96:ASP:CA	2.46	0.69
7:CH:103:VAL:HG12	7:CH:124:ILE:HA	1.74	0.69
55:CA:373:A:H2'	55:CA:374:A:C8	2.28	0.69
24:DA:95:A:H4'	48:DY:38:GLN:O	1.93	0.69
24:DA:118:A:C8	24:DA:119:A:C8	2.80	0.69
24:DA:414:C:H5''	24:DA:1879:C:O2'	1.93	0.69
24:DA:1439:A:N7	24:DA:1440:U:C6	2.60	0.69
24:DA:1676:A:H2	24:DA:1993:U:H5'	1.53	0.69
24:DA:2320:U:H1'	24:DA:2333:A:H62	1.57	0.69
43:DT:67:VAL:HB	43:DT:76:ARG:HG3	1.75	0.69
24:BA:496:G:C5	24:BA:497:A:C8	2.80	0.69
24:BA:848:C:H2'	24:BA:849:A:H8	1.58	0.69
24:BA:1790:C:H2'	24:BA:1791:A:C5	2.28	0.69
24:BA:1943:U:O2	24:BA:1943:U:O4'	2.10	0.69
55:CA:250:A:H1'	55:CA:252:U:C4	2.28	0.69
55:CA:672:U:H2'	55:CA:673:A:C8	2.27	0.69
55:CA:1449:C:O2'	55:CA:1450:U:H5'	1.93	0.69
24:DA:85:G:OP2	44:DU:6:ARG:HB2	1.92	0.69
24:DA:505:A:O2'	24:DA:506:G:H5'	1.91	0.69
24:DA:529:A:C8	24:DA:2023:C:N4	2.60	0.69
3:AD:31:CYS:O	3:AD:32:LYS:HB2	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:8:THR:N	8:AI:84:ARG:HH12	1.90	0.69
21:AA:427:U:C4	21:AA:428:G:C6	2.81	0.69
21:AA:1218:C:H2'	21:AA:1219:A:H8	1.57	0.69
24:BA:10:A:C2'	24:BA:11:C:H5'	2.22	0.69
24:BA:221:A:H2'	24:BA:266:G:N7	2.07	0.69
24:BA:699:A:H4'	24:BA:1634:A:N7	2.07	0.69
24:BA:869:G:H4'	36:BM:8:LYS:CE	2.21	0.69
24:BA:1385:A:C4	24:BA:1386:C:C5	2.81	0.69
24:BA:1973:G:H2'	24:BA:1974:C:C6	2.28	0.69
24:BA:2800:A:C2	24:BA:2895:G:H1'	2.27	0.69
28:BE:1:MET:HG3	28:BE:14:VAL:HG23	1.74	0.69
33:BJ:65:THR:HG23	33:BJ:66:GLY:N	2.07	0.69
35:BL:90:VAL:HG13	35:BL:95:LEU:HD21	1.75	0.69
45:BV:80:HIS:CD2	45:BV:83:LYS:HB2	2.27	0.69
2:CC:109:GLU:HB3	2:CC:143:LEU:HD22	1.73	0.69
3:CD:105:GLY:HA3	3:CD:158:LEU:HD23	1.75	0.69
8:CI:74:GLN:O	8:CI:78:ILE:HG13	1.92	0.69
10:CK:14:GLN:HA	10:CK:76:TYR:O	1.92	0.69
10:CK:64:VAL:O	10:CK:68:ARG:HB2	1.93	0.69
55:CA:630:A:N1	59:CA:1859:HOH:O	2.26	0.69
24:DA:6:A:H2'	24:DA:7:G:H8	1.57	0.69
24:DA:823:C:H2'	24:DA:824:U:H6	1.58	0.69
24:DA:1310:G:H2'	24:DA:1311:G:O4'	1.93	0.69
24:DA:2216:G:H2'	24:DA:2217:G:C8	2.27	0.69
24:DA:2837:A:H2'	24:DA:2838:G:H8	1.54	0.69
26:DC:38:LYS:HE2	26:DC:55:GLY:H	1.56	0.69
26:DC:79:ARG:HD3	26:DC:81:GLU:OE1	1.93	0.69
28:DE:79:ARG:HG2	28:DE:80:SER:H	1.57	0.69
29:DF:109:ARG:HB2	29:DF:109:ARG:NH1	2.06	0.69
30:DG:86:LEU:HA	30:DG:163:TYR:HB3	1.75	0.69
43:DT:87:LEU:HD23	43:DT:88:LYS:N	2.08	0.69
53:D3:23:HIS:O	53:D3:46:LYS:HB2	1.93	0.69
1:AB:22:TRP:HA	1:AB:189:ASN:CA	2.23	0.69
3:AD:22:SER:HA	3:AD:26:ALA:HB2	1.74	0.69
5:AF:3:HIS:N	5:AF:92:THR:HG23	2.02	0.69
30:BG:102:ILE:HD12	30:BG:147:LEU:HD11	1.73	0.69
34:BK:111:LYS:HE2	34:BK:111:LYS:N	2.06	0.69
46:BW:26:GLY:O	46:BW:27:GLY:O	2.11	0.69
46:BW:30:VAL:HG22	46:BW:30:VAL:O	1.92	0.69
47:BX:46:VAL:HG21	47:BX:67:LEU:HD11	1.74	0.69
3:CD:58:GLN:O	3:CD:62:ARG:HG2	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:5:GLU:HG3	5:CF:63:ASN:OD1	1.93	0.69
14:CO:47:LYS:HD2	14:CO:47:LYS:H	1.58	0.69
15:CP:24:SER:HB2	55:CA:377:G:H5''	1.73	0.69
24:DA:1190:G:H2'	24:DA:1191:G:H8	1.57	0.69
24:DA:1635:A:H2'	24:DA:1636:U:H6	1.57	0.69
24:DA:2537:U:H2'	24:DA:2538:C:H6	1.57	0.69
56:DB:19:C:H2'	56:DB:20:G:C8	2.28	0.69
6:AG:113:LYS:HB2	6:AG:117:LEU:HD12	1.73	0.69
6:AG:115:MET:HA	6:AG:118:ARG:HD3	1.73	0.69
11:AL:43:LYS:NZ	11:AL:44:PRO:HD2	2.08	0.69
21:AA:36:C:H2'	21:AA:37:U:O4'	1.92	0.69
21:AA:549:C:H2'	21:AA:550:G:H8	1.57	0.69
21:AA:575:G:H4'	21:AA:576:C:O5'	1.93	0.69
24:BA:646:U:H3'	24:BA:647:G:C5'	2.23	0.69
24:BA:1131:G:OP1	33:BJ:82:GLY:HA2	1.93	0.69
24:BA:1157:G:H2'	24:BA:1158:C:C6	2.27	0.69
24:BA:2801:G:O2'	24:BA:2802:G:H5'	1.91	0.69
28:BE:18:THR:HG22	28:BE:106:LYS:HE3	1.73	0.69
28:BE:57:LYS:HG3	28:BE:58:LYS:H	1.57	0.69
28:BE:111:GLU:HG2	28:BE:114:ARG:NH1	2.08	0.69
33:BJ:44:TYR:O	33:BJ:45:THR:HB	1.92	0.69
38:BO:16:ARG:O	38:BO:19:GLN:N	2.26	0.69
43:BT:48:GLN:HE21	43:BT:48:GLN:HA	1.58	0.69
52:B2:12:ARG:HG2	52:B2:13:ASN:ND2	2.08	0.69
53:B3:26:ALA:O	53:B3:27:ASN:HB2	1.91	0.69
5:CF:9:MET:HE1	17:CR:64:LEU:HA	1.75	0.69
9:CJ:42:LEU:HB3	9:CJ:43:PRO:HD2	1.75	0.69
55:CA:591:U:H2'	55:CA:592:G:C8	2.28	0.69
24:DA:1021:A:C2	24:DA:1023:U:C2	2.81	0.69
24:DA:1080:A:H2'	24:DA:1081:U:C6	2.28	0.69
24:DA:2307:G:H1'	24:DA:2308:G:C5	2.27	0.69
24:DA:2491:U:H5''	24:DA:2570:G:H5''	1.75	0.69
44:DU:47:PRO:HB3	44:DU:54:PRO:CG	2.22	0.69
45:DV:77:VAL:HG23	45:DV:89:ILE:HG21	1.75	0.69
2:AC:27:GLU:O	2:AC:31:ASN:HB2	1.93	0.68
5:AF:29:ILE:HG12	5:AF:64:VAL:HG11	1.73	0.68
21:AA:492:C:H2'	21:AA:493:A:C8	2.28	0.68
21:AA:1299:A:H2'	21:AA:1299:A:N3	2.07	0.68
24:BA:558:U:OP2	33:BJ:113:PRO:HG2	1.93	0.68
24:BA:638:G:H2'	24:BA:639:U:H6	1.58	0.68
27:BD:104:VAL:O	27:BD:177:VAL:HG21	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:110:THR:CG2	27:BD:171:THR:HG22	2.23	0.68
43:BT:32:LEU:H	43:BT:83:ALA:HB3	1.58	0.68
46:BW:37:VAL:CG1	46:BW:38:ARG:H	1.99	0.68
8:CI:24:ASN:HD22	8:CI:26:LYS:HD2	1.57	0.68
18:CS:79:TYR:O	18:CS:80:ARG:HB2	1.93	0.68
55:CA:560:A:H4'	55:CA:561:U:H5''	1.74	0.68
55:CA:880:C:H2'	55:CA:880:C:O2	1.94	0.68
55:CA:1018:G:H2'	55:CA:1019:A:O4'	1.93	0.68
24:DA:797:G:OP1	28:DE:57:LYS:HG2	1.94	0.68
24:DA:1014:A:H2'	24:DA:1015:U:H6	1.57	0.68
24:DA:1799:G:H4'	24:DA:1800:C:O5'	1.91	0.68
24:DA:1799:G:H2'	26:DC:179:GLU:OE1	1.91	0.68
24:DA:2492:U:O2'	24:DA:2493:U:H5'	1.93	0.68
56:DB:11:C:H5'	46:DW:71:LYS:HD3	1.73	0.68
9:AJ:26:VAL:O	9:AJ:30:LYS:HG2	1.93	0.68
12:AM:69:ARG:HH12	21:AA:1330:U:H4'	1.57	0.68
21:AA:1363:A:C5	21:AA:1365:G:C6	2.81	0.68
24:BA:321:U:HO2'	24:BA:340:A:HO2'	1.41	0.68
24:BA:632:A:H2'	24:BA:633:A:C8	2.28	0.68
24:BA:848:C:H2'	24:BA:849:A:C8	2.28	0.68
24:BA:1475:G:O2'	24:BA:1476:U:OP2	2.10	0.68
24:BA:2197:U:P	3:CD:150:LYS:HG3	2.33	0.68
24:BA:2356:U:H4'	46:BW:16:GLU:HG3	1.74	0.68
28:BE:23:PHE:CZ	28:BE:28:VAL:HG11	2.28	0.68
37:BN:73:ASN:ND2	37:BN:76:VAL:HG11	2.09	0.68
40:BQ:63:ARG:CZ	40:BQ:96:ASP:HA	2.23	0.68
4:CE:110:MET:HG2	4:CE:139:THR:HG21	1.75	0.68
5:CF:68:GLN:O	5:CF:71:ILE:HG22	1.93	0.68
6:CG:3:ARG:HB3	55:CA:932:C:OP1	1.93	0.68
10:CK:74:LYS:HD2	10:CK:104:PHE:CE1	2.28	0.68
12:CM:25:GLY:H	55:CA:1329:A:H5''	1.57	0.68
55:CA:631:C:H5''	55:CA:632:U:O4'	1.92	0.68
24:DA:1071:G:N7	24:DA:1089:A:C6	2.61	0.68
24:DA:2010:G:OP1	42:DS:41:LYS:HD3	1.93	0.68
24:DA:2260:C:O2'	24:DA:2261:C:H6	1.77	0.68
24:DA:2657:A:O3'	30:DG:159:LYS:NZ	2.26	0.68
29:DF:110:ILE:HD13	29:DF:110:ILE:H	1.56	0.68
31:DH:27:ARG:NH1	47:DX:59:ASP:HA	2.08	0.68
31:DH:80:ILE:HB	31:DH:101:ASP:CB	2.23	0.68
3:AD:10:LEU:HD21	3:AD:62:ARG:HG3	1.75	0.68
4:AE:32:PHE:HD2	4:AE:54:GLU:HA	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:59:LYS:HG2	21:AA:972:C:H4'	1.75	0.68
21:AA:86:G:C2	21:AA:87:C:N4	2.61	0.68
24:BA:88:G:C2	24:BA:89:A:C8	2.82	0.68
24:BA:1388:G:H2'	24:BA:1389:G:H8	1.58	0.68
24:BA:1989:G:C2'	24:BA:1990:C:H5'	2.23	0.68
9:CJ:80:THR:HG22	9:CJ:82:LYS:HZ1	1.57	0.68
55:CA:1477:U:H2'	55:CA:1478:U:H6	1.56	0.68
24:DA:477:A:H2'	24:DA:478:A:H8	1.56	0.68
24:DA:656:G:O2'	24:DA:657:U:H5'	1.94	0.68
21:AA:1453:G:N3	21:AA:1453:G:H2'	2.07	0.68
24:BA:1303:G:H2'	24:BA:1304:A:H8	1.58	0.68
24:BA:1886:U:H2'	24:BA:1887:C:C6	2.29	0.68
24:BA:2032:G:H4'	59:BA:3484:HOH:O	1.92	0.68
36:BM:57:VAL:HA	36:BM:112:LEU:HD21	1.75	0.68
41:BR:49:ILE:O	41:BR:49:ILE:HG13	1.92	0.68
48:BY:18:LEU:O	48:BY:22:LEU:HB2	1.93	0.68
52:B2:24:THR:HG23	52:B2:27:GLY:H	1.59	0.68
13:CN:72:PHE:HA	13:CN:79:SER:HA	1.76	0.68
55:CA:462:G:O5'	55:CA:463:U:OP2	2.11	0.68
24:DA:247:G:H4'	24:DA:386:G:C4	2.28	0.68
24:DA:782:A:H5''	24:DA:783:A:OP1	1.93	0.68
24:DA:1560:G:O2'	24:DA:1561:C:H5'	1.94	0.68
24:DA:1641:A:H2'	24:DA:1642:G:O4'	1.94	0.68
24:DA:1713:A:H4'	24:DA:1714:U:OP1	1.93	0.68
36:DM:35:ALA:HB3	36:DM:99:GLY:N	2.08	0.68
36:DM:62:LYS:HG2	36:DM:64:TRP:CZ2	2.29	0.68
42:DS:4:ILE:HG22	42:DS:106:VAL:HG13	1.74	0.68
19:AT:43:LYS:CB	19:AT:86:ALA:HB1	2.21	0.68
21:AA:212:G:O2'	21:AA:213:G:C8	2.32	0.68
21:AA:1234:C:H1'	21:AA:1364:U:C6	2.27	0.68
24:BA:100:U:H4'	24:BA:101:A:O5'	1.94	0.68
24:BA:866:A:O2'	24:BA:867:C:H5'	1.93	0.68
24:BA:1060:U:O4'	24:BA:1062:G:H5''	1.94	0.68
24:BA:1673:G:C2'	24:BA:1674:G:H5'	2.23	0.68
24:BA:2591:C:OP1	26:BC:237:ARG:HG3	1.92	0.68
26:BC:141:HIS:N	26:BC:190:THR:O	2.23	0.68
26:BC:230:PRO:HD2	26:BC:246:PRO:HA	1.75	0.68
30:BG:88:LEU:HD11	30:BG:95:ALA:HB2	1.75	0.68
34:BK:6:THR:HG22	34:BK:6:THR:O	1.92	0.68
4:CE:55:VAL:O	4:CE:58:ALA:HB3	1.94	0.68
5:CF:86:ARG:CZ	17:CR:63:TYR:HB3	2.23	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:26:VAL:O	9:CJ:30:LYS:HB3	1.92	0.68
15:CP:40:ASN:HD21	15:CP:42:ILE:HB	1.58	0.68
55:CA:566:G:H4'	55:CA:567:G:OP1	1.94	0.68
24:DA:128:C:H6	24:DA:128:C:H5''	1.57	0.68
24:DA:2096:C:H2'	24:DA:2097:A:H8	1.58	0.68
24:DA:2681:C:H4'	24:DA:2682:A:O5'	1.93	0.68
24:DA:2851:A:H2'	24:DA:2852:G:C8	2.29	0.68
37:DN:2:ARG:HG2	37:DN:5:LYS:HD3	1.75	0.68
48:DY:20:ASN:ND2	48:DY:50:VAL:HG22	2.08	0.68
54:D4:36:ARG:HG2	54:D4:37:GLN:H	1.59	0.68
21:AA:390:U:H2'	21:AA:391:G:C8	2.25	0.68
21:AA:1382:C:HO2'	21:AA:1383:C:H6	1.39	0.68
23:AW:5:U:H2'	23:AW:6:U:C6	2.28	0.68
24:BA:800:A:H4'	24:BA:801:G:O5'	1.93	0.68
24:BA:1399:C:H2'	24:BA:1400:U:H6	1.58	0.68
31:BH:27:ARG:NH1	31:BH:38:PRO:HG3	2.08	0.68
35:BL:4:ASN:HD22	35:BL:4:ASN:N	1.91	0.68
36:BM:24:THR:O	36:BM:34:LYS:HE2	1.93	0.68
39:BP:25:VAL:CG1	39:BP:46:VAL:HG23	2.24	0.68
40:BQ:65:ASN:ND2	40:BQ:69:ARG:NH2	2.41	0.68
54:B4:9:LYS:O	54:B4:10:LEU:HD23	1.94	0.68
6:CG:118:ARG:HH22	55:CA:1239:A:C3'	1.99	0.68
8:CI:79:ARG:HD2	8:CI:102:PHE:CD1	2.28	0.68
55:CA:209:U:H5''	55:CA:210:C:OP2	1.93	0.68
24:DA:265:A:H5'	24:DA:428:A:N1	2.08	0.68
24:DA:620:G:H4'	24:DA:621:A:O5'	1.92	0.68
24:DA:665:U:H2'	24:DA:666:A:C8	2.28	0.68
24:DA:741:U:O2'	24:DA:742:A:O4'	2.09	0.68
24:DA:2716:C:H2'	24:DA:2717:C:H6	1.57	0.68
2:AC:166:TRP:HE3	2:AC:166:TRP:N	1.91	0.68
21:AA:71:A:H61	21:AA:99:C:C1'	2.07	0.68
21:AA:174:A:H2'	21:AA:175:C:H6	1.58	0.68
21:AA:765:G:H1	21:AA:812:G:HO2'	1.36	0.68
21:AA:885:G:N2	21:AA:886:G:C4	2.62	0.68
21:AA:978:A:O2'	21:AA:979:C:H5'	1.94	0.68
21:AA:1306:A:H61	21:AA:1331:G:H1'	1.57	0.68
24:BA:1073:A:H3'	24:BA:1074:G:H5''	1.74	0.68
28:BE:79:ARG:HG2	28:BE:80:SER:N	2.06	0.68
52:B2:3:ARG:HG2	52:B2:3:ARG:NH2	1.91	0.68
1:CB:103:TRP:HA	1:CB:106:VAL:HB	1.74	0.68
2:CC:122:GLN:O	2:CC:127:VAL:HG13	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:40:ARG:HH12	18:CS:6:LYS:HB2	1.58	0.68
55:CA:503:C:H2'	55:CA:504:C:H6	1.58	0.68
24:DA:92:U:H2'	24:DA:93:G:C8	2.27	0.68
24:DA:442:G:C6	24:DA:444:C:N4	2.62	0.68
24:DA:478:A:H5''	24:DA:479:A:OP2	1.94	0.68
24:DA:1147:A:H2'	24:DA:1148:U:H6	1.58	0.68
24:DA:1386:C:O2'	24:DA:1387:A:H8	1.76	0.68
24:DA:2408:U:O2'	24:DA:2409:G:C8	2.39	0.68
24:DA:2748:A:H1'	30:DG:66:THR:CG2	2.20	0.68
26:DC:122:ALA:HB3	26:DC:127:ASN:HD22	1.58	0.68
27:DD:125:TRP:CG	27:DD:160:LYS:HB3	2.29	0.68
21:AA:596:A:N6	21:AA:645:G:C6	2.61	0.68
21:AA:1394:A:H62	21:AA:1501:C:H4'	1.57	0.68
24:BA:14:A:H5''	24:BA:15:G:OP2	1.93	0.68
24:BA:370:G:C6	24:BA:424:G:N7	2.62	0.68
24:BA:2276:G:OP2	36:BM:83:GLY:O	2.12	0.68
24:BA:2531:A:H5'	30:BG:156:TYR:CZ	2.28	0.68
27:BD:107:VAL:O	27:BD:174:SER:O	2.11	0.68
30:BG:93:TYR:O	30:BG:105:SER:O	2.11	0.68
43:BT:50:LEU:H	43:BT:50:LEU:CD1	2.05	0.68
11:CL:49:ARG:HH22	55:CA:522:C:H41	1.40	0.68
15:CP:39:PHE:HD1	15:CP:50:THR:HG1	1.39	0.68
55:CA:425:G:H2'	55:CA:426:U:C6	2.28	0.68
24:DA:297:G:H5''	44:DU:84:PHE:CB	2.15	0.68
24:DA:1207:C:H2'	24:DA:1208:C:H6	1.59	0.68
24:DA:1994:C:H2'	24:DA:1995:U:H6	1.57	0.68
45:DV:17:SER:OG	45:DV:27:PRO:HG3	1.94	0.68
45:DV:29:ILE:CD1	45:DV:31:TYR:CE2	2.75	0.68
1:AB:159:ALA:HB1	1:AB:183:PHE:HE2	1.59	0.68
10:AK:85:VAL:HG11	10:AK:92:ARG:HG3	1.76	0.68
11:AL:2:THR:HG22	11:AL:4:ASN:H	1.59	0.68
21:AA:57:G:C5	21:AA:58:C:C4	2.82	0.68
22:AV:34:G:H8	22:AV:34:G:OP1	1.77	0.68
24:BA:460:A:H2'	24:BA:461:C:H6	1.57	0.68
24:BA:522:A:C6	24:BA:523:C:C4	2.82	0.68
24:BA:588:U:H2'	24:BA:589:U:C6	2.28	0.68
24:BA:725:G:C6	24:BA:726:G:N1	2.62	0.68
44:BU:46:LYS:HG2	44:BU:47:PRO:HD2	1.76	0.68
9:CJ:51:VAL:HB	13:CN:80:ARG:HB2	1.76	0.68
55:CA:1036:A:O2'	55:CA:1037:C:H5'	1.93	0.68
55:CA:1442:G:O6	55:CA:1461:G:C2	2.47	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2657:A:O2'	24:DA:2658:C:H5'	1.94	0.68
27:DD:10:GLY:O	27:DD:11:MET:HB2	1.93	0.68
27:DD:106:LYS:O	27:DD:107:VAL:HB	1.94	0.68
28:DE:61:ARG:O	28:DE:61:ARG:HD2	1.93	0.68
16:AQ:12:VAL:HB	16:AQ:21:VAL:HG22	1.76	0.68
21:AA:872:A:C4	21:AA:874:G:N7	2.62	0.68
21:AA:1530:G:O2'	21:AA:1531:A:C8	2.36	0.68
24:BA:84:A:H62	24:BA:101:A:H2	1.42	0.68
24:BA:704:G:O2'	24:BA:726:G:N2	2.27	0.68
24:BA:833:A:H2'	24:BA:834:G:C8	2.28	0.68
24:BA:976:G:C2	24:BA:977:G:N7	2.61	0.68
24:BA:1964:G:H4'	24:BA:1965:C:OP2	1.93	0.68
26:BC:159:THR:O	26:BC:194:VAL:HG12	1.93	0.68
28:BE:82:GLY:O	28:BE:83:VAL:HB	1.93	0.68
36:BM:1:MET:O	36:BM:2:LEU:HB2	1.92	0.68
43:BT:43:ILE:O	43:BT:43:ILE:HG13	1.94	0.68
9:CJ:40:ILE:HG12	55:CA:1125:U:C6	2.28	0.68
13:CN:2:LYS:HG3	55:CA:1048:G:H5''	1.74	0.68
55:CA:591:U:H2'	55:CA:592:G:H8	1.58	0.68
55:CA:1064:G:H4'	55:CA:1065:U:O5'	1.91	0.68
24:DA:1079:C:C4	24:DA:1088:A:H2	2.12	0.68
24:DA:1933:G:N2	24:DA:1968:G:H1'	2.08	0.68
24:DA:2311:A:H3'	24:DA:2312:U:H6	1.59	0.68
26:DC:77:VAL:HG23	26:DC:112:GLY:H	1.59	0.68
30:DG:115:GLN:HG2	30:DG:116:LEU:N	2.08	0.68
48:DY:28:LEU:HG	48:DY:42:LEU:HD22	1.76	0.68
9:AJ:93:ALA:O	9:AJ:96:VAL:HG22	1.94	0.67
21:AA:994:A:O2'	21:AA:995:C:H5'	1.93	0.67
24:BA:2813:A:C2	24:BA:2887:A:N6	2.62	0.67
30:BG:23:ILE:H	30:BG:23:ILE:HD12	1.59	0.67
31:BH:38:PRO:HB2	31:BH:40:THR:HG23	1.76	0.67
33:BJ:73:VAL:CG2	33:BJ:74:TYR:H	1.98	0.67
6:CG:41:ILE:O	6:CG:45:ALA:HB3	1.93	0.67
24:DA:53:A:C2	24:DA:179:C:H4'	2.28	0.67
24:DA:74:A:H4'	24:DA:75:G:O5'	1.93	0.67
24:DA:478:A:C6	24:DA:480:A:C5	2.82	0.67
24:DA:655:A:O2'	24:DA:656:G:C8	2.44	0.67
24:DA:789:A:N1	59:DA:3322:HOH:O	2.26	0.67
24:DA:1307:A:H62	24:DA:1606:C:H6	1.43	0.67
29:DF:65:LEU:HD23	29:DF:65:LEU:H	1.60	0.67
30:DG:88:LEU:HD13	30:DG:93:TYR:HB3	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DU:35:VAL:HG12	44:DU:36:GLU:H	1.60	0.67
7:AH:7:ALA:HB2	7:AH:76:ARG:HG3	1.75	0.67
7:AH:30:LYS:HG2	21:AA:590:U:OP1	1.94	0.67
8:AI:8:THR:HG21	8:AI:10:ARG:HH21	1.59	0.67
14:AO:2:LEU:HD22	14:AO:34:GLN:HG2	1.76	0.67
21:AA:185:U:H2'	21:AA:186:C:C6	2.29	0.67
21:AA:275:G:O2'	21:AA:276:G:H5'	1.94	0.67
21:AA:473:U:H2'	21:AA:474:G:C8	2.27	0.67
24:BA:949:G:C2'	24:BA:950:G:H5'	2.25	0.67
24:BA:1676:A:H2	24:BA:1993:U:H5'	1.59	0.67
30:BG:104:LEU:HB2	30:BG:112:VAL:HG22	1.76	0.67
33:BJ:45:THR:O	33:BJ:45:THR:HG23	1.95	0.67
34:BK:21:CYS:HA	34:BK:41:ILE:HD12	1.76	0.67
41:BR:39:LEU:HD23	41:BR:39:LEU:N	2.09	0.67
46:BW:14:ASP:OD2	46:BW:16:GLU:OE1	2.11	0.67
1:CB:20:ARG:HH21	1:CB:38:HIS:CD2	2.12	0.67
2:CC:5:HIS:CE1	2:CC:7:ASN:HB3	2.28	0.67
6:CG:30:MET:O	6:CG:31:VAL:HB	1.94	0.67
11:CL:18:SER:O	11:CL:21:PRO:HD3	1.94	0.67
55:CA:1303:C:H3'	55:CA:1304:G:C8	2.29	0.67
24:DA:729:G:O2'	24:DA:1775:U:H1'	1.92	0.67
24:DA:973:A:H1'	24:DA:1188:U:C5	2.29	0.67
24:DA:1686:C:H2'	24:DA:1687:G:O4'	1.94	0.67
24:DA:1713:A:O2'	24:DA:1715:G:H5'	1.94	0.67
24:DA:2066:C:H2'	24:DA:2067:G:H8	1.59	0.67
24:DA:2285:C:C5	51:D1:5:ARG:NH2	2.62	0.67
41:DR:21:ARG:HB2	41:DR:93:PHE:HD1	1.60	0.67
1:AB:63:LYS:HG2	1:AB:224:ARG:NH1	2.09	0.67
1:AB:99:MET:HA	1:AB:106:VAL:HG21	1.76	0.67
1:AB:143:LEU:HB2	1:AB:147:LEU:HD12	1.75	0.67
3:AD:145:ARG:O	3:AD:149:LYS:HG3	1.94	0.67
6:AG:125:ASP:OD2	6:AG:130:LYS:HG3	1.94	0.67
8:AI:129:ARG:HH21	21:AA:966:G:N2	1.90	0.67
13:AN:15:LEU:HD23	13:AN:18:LYS:HD2	1.76	0.67
16:AQ:16:MET:HG3	16:AQ:20:ILE:HA	1.77	0.67
21:AA:1054:C:OP2	21:AA:1197:A:OP2	2.12	0.67
24:BA:459:U:H2'	24:BA:460:A:C8	2.28	0.67
24:BA:1256:G:H21	28:BE:77:ILE:HG13	1.59	0.67
24:BA:2358:A:H61	35:BL:54:GLN:NE2	1.92	0.67
41:BR:62:GLU:O	41:BR:62:GLU:HG3	1.92	0.67
6:CG:46:LEU:HD11	6:CG:57:GLU:OE2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:149:ALA:HB2	10:CK:55:ARG:HG3	1.75	0.67
55:CA:787:A:C2	55:CA:796:C:N3	2.62	0.67
24:DA:254:G:N7	53:D3:4:LYS:HE2	2.09	0.67
24:DA:1731:G:HO2'	24:DA:1732:C:H5''	1.57	0.67
30:DG:112:VAL:HG13	30:DG:150:TYR:HE1	1.59	0.67
34:DK:60:ALA:HA	34:DK:87:LEU:CD2	2.24	0.67
35:DL:9:ALA:HB3	35:DL:12:SER:HB3	1.75	0.67
43:DT:6:ARG:O	43:DT:9:LYS:HD2	1.93	0.67
48:DY:17:GLU:HG3	48:DY:53:VAL:HG11	1.77	0.67
16:AQ:58:VAL:HG22	16:AQ:59:GLU:H	1.60	0.67
18:AS:54:ARG:HG2	21:AA:958:A:C6	2.30	0.67
24:BA:321:U:O2'	24:BA:340:A:O2'	2.06	0.67
31:BH:96:THR:O	31:BH:97:ARG:HG3	1.95	0.67
34:BK:18:ARG:HG3	34:BK:18:ARG:NH1	2.06	0.67
46:BW:39:GLN:HG3	46:BW:42:THR:HB	1.76	0.67
50:B0:43:THR:HG23	50:B0:47:TYR:O	1.94	0.67
55:CA:181:A:H1'	55:CA:182:A:C2	2.28	0.67
55:CA:279:A:H5''	55:CA:280:C:H3'	1.77	0.67
55:CA:890:G:HO2'	55:CA:891:U:P	2.17	0.67
55:CA:1305:G:H22	55:CA:1331:G:H2'	1.60	0.67
24:DA:53:A:O2'	24:DA:54:G:H5'	1.93	0.67
24:DA:311:A:O2'	24:DA:332:A:H5'	1.95	0.67
24:DA:817:C:O2'	24:DA:839:U:H5''	1.94	0.67
24:DA:1060:U:H5''	24:DA:1061:U:OP1	1.94	0.67
24:DA:1197:G:H5'	24:DA:1227:G:O2'	1.95	0.67
24:DA:1210:G:H5''	24:DA:1211:C:H3'	1.75	0.67
24:DA:2728:U:O2'	24:DA:2729:G:H8	1.77	0.67
28:DE:133:LEU:O	28:DE:137:LYS:HB2	1.95	0.67
37:DN:71:ARG:HH21	37:DN:71:ARG:HB2	1.59	0.67
1:AB:89:PHE:CB	1:AB:149:GLY:HA2	2.25	0.67
4:AE:83:PRO:CB	4:AE:97:PRO:HD3	2.24	0.67
10:AK:85:VAL:HG12	10:AK:86:LYS:H	1.58	0.67
21:AA:77:A:H8	21:AA:77:A:OP2	1.78	0.67
21:AA:994:A:C5	21:AA:1216:A:H4'	2.29	0.67
21:AA:1005:A:H2'	21:AA:1006:G:O4'	1.94	0.67
24:BA:869:G:O2'	36:BM:8:LYS:HD3	1.94	0.67
24:BA:1557:C:H2'	24:BA:1558:C:C6	2.29	0.67
24:BA:2354:C:C4'	46:BW:31:LEU:HD22	2.24	0.67
24:BA:2557:G:H2'	24:BA:2558:C:H6	1.59	0.67
38:BO:24:THR:HG22	38:BO:42:PRO:HD3	1.77	0.67
9:CJ:35:GLN:HG2	9:CJ:76:ILE:HG23	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:36:ALA:HB2	12:CM:55:LEU:HD21	1.76	0.67
20:CU:24:LYS:HG3	20:CU:25:ALA:N	2.06	0.67
55:CA:559:A:H4'	55:CA:560:A:C5'	2.25	0.67
24:DA:612:G:C2	24:DA:614:A:H1'	2.30	0.67
24:DA:1439:A:N6	24:DA:1551:A:C2	2.63	0.67
24:DA:1759:A:H2'	24:DA:1760:C:C6	2.29	0.67
43:DT:29:THR:HB	43:DT:87:LEU:N	2.09	0.67
46:DW:9:THR:HG23	46:DW:10:ARG:HG3	1.75	0.67
1:AB:163:ILE:O	1:AB:185:ILE:HG12	1.95	0.67
12:AM:28:ARG:NH1	12:AM:28:ARG:HB3	2.09	0.67
13:AN:70:HIS:CE1	21:AA:974:A:H1'	2.29	0.67
21:AA:721:G:H4'	21:AA:722:G:O5'	1.93	0.67
21:AA:765:G:H22	21:AA:812:G:HO2'	1.41	0.67
21:AA:1137:C:H5'	21:AA:1138:G:OP1	1.93	0.67
24:BA:1783:A:C2	24:BA:2587:A:C5	2.83	0.67
24:BA:2822:G:P	27:BD:115:GLY:HA3	2.34	0.67
32:BI:33:ASN:HD22	32:BI:64:ARG:NH2	1.92	0.67
33:BJ:81:ILE:HG23	33:BJ:82:GLY:N	2.08	0.67
55:CA:1508:A:H2'	55:CA:1509:C:H6	1.58	0.67
24:DA:1590:A:H2'	24:DA:1591:A:C8	2.30	0.67
24:DA:2547:A:H1'	24:DA:2566:A:N6	2.08	0.67
26:DC:75:ALA:HB2	26:DC:95:TYR:CD1	2.29	0.67
26:DC:166:ARG:HG3	26:DC:166:ARG:O	1.95	0.67
29:DF:42:ALA:HB2	29:DF:49:LEU:HD21	1.76	0.67
29:DF:104:THR:HG22	29:DF:105:ILE:HG13	1.76	0.67
34:DK:7:MET:HA	34:DK:7:MET:CE	2.24	0.67
43:DT:38:ALA:HB1	43:DT:81:LYS:NZ	2.10	0.67
54:D4:7:VAL:HG13	54:D4:8:LYS:H	1.60	0.67
1:AB:205:ALA:HB3	1:AB:208:ALA:HB2	1.76	0.67
21:AA:769:G:H4'	21:AA:1513:A:H4'	1.77	0.67
24:BA:49:A:H61	24:BA:177:G:H2'	1.59	0.67
24:BA:312:G:H2'	24:BA:313:G:H8	1.60	0.67
24:BA:825:A:C1'	35:BL:54:GLN:HE21	2.07	0.67
26:BC:77:VAL:HG22	26:BC:77:VAL:O	1.94	0.67
36:BM:83:GLY:O	36:BM:85:GLY:N	2.28	0.67
46:BW:18:LYS:HA	46:BW:36:ILE:HG13	1.76	0.67
49:BZ:26:LEU:O	49:BZ:37:ARG:NH1	2.27	0.67
55:CA:70:U:H4'	55:CA:71:A:OP1	1.95	0.67
55:CA:613:C:H2'	55:CA:614:C:C6	2.29	0.67
24:DA:855:G:N3	46:DW:23:LYS:HE3	2.07	0.67
24:DA:1223:G:N2	24:DA:1225:G:H3'	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2400:G:H2'	24:DA:2401:U:O4'	1.94	0.67
24:DA:2408:U:HO2'	24:DA:2409:G:H8	0.75	0.67
33:DJ:44:TYR:O	33:DJ:45:THR:HB	1.93	0.67
48:DY:1:MET:HE2	48:DY:1:MET:N	2.10	0.67
3:AD:101:VAL:HG13	3:AD:106:PHE:HB2	1.77	0.67
23:AW:4:U:N3	22:AX:37:A:C2	2.63	0.67
24:BA:1322:A:O3'	42:BS:84:ARG:NH1	2.27	0.67
24:BA:2888:C:H2'	24:BA:2889:C:H6	1.60	0.67
33:BJ:21:THR:CG2	33:BJ:22:GLY:N	2.51	0.67
33:BJ:56:VAL:HG12	33:BJ:57:LEU:H	1.58	0.67
33:BJ:111:LYS:HD3	33:BJ:112:GLY:H	1.60	0.67
40:BQ:77:LYS:HE2	40:BQ:116:LEU:HD23	1.77	0.67
47:BX:76:LYS:HG3	47:BX:77:TYR:H	1.59	0.67
54:B4:24:ARG:HG2	54:B4:24:ARG:NH2	2.10	0.67
1:CB:79:VAL:HG13	1:CB:80:LYS:H	1.60	0.67
24:DA:417:C:H2'	24:DA:418:C:H6	1.60	0.67
24:DA:627:A:O2'	24:DA:628:G:O4'	2.13	0.67
24:DA:2036:C:O2'	24:DA:2037:A:H8	1.72	0.67
24:DA:2592:G:H2'	24:DA:2593:U:H6	1.60	0.67
21:AA:1505:G:H5''	59:AA:1801:HOH:O	1.93	0.67
24:BA:33:C:H4'	24:BA:34:U:OP1	1.95	0.67
24:BA:988:A:OP2	49:BZ:11:SER:HB3	1.95	0.67
24:BA:1190:G:H2'	24:BA:1191:G:H8	1.59	0.67
24:BA:1361:G:C5	24:BA:1371:G:N2	2.63	0.67
25:BB:7:G:O2'	38:BO:38:GLN:NE2	2.28	0.67
46:BW:28:GLU:HG3	46:BW:29:SER:H	1.60	0.67
19:CT:73:ARG:NH1	55:CA:261:U:C4	2.63	0.67
55:CA:928:G:O2'	55:CA:1533:C:OP1	2.12	0.67
24:DA:85:G:O2'	24:DA:86:G:C8	2.47	0.67
24:DA:375:G:H5''	24:DA:375:G:H8	1.60	0.67
24:DA:973:A:OP1	24:DA:973:A:H8	1.78	0.67
24:DA:1008:A:H5''	33:DJ:37:ARG:HH22	1.58	0.67
26:DC:9:SER:O	26:DC:12:ARG:HB2	1.95	0.67
45:DV:77:VAL:HG23	45:DV:89:ILE:CG2	2.25	0.67
49:DZ:20:LYS:O	49:DZ:24:LEU:HD13	1.95	0.67
1:AB:69:VAL:HG21	1:AB:160:LEU:HD21	1.76	0.67
3:AD:50:TYR:CE2	3:AD:54:LEU:HD12	2.29	0.67
8:AI:129:ARG:HH22	21:AA:967:C:H1'	1.60	0.67
21:AA:355:C:C4	21:AA:356:A:N7	2.62	0.67
21:AA:463:U:C4	21:AA:464:U:O4	2.48	0.67
21:AA:1258:G:O2'	21:AA:1259:C:C5'	2.41	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:64:A:H2'	24:BA:65:U:H6	1.60	0.67
24:BA:2848:G:O2'	24:BA:2867:G:N2	2.27	0.67
29:BF:134:GLN:HG3	29:BF:140:ILE:HG12	1.75	0.67
41:BR:14:VAL:HG11	41:BR:98:ILE:HD12	1.76	0.67
11:CL:98:ARG:HB2	11:CL:116:TYR:HA	1.77	0.67
55:CA:1284:C:H2'	55:CA:1285:A:C8	2.30	0.67
50:D0:26:SER:O	50:D0:27:LEU:HD13	1.95	0.67
4:AE:149:PRO:HA	4:AE:152:VAL:HG13	1.77	0.66
21:AA:484:G:OP1	21:AA:484:G:H8	1.76	0.66
24:BA:858:G:H21	24:BA:2268:A:H2'	1.59	0.66
24:BA:919:U:H5''	24:BA:919:U:H6	1.59	0.66
24:BA:2466:C:OP1	54:B4:4:ARG:HB2	1.95	0.66
39:BP:50:ARG:HB3	39:BP:57:ALA:N	2.04	0.66
6:CG:135:LYS:O	6:CG:139:ASP:HB2	1.94	0.66
55:CA:735:C:HO2'	55:CA:736:C:H6	1.43	0.66
22:CV:27:G:H5''	22:CV:27:G:H8	1.60	0.66
24:DA:823:C:H2'	24:DA:824:U:C6	2.30	0.66
24:DA:2056:G:C2	24:DA:2057:G:C8	2.83	0.66
24:DA:2311:A:H4'	24:DA:2312:U:OP2	1.95	0.66
35:DL:79:LEU:HB3	35:DL:114:GLY:H	1.59	0.66
42:DS:88:ARG:HH21	42:DS:88:ARG:HG3	1.60	0.66
1:AB:67:LEU:HD21	1:AB:91:VAL:HG23	1.77	0.66
3:AD:104:MET:SD	3:AD:179:GLY:HA3	2.35	0.66
4:AE:85:LYS:HG3	4:AE:94:PHE:HB2	1.78	0.66
7:AH:21:LYS:HE2	7:AH:21:LYS:HA	1.76	0.66
12:AM:67:ASP:C	12:AM:70:ARG:HD2	2.13	0.66
21:AA:121:U:H6	21:AA:121:U:H5''	1.60	0.66
24:BA:143:C:H2'	24:BA:144:A:C8	2.29	0.66
24:BA:509:C:H5''	24:BA:509:C:H6	1.59	0.66
24:BA:1340:U:H6	24:BA:1603:A:H5'	1.59	0.66
24:BA:1695:G:H2'	24:BA:1696:G:O4'	1.95	0.66
24:BA:1731:G:C4	24:BA:1733:G:N7	2.64	0.66
24:BA:2792:A:O2'	24:BA:2793:C:H5'	1.95	0.66
26:BC:259:ASN:O	26:BC:260:LYS:HB2	1.96	0.66
33:BJ:43:GLU:O	33:BJ:44:TYR:C	2.33	0.66
45:BV:40:ILE:HG22	45:BV:41:GLU:N	2.09	0.66
46:BW:50:VAL:O	46:BW:52:CYS:N	2.27	0.66
54:B4:36:ARG:HG2	54:B4:37:GLN:N	2.05	0.66
1:CB:128:LEU:HB2	1:CB:132:GLU:HG2	1.75	0.66
6:CG:77:ARG:CZ	55:CA:1381:U:H3	2.08	0.66
6:CG:100:MET:HA	6:CG:103:ILE:HD12	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:1070:U:H2'	55:CA:1071:C:H6	1.60	0.66
24:DA:45:G:H5'	24:DA:46:G:OP1	1.96	0.66
24:DA:1303:G:H2'	24:DA:1304:A:H8	1.59	0.66
24:DA:1810:A:H2'	24:DA:1811:G:O4'	1.93	0.66
24:DA:2292:U:H2'	24:DA:2293:G:C8	2.30	0.66
24:DA:2631:G:C2'	24:DA:2632:A:H5''	2.22	0.66
37:DN:2:ARG:CD	37:DN:5:LYS:HB3	2.25	0.66
1:AB:107:ARG:HH21	1:AB:108:GLN:HE22	1.41	0.66
6:AG:31:VAL:HG22	6:AG:32:ASP:OD1	1.95	0.66
12:AM:70:ARG:HG2	12:AM:71:GLU:N	2.10	0.66
17:AR:24:ASP:HB3	17:AR:27:THR:OG1	1.94	0.66
20:AU:10:PRO:O	20:AU:11:PHE:HB3	1.95	0.66
21:AA:792:A:O2'	21:AA:794:A:N7	2.20	0.66
24:BA:181:A:H1'	24:BA:435:C:H5'	1.76	0.66
24:BA:197:A:N6	24:BA:2430:A:H2'	2.07	0.66
24:BA:1652:A:C2	24:BA:2006:C:N3	2.63	0.66
24:BA:2054:A:H2'	50:B0:4:GLN:OE1	1.95	0.66
24:BA:2312:U:O2	29:BF:38:GLY:HA3	1.95	0.66
24:BA:2417:C:H2'	24:BA:2418:A:H8	1.60	0.66
24:BA:2438:U:O2'	24:BA:2439:A:H5''	1.95	0.66
26:BC:251:THR:HG22	26:BC:252:LYS:N	2.07	0.66
30:BG:11:PRO:O	30:BG:14:VAL:HG22	1.95	0.66
48:BY:9:LYS:HA	48:BY:9:LYS:HZ1	1.58	0.66
1:CB:61:SER:OG	1:CB:224:ARG:HA	1.95	0.66
1:CB:208:ALA:O	1:CB:211:LEU:HB3	1.95	0.66
8:CI:96:GLU:HA	8:CI:99:LYS:HE2	1.75	0.66
24:DA:27:G:H1'	24:DA:513:A:H61	1.61	0.66
24:DA:123:G:H4'	24:DA:1376:C:H5'	1.77	0.66
24:DA:234:U:HO2'	24:DA:235:U:H6	1.41	0.66
24:DA:479:A:O2'	24:DA:480:A:H5''	1.95	0.66
24:DA:480:A:H3'	24:DA:481:G:H5''	1.76	0.66
24:DA:1281:G:C6	24:DA:1290:C:N4	2.63	0.66
24:DA:1498:C:O2'	24:DA:1499:C:H5'	1.95	0.66
24:DA:1695:G:H8	26:DC:7:PRO:O	1.78	0.66
30:DG:148:ARG:HB2	30:DG:152:ARG:NH2	2.09	0.66
30:DG:164:ALA:O	30:DG:165:ASP:HB2	1.95	0.66
35:DL:119:PRO:HB3	35:DL:139:GLY:O	1.94	0.66
39:DP:109:ILE:O	39:DP:110:LYS:HG3	1.95	0.66
4:AE:109:ALA:O	4:AE:111:ARG:N	2.27	0.66
10:AK:23:HIS:HB3	10:AK:30:ILE:HG13	1.78	0.66
21:AA:1215:G:O2'	21:AA:1216:A:H5'	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:478:A:C6	24:BA:480:A:C6	2.83	0.66
24:BA:1654:A:H1'	27:BD:118:PHE:CD1	2.30	0.66
24:BA:2531:A:OP1	30:BG:174:LYS:HG3	1.95	0.66
31:BH:48:GLU:HA	31:BH:51:ARG:CG	2.24	0.66
40:BQ:81:GLY:HA2	40:BQ:116:LEU:HD13	1.77	0.66
4:CE:125:LYS:HG2	4:CE:126:ALA:H	1.59	0.66
8:CI:30:ASN:ND2	8:CI:66:VAL:H	1.93	0.66
10:CK:20:ALA:HB3	10:CK:83:VAL:HG13	1.77	0.66
13:CN:47:LEU:O	13:CN:50:LEU:HG	1.95	0.66
55:CA:51:A:H4'	55:CA:52:C:OP2	1.94	0.66
55:CA:1207:G:H2'	55:CA:1208:C:H6	1.60	0.66
24:DA:251:A:H2'	24:DA:252:G:O4'	1.95	0.66
33:DJ:73:VAL:HG23	33:DJ:74:TYR:H	1.59	0.66
40:DQ:4:LYS:CE	40:DQ:7:VAL:H	2.08	0.66
47:DX:29:LEU:HB2	47:DX:30:PRO:CD	2.26	0.66
49:DZ:18:LYS:O	49:DZ:22:THR:HG23	1.95	0.66
8:AI:128:LYS:HD3	8:AI:129:ARG:H	1.61	0.66
11:AL:42:LYS:HE2	11:AL:43:LYS:HZ1	1.60	0.66
21:AA:1031:C:O2'	21:AA:1032:G:H5''	1.96	0.66
24:BA:1655:A:H4'	27:BD:119:ALA:O	1.95	0.66
28:BE:145:ASP:HA	28:BE:166:LYS:O	1.96	0.66
8:CI:90:ASP:HB3	8:CI:93:LEU:HD23	1.76	0.66
8:CI:112:ARG:HH22	9:CJ:64:GLN:NE2	1.93	0.66
55:CA:9:G:H2'	55:CA:10:A:C8	2.29	0.66
55:CA:564:C:H5'	55:CA:564:C:H6	1.60	0.66
55:CA:1033:G:O2'	55:CA:1034:G:O4'	2.13	0.66
55:CA:1412:C:H2'	55:CA:1413:A:C8	2.30	0.66
55:CA:1523:G:H2'	55:CA:1524:C:C6	2.30	0.66
24:DA:686:U:O4	52:D2:12:ARG:HG3	1.95	0.66
24:DA:861:A:O2'	24:DA:862:G:H5'	1.96	0.66
24:DA:996:A:H5'	40:DQ:91:ARG:NH1	2.10	0.66
24:DA:1666:G:O3'	34:DK:6:THR:HA	1.96	0.66
24:DA:1956:U:O2'	24:DA:1957:C:C5'	2.44	0.66
26:DC:71:ASP:O	26:DC:73:ILE:HG12	1.95	0.66
26:DC:143:VAL:HB	26:DC:153:LEU:HB3	1.77	0.66
27:DD:16:THR:HG22	27:DD:20:VAL:H	1.59	0.66
30:DG:72:ASN:O	30:DG:76:ILE:HG12	1.95	0.66
32:DI:74:PRO:HB2	32:DI:77:VAL:HG22	1.76	0.66
2:AC:32:LEU:O	2:AC:35:ASP:HB3	1.96	0.66
3:AD:106:PHE:HB3	3:AD:144:ILE:HD11	1.77	0.66
7:AH:29:SER:HB2	7:AH:32:LYS:NZ	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:17:LEU:O	9:AJ:17:LEU:HD23	1.96	0.66
11:AL:49:ARG:NH2	21:AA:522:C:H41	1.93	0.66
21:AA:300:A:H1'	21:AA:565:U:O2	1.96	0.66
21:AA:1038:C:H2'	21:AA:1039:G:C8	2.31	0.66
21:AA:1418:A:H3'	21:AA:1418:A:H8	1.61	0.66
24:BA:249:C:H5'	24:BA:2394:C:O2'	1.95	0.66
24:BA:1721:G:O2'	24:BA:1722:A:H8	1.78	0.66
26:BC:143:VAL:HG12	26:BC:144:GLU:O	1.96	0.66
28:BE:104:ALA:O	28:BE:108:ILE:HG22	1.94	0.66
29:BF:107:VAL:CG1	29:BF:113:PHE:CZ	2.79	0.66
42:BS:73:LYS:HB3	42:BS:106:VAL:HB	1.78	0.66
50:B0:9:ARG:HH21	50:B0:9:ARG:HG3	1.59	0.66
8:CI:87:MET:HG3	8:CI:94:ARG:HE	1.60	0.66
16:CQ:25:GLU:HG2	16:CQ:40:THR:HG22	1.78	0.66
19:CT:30:PHE:HE2	19:CT:52:GLU:HG2	1.59	0.66
55:CA:869:G:H4'	55:CA:872:A:C8	2.31	0.66
24:DA:248:G:H5'	24:DA:250:G:N7	2.10	0.66
24:DA:749:A:H2'	24:DA:750:A:H8	1.60	0.66
24:DA:962:G:O2'	24:DA:963:U:H5'	1.96	0.66
24:DA:1084:A:H2'	24:DA:1085:A:H5'	1.75	0.66
24:DA:1296:G:N2	24:DA:1645:G:C4	2.64	0.66
24:DA:2312:U:OP2	29:DF:70:ARG:HD2	1.96	0.66
24:DA:2800:A:O2'	24:DA:2801:G:H4'	1.95	0.66
44:DU:43:LYS:HG2	44:DU:45:GLN:HG2	1.76	0.66
49:DZ:30:ARG:NH2	49:DZ:33:HIS:HB2	2.11	0.66
1:AB:108:GLN:H	1:AB:108:GLN:NE2	1.92	0.66
9:AJ:11:LYS:HB3	9:AJ:71:LEU:HD13	1.77	0.66
19:AT:26:MET:HA	19:AT:29:THR:OG1	1.94	0.66
27:BD:140:HIS:CE1	59:BD:403:HOH:O	2.42	0.66
32:BI:3:LYS:HD2	32:BI:4:VAL:HG23	1.78	0.66
42:BS:42:LYS:O	42:BS:45:VAL:HG13	1.95	0.66
8:CI:83:THR:OG1	8:CI:97:LEU:HD13	1.95	0.66
12:CM:33:LEU:HB3	12:CM:38:ILE:HB	1.78	0.66
55:CA:513:C:O2'	55:CA:514:C:O4'	2.14	0.66
55:CA:982:U:H4'	55:CA:983:A:O5'	1.94	0.66
22:CX:34:G:H2'	22:CX:35:A:H8	1.58	0.66
24:DA:1309:G:H4'	52:D2:7:PRO:HB2	1.78	0.66
24:DA:1594:U:H2'	24:DA:1595:C:C6	2.30	0.66
26:DC:209:ALA:HA	26:DC:212:TRP:CE2	2.31	0.66
31:DH:83:LYS:HZ1	31:DH:91:PHE:HD2	1.42	0.66
35:DL:100:ILE:O	35:DL:101:ILE:HB	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DP:56:SER:HB2	39:DP:75:THR:HG21	1.77	0.66
43:DT:69:ARG:O	43:DT:74:ILE:HD12	1.95	0.66
44:DU:83:GLY:O	44:DU:93:ARG:HA	1.95	0.66
3:AD:47:LEU:HD23	3:AD:47:LEU:H	1.61	0.66
21:AA:131:A:C2	21:AA:132:C:C4	2.84	0.66
21:AA:210:C:H4'	21:AA:211:G:C2	2.31	0.66
24:BA:163:C:O2'	24:BA:164:C:H5''	1.96	0.66
24:BA:1499:C:H2'	24:BA:1500:G:H8	1.59	0.66
24:BA:2346:A:H3'	24:BA:2347:C:H5''	1.78	0.66
33:BJ:38:GLY:O	33:BJ:43:GLU:HB2	1.95	0.66
36:BM:54:THR:O	36:BM:56:ALA:N	2.29	0.66
36:BM:107:GLY:O	36:BM:108:VAL:HG23	1.94	0.66
41:BR:16:GLU:HA	41:BR:98:ILE:CG2	2.24	0.66
44:BU:35:VAL:HB	44:BU:38:ILE:HG13	1.78	0.66
1:CB:127:LYS:HE3	1:CB:132:GLU:HG3	1.77	0.66
3:CD:8:LEU:O	3:CD:12:ARG:HB2	1.96	0.66
55:CA:109:A:H61	55:CA:324:G:H1'	1.60	0.66
24:DA:1069:A:H2'	24:DA:1072:C:OP2	1.94	0.66
24:DA:2067:G:H4'	24:DA:2068:U:OP2	1.94	0.66
24:DA:2838:G:H1'	37:DN:45:ARG:NH2	2.08	0.66
29:DF:147:ARG:O	29:DF:148:VAL:HG22	1.95	0.66
39:DP:86:LYS:HA	39:DP:86:LYS:HZ2	1.61	0.66
41:DR:9:GLY:H	41:DR:10:LYS:HD2	1.59	0.66
4:AE:76:ASN:HB3	4:AE:81:GLN:HG2	1.78	0.66
7:AH:99:GLY:HA3	7:AH:129:ALA:HB2	1.77	0.66
8:AI:29:ILE:HA	8:AI:64:ILE:O	1.96	0.66
24:BA:2725:A:HO2'	24:BA:2726:A:H2'	1.60	0.66
25:BB:90:C:H5''	25:BB:90:C:C6	2.31	0.66
31:BH:1:MET:HG2	31:BH:23:ALA:HA	1.77	0.66
39:BP:50:ARG:HD2	39:BP:51:ASN:N	2.10	0.66
42:BS:20:VAL:HG11	42:BS:44:ALA:HA	1.78	0.66
53:B3:15:LYS:HE2	53:B3:19:GLY:HA2	1.77	0.66
6:CG:115:MET:CE	6:CG:119:LEU:HB3	2.25	0.66
55:CA:108:G:H5'	55:CA:109:A:H5''	1.77	0.66
55:CA:682:G:H2'	55:CA:683:G:H8	1.61	0.66
24:DA:628:G:H2'	24:DA:629:G:C8	2.30	0.66
24:DA:995:C:O2	33:DJ:3:THR:HG23	1.96	0.66
24:DA:1060:U:C4'	24:DA:1061:U:H5''	2.26	0.66
24:DA:1915:U:H2'	24:DA:1916:A:H8	1.57	0.66
24:DA:2590:A:H2'	24:DA:2591:C:C6	2.31	0.66
24:DA:2798:U:H5'	24:DA:2800:A:C6	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2852:G:H2'	24:DA:2853:C:O4'	1.95	0.66
27:DD:178:VAL:HG12	27:DD:179:ARG:HG3	1.76	0.66
40:DQ:69:ARG:HB2	40:DQ:69:ARG:NH2	2.11	0.66
17:AR:40:PRO:HB2	17:AR:42:ARG:HG2	1.78	0.66
21:AA:1082:A:C6	21:AA:1083:U:C4	2.84	0.66
24:BA:2388:A:C2'	24:BA:2389:G:H5'	2.26	0.66
32:BI:33:ASN:HD22	32:BI:64:ARG:HH22	1.41	0.66
35:BL:81:ASP:O	35:BL:82:LEU:HB3	1.96	0.66
45:BV:25:LYS:HD3	45:BV:43:ASP:HA	1.78	0.66
55:CA:892:A:H2'	55:CA:893:C:C6	2.31	0.66
24:DA:614:A:O2'	24:DA:615:U:H5'	1.96	0.66
24:DA:668:A:H2'	24:DA:670:A:N6	2.08	0.66
24:DA:974:G:H1'	24:DA:975:A:C8	2.31	0.66
24:DA:1079:C:H41	24:DA:1088:A:H5''	1.61	0.66
24:DA:2091:C:OP2	24:DA:2092:U:H3'	1.96	0.66
24:DA:2847:U:H2'	24:DA:2848:G:H5'	1.78	0.66
26:DC:82:TYR:O	26:DC:84:PRO:HD3	1.96	0.66
28:DE:130:LYS:H	28:DE:160:ALA:HB2	1.61	0.66
34:DK:13:ASN:HD21	34:DK:97:THR:N	1.93	0.66
34:DK:13:ASN:H	34:DK:13:ASN:HD22	1.44	0.66
45:DV:44:HIS:NE2	45:DV:85:LYS:HB2	2.11	0.66
1:AB:22:TRP:CA	1:AB:189:ASN:HA	2.24	0.65
21:AA:950:U:H2'	21:AA:951:G:H8	1.61	0.65
24:BA:103:A:H2'	24:BA:104:A:C8	2.30	0.65
24:BA:1071:G:C8	24:BA:1089:A:N6	2.65	0.65
24:BA:1206:G:H2'	24:BA:1207:C:C6	2.30	0.65
24:BA:2146:C:H4'	24:BA:2147:A:O5'	1.95	0.65
26:BC:156:SER:O	26:BC:194:VAL:HG11	1.96	0.65
30:BG:83:THR:HA	30:BG:84:LYS:NZ	2.11	0.65
30:BG:96:ALA:O	30:BG:97:VAL:HB	1.96	0.65
40:BQ:91:ARG:HB3	40:BQ:93:ILE:HG22	1.76	0.65
55:CA:120:A:H2'	55:CA:121:U:H5''	1.78	0.65
24:DA:64:A:O2'	43:DT:69:ARG:HG2	1.96	0.65
24:DA:228:C:H5'	24:DA:229:C:C5	2.31	0.65
24:DA:1008:A:H4'	24:DA:1009:A:OP1	1.95	0.65
24:DA:1063:G:H2'	24:DA:1064:C:C6	2.31	0.65
24:DA:1252:G:H5''	59:DA:3287:HOH:O	1.95	0.65
24:DA:1437:C:H2'	24:DA:1438:U:C6	2.32	0.65
24:DA:1730:C:O2'	24:DA:1731:G:H5''	1.96	0.65
41:DR:62:GLU:HB3	41:DR:97:LYS:HB3	1.78	0.65
43:DT:67:VAL:HG23	43:DT:75:GLY:O	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:59:ILE:O	4:AE:62:ALA:HB3	1.96	0.65
7:AH:88:LYS:HG3	7:AH:89:ASP:H	1.61	0.65
21:AA:171:A:H2'	21:AA:172:A:C8	2.31	0.65
21:AA:792:A:H1'	21:AA:794:A:N7	2.11	0.65
24:BA:675:A:H4'	28:BE:62:GLN:NE2	2.11	0.65
24:BA:1616:A:H4'	24:BA:1617:C:OP2	1.96	0.65
24:BA:1957:C:H5''	24:BA:1958:C:OP2	1.96	0.65
24:BA:1997:C:OP2	27:BD:129:THR:OG1	2.13	0.65
24:BA:2599:G:N7	26:BC:234:GLY:HA2	2.11	0.65
24:BA:2793:C:H2'	24:BA:2794:C:C6	2.30	0.65
25:BB:29:A:H2'	25:BB:30:C:C6	2.31	0.65
25:BB:64:G:H2'	25:BB:65:U:C6	2.32	0.65
27:BD:114:LYS:HE3	27:BD:114:LYS:N	2.12	0.65
32:BI:126:ARG:HA	32:BI:129:GLU:HB2	1.79	0.65
33:BJ:16:TYR:HA	33:BJ:138:GLN:O	1.95	0.65
34:BK:28:SER:O	34:BK:29:HIS:HB2	1.95	0.65
40:BQ:82:LEU:CD2	40:BQ:112:ALA:HB2	2.26	0.65
8:CI:125:GLN:NE2	55:CA:1232:U:H5''	2.12	0.65
9:CJ:9:ARG:HH21	9:CJ:71:LEU:CD2	2.08	0.65
9:CJ:37:ARG:HB3	9:CJ:74:VAL:O	1.96	0.65
12:CM:2:ARG:HD2	12:CM:8:ILE:HG12	1.76	0.65
55:CA:52:C:C4	55:CA:360:G:N2	2.64	0.65
55:CA:721:G:H4'	55:CA:722:G:C5'	2.25	0.65
24:DA:677:A:O2'	24:DA:2071:A:H5'	1.97	0.65
24:DA:752:A:O2'	24:DA:753:A:P	2.54	0.65
24:DA:1236:G:O2'	24:DA:1237:A:H8	1.79	0.65
24:DA:2037:A:O2'	24:DA:2038:G:O4'	2.13	0.65
24:DA:2860:A:H8	24:DA:2860:A:O5'	1.79	0.65
56:DB:98:G:H1	45:DV:14:LYS:HB2	1.60	0.65
1:AB:143:LEU:HD12	1:AB:147:LEU:HD12	1.77	0.65
4:AE:37:VAL:HG11	4:AE:113:VAL:HA	1.77	0.65
4:AE:155:LYS:HB3	7:AH:64:TYR:C	2.16	0.65
12:AM:101:THR:OG1	21:AA:1225:A:H5''	1.96	0.65
24:BA:709:U:H2'	24:BA:710:U:H6	1.56	0.65
24:BA:994:C:O2	41:BR:10:LYS:NZ	2.29	0.65
24:BA:1566:A:O2'	24:BA:1567:G:H5'	1.97	0.65
24:BA:1625:C:H5''	24:BA:1626:A:OP2	1.96	0.65
33:BJ:43:GLU:O	33:BJ:45:THR:N	2.29	0.65
37:BN:37:THR:HA	37:BN:110:MET:SD	2.36	0.65
40:BQ:63:ARG:HH12	40:BQ:96:ASP:CB	2.08	0.65
3:CD:171:GLU:HG2	3:CD:180:THR:HB	1.76	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:14:LEU:HG	4:CE:15:ILE:N	2.10	0.65
4:CE:148:SER:O	4:CE:152:VAL:HG23	1.95	0.65
5:CF:70:VAL:O	5:CF:73:GLU:HB2	1.96	0.65
7:CH:88:LYS:HG3	7:CH:89:ASP:OD1	1.96	0.65
12:CM:69:ARG:HA	12:CM:72:ILE:HG22	1.78	0.65
55:CA:818:G:O2'	55:CA:819:A:H5''	1.96	0.65
55:CA:1051:C:O2'	55:CA:1052:U:C6	2.48	0.65
55:CA:1319:A:C6	55:CA:1323:G:C4	2.85	0.65
55:CA:1494:G:H4'	24:DA:1913:A:N7	2.12	0.65
24:DA:27:G:H1'	24:DA:513:A:N6	2.11	0.65
24:DA:445:C:H2'	24:DA:446:G:C8	2.31	0.65
24:DA:533:G:H2'	24:DA:534:U:C6	2.31	0.65
24:DA:975:A:H2'	24:DA:976:G:H8	1.62	0.65
24:DA:1270:C:N4	24:DA:1648:U:O4	2.29	0.65
24:DA:1935:G:H1'	24:DA:1964:G:C2	2.31	0.65
24:DA:2264:C:C2	24:DA:2277:G:N2	2.63	0.65
24:DA:2751:G:O2'	24:DA:2752:C:H5'	1.96	0.65
27:DD:38:LYS:HB3	27:DD:38:LYS:HZ3	1.60	0.65
27:DD:117:GLY:HA2	27:DD:164:GLN:OE1	1.96	0.65
21:AA:339:C:N3	21:AA:351:G:O6	2.29	0.65
21:AA:1003:G:N2	21:AA:1005:A:H5'	2.11	0.65
22:AX:30:G:C4	22:AX:31:A:C8	2.85	0.65
24:BA:532:A:C8	24:BA:2021:C:C6	2.85	0.65
24:BA:763:G:N7	24:BA:765:C:C5	2.65	0.65
24:BA:1139:G:O2'	24:BA:1140:C:H5'	1.96	0.65
24:BA:1253:A:C3'	24:BA:1254:A:H5'	2.27	0.65
26:BC:106:PRO:HA	26:BC:141:HIS:CE1	2.30	0.65
26:BC:245:THR:OG1	26:BC:249:VAL:HB	1.96	0.65
28:BE:110:SER:O	28:BE:113:VAL:HG12	1.96	0.65
33:BJ:25:LEU:HD22	33:BJ:25:LEU:C	2.16	0.65
39:BP:33:GLU:CB	39:BP:38:ARG:HH11	2.09	0.65
40:BQ:4:LYS:NZ	40:BQ:7:VAL:HG13	2.12	0.65
2:CC:110:LEU:HD11	2:CC:203:LYS:NZ	2.11	0.65
2:CC:120:THR:HG22	2:CC:120:THR:O	1.97	0.65
55:CA:390:U:O2'	55:CA:391:G:H5'	1.97	0.65
55:CA:865:A:C2	55:CA:918:A:H4'	2.31	0.65
24:DA:13:A:O2'	24:DA:15:G:N7	2.29	0.65
24:DA:75:G:H4'	48:DY:48:ARG:NH2	2.12	0.65
24:DA:140:C:H5'	24:DA:141:G:H21	1.61	0.65
24:DA:704:G:H1'	24:DA:727:A:N6	2.12	0.65
24:DA:852:U:H2'	24:DA:853:C:C6	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1062:G:OP1	24:DA:1070:A:H4'	1.97	0.65
24:DA:1496:A:H2'	24:DA:1498:C:N4	2.12	0.65
24:DA:1832:C:N4	24:DA:1833:C:C4	2.64	0.65
24:DA:2308:G:O6	24:DA:2311:A:C6	2.49	0.65
35:DL:142:ILE:HG22	35:DL:144:GLU:H	1.61	0.65
44:DU:14:THR:HB	44:DU:68:ASN:HB3	1.78	0.65
44:DU:82:VAL:H	44:DU:96:LYS:HZ2	1.44	0.65
48:DY:19:LEU:HA	48:DY:22:LEU:HB2	1.77	0.65
3:AD:117:VAL:HA	3:AD:122:ILE:HD11	1.79	0.65
4:AE:13:LYS:HG3	4:AE:112:ALA:HB1	1.79	0.65
4:AE:90:GLY:O	4:AE:129:SER:HB3	1.97	0.65
7:AH:87:ARG:HG3	7:AH:90:GLU:OE2	1.96	0.65
8:AI:3:ASN:CG	8:AI:4:GLN:H	2.00	0.65
10:AK:85:VAL:O	10:AK:112:VAL:HG22	1.96	0.65
12:AM:109:LYS:NZ	21:AA:1227:A:H5'	2.11	0.65
16:AQ:76:ARG:HG2	16:AQ:77:VAL:N	2.12	0.65
21:AA:338:A:N1	21:AA:351:G:C6	2.65	0.65
21:AA:582:C:C2	21:AA:583:A:C8	2.85	0.65
21:AA:1084:G:OP1	21:AA:1086:U:H5''	1.97	0.65
24:BA:491:G:C2	24:BA:492:A:H1'	2.31	0.65
24:BA:860:U:H6	24:BA:860:U:C5'	2.08	0.65
24:BA:2210:U:H4'	24:BA:2211:A:H5'	1.78	0.65
24:BA:2868:A:H2'	24:BA:2869:G:H8	1.56	0.65
26:BC:109:LEU:HD23	26:BC:110:LYS:N	2.12	0.65
42:BS:63:GLY:O	42:BS:64:ALA:HB3	1.96	0.65
46:BW:9:THR:HG23	46:BW:10:ARG:CD	2.24	0.65
55:CA:632:U:H3'	55:CA:633:G:H5'	1.78	0.65
55:CA:662:U:H2'	55:CA:663:A:C8	2.32	0.65
55:CA:1228:C:O2'	55:CA:1229:A:H5'	1.95	0.65
24:DA:417:C:H2'	24:DA:418:C:C6	2.32	0.65
24:DA:634:C:H2'	24:DA:635:C:C6	2.31	0.65
24:DA:1050:A:O2'	24:DA:1051:G:H5'	1.96	0.65
24:DA:2184:A:H2'	24:DA:2185:U:C6	2.31	0.65
24:DA:2210:U:H4'	24:DA:2211:A:O5'	1.97	0.65
6:AG:26:VAL:HG12	6:AG:42:VAL:HG21	1.78	0.65
16:AQ:11:VAL:HB	16:AQ:55:GLY:H	1.60	0.65
21:AA:130:A:O2'	21:AA:263:A:O2'	2.13	0.65
21:AA:306:A:H2'	21:AA:307:C:H6	1.61	0.65
21:AA:653:U:O2'	21:AA:654:G:H5'	1.96	0.65
21:AA:984:C:O2'	21:AA:985:C:C6	2.44	0.65
37:BN:24:MET:HG2	37:BN:44:LEU:CD2	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BW:29:SER:HA	46:BW:63:ASP:HB3	1.77	0.65
1:CB:212:TYR:O	1:CB:216:VAL:HG23	1.96	0.65
4:CE:55:VAL:N	4:CE:56:PRO:HD2	2.11	0.65
55:CA:109:A:N6	55:CA:324:G:H1'	2.12	0.65
24:DA:53:A:H2'	24:DA:54:G:O4'	1.97	0.65
24:DA:454:A:H4'	24:DA:455:C:OP2	1.95	0.65
24:DA:459:U:O2'	24:DA:460:A:H5'	1.96	0.65
24:DA:740:C:H5'	24:DA:1784:A:C3'	2.19	0.65
24:DA:1079:C:N4	24:DA:1088:A:N3	2.45	0.65
24:DA:1558:C:H1'	24:DA:1560:G:N7	2.12	0.65
56:DB:46:A:H2'	56:DB:47:C:H6	1.62	0.65
31:DH:84:ALA:H	31:DH:148:ALA:HA	1.61	0.65
33:DJ:75:TYR:CD1	33:DJ:84:ILE:HD11	2.32	0.65
34:DK:39:ILE:HD11	34:DK:62:VAL:HG23	1.79	0.65
12:AM:39:ALA:HB3	12:AM:42:VAL:HG13	1.78	0.65
16:AQ:58:VAL:HG22	16:AQ:59:GLU:N	2.12	0.65
21:AA:9:G:C6	21:AA:26:A:N6	2.65	0.65
24:BA:1027:A:H2'	24:BA:1027:A:N3	2.11	0.65
40:BQ:48:ASP:O	40:BQ:51:GLN:N	2.30	0.65
1:CB:25:LYS:HD2	1:CB:25:LYS:H	1.61	0.65
5:CF:86:ARG:NH1	17:CR:63:TYR:HB3	2.11	0.65
11:CL:65:TYR:HD1	11:CL:66:ILE:N	1.94	0.65
15:CP:68:SER:HB3	15:CP:71:VAL:HG12	1.79	0.65
55:CA:570:G:H2'	55:CA:571:U:C6	2.32	0.65
55:CA:1101:A:H4'	55:CA:1102:A:O5'	1.96	0.65
24:DA:121:G:C2	24:DA:131:A:C5	2.85	0.65
24:DA:734:A:C4	24:DA:735:A:C8	2.84	0.65
24:DA:1069:A:N6	24:DA:1073:A:H5''	2.12	0.65
24:DA:1078:U:H4'	24:DA:1079:C:O5'	1.97	0.65
24:DA:1334:G:O2'	24:DA:1335:C:H5'	1.96	0.65
24:DA:2459:A:O2'	24:DA:2460:U:H5'	1.96	0.65
24:DA:2585:U:O2'	24:DA:2586:U:H5'	1.97	0.65
2:AC:119:ILE:HG21	2:AC:197:VAL:HG11	1.77	0.65
3:AD:103:ARG:O	3:AD:167:PRO:HG2	1.96	0.65
21:AA:1239:A:H1'	21:AA:1241:G:C4	2.32	0.65
21:AA:1384:C:H2'	21:AA:1385:G:H8	1.61	0.65
21:AA:1417:G:N2	21:AA:1482:G:H2'	2.11	0.65
24:BA:479:A:O2'	24:BA:481:G:H5'	1.96	0.65
25:BB:78:A:H2'	25:BB:79:G:O4'	1.96	0.65
34:BK:112:PHE:O	34:BK:115:ILE:HG22	1.97	0.65
36:BM:96:ILE:C	36:BM:96:ILE:HD12	2.17	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BP:56:SER:O	39:BP:75:THR:HG23	1.96	0.65
54:B4:9:LYS:C	54:B4:10:LEU:HD23	2.17	0.65
1:CB:79:VAL:HG11	1:CB:92:ASN:HB3	1.78	0.65
4:CE:38:VAL:HG12	4:CE:39:GLY:N	2.10	0.65
55:CA:1504:G:H4'	55:CA:1505:G:H5'	1.77	0.65
24:DA:471:A:H5''	28:DE:79:ARG:HH12	1.61	0.65
24:DA:1298:C:H2'	24:DA:1299:G:O4'	1.97	0.65
26:DC:2:VAL:O	26:DC:3:VAL:HB	1.97	0.65
40:DQ:10:ARG:HA	40:DQ:13:HIS:HB2	1.79	0.65
54:D4:36:ARG:HG2	54:D4:37:GLN:N	2.11	0.65
21:AA:1076:U:H2'	21:AA:1077:G:C8	2.31	0.65
21:AA:1125:U:O2'	21:AA:1126:U:O5'	2.13	0.65
24:BA:229:C:H2'	24:BA:230:G:O4'	1.97	0.65
24:BA:436:C:HO2'	24:BA:437:U:H6	1.45	0.65
24:BA:540:C:O2'	24:BA:541:A:H5'	1.97	0.65
24:BA:1373:A:H2'	24:BA:1374:G:O4'	1.96	0.65
24:BA:1427:A:H4'	24:BA:1428:C:O5'	1.96	0.65
24:BA:1842:G:H2'	24:BA:1843:C:C6	2.32	0.65
24:BA:2021:C:P	50:B0:8:THR:HG21	2.36	0.65
24:BA:2364:C:H4'	46:BW:55:ASP:OD1	1.97	0.65
24:BA:2483:C:H2'	24:BA:2484:G:O4'	1.95	0.65
39:BP:37:LYS:N	39:BP:37:LYS:HD3	2.11	0.65
40:BQ:68:ALA:HB1	40:BQ:73:ILE:HG23	1.77	0.65
40:BQ:91:ARG:HD3	41:BR:11:GLN:CG	2.26	0.65
43:BT:38:ALA:HB1	43:BT:43:ILE:HG22	1.79	0.65
7:CH:39:LEU:HB2	7:CH:45:ILE:HD11	1.78	0.65
18:CS:52:ASN:HD21	18:CS:55:GLN:H	1.44	0.65
55:CA:25:C:H2'	55:CA:26:A:C8	2.32	0.65
22:CX:34:G:H2'	22:CX:35:A:C8	2.32	0.65
24:DA:1328:A:H2'	24:DA:1330:C:C5	2.31	0.65
24:DA:1386:C:O2'	24:DA:1387:A:C8	2.50	0.65
24:DA:1555:G:N2	24:DA:1556:C:C2	2.65	0.65
24:DA:1608:A:C8	24:DA:1611:C:N4	2.65	0.65
24:DA:1734:G:HO2'	24:DA:1735:A:H8	1.43	0.65
24:DA:2895:G:O2'	24:DA:2896:C:H6	1.79	0.65
56:DB:115:A:H2'	56:DB:116:G:C8	2.32	0.65
27:DD:29:VAL:HB	27:DD:98:VAL:CG1	2.26	0.65
33:DJ:20:ALA:HA	33:DJ:23:LYS:HG3	1.79	0.65
33:DJ:30:THR:HG23	33:DJ:31:GLU:N	2.12	0.65
40:DQ:24:TYR:O	40:DQ:27:ARG:HB3	1.97	0.65
4:AE:81:GLN:HG2	4:AE:149:PRO:CG	2.17	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:122:ARG:CZ	21:AA:1343:G:H1'	2.27	0.65
8:AI:129:ARG:NH2	21:AA:966:G:N2	2.41	0.65
21:AA:17:U:H2'	21:AA:18:C:C6	2.32	0.65
21:AA:451:A:H1'	21:AA:452:A:N7	2.12	0.65
21:AA:1225:A:H2'	21:AA:1225:A:N3	2.11	0.65
21:AA:1299:A:O2'	21:AA:1300:G:H4'	1.97	0.65
24:BA:553:G:H2'	24:BA:554:U:O4'	1.96	0.65
24:BA:653:U:H4'	24:BA:653:U:OP1	1.96	0.65
24:BA:1422:G:C4	24:BA:1423:G:C8	2.85	0.65
24:BA:2629:U:O2'	24:BA:2630:G:OP2	2.15	0.65
34:BK:19:VAL:HG22	34:BK:41:ILE:HG13	1.78	0.65
54:B4:9:LYS:CD	54:B4:9:LYS:H	2.10	0.65
2:CC:198:LYS:HE2	55:CA:1058:G:OP1	1.97	0.65
7:CH:104:SER:O	7:CH:122:GLY:HA3	1.97	0.65
20:CU:15:LEU:O	20:CU:15:LEU:HD12	1.97	0.65
55:CA:93:U:H2'	55:CA:95:C:H5	1.62	0.65
55:CA:765:G:C5	55:CA:812:G:C6	2.85	0.65
55:CA:1311:A:H2'	55:CA:1312:G:O4'	1.97	0.65
24:DA:303:G:O2'	24:DA:304:U:O4'	2.12	0.65
24:DA:515:A:H2	24:DA:1260:A:N3	1.95	0.65
24:DA:810:U:O4	35:DL:30:THR:HG22	1.97	0.65
24:DA:1277:G:O2'	24:DA:1278:C:O4'	2.14	0.65
24:DA:1312:U:HO2'	24:DA:1314:C:N4	1.95	0.65
24:DA:1400:U:H2'	24:DA:1401:G:O4'	1.96	0.65
24:DA:1421:G:H8	24:DA:1421:G:OP2	1.80	0.65
24:DA:1683:U:O2'	24:DA:1684:G:H8	1.80	0.65
24:DA:1787:A:C2	24:DA:1788:C:C4	2.85	0.65
24:DA:2061:G:C8	24:DA:2501:C:H4'	2.32	0.65
24:DA:2260:C:O2'	24:DA:2261:C:C6	2.50	0.65
24:DA:2742:G:OP1	54:D4:36:ARG:HD3	1.97	0.65
28:DE:105:LEU:HD12	28:DE:200:LEU:HD11	1.79	0.65
34:DK:54:LYS:H	34:DK:54:LYS:HD2	1.61	0.65
38:DO:17:LYS:HE3	38:DO:17:LYS:O	1.97	0.65
4:AE:17:VAL:HG23	4:AE:33:THR:O	1.97	0.64
16:AQ:11:VAL:HG12	16:AQ:12:VAL:N	2.12	0.64
21:AA:1295:U:H2'	21:AA:1296:C:H6	1.61	0.64
24:BA:9:G:C6	24:BA:2629:U:C6	2.85	0.64
24:BA:169:G:H2'	24:BA:170:U:H6	1.61	0.64
24:BA:541:A:C2	24:BA:553:G:C2	2.85	0.64
24:BA:842:U:O4	59:BA:3593:HOH:O	2.10	0.64
24:BA:1125:G:C6	24:BA:1126:A:N6	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1496:A:H2'	24:BA:1498:C:N4	2.12	0.64
24:BA:2020:A:C2	24:BA:2022:U:O4'	2.50	0.64
24:BA:2543:G:H2'	24:BA:2544:G:C8	2.32	0.64
24:BA:2741:A:H2'	24:BA:2742:G:O4'	1.95	0.64
35:BL:14:LYS:HG3	35:BL:15:ALA:N	2.12	0.64
15:CP:78:VAL:O	15:CP:80:LYS:HG3	1.97	0.64
24:DA:18:U:H2'	24:DA:19:A:O4'	1.97	0.64
24:DA:243:U:O2'	24:DA:244:A:H5'	1.98	0.64
24:DA:752:A:O2'	24:DA:753:A:OP2	2.15	0.64
27:DD:30:GLU:HG2	27:DD:185:ASN:ND2	2.12	0.64
35:DL:47:ARG:HG2	35:DL:47:ARG:NH2	2.11	0.64
36:DM:108:VAL:HG21	36:DM:112:LEU:HB3	1.78	0.64
39:DP:5:LYS:HE2	39:DP:9:GLN:NE2	2.12	0.64
40:DQ:4:LYS:HE3	40:DQ:7:VAL:HG13	1.77	0.64
48:DY:39:GLN:O	48:DY:42:LEU:HB2	1.97	0.64
2:AC:6:PRO:O	2:AC:10:ARG:HG2	1.97	0.64
21:AA:41:G:H2'	21:AA:42:G:C8	2.32	0.64
21:AA:1124:G:H3'	21:AA:1145:A:N6	2.11	0.64
24:BA:960:A:H2'	24:BA:962:G:H5'	1.79	0.64
24:BA:1965:C:H2'	24:BA:1966:A:C8	2.32	0.64
24:BA:2799:A:O2'	24:BA:2800:A:H4'	1.97	0.64
27:BD:101:PHE:CE2	27:BD:203:VAL:HG22	2.31	0.64
33:BJ:88:THR:CG2	33:BJ:90:GLU:HG3	2.27	0.64
41:BR:14:VAL:HG11	41:BR:98:ILE:CD1	2.28	0.64
2:CC:59:PRO:HG2	2:CC:62:SER:HB3	1.79	0.64
7:CH:9:MET:SD	7:CH:32:LYS:HG3	2.36	0.64
55:CA:1504:G:C3'	55:CA:1505:G:H5'	2.27	0.64
24:DA:75:G:HO2'	24:DA:76:C:H6	1.42	0.64
24:DA:1695:G:H8	26:DC:7:PRO:HB2	1.59	0.64
24:DA:2190:G:H3'	24:DA:2191:A:O4'	1.97	0.64
24:DA:2226:C:H2'	24:DA:2227:A:C8	2.32	0.64
24:DA:2519:U:C6	24:DA:2542:A:N6	2.64	0.64
24:DA:2788:C:O2	24:DA:2809:A:H2	1.80	0.64
24:DA:2895:G:O2'	24:DA:2896:C:C6	2.50	0.64
56:DB:74:U:H2'	56:DB:75:G:O4'	1.97	0.64
26:DC:224:MET:SD	26:DC:229:HIS:HB2	2.37	0.64
3:AD:166:LYS:HB3	3:AD:166:LYS:NZ	2.11	0.64
11:AL:78:VAL:O	11:AL:102:ASP:HB2	1.97	0.64
19:AT:24:ARG:HG2	19:AT:28:ARG:NH1	2.12	0.64
19:AT:80:ALA:O	19:AT:84:LYS:HB2	1.97	0.64
21:AA:1394:A:HO2'	21:AA:1395:C:P	2.19	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1095:A:H2'	24:BA:1096:A:C8	2.32	0.64
24:BA:1187:G:H5''	41:BR:83:TYR:CE2	2.32	0.64
24:BA:1339:G:N2	24:BA:1603:A:H1'	2.12	0.64
24:BA:1408:G:H2'	24:BA:1409:U:H6	1.61	0.64
24:BA:1779:U:H5	24:BA:1784:A:N7	1.95	0.64
24:BA:1794:A:H2'	24:BA:1795:C:C6	2.30	0.64
24:BA:1796:U:H2'	24:BA:1797:G:C8	2.32	0.64
24:BA:1805:A:C5	24:BA:1806:C:H5	2.16	0.64
25:BB:57:A:C2	25:BB:58:A:C4	2.85	0.64
31:BH:82:SER:O	31:BH:83:LYS:HB2	1.97	0.64
37:BN:55:ALA:HB1	37:BN:80:PHE:N	2.13	0.64
39:BP:24:THR:HG22	39:BP:87:ARG:H	1.61	0.64
41:BR:49:ILE:CB	41:BR:51:VAL:O	2.45	0.64
43:BT:39:THR:HG22	43:BT:39:THR:O	1.97	0.64
2:CC:139:ASN:HB3	2:CC:142:ARG:NH2	2.11	0.64
11:CL:29:LYS:O	11:CL:80:LEU:HD12	1.97	0.64
55:CA:33:A:H2'	55:CA:34:C:C6	2.31	0.64
24:DA:741:U:H2'	24:DA:742:A:H8	1.61	0.64
24:DA:1275:A:H2'	24:DA:1275:A:N3	2.13	0.64
24:DA:1782:U:O2'	24:DA:1783:A:H5'	1.97	0.64
24:DA:2707:U:H2'	24:DA:2708:G:C8	2.32	0.64
56:DB:24:G:H1'	56:DB:27:C:N4	2.12	0.64
44:DU:58:VAL:HG12	44:DU:60:LYS:H	1.61	0.64
1:AB:40:ILE:HD13	1:AB:201:GLY:CA	2.26	0.64
1:AB:212:TYR:HA	1:AB:215:ALA:HB3	1.78	0.64
5:AF:38:ARG:HG3	5:AF:39:LEU:N	2.11	0.64
12:AM:106:ARG:HA	12:AM:106:ARG:HH11	1.63	0.64
14:AO:21:THR:HG21	21:AA:658:C:H1'	1.79	0.64
19:AT:20:ASN:O	19:AT:24:ARG:HB2	1.97	0.64
24:BA:493:G:H2'	24:BA:494:G:O4'	1.98	0.64
24:BA:1059:G:H1'	32:BI:127:SER:HB2	1.77	0.64
24:BA:1266:G:OP2	50:B0:16:ARG:NE	2.28	0.64
24:BA:2484:G:OP1	36:BM:44:ARG:HD3	1.98	0.64
24:BA:2747:G:HO2'	30:BG:66:THR:HG22	1.60	0.64
26:BC:12:ARG:HH11	26:BC:12:ARG:HG2	1.61	0.64
30:BG:85:LYS:HG2	30:BG:131:VAL:HG12	1.80	0.64
46:BW:28:GLU:CG	46:BW:29:SER:H	2.11	0.64
3:CD:18:LEU:HB2	3:CD:20:LEU:HG	1.78	0.64
8:CI:18:VAL:HG11	8:CI:82:ILE:HA	1.80	0.64
9:CJ:44:THR:HG22	9:CJ:45:ARG:H	1.61	0.64
55:CA:275:G:O2'	55:CA:276:G:H5'	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:695:A:H61	55:CA:797:C:H1'	1.62	0.64
55:CA:1381:U:O2'	55:CA:1382:C:H5'	1.96	0.64
24:DA:223:A:H2	24:DA:407:G:N3	1.95	0.64
24:DA:390:U:O2'	24:DA:391:A:C8	2.50	0.64
24:DA:764:A:N1	24:DA:1789:A:O2'	2.31	0.64
24:DA:1601:G:H2'	24:DA:1602:U:O4'	1.96	0.64
24:DA:1835:G:N2	24:DA:1836:C:C2	2.65	0.64
24:DA:2543:G:O6	24:DA:2765:A:C5	2.50	0.64
56:DB:12:C:H4'	56:DB:13:G:OP1	1.95	0.64
1:AB:183:PHE:N	1:AB:183:PHE:CD2	2.65	0.64
3:AD:195:ASN:HD22	3:AD:195:ASN:N	1.96	0.64
21:AA:236:A:H2'	21:AA:237:G:H8	1.63	0.64
21:AA:532:A:H2	21:AA:1206:G:H21	1.46	0.64
24:BA:494:G:H21	42:BS:57:ASN:HD21	1.44	0.64
24:BA:672:C:C2	24:BA:809:G:N2	2.65	0.64
24:BA:1436:G:N2	24:BA:1557:C:C2	2.65	0.64
24:BA:2195:U:H2'	24:BA:2196:C:H6	1.60	0.64
26:BC:229:HIS:CD2	26:BC:246:PRO:HB3	2.32	0.64
28:BE:146:VAL:HA	28:BE:185:LYS:O	1.96	0.64
35:BL:93:ASN:ND2	35:BL:94:THR:N	2.45	0.64
36:BM:78:LEU:C	36:BM:80:VAL:H	2.01	0.64
41:BR:28:ALA:O	41:BR:63:VAL:HG21	1.98	0.64
19:CT:22:SER:HB2	55:CA:1458:G:H4'	1.78	0.64
55:CA:93:U:C2	55:CA:95:C:N4	2.65	0.64
22:CV:39:U:H2'	22:CV:40:C:C6	2.33	0.64
24:DA:465:G:H4'	52:D2:16:HIS:HD2	1.62	0.64
24:DA:572:A:OP1	59:DA:3603:HOH:O	2.15	0.64
24:DA:1078:U:H4'	24:DA:1079:C:C5'	2.28	0.64
26:DC:128:THR:CG2	26:DC:188:ARG:HB3	2.28	0.64
4:AE:55:VAL:O	4:AE:58:ALA:HB3	1.98	0.64
5:AF:2:ARG:HB3	5:AF:92:THR:OG1	1.98	0.64
5:AF:11:HIS:HD2	5:AF:12:PRO:HD2	1.62	0.64
8:AI:40:ARG:HA	8:AI:44:ARG:HB3	1.80	0.64
8:AI:62:LEU:HD12	8:AI:64:ILE:HD11	1.79	0.64
17:AR:63:TYR:CE1	21:AA:734:G:N2	2.62	0.64
24:BA:401:A:H2'	24:BA:402:A:C8	2.33	0.64
24:BA:1131:G:C8	33:BJ:77:HIS:CE1	2.86	0.64
24:BA:2094:A:H2'	24:BA:2095:A:H8	1.60	0.64
26:BC:43:ASN:HB3	26:BC:45:ASN:H	1.63	0.64
42:BS:13:SER:O	42:BS:14:ALA:HB2	1.98	0.64
2:CC:133:MET:HB2	2:CC:150:VAL:HG21	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:171:ARG:HB3	55:CA:1106:G:H5''	1.79	0.64
3:CD:96:ARG:HE	3:CD:133:SER:HA	1.61	0.64
4:CE:147:ASN:HD21	7:CH:72:GLU:HG3	1.61	0.64
7:CH:85:TYR:CE1	16:CQ:36:PHE:HE2	2.15	0.64
9:CJ:54:SER:HB2	55:CA:1060:U:H4'	1.80	0.64
12:CM:2:ARG:HD3	12:CM:2:ARG:H	1.59	0.64
55:CA:1356:G:H2'	55:CA:1357:A:H8	1.59	0.64
24:DA:1:G:H2'	24:DA:2:G:C8	2.31	0.64
24:DA:233:A:O2'	24:DA:234:U:H6	1.81	0.64
24:DA:1598:A:H2'	24:DA:1599:U:C6	2.32	0.64
24:DA:2716:C:O2'	24:DA:2717:C:H5'	1.97	0.64
29:DF:107:VAL:C	29:DF:109:ARG:N	2.51	0.64
31:DH:84:ALA:HA	31:DH:89:LYS:O	1.96	0.64
46:DW:49:ASN:ND2	46:DW:81:ILE:HG23	2.13	0.64
21:AA:1086:U:O2'	21:AA:1087:G:H5'	1.98	0.64
24:BA:250:G:H2'	24:BA:251:A:C8	2.33	0.64
24:BA:373:U:OP2	24:BA:400:G:N1	2.28	0.64
24:BA:898:C:H2'	24:BA:899:A:O4'	1.98	0.64
24:BA:919:U:H6	24:BA:919:U:C5'	2.11	0.64
30:BG:73:SER:HA	30:BG:76:ILE:CG2	2.27	0.64
32:BI:71:LYS:HG2	32:BI:72:THR:H	1.62	0.64
35:BL:7:SER:HB2	35:BL:8:PRO:HD2	1.80	0.64
40:BQ:4:LYS:HG3	40:BQ:5:ARG:N	2.13	0.64
50:B0:10:SER:O	50:B0:14:MET:HG3	1.97	0.64
55:CA:652:U:O2'	55:CA:653:U:H6	1.81	0.64
24:DA:1138:G:H2'	24:DA:1139:G:O4'	1.98	0.64
24:DA:1141:U:H5''	24:DA:1142:A:OP1	1.98	0.64
24:DA:1465:G:H2'	24:DA:1466:U:O4'	1.98	0.64
24:DA:1499:C:O2'	24:DA:1500:G:H5'	1.98	0.64
24:DA:2093:G:N2	24:DA:2094:A:C4	2.66	0.64
24:DA:2148:G:O2'	24:DA:2149:U:C6	2.51	0.64
24:DA:2235:G:H2'	24:DA:2236:U:H6	1.61	0.64
24:DA:2259:U:C4	24:DA:2427:C:N4	2.65	0.64
24:DA:2269:G:O3'	46:DW:18:LYS:HE2	1.98	0.64
24:DA:2756:U:H3	24:DA:2758:A:H62	1.44	0.64
24:DA:2850:A:O2'	24:DA:2851:A:H5'	1.98	0.64
26:DC:181:ARG:HG3	26:DC:265:PHE:O	1.98	0.64
27:DD:4:LEU:HD23	27:DD:101:PHE:CE1	2.33	0.64
4:AE:11:GLN:CG	4:AE:116:VAL:HA	2.28	0.64
4:AE:79:THR:CB	4:AE:121:ASN:HD21	2.10	0.64
6:AG:147:ASN:H	6:AG:147:ASN:ND2	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:46:HIS:HB2	16:AQ:66:LEU:HD12	1.79	0.64
17:AR:38:ILE:O	21:AA:719:C:O2'	2.16	0.64
21:AA:1394:A:N6	21:AA:1501:C:H4'	2.13	0.64
24:BA:63:A:C2	24:BA:64:A:C8	2.86	0.64
24:BA:143:C:H2'	24:BA:144:A:H8	1.62	0.64
24:BA:276:U:O2'	24:BA:278:A:N7	2.31	0.64
24:BA:1057:A:C8	24:BA:1086:A:C8	2.85	0.64
24:BA:1874:C:H2'	24:BA:1875:G:O4'	1.98	0.64
26:BC:16:VAL:HB	26:BC:203:VAL:HB	1.78	0.64
35:BL:79:LEU:HB2	35:BL:114:GLY:O	1.98	0.64
36:BM:55:ARG:O	36:BM:55:ARG:HG3	1.98	0.64
46:BW:72:GLY:C	46:BW:74:LYS:H	2.01	0.64
54:B4:10:LEU:HD12	54:B4:33:HIS:CD2	2.32	0.64
4:CE:104:ILE:HG23	4:CE:104:ILE:O	1.98	0.64
6:CG:2:ARG:HD3	55:CA:932:C:H5''	1.79	0.64
55:CA:1434:A:H2'	55:CA:1435:G:O4'	1.98	0.64
24:DA:73:A:H8	24:DA:73:A:O5'	1.81	0.64
24:DA:865:C:H5''	24:DA:866:A:OP1	1.97	0.64
24:DA:2537:U:H2'	24:DA:2538:C:C6	2.33	0.64
27:DD:107:VAL:CG1	27:DD:109:VAL:HG23	2.27	0.64
30:DG:10:VAL:HB	30:DG:14:VAL:HG21	1.78	0.64
34:DK:104:THR:O	34:DK:107:LEU:HD22	1.97	0.64
44:DU:26:ASN:OD1	44:DU:34:ILE:HD12	1.98	0.64
46:DW:18:LYS:H	46:DW:36:ILE:HG12	1.62	0.64
3:AD:53:GLN:NE2	3:AD:201:GLU:HG2	2.13	0.64
4:AE:75:LEU:HD21	4:AE:119:VAL:HG13	1.80	0.64
8:AI:122:ARG:NH1	21:AA:1343:G:H1'	2.13	0.64
18:AS:77:ARG:HH22	21:AA:1322:C:P	2.21	0.64
21:AA:1360:A:H2'	21:AA:1361:G:H8	1.63	0.64
21:AA:1500:A:OP1	21:AA:1508:A:OP1	2.16	0.64
24:BA:1387:A:H2'	24:BA:1388:G:H8	1.62	0.64
24:BA:1553:A:N7	24:BA:1555:G:C6	2.66	0.64
24:BA:2269:G:H4'	46:BW:18:LYS:HE2	1.78	0.64
26:BC:180:MET:HG3	26:BC:268:ARG:HH11	1.60	0.64
27:BD:121:THR:O	27:BD:122:VAL:HG23	1.97	0.64
32:BI:48:ILE:HG13	32:BI:49:GLU:H	1.62	0.64
42:BS:88:ARG:NE	42:BS:94:ASP:OD1	2.30	0.64
8:CI:51:LEU:HB2	8:CI:56:MET:SD	2.38	0.64
18:CS:49:ALA:HB1	18:CS:56:HIS:HB3	1.80	0.64
55:CA:239:U:H4'	55:CA:239:U:OP1	1.97	0.64
55:CA:815:A:OP2	55:CA:816:A:C8	2.51	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:977:A:C8	55:CA:1223:C:N3	2.65	0.64
55:CA:1050:G:O2'	55:CA:1051:C:C6	2.48	0.64
55:CA:1163:A:C2	55:CA:1174:G:C2	2.86	0.64
55:CA:1533:C:H2'	55:CA:1534:A:H5''	1.78	0.64
24:DA:300:A:OP2	44:DU:96:LYS:HD3	1.97	0.64
24:DA:411:G:H4'	24:DA:412:A:OP1	1.97	0.64
24:DA:607:U:H5	24:DA:619:G:C4	2.16	0.64
24:DA:1056:G:H1'	24:DA:1103:A:N1	2.13	0.64
24:DA:1439:A:N1	24:DA:1552:A:C4	2.65	0.64
24:DA:1645:G:H5''	24:DA:1646:C:H5'	1.78	0.64
24:DA:2384:U:H5''	24:DA:2386:A:OP1	1.98	0.64
1:AB:71:THR:O	1:AB:72:LYS:HG2	1.98	0.64
16:AQ:12:VAL:HG13	16:AQ:16:MET:HE1	1.80	0.64
21:AA:1173:U:H2'	21:AA:1174:G:C8	2.33	0.64
21:AA:1361:G:C2'	21:AA:1362:A:H5'	2.27	0.64
24:BA:77:G:C5	24:BA:78:U:C5	2.86	0.64
24:BA:216:A:H2'	24:BA:217:A:C8	2.32	0.64
24:BA:592:A:O2'	53:B3:2:LYS:HA	1.98	0.64
24:BA:1181:U:O2'	24:BA:1182:G:C8	2.48	0.64
24:BA:2297:A:N1	24:BA:2321:U:C5	2.63	0.64
25:BB:116:G:H4'	38:BO:54:VAL:O	1.99	0.64
29:BF:40:GLY:CA	29:BF:84:ILE:HD11	2.28	0.64
35:BL:85:VAL:HG21	35:BL:94:THR:HG23	1.80	0.64
41:BR:51:VAL:HB	41:BR:52:PRO:CD	2.28	0.64
49:BZ:6:ILE:O	49:BZ:34:THR:HA	1.97	0.64
8:CI:27:ILE:HD13	8:CI:62:LEU:HG	1.78	0.64
17:CR:32:ILE:HA	17:CR:39:VAL:HG23	1.80	0.64
55:CA:6:G:N3	55:CA:6:G:C2'	2.59	0.64
55:CA:765:G:C8	55:CA:812:G:C2	2.86	0.64
55:CA:960:U:H5'	55:CA:961:U:H5''	1.78	0.64
55:CA:1184:G:OP1	55:CA:1184:G:H3'	1.97	0.64
24:DA:319:G:H2'	24:DA:320:A:O4'	1.98	0.64
24:DA:1213:A:HO2'	24:DA:1214:A:H8	1.45	0.64
24:DA:1654:A:HO2'	24:DA:1655:A:H8	0.76	0.64
24:DA:2350:C:H5	53:D3:41:ARG:NH1	1.95	0.64
24:DA:2623:G:O2'	24:DA:2624:G:H5'	1.98	0.64
28:DE:111:GLU:HA	28:DE:114:ARG:HE	1.61	0.64
45:DV:55:GLU:O	45:DV:57:TYR:N	2.31	0.64
4:AE:11:GLN:HG3	4:AE:116:VAL:HG12	1.80	0.63
7:AH:82:LEU:HD12	11:AL:3:VAL:HG11	1.78	0.63
21:AA:94:G:H5''	21:AA:95:C:C5	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:475:C:O2'	24:BA:476:G:H5'	1.97	0.63
24:BA:522:A:C5	24:BA:523:C:C5	2.86	0.63
24:BA:533:G:H2'	24:BA:534:U:C6	2.34	0.63
24:BA:1508:A:O2'	24:BA:1509:A:O4'	2.17	0.63
30:BG:66:THR:O	30:BG:70:LEU:HG	1.97	0.63
38:BO:74:VAL:O	38:BO:78:VAL:HG22	1.97	0.63
39:BP:72:VAL:O	39:BP:72:VAL:HG23	1.97	0.63
51:B1:12:SER:HB2	51:B1:48:TYR:CZ	2.33	0.63
55:CA:189:A:H3'	55:CA:190:A:C8	2.33	0.63
55:CA:1283:U:O2'	55:CA:1284:C:C5'	2.45	0.63
55:CA:1455:G:H2'	55:CA:1456:A:H8	1.61	0.63
24:DA:13:A:H5''	24:DA:14:A:OP1	1.97	0.63
24:DA:225:C:O2'	24:DA:226:A:O4'	2.16	0.63
24:DA:724:U:H2'	24:DA:725:G:O4'	1.97	0.63
24:DA:1074:G:H2'	24:DA:1075:C:C6	2.34	0.63
24:DA:1328:A:H2'	24:DA:1330:C:C4	2.33	0.63
24:DA:1560:G:C2'	24:DA:1561:C:H5'	2.28	0.63
24:DA:2712:C:C2	24:DA:2715:C:OP1	2.50	0.63
24:DA:2902:C:O2'	24:DA:2903:U:C5'	2.46	0.63
27:DD:159:LYS:HE2	27:DD:160:LYS:H	1.63	0.63
44:DU:26:ASN:O	44:DU:34:ILE:HB	1.98	0.63
10:AK:45:THR:OG1	10:AK:48:GLY:HA3	1.97	0.63
11:AL:50:LYS:N	11:AL:50:LYS:HD2	2.13	0.63
16:AQ:44:HIS:HE1	21:AA:276:G:O3'	1.82	0.63
21:AA:236:A:H2'	21:AA:237:G:C8	2.34	0.63
21:AA:1192:C:H2'	21:AA:1193:G:O4'	1.98	0.63
21:AA:1444:U:H1'	21:AA:1459:G:N2	2.13	0.63
24:BA:1075:C:H2'	24:BA:1076:C:C6	2.33	0.63
24:BA:1372:U:O2'	24:BA:1373:A:H5'	1.98	0.63
24:BA:2407:A:H2'	24:BA:2408:U:H6	1.62	0.63
24:BA:2742:G:O2'	24:BA:2743:U:H5'	1.97	0.63
27:BD:191:GLY:O	27:BD:192:ALA:HB3	1.98	0.63
31:BH:130:VAL:HG23	31:BH:131:SER:H	1.63	0.63
37:BN:8:ARG:HB3	37:BN:10:LEU:HD22	1.79	0.63
1:CB:59:ILE:HA	1:CB:62:ARG:HD3	1.79	0.63
1:CB:133:ALA:HA	1:CB:137:THR:HG21	1.79	0.63
13:CN:52:ARG:HA	13:CN:52:ARG:CZ	2.26	0.63
55:CA:1320:C:H2'	55:CA:1321:U:O4'	1.99	0.63
24:DA:64:A:H2'	24:DA:65:U:C6	2.34	0.63
24:DA:1799:G:H8	26:DC:179:GLU:OE1	1.82	0.63
24:DA:2882:A:H4'	37:DN:97:ILE:HG12	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:40:U:O2'	56:DB:45:A:N6	2.31	0.63
59:AN:204:HOH:O	21:AA:1359:C:H5''	1.98	0.63
21:AA:423:G:HO2'	21:AA:424:G:C4'	2.11	0.63
24:BA:233:A:N6	24:BA:428:A:H61	1.96	0.63
24:BA:570:G:H2'	24:BA:2030:A:N7	2.13	0.63
26:BC:108:GLY:O	26:BC:109:LEU:HD22	1.98	0.63
14:CO:77:TYR:OH	14:CO:87:ARG:HD3	1.97	0.63
55:CA:205:A:C6	55:CA:206:C:N4	2.66	0.63
55:CA:320:A:H2'	55:CA:321:A:C8	2.33	0.63
55:CA:558:G:H2'	55:CA:559:A:H2	1.64	0.63
55:CA:1003:G:N2	55:CA:1005:A:H5''	2.14	0.63
55:CA:1324:A:H2'	55:CA:1325:C:C6	2.34	0.63
24:DA:272:A:O2'	24:DA:273:G:H8	1.80	0.63
24:DA:556:A:OP2	24:DA:556:A:C8	2.52	0.63
24:DA:607:U:H5	24:DA:619:G:C5	2.16	0.63
24:DA:674:G:O2'	28:DE:69:ARG:HG2	1.98	0.63
24:DA:866:A:O2'	24:DA:867:C:H6	1.82	0.63
37:DN:90:ARG:NH2	37:DN:116:VAL:HG11	2.14	0.63
41:DR:27:ILE:HG22	41:DR:28:ALA:N	2.13	0.63
41:DR:87:GLN:HG2	41:DR:88:GLY:N	2.13	0.63
4:AE:19:ARG:HB2	4:AE:32:PHE:CE1	2.34	0.63
4:AE:83:PRO:HG2	7:AH:95:MET:HG2	1.80	0.63
6:AG:86:VAL:HG13	6:AG:87:PRO:HD2	1.80	0.63
7:AH:29:SER:HB3	7:AH:32:LYS:CG	2.27	0.63
21:AA:466:A:H5'	21:AA:467:U:OP2	1.99	0.63
21:AA:1238:A:H5'	21:AA:1336:C:N4	2.07	0.63
24:BA:822:G:C5	24:BA:836:G:N2	2.67	0.63
24:BA:1059:G:C6	24:BA:1060:U:N3	2.65	0.63
24:BA:1517:G:C2	24:BA:1518:C:C2	2.86	0.63
24:BA:2680:U:OP2	27:BD:114:LYS:HE2	1.98	0.63
28:BE:196:VAL:HG13	28:BE:200:LEU:HD23	1.81	0.63
47:BX:2:ARG:HD2	47:BX:29:LEU:HD12	1.80	0.63
47:BX:31:ASN:O	47:BX:51:SER:HA	1.99	0.63
5:CF:11:HIS:HD2	5:CF:13:ASP:H	1.46	0.63
6:CG:149:ALA:CB	10:CK:55:ARG:HG3	2.29	0.63
55:CA:1064:G:O2'	55:CA:1190:G:N2	2.31	0.63
55:CA:1432:G:H1'	55:CA:1468:A:H61	1.61	0.63
24:DA:1180:U:H2'	24:DA:1181:U:O4'	1.98	0.63
24:DA:1854:A:H61	24:DA:1888:G:H1'	1.63	0.63
24:DA:2345:G:H4'	24:DA:2346:A:O5'	1.96	0.63
24:DA:2592:G:C5	24:DA:2593:U:C5	2.86	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:46:A:H2'	56:DB:47:C:C6	2.33	0.63
26:DC:17:LYS:HD3	26:DC:18:VAL:N	2.14	0.63
27:DD:34:VAL:CG1	27:DD:48:ILE:HD11	2.27	0.63
27:DD:114:LYS:HB2	27:DD:116:LYS:HE3	1.81	0.63
31:DH:50:ARG:HA	31:DH:53:GLU:HB3	1.81	0.63
34:DK:87:LEU:HD12	34:DK:92:GLU:HA	1.80	0.63
44:DU:3:LYS:HG2	44:DU:84:PHE:HZ	1.63	0.63
45:DV:75:GLN:HB2	45:DV:90:ASP:O	1.99	0.63
2:AC:42:LEU:HD21	2:AC:67:ILE:HD11	1.79	0.63
3:AD:55:ARG:NH1	3:AD:58:GLN:HB3	2.13	0.63
21:AA:1129:C:H1'	21:AA:1130:A:N7	2.14	0.63
21:AA:1261:A:H61	21:AA:1274:A:H2'	1.62	0.63
24:BA:528:A:H2	24:BA:2043:C:H5'	1.64	0.63
24:BA:2383:G:H2'	24:BA:2384:U:H6	1.64	0.63
33:BJ:124:VAL:HG23	33:BJ:125:TYR:H	1.63	0.63
35:BL:109:LYS:HG2	35:BL:126:ARG:HB3	1.79	0.63
39:BP:50:ARG:CD	39:BP:51:ASN:N	2.61	0.63
1:CB:17:HIS:HA	1:CB:37:VAL:HG21	1.80	0.63
12:CM:57:ASP:O	12:CM:61:LYS:HG3	1.98	0.63
19:CT:26:MET:HE3	19:CT:30:PHE:HD1	1.63	0.63
20:CU:16:ARG:HA	20:CU:16:ARG:NE	2.12	0.63
55:CA:393:A:H2'	55:CA:394:G:H8	1.63	0.63
55:CA:908:A:H2'	55:CA:909:A:H8	1.62	0.63
55:CA:1327:C:C4	55:CA:1328:C:N4	2.66	0.63
24:DA:7:G:H4'	33:DJ:15:TRP:CH2	2.34	0.63
24:DA:142:A:H2'	24:DA:143:C:C5	2.33	0.63
24:DA:339:U:H2'	24:DA:340:A:C8	2.34	0.63
24:DA:741:U:H2'	24:DA:742:A:C8	2.34	0.63
24:DA:776:G:C8	24:DA:793:A:C4	2.86	0.63
24:DA:786:C:H4'	24:DA:1780:A:N7	2.13	0.63
24:DA:833:A:H2'	24:DA:834:G:H8	1.59	0.63
24:DA:983:A:C6	24:DA:984:A:C2	2.87	0.63
24:DA:1345:C:O2'	24:DA:1346:G:H5'	1.99	0.63
24:DA:2010:G:C6	24:DA:2011:U:C4	2.87	0.63
24:DA:2262:U:H4'	24:DA:2328:A:C2	2.34	0.63
27:DD:124:ARG:NH1	27:DD:125:TRP:CZ2	2.67	0.63
4:AE:33:THR:HB	4:AE:49:TYR:HE1	1.63	0.63
4:AE:90:GLY:C	4:AE:129:SER:HB3	2.19	0.63
8:AI:110:VAL:HG21	21:AA:1370:G:O5'	1.98	0.63
13:AN:29:ILE:HG23	13:AN:34:ASN:CG	2.19	0.63
21:AA:206:C:H2'	21:AA:207:C:O4'	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:221:A:H4'	24:BA:222:A:O5'	1.98	0.63
24:BA:748:G:O5'	42:BS:89:ALA:HB2	1.99	0.63
24:BA:1062:G:C8	24:BA:1088:A:C8	2.87	0.63
24:BA:2020:A:H5'	50:B0:8:THR:HG22	1.80	0.63
25:BB:9:G:OP1	38:BO:15:ARG:HD2	1.98	0.63
27:BD:151:THR:HB	27:BD:152:PRO:HD3	1.80	0.63
48:BY:47:ARG:HH21	48:BY:47:ARG:HG3	1.64	0.63
3:CD:35:GLN:HG3	3:CD:36:ALA:H	1.64	0.63
4:CE:80:LEU:HB3	4:CE:97:PRO:HB3	1.80	0.63
10:CK:30:ILE:HG23	10:CK:45:THR:HG22	1.81	0.63
13:CN:19:TYR:CD2	13:CN:51:PRO:HG3	2.33	0.63
55:CA:300:A:H1'	55:CA:565:U:O2	1.98	0.63
55:CA:1306:A:H61	55:CA:1331:G:H1'	1.64	0.63
24:DA:103:A:H2'	24:DA:104:A:C8	2.34	0.63
24:DA:105:C:H2'	24:DA:106:C:C6	2.34	0.63
24:DA:476:G:O2'	24:DA:477:A:H3'	1.99	0.63
24:DA:1386:C:HO2'	24:DA:1387:A:H8	1.44	0.63
24:DA:2572:A:O2'	24:DA:2573:C:OP2	2.15	0.63
24:DA:2726:A:O2'	34:DK:67:LYS:NZ	2.31	0.63
30:DG:85:LYS:O	30:DG:86:LEU:HG	1.98	0.63
38:DO:13:ARG:O	38:DO:17:LYS:HB2	1.99	0.63
42:DS:24:ILE:HG21	42:DS:36:LEU:HD21	1.81	0.63
45:DV:29:ILE:CD1	45:DV:31:TYR:HE2	2.11	0.63
8:AI:113:LYS:HE2	8:AI:118:ARG:O	1.99	0.63
12:AM:94:LEU:HD22	12:AM:95:PRO:HD2	1.80	0.63
21:AA:1054:C:C4	22:AX:34:G:H1'	2.34	0.63
24:BA:614:A:O2'	24:BA:615:U:OP2	2.13	0.63
24:BA:652:U:H5''	24:BA:653:U:O5'	1.98	0.63
24:BA:1204:A:H1'	24:BA:1206:G:C5	2.33	0.63
24:BA:2691:C:O2'	24:BA:2692:G:H5'	1.99	0.63
24:BA:2728:U:O2'	24:BA:2729:G:C8	2.52	0.63
27:BD:70:LYS:O	27:BD:71:ALA:HB3	1.98	0.63
32:BI:53:PRO:O	32:BI:74:PRO:HD2	1.98	0.63
33:BJ:111:LYS:HD3	33:BJ:112:GLY:N	2.13	0.63
45:BV:44:HIS:HE1	45:BV:86:LEU:H	1.47	0.63
3:CD:2:ARG:HE	3:CD:114:ARG:HD2	1.64	0.63
11:CL:19:ASN:N	11:CL:19:ASN:HD22	1.95	0.63
15:CP:36:VAL:O	15:CP:36:VAL:HG13	1.99	0.63
55:CA:371:A:O2'	55:CA:372:C:H5'	1.99	0.63
55:CA:397:A:N6	55:CA:548:G:C5	2.66	0.63
55:CA:1127:G:O2'	55:CA:1128:C:H5'	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:1264:U:H2'	55:CA:1265:C:C6	2.33	0.63
55:CA:1300:G:O2'	55:CA:1303:C:N4	2.31	0.63
24:DA:918:A:C6	24:DA:919:U:H1'	2.33	0.63
24:DA:2053:G:N2	24:DA:2054:A:C4	2.66	0.63
24:DA:2448:A:H3'	24:DA:2449:U:H6	1.63	0.63
28:DE:126:VAL:HG22	28:DE:127:GLU:OE2	1.98	0.63
30:DG:106:LEU:HB2	30:DG:108:PHE:HE1	1.63	0.63
36:DM:19:GLY:N	36:DM:38:ARG:HH21	1.92	0.63
37:DN:98:LEU:HD21	50:D0:53:VAL:HG11	1.80	0.63
41:DR:70:GLU:CD	41:DR:70:GLU:H	2.02	0.63
1:AB:51:GLU:O	1:AB:54:ALA:HB3	1.98	0.63
12:AM:44:ILE:HD12	12:AM:44:ILE:N	2.13	0.63
21:AA:76:G:H2'	21:AA:76:G:N3	2.14	0.63
24:BA:84:A:N1	24:BA:103:A:C5	2.67	0.63
24:BA:320:A:O2'	24:BA:322:A:H8	1.82	0.63
24:BA:455:C:H42	24:BA:473:G:H5'	1.62	0.63
24:BA:945:A:C4	24:BA:2448:A:C2	2.86	0.63
24:BA:1247:A:C4	24:BA:1249:U:C5	2.87	0.63
24:BA:2156:G:H2'	24:BA:2157:G:N2	2.13	0.63
30:BG:123:GLU:CD	30:BG:124:CYS:H	2.02	0.63
37:BN:106:ASP:OD1	37:BN:106:ASP:C	2.37	0.63
40:BQ:13:HIS:HD2	40:BQ:31:TYR:CD1	2.17	0.63
40:BQ:86:SER:O	40:BQ:88:GLU:N	2.31	0.63
42:BS:2:GLU:O	42:BS:107:VAL:O	2.16	0.63
46:BW:14:ASP:O	46:BW:15:SER:HB2	1.97	0.63
51:B1:8:ILE:HG22	51:B1:9:LYS:N	2.14	0.63
1:CB:113:LEU:HD13	1:CB:143:LEU:HB3	1.81	0.63
3:CD:29:THR:C	3:CD:30:LYS:HD3	2.19	0.63
3:CD:205:LYS:HD3	55:CA:8:A:C6	2.34	0.63
9:CJ:57:VAL:HG23	55:CA:972:C:O2'	1.97	0.63
11:CL:109:ARG:NH2	11:CL:116:TYR:CE2	2.67	0.63
55:CA:1106:G:H2'	55:CA:1107:C:H6	1.62	0.63
55:CA:1490:U:O2'	55:CA:1491:G:H5'	1.99	0.63
24:DA:121:G:H2'	24:DA:122:G:C8	2.34	0.63
24:DA:217:A:O2'	24:DA:218:A:H5'	1.99	0.63
24:DA:1079:C:C4	24:DA:1088:A:C2	2.87	0.63
24:DA:1695:G:H2'	24:DA:1695:G:N3	2.14	0.63
24:DA:1748:C:H2'	24:DA:1749:A:H8	1.63	0.63
26:DC:183:VAL:HG13	26:DC:185:ALA:H	1.64	0.63
36:DM:34:LYS:HB2	36:DM:131:VAL:CG2	2.29	0.63
46:DW:39:GLN:HG2	46:DW:42:THR:HB	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DX:63:ILE:CD1	47:DX:64:ASP:H	2.11	0.63
49:DZ:7:THR:O	49:DZ:54:VAL:HA	1.99	0.63
53:D3:18:LYS:HD2	53:D3:19:GLY:H	1.64	0.63
1:AB:107:ARG:HE	1:AB:108:GLN:HE22	1.44	0.63
2:AC:180:ASP:O	2:AC:181:ILE:HD13	1.99	0.63
6:AG:69:ARG:HG3	6:AG:95:ARG:HG2	1.81	0.63
21:AA:1226:C:H4'	21:AA:1227:A:OP1	1.98	0.63
21:AA:1405:G:O2'	21:AA:1519:A:H5'	1.99	0.63
23:AW:5:U:H2'	23:AW:6:U:C5	2.34	0.63
24:BA:923:G:H4'	46:BW:25:PHE:CZ	2.33	0.63
24:BA:1747:U:H2'	24:BA:1748:C:C6	2.34	0.63
24:BA:2853:C:O2'	24:BA:2854:G:H5'	1.99	0.63
46:BW:23:LYS:HD2	46:BW:24:ARG:N	2.13	0.63
47:BX:67:LEU:HD13	47:BX:77:TYR:CE1	2.34	0.63
2:CC:5:HIS:ND1	13:CN:88:MET:HB3	2.14	0.63
9:CJ:8:ILE:HG22	9:CJ:100:ILE:HG12	1.80	0.63
55:CA:67:C:O2'	55:CA:68:G:C8	2.51	0.63
55:CA:865:A:H2	55:CA:918:A:H4'	1.63	0.63
55:CA:1050:G:HO2'	55:CA:1051:C:H6	1.36	0.63
24:DA:476:G:H4'	24:DA:502:A:N1	2.14	0.63
24:DA:600:G:H5''	28:DE:27:LEU:HD22	1.80	0.63
24:DA:812:C:O2'	24:DA:813:U:H5'	1.98	0.63
24:DA:1439:A:N7	24:DA:1440:U:N1	2.47	0.63
24:DA:1809:A:C2	24:DA:1810:A:C4	2.87	0.63
56:DB:11:C:C5	56:DB:12:C:C5	2.86	0.63
37:DN:45:ARG:HG2	37:DN:95:THR:HG21	1.81	0.63
37:DN:98:LEU:O	37:DN:112:TYR:HB2	1.99	0.63
49:DZ:16:LEU:H	49:DZ:16:LEU:CD2	2.12	0.63
2:AC:78:LYS:HB3	2:AC:78:LYS:NZ	2.13	0.62
21:AA:664:G:H2'	21:AA:666:G:OP1	1.98	0.62
21:AA:781:A:H5'	21:AA:782:A:OP2	1.98	0.62
24:BA:373:U:O2'	24:BA:374:A:H5'	1.99	0.62
24:BA:620:G:H4'	24:BA:621:A:O5'	1.99	0.62
24:BA:783:A:H4'	24:BA:1779:U:O2	1.98	0.62
24:BA:2185:U:H2'	24:BA:2186:G:C8	2.34	0.62
24:BA:2408:U:O2'	24:BA:2409:G:H5'	1.99	0.62
24:BA:2532:G:N7	24:BA:2533:U:C5	2.66	0.62
53:B3:53:ASP:HA	53:B3:56:LEU:HD23	1.81	0.62
1:CB:34:ARG:HD3	1:CB:35:ASN:HB2	1.79	0.62
7:CH:28:SER:HA	7:CH:58:LEU:HD12	1.81	0.62
9:CJ:17:LEU:HD21	9:CJ:95:GLY:HA3	1.79	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:28:ARG:HA	12:CM:31:ALA:HB3	1.79	0.62
55:CA:121:U:OP1	55:CA:121:U:H3'	1.99	0.62
55:CA:1530:G:O2'	55:CA:1531:A:H8	1.82	0.62
24:DA:75:G:O2'	24:DA:76:C:H6	1.82	0.62
24:DA:329:G:OP1	24:DA:329:G:H3'	1.99	0.62
24:DA:468:G:H4'	28:DE:57:LYS:HG2	1.80	0.62
24:DA:1061:U:O2'	24:DA:1062:G:H5''	1.99	0.62
24:DA:1439:A:H1'	24:DA:1553:A:N6	2.14	0.62
24:DA:1470:A:H8	24:DA:1470:A:OP2	1.81	0.62
24:DA:2258:C:H2'	24:DA:2426:A:H4'	1.81	0.62
29:DF:46:LYS:O	29:DF:46:LYS:HD3	1.98	0.62
34:DK:25:LEU:HD23	34:DK:25:LEU:H	1.64	0.62
41:DR:4:VAL:HG22	41:DR:40:MET:HB3	1.82	0.62
42:DS:20:VAL:HG23	42:DS:23:LEU:HD12	1.81	0.62
48:DY:18:LEU:O	48:DY:18:LEU:HD13	1.98	0.62
5:AF:11:HIS:CE1	5:AF:13:ASP:HB2	2.34	0.62
5:AF:91:ARG:HG3	5:AF:92:THR:N	2.13	0.62
11:AL:43:LYS:HZ2	11:AL:44:PRO:HD2	1.63	0.62
16:AQ:79:GLU:C	16:AQ:80:LYS:HD3	2.19	0.62
21:AA:446:G:H2'	21:AA:447:G:O4'	2.00	0.62
21:AA:1432:G:H1'	21:AA:1468:A:H61	1.62	0.62
24:BA:58:G:N2	24:BA:70:G:C4	2.67	0.62
24:BA:855:G:H21	46:BW:23:LYS:CG	2.06	0.62
24:BA:1020:A:H4'	24:BA:1021:A:O5'	1.98	0.62
24:BA:1721:G:O2'	24:BA:1722:A:C8	2.50	0.62
29:BF:121:PHE:HD1	29:BF:126:ASN:O	1.82	0.62
31:BH:76:GLU:HG2	31:BH:106:ALA:HB2	1.79	0.62
39:BP:37:LYS:HD3	39:BP:37:LYS:H	1.63	0.62
47:BX:5:GLN:HE21	47:BX:49:ARG:H	1.45	0.62
55:CA:463:U:H2'	55:CA:464:U:C6	2.34	0.62
55:CA:654:G:C2'	55:CA:655:A:H8	2.11	0.62
55:CA:1239:A:N6	55:CA:1299:A:H62	1.97	0.62
55:CA:1264:U:H2'	55:CA:1265:C:H6	1.65	0.62
24:DA:33:C:H2'	24:DA:446:G:H22	1.64	0.62
24:DA:140:C:H5'	24:DA:141:G:N2	2.13	0.62
24:DA:1352:U:C5	24:DA:1377:G:C6	2.87	0.62
24:DA:2748:A:C4	24:DA:2757:A:N6	2.67	0.62
28:DE:61:ARG:HE	28:DE:65:THR:HB	1.64	0.62
32:DI:104:GLN:HA	32:DI:107:GLU:CB	2.29	0.62
43:DT:13:ALA:O	43:DT:32:LEU:HB2	1.99	0.62
43:DT:15:HIS:CE1	43:DT:80:TRP:CH2	2.87	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:D4:7:VAL:HG13	54:D4:8:LYS:N	2.14	0.62
1:AB:89:PHE:CE1	1:AB:153:MET:HG3	2.33	0.62
21:AA:497:G:O2'	21:AA:498:A:C8	2.46	0.62
21:AA:1376:U:H2'	21:AA:1377:A:C8	2.32	0.62
24:BA:83:A:OP1	44:BU:91:LYS:HE3	1.99	0.62
24:BA:1166:G:C2	24:BA:1184:U:O2	2.53	0.62
24:BA:1287:A:H5'	37:BN:103:ARG:HD2	1.80	0.62
24:BA:1576:U:H2'	24:BA:1577:C:H6	1.64	0.62
24:BA:2673:G:N3	24:BA:2674:G:C8	2.67	0.62
26:BC:80:LEU:CD1	26:BC:109:LEU:HG	2.29	0.62
28:BE:150:THR:HG21	28:BE:153:LEU:HA	1.80	0.62
40:BQ:91:ARG:NE	41:BR:11:GLN:H	1.97	0.62
6:CG:77:ARG:CZ	55:CA:1381:U:N3	2.62	0.62
13:CN:79:SER:O	13:CN:83:VAL:HG23	2.00	0.62
17:CR:25:ILE:HB	17:CR:67:LEU:HD21	1.81	0.62
55:CA:82:G:C5	55:CA:89:U:C5	2.87	0.62
55:CA:115:G:H5'	55:CA:116:A:OP1	1.99	0.62
55:CA:642:A:O2'	55:CA:643:C:C6	2.50	0.62
55:CA:1071:C:H2'	55:CA:1072:G:C8	2.34	0.62
55:CA:1283:U:O2'	55:CA:1284:C:H5'	1.98	0.62
55:CA:1453:G:H2'	55:CA:1453:G:N3	2.15	0.62
55:CA:1513:A:H2'	55:CA:1514:G:C8	2.35	0.62
24:DA:7:G:H4'	33:DJ:15:TRP:CZ2	2.33	0.62
24:DA:538:A:H5''	33:DJ:7:LYS:HZ3	1.63	0.62
24:DA:832:U:OP1	35:DL:39:LYS:N	2.33	0.62
24:DA:843:G:H2'	24:DA:844:A:H8	1.64	0.62
24:DA:1213:A:O2'	24:DA:1214:A:H5'	1.99	0.62
24:DA:1895:C:C2	24:DA:1896:G:C8	2.87	0.62
24:DA:1980:G:C5	24:DA:1982:U:O4	2.53	0.62
56:DB:19:C:H2'	56:DB:20:G:H8	1.63	0.62
33:DJ:35:ARG:HG2	33:DJ:40:HIS:CD2	2.34	0.62
37:DN:114:GLU:HG3	37:DN:118:ARG:HD3	1.81	0.62
45:DV:63:ILE:O	45:DV:70:ILE:HD11	1.99	0.62
46:DW:39:GLN:O	46:DW:56:HIS:HB3	2.00	0.62
2:AC:142:ARG:HB3	2:AC:143:LEU:HD13	1.81	0.62
4:AE:57:ALA:HB1	4:AE:61:LYS:HE3	1.79	0.62
8:AI:20:ILE:HG23	8:AI:60:LEU:HD12	1.81	0.62
14:AO:57:ARG:NH1	14:AO:57:ARG:HB3	2.14	0.62
16:AQ:11:VAL:HG12	16:AQ:12:VAL:H	1.64	0.62
21:AA:33:A:O2'	21:AA:34:C:H5'	1.99	0.62
21:AA:1008:U:H2'	21:AA:1009:U:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1464:U:H2'	21:AA:1465:A:H8	1.64	0.62
24:BA:747:U:C2	24:BA:2613:U:O4	2.52	0.62
24:BA:876:C:H2'	24:BA:877:A:O4'	1.99	0.62
24:BA:954:G:C4	24:BA:955:U:C6	2.87	0.62
24:BA:1070:A:C2	24:BA:1097:U:H4'	2.34	0.62
24:BA:2675:A:O2'	24:BA:2676:C:H5'	1.98	0.62
25:BB:15:A:H1'	25:BB:109:A:N7	2.14	0.62
26:BC:109:LEU:CD2	26:BC:110:LYS:H	2.11	0.62
26:BC:251:THR:CG2	26:BC:252:LYS:H	2.07	0.62
27:BD:149:ASN:CG	27:BD:150:GLN:H	2.03	0.62
46:BW:67:LYS:HB3	46:BW:80:SER:H	1.64	0.62
1:CB:125:PHE:HD1	1:CB:137:THR:HG22	1.64	0.62
3:CD:25:ARG:NH1	3:CD:30:LYS:HG2	2.14	0.62
4:CE:93:VAL:HG12	4:CE:126:ALA:CB	2.30	0.62
6:CG:70:PRO:O	6:CG:95:ARG:HD2	1.99	0.62
7:CH:26:MET:O	7:CH:57:GLU:HG3	1.99	0.62
9:CJ:45:ARG:HH21	55:CA:1279:G:H5''	1.62	0.62
14:CO:25:GLU:HG2	14:CO:80:LEU:HD12	1.80	0.62
55:CA:687:A:C2	55:CA:704:A:C6	2.87	0.62
55:CA:991:U:C4	55:CA:1212:U:H4'	2.35	0.62
55:CA:1293:C:H2'	55:CA:1294:G:C8	2.34	0.62
24:DA:849:A:H2'	24:DA:850:U:H6	1.64	0.62
24:DA:1082:U:N3	24:DA:1086:A:C5	2.67	0.62
24:DA:1381:G:H2'	24:DA:1382:G:H5''	1.81	0.62
24:DA:1722:A:N6	24:DA:1738:G:H1'	2.14	0.62
24:DA:1830:C:H2'	24:DA:1831:G:H8	1.64	0.62
24:DA:2287:A:C5	24:DA:2289:G:C8	2.87	0.62
24:DA:2500:U:H5''	24:DA:2501:C:OP2	1.98	0.62
24:DA:2734:A:N6	24:DA:2770:G:H1'	2.14	0.62
26:DC:28:PRO:HB3	26:DC:62:ARG:HH22	1.65	0.62
41:DR:48:LYS:HD2	41:DR:48:LYS:H	1.63	0.62
4:AE:15:ILE:HD13	4:AE:35:LEU:HG	1.81	0.62
8:AI:34:LEU:HD11	8:AI:47:VAL:HG21	1.82	0.62
9:AJ:50:THR:HG22	9:AJ:64:GLN:HG2	1.81	0.62
21:AA:374:A:H5''	21:AA:452:A:N1	2.15	0.62
21:AA:747:A:H5'	21:AA:748:G:OP2	1.99	0.62
21:AA:1043:G:H2'	21:AA:1044:A:H8	1.64	0.62
21:AA:1468:A:H2'	21:AA:1469:C:H5''	1.81	0.62
21:AA:1517:G:H1'	24:BA:1919:A:O3'	2.00	0.62
24:BA:9:G:C6	24:BA:2629:U:C5	2.87	0.62
24:BA:391:A:C6	24:BA:411:G:C2	2.87	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:690:G:H2'	24:BA:691:C:O4'	2.00	0.62
24:BA:1026:G:H2'	24:BA:1027:A:H8	1.61	0.62
24:BA:1136:G:N2	24:BA:1137:G:C4	2.68	0.62
24:BA:2094:A:H2'	24:BA:2095:A:C8	2.35	0.62
24:BA:2896:C:H2'	24:BA:2897:U:C6	2.35	0.62
27:BD:99:GLU:CG	27:BD:100:LEU:H	2.12	0.62
31:BH:18:GLN:HE21	31:BH:18:GLN:HA	1.64	0.62
32:BI:7:TYR:HA	32:BI:58:ILE:HB	1.81	0.62
34:BK:76:VAL:HB	39:BP:72:VAL:HG22	1.80	0.62
38:BO:31:THR:HG23	38:BO:33:ARG:H	1.65	0.62
43:BT:27:SER:O	43:BT:28:ASN:OD1	2.18	0.62
24:DA:364:C:O2'	24:DA:365:U:O4'	2.13	0.62
24:DA:1157:G:H2'	24:DA:1158:C:C6	2.34	0.62
24:DA:1333:G:O2'	24:DA:1334:G:H8	1.81	0.62
24:DA:1639:C:C2'	24:DA:1640:A:H5''	2.28	0.62
24:DA:2262:U:H5''	46:DW:38:ARG:NH2	2.14	0.62
24:DA:2867:G:N3	24:DA:2867:G:C2'	2.61	0.62
29:DF:134:GLN:NE2	29:DF:136:ILE:H	1.97	0.62
32:DI:76:ALA:HB2	32:DI:131:THR:HB	1.80	0.62
40:DQ:60:TRP:O	40:DQ:64:ILE:HG12	1.99	0.62
41:DR:4:VAL:HG23	41:DR:39:LEU:HG	1.82	0.62
53:D3:15:LYS:NZ	53:D3:19:GLY:HA2	2.15	0.62
1:AB:17:HIS:CD2	1:AB:202:ASN:HD21	2.17	0.62
1:AB:94:ARG:HG2	21:AA:1100:C:OP1	1.99	0.62
1:AB:95:TRP:CZ2	1:AB:99:MET:HG2	2.35	0.62
4:AE:19:ARG:HB2	4:AE:32:PHE:CD1	2.35	0.62
5:AF:49:TYR:CE2	5:AF:51:ILE:HB	2.35	0.62
21:AA:246:A:C4	21:AA:282:A:N6	2.68	0.62
21:AA:1160:G:O2'	21:AA:1161:C:C5'	2.48	0.62
24:BA:528:A:H3'	24:BA:528:A:H8	1.65	0.62
24:BA:1082:U:N3	24:BA:1086:A:C6	2.67	0.62
31:BH:21:VAL:HG21	31:BH:25:TYR:HD2	1.65	0.62
49:BZ:5:LYS:HD2	49:BZ:5:LYS:H	1.64	0.62
3:CD:109:THR:HG21	55:CA:408:A:OP1	1.99	0.62
55:CA:373:A:H2'	55:CA:374:A:H8	1.64	0.62
55:CA:510:A:N3	55:CA:543:U:H1'	2.14	0.62
55:CA:1235:U:H2'	55:CA:1236:A:H8	1.65	0.62
24:DA:41:C:H2'	24:DA:42:A:C8	2.35	0.62
24:DA:271:G:O2'	24:DA:272:A:C5'	2.43	0.62
24:DA:834:G:H1'	24:DA:2358:A:N3	2.15	0.62
24:DA:1744:A:H3'	24:DA:1745:A:H8	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2052:A:O2'	24:DA:2053:G:H5'	1.99	0.62
24:DA:2344:U:O2'	24:DA:2345:G:H5''	1.99	0.62
24:DA:2695:U:H2'	24:DA:2696:U:C6	2.34	0.62
24:DA:2788:C:O2'	24:DA:2809:A:N3	2.26	0.62
28:DE:108:ILE:O	28:DE:112:LEU:HB2	1.99	0.62
29:DF:48:LEU:HD23	29:DF:48:LEU:H	1.64	0.62
43:DT:29:THR:H	43:DT:87:LEU:CB	2.13	0.62
46:DW:13:ARG:HG3	46:DW:14:ASP:N	2.08	0.62
2:AC:24:ASN:ND2	2:AC:25:THR:H	1.96	0.62
2:AC:184:ASN:HD22	2:AC:185:THR:N	1.96	0.62
11:AL:42:LYS:HB3	11:AL:43:LYS:HZ1	1.65	0.62
21:AA:266:G:O2'	21:AA:267:C:P	2.57	0.62
21:AA:375:U:C4	21:AA:376:G:N7	2.68	0.62
24:BA:1973:G:C5	24:BA:1974:C:C5	2.88	0.62
24:BA:2383:G:C4	24:BA:2384:U:C5	2.88	0.62
35:BL:110:VAL:O	35:BL:111:ILE:HB	1.99	0.62
38:BO:105:ALA:O	38:BO:106:LEU:HB3	2.00	0.62
6:CG:124:SER:O	6:CG:128:GLU:HG2	1.99	0.62
9:CJ:84:VAL:HG23	9:CJ:85:ASP:N	2.11	0.62
18:CS:33:TRP:HB2	55:CA:1014:A:C2	2.35	0.62
55:CA:358:U:H2'	55:CA:359:G:H8	1.64	0.62
55:CA:1533:C:C2'	55:CA:1534:A:H5''	2.29	0.62
24:DA:1965:C:H2'	24:DA:1966:A:C8	2.35	0.62
28:DE:88:ARG:HB3	28:DE:89:PRO:HD2	1.82	0.62
32:DI:106:GLN:HA	32:DI:109:ALA:HB3	1.81	0.62
35:DL:62:PRO:O	53:D3:12:ARG:HB3	1.99	0.62
49:DZ:23:LEU:HD12	49:DZ:28:LEU:HD21	1.80	0.62
1:AB:75:ALA:O	1:AB:79:VAL:HG23	1.99	0.62
7:AH:88:LYS:O	7:AH:91:LEU:HB2	2.00	0.62
8:AI:17:ARG:HH22	21:AA:1129:C:C5'	2.12	0.62
9:AJ:19:ASP:HA	9:AJ:22:THR:HB	1.82	0.62
11:AL:2:THR:HB	11:AL:5:GLN:HG3	1.81	0.62
11:AL:43:LYS:H	11:AL:43:LYS:CD	2.08	0.62
21:AA:49:U:O4	21:AA:365:U:H5	1.82	0.62
21:AA:595:A:H1'	21:AA:596:A:N7	2.15	0.62
21:AA:1348:U:HO2'	21:AA:1349:A:H8	1.46	0.62
21:AA:1394:A:O2'	21:AA:1395:C:OP1	2.18	0.62
24:BA:216:A:H2'	24:BA:217:A:H8	1.64	0.62
24:BA:1021:A:N6	24:BA:1142:A:H61	1.98	0.62
24:BA:1082:U:N3	24:BA:1086:A:C5	2.68	0.62
24:BA:1717:A:H2'	24:BA:1718:G:O4'	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1782:U:H1'	24:BA:2609:U:O4'	1.99	0.62
25:BB:54:G:H2'	25:BB:55:U:H6	1.64	0.62
26:BC:259:ASN:C	26:BC:261:ARG:H	2.03	0.62
30:BG:29:ASN:CG	30:BG:30:GLY:N	2.51	0.62
34:BK:71:ARG:HG3	34:BK:106:GLU:OE2	1.99	0.62
35:BL:87:GLY:O	35:BL:89:VAL:N	2.31	0.62
36:BM:45:GLN:O	36:BM:46:ILE:C	2.37	0.62
46:BW:72:GLY:N	46:BW:73:PRO:HD2	2.14	0.62
49:BZ:15:ARG:HG3	49:BZ:15:ARG:HH11	1.64	0.62
3:CD:90:LEU:HD11	3:CD:194:ILE:HD11	1.82	0.62
55:CA:64:G:H4'	55:CA:65:A:H5''	1.81	0.62
24:DA:16:C:H2'	24:DA:17:G:C8	2.32	0.62
24:DA:437:U:O2'	24:DA:438:G:O4'	2.15	0.62
24:DA:629:G:H4'	24:DA:650:C:O2	1.99	0.62
24:DA:1103:A:H8	24:DA:1103:A:O5'	1.82	0.62
24:DA:1338:G:H4'	43:DT:18:GLU:OE2	1.99	0.62
24:DA:1397:U:H5''	24:DA:1398:C:H5	1.65	0.62
24:DA:1440:U:C2	24:DA:1441:G:C8	2.88	0.62
24:DA:1906:G:C2	24:DA:1925:C:O2	2.53	0.62
24:DA:2547:A:H1'	24:DA:2566:A:C6	2.34	0.62
24:DA:2721:A:H2'	24:DA:2722:G:O4'	1.99	0.62
26:DC:28:PRO:HG3	26:DC:62:ARG:NH1	2.15	0.62
28:DE:126:VAL:HG11	28:DE:134:LEU:HD22	1.81	0.62
33:DJ:111:LYS:HB2	33:DJ:115:GLY:N	2.15	0.62
53:D3:41:ARG:HH21	53:D3:41:ARG:CG	2.13	0.62
1:AB:158:ASP:C	1:AB:180:ILE:HG23	2.19	0.62
9:AJ:84:VAL:O	9:AJ:88:MET:HG2	2.00	0.62
21:AA:5:U:O2'	21:AA:6:G:OP2	2.18	0.62
21:AA:90:C:O2'	21:AA:91:U:C6	2.50	0.62
21:AA:1003:G:H21	21:AA:1005:A:H5'	1.64	0.62
21:AA:1087:G:N2	21:AA:1088:G:C4	2.67	0.62
24:BA:231:A:C6	24:BA:232:G:C2	2.88	0.62
24:BA:572:A:OP1	24:BA:573:U:H5	1.83	0.62
24:BA:1054:A:H2'	24:BA:1055:G:C8	2.35	0.62
24:BA:1060:U:C4'	24:BA:1061:U:H5'	2.29	0.62
24:BA:1456:G:C5	24:BA:1457:U:C5	2.88	0.62
24:BA:1499:C:O2'	24:BA:1500:G:H5'	1.98	0.62
24:BA:2103:C:H2'	24:BA:2104:C:H5'	1.82	0.62
24:BA:2239:G:O2'	24:BA:2240:U:H5'	2.00	0.62
29:BF:34:THR:HG23	29:BF:89:THR:HG23	1.81	0.62
33:BJ:88:THR:HG22	33:BJ:91:GLU:CG	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:102:VAL:HG22	7:CH:126:CYS:SG	2.40	0.62
9:CJ:59:LYS:HG2	55:CA:972:C:H4'	1.82	0.62
10:CK:15:VAL:HG13	10:CK:36:ARG:HH12	1.65	0.62
19:CT:67:HIS:HB3	19:CT:68:LYS:HD2	1.81	0.62
55:CA:542:G:O2'	55:CA:543:U:H5'	2.00	0.62
55:CA:765:G:C5	55:CA:812:G:C5	2.88	0.62
24:DA:84:A:C5	24:DA:103:A:N6	2.68	0.62
24:DA:753:A:C2	24:DA:754:U:N3	2.68	0.62
24:DA:1073:A:H3'	24:DA:1074:G:C8	2.35	0.62
24:DA:1213:A:H62	24:DA:1236:G:H1'	1.63	0.62
24:DA:1567:G:H3'	26:DC:84:PRO:HG3	1.81	0.62
24:DA:1655:A:H2'	24:DA:1656:C:C6	2.33	0.62
24:DA:2421:G:N7	53:D3:30:HIS:CD2	2.66	0.62
24:DA:2638:G:O2'	24:DA:2639:A:C8	2.53	0.62
24:DA:2686:G:C2	24:DA:2687:U:C2	2.87	0.62
26:DC:171:VAL:N	26:DC:185:ALA:HB2	2.14	0.62
27:DD:5:VAL:H	27:DD:32:ASN:ND2	1.97	0.62
27:DD:68:PHE:HB3	27:DD:73:VAL:HA	1.81	0.62
42:DS:28:LYS:HA	42:DS:70:LYS:HA	1.82	0.62
6:AG:149:ALA:HB2	10:AK:60:PHE:HD2	1.64	0.62
7:AH:87:ARG:O	7:AH:121:GLY:HA3	2.00	0.62
9:AJ:11:LYS:HE2	9:AJ:71:LEU:HD11	1.80	0.62
10:AK:28:ASN:CG	10:AK:46:ALA:HB3	2.20	0.62
16:AQ:12:VAL:CB	16:AQ:21:VAL:HG22	2.30	0.62
18:AS:17:LYS:HA	18:AS:20:LYS:HZ2	1.65	0.62
21:AA:104:G:N2	21:AA:105:G:C4	2.68	0.62
21:AA:519:C:H2'	21:AA:520:A:H8	1.63	0.62
21:AA:1064:G:H1'	21:AA:1066:C:C5	2.34	0.62
21:AA:1074:G:H2'	21:AA:1075:U:O4'	1.99	0.62
21:AA:1137:C:H4'	21:AA:1138:G:H5''	1.81	0.62
21:AA:1305:G:H22	21:AA:1331:G:H2'	1.63	0.62
21:AA:1411:C:C2'	21:AA:1412:C:H5'	2.30	0.62
22:AX:30:G:N3	22:AX:31:A:C8	2.67	0.62
24:BA:704:G:H2'	24:BA:726:G:H22	1.64	0.62
24:BA:1919:A:H2'	24:BA:1919:A:N3	2.14	0.62
24:BA:1931:U:O2'	24:BA:1932:A:H5'	2.00	0.62
24:BA:1977:A:H2'	24:BA:1978:A:O4'	1.99	0.62
24:BA:2267:A:H3'	24:BA:2268:A:H5''	1.81	0.62
24:BA:2728:U:O2'	24:BA:2729:G:H8	1.83	0.62
24:BA:2794:C:C2	24:BA:2803:G:N2	2.68	0.62
25:BB:56:G:H4'	25:BB:57:A:O5'	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BB:70:C:H2'	25:BB:71:C:H6	1.65	0.62
30:BG:155:PRO:O	30:BG:170:THR:HA	2.00	0.62
37:BN:73:ASN:HD22	37:BN:76:VAL:CG1	2.13	0.62
39:BP:19:PHE:O	39:BP:20:ARG:HB3	1.99	0.62
43:BT:32:LEU:N	43:BT:32:LEU:HD23	2.15	0.62
43:BT:52:GLU:O	43:BT:52:GLU:HG3	2.00	0.62
8:CI:70:GLY:C	8:CI:71:ILE:HD12	2.20	0.62
55:CA:61:G:O6	55:CA:107:G:C6	2.53	0.62
24:DA:708:G:N2	24:DA:724:U:H1'	2.15	0.62
24:DA:832:U:P	35:DL:38:GLN:H	2.22	0.62
24:DA:1567:G:H1'	24:DA:1568:G:C6	2.35	0.62
24:DA:2515:C:OP1	33:DJ:81:ILE:HG22	2.00	0.62
28:DE:5:LEU:HA	28:DE:120:VAL:HG13	1.82	0.62
28:DE:130:LYS:CB	28:DE:133:LEU:HB3	2.29	0.62
30:DG:103:ASN:HD22	30:DG:111:PRO:HB2	1.64	0.62
36:DM:49:ALA:HB2	36:DM:123:LYS:HB2	1.82	0.62
48:DY:2:LYS:HD2	48:DY:4:LYS:HE3	1.82	0.62
21:AA:89:U:O2'	21:AA:90:C:C5'	2.48	0.61
21:AA:738:C:H2'	21:AA:739:C:H6	1.65	0.61
24:BA:10:A:H2'	24:BA:11:C:H5'	1.80	0.61
24:BA:1734:G:H2'	24:BA:1735:A:H8	1.65	0.61
24:BA:1996:C:H5	34:BK:32:TYR:HH	1.48	0.61
24:BA:2209:G:C6	24:BA:2210:U:C4	2.87	0.61
24:BA:2352:A:N1	46:BW:30:VAL:HG11	2.15	0.61
24:BA:2521:C:C2	24:BA:2545:G:N2	2.68	0.61
24:BA:2716:C:O2'	24:BA:2717:C:H5'	2.00	0.61
25:BB:51:G:H21	25:BB:53:A:H62	1.47	0.61
27:BD:12:THR:CG2	27:BD:13:ARG:N	2.63	0.61
32:BI:105:LEU:HA	32:BI:108:ILE:HB	1.82	0.61
33:BJ:88:THR:HG22	33:BJ:91:GLU:HB2	1.82	0.61
44:BU:73:ASN:HD22	44:BU:76:THR:H	1.48	0.61
14:CO:42:PHE:CZ	14:CO:52:ARG:HA	2.35	0.61
19:CT:26:MET:HE3	19:CT:30:PHE:CD1	2.34	0.61
55:CA:404:G:H2'	55:CA:405:U:C6	2.33	0.61
55:CA:1067:A:H1'	55:CA:1068:G:C8	2.35	0.61
55:CA:1440:U:OP2	55:CA:1440:U:H6	1.82	0.61
24:DA:45:G:H5'	24:DA:46:G:H5'	1.81	0.61
24:DA:500:G:N2	24:DA:503:A:C8	2.68	0.61
24:DA:686:U:H2'	24:DA:788:A:C2	2.35	0.61
24:DA:866:A:O2'	24:DA:867:C:C6	2.53	0.61
24:DA:1033:U:H4'	24:DA:1034:G:OP1	1.98	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1625:C:H5''	24:DA:1626:A:OP2	2.00	0.61
24:DA:2211:A:OP2	24:DA:2211:A:H4'	2.00	0.61
24:DA:2468:A:O2'	24:DA:2469:A:C8	2.53	0.61
24:DA:2638:G:O2'	24:DA:2639:A:H8	1.83	0.61
24:DA:2766:A:H2'	24:DA:2766:A:N3	2.13	0.61
56:DB:116:G:H2'	56:DB:117:G:H8	1.65	0.61
36:DM:50:ARG:O	36:DM:53:MET:HB3	1.99	0.61
43:DT:48:GLN:HA	43:DT:48:GLN:HE21	1.65	0.61
44:DU:10:VAL:HG12	44:DU:71:ILE:HA	1.82	0.61
45:DV:6:ALA:HB3	45:DV:65:VAL:HB	1.81	0.61
47:DX:32:LEU:HD13	47:DX:50:VAL:O	2.00	0.61
7:AH:106:SER:O	21:AA:641:U:H4'	1.99	0.61
21:AA:68:G:C6	21:AA:69:G:H1'	2.35	0.61
21:AA:827:U:O4	21:AA:870:U:H1'	1.99	0.61
21:AA:1378:C:C5	21:AA:1379:G:C8	2.88	0.61
24:BA:572:A:C2	24:BA:2033:A:C2	2.88	0.61
24:BA:790:U:HO2'	24:BA:791:C:C5'	2.13	0.61
24:BA:1442:U:H2'	24:BA:1443:U:C6	2.35	0.61
24:BA:2183:A:H2'	24:BA:2184:A:C8	2.36	0.61
24:BA:2305:U:C4	24:BA:2306:C:N3	2.69	0.61
24:BA:2313:C:H5''	29:BF:87:LYS:HD3	1.82	0.61
24:BA:2879:A:H4'	24:BA:2880:C:OP1	2.00	0.61
26:BC:52:HIS:CE1	26:BC:218:THR:HG23	2.35	0.61
33:BJ:18:VAL:HG22	33:BJ:140:LEU:CD1	2.30	0.61
37:BN:70:THR:HB	37:BN:75:ILE:HD11	1.82	0.61
46:BW:24:ARG:HB2	46:BW:65:LYS:HD3	1.81	0.61
51:B1:39:ASP:OD1	51:B1:42:VAL:HB	1.99	0.61
3:CD:30:LYS:HD3	3:CD:30:LYS:N	2.15	0.61
5:CF:45:ARG:HG2	5:CF:46:GLN:H	1.66	0.61
55:CA:219:U:H2'	55:CA:220:G:H8	1.64	0.61
55:CA:717:U:C4	55:CA:734:G:N7	2.68	0.61
55:CA:858:G:O6	59:CA:1824:HOH:O	2.16	0.61
55:CA:913:A:H1'	55:CA:914:A:O4'	2.00	0.61
24:DA:85:G:O2'	24:DA:86:G:H8	1.80	0.61
24:DA:323:C:OP1	24:DA:324:A:H8	1.83	0.61
24:DA:1346:G:H2'	24:DA:1347:A:H8	1.65	0.61
24:DA:1355:G:N2	24:DA:1377:G:H1'	2.15	0.61
24:DA:1923:U:H2'	24:DA:1924:C:H6	1.64	0.61
24:DA:1944:U:O4'	24:DA:1955:U:H1'	2.00	0.61
24:DA:2093:G:C6	24:DA:2225:A:C8	2.88	0.61
24:DA:2303:G:H2'	24:DA:2304:G:C8	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2340:A:H2'	24:DA:2341:G:C8	2.36	0.61
24:DA:2543:G:O4'	24:DA:2766:A:H5''	2.00	0.61
24:DA:2544:G:H5'	24:DA:2645:G:C8	2.35	0.61
24:DA:2728:U:O2'	24:DA:2729:G:C8	2.50	0.61
26:DC:175:LEU:O	26:DC:178:GLY:N	2.31	0.61
37:DN:12:ARG:HG3	37:DN:13:ASN:H	1.64	0.61
41:DR:80:ARG:HA	41:DR:80:ARG:HE	1.64	0.61
46:DW:67:LYS:HB3	46:DW:80:SER:HB2	1.82	0.61
49:DZ:30:ARG:HH21	49:DZ:33:HIS:HB2	1.63	0.61
1:AB:160:LEU:O	1:AB:183:PHE:HD2	1.84	0.61
2:AC:139:ASN:HA	2:AC:142:ARG:HB2	1.81	0.61
4:AE:32:PHE:HD2	4:AE:54:GLU:CA	2.12	0.61
13:AN:62:ARG:HB3	13:AN:67:GLY:HA2	1.82	0.61
15:AP:52:LEU:O	15:AP:54:LEU:HD12	2.00	0.61
21:AA:82:G:O2'	21:AA:83:C:H4'	2.00	0.61
21:AA:174:A:H2'	21:AA:175:C:C6	2.34	0.61
21:AA:806:C:H2'	21:AA:807:A:C8	2.34	0.61
21:AA:1203:C:H2'	21:AA:1204:A:H8	1.65	0.61
21:AA:1228:C:O2'	21:AA:1229:A:C8	2.52	0.61
24:BA:322:A:C2	24:BA:340:A:C6	2.88	0.61
24:BA:541:A:N1	24:BA:553:G:C6	2.69	0.61
24:BA:746:U:HO2'	24:BA:747:U:P	2.23	0.61
24:BA:799:G:N1	24:BA:800:A:N6	2.48	0.61
24:BA:923:G:H5'	46:BW:25:PHE:CZ	2.35	0.61
24:BA:1649:G:O6	24:BA:2009:A:N6	2.33	0.61
24:BA:2791:G:H2'	24:BA:2792:A:H8	1.65	0.61
24:BA:2796:U:C4	24:BA:2798:U:C4	2.89	0.61
46:BW:77:LYS:O	46:BW:78:PHE:HB2	1.99	0.61
49:BZ:3:THR:C	49:BZ:4:ILE:HG22	2.20	0.61
4:CE:93:VAL:HG12	4:CE:126:ALA:HB1	1.81	0.61
4:CE:131:ASN:HD22	4:CE:131:ASN:C	2.03	0.61
8:CI:97:LEU:HA	8:CI:100:ALA:HB3	1.82	0.61
15:CP:52:LEU:O	15:CP:53:ASP:HB2	2.00	0.61
55:CA:656:G:N2	55:CA:751:U:C2	2.67	0.61
55:CA:1095:U:H2'	55:CA:1096:C:H6	1.62	0.61
24:DA:422:A:H2'	24:DA:423:A:C8	2.35	0.61
24:DA:444:C:O2'	24:DA:445:C:H5'	1.99	0.61
24:DA:1346:G:H2'	24:DA:1347:A:C8	2.36	0.61
24:DA:1554:U:H5''	24:DA:1555:G:OP2	2.00	0.61
24:DA:1716:U:HO2'	24:DA:1717:A:H8	0.70	0.61
24:DA:1992:G:H22	24:DA:1996:C:H2'	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2468:A:O2'	24:DA:2469:A:H8	1.83	0.61
24:DA:2629:U:H5''	24:DA:2630:G:OP1	2.00	0.61
27:DD:16:THR:HG22	27:DD:20:VAL:N	2.15	0.61
29:DF:169:LEU:HB3	29:DF:174:PHE:HB2	1.82	0.61
33:DJ:73:VAL:HB	33:DJ:75:TYR:CE2	2.35	0.61
21:AA:31:G:H21	21:AA:46:G:H5''	1.64	0.61
21:AA:954:G:C6	21:AA:955:U:N3	2.68	0.61
21:AA:1076:U:C2	21:AA:1077:G:C8	2.89	0.61
24:BA:271:G:HO2'	24:BA:272:A:H8	1.49	0.61
24:BA:794:A:H2'	24:BA:795:C:H6	1.66	0.61
24:BA:1131:G:C4	33:BJ:77:HIS:ND1	2.68	0.61
24:BA:1179:G:C2	24:BA:1180:U:O2'	2.53	0.61
24:BA:1815:A:H1'	24:BA:1817:G:C8	2.35	0.61
24:BA:2492:U:H2'	24:BA:2493:U:C6	2.35	0.61
24:BA:2680:U:H5'	27:BD:194:PRO:HA	1.82	0.61
31:BH:62:LEU:HD12	31:BH:63:ALA:N	2.15	0.61
33:BJ:88:THR:HG22	33:BJ:91:GLU:CB	2.31	0.61
51:B1:24:LYS:HE2	51:B1:52:LYS:HB2	1.82	0.61
2:CC:149:LYS:HG3	2:CC:168:ARG:HB2	1.82	0.61
12:CM:2:ARG:HA	12:CM:7:ASN:O	1.99	0.61
13:CN:6:LYS:O	13:CN:10:VAL:HG23	2.00	0.61
20:CU:28:LEU:HD23	20:CU:29:ALA:N	2.16	0.61
55:CA:60:A:H4'	55:CA:61:G:O5'	1.99	0.61
55:CA:722:G:H2'	55:CA:722:G:N3	2.15	0.61
55:CA:801:U:O2'	55:CA:802:A:H5'	2.01	0.61
55:CA:1129:C:O2'	55:CA:1130:A:C8	2.53	0.61
24:DA:565:C:H2'	24:DA:566:U:O4'	2.00	0.61
24:DA:637:A:OP2	35:DL:112:LEU:HD22	2.01	0.61
24:DA:1177:G:H2'	24:DA:1178:C:C6	2.36	0.61
24:DA:1570:A:C6	24:DA:1571:A:C6	2.89	0.61
24:DA:2092:U:H4'	24:DA:2093:G:C5'	2.18	0.61
24:DA:2240:U:O2'	24:DA:2241:A:O4'	2.18	0.61
24:DA:2310:C:H42	29:DF:76:PHE:HZ	1.47	0.61
27:DD:45:TYR:HE2	27:DD:47:ALA:HB3	1.65	0.61
31:DH:68:ARG:CD	31:DH:71:LYS:HD3	2.30	0.61
33:DJ:45:THR:HG21	33:DJ:50:THR:HG23	1.82	0.61
35:DL:110:VAL:HB	35:DL:127:VAL:HA	1.83	0.61
41:DR:21:ARG:HB2	41:DR:93:PHE:CD1	2.35	0.61
13:AN:20:PHE:C	13:AN:22:LYS:N	2.54	0.61
16:AQ:44:HIS:O	16:AQ:70:LYS:HA	2.00	0.61
21:AA:845:A:H3'	21:AA:846:G:O4'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:964:A:OP1	59:AA:1829:HOH:O	2.16	0.61
21:AA:1055:A:N6	21:AA:1206:G:C6	2.68	0.61
21:AA:1230:C:C5'	22:AV:30:G:H5''	2.30	0.61
24:BA:669:G:H3'	24:BA:670:A:C8	2.35	0.61
24:BA:852:U:H2'	24:BA:853:C:C6	2.35	0.61
27:BD:114:LYS:HZ2	27:BD:116:LYS:HE2	1.65	0.61
32:BI:10:LEU:HD13	32:BI:27:LEU:HA	1.83	0.61
37:BN:38:LEU:HD12	37:BN:38:LEU:C	2.21	0.61
37:BN:73:ASN:HA	37:BN:76:VAL:CG1	2.26	0.61
42:BS:14:ALA:O	42:BS:18:ARG:HG3	2.00	0.61
3:CD:195:ASN:HB3	3:CD:197:HIS:NE2	2.15	0.61
11:CL:91:GLY:O	11:CL:93:ARG:HG3	1.99	0.61
12:CM:106:ARG:HH21	12:CM:112:ARG:CZ	2.13	0.61
24:DA:279:A:H61	24:DA:361:G:H1'	1.65	0.61
24:DA:292:U:H2'	24:DA:293:U:C6	2.36	0.61
24:DA:444:C:O2'	24:DA:445:C:H6	1.75	0.61
24:DA:686:U:C4	52:D2:12:ARG:HG3	2.35	0.61
24:DA:927:A:H2'	24:DA:928:A:C8	2.35	0.61
24:DA:942:G:O2'	24:DA:1189:A:H1'	2.01	0.61
24:DA:1698:A:H1'	24:DA:1700:A:OP2	2.00	0.61
24:DA:2284:A:H1'	24:DA:2325:G:N2	2.15	0.61
24:DA:2297:A:N6	24:DA:2319:G:O2'	2.33	0.61
24:DA:2544:G:H2'	24:DA:2545:G:C8	2.35	0.61
56:DB:86:G:HO2'	56:DB:87:U:H6	1.49	0.61
28:DE:110:SER:O	28:DE:113:VAL:HG12	1.99	0.61
33:DJ:5:THR:HA	33:DJ:44:TYR:CD2	2.35	0.61
3:AD:43:ARG:C	3:AD:45:PRO:HD3	2.21	0.61
8:AI:19:PHE:O	8:AI:62:LEU:HA	2.00	0.61
9:AJ:14:ASP:CB	9:AJ:17:LEU:HB3	2.30	0.61
24:BA:215:G:H4'	24:BA:216:A:H4'	1.83	0.61
24:BA:1061:U:H3'	24:BA:1062:G:H5''	1.83	0.61
24:BA:1670:C:H2'	24:BA:1670:C:O2	2.00	0.61
24:BA:1980:G:O2'	24:BA:1982:U:OP2	2.14	0.61
24:BA:2308:G:O2'	24:BA:2310:C:H5	1.74	0.61
26:BC:29:PHE:CE2	26:BC:31:PRO:HG2	2.35	0.61
26:BC:230:PRO:CD	26:BC:246:PRO:HA	2.30	0.61
39:BP:3:ILE:HD13	39:BP:3:ILE:C	2.20	0.61
18:CS:50:VAL:HG11	18:CS:70:LEU:HB3	1.82	0.61
55:CA:568:G:N2	55:CA:883:C:C2	2.68	0.61
55:CA:1233:G:H2'	55:CA:1234:C:C6	2.35	0.61
22:CV:39:U:H2'	22:CV:40:C:H6	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:33:C:O2	24:DA:447:A:N6	2.34	0.61
24:DA:77:G:O2'	24:DA:78:U:O4'	2.06	0.61
24:DA:329:G:H4'	24:DA:330:A:OP1	2.00	0.61
24:DA:537:G:N2	24:DA:557:C:N4	2.48	0.61
24:DA:972:A:N1	24:DA:973:A:N6	2.48	0.61
24:DA:1395:A:H4'	24:DA:1397:U:C5	2.35	0.61
24:DA:1438:U:H5'	24:DA:1517:G:OP1	2.01	0.61
24:DA:1789:A:OP1	26:DC:219:VAL:HA	2.01	0.61
24:DA:1914:C:H2'	24:DA:1915:U:C6	2.36	0.61
24:DA:1956:U:O2'	24:DA:1957:C:H5'	2.01	0.61
24:DA:2064:C:O2'	24:DA:2065:C:O4'	2.15	0.61
24:DA:2733:A:H2'	24:DA:2734:A:O4'	2.00	0.61
35:DL:17:LYS:HZ3	35:DL:19:LEU:HD22	1.66	0.61
35:DL:117:THR:HG22	35:DL:118:THR:H	1.66	0.61
35:DL:141:LYS:HD2	35:DL:142:ILE:N	2.14	0.61
49:DZ:40:THR:H	49:DZ:43:ILE:HD11	1.65	0.61
20:AU:48:LYS:HG2	21:AA:723:U:H5''	1.82	0.61
21:AA:1382:C:O2'	21:AA:1383:C:H6	1.83	0.61
22:AX:27:G:H5''	22:AX:27:G:C8	2.32	0.61
24:BA:27:G:H1'	24:BA:513:A:N6	2.14	0.61
24:BA:272:A:O2'	24:BA:273:G:O4'	2.15	0.61
24:BA:598:U:H2'	24:BA:599:A:H8	1.65	0.61
24:BA:687:C:O2'	24:BA:1780:A:N1	2.33	0.61
24:BA:1730:C:C2'	24:BA:1731:G:H5''	2.31	0.61
24:BA:2388:A:C3'	24:BA:2389:G:H5'	2.29	0.61
25:BB:20:G:C2	25:BB:64:G:C2	2.89	0.61
25:BB:40:U:HO2'	25:BB:43:C:H5	1.44	0.61
28:BE:58:LYS:HG3	28:BE:71:GLY:HA2	1.82	0.61
28:BE:146:VAL:HG23	28:BE:167:VAL:CG2	2.29	0.61
29:BF:134:GLN:H	29:BF:134:GLN:NE2	1.99	0.61
30:BG:52:GLY:O	30:BG:53:PRO:O	2.19	0.61
35:BL:65:GLY:O	35:BL:66:PHE:HB3	2.00	0.61
36:BM:56:ALA:H	36:BM:58:LYS:H	1.47	0.61
1:CB:163:ILE:CG2	1:CB:203:ASP:HA	2.31	0.61
4:CE:13:LYS:HE2	4:CE:13:LYS:HA	1.81	0.61
55:CA:384:G:H2'	55:CA:385:C:C6	2.35	0.61
55:CA:1053:G:O6	55:CA:1199:U:H2'	2.00	0.61
24:DA:397:U:OP1	47:DX:30:PRO:CA	2.48	0.61
24:DA:412:A:N7	24:DA:2412:A:H1'	2.15	0.61
24:DA:1287:A:O2'	24:DA:1288:G:C5'	2.48	0.61
24:DA:1341:G:O2'	24:DA:1398:C:H5''	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2439:A:H1'	24:DA:2586:U:O3'	2.01	0.61
28:DE:119:ILE:O	28:DE:119:ILE:HG13	1.99	0.61
31:DH:49:ALA:O	31:DH:53:GLU:N	2.34	0.61
31:DH:57:LYS:O	31:DH:57:LYS:HD2	2.00	0.61
4:AE:53:ARG:HH21	21:AA:1071:C:H5''	1.66	0.61
6:AG:52:ARG:HH22	6:AG:121:ASN:HA	1.66	0.61
7:AH:24:VAL:HG23	7:AH:62:LEU:HD21	1.83	0.61
9:AJ:45:ARG:HB2	9:AJ:69:THR:HB	1.82	0.61
13:AN:63:CYS:HB2	13:AN:79:SER:OG	2.00	0.61
19:AT:81:GLN:HA	19:AT:84:LYS:HB2	1.82	0.61
20:AU:19:LYS:C	20:AU:21:SER:H	2.04	0.61
24:BA:228:C:H4'	24:BA:229:C:H5''	1.83	0.61
24:BA:460:A:H2'	24:BA:461:C:C6	2.36	0.61
24:BA:1027:A:N1	24:BA:1126:A:C4	2.69	0.61
24:BA:1059:G:O2'	32:BI:128:ILE:HD13	2.01	0.61
24:BA:2291:U:H2'	24:BA:2292:U:C5	2.36	0.61
32:BI:89:SER:OG	32:BI:135:MET:HA	1.99	0.61
38:BO:11:ALA:HB2	38:BO:96:GLY:N	2.14	0.61
45:BV:21:ARG:HA	45:BV:25:LYS:O	2.00	0.61
2:CC:191:THR:O	55:CA:1206:G:H4'	2.01	0.61
6:CG:29:LEU:HG	55:CA:1240:U:C4	2.36	0.61
9:CJ:52:LEU:HD21	9:CJ:59:LYS:HA	1.83	0.61
55:CA:575:G:C6	55:CA:821:G:N7	2.69	0.61
24:DA:391:A:H2'	24:DA:392:U:H6	1.66	0.61
24:DA:962:G:H2'	24:DA:963:U:C6	2.36	0.61
24:DA:1311:G:N2	24:DA:1603:A:H62	1.87	0.61
24:DA:1586:A:H2'	24:DA:1587:G:H8	1.66	0.61
24:DA:2239:G:O2'	24:DA:2240:U:H6	1.83	0.61
29:DF:39:VAL:HG22	29:DF:49:LEU:HG	1.83	0.61
30:DG:167:VAL:HG23	30:DG:168:VAL:H	1.64	0.61
39:DP:102:ARG:HD2	39:DP:106:ALA:O	1.99	0.61
40:DQ:60:TRP:O	40:DQ:63:ARG:HG2	2.00	0.61
46:DW:33:GLY:O	46:DW:34:SER:CB	2.48	0.61
47:DX:6:VAL:HG22	47:DX:7:THR:HG23	1.82	0.61
54:D4:3:VAL:O	54:D4:4:ARG:HB2	2.01	0.61
2:AC:46:LEU:HB3	2:AC:49:ALA:HB3	1.83	0.61
7:AH:106:SER:HB3	21:AA:640:A:N3	2.16	0.61
21:AA:33:A:H2'	21:AA:34:C:C6	2.35	0.61
21:AA:428:G:C2	21:AA:430:A:N6	2.69	0.61
21:AA:439:U:H2'	21:AA:440:C:H5'	1.81	0.61
24:BA:1084:A:H2'	24:BA:1085:A:H8	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1885:A:H2'	24:BA:1886:U:C6	2.36	0.61
24:BA:2287:A:N7	24:BA:2289:G:C8	2.69	0.61
29:BF:13:LYS:C	29:BF:13:LYS:HD2	2.20	0.61
33:BJ:88:THR:CG2	33:BJ:91:GLU:H	2.14	0.61
33:BJ:103:ILE:HG13	33:BJ:104:ALA:N	2.16	0.61
40:BQ:18:LYS:O	40:BQ:21:LYS:HG3	2.00	0.61
1:CB:30:ILE:HG21	1:CB:38:HIS:ND1	2.16	0.61
13:CN:20:PHE:HE1	13:CN:54:SER:HB2	1.65	0.61
16:CQ:70:LYS:HD3	55:CA:254:G:H5''	1.82	0.61
55:CA:413:G:N2	55:CA:428:G:O2'	2.34	0.61
55:CA:664:G:H2'	55:CA:666:G:OP1	2.01	0.61
55:CA:1071:C:H2'	55:CA:1072:G:H8	1.66	0.61
55:CA:1215:G:C2	55:CA:1216:A:C8	2.88	0.61
24:DA:70:G:O2'	24:DA:71:A:H5'	2.01	0.61
24:DA:76:C:O2'	24:DA:77:G:C5'	2.49	0.61
24:DA:323:C:H3'	24:DA:323:C:OP2	2.01	0.61
24:DA:851:C:H2'	24:DA:852:U:C6	2.35	0.61
24:DA:861:A:H2'	24:DA:862:G:C8	2.36	0.61
24:DA:923:G:H1'	46:DW:23:LYS:HZ1	1.62	0.61
24:DA:945:A:H5'	24:DA:946:C:OP2	2.01	0.61
24:DA:1430:G:O2'	24:DA:1431:A:H5'	2.01	0.61
24:DA:1441:G:C6	24:DA:1442:U:C4	2.89	0.61
24:DA:1734:G:O2'	24:DA:1735:A:H8	1.82	0.61
24:DA:1809:A:C2'	24:DA:1810:A:C8	2.84	0.61
24:DA:2021:C:H5''	24:DA:2022:U:OP2	2.01	0.61
24:DA:2267:A:N6	24:DA:2271:G:O6	2.34	0.61
24:DA:2333:A:C2	24:DA:2335:A:N6	2.69	0.61
24:DA:2695:U:H2'	24:DA:2696:U:H6	1.65	0.61
24:DA:2836:U:O2'	24:DA:2837:A:H5''	2.00	0.61
27:DD:141:ARG:HB3	27:DD:141:ARG:NH1	2.16	0.61
28:DE:45:ALA:O	28:DE:46:GLN:HB2	2.00	0.61
28:DE:105:LEU:HD23	28:DE:177:PRO:HG3	1.82	0.61
36:DM:38:ARG:O	36:DM:126:ILE:HG21	2.00	0.61
36:DM:133:LYS:O	36:DM:134:THR:HB	2.00	0.61
37:DN:33:ILE:HA	37:DN:114:GLU:HB2	1.83	0.61
2:AC:46:LEU:HD21	2:AC:86:LEU:HD11	1.83	0.61
3:AD:63:ILE:HG23	3:AD:64:TYR:CD1	2.35	0.61
7:AH:45:ILE:HD12	7:AH:60:LEU:HD22	1.82	0.61
15:AP:18:GLN:NE2	15:AP:35:ARG:HD2	2.16	0.61
21:AA:198:G:O2'	21:AA:199:A:C8	2.40	0.61
24:BA:327:G:O2'	24:BA:328:U:H5'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:860:U:C1'	24:BA:2268:A:H5'	2.31	0.61
24:BA:919:U:H6	24:BA:919:U:C4'	2.14	0.61
24:BA:946:C:O2'	24:BA:947:A:H5'	2.00	0.61
24:BA:2250:G:H8	24:BA:2250:G:O5'	1.84	0.61
26:BC:94:LEU:HD12	26:BC:95:TYR:N	2.16	0.61
28:BE:157:LEU:HG	28:BE:169:VAL:HG11	1.82	0.61
34:BK:121:GLU:HG2	34:BK:122:VAL:HG23	1.82	0.61
36:BM:101:VAL:O	36:BM:101:VAL:HG13	2.01	0.61
15:CP:66:THR:HG22	15:CP:67:ILE:N	2.16	0.61
55:CA:205:A:C5	55:CA:206:C:N4	2.69	0.61
55:CA:654:G:C2'	55:CA:655:A:C8	2.84	0.61
55:CA:990:C:H2'	55:CA:991:U:O4'	2.01	0.61
55:CA:1077:G:C6	55:CA:1081:A:N6	2.69	0.61
24:DA:214:G:H1'	24:DA:217:A:H5'	1.83	0.61
24:DA:503:A:H5''	24:DA:504:A:O5'	2.01	0.61
24:DA:867:C:HO2'	24:DA:868:U:H6	1.47	0.61
24:DA:1014:A:C5	24:DA:1015:U:C5	2.89	0.61
24:DA:1635:A:H2'	24:DA:1636:U:C6	2.36	0.61
24:DA:2611:C:O2'	24:DA:2612:C:O4'	2.18	0.61
24:DA:2643:G:C5	24:DA:2644:G:N7	2.68	0.61
30:DG:93:TYR:CD2	30:DG:93:TYR:N	2.67	0.61
32:DI:109:ALA:HB1	32:DI:125:THR:HA	1.83	0.61
33:DJ:94:ALA:O	33:DJ:95:ARG:HB3	2.01	0.61
36:DM:41:LEU:C	36:DM:93:VAL:HG23	2.22	0.61
45:DV:16:ALA:HA	45:DV:19:ARG:CZ	2.31	0.61
50:D0:30:ASP:OD1	50:D0:47:TYR:HB3	2.01	0.61
4:AE:83:PRO:HB3	4:AE:96:GLN:HA	1.83	0.60
6:AG:71:THR:O	6:AG:90:VAL:HG12	2.01	0.60
19:AT:60:GLN:O	19:AT:66:ILE:HG22	2.00	0.60
21:AA:1091:U:H1'	21:AA:1095:U:O2	2.00	0.60
24:BA:1429:G:C4	24:BA:1568:G:C2	2.88	0.60
24:BA:1747:U:H2'	24:BA:1748:C:H6	1.66	0.60
24:BA:2424:C:HO2'	24:BA:2429:G:H4'	1.65	0.60
59:BA:3293:HOH:O	28:BE:98:LYS:HE2	2.00	0.60
36:BM:132:THR:HG22	36:BM:133:LYS:N	2.16	0.60
37:BN:55:ALA:HA	37:BN:80:PHE:CE1	2.35	0.60
42:BS:73:LYS:CE	42:BS:74:ILE:H	2.12	0.60
47:BX:3:VAL:HG22	47:BX:10:ARG:HB3	1.83	0.60
53:B3:30:HIS:O	53:B3:31:ILE:C	2.39	0.60
1:CB:107:ARG:HA	1:CB:110:ILE:HG13	1.82	0.60
8:CI:33:SER:H	8:CI:36:GLN:HG3	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:73:LEU:HD12	13:CN:83:VAL:HG21	1.83	0.60
18:CS:54:ARG:HG2	18:CS:55:GLN:N	2.13	0.60
55:CA:166:U:H2'	55:CA:167:A:H5'	1.83	0.60
55:CA:765:G:C4	55:CA:812:G:C6	2.89	0.60
55:CA:1036:A:C2'	55:CA:1037:C:H5'	2.31	0.60
55:CA:1169:A:H2'	55:CA:1170:A:C8	2.36	0.60
55:CA:1182:G:C3'	55:CA:1183:U:H5'	2.31	0.60
55:CA:1242:G:N2	55:CA:1243:C:H1'	2.16	0.60
55:CA:1514:G:H2'	55:CA:1515:G:H8	1.64	0.60
24:DA:1830:C:H5'	26:DC:14:HIS:CE1	2.36	0.60
24:DA:2093:G:C5	24:DA:2225:A:C5	2.89	0.60
24:DA:2417:C:H2'	24:DA:2418:A:H8	1.66	0.60
31:DH:61:VAL:HG13	31:DH:62:LEU:HG	1.83	0.60
34:DK:13:ASN:HD22	34:DK:13:ASN:N	1.97	0.60
37:DN:63:ARG:O	37:DN:67:PHE:HB2	2.01	0.60
43:DT:58:VAL:HG23	43:DT:85:VAL:HA	1.83	0.60
21:AA:888:G:H4'	21:AA:1488:G:O2'	2.00	0.60
24:BA:796:C:H2'	24:BA:797:G:C8	2.31	0.60
24:BA:826:U:O2'	35:BL:53:GLY:CA	2.47	0.60
24:BA:854:C:O2	24:BA:924:G:C2	2.54	0.60
24:BA:1064:C:H4'	32:BI:90:GLY:N	2.15	0.60
24:BA:1190:G:OP1	35:BL:32:GLY:HA2	2.01	0.60
24:BA:1343:G:H2'	24:BA:1344:U:H6	1.65	0.60
24:BA:2291:U:H2'	24:BA:2292:U:C6	2.36	0.60
24:BA:2850:A:H2'	24:BA:2851:A:C8	2.36	0.60
29:BF:110:ILE:HG22	29:BF:110:ILE:O	1.99	0.60
30:BG:132:LEU:N	30:BG:132:LEU:HD23	2.16	0.60
35:BL:62:PRO:HG2	53:B3:24:LYS:HB3	1.82	0.60
47:BX:52:ALA:O	47:BX:53:LYS:CB	2.48	0.60
1:CB:58:LYS:HE2	1:CB:62:ARG:HD2	1.82	0.60
4:CE:24:VAL:HG23	4:CE:26:GLY:H	1.66	0.60
4:CE:94:PHE:O	4:CE:124:ALA:HB1	2.00	0.60
18:CS:20:LYS:NZ	18:CS:27:LYS:HD3	2.16	0.60
55:CA:588:G:C5	55:CA:589:U:C4	2.89	0.60
55:CA:969:A:O2'	55:CA:970:C:H5'	2.02	0.60
24:DA:477:A:H2'	24:DA:478:A:C8	2.35	0.60
24:DA:522:A:H2'	24:DA:523:C:H6	1.66	0.60
24:DA:671:C:O2'	24:DA:672:C:C6	2.54	0.60
24:DA:1056:G:H1'	24:DA:1103:A:H61	1.64	0.60
24:DA:1238:G:O2'	24:DA:1239:G:H5'	2.02	0.60
24:DA:1360:G:H2'	24:DA:1361:G:H5'	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1784:A:C4'	24:DA:1785:A:O5'	2.44	0.60
24:DA:2336:A:N7	46:DW:40:ARG:NH2	2.49	0.60
24:DA:2489:U:H2'	24:DA:2490:G:O4'	2.01	0.60
24:DA:2531:A:C4	24:DA:2532:G:C8	2.89	0.60
24:DA:2571:U:C4	24:DA:2574:G:C8	2.89	0.60
24:DA:2714:G:H2'	24:DA:2715:C:H6	1.65	0.60
56:DB:65:U:H3'	56:DB:108:A:H62	1.64	0.60
29:DF:74:ALA:HB3	29:DF:78:ILE:CD1	2.31	0.60
34:DK:13:ASN:H	34:DK:13:ASN:ND2	1.99	0.60
34:DK:76:VAL:HB	39:DP:72:VAL:HG22	1.82	0.60
36:DM:25:ASP:OD2	45:DV:79:ARG:HD2	2.00	0.60
48:DY:28:LEU:HD11	48:DY:43:LEU:HD13	1.81	0.60
10:AK:124:LYS:O	20:AU:33:ARG:NE	2.34	0.60
10:AK:125:LYS:O	10:AK:126:ARG:HB2	2.00	0.60
13:AN:40:ARG:HH12	13:AN:44:VAL:CG2	2.13	0.60
20:AU:38:GLU:HB2	21:AA:1526:G:P	2.40	0.60
21:AA:201:G:H5''	21:AA:202:G:OP2	2.01	0.60
21:AA:270:A:H2'	21:AA:271:C:C6	2.37	0.60
24:BA:27:G:N2	24:BA:512:G:O2'	2.34	0.60
24:BA:509:C:H5''	24:BA:509:C:C6	2.35	0.60
24:BA:1064:C:O3'	32:BI:90:GLY:HA2	2.02	0.60
24:BA:1364:G:OP2	47:BX:1:SER:N	2.26	0.60
24:BA:2279:G:N7	46:BW:10:ARG:NH2	2.48	0.60
33:BJ:58:ASN:HD21	33:BJ:128:ASN:HB2	1.66	0.60
33:BJ:64:VAL:O	33:BJ:65:THR:HB	2.00	0.60
37:BN:23:ASN:N	37:BN:23:ASN:ND2	2.50	0.60
48:BY:39:GLN:HB2	48:BY:41:HIS:HD2	1.64	0.60
50:B0:9:ARG:HH21	50:B0:9:ARG:CG	2.14	0.60
1:CB:212:TYR:HA	1:CB:215:ALA:HB3	1.82	0.60
6:CG:110:ARG:HG2	6:CG:112:ASP:OD1	2.02	0.60
11:CL:2:THR:HB	11:CL:5:GLN:H	1.65	0.60
11:CL:113:ARG:HB3	11:CL:118:VAL:HB	1.84	0.60
12:CM:2:ARG:HD2	12:CM:8:ILE:HG23	1.82	0.60
12:CM:28:ARG:O	12:CM:28:ARG:HD2	2.01	0.60
55:CA:198:G:C2'	55:CA:199:A:H8	2.14	0.60
55:CA:247:G:C6	55:CA:278:G:C2	2.88	0.60
55:CA:801:U:H2'	55:CA:802:A:H8	1.66	0.60
55:CA:1226:C:O2'	55:CA:1227:A:H5'	2.00	0.60
24:DA:127:A:H5''	24:DA:128:C:C6	2.36	0.60
24:DA:279:A:N6	24:DA:361:G:H1'	2.16	0.60
24:DA:1051:G:H2'	24:DA:1052:C:C6	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2259:U:C2	24:DA:2260:C:C5	2.89	0.60
26:DC:144:GLU:HG3	26:DC:151:GLY:N	2.16	0.60
28:DE:24:ASN:HB3	28:DE:27:LEU:HB3	1.82	0.60
28:DE:47:LYS:CB	28:DE:51:GLU:HB2	2.30	0.60
35:DL:92:LEU:CD2	35:DL:124:GLY:HA3	2.31	0.60
4:AE:123:LEU:O	4:AE:124:ALA:HB2	2.01	0.60
7:AH:1:SER:HB2	21:AA:877:G:H21	1.67	0.60
21:AA:251:G:C6	21:AA:266:G:O6	2.54	0.60
21:AA:790:A:C6	21:AA:791:G:C6	2.89	0.60
24:BA:448:U:H4'	24:BA:449:A:OP2	2.01	0.60
24:BA:616:A:H2'	24:BA:617:G:C8	2.37	0.60
24:BA:1122:G:N3	24:BA:1122:G:H2'	2.16	0.60
24:BA:1779:U:C5	24:BA:1784:A:N7	2.69	0.60
24:BA:2725:A:O2'	24:BA:2726:A:O5'	2.16	0.60
28:BE:37:ALA:C	28:BE:39:ALA:H	2.05	0.60
29:BF:43:ILE:HG22	29:BF:82:TYR:CE1	2.37	0.60
34:BK:11:ALA:O	34:BK:99:ILE:HA	2.02	0.60
34:BK:118:LEU:O	34:BK:119:ALA:O	2.19	0.60
37:BN:73:ASN:O	37:BN:76:VAL:HG12	2.02	0.60
40:BQ:57:ARG:NH2	40:BQ:92:LYS:HD2	2.17	0.60
40:BQ:93:ILE:HG23	40:BQ:94:LEU:N	2.16	0.60
46:BW:23:LYS:HE3	46:BW:24:ARG:HG3	1.82	0.60
54:B4:36:ARG:CG	54:B4:37:GLN:H	1.99	0.60
8:CI:27:ILE:HA	8:CI:62:LEU:HB2	1.82	0.60
55:CA:106:C:O2	55:CA:379:C:H4'	2.01	0.60
55:CA:509:A:C2	55:CA:510:A:C2	2.89	0.60
55:CA:1256:A:C4	55:CA:1278:G:C6	2.90	0.60
55:CA:1316:G:N2	55:CA:1318:A:H3'	2.17	0.60
24:DA:33:C:H2'	24:DA:446:G:N2	2.17	0.60
24:DA:82:U:H2'	24:DA:83:A:O4'	2.01	0.60
24:DA:1080:A:O2'	24:DA:1081:U:O4'	2.16	0.60
24:DA:1282:U:H2'	24:DA:1283:G:O4'	2.01	0.60
24:DA:1773:A:N7	24:DA:1829:A:H1'	2.15	0.60
24:DA:2019:A:H4'	40:DQ:33:VAL:HG21	1.83	0.60
24:DA:2235:G:H2'	24:DA:2236:U:C6	2.35	0.60
24:DA:2746:U:H1'	30:DG:138:GLN:NE2	2.08	0.60
37:DN:99:LYS:O	50:D0:41:HIS:HB2	2.01	0.60
38:DO:8:ILE:H	38:DO:8:ILE:HD12	1.65	0.60
44:DU:3:LYS:HG2	44:DU:84:PHE:CZ	2.36	0.60
46:DW:8:SER:O	46:DW:9:THR:HB	2.02	0.60
1:AB:41:ASN:HD22	1:AB:42:LEU:H	1.48	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:74:ILE:HD12	7:AH:127:TYR:O	2.02	0.60
19:AT:68:LYS:HB2	19:AT:68:LYS:NZ	2.16	0.60
21:AA:197:A:O2'	21:AA:198:G:C8	2.54	0.60
21:AA:543:U:C2'	21:AA:544:G:H5'	2.32	0.60
21:AA:575:G:C6	21:AA:821:G:C8	2.90	0.60
21:AA:724:G:O2'	21:AA:725:G:H5'	2.01	0.60
21:AA:792:A:C4	21:AA:794:A:N6	2.70	0.60
21:AA:914:A:H2'	21:AA:915:A:H8	1.66	0.60
21:AA:977:A:H3'	21:AA:1362:A:H62	1.67	0.60
21:AA:1050:G:O2'	21:AA:1051:C:H5'	2.01	0.60
21:AA:1054:C:C5	22:AX:34:G:C1'	2.83	0.60
21:AA:1443:C:H2'	21:AA:1444:U:O4'	2.01	0.60
24:BA:13:A:H4'	24:BA:14:A:OP1	2.01	0.60
24:BA:92:U:H6	24:BA:92:U:H5''	1.66	0.60
24:BA:200:U:O2'	24:BA:201:C:H5'	2.00	0.60
24:BA:363:G:H2'	24:BA:364:C:H6	1.65	0.60
24:BA:528:A:C3'	24:BA:528:A:C8	2.83	0.60
24:BA:604:G:O6	24:BA:625:G:C6	2.54	0.60
24:BA:812:C:H4'	40:BQ:12:ARG:HH22	1.66	0.60
24:BA:1022:G:N2	24:BA:1142:A:C2	2.62	0.60
24:BA:1038:G:O2'	24:BA:1039:A:H5'	2.02	0.60
24:BA:1105:U:H2'	24:BA:1106:G:H8	1.66	0.60
24:BA:1271:G:OP2	59:BA:3391:HOH:O	2.16	0.60
27:BD:118:PHE:HD2	27:BD:119:ALA:N	1.99	0.60
28:BE:154:ASP:OD2	28:BE:157:LEU:HB3	2.02	0.60
31:BH:31:VAL:O	31:BH:32:PRO:C	2.37	0.60
46:BW:30:VAL:HG23	46:BW:60:ALA:O	2.02	0.60
10:CK:51:PHE:HE2	10:CK:64:VAL:HG21	1.65	0.60
10:CK:74:LYS:HA	10:CK:78:ILE:HD11	1.83	0.60
15:CP:56:ARG:O	15:CP:59:HIS:HB3	2.01	0.60
55:CA:57:G:H2'	55:CA:58:C:C6	2.36	0.60
55:CA:1410:A:H5''	55:CA:1411:C:OP1	2.02	0.60
55:CA:1423:G:H2'	55:CA:1424:U:H6	1.65	0.60
24:DA:170:U:H2'	24:DA:171:U:H6	1.66	0.60
24:DA:571:U:C2	24:DA:2030:A:C5	2.89	0.60
24:DA:1303:G:H2'	24:DA:1304:A:C8	2.35	0.60
24:DA:2624:G:H1'	50:D0:18:HIS:HE1	1.66	0.60
56:DB:38:C:C4'	38:DO:100:HIS:NE2	2.63	0.60
29:DF:160:LYS:HD3	29:DF:161:SER:N	2.17	0.60
34:DK:19:VAL:HG12	34:DK:41:ILE:HG12	1.83	0.60
46:DW:22:VAL:O	46:DW:23:LYS:HG3	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:11:G:C5	21:AA:12:U:C5	2.90	0.60
21:AA:182:A:C2	21:AA:184:G:C8	2.90	0.60
21:AA:414:A:C2'	21:AA:415:A:H5'	2.31	0.60
21:AA:1055:A:N6	21:AA:1206:G:C5	2.69	0.60
21:AA:1343:G:H2'	21:AA:1344:C:C6	2.36	0.60
24:BA:1372:U:C2'	24:BA:1373:A:H5'	2.31	0.60
24:BA:1854:A:N6	24:BA:1888:G:H1'	2.17	0.60
24:BA:2762:C:N4	24:BA:2763:G:C6	2.70	0.60
59:BA:3787:HOH:O	33:BJ:39:LYS:HE3	2.00	0.60
26:BC:236:GLY:O	26:BC:237:ARG:HB2	2.02	0.60
28:BE:47:LYS:HB3	28:BE:51:GLU:HG3	1.82	0.60
29:BF:131:VAL:HG22	29:BF:151:LEU:H	1.66	0.60
30:BG:33:THR:CA	30:BG:34:ARG:HH11	2.14	0.60
44:BU:43:LYS:O	44:BU:57:ILE:HA	2.01	0.60
46:BW:47:GLY:N	46:BW:80:SER:HB3	2.15	0.60
3:CD:31:CYS:O	3:CD:32:LYS:HB2	2.00	0.60
6:CG:132:THR:O	6:CG:133:ALA:HB2	2.02	0.60
12:CM:22:TYR:O	12:CM:65:GLU:HG2	2.01	0.60
12:CM:80:MET:SD	12:CM:91:ARG:HB3	2.42	0.60
15:CP:75:ILE:HA	15:CP:78:VAL:HG23	1.83	0.60
16:CQ:67:SER:HA	55:CA:265:G:H4'	1.83	0.60
20:CU:13:VAL:HG22	20:CU:15:LEU:HD23	1.83	0.60
55:CA:463:U:H2'	55:CA:464:U:C5	2.37	0.60
55:CA:920:U:O2'	55:CA:921:U:H5'	2.02	0.60
55:CA:1135:U:H5'	55:CA:1136:C:OP2	2.01	0.60
55:CA:1308:U:O2	55:CA:1330:U:C2	2.54	0.60
24:DA:222:A:N6	24:DA:232:G:H1'	2.16	0.60
24:DA:757:G:H2'	24:DA:758:C:H5'	1.83	0.60
24:DA:959:A:H2'	24:DA:960:A:H8	1.65	0.60
29:DF:91:ARG:HB3	29:DF:91:ARG:NH2	2.16	0.60
39:DP:86:LYS:HA	39:DP:86:LYS:NZ	2.17	0.60
40:DQ:71:ASN:HD21	40:DQ:106:THR:HG23	1.67	0.60
42:DS:71:VAL:O	42:DS:71:VAL:HG13	2.01	0.60
18:AS:5:LYS:HA	21:AA:1313:U:OP2	2.02	0.60
21:AA:95:C:H2'	21:AA:96:U:C6	2.36	0.60
21:AA:570:G:H1'	21:AA:820:U:C4	2.36	0.60
21:AA:587:G:N1	21:AA:755:G:C6	2.69	0.60
21:AA:866:C:C4	21:AA:867:G:H1'	2.37	0.60
21:AA:895:G:C4	21:AA:896:C:C5	2.89	0.60
21:AA:1194:U:H2'	21:AA:1195:C:C6	2.36	0.60
24:BA:161:A:H3'	24:BA:162:U:H5''	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1195:G:N2	24:BA:1196:C:C2	2.69	0.60
24:BA:2259:U:H2'	24:BA:2260:C:H6	1.66	0.60
24:BA:2493:U:H2'	24:BA:2494:G:O4'	2.01	0.60
24:BA:2832:U:O2	24:BA:2834:G:N1	2.34	0.60
25:BB:76:G:H8	25:BB:76:G:O5'	1.83	0.60
40:BQ:68:ALA:O	40:BQ:71:ASN:N	2.34	0.60
47:BX:33:HIS:O	47:BX:34:SER:O	2.19	0.60
3:CD:59:LYS:O	3:CD:63:ILE:HG13	2.02	0.60
10:CK:44:ALA:HB3	10:CK:69:CYS:HB2	1.83	0.60
12:CM:69:ARG:HD2	12:CM:69:ARG:N	2.17	0.60
19:CT:35:TYR:OH	55:CA:259:G:H5'	2.01	0.60
55:CA:140:U:H2'	55:CA:141:G:O4'	2.02	0.60
55:CA:714:G:H2'	55:CA:715:A:C8	2.37	0.60
55:CA:1228:C:O2'	55:CA:1229:A:H8	1.84	0.60
22:CX:33:U:H5'	22:CX:34:G:OP2	2.02	0.60
24:DA:417:C:H2'	24:DA:418:C:O4'	2.01	0.60
24:DA:627:A:H5''	35:DL:78:ARG:HH12	1.66	0.60
24:DA:1055:G:H2'	24:DA:1055:G:N3	2.16	0.60
24:DA:1071:G:N7	24:DA:1089:A:C5	2.70	0.60
24:DA:1196:C:H1'	24:DA:1226:A:C4	2.37	0.60
24:DA:2674:G:H2'	24:DA:2675:A:C8	2.34	0.60
29:DF:103:ILE:HA	29:DF:107:VAL:HG21	1.84	0.60
33:DJ:74:TYR:OH	33:DJ:100:VAL:HG13	2.01	0.60
4:AE:84:VAL:HG23	4:AE:145:ASN:HD21	1.66	0.60
4:AE:112:ALA:O	4:AE:116:VAL:HG13	2.01	0.60
5:AF:3:HIS:H	5:AF:92:THR:CG2	2.08	0.60
21:AA:15:G:C8	21:AA:1396:A:C2	2.89	0.60
21:AA:274:A:O2'	21:AA:275:G:H8	1.84	0.60
21:AA:324:G:O6	59:AA:1847:HOH:O	2.16	0.60
21:AA:1034:G:H2'	21:AA:1035:A:C8	2.37	0.60
21:AA:1082:A:C2	21:AA:1083:U:C2	2.90	0.60
24:BA:1079:C:C4	24:BA:1088:A:H2	2.18	0.60
24:BA:1097:U:H3'	24:BA:1098:A:H4'	1.84	0.60
24:BA:1115:G:HO2'	24:BA:1116:G:P	2.25	0.60
24:BA:1315:C:C2	24:BA:1338:G:N2	2.69	0.60
24:BA:2063:C:C4	24:BA:2064:C:C5	2.89	0.60
24:BA:2287:A:C8	24:BA:2289:G:C8	2.90	0.60
24:BA:2353:G:O2'	46:BW:31:LEU:HD23	2.01	0.60
24:BA:2404:U:O2	24:BA:2414:G:C2	2.54	0.60
30:BG:85:LYS:HA	30:BG:130:ILE:O	2.01	0.60
34:BK:64:ARG:NH1	34:BK:101:GLY:HA3	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BL:85:VAL:CG2	35:BL:94:THR:HG23	2.32	0.60
38:BO:75:GLY:HA2	38:BO:106:LEU:HD12	1.83	0.60
46:BW:24:ARG:O	46:BW:25:PHE:HB2	2.01	0.60
12:CM:69:ARG:NH2	55:CA:1330:U:H5'	2.17	0.60
55:CA:120:A:H3'	55:CA:121:U:C5'	2.31	0.60
55:CA:415:A:H3'	55:CA:416:G:H8	1.67	0.60
55:CA:607:A:H2'	55:CA:608:A:C8	2.36	0.60
55:CA:891:U:O2'	55:CA:892:A:H5'	2.01	0.60
55:CA:1167:A:N7	55:CA:1169:A:N6	2.49	0.60
24:DA:23:G:H2'	24:DA:24:G:H8	1.67	0.60
24:DA:1008:A:OP1	24:DA:1008:A:H8	1.84	0.60
24:DA:1078:U:H4'	24:DA:1079:C:H5''	1.83	0.60
24:DA:1455:G:H2'	24:DA:1456:G:C8	2.36	0.60
24:DA:1555:G:O2'	24:DA:1556:C:H5'	2.01	0.60
24:DA:1738:G:O2'	24:DA:1739:A:H8	1.85	0.60
24:DA:1738:G:O2'	24:DA:1739:A:C8	2.55	0.60
26:DC:166:ARG:CB	26:DC:171:VAL:HG22	2.31	0.60
30:DG:15:ASP:HB3	30:DG:26:LYS:H	1.67	0.60
31:DH:93:SER:HB3	31:DH:121:VAL:HG21	1.83	0.60
34:DK:41:ILE:HG22	34:DK:58:LEU:O	2.01	0.60
38:DO:26:LEU:HD23	38:DO:92:PHE:CE1	2.37	0.60
45:DV:14:LYS:HG3	45:DV:18:ARG:HD2	1.84	0.60
51:D1:5:ARG:HD2	51:D1:25:ASN:HB2	1.82	0.60
1:AB:108:GLN:HE21	1:AB:108:GLN:N	1.94	0.60
8:AI:123:ARG:HB3	21:AA:1343:G:O3'	2.01	0.60
10:AK:86:LYS:HE3	21:AA:707:U:OP1	2.02	0.60
21:AA:335:C:H2'	21:AA:336:A:C8	2.37	0.60
21:AA:830:G:H2'	21:AA:831:A:H8	1.67	0.60
21:AA:1256:A:H1'	21:AA:1258:G:C5	2.37	0.60
24:BA:547:A:C8	24:BA:548:G:N3	2.70	0.60
24:BA:789:A:OP1	24:BA:790:U:H5	1.85	0.60
24:BA:880:G:H8	24:BA:880:G:O5'	1.83	0.60
24:BA:1287:A:OP2	37:BN:103:ARG:HG3	2.02	0.60
24:BA:2134:A:N6	24:BA:2157:G:C5	2.70	0.60
24:BA:2352:A:C2	46:BW:30:VAL:HG11	2.37	0.60
29:BF:161:SER:OG	29:BF:164:GLU:HG3	2.01	0.60
2:CC:26:LYS:HA	2:CC:26:LYS:HE3	1.82	0.60
10:CK:74:LYS:HG3	10:CK:78:ILE:HG12	1.82	0.60
55:CA:21:G:H2'	55:CA:22:G:C8	2.37	0.60
55:CA:425:G:O2'	55:CA:426:U:O4'	2.19	0.60
55:CA:686:U:O4	55:CA:703:G:H1'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:1091:U:H2'	55:CA:1093:A:OP2	2.01	0.60
55:CA:1518:A:H2'	55:CA:1519:A:C8	2.37	0.60
24:DA:312:G:H2'	24:DA:313:G:H8	1.65	0.60
24:DA:673:C:C2'	24:DA:674:G:H5'	2.31	0.60
24:DA:860:U:C4	24:DA:2268:A:C4	2.90	0.60
24:DA:923:G:H1'	46:DW:23:LYS:HZ2	1.64	0.60
24:DA:1213:A:H2'	24:DA:1214:A:C8	2.37	0.60
24:DA:1245:G:H4'	28:DE:33:VAL:CG1	2.31	0.60
24:DA:1440:U:H2'	24:DA:1441:G:H8	1.67	0.60
24:DA:1706:C:H5'	24:DA:1707:G:OP2	2.01	0.60
24:DA:1967:C:H6	24:DA:1967:C:H5''	1.66	0.60
24:DA:1993:U:H4'	27:DD:133:THR:CG2	2.31	0.60
29:DF:47:LYS:HA	29:DF:50:ASP:HB3	1.84	0.60
34:DK:101:GLY:O	34:DK:120:PRO:HB3	2.00	0.60
39:DP:62:LYS:O	39:DP:63:ILE:HB	2.01	0.60
47:DX:1:SER:O	47:DX:3:VAL:N	2.35	0.60
47:DX:30:PRO:HG2	47:DX:32:LEU:CD2	2.32	0.60
2:AC:141:MET:HG3	2:AC:169:GLU:OE2	2.02	0.60
3:AD:54:LEU:O	3:AD:54:LEU:HD23	2.01	0.60
21:AA:397:A:N7	21:AA:547:A:O2'	2.35	0.60
21:AA:1252:A:H2'	21:AA:1253:G:O4'	2.02	0.60
24:BA:639:U:H2'	24:BA:640:C:H6	1.59	0.60
24:BA:997:G:O2'	24:BA:998:C:H5'	2.01	0.60
24:BA:1060:U:H6	24:BA:1060:U:OP1	1.84	0.60
24:BA:1224:U:H4'	41:BR:88:GLY:O	2.02	0.60
24:BA:1429:G:N3	24:BA:1568:G:C2	2.70	0.60
24:BA:1515:A:H2'	24:BA:1516:G:O4'	2.02	0.60
24:BA:2026:U:H2'	24:BA:2027:G:O4'	2.02	0.60
24:BA:2331:G:N2	24:BA:2385:C:C2	2.70	0.60
24:BA:2358:A:N6	35:BL:54:GLN:HE22	1.98	0.60
24:BA:2691:C:O3'	24:BA:2871:U:H4'	2.02	0.60
26:BC:66:PHE:HB3	26:BC:150:GLY:O	2.02	0.60
7:CH:76:ARG:HD3	7:CH:77:VAL:N	2.17	0.60
19:CT:23:ARG:HB3	19:CT:60:GLN:NE2	2.14	0.60
55:CA:431:A:N3	55:CA:431:A:H2'	2.16	0.60
55:CA:1423:G:O2'	55:CA:1424:U:H5'	2.01	0.60
55:CA:1477:U:H2'	55:CA:1478:U:C6	2.35	0.60
24:DA:324:A:N6	24:DA:339:U:H5'	2.17	0.60
24:DA:682:G:H2'	24:DA:683:U:H6	1.67	0.60
24:DA:1126:A:H4'	24:DA:1127:A:O5'	2.02	0.60
24:DA:1311:G:H1'	24:DA:1313:U:O4	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1417:C:H4'	24:DA:1587:G:H21	1.66	0.60
24:DA:2770:G:H8	24:DA:2770:G:O5'	1.84	0.60
26:DC:131:MET:HA	26:DC:134:ILE:HG12	1.84	0.60
37:DN:8:ARG:HG2	37:DN:10:LEU:HD22	1.84	0.60
45:DV:31:TYR:CD1	45:DV:31:TYR:O	2.54	0.60
1:AB:182:VAL:HG12	1:AB:183:PHE:N	2.17	0.59
2:AC:13:ILE:HG12	2:AC:14:VAL:HG22	1.83	0.59
9:AJ:6:ILE:HD11	9:AJ:79:PRO:HA	1.84	0.59
11:AL:42:LYS:HD2	11:AL:90:PRO:HG3	1.83	0.59
11:AL:43:LYS:HZ2	11:AL:43:LYS:N	2.00	0.59
21:AA:930:C:H2'	21:AA:931:C:O4'	2.02	0.59
24:BA:434:U:H4'	24:BA:435:C:OP1	2.01	0.59
24:BA:923:G:N3	46:BW:23:LYS:HE2	2.17	0.59
24:BA:1408:G:C2	24:BA:1595:C:O2	2.55	0.59
24:BA:1681:G:O2'	24:BA:1762:A:C2'	2.50	0.59
24:BA:2410:G:C2	24:BA:2411:A:H1'	2.37	0.59
26:BC:85:ASN:OD1	26:BC:85:ASN:N	2.35	0.59
27:BD:101:PHE:HE2	27:BD:203:VAL:CG2	2.15	0.59
43:BT:38:ALA:HB1	43:BT:43:ILE:CG2	2.32	0.59
54:B4:7:VAL:HG23	54:B4:8:LYS:H	1.67	0.59
3:CD:167:PRO:HB3	3:CD:169:TRP:CH2	2.37	0.59
3:CD:197:HIS:O	3:CD:200:VAL:HB	2.02	0.59
11:CL:72:ASN:HD21	11:CL:104:SER:H	1.48	0.59
16:CQ:64:ARG:HD3	55:CA:130:A:H8	1.67	0.59
20:CU:36:PHE:HD1	20:CU:40:PRO:HB3	1.66	0.59
55:CA:92:U:H2'	55:CA:93:U:C6	2.36	0.59
55:CA:211:G:N3	55:CA:211:G:C2'	2.56	0.59
55:CA:576:C:H2'	55:CA:578:C:OP2	2.02	0.59
55:CA:1239:A:N6	55:CA:1299:A:N6	2.49	0.59
24:DA:49:A:N6	24:DA:177:G:C5	2.70	0.59
24:DA:167:A:C2	24:DA:168:G:H1'	2.37	0.59
24:DA:279:A:N6	24:DA:361:G:O2'	2.35	0.59
24:DA:335:C:O2'	24:DA:336:C:H5'	2.01	0.59
24:DA:782:A:OP1	24:DA:782:A:C8	2.46	0.59
24:DA:876:C:H3'	24:DA:877:A:H8	1.66	0.59
24:DA:975:A:H2'	24:DA:976:G:C8	2.36	0.59
24:DA:1181:U:H2'	24:DA:1182:G:C8	2.37	0.59
24:DA:1439:A:C2	24:DA:1552:A:C4	2.89	0.59
24:DA:1789:A:H5''	26:DC:218:THR:O	2.01	0.59
24:DA:1867:G:H2'	24:DA:1868:C:H6	1.66	0.59
24:DA:2096:C:H2'	24:DA:2097:A:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2714:G:H2'	24:DA:2715:C:C6	2.37	0.59
30:DG:95:ALA:HB3	30:DG:127:GLN:HA	1.83	0.59
4:AE:154:ALA:HB3	7:AH:65:PHE:CD1	2.38	0.59
21:AA:15:G:N7	21:AA:1396:A:C2	2.70	0.59
21:AA:214:C:H2'	21:AA:215:C:C6	2.38	0.59
21:AA:1269:A:H2	21:AA:1312:G:N3	1.99	0.59
21:AA:1464:U:H2'	21:AA:1465:A:C8	2.37	0.59
24:BA:14:A:N6	24:BA:15:G:C2	2.69	0.59
24:BA:411:G:H5''	24:BA:412:A:OP1	2.02	0.59
24:BA:558:U:P	33:BJ:113:PRO:HG2	2.42	0.59
24:BA:1027:A:N1	24:BA:1126:A:N3	2.50	0.59
24:BA:1083:U:O2	24:BA:1086:A:N6	2.36	0.59
24:BA:1286:A:H4'	24:BA:1287:A:OP1	2.02	0.59
24:BA:1683:U:H2'	24:BA:1684:G:C8	2.37	0.59
24:BA:1936:A:H2	24:BA:1943:U:O4	1.85	0.59
28:BE:97:ASN:HB2	28:BE:100:MET:HG3	1.84	0.59
29:BF:68:LYS:HD2	29:BF:68:LYS:N	2.17	0.59
36:BM:35:ALA:O	36:BM:36:VAL:CB	2.45	0.59
4:CE:95:MET:HE1	4:CE:143:LEU:HD11	1.84	0.59
10:CK:19:VAL:HB	10:CK:34:THR:O	2.01	0.59
12:CM:88:LEU:O	12:CM:92:ARG:HB2	2.01	0.59
20:CU:24:LYS:CG	20:CU:25:ALA:N	2.64	0.59
55:CA:170:U:O2'	55:CA:171:A:H5'	2.01	0.59
55:CA:223:A:H2'	55:CA:224:U:C6	2.35	0.59
55:CA:983:A:C2'	55:CA:984:C:H5'	2.31	0.59
55:CA:1084:G:C5	55:CA:1085:U:C4	2.90	0.59
55:CA:1213:A:C8	55:CA:1215:G:C5	2.90	0.59
55:CA:1409:C:H4'	24:DA:1915:U:O4	2.02	0.59
55:CA:1415:G:C2	55:CA:1486:G:C4	2.90	0.59
55:CA:1461:G:H2'	55:CA:1462:C:C6	2.37	0.59
24:DA:375:G:C8	24:DA:375:G:H5''	2.36	0.59
24:DA:985:C:N4	24:DA:986:C:H41	2.01	0.59
24:DA:1815:A:H4'	24:DA:1816:C:OP1	2.01	0.59
24:DA:1844:C:C2	24:DA:1845:G:C8	2.90	0.59
24:DA:2092:U:C4'	24:DA:2093:G:H5''	2.17	0.59
26:DC:173:LEU:HD22	26:DC:181:ARG:O	2.00	0.59
33:DJ:37:ARG:HG3	33:DJ:118:MET:SD	2.41	0.59
34:DK:1:MET:HA	34:DK:33:ALA:O	2.02	0.59
38:DO:24:THR:HG22	38:DO:41:ALA:HA	1.85	0.59
40:DQ:34:ALA:O	40:DQ:38:VAL:HG23	2.02	0.59
42:DS:66:ILE:HA	42:DS:69:LEU:HD13	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DU:81:ARG:HD2	44:DU:81:ARG:N	2.17	0.59
46:DW:31:LEU:C	46:DW:33:GLY:H	2.05	0.59
4:AE:155:LYS:HD2	4:AE:156:ARG:CG	2.31	0.59
5:AF:11:HIS:CD2	5:AF:12:PRO:HD2	2.37	0.59
21:AA:11:G:C6	21:AA:12:U:C4	2.90	0.59
21:AA:308:C:H2'	21:AA:309:A:H8	1.67	0.59
21:AA:511:C:N3	21:AA:512:U:C4	2.70	0.59
21:AA:722:G:N3	21:AA:722:G:H2'	2.16	0.59
21:AA:1055:A:C6	21:AA:1206:G:C5	2.90	0.59
24:BA:289:G:H2'	24:BA:290:U:O4'	2.01	0.59
24:BA:418:C:H2'	24:BA:419:U:O4'	2.02	0.59
24:BA:529:A:H2'	24:BA:2023:C:H41	1.67	0.59
24:BA:1738:G:O2'	24:BA:1739:A:H8	1.85	0.59
24:BA:2217:G:H2'	24:BA:2218:G:H8	1.66	0.59
24:BA:2286:G:H4'	24:BA:2287:A:O4'	2.01	0.59
24:BA:2812:G:H5'	24:BA:2813:A:OP2	2.02	0.59
24:BA:2888:C:H2'	24:BA:2889:C:C6	2.36	0.59
27:BD:118:PHE:HD2	27:BD:119:ALA:H	1.50	0.59
37:BN:114:GLU:HB2	37:BN:118:ARG:HD3	1.83	0.59
39:BP:50:ARG:CB	39:BP:57:ALA:N	2.56	0.59
3:CD:87:GLU:OE2	3:CD:187:ARG:HB2	2.02	0.59
4:CE:22:LYS:HB3	4:CE:29:ILE:HG21	1.84	0.59
6:CG:12:LEU:HD22	6:CG:13:PRO:O	2.01	0.59
9:CJ:90:LEU:HD23	9:CJ:92:LEU:HD11	1.85	0.59
18:CS:28:LYS:HB3	18:CS:29:PRO:HD2	1.84	0.59
55:CA:481:G:H1'	55:CA:482:A:N7	2.18	0.59
24:DA:746:U:H5'	24:DA:748:G:O4'	2.02	0.59
24:DA:770:G:H1'	24:DA:1379:U:C4	2.37	0.59
24:DA:1290:C:O2'	24:DA:1291:C:H6	1.84	0.59
24:DA:1343:G:C5	24:DA:1597:A:N6	2.70	0.59
24:DA:1700:A:C2'	24:DA:1701:A:H5'	2.32	0.59
24:DA:2015:A:C6	50:D0:2:VAL:HG11	2.37	0.59
56:DB:75:G:H1	56:DB:102:G:N2	1.99	0.59
29:DF:33:ILE:HB	29:DF:90:LEU:HB2	1.84	0.59
29:DF:136:ILE:HG22	29:DF:142:TYR:CG	2.38	0.59
30:DG:18:ILE:HD12	30:DG:42:VAL:HG13	1.83	0.59
1:AB:103:TRP:CZ2	1:AB:154:GLY:HA2	2.37	0.59
1:AB:168:GLU:HB3	1:AB:171:ALA:HB3	1.82	0.59
2:AC:27:GLU:CD	2:AC:27:GLU:H	2.04	0.59
3:AD:98:ASP:CB	3:AD:114:ARG:HG2	2.31	0.59
3:AD:125:ASN:OD1	3:AD:140:ASP:HA	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:62:THR:HG22	18:AS:63:ASP:N	2.16	0.59
21:AA:280:C:H3'	21:AA:281:G:H5'	1.84	0.59
22:AV:39:U:H2'	22:AV:40:C:H6	1.66	0.59
24:BA:26:G:C2	24:BA:27:G:N2	2.71	0.59
24:BA:447:A:C2	24:BA:454:A:C8	2.89	0.59
24:BA:811:U:C4	35:BL:21:ARG:CZ	2.85	0.59
24:BA:2485:G:N2	24:BA:2486:C:C2	2.70	0.59
24:BA:2502:G:H5'	24:BA:2503:A:C5'	2.33	0.59
26:BC:20:ASN:HB3	26:BC:23:LEU:HD23	1.85	0.59
27:BD:186:LEU:HD11	39:BP:3:ILE:CD1	2.32	0.59
30:BG:168:VAL:O	30:BG:170:THR:HG23	2.02	0.59
37:BN:65:LEU:HD11	37:BN:69:ARG:NH2	2.17	0.59
1:CB:187:ASP:HB2	1:CB:202:ASN:O	2.02	0.59
2:CC:9:ILE:HG23	2:CC:10:ARG:N	2.18	0.59
11:CL:24:GLU:O	11:CL:25:ALA:HB3	2.02	0.59
12:CM:102:LYS:CA	55:CA:1226:C:H5	2.08	0.59
55:CA:1077:G:N1	55:CA:1081:A:C6	2.71	0.59
55:CA:1087:G:O2'	55:CA:1088:G:H5'	2.03	0.59
24:DA:873:C:H4'	36:DM:64:TRP:CD1	2.38	0.59
24:DA:1206:G:C2	24:DA:1207:C:C2	2.91	0.59
24:DA:1209:U:O3'	24:DA:1212:G:H5'	2.03	0.59
24:DA:1210:G:H1'	24:DA:1212:G:C2	2.37	0.59
24:DA:2143:C:H5'	24:DA:2144:G:OP2	2.01	0.59
24:DA:2425:A:H5'	24:DA:2427:C:H5'	1.83	0.59
56:DB:60:C:H2'	56:DB:61:G:C8	2.36	0.59
34:DK:108:ARG:HA	34:DK:116:ILE:HD13	1.84	0.59
36:DM:136:MET:OXT	36:DM:136:MET:CG	2.45	0.59
39:DP:91:VAL:HG11	39:DP:96:LEU:HD11	1.84	0.59
49:DZ:6:ILE:O	49:DZ:34:THR:HA	2.03	0.59
53:D3:18:LYS:CD	53:D3:19:GLY:H	2.15	0.59
1:AB:110:ILE:HD11	1:AB:147:LEU:HD13	1.82	0.59
3:AD:130:ASN:HB3	21:AA:619:U:H3	1.67	0.59
4:AE:136:VAL:HG22	4:AE:136:VAL:O	2.02	0.59
4:AE:152:VAL:HB	4:AE:155:LYS:HZ2	1.68	0.59
5:AF:16:GLU:HG2	3:CD:191:SER:CB	2.24	0.59
6:AG:9:ARG:NH1	21:AA:1346:A:C4	2.70	0.59
7:AH:77:VAL:HG23	7:AH:126:CYS:HA	1.84	0.59
10:AK:28:ASN:HD21	10:AK:47:GLY:N	1.93	0.59
10:AK:49:SER:HA	10:AK:68:ARG:NH2	2.17	0.59
21:AA:223:A:H2'	21:AA:224:U:H6	1.68	0.59
21:AA:1088:G:C6	21:AA:1089:G:N7	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1502:A:O2'	21:AA:1503:A:P	2.61	0.59
24:BA:53:A:H2'	24:BA:54:G:O4'	2.02	0.59
24:BA:322:A:H1'	24:BA:339:U:O2	2.03	0.59
24:BA:1555:G:H5'	24:BA:1555:G:H8	1.65	0.59
24:BA:2657:A:O2'	24:BA:2658:C:H5'	2.02	0.59
32:BI:120:ASP:HB3	32:BI:123:ALA:HB3	1.83	0.59
33:BJ:4:PHE:O	33:BJ:44:TYR:CE1	2.56	0.59
33:BJ:13:ARG:O	33:BJ:14:ASP:HB2	2.02	0.59
33:BJ:43:GLU:O	33:BJ:45:THR:HG22	2.00	0.59
35:BL:59:ARG:HA	53:B3:12:ARG:NH2	2.17	0.59
36:BM:41:LEU:HA	36:BM:45:GLN:OE1	2.03	0.59
50:B0:42:ILE:HG22	50:B0:43:THR:O	2.02	0.59
2:CC:56:ILE:HG23	2:CC:65:VAL:HG22	1.85	0.59
11:CL:86:VAL:HG11	11:CL:89:LEU:HD23	1.83	0.59
14:CO:83:ARG:HG2	14:CO:83:ARG:O	2.02	0.59
55:CA:164:G:H2'	55:CA:165:G:H5'	1.83	0.59
55:CA:374:A:H5''	55:CA:452:A:C6	2.37	0.59
55:CA:395:C:H2'	55:CA:396:C:C6	2.37	0.59
55:CA:1336:C:H1'	55:CA:1337:G:C6	2.38	0.59
55:CA:1446:A:H2'	55:CA:1447:A:C5'	2.32	0.59
24:DA:616:A:O2'	24:DA:617:G:H5'	2.02	0.59
24:DA:777:G:HO2'	24:DA:778:G:H8	1.50	0.59
24:DA:1074:G:C8	24:DA:1074:G:OP2	2.56	0.59
24:DA:1437:C:H2'	24:DA:1438:U:H6	1.67	0.59
32:DI:16:MET:SD	32:DI:19:PRO:HG2	2.42	0.59
34:DK:87:LEU:HD23	34:DK:87:LEU:N	2.17	0.59
51:D1:5:ARG:NH2	51:D1:23:THR:HB	2.18	0.59
1:AB:142:LYS:NZ	21:AA:1098:C:P	2.76	0.59
1:AB:184:ALA:HB3	1:AB:195:VAL:HG22	1.83	0.59
2:AC:91:ALA:C	2:AC:93:ILE:H	2.05	0.59
4:AE:142:GLY:O	4:AE:143:LEU:HD23	2.02	0.59
6:AG:110:ARG:NH1	6:AG:122:GLU:HG2	2.17	0.59
13:AN:81:ILE:HG21	21:AA:1202:U:N3	2.18	0.59
21:AA:21:G:H1'	21:AA:915:A:H61	1.67	0.59
21:AA:512:U:H2'	21:AA:513:C:C6	2.37	0.59
21:AA:1143:G:O2'	21:AA:1144:G:H5'	2.01	0.59
24:BA:571:U:O3'	41:BR:80:ARG:NH2	2.36	0.59
24:BA:1084:A:H2'	24:BA:1085:A:C8	2.38	0.59
24:BA:1234:U:H2'	24:BA:1235:G:O4'	2.03	0.59
24:BA:1334:G:O2'	24:BA:1335:C:H5'	2.02	0.59
24:BA:2556:C:H2'	24:BA:2557:G:H5'	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:191:GLY:O	27:BD:192:ALA:CB	2.50	0.59
35:BL:28:GLY:O	35:BL:29:LYS:HB3	2.00	0.59
40:BQ:63:ARG:CZ	40:BQ:95:ALA:O	2.51	0.59
40:BQ:96:ASP:C	40:BQ:98:ALA:N	2.54	0.59
42:BS:38:TYR:HD2	50:B0:38:LEU:HD21	1.67	0.59
1:CB:49:PHE:HB3	1:CB:199:ILE:CG2	2.32	0.59
1:CB:185:ILE:HD12	1:CB:202:ASN:N	2.18	0.59
13:CN:20:PHE:HA	13:CN:24:ALA:HB2	1.85	0.59
14:CO:63:ARG:HH22	24:DA:715:A:C5'	2.07	0.59
16:CQ:17:GLU:HB2	55:CA:255:G:O4'	2.02	0.59
20:CU:40:PRO:HA	20:CU:43:GLU:CB	2.32	0.59
55:CA:149:A:H1'	55:CA:1446:A:H2	1.66	0.59
55:CA:198:G:H2'	55:CA:199:A:C8	2.36	0.59
55:CA:199:A:O2'	55:CA:200:G:O4'	2.21	0.59
55:CA:242:G:N2	55:CA:285:C:C2	2.71	0.59
55:CA:302:G:C4	55:CA:303:A:C8	2.91	0.59
55:CA:704:A:H2'	55:CA:705:G:C8	2.33	0.59
55:CA:1068:G:O2'	55:CA:1069:C:H5'	2.03	0.59
55:CA:1119:C:H2'	55:CA:1120:C:C6	2.33	0.59
55:CA:1172:C:O2'	55:CA:1173:U:H5'	2.01	0.59
55:CA:1206:G:H2'	55:CA:1207:G:O4'	2.02	0.59
24:DA:633:A:O5'	24:DA:633:A:H8	1.86	0.59
24:DA:1313:U:C6	24:DA:1610:A:H8	2.19	0.59
24:DA:1439:A:N1	24:DA:1552:A:C8	2.71	0.59
24:DA:1645:G:OP1	24:DA:1646:C:H5'	2.03	0.59
24:DA:1683:U:O2'	24:DA:1684:G:C8	2.53	0.59
24:DA:1716:U:O2'	24:DA:1717:A:H5'	2.01	0.59
24:DA:1768:C:O2'	24:DA:1958:C:H4'	2.02	0.59
24:DA:1808:A:N6	47:DX:27:ARG:HD2	2.18	0.59
24:DA:2093:G:N7	24:DA:2225:A:C4	2.70	0.59
24:DA:2142:A:C3'	24:DA:2143:C:H4'	2.31	0.59
56:DB:73:A:N6	45:DV:31:TYR:CE2	2.71	0.59
26:DC:158:GLY:H	26:DC:194:VAL:HG13	1.68	0.59
27:DD:36:GLN:HE21	27:DD:38:LYS:HZ1	1.50	0.59
30:DG:8:VAL:HA	30:DG:68:ARG:HH21	1.67	0.59
38:DO:30:ARG:HG2	38:DO:31:THR:N	2.17	0.59
41:DR:33:VAL:HG23	41:DR:61:ALA:HB3	1.83	0.59
44:DU:44:HIS:HD2	44:DU:57:ILE:HG21	1.66	0.59
44:DU:81:ARG:HD2	44:DU:81:ARG:H	1.66	0.59
44:DU:81:ARG:HB2	44:DU:96:LYS:HD2	1.84	0.59
1:AB:138:ARG:HA	1:AB:141:GLU:OE2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:31:LEU:HD22	21:AA:643:C:H5''	1.85	0.59
17:AR:64:LEU:HB2	17:AR:66:LEU:HG	1.83	0.59
21:AA:512:U:C2	21:AA:513:C:C5	2.90	0.59
21:AA:721:G:H4'	21:AA:722:G:C5'	2.33	0.59
21:AA:1142:G:H2'	21:AA:1143:G:O4'	2.02	0.59
24:BA:288:U:H2'	24:BA:289:G:H8	1.68	0.59
24:BA:609:A:H2'	24:BA:610:C:O4'	2.02	0.59
24:BA:1079:C:C4	24:BA:1080:A:N7	2.70	0.59
24:BA:1513:U:O2'	24:BA:1514:G:H5'	2.02	0.59
24:BA:1676:A:C2	24:BA:1993:U:H5'	2.37	0.59
24:BA:2052:A:OP1	27:BD:145:SER:HA	2.03	0.59
24:BA:2400:G:C5	24:BA:2401:U:C5	2.91	0.59
27:BD:47:ALA:HB1	27:BD:82:PHE:O	2.03	0.59
36:BM:1:MET:O	36:BM:2:LEU:CB	2.49	0.59
48:BY:42:LEU:O	48:BY:45:GLN:O	2.20	0.59
55:CA:147:G:H2'	55:CA:148:G:H8	1.65	0.59
55:CA:534:U:O2'	55:CA:535:A:H5'	2.02	0.59
55:CA:1249:C:H2'	55:CA:1250:A:H5''	1.85	0.59
55:CA:1443:C:H2'	55:CA:1444:U:O4'	2.01	0.59
24:DA:387:U:H4'	24:DA:388:G:O5'	2.02	0.59
24:DA:851:C:O4'	49:DZ:46:MET:HG2	2.02	0.59
24:DA:1337:G:H8	24:DA:1337:G:OP2	1.86	0.59
24:DA:1341:G:O2'	24:DA:1398:C:C5'	2.50	0.59
24:DA:1521:G:C6	24:DA:1522:A:N6	2.71	0.59
24:DA:1945:G:H2'	24:DA:1946:U:C6	2.37	0.59
24:DA:2092:U:H5	24:DA:2226:C:OP2	1.84	0.59
28:DE:131:THR:HG22	28:DE:161:ALA:H	1.67	0.59
30:DG:162:ARG:HB2	30:DG:166:GLU:HB3	1.84	0.59
34:DK:2:ILE:HG22	34:DK:3:GLN:N	2.17	0.59
35:DL:127:VAL:HG13	35:DL:132:ARG:HB2	1.85	0.59
38:DO:79:ALA:HB1	38:DO:114:GLY:HA3	1.84	0.59
45:DV:29:ILE:HG22	45:DV:39:ALA:HA	1.83	0.59
47:DX:53:LYS:HA	47:DX:56:ARG:CB	2.23	0.59
3:AD:196:GLU:C	3:AD:198:LEU:H	2.04	0.59
4:AE:93:VAL:HG11	4:AE:139:THR:HG23	1.85	0.59
5:AF:54:LEU:HD22	5:AF:55:HIS:H	1.67	0.59
8:AI:113:LYS:HG3	8:AI:119:LYS:HA	1.83	0.59
11:AL:89:LEU:HB2	11:AL:92:VAL:CG2	2.32	0.59
11:AL:110:LYS:HB2	21:AA:538:G:H5''	1.85	0.59
21:AA:1180:A:H5''	21:AA:1181:G:OP2	2.02	0.59
21:AA:1395:C:H3'	21:AA:1395:C:OP2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:27:G:H5''	22:AV:27:G:C8	2.37	0.59
24:BA:822:G:C6	24:BA:836:G:C2	2.91	0.59
24:BA:949:G:H2'	24:BA:950:G:H5'	1.84	0.59
24:BA:1343:G:O2'	24:BA:1344:U:H5'	2.03	0.59
24:BA:1539:U:O2'	24:BA:1540:G:O4'	2.20	0.59
24:BA:2259:U:H2'	24:BA:2260:C:C6	2.38	0.59
24:BA:2307:G:C2	24:BA:2311:A:N7	2.71	0.59
24:BA:2726:A:O2'	24:BA:2727:A:H5'	2.02	0.59
24:BA:2795:C:C2	24:BA:2802:G:N2	2.71	0.59
31:BH:68:ARG:HH21	31:BH:69:ALA:HA	1.68	0.59
38:BO:35:ILE:O	38:BO:53:THR:HG23	2.03	0.59
42:BS:12:SER:OG	42:BS:13:SER:N	2.35	0.59
46:BW:23:LYS:HD2	46:BW:24:ARG:H	1.66	0.59
46:BW:39:GLN:HG3	46:BW:42:THR:N	2.18	0.59
51:B1:10:LEU:O	51:B1:19:PHE:HB2	2.03	0.59
3:CD:147:LYS:HD3	3:CD:148:ALA:N	2.18	0.59
7:CH:94:VAL:HB	7:CH:99:GLY:O	2.02	0.59
24:DA:176:A:H3'	24:DA:177:G:N2	2.17	0.59
24:DA:249:C:H4'	24:DA:250:G:O5'	2.03	0.59
24:DA:2460:U:O2'	24:DA:2461:A:O4'	2.12	0.59
24:DA:2577:A:H2	50:D0:1:ALA:N	2.00	0.59
24:DA:2692:G:H2'	24:DA:2693:G:C8	2.38	0.59
24:DA:2836:U:C2	24:DA:2837:A:N7	2.71	0.59
56:DB:46:A:OP1	38:DO:3:LYS:HD2	2.02	0.59
26:DC:8:THR:O	26:DC:9:SER:CB	2.50	0.59
28:DE:149:ILE:HG23	28:DE:188:MET:CA	2.32	0.59
33:DJ:45:THR:C	33:DJ:47:HIS:N	2.56	0.59
36:DM:8:LYS:HA	36:DM:8:LYS:HE3	1.84	0.59
39:DP:5:LYS:HE2	39:DP:9:GLN:HE22	1.67	0.59
43:DT:28:ASN:HB2	43:DT:87:LEU:HB3	1.83	0.59
53:D3:32:LEU:HA	53:D3:35:LYS:HG3	1.84	0.59
2:AC:110:LEU:HD21	2:AC:143:LEU:HD23	1.85	0.59
4:AE:156:ARG:HA	7:AH:63:LYS:HE2	1.84	0.59
8:AI:105:ARG:HH21	21:AA:1117:A:H5''	1.67	0.59
21:AA:602:A:H2'	21:AA:603:U:C6	2.37	0.59
21:AA:842:U:H3'	21:AA:843:U:C5'	2.32	0.59
21:AA:1103:C:O2'	21:AA:1104:G:O5'	2.21	0.59
22:AV:35:A:C2	22:AV:36:A:C8	2.91	0.59
24:BA:995:C:O2'	24:BA:996:A:P	2.60	0.59
24:BA:1050:A:C2	24:BA:2751:G:C5	2.90	0.59
24:BA:1555:G:C6	24:BA:1556:C:N4	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1585:C:O5'	24:BA:1585:C:H6	1.86	0.59
24:BA:2312:U:H2'	24:BA:2313:C:H5'	1.85	0.59
25:BB:40:U:O2'	25:BB:43:C:H5	1.86	0.59
33:BJ:11:VAL:HG11	33:BJ:50:THR:HA	1.84	0.59
36:BM:8:LYS:HD2	36:BM:8:LYS:N	2.18	0.59
43:BT:73:ARG:HB3	43:BT:73:ARG:CZ	2.33	0.59
46:BW:43:LYS:HG3	46:BW:79:ILE:HD11	1.82	0.59
3:CD:57:LYS:HE2	3:CD:58:GLN:OE1	2.03	0.59
4:CE:96:GLN:OE1	4:CE:123:LEU:HD12	2.03	0.59
12:CM:97:ARG:CZ	55:CA:1308:U:C5	2.85	0.59
55:CA:13:U:HO2'	55:CA:14:U:P	2.24	0.59
55:CA:397:A:N7	55:CA:547:A:O2'	2.36	0.59
55:CA:425:G:H2'	55:CA:426:U:H6	1.68	0.59
55:CA:432:A:H2'	55:CA:433:G:O4'	2.02	0.59
55:CA:436:C:C2	55:CA:437:U:C5	2.90	0.59
55:CA:519:C:C2'	55:CA:520:A:C8	2.84	0.59
55:CA:564:C:O2'	55:CA:565:U:H5'	2.03	0.59
55:CA:817:C:H1'	55:CA:819:A:H5'	1.84	0.59
55:CA:1116:U:O2'	55:CA:1117:A:H5'	2.03	0.59
22:CV:40:C:H2'	22:CV:41:C:C6	2.38	0.59
24:DA:1001:A:C8	24:DA:1002:G:C8	2.90	0.59
24:DA:1746:A:H2'	24:DA:1747:U:C6	2.38	0.59
24:DA:2324:U:H5'	24:DA:2325:G:C5'	2.26	0.59
24:DA:2415:G:C2	24:DA:2416:C:C2	2.91	0.59
24:DA:2493:U:C2'	24:DA:2494:G:H5''	2.32	0.59
31:DH:27:ARG:HB2	31:DH:27:ARG:HH21	1.67	0.59
34:DK:18:ARG:HB2	34:DK:45:GLU:HB2	1.84	0.59
44:DU:35:VAL:HB	44:DU:38:ILE:HD13	1.85	0.59
1:AB:94:ARG:HG2	21:AA:1100:C:P	2.43	0.59
4:AE:113:VAL:HG11	4:AE:136:VAL:HG23	1.84	0.59
7:AH:85:TYR:CD2	7:AH:123:GLU:HB2	2.37	0.59
11:AL:2:THR:HB	11:AL:5:GLN:CG	2.33	0.59
21:AA:228:A:H2'	21:AA:229:U:H6	1.68	0.59
21:AA:654:G:O2'	21:AA:655:A:H5'	2.03	0.59
21:AA:996:A:H2'	21:AA:997:U:H6	1.68	0.59
21:AA:1021:A:C2'	21:AA:1022:A:H5''	2.32	0.59
21:AA:1251:A:H2'	21:AA:1252:A:C8	2.38	0.59
21:AA:1360:A:H2'	21:AA:1361:G:C8	2.38	0.59
21:AA:1415:G:O2'	21:AA:1416:G:H5'	2.03	0.59
24:BA:554:U:C4	24:BA:555:G:C6	2.90	0.59
24:BA:858:G:N2	24:BA:2268:A:H2'	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1343:G:C4	24:BA:1344:U:C5	2.90	0.59
24:BA:1361:G:C4	24:BA:1371:G:N2	2.71	0.59
24:BA:2683:C:O2	34:BK:70:ARG:NH2	2.33	0.59
24:BA:2790:U:H4'	24:BA:2791:G:OP1	2.00	0.59
24:BA:2834:G:H2'	24:BA:2879:A:N6	2.18	0.59
27:BD:118:PHE:O	27:BD:120:GLY:N	2.36	0.59
30:BG:72:ASN:O	30:BG:76:ILE:HG22	2.03	0.59
30:BG:86:LEU:HB3	30:BG:162:ARG:O	2.03	0.59
36:BM:42:THR:OG1	36:BM:45:GLN:HG3	2.03	0.59
37:BN:23:ASN:H	37:BN:23:ASN:ND2	1.99	0.59
39:BP:80:VAL:HG12	39:BP:81:ASP:N	2.17	0.59
40:BQ:6:GLY:HA2	40:BQ:9:ALA:CB	2.31	0.59
40:BQ:63:ARG:HH22	40:BQ:96:ASP:CB	2.15	0.59
46:BW:35:ILE:O	46:BW:37:VAL:N	2.36	0.59
1:CB:20:ARG:HG3	55:CA:831:A:OP1	2.02	0.59
5:CF:8:PHE:HE2	5:CF:62:MET:CE	2.15	0.59
6:CG:116:ALA:O	6:CG:120:ALA:HB3	2.03	0.59
55:CA:880:C:H2'	55:CA:881:G:H5'	1.85	0.59
55:CA:938:A:N6	55:CA:939:G:C6	2.71	0.59
55:CA:1157:A:H1'	55:CA:1181:G:C2	2.37	0.59
55:CA:1194:U:H2'	55:CA:1195:C:H6	1.66	0.59
24:DA:46:G:N2	24:DA:47:C:C2	2.71	0.59
24:DA:300:A:H1'	24:DA:333:G:H21	1.68	0.59
24:DA:810:U:O2'	24:DA:811:U:H5	1.86	0.59
24:DA:1079:C:H41	24:DA:1088:A:C5'	2.15	0.59
24:DA:2485:G:O2'	24:DA:2486:C:H5'	2.03	0.59
24:DA:2660:A:H2	24:DA:2661:G:C8	2.21	0.59
56:DB:24:G:H1'	56:DB:27:C:H42	1.68	0.59
33:DJ:45:THR:C	33:DJ:47:HIS:H	2.06	0.59
33:DJ:59:ALA:O	33:DJ:62:VAL:HG12	2.03	0.59
37:DN:33:ILE:HG23	37:DN:114:GLU:HB2	1.83	0.59
38:DO:23:ALA:HB1	38:DO:90:VAL:HG12	1.85	0.59
3:AD:90:LEU:O	3:AD:93:LEU:HB2	2.03	0.58
15:AP:1:MET:HB2	21:AA:135:C:C2	2.38	0.58
21:AA:267:C:O2'	21:AA:268:U:H5'	2.02	0.58
21:AA:922:G:H2'	21:AA:923:A:H8	1.68	0.58
21:AA:1342:C:H2'	21:AA:1343:G:C8	2.38	0.58
21:AA:1418:A:H3'	21:AA:1418:A:C8	2.37	0.58
24:BA:222:A:C6	24:BA:224:U:O2	2.56	0.58
24:BA:580:U:H2'	24:BA:581:C:H6	1.68	0.58
24:BA:914:G:H5''	24:BA:914:G:H8	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:946:C:H2'	24:BA:947:A:H8	1.68	0.58
24:BA:1140:C:OP1	33:BJ:25:LEU:O	2.21	0.58
24:BA:2297:A:N7	24:BA:2320:U:N3	2.51	0.58
24:BA:2352:A:N1	46:BW:30:VAL:HG21	2.18	0.58
24:BA:2393:U:H5'	35:BL:60:ARG:O	2.03	0.58
24:BA:2650:U:H2'	24:BA:2651:C:C6	2.38	0.58
24:BA:2714:G:P	59:BA:3555:HOH:O	2.61	0.58
27:BD:45:TYR:H	27:BD:45:TYR:HD1	1.50	0.58
27:BD:190:LYS:O	27:BD:190:LYS:HG3	2.03	0.58
28:BE:131:THR:HG22	28:BE:160:ALA:HA	1.84	0.58
1:CB:79:VAL:HG13	1:CB:80:LYS:N	2.17	0.58
1:CB:81:ASP:CG	1:CB:82:ALA:H	2.04	0.58
1:CB:114:LYS:HA	1:CB:117:GLU:CG	2.28	0.58
4:CE:36:THR:O	4:CE:47:PHE:HB2	2.03	0.58
11:CL:6:LEU:HA	11:CL:9:LYS:O	2.04	0.58
55:CA:82:G:C2	55:CA:83:C:O2'	2.55	0.58
55:CA:599:C:H2'	55:CA:600:A:C8	2.37	0.58
55:CA:977:A:O2'	55:CA:1223:C:N4	2.29	0.58
24:DA:990:A:O2'	24:DA:991:C:H5''	2.03	0.58
24:DA:1056:G:H1'	24:DA:1103:A:N6	2.18	0.58
24:DA:1998:A:O3'	24:DA:2724:U:H4'	2.03	0.58
24:DA:2327:A:H2'	24:DA:2328:A:C8	2.38	0.58
24:DA:2508:G:C2	24:DA:2582:G:C6	2.91	0.58
24:DA:2626:C:O2'	24:DA:2627:G:H5'	2.02	0.58
27:DD:79:LEU:N	27:DD:79:LEU:HD22	2.18	0.58
43:DT:43:ILE:CG2	43:DT:58:VAL:HG11	2.32	0.58
6:AG:144:ALA:C	6:AG:146:ALA:N	2.54	0.58
6:AG:149:ALA:HB1	10:AK:58:THR:OG1	2.03	0.58
15:AP:28:ARG:HH11	15:AP:29:ASN:HD21	1.50	0.58
18:AS:76:THR:HG21	21:AA:1221:G:H4'	1.84	0.58
21:AA:336:A:O2'	21:AA:1469:C:H1'	2.04	0.58
21:AA:937:A:C5	21:AA:938:A:N7	2.71	0.58
21:AA:1084:G:C6	21:AA:1085:U:O4	2.56	0.58
21:AA:1201:A:H5'	21:AA:1203:C:OP2	2.03	0.58
21:AA:1340:A:H4'	22:AV:31:A:O2'	2.03	0.58
24:BA:387:U:C4'	24:BA:388:G:H5''	2.31	0.58
24:BA:918:A:C6	24:BA:919:U:H1'	2.38	0.58
24:BA:1106:G:C2	24:BA:1107:G:C8	2.91	0.58
24:BA:1269:A:H8	24:BA:1269:A:O5'	1.86	0.58
24:BA:1289:C:H2'	24:BA:1290:C:C6	2.38	0.58
24:BA:1553:A:C8	24:BA:1555:G:C6	2.91	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BC:255:LYS:C	26:BC:257:ARG:H	2.07	0.58
36:BM:64:TRP:CZ3	36:BM:106:ASP:HB2	2.39	0.58
36:BM:72:PRO:O	36:BM:91:TYR:O	2.21	0.58
37:BN:73:ASN:CA	37:BN:76:VAL:HG12	2.31	0.58
38:BO:111:ARG:O	38:BO:113:ALA:N	2.36	0.58
39:BP:19:PHE:O	39:BP:20:ARG:CB	2.50	0.58
45:BV:61:LEU:O	45:BV:71:LYS:HA	2.03	0.58
50:B0:9:ARG:CZ	50:B0:9:ARG:HB3	2.33	0.58
9:CJ:57:VAL:HG22	9:CJ:58:ASN:N	2.16	0.58
55:CA:283:U:H2'	55:CA:284:C:H6	1.66	0.58
55:CA:563:A:N3	55:CA:563:A:C2'	2.66	0.58
55:CA:1051:C:O2'	55:CA:1052:U:O5'	2.21	0.58
55:CA:1134:G:C5	55:CA:1135:U:H1'	2.38	0.58
55:CA:1265:C:H2'	55:CA:1266:G:H5'	1.85	0.58
24:DA:3:U:H2'	24:DA:4:U:C6	2.38	0.58
24:DA:478:A:N6	24:DA:480:A:C6	2.71	0.58
24:DA:674:G:H5''	28:DE:71:GLY:H	1.68	0.58
24:DA:729:G:N3	24:DA:729:G:C2'	2.66	0.58
24:DA:1136:G:O2'	24:DA:1137:G:H8	1.86	0.58
24:DA:1258:U:H2'	24:DA:1259:G:H8	1.66	0.58
24:DA:2623:G:N2	50:D0:18:HIS:CE1	2.71	0.58
24:DA:2816:G:O3'	37:DN:99:LYS:HE3	2.03	0.58
24:DA:2869:G:H2'	24:DA:2870:C:O4'	2.03	0.58
56:DB:83:G:OP1	49:DZ:16:LEU:HD21	2.03	0.58
27:DD:21:SER:O	27:DD:23:PRO:HD3	2.03	0.58
29:DF:11:VAL:HG12	29:DF:12:VAL:N	2.18	0.58
31:DH:24:GLY:O	31:DH:26:ALA:O	2.22	0.58
1:AB:19:THR:HG23	1:AB:20:ARG:H	1.68	0.58
3:AD:36:ALA:HA	3:AD:41:GLY:HA3	1.84	0.58
11:AL:74:GLN:HG3	11:AL:75:GLU:HG2	1.84	0.58
21:AA:957:U:O2	21:AA:959:A:C8	2.56	0.58
21:AA:957:U:O2	21:AA:959:A:H8	1.87	0.58
21:AA:1238:A:C5'	21:AA:1336:C:H41	2.09	0.58
21:AA:1533:C:C3'	21:AA:1534:A:H5''	2.34	0.58
24:BA:63:A:O2'	24:BA:64:A:H5'	2.02	0.58
24:BA:387:U:H4'	24:BA:388:G:C5'	2.33	0.58
24:BA:449:A:H4'	40:BQ:2:ARG:NH1	2.18	0.58
24:BA:786:C:C2'	24:BA:787:C:H5'	2.33	0.58
24:BA:914:G:H5''	24:BA:914:G:C8	2.38	0.58
24:BA:1059:G:C8	24:BA:1060:U:H2'	2.38	0.58
24:BA:1422:G:N3	24:BA:1423:G:C8	2.71	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1914:C:O2'	24:BA:1915:U:H5'	2.04	0.58
27:BD:9:VAL:HG22	27:BD:10:GLY:H	1.67	0.58
27:BD:118:PHE:CD2	27:BD:119:ALA:N	2.71	0.58
33:BJ:42:ALA:O	33:BJ:43:GLU:C	2.40	0.58
34:BK:34:GLY:O	34:BK:35:VAL:C	2.41	0.58
45:BV:80:HIS:CD2	45:BV:82:TYR:H	2.21	0.58
3:CD:88:ASN:O	3:CD:92:LEU:HG	2.03	0.58
5:CF:57:ALA:O	5:CF:59:TYR:HD1	1.87	0.58
8:CI:24:ASN:HB2	8:CI:26:LYS:HZ2	1.68	0.58
12:CM:92:ARG:HA	12:CM:92:ARG:NE	2.18	0.58
55:CA:264:C:H2'	55:CA:265:G:O4'	2.04	0.58
55:CA:369:G:C6	55:CA:393:A:N1	2.71	0.58
55:CA:459:A:H2'	55:CA:460:A:C8	2.38	0.58
55:CA:1125:U:C2	55:CA:1127:G:N7	2.71	0.58
24:DA:374:A:O2'	24:DA:375:G:O4'	2.17	0.58
24:DA:380:G:C2	24:DA:395:U:O2	2.55	0.58
24:DA:474:G:H4'	24:DA:475:C:OP1	2.02	0.58
24:DA:704:G:H2'	24:DA:726:G:N2	2.18	0.58
24:DA:704:G:H1'	24:DA:727:A:H61	1.67	0.58
24:DA:2643:G:C4	24:DA:2644:G:C8	2.91	0.58
24:DA:2686:G:C5	24:DA:2687:U:C4	2.92	0.58
24:DA:2774:C:N4	24:DA:2775:G:C6	2.71	0.58
24:DA:2823:A:H2'	24:DA:2824:C:H5'	1.86	0.58
27:DD:149:ASN:O	27:DD:151:THR:N	2.36	0.58
29:DF:64:PRO:HA	29:DF:88:VAL:CG2	2.33	0.58
31:DH:93:SER:CB	31:DH:121:VAL:HG21	2.34	0.58
31:DH:125:THR:HG22	31:DH:146:VAL:HG11	1.85	0.58
41:DR:87:GLN:HG2	41:DR:88:GLY:H	1.66	0.58
1:AB:46:VAL:HG13	1:AB:49:PHE:CZ	2.39	0.58
5:AF:99:ALA:O	5:AF:100:SER:HB2	2.03	0.58
11:AL:20:VAL:N	11:AL:21:PRO:HD3	2.18	0.58
14:AO:52:ARG:HG3	14:AO:55:LEU:HD23	1.85	0.58
17:AR:63:TYR:HE1	21:AA:734:G:N2	1.94	0.58
21:AA:94:G:C4'	21:AA:95:C:H5''	2.32	0.58
21:AA:251:G:H4'	21:AA:252:U:O5'	2.03	0.58
21:AA:557:G:H2'	21:AA:558:G:O4'	2.03	0.58
21:AA:765:G:C6	21:AA:812:G:C4	2.91	0.58
24:BA:256:A:O2'	24:BA:257:C:H5'	2.04	0.58
24:BA:522:A:C6	24:BA:523:C:N4	2.72	0.58
24:BA:684:G:OP1	52:B2:16:HIS:CD2	2.57	0.58
24:BA:858:G:N3	24:BA:2268:A:H2'	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:976:G:C2	24:BA:977:G:C8	2.91	0.58
24:BA:1333:G:N3	24:BA:1334:G:C8	2.71	0.58
24:BA:1385:A:H1'	24:BA:1386:C:C6	2.38	0.58
24:BA:1388:G:H2'	24:BA:1389:G:C8	2.39	0.58
24:BA:2052:A:N6	24:BA:2618:G:C2	2.72	0.58
24:BA:2665:A:C2	24:BA:2666:C:C6	2.92	0.58
24:BA:2850:A:C2	24:BA:2851:A:C4	2.90	0.58
27:BD:46:ARG:HG3	27:BD:84:LEU:HB2	1.86	0.58
27:BD:89:GLU:HG3	27:BD:94:GLN:OE1	2.03	0.58
32:BI:86:LYS:HD2	32:BI:86:LYS:H	1.67	0.58
33:BJ:38:GLY:C	33:BJ:40:HIS:H	2.06	0.58
42:BS:69:LEU:HG	42:BS:107:VAL:HG13	1.85	0.58
53:B3:21:PHE:O	53:B3:22:LYS:O	2.21	0.58
6:CG:77:ARG:NH1	55:CA:1381:U:C4	2.71	0.58
6:CG:116:ALA:C	6:CG:120:ALA:HB3	2.24	0.58
8:CI:33:SER:OG	8:CI:36:GLN:HG2	2.03	0.58
12:CM:82:LEU:CD2	18:CS:60:PHE:HB3	2.33	0.58
13:CN:50:LEU:HB2	13:CN:51:PRO:HD3	1.84	0.58
55:CA:131:A:C2	55:CA:132:C:N3	2.72	0.58
55:CA:517:G:H5'	55:CA:519:C:C2	2.39	0.58
55:CA:794:A:H2'	55:CA:795:C:C6	2.38	0.58
55:CA:953:G:H2'	55:CA:954:G:O4'	2.04	0.58
55:CA:1417:G:N2	55:CA:1484:C:C4	2.72	0.58
24:DA:7:G:H2'	24:DA:8:C:O4'	2.02	0.58
24:DA:79:C:H2'	24:DA:80:G:O4'	2.04	0.58
24:DA:240:C:H3'	24:DA:241:A:H5''	1.86	0.58
24:DA:720:U:H2'	24:DA:721:A:C8	2.37	0.58
24:DA:832:U:O2'	24:DA:833:A:O4'	2.19	0.58
24:DA:878:A:H4'	24:DA:898:C:N4	2.19	0.58
24:DA:1021:A:O2'	24:DA:1022:G:H4'	2.03	0.58
24:DA:1049:C:O2'	24:DA:1050:A:H5'	2.04	0.58
24:DA:1075:C:O2'	24:DA:1076:C:C5'	2.51	0.58
24:DA:2660:A:H2	24:DA:2661:G:C5	2.21	0.58
26:DC:62:ARG:HG2	26:DC:62:ARG:NH2	2.18	0.58
26:DC:131:MET:HG2	26:DC:134:ILE:HD11	1.84	0.58
28:DE:136:GLN:HA	28:DE:139:LYS:HG2	1.85	0.58
30:DG:163:TYR:HD2	30:DG:163:TYR:N	2.02	0.58
31:DH:78:VAL:HB	31:DH:144:VAL:HA	1.85	0.58
34:DK:71:ARG:CB	34:DK:72:PRO:HD3	2.22	0.58
38:DO:62:LEU:HD11	38:DO:65:THR:N	2.18	0.58
43:DT:29:THR:N	43:DT:87:LEU:HB2	2.16	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:50:VAL:O	7:AH:50:VAL:HG13	2.04	0.58
10:AK:20:ALA:HB3	10:AK:83:VAL:HA	1.84	0.58
19:AT:24:ARG:O	19:AT:28:ARG:HG2	2.03	0.58
24:BA:181:A:H2'	24:BA:182:A:H8	1.67	0.58
24:BA:1027:A:N1	24:BA:1126:A:H1'	2.17	0.58
24:BA:1257:C:O2'	28:BE:79:ARG:N	2.36	0.58
24:BA:1340:U:C6	24:BA:1603:A:H5'	2.38	0.58
24:BA:2585:U:O2'	24:BA:2586:U:H5'	2.04	0.58
25:BB:42:C:O2'	25:BB:43:C:H5'	2.03	0.58
2:CC:180:ASP:OD2	2:CC:203:LYS:HB2	2.04	0.58
2:CC:181:ILE:HG12	2:CC:202:PHE:HB2	1.85	0.58
6:CG:63:VAL:O	6:CG:67:ASN:HB2	2.03	0.58
11:CL:42:LYS:HG2	11:CL:43:LYS:H	1.68	0.58
55:CA:31:G:C5	55:CA:306:A:H1'	2.39	0.58
55:CA:382:A:O2'	55:CA:383:A:H5'	2.03	0.58
55:CA:1245:C:H2'	55:CA:1246:A:H8	1.68	0.58
55:CA:1406:U:H1'	55:CA:1518:A:H4'	1.85	0.58
24:DA:277:G:H2'	24:DA:361:G:C6	2.39	0.58
24:DA:1073:A:H3'	24:DA:1074:G:H8	1.69	0.58
24:DA:2315:G:C2	24:DA:2316:G:C4	2.91	0.58
24:DA:2446:G:C2	24:DA:2501:C:C5	2.92	0.58
24:DA:2687:U:C4	24:DA:2688:G:C6	2.90	0.58
24:DA:2756:U:H1'	24:DA:2757:A:H5''	1.85	0.58
26:DC:147:PRO:HA	26:DC:187:CYS:HB3	1.85	0.58
30:DG:70:LEU:O	30:DG:74:MET:HB2	2.03	0.58
31:DH:41:LYS:H	31:DH:44:ILE:HG23	1.68	0.58
1:AB:140:LEU:O	1:AB:144:GLU:HG2	2.03	0.58
6:AG:34:LYS:HD3	6:AG:37:THR:HG21	1.86	0.58
7:AH:74:ILE:CD1	7:AH:128:VAL:HG22	2.33	0.58
20:AU:39:LYS:N	20:AU:40:PRO:HD2	2.19	0.58
21:AA:833:G:N2	21:AA:854:U:H1'	2.19	0.58
21:AA:1065:U:H5''	21:AA:1190:G:H21	1.69	0.58
21:AA:1251:A:H2'	21:AA:1252:A:H8	1.68	0.58
21:AA:1338:G:C2	21:AA:1339:A:C4	2.91	0.58
21:AA:1463:U:C2	21:AA:1464:U:C5	2.92	0.58
24:BA:494:G:N2	42:BS:57:ASN:HD21	2.00	0.58
24:BA:522:A:N6	24:BA:523:C:N4	2.51	0.58
24:BA:638:G:C5	24:BA:651:G:N2	2.72	0.58
24:BA:856:G:N2	24:BA:857:G:C2	2.71	0.58
24:BA:1127:A:O2'	24:BA:1128:G:H5'	2.02	0.58
24:BA:2021:C:OP1	50:B0:8:THR:HG21	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2047:C:C2'	24:BA:2048:G:H5'	2.33	0.58
24:BA:2682:A:C8	27:BD:11:MET:HG3	2.38	0.58
28:BE:148:ILE:HA	28:BE:187:VAL:HB	1.85	0.58
41:BR:47:VAL:HG12	41:BR:47:VAL:O	2.03	0.58
46:BW:9:THR:OG1	46:BW:10:ARG:N	2.35	0.58
1:CB:89:PHE:HB3	1:CB:149:GLY:O	2.03	0.58
3:CD:127:ARG:CZ	3:CD:127:ARG:HB2	2.31	0.58
3:CD:190:LEU:O	3:CD:190:LEU:HD23	2.03	0.58
4:CE:45:VAL:HB	4:CE:117:ALA:HB2	1.86	0.58
5:CF:35:LYS:HE2	5:CF:37:HIS:HE1	1.68	0.58
55:CA:512:U:HO2'	55:CA:513:C:H6	1.51	0.58
55:CA:539:A:H2'	55:CA:540:G:C8	2.38	0.58
55:CA:672:U:H2'	55:CA:673:A:H8	1.68	0.58
55:CA:721:G:H4'	55:CA:722:G:H5''	1.86	0.58
24:DA:583:G:C6	24:DA:584:C:C4	2.92	0.58
24:DA:848:C:H2'	24:DA:849:A:C8	2.38	0.58
24:DA:1055:G:H2'	24:DA:1056:G:H5'	1.85	0.58
24:DA:1087:G:C5	24:DA:1089:A:C2	2.92	0.58
24:DA:1289:C:O2'	24:DA:1290:C:H6	1.86	0.58
24:DA:1552:A:H2	24:DA:1553:A:C8	2.21	0.58
24:DA:1826:G:C6	24:DA:1827:U:C4	2.90	0.58
24:DA:2300:C:H2'	24:DA:2301:C:C6	2.39	0.58
24:DA:2788:C:H2'	24:DA:2789:C:C6	2.39	0.58
34:DK:63:VAL:HG21	34:DK:85:VAL:HG23	1.85	0.58
1:AB:24:PRO:HG2	21:AA:829:G:O2'	2.04	0.58
2:AC:178:ARG:HD3	21:AA:1112:C:H1'	1.86	0.58
7:AH:86:LYS:HD3	7:AH:124:ILE:HD11	1.84	0.58
8:AI:7:GLY:HA3	8:AI:85:ALA:HB2	1.84	0.58
8:AI:21:LYS:NZ	8:AI:23:GLY:HA3	2.18	0.58
19:AT:25:SER:HB3	21:AA:1458:G:H5''	1.86	0.58
21:AA:116:A:H2'	21:AA:117:G:C8	2.38	0.58
21:AA:814:A:C8	21:AA:816:A:C8	2.91	0.58
21:AA:1022:A:H2'	21:AA:1023:U:O4'	2.04	0.58
21:AA:1338:G:H2'	21:AA:1339:A:H8	1.68	0.58
23:AW:4:U:O2'	23:AW:5:U:H5'	2.03	0.58
24:BA:704:G:C2'	24:BA:726:G:H22	2.17	0.58
24:BA:860:U:H2'	24:BA:861:A:H8	1.69	0.58
24:BA:1587:G:H8	24:BA:1587:G:OP2	1.87	0.58
24:BA:1660:G:H2'	24:BA:1661:G:H8	1.69	0.58
24:BA:1700:A:H2'	24:BA:1701:A:O4'	2.03	0.58
24:BA:2581:G:C8	24:BA:2610:C:N4	2.71	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2627:G:H2'	24:BA:2628:C:H6	1.67	0.58
24:BA:2783:U:H2'	24:BA:2784:U:C6	2.37	0.58
27:BD:140:HIS:CE1	59:BD:402:HOH:O	2.53	0.58
30:BG:162:ARG:NH1	30:BG:168:VAL:HG21	2.18	0.58
32:BI:58:ILE:O	32:BI:60:VAL:HG23	2.03	0.58
6:CG:45:ALA:HB1	6:CG:120:ALA:CB	2.22	0.58
6:CG:108:ARG:CZ	55:CA:1240:U:C6	2.87	0.58
7:CH:65:PHE:CD2	7:CH:66:GLN:HG2	2.38	0.58
55:CA:1242:G:C2'	55:CA:1243:C:O5'	2.52	0.58
24:DA:345:A:O2'	24:DA:346:A:C2	2.53	0.58
24:DA:371:A:H61	24:DA:401:A:H3'	1.68	0.58
24:DA:1090:A:H2'	24:DA:1091:G:H5''	1.85	0.58
24:DA:1476:U:O2'	24:DA:1477:A:P	2.61	0.58
24:DA:2077:A:C8	24:DA:2435:A:C4	2.91	0.58
24:DA:2084:C:H2'	24:DA:2085:U:H6	1.67	0.58
24:DA:2253:G:C6	24:DA:2254:C:C4	2.92	0.58
24:DA:2653:U:C4	24:DA:2654:A:C6	2.92	0.58
24:DA:2748:A:C1'	30:DG:66:THR:HG22	2.27	0.58
29:DF:109:ARG:NH1	29:DF:135:ILE:CG2	2.66	0.58
30:DG:8:VAL:HB	30:DG:49:LEU:HB3	1.86	0.58
33:DJ:111:LYS:HB2	33:DJ:115:GLY:H	1.69	0.58
34:DK:1:MET:HB2	34:DK:32:TYR:HB3	1.85	0.58
51:D1:34:GLU:HG3	51:D1:49:LYS:HB2	1.85	0.58
1:AB:209:VAL:HB	1:AB:213:LEU:HB2	1.85	0.58
4:AE:41:GLY:HA2	4:AE:116:VAL:O	2.03	0.58
8:AI:50:PRO:HG3	8:AI:82:ILE:HD12	1.85	0.58
13:AN:81:ILE:O	13:AN:85:GLU:HG2	2.03	0.58
17:AR:37:LYS:HB3	21:AA:719:C:H1'	1.85	0.58
21:AA:33:A:H2'	21:AA:34:C:H6	1.69	0.58
21:AA:794:A:O2'	21:AA:795:C:H5'	2.03	0.58
21:AA:1062:U:H2'	21:AA:1063:C:C5	2.37	0.58
21:AA:1518:A:H2'	21:AA:1519:A:C8	2.38	0.58
24:BA:1416:G:O2'	24:BA:1417:C:O5'	2.22	0.58
29:BF:165:GLY:O	29:BF:168:LEU:HB3	2.04	0.58
36:BM:35:ALA:O	36:BM:128:THR:HA	2.04	0.58
43:BT:43:ILE:O	43:BT:47:VAL:HG23	2.04	0.58
54:B4:25:VAL:HG11	54:B4:35:GLN:HE21	1.68	0.58
1:CB:139:GLU:HG3	1:CB:140:LEU:N	2.19	0.58
4:CE:76:ASN:HB2	4:CE:81:GLN:HE22	1.68	0.58
4:CE:94:PHE:CZ	4:CE:95:MET:O	2.57	0.58
10:CK:21:HIS:HD2	10:CK:34:THR:HG21	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:936:C:H2'	55:CA:937:A:C8	2.39	0.58
55:CA:1502:A:O2'	55:CA:1503:A:P	2.62	0.58
24:DA:54:G:C6	24:DA:55:G:N7	2.72	0.58
24:DA:508:A:H62	42:DS:9:HIS:CE1	2.22	0.58
24:DA:555:G:H8	24:DA:555:G:OP2	1.85	0.58
24:DA:576:U:H2'	24:DA:577:G:H8	1.67	0.58
24:DA:646:U:H2'	24:DA:647:G:O4'	2.04	0.58
24:DA:1113:U:O2'	24:DA:1114:C:C6	2.50	0.58
24:DA:1443:U:H2'	24:DA:1444:G:H8	1.68	0.58
24:DA:1965:C:C5'	24:DA:1966:A:H5''	2.34	0.58
24:DA:2335:A:H2'	24:DA:2337:G:N7	2.19	0.58
28:DE:60:TRP:CZ2	28:DE:71:GLY:HA2	2.39	0.58
30:DG:163:TYR:N	30:DG:163:TYR:CD2	2.72	0.58
34:DK:40:LYS:NZ	34:DK:89:ASN:HD21	2.02	0.58
37:DN:56:LYS:HA	37:DN:84:GLY:HA2	1.86	0.58
44:DU:45:GLN:HA	44:DU:45:GLN:HE21	1.67	0.58
45:DV:79:ARG:HB3	45:DV:79:ARG:CZ	2.34	0.58
46:DW:19:ARG:HA	46:DW:34:SER:HA	1.86	0.58
3:AD:173:ASP:CG	3:AD:174:ALA:N	2.56	0.58
16:AQ:58:VAL:HG23	16:AQ:76:ARG:O	2.04	0.58
21:AA:228:A:H2'	21:AA:229:U:O4'	2.04	0.58
21:AA:978:A:OP2	21:AA:1362:A:N6	2.37	0.58
21:AA:1341:U:O2'	21:AA:1342:C:H5'	2.04	0.58
21:AA:1349:A:C6	21:AA:1374:A:C8	2.92	0.58
24:BA:548:G:H5''	24:BA:549:G:H5'	1.86	0.58
24:BA:655:A:O2'	24:BA:656:G:C8	2.57	0.58
24:BA:666:A:O2'	24:BA:667:U:H5'	2.02	0.58
24:BA:745:G:C2'	24:BA:746:U:H5'	2.32	0.58
24:BA:1060:U:O4'	24:BA:1062:G:C5'	2.52	0.58
24:BA:1447:C:H1'	24:BA:1545:A:H1'	1.84	0.58
24:BA:1680:U:H2'	24:BA:1681:G:O4'	2.03	0.58
24:BA:2075:U:H2'	24:BA:2238:G:H22	1.68	0.58
27:BD:14:ILE:O	27:BD:14:ILE:HG13	2.03	0.58
30:BG:26:LYS:HB3	30:BG:32:LEU:HG	1.86	0.58
31:BH:68:ARG:NH2	31:BH:69:ALA:HA	2.18	0.58
36:BM:36:VAL:HG22	45:BV:82:TYR:CD1	2.37	0.58
39:BP:50:ARG:HD3	39:BP:51:ASN:H	1.68	0.58
1:CB:44:LYS:O	1:CB:48:MET:HG3	2.04	0.58
5:CF:67:PRO:O	5:CF:70:VAL:HG22	2.03	0.58
5:CF:92:THR:O	5:CF:93:LYS:HG2	2.03	0.58
9:CJ:59:LYS:HB2	9:CJ:62:ARG:NH2	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:62:ARG:NH1	55:CA:1366:C:O3'	2.36	0.58
9:CJ:80:THR:HG22	9:CJ:82:LYS:NZ	2.17	0.58
12:CM:32:ILE:HG13	12:CM:59:VAL:HB	1.84	0.58
13:CN:60:ARG:HG2	13:CN:61:ASN:H	1.69	0.58
17:CR:22:TYR:HE1	17:CR:64:LEU:HD12	1.69	0.58
55:CA:500:G:H2'	55:CA:501:C:C6	2.39	0.58
55:CA:727:G:N2	55:CA:731:G:C4	2.71	0.58
55:CA:996:A:N1	55:CA:1046:A:H5'	2.18	0.58
24:DA:391:A:H2'	24:DA:392:U:C6	2.39	0.58
24:DA:804:A:H2'	24:DA:806:C:C4	2.39	0.58
24:DA:1008:A:N6	24:DA:1136:G:C6	2.71	0.58
24:DA:1213:A:H2'	24:DA:1214:A:H8	1.67	0.58
24:DA:1413:A:H2'	24:DA:1414:C:C6	2.39	0.58
24:DA:1552:A:N3	24:DA:1552:A:C2'	2.59	0.58
24:DA:1668:A:H5'	24:DA:1669:A:C5	2.38	0.58
24:DA:2554:U:H2'	24:DA:2555:U:C6	2.38	0.58
24:DA:2567:G:O2'	24:DA:2568:U:H5'	2.03	0.58
24:DA:2716:C:H2'	24:DA:2717:C:C6	2.39	0.58
56:DB:12:C:H5''	56:DB:15:A:N6	2.19	0.58
27:DD:137:SER:C	27:DD:138:LEU:HD22	2.24	0.58
42:DS:31:GLN:O	42:DS:35:ILE:HG12	2.04	0.58
11:AL:82:ARG:N	11:AL:95:HIS:O	2.37	0.58
13:AN:48:GLN:HA	13:AN:48:GLN:HE21	1.69	0.58
21:AA:1365:G:H2'	21:AA:1366:C:C6	2.39	0.58
24:BA:464:U:H2'	24:BA:465:G:O4'	2.03	0.58
24:BA:2023:C:O2'	24:BA:2024:G:C5'	2.50	0.58
24:BA:2683:C:H4'	27:BD:13:ARG:NH2	2.19	0.58
27:BD:47:ALA:HA	27:BD:84:LEU:HG	1.84	0.58
30:BG:84:LYS:HD2	30:BG:133:LYS:HG2	1.86	0.58
31:BH:97:ARG:HH12	55:CA:368:U:P	2.27	0.58
40:BQ:8:ILE:HG13	40:BQ:9:ALA:N	2.18	0.58
40:BQ:71:ASN:OD1	40:BQ:106:THR:HG23	2.04	0.58
44:BU:53:GLN:N	44:BU:54:PRO:CD	2.67	0.58
46:BW:72:GLY:C	46:BW:74:LYS:N	2.54	0.58
54:B4:9:LYS:H	54:B4:9:LYS:CE	2.16	0.58
3:CD:90:LEU:HD11	3:CD:194:ILE:CD1	2.34	0.58
6:CG:114:SER:O	6:CG:118:ARG:HG3	2.03	0.58
7:CH:7:ALA:O	7:CH:11:THR:HG23	2.02	0.58
8:CI:40:ARG:HG3	8:CI:44:ARG:NH1	2.18	0.58
12:CM:86:ARG:HD3	12:CM:96:VAL:HG21	1.84	0.58
19:CT:70:LYS:HA	19:CT:73:ARG:HE	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:68:G:H1'	55:CA:151:A:H61	1.68	0.58
55:CA:129:A:O2'	55:CA:130:A:C8	2.56	0.58
55:CA:875:U:O2'	55:CA:876:C:O5'	2.21	0.58
24:DA:123:G:N2	24:DA:124:G:H1'	2.18	0.58
24:DA:170:U:H2'	24:DA:171:U:C6	2.38	0.58
24:DA:1326:U:O2'	24:DA:1327:A:H8	1.76	0.58
24:DA:1327:A:O2'	24:DA:1328:A:O4'	2.11	0.58
24:DA:1331:G:C4	24:DA:1333:G:N7	2.72	0.58
24:DA:2210:U:H4'	24:DA:2211:A:C5'	2.34	0.58
24:DA:2554:U:H2'	24:DA:2555:U:H6	1.69	0.58
56:DB:13:G:N2	56:DB:69:G:H21	2.01	0.58
56:DB:66:A:H4'	56:DB:67:G:C8	2.39	0.58
26:DC:127:ASN:O	26:DC:190:THR:HA	2.04	0.58
27:DD:208:LYS:O	27:DD:209:ALA:CB	2.52	0.58
28:DE:150:THR:O	28:DE:192:ALA:HB2	2.04	0.58
34:DK:17:ARG:CG	34:DK:18:ARG:H	2.17	0.58
40:DQ:89:ILE:HG22	40:DQ:91:ARG:H	1.68	0.58
40:DQ:101:ASP:HB2	41:DR:2:TYR:OH	2.04	0.58
44:DU:3:LYS:HD3	44:DU:82:VAL:HG21	1.85	0.58
1:AB:161:PHE:HA	1:AB:183:PHE:O	2.04	0.57
2:AC:149:LYS:HG3	2:AC:200:TRP:HB2	1.85	0.57
3:AD:98:ASP:HB3	3:AD:114:ARG:HG2	1.85	0.57
21:AA:71:A:C5	21:AA:100:G:C5	2.92	0.57
21:AA:874:G:C6	21:AA:875:U:C4	2.92	0.57
21:AA:1348:U:O2'	21:AA:1349:A:H8	1.86	0.57
24:BA:60:G:N3	24:BA:74:A:C2	2.72	0.57
24:BA:176:A:N7	24:BA:177:G:C6	2.72	0.57
24:BA:505:A:O2'	24:BA:506:G:H5'	2.04	0.57
24:BA:2020:A:O2'	24:BA:2021:C:H3'	2.03	0.57
24:BA:2079:U:O3'	47:BX:20:ALA:HB2	2.04	0.57
24:BA:2552:U:O2	24:BA:2554:U:H5'	2.04	0.57
27:BD:91:THR:O	27:BD:93:GLY:N	2.35	0.57
29:BF:30:VAL:CG1	29:BF:96:TRP:CH2	2.87	0.57
33:BJ:101:ILE:O	33:BJ:105:VAL:CG1	2.51	0.57
39:BP:30:TRP:CH2	39:BP:39:LEU:HD11	2.39	0.57
3:CD:125:ASN:N	3:CD:141:VAL:O	2.35	0.57
8:CI:44:ARG:HA	8:CI:46:VAL:HG22	1.86	0.57
12:CM:1:ALA:H3	12:CM:2:ARG:CD	2.17	0.57
16:CQ:4:ILE:HG22	16:CQ:5:ARG:N	2.18	0.57
55:CA:557:G:C6	55:CA:558:G:N1	2.72	0.57
55:CA:1513:A:H2'	55:CA:1514:G:H8	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:75:G:O2'	24:DA:76:C:C6	2.56	0.57
24:DA:397:U:O2'	24:DA:398:C:O4'	2.12	0.57
24:DA:975:A:C4	24:DA:990:A:N7	2.72	0.57
24:DA:1068:G:H2'	24:DA:1069:A:C8	2.38	0.57
24:DA:1623:G:C2	24:DA:1624:U:C6	2.91	0.57
24:DA:1950:G:N1	24:DA:1954:G:C8	2.72	0.57
24:DA:2212:A:C8	24:DA:2214:C:N4	2.72	0.57
24:DA:2812:G:C2	24:DA:2813:A:C4	2.92	0.57
56:DB:57:A:H2'	56:DB:58:A:C8	2.39	0.57
27:DD:53:GLY:HA3	27:DD:77:ARG:HG3	1.86	0.57
27:DD:118:PHE:CD1	27:DD:119:ALA:N	2.72	0.57
28:DE:153:LEU:HB2	28:DE:171:ASP:HB3	1.86	0.57
29:DF:35:LEU:HA	29:DF:152:ASP:O	2.03	0.57
29:DF:101:ARG:HH11	29:DF:138:PRO:HB3	1.69	0.57
53:D3:3:ILE:HG21	53:D3:62:PRO:HG2	1.86	0.57
1:AB:14:HIS:O	1:AB:14:HIS:CG	2.56	0.57
1:AB:24:PRO:HB3	21:AA:829:G:O3'	2.03	0.57
3:AD:29:THR:O	3:AD:30:LYS:HE2	2.04	0.57
8:AI:112:ARG:HH22	9:AJ:64:GLN:HE22	1.52	0.57
11:AL:49:ARG:HH21	21:AA:522:C:H41	1.51	0.57
21:AA:178:C:H2'	21:AA:179:A:H8	1.69	0.57
21:AA:774:G:C6	21:AA:775:G:C5	2.93	0.57
24:BA:747:U:C4	24:BA:2613:U:C4	2.92	0.57
24:BA:811:U:H1'	24:BA:1251:C:C6	2.39	0.57
24:BA:856:G:H1'	46:BW:23:LYS:HB3	1.86	0.57
24:BA:928:A:H2'	24:BA:929:U:O4'	2.03	0.57
24:BA:1387:A:H2'	24:BA:1388:G:C8	2.39	0.57
24:BA:2294:G:H5''	38:BO:10:ARG:HD3	1.85	0.57
24:BA:2467:C:O2	36:BM:123:LYS:HE2	2.04	0.57
27:BD:53:GLY:HA3	27:BD:77:ARG:HB2	1.86	0.57
28:BE:48:THR:HG22	28:BE:86:ALA:HB3	1.85	0.57
31:BH:76:GLU:HB3	31:BH:103:VAL:HG12	1.85	0.57
33:BJ:44:TYR:HA	40:BQ:59:LEU:HD21	1.86	0.57
35:BL:55:MET:CE	35:BL:55:MET:HA	2.34	0.57
39:BP:26:GLU:HG3	39:BP:43:GLU:HB2	1.86	0.57
41:BR:6:GLN:HE21	41:BR:9:GLY:HA2	1.69	0.57
41:BR:25:LEU:H	41:BR:94:THR:CG2	2.17	0.57
42:BS:25:ARG:NE	42:BS:73:LYS:NZ	2.52	0.57
42:BS:74:ILE:HD13	42:BS:105:VAL:HG22	1.86	0.57
43:BT:67:VAL:HG12	43:BT:76:ARG:HG3	1.85	0.57
1:CB:99:MET:HA	1:CB:106:VAL:HG21	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:129:PHE:CE2	2:CC:156:LEU:HD13	2.39	0.57
5:CF:86:ARG:HD2	55:CA:673:A:H4'	1.86	0.57
6:CG:61:PHE:O	6:CG:63:VAL:N	2.37	0.57
11:CL:29:LYS:O	11:CL:81:ILE:HG22	2.04	0.57
18:CS:28:LYS:O	18:CS:30:LEU:HD12	2.04	0.57
55:CA:452:A:O2'	55:CA:453:G:O4'	2.20	0.57
55:CA:548:G:H2'	55:CA:549:C:C6	2.39	0.57
55:CA:1077:G:N2	55:CA:1080:A:OP2	2.37	0.57
55:CA:1145:A:O2'	55:CA:1146:A:C8	2.56	0.57
55:CA:1160:G:HO2'	55:CA:1161:C:H6	1.49	0.57
55:CA:1179:A:H2'	55:CA:1180:A:O4'	2.03	0.57
55:CA:1285:A:H4'	55:CA:1286:U:OP1	2.03	0.57
55:CA:1441:A:H2'	55:CA:1442:G:H8	1.69	0.57
55:CA:1530:G:O2'	55:CA:1531:A:C8	2.56	0.57
24:DA:30:G:H4'	24:DA:1214:A:O2'	2.04	0.57
24:DA:45:G:H4'	24:DA:46:G:H5'	1.85	0.57
24:DA:121:G:N2	24:DA:131:A:C4	2.72	0.57
24:DA:233:A:O2'	24:DA:234:U:C6	2.57	0.57
24:DA:719:C:H2'	24:DA:720:U:H6	1.69	0.57
24:DA:777:G:N7	24:DA:793:A:H2	2.02	0.57
24:DA:2227:A:H5''	26:DC:260:LYS:CD	2.34	0.57
24:DA:2358:A:N6	35:DL:54:GLN:HE22	1.97	0.57
24:DA:2595:G:N1	24:DA:2599:G:C6	2.72	0.57
29:DF:16:MET:HA	29:DF:21:TYR:HB2	1.86	0.57
34:DK:76:VAL:HB	39:DP:72:VAL:CG2	2.33	0.57
46:DW:18:LYS:HD3	46:DW:19:ARG:HG2	1.85	0.57
47:DX:31:ASN:H	47:DX:31:ASN:HD22	1.52	0.57
12:AM:22:TYR:HB2	12:AM:65:GLU:HA	1.85	0.57
14:AO:23:SER:HA	21:AA:751:U:H4'	1.86	0.57
20:AU:33:ARG:HE	20:AU:34:ARG:HG3	1.70	0.57
21:AA:324:G:N2	21:AA:326:G:H3'	2.19	0.57
21:AA:1140:C:HO2'	21:AA:1141:C:H6	1.53	0.57
21:AA:1305:G:O2'	21:AA:1306:A:H8	1.87	0.57
22:AX:39:U:H2'	22:AX:40:C:H6	1.69	0.57
24:BA:141:G:H5'	24:BA:142:A:C8	2.39	0.57
24:BA:619:G:H5''	24:BA:620:G:OP2	2.03	0.57
24:BA:653:U:H6	24:BA:653:U:H5''	1.69	0.57
24:BA:827:U:OP2	24:BA:828:U:N3	2.37	0.57
24:BA:838:C:C5	24:BA:941:A:N6	2.72	0.57
24:BA:954:G:N7	24:BA:955:U:C5	2.72	0.57
24:BA:1005:C:H1'	24:BA:1012:U:N3	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1016:G:H2'	24:BA:1017:G:O4'	2.04	0.57
24:BA:2828:G:C2'	24:BA:2829:A:H5'	2.33	0.57
25:BB:76:G:H5'	45:BV:9:ARG:HH12	1.70	0.57
33:BJ:88:THR:HG23	33:BJ:90:GLU:HG3	1.86	0.57
38:BO:103:VAL:O	38:BO:105:ALA:O	2.22	0.57
40:BQ:82:LEU:HB3	40:BQ:88:GLU:OE2	2.03	0.57
4:CE:95:MET:HA	4:CE:124:ALA:CB	2.34	0.57
6:CG:27:ASN:HB3	55:CA:1374:A:O3'	2.03	0.57
6:CG:59:GLU:HG3	6:CG:60:ALA:N	2.20	0.57
8:CI:61:ASP:C	8:CI:62:LEU:HD22	2.25	0.57
12:CM:1:ALA:H3	12:CM:8:ILE:HG23	1.68	0.57
55:CA:1102:A:O2'	55:CA:1103:C:H5'	2.04	0.57
55:CA:1299:A:C8	55:CA:1301:U:H1'	2.39	0.57
24:DA:250:G:H2'	24:DA:251:A:N7	2.20	0.57
24:DA:866:A:HO2'	24:DA:867:C:H6	1.44	0.57
24:DA:1548:A:H2'	24:DA:1549:A:C8	2.38	0.57
24:DA:2241:A:H2'	24:DA:2242:G:C8	2.38	0.57
24:DA:2601:C:C2	24:DA:2603:G:N7	2.72	0.57
26:DC:124:LYS:NZ	26:DC:124:LYS:HB3	2.20	0.57
26:DC:131:MET:HE2	26:DC:187:CYS:O	2.04	0.57
28:DE:29:HIS:HA	28:DE:32:VAL:HG22	1.86	0.57
38:DO:57:ALA:C	38:DO:58:ILE:HD12	2.24	0.57
42:DS:29:VAL:HG23	42:DS:69:LEU:O	2.04	0.57
3:AD:61:ARG:HH21	3:AD:67:LEU:HA	1.70	0.57
7:AH:99:GLY:HA3	7:AH:129:ALA:CB	2.33	0.57
8:AI:104:THR:HG23	21:AA:1179:A:O3'	2.04	0.57
9:AJ:5:ARG:HG2	9:AJ:79:PRO:HD3	1.84	0.57
11:AL:45:ASN:ND2	21:AA:528:C:N4	2.53	0.57
15:AP:28:ARG:NH1	15:AP:29:ASN:HD21	2.01	0.57
21:AA:744:C:H2'	21:AA:745:G:C8	2.39	0.57
21:AA:1023:U:H2'	21:AA:1024:G:C8	2.39	0.57
21:AA:1099:G:C6	21:AA:1100:C:C4	2.92	0.57
21:AA:1394:A:O2'	21:AA:1395:C:P	2.62	0.57
24:BA:447:A:N1	24:BA:454:A:C8	2.72	0.57
24:BA:1050:A:H2'	24:BA:1051:G:O4'	2.05	0.57
24:BA:1064:C:H5'	32:BI:88:GLY:HA3	1.87	0.57
24:BA:1847:A:H2'	24:BA:1848:A:C8	2.39	0.57
24:BA:2297:A:C5	24:BA:2320:U:C2	2.92	0.57
24:BA:2450:A:O2'	24:BA:2451:A:H5'	2.03	0.57
24:BA:2505:G:O2'	24:BA:2506:U:H5''	2.04	0.57
24:BA:2557:G:H2'	24:BA:2558:C:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BC:103:ILE:O	26:BC:104:LEU:O	2.23	0.57
33:BJ:56:VAL:CG1	33:BJ:57:LEU:N	2.67	0.57
36:BM:78:LEU:O	36:BM:80:VAL:N	2.37	0.57
39:BP:37:LYS:HG2	39:BP:37:LYS:O	2.03	0.57
4:CE:25:LYS:HB2	4:CE:25:LYS:NZ	2.20	0.57
5:CF:68:GLN:HG2	5:CF:69:GLU:H	1.68	0.57
9:CJ:80:THR:C	9:CJ:84:VAL:HG22	2.25	0.57
16:CQ:27:PHE:CE1	16:CQ:36:PHE:HB3	2.39	0.57
55:CA:60:A:H62	55:CA:110:C:N4	2.02	0.57
55:CA:428:G:H1'	55:CA:430:A:C8	2.40	0.57
55:CA:731:G:H5'	55:CA:766:A:H4'	1.86	0.57
55:CA:1054:C:HO2'	55:CA:1055:A:H5''	1.67	0.57
24:DA:224:U:H5	24:DA:420:C:H4'	1.68	0.57
24:DA:740:C:C5'	24:DA:1784:A:H3'	2.23	0.57
24:DA:931:U:H5''	24:DA:932:U:OP2	2.04	0.57
24:DA:2038:G:H2'	24:DA:2039:U:O4'	2.02	0.57
24:DA:2179:C:H5'	24:DA:2179:C:H6	1.70	0.57
24:DA:2440:C:H2'	24:DA:2441:U:O4'	2.04	0.57
24:DA:2461:A:N1	24:DA:2490:G:N2	2.52	0.57
56:DB:35:C:H2'	56:DB:36:C:H4'	1.86	0.57
56:DB:76:G:OP1	45:DV:12:GLN:HA	2.05	0.57
26:DC:33:LEU:O	26:DC:34:GLU:HB3	2.04	0.57
39:DP:63:ILE:HA	39:DP:68:GLY:CA	2.31	0.57
39:DP:88:ARG:HH11	39:DP:112:ARG:NH2	2.02	0.57
40:DQ:57:ARG:C	40:DQ:59:LEU:H	2.07	0.57
44:DU:32:LYS:HE2	44:DU:65:GLN:OE1	2.04	0.57
47:DX:26:ARG:NH1	47:DX:28:PHE:CD2	2.72	0.57
48:DY:60:LYS:HG2	48:DY:60:LYS:O	2.05	0.57
51:D1:25:ASN:HB3	51:D1:28:THR:OG1	2.04	0.57
2:AC:15:LYS:HD2	2:AC:16:PRO:HD2	1.86	0.57
11:AL:98:ARG:HD2	11:AL:103:CYS:SG	2.43	0.57
21:AA:182:A:N3	21:AA:184:G:C8	2.73	0.57
21:AA:903:G:C5	21:AA:904:U:C4	2.92	0.57
21:AA:903:G:C5	21:AA:904:U:C5	2.93	0.57
22:AX:34:G:H8	22:AX:34:G:OP1	1.88	0.57
24:BA:31:C:O3'	24:BA:1238:G:C5'	2.52	0.57
24:BA:126:A:O2'	24:BA:127:A:H5'	2.05	0.57
24:BA:475:C:N3	24:BA:481:G:C6	2.72	0.57
24:BA:514:A:H2'	24:BA:515:A:C8	2.39	0.57
24:BA:1165:A:C2	24:BA:1185:G:C2	2.92	0.57
24:BA:1579:A:H2'	24:BA:1580:A:C8	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1782:U:C4	24:BA:2587:A:C2	2.92	0.57
24:BA:2049:G:N2	24:BA:2620:C:C2	2.73	0.57
28:BE:72:SER:C	28:BE:74:LYS:H	2.08	0.57
31:BH:8:LYS:O	31:BH:13:GLY:HA3	2.03	0.57
32:BI:109:ALA:HB2	32:BI:128:ILE:HG13	1.85	0.57
37:BN:67:PHE:O	37:BN:71:ARG:HA	2.05	0.57
46:BW:39:GLN:NE2	46:BW:43:LYS:N	2.49	0.57
1:CB:27:LYS:N	1:CB:28:PRO:CD	2.68	0.57
2:CC:113:LYS:HG3	2:CC:184:ASN:ND2	2.19	0.57
3:CD:104:MET:HG2	3:CD:104:MET:O	2.04	0.57
6:CG:102:TRP:O	6:CG:105:GLU:HB2	2.04	0.57
7:CH:115:ALA:HA	7:CH:120:LEU:HD12	1.85	0.57
8:CI:49:GLN:HA	8:CI:52:GLU:HG2	1.85	0.57
55:CA:587:G:C2	55:CA:755:G:C5	2.92	0.57
55:CA:724:G:O2'	55:CA:725:G:H5'	2.04	0.57
55:CA:1228:C:O2'	55:CA:1229:A:C5'	2.52	0.57
55:CA:1376:U:C2	55:CA:1377:A:N7	2.73	0.57
55:CA:1387:G:C4	55:CA:1388:C:C5	2.92	0.57
24:DA:100:U:O2'	24:DA:101:A:O5'	2.21	0.57
24:DA:379:G:C6	24:DA:380:G:C5	2.92	0.57
24:DA:534:U:H2'	24:DA:535:G:H8	1.68	0.57
24:DA:673:C:H5'	28:DE:76:PRO:HD2	1.87	0.57
24:DA:849:A:H2'	24:DA:850:U:C6	2.40	0.57
24:DA:1087:G:H1'	24:DA:1089:A:H1'	1.87	0.57
24:DA:1341:G:H3'	24:DA:1397:U:O2	2.05	0.57
24:DA:1387:A:H2'	24:DA:1388:G:H8	1.70	0.57
24:DA:1586:A:H3'	24:DA:1586:A:OP2	2.04	0.57
24:DA:2097:A:H2'	24:DA:2098:U:C6	2.39	0.57
24:DA:2135:A:H8	24:DA:2135:A:OP2	1.88	0.57
24:DA:2336:A:N7	46:DW:40:ARG:CZ	2.67	0.57
56:DB:17:C:O2'	56:DB:18:G:O4'	2.22	0.57
56:DB:43:C:H2'	56:DB:45:A:N7	2.20	0.57
26:DC:220:ARG:O	26:DC:223:ALA:HB3	2.04	0.57
30:DG:19:ASN:N	30:DG:19:ASN:HD22	2.02	0.57
31:DH:1:MET:HB3	31:DH:21:VAL:O	2.04	0.57
31:DH:2:GLN:O	31:DH:3:VAL:O	2.23	0.57
32:DI:50:LYS:HA	32:DI:50:LYS:HE2	1.85	0.57
32:DI:98:GLY:HA3	32:DI:137:LEU:HA	1.86	0.57
1:AB:24:PRO:HG3	21:AA:830:G:C5'	2.29	0.57
9:AJ:28:THR:HG22	9:AJ:28:THR:O	2.04	0.57
21:AA:428:G:C4	21:AA:430:A:C6	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:695:A:H2'	21:AA:696:A:C8	2.39	0.57
21:AA:744:C:H2'	21:AA:745:G:H8	1.69	0.57
21:AA:1065:U:H5''	21:AA:1190:G:N2	2.19	0.57
24:BA:1050:A:C2	24:BA:2751:G:C4	2.93	0.57
24:BA:1490:A:C8	26:BC:73:ILE:HD13	2.39	0.57
24:BA:1917:U:H2'	24:BA:1918:A:O4'	2.05	0.57
30:BG:163:TYR:O	30:BG:164:ALA:HB2	2.04	0.57
43:BT:44:LYS:O	43:BT:48:GLN:HG2	2.05	0.57
48:BY:32:ALA:HB2	48:BY:37:LEU:HD12	1.85	0.57
51:B1:8:ILE:CG2	51:B1:9:LYS:N	2.68	0.57
6:CG:19:SER:O	6:CG:23:ALA:HB2	2.05	0.57
8:CI:40:ARG:H	8:CI:44:ARG:HD3	1.69	0.57
55:CA:52:C:N4	55:CA:360:G:N2	2.53	0.57
55:CA:79:G:N1	55:CA:80:A:N6	2.53	0.57
55:CA:551:U:C4	55:CA:552:U:C4	2.93	0.57
55:CA:695:A:H2'	55:CA:696:A:C8	2.39	0.57
55:CA:818:G:C3'	55:CA:819:A:H5''	2.35	0.57
55:CA:1065:U:O4	55:CA:1189:U:C2	2.58	0.57
55:CA:1333:A:N6	55:CA:1334:G:C2	2.73	0.57
24:DA:59:U:O2'	24:DA:73:A:H2'	2.03	0.57
24:DA:442:G:O6	24:DA:444:C:N4	2.37	0.57
24:DA:682:G:O2'	24:DA:683:U:H5'	2.04	0.57
24:DA:972:A:C6	24:DA:973:A:C6	2.93	0.57
24:DA:1207:C:H2'	24:DA:1208:C:C6	2.40	0.57
24:DA:1974:C:C2	24:DA:1975:G:C8	2.92	0.57
24:DA:2136:G:H2'	24:DA:2137:U:C6	2.38	0.57
24:DA:2149:U:H2'	24:DA:2150:C:H6	1.69	0.57
24:DA:2543:G:N1	24:DA:2765:A:C8	2.72	0.57
24:DA:2886:A:N7	50:D0:39:ARG:NE	2.53	0.57
26:DC:66:PHE:HB3	26:DC:150:GLY:O	2.05	0.57
27:DD:29:VAL:HB	27:DD:98:VAL:HG12	1.85	0.57
33:DJ:13:ARG:HG2	33:DJ:51:GLY:O	2.05	0.57
1:AB:206:ILE:HD13	1:AB:206:ILE:H	1.69	0.57
10:AK:60:PHE:O	10:AK:64:VAL:HG12	2.04	0.57
15:AP:1:MET:HB2	21:AA:135:C:N3	2.19	0.57
20:AU:24:LYS:NZ	20:AU:25:ALA:HB2	2.19	0.57
21:AA:142:G:C5	21:AA:143:A:C8	2.93	0.57
21:AA:229:U:H2'	21:AA:230:G:O4'	2.05	0.57
21:AA:252:U:H6	21:AA:252:U:H5''	1.69	0.57
24:BA:587:C:H2'	35:BL:19:LEU:HD22	1.86	0.57
24:BA:704:G:H1'	24:BA:727:A:H61	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1063:G:C6	24:BA:1064:C:N3	2.72	0.57
24:BA:2383:G:C5	24:BA:2384:U:C5	2.93	0.57
24:BA:2592:G:C6	24:BA:2593:U:C4	2.93	0.57
24:BA:2721:A:H2'	24:BA:2722:G:O4'	2.04	0.57
29:BF:84:ILE:O	29:BF:84:ILE:HG13	2.05	0.57
32:BI:24:GLY:O	32:BI:27:LEU:HG	2.05	0.57
36:BM:54:THR:O	36:BM:57:VAL:HG22	2.05	0.57
41:BR:90:ARG:O	41:BR:91:GLN:HB3	2.04	0.57
42:BS:71:VAL:HG22	42:BS:71:VAL:O	2.03	0.57
46:BW:17:ALA:O	46:BW:18:LYS:HB3	2.04	0.57
50:B0:16:ARG:HG2	50:B0:19:ASP:OD1	2.03	0.57
54:B4:9:LYS:H	54:B4:9:LYS:HD3	1.70	0.57
3:CD:148:ALA:O	3:CD:151:GLN:HB2	2.04	0.57
5:CF:64:VAL:HG23	5:CF:66:ALA:H	1.70	0.57
12:CM:32:ILE:HD13	12:CM:32:ILE:O	2.05	0.57
12:CM:94:LEU:HD21	55:CA:1226:C:H5''	1.85	0.57
55:CA:160:A:H2'	55:CA:161:A:O4'	2.03	0.57
55:CA:794:A:H2'	55:CA:795:C:H6	1.69	0.57
24:DA:277:G:H2'	24:DA:361:G:O6	2.04	0.57
24:DA:447:A:H5'	24:DA:449:A:C5	2.39	0.57
24:DA:468:G:H4'	28:DE:57:LYS:CG	2.34	0.57
24:DA:593:U:H2'	24:DA:594:U:C6	2.40	0.57
24:DA:862:G:H2'	24:DA:863:A:O4'	2.04	0.57
24:DA:874:G:H5'	24:DA:875:G:OP2	2.03	0.57
24:DA:976:G:H5'	24:DA:1156:A:N6	2.18	0.57
24:DA:1022:G:H22	24:DA:1142:A:H2	1.51	0.57
24:DA:1696:G:H2'	24:DA:1697:G:C8	2.40	0.57
24:DA:1731:G:N3	24:DA:1733:G:C8	2.73	0.57
24:DA:1820:U:H3	26:DC:197:ALA:HA	1.70	0.57
24:DA:2193:G:H2'	24:DA:2194:U:H6	1.70	0.57
24:DA:2420:C:OP1	53:D3:33:THR:HB	2.04	0.57
26:DC:93:VAL:CG1	26:DC:101:ARG:H	2.18	0.57
33:DJ:35:ARG:NH1	33:DJ:140:LEU:HD11	2.20	0.57
37:DN:7:GLY:O	37:DN:8:ARG:HB2	2.05	0.57
42:DS:55:ILE:HG23	42:DS:66:ILE:HG21	1.85	0.57
43:DT:39:THR:HG21	43:DT:42:GLU:CB	2.25	0.57
49:DZ:32:GLY:C	49:DZ:34:THR:H	2.08	0.57
2:AC:35:ASP:O	2:AC:38:VAL:HG22	2.05	0.57
6:AG:108:ARG:HH21	6:AG:118:ARG:HH22	1.53	0.57
6:AG:147:ASN:O	6:AG:150:PHE:HD1	1.88	0.57
7:AH:1:SER:HB2	21:AA:877:G:N2	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:59:LYS:HE3	21:AA:972:C:O5'	2.05	0.57
11:AL:89:LEU:HB2	11:AL:92:VAL:HG23	1.85	0.57
14:AO:9:LYS:O	14:AO:13:GLU:HG3	2.05	0.57
21:AA:22:G:H4'	21:AA:885:G:C8	2.40	0.57
21:AA:130:A:C5	21:AA:264:C:H1'	2.40	0.57
21:AA:1342:C:H2'	21:AA:1343:G:H8	1.67	0.57
24:BA:541:A:H2'	24:BA:542:C:O4'	2.04	0.57
24:BA:1936:A:H2	24:BA:1943:U:C4	2.22	0.57
24:BA:1946:U:H2'	24:BA:1947:C:C6	2.40	0.57
24:BA:2383:G:C5	24:BA:2384:U:H5	2.22	0.57
24:BA:2492:U:HO2'	24:BA:2493:U:H5'	1.69	0.57
24:BA:2854:G:H2'	24:BA:2855:C:H6	1.68	0.57
26:BC:34:GLU:OE1	26:BC:63:ILE:HD11	2.04	0.57
52:B2:21:ARG:HG2	52:B2:31:LEU:HG	1.85	0.57
3:CD:34:GLU:O	3:CD:36:ALA:N	2.37	0.57
7:CH:97:GLY:C	7:CH:98:LEU:HD12	2.25	0.57
17:CR:58:ILE:HG22	17:CR:62:ARG:HE	1.69	0.57
55:CA:407:U:H2'	55:CA:408:A:C8	2.39	0.57
55:CA:512:U:O2'	55:CA:513:C:C5'	2.48	0.57
55:CA:960:U:O4	55:CA:1225:A:H1'	2.04	0.57
55:CA:982:U:H1'	55:CA:983:A:C5	2.40	0.57
55:CA:1181:G:O2'	55:CA:1182:G:O4'	2.21	0.57
55:CA:1394:A:N6	55:CA:1501:C:H5'	2.18	0.57
24:DA:23:G:H2'	24:DA:24:G:C8	2.39	0.57
24:DA:164:C:O2'	24:DA:165:A:H5'	2.04	0.57
24:DA:167:A:H2'	24:DA:168:G:O4'	2.04	0.57
24:DA:489:G:H4'	24:DA:490:C:OP1	2.04	0.57
24:DA:745:G:C2	24:DA:753:A:N6	2.73	0.57
24:DA:807:U:H4'	24:DA:2445:G:O3'	2.04	0.57
24:DA:1066:U:H3	24:DA:1069:A:P	2.28	0.57
24:DA:2214:C:O2'	24:DA:2215:C:C5'	2.52	0.57
27:DD:36:GLN:HG3	27:DD:38:LYS:HZ1	1.70	0.57
30:DG:84:LYS:HB3	30:DG:132:LEU:O	2.03	0.57
30:DG:84:LYS:O	30:DG:85:LYS:HB3	2.04	0.57
44:DU:58:VAL:HG13	44:DU:60:LYS:HG2	1.85	0.57
3:AD:117:VAL:CA	3:AD:122:ILE:HD11	2.34	0.57
7:AH:10:LEU:HB3	7:AH:74:ILE:CG1	2.34	0.57
9:AJ:44:THR:OG1	21:AA:1151:A:H5''	2.05	0.57
11:AL:119:LYS:HB3	21:AA:37:U:OP1	2.04	0.57
12:AM:86:ARG:HH22	12:AM:97:ARG:HA	1.69	0.57
14:AO:42:PHE:O	14:AO:46:LYS:HG2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:12:VAL:CG1	16:AQ:13:SER:H	2.17	0.57
19:AT:29:THR:HA	19:AT:32:LYS:HG3	1.86	0.57
21:AA:57:G:C6	21:AA:58:C:C4	2.93	0.57
21:AA:335:C:H2'	21:AA:336:A:H8	1.69	0.57
21:AA:607:A:H2'	21:AA:608:A:C8	2.40	0.57
21:AA:725:G:H2'	21:AA:726:C:C6	2.40	0.57
21:AA:926:G:C5	21:AA:1505:G:O6	2.58	0.57
21:AA:1201:A:O2'	21:AA:1202:U:OP2	2.22	0.57
21:AA:1211:U:H1'	21:AA:1213:A:C2	2.40	0.57
24:BA:435:C:O2'	24:BA:436:C:H5'	2.05	0.57
24:BA:657:U:H2'	24:BA:658:U:C6	2.40	0.57
24:BA:1669:A:O3'	24:BA:2549:G:H5'	2.05	0.57
24:BA:2307:G:N2	24:BA:2311:A:C8	2.72	0.57
24:BA:2531:A:P	30:BG:174:LYS:HG3	2.44	0.57
24:BA:2564:A:OP1	24:BA:2648:G:H4'	2.05	0.57
26:BC:158:GLY:H	26:BC:194:VAL:HG13	1.69	0.57
27:BD:107:VAL:HG21	27:BD:177:VAL:CG1	2.35	0.57
43:BT:43:ILE:HD11	43:BT:58:VAL:HG21	1.87	0.57
49:BZ:36:GLU:C	49:BZ:37:ARG:HD2	2.24	0.57
1:CB:116:LEU:HD13	1:CB:140:LEU:HB2	1.87	0.57
2:CC:134:LYS:HG2	2:CC:138:GLN:HE22	1.70	0.57
4:CE:24:VAL:HG23	4:CE:25:LYS:N	2.18	0.57
6:CG:134:VAL:O	6:CG:138:GLU:HB2	2.04	0.57
9:CJ:25:ILE:HG22	9:CJ:25:ILE:O	2.05	0.57
10:CK:15:VAL:HG12	10:CK:17:ASP:H	1.69	0.57
14:CO:7:THR:O	14:CO:11:VAL:HG23	2.05	0.57
17:CR:59:LYS:HA	17:CR:62:ARG:HD2	1.87	0.57
55:CA:724:G:H2'	55:CA:725:G:C8	2.32	0.57
24:DA:324:A:H61	24:DA:338:G:C2'	2.18	0.57
24:DA:1651:G:C6	24:DA:1652:A:C6	2.93	0.57
24:DA:1773:A:H2'	24:DA:1774:C:O4'	2.04	0.57
24:DA:2825:G:H3'	24:DA:2826:A:C8	2.31	0.57
28:DE:62:GLN:O	28:DE:65:THR:HG22	2.05	0.57
29:DF:43:ILE:HG12	29:DF:77:LYS:HD3	1.87	0.57
35:DL:63:LYS:HB3	53:D3:12:ARG:HD2	1.85	0.57
36:DM:42:THR:HB	36:DM:45:GLN:HG3	1.85	0.57
38:DO:30:ARG:HH12	38:DO:102:ARG:HB2	1.70	0.57
43:DT:62:VAL:HG12	43:DT:63:VAL:N	2.20	0.57
4:AE:156:ARG:CG	7:AH:63:LYS:HZ1	2.10	0.57
10:AK:28:ASN:ND2	10:AK:46:ALA:HB3	2.20	0.57
12:AM:10:ASP:CG	12:AM:11:HIS:H	2.08	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:20:ILE:H	16:AQ:47:ASP:CG	2.08	0.57
21:AA:116:A:O2'	21:AA:117:G:C5'	2.52	0.57
21:AA:486:U:C2'	21:AA:487:A:H8	2.17	0.57
21:AA:1256:A:H1'	21:AA:1258:G:N7	2.20	0.57
21:AA:1297:G:H5''	21:AA:1298:U:OP1	2.05	0.57
21:AA:1347:G:N2	21:AA:1373:G:H2'	2.20	0.57
24:BA:17:G:H2'	24:BA:18:U:C6	2.39	0.57
24:BA:84:A:H5''	44:BU:5:ARG:HH21	1.70	0.57
24:BA:1253:A:C5	59:BA:3337:HOH:O	2.58	0.57
24:BA:1328:A:H2'	24:BA:1330:C:C4	2.39	0.57
24:BA:1496:A:H2'	24:BA:1498:C:H41	1.70	0.57
24:BA:2860:A:C3'	24:BA:2860:A:C8	2.88	0.57
25:BB:53:A:C2	25:BB:54:G:C8	2.93	0.57
30:BG:97:VAL:HG12	30:BG:97:VAL:O	2.04	0.57
33:BJ:30:THR:HG22	33:BJ:31:GLU:H	1.69	0.57
43:BT:29:THR:HA	43:BT:86:THR:HA	1.86	0.57
1:CB:9:LEU:HG	1:CB:10:LYS:N	2.18	0.57
1:CB:94:ARG:HD2	55:CA:1100:C:OP1	2.05	0.57
1:CB:122:ASP:HB3	1:CB:124:THR:HG22	1.87	0.57
6:CG:148:LYS:HB2	6:CG:148:LYS:HZ2	1.68	0.57
10:CK:127:ARG:NH2	55:CA:795:C:H5''	2.20	0.57
19:CT:61:ALA:HA	19:CT:67:HIS:HA	1.87	0.57
55:CA:269:C:H2'	55:CA:270:A:C8	2.39	0.57
55:CA:1268:G:H21	55:CA:1327:C:H1'	1.70	0.57
24:DA:91:A:H1'	24:DA:92:U:C6	2.39	0.57
24:DA:460:A:OP2	52:D2:41:ARG:NH1	2.33	0.57
24:DA:592:A:H2'	24:DA:593:U:C6	2.40	0.57
24:DA:921:C:C2'	24:DA:922:C:H5'	2.34	0.57
24:DA:935:C:H2'	24:DA:936:A:C8	2.40	0.57
24:DA:1986:C:H5''	59:DA:3444:HOH:O	2.05	0.57
24:DA:2798:U:H5'	24:DA:2800:A:N7	2.20	0.57
56:DB:11:C:H2'	56:DB:15:A:N6	2.20	0.57
29:DF:8:LYS:HB2	29:DF:8:LYS:NZ	2.20	0.57
31:DH:109:GLU:HA	31:DH:109:GLU:OE2	2.05	0.57
33:DJ:38:GLY:O	33:DJ:43:GLU:HB2	2.05	0.57
35:DL:123:ARG:HA	35:DL:143:GLU:HB3	1.87	0.57
43:DT:4:GLU:HG3	43:DT:6:ARG:HH21	1.68	0.57
46:DW:33:GLY:O	46:DW:34:SER:HB2	2.05	0.57
47:DX:39:VAL:O	47:DX:40:GLU:HB2	2.05	0.57
48:DY:4:LYS:HD3	48:DY:4:LYS:H	1.69	0.57
6:AG:14:ASP:HB3	6:AG:18:GLY:N	2.11	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:87:ARG:HB3	21:AA:600:A:OP1	2.05	0.56
12:AM:28:ARG:HB3	12:AM:28:ARG:HH11	1.69	0.56
13:AN:44:VAL:HG23	13:AN:45:LEU:N	2.16	0.56
16:AQ:45:VAL:HG13	16:AQ:72:TRP:O	2.05	0.56
21:AA:266:G:O2'	21:AA:267:C:H3'	2.05	0.56
21:AA:880:C:O2'	21:AA:881:G:H5'	2.05	0.56
21:AA:1262:C:H2'	21:AA:1263:C:O4'	2.05	0.56
24:BA:84:A:N1	24:BA:103:A:C6	2.72	0.56
24:BA:593:U:H2'	24:BA:594:U:C6	2.40	0.56
24:BA:728:G:HO2'	24:BA:730:A:H8	1.50	0.56
24:BA:974:G:C2	24:BA:1186:G:N1	2.73	0.56
24:BA:1076:C:H2'	24:BA:1077:A:C8	2.40	0.56
24:BA:1612:C:H4'	52:B2:5:PHE:O	2.05	0.56
24:BA:2061:G:H5''	24:BA:2503:A:C2	2.40	0.56
24:BA:2063:C:H6	24:BA:2063:C:C5'	2.18	0.56
24:BA:2636:C:O2'	27:BD:45:TYR:OH	2.21	0.56
41:BR:38:VAL:HG23	41:BR:40:MET:H	1.69	0.56
44:BU:85:ARG:NH1	44:BU:91:LYS:HA	2.20	0.56
3:CD:32:LYS:HB3	3:CD:35:GLN:OE1	2.05	0.56
7:CH:17:GLN:HE21	7:CH:71:VAL:HG23	1.70	0.56
11:CL:109:ARG:NH2	11:CL:116:TYR:HE2	2.03	0.56
12:CM:64:VAL:HG12	12:CM:65:GLU:HG3	1.87	0.56
55:CA:769:G:H4'	55:CA:1513:A:H4'	1.87	0.56
55:CA:979:C:H1'	55:CA:1317:C:H41	1.69	0.56
55:CA:1242:G:H4'	55:CA:1304:G:OP1	2.05	0.56
24:DA:357:C:H2'	24:DA:358:U:O4'	2.05	0.56
24:DA:782:A:C2	26:DC:224:MET:SD	2.98	0.56
24:DA:792:A:H1'	24:DA:2072:C:O2'	2.04	0.56
24:DA:1088:A:H4'	24:DA:1089:A:C8	2.40	0.56
24:DA:1682:G:C8	24:DA:1757:A:C2	2.92	0.56
24:DA:1845:G:C6	24:DA:1896:G:C6	2.93	0.56
24:DA:1965:C:H5''	24:DA:1965:C:H6	1.70	0.56
24:DA:2447:G:O6	24:DA:2504:U:O4	2.22	0.56
24:DA:2597:G:H2'	24:DA:2598:A:C8	2.39	0.56
24:DA:2822:G:H2'	24:DA:2823:A:H5''	1.87	0.56
27:DD:33:ARG:HD2	27:DD:33:ARG:H	1.70	0.56
29:DF:58:ALA:HB1	29:DF:139:GLU:HG2	1.87	0.56
32:DI:28:GLY:O	32:DI:30:GLN:HG3	2.05	0.56
35:DL:79:LEU:CA	35:DL:82:LEU:HD11	2.31	0.56
36:DM:26:VAL:HG21	36:DM:132:THR:O	2.05	0.56
37:DN:19:ALA:HA	37:DN:22:ARG:HB3	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DP:1:SER:HB3	39:DP:4:ILE:HB	1.87	0.56
43:DT:19:LYS:HE2	43:DT:23:ALA:HB3	1.86	0.56
1:AB:160:LEU:HB3	1:AB:182:VAL:HG13	1.86	0.56
6:AG:68:VAL:HG12	6:AG:102:TRP:HE3	1.69	0.56
10:AK:18:GLY:O	10:AK:81:LEU:HB2	2.05	0.56
15:AP:80:LYS:HB2	15:AP:80:LYS:NZ	2.21	0.56
18:AS:36:ARG:O	18:AS:69:LYS:HD2	2.05	0.56
21:AA:70:U:O2'	21:AA:71:A:C8	2.58	0.56
21:AA:577:G:N2	21:AA:578:C:C2	2.73	0.56
21:AA:580:C:H2'	21:AA:581:G:H8	1.65	0.56
21:AA:993:G:H2'	21:AA:995:C:H41	1.70	0.56
24:BA:163:C:O2'	24:BA:164:C:C5'	2.52	0.56
24:BA:532:A:C8	24:BA:2021:C:C5	2.93	0.56
24:BA:1022:G:O2'	24:BA:1023:U:OP2	2.23	0.56
24:BA:1435:G:N2	24:BA:1558:C:H41	2.03	0.56
24:BA:1463:C:H2'	24:BA:1464:G:O4'	2.05	0.56
24:BA:1916:A:H2'	24:BA:1917:U:O4'	2.04	0.56
24:BA:2792:A:C2	24:BA:2793:C:C2	2.93	0.56
25:BB:14:U:H3'	25:BB:15:A:H5''	1.87	0.56
26:BC:77:VAL:HA	26:BC:93:VAL:HA	1.87	0.56
30:BG:30:GLY:HA3	30:BG:78:VAL:HG12	1.87	0.56
31:BH:6:LEU:O	31:BH:15:LEU:HA	2.04	0.56
33:BJ:55:ILE:HD12	33:BJ:56:VAL:O	2.05	0.56
34:BK:78:ARG:NH1	39:BP:70:GLU:OE2	2.38	0.56
38:BO:75:GLY:HA2	38:BO:106:LEU:CD1	2.34	0.56
6:CG:20:GLU:O	6:CG:23:ALA:HB3	2.05	0.56
19:CT:67:HIS:ND1	19:CT:68:LYS:N	2.52	0.56
20:CU:33:ARG:NH1	20:CU:34:ARG:HD3	2.20	0.56
20:CU:53:LYS:HB2	20:CU:53:LYS:NZ	2.20	0.56
55:CA:54:C:N4	55:CA:352:C:H2'	2.20	0.56
55:CA:157:U:O2'	55:CA:158:G:H5'	2.05	0.56
55:CA:536:C:H2'	55:CA:537:G:H8	1.69	0.56
55:CA:926:G:H22	23:CW:1:U:P	2.28	0.56
24:DA:112:U:H5'	48:DY:58:ASN:HD21	1.70	0.56
24:DA:226:A:C2	24:DA:230:G:O6	2.58	0.56
24:DA:390:U:O2'	24:DA:391:A:H8	1.88	0.56
24:DA:600:G:H5'	28:DE:27:LEU:HD13	1.87	0.56
24:DA:790:U:H3	24:DA:795:C:H5'	1.70	0.56
24:DA:903:C:H2'	24:DA:904:G:C8	2.40	0.56
24:DA:1237:A:O2'	24:DA:1238:G:H4'	2.03	0.56
24:DA:1331:G:O2'	24:DA:1332:G:C5'	2.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1456:G:O2'	24:DA:1457:U:H5'	2.04	0.56
24:DA:1916:A:H8	24:DA:1916:A:H5''	1.69	0.56
24:DA:2287:A:C6	24:DA:2289:G:C5	2.93	0.56
24:DA:2287:A:C4	24:DA:2289:G:N7	2.74	0.56
26:DC:66:PHE:CZ	26:DC:155:ARG:NH1	2.74	0.56
27:DD:151:THR:HB	27:DD:152:PRO:HD3	1.86	0.56
29:DF:31:GLU:C	29:DF:95:MET:HE1	2.26	0.56
30:DG:44:HIS:HA	30:DG:49:LEU:HA	1.88	0.56
30:DG:62:ALA:O	30:DG:66:THR:HG23	2.05	0.56
38:DO:30:ARG:HH11	38:DO:30:ARG:CG	2.17	0.56
1:AB:51:GLU:HG2	1:AB:197:PHE:HE1	1.69	0.56
1:AB:80:LYS:HG3	1:AB:90:PHE:CE1	2.40	0.56
1:AB:209:VAL:O	1:AB:213:LEU:N	2.34	0.56
2:AC:100:ILE:O	2:AC:100:ILE:HG23	2.05	0.56
4:AE:82:HIS:O	4:AE:146:MET:HE2	2.05	0.56
4:AE:83:PRO:HD3	4:AE:97:PRO:HD3	1.86	0.56
4:AE:154:ALA:HB3	7:AH:65:PHE:CE1	2.40	0.56
5:AF:47:LEU:HG	5:AF:56:LYS:H	1.70	0.56
6:AG:143:MET:O	6:AG:146:ALA:HB3	2.06	0.56
8:AI:119:LYS:O	8:AI:120:ALA:HB3	2.05	0.56
10:AK:35:ASP:OD2	10:AK:39:ASN:HB2	2.05	0.56
11:AL:8:ARG:NH1	21:AA:880:C:OP1	2.35	0.56
11:AL:42:LYS:HB3	11:AL:43:LYS:NZ	2.20	0.56
20:AU:38:GLU:OE2	20:AU:41:THR:HG21	2.06	0.56
21:AA:214:C:H2'	21:AA:215:C:H6	1.70	0.56
21:AA:223:A:H2'	21:AA:224:U:C6	2.40	0.56
21:AA:346:G:OP1	39:BP:33:GLU:OE1	2.23	0.56
21:AA:734:G:C6	21:AA:735:C:C4	2.94	0.56
21:AA:821:G:H4'	59:AA:1740:HOH:O	2.05	0.56
21:AA:1130:A:C5	21:AA:1146:A:C6	2.94	0.56
21:AA:1425:U:O2'	21:AA:1426:G:H5'	2.05	0.56
24:BA:83:A:N6	24:BA:101:A:C4	2.74	0.56
24:BA:103:A:H2'	24:BA:104:A:H8	1.70	0.56
24:BA:300:A:N1	24:BA:333:G:O2'	2.38	0.56
24:BA:449:A:OP1	28:BE:80:SER:HA	2.05	0.56
24:BA:919:U:N3	24:BA:920:A:N7	2.54	0.56
24:BA:1179:G:N7	24:BA:1180:U:H1'	2.20	0.56
24:BA:1459:G:O2'	24:BA:1460:U:H5''	2.05	0.56
24:BA:1649:G:O2'	24:BA:1650:A:H5'	2.05	0.56
24:BA:2397:G:C2	24:BA:2420:C:O2	2.58	0.56
24:BA:2439:A:H4'	24:BA:2440:C:O5'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2617:U:H2'	24:BA:2618:G:O4'	2.04	0.56
24:BA:2886:A:C2	24:BA:2887:A:H1'	2.41	0.56
25:BB:51:G:N2	25:BB:53:A:N6	2.53	0.56
26:BC:229:HIS:CG	26:BC:230:PRO:HD2	2.40	0.56
29:BF:107:VAL:HG13	29:BF:113:PHE:CZ	2.40	0.56
29:BF:142:TYR:HA	29:BF:145:VAL:HG13	1.87	0.56
30:BG:168:VAL:O	30:BG:168:VAL:HG23	2.05	0.56
32:BI:126:ARG:HA	32:BI:129:GLU:CG	2.36	0.56
39:BP:57:ALA:HB1	39:BP:73:PHE:O	2.05	0.56
39:BP:85:VAL:O	39:BP:86:LYS:HB2	2.04	0.56
41:BR:45:GLU:OE2	41:BR:45:GLU:HA	2.05	0.56
42:BS:70:LYS:N	42:BS:70:LYS:HD2	2.21	0.56
44:BU:85:ARG:HA	44:BU:91:LYS:O	2.05	0.56
45:BV:5:ASN:ND2	45:BV:5:ASN:H	2.01	0.56
46:BW:8:SER:O	46:BW:9:THR:CB	2.53	0.56
48:BY:7:ARG:H	48:BY:60:LYS:HZ1	1.53	0.56
54:B4:9:LYS:HD3	54:B4:9:LYS:N	2.20	0.56
1:CB:125:PHE:CD1	1:CB:137:THR:HG22	2.40	0.56
1:CB:161:PHE:CE2	1:CB:216:VAL:HG21	2.40	0.56
6:CG:2:ARG:NH1	55:CA:932:C:C5	2.74	0.56
6:CG:77:ARG:NH2	55:CA:1381:U:H3	2.03	0.56
10:CK:19:VAL:HB	10:CK:34:THR:HG23	1.86	0.56
11:CL:65:TYR:HB3	11:CL:95:HIS:CD2	2.40	0.56
11:CL:83:GLY:HA2	11:CL:94:TYR:CD1	2.40	0.56
12:CM:89:ARG:HB3	12:CM:94:LEU:O	2.05	0.56
13:CN:16:ALA:HB2	13:CN:59:GLN:HE22	1.70	0.56
14:CO:25:GLU:HA	14:CO:80:LEU:HD11	1.87	0.56
55:CA:193:C:H2'	55:CA:194:C:C6	2.40	0.56
55:CA:260:G:H2'	55:CA:261:U:H6	1.70	0.56
55:CA:374:A:OP1	55:CA:452:A:N1	2.39	0.56
55:CA:588:G:C2	55:CA:589:U:C2	2.93	0.56
55:CA:920:U:H2'	55:CA:921:U:H6	1.70	0.56
55:CA:965:U:H1'	55:CA:969:A:C5	2.40	0.56
55:CA:1202:U:H2'	55:CA:1203:C:C6	2.40	0.56
55:CA:1494:G:H8	55:CA:1494:G:OP2	1.89	0.56
24:DA:110:G:C4	24:DA:111:A:C8	2.93	0.56
24:DA:117:G:C6	24:DA:119:A:C6	2.93	0.56
24:DA:155:A:H2'	24:DA:156:A:H8	1.70	0.56
24:DA:223:A:C4	24:DA:408:G:H1'	2.40	0.56
24:DA:233:A:O2'	24:DA:234:U:O5'	2.23	0.56
24:DA:265:A:C5	24:DA:428:A:C8	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:281:C:H2'	24:DA:282:A:H8	1.70	0.56
24:DA:329:G:O6	44:DU:16:LYS:HB2	2.05	0.56
24:DA:475:C:O5'	24:DA:475:C:H6	1.88	0.56
24:DA:606:U:OP1	28:DE:99:LYS:HD3	2.05	0.56
24:DA:621:A:H2'	24:DA:622:G:C8	2.40	0.56
24:DA:656:G:H2'	24:DA:657:U:C5	2.39	0.56
24:DA:1203:U:N3	24:DA:1204:A:N6	2.53	0.56
24:DA:1461:C:O2'	24:DA:1462:C:C6	2.53	0.56
24:DA:1526:C:H2'	24:DA:1527:G:O4'	2.06	0.56
24:DA:1650:A:H1'	37:DN:108:ALA:HB2	1.87	0.56
24:DA:1819:A:OP1	26:DC:154:ALA:HA	2.05	0.56
24:DA:2093:G:O2'	24:DA:2094:A:H5'	2.05	0.56
24:DA:2216:G:H2'	24:DA:2217:G:H8	1.70	0.56
24:DA:2602:A:OP1	24:DA:2602:A:H3'	2.06	0.56
56:DB:45:A:C2'	56:DB:46:A:H8	2.16	0.56
26:DC:196:ASN:OD1	26:DC:199:HIS:HB2	2.04	0.56
27:DD:112:THR:HG22	27:DD:113:SER:N	2.20	0.56
29:DF:5:ASP:C	29:DF:7:TYR:H	2.09	0.56
34:DK:45:GLU:O	34:DK:54:LYS:HE3	2.04	0.56
37:DN:55:ALA:HA	37:DN:80:PHE:CE1	2.40	0.56
37:DN:67:PHE:HE2	37:DN:73:ASN:HD21	1.52	0.56
38:DO:94:ARG:HD2	38:DO:97:PHE:O	2.05	0.56
42:DS:14:ALA:O	42:DS:18:ARG:HB2	2.05	0.56
45:DV:9:ARG:HH22	45:DV:17:SER:HB2	1.69	0.56
45:DV:27:PRO:O	45:DV:88:HIS:HA	2.04	0.56
1:AB:86:CYS:SG	1:AB:221:ARG:HB2	2.45	0.56
1:AB:187:ASP:CG	1:AB:188:THR:H	2.09	0.56
4:AE:10:LEU:HD23	4:AE:10:LEU:H	1.71	0.56
8:AI:18:VAL:HG22	8:AI:64:ILE:HD13	1.87	0.56
21:AA:71:A:N6	21:AA:99:C:H1'	2.13	0.56
21:AA:82:G:N2	21:AA:84:U:N3	2.50	0.56
21:AA:246:A:H4'	21:AA:247:G:OP1	2.05	0.56
21:AA:1502:A:O2'	21:AA:1503:A:OP1	2.23	0.56
24:BA:51:G:N2	24:BA:120:U:O2	2.37	0.56
24:BA:119:A:H4'	24:BA:120:U:O5'	2.05	0.56
24:BA:950:G:C5	24:BA:951:C:C5	2.93	0.56
24:BA:1731:G:H2'	24:BA:1732:C:H5''	1.88	0.56
26:BC:106:PRO:CA	26:BC:141:HIS:CE1	2.87	0.56
27:BD:4:LEU:HD13	27:BD:100:LEU:HD23	1.86	0.56
28:BE:31:VAL:HG21	28:BE:104:ALA:CB	2.35	0.56
29:BF:129:MET:HG3	29:BF:153:ILE:HD11	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:148:VAL:O	29:BF:150:GLY:N	2.38	0.56
38:BO:54:VAL:O	38:BO:54:VAL:HG22	2.04	0.56
1:CB:114:LYS:HE3	1:CB:151:LYS:HB2	1.87	0.56
2:CC:31:ASN:O	2:CC:35:ASP:HB2	2.04	0.56
6:CG:142:ARG:O	6:CG:146:ALA:HB3	2.05	0.56
7:CH:24:VAL:HG22	7:CH:25:THR:H	1.70	0.56
7:CH:24:VAL:HG22	7:CH:25:THR:N	2.20	0.56
9:CJ:9:ARG:HH21	9:CJ:71:LEU:HD21	1.69	0.56
12:CM:94:LEU:HD22	55:CA:1226:C:OP2	2.06	0.56
15:CP:22:ALA:HA	15:CP:33:ILE:HG13	1.88	0.56
17:CR:37:LYS:HD2	20:CU:22:CYS:HB3	1.86	0.56
55:CA:536:C:H2'	55:CA:537:G:C8	2.40	0.56
55:CA:1092:A:C6	55:CA:1183:U:O2	2.59	0.56
22:CV:34:G:H2'	22:CV:35:A:C8	2.38	0.56
24:DA:250:G:C2'	24:DA:251:A:C8	2.87	0.56
24:DA:277:G:H4'	24:DA:278:A:C8	2.41	0.56
24:DA:538:A:H2'	24:DA:539:G:H8	1.68	0.56
24:DA:576:U:O2'	24:DA:577:G:H5'	2.05	0.56
24:DA:1265:A:H1'	24:DA:1267:U:C5	2.41	0.56
24:DA:1874:C:H2'	24:DA:1875:G:O4'	2.05	0.56
24:DA:2001:C:H1'	24:DA:2689:U:N3	2.20	0.56
24:DA:2226:C:O2'	24:DA:2227:A:H5'	2.05	0.56
24:DA:2823:A:C5	24:DA:2824:C:C5	2.93	0.56
27:DD:116:LYS:HD3	37:DN:1:MET:HE1	1.87	0.56
39:DP:67:GLU:CD	39:DP:68:GLY:H	2.09	0.56
44:DU:95:PHE:O	44:DU:97:SER:N	2.38	0.56
3:AD:131:ILE:HG22	21:AA:403:C:H5'	1.88	0.56
4:AE:134:ASN:OD1	21:AA:1078:U:H1'	2.06	0.56
5:AF:51:ILE:HG13	21:AA:674:G:OP1	2.06	0.56
6:AG:3:ARG:HG3	6:AG:4:ARG:N	2.14	0.56
21:AA:92:U:H2'	21:AA:93:U:O4'	2.06	0.56
21:AA:1206:G:C6	21:AA:1207:G:C5	2.93	0.56
24:BA:48:G:N2	24:BA:177:G:H21	2.03	0.56
24:BA:288:U:O2'	24:BA:289:G:H5'	2.05	0.56
24:BA:831:G:C6	24:BA:832:U:C4	2.93	0.56
24:BA:2635:A:O2'	27:BD:81:GLU:HG3	2.05	0.56
24:BA:2656:U:C5	24:BA:2664:G:N2	2.73	0.56
28:BE:105:LEU:O	28:BE:109:LEU:HB2	2.06	0.56
29:BF:47:LYS:HB3	29:BF:47:LYS:NZ	2.21	0.56
30:BG:82:PHE:CZ	30:BG:137:LYS:HB2	2.40	0.56
35:BL:95:LEU:HD11	35:BL:125:LEU:HD11	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BZ:15:ARG:HG3	49:BZ:15:ARG:NH1	2.21	0.56
5:CF:14:GLN:HB3	5:CF:17:GLN:NE2	2.20	0.56
8:CI:59:LYS:HE3	8:CI:60:LEU:HG	1.86	0.56
17:CR:25:ILE:O	17:CR:29:LYS:HG2	2.06	0.56
55:CA:102:G:H2'	55:CA:103:U:C6	2.41	0.56
55:CA:316:C:O2'	55:CA:317:U:H5'	2.06	0.56
55:CA:549:C:H2'	55:CA:550:G:H8	1.71	0.56
55:CA:649:A:C2	55:CA:650:G:H1'	2.41	0.56
55:CA:692:U:H2'	55:CA:694:A:OP2	2.06	0.56
55:CA:709:U:H2'	55:CA:710:G:H8	1.71	0.56
55:CA:977:A:C8	55:CA:1223:C:C2	2.85	0.56
55:CA:1087:G:H2'	55:CA:1088:G:H8	1.71	0.56
55:CA:1151:A:H2'	55:CA:1152:A:H8	1.71	0.56
55:CA:1395:C:O5'	55:CA:1395:C:H6	1.88	0.56
24:DA:104:A:H2'	24:DA:105:C:C6	2.39	0.56
24:DA:133:U:H2'	24:DA:134:G:O4'	2.06	0.56
24:DA:732:C:H2'	24:DA:733:G:O4'	2.06	0.56
24:DA:996:A:H2'	24:DA:997:G:H8	1.69	0.56
24:DA:1136:G:HO2'	24:DA:1137:G:H8	1.52	0.56
24:DA:1351:C:H2'	24:DA:1352:U:O4'	2.04	0.56
24:DA:1840:G:H2'	24:DA:1841:U:H6	1.71	0.56
24:DA:2332:C:H4'	46:DW:40:ARG:CZ	2.35	0.56
24:DA:2540:C:C2	24:DA:2541:A:C8	2.94	0.56
24:DA:2547:A:C1'	24:DA:2566:A:C6	2.88	0.56
56:DB:42:C:O2	29:DF:89:THR:HB	2.06	0.56
35:DL:56:PRO:O	35:DL:60:ARG:HG3	2.06	0.56
36:DM:34:LYS:NZ	45:DV:82:TYR:HA	2.20	0.56
39:DP:25:VAL:HA	39:DP:85:VAL:HA	1.88	0.56
40:DQ:4:LYS:HG2	40:DQ:6:GLY:N	2.21	0.56
52:D2:22:MET:HG2	52:D2:22:MET:O	2.06	0.56
52:D2:35:ARG:HG3	52:D2:42:LEU:HD21	1.86	0.56
1:AB:71:THR:HG22	1:AB:72:LYS:N	2.18	0.56
1:AB:113:LEU:HD13	1:AB:143:LEU:CD2	2.36	0.56
4:AE:25:LYS:NZ	4:AE:25:LYS:CB	2.68	0.56
7:AH:88:LYS:HG3	7:AH:89:ASP:N	2.20	0.56
10:AK:95:THR:HG23	10:AK:96:ILE:HG23	1.88	0.56
11:AL:88:ASP:O	11:AL:90:PRO:HD3	2.06	0.56
12:AM:10:ASP:OD1	12:AM:44:ILE:HD13	2.06	0.56
21:AA:923:A:H2'	21:AA:924:C:C6	2.40	0.56
21:AA:1052:U:H5'	21:AA:1053:G:OP2	2.06	0.56
21:AA:1504:G:H5'	21:AA:1505:G:N2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:27:G:O2'	24:BA:28:A:P	2.64	0.56
24:BA:309:A:H4'	44:BU:15:GLY:HA2	1.87	0.56
24:BA:653:U:H3'	24:BA:654:A:H5'	1.86	0.56
24:BA:821:A:H5''	24:BA:822:G:O5'	2.04	0.56
24:BA:1243:C:H2'	24:BA:1244:A:O4'	2.06	0.56
24:BA:1509:A:O2'	24:BA:1510:G:OP2	2.23	0.56
24:BA:1989:G:H2'	24:BA:1990:C:H5'	1.87	0.56
29:BF:35:LEU:CD1	29:BF:88:VAL:HB	2.36	0.56
29:BF:46:LYS:HD2	29:BF:46:LYS:H	1.70	0.56
35:BL:95:LEU:HB3	35:BL:100:ILE:CD1	2.36	0.56
39:BP:112:ARG:C	39:BP:113:LEU:HD23	2.26	0.56
43:BT:2:ILE:HG13	43:BT:3:ARG:CZ	2.35	0.56
46:BW:18:LYS:HA	46:BW:36:ILE:HG12	1.87	0.56
51:B1:49:LYS:O	51:B1:50:GLU:HB3	2.05	0.56
3:CD:57:LYS:HA	3:CD:199:ILE:HG22	1.88	0.56
8:CI:122:ARG:NH1	55:CA:1343:G:H1'	2.21	0.56
55:CA:825:A:H2'	55:CA:826:C:H6	1.70	0.56
55:CA:872:A:C4	55:CA:874:G:N7	2.73	0.56
55:CA:1233:G:H2'	55:CA:1234:C:H6	1.70	0.56
55:CA:1366:C:H2'	55:CA:1367:C:C6	2.39	0.56
55:CA:1483:A:H8	55:CA:1483:A:O5'	1.89	0.56
55:CA:1507:A:C6	55:CA:1530:G:C6	2.94	0.56
24:DA:91:A:HO2'	24:DA:92:U:H6	1.48	0.56
24:DA:117:G:N1	24:DA:119:A:N6	2.53	0.56
24:DA:469:G:OP2	28:DE:55:SER:HB3	2.06	0.56
24:DA:476:G:O2'	24:DA:477:A:O5'	2.12	0.56
24:DA:822:G:O6	24:DA:943:A:H2	1.89	0.56
24:DA:1168:G:C6	24:DA:1182:G:C6	2.93	0.56
24:DA:2198:A:O2'	24:DA:2199:A:H8	1.87	0.56
24:DA:2287:A:C5	24:DA:2289:G:N7	2.74	0.56
24:DA:2394:C:H41	53:D3:30:HIS:CE1	2.24	0.56
24:DA:2543:G:C6	24:DA:2765:A:C4	2.94	0.56
26:DC:99:GLU:HG2	26:DC:100:ARG:N	2.21	0.56
28:DE:29:HIS:ND1	35:DL:6:LEU:HD22	2.20	0.56
29:DF:139:GLU:HB3	29:DF:142:TYR:HB3	1.87	0.56
45:DV:31:TYR:O	45:DV:31:TYR:HD1	1.89	0.56
51:D1:8:ILE:CD1	51:D1:52:LYS:HG3	2.36	0.56
4:AE:11:GLN:HG3	4:AE:11:GLN:O	2.05	0.56
4:AE:82:HIS:CE1	4:AE:146:MET:HG3	2.41	0.56
5:AF:40:GLU:O	5:AF:42:TRP:CD1	2.58	0.56
8:AI:21:LYS:HZ2	8:AI:23:GLY:HA3	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:27:ILE:HD13	8:AI:34:LEU:HB2	1.86	0.56
8:AI:51:LEU:HB3	8:AI:56:MET:CG	2.36	0.56
11:AL:65:TYR:HE1	11:AL:67:GLY:HA2	1.69	0.56
16:AQ:16:MET:O	16:AQ:19:SER:N	2.37	0.56
21:AA:486:U:H6	21:AA:486:U:C5'	2.17	0.56
21:AA:687:A:C2	21:AA:704:A:C5	2.93	0.56
21:AA:720:C:N4	21:AA:721:G:C2	2.73	0.56
21:AA:1160:G:O6	21:AA:1181:G:C6	2.58	0.56
21:AA:1391:U:H2'	21:AA:1392:G:C8	2.41	0.56
24:BA:735:A:H3'	24:BA:736:C:C6	2.40	0.56
24:BA:994:C:O3'	24:BA:995:C:H3'	2.06	0.56
24:BA:1572:A:H2'	24:BA:1573:G:O4'	2.06	0.56
28:BE:48:THR:C	28:BE:50:ALA:H	2.08	0.56
28:BE:137:LYS:O	28:BE:141:MET:HG3	2.05	0.56
29:BF:142:TYR:O	29:BF:145:VAL:HG22	2.06	0.56
30:BG:84:LYS:HZ2	30:BG:133:LYS:HE3	1.70	0.56
31:BH:21:VAL:HG21	31:BH:25:TYR:CD2	2.41	0.56
33:BJ:77:HIS:HD2	33:BJ:79:GLY:H	1.51	0.56
36:BM:69:PRO:HA	36:BM:94:ALA:HB2	1.87	0.56
41:BR:27:ILE:HG13	41:BR:33:VAL:HG12	1.87	0.56
42:BS:18:ARG:HA	42:BS:21:ALA:HB3	1.88	0.56
44:BU:86:PHE:CE1	44:BU:101:THR:HG21	2.41	0.56
6:CG:143:MET:HA	6:CG:147:ASN:HB3	1.88	0.56
9:CJ:5:ARG:HG2	9:CJ:79:PRO:HG3	1.87	0.56
11:CL:22:ALA:HB3	11:CL:94:TYR:OH	2.06	0.56
55:CA:438:U:C5	55:CA:494:G:N7	2.74	0.56
55:CA:728:A:H2'	55:CA:729:A:C8	2.41	0.56
55:CA:1123:U:H2'	55:CA:1124:G:O4'	2.06	0.56
55:CA:1386:G:H2'	55:CA:1387:G:H8	1.71	0.56
24:DA:56:A:H2'	24:DA:57:C:C6	2.41	0.56
24:DA:258:G:H2'	24:DA:259:G:C8	2.40	0.56
24:DA:320:A:C5	28:DE:132:LYS:HB2	2.41	0.56
24:DA:356:G:H2'	24:DA:357:C:O4'	2.05	0.56
24:DA:443:A:H61	28:DE:36:ALA:HB1	1.70	0.56
24:DA:502:A:H5'	24:DA:503:A:OP2	2.06	0.56
24:DA:573:U:N3	24:DA:2030:A:H3'	2.21	0.56
24:DA:800:A:O2'	24:DA:801:G:H5''	2.06	0.56
24:DA:1203:U:N3	24:DA:1204:A:C6	2.73	0.56
24:DA:1290:C:HO2'	24:DA:1291:C:H6	1.51	0.56
24:DA:2028:U:H2'	24:DA:2029:G:C8	2.41	0.56
24:DA:2893:A:H5''	24:DA:2894:G:H5'	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DS:66:ILE:HD13	42:DS:66:ILE:H	1.70	0.56
43:DT:45:ALA:HA	43:DT:48:GLN:CG	2.36	0.56
48:DY:57:LEU:HD13	48:DY:60:LYS:HE3	1.87	0.56
13:AN:30:ILE:HG23	13:AN:44:VAL:HG12	1.87	0.56
21:AA:366:A:O2'	21:AA:394:G:N2	2.39	0.56
21:AA:369:G:OP2	21:AA:388:G:N2	2.29	0.56
24:BA:35:G:HO2'	24:BA:36:G:P	2.28	0.56
24:BA:100:U:C2	24:BA:101:A:N6	2.73	0.56
24:BA:271:G:O2'	24:BA:272:A:C5'	2.53	0.56
24:BA:315:G:H2'	24:BA:316:C:C6	2.41	0.56
24:BA:358:U:H2'	24:BA:359:G:O4'	2.06	0.56
24:BA:623:C:H2'	24:BA:624:C:C6	2.40	0.56
24:BA:646:U:O4	24:BA:2368:C:H1'	2.06	0.56
24:BA:705:A:H62	24:BA:726:G:H1'	1.68	0.56
24:BA:706:A:H2'	24:BA:707:G:O4'	2.06	0.56
24:BA:864:G:C6	24:BA:865:C:N4	2.74	0.56
24:BA:947:A:H2'	24:BA:948:C:H6	1.70	0.56
24:BA:1021:A:N6	24:BA:1142:A:N6	2.54	0.56
24:BA:1419:A:N7	24:BA:1421:G:C6	2.74	0.56
24:BA:2067:G:H4'	24:BA:2068:U:OP2	2.05	0.56
24:BA:2516:A:C4	24:BA:2569:G:N2	2.73	0.56
24:BA:2816:G:C4	24:BA:2817:U:C5	2.93	0.56
26:BC:61:TYR:HD2	26:BC:85:ASN:ND2	2.04	0.56
26:BC:263:ASP:O	26:BC:264:LYS:C	2.44	0.56
29:BF:127:TYR:CE2	29:BF:129:MET:HG2	2.40	0.56
30:BG:59:ASP:O	30:BG:62:ALA:HB3	2.06	0.56
30:BG:59:ASP:HB2	30:BG:63:GLN:HG2	1.88	0.56
34:BK:121:GLU:OE2	39:BP:64:SER:OG	2.19	0.56
40:BQ:13:HIS:HD2	40:BQ:31:TYR:CE1	2.23	0.56
43:BT:12:ARG:O	43:BT:13:ALA:HB2	2.06	0.56
48:BY:17:GLU:HB2	48:BY:53:VAL:HG11	1.88	0.56
1:CB:160:LEU:O	1:CB:183:PHE:HD1	1.89	0.56
6:CG:3:ARG:HG2	55:CA:932:C:H5'	1.86	0.56
10:CK:15:VAL:O	10:CK:16:SER:HB2	2.05	0.56
55:CA:65:A:H4'	55:CA:66:A:O5'	2.06	0.56
55:CA:177:G:H2'	55:CA:178:C:H5'	1.88	0.56
55:CA:324:G:N2	55:CA:326:G:H3'	2.21	0.56
55:CA:652:U:H1'	55:CA:653:U:C5	2.40	0.56
55:CA:734:G:H2'	55:CA:735:C:C6	2.41	0.56
55:CA:764:C:H2'	55:CA:765:G:H5'	1.88	0.56
24:DA:322:A:H5''	28:DE:163:ASN:ND2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:673:C:C5'	28:DE:75:SER:HB2	2.35	0.56
24:DA:2080:A:C2	24:DA:2081:U:C2	2.94	0.56
24:DA:2592:G:C4	24:DA:2593:U:C5	2.94	0.56
24:DA:2849:U:OP1	39:DP:92:ARG:NH1	2.39	0.56
29:DF:113:PHE:CE2	29:DF:116:LEU:HD22	2.41	0.56
31:DH:9:VAL:CG1	31:DH:10:ALA:N	2.68	0.56
37:DN:103:ARG:HB2	37:DN:110:MET:CG	2.35	0.56
43:DT:9:LYS:HG3	48:DY:21:LEU:HD13	1.87	0.56
1:AB:20:ARG:HA	1:AB:20:ARG:NH1	2.21	0.56
2:AC:36:PHE:HD1	2:AC:36:PHE:O	1.89	0.56
8:AI:49:GLN:N	8:AI:50:PRO:HD2	2.20	0.56
13:AN:74:ARG:HG2	21:AA:1358:U:OP1	2.06	0.56
20:AU:40:PRO:HB3	20:AU:44:ARG:HD3	1.88	0.56
24:BA:231:A:N6	24:BA:232:G:N2	2.54	0.56
24:BA:417:C:H2'	24:BA:418:C:C6	2.38	0.56
24:BA:588:U:H2'	24:BA:589:U:H6	1.71	0.56
24:BA:1021:A:H2'	24:BA:1021:A:N3	2.21	0.56
24:BA:1116:G:O2'	24:BA:1117:C:H5'	2.05	0.56
24:BA:1229:C:H2'	24:BA:1230:A:C8	2.41	0.56
24:BA:1278:C:H2'	24:BA:1279:G:C8	2.40	0.56
24:BA:1383:A:C6	24:BA:1384:A:N1	2.74	0.56
24:BA:1411:U:O2'	24:BA:1412:U:H5'	2.06	0.56
24:BA:1556:C:O2'	24:BA:1557:C:H5'	2.06	0.56
24:BA:2473:U:H5''	24:BA:2474:U:OP2	2.06	0.56
26:BC:16:VAL:H	26:BC:203:VAL:HG12	1.70	0.56
29:BF:10:GLU:O	29:BF:11:VAL:HB	2.06	0.56
29:BF:128:SER:OG	29:BF:154:THR:HB	2.06	0.56
35:BL:77:ILE:CD1	35:BL:108:ALA:HB1	2.35	0.56
44:BU:6:ARG:O	44:BU:24:VAL:HB	2.05	0.56
54:B4:9:LYS:CD	54:B4:9:LYS:N	2.68	0.56
9:CJ:71:LEU:O	9:CJ:72:ARG:HD3	2.05	0.56
13:CN:30:ILE:O	13:CN:45:LEU:HD11	2.06	0.56
18:CS:35:ARG:NH1	18:CS:52:ASN:HA	2.21	0.56
55:CA:13:U:O2'	55:CA:14:U:P	2.63	0.56
55:CA:79:G:H2'	55:CA:80:A:H8	1.71	0.56
55:CA:82:G:N7	55:CA:89:U:C4	2.74	0.56
55:CA:96:U:HO2'	55:CA:97:G:H8	1.53	0.56
55:CA:593:U:C4	55:CA:594:U:C5	2.93	0.56
55:CA:637:C:H2'	55:CA:638:U:H6	1.71	0.56
55:CA:966:G:C2	55:CA:967:C:C2	2.94	0.56
24:DA:234:U:O2'	24:DA:235:U:H6	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:374:A:C6	24:DA:401:A:C8	2.94	0.56
24:DA:547:A:H2'	24:DA:548:G:H5'	1.88	0.56
24:DA:655:A:H4'	24:DA:656:G:O5'	2.04	0.56
24:DA:822:G:H5''	59:DA:3360:HOH:O	2.06	0.56
24:DA:1128:G:O6	24:DA:2491:U:C5	2.59	0.56
24:DA:1854:A:H62	24:DA:1888:G:H8	1.53	0.56
56:DB:51:G:H5''	38:DO:64:TYR:CG	2.40	0.56
26:DC:52:HIS:NE2	26:DC:218:THR:HG23	2.21	0.56
26:DC:68:ARG:HD3	26:DC:103:ILE:HD13	1.86	0.56
28:DE:128:ALA:HB1	28:DE:129:PRO:CD	2.34	0.56
29:DF:48:LEU:HG	29:DF:49:LEU:HD22	1.88	0.56
33:DJ:77:HIS:CE1	33:DJ:83:GLY:HA3	2.40	0.56
33:DJ:86:GLN:O	33:DJ:87:ALA:HB2	2.06	0.56
39:DP:5:LYS:O	39:DP:9:GLN:HG2	2.04	0.56
39:DP:59:THR:OG1	39:DP:72:VAL:HG12	2.06	0.56
39:DP:88:ARG:NE	39:DP:112:ARG:HH21	2.01	0.56
42:DS:14:ALA:HB1	42:DS:18:ARG:NH2	2.21	0.56
42:DS:18:ARG:HH21	42:DS:76:VAL:HG22	1.71	0.56
50:D0:28:SER:HB3	50:D0:39:ARG:NE	2.21	0.56
7:AH:29:SER:HB2	7:AH:32:LYS:HZ3	1.69	0.56
10:AK:106:ILE:HD13	10:AK:107:THR:N	2.20	0.56
11:AL:41:PRO:HB3	11:AL:49:ARG:NH1	2.21	0.56
14:AO:45:HIS:HB3	21:AA:668:G:O2'	2.06	0.56
21:AA:2:A:N6	21:AA:3:A:N1	2.54	0.56
22:AX:39:U:H2'	22:AX:40:C:C6	2.41	0.56
24:BA:90:U:H2'	24:BA:91:A:C8	2.41	0.56
24:BA:463:G:N1	24:BA:467:G:C6	2.74	0.56
24:BA:960:A:N7	24:BA:962:G:C8	2.74	0.56
24:BA:1065:U:H5	24:BA:1074:G:H21	1.54	0.56
24:BA:2286:G:O6	51:B1:22:THR:HG21	2.05	0.56
24:BA:2426:A:H3'	24:BA:2427:C:H5'	1.88	0.56
27:BD:9:VAL:HG22	27:BD:10:GLY:N	2.20	0.56
30:BG:54:ARG:HD3	30:BG:54:ARG:C	2.27	0.56
33:BJ:13:ARG:O	33:BJ:14:ASP:CB	2.54	0.56
33:BJ:112:GLY:O	33:BJ:113:PRO:C	2.45	0.56
37:BN:75:ILE:HG13	37:BN:76:VAL:N	2.20	0.56
51:B1:27:ARG:O	51:B1:30:PRO:HD3	2.06	0.56
1:CB:86:CYS:SG	1:CB:220:VAL:HB	2.45	0.56
12:CM:62:PHE:O	12:CM:64:VAL:HG23	2.04	0.56
20:CU:14:ALA:O	20:CU:15:LEU:HG	2.06	0.56
55:CA:481:G:H4'	55:CA:482:A:OP1	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:914:A:O2'	55:CA:915:A:C5'	2.54	0.56
55:CA:1310:G:H2'	55:CA:1311:A:O4'	2.06	0.56
55:CA:1381:U:O2'	55:CA:1382:C:C5'	2.54	0.56
24:DA:45:G:C5'	24:DA:46:G:H5'	2.35	0.56
24:DA:333:G:O2'	24:DA:334:C:C5'	2.54	0.56
24:DA:600:G:C5'	28:DE:27:LEU:HD22	2.35	0.56
24:DA:1916:A:C8	24:DA:1916:A:H5''	2.41	0.56
24:DA:2248:C:H2'	24:DA:2249:U:O4'	2.06	0.56
24:DA:2261:C:O2'	24:DA:2262:U:H5'	2.06	0.56
29:DF:136:ILE:HG23	29:DF:142:TYR:HB2	1.87	0.56
29:DF:136:ILE:CD1	29:DF:145:VAL:HG11	2.34	0.56
29:DF:147:ARG:HD2	29:DF:147:ARG:H	1.71	0.56
30:DG:85:LYS:HG3	30:DG:163:TYR:HB2	1.87	0.56
31:DH:41:LYS:HA	31:DH:44:ILE:CG1	2.35	0.56
39:DP:9:GLN:HB3	39:DP:12:MET:CE	2.36	0.56
53:D3:57:VAL:HA	53:D3:60:CYS:SG	2.46	0.56
3:AD:25:ARG:NH1	3:AD:30:LYS:HE3	2.21	0.55
10:AK:85:VAL:HG12	10:AK:86:LYS:N	2.21	0.55
11:AL:23:LEU:C	11:AL:25:ALA:H	2.09	0.55
11:AL:42:LYS:HA	21:AA:1492:A:OP1	2.06	0.55
11:AL:43:LYS:N	21:AA:1492:A:OP1	2.39	0.55
13:AN:48:GLN:HA	13:AN:48:GLN:NE2	2.20	0.55
21:AA:98:A:H2'	21:AA:99:C:H6	1.71	0.55
21:AA:205:A:H62	21:AA:214:C:H1'	1.70	0.55
21:AA:985:C:O2'	21:AA:986:U:H5'	2.06	0.55
21:AA:1089:G:N2	21:AA:1090:U:H1'	2.20	0.55
21:AA:1239:A:C5	21:AA:1298:U:C5	2.93	0.55
21:AA:1295:U:H2'	21:AA:1296:C:C6	2.40	0.55
21:AA:1468:A:H8	21:AA:1468:A:O5'	1.89	0.55
24:BA:503:A:C2	24:BA:505:A:C4	2.95	0.55
24:BA:784:G:O6	26:BC:227:VAL:HG11	2.06	0.55
24:BA:809:G:H2'	24:BA:810:U:O5'	2.05	0.55
24:BA:1256:G:C2'	28:BE:77:ILE:HD11	2.35	0.55
24:BA:1313:U:C6	24:BA:1610:A:N3	2.74	0.55
24:BA:1468:U:C2	24:BA:1522:A:C2	2.95	0.55
24:BA:1498:C:H2'	24:BA:1499:C:C6	2.41	0.55
24:BA:1649:G:O2'	37:BN:106:ASP:OD2	2.23	0.55
24:BA:1683:U:H2'	24:BA:1684:G:H8	1.69	0.55
24:BA:2305:U:C5	24:BA:2306:C:C4	2.94	0.55
33:BJ:114:LEU:O	33:BJ:118:MET:HG3	2.05	0.55
46:BW:23:LYS:HE3	46:BW:24:ARG:O	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B0:32:THR:OG1	50:B0:50:GLY:HA2	2.06	0.55
52:B2:30:VAL:HG22	52:B2:33:ARG:NH1	2.21	0.55
53:B3:28:LEU:CD1	53:B3:40:LYS:HG2	2.36	0.55
4:CE:28:ARG:HG2	4:CE:29:ILE:N	2.21	0.55
7:CH:36:ALA:HA	7:CH:39:LEU:HD12	1.88	0.55
12:CM:52:ILE:HD12	12:CM:55:LEU:HB2	1.88	0.55
16:CQ:18:LYS:HD3	16:CQ:48:GLU:OE2	2.05	0.55
55:CA:720:C:H2'	55:CA:721:G:C8	2.41	0.55
55:CA:1134:G:C2	55:CA:1141:C:C2	2.94	0.55
24:DA:17:G:H4'	40:DQ:24:TYR:HE1	1.71	0.55
24:DA:216:A:C2'	24:DA:217:A:H8	2.18	0.55
24:DA:508:A:N6	42:DS:9:HIS:CE1	2.74	0.55
24:DA:604:G:C6	24:DA:625:G:C6	2.94	0.55
24:DA:695:G:C4	24:DA:768:G:C2	2.95	0.55
24:DA:1055:G:C3'	24:DA:1056:G:H5'	2.36	0.55
24:DA:1070:A:H61	32:DI:8:VAL:HG12	1.69	0.55
24:DA:1439:A:N6	24:DA:1440:U:C2	2.74	0.55
24:DA:1717:A:H2'	24:DA:1718:G:O4'	2.06	0.55
24:DA:2147:A:N3	24:DA:2147:A:H2'	2.20	0.55
24:DA:2230:G:C6	24:DA:2231:U:C4	2.95	0.55
24:DA:2299:U:H2'	24:DA:2300:C:C6	2.41	0.55
24:DA:2307:G:H1'	24:DA:2308:G:C8	2.40	0.55
24:DA:2458:G:H5''	24:DA:2459:A:OP1	2.06	0.55
56:DB:43:C:H4'	29:DF:91:ARG:NH2	2.22	0.55
26:DC:78:GLU:OE2	26:DC:94:LEU:HD22	2.06	0.55
48:DY:28:LEU:HD23	48:DY:42:LEU:HD13	1.87	0.55
3:AD:196:GLU:O	3:AD:198:LEU:N	2.39	0.55
7:AH:6:ILE:O	7:AH:9:MET:HB3	2.06	0.55
11:AL:89:LEU:HD22	11:AL:89:LEU:H	1.72	0.55
11:AL:118:VAL:O	21:AA:36:C:H4'	2.06	0.55
21:AA:115:G:H4'	21:AA:116:A:O5'	2.04	0.55
21:AA:123:U:H5''	21:AA:311:C:O2'	2.06	0.55
21:AA:1419:G:C6	21:AA:1420:U:C4	2.94	0.55
24:BA:682:G:H5'	52:B2:26:ASN:OD1	2.07	0.55
24:BA:827:U:H5'	24:BA:828:U:OP1	2.07	0.55
24:BA:1303:G:O2'	24:BA:1304:A:H5'	2.05	0.55
24:BA:1796:U:H2'	24:BA:1797:G:H8	1.70	0.55
24:BA:1831:G:C4	24:BA:1832:C:C5	2.94	0.55
24:BA:1849:G:O2'	24:BA:1850:G:H5'	2.05	0.55
24:BA:1891:G:H8	24:BA:1891:G:O5'	1.89	0.55
24:BA:1998:A:P	27:BD:141:ARG:NH2	2.79	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2305:U:C5'	29:BF:130:GLY:HA3	2.33	0.55
24:BA:2540:C:H2'	24:BA:2541:A:C5'	2.36	0.55
24:BA:2657:A:C2	24:BA:2665:A:C4	2.94	0.55
24:BA:2697:G:C5	24:BA:2698:U:C5	2.94	0.55
27:BD:150:GLN:O	27:BD:150:GLN:HG3	2.06	0.55
28:BE:79:ARG:CG	28:BE:80:SER:N	2.67	0.55
33:BJ:17:VAL:HG23	33:BJ:137:PRO:HB2	1.88	0.55
42:BS:20:VAL:HG21	42:BS:43:ALA:HB3	1.87	0.55
43:BT:54:GLU:O	43:BT:55:VAL:HB	2.06	0.55
53:B3:40:LYS:O	53:B3:43:LEU:N	2.35	0.55
2:CC:181:ILE:HA	2:CC:201:ILE:O	2.06	0.55
55:CA:79:G:H2'	55:CA:80:A:C8	2.41	0.55
55:CA:275:G:O2'	55:CA:276:G:C5'	2.53	0.55
55:CA:1060:U:O2	55:CA:1198:G:C2	2.58	0.55
55:CA:1250:A:N3	55:CA:1287:A:N6	2.54	0.55
55:CA:1300:G:N1	55:CA:1334:G:C8	2.74	0.55
24:DA:275:C:H2'	24:DA:276:U:O4'	2.06	0.55
24:DA:396:G:OP2	47:DX:9:LYS:NZ	2.35	0.55
24:DA:682:G:H2'	24:DA:683:U:C6	2.41	0.55
24:DA:822:G:N7	24:DA:944:C:H1'	2.21	0.55
24:DA:1236:G:O2'	24:DA:1237:A:C8	2.58	0.55
24:DA:1809:A:H2'	24:DA:1810:A:C8	2.41	0.55
24:DA:1965:C:H3'	24:DA:1966:A:C5'	2.31	0.55
24:DA:2332:C:H4'	46:DW:40:ARG:NH2	2.21	0.55
24:DA:2542:A:H4'	24:DA:2543:G:H5'	1.87	0.55
27:DD:119:ALA:HB3	27:DD:163:GLY:N	2.18	0.55
28:DE:105:LEU:HB3	28:DE:200:LEU:HD11	1.88	0.55
28:DE:147:LEU:O	28:DE:148:ILE:HB	2.05	0.55
30:DG:86:LEU:HD12	30:DG:132:LEU:HD11	1.88	0.55
31:DH:8:LYS:HD2	31:DH:9:VAL:N	2.21	0.55
31:DH:132:PHE:CZ	31:DH:134:VAL:HB	2.42	0.55
37:DN:37:THR:HB	37:DN:40:LYS:HB2	1.88	0.55
39:DP:105:LYS:HA	39:DP:108:ARG:NE	2.22	0.55
44:DU:11:ILE:HG21	44:DU:79:ALA:HB2	1.88	0.55
45:DV:57:TYR:HD2	45:DV:74:ALA:HB1	1.72	0.55
48:DY:19:LEU:HG	48:DY:22:LEU:HD22	1.89	0.55
1:AB:9:LEU:HD12	1:AB:42:LEU:CD1	2.36	0.55
2:AC:78:LYS:HG3	2:AC:79:LYS:HD2	1.88	0.55
4:AE:96:GLN:CD	4:AE:97:PRO:HD2	2.27	0.55
16:AQ:20:ILE:HG22	16:AQ:47:ASP:OD1	2.06	0.55
19:AT:73:ARG:HG3	19:AT:73:ARG:HH11	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:271:C:O2'	21:AA:272:C:H5'	2.06	0.55
21:AA:630:A:H2'	21:AA:631:C:O4'	2.07	0.55
21:AA:830:G:H2'	21:AA:831:A:C8	2.42	0.55
21:AA:1461:G:H2'	21:AA:1462:C:H6	1.72	0.55
24:BA:7:G:C6	24:BA:8:C:C4	2.94	0.55
24:BA:790:U:O2'	24:BA:791:C:H5'	2.06	0.55
24:BA:977:G:C2	24:BA:978:G:C8	2.94	0.55
24:BA:1006:C:C6	24:BA:1138:G:N2	2.74	0.55
24:BA:1026:G:C2'	24:BA:1027:A:H8	2.18	0.55
24:BA:1734:G:C4	24:BA:1735:A:C8	2.94	0.55
27:BD:107:VAL:HG21	27:BD:177:VAL:HG13	1.87	0.55
32:BI:85:ILE:HD13	32:BI:88:GLY:HA2	1.89	0.55
36:BM:46:ILE:CG1	36:BM:47:GLU:H	2.19	0.55
36:BM:96:ILE:HD12	36:BM:96:ILE:O	2.06	0.55
39:BP:50:ARG:CG	39:BP:57:ALA:H	2.19	0.55
39:BP:59:THR:HG23	39:BP:72:VAL:CG1	2.35	0.55
3:CD:10:LEU:HD23	3:CD:62:ARG:HD3	1.87	0.55
3:CD:69:ARG:O	3:CD:70:GLN:C	2.44	0.55
4:CE:80:LEU:HB3	4:CE:97:PRO:CB	2.37	0.55
6:CG:137:ARG:NH1	6:CG:138:GLU:OE2	2.40	0.55
13:CN:30:ILE:HB	13:CN:45:LEU:HD21	1.89	0.55
13:CN:46:LYS:HE3	18:CS:10:ILE:HB	1.89	0.55
16:CQ:17:GLU:HG3	55:CA:254:G:H21	1.71	0.55
55:CA:542:G:H2'	55:CA:543:U:H6	1.71	0.55
55:CA:689:C:H2'	55:CA:690:G:O4'	2.06	0.55
55:CA:765:G:O6	55:CA:811:C:C5	2.59	0.55
55:CA:881:G:H2'	55:CA:882:C:O4'	2.07	0.55
55:CA:1010:U:C2	55:CA:1020:G:N2	2.74	0.55
55:CA:1446:A:H61	55:CA:1447:A:N6	2.04	0.55
24:DA:74:A:O2'	24:DA:88:G:C8	2.60	0.55
24:DA:155:A:H2'	24:DA:156:A:C8	2.41	0.55
24:DA:233:A:H2'	24:DA:234:U:C6	2.42	0.55
24:DA:955:U:OP1	36:DM:86:LYS:HE3	2.07	0.55
24:DA:1011:G:C6	24:DA:1013:C:C4	2.94	0.55
24:DA:1054:A:C4	24:DA:1055:G:H1'	2.41	0.55
24:DA:2542:A:H5''	24:DA:2543:G:OP1	2.06	0.55
24:DA:2693:G:H2'	24:DA:2694:G:H8	1.71	0.55
27:DD:10:GLY:O	27:DD:11:MET:CB	2.54	0.55
42:DS:32:ALA:HA	42:DS:35:ILE:HD11	1.86	0.55
54:D4:19:ARG:O	54:D4:20:ASP:CB	2.54	0.55
2:AC:78:LYS:CG	2:AC:79:LYS:HD2	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:11:GLN:HG2	4:AE:116:VAL:HA	1.87	0.55
9:AJ:14:ASP:HB2	9:AJ:17:LEU:HB3	1.88	0.55
19:AT:19:HIS:O	19:AT:23:ARG:HG2	2.06	0.55
21:AA:192:A:C5	21:AA:193:C:C5	2.95	0.55
21:AA:1138:G:O2'	21:AA:1139:G:H4'	2.06	0.55
21:AA:1324:A:H2'	21:AA:1325:C:C6	2.41	0.55
24:BA:1455:G:O2'	24:BA:1456:G:H5'	2.05	0.55
24:BA:1833:C:C2	24:BA:1834:U:C6	2.95	0.55
24:BA:2426:A:H3'	24:BA:2427:C:C5'	2.36	0.55
30:BG:33:THR:C	30:BG:34:ARG:HD3	2.26	0.55
33:BJ:25:LEU:HB2	33:BJ:62:VAL:CG2	2.36	0.55
34:BK:61:VAL:HG21	34:BK:112:PHE:CE2	2.42	0.55
38:BO:104:GLN:O	38:BO:107:ALA:HB3	2.07	0.55
39:BP:33:GLU:HB2	39:BP:38:ARG:NH1	2.18	0.55
40:BQ:91:ARG:NH1	41:BR:10:LYS:HB3	2.21	0.55
49:BZ:37:ARG:HD2	49:BZ:37:ARG:N	2.20	0.55
1:CB:49:PHE:HB3	1:CB:199:ILE:HG22	1.88	0.55
1:CB:80:LYS:HB3	1:CB:90:PHE:CE2	2.41	0.55
2:CC:115:VAL:O	2:CC:118:SER:HB3	2.07	0.55
2:CC:179:ALA:O	2:CC:181:ILE:HG13	2.06	0.55
5:CF:3:HIS:NE2	5:CF:95:ALA:HB2	2.22	0.55
8:CI:20:ILE:HD11	8:CI:62:LEU:HD13	1.88	0.55
8:CI:24:ASN:HD22	8:CI:26:LYS:CD	2.18	0.55
9:CJ:11:LYS:HD3	9:CJ:11:LYS:N	2.18	0.55
12:CM:1:ALA:N	12:CM:2:ARG:HD3	2.21	0.55
12:CM:68:LEU:HD22	12:CM:69:ARG:NH1	2.21	0.55
12:CM:69:ARG:HH21	55:CA:1330:U:H5'	1.70	0.55
13:CN:16:ALA:HB2	13:CN:59:GLN:NE2	2.21	0.55
19:CT:17:ARG:HG2	55:CA:322:C:O3'	2.06	0.55
55:CA:369:G:N2	55:CA:370:C:C2	2.75	0.55
55:CA:688:G:N2	55:CA:689:C:C2	2.75	0.55
55:CA:880:C:C2'	55:CA:881:G:H5'	2.37	0.55
55:CA:1347:G:N2	55:CA:1373:G:H2'	2.21	0.55
55:CA:1531:A:O2'	55:CA:1532:U:H5'	2.06	0.55
24:DA:54:G:C4	24:DA:55:G:C8	2.95	0.55
24:DA:76:C:N3	24:DA:111:A:C2	2.74	0.55
24:DA:482:A:C6	24:DA:506:G:C4	2.95	0.55
24:DA:511:U:H5''	24:DA:1235:G:H4'	1.87	0.55
24:DA:828:U:H4'	24:DA:831:G:N1	2.22	0.55
24:DA:1439:A:N6	24:DA:1551:A:N1	2.54	0.55
24:DA:1663:G:C6	24:DA:1992:G:N7	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2065:C:N4	24:DA:2066:C:N4	2.55	0.55
24:DA:2466:C:OP1	54:D4:4:ARG:HB3	2.06	0.55
24:DA:2656:U:HO2'	24:DA:2657:A:H8	1.55	0.55
56:DB:45:A:HO2'	56:DB:46:A:H8	1.54	0.55
31:DH:83:LYS:HE2	31:DH:149:GLU:HB3	1.88	0.55
36:DM:133:LYS:NZ	36:DM:133:LYS:HB3	2.21	0.55
38:DO:70:ALA:O	38:DO:74:VAL:HG23	2.07	0.55
41:DR:2:TYR:CE1	41:DR:13:ARG:HD2	2.41	0.55
41:DR:90:ARG:O	41:DR:91:GLN:HB3	2.06	0.55
49:DZ:28:LEU:HD23	49:DZ:28:LEU:N	2.22	0.55
1:AB:209:VAL:HG23	1:AB:210:THR:H	1.71	0.55
3:AD:1:ALA:O	3:AD:67:LEU:HD11	2.07	0.55
4:AE:72:ASN:HD22	4:AE:72:ASN:N	2.04	0.55
6:AG:65:LEU:HD11	6:AG:100:MET:HG2	1.86	0.55
8:AI:75:ALA:HA	8:AI:78:ILE:HD12	1.88	0.55
11:AL:23:LEU:O	11:AL:25:ALA:N	2.40	0.55
15:AP:51:ARG:HG2	15:AP:52:LEU:H	1.71	0.55
21:AA:161:A:H2'	21:AA:162:A:C8	2.41	0.55
21:AA:235:C:H2'	21:AA:236:A:C8	2.41	0.55
21:AA:466:A:C5'	21:AA:467:U:OP2	2.55	0.55
21:AA:828:U:H5'	21:AA:870:U:O4	2.07	0.55
21:AA:922:G:N3	21:AA:1398:A:H2	2.04	0.55
21:AA:1242:G:O2'	21:AA:1243:C:H5'	2.06	0.55
21:AA:1345:U:H4'	21:AA:1346:A:O5'	2.05	0.55
24:BA:77:G:C6	24:BA:78:U:C4	2.95	0.55
24:BA:85:G:O6	24:BA:98:G:C6	2.59	0.55
24:BA:324:A:N6	24:BA:338:G:H2'	2.21	0.55
24:BA:370:G:C6	24:BA:424:G:C8	2.94	0.55
24:BA:949:G:N2	24:BA:969:G:C4	2.75	0.55
24:BA:983:A:C6	24:BA:984:A:C2	2.95	0.55
24:BA:1477:A:H61	24:BA:1514:G:H1'	1.71	0.55
24:BA:1805:A:N3	26:BC:49:THR:CG2	2.70	0.55
24:BA:2386:A:C2	46:BW:38:ARG:HD2	2.41	0.55
24:BA:2417:C:C2	24:BA:2418:A:C8	2.94	0.55
31:BH:40:THR:O	31:BH:42:LYS:N	2.35	0.55
31:BH:78:VAL:HG11	31:BH:145:ASN:HB3	1.87	0.55
33:BJ:38:GLY:O	33:BJ:40:HIS:N	2.39	0.55
34:BK:69:VAL:O	34:BK:76:VAL:HA	2.06	0.55
36:BM:70:ASP:OD1	36:BM:70:ASP:C	2.45	0.55
42:BS:9:HIS:H	42:BS:102:HIS:CE1	2.24	0.55
46:BW:43:LYS:HE2	46:BW:68:PHE:HE1	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B1:33:LEU:N	51:B1:51:ALA:HB3	2.21	0.55
1:CB:95:TRP:HZ3	1:CB:170:ILE:HG22	1.71	0.55
2:CC:15:LYS:HG3	2:CC:16:PRO:HD2	1.88	0.55
2:CC:19:SER:HB3	2:CC:21:TRP:HE1	1.71	0.55
2:CC:25:THR:HB	2:CC:26:LYS:NZ	2.21	0.55
11:CL:11:ARG:HD2	55:CA:562:U:H1'	1.88	0.55
18:CS:36:ARG:HD3	55:CA:1318:A:O2'	2.07	0.55
55:CA:171:A:H2'	55:CA:172:A:C8	2.41	0.55
55:CA:832:G:C2	55:CA:855:U:C2	2.94	0.55
55:CA:844:G:O6	55:CA:847:G:H1'	2.07	0.55
55:CA:914:A:HO2'	55:CA:915:A:H8	1.53	0.55
55:CA:1067:A:O2'	55:CA:1094:G:H3'	2.07	0.55
24:DA:1049:C:O2'	24:DA:1050:A:C5'	2.54	0.55
24:DA:1558:C:H1'	24:DA:1560:G:C5	2.41	0.55
24:DA:1776:G:N2	24:DA:1789:A:H1'	2.20	0.55
24:DA:2447:G:C8	24:DA:2500:U:C6	2.94	0.55
24:DA:2616:C:O2'	24:DA:2617:U:O4'	2.24	0.55
56:DB:24:G:H5'	56:DB:25:U:H5	1.71	0.55
56:DB:76:G:H21	45:DV:78:GLN:HE22	1.53	0.55
33:DJ:80:HIS:HB3	33:DJ:81:ILE:HG13	1.87	0.55
4:AE:33:THR:HG22	4:AE:51:LYS:HE2	1.87	0.55
7:AH:8:ASP:O	7:AH:12:ARG:HB2	2.07	0.55
21:AA:35:G:H2'	21:AA:36:C:H6	1.72	0.55
21:AA:329:A:C8	21:AA:332:G:C6	2.94	0.55
21:AA:461:A:H3'	21:AA:461:A:N3	2.22	0.55
24:BA:60:G:O2'	24:BA:61:C:P	2.64	0.55
24:BA:1059:G:H2'	32:BI:131:THR:OG1	2.06	0.55
24:BA:1797:G:C6	24:BA:1798:U:C4	2.94	0.55
24:BA:1812:U:H2'	24:BA:1813:G:H8	1.70	0.55
24:BA:2037:A:C2	24:BA:2038:G:C4	2.94	0.55
24:BA:2251:G:H2'	24:BA:2252:G:H8	1.67	0.55
26:BC:171:VAL:CG2	26:BC:185:ALA:HA	2.37	0.55
30:BG:61:TRP:HA	30:BG:61:TRP:CE3	2.40	0.55
46:BW:39:GLN:HG2	46:BW:41:GLY:N	2.17	0.55
11:CL:23:LEU:HD11	11:CL:94:TYR:CE1	2.42	0.55
11:CL:122:LYS:O	11:CL:123:ALA:HB3	2.07	0.55
19:CT:32:LYS:HA	19:CT:35:TYR:HB3	1.89	0.55
55:CA:93:U:O5'	55:CA:93:U:H6	1.89	0.55
55:CA:106:C:H2'	55:CA:107:G:O4'	2.07	0.55
55:CA:1245:C:H2'	55:CA:1246:A:C8	2.41	0.55
24:DA:52:A:H2	24:DA:179:C:O4'	1.90	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:123:G:C2	24:DA:124:G:H1'	2.41	0.55
24:DA:605:G:H2'	24:DA:606:U:H6	1.71	0.55
24:DA:672:C:C2	24:DA:809:G:N2	2.75	0.55
24:DA:752:A:HO2'	24:DA:753:A:P	2.30	0.55
24:DA:825:A:C2	24:DA:826:U:C2	2.94	0.55
24:DA:1098:A:H3'	24:DA:1099:G:H8	1.71	0.55
24:DA:1238:G:N3	24:DA:1239:G:C8	2.74	0.55
24:DA:1333:G:O2'	24:DA:1334:G:H5'	2.06	0.55
24:DA:1668:A:N6	24:DA:1676:A:H61	2.04	0.55
24:DA:1788:C:H2'	24:DA:1789:A:H8	1.71	0.55
26:DC:146:LYS:O	26:DC:148:GLY:N	2.39	0.55
27:DD:148:GLN:HG2	27:DD:152:PRO:HG2	1.86	0.55
28:DE:6:LYS:HE3	28:DE:7:ASP:OD2	2.07	0.55
31:DH:8:LYS:HD2	31:DH:8:LYS:C	2.26	0.55
35:DL:23:ILE:HD13	41:DR:84:ARG:CZ	2.36	0.55
43:DT:4:GLU:HG3	43:DT:6:ARG:NH2	2.22	0.55
1:AB:40:ILE:HG21	1:AB:201:GLY:CA	2.36	0.55
5:AF:18:VAL:HB	5:AF:19:PRO:CD	2.36	0.55
6:AG:75:LYS:HE3	21:AA:1378:C:O2	2.07	0.55
8:AI:40:ARG:CA	8:AI:44:ARG:HB3	2.37	0.55
20:AU:36:PHE:HD1	20:AU:39:LYS:HB3	1.70	0.55
24:BA:432:A:C5	24:BA:433:C:C5	2.94	0.55
24:BA:469:G:O6	52:B2:39:ARG:NH1	2.39	0.55
24:BA:1649:G:C6	24:BA:2009:A:C6	2.94	0.55
24:BA:1716:U:O2'	24:BA:1717:A:H5'	2.07	0.55
24:BA:1747:U:O2'	24:BA:1748:C:H5'	2.06	0.55
24:BA:1764:C:O2'	24:BA:1765:U:H5'	2.07	0.55
24:BA:1915:U:H2'	24:BA:1916:A:C8	2.42	0.55
24:BA:2328:A:H2'	24:BA:2329:U:H6	1.71	0.55
24:BA:2330:G:H21	46:BW:38:ARG:HA	1.71	0.55
24:BA:2484:G:C2	24:BA:2485:G:C8	2.94	0.55
24:BA:2492:U:H2'	24:BA:2493:U:H6	1.70	0.55
25:BB:46:A:H2'	25:BB:47:C:O4'	2.06	0.55
26:BC:90:ILE:CG2	26:BC:102:TYR:CD1	2.90	0.55
29:BF:129:MET:HG3	29:BF:153:ILE:CD1	2.37	0.55
29:BF:134:GLN:CG	29:BF:135:ILE:H	2.04	0.55
34:BK:76:VAL:HB	39:BP:72:VAL:CG2	2.36	0.55
48:BY:18:LEU:O	48:BY:18:LEU:HD13	2.07	0.55
53:B3:56:LEU:H	53:B3:56:LEU:CD2	2.19	0.55
12:CM:90:HIS:HA	12:CM:108:ARG:NH2	2.22	0.55
55:CA:55:A:H2'	55:CA:56:U:H5'	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:78:A:H2'	55:CA:79:G:H8	1.70	0.55
55:CA:1124:G:O2'	55:CA:1127:G:O6	2.18	0.55
24:DA:553:G:H2'	24:DA:554:U:O4'	2.07	0.55
24:DA:815:C:P	41:DR:85:LYS:HE2	2.46	0.55
24:DA:1035:U:H2'	24:DA:1036:G:C8	2.42	0.55
24:DA:1249:U:H4'	40:DQ:3:VAL:HG21	1.87	0.55
24:DA:1352:U:H5	24:DA:1377:G:C6	2.24	0.55
24:DA:2902:C:OP2	24:DA:2902:C:H6	1.90	0.55
26:DC:158:GLY:N	26:DC:194:VAL:HG13	2.20	0.55
29:DF:66:ILE:HG13	29:DF:83:PRO:HB3	1.89	0.55
29:DF:129:MET:HG3	29:DF:153:ILE:HD12	1.88	0.55
31:DH:50:ARG:HB2	31:DH:50:ARG:CZ	2.30	0.55
33:DJ:4:PHE:O	33:DJ:44:TYR:CZ	2.60	0.55
42:DS:84:ARG:HB3	42:DS:96:ILE:HG23	1.87	0.55
47:DX:36:ARG:HG2	47:DX:47:THR:HB	1.88	0.55
1:AB:51:GLU:CD	1:AB:197:PHE:HE1	2.10	0.55
2:AC:10:ARG:O	2:AC:11:LEU:C	2.46	0.55
3:AD:8:LEU:HB2	21:AA:430:A:OP1	2.07	0.55
8:AI:105:ARG:NE	21:AA:1117:A:O3'	2.39	0.55
9:AJ:15:HIS:O	9:AJ:18:ILE:HG22	2.06	0.55
14:AO:27:GLN:O	14:AO:30:LEU:HB2	2.06	0.55
21:AA:78:A:N6	21:AA:79:G:N1	2.54	0.55
21:AA:317:U:C2	21:AA:337:G:N2	2.74	0.55
21:AA:914:A:C2'	21:AA:915:A:H8	2.19	0.55
21:AA:1006:G:H2'	21:AA:1007:U:O4'	2.07	0.55
21:AA:1237:C:OP1	21:AA:1238:A:H1'	2.07	0.55
21:AA:1422:G:C2	21:AA:1423:G:C8	2.95	0.55
24:BA:60:G:C2	24:BA:74:A:C2	2.95	0.55
24:BA:121:G:HO2'	24:BA:122:G:H8	1.51	0.55
24:BA:324:A:H61	24:BA:338:G:H2'	1.72	0.55
24:BA:1017:G:C5	24:BA:1018:U:C5	2.95	0.55
24:BA:1220:G:H2'	24:BA:1221:C:O4'	2.07	0.55
24:BA:1385:A:C6	24:BA:1403:A:C5	2.95	0.55
24:BA:1456:G:C2'	24:BA:1457:U:H5'	2.36	0.55
27:BD:151:THR:CB	27:BD:152:PRO:HD3	2.37	0.55
32:BI:104:GLN:O	32:BI:105:LEU:CB	2.55	0.55
41:BR:39:LEU:HA	41:BR:49:ILE:HG21	1.88	0.55
46:BW:40:ARG:HD3	46:BW:45:HIS:CE1	2.42	0.55
1:CB:92:ASN:H	1:CB:92:ASN:ND2	2.04	0.55
5:CF:27:ALA:O	5:CF:31:GLY:HA3	2.06	0.55
6:CG:69:ARG:HD3	6:CG:70:PRO:HD2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:77:VAL:HG12	7:CH:84:ILE:HG13	1.87	0.55
13:CN:66:THR:HG23	13:CN:82:LYS:HE3	1.88	0.55
14:CO:24:THR:HG21	14:CO:69:LEU:HB2	1.88	0.55
16:CQ:75:VAL:O	16:CQ:76:ARG:HB3	2.06	0.55
19:CT:54:GLN:N	19:CT:55:PRO:HD2	2.22	0.55
55:CA:812:G:H2'	55:CA:812:G:N3	2.21	0.55
55:CA:1124:G:O2'	55:CA:1125:U:C5	2.59	0.55
55:CA:1160:G:O6	55:CA:1181:G:C6	2.60	0.55
24:DA:216:A:O2'	24:DA:217:A:O5'	2.24	0.55
24:DA:301:G:C6	24:DA:302:C:N4	2.75	0.55
24:DA:572:A:H2'	24:DA:573:U:O4'	2.07	0.55
24:DA:629:G:H2'	24:DA:630:G:C8	2.42	0.55
24:DA:804:A:H2'	24:DA:806:C:N4	2.22	0.55
24:DA:804:A:H5''	24:DA:805:G:OP1	2.07	0.55
24:DA:999:U:O2'	24:DA:1000:A:H5'	2.07	0.55
24:DA:1183:U:H2'	24:DA:1184:U:C6	2.42	0.55
24:DA:1286:A:C5	24:DA:1289:C:N4	2.75	0.55
24:DA:2276:G:O2'	24:DA:2277:G:H5'	2.07	0.55
24:DA:2459:A:H2'	24:DA:2460:U:H6	1.72	0.55
56:DB:86:G:H2'	56:DB:87:U:H5''	1.89	0.55
26:DC:255:LYS:C	26:DC:256:THR:HG23	2.27	0.55
27:DD:38:LYS:HB3	27:DD:38:LYS:NZ	2.21	0.55
28:DE:79:ARG:CG	28:DE:80:SER:H	2.19	0.55
28:DE:129:PRO:HD3	28:DE:156:ASN:OD1	2.07	0.55
30:DG:43:LYS:O	30:DG:49:LEU:HD12	2.07	0.55
30:DG:84:LYS:HB2	30:DG:132:LEU:H	1.72	0.55
38:DO:23:ALA:O	38:DO:42:PRO:HG3	2.06	0.55
39:DP:91:VAL:HG21	39:DP:96:LEU:HD21	1.89	0.55
44:DU:95:PHE:N	44:DU:95:PHE:CD1	2.74	0.55
46:DW:18:LYS:H	46:DW:36:ILE:CG1	2.20	0.55
3:AD:109:THR:HG21	21:AA:408:A:P	2.47	0.55
8:AI:129:ARG:HH22	21:AA:967:C:C1'	2.20	0.55
9:AJ:35:GLN:HG2	9:AJ:77:VAL:HB	1.89	0.55
11:AL:6:LEU:HD21	11:AL:11:ARG:HE	1.72	0.55
21:AA:266:G:O2'	21:AA:267:C:O5'	2.25	0.55
21:AA:950:U:H2'	21:AA:951:G:C8	2.42	0.55
21:AA:1101:A:O2'	21:AA:1102:A:C8	2.59	0.55
24:BA:10:A:C5	24:BA:2800:A:C6	2.95	0.55
24:BA:88:G:C6	24:BA:89:A:N7	2.75	0.55
24:BA:229:C:C5	24:BA:230:G:C8	2.95	0.55
24:BA:1124:G:H1'	54:B4:38:GLY:OXT	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1641:A:N6	24:BA:1642:G:C2	2.74	0.55
24:BA:1647:U:P	24:BA:1647:U:H3'	2.46	0.55
24:BA:2093:G:N7	24:BA:2225:A:H2'	2.21	0.55
24:BA:2222:C:H4'	26:BC:184:GLU:OE1	2.07	0.55
24:BA:2896:C:O2'	24:BA:2897:U:H5'	2.07	0.55
33:BJ:25:LEU:HB2	33:BJ:62:VAL:HG22	1.89	0.55
34:BK:18:ARG:N	34:BK:45:GLU:HB2	2.21	0.55
40:BQ:96:ASP:C	40:BQ:98:ALA:H	2.10	0.55
45:BV:40:ILE:HG22	45:BV:41:GLU:H	1.71	0.55
46:BW:42:THR:O	46:BW:43:LYS:HD3	2.07	0.55
52:B2:42:LEU:H	52:B2:42:LEU:HD22	1.70	0.55
2:CC:156:LEU:C	2:CC:158:GLY:H	2.10	0.55
9:CJ:80:THR:O	9:CJ:84:VAL:HG22	2.06	0.55
12:CM:2:ARG:N	12:CM:2:ARG:CD	2.59	0.55
55:CA:315:A:H5''	55:CA:317:U:OP2	2.07	0.55
55:CA:908:A:H2'	55:CA:909:A:C8	2.42	0.55
55:CA:976:G:O5'	55:CA:1358:U:O2'	2.25	0.55
55:CA:1026:G:H22	55:CA:1036:A:H61	1.52	0.55
55:CA:1043:G:O6	55:CA:1044:A:N6	2.40	0.55
55:CA:1136:C:C5	55:CA:1138:G:O6	2.59	0.55
24:DA:364:C:H2'	24:DA:365:U:C5	2.41	0.55
24:DA:1079:C:N4	24:DA:1088:A:C2	2.75	0.55
24:DA:1838:C:C6	24:DA:1899:A:C6	2.95	0.55
24:DA:2278:A:H2'	24:DA:2279:G:H5''	1.89	0.55
24:DA:2350:C:H5	53:D3:41:ARG:CZ	2.20	0.55
24:DA:2539:C:C4	24:DA:2540:C:C5	2.94	0.55
24:DA:2751:G:H4'	30:DG:3:VAL:HG11	1.87	0.55
24:DA:2770:G:O5'	24:DA:2770:G:C8	2.60	0.55
30:DG:115:GLN:HG2	30:DG:116:LEU:H	1.70	0.55
37:DN:24:MET:HG2	37:DN:44:LEU:HD22	1.87	0.55
43:DT:68:LYS:O	43:DT:74:ILE:HG13	2.05	0.55
45:DV:30:ILE:HG12	45:DV:91:PHE:HB2	1.89	0.55
45:DV:82:TYR:CE1	45:DV:83:LYS:HG2	2.41	0.55
1:AB:20:ARG:HA	1:AB:20:ARG:CZ	2.36	0.55
2:AC:34:SER:O	2:AC:38:VAL:HG13	2.07	0.55
6:AG:86:VAL:HG22	6:AG:150:PHE:HB3	1.89	0.55
11:AL:45:ASN:HA	21:AA:529:G:O6	2.07	0.55
21:AA:113:G:H2'	21:AA:114:U:H6	1.72	0.55
21:AA:597:G:C5	21:AA:598:U:C5	2.95	0.55
21:AA:1117:A:C6	21:AA:1184:G:O6	2.59	0.55
22:AX:30:G:O2'	22:AX:31:A:H5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:195:A:C6	24:BA:198:C:C5	2.95	0.55
24:BA:515:A:C8	24:BA:516:C:C5	2.95	0.55
24:BA:639:U:C2	24:BA:640:C:C5	2.95	0.55
24:BA:1115:G:O2'	24:BA:1116:G:O5'	2.23	0.55
24:BA:1495:A:O2'	24:BA:1496:A:C8	2.58	0.55
24:BA:1847:A:H2'	24:BA:1848:A:H8	1.72	0.55
24:BA:2063:C:O2	24:BA:2450:A:N1	2.40	0.55
24:BA:2209:G:C5	24:BA:2210:U:C4	2.95	0.55
24:BA:2680:U:OP1	27:BD:114:LYS:HE2	2.07	0.55
27:BD:97:SER:H	27:BD:99:GLU:CD	2.10	0.55
27:BD:120:GLY:HA2	27:BD:162:ALA:CB	2.36	0.55
29:BF:68:LYS:HA	29:BF:83:PRO:HA	1.89	0.55
30:BG:32:LEU:O	30:BG:33:THR:HG23	2.07	0.55
36:BM:42:THR:O	36:BM:43:ALA:HB3	2.06	0.55
40:BQ:86:SER:HB3	41:BR:51:VAL:HG12	1.89	0.55
40:BQ:91:ARG:CZ	41:BR:11:GLN:H	2.20	0.55
46:BW:40:ARG:HH11	46:BW:45:HIS:CE1	2.25	0.55
2:CC:61:LYS:O	2:CC:97:PRO:HD2	2.06	0.55
5:CF:68:GLN:HG2	5:CF:69:GLU:N	2.22	0.55
6:CG:134:VAL:HB	6:CG:137:ARG:HH21	1.72	0.55
19:CT:30:PHE:CE2	19:CT:52:GLU:HG2	2.41	0.55
55:CA:229:U:H2'	55:CA:230:G:O4'	2.06	0.55
55:CA:860:A:H2'	55:CA:861:G:O4'	2.05	0.55
55:CA:942:G:C2	55:CA:1342:C:C2	2.95	0.55
55:CA:1287:A:O2'	55:CA:1288:A:C8	2.55	0.55
24:DA:241:A:H4'	24:DA:242:G:OP1	2.07	0.55
24:DA:1010:A:OP1	40:DQ:61:ILE:HG22	2.07	0.55
24:DA:1251:C:C6	40:DQ:5:ARG:NH1	2.75	0.55
24:DA:2240:U:O2'	24:DA:2241:A:O5'	2.25	0.55
24:DA:2287:A:O2'	24:DA:2288:A:O5'	2.20	0.55
24:DA:2611:C:O2'	24:DA:2612:C:C5'	2.55	0.55
24:DA:2751:G:H4'	30:DG:3:VAL:CG1	2.36	0.55
24:DA:2868:A:O2'	24:DA:2869:G:H5'	2.07	0.55
56:DB:50:A:H5''	38:DO:67:ASN:OD1	2.07	0.55
26:DC:106:PRO:HB3	26:DC:141:HIS:CE1	2.41	0.55
26:DC:140:VAL:CG2	26:DC:161:VAL:HB	2.37	0.55
26:DC:245:THR:C	26:DC:247:TRP:H	2.11	0.55
30:DG:106:LEU:HB2	30:DG:108:PHE:CE1	2.42	0.55
33:DJ:45:THR:H	33:DJ:46:PRO:HD3	1.71	0.55
34:DK:87:LEU:HD23	34:DK:87:LEU:H	1.71	0.55
37:DN:71:ARG:HB2	37:DN:71:ARG:NH2	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DT:55:VAL:HG21	43:DT:85:VAL:O	2.07	0.55
1:AB:24:PRO:C	1:AB:26:MET:H	2.10	0.54
1:AB:95:TRP:CH2	1:AB:99:MET:HG2	2.42	0.54
2:AC:52:SER:HB2	2:AC:111:ASP:OD2	2.07	0.54
2:AC:177:LEU:HD23	21:AA:1112:C:N4	2.22	0.54
5:AF:6:ILE:HB	5:AF:62:MET:CB	2.37	0.54
6:AG:99:ALA:HA	6:AG:102:TRP:CE3	2.41	0.54
14:AO:69:LEU:HD21	14:AO:76:ARG:HB2	1.89	0.54
16:AQ:15:LYS:HE2	21:AA:274:A:H5'	1.88	0.54
21:AA:115:G:C2	21:AA:313:A:C2	2.95	0.54
21:AA:181:A:H5''	21:AA:182:A:OP1	2.07	0.54
21:AA:519:C:O2'	21:AA:520:A:H5'	2.07	0.54
21:AA:1322:C:O2'	21:AA:1323:G:C5'	2.53	0.54
24:BA:470:A:H61	43:BT:72:GLN:NE2	2.04	0.54
24:BA:1045:C:H1'	24:BA:1047:G:C2	2.41	0.54
24:BA:1073:A:C3'	24:BA:1074:G:C5'	2.80	0.54
24:BA:1079:C:C4	24:BA:1088:A:C2	2.95	0.54
24:BA:1300:G:H5''	24:BA:1301:A:H5''	1.89	0.54
24:BA:1667:G:O2'	24:BA:1991:U:O4	2.24	0.54
24:BA:1730:C:H2'	24:BA:1731:G:H5''	1.89	0.54
24:BA:1784:A:H4'	24:BA:1785:A:C5'	2.37	0.54
24:BA:2025:C:H2'	24:BA:2026:U:C6	2.41	0.54
24:BA:2144:G:H3'	24:BA:2144:G:N3	2.21	0.54
25:BB:74:U:O2	45:BV:29:ILE:HD12	2.07	0.54
26:BC:199:HIS:O	26:BC:202:ARG:HG3	2.07	0.54
27:BD:14:ILE:O	27:BD:14:ILE:CG1	2.55	0.54
28:BE:1:MET:CG	28:BE:14:VAL:HG23	2.36	0.54
31:BH:131:SER:HB2	31:BH:139:PHE:HD2	1.72	0.54
34:BK:2:ILE:HG21	34:BK:39:ILE:HD12	1.90	0.54
36:BM:71:LYS:HD3	36:BM:95:LEU:CD1	2.37	0.54
45:BV:51:GLN:NE2	45:BV:51:GLN:O	2.40	0.54
49:BZ:39:ASP:CG	49:BZ:44:ARG:HH11	2.11	0.54
2:CC:75:VAL:HG12	2:CC:83:VAL:HG12	1.89	0.54
5:CF:6:ILE:HG12	5:CF:74:LEU:HD23	1.89	0.54
13:CN:20:PHE:CE1	13:CN:54:SER:HB2	2.42	0.54
55:CA:9:G:N3	55:CA:10:A:C8	2.74	0.54
55:CA:51:A:O2'	55:CA:116:A:H4'	2.07	0.54
55:CA:330:C:H2'	55:CA:331:G:C8	2.42	0.54
55:CA:436:C:N3	55:CA:437:U:C5	2.75	0.54
55:CA:988:G:H2'	55:CA:989:U:O4'	2.07	0.54
55:CA:1493:A:H2	22:CX:36:A:N3	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:9:G:N1	24:DA:2629:U:H2'	2.19	0.54
24:DA:100:U:HO2'	24:DA:101:A:C5'	2.21	0.54
24:DA:241:A:H1'	24:DA:243:U:C4	2.42	0.54
24:DA:324:A:N6	24:DA:338:G:H2'	2.22	0.54
24:DA:807:U:O4'	24:DA:2445:G:H5'	2.08	0.54
24:DA:874:G:C2	24:DA:904:G:C2	2.95	0.54
24:DA:1074:G:OP2	24:DA:1074:G:H8	1.90	0.54
24:DA:1276:A:C2	24:DA:1277:G:C5	2.95	0.54
24:DA:1455:G:H2'	24:DA:1456:G:H8	1.72	0.54
24:DA:2079:U:H2'	24:DA:2080:A:C8	2.42	0.54
24:DA:2346:A:H3'	24:DA:2347:C:H5''	1.88	0.54
33:DJ:3:THR:HG21	40:DQ:60:TRP:HE1	1.72	0.54
35:DL:33:ARG:HD3	35:DL:40:SER:HA	1.87	0.54
1:AB:160:LEU:C	1:AB:182:VAL:HG13	2.28	0.54
2:AC:5:HIS:HB3	13:AN:88:MET:CE	2.37	0.54
3:AD:11:SER:OG	3:AD:17:ASP:HA	2.07	0.54
8:AI:17:ARG:HH22	21:AA:1129:C:H5''	1.71	0.54
10:AK:30:ILE:HD12	10:AK:30:ILE:O	2.07	0.54
20:AU:52:VAL:HG13	20:AU:53:LYS:N	2.18	0.54
21:AA:84:U:O2	21:AA:84:U:H2'	2.07	0.54
21:AA:250:A:H4'	21:AA:251:G:O5'	2.08	0.54
21:AA:368:U:H3'	21:AA:369:G:H5'	1.89	0.54
21:AA:1143:G:H2'	21:AA:1144:G:H8	1.73	0.54
24:BA:187:G:C2	24:BA:210:C:O2	2.61	0.54
24:BA:1274:A:C2	24:BA:1645:G:O4'	2.60	0.54
24:BA:1494:A:H2'	24:BA:1495:A:C8	2.42	0.54
24:BA:1522:A:HO2'	24:BA:1523:U:P	2.30	0.54
24:BA:1855:U:H2'	24:BA:1856:U:O4'	2.07	0.54
24:BA:2287:A:C5	24:BA:2289:G:C8	2.96	0.54
24:BA:2808:G:N2	24:BA:2891:U:C6	2.76	0.54
25:BB:29:A:H2'	25:BB:30:C:H6	1.69	0.54
25:BB:52:A:N7	38:BO:64:TYR:OH	2.27	0.54
32:BI:23:VAL:HG23	32:BI:24:GLY:H	1.72	0.54
39:BP:23:ASP:HA	39:BP:89:GLY:H	1.73	0.54
48:BY:7:ARG:O	48:BY:7:ARG:HG3	2.07	0.54
51:B1:33:LEU:H	51:B1:51:ALA:HB3	1.72	0.54
7:CH:15:ASN:HD21	55:CA:875:U:H1'	1.71	0.54
9:CJ:10:LEU:O	9:CJ:18:ILE:HD11	2.06	0.54
9:CJ:17:LEU:HG	9:CJ:96:VAL:HG13	1.89	0.54
9:CJ:57:VAL:HG13	9:CJ:58:ASN:N	2.23	0.54
55:CA:815:A:N7	55:CA:1509:C:O2'	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:825:A:H2'	55:CA:826:C:C6	2.43	0.54
55:CA:914:A:O2'	55:CA:915:A:H8	1.91	0.54
55:CA:1140:C:H2'	55:CA:1141:C:C5	2.43	0.54
55:CA:1401:G:C2	55:CA:1402:C:H1'	2.42	0.54
55:CA:1523:G:C5	55:CA:1524:C:C5	2.95	0.54
24:DA:258:G:H2'	24:DA:259:G:H8	1.72	0.54
24:DA:271:G:C6	24:DA:272:A:N6	2.75	0.54
24:DA:839:U:H2'	24:DA:840:C:C6	2.42	0.54
24:DA:973:A:OP1	24:DA:973:A:O4'	2.24	0.54
24:DA:1032:A:H1'	54:D4:23:ILE:HD13	1.90	0.54
24:DA:1114:C:H2'	24:DA:1115:G:C8	2.41	0.54
24:DA:1353:A:H2'	24:DA:1354:A:C8	2.41	0.54
24:DA:1425:G:H2'	24:DA:1426:G:C8	2.42	0.54
24:DA:1431:A:H2'	24:DA:1432:G:O4'	2.05	0.54
24:DA:1507:C:H3'	24:DA:1508:A:O4'	2.05	0.54
24:DA:1681:G:O2'	24:DA:1762:A:H2'	2.08	0.54
27:DD:148:GLN:OE1	27:DD:152:PRO:HG2	2.06	0.54
36:DM:27:SER:N	36:DM:66:ARG:NH2	2.43	0.54
40:DQ:16:ILE:HG23	40:DQ:38:VAL:HG21	1.89	0.54
6:AG:101:ARG:NH2	21:AA:939:G:H5'	2.21	0.54
13:AN:14:ALA:O	13:AN:18:LYS:HG3	2.07	0.54
21:AA:206:C:C2	21:AA:207:C:H1'	2.43	0.54
21:AA:211:G:N2	21:AA:212:G:C4	2.74	0.54
21:AA:455:G:H2'	21:AA:456:A:C8	2.39	0.54
21:AA:577:G:H4'	21:AA:816:A:H2'	1.88	0.54
21:AA:1333:A:H2'	21:AA:1334:G:O4'	2.08	0.54
21:AA:1413:A:C2	21:AA:1488:G:C2	2.95	0.54
24:BA:155:A:H2'	24:BA:156:A:C8	2.43	0.54
24:BA:232:G:H4'	24:BA:233:A:OP1	2.06	0.54
24:BA:684:G:OP1	52:B2:16:HIS:HD2	1.90	0.54
24:BA:685:A:C2	24:BA:689:A:C6	2.95	0.54
24:BA:790:U:O2'	24:BA:791:C:O5'	2.24	0.54
24:BA:1017:G:C6	24:BA:1018:U:C5	2.95	0.54
24:BA:1019:U:C4	24:BA:1020:A:N6	2.75	0.54
24:BA:1131:G:N2	24:BA:2024:G:H21	2.05	0.54
24:BA:1385:A:C6	24:BA:1403:A:C6	2.96	0.54
24:BA:1416:G:O2'	24:BA:1417:C:O4'	2.25	0.54
24:BA:1900:A:C2	24:BA:1970:A:C4	2.96	0.54
24:BA:2497:A:H4'	24:BA:2498:C:OP1	2.06	0.54
25:BB:37:C:C5	25:BB:38:C:C4	2.96	0.54
25:BB:45:A:H2'	25:BB:46:A:C8	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BC:12:ARG:CG	26:BC:12:ARG:NH1	2.55	0.54
33:BJ:81:ILE:CG2	33:BJ:82:GLY:H	2.05	0.54
43:BT:28:ASN:HA	43:BT:91:GLN:OE1	2.07	0.54
54:B4:1:MET:CE	54:B4:34:LYS:HG2	2.37	0.54
3:CD:10:LEU:HD23	3:CD:62:ARG:HB3	1.89	0.54
13:CN:89:ARG:HG3	13:CN:91:GLU:HG3	1.89	0.54
55:CA:520:A:O2'	55:CA:521:G:O5'	2.25	0.54
55:CA:920:U:H2'	55:CA:921:U:C6	2.42	0.54
55:CA:1106:G:H2'	55:CA:1107:C:C6	2.42	0.54
55:CA:1244:G:C6	55:CA:1245:C:N4	2.76	0.54
24:DA:54:G:C5	24:DA:55:G:C8	2.96	0.54
24:DA:492:A:H2'	24:DA:493:G:O4'	2.07	0.54
24:DA:508:A:N6	42:DS:9:HIS:NE2	2.56	0.54
24:DA:969:G:H2'	24:DA:970:U:C6	2.42	0.54
24:DA:1213:A:O2'	24:DA:1214:A:C5'	2.55	0.54
24:DA:2615:U:C4	50:D0:2:VAL:C	2.80	0.54
24:DA:2884:U:O2	50:D0:49:ARG:HB3	2.08	0.54
24:DA:2902:C:O2'	24:DA:2903:U:O5'	2.26	0.54
30:DG:112:VAL:HG12	30:DG:114:HIS:N	2.22	0.54
35:DL:73:ILE:O	35:DL:105:ILE:HA	2.07	0.54
49:DZ:4:ILE:CG2	49:DZ:56:VAL:HG13	2.37	0.54
3:AD:43:ARG:O	3:AD:45:PRO:HD3	2.07	0.54
4:AE:155:LYS:HG2	7:AH:65:PHE:HB2	1.88	0.54
5:AF:42:TRP:CD1	5:AF:42:TRP:N	2.74	0.54
10:AK:125:LYS:HD3	10:AK:125:LYS:H	1.72	0.54
15:AP:33:ILE:HG21	15:AP:60:TRP:CZ2	2.43	0.54
21:AA:91:U:H2'	21:AA:92:U:H1'	1.87	0.54
21:AA:996:A:C4	21:AA:997:U:C5	2.95	0.54
21:AA:1413:A:H2'	21:AA:1414:U:O4'	2.08	0.54
21:AA:1416:G:H2'	21:AA:1417:G:H5'	1.89	0.54
24:BA:233:A:H61	24:BA:428:A:H61	1.54	0.54
24:BA:976:G:C2	24:BA:977:G:C5	2.96	0.54
24:BA:1298:C:C2	24:BA:1643:G:N2	2.75	0.54
24:BA:2210:U:H4'	24:BA:2211:A:C5'	2.36	0.54
24:BA:2289:G:O2'	24:BA:2346:A:OP2	2.25	0.54
24:BA:2720:U:C2	24:BA:2872:A:C5	2.95	0.54
25:BB:61:G:C6	25:BB:62:C:C4	2.96	0.54
26:BC:69:ASN:O	26:BC:117:SER:OG	2.25	0.54
31:BH:8:LYS:O	31:BH:9:VAL:CB	2.55	0.54
36:BM:43:ALA:O	36:BM:46:ILE:HG13	2.08	0.54
42:BS:42:LYS:O	42:BS:42:LYS:HD3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BX:73:ARG:HG2	47:BX:75:GLU:HG3	1.88	0.54
51:B1:8:ILE:HG23	51:B1:51:ALA:HA	1.90	0.54
1:CB:161:PHE:CZ	1:CB:216:VAL:HG21	2.43	0.54
1:CB:185:ILE:HD12	1:CB:202:ASN:H	1.72	0.54
2:CC:9:ILE:HG23	2:CC:10:ARG:HG3	1.88	0.54
5:CF:18:VAL:N	5:CF:19:PRO:HD2	2.23	0.54
11:CL:23:LEU:HD11	11:CL:94:TYR:HE1	1.71	0.54
13:CN:96:LYS:HD2	13:CN:96:LYS:H	1.73	0.54
20:CU:3:ILE:HG23	20:CU:3:ILE:O	2.08	0.54
55:CA:10:A:N6	55:CA:25:C:H42	2.05	0.54
55:CA:248:C:O2'	55:CA:249:U:O5'	2.24	0.54
55:CA:373:A:O2'	55:CA:374:A:C5'	2.54	0.54
55:CA:1411:C:OP2	55:CA:1411:C:H6	1.90	0.54
22:CV:33:U:H5'	22:CV:34:G:OP2	2.07	0.54
24:DA:161:A:C5	24:DA:162:U:C4	2.96	0.54
24:DA:657:U:O2'	24:DA:658:U:C6	2.57	0.54
24:DA:664:G:H2'	24:DA:665:U:O4'	2.07	0.54
24:DA:1527:G:H5''	24:DA:1528:A:OP1	2.07	0.54
24:DA:1665:A:H2'	24:DA:1666:G:O4'	2.08	0.54
24:DA:2052:A:N7	27:DD:146:ILE:HD11	2.22	0.54
24:DA:2304:G:H22	24:DA:2312:U:H3	1.54	0.54
26:DC:239:PHE:HD1	26:DC:240:GLY:H	1.55	0.54
27:DD:133:THR:HG23	27:DD:134:HIS:N	2.23	0.54
28:DE:112:LEU:HD11	28:DE:186:VAL:HG11	1.89	0.54
28:DE:149:ILE:HG23	28:DE:188:MET:N	2.21	0.54
29:DF:109:ARG:NH1	29:DF:135:ILE:HG22	2.23	0.54
31:DH:7:ASP:O	31:DH:15:LEU:HA	2.08	0.54
32:DI:90:GLY:O	32:DI:92:PRO:HD3	2.07	0.54
34:DK:7:MET:HG3	34:DK:17:ARG:HH12	1.71	0.54
38:DO:30:ARG:HA	38:DO:35:ILE:HD13	1.87	0.54
42:DS:49:LYS:HB3	42:DS:49:LYS:NZ	2.23	0.54
1:AB:40:ILE:HG21	1:AB:201:GLY:H	1.73	0.54
5:AF:47:LEU:HD22	17:AR:65:SER:CB	2.37	0.54
13:AN:14:ALA:HB1	13:AN:18:LYS:NZ	2.23	0.54
19:AT:26:MET:SD	19:AT:27:MET:N	2.81	0.54
21:AA:63:C:O2'	21:AA:380:G:H4'	2.08	0.54
21:AA:441:A:C2	21:AA:497:G:C6	2.95	0.54
21:AA:820:U:H4'	21:AA:821:G:OP2	2.07	0.54
21:AA:1202:U:O2'	21:AA:1203:C:C5'	2.56	0.54
24:BA:151:C:O2	24:BA:176:A:C2	2.61	0.54
24:BA:215:G:H4'	24:BA:216:A:OP1	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:769:U:H2'	24:BA:770:G:C8	2.42	0.54
24:BA:827:U:C4	24:BA:2430:A:C6	2.95	0.54
24:BA:1088:A:O4'	24:BA:1088:A:N3	2.39	0.54
24:BA:1442:U:H2'	24:BA:1443:U:H6	1.72	0.54
24:BA:1759:A:H2'	24:BA:1760:C:C6	2.42	0.54
24:BA:1936:A:H5''	24:BA:1937:A:C5'	2.36	0.54
24:BA:2331:G:O2'	46:BW:39:GLN:O	2.19	0.54
24:BA:2393:U:H2'	24:BA:2394:C:H6	1.72	0.54
24:BA:2663:G:H2'	24:BA:2664:G:O5'	2.08	0.54
30:BG:15:ASP:CG	30:BG:16:VAL:N	2.61	0.54
35:BL:101:ILE:HG22	35:BL:102:GLY:N	2.23	0.54
39:BP:20:ARG:HD2	39:BP:112:ARG:HH11	1.71	0.54
46:BW:46:ALA:HB3	46:BW:79:ILE:O	2.08	0.54
48:BY:6:LEU:O	48:BY:7:ARG:HB3	2.07	0.54
51:B1:46:VAL:HG12	51:B1:47:ILE:H	1.71	0.54
3:CD:25:ARG:HB3	3:CD:30:LYS:NZ	2.23	0.54
7:CH:121:GLY:HA3	55:CA:599:C:H4'	1.89	0.54
8:CI:9:GLY:HA3	8:CI:77:ALA:O	2.08	0.54
8:CI:79:ARG:HD2	8:CI:102:PHE:CE1	2.43	0.54
10:CK:81:LEU:HD11	10:CK:104:PHE:HB3	1.90	0.54
13:CN:80:ARG:HG2	13:CN:81:ILE:H	1.73	0.54
19:CT:4:LYS:C	19:CT:6:ALA:H	2.10	0.54
55:CA:370:C:H2'	55:CA:371:A:H8	1.70	0.54
55:CA:372:C:O2'	55:CA:373:A:OP2	2.23	0.54
55:CA:973:G:OP2	55:CA:975:A:OP1	2.24	0.54
55:CA:1452:C:H4'	55:CA:1453:G:O5'	2.06	0.54
24:DA:70:G:O2'	24:DA:71:A:C5'	2.56	0.54
24:DA:310:A:H2'	24:DA:312:G:N7	2.21	0.54
24:DA:586:A:H8	24:DA:586:A:O5'	1.90	0.54
24:DA:617:G:O2'	24:DA:618:G:O4'	2.21	0.54
24:DA:1022:G:N2	24:DA:1142:A:C2	2.76	0.54
24:DA:1474:U:H2'	24:DA:1475:G:C5'	2.33	0.54
24:DA:1984:G:C6	24:DA:1985:C:C4	2.96	0.54
24:DA:2312:U:H4'	24:DA:2312:U:OP1	2.08	0.54
24:DA:2627:G:N3	24:DA:2781:A:H2	2.05	0.54
26:DC:93:VAL:HG12	26:DC:101:ARG:H	1.72	0.54
27:DD:181:ASP:C	27:DD:183:GLU:H	2.10	0.54
29:DF:32:LYS:HB3	29:DF:156:THR:HB	1.88	0.54
36:DM:119:LEU:O	36:DM:119:LEU:HD23	2.08	0.54
48:DY:17:GLU:OE1	48:DY:53:VAL:HB	2.08	0.54
48:DY:57:LEU:O	48:DY:60:LYS:HB3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DZ:16:LEU:HD22	49:DZ:16:LEU:N	2.19	0.54
10:AK:34:THR:HA	10:AK:41:LEU:HG	1.90	0.54
21:AA:99:C:H2'	21:AA:100:G:OP2	2.08	0.54
21:AA:1125:U:HO2'	21:AA:1126:U:P	2.30	0.54
21:AA:1129:C:H2'	21:AA:1139:G:N7	2.22	0.54
21:AA:1305:G:N2	21:AA:1332:A:OP2	2.40	0.54
21:AA:1498:U:H5''	21:AA:1499:A:OP1	2.06	0.54
24:BA:145:C:H2'	24:BA:146:A:H8	1.72	0.54
24:BA:243:U:OP1	53:B3:5:THR:CG2	2.55	0.54
24:BA:587:C:H42	35:BL:33:ARG:HD3	1.72	0.54
24:BA:776:G:C5	24:BA:793:A:C8	2.95	0.54
24:BA:1380:G:C2	24:BA:1381:G:C8	2.95	0.54
24:BA:1783:A:H2	24:BA:2587:A:C5	2.26	0.54
24:BA:1797:G:O3'	26:BC:255:LYS:O	2.25	0.54
24:BA:1905:C:HO2'	24:BA:1929:G:HO2'	1.51	0.54
24:BA:1923:U:H2'	24:BA:1924:C:H6	1.72	0.54
24:BA:1950:G:C8	24:BA:1951:U:H5	2.25	0.54
24:BA:2144:G:C2'	24:BA:2148:G:O6	2.54	0.54
24:BA:2846:G:OP1	39:BP:50:ARG:O	2.25	0.54
28:BE:28:VAL:HA	28:BE:104:ALA:HB1	1.90	0.54
29:BF:129:MET:CG	29:BF:153:ILE:HD11	2.37	0.54
30:BG:164:ALA:C	30:BG:166:GLU:H	2.10	0.54
39:BP:83:ILE:HD13	39:BP:84:SER:N	2.22	0.54
42:BS:13:SER:O	42:BS:14:ALA:CB	2.55	0.54
43:BT:2:ILE:HG13	43:BT:3:ARG:NH2	2.22	0.54
47:BX:34:SER:HA	47:BX:48:LEU:O	2.06	0.54
51:B1:46:VAL:HG12	51:B1:47:ILE:N	2.23	0.54
1:CB:128:LEU:HD22	1:CB:132:GLU:HG2	1.89	0.54
2:CC:22:PHE:HD1	9:CJ:13:PHE:CE1	2.25	0.54
3:CD:2:ARG:NH2	3:CD:114:ARG:HH11	2.06	0.54
8:CI:44:ARG:NH1	8:CI:44:ARG:HB3	2.23	0.54
10:CK:62:ALA:O	10:CK:66:ALA:N	2.40	0.54
10:CK:86:LYS:HE2	10:CK:112:VAL:O	2.07	0.54
17:CR:53:GLN:O	17:CR:56:ARG:HB2	2.07	0.54
55:CA:253:A:O2'	55:CA:254:G:H8	1.89	0.54
55:CA:555:U:C2	55:CA:556:C:C5	2.96	0.54
55:CA:649:A:N3	55:CA:650:G:H1'	2.23	0.54
55:CA:1050:G:O2'	55:CA:1051:C:H6	1.89	0.54
55:CA:1501:C:N4	55:CA:1504:G:C2	2.76	0.54
24:DA:53:A:C2	52:D2:35:ARG:NH1	2.76	0.54
24:DA:287:G:O2'	24:DA:288:U:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:466:A:P	52:D2:34:ARG:HH21	2.31	0.54
24:DA:1147:A:H2'	24:DA:1148:U:C6	2.40	0.54
24:DA:1287:A:OP1	37:DN:103:ARG:HG3	2.07	0.54
24:DA:1353:A:H2'	24:DA:1354:A:H8	1.73	0.54
29:DF:137:PHE:CB	29:DF:138:PRO:HD2	2.30	0.54
34:DK:88:ASN:HB2	34:DK:91:SER:HB2	1.89	0.54
40:DQ:8:ILE:HG12	40:DQ:8:ILE:O	2.07	0.54
45:DV:44:HIS:CD2	45:DV:85:LYS:HB2	2.42	0.54
47:DX:6:VAL:HG13	47:DX:7:THR:N	2.22	0.54
1:AB:61:SER:O	1:AB:224:ARG:HB3	2.08	0.54
4:AE:132:PRO:O	4:AE:135:VAL:HG12	2.08	0.54
8:AI:128:LYS:HD2	8:AI:129:ARG:H	1.73	0.54
10:AK:22:ILE:CD1	10:AK:95:THR:HG21	2.37	0.54
11:AL:114:SER:HB3	21:AA:502:A:OP1	2.07	0.54
15:AP:57:ILE:HG22	15:AP:58:ALA:N	2.22	0.54
20:AU:4:LYS:O	20:AU:4:LYS:HD2	2.07	0.54
21:AA:844:G:H21	21:AA:845:A:H62	1.55	0.54
21:AA:1131:G:C2'	21:AA:1132:C:O5'	2.56	0.54
24:BA:136:G:C6	24:BA:142:A:N6	2.75	0.54
24:BA:570:G:OP1	24:BA:972:A:O2'	2.23	0.54
24:BA:613:A:H8	24:BA:616:A:N1	2.05	0.54
24:BA:1179:G:H3'	24:BA:1180:U:C4'	2.25	0.54
24:BA:1555:G:N2	24:BA:1556:C:C2	2.75	0.54
24:BA:1779:U:C5	24:BA:1783:A:C8	2.95	0.54
24:BA:2018:G:C2	24:BA:2019:A:C4	2.96	0.54
24:BA:2091:C:O2	47:BX:33:HIS:CE1	2.61	0.54
24:BA:2109:U:H2'	24:BA:2110:G:H5'	1.89	0.54
24:BA:2473:U:O2	24:BA:2473:U:H2'	2.08	0.54
26:BC:5:CYS:SG	26:BC:15:VAL:HB	2.47	0.54
1:CB:128:LEU:O	1:CB:129:THR:C	2.46	0.54
5:CF:17:GLN:O	5:CF:21:MET:HG3	2.07	0.54
15:CP:78:VAL:O	15:CP:78:VAL:HG12	2.08	0.54
18:CS:4:LEU:HD11	55:CA:1319:A:OP2	2.06	0.54
19:CT:78:LEU:O	19:CT:82:ILE:HG12	2.07	0.54
55:CA:32:A:N6	55:CA:553:A:C6	2.76	0.54
55:CA:81:A:C2	55:CA:89:U:O4	2.61	0.54
55:CA:501:C:H2'	55:CA:502:A:C8	2.43	0.54
55:CA:618:C:C6	55:CA:620:C:OP2	2.60	0.54
55:CA:652:U:O2'	55:CA:653:U:O5'	2.25	0.54
55:CA:1394:A:C5	55:CA:1501:C:H4'	2.43	0.54
24:DA:90:U:C4	24:DA:91:A:C5	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:449:A:HO2'	24:DA:450:G:H5'	1.68	0.54
24:DA:860:U:O2'	24:DA:861:A:H5'	2.08	0.54
24:DA:1067:A:H2'	24:DA:1068:G:H5''	1.90	0.54
24:DA:1290:C:O2'	24:DA:1291:C:O4'	2.26	0.54
24:DA:1590:A:H2'	24:DA:1591:A:H8	1.73	0.54
24:DA:2015:A:N1	50:D0:2:VAL:HG11	2.23	0.54
24:DA:2783:U:H2'	24:DA:2784:U:C6	2.42	0.54
24:DA:2835:A:N7	24:DA:2879:A:C2	2.76	0.54
26:DC:120:ASP:CG	26:DC:121:ALA:H	2.11	0.54
26:DC:259:ASN:C	26:DC:261:ARG:H	2.11	0.54
27:DD:51:THR:HG21	27:DD:75:ALA:O	2.08	0.54
28:DE:196:VAL:HG13	28:DE:200:LEU:HD23	1.90	0.54
30:DG:28:LYS:HG3	30:DG:79:THR:HG22	1.89	0.54
33:DJ:106:LYS:HD2	33:DJ:119:PHE:CD2	2.42	0.54
34:DK:113:MET:O	34:DK:116:ILE:HG13	2.08	0.54
35:DL:48:ARG:HG3	35:DL:48:ARG:HH11	1.73	0.54
42:DS:47:VAL:HG12	42:DS:103:ILE:HG12	1.89	0.54
43:DT:29:THR:CB	43:DT:86:THR:H	2.21	0.54
1:AB:67:LEU:HD22	1:AB:69:VAL:HG22	1.89	0.54
3:AD:191:SER:O	3:AD:192:ALA:HB2	2.06	0.54
4:AE:79:THR:CA	4:AE:119:VAL:HG12	2.35	0.54
5:AF:5:GLU:HG3	5:AF:63:ASN:OD1	2.08	0.54
12:AM:67:ASP:O	12:AM:70:ARG:CB	2.53	0.54
12:AM:84:CYS:O	12:AM:88:LEU:HG	2.08	0.54
15:AP:38:PHE:CZ	15:AP:51:ARG:HB2	2.42	0.54
15:AP:51:ARG:HG2	15:AP:52:LEU:N	2.22	0.54
16:AQ:26:ARG:NH2	21:AA:237:G:H5''	2.22	0.54
21:AA:87:C:H2'	21:AA:88:U:O4'	2.07	0.54
21:AA:430:A:O2'	21:AA:431:A:C5'	2.49	0.54
21:AA:780:A:C8	21:AA:800:G:C6	2.95	0.54
21:AA:802:A:H3'	21:AA:803:G:H8	1.72	0.54
21:AA:1102:A:H2'	21:AA:1103:C:C5	2.43	0.54
21:AA:1125:U:OP2	21:AA:1145:A:N6	2.41	0.54
21:AA:1181:G:C2	21:AA:1182:G:N2	2.76	0.54
24:BA:265:A:N7	24:BA:428:A:N3	2.55	0.54
24:BA:479:A:C2	24:BA:480:A:C4	2.95	0.54
24:BA:734:A:N7	24:BA:735:A:N7	2.56	0.54
24:BA:743:A:O2'	24:BA:744:U:H5'	2.08	0.54
24:BA:996:A:H4'	40:BQ:91:ARG:HG2	1.90	0.54
24:BA:1062:G:H1'	32:BI:134:SER:CB	2.33	0.54
24:BA:1252:G:C2	40:BQ:32:ARG:HG2	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1555:G:N1	24:BA:1556:C:C4	2.76	0.54
24:BA:1744:A:H3'	24:BA:1745:A:H8	1.73	0.54
24:BA:1783:A:H2	24:BA:2587:A:C4	2.26	0.54
24:BA:1797:G:O3'	26:BC:255:LYS:HA	2.08	0.54
24:BA:2100:G:C6	24:BA:2190:G:C6	2.95	0.54
24:BA:2135:A:C2'	24:BA:2136:G:C8	2.88	0.54
24:BA:2320:U:H4'	24:BA:2321:U:C5'	2.36	0.54
24:BA:2377:A:H2'	24:BA:2378:A:C8	2.42	0.54
24:BA:2657:A:H2'	24:BA:2658:C:O4'	2.08	0.54
24:BA:2675:A:C2'	24:BA:2676:C:H5'	2.37	0.54
27:BD:90:PHE:HB2	27:BD:92:VAL:HG23	1.90	0.54
27:BD:99:GLU:CG	27:BD:100:LEU:N	2.69	0.54
27:BD:143:PRO:O	27:BD:144:GLY:O	2.26	0.54
30:BG:86:LEU:HD11	30:BG:132:LEU:HD21	1.90	0.54
38:BO:75:GLY:HA3	38:BO:106:LEU:HA	1.89	0.54
39:BP:4:ILE:O	39:BP:6:GLN:N	2.41	0.54
40:BQ:10:ARG:HB2	40:BQ:10:ARG:CZ	2.38	0.54
41:BR:90:ARG:O	41:BR:91:GLN:CB	2.56	0.54
54:B4:30:GLU:OE2	54:B4:32:LYS:HG3	2.08	0.54
1:CB:208:ALA:HA	1:CB:211:LEU:CB	2.37	0.54
3:CD:104:MET:SD	3:CD:179:GLY:HA3	2.48	0.54
6:CG:19:SER:OG	6:CG:22:LEU:HB3	2.07	0.54
8:CI:25:GLY:HA3	8:CI:58:GLU:N	2.22	0.54
12:CM:49:GLU:HA	12:CM:49:GLU:OE1	2.07	0.54
55:CA:197:A:N6	55:CA:221:C:H4'	2.22	0.54
55:CA:252:U:O2'	55:CA:253:A:C8	2.47	0.54
55:CA:274:A:H4'	55:CA:275:G:O5'	2.08	0.54
55:CA:545:C:O2'	55:CA:549:C:OP1	2.22	0.54
55:CA:1004:A:C4	55:CA:1026:G:N7	2.76	0.54
55:CA:1161:C:O2'	55:CA:1162:C:C6	2.61	0.54
24:DA:529:A:C5	24:DA:2023:C:C4	2.95	0.54
24:DA:851:C:H2'	24:DA:852:U:H6	1.73	0.54
24:DA:1011:G:OP1	40:DQ:76:SER:HB3	2.07	0.54
24:DA:1623:G:C6	24:DA:1624:U:C5	2.96	0.54
24:DA:1731:G:H4'	24:DA:1732:C:OP1	2.08	0.54
24:DA:2366:A:C2	24:DA:2367:G:H1'	2.43	0.54
27:DD:39:ASP:CG	27:DD:40:LEU:H	2.11	0.54
29:DF:32:LYS:HD2	29:DF:156:THR:HG21	1.89	0.54
34:DK:87:LEU:HB2	34:DK:92:GLU:O	2.07	0.54
41:DR:3:ALA:HB2	41:DR:101:ILE:HD13	1.90	0.54
42:DS:7:HIS:CE1	42:DS:10:ALA:HA	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DU:35:VAL:HG12	44:DU:36:GLU:N	2.22	0.54
53:D3:28:LEU:HA	53:D3:32:LEU:HD21	1.88	0.54
3:AD:204:SER:HB2	21:AA:8:A:H62	1.73	0.54
4:AE:37:VAL:HG11	4:AE:113:VAL:CA	2.38	0.54
8:AI:33:SER:HB3	8:AI:36:GLN:HG2	1.89	0.54
9:AJ:36:VAL:HG22	9:AJ:76:ILE:HG23	1.89	0.54
15:AP:79:ASN:O	15:AP:80:LYS:HB2	2.08	0.54
19:AT:78:LEU:O	19:AT:82:ILE:HG23	2.07	0.54
20:AU:9:GLU:HG3	20:AU:10:PRO:HD3	1.89	0.54
21:AA:282:A:H2'	21:AA:283:U:C6	2.43	0.54
21:AA:1228:C:O2'	21:AA:1229:A:H8	1.90	0.54
24:BA:63:A:N3	24:BA:64:A:C8	2.76	0.54
24:BA:321:U:C6	28:BE:159:LEU:HD23	2.43	0.54
24:BA:554:U:O4	24:BA:555:G:C6	2.61	0.54
24:BA:621:A:H2'	24:BA:622:G:O4'	2.08	0.54
24:BA:1394:U:C4	24:BA:1395:A:C6	2.96	0.54
24:BA:1422:G:H2'	24:BA:1423:G:H8	1.73	0.54
24:BA:2508:G:C4	24:BA:2509:G:C8	2.96	0.54
26:BC:105:ALA:O	26:BC:195:GLY:HA3	2.08	0.54
28:BE:104:ALA:O	28:BE:108:ILE:CG2	2.56	0.54
29:BF:131:VAL:CG2	29:BF:151:LEU:H	2.19	0.54
30:BG:21:GLN:O	30:BG:36:LEU:HD13	2.08	0.54
34:BK:108:ARG:O	34:BK:108:ARG:HG3	2.08	0.54
37:BN:81:ASN:O	37:BN:85:PRO:HG3	2.08	0.54
39:BP:50:ARG:O	39:BP:51:ASN:HB2	2.07	0.54
3:CD:194:ILE:O	3:CD:194:ILE:HG13	2.07	0.54
4:CE:98:ALA:HB2	4:CE:123:LEU:CG	2.36	0.54
15:CP:1:MET:HB2	55:CA:135:C:O2	2.07	0.54
55:CA:28:A:C5	55:CA:29:U:C5	2.96	0.54
55:CA:313:A:H2'	55:CA:314:C:C6	2.43	0.54
55:CA:428:G:H1'	55:CA:430:A:N7	2.22	0.54
55:CA:463:U:C4	55:CA:464:U:O4	2.61	0.54
24:DA:84:A:C4	24:DA:103:A:N6	2.76	0.54
24:DA:123:G:H2'	24:DA:124:G:O4'	2.08	0.54
24:DA:300:A:H1'	24:DA:333:G:N2	2.22	0.54
24:DA:320:A:H2'	28:DE:131:THR:OG1	2.07	0.54
24:DA:597:G:H2'	24:DA:598:U:O4'	2.08	0.54
24:DA:857:G:H1'	46:DW:19:ARG:CZ	2.38	0.54
24:DA:1063:G:H2'	24:DA:1064:C:C5	2.42	0.54
24:DA:1123:C:H2'	24:DA:1124:G:H8	1.73	0.54
24:DA:1219:U:H2'	24:DA:1220:G:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1548:A:H2'	24:DA:1549:A:H8	1.73	0.54
24:DA:2586:U:O5'	24:DA:2586:U:H6	1.90	0.54
24:DA:2786:U:O2'	24:DA:2787:C:H5'	2.08	0.54
27:DD:121:THR:HG21	27:DD:127:PHE:CD1	2.42	0.54
29:DF:107:VAL:N	29:DF:108:PRO:CD	2.71	0.54
35:DL:93:ASN:CG	35:DL:94:THR:H	2.10	0.54
36:DM:27:SER:N	36:DM:66:ARG:HH22	2.00	0.54
39:DP:50:ARG:HA	39:DP:57:ALA:H	1.73	0.54
44:DU:90:LYS:HE2	44:DU:92:VAL:HG12	1.89	0.54
45:DV:56:PHE:C	45:DV:58:SER:H	2.12	0.54
47:DX:19:HIS:C	47:DX:21:LEU:H	2.11	0.54
48:DY:31:GLN:C	48:DY:33:ALA:H	2.10	0.54
4:AE:95:MET:SD	4:AE:139:THR:HG22	2.47	0.54
7:AH:91:LEU:HD21	7:AH:103:VAL:HG11	1.89	0.54
21:AA:98:A:H2'	21:AA:99:C:C6	2.43	0.54
21:AA:260:G:O2'	21:AA:261:U:H5'	2.08	0.54
21:AA:374:A:OP1	21:AA:452:A:N1	2.41	0.54
21:AA:402:G:C6	21:AA:403:C:C4	2.95	0.54
21:AA:607:A:H2'	21:AA:608:A:H8	1.72	0.54
21:AA:903:G:C6	21:AA:904:U:C4	2.96	0.54
21:AA:954:G:C6	21:AA:955:U:C4	2.96	0.54
21:AA:976:G:N7	21:AA:1358:U:C2	2.76	0.54
21:AA:1208:C:H2'	21:AA:1209:C:O4'	2.08	0.54
24:BA:401:A:C2	24:BA:402:A:C4	2.96	0.54
24:BA:821:A:H2'	24:BA:946:C:H5''	1.89	0.54
24:BA:1178:C:H2'	24:BA:1179:G:N7	2.22	0.54
24:BA:1849:G:H2'	24:BA:1850:G:H8	1.73	0.54
24:BA:2332:C:H4'	24:BA:2336:A:C6	2.43	0.54
24:BA:2727:A:H2'	24:BA:2728:U:C6	2.43	0.54
24:BA:2733:A:O5'	24:BA:2733:A:C8	2.54	0.54
25:BB:20:G:C2	25:BB:64:G:N3	2.76	0.54
25:BB:45:A:H2'	25:BB:46:A:H8	1.73	0.54
28:BE:60:TRP:CZ2	28:BE:70:SER:HB3	2.43	0.54
30:BG:115:GLN:CD	30:BG:115:GLN:H	2.11	0.54
34:BK:8:LEU:HD23	34:BK:8:LEU:N	2.23	0.54
36:BM:65:ILE:HG12	36:BM:103:TYR:CD2	2.42	0.54
39:BP:50:ARG:CG	39:BP:57:ALA:N	2.71	0.54
39:BP:83:ILE:HD13	39:BP:83:ILE:C	2.28	0.54
42:BS:24:ILE:HG22	42:BS:71:VAL:HG21	1.91	0.54
4:CE:22:LYS:HB3	4:CE:29:ILE:CG2	2.38	0.54
6:CG:139:ASP:O	6:CG:142:ARG:HB2	2.09	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:124:ILE:HG22	7:CH:125:ILE:H	1.73	0.54
8:CI:4:GLN:HB3	8:CI:21:LYS:HD3	1.90	0.54
11:CL:97:VAL:HG23	11:CL:100:ALA:HB3	1.90	0.54
13:CN:20:PHE:HE1	13:CN:54:SER:CB	2.20	0.54
14:CO:8:ALA:O	14:CO:11:VAL:HB	2.08	0.54
18:CS:45:GLY:H	18:CS:61:VAL:HB	1.72	0.54
20:CU:16:ARG:HG3	20:CU:19:LYS:CG	2.33	0.54
55:CA:198:G:HO2'	55:CA:199:A:H8	1.56	0.54
55:CA:410:G:H2'	55:CA:429:U:C5	2.43	0.54
55:CA:1327:C:H2'	55:CA:1328:C:C6	2.42	0.54
55:CA:1430:A:N6	55:CA:1431:A:C2	2.76	0.54
55:CA:1431:A:C6	55:CA:1432:G:N1	2.76	0.54
22:CX:40:C:H2'	22:CX:41:C:C6	2.41	0.54
24:DA:225:C:H2'	24:DA:226:A:C8	2.43	0.54
24:DA:547:A:H3'	24:DA:548:G:C5'	2.36	0.54
24:DA:1059:G:C5	24:DA:1060:U:C2	2.96	0.54
24:DA:1355:G:C6	24:DA:1377:G:N2	2.76	0.54
24:DA:1535:A:N1	24:DA:1537:G:N7	2.56	0.54
24:DA:1782:U:O2'	24:DA:1783:A:C5'	2.55	0.54
24:DA:2060:A:H2'	28:DE:63:LYS:NZ	2.23	0.54
24:DA:2300:C:H2'	24:DA:2301:C:H6	1.72	0.54
24:DA:2331:G:O2'	46:DW:40:ARG:HB3	2.08	0.54
24:DA:2612:C:O2	50:D0:1:ALA:HB2	2.08	0.54
24:DA:2724:U:P	27:DD:116:LYS:HZ3	2.31	0.54
26:DC:70:LYS:HD3	26:DC:101:ARG:HH12	1.72	0.54
27:DD:117:GLY:O	27:DD:119:ALA:N	2.41	0.54
30:DG:94:ARG:CZ	30:DG:105:SER:HB2	2.38	0.54
33:DJ:103:ILE:HD12	33:DJ:103:ILE:O	2.08	0.54
37:DN:110:MET:HE2	37:DN:110:MET:HA	1.89	0.54
39:DP:22:GLY:HA3	39:DP:91:VAL:CG2	2.38	0.54
39:DP:28:LYS:HB3	39:DP:39:LEU:HD23	1.90	0.54
40:DQ:4:LYS:HZ1	40:DQ:6:GLY:HA3	1.65	0.54
40:DQ:78:PHE:CE1	40:DQ:82:LEU:HD11	2.43	0.54
1:AB:110:ILE:HD11	1:AB:147:LEU:HD22	1.90	0.53
8:AI:17:ARG:O	8:AI:64:ILE:HG23	2.08	0.53
13:AN:51:PRO:O	13:AN:52:ARG:HB2	2.08	0.53
21:AA:201:G:N3	21:AA:202:G:H1'	2.23	0.53
21:AA:372:C:H4'	21:AA:373:A:OP1	2.07	0.53
21:AA:1386:G:C2	21:AA:1387:G:C5	2.96	0.53
21:AA:1409:C:H5'	24:BA:1916:A:C2	2.43	0.53
22:AV:39:U:H2'	22:AV:40:C:C6	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:361:G:HO2'	24:BA:362:A:C5'	2.20	0.53
24:BA:675:A:H4'	28:BE:62:GLN:HE22	1.72	0.53
24:BA:860:U:O2'	24:BA:861:A:C5'	2.52	0.53
24:BA:1007:C:H5''	33:BJ:37:ARG:NH2	2.24	0.53
24:BA:1142:A:C8	24:BA:1144:A:N6	2.76	0.53
24:BA:1659:G:C6	24:BA:1660:G:N7	2.76	0.53
24:BA:1820:U:O2	26:BC:200:MET:N	2.40	0.53
24:BA:2308:G:O2'	24:BA:2310:C:C5	2.51	0.53
24:BA:2776:A:O2'	24:BA:2777:G:OP2	2.20	0.53
29:BF:40:GLY:HA2	29:BF:84:ILE:HD11	1.89	0.53
30:BG:86:LEU:HD12	30:BG:86:LEU:N	2.22	0.53
31:BH:81:ALA:HB2	31:BH:147:VAL:HG23	1.89	0.53
32:BI:72:THR:HB	32:BI:112:LYS:NZ	2.23	0.53
35:BL:94:THR:HG22	35:BL:95:LEU:H	1.73	0.53
38:BO:7:ARG:HD2	38:BO:97:PHE:CE1	2.43	0.53
38:BO:79:ALA:HB2	38:BO:110:ALA:HA	1.90	0.53
41:BR:46:GLU:HG2	41:BR:47:VAL:N	2.23	0.53
43:BT:48:GLN:HB2	43:BT:49:LYS:HE3	1.89	0.53
44:BU:100:GLU:O	44:BU:101:THR:HB	2.07	0.53
45:BV:72:VAL:HG21	45:BV:91:PHE:HB3	1.90	0.53
46:BW:52:CYS:HA	46:BW:57:THR:O	2.08	0.53
1:CB:103:TRP:CD1	1:CB:107:ARG:HB3	2.43	0.53
5:CF:11:HIS:CD2	5:CF:13:ASP:H	2.25	0.53
55:CA:75:G:C2	55:CA:96:U:N3	2.76	0.53
55:CA:425:G:O2'	55:CA:426:U:H5'	2.08	0.53
55:CA:1173:U:H2'	55:CA:1174:G:H8	1.73	0.53
55:CA:1392:G:C6	55:CA:1393:U:C4	2.95	0.53
55:CA:1417:G:H2'	55:CA:1482:G:H22	1.74	0.53
55:CA:1460:C:C4	55:CA:1461:G:C5	2.96	0.53
24:DA:191:A:N6	24:DA:203:A:H2'	2.23	0.53
24:DA:197:A:N7	24:DA:2430:A:C5	2.76	0.53
24:DA:475:C:O2'	24:DA:476:G:H5'	2.08	0.53
24:DA:804:A:C2'	24:DA:806:C:C4	2.91	0.53
24:DA:1079:C:O2'	24:DA:1080:A:C8	2.57	0.53
24:DA:1450:G:N2	24:DA:1462:C:C2	2.76	0.53
24:DA:1666:G:H4'	34:DK:6:THR:HG23	1.90	0.53
24:DA:2423:U:H5''	24:DA:2424:C:OP1	2.07	0.53
24:DA:2590:A:H5''	26:DC:237:ARG:HG3	1.90	0.53
56:DB:112:G:H2'	56:DB:113:C:O4'	2.09	0.53
26:DC:95:TYR:C	26:DC:97:ASP:H	2.09	0.53
31:DH:66:ASN:HD22	31:DH:137:GLU:HB3	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DL:110:VAL:O	35:DL:111:ILE:HG12	2.08	0.53
37:DN:73:ASN:HA	37:DN:76:VAL:HG22	1.90	0.53
40:DQ:10:ARG:CZ	40:DQ:10:ARG:HB2	2.38	0.53
44:DU:86:PHE:HB2	44:DU:92:VAL:HG22	1.89	0.53
48:DY:4:LYS:HB2	48:DY:4:LYS:NZ	2.22	0.53
1:AB:26:MET:CE	1:AB:192:PRO:HG3	2.38	0.53
3:AD:157:ALA:O	3:AD:161:ALA:HB2	2.07	0.53
4:AE:156:ARG:HA	7:AH:63:LYS:CE	2.38	0.53
5:AF:42:TRP:HB2	5:AF:59:TYR:HB2	1.91	0.53
10:AK:116:PRO:HB3	21:AA:676:A:H1'	1.90	0.53
10:AK:124:LYS:HE3	20:AU:34:ARG:NE	2.23	0.53
12:AM:40:GLU:HG3	12:AM:41:ASP:N	2.23	0.53
21:AA:794:A:O2'	21:AA:795:C:C5'	2.56	0.53
21:AA:872:A:C4	21:AA:874:G:C8	2.97	0.53
21:AA:1227:A:C2'	21:AA:1228:C:H5''	2.38	0.53
21:AA:1348:U:C2'	21:AA:1349:A:H8	2.21	0.53
24:BA:9:G:N1	24:BA:2629:U:C6	2.76	0.53
24:BA:528:A:H8	24:BA:528:A:C3'	2.21	0.53
24:BA:659:G:H4'	28:BE:95:LYS:HD3	1.88	0.53
24:BA:785:G:H2'	24:BA:786:C:H6	1.73	0.53
24:BA:1477:A:N6	24:BA:1514:G:H1'	2.23	0.53
24:BA:1677:A:N6	24:BA:1678:A:C6	2.76	0.53
24:BA:1799:G:OP1	26:BC:257:ARG:HG2	2.08	0.53
24:BA:1943:U:H4'	24:BA:1944:U:O5'	2.08	0.53
24:BA:1964:G:C2	24:BA:1967:C:C5	2.96	0.53
24:BA:2226:C:H2'	24:BA:2227:A:C8	2.43	0.53
24:BA:2383:G:C4	24:BA:2384:U:H5	2.26	0.53
24:BA:2407:A:H2'	24:BA:2408:U:C5	2.43	0.53
24:BA:2540:C:C2'	24:BA:2541:A:H5'	2.38	0.53
24:BA:2545:G:C6	24:BA:2546:U:N3	2.76	0.53
26:BC:90:ILE:HG21	26:BC:102:TYR:CD1	2.43	0.53
26:BC:147:PRO:HD3	26:BC:187:CYS:SG	2.49	0.53
29:BF:134:GLN:NE2	29:BF:150:GLY:H	2.04	0.53
32:BI:32:VAL:HG13	32:BI:66:PHE:CE2	2.43	0.53
35:BL:91:ASP:HB2	35:BL:94:THR:HB	1.90	0.53
40:BQ:82:LEU:HD23	40:BQ:112:ALA:HB2	1.90	0.53
41:BR:42:ALA:HA	41:BR:46:GLU:CB	2.31	0.53
3:CD:57:LYS:HG3	3:CD:58:GLN:N	2.22	0.53
6:CG:45:ALA:O	6:CG:120:ALA:HB1	2.09	0.53
9:CJ:50:THR:HA	9:CJ:63:ASP:O	2.08	0.53
55:CA:650:G:C6	55:CA:651:C:C4	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:818:G:C2'	55:CA:819:A:H5''	2.39	0.53
55:CA:858:G:N7	59:CA:1824:HOH:O	2.33	0.53
55:CA:913:A:HO2'	55:CA:914:A:H5''	1.69	0.53
55:CA:1306:A:N6	55:CA:1331:G:H1'	2.22	0.53
55:CA:1446:A:N6	55:CA:1447:A:C6	2.76	0.53
55:CA:1495:U:O2	24:DA:1919:A:H2	1.91	0.53
24:DA:298:G:OP1	44:DU:83:GLY:HA2	2.08	0.53
24:DA:422:A:C6	24:DA:423:A:N6	2.77	0.53
24:DA:468:G:H5''	28:DE:55:SER:HB2	1.90	0.53
24:DA:528:A:H2	24:DA:2043:C:O5'	1.91	0.53
24:DA:955:U:OP1	36:DM:13:HIS:HA	2.07	0.53
24:DA:1056:G:H1'	24:DA:1103:A:C6	2.43	0.53
24:DA:1061:U:C6	32:DI:9:LYS:HD3	2.43	0.53
24:DA:1275:A:C6	24:DA:1296:G:H4'	2.44	0.53
24:DA:1352:U:C6	24:DA:1377:G:C6	2.96	0.53
24:DA:1364:G:N7	47:DX:1:SER:HB2	2.24	0.53
24:DA:1668:A:H4'	24:DA:1669:A:O5'	2.08	0.53
24:DA:2052:A:C2	24:DA:2053:G:C8	2.97	0.53
24:DA:2520:C:C2	24:DA:2521:C:C5	2.97	0.53
26:DC:30:ALA:HB3	26:DC:31:PRO:HD3	1.90	0.53
29:DF:91:ARG:HA	29:DF:95:MET:SD	2.48	0.53
33:DJ:57:LEU:HG	33:DJ:128:ASN:H	1.73	0.53
34:DK:73:ASP:OD1	34:DK:73:ASP:N	2.39	0.53
39:DP:22:GLY:HA3	39:DP:91:VAL:HG21	1.90	0.53
39:DP:92:ARG:HG2	39:DP:92:ARG:O	2.07	0.53
43:DT:5:GLU:HA	43:DT:8:LEU:HD12	1.90	0.53
45:DV:57:TYR:HD2	45:DV:74:ALA:CB	2.21	0.53
51:D1:3:GLY:C	51:D1:5:ARG:H	2.12	0.53
53:D3:54:LEU:O	53:D3:58:ILE:HG13	2.08	0.53
1:AB:36:LYS:HA	1:AB:36:LYS:HE3	1.90	0.53
1:AB:59:ILE:HD12	1:AB:60:ALA:N	2.23	0.53
1:AB:108:GLN:HA	1:AB:111:LYS:CB	2.37	0.53
2:AC:143:LEU:H	2:AC:143:LEU:HD22	1.71	0.53
4:AE:111:ARG:HG2	4:AE:111:ARG:O	2.07	0.53
6:AG:121:ASN:H	6:AG:121:ASN:HD22	1.56	0.53
7:AH:34:ALA:HB1	7:AH:109:VAL:HB	1.90	0.53
11:AL:17:LYS:O	11:AL:17:LYS:HD2	2.08	0.53
12:AM:67:ASP:O	12:AM:70:ARG:CG	2.55	0.53
21:AA:688:G:O6	21:AA:700:G:C6	2.61	0.53
21:AA:834:U:H2'	21:AA:835:U:C6	2.43	0.53
21:AA:1084:G:C5	21:AA:1085:U:C4	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:29:G:H2'	22:AV:30:G:H8	1.73	0.53
24:BA:243:U:HO2'	24:BA:244:A:H5'	1.72	0.53
24:BA:785:G:H2'	24:BA:786:C:C6	2.43	0.53
24:BA:790:U:O2'	24:BA:791:C:C5'	2.56	0.53
24:BA:1248:G:O2'	40:BQ:2:ARG:HA	2.07	0.53
24:BA:1346:G:H2'	24:BA:1347:A:H8	1.73	0.53
24:BA:1677:A:C6	24:BA:1678:A:C5	2.97	0.53
24:BA:2365:G:H2'	24:BA:2366:A:C8	2.44	0.53
24:BA:2378:A:H8	24:BA:2378:A:O5'	1.91	0.53
24:BA:2555:U:C5	24:BA:2556:C:C6	2.97	0.53
24:BA:2813:A:H2	24:BA:2887:A:H62	1.55	0.53
28:BE:46:GLN:HG2	28:BE:87:ALA:H	1.73	0.53
32:BI:32:VAL:HG22	32:BI:66:PHE:CG	2.43	0.53
35:BL:78:ARG:HB2	35:BL:80:SER:OG	2.09	0.53
40:BQ:57:ARG:NH2	40:BQ:92:LYS:CE	2.71	0.53
40:BQ:94:LEU:CD1	41:BR:4:VAL:HG11	2.36	0.53
41:BR:12:HIS:CE1	41:BR:22:LEU:CD2	2.91	0.53
42:BS:97:LEU:N	42:BS:97:LEU:CD2	2.70	0.53
43:BT:32:LEU:O	43:BT:83:ALA:HB2	2.08	0.53
43:BT:43:ILE:CD1	43:BT:58:VAL:HG21	2.38	0.53
1:CB:25:LYS:HD2	1:CB:25:LYS:N	2.23	0.53
8:CI:30:ASN:O	8:CI:32:ARG:HG2	2.08	0.53
8:CI:45:MET:HA	8:CI:48:ARG:HG2	1.89	0.53
13:CN:80:ARG:HG2	13:CN:81:ILE:N	2.23	0.53
55:CA:577:G:N2	55:CA:578:C:O2	2.41	0.53
55:CA:754:C:H5''	55:CA:754:C:O2	2.09	0.53
22:CX:31:A:C2'	22:CX:32:U:H5'	2.39	0.53
24:DA:962:G:H4'	24:DA:2496:C:O2'	2.08	0.53
24:DA:1098:A:H2'	24:DA:1099:G:O4'	2.08	0.53
24:DA:1420:A:C2	24:DA:2211:A:N7	2.76	0.53
24:DA:1439:A:N7	24:DA:1440:U:C2	2.76	0.53
24:DA:2225:A:H4'	24:DA:2226:C:C6	2.43	0.53
24:DA:2311:A:H3'	24:DA:2312:U:C6	2.42	0.53
24:DA:2630:G:O2'	24:DA:2631:G:H8	1.92	0.53
24:DA:2756:U:H4'	24:DA:2757:A:O5'	2.08	0.53
56:DB:17:C:O2'	56:DB:18:G:C5'	2.57	0.53
32:DI:96:LYS:HE2	32:DI:138:VAL:HG11	1.90	0.53
46:DW:18:LYS:HD3	46:DW:19:ARG:H	1.72	0.53
49:DZ:51:SER:C	49:DZ:53:MET:H	2.10	0.53
1:AB:107:ARG:NH2	1:AB:108:GLN:HE22	2.04	0.53
2:AC:5:HIS:HB3	13:AN:88:MET:HE3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:156:LEU:N	2:AC:156:LEU:HD12	2.24	0.53
8:AI:105:ARG:HE	21:AA:1117:A:H4'	1.73	0.53
11:AL:34:THR:HB	11:AL:35:ARG:HG2	1.91	0.53
13:AN:29:ILE:HG23	13:AN:34:ASN:OD1	2.09	0.53
19:AT:79:THR:O	19:AT:82:ILE:HG13	2.08	0.53
21:AA:228:A:H2'	21:AA:229:U:C6	2.43	0.53
21:AA:240:G:OP2	21:AA:240:G:H4'	2.09	0.53
21:AA:262:A:H2'	21:AA:263:A:C8	2.43	0.53
21:AA:1177:G:H2'	21:AA:1178:G:O4'	2.08	0.53
21:AA:1316:G:N2	21:AA:1318:A:H3'	2.24	0.53
24:BA:1081:U:H2'	24:BA:1081:U:O2	2.07	0.53
24:BA:1483:G:C2	24:BA:1484:U:C2	2.96	0.53
24:BA:1714:U:H5''	24:BA:1714:U:H6	1.73	0.53
24:BA:1744:A:H3'	24:BA:1745:A:C8	2.43	0.53
24:BA:1770:G:C5	24:BA:1983:G:C6	2.97	0.53
24:BA:1899:A:O2'	24:BA:1900:A:H5''	2.09	0.53
24:BA:2013:A:C2	42:BS:88:ARG:NH1	2.76	0.53
24:BA:2014:A:H2'	24:BA:2015:A:C8	2.43	0.53
24:BA:2532:G:C5	24:BA:2533:U:C6	2.97	0.53
24:BA:2588:G:H2'	24:BA:2589:A:O4'	2.08	0.53
27:BD:45:TYR:N	27:BD:45:TYR:HD1	2.04	0.53
30:BG:35:THR:O	30:BG:36:LEU:HD22	2.09	0.53
32:BI:56:VAL:HG23	32:BI:69:VAL:O	2.08	0.53
33:BJ:3:THR:HB	33:BJ:44:TYR:OH	2.08	0.53
33:BJ:56:VAL:CG1	33:BJ:57:LEU:H	2.20	0.53
34:BK:10:VAL:HB	34:BK:16:ALA:HB1	1.91	0.53
36:BM:25:ASP:N	36:BM:25:ASP:OD2	2.42	0.53
42:BS:25:ARG:HE	42:BS:73:LYS:HZ1	1.53	0.53
44:BU:73:ASN:C	44:BU:75:ALA:H	2.12	0.53
47:BX:52:ALA:O	47:BX:53:LYS:HB3	2.08	0.53
50:B0:39:ARG:HB2	50:B0:39:ARG:NH1	2.23	0.53
50:B0:42:ILE:HD12	50:B0:48:TYR:HB2	1.90	0.53
2:CC:109:GLU:HG2	2:CC:139:ASN:HB2	1.89	0.53
4:CE:156:ARG:NH1	7:CH:43:GLY:HA3	2.23	0.53
6:CG:14:ASP:HB3	6:CG:19:SER:N	2.24	0.53
6:CG:115:MET:HE3	6:CG:119:LEU:HB3	1.91	0.53
11:CL:84:GLY:H	11:CL:94:TYR:HA	1.73	0.53
12:CM:75:SER:O	12:CM:79:LEU:HG	2.08	0.53
13:CN:33:VAL:HB	55:CA:1272:G:H5'	1.90	0.53
55:CA:575:G:C6	55:CA:821:G:C5	2.96	0.53
55:CA:597:G:O2'	55:CA:598:U:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:654:G:C6	55:CA:753:A:C5	2.96	0.53
55:CA:1032:G:N2	55:CA:1033:G:C5	2.77	0.53
55:CA:1139:G:H4'	55:CA:1140:C:O5'	2.09	0.53
24:DA:90:U:H3'	24:DA:91:A:H5''	1.91	0.53
24:DA:401:A:H2'	24:DA:402:A:C8	2.44	0.53
24:DA:437:U:H2'	24:DA:438:G:C8	2.43	0.53
24:DA:547:A:C2'	24:DA:548:G:H5'	2.38	0.53
24:DA:571:U:C5	24:DA:575:A:C6	2.97	0.53
24:DA:632:A:H5''	35:DL:68:SER:OG	2.09	0.53
24:DA:669:G:N3	24:DA:669:G:H2'	2.22	0.53
24:DA:674:G:H4'	28:DE:69:ARG:HB3	1.91	0.53
24:DA:695:G:N3	24:DA:768:G:C2	2.77	0.53
24:DA:781:A:H5''	24:DA:782:A:OP1	2.08	0.53
24:DA:1248:G:H2'	40:DQ:1:ALA:O	2.08	0.53
24:DA:1338:G:O2'	43:DT:18:GLU:HG3	2.09	0.53
24:DA:1416:G:C6	24:DA:1417:C:C4	2.96	0.53
24:DA:1522:A:H1'	24:DA:1524:G:C4	2.43	0.53
24:DA:1649:G:O6	24:DA:2009:A:N6	2.41	0.53
24:DA:1827:U:H2'	24:DA:1828:G:O4'	2.08	0.53
24:DA:2077:A:C5	24:DA:2435:A:C5	2.96	0.53
24:DA:2312:U:H2'	24:DA:2312:U:O2	2.09	0.53
24:DA:2720:U:H5''	39:DP:52:ARG:NH2	2.23	0.53
29:DF:131:VAL:C	29:DF:133:GLU:H	2.12	0.53
41:DR:61:ALA:HB1	41:DR:96:VAL:HB	1.90	0.53
3:AD:160:LEU:H	3:AD:160:LEU:HD13	1.73	0.53
6:AG:22:LEU:O	6:AG:22:LEU:HD23	2.08	0.53
12:AM:13:HIS:ND1	12:AM:41:ASP:HB2	2.24	0.53
13:AN:19:TYR:O	13:AN:22:LYS:HB3	2.08	0.53
14:AO:9:LYS:HB3	14:AO:9:LYS:NZ	2.24	0.53
20:AU:40:PRO:HA	20:AU:43:GLU:HB2	1.90	0.53
21:AA:20:U:H2'	21:AA:21:G:O4'	2.08	0.53
21:AA:142:G:C4	21:AA:143:A:C8	2.97	0.53
21:AA:266:G:HO2'	21:AA:267:C:P	2.31	0.53
21:AA:524:G:C6	21:AA:525:C:N4	2.76	0.53
21:AA:532:A:O2'	21:AA:533:A:OP1	2.26	0.53
21:AA:692:U:H2'	21:AA:694:A:OP2	2.07	0.53
21:AA:983:A:O2'	21:AA:984:C:H5'	2.07	0.53
21:AA:1171:A:H2'	21:AA:1172:C:C6	2.44	0.53
21:AA:1305:G:N2	21:AA:1331:G:H2'	2.24	0.53
21:AA:1305:G:H21	21:AA:1332:A:H2	1.56	0.53
21:AA:1513:A:H2'	21:AA:1514:G:C8	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:587:C:H5''	24:BA:588:U:H5'	1.91	0.53
24:BA:1062:G:C6	24:BA:1063:G:C6	2.96	0.53
24:BA:1873:G:H2'	24:BA:1874:C:C6	2.43	0.53
24:BA:1967:C:O2'	24:BA:1968:G:H5'	2.08	0.53
24:BA:2523:G:O2'	24:BA:2524:G:H5'	2.08	0.53
26:BC:184:GLU:O	26:BC:186:ASP:N	2.39	0.53
26:BC:195:GLY:O	26:BC:196:ASN:HB3	2.09	0.53
27:BD:113:SER:HB2	27:BD:114:LYS:HE3	1.89	0.53
28:BE:7:ASP:O	28:BE:9:GLN:N	2.42	0.53
28:BE:27:LEU:O	28:BE:31:VAL:HG23	2.08	0.53
28:BE:150:THR:CG2	28:BE:153:LEU:HA	2.38	0.53
29:BF:30:VAL:HG12	29:BF:96:TRP:CH2	2.43	0.53
35:BL:18:ARG:O	35:BL:19:LEU:HB3	2.07	0.53
38:BO:75:GLY:HA3	38:BO:109:ALA:HB3	1.90	0.53
38:BO:88:LYS:O	38:BO:89:ASP:HB2	2.08	0.53
43:BT:8:LEU:HD13	43:BT:46:ALA:HA	1.91	0.53
43:BT:9:LYS:O	43:BT:9:LYS:HG3	2.07	0.53
44:BU:3:LYS:O	44:BU:82:VAL:HG21	2.08	0.53
45:BV:72:VAL:HG12	45:BV:93:ARG:HA	1.89	0.53
46:BW:33:GLY:O	46:BW:34:SER:HB3	2.08	0.53
2:CC:86:LEU:O	2:CC:90:VAL:HG13	2.08	0.53
2:CC:129:PHE:CE1	2:CC:156:LEU:HB3	2.44	0.53
15:CP:12:LYS:HD2	55:CA:393:A:OP2	2.08	0.53
18:CS:72:GLU:HA	55:CA:1320:C:O2'	2.08	0.53
55:CA:557:G:C6	55:CA:558:G:C6	2.97	0.53
55:CA:612:C:N3	55:CA:629:A:C2	2.76	0.53
55:CA:652:U:H1'	55:CA:653:U:H5	1.72	0.53
55:CA:1134:G:C2	55:CA:1141:C:N3	2.76	0.53
24:DA:284:U:O2'	24:DA:285:G:H5'	2.08	0.53
24:DA:377:G:C6	24:DA:378:C:C4	2.96	0.53
24:DA:437:U:H2'	24:DA:438:G:H8	1.74	0.53
24:DA:686:U:HO2'	24:DA:788:A:H2	1.56	0.53
24:DA:818:G:C2'	24:DA:819:A:H5''	2.38	0.53
24:DA:957:C:C2	24:DA:2459:A:O4'	2.62	0.53
24:DA:1057:A:C8	24:DA:1086:A:H2'	2.43	0.53
24:DA:1783:A:H5''	24:DA:2608:G:H4'	1.91	0.53
24:DA:1808:A:N7	47:DX:27:ARG:NH1	2.57	0.53
24:DA:1853:A:N1	24:DA:2087:G:H1'	2.23	0.53
56:DB:13:G:H21	56:DB:69:G:H21	1.55	0.53
56:DB:75:G:H2'	56:DB:76:G:H5'	1.90	0.53
27:DD:55:LYS:HB3	27:DD:75:ALA:HB1	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DD:94:GLN:HG2	27:DD:94:GLN:O	2.08	0.53
31:DH:50:ARG:HA	31:DH:53:GLU:CB	2.39	0.53
31:DH:58:LEU:HG	31:DH:62:LEU:HD11	1.90	0.53
32:DI:21:PRO:N	32:DI:22:PRO:HD2	2.24	0.53
38:DO:31:THR:HG23	38:DO:34:HIS:C	2.28	0.53
40:DQ:57:ARG:CZ	40:DQ:92:LYS:HE2	2.39	0.53
40:DQ:90:ASP:O	40:DQ:94:LEU:HB2	2.08	0.53
43:DT:9:LYS:HG2	43:DT:9:LYS:O	2.08	0.53
44:DU:43:LYS:HE3	44:DU:45:GLN:CD	2.29	0.53
53:D3:22:LYS:H	53:D3:48:MET:CB	2.20	0.53
1:AB:70:GLY:HA2	1:AB:163:ILE:HG22	1.91	0.53
2:AC:156:LEU:HD12	2:AC:156:LEU:H	1.73	0.53
6:AG:148:LYS:C	6:AG:150:PHE:H	2.12	0.53
8:AI:8:THR:H	8:AI:84:ARG:HH12	1.54	0.53
8:AI:67:LYS:HE2	21:AA:1148:U:O2'	2.09	0.53
11:AL:19:ASN:C	11:AL:21:PRO:HD3	2.29	0.53
11:AL:65:TYR:CE1	11:AL:67:GLY:HA2	2.43	0.53
12:AM:94:LEU:HD11	21:AA:1226:C:H5'	1.90	0.53
19:AT:56:ILE:O	19:AT:60:GLN:HG2	2.09	0.53
21:AA:1090:U:H3	21:AA:1095:U:H3	1.54	0.53
21:AA:1169:A:H2'	21:AA:1170:A:C8	2.44	0.53
21:AA:1287:A:H2'	21:AA:1288:A:C8	2.44	0.53
21:AA:1423:G:O2'	21:AA:1424:U:H5'	2.09	0.53
24:BA:17:G:C6	24:BA:524:G:C6	2.96	0.53
24:BA:455:C:N4	24:BA:473:G:H5'	2.23	0.53
24:BA:730:A:O2'	24:BA:731:C:H5'	2.08	0.53
24:BA:855:G:C2	46:BW:23:LYS:HG2	2.44	0.53
24:BA:1062:G:C4	24:BA:1088:A:N7	2.77	0.53
24:BA:1071:G:C5	24:BA:1089:A:N1	2.76	0.53
24:BA:1121:C:H2'	24:BA:1122:G:O4'	2.08	0.53
24:BA:1403:A:H2'	24:BA:1404:C:H6	1.73	0.53
24:BA:1422:G:C2	24:BA:1423:G:C8	2.97	0.53
24:BA:1813:G:N3	26:BC:49:THR:CG2	2.71	0.53
24:BA:1858:A:H2'	24:BA:1859:U:C6	2.43	0.53
24:BA:2004:G:H2'	24:BA:2005:A:H5'	1.89	0.53
24:BA:2078:C:H2'	24:BA:2079:U:O4'	2.08	0.53
24:BA:2185:U:H2'	24:BA:2186:G:H8	1.72	0.53
24:BA:2298:A:H2'	24:BA:2299:U:O4'	2.09	0.53
24:BA:2443:C:O2'	24:BA:2444:G:H5'	2.07	0.53
24:BA:2713:U:H3'	24:BA:2714:G:H5''	1.91	0.53
24:BA:2847:U:H2'	24:BA:2848:G:H5'	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BC:146:LYS:O	26:BC:147:PRO:C	2.45	0.53
30:BG:61:TRP:O	30:BG:62:ALA:C	2.46	0.53
31:BH:67:ALA:C	31:BH:69:ALA:H	2.12	0.53
35:BL:92:LEU:HA	35:BL:125:LEU:HD21	1.91	0.53
37:BN:117:ASP:OD2	37:BN:118:ARG:N	2.42	0.53
42:BS:37:THR:HG22	42:BS:37:THR:O	2.09	0.53
43:BT:40:LYS:CA	43:BT:43:ILE:HG23	2.39	0.53
46:BW:23:LYS:HZ1	46:BW:24:ARG:HG3	1.72	0.53
3:CD:109:THR:HG22	3:CD:111:ALA:N	2.20	0.53
11:CL:111:GLN:HB3	55:CA:538:G:OP2	2.09	0.53
12:CM:1:ALA:H3	12:CM:2:ARG:HH11	1.56	0.53
12:CM:15:VAL:O	12:CM:19:THR:HG23	2.09	0.53
13:CN:53:ASP:HA	13:CN:58:ARG:HD3	1.91	0.53
19:CT:34:VAL:HG22	19:CT:49:ALA:CB	2.38	0.53
55:CA:501:C:H1'	55:CA:549:C:H1'	1.90	0.53
55:CA:560:A:C8	55:CA:566:G:N3	2.77	0.53
55:CA:695:A:H2'	55:CA:696:A:O4'	2.08	0.53
55:CA:962:C:N3	55:CA:974:A:N6	2.57	0.53
55:CA:1118:U:H1'	55:CA:1179:A:C4	2.44	0.53
24:DA:554:U:H2'	24:DA:555:G:O4'	2.09	0.53
24:DA:579:G:C2	24:DA:1262:A:C4	2.97	0.53
24:DA:705:A:N6	24:DA:726:G:H1'	2.23	0.53
24:DA:1001:A:H2'	24:DA:1002:G:O4'	2.09	0.53
24:DA:1266:G:N7	42:DS:16:LYS:HE3	2.24	0.53
24:DA:1324:G:O2'	24:DA:1616:A:C5	2.59	0.53
24:DA:1359:A:C2	24:DA:1360:G:H1'	2.44	0.53
24:DA:1376:C:H5''	59:DA:3414:HOH:O	2.08	0.53
24:DA:1567:G:H5''	26:DC:84:PRO:HB3	1.90	0.53
24:DA:1608:A:C5	24:DA:1611:C:C4	2.96	0.53
24:DA:2370:G:C6	24:DA:2371:G:C6	2.97	0.53
24:DA:2418:A:C2	24:DA:2419:U:C2	2.97	0.53
24:DA:2758:A:O2'	24:DA:2759:G:H5'	2.09	0.53
56:DB:61:G:H2'	56:DB:62:C:O4'	2.09	0.53
30:DG:149:ALA:O	30:DG:151:ARG:N	2.42	0.53
35:DL:3:LEU:C	35:DL:3:LEU:HD12	2.29	0.53
44:DU:34:ILE:HG12	44:DU:62:ALA:O	2.09	0.53
44:DU:44:HIS:CD2	44:DU:57:ILE:HG21	2.44	0.53
44:DU:73:ASN:HB3	44:DU:95:PHE:HE2	1.73	0.53
50:D0:4:GLN:HG2	50:D0:4:GLN:O	2.09	0.53
51:D1:8:ILE:HD12	51:D1:52:LYS:HG3	1.88	0.53
3:AD:71:PHE:HE1	3:AD:199:ILE:HD11	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:54:LEU:HD22	5:AF:55:HIS:N	2.23	0.53
5:AF:90:MET:HB3	17:AR:60:ARG:HH21	1.74	0.53
15:AP:20:VAL:HG23	15:AP:34:GLU:O	2.08	0.53
21:AA:386:C:H2'	21:AA:387:U:H5'	1.91	0.53
21:AA:575:G:C8	21:AA:881:G:N2	2.76	0.53
21:AA:704:A:H2'	21:AA:705:G:C8	2.43	0.53
24:BA:264:C:H2'	24:BA:265:A:H5''	1.89	0.53
24:BA:355:U:H2'	24:BA:356:G:C8	2.44	0.53
24:BA:374:A:C2	24:BA:401:A:C4	2.96	0.53
24:BA:463:G:C6	24:BA:467:G:C6	2.96	0.53
24:BA:839:U:H1'	24:BA:1191:G:H1'	1.90	0.53
24:BA:871:U:H2'	24:BA:872:U:C6	2.44	0.53
24:BA:1174:U:H5''	24:BA:1174:U:O2	2.08	0.53
24:BA:1497:U:H5''	24:BA:1498:C:OP2	2.08	0.53
24:BA:1682:G:H2'	24:BA:1683:U:C6	2.44	0.53
27:BD:110:THR:N	27:BD:202:ILE:O	2.34	0.53
29:BF:151:LEU:C	29:BF:151:LEU:HD12	2.29	0.53
39:BP:56:SER:C	39:BP:75:THR:HG23	2.29	0.53
43:BT:29:THR:CB	43:BT:86:THR:HG22	2.35	0.53
52:B2:34:ARG:NH1	52:B2:39:ARG:HG2	2.24	0.53
2:CC:6:PRO:O	2:CC:9:ILE:HG22	2.09	0.53
55:CA:49:U:O4	55:CA:362:G:N2	2.42	0.53
55:CA:685:G:O2'	55:CA:686:U:H5'	2.09	0.53
55:CA:1219:A:C5	55:CA:1220:G:N7	2.76	0.53
55:CA:1245:C:O2'	55:CA:1246:A:C5'	2.56	0.53
55:CA:1282:C:O2'	55:CA:1283:U:C6	2.57	0.53
24:DA:739:A:O2'	24:DA:740:C:C5	2.61	0.53
24:DA:1181:U:H2'	24:DA:1182:G:H8	1.72	0.53
24:DA:1276:A:OP1	24:DA:1276:A:H4'	2.08	0.53
24:DA:1338:G:H5''	43:DT:17:SER:HB3	1.89	0.53
24:DA:1428:C:O2'	24:DA:1429:G:H5'	2.09	0.53
24:DA:1439:A:C8	24:DA:1440:U:C6	2.97	0.53
24:DA:1578:U:O2'	24:DA:1579:A:H5'	2.09	0.53
24:DA:2262:U:H1'	24:DA:2328:A:H1'	1.91	0.53
24:DA:2348:U:O2'	24:DA:2349:G:O4'	2.22	0.53
24:DA:2542:A:H4'	24:DA:2543:G:C5'	2.37	0.53
24:DA:2556:C:H2'	24:DA:2557:G:O4'	2.08	0.53
24:DA:2591:C:H2'	24:DA:2592:G:C8	2.44	0.53
24:DA:2636:C:H4'	27:DD:81:GLU:OE2	2.08	0.53
26:DC:43:ASN:ND2	26:DC:44:ASN:N	2.55	0.53
34:DK:17:ARG:HD3	34:DK:18:ARG:HG3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DL:73:ILE:O	35:DL:105:ILE:HG23	2.08	0.53
36:DM:73:ILE:HG21	36:DM:91:TYR:CZ	2.43	0.53
10:AK:63:GLN:HG3	10:AK:98:ALA:CB	2.39	0.53
13:AN:86:ALA:HA	13:AN:89:ARG:HH21	1.73	0.53
16:AQ:59:GLU:HG2	16:AQ:60:ILE:N	2.23	0.53
21:AA:181:A:N6	21:AA:195:A:OP2	2.42	0.53
21:AA:1331:G:C2'	21:AA:1332:A:OP2	2.57	0.53
24:BA:371:A:N6	24:BA:401:A:H3'	2.22	0.53
24:BA:459:U:O2'	24:BA:460:A:C5'	2.44	0.53
24:BA:1142:A:C5	24:BA:1144:A:C5	2.96	0.53
24:BA:1202:G:C6	24:BA:1203:U:N3	2.76	0.53
24:BA:1224:U:C4	24:BA:1225:G:C6	2.97	0.53
24:BA:1333:G:C2	24:BA:1334:G:C8	2.96	0.53
24:BA:1850:G:C6	24:BA:1851:U:C4	2.97	0.53
24:BA:2070:A:C2	24:BA:2442:C:C2	2.96	0.53
24:BA:2147:A:H3'	24:BA:2148:G:H5'	1.90	0.53
24:BA:2268:A:H8	24:BA:2268:A:O5'	1.91	0.53
24:BA:2297:A:C5	24:BA:2320:U:N3	2.77	0.53
24:BA:2683:C:H4'	27:BD:13:ARG:HH22	1.73	0.53
25:BB:73:A:C4	25:BB:104:A:C2	2.96	0.53
28:BE:119:ILE:HG12	28:BE:119:ILE:O	2.07	0.53
28:BE:148:ILE:HD13	28:BE:187:VAL:CG2	2.38	0.53
33:BJ:44:TYR:O	33:BJ:45:THR:CB	2.56	0.53
38:BO:34:HIS:CD2	38:BO:53:THR:O	2.61	0.53
47:BX:14:GLY:O	47:BX:26:ARG:N	2.39	0.53
3:CD:20:LEU:O	3:CD:21:LYS:C	2.46	0.53
9:CJ:38:GLY:O	9:CJ:40:ILE:HD12	2.09	0.53
9:CJ:40:ILE:HG12	55:CA:1125:U:C5	2.43	0.53
11:CL:114:SER:OG	55:CA:501:C:O3'	2.27	0.53
55:CA:429:U:C1'	55:CA:430:A:H5''	2.39	0.53
55:CA:429:U:H4'	55:CA:430:A:O5'	2.09	0.53
55:CA:1441:A:H2'	55:CA:1442:G:C8	2.44	0.53
24:DA:70:G:H5'	24:DA:112:U:O2	2.08	0.53
24:DA:164:C:H2'	24:DA:165:A:O4'	2.09	0.53
24:DA:201:C:C5	24:DA:202:U:C5	2.97	0.53
24:DA:444:C:O2'	24:DA:445:C:C5'	2.56	0.53
24:DA:615:U:H5''	24:DA:616:A:C8	2.43	0.53
24:DA:616:A:O2'	24:DA:617:G:C5'	2.56	0.53
24:DA:976:G:H2'	24:DA:977:G:H8	1.73	0.53
24:DA:1035:U:H2'	24:DA:1036:G:H8	1.73	0.53
24:DA:1090:A:C2'	24:DA:1091:G:H5''	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1135:C:N4	24:DA:1139:G:C6	2.76	0.53
24:DA:1511:G:O2'	24:DA:1512:C:O4'	2.27	0.53
24:DA:2536:G:C6	24:DA:2537:U:C4	2.97	0.53
28:DE:146:VAL:O	28:DE:167:VAL:HA	2.09	0.53
34:DK:10:VAL:HG13	34:DK:12:ASP:OD1	2.09	0.53
40:DQ:18:LYS:O	40:DQ:18:LYS:HD2	2.09	0.53
41:DR:2:TYR:HE1	41:DR:13:ARG:HD2	1.73	0.53
42:DS:32:ALA:O	42:DS:33:LEU:HB2	2.09	0.53
45:DV:72:VAL:HA	45:DV:92:VAL:O	2.09	0.53
49:DZ:6:ILE:HD12	49:DZ:47:ILE:HD11	1.90	0.53
1:AB:65:LYS:HG2	1:AB:153:MET:SD	2.49	0.53
1:AB:67:LEU:HD21	1:AB:91:VAL:CG2	2.39	0.53
1:AB:143:LEU:HD12	1:AB:147:LEU:CD1	2.38	0.53
2:AC:1:GLY:O	21:AA:1061:G:OP2	2.27	0.53
2:AC:79:LYS:HE3	2:AC:79:LYS:N	2.24	0.53
4:AE:115:GLU:HG2	4:AE:120:HIS:NE2	2.24	0.53
5:AF:3:HIS:ND1	5:AF:65:GLU:HB2	2.24	0.53
6:AG:23:ALA:O	6:AG:26:VAL:HG22	2.08	0.53
10:AK:86:LYS:HG3	10:AK:114:PRO:HD3	1.90	0.53
21:AA:88:U:O2	21:AA:89:U:C6	2.62	0.53
21:AA:94:G:H5''	21:AA:95:C:C6	2.44	0.53
21:AA:243:A:N3	21:AA:245:U:H2'	2.23	0.53
21:AA:532:A:HO2'	21:AA:533:A:P	2.32	0.53
21:AA:638:U:H2'	21:AA:639:G:O4'	2.09	0.53
21:AA:1074:G:N1	21:AA:1102:A:C6	2.77	0.53
21:AA:1095:U:C5'	21:AA:1109:C:O2	2.56	0.53
21:AA:1120:C:H2'	21:AA:1121:U:H6	1.74	0.53
24:BA:216:A:N7	24:BA:432:A:C5	2.77	0.53
24:BA:528:A:H3'	24:BA:528:A:C8	2.42	0.53
24:BA:747:U:C5	24:BA:2613:U:C5	2.96	0.53
24:BA:958:U:C2	25:BB:89:U:O2'	2.62	0.53
24:BA:1032:A:H1'	54:B4:23:ILE:HD13	1.91	0.53
24:BA:1506:U:H2'	24:BA:1507:C:C6	2.43	0.53
24:BA:2209:G:C2	24:BA:2216:G:C2	2.97	0.53
24:BA:2514:U:H2'	24:BA:2515:C:C6	2.44	0.53
24:BA:2527:C:C5	24:BA:2528:U:C5	2.96	0.53
26:BC:90:ILE:HG21	26:BC:102:TYR:CE1	2.44	0.53
26:BC:254:LYS:O	26:BC:256:THR:N	2.40	0.53
28:BE:112:LEU:HD13	28:BE:186:VAL:HG11	1.90	0.53
29:BF:114:ARG:HD2	29:BF:114:ARG:N	2.20	0.53
39:BP:3:ILE:O	39:BP:7:LEU:HB2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BP:67:GLU:HG3	39:BP:68:GLY:N	2.20	0.53
45:BV:4:ILE:O	45:BV:63:ILE:HA	2.09	0.53
48:BY:45:GLN:O	48:BY:46:VAL:CB	2.51	0.53
50:B0:29:VAL:HG13	50:B0:34:GLY:O	2.08	0.53
1:CB:146:SER:HB2	1:CB:147:LEU:HD12	1.91	0.53
1:CB:159:ALA:HB1	1:CB:183:PHE:HE1	1.73	0.53
7:CH:33:VAL:HG22	7:CH:58:LEU:CD1	2.39	0.53
12:CM:75:SER:HB2	12:CM:79:LEU:HG	1.90	0.53
17:CR:61:ALA:HB1	17:CR:67:LEU:HG	1.91	0.53
55:CA:517:G:N2	55:CA:533:A:OP2	2.42	0.53
55:CA:551:U:N3	55:CA:552:U:C4	2.76	0.53
55:CA:995:C:N3	55:CA:1046:A:O2'	2.42	0.53
55:CA:1347:G:H22	55:CA:1373:G:H2'	1.73	0.53
24:DA:138:U:H2'	24:DA:140:C:H1'	1.89	0.53
24:DA:540:C:H2'	24:DA:541:A:C8	2.44	0.53
24:DA:856:G:C1'	46:DW:23:LYS:HB3	2.38	0.53
24:DA:1153:C:H2'	24:DA:1154:G:C8	2.44	0.53
24:DA:1286:A:H1'	24:DA:1288:G:N2	2.24	0.53
24:DA:1945:G:O2'	24:DA:1946:U:H5'	2.09	0.53
24:DA:2143:C:H3'	24:DA:2144:G:C8	2.43	0.53
24:DA:2660:A:H2	24:DA:2661:G:N7	2.06	0.53
27:DD:124:ARG:NH1	27:DD:125:TRP:CE2	2.77	0.53
28:DE:73:ILE:O	28:DE:73:ILE:HG13	2.09	0.53
30:DG:28:LYS:H	30:DG:79:THR:HG22	1.73	0.53
33:DJ:36:LEU:HD21	33:DJ:122:LEU:HD13	1.91	0.53
34:DK:77:ILE:HG23	39:DP:71:ARG:HD2	1.91	0.53
37:DN:78:LYS:O	37:DN:82:GLU:HB3	2.08	0.53
41:DR:49:ILE:HB	41:DR:51:VAL:O	2.09	0.53
44:DU:85:ARG:HA	44:DU:85:ARG:HE	1.73	0.53
45:DV:61:LEU:O	45:DV:72:VAL:HG22	2.09	0.53
48:DY:4:LYS:HB2	48:DY:4:LYS:HZ3	1.74	0.53
52:D2:19:ARG:HH21	52:D2:19:ARG:CB	2.20	0.53
1:AB:46:VAL:HA	1:AB:49:PHE:CE2	2.43	0.53
1:AB:142:LYS:HZ1	21:AA:1098:C:P	2.32	0.53
3:AD:71:PHE:CE1	3:AD:199:ILE:HD11	2.44	0.53
7:AH:77:VAL:HG12	7:AH:78:SER:N	2.24	0.53
9:AJ:59:LYS:HE3	21:AA:972:C:P	2.49	0.53
13:AN:4:SER:HB2	21:AA:1216:A:H5''	1.91	0.53
20:AU:39:LYS:H	20:AU:40:PRO:HD2	1.73	0.53
21:AA:497:G:HO2'	21:AA:498:A:H8	1.43	0.53
21:AA:627:G:H2'	21:AA:628:G:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:817:C:C5	21:AA:819:A:H1'	2.44	0.53
21:AA:1239:A:H5'	21:AA:1240:U:OP1	2.09	0.53
21:AA:1261:A:C2	21:AA:1275:A:C6	2.96	0.53
24:BA:376:G:O2'	24:BA:377:G:H5'	2.09	0.53
24:BA:910:A:H2'	24:BA:911:A:C8	2.44	0.53
24:BA:1421:G:C2	24:BA:1422:G:C8	2.97	0.53
24:BA:2103:C:C2'	24:BA:2104:C:H5'	2.38	0.53
24:BA:2305:U:C2'	24:BA:2306:C:O4'	2.55	0.53
24:BA:2854:G:H2'	24:BA:2855:C:C6	2.43	0.53
25:BB:30:C:O2	25:BB:30:C:H2'	2.08	0.53
28:BE:12:LEU:O	28:BE:13:THR:HB	2.09	0.53
28:BE:153:LEU:C	28:BE:153:LEU:HD12	2.29	0.53
29:BF:7:TYR:O	29:BF:12:VAL:HG12	2.09	0.53
30:BG:156:TYR:O	30:BG:157:LYS:HG3	2.09	0.53
31:BH:43:ASN:N	31:BH:43:ASN:HD22	2.07	0.53
34:BK:20:MET:O	34:BK:42:THR:HG22	2.08	0.53
35:BL:93:ASN:O	35:BL:94:THR:HG22	2.08	0.53
43:BT:39:THR:O	43:BT:39:THR:CG2	2.57	0.53
48:BY:9:LYS:HB3	48:BY:12:GLU:HB2	1.90	0.53
51:B1:31:GLU:HG2	51:B1:31:GLU:O	2.09	0.53
2:CC:181:ILE:HG23	2:CC:201:ILE:O	2.09	0.53
4:CE:29:ILE:CG2	4:CE:30:PHE:N	2.70	0.53
4:CE:45:VAL:HG12	4:CE:73:VAL:HG21	1.91	0.53
6:CG:115:MET:SD	6:CG:118:ARG:HB2	2.49	0.53
7:CH:65:PHE:CE2	7:CH:66:GLN:HG2	2.44	0.53
8:CI:24:ASN:HD22	8:CI:26:LYS:CG	2.22	0.53
10:CK:63:GLN:HG3	10:CK:64:VAL:N	2.23	0.53
12:CM:89:ARG:NE	12:CM:94:LEU:HB2	2.24	0.53
17:CR:47:ARG:HD2	17:CR:50:TYR:CD2	2.44	0.53
18:CS:55:GLN:CD	18:CS:56:HIS:H	2.12	0.53
55:CA:441:A:H61	55:CA:493:A:H62	1.57	0.53
55:CA:596:A:HO2'	55:CA:597:G:H8	1.55	0.53
55:CA:891:U:O2'	55:CA:892:A:C5'	2.57	0.53
55:CA:1156:G:HO2'	55:CA:1180:A:H61	1.57	0.53
24:DA:20:C:O2'	24:DA:21:A:H5'	2.08	0.53
24:DA:99:U:O3'	24:DA:100:U:H3'	2.07	0.53
24:DA:288:U:H2'	24:DA:289:G:C8	2.44	0.53
24:DA:656:G:O2'	24:DA:657:U:C5'	2.57	0.53
24:DA:1274:A:C6	24:DA:1302:A:C2	2.97	0.53
24:DA:1621:U:H5''	24:DA:1622:G:OP1	2.09	0.53
24:DA:1789:A:H2'	24:DA:1790:C:C6	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1992:G:N2	24:DA:1995:U:C5	2.77	0.53
24:DA:2286:G:N7	51:D1:33:LEU:HD23	2.24	0.53
24:DA:2314:A:H2'	24:DA:2315:G:H8	1.72	0.53
27:DD:99:GLU:HG3	27:DD:100:LEU:N	2.24	0.53
31:DH:22:LYS:NZ	31:DH:22:LYS:HB3	2.24	0.53
31:DH:32:PRO:HA	47:DX:38:TRP:HD1	1.74	0.53
31:DH:132:PHE:HB3	31:DH:140:ALA:CB	2.38	0.53
33:DJ:92:MET:CE	33:DJ:92:MET:HA	2.39	0.53
36:DM:41:LEU:O	36:DM:93:VAL:HG23	2.08	0.53
37:DN:72:ASP:O	37:DN:75:ILE:HG13	2.09	0.53
37:DN:92:GLY:H	37:DN:94:TYR:HE1	1.54	0.53
41:DR:24:LYS:HA	41:DR:94:THR:HG23	1.91	0.53
44:DU:43:LYS:HE3	44:DU:45:GLN:CG	2.39	0.53
1:AB:41:ASN:HD22	1:AB:42:LEU:N	2.05	0.52
4:AE:37:VAL:HG11	4:AE:113:VAL:CB	2.39	0.52
6:AG:78:ARG:NH2	6:AG:81:GLY:HA2	2.23	0.52
6:AG:83:THR:HG22	6:AG:85:GLN:H	1.73	0.52
10:AK:66:ALA:HB1	10:AK:99:LEU:CD1	2.36	0.52
21:AA:505:G:H2'	21:AA:506:G:H8	1.73	0.52
21:AA:587:G:C2	21:AA:755:G:C6	2.96	0.52
21:AA:690:G:H2'	21:AA:691:G:O4'	2.08	0.52
21:AA:938:A:N1	21:AA:939:G:C5	2.77	0.52
21:AA:1138:G:N3	21:AA:1138:G:C2'	2.68	0.52
21:AA:1356:G:N2	21:AA:1357:A:C2	2.76	0.52
24:BA:235:U:H2'	24:BA:236:C:H6	1.73	0.52
24:BA:435:C:O2'	24:BA:436:C:C5'	2.57	0.52
24:BA:811:U:O2'	24:BA:1250:G:H2'	2.09	0.52
24:BA:1156:A:C8	40:BQ:50:ARG:HG2	2.45	0.52
24:BA:1522:A:O2'	24:BA:1523:U:OP2	2.27	0.52
24:BA:1964:G:C6	24:BA:1967:C:N4	2.77	0.52
24:BA:2420:C:OP1	53:B3:33:THR:HB	2.08	0.52
27:BD:16:THR:HG22	27:BD:20:VAL:O	2.10	0.52
27:BD:149:ASN:OD1	27:BD:150:GLN:N	2.42	0.52
29:BF:129:MET:SD	29:BF:153:ILE:HD11	2.49	0.52
33:BJ:67:ASN:O	33:BJ:69:ARG:N	2.42	0.52
36:BM:93:VAL:HG22	36:BM:94:ALA:N	2.24	0.52
36:BM:126:ILE:O	36:BM:128:THR:HG23	2.08	0.52
44:BU:25:LYS:O	44:BU:26:ASN:HB3	2.08	0.52
2:CC:22:PHE:HD1	9:CJ:13:PHE:CD1	2.27	0.52
2:CC:135:ARG:HA	2:CC:138:GLN:OE1	2.09	0.52
3:CD:151:GLN:O	3:CD:154:VAL:HG12	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:124:LYS:O	20:CU:33:ARG:NE	2.41	0.52
12:CM:82:LEU:HB2	18:CS:73:PHE:HE2	1.75	0.52
17:CR:46:THR:HG23	17:CR:51:GLN:HB2	1.92	0.52
55:CA:322:C:O2	55:CA:332:G:N2	2.42	0.52
55:CA:358:U:H2'	55:CA:359:G:C8	2.43	0.52
55:CA:1215:G:N3	55:CA:1216:A:C8	2.77	0.52
55:CA:1441:A:H62	55:CA:1462:C:H1'	1.74	0.52
24:DA:344:A:H2'	24:DA:345:A:C8	2.44	0.52
24:DA:381:G:H5'	47:DX:15:ASN:HD22	1.73	0.52
24:DA:687:C:O2'	24:DA:688:U:H5'	2.09	0.52
24:DA:1178:C:C2	24:DA:1179:G:C8	2.98	0.52
24:DA:1277:G:H2'	24:DA:1278:C:C6	2.43	0.52
24:DA:1327:A:H2'	24:DA:1328:A:C8	2.44	0.52
24:DA:1439:A:N6	24:DA:1440:U:O2	2.42	0.52
24:DA:1512:C:H2'	24:DA:1513:U:O4'	2.09	0.52
24:DA:1537:G:H2'	24:DA:1538:G:C4'	2.21	0.52
24:DA:2056:G:N3	24:DA:2056:G:H2'	2.24	0.52
24:DA:2084:C:H2'	24:DA:2085:U:C6	2.44	0.52
24:DA:2193:G:H2'	24:DA:2194:U:C6	2.44	0.52
24:DA:2313:C:O2'	24:DA:2314:A:C5'	2.43	0.52
24:DA:2387:U:H1'	46:DW:38:ARG:NH1	2.23	0.52
24:DA:2734:A:H61	24:DA:2770:G:H1'	1.72	0.52
26:DC:43:ASN:CG	26:DC:44:ASN:H	2.12	0.52
29:DF:73:VAL:O	29:DF:73:VAL:HG12	2.08	0.52
30:DG:74:MET:O	30:DG:78:VAL:HG13	2.09	0.52
35:DL:29:LYS:HG2	35:DL:30:THR:HG23	1.90	0.52
37:DN:51:LEU:HA	37:DN:54:LEU:CD2	2.40	0.52
38:DO:56:LYS:HD3	38:DO:56:LYS:O	2.09	0.52
40:DQ:6:GLY:C	40:DQ:8:ILE:H	2.12	0.52
48:DY:17:GLU:HG2	48:DY:50:VAL:HG13	1.91	0.52
4:AE:34:ALA:O	4:AE:49:TYR:CG	2.62	0.52
8:AI:98:ARG:NH2	21:AA:1179:A:H5''	2.24	0.52
8:AI:107:ALA:O	8:AI:109:GLN:HG2	2.10	0.52
12:AM:100:ARG:NH2	21:AA:951:G:OP2	2.42	0.52
21:AA:243:A:C2	21:AA:245:U:H2'	2.44	0.52
21:AA:429:U:H1'	21:AA:430:A:H5''	1.91	0.52
21:AA:439:U:C2'	21:AA:440:C:H5'	2.39	0.52
21:AA:845:A:C8	21:AA:846:G:H4'	2.43	0.52
21:AA:1026:G:C6	21:AA:1027:C:N4	2.77	0.52
21:AA:1088:G:N1	21:AA:1089:G:C5	2.77	0.52
21:AA:1136:C:H5''	21:AA:1137:C:OP2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1160:G:C6	21:AA:1181:G:O6	2.63	0.52
21:AA:1418:A:N7	21:AA:1419:G:H1'	2.25	0.52
24:BA:142:A:O2'	24:BA:143:C:O4'	2.19	0.52
24:BA:615:U:C4	28:BE:35:TYR:CE1	2.97	0.52
24:BA:1333:G:H2'	24:BA:1334:G:C8	2.39	0.52
24:BA:1450:G:H2'	24:BA:1451:C:C6	2.44	0.52
24:BA:1665:A:C2'	24:BA:1666:G:H5'	2.39	0.52
24:BA:1885:A:O2'	24:BA:1886:U:H5'	2.09	0.52
24:BA:2834:G:O6	24:BA:2879:A:H2'	2.09	0.52
27:BD:35:THR:OG1	27:BD:49:GLN:HG2	2.09	0.52
27:BD:97:SER:O	27:BD:99:GLU:HG2	2.09	0.52
27:BD:120:GLY:HA2	27:BD:162:ALA:HB1	1.91	0.52
35:BL:55:MET:HE2	35:BL:56:PRO:HD3	1.91	0.52
35:BL:101:ILE:CG2	35:BL:102:GLY:N	2.73	0.52
43:BT:80:TRP:HE3	43:BT:81:LYS:O	1.93	0.52
1:CB:104:LYS:HD2	1:CB:104:LYS:N	2.13	0.52
1:CB:174:GLU:O	1:CB:178:LEU:HB2	2.09	0.52
2:CC:129:PHE:O	2:CC:132:ALA:HB3	2.08	0.52
3:CD:72:ARG:HD2	3:CD:203:TYR:CD1	2.44	0.52
5:CF:3:HIS:ND1	5:CF:92:THR:HG23	2.24	0.52
7:CH:44:PHE:O	7:CH:70:VAL:HG11	2.09	0.52
11:CL:80:LEU:HB2	11:CL:101:LEU:HD23	1.91	0.52
16:CQ:26:ARG:O	16:CQ:38:LYS:HA	2.09	0.52
55:CA:82:G:H2'	55:CA:83:C:C4'	2.25	0.52
55:CA:143:A:H2'	55:CA:143:A:N3	2.23	0.52
55:CA:560:A:C8	55:CA:566:G:C2	2.97	0.52
55:CA:1241:G:O2'	55:CA:1242:G:O5'	2.27	0.52
24:DA:36:G:H4'	24:DA:451:U:C2	2.45	0.52
24:DA:284:U:H2'	24:DA:285:G:H8	1.74	0.52
24:DA:296:U:H5''	44:DU:91:LYS:NZ	2.23	0.52
24:DA:352:A:H2'	24:DA:353:C:H4'	1.90	0.52
24:DA:615:U:H5''	24:DA:616:A:H8	1.74	0.52
24:DA:1071:G:O4'	24:DA:1088:A:O2'	2.28	0.52
24:DA:1358:G:O6	24:DA:1371:G:C8	2.63	0.52
24:DA:1439:A:N3	24:DA:1552:A:C6	2.77	0.52
24:DA:1508:A:C4'	24:DA:1509:A:OP1	2.53	0.52
24:DA:1759:A:O2'	24:DA:1760:C:H5'	2.08	0.52
24:DA:2847:U:H3'	39:DP:94:ALA:HB2	1.89	0.52
26:DC:75:ALA:HB1	26:DC:93:VAL:HG22	1.90	0.52
29:DF:45:ASP:C	29:DF:47:LYS:H	2.12	0.52
33:DJ:110:PRO:HG2	33:DJ:111:LYS:HG2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DJ:123:LYS:HG2	33:DJ:132:HIS:NE2	2.24	0.52
39:DP:13:LYS:HD2	39:DP:13:LYS:H	1.74	0.52
43:DT:8:LEU:HD22	43:DT:46:ALA:HA	1.90	0.52
44:DU:47:PRO:HB3	44:DU:54:PRO:HG3	1.90	0.52
1:AB:140:LEU:O	1:AB:143:LEU:HD23	2.09	0.52
3:AD:187:ARG:HE	3:AD:196:GLU:CD	2.13	0.52
6:AG:35:LYS:O	6:AG:39:GLU:HG2	2.10	0.52
6:AG:149:ALA:HA	10:AK:60:PHE:CB	2.40	0.52
9:AJ:15:HIS:CD2	21:AA:1152:A:H5'	2.44	0.52
10:AK:26:PHE:CE1	10:AK:88:PRO:HG2	2.44	0.52
12:AM:39:ALA:HB3	12:AM:42:VAL:CG1	2.39	0.52
21:AA:488:C:H2'	21:AA:489:C:H6	1.74	0.52
21:AA:792:A:C2	21:AA:794:A:C6	2.97	0.52
21:AA:1090:U:O2'	21:AA:1091:U:H5'	2.09	0.52
21:AA:1103:C:O2'	21:AA:1104:G:O4'	2.16	0.52
24:BA:34:U:H4'	24:BA:35:G:OP2	2.10	0.52
24:BA:197:A:C6	24:BA:2430:A:C2	2.97	0.52
24:BA:449:A:C4'	40:BQ:2:ARG:NH1	2.73	0.52
24:BA:498:G:N2	24:BA:499:U:C2	2.78	0.52
24:BA:558:U:P	33:BJ:113:PRO:HB2	2.50	0.52
24:BA:580:U:H2'	24:BA:581:C:C6	2.45	0.52
24:BA:604:G:H2'	24:BA:605:G:C8	2.43	0.52
24:BA:604:G:H2'	24:BA:605:G:H8	1.74	0.52
24:BA:966:G:H2'	24:BA:967:U:O4'	2.09	0.52
24:BA:1011:G:O2'	24:BA:1013:C:H5''	2.10	0.52
24:BA:1441:G:H2'	24:BA:1442:U:C6	2.45	0.52
24:BA:1468:U:N3	24:BA:1522:A:C2	2.78	0.52
24:BA:2216:G:C6	24:BA:2217:G:C6	2.97	0.52
24:BA:2295:C:O2'	24:BA:2296:U:H5'	2.09	0.52
24:BA:2553:G:N1	24:BA:2554:U:O2	2.42	0.52
24:BA:2555:U:H2'	24:BA:2556:C:O4'	2.09	0.52
24:BA:2860:A:C8	24:BA:2860:A:H3'	2.44	0.52
25:BB:55:U:O2'	25:BB:56:G:H5'	2.09	0.52
25:BB:109:A:H2'	25:BB:110:C:C6	2.44	0.52
26:BC:114:GLN:O	26:BC:115:ILE:HD13	2.09	0.52
26:BC:170:TYR:CD2	26:BC:184:GLU:HA	2.43	0.52
28:BE:175:ILE:HG23	28:BE:175:ILE:O	2.09	0.52
32:BI:19:PRO:HG2	32:BI:23:VAL:CG2	2.38	0.52
32:BI:78:LEU:HD13	32:BI:108:ILE:CG2	2.35	0.52
37:BN:79:LEU:O	37:BN:80:PHE:CB	2.50	0.52
42:BS:43:ALA:O	42:BS:46:LEU:HB2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BY:5:GLU:O	48:BY:8:GLU:HB2	2.10	0.52
50:B0:30:ASP:O	50:B0:33:SER:O	2.26	0.52
3:CD:170:LEU:HA	3:CD:182:LYS:HB2	1.90	0.52
4:CE:18:ASN:OD1	4:CE:33:THR:HG23	2.09	0.52
8:CI:16:ALA:HA	8:CI:65:THR:O	2.08	0.52
9:CJ:56:HIS:HE1	55:CA:973:G:N3	2.08	0.52
12:CM:8:ILE:N	12:CM:9:PRO:HD3	2.24	0.52
15:CP:32:PHE:HZ	55:CA:608:A:H1'	1.75	0.52
55:CA:33:A:O2'	55:CA:34:C:H5'	2.09	0.52
55:CA:369:G:OP2	55:CA:388:G:N2	2.41	0.52
55:CA:386:C:C2'	55:CA:387:U:H5'	2.40	0.52
55:CA:388:G:HO2'	55:CA:389:A:P	2.33	0.52
55:CA:438:U:C5	55:CA:494:G:C5	2.96	0.52
55:CA:1129:C:HO2'	55:CA:1130:A:H8	1.48	0.52
55:CA:1161:C:O2'	55:CA:1162:C:H6	1.93	0.52
22:CV:27:G:H5''	22:CV:27:G:C8	2.44	0.52
24:DA:86:G:HO2'	24:DA:87:U:H6	1.56	0.52
24:DA:93:G:O2'	24:DA:94:A:O4'	2.23	0.52
24:DA:679:C:H6	24:DA:679:C:O5'	1.92	0.52
24:DA:1022:G:N2	24:DA:1142:A:H2	2.07	0.52
24:DA:1428:C:C5	24:DA:1569:A:H5'	2.44	0.52
24:DA:1494:A:OP2	24:DA:1494:A:H3'	2.09	0.52
24:DA:1638:C:O2	24:DA:2698:U:O2'	2.27	0.52
24:DA:1654:A:O2'	24:DA:1655:A:O5'	2.28	0.52
24:DA:1725:U:H2'	24:DA:1726:C:C6	2.43	0.52
24:DA:1759:A:H2'	24:DA:1760:C:C5	2.44	0.52
24:DA:2026:U:O2	24:DA:2038:G:N2	2.43	0.52
24:DA:2079:U:H2'	24:DA:2080:A:H8	1.74	0.52
24:DA:2472:G:H2'	24:DA:2475:C:H42	1.75	0.52
24:DA:2533:U:H4'	24:DA:2664:G:H4'	1.91	0.52
26:DC:94:LEU:HA	26:DC:100:ARG:HG2	1.92	0.52
52:D2:38:GLY:O	52:D2:42:LEU:HD13	2.08	0.52
53:D3:31:ILE:HG21	53:D3:34:LYS:NZ	2.24	0.52
2:AC:180:ASP:HB3	2:AC:204:GLY:H	1.72	0.52
3:AD:14:GLU:HG3	3:AD:18:LEU:HD11	1.91	0.52
4:AE:55:VAL:N	4:AE:56:PRO:CD	2.71	0.52
5:AF:85:ILE:O	5:AF:86:ARG:C	2.48	0.52
11:AL:113:ARG:NH2	21:AA:501:C:OP1	2.43	0.52
14:AO:25:GLU:HG3	14:AO:69:LEU:HD11	1.91	0.52
21:AA:66:A:O4'	21:AA:173:U:C4	2.63	0.52
21:AA:76:G:N1	21:AA:95:C:N4	2.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:784:A:N6	21:AA:799:G:C6	2.77	0.52
21:AA:1203:C:H2'	21:AA:1204:A:C8	2.43	0.52
22:AX:36:A:H2'	22:AX:37:A:C8	2.44	0.52
24:BA:9:G:C5	24:BA:2629:U:C5	2.97	0.52
24:BA:121:G:O2'	24:BA:122:G:H8	1.92	0.52
24:BA:308:G:H1'	24:BA:501:A:OP1	2.10	0.52
24:BA:506:G:C5'	24:BA:509:C:H1'	2.40	0.52
24:BA:922:C:HO2'	46:BW:25:PHE:HE2	1.56	0.52
24:BA:986:C:C2'	24:BA:987:C:H5'	2.39	0.52
24:BA:1000:A:C6	24:BA:1001:A:C6	2.98	0.52
24:BA:1141:U:H4'	24:BA:1142:A:O4'	2.09	0.52
24:BA:1142:A:N7	24:BA:1144:A:C6	2.78	0.52
24:BA:1171:G:C6	24:BA:1172:C:C4	2.97	0.52
24:BA:1275:A:OP2	24:BA:1646:C:N4	2.42	0.52
24:BA:1326:U:H2'	24:BA:1327:A:C8	2.44	0.52
24:BA:1408:G:H2'	24:BA:1409:U:C6	2.42	0.52
24:BA:1600:C:OP1	43:BT:81:LYS:NZ	2.42	0.52
24:BA:1856:U:H3	24:BA:1886:U:H3	1.58	0.52
24:BA:2180:U:H2'	24:BA:2181:U:C5	2.45	0.52
24:BA:2251:G:C8	24:BA:2450:A:H4'	2.44	0.52
24:BA:2291:U:N3	24:BA:2292:U:O4	2.43	0.52
24:BA:2788:C:H2'	24:BA:2789:C:C6	2.44	0.52
27:BD:9:VAL:HG13	27:BD:26:VAL:O	2.10	0.52
27:BD:90:PHE:C	27:BD:92:VAL:H	2.12	0.52
41:BR:54:VAL:HG23	41:BR:55:ASP:OD1	2.10	0.52
5:CF:5:GLU:OE2	17:CR:23:LYS:HE2	2.10	0.52
7:CH:85:TYR:CD2	7:CH:123:GLU:HB2	2.44	0.52
14:CO:42:PHE:O	14:CO:46:LYS:HG2	2.09	0.52
16:CQ:45:VAL:HG21	16:CQ:60:ILE:HG21	1.90	0.52
18:CS:35:ARG:NH2	55:CA:1221:G:H4'	2.24	0.52
19:CT:66:ILE:HG13	19:CT:67:HIS:N	2.24	0.52
55:CA:509:A:C2	55:CA:510:A:N1	2.78	0.52
55:CA:663:A:O2'	55:CA:664:G:H5'	2.09	0.52
55:CA:763:G:H2'	55:CA:764:C:H6	1.73	0.52
55:CA:1049:U:H4'	55:CA:1050:G:H5'	1.91	0.52
55:CA:1117:A:C6	55:CA:1184:G:O6	2.62	0.52
22:CV:27:G:O2'	22:CV:28:G:H5'	2.10	0.52
24:DA:160:A:C6	24:DA:161:A:C6	2.97	0.52
24:DA:200:U:O4	24:DA:248:G:C2	2.63	0.52
24:DA:240:C:O5'	24:DA:240:C:H6	1.93	0.52
24:DA:807:U:OP2	35:DL:36:LYS:HG2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:910:A:C6	24:DA:911:A:C6	2.98	0.52
24:DA:1127:A:N7	24:DA:2488:G:O2'	2.41	0.52
24:DA:1154:G:OP1	40:DQ:57:ARG:HD2	2.09	0.52
24:DA:1286:A:C5	24:DA:1289:C:C4	2.97	0.52
24:DA:1430:G:H2'	24:DA:1431:A:C8	2.43	0.52
24:DA:1651:G:C6	24:DA:1652:A:C5	2.98	0.52
24:DA:1673:G:O2'	24:DA:1674:G:H5'	2.09	0.52
24:DA:1794:A:H2'	24:DA:1795:C:C6	2.45	0.52
24:DA:2048:G:C6	24:DA:2049:G:C5	2.98	0.52
24:DA:2370:G:O6	24:DA:2371:G:C6	2.62	0.52
24:DA:2563:U:H2'	24:DA:2565:A:OP2	2.10	0.52
24:DA:2577:A:C2	50:D0:1:ALA:N	2.77	0.52
24:DA:2591:C:H2'	24:DA:2592:G:H8	1.73	0.52
30:DG:162:ARG:HG3	30:DG:166:GLU:HG3	1.91	0.52
31:DH:96:THR:O	31:DH:97:ARG:HG3	2.09	0.52
31:DH:116:ARG:O	31:DH:117:LEU:HG	2.09	0.52
33:DJ:44:TYR:CD1	40:DQ:59:LEU:HD11	2.45	0.52
35:DL:20:GLY:HA2	35:DL:28:GLY:HA2	1.90	0.52
35:DL:81:ASP:O	35:DL:83:ALA:N	2.42	0.52
37:DN:20:MET:C	37:DN:22:ARG:H	2.13	0.52
46:DW:40:ARG:NH1	46:DW:40:ARG:CG	2.58	0.52
50:D0:37:HIS:HB2	50:D0:41:HIS:HE1	1.75	0.52
8:AI:33:SER:HB3	8:AI:36:GLN:CG	2.40	0.52
11:AL:27:PRO:HB2	11:AL:28:GLN:OE1	2.09	0.52
19:AT:53:MET:O	19:AT:56:ILE:HG22	2.10	0.52
21:AA:88:U:O2	21:AA:89:U:C5	2.63	0.52
21:AA:993:G:H4'	21:AA:994:A:OP2	2.08	0.52
21:AA:1101:A:H4'	21:AA:1102:A:C4'	2.38	0.52
21:AA:1239:A:N1	21:AA:1297:G:H1'	2.24	0.52
21:AA:1411:C:H2'	21:AA:1412:C:H5'	1.92	0.52
24:BA:858:G:H21	24:BA:2268:A:C2'	2.23	0.52
24:BA:1026:G:H2'	24:BA:1027:A:N7	2.23	0.52
24:BA:1048:A:C4	24:BA:1049:C:C5	2.97	0.52
24:BA:1528:A:H2'	24:BA:1529:G:O4'	2.10	0.52
24:BA:1857:G:O2'	24:BA:1858:A:P	2.68	0.52
24:BA:1876:A:H2'	24:BA:1877:A:H8	1.74	0.52
24:BA:1998:A:P	27:BD:141:ARG:HH22	2.32	0.52
24:BA:2699:C:H2'	24:BA:2700:A:O4'	2.10	0.52
24:BA:2856:A:N6	24:BA:2857:G:C6	2.78	0.52
25:BB:33:G:C2	25:BB:50:A:C2	2.98	0.52
31:BH:66:ASN:C	31:BH:68:ARG:H	2.13	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BJ:31:GLU:O	33:BJ:32:LEU:C	2.48	0.52
33:BJ:88:THR:HG23	33:BJ:91:GLU:H	1.73	0.52
38:BO:93:ASP:C	38:BO:95:SER:H	2.13	0.52
40:BQ:63:ARG:HH12	40:BQ:96:ASP:HB2	1.74	0.52
46:BW:40:ARG:H	46:BW:56:HIS:HB3	1.74	0.52
1:CB:164:ASP:OD2	1:CB:203:ASP:HB2	2.10	0.52
4:CE:35:LEU:HD11	4:CE:136:VAL:HG11	1.91	0.52
10:CK:51:PHE:HB3	10:CK:55:ARG:CB	2.39	0.52
11:CL:31:GLY:HA3	11:CL:54:VAL:CG1	2.40	0.52
14:CO:62:ARG:O	14:CO:66:LEU:HG	2.10	0.52
16:CQ:39:ARG:HA	16:CQ:39:ARG:HH11	1.74	0.52
55:CA:16:A:C6	55:CA:17:U:C5	2.98	0.52
55:CA:246:A:C4	55:CA:282:A:N6	2.78	0.52
55:CA:352:C:H6	55:CA:352:C:H5'	1.73	0.52
55:CA:642:A:HO2'	55:CA:643:C:H6	1.49	0.52
55:CA:677:U:H3	55:CA:714:G:H22	1.57	0.52
55:CA:1134:G:C6	55:CA:1135:U:H1'	2.44	0.52
55:CA:1173:U:H2'	55:CA:1174:G:C8	2.44	0.52
55:CA:1408:A:C5	55:CA:1409:C:C5	2.97	0.52
24:DA:3:U:H2'	24:DA:4:U:H6	1.75	0.52
24:DA:171:U:H2'	24:DA:172:A:H8	1.74	0.52
24:DA:600:G:H2'	24:DA:601:C:O4'	2.10	0.52
24:DA:866:A:C5	24:DA:914:G:N7	2.77	0.52
24:DA:1748:C:H2'	24:DA:1749:A:C8	2.43	0.52
24:DA:1776:G:N2	24:DA:1789:A:C4	2.78	0.52
24:DA:2459:A:H2'	24:DA:2460:U:C6	2.45	0.52
24:DA:2585:U:O2'	24:DA:2586:U:C5'	2.57	0.52
24:DA:2644:G:O2'	24:DA:2732:G:H1'	2.09	0.52
56:DB:50:A:C2	56:DB:51:G:H1'	2.44	0.52
56:DB:77:U:H2'	56:DB:78:A:H5'	1.91	0.52
27:DD:46:ARG:HB3	27:DD:84:LEU:HD12	1.92	0.52
29:DF:30:VAL:HA	29:DF:157:THR:HG22	1.91	0.52
33:DJ:6:ALA:HB3	33:DJ:45:THR:HB	1.92	0.52
34:DK:119:ALA:N	34:DK:120:PRO:HD2	2.25	0.52
40:DQ:4:LYS:HZ2	40:DQ:6:GLY:CA	2.12	0.52
40:DQ:42:GLY:HA3	41:DR:75:VAL:HG21	1.91	0.52
42:DS:86:MET:CE	42:DS:87:PRO:HD2	2.39	0.52
49:DZ:4:ILE:CD1	49:DZ:58:GLU:HA	2.40	0.52
54:D4:7:VAL:CG1	54:D4:8:LYS:H	2.23	0.52
2:AC:78:LYS:O	2:AC:78:LYS:HG2	2.07	0.52
2:AC:107:LYS:NZ	2:AC:107:LYS:HB2	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:168:ARG:CZ	21:AA:1106:G:O2'	2.57	0.52
20:AU:3:ILE:HA	20:AU:19:LYS:HE3	1.91	0.52
21:AA:72:A:O2'	21:AA:73:C:O4'	2.17	0.52
21:AA:209:U:H5'	21:AA:210:C:OP2	2.09	0.52
21:AA:920:U:H2'	21:AA:921:U:C6	2.45	0.52
21:AA:1372:U:C4	21:AA:1373:G:C5	2.98	0.52
21:AA:1395:C:H5'	21:AA:1401:G:N2	2.20	0.52
24:BA:278:A:N3	24:BA:278:A:H2'	2.25	0.52
24:BA:431:U:C2'	24:BA:432:A:H5'	2.40	0.52
24:BA:1252:G:N3	40:BQ:32:ARG:HG2	2.25	0.52
24:BA:1464:G:H2'	24:BA:1465:G:H8	1.75	0.52
24:BA:1537:G:H2'	24:BA:1538:G:O4'	2.10	0.52
24:BA:1549:A:C6	24:BA:1550:C:C4	2.97	0.52
24:BA:2048:G:H4'	24:BA:2823:A:C2	2.44	0.52
24:BA:2269:G:O2'	46:BW:18:LYS:HG2	2.09	0.52
24:BA:2856:A:C6	24:BA:2857:G:C5	2.97	0.52
27:BD:98:VAL:O	27:BD:99:GLU:C	2.47	0.52
29:BF:134:GLN:H	29:BF:134:GLN:HE21	1.57	0.52
30:BG:93:TYR:O	30:BG:94:ARG:O	2.27	0.52
36:BM:28:PHE:HB3	36:BM:64:TRP:CE2	2.44	0.52
36:BM:66:ARG:HB2	36:BM:101:VAL:O	2.10	0.52
38:BO:70:ALA:O	38:BO:73:ALA:HB3	2.10	0.52
39:BP:19:PHE:CE2	39:BP:83:ILE:HD12	2.44	0.52
41:BR:39:LEU:HA	41:BR:49:ILE:CG2	2.40	0.52
49:BZ:13:ILE:HG22	49:BZ:14:GLY:N	2.24	0.52
8:CI:21:LYS:O	8:CI:60:LEU:HB2	2.09	0.52
11:CL:43:LYS:CB	11:CL:44:PRO:HD2	2.07	0.52
20:CU:40:PRO:HA	20:CU:43:GLU:HB2	1.90	0.52
55:CA:154:U:C2'	55:CA:155:A:H5'	2.39	0.52
55:CA:373:A:N3	55:CA:374:A:C8	2.78	0.52
55:CA:388:G:O2'	55:CA:389:A:OP2	2.25	0.52
55:CA:961:U:C4	55:CA:983:A:C6	2.97	0.52
55:CA:978:A:C5	55:CA:1318:A:C6	2.97	0.52
55:CA:1168:U:H2'	55:CA:1168:U:O2	2.09	0.52
55:CA:1316:G:H8	55:CA:1316:G:OP2	1.93	0.52
55:CA:1520:C:H2'	55:CA:1521:C:C6	2.45	0.52
24:DA:81:G:H2'	24:DA:82:U:O4'	2.10	0.52
24:DA:197:A:C5	24:DA:2430:A:C4	2.98	0.52
24:DA:604:G:C2	24:DA:605:G:C5	2.98	0.52
24:DA:850:U:O2'	49:DZ:22:THR:HG22	2.09	0.52
24:DA:1427:A:H4'	24:DA:1428:C:O5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1478:G:C6	24:DA:1514:G:C2	2.97	0.52
24:DA:2287:A:HO2'	24:DA:2288:A:P	2.31	0.52
24:DA:2423:U:H1'	24:DA:2425:A:N7	2.23	0.52
24:DA:2759:G:H2'	24:DA:2760:C:O4'	2.10	0.52
28:DE:170:ARG:CZ	28:DE:176:ASP:OD2	2.57	0.52
29:DF:36:ASN:O	29:DF:37:MET:HB3	2.09	0.52
33:DJ:23:LYS:HB3	33:DJ:28:LEU:HD13	1.90	0.52
36:DM:1:MET:O	36:DM:2:LEU:O	2.27	0.52
37:DN:72:ASP:O	37:DN:76:VAL:HG13	2.10	0.52
39:DP:26:GLU:OE1	39:DP:28:LYS:HE2	2.10	0.52
45:DV:30:ILE:HB	45:DV:38:LEU:HB3	1.91	0.52
54:D4:3:VAL:O	54:D4:4:ARG:CB	2.57	0.52
3:AD:10:LEU:HD22	3:AD:62:ARG:HG3	1.92	0.52
4:AE:32:PHE:CD2	4:AE:53:ARG:O	2.62	0.52
5:AF:55:HIS:O	5:AF:56:LYS:HB2	2.09	0.52
10:AK:117:HIS:CD2	21:AA:675:A:H1'	2.45	0.52
13:AN:48:GLN:CG	21:AA:1317:C:H4'	2.40	0.52
15:AP:46:LYS:NZ	15:AP:48:GLU:H	2.07	0.52
19:AT:60:GLN:HA	19:AT:63:LYS:HB2	1.91	0.52
21:AA:587:G:N2	21:AA:755:G:C4	2.77	0.52
21:AA:594:U:H1'	21:AA:646:G:N2	2.24	0.52
21:AA:838:G:H2'	21:AA:839:C:C6	2.45	0.52
21:AA:1418:A:C8	21:AA:1418:A:C3'	2.93	0.52
24:BA:231:A:N6	24:BA:232:G:C2	2.77	0.52
24:BA:623:C:O5'	24:BA:623:C:H6	1.93	0.52
24:BA:1064:C:H5'	32:BI:88:GLY:CA	2.40	0.52
24:BA:1510:G:HO2'	24:BA:1511:G:H8	1.54	0.52
24:BA:1579:A:O2'	24:BA:1580:A:H5'	2.10	0.52
24:BA:1693:U:O4	24:BA:1977:A:C5	2.63	0.52
24:BA:1824:G:C6	24:BA:1825:U:C4	2.98	0.52
24:BA:2400:G:C6	24:BA:2401:U:C4	2.97	0.52
24:BA:2816:G:N2	24:BA:2831:G:C4	2.77	0.52
25:BB:51:G:N2	25:BB:53:A:H62	2.06	0.52
31:BH:32:PRO:O	31:BH:33:GLN:HB2	2.08	0.52
38:BO:2:ASP:O	38:BO:3:LYS:HB3	2.10	0.52
38:BO:7:ARG:CD	38:BO:97:PHE:CE1	2.92	0.52
40:BQ:71:ASN:CB	40:BQ:109:VAL:HG11	2.38	0.52
42:BS:24:ILE:O	42:BS:25:ARG:C	2.47	0.52
43:BT:64:LYS:HA	43:BT:79:ASP:OD1	2.09	0.52
43:BT:68:LYS:O	43:BT:69:ARG:O	2.28	0.52
1:CB:80:LYS:HG3	1:CB:81:ASP:H	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:101:VAL:HG13	3:CD:106:PHE:HB2	1.92	0.52
4:CE:132:PRO:O	4:CE:136:VAL:HG12	2.10	0.52
7:CH:1:SER:C	7:CH:3:GLN:H	2.11	0.52
14:CO:34:GLN:HE22	14:CO:38:LEU:HD13	1.75	0.52
55:CA:811:C:O2'	55:CA:901:A:N1	2.43	0.52
55:CA:1061:G:N7	55:CA:1062:U:C5	2.77	0.52
55:CA:1350:A:C2	55:CA:1351:U:C2	2.97	0.52
24:DA:422:A:O2'	24:DA:423:A:H5'	2.10	0.52
24:DA:538:A:H61	24:DA:555:G:C2'	2.23	0.52
24:DA:753:A:C2	24:DA:754:U:C2	2.98	0.52
24:DA:1923:U:C2	24:DA:1924:C:C5	2.97	0.52
24:DA:2149:U:O2'	24:DA:2150:C:H5'	2.10	0.52
24:DA:2480:C:H2'	24:DA:2481:G:H5'	1.92	0.52
24:DA:2811:G:C2	24:DA:2812:G:C4	2.98	0.52
56:DB:60:C:H2'	56:DB:61:G:H8	1.73	0.52
26:DC:189:ALA:O	26:DC:190:THR:CB	2.56	0.52
30:DG:167:VAL:HG23	30:DG:168:VAL:N	2.24	0.52
33:DJ:55:ILE:O	33:DJ:55:ILE:HG13	2.09	0.52
36:DM:66:ARG:CZ	36:DM:101:VAL:HG11	2.39	0.52
38:DO:24:THR:OG1	38:DO:90:VAL:HG11	2.09	0.52
39:DP:24:THR:HA	39:DP:44:GLY:O	2.10	0.52
40:DQ:4:LYS:HE3	40:DQ:7:VAL:H	1.74	0.52
44:DU:33:VAL:O	44:DU:34:ILE:HG13	2.09	0.52
47:DX:76:LYS:HG3	47:DX:77:TYR:N	2.25	0.52
53:D3:15:LYS:HG2	53:D3:16:THR:H	1.74	0.52
53:D3:33:THR:HG23	53:D3:34:LYS:N	2.25	0.52
54:D4:37:GLN:HG2	54:D4:38:GLY:N	2.25	0.52
3:AD:60:VAL:O	3:AD:61:ARG:C	2.48	0.52
6:AG:110:ARG:HG2	6:AG:111:GLY:H	1.74	0.52
9:AJ:32:THR:HG23	9:AJ:33:GLY:H	1.75	0.52
21:AA:190:A:H8	21:AA:190:A:O5'	1.93	0.52
21:AA:539:A:H2'	21:AA:540:G:C8	2.44	0.52
21:AA:1173:U:H2'	21:AA:1174:G:H8	1.73	0.52
24:BA:518:G:H2'	24:BA:519:U:C6	2.45	0.52
24:BA:570:G:O2'	24:BA:571:U:H5'	2.09	0.52
24:BA:855:G:N3	46:BW:23:LYS:CD	2.72	0.52
24:BA:866:A:O2'	24:BA:867:C:C5'	2.57	0.52
24:BA:1010:A:N3	24:BA:1153:C:H1'	2.25	0.52
24:BA:1014:A:C4	24:BA:1149:G:N2	2.78	0.52
24:BA:1385:A:N3	24:BA:1386:C:C5	2.78	0.52
24:BA:1805:A:C5	24:BA:1806:C:C5	2.96	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1941:C:H2'	24:BA:1942:C:C6	2.45	0.52
24:BA:1956:U:H2'	24:BA:1957:C:C6	2.40	0.52
24:BA:2550:G:C6	24:BA:2551:C:C4	2.97	0.52
24:BA:2662:A:H2'	24:BA:2663:G:O4'	2.08	0.52
25:BB:37:C:C4	25:BB:38:C:C4	2.98	0.52
25:BB:49:C:OP1	38:BO:101:GLY:HA3	2.09	0.52
26:BC:245:THR:O	26:BC:247:TRP:N	2.42	0.52
28:BE:24:ASN:C	28:BE:24:ASN:HD22	2.13	0.52
29:BF:45:ASP:CB	29:BF:48:LEU:HB2	2.39	0.52
32:BI:135:MET:HG2	32:BI:137:LEU:HG	1.91	0.52
40:BQ:15:LYS:O	40:BQ:19:GLN:HG3	2.09	0.52
40:BQ:91:ARG:CD	41:BR:11:GLN:H	2.22	0.52
42:BS:20:VAL:HA	42:BS:23:LEU:HD12	1.92	0.52
44:BU:25:LYS:HG2	44:BU:36:GLU:HB3	1.91	0.52
44:BU:73:ASN:O	44:BU:75:ALA:N	2.42	0.52
1:CB:26:MET:C	1:CB:28:PRO:HD2	2.30	0.52
2:CC:88:LYS:O	2:CC:92:ASP:HB2	2.09	0.52
6:CG:29:LEU:HD21	6:CG:41:ILE:HD12	1.92	0.52
6:CG:119:LEU:HG	6:CG:123:LEU:HD23	1.91	0.52
7:CH:54:THR:HG23	7:CH:55:LYS:HD3	1.90	0.52
10:CK:78:ILE:N	10:CK:78:ILE:HD13	2.24	0.52
10:CK:126:ARG:NH2	55:CA:796:C:H4'	2.24	0.52
18:CS:35:ARG:O	18:CS:35:ARG:HG3	2.09	0.52
55:CA:198:G:O6	55:CA:220:G:C4	2.62	0.52
55:CA:219:U:H2'	55:CA:220:G:C8	2.43	0.52
55:CA:236:A:H2'	55:CA:237:G:C8	2.45	0.52
55:CA:301:G:H2'	55:CA:302:G:C8	2.41	0.52
55:CA:734:G:C2	55:CA:735:C:C2	2.98	0.52
55:CA:937:A:N6	55:CA:1345:U:O4	2.42	0.52
55:CA:1064:G:H1'	55:CA:1066:C:C5	2.44	0.52
55:CA:1387:G:C5	55:CA:1388:C:C5	2.97	0.52
22:CV:27:G:H8	22:CV:27:G:C5'	2.23	0.52
24:DA:48:G:C6	24:DA:178:G:O6	2.62	0.52
24:DA:177:G:H5''	24:DA:178:G:OP2	2.10	0.52
24:DA:323:C:H6	28:DE:165:HIS:CE1	2.28	0.52
24:DA:352:A:C4	24:DA:353:C:H1'	2.44	0.52
24:DA:989:G:H4'	24:DA:990:A:OP1	2.09	0.52
24:DA:1020:A:H1'	24:DA:1021:A:N6	2.24	0.52
24:DA:1028:A:N6	24:DA:1125:G:H2'	2.24	0.52
24:DA:1158:C:O2'	24:DA:1159:U:O4'	2.28	0.52
24:DA:1866:A:H2'	24:DA:1867:G:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2264:C:C2	24:DA:2277:G:C2	2.97	0.52
24:DA:2711:A:N6	24:DA:2714:G:C5	2.77	0.52
24:DA:2752:C:O2'	24:DA:2753:A:O4'	2.26	0.52
24:DA:2752:C:H2'	24:DA:2753:A:C8	2.45	0.52
56:DB:62:C:H2'	56:DB:63:C:O4'	2.09	0.52
26:DC:147:PRO:CD	26:DC:184:GLU:HG3	2.37	0.52
28:DE:79:ARG:O	28:DE:80:SER:C	2.48	0.52
28:DE:111:GLU:HB2	28:DE:114:ARG:HH21	1.75	0.52
32:DI:57:VAL:O	32:DI:58:ILE:HG13	2.10	0.52
33:DJ:3:THR:CG2	40:DQ:60:TRP:HE1	2.22	0.52
41:DR:68:ARG:CZ	41:DR:90:ARG:HG2	2.40	0.52
43:DT:38:ALA:HB1	43:DT:81:LYS:HZ3	1.75	0.52
47:DX:31:ASN:HD22	47:DX:31:ASN:N	2.04	0.52
1:AB:26:MET:HE3	1:AB:192:PRO:HG3	1.92	0.52
1:AB:212:TYR:HA	1:AB:215:ALA:CB	2.40	0.52
3:AD:84:ASN:O	3:AD:87:GLU:HG2	2.09	0.52
11:AL:71:HIS:HB2	11:AL:73:LEU:HD23	1.92	0.52
11:AL:72:ASN:OD1	11:AL:104:SER:HB3	2.10	0.52
18:AS:51:HIS:HB2	18:AS:56:HIS:CD2	2.44	0.52
21:AA:183:C:O2'	21:AA:184:G:C5'	2.49	0.52
21:AA:341:C:O2'	21:AA:342:C:H5'	2.09	0.52
21:AA:1348:U:H2'	21:AA:1349:A:H8	1.75	0.52
21:AA:1452:C:H2'	21:AA:1452:C:OP2	2.10	0.52
22:AX:40:C:H2'	22:AX:41:C:C6	2.45	0.52
24:BA:42:A:C2	24:BA:438:G:C6	2.97	0.52
24:BA:233:A:O2'	24:BA:234:U:H5'	2.10	0.52
24:BA:431:U:O2'	24:BA:432:A:H5'	2.09	0.52
24:BA:455:C:N4	24:BA:472:A:H2'	2.25	0.52
24:BA:538:A:O2'	33:BJ:8:PRO:HD2	2.10	0.52
24:BA:541:A:C2	24:BA:553:G:C4	2.97	0.52
24:BA:616:A:H2'	24:BA:617:G:H8	1.74	0.52
24:BA:799:G:C6	24:BA:800:A:C6	2.97	0.52
24:BA:1008:A:N6	24:BA:1136:G:C6	2.78	0.52
24:BA:1062:G:N7	24:BA:1088:A:H8	2.07	0.52
24:BA:1368:G:H2'	24:BA:1369:G:C8	2.35	0.52
24:BA:1421:G:C2	24:BA:1422:G:N7	2.77	0.52
24:BA:1847:A:C8	24:BA:1848:A:N7	2.66	0.52
24:BA:2383:G:H2'	24:BA:2384:U:C6	2.45	0.52
24:BA:2392:A:H2'	24:BA:2392:A:N3	2.25	0.52
24:BA:2478:A:OP2	54:B4:2:LYS:NZ	2.43	0.52
24:BA:2857:G:N2	24:BA:2859:G:H3'	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BP:92:ARG:O	39:BP:93:LYS:HB2	2.10	0.52
39:BP:105:LYS:HA	39:BP:108:ARG:CD	2.39	0.52
44:BU:97:SER:O	44:BU:98:ASN:CB	2.54	0.52
45:BV:14:LYS:O	45:BV:15:GLY:C	2.48	0.52
46:BW:17:ALA:HB1	46:BW:36:ILE:HA	1.91	0.52
4:CE:81:GLN:CD	4:CE:149:PRO:HD3	2.31	0.52
5:CF:18:VAL:O	5:CF:22:ILE:N	2.41	0.52
55:CA:616:G:C2	55:CA:625:U:O2	2.62	0.52
55:CA:860:A:N6	55:CA:861:G:C2	2.77	0.52
55:CA:1001:C:H2'	55:CA:1002:G:O4'	2.10	0.52
55:CA:1127:G:O2'	55:CA:1128:C:C5'	2.58	0.52
55:CA:1279:G:C8	55:CA:1282:C:N3	2.77	0.52
24:DA:33:C:HO2'	24:DA:34:U:H5'	1.73	0.52
24:DA:216:A:C2'	24:DA:217:A:C8	2.93	0.52
24:DA:476:G:C4	24:DA:478:A:OP2	2.63	0.52
24:DA:680:C:O2	24:DA:681:G:C8	2.63	0.52
24:DA:727:A:H2'	24:DA:728:G:C8	2.44	0.52
24:DA:1439:A:H5''	24:DA:1440:U:OP2	2.10	0.52
24:DA:1517:G:H2'	24:DA:1518:C:C6	2.45	0.52
24:DA:1552:A:H2	24:DA:1553:A:H8	1.57	0.52
24:DA:1570:A:C6	24:DA:1571:A:N1	2.78	0.52
24:DA:2297:A:HO2'	24:DA:2298:A:C5'	2.23	0.52
24:DA:2720:U:C2	24:DA:2872:A:C5	2.98	0.52
24:DA:2882:A:C5'	37:DN:96:ARG:HD3	2.40	0.52
27:DD:137:SER:HB3	27:DD:138:LEU:HD22	1.91	0.52
29:DF:42:ALA:CB	29:DF:49:LEU:HD21	2.39	0.52
29:DF:155:ILE:H	29:DF:155:ILE:HD12	1.75	0.52
30:DG:7:PRO:O	30:DG:8:VAL:HB	2.10	0.52
34:DK:11:ALA:O	34:DK:99:ILE:HG23	2.10	0.52
37:DN:93:GLY:O	37:DN:116:VAL:HG21	2.10	0.52
39:DP:56:SER:O	39:DP:75:THR:HG22	2.09	0.52
40:DQ:71:ASN:ND2	40:DQ:106:THR:HA	2.24	0.52
1:AB:52:ALA:C	1:AB:54:ALA:H	2.14	0.52
4:AE:61:LYS:HD3	21:AA:1073:U:OP2	2.10	0.52
6:AG:119:LEU:O	6:AG:123:LEU:HB2	2.10	0.52
6:AG:147:ASN:N	6:AG:147:ASN:ND2	2.48	0.52
8:AI:11:ARG:CD	8:AI:106:ASP:HB2	2.40	0.52
8:AI:90:ASP:OD2	8:AI:93:LEU:HG	2.10	0.52
15:AP:13:LYS:NZ	21:AA:483:C:O2	2.37	0.52
15:AP:54:LEU:HD23	15:AP:80:LYS:HE3	1.91	0.52
15:AP:67:ILE:HD11	15:AP:71:VAL:CG1	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AU:9:GLU:HB2	2:CC:48:LYS:HZ1	1.75	0.52
21:AA:109:A:C6	21:AA:326:G:C6	2.97	0.52
21:AA:244:U:C2	21:AA:894:G:N3	2.78	0.52
21:AA:299:G:H2'	21:AA:300:A:C8	2.45	0.52
21:AA:548:G:O2'	21:AA:549:C:C5'	2.56	0.52
21:AA:604:G:H2'	21:AA:605:U:O4'	2.09	0.52
21:AA:615:G:C4	21:AA:616:G:C8	2.97	0.52
21:AA:1058:G:C6	21:AA:1059:C:N3	2.78	0.52
21:AA:1319:A:H2'	21:AA:1323:G:N7	2.25	0.52
21:AA:1503:A:C8	21:AA:1531:A:O2'	2.57	0.52
24:BA:2156:G:H2'	24:BA:2157:G:H21	1.75	0.52
24:BA:2243:U:O2	24:BA:2434:A:C2	2.62	0.52
24:BA:2567:G:H2'	24:BA:2568:U:C6	2.45	0.52
24:BA:2816:G:C5	24:BA:2817:U:C5	2.98	0.52
24:BA:2832:U:O2	24:BA:2834:G:C2	2.63	0.52
26:BC:7:PRO:C	26:BC:9:SER:H	2.13	0.52
27:BD:114:LYS:HZ3	27:BD:116:LYS:HE2	1.75	0.52
28:BE:76:PRO:HA	28:BE:82:GLY:HA3	1.91	0.52
33:BJ:12:LYS:O	33:BJ:13:ARG:HB2	2.10	0.52
34:BK:4:GLU:O	34:BK:5:GLN:HB2	2.09	0.52
34:BK:43:ILE:HG13	34:BK:56:ASP:HB2	1.92	0.52
34:BK:91:SER:O	34:BK:92:GLU:C	2.48	0.52
36:BM:64:TRP:CH2	36:BM:106:ASP:HB2	2.45	0.52
38:BO:57:ALA:C	38:BO:59:ALA:H	2.12	0.52
51:B1:7:LYS:HE3	53:B3:33:THR:CG2	2.40	0.52
1:CB:162:VAL:O	1:CB:184:ALA:HA	2.09	0.52
4:CE:87:VAL:HG12	4:CE:92:ARG:HA	1.91	0.52
6:CG:76:SER:HA	6:CG:85:GLN:HA	1.92	0.52
7:CH:54:THR:HG23	7:CH:55:LYS:H	1.75	0.52
8:CI:112:ARG:O	8:CI:112:ARG:HG3	2.09	0.52
9:CJ:15:HIS:HA	9:CJ:18:ILE:CG2	2.38	0.52
17:CR:55:ALA:O	17:CR:59:LYS:HG3	2.09	0.52
55:CA:577:G:C6	55:CA:812:G:N2	2.78	0.52
55:CA:662:U:H2'	55:CA:663:A:H8	1.76	0.52
55:CA:677:U:H3	55:CA:714:G:N2	2.08	0.52
55:CA:1402:C:C2	55:CA:1403:C:C6	2.97	0.52
55:CA:1488:G:N2	55:CA:1489:G:H1'	2.25	0.52
24:DA:21:A:H2'	24:DA:22:C:H6	1.74	0.52
24:DA:45:G:H2'	24:DA:215:G:C5	2.45	0.52
24:DA:684:G:C2	24:DA:794:A:C2	2.98	0.52
24:DA:686:U:C6	24:DA:788:A:N1	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:697:G:C2	24:DA:766:U:O2	2.63	0.52
24:DA:985:C:N4	24:DA:986:C:N4	2.58	0.52
24:DA:1296:G:N2	24:DA:1645:G:C5	2.78	0.52
24:DA:1812:U:H1'	26:DC:43:ASN:HD21	1.75	0.52
24:DA:1827:U:O4'	24:DA:1970:A:O2'	2.28	0.52
24:DA:2064:C:H2'	24:DA:2065:C:C6	2.44	0.52
24:DA:2349:G:N1	24:DA:2350:C:C2	2.77	0.52
24:DA:2450:A:O2'	24:DA:2451:A:H5'	2.09	0.52
24:DA:2592:G:C6	24:DA:2593:U:C4	2.98	0.52
24:DA:2691:C:O2'	24:DA:2692:G:H5'	2.10	0.52
26:DC:119:VAL:HG13	26:DC:133:ASN:ND2	2.21	0.52
26:DC:179:GLU:HA	26:DC:269:ARG:O	2.10	0.52
28:DE:23:PHE:HB2	28:DE:114:ARG:HH22	1.74	0.52
28:DE:178:VAL:HG13	28:DE:179:SER:N	2.25	0.52
35:DL:9:ALA:HB3	35:DL:12:SER:CB	2.40	0.52
42:DS:17:VAL:HG21	42:DS:103:ILE:HD11	1.90	0.52
42:DS:33:LEU:HA	42:DS:36:LEU:HD23	1.92	0.52
46:DW:70:VAL:HG22	46:DW:70:VAL:O	2.08	0.52
1:AB:51:GLU:CG	1:AB:197:PHE:HE1	2.23	0.51
3:AD:196:GLU:C	3:AD:198:LEU:N	2.63	0.51
3:AD:196:GLU:O	3:AD:200:VAL:HG23	2.10	0.51
12:AM:44:ILE:HG22	12:AM:44:ILE:O	2.08	0.51
21:AA:46:G:C6	21:AA:366:A:C2	2.98	0.51
21:AA:549:C:H2'	21:AA:550:G:C8	2.43	0.51
24:BA:38:A:O2'	28:BE:43:THR:HA	2.09	0.51
24:BA:64:A:O2'	43:BT:70:HIS:HE1	1.93	0.51
24:BA:740:C:H1'	24:BA:1981:A:H1'	1.92	0.51
24:BA:1333:G:C2	24:BA:1334:G:N7	2.78	0.51
24:BA:2585:U:O2'	24:BA:2586:U:C5'	2.58	0.51
26:BC:75:ALA:HB1	26:BC:94:LEU:O	2.10	0.51
27:BD:9:VAL:CG2	27:BD:10:GLY:N	2.72	0.51
30:BG:26:LYS:HA	30:BG:32:LEU:HA	1.91	0.51
32:BI:16:MET:O	32:BI:19:PRO:HD3	2.09	0.51
32:BI:24:GLY:O	32:BI:34:ILE:HD12	2.10	0.51
32:BI:78:LEU:HD23	32:BI:81:LYS:HE3	1.92	0.51
33:BJ:64:VAL:HG13	33:BJ:65:THR:N	2.24	0.51
41:BR:1:MET:HB2	41:BR:43:ASN:HD21	1.75	0.51
43:BT:40:LYS:HG2	43:BT:58:VAL:HG13	1.92	0.51
46:BW:39:GLN:O	46:BW:40:ARG:C	2.48	0.51
8:CI:10:ARG:HG2	8:CI:105:ARG:HH21	1.75	0.51
12:CM:45:SER:O	12:CM:47:LEU:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:88:ARG:HH21	24:DA:715:A:H4'	1.74	0.51
55:CA:243:A:H62	55:CA:281:G:H1'	1.75	0.51
55:CA:774:G:C6	55:CA:775:G:N7	2.77	0.51
55:CA:1058:G:H2'	55:CA:1059:C:O4'	2.10	0.51
55:CA:1230:C:O5'	22:CV:30:G:H5''	2.09	0.51
55:CA:1255:G:H21	55:CA:1259:C:H1'	1.74	0.51
55:CA:1270:G:H2'	55:CA:1271:A:H8	1.75	0.51
24:DA:161:A:C6	24:DA:162:U:O4	2.62	0.51
24:DA:263:G:H4'	24:DA:430:A:O4'	2.09	0.51
24:DA:428:A:O2'	24:DA:429:A:H5'	2.10	0.51
24:DA:517:C:H5''	50:D0:12:ARG:HH12	1.75	0.51
24:DA:673:C:C5'	28:DE:76:PRO:HD2	2.41	0.51
24:DA:1156:A:P	40:DQ:54:ARG:HE	2.33	0.51
24:DA:1288:G:H2'	24:DA:1288:G:N3	2.25	0.51
24:DA:1616:A:H4'	24:DA:1617:C:OP2	2.08	0.51
24:DA:1714:U:H3'	24:DA:1715:G:H5'	1.92	0.51
24:DA:1809:A:C6	24:DA:1810:A:C6	2.98	0.51
24:DA:1826:G:OP2	26:DC:220:ARG:HB3	2.09	0.51
24:DA:1973:G:C5	24:DA:1974:C:C5	2.98	0.51
24:DA:2311:A:H5'	24:DA:2312:U:C6	2.45	0.51
24:DA:2337:G:OP1	24:DA:2385:C:OP2	2.28	0.51
24:DA:2638:G:H1'	24:DA:2778:A:N6	2.25	0.51
56:DB:48:U:H5'	38:DO:30:ARG:NE	2.26	0.51
26:DC:130:PRO:N	26:DC:188:ARG:HG3	2.25	0.51
29:DF:11:VAL:HG22	29:DF:171:ALA:HA	1.91	0.51
29:DF:65:LEU:HD11	29:DF:87:LYS:HZ2	1.74	0.51
29:DF:136:ILE:CG2	29:DF:142:TYR:CG	2.93	0.51
31:DH:68:ARG:HD3	31:DH:71:LYS:HB2	1.92	0.51
33:DJ:30:THR:CG2	33:DJ:31:GLU:N	2.73	0.51
34:DK:2:ILE:HD11	34:DK:65:THR:HG22	1.92	0.51
37:DN:75:ILE:HD12	37:DN:79:LEU:HD12	1.93	0.51
43:DT:34:VAL:HG12	43:DT:34:VAL:O	2.09	0.51
45:DV:42:LEU:HD13	45:DV:47:VAL:HG21	1.92	0.51
1:AB:130:LYS:HA	1:AB:130:LYS:HZ2	1.76	0.51
7:AH:85:TYR:HD2	7:AH:123:GLU:HB2	1.74	0.51
7:AH:104:SER:HB2	7:AH:125:ILE:HD11	1.93	0.51
10:AK:13:LYS:O	10:AK:14:GLN:CB	2.58	0.51
14:AO:18:ALA:O	14:AO:19:ASN:HB2	2.09	0.51
19:AT:75:LYS:HG3	21:AA:186:C:H4'	1.91	0.51
21:AA:31:G:N2	21:AA:46:G:H5''	2.23	0.51
21:AA:289:G:C6	21:AA:290:C:N4	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:438:U:C5	21:AA:494:G:N7	2.78	0.51
21:AA:874:G:O2'	21:AA:875:U:C5'	2.57	0.51
21:AA:1478:U:H2'	21:AA:1479:C:C6	2.45	0.51
24:BA:278:A:H3'	24:BA:278:A:OP2	2.10	0.51
24:BA:414:C:H1'	24:BA:1864:U:O2'	2.10	0.51
24:BA:451:U:C2	24:BA:453:A:N7	2.78	0.51
24:BA:536:G:H2'	24:BA:537:G:H5'	1.92	0.51
24:BA:1045:C:C2	24:BA:1047:G:N2	2.78	0.51
24:BA:1223:G:C5	24:BA:1225:G:OP2	2.64	0.51
24:BA:1346:G:C2	24:BA:1601:G:C4	2.98	0.51
24:BA:1487:U:C2	24:BA:1503:A:C2	2.97	0.51
24:BA:1730:C:H1'	24:BA:1731:G:C2	2.45	0.51
24:BA:2031:A:C6	24:BA:2498:C:H1'	2.46	0.51
24:BA:2782:G:N2	24:BA:2783:U:C2	2.78	0.51
27:BD:40:LEU:H	27:BD:40:LEU:HD12	1.74	0.51
28:BE:132:LYS:O	28:BE:135:ALA:HB3	2.09	0.51
30:BG:35:THR:C	30:BG:36:LEU:HD22	2.30	0.51
31:BH:29:PHE:O	31:BH:33:GLN:HB3	2.10	0.51
34:BK:1:MET:HE2	34:BK:32:TYR:CE1	2.45	0.51
39:BP:74:GLN:O	39:BP:77:SER:HB3	2.10	0.51
40:BQ:51:GLN:HE21	40:BQ:55:GLN:HE21	1.56	0.51
44:BU:17:ASP:O	44:BU:18:LYS:C	2.49	0.51
45:BV:51:GLN:C	45:BV:51:GLN:CD	2.69	0.51
45:BV:83:LYS:O	45:BV:85:LYS:N	2.41	0.51
46:BW:22:VAL:O	46:BW:25:PHE:HB2	2.11	0.51
2:CC:187:GLU:O	2:CC:188:ALA:HB2	2.09	0.51
3:CD:29:THR:HG22	3:CD:30:LYS:HD3	1.92	0.51
3:CD:40:HIS:O	3:CD:43:ARG:HB2	2.10	0.51
5:CF:3:HIS:O	5:CF:4:TYR:CG	2.64	0.51
10:CK:57:SER:HA	10:CK:90:PRO:HG3	1.91	0.51
10:CK:81:LEU:N	10:CK:81:LEU:HD13	2.25	0.51
55:CA:528:C:H5'	55:CA:535:A:N6	2.25	0.51
55:CA:733:G:O2'	55:CA:734:G:H5''	2.10	0.51
55:CA:1140:C:O2'	55:CA:1141:C:C6	2.61	0.51
55:CA:1229:A:O2'	55:CA:1230:C:O4'	2.26	0.51
55:CA:1256:A:C4	55:CA:1278:G:C5	2.99	0.51
55:CA:1258:G:C2	55:CA:1278:G:N2	2.78	0.51
55:CA:1321:U:H2'	55:CA:1322:C:C4	2.45	0.51
55:CA:1387:G:H2'	55:CA:1388:C:H6	1.74	0.51
24:DA:120:U:C2	24:DA:149:A:C6	2.98	0.51
24:DA:788:A:O2'	52:D2:4:THR:HB	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:815:C:OP2	41:DR:85:LYS:HE2	2.09	0.51
24:DA:1629:U:H2'	24:DA:1630:A:O4'	2.10	0.51
24:DA:1722:A:H8	24:DA:1722:A:O5'	1.93	0.51
24:DA:1900:A:C2	24:DA:1970:A:C5	2.97	0.51
24:DA:1953:A:C6	24:DA:2550:G:O4'	2.63	0.51
24:DA:2086:U:H2'	24:DA:2087:G:O4'	2.10	0.51
24:DA:2140:G:C6	24:DA:2152:G:C6	2.98	0.51
24:DA:2283:C:C4	24:DA:2389:G:C5	2.99	0.51
24:DA:2284:A:H1'	24:DA:2325:G:C2	2.45	0.51
24:DA:2294:G:P	38:DO:94:ARG:HH11	2.34	0.51
24:DA:2409:G:H2'	24:DA:2410:G:O4'	2.10	0.51
24:DA:2615:U:N3	50:D0:3:GLN:HA	2.24	0.51
24:DA:2636:C:H2'	24:DA:2637:U:H6	1.75	0.51
24:DA:2769:U:H2'	24:DA:2770:G:C8	2.44	0.51
56:DB:75:G:O2'	56:DB:76:G:H5'	2.11	0.51
29:DF:3:LEU:HG	29:DF:100:GLU:CD	2.31	0.51
29:DF:28:PRO:CB	29:DF:168:LEU:HD21	2.39	0.51
31:DH:80:ILE:HB	31:DH:101:ASP:HB3	1.90	0.51
38:DO:71:ALA:CB	38:DO:102:ARG:HB3	2.39	0.51
53:D3:18:LYS:HG3	53:D3:19:GLY:N	2.25	0.51
1:AB:131:LYS:O	1:AB:135:MET:HB2	2.10	0.51
4:AE:83:PRO:CD	4:AE:97:PRO:HD3	2.39	0.51
5:AF:79:ARG:CA	5:AF:79:ARG:HE	2.23	0.51
7:AH:14:ARG:HB2	7:AH:74:ILE:CG2	2.41	0.51
14:AO:25:GLU:OE2	14:AO:76:ARG:CZ	2.58	0.51
19:AT:53:MET:CE	19:AT:57:VAL:HG21	2.40	0.51
21:AA:110:C:H2'	21:AA:111:G:C8	2.46	0.51
21:AA:509:A:H2'	21:AA:510:A:C8	2.46	0.51
21:AA:1164:G:C6	21:AA:1165:U:C4	2.98	0.51
24:BA:28:A:N6	24:BA:512:G:H1'	2.25	0.51
24:BA:111:A:C2	24:BA:112:U:C2	2.97	0.51
24:BA:405:U:H3'	24:BA:406:G:H5'	1.92	0.51
24:BA:1062:G:C8	24:BA:1088:A:H8	2.27	0.51
24:BA:1268:A:C2	24:BA:2013:A:C4	2.99	0.51
24:BA:1369:G:C2	24:BA:1370:C:C2	2.99	0.51
24:BA:1510:G:O2'	24:BA:1511:G:H8	1.93	0.51
24:BA:2195:U:H2'	24:BA:2196:C:C6	2.43	0.51
24:BA:2489:U:O2	24:BA:2491:U:C4	2.63	0.51
24:BA:2578:G:N7	27:BD:145:SER:HB2	2.25	0.51
26:BC:104:LEU:O	26:BC:105:ALA:CB	2.54	0.51
27:BD:54:ALA:N	27:BD:76:GLY:HA2	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:163:GLY:O	27:BD:164:GLN:C	2.48	0.51
31:BH:125:THR:HG23	31:BH:126:GLY:H	1.76	0.51
31:BH:147:VAL:HG12	31:BH:149:GLU:HG3	1.90	0.51
43:BT:15:HIS:O	43:BT:17:SER:N	2.43	0.51
43:BT:70:HIS:HB2	43:BT:73:ARG:O	2.10	0.51
2:CC:71:ARG:HH12	2:CC:74:ILE:HB	1.75	0.51
3:CD:66:VAL:CG1	3:CD:70:GLN:HB3	2.41	0.51
5:CF:43:GLY:HA2	5:CF:58:HIS:CE1	2.45	0.51
5:CF:99:ALA:O	5:CF:100:SER:HB2	2.10	0.51
11:CL:31:GLY:HA2	11:CL:56:LEU:HA	1.91	0.51
15:CP:54:LEU:HG	15:CP:55:ASP:N	2.22	0.51
55:CA:181:A:H5''	55:CA:182:A:OP1	2.10	0.51
55:CA:279:A:H5'	55:CA:281:G:H5'	1.92	0.51
55:CA:1008:U:C4	55:CA:1009:U:C4	2.99	0.51
55:CA:1261:A:H2'	55:CA:1262:C:O4'	2.10	0.51
24:DA:160:A:C2	24:DA:161:A:C4	2.99	0.51
24:DA:581:C:H2'	24:DA:582:A:C8	2.45	0.51
24:DA:845:A:H2	24:DA:934:U:O2	1.92	0.51
24:DA:1252:G:O2'	24:DA:1253:A:H5''	2.11	0.51
24:DA:1313:U:H2'	24:DA:1313:U:O2	2.08	0.51
24:DA:1598:A:H2'	24:DA:1599:U:H6	1.75	0.51
24:DA:1775:U:C2'	24:DA:1776:G:O5'	2.58	0.51
24:DA:1933:G:H22	24:DA:1968:G:H1'	1.74	0.51
24:DA:2389:G:C5'	24:DA:2390:U:H5'	2.39	0.51
24:DA:2418:A:OP1	53:D3:44:ARG:HD3	2.10	0.51
24:DA:2840:C:OP1	37:DN:50:PRO:HA	2.11	0.51
24:DA:2860:A:O5'	24:DA:2860:A:C8	2.62	0.51
56:DB:50:A:OP2	38:DO:67:ASN:HA	2.11	0.51
29:DF:107:VAL:O	29:DF:109:ARG:N	2.44	0.51
32:DI:12:VAL:HG12	32:DI:13:ALA:N	2.24	0.51
34:DK:39:ILE:HD11	34:DK:62:VAL:CG2	2.41	0.51
35:DL:94:THR:O	35:DL:98:ALA:N	2.44	0.51
38:DO:25:ARG:HB3	38:DO:93:ASP:HB2	1.92	0.51
39:DP:113:LEU:HD23	39:DP:113:LEU:C	2.30	0.51
41:DR:43:ASN:ND2	41:DR:44:GLY:H	2.08	0.51
43:DT:40:LYS:HA	43:DT:43:ILE:HG22	1.92	0.51
44:DU:34:ILE:HG12	44:DU:63:ALA:HA	1.92	0.51
47:DX:39:VAL:HG22	47:DX:44:ARG:O	2.09	0.51
48:DY:49:ASP:HA	48:DY:52:ARG:HD2	1.92	0.51
54:D4:22:VAL:O	54:D4:24:ARG:HG3	2.11	0.51
1:AB:55:GLU:OE2	1:AB:58:LYS:HD2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:57:LYS:HG2	3:AD:202:LEU:HD23	1.93	0.51
6:AG:136:LYS:O	6:AG:139:ASP:HB2	2.10	0.51
7:AH:10:LEU:HB3	7:AH:74:ILE:HG13	1.93	0.51
10:AK:91:GLY:O	10:AK:95:THR:HB	2.09	0.51
15:AP:35:ARG:HH21	15:AP:51:ARG:NH1	2.09	0.51
21:AA:15:G:C5	21:AA:1396:A:C2	2.98	0.51
21:AA:1067:A:H1'	21:AA:1068:G:H8	1.68	0.51
21:AA:1492:A:C2	21:AA:1493:A:C2	2.98	0.51
24:BA:2:G:C6	24:BA:3:U:C4	2.99	0.51
24:BA:84:A:C2	24:BA:103:A:C6	2.99	0.51
24:BA:195:A:N7	59:BA:3767:HOH:O	2.33	0.51
24:BA:532:A:H2'	24:BA:532:A:N3	2.24	0.51
24:BA:2577:A:O4'	24:BA:2612:C:N4	2.44	0.51
24:BA:2765:A:H2'	24:BA:2765:A:N3	2.26	0.51
24:BA:2787:C:C2'	24:BA:2788:C:H5'	2.41	0.51
26:BC:105:ALA:O	26:BC:106:PRO:O	2.29	0.51
27:BD:106:LYS:HB3	27:BD:206:ALA:CB	2.28	0.51
35:BL:55:MET:HG3	35:BL:59:ARG:HB2	1.92	0.51
37:BN:20:MET:HG3	37:BN:21:PHE:N	2.21	0.51
45:BV:19:ARG:O	45:BV:22:ALA:HB3	2.10	0.51
47:BX:10:ARG:HB2	47:BX:11:PRO:CD	2.40	0.51
50:B0:46:GLY:O	50:B0:53:VAL:HG22	2.10	0.51
1:CB:80:LYS:HD3	1:CB:90:PHE:CZ	2.46	0.51
1:CB:99:MET:O	1:CB:103:TRP:HB2	2.09	0.51
2:CC:129:PHE:CZ	2:CC:156:LEU:HB3	2.45	0.51
5:CF:53:LYS:HD3	5:CF:53:LYS:O	2.10	0.51
5:CF:57:ALA:HB3	5:CF:59:TYR:HE1	1.75	0.51
8:CI:118:ARG:NH2	8:CI:122:ARG:HE	2.08	0.51
9:CJ:5:ARG:NH1	9:CJ:7:ARG:HH12	2.09	0.51
11:CL:6:LEU:HD13	16:CQ:33:TYR:CE2	2.44	0.51
12:CM:36:ALA:HB3	12:CM:55:LEU:HD11	1.93	0.51
55:CA:503:C:H2'	55:CA:504:C:C6	2.43	0.51
55:CA:549:C:H2'	55:CA:550:G:C8	2.45	0.51
55:CA:642:A:O2'	55:CA:643:C:H6	1.92	0.51
55:CA:1275:A:H2'	55:CA:1276:G:C8	2.45	0.51
55:CA:1348:U:H2'	55:CA:1349:A:C8	2.37	0.51
55:CA:1508:A:O2'	55:CA:1509:C:C5'	2.58	0.51
24:DA:154:U:H2'	24:DA:155:A:O4'	2.11	0.51
24:DA:191:A:H2'	24:DA:192:C:C6	2.46	0.51
24:DA:529:A:C8	24:DA:2042:A:N1	2.79	0.51
24:DA:845:A:N6	24:DA:932:U:N3	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1180:U:N3	24:DA:1181:U:C2	2.79	0.51
24:DA:1210:G:H4'	24:DA:1211:C:OP2	2.10	0.51
24:DA:1439:A:C8	24:DA:1439:A:H3'	2.46	0.51
24:DA:1522:A:H1'	24:DA:1524:G:C6	2.45	0.51
24:DA:1529:G:H2'	24:DA:1530:G:O4'	2.09	0.51
24:DA:1760:C:O2'	24:DA:1761:C:H5'	2.10	0.51
24:DA:2074:U:N3	24:DA:2075:U:C4	2.78	0.51
24:DA:2135:A:C2	24:DA:2136:G:H1'	2.46	0.51
24:DA:2306:C:OP2	24:DA:2307:G:H3'	2.09	0.51
24:DA:2511:U:C6	24:DA:2511:U:H3'	2.45	0.51
24:DA:2611:C:HO2'	24:DA:2612:C:H6	1.58	0.51
24:DA:2700:A:C2	24:DA:2708:G:C2	2.98	0.51
26:DC:16:VAL:H	26:DC:203:VAL:HG12	1.76	0.51
27:DD:3:GLY:O	27:DD:4:LEU:HD13	2.10	0.51
27:DD:113:SER:OG	27:DD:114:LYS:N	2.44	0.51
28:DE:149:ILE:O	28:DE:149:ILE:HG12	2.11	0.51
29:DF:110:ILE:H	29:DF:110:ILE:CD1	2.21	0.51
29:DF:113:PHE:O	29:DF:114:ARG:CB	2.59	0.51
33:DJ:95:ARG:O	33:DJ:96:ARG:C	2.48	0.51
35:DL:47:ARG:HH21	35:DL:47:ARG:CG	2.18	0.51
43:DT:29:THR:HA	43:DT:87:LEU:HB2	1.93	0.51
1:AB:17:HIS:HD2	1:AB:204:ASP:OD2	1.93	0.51
1:AB:127:LYS:HG3	1:AB:128:LEU:H	1.74	0.51
1:AB:128:LEU:HD12	1:AB:132:GLU:HB2	1.93	0.51
2:AC:113:LYS:HD3	2:AC:184:ASN:ND2	2.26	0.51
2:AC:113:LYS:HB2	2:AC:184:ASN:OD1	2.11	0.51
3:AD:12:ARG:HG2	3:AD:33:ILE:HD12	1.92	0.51
7:AH:54:THR:HG23	7:AH:55:LYS:HG3	1.91	0.51
14:AO:5:GLU:O	14:AO:9:LYS:HG3	2.10	0.51
21:AA:342:C:O2'	21:AA:343:U:H5'	2.11	0.51
21:AA:923:A:H2'	21:AA:924:C:H6	1.75	0.51
21:AA:1101:A:H4'	21:AA:1102:A:O4'	2.10	0.51
24:BA:182:A:C6	24:BA:183:C:C4	2.98	0.51
24:BA:856:G:H2'	24:BA:857:G:C8	2.46	0.51
24:BA:1019:U:O4	24:BA:1020:A:N6	2.43	0.51
24:BA:1028:A:N6	24:BA:1125:G:H2'	2.25	0.51
24:BA:1468:U:N3	24:BA:1522:A:H2	2.08	0.51
24:BA:1630:A:H2'	24:BA:1631:G:H5'	1.93	0.51
24:BA:1675:C:O2'	24:BA:1676:A:H5'	2.10	0.51
24:BA:1734:G:H2'	24:BA:1735:A:C8	2.46	0.51
24:BA:1989:G:O2'	24:BA:1990:C:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2690:U:HO2'	24:BA:2872:A:H1'	1.76	0.51
24:BA:2870:C:C2'	24:BA:2871:U:H5'	2.41	0.51
26:BC:94:LEU:HB2	26:BC:100:ARG:HD3	1.92	0.51
29:BF:39:VAL:HG11	29:BF:42:ALA:HB2	1.93	0.51
31:BH:48:GLU:CA	31:BH:51:ARG:HG3	2.40	0.51
51:B1:42:VAL:O	51:B1:42:VAL:CG1	2.58	0.51
52:B2:43:THR:O	52:B2:44:VAL:CG2	2.58	0.51
2:CC:63:ILE:HG12	2:CC:65:VAL:HG23	1.90	0.51
2:CC:75:VAL:O	2:CC:82:ASP:HB2	2.11	0.51
7:CH:93:LYS:HD3	7:CH:93:LYS:N	2.25	0.51
9:CJ:72:ARG:O	9:CJ:73:LEU:HD23	2.11	0.51
13:CN:11:LYS:O	13:CN:14:ALA:HB3	2.11	0.51
13:CN:87:ALA:HB2	13:CN:92:ILE:HD12	1.92	0.51
16:CQ:61:ARG:HD3	16:CQ:75:VAL:HG11	1.92	0.51
55:CA:321:A:N7	55:CA:328:C:C2	2.78	0.51
55:CA:1447:A:O3'	55:CA:1448:C:H6	1.94	0.51
24:DA:374:A:H2'	24:DA:375:G:H8	1.71	0.51
24:DA:508:A:H3'	24:DA:509:C:C5'	2.40	0.51
24:DA:1024:G:C6	24:DA:1025:G:C6	2.99	0.51
24:DA:1278:C:O2'	37:DN:27:SER:HB3	2.11	0.51
24:DA:1680:U:O4	24:DA:1681:G:C2	2.64	0.51
24:DA:1821:A:O2'	24:DA:1822:C:O5'	2.27	0.51
24:DA:2079:U:C2	24:DA:2080:A:C8	2.98	0.51
24:DA:2259:U:HO2'	24:DA:2260:C:H6	0.71	0.51
24:DA:2337:G:N3	24:DA:2337:G:C2'	2.73	0.51
24:DA:2646:C:H2'	24:DA:2647:U:O4'	2.11	0.51
24:DA:2667:C:O2'	30:DG:110:HIS:CE1	2.63	0.51
29:DF:60:SER:C	29:DF:62:GLN:H	2.14	0.51
31:DH:24:GLY:O	31:DH:25:TYR:C	2.48	0.51
33:DJ:94:ALA:O	33:DJ:95:ARG:CB	2.58	0.51
34:DK:99:ILE:HD12	34:DK:118:LEU:HB2	1.92	0.51
34:DK:108:ARG:HB2	34:DK:116:ILE:HD13	1.92	0.51
41:DR:98:ILE:HG22	41:DR:98:ILE:O	2.10	0.51
1:AB:39:ILE:HG22	1:AB:40:ILE:H	1.74	0.51
2:AC:63:ILE:HG12	2:AC:65:VAL:HG23	1.93	0.51
4:AE:19:ARG:CA	4:AE:31:SER:O	2.50	0.51
6:AG:52:ARG:NH2	6:AG:121:ASN:HA	2.25	0.51
21:AA:205:A:N6	21:AA:214:C:H1'	2.26	0.51
21:AA:502:A:H2'	21:AA:503:C:O4'	2.10	0.51
21:AA:567:G:O2'	21:AA:568:G:O5'	2.28	0.51
21:AA:791:G:C5	21:AA:792:A:N7	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1380:U:H5'	21:AA:1381:U:OP1	2.10	0.51
22:AV:29:G:H2'	22:AV:30:G:C8	2.46	0.51
24:BA:14:A:C6	24:BA:526:A:C2	2.98	0.51
24:BA:60:G:C8	24:BA:62:U:C6	2.98	0.51
24:BA:151:C:C2	24:BA:176:A:C2	2.99	0.51
24:BA:533:G:H5''	24:BA:533:G:H8	1.75	0.51
24:BA:1026:G:C2'	24:BA:1027:A:C8	2.89	0.51
24:BA:1157:G:H2'	24:BA:1158:C:H6	1.74	0.51
24:BA:1213:A:O2'	24:BA:1214:A:H5'	2.11	0.51
24:BA:1275:A:H4'	24:BA:1276:A:OP1	2.09	0.51
24:BA:1815:A:C5	24:BA:1817:G:C6	2.99	0.51
24:BA:1973:G:H2'	24:BA:1974:C:O4'	2.11	0.51
24:BA:2247:A:H2'	24:BA:2248:C:H6	1.76	0.51
24:BA:2409:G:H2'	24:BA:2410:G:O4'	2.10	0.51
24:BA:2555:U:C6	24:BA:2556:C:C6	2.98	0.51
24:BA:2821:A:H2'	24:BA:2822:G:O4'	2.09	0.51
30:BG:27:GLY:O	30:BG:28:LYS:C	2.48	0.51
36:BM:117:PHE:HD2	36:BM:130:PHE:CE1	2.29	0.51
41:BR:62:GLU:O	41:BR:64:VAL:HG23	2.09	0.51
42:BS:1:MET:CE	42:BS:1:MET:HA	2.40	0.51
43:BT:32:LEU:HD23	43:BT:83:ALA:HB3	1.92	0.51
43:BT:83:ALA:O	43:BT:84:TYR:O	2.28	0.51
48:BY:9:LYS:HB3	48:BY:12:GLU:HG3	1.93	0.51
48:BY:20:ASN:O	48:BY:21:LEU:C	2.49	0.51
52:B2:43:THR:O	52:B2:44:VAL:HG23	2.11	0.51
53:B3:57:VAL:O	53:B3:60:CYS:HB2	2.11	0.51
1:CB:59:ILE:HA	1:CB:62:ARG:HG3	1.93	0.51
2:CC:46:LEU:HD22	2:CC:75:VAL:HG22	1.93	0.51
3:CD:56:GLU:HG2	3:CD:198:LEU:HD12	1.93	0.51
6:CG:84:TYR:HB3	6:CG:86:VAL:HG23	1.92	0.51
10:CK:127:ARG:HB3	55:CA:796:C:OP1	2.11	0.51
20:CU:3:ILE:HG22	20:CU:19:LYS:HZ1	1.75	0.51
55:CA:412:A:H4'	55:CA:413:G:OP1	2.10	0.51
55:CA:1062:U:H2'	55:CA:1063:C:C6	2.45	0.51
55:CA:1086:U:O5'	55:CA:1086:U:H6	1.93	0.51
55:CA:1332:A:H2'	55:CA:1333:A:H5'	1.91	0.51
24:DA:126:A:O5'	52:D2:19:ARG:HG3	2.10	0.51
24:DA:225:C:O2'	24:DA:226:A:C5'	2.58	0.51
24:DA:247:G:C4'	24:DA:386:G:C5	2.89	0.51
24:DA:252:G:H2'	24:DA:253:C:C6	2.45	0.51
24:DA:392:U:O2'	24:DA:393:C:O4'	2.28	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:511:U:C5'	24:DA:1235:G:H4'	2.40	0.51
24:DA:533:G:C2	24:DA:534:U:C2	2.99	0.51
24:DA:843:G:H2'	24:DA:844:A:C8	2.44	0.51
24:DA:1251:C:H6	40:DQ:5:ARG:NH1	2.09	0.51
24:DA:1438:U:C4	24:DA:1552:A:N1	2.78	0.51
24:DA:1562:U:C4	24:DA:1563:U:C4	2.98	0.51
24:DA:1667:G:P	34:DK:6:THR:HA	2.50	0.51
24:DA:1698:A:H4'	24:DA:1699:G:O5'	2.09	0.51
24:DA:1969:A:H2'	24:DA:1972:G:H21	1.75	0.51
24:DA:2026:U:H2'	24:DA:2027:G:O4'	2.11	0.51
24:DA:2052:A:N6	24:DA:2618:G:C2	2.78	0.51
24:DA:2351:G:O6	53:D3:42:HIS:HE1	1.93	0.51
24:DA:2725:A:H2'	24:DA:2727:A:N7	2.25	0.51
24:DA:2884:U:H2'	24:DA:2885:G:C8	2.46	0.51
26:DC:67:LYS:CG	26:DC:150:GLY:HA2	2.41	0.51
26:DC:184:GLU:HB2	26:DC:187:CYS:SG	2.51	0.51
28:DE:147:LEU:HB3	28:DE:186:VAL:HG23	1.92	0.51
29:DF:147:ARG:HG2	29:DF:149:ARG:HH12	1.75	0.51
31:DH:147:VAL:O	31:DH:148:ALA:HB3	2.11	0.51
33:DJ:27:ARG:O	33:DJ:30:THR:HG22	2.10	0.51
37:DN:90:ARG:HH21	37:DN:116:VAL:HG11	1.74	0.51
40:DQ:63:ARG:HH12	40:DQ:99:VAL:CG2	2.24	0.51
43:DT:67:VAL:O	43:DT:68:LYS:HG3	2.10	0.51
44:DU:39:ASN:OD1	44:DU:64:ILE:HB	2.10	0.51
47:DX:31:ASN:HB2	47:DX:33:HIS:HE1	1.75	0.51
1:AB:159:ALA:HB1	1:AB:183:PHE:CE2	2.44	0.51
3:AD:109:THR:HG23	3:AD:112:GLU:N	2.14	0.51
3:AD:115:GLN:HG2	3:AD:153:ARG:HH12	1.76	0.51
6:AG:12:LEU:HB3	6:AG:13:PRO:HD2	1.91	0.51
8:AI:27:ILE:HG22	8:AI:29:ILE:H	1.76	0.51
9:AJ:14:ASP:HB3	9:AJ:17:LEU:HB3	1.91	0.51
15:AP:41:PRO:O	15:AP:42:ILE:HD13	2.10	0.51
21:AA:31:G:H22	21:AA:47:C:H5''	1.75	0.51
21:AA:103:U:C2	21:AA:104:G:C8	2.99	0.51
21:AA:339:C:H2'	21:AA:340:U:C6	2.45	0.51
21:AA:341:C:C2	21:AA:349:A:C2	2.99	0.51
21:AA:967:C:C4	21:AA:968:A:C5	2.98	0.51
21:AA:974:A:H4'	21:AA:975:A:H5'	1.93	0.51
21:AA:1213:A:C8	21:AA:1215:G:C5	2.99	0.51
21:AA:1258:G:HO2'	21:AA:1259:C:H6	1.59	0.51
21:AA:1275:A:H2'	21:AA:1276:G:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1423:G:H2'	21:AA:1424:U:C6	2.46	0.51
24:BA:28:A:C8	24:BA:513:A:C6	2.99	0.51
24:BA:60:G:C4	24:BA:74:A:C2	2.98	0.51
24:BA:167:A:C5	24:BA:168:G:C8	2.99	0.51
24:BA:191:A:H2'	24:BA:192:C:C6	2.46	0.51
24:BA:508:A:C6	42:BS:9:HIS:CE1	2.99	0.51
24:BA:522:A:C4	24:BA:523:C:C5	2.99	0.51
24:BA:740:C:O5'	24:BA:740:C:H6	1.93	0.51
24:BA:1277:G:C6	24:BA:1278:C:C4	2.99	0.51
24:BA:1333:G:H8	24:BA:1333:G:H5'	1.76	0.51
24:BA:1494:A:C2	24:BA:1495:A:C4	2.99	0.51
24:BA:1759:A:C8	24:BA:2696:U:H1'	2.46	0.51
24:BA:2019:A:H4'	40:BQ:33:VAL:HG21	1.93	0.51
24:BA:2690:U:O2'	24:BA:2872:A:H1'	2.10	0.51
24:BA:2720:U:OP1	39:BP:52:ARG:NH2	2.43	0.51
25:BB:58:A:O2'	25:BB:59:A:H5'	2.11	0.51
26:BC:229:HIS:CD2	26:BC:246:PRO:HA	2.46	0.51
27:BD:35:THR:CG2	27:BD:51:THR:HG22	2.40	0.51
29:BF:19:PHE:O	29:BF:20:ASN:C	2.49	0.51
30:BG:53:PRO:HD3	30:BG:61:TRP:CD2	2.45	0.51
40:BQ:97:ILE:HD11	40:BQ:105:PHE:N	2.25	0.51
42:BS:53:SER:O	42:BS:56:ALA:HB3	2.11	0.51
44:BU:31:GLY:O	44:BU:66:VAL:HG12	2.11	0.51
5:CF:98:GLU:O	5:CF:99:ALA:HB3	2.10	0.51
6:CG:14:ASP:HB3	6:CG:19:SER:H	1.75	0.51
9:CJ:26:VAL:HG13	9:CJ:30:LYS:HB3	1.92	0.51
12:CM:78:ARG:HH11	12:CM:78:ARG:HG2	1.75	0.51
14:CO:20:ASP:HB2	55:CA:750:C:H4'	1.93	0.51
14:CO:69:LEU:HD13	14:CO:77:TYR:HB2	1.92	0.51
55:CA:283:U:O2'	55:CA:284:C:H5'	2.11	0.51
55:CA:424:G:O2'	55:CA:425:G:H5'	2.09	0.51
55:CA:522:C:O4'	55:CA:536:C:H4'	2.10	0.51
55:CA:534:U:O2'	55:CA:535:A:C5'	2.59	0.51
55:CA:585:G:N3	55:CA:879:C:H4'	2.25	0.51
55:CA:635:A:C6	55:CA:636:U:C4	2.99	0.51
55:CA:1014:A:H2	55:CA:1219:A:H1'	1.76	0.51
24:DA:35:G:C2'	24:DA:36:G:O5'	2.58	0.51
24:DA:54:G:H2'	24:DA:55:G:O4'	2.11	0.51
24:DA:135:U:H2'	24:DA:136:G:C8	2.45	0.51
24:DA:504:A:C2	24:DA:1234:U:H4'	2.45	0.51
24:DA:527:C:C2	24:DA:2779:U:H2'	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:571:U:C6	24:DA:575:A:N6	2.79	0.51
24:DA:680:C:C2	24:DA:681:G:C8	2.99	0.51
24:DA:779:U:O2'	24:DA:780:G:H5'	2.10	0.51
24:DA:1558:C:C2	24:DA:1560:G:C6	2.99	0.51
24:DA:1576:U:H2'	24:DA:1577:C:C6	2.46	0.51
24:DA:1678:A:H2'	24:DA:1679:A:O4'	2.11	0.51
24:DA:1686:C:N3	24:DA:1703:G:C2	2.78	0.51
24:DA:1744:A:H3'	24:DA:1745:A:C8	2.46	0.51
24:DA:2107:G:H2'	24:DA:2108:A:C8	2.46	0.51
24:DA:2499:C:O2'	24:DA:2500:U:O4'	2.24	0.51
24:DA:2769:U:H2'	24:DA:2770:G:H8	1.76	0.51
24:DA:2782:G:N2	24:DA:2783:U:C2	2.79	0.51
56:DB:21:G:H2'	56:DB:22:U:O4'	2.11	0.51
32:DI:52:LEU:HD12	32:DI:53:PRO:HD2	1.92	0.51
46:DW:17:ALA:HB1	46:DW:36:ILE:HA	1.91	0.51
46:DW:44:PHE:HB3	46:DW:78:PHE:CD1	2.46	0.51
49:DZ:51:SER:HA	49:DZ:54:VAL:HG22	1.93	0.51
3:AD:8:LEU:HD21	3:AD:21:LYS:HB2	1.92	0.51
4:AE:56:PRO:C	4:AE:58:ALA:H	2.14	0.51
5:AF:43:GLY:HA2	5:AF:58:HIS:NE2	2.26	0.51
5:AF:44:ARG:HG3	5:AF:58:HIS:ND1	2.26	0.51
5:AF:90:MET:CG	17:AR:60:ARG:HH21	2.23	0.51
7:AH:45:ILE:HB	7:AH:61:THR:O	2.10	0.51
8:AI:51:LEU:HB3	8:AI:56:MET:HG3	1.92	0.51
12:AM:67:ASP:C	12:AM:70:ARG:HB3	2.30	0.51
14:AO:26:VAL:O	14:AO:30:LEU:HG	2.11	0.51
19:AT:60:GLN:C	19:AT:66:ILE:HG22	2.31	0.51
20:AU:38:GLU:HB2	21:AA:1526:G:OP2	2.11	0.51
21:AA:82:G:H2'	21:AA:83:C:O4'	2.09	0.51
24:BA:28:A:H2'	24:BA:29:U:C6	2.46	0.51
24:BA:628:G:H4'	24:BA:651:G:O2'	2.11	0.51
24:BA:677:A:O2'	24:BA:2071:A:H5'	2.11	0.51
24:BA:855:G:N3	46:BW:23:LYS:CG	2.73	0.51
24:BA:1113:U:H2'	24:BA:1114:C:H6	1.75	0.51
24:BA:1702:G:H2'	24:BA:1703:G:O4'	2.11	0.51
24:BA:1866:A:H2'	24:BA:1867:G:O4'	2.11	0.51
24:BA:2020:A:H2	24:BA:2022:U:O4'	1.93	0.51
24:BA:2472:G:C2'	24:BA:2475:C:H42	2.20	0.51
24:BA:2860:A:H3'	24:BA:2860:A:H8	1.76	0.51
27:BD:9:VAL:CG2	27:BD:26:VAL:HB	2.35	0.51
30:BG:54:ARG:HG3	30:BG:57:TYR:CD1	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BK:63:VAL:HG12	34:BK:64:ARG:HG3	1.92	0.51
35:BL:93:ASN:HD22	35:BL:94:THR:H	1.54	0.51
37:BN:2:ARG:HA	37:BN:5:LYS:HD2	1.93	0.51
37:BN:69:ARG:O	37:BN:70:THR:OG1	2.23	0.51
39:BP:25:VAL:HG11	39:BP:46:VAL:CG2	2.40	0.51
39:BP:102:ARG:HD3	39:BP:106:ALA:O	2.11	0.51
43:BT:29:THR:CA	43:BT:86:THR:HA	2.39	0.51
45:BV:10:LYS:H	45:BV:10:LYS:CD	2.20	0.51
46:BW:25:PHE:O	46:BW:26:GLY:C	2.49	0.51
1:CB:157:PRO:O	1:CB:180:ILE:HD12	2.10	0.51
4:CE:22:LYS:HD2	55:CA:1081:A:C5'	2.38	0.51
6:CG:115:MET:HE1	6:CG:119:LEU:HB3	1.93	0.51
9:CJ:21:ALA:O	9:CJ:25:ILE:HG13	2.11	0.51
11:CL:28:GLN:HG3	11:CL:80:LEU:HD21	1.92	0.51
55:CA:38:G:C2	55:CA:397:A:C2	2.98	0.51
55:CA:861:G:C6	55:CA:862:C:C4	2.98	0.51
55:CA:1140:C:H2'	55:CA:1141:C:H5	1.75	0.51
55:CA:1333:A:H2'	55:CA:1334:G:O4'	2.11	0.51
55:CA:1412:C:H2'	55:CA:1413:A:H8	1.76	0.51
55:CA:1514:G:H2'	55:CA:1515:G:C8	2.44	0.51
24:DA:522:A:H2'	24:DA:523:C:C6	2.45	0.51
24:DA:628:G:C6	24:DA:636:G:C2	2.99	0.51
24:DA:860:U:O2'	24:DA:861:A:H8	1.94	0.51
24:DA:1560:G:H2'	24:DA:1561:C:C6	2.46	0.51
24:DA:1707:G:C8	24:DA:1756:G:C5	2.99	0.51
24:DA:1812:U:H2'	24:DA:1813:G:H8	1.75	0.51
24:DA:1901:A:OP2	26:DC:252:LYS:HE3	2.11	0.51
24:DA:2015:A:C2	50:D0:2:VAL:CG1	2.91	0.51
24:DA:2142:A:H2'	24:DA:2143:C:H4'	1.91	0.51
24:DA:2741:A:H2'	24:DA:2742:G:O4'	2.10	0.51
26:DC:212:TRP:C	26:DC:212:TRP:CD1	2.84	0.51
27:DD:16:THR:HG23	27:DD:19:GLY:H	1.76	0.51
29:DF:52:ALA:HA	29:DF:55:ASP:HB2	1.91	0.51
33:DJ:43:GLU:O	33:DJ:45:THR:N	2.43	0.51
35:DL:90:VAL:HB	35:DL:122:VAL:HA	1.93	0.51
42:DS:87:PRO:HG2	42:DS:87:PRO:O	2.10	0.51
44:DU:94:PHE:O	44:DU:95:PHE:C	2.48	0.51
47:DX:6:VAL:HG13	47:DX:7:THR:H	1.75	0.51
50:D0:32:THR:HG21	50:D0:47:TYR:CE2	2.46	0.51
2:AC:17:TRP:HZ2	13:AN:95:LEU:O	1.93	0.51
4:AE:80:LEU:HD12	4:AE:146:MET:SD	2.51	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:19:PRO:O	5:AF:22:ILE:HB	2.11	0.51
5:AF:52:ASN:O	5:AF:53:LYS:HB3	2.11	0.51
9:AJ:35:GLN:HA	9:AJ:35:GLN:NE2	2.21	0.51
19:AT:4:LYS:CE	19:AT:5:SER:HB3	2.40	0.51
20:AU:35:GLU:O	20:AU:36:PHE:C	2.49	0.51
21:AA:146:G:N2	21:AA:177:G:C8	2.79	0.51
21:AA:389:A:O2'	21:AA:390:U:H5'	2.10	0.51
21:AA:579:A:H5'	21:AA:728:A:H1'	1.93	0.51
21:AA:632:U:OP1	21:AA:633:G:C8	2.64	0.51
21:AA:869:G:H4'	21:AA:872:A:O4'	2.11	0.51
21:AA:1324:A:H2'	21:AA:1325:C:O4'	2.10	0.51
24:BA:176:A:C6	24:BA:177:G:N7	2.79	0.51
24:BA:194:G:N7	59:BA:3767:HOH:O	2.34	0.51
24:BA:482:A:N6	24:BA:506:G:H1'	2.26	0.51
24:BA:931:U:O2'	24:BA:932:U:P	2.69	0.51
24:BA:1576:U:H2'	24:BA:1577:C:C6	2.45	0.51
24:BA:2305:U:C4'	29:BF:130:GLY:HA3	2.41	0.51
24:BA:2516:A:H2'	24:BA:2517:C:O4'	2.11	0.51
26:BC:261:ARG:O	26:BC:261:ARG:HG2	2.11	0.51
27:BD:143:PRO:HD2	27:BD:144:GLY:H	1.74	0.51
28:BE:7:ASP:CG	28:BE:8:ALA:H	2.14	0.51
28:BE:147:LEU:HB3	28:BE:186:VAL:HG23	1.93	0.51
30:BG:153:PRO:HA	30:BG:159:LYS:O	2.11	0.51
31:BH:41:LYS:O	31:BH:44:ILE:HG12	2.11	0.51
35:BL:100:ILE:HD12	35:BL:100:ILE:C	2.31	0.51
39:BP:37:LYS:N	39:BP:37:LYS:CD	2.74	0.51
1:CB:103:TRP:CD1	1:CB:103:TRP:O	2.64	0.51
1:CB:187:ASP:O	1:CB:189:ASN:N	2.43	0.51
5:CF:2:ARG:HD2	5:CF:92:THR:OG1	2.10	0.51
6:CG:90:VAL:HG23	6:CG:95:ARG:HG2	1.93	0.51
10:CK:51:PHE:HB3	10:CK:55:ARG:HB2	1.92	0.51
11:CL:39:THR:O	11:CL:48:LEU:HA	2.11	0.51
13:CN:51:PRO:HG2	13:CN:54:SER:OG	2.11	0.51
16:CQ:77:VAL:HG12	16:CQ:78:VAL:N	2.25	0.51
55:CA:183:C:O2'	55:CA:184:G:C5'	2.49	0.51
55:CA:500:G:HO2'	55:CA:501:C:H5'	1.73	0.51
55:CA:511:C:C2	55:CA:512:U:C5	2.99	0.51
55:CA:560:A:N7	55:CA:566:G:C4	2.79	0.51
55:CA:1192:C:C5	55:CA:1193:G:C8	2.98	0.51
55:CA:1435:G:C5	55:CA:1436:U:C4	2.99	0.51
24:DA:28:A:C6	24:DA:29:U:C2	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:120:U:H1'	24:DA:149:A:C8	2.46	0.51
24:DA:223:A:N6	24:DA:422:A:C5	2.78	0.51
24:DA:311:A:HO2'	24:DA:332:A:H5'	1.75	0.51
24:DA:745:G:O2'	24:DA:748:G:H1'	2.11	0.51
24:DA:910:A:N6	24:DA:911:A:N1	2.59	0.51
24:DA:975:A:O2'	24:DA:976:G:C5'	2.58	0.51
24:DA:1338:G:O2'	24:DA:1339:G:H5'	2.11	0.51
24:DA:1417:C:H4'	24:DA:1587:G:N2	2.26	0.51
24:DA:1498:C:O2'	24:DA:1499:C:C5'	2.59	0.51
24:DA:1716:U:O2'	24:DA:1717:A:C5'	2.59	0.51
24:DA:1775:U:H2'	24:DA:1776:G:O5'	2.11	0.51
24:DA:2314:A:H2'	24:DA:2315:G:C8	2.45	0.51
24:DA:2417:C:H2'	24:DA:2418:A:C8	2.45	0.51
24:DA:2626:C:C2'	24:DA:2627:G:H5'	2.40	0.51
29:DF:59:ILE:HG23	29:DF:137:PHE:HE1	1.74	0.51
30:DG:120:ILE:O	30:DG:120:ILE:HG23	2.09	0.51
32:DI:83:ALA:HB2	32:DI:99:LYS:O	2.10	0.51
37:DN:103:ARG:HD3	37:DN:110:MET:SD	2.51	0.51
39:DP:87:ARG:HG2	39:DP:88:ARG:H	1.75	0.51
42:DS:80:PRO:HD2	42:DS:100:THR:OG1	2.11	0.51
49:DZ:13:ILE:HG22	49:DZ:14:GLY:N	2.26	0.51
54:D4:9:LYS:O	54:D4:9:LYS:HD3	2.11	0.51
6:AG:149:ALA:HB2	10:AK:55:ARG:HH21	1.76	0.51
8:AI:121:ARG:HG3	21:AA:1348:U:H4'	1.92	0.51
20:AU:9:GLU:CG	20:AU:10:PRO:HD3	2.41	0.51
21:AA:71:A:C6	21:AA:100:G:N7	2.79	0.51
21:AA:174:A:O2'	21:AA:175:C:H5'	2.11	0.51
21:AA:204:G:H1'	21:AA:465:A:C2	2.46	0.51
21:AA:857:C:N4	21:AA:858:G:C6	2.79	0.51
21:AA:899:C:H2'	21:AA:900:A:O4'	2.11	0.51
21:AA:914:A:O2'	21:AA:915:A:C5'	2.59	0.51
21:AA:1007:U:C2'	21:AA:1008:U:H5''	2.38	0.51
21:AA:1140:C:O2'	21:AA:1141:C:H6	1.93	0.51
21:AA:1444:U:H2'	21:AA:1445:U:C6	2.45	0.51
24:BA:281:C:H2'	24:BA:282:A:C8	2.45	0.51
24:BA:638:G:C5	24:BA:651:G:C2	2.99	0.51
24:BA:726:G:O2'	24:BA:727:A:H8	1.93	0.51
24:BA:962:G:H21	24:BA:2250:G:H1	1.59	0.51
24:BA:1135:C:N4	24:BA:1139:G:C6	2.79	0.51
24:BA:1315:C:C2	24:BA:1338:G:C2	2.99	0.51
24:BA:1469:A:H2'	24:BA:1470:A:H8	1.69	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1819:A:H3'	26:BC:176:ARG:HG2	1.92	0.51
24:BA:1972:G:OP2	26:BC:237:ARG:NH1	2.44	0.51
24:BA:2385:C:H2'	24:BA:2386:A:C8	2.46	0.51
28:BE:79:ARG:O	28:BE:80:SER:C	2.49	0.51
30:BG:97:VAL:HA	30:BG:102:ILE:HA	1.92	0.51
30:BG:115:GLN:CD	30:BG:115:GLN:N	2.65	0.51
34:BK:88:ASN:ND2	34:BK:90:ASN:H	2.09	0.51
35:BL:66:PHE:O	35:BL:66:PHE:CG	2.64	0.51
35:BL:94:THR:CG2	35:BL:95:LEU:N	2.74	0.51
38:BO:4:LYS:O	38:BO:8:ILE:HG13	2.11	0.51
42:BS:29:VAL:HB	42:BS:69:LEU:O	2.09	0.51
43:BT:61:LEU:C	43:BT:61:LEU:HD12	2.31	0.51
46:BW:19:ARG:NH1	46:BW:22:VAL:HG11	2.26	0.51
2:CC:39:ARG:CG	2:CC:54:ILE:HD13	2.41	0.51
6:CG:78:ARG:HH21	55:CA:1382:C:H4'	1.75	0.51
8:CI:35:GLU:HA	8:CI:39:GLY:CA	2.41	0.51
12:CM:71:GLU:O	12:CM:74:MET:HB3	2.11	0.51
14:CO:52:ARG:O	14:CO:55:LEU:HB3	2.11	0.51
16:CQ:29:LYS:HE2	16:CQ:36:PHE:CZ	2.45	0.51
18:CS:20:LYS:HZ3	18:CS:27:LYS:HD3	1.74	0.51
55:CA:83:C:O2	55:CA:83:C:H2'	2.11	0.51
55:CA:456:A:H2'	55:CA:457:G:H8	1.76	0.51
55:CA:857:C:H2'	55:CA:858:G:O4'	2.11	0.51
55:CA:1336:C:H1'	55:CA:1337:G:N1	2.25	0.51
24:DA:15:G:O2'	24:DA:16:C:H5'	2.10	0.51
24:DA:397:U:OP2	47:DX:9:LYS:HE2	2.11	0.51
24:DA:410:G:N1	24:DA:2407:A:N6	2.59	0.51
24:DA:587:C:H5''	24:DA:588:U:H5'	1.93	0.51
24:DA:755:U:HO2'	24:DA:756:A:H8	1.58	0.51
24:DA:855:G:H21	46:DW:23:LYS:NZ	2.07	0.51
24:DA:981:A:H2	24:DA:2027:G:N3	2.09	0.51
24:DA:995:C:H5''	40:DQ:53:LYS:HG2	1.92	0.51
24:DA:1069:A:O2'	24:DA:1071:G:H5''	2.11	0.51
24:DA:1206:G:H2'	24:DA:1207:C:C6	2.46	0.51
24:DA:1399:C:HO2'	24:DA:1400:U:H6	1.53	0.51
24:DA:1669:A:C8	34:DK:5:GLN:HG3	2.46	0.51
24:DA:1826:G:H5''	26:DC:239:PHE:HE2	1.76	0.51
24:DA:1828:G:O2'	24:DA:1829:A:H5'	2.11	0.51
24:DA:2331:G:N1	24:DA:2385:C:N4	2.58	0.51
24:DA:2748:A:C2	24:DA:2757:A:C5	2.99	0.51
38:DO:88:LYS:O	38:DO:89:ASP:HB3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DO:99:TYR:CD1	38:DO:99:TYR:O	2.64	0.51
40:DQ:64:ILE:HD12	40:DQ:95:ALA:CB	2.40	0.51
41:DR:55:ASP:CG	41:DR:56:GLY:H	2.13	0.51
47:DX:29:LEU:HB2	47:DX:30:PRO:HD2	1.91	0.51
2:AC:156:LEU:C	2:AC:158:GLY:H	2.14	0.50
10:AK:21:HIS:CD2	10:AK:34:THR:CG2	2.94	0.50
13:AN:60:ARG:O	13:AN:61:ASN:CB	2.57	0.50
16:AQ:22:VAL:O	16:AQ:42:LYS:HA	2.12	0.50
21:AA:463:U:C4	21:AA:464:U:C4	2.99	0.50
21:AA:505:G:H2'	21:AA:506:G:C8	2.46	0.50
21:AA:525:C:H2'	21:AA:526:C:C6	2.46	0.50
21:AA:688:G:H2'	21:AA:689:C:H6	1.76	0.50
21:AA:702:A:O2'	21:AA:703:G:P	2.69	0.50
21:AA:702:A:N6	24:BA:1846:G:O2'	2.44	0.50
21:AA:960:U:C2	21:AA:1225:A:C5	2.98	0.50
21:AA:1234:C:C4'	21:AA:1364:U:H1'	2.41	0.50
21:AA:1277:C:HO2'	21:AA:1279:G:H8	1.58	0.50
24:BA:683:U:H2'	24:BA:684:G:O5'	2.11	0.50
24:BA:923:G:H5'	46:BW:25:PHE:HZ	1.75	0.50
24:BA:1098:A:H3'	24:BA:1099:G:C8	2.46	0.50
24:BA:1108:U:H2'	24:BA:1109:C:O4'	2.10	0.50
24:BA:1482:G:H1'	24:BA:1509:A:H61	1.76	0.50
24:BA:1954:G:O2'	24:BA:1955:U:OP2	2.29	0.50
24:BA:2140:G:C6	24:BA:2152:G:N1	2.79	0.50
24:BA:2199:A:H3'	24:BA:2200:C:H6	1.76	0.50
25:BB:33:G:C2'	25:BB:34:A:H5'	2.41	0.50
27:BD:64:GLU:O	27:BD:68:PHE:CD1	2.64	0.50
29:BF:131:VAL:HG21	29:BF:151:LEU:HG	1.92	0.50
32:BI:126:ARG:HA	32:BI:129:GLU:CD	2.32	0.50
34:BK:107:LEU:C	34:BK:109:SER:H	2.15	0.50
35:BL:89:VAL:HA	35:BL:121:THR:O	2.11	0.50
41:BR:74:ILE:HD12	41:BR:74:ILE:N	2.26	0.50
42:BS:74:ILE:HD12	42:BS:104:THR:O	2.10	0.50
1:CB:125:PHE:HA	1:CB:136:ARG:HH22	1.76	0.50
1:CB:185:ILE:HA	1:CB:199:ILE:O	2.11	0.50
7:CH:104:SER:OG	7:CH:109:VAL:HG22	2.11	0.50
13:CN:62:ARG:NH2	13:CN:69:PRO:HD3	2.26	0.50
20:CU:16:ARG:HA	20:CU:16:ARG:HE	1.75	0.50
55:CA:181:A:H1'	55:CA:182:A:N1	2.26	0.50
55:CA:268:U:H2'	55:CA:269:C:H6	1.71	0.50
55:CA:317:U:H2'	55:CA:318:G:C8	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:1183:U:O2'	55:CA:1184:G:OP1	2.26	0.50
55:CA:1528:U:O2'	55:CA:1529:G:H3'	2.11	0.50
24:DA:118:A:OP2	24:DA:119:A:H5''	2.11	0.50
24:DA:312:G:H2'	24:DA:313:G:C8	2.45	0.50
24:DA:467:G:H2'	24:DA:468:G:H8	1.75	0.50
24:DA:594:U:H2'	24:DA:595:C:H6	1.72	0.50
24:DA:648:G:H2'	24:DA:649:G:H8	1.76	0.50
24:DA:941:A:H2'	24:DA:942:G:C8	2.46	0.50
24:DA:1019:U:HO2'	24:DA:1021:A:H2	1.49	0.50
24:DA:1191:G:N2	24:DA:1192:G:C4	2.79	0.50
24:DA:1269:A:H2'	24:DA:1270:C:C6	2.46	0.50
24:DA:1435:G:N2	24:DA:1558:C:N4	2.59	0.50
24:DA:1662:U:C2'	24:DA:1663:G:H5''	2.34	0.50
24:DA:1853:A:N6	24:DA:1888:G:O2'	2.45	0.50
24:DA:2750:A:O2'	24:DA:2752:C:N4	2.42	0.50
24:DA:2864:G:C5	24:DA:2865:U:C4	2.99	0.50
26:DC:52:HIS:HD2	26:DC:217:PRO:O	1.93	0.50
26:DC:169:ALA:O	26:DC:185:ALA:HB3	2.11	0.50
30:DG:112:VAL:HG13	30:DG:150:TYR:CE1	2.44	0.50
32:DI:98:GLY:HA2	32:DI:137:LEU:HD23	1.93	0.50
33:DJ:127:GLY:O	33:DJ:129:GLU:HG3	2.10	0.50
35:DL:77:ILE:HG12	35:DL:101:ILE:HD11	1.93	0.50
36:DM:19:GLY:N	36:DM:38:ARG:NH2	2.56	0.50
37:DN:31:HIS:O	37:DN:33:ILE:HG13	2.11	0.50
37:DN:54:LEU:HD11	37:DN:66:ALA:HB2	1.93	0.50
41:DR:5:PHE:HA	41:DR:39:LEU:HD23	1.93	0.50
1:AB:60:ALA:C	1:AB:223:GLY:HA3	2.31	0.50
2:AC:113:LYS:HD3	2:AC:184:ASN:CG	2.31	0.50
5:AF:6:ILE:HB	5:AF:62:MET:HB2	1.93	0.50
5:AF:7:VAL:HG22	5:AF:7:VAL:O	2.11	0.50
8:AI:55:ASP:CG	8:AI:56:MET:N	2.64	0.50
16:AQ:6:THR:C	16:AQ:7:LEU:HD12	2.30	0.50
21:AA:70:U:C2	21:AA:94:G:C5	2.99	0.50
21:AA:82:G:N1	21:AA:88:U:H1'	2.26	0.50
21:AA:329:A:N7	21:AA:332:G:C6	2.79	0.50
21:AA:423:G:O2'	21:AA:424:G:C4'	2.59	0.50
21:AA:451:A:N6	21:AA:481:G:C4	2.79	0.50
24:BA:528:A:C2	24:BA:2043:C:H4'	2.46	0.50
24:BA:932:U:H4'	24:BA:933:A:O5'	2.11	0.50
24:BA:1592:C:O2'	24:BA:1593:A:H5'	2.11	0.50
24:BA:1809:A:O2'	24:BA:1810:A:C5'	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2408:U:C2'	24:BA:2409:G:H5'	2.41	0.50
24:BA:2472:G:C8	24:BA:2475:C:N4	2.79	0.50
24:BA:2631:G:C4	24:BA:2632:A:C8	2.99	0.50
24:BA:2656:U:C4	24:BA:2664:G:N2	2.79	0.50
24:BA:2756:U:C1'	24:BA:2757:A:H5''	2.38	0.50
24:BA:2789:C:N4	24:BA:2893:A:C2	2.79	0.50
30:BG:8:VAL:CG1	30:BG:9:VAL:N	2.74	0.50
36:BM:66:ARG:HG3	36:BM:101:VAL:HG13	1.93	0.50
38:BO:40:ILE:HG12	38:BO:47:VAL:HG12	1.93	0.50
42:BS:107:VAL:O	42:BS:107:VAL:HG12	2.11	0.50
45:BV:43:ASP:OD1	45:BV:43:ASP:C	2.50	0.50
48:BY:7:ARG:H	48:BY:60:LYS:NZ	2.08	0.50
3:CD:7:LYS:HB3	3:CD:20:LEU:HD13	1.93	0.50
4:CE:55:VAL:O	4:CE:59:ILE:HG22	2.11	0.50
6:CG:92:PRO:HA	6:CG:95:ARG:HB2	1.92	0.50
6:CG:105:GLU:O	6:CG:109:LYS:HD3	2.11	0.50
7:CH:63:LYS:HB2	7:CH:70:VAL:HG11	1.94	0.50
16:CQ:13:SER:O	16:CQ:20:ILE:HB	2.11	0.50
18:CS:9:PHE:CZ	55:CA:1318:A:H4'	2.45	0.50
55:CA:389:A:N3	55:CA:389:A:H2'	2.26	0.50
55:CA:875:U:HO2'	55:CA:876:C:P	2.33	0.50
55:CA:1011:C:H2'	55:CA:1012:A:C8	2.45	0.50
55:CA:1089:G:C2	55:CA:1090:U:H1'	2.46	0.50
55:CA:1299:A:N3	55:CA:1299:A:C2'	2.71	0.50
24:DA:90:U:H3'	24:DA:91:A:C5'	2.41	0.50
24:DA:93:G:N2	24:DA:94:A:H1'	2.26	0.50
24:DA:260:G:C6	24:DA:261:G:N7	2.79	0.50
24:DA:289:G:C2	24:DA:352:A:C2	2.99	0.50
24:DA:301:G:C6	24:DA:317:G:C6	2.99	0.50
24:DA:637:A:N6	24:DA:652:U:H4'	2.26	0.50
24:DA:1182:G:H2'	24:DA:1183:U:O4'	2.11	0.50
24:DA:1572:A:H2'	24:DA:1573:G:C8	2.45	0.50
24:DA:1998:A:C5	24:DA:1999:C:C5	2.99	0.50
24:DA:2271:G:H2'	24:DA:2272:U:C6	2.47	0.50
56:DB:66:A:OP2	56:DB:108:A:N6	2.44	0.50
56:DB:77:U:C2'	56:DB:78:A:H5'	2.41	0.50
27:DD:135:GLY:O	27:DD:136:ASN:O	2.29	0.50
27:DD:148:GLN:CG	27:DD:152:PRO:HG2	2.41	0.50
29:DF:111:ARG:HG3	29:DF:135:ILE:HG12	1.93	0.50
39:DP:9:GLN:HB3	39:DP:12:MET:HE2	1.93	0.50
39:DP:50:ARG:CB	39:DP:56:SER:HB3	2.37	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DQ:4:LYS:NZ	40:DQ:6:GLY:CA	2.65	0.50
42:DS:17:VAL:HG11	42:DS:103:ILE:CG1	2.38	0.50
45:DV:2:PHE:CD1	45:DV:50:MET:HE3	2.46	0.50
47:DX:10:ARG:O	47:DX:12:VAL:HG13	2.11	0.50
47:DX:69:GLU:HA	47:DX:72:ALA:HB3	1.92	0.50
1:AB:113:LEU:HD22	1:AB:143:LEU:CG	2.32	0.50
3:AD:40:HIS:O	3:AD:43:ARG:HB2	2.12	0.50
12:AM:70:ARG:HG2	12:AM:71:GLU:HA	1.92	0.50
15:AP:19:VAL:HG13	15:AP:37:GLY:C	2.31	0.50
18:AS:18:VAL:O	18:AS:22:VAL:HG23	2.11	0.50
19:AT:53:MET:HE1	19:AT:57:VAL:HG21	1.93	0.50
20:AU:16:ARG:NH1	20:AU:19:LYS:HG3	2.27	0.50
20:AU:52:VAL:HG22	20:AU:53:LYS:HG2	1.93	0.50
21:AA:97:G:H2'	21:AA:98:A:O4'	2.12	0.50
21:AA:316:C:N4	21:AA:351:G:C2	2.80	0.50
21:AA:428:G:C1'	21:AA:430:A:N7	2.74	0.50
21:AA:908:A:H2'	21:AA:909:A:H8	1.75	0.50
21:AA:942:G:C2	21:AA:1342:C:C2	2.99	0.50
21:AA:961:U:N3	21:AA:983:A:C6	2.79	0.50
21:AA:967:C:C4	21:AA:968:A:C6	2.99	0.50
21:AA:1243:C:O2'	21:AA:1244:G:H5'	2.12	0.50
21:AA:1253:G:N1	21:AA:1285:A:N6	2.59	0.50
21:AA:1338:G:N2	21:AA:1339:A:C4	2.79	0.50
22:AX:30:G:H2'	22:AX:31:A:C8	2.34	0.50
24:BA:90:U:C6	24:BA:91:A:C8	2.99	0.50
24:BA:401:A:H2'	24:BA:402:A:H8	1.76	0.50
24:BA:536:G:C2'	24:BA:537:G:H5'	2.41	0.50
24:BA:685:A:H2'	24:BA:773:U:O4	2.12	0.50
24:BA:854:C:C2'	24:BA:855:G:H5'	2.41	0.50
24:BA:1176:U:C4	24:BA:1177:G:C6	2.99	0.50
24:BA:1343:G:O4'	24:BA:1597:A:H2'	2.10	0.50
24:BA:1437:C:H2'	24:BA:1438:U:C6	2.45	0.50
24:BA:1839:G:C4	24:BA:1927:A:C8	2.99	0.50
24:BA:2552:U:O2	24:BA:2554:U:C5'	2.59	0.50
24:BA:2652:C:C4	24:BA:2653:U:C4	2.99	0.50
25:BB:28:C:C2'	25:BB:29:A:H5'	2.41	0.50
27:BD:48:ILE:HG23	27:BD:84:LEU:HD21	1.93	0.50
33:BJ:54:ILE:O	33:BJ:54:ILE:HG13	2.12	0.50
34:BK:64:ARG:HH12	34:BK:101:GLY:HA3	1.76	0.50
36:BM:97:GLN:CD	36:BM:97:GLN:N	2.65	0.50
36:BM:136:MET:HE2	45:BV:57:TYR:CD2	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BT:39:THR:HB	43:BT:42:GLU:CB	2.35	0.50
46:BW:24:ARG:HD2	46:BW:25:PHE:H	1.73	0.50
48:BY:21:LEU:O	48:BY:22:LEU:O	2.28	0.50
49:BZ:29:ARG:CG	49:BZ:29:ARG:NH2	2.69	0.50
1:CB:27:LYS:N	1:CB:28:PRO:HD2	2.25	0.50
3:CD:156:ALA:O	3:CD:160:LEU:HD23	2.12	0.50
4:CE:44:ARG:HG2	4:CE:72:ASN:HA	1.93	0.50
7:CH:11:THR:HG21	55:CA:876:C:H1'	1.92	0.50
9:CJ:76:ILE:HG22	9:CJ:77:VAL:N	2.26	0.50
11:CL:2:THR:CB	11:CL:5:GLN:HB2	2.35	0.50
11:CL:109:ARG:C	11:CL:110:LYS:HD2	2.31	0.50
15:CP:20:VAL:HG21	15:CP:32:PHE:CB	2.34	0.50
17:CR:35:SER:HA	17:CR:71:ASP:OD1	2.11	0.50
18:CS:42:ASN:HB2	18:CS:43:MET:CE	2.38	0.50
20:CU:40:PRO:HA	20:CU:43:GLU:HB3	1.91	0.50
55:CA:247:G:N2	55:CA:248:C:C2	2.79	0.50
55:CA:429:U:O4'	55:CA:430:A:H5''	2.11	0.50
55:CA:659:U:H2'	55:CA:660:C:H6	1.75	0.50
55:CA:730:G:H2'	55:CA:766:A:H5'	1.92	0.50
55:CA:960:U:O2'	55:CA:1223:C:H5'	2.12	0.50
24:DA:143:C:H3'	24:DA:144:A:C8	2.46	0.50
24:DA:158:U:H1'	24:DA:169:G:N2	2.26	0.50
24:DA:182:A:H2'	24:DA:183:C:C6	2.47	0.50
24:DA:279:A:C2	24:DA:362:A:H4'	2.47	0.50
24:DA:298:G:H8	24:DA:298:G:O5'	1.94	0.50
24:DA:301:G:O2'	24:DA:302:C:P	2.70	0.50
24:DA:338:G:H2'	24:DA:339:U:H5'	1.93	0.50
24:DA:766:U:O2'	24:DA:767:U:O4'	2.28	0.50
24:DA:848:C:H2'	24:DA:849:A:H8	1.75	0.50
24:DA:1754:A:H2'	24:DA:1755:A:C8	2.47	0.50
24:DA:1847:A:O2'	24:DA:1848:A:H8	1.89	0.50
24:DA:1982:U:H2'	24:DA:1983:G:H8	1.76	0.50
24:DA:2550:G:C6	24:DA:2551:C:C4	2.99	0.50
24:DA:2653:U:N3	24:DA:2654:A:C6	2.79	0.50
24:DA:2674:G:C5	24:DA:2675:A:N7	2.79	0.50
56:DB:18:G:H2'	56:DB:19:C:O4'	2.10	0.50
26:DC:15:VAL:HG13	26:DC:204:LEU:O	2.11	0.50
26:DC:260:LYS:HA	26:DC:263:ASP:CG	2.32	0.50
29:DF:43:ILE:HD13	29:DF:82:TYR:CE2	2.46	0.50
30:DG:87:GLN:HA	30:DG:129:GLU:HA	1.93	0.50
30:DG:103:ASN:HA	30:DG:112:VAL:HB	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DQ:65:ASN:HA	40:DQ:75:TYR:HB2	1.93	0.50
1:AB:63:LYS:HZ1	1:AB:87:ASP:HB3	1.75	0.50
2:AC:57:GLU:OE2	2:AC:64:ARG:HB3	2.12	0.50
2:AC:159:ALA:C	2:AC:161:ILE:H	2.14	0.50
11:AL:24:GLU:HB2	11:AL:29:LYS:HD2	1.93	0.50
12:AM:92:ARG:NH1	18:AS:79:TYR:CZ	2.79	0.50
13:AN:13:VAL:HA	13:AN:59:GLN:NE2	2.26	0.50
16:AQ:65:PRO:HD2	21:AA:264:C:O2'	2.12	0.50
21:AA:318:G:C2	21:AA:336:A:C2	3.00	0.50
21:AA:414:A:C2	21:AA:415:A:C4	2.98	0.50
21:AA:595:A:N6	21:AA:641:U:C6	2.80	0.50
24:BA:28:A:C5	24:BA:513:A:N7	2.79	0.50
24:BA:669:G:N3	24:BA:669:G:C2'	2.71	0.50
24:BA:814:C:C2	24:BA:1194:A:C2	2.99	0.50
24:BA:957:C:O2'	24:BA:959:A:O5'	2.28	0.50
24:BA:980:A:C6	24:BA:981:A:N1	2.80	0.50
24:BA:1385:A:C5	24:BA:1403:A:C6	2.99	0.50
24:BA:1386:C:H2'	24:BA:1387:A:C8	2.47	0.50
24:BA:2020:A:C6	24:BA:2022:U:C2	2.99	0.50
24:BA:2309:A:H2'	24:BA:2310:C:C6	2.46	0.50
26:BC:255:LYS:C	26:BC:256:THR:HG23	2.32	0.50
29:BF:45:ASP:HB2	29:BF:48:LEU:HB2	1.92	0.50
30:BG:44:HIS:HA	30:BG:49:LEU:HD23	1.94	0.50
32:BI:58:ILE:HG22	32:BI:60:VAL:HG23	1.92	0.50
35:BL:131:ALA:O	35:BL:135:ILE:HD12	2.11	0.50
42:BS:25:ARG:HE	42:BS:73:LYS:HZ3	1.57	0.50
49:BZ:16:LEU:O	49:BZ:19:HIS:HB2	2.11	0.50
2:CC:171:ARG:HH21	2:CC:173:PRO:HG3	1.76	0.50
6:CG:12:LEU:HD13	6:CG:12:LEU:O	2.11	0.50
7:CH:88:LYS:HG2	55:CA:600:A:H5''	1.93	0.50
16:CQ:27:PHE:CD1	16:CQ:36:PHE:HB3	2.47	0.50
20:CU:19:LYS:C	20:CU:21:SER:H	2.13	0.50
20:CU:35:GLU:HG3	20:CU:36:PHE:N	2.25	0.50
55:CA:173:U:H1'	55:CA:197:A:C2	2.46	0.50
55:CA:206:C:C6	55:CA:206:C:H3'	2.47	0.50
55:CA:397:A:H8	55:CA:548:G:OP2	1.95	0.50
55:CA:866:C:N3	55:CA:867:G:H1'	2.26	0.50
55:CA:1148:U:H2'	55:CA:1149:C:O4'	2.12	0.50
24:DA:21:A:H2'	24:DA:22:C:C6	2.47	0.50
24:DA:28:A:O2'	24:DA:583:G:H5'	2.11	0.50
24:DA:43:G:C2	24:DA:437:U:C2	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:146:A:C2	24:DA:147:C:C2	3.00	0.50
24:DA:228:C:O2	24:DA:418:C:H4'	2.11	0.50
24:DA:246:C:H4'	24:DA:385:C:O2'	2.10	0.50
24:DA:489:G:C6	24:DA:491:G:C6	2.99	0.50
24:DA:573:U:H3	24:DA:2030:A:H3'	1.76	0.50
24:DA:636:G:H5'	24:DA:639:U:OP1	2.11	0.50
24:DA:664:G:H4'	24:DA:941:A:OP1	2.11	0.50
24:DA:960:A:H2'	24:DA:962:G:H5'	1.93	0.50
24:DA:961:C:C5	24:DA:2031:A:C2	2.99	0.50
24:DA:1047:G:C2	24:DA:1110:G:C5	3.00	0.50
24:DA:1203:U:C4	24:DA:1204:A:C6	3.00	0.50
24:DA:1206:G:N2	24:DA:1207:C:C2	2.80	0.50
24:DA:1587:G:H21	24:DA:1588:G:H1'	1.77	0.50
24:DA:2800:A:H2'	24:DA:2801:G:O4'	2.12	0.50
26:DC:194:VAL:HG13	26:DC:194:VAL:O	2.11	0.50
29:DF:135:ILE:O	29:DF:137:PHE:N	2.37	0.50
31:DH:96:THR:O	31:DH:97:ARG:CG	2.60	0.50
34:DK:64:ARG:HD2	34:DK:102:PRO:O	2.11	0.50
36:DM:17:ASN:OD1	36:DM:95:LEU:HB3	2.11	0.50
37:DN:67:PHE:HE2	37:DN:73:ASN:ND2	2.08	0.50
37:DN:103:ARG:HG3	37:DN:104:ALA:N	2.27	0.50
42:DS:39:THR:O	42:DS:40:ASN:HB3	2.11	0.50
2:AC:10:ARG:O	2:AC:13:ILE:N	2.45	0.50
3:AD:29:THR:HG22	3:AD:30:LYS:H	1.76	0.50
3:AD:125:ASN:HA	3:AD:141:VAL:HG23	1.94	0.50
3:AD:191:SER:OG	3:AD:192:ALA:N	2.42	0.50
6:AG:37:THR:O	6:AG:41:ILE:HG13	2.12	0.50
7:AH:17:GLN:HB3	7:AH:69:ALA:CB	2.41	0.50
18:AS:42:ASN:HD22	18:AS:42:ASN:C	2.14	0.50
21:AA:120:A:C5	21:AA:122:G:C6	3.00	0.50
21:AA:276:G:O2'	21:AA:277:C:H5'	2.12	0.50
21:AA:409:U:C4	21:AA:410:G:C5	3.00	0.50
21:AA:434:U:H2'	21:AA:435:A:O4'	2.12	0.50
21:AA:590:U:C2	21:AA:650:G:C2	3.00	0.50
21:AA:885:G:C2	21:AA:886:G:C5	2.99	0.50
21:AA:1385:G:H2'	21:AA:1386:G:O4'	2.10	0.50
24:BA:396:G:H8	24:BA:396:G:O5'	1.93	0.50
24:BA:538:A:C2	24:BA:556:A:C4	3.00	0.50
24:BA:822:G:C5	24:BA:836:G:C2	3.00	0.50
24:BA:912:C:H2'	24:BA:913:U:H6	1.76	0.50
24:BA:993:G:C6	24:BA:1162:G:C6	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:996:A:C2	24:BA:997:G:C8	3.00	0.50
24:BA:1019:U:H2'	24:BA:1020:A:C8	2.46	0.50
24:BA:1090:A:N6	24:BA:1102:C:N3	2.59	0.50
24:BA:1753:G:OP1	39:BP:92:ARG:HD3	2.11	0.50
24:BA:1821:A:H2'	24:BA:1822:C:C6	2.47	0.50
24:BA:2648:G:N2	24:BA:2673:G:H1'	2.27	0.50
24:BA:2663:G:C2'	24:BA:2664:G:O5'	2.60	0.50
30:BG:84:LYS:HG2	30:BG:85:LYS:N	2.26	0.50
30:BG:126:THR:HG22	30:BG:127:GLN:N	2.24	0.50
34:BK:17:ARG:HB3	34:BK:45:GLU:HB3	1.93	0.50
34:BK:114:LYS:O	34:BK:118:LEU:HD13	2.11	0.50
36:BM:14:LYS:O	36:BM:15:GLY:C	2.50	0.50
38:BO:33:ARG:HG2	38:BO:34:HIS:CE1	2.47	0.50
42:BS:25:ARG:NE	42:BS:73:LYS:HZ1	2.09	0.50
44:BU:4:ILE:HD12	44:BU:69:VAL:HG23	1.94	0.50
52:B2:1:MET:CE	52:B2:2:LYS:HB3	2.42	0.50
54:B4:1:MET:HE2	54:B4:34:LYS:HG2	1.93	0.50
54:B4:7:VAL:HG23	54:B4:8:LYS:N	2.26	0.50
2:CC:18:ASN:HA	2:CC:55:VAL:HG12	1.92	0.50
2:CC:52:SER:C	2:CC:113:LYS:HD3	2.31	0.50
3:CD:24:VAL:O	3:CD:25:ARG:C	2.48	0.50
7:CH:33:VAL:C	7:CH:35:ILE:H	2.14	0.50
11:CL:31:GLY:HA3	11:CL:54:VAL:HG11	1.94	0.50
55:CA:295:C:H2'	55:CA:296:U:C6	2.47	0.50
55:CA:687:A:C2	55:CA:704:A:C5	2.99	0.50
55:CA:724:G:N3	55:CA:725:G:C8	2.79	0.50
55:CA:914:A:C2'	55:CA:915:A:H8	2.25	0.50
55:CA:1206:G:C6	55:CA:1207:G:C5	3.00	0.50
24:DA:38:A:C5	24:DA:39:G:C8	2.99	0.50
24:DA:315:G:H2'	24:DA:316:C:O4'	2.11	0.50
24:DA:325:G:HO2'	24:DA:326:G:C5'	2.25	0.50
24:DA:507:A:H5''	24:DA:509:C:O4'	2.12	0.50
24:DA:510:C:H2'	24:DA:511:U:H6	1.69	0.50
24:DA:656:G:C5	24:DA:657:U:C4	2.99	0.50
24:DA:710:U:H2'	24:DA:711:G:C8	2.47	0.50
24:DA:775:G:H22	24:DA:794:A:H5'	1.73	0.50
24:DA:800:A:H4'	24:DA:801:G:O5'	2.11	0.50
24:DA:837:C:C2'	24:DA:838:C:H5'	2.41	0.50
24:DA:1794:A:H2'	24:DA:1795:C:H6	1.76	0.50
24:DA:1835:G:C2	24:DA:1836:C:C2	3.00	0.50
24:DA:1935:G:C2	24:DA:1962:C:C2	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1999:C:H5''	24:DA:2723:C:O2'	2.12	0.50
24:DA:2009:A:N1	24:DA:2010:G:C5	2.79	0.50
24:DA:2267:A:N6	24:DA:2271:G:C6	2.79	0.50
24:DA:2469:A:C2	24:DA:2470:G:H1'	2.47	0.50
24:DA:2515:C:O2	24:DA:2570:G:C2	2.65	0.50
26:DC:156:SER:O	26:DC:194:VAL:HG11	2.11	0.50
28:DE:112:LEU:HD12	28:DE:118:LEU:HD13	1.93	0.50
29:DF:101:ARG:HH11	29:DF:138:PRO:CB	2.25	0.50
34:DK:10:VAL:HG13	34:DK:12:ASP:H	1.77	0.50
36:DM:112:LEU:HD13	36:DM:112:LEU:O	2.12	0.50
42:DS:88:ARG:HH21	42:DS:88:ARG:CG	2.23	0.50
43:DT:38:ALA:HB1	43:DT:81:LYS:HZ2	1.75	0.50
12:AM:5:GLY:HA3	12:AM:65:GLU:HG3	1.94	0.50
17:AR:58:ILE:O	17:AR:59:LYS:C	2.48	0.50
19:AT:57:VAL:HG12	19:AT:71:ALA:CB	2.41	0.50
21:AA:15:G:C8	21:AA:1396:A:N3	2.80	0.50
21:AA:21:G:H1'	21:AA:915:A:N6	2.26	0.50
21:AA:35:G:H2'	21:AA:36:C:C6	2.47	0.50
21:AA:428:G:O4'	21:AA:430:A:C8	2.65	0.50
21:AA:575:G:H4'	21:AA:576:C:H5'	1.90	0.50
21:AA:1043:G:H2'	21:AA:1044:A:C8	2.44	0.50
21:AA:1075:U:C2	21:AA:1076:U:C5	3.00	0.50
21:AA:1151:A:C6	21:AA:1152:A:N6	2.79	0.50
21:AA:1227:A:C3'	21:AA:1228:C:H5''	2.42	0.50
21:AA:1442:G:N2	21:AA:1461:G:H1'	2.26	0.50
21:AA:1524:C:H2'	21:AA:1525:G:C8	2.47	0.50
24:BA:143:C:O5'	24:BA:143:C:H6	1.93	0.50
24:BA:646:U:H6	24:BA:646:U:H5''	1.77	0.50
24:BA:1062:G:N9	24:BA:1088:A:N7	2.60	0.50
24:BA:1317:G:C2	24:BA:1336:A:C2	3.00	0.50
24:BA:1561:C:H2'	24:BA:1562:U:C6	2.47	0.50
24:BA:1973:G:C4	24:BA:1974:C:C6	3.00	0.50
24:BA:2204:G:C5	24:BA:2221:G:C2	3.00	0.50
30:BG:61:TRP:O	30:BG:65:GLY:N	2.32	0.50
33:BJ:114:LEU:O	33:BJ:114:LEU:HD23	2.11	0.50
36:BM:78:LEU:C	36:BM:80:VAL:N	2.64	0.50
37:BN:71:ARG:HH21	37:BN:71:ARG:HG2	1.75	0.50
44:BU:36:GLU:O	44:BU:38:ILE:HG12	2.11	0.50
46:BW:41:GLY:HA2	46:BW:44:PHE:CZ	2.46	0.50
54:B4:36:ARG:CG	54:B4:37:GLN:N	2.71	0.50
1:CB:199:ILE:O	1:CB:199:ILE:HG13	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:102:TYR:HD2	3:CD:103:ARG:HG2	1.76	0.50
5:CF:10:VAL:O	5:CF:57:ALA:HA	2.12	0.50
11:CL:85:ARG:HG2	11:CL:86:VAL:N	2.26	0.50
16:CQ:21:VAL:HA	16:CQ:43:LEU:O	2.11	0.50
55:CA:203:G:HO2'	55:CA:204:G:H8	1.58	0.50
55:CA:444:G:C6	55:CA:445:G:N7	2.80	0.50
55:CA:704:A:C4	55:CA:705:G:C8	3.00	0.50
55:CA:1031:C:C5'	55:CA:1032:G:H5''	2.23	0.50
55:CA:1363:A:C5	55:CA:1365:G:C6	3.00	0.50
55:CA:1438:G:N2	55:CA:1464:U:H1'	2.26	0.50
24:DA:36:G:N2	24:DA:445:C:C2	2.79	0.50
24:DA:100:U:O2'	24:DA:101:A:P	2.69	0.50
24:DA:422:A:C6	24:DA:423:A:C6	2.99	0.50
24:DA:475:C:N3	24:DA:479:A:N7	2.59	0.50
24:DA:656:G:O5'	24:DA:656:G:H8	1.95	0.50
24:DA:992:C:H4'	41:DR:74:ILE:HD13	1.94	0.50
24:DA:1168:G:C2	24:DA:1182:G:C2	3.00	0.50
24:DA:1558:C:H1'	24:DA:1560:G:C8	2.46	0.50
24:DA:1622:G:C2	24:DA:1623:G:C8	2.99	0.50
24:DA:1683:U:O2'	24:DA:1684:G:O5'	2.29	0.50
24:DA:1814:G:C6	24:DA:1815:A:C6	3.00	0.50
24:DA:2189:U:H2'	24:DA:2190:G:C5'	2.38	0.50
24:DA:2239:G:O2'	24:DA:2240:U:C6	2.62	0.50
24:DA:2472:G:H1'	24:DA:2478:A:H61	1.76	0.50
24:DA:2809:A:OP2	24:DA:2890:G:N1	2.41	0.50
24:DA:2818:U:H2'	24:DA:2819:G:C8	2.46	0.50
32:DI:86:LYS:O	32:DI:87:SER:HB2	2.11	0.50
34:DK:1:MET:O	34:DK:1:MET:HG3	2.12	0.50
42:DS:22:ASP:HA	42:DS:25:ARG:HH12	1.76	0.50
50:D0:37:HIS:CG	50:D0:43:THR:HG22	2.47	0.50
3:AD:23:GLY:O	3:AD:160:LEU:HG	2.12	0.50
5:AF:78:PHE:HD1	5:AF:87:SER:HG	1.60	0.50
7:AH:102:VAL:HB	7:AH:126:CYS:SG	2.52	0.50
19:AT:29:THR:HA	19:AT:32:LYS:CG	2.42	0.50
20:AU:52:VAL:O	20:AU:53:LYS:HD2	2.12	0.50
21:AA:96:U:O2'	21:AA:97:G:C8	2.48	0.50
21:AA:244:U:H4'	21:AA:245:U:H5'	1.93	0.50
21:AA:554:A:O2'	21:AA:555:U:H5'	2.12	0.50
21:AA:582:C:H2'	21:AA:583:A:O4'	2.12	0.50
21:AA:623:C:O5'	21:AA:623:C:H6	1.95	0.50
21:AA:713:G:H2'	21:AA:714:G:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:914:A:HO2'	21:AA:915:A:H8	1.59	0.50
24:BA:28:A:H2'	24:BA:29:U:H6	1.77	0.50
24:BA:63:A:C2	24:BA:64:A:C5	3.00	0.50
24:BA:244:A:H2'	24:BA:245:G:O4'	2.12	0.50
24:BA:480:A:H3'	24:BA:481:G:H5''	1.94	0.50
24:BA:633:A:O5'	24:BA:633:A:C8	2.57	0.50
24:BA:735:A:H3'	24:BA:736:C:H6	1.75	0.50
24:BA:809:G:C2'	24:BA:810:U:O5'	2.59	0.50
24:BA:920:A:C5	24:BA:921:C:C5	2.99	0.50
24:BA:1085:A:H3'	24:BA:1086:A:H2	1.75	0.50
24:BA:1253:A:H4'	24:BA:1254:A:OP2	2.11	0.50
24:BA:1277:G:H4'	37:BN:20:MET:HE2	1.94	0.50
24:BA:1476:U:O2'	24:BA:1477:A:H5'	2.12	0.50
24:BA:1820:U:O2'	26:BC:157:ALA:O	2.28	0.50
24:BA:1942:C:C4	24:BA:1943:U:C5	2.98	0.50
24:BA:2037:A:H2'	24:BA:2038:G:C8	2.46	0.50
24:BA:2456:C:C5	24:BA:2457:U:C5	3.00	0.50
26:BC:83:ASP:HB2	26:BC:90:ILE:HG12	1.94	0.50
26:BC:242:HIS:O	26:BC:244:VAL:HG13	2.11	0.50
28:BE:42:GLY:O	28:BE:43:THR:O	2.30	0.50
28:BE:151:GLY:HA2	28:BE:192:ALA:HB2	1.94	0.50
29:BF:37:MET:CE	29:BF:150:GLY:O	2.60	0.50
29:BF:99:PHE:O	29:BF:102:LEU:HB3	2.10	0.50
34:BK:18:ARG:HB2	34:BK:45:GLU:CG	2.42	0.50
35:BL:65:GLY:O	35:BL:66:PHE:CB	2.58	0.50
40:BQ:42:GLY:HA3	41:BR:75:VAL:HG21	1.93	0.50
41:BR:97:LYS:O	41:BR:98:ILE:HB	2.10	0.50
42:BS:74:ILE:HG23	42:BS:74:ILE:O	2.12	0.50
47:BX:58:ILE:HD11	47:BX:66:VAL:HG11	1.94	0.50
48:BY:12:GLU:O	48:BY:15:ASN:HB2	2.12	0.50
48:BY:17:GLU:HG3	48:BY:18:LEU:N	2.25	0.50
53:B3:21:PHE:HB2	53:B3:49:VAL:CG1	2.41	0.50
1:CB:54:ALA:HA	1:CB:57:ASN:HB3	1.94	0.50
1:CB:151:LYS:HG3	1:CB:152:ASP:N	2.26	0.50
2:CC:54:ILE:HG12	2:CC:54:ILE:O	2.11	0.50
3:CD:23:GLY:O	3:CD:24:VAL:O	2.29	0.50
4:CE:155:LYS:HD3	7:CH:70:VAL:HG23	1.94	0.50
8:CI:27:ILE:CD1	8:CI:62:LEU:HG	2.42	0.50
55:CA:71:A:C6	55:CA:100:G:C5	3.00	0.50
55:CA:134:G:H2'	55:CA:135:C:O4'	2.12	0.50
55:CA:779:C:H2'	55:CA:780:A:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:1133:G:H2'	55:CA:1134:G:H8	1.76	0.50
55:CA:1250:A:C5	55:CA:1287:A:N7	2.79	0.50
55:CA:1394:A:C6	55:CA:1501:C:H4'	2.46	0.50
22:CX:38:A:H2'	22:CX:39:U:C6	2.47	0.50
24:DA:558:U:OP1	33:DJ:113:PRO:HD2	2.12	0.50
24:DA:801:G:C8	28:DE:49:ARG:HG3	2.47	0.50
24:DA:870:U:H2'	24:DA:871:U:H5'	1.93	0.50
24:DA:1055:G:C2'	24:DA:1056:G:H5'	2.42	0.50
24:DA:1285:A:H2'	24:DA:1286:A:H5''	1.93	0.50
24:DA:1312:U:C2	24:DA:1603:A:C6	3.00	0.50
24:DA:1475:G:O2'	24:DA:1476:U:C6	2.63	0.50
56:DB:76:G:H2'	56:DB:77:U:C6	2.46	0.50
31:DH:102:ALA:C	31:DH:104:THR:H	2.14	0.50
37:DN:97:ILE:HG13	37:DN:98:LEU:N	2.27	0.50
48:DY:30:MET:SD	48:DY:30:MET:O	2.70	0.50
49:DZ:4:ILE:HG21	49:DZ:56:VAL:HG13	1.93	0.50
1:AB:107:ARG:NE	1:AB:108:GLN:HE22	2.08	0.50
4:AE:36:THR:CG2	4:AE:59:ILE:HD12	2.41	0.50
5:AF:43:GLY:HA2	5:AF:58:HIS:CE1	2.45	0.50
5:AF:47:LEU:HD22	17:AR:65:SER:HB3	1.93	0.50
9:AJ:10:LEU:HB2	9:AJ:72:ARG:HB2	1.92	0.50
10:AK:31:VAL:O	10:AK:43:TRP:HA	2.11	0.50
20:AU:24:LYS:HG2	20:AU:25:ALA:N	2.26	0.50
21:AA:351:G:H4'	21:AA:352:C:OP1	2.12	0.50
21:AA:474:G:C6	21:AA:475:C:C4	3.00	0.50
21:AA:1098:C:H2'	21:AA:1099:G:H8	1.76	0.50
24:BA:276:U:O2'	24:BA:277:G:O5'	2.30	0.50
24:BA:327:G:H2'	24:BA:328:U:C6	2.47	0.50
24:BA:381:G:N2	24:BA:382:A:H1'	2.27	0.50
24:BA:639:U:H2'	24:BA:640:C:C5	2.43	0.50
24:BA:789:A:H5''	59:BA:3765:HOH:O	2.12	0.50
24:BA:821:A:N7	24:BA:946:C:C2	2.80	0.50
24:BA:858:G:C2	24:BA:2268:A:C4	2.99	0.50
24:BA:866:A:N7	24:BA:914:G:C6	2.80	0.50
24:BA:974:G:N1	24:BA:1186:G:C6	2.80	0.50
24:BA:1144:A:H2'	24:BA:1145:C:C6	2.46	0.50
24:BA:1327:A:H2'	24:BA:1328:A:C5'	2.37	0.50
24:BA:1844:C:O2'	24:BA:1845:G:H5'	2.11	0.50
24:BA:2275:C:HO2'	36:BM:84:LYS:HA	1.77	0.50
24:BA:2352:A:C5	46:BW:30:VAL:HG11	2.46	0.50
24:BA:2472:G:O6	24:BA:2476:A:H4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2654:A:N1	24:BA:2665:A:H5''	2.27	0.50
27:BD:103:ASP:O	27:BD:104:VAL:O	2.30	0.50
29:BF:46:LYS:H	29:BF:46:LYS:CD	2.25	0.50
35:BL:23:ILE:O	35:BL:24:GLY:C	2.50	0.50
36:BM:46:ILE:HD12	36:BM:47:GLU:N	2.27	0.50
37:BN:66:ALA:O	37:BN:70:THR:OG1	2.30	0.50
49:BZ:29:ARG:HG3	49:BZ:29:ARG:NH2	2.14	0.50
1:CB:122:ASP:C	1:CB:124:THR:H	2.14	0.50
3:CD:24:VAL:HG23	3:CD:25:ARG:N	2.26	0.50
9:CJ:11:LYS:HE2	9:CJ:97:ASP:OD1	2.11	0.50
11:CL:3:VAL:HG23	11:CL:4:ASN:H	1.76	0.50
14:CO:60:SER:O	14:CO:64:LYS:HG3	2.11	0.50
15:CP:40:ASN:ND2	15:CP:42:ILE:HB	2.26	0.50
20:CU:26:GLY:O	20:CU:30:GLU:HG3	2.12	0.50
55:CA:46:G:H2'	55:CA:366:A:N7	2.27	0.50
55:CA:91:U:O2'	55:CA:92:U:O4'	2.12	0.50
55:CA:763:G:N3	55:CA:764:C:C6	2.80	0.50
55:CA:1288:A:N1	55:CA:1371:G:H1'	2.26	0.50
24:DA:155:A:C2'	24:DA:156:A:H5'	2.42	0.50
24:DA:352:A:C6	24:DA:353:C:C2	3.00	0.50
24:DA:419:U:H5''	59:DA:3234:HOH:O	2.09	0.50
24:DA:699:A:H2'	24:DA:700:G:O4'	2.12	0.50
24:DA:1494:A:H3'	24:DA:1494:A:P	2.52	0.50
24:DA:1565:C:O2'	24:DA:1566:A:C8	2.57	0.50
24:DA:1613:G:N1	24:DA:1617:C:C2	2.80	0.50
24:DA:1613:G:C2	24:DA:1617:C:C2	2.99	0.50
24:DA:1912:A:H62	24:DA:1918:A:H1'	1.74	0.50
24:DA:2285:C:O4'	24:DA:2288:A:C2	2.65	0.50
24:DA:2402:U:H5'	24:DA:2402:U:H6	1.76	0.50
24:DA:2630:G:C5	24:DA:2894:G:C6	3.00	0.50
24:DA:2686:G:C6	24:DA:2687:U:C4	2.99	0.50
26:DC:66:PHE:HD2	26:DC:142:ASN:HD21	1.58	0.50
26:DC:264:LYS:HG3	26:DC:265:PHE:CD2	2.47	0.50
28:DE:158:PHE:HA	28:DE:169:VAL:HG11	1.93	0.50
29:DF:34:THR:O	29:DF:35:LEU:HB2	2.10	0.50
30:DG:104:LEU:H	30:DG:112:VAL:HG23	1.77	0.50
30:DG:139:VAL:HA	30:DG:142:GLN:HB3	1.93	0.50
31:DH:84:ALA:N	31:DH:148:ALA:HA	2.26	0.50
33:DJ:43:GLU:O	33:DJ:43:GLU:CG	2.59	0.50
33:DJ:56:VAL:HG11	33:DJ:101:ILE:HG21	1.92	0.50
35:DL:3:LEU:O	35:DL:4:ASN:C	2.49	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DM:2:LEU:O	36:DM:69:PRO:HG2	2.11	0.50
39:DP:28:LYS:H	39:DP:28:LYS:NZ	2.10	0.50
40:DQ:91:ARG:NH2	40:DQ:93:ILE:HD13	2.27	0.50
42:DS:21:ALA:O	42:DS:74:ILE:HD13	2.12	0.50
48:DY:57:LEU:HD13	48:DY:57:LEU:O	2.12	0.50
53:D3:18:LYS:CG	53:D3:19:GLY:N	2.75	0.50
2:AC:129:PHE:CE2	2:AC:156:LEU:HD23	2.47	0.50
7:AH:12:ARG:NH2	21:AA:826:C:H5'	2.27	0.50
8:AI:17:ARG:NH2	21:AA:1129:C:H5''	2.27	0.50
9:AJ:52:LEU:CD2	9:AJ:59:LYS:HA	2.40	0.50
16:AQ:8:GLN:HA	16:AQ:8:GLN:OE1	2.12	0.50
16:AQ:66:LEU:HB2	16:AQ:70:LYS:HE2	1.93	0.50
19:AT:53:MET:O	19:AT:57:VAL:HG23	2.12	0.50
21:AA:132:C:O2'	21:AA:133:U:O4'	2.22	0.50
21:AA:885:G:N2	21:AA:886:G:C5	2.80	0.50
21:AA:898:G:N2	21:AA:901:A:OP2	2.39	0.50
24:BA:545:U:C6	24:BA:545:U:H3'	2.47	0.50
24:BA:687:C:C4	24:BA:688:U:C4	3.00	0.50
24:BA:769:U:H2'	24:BA:770:G:H8	1.77	0.50
24:BA:799:G:H2'	24:BA:800:A:C8	2.46	0.50
24:BA:883:G:C2	24:BA:894:U:O2	2.65	0.50
24:BA:954:G:OP2	36:BM:16:ARG:NH2	2.42	0.50
24:BA:1190:G:H5''	35:BL:32:GLY:HA2	1.93	0.50
24:BA:1205:A:N1	28:BE:165:HIS:HB2	2.27	0.50
24:BA:1333:G:H5'	24:BA:1333:G:C8	2.46	0.50
24:BA:1808:A:N1	47:BX:27:ARG:HD2	2.27	0.50
24:BA:1829:A:N3	26:BC:14:HIS:HE1	2.09	0.50
24:BA:2004:G:C2'	24:BA:2005:A:H5'	2.42	0.50
24:BA:2058:A:H5''	24:BA:2059:A:P	2.52	0.50
24:BA:2572:A:C8	27:BD:150:GLN:HB3	2.47	0.50
24:BA:2816:G:C6	24:BA:2817:U:C4	3.00	0.50
25:BB:90:C:OP1	36:BM:16:ARG:HB3	2.12	0.50
29:BF:110:ILE:O	29:BF:111:ARG:O	2.29	0.50
30:BG:86:LEU:CD1	30:BG:132:LEU:HD21	2.42	0.50
32:BI:9:LYS:HB2	32:BI:55:PRO:HB2	1.93	0.50
32:BI:60:VAL:HG22	32:BI:66:PHE:HB2	1.93	0.50
38:BO:67:ASN:O	38:BO:68:LYS:C	2.49	0.50
40:BQ:13:HIS:CD2	40:BQ:31:TYR:CG	2.99	0.50
48:BY:26:PHE:CE1	48:BY:30:MET:HG3	2.47	0.50
2:CC:91:ALA:HB2	2:CC:98:ALA:HB3	1.92	0.50
4:CE:57:ALA:HA	4:CE:60:GLN:HB3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:95:MET:CE	4:CE:143:LEU:HD21	2.42	0.50
7:CH:15:ASN:ND2	55:CA:875:U:O2	2.45	0.50
9:CJ:15:HIS:ND1	9:CJ:70:HIS:CD2	2.80	0.50
10:CK:117:HIS:O	10:CK:118:ASN:HB2	2.12	0.50
12:CM:52:ILE:C	12:CM:54:THR:H	2.15	0.50
16:CQ:70:LYS:CD	55:CA:254:G:H5''	2.42	0.50
55:CA:13:U:O2'	55:CA:14:U:OP1	2.30	0.50
55:CA:13:U:O2	55:CA:914:A:H2'	2.11	0.50
55:CA:304:U:H2'	55:CA:305:G:C8	2.47	0.50
55:CA:647:C:H2'	55:CA:648:A:C8	2.46	0.50
55:CA:1157:A:H1'	55:CA:1181:G:H22	1.76	0.50
55:CA:1239:A:N7	55:CA:1298:U:N3	2.60	0.50
55:CA:1250:A:H2'	55:CA:1251:A:O4'	2.12	0.50
55:CA:1349:A:H2'	55:CA:1350:A:O4'	2.11	0.50
55:CA:1387:G:C6	55:CA:1388:C:N4	2.79	0.50
55:CA:1508:A:O2'	55:CA:1509:C:H5'	2.12	0.50
24:DA:14:A:H3'	24:DA:15:G:H5''	1.94	0.50
24:DA:105:C:H2'	24:DA:106:C:H6	1.76	0.50
24:DA:540:C:H2'	24:DA:541:A:H8	1.76	0.50
24:DA:754:U:O2'	24:DA:755:U:C5'	2.60	0.50
24:DA:855:G:O2'	46:DW:23:LYS:HD3	2.12	0.50
24:DA:1124:G:H1'	54:D4:38:GLY:OXT	2.12	0.50
24:DA:1338:G:H4'	43:DT:18:GLU:CD	2.32	0.50
24:DA:1381:G:H2'	24:DA:1381:G:N3	2.27	0.50
24:DA:1653:G:H5''	24:DA:1654:A:OP1	2.12	0.50
24:DA:1789:A:OP2	26:DC:220:ARG:NH1	2.45	0.50
24:DA:2363:G:OP1	53:D3:39:ARG:HD2	2.12	0.50
56:DB:65:U:H2'	56:DB:108:A:N6	2.26	0.50
27:DD:118:PHE:CG	27:DD:119:ALA:N	2.80	0.50
27:DD:125:TRP:CD1	27:DD:160:LYS:HB3	2.46	0.50
28:DE:139:LYS:HB2	28:DE:139:LYS:NZ	2.27	0.50
29:DF:36:ASN:O	29:DF:37:MET:CB	2.59	0.50
32:DI:8:VAL:C	32:DI:9:LYS:CG	2.80	0.50
33:DJ:20:ALA:HA	33:DJ:23:LYS:CG	2.42	0.50
34:DK:107:LEU:C	34:DK:109:SER:H	2.15	0.50
34:DK:111:LYS:HE3	34:DK:111:LYS:N	2.14	0.50
38:DO:51:ALA:HB3	38:DO:78:VAL:CG2	2.42	0.50
40:DQ:59:LEU:O	40:DQ:63:ARG:HD3	2.12	0.50
49:DZ:37:ARG:NE	49:DZ:37:ARG:HA	2.27	0.50
50:D0:12:ARG:HG3	50:D0:15:ARG:NH1	2.19	0.50
1:AB:83:ALA:HB1	1:AB:89:PHE:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:76:SER:HA	6:AG:85:GLN:HB3	1.94	0.49
10:AK:39:ASN:O	10:AK:40:ALA:HB3	2.11	0.49
21:AA:86:G:N2	21:AA:87:C:N4	2.60	0.49
21:AA:503:C:O2	21:AA:510:A:H2	1.95	0.49
21:AA:602:A:H2'	21:AA:603:U:H6	1.76	0.49
21:AA:872:A:C5	21:AA:874:G:C8	3.00	0.49
21:AA:1071:C:C2	21:AA:1105:A:C2	3.00	0.49
21:AA:1234:C:C1'	21:AA:1364:U:H6	2.20	0.49
24:BA:33:C:H2'	24:BA:446:G:N2	2.27	0.49
24:BA:623:C:O2'	24:BA:624:C:H5'	2.11	0.49
24:BA:792:A:C6	24:BA:2440:C:C6	3.00	0.49
24:BA:919:U:H5''	24:BA:919:U:C6	2.44	0.49
24:BA:954:G:C5	24:BA:955:U:C6	2.99	0.49
24:BA:1438:U:O2'	24:BA:1439:A:H5'	2.12	0.49
24:BA:1525:A:H2'	24:BA:1526:C:O4'	2.12	0.49
24:BA:1569:A:N1	24:BA:1570:A:C2	2.80	0.49
24:BA:1653:G:H3'	37:BN:2:ARG:HG3	1.94	0.49
24:BA:1724:G:C5	24:BA:1725:U:C4	2.99	0.49
24:BA:1813:G:N3	26:BC:49:THR:HG21	2.27	0.49
24:BA:2365:G:H4'	46:BW:59:PHE:CE2	2.46	0.49
24:BA:2531:A:H5'	30:BG:156:TYR:CE2	2.46	0.49
26:BC:245:THR:HG23	26:BC:249:VAL:O	2.11	0.49
27:BD:57:ALA:O	27:BD:60:VAL:HG12	2.12	0.49
29:BF:46:LYS:HD2	29:BF:46:LYS:N	2.27	0.49
36:BM:33:LEU:CD2	36:BM:128:THR:HB	2.41	0.49
36:BM:46:ILE:CG1	36:BM:47:GLU:N	2.74	0.49
47:BX:20:ALA:HB3	47:BX:22:ASN:ND2	2.27	0.49
1:CB:45:THR:HG23	1:CB:200:PRO:HD2	1.94	0.49
3:CD:98:ASP:CG	3:CD:114:ARG:HH21	2.14	0.49
3:CD:187:ARG:NH1	3:CD:196:GLU:OE1	2.45	0.49
4:CE:38:VAL:HG23	4:CE:66:ALA:HB1	1.94	0.49
6:CG:30:MET:O	6:CG:31:VAL:CB	2.60	0.49
6:CG:88:VAL:HG22	6:CG:89:GLU:N	2.25	0.49
6:CG:94:ARG:C	6:CG:96:ASN:N	2.65	0.49
8:CI:6:TYR:CE2	8:CI:17:ARG:HA	2.41	0.49
9:CJ:7:ARG:HD3	9:CJ:102:LEU:HD23	1.93	0.49
10:CK:27:ASN:O	10:CK:28:ASN:HB2	2.12	0.49
12:CM:5:GLY:O	12:CM:6:ILE:HG13	2.12	0.49
12:CM:112:ARG:O	55:CA:1228:C:H5''	2.12	0.49
14:CO:16:ARG:HB2	14:CO:23:SER:CB	2.36	0.49
55:CA:90:C:O2'	55:CA:91:U:C6	2.64	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:132:C:O2'	55:CA:133:U:O5'	2.30	0.49
55:CA:484:G:H4'	55:CA:485:U:H5'	1.94	0.49
55:CA:1400:C:C5	22:CV:34:G:N7	2.80	0.49
24:DA:295:G:N3	24:DA:295:G:H2'	2.27	0.49
24:DA:324:A:H2'	24:DA:325:G:C8	2.48	0.49
24:DA:468:G:H5''	28:DE:55:SER:CB	2.42	0.49
24:DA:1342:A:C4	24:DA:1345:C:N4	2.80	0.49
24:DA:1885:A:C6	24:DA:1886:U:C2	3.00	0.49
24:DA:2572:A:C8	27:DD:149:ASN:ND2	2.74	0.49
24:DA:2607:G:H2'	24:DA:2608:G:O4'	2.11	0.49
24:DA:2900:A:C6	24:DA:2901:C:C4	2.99	0.49
56:DB:11:C:C5	56:DB:12:C:H5	2.27	0.49
26:DC:94:LEU:HD13	26:DC:100:ARG:HD3	1.92	0.49
27:DD:28:GLU:HA	27:DD:185:ASN:O	2.11	0.49
35:DL:40:SER:O	35:DL:41:ARG:O	2.30	0.49
41:DR:37:GLU:HB2	41:DR:53:PHE:CG	2.47	0.49
42:DS:96:ILE:HG12	42:DS:96:ILE:O	2.11	0.49
44:DU:9:GLU:OE1	44:DU:23:LYS:HA	2.12	0.49
47:DX:4:CYS:HA	47:DX:32:LEU:HD11	1.94	0.49
47:DX:69:GLU:O	47:DX:71:ARG:N	2.45	0.49
1:AB:143:LEU:HD23	1:AB:143:LEU:H	1.77	0.49
2:AC:130:ARG:O	2:AC:133:MET:HB2	2.12	0.49
4:AE:76:ASN:HD22	4:AE:81:GLN:CG	2.26	0.49
8:AI:11:ARG:HA	8:AI:105:ARG:NH1	2.27	0.49
8:AI:21:LYS:HG2	8:AI:22:PRO:HD2	1.94	0.49
9:AJ:56:HIS:O	9:AJ:57:VAL:HG12	2.12	0.49
10:AK:115:ILE:HG22	10:AK:115:ILE:O	2.10	0.49
16:AQ:32:ILE:HG22	16:AQ:33:TYR:CG	2.47	0.49
16:AQ:41:THR:HG23	21:AA:237:G:OP1	2.12	0.49
21:AA:14:U:C6	21:AA:16:A:OP2	2.65	0.49
21:AA:754:C:HO2'	21:AA:755:G:P	2.34	0.49
21:AA:926:G:C6	21:AA:1505:G:O6	2.64	0.49
21:AA:1054:C:C4	22:AX:34:G:C1'	2.95	0.49
21:AA:1074:G:C6	21:AA:1102:A:N6	2.81	0.49
21:AA:1338:G:C2	21:AA:1339:A:C5	3.00	0.49
24:BA:298:G:H8	24:BA:298:G:O5'	1.96	0.49
24:BA:319:G:C4	24:BA:333:G:N2	2.80	0.49
24:BA:329:G:O4'	24:BA:477:A:H1'	2.12	0.49
24:BA:733:G:C8	24:BA:761:A:N6	2.80	0.49
24:BA:747:U:N3	24:BA:2613:U:C4	2.80	0.49
24:BA:825:A:C6	24:BA:833:A:N1	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1287:A:OP2	37:BN:103:ARG:CG	2.59	0.49
24:BA:1322:A:C5	24:BA:1323:C:C5	3.00	0.49
24:BA:1403:A:C5	24:BA:1404:C:C5	3.00	0.49
24:BA:2093:G:C6	24:BA:2225:A:N7	2.80	0.49
24:BA:2135:A:O2'	24:BA:2136:G:O4'	2.27	0.49
24:BA:2612:C:H2'	24:BA:2612:C:O2	2.11	0.49
24:BA:2674:G:H2'	24:BA:2675:A:H8	1.77	0.49
25:BB:15:A:H1'	25:BB:109:A:C8	2.47	0.49
29:BF:27:VAL:O	29:BF:27:VAL:HG13	2.11	0.49
31:BH:32:PRO:HB3	47:BX:38:TRP:CB	2.38	0.49
33:BJ:18:VAL:HG22	33:BJ:140:LEU:HD12	1.95	0.49
34:BK:105:ARG:NE	34:BK:106:GLU:OE2	2.45	0.49
41:BR:54:VAL:HG22	41:BR:54:VAL:O	2.11	0.49
45:BV:10:LYS:HD3	45:BV:10:LYS:N	2.21	0.49
47:BX:51:SER:O	47:BX:54:GLY:N	2.45	0.49
1:CB:74:ALA:O	1:CB:206:ILE:HD11	2.11	0.49
2:CC:39:ARG:HG3	2:CC:54:ILE:HD13	1.94	0.49
2:CC:122:GLN:HB2	2:CC:127:VAL:CG2	2.42	0.49
2:CC:134:LYS:HD3	2:CC:135:ARG:N	2.27	0.49
3:CD:33:ILE:O	3:CD:35:GLN:HG2	2.12	0.49
9:CJ:101:SER:O	9:CJ:102:LEU:HB2	2.12	0.49
11:CL:80:LEU:HB3	11:CL:97:VAL:CG2	2.42	0.49
11:CL:81:ILE:HD11	11:CL:94:TYR:HB2	1.93	0.49
15:CP:66:THR:HG22	15:CP:67:ILE:H	1.74	0.49
55:CA:193:C:H2'	55:CA:194:C:C5	2.47	0.49
55:CA:469:C:H2'	55:CA:470:C:O4'	2.12	0.49
55:CA:1102:A:C4	55:CA:1103:C:C5	3.00	0.49
55:CA:1213:A:N7	55:CA:1215:G:C5	2.80	0.49
55:CA:1256:A:C2	55:CA:1278:G:C4	3.00	0.49
55:CA:1413:A:C6	55:CA:1414:U:C4	3.00	0.49
24:DA:860:U:O2'	24:DA:861:A:C5'	2.60	0.49
24:DA:1819:A:H5''	26:DC:159:THR:HG21	1.94	0.49
24:DA:2184:A:C2	24:DA:2185:U:C2	3.00	0.49
24:DA:2648:G:H2'	24:DA:2649:C:O4'	2.12	0.49
24:DA:2848:G:N3	24:DA:2849:U:H5	2.10	0.49
26:DC:79:ARG:HG3	26:DC:92:LEU:HB2	1.93	0.49
26:DC:231:HIS:O	26:DC:232:GLY:C	2.50	0.49
27:DD:88:GLU:O	27:DD:89:GLU:HG3	2.12	0.49
27:DD:208:LYS:O	27:DD:209:ALA:HB2	2.10	0.49
28:DE:46:GLN:HB3	28:DE:86:ALA:CB	2.39	0.49
28:DE:55:SER:OG	28:DE:56:GLY:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DF:59:ILE:HD13	29:DF:137:PHE:HZ	1.77	0.49
31:DH:96:THR:HA	31:DH:113:SER:OG	2.12	0.49
33:DJ:44:TYR:O	33:DJ:45:THR:CB	2.60	0.49
33:DJ:73:VAL:HG23	33:DJ:74:TYR:N	2.27	0.49
33:DJ:92:MET:HE2	33:DJ:95:ARG:HD2	1.94	0.49
36:DM:49:ALA:O	36:DM:120:ALA:HB1	2.12	0.49
45:DV:69:GLU:C	45:DV:70:ILE:HD13	2.32	0.49
51:D1:51:ALA:O	51:D1:52:LYS:CB	2.60	0.49
1:AB:51:GLU:HG2	1:AB:197:PHE:CE1	2.47	0.49
1:AB:163:ILE:HG23	1:AB:164:ASP:N	2.22	0.49
3:AD:197:HIS:O	3:AD:201:GLU:HB2	2.13	0.49
4:AE:83:PRO:HB3	4:AE:97:PRO:CD	2.38	0.49
4:AE:130:THR:O	4:AE:131:ASN:C	2.50	0.49
13:AN:84:ARG:HA	13:AN:87:ALA:HB3	1.94	0.49
19:AT:59:ARG:NH2	21:AA:178:C:OP2	2.35	0.49
21:AA:111:G:O6	21:AA:330:C:N4	2.45	0.49
21:AA:577:G:C4'	21:AA:816:A:H2'	2.42	0.49
21:AA:677:U:H2'	21:AA:678:U:C6	2.47	0.49
21:AA:778:G:H2'	21:AA:779:C:H6	1.76	0.49
21:AA:828:U:C5	21:AA:829:G:C8	2.99	0.49
21:AA:872:A:C8	21:AA:874:G:C8	3.00	0.49
21:AA:985:C:H2'	21:AA:986:U:C6	2.47	0.49
21:AA:1053:G:HO2'	21:AA:1054:C:P	2.34	0.49
24:BA:1067:A:H3'	24:BA:1068:G:C8	2.47	0.49
24:BA:2036:C:O2'	24:BA:2037:A:H5'	2.12	0.49
24:BA:2512:C:H2'	24:BA:2513:A:O4'	2.11	0.49
24:BA:2557:G:O2'	24:BA:2558:C:H5'	2.13	0.49
25:BB:38:C:O2'	25:BB:39:A:H5'	2.12	0.49
36:BM:13:HIS:O	36:BM:14:LYS:CB	2.53	0.49
37:BN:32:GLU:CB	37:BN:115:LEU:HD12	2.42	0.49
39:BP:51:ASN:O	39:BP:52:ARG:HD3	2.12	0.49
43:BT:11:LEU:HG	43:BT:46:ALA:HB1	1.93	0.49
53:B3:44:ARG:N	53:B3:45:PRO:HD2	2.27	0.49
54:B4:9:LYS:HB3	54:B4:14:CYS:HB2	1.94	0.49
1:CB:67:LEU:HA	1:CB:89:PHE:O	2.12	0.49
1:CB:133:ALA:HA	1:CB:137:THR:CG2	2.42	0.49
1:CB:212:TYR:HA	1:CB:215:ALA:CB	2.43	0.49
2:CC:63:ILE:HG12	2:CC:65:VAL:CG2	2.42	0.49
3:CD:170:LEU:HB3	3:CD:182:LYS:H	1.76	0.49
4:CE:51:LYS:HE3	55:CA:1081:A:N7	2.27	0.49
5:CF:39:LEU:HD12	5:CF:40:GLU:N	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:33:VAL:HG22	7:CH:58:LEU:HD11	1.95	0.49
9:CJ:5:ARG:HH22	9:CJ:7:ARG:HH22	1.59	0.49
10:CK:126:ARG:NH2	55:CA:796:C:O2'	2.45	0.49
55:CA:423:G:H2'	55:CA:423:G:N3	2.28	0.49
55:CA:427:U:C4	55:CA:428:G:C6	3.00	0.49
55:CA:767:A:C6	55:CA:768:A:C5	3.00	0.49
55:CA:770:C:O2'	55:CA:771:G:H5'	2.12	0.49
55:CA:849:G:N2	55:CA:850:U:H1'	2.27	0.49
55:CA:936:C:H2'	55:CA:937:A:H8	1.77	0.49
55:CA:966:G:N2	55:CA:967:C:C2	2.81	0.49
55:CA:1241:G:O2'	55:CA:1242:G:C8	2.41	0.49
55:CA:1452:C:H4'	55:CA:1453:G:C5'	2.43	0.49
24:DA:6:A:H2'	24:DA:7:G:C8	2.44	0.49
24:DA:41:C:H2'	24:DA:42:A:H8	1.75	0.49
24:DA:751:A:H5'	42:DS:90:LYS:HA	1.93	0.49
24:DA:856:G:O4'	46:DW:23:LYS:HB3	2.11	0.49
24:DA:910:A:C2	36:DM:13:HIS:CE1	2.99	0.49
24:DA:1223:G:H21	24:DA:1225:G:H3'	1.76	0.49
24:DA:1782:U:HO2'	24:DA:1783:A:C5'	2.25	0.49
24:DA:2230:G:H1'	47:DX:31:ASN:HB3	1.95	0.49
24:DA:2427:C:H5''	24:DA:2429:G:H5'	1.94	0.49
24:DA:2455:G:N1	24:DA:2498:C:N4	2.60	0.49
24:DA:2492:U:H2'	24:DA:2493:U:C6	2.46	0.49
24:DA:2516:A:C4	24:DA:2569:G:N2	2.80	0.49
24:DA:2722:G:H2'	24:DA:2723:C:C6	2.47	0.49
24:DA:2745:C:C4	24:DA:2746:U:O4	2.66	0.49
56:DB:52:A:N6	38:DO:33:ARG:HB2	2.27	0.49
29:DF:102:LEU:HB3	29:DF:103:ILE:HD12	1.94	0.49
30:DG:148:ARG:HB2	30:DG:152:ARG:HH21	1.77	0.49
35:DL:95:LEU:HB3	35:DL:100:ILE:HG23	1.93	0.49
38:DO:39:VAL:HB	38:DO:49:VAL:H	1.77	0.49
38:DO:98:GLN:HB3	38:DO:100:HIS:HB3	1.95	0.49
41:DR:66:HIS:CD2	41:DR:94:THR:HG22	2.47	0.49
44:DU:22:GLY:HA3	44:DU:36:GLU:HB3	1.94	0.49
45:DV:29:ILE:HD13	45:DV:31:TYR:CD2	2.45	0.49
45:DV:30:ILE:HD12	45:DV:38:LEU:HD23	1.94	0.49
49:DZ:51:SER:HA	49:DZ:54:VAL:CG2	2.43	0.49
1:AB:50:ASN:OD1	1:AB:51:GLU:N	2.45	0.49
1:AB:124:THR:O	1:AB:125:PHE:HB3	2.12	0.49
3:AD:115:GLN:CD	3:AD:119:HIS:HE1	2.15	0.49
4:AE:19:ARG:HD2	4:AE:30:PHE:CB	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:3:ASN:CG	8:AI:4:GLN:N	2.65	0.49
10:AK:62:ALA:CB	10:AK:91:GLY:HA3	2.43	0.49
14:AO:44:GLU:HG3	14:AO:45:HIS:ND1	2.26	0.49
16:AQ:12:VAL:CG1	16:AQ:13:SER:N	2.70	0.49
21:AA:57:G:C6	21:AA:58:C:N3	2.80	0.49
21:AA:191:G:C6	21:AA:192:A:C5	3.01	0.49
21:AA:418:C:N4	59:AA:1716:HOH:O	2.45	0.49
21:AA:497:G:N2	21:AA:498:A:C6	2.81	0.49
21:AA:652:U:O4	21:AA:752:G:H2'	2.11	0.49
21:AA:803:G:C6	21:AA:804:U:C4	3.01	0.49
21:AA:853:C:O2'	21:AA:854:U:H5'	2.12	0.49
21:AA:1094:G:O2'	21:AA:1095:U:OP2	2.26	0.49
21:AA:1103:C:C2'	21:AA:1104:G:O5'	2.61	0.49
21:AA:1223:C:H5''	21:AA:1224:U:H5''	1.94	0.49
21:AA:1364:U:H2'	21:AA:1364:U:O2	2.12	0.49
24:BA:270:A:C2	24:BA:370:G:C6	3.01	0.49
24:BA:396:G:H1'	47:BX:28:PHE:HB3	1.93	0.49
24:BA:455:C:N3	24:BA:472:A:H2'	2.27	0.49
24:BA:1079:C:C2	24:BA:1080:A:C8	3.00	0.49
24:BA:1083:U:C6	24:BA:1085:A:OP2	2.65	0.49
24:BA:1132:U:H3'	24:BA:1133:A:H5''	1.94	0.49
24:BA:1273:U:HO2'	24:BA:1274:A:P	2.35	0.49
24:BA:1429:G:O4'	24:BA:1568:G:H1'	2.13	0.49
24:BA:1561:C:H2'	24:BA:1562:U:H6	1.77	0.49
24:BA:1669:A:N3	24:BA:1669:A:C2'	2.74	0.49
24:BA:2468:A:O2'	24:BA:2469:A:OP2	2.28	0.49
24:BA:2540:C:H2'	24:BA:2541:A:H5'	1.93	0.49
27:BD:189:VAL:C	27:BD:191:GLY:H	2.16	0.49
30:BG:37:ASN:HB3	30:BG:40:VAL:HG13	1.95	0.49
31:BH:95:GLY:C	31:BH:97:ARG:H	2.15	0.49
33:BJ:70:THR:HG22	33:BJ:90:GLU:CD	2.33	0.49
33:BJ:95:ARG:O	33:BJ:95:ARG:HG3	2.11	0.49
37:BN:103:ARG:HB2	37:BN:110:MET:HE2	1.93	0.49
45:BV:80:HIS:CD2	45:BV:83:LYS:CB	2.95	0.49
46:BW:22:VAL:O	46:BW:23:LYS:O	2.30	0.49
47:BX:40:GLU:O	47:BX:43:LYS:HD2	2.12	0.49
54:B4:30:GLU:HB3	54:B4:33:HIS:ND1	2.28	0.49
3:CD:11:SER:HA	3:CD:18:LEU:HG	1.94	0.49
6:CG:94:ARG:O	6:CG:98:LEU:HB2	2.12	0.49
10:CK:125:LYS:O	10:CK:126:ARG:O	2.30	0.49
15:CP:68:SER:HB3	15:CP:71:VAL:CG1	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CR:32:ILE:CA	17:CR:39:VAL:HG23	2.42	0.49
55:CA:41:G:C2	55:CA:402:G:C2	3.01	0.49
55:CA:96:U:O2'	55:CA:97:G:H5'	2.12	0.49
55:CA:239:U:O5'	55:CA:240:G:OP2	2.31	0.49
55:CA:265:G:H2'	55:CA:266:G:H5'	1.94	0.49
55:CA:369:G:OP2	55:CA:388:G:N1	2.45	0.49
55:CA:1004:A:H2'	55:CA:1005:A:O4'	2.11	0.49
55:CA:1095:U:H5'	55:CA:1109:C:O2	2.12	0.49
55:CA:1322:C:H2'	55:CA:1322:C:O2	2.11	0.49
24:DA:197:A:C8	24:DA:2430:A:C5	3.00	0.49
24:DA:251:A:HO2'	24:DA:252:G:P	2.35	0.49
24:DA:309:A:H1'	24:DA:329:G:C4	2.47	0.49
24:DA:319:G:C6	24:DA:333:G:C6	3.00	0.49
24:DA:354:A:H2'	24:DA:355:U:O4'	2.13	0.49
24:DA:581:C:C2	24:DA:582:A:C8	3.00	0.49
24:DA:725:G:N1	24:DA:726:G:N2	2.61	0.49
24:DA:851:C:H4'	49:DZ:46:MET:HA	1.94	0.49
24:DA:1019:U:O2'	24:DA:1021:A:C2	2.59	0.49
24:DA:1264:A:N7	24:DA:1265:A:C5	2.81	0.49
24:DA:1329:U:O2'	24:DA:1330:C:OP1	2.29	0.49
24:DA:1331:G:HO2'	24:DA:1332:G:C5'	2.25	0.49
24:DA:1399:C:O2'	24:DA:1400:U:C5'	2.56	0.49
24:DA:1416:G:C6	24:DA:1417:C:N4	2.81	0.49
24:DA:2443:C:O2'	24:DA:2444:G:H5'	2.12	0.49
24:DA:2893:A:H4'	24:DA:2894:G:O5'	2.11	0.49
56:DB:39:A:H2'	56:DB:40:U:C6	2.47	0.49
26:DC:174:ARG:HA	26:DC:180:MET:HG2	1.93	0.49
27:DD:148:GLN:HG2	27:DD:149:ASN:H	1.77	0.49
29:DF:136:ILE:HD13	29:DF:145:VAL:CG1	2.39	0.49
29:DF:147:ARG:HD3	29:DF:149:ARG:HH22	1.76	0.49
30:DG:112:VAL:CG1	30:DG:114:HIS:HB3	2.42	0.49
31:DH:49:ALA:O	31:DH:53:GLU:HB2	2.12	0.49
32:DI:109:ALA:HB1	32:DI:125:THR:HG22	1.93	0.49
35:DL:88:GLY:O	35:DL:89:VAL:HG12	2.11	0.49
36:DM:103:TYR:O	36:DM:104:GLU:HG3	2.13	0.49
37:DN:5:LYS:O	59:DN:202:HOH:O	2.20	0.49
37:DN:83:LEU:O	37:DN:87:PHE:HB2	2.13	0.49
42:DS:6:LYS:HZ1	42:DS:104:THR:HG23	1.76	0.49
42:DS:66:ILE:HD13	42:DS:66:ILE:N	2.26	0.49
46:DW:77:LYS:O	46:DW:78:PHE:HB2	2.11	0.49
48:DY:18:LEU:HD13	48:DY:22:LEU:HD13	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:48:MET:C	1:AB:50:ASN:H	2.14	0.49
3:AD:33:ILE:O	3:AD:34:GLU:HB3	2.13	0.49
4:AE:120:HIS:O	4:AE:121:ASN:CB	2.60	0.49
12:AM:40:GLU:HG3	12:AM:41:ASP:H	1.78	0.49
12:AM:109:LYS:HZ3	21:AA:1227:A:H5'	1.77	0.49
14:AO:22:GLY:HA3	21:AA:750:C:O2	2.12	0.49
21:AA:81:A:O2'	21:AA:89:U:O2	2.31	0.49
21:AA:134:G:H2'	21:AA:135:C:C6	2.47	0.49
21:AA:243:A:H4'	21:AA:244:U:H5'	1.94	0.49
21:AA:266:G:H1'	21:AA:268:U:H5	1.76	0.49
21:AA:294:U:H2'	21:AA:295:C:H6	1.77	0.49
21:AA:451:A:N6	21:AA:481:G:O4'	2.46	0.49
21:AA:508:U:O2'	21:AA:509:A:C8	2.66	0.49
21:AA:575:G:N1	21:AA:821:G:C8	2.80	0.49
21:AA:898:G:N2	21:AA:900:A:H3'	2.28	0.49
21:AA:1033:G:H2'	21:AA:1033:G:N3	2.27	0.49
21:AA:1099:G:N3	21:AA:1099:G:H2'	2.28	0.49
21:AA:1261:A:H2'	21:AA:1262:C:O4'	2.13	0.49
24:BA:580:U:O3'	40:BQ:30:VAL:HG13	2.13	0.49
24:BA:696:G:C4	24:BA:697:G:C8	2.99	0.49
24:BA:919:U:C2	24:BA:920:A:N7	2.80	0.49
24:BA:971:G:C2'	24:BA:972:A:H5'	2.42	0.49
24:BA:1239:G:H5''	59:BA:3711:HOH:O	2.12	0.49
24:BA:1255:U:C5	28:BE:67:ARG:O	2.66	0.49
24:BA:1371:G:O2'	24:BA:1372:U:H5'	2.12	0.49
24:BA:1392:A:C6	24:BA:1393:A:N6	2.81	0.49
24:BA:1522:A:O2'	24:BA:1523:U:P	2.70	0.49
24:BA:1805:A:C4	24:BA:1806:C:C5	3.01	0.49
24:BA:2287:A:O2'	24:BA:2288:A:H3'	2.13	0.49
24:BA:2312:U:C2'	24:BA:2313:C:H5'	2.41	0.49
24:BA:2578:G:N2	24:BA:2579:C:C2	2.81	0.49
24:BA:2603:G:O2'	24:BA:2604:U:H5'	2.12	0.49
24:BA:2636:C:O2'	27:BD:45:TYR:CZ	2.65	0.49
24:BA:2712:C:O2'	24:BA:2713:U:H5'	2.12	0.49
25:BB:24:G:H1'	25:BB:27:C:N4	2.28	0.49
25:BB:42:C:O2'	25:BB:43:C:C5'	2.61	0.49
26:BC:151:GLY:C	26:BC:152:GLN:HG3	2.32	0.49
28:BE:134:LEU:CD2	28:BE:161:ALA:HB2	2.43	0.49
34:BK:2:ILE:HG23	34:BK:6:THR:HG21	1.94	0.49
35:BL:77:ILE:HD11	35:BL:108:ALA:HB1	1.93	0.49
36:BM:34:LYS:HD3	36:BM:99:GLY:HA2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BP:13:LYS:HG3	39:BP:76:HIS:ND1	2.28	0.49
42:BS:19:LEU:O	50:B0:21:LEU:HD12	2.13	0.49
46:BW:41:GLY:O	46:BW:42:THR:C	2.51	0.49
51:B1:24:LYS:HE3	51:B1:26:LYS:HA	1.93	0.49
2:CC:2:GLN:OE1	55:CA:1193:G:O6	2.30	0.49
4:CE:151:MET:O	4:CE:155:LYS:HG3	2.12	0.49
6:CG:2:ARG:HA	55:CA:1380:U:H5	1.77	0.49
8:CI:54:VAL:HG23	8:CI:59:LYS:NZ	2.27	0.49
11:CL:54:VAL:O	11:CL:61:GLU:HA	2.12	0.49
18:CS:35:ARG:NH1	18:CS:76:THR:HG22	2.28	0.49
18:CS:43:MET:H	18:CS:43:MET:HE3	1.76	0.49
55:CA:51:A:C4'	55:CA:52:C:OP2	2.59	0.49
55:CA:117:G:O2'	55:CA:118:U:H5'	2.13	0.49
55:CA:765:G:O6	55:CA:811:C:H5	1.95	0.49
55:CA:765:G:C6	55:CA:812:G:C5	3.00	0.49
55:CA:1217:C:H2'	55:CA:1218:C:H6	1.77	0.49
55:CA:1393:U:O4'	55:CA:1502:A:H5''	2.12	0.49
55:CA:1498:U:H6	55:CA:1498:U:OP2	1.95	0.49
22:CV:35:A:C2	22:CV:36:A:C8	3.00	0.49
24:DA:136:G:H8	24:DA:136:G:O5'	1.96	0.49
24:DA:182:A:H2'	24:DA:183:C:H6	1.77	0.49
24:DA:204:A:C8	24:DA:206:U:C4	3.00	0.49
24:DA:249:C:P	24:DA:2394:C:HO2'	2.35	0.49
24:DA:590:A:OP1	28:DE:90:GLN:NE2	2.43	0.49
24:DA:671:C:C5	35:DL:33:ARG:NH2	2.80	0.49
24:DA:1087:G:H2'	24:DA:1089:A:C8	2.48	0.49
24:DA:1299:G:O6	24:DA:1639:C:H5''	2.12	0.49
24:DA:1982:U:H6	24:DA:1982:U:C5'	2.25	0.49
24:DA:2015:A:C4	50:D0:2:VAL:HG11	2.48	0.49
24:DA:2200:C:OP1	47:DX:35:HIS:HA	2.12	0.49
24:DA:2263:C:H4'	24:DA:2329:U:H4'	1.95	0.49
24:DA:2436:G:C2	24:DA:2437:G:C8	3.01	0.49
24:DA:2445:G:O2'	24:DA:2446:G:H5'	2.13	0.49
24:DA:2630:G:O2'	24:DA:2631:G:O5'	2.30	0.49
29:DF:49:LEU:HD22	29:DF:49:LEU:N	2.24	0.49
30:DG:85:LYS:HD3	30:DG:164:ALA:HB3	1.94	0.49
32:DI:52:LEU:O	32:DI:54:ILE:HD12	2.12	0.49
33:DJ:45:THR:O	33:DJ:45:THR:HG23	2.12	0.49
35:DL:48:ARG:HG3	35:DL:48:ARG:NH1	2.27	0.49
37:DN:5:LYS:O	37:DN:6:SER:HB2	2.13	0.49
37:DN:100:CYS:O	50:D0:41:HIS:HD2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DO:26:LEU:HD23	38:DO:92:PHE:HE1	1.76	0.49
38:DO:111:ARG:HA	38:DO:115:LEU:O	2.13	0.49
40:DQ:87:VAL:HG12	40:DQ:88:GLU:H	1.77	0.49
43:DT:7:LEU:O	43:DT:7:LEU:HD23	2.12	0.49
2:AC:133:MET:O	2:AC:136:ALA:HB3	2.12	0.49
4:AE:33:THR:HB	4:AE:49:TYR:CE1	2.46	0.49
7:AH:31:LEU:O	7:AH:35:ILE:HG13	2.13	0.49
15:AP:41:PRO:C	15:AP:42:ILE:HD13	2.33	0.49
20:AU:36:PHE:HD1	20:AU:39:LYS:CB	2.25	0.49
21:AA:428:G:N3	21:AA:430:A:N6	2.60	0.49
21:AA:734:G:C6	21:AA:735:C:N4	2.81	0.49
24:BA:189:G:H2'	24:BA:205:G:N2	2.28	0.49
24:BA:494:G:O2'	24:BA:495:G:H5'	2.12	0.49
24:BA:704:G:C2'	24:BA:726:G:N2	2.75	0.49
24:BA:858:G:C2	24:BA:2268:A:H2'	2.46	0.49
24:BA:1083:U:C5	24:BA:1085:A:OP2	2.65	0.49
24:BA:1326:U:H2'	24:BA:1327:A:H8	1.77	0.49
24:BA:2056:G:H5'	24:BA:2056:G:C8	2.47	0.49
24:BA:2199:A:C5'	24:BA:2200:C:H5	2.25	0.49
27:BD:101:PHE:N	27:BD:101:PHE:CD1	2.81	0.49
28:BE:48:THR:O	28:BE:50:ALA:N	2.46	0.49
28:BE:119:ILE:O	28:BE:187:VAL:O	2.30	0.49
34:BK:77:ILE:HG13	39:BP:71:ARG:HG3	1.94	0.49
36:BM:46:ILE:HG13	36:BM:47:GLU:N	2.26	0.49
38:BO:3:LYS:HG3	38:BO:4:LYS:N	2.28	0.49
40:BQ:85:ALA:HA	40:BQ:115:ALA:CB	2.43	0.49
41:BR:39:LEU:O	41:BR:40:MET:HB2	2.13	0.49
41:BR:64:VAL:O	41:BR:65:ALA:HB3	2.13	0.49
45:BV:40:ILE:CG2	45:BV:41:GLU:N	2.76	0.49
50:B0:53:VAL:O	50:B0:54:ILE:O	2.30	0.49
1:CB:9:LEU:O	1:CB:10:LYS:HB2	2.11	0.49
2:CC:120:THR:HG23	2:CC:187:GLU:O	2.12	0.49
5:CF:5:GLU:O	5:CF:90:MET:HG2	2.11	0.49
6:CG:4:ARG:HG3	6:CG:6:ILE:HG22	1.92	0.49
8:CI:69:GLY:O	55:CA:1250:A:H4'	2.11	0.49
9:CJ:37:ARG:HB3	9:CJ:75:ASP:HB3	1.94	0.49
9:CJ:52:LEU:HB2	13:CN:80:ARG:CD	2.42	0.49
11:CL:65:TYR:HD1	11:CL:66:ILE:H	1.59	0.49
12:CM:1:ALA:N	12:CM:2:ARG:HH11	2.10	0.49
16:CQ:77:VAL:HG12	16:CQ:78:VAL:H	1.77	0.49
20:CU:31:VAL:O	20:CU:33:ARG:N	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:1114:C:H2'	55:CA:1115:U:H6	1.78	0.49
55:CA:1219:A:H2'	55:CA:1220:G:H8	1.76	0.49
55:CA:1408:A:N1	55:CA:1494:G:C6	2.80	0.49
22:CV:30:G:O2'	22:CV:31:A:H5'	2.13	0.49
24:DA:35:G:O2'	24:DA:36:G:O5'	2.30	0.49
24:DA:241:A:O2'	24:DA:242:G:O5'	2.26	0.49
24:DA:464:U:H2'	24:DA:465:G:C8	2.48	0.49
24:DA:784:G:C6	26:DC:227:VAL:HG21	2.48	0.49
24:DA:1071:G:O6	24:DA:1091:G:N7	2.45	0.49
24:DA:1264:A:C6	24:DA:1265:A:N6	2.80	0.49
24:DA:1338:G:N3	24:DA:1393:A:H2	2.10	0.49
24:DA:1521:G:C6	24:DA:1522:A:C6	3.01	0.49
24:DA:1840:G:H2'	24:DA:1841:U:C6	2.48	0.49
24:DA:2373:G:C6	24:DA:2374:C:C4	3.01	0.49
24:DA:2378:A:H2'	38:DO:21:LEU:HD13	1.95	0.49
56:DB:75:G:H1	56:DB:102:G:H22	1.55	0.49
29:DF:46:LYS:HD3	29:DF:50:ASP:HB2	1.95	0.49
29:DF:74:ALA:HB1	29:DF:76:PHE:HD2	1.74	0.49
36:DM:68:PHE:CG	36:DM:69:PRO:HD2	2.47	0.49
39:DP:22:GLY:H	39:DP:46:VAL:HB	1.78	0.49
44:DU:39:ASN:HD21	44:DU:64:ILE:HG22	1.77	0.49
47:DX:26:ARG:HG3	47:DX:27:ARG:N	2.27	0.49
1:AB:40:ILE:HG21	1:AB:201:GLY:N	2.27	0.49
1:AB:132:GLU:O	1:AB:132:GLU:HG3	2.13	0.49
2:AC:49:ALA:HB1	2:AC:75:VAL:HG22	1.94	0.49
8:AI:128:LYS:CD	8:AI:129:ARG:N	2.74	0.49
8:AI:128:LYS:HD2	8:AI:129:ARG:N	2.28	0.49
11:AL:115:LYS:O	11:AL:116:TYR:HB2	2.13	0.49
13:AN:16:ALA:HB2	13:AN:55:SER:H	1.78	0.49
15:AP:21:VAL:O	15:AP:33:ILE:N	2.45	0.49
21:AA:31:G:N2	21:AA:47:C:H5''	2.27	0.49
21:AA:662:U:H2'	21:AA:663:A:C8	2.47	0.49
21:AA:792:A:N3	21:AA:794:A:C6	2.79	0.49
21:AA:794:A:H2'	21:AA:795:C:C5	2.47	0.49
21:AA:1185:G:C6	21:AA:1186:G:N7	2.80	0.49
21:AA:1358:U:H2'	21:AA:1359:C:O4'	2.11	0.49
21:AA:1409:C:H5'	24:BA:1916:A:N1	2.27	0.49
24:BA:455:C:C4	24:BA:472:A:H2'	2.48	0.49
24:BA:555:G:O2'	24:BA:556:A:OP2	2.28	0.49
24:BA:562:U:C4	24:BA:2036:C:O4'	2.66	0.49
24:BA:1071:G:C5	24:BA:1089:A:C6	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1105:U:H2'	24:BA:1106:G:C8	2.46	0.49
24:BA:1435:G:C2	24:BA:1558:C:N4	2.81	0.49
24:BA:1456:G:O2'	24:BA:1457:U:H5'	2.13	0.49
24:BA:1568:G:H4'	26:BC:58:LYS:HB3	1.94	0.49
24:BA:2339:C:H2'	24:BA:2340:A:C8	2.47	0.49
24:BA:2571:U:C4	24:BA:2574:G:C8	3.01	0.49
24:BA:2606:C:H2'	24:BA:2606:C:O2	2.13	0.49
24:BA:2868:A:C2	24:BA:2869:G:C4	3.01	0.49
25:BB:57:A:O2'	25:BB:58:A:H5'	2.12	0.49
26:BC:165:ALA:O	26:BC:172:THR:HG23	2.13	0.49
30:BG:10:VAL:O	30:BG:10:VAL:CG2	2.58	0.49
33:BJ:88:THR:HG21	33:BJ:90:GLU:HG3	1.94	0.49
37:BN:18:GLN:HE21	37:BN:22:ARG:NH1	2.10	0.49
49:BZ:40:THR:HG23	49:BZ:43:ILE:H	1.78	0.49
51:B1:3:GLY:O	51:B1:5:ARG:N	2.46	0.49
6:CG:31:VAL:HG22	6:CG:32:ASP:OD1	2.12	0.49
6:CG:148:LYS:HB2	6:CG:148:LYS:HZ3	1.73	0.49
8:CI:44:ARG:CA	8:CI:46:VAL:HG22	2.42	0.49
8:CI:127:SER:HG	55:CA:1232:U:P	2.35	0.49
19:CT:70:LYS:HA	19:CT:73:ARG:NE	2.28	0.49
55:CA:582:C:H2'	55:CA:583:A:O4'	2.13	0.49
55:CA:849:G:N1	55:CA:850:U:C2	2.81	0.49
55:CA:887:G:H2'	55:CA:888:G:H5'	1.95	0.49
55:CA:1453:G:H2'	55:CA:1454:G:O4'	2.13	0.49
24:DA:83:A:P	44:DU:91:LYS:HZ2	2.36	0.49
24:DA:233:A:C2'	24:DA:234:U:C6	2.96	0.49
24:DA:449:A:H2'	24:DA:450:G:H8	1.77	0.49
24:DA:481:G:H1'	24:DA:507:A:N6	2.28	0.49
24:DA:532:A:H4'	24:DA:533:G:H8	1.74	0.49
24:DA:655:A:O2'	24:DA:656:G:N7	2.46	0.49
24:DA:674:G:H5''	28:DE:71:GLY:HA3	1.94	0.49
24:DA:983:A:H2'	24:DA:984:A:H5'	1.95	0.49
24:DA:1125:G:H4'	54:D4:37:GLN:NE2	2.28	0.49
24:DA:1475:G:O2'	24:DA:1476:U:H6	1.95	0.49
24:DA:1707:G:C5	24:DA:1756:G:C6	3.01	0.49
24:DA:1738:G:HO2'	24:DA:1739:A:H8	1.53	0.49
24:DA:2056:G:N2	24:DA:2057:G:N9	2.61	0.49
24:DA:2566:A:HO2'	24:DA:2567:G:P	2.35	0.49
24:DA:2566:A:O2'	24:DA:2567:G:OP2	2.28	0.49
24:DA:2639:A:N6	24:DA:2640:G:C2	2.81	0.49
24:DA:2737:G:H2'	24:DA:2738:A:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2818:U:H2'	24:DA:2819:G:H8	1.78	0.49
24:DA:2896:C:O2'	24:DA:2897:U:C5'	2.61	0.49
24:DA:2902:C:O2'	24:DA:2903:U:O4'	2.29	0.49
27:DD:193:VAL:HB	27:DD:194:PRO:HD2	1.94	0.49
28:DE:130:LYS:HG3	28:DE:133:LEU:HD13	1.95	0.49
31:DH:143:ILE:O	31:DH:144:VAL:HG13	2.11	0.49
33:DJ:64:VAL:HG11	33:DJ:69:ARG:HA	1.95	0.49
34:DK:111:LYS:HG2	34:DK:112:PHE:CD1	2.47	0.49
37:DN:38:LEU:HB3	37:DN:39:PRO:CD	2.41	0.49
37:DN:97:ILE:HD11	37:DN:99:LYS:NZ	2.28	0.49
41:DR:36:ALA:HA	41:DR:58:VAL:HA	1.95	0.49
47:DX:19:HIS:O	47:DX:20:ALA:HB3	2.13	0.49
48:DY:23:ARG:O	48:DY:27:ASN:HB2	2.12	0.49
51:D1:5:ARG:HH21	51:D1:23:THR:HB	1.75	0.49
1:AB:52:ALA:HA	1:AB:197:PHE:CE1	2.48	0.49
1:AB:94:ARG:CG	21:AA:1100:C:OP1	2.61	0.49
3:AD:25:ARG:O	3:AD:25:ARG:HD2	2.13	0.49
4:AE:36:THR:HG23	4:AE:62:ALA:HB1	1.95	0.49
5:AF:9:MET:HE1	17:AR:64:LEU:O	2.12	0.49
6:AG:147:ASN:O	6:AG:150:PHE:CD1	2.66	0.49
7:AH:40:LYS:HG3	7:AH:47:ASP:HA	1.94	0.49
8:AI:8:THR:HG21	8:AI:10:ARG:NH2	2.25	0.49
12:AM:58:GLU:HA	12:AM:61:LYS:HE3	1.95	0.49
13:AN:87:ALA:HA	13:AN:92:ILE:HG13	1.95	0.49
16:AQ:7:LEU:HD12	16:AQ:7:LEU:N	2.27	0.49
20:AU:16:ARG:C	20:AU:18:PHE:H	2.15	0.49
21:AA:389:A:H2'	21:AA:390:U:O4'	2.12	0.49
21:AA:967:C:N3	21:AA:968:A:N6	2.60	0.49
21:AA:1365:G:HO2'	21:AA:1366:C:H6	1.61	0.49
24:BA:67:U:O5'	24:BA:67:U:H6	1.95	0.49
24:BA:86:G:O2'	24:BA:87:U:C5'	2.58	0.49
24:BA:117:G:C6	24:BA:119:A:N6	2.81	0.49
24:BA:233:A:H61	24:BA:428:A:N6	2.10	0.49
24:BA:513:A:C2	24:BA:514:A:C5	3.00	0.49
24:BA:604:G:C6	24:BA:625:G:C2	3.00	0.49
24:BA:912:C:H2'	24:BA:913:U:C6	2.47	0.49
24:BA:1285:A:C2	24:BA:1328:A:H5''	2.47	0.49
24:BA:1865:U:C5	24:BA:1875:G:N1	2.81	0.49
24:BA:2015:A:O5'	24:BA:2015:A:H8	1.94	0.49
24:BA:2198:A:O2'	24:BA:2224:G:N2	2.44	0.49
24:BA:2679:A:C2	24:BA:2729:G:C2	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2809:A:H2'	24:BA:2810:A:C8	2.48	0.49
24:BA:2816:G:C2	24:BA:2831:G:C4	3.01	0.49
26:BC:266:ILE:HD12	26:BC:266:ILE:N	2.27	0.49
28:BE:26:ALA:O	28:BE:29:HIS:HB3	2.13	0.49
32:BI:15:GLY:CA	32:BI:50:LYS:HB3	2.34	0.49
34:BK:118:LEU:HD12	34:BK:118:LEU:N	2.28	0.49
41:BR:33:VAL:HG21	41:BR:35:PHE:CZ	2.48	0.49
46:BW:13:ARG:O	46:BW:14:ASP:C	2.51	0.49
51:B1:24:LYS:HE2	51:B1:52:LYS:CB	2.43	0.49
52:B2:13:ASN:O	52:B2:17:GLY:HA3	2.12	0.49
2:CC:74:ILE:HG12	2:CC:74:ILE:O	2.13	0.49
4:CE:122:VAL:O	4:CE:123:LEU:HD23	2.13	0.49
8:CI:30:ASN:OD1	8:CI:65:THR:HG23	2.12	0.49
8:CI:66:VAL:O	8:CI:66:VAL:HG13	2.13	0.49
12:CM:53:ASP:HA	12:CM:56:ARG:CZ	2.43	0.49
15:CP:32:PHE:CD1	15:CP:32:PHE:O	2.66	0.49
20:CU:33:ARG:CZ	20:CU:34:ARG:HD3	2.43	0.49
55:CA:720:C:O5'	55:CA:720:C:H6	1.94	0.49
55:CA:885:G:O2'	55:CA:886:G:O5'	2.28	0.49
55:CA:962:C:C4	55:CA:974:A:N6	2.81	0.49
55:CA:1295:U:H2'	55:CA:1296:C:O4'	2.13	0.49
55:CA:1367:C:H2'	55:CA:1368:A:O4'	2.12	0.49
55:CA:1523:G:C4	55:CA:1524:C:C5	3.01	0.49
24:DA:83:A:N6	24:DA:101:A:C5'	2.73	0.49
24:DA:453:A:N3	24:DA:457:A:O2'	2.45	0.49
24:DA:669:G:N2	24:DA:670:A:C2	2.80	0.49
24:DA:1014:A:C4	24:DA:1015:U:C5	3.00	0.49
24:DA:1125:G:C6	24:DA:1126:A:N6	2.80	0.49
24:DA:1331:G:N3	24:DA:1333:G:C8	2.81	0.49
24:DA:1532:A:H2'	24:DA:1533:C:C6	2.47	0.49
24:DA:1875:G:H8	24:DA:1875:G:OP2	1.95	0.49
24:DA:1947:C:O2'	24:DA:1948:G:H5'	2.13	0.49
24:DA:2496:C:N4	59:DA:3562:HOH:O	2.46	0.49
24:DA:2550:G:O6	24:DA:2551:C:N4	2.45	0.49
24:DA:2757:A:C2'	24:DA:2758:A:H5'	2.43	0.49
26:DC:166:ARG:HB2	26:DC:171:VAL:CG2	2.39	0.49
28:DE:98:LYS:O	28:DE:99:LYS:HB2	2.13	0.49
28:DE:129:PRO:HG3	28:DE:159:LEU:HD23	1.93	0.49
31:DH:21:VAL:HG22	31:DH:22:LYS:H	1.77	0.49
41:DR:6:GLN:HA	41:DR:6:GLN:HE21	1.78	0.49
52:D2:11:LYS:O	52:D2:14:ARG:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:187:ASP:HB2	1:AB:203:ASP:OD1	2.13	0.49
4:AE:79:THR:OG1	4:AE:80:LEU:N	2.46	0.49
4:AE:80:LEU:HD23	4:AE:122:VAL:HG21	1.94	0.49
5:AF:38:ARG:HH21	5:AF:97:THR:CA	2.26	0.49
12:AM:3:ILE:O	12:AM:3:ILE:HG13	2.13	0.49
15:AP:4:ILE:HG12	15:AP:21:VAL:HG22	1.94	0.49
21:AA:71:A:C6	21:AA:100:G:C8	3.00	0.49
21:AA:147:G:H2'	21:AA:148:G:C8	2.47	0.49
21:AA:570:G:C6	21:AA:873:A:C2	3.00	0.49
21:AA:664:G:H22	21:AA:741:G:H1	1.59	0.49
21:AA:765:G:N2	21:AA:813:U:H5	2.11	0.49
21:AA:967:C:N3	21:AA:968:A:C6	2.81	0.49
21:AA:1219:A:H2'	21:AA:1220:G:C8	2.47	0.49
21:AA:1331:G:H2'	21:AA:1332:A:OP2	2.12	0.49
21:AA:1386:G:C2	21:AA:1387:G:N7	2.81	0.49
24:BA:164:C:H5'	24:BA:165:A:OP2	2.12	0.49
24:BA:221:A:C4	24:BA:266:G:N7	2.81	0.49
24:BA:322:A:O4'	24:BA:340:A:H1'	2.13	0.49
24:BA:402:A:H2'	24:BA:403:U:O4'	2.13	0.49
24:BA:418:C:C2'	24:BA:419:U:H5'	2.43	0.49
24:BA:545:U:H2'	24:BA:546:U:C4'	2.39	0.49
24:BA:1083:U:H2'	24:BA:1084:A:O5'	2.13	0.49
24:BA:1138:G:O2'	33:BJ:107:GLY:HA3	2.12	0.49
24:BA:1452:G:C8	24:BA:1457:U:N3	2.81	0.49
24:BA:1632:A:H2'	24:BA:1633:G:C8	2.47	0.49
24:BA:1675:C:O5'	24:BA:1675:C:H6	1.95	0.49
24:BA:1831:G:H2'	24:BA:1832:C:H6	1.77	0.49
24:BA:2231:U:C4	24:BA:2232:C:C5	3.01	0.49
24:BA:2468:A:O2'	24:BA:2469:A:P	2.71	0.49
25:BB:35:C:H2'	25:BB:36:C:O4'	2.12	0.49
27:BD:139:SER:HB3	27:BD:142:VAL:HG21	1.93	0.49
29:BF:3:LEU:HD23	29:BF:100:GLU:HB2	1.95	0.49
35:BL:57:LEU:HD22	53:B3:53:ASP:HB3	1.95	0.49
35:BL:80:SER:C	35:BL:81:ASP:O	2.49	0.49
40:BQ:57:ARG:HH21	40:BQ:92:LYS:HD2	1.78	0.49
40:BQ:91:ARG:CZ	40:BQ:93:ILE:HG21	2.43	0.49
45:BV:42:LEU:HD12	45:BV:47:VAL:HG21	1.94	0.49
46:BW:25:PHE:O	46:BW:27:GLY:N	2.45	0.49
49:BZ:43:ILE:HD12	49:BZ:43:ILE:O	2.13	0.49
1:CB:64:GLY:HA2	1:CB:158:ASP:OD2	2.13	0.49
2:CC:196:GLY:HA3	55:CA:1057:G:O3'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:10:LEU:HD12	3:CD:10:LEU:N	2.28	0.49
4:CE:63:MET:HA	4:CE:66:ALA:HB3	1.95	0.49
6:CG:32:ASP:HB2	6:CG:34:LYS:HD3	1.94	0.49
6:CG:70:PRO:O	6:CG:90:VAL:HG21	2.12	0.49
8:CI:48:ARG:N	8:CI:48:ARG:HD2	2.28	0.49
12:CM:102:LYS:CG	55:CA:1226:C:H41	2.19	0.49
15:CP:36:VAL:HG21	15:CP:57:ILE:HD13	1.95	0.49
16:CQ:17:GLU:O	55:CA:255:G:H5'	2.12	0.49
17:CR:47:ARG:HD2	17:CR:50:TYR:CE2	2.48	0.49
18:CS:35:ARG:NE	55:CA:1221:G:H5'	2.28	0.49
55:CA:71:A:C2	55:CA:72:A:C8	3.00	0.49
55:CA:198:G:C6	55:CA:220:G:N3	2.81	0.49
55:CA:588:G:C6	55:CA:589:U:C4	3.00	0.49
55:CA:635:A:H2'	55:CA:636:U:C6	2.48	0.49
55:CA:752:G:H1'	55:CA:754:C:N4	2.27	0.49
55:CA:927:G:C4'	55:CA:1503:A:N7	2.72	0.49
55:CA:1004:A:C5	55:CA:1026:G:N7	2.81	0.49
55:CA:1126:U:HO2'	55:CA:1127:G:H8	1.61	0.49
55:CA:1401:G:N2	55:CA:1402:C:H1'	2.28	0.49
24:DA:49:A:H1'	24:DA:51:G:C4	2.48	0.49
24:DA:96:C:H2'	24:DA:97:C:C6	2.48	0.49
24:DA:380:G:H2'	24:DA:381:G:O4'	2.12	0.49
24:DA:446:G:H5''	24:DA:447:A:OP1	2.12	0.49
24:DA:876:C:H3'	24:DA:877:A:C8	2.47	0.49
24:DA:1171:G:H2'	24:DA:1172:C:O4'	2.13	0.49
24:DA:1272:A:N7	24:DA:1618:A:H1'	2.28	0.49
24:DA:1783:A:N1	24:DA:2587:A:H2'	2.27	0.49
24:DA:1906:G:N2	24:DA:1925:C:O2	2.46	0.49
24:DA:2001:C:H1'	24:DA:2689:U:C4	2.47	0.49
24:DA:2065:C:C4	24:DA:2066:C:N4	2.81	0.49
24:DA:2074:U:H4'	24:DA:2598:A:O4'	2.11	0.49
24:DA:2106:U:H2'	24:DA:2107:G:C8	2.48	0.49
24:DA:2141:G:H2'	24:DA:2142:A:C8	2.47	0.49
24:DA:2152:G:N3	24:DA:2152:G:H2'	2.27	0.49
24:DA:2199:A:H2'	24:DA:2200:C:C6	2.48	0.49
24:DA:2331:G:C6	24:DA:2385:C:N4	2.81	0.49
24:DA:2592:G:O2'	24:DA:2593:U:H5'	2.13	0.49
24:DA:2691:C:O2'	24:DA:2692:G:C5'	2.60	0.49
24:DA:2779:U:O4'	24:DA:2781:A:N7	2.46	0.49
24:DA:2861:U:H2'	24:DA:2862:G:H8	1.76	0.49
26:DC:93:VAL:HG13	26:DC:94:LEU:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DC:144:GLU:HG3	26:DC:151:GLY:CA	2.42	0.49
29:DF:110:ILE:HB	29:DF:113:PHE:HB2	1.94	0.49
32:DI:32:VAL:HG22	32:DI:58:ILE:HG21	1.95	0.49
32:DI:61:TYR:HE2	32:DI:67:THR:H	1.61	0.49
34:DK:87:LEU:HA	34:DK:95:ILE:H	1.78	0.49
37:DN:114:GLU:HG2	37:DN:115:LEU:N	2.27	0.49
38:DO:30:ARG:HG3	38:DO:30:ARG:NH1	2.23	0.49
39:DP:20:ARG:HD2	39:DP:21:PRO:HD2	1.94	0.49
43:DT:10:VAL:HG23	43:DT:11:LEU:H	1.78	0.49
46:DW:16:GLU:O	46:DW:17:ALA:HB3	2.12	0.49
1:AB:101:THR:HG23	1:AB:102:ASN:N	2.24	0.49
1:AB:138:ARG:HA	1:AB:141:GLU:CD	2.33	0.49
1:AB:216:VAL:O	1:AB:216:VAL:HG12	2.12	0.49
2:AC:119:ILE:CG2	2:AC:197:VAL:HG11	2.42	0.49
3:AD:71:PHE:O	3:AD:74:TYR:HB2	2.13	0.49
4:AE:13:LYS:CE	4:AE:112:ALA:HA	2.43	0.49
4:AE:14:LEU:HD13	4:AE:14:LEU:C	2.33	0.49
6:AG:146:ALA:C	6:AG:148:LYS:H	2.14	0.49
10:AK:126:ARG:HA	10:AK:126:ARG:HE	1.77	0.49
14:AO:31:LEU:HD12	14:AO:62:ARG:HB2	1.94	0.49
21:AA:198:G:O6	21:AA:220:G:C6	2.66	0.49
21:AA:427:U:H2'	21:AA:428:G:C8	2.47	0.49
21:AA:588:G:C5	21:AA:589:U:C5	3.01	0.49
21:AA:604:G:C6	21:AA:605:U:N3	2.80	0.49
21:AA:1142:G:C2	21:AA:1143:G:H1'	2.48	0.49
21:AA:1220:G:N1	21:AA:1221:G:C5	2.81	0.49
21:AA:1296:C:H4'	21:AA:1302:C:N3	2.28	0.49
24:BA:301:G:C5	24:BA:302:C:C4	3.01	0.49
24:BA:778:G:C6	24:BA:779:U:N3	2.81	0.49
24:BA:1312:U:H4'	24:BA:1313:U:O2	2.13	0.49
24:BA:1452:G:H3'	59:BA:3420:HOH:O	2.13	0.49
24:BA:1781:U:O2'	24:BA:1782:U:P	2.71	0.49
24:BA:1817:G:O2'	24:BA:1818:U:C5'	2.56	0.49
24:BA:1965:C:H2'	24:BA:1966:A:H8	1.74	0.49
24:BA:2886:A:N3	24:BA:2887:A:H1'	2.28	0.49
29:BF:7:TYR:HD2	29:BF:11:VAL:HG11	1.77	0.49
31:BH:80:ILE:HG23	31:BH:147:VAL:HG21	1.94	0.49
32:BI:126:ARG:HA	32:BI:129:GLU:CB	2.42	0.49
33:BJ:65:THR:CG2	33:BJ:66:GLY:N	2.74	0.49
34:BK:7:MET:C	34:BK:8:LEU:HD23	2.33	0.49
37:BN:53:THR:HA	37:BN:56:LYS:HG3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BQ:20:ALA:HB1	40:BQ:27:ARG:O	2.13	0.49
44:BU:13:LEU:HD11	44:BU:70:ALA:HB2	1.95	0.49
46:BW:31:LEU:HD23	46:BW:31:LEU:N	2.27	0.49
48:BY:43:LEU:O	48:BY:47:ARG:HB2	2.12	0.49
49:BZ:23:LEU:HD21	49:BZ:53:MET:CE	2.43	0.49
51:B1:13:SER:HB3	51:B1:47:ILE:O	2.13	0.49
1:CB:73:ARG:HG3	1:CB:74:ALA:N	2.28	0.49
1:CB:170:ILE:HA	1:CB:173:LYS:HE2	1.95	0.49
2:CC:110:LEU:HD11	2:CC:203:LYS:HZ3	1.78	0.49
3:CD:81:LEU:O	3:CD:83:GLY:N	2.45	0.49
4:CE:79:THR:HA	4:CE:121:ASN:ND2	2.27	0.49
6:CG:65:LEU:O	6:CG:69:ARG:HB2	2.13	0.49
6:CG:94:ARG:O	6:CG:96:ASN:N	2.46	0.49
13:CN:72:PHE:CG	13:CN:73:LEU:N	2.81	0.49
55:CA:93:U:H2'	55:CA:95:C:C5	2.47	0.49
55:CA:345:C:H3'	39:DP:38:ARG:NH1	2.28	0.49
55:CA:373:A:OP2	55:CA:373:A:H3'	2.13	0.49
55:CA:428:G:H8	55:CA:428:G:OP1	1.96	0.49
55:CA:792:A:C4	55:CA:794:A:N6	2.81	0.49
55:CA:821:G:HO2'	55:CA:822:U:H6	1.54	0.49
55:CA:1050:G:O2'	55:CA:1051:C:O5'	2.31	0.49
55:CA:1169:A:C2	55:CA:1170:A:C4	3.01	0.49
55:CA:1502:A:O2'	55:CA:1503:A:OP1	2.26	0.49
24:DA:64:A:N1	24:DA:91:A:N6	2.60	0.49
24:DA:271:G:C4	24:DA:367:G:C2	3.01	0.49
24:DA:303:G:C2	24:DA:304:U:C2	3.00	0.49
24:DA:604:G:O2'	24:DA:605:G:C8	2.50	0.49
24:DA:1054:A:N3	24:DA:1055:G:H1'	2.27	0.49
24:DA:1085:A:H2'	24:DA:1086:A:N3	2.28	0.49
24:DA:1332:G:C6	24:DA:1609:A:N7	2.81	0.49
24:DA:1486:U:H2'	24:DA:1487:U:C6	2.47	0.49
24:DA:1506:U:O5'	24:DA:1506:U:H6	1.96	0.49
24:DA:1587:G:H2'	24:DA:1588:G:H8	1.78	0.49
24:DA:1659:G:C5	24:DA:1660:G:C8	3.01	0.49
24:DA:2093:G:C6	24:DA:2225:A:N7	2.81	0.49
24:DA:2227:A:H5''	26:DC:260:LYS:HD2	1.93	0.49
24:DA:2340:A:H2'	24:DA:2341:G:H8	1.76	0.49
56:DB:52:A:OP2	38:DO:64:TYR:CD1	2.66	0.49
56:DB:76:G:H5''	45:DV:17:SER:CB	2.43	0.49
26:DC:147:PRO:HD3	26:DC:184:GLU:CG	2.40	0.49
27:DD:159:LYS:HE2	27:DD:160:LYS:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DF:35:LEU:HD11	29:DF:153:ILE:HG23	1.94	0.49
29:DF:103:ILE:HG22	29:DF:103:ILE:O	2.13	0.49
40:DQ:40:LYS:HD2	40:DQ:44:TYR:CE2	2.48	0.49
40:DQ:42:GLY:O	40:DQ:45:ALA:HB3	2.12	0.49
40:DQ:108:LEU:O	40:DQ:108:LEU:HD23	2.13	0.49
45:DV:21:ARG:HE	45:DV:87:GLN:CB	2.26	0.49
53:D3:41:ARG:HG2	53:D3:44:ARG:HH22	1.78	0.49
1:AB:69:VAL:HB	1:AB:162:VAL:HG12	1.95	0.48
1:AB:80:LYS:O	1:AB:80:LYS:HG2	2.12	0.48
3:AD:195:ASN:CB	3:AD:198:LEU:HD12	2.43	0.48
4:AE:75:LEU:HD21	4:AE:119:VAL:CG1	2.42	0.48
8:AI:11:ARG:NE	8:AI:106:ASP:HB2	2.28	0.48
8:AI:11:ARG:HD3	8:AI:106:ASP:HB2	1.94	0.48
13:AN:63:CYS:HB3	13:AN:68:ARG:H	1.78	0.48
16:AQ:17:GLU:HG2	16:AQ:17:GLU:O	2.13	0.48
20:AU:36:PHE:HD1	20:AU:39:LYS:HG2	1.78	0.48
21:AA:484:G:C4'	21:AA:485:U:O5'	2.56	0.48
21:AA:655:A:H2'	21:AA:656:G:C8	2.48	0.48
21:AA:954:G:C5	21:AA:955:U:C4	3.01	0.48
21:AA:1006:G:H2'	21:AA:1007:U:C6	2.48	0.48
21:AA:1088:G:C2	21:AA:1089:G:C8	3.00	0.48
21:AA:1304:G:H5''	21:AA:1305:G:OP1	2.13	0.48
21:AA:1466:C:H2'	21:AA:1467:C:O4'	2.13	0.48
21:AA:1513:A:H2'	21:AA:1514:G:H8	1.78	0.48
24:BA:169:G:H2'	24:BA:170:U:C6	2.47	0.48
24:BA:563:A:C6	24:BA:2018:G:C4	3.01	0.48
24:BA:728:G:C4	24:BA:730:A:C8	3.01	0.48
24:BA:839:U:O2'	24:BA:840:C:H5'	2.13	0.48
24:BA:960:A:H2	24:BA:2495:G:N3	2.10	0.48
24:BA:995:C:OP2	40:BQ:53:LYS:CE	2.61	0.48
24:BA:1059:G:C6	24:BA:1080:A:C6	3.01	0.48
24:BA:1252:G:C2	24:BA:1253:A:C2	3.01	0.48
24:BA:1520:U:C4	24:BA:1521:G:C6	3.01	0.48
24:BA:1693:U:H4'	24:BA:1694:C:OP2	2.11	0.48
24:BA:1786:A:H1'	24:BA:1938:A:N6	2.28	0.48
24:BA:1805:A:N3	26:BC:49:THR:HG23	2.28	0.48
24:BA:2063:C:C5	24:BA:2064:C:C5	3.01	0.48
24:BA:2200:C:N4	24:BA:2224:G:C2	2.80	0.48
24:BA:2316:G:H2'	24:BA:2317:A:H8	1.77	0.48
24:BA:2405:G:H1'	24:BA:2412:A:H61	1.77	0.48
24:BA:2842:G:C4	24:BA:2843:G:C8	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BL:30:THR:O	35:BL:33:ARG:HG2	2.12	0.48
40:BQ:13:HIS:CD2	40:BQ:31:TYR:CD1	2.99	0.48
1:CB:131:LYS:HD3	1:CB:131:LYS:O	2.13	0.48
7:CH:29:SER:HB3	55:CA:589:U:H5''	1.95	0.48
12:CM:69:ARG:HA	12:CM:72:ILE:CG2	2.42	0.48
13:CN:30:ILE:O	13:CN:40:ARG:HA	2.13	0.48
17:CR:33:THR:HG22	17:CR:39:VAL:HG22	1.94	0.48
55:CA:37:U:O2	55:CA:548:G:C2	2.66	0.48
55:CA:80:A:C6	55:CA:81:A:O2'	2.66	0.48
55:CA:885:G:HO2'	55:CA:886:G:H8	1.61	0.48
55:CA:1070:U:H2'	55:CA:1071:C:C6	2.45	0.48
55:CA:1213:A:C4	55:CA:1215:G:C8	3.01	0.48
55:CA:1386:G:C2	55:CA:1387:G:N7	2.81	0.48
55:CA:1524:C:H2'	55:CA:1525:G:C8	2.48	0.48
24:DA:1:G:H2'	24:DA:2:G:H8	1.74	0.48
24:DA:142:A:H5''	24:DA:142:A:H8	1.77	0.48
24:DA:155:A:C6	24:DA:172:A:N6	2.81	0.48
24:DA:370:G:C6	24:DA:424:G:C5	3.01	0.48
24:DA:526:A:C6	24:DA:2626:C:H4'	2.49	0.48
24:DA:591:U:C2	24:DA:592:A:C8	3.01	0.48
24:DA:815:C:H2'	24:DA:816:C:H6	1.78	0.48
24:DA:1123:C:H2'	24:DA:1124:G:C8	2.47	0.48
24:DA:1210:G:H5'	24:DA:1212:G:O4'	2.13	0.48
24:DA:1340:U:H1'	24:DA:1603:A:H5'	1.94	0.48
24:DA:1566:A:C2	26:DC:212:TRP:HB2	2.48	0.48
24:DA:1889:A:N3	24:DA:2086:U:O2'	2.37	0.48
24:DA:2023:C:H4'	24:DA:2617:U:O2'	2.13	0.48
24:DA:2093:G:O2'	24:DA:2094:A:C5'	2.61	0.48
24:DA:2183:A:H2'	24:DA:2184:A:H8	1.78	0.48
24:DA:2880:C:H1'	37:DN:93:GLY:H	1.78	0.48
56:DB:45:A:C2'	56:DB:46:A:C8	2.92	0.48
56:DB:98:G:N1	45:DV:14:LYS:CB	2.75	0.48
26:DC:173:LEU:HD22	26:DC:173:LEU:N	2.26	0.48
33:DJ:44:TYR:CD2	33:DJ:44:TYR:C	2.86	0.48
36:DM:17:ASN:HB3	36:DM:38:ARG:NH2	2.28	0.48
37:DN:32:GLU:OE1	37:DN:115:LEU:HD12	2.13	0.48
40:DQ:57:ARG:O	40:DQ:61:ILE:HD13	2.12	0.48
44:DU:47:PRO:HB3	44:DU:54:PRO:HG2	1.95	0.48
5:AF:98:GLU:O	5:AF:99:ALA:HB3	2.13	0.48
7:AH:45:ILE:C	7:AH:63:LYS:HD2	2.32	0.48
18:AS:36:ARG:HD3	21:AA:1318:A:O2'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AU:9:GLU:HB2	2:CC:48:LYS:NZ	2.28	0.48
21:AA:61:G:H2'	21:AA:62:U:C6	2.48	0.48
21:AA:71:A:C2	21:AA:72:A:C8	3.01	0.48
21:AA:230:G:O2'	21:AA:231:U:H5'	2.13	0.48
24:BA:145:C:H2'	24:BA:146:A:C8	2.48	0.48
24:BA:361:G:H8	24:BA:361:G:OP2	1.96	0.48
24:BA:715:A:C6	24:BA:716:A:C6	3.01	0.48
24:BA:726:G:O2'	24:BA:727:A:P	2.71	0.48
24:BA:754:U:C2	24:BA:755:U:C5	3.01	0.48
24:BA:976:G:N3	24:BA:977:G:C8	2.80	0.48
24:BA:1005:C:C2	24:BA:1143:A:C6	3.01	0.48
24:BA:1190:G:H2'	24:BA:1191:G:C8	2.43	0.48
24:BA:1231:U:H2'	24:BA:1232:G:H8	1.78	0.48
24:BA:1356:G:C5	24:BA:1357:C:C5	3.01	0.48
24:BA:1362:C:H2'	24:BA:1363:C:O4'	2.13	0.48
24:BA:2231:U:P	47:BX:29:LEU:HD23	2.54	0.48
24:BA:2378:A:N7	24:BA:2379:G:H1'	2.28	0.48
25:BB:29:A:OP2	38:BO:32:PRO:HD2	2.13	0.48
25:BB:41:G:H3'	25:BB:42:C:C5'	2.42	0.48
26:BC:188:ARG:O	26:BC:189:ALA:HB2	2.12	0.48
30:BG:59:ASP:O	30:BG:60:GLY:C	2.51	0.48
34:BK:22:ILE:O	34:BK:23:LYS:HB2	2.13	0.48
35:BL:55:MET:HE2	35:BL:56:PRO:CD	2.43	0.48
35:BL:68:SER:HB3	35:BL:71:ALA:HB3	1.94	0.48
35:BL:76:GLU:C	35:BL:77:ILE:HD12	2.33	0.48
39:BP:67:GLU:OE1	39:BP:67:GLU:HA	2.13	0.48
41:BR:98:ILE:HG22	41:BR:98:ILE:O	2.13	0.48
42:BS:24:ILE:HD12	42:BS:32:ALA:HB1	1.96	0.48
44:BU:73:ASN:HD22	44:BU:76:THR:HG23	1.78	0.48
46:BW:37:VAL:HG22	46:BW:55:ASP:O	2.13	0.48
47:BX:39:VAL:C	47:BX:41:SER:H	2.16	0.48
51:B1:11:VAL:O	51:B1:48:TYR:HA	2.13	0.48
1:CB:125:PHE:HA	1:CB:136:ARG:NH2	2.28	0.48
13:CN:9:GLU:HA	13:CN:12:ARG:HD2	1.95	0.48
19:CT:62:ALA:HA	19:CT:67:HIS:CE1	2.48	0.48
55:CA:128:G:C2	55:CA:234:C:C2	3.01	0.48
55:CA:459:A:H2'	55:CA:460:A:H8	1.78	0.48
55:CA:530:G:O2'	22:CX:35:A:H4'	2.13	0.48
55:CA:792:A:O2'	55:CA:793:U:OP2	2.31	0.48
55:CA:1162:C:C2	55:CA:1175:G:N2	2.81	0.48
55:CA:1244:G:C6	55:CA:1245:C:C4	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:17:G:H4'	40:DQ:24:TYR:CE1	2.49	0.48
24:DA:40:U:C4	24:DA:41:C:C4	3.00	0.48
24:DA:78:U:C2'	24:DA:79:C:H5'	2.43	0.48
24:DA:465:G:C4'	52:D2:16:HIS:HD2	2.24	0.48
24:DA:574:A:H4'	24:DA:575:A:C5'	2.42	0.48
24:DA:771:G:C4	24:DA:772:C:C5	3.00	0.48
24:DA:1004:U:H1'	24:DA:1010:A:C4	2.47	0.48
24:DA:1219:U:H2'	24:DA:1220:G:C8	2.47	0.48
24:DA:1275:A:C4	37:DN:16:HIS:HD2	2.31	0.48
24:DA:1278:C:H2'	24:DA:1279:G:H8	1.77	0.48
24:DA:1412:U:H2'	24:DA:1413:A:O4'	2.12	0.48
24:DA:1434:A:H2'	24:DA:1435:G:O4'	2.12	0.48
24:DA:1570:A:C5	24:DA:1571:A:C6	3.00	0.48
24:DA:1935:G:H1	24:DA:1962:C:H2'	1.78	0.48
24:DA:1953:A:C2	24:DA:2550:G:O4'	2.66	0.48
24:DA:2201:G:H2'	24:DA:2202:U:O4'	2.13	0.48
24:DA:2229:U:H2'	24:DA:2230:G:H8	1.77	0.48
24:DA:2270:A:H5'	46:DW:18:LYS:HG2	1.94	0.48
24:DA:2283:C:N4	24:DA:2389:G:C6	2.81	0.48
56:DB:11:C:H3'	56:DB:12:C:H5'	1.94	0.48
28:DE:148:ILE:HA	28:DE:187:VAL:HB	1.95	0.48
30:DG:37:ASN:HD22	30:DG:40:VAL:CG2	2.25	0.48
36:DM:3:GLN:NE2	36:DM:92:TRP:CD1	2.81	0.48
38:DO:51:ALA:HB3	38:DO:78:VAL:HG22	1.95	0.48
39:DP:48:ALA:HB3	39:DP:59:THR:OG1	2.12	0.48
39:DP:107:ALA:O	39:DP:108:ARG:C	2.51	0.48
52:D2:11:LYS:O	52:D2:12:ARG:C	2.51	0.48
1:AB:130:LYS:HA	1:AB:130:LYS:HZ3	1.77	0.48
2:AC:139:ASN:N	2:AC:139:ASN:HD22	2.11	0.48
2:AC:161:ILE:O	2:AC:161:ILE:HG13	2.13	0.48
2:AC:190:THR:HG21	2:AC:192:TYR:CZ	2.48	0.48
9:AJ:37:ARG:HD2	21:AA:1125:U:OP1	2.13	0.48
10:AK:113:THR:HB	20:AU:28:LEU:HD11	1.94	0.48
16:AQ:46:HIS:CG	16:AQ:47:ASP:N	2.81	0.48
16:AQ:51:GLU:HG2	16:AQ:52:CYS:SG	2.53	0.48
19:AT:82:ILE:C	19:AT:82:ILE:HD12	2.33	0.48
20:AU:43:GLU:C	20:AU:45:LYS:H	2.16	0.48
21:AA:91:U:H2'	21:AA:92:U:C1'	2.42	0.48
21:AA:465:A:H2'	21:AA:466:A:O4'	2.13	0.48
21:AA:502:A:H2'	21:AA:503:C:H6	1.78	0.48
21:AA:947:G:C2	21:AA:948:C:C2	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:955:U:H2'	21:AA:956:U:C6	2.43	0.48
21:AA:1049:U:O2'	21:AA:1050:G:P	2.71	0.48
21:AA:1099:G:C5	21:AA:1100:C:C4	3.01	0.48
21:AA:1151:A:N6	21:AA:1152:A:N6	2.61	0.48
21:AA:1169:A:O2'	21:AA:1170:A:C5'	2.62	0.48
21:AA:1239:A:H1'	21:AA:1241:G:C5	2.48	0.48
22:AV:37:A:C2	23:AW:1:U:C4	3.01	0.48
24:BA:574:A:H4'	24:BA:575:A:H5'	1.95	0.48
24:BA:1001:A:H2'	24:BA:1002:G:O4'	2.13	0.48
24:BA:1351:C:N3	24:BA:1381:G:C6	2.81	0.48
24:BA:1374:G:C5	24:BA:1375:U:C5	3.01	0.48
24:BA:1549:A:C6	24:BA:1550:C:N3	2.82	0.48
24:BA:1858:A:O2'	24:BA:1859:U:H5'	2.13	0.48
24:BA:2276:G:P	36:BM:83:GLY:O	2.71	0.48
24:BA:2297:A:O2'	24:BA:2298:A:H5'	2.12	0.48
24:BA:2318:G:C6	24:BA:2319:G:C6	3.01	0.48
24:BA:2444:G:C6	24:BA:2445:G:C5	3.01	0.48
24:BA:2486:C:H2'	24:BA:2487:G:O4'	2.13	0.48
24:BA:2740:A:C6	24:BA:2741:A:C6	3.01	0.48
24:BA:2887:A:H2'	24:BA:2887:A:N3	2.29	0.48
26:BC:169:ALA:O	26:BC:185:ALA:HB3	2.12	0.48
27:BD:70:LYS:O	27:BD:71:ALA:CB	2.61	0.48
27:BD:182:ALA:O	27:BD:184:ARG:N	2.46	0.48
31:BH:5:LEU:O	31:BH:16:GLY:HA2	2.14	0.48
32:BI:6:ALA:HB3	32:BI:60:VAL:H	1.79	0.48
33:BJ:37:ARG:HA	33:BJ:118:MET:CE	2.44	0.48
33:BJ:64:VAL:HG13	33:BJ:65:THR:O	2.13	0.48
33:BJ:132:HIS:HB3	33:BJ:135:GLN:HG2	1.96	0.48
37:BN:3:HIS:O	37:BN:4:ARG:HB2	2.13	0.48
37:BN:93:GLY:C	37:BN:95:THR:H	2.15	0.48
39:BP:8:GLU:O	39:BP:11:GLN:CB	2.60	0.48
41:BR:49:ILE:HG22	41:BR:54:VAL:HG12	1.96	0.48
47:BX:5:GLN:HG3	47:BX:49:ARG:O	2.13	0.48
1:CB:59:ILE:HA	1:CB:62:ARG:CD	2.42	0.48
1:CB:208:ALA:HA	1:CB:211:LEU:HB3	1.94	0.48
7:CH:40:LYS:HD3	7:CH:40:LYS:C	2.32	0.48
7:CH:77:VAL:HG21	7:CH:127:TYR:CE1	2.49	0.48
11:CL:2:THR:HG22	11:CL:4:ASN:H	1.77	0.48
11:CL:6:LEU:C	11:CL:8:ARG:H	2.16	0.48
55:CA:247:G:O6	55:CA:278:G:C6	2.66	0.48
55:CA:293:G:N1	55:CA:305:G:C2	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:476:U:C6	55:CA:476:U:OP2	2.66	0.48
55:CA:855:U:H2'	55:CA:856:C:H6	1.78	0.48
55:CA:1023:U:H2'	55:CA:1024:G:H8	1.71	0.48
55:CA:1117:A:C2	55:CA:1184:G:C6	3.01	0.48
55:CA:1254:A:C2	55:CA:1284:C:N3	2.82	0.48
55:CA:1275:A:H2'	55:CA:1276:G:H8	1.77	0.48
55:CA:1336:C:H4'	55:CA:1337:G:N3	2.27	0.48
24:DA:324:A:N6	24:DA:338:G:C2'	2.75	0.48
24:DA:361:G:HO2'	24:DA:362:A:P	2.37	0.48
24:DA:480:A:HO2'	24:DA:499:U:HO2'	1.60	0.48
24:DA:503:A:C2	24:DA:505:A:C4	3.02	0.48
24:DA:924:G:O2'	24:DA:925:A:H5'	2.13	0.48
24:DA:1027:A:O2'	24:DA:1028:A:C8	2.64	0.48
24:DA:1041:G:H2'	24:DA:1042:G:H8	1.79	0.48
24:DA:1149:G:C2	24:DA:1150:C:C2	3.01	0.48
24:DA:1376:C:H2'	24:DA:1377:G:C8	2.48	0.48
24:DA:1936:A:H2	24:DA:1943:U:O4	1.96	0.48
24:DA:2267:A:H3'	24:DA:2268:A:C5'	2.44	0.48
24:DA:2339:C:O2'	24:DA:2340:A:O4'	2.30	0.48
24:DA:2356:U:H2'	24:DA:2357:G:O4'	2.13	0.48
24:DA:2418:A:H2'	24:DA:2419:U:O4'	2.13	0.48
24:DA:2435:A:C2	24:DA:2436:G:C4	3.02	0.48
24:DA:2662:A:H2'	24:DA:2663:G:O4'	2.13	0.48
24:DA:2875:C:HO2'	24:DA:2876:G:H8	1.59	0.48
56:DB:14:U:H3'	56:DB:15:A:H5''	1.94	0.48
28:DE:5:LEU:HD13	28:DE:122:GLU:HB2	1.95	0.48
31:DH:5:LEU:HD11	31:DH:13:GLY:HA3	1.95	0.48
43:DT:30:ILE:O	43:DT:85:VAL:HG23	2.13	0.48
44:DU:14:THR:HG23	44:DU:15:GLY:N	2.23	0.48
13:AN:70:HIS:CE1	21:AA:974:A:C1'	2.95	0.48
15:AP:56:ARG:O	15:AP:59:HIS:HB3	2.14	0.48
21:AA:233:C:H2'	21:AA:234:C:C6	2.48	0.48
21:AA:253:A:H2'	21:AA:254:G:C8	2.48	0.48
21:AA:294:U:H2'	21:AA:295:C:C6	2.49	0.48
21:AA:481:G:HO2'	21:AA:482:A:H8	1.57	0.48
21:AA:552:U:H2'	21:AA:553:A:H8	1.78	0.48
24:BA:77:G:C4	24:BA:78:U:C5	3.01	0.48
24:BA:228:C:H4'	24:BA:229:C:C5'	2.44	0.48
24:BA:684:G:C6	24:BA:774:G:C4	3.01	0.48
24:BA:797:G:C2	24:BA:798:G:C4	3.01	0.48
24:BA:811:U:H2'	35:BL:21:ARG:HD3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1153:C:H2'	24:BA:1154:G:O4'	2.14	0.48
24:BA:1406:U:H2'	24:BA:1407:G:H8	1.79	0.48
24:BA:1553:A:C5	24:BA:1555:G:C5	3.00	0.48
24:BA:1672:A:C2	24:BA:2582:G:H5'	2.47	0.48
24:BA:2020:A:N1	24:BA:2022:U:C2	2.81	0.48
24:BA:2093:G:C5	24:BA:2225:A:C8	3.01	0.48
24:BA:2097:A:H2'	24:BA:2098:U:O4'	2.13	0.48
24:BA:2578:G:C5	27:BD:145:SER:HB2	2.47	0.48
24:BA:2725:A:C4	24:BA:2727:A:C8	3.01	0.48
24:BA:2828:G:O2'	24:BA:2829:A:H5'	2.12	0.48
24:BA:2856:A:O2'	24:BA:2857:G:H5'	2.13	0.48
25:BB:90:C:H5'	36:BM:18:ARG:HG2	1.94	0.48
26:BC:221:GLY:O	26:BC:224:MET:HG3	2.13	0.48
32:BI:12:VAL:HG23	32:BI:13:ALA:H	1.78	0.48
35:BL:23:ILE:HG12	41:BR:82:HIS:CE1	2.48	0.48
41:BR:6:GLN:HE21	41:BR:9:GLY:CA	2.26	0.48
1:CB:164:ASP:O	1:CB:168:GLU:HB2	2.13	0.48
3:CD:55:ARG:HD2	3:CD:55:ARG:N	2.29	0.48
6:CG:22:LEU:HD23	6:CG:22:LEU:C	2.34	0.48
6:CG:114:SER:HB2	6:CG:117:LEU:HD13	1.96	0.48
8:CI:24:ASN:HB2	8:CI:26:LYS:HZ3	1.76	0.48
8:CI:90:ASP:HB3	8:CI:93:LEU:CD2	2.42	0.48
9:CJ:11:LYS:HZ3	9:CJ:99:GLN:HB3	1.76	0.48
12:CM:1:ALA:N	12:CM:2:ARG:NH1	2.61	0.48
12:CM:21:ILE:HG22	12:CM:23:GLY:H	1.79	0.48
16:CQ:4:ILE:HG22	16:CQ:5:ARG:H	1.78	0.48
16:CQ:46:HIS:HB2	16:CQ:70:LYS:HE3	1.94	0.48
19:CT:26:MET:CE	19:CT:30:PHE:HD1	2.25	0.48
20:CU:23:GLU:O	20:CU:24:LYS:HB3	2.12	0.48
55:CA:82:G:C5	55:CA:89:U:C4	3.02	0.48
55:CA:132:C:O2'	55:CA:133:U:C5'	2.61	0.48
55:CA:763:G:C2	55:CA:764:C:C6	3.01	0.48
55:CA:764:C:N4	55:CA:812:G:C6	2.81	0.48
55:CA:821:G:O2'	55:CA:822:U:C5'	2.61	0.48
55:CA:821:G:O2'	55:CA:822:U:C6	2.59	0.48
55:CA:1055:A:C6	55:CA:1206:G:C5	3.02	0.48
55:CA:1170:A:H2'	55:CA:1171:A:O4'	2.13	0.48
55:CA:1460:C:C5	55:CA:1461:G:N7	2.81	0.48
24:DA:92:U:O2'	24:DA:93:G:C5'	2.62	0.48
24:DA:156:A:H2'	24:DA:157:C:O4'	2.13	0.48
24:DA:194:G:C6	24:DA:195:A:C6	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:227:A:H61	24:DA:410:G:H1'	1.78	0.48
24:DA:777:G:N7	24:DA:793:A:C2	2.81	0.48
24:DA:785:G:C6	24:DA:786:C:C4	3.01	0.48
24:DA:807:U:H2'	24:DA:808:G:H8	1.78	0.48
24:DA:935:C:H2'	24:DA:936:A:H8	1.78	0.48
24:DA:1057:A:N3	24:DA:1082:U:C2	2.81	0.48
24:DA:1059:G:C2	24:DA:1080:A:C2	3.02	0.48
24:DA:1142:A:C8	24:DA:1144:A:N7	2.82	0.48
24:DA:1669:A:O2'	24:DA:1670:C:H5'	2.13	0.48
24:DA:1919:A:H2'	24:DA:1920:C:H5'	1.95	0.48
24:DA:2155:U:H6	24:DA:2155:U:OP2	1.96	0.48
24:DA:2315:G:N1	24:DA:2316:G:C5	2.82	0.48
24:DA:2616:C:HO2'	24:DA:2617:U:H6	1.61	0.48
24:DA:2653:U:C4	24:DA:2654:A:C5	3.01	0.48
56:DB:76:G:H5''	45:DV:17:SER:OG	2.13	0.48
26:DC:62:ARG:NH2	26:DC:62:ARG:CG	2.77	0.48
27:DD:17:GLU:CD	27:DD:17:GLU:H	2.17	0.48
27:DD:114:LYS:HD2	27:DD:116:LYS:HZ2	1.79	0.48
29:DF:1:ALA:HA	29:DF:97:GLU:HB3	1.95	0.48
33:DJ:111:LYS:HB2	33:DJ:115:GLY:CA	2.43	0.48
35:DL:90:VAL:HG13	35:DL:95:LEU:HD21	1.96	0.48
36:DM:71:LYS:HD3	36:DM:95:LEU:CD1	2.43	0.48
1:AB:110:ILE:HA	1:AB:113:LEU:HB3	1.94	0.48
2:AC:149:LYS:O	2:AC:200:TRP:HE3	1.95	0.48
4:AE:95:MET:CE	4:AE:114:LEU:HD11	2.44	0.48
4:AE:109:ALA:C	4:AE:111:ARG:N	2.66	0.48
5:AF:36:ILE:HG22	5:AF:64:VAL:HG13	1.94	0.48
5:AF:79:ARG:HE	5:AF:79:ARG:HA	1.78	0.48
7:AH:17:GLN:NE2	7:AH:71:VAL:HG23	2.23	0.48
10:AK:81:LEU:HD22	10:AK:104:PHE:HB3	1.94	0.48
11:AL:24:GLU:O	11:AL:25:ALA:C	2.51	0.48
14:AO:23:SER:HB3	14:AO:26:VAL:HG23	1.95	0.48
21:AA:427:U:N3	21:AA:428:G:C6	2.82	0.48
21:AA:987:G:C4	21:AA:988:G:C8	3.02	0.48
21:AA:1026:G:C5	21:AA:1027:C:N4	2.82	0.48
21:AA:1219:A:C6	21:AA:1220:G:C6	3.01	0.48
21:AA:1469:C:H2'	21:AA:1470:U:H5'	1.94	0.48
24:BA:49:A:C2	24:BA:118:A:C2	3.01	0.48
24:BA:49:A:C2	24:BA:118:A:N1	2.82	0.48
24:BA:1142:A:C4	24:BA:1144:A:N7	2.82	0.48
24:BA:1517:G:C6	24:BA:1518:C:C4	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1967:C:H2'	24:BA:1968:G:H8	1.78	0.48
24:BA:2232:C:OP1	47:BX:26:ARG:NH2	2.47	0.48
24:BA:2250:G:O5'	24:BA:2250:G:C8	2.64	0.48
24:BA:2689:U:C2	24:BA:2713:U:C6	3.02	0.48
29:BF:72:SER:HB2	29:BF:80:GLN:HB2	1.94	0.48
29:BF:107:VAL:HG11	29:BF:175:PRO:HG2	1.95	0.48
31:BH:96:THR:O	31:BH:96:THR:HG23	2.14	0.48
32:BI:56:VAL:HG11	32:BI:68:PHE:HD2	1.78	0.48
32:BI:107:GLU:HA	32:BI:110:GLN:HB3	1.95	0.48
33:BJ:23:LYS:O	33:BJ:63:ALA:HB3	2.13	0.48
35:BL:82:LEU:C	35:BL:84:LYS:H	2.15	0.48
39:BP:25:VAL:HG23	39:BP:83:ILE:HD11	1.95	0.48
42:BS:63:GLY:O	42:BS:64:ALA:CB	2.61	0.48
46:BW:45:HIS:HB2	46:BW:50:VAL:HG13	1.94	0.48
2:CC:19:SER:O	13:CN:93:PRO:HG3	2.13	0.48
2:CC:148:ILE:HG23	2:CC:169:GLU:HB3	1.95	0.48
3:CD:113:ALA:O	3:CD:117:VAL:HG23	2.14	0.48
3:CD:161:ALA:O	3:CD:164:ARG:HB2	2.13	0.48
7:CH:64:TYR:HA	7:CH:69:ALA:HA	1.94	0.48
11:CL:34:THR:C	11:CL:35:ARG:NE	2.67	0.48
18:CS:39:ILE:HD11	18:CS:65:MET:HB2	1.95	0.48
18:CS:50:VAL:CG2	18:CS:74:ALA:HB2	2.43	0.48
55:CA:174:A:H2'	55:CA:175:C:C6	2.49	0.48
55:CA:247:G:O6	55:CA:278:G:N1	2.47	0.48
55:CA:519:C:O2'	55:CA:520:A:C5'	2.61	0.48
55:CA:747:A:H2'	55:CA:748:G:O4'	2.12	0.48
55:CA:915:A:O2'	55:CA:916:U:C5'	2.60	0.48
55:CA:1227:A:N3	55:CA:1227:A:H5''	2.28	0.48
24:DA:17:G:C6	24:DA:524:G:C6	3.01	0.48
24:DA:227:A:H5'	24:DA:229:C:N4	2.28	0.48
24:DA:964:C:O2'	24:DA:2273:A:H1'	2.14	0.48
24:DA:1571:A:H2'	24:DA:1572:A:C8	2.49	0.48
24:DA:1910:G:C6	24:DA:1921:G:C6	3.01	0.48
24:DA:2624:G:H2'	24:DA:2625:G:O4'	2.13	0.48
24:DA:2811:G:H2'	24:DA:2812:G:H8	1.78	0.48
24:DA:2838:G:OP1	59:DA:3795:HOH:O	2.20	0.48
24:DA:2867:G:O2'	24:DA:2868:A:OP2	2.31	0.48
26:DC:245:THR:O	26:DC:247:TRP:N	2.47	0.48
27:DD:36:GLN:HE21	27:DD:38:LYS:NZ	2.11	0.48
28:DE:48:THR:O	28:DE:52:VAL:HG23	2.14	0.48
28:DE:106:LYS:HG3	28:DE:200:LEU:HD12	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DF:134:GLN:HB2	29:DF:137:PHE:HE2	1.78	0.48
30:DG:8:VAL:O	30:DG:9:VAL:HB	2.14	0.48
30:DG:112:VAL:HG12	30:DG:114:HIS:HB3	1.96	0.48
34:DK:118:LEU:O	34:DK:120:PRO:HD2	2.13	0.48
35:DL:66:PHE:CG	35:DL:67:THR:N	2.81	0.48
43:DT:50:LEU:HD23	43:DT:51:PHE:N	2.24	0.48
53:D3:15:LYS:HZ2	53:D3:19:GLY:HA2	1.79	0.48
1:AB:16:GLY:HA2	1:AB:202:ASN:ND2	2.29	0.48
2:AC:70:ALA:HA	2:AC:105:VAL:HB	1.95	0.48
3:AD:166:LYS:HA	3:AD:167:PRO:HD3	1.71	0.48
4:AE:14:LEU:HD22	4:AE:15:ILE:C	2.34	0.48
4:AE:61:LYS:HD3	21:AA:1073:U:P	2.53	0.48
4:AE:71:ILE:HD11	4:AE:144:GLU:HG3	1.96	0.48
9:AJ:74:VAL:O	9:AJ:75:ASP:HB3	2.13	0.48
11:AL:27:PRO:O	11:AL:28:GLN:HB3	2.12	0.48
11:AL:43:LYS:HB2	11:AL:44:PRO:CD	2.43	0.48
21:AA:126:G:H2'	21:AA:127:G:O5'	2.14	0.48
21:AA:636:U:O5'	21:AA:636:U:H6	1.97	0.48
21:AA:901:A:N7	21:AA:902:G:H1'	2.28	0.48
21:AA:944:G:C6	21:AA:1337:G:H2'	2.48	0.48
21:AA:1036:A:H3'	21:AA:1037:C:C6	2.48	0.48
24:BA:48:G:N2	24:BA:177:G:N2	2.61	0.48
24:BA:95:A:N1	24:BA:96:C:C2	2.81	0.48
24:BA:471:A:H8	24:BA:471:A:O5'	1.97	0.48
24:BA:484:C:O5'	24:BA:484:C:H6	1.95	0.48
24:BA:493:G:O2'	42:BS:7:HIS:HA	2.14	0.48
24:BA:813:U:H2'	24:BA:814:C:C6	2.48	0.48
24:BA:813:U:O2'	24:BA:1225:G:H1'	2.14	0.48
24:BA:923:G:C1'	46:BW:23:LYS:HE2	2.42	0.48
24:BA:959:A:N6	36:BM:82:MET:CE	2.76	0.48
24:BA:994:C:H1'	41:BR:10:LYS:HZ3	1.76	0.48
24:BA:1025:G:H4'	24:BA:1026:G:OP2	2.14	0.48
24:BA:1052:C:C2'	24:BA:1053:C:H5'	2.44	0.48
24:BA:1147:A:C6	24:BA:1148:U:C4	3.02	0.48
24:BA:2209:G:N1	24:BA:2210:U:O4	2.46	0.48
24:BA:2217:G:H2'	24:BA:2218:G:C8	2.48	0.48
24:BA:2415:G:C2	24:BA:2416:C:C2	3.01	0.48
24:BA:2727:A:H2'	24:BA:2728:U:H6	1.78	0.48
27:BD:61:THR:OG1	27:BD:63:PRO:HD2	2.14	0.48
32:BI:64:ARG:HG3	32:BI:65:SER:N	2.28	0.48
32:BI:105:LEU:HD23	32:BI:108:ILE:HG21	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BJ:45:THR:O	33:BJ:45:THR:CG2	2.60	0.48
34:BK:57:VAL:C	34:BK:58:LEU:HD23	2.34	0.48
35:BL:119:PRO:HA	35:BL:138:ALA:O	2.13	0.48
36:BM:101:VAL:O	36:BM:101:VAL:CG1	2.61	0.48
37:BN:92:GLY:HA2	37:BN:94:TYR:CZ	2.49	0.48
39:BP:105:LYS:CA	39:BP:108:ARG:HD3	2.44	0.48
44:BU:53:GLN:N	44:BU:54:PRO:HD2	2.27	0.48
2:CC:110:LEU:HD11	2:CC:203:LYS:HZ1	1.77	0.48
2:CC:131:ARG:HA	2:CC:134:LYS:HD2	1.94	0.48
6:CG:94:ARG:C	6:CG:96:ASN:H	2.17	0.48
10:CK:15:VAL:HG13	10:CK:36:ARG:NH1	2.29	0.48
12:CM:1:ALA:N	12:CM:2:ARG:CD	2.77	0.48
12:CM:75:SER:C	12:CM:77:LYS:H	2.17	0.48
13:CN:15:LEU:O	13:CN:54:SER:HB2	2.13	0.48
17:CR:56:ARG:O	17:CR:60:ARG:HG3	2.14	0.48
55:CA:10:A:N1	55:CA:25:C:N3	2.62	0.48
55:CA:95:C:O2'	55:CA:96:U:H5'	2.14	0.48
55:CA:370:C:O2'	55:CA:371:A:H5'	2.13	0.48
55:CA:499:A:O2'	55:CA:500:G:H8	1.91	0.48
55:CA:519:C:O2'	55:CA:520:A:C8	2.65	0.48
55:CA:581:G:N2	55:CA:582:C:N4	2.62	0.48
55:CA:588:G:C6	55:CA:589:U:N3	2.81	0.48
55:CA:879:C:C2	55:CA:880:C:C6	3.01	0.48
55:CA:1049:U:H4'	55:CA:1050:G:OP2	2.14	0.48
24:DA:860:U:HO2'	24:DA:861:A:C5'	2.26	0.48
24:DA:1049:C:HO2'	24:DA:1050:A:H8	1.61	0.48
24:DA:1062:G:O2'	24:DA:1063:G:O5'	2.31	0.48
24:DA:1152:C:H2'	24:DA:1153:C:H6	1.79	0.48
24:DA:1259:G:H2'	24:DA:1260:A:H8	1.77	0.48
24:DA:1293:C:H2'	24:DA:1294:U:O4'	2.13	0.48
24:DA:1440:U:O2'	24:DA:1441:G:H5'	2.13	0.48
24:DA:1535:A:H2'	24:DA:1535:A:N3	2.28	0.48
24:DA:1941:C:O2'	24:DA:1942:C:H5'	2.13	0.48
24:DA:1953:A:H4'	24:DA:2560:A:H5'	1.94	0.48
24:DA:2061:G:H5''	24:DA:2503:A:C2	2.48	0.48
24:DA:2303:G:C4	24:DA:2304:G:C8	3.01	0.48
24:DA:2359:C:O2	35:DL:60:ARG:NH2	2.47	0.48
24:DA:2562:U:O2	24:DA:2562:U:H2'	2.14	0.48
24:DA:2688:G:H1'	24:DA:2721:A:N6	2.28	0.48
24:DA:2833:U:H3'	24:DA:2834:G:C5'	2.44	0.48
24:DA:2901:C:N4	24:DA:2902:C:N4	2.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DC:7:PRO:HB3	26:DC:13:ARG:HB2	1.95	0.48
28:DE:151:GLY:HA3	28:DE:191:ASP:OD1	2.12	0.48
29:DF:110:ILE:HB	29:DF:113:PHE:H	1.78	0.48
31:DH:32:PRO:HA	47:DX:38:TRP:CD1	2.49	0.48
32:DI:52:LEU:HD11	32:DI:78:LEU:CD2	2.44	0.48
42:DS:82:MET:HE1	42:DS:84:ARG:HH12	1.79	0.48
44:DU:85:ARG:HA	44:DU:85:ARG:NE	2.29	0.48
47:DX:53:LYS:CA	47:DX:56:ARG:HB3	2.25	0.48
1:AB:65:LYS:HG2	1:AB:153:MET:CG	2.43	0.48
2:AC:99:GLN:O	2:AC:100:ILE:CB	2.58	0.48
2:AC:148:ILE:HG12	2:AC:149:LYS:N	2.28	0.48
2:AC:166:TRP:N	2:AC:166:TRP:CE3	2.71	0.48
3:AD:164:ARG:HG2	3:AD:165:GLU:H	1.78	0.48
3:AD:172:VAL:HG22	3:AD:173:ASP:N	2.20	0.48
4:AE:37:VAL:HG11	4:AE:113:VAL:HG12	1.95	0.48
6:AG:121:ASN:HD22	6:AG:121:ASN:N	2.11	0.48
7:AH:74:ILE:HD13	7:AH:128:VAL:HG13	1.96	0.48
9:AJ:53:ILE:HG22	9:AJ:62:ARG:H	1.79	0.48
10:AK:125:LYS:O	10:AK:126:ARG:CB	2.62	0.48
18:AS:39:ILE:HD11	18:AS:73:PHE:HE1	1.77	0.48
19:AT:63:LYS:HE2	21:AA:176:C:OP1	2.14	0.48
21:AA:78:A:N6	21:AA:79:G:C6	2.81	0.48
21:AA:394:G:C5	21:AA:395:C:C5	3.01	0.48
21:AA:411:A:C5	21:AA:429:U:C5	3.02	0.48
21:AA:415:A:O2'	21:AA:416:G:H5'	2.14	0.48
21:AA:550:G:N2	21:AA:551:U:C2	2.82	0.48
21:AA:596:A:O2'	21:AA:597:G:H5'	2.13	0.48
21:AA:842:U:H3'	21:AA:843:U:H5''	1.95	0.48
21:AA:977:A:H2'	21:AA:977:A:N3	2.29	0.48
21:AA:1038:C:H2'	21:AA:1039:G:H8	1.78	0.48
21:AA:1103:C:HO2'	21:AA:1104:G:C4'	2.26	0.48
21:AA:1106:G:C2	21:AA:1107:C:C6	3.02	0.48
21:AA:1312:G:H2'	21:AA:1313:U:C6	2.49	0.48
21:AA:1394:A:N6	21:AA:1501:C:C4'	2.76	0.48
24:BA:152:A:H2'	24:BA:153:U:C6	2.48	0.48
24:BA:396:G:O3'	47:BX:30:PRO:HA	2.13	0.48
24:BA:475:C:C4	24:BA:481:G:O6	2.67	0.48
24:BA:668:A:C2'	24:BA:669:G:OP1	2.62	0.48
24:BA:1054:A:C6	24:BA:1106:G:O6	2.67	0.48
24:BA:1250:G:N7	35:BL:18:ARG:NH1	2.62	0.48
24:BA:1873:G:H2'	24:BA:1874:C:H6	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1892:C:H2'	24:BA:1893:C:C6	2.48	0.48
24:BA:2488:G:C2	24:BA:2489:U:C2	3.02	0.48
24:BA:2691:C:O2'	24:BA:2692:G:C5'	2.60	0.48
24:BA:2845:U:H5''	39:BP:51:ASN:O	2.14	0.48
27:BD:110:THR:OG1	27:BD:171:THR:CG2	2.61	0.48
28:BE:147:LEU:O	28:BE:168:ASP:O	2.31	0.48
30:BG:27:GLY:O	30:BG:29:ASN:O	2.32	0.48
37:BN:60:VAL:O	37:BN:61:ALA:C	2.51	0.48
37:BN:67:PHE:CE1	37:BN:73:ASN:OD1	2.66	0.48
40:BQ:82:LEU:HD21	40:BQ:112:ALA:HB2	1.95	0.48
42:BS:38:TYR:CD2	50:B0:38:LEU:HD21	2.48	0.48
46:BW:17:ALA:HA	46:BW:35:ILE:CG2	2.27	0.48
46:BW:24:ARG:HD2	46:BW:24:ARG:C	2.32	0.48
46:BW:30:VAL:HA	46:BW:60:ALA:HB3	1.95	0.48
46:BW:67:LYS:HG3	46:BW:69:GLU:HG3	1.94	0.48
54:B4:25:VAL:CG2	54:B4:35:GLN:HB2	2.44	0.48
4:CE:114:LEU:HD13	4:CE:122:VAL:HG11	1.96	0.48
8:CI:118:ARG:HH21	8:CI:122:ARG:HE	1.60	0.48
9:CJ:7:ARG:HB2	9:CJ:101:SER:O	2.13	0.48
9:CJ:35:GLN:OE1	9:CJ:77:VAL:HB	2.14	0.48
10:CK:115:ILE:HD12	20:CU:23:GLU:CG	2.33	0.48
19:CT:81:GLN:O	19:CT:82:ILE:HG23	2.13	0.48
55:CA:95:C:H2'	55:CA:96:U:C5	2.47	0.48
55:CA:127:G:N2	55:CA:128:G:H1'	2.29	0.48
55:CA:131:A:C2	55:CA:132:C:C2	3.02	0.48
55:CA:259:G:C2	55:CA:268:U:C2	3.02	0.48
55:CA:428:G:C1'	55:CA:430:A:C8	2.96	0.48
55:CA:581:G:N2	55:CA:582:C:H41	2.12	0.48
55:CA:601:G:H2'	55:CA:602:A:C8	2.43	0.48
55:CA:942:G:C6	55:CA:1342:C:C4	3.01	0.48
55:CA:1155:A:O2'	55:CA:1156:G:H5'	2.14	0.48
24:DA:448:U:H4'	24:DA:449:A:OP2	2.14	0.48
24:DA:1057:A:C4	24:DA:1082:U:N3	2.81	0.48
24:DA:1254:A:H3'	24:DA:1255:U:H5''	1.96	0.48
24:DA:1504:A:C2	24:DA:1505:A:C8	3.01	0.48
24:DA:1809:A:O2'	24:DA:1810:A:O5'	2.31	0.48
24:DA:2341:G:H2'	24:DA:2342:C:O4'	2.14	0.48
27:DD:118:PHE:O	27:DD:119:ALA:HB3	2.13	0.48
28:DE:137:LYS:O	28:DE:140:ASP:HB2	2.13	0.48
28:DE:164:LEU:HD12	28:DE:167:VAL:HG12	1.94	0.48
30:DG:120:ILE:O	30:DG:120:ILE:HD13	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DY:47:ARG:O	48:DY:50:VAL:N	2.45	0.48
48:DY:53:VAL:O	48:DY:57:LEU:HB2	2.13	0.48
1:AB:130:LYS:O	1:AB:133:ALA:HB3	2.14	0.48
3:AD:29:THR:HB	3:AD:30:LYS:NZ	2.29	0.48
4:AE:40:ASP:OD1	4:AE:44:ARG:HB2	2.14	0.48
4:AE:95:MET:HE3	4:AE:114:LEU:HD11	1.95	0.48
7:AH:17:GLN:HB3	7:AH:69:ALA:HB2	1.94	0.48
10:AK:61:ALA:O	10:AK:64:VAL:HG13	2.13	0.48
11:AL:41:PRO:HB3	11:AL:49:ARG:HH12	1.77	0.48
12:AM:74:MET:CE	12:AM:74:MET:CA	2.69	0.48
14:AO:22:GLY:O	21:AA:751:U:H1'	2.14	0.48
14:AO:22:GLY:O	14:AO:27:GLN:NE2	2.47	0.48
16:AQ:45:VAL:HG21	16:AQ:60:ILE:HD13	1.96	0.48
19:AT:26:MET:HA	19:AT:29:THR:HG1	1.76	0.48
21:AA:24:U:H2'	21:AA:25:C:H6	1.78	0.48
21:AA:65:A:C2	21:AA:381:C:C6	3.02	0.48
21:AA:414:A:N3	21:AA:414:A:H2'	2.29	0.48
21:AA:415:A:H2'	21:AA:416:G:O4'	2.13	0.48
21:AA:706:A:H2'	21:AA:707:U:O4'	2.14	0.48
21:AA:788:U:C4	21:AA:789:U:C4	3.02	0.48
21:AA:1257:A:H4'	21:AA:1258:G:OP2	2.11	0.48
21:AA:1486:G:H2'	21:AA:1487:G:O4'	2.14	0.48
24:BA:856:G:C1'	46:BW:23:LYS:HB3	2.44	0.48
24:BA:1022:G:C6	24:BA:1141:U:C5	3.01	0.48
24:BA:1154:G:OP2	40:BQ:57:ARG:NH1	2.45	0.48
24:BA:1944:U:O4	24:BA:2557:G:N2	2.40	0.48
24:BA:2082:A:N6	24:BA:2237:G:H1'	2.29	0.48
24:BA:2204:G:H4'	26:BC:149:LYS:HG3	1.95	0.48
24:BA:2207:C:H2'	24:BA:2208:C:C6	2.49	0.48
24:BA:2291:U:C2	24:BA:2292:U:C4	3.01	0.48
24:BA:2692:G:C4	24:BA:2718:G:N2	2.82	0.48
27:BD:4:LEU:HD23	27:BD:29:VAL:HG11	1.95	0.48
27:BD:27:ILE:HG12	27:BD:201:LEU:HD23	1.96	0.48
29:BF:39:VAL:CG1	29:BF:49:LEU:HD13	2.44	0.48
29:BF:66:ILE:O	29:BF:66:ILE:HG13	2.13	0.48
29:BF:72:SER:HB2	29:BF:80:GLN:N	2.29	0.48
30:BG:94:ARG:HG3	30:BG:127:GLN:OE1	2.13	0.48
31:BH:100:ALA:O	31:BH:102:ALA:N	2.47	0.48
33:BJ:5:THR:HG22	33:BJ:5:THR:O	2.13	0.48
43:BT:24:MET:HG3	43:BT:29:THR:HG23	1.96	0.48
1:CB:9:LEU:O	1:CB:10:LYS:CB	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:72:LYS:HB2	1:CB:75:ALA:HB3	1.96	0.48
3:CD:171:GLU:CG	3:CD:180:THR:HB	2.44	0.48
4:CE:22:LYS:CD	55:CA:1081:A:H5'	2.38	0.48
6:CG:77:ARG:HG3	6:CG:77:ARG:HH11	1.79	0.48
8:CI:51:LEU:HD11	8:CI:82:ILE:HG22	1.94	0.48
11:CL:85:ARG:HA	11:CL:93:ARG:HA	1.95	0.48
12:CM:14:ALA:HB1	12:CM:33:LEU:CD1	2.41	0.48
19:CT:34:VAL:HG22	19:CT:49:ALA:HB1	1.95	0.48
55:CA:27:G:H2'	55:CA:28:A:O4'	2.13	0.48
55:CA:66:A:C2	55:CA:104:G:H1'	2.48	0.48
55:CA:66:A:O2'	55:CA:67:C:H5'	2.12	0.48
55:CA:391:G:O6	55:CA:392:C:C4	2.67	0.48
55:CA:463:U:H3	55:CA:469:C:H42	1.61	0.48
55:CA:848:C:H2'	55:CA:849:G:O5'	2.13	0.48
55:CA:988:G:O2'	55:CA:989:U:H5'	2.14	0.48
55:CA:1270:G:H2'	55:CA:1271:A:C8	2.49	0.48
55:CA:1426:G:N2	55:CA:1475:G:H1'	2.28	0.48
55:CA:1449:C:O2'	55:CA:1450:U:C5'	2.62	0.48
24:DA:89:A:C2	24:DA:90:U:C2	3.02	0.48
24:DA:190:A:H2'	24:DA:191:A:O4'	2.12	0.48
24:DA:471:A:H2'	24:DA:472:A:O4'	2.13	0.48
24:DA:536:G:H2'	24:DA:537:G:H5'	1.94	0.48
24:DA:556:A:OP2	24:DA:556:A:H8	1.95	0.48
24:DA:675:A:OP1	28:DE:60:TRP:HZ2	1.95	0.48
24:DA:831:G:H2'	24:DA:832:U:C6	2.49	0.48
24:DA:845:A:N6	24:DA:932:U:C2	2.81	0.48
24:DA:1137:G:H2'	24:DA:1138:G:C8	2.49	0.48
24:DA:1266:G:C8	42:DS:16:LYS:HE3	2.49	0.48
24:DA:1802:A:H62	24:DA:1817:G:N2	2.12	0.48
24:DA:2037:A:H2'	24:DA:2038:G:C8	2.49	0.48
24:DA:2446:G:H2'	24:DA:2447:G:H5''	1.96	0.48
24:DA:2575:C:H4'	27:DD:148:GLN:O	2.14	0.48
24:DA:2581:G:H5''	24:DA:2582:G:OP1	2.13	0.48
24:DA:2721:A:C2	24:DA:2722:G:H1'	2.48	0.48
24:DA:2838:G:C4	24:DA:2839:G:C8	3.01	0.48
29:DF:76:PHE:CD2	29:DF:76:PHE:N	2.75	0.48
31:DH:42:LYS:NZ	31:DH:42:LYS:HB3	2.29	0.48
33:DJ:2:LYS:HB2	33:DJ:2:LYS:NZ	2.29	0.48
33:DJ:4:PHE:HB3	40:DQ:63:ARG:HH22	1.78	0.48
33:DJ:35:ARG:HH12	33:DJ:140:LEU:HD21	1.78	0.48
35:DL:71:ALA:HA	35:DL:74:THR:HB	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DL:76:GLU:O	35:DL:76:GLU:HG3	2.12	0.48
46:DW:18:LYS:HZ3	46:DW:18:LYS:HB2	1.77	0.48
48:DY:6:LEU:HD21	48:DY:56:LEU:HD12	1.95	0.48
1:AB:153:MET:HE1	1:AB:157:PRO:HG3	1.96	0.48
1:AB:162:VAL:HG22	1:AB:184:ALA:HB2	1.95	0.48
3:AD:191:SER:HA	3:AD:194:ILE:HD11	1.94	0.48
4:AE:36:THR:HG23	4:AE:62:ALA:CB	2.44	0.48
4:AE:82:HIS:HA	7:AH:98:LEU:HD12	1.96	0.48
15:AP:42:ILE:C	15:AP:44:SER:H	2.16	0.48
21:AA:217:C:O2'	21:AA:218:U:H5'	2.14	0.48
21:AA:332:G:C2	21:AA:333:U:C6	3.02	0.48
21:AA:569:C:H5''	21:AA:570:G:OP1	2.14	0.48
21:AA:622:A:H2'	21:AA:623:C:H5'	1.95	0.48
21:AA:1363:A:H2'	21:AA:1365:G:N7	2.29	0.48
21:AA:1484:C:H2'	21:AA:1485:U:O4'	2.14	0.48
24:BA:826:U:O2	24:BA:828:U:H4'	2.14	0.48
24:BA:947:A:O2'	24:BA:984:A:C2	2.67	0.48
24:BA:966:G:C6	24:BA:967:U:N3	2.82	0.48
24:BA:1232:G:C6	24:BA:1233:C:C4	3.01	0.48
24:BA:1759:A:H2'	24:BA:1760:C:C5	2.48	0.48
24:BA:1773:A:H2'	24:BA:1774:C:O4'	2.13	0.48
24:BA:2291:U:OP1	24:BA:2381:A:H5'	2.13	0.48
24:BA:2643:G:H2'	24:BA:2644:G:O4'	2.14	0.48
24:BA:2674:G:H2'	24:BA:2675:A:C8	2.49	0.48
24:BA:2714:G:O2'	24:BA:2715:C:H5'	2.14	0.48
24:BA:2798:U:H6	24:BA:2798:U:OP2	1.96	0.48
24:BA:2818:U:H1'	24:BA:2829:A:C2	2.48	0.48
26:BC:77:VAL:O	26:BC:77:VAL:CG2	2.60	0.48
28:BE:5:LEU:CD1	28:BE:10:SER:HB3	2.41	0.48
28:BE:32:VAL:HG23	28:BE:33:VAL:N	2.29	0.48
28:BE:108:ILE:HD11	28:BE:180:LEU:HB3	1.94	0.48
28:BE:148:ILE:HD13	28:BE:187:VAL:HG21	1.95	0.48
29:BF:54:ALA:O	29:BF:57:ALA:HB3	2.13	0.48
29:BF:110:ILE:O	29:BF:111:ARG:C	2.50	0.48
35:BL:57:LEU:CD2	53:B3:53:ASP:HB3	2.44	0.48
35:BL:81:ASP:O	35:BL:83:ALA:N	2.39	0.48
35:BL:100:ILE:HD12	35:BL:100:ILE:O	2.14	0.48
37:BN:2:ARG:O	37:BN:3:HIS:C	2.52	0.48
38:BO:74:VAL:HG12	38:BO:106:LEU:HD13	1.96	0.48
43:BT:29:THR:HB	43:BT:86:THR:N	2.29	0.48
4:CE:94:PHE:CE2	4:CE:96:GLN:HB2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:114:LEU:HB3	4:CE:119:VAL:HG23	1.96	0.48
9:CJ:64:GLN:HB2	13:CN:98:ALA:HB3	1.94	0.48
11:CL:51:VAL:HG13	11:CL:64:SER:O	2.13	0.48
12:CM:8:ILE:N	12:CM:9:PRO:HD2	2.26	0.48
13:CN:80:ARG:CG	13:CN:81:ILE:N	2.77	0.48
55:CA:47:C:O2'	55:CA:48:C:H5'	2.13	0.48
55:CA:238:A:H3'	55:CA:239:U:H5''	1.94	0.48
55:CA:253:A:N3	55:CA:254:G:C8	2.82	0.48
55:CA:327:A:C2	55:CA:329:A:C4	3.02	0.48
55:CA:533:A:OP2	55:CA:533:A:H8	1.97	0.48
55:CA:954:G:C6	55:CA:955:U:N3	2.82	0.48
55:CA:987:G:H2'	55:CA:988:G:C8	2.49	0.48
55:CA:1250:A:C8	55:CA:1287:A:N7	2.82	0.48
24:DA:49:A:N6	24:DA:177:G:C4	2.82	0.48
24:DA:88:G:C2	24:DA:89:A:C8	3.02	0.48
24:DA:132:G:N2	24:DA:148:U:C2	2.82	0.48
24:DA:232:G:O2'	24:DA:233:A:H5''	2.14	0.48
24:DA:439:A:C5	24:DA:440:C:C4	3.02	0.48
24:DA:537:G:N2	24:DA:557:C:H42	2.10	0.48
24:DA:754:U:O2'	24:DA:755:U:C6	2.64	0.48
24:DA:866:A:C8	24:DA:914:G:O6	2.67	0.48
24:DA:1009:A:C2	24:DA:1010:A:C2	3.02	0.48
24:DA:1011:G:OP1	40:DQ:76:SER:CB	2.62	0.48
24:DA:1045:C:H1'	24:DA:1047:G:C2	2.49	0.48
24:DA:1239:G:C2	24:DA:1240:U:H1'	2.49	0.48
24:DA:1448:G:C2	24:DA:1464:G:C2	3.02	0.48
24:DA:1807:G:OP1	26:DC:47:ARG:NH1	2.46	0.48
24:DA:1997:C:O2'	24:DA:1998:A:H5'	2.14	0.48
24:DA:2067:G:C4	24:DA:2444:G:N2	2.82	0.48
24:DA:2069:G:C2	24:DA:2443:C:C2	3.01	0.48
24:DA:2199:A:H2'	24:DA:2200:C:H6	1.79	0.48
24:DA:2408:U:O2'	24:DA:2409:G:O5'	2.32	0.48
24:DA:2508:G:H2'	24:DA:2509:G:O4'	2.14	0.48
24:DA:2544:G:H2'	24:DA:2545:G:H8	1.78	0.48
56:DB:8:C:H2'	56:DB:9:G:O4'	2.14	0.48
56:DB:13:G:H21	56:DB:69:G:N2	2.11	0.48
27:DD:106:LYS:HD3	27:DD:106:LYS:N	2.28	0.48
28:DE:130:LYS:O	28:DE:134:LEU:HB3	2.13	0.48
29:DF:43:ILE:HD13	29:DF:82:TYR:HE2	1.79	0.48
29:DF:109:ARG:CB	29:DF:109:ARG:NH2	2.74	0.48
30:DG:1:SER:C	30:DG:3:VAL:H	2.17	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DU:20:LYS:HD2	44:DU:38:ILE:HD11	1.95	0.48
46:DW:51:GLY:HA2	46:DW:59:PHE:HD2	1.79	0.48
49:DZ:32:GLY:C	49:DZ:34:THR:N	2.66	0.48
50:D0:28:SER:HB3	50:D0:39:ARG:HE	1.78	0.48
53:D3:15:LYS:HZ1	53:D3:19:GLY:HA2	1.78	0.48
54:D4:27:CYS:CB	54:D4:33:HIS:HB2	2.44	0.48
1:AB:129:THR:O	1:AB:132:GLU:HB3	2.14	0.48
1:AB:209:VAL:HG23	1:AB:210:THR:N	2.28	0.48
5:AF:47:LEU:HD22	17:AR:65:SER:OG	2.14	0.48
7:AH:6:ILE:HD12	7:AH:35:ILE:HD11	1.96	0.48
8:AI:27:ILE:HG12	8:AI:34:LEU:HD13	1.96	0.48
10:AK:30:ILE:CG2	10:AK:45:THR:HG22	2.42	0.48
12:AM:109:LYS:HZ1	21:AA:1227:A:H5'	1.78	0.48
15:AP:1:MET:HB2	21:AA:135:C:O2	2.13	0.48
15:AP:38:PHE:O	15:AP:50:THR:HG23	2.14	0.48
19:AT:74:HIS:O	19:AT:75:LYS:C	2.52	0.48
21:AA:16:A:O2'	21:AA:17:U:H5'	2.14	0.48
21:AA:69:G:H2'	21:AA:69:G:N3	2.29	0.48
21:AA:158:G:C3'	21:AA:159:G:H5''	2.44	0.48
21:AA:184:G:C6	21:AA:194:C:N4	2.82	0.48
21:AA:207:C:H2'	21:AA:208:U:C4	2.49	0.48
21:AA:273:U:C4	21:AA:274:A:N7	2.82	0.48
21:AA:543:U:H2'	21:AA:544:G:H5'	1.95	0.48
21:AA:994:A:HO2'	21:AA:995:C:H5'	1.77	0.48
21:AA:1151:A:C4	21:AA:1152:A:N7	2.82	0.48
21:AA:1171:A:H2'	21:AA:1172:C:H6	1.79	0.48
21:AA:1172:C:H2'	21:AA:1173:U:C6	2.49	0.48
21:AA:1183:U:HO2'	21:AA:1184:G:P	2.37	0.48
24:BA:55:G:N2	24:BA:116:C:C2	2.81	0.48
24:BA:616:A:H4'	28:BE:101:TYR:CE2	2.49	0.48
24:BA:684:G:C6	24:BA:774:G:C5	3.02	0.48
24:BA:950:G:C6	24:BA:951:C:C4	3.02	0.48
24:BA:962:G:N2	24:BA:2250:G:H1	2.11	0.48
24:BA:995:C:O2'	24:BA:996:A:OP2	2.32	0.48
24:BA:1028:A:H2'	24:BA:1029:A:C8	2.49	0.48
24:BA:1338:G:O2'	43:BT:18:GLU:HG2	2.14	0.48
24:BA:1570:A:C6	24:BA:1571:A:C6	3.02	0.48
24:BA:1638:C:O2	24:BA:2698:U:O2'	2.30	0.48
24:BA:1651:G:H4'	37:BN:39:PRO:HG2	1.94	0.48
24:BA:2315:G:H1'	29:BF:122:ASP:OD2	2.14	0.48
24:BA:2385:C:H5'	24:BA:2385:C:H6	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2720:U:H5''	39:BP:52:ARG:NH2	2.28	0.48
26:BC:209:ALA:HA	26:BC:212:TRP:NE1	2.29	0.48
27:BD:93:GLY:O	27:BD:94:GLN:C	2.51	0.48
28:BE:127:GLU:CD	28:BE:127:GLU:H	2.17	0.48
28:BE:168:ASP:OD1	28:BE:169:VAL:N	2.47	0.48
32:BI:76:ALA:HB2	32:BI:131:THR:CG2	2.40	0.48
33:BJ:44:TYR:CD1	33:BJ:44:TYR:C	2.87	0.48
33:BJ:124:VAL:HG23	33:BJ:125:TYR:N	2.28	0.48
38:BO:3:LYS:CG	38:BO:4:LYS:H	2.27	0.48
39:BP:33:GLU:OE2	39:BP:38:ARG:NH1	2.47	0.48
52:B2:10:LEU:HD12	52:B2:10:LEU:O	2.14	0.48
1:CB:142:LYS:HA	1:CB:145:ASN:HB2	1.94	0.48
1:CB:186:VAL:HG11	1:CB:192:PRO:HB3	1.96	0.48
3:CD:196:GLU:CD	3:CD:196:GLU:H	2.17	0.48
5:CF:6:ILE:H	5:CF:6:ILE:HD12	1.79	0.48
6:CG:96:ASN:O	6:CG:97:ALA:C	2.52	0.48
7:CH:59:GLU:HG2	7:CH:60:LEU:N	2.29	0.48
8:CI:48:ARG:C	8:CI:50:PRO:HD2	2.34	0.48
8:CI:108:ARG:HB3	55:CA:1347:G:C8	2.49	0.48
16:CQ:44:HIS:CE1	55:CA:277:C:OP1	2.67	0.48
16:CQ:46:HIS:HB3	16:CQ:66:LEU:HD13	1.96	0.48
55:CA:102:G:H2'	55:CA:103:U:H6	1.79	0.48
55:CA:785:G:N3	55:CA:785:G:H2'	2.29	0.48
55:CA:1296:C:O2'	55:CA:1302:C:N4	2.45	0.48
55:CA:1309:G:C6	55:CA:1310:G:C6	3.02	0.48
55:CA:1498:U:C5	23:CW:2:U:H5'	2.49	0.48
55:CA:1499:A:H2'	55:CA:1500:A:H8	1.78	0.48
55:CA:1502:A:HO2'	55:CA:1503:A:P	2.34	0.48
24:DA:27:G:C6	24:DA:512:G:C6	3.02	0.48
24:DA:234:U:O2'	24:DA:235:U:O5'	2.32	0.48
24:DA:308:G:N1	24:DA:309:A:C2	2.82	0.48
24:DA:571:U:O2'	24:DA:573:U:H5''	2.14	0.48
24:DA:607:U:O4	24:DA:619:G:H2'	2.14	0.48
24:DA:624:C:O2'	24:DA:657:U:H5''	2.14	0.48
24:DA:647:G:O2'	24:DA:648:G:O4'	2.17	0.48
24:DA:686:U:H2'	24:DA:788:A:N1	2.29	0.48
24:DA:726:G:O2'	24:DA:727:A:P	2.72	0.48
24:DA:1078:U:H5''	24:DA:1079:C:OP1	2.14	0.48
24:DA:1716:U:O2	24:DA:1717:A:C8	2.67	0.48
24:DA:1799:G:C8	26:DC:179:GLU:OE1	2.66	0.48
24:DA:2014:A:H2	24:DA:2613:U:C2	2.32	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2067:G:C4'	24:DA:2068:U:OP2	2.62	0.48
24:DA:2219:U:H2'	24:DA:2220:U:C6	2.48	0.48
24:DA:2226:C:O2'	24:DA:2227:A:C5'	2.62	0.48
24:DA:2269:G:H2'	24:DA:2270:A:H8	1.78	0.48
24:DA:2624:G:H1'	50:D0:18:HIS:CE1	2.48	0.48
24:DA:2748:A:N6	24:DA:2749:A:C6	2.82	0.48
26:DC:44:ASN:C	26:DC:46:GLY:H	2.18	0.48
27:DD:122:VAL:HA	27:DD:127:PHE:H	1.78	0.48
29:DF:7:TYR:O	29:DF:8:LYS:HG3	2.14	0.48
29:DF:57:ALA:HB2	29:DF:64:PRO:HG2	1.96	0.48
29:DF:118:ALA:HB2	29:DF:176:PHE:HB3	1.96	0.48
46:DW:25:PHE:O	46:DW:27:GLY:N	2.46	0.48
46:DW:37:VAL:C	46:DW:39:GLN:H	2.16	0.48
51:D1:47:ILE:HD12	51:D1:47:ILE:N	2.29	0.48
1:AB:86:CYS:SG	1:AB:221:ARG:HD3	2.53	0.47
3:AD:49:ASP:O	3:AD:53:GLN:HB2	2.13	0.47
4:AE:125:LYS:O	4:AE:127:TYR:CZ	2.67	0.47
5:AF:42:TRP:HZ2	5:AF:61:LEU:HD22	1.78	0.47
5:AF:99:ALA:O	5:AF:100:SER:CB	2.61	0.47
21:AA:654:G:O2'	21:AA:655:A:C5'	2.63	0.47
21:AA:803:G:C5	21:AA:804:U:C4	3.02	0.47
21:AA:895:G:H2'	21:AA:896:C:H6	1.79	0.47
21:AA:960:U:C2	21:AA:1225:A:N7	2.82	0.47
21:AA:1051:C:O2'	21:AA:1052:U:O4'	2.31	0.47
21:AA:1145:A:O2'	21:AA:1146:A:H8	1.96	0.47
24:BA:27:G:C4	24:BA:512:G:N2	2.82	0.47
24:BA:30:G:C5	24:BA:31:C:C4	3.02	0.47
24:BA:199:A:C2	24:BA:2434:A:C2	3.02	0.47
24:BA:249:C:O2'	24:BA:250:G:OP2	2.32	0.47
24:BA:860:U:C6	24:BA:860:U:C5'	2.89	0.47
24:BA:974:G:C6	24:BA:1186:G:C6	3.02	0.47
24:BA:990:A:C6	24:BA:1186:G:H1'	2.49	0.47
24:BA:1085:A:H3'	24:BA:1086:A:C2	2.48	0.47
24:BA:1403:A:C4	24:BA:1404:C:C6	3.02	0.47
24:BA:1867:G:O2'	24:BA:1868:C:C5'	2.56	0.47
24:BA:2052:A:C8	27:BD:146:ILE:HD11	2.48	0.47
24:BA:2075:U:H2'	24:BA:2238:G:N2	2.28	0.47
24:BA:2332:C:H4'	24:BA:2336:A:N6	2.29	0.47
24:BA:2628:C:O2'	24:BA:2781:A:H2'	2.14	0.47
24:BA:2756:U:C4'	24:BA:2757:A:O5'	2.57	0.47
25:BB:28:C:H2'	25:BB:29:A:O4'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BC:12:ARG:HG2	26:BC:12:ARG:NH1	2.25	0.47
26:BC:203:VAL:O	26:BC:204:LEU:HB2	2.15	0.47
27:BD:53:GLY:HA3	27:BD:77:ARG:N	2.19	0.47
28:BE:48:THR:C	28:BE:50:ALA:N	2.67	0.47
29:BF:90:LEU:HD12	29:BF:90:LEU:HA	1.68	0.47
30:BG:83:THR:HA	30:BG:84:LYS:CE	2.43	0.47
30:BG:84:LYS:CG	30:BG:85:LYS:N	2.76	0.47
31:BH:31:VAL:CG2	31:BH:32:PRO:HD2	2.44	0.47
32:BI:21:PRO:HB2	32:BI:22:PRO:HD3	1.96	0.47
35:BL:55:MET:HA	35:BL:55:MET:HE3	1.95	0.47
40:BQ:91:ARG:HH21	40:BQ:93:ILE:HD13	1.76	0.47
41:BR:14:VAL:CG1	41:BR:98:ILE:HD12	2.43	0.47
50:B0:50:GLY:O	50:B0:51:ARG:O	2.32	0.47
1:CB:114:LYS:CA	1:CB:117:GLU:HG2	2.36	0.47
4:CE:83:PRO:HG2	7:CH:95:MET:HA	1.96	0.47
5:CF:3:HIS:HB2	5:CF:92:THR:HA	1.96	0.47
10:CK:41:LEU:O	55:CA:685:G:H4'	2.14	0.47
14:CO:88:ARG:NH2	24:DA:715:A:H4'	2.29	0.47
16:CQ:40:THR:HG23	55:CA:280:C:H42	1.79	0.47
55:CA:11:G:C5	55:CA:12:U:C5	3.02	0.47
55:CA:293:G:C6	55:CA:305:G:C2	3.02	0.47
55:CA:577:G:N2	55:CA:578:C:C2	2.82	0.47
55:CA:612:C:C2	55:CA:629:A:C2	3.02	0.47
55:CA:927:G:C6	55:CA:1391:U:C2	3.02	0.47
55:CA:1050:G:C2	55:CA:1051:C:C4	3.02	0.47
55:CA:1400:C:C4	22:CV:34:G:C8	3.01	0.47
55:CA:1484:C:H2'	55:CA:1485:U:O4'	2.13	0.47
24:DA:15:G:C2	24:DA:16:C:C2	3.02	0.47
24:DA:140:C:O2'	24:DA:141:G:P	2.72	0.47
24:DA:630:G:N2	24:DA:634:C:C4	2.82	0.47
24:DA:636:G:H3'	35:DL:128:THR:HG21	1.95	0.47
24:DA:753:A:O2'	24:DA:754:U:O5'	2.32	0.47
24:DA:776:G:H4'	24:DA:777:G:O5'	2.13	0.47
24:DA:834:G:H2'	24:DA:835:C:O4'	2.14	0.47
24:DA:978:G:O4'	24:DA:1001:A:C2	2.67	0.47
24:DA:1056:G:C1'	24:DA:1103:A:H61	2.27	0.47
24:DA:1255:U:H3	24:DA:2060:A:H5'	1.79	0.47
24:DA:1278:C:O2'	24:DA:1279:G:H5'	2.13	0.47
24:DA:1429:G:O2'	24:DA:1430:G:C8	2.35	0.47
24:DA:1633:G:C5	24:DA:1635:A:C5	3.02	0.47
24:DA:2283:C:C4	24:DA:2389:G:C6	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2417:C:C2	24:DA:2418:A:C8	3.02	0.47
24:DA:2466:C:H2'	24:DA:2467:C:H6	1.77	0.47
24:DA:2478:A:N7	24:DA:2529:G:C6	2.82	0.47
24:DA:2808:G:N2	24:DA:2891:U:C6	2.82	0.47
27:DD:124:ARG:HD3	27:DD:125:TRP:HE1	1.71	0.47
31:DH:54:LEU:HA	31:DH:57:LYS:CG	2.44	0.47
38:DO:31:THR:HG23	38:DO:34:HIS:O	2.14	0.47
3:AD:36:ALA:CB	21:AA:426:U:H5''	2.44	0.47
3:AD:185:PRO:HB2	3:AD:190:LEU:HD23	1.96	0.47
4:AE:15:ILE:N	4:AE:15:ILE:HD12	2.28	0.47
4:AE:112:ALA:O	4:AE:116:VAL:HG22	2.14	0.47
5:AF:67:PRO:HG2	5:AF:70:VAL:HG22	1.96	0.47
8:AI:9:GLY:HA2	8:AI:80:HIS:HD2	1.78	0.47
9:AJ:88:MET:C	9:AJ:90:LEU:H	2.17	0.47
10:AK:18:GLY:C	10:AK:81:LEU:HB2	2.34	0.47
10:AK:43:TRP:CZ3	10:AK:45:THR:HG23	2.49	0.47
16:AQ:12:VAL:HG12	16:AQ:21:VAL:O	2.14	0.47
17:AR:63:TYR:HE1	21:AA:673:A:H1'	1.79	0.47
21:AA:438:U:C4	21:AA:494:G:C5	3.02	0.47
21:AA:550:G:C2	21:AA:551:U:C2	3.02	0.47
21:AA:1035:A:H2'	21:AA:1036:A:O4'	2.14	0.47
21:AA:1227:A:N3	21:AA:1227:A:C2'	2.73	0.47
24:BA:10:A:C8	24:BA:2800:A:N6	2.83	0.47
24:BA:506:G:H5''	24:BA:509:C:H1'	1.96	0.47
24:BA:536:G:H21	33:BJ:47:HIS:CG	2.32	0.47
24:BA:538:A:H4'	33:BJ:7:LYS:HB3	1.96	0.47
24:BA:792:A:H5''	24:BA:793:A:H5'	1.96	0.47
24:BA:1188:U:C2	24:BA:1189:A:C8	3.01	0.47
24:BA:1471:G:C5	24:BA:1472:C:C5	3.02	0.47
24:BA:2343:U:O3'	24:BA:2373:G:H4'	2.14	0.47
24:BA:2407:A:C4	24:BA:2408:U:C5	3.02	0.47
24:BA:2410:G:N2	24:BA:2411:A:H1'	2.28	0.47
26:BC:141:HIS:HB2	26:BC:190:THR:CB	2.44	0.47
27:BD:151:THR:CG2	27:BD:152:PRO:HD3	2.44	0.47
27:BD:184:ARG:HH11	39:BP:6:GLN:CD	2.16	0.47
31:BH:26:ALA:HA	31:BH:30:LEU:HB2	1.96	0.47
36:BM:126:ILE:O	36:BM:126:ILE:HD12	2.14	0.47
40:BQ:63:ARG:HD2	40:BQ:64:ILE:H	1.78	0.47
41:BR:38:VAL:CG1	41:BR:59:ILE:HG13	2.44	0.47
42:BS:18:ARG:O	42:BS:19:LEU:HB2	2.13	0.47
2:CC:174:LEU:HD11	2:CC:200:TRP:NE1	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:47:LEU:HD23	3:CD:52:VAL:HA	1.95	0.47
3:CD:78:ALA:C	3:CD:85:THR:HG23	2.34	0.47
4:CE:149:PRO:HA	4:CE:152:VAL:HG23	1.95	0.47
5:CF:47:LEU:HG	5:CF:55:HIS:C	2.34	0.47
8:CI:6:TYR:CE1	55:CA:1147:C:H4'	2.49	0.47
8:CI:24:ASN:O	8:CI:61:ASP:HA	2.13	0.47
11:CL:45:ASN:OD1	55:CA:528:C:N4	2.43	0.47
18:CS:35:ARG:HH12	18:CS:76:THR:HA	1.79	0.47
55:CA:120:A:C3'	55:CA:121:U:C5'	2.90	0.47
55:CA:254:G:O2'	55:CA:255:G:H5'	2.14	0.47
55:CA:256:U:H2'	55:CA:257:G:O4'	2.14	0.47
55:CA:330:C:H2'	55:CA:331:G:H8	1.79	0.47
55:CA:601:G:C4	55:CA:602:A:C8	3.03	0.47
55:CA:1043:G:C5	55:CA:1044:A:N7	2.82	0.47
55:CA:1298:U:H4'	55:CA:1299:A:O5'	2.13	0.47
55:CA:1475:G:H4'	24:DA:1689:A:H4'	1.95	0.47
24:DA:45:G:C4'	24:DA:46:G:H5'	2.44	0.47
24:DA:49:A:C6	24:DA:177:G:C5	3.02	0.47
24:DA:92:U:O2'	24:DA:93:G:H5'	2.14	0.47
24:DA:109:C:C4'	24:DA:348:A:H4'	2.38	0.47
24:DA:151:C:H2'	24:DA:152:A:C8	2.49	0.47
24:DA:251:A:C2'	24:DA:252:G:O4'	2.60	0.47
24:DA:379:G:C2	24:DA:396:G:C5	3.02	0.47
24:DA:587:C:O2	24:DA:671:C:H5'	2.14	0.47
24:DA:659:G:C6	24:DA:660:C:N4	2.82	0.47
24:DA:1021:A:C2'	24:DA:1022:G:H4'	2.43	0.47
24:DA:1215:G:OP1	40:DQ:7:VAL:HG11	2.13	0.47
24:DA:1327:A:O2'	24:DA:1328:A:O5'	2.32	0.47
24:DA:1423:G:C4	24:DA:1424:G:C8	3.02	0.47
24:DA:1638:C:H1'	24:DA:2698:U:O2'	2.13	0.47
24:DA:1649:G:C6	24:DA:2009:A:C6	3.02	0.47
24:DA:1681:G:O2'	24:DA:1762:A:C2'	2.62	0.47
24:DA:2100:G:C6	24:DA:2190:G:C5	3.02	0.47
24:DA:2212:A:N7	24:DA:2214:C:N4	2.62	0.47
24:DA:2386:A:O2'	24:DA:2387:U:O5'	2.31	0.47
24:DA:2543:G:C4	24:DA:2765:A:H2'	2.49	0.47
24:DA:2550:G:C6	24:DA:2551:C:N4	2.82	0.47
24:DA:2875:C:H2'	24:DA:2876:G:C8	2.48	0.47
30:DG:162:ARG:HB2	30:DG:166:GLU:CB	2.44	0.47
35:DL:17:LYS:HZ1	35:DL:19:LEU:HD22	1.78	0.47
38:DO:90:VAL:HB	38:DO:91:SER:H	1.52	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DQ:4:LYS:HE3	40:DQ:7:VAL:HG22	1.96	0.47
40:DQ:10:ARG:O	40:DQ:14:LYS:HB2	2.14	0.47
1:AB:22:TRP:O	1:AB:22:TRP:CG	2.67	0.47
2:AC:6:PRO:HB3	2:AC:174:LEU:HD11	1.96	0.47
3:AD:109:THR:HG23	3:AD:112:GLU:HB2	1.96	0.47
4:AE:104:ILE:HD11	4:AE:111:ARG:HA	1.96	0.47
5:AF:3:HIS:O	5:AF:92:THR:HA	2.12	0.47
8:AI:43:ALA:HB1	8:AI:46:VAL:CG2	2.44	0.47
21:AA:251:G:C2	21:AA:266:G:O6	2.66	0.47
21:AA:255:G:H2'	21:AA:256:U:C6	2.49	0.47
21:AA:550:G:C6	21:AA:551:U:C4	3.02	0.47
21:AA:996:A:H2'	21:AA:997:U:C6	2.49	0.47
21:AA:1074:G:C2	21:AA:1102:A:C5	3.02	0.47
21:AA:1248:A:H2'	21:AA:1249:C:H6	1.79	0.47
24:BA:242:G:N2	24:BA:255:A:OP2	2.39	0.47
24:BA:310:A:HO2'	24:BA:311:A:P	2.38	0.47
24:BA:369:U:O2'	24:BA:370:G:OP2	2.26	0.47
24:BA:437:U:H2'	24:BA:438:G:H8	1.78	0.47
24:BA:1005:C:N3	24:BA:1143:A:C2	2.82	0.47
24:BA:1046:A:H3'	24:BA:1047:G:C5'	2.43	0.47
24:BA:1753:G:H5''	39:BP:92:ARG:HE	1.79	0.47
24:BA:2391:G:O6	24:BA:2425:A:C8	2.56	0.47
25:BB:41:G:H3'	25:BB:42:C:H5''	1.97	0.47
31:BH:82:SER:HA	31:BH:101:ASP:OD1	2.14	0.47
31:BH:132:PHE:CG	31:BH:133:GLN:N	2.82	0.47
32:BI:93:ASN:OD1	32:BI:136:GLY:HA2	2.14	0.47
33:BJ:67:ASN:O	33:BJ:68:LYS:C	2.53	0.47
38:BO:36:TYR:CD2	38:BO:36:TYR:N	2.82	0.47
41:BR:48:LYS:O	41:BR:48:LYS:HD2	2.15	0.47
42:BS:96:ILE:O	42:BS:96:ILE:CG1	2.47	0.47
47:BX:2:ARG:CD	47:BX:29:LEU:HD12	2.44	0.47
2:CC:106:ARG:H	2:CC:106:ARG:CD	2.19	0.47
3:CD:39:GLN:HA	55:CA:426:U:H4'	1.97	0.47
3:CD:164:ARG:HB3	3:CD:165:GLU:H	1.54	0.47
4:CE:15:ILE:HD11	4:CE:37:VAL:CG2	2.44	0.47
4:CE:59:ILE:O	4:CE:62:ALA:HB3	2.14	0.47
4:CE:77:ASN:HB3	4:CE:79:THR:HG22	1.95	0.47
8:CI:78:ILE:O	8:CI:82:ILE:HG13	2.14	0.47
18:CS:33:TRP:HB2	55:CA:1014:A:N3	2.30	0.47
55:CA:482:A:H2'	55:CA:483:C:C6	2.49	0.47
55:CA:801:U:H2'	55:CA:802:A:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:837:U:H2'	55:CA:838:G:H8	1.79	0.47
55:CA:979:C:C6	55:CA:1318:A:N1	2.82	0.47
55:CA:1324:A:C2'	55:CA:1325:C:H5'	2.44	0.47
22:CV:37:A:N6	22:CV:38:A:C6	2.83	0.47
24:DA:8:C:C2'	24:DA:9:G:H5'	2.44	0.47
24:DA:49:A:C6	24:DA:177:G:C6	3.02	0.47
24:DA:159:G:O2'	24:DA:160:A:H5''	2.14	0.47
24:DA:478:A:C6	24:DA:480:A:C6	3.03	0.47
24:DA:836:G:C6	24:DA:837:C:C4	3.01	0.47
24:DA:922:C:H1'	46:DW:22:VAL:CG2	2.40	0.47
24:DA:1180:U:C4	24:DA:1181:U:N3	2.83	0.47
24:DA:1254:A:N1	28:DE:77:ILE:HD12	2.29	0.47
24:DA:1269:A:H2'	24:DA:1270:C:H6	1.79	0.47
24:DA:1427:A:H4'	24:DA:1428:C:O4'	2.14	0.47
24:DA:1635:A:HO2'	24:DA:1636:U:H5'	1.77	0.47
24:DA:1715:G:OP1	24:DA:1715:G:H8	1.98	0.47
24:DA:2136:G:H5'	24:DA:2137:U:OP2	2.15	0.47
24:DA:2142:A:C2'	24:DA:2143:C:H4'	2.44	0.47
24:DA:2189:U:C2	24:DA:2190:G:C8	3.02	0.47
24:DA:2234:G:C6	24:DA:2235:G:C5	3.03	0.47
24:DA:2345:G:C4	24:DA:2381:A:C2	3.02	0.47
24:DA:2393:U:H2'	24:DA:2394:C:O4'	2.14	0.47
24:DA:2428:G:H4'	24:DA:2429:G:C4	2.49	0.47
24:DA:2449:U:H4'	24:DA:2450:A:OP1	2.15	0.47
24:DA:2686:G:C6	24:DA:2687:U:N3	2.83	0.47
56:DB:28:C:H2'	56:DB:29:A:O4'	2.15	0.47
56:DB:37:C:N3	56:DB:49:C:O4'	2.47	0.47
26:DC:14:HIS:O	26:DC:203:VAL:HG11	2.14	0.47
26:DC:159:THR:N	26:DC:194:VAL:CG1	2.78	0.47
27:DD:12:THR:HG22	27:DD:13:ARG:O	2.14	0.47
28:DE:112:LEU:HD13	28:DE:112:LEU:O	2.14	0.47
29:DF:134:GLN:HG3	29:DF:149:ARG:O	2.13	0.47
32:DI:102:ARG:HG2	32:DI:141:ASP:O	2.14	0.47
34:DK:19:VAL:CG1	34:DK:41:ILE:HG12	2.43	0.47
34:DK:97:THR:O	34:DK:98:ARG:HB2	2.14	0.47
35:DL:81:ASP:C	35:DL:82:LEU:HD12	2.35	0.47
36:DM:71:LYS:HD3	36:DM:95:LEU:HD13	1.96	0.47
38:DO:30:ARG:CG	38:DO:30:ARG:NH1	2.76	0.47
41:DR:26:ASP:O	41:DR:27:ILE:HD13	2.14	0.47
41:DR:72:VAL:HG23	41:DR:72:VAL:O	2.13	0.47
43:DT:55:VAL:HG23	43:DT:86:THR:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DT:69:ARG:NE	43:DT:70:HIS:CD2	2.82	0.47
44:DU:3:LYS:HD3	44:DU:82:VAL:CG2	2.44	0.47
44:DU:91:LYS:O	44:DU:92:VAL:HG22	2.13	0.47
53:D3:41:ARG:O	53:D3:41:ARG:HD2	2.14	0.47
1:AB:34:ARG:HG2	1:AB:35:ASN:H	1.77	0.47
2:AC:168:ARG:HD2	2:AC:169:GLU:N	2.29	0.47
4:AE:89:THR:HG21	21:AA:1078:U:C2	2.49	0.47
8:AI:56:MET:SD	8:AI:57:VAL:N	2.84	0.47
10:AK:124:LYS:HG2	20:AU:34:ARG:HG2	1.97	0.47
11:AL:62:VAL:HG21	11:AL:94:TYR:CE2	2.36	0.47
11:AL:74:GLN:CG	11:AL:75:GLU:HG2	2.44	0.47
12:AM:69:ARG:HH22	21:AA:1330:U:H5''	1.77	0.47
13:AN:58:ARG:HH21	21:AA:980:C:H5'	1.80	0.47
19:AT:82:ILE:HD11	19:AT:83:ASN:ND2	2.29	0.47
21:AA:6:G:O2'	21:AA:7:A:P	2.72	0.47
21:AA:14:U:H2'	21:AA:16:A:OP2	2.13	0.47
21:AA:82:G:H2'	21:AA:83:C:C4'	2.44	0.47
21:AA:97:G:O2'	21:AA:98:A:H5'	2.13	0.47
21:AA:208:U:H3	21:AA:212:G:N2	2.13	0.47
21:AA:551:U:H2'	21:AA:552:U:O4'	2.15	0.47
21:AA:696:A:H1'	21:AA:786:G:O2'	2.14	0.47
21:AA:763:G:H2'	21:AA:764:C:H6	1.79	0.47
21:AA:1058:G:C6	21:AA:1059:C:C4	3.02	0.47
21:AA:1095:U:H5'	21:AA:1109:C:O2	2.14	0.47
21:AA:1122:U:H2'	21:AA:1123:U:H6	1.79	0.47
21:AA:1459:G:H8	21:AA:1459:G:O5'	1.97	0.47
24:BA:271:G:C2	24:BA:272:A:C5	3.02	0.47
24:BA:664:G:H4'	24:BA:941:A:OP1	2.14	0.47
24:BA:1024:G:H5''	24:BA:1025:G:H3'	1.96	0.47
24:BA:1185:G:H5''	24:BA:1186:G:OP1	2.14	0.47
24:BA:1310:G:H3'	24:BA:1311:G:C8	2.49	0.47
24:BA:1538:G:O2'	24:BA:1539:U:H5'	2.14	0.47
24:BA:1987:A:C2	24:BA:1988:G:C8	3.02	0.47
24:BA:1996:C:H4'	24:BA:1997:C:OP1	2.13	0.47
24:BA:2226:C:H2'	24:BA:2227:A:H8	1.79	0.47
24:BA:2580:U:H5''	27:BD:135:GLY:O	2.15	0.47
24:BA:2691:C:H2'	24:BA:2692:G:H8	1.78	0.47
26:BC:21:PRO:C	26:BC:23:LEU:H	2.17	0.47
26:BC:144:GLU:CA	26:BC:151:GLY:HA2	2.44	0.47
29:BF:15:LEU:O	29:BF:18:GLU:N	2.46	0.47
29:BF:168:LEU:HD12	29:BF:168:LEU:C	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:73:SER:HA	30:BG:76:ILE:HG22	1.95	0.47
38:BO:33:ARG:HG2	38:BO:34:HIS:ND1	2.29	0.47
39:BP:50:ARG:HD3	39:BP:56:SER:HB3	1.97	0.47
43:BT:29:THR:HA	43:BT:86:THR:H	1.79	0.47
43:BT:29:THR:H	43:BT:91:GLN:HE22	1.59	0.47
43:BT:39:THR:O	43:BT:40:LYS:HB2	2.14	0.47
44:BU:58:VAL:O	44:BU:58:VAL:HG12	2.15	0.47
1:CB:71:THR:HG22	1:CB:71:THR:O	2.13	0.47
1:CB:115:ASP:O	1:CB:119:GLN:HB2	2.13	0.47
4:CE:45:VAL:O	4:CE:71:ILE:HG22	2.13	0.47
4:CE:156:ARG:HH11	7:CH:43:GLY:HA3	1.78	0.47
6:CG:30:MET:HA	6:CG:38:ALA:HB2	1.96	0.47
8:CI:123:ARG:HG3	8:CI:124:PRO:O	2.13	0.47
16:CQ:45:VAL:HA	16:CQ:72:TRP:O	2.15	0.47
18:CS:20:LYS:C	18:CS:20:LYS:HD3	2.35	0.47
55:CA:50:A:N1	55:CA:360:G:O2'	2.33	0.47
55:CA:200:G:H2'	55:CA:200:G:N3	2.29	0.47
55:CA:275:G:N3	55:CA:276:G:C8	2.82	0.47
55:CA:364:A:C2	55:CA:365:U:O4	2.68	0.47
55:CA:369:G:O2'	55:CA:370:C:H6	1.97	0.47
55:CA:544:G:C6	55:CA:545:C:C4	3.02	0.47
55:CA:766:A:H2'	55:CA:767:A:O4'	2.15	0.47
55:CA:775:G:O2'	55:CA:776:G:H5'	2.14	0.47
55:CA:981:U:C5	55:CA:982:U:C2	3.02	0.47
55:CA:1299:A:O2'	55:CA:1300:G:H4'	2.14	0.47
55:CA:1497:G:HO2'	55:CA:1518:A:H2	1.60	0.47
24:DA:20:C:H2'	24:DA:21:A:H8	1.79	0.47
24:DA:40:U:C4	24:DA:41:C:N4	2.83	0.47
24:DA:379:G:C5	24:DA:396:G:C6	3.02	0.47
24:DA:396:G:O2'	24:DA:397:U:C5'	2.62	0.47
24:DA:1121:C:H2'	24:DA:1122:G:O4'	2.13	0.47
24:DA:1140:C:OP2	33:DJ:68:LYS:HE3	2.13	0.47
24:DA:1172:C:H2'	24:DA:1173:U:O4'	2.14	0.47
24:DA:1672:A:N6	24:DA:1673:G:C6	2.83	0.47
24:DA:1760:C:O2'	24:DA:1761:C:C5'	2.62	0.47
24:DA:1833:C:H2'	24:DA:1834:U:H6	1.78	0.47
24:DA:2026:U:C2	24:DA:2038:G:N2	2.82	0.47
24:DA:2064:C:C2	24:DA:2450:A:N6	2.82	0.47
24:DA:2068:U:H5''	24:DA:2068:U:H6	1.78	0.47
24:DA:2287:A:N7	24:DA:2289:G:C8	2.82	0.47
24:DA:2603:G:C2	24:DA:2604:U:C2	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2656:U:O2'	24:DA:2657:A:H5'	2.13	0.47
24:DA:2672:U:H6	24:DA:2672:U:O5'	1.97	0.47
24:DA:2748:A:C6	24:DA:2749:A:C5	3.02	0.47
56:DB:13:G:N2	56:DB:16:G:C4	2.83	0.47
27:DD:169:ARG:O	27:DD:170:VAL:O	2.32	0.47
28:DE:79:ARG:HG2	28:DE:80:SER:N	2.25	0.47
28:DE:115:GLN:O	28:DE:117:ARG:N	2.47	0.47
28:DE:144:GLU:O	28:DE:145:ASP:C	2.53	0.47
28:DE:175:ILE:O	28:DE:175:ILE:HG23	2.14	0.47
29:DF:90:LEU:HB3	29:DF:95:MET:HG3	1.96	0.47
33:DJ:89:PHE:HE2	33:DJ:100:VAL:HG11	1.79	0.47
36:DM:111:GLU:O	36:DM:115:GLU:HB2	2.13	0.47
42:DS:44:ALA:O	42:DS:48:LYS:HB2	2.14	0.47
45:DV:17:SER:HA	45:DV:20:LEU:HG	1.95	0.47
1:AB:9:LEU:HD12	1:AB:42:LEU:HD13	1.97	0.47
1:AB:89:PHE:CZ	1:AB:153:MET:HB2	2.48	0.47
4:AE:59:ILE:HA	4:AE:62:ALA:HB3	1.97	0.47
4:AE:109:ALA:O	4:AE:110:MET:C	2.53	0.47
6:AG:96:ASN:O	6:AG:100:MET:HG3	2.15	0.47
10:AK:80:ASN:HA	10:AK:105:ARG:O	2.15	0.47
10:AK:126:ARG:HB2	20:AU:33:ARG:NH1	2.30	0.47
14:AO:73:ASP:CG	14:AO:76:ARG:HG3	2.35	0.47
21:AA:594:U:H2'	21:AA:595:A:O4'	2.14	0.47
21:AA:1031:C:H1'	21:AA:1032:G:C2	2.49	0.47
21:AA:1095:U:H5''	21:AA:1109:C:O2	2.14	0.47
21:AA:1172:C:H2'	21:AA:1173:U:H6	1.78	0.47
24:BA:32:C:P	24:BA:1238:G:H5''	2.55	0.47
24:BA:90:U:H2'	24:BA:91:A:H8	1.79	0.47
24:BA:95:A:C2	24:BA:96:C:H1'	2.49	0.47
24:BA:301:G:C5	24:BA:302:C:N4	2.81	0.47
24:BA:487:C:N4	24:BA:494:G:C6	2.82	0.47
24:BA:581:C:C2	24:BA:582:A:N7	2.82	0.47
24:BA:608:A:C4	24:BA:621:A:C6	3.02	0.47
24:BA:920:A:C6	24:BA:921:C:C4	3.02	0.47
24:BA:1011:G:H5''	40:BQ:76:SER:OG	2.15	0.47
24:BA:1344:U:O2'	24:BA:1345:C:OP1	2.28	0.47
24:BA:1413:A:H2'	24:BA:1414:C:O4'	2.14	0.47
24:BA:1556:C:O2'	24:BA:1557:C:C5'	2.63	0.47
24:BA:1707:G:H2'	24:BA:1708:C:C6	2.50	0.47
24:BA:1820:U:OP1	26:BC:176:ARG:HG2	2.14	0.47
24:BA:2018:G:N1	24:BA:2019:A:C5	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2027:G:H2'	24:BA:2028:U:H6	1.79	0.47
24:BA:2385:C:O2'	24:BA:2386:A:H5'	2.14	0.47
24:BA:2599:G:C2	24:BA:2600:A:C8	3.02	0.47
24:BA:2740:A:C6	24:BA:2764:A:C8	3.03	0.47
25:BB:46:A:H2'	25:BB:47:C:C6	2.49	0.47
26:BC:64:VAL:HG11	26:BC:66:PHE:CZ	2.50	0.47
26:BC:229:HIS:CD2	26:BC:246:PRO:CB	2.97	0.47
27:BD:111:GLY:O	27:BD:169:ARG:O	2.32	0.47
30:BG:112:VAL:O	30:BG:113:ASP:HB2	2.15	0.47
31:BH:68:ARG:HH22	31:BH:72:ILE:HG21	1.77	0.47
33:BJ:64:VAL:CG1	33:BJ:65:THR:N	2.77	0.47
36:BM:2:LEU:HD23	36:BM:69:PRO:HD2	1.97	0.47
36:BM:45:GLN:HE22	36:BM:125:PRO:HG3	1.78	0.47
41:BR:1:MET:HB2	41:BR:43:ASN:ND2	2.29	0.47
48:BY:21:LEU:O	48:BY:22:LEU:C	2.52	0.47
52:B2:29:GLN:O	52:B2:33:ARG:HG3	2.13	0.47
2:CC:45:GLU:C	2:CC:47:ALA:H	2.17	0.47
3:CD:180:THR:O	3:CD:182:LYS:N	2.47	0.47
6:CG:77:ARG:NH1	55:CA:1381:U:N3	2.63	0.47
6:CG:108:ARG:CZ	55:CA:1240:U:H6	2.26	0.47
10:CK:124:LYS:HD2	20:CU:34:ARG:HD2	1.96	0.47
11:CL:109:ARG:O	11:CL:110:LYS:HD2	2.14	0.47
12:CM:12:LYS:HE2	12:CM:16:ILE:HG22	1.97	0.47
12:CM:99:GLN:HE22	55:CA:1307:U:H5'	1.78	0.47
16:CQ:3:LYS:HZ3	16:CQ:6:THR:HG21	1.80	0.47
18:CS:18:VAL:HG21	18:CS:42:ASN:HB3	1.96	0.47
19:CT:77:ASN:OD1	19:CT:77:ASN:N	2.37	0.47
55:CA:168:G:C2'	55:CA:169:C:H5'	2.44	0.47
55:CA:210:C:O2'	55:CA:211:G:P	2.73	0.47
55:CA:708:C:H2'	55:CA:709:U:C6	2.43	0.47
55:CA:709:U:H2'	55:CA:710:G:C8	2.50	0.47
55:CA:1154:G:H2'	55:CA:1155:A:H8	1.80	0.47
55:CA:1239:A:H1'	55:CA:1241:G:C4	2.50	0.47
55:CA:1256:A:N9	55:CA:1278:G:C6	2.83	0.47
55:CA:1453:G:N3	55:CA:1453:G:C2'	2.77	0.47
24:DA:335:C:H2'	24:DA:336:C:H6	1.80	0.47
24:DA:527:C:H4'	24:DA:528:A:H5'	1.96	0.47
24:DA:607:U:C5	24:DA:619:G:C4	3.01	0.47
24:DA:625:G:H5'	24:DA:657:U:OP1	2.14	0.47
24:DA:705:A:H8	24:DA:705:A:O5'	1.97	0.47
24:DA:740:C:O2'	24:DA:741:U:C5'	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:740:C:H5''	24:DA:1784:A:OP1	2.14	0.47
24:DA:1343:G:C4	24:DA:1597:A:C6	3.03	0.47
24:DA:1930:G:HO2'	24:DA:1968:G:H1	1.56	0.47
24:DA:2239:G:C4	24:DA:2240:U:C5	3.02	0.47
24:DA:2415:G:C4'	35:DL:66:PHE:HB2	2.37	0.47
24:DA:2516:A:C2	24:DA:2569:G:N3	2.82	0.47
24:DA:2574:G:HO2'	27:DD:148:GLN:HB2	1.78	0.47
56:DB:43:C:O2'	56:DB:45:A:N7	2.46	0.47
56:DB:75:G:H22	56:DB:102:G:N2	2.12	0.47
29:DF:109:ARG:HH11	29:DF:135:ILE:CG2	2.27	0.47
30:DG:116:LEU:HA	30:DG:117:PRO:HD3	1.68	0.47
33:DJ:124:VAL:HG22	33:DJ:125:TYR:O	2.14	0.47
35:DL:117:THR:HG22	35:DL:118:THR:N	2.27	0.47
39:DP:37:LYS:O	39:DP:38:ARG:HB3	2.15	0.47
42:DS:51:LEU:HG	42:DS:55:ILE:HD13	1.97	0.47
43:DT:12:ARG:HB2	43:DT:33:LYS:HG2	1.97	0.47
50:D0:55:ALA:HB3	50:D0:56:LYS:NZ	2.29	0.47
53:D3:57:VAL:O	53:D3:60:CYS:HB2	2.15	0.47
1:AB:119:GLN:O	1:AB:120:SER:C	2.53	0.47
2:AC:125:ARG:O	2:AC:126:ARG:HB3	2.15	0.47
5:AF:31:GLY:C	5:AF:33:GLU:H	2.18	0.47
7:AH:79:ARG:HB2	7:AH:80:PRO:HD2	1.96	0.47
9:AJ:6:ILE:HD11	9:AJ:79:PRO:CA	2.44	0.47
13:AN:89:ARG:HB2	13:AN:91:GLU:HG2	1.97	0.47
14:AO:42:PHE:CD2	14:AO:52:ARG:HD3	2.50	0.47
15:AP:1:MET:SD	15:AP:66:THR:HG21	2.55	0.47
16:AQ:30:HIS:HB2	16:AQ:35:LYS:O	2.14	0.47
18:AS:35:ARG:HD2	18:AS:51:HIS:O	2.14	0.47
21:AA:104:G:C2	21:AA:105:G:C5	3.02	0.47
21:AA:244:U:C2	21:AA:894:G:C2	3.02	0.47
21:AA:302:G:O2'	21:AA:556:C:H5'	2.14	0.47
21:AA:707:U:C4	21:AA:708:C:N4	2.82	0.47
21:AA:981:U:H2'	21:AA:982:U:C5	2.50	0.47
21:AA:1266:G:C6	21:AA:1270:G:C6	3.02	0.47
21:AA:1390:U:H2'	21:AA:1391:U:C6	2.49	0.47
24:BA:197:A:C6	24:BA:2430:A:N3	2.82	0.47
24:BA:237:C:C2'	24:BA:238:C:H5'	2.44	0.47
24:BA:841:G:C4	24:BA:938:G:N2	2.82	0.47
24:BA:855:G:H1'	46:BW:23:LYS:CD	2.42	0.47
24:BA:1005:C:O2	24:BA:1143:A:C6	2.67	0.47
24:BA:1315:C:O2'	24:BA:1316:U:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1422:G:C5	24:BA:1423:G:N7	2.83	0.47
24:BA:1479:G:N2	24:BA:1513:U:H1'	2.30	0.47
24:BA:1497:U:H2'	24:BA:1578:U:OP1	2.14	0.47
24:BA:1672:A:N6	24:BA:1673:G:C6	2.83	0.47
24:BA:1833:C:H2'	24:BA:1834:U:H6	1.79	0.47
24:BA:1859:U:H2'	24:BA:1860:G:O4'	2.15	0.47
24:BA:2526:G:C6	24:BA:2527:C:N3	2.83	0.47
24:BA:2657:A:C6	24:BA:2665:A:C8	3.02	0.47
24:BA:2720:U:H2'	24:BA:2721:A:C8	2.50	0.47
26:BC:141:HIS:HB3	26:BC:142:ASN:H	1.34	0.47
28:BE:159:LEU:HD12	28:BE:159:LEU:HA	1.55	0.47
34:BK:21:CYS:SG	34:BK:39:ILE:HD11	2.54	0.47
36:BM:136:MET:HE2	45:BV:57:TYR:CE2	2.50	0.47
37:BN:55:ALA:HB1	37:BN:80:PHE:H	1.77	0.47
40:BQ:59:LEU:O	40:BQ:60:TRP:C	2.51	0.47
42:BS:36:LEU:HA	42:BS:36:LEU:HD12	1.49	0.47
45:BV:26:PHE:C	45:BV:26:PHE:CD1	2.87	0.47
46:BW:22:VAL:O	46:BW:25:PHE:HD2	1.96	0.47
46:BW:28:GLU:CG	46:BW:29:SER:N	2.78	0.47
10:CK:70:ALA:HB1	10:CK:104:PHE:CZ	2.49	0.47
15:CP:8:ARG:NH2	15:CP:15:PRO:HD3	2.30	0.47
18:CS:5:LYS:HD3	18:CS:5:LYS:H	1.79	0.47
55:CA:9:G:C2	55:CA:10:A:C8	3.03	0.47
55:CA:247:G:C5	55:CA:278:G:C2	3.03	0.47
55:CA:327:A:C2	55:CA:329:A:N3	2.82	0.47
55:CA:1051:C:O2'	55:CA:1052:U:O4'	2.32	0.47
55:CA:1069:C:O2'	55:CA:1192:C:H1'	2.15	0.47
55:CA:1170:A:O2'	55:CA:1171:A:H5'	2.15	0.47
55:CA:1202:U:O2'	55:CA:1203:C:H5'	2.14	0.47
55:CA:1460:C:N4	55:CA:1461:G:C6	2.83	0.47
23:CW:5:U:H2'	23:CW:6:U:C6	2.49	0.47
24:DA:112:U:H5'	48:DY:58:ASN:ND2	2.29	0.47
24:DA:222:A:C6	24:DA:224:U:C2	3.02	0.47
24:DA:244:A:H2'	24:DA:245:G:O4'	2.14	0.47
24:DA:296:U:C2	24:DA:297:G:C8	3.03	0.47
24:DA:562:U:H2'	24:DA:572:A:O4'	2.14	0.47
24:DA:971:G:O6	24:DA:972:A:C2	2.67	0.47
24:DA:1022:G:O2'	24:DA:1023:U:OP2	2.25	0.47
24:DA:1331:G:H2'	24:DA:1333:G:N7	2.29	0.47
24:DA:1889:A:H2	24:DA:2086:U:H1'	1.79	0.47
24:DA:2061:G:H8	24:DA:2501:C:H4'	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2527:C:H2'	24:DA:2528:U:O4'	2.13	0.47
24:DA:2568:U:H2'	24:DA:2569:G:C8	2.49	0.47
56:DB:102:G:C6	56:DB:103:U:C4	3.03	0.47
26:DC:62:ARG:HH21	26:DC:62:ARG:CG	2.18	0.47
28:DE:108:ILE:O	28:DE:108:ILE:HD13	2.15	0.47
30:DG:7:PRO:HB3	30:DG:48:THR:HB	1.97	0.47
30:DG:84:LYS:O	30:DG:85:LYS:CB	2.62	0.47
31:DH:75:LEU:O	31:DH:76:GLU:HB2	2.14	0.47
31:DH:90:LEU:CB	31:DH:123:ARG:HB3	2.39	0.47
32:DI:57:VAL:HG21	32:DI:69:VAL:H	1.78	0.47
35:DL:100:ILE:O	35:DL:101:ILE:CB	2.62	0.47
36:DM:72:PRO:O	36:DM:73:ILE:CB	2.59	0.47
40:DQ:63:ARG:HH12	40:DQ:99:VAL:HG21	1.79	0.47
44:DU:92:VAL:CB	44:DU:101:THR:HG21	2.41	0.47
44:DU:95:PHE:HD1	44:DU:95:PHE:N	2.09	0.47
49:DZ:38:GLU:CD	49:DZ:39:ASP:H	2.18	0.47
1:AB:69:VAL:CG2	1:AB:160:LEU:HD21	2.44	0.47
1:AB:150:ILE:HG12	1:AB:150:ILE:O	2.15	0.47
1:AB:170:ILE:HD13	1:AB:170:ILE:H	1.79	0.47
1:AB:186:VAL:HG23	1:AB:186:VAL:O	2.15	0.47
3:AD:55:ARG:HH12	3:AD:58:GLN:HB3	1.79	0.47
3:AD:98:ASP:HB2	3:AD:114:ARG:HG2	1.97	0.47
3:AD:109:THR:HG21	21:AA:408:A:O5'	2.14	0.47
4:AE:37:VAL:HG21	4:AE:113:VAL:CG1	2.37	0.47
7:AH:3:GLN:OE1	21:AA:878:A:H1'	2.15	0.47
10:AK:51:PHE:HZ	10:AK:64:VAL:HG11	1.79	0.47
10:AK:63:GLN:HG3	10:AK:98:ALA:HB3	1.96	0.47
12:AM:27:THR:HG21	21:AA:1328:C:H5''	1.97	0.47
14:AO:34:GLN:O	14:AO:38:LEU:HD23	2.15	0.47
17:AR:21:ASP:OD1	17:AR:23:LYS:HG3	2.15	0.47
19:AT:5:SER:OG	19:AT:6:ALA:N	2.46	0.47
21:AA:103:U:N3	21:AA:104:G:C8	2.83	0.47
21:AA:131:A:C2	21:AA:132:C:N3	2.83	0.47
21:AA:143:A:H5'	21:AA:144:G:H5'	1.96	0.47
21:AA:339:C:H2'	21:AA:340:U:H6	1.79	0.47
21:AA:415:A:C8	21:AA:416:G:N7	2.82	0.47
21:AA:481:G:O2'	21:AA:482:A:C8	2.65	0.47
21:AA:692:U:O2	21:AA:694:A:H3'	2.15	0.47
21:AA:821:G:H2'	21:AA:822:U:H6	1.78	0.47
21:AA:962:C:H2'	21:AA:963:G:O4'	2.15	0.47
21:AA:987:G:N1	21:AA:988:G:C5	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1065:U:C4	21:AA:1190:G:O4'	2.68	0.47
24:BA:27:G:O2'	24:BA:28:A:OP2	2.33	0.47
24:BA:184:C:H2'	24:BA:185:G:H8	1.80	0.47
24:BA:241:A:O2'	53:B3:2:LYS:NZ	2.48	0.47
24:BA:387:U:C5	24:BA:388:G:O6	2.68	0.47
24:BA:911:A:H2'	36:BM:9:PHE:CZ	2.49	0.47
24:BA:946:C:H2'	24:BA:947:A:C8	2.47	0.47
24:BA:960:A:C8	24:BA:962:G:C8	3.02	0.47
24:BA:1107:G:H2'	24:BA:1108:U:H6	1.80	0.47
24:BA:1247:A:C5	24:BA:1249:U:C4	3.03	0.47
24:BA:1253:A:H3'	24:BA:1254:A:H5'	1.95	0.47
24:BA:1274:A:H8	24:BA:1274:A:O5'	1.98	0.47
24:BA:1498:C:O2'	24:BA:1499:C:O4'	2.30	0.47
24:BA:1539:U:O2'	24:BA:1540:G:O5'	2.32	0.47
24:BA:1553:A:C8	24:BA:1555:G:C5	3.02	0.47
24:BA:1663:G:C6	24:BA:1998:A:C6	3.03	0.47
24:BA:1819:A:H5''	26:BC:159:THR:CG2	2.44	0.47
24:BA:1936:A:C2	24:BA:1943:U:O4	2.67	0.47
24:BA:1937:A:H5''	59:BA:3469:HOH:O	2.14	0.47
24:BA:2510:C:C4	24:BA:2511:U:C4	3.03	0.47
24:BA:2513:A:C6	24:BA:2574:G:C6	3.02	0.47
24:BA:2525:G:C2	24:BA:2539:C:C2	3.02	0.47
24:BA:2552:U:H2'	24:BA:2554:U:OP2	2.13	0.47
24:BA:2595:G:N2	24:BA:2599:G:C5	2.83	0.47
24:BA:2748:A:N6	24:BA:2749:A:C6	2.82	0.47
24:BA:2776:A:C2	24:BA:2778:A:C4	3.02	0.47
24:BA:2796:U:H3	24:BA:2799:A:N6	2.05	0.47
24:BA:2800:A:C2	24:BA:2895:G:C1'	2.96	0.47
24:BA:2870:C:O2'	24:BA:2871:U:H5'	2.14	0.47
25:BB:88:C:H3'	25:BB:88:C:OP2	2.14	0.47
26:BC:124:LYS:HB3	26:BC:127:ASN:ND2	2.30	0.47
27:BD:34:VAL:CG2	27:BD:91:THR:HA	2.43	0.47
28:BE:58:LYS:O	28:BE:59:PRO:C	2.52	0.47
30:BG:54:ARG:HG3	30:BG:57:TYR:HD1	1.80	0.47
32:BI:60:VAL:HG22	32:BI:66:PHE:CB	2.45	0.47
32:BI:100:ILE:HG22	32:BI:101:SER:N	2.22	0.47
32:BI:123:ALA:C	32:BI:125:THR:H	2.17	0.47
41:BR:29:THR:HG22	41:BR:29:THR:O	2.15	0.47
41:BR:83:TYR:C	41:BR:83:TYR:CD1	2.87	0.47
43:BT:15:HIS:HB3	43:BT:31:VAL:HG22	1.97	0.47
47:BX:53:LYS:HD3	47:BX:53:LYS:C	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B0:9:ARG:CG	50:B0:9:ARG:NH2	2.76	0.47
51:B1:16:THR:HG21	51:B1:39:ASP:OD1	2.14	0.47
1:CB:14:HIS:HE1	1:CB:42:LEU:HD11	1.80	0.47
1:CB:65:LYS:HE2	1:CB:153:MET:HG3	1.97	0.47
1:CB:80:LYS:O	1:CB:83:ALA:N	2.48	0.47
1:CB:127:LYS:O	1:CB:132:GLU:HB2	2.14	0.47
1:CB:164:ASP:HB3	1:CB:167:HIS:H	1.79	0.47
4:CE:80:LEU:O	4:CE:81:GLN:C	2.53	0.47
5:CF:73:GLU:HA	5:CF:73:GLU:OE1	2.14	0.47
6:CG:68:VAL:HG22	6:CG:134:VAL:HG12	1.97	0.47
8:CI:47:VAL:HG23	8:CI:48:ARG:HD2	1.96	0.47
10:CK:104:PHE:N	10:CK:104:PHE:HD1	2.13	0.47
10:CK:121:ARG:HD3	55:CA:778:G:H21	1.80	0.47
11:CL:26:CYS:HB2	11:CL:29:LYS:HE2	1.95	0.47
11:CL:65:TYR:CD1	11:CL:66:ILE:N	2.79	0.47
12:CM:23:GLY:HA3	12:CM:64:VAL:HG13	1.96	0.47
12:CM:66:GLY:O	12:CM:70:ARG:HB2	2.15	0.47
13:CN:63:CYS:O	13:CN:67:GLY:HA2	2.14	0.47
15:CP:13:LYS:HE2	55:CA:483:C:O2	2.15	0.47
17:CR:72:ARG:HA	20:CU:4:LYS:HE3	1.96	0.47
18:CS:35:ARG:HD2	18:CS:71:GLY:HA2	1.97	0.47
18:CS:43:MET:CE	18:CS:43:MET:H	2.27	0.47
55:CA:90:C:H2'	55:CA:91:U:C5	2.49	0.47
55:CA:126:G:C2	55:CA:236:A:C2	3.03	0.47
55:CA:161:A:C4	55:CA:162:A:C8	3.03	0.47
55:CA:204:G:H2'	55:CA:205:A:O4'	2.14	0.47
55:CA:212:G:O2'	55:CA:213:G:O5'	2.33	0.47
55:CA:251:G:C2	55:CA:266:G:C6	3.03	0.47
55:CA:265:G:C2'	55:CA:266:G:H5'	2.44	0.47
55:CA:397:A:H5''	55:CA:397:A:N3	2.29	0.47
55:CA:722:G:H2'	55:CA:724:G:C8	2.50	0.47
55:CA:723:U:O2'	55:CA:724:G:OP1	2.26	0.47
55:CA:749:A:C6	55:CA:750:C:C4	3.03	0.47
55:CA:774:G:C5	55:CA:775:G:C8	3.03	0.47
55:CA:969:A:C2'	55:CA:970:C:H5'	2.44	0.47
55:CA:1009:U:H2'	55:CA:1010:U:C5	2.49	0.47
55:CA:1266:G:C6	55:CA:1270:G:O6	2.68	0.47
55:CA:1370:G:H2'	55:CA:1371:G:H8	1.78	0.47
55:CA:1486:G:H2'	55:CA:1487:G:O4'	2.14	0.47
24:DA:54:G:C6	24:DA:117:G:N2	2.83	0.47
24:DA:78:U:O2'	24:DA:79:C:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:100:U:O2'	24:DA:101:A:C5'	2.63	0.47
24:DA:126:A:OP2	52:D2:19:ARG:HB2	2.15	0.47
24:DA:138:U:H2'	24:DA:140:C:C1'	2.45	0.47
24:DA:155:A:O2'	24:DA:156:A:H5'	2.15	0.47
24:DA:405:U:H3'	24:DA:406:G:H5'	1.96	0.47
24:DA:449:A:O2'	24:DA:450:G:C5'	2.59	0.47
24:DA:571:U:C2	24:DA:575:A:N7	2.83	0.47
24:DA:617:G:H2'	24:DA:618:G:H8	1.80	0.47
24:DA:636:G:H4'	24:DA:638:G:O3'	2.15	0.47
24:DA:675:A:N6	24:DA:676:A:N6	2.63	0.47
24:DA:771:G:C5	24:DA:772:C:C5	3.03	0.47
24:DA:828:U:C5	24:DA:829:A:N6	2.83	0.47
24:DA:910:A:N6	24:DA:911:A:C6	2.82	0.47
24:DA:1019:U:C5	24:DA:1020:A:N7	2.83	0.47
24:DA:1248:G:O2'	40:DQ:2:ARG:HA	2.15	0.47
24:DA:1378:A:N7	24:DA:1380:G:C6	2.83	0.47
24:DA:1669:A:H8	34:DK:5:GLN:HG3	1.79	0.47
24:DA:1693:U:O4	24:DA:1977:A:C5	2.67	0.47
24:DA:1783:A:C5'	24:DA:2608:G:H4'	2.45	0.47
24:DA:2023:C:C5'	24:DA:2617:U:H4'	2.45	0.47
24:DA:2285:C:H5	51:D1:5:ARG:CZ	2.27	0.47
24:DA:2370:G:C6	24:DA:2371:G:C5	3.03	0.47
24:DA:2439:A:H2'	24:DA:2439:A:N3	2.29	0.47
24:DA:2523:G:H1'	24:DA:2765:A:N7	2.30	0.47
24:DA:2547:A:C8	24:DA:2566:A:N7	2.82	0.47
24:DA:2571:U:O4	24:DA:2574:G:C8	2.67	0.47
24:DA:2623:G:C2'	24:DA:2624:G:H5'	2.45	0.47
56:DB:16:G:H2'	56:DB:17:C:C6	2.50	0.47
56:DB:77:U:OP1	45:DV:18:ARG:CG	2.60	0.47
27:DD:51:THR:HG21	27:DD:76:GLY:HA3	1.94	0.47
27:DD:127:PHE:CZ	27:DD:160:LYS:HD2	2.49	0.47
28:DE:77:ILE:H	28:DE:77:ILE:HG12	1.51	0.47
30:DG:104:LEU:HG	30:DG:112:VAL:HG21	1.95	0.47
32:DI:48:ILE:HG13	32:DI:49:GLU:N	2.29	0.47
34:DK:6:THR:O	34:DK:8:LEU:CD1	2.62	0.47
38:DO:7:ARG:HH21	38:DO:95:SER:HB3	1.78	0.47
41:DR:51:VAL:HB	41:DR:52:PRO:HD2	1.97	0.47
47:DX:31:ASN:HB2	47:DX:33:HIS:CE1	2.49	0.47
48:DY:28:LEU:O	48:DY:28:LEU:HD22	2.15	0.47
1:AB:56:LEU:O	1:AB:59:ILE:HG13	2.15	0.47
3:AD:57:LYS:C	3:AD:57:LYS:HD2	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:13:LYS:HE2	4:AE:112:ALA:HB2	1.95	0.47
6:AG:26:VAL:HG12	6:AG:42:VAL:HG11	1.96	0.47
8:AI:24:ASN:HB3	8:AI:58:GLU:OE1	2.15	0.47
9:AJ:59:LYS:CG	21:AA:972:C:H4'	2.45	0.47
11:AL:43:LYS:HD3	11:AL:43:LYS:N	2.15	0.47
11:AL:109:ARG:NH2	21:AA:537:G:OP1	2.45	0.47
15:AP:16:PHE:CE2	21:AA:625:U:H4'	2.50	0.47
16:AQ:60:ILE:HG22	16:AQ:61:ARG:H	1.80	0.47
21:AA:123:U:H2'	21:AA:124:C:H6	1.79	0.47
21:AA:155:A:C6	21:AA:156:C:C4	3.03	0.47
21:AA:298:A:H2'	21:AA:299:G:C8	2.50	0.47
21:AA:499:A:O2'	21:AA:500:G:N7	2.45	0.47
21:AA:721:G:H4'	21:AA:722:G:H5''	1.96	0.47
21:AA:764:C:C2	21:AA:765:G:C8	3.03	0.47
21:AA:841:C:H3'	21:AA:843:U:OP2	2.15	0.47
21:AA:855:U:N3	21:AA:856:C:C5	2.83	0.47
21:AA:1256:A:O2'	21:AA:1257:A:OP2	2.29	0.47
21:AA:1337:G:H5''	21:AA:1338:G:OP1	2.15	0.47
21:AA:1416:G:C2'	21:AA:1417:G:H5'	2.44	0.47
21:AA:1468:A:C2'	21:AA:1469:C:H5''	2.43	0.47
22:AV:34:G:H2'	22:AV:35:A:H8	1.80	0.47
24:BA:84:A:C6	24:BA:103:A:N6	2.83	0.47
24:BA:96:C:H4'	48:BY:41:HIS:ND1	2.30	0.47
24:BA:215:G:C4'	24:BA:216:A:H4'	2.45	0.47
24:BA:383:C:H5'	24:BA:385:C:OP2	2.14	0.47
24:BA:783:A:C4'	24:BA:1779:U:O2	2.62	0.47
24:BA:1048:A:C6	24:BA:1049:C:C4	3.03	0.47
24:BA:1343:G:H2'	24:BA:1344:U:C5	2.50	0.47
24:BA:1427:A:H1'	24:BA:1428:C:C5	2.50	0.47
24:BA:1570:A:H5'	26:BC:35:LYS:HG2	1.97	0.47
24:BA:1809:A:O2'	24:BA:1810:A:O5'	2.32	0.47
24:BA:1820:U:C5	26:BC:158:GLY:HA3	2.50	0.47
24:BA:1945:G:H2'	24:BA:1946:U:C6	2.50	0.47
24:BA:2410:G:C2	24:BA:2411:A:C1'	2.98	0.47
24:BA:2492:U:C2	24:BA:2493:U:C5	3.03	0.47
24:BA:2720:U:H2'	24:BA:2721:A:H8	1.80	0.47
25:BB:62:C:H2'	25:BB:63:C:C6	2.37	0.47
26:BC:194:VAL:HG22	26:BC:195:GLY:N	2.30	0.47
26:BC:229:HIS:CD2	26:BC:246:PRO:CA	2.98	0.47
32:BI:19:PRO:HG2	32:BI:23:VAL:HG22	1.96	0.47
32:BI:33:ASN:HB3	32:BI:36:GLU:CB	2.41	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BJ:64:VAL:HG22	33:BJ:68:LYS:HD2	1.97	0.47
33:BJ:77:HIS:CD2	33:BJ:79:GLY:H	2.31	0.47
40:BQ:97:ILE:HG13	40:BQ:98:ALA:N	2.27	0.47
47:BX:36:ARG:HG2	47:BX:45:PHE:HB3	1.96	0.47
48:BY:57:LEU:CA	48:BY:60:LYS:HB3	2.42	0.47
54:B4:9:LYS:HB3	54:B4:14:CYS:CB	2.45	0.47
2:CC:22:PHE:CD1	9:CJ:13:PHE:CE1	3.02	0.47
6:CG:26:VAL:O	6:CG:30:MET:HG3	2.15	0.47
6:CG:94:ARG:HB3	6:CG:98:LEU:CD1	2.45	0.47
10:CK:104:PHE:N	10:CK:104:PHE:CD1	2.83	0.47
14:CO:54:GLY:O	14:CO:58:MET:HG3	2.14	0.47
15:CP:43:ALA:HB1	15:CP:46:LYS:HZ3	1.80	0.47
20:CU:3:ILE:O	20:CU:4:LYS:O	2.33	0.47
55:CA:161:A:H2'	55:CA:162:A:H8	1.78	0.47
55:CA:486:U:H2'	55:CA:487:A:H8	1.79	0.47
55:CA:702:A:O2'	55:CA:703:G:OP1	2.31	0.47
55:CA:1020:G:C6	55:CA:1021:A:C6	3.03	0.47
55:CA:1256:A:C5	55:CA:1278:G:C5	3.03	0.47
55:CA:1306:A:C5	55:CA:1307:U:C5	3.03	0.47
55:CA:1322:C:HO2'	55:CA:1323:G:H5'	1.74	0.47
55:CA:1342:C:O2'	55:CA:1343:G:H5'	2.15	0.47
22:CV:30:G:C2	22:CV:31:A:C8	3.03	0.47
24:DA:56:A:C2	24:DA:115:C:C2	3.03	0.47
24:DA:77:G:H2'	24:DA:78:U:C6	2.49	0.47
24:DA:380:G:O3'	47:DX:15:ASN:HB2	2.15	0.47
24:DA:527:C:N3	24:DA:2779:U:H2'	2.30	0.47
24:DA:586:A:O5'	24:DA:586:A:C8	2.68	0.47
24:DA:588:U:O4	24:DA:670:A:H1'	2.15	0.47
24:DA:1140:C:OP1	33:DJ:25:LEU:HD13	2.14	0.47
24:DA:1179:G:O2'	24:DA:1180:U:H5'	2.15	0.47
24:DA:1247:A:C5	24:DA:1249:U:C4	3.02	0.47
24:DA:1345:C:O2'	24:DA:1346:G:C5'	2.62	0.47
24:DA:1613:G:H1	24:DA:1617:C:HO2'	1.63	0.47
24:DA:1789:A:OP1	26:DC:220:ARG:HD3	2.15	0.47
24:DA:1832:C:C4	24:DA:1833:C:C5	3.02	0.47
24:DA:1833:C:H2'	24:DA:1834:U:C6	2.50	0.47
24:DA:2023:C:H5'	24:DA:2617:U:H4'	1.97	0.47
24:DA:2630:G:O2'	24:DA:2631:G:C8	2.66	0.47
24:DA:2645:G:H3'	24:DA:2646:C:C5'	2.44	0.47
24:DA:2765:A:H3'	24:DA:2766:A:H5'	1.97	0.47
24:DA:2825:G:C4	24:DA:2826:A:C8	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2848:G:N3	24:DA:2849:U:C5	2.83	0.47
24:DA:2849:U:O4	24:DA:2867:G:C8	2.68	0.47
28:DE:16:GLU:HG3	28:DE:16:GLU:O	2.15	0.47
28:DE:153:LEU:HD22	28:DE:158:PHE:HD2	1.79	0.47
31:DH:24:GLY:O	31:DH:28:ASN:HB2	2.14	0.47
34:DK:66:LYS:HG2	34:DK:66:LYS:O	2.15	0.47
35:DL:89:VAL:HG21	35:DL:123:ARG:HE	1.79	0.47
38:DO:28:VAL:HG23	38:DO:106:LEU:HD23	1.95	0.47
39:DP:63:ILE:CA	39:DP:68:GLY:HA2	2.36	0.47
42:DS:68:ASP:OD1	42:DS:68:ASP:N	2.48	0.47
45:DV:63:ILE:HD13	45:DV:72:VAL:CG2	2.45	0.47
46:DW:49:ASN:HB3	46:DW:81:ILE:HG12	1.96	0.47
1:AB:19:THR:HA	1:AB:37:VAL:HG23	1.97	0.47
2:AC:89:VAL:O	2:AC:93:ILE:HG13	2.14	0.47
8:AI:42:THR:O	8:AI:43:ALA:HB2	2.15	0.47
8:AI:60:LEU:HD23	8:AI:60:LEU:N	2.30	0.47
18:AS:19:GLU:O	18:AS:22:VAL:HB	2.15	0.47
21:AA:75:G:N1	21:AA:96:U:N3	2.63	0.47
21:AA:438:U:O2'	21:AA:439:U:H5	1.97	0.47
21:AA:449:G:N1	21:AA:450:G:C6	2.83	0.47
21:AA:511:C:O2'	21:AA:512:U:O5'	2.33	0.47
21:AA:615:G:C2	21:AA:616:G:C8	3.03	0.47
21:AA:737:C:N4	21:AA:738:C:N4	2.63	0.47
21:AA:1161:C:O2'	21:AA:1162:C:O4'	2.31	0.47
24:BA:189:G:P	47:BX:13:THR:HG21	2.54	0.47
24:BA:580:U:O2'	24:BA:581:C:H5'	2.15	0.47
24:BA:617:G:O2'	24:BA:618:G:H5'	2.15	0.47
24:BA:1805:A:N3	26:BC:49:THR:HG21	2.30	0.47
24:BA:1869:G:H8	24:BA:1869:G:OP2	1.97	0.47
24:BA:1899:A:H2'	24:BA:1900:A:OP2	2.15	0.47
24:BA:2330:G:C2	24:BA:2386:A:C2	3.03	0.47
26:BC:129:LEU:HD22	26:BC:133:ASN:HB2	1.96	0.47
27:BD:53:GLY:O	27:BD:54:ALA:HB2	2.15	0.47
31:BH:97:ARG:NH1	55:CA:368:U:OP1	2.48	0.47
33:BJ:12:LYS:O	33:BJ:13:ARG:CB	2.61	0.47
35:BL:93:ASN:O	35:BL:95:LEU:N	2.47	0.47
35:BL:135:ILE:HG22	35:BL:136:GLU:N	2.29	0.47
39:BP:24:THR:O	39:BP:25:VAL:O	2.33	0.47
40:BQ:91:ARG:HB3	40:BQ:93:ILE:CG2	2.42	0.47
50:B0:53:VAL:O	50:B0:54:ILE:C	2.53	0.47
1:CB:19:THR:HG23	1:CB:20:ARG:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:28:PRO:HB2	1:CB:29:PHE:CE1	2.50	0.47
2:CC:161:ILE:O	2:CC:161:ILE:HG12	2.14	0.47
3:CD:98:ASP:OD2	3:CD:132:ALA:HB1	2.15	0.47
3:CD:105:GLY:HA3	3:CD:158:LEU:CD2	2.44	0.47
5:CF:2:ARG:HH22	5:CF:91:ARG:HB2	1.78	0.47
8:CI:11:ARG:HD3	8:CI:106:ASP:OD1	2.15	0.47
9:CJ:5:ARG:CZ	9:CJ:7:ARG:HH12	2.27	0.47
9:CJ:42:LEU:HD22	9:CJ:71:LEU:CD2	2.40	0.47
9:CJ:42:LEU:CB	9:CJ:43:PRO:HD2	2.44	0.47
10:CK:96:ILE:HD13	10:CK:109:ILE:HD13	1.95	0.47
10:CK:115:ILE:O	10:CK:115:ILE:HG23	2.15	0.47
13:CN:60:ARG:HH22	13:CN:70:HIS:HD2	1.61	0.47
15:CP:8:ARG:CZ	15:CP:15:PRO:HB3	2.45	0.47
55:CA:76:G:H8	55:CA:76:G:OP2	1.97	0.47
55:CA:90:C:H2'	55:CA:91:U:C6	2.50	0.47
55:CA:98:A:H2'	55:CA:99:C:O4'	2.15	0.47
55:CA:197:A:C5	55:CA:221:C:H4'	2.50	0.47
55:CA:321:A:O2'	55:CA:1436:U:H5'	2.15	0.47
55:CA:373:A:C2'	55:CA:374:A:H8	2.27	0.47
55:CA:781:A:H2'	55:CA:782:A:C5'	2.42	0.47
55:CA:872:A:C5	55:CA:874:G:C8	3.02	0.47
55:CA:1090:U:N3	55:CA:1091:U:C5	2.83	0.47
55:CA:1241:G:C2	55:CA:1242:G:C5	3.03	0.47
55:CA:1446:A:N6	55:CA:1447:A:N6	2.62	0.47
24:DA:61:C:HO2'	24:DA:62:U:H5'	1.78	0.47
24:DA:223:A:C6	24:DA:422:A:N7	2.83	0.47
24:DA:740:C:C4	24:DA:1981:A:C2	3.03	0.47
24:DA:775:G:C2	24:DA:794:A:C8	3.03	0.47
24:DA:807:U:O4'	24:DA:2445:G:H4'	2.15	0.47
24:DA:1031:G:O2'	54:D4:7:VAL:HG12	2.14	0.47
24:DA:2053:G:C2	24:DA:2054:A:C4	3.02	0.47
24:DA:2250:G:H21	24:DA:2496:C:H5''	1.78	0.47
24:DA:2331:G:C2	24:DA:2332:C:C2	3.03	0.47
24:DA:2520:C:N4	24:DA:2567:G:C5	2.83	0.47
24:DA:2660:A:C2	24:DA:2661:G:C5	3.03	0.47
56:DB:109:A:C5	56:DB:110:C:C4	3.03	0.47
26:DC:260:LYS:HA	26:DC:263:ASP:OD1	2.15	0.47
28:DE:40:ARG:NH2	28:DE:92:HIS:NE2	2.63	0.47
31:DH:99:ILE:HG22	31:DH:100:ALA:N	2.28	0.47
31:DH:120:GLY:O	31:DH:121:VAL:HB	2.15	0.47
34:DK:14:SER:OG	34:DK:51:LYS:N	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DL:23:ILE:HG13	41:DR:82:HIS:HE1	1.69	0.47
38:DO:31:THR:HG21	38:DO:36:TYR:HE2	1.80	0.47
40:DQ:60:TRP:CZ2	40:DQ:93:ILE:HB	2.50	0.47
41:DR:48:LYS:H	41:DR:48:LYS:CD	2.23	0.47
43:DT:62:VAL:HG12	43:DT:63:VAL:H	1.77	0.47
45:DV:26:PHE:CE2	45:DV:42:LEU:HD12	2.49	0.47
1:AB:184:ALA:HB3	1:AB:195:VAL:CG2	2.45	0.47
1:AB:199:ILE:O	1:AB:200:PRO:O	2.33	0.47
4:AE:104:ILE:O	4:AE:104:ILE:HG12	2.14	0.47
9:AJ:65:TYR:CB	13:AN:95:LEU:HD11	2.42	0.47
13:AN:81:ILE:HD13	21:AA:1202:U:C6	2.49	0.47
17:AR:37:LYS:HA	21:AA:719:C:O2	2.14	0.47
18:AS:20:LYS:HZ2	18:AS:20:LYS:CB	2.27	0.47
19:AT:27:MET:HG3	19:AT:28:ARG:N	2.29	0.47
21:AA:76:G:C2	21:AA:95:C:N3	2.83	0.47
21:AA:104:G:O2'	21:AA:105:G:H5'	2.15	0.47
21:AA:261:U:C2	21:AA:263:A:OP2	2.67	0.47
21:AA:274:A:H4'	21:AA:275:G:O5'	2.15	0.47
21:AA:766:A:H2'	21:AA:767:A:H8	1.76	0.47
21:AA:860:A:H8	21:AA:860:A:O5'	1.98	0.47
21:AA:987:G:C5	21:AA:988:G:N7	2.83	0.47
21:AA:1184:G:O2'	21:AA:1185:G:H5'	2.14	0.47
21:AA:1185:G:C6	21:AA:1186:G:C5	3.03	0.47
21:AA:1410:A:C4	21:AA:1491:G:N2	2.84	0.47
21:AA:1446:A:C2'	21:AA:1447:A:H5'	2.45	0.47
24:BA:80:G:C2'	24:BA:81:G:H5'	2.44	0.47
24:BA:84:A:H4'	24:BA:85:G:O5'	2.14	0.47
24:BA:171:U:H2'	24:BA:172:A:C8	2.50	0.47
24:BA:211:C:O2'	24:BA:212:G:H5'	2.14	0.47
24:BA:479:A:C2	24:BA:480:A:C5	3.03	0.47
24:BA:667:U:H2'	24:BA:668:A:O4'	2.15	0.47
24:BA:855:G:C1'	46:BW:23:LYS:HD3	2.42	0.47
24:BA:866:A:HO2'	24:BA:867:C:H5'	1.80	0.47
24:BA:925:A:H2'	24:BA:926:G:O4'	2.15	0.47
24:BA:1065:U:P	24:BA:1065:U:H3'	2.55	0.47
24:BA:1348:C:H2'	24:BA:1349:C:H5'	1.97	0.47
24:BA:1392:A:H61	43:BT:18:GLU:CD	2.18	0.47
24:BA:1429:G:H2'	24:BA:1430:G:C8	2.50	0.47
24:BA:1579:A:H2'	24:BA:1580:A:H8	1.79	0.47
24:BA:2042:A:H2'	24:BA:2043:C:H5'	1.96	0.47
24:BA:2549:G:N2	24:BA:2560:A:C4	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2691:C:C4	24:BA:2719:G:N2	2.82	0.47
24:BA:2843:G:N2	24:BA:2844:G:H1'	2.29	0.47
27:BD:101:PHE:N	27:BD:101:PHE:HD1	2.13	0.47
29:BF:128:SER:HA	29:BF:154:THR:HA	1.96	0.47
30:BG:163:TYR:O	30:BG:164:ALA:CB	2.63	0.47
31:BH:8:LYS:O	31:BH:13:GLY:CA	2.62	0.47
31:BH:12:LEU:HB2	31:BH:19:VAL:HG11	1.97	0.47
36:BM:6:ARG:HD2	36:BM:8:LYS:NZ	2.30	0.47
39:BP:80:VAL:O	39:BP:81:ASP:HB3	2.14	0.47
49:BZ:9:THR:HG23	49:BZ:10:ARG:HB2	1.97	0.47
1:CB:59:ILE:HA	1:CB:62:ARG:CG	2.44	0.47
1:CB:128:LEU:HD13	1:CB:132:GLU:HG3	1.96	0.47
1:CB:160:LEU:O	1:CB:183:PHE:CD1	2.68	0.47
2:CC:127:VAL:O	2:CC:128:MET:HB2	2.15	0.47
4:CE:15:ILE:HD11	4:CE:37:VAL:HG23	1.97	0.47
6:CG:30:MET:SD	6:CG:35:LYS:HB2	2.54	0.47
7:CH:87:ARG:HB3	55:CA:600:A:OP1	2.14	0.47
8:CI:30:ASN:O	8:CI:31:GLN:HG3	2.15	0.47
11:CL:98:ARG:CB	11:CL:116:TYR:HA	2.43	0.47
11:CL:122:LYS:O	11:CL:123:ALA:CB	2.63	0.47
12:CM:69:ARG:HD2	12:CM:69:ARG:H	1.80	0.47
17:CR:32:ILE:HD12	17:CR:33:THR:O	2.14	0.47
19:CT:20:ASN:O	19:CT:24:ARG:HB2	2.15	0.47
19:CT:58:ASP:O	19:CT:61:ALA:HB3	2.15	0.47
55:CA:197:A:C4'	55:CA:198:G:O5'	2.55	0.47
55:CA:355:C:H2'	55:CA:356:A:O4'	2.15	0.47
55:CA:722:G:C2	55:CA:724:G:C5	3.03	0.47
55:CA:790:A:OP1	22:CV:38:A:O2'	2.33	0.47
55:CA:1218:C:H2'	55:CA:1219:A:H8	1.74	0.47
55:CA:1304:G:O2'	55:CA:1333:A:N6	2.47	0.47
55:CA:1452:C:H4'	55:CA:1453:G:H5''	1.97	0.47
24:DA:85:G:C5	24:DA:98:G:C2	3.03	0.47
24:DA:571:U:C4	24:DA:2030:A:C6	3.02	0.47
24:DA:658:U:O2'	24:DA:659:G:O4'	2.24	0.47
24:DA:963:U:O2'	24:DA:964:C:O5'	2.32	0.47
24:DA:1026:G:O2'	24:DA:1027:A:C5'	2.60	0.47
24:DA:1056:G:O5'	24:DA:1085:A:H2	1.98	0.47
24:DA:1113:U:O2'	24:DA:1114:C:O5'	2.33	0.47
24:DA:1435:G:C2	24:DA:1558:C:N4	2.83	0.47
24:DA:1476:U:C5	24:DA:1514:G:C2	3.03	0.47
24:DA:1570:A:C2	24:DA:1571:A:C2	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2067:G:C6	24:DA:2069:G:N7	2.83	0.47
24:DA:2392:A:C2	35:DL:55:MET:SD	3.03	0.47
24:DA:2394:C:H5'	35:DL:63:LYS:HE3	1.97	0.47
24:DA:2590:A:H2'	24:DA:2591:C:H6	1.80	0.47
24:DA:2868:A:O2'	24:DA:2869:G:O4'	2.31	0.47
56:DB:48:U:C4	56:DB:49:C:N4	2.83	0.47
56:DB:98:G:H1	45:DV:14:LYS:HB3	1.80	0.47
26:DC:161:VAL:HG13	26:DC:174:ARG:O	2.15	0.47
27:DD:116:LYS:CD	37:DN:1:MET:HE1	2.45	0.47
29:DF:122:ASP:HB2	29:DF:126:ASN:HB2	1.97	0.47
31:DH:2:GLN:HB3	31:DH:18:GLN:HG2	1.97	0.47
31:DH:62:LEU:HD12	31:DH:63:ALA:N	2.29	0.47
32:DI:18:ASN:HB3	32:DI:19:PRO:HD3	1.97	0.47
32:DI:58:ILE:HG23	32:DI:66:PHE:CD2	2.50	0.47
33:DJ:104:ALA:O	33:DJ:108:MET:HG3	2.15	0.47
36:DM:34:LYS:HD3	36:DM:131:VAL:CG2	2.44	0.47
40:DQ:78:PHE:CE2	40:DQ:109:VAL:HG22	2.50	0.47
42:DS:8:ARG:HA	42:DS:102:HIS:ND1	2.29	0.47
46:DW:46:ALA:HA	46:DW:50:VAL:HG12	1.96	0.47
50:D0:11:LYS:HD2	50:D0:14:MET:HB2	1.97	0.47
2:AC:156:LEU:H	2:AC:156:LEU:CD1	2.28	0.46
4:AE:94:PHE:CE1	4:AE:96:GLN:HG2	2.49	0.46
8:AI:80:HIS:HE1	8:AI:103:VAL:O	1.97	0.46
9:AJ:67:ILE:HG23	13:AN:94:GLY:O	2.15	0.46
10:AK:95:THR:HG23	10:AK:96:ILE:N	2.30	0.46
21:AA:17:U:H2'	21:AA:18:C:H6	1.80	0.46
21:AA:103:U:H2'	21:AA:103:U:O2	2.15	0.46
21:AA:722:G:N3	21:AA:722:G:C2'	2.78	0.46
21:AA:978:A:C6	21:AA:1318:A:C6	3.03	0.46
21:AA:1082:A:N1	21:AA:1083:U:N3	2.63	0.46
21:AA:1461:G:H2'	21:AA:1462:C:C6	2.50	0.46
24:BA:7:G:C5	24:BA:8:C:C4	3.03	0.46
24:BA:825:A:H1'	35:BL:54:GLN:HE22	1.71	0.46
24:BA:1303:G:H2'	24:BA:1304:A:C8	2.45	0.46
24:BA:1475:G:O2'	24:BA:1476:U:P	2.73	0.46
24:BA:1779:U:C6	24:BA:1783:A:N7	2.83	0.46
24:BA:1829:A:H2'	24:BA:1830:C:C6	2.51	0.46
24:BA:1835:G:C4	24:BA:1931:U:C4	3.03	0.46
24:BA:2793:C:H2'	24:BA:2794:C:H6	1.75	0.46
24:BA:2902:C:O2'	24:BA:2903:U:C5'	2.63	0.46
24:BA:2902:C:O2'	24:BA:2903:U:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BB:46:A:H2'	25:BB:47:C:H6	1.80	0.46
26:BC:12:ARG:HA	26:BC:15:VAL:HG23	1.97	0.46
26:BC:90:ILE:CG2	26:BC:91:ALA:N	2.78	0.46
26:BC:259:ASN:C	26:BC:261:ARG:N	2.68	0.46
28:BE:101:TYR:O	28:BE:102:ARG:C	2.51	0.46
29:BF:31:GLU:HB3	29:BF:156:THR:O	2.15	0.46
33:BJ:49:ASP:C	33:BJ:49:ASP:OD2	2.54	0.46
33:BJ:60:ASP:OD1	33:BJ:61:LYS:HG3	2.15	0.46
50:B0:42:ILE:CD1	50:B0:48:TYR:HB2	2.44	0.46
51:B1:5:ARG:HG2	51:B1:23:THR:HB	1.96	0.46
51:B1:47:ILE:HD12	51:B1:47:ILE:N	2.20	0.46
1:CB:47:PRO:HA	1:CB:50:ASN:CB	2.39	0.46
1:CB:209:VAL:O	1:CB:213:LEU:HB2	2.15	0.46
4:CE:111:ARG:C	4:CE:113:VAL:H	2.18	0.46
7:CH:36:ALA:O	7:CH:45:ILE:HD11	2.15	0.46
12:CM:6:ILE:O	12:CM:6:ILE:HD12	2.15	0.46
20:CU:35:GLU:O	20:CU:36:PHE:HD2	1.97	0.46
55:CA:163:C:H6	55:CA:163:C:O5'	1.98	0.46
55:CA:298:A:H2'	55:CA:299:G:O4'	2.15	0.46
55:CA:486:U:H2'	55:CA:487:A:C8	2.50	0.46
55:CA:764:C:H3'	55:CA:765:G:N2	2.23	0.46
55:CA:813:U:H3'	55:CA:816:A:N6	2.29	0.46
55:CA:914:A:H2'	55:CA:915:A:H8	1.79	0.46
55:CA:982:U:O2	55:CA:1222:G:O6	2.33	0.46
55:CA:1432:G:O2'	55:CA:1433:A:C8	2.68	0.46
24:DA:54:G:C6	24:DA:55:G:C5	3.03	0.46
24:DA:202:U:C4	24:DA:203:A:N1	2.83	0.46
24:DA:233:A:H2'	24:DA:234:U:C5	2.49	0.46
24:DA:311:A:O2'	24:DA:312:G:H5'	2.15	0.46
24:DA:335:C:O2'	24:DA:336:C:C5'	2.63	0.46
24:DA:476:G:HO2'	24:DA:477:A:H3'	1.80	0.46
24:DA:536:G:C2'	24:DA:537:G:H5'	2.45	0.46
24:DA:661:A:H2'	24:DA:662:G:O4'	2.15	0.46
24:DA:747:U:C2	24:DA:2613:U:O4	2.68	0.46
24:DA:836:G:C5	24:DA:837:C:C4	3.03	0.46
24:DA:858:G:H2'	24:DA:2268:A:N3	2.30	0.46
24:DA:1092:C:H2'	24:DA:1093:G:O4'	2.15	0.46
24:DA:1190:G:H5''	35:DL:32:GLY:HA2	1.97	0.46
24:DA:1214:A:O2'	24:DA:1215:G:H5'	2.15	0.46
24:DA:1553:A:C8	24:DA:1555:G:C5	3.03	0.46
24:DA:1651:G:N2	24:DA:2007:U:C2	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1760:C:O2'	24:DA:1761:C:O4'	2.31	0.46
24:DA:2261:C:C2	24:DA:2280:G:N2	2.83	0.46
24:DA:2378:A:C2'	38:DO:21:LEU:HD13	2.45	0.46
24:DA:2411:A:H2'	24:DA:2412:A:H8	1.80	0.46
24:DA:2484:G:OP1	36:DM:44:ARG:HD3	2.15	0.46
24:DA:2682:A:N6	24:DA:2728:U:H1'	2.23	0.46
24:DA:2771:C:H5''	27:DD:207:VAL:HG11	1.97	0.46
24:DA:2836:U:O2'	24:DA:2837:A:C5'	2.63	0.46
56:DB:79:G:N7	45:DV:14:LYS:NZ	2.45	0.46
28:DE:5:LEU:HD12	28:DE:10:SER:HB2	1.97	0.46
28:DE:131:THR:HG22	28:DE:161:ALA:N	2.28	0.46
33:DJ:57:LEU:HD11	33:DJ:129:GLU:H	1.79	0.46
35:DL:98:ALA:O	35:DL:100:ILE:HG22	2.15	0.46
36:DM:15:GLY:O	36:DM:16:ARG:HB3	2.15	0.46
37:DN:22:ARG:HG2	37:DN:22:ARG:O	2.15	0.46
39:DP:32:VAL:HA	39:DP:37:LYS:HA	1.96	0.46
40:DQ:77:LYS:HE2	40:DQ:116:LEU:HD21	1.97	0.46
41:DR:2:TYR:H	41:DR:42:ALA:CB	2.28	0.46
4:AE:14:LEU:HA	4:AE:36:THR:HA	1.97	0.46
6:AG:146:ALA:C	6:AG:148:LYS:N	2.69	0.46
8:AI:55:ASP:CG	8:AI:56:MET:H	2.19	0.46
8:AI:105:ARG:NE	21:AA:1117:A:H4'	2.29	0.46
9:AJ:80:THR:HB	9:AJ:83:THR:HG22	1.97	0.46
14:AO:21:THR:HG23	21:AA:657:U:O2	2.15	0.46
14:AO:40:GLY:HA2	14:AO:43:ALA:HB2	1.98	0.46
18:AS:17:LYS:O	18:AS:20:LYS:HB3	2.15	0.46
21:AA:119:A:H5''	21:AA:120:A:O4'	2.15	0.46
21:AA:587:G:C2	21:AA:755:G:C5	3.03	0.46
21:AA:735:C:O2'	21:AA:736:C:H5'	2.15	0.46
21:AA:1053:G:P	21:AA:1054:C:H3'	2.55	0.46
21:AA:1426:G:N2	21:AA:1475:G:H1'	2.31	0.46
24:BA:93:G:N2	24:BA:94:A:H1'	2.29	0.46
24:BA:1061:U:H1'	24:BA:1070:A:O4'	2.15	0.46
24:BA:1803:A:H4'	26:BC:256:THR:OG1	2.15	0.46
24:BA:1970:A:H4'	24:BA:1971:U:O5'	2.15	0.46
24:BA:2063:C:H6	24:BA:2063:C:H5'	1.79	0.46
24:BA:2273:A:C2	24:BA:2274:A:C5	3.03	0.46
24:BA:2523:G:C2'	24:BA:2524:G:H5'	2.45	0.46
24:BA:2581:G:H2'	24:BA:2610:C:H41	1.79	0.46
24:BA:2856:A:C6	24:BA:2857:G:C6	3.03	0.46
25:BB:90:C:C2'	25:BB:91:C:O5'	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BC:42:ARG:HG2	26:BC:48:ILE:HA	1.97	0.46
26:BC:268:ARG:HH11	26:BC:268:ARG:HB3	1.80	0.46
27:BD:151:THR:HG22	27:BD:152:PRO:HD3	1.97	0.46
29:BF:168:LEU:HD12	29:BF:168:LEU:O	2.15	0.46
30:BG:120:ILE:HD11	30:BG:132:LEU:CB	2.42	0.46
33:BJ:74:TYR:HB2	33:BJ:87:ALA:O	2.15	0.46
35:BL:122:VAL:O	35:BL:122:VAL:HG22	2.15	0.46
36:BM:59:ARG:O	36:BM:60:GLN:O	2.33	0.46
40:BQ:114:ALA:C	40:BQ:116:LEU:H	2.17	0.46
43:BT:14:PRO:HA	43:BT:32:LEU:HB3	1.96	0.46
45:BV:68:LYS:O	45:BV:69:GLU:C	2.53	0.46
53:B3:62:PRO:HG2	53:B3:63:TYR:CD2	2.51	0.46
1:CB:71:THR:HA	1:CB:92:ASN:O	2.15	0.46
1:CB:101:THR:HG22	1:CB:178:LEU:HD13	1.97	0.46
2:CC:2:GLN:HE21	55:CA:1191:A:P	2.38	0.46
2:CC:120:THR:CG2	2:CC:187:GLU:O	2.63	0.46
4:CE:83:PRO:HD2	7:CH:95:MET:O	2.15	0.46
5:CF:38:ARG:HD2	5:CF:63:ASN:HB2	1.96	0.46
6:CG:75:LYS:HG3	6:CG:76:SER:N	2.30	0.46
6:CG:115:MET:HA	6:CG:118:ARG:HD2	1.98	0.46
9:CJ:15:HIS:HE1	9:CJ:68:ARG:HD3	1.80	0.46
15:CP:20:VAL:HA	15:CP:36:VAL:HG12	1.96	0.46
20:CU:16:ARG:O	20:CU:20:ARG:HG2	2.15	0.46
55:CA:51:A:C6	55:CA:116:A:C8	3.03	0.46
55:CA:57:G:H2'	55:CA:58:C:H6	1.78	0.46
55:CA:89:U:O2'	55:CA:90:C:O5'	2.34	0.46
55:CA:403:C:H2'	55:CA:404:G:H8	1.81	0.46
55:CA:631:C:H3'	55:CA:632:U:H5'	1.97	0.46
55:CA:702:A:OP1	55:CA:702:A:H8	1.97	0.46
55:CA:861:G:C5	55:CA:862:C:C5	3.03	0.46
55:CA:888:G:N1	55:CA:889:A:N6	2.63	0.46
55:CA:890:G:O2'	55:CA:891:U:P	2.73	0.46
55:CA:1253:G:N1	55:CA:1285:A:N6	2.62	0.46
55:CA:1276:G:O2'	55:CA:1277:C:H5'	2.15	0.46
55:CA:1324:A:O2'	55:CA:1325:C:H5'	2.15	0.46
24:DA:193:U:H4'	24:DA:803:U:H5'	1.97	0.46
24:DA:197:A:C8	24:DA:2430:A:N7	2.83	0.46
24:DA:292:U:H2'	24:DA:293:U:H6	1.79	0.46
24:DA:532:A:C2'	24:DA:532:A:N3	2.78	0.46
24:DA:674:G:H5''	28:DE:71:GLY:N	2.30	0.46
24:DA:776:G:C8	24:DA:793:A:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:831:G:O2'	24:DA:832:U:H5'	2.15	0.46
24:DA:1084:A:C2'	24:DA:1085:A:H5'	2.44	0.46
24:DA:1286:A:O2'	24:DA:1288:G:N2	2.47	0.46
24:DA:1287:A:OP1	37:DN:103:ARG:HD2	2.15	0.46
24:DA:1470:A:C8	24:DA:1470:A:OP2	2.65	0.46
24:DA:1519:G:N3	24:DA:1519:G:H2'	2.28	0.46
24:DA:1633:G:C6	24:DA:1635:A:C6	3.03	0.46
24:DA:1633:G:C6	24:DA:1635:A:C5	3.03	0.46
24:DA:1665:A:N6	59:DA:3440:HOH:O	2.47	0.46
24:DA:2202:U:H5''	24:DA:2203:U:OP1	2.16	0.46
24:DA:2611:C:H2'	24:DA:2612:C:H6	1.80	0.46
24:DA:2630:G:C6	24:DA:2894:G:O6	2.68	0.46
24:DA:2725:A:C4	24:DA:2727:A:C8	3.03	0.46
24:DA:2812:G:H2'	24:DA:2813:A:C8	2.49	0.46
26:DC:196:ASN:O	26:DC:197:ALA:HB3	2.15	0.46
27:DD:105:LYS:HA	27:DD:177:VAL:CG2	2.40	0.46
30:DG:152:ARG:HD2	30:DG:153:PRO:HD2	1.97	0.46
53:D3:41:ARG:HG2	53:D3:44:ARG:NH2	2.30	0.46
2:AC:33:ASP:O	2:AC:37:LYS:HB2	2.16	0.46
3:AD:68:GLU:O	3:AD:72:ARG:HG2	2.15	0.46
5:AF:45:ARG:HG2	5:AF:46:GLN:N	2.29	0.46
7:AH:123:GLU:O	7:AH:125:ILE:HD12	2.15	0.46
10:AK:126:ARG:C	20:AU:33:ARG:HH12	2.19	0.46
12:AM:74:MET:HE2	12:AM:77:LYS:HB3	1.95	0.46
12:AM:106:ARG:HG3	12:AM:112:ARG:HH21	1.80	0.46
21:AA:15:G:C2	21:AA:16:A:C4	3.03	0.46
21:AA:22:G:C6	21:AA:23:C:C4	3.03	0.46
21:AA:265:G:H2'	21:AA:267:C:H5	1.81	0.46
21:AA:540:G:C6	21:AA:541:G:C5	3.03	0.46
21:AA:681:A:C2	21:AA:710:G:C2	3.03	0.46
21:AA:1064:G:H1'	21:AA:1066:C:C6	2.50	0.46
21:AA:1078:U:H3'	21:AA:1079:G:C8	2.50	0.46
24:BA:292:U:C4	24:BA:293:U:C5	3.03	0.46
24:BA:625:G:O2'	24:BA:626:A:H5'	2.14	0.46
24:BA:745:G:H2'	24:BA:746:U:H5'	1.97	0.46
24:BA:799:G:H2'	24:BA:800:A:H8	1.80	0.46
24:BA:1020:A:C2	24:BA:1141:U:O2	2.69	0.46
24:BA:1090:A:C6	24:BA:1102:C:C2	3.03	0.46
24:BA:1347:A:O2'	24:BA:1348:C:H5'	2.15	0.46
24:BA:1653:G:O6	37:BN:11:ASN:N	2.39	0.46
24:BA:1659:G:C5	24:BA:1660:G:C8	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1839:G:H2'	24:BA:1840:G:H8	1.81	0.46
24:BA:1964:G:O2'	24:BA:1967:C:OP2	2.34	0.46
24:BA:2077:A:C8	24:BA:2435:A:C4	3.04	0.46
24:BA:2418:A:H2'	24:BA:2419:U:O4'	2.16	0.46
24:BA:2461:A:H2'	24:BA:2462:C:C6	2.49	0.46
24:BA:2512:C:H1'	27:BD:145:SER:O	2.15	0.46
27:BD:114:LYS:CD	27:BD:116:LYS:HE2	2.45	0.46
29:BF:3:LEU:HD12	29:BF:172:PHE:CD2	2.50	0.46
29:BF:172:PHE:O	29:BF:173:ASP:C	2.53	0.46
31:BH:41:LYS:HA	31:BH:44:ILE:CG1	2.41	0.46
31:BH:89:LYS:O	31:BH:90:LEU:HD12	2.15	0.46
35:BL:73:ILE:C	35:BL:105:ILE:HD13	2.35	0.46
37:BN:82:GLU:O	37:BN:85:PRO:HG2	2.16	0.46
40:BQ:104:ALA:O	40:BQ:108:LEU:HD12	2.16	0.46
41:BR:24:LYS:HA	41:BR:94:THR:HG23	1.97	0.46
42:BS:18:ARG:HG3	42:BS:18:ARG:H	1.56	0.46
46:BW:28:GLU:H	46:BW:31:LEU:CD1	2.28	0.46
51:B1:10:LEU:HB3	51:B1:48:TYR:HB3	1.97	0.46
2:CC:10:ARG:O	2:CC:13:ILE:O	2.32	0.46
3:CD:176:LYS:O	3:CD:176:LYS:HG3	2.15	0.46
4:CE:88:HIS:HE1	55:CA:1078:U:O4'	1.98	0.46
8:CI:121:ARG:HG3	55:CA:1348:U:H4'	1.97	0.46
11:CL:4:ASN:HA	11:CL:7:VAL:HG23	1.97	0.46
16:CQ:26:ARG:HG3	16:CQ:39:ARG:HB2	1.98	0.46
18:CS:35:ARG:HA	18:CS:70:LEU:CB	2.42	0.46
55:CA:104:G:C2	55:CA:105:G:C8	3.03	0.46
55:CA:426:U:C2	55:CA:427:U:C5	3.04	0.46
55:CA:502:A:H2'	55:CA:503:C:O4'	2.15	0.46
55:CA:585:G:C5	55:CA:586:C:C5	3.04	0.46
55:CA:960:U:C4	55:CA:1225:A:H1'	2.49	0.46
55:CA:1207:G:C5	55:CA:1208:C:C5	3.03	0.46
55:CA:1292:G:C5	55:CA:1293:C:C4	3.03	0.46
55:CA:1399:C:O2	55:CA:1401:G:C5	2.67	0.46
24:DA:33:C:N4	24:DA:446:G:O2'	2.48	0.46
24:DA:95:A:O2'	48:DY:41:HIS:HD2	1.99	0.46
24:DA:110:G:C2	24:DA:111:A:C8	3.04	0.46
24:DA:224:U:C5	24:DA:420:C:H4'	2.49	0.46
24:DA:616:A:O2'	24:DA:617:G:O4'	2.28	0.46
24:DA:779:U:C2'	24:DA:780:G:H5'	2.45	0.46
24:DA:1011:G:C6	24:DA:1013:C:N3	2.83	0.46
24:DA:1090:A:C6	24:DA:1102:C:O2	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1450:G:C2	24:DA:1462:C:N3	2.83	0.46
24:DA:1534:U:H2'	24:DA:1534:U:O2	2.15	0.46
24:DA:1539:U:H2'	24:DA:1540:G:C8	2.50	0.46
24:DA:1873:G:N2	24:DA:1874:C:C2	2.84	0.46
24:DA:2093:G:C8	24:DA:2225:A:C4	3.03	0.46
24:DA:2413:G:N2	24:DA:2414:G:H1'	2.31	0.46
24:DA:2473:U:P	24:DA:2473:U:H6	2.38	0.46
24:DA:2513:A:H2'	24:DA:2514:U:C6	2.51	0.46
24:DA:2592:G:C4	24:DA:2593:U:C6	3.03	0.46
26:DC:75:ALA:HA	26:DC:95:TYR:HA	1.97	0.46
27:DD:193:VAL:O	27:DD:194:PRO:O	2.33	0.46
30:DG:8:VAL:HG11	30:DG:49:LEU:HD23	1.97	0.46
31:DH:62:LEU:C	31:DH:64:ALA:H	2.18	0.46
36:DM:136:MET:HE1	45:DV:75:GLN:C	2.35	0.46
37:DN:1:MET:O	37:DN:2:ARG:CB	2.62	0.46
38:DO:18:LEU:HD21	38:DO:91:SER:HB2	1.96	0.46
42:DS:71:VAL:HG23	42:DS:107:VAL:HB	1.96	0.46
44:DU:7:ASP:O	44:DU:8:ASP:HB2	2.15	0.46
47:DX:65:THR:O	47:DX:68:ALA:HB3	2.15	0.46
1:AB:52:ALA:HA	1:AB:197:PHE:CD1	2.51	0.46
2:AC:39:ARG:CG	2:AC:54:ILE:HD11	2.45	0.46
3:AD:109:THR:CG2	3:AD:112:GLU:HB2	2.46	0.46
7:AH:4:ASP:OD2	7:AH:76:ARG:NH1	2.49	0.46
8:AI:14:SER:OG	8:AI:69:GLY:HA3	2.15	0.46
15:AP:22:ALA:HB2	15:AP:32:PHE:HA	1.97	0.46
21:AA:41:G:N3	21:AA:42:G:C8	2.84	0.46
21:AA:115:G:H1'	21:AA:116:A:N7	2.30	0.46
21:AA:481:G:O2'	21:AA:482:A:H8	1.98	0.46
21:AA:1054:C:OP1	21:AA:1198:G:OP2	2.34	0.46
21:AA:1061:G:N7	21:AA:1062:U:C4	2.84	0.46
21:AA:1096:C:H2'	21:AA:1097:C:O4'	2.16	0.46
21:AA:1163:A:H2'	21:AA:1164:G:C8	2.51	0.46
21:AA:1181:G:N2	21:AA:1182:G:N2	2.63	0.46
21:AA:1185:G:C4	21:AA:1186:G:C8	3.04	0.46
21:AA:1352:C:H2'	21:AA:1353:G:C8	2.51	0.46
21:AA:1441:A:N6	21:AA:1461:G:H21	2.13	0.46
24:BA:312:G:H2'	24:BA:313:G:C8	2.47	0.46
24:BA:763:G:O2'	24:BA:765:C:H5'	2.15	0.46
24:BA:1927:A:H2'	24:BA:1928:A:C8	2.50	0.46
24:BA:2536:G:C5	24:BA:2537:U:C5	3.03	0.46
24:BA:2742:G:C2'	24:BA:2743:U:H5'	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2828:G:H2'	24:BA:2829:A:H5'	1.97	0.46
25:BB:37:C:H6	25:BB:37:C:C5'	2.28	0.46
26:BC:106:PRO:N	26:BC:141:HIS:HE1	2.14	0.46
27:BD:121:THR:O	27:BD:122:VAL:CG2	2.64	0.46
28:BE:37:ALA:O	28:BE:39:ALA:N	2.47	0.46
33:BJ:110:PRO:HB2	33:BJ:111:LYS:HG3	1.96	0.46
40:BQ:4:LYS:HZ3	40:BQ:7:VAL:HG13	1.78	0.46
41:BR:4:VAL:HG23	41:BR:39:LEU:HG	1.97	0.46
44:BU:38:ILE:HG22	44:BU:39:ASN:H	1.79	0.46
47:BX:39:VAL:HG13	47:BX:46:VAL:HG22	1.96	0.46
1:CB:185:ILE:HG22	1:CB:199:ILE:HG13	1.97	0.46
1:CB:221:ARG:HG3	1:CB:222:GLU:H	1.79	0.46
3:CD:30:LYS:NZ	3:CD:30:LYS:HB2	2.31	0.46
11:CL:91:GLY:O	11:CL:92:VAL:C	2.53	0.46
12:CM:12:LYS:O	12:CM:44:ILE:HG13	2.15	0.46
16:CQ:68:LYS:HE2	55:CA:253:A:OP1	2.15	0.46
55:CA:813:U:H2'	55:CA:814:A:H5'	1.96	0.46
55:CA:1153:G:N2	55:CA:1154:G:H1'	2.29	0.46
55:CA:1160:G:O2'	55:CA:1161:C:C5'	2.63	0.46
55:CA:1201:A:H5'	55:CA:1203:C:OP2	2.16	0.46
55:CA:1210:C:H1'	55:CA:1214:C:C4	2.50	0.46
55:CA:1255:G:C5	55:CA:1279:G:C6	3.04	0.46
55:CA:1433:A:C4	55:CA:1468:A:C2	3.03	0.46
24:DA:389:G:N9	24:DA:2413:G:H4'	2.31	0.46
24:DA:687:C:O2'	24:DA:688:U:C5'	2.64	0.46
24:DA:751:A:C5'	42:DS:90:LYS:HA	2.46	0.46
24:DA:811:U:O4	35:DL:21:ARG:NH1	2.46	0.46
24:DA:963:U:O2'	24:DA:964:C:H6	1.98	0.46
24:DA:972:A:C6	24:DA:973:A:N6	2.84	0.46
24:DA:982:C:H5''	24:DA:983:A:OP1	2.14	0.46
24:DA:1126:A:H4'	24:DA:1127:A:C5'	2.46	0.46
24:DA:1212:G:H1'	24:DA:1236:G:N2	2.31	0.46
24:DA:1325:U:O2'	24:DA:1326:U:H5'	2.15	0.46
24:DA:1413:A:C6	24:DA:1414:C:N4	2.83	0.46
24:DA:1722:A:C6	24:DA:1739:A:C8	3.03	0.46
24:DA:2458:G:H4'	24:DA:2459:A:C8	2.50	0.46
56:DB:73:A:C2	45:DV:37:PRO:HB3	2.50	0.46
35:DL:79:LEU:HD23	35:DL:82:LEU:CD1	2.45	0.46
37:DN:37:THR:HA	37:DN:110:MET:HE2	1.96	0.46
37:DN:82:GLU:C	37:DN:85:PRO:HD2	2.35	0.46
38:DO:49:VAL:CG1	38:DO:81:ARG:HB3	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DO:62:LEU:C	38:DO:62:LEU:HD13	2.36	0.46
42:DS:70:LYS:HD2	42:DS:110:ARG:O	2.16	0.46
46:DW:14:ASP:O	46:DW:15:SER:HB2	2.15	0.46
46:DW:42:THR:O	46:DW:43:LYS:HG2	2.15	0.46
52:D2:15:SER:O	52:D2:16:HIS:ND1	2.48	0.46
52:D2:46:LYS:HD2	52:D2:46:LYS:N	2.31	0.46
5:AF:3:HIS:ND1	5:AF:95:ALA:HB2	2.29	0.46
5:AF:49:TYR:HE2	5:AF:51:ILE:HB	1.81	0.46
5:AF:91:ARG:HG3	5:AF:92:THR:H	1.81	0.46
6:AG:119:LEU:HD23	6:AG:119:LEU:C	2.35	0.46
7:AH:91:LEU:HD23	7:AH:92:PRO:HD2	1.97	0.46
8:AI:9:GLY:HA2	8:AI:80:HIS:CD2	2.50	0.46
9:AJ:15:HIS:CG	9:AJ:16:ARG:N	2.83	0.46
12:AM:112:ARG:HA	21:AA:1228:C:OP1	2.16	0.46
21:AA:370:C:O2'	21:AA:371:A:H5'	2.15	0.46
21:AA:386:C:C2'	21:AA:387:U:H5'	2.46	0.46
21:AA:1036:A:H5'	21:AA:1037:C:P	2.56	0.46
21:AA:1050:G:O2'	21:AA:1051:C:C5'	2.63	0.46
21:AA:1403:C:H1'	21:AA:1500:A:N1	2.30	0.46
24:BA:66:C:C4	24:BA:67:U:C4	3.04	0.46
24:BA:72:U:C4	24:BA:112:U:H4'	2.50	0.46
24:BA:151:C:O2	24:BA:176:A:H2	1.99	0.46
24:BA:595:C:H2'	24:BA:596:U:C6	2.50	0.46
24:BA:747:U:O2'	42:BS:88:ARG:NH2	2.49	0.46
24:BA:778:G:C6	24:BA:779:U:C4	3.03	0.46
24:BA:820:A:H8	24:BA:820:A:O5'	1.98	0.46
24:BA:945:A:C5	24:BA:2448:A:C2	3.04	0.46
24:BA:1082:U:H2'	24:BA:1083:U:O2	2.16	0.46
24:BA:1097:U:H3'	24:BA:1098:A:C4'	2.45	0.46
24:BA:1229:C:H2'	24:BA:1230:A:H8	1.79	0.46
24:BA:1620:G:C2'	24:BA:1621:U:H5'	2.46	0.46
24:BA:2555:U:C5	24:BA:2556:C:N1	2.83	0.46
24:BA:2827:C:H2'	24:BA:2828:G:H8	1.80	0.46
26:BC:114:GLN:O	26:BC:115:ILE:CD1	2.64	0.46
27:BD:182:ALA:C	27:BD:184:ARG:N	2.68	0.46
29:BF:13:LYS:HD2	29:BF:13:LYS:O	2.15	0.46
29:BF:173:ASP:O	29:BF:174:PHE:C	2.53	0.46
30:BG:166:GLU:OE2	30:BG:166:GLU:C	2.53	0.46
33:BJ:117:ALA:HA	33:BJ:120:ARG:NH2	2.30	0.46
34:BK:85:VAL:HG11	34:BK:115:ILE:HD11	1.98	0.46
36:BM:53:MET:O	36:BM:56:ALA:HB3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BN:71:ARG:HH21	37:BN:71:ARG:HG3	1.79	0.46
41:BR:1:MET:O	41:BR:1:MET:HG3	2.15	0.46
43:BT:32:LEU:O	43:BT:34:VAL:HG13	2.15	0.46
51:B1:25:ASN:O	51:B1:26:LYS:C	2.53	0.46
53:B3:14:LYS:O	53:B3:15:LYS:C	2.54	0.46
54:B4:36:ARG:O	54:B4:37:GLN:C	2.54	0.46
1:CB:127:LYS:HG3	1:CB:128:LEU:HD13	1.97	0.46
2:CC:140:ALA:O	2:CC:145:ALA:HB3	2.15	0.46
2:CC:149:LYS:CG	2:CC:168:ARG:HB2	2.46	0.46
2:CC:172:VAL:HG12	2:CC:172:VAL:O	2.15	0.46
2:CC:183:TYR:HE1	2:CC:200:TRP:CZ2	2.34	0.46
4:CE:114:LEU:HD13	4:CE:122:VAL:HG21	1.97	0.46
5:CF:92:THR:C	5:CF:93:LYS:HG2	2.36	0.46
6:CG:61:PHE:HE2	6:CG:123:LEU:HD11	1.80	0.46
7:CH:42:GLU:OE2	7:CH:42:GLU:O	2.34	0.46
7:CH:93:LYS:HD3	7:CH:93:LYS:H	1.79	0.46
10:CK:94:SER:O	10:CK:97:ARG:HB2	2.15	0.46
13:CN:87:ALA:HB1	13:CN:95:LEU:HD23	1.97	0.46
55:CA:768:A:H5'	55:CA:1524:C:H1'	1.98	0.46
55:CA:1349:A:C4	55:CA:1350:A:C8	3.03	0.46
24:DA:296:U:H2'	24:DA:297:G:C8	2.51	0.46
24:DA:365:U:H2'	24:DA:366:C:C6	2.51	0.46
24:DA:439:A:H2'	24:DA:440:C:O4'	2.14	0.46
24:DA:576:U:H4'	24:DA:2502:G:C8	2.50	0.46
24:DA:784:G:OP1	24:DA:2588:G:H5''	2.16	0.46
24:DA:1060:U:O4'	24:DA:1061:U:H2'	2.15	0.46
24:DA:1152:C:H2'	24:DA:1153:C:C6	2.50	0.46
24:DA:1512:C:C4	24:DA:1513:U:C4	3.02	0.46
24:DA:1926:U:H2'	24:DA:1928:A:N7	2.31	0.46
24:DA:1946:U:O2'	24:DA:1947:C:H5'	2.15	0.46
24:DA:2348:U:H2'	24:DA:2349:G:H8	1.80	0.46
24:DA:2407:A:H2'	24:DA:2408:U:C5	2.50	0.46
24:DA:2422:C:H2'	24:DA:2423:U:H5''	1.97	0.46
24:DA:2455:G:C6	24:DA:2498:C:N4	2.84	0.46
24:DA:2593:U:N3	24:DA:2594:C:C5	2.83	0.46
56:DB:21:G:C2	56:DB:63:C:C2	3.03	0.46
56:DB:49:C:OP1	38:DO:102:ARG:HB2	2.15	0.46
26:DC:103:ILE:HD12	26:DC:104:LEU:H	1.81	0.46
27:DD:16:THR:HG23	27:DD:18:ASP:H	1.80	0.46
27:DD:38:LYS:HD2	27:DD:45:TYR:OH	2.16	0.46
28:DE:24:ASN:O	28:DE:28:VAL:HG13	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DH:5:LEU:O	31:DH:6:LEU:HD12	2.15	0.46
36:DM:118:LYS:O	36:DM:118:LYS:HD3	2.16	0.46
37:DN:51:LEU:HD21	37:DN:69:ARG:HG3	1.98	0.46
40:DQ:15:LYS:HD2	40:DQ:19:GLN:HE21	1.81	0.46
40:DQ:111:LYS:HE3	41:DR:48:LYS:HD3	1.96	0.46
43:DT:10:VAL:HG23	43:DT:11:LEU:CD1	2.45	0.46
43:DT:69:ARG:HD2	43:DT:70:HIS:H	1.79	0.46
47:DX:4:CYS:O	47:DX:4:CYS:SG	2.73	0.46
1:AB:187:ASP:HB2	1:AB:203:ASP:CG	2.36	0.46
4:AE:76:ASN:O	4:AE:77:ASN:CB	2.62	0.46
4:AE:117:ALA:HB3	4:AE:119:VAL:HG22	1.97	0.46
6:AG:68:VAL:HG12	6:AG:102:TRP:CE3	2.50	0.46
9:AJ:91:ASP:O	9:AJ:92:LEU:HG	2.16	0.46
12:AM:74:MET:CE	12:AM:77:LYS:HD3	2.45	0.46
14:AO:40:GLY:O	14:AO:43:ALA:HB3	2.15	0.46
14:AO:50:HIS:CE1	21:AA:667:G:H4'	2.51	0.46
15:AP:31:ARG:HH21	21:AA:230:G:H5''	1.81	0.46
17:AR:49:LYS:HB2	21:AA:835:U:OP1	2.16	0.46
18:AS:30:LEU:HD12	18:AS:30:LEU:N	2.31	0.46
18:AS:51:HIS:CD2	18:AS:53:GLY:H	2.32	0.46
21:AA:15:G:C5	21:AA:1396:A:N1	2.83	0.46
21:AA:112:G:C2	21:AA:113:G:C8	3.04	0.46
21:AA:1054:C:N4	22:AX:34:G:C4	2.84	0.46
24:BA:111:A:N1	24:BA:112:U:C2	2.84	0.46
24:BA:264:C:C2'	24:BA:265:A:H5''	2.46	0.46
24:BA:445:C:H5''	40:BQ:2:ARG:HB2	1.98	0.46
24:BA:551:G:C6	24:BA:552:U:C4	3.03	0.46
24:BA:1235:G:C2	24:BA:1236:G:N2	2.84	0.46
24:BA:1328:A:HO2'	24:BA:1329:U:H6	1.63	0.46
24:BA:1429:G:N3	24:BA:1568:G:N2	2.63	0.46
24:BA:1569:A:N6	24:BA:1570:A:N1	2.64	0.46
24:BA:2106:U:C4	24:BA:2107:G:N7	2.84	0.46
24:BA:2136:G:H2'	24:BA:2137:U:C6	2.45	0.46
24:BA:2594:C:O2'	24:BA:2595:G:H5'	2.16	0.46
24:BA:2673:G:C2	24:BA:2674:G:N7	2.83	0.46
24:BA:2776:A:H4'	24:BA:2777:G:O5'	2.15	0.46
30:BG:72:ASN:C	30:BG:72:ASN:HD22	2.18	0.46
32:BI:107:GLU:O	32:BI:111:THR:HG23	2.16	0.46
34:BK:12:ASP:OD1	34:BK:12:ASP:C	2.53	0.46
35:BL:80:SER:O	35:BL:81:ASP:O	2.34	0.46
41:BR:49:ILE:CG1	41:BR:51:VAL:O	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BW:17:ALA:O	46:BW:18:LYS:CB	2.64	0.46
49:BZ:52:PHE:CE2	49:BZ:53:MET:HG2	2.51	0.46
1:CB:14:HIS:O	1:CB:14:HIS:CG	2.68	0.46
1:CB:120:SER:HA	1:CB:125:PHE:CZ	2.51	0.46
2:CC:179:ALA:O	2:CC:180:ASP:C	2.54	0.46
5:CF:2:ARG:NH2	5:CF:91:ARG:HB2	2.30	0.46
8:CI:33:SER:N	8:CI:36:GLN:HG3	2.30	0.46
11:CL:49:ARG:HG3	11:CL:65:TYR:OH	2.15	0.46
15:CP:10:GLY:HA2	55:CA:624:C:O3'	2.16	0.46
55:CA:32:A:C6	55:CA:553:A:N1	2.83	0.46
55:CA:33:A:H2'	55:CA:34:C:H6	1.78	0.46
55:CA:119:A:H5'	55:CA:120:A:O4'	2.16	0.46
55:CA:200:G:N1	55:CA:201:G:C5	2.84	0.46
55:CA:246:A:O3'	55:CA:247:G:H4'	2.16	0.46
55:CA:317:U:C2'	55:CA:318:G:H8	2.26	0.46
55:CA:369:G:O2'	55:CA:370:C:C6	2.67	0.46
55:CA:565:U:H2'	55:CA:566:G:C8	2.50	0.46
55:CA:767:A:C5	55:CA:768:A:N7	2.83	0.46
55:CA:770:C:H1'	55:CA:899:C:H42	1.80	0.46
55:CA:813:U:H3'	55:CA:816:A:H62	1.81	0.46
55:CA:938:A:C6	55:CA:939:G:C5	3.03	0.46
55:CA:1134:G:C2	55:CA:1135:U:O2'	2.66	0.46
55:CA:1415:G:N2	55:CA:1486:G:C4	2.84	0.46
24:DA:51:G:N3	24:DA:119:A:C2	2.84	0.46
24:DA:83:A:C6	24:DA:101:A:OP1	2.68	0.46
24:DA:122:G:O2'	24:DA:123:G:C5'	2.64	0.46
24:DA:284:U:OP2	24:DA:284:U:H6	1.98	0.46
24:DA:482:A:N6	24:DA:506:G:N9	2.63	0.46
24:DA:734:A:C5	24:DA:735:A:C8	3.04	0.46
24:DA:777:G:N2	24:DA:778:G:C4	2.84	0.46
24:DA:812:C:O5'	35:DL:22:GLY:HA2	2.16	0.46
24:DA:838:C:C2	24:DA:941:A:C2	3.04	0.46
24:DA:858:G:C4	24:DA:2268:A:C2	3.03	0.46
24:DA:1004:U:H1'	24:DA:1010:A:N3	2.30	0.46
24:DA:1059:G:C5	24:DA:1060:U:N3	2.84	0.46
24:DA:1331:G:C4	24:DA:1333:G:C8	3.03	0.46
24:DA:1695:G:HO2'	24:DA:1696:G:P	2.39	0.46
24:DA:1797:G:O3'	26:DC:255:LYS:O	2.33	0.46
24:DA:1832:C:H2'	24:DA:1833:C:O4'	2.16	0.46
24:DA:2660:A:C2	24:DA:2661:G:C8	3.03	0.46
24:DA:2900:A:C2	24:DA:2901:C:C2	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DC:128:THR:C	26:DC:129:LEU:HD23	2.35	0.46
29:DF:135:ILE:HD12	29:DF:135:ILE:N	2.31	0.46
47:DX:3:VAL:O	47:DX:3:VAL:HG23	2.14	0.46
1:AB:15:PHE:HB2	1:AB:39:ILE:CG2	2.44	0.46
1:AB:106:VAL:HG12	1:AB:106:VAL:O	2.16	0.46
3:AD:43:ARG:CZ	3:AD:43:ARG:HA	2.46	0.46
3:AD:54:LEU:O	3:AD:58:GLN:HB2	2.16	0.46
3:AD:104:MET:HE3	3:AD:170:LEU:HD22	1.97	0.46
4:AE:76:ASN:CB	4:AE:81:GLN:HG2	2.43	0.46
5:AF:70:VAL:HA	5:AF:73:GLU:HB3	1.98	0.46
6:AG:144:ALA:O	6:AG:146:ALA:N	2.49	0.46
7:AH:48:PHE:O	7:AH:49:LYS:HG3	2.15	0.46
8:AI:14:SER:HB3	8:AI:74:GLN:HA	1.97	0.46
10:AK:57:SER:O	10:AK:90:PRO:HG3	2.16	0.46
11:AL:33:CYS:CA	11:AL:54:VAL:HA	2.26	0.46
11:AL:54:VAL:HG21	11:AL:79:ILE:HD11	1.97	0.46
11:AL:84:GLY:O	11:AL:95:HIS:HD2	1.99	0.46
17:AR:44:THR:OG1	17:AR:46:THR:HG22	2.16	0.46
21:AA:261:U:H2'	21:AA:263:A:OP2	2.14	0.46
21:AA:414:A:C2'	21:AA:414:A:N3	2.79	0.46
21:AA:544:G:C6	21:AA:545:C:C4	3.04	0.46
21:AA:683:G:N1	21:AA:684:U:C2	2.83	0.46
21:AA:736:C:H2'	21:AA:737:C:C6	2.51	0.46
21:AA:803:G:H2'	21:AA:804:U:C6	2.51	0.46
21:AA:892:A:C6	21:AA:893:C:C4	3.03	0.46
21:AA:918:A:H2'	21:AA:919:A:O4'	2.15	0.46
21:AA:956:U:O2	21:AA:956:U:H2'	2.15	0.46
21:AA:1224:U:C4'	21:AA:1225:A:OP2	2.57	0.46
21:AA:1239:A:H62	21:AA:1299:A:N6	2.13	0.46
22:AX:30:G:C2	22:AX:31:A:C8	3.04	0.46
24:BA:68:G:C5	24:BA:69:C:C5	3.04	0.46
24:BA:96:C:H2'	24:BA:97:C:H6	1.81	0.46
24:BA:272:A:O2'	24:BA:273:G:C5'	2.64	0.46
24:BA:396:G:OP2	47:BX:9:LYS:NZ	2.46	0.46
24:BA:752:A:O2'	24:BA:753:A:OP2	2.31	0.46
24:BA:763:G:C8	24:BA:765:C:C6	3.04	0.46
24:BA:857:G:H2'	24:BA:858:G:O4'	2.15	0.46
24:BA:1063:G:OP1	32:BI:76:ALA:HB3	2.16	0.46
24:BA:1310:G:N2	24:BA:1313:U:C5	2.83	0.46
24:BA:1320:C:C6	24:BA:1329:U:OP2	2.69	0.46
24:BA:1327:A:O2'	24:BA:1328:A:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1425:G:N1	24:BA:1426:G:C2	2.83	0.46
24:BA:1445:G:O2'	24:BA:1446:C:H5'	2.16	0.46
24:BA:1746:A:C4	24:BA:1747:U:C5	3.04	0.46
24:BA:2273:A:H2'	24:BA:2274:A:C8	2.51	0.46
24:BA:2404:U:C2	24:BA:2414:G:N1	2.83	0.46
24:BA:2625:G:H2'	24:BA:2626:C:O4'	2.16	0.46
24:BA:2805:C:C5	24:BA:2806:C:C5	3.04	0.46
24:BA:2816:G:O3'	37:BN:99:LYS:HE2	2.15	0.46
27:BD:125:TRP:CD2	27:BD:160:LYS:HG2	2.50	0.46
28:BE:109:LEU:HD13	28:BE:109:LEU:HA	1.75	0.46
31:BH:101:ASP:C	31:BH:104:THR:HB	2.36	0.46
33:BJ:128:ASN:O	33:BJ:128:ASN:CG	2.54	0.46
35:BL:47:ARG:CG	35:BL:50:PHE:HB2	2.45	0.46
36:BM:24:THR:O	36:BM:34:LYS:CE	2.63	0.46
39:BP:25:VAL:CG2	39:BP:83:ILE:HD11	2.46	0.46
40:BQ:86:SER:O	40:BQ:87:VAL:C	2.54	0.46
42:BS:72:THR:HG21	42:BS:108:SER:OG	2.15	0.46
43:BT:50:LEU:O	43:BT:51:PHE:HB2	2.15	0.46
44:BU:38:ILE:O	44:BU:40:LEU:N	2.49	0.46
46:BW:66:VAL:HG12	46:BW:67:LYS:N	2.31	0.46
1:CB:26:MET:HG2	1:CB:188:THR:HA	1.98	0.46
1:CB:71:THR:HG23	1:CB:92:ASN:O	2.15	0.46
3:CD:56:GLU:OE2	3:CD:194:ILE:HA	2.16	0.46
3:CD:81:LEU:HB2	3:CD:88:ASN:ND2	2.31	0.46
3:CD:105:GLY:CA	3:CD:158:LEU:HD23	2.44	0.46
4:CE:37:VAL:HG12	4:CE:38:VAL:O	2.15	0.46
55:CA:71:A:O2'	55:CA:72:A:O4'	2.23	0.46
55:CA:95:C:H6	55:CA:95:C:H5''	1.80	0.46
55:CA:247:G:H4'	55:CA:247:G:OP1	2.12	0.46
55:CA:254:G:HO2'	55:CA:255:G:H5'	1.81	0.46
55:CA:391:G:C6	55:CA:392:C:N3	2.83	0.46
55:CA:548:G:O2'	55:CA:549:C:C5'	2.64	0.46
55:CA:724:G:C4	55:CA:725:G:C8	3.03	0.46
55:CA:754:C:O2	55:CA:754:C:H2'	2.16	0.46
55:CA:756:C:O2'	55:CA:757:U:H5'	2.16	0.46
55:CA:814:A:H5'	55:CA:1511:G:H4'	1.98	0.46
55:CA:914:A:O2'	55:CA:915:A:H5'	2.16	0.46
55:CA:1072:G:H2'	55:CA:1073:U:C6	2.50	0.46
55:CA:1144:G:H2'	55:CA:1145:A:O4'	2.16	0.46
55:CA:1160:G:O2'	55:CA:1161:C:H6	1.98	0.46
24:DA:450:G:O6	59:DA:3239:HOH:O	2.20	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:570:G:O6	24:DA:2499:C:OP1	2.34	0.46
24:DA:571:U:O2'	24:DA:573:U:H6	1.97	0.46
24:DA:632:A:H4'	35:DL:68:SER:HA	1.98	0.46
24:DA:638:G:O2'	24:DA:639:U:H5'	2.16	0.46
24:DA:837:C:H2'	24:DA:838:C:H5'	1.98	0.46
24:DA:940:G:N3	24:DA:1191:G:H4'	2.30	0.46
24:DA:950:G:C6	24:DA:968:C:N3	2.84	0.46
24:DA:1080:A:C5	24:DA:1081:U:C4	3.03	0.46
24:DA:1157:G:H2'	24:DA:1158:C:H6	1.79	0.46
24:DA:1213:A:C2'	24:DA:1214:A:H8	2.27	0.46
24:DA:1249:U:H2'	35:DL:18:ARG:HH12	1.79	0.46
24:DA:1281:G:N1	24:DA:1290:C:C4	2.83	0.46
24:DA:1378:A:H2'	24:DA:1380:G:N7	2.31	0.46
24:DA:1450:G:C2	24:DA:1462:C:C2	3.04	0.46
24:DA:1533:C:C4	24:DA:1534:U:H5	2.33	0.46
24:DA:1553:A:H2'	24:DA:1555:G:N7	2.31	0.46
24:DA:1787:A:C2	24:DA:1788:C:C5	3.03	0.46
24:DA:1889:A:O2'	24:DA:2087:G:H5'	2.15	0.46
24:DA:1930:G:C4	24:DA:1968:G:C6	3.03	0.46
24:DA:2107:G:H2'	24:DA:2108:A:H8	1.81	0.46
24:DA:2184:A:H2'	24:DA:2185:U:O4'	2.14	0.46
24:DA:2524:G:H21	24:DA:2741:A:H1'	1.81	0.46
24:DA:2748:A:C6	24:DA:2749:A:C6	3.03	0.46
24:DA:2811:G:C4	24:DA:2812:G:C8	3.03	0.46
56:DB:6:G:H4'	56:DB:28:C:H4'	1.97	0.46
56:DB:10:G:C6	56:DB:11:C:N3	2.84	0.46
28:DE:126:VAL:HG13	28:DE:127:GLU:N	2.30	0.46
29:DF:56:LEU:O	29:DF:60:SER:HB3	2.15	0.46
30:DG:138:GLN:HG2	30:DG:138:GLN:O	2.16	0.46
31:DH:54:LEU:HA	31:DH:57:LYS:HG3	1.97	0.46
31:DH:125:THR:CG2	31:DH:146:VAL:HG11	2.45	0.46
36:DM:41:LEU:HD11	36:DM:126:ILE:HD11	1.97	0.46
36:DM:42:THR:HG22	36:DM:44:ARG:N	2.22	0.46
37:DN:12:ARG:HG2	37:DN:16:HIS:CG	2.51	0.46
37:DN:37:THR:HG22	37:DN:39:PRO:CD	2.32	0.46
44:DU:86:PHE:CG	44:DU:87:GLU:N	2.83	0.46
46:DW:23:LYS:HD2	46:DW:24:ARG:H	1.77	0.46
3:AD:61:ARG:NH1	3:AD:68:GLU:HG2	2.31	0.46
3:AD:78:ALA:C	3:AD:85:THR:HG23	2.36	0.46
5:AF:97:THR:HG22	5:AF:98:GLU:H	1.81	0.46
6:AG:87:PRO:HG2	6:AG:87:PRO:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:30:ILE:HD12	10:AK:30:ILE:C	2.36	0.46
11:AL:1:ALA:HB2	21:AA:568:G:O6	2.15	0.46
14:AO:6:ALA:O	14:AO:10:ILE:HG13	2.15	0.46
15:AP:5:ARG:HH12	15:AP:24:SER:HA	1.81	0.46
15:AP:23:ASP:HB3	15:AP:26:ASN:OD1	2.16	0.46
18:AS:77:ARG:NH2	21:AA:1322:C:OP1	2.49	0.46
21:AA:6:G:O2'	21:AA:7:A:OP2	2.29	0.46
21:AA:51:A:H4'	21:AA:52:C:H5'	1.96	0.46
21:AA:80:A:C2	21:AA:90:C:C2	3.04	0.46
21:AA:158:G:H3'	21:AA:159:G:H5''	1.98	0.46
21:AA:182:A:N6	21:AA:194:C:N4	2.63	0.46
21:AA:295:C:H2'	21:AA:296:U:H6	1.81	0.46
21:AA:409:U:O4	21:AA:410:G:C6	2.69	0.46
21:AA:720:C:H2'	21:AA:721:G:C8	2.51	0.46
21:AA:741:G:C2	21:AA:742:G:C4	3.04	0.46
21:AA:824:G:N1	21:AA:877:G:C6	2.84	0.46
21:AA:828:U:H2'	21:AA:829:G:O5'	2.16	0.46
21:AA:833:G:O2'	21:AA:834:U:H5'	2.16	0.46
21:AA:833:G:C5	21:AA:834:U:C5	3.04	0.46
21:AA:1234:C:H4'	21:AA:1364:U:H1'	1.97	0.46
21:AA:1338:G:N2	21:AA:1339:A:N3	2.63	0.46
21:AA:1348:U:H2'	21:AA:1349:A:C8	2.50	0.46
21:AA:1444:U:H1'	21:AA:1459:G:H22	1.77	0.46
24:BA:3:U:H2'	24:BA:4:U:C6	2.50	0.46
24:BA:26:G:OP1	42:BS:80:PRO:HB3	2.16	0.46
24:BA:62:U:C4'	24:BA:63:A:OP1	2.62	0.46
24:BA:96:C:C2	24:BA:97:C:C5	3.04	0.46
24:BA:406:G:H2'	24:BA:407:G:H8	1.81	0.46
24:BA:436:C:O2'	24:BA:437:U:H6	1.97	0.46
24:BA:491:G:C2	24:BA:492:A:C1'	2.99	0.46
24:BA:503:A:C6	24:BA:506:G:C6	3.04	0.46
24:BA:630:G:N2	24:BA:632:A:H3'	2.31	0.46
24:BA:1005:C:C2	24:BA:1143:A:C5	3.03	0.46
24:BA:1026:G:O2'	24:BA:1027:A:H8	1.98	0.46
24:BA:1064:C:C4'	32:BI:90:GLY:H	2.24	0.46
24:BA:1139:G:C2'	24:BA:1140:C:H5'	2.46	0.46
24:BA:1313:U:O3'	24:BA:1332:G:H5''	2.15	0.46
24:BA:1839:G:C8	24:BA:1927:A:C1'	2.98	0.46
24:BA:1900:A:N1	24:BA:1970:A:C5	2.83	0.46
24:BA:1945:G:H2'	24:BA:1946:U:C5	2.51	0.46
24:BA:2394:C:OP1	53:B3:29:ARG:NH2	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2496:C:OP1	36:BM:82:MET:HB2	2.15	0.46
29:BF:7:TYR:CD2	29:BF:11:VAL:HG11	2.51	0.46
29:BF:24:VAL:O	29:BF:27:VAL:HG12	2.15	0.46
31:BH:2:GLN:HA	31:BH:20:ASN:HA	1.97	0.46
33:BJ:124:VAL:O	33:BJ:125:TYR:HB2	2.16	0.46
37:BN:13:ASN:O	37:BN:14:SER:C	2.54	0.46
37:BN:35:LYS:HB2	37:BN:112:TYR:CE1	2.51	0.46
37:BN:38:LEU:CD1	37:BN:42:LYS:HD2	2.45	0.46
37:BN:117:ASP:O	37:BN:119:SER:N	2.47	0.46
42:BS:28:LYS:HB3	42:BS:28:LYS:HE3	1.62	0.46
42:BS:73:LYS:CE	42:BS:73:LYS:HA	2.41	0.46
1:CB:22:TRP:HE1	55:CA:830:G:H5''	1.80	0.46
1:CB:46:VAL:HG13	1:CB:47:PRO:HD3	1.98	0.46
3:CD:102:TYR:HB2	3:CD:113:ALA:HB2	1.96	0.46
4:CE:47:PHE:CD2	4:CE:48:GLY:N	2.84	0.46
5:CF:6:ILE:HD12	5:CF:6:ILE:N	2.31	0.46
6:CG:104:VAL:HA	6:CG:107:ALA:HB2	1.98	0.46
10:CK:19:VAL:N	10:CK:34:THR:O	2.48	0.46
11:CL:6:LEU:HD21	11:CL:11:ARG:NE	2.31	0.46
16:CQ:3:LYS:NZ	16:CQ:6:THR:HG21	2.31	0.46
20:CU:31:VAL:C	20:CU:33:ARG:H	2.19	0.46
55:CA:414:A:C2	55:CA:415:A:C4	3.04	0.46
55:CA:429:U:H1'	55:CA:430:A:H5''	1.97	0.46
55:CA:1005:A:N7	55:CA:1006:G:H1'	2.31	0.46
55:CA:1520:C:H2'	55:CA:1521:C:H6	1.79	0.46
24:DA:237:C:C2	24:DA:261:G:C2	3.03	0.46
24:DA:323:C:H2'	28:DE:163:ASN:CG	2.37	0.46
24:DA:352:A:C2	24:DA:353:C:H1'	2.51	0.46
24:DA:399:U:C4	24:DA:400:G:C6	3.03	0.46
24:DA:604:G:C6	24:DA:625:G:N1	2.84	0.46
24:DA:607:U:H3	24:DA:620:G:H1'	1.80	0.46
24:DA:764:A:O4'	26:DC:211:ARG:HG3	2.16	0.46
24:DA:818:G:O2'	24:DA:819:A:H5''	2.15	0.46
24:DA:949:G:C2	24:DA:969:G:C2	3.04	0.46
24:DA:1231:U:H2'	24:DA:1232:G:H8	1.81	0.46
24:DA:1388:G:C2	24:DA:1389:G:C8	3.04	0.46
24:DA:1445:G:C2	24:DA:1547:C:N3	2.83	0.46
24:DA:1655:A:H4'	27:DD:118:PHE:CD1	2.51	0.46
24:DA:2142:A:H3'	24:DA:2143:C:H4'	1.97	0.46
56:DB:42:C:C5	29:DF:87:LYS:NZ	2.84	0.46
26:DC:77:VAL:CG2	26:DC:112:GLY:H	2.25	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DC:124:LYS:HB3	26:DC:124:LYS:HZ3	1.80	0.46
26:DC:134:ILE:O	26:DC:166:ARG:NH1	2.46	0.46
29:DF:58:ALA:HB1	29:DF:139:GLU:CG	2.46	0.46
29:DF:122:ASP:HB3	29:DF:123:GLY:H	1.45	0.46
43:DT:76:ARG:HG2	43:DT:77:ARG:N	2.31	0.46
50:D0:39:ARG:O	50:D0:40:HIS:HB2	2.15	0.46
1:AB:138:ARG:HB2	1:AB:138:ARG:NH1	2.30	0.46
1:AB:165:ALA:CB	1:AB:186:VAL:HG12	2.44	0.46
2:AC:72:PRO:O	2:AC:76:ILE:HG13	2.15	0.46
4:AE:13:LYS:HE2	4:AE:112:ALA:CB	2.45	0.46
4:AE:71:ILE:CD1	4:AE:144:GLU:HG3	2.46	0.46
4:AE:81:GLN:CD	4:AE:81:GLN:H	2.18	0.46
6:AG:91:ARG:C	6:AG:93:VAL:H	2.18	0.46
18:AS:28:LYS:HB3	18:AS:29:PRO:HD2	1.97	0.46
21:AA:94:G:N1	21:AA:98:A:C2	2.84	0.46
21:AA:212:G:N2	21:AA:213:G:C5	2.84	0.46
21:AA:230:G:C2'	21:AA:231:U:H5'	2.46	0.46
21:AA:250:A:H1'	21:AA:252:U:C4	2.51	0.46
21:AA:546:A:H4'	21:AA:548:G:H4'	1.98	0.46
21:AA:1016:A:H3'	21:AA:1017:U:O4'	2.16	0.46
21:AA:1123:U:H5''	21:AA:1124:G:OP2	2.15	0.46
22:AV:27:G:O2'	22:AV:28:G:H5'	2.16	0.46
24:BA:31:C:H4'	24:BA:1238:G:H4'	1.98	0.46
24:BA:137:U:HO2'	24:BA:138:U:P	2.39	0.46
24:BA:192:C:O5'	24:BA:192:C:H6	1.99	0.46
24:BA:542:C:O2	24:BA:542:C:H2'	2.16	0.46
24:BA:763:G:O2'	24:BA:764:A:H3'	2.15	0.46
24:BA:1892:C:H2'	24:BA:1893:C:H6	1.80	0.46
24:BA:2692:G:H1'	24:BA:2847:U:H1'	1.96	0.46
24:BA:2734:A:N6	24:BA:2770:G:H1'	2.31	0.46
26:BC:8:THR:O	26:BC:9:SER:HB3	2.15	0.46
33:BJ:76:HIS:O	33:BJ:84:ILE:HD12	2.16	0.46
33:BJ:109:LEU:HB3	33:BJ:110:PRO:HD2	1.97	0.46
34:BK:47:ILE:HA	34:BK:47:ILE:HD12	1.76	0.46
37:BN:30:ARG:HE	37:BN:30:ARG:HB2	1.57	0.46
37:BN:33:ILE:HG13	37:BN:118:ARG:CD	2.46	0.46
2:CC:133:MET:HB2	2:CC:150:VAL:CG2	2.46	0.46
2:CC:188:ALA:O	2:CC:194:VAL:HA	2.16	0.46
6:CG:73:GLU:HA	6:CG:140:VAL:HG11	1.97	0.46
6:CG:115:MET:C	6:CG:117:LEU:H	2.18	0.46
7:CH:54:THR:HG23	7:CH:55:LYS:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:21:ILE:HB	12:CM:24:VAL:HG23	1.98	0.46
12:CM:82:LEU:HD21	18:CS:60:PHE:HB3	1.98	0.46
12:CM:89:ARG:HE	12:CM:94:LEU:HB2	1.80	0.46
13:CN:62:ARG:HA	13:CN:68:ARG:O	2.16	0.46
15:CP:40:ASN:OD1	15:CP:42:ILE:HG12	2.16	0.46
18:CS:35:ARG:HH12	18:CS:52:ASN:HA	1.79	0.46
55:CA:268:U:C4	55:CA:269:C:N4	2.83	0.46
55:CA:382:A:O2'	55:CA:383:A:C5'	2.64	0.46
55:CA:580:C:H2'	55:CA:581:G:O4'	2.16	0.46
55:CA:597:G:C6	55:CA:598:U:C2	3.04	0.46
55:CA:610:U:H5'	55:CA:611:C:OP2	2.16	0.46
55:CA:743:A:C2	55:CA:744:C:C2	3.03	0.46
55:CA:835:U:H1'	55:CA:852:G:N2	2.31	0.46
55:CA:1005:A:C5	55:CA:1006:G:H1'	2.51	0.46
55:CA:1053:G:N7	55:CA:1199:U:H3'	2.31	0.46
24:DA:297:G:C6	24:DA:342:A:N1	2.84	0.46
24:DA:412:A:H61	24:DA:2411:A:C2'	2.29	0.46
24:DA:464:U:C2	24:DA:788:A:N6	2.84	0.46
24:DA:495:G:H4'	42:DS:4:ILE:O	2.16	0.46
24:DA:528:A:HO2'	24:DA:529:A:P	2.39	0.46
24:DA:538:A:H2'	24:DA:539:G:C8	2.49	0.46
24:DA:811:U:C4	35:DL:21:ARG:NH2	2.84	0.46
24:DA:863:A:H2'	24:DA:864:G:H8	1.80	0.46
24:DA:956:G:H1'	36:DM:82:MET:HE1	1.97	0.46
24:DA:1358:G:C8	24:DA:1371:G:O6	2.68	0.46
24:DA:1476:U:O2'	24:DA:1477:A:H8	1.99	0.46
24:DA:1665:A:C2	24:DA:1666:G:C4	3.04	0.46
24:DA:1835:G:H2'	24:DA:1836:C:C6	2.50	0.46
24:DA:1884:G:H8	24:DA:1884:G:OP2	1.99	0.46
24:DA:1923:U:H2'	24:DA:1924:C:C6	2.48	0.46
24:DA:2093:G:C2	24:DA:2094:A:C5	3.03	0.46
24:DA:2252:G:H2'	24:DA:2253:G:O4'	2.16	0.46
24:DA:2315:G:C2	24:DA:2316:G:N9	2.84	0.46
24:DA:2386:A:O2'	24:DA:2387:U:H6	1.89	0.46
24:DA:2547:A:C8	24:DA:2566:A:C5	3.04	0.46
24:DA:2692:G:H2'	24:DA:2693:G:H8	1.78	0.46
56:DB:49:C:H2'	56:DB:50:A:H8	1.81	0.46
26:DC:202:ARG:HE	26:DC:204:LEU:HD21	1.81	0.46
30:DG:104:LEU:HB3	30:DG:106:LEU:HD21	1.97	0.46
31:DH:21:VAL:HG22	31:DH:22:LYS:N	2.31	0.46
31:DH:38:PRO:O	31:DH:40:THR:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DK:17:ARG:HG2	34:DK:18:ARG:H	1.80	0.46
34:DK:113:MET:SD	34:DK:116:ILE:HD11	2.56	0.46
35:DL:7:SER:HB2	35:DL:8:PRO:HD2	1.97	0.46
35:DL:47:ARG:NH2	35:DL:47:ARG:CG	2.77	0.46
39:DP:52:ARG:HH11	39:DP:52:ARG:HG2	1.81	0.46
42:DS:10:ALA:O	42:DS:100:THR:HB	2.16	0.46
43:DT:29:THR:CA	43:DT:87:LEU:HB2	2.46	0.46
5:AF:88:MET:HG2	5:AF:89:VAL:N	2.31	0.46
6:AG:4:ARG:HA	6:AG:4:ARG:NE	2.30	0.46
6:AG:52:ARG:HH12	6:AG:121:ASN:ND2	2.14	0.46
6:AG:102:TRP:CD1	6:AG:136:LYS:HG2	2.50	0.46
7:AH:104:SER:O	7:AH:122:GLY:HA3	2.16	0.46
8:AI:56:MET:CE	8:AI:57:VAL:H	2.29	0.46
13:AN:76:PHE:CE2	13:AN:92:ILE:HG21	2.51	0.46
15:AP:25:ARG:HH22	21:AA:230:G:H4'	1.81	0.46
16:AQ:16:MET:HB2	16:AQ:19:SER:HB3	1.98	0.46
21:AA:13:U:O2'	21:AA:14:U:H5'	2.16	0.46
21:AA:64:G:C8	21:AA:99:C:N4	2.84	0.46
21:AA:367:U:C6	21:AA:394:G:N2	2.84	0.46
21:AA:575:G:N1	21:AA:821:G:C5	2.83	0.46
21:AA:833:G:C6	21:AA:834:U:C4	3.04	0.46
21:AA:1395:C:C5'	21:AA:1401:G:H21	2.26	0.46
24:BA:16:C:O3'	50:B0:10:SER:OG	2.33	0.46
24:BA:272:A:H2'	24:BA:273:G:C8	2.51	0.46
24:BA:831:G:C5	24:BA:832:U:C5	3.03	0.46
24:BA:918:A:H8	24:BA:918:A:O5'	1.99	0.46
24:BA:1059:G:OP2	24:BA:1060:U:O3'	2.35	0.46
24:BA:1071:G:C8	24:BA:1089:A:C6	3.04	0.46
24:BA:1131:G:C5	33:BJ:77:HIS:CE1	3.04	0.46
24:BA:1387:A:H5'	24:BA:1469:A:H1'	1.98	0.46
24:BA:1423:G:C2	24:BA:1424:G:C8	3.05	0.46
24:BA:1432:G:H2'	24:BA:1433:A:C8	2.51	0.46
24:BA:1487:U:H2'	24:BA:1488:C:O4'	2.15	0.46
24:BA:2318:G:C6	24:BA:2319:G:N1	2.84	0.46
24:BA:2425:A:H5'	24:BA:2427:C:H5'	1.98	0.46
24:BA:2624:G:H1'	50:B0:18:HIS:CE1	2.51	0.46
24:BA:2847:U:C2'	24:BA:2848:G:H5'	2.46	0.46
25:BB:54:G:C4	25:BB:55:U:C5	3.04	0.46
26:BC:20:ASN:HA	26:BC:21:PRO:HD2	1.82	0.46
26:BC:67:LYS:HG2	26:BC:150:GLY:HA2	1.97	0.46
27:BD:107:VAL:N	27:BD:206:ALA:H	2.02	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:151:THR:HG22	27:BD:152:PRO:N	2.31	0.46
28:BE:12:LEU:HD21	28:BE:190:ALA:HB1	1.98	0.46
28:BE:96:VAL:O	28:BE:96:VAL:HG12	2.16	0.46
29:BF:7:TYR:OH	29:BF:29:ARG:HB3	2.16	0.46
29:BF:134:GLN:CG	29:BF:135:ILE:N	2.70	0.46
34:BK:17:ARG:HG3	34:BK:47:ILE:HD13	1.97	0.46
38:BO:41:ALA:HB2	38:BO:48:LEU:HD21	1.98	0.46
42:BS:37:THR:O	42:BS:37:THR:CG2	2.64	0.46
46:BW:22:VAL:HG13	46:BW:25:PHE:CE2	2.51	0.46
46:BW:47:GLY:C	46:BW:49:ASN:H	2.19	0.46
1:CB:147:LEU:HD12	1:CB:147:LEU:N	2.31	0.46
1:CB:156:LEU:HD23	1:CB:156:LEU:H	1.80	0.46
3:CD:23:GLY:HA2	3:CD:160:LEU:HD12	1.97	0.46
3:CD:106:PHE:CE1	3:CD:144:ILE:HD11	2.51	0.46
4:CE:148:SER:H	4:CE:151:MET:CE	2.21	0.46
5:CF:14:GLN:HB3	5:CF:17:GLN:HE22	1.79	0.46
8:CI:10:ARG:NH2	55:CA:1119:C:OP2	2.49	0.46
10:CK:22:ILE:HB	10:CK:85:VAL:HG22	1.98	0.46
12:CM:86:ARG:C	12:CM:88:LEU:H	2.20	0.46
13:CN:2:LYS:HE2	55:CA:1216:A:OP1	2.15	0.46
18:CS:34:SER:O	18:CS:36:ARG:N	2.48	0.46
19:CT:67:HIS:CG	19:CT:68:LYS:H	2.25	0.46
55:CA:61:G:C6	55:CA:107:G:C6	3.04	0.46
55:CA:96:U:O2'	55:CA:97:G:H8	1.98	0.46
55:CA:204:G:H2'	55:CA:205:A:C8	2.51	0.46
55:CA:377:G:N2	55:CA:387:U:H1'	2.30	0.46
55:CA:1101:A:H1'	55:CA:1102:A:O4'	2.15	0.46
55:CA:1113:C:H2'	55:CA:1114:C:O4'	2.15	0.46
55:CA:1183:U:O2'	55:CA:1184:G:P	2.73	0.46
55:CA:1266:G:N1	55:CA:1270:G:C6	2.84	0.46
22:CV:30:G:C4	22:CV:31:A:C8	3.04	0.46
24:DA:30:G:C6	24:DA:511:U:O2	2.69	0.46
24:DA:72:U:O2'	24:DA:73:A:H5'	2.16	0.46
24:DA:136:G:H2'	24:DA:137:U:O4'	2.16	0.46
24:DA:325:G:O2'	24:DA:326:G:C5'	2.63	0.46
24:DA:628:G:C6	24:DA:636:G:N1	2.84	0.46
24:DA:782:A:N7	26:DC:219:VAL:HG21	2.31	0.46
24:DA:845:A:H2'	24:DA:847:U:O2	2.16	0.46
24:DA:950:G:O2'	24:DA:951:C:H5'	2.16	0.46
24:DA:1071:G:C8	24:DA:1089:A:C5	3.04	0.46
24:DA:1149:G:C6	24:DA:1150:C:N4	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1277:G:H5'	37:DN:20:MET:CE	2.46	0.46
24:DA:1422:G:H4'	24:DA:1493:C:OP1	2.16	0.46
24:DA:1430:G:H2'	24:DA:1431:A:H8	1.80	0.46
24:DA:1731:G:C4'	24:DA:1732:C:OP1	2.63	0.46
24:DA:1800:C:C2	24:DA:1802:A:C8	3.04	0.46
24:DA:1993:U:H4'	27:DD:133:THR:HG21	1.96	0.46
24:DA:2011:U:H2'	24:DA:2012:G:O4'	2.16	0.46
24:DA:2050:C:O2'	27:DD:146:ILE:HG21	2.16	0.46
24:DA:2104:C:O2	24:DA:2105:U:C5	2.68	0.46
24:DA:2214:C:H2'	24:DA:2215:C:C6	2.50	0.46
24:DA:2230:G:H2'	24:DA:2231:U:C6	2.51	0.46
26:DC:128:THR:HA	26:DC:190:THR:HA	1.98	0.46
26:DC:211:ARG:C	26:DC:213:ARG:H	2.19	0.46
29:DF:131:VAL:O	29:DF:132:ARG:HB2	2.16	0.46
29:DF:160:LYS:HD3	29:DF:161:SER:H	1.80	0.46
31:DH:61:VAL:HG13	31:DH:62:LEU:N	2.31	0.46
31:DH:89:LYS:HD2	31:DH:124:THR:HA	1.96	0.46
31:DH:104:THR:O	31:DH:104:THR:HG23	2.16	0.46
34:DK:92:GLU:O	34:DK:93:GLN:O	2.34	0.46
37:DN:56:LYS:HD3	37:DN:88:ALA:HA	1.98	0.46
38:DO:49:VAL:HG11	38:DO:81:ARG:HB3	1.97	0.46
40:DQ:46:TYR:HD1	41:DR:74:ILE:HG23	1.80	0.46
40:DQ:60:TRP:CH2	40:DQ:93:ILE:HB	2.50	0.46
43:DT:10:VAL:HG23	43:DT:11:LEU:HD12	1.97	0.46
43:DT:19:LYS:HD3	43:DT:19:LYS:HA	1.64	0.46
43:DT:39:THR:OG1	43:DT:42:GLU:HG3	2.14	0.46
1:AB:96:LEU:O	1:AB:99:MET:HB3	2.16	0.45
1:AB:117:GLU:C	1:AB:119:GLN:H	2.20	0.45
2:AC:179:ALA:HB1	2:AC:202:PHE:CE1	2.50	0.45
3:AD:2:ARG:HB2	3:AD:4:LEU:HD13	1.98	0.45
4:AE:94:PHE:CZ	4:AE:95:MET:O	2.69	0.45
4:AE:120:HIS:O	4:AE:121:ASN:HB3	2.16	0.45
5:AF:38:ARG:HH22	5:AF:96:VAL:HG23	1.80	0.45
11:AL:23:LEU:HG	11:AL:24:GLU:N	2.12	0.45
11:AL:33:CYS:CB	11:AL:54:VAL:HG22	2.33	0.45
19:AT:53:MET:HA	19:AT:56:ILE:HG22	1.98	0.45
20:AU:18:PHE:O	20:AU:21:SER:HB3	2.15	0.45
21:AA:80:A:C2	21:AA:81:A:H1'	2.51	0.45
21:AA:588:G:C6	21:AA:589:U:C4	3.04	0.45
21:AA:763:G:C5	21:AA:764:C:C5	3.04	0.45
21:AA:872:A:C2	21:AA:874:G:C6	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1054:C:P	21:AA:1197:A:OP2	2.74	0.45
21:AA:1140:C:O2'	21:AA:1141:C:O5'	2.34	0.45
24:BA:24:G:C6	24:BA:25:U:C4	3.04	0.45
24:BA:49:A:N6	24:BA:177:G:C4	2.84	0.45
24:BA:96:C:O2'	24:BA:97:C:H5'	2.15	0.45
24:BA:142:A:H2'	24:BA:143:C:C5	2.50	0.45
24:BA:308:G:H2'	24:BA:309:A:O4'	2.16	0.45
24:BA:310:A:H5''	44:BU:14:THR:HG22	1.97	0.45
24:BA:821:A:N7	24:BA:946:C:N3	2.64	0.45
24:BA:919:U:C2	24:BA:920:A:C8	3.03	0.45
24:BA:957:C:C5	24:BA:959:A:C5	3.04	0.45
24:BA:1060:U:H5''	24:BA:1061:U:OP1	2.16	0.45
24:BA:1224:U:O4	24:BA:1225:G:C6	2.69	0.45
24:BA:1399:C:C2	24:BA:1400:U:C5	3.05	0.45
24:BA:1471:G:H2'	24:BA:1472:C:H6	1.81	0.45
24:BA:1631:G:H1'	24:BA:1635:A:N6	2.31	0.45
24:BA:1936:A:H2	24:BA:1943:U:C5	2.35	0.45
24:BA:2082:A:H61	24:BA:2237:G:H1'	1.80	0.45
24:BA:2413:G:C4	24:BA:2414:G:C8	3.04	0.45
31:BH:27:ARG:HH12	31:BH:38:PRO:HG3	1.81	0.45
34:BK:19:VAL:HG22	34:BK:41:ILE:CG1	2.42	0.45
39:BP:15:ASP:OD1	39:BP:15:ASP:C	2.52	0.45
43:BT:18:GLU:HA	43:BT:18:GLU:OE2	2.16	0.45
44:BU:27:VAL:HG22	44:BU:28:LEU:N	2.31	0.45
45:BV:65:VAL:O	45:BV:66:ASP:OD1	2.34	0.45
46:BW:18:LYS:N	46:BW:36:ILE:HG12	2.30	0.45
47:BX:69:GLU:O	47:BX:71:ARG:N	2.47	0.45
48:BY:22:LEU:O	48:BY:23:ARG:O	2.34	0.45
52:B2:12:ARG:HE	52:B2:44:VAL:HG11	1.80	0.45
53:B3:46:LYS:HD3	53:B3:46:LYS:HA	1.78	0.45
2:CC:166:TRP:N	2:CC:166:TRP:CE3	2.82	0.45
6:CG:62:GLU:OE2	6:CG:65:LEU:HD12	2.16	0.45
6:CG:148:LYS:HD3	6:CG:148:LYS:O	2.16	0.45
11:CL:83:GLY:HA2	11:CL:94:TYR:HD1	1.80	0.45
15:CP:1:MET:O	15:CP:1:MET:HG3	2.16	0.45
16:CQ:18:LYS:HD2	55:CA:255:G:O3'	2.16	0.45
55:CA:156:C:OP2	55:CA:156:C:H6	1.99	0.45
55:CA:286:C:H2'	55:CA:287:U:O4'	2.16	0.45
55:CA:612:C:C2	55:CA:629:A:H2	2.34	0.45
55:CA:783:C:H2'	55:CA:784:A:H8	1.80	0.45
55:CA:977:A:O3'	55:CA:980:C:N4	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:1319:A:C5	55:CA:1323:G:C5	3.05	0.45
55:CA:1381:U:O2'	55:CA:1382:C:H6	1.99	0.45
22:CV:38:A:N7	22:CV:39:U:C5	2.84	0.45
22:CX:38:A:H2'	22:CX:39:U:H6	1.81	0.45
24:DA:304:U:H2'	24:DA:305:C:C6	2.51	0.45
24:DA:372:G:P	47:DX:61:LYS:HZ1	2.38	0.45
24:DA:755:U:H2'	24:DA:756:A:H8	1.81	0.45
24:DA:827:U:H1'	24:DA:2246:G:O2'	2.16	0.45
24:DA:903:C:C2	24:DA:904:G:C8	3.04	0.45
24:DA:1056:G:N2	24:DA:1102:C:H5	2.14	0.45
24:DA:1183:U:H2'	24:DA:1184:U:H6	1.81	0.45
24:DA:1364:G:H1'	24:DA:1368:G:N2	2.31	0.45
24:DA:1603:A:H2'	24:DA:1604:C:O4'	2.15	0.45
24:DA:1715:G:N2	24:DA:1743:G:H2'	2.31	0.45
24:DA:1895:C:N3	24:DA:1896:G:N7	2.65	0.45
24:DA:2435:A:N1	24:DA:2436:G:C5	2.84	0.45
24:DA:2516:A:N3	24:DA:2569:G:N2	2.64	0.45
24:DA:2519:U:C6	24:DA:2542:A:C6	3.04	0.45
24:DA:2687:U:H2'	24:DA:2688:G:C8	2.50	0.45
24:DA:2842:G:C6	24:DA:2843:G:C5	3.04	0.45
27:DD:60:VAL:O	27:DD:60:VAL:HG13	2.15	0.45
27:DD:61:THR:HB	27:DD:63:PRO:HD2	1.97	0.45
27:DD:121:THR:CG2	27:DD:127:PHE:CD1	2.99	0.45
29:DF:113:PHE:HE2	29:DF:116:LEU:HB2	1.81	0.45
35:DL:85:VAL:HG22	35:DL:85:VAL:O	2.16	0.45
40:DQ:82:LEU:HD23	40:DQ:112:ALA:HB2	1.97	0.45
46:DW:20:LEU:HD11	46:DW:35:ILE:HD11	1.98	0.45
46:DW:37:VAL:CG2	46:DW:38:ARG:NH1	2.79	0.45
50:D0:38:LEU:HB2	50:D0:41:HIS:CE1	2.51	0.45
54:D4:7:VAL:CG1	54:D4:8:LYS:N	2.79	0.45
1:AB:52:ALA:C	1:AB:54:ALA:N	2.69	0.45
1:AB:136:ARG:HD2	1:AB:136:ARG:O	2.16	0.45
1:AB:160:LEU:HB3	1:AB:182:VAL:CG1	2.44	0.45
1:AB:182:VAL:CG1	1:AB:183:PHE:N	2.79	0.45
3:AD:137:SER:HB3	3:AD:138:PRO:HD2	1.98	0.45
4:AE:20:VAL:O	4:AE:30:PHE:HA	2.17	0.45
4:AE:56:PRO:C	4:AE:58:ALA:N	2.70	0.45
6:AG:52:ARG:HH12	6:AG:121:ASN:HD21	1.63	0.45
7:AH:75:GLN:O	7:AH:126:CYS:HB2	2.17	0.45
9:AJ:57:VAL:HG22	9:AJ:58:ASN:N	2.23	0.45
15:AP:19:VAL:HG22	15:AP:36:VAL:CG1	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:27:MET:SD	19:AT:66:ILE:HD13	2.56	0.45
21:AA:109:A:C4	21:AA:326:G:C2	3.04	0.45
21:AA:756:C:H2'	21:AA:757:U:O4'	2.15	0.45
21:AA:815:A:C2	21:AA:1529:G:C4	3.05	0.45
21:AA:1171:A:C2	21:AA:1172:C:C2	3.04	0.45
21:AA:1353:G:C2	21:AA:1370:G:C2	3.05	0.45
22:AV:40:C:C2	22:AV:41:C:C5	3.03	0.45
24:BA:404:A:O2'	24:BA:405:U:P	2.74	0.45
24:BA:812:C:C2	24:BA:1250:G:N1	2.84	0.45
24:BA:856:G:N2	46:BW:19:ARG:HH22	2.09	0.45
24:BA:923:G:C4'	46:BW:25:PHE:CZ	2.99	0.45
24:BA:1274:A:H8	24:BA:1274:A:C5'	2.29	0.45
24:BA:1369:G:C6	24:BA:1370:C:C4	3.05	0.45
24:BA:2013:A:OP1	42:BS:96:ILE:HA	2.17	0.45
24:BA:2061:G:C2	24:BA:2063:C:C4	3.04	0.45
24:BA:2418:A:C2	24:BA:2419:U:C2	3.05	0.45
24:BA:2778:A:H4'	24:BA:2779:U:OP2	2.17	0.45
25:BB:66:A:H4'	25:BB:67:G:OP1	2.15	0.45
29:BF:103:ILE:H	29:BF:103:ILE:HG12	1.54	0.45
29:BF:133:GLU:H	29:BF:150:GLY:HA3	1.81	0.45
30:BG:31:GLU:O	30:BG:32:LEU:C	2.54	0.45
30:BG:53:PRO:HD3	30:BG:61:TRP:CE3	2.52	0.45
32:BI:52:LEU:HD12	32:BI:52:LEU:N	2.31	0.45
33:BJ:80:HIS:O	33:BJ:81:ILE:C	2.54	0.45
34:BK:2:ILE:HG21	34:BK:39:ILE:CD1	2.46	0.45
36:BM:2:LEU:HD22	36:BM:46:ILE:HD13	1.98	0.45
36:BM:108:VAL:HG13	36:BM:112:LEU:HB3	1.98	0.45
37:BN:71:ARG:CG	37:BN:71:ARG:NH2	2.71	0.45
39:BP:8:GLU:O	39:BP:11:GLN:N	2.49	0.45
39:BP:61:ARG:HG2	39:BP:70:GLU:CG	2.36	0.45
39:BP:91:VAL:O	39:BP:92:ARG:HG2	2.16	0.45
41:BR:49:ILE:HG21	41:BR:53:PHE:N	2.31	0.45
42:BS:28:LYS:O	42:BS:29:VAL:C	2.54	0.45
46:BW:29:SER:CA	46:BW:63:ASP:HB3	2.45	0.45
46:BW:72:GLY:N	46:BW:73:PRO:CD	2.78	0.45
47:BX:69:GLU:O	47:BX:70:LEU:HB2	2.16	0.45
49:BZ:23:LEU:HD13	49:BZ:23:LEU:HA	1.72	0.45
53:B3:7:ARG:HA	53:B3:7:ARG:HD2	1.52	0.45
1:CB:39:ILE:HD13	1:CB:40:ILE:H	1.81	0.45
1:CB:100:LEU:C	1:CB:102:ASN:H	2.20	0.45
1:CB:100:LEU:O	1:CB:102:ASN:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:3:TYR:OH	3:CD:10:LEU:HD11	2.16	0.45
4:CE:88:HIS:O	4:CE:89:THR:C	2.54	0.45
6:CG:2:ARG:HA	55:CA:1380:U:C5	2.51	0.45
6:CG:136:LYS:O	6:CG:140:VAL:HG23	2.16	0.45
7:CH:102:VAL:O	7:CH:125:ILE:HB	2.16	0.45
10:CK:22:ILE:HG12	10:CK:95:THR:HG21	1.98	0.45
18:CS:21:ALA:HB2	18:CS:27:LYS:HZ3	1.80	0.45
55:CA:202:G:O2'	55:CA:468:A:C8	2.68	0.45
55:CA:367:U:C6	55:CA:394:G:N2	2.84	0.45
55:CA:458:U:H2'	55:CA:459:A:C8	2.51	0.45
55:CA:542:G:H2'	55:CA:543:U:C6	2.51	0.45
55:CA:587:G:C6	55:CA:755:G:O6	2.70	0.45
55:CA:652:U:O2'	55:CA:653:U:P	2.74	0.45
55:CA:655:A:N6	55:CA:752:G:N2	2.64	0.45
55:CA:813:U:C2'	55:CA:814:A:H5'	2.46	0.45
55:CA:1415:G:C2	55:CA:1486:G:C5	3.03	0.45
24:DA:192:C:OP1	24:DA:2243:U:OP1	2.34	0.45
24:DA:197:A:C5	24:DA:2430:A:C5	3.05	0.45
24:DA:204:A:C8	24:DA:206:U:N3	2.84	0.45
24:DA:298:G:H2'	24:DA:339:U:O4	2.17	0.45
24:DA:322:A:H3'	28:DE:163:ASN:HD21	1.82	0.45
24:DA:353:C:N4	24:DA:354:A:N6	2.64	0.45
24:DA:413:C:O2'	24:DA:414:C:H5'	2.16	0.45
24:DA:581:C:N3	24:DA:582:A:C5	2.84	0.45
24:DA:660:C:H5''	28:DE:94:GLN:OE1	2.15	0.45
24:DA:719:C:C2	24:DA:720:U:C6	3.04	0.45
24:DA:725:G:C6	24:DA:726:G:N1	2.84	0.45
24:DA:857:G:H1'	46:DW:19:ARG:HE	1.79	0.45
24:DA:917:A:H5''	24:DA:2268:A:H61	1.81	0.45
24:DA:1021:A:H2'	24:DA:1022:G:H4'	1.98	0.45
24:DA:1034:G:O2'	24:DA:1035:U:O4'	2.20	0.45
24:DA:1040:A:H2'	24:DA:1041:G:O4'	2.17	0.45
24:DA:1159:U:O2'	24:DA:1160:G:H5'	2.16	0.45
24:DA:1205:A:C5	28:DE:165:HIS:CE1	3.05	0.45
24:DA:1303:G:C2'	24:DA:1304:A:H8	2.28	0.45
24:DA:1661:G:O2'	24:DA:1662:U:H5'	2.16	0.45
24:DA:1884:G:H2'	24:DA:1884:G:N3	2.31	0.45
24:DA:2015:A:C5	50:D0:2:VAL:HG11	2.50	0.45
24:DA:2599:G:OP2	26:DC:234:GLY:HA2	2.16	0.45
24:DA:2772:C:N3	24:DA:2773:C:C5	2.84	0.45
24:DA:2869:G:C6	24:DA:2870:C:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:43:C:C2'	56:DB:45:A:N7	2.80	0.45
56:DB:75:G:H22	56:DB:102:G:H21	1.64	0.45
32:DI:102:ARG:HD3	32:DI:140:GLU:O	2.16	0.45
36:DM:40:ARG:HB2	36:DM:93:VAL:HG21	1.97	0.45
40:DQ:12:ARG:HD2	40:DQ:12:ARG:H	1.80	0.45
41:DR:37:GLU:HB2	41:DR:53:PHE:CD2	2.51	0.45
41:DR:98:ILE:HD12	41:DR:98:ILE:N	2.32	0.45
1:AB:63:LYS:HG2	1:AB:224:ARG:CZ	2.46	0.45
3:AD:57:LYS:HG2	3:AD:202:LEU:CD2	2.45	0.45
3:AD:158:LEU:O	3:AD:161:ALA:HB3	2.16	0.45
4:AE:152:VAL:HB	4:AE:155:LYS:NZ	2.31	0.45
9:AJ:5:ARG:HG2	9:AJ:79:PRO:CD	2.46	0.45
10:AK:121:ARG:HH21	20:AU:35:GLU:HB2	1.82	0.45
11:AL:86:VAL:O	11:AL:88:ASP:N	2.43	0.45
13:AN:40:ARG:NH1	13:AN:44:VAL:HG21	2.18	0.45
16:AQ:32:ILE:HG22	16:AQ:33:TYR:CD2	2.52	0.45
21:AA:113:G:H2'	21:AA:114:U:C6	2.50	0.45
21:AA:570:G:C6	21:AA:571:U:O4	2.70	0.45
21:AA:802:A:H5''	21:AA:803:G:OP2	2.17	0.45
21:AA:914:A:H2'	21:AA:915:A:C8	2.48	0.45
21:AA:1346:A:C4	21:AA:1348:U:C4	3.04	0.45
24:BA:18:U:H2'	24:BA:19:A:O4'	2.16	0.45
24:BA:736:C:H2'	24:BA:737:C:H6	1.81	0.45
24:BA:919:U:C4'	24:BA:919:U:C6	2.94	0.45
24:BA:1060:U:C5'	24:BA:1061:U:OP1	2.64	0.45
24:BA:1322:A:N7	24:BA:1323:C:C5	2.85	0.45
24:BA:1342:A:C6	24:BA:1345:C:C2	3.05	0.45
24:BA:1471:G:C6	24:BA:1472:C:C4	3.05	0.45
24:BA:1724:G:C6	24:BA:1725:U:C4	3.04	0.45
24:BA:1758:U:H2'	24:BA:2696:U:O4'	2.16	0.45
24:BA:1850:G:O2'	24:BA:1851:U:H5'	2.17	0.45
24:BA:2305:U:H2'	24:BA:2306:C:C6	2.51	0.45
24:BA:2895:G:H2'	24:BA:2896:C:C6	2.51	0.45
25:BB:66:A:N6	25:BB:107:G:H3'	2.32	0.45
27:BD:12:THR:CG2	27:BD:13:ARG:H	2.29	0.45
28:BE:164:LEU:HB3	28:BE:167:VAL:HG12	1.97	0.45
33:BJ:18:VAL:HG23	33:BJ:54:ILE:HD13	1.99	0.45
33:BJ:55:ILE:HA	33:BJ:123:LYS:O	2.16	0.45
35:BL:4:ASN:N	35:BL:4:ASN:ND2	2.63	0.45
36:BM:32:GLY:CA	36:BM:131:VAL:HG23	2.46	0.45
36:BM:71:LYS:HD3	36:BM:95:LEU:HD13	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BM:132:THR:CG2	36:BM:133:LYS:H	2.24	0.45
38:BO:11:ALA:HB2	38:BO:96:GLY:CA	2.47	0.45
38:BO:104:GLN:C	38:BO:105:ALA:O	2.54	0.45
41:BR:37:GLU:CD	41:BR:37:GLU:H	2.20	0.45
43:BT:61:LEU:HA	59:BT:201:HOH:O	2.16	0.45
47:BX:33:HIS:O	47:BX:34:SER:C	2.55	0.45
51:B1:3:GLY:C	51:B1:5:ARG:H	2.19	0.45
8:CI:12:LYS:HG2	8:CI:12:LYS:O	2.15	0.45
16:CQ:46:HIS:CB	16:CQ:66:LEU:HD13	2.46	0.45
18:CS:76:THR:HB	55:CA:1221:G:O3'	2.16	0.45
55:CA:395:C:H2'	55:CA:396:C:H6	1.80	0.45
55:CA:397:A:H5'	55:CA:398:U:OP1	2.16	0.45
55:CA:648:A:H2'	55:CA:649:A:H8	1.81	0.45
55:CA:790:A:H2'	55:CA:791:G:O4'	2.16	0.45
55:CA:1090:U:C4	55:CA:1091:U:C5	3.04	0.45
55:CA:1236:A:H2'	55:CA:1237:C:C6	2.52	0.45
55:CA:1246:A:O2'	55:CA:1247:U:H5'	2.17	0.45
55:CA:1315:U:H3'	55:CA:1316:G:C8	2.51	0.45
55:CA:1496:C:H2'	55:CA:1497:G:O4'	2.17	0.45
24:DA:171:U:O2	24:DA:172:A:C8	2.70	0.45
24:DA:230:G:C2	24:DA:231:A:C8	3.04	0.45
24:DA:247:G:H5''	24:DA:386:G:H2'	1.97	0.45
24:DA:770:G:O4'	24:DA:1379:U:C5	2.70	0.45
24:DA:1085:A:H3'	24:DA:1086:A:N3	2.32	0.45
24:DA:1153:C:H2'	24:DA:1154:G:H8	1.81	0.45
24:DA:1826:G:C5	24:DA:1827:U:C4	3.04	0.45
24:DA:1830:C:H2'	24:DA:1831:G:C8	2.48	0.45
24:DA:2031:A:O2'	24:DA:2032:G:P	2.74	0.45
24:DA:2056:G:N2	24:DA:2057:G:C8	2.84	0.45
24:DA:2108:A:C8	24:DA:2108:A:OP2	2.69	0.45
24:DA:2248:C:H3'	24:DA:2249:U:H6	1.81	0.45
24:DA:2259:U:C2	24:DA:2427:C:N3	2.85	0.45
24:DA:2264:C:H41	46:DW:11:ASN:ND2	2.14	0.45
24:DA:2386:A:H2	46:DW:38:ARG:HG2	1.81	0.45
24:DA:2520:C:O2'	24:DA:2521:C:C5'	2.64	0.45
24:DA:2881:U:O4'	37:DN:93:GLY:HA3	2.16	0.45
56:DB:11:C:H5	56:DB:12:C:H5	1.63	0.45
56:DB:42:C:O2'	56:DB:43:C:H5'	2.16	0.45
26:DC:206:LYS:HG3	26:DC:209:ALA:H	1.82	0.45
29:DF:134:GLN:HE22	29:DF:136:ILE:H	1.64	0.45
31:DH:31:VAL:HB	31:DH:32:PRO:HD3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DH:49:ALA:C	31:DH:53:GLU:HB2	2.37	0.45
33:DJ:106:LYS:HE2	33:DJ:106:LYS:HA	1.98	0.45
34:DK:16:ALA:HB3	34:DK:46:ALA:N	2.31	0.45
34:DK:88:ASN:CB	34:DK:91:SER:HB2	2.46	0.45
34:DK:92:GLU:O	34:DK:93:GLN:C	2.54	0.45
35:DL:62:PRO:HG2	53:D3:24:LYS:CB	2.47	0.45
39:DP:64:SER:O	39:DP:66:GLY:N	2.47	0.45
42:DS:55:ILE:O	42:DS:59:GLU:HG2	2.17	0.45
44:DU:73:ASN:CB	44:DU:95:PHE:HE2	2.29	0.45
45:DV:57:TYR:CD2	45:DV:74:ALA:HB1	2.51	0.45
4:AE:95:MET:HA	4:AE:124:ALA:CB	2.46	0.45
9:AJ:10:LEU:HD21	9:AJ:25:ILE:HD11	1.98	0.45
15:AP:17:TYR:CE2	21:AA:375:U:H4'	2.52	0.45
16:AQ:60:ILE:HG22	16:AQ:61:ARG:N	2.32	0.45
21:AA:199:A:O2'	21:AA:200:G:O5'	2.35	0.45
21:AA:423:G:O2'	21:AA:424:G:O4'	2.33	0.45
21:AA:652:U:HO2'	21:AA:653:U:H6	1.61	0.45
21:AA:1131:G:H1	21:AA:1144:G:H4'	1.80	0.45
21:AA:1169:A:O2'	21:AA:1170:A:O4'	2.35	0.45
21:AA:1322:C:O4'	21:AA:1322:C:O2	2.30	0.45
21:AA:1348:U:O2'	21:AA:1349:A:C5'	2.64	0.45
21:AA:1386:G:N3	21:AA:1387:G:C8	2.84	0.45
21:AA:1462:C:C4	21:AA:1463:U:C4	3.04	0.45
24:BA:27:G:H1'	24:BA:513:A:H62	1.82	0.45
24:BA:81:G:H2'	24:BA:82:U:O4'	2.16	0.45
24:BA:107:G:H1'	24:BA:294:A:H1'	1.97	0.45
24:BA:320:A:H4'	24:BA:322:A:N7	2.32	0.45
24:BA:527:C:C5	24:BA:2779:U:C5	3.04	0.45
24:BA:608:A:N6	24:BA:609:A:C6	2.84	0.45
24:BA:631:A:H3'	24:BA:632:A:H8	1.82	0.45
24:BA:669:G:C5	24:BA:801:G:C6	3.05	0.45
24:BA:919:U:C4	24:BA:920:A:N7	2.84	0.45
24:BA:994:C:O2	41:BR:10:LYS:CE	2.64	0.45
24:BA:1059:G:C2'	32:BI:131:THR:OG1	2.64	0.45
24:BA:1179:G:OP2	24:BA:1180:U:H5''	2.15	0.45
24:BA:1223:G:N2	24:BA:1226:A:OP2	2.47	0.45
24:BA:1315:C:N3	24:BA:1338:G:C2	2.85	0.45
24:BA:1429:G:H2'	24:BA:1430:G:H8	1.82	0.45
24:BA:1544:A:C6	24:BA:1545:A:C6	3.04	0.45
24:BA:1850:G:C2'	24:BA:1851:U:H5'	2.46	0.45
24:BA:1914:C:H2'	24:BA:1915:U:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1989:G:H2'	24:BA:1990:C:C5'	2.46	0.45
24:BA:1989:G:H8	24:BA:1989:G:O5'	2.00	0.45
24:BA:2023:C:H4'	24:BA:2617:U:O3'	2.15	0.45
24:BA:2297:A:C8	24:BA:2320:U:N3	2.84	0.45
24:BA:2528:U:H2'	24:BA:2530:A:O5'	2.16	0.45
24:BA:2603:G:C6	24:BA:2604:U:C4	3.05	0.45
24:BA:2679:A:C2	24:BA:2729:G:N1	2.84	0.45
24:BA:2682:A:H2'	24:BA:2683:C:C6	2.52	0.45
24:BA:2897:U:H2'	24:BA:2898:U:O4'	2.16	0.45
25:BB:37:C:C5	25:BB:38:C:C5	3.04	0.45
26:BC:5:CYS:HB3	26:BC:12:ARG:NH1	2.31	0.45
26:BC:114:GLN:C	26:BC:115:ILE:HD13	2.35	0.45
27:BD:90:PHE:C	27:BD:92:VAL:N	2.70	0.45
28:BE:31:VAL:HG21	28:BE:104:ALA:HB3	1.98	0.45
29:BF:153:ILE:H	29:BF:153:ILE:HG13	1.57	0.45
29:BF:174:PHE:CD1	29:BF:176:PHE:CE1	3.05	0.45
31:BH:101:ASP:O	31:BH:104:THR:HB	2.16	0.45
32:BI:19:PRO:HB2	32:BI:22:PRO:HD2	1.99	0.45
36:BM:32:GLY:HA3	36:BM:131:VAL:HG23	1.98	0.45
38:BO:3:LYS:CG	38:BO:4:LYS:N	2.79	0.45
40:BQ:105:PHE:HA	40:BQ:108:LEU:HD12	1.98	0.45
41:BR:53:PHE:N	41:BR:53:PHE:CD1	2.80	0.45
42:BS:68:ASP:O	42:BS:109:ASP:HB3	2.16	0.45
49:BZ:43:ILE:HD12	49:BZ:43:ILE:C	2.36	0.45
1:CB:103:TRP:HD1	1:CB:107:ARG:HB3	1.81	0.45
2:CC:168:ARG:NH1	55:CA:1106:G:O2'	2.49	0.45
3:CD:77:GLU:OE1	3:CD:80:ARG:NH2	2.48	0.45
9:CJ:5:ARG:CG	9:CJ:79:PRO:HG3	2.47	0.45
9:CJ:31:ARG:NH1	9:CJ:32:THR:HB	2.32	0.45
9:CJ:42:LEU:HB3	9:CJ:43:PRO:CD	2.45	0.45
9:CJ:65:TYR:HB3	13:CN:95:LEU:HD11	1.98	0.45
11:CL:34:THR:C	11:CL:35:ARG:HE	2.19	0.45
13:CN:15:LEU:HD22	13:CN:19:TYR:HE1	1.82	0.45
15:CP:38:PHE:O	15:CP:50:THR:HG23	2.15	0.45
19:CT:22:SER:O	19:CT:26:MET:HB2	2.17	0.45
19:CT:61:ALA:O	19:CT:67:HIS:HA	2.16	0.45
55:CA:51:A:H4'	55:CA:52:C:H5'	1.98	0.45
55:CA:77:A:H3'	55:CA:77:A:OP2	2.17	0.45
55:CA:245:U:O2'	55:CA:246:A:H5'	2.16	0.45
55:CA:405:U:OP1	55:CA:406:G:O2'	2.32	0.45
55:CA:636:U:H2'	55:CA:637:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:669:G:H2'	55:CA:670:G:C8	2.51	0.45
55:CA:961:U:O2'	55:CA:962:C:O4'	2.30	0.45
55:CA:977:A:H2'	55:CA:1224:U:C4	2.45	0.45
55:CA:1157:A:C4'	55:CA:1158:C:O5'	2.56	0.45
55:CA:1217:C:H2'	55:CA:1218:C:C6	2.52	0.45
55:CA:1386:G:C2	55:CA:1387:G:C8	3.05	0.45
24:DA:68:G:N2	24:DA:69:C:H1'	2.32	0.45
24:DA:170:U:H6	24:DA:170:U:O5'	1.99	0.45
24:DA:294:A:H2'	24:DA:295:G:O5'	2.16	0.45
24:DA:539:G:C6	24:DA:540:C:C4	3.04	0.45
24:DA:571:U:C5	24:DA:575:A:C5	3.05	0.45
24:DA:838:C:C2	24:DA:941:A:N1	2.84	0.45
24:DA:866:A:N7	24:DA:914:G:N7	2.64	0.45
24:DA:996:A:C4'	40:DQ:91:ARG:HH11	2.30	0.45
24:DA:1520:U:O4	24:DA:1521:G:C6	2.69	0.45
24:DA:1684:G:C2	24:DA:1705:A:C2	3.04	0.45
24:DA:1731:G:N3	24:DA:1731:G:O4'	2.46	0.45
24:DA:1821:A:H5'	26:DC:156:SER:OG	2.16	0.45
24:DA:1857:G:C4	24:DA:1884:G:N1	2.85	0.45
24:DA:2419:U:OP2	53:D3:32:LEU:HD13	2.16	0.45
24:DA:2603:G:C6	24:DA:2604:U:C4	3.05	0.45
24:DA:2619:C:H5'	27:DD:157:LYS:HD3	1.97	0.45
24:DA:2826:A:H2'	24:DA:2827:C:O4'	2.16	0.45
56:DB:9:G:C2	56:DB:112:G:C2	3.04	0.45
56:DB:49:C:H2'	56:DB:50:A:C8	2.51	0.45
26:DC:17:LYS:HD3	26:DC:17:LYS:C	2.37	0.45
28:DE:45:ALA:O	28:DE:46:GLN:CB	2.64	0.45
29:DF:11:VAL:HG12	29:DF:12:VAL:H	1.81	0.45
29:DF:28:PRO:HB2	29:DF:168:LEU:CD2	2.42	0.45
33:DJ:35:ARG:HH11	33:DJ:140:LEU:HD11	1.80	0.45
43:DT:63:VAL:HG21	43:DT:80:TRP:CE2	2.51	0.45
44:DU:48:VAL:HG22	44:DU:50:ALA:H	1.81	0.45
48:DY:50:VAL:HA	48:DY:53:VAL:HG23	1.97	0.45
49:DZ:29:ARG:H	49:DZ:29:ARG:CZ	2.29	0.45
50:D0:29:VAL:HG21	50:D0:34:GLY:HA2	1.97	0.45
2:AC:144:GLY:O	2:AC:145:ALA:O	2.35	0.45
7:AH:106:SER:HB2	21:AA:640:A:O2'	2.17	0.45
10:AK:81:LEU:CD2	10:AK:104:PHE:HB3	2.46	0.45
11:AL:38:THR:HG22	11:AL:50:LYS:HA	1.99	0.45
16:AQ:18:LYS:HE3	21:AA:255:G:H4'	1.97	0.45
17:AR:62:ARG:HA	17:AR:67:LEU:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:346:G:P	39:BP:33:GLU:OE2	2.74	0.45
21:AA:462:G:OP1	21:AA:463:U:H5	2.00	0.45
21:AA:579:A:C4	21:AA:580:C:C5	3.05	0.45
21:AA:845:A:H5''	21:AA:846:G:C1'	2.46	0.45
21:AA:1163:A:N1	21:AA:1174:G:C6	2.85	0.45
21:AA:1253:G:C2	21:AA:1285:A:N6	2.85	0.45
21:AA:1428:A:C5	21:AA:1429:A:N7	2.84	0.45
21:AA:1463:U:H2'	21:AA:1464:U:C6	2.52	0.45
24:BA:192:C:O2'	24:BA:802:A:H1'	2.17	0.45
24:BA:271:G:O2'	24:BA:272:A:H8	1.99	0.45
24:BA:272:A:H2'	24:BA:273:G:H8	1.80	0.45
24:BA:536:G:C6	24:BA:537:G:C4	3.05	0.45
24:BA:668:A:H2'	24:BA:669:G:OP1	2.17	0.45
24:BA:909:A:C6	24:BA:912:C:C2	3.05	0.45
24:BA:956:G:N2	24:BA:959:A:H3'	2.32	0.45
24:BA:1016:G:N2	24:BA:1147:A:C4	2.84	0.45
24:BA:1179:G:N1	24:BA:1180:U:O2'	2.50	0.45
24:BA:1190:G:OP1	35:BL:32:GLY:CA	2.64	0.45
24:BA:1216:G:C5	24:BA:1217:U:C5	3.05	0.45
24:BA:1331:G:C2	24:BA:1333:G:C8	3.05	0.45
24:BA:1419:A:C8	24:BA:1421:G:C6	3.05	0.45
24:BA:1509:A:C4	24:BA:1510:G:C8	3.04	0.45
24:BA:1550:C:H2'	24:BA:1551:A:O4'	2.16	0.45
24:BA:2069:G:O2'	24:BA:2070:A:H5'	2.16	0.45
24:BA:2196:C:H5''	3:CD:150:LYS:HB3	1.99	0.45
24:BA:2517:C:H2'	24:BA:2542:A:N7	2.32	0.45
24:BA:2799:A:H8	24:BA:2799:A:H2'	1.58	0.45
24:BA:2863:C:C2	24:BA:2864:G:C8	3.05	0.45
24:BA:2881:U:O2'	37:BN:96:ARG:HA	2.17	0.45
25:BB:32:U:O2'	25:BB:33:G:H5'	2.17	0.45
25:BB:44:G:H1'	25:BB:47:C:N4	2.32	0.45
27:BD:151:THR:HG22	27:BD:152:PRO:CD	2.47	0.45
32:BI:18:ASN:ND2	32:BI:38:CYS:HB3	2.31	0.45
39:BP:26:GLU:CB	39:BP:43:GLU:HB2	2.47	0.45
43:BT:14:PRO:HA	43:BT:32:LEU:CB	2.45	0.45
43:BT:40:LYS:O	43:BT:44:LYS:N	2.50	0.45
44:BU:82:VAL:O	44:BU:94:PHE:O	2.34	0.45
46:BW:46:ALA:O	46:BW:47:GLY:O	2.33	0.45
47:BX:16:ASN:HB2	47:BX:24:THR:OG1	2.17	0.45
49:BZ:22:THR:O	49:BZ:23:LEU:C	2.54	0.45
1:CB:23:ASN:ND2	1:CB:191:ASP:OD1	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:80:GLY:O	2:CC:83:VAL:HG22	2.16	0.45
3:CD:124:VAL:O	3:CD:125:ASN:C	2.54	0.45
7:CH:85:TYR:CD1	16:CQ:36:PHE:HE2	2.35	0.45
7:CH:112:ASP:OD2	7:CH:116:ARG:HG3	2.15	0.45
11:CL:6:LEU:C	11:CL:8:ARG:N	2.70	0.45
15:CP:6:LEU:HB2	15:CP:17:TYR:HB3	1.97	0.45
16:CQ:68:LYS:O	55:CA:254:G:OP1	2.35	0.45
17:CR:44:THR:OG1	17:CR:46:THR:HG22	2.16	0.45
18:CS:10:ILE:HG22	18:CS:14:LEU:HD11	1.98	0.45
18:CS:33:TRP:CB	55:CA:1014:A:C2	3.00	0.45
19:CT:34:VAL:O	19:CT:38:ILE:HG13	2.17	0.45
55:CA:374:A:P	55:CA:452:A:H61	2.39	0.45
55:CA:488:C:H2'	55:CA:489:C:C6	2.51	0.45
55:CA:512:U:C2	55:CA:513:C:C5	3.05	0.45
55:CA:557:G:C6	55:CA:558:G:C2	3.04	0.45
55:CA:688:G:H2'	55:CA:689:C:C6	2.52	0.45
55:CA:728:A:H2'	55:CA:729:A:H8	1.80	0.45
55:CA:767:A:N6	55:CA:768:A:C6	2.84	0.45
55:CA:807:A:H2'	55:CA:808:C:C6	2.52	0.45
55:CA:951:G:C2	55:CA:1231:G:C5	3.05	0.45
55:CA:1460:C:N4	55:CA:1461:G:C5	2.85	0.45
24:DA:30:G:H2'	24:DA:31:C:O4'	2.16	0.45
24:DA:90:U:OP2	24:DA:91:A:H3'	2.15	0.45
24:DA:160:A:N1	24:DA:161:A:C2	2.85	0.45
24:DA:296:U:H2'	24:DA:297:G:H8	1.82	0.45
24:DA:500:G:C2	24:DA:503:A:C8	3.05	0.45
24:DA:975:A:C5	24:DA:990:A:N7	2.85	0.45
24:DA:995:C:H1'	40:DQ:60:TRP:HZ2	1.81	0.45
24:DA:1050:A:O2'	24:DA:1051:G:C5'	2.64	0.45
24:DA:1255:U:H2'	28:DE:68:ALA:HB2	1.98	0.45
24:DA:1341:G:OP2	24:DA:1394:U:O2'	2.34	0.45
24:DA:1439:A:N6	24:DA:1552:A:C8	2.84	0.45
24:DA:1710:G:H2'	24:DA:1711:A:C8	2.51	0.45
24:DA:2210:U:H4'	24:DA:2211:A:H5'	1.97	0.45
24:DA:2250:G:OP1	24:DA:2275:C:H2'	2.16	0.45
24:DA:2418:A:C6	24:DA:2419:U:C4	3.04	0.45
24:DA:2425:A:H4'	24:DA:2426:A:O5'	2.16	0.45
24:DA:2456:C:H2'	24:DA:2457:U:O4'	2.16	0.45
24:DA:2474:U:H2'	24:DA:2475:C:O5'	2.17	0.45
24:DA:2718:G:H2'	24:DA:2719:G:O4'	2.16	0.45
26:DC:68:ARG:HH12	26:DC:115:ILE:HD12	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DE:194:LYS:O	28:DE:197:GLU:HB3	2.17	0.45
30:DG:58:ALA:O	30:DG:59:ASP:C	2.55	0.45
32:DI:22:PRO:HB2	32:DI:23:VAL:H	1.57	0.45
41:DR:13:ARG:C	41:DR:13:ARG:HE	2.19	0.45
41:DR:38:VAL:O	41:DR:53:PHE:HA	2.16	0.45
42:DS:33:LEU:O	42:DS:36:LEU:HB2	2.17	0.45
43:DT:34:VAL:O	43:DT:35:ALA:HB3	2.17	0.45
45:DV:32:GLY:O	45:DV:33:GLY:C	2.55	0.45
47:DX:70:LEU:O	47:DX:74:GLY:N	2.49	0.45
1:AB:30:ILE:HD11	1:AB:188:THR:CG2	2.47	0.45
1:AB:108:GLN:CA	1:AB:111:LYS:HB3	2.40	0.45
1:AB:160:LEU:O	1:AB:183:PHE:CD2	2.66	0.45
1:AB:161:PHE:CZ	1:AB:216:VAL:HG21	2.51	0.45
2:AC:8:GLY:HA2	2:AC:11:LEU:HG	1.98	0.45
3:AD:194:ILE:C	3:AD:195:ASN:HD22	2.19	0.45
4:AE:15:ILE:CD1	4:AE:37:VAL:HG23	2.44	0.45
6:AG:43:TYR:O	6:AG:47:GLU:HB2	2.16	0.45
6:AG:134:VAL:O	6:AG:137:ARG:HB3	2.17	0.45
7:AH:124:ILE:H	7:AH:124:ILE:HG12	1.49	0.45
9:AJ:39:PRO:HD2	21:AA:1123:U:H4'	1.97	0.45
10:AK:13:LYS:O	10:AK:14:GLN:HB3	2.16	0.45
16:AQ:49:ASN:O	16:AQ:51:GLU:N	2.50	0.45
21:AA:264:C:N4	21:AA:265:G:C6	2.85	0.45
21:AA:401:C:C2	21:AA:402:G:C8	3.05	0.45
21:AA:632:U:O2	21:AA:632:U:H2'	2.15	0.45
21:AA:682:G:N2	21:AA:709:U:C2	2.85	0.45
21:AA:844:G:C6	21:AA:847:G:H5'	2.52	0.45
21:AA:908:A:H2'	21:AA:909:A:C8	2.51	0.45
21:AA:914:A:O2'	21:AA:915:A:H8	1.98	0.45
21:AA:1144:G:OP2	21:AA:1144:G:C8	2.69	0.45
21:AA:1195:C:C4	21:AA:1197:A:N7	2.85	0.45
21:AA:1202:U:H2'	21:AA:1203:C:C6	2.52	0.45
21:AA:1250:A:C8	21:AA:1287:A:N7	2.85	0.45
21:AA:1384:C:H2'	21:AA:1385:G:C8	2.46	0.45
21:AA:1423:G:H2'	21:AA:1424:U:H6	1.80	0.45
21:AA:1449:C:O2'	21:AA:1450:U:C5'	2.64	0.45
21:AA:1452:C:H4'	21:AA:1453:G:C4	2.51	0.45
21:AA:1462:C:C4	21:AA:1463:U:C5	3.05	0.45
24:BA:56:A:C2	24:BA:57:C:C2	3.05	0.45
24:BA:602:A:N3	24:BA:655:A:C2	2.85	0.45
24:BA:729:G:C4	24:BA:1775:U:C2	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:746:U:O2'	24:BA:747:U:P	2.75	0.45
24:BA:994:C:H3'	40:BQ:53:LYS:HE2	1.99	0.45
24:BA:1063:G:C2	24:BA:1064:C:C2	3.05	0.45
24:BA:1549:A:C5	24:BA:1550:C:C4	3.05	0.45
24:BA:1615:C:O2'	24:BA:1616:A:P	2.74	0.45
24:BA:2315:G:H2'	24:BA:2316:G:O4'	2.16	0.45
24:BA:2364:C:C2'	24:BA:2365:G:H5'	2.47	0.45
24:BA:2683:C:H2'	24:BA:2684:U:H6	1.81	0.45
24:BA:2824:C:C5	24:BA:2825:G:C6	3.05	0.45
24:BA:2824:C:C5	24:BA:2825:G:C5	3.05	0.45
26:BC:114:GLN:HE21	26:BC:114:GLN:HB2	1.59	0.45
27:BD:97:SER:OG	27:BD:98:VAL:N	2.50	0.45
27:BD:182:ALA:C	27:BD:183:GLU:HG3	2.37	0.45
28:BE:119:ILE:CD1	28:BE:187:VAL:HA	2.47	0.45
30:BG:33:THR:CA	30:BG:34:ARG:HD3	2.47	0.45
30:BG:123:GLU:CD	30:BG:124:CYS:N	2.70	0.45
32:BI:32:VAL:HG22	32:BI:66:PHE:CD1	2.52	0.45
33:BJ:64:VAL:O	33:BJ:65:THR:CB	2.65	0.45
35:BL:79:LEU:HB3	35:BL:116:VAL:HB	1.99	0.45
40:BQ:94:LEU:HA	40:BQ:94:LEU:HD22	1.64	0.45
41:BR:81:LYS:O	41:BR:82:HIS:C	2.54	0.45
42:BS:25:ARG:CD	42:BS:73:LYS:NZ	2.80	0.45
44:BU:78:LYS:HG2	44:BU:79:ALA:H	1.81	0.45
46:BW:28:GLU:HG3	46:BW:29:SER:N	2.28	0.45
46:BW:28:GLU:O	46:BW:30:VAL:N	2.50	0.45
46:BW:29:SER:O	46:BW:30:VAL:HB	2.17	0.45
54:B4:19:ARG:O	54:B4:20:ASP:C	2.54	0.45
4:CE:43:GLY:O	4:CE:73:VAL:HB	2.16	0.45
7:CH:110:MET:HB2	7:CH:111:THR:H	1.65	0.45
9:CJ:15:HIS:CE1	9:CJ:68:ARG:HD3	2.52	0.45
9:CJ:77:VAL:O	9:CJ:79:PRO:HD3	2.16	0.45
55:CA:161:A:H2'	55:CA:162:A:C8	2.51	0.45
55:CA:275:G:H2'	55:CA:276:G:H8	1.80	0.45
55:CA:391:G:C6	55:CA:392:C:C4	3.04	0.45
55:CA:557:G:O6	55:CA:558:G:N1	2.50	0.45
55:CA:596:A:N3	55:CA:597:G:C8	2.84	0.45
55:CA:792:A:C4	55:CA:794:A:C6	3.05	0.45
55:CA:1391:U:H2'	55:CA:1392:G:C8	2.52	0.45
24:DA:153:U:O2'	24:DA:154:U:H5'	2.16	0.45
24:DA:244:A:C2	24:DA:255:A:C4	3.04	0.45
24:DA:271:G:O4'	24:DA:367:G:N2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:455:C:H3'	24:DA:456:C:H5'	1.99	0.45
24:DA:628:G:H2'	24:DA:629:G:H8	1.76	0.45
24:DA:684:G:OP1	52:D2:16:HIS:CD2	2.70	0.45
24:DA:691:C:O5'	24:DA:691:C:H6	1.99	0.45
24:DA:742:A:H2'	24:DA:743:A:C8	2.52	0.45
24:DA:753:A:C2	24:DA:754:U:C4	3.04	0.45
24:DA:962:G:N2	36:DM:82:MET:HE2	2.31	0.45
24:DA:1158:C:HO2'	24:DA:1159:U:H6	1.63	0.45
24:DA:1188:U:O2'	24:DA:1189:A:H5'	2.17	0.45
24:DA:1425:G:H8	24:DA:1425:G:O5'	1.99	0.45
24:DA:1783:A:C2	24:DA:2588:G:O4'	2.69	0.45
24:DA:1853:A:C1'	24:DA:2234:G:H5'	2.46	0.45
24:DA:2233:U:H2'	24:DA:2234:G:C8	2.45	0.45
24:DA:2312:U:OP1	29:DF:70:ARG:HB2	2.16	0.45
24:DA:2552:U:C2	24:DA:2554:U:H5'	2.52	0.45
24:DA:2738:A:C2	24:DA:2766:A:N6	2.83	0.45
24:DA:2902:C:O2'	24:DA:2903:U:H5'	2.17	0.45
56:DB:81:G:C5	56:DB:82:U:C5	3.04	0.45
26:DC:62:ARG:N	26:DC:62:ARG:HD2	2.31	0.45
26:DC:119:VAL:CG1	26:DC:133:ASN:HD21	2.22	0.45
26:DC:244:VAL:HB	26:DC:249:VAL:N	2.32	0.45
27:DD:149:ASN:OD1	27:DD:150:GLN:N	2.49	0.45
29:DF:113:PHE:CZ	29:DF:116:LEU:HD22	2.52	0.45
32:DI:28:GLY:O	32:DI:29:GLN:C	2.54	0.45
45:DV:21:ARG:C	45:DV:23:ALA:H	2.20	0.45
45:DV:49:ASN:O	45:DV:52:ALA:HB3	2.17	0.45
47:DX:67:LEU:O	47:DX:77:TYR:OH	2.33	0.45
50:D0:47:TYR:CE2	50:D0:52:LYS:HG3	2.51	0.45
1:AB:20:ARG:O	1:AB:21:TYR:C	2.54	0.45
1:AB:110:ILE:HG13	1:AB:147:LEU:HD13	1.99	0.45
1:AB:138:ARG:HH21	21:AA:1170:A:P	2.39	0.45
3:AD:57:LYS:HA	3:AD:199:ILE:HD12	1.99	0.45
4:AE:121:ASN:HD22	4:AE:122:VAL:N	2.15	0.45
8:AI:24:ASN:C	8:AI:26:LYS:H	2.19	0.45
9:AJ:53:ILE:HG22	9:AJ:62:ARG:N	2.31	0.45
9:AJ:57:VAL:O	9:AJ:58:ASN:HB2	2.16	0.45
21:AA:138:G:C2	21:AA:226:G:C4	3.04	0.45
21:AA:233:C:H2'	21:AA:234:C:H6	1.82	0.45
21:AA:329:A:O2'	21:AA:330:C:H5'	2.16	0.45
21:AA:622:A:H2'	21:AA:623:C:C5'	2.46	0.45
21:AA:815:A:O2'	21:AA:816:A:P	2.75	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:872:A:O2'	21:AA:873:A:H3'	2.17	0.45
21:AA:1082:A:C5	21:AA:1083:U:C4	3.05	0.45
21:AA:1151:A:O2'	21:AA:1152:A:O5'	2.31	0.45
24:BA:35:G:C4	24:BA:454:A:C2	3.05	0.45
24:BA:225:C:H2'	24:BA:226:A:O4'	2.17	0.45
24:BA:235:U:H2'	24:BA:236:C:O4'	2.16	0.45
24:BA:355:U:H2'	24:BA:356:G:H8	1.78	0.45
24:BA:522:A:C5	24:BA:523:C:C4	3.04	0.45
24:BA:563:A:C6	24:BA:2018:G:C5	3.05	0.45
24:BA:587:C:C6	24:BA:671:C:H1'	2.52	0.45
24:BA:715:A:OP1	24:BA:715:A:H8	2.00	0.45
24:BA:753:A:O2'	24:BA:754:U:H5'	2.16	0.45
24:BA:841:G:C2	24:BA:938:G:C2	3.05	0.45
24:BA:973:A:O4'	24:BA:1188:U:C6	2.69	0.45
24:BA:2067:G:O3'	24:BA:2068:U:H4'	2.17	0.45
24:BA:2287:A:C6	24:BA:2289:G:C5	3.05	0.45
24:BA:2333:A:C6	24:BA:2335:A:N6	2.85	0.45
24:BA:2581:G:C5	24:BA:2610:C:C4	3.04	0.45
24:BA:2639:A:H2'	24:BA:2640:G:O4'	2.17	0.45
31:BH:31:VAL:O	31:BH:33:GLN:N	2.50	0.45
32:BI:79:LEU:HD22	32:BI:137:LEU:CD1	2.47	0.45
34:BK:35:VAL:HG12	34:BK:36:GLY:N	2.32	0.45
37:BN:67:PHE:HE1	37:BN:73:ASN:OD1	2.00	0.45
39:BP:104:GLY:O	39:BP:106:ALA:N	2.50	0.45
45:BV:41:GLU:O	45:BV:41:GLU:OE1	2.35	0.45
46:BW:45:HIS:ND1	46:BW:45:HIS:N	2.57	0.45
53:B3:54:LEU:HD12	53:B3:54:LEU:HA	1.82	0.45
3:CD:57:LYS:CA	3:CD:199:ILE:HG22	2.47	0.45
3:CD:176:LYS:HE2	3:CD:178:GLU:OE1	2.16	0.45
17:CR:34:GLU:HB2	20:CU:18:PHE:HZ	1.81	0.45
18:CS:9:PHE:HB3	55:CA:1319:A:OP1	2.16	0.45
19:CT:14:GLU:OE1	19:CT:18:LYS:HE2	2.17	0.45
55:CA:316:C:C5	55:CA:351:G:C5	3.04	0.45
55:CA:369:G:C6	55:CA:393:A:C2	3.05	0.45
55:CA:464:U:O2'	55:CA:465:A:O5'	2.28	0.45
55:CA:607:A:C6	55:CA:608:A:C6	3.05	0.45
55:CA:722:G:N3	55:CA:722:G:C2'	2.79	0.45
55:CA:994:A:O2'	55:CA:995:C:H5'	2.17	0.45
55:CA:994:A:N7	55:CA:1216:A:O4'	2.49	0.45
55:CA:1013:G:N2	55:CA:1015:G:H3'	2.32	0.45
55:CA:1026:G:N2	55:CA:1036:A:H61	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:1250:A:C5	55:CA:1251:A:C8	3.04	0.45
55:CA:1305:G:N2	55:CA:1331:G:H2'	2.28	0.45
24:DA:181:A:H2	24:DA:434:U:H1'	1.82	0.45
24:DA:413:C:O2'	24:DA:414:C:O4'	2.34	0.45
24:DA:510:C:O2'	24:DA:511:U:H5'	2.16	0.45
24:DA:690:G:O2'	24:DA:780:G:OP1	2.23	0.45
24:DA:749:A:C4	24:DA:750:A:C8	3.05	0.45
24:DA:1088:A:H4'	24:DA:1089:A:H8	1.81	0.45
24:DA:1376:C:H6	59:DA:3412:HOH:O	2.00	0.45
24:DA:1430:G:O2'	24:DA:1431:A:O4'	2.32	0.45
24:DA:1475:G:O2'	24:DA:1476:U:OP2	2.35	0.45
24:DA:1534:U:H2'	24:DA:1536:C:O2	2.17	0.45
24:DA:1776:G:H21	24:DA:1789:A:H1'	1.82	0.45
24:DA:1793:C:H2'	24:DA:1794:A:H8	1.82	0.45
24:DA:1799:G:OP1	26:DC:257:ARG:NH1	2.50	0.45
24:DA:1940:U:H1'	24:DA:1942:C:N4	2.31	0.45
24:DA:2297:A:H1'	24:DA:2322:A:N3	2.32	0.45
24:DA:2428:G:H4'	24:DA:2429:G:C5	2.52	0.45
24:DA:2788:C:H2'	24:DA:2789:C:H6	1.79	0.45
56:DB:48:U:H5'	38:DO:30:ARG:HE	1.80	0.45
56:DB:81:G:H2'	56:DB:82:U:H6	1.82	0.45
26:DC:130:PRO:CD	26:DC:188:ARG:HG3	2.47	0.45
28:DE:53:THR:OG1	28:DE:54:GLY:N	2.50	0.45
31:DH:132:PHE:HB3	31:DH:140:ALA:HB3	1.98	0.45
32:DI:20:SER:OG	32:DI:25:PRO:HG2	2.16	0.45
33:DJ:4:PHE:CG	33:DJ:5:THR:N	2.85	0.45
34:DK:61:VAL:HG13	34:DK:87:LEU:CD2	2.47	0.45
40:DQ:64:ILE:HD12	40:DQ:95:ALA:HB1	1.99	0.45
42:DS:47:VAL:O	42:DS:50:VAL:HB	2.15	0.45
43:DT:45:ALA:HA	43:DT:48:GLN:HG2	1.99	0.45
45:DV:21:ARG:HD3	45:DV:87:GLN:HG2	1.97	0.45
47:DX:10:ARG:HB3	47:DX:11:PRO:HD2	1.99	0.45
48:DY:58:ASN:C	48:DY:60:LYS:N	2.70	0.45
53:D3:61:LEU:HB2	53:D3:64:ALA:HB3	1.98	0.45
5:AF:53:LYS:HE2	5:AF:53:LYS:HB2	1.75	0.45
6:AG:12:LEU:N	6:AG:12:LEU:HD22	2.32	0.45
6:AG:86:VAL:CG1	6:AG:87:PRO:HD2	2.47	0.45
7:AH:88:LYS:HB3	7:AH:120:LEU:O	2.16	0.45
17:AR:70:THR:OG1	17:AR:72:ARG:HG2	2.17	0.45
21:AA:18:C:O2'	21:AA:19:A:H5'	2.17	0.45
21:AA:99:C:C2'	21:AA:100:G:OP2	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:409:U:H2'	21:AA:410:G:O4'	2.17	0.45
21:AA:683:G:C6	21:AA:684:U:N3	2.85	0.45
21:AA:1125:U:C2	21:AA:1127:G:C8	3.04	0.45
21:AA:1137:C:H1'	21:AA:1138:G:N2	2.32	0.45
21:AA:1185:G:C5	21:AA:1186:G:N7	2.85	0.45
21:AA:1314:C:O2'	21:AA:1315:U:H5'	2.16	0.45
21:AA:1403:C:H6	21:AA:1403:C:O5'	2.00	0.45
21:AA:1418:A:N7	21:AA:1419:G:C1'	2.80	0.45
21:AA:1453:G:HO2'	21:AA:1454:G:P	2.40	0.45
24:BA:161:A:C3'	24:BA:162:U:H5''	2.47	0.45
24:BA:373:U:C5	24:BA:400:G:N2	2.85	0.45
24:BA:374:A:H2'	24:BA:375:G:O4'	2.16	0.45
24:BA:681:G:H2'	24:BA:682:G:O5'	2.17	0.45
24:BA:811:U:C2	24:BA:1251:C:H5	2.34	0.45
24:BA:1204:A:C8	24:BA:1206:G:C2	3.05	0.45
24:BA:1247:A:C2	24:BA:1249:U:C6	3.05	0.45
24:BA:1276:A:C2	24:BA:1277:G:C5	3.04	0.45
24:BA:1425:G:H2'	24:BA:1426:G:C8	2.52	0.45
24:BA:1606:C:H4'	24:BA:1607:C:H5'	1.98	0.45
24:BA:1665:A:H2'	24:BA:1666:G:H5'	1.97	0.45
24:BA:1701:A:H2'	24:BA:1702:G:H5'	1.99	0.45
24:BA:2448:A:H3'	24:BA:2449:U:H2'	1.97	0.45
24:BA:2516:A:O2'	24:BA:2517:C:H5'	2.16	0.45
24:BA:2520:C:C4	24:BA:2567:G:C8	3.05	0.45
24:BA:2548:U:C2'	24:BA:2549:G:O5'	2.65	0.45
24:BA:2650:U:H2'	24:BA:2651:C:H6	1.80	0.45
24:BA:2662:A:N6	24:BA:2663:G:C2	2.85	0.45
25:BB:112:G:H2'	25:BB:113:C:C6	2.52	0.45
26:BC:140:VAL:HA	26:BC:190:THR:O	2.16	0.45
28:BE:75:SER:OG	28:BE:77:ILE:HG23	2.17	0.45
28:BE:83:VAL:O	28:BE:83:VAL:HG12	2.16	0.45
30:BG:84:LYS:CG	30:BG:85:LYS:H	2.29	0.45
31:BH:53:GLU:HG2	31:BH:53:GLU:O	2.17	0.45
31:BH:134:VAL:HG23	31:BH:138:VAL:HG23	1.98	0.45
35:BL:82:LEU:HD23	35:BL:83:ALA:N	2.31	0.45
37:BN:61:ALA:O	37:BN:64:ARG:HB2	2.17	0.45
43:BT:52:GLU:O	43:BT:52:GLU:CG	2.61	0.45
47:BX:19:HIS:C	47:BX:21:LEU:H	2.20	0.45
47:BX:65:THR:O	47:BX:68:ALA:HB3	2.17	0.45
49:BZ:40:THR:CG2	49:BZ:43:ILE:HG23	2.47	0.45
54:B4:4:ARG:HG3	54:B4:6:SER:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:25:TYR:HA	5:CF:28:ALA:HB3	1.98	0.45
7:CH:12:ARG:HD2	7:CH:26:MET:HE2	1.99	0.45
8:CI:9:GLY:CA	8:CI:16:ALA:HB3	2.39	0.45
8:CI:58:GLU:HG3	8:CI:59:LYS:N	2.32	0.45
15:CP:4:ILE:HD12	15:CP:4:ILE:N	2.32	0.45
55:CA:37:U:C2	55:CA:548:G:N1	2.84	0.45
55:CA:89:U:O2'	55:CA:90:C:O4'	2.24	0.45
55:CA:96:U:O2'	55:CA:97:G:C5'	2.65	0.45
55:CA:245:U:H6	55:CA:245:U:H5''	1.82	0.45
55:CA:1157:A:C2	55:CA:1181:G:C4	3.05	0.45
55:CA:1297:G:C8	55:CA:1297:G:OP2	2.70	0.45
24:DA:52:A:N1	24:DA:178:G:O2'	2.47	0.45
24:DA:244:A:C2'	24:DA:245:G:O5'	2.65	0.45
24:DA:301:G:C5	24:DA:302:C:N4	2.85	0.45
24:DA:350:G:H2'	24:DA:351:C:O4'	2.16	0.45
24:DA:478:A:C2	24:DA:480:A:C8	3.04	0.45
24:DA:567:U:C4	24:DA:568:U:C4	3.05	0.45
24:DA:589:U:HO2'	24:DA:590:A:H8	0.67	0.45
24:DA:604:G:O6	24:DA:625:G:C6	2.70	0.45
24:DA:628:G:O2'	24:DA:629:G:H5'	2.17	0.45
24:DA:630:G:OP1	53:D3:22:LYS:NZ	2.49	0.45
24:DA:941:A:H2'	24:DA:942:G:H8	1.80	0.45
24:DA:1014:A:O2'	24:DA:1015:U:H5'	2.16	0.45
24:DA:1130:U:O2'	24:DA:1131:G:N7	2.50	0.45
24:DA:1545:A:H2'	24:DA:1546:G:O4'	2.16	0.45
24:DA:1799:G:H22	24:DA:1818:U:H2'	1.82	0.45
24:DA:1807:G:C2'	24:DA:1808:A:H5'	2.45	0.45
24:DA:1816:C:O2'	24:DA:1817:G:P	2.74	0.45
24:DA:1875:G:OP2	24:DA:1875:G:C8	2.70	0.45
24:DA:1954:G:O2'	24:DA:1956:U:O4	2.25	0.45
24:DA:2287:A:O2'	24:DA:2288:A:C3'	2.46	0.45
24:DA:2332:C:H5''	46:DW:76:ARG:NH1	2.32	0.45
24:DA:2685:G:C2	24:DA:2725:A:C2	3.05	0.45
56:DB:50:A:C5	56:DB:51:G:C8	3.05	0.45
28:DE:133:LEU:HD23	28:DE:133:LEU:C	2.36	0.45
31:DH:29:PHE:C	31:DH:32:PRO:HD2	2.37	0.45
41:DR:51:VAL:HB	41:DR:52:PRO:CD	2.47	0.45
43:DT:25:GLU:HA	43:DT:29:THR:O	2.17	0.45
44:DU:54:PRO:CG	44:DU:55:GLY:H	2.23	0.45
45:DV:4:ILE:HD11	45:DV:50:MET:CE	2.46	0.45
1:AB:31:PHE:HB3	1:AB:40:ILE:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:16:PRO:HB2	2:AC:17:TRP:H	1.61	0.45
4:AE:60:GLN:C	4:AE:62:ALA:H	2.19	0.45
6:AG:77:ARG:NE	6:AG:77:ARG:HA	2.32	0.45
8:AI:6:TYR:CG	8:AI:7:GLY:N	2.85	0.45
13:AN:50:LEU:O	13:AN:51:PRO:C	2.55	0.45
21:AA:198:G:O2'	21:AA:199:A:C5'	2.65	0.45
21:AA:245:U:O2'	21:AA:246:A:H5'	2.17	0.45
21:AA:267:C:O2'	21:AA:268:U:C5'	2.65	0.45
21:AA:914:A:O2'	21:AA:915:A:H5'	2.17	0.45
21:AA:1061:G:C5	21:AA:1062:U:C4	3.05	0.45
21:AA:1415:G:C6	21:AA:1486:G:C6	3.05	0.45
24:BA:216:A:C8	24:BA:432:A:C6	3.05	0.45
24:BA:239:C:C4	24:BA:240:C:N3	2.85	0.45
24:BA:478:A:N6	24:BA:480:A:C6	2.85	0.45
24:BA:484:C:H2'	24:BA:485:C:H6	1.81	0.45
24:BA:515:A:H3'	24:BA:516:C:H6	1.82	0.45
24:BA:658:U:C2'	24:BA:659:G:O5'	2.65	0.45
24:BA:665:U:H2'	24:BA:666:A:C8	2.52	0.45
24:BA:665:U:H2'	24:BA:666:A:H8	1.81	0.45
24:BA:704:G:O2'	24:BA:705:A:P	2.75	0.45
24:BA:829:A:O2'	24:BA:830:G:P	2.75	0.45
24:BA:835:C:C2'	24:BA:836:G:H5'	2.47	0.45
24:BA:854:C:C6	24:BA:854:C:H3'	2.52	0.45
24:BA:969:G:C2	24:BA:970:U:C2	3.05	0.45
24:BA:1055:G:N2	24:BA:1105:U:O2	2.50	0.45
24:BA:1166:G:C5	24:BA:1167:C:C5	3.05	0.45
24:BA:1316:U:H2'	24:BA:1317:G:C8	2.52	0.45
24:BA:1555:G:C6	24:BA:1556:C:C4	3.05	0.45
24:BA:1727:C:H2'	24:BA:1728:C:O4'	2.16	0.45
24:BA:1733:G:O2'	24:BA:1734:G:H5'	2.17	0.45
24:BA:1880:U:H2'	24:BA:1881:C:C6	2.51	0.45
24:BA:2025:C:H2'	24:BA:2026:U:H6	1.82	0.45
24:BA:2147:A:H3'	24:BA:2148:G:C5'	2.46	0.45
24:BA:2660:A:H2'	24:BA:2661:G:O4'	2.16	0.45
24:BA:2800:A:H8	24:BA:2800:A:H5''	1.82	0.45
25:BB:53:A:O2'	25:BB:54:G:C5'	2.60	0.45
27:BD:8:LYS:HB2	27:BD:201:LEU:HD22	1.99	0.45
29:BF:16:MET:O	29:BF:20:ASN:HA	2.17	0.45
30:BG:154:GLU:OE2	30:BG:156:TYR:HB2	2.17	0.45
32:BI:3:LYS:CD	32:BI:4:VAL:HG23	2.47	0.45
33:BJ:42:ALA:O	33:BJ:44:TYR:O	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BK:21:CYS:HB2	34:BK:39:ILE:HD13	1.98	0.45
36:BM:71:LYS:HD3	36:BM:95:LEU:HD11	1.99	0.45
40:BQ:45:ALA:O	40:BQ:46:TYR:C	2.54	0.45
45:BV:1:MET:HG3	45:BV:2:PHE:N	2.31	0.45
45:BV:68:LYS:O	45:BV:69:GLU:O	2.34	0.45
46:BW:39:GLN:C	46:BW:41:GLY:N	2.68	0.45
1:CB:14:HIS:NE2	1:CB:42:LEU:HD21	2.32	0.45
1:CB:44:LYS:O	1:CB:47:PRO:HD2	2.17	0.45
1:CB:105:THR:O	1:CB:105:THR:HG22	2.16	0.45
1:CB:158:ASP:O	1:CB:181:PRO:HD2	2.17	0.45
2:CC:86:LEU:O	2:CC:90:VAL:HG22	2.17	0.45
4:CE:131:ASN:C	4:CE:131:ASN:ND2	2.70	0.45
5:CF:67:PRO:O	5:CF:68:GLN:C	2.56	0.45
6:CG:134:VAL:HB	6:CG:137:ARG:NH2	2.32	0.45
7:CH:3:GLN:HB3	55:CA:587:G:H4'	1.99	0.45
11:CL:6:LEU:HD13	16:CQ:33:TYR:HE2	1.82	0.45
11:CL:19:ASN:N	11:CL:19:ASN:ND2	2.65	0.45
11:CL:86:VAL:CG1	11:CL:89:LEU:HD23	2.47	0.45
12:CM:77:LYS:HA	12:CM:80:MET:HE2	1.99	0.45
13:CN:27:LYS:HD2	13:CN:27:LYS:C	2.37	0.45
15:CP:40:ASN:HA	15:CP:41:PRO:HD3	1.81	0.45
15:CP:71:VAL:O	15:CP:75:ILE:HG13	2.16	0.45
18:CS:50:VAL:HG21	18:CS:74:ALA:HB2	1.99	0.45
55:CA:609:A:N7	59:CA:1858:HOH:O	2.36	0.45
55:CA:708:C:C5	55:CA:709:U:H5	2.34	0.45
55:CA:929:G:C6	55:CA:930:C:C4	3.04	0.45
55:CA:954:G:H1	55:CA:1228:C:N4	2.15	0.45
55:CA:1115:U:H2'	55:CA:1116:U:C6	2.52	0.45
55:CA:1194:U:C4	55:CA:1195:C:N4	2.85	0.45
55:CA:1238:A:OP1	55:CA:1336:C:H5	2.00	0.45
55:CA:1422:G:H2'	55:CA:1423:G:H8	1.81	0.45
55:CA:1495:U:O2'	55:CA:1496:C:H5'	2.17	0.45
24:DA:5:A:C2	24:DA:2899:A:C2	3.05	0.45
24:DA:232:G:C4'	24:DA:233:A:OP1	2.59	0.45
24:DA:377:G:C5	24:DA:378:C:C4	3.05	0.45
24:DA:491:G:O2'	24:DA:492:A:H5'	2.17	0.45
24:DA:746:U:C5'	24:DA:748:G:O4'	2.65	0.45
24:DA:973:A:OP2	41:DR:81:LYS:HD2	2.17	0.45
24:DA:1021:A:C2	24:DA:1023:U:O2	2.69	0.45
24:DA:1035:U:H6	24:DA:1035:U:H5''	1.82	0.45
24:DA:1062:G:OP1	24:DA:1070:A:OP2	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1229:C:H2'	24:DA:1230:A:O4'	2.16	0.45
24:DA:1264:A:C5	24:DA:1265:A:C6	3.04	0.45
24:DA:1438:U:O4	24:DA:1552:A:N1	2.50	0.45
24:DA:1568:G:H8	24:DA:1568:G:H2'	1.53	0.45
24:DA:1941:C:C6	24:DA:1965:C:C4	3.05	0.45
24:DA:2137:U:O2	24:DA:2137:U:H2'	2.17	0.45
24:DA:2144:G:H2'	24:DA:2147:A:OP2	2.17	0.45
24:DA:2147:A:OP1	24:DA:2147:A:C4'	2.64	0.45
24:DA:2520:C:O2'	24:DA:2521:C:H5'	2.17	0.45
24:DA:2748:A:C4	24:DA:2757:A:C6	3.05	0.45
24:DA:2886:A:N7	50:D0:39:ARG:CZ	2.80	0.45
56:DB:98:G:N1	45:DV:14:LYS:HB3	2.32	0.45
27:DD:38:LYS:HD2	27:DD:45:TYR:CZ	2.52	0.45
27:DD:76:GLY:O	27:DD:77:ARG:C	2.53	0.45
28:DE:170:ARG:NH2	28:DE:176:ASP:OD2	2.50	0.45
29:DF:48:LEU:HB2	29:DF:149:ARG:NH2	2.31	0.45
29:DF:107:VAL:N	29:DF:108:PRO:HD2	2.31	0.45
30:DG:22:VAL:HG12	30:DG:23:ILE:H	1.82	0.45
30:DG:53:PRO:HB3	30:DG:61:TRP:H	1.81	0.45
32:DI:52:LEU:HD11	32:DI:78:LEU:HD21	1.99	0.45
35:DL:93:ASN:O	35:DL:95:LEU:N	2.44	0.45
36:DM:136:MET:CE	45:DV:75:GLN:C	2.86	0.45
47:DX:31:ASN:ND2	47:DX:31:ASN:N	2.54	0.45
2:AC:10:ARG:O	2:AC:13:ILE:O	2.35	0.45
4:AE:110:MET:SD	4:AE:139:THR:HG21	2.57	0.45
6:AG:12:LEU:HD22	6:AG:12:LEU:H	1.82	0.45
7:AH:33:VAL:O	7:AH:34:ALA:C	2.55	0.45
8:AI:112:ARG:O	8:AI:112:ARG:HG3	2.17	0.45
9:AJ:48:ARG:NH2	13:AN:100:TRP:CD2	2.84	0.45
10:AK:12:ARG:O	10:AK:13:LYS:C	2.55	0.45
18:AS:76:THR:CG2	21:AA:1221:G:H4'	2.47	0.45
21:AA:65:A:C4	21:AA:381:C:C5	3.05	0.45
21:AA:104:G:C2	21:AA:105:G:C8	3.04	0.45
21:AA:325:A:H3'	21:AA:326:G:H8	1.82	0.45
21:AA:938:A:C6	21:AA:939:G:C5	3.05	0.45
21:AA:993:G:H2'	21:AA:993:G:N3	2.32	0.45
21:AA:1253:G:C6	21:AA:1285:A:N6	2.85	0.45
21:AA:1349:A:O2'	21:AA:1350:A:H5'	2.16	0.45
21:AA:1504:G:C3'	21:AA:1505:G:H5'	2.48	0.45
22:AV:33:U:H3'	22:AV:35:A:OP2	2.17	0.45
24:BA:50:U:O5'	24:BA:50:U:H6	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1063:G:C5	24:BA:1064:C:C4	3.05	0.45
24:BA:1289:C:H2'	24:BA:1290:C:H6	1.81	0.45
24:BA:1300:G:C2	24:BA:1626:A:C6	3.05	0.45
24:BA:1489:C:O2'	24:BA:1490:A:H5'	2.17	0.45
24:BA:1906:G:H2'	24:BA:1907:G:O5'	2.16	0.45
24:BA:1912:A:C2	24:BA:1919:A:C6	3.05	0.45
24:BA:1965:C:H5''	24:BA:1966:A:H2'	1.99	0.45
24:BA:2182:U:H2'	24:BA:2183:A:OP1	2.17	0.45
26:BC:124:LYS:HB3	26:BC:127:ASN:HD22	1.81	0.45
26:BC:236:GLY:O	59:BC:308:HOH:O	2.21	0.45
29:BF:62:GLN:O	29:BF:64:PRO:HD3	2.17	0.45
30:BG:37:ASN:OD1	30:BG:37:ASN:N	2.50	0.45
33:BJ:30:THR:O	33:BJ:33:ALA:HB3	2.17	0.45
34:BK:71:ARG:CB	34:BK:72:PRO:CD	2.93	0.45
34:BK:113:MET:O	34:BK:116:ILE:HG13	2.16	0.45
35:BL:90:VAL:HG13	35:BL:95:LEU:CD2	2.46	0.45
35:BL:96:LYS:HD3	35:BL:103:ILE:HA	1.99	0.45
36:BM:49:ALA:HB3	36:BM:103:TYR:OH	2.18	0.45
37:BN:51:LEU:HD21	37:BN:70:THR:HG22	1.98	0.45
39:BP:111:GLU:CD	39:BP:111:GLU:N	2.69	0.45
40:BQ:63:ARG:HD2	40:BQ:64:ILE:HG13	1.99	0.45
44:BU:12:VAL:O	44:BU:18:LYS:O	2.34	0.45
44:BU:61:GLU:H	44:BU:61:GLU:HG2	1.54	0.45
44:BU:98:ASN:C	44:BU:98:ASN:OD1	2.55	0.45
47:BX:19:HIS:C	47:BX:21:LEU:N	2.71	0.45
6:CG:101:ARG:NH1	55:CA:1375:A:H4'	2.20	0.45
6:CG:112:ASP:HB2	6:CG:118:ARG:HA	1.99	0.45
9:CJ:5:ARG:N	9:CJ:6:ILE:HD12	2.32	0.45
10:CK:86:LYS:HA	10:CK:113:THR:OG1	2.17	0.45
11:CL:20:VAL:HG23	11:CL:20:VAL:O	2.17	0.45
12:CM:13:HIS:HD2	12:CM:14:ALA:H	1.64	0.45
16:CQ:68:LYS:HG2	16:CQ:69:THR:HG23	1.98	0.45
55:CA:172:A:C5	55:CA:174:A:N7	2.85	0.45
55:CA:518:C:H2'	55:CA:530:G:N3	2.31	0.45
55:CA:665:A:C2	55:CA:732:C:C2	3.05	0.45
55:CA:734:G:C4	55:CA:735:C:C5	3.05	0.45
55:CA:765:G:C4	55:CA:812:G:N1	2.85	0.45
55:CA:783:C:C2'	55:CA:784:A:H5'	2.46	0.45
55:CA:953:G:H2'	55:CA:954:G:C8	2.52	0.45
55:CA:994:A:C5	55:CA:1216:A:H4'	2.52	0.45
55:CA:1126:U:O2'	55:CA:1127:G:H8	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:1151:A:C2	55:CA:1152:A:C5	3.05	0.45
55:CA:1252:A:H2'	55:CA:1253:G:O4'	2.17	0.45
55:CA:1361:G:H2'	55:CA:1362:A:C5'	2.47	0.45
24:DA:104:A:O2'	24:DA:105:C:O4'	2.31	0.45
24:DA:125:A:OP2	52:D2:19:ARG:NH2	2.50	0.45
24:DA:288:U:H2'	24:DA:289:G:O4'	2.17	0.45
24:DA:303:G:C6	24:DA:315:G:C6	3.05	0.45
24:DA:464:U:C2	24:DA:788:A:C6	3.05	0.45
24:DA:603:A:H4'	24:DA:604:G:C4'	2.46	0.45
24:DA:769:U:HO2'	24:DA:1379:U:H6	1.63	0.45
24:DA:1264:A:C5'	50:D0:15:ARG:HH22	2.30	0.45
24:DA:1423:G:C2	24:DA:1424:G:C4	3.05	0.45
24:DA:1667:G:H1'	24:DA:1669:A:H62	1.81	0.45
24:DA:1812:U:H2'	24:DA:1813:G:C8	2.52	0.45
24:DA:1950:G:C2	24:DA:1954:G:C8	3.04	0.45
24:DA:2245:U:H5''	24:DA:2246:G:H5'	1.99	0.45
24:DA:2269:G:O2'	46:DW:18:LYS:HG2	2.17	0.45
24:DA:2408:U:O2'	24:DA:2409:G:C5'	2.65	0.45
24:DA:2443:C:C2'	24:DA:2444:G:H5'	2.46	0.45
24:DA:2581:G:C6	24:DA:2610:C:O2	2.70	0.45
24:DA:2662:A:H8	24:DA:2662:A:O5'	2.00	0.45
56:DB:65:U:H3'	56:DB:108:A:N6	2.30	0.45
26:DC:229:HIS:ND1	26:DC:230:PRO:HD2	2.32	0.45
31:DH:15:LEU:N	31:DH:15:LEU:HD22	2.32	0.45
31:DH:84:ALA:HB3	31:DH:148:ALA:CB	2.47	0.45
32:DI:118:GLY:O	32:DI:123:ALA:HB3	2.17	0.45
32:DI:132:ALA:HA	32:DI:137:LEU:HD12	1.98	0.45
34:DK:35:VAL:HG23	34:DK:36:GLY:N	2.24	0.45
34:DK:87:LEU:HA	34:DK:94:PRO:HA	1.98	0.45
35:DL:122:VAL:O	35:DL:122:VAL:HG23	2.17	0.45
36:DM:71:LYS:HA	36:DM:72:PRO:HD3	1.86	0.45
37:DN:12:ARG:NE	37:DN:12:ARG:HA	2.32	0.45
40:DQ:91:ARG:HG3	41:DR:11:GLN:CD	2.37	0.45
42:DS:19:LEU:HG	50:D0:21:LEU:HG	1.99	0.45
43:DT:74:ILE:HG13	43:DT:75:GLY:H	1.82	0.45
52:D2:34:ARG:HB3	52:D2:42:LEU:CD1	2.45	0.45
2:AC:55:VAL:O	2:AC:65:VAL:HA	2.17	0.44
4:AE:83:PRO:HD3	4:AE:97:PRO:CG	2.47	0.44
5:AF:79:ARG:HA	5:AF:79:ARG:NE	2.31	0.44
8:AI:25:GLY:H	8:AI:58:GLU:HA	1.81	0.44
8:AI:112:ARG:NH2	9:AJ:64:GLN:HE22	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:78:LEU:HB2	13:AN:83:VAL:HG22	1.99	0.44
21:AA:332:G:O2'	21:AA:333:U:C5'	2.61	0.44
21:AA:482:A:O2'	21:AA:483:C:H5'	2.18	0.44
21:AA:556:C:O2	21:AA:556:C:H2'	2.17	0.44
21:AA:925:G:C4	21:AA:927:G:C8	3.04	0.44
21:AA:1020:G:H2'	21:AA:1021:A:C8	2.52	0.44
21:AA:1073:U:O2'	21:AA:1074:G:H5'	2.17	0.44
24:BA:86:G:C2	24:BA:87:U:C5	3.05	0.44
24:BA:227:A:H4'	24:BA:229:C:N4	2.33	0.44
24:BA:271:G:C4	24:BA:272:A:N7	2.85	0.44
24:BA:408:G:H2'	24:BA:409:G:O4'	2.17	0.44
24:BA:463:G:C6	24:BA:467:G:O6	2.70	0.44
24:BA:528:A:C2	24:BA:2042:A:H2'	2.52	0.44
24:BA:555:G:O2'	24:BA:556:A:P	2.74	0.44
24:BA:867:C:C4	24:BA:868:U:C4	3.05	0.44
24:BA:1094:U:H1'	24:BA:1098:A:C2	2.52	0.44
24:BA:1212:G:C2	24:BA:1236:G:C5	3.05	0.44
24:BA:1404:C:O2	24:BA:1405:U:C6	2.70	0.44
24:BA:1698:A:H4'	24:BA:1699:G:O5'	2.16	0.44
24:BA:2058:A:O5'	24:BA:2058:A:H8	2.00	0.44
24:BA:2197:U:H1'	24:BA:2198:A:C8	2.52	0.44
24:BA:2331:G:O2'	24:BA:2336:A:N1	2.50	0.44
24:BA:2348:U:P	53:B3:37:THR:HG21	2.57	0.44
24:BA:2478:A:H2'	24:BA:2479:U:O4'	2.17	0.44
24:BA:2532:G:C4	24:BA:2533:U:C6	3.04	0.44
24:BA:2539:C:O2'	24:BA:2540:C:H5'	2.17	0.44
24:BA:2567:G:N2	24:BA:2568:U:C2	2.85	0.44
24:BA:2819:G:C5	24:BA:2821:A:C6	3.06	0.44
30:BG:8:VAL:O	30:BG:9:VAL:O	2.34	0.44
30:BG:174:LYS:HD2	30:BG:174:LYS:C	2.37	0.44
31:BH:9:VAL:O	31:BH:10:ALA:O	2.35	0.44
33:BJ:88:THR:HG22	33:BJ:91:GLU:HG3	2.00	0.44
35:BL:14:LYS:CG	35:BL:15:ALA:N	2.79	0.44
49:BZ:35:VAL:HG22	49:BZ:36:GLU:N	2.32	0.44
1:CB:72:LYS:O	1:CB:76:SER:N	2.50	0.44
2:CC:24:ASN:O	2:CC:28:PHE:HB2	2.17	0.44
6:CG:78:ARG:HA	6:CG:84:TYR:HB2	1.99	0.44
8:CI:129:ARG:O	55:CA:967:C:H5'	2.16	0.44
13:CN:13:VAL:O	13:CN:16:ALA:HB3	2.17	0.44
16:CQ:46:HIS:HE2	16:CQ:48:GLU:HG2	1.81	0.44
19:CT:7:LYS:O	19:CT:10:ALA:HB3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:66:ILE:HG13	19:CT:67:HIS:H	1.82	0.44
55:CA:91:U:C4	55:CA:92:U:C4	3.05	0.44
55:CA:113:G:C2	55:CA:315:A:C2	3.04	0.44
55:CA:368:U:H6	55:CA:368:U:H2'	1.44	0.44
55:CA:866:C:C4	55:CA:867:G:H1'	2.52	0.44
55:CA:954:G:N7	55:CA:955:U:C4	2.85	0.44
55:CA:1087:G:H2'	55:CA:1088:G:C8	2.51	0.44
55:CA:1142:G:C2	55:CA:1143:G:H1'	2.51	0.44
55:CA:1160:G:O2'	55:CA:1161:C:H5'	2.17	0.44
55:CA:1381:U:HO2'	55:CA:1382:C:H6	1.64	0.44
55:CA:1387:G:H2'	55:CA:1388:C:C6	2.52	0.44
55:CA:1400:C:H4'	55:CA:1401:G:OP2	2.17	0.44
22:CV:35:A:C2	22:CV:36:A:N9	2.86	0.44
24:DA:54:G:C5	24:DA:55:G:N7	2.85	0.44
24:DA:196:A:O2'	24:DA:197:A:OP1	2.34	0.44
24:DA:218:A:N6	24:DA:219:A:N6	2.65	0.44
24:DA:223:A:C6	24:DA:422:A:C5	3.05	0.44
24:DA:310:A:C2'	24:DA:312:G:N7	2.80	0.44
24:DA:319:G:H2'	24:DA:320:A:C8	2.52	0.44
24:DA:414:C:H2'	24:DA:415:A:C8	2.52	0.44
24:DA:426:C:O2'	24:DA:427:U:H5'	2.18	0.44
24:DA:464:U:H1'	24:DA:686:U:H5	1.81	0.44
24:DA:493:G:H4'	42:DS:8:ARG:O	2.16	0.44
24:DA:792:A:C8	24:DA:2440:C:C2	3.05	0.44
24:DA:1343:G:O2'	24:DA:1344:U:C6	2.67	0.44
24:DA:1567:G:H5''	26:DC:84:PRO:CB	2.47	0.44
24:DA:1953:A:N1	24:DA:2550:G:O4'	2.50	0.44
24:DA:1993:U:H4'	27:DD:133:THR:HG22	1.98	0.44
24:DA:1994:C:O2'	24:DA:1995:U:H5'	2.17	0.44
24:DA:2489:U:C4	24:DA:2490:G:N1	2.85	0.44
24:DA:2543:G:O6	24:DA:2765:A:C6	2.71	0.44
24:DA:2625:G:C5	24:DA:2626:C:C4	3.05	0.44
24:DA:2656:U:O2'	24:DA:2657:A:H8	2.00	0.44
24:DA:2697:G:H2'	24:DA:2698:U:H6	1.82	0.44
24:DA:2823:A:C2'	24:DA:2824:C:H5'	2.46	0.44
27:DD:184:ARG:NH2	39:DP:6:GLN:HE21	2.06	0.44
28:DE:28:VAL:O	28:DE:32:VAL:HG13	2.17	0.44
29:DF:45:ASP:OD2	29:DF:47:LYS:HB2	2.17	0.44
34:DK:7:MET:HA	34:DK:7:MET:HE2	2.00	0.44
35:DL:85:VAL:O	35:DL:86:GLU:HB2	2.17	0.44
37:DN:34:ILE:HD12	37:DN:44:LEU:HD21	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DO:74:VAL:HB	38:DO:106:LEU:HD11	1.99	0.44
38:DO:82:ALA:HB3	38:DO:115:LEU:HD11	1.98	0.44
44:DU:96:LYS:O	44:DU:97:SER:HB3	2.17	0.44
54:D4:15:LYS:O	54:D4:16:ILE:HB	2.16	0.44
1:AB:136:ARG:O	1:AB:139:GLU:HB3	2.18	0.44
1:AB:147:LEU:HD22	1:AB:150:ILE:HG21	1.99	0.44
2:AC:159:ALA:C	2:AC:161:ILE:N	2.70	0.44
2:AC:168:ARG:NH2	21:AA:1106:G:O2'	2.50	0.44
3:AD:146:GLU:HA	3:AD:149:LYS:HE2	1.99	0.44
6:AG:74:VAL:HA	6:AG:87:PRO:HA	1.98	0.44
12:AM:70:ARG:CG	12:AM:71:GLU:N	2.77	0.44
15:AP:19:VAL:HG22	15:AP:36:VAL:HG12	1.99	0.44
21:AA:366:A:O2'	21:AA:367:U:P	2.76	0.44
21:AA:408:A:C2	21:AA:435:A:C2	3.05	0.44
21:AA:428:G:C4	21:AA:430:A:N6	2.85	0.44
21:AA:720:C:N3	21:AA:721:G:C6	2.85	0.44
21:AA:961:U:OP2	21:AA:1223:C:H1'	2.17	0.44
21:AA:1101:A:H4'	21:AA:1102:A:C5'	2.47	0.44
21:AA:1346:A:C2	21:AA:1348:U:O4	2.70	0.44
24:BA:28:A:C8	24:BA:513:A:N6	2.86	0.44
24:BA:206:U:O2'	24:BA:207:A:H5'	2.18	0.44
24:BA:578:G:H21	24:BA:1252:G:N2	2.15	0.44
24:BA:598:U:H2'	24:BA:599:A:C8	2.49	0.44
24:BA:745:G:O2'	24:BA:748:G:H1'	2.18	0.44
24:BA:932:U:H4'	24:BA:933:A:C5'	2.47	0.44
24:BA:1057:A:N7	24:BA:1086:A:H2'	2.31	0.44
24:BA:1085:A:H2'	24:BA:1086:A:N3	2.32	0.44
24:BA:1383:A:C6	24:BA:1384:A:C6	3.04	0.44
24:BA:1820:U:O2'	26:BC:157:ALA:HB3	2.17	0.44
24:BA:2478:A:H1'	24:BA:2529:G:C8	2.52	0.44
24:BA:2762:C:C4	24:BA:2763:G:C5	3.05	0.44
26:BC:105:ALA:HA	26:BC:106:PRO:HD2	1.63	0.44
27:BD:110:THR:OG1	27:BD:171:THR:HG22	2.17	0.44
27:BD:184:ARG:NH1	39:BP:6:GLN:OE1	2.37	0.44
28:BE:5:LEU:HD23	28:BE:120:VAL:HG13	2.00	0.44
28:BE:117:ARG:HA	28:BE:185:LYS:CD	2.45	0.44
28:BE:134:LEU:HD21	28:BE:161:ALA:HB2	1.98	0.44
29:BF:134:GLN:C	29:BF:136:ILE:N	2.70	0.44
30:BG:29:ASN:CG	30:BG:30:GLY:H	2.20	0.44
31:BH:137:GLU:HG3	31:BH:138:VAL:N	2.31	0.44
36:BM:71:LYS:HA	36:BM:72:PRO:HD2	1.79	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BQ:3:VAL:O	40:BQ:3:VAL:HG12	2.16	0.44
40:BQ:57:ARG:NH2	40:BQ:92:LYS:HE2	2.31	0.44
41:BR:66:HIS:ND1	41:BR:94:THR:HG22	2.33	0.44
42:BS:24:ILE:HD12	42:BS:32:ALA:CB	2.47	0.44
43:BT:19:LYS:O	43:BT:23:ALA:N	2.37	0.44
43:BT:40:LYS:N	43:BT:43:ILE:HG23	2.32	0.44
1:CB:66:ILE:HB	1:CB:88:GLN:HB3	1.98	0.44
1:CB:125:PHE:HD2	1:CB:125:PHE:H	1.64	0.44
2:CC:28:PHE:CE2	2:CC:32:LEU:HD11	2.52	0.44
7:CH:124:ILE:HG22	7:CH:125:ILE:N	2.32	0.44
9:CJ:35:GLN:NE2	9:CJ:78:GLU:H	2.16	0.44
10:CK:21:HIS:HD2	10:CK:34:THR:CG2	2.28	0.44
11:CL:65:TYR:N	11:CL:94:TYR:O	2.45	0.44
11:CL:93:ARG:HH21	55:CA:911:U:P	2.40	0.44
20:CU:38:GLU:CG	55:CA:1526:G:OP1	2.62	0.44
55:CA:180:U:O4	55:CA:181:A:N6	2.51	0.44
55:CA:198:G:C4	55:CA:199:A:C8	3.06	0.44
55:CA:251:G:C4	55:CA:266:G:C5	3.04	0.44
55:CA:276:G:C2	55:CA:277:C:C2	3.05	0.44
55:CA:293:G:O2'	55:CA:294:U:H5'	2.17	0.44
55:CA:525:C:H2'	55:CA:526:C:H6	1.83	0.44
55:CA:596:A:C2	55:CA:597:G:C8	3.05	0.44
55:CA:815:A:H4'	55:CA:817:C:C4	2.52	0.44
55:CA:1064:G:C4	55:CA:1066:C:C4	3.05	0.44
55:CA:1144:G:H21	55:CA:1146:A:H62	1.65	0.44
24:DA:121:G:C2	24:DA:131:A:C4	3.05	0.44
24:DA:180:G:OP1	24:DA:180:G:H4'	2.16	0.44
24:DA:188:G:C2	24:DA:209:C:N3	2.86	0.44
24:DA:322:A:H3'	28:DE:163:ASN:ND2	2.32	0.44
24:DA:347:A:O2'	24:DA:348:A:H5'	2.17	0.44
24:DA:520:G:H5'	42:DS:73:LYS:NZ	2.31	0.44
24:DA:638:G:C6	24:DA:651:G:C6	3.05	0.44
24:DA:716:A:H3'	24:DA:717:C:H5''	1.98	0.44
24:DA:1146:C:H2'	24:DA:1147:A:C8	2.52	0.44
24:DA:1352:U:C5	24:DA:1377:G:C5	2.95	0.44
24:DA:1517:G:N2	24:DA:1732:C:C5	2.85	0.44
24:DA:1839:G:O2'	24:DA:1840:G:C5'	2.65	0.44
24:DA:2148:G:O3'	24:DA:2149:U:O4'	2.35	0.44
24:DA:2286:G:O6	51:D1:22:THR:HG21	2.17	0.44
24:DA:2492:U:HO2'	24:DA:2493:U:H5'	1.82	0.44
24:DA:2861:U:H2'	24:DA:2862:G:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DC:245:THR:C	26:DC:247:TRP:N	2.70	0.44
27:DD:12:THR:OG1	39:DP:4:ILE:HG23	2.17	0.44
29:DF:48:LEU:O	29:DF:52:ALA:HB2	2.16	0.44
30:DG:94:ARG:O	30:DG:95:ALA:HB2	2.17	0.44
33:DJ:58:ASN:OD1	33:DJ:127:GLY:HA2	2.17	0.44
33:DJ:80:HIS:O	33:DJ:81:ILE:O	2.34	0.44
37:DN:1:MET:O	37:DN:2:ARG:HB2	2.17	0.44
37:DN:16:HIS:O	37:DN:20:MET:N	2.51	0.44
40:DQ:4:LYS:CD	40:DQ:7:VAL:HG22	2.46	0.44
43:DT:68:LYS:HB3	43:DT:69:ARG:H	1.53	0.44
44:DU:14:THR:HB	44:DU:68:ASN:CB	2.44	0.44
45:DV:30:ILE:HG13	45:DV:40:ILE:HD11	1.98	0.44
46:DW:9:THR:HG23	46:DW:10:ARG:N	2.32	0.44
51:D1:38:PHE:CD2	51:D1:39:ASP:N	2.85	0.44
1:AB:26:MET:HE3	1:AB:26:MET:HA	1.98	0.44
1:AB:101:THR:HG22	1:AB:174:GLU:OE1	2.17	0.44
3:AD:117:VAL:HG22	3:AD:122:ILE:HD11	1.98	0.44
4:AE:15:ILE:HD11	4:AE:37:VAL:CG2	2.44	0.44
4:AE:76:ASN:HD22	4:AE:81:GLN:HB3	1.82	0.44
4:AE:121:ASN:HD22	4:AE:121:ASN:N	2.14	0.44
8:AI:26:LYS:HG3	8:AI:61:ASP:OD1	2.17	0.44
8:AI:44:ARG:H	8:AI:44:ARG:HG2	1.49	0.44
9:AJ:6:ILE:HD12	9:AJ:76:ILE:HB	1.98	0.44
12:AM:13:HIS:NE2	21:AA:1296:C:H5'	2.32	0.44
12:AM:88:LEU:O	12:AM:92:ARG:HG3	2.18	0.44
12:AM:113:LYS:HD3	12:AM:113:LYS:HA	1.59	0.44
15:AP:78:VAL:O	15:AP:78:VAL:HG13	2.17	0.44
16:AQ:12:VAL:HG11	16:AQ:21:VAL:H	1.82	0.44
16:AQ:30:HIS:HB2	16:AQ:37:ILE:HD11	1.99	0.44
16:AQ:58:VAL:CG2	16:AQ:59:GLU:N	2.80	0.44
21:AA:66:A:H2'	21:AA:66:A:N3	2.31	0.44
21:AA:227:G:C2'	21:AA:228:A:H5'	2.47	0.44
21:AA:445:G:N2	21:AA:490:C:C2	2.86	0.44
21:AA:695:A:C6	21:AA:696:A:C6	3.05	0.44
21:AA:763:G:C4	21:AA:764:C:C6	3.05	0.44
21:AA:1069:C:H4'	21:AA:1192:C:O2	2.17	0.44
21:AA:1492:A:H2	23:AW:5:U:O2	1.99	0.44
24:BA:92:U:H2'	24:BA:93:G:C8	2.53	0.44
24:BA:106:C:O2'	24:BA:294:A:O2'	2.34	0.44
24:BA:310:A:O2'	24:BA:311:A:P	2.75	0.44
24:BA:545:U:C6	24:BA:545:U:C3'	3.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:827:U:H2'	24:BA:2068:U:C2	2.52	0.44
24:BA:923:G:N3	46:BW:23:LYS:CE	2.80	0.44
24:BA:946:C:O2'	24:BA:947:A:C5'	2.65	0.44
24:BA:1707:G:O2'	24:BA:1708:C:H5'	2.18	0.44
24:BA:1731:G:C2'	24:BA:1732:C:H5''	2.48	0.44
24:BA:1816:C:C5	26:BC:61:TYR:CE1	3.05	0.44
24:BA:1965:C:C5'	24:BA:1965:C:C6	2.90	0.44
24:BA:2146:C:O2	24:BA:2146:C:O4'	2.35	0.44
24:BA:2305:U:N3	24:BA:2306:C:C2	2.85	0.44
24:BA:2533:U:H2'	24:BA:2534:A:H5'	1.99	0.44
26:BC:27:LYS:HE3	26:BC:27:LYS:N	2.31	0.44
29:BF:79:ARG:O	29:BF:82:TYR:HB2	2.17	0.44
29:BF:82:TYR:HA	29:BF:83:PRO:HD2	1.79	0.44
29:BF:146:ASP:O	29:BF:147:ARG:HB2	2.18	0.44
31:BH:4:ILE:HG23	31:BH:17:ASP:O	2.17	0.44
32:BI:61:TYR:N	32:BI:61:TYR:CD2	2.85	0.44
34:BK:102:PRO:HB3	34:BK:121:GLU:HB3	1.99	0.44
35:BL:55:MET:HA	35:BL:56:PRO:HD3	1.53	0.44
35:BL:67:THR:CG2	35:BL:68:SER:N	2.80	0.44
38:BO:39:VAL:O	38:BO:39:VAL:HG12	2.17	0.44
38:BO:58:ILE:HD11	38:BO:81:ARG:NH2	2.33	0.44
39:BP:105:LYS:CA	39:BP:108:ARG:HH21	2.22	0.44
40:BQ:91:ARG:HE	41:BR:11:GLN:HB2	1.82	0.44
41:BR:51:VAL:HB	41:BR:52:PRO:HD3	1.99	0.44
41:BR:72:VAL:HG13	41:BR:89:HIS:O	2.17	0.44
42:BS:29:VAL:O	42:BS:33:LEU:CD2	2.65	0.44
42:BS:40:ASN:O	42:BS:41:LYS:HG2	2.17	0.44
43:BT:22:THR:O	43:BT:26:LYS:HG2	2.18	0.44
45:BV:80:HIS:CD2	45:BV:83:LYS:N	2.72	0.44
46:BW:14:ASP:O	46:BW:15:SER:CB	2.65	0.44
46:BW:23:LYS:CG	46:BW:24:ARG:N	2.80	0.44
2:CC:113:LYS:HG3	2:CC:184:ASN:HD22	1.81	0.44
11:CL:111:GLN:HE21	11:CL:111:GLN:HB2	1.60	0.44
12:CM:13:HIS:HA	12:CM:43:LYS:HA	1.99	0.44
12:CM:13:HIS:HD1	12:CM:43:LYS:HE2	1.81	0.44
14:CO:28:VAL:HG13	14:CO:62:ARG:HG3	1.98	0.44
15:CP:35:ARG:HH12	15:CP:38:PHE:HB3	1.82	0.44
15:CP:52:LEU:O	15:CP:53:ASP:CB	2.64	0.44
55:CA:80:A:C5	55:CA:81:A:H1'	2.51	0.44
55:CA:123:U:C5	55:CA:124:C:C5	3.06	0.44
55:CA:328:C:H2'	55:CA:328:C:O2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:329:A:C6	55:CA:332:G:C2	3.06	0.44
55:CA:557:G:C5	55:CA:558:G:C6	3.05	0.44
55:CA:571:U:H5''	55:CA:572:A:OP2	2.17	0.44
55:CA:774:G:C5	55:CA:775:G:N7	2.85	0.44
55:CA:885:G:O2'	55:CA:886:G:H8	2.01	0.44
55:CA:951:G:C6	55:CA:952:U:C4	3.06	0.44
55:CA:1237:C:H4'	55:CA:1334:G:N2	2.32	0.44
55:CA:1478:U:H2'	55:CA:1479:C:C6	2.52	0.44
24:DA:125:A:H4'	24:DA:126:A:OP2	2.18	0.44
24:DA:226:A:H5'	24:DA:257:C:O3'	2.16	0.44
24:DA:241:A:N9	24:DA:243:U:C4	2.85	0.44
24:DA:608:A:C5	24:DA:621:A:C5	3.05	0.44
24:DA:706:A:H2'	24:DA:707:G:O4'	2.18	0.44
24:DA:725:G:C6	24:DA:726:G:C2	3.05	0.44
24:DA:1187:G:H8	24:DA:1187:G:O5'	2.00	0.44
24:DA:1495:A:H2'	24:DA:1496:A:C8	2.52	0.44
24:DA:1667:G:C5'	34:DK:6:THR:H	2.31	0.44
24:DA:1675:C:O2'	24:DA:1676:A:H5'	2.18	0.44
24:DA:1923:U:H6	24:DA:1923:U:O5'	2.00	0.44
24:DA:1946:U:H2'	24:DA:1947:C:C6	2.52	0.44
24:DA:1956:U:O2	24:DA:1985:C:H4'	2.18	0.44
24:DA:2286:G:H4'	24:DA:2287:A:O4'	2.16	0.44
24:DA:2345:G:C2	24:DA:2381:A:C5	3.05	0.44
24:DA:2459:A:C4	24:DA:2460:U:C5	3.06	0.44
26:DC:67:LYS:HB3	26:DC:150:GLY:HA2	1.99	0.44
26:DC:70:LYS:HB2	26:DC:101:ARG:HH22	1.81	0.44
28:DE:117:ARG:NH2	35:DL:2:ARG:HB3	2.32	0.44
29:DF:11:VAL:C	29:DF:13:LYS:H	2.20	0.44
34:DK:2:ILE:O	34:DK:3:GLN:HG2	2.17	0.44
38:DO:17:LYS:O	38:DO:21:LEU:HG	2.17	0.44
43:DT:17:SER:C	43:DT:18:GLU:HG2	2.37	0.44
45:DV:14:LYS:CG	45:DV:18:ARG:HD2	2.46	0.44
48:DY:11:VAL:HG12	48:DY:11:VAL:O	2.17	0.44
1:AB:142:LYS:HZ3	21:AA:1098:C:P	2.39	0.44
3:AD:52:VAL:O	3:AD:56:GLU:HB2	2.17	0.44
3:AD:96:ARG:HH21	3:AD:114:ARG:HH21	1.66	0.44
3:AD:168:THR:HG22	3:AD:183:ARG:HH21	1.82	0.44
4:AE:32:PHE:CD2	4:AE:54:GLU:CA	2.92	0.44
4:AE:36:THR:HG22	4:AE:59:ILE:HD12	1.98	0.44
12:AM:96:VAL:HB	21:AA:1308:U:H5'	2.00	0.44
16:AQ:13:SER:O	16:AQ:16:MET:SD	2.75	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:17:LYS:HA	18:AS:20:LYS:NZ	2.33	0.44
19:AT:14:GLU:O	19:AT:15:LYS:C	2.56	0.44
19:AT:66:ILE:HD11	19:AT:70:LYS:HG2	1.99	0.44
21:AA:65:A:C5	21:AA:381:C:C4	3.05	0.44
21:AA:71:A:N7	21:AA:100:G:C6	2.85	0.44
21:AA:105:G:H2'	21:AA:106:C:C6	2.53	0.44
21:AA:215:C:H2'	21:AA:216:U:C6	2.51	0.44
21:AA:427:U:N3	21:AA:428:G:O6	2.50	0.44
21:AA:471:U:C4	21:AA:472:U:C5	3.05	0.44
21:AA:755:G:O2'	21:AA:756:C:H5'	2.17	0.44
21:AA:806:C:H2'	21:AA:807:A:H8	1.79	0.44
21:AA:943:U:H2'	21:AA:944:G:H8	1.82	0.44
21:AA:993:G:C2'	21:AA:995:C:H41	2.30	0.44
21:AA:1084:G:H5'	21:AA:1102:A:OP2	2.17	0.44
21:AA:1279:G:H2'	21:AA:1279:G:N3	2.31	0.44
21:AA:1394:A:C8	21:AA:1501:C:O2'	2.68	0.44
21:AA:1501:C:C6	21:AA:1504:G:N7	2.86	0.44
24:BA:14:A:H3'	24:BA:15:G:C5'	2.47	0.44
24:BA:150:U:O2'	24:BA:151:C:H5'	2.17	0.44
24:BA:254:G:H2'	24:BA:255:A:OP2	2.18	0.44
24:BA:285:G:N2	24:BA:286:U:C2	2.85	0.44
24:BA:300:A:H2'	24:BA:334:C:H1'	1.98	0.44
24:BA:336:C:O2'	24:BA:337:C:H5'	2.17	0.44
24:BA:372:G:O2'	24:BA:373:U:P	2.75	0.44
24:BA:513:A:C2	24:BA:514:A:C4	3.06	0.44
24:BA:736:C:H2'	24:BA:737:C:C6	2.53	0.44
24:BA:880:G:O5'	24:BA:880:G:C8	2.67	0.44
24:BA:919:U:N3	24:BA:920:A:C5	2.86	0.44
24:BA:985:C:C2'	24:BA:986:C:H5'	2.47	0.44
24:BA:999:U:C2'	24:BA:1000:A:H5'	2.47	0.44
24:BA:1096:A:N6	24:BA:1097:U:C4	2.86	0.44
24:BA:1128:G:O2'	24:BA:1129:A:H5''	2.18	0.44
24:BA:1243:C:H1'	35:BL:4:ASN:O	2.17	0.44
24:BA:1343:G:N2	24:BA:1405:U:C6	2.85	0.44
24:BA:1386:C:H5'	24:BA:1396:U:O2	2.17	0.44
24:BA:1392:A:C6	24:BA:1393:A:C6	3.05	0.44
24:BA:1510:G:O2'	24:BA:1511:G:O5'	2.36	0.44
24:BA:1753:G:C2	24:BA:1756:G:C2	3.05	0.44
24:BA:1808:A:C3'	24:BA:1809:A:H5'	2.48	0.44
24:BA:1832:C:H2'	24:BA:1833:C:O5'	2.16	0.44
24:BA:2495:G:O2'	24:BA:2496:C:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2592:G:C5	24:BA:2593:U:C4	3.06	0.44
24:BA:2723:C:C4	24:BA:2724:U:C4	3.05	0.44
24:BA:2813:A:C2	24:BA:2814:A:C5	3.06	0.44
25:BB:76:G:H5''	45:BV:17:SER:OG	2.17	0.44
27:BD:151:THR:CB	27:BD:152:PRO:CD	2.95	0.44
28:BE:46:GLN:CG	28:BE:87:ALA:H	2.29	0.44
29:BF:43:ILE:HA	29:BF:82:TYR:CE1	2.52	0.44
32:BI:109:ALA:CB	32:BI:128:ILE:HG13	2.47	0.44
37:BN:32:GLU:OE1	37:BN:118:ARG:HA	2.17	0.44
40:BQ:57:ARG:NH2	40:BQ:92:LYS:CD	2.79	0.44
43:BT:57:VAL:O	43:BT:85:VAL:O	2.36	0.44
45:BV:26:PHE:CZ	45:BV:42:LEU:HD12	2.52	0.44
45:BV:89:ILE:HG21	45:BV:91:PHE:CZ	2.53	0.44
47:BX:42:GLU:O	47:BX:43:LYS:C	2.55	0.44
51:B1:47:ILE:H	51:B1:47:ILE:CD1	2.14	0.44
2:CC:46:LEU:HD21	2:CC:86:LEU:HD11	1.98	0.44
6:CG:142:ARG:C	6:CG:144:ALA:H	2.20	0.44
14:CO:67:ASP:O	14:CO:71:ARG:HG3	2.17	0.44
16:CQ:4:ILE:CG2	16:CQ:5:ARG:N	2.80	0.44
16:CQ:71:SER:OG	55:CA:235:C:H5'	2.17	0.44
18:CS:52:ASN:HD22	18:CS:52:ASN:H	1.64	0.44
19:CT:4:LYS:HB3	19:CT:4:LYS:HE3	1.81	0.44
55:CA:155:A:C6	55:CA:167:A:C6	3.05	0.44
55:CA:250:A:H1'	55:CA:252:U:C2	2.52	0.44
55:CA:301:G:C4	55:CA:302:G:C8	3.06	0.44
55:CA:325:A:H2'	55:CA:326:G:O4'	2.17	0.44
55:CA:471:U:H2'	55:CA:472:U:C6	2.52	0.44
55:CA:491:G:O2'	55:CA:492:C:H5'	2.17	0.44
55:CA:585:G:H2'	55:CA:586:C:O4'	2.17	0.44
55:CA:887:G:C2'	55:CA:888:G:H5'	2.47	0.44
55:CA:1022:A:O2'	55:CA:1023:U:H5'	2.18	0.44
55:CA:1039:G:H2'	55:CA:1040:U:O4'	2.16	0.44
55:CA:1134:G:C4	55:CA:1135:U:H1'	2.53	0.44
55:CA:1242:G:HO2'	55:CA:1243:C:P	2.40	0.44
55:CA:1423:G:H2'	55:CA:1424:U:C6	2.49	0.44
24:DA:93:G:H2'	24:DA:94:A:H8	1.82	0.44
24:DA:325:G:O2'	24:DA:326:G:H5'	2.17	0.44
24:DA:521:U:H2'	24:DA:522:A:H8	1.82	0.44
24:DA:530:G:N2	24:DA:2034:U:O3'	2.50	0.44
24:DA:533:G:O2'	24:DA:534:U:H5'	2.18	0.44
24:DA:593:U:C4	24:DA:594:U:O4	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1210:G:N3	24:DA:1212:G:N2	2.66	0.44
24:DA:1270:C:N3	24:DA:1648:U:C4	2.86	0.44
24:DA:1399:C:H2'	24:DA:1400:U:C5	2.51	0.44
24:DA:1440:U:O2	24:DA:1441:G:C8	2.71	0.44
24:DA:1529:G:O6	24:DA:1543:G:N2	2.51	0.44
24:DA:1796:U:O2	24:DA:1824:G:C2	2.70	0.44
24:DA:2135:A:H3'	24:DA:2136:G:C5'	2.43	0.44
24:DA:2298:A:H2'	24:DA:2299:U:C6	2.52	0.44
24:DA:2511:U:O5'	24:DA:2511:U:H6	2.00	0.44
56:DB:16:G:O6	56:DB:69:G:C6	2.70	0.44
26:DC:43:ASN:CG	26:DC:44:ASN:N	2.71	0.44
26:DC:93:VAL:HG12	26:DC:101:ARG:N	2.33	0.44
26:DC:244:VAL:HG12	26:DC:250:GLN:HA	1.98	0.44
28:DE:105:LEU:HD12	28:DE:200:LEU:HD21	2.00	0.44
32:DI:5:GLN:OE1	32:DI:59:THR:HG21	2.18	0.44
33:DJ:64:VAL:HG13	33:DJ:65:THR:N	2.32	0.44
38:DO:30:ARG:HH22	38:DO:103:VAL:HG23	1.82	0.44
39:DP:16:VAL:HG13	39:DP:19:PHE:HE2	1.82	0.44
40:DQ:4:LYS:HG2	40:DQ:5:ARG:N	2.31	0.44
41:DR:49:ILE:HG22	41:DR:54:VAL:H	1.81	0.44
42:DS:6:LYS:NZ	42:DS:6:LYS:HB3	2.33	0.44
43:DT:28:ASN:HB3	43:DT:91:GLN:HE22	1.83	0.44
43:DT:40:LYS:HA	43:DT:43:ILE:CG2	2.47	0.44
44:DU:52:ASN:CG	44:DU:54:PRO:HD3	2.37	0.44
45:DV:61:LEU:HG	45:DV:72:VAL:O	2.17	0.44
46:DW:43:LYS:HA	46:DW:43:LYS:HD3	1.64	0.44
2:AC:38:VAL:O	2:AC:42:LEU:HB2	2.17	0.44
4:AE:33:THR:HG22	4:AE:51:LYS:HB2	1.98	0.44
13:AN:2:LYS:HE2	21:AA:1216:A:OP1	2.16	0.44
15:AP:4:ILE:O	15:AP:67:ILE:HD12	2.18	0.44
18:AS:42:ASN:HD22	18:AS:43:MET:N	2.15	0.44
20:AU:37:TYR:HB3	20:AU:38:GLU:H	1.67	0.44
21:AA:32:A:H2'	21:AA:33:A:H8	1.75	0.44
21:AA:113:G:C1'	21:AA:354:G:H5'	2.48	0.44
21:AA:113:G:C5	21:AA:114:U:C5	3.06	0.44
21:AA:259:G:H2'	21:AA:260:G:C8	2.53	0.44
21:AA:605:U:H2'	21:AA:606:G:H8	1.82	0.44
21:AA:702:A:HO2'	21:AA:703:G:P	2.38	0.44
21:AA:709:U:H2'	21:AA:710:G:C8	2.52	0.44
21:AA:938:A:C2	21:AA:939:G:C4	3.06	0.44
21:AA:1091:U:O2	21:AA:1095:U:C2	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1281:C:O2'	21:AA:1282:C:H5'	2.17	0.44
21:AA:1523:G:C6	21:AA:1524:C:C4	3.06	0.44
24:BA:3:U:H2'	24:BA:4:U:H6	1.83	0.44
24:BA:10:A:N7	24:BA:11:C:C5	2.86	0.44
24:BA:89:A:N1	24:BA:90:U:C4	2.85	0.44
24:BA:466:A:O4'	24:BA:683:U:H4'	2.18	0.44
24:BA:867:C:N4	24:BA:868:U:O4	2.51	0.44
24:BA:1036:G:C6	24:BA:1120:G:C5	3.05	0.44
24:BA:1238:G:O2'	24:BA:1239:G:H5'	2.18	0.44
24:BA:1279:G:H5'	37:BN:34:ILE:HG22	1.98	0.44
24:BA:1660:G:N3	24:BA:1661:G:C8	2.85	0.44
24:BA:1817:G:OP1	26:BC:86:ARG:NH2	2.45	0.44
24:BA:1927:A:C2	24:BA:1928:A:C4	3.06	0.44
24:BA:2093:G:C4	24:BA:2225:A:C5	3.05	0.44
24:BA:2184:A:H8	24:BA:2184:A:OP2	2.00	0.44
24:BA:2200:C:HO2'	24:BA:2201:G:H8	1.65	0.44
24:BA:2293:G:H2'	24:BA:2294:G:O4'	2.16	0.44
24:BA:2297:A:N7	24:BA:2320:U:C4	2.85	0.44
24:BA:2554:U:C4	24:BA:2555:U:O4	2.70	0.44
24:BA:2612:C:H5''	24:BA:2613:U:OP1	2.18	0.44
24:BA:2720:U:C2	24:BA:2872:A:C6	3.05	0.44
24:BA:2864:G:C2	24:BA:2865:U:C2	3.06	0.44
59:BA:3241:HOH:O	28:BE:81:GLY:HA2	2.17	0.44
25:BB:114:C:O4'	38:BO:47:VAL:CG2	2.66	0.44
26:BC:109:LEU:CD2	26:BC:110:LYS:N	2.77	0.44
27:BD:64:GLU:O	27:BD:68:PHE:HD1	2.00	0.44
27:BD:113:SER:O	27:BD:167:ASN:HA	2.18	0.44
28:BE:189:THR:O	28:BE:193:VAL:HG23	2.17	0.44
29:BF:60:SER:O	29:BF:61:GLY:C	2.55	0.44
30:BG:109:SER:O	30:BG:110:HIS:HB3	2.17	0.44
35:BL:82:LEU:C	35:BL:84:LYS:N	2.71	0.44
37:BN:72:ASP:OD1	37:BN:75:ILE:HG23	2.17	0.44
40:BQ:3:VAL:O	40:BQ:4:LYS:C	2.55	0.44
43:BT:28:ASN:OD1	43:BT:29:THR:HG22	2.17	0.44
43:BT:51:PHE:O	43:BT:52:GLU:HG2	2.18	0.44
45:BV:42:LEU:CD1	45:BV:47:VAL:HG21	2.48	0.44
46:BW:66:VAL:HG12	46:BW:67:LYS:H	1.83	0.44
48:BY:8:GLU:O	48:BY:12:GLU:HB2	2.17	0.44
1:CB:101:THR:O	55:CA:1074:G:H4'	2.18	0.44
8:CI:38:PHE:HZ	8:CI:74:GLN:HE21	1.65	0.44
11:CL:17:LYS:NZ	55:CA:910:C:OP2	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:72:ASN:ND2	11:CL:104:SER:OG	2.51	0.44
11:CL:119:LYS:HA	55:CA:36:C:O3'	2.18	0.44
14:CO:38:LEU:HD23	14:CO:55:LEU:HD13	1.99	0.44
14:CO:57:ARG:NH1	55:CA:742:G:H5''	2.32	0.44
55:CA:55:A:H2'	55:CA:56:U:C5'	2.48	0.44
55:CA:184:G:H2'	55:CA:185:U:C6	2.53	0.44
55:CA:528:C:H5'	55:CA:535:A:C6	2.52	0.44
55:CA:582:C:C4	55:CA:760:G:C6	3.05	0.44
55:CA:657:U:C4	55:CA:658:C:C5	3.06	0.44
55:CA:1207:G:H2'	55:CA:1208:C:C6	2.46	0.44
55:CA:1245:C:O2'	55:CA:1246:A:H5'	2.17	0.44
55:CA:1435:G:H2'	55:CA:1436:U:C6	2.52	0.44
55:CA:1533:C:C3'	55:CA:1534:A:H5''	2.48	0.44
24:DA:9:G:C6	24:DA:2895:G:O6	2.70	0.44
24:DA:26:G:C6	24:DA:27:G:C2	3.06	0.44
24:DA:150:U:O2'	24:DA:151:C:H5'	2.18	0.44
24:DA:242:G:P	53:D3:2:LYS:HZ2	2.40	0.44
24:DA:245:G:OP2	35:DL:67:THR:HG21	2.17	0.44
24:DA:247:G:C6	24:DA:249:C:H1'	2.52	0.44
24:DA:299:A:H2	24:DA:319:G:N3	2.15	0.44
24:DA:335:C:H2'	24:DA:336:C:C6	2.52	0.44
24:DA:372:G:P	47:DX:61:LYS:NZ	2.90	0.44
24:DA:450:G:H2'	24:DA:451:U:H5''	1.99	0.44
24:DA:509:C:H6	24:DA:509:C:H2'	1.30	0.44
24:DA:860:U:C2	24:DA:2268:A:C8	3.05	0.44
24:DA:1268:A:O2'	24:DA:1269:A:H5'	2.18	0.44
24:DA:1317:G:C2	24:DA:1336:A:C2	3.05	0.44
24:DA:1397:U:H5''	24:DA:1398:C:C5	2.48	0.44
24:DA:1462:C:HO2'	24:DA:1463:C:H6	1.66	0.44
24:DA:1519:G:N1	24:DA:1520:U:C2	2.86	0.44
24:DA:1555:G:H2'	24:DA:1556:C:C6	2.51	0.44
24:DA:1869:G:H5'	24:DA:1870:C:OP2	2.18	0.44
24:DA:1906:G:OP2	24:DA:1930:G:H8	2.01	0.44
24:DA:2285:C:C2'	24:DA:2286:G:H5''	2.46	0.44
24:DA:2323:G:N2	24:DA:2335:A:H2	2.15	0.44
24:DA:2338:C:H6	24:DA:2338:C:H2'	1.43	0.44
24:DA:2407:A:C2	24:DA:2408:U:N3	2.85	0.44
24:DA:2511:U:C6	24:DA:2511:U:C3'	3.01	0.44
24:DA:2782:G:N2	24:DA:2783:U:O2	2.50	0.44
24:DA:2875:C:H2'	24:DA:2876:G:H8	1.82	0.44
26:DC:144:GLU:CA	26:DC:151:GLY:HA2	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DD:78:GLY:O	27:DD:79:LEU:HD13	2.18	0.44
31:DH:84:ALA:HB3	31:DH:148:ALA:HA	1.99	0.44
40:DQ:18:LYS:HD2	40:DQ:18:LYS:C	2.38	0.44
41:DR:5:PHE:HB3	41:DR:59:ILE:HD12	1.99	0.44
41:DR:39:LEU:HD23	41:DR:39:LEU:H	1.82	0.44
1:AB:13:VAL:O	1:AB:13:VAL:HG23	2.18	0.44
6:AG:128:GLU:CD	6:AG:130:LYS:HE2	2.38	0.44
8:AI:10:ARG:HA	8:AI:77:ALA:HB1	2.00	0.44
10:AK:43:TRP:HE1	21:AA:686:U:C1'	2.30	0.44
11:AL:58:ASN:ND2	11:AL:60:PHE:HD1	2.16	0.44
19:AT:28:ARG:O	19:AT:32:LYS:HG2	2.18	0.44
21:AA:51:A:H4'	21:AA:52:C:C5'	2.47	0.44
21:AA:212:G:O2'	21:AA:213:G:O5'	2.36	0.44
21:AA:441:A:N3	21:AA:441:A:H2'	2.33	0.44
21:AA:1049:U:O2'	21:AA:1050:G:OP2	2.35	0.44
21:AA:1275:A:N6	21:AA:1276:G:C6	2.85	0.44
24:BA:319:G:O2'	24:BA:320:A:H5'	2.18	0.44
24:BA:437:U:H2'	24:BA:438:G:C8	2.53	0.44
24:BA:883:G:N2	24:BA:894:U:H1'	2.33	0.44
24:BA:1061:U:H3'	24:BA:1062:G:C5'	2.47	0.44
24:BA:1401:G:H2'	24:BA:1402:U:O4'	2.17	0.44
24:BA:1496:A:O3'	24:BA:1497:U:H6	2.01	0.44
24:BA:1704:C:H2'	24:BA:1705:A:C8	2.52	0.44
24:BA:1813:G:N3	26:BC:49:THR:HG22	2.32	0.44
24:BA:1827:U:O2	24:BA:1827:U:H2'	2.18	0.44
24:BA:1909:C:H2'	24:BA:1910:G:O4'	2.17	0.44
24:BA:1993:U:H4'	27:BD:133:THR:HG22	1.96	0.44
24:BA:2199:A:H5'	24:BA:2200:C:H5	1.82	0.44
30:BG:33:THR:HA	30:BG:34:ARG:NH1	2.19	0.44
33:BJ:130:HIS:HD2	33:BJ:132:HIS:HB2	1.82	0.44
34:BK:99:ILE:HG21	34:BK:119:ALA:HB2	1.98	0.44
35:BL:28:GLY:C	35:BL:29:LYS:O	2.55	0.44
35:BL:95:LEU:HB3	35:BL:100:ILE:CG1	2.48	0.44
37:BN:8:ARG:HB3	37:BN:10:LEU:CD2	2.48	0.44
46:BW:40:ARG:HD3	46:BW:45:HIS:HE1	1.81	0.44
52:B2:12:ARG:HG2	52:B2:13:ASN:HD22	1.82	0.44
52:B2:35:ARG:HG2	52:B2:42:LEU:HD11	1.99	0.44
1:CB:9:LEU:CG	1:CB:10:LYS:H	2.13	0.44
1:CB:68:PHE:HB2	1:CB:90:PHE:HB3	2.00	0.44
2:CC:69:THR:O	2:CC:105:VAL:HB	2.16	0.44
2:CC:172:VAL:O	2:CC:174:LEU:HD23	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:133:ILE:HD12	55:CA:1079:G:H5'	2.00	0.44
5:CF:18:VAL:O	5:CF:22:ILE:HG12	2.17	0.44
6:CG:132:THR:O	6:CG:133:ALA:CB	2.65	0.44
7:CH:85:TYR:CE2	7:CH:123:GLU:HB2	2.53	0.44
8:CI:46:VAL:O	8:CI:79:ARG:HB2	2.17	0.44
9:CJ:31:ARG:HH12	9:CJ:32:THR:HB	1.83	0.44
10:CK:21:HIS:CD2	55:CA:707:U:H4'	2.52	0.44
12:CM:61:LYS:O	12:CM:62:PHE:HB2	2.18	0.44
13:CN:71:GLY:O	13:CN:79:SER:HA	2.17	0.44
15:CP:10:GLY:C	55:CA:624:C:H4'	2.38	0.44
16:CQ:46:HIS:H	16:CQ:73:THR:HA	1.82	0.44
16:CQ:65:PRO:HD2	55:CA:130:A:N7	2.33	0.44
20:CU:33:ARG:O	20:CU:34:ARG:O	2.35	0.44
55:CA:346:G:N3	55:CA:346:G:C2'	2.69	0.44
55:CA:543:U:C2	55:CA:544:G:C8	3.06	0.44
55:CA:723:U:H6	55:CA:723:U:H2'	1.23	0.44
55:CA:881:G:C6	55:CA:882:C:C4	3.05	0.44
55:CA:892:A:O2'	55:CA:893:C:H5'	2.17	0.44
55:CA:1053:G:C4	55:CA:1199:U:C5	3.05	0.44
55:CA:1077:G:O6	55:CA:1081:A:N6	2.51	0.44
55:CA:1203:C:O5'	55:CA:1203:C:H6	2.01	0.44
55:CA:1255:G:C4	55:CA:1279:G:O6	2.71	0.44
55:CA:1316:G:N2	55:CA:1319:A:OP2	2.47	0.44
24:DA:49:A:C2	24:DA:118:A:N1	2.85	0.44
24:DA:182:A:C2	24:DA:183:C:C2	3.05	0.44
24:DA:454:A:O2'	24:DA:455:C:OP1	2.33	0.44
24:DA:529:A:C4	24:DA:2023:C:C5	3.05	0.44
24:DA:558:U:H5''	33:DJ:111:LYS:HD2	1.99	0.44
24:DA:573:U:C4	24:DA:2030:A:H3'	2.53	0.44
24:DA:581:C:N4	24:DA:582:A:N6	2.65	0.44
24:DA:587:C:H1'	24:DA:671:C:H5'	2.00	0.44
24:DA:712:G:N2	24:DA:720:U:H1'	2.32	0.44
24:DA:716:A:C3'	24:DA:717:C:H5''	2.47	0.44
24:DA:834:G:C5'	53:D3:56:LEU:HD11	2.48	0.44
24:DA:870:U:C2'	24:DA:871:U:H5'	2.48	0.44
24:DA:996:A:N6	24:DA:1160:G:C6	2.86	0.44
24:DA:1062:G:C2'	24:DA:1063:G:H8	2.28	0.44
24:DA:1189:A:H2'	24:DA:1190:G:O4'	2.18	0.44
24:DA:1191:G:C2	24:DA:1192:G:C4	3.05	0.44
24:DA:1255:U:N3	24:DA:2060:A:H5'	2.33	0.44
24:DA:1623:G:C5	24:DA:1624:U:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1782:U:H5'	24:DA:2609:U:C2	2.53	0.44
24:DA:1947:C:H2'	24:DA:1948:G:C8	2.43	0.44
24:DA:2191:A:H3'	24:DA:2192:U:C6	2.52	0.44
24:DA:2666:C:O2	24:DA:2666:C:O4'	2.36	0.44
24:DA:2750:A:O2'	24:DA:2752:C:C5	2.70	0.44
24:DA:2868:A:H2'	24:DA:2869:G:H8	1.77	0.44
27:DD:131:ASP:N	27:DD:131:ASP:OD2	2.51	0.44
28:DE:2:GLU:HA	28:DE:13:THR:HA	2.00	0.44
28:DE:29:HIS:HA	28:DE:32:VAL:CG2	2.47	0.44
34:DK:40:LYS:HZ2	34:DK:89:ASN:HD21	1.64	0.44
35:DL:89:VAL:HG21	35:DL:123:ARG:NE	2.32	0.44
36:DM:40:ARG:HB2	36:DM:93:VAL:CG2	2.47	0.44
37:DN:70:THR:HG22	37:DN:70:THR:O	2.17	0.44
44:DU:81:ARG:CB	44:DU:96:LYS:HD2	2.45	0.44
46:DW:18:LYS:HB2	46:DW:18:LYS:NZ	2.33	0.44
47:DX:20:ALA:O	47:DX:21:LEU:HB2	2.17	0.44
47:DX:34:SER:O	47:DX:35:HIS:HB2	2.17	0.44
52:D2:30:VAL:C	52:D2:32:ALA:H	2.21	0.44
1:AB:93:HIS:O	1:AB:94:ARG:C	2.55	0.44
5:AF:46:GLN:HB2	5:AF:56:LYS:HE2	2.00	0.44
8:AI:27:ILE:N	8:AI:27:ILE:HD12	2.33	0.44
8:AI:90:ASP:C	8:AI:92:SER:H	2.21	0.44
9:AJ:35:GLN:HE21	9:AJ:35:GLN:CA	2.22	0.44
10:AK:117:HIS:O	10:AK:118:ASN:HB2	2.18	0.44
11:AL:69:GLU:HA	21:AA:521:G:OP1	2.18	0.44
16:AQ:18:LYS:C	16:AQ:47:ASP:OD2	2.56	0.44
21:AA:102:G:N3	21:AA:151:A:H2	2.15	0.44
21:AA:300:A:H2'	21:AA:301:G:O4'	2.17	0.44
21:AA:423:G:N3	21:AA:423:G:C2'	2.70	0.44
21:AA:948:C:H5'	21:AA:1306:A:O2'	2.17	0.44
21:AA:1023:U:H2'	21:AA:1024:G:H8	1.83	0.44
21:AA:1249:C:O2	21:AA:1249:C:H2'	2.18	0.44
21:AA:1328:C:H2'	21:AA:1329:A:O4'	2.18	0.44
21:AA:1366:C:H2'	21:AA:1367:C:C6	2.53	0.44
21:AA:1512:U:H2'	21:AA:1513:A:H8	1.82	0.44
22:AV:40:C:H2'	22:AV:41:C:H6	1.76	0.44
24:BA:77:G:C4	24:BA:78:U:C6	3.06	0.44
24:BA:1097:U:C5	24:BA:1098:A:H1'	2.53	0.44
24:BA:1181:U:O2'	24:BA:1182:G:P	2.75	0.44
24:BA:1458:U:O4'	24:BA:1459:G:C2	2.71	0.44
24:BA:1595:C:H3'	24:BA:1595:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1854:A:H2'	24:BA:1855:U:H5'	1.99	0.44
24:BA:2074:U:C6	24:BA:2436:G:N2	2.86	0.44
24:BA:2430:A:H5'	24:BA:2431:U:OP2	2.18	0.44
24:BA:2734:A:H61	24:BA:2770:G:H1'	1.82	0.44
24:BA:2805:C:C4	24:BA:2806:C:C5	3.05	0.44
25:BB:40:U:H1'	25:BB:45:A:N6	2.32	0.44
26:BC:21:PRO:O	26:BC:23:LEU:N	2.50	0.44
28:BE:31:VAL:O	28:BE:34:ALA:N	2.51	0.44
30:BG:1:SER:O	30:BG:3:VAL:HG12	2.18	0.44
30:BG:26:LYS:HB3	30:BG:32:LEU:CG	2.48	0.44
33:BJ:55:ILE:O	33:BJ:55:ILE:HG13	2.18	0.44
33:BJ:141:ASP:HB3	33:BJ:142:ILE:H	1.47	0.44
41:BR:25:LEU:H	41:BR:94:THR:HG21	1.81	0.44
43:BT:39:THR:CB	43:BT:42:GLU:HB2	2.36	0.44
43:BT:55:VAL:O	43:BT:55:VAL:HG12	2.17	0.44
45:BV:10:LYS:NZ	45:BV:10:LYS:HB2	2.33	0.44
46:BW:39:GLN:HG2	46:BW:40:ARG:N	2.32	0.44
1:CB:176:ASN:C	1:CB:178:LEU:H	2.21	0.44
3:CD:10:LEU:HD12	3:CD:10:LEU:H	1.81	0.44
4:CE:76:ASN:HD22	4:CE:76:ASN:HA	1.58	0.44
4:CE:149:PRO:HA	4:CE:152:VAL:CG2	2.47	0.44
6:CG:2:ARG:NH1	55:CA:932:C:C4	2.82	0.44
8:CI:24:ASN:ND2	8:CI:26:LYS:HD2	2.29	0.44
9:CJ:82:LYS:HA	9:CJ:86:ALA:CB	2.43	0.44
11:CL:56:LEU:HG	11:CL:60:PHE:O	2.16	0.44
13:CN:77:GLY:C	13:CN:78:LEU:HD12	2.38	0.44
15:CP:54:LEU:N	15:CP:54:LEU:HD23	2.32	0.44
55:CA:17:U:H4'	55:CA:1080:A:O4'	2.18	0.44
55:CA:18:C:C2	55:CA:19:A:C8	3.06	0.44
55:CA:50:A:H1'	55:CA:52:C:C6	2.53	0.44
55:CA:369:G:C6	55:CA:393:A:C6	3.04	0.44
55:CA:438:U:C4	55:CA:494:G:C5	3.06	0.44
55:CA:559:A:H4'	55:CA:560:A:O5'	2.18	0.44
55:CA:644:U:H2'	55:CA:645:G:O4'	2.18	0.44
55:CA:648:A:H2'	55:CA:649:A:C8	2.52	0.44
55:CA:888:G:HO2'	55:CA:1488:G:HO2'	1.66	0.44
55:CA:892:A:H2'	55:CA:893:C:H6	1.79	0.44
55:CA:994:A:N3	55:CA:995:C:C6	2.86	0.44
55:CA:1279:G:O2'	55:CA:1282:C:N4	2.50	0.44
55:CA:1359:C:H2'	55:CA:1361:G:OP2	2.18	0.44
24:DA:101:A:O2'	24:DA:102:U:P	2.76	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:272:A:O2'	24:DA:273:G:O5'	2.35	0.44
24:DA:372:G:N2	24:DA:401:A:OP2	2.50	0.44
24:DA:419:U:H2'	24:DA:420:C:C6	2.53	0.44
24:DA:422:A:C2'	24:DA:423:A:C8	3.01	0.44
24:DA:508:A:H3'	24:DA:509:C:H5'	2.00	0.44
24:DA:523:C:O2'	24:DA:524:G:H5'	2.18	0.44
24:DA:537:G:H21	24:DA:557:C:N4	2.13	0.44
24:DA:574:A:H5''	24:DA:575:A:C5'	2.48	0.44
24:DA:604:G:C2	24:DA:605:G:N7	2.85	0.44
24:DA:628:G:C5	24:DA:636:G:N2	2.86	0.44
24:DA:633:A:H5''	35:DL:70:LYS:HD3	1.99	0.44
24:DA:670:A:HO2'	24:DA:671:C:P	2.33	0.44
24:DA:705:A:O5'	24:DA:705:A:C8	2.71	0.44
24:DA:740:C:C2	24:DA:1981:A:C2	3.06	0.44
24:DA:763:G:H8	24:DA:763:G:H2'	1.47	0.44
24:DA:974:G:H1'	24:DA:975:A:N7	2.32	0.44
24:DA:988:A:H2'	49:DZ:13:ILE:HD11	2.00	0.44
24:DA:1080:A:C6	24:DA:1081:U:C4	3.06	0.44
24:DA:1311:G:O2'	24:DA:1312:U:H6	2.01	0.44
24:DA:1338:G:C2'	24:DA:1339:G:H5'	2.48	0.44
24:DA:1748:C:C2	24:DA:1749:A:C8	3.06	0.44
24:DA:1773:A:H2'	24:DA:1774:C:C5'	2.48	0.44
24:DA:2053:G:N2	24:DA:2054:A:N3	2.66	0.44
24:DA:2893:A:H5''	24:DA:2894:G:C5'	2.47	0.44
26:DC:152:GLN:HA	26:DC:155:ARG:HD3	2.00	0.44
26:DC:212:TRP:CD1	26:DC:212:TRP:O	2.70	0.44
27:DD:108:ASP:OD1	27:DD:207:VAL:HG23	2.18	0.44
29:DF:27:VAL:O	29:DF:27:VAL:HG23	2.18	0.44
30:DG:25:ILE:CG2	30:DG:78:VAL:HG21	2.48	0.44
34:DK:62:VAL:HG11	34:DK:65:THR:HG23	2.00	0.44
36:DM:72:PRO:HB2	36:DM:73:ILE:H	1.58	0.44
37:DN:120:GLU:HA	37:DN:120:GLU:OE1	2.18	0.44
40:DQ:9:ALA:C	40:DQ:11:ALA:H	2.21	0.44
41:DR:49:ILE:O	41:DR:49:ILE:HG13	2.18	0.44
42:DS:51:LEU:HG	42:DS:55:ILE:CD1	2.48	0.44
42:DS:103:ILE:HD12	42:DS:103:ILE:N	2.32	0.44
46:DW:20:LEU:HD11	46:DW:35:ILE:HG13	1.98	0.44
46:DW:36:ILE:HG22	46:DW:37:VAL:O	2.17	0.44
4:AE:115:GLU:HA	4:AE:120:HIS:NE2	2.32	0.44
5:AF:9:MET:HE2	5:AF:9:MET:HB3	1.84	0.44
6:AG:3:ARG:CG	6:AG:4:ARG:H	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:8:ILE:HD12	9:AJ:25:ILE:HG21	2.00	0.44
13:AN:20:PHE:HA	13:AN:24:ALA:CB	2.32	0.44
15:AP:70:ARG:HD2	15:AP:70:ARG:HA	1.82	0.44
21:AA:160:A:H4'	21:AA:344:A:N7	2.33	0.44
21:AA:586:C:O2'	21:AA:587:G:H5'	2.17	0.44
21:AA:625:U:O2	21:AA:626:G:N7	2.51	0.44
21:AA:655:A:H2'	21:AA:656:G:H8	1.81	0.44
21:AA:673:A:C4	21:AA:734:G:C2	3.06	0.44
21:AA:987:G:C6	21:AA:988:G:N7	2.86	0.44
21:AA:1239:A:H4'	21:AA:1240:U:C5'	2.47	0.44
21:AA:1512:U:H2'	21:AA:1513:A:C8	2.52	0.44
24:BA:68:G:H2'	24:BA:69:C:O4'	2.17	0.44
24:BA:177:G:H3'	24:BA:178:G:H8	1.82	0.44
24:BA:359:G:H3'	24:BA:360:U:C6	2.52	0.44
24:BA:643:A:H2'	24:BA:644:A:H8	1.83	0.44
24:BA:699:A:H2'	24:BA:700:G:O4'	2.18	0.44
24:BA:738:G:N1	24:BA:739:A:C2	2.86	0.44
24:BA:738:G:H2'	24:BA:739:A:O4'	2.18	0.44
24:BA:763:G:C5	24:BA:765:C:C5	3.05	0.44
24:BA:858:G:N2	24:BA:2269:G:OP2	2.51	0.44
24:BA:975:A:C4	24:BA:976:G:C8	3.06	0.44
24:BA:1062:G:C5	24:BA:1088:A:C8	3.06	0.44
24:BA:1145:C:O2'	24:BA:1146:C:H5'	2.18	0.44
24:BA:1647:U:H3'	24:BA:1647:U:OP2	2.18	0.44
24:BA:1724:G:C6	24:BA:1725:U:N3	2.86	0.44
24:BA:1854:A:H62	24:BA:1888:G:H1'	1.80	0.44
24:BA:1973:G:C4	24:BA:1974:C:C5	3.06	0.44
24:BA:2070:A:H2'	24:BA:2071:A:O4'	2.18	0.44
24:BA:2230:G:O3'	47:BX:29:LEU:HD23	2.17	0.44
24:BA:2290:G:O6	24:BA:2341:G:O6	2.35	0.44
24:BA:2305:U:O4'	29:BF:130:GLY:HA3	2.17	0.44
24:BA:2529:G:OP2	24:BA:2530:A:H5''	2.17	0.44
24:BA:2682:A:H2'	24:BA:2683:C:H6	1.83	0.44
24:BA:2813:A:N1	24:BA:2814:A:C6	2.85	0.44
25:BB:89:U:H6	25:BB:89:U:H2'	1.37	0.44
26:BC:145:MET:HB2	26:BC:152:GLN:HE22	1.83	0.44
26:BC:183:VAL:HG12	26:BC:184:GLU:N	2.33	0.44
27:BD:108:ASP:O	27:BD:109:VAL:HB	2.18	0.44
28:BE:83:VAL:HG11	28:BE:86:ALA:HA	1.99	0.44
31:BH:33:GLN:HB2	31:BH:33:GLN:HE21	1.65	0.44
31:BH:96:THR:C	31:BH:97:ARG:HG3	2.37	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BJ:70:THR:C	33:BJ:71:ASP:OD2	2.56	0.44
34:BK:12:ASP:HA	34:BK:98:ARG:O	2.17	0.44
38:BO:34:HIS:HD2	38:BO:53:THR:O	2.00	0.44
42:BS:69:LEU:HD12	42:BS:69:LEU:HA	1.65	0.44
43:BT:29:THR:N	43:BT:91:GLN:NE2	2.61	0.44
44:BU:73:ASN:HD22	44:BU:76:THR:N	2.12	0.44
45:BV:40:ILE:CG2	45:BV:41:GLU:H	2.31	0.44
46:BW:16:GLU:OE2	46:BW:16:GLU:HA	2.18	0.44
49:BZ:9:THR:HG22	49:BZ:53:MET:C	2.38	0.44
51:B1:22:THR:OG1	51:B1:23:THR:N	2.50	0.44
1:CB:78:ALA:O	1:CB:213:LEU:HD23	2.18	0.44
1:CB:128:LEU:HB3	1:CB:131:LYS:HB3	1.99	0.44
3:CD:154:VAL:O	3:CD:157:ALA:HB3	2.18	0.44
4:CE:135:VAL:O	4:CE:138:ALA:HB3	2.17	0.44
5:CF:9:MET:HE1	17:CR:64:LEU:CA	2.45	0.44
6:CG:137:ARG:CZ	6:CG:138:GLU:HG2	2.47	0.44
9:CJ:5:ARG:HH21	9:CJ:77:VAL:HG13	1.83	0.44
11:CL:27:PRO:HG3	55:CA:363:A:C2	2.52	0.44
20:CU:19:LYS:HZ3	20:CU:19:LYS:N	2.15	0.44
55:CA:81:A:H2	55:CA:89:U:O4	1.98	0.44
55:CA:328:C:O2	55:CA:328:C:C2'	2.64	0.44
55:CA:452:A:O2'	55:CA:453:G:O5'	2.35	0.44
55:CA:577:G:N9	55:CA:816:A:C2	2.86	0.44
55:CA:586:C:O2'	55:CA:878:A:H4'	2.18	0.44
55:CA:588:G:H2'	55:CA:589:U:C6	2.52	0.44
55:CA:1095:U:C5'	55:CA:1109:C:O2	2.65	0.44
55:CA:1171:A:H2'	55:CA:1172:C:C6	2.52	0.44
55:CA:1392:G:C2'	55:CA:1393:U:H5'	2.48	0.44
24:DA:60:G:H21	24:DA:74:A:H2'	1.83	0.44
24:DA:85:G:C6	24:DA:98:G:C2	3.06	0.44
24:DA:370:G:N1	24:DA:424:G:C5	2.85	0.44
24:DA:482:A:HO2'	24:DA:483:A:P	2.41	0.44
24:DA:562:U:C2	24:DA:572:A:C8	3.06	0.44
24:DA:589:U:O2'	24:DA:590:A:C5'	2.64	0.44
24:DA:593:U:N3	24:DA:594:U:C4	2.86	0.44
24:DA:663:G:C6	24:DA:664:G:C5	3.05	0.44
24:DA:1058:U:H2'	24:DA:1059:G:O4'	2.17	0.44
24:DA:1180:U:C4	24:DA:1181:U:C4	3.05	0.44
24:DA:1199:U:H2'	24:DA:1200:C:O4'	2.17	0.44
24:DA:1278:C:H2'	24:DA:1279:G:C8	2.53	0.44
24:DA:1439:A:C2	24:DA:1552:A:N1	2.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1439:A:C8	24:DA:1439:A:C3'	3.01	0.44
24:DA:1736:U:H2'	24:DA:1737:G:O4'	2.17	0.44
24:DA:1886:U:H6	24:DA:1886:U:O5'	2.01	0.44
24:DA:1924:C:H2'	24:DA:1925:C:O4'	2.17	0.44
24:DA:1992:G:H22	24:DA:1996:C:C2'	2.28	0.44
24:DA:2347:C:OP1	24:DA:2347:C:H4'	2.17	0.44
24:DA:2547:A:H2	34:DK:23:LYS:HZ1	1.65	0.44
24:DA:2625:G:C4	24:DA:2626:C:C5	3.06	0.44
56:DB:31:C:H42	38:DO:32:PRO:HB3	1.83	0.44
56:DB:75:G:N1	56:DB:102:G:N2	2.58	0.44
26:DC:24:HIS:N	26:DC:80:LEU:O	2.48	0.44
27:DD:181:ASP:C	27:DD:183:GLU:N	2.70	0.44
29:DF:65:LEU:H	29:DF:65:LEU:CD2	2.29	0.44
29:DF:67:THR:O	29:DF:84:ILE:HG22	2.18	0.44
29:DF:103:ILE:HG12	29:DF:175:PRO:HD3	2.00	0.44
42:DS:2:GLU:HA	42:DS:2:GLU:OE2	2.18	0.44
44:DU:84:PHE:HA	44:DU:92:VAL:O	2.18	0.44
47:DX:77:TYR:CD1	47:DX:77:TYR:C	2.91	0.44
48:DY:21:LEU:HA	48:DY:25:GLN:HB3	2.00	0.44
1:AB:56:LEU:C	1:AB:56:LEU:HD13	2.38	0.44
2:AC:13:ILE:H	2:AC:13:ILE:HD13	1.82	0.44
2:AC:41:TYR:CD1	2:AC:41:TYR:C	2.91	0.44
4:AE:155:LYS:HG3	7:AH:65:PHE:CD1	2.52	0.44
5:AF:90:MET:HB3	17:AR:60:ARG:NH2	2.32	0.44
8:AI:6:TYR:OH	21:AA:1148:U:H5'	2.18	0.44
8:AI:12:LYS:C	8:AI:14:SER:H	2.21	0.44
12:AM:9:PRO:O	12:AM:10:ASP:HB2	2.16	0.44
21:AA:82:G:H1	21:AA:88:U:H1'	1.83	0.44
21:AA:123:U:O2'	21:AA:124:C:H5'	2.18	0.44
21:AA:290:C:H2'	21:AA:291:U:O4'	2.18	0.44
21:AA:495:A:C2	21:AA:496:A:N6	2.86	0.44
21:AA:961:U:C2	21:AA:983:A:C5	3.05	0.44
21:AA:992:U:C4	21:AA:1045:C:C4	3.06	0.44
21:AA:1271:A:H2'	21:AA:1272:G:H8	1.82	0.44
21:AA:1326:U:H2'	21:AA:1327:C:C6	2.52	0.44
24:BA:89:A:C2	24:BA:90:U:C2	3.05	0.44
24:BA:169:G:C4	24:BA:170:U:C5	3.05	0.44
24:BA:252:G:C2'	24:BA:253:C:H5'	2.48	0.44
24:BA:319:G:C5	24:BA:333:G:C2	3.05	0.44
24:BA:503:A:C2	24:BA:505:A:C5	3.06	0.44
24:BA:683:U:C2	24:BA:684:G:C8	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:745:G:H1'	24:BA:750:A:N6	2.32	0.44
24:BA:823:C:C4	24:BA:824:U:C4	3.05	0.44
24:BA:900:A:C4	24:BA:901:C:C6	3.06	0.44
24:BA:1046:A:H3'	24:BA:1047:G:H5'	2.00	0.44
24:BA:1049:C:O2'	24:BA:1050:A:H5'	2.17	0.44
24:BA:1263:U:H2'	24:BA:1264:A:C8	2.53	0.44
24:BA:1759:A:O2'	24:BA:1760:C:C5'	2.60	0.44
24:BA:1795:C:H2'	24:BA:1795:C:O2	2.17	0.44
24:BA:1975:G:C6	24:BA:1976:U:C4	3.06	0.44
24:BA:2064:C:H2'	24:BA:2065:C:C6	2.53	0.44
24:BA:2346:A:C5	24:BA:2383:G:C2	3.06	0.44
24:BA:2455:G:C2	24:BA:2456:C:C2	3.06	0.44
24:BA:2727:A:O2'	24:BA:2728:U:C5'	2.61	0.44
26:BC:246:PRO:HG2	26:BC:247:TRP:CH2	2.53	0.44
27:BD:142:VAL:HB	27:BD:143:PRO:CD	2.48	0.44
29:BF:3:LEU:HD12	29:BF:172:PHE:CE2	2.52	0.44
30:BG:51:PHE:CD2	30:BG:51:PHE:N	2.86	0.44
30:BG:61:TRP:O	30:BG:64:ALA:HB3	2.18	0.44
31:BH:100:ALA:O	31:BH:101:ASP:C	2.56	0.44
34:BK:52:VAL:HG23	34:BK:53:LYS:N	2.33	0.44
34:BK:91:SER:O	34:BK:93:GLN:HB2	2.18	0.44
34:BK:97:THR:O	34:BK:118:LEU:HD21	2.18	0.44
40:BQ:85:ALA:O	40:BQ:87:VAL:C	2.56	0.44
44:BU:3:LYS:NZ	44:BU:83:GLY:H	2.14	0.44
48:BY:23:ARG:O	48:BY:24:GLU:C	2.57	0.44
53:B3:40:LYS:O	53:B3:41:ARG:C	2.55	0.44
1:CB:61:SER:HA	1:CB:224:ARG:HA	2.00	0.44
2:CC:70:ALA:O	2:CC:72:PRO:HD2	2.17	0.44
3:CD:167:PRO:HB3	3:CD:169:TRP:CZ3	2.52	0.44
3:CD:172:VAL:HA	3:CD:179:GLY:HA2	2.00	0.44
8:CI:83:THR:HG21	8:CI:102:PHE:HB3	2.00	0.44
8:CI:126:PHE:N	8:CI:126:PHE:CD2	2.86	0.44
10:CK:15:VAL:HG21	10:CK:35:ASP:HB3	1.99	0.44
12:CM:64:VAL:CG1	12:CM:65:GLU:HG3	2.48	0.44
13:CN:2:LYS:O	13:CN:5:MET:HB2	2.18	0.44
13:CN:80:ARG:C	13:CN:82:LYS:H	2.21	0.44
17:CR:41:SER:HB3	17:CR:51:GLN:NE2	2.33	0.44
18:CS:19:GLU:HA	18:CS:22:VAL:HG23	2.00	0.44
55:CA:16:A:C5	55:CA:17:U:C5	3.06	0.44
55:CA:286:C:H2'	55:CA:287:U:C6	2.53	0.44
55:CA:312:C:C2	55:CA:313:A:C8	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:426:U:H2'	55:CA:427:U:C6	2.52	0.44
55:CA:488:C:H2'	55:CA:489:C:H6	1.83	0.44
55:CA:496:A:N3	55:CA:496:A:C2'	2.71	0.44
55:CA:501:C:H2'	55:CA:502:A:H8	1.81	0.44
55:CA:519:C:H2'	55:CA:520:A:N7	2.32	0.44
55:CA:860:A:C6	55:CA:861:G:C4	3.06	0.44
55:CA:954:G:C6	55:CA:955:U:C2	3.06	0.44
55:CA:1061:G:C5	55:CA:1062:U:C5	3.06	0.44
55:CA:1064:G:N3	55:CA:1066:C:N4	2.66	0.44
55:CA:1426:G:C6	55:CA:1427:C:C4	3.06	0.44
55:CA:1456:A:H2'	55:CA:1457:G:O4'	2.17	0.44
24:DA:55:G:N3	24:DA:55:G:H2'	2.33	0.44
24:DA:82:U:H5''	24:DA:296:U:H5''	2.00	0.44
24:DA:217:A:H2'	24:DA:218:A:O4'	2.18	0.44
24:DA:227:A:H4'	24:DA:228:C:OP1	2.17	0.44
24:DA:243:U:O2'	24:DA:244:A:C5'	2.64	0.44
24:DA:273:G:N2	24:DA:365:U:C2	2.85	0.44
24:DA:513:A:O5'	24:DA:513:A:H8	2.01	0.44
24:DA:524:G:O2'	24:DA:525:U:H5'	2.18	0.44
24:DA:548:G:C5'	24:DA:549:G:H5'	2.48	0.44
24:DA:568:U:OP1	35:DL:36:LYS:HD3	2.17	0.44
24:DA:601:C:H4'	28:DE:99:LYS:HE2	2.00	0.44
24:DA:659:G:C6	24:DA:660:C:C4	3.06	0.44
24:DA:670:A:OP1	35:DL:43:GLY:HA3	2.17	0.44
24:DA:745:G:H5''	24:DA:746:U:OP2	2.18	0.44
24:DA:776:G:N7	24:DA:793:A:C4	2.86	0.44
24:DA:976:G:H2'	24:DA:977:G:C8	2.53	0.44
24:DA:1022:G:C6	24:DA:1140:C:C5	3.06	0.44
24:DA:1202:G:C5	24:DA:1203:U:C5	3.05	0.44
24:DA:1385:A:C6	24:DA:1403:A:C5	3.05	0.44
24:DA:1415:U:O3'	24:DA:1416:G:H4'	2.17	0.44
24:DA:1651:G:C2	24:DA:2007:U:N3	2.86	0.44
24:DA:1839:G:O2'	24:DA:1840:G:H5'	2.17	0.44
24:DA:1908:C:H2'	24:DA:1909:C:C6	2.53	0.44
24:DA:2470:G:C2	24:DA:2481:G:H1'	2.52	0.44
24:DA:2509:G:C6	24:DA:2510:C:C5	3.05	0.44
24:DA:2517:C:HO2'	24:DA:2518:A:P	2.41	0.44
24:DA:2585:U:HO2'	24:DA:2586:U:P	2.41	0.44
24:DA:2723:C:H5'	37:DN:3:HIS:HB2	2.00	0.44
56:DB:58:A:O2'	56:DB:59:A:C5'	2.66	0.44
28:DE:105:LEU:HD13	28:DE:105:LEU:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DF:103:ILE:HG21	29:DF:173:ASP:O	2.17	0.44
33:DJ:97:PRO:C	33:DJ:99:ARG:H	2.22	0.44
35:DL:3:LEU:HG	35:DL:4:ASN:N	2.33	0.44
35:DL:105:ILE:HG22	35:DL:106:GLU:N	2.33	0.44
36:DM:68:PHE:CD1	36:DM:69:PRO:HD2	2.53	0.44
36:DM:96:ILE:O	36:DM:96:ILE:HG13	2.06	0.44
37:DN:21:PHE:N	37:DN:21:PHE:CD1	2.86	0.44
42:DS:35:ILE:HA	50:D0:24:VAL:HG21	2.00	0.44
46:DW:37:VAL:HG23	46:DW:38:ARG:HD2	1.99	0.44
48:DY:25:GLN:HA	48:DY:28:LEU:HB3	1.99	0.44
1:AB:110:ILE:HD13	1:AB:150:ILE:HD13	1.99	0.43
2:AC:9:ILE:HD12	2:AC:9:ILE:HA	1.86	0.43
3:AD:151:GLN:H	3:AD:154:VAL:CG1	2.31	0.43
5:AF:21:MET:HE2	5:AF:25:TYR:HE1	1.83	0.43
8:AI:20:ILE:CG2	8:AI:60:LEU:HD12	2.47	0.43
9:AJ:26:VAL:HG12	9:AJ:30:LYS:CE	2.47	0.43
9:AJ:53:ILE:HG12	9:AJ:53:ILE:O	2.17	0.43
11:AL:33:CYS:H	11:AL:54:VAL:HG13	1.82	0.43
11:AL:72:ASN:O	11:AL:73:LEU:O	2.36	0.43
12:AM:44:ILE:N	12:AM:44:ILE:CD1	2.81	0.43
13:AN:19:TYR:HD2	13:AN:50:LEU:HD13	1.83	0.43
13:AN:29:ILE:O	13:AN:34:ASN:ND2	2.51	0.43
15:AP:5:ARG:HD2	21:AA:376:G:H5''	2.00	0.43
16:AQ:11:VAL:CG1	16:AQ:12:VAL:H	2.28	0.43
16:AQ:16:MET:HG3	16:AQ:20:ILE:CA	2.45	0.43
17:AR:63:TYR:CE1	21:AA:673:A:H1'	2.53	0.43
21:AA:146:G:C2	21:AA:177:G:N7	2.86	0.43
21:AA:451:A:N6	21:AA:481:G:N9	2.66	0.43
21:AA:914:A:N3	21:AA:915:A:C8	2.86	0.43
21:AA:961:U:O2	21:AA:983:A:C4	2.71	0.43
21:AA:986:U:H2'	21:AA:987:G:O4'	2.17	0.43
21:AA:1078:U:H3'	21:AA:1079:G:H8	1.83	0.43
21:AA:1324:A:C5	21:AA:1325:C:C4	3.06	0.43
21:AA:1405:G:O4'	21:AA:1519:A:H4'	2.18	0.43
21:AA:1474:U:H2'	21:AA:1475:G:O4'	2.18	0.43
21:AA:1504:G:H5'	21:AA:1505:G:C2	2.53	0.43
24:BA:308:G:C8	24:BA:501:A:O4'	2.71	0.43
24:BA:804:A:H5''	24:BA:805:G:OP1	2.18	0.43
24:BA:820:A:N1	24:BA:821:A:C2	2.86	0.43
24:BA:959:A:H62	36:BM:82:MET:HE3	1.83	0.43
24:BA:1048:A:C5	24:BA:1049:C:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1071:G:N7	24:BA:1089:A:N6	2.66	0.43
24:BA:1099:G:H2'	24:BA:1100:C:C6	2.53	0.43
24:BA:1436:G:C2	24:BA:1557:C:C2	3.06	0.43
24:BA:1652:A:N6	24:BA:1653:G:N2	2.66	0.43
24:BA:1833:C:C2	24:BA:1834:U:C5	3.06	0.43
24:BA:1842:G:C5	24:BA:1843:C:C5	3.06	0.43
24:BA:1897:G:O2'	24:BA:1898:U:H5'	2.17	0.43
24:BA:1914:C:O2'	24:BA:1915:U:C5'	2.66	0.43
24:BA:1972:G:C2	24:BA:1973:G:N7	2.86	0.43
24:BA:2064:C:H1'	24:BA:2450:A:C6	2.52	0.43
24:BA:2785:C:H2'	24:BA:2786:U:O4'	2.17	0.43
24:BA:2786:U:H2'	24:BA:2787:C:H6	1.84	0.43
27:BD:91:THR:C	27:BD:93:GLY:N	2.71	0.43
27:BD:149:ASN:CG	27:BD:150:GLN:N	2.70	0.43
28:BE:172:ALA:O	28:BE:175:ILE:CG2	2.66	0.43
29:BF:84:ILE:O	29:BF:84:ILE:CG1	2.66	0.43
32:BI:56:VAL:HG22	32:BI:57:VAL:N	2.33	0.43
33:BJ:38:GLY:C	33:BJ:40:HIS:N	2.69	0.43
36:BM:53:MET:HE2	36:BM:53:MET:HB2	1.73	0.43
38:BO:28:VAL:HG21	38:BO:103:VAL:HG12	2.00	0.43
40:BQ:79:ILE:O	40:BQ:80:ASN:C	2.57	0.43
44:BU:73:ASN:C	44:BU:75:ALA:N	2.70	0.43
49:BZ:30:ARG:HE	49:BZ:30:ARG:HB2	1.57	0.43
52:B2:18:PHE:HA	52:B2:43:THR:HG21	2.00	0.43
1:CB:30:ILE:HG21	1:CB:38:HIS:CG	2.52	0.43
1:CB:67:LEU:CD1	1:CB:157:PRO:HG3	2.48	0.43
1:CB:79:VAL:HA	1:CB:213:LEU:CD2	2.36	0.43
1:CB:127:LYS:HG3	1:CB:132:GLU:HG3	2.00	0.43
1:CB:170:ILE:HD12	55:CA:1101:A:C8	2.53	0.43
2:CC:84:GLU:C	2:CC:86:LEU:H	2.19	0.43
2:CC:159:ALA:HB1	2:CC:161:ILE:HD13	2.00	0.43
2:CC:178:ARG:O	2:CC:205:GLU:O	2.36	0.43
7:CH:26:MET:O	7:CH:58:LEU:N	2.51	0.43
9:CJ:28:THR:HG23	9:CJ:29:ALA:N	2.33	0.43
10:CK:127:ARG:HG2	10:CK:127:ARG:O	2.17	0.43
12:CM:68:LEU:HB3	12:CM:69:ARG:HD2	2.00	0.43
15:CP:48:GLU:CD	15:CP:51:ARG:HB2	2.39	0.43
55:CA:32:A:OP2	55:CA:398:U:O2'	2.28	0.43
55:CA:117:G:H2'	55:CA:118:U:C6	2.53	0.43
55:CA:562:U:H2'	55:CA:562:U:OP2	2.18	0.43
55:CA:695:A:N1	55:CA:696:A:C2	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:757:U:O2'	55:CA:879:C:H1'	2.17	0.43
55:CA:786:G:C2	55:CA:797:C:C2	3.06	0.43
55:CA:842:U:OP1	55:CA:842:U:H3'	2.18	0.43
55:CA:878:A:O2'	55:CA:879:C:H5'	2.18	0.43
55:CA:1008:U:H2'	55:CA:1009:U:C6	2.53	0.43
55:CA:1069:C:H4'	55:CA:1192:C:O2	2.18	0.43
55:CA:1308:U:C2	55:CA:1330:U:N3	2.86	0.43
24:DA:2:G:C6	24:DA:3:U:C4	3.05	0.43
24:DA:171:U:H2'	24:DA:172:A:C8	2.52	0.43
24:DA:531:C:C5	24:DA:2035:G:C2	3.06	0.43
24:DA:675:A:C6	24:DA:676:A:C6	3.06	0.43
24:DA:739:A:O2'	24:DA:740:C:C6	2.71	0.43
24:DA:1061:U:H6	32:DI:9:LYS:HD3	1.83	0.43
24:DA:1083:U:H1'	24:DA:1086:A:C2	2.53	0.43
24:DA:1456:G:C6	24:DA:1457:U:C4	3.06	0.43
24:DA:1700:A:H2'	24:DA:1701:A:C5'	2.43	0.43
24:DA:1721:G:HO2'	24:DA:1722:A:P	2.41	0.43
24:DA:1950:G:H1	24:DA:1954:G:H2'	1.83	0.43
24:DA:2072:C:OP2	24:DA:2072:C:H6	2.01	0.43
24:DA:2229:U:H2'	24:DA:2230:G:C8	2.52	0.43
24:DA:2460:U:O2'	24:DA:2461:A:C5'	2.66	0.43
24:DA:2517:C:O2'	24:DA:2518:A:C3'	2.48	0.43
24:DA:2522:U:C2'	24:DA:2523:G:H5'	2.48	0.43
24:DA:2548:U:C4	24:DA:2549:G:N7	2.86	0.43
24:DA:2635:A:C2	24:DA:2784:U:C2	3.06	0.43
56:DB:30:C:C2'	56:DB:31:C:H5'	2.45	0.43
56:DB:90:C:H5'	36:DM:18:ARG:HD2	1.99	0.43
27:DD:62:LYS:HA	27:DD:62:LYS:HE3	1.99	0.43
27:DD:114:LYS:HD2	27:DD:116:LYS:NZ	2.33	0.43
30:DG:6:ALA:HA	30:DG:7:PRO:HD3	1.66	0.43
31:DH:25:TYR:CD1	31:DH:30:LEU:HG	2.53	0.43
32:DI:112:LYS:NZ	32:DI:128:ILE:HD12	2.33	0.43
34:DK:21:CYS:HA	34:DK:41:ILE:HD12	2.00	0.43
36:DM:42:THR:HB	36:DM:45:GLN:CG	2.47	0.43
39:DP:9:GLN:HA	39:DP:12:MET:HG3	1.98	0.43
40:DQ:74:SER:O	40:DQ:78:PHE:HB2	2.18	0.43
42:DS:88:ARG:CG	42:DS:88:ARG:NH2	2.77	0.43
44:DU:54:PRO:HG2	44:DU:55:GLY:N	2.22	0.43
46:DW:44:PHE:HE2	46:DW:76:ARG:NE	2.16	0.43
48:DY:1:MET:N	48:DY:1:MET:CE	2.78	0.43
1:AB:27:LYS:N	1:AB:28:PRO:CD	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:38:HIS:O	1:AB:38:HIS:CD2	2.71	0.43
1:AB:49:PHE:HB2	1:AB:53:LEU:HD23	1.99	0.43
2:AC:119:ILE:O	2:AC:123:LEU:HG	2.16	0.43
3:AD:96:ARG:HH21	3:AD:114:ARG:NH2	2.16	0.43
3:AD:104:MET:HE2	3:AD:170:LEU:HB2	2.00	0.43
4:AE:151:MET:O	4:AE:153:ALA:N	2.52	0.43
4:AE:155:LYS:HB3	7:AH:64:TYR:O	2.18	0.43
6:AG:148:LYS:C	6:AG:150:PHE:N	2.71	0.43
8:AI:8:THR:O	8:AI:16:ALA:O	2.36	0.43
12:AM:90:HIS:HA	12:AM:108:ARG:NH2	2.33	0.43
14:AO:53:ARG:NH1	21:AA:579:A:O2'	2.51	0.43
20:AU:36:PHE:CD1	20:AU:39:LYS:HG2	2.53	0.43
21:AA:198:G:O2'	21:AA:199:A:O5'	2.36	0.43
21:AA:340:U:O2'	21:AA:341:C:H5'	2.18	0.43
21:AA:903:G:C4	21:AA:904:U:C5	3.05	0.43
21:AA:953:G:C2	21:AA:1229:A:C2	3.07	0.43
21:AA:996:A:N1	21:AA:1045:C:O2'	2.49	0.43
21:AA:1084:G:C6	21:AA:1085:U:C4	3.06	0.43
21:AA:1158:C:H5''	21:AA:1158:C:O2	2.18	0.43
21:AA:1321:U:C5	21:AA:1322:C:C5	3.07	0.43
24:BA:59:U:H1'	24:BA:73:A:O2'	2.18	0.43
24:BA:60:G:HO2'	24:BA:61:C:P	2.38	0.43
24:BA:279:A:H2'	24:BA:280:U:C6	2.44	0.43
24:BA:301:G:C6	24:BA:317:G:C6	3.06	0.43
24:BA:378:C:O2'	24:BA:379:G:H5'	2.18	0.43
24:BA:491:G:H2'	24:BA:492:A:C8	2.53	0.43
24:BA:611:C:H2'	24:BA:612:G:O4'	2.19	0.43
24:BA:919:U:C6	24:BA:919:U:C3'	3.00	0.43
24:BA:941:A:H2'	24:BA:942:G:C8	2.53	0.43
24:BA:1588:G:C2	24:BA:1589:U:C6	3.07	0.43
24:BA:1769:U:N3	24:BA:1984:G:C6	2.87	0.43
24:BA:1950:G:C8	24:BA:1951:U:C5	3.06	0.43
24:BA:2079:U:O2'	47:BX:22:ASN:ND2	2.51	0.43
24:BA:2250:G:OP1	24:BA:2275:C:H2'	2.17	0.43
24:BA:2465:C:O2	24:BA:2465:C:H2'	2.18	0.43
24:BA:2576:G:C8	24:BA:2580:U:O4	2.71	0.43
24:BA:2631:G:H2'	24:BA:2632:A:O4'	2.17	0.43
24:BA:2894:G:H8	24:BA:2894:G:H2'	1.36	0.43
25:BB:33:G:O2'	25:BB:34:A:H5'	2.18	0.43
25:BB:33:G:N3	25:BB:50:A:C2	2.86	0.43
26:BC:141:HIS:NE2	26:BC:194:VAL:HA	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:58:ASN:OD1	27:BD:59:ARG:HG2	2.18	0.43
29:BF:3:LEU:HD13	29:BF:3:LEU:HA	1.69	0.43
29:BF:42:ALA:HA	29:BF:45:ASP:O	2.18	0.43
30:BG:41:GLU:O	30:BG:41:GLU:HG3	2.17	0.43
30:BG:83:THR:O	30:BG:84:LYS:HB3	2.17	0.43
30:BG:84:LYS:CB	30:BG:132:LEU:H	2.31	0.43
30:BG:120:ILE:HG21	30:BG:143:VAL:HG21	1.99	0.43
31:BH:89:LYS:CG	31:BH:90:LEU:H	2.25	0.43
35:BL:132:ARG:HG3	35:BL:142:ILE:HD12	1.99	0.43
38:BO:7:ARG:HD2	38:BO:97:PHE:CZ	2.52	0.43
39:BP:17:PRO:HG3	39:BP:83:ILE:O	2.18	0.43
40:BQ:40:LYS:HG2	40:BQ:44:TYR:CE1	2.53	0.43
40:BQ:94:LEU:C	40:BQ:96:ASP:H	2.21	0.43
45:BV:5:ASN:ND2	45:BV:5:ASN:N	2.66	0.43
47:BX:19:HIS:O	47:BX:21:LEU:N	2.51	0.43
1:CB:185:ILE:HA	1:CB:199:ILE:HG13	2.00	0.43
6:CG:86:VAL:HA	6:CG:87:PRO:HD2	1.83	0.43
8:CI:49:GLN:O	8:CI:52:GLU:HG2	2.17	0.43
9:CJ:25:ILE:HD11	9:CJ:93:ALA:CB	2.48	0.43
11:CL:28:GLN:HE21	11:CL:28:GLN:HB3	1.61	0.43
11:CL:98:ARG:HD3	11:CL:103:CYS:SG	2.57	0.43
12:CM:1:ALA:H3	12:CM:2:ARG:HD2	1.82	0.43
15:CP:77:GLU:C	15:CP:79:ASN:H	2.21	0.43
55:CA:298:A:N6	55:CA:299:G:N1	2.67	0.43
55:CA:391:G:C6	55:CA:392:C:C2	3.07	0.43
55:CA:570:G:C6	55:CA:873:A:C2	3.06	0.43
55:CA:936:C:O2'	55:CA:937:A:H5'	2.18	0.43
55:CA:978:A:C6	55:CA:1318:A:C6	3.05	0.43
55:CA:1130:A:C5	55:CA:1146:A:C6	3.06	0.43
55:CA:1182:G:C4'	55:CA:1183:U:H5'	2.49	0.43
55:CA:1265:C:C2'	55:CA:1266:G:H5'	2.48	0.43
24:DA:122:G:P	24:DA:149:A:H4'	2.58	0.43
24:DA:142:A:H5''	24:DA:142:A:C8	2.53	0.43
24:DA:142:A:O2'	24:DA:143:C:H5'	2.18	0.43
24:DA:409:G:O2'	24:DA:410:G:H5'	2.17	0.43
24:DA:464:U:H1'	24:DA:686:U:C5	2.53	0.43
24:DA:529:A:H4'	24:DA:530:G:OP1	2.18	0.43
24:DA:713:G:N2	24:DA:718:A:H2	2.10	0.43
24:DA:921:C:O5'	24:DA:921:C:H6	2.01	0.43
24:DA:973:A:OP1	24:DA:973:A:C8	2.63	0.43
24:DA:1122:G:H2'	24:DA:1122:G:N3	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1286:A:C4	24:DA:1289:C:N4	2.87	0.43
24:DA:1668:A:N3	24:DA:1670:C:C4	2.86	0.43
24:DA:1771:C:N4	24:DA:1772:A:H62	2.16	0.43
24:DA:1774:C:H5''	24:DA:1775:U:OP2	2.18	0.43
24:DA:1828:G:H8	24:DA:1828:G:OP2	2.01	0.43
24:DA:1973:G:C6	24:DA:1974:C:C4	3.07	0.43
24:DA:2066:C:H2'	24:DA:2067:G:C8	2.47	0.43
24:DA:2080:A:C2	24:DA:2081:U:H1'	2.54	0.43
24:DA:2093:G:C5	24:DA:2225:A:N7	2.86	0.43
24:DA:2675:A:C2	24:DA:2676:C:C2	3.06	0.43
24:DA:2716:C:C2	24:DA:2717:C:C5	3.07	0.43
24:DA:2835:A:C6	24:DA:2879:A:C4	3.06	0.43
56:DB:11:C:H5	56:DB:12:C:C5	2.33	0.43
56:DB:104:A:C2	56:DB:105:G:H1'	2.53	0.43
26:DC:188:ARG:HD3	26:DC:188:ARG:H	1.82	0.43
26:DC:244:VAL:HB	26:DC:249:VAL:H	1.83	0.43
31:DH:68:ARG:CD	31:DH:71:LYS:HB2	2.48	0.43
32:DI:74:PRO:O	32:DI:78:LEU:HG	2.18	0.43
33:DJ:35:ARG:HA	33:DJ:40:HIS:HD2	1.84	0.43
35:DL:116:VAL:HG13	35:DL:117:THR:H	1.83	0.43
39:DP:4:ILE:HG22	39:DP:4:ILE:O	2.18	0.43
39:DP:9:GLN:HB3	39:DP:12:MET:HE3	2.00	0.43
39:DP:75:THR:HG23	39:DP:76:HIS:CD2	2.54	0.43
41:DR:49:ILE:HG22	41:DR:54:VAL:N	2.33	0.43
41:DR:81:LYS:O	41:DR:82:HIS:C	2.57	0.43
43:DT:29:THR:OG1	43:DT:85:VAL:HB	2.17	0.43
44:DU:3:LYS:O	44:DU:4:ILE:C	2.56	0.43
44:DU:35:VAL:CG1	44:DU:36:GLU:H	2.24	0.43
47:DX:52:ALA:C	47:DX:54:GLY:H	2.21	0.43
52:D2:10:LEU:O	52:D2:10:LEU:HD23	2.18	0.43
5:AF:9:MET:HE1	5:AF:59:TYR:CE2	2.53	0.43
10:AK:59:PRO:HD3	10:AK:90:PRO:HB3	2.01	0.43
12:AM:94:LEU:CD1	21:AA:1226:C:H5'	2.48	0.43
16:AQ:25:GLU:HA	16:AQ:25:GLU:OE1	2.19	0.43
21:AA:49:U:C4	21:AA:364:A:C6	3.06	0.43
21:AA:161:A:H2'	21:AA:162:A:H8	1.83	0.43
21:AA:169:C:C5	21:AA:170:U:C5	3.06	0.43
21:AA:680:C:C2	21:AA:711:G:C2	3.06	0.43
21:AA:845:A:H8	21:AA:846:G:H4'	1.83	0.43
21:AA:977:A:H8	21:AA:1223:C:C2	2.37	0.43
21:AA:1523:G:C6	21:AA:1524:C:N4	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:195:A:C5	59:BA:3767:HOH:O	2.70	0.43
24:BA:243:U:OP2	53:B3:7:ARG:NE	2.47	0.43
24:BA:399:U:H2'	24:BA:400:G:H5'	2.00	0.43
24:BA:482:A:C6	24:BA:506:G:C4	3.06	0.43
24:BA:558:U:H5''	33:BJ:111:LYS:HE3	2.00	0.43
24:BA:587:C:OP2	35:BL:21:ARG:NH1	2.51	0.43
24:BA:747:U:O2	24:BA:2014:A:H1'	2.18	0.43
24:BA:986:C:H2'	24:BA:987:C:H5'	1.99	0.43
24:BA:986:C:O2'	24:BA:987:C:H5'	2.17	0.43
24:BA:1145:C:H2'	24:BA:1146:C:H6	1.83	0.43
24:BA:1154:G:OP1	40:BQ:57:ARG:HD3	2.18	0.43
24:BA:1295:C:H2'	24:BA:1296:G:H8	1.84	0.43
24:BA:1464:G:H2'	24:BA:1465:G:C8	2.51	0.43
24:BA:1797:G:H1'	24:BA:1823:G:N2	2.32	0.43
24:BA:1857:G:O2'	24:BA:1858:A:OP2	2.29	0.43
24:BA:1865:U:HO2'	24:BA:1866:A:H8	1.63	0.43
24:BA:2286:G:O6	51:B1:22:THR:CG2	2.66	0.43
24:BA:2339:C:H2'	24:BA:2340:A:H8	1.84	0.43
24:BA:2410:G:C6	24:BA:2411:A:C4	3.07	0.43
24:BA:2520:C:O2'	24:BA:2521:C:H5'	2.18	0.43
24:BA:2578:G:H1'	27:BD:144:GLY:HA2	2.00	0.43
24:BA:2580:U:H3'	24:BA:2581:G:C2	2.53	0.43
24:BA:2587:A:H2'	24:BA:2588:G:H5'	2.00	0.43
24:BA:2747:G:N1	24:BA:2754:U:C2	2.87	0.43
25:BB:27:C:C5	25:BB:28:C:C5	3.05	0.43
59:BB:315:HOH:O	45:BV:14:LYS:HD2	2.18	0.43
26:BC:225:ASN:O	26:BC:227:VAL:N	2.51	0.43
26:BC:245:THR:HG1	26:BC:249:VAL:HB	1.80	0.43
26:BC:269:ARG:HA	26:BC:269:ARG:HD3	1.81	0.43
27:BD:16:THR:O	27:BD:19:GLY:N	2.40	0.43
27:BD:121:THR:O	27:BD:122:VAL:CB	2.66	0.43
28:BE:19:PHE:HE2	28:BE:197:GLU:OE1	2.01	0.43
28:BE:72:SER:C	28:BE:74:LYS:N	2.72	0.43
30:BG:83:THR:C	30:BG:84:LYS:HD3	2.38	0.43
37:BN:93:GLY:C	37:BN:95:THR:N	2.71	0.43
41:BR:72:VAL:O	41:BR:72:VAL:HG22	2.17	0.43
42:BS:50:VAL:O	42:BS:51:LEU:C	2.57	0.43
42:BS:59:GLU:HA	42:BS:64:ALA:HA	2.00	0.43
45:BV:62:THR:HA	45:BV:71:LYS:HA	1.98	0.43
46:BW:22:VAL:HG13	46:BW:25:PHE:CD2	2.52	0.43
46:BW:75:ASN:O	46:BW:76:ARG:CB	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BY:24:GLU:O	48:BY:28:LEU:HB2	2.17	0.43
53:B3:7:ARG:O	53:B3:11:LYS:HG3	2.18	0.43
1:CB:164:ASP:OD1	1:CB:203:ASP:CB	2.66	0.43
2:CC:13:ILE:HG22	2:CC:14:VAL:HG23	2.00	0.43
3:CD:68:GLU:HB2	55:CA:545:C:H5'	2.00	0.43
4:CE:38:VAL:O	4:CE:45:VAL:HG23	2.18	0.43
6:CG:101:ARG:NH2	55:CA:1375:A:O2'	2.51	0.43
8:CI:53:LEU:HD21	8:CI:96:GLU:HB3	2.00	0.43
11:CL:50:LYS:HD2	11:CL:50:LYS:N	2.33	0.43
14:CO:44:GLU:HG2	14:CO:45:HIS:CD2	2.53	0.43
18:CS:38:THR:OG1	18:CS:39:ILE:N	2.51	0.43
55:CA:181:A:N6	55:CA:195:A:OP2	2.51	0.43
55:CA:355:C:C4	55:CA:356:A:N7	2.86	0.43
55:CA:452:A:HO2'	55:CA:453:G:C4'	2.30	0.43
55:CA:614:C:H2'	55:CA:615:G:O4'	2.18	0.43
55:CA:760:G:N7	55:CA:761:G:C8	2.85	0.43
55:CA:821:G:C2	55:CA:822:U:C2	3.06	0.43
55:CA:823:C:O2'	55:CA:824:G:H5'	2.17	0.43
55:CA:1050:G:N2	55:CA:1051:C:C2	2.86	0.43
55:CA:1129:C:O2'	55:CA:1130:A:H8	1.94	0.43
55:CA:1163:A:N1	55:CA:1174:G:C6	2.86	0.43
55:CA:1349:A:H2'	55:CA:1350:A:H8	1.82	0.43
55:CA:1394:A:N6	55:CA:1501:C:H4'	2.33	0.43
24:DA:142:A:C2'	24:DA:143:C:H6	2.25	0.43
24:DA:303:G:N1	24:DA:315:G:C6	2.86	0.43
24:DA:353:C:N4	24:DA:354:A:H62	2.15	0.43
24:DA:471:A:H5''	28:DE:79:ARG:NH1	2.31	0.43
24:DA:972:A:H3'	24:DA:973:A:H5''	1.99	0.43
24:DA:1045:C:O4'	24:DA:1111:A:N6	2.51	0.43
24:DA:1048:A:O2'	24:DA:1049:C:C6	2.71	0.43
24:DA:1054:A:C2	24:DA:1055:G:H1'	2.53	0.43
24:DA:1262:A:H2	50:D0:6:LYS:HD2	1.83	0.43
24:DA:1315:C:C2	24:DA:1338:G:C2	3.06	0.43
24:DA:1797:G:H4'	26:DC:254:LYS:O	2.18	0.43
24:DA:1803:A:H3'	24:DA:1804:C:H6	1.82	0.43
24:DA:1816:C:HO2'	24:DA:1817:G:P	2.40	0.43
24:DA:1825:U:O3'	26:DC:231:HIS:CE1	2.71	0.43
24:DA:2232:C:P	47:DX:26:ARG:NH1	2.91	0.43
24:DA:2373:G:C6	24:DA:2381:A:N1	2.86	0.43
24:DA:2581:G:H4'	24:DA:2582:G:C8	2.53	0.43
26:DC:255:LYS:O	26:DC:256:THR:HG23	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DQ:84:LYS:C	40:DQ:86:SER:H	2.22	0.43
46:DW:31:LEU:C	46:DW:33:GLY:N	2.71	0.43
48:DY:58:ASN:C	48:DY:60:LYS:H	2.22	0.43
51:D1:16:THR:CG2	51:D1:42:VAL:HG23	2.48	0.43
1:AB:14:HIS:CD2	1:AB:202:ASN:H	2.36	0.43
1:AB:66:ILE:O	1:AB:160:LEU:HD12	2.18	0.43
1:AB:219:THR:HG23	1:AB:220:VAL:N	2.33	0.43
2:AC:194:VAL:O	2:AC:194:VAL:HG12	2.18	0.43
7:AH:41:GLU:HA	7:AH:41:GLU:OE1	2.18	0.43
9:AJ:41:PRO:O	9:AJ:42:LEU:HB2	2.19	0.43
14:AO:50:HIS:ND1	21:AA:667:G:H4'	2.33	0.43
16:AQ:58:VAL:CG2	16:AQ:59:GLU:H	2.30	0.43
20:AU:19:LYS:C	20:AU:21:SER:N	2.71	0.43
21:AA:71:A:HO2'	21:AA:72:A:C5'	2.30	0.43
21:AA:104:G:N1	21:AA:105:G:C5	2.86	0.43
21:AA:119:A:N7	21:AA:240:G:C5	2.86	0.43
21:AA:724:G:H2'	21:AA:725:G:C8	2.53	0.43
24:BA:336:C:C2'	24:BA:337:C:H5'	2.48	0.43
24:BA:601:C:O2	24:BA:605:G:H4'	2.19	0.43
24:BA:636:G:OP2	35:BL:128:THR:HG22	2.17	0.43
24:BA:696:G:C2	24:BA:697:G:C8	3.06	0.43
24:BA:825:A:C2'	35:BL:54:GLN:HE21	2.32	0.43
24:BA:987:C:C4	24:BA:988:A:C5	3.06	0.43
24:BA:1048:A:N7	24:BA:1111:A:C6	2.85	0.43
24:BA:1137:G:H2'	24:BA:1138:G:O4'	2.18	0.43
24:BA:1170:C:H2'	24:BA:1171:G:O4'	2.18	0.43
24:BA:1277:G:C4'	37:BN:20:MET:HE2	2.48	0.43
24:BA:1295:C:H2'	24:BA:1296:G:O4'	2.17	0.43
24:BA:1399:C:H2'	24:BA:1400:U:C6	2.44	0.43
24:BA:1654:A:H4'	27:BD:118:PHE:CE1	2.52	0.43
24:BA:1721:G:H1'	24:BA:1739:A:N6	2.33	0.43
24:BA:1926:U:H2'	24:BA:1928:A:N7	2.34	0.43
24:BA:2287:A:C6	24:BA:2289:G:C4	3.07	0.43
24:BA:2287:A:C4	24:BA:2289:G:N7	2.87	0.43
24:BA:2297:A:H61	24:BA:2319:G:H1'	1.84	0.43
24:BA:2305:U:O2'	29:BF:132:ARG:HG2	2.18	0.43
24:BA:2365:G:C2'	24:BA:2366:A:C8	3.02	0.43
24:BA:2656:U:O2'	24:BA:2657:A:H5'	2.18	0.43
24:BA:2832:U:C2	24:BA:2834:G:C2	3.06	0.43
26:BC:142:ASN:O	26:BC:142:ASN:CG	2.56	0.43
27:BD:22:ILE:HA	27:BD:23:PRO:HD3	1.79	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:35:LEU:CD1	29:BF:56:LEU:HD22	2.41	0.43
30:BG:61:TRP:O	30:BG:64:ALA:N	2.51	0.43
31:BH:27:ARG:HG3	47:BX:59:ASP:CG	2.38	0.43
33:BJ:114:LEU:O	33:BJ:117:ALA:HB3	2.19	0.43
34:BK:65:THR:O	34:BK:79:PHE:HB2	2.18	0.43
37:BN:94:TYR:O	37:BN:116:VAL:HG12	2.18	0.43
40:BQ:63:ARG:HH22	40:BQ:96:ASP:CA	2.31	0.43
41:BR:35:PHE:HB2	41:BR:59:ILE:HB	2.00	0.43
46:BW:24:ARG:HD3	46:BW:65:LYS:CD	2.48	0.43
46:BW:70:VAL:C	46:BW:71:LYS:HD2	2.37	0.43
4:CE:71:ILE:HG12	4:CE:144:GLU:CG	2.48	0.43
8:CI:60:LEU:O	8:CI:60:LEU:HD12	2.18	0.43
13:CN:12:ARG:NH2	55:CA:980:C:O3'	2.49	0.43
13:CN:25:GLU:O	13:CN:28:ALA:HB3	2.18	0.43
15:CP:46:LYS:HB2	15:CP:47:GLU:H	1.64	0.43
15:CP:70:ARG:O	15:CP:74:LEU:HG	2.18	0.43
16:CQ:22:VAL:HG21	16:CQ:58:VAL:HG21	1.99	0.43
20:CU:17:ARG:HD3	20:CU:17:ARG:H	1.83	0.43
55:CA:17:U:H1'	55:CA:1080:A:N3	2.34	0.43
55:CA:122:G:O2'	55:CA:123:U:H5'	2.17	0.43
55:CA:268:U:N3	55:CA:269:C:C4	2.86	0.43
55:CA:331:G:O2'	55:CA:332:G:P	2.77	0.43
55:CA:484:G:O2'	55:CA:485:U:O5'	2.32	0.43
55:CA:1000:A:H2'	55:CA:1001:C:C6	2.53	0.43
55:CA:1163:A:N3	55:CA:1174:G:C2	2.87	0.43
55:CA:1266:G:C2	55:CA:1270:G:C6	3.07	0.43
55:CA:1301:U:H2'	55:CA:1301:U:O2	2.17	0.43
55:CA:1349:A:C2'	55:CA:1350:A:H8	2.31	0.43
55:CA:1415:G:N2	55:CA:1486:G:N9	2.66	0.43
22:CV:28:G:O2'	22:CV:29:G:H5'	2.18	0.43
22:CV:33:U:C5'	22:CV:34:G:OP2	2.66	0.43
24:DA:16:C:O2'	24:DA:17:G:H5'	2.18	0.43
24:DA:66:C:N4	24:DA:67:U:N3	2.67	0.43
24:DA:83:A:H61	24:DA:101:A:C5'	2.20	0.43
24:DA:94:A:C2	24:DA:95:A:C4	3.07	0.43
24:DA:121:G:N2	24:DA:131:A:N9	2.66	0.43
24:DA:197:A:N7	24:DA:2430:A:C4	2.86	0.43
24:DA:579:G:C2	24:DA:1262:A:C5	3.06	0.43
24:DA:761:A:OP2	59:DA:3304:HOH:O	2.21	0.43
24:DA:762:U:C2	24:DA:1431:A:H5''	2.53	0.43
24:DA:1050:A:H2'	24:DA:1051:G:H8	1.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1077:A:H2'	24:DA:1078:U:O4'	2.19	0.43
24:DA:1371:G:O2'	24:DA:1372:U:H5'	2.18	0.43
24:DA:1677:A:H2'	24:DA:1678:A:C8	2.52	0.43
24:DA:1787:A:H2'	24:DA:1788:C:C5	2.53	0.43
24:DA:1815:A:H1'	24:DA:1817:G:N7	2.33	0.43
24:DA:1906:G:H8	24:DA:1929:G:H2'	1.82	0.43
24:DA:2208:C:C2	24:DA:2217:G:N2	2.86	0.43
24:DA:2483:C:C5	24:DA:2484:G:C8	3.06	0.43
24:DA:2781:A:H3'	24:DA:2782:G:H5'	2.00	0.43
24:DA:2882:A:H5''	37:DN:96:ARG:HD3	1.99	0.43
56:DB:35:C:H3'	56:DB:36:C:H5''	2.01	0.43
56:DB:98:G:O6	45:DV:14:LYS:N	2.51	0.43
26:DC:130:PRO:HD3	26:DC:188:ARG:HG3	1.99	0.43
28:DE:134:LEU:HA	28:DE:137:LYS:HB2	2.00	0.43
29:DF:4:HIS:CE1	29:DF:96:TRP:CZ2	3.06	0.43
29:DF:41:GLU:O	29:DF:43:ILE:N	2.51	0.43
29:DF:102:LEU:N	29:DF:102:LEU:HD22	2.34	0.43
34:DK:103:VAL:HG23	34:DK:122:VAL:O	2.17	0.43
39:DP:105:LYS:HA	39:DP:108:ARG:CZ	2.49	0.43
41:DR:30:GLY:HA2	41:DR:63:VAL:O	2.18	0.43
44:DU:73:ASN:HB3	44:DU:95:PHE:CE2	2.53	0.43
45:DV:75:GLN:HG3	45:DV:92:VAL:CG1	2.48	0.43
47:DX:1:SER:C	47:DX:3:VAL:N	2.72	0.43
47:DX:48:LEU:O	47:DX:50:VAL:HG13	2.18	0.43
49:DZ:43:ILE:HD12	49:DZ:44:ARG:N	2.34	0.43
53:D3:24:LYS:O	53:D3:25:HIS:CD2	2.71	0.43
1:AB:113:LEU:HD11	1:AB:144:GLU:OE1	2.19	0.43
2:AC:17:TRP:O	2:AC:19:SER:N	2.52	0.43
3:AD:92:LEU:HA	3:AD:135:GLN:NE2	2.33	0.43
4:AE:14:LEU:HD13	4:AE:14:LEU:O	2.17	0.43
5:AF:90:MET:CB	17:AR:60:ARG:HH21	2.31	0.43
8:AI:25:GLY:HA2	8:AI:60:LEU:O	2.19	0.43
8:AI:51:LEU:HB3	8:AI:56:MET:HG2	2.01	0.43
8:AI:123:ARG:O	21:AA:1343:G:H4'	2.19	0.43
11:AL:29:LYS:HD3	11:AL:58:ASN:HB3	2.01	0.43
11:AL:64:SER:OG	11:AL:96:THR:HG23	2.19	0.43
14:AO:36:ASN:N	14:AO:36:ASN:HD22	2.16	0.43
20:AU:7:GLU:HB2	20:AU:11:PHE:CZ	2.54	0.43
20:AU:36:PHE:CD1	20:AU:39:LYS:HB3	2.52	0.43
21:AA:172:A:C5	21:AA:174:A:N7	2.87	0.43
21:AA:243:A:C4'	21:AA:244:U:H5''	2.42	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:596:A:N6	21:AA:645:G:C5	2.85	0.43
21:AA:828:U:O4	21:AA:859:G:C8	2.72	0.43
21:AA:1068:G:N3	21:AA:1068:G:H2'	2.33	0.43
21:AA:1074:G:N3	21:AA:1101:A:C2	2.86	0.43
21:AA:1098:C:H2'	21:AA:1099:G:O4'	2.19	0.43
21:AA:1428:A:C6	21:AA:1429:A:N7	2.87	0.43
24:BA:24:G:C6	24:BA:25:U:N3	2.86	0.43
24:BA:78:U:H2'	24:BA:79:C:H6	1.82	0.43
24:BA:110:G:H2'	24:BA:110:G:N3	2.33	0.43
24:BA:313:G:C4	24:BA:314:C:C5	3.07	0.43
24:BA:324:A:N6	24:BA:339:U:H5'	2.33	0.43
24:BA:640:C:H2'	24:BA:641:U:H6	1.83	0.43
24:BA:728:G:O2'	24:BA:730:A:H8	2.01	0.43
24:BA:963:U:O2'	24:BA:964:C:H5'	2.17	0.43
24:BA:1189:A:OP1	41:BR:82:HIS:HD2	2.01	0.43
24:BA:1216:G:C2	24:BA:1234:U:O2	2.71	0.43
24:BA:1277:G:C6	24:BA:1278:C:N4	2.86	0.43
24:BA:1282:U:H2'	24:BA:1283:G:O4'	2.18	0.43
24:BA:1712:U:C4	24:BA:1713:A:C6	3.06	0.43
25:BB:75:G:H1	25:BB:102:G:N2	2.16	0.43
26:BC:15:VAL:HG12	26:BC:16:VAL:N	2.33	0.43
26:BC:200:MET:HB3	26:BC:201:LEU:HD13	1.99	0.43
27:BD:72:GLY:O	27:BD:73:VAL:O	2.37	0.43
28:BE:119:ILE:HD11	28:BE:187:VAL:HG22	2.00	0.43
33:BJ:99:ARG:NH1	33:BJ:103:ILE:HG22	2.34	0.43
33:BJ:105:VAL:HG22	33:BJ:106:LYS:N	2.33	0.43
34:BK:22:ILE:HG23	34:BK:42:THR:HG22	2.01	0.43
34:BK:92:GLU:O	34:BK:93:GLN:O	2.37	0.43
34:BK:95:ILE:HD12	34:BK:95:ILE:O	2.18	0.43
38:BO:53:THR:HB	38:BO:65:THR:HG22	2.00	0.43
40:BQ:59:LEU:O	40:BQ:62:ALA:N	2.52	0.43
47:BX:77:TYR:O	47:BX:77:TYR:CG	2.71	0.43
48:BY:61:ALA:C	48:BY:63:ALA:H	2.22	0.43
51:B1:9:LYS:N	51:B1:9:LYS:HD3	2.33	0.43
53:B3:56:LEU:HD22	53:B3:56:LEU:N	2.28	0.43
2:CC:125:ARG:HB2	2:CC:127:VAL:CG1	2.48	0.43
2:CC:131:ARG:HA	2:CC:134:LYS:HB3	1.99	0.43
3:CD:19:PHE:C	3:CD:20:LEU:O	2.55	0.43
3:CD:81:LEU:HB2	3:CD:88:ASN:HD22	1.83	0.43
4:CE:80:LEU:O	4:CE:97:PRO:HG3	2.18	0.43
7:CH:94:VAL:CG2	7:CH:101:ALA:HB2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:13:HIS:CD2	12:CM:14:ALA:H	2.37	0.43
12:CM:113:LYS:HD3	12:CM:113:LYS:H	1.83	0.43
16:CQ:4:ILE:CG2	16:CQ:5:ARG:H	2.32	0.43
19:CT:2:ASN:N	19:CT:7:LYS:NZ	2.59	0.43
19:CT:26:MET:CG	55:CA:1457:G:O2'	2.64	0.43
55:CA:247:G:C5	55:CA:278:G:N2	2.86	0.43
55:CA:518:C:H4'	55:CA:519:C:C5'	2.41	0.43
55:CA:562:U:C4	55:CA:884:U:C6	3.07	0.43
55:CA:683:G:C2	55:CA:684:U:C2	3.07	0.43
55:CA:868:C:C2'	55:CA:869:G:H5'	2.49	0.43
55:CA:947:G:H2'	55:CA:948:C:O4'	2.18	0.43
55:CA:1270:G:O2'	55:CA:1314:C:H5'	2.18	0.43
55:CA:1484:C:H2'	55:CA:1485:U:C6	2.54	0.43
24:DA:3:U:C5	24:DA:4:U:C5	3.06	0.43
24:DA:101:A:HO2'	24:DA:102:U:P	2.41	0.43
24:DA:352:A:N3	24:DA:353:C:H1'	2.34	0.43
24:DA:636:G:O5'	35:DL:128:THR:HG23	2.19	0.43
24:DA:771:G:O2'	24:DA:772:C:H5'	2.18	0.43
24:DA:838:C:C4	24:DA:839:U:C4	3.07	0.43
24:DA:1127:A:H61	24:DA:2463:C:H1'	1.84	0.43
24:DA:1265:A:C8	24:DA:1267:U:C2	3.06	0.43
24:DA:1287:A:H5'	37:DN:103:ARG:NH1	2.34	0.43
24:DA:1333:G:O2'	24:DA:1334:G:C5'	2.65	0.43
24:DA:1496:A:H4'	24:DA:1497:U:H5	1.84	0.43
24:DA:1614:A:N6	42:DS:91:GLY:HA2	2.34	0.43
24:DA:2052:A:C8	27:DD:146:ILE:HD11	2.53	0.43
24:DA:2060:A:C8	28:DE:63:LYS:NZ	2.87	0.43
24:DA:2077:A:N1	24:DA:2078:C:C4	2.87	0.43
24:DA:2209:G:C2	24:DA:2210:U:O4	2.71	0.43
24:DA:2711:A:N6	24:DA:2714:G:N7	2.66	0.43
24:DA:2721:A:H2'	24:DA:2722:G:C8	2.54	0.43
24:DA:2746:U:C2'	24:DA:2747:G:H5'	2.48	0.43
24:DA:2800:A:N3	24:DA:2801:G:H1'	2.34	0.43
28:DE:128:ALA:O	28:DE:130:LYS:HG2	2.19	0.43
29:DF:2:LYS:HD3	29:DF:2:LYS:H	1.82	0.43
29:DF:5:ASP:C	29:DF:7:TYR:N	2.70	0.43
32:DI:20:SER:N	32:DI:21:PRO:CD	2.81	0.43
33:DJ:49:ASP:HB2	33:DJ:121:LYS:HZ1	1.83	0.43
37:DN:96:ARG:O	37:DN:113:ILE:HA	2.18	0.43
38:DO:115:LEU:H	38:DO:115:LEU:CD1	2.15	0.43
41:DR:79:ARG:O	41:DR:80:ARG:CB	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DV:35:GLU:HB2	45:DV:93:ARG:NH1	2.33	0.43
52:D2:23:ALA:O	52:D2:24:THR:HB	2.18	0.43
52:D2:43:THR:O	52:D2:44:VAL:C	2.57	0.43
1:AB:191:ASP:HA	1:AB:192:PRO:HD2	1.80	0.43
2:AC:91:ALA:C	2:AC:93:ILE:N	2.71	0.43
3:AD:88:ASN:O	3:AD:92:LEU:HD23	2.18	0.43
4:AE:45:VAL:HG23	4:AE:73:VAL:HG23	1.99	0.43
5:AF:32:ALA:HB1	5:AF:67:PRO:HG3	2.00	0.43
8:AI:51:LEU:CD1	8:AI:56:MET:HG2	2.44	0.43
10:AK:22:ILE:HD13	10:AK:95:THR:HG21	1.98	0.43
14:AO:32:THR:OG1	14:AO:84:LEU:HD21	2.18	0.43
17:AR:44:THR:C	17:AR:46:THR:H	2.22	0.43
21:AA:112:G:C5	21:AA:330:C:N4	2.86	0.43
21:AA:191:G:C6	21:AA:192:A:C6	3.07	0.43
21:AA:355:C:N3	21:AA:356:A:N7	2.66	0.43
21:AA:786:G:C2	21:AA:797:C:C2	3.05	0.43
21:AA:833:G:C2'	21:AA:834:U:H5'	2.49	0.43
21:AA:900:A:C6	21:AA:901:A:C2	3.06	0.43
21:AA:930:C:C4	21:AA:931:C:C5	3.07	0.43
21:AA:1053:G:O5'	21:AA:1054:C:H3'	2.18	0.43
21:AA:1095:U:P	21:AA:1108:G:H22	2.41	0.43
21:AA:1389:C:H2'	21:AA:1390:U:O4'	2.19	0.43
21:AA:1462:C:C2	21:AA:1463:U:C6	3.07	0.43
24:BA:16:C:H4'	50:B0:10:SER:OG	2.19	0.43
24:BA:313:G:C5	24:BA:314:C:C5	3.07	0.43
24:BA:960:A:H5''	24:BA:961:C:OP2	2.18	0.43
24:BA:1027:A:N3	24:BA:1027:A:C2'	2.78	0.43
24:BA:1238:G:O2'	24:BA:1239:G:C5'	2.66	0.43
24:BA:1495:A:O2'	24:BA:1496:A:O5'	2.37	0.43
24:BA:1731:G:C4	24:BA:1733:G:C8	3.06	0.43
24:BA:1776:G:C6	24:BA:1777:U:C4	3.06	0.43
24:BA:1997:C:H6	24:BA:1997:C:C5'	2.32	0.43
24:BA:2282:G:C6	24:BA:2425:A:C2	3.07	0.43
24:BA:2297:A:C2	24:BA:2321:U:H5	2.36	0.43
24:BA:2340:A:H2'	24:BA:2341:G:H8	1.83	0.43
24:BA:2706:A:H8	24:BA:2706:A:O5'	2.02	0.43
25:BB:27:C:C6	25:BB:28:C:C5	3.06	0.43
26:BC:140:VAL:CG1	26:BC:189:ALA:HB1	2.48	0.43
26:BC:250:GLN:N	26:BC:250:GLN:HE21	2.17	0.43
28:BE:117:ARG:CA	28:BE:185:LYS:HD3	2.43	0.43
29:BF:113:PHE:HE1	29:BF:116:LEU:HD22	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:82:PHE:CZ	30:BG:137:LYS:HD2	2.54	0.43
32:BI:59:THR:HG22	32:BI:61:TYR:CE2	2.52	0.43
33:BJ:18:VAL:HG12	33:BJ:19:ASP:N	2.33	0.43
34:BK:105:ARG:HD3	34:BK:105:ARG:H	1.83	0.43
36:BM:71:LYS:HB3	36:BM:93:VAL:O	2.19	0.43
42:BS:24:ILE:HD12	42:BS:32:ALA:HA	2.01	0.43
42:BS:73:LYS:CB	42:BS:106:VAL:HB	2.46	0.43
46:BW:22:VAL:O	46:BW:23:LYS:C	2.57	0.43
46:BW:43:LYS:CG	46:BW:79:ILE:HD11	2.48	0.43
47:BX:39:VAL:O	47:BX:41:SER:N	2.46	0.43
48:BY:42:LEU:HA	48:BY:42:LEU:HD12	1.75	0.43
49:BZ:8:GLN:O	49:BZ:10:ARG:N	2.45	0.43
53:B3:35:LYS:O	53:B3:40:LYS:HE2	2.19	0.43
1:CB:139:GLU:O	1:CB:140:LEU:C	2.57	0.43
4:CE:46:GLY:HA3	4:CE:70:MET:HA	2.00	0.43
4:CE:111:ARG:C	4:CE:113:VAL:N	2.72	0.43
5:CF:5:GLU:HA	5:CF:63:ASN:HA	2.00	0.43
5:CF:44:ARG:HA	5:CF:58:HIS:HA	2.00	0.43
6:CG:31:VAL:HG12	55:CA:1240:U:C2	2.53	0.43
7:CH:46:GLU:N	7:CH:63:LYS:HG3	2.33	0.43
8:CI:63:TYR:C	8:CI:63:TYR:CD1	2.92	0.43
10:CK:19:VAL:O	10:CK:33:ILE:HA	2.19	0.43
12:CM:85:TYR:HB3	18:CS:72:GLU:OE2	2.18	0.43
20:CU:3:ILE:HG12	20:CU:18:PHE:CD1	2.54	0.43
55:CA:272:C:C4	55:CA:273:U:C5	3.06	0.43
55:CA:275:G:C2	55:CA:276:G:C8	3.06	0.43
55:CA:495:A:C2	55:CA:496:A:C6	3.06	0.43
55:CA:570:G:O6	55:CA:873:A:C2	2.71	0.43
55:CA:1266:G:C4	55:CA:1268:G:OP2	2.72	0.43
55:CA:1392:G:O2'	55:CA:1393:U:H5'	2.19	0.43
55:CA:1487:G:C6	55:CA:1488:G:N7	2.87	0.43
24:DA:202:U:H2'	24:DA:203:A:C8	2.54	0.43
24:DA:230:G:HO2'	24:DA:231:A:C5'	2.31	0.43
24:DA:300:A:N6	59:DA:3596:HOH:O	2.51	0.43
24:DA:545:U:C4	24:DA:547:A:H4'	2.54	0.43
24:DA:585:G:H2'	24:DA:1254:A:H61	1.83	0.43
24:DA:686:U:N3	52:D2:12:ARG:HG3	2.34	0.43
24:DA:771:G:H2'	24:DA:772:C:H6	1.82	0.43
24:DA:958:U:H6	24:DA:958:U:H2'	1.29	0.43
24:DA:996:A:N3	24:DA:997:G:C8	2.86	0.43
24:DA:996:A:C5'	40:DQ:91:ARG:NH1	2.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1149:G:H2'	24:DA:1150:C:C6	2.54	0.43
24:DA:1202:G:C6	24:DA:1203:U:C4	3.06	0.43
24:DA:1345:C:H5'	24:DA:1396:U:O4	2.18	0.43
24:DA:1647:U:H3'	24:DA:1647:U:OP2	2.19	0.43
24:DA:1800:C:C2	24:DA:1818:U:O2	2.71	0.43
24:DA:1829:A:C8	24:DA:1830:C:C5	3.07	0.43
24:DA:1858:A:H62	24:DA:1884:G:H21	1.66	0.43
24:DA:1907:G:C2	24:DA:1924:C:C2	3.07	0.43
24:DA:1914:C:C4	24:DA:1915:U:C4	3.07	0.43
24:DA:1938:A:O2'	24:DA:1939:U:H5''	2.17	0.43
24:DA:2282:G:O2'	24:DA:2283:C:OP2	2.37	0.43
24:DA:2294:G:H5''	38:DO:10:ARG:HD3	1.99	0.43
24:DA:2344:U:OP1	51:D1:36:LYS:HD2	2.18	0.43
24:DA:2422:C:N4	24:DA:2424:C:C4	2.86	0.43
24:DA:2590:A:O2'	24:DA:2591:C:H5'	2.19	0.43
24:DA:2601:C:H4'	24:DA:2602:A:OP2	2.18	0.43
24:DA:2848:G:H1'	24:DA:2868:A:N6	2.33	0.43
26:DC:135:PRO:HG2	26:DC:138:SER:OG	2.18	0.43
27:DD:110:THR:OG1	27:DD:171:THR:HG22	2.18	0.43
28:DE:34:ALA:HB1	28:DE:94:GLN:HB2	2.01	0.43
29:DF:97:GLU:O	29:DF:97:GLU:HG2	2.16	0.43
31:DH:71:LYS:CD	31:DH:71:LYS:N	2.82	0.43
32:DI:89:SER:HB3	32:DI:97:VAL:HG11	1.99	0.43
32:DI:139:VAL:O	32:DI:140:GLU:HB2	2.19	0.43
33:DJ:24:THR:O	33:DJ:25:LEU:HB3	2.19	0.43
33:DJ:25:LEU:HD22	33:DJ:25:LEU:C	2.38	0.43
34:DK:41:ILE:O	34:DK:57:VAL:HA	2.19	0.43
37:DN:31:HIS:C	37:DN:33:ILE:H	2.21	0.43
39:DP:26:GLU:HB2	39:DP:86:LYS:HD3	2.01	0.43
40:DQ:4:LYS:HD3	40:DQ:7:VAL:H	1.83	0.43
45:DV:44:HIS:NE2	45:DV:86:LEU:O	2.52	0.43
47:DX:1:SER:O	47:DX:3:VAL:HG13	2.18	0.43
53:D3:29:ARG:HG2	53:D3:29:ARG:HH21	1.84	0.43
1:AB:61:SER:HA	1:AB:224:ARG:N	2.33	0.43
2:AC:21:TRP:O	13:AN:93:PRO:HB3	2.19	0.43
4:AE:49:TYR:O	4:AE:62:ALA:HA	2.18	0.43
5:AF:66:ALA:HB1	5:AF:67:PRO:HD2	2.00	0.43
7:AH:26:MET:O	7:AH:58:LEU:N	2.50	0.43
7:AH:85:TYR:C	7:AH:86:LYS:HD2	2.39	0.43
8:AI:21:LYS:NZ	8:AI:61:ASP:HB3	2.34	0.43
9:AJ:29:ALA:C	9:AJ:31:ARG:H	2.22	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:88:PRO:HD3	20:AU:28:LEU:HD13	2.01	0.43
11:AL:62:VAL:CG2	11:AL:94:TYR:HE2	2.23	0.43
13:AN:92:ILE:HA	13:AN:93:PRO:HD3	1.84	0.43
16:AQ:13:SER:HB3	16:AQ:16:MET:HE1	2.00	0.43
16:AQ:37:ILE:HD12	16:AQ:37:ILE:N	2.34	0.43
16:AQ:66:LEU:CB	16:AQ:70:LYS:HE2	2.48	0.43
18:AS:62:THR:CG2	18:AS:63:ASP:H	2.27	0.43
19:AT:57:VAL:HG12	19:AT:71:ALA:HB1	2.01	0.43
19:AT:75:LYS:HD2	21:AA:185:U:O2'	2.18	0.43
21:AA:16:A:C2'	21:AA:17:U:H5'	2.48	0.43
21:AA:124:C:O2'	21:AA:125:U:H5'	2.19	0.43
21:AA:596:A:H2'	21:AA:597:G:C8	2.39	0.43
21:AA:597:G:N7	21:AA:598:U:C5	2.87	0.43
21:AA:644:U:H2'	21:AA:645:G:O4'	2.19	0.43
21:AA:1152:A:H2'	21:AA:1153:G:H8	1.84	0.43
24:BA:95:A:O2'	48:BY:41:HIS:CD2	2.71	0.43
24:BA:159:G:N2	24:BA:166:U:C5	2.87	0.43
24:BA:222:A:C5	24:BA:224:U:C2	3.07	0.43
24:BA:301:G:N1	24:BA:317:G:C5	2.87	0.43
24:BA:857:G:H1'	46:BW:19:ARG:HD2	2.01	0.43
24:BA:1052:C:C4	24:BA:1053:C:H5	2.37	0.43
24:BA:1070:A:HO2'	24:BA:1071:G:P	2.41	0.43
24:BA:1151:A:C6	24:BA:1152:C:C4	3.07	0.43
24:BA:1312:U:C4'	24:BA:1313:U:O2	2.67	0.43
24:BA:1790:C:H2'	24:BA:1791:A:N7	2.34	0.43
24:BA:1816:C:H5	26:BC:61:TYR:CE1	2.36	0.43
24:BA:1992:G:H4'	24:BA:1993:U:OP1	2.14	0.43
24:BA:2472:G:C5	24:BA:2475:C:C4	3.06	0.43
24:BA:2482:A:C5	24:BA:2483:C:C5	3.07	0.43
24:BA:2821:A:H2'	24:BA:2822:G:H8	1.83	0.43
25:BB:9:G:O2'	25:BB:10:G:H5'	2.19	0.43
25:BB:33:G:N2	25:BB:50:A:C4	2.87	0.43
26:BC:120:ASP:O	26:BC:121:ALA:O	2.37	0.43
26:BC:229:HIS:CE1	26:BC:230:PRO:HD2	2.54	0.43
28:BE:29:HIS:O	28:BE:32:VAL:HG22	2.19	0.43
29:BF:132:ARG:O	29:BF:133:GLU:CB	2.57	0.43
33:BJ:21:THR:C	33:BJ:23:LYS:H	2.22	0.43
39:BP:37:LYS:O	39:BP:37:LYS:CG	2.66	0.43
39:BP:44:GLY:HA3	39:BP:61:ARG:O	2.18	0.43
40:BQ:69:ARG:HH21	40:BQ:69:ARG:CG	2.32	0.43
40:BQ:88:GLU:OE1	40:BQ:88:GLU:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BR:43:ASN:HD22	41:BR:43:ASN:HA	1.57	0.43
45:BV:38:LEU:HD12	45:BV:38:LEU:HA	1.70	0.43
48:BY:40:SER:O	48:BY:42:LEU:N	2.52	0.43
1:CB:53:LEU:O	1:CB:57:ASN:HB2	2.19	0.43
1:CB:112:ARG:HA	1:CB:115:ASP:OD2	2.19	0.43
2:CC:149:LYS:HD2	2:CC:200:TRP:CE3	2.54	0.43
2:CC:168:ARG:HG2	2:CC:168:ARG:HH11	1.82	0.43
3:CD:10:LEU:O	3:CD:11:SER:C	2.57	0.43
3:CD:27:ILE:HG22	3:CD:27:ILE:O	2.19	0.43
3:CD:39:GLN:C	3:CD:41:GLY:H	2.21	0.43
4:CE:38:VAL:HG21	4:CE:66:ALA:C	2.39	0.43
5:CF:68:GLN:HG2	5:CF:69:GLU:HG3	2.01	0.43
6:CG:9:ARG:C	6:CG:10:LYS:HG3	2.39	0.43
6:CG:59:GLU:OE2	6:CG:63:VAL:HG23	2.18	0.43
6:CG:134:VAL:CB	6:CG:137:ARG:HH21	2.31	0.43
7:CH:38:VAL:O	7:CH:41:GLU:HB2	2.18	0.43
12:CM:47:LEU:HD23	12:CM:47:LEU:C	2.39	0.43
12:CM:95:PRO:HG3	12:CM:99:GLN:HE21	1.83	0.43
18:CS:18:VAL:CG2	18:CS:42:ASN:HB3	2.48	0.43
18:CS:52:ASN:HD22	18:CS:52:ASN:N	2.16	0.43
20:CU:24:LYS:NZ	20:CU:25:ALA:HB2	2.34	0.43
55:CA:95:C:H5'	55:CA:95:C:C6	2.53	0.43
55:CA:191:G:H2'	55:CA:192:A:C8	2.54	0.43
55:CA:293:G:H5'	55:CA:610:U:C5	2.54	0.43
55:CA:302:G:N3	55:CA:303:A:C8	2.87	0.43
55:CA:397:A:C6	55:CA:548:G:N7	2.87	0.43
55:CA:491:G:C2'	55:CA:492:C:H5'	2.48	0.43
55:CA:752:G:H1'	55:CA:754:C:H41	1.84	0.43
55:CA:759:A:C8	55:CA:760:G:C8	3.06	0.43
55:CA:774:G:C2	55:CA:806:C:C2	3.07	0.43
55:CA:810:C:H2'	55:CA:811:C:O4'	2.19	0.43
55:CA:926:G:H2'	55:CA:1505:G:C2	2.54	0.43
55:CA:946:A:H2'	55:CA:947:G:C8	2.54	0.43
55:CA:1409:C:H2'	55:CA:1410:A:C8	2.54	0.43
55:CA:1442:G:N2	55:CA:1443:C:C2	2.87	0.43
55:CA:1448:C:O2'	55:CA:1449:C:C6	2.67	0.43
55:CA:1494:G:H4'	24:DA:1913:A:C8	2.53	0.43
24:DA:320:A:H62	28:DE:132:LYS:HG3	1.82	0.43
24:DA:460:A:N3	24:DA:470:A:C6	2.87	0.43
24:DA:639:U:H2'	24:DA:640:C:C6	2.53	0.43
24:DA:807:U:H1'	24:DA:2445:G:H5'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1022:G:O6	33:DJ:68:LYS:HD3	2.19	0.43
24:DA:1693:U:H2'	26:DC:13:ARG:HH21	1.84	0.43
24:DA:1746:A:H2'	24:DA:1747:U:H6	1.81	0.43
24:DA:1774:C:C5	24:DA:1775:U:H5	2.37	0.43
24:DA:1817:G:H3'	26:DC:155:ARG:HH21	1.83	0.43
24:DA:2072:C:H2'	24:DA:2073:C:H5'	1.99	0.43
24:DA:2148:G:O2'	24:DA:2149:U:N1	2.50	0.43
24:DA:2304:G:N2	24:DA:2312:U:H3	2.16	0.43
24:DA:2636:C:H4'	27:DD:81:GLU:CD	2.39	0.43
24:DA:2869:G:C6	24:DA:2870:C:N3	2.87	0.43
56:DB:49:C:OP1	38:DO:102:ARG:N	2.44	0.43
56:DB:56:G:H21	56:DB:59:A:H2	1.66	0.43
31:DH:70:GLU:HB2	31:DH:71:LYS:HD2	1.99	0.43
33:DJ:45:THR:OG1	33:DJ:48:VAL:HB	2.19	0.43
34:DK:14:SER:HG	34:DK:51:LYS:H	1.65	0.43
35:DL:40:SER:O	35:DL:41:ARG:C	2.56	0.43
35:DL:93:ASN:CG	35:DL:94:THR:N	2.72	0.43
36:DM:62:LYS:C	36:DM:63:ILE:HD12	2.38	0.43
36:DM:100:LYS:HD3	36:DM:100:LYS:HA	1.88	0.43
40:DQ:87:VAL:HG11	41:DR:52:PRO:CG	2.42	0.43
46:DW:8:SER:O	46:DW:9:THR:CB	2.66	0.43
51:D1:8:ILE:HG22	51:D1:9:LYS:N	2.34	0.43
1:AB:9:LEU:HD21	1:AB:11:ALA:O	2.18	0.43
2:AC:5:HIS:HA	2:AC:6:PRO:HD2	1.87	0.43
3:AD:190:LEU:HD12	3:AD:190:LEU:O	2.17	0.43
4:AE:149:PRO:HA	4:AE:152:VAL:CG1	2.47	0.43
4:AE:155:LYS:HD3	7:AH:70:VAL:CG2	2.48	0.43
13:AN:46:LYS:O	18:AS:12:LEU:HD11	2.18	0.43
17:AR:66:LEU:O	17:AR:67:LEU:HD23	2.19	0.43
21:AA:71:A:C8	21:AA:100:G:C6	3.07	0.43
21:AA:165:G:C2	21:AA:166:U:C2	3.07	0.43
21:AA:183:C:H6	21:AA:183:C:H2'	1.47	0.43
21:AA:383:A:C5	21:AA:384:G:H1'	2.54	0.43
21:AA:551:U:O2'	21:AA:552:U:H5'	2.19	0.43
21:AA:688:G:C2	21:AA:689:C:C6	3.06	0.43
21:AA:1143:G:H2'	21:AA:1144:G:C8	2.53	0.43
21:AA:1234:C:O4'	21:AA:1364:U:H1'	2.19	0.43
21:AA:1363:A:O2'	21:AA:1364:U:H5''	2.18	0.43
21:AA:1363:A:C8	21:AA:1365:G:C5	3.07	0.43
21:AA:1402:C:H2'	21:AA:1403:C:O4'	2.17	0.43
24:BA:141:G:H3'	24:BA:142:A:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:416:U:C4	24:BA:417:C:C4	3.07	0.43
24:BA:536:G:O6	24:BA:537:G:C2	2.71	0.43
24:BA:558:U:OP1	33:BJ:113:PRO:HB2	2.18	0.43
24:BA:1015:U:O2'	24:BA:1016:G:H5'	2.19	0.43
24:BA:1206:G:C2	24:BA:1207:C:C2	3.07	0.43
24:BA:1266:G:H5''	42:BS:15:GLN:HE22	1.84	0.43
24:BA:1456:G:H2'	24:BA:1457:U:H5'	2.00	0.43
24:BA:1810:A:O2'	24:BA:1811:G:H5'	2.19	0.43
24:BA:1885:A:H2'	24:BA:1886:U:O4'	2.19	0.43
24:BA:2086:U:H2'	24:BA:2087:G:O4'	2.18	0.43
24:BA:2215:C:H6	24:BA:2215:C:O5'	2.02	0.43
24:BA:2674:G:C4	24:BA:2675:A:C8	3.06	0.43
24:BA:2748:A:C6	24:BA:2749:A:C5	3.06	0.43
24:BA:2819:G:H5''	59:BA:3813:HOH:O	2.19	0.43
24:BA:2824:C:C4	24:BA:2825:G:C5	3.07	0.43
24:BA:2842:G:C2	24:BA:2876:G:C2	3.07	0.43
24:BA:2864:G:H2'	24:BA:2865:U:C6	2.54	0.43
25:BB:20:G:N2	25:BB:64:G:N3	2.66	0.43
26:BC:145:MET:HB2	26:BC:152:GLN:NE2	2.34	0.43
28:BE:121:VAL:O	28:BE:189:THR:HA	2.18	0.43
29:BF:28:PRO:HB3	29:BF:159:ALA:HB2	2.00	0.43
31:BH:21:VAL:CG2	31:BH:25:TYR:HD2	2.29	0.43
31:BH:97:ARG:HE	31:BH:97:ARG:HB2	1.65	0.43
35:BL:40:SER:O	35:BL:41:ARG:HB2	2.18	0.43
36:BM:52:ALA:O	36:BM:53:MET:C	2.57	0.43
38:BO:116:GLN:O	38:BO:117:PHE:HB3	2.19	0.43
40:BQ:88:GLU:C	40:BQ:88:GLU:CD	2.78	0.43
46:BW:22:VAL:CG1	46:BW:25:PHE:CE2	3.01	0.43
1:CB:10:LYS:HA	1:CB:10:LYS:HE3	2.00	0.43
2:CC:9:ILE:CG2	2:CC:10:ARG:N	2.82	0.43
3:CD:90:LEU:HA	3:CD:90:LEU:HD13	1.80	0.43
5:CF:7:VAL:O	5:CF:7:VAL:HG22	2.19	0.43
5:CF:38:ARG:HB3	5:CF:97:THR:HA	2.00	0.43
7:CH:6:ILE:HB	7:CH:76:ARG:NH1	2.33	0.43
7:CH:95:MET:HE1	7:CH:98:LEU:HB2	2.01	0.43
10:CK:47:GLY:CA	10:CK:56:LYS:HE3	2.49	0.43
12:CM:16:ILE:H	12:CM:16:ILE:CD1	2.26	0.43
15:CP:48:GLU:CG	15:CP:51:ARG:HH21	2.25	0.43
19:CT:22:SER:HB3	55:CA:1458:G:O2'	2.17	0.43
19:CT:60:GLN:HB3	19:CT:65:LEU:HD12	2.01	0.43
55:CA:67:C:O2'	55:CA:68:G:H8	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:444:G:C2	55:CA:445:G:C8	3.06	0.43
55:CA:496:A:O2'	55:CA:497:G:C8	2.66	0.43
55:CA:536:C:O2'	55:CA:537:G:H5'	2.19	0.43
55:CA:595:A:N6	55:CA:641:U:C6	2.87	0.43
55:CA:694:A:H3'	55:CA:695:A:H5''	2.01	0.43
55:CA:741:G:C5	55:CA:742:G:N7	2.87	0.43
55:CA:994:A:O2'	55:CA:995:C:C5'	2.66	0.43
55:CA:1269:A:C2	55:CA:1313:U:H1'	2.54	0.43
55:CA:1528:U:H5'	55:CA:1529:G:OP1	2.19	0.43
24:DA:67:U:H2'	24:DA:68:G:C8	2.44	0.43
24:DA:117:G:C2	24:DA:119:A:N6	2.87	0.43
24:DA:143:C:H3'	24:DA:144:A:H8	1.84	0.43
24:DA:294:A:C2'	24:DA:295:G:O5'	2.67	0.43
24:DA:324:A:N7	24:DA:339:U:H4'	2.34	0.43
24:DA:352:A:H2'	24:DA:353:C:C4'	2.49	0.43
24:DA:467:G:H2'	24:DA:468:G:C8	2.53	0.43
24:DA:527:C:O2'	24:DA:528:A:N7	2.51	0.43
24:DA:528:A:H8	24:DA:528:A:H2'	1.63	0.43
24:DA:739:A:O2'	24:DA:740:C:H5	2.02	0.43
24:DA:1245:G:OP1	35:DL:8:PRO:HG3	2.19	0.43
24:DA:1386:C:O2'	24:DA:1387:A:O5'	2.28	0.43
24:DA:1528:A:H2'	24:DA:1529:G:O4'	2.19	0.43
24:DA:1638:C:H5''	24:DA:2710:C:O2'	2.18	0.43
24:DA:1867:G:O6	24:DA:1875:G:N2	2.52	0.43
24:DA:2078:C:C4	24:DA:2079:U:C4	3.06	0.43
24:DA:2262:U:H4'	24:DA:2328:A:H2	1.79	0.43
24:DA:2266:A:H4'	24:DA:2267:A:O5'	2.18	0.43
24:DA:2361:G:H2'	24:DA:2362:C:H6	1.83	0.43
24:DA:2547:A:C8	24:DA:2566:A:C8	3.07	0.43
24:DA:2811:G:OP1	27:DD:61:THR:HB	2.18	0.43
56:DB:16:G:C6	56:DB:69:G:C4	3.07	0.43
26:DC:16:VAL:N	26:DC:203:VAL:HG12	2.33	0.43
27:DD:37:VAL:HB	27:DD:91:THR:HA	2.00	0.43
27:DD:47:ALA:HB2	27:DD:83:ARG:HD2	2.00	0.43
27:DD:76:GLY:O	27:DD:78:GLY:N	2.52	0.43
27:DD:115:GLY:O	37:DN:3:HIS:CE1	2.72	0.43
32:DI:127:SER:O	32:DI:131:THR:HG23	2.19	0.43
33:DJ:69:ARG:CZ	33:DJ:89:PHE:HE1	2.32	0.43
33:DJ:84:ILE:O	33:DJ:84:ILE:HG23	2.19	0.43
38:DO:18:LEU:HD13	38:DO:25:ARG:HD2	2.00	0.43
38:DO:58:ILE:O	38:DO:62:LEU:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DP:91:VAL:HG11	39:DP:96:LEU:CG	2.49	0.43
40:DQ:87:VAL:HG12	40:DQ:88:GLU:N	2.33	0.43
41:DR:55:ASP:CG	41:DR:56:GLY:N	2.72	0.43
43:DT:14:PRO:O	43:DT:32:LEU:HA	2.18	0.43
49:DZ:8:GLN:OE1	49:DZ:30:ARG:O	2.37	0.43
50:D0:42:ILE:HA	50:D0:42:ILE:HD13	1.76	0.43
1:AB:38:HIS:O	1:AB:38:HIS:HD2	2.02	0.43
2:AC:78:LYS:HG2	2:AC:79:LYS:HD2	2.01	0.43
2:AC:179:ALA:HB1	2:AC:202:PHE:HE1	1.83	0.43
3:AD:88:ASN:O	3:AD:91:ALA:HB3	2.19	0.43
3:AD:100:VAL:HG12	3:AD:100:VAL:O	2.17	0.43
4:AE:83:PRO:CG	4:AE:97:PRO:HD3	2.48	0.43
10:AK:94:SER:HA	10:AK:97:ARG:HG2	2.01	0.43
15:AP:22:ALA:CB	15:AP:32:PHE:HA	2.49	0.43
18:AS:9:PHE:CE1	21:AA:1318:A:H4'	2.54	0.43
21:AA:49:U:O4	21:AA:365:U:C5	2.69	0.43
21:AA:792:A:C4	21:AA:794:A:C6	3.07	0.43
21:AA:1074:G:N2	21:AA:1102:A:C5	2.87	0.43
21:AA:1139:G:C2	21:AA:1141:C:N4	2.87	0.43
21:AA:1390:U:H2'	21:AA:1391:U:H6	1.84	0.43
24:BA:57:C:H2'	24:BA:58:G:O4'	2.19	0.43
24:BA:527:C:H4'	24:BA:528:A:O5'	2.19	0.43
24:BA:613:A:C8	24:BA:616:A:N1	2.86	0.43
24:BA:954:G:C6	24:BA:955:U:C4	3.06	0.43
24:BA:994:C:O2	41:BR:10:LYS:HE2	2.19	0.43
24:BA:1643:G:H2'	24:BA:1644:C:O4'	2.18	0.43
24:BA:1857:G:HO2'	24:BA:1858:A:P	2.41	0.43
24:BA:1858:A:H2'	24:BA:1859:U:H6	1.83	0.43
24:BA:1860:G:C2	24:BA:1861:G:C8	3.07	0.43
24:BA:2026:U:C2	24:BA:2027:G:C8	3.06	0.43
24:BA:2040:G:H2'	24:BA:2041:U:C6	2.53	0.43
24:BA:2503:A:O2'	24:BA:2505:G:OP2	2.26	0.43
24:BA:2548:U:O2	34:BK:23:LYS:NZ	2.38	0.43
24:BA:2611:C:H2'	24:BA:2612:C:H6	1.84	0.43
24:BA:2617:U:O2'	24:BA:2618:G:H5'	2.18	0.43
28:BE:178:VAL:HG22	28:BE:179:SER:N	2.33	0.43
31:BH:37:VAL:HG23	31:BH:38:PRO:HD2	2.00	0.43
31:BH:62:LEU:HD12	31:BH:62:LEU:C	2.39	0.43
36:BM:49:ALA:HB1	36:BM:120:ALA:HB1	2.01	0.43
38:BO:94:ARG:O	38:BO:95:SER:C	2.57	0.43
44:BU:17:ASP:HB3	44:BU:20:LYS:HD3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BX:20:ALA:O	47:BX:21:LEU:HB2	2.19	0.43
49:BZ:26:LEU:HA	49:BZ:26:LEU:HD23	1.79	0.43
50:B0:45:ASP:O	50:B0:52:LYS:HE3	2.18	0.43
1:CB:46:VAL:N	1:CB:47:PRO:HD2	2.33	0.43
3:CD:125:ASN:HB2	3:CD:141:VAL:H	1.82	0.43
6:CG:9:ARG:HH12	55:CA:1346:A:H62	1.64	0.43
7:CH:10:LEU:HD13	7:CH:75:GLN:O	2.19	0.43
8:CI:80:HIS:CD2	8:CI:84:ARG:HG3	2.53	0.43
10:CK:127:ARG:HH21	55:CA:795:C:C5'	2.28	0.43
11:CL:59:GLY:O	11:CL:60:PHE:C	2.57	0.43
16:CQ:11:VAL:HG23	16:CQ:56:ASP:O	2.19	0.43
16:CQ:62:GLU:HB2	16:CQ:72:TRP:CH2	2.54	0.43
55:CA:10:A:H2'	55:CA:11:G:H8	1.84	0.43
55:CA:533:A:C2	55:CA:536:C:C6	3.06	0.43
55:CA:680:C:C2	55:CA:711:G:N2	2.87	0.43
55:CA:774:G:C6	55:CA:775:G:C5	3.07	0.43
55:CA:790:A:N6	55:CA:791:G:C6	2.86	0.43
55:CA:818:G:C3'	55:CA:819:A:C5'	2.97	0.43
55:CA:906:A:N6	59:CA:1760:HOH:O	2.51	0.43
55:CA:1064:G:C2	55:CA:1066:C:N4	2.87	0.43
55:CA:1106:G:C4	55:CA:1107:C:C5	3.07	0.43
55:CA:1264:U:C2	55:CA:1272:G:N2	2.87	0.43
55:CA:1303:C:H2'	55:CA:1303:C:O2	2.18	0.43
55:CA:1386:G:N3	55:CA:1387:G:C8	2.87	0.43
24:DA:3:U:H2'	24:DA:4:U:O4'	2.18	0.43
24:DA:252:G:H2'	24:DA:253:C:H6	1.80	0.43
24:DA:308:G:C2	24:DA:309:A:C2	3.06	0.43
24:DA:478:A:N1	24:DA:480:A:C4	2.87	0.43
24:DA:486:C:O5'	24:DA:486:C:H6	2.01	0.43
24:DA:533:G:N2	40:DQ:44:TYR:CD1	2.82	0.43
24:DA:763:G:C5	24:DA:765:C:C4	3.07	0.43
24:DA:1348:C:C5	24:DA:1349:C:C2	3.06	0.43
24:DA:1407:G:H2'	24:DA:1408:G:C8	2.53	0.43
24:DA:1413:A:C5	24:DA:1414:C:N4	2.87	0.43
24:DA:1462:C:O2'	24:DA:1463:C:C5'	2.66	0.43
24:DA:1695:G:N3	24:DA:1695:G:C2'	2.82	0.43
24:DA:1766:G:C4	24:DA:1987:A:C2	3.06	0.43
24:DA:1936:A:C4	24:DA:1940:U:C5	3.07	0.43
24:DA:1945:G:N2	24:DA:1946:U:C2	2.87	0.43
24:DA:2355:G:H5''	46:DW:20:LEU:HD22	2.00	0.43
24:DA:2389:G:O5'	24:DA:2390:U:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2458:G:C4	24:DA:2490:G:C6	3.07	0.43
24:DA:2542:A:C2	24:DA:2567:G:O6	2.72	0.43
24:DA:2654:A:N3	24:DA:2656:U:C4	2.87	0.43
24:DA:2683:C:H2'	24:DA:2684:U:H6	1.84	0.43
24:DA:2686:G:H2'	24:DA:2687:U:C6	2.54	0.43
24:DA:2869:G:C5	24:DA:2870:C:C4	3.06	0.43
26:DC:250:GLN:H	26:DC:250:GLN:HG2	1.51	0.43
27:DD:98:VAL:O	27:DD:99:GLU:C	2.58	0.43
27:DD:119:ALA:O	27:DD:120:GLY:O	2.37	0.43
28:DE:149:ILE:CD1	28:DE:188:MET:HG3	2.49	0.43
28:DE:178:VAL:HG13	28:DE:179:SER:H	1.83	0.43
29:DF:72:SER:H	29:DF:78:ILE:HG21	1.84	0.43
30:DG:116:LEU:HD13	30:DG:120:ILE:O	2.19	0.43
30:DG:132:LEU:HD12	30:DG:132:LEU:N	2.34	0.43
31:DH:84:ALA:HB3	31:DH:148:ALA:HB2	2.01	0.43
31:DH:90:LEU:HB3	31:DH:123:ARG:HD2	2.00	0.43
33:DJ:17:VAL:HG23	33:DJ:137:PRO:CB	2.44	0.43
33:DJ:110:PRO:O	33:DJ:115:GLY:HA3	2.19	0.43
35:DL:79:LEU:CB	35:DL:113:ALA:H	2.23	0.43
39:DP:85:VAL:O	39:DP:85:VAL:HG13	2.18	0.43
41:DR:16:GLU:HG3	41:DR:16:GLU:O	2.19	0.43
43:DT:39:THR:C	43:DT:41:ALA:H	2.22	0.43
44:DU:58:VAL:HG12	44:DU:59:GLU:N	2.34	0.43
48:DY:31:GLN:C	48:DY:33:ALA:N	2.72	0.43
1:AB:89:PHE:O	1:AB:90:PHE:HB3	2.19	0.43
2:AC:3:LYS:HE3	21:AA:1191:A:H5''	2.00	0.43
4:AE:93:VAL:HG12	4:AE:94:PHE:N	2.33	0.43
10:AK:39:ASN:O	21:AA:684:U:O2'	2.36	0.43
11:AL:22:ALA:O	11:AL:23:LEU:O	2.37	0.43
12:AM:5:GLY:O	12:AM:7:ASN:N	2.51	0.43
14:AO:31:LEU:CD1	14:AO:62:ARG:HB2	2.48	0.43
20:AU:19:LYS:HA	20:AU:19:LYS:CE	2.48	0.43
21:AA:329:A:H2'	21:AA:332:G:N7	2.34	0.43
21:AA:782:A:H2'	21:AA:783:C:O4'	2.19	0.43
21:AA:987:G:H2'	21:AA:988:G:H8	1.84	0.43
21:AA:1059:C:O2'	21:AA:1060:U:H5'	2.19	0.43
21:AA:1124:G:C2	21:AA:1150:A:C2	3.07	0.43
21:AA:1498:U:H2'	23:AW:2:U:OP1	2.18	0.43
24:BA:149:A:H2'	24:BA:150:U:H6	1.84	0.43
24:BA:176:A:C5	24:BA:177:G:C5	3.07	0.43
24:BA:247:G:P	24:BA:388:G:H21	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:541:A:C5	24:BA:542:C:C5	3.07	0.43
24:BA:825:A:C2	24:BA:833:A:C2	3.06	0.43
24:BA:857:G:C2'	24:BA:858:G:H5'	2.49	0.43
24:BA:1006:C:H1'	33:BJ:108:MET:HB3	2.00	0.43
24:BA:1032:A:O2'	24:BA:1033:U:H5'	2.19	0.43
24:BA:1034:G:C6	24:BA:1035:U:N3	2.87	0.43
24:BA:1056:G:O2'	24:BA:1086:A:H1'	2.19	0.43
24:BA:1342:A:OP2	24:BA:1602:U:O4	2.36	0.43
24:BA:1569:A:C6	24:BA:1570:A:C2	3.07	0.43
24:BA:1719:G:H2'	24:BA:1720:U:H6	1.84	0.43
24:BA:1849:G:H2'	24:BA:1850:G:C8	2.53	0.43
24:BA:1866:A:H61	24:BA:1875:G:C2'	2.32	0.43
24:BA:1967:C:C2	24:BA:1968:G:C8	3.07	0.43
24:BA:2298:A:H2'	24:BA:2299:U:C6	2.54	0.43
31:BH:24:GLY:O	31:BH:26:ALA:N	2.52	0.43
33:BJ:44:TYR:C	33:BJ:44:TYR:HD1	2.22	0.43
33:BJ:44:TYR:CD2	40:BQ:63:ARG:HG2	2.54	0.43
34:BK:43:ILE:CG1	34:BK:56:ASP:HB2	2.48	0.43
39:BP:105:LYS:HA	39:BP:108:ARG:NH2	2.25	0.43
40:BQ:40:LYS:HA	40:BQ:43:GLN:HB2	2.00	0.43
40:BQ:91:ARG:NE	41:BR:11:GLN:HB2	2.34	0.43
47:BX:12:VAL:CG2	47:BX:28:PHE:HB2	2.48	0.43
47:BX:32:LEU:HA	47:BX:51:SER:HA	2.00	0.43
47:BX:51:SER:O	47:BX:52:ALA:C	2.55	0.43
50:B0:33:SER:OG	50:B0:35:GLU:HG3	2.19	0.43
1:CB:74:ALA:C	1:CB:76:SER:H	2.22	0.43
4:CE:107:GLY:O	4:CE:108:GLY:C	2.56	0.43
6:CG:104:VAL:HA	6:CG:107:ALA:CB	2.48	0.43
12:CM:77:LYS:HE3	12:CM:77:LYS:C	2.38	0.43
20:CU:24:LYS:HA	20:CU:24:LYS:HD2	1.87	0.43
55:CA:110:C:O2'	55:CA:111:G:H5'	2.19	0.43
55:CA:181:A:H4'	55:CA:182:A:O5'	2.18	0.43
55:CA:251:G:C8	55:CA:266:G:C8	3.06	0.43
55:CA:727:G:N1	55:CA:731:G:C6	2.86	0.43
55:CA:959:A:N3	55:CA:985:C:H1'	2.34	0.43
55:CA:1175:G:H2'	55:CA:1176:A:O4'	2.19	0.43
24:DA:94:A:C6	24:DA:95:A:C6	3.06	0.43
24:DA:281:C:H2'	24:DA:282:A:C8	2.51	0.43
24:DA:422:A:N1	24:DA:423:A:C6	2.87	0.43
24:DA:430:A:OP2	24:DA:431:U:H5	2.02	0.43
24:DA:674:G:H5''	28:DE:71:GLY:CA	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:695:G:C2	24:DA:768:G:C2	3.07	0.43
24:DA:962:G:O2'	24:DA:963:U:C5'	2.65	0.43
24:DA:1108:U:H2'	24:DA:1109:C:O4'	2.18	0.43
24:DA:1142:A:C8	24:DA:1144:A:C5	3.07	0.43
24:DA:1765:U:O2'	24:DA:1766:G:H5'	2.19	0.43
24:DA:2312:U:P	29:DF:70:ARG:HB3	2.59	0.43
24:DA:2428:G:O5'	24:DA:2428:G:H8	2.01	0.43
24:DA:2584:U:H5	59:DA:3697:HOH:O	2.02	0.43
24:DA:2854:G:H2'	24:DA:2855:C:C6	2.53	0.43
28:DE:75:SER:O	28:DE:78:TRP:HB2	2.19	0.43
28:DE:134:LEU:O	28:DE:138:LEU:HG	2.18	0.43
29:DF:160:LYS:HE2	29:DF:160:LYS:HB2	1.87	0.43
30:DG:78:VAL:HG23	30:DG:79:THR:HG23	2.01	0.43
35:DL:50:PHE:CE2	35:DL:53:GLY:N	2.86	0.43
35:DL:132:ARG:HA	35:DL:135:ILE:HG22	2.00	0.43
37:DN:16:HIS:C	37:DN:18:GLN:H	2.22	0.43
38:DO:7:ARG:HA	38:DO:10:ARG:NH2	2.34	0.43
38:DO:89:ASP:O	38:DO:90:VAL:HG13	2.18	0.43
41:DR:23:GLU:O	41:DR:25:LEU:HD22	2.19	0.43
42:DS:7:HIS:HB2	42:DS:50:VAL:CG2	2.49	0.43
45:DV:2:PHE:HD1	45:DV:50:MET:HE3	1.83	0.43
46:DW:14:ASP:C	46:DW:16:GLU:H	2.23	0.43
49:DZ:40:THR:C	49:DZ:42:ALA:N	2.71	0.43
1:AB:9:LEU:HD12	1:AB:42:LEU:HD11	1.99	0.42
3:AD:62:ARG:HA	3:AD:62:ARG:CZ	2.49	0.42
7:AH:21:LYS:HE2	7:AH:21:LYS:CA	2.48	0.42
8:AI:52:GLU:C	8:AI:54:VAL:H	2.23	0.42
10:AK:121:ARG:HA	10:AK:122:PRO:HD2	1.89	0.42
11:AL:24:GLU:HB3	11:AL:26:CYS:SG	2.59	0.42
13:AN:19:TYR:HB2	13:AN:54:SER:OG	2.19	0.42
13:AN:20:PHE:O	13:AN:22:LYS:N	2.52	0.42
14:AO:55:LEU:O	14:AO:59:VAL:HG23	2.19	0.42
16:AQ:44:HIS:CE1	21:AA:276:G:O3'	2.66	0.42
17:AR:29:LYS:HG3	17:AR:30:ASN:ND2	2.34	0.42
21:AA:308:C:H2'	21:AA:309:A:C8	2.51	0.42
21:AA:350:G:N1	21:AA:351:G:O6	2.52	0.42
21:AA:374:A:H5''	21:AA:452:A:C2	2.54	0.42
21:AA:497:G:O2'	21:AA:498:A:H8	1.91	0.42
21:AA:569:C:H6	21:AA:569:C:O5'	2.01	0.42
21:AA:843:U:H2'	21:AA:844:G:H5'	2.01	0.42
21:AA:910:C:H2'	21:AA:911:U:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1134:G:C2	21:AA:1141:C:C2	3.07	0.42
21:AA:1145:A:HO2'	21:AA:1146:A:H8	1.62	0.42
24:BA:281:C:H2'	24:BA:282:A:H8	1.82	0.42
24:BA:464:U:O2'	24:BA:465:G:H5'	2.19	0.42
24:BA:541:A:C2	24:BA:553:G:N3	2.87	0.42
24:BA:638:G:C6	24:BA:651:G:C2	3.07	0.42
24:BA:652:U:H4'	24:BA:653:U:OP2	2.19	0.42
24:BA:947:A:O2'	24:BA:984:A:H2	2.02	0.42
24:BA:992:C:O2	24:BA:993:G:C8	2.72	0.42
24:BA:1017:G:C5	24:BA:1018:U:H5	2.35	0.42
24:BA:1140:C:P	33:BJ:68:LYS:NZ	2.83	0.42
24:BA:1252:G:N3	40:BQ:32:ARG:CG	2.82	0.42
24:BA:1281:G:H2'	24:BA:1282:U:C6	2.53	0.42
24:BA:1444:G:C6	24:BA:1445:G:C6	3.07	0.42
24:BA:1652:A:H2	24:BA:2006:C:C2	2.37	0.42
24:BA:1654:A:C4'	27:BD:118:PHE:CE1	3.02	0.42
24:BA:1812:U:H2'	24:BA:1813:G:C8	2.53	0.42
24:BA:2154:A:H5'	24:BA:2155:U:OP2	2.18	0.42
24:BA:2209:G:C6	24:BA:2210:U:N3	2.87	0.42
24:BA:2688:G:H1'	24:BA:2721:A:N6	2.34	0.42
25:BB:46:A:C5	25:BB:47:C:C5	3.07	0.42
25:BB:73:A:C5	25:BB:104:A:C2	3.07	0.42
26:BC:68:ARG:HD3	26:BC:103:ILE:CD1	2.17	0.42
26:BC:80:LEU:HD11	26:BC:109:LEU:CG	2.41	0.42
27:BD:113:SER:HB2	27:BD:114:LYS:CE	2.49	0.42
28:BE:77:ILE:C	28:BE:78:TRP:O	2.57	0.42
29:BF:127:TYR:O	29:BF:128:SER:HB2	2.19	0.42
33:BJ:35:ARG:O	33:BJ:37:ARG:N	2.52	0.42
33:BJ:36:LEU:HD12	33:BJ:36:LEU:HA	1.70	0.42
35:BL:62:PRO:HB2	53:B3:29:ARG:NH2	2.34	0.42
36:BM:61:GLY:HA2	36:BM:107:GLY:CA	2.49	0.42
37:BN:73:ASN:O	37:BN:74:GLU:C	2.56	0.42
38:BO:57:ALA:O	38:BO:59:ALA:N	2.52	0.42
39:BP:24:THR:O	39:BP:24:THR:HG23	2.19	0.42
40:BQ:67:ALA:O	40:BQ:68:ALA:C	2.57	0.42
41:BR:37:GLU:OE1	41:BR:37:GLU:O	2.36	0.42
41:BR:43:ASN:HB3	41:BR:44:GLY:H	1.56	0.42
41:BR:60:LYS:H	41:BR:100:GLY:HA3	1.85	0.42
42:BS:54:ALA:O	42:BS:57:ASN:HB2	2.19	0.42
49:BZ:3:THR:C	49:BZ:4:ILE:CG2	2.87	0.42
1:CB:20:ARG:CG	55:CA:831:A:OP1	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:187:ARG:CZ	3:CD:191:SER:OG	2.67	0.42
5:CF:3:HIS:CD2	5:CF:65:GLU:HG3	2.53	0.42
5:CF:57:ALA:O	5:CF:59:TYR:CD1	2.70	0.42
8:CI:35:GLU:O	8:CI:36:GLN:C	2.57	0.42
10:CK:44:ALA:HB1	10:CK:68:ARG:NH2	2.34	0.42
11:CL:22:ALA:CB	11:CL:94:TYR:OH	2.67	0.42
12:CM:107:THR:HG21	55:CA:1307:U:H1'	2.00	0.42
16:CQ:9:GLY:O	16:CQ:57:VAL:HG13	2.19	0.42
16:CQ:17:GLU:O	55:CA:254:G:O2'	2.37	0.42
18:CS:4:LEU:HB3	18:CS:5:LYS:H	1.56	0.42
18:CS:11:ASP:OD1	18:CS:14:LEU:HD21	2.19	0.42
55:CA:90:C:O2'	55:CA:91:U:O4'	2.37	0.42
55:CA:266:G:O2'	55:CA:267:C:H3'	2.19	0.42
55:CA:324:G:N2	55:CA:327:A:C8	2.87	0.42
55:CA:550:G:H2'	55:CA:551:U:C6	2.54	0.42
55:CA:610:U:O2	55:CA:610:U:O4'	2.36	0.42
55:CA:692:U:H5'	55:CA:797:C:H4'	2.01	0.42
55:CA:855:U:O2'	55:CA:856:C:H5'	2.19	0.42
55:CA:1231:G:C6	55:CA:1232:U:C4	3.07	0.42
24:DA:242:G:P	53:D3:2:LYS:NZ	2.92	0.42
24:DA:531:C:C6	24:DA:2035:G:C2	3.07	0.42
24:DA:617:G:C4	24:DA:618:G:C8	3.07	0.42
24:DA:831:G:O2'	24:DA:832:U:C5'	2.67	0.42
24:DA:1328:A:H2'	24:DA:1330:C:N4	2.33	0.42
24:DA:1593:A:C6	24:DA:1594:U:C4	3.07	0.42
24:DA:1598:A:H2'	24:DA:1599:U:O4'	2.19	0.42
24:DA:1650:A:O2'	37:DN:108:ALA:HB1	2.19	0.42
24:DA:1889:A:C2	24:DA:2086:U:H1'	2.53	0.42
24:DA:2019:A:H4'	40:DQ:33:VAL:CG2	2.49	0.42
24:DA:2183:A:H2'	24:DA:2184:A:C8	2.54	0.42
24:DA:2391:G:O2'	24:DA:2392:A:H8	2.02	0.42
24:DA:2425:A:H5''	24:DA:2426:A:H2'	2.01	0.42
24:DA:2438:U:O2'	24:DA:2439:A:H5''	2.19	0.42
24:DA:2467:C:H2'	24:DA:2468:A:O4'	2.19	0.42
24:DA:2492:U:O5'	24:DA:2492:U:H6	2.01	0.42
24:DA:2522:U:O2'	24:DA:2523:G:H5'	2.19	0.42
24:DA:2620:C:O4'	27:DD:161:MET:HG3	2.18	0.42
24:DA:2624:G:C2	24:DA:2625:G:H1'	2.54	0.42
24:DA:2654:A:C4	24:DA:2656:U:C4	3.07	0.42
24:DA:2693:G:C2	24:DA:2694:G:N7	2.87	0.42
24:DA:2746:U:N3	24:DA:2759:G:N1	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:16:G:H2'	56:DB:17:C:H6	1.84	0.42
26:DC:171:VAL:HG12	26:DC:173:LEU:CD1	2.49	0.42
27:DD:196:ALA:O	27:DD:197:THR:C	2.57	0.42
30:DG:120:ILE:CG1	30:DG:140:ILE:HG22	2.41	0.42
30:DG:175:LYS:HD3	30:DG:175:LYS:C	2.40	0.42
32:DI:29:GLN:O	32:DI:30:GLN:HB3	2.19	0.42
34:DK:19:VAL:HG12	34:DK:41:ILE:CG1	2.49	0.42
36:DM:41:LEU:HD23	36:DM:46:ILE:CG2	2.44	0.42
37:DN:82:GLU:O	37:DN:85:PRO:HD2	2.19	0.42
38:DO:108:ASP:C	38:DO:110:ALA:H	2.22	0.42
39:DP:61:ARG:NH1	39:DP:63:ILE:HD11	2.34	0.42
39:DP:86:LYS:N	39:DP:86:LYS:HZ3	2.16	0.42
40:DQ:4:LYS:CD	40:DQ:7:VAL:H	2.32	0.42
40:DQ:61:ILE:HD12	40:DQ:61:ILE:N	2.34	0.42
45:DV:4:ILE:HD11	45:DV:50:MET:HE2	2.00	0.42
45:DV:26:PHE:HE2	45:DV:42:LEU:HD12	1.84	0.42
46:DW:27:GLY:HA3	46:DW:31:LEU:HD11	1.95	0.42
2:AC:171:ARG:HG2	2:AC:173:PRO:HD3	2.00	0.42
4:AE:37:VAL:CG2	4:AE:113:VAL:HG12	2.40	0.42
4:AE:83:PRO:HD3	4:AE:97:PRO:CD	2.49	0.42
7:AH:11:THR:HA	7:AH:14:ARG:HB3	2.01	0.42
8:AI:61:ASP:CG	8:AI:62:LEU:N	2.72	0.42
8:AI:62:LEU:N	8:AI:62:LEU:HD23	2.34	0.42
13:AN:56:PRO:HA	13:AN:59:GLN:OE1	2.19	0.42
13:AN:74:ARG:CG	21:AA:1358:U:OP1	2.67	0.42
17:AR:32:ILE:O	17:AR:32:ILE:HG13	2.18	0.42
19:AT:3:ILE:HA	19:AT:7:LYS:HD3	2.01	0.42
20:AU:44:ARG:N	20:AU:44:ARG:HD2	2.35	0.42
21:AA:564:C:C4	21:AA:565:U:C4	3.07	0.42
21:AA:692:U:O2	21:AA:694:A:C8	2.72	0.42
21:AA:1021:A:C3'	21:AA:1022:A:H5''	2.49	0.42
21:AA:1087:G:N2	21:AA:1088:G:C5	2.87	0.42
21:AA:1091:U:N3	21:AA:1094:G:OP2	2.38	0.42
21:AA:1118:U:H1'	21:AA:1179:A:C4	2.54	0.42
21:AA:1206:G:H2'	21:AA:1207:G:O4'	2.19	0.42
21:AA:1251:A:H1'	21:AA:1369:C:O2'	2.19	0.42
21:AA:1320:C:O2'	21:AA:1321:U:O5'	2.37	0.42
21:AA:1449:C:C2	21:AA:1455:G:C2	3.07	0.42
22:AV:33:U:H2'	22:AV:35:A:N7	2.34	0.42
24:BA:55:G:H2'	24:BA:56:A:H8	1.84	0.42
24:BA:84:A:H1'	24:BA:85:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:85:G:C5	24:BA:98:G:C2	3.07	0.42
24:BA:184:C:H2'	24:BA:185:G:C8	2.53	0.42
24:BA:388:G:H8	24:BA:388:G:H2'	1.70	0.42
24:BA:447:A:N1	24:BA:454:A:H2'	2.34	0.42
24:BA:683:U:C2'	24:BA:684:G:O5'	2.67	0.42
24:BA:714:U:H2'	24:BA:716:A:N7	2.34	0.42
24:BA:776:G:H4'	24:BA:777:G:H5''	2.01	0.42
24:BA:858:G:C5	24:BA:2268:A:C2	3.07	0.42
24:BA:988:A:C2	24:BA:989:G:C2	3.07	0.42
24:BA:991:C:C2	24:BA:1185:G:C6	3.08	0.42
24:BA:1060:U:OP1	24:BA:1060:U:C6	2.68	0.42
24:BA:1654:A:C4'	27:BD:118:PHE:CZ	2.98	0.42
24:BA:1659:G:C2	24:BA:2002:G:N3	2.87	0.42
24:BA:1677:A:C6	24:BA:1678:A:C6	3.07	0.42
24:BA:1734:G:O2'	24:BA:1735:A:H5'	2.19	0.42
24:BA:1967:C:H2'	24:BA:1968:G:C8	2.54	0.42
24:BA:1996:C:C5	34:BK:32:TYR:OH	2.72	0.42
24:BA:2074:U:N3	24:BA:2075:U:C4	2.87	0.42
24:BA:2231:U:H2'	24:BA:2232:C:H6	1.83	0.42
24:BA:2555:U:C5	24:BA:2556:C:C2	3.07	0.42
24:BA:2845:U:H2'	24:BA:2846:G:O4'	2.19	0.42
26:BC:104:LEU:HA	26:BC:104:LEU:HD12	1.68	0.42
26:BC:209:ALA:HA	26:BC:212:TRP:CE2	2.54	0.42
27:BD:103:ASP:CG	27:BD:104:VAL:N	2.72	0.42
27:BD:151:THR:HB	27:BD:152:PRO:CD	2.46	0.42
29:BF:100:GLU:C	29:BF:102:LEU:N	2.73	0.42
32:BI:40:ALA:HB3	32:BI:68:PHE:CE1	2.54	0.42
32:BI:126:ARG:HD3	32:BI:126:ARG:H	1.84	0.42
33:BJ:72:LYS:HB2	33:BJ:89:PHE:HB2	2.01	0.42
34:BK:18:ARG:HA	34:BK:18:ARG:HD2	1.78	0.42
34:BK:117:SER:C	34:BK:118:LEU:O	2.58	0.42
35:BL:82:LEU:C	35:BL:82:LEU:HD23	2.40	0.42
36:BM:69:PRO:CA	36:BM:94:ALA:HB2	2.49	0.42
36:BM:109:PRO:O	36:BM:110:GLU:C	2.57	0.42
37:BN:96:ARG:NH2	37:BN:116:VAL:HG23	2.34	0.42
40:BQ:93:ILE:O	40:BQ:93:ILE:HG12	2.16	0.42
41:BR:24:LYS:HB3	41:BR:24:LYS:HE2	1.73	0.42
43:BT:68:LYS:HG2	43:BT:69:ARG:H	1.84	0.42
46:BW:26:GLY:O	46:BW:27:GLY:C	2.58	0.42
47:BX:44:ARG:HG2	47:BX:45:PHE:N	2.35	0.42
48:BY:18:LEU:O	48:BY:22:LEU:CB	2.66	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B2:12:ARG:O	52:B2:12:ARG:HG3	2.18	0.42
5:CF:39:LEU:HD12	5:CF:40:GLU:H	1.83	0.42
7:CH:114:ALA:O	7:CH:117:GLN:HB3	2.19	0.42
8:CI:44:ARG:C	8:CI:46:VAL:N	2.71	0.42
8:CI:125:GLN:HE22	55:CA:1232:U:H5''	1.82	0.42
9:CJ:47:GLU:HB2	9:CJ:67:ILE:CG1	2.42	0.42
11:CL:5:GLN:HE21	55:CA:882:C:H41	1.66	0.42
11:CL:110:LYS:N	55:CA:538:G:OP1	2.41	0.42
14:CO:57:ARG:O	14:CO:61:GLN:HG2	2.18	0.42
16:CQ:22:VAL:HG21	16:CQ:58:VAL:CG2	2.49	0.42
20:CU:22:CYS:HB2	20:CU:23:GLU:H	1.51	0.42
55:CA:276:G:O2'	55:CA:277:C:O4'	2.37	0.42
55:CA:369:G:C5	55:CA:393:A:C2	3.07	0.42
55:CA:451:A:C5	55:CA:481:G:C5	3.07	0.42
55:CA:629:A:H2'	55:CA:630:A:O4'	2.19	0.42
55:CA:944:G:C2	55:CA:1340:A:C6	3.07	0.42
55:CA:1320:C:N3	55:CA:1321:U:C2	2.87	0.42
55:CA:1408:A:N6	55:CA:1409:C:N4	2.67	0.42
55:CA:1463:U:H2'	55:CA:1464:U:C6	2.54	0.42
24:DA:18:U:H5''	40:DQ:23:TYR:O	2.19	0.42
24:DA:289:G:H2'	24:DA:290:U:O4'	2.19	0.42
24:DA:389:G:C6	24:DA:2413:G:O2'	2.71	0.42
24:DA:615:U:H3'	24:DA:616:A:H5'	2.01	0.42
24:DA:699:A:H5'	24:DA:699:A:H8	1.84	0.42
24:DA:755:U:H2'	24:DA:756:A:C8	2.54	0.42
24:DA:820:A:H2'	24:DA:821:A:O4'	2.19	0.42
24:DA:1010:A:C2'	24:DA:1011:G:H5''	2.48	0.42
24:DA:1031:G:N2	24:DA:1124:G:C4	2.87	0.42
24:DA:1223:G:O6	41:DR:71:LYS:NZ	2.51	0.42
24:DA:1342:A:OP1	43:DT:59:ASN:HB3	2.18	0.42
24:DA:1455:G:C2	24:DA:1456:G:C4	3.07	0.42
24:DA:1496:A:H2'	24:DA:1498:C:C4	2.53	0.42
24:DA:1611:C:O2'	24:DA:1612:C:H5'	2.19	0.42
24:DA:1647:U:H5''	24:DA:1648:U:OP1	2.19	0.42
24:DA:1824:G:H2'	24:DA:1825:U:O4'	2.18	0.42
24:DA:1838:C:N4	24:DA:1898:U:H2'	2.34	0.42
24:DA:2023:C:O2'	24:DA:2024:G:O5'	2.35	0.42
24:DA:2060:A:H2'	28:DE:63:LYS:HZ3	1.83	0.42
24:DA:2303:G:H5'	29:DF:121:PHE:CZ	2.53	0.42
24:DA:2315:G:C6	24:DA:2316:G:C5	3.08	0.42
24:DA:2459:A:C5	24:DA:2460:U:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2472:G:H1'	24:DA:2478:A:N6	2.34	0.42
26:DC:63:ILE:O	26:DC:64:VAL:HB	2.19	0.42
26:DC:213:ARG:HB3	26:DC:214:GLY:H	1.47	0.42
27:DD:4:LEU:HD12	27:DD:32:ASN:OD1	2.19	0.42
27:DD:19:GLY:O	34:DK:72:PRO:HB2	2.18	0.42
27:DD:45:TYR:CE2	27:DD:47:ALA:HB3	2.51	0.42
29:DF:41:GLU:O	29:DF:43:ILE:HG22	2.20	0.42
32:DI:51:GLY:O	32:DI:52:LEU:CB	2.66	0.42
36:DM:4:PRO:HD3	36:DM:68:PHE:HE2	1.83	0.42
39:DP:102:ARG:O	39:DP:103:THR:CB	2.67	0.42
41:DR:7:SER:HB2	41:DR:22:LEU:HB2	2.01	0.42
47:DX:32:LEU:N	47:DX:32:LEU:HD22	2.34	0.42
49:DZ:28:LEU:N	49:DZ:28:LEU:CD2	2.82	0.42
50:D0:31:LYS:H	50:D0:31:LYS:HG3	1.61	0.42
52:D2:28:ARG:O	52:D2:31:LEU:N	2.50	0.42
1:AB:63:LYS:NZ	1:AB:87:ASP:HB3	2.34	0.42
1:AB:128:LEU:O	1:AB:129:THR:HG23	2.18	0.42
1:AB:159:ALA:HB1	1:AB:181:PRO:O	2.18	0.42
2:AC:153:SER:HA	2:AC:156:LEU:HD11	2.02	0.42
5:AF:53:LYS:HZ2	21:AA:710:G:H5''	1.79	0.42
10:AK:89:GLY:O	10:AK:92:ARG:HB3	2.19	0.42
12:AM:95:PRO:HG2	12:AM:101:THR:HG22	2.01	0.42
14:AO:86:LEU:HD23	14:AO:86:LEU:N	2.34	0.42
21:AA:138:G:C6	21:AA:226:G:C6	3.08	0.42
21:AA:320:A:H2'	21:AA:321:A:C8	2.54	0.42
21:AA:356:A:C2	21:AA:368:U:O2	2.72	0.42
21:AA:373:A:O2'	21:AA:374:A:C5'	2.67	0.42
21:AA:573:A:O2'	21:AA:574:A:H5'	2.19	0.42
21:AA:578:C:O2	21:AA:728:A:H2	2.02	0.42
21:AA:717:U:H3'	21:AA:734:G:OP2	2.20	0.42
21:AA:984:C:O2'	21:AA:985:C:C5'	2.67	0.42
21:AA:1054:C:O2	21:AA:1054:C:O4'	2.37	0.42
21:AA:1262:C:N4	21:AA:1274:A:C2	2.88	0.42
21:AA:1446:A:H2'	21:AA:1447:A:H5'	2.01	0.42
21:AA:1468:A:C3'	21:AA:1469:C:H5''	2.49	0.42
24:BA:68:G:N3	24:BA:74:A:C8	2.87	0.42
24:BA:78:U:H2'	24:BA:79:C:C6	2.55	0.42
24:BA:606:U:OP1	28:BE:99:LYS:HD2	2.19	0.42
24:BA:638:G:O2'	24:BA:639:U:O4'	2.23	0.42
24:BA:715:A:N6	24:BA:716:A:C6	2.87	0.42
24:BA:860:U:C6	24:BA:2268:A:O4'	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1295:C:H2'	24:BA:1296:G:C8	2.54	0.42
24:BA:1331:G:C5	24:BA:1333:G:N7	2.87	0.42
24:BA:2231:U:OP1	47:BX:29:LEU:HD23	2.19	0.42
24:BA:2287:A:C5	24:BA:2289:G:C5	3.07	0.42
24:BA:2737:G:H2'	24:BA:2738:A:O4'	2.19	0.42
24:BA:2854:G:C6	24:BA:2864:G:C6	3.07	0.42
25:BB:34:A:N6	25:BB:44:G:O2'	2.52	0.42
26:BC:18:VAL:O	26:BC:18:VAL:HG22	2.19	0.42
26:BC:44:ASN:OD1	26:BC:44:ASN:C	2.57	0.42
26:BC:83:ASP:OD1	26:BC:85:ASN:OD1	2.36	0.42
26:BC:141:HIS:CB	26:BC:190:THR:HB	2.44	0.42
26:BC:151:GLY:O	26:BC:152:GLN:HG3	2.19	0.42
27:BD:94:GLN:O	27:BD:95:SER:HB2	2.17	0.42
28:BE:48:THR:O	28:BE:52:VAL:HG23	2.19	0.42
28:BE:175:ILE:CG1	28:BE:180:LEU:HD11	2.49	0.42
30:BG:8:VAL:CG1	30:BG:49:LEU:H	2.29	0.42
33:BJ:35:ARG:C	33:BJ:37:ARG:N	2.72	0.42
33:BJ:78:THR:OG1	33:BJ:80:HIS:HB2	2.19	0.42
34:BK:119:ALA:HA	34:BK:120:PRO:HD2	1.67	0.42
35:BL:66:PHE:CD1	35:BL:66:PHE:C	2.91	0.42
38:BO:2:ASP:OD1	38:BO:3:LYS:HG2	2.19	0.42
38:BO:59:ALA:HA	38:BO:62:LEU:HD12	2.01	0.42
41:BR:49:ILE:HG21	41:BR:53:PHE:H	1.84	0.42
43:BT:28:ASN:HA	43:BT:91:GLN:CD	2.40	0.42
43:BT:29:THR:H	43:BT:91:GLN:NE2	2.17	0.42
1:CB:46:VAL:HA	1:CB:49:PHE:CZ	2.54	0.42
1:CB:218:ALA:O	1:CB:222:GLU:HB2	2.18	0.42
2:CC:18:ASN:ND2	2:CC:53:ARG:HD3	2.34	0.42
2:CC:129:PHE:CD2	2:CC:130:ARG:N	2.88	0.42
3:CD:61:ARG:NH2	3:CD:67:LEU:HA	2.34	0.42
4:CE:22:LYS:HE3	55:CA:1082:A:OP2	2.19	0.42
4:CE:80:LEU:HB3	4:CE:97:PRO:CA	2.49	0.42
6:CG:70:PRO:HD2	6:CG:95:ARG:O	2.20	0.42
8:CI:53:LEU:HD13	8:CI:53:LEU:O	2.19	0.42
9:CJ:81:GLU:C	9:CJ:83:THR:H	2.23	0.42
10:CK:27:ASN:ND2	10:CK:27:ASN:N	2.68	0.42
17:CR:49:LYS:HE2	17:CR:50:TYR:CE2	2.54	0.42
55:CA:22:G:H5''	55:CA:561:U:N3	2.34	0.42
55:CA:41:G:N2	55:CA:402:G:C4	2.87	0.42
55:CA:66:A:OP1	55:CA:66:A:H8	2.03	0.42
55:CA:190:A:H2'	55:CA:191:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:255:G:C2	55:CA:272:C:O2	2.72	0.42
55:CA:459:A:C2'	55:CA:460:A:H5'	2.48	0.42
55:CA:487:A:H2'	55:CA:488:C:O4'	2.19	0.42
55:CA:662:U:O2'	55:CA:836:G:OP1	2.35	0.42
55:CA:696:A:H1'	55:CA:786:G:O2'	2.20	0.42
55:CA:764:C:C4	55:CA:812:G:O6	2.73	0.42
55:CA:1006:G:N3	55:CA:1006:G:H2'	2.34	0.42
55:CA:1215:G:H2'	55:CA:1216:A:H8	1.84	0.42
55:CA:1352:C:H2'	55:CA:1353:G:C8	2.54	0.42
55:CA:1444:U:H2'	55:CA:1445:U:C6	2.54	0.42
24:DA:61:C:C4	24:DA:94:A:N1	2.87	0.42
24:DA:64:A:OP1	43:DT:77:ARG:HA	2.19	0.42
24:DA:244:A:O2'	24:DA:245:G:O4'	2.36	0.42
24:DA:310:A:C2	24:DA:330:A:C4	3.06	0.42
24:DA:446:G:OP1	40:DQ:2:ARG:HD3	2.19	0.42
24:DA:455:C:C3'	24:DA:456:C:H5'	2.50	0.42
24:DA:510:C:H6	24:DA:510:C:O5'	2.02	0.42
24:DA:765:C:O2'	24:DA:766:U:O4'	2.37	0.42
24:DA:862:G:C2	24:DA:863:A:H1'	2.54	0.42
24:DA:1171:G:C4	24:DA:1179:G:N2	2.87	0.42
24:DA:1208:C:N3	24:DA:1209:U:C5	2.87	0.42
24:DA:1289:C:O2'	24:DA:1290:C:C6	2.70	0.42
24:DA:1315:C:O2'	24:DA:1316:U:H5'	2.19	0.42
24:DA:1471:G:C6	24:DA:1472:C:C4	3.07	0.42
24:DA:1582:C:H2'	24:DA:1585:C:H42	1.83	0.42
24:DA:1653:G:H8	24:DA:1653:G:OP2	2.01	0.42
24:DA:1654:A:N3	24:DA:1655:A:C8	2.87	0.42
24:DA:2056:G:N2	50:D0:1:ALA:H1	2.16	0.42
24:DA:2307:G:C8	24:DA:2312:U:C5	3.07	0.42
24:DA:2625:G:C6	24:DA:2626:C:C4	3.07	0.42
24:DA:2800:A:O2'	24:DA:2801:G:C4'	2.65	0.42
24:DA:2848:G:OP2	39:DP:94:ALA:CB	2.68	0.42
28:DE:31:VAL:HG11	28:DE:100:MET:O	2.20	0.42
28:DE:146:VAL:HG13	28:DE:187:VAL:HG23	2.02	0.42
29:DF:37:MET:HE3	29:DF:56:LEU:HB2	2.00	0.42
30:DG:122:ALA:O	30:DG:123:GLU:HB2	2.19	0.42
33:DJ:43:GLU:O	33:DJ:43:GLU:HG2	2.20	0.42
36:DM:23:GLY:O	36:DM:101:VAL:HG12	2.19	0.42
37:DN:5:LYS:CG	37:DN:6:SER:H	2.28	0.42
40:DQ:79:ILE:HD13	40:DQ:79:ILE:C	2.39	0.42
41:DR:10:LYS:HD2	41:DR:10:LYS:N	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DR:43:ASN:HD22	41:DR:44:GLY:H	1.67	0.42
42:DS:6:LYS:HD2	42:DS:8:ARG:HD2	2.01	0.42
44:DU:39:ASN:O	44:DU:40:LEU:C	2.57	0.42
46:DW:16:GLU:OE2	46:DW:16:GLU:HA	2.20	0.42
46:DW:28:GLU:HG3	46:DW:29:SER:H	1.84	0.42
50:D0:21:LEU:HB3	50:D0:22:THR:H	1.55	0.42
51:D1:34:GLU:HG3	51:D1:49:LYS:CB	2.48	0.42
1:AB:88:GLN:C	1:AB:88:GLN:HE21	2.22	0.42
2:AC:51:VAL:HG22	2:AC:52:SER:N	2.33	0.42
2:AC:55:VAL:HG12	2:AC:56:ILE:H	1.84	0.42
3:AD:149:LYS:NZ	3:AD:177:MET:HB2	2.34	0.42
4:AE:121:ASN:N	4:AE:121:ASN:ND2	2.67	0.42
6:AG:68:VAL:HB	6:AG:99:ALA:HB1	2.02	0.42
7:AH:9:MET:HG2	7:AH:10:LEU:N	2.34	0.42
14:AO:34:GLN:O	14:AO:35:ILE:C	2.57	0.42
17:AR:40:PRO:CB	17:AR:42:ARG:HG2	2.49	0.42
21:AA:91:U:C5	21:AA:92:U:N3	2.88	0.42
21:AA:780:A:N7	21:AA:800:G:C6	2.87	0.42
21:AA:977:A:H3'	21:AA:1362:A:N6	2.32	0.42
21:AA:1008:U:C4	21:AA:1022:A:C6	3.07	0.42
21:AA:1145:A:O2'	21:AA:1146:A:H5''	2.20	0.42
24:BA:30:G:C6	24:BA:31:C:C4	3.07	0.42
24:BA:296:U:H2'	24:BA:297:G:H8	1.84	0.42
24:BA:319:G:C5	24:BA:333:G:N2	2.88	0.42
24:BA:555:G:C2'	24:BA:556:A:OP2	2.67	0.42
24:BA:749:A:N7	24:BA:1618:A:C6	2.87	0.42
24:BA:915:C:O2	25:BB:100:G:H4'	2.20	0.42
24:BA:923:G:C5'	46:BW:25:PHE:CZ	3.01	0.42
24:BA:941:A:H2'	24:BA:942:G:O4'	2.18	0.42
24:BA:987:C:H2'	24:BA:988:A:C5'	2.48	0.42
24:BA:1177:G:H2'	24:BA:1178:C:O4'	2.20	0.42
24:BA:1204:A:C1'	24:BA:1206:G:C5	3.01	0.42
24:BA:1205:A:C6	28:BE:165:HIS:HB2	2.55	0.42
24:BA:1346:G:N2	24:BA:1601:G:C4	2.88	0.42
24:BA:1392:A:H62	43:BT:19:LYS:HD2	1.84	0.42
24:BA:1437:C:C4	24:BA:1438:U:C4	3.07	0.42
24:BA:1670:C:N4	24:BA:1674:G:O5'	2.51	0.42
24:BA:1808:A:C5'	24:BA:1809:A:OP2	2.68	0.42
24:BA:2052:A:N7	27:BD:146:ILE:HD11	2.34	0.42
24:BA:2075:U:C4	24:BA:2238:G:C6	3.07	0.42
24:BA:2357:G:C2	24:BA:2361:G:C6	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2366:A:C2	24:BA:2367:G:H1'	2.54	0.42
24:BA:2661:G:C2'	24:BA:2662:A:H5'	2.50	0.42
26:BC:108:GLY:C	26:BC:109:LEU:HD22	2.39	0.42
27:BD:172:VAL:O	27:BD:173:GLN:HB2	2.19	0.42
28:BE:31:VAL:HG21	28:BE:104:ALA:HB2	2.02	0.42
29:BF:80:GLN:OE1	29:BF:81:GLY:N	2.53	0.42
30:BG:10:VAL:HB	30:BG:14:VAL:HG21	2.02	0.42
31:BH:12:LEU:HD12	31:BH:19:VAL:HG11	2.02	0.42
31:BH:27:ARG:NH1	47:BX:59:ASP:O	2.52	0.42
31:BH:30:LEU:HD23	31:BH:30:LEU:HA	1.82	0.42
31:BH:57:LYS:O	31:BH:61:VAL:HG23	2.20	0.42
31:BH:66:ASN:O	31:BH:68:ARG:N	2.53	0.42
31:BH:94:ILE:HG23	31:BH:98:ASP:HB3	2.02	0.42
32:BI:56:VAL:CG2	32:BI:68:PHE:HB2	2.49	0.42
32:BI:115:ASP:OD1	32:BI:115:ASP:C	2.58	0.42
34:BK:88:ASN:ND2	34:BK:88:ASN:C	2.73	0.42
35:BL:94:THR:HG22	35:BL:95:LEU:N	2.35	0.42
37:BN:17:ARG:HH21	37:BN:17:ARG:HG3	1.85	0.42
40:BQ:93:ILE:CG2	40:BQ:94:LEU:N	2.83	0.42
41:BR:27:ILE:HG13	41:BR:33:VAL:CG1	2.49	0.42
41:BR:38:VAL:HG12	41:BR:59:ILE:HG13	2.01	0.42
46:BW:18:LYS:CA	46:BW:36:ILE:HG12	2.50	0.42
46:BW:30:VAL:HG23	46:BW:59:PHE:HD1	1.84	0.42
1:CB:104:LYS:H	1:CB:104:LYS:CD	2.11	0.42
1:CB:137:THR:O	1:CB:140:LEU:HB3	2.20	0.42
1:CB:139:GLU:HG3	1:CB:140:LEU:H	1.84	0.42
2:CC:113:LYS:O	2:CC:117:ASP:OD1	2.38	0.42
3:CD:98:ASP:OD1	3:CD:99:ASN:N	2.53	0.42
3:CD:196:GLU:O	3:CD:199:ILE:HG12	2.20	0.42
5:CF:39:LEU:HD12	5:CF:61:LEU:O	2.19	0.42
6:CG:12:LEU:HB2	6:CG:13:PRO:HD2	2.01	0.42
6:CG:78:ARG:HG3	6:CG:82:SER:O	2.19	0.42
6:CG:104:VAL:O	6:CG:107:ALA:N	2.48	0.42
10:CK:16:SER:HA	10:CK:77:GLY:O	2.19	0.42
10:CK:34:THR:HA	10:CK:41:LEU:HG	2.01	0.42
10:CK:109:ILE:O	20:CU:5:VAL:HB	2.20	0.42
11:CL:93:ARG:NH2	55:CA:911:U:OP2	2.53	0.42
12:CM:22:TYR:C	12:CM:65:GLU:HG2	2.40	0.42
19:CT:22:SER:CB	55:CA:1458:G:H4'	2.48	0.42
20:CU:7:GLU:HB3	20:CU:11:PHE:CE1	2.54	0.42
55:CA:51:A:H4'	55:CA:52:C:C5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:218:U:H2'	55:CA:219:U:O4'	2.19	0.42
55:CA:251:G:C5	55:CA:266:G:C5	3.06	0.42
55:CA:348:G:O2'	55:CA:349:A:H5'	2.20	0.42
55:CA:438:U:O2'	55:CA:439:U:C5	2.72	0.42
55:CA:499:A:N1	55:CA:546:A:H2'	2.35	0.42
55:CA:631:C:O3'	55:CA:632:U:H6	2.02	0.42
55:CA:654:G:C5	55:CA:753:A:C6	3.07	0.42
55:CA:1091:U:O2	55:CA:1093:A:OP2	2.37	0.42
55:CA:1282:C:C2	55:CA:1283:U:C4	3.08	0.42
55:CA:1319:A:N6	55:CA:1323:G:N3	2.68	0.42
55:CA:1433:A:C5	55:CA:1468:A:C2	3.08	0.42
55:CA:1454:G:HO2'	55:CA:1455:G:P	2.42	0.42
55:CA:1473:G:H2'	55:CA:1474:U:O4'	2.19	0.42
24:DA:38:A:N6	24:DA:39:G:C5	2.88	0.42
24:DA:230:G:C2	24:DA:231:A:N7	2.87	0.42
24:DA:255:A:H2'	24:DA:256:A:O4'	2.19	0.42
24:DA:340:A:H2'	24:DA:341:C:H5'	2.01	0.42
24:DA:443:A:N6	28:DE:36:ALA:HB1	2.34	0.42
24:DA:503:A:C2	24:DA:505:A:C2	3.07	0.42
24:DA:540:C:O2'	24:DA:541:A:H5'	2.19	0.42
24:DA:615:U:O4	28:DE:39:ALA:HB2	2.19	0.42
24:DA:668:A:N7	24:DA:670:A:N7	2.67	0.42
24:DA:781:A:N1	24:DA:1776:G:O2'	2.44	0.42
24:DA:783:A:HO2'	24:DA:784:G:H4'	1.81	0.42
24:DA:956:G:C2	24:DA:962:G:O6	2.72	0.42
24:DA:976:G:O6	24:DA:988:A:C2	2.73	0.42
24:DA:1358:G:H1'	24:DA:1374:G:N2	2.34	0.42
24:DA:1773:A:C8	24:DA:1829:A:C8	3.08	0.42
24:DA:1906:G:H5''	24:DA:1929:G:O2'	2.20	0.42
24:DA:1910:G:N1	24:DA:1921:G:C5	2.87	0.42
24:DA:2030:A:C2	24:DA:2499:C:OP1	2.72	0.42
24:DA:2074:U:C2	24:DA:2436:G:C2	3.07	0.42
24:DA:2083:G:O2'	24:DA:2084:C:H5'	2.19	0.42
24:DA:2459:A:O2'	24:DA:2460:U:C5'	2.65	0.42
24:DA:2520:C:C4	24:DA:2567:G:C5	3.07	0.42
24:DA:2733:A:C2	24:DA:2734:A:C4	3.08	0.42
24:DA:2810:A:H2'	24:DA:2811:G:O4'	2.19	0.42
56:DB:17:C:O2'	56:DB:18:G:H5'	2.18	0.42
26:DC:30:ALA:C	26:DC:32:LEU:H	2.22	0.42
26:DC:82:TYR:O	26:DC:84:PRO:CD	2.64	0.42
29:DF:11:VAL:CG1	29:DF:12:VAL:N	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DF:136:ILE:CG2	29:DF:142:TYR:HB2	2.49	0.42
31:DH:40:THR:O	31:DH:42:LYS:N	2.45	0.42
32:DI:7:TYR:HD1	32:DI:9:LYS:NZ	2.17	0.42
32:DI:42:ASN:HA	32:DI:45:THR:HB	2.01	0.42
32:DI:78:LEU:O	32:DI:81:LYS:HG2	2.18	0.42
36:DM:19:GLY:O	36:DM:20:LEU:HB2	2.19	0.42
36:DM:34:LYS:HB3	36:DM:129:THR:HG22	2.01	0.42
40:DQ:10:ARG:HB2	40:DQ:10:ARG:NH1	2.34	0.42
43:DT:48:GLN:HA	43:DT:48:GLN:NE2	2.33	0.42
45:DV:63:ILE:O	45:DV:63:ILE:HG22	2.20	0.42
46:DW:77:LYS:O	46:DW:78:PHE:CB	2.67	0.42
54:D4:7:VAL:O	54:D4:8:LYS:O	2.37	0.42
1:AB:67:LEU:HB3	1:AB:160:LEU:CD1	2.48	0.42
6:AG:88:VAL:HG22	6:AG:89:GLU:N	2.25	0.42
8:AI:27:ILE:HG22	8:AI:28:VAL:N	2.34	0.42
9:AJ:52:LEU:HB2	13:AN:80:ARG:HD2	2.01	0.42
10:AK:86:LYS:CG	10:AK:114:PRO:HD3	2.49	0.42
11:AL:11:ARG:HB3	21:AA:562:U:H1'	2.02	0.42
14:AO:64:LYS:HD2	21:AA:755:G:OP2	2.19	0.42
14:AO:84:LEU:HB3	14:AO:86:LEU:CD2	2.50	0.42
18:AS:20:LYS:HZ2	18:AS:20:LYS:HB3	1.85	0.42
19:AT:24:ARG:HG2	19:AT:28:ARG:HH12	1.82	0.42
20:AU:36:PHE:HB3	20:AU:40:PRO:HD3	2.02	0.42
21:AA:113:G:C4	21:AA:114:U:C5	3.07	0.42
21:AA:154:U:C2	21:AA:168:G:N2	2.88	0.42
21:AA:216:U:H2'	21:AA:217:C:C6	2.54	0.42
21:AA:320:A:C2	21:AA:334:C:C2	3.07	0.42
21:AA:373:A:H1'	21:AA:481:G:N3	2.34	0.42
21:AA:420:U:O2	21:AA:424:G:C2	2.73	0.42
21:AA:841:C:H5'	21:AA:843:U:OP2	2.20	0.42
21:AA:925:G:C5	21:AA:927:G:N7	2.88	0.42
21:AA:1346:A:N1	21:AA:1374:A:H5''	2.34	0.42
21:AA:1360:A:C4	21:AA:1361:G:C8	3.08	0.42
22:AX:38:A:C6	22:AX:39:U:C4	3.07	0.42
24:BA:7:G:C6	24:BA:8:C:N4	2.87	0.42
24:BA:9:G:H2'	24:BA:2629:U:O4	2.19	0.42
24:BA:32:C:OP1	24:BA:1238:G:H5''	2.20	0.42
24:BA:238:C:O2	24:BA:260:G:C2	2.73	0.42
24:BA:364:C:H2'	24:BA:365:U:C6	2.55	0.42
24:BA:455:C:H42	24:BA:472:A:H2'	1.85	0.42
24:BA:634:C:H6	24:BA:634:C:O5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1006:C:C5	24:BA:1138:G:N2	2.87	0.42
24:BA:1408:G:N1	24:BA:1595:C:C2	2.87	0.42
24:BA:1496:A:H2'	24:BA:1498:C:C4	2.53	0.42
24:BA:1532:A:C6	24:BA:1540:G:C6	3.08	0.42
24:BA:1565:C:O2'	24:BA:1566:A:O5'	2.34	0.42
24:BA:2310:C:O5'	24:BA:2310:C:H6	2.02	0.42
24:BA:2417:C:O2'	24:BA:2418:A:H5'	2.19	0.42
24:BA:2530:A:H3'	30:BG:156:TYR:OH	2.19	0.42
24:BA:2648:G:H2'	24:BA:2649:C:C6	2.54	0.42
24:BA:2830:C:O3'	27:BD:56:LYS:NZ	2.53	0.42
24:BA:2850:A:H2'	24:BA:2851:A:H8	1.82	0.42
26:BC:69:ASN:O	26:BC:70:LYS:C	2.56	0.42
26:BC:139:THR:O	26:BC:161:VAL:O	2.38	0.42
31:BH:66:ASN:C	31:BH:68:ARG:N	2.72	0.42
31:BH:67:ALA:C	31:BH:69:ALA:N	2.73	0.42
32:BI:31:GLY:HA3	32:BI:60:VAL:HG11	2.01	0.42
32:BI:37:PHE:HD1	32:BI:37:PHE:O	2.02	0.42
32:BI:56:VAL:HG22	32:BI:68:PHE:HB2	2.01	0.42
32:BI:123:ALA:HA	32:BI:126:ARG:CZ	2.48	0.42
33:BJ:93:ILE:O	33:BJ:97:PRO:HG3	2.19	0.42
34:BK:121:GLU:O	34:BK:122:VAL:C	2.58	0.42
35:BL:19:LEU:HA	35:BL:27:LEU:O	2.20	0.42
35:BL:74:THR:CG2	35:BL:107:PHE:HB2	2.21	0.42
35:BL:120:VAL:CG1	35:BL:121:THR:N	2.82	0.42
40:BQ:86:SER:HB3	41:BR:51:VAL:CG1	2.50	0.42
51:B1:12:SER:HB2	51:B1:48:TYR:CE1	2.54	0.42
1:CB:30:ILE:HD11	1:CB:188:THR:HG22	2.02	0.42
1:CB:103:TRP:HA	1:CB:106:VAL:CB	2.44	0.42
2:CC:122:GLN:O	2:CC:127:VAL:HG22	2.19	0.42
6:CG:70:PRO:HG2	6:CG:94:ARG:O	2.18	0.42
7:CH:95:MET:HB3	7:CH:95:MET:HE2	1.85	0.42
9:CJ:20:GLN:O	9:CJ:23:ALA:HB3	2.19	0.42
13:CN:80:ARG:C	13:CN:82:LYS:N	2.72	0.42
19:CT:23:ARG:HA	19:CT:23:ARG:HE	1.85	0.42
20:CU:53:LYS:HB2	20:CU:53:LYS:HZ2	1.85	0.42
55:CA:28:A:C5	55:CA:29:U:C6	3.07	0.42
55:CA:83:C:O2	55:CA:83:C:C2'	2.67	0.42
55:CA:178:C:H2'	55:CA:179:A:O4'	2.18	0.42
55:CA:253:A:C6	55:CA:274:A:C2	3.07	0.42
55:CA:261:U:C2	55:CA:263:A:OP2	2.72	0.42
55:CA:380:G:N2	55:CA:382:A:H2'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:532:A:N6	55:CA:1206:G:O2'	2.52	0.42
55:CA:695:A:H61	55:CA:797:C:C1'	2.29	0.42
55:CA:760:G:C5	55:CA:761:G:C8	3.07	0.42
55:CA:1102:A:O2'	55:CA:1103:C:C5'	2.68	0.42
55:CA:1124:G:C4'	55:CA:1125:U:OP1	2.65	0.42
55:CA:1349:A:H3'	55:CA:1350:A:H8	1.84	0.42
55:CA:1380:U:H5'	55:CA:1381:U:OP1	2.19	0.42
55:CA:1480:A:N1	55:CA:1481:U:C2	2.88	0.42
55:CA:1499:A:O5'	55:CA:1499:A:C8	2.72	0.42
24:DA:75:G:O2'	24:DA:76:C:O5'	2.38	0.42
24:DA:89:A:C6	24:DA:90:U:C4	3.08	0.42
24:DA:216:A:N3	24:DA:217:A:C8	2.88	0.42
24:DA:347:A:H2'	24:DA:348:A:C8	2.55	0.42
24:DA:456:C:HO2'	43:DT:73:ARG:HG3	1.80	0.42
24:DA:642:U:H4'	24:DA:2349:G:O2'	2.19	0.42
24:DA:743:A:H2'	24:DA:744:U:O4'	2.19	0.42
24:DA:846:U:H4'	24:DA:847:U:O2	2.19	0.42
24:DA:962:G:N2	36:DM:82:MET:CE	2.82	0.42
24:DA:1008:A:C4'	24:DA:1009:A:OP1	2.66	0.42
24:DA:1139:G:O2'	24:DA:1140:C:H5'	2.18	0.42
24:DA:1247:A:N7	24:DA:1249:U:O4	2.53	0.42
24:DA:1281:G:O2'	24:DA:1282:U:H5'	2.19	0.42
24:DA:1307:A:C6	24:DA:1308:A:C5	3.08	0.42
24:DA:1422:G:H1'	24:DA:1495:A:H61	1.85	0.42
24:DA:1505:A:C2	24:DA:1506:U:C2	3.08	0.42
24:DA:1566:A:N3	26:DC:212:TRP:HB2	2.34	0.42
24:DA:1870:C:H5''	24:DA:1871:A:C2	2.55	0.42
24:DA:2040:G:C6	24:DA:2041:U:C4	3.08	0.42
24:DA:2229:U:C2	24:DA:2230:G:C8	3.08	0.42
24:DA:2297:A:O2'	24:DA:2298:A:C5'	2.67	0.42
24:DA:2323:G:N2	24:DA:2335:A:C2	2.88	0.42
24:DA:2454:G:C2	24:DA:2499:C:N3	2.87	0.42
26:DC:28:PRO:HB3	26:DC:62:ARG:NH2	2.34	0.42
27:DD:115:GLY:O	37:DN:3:HIS:HE1	2.03	0.42
27:DD:124:ARG:CD	27:DD:125:TRP:CD1	2.82	0.42
28:DE:132:LYS:O	28:DE:132:LYS:HG2	2.20	0.42
31:DH:2:GLN:HB3	31:DH:18:GLN:CD	2.40	0.42
31:DH:9:VAL:HG12	31:DH:10:ALA:N	2.34	0.42
31:DH:68:ARG:CG	31:DH:71:LYS:HD3	2.49	0.42
35:DL:128:THR:HG22	35:DL:130:GLY:H	1.84	0.42
36:DM:57:VAL:O	36:DM:58:LYS:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DQ:21:LYS:HD2	40:DQ:21:LYS:HA	1.83	0.42
41:DR:27:ILE:CG2	41:DR:28:ALA:H	2.15	0.42
42:DS:36:LEU:C	42:DS:38:TYR:N	2.72	0.42
42:DS:74:ILE:O	42:DS:74:ILE:HG12	2.17	0.42
46:DW:43:LYS:HD2	46:DW:79:ILE:HD11	2.01	0.42
49:DZ:51:SER:C	49:DZ:53:MET:N	2.72	0.42
54:D4:9:LYS:HD3	54:D4:9:LYS:C	2.40	0.42
1:AB:102:ASN:C	1:AB:104:LYS:H	2.22	0.42
1:AB:104:LYS:HE2	1:AB:104:LYS:HB3	1.89	0.42
1:AB:110:ILE:CG1	1:AB:147:LEU:HD13	2.49	0.42
2:AC:139:ASN:HD22	2:AC:139:ASN:H	1.66	0.42
3:AD:149:LYS:HZ3	3:AD:177:MET:HB2	1.84	0.42
4:AE:48:GLY:HA3	4:AE:65:LYS:C	2.40	0.42
6:AG:32:ASP:O	21:AA:1351:U:H1'	2.19	0.42
6:AG:76:SER:HA	6:AG:85:GLN:CB	2.48	0.42
9:AJ:45:ARG:HD3	9:AJ:45:ARG:HA	1.88	0.42
9:AJ:50:THR:HG22	9:AJ:64:GLN:CG	2.49	0.42
10:AK:125:LYS:HG3	21:AA:797:C:OP2	2.17	0.42
10:AK:125:LYS:HG3	21:AA:797:C:P	2.59	0.42
11:AL:9:LYS:HB2	11:AL:9:LYS:NZ	2.34	0.42
12:AM:44:ILE:C	12:AM:46:GLU:H	2.23	0.42
15:AP:35:ARG:HH21	15:AP:51:ARG:CZ	2.32	0.42
20:AU:13:VAL:HG13	20:AU:15:LEU:CG	2.50	0.42
20:AU:46:ARG:HG3	20:AU:49:ALA:HB3	2.00	0.42
21:AA:39:G:N2	21:AA:40:C:C2	2.88	0.42
21:AA:215:C:O2'	21:AA:216:U:H5'	2.19	0.42
21:AA:488:C:O2'	21:AA:489:C:H5'	2.20	0.42
21:AA:678:U:O2'	21:AA:679:C:H5'	2.20	0.42
21:AA:687:A:C2	21:AA:704:A:C6	3.07	0.42
21:AA:724:G:H2'	21:AA:725:G:H8	1.84	0.42
21:AA:1074:G:C2	21:AA:1102:A:C6	3.08	0.42
24:BA:10:A:C5	24:BA:2800:A:N6	2.87	0.42
24:BA:42:A:C2	24:BA:438:G:C5	3.08	0.42
24:BA:117:G:C6	24:BA:119:A:C6	3.08	0.42
24:BA:312:G:O2'	24:BA:313:G:H5'	2.19	0.42
24:BA:357:C:H2'	24:BA:358:U:C6	2.54	0.42
24:BA:529:A:H2'	24:BA:2023:C:N4	2.33	0.42
24:BA:556:A:H3'	24:BA:557:C:H6	1.84	0.42
24:BA:633:A:H8	24:BA:633:A:C5'	2.31	0.42
24:BA:753:A:O2'	24:BA:754:U:C5'	2.68	0.42
24:BA:1064:C:C1'	32:BI:89:SER:HB2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1177:G:C5	24:BA:1178:C:C5	3.08	0.42
24:BA:1530:G:C2	24:BA:1542:U:O2	2.72	0.42
24:BA:1781:U:O2'	24:BA:1782:U:OP2	2.37	0.42
24:BA:2027:G:H2'	24:BA:2028:U:C6	2.54	0.42
24:BA:2180:U:H2'	24:BA:2181:U:C6	2.55	0.42
24:BA:2253:G:C4	24:BA:2254:C:C5	3.07	0.42
24:BA:2552:U:C2	24:BA:2554:U:C5'	3.02	0.42
25:BB:13:G:O2'	25:BB:14:U:H5''	2.20	0.42
26:BC:259:ASN:O	26:BC:260:LYS:CB	2.65	0.42
27:BD:42:ASN:O	27:BD:43:ASP:O	2.38	0.42
27:BD:176:ASP:OD2	27:BD:176:ASP:N	2.53	0.42
28:BE:37:ALA:C	28:BE:39:ALA:N	2.69	0.42
30:BG:7:PRO:HB2	30:BG:8:VAL:H	1.71	0.42
32:BI:9:LYS:HB2	32:BI:55:PRO:CB	2.50	0.42
33:BJ:121:LYS:HB2	33:BJ:121:LYS:HE3	1.67	0.42
34:BK:2:ILE:O	34:BK:3:GLN:O	2.38	0.42
37:BN:85:PRO:HA	37:BN:88:ALA:HB2	2.00	0.42
37:BN:100:CYS:SG	37:BN:111:ALA:HA	2.60	0.42
52:B2:24:THR:HG23	52:B2:27:GLY:N	2.31	0.42
2:CC:129:PHE:CG	2:CC:130:ARG:N	2.87	0.42
2:CC:190:THR:CG2	2:CC:191:THR:N	2.83	0.42
2:CC:199:VAL:O	2:CC:199:VAL:HG23	2.20	0.42
3:CD:2:ARG:NH2	3:CD:114:ARG:HD3	2.27	0.42
4:CE:25:LYS:HB2	4:CE:25:LYS:HZ2	1.84	0.42
5:CF:43:GLY:HA2	5:CF:58:HIS:HE1	1.84	0.42
6:CG:64:ALA:HB2	6:CG:126:ALA:CB	2.48	0.42
8:CI:54:VAL:HG23	8:CI:59:LYS:HZ3	1.84	0.42
8:CI:125:GLN:HB3	55:CA:1342:C:H4'	2.02	0.42
9:CJ:49:PHE:CD1	9:CJ:67:ILE:HD11	2.54	0.42
10:CK:51:PHE:CE2	10:CK:64:VAL:HG21	2.51	0.42
14:CO:88:ARG:HD2	24:DA:716:A:OP1	2.19	0.42
18:CS:27:LYS:HE3	18:CS:30:LEU:HD11	2.02	0.42
19:CT:17:ARG:O	19:CT:17:ARG:HD2	2.20	0.42
20:CU:14:ALA:O	20:CU:15:LEU:O	2.38	0.42
55:CA:16:A:C2	55:CA:17:U:C6	3.07	0.42
55:CA:174:A:OP1	55:CA:174:A:H3'	2.19	0.42
55:CA:202:G:H2'	55:CA:203:G:H8	1.78	0.42
55:CA:386:C:H2'	55:CA:387:U:H5'	2.01	0.42
55:CA:724:G:O2'	55:CA:725:G:C5'	2.67	0.42
55:CA:878:A:C5	55:CA:879:C:C5	3.07	0.42
55:CA:957:U:N3	55:CA:960:U:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:1002:G:N2	55:CA:1039:G:C4	2.88	0.42
55:CA:1040:U:O2'	55:CA:1041:G:H5'	2.20	0.42
55:CA:1363:A:H2'	55:CA:1365:G:N7	2.35	0.42
55:CA:1448:C:HO2'	55:CA:1449:C:H6	1.56	0.42
55:CA:1449:C:C2	55:CA:1455:G:C2	3.08	0.42
24:DA:360:U:H2'	24:DA:361:G:O4'	2.19	0.42
24:DA:406:G:H2'	24:DA:407:G:H8	1.85	0.42
24:DA:522:A:C4	24:DA:523:C:C5	3.08	0.42
24:DA:579:G:N2	24:DA:1262:A:C4	2.88	0.42
24:DA:597:G:C6	24:DA:598:U:C2	3.07	0.42
24:DA:605:G:H21	24:DA:658:U:H5''	1.85	0.42
24:DA:668:A:N3	24:DA:670:A:N6	2.68	0.42
24:DA:705:A:H61	24:DA:726:G:H1'	1.83	0.42
24:DA:705:A:C2	24:DA:727:A:O4'	2.72	0.42
24:DA:736:C:H2'	24:DA:737:C:H6	1.84	0.42
24:DA:759:G:C2	24:DA:760:G:C4	3.08	0.42
24:DA:975:A:C8	24:DA:990:A:N6	2.85	0.42
24:DA:1127:A:HO2'	24:DA:1128:G:H5'	1.82	0.42
24:DA:1130:U:O2'	24:DA:1131:G:C8	2.66	0.42
24:DA:1208:C:H2'	24:DA:1209:U:H5'	2.02	0.42
24:DA:1304:A:C6	24:DA:1305:C:C4	3.07	0.42
24:DA:1394:U:H4'	24:DA:1603:A:H4'	2.02	0.42
24:DA:1534:U:O2	24:DA:1534:U:C2'	2.67	0.42
24:DA:1710:G:C2	24:DA:1749:A:C2	3.07	0.42
24:DA:1815:A:C4	24:DA:1817:G:C6	3.07	0.42
24:DA:1819:A:C1'	24:DA:1821:A:C6	2.95	0.42
24:DA:2093:G:C5	24:DA:2225:A:C8	3.08	0.42
24:DA:2489:U:C5	24:DA:2490:G:C6	3.08	0.42
24:DA:2811:G:H2'	24:DA:2812:G:C8	2.55	0.42
56:DB:58:A:O2'	56:DB:59:A:H5'	2.20	0.42
26:DC:79:ARG:CG	26:DC:92:LEU:HB2	2.49	0.42
29:DF:31:GLU:HG3	29:DF:32:LYS:N	2.35	0.42
29:DF:43:ILE:HG23	29:DF:44:ALA:N	2.26	0.42
31:DH:45:GLU:C	31:DH:47:PHE:H	2.21	0.42
32:DI:57:VAL:HG12	32:DI:58:ILE:N	2.28	0.42
42:DS:29:VAL:O	42:DS:33:LEU:HB2	2.20	0.42
48:DY:22:LEU:HG	48:DY:23:ARG:H	1.84	0.42
49:DZ:6:ILE:HG22	49:DZ:7:THR:N	2.35	0.42
50:D0:53:VAL:O	50:D0:54:ILE:O	2.37	0.42
1:AB:186:VAL:CG2	1:AB:198:VAL:HG23	2.49	0.42
2:AC:5:HIS:NE2	2:AC:183:TYR:CE2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:15:LYS:CD	2:AC:16:PRO:HD2	2.48	0.42
2:AC:122:GLN:O	2:AC:127:VAL:HG22	2.19	0.42
7:AH:21:LYS:N	7:AH:64:TYR:OH	2.50	0.42
7:AH:95:MET:SD	7:AH:129:ALA:HB1	2.59	0.42
8:AI:61:ASP:CG	8:AI:62:LEU:H	2.22	0.42
8:AI:99:LYS:HE3	8:AI:99:LYS:HB3	1.85	0.42
12:AM:47:LEU:HD22	12:AM:52:ILE:HB	2.02	0.42
18:AS:5:LYS:HD3	21:AA:1314:C:C6	2.55	0.42
20:AU:38:GLU:OE1	20:AU:38:GLU:HA	2.20	0.42
21:AA:223:A:C4	21:AA:224:U:C5	3.07	0.42
21:AA:428:G:C1'	21:AA:430:A:C8	3.03	0.42
21:AA:645:G:C2'	21:AA:646:G:H5'	2.50	0.42
21:AA:852:G:N1	21:AA:853:C:C2	2.87	0.42
21:AA:1110:A:N6	21:AA:1111:A:C6	2.87	0.42
21:AA:1202:U:O2'	21:AA:1203:C:H5'	2.19	0.42
21:AA:1343:G:C2	21:AA:1344:C:C2	3.08	0.42
21:AA:1367:C:H2'	21:AA:1368:A:O4'	2.20	0.42
21:AA:1441:A:H62	21:AA:1461:G:H21	1.68	0.42
24:BA:392:U:H2'	24:BA:393:C:H6	1.85	0.42
24:BA:559:G:H2'	24:BA:560:C:O4'	2.19	0.42
24:BA:569:U:OP1	24:BA:945:A:C4	2.73	0.42
24:BA:833:A:H2'	24:BA:834:G:H8	1.78	0.42
24:BA:904:G:H2'	24:BA:905:A:O4'	2.19	0.42
24:BA:1055:G:H2'	24:BA:1056:G:O4'	2.19	0.42
24:BA:1107:G:H2'	24:BA:1108:U:C6	2.55	0.42
24:BA:1360:G:H5'	24:BA:1361:G:OP2	2.19	0.42
24:BA:1511:G:C2'	24:BA:1512:C:OP2	2.65	0.42
24:BA:1608:A:O2'	24:BA:1610:A:OP1	2.36	0.42
24:BA:1831:G:C5	24:BA:1832:C:C5	3.07	0.42
24:BA:2024:G:C6	24:BA:2025:C:N3	2.88	0.42
24:BA:2197:U:O2'	24:BA:2198:A:P	2.78	0.42
24:BA:2345:G:N3	24:BA:2381:A:H2'	2.34	0.42
24:BA:2414:G:C2	24:BA:2415:G:C8	3.08	0.42
24:BA:2820:A:H2'	27:BD:196:ALA:HB2	2.00	0.42
26:BC:171:VAL:O	26:BC:182:LYS:HA	2.20	0.42
27:BD:73:VAL:HG23	27:BD:74:GLU:H	1.84	0.42
28:BE:154:ASP:OD2	28:BE:154:ASP:C	2.58	0.42
28:BE:193:VAL:O	28:BE:197:GLU:HB2	2.19	0.42
29:BF:27:VAL:O	29:BF:27:VAL:CG1	2.67	0.42
30:BG:115:GLN:O	30:BG:116:LEU:C	2.57	0.42
30:BG:159:LYS:HB3	30:BG:159:LYS:HE2	1.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:27:ARG:HG3	47:BX:59:ASP:OD1	2.19	0.42
32:BI:27:LEU:C	32:BI:27:LEU:HD12	2.40	0.42
36:BM:76:LYS:O	36:BM:77:PRO:O	2.37	0.42
37:BN:24:MET:CE	37:BN:44:LEU:HD22	2.50	0.42
38:BO:31:THR:HG23	38:BO:33:ARG:N	2.32	0.42
43:BT:23:ALA:C	43:BT:25:GLU:H	2.23	0.42
46:BW:71:LYS:HB3	46:BW:72:GLY:H	1.73	0.42
1:CB:125:PHE:N	1:CB:125:PHE:CD2	2.88	0.42
2:CC:133:MET:HE3	2:CC:152:VAL:HG13	2.02	0.42
3:CD:112:GLU:HB2	55:CA:407:U:O2'	2.20	0.42
4:CE:156:ARG:NH1	7:CH:63:LYS:NZ	2.68	0.42
7:CH:98:LEU:HB2	7:CH:99:GLY:H	1.74	0.42
8:CI:23:GLY:H	8:CI:60:LEU:HA	1.84	0.42
8:CI:30:ASN:HD21	8:CI:66:VAL:N	2.04	0.42
10:CK:74:LYS:HD2	10:CK:104:PHE:CZ	2.55	0.42
10:CK:95:THR:HG23	10:CK:96:ILE:H	1.83	0.42
11:CL:8:ARG:HB3	11:CL:9:LYS:HD3	2.01	0.42
12:CM:16:ILE:HD12	12:CM:16:ILE:N	2.29	0.42
13:CN:30:ILE:C	13:CN:40:ARG:HA	2.40	0.42
18:CS:60:PHE:HE2	18:CS:62:THR:HG1	1.65	0.42
55:CA:25:C:H2'	55:CA:26:A:H8	1.80	0.42
55:CA:45:G:H5''	55:CA:307:C:O2'	2.19	0.42
55:CA:49:U:O2'	55:CA:50:A:H2'	2.19	0.42
55:CA:86:G:HO2'	55:CA:87:C:P	2.41	0.42
55:CA:152:A:N6	55:CA:170:U:C2	2.87	0.42
55:CA:206:C:C6	55:CA:206:C:C3'	3.02	0.42
55:CA:257:G:C2	55:CA:270:A:N1	2.87	0.42
55:CA:320:A:H2'	55:CA:321:A:O4'	2.19	0.42
55:CA:404:G:C4	55:CA:405:U:C6	3.08	0.42
55:CA:414:A:C2	55:CA:415:A:N9	2.87	0.42
55:CA:506:G:H2'	55:CA:507:C:H6	1.85	0.42
55:CA:596:A:N6	55:CA:645:G:N1	2.67	0.42
55:CA:999:C:N4	55:CA:1000:A:N7	2.67	0.42
55:CA:1054:C:OP2	55:CA:1197:A:OP2	2.38	0.42
55:CA:1134:G:N1	55:CA:1141:C:C4	2.87	0.42
55:CA:1171:A:O2'	55:CA:1172:C:H5'	2.20	0.42
55:CA:1387:G:C6	55:CA:1388:C:C4	3.08	0.42
24:DA:100:U:O2'	24:DA:101:A:H5''	2.18	0.42
24:DA:100:U:H3'	24:DA:100:U:P	2.60	0.42
24:DA:100:U:H1'	24:DA:101:A:C5	2.55	0.42
24:DA:223:A:N6	24:DA:422:A:N6	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:265:A:H5'	24:DA:428:A:C2	2.54	0.42
24:DA:743:A:C6	24:DA:744:U:C4	3.07	0.42
24:DA:1013:C:H2'	24:DA:1014:A:C8	2.55	0.42
24:DA:1056:G:OP2	24:DA:1056:G:H3'	2.19	0.42
24:DA:1218:G:H2'	24:DA:1219:U:O4'	2.19	0.42
24:DA:1222:U:H2'	24:DA:1223:G:C8	2.55	0.42
24:DA:1437:C:HO2'	24:DA:1516:G:HO2'	1.62	0.42
24:DA:1636:U:H2'	24:DA:1637:A:C8	2.55	0.42
24:DA:1680:U:H2'	24:DA:1681:G:O4'	2.18	0.42
24:DA:1717:A:C2'	24:DA:1718:G:O4'	2.68	0.42
24:DA:1788:C:H2'	24:DA:1789:A:C8	2.51	0.42
24:DA:1808:A:O3'	24:DA:1809:A:H8	2.03	0.42
24:DA:1848:A:H2'	24:DA:1849:G:C8	2.55	0.42
24:DA:2336:A:N7	46:DW:40:ARG:NE	2.67	0.42
24:DA:2467:C:N4	24:DA:2468:A:N1	2.67	0.42
24:DA:2513:A:H2'	24:DA:2514:U:H6	1.85	0.42
24:DA:2638:G:H1'	24:DA:2778:A:H61	1.83	0.42
24:DA:2710:C:H2'	24:DA:2711:A:C8	2.55	0.42
24:DA:2847:U:H2'	24:DA:2848:G:C5'	2.48	0.42
56:DB:75:G:N2	56:DB:102:G:N2	2.68	0.42
26:DC:76:VAL:O	26:DC:76:VAL:HG23	2.19	0.42
26:DC:141:HIS:HB3	26:DC:142:ASN:H	1.58	0.42
27:DD:148:GLN:CD	27:DD:152:PRO:HG2	2.39	0.42
29:DF:11:VAL:O	29:DF:13:LYS:HD2	2.19	0.42
29:DF:74:ALA:CB	29:DF:78:ILE:CD1	2.98	0.42
29:DF:139:GLU:CB	29:DF:142:TYR:HB3	2.49	0.42
30:DG:11:PRO:HD2	30:DG:14:VAL:HG11	2.00	0.42
34:DK:28:SER:O	34:DK:29:HIS:HB3	2.19	0.42
34:DK:63:VAL:HG12	34:DK:64:ARG:HG3	2.02	0.42
38:DO:38:GLN:HA	38:DO:50:ALA:HA	2.00	0.42
40:DQ:77:LYS:CE	40:DQ:116:LEU:HD11	2.49	0.42
46:DW:20:LEU:HD11	46:DW:35:ILE:CG1	2.50	0.42
46:DW:51:GLY:HA3	46:DW:59:PHE:HB3	2.02	0.42
54:D4:16:ILE:O	54:D4:17:VAL:HG13	2.20	0.42
1:AB:22:TRP:CD1	1:AB:38:HIS:HE1	2.37	0.42
1:AB:65:LYS:HE2	1:AB:153:MET:HG2	2.02	0.42
2:AC:26:LYS:NZ	2:AC:26:LYS:HB3	2.34	0.42
2:AC:107:LYS:HA	2:AC:108:PRO:HD2	1.88	0.42
3:AD:166:LYS:HB3	3:AD:166:LYS:HZ2	1.80	0.42
4:AE:131:ASN:HA	4:AE:132:PRO:HD2	1.61	0.42
7:AH:106:SER:HA	21:AA:642:A:N7	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:84:CYS:SG	12:AM:85:TYR:N	2.92	0.42
12:AM:85:TYR:CE1	21:AA:1321:U:H4'	2.55	0.42
13:AN:54:SER:O	13:AN:55:SER:HB2	2.20	0.42
15:AP:8:ARG:NH2	15:AP:11:ALA:O	2.52	0.42
16:AQ:16:MET:O	16:AQ:18:LYS:N	2.53	0.42
19:AT:54:GLN:N	19:AT:55:PRO:HD2	2.34	0.42
21:AA:261:U:N1	21:AA:263:A:OP2	2.52	0.42
21:AA:579:A:H2'	21:AA:580:C:H6	1.85	0.42
21:AA:683:G:C2	21:AA:684:U:C2	3.08	0.42
21:AA:791:G:C6	21:AA:792:A:N6	2.84	0.42
21:AA:1213:A:C4	21:AA:1215:G:C8	3.07	0.42
22:AV:35:A:C2	22:AV:36:A:N9	2.87	0.42
24:BA:64:A:O2'	43:BT:70:HIS:CE1	2.73	0.42
24:BA:98:G:N1	24:BA:99:U:C4	2.87	0.42
24:BA:183:C:O2	24:BA:432:A:H2	2.03	0.42
24:BA:227:A:N6	24:BA:410:G:H1'	2.35	0.42
24:BA:251:A:H2'	24:BA:252:G:O4'	2.18	0.42
24:BA:813:U:H4'	24:BA:1225:G:O2'	2.18	0.42
24:BA:1002:G:N2	24:BA:1154:G:H1'	2.35	0.42
24:BA:1031:G:H4'	54:B4:6:SER:HB2	2.01	0.42
24:BA:1063:G:N2	24:BA:1076:C:C2	2.88	0.42
24:BA:1110:G:O2'	24:BA:1111:A:C8	2.72	0.42
24:BA:1328:A:H4'	24:BA:1329:U:C5	2.55	0.42
24:BA:1595:C:H2'	24:BA:1596:A:O4'	2.19	0.42
24:BA:1655:A:H3'	24:BA:1656:C:H6	1.85	0.42
24:BA:1681:G:HO2'	24:BA:1762:A:C2'	2.31	0.42
24:BA:1959:G:N1	24:BA:1960:A:C4	2.88	0.42
24:BA:2017:U:H4'	50:B0:4:GLN:O	2.19	0.42
24:BA:2225:A:H5'	24:BA:2226:C:H5'	2.02	0.42
24:BA:2259:U:C2	24:BA:2427:C:C4	3.08	0.42
24:BA:2297:A:N6	24:BA:2319:G:H1'	2.35	0.42
24:BA:2305:U:C6	29:BF:152:ASP:HB3	2.55	0.42
24:BA:2418:A:C4	24:BA:2419:U:C6	3.06	0.42
24:BA:2549:G:C2	24:BA:2560:A:C5	3.08	0.42
24:BA:2630:G:H2'	24:BA:2631:G:H8	1.85	0.42
24:BA:2684:U:H4'	34:BK:76:VAL:HG21	2.01	0.42
26:BC:170:TYR:HD2	26:BC:183:VAL:C	2.23	0.42
26:BC:255:LYS:O	26:BC:257:ARG:N	2.53	0.42
28:BE:88:ARG:O	28:BE:89:PRO:C	2.56	0.42
28:BE:119:ILE:HD13	28:BE:119:ILE:H	1.85	0.42
30:BG:112:VAL:HG23	30:BG:113:ASP:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:90:GLY:O	32:BI:92:PRO:HD3	2.20	0.42
33:BJ:41:LYS:N	40:BQ:66:ALA:HB1	2.35	0.42
38:BO:3:LYS:HG3	38:BO:4:LYS:H	1.83	0.42
38:BO:67:ASN:O	38:BO:67:ASN:CG	2.58	0.42
41:BR:100:GLY:C	41:BR:101:ILE:HG12	2.40	0.42
44:BU:60:LYS:HD2	44:BU:60:LYS:HA	1.77	0.42
46:BW:24:ARG:O	46:BW:25:PHE:CB	2.63	0.42
46:BW:37:VAL:HG13	46:BW:55:ASP:C	2.40	0.42
5:CF:36:ILE:HG22	5:CF:38:ARG:O	2.20	0.42
6:CG:47:GLU:HA	6:CG:47:GLU:OE1	2.20	0.42
6:CG:149:ALA:C	6:CG:150:PHE:CG	2.93	0.42
7:CH:17:GLN:OE1	7:CH:64:TYR:CZ	2.73	0.42
9:CJ:6:ILE:HD12	9:CJ:6:ILE:N	2.34	0.42
12:CM:67:ASP:O	12:CM:70:ARG:HB3	2.20	0.42
13:CN:22:LYS:O	13:CN:26:LEU:N	2.53	0.42
13:CN:76:PHE:HE2	13:CN:92:ILE:HG21	1.85	0.42
14:CO:28:VAL:HG21	14:CO:66:LEU:HD23	2.01	0.42
15:CP:6:LEU:HB3	15:CP:19:VAL:HA	2.02	0.42
19:CT:24:ARG:HD3	19:CT:28:ARG:NH2	2.25	0.42
55:CA:100:G:O6	55:CA:101:A:C6	2.72	0.42
55:CA:192:A:H8	55:CA:192:A:O5'	2.02	0.42
55:CA:316:C:N4	55:CA:351:G:C6	2.88	0.42
55:CA:402:G:C6	55:CA:403:C:C4	3.08	0.42
55:CA:519:C:C2'	55:CA:520:A:H8	2.31	0.42
55:CA:688:G:C6	55:CA:700:G:C5	3.07	0.42
55:CA:774:G:C4	55:CA:775:G:C8	3.07	0.42
55:CA:878:A:C2'	55:CA:879:C:H5'	2.49	0.42
55:CA:935:A:C2	55:CA:936:C:C2	3.07	0.42
55:CA:1114:C:H2'	55:CA:1115:U:C6	2.55	0.42
55:CA:1216:A:O2'	55:CA:1217:C:O4'	2.37	0.42
55:CA:1308:U:N3	55:CA:1330:U:N3	2.67	0.42
55:CA:1365:G:H2'	55:CA:1366:C:C6	2.54	0.42
55:CA:1494:G:C2	55:CA:1495:U:C5	3.08	0.42
24:DA:220:G:H1	24:DA:427:U:H2'	1.85	0.42
24:DA:309:A:H4'	44:DU:16:LYS:H	1.83	0.42
24:DA:571:U:H1'	24:DA:573:U:C6	2.54	0.42
24:DA:572:A:H5''	41:DR:79:ARG:NH2	2.34	0.42
24:DA:637:A:O5'	35:DL:112:LEU:HD21	2.19	0.42
24:DA:650:C:O4'	53:D3:22:LYS:NZ	2.53	0.42
24:DA:770:G:H1'	24:DA:1379:U:O4	2.19	0.42
24:DA:1008:A:N6	24:DA:1136:G:N1	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1232:G:C6	24:DA:1233:C:C4	3.08	0.42
24:DA:1585:C:C2'	24:DA:1586:A:O5'	2.68	0.42
24:DA:1731:G:C2	24:DA:1733:G:N7	2.88	0.42
24:DA:1816:C:H3'	26:DC:61:TYR:CE2	2.55	0.42
24:DA:1859:U:H2'	24:DA:1860:G:C8	2.55	0.42
24:DA:1917:U:C2'	24:DA:1918:A:H5'	2.50	0.42
24:DA:1920:C:C2	24:DA:1921:G:C8	3.07	0.42
24:DA:1963:U:O2'	24:DA:1964:G:H5''	2.19	0.42
24:DA:2077:A:C5	24:DA:2435:A:C6	3.08	0.42
24:DA:2077:A:C2	24:DA:2078:C:C2	3.08	0.42
24:DA:2342:C:O2'	24:DA:2374:C:H5''	2.20	0.42
24:DA:2406:A:C2	35:DL:69:ARG:NH2	2.87	0.42
24:DA:2441:U:O2'	24:DA:2442:C:C5'	2.65	0.42
24:DA:2485:G:C2'	24:DA:2486:C:H5'	2.50	0.42
24:DA:2635:A:H5'	27:DD:79:LEU:HB2	2.02	0.42
24:DA:2835:A:H4'	24:DA:2836:U:OP1	2.20	0.42
26:DC:67:LYS:HG2	26:DC:150:GLY:HA2	2.01	0.42
27:DD:98:VAL:O	27:DD:100:LEU:N	2.52	0.42
27:DD:110:THR:HA	27:DD:171:THR:HA	2.01	0.42
27:DD:127:PHE:HZ	27:DD:160:LYS:HD2	1.84	0.42
28:DE:9:GLN:O	28:DE:9:GLN:HG3	2.20	0.42
28:DE:85:PHE:O	28:DE:86:ALA:C	2.58	0.42
34:DK:28:SER:O	34:DK:29:HIS:CB	2.68	0.42
35:DL:29:LYS:O	35:DL:30:THR:OG1	2.33	0.42
36:DM:29:GLY:CA	36:DM:64:TRP:HZ3	2.33	0.42
36:DM:36:VAL:HG22	45:DV:82:TYR:CD1	2.55	0.42
36:DM:57:VAL:HA	36:DM:112:LEU:HD11	2.01	0.42
36:DM:69:PRO:O	36:DM:70:ASP:HB3	2.20	0.42
38:DO:79:ALA:HB1	38:DO:114:GLY:CA	2.48	0.42
43:DT:19:LYS:O	43:DT:20:ALA:HB2	2.20	0.42
44:DU:20:LYS:HD2	44:DU:38:ILE:CD1	2.50	0.42
54:D4:2:LYS:HZ3	54:D4:2:LYS:HA	1.83	0.42
1:AB:143:LEU:HB2	1:AB:147:LEU:CD1	2.47	0.42
1:AB:185:ILE:HD11	1:AB:203:ASP:HA	2.01	0.42
1:AB:209:VAL:O	1:AB:212:TYR:N	2.52	0.42
2:AC:6:PRO:HB3	2:AC:174:LEU:CD1	2.50	0.42
4:AE:84:VAL:O	4:AE:95:MET:HG2	2.20	0.42
4:AE:100:GLU:HB3	4:AE:121:ASN:CA	2.47	0.42
4:AE:123:LEU:O	4:AE:124:ALA:CB	2.66	0.42
4:AE:155:LYS:HG3	4:AE:155:LYS:H	1.59	0.42
6:AG:106:ALA:HB1	6:AG:132:THR:HB	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:34:ALA:HB1	7:AH:109:VAL:CB	2.50	0.42
10:AK:23:HIS:HB3	10:AK:30:ILE:CG1	2.49	0.42
16:AQ:79:GLU:O	16:AQ:80:LYS:HD3	2.19	0.42
18:AS:17:LYS:HB3	18:AS:30:LEU:HD23	2.02	0.42
21:AA:15:G:N7	21:AA:1396:A:N1	2.68	0.42
21:AA:76:G:C2	21:AA:95:C:C4	3.07	0.42
21:AA:502:A:H2'	21:AA:503:C:C6	2.55	0.42
21:AA:587:G:N2	21:AA:755:G:C5	2.88	0.42
21:AA:587:G:O2'	21:AA:588:G:C5'	2.68	0.42
21:AA:594:U:C2'	21:AA:595:A:H5'	2.50	0.42
21:AA:960:U:N3	21:AA:1225:A:C5	2.88	0.42
21:AA:1210:C:C4	21:AA:1211:U:C5	3.07	0.42
21:AA:1246:A:H2'	21:AA:1247:U:O4'	2.20	0.42
21:AA:1353:G:C2	21:AA:1370:G:N2	2.88	0.42
21:AA:1425:U:O2	21:AA:1476:A:C2	2.73	0.42
21:AA:1496:C:H2'	21:AA:1497:G:O4'	2.19	0.42
24:BA:37:C:O2'	28:BE:45:ALA:HA	2.20	0.42
24:BA:324:A:H61	24:BA:338:G:C2'	2.32	0.42
24:BA:740:C:O5'	24:BA:740:C:C6	2.73	0.42
24:BA:999:U:C5	24:BA:1154:G:C5	3.08	0.42
24:BA:1035:U:H2'	24:BA:1036:G:H8	1.85	0.42
24:BA:1076:C:H2'	24:BA:1077:A:O4'	2.20	0.42
24:BA:1789:A:OP1	26:BC:219:VAL:HA	2.20	0.42
24:BA:1798:U:OP1	26:BC:255:LYS:O	2.38	0.42
24:BA:1805:A:C6	24:BA:1806:C:C5	3.07	0.42
24:BA:1815:A:C4	24:BA:1817:G:C5	3.07	0.42
24:BA:1876:A:H2'	24:BA:1877:A:C8	2.52	0.42
24:BA:1931:U:O2'	24:BA:1932:A:C5'	2.66	0.42
24:BA:2373:G:C6	24:BA:2381:A:N1	2.88	0.42
24:BA:2425:A:H5'	24:BA:2426:A:H3'	2.01	0.42
24:BA:2602:A:C4'	24:BA:2603:G:OP2	2.56	0.42
24:BA:2720:U:H5''	39:BP:52:ARG:HH22	1.85	0.42
24:BA:2743:U:H2'	24:BA:2744:G:O4'	2.19	0.42
26:BC:115:ILE:HD12	26:BC:115:ILE:HA	1.67	0.42
27:BD:169:ARG:C	27:BD:170:VAL:HG13	2.39	0.42
29:BF:39:VAL:HG13	29:BF:40:GLY:N	2.35	0.42
29:BF:116:LEU:HB3	29:BF:127:TYR:OH	2.20	0.42
31:BH:30:LEU:C	31:BH:31:VAL:O	2.58	0.42
32:BI:58:ILE:HG23	32:BI:66:PHE:CD1	2.55	0.42
33:BJ:118:MET:HA	33:BJ:121:LYS:HE2	2.02	0.42
35:BL:77:ILE:HD12	35:BL:77:ILE:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BO:21:LEU:O	38:BO:22:GLY:O	2.38	0.42
40:BQ:85:ALA:O	40:BQ:87:VAL:O	2.37	0.42
43:BT:27:SER:O	43:BT:28:ASN:CG	2.58	0.42
44:BU:66:VAL:C	44:BU:68:ASN:H	2.23	0.42
53:B3:6:VAL:HG23	53:B3:60:CYS:O	2.20	0.42
3:CD:30:LYS:HA	55:CA:413:G:O6	2.20	0.42
3:CD:57:LYS:HA	3:CD:199:ILE:CG2	2.49	0.42
3:CD:170:LEU:O	3:CD:170:LEU:HD12	2.20	0.42
5:CF:81:ASN:O	5:CF:84:VAL:HG12	2.20	0.42
6:CG:29:LEU:O	6:CG:30:MET:O	2.38	0.42
9:CJ:45:ARG:O	9:CJ:46:LYS:C	2.58	0.42
9:CJ:66:GLU:OE2	9:CJ:68:ARG:NE	2.52	0.42
11:CL:2:THR:HG22	11:CL:4:ASN:N	2.35	0.42
12:CM:85:TYR:O	12:CM:88:LEU:HB2	2.19	0.42
18:CS:43:MET:O	18:CS:61:VAL:HG11	2.20	0.42
20:CU:19:LYS:HD3	20:CU:19:LYS:HA	1.80	0.42
20:CU:32:ARG:HD3	20:CU:33:ARG:HB2	2.02	0.42
55:CA:39:G:N2	55:CA:40:C:C2	2.88	0.42
55:CA:82:G:C6	55:CA:89:U:C5	3.08	0.42
55:CA:144:G:C6	55:CA:145:G:C5	3.07	0.42
55:CA:169:C:C5	55:CA:170:U:C5	3.08	0.42
55:CA:181:A:O2'	55:CA:182:A:H2	1.76	0.42
55:CA:182:A:H5''	55:CA:182:A:N3	2.34	0.42
55:CA:203:G:O2'	55:CA:204:G:H8	2.03	0.42
55:CA:243:A:O2'	55:CA:244:U:P	2.78	0.42
55:CA:363:A:H2'	55:CA:364:A:O4'	2.19	0.42
55:CA:369:G:O2'	55:CA:370:C:C5'	2.68	0.42
55:CA:397:A:N7	55:CA:548:G:C8	2.88	0.42
55:CA:484:G:O2'	55:CA:485:U:P	2.78	0.42
55:CA:709:U:C2	55:CA:710:G:C8	3.07	0.42
55:CA:734:G:C6	55:CA:735:C:C4	3.07	0.42
55:CA:845:A:N3	55:CA:845:A:H2'	2.35	0.42
55:CA:1093:A:C4	55:CA:1095:U:O4'	2.73	0.42
55:CA:1279:G:H8	55:CA:1282:C:N3	2.16	0.42
55:CA:1310:G:N2	55:CA:1328:C:C2	2.88	0.42
55:CA:1460:C:H2'	55:CA:1461:G:O4'	2.20	0.42
24:DA:77:G:C4	24:DA:110:G:C2	3.08	0.42
24:DA:241:A:C4	24:DA:243:U:O4	2.72	0.42
24:DA:280:U:O2	24:DA:280:U:O4'	2.37	0.42
24:DA:364:C:C2'	24:DA:365:U:C6	2.91	0.42
24:DA:605:G:H2'	24:DA:606:U:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:646:U:H6	24:DA:646:U:OP2	2.03	0.42
24:DA:950:G:H2'	24:DA:951:C:C6	2.55	0.42
24:DA:1155:A:C4	24:DA:1157:G:C8	3.07	0.42
24:DA:1306:C:H41	24:DA:1606:C:H2'	1.85	0.42
24:DA:1341:G:H4'	24:DA:1342:A:OP2	2.19	0.42
24:DA:1366:A:H2'	24:DA:1367:A:O4'	2.20	0.42
24:DA:1941:C:C5	24:DA:1942:C:N4	2.87	0.42
24:DA:2061:G:C2	24:DA:2063:C:C4	3.07	0.42
24:DA:2307:G:O6	29:DF:84:ILE:HD11	2.20	0.42
24:DA:2645:G:H4'	24:DA:2732:G:H2'	2.02	0.42
26:DC:123:ILE:HD12	26:DC:123:ILE:HA	1.89	0.42
27:DD:184:ARG:HH22	39:DP:6:GLN:NE2	2.06	0.42
28:DE:5:LEU:CD1	28:DE:10:SER:HB2	2.50	0.42
28:DE:108:ILE:CD1	28:DE:181:ILE:HB	2.41	0.42
30:DG:39:ALA:O	30:DG:40:VAL:HG13	2.20	0.42
31:DH:58:LEU:HA	31:DH:61:VAL:HG12	2.01	0.42
33:DJ:105:VAL:HA	33:DJ:108:MET:HG3	2.01	0.42
35:DL:56:PRO:HB3	35:DL:58:TYR:CE2	2.55	0.42
35:DL:79:LEU:C	35:DL:82:LEU:HD11	2.39	0.42
36:DM:45:GLN:OE1	36:DM:125:PRO:HG3	2.20	0.42
38:DO:69:ASP:O	38:DO:70:ALA:C	2.57	0.42
39:DP:52:ARG:HG2	39:DP:52:ARG:NH1	2.35	0.42
40:DQ:69:ARG:HH21	40:DQ:69:ARG:CB	2.28	0.42
42:DS:88:ARG:HG3	42:DS:88:ARG:NH2	2.33	0.42
45:DV:44:HIS:CE1	45:DV:85:LYS:HD3	2.55	0.42
50:D0:37:HIS:HB2	50:D0:41:HIS:CE1	2.55	0.42
50:D0:54:ILE:O	50:D0:55:ALA:HB2	2.19	0.42
1:AB:110:ILE:O	1:AB:114:LYS:N	2.53	0.42
1:AB:133:ALA:O	1:AB:137:THR:HG23	2.20	0.42
1:AB:205:ALA:HB3	1:AB:208:ALA:CB	2.48	0.42
2:AC:19:SER:HB2	2:AC:39:ARG:NH2	2.34	0.42
2:AC:51:VAL:CG2	2:AC:52:SER:N	2.82	0.42
4:AE:90:GLY:O	4:AE:129:SER:N	2.38	0.42
11:AL:23:LEU:C	11:AL:25:ALA:N	2.71	0.42
12:AM:89:ARG:HH11	12:AM:94:LEU:HB3	1.84	0.42
13:AN:56:PRO:O	13:AN:59:GLN:HB2	2.19	0.42
13:AN:83:VAL:HG12	13:AN:84:ARG:N	2.34	0.42
19:AT:73:ARG:O	19:AT:77:ASN:ND2	2.53	0.42
21:AA:66:A:N6	21:AA:104:G:C2	2.87	0.42
21:AA:355:C:C2	21:AA:356:A:C8	3.08	0.42
21:AA:445:G:C2	21:AA:490:C:C2	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:693:G:O2'	21:AA:694:A:H5'	2.20	0.42
21:AA:918:A:N6	21:AA:919:A:N1	2.68	0.42
21:AA:1163:A:H2'	21:AA:1164:G:H8	1.83	0.42
24:BA:25:U:C5	24:BA:26:G:C6	3.08	0.42
24:BA:200:U:HO2'	24:BA:201:C:H5'	1.85	0.42
24:BA:489:G:H2'	24:BA:491:G:C8	2.55	0.42
24:BA:584:C:C2'	24:BA:585:G:H5'	2.50	0.42
24:BA:608:A:C6	24:BA:609:A:C6	3.08	0.42
24:BA:632:A:H1'	35:BL:66:PHE:HE2	1.84	0.42
24:BA:699:A:HO2'	24:BA:1634:A:H8	1.64	0.42
24:BA:729:G:H2'	24:BA:1775:U:H1'	2.01	0.42
24:BA:846:U:O4	24:BA:927:A:OP2	2.38	0.42
24:BA:919:U:C2	24:BA:920:A:C5	3.08	0.42
24:BA:933:A:N3	24:BA:933:A:H2'	2.35	0.42
24:BA:1001:A:C2'	24:BA:1002:G:H5'	2.50	0.42
24:BA:1068:G:N3	24:BA:1068:G:H2'	2.35	0.42
24:BA:1423:G:C2	24:BA:1424:G:N9	2.88	0.42
24:BA:1510:G:O2'	24:BA:1511:G:C5'	2.67	0.42
24:BA:1654:A:O3'	27:BD:118:PHE:CE2	2.73	0.42
24:BA:1923:U:H2'	24:BA:1924:C:C6	2.55	0.42
24:BA:2073:C:H2'	24:BA:2074:U:H6	1.84	0.42
24:BA:2095:A:C2	24:BA:2195:U:O2	2.73	0.42
24:BA:2209:G:C6	24:BA:2210:U:O4	2.72	0.42
24:BA:2379:G:H4'	38:BO:21:LEU:HD11	2.02	0.42
24:BA:2478:A:N9	24:BA:2529:G:N7	2.66	0.42
24:BA:2531:A:OP1	30:BG:174:LYS:CG	2.65	0.42
24:BA:2688:G:H1'	24:BA:2721:A:H61	1.83	0.42
24:BA:2708:G:H1'	37:BN:71:ARG:CZ	2.49	0.42
24:BA:2828:G:N2	24:BA:2829:A:C4	2.88	0.42
24:BA:2837:A:N1	24:BA:2882:A:C6	2.88	0.42
24:BA:2856:A:C2'	24:BA:2857:G:H5'	2.49	0.42
26:BC:229:HIS:CG	26:BC:230:PRO:CD	3.02	0.42
27:BD:133:THR:HG23	27:BD:134:HIS:CD2	2.55	0.42
29:BF:123:GLY:HA2	29:BF:162:ASP:OD2	2.20	0.42
30:BG:38:ASP:H	30:BG:40:VAL:HG13	1.85	0.42
33:BJ:70:THR:HA	33:BJ:90:GLU:HG2	2.02	0.42
35:BL:68:SER:O	35:BL:69:ARG:HB2	2.20	0.42
37:BN:10:LEU:HD13	37:BN:10:LEU:HA	1.79	0.42
54:B4:16:ILE:HA	54:B4:24:ARG:O	2.19	0.42
2:CC:54:ILE:HG13	2:CC:67:ILE:HD13	2.01	0.42
3:CD:197:HIS:O	3:CD:201:GLU:HG3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:94:ARG:HA	6:CG:98:LEU:HG	2.01	0.42
11:CL:49:ARG:HG2	11:CL:49:ARG:HH11	1.84	0.42
13:CN:20:PHE:CA	13:CN:24:ALA:HB2	2.50	0.42
18:CS:6:LYS:HD2	18:CS:6:LYS:H	1.85	0.42
19:CT:17:ARG:HD2	19:CT:17:ARG:C	2.40	0.42
55:CA:9:G:C2	55:CA:10:A:C5	3.08	0.42
55:CA:253:A:C4	55:CA:254:G:N7	2.88	0.42
55:CA:359:G:C6	55:CA:360:G:C5	3.08	0.42
55:CA:937:A:C2	55:CA:1379:G:C6	3.08	0.42
55:CA:1140:C:O2'	55:CA:1141:C:H6	2.01	0.42
24:DA:303:G:C6	24:DA:315:G:O6	2.73	0.42
24:DA:422:A:C2	24:DA:423:A:C5	3.07	0.42
24:DA:436:C:HO2'	24:DA:437:U:H6	1.67	0.42
24:DA:629:G:O2'	24:DA:630:G:H5'	2.20	0.42
24:DA:670:A:O2'	24:DA:671:C:P	2.78	0.42
24:DA:805:G:OP2	35:DL:41:ARG:HB3	2.20	0.42
24:DA:834:G:H5''	53:D3:56:LEU:HD11	2.02	0.42
24:DA:857:G:O2'	46:DW:19:ARG:CZ	2.68	0.42
24:DA:987:C:O2	24:DA:1000:A:H2	2.03	0.42
24:DA:991:C:C4	24:DA:1185:G:C6	3.08	0.42
24:DA:1045:C:O5'	24:DA:1046:A:H5''	2.19	0.42
24:DA:1295:C:H1'	37:DN:23:ASN:HD21	1.85	0.42
24:DA:1332:G:H4'	24:DA:1333:G:OP2	2.19	0.42
24:DA:1345:C:H5'	24:DA:1396:U:C4	2.55	0.42
24:DA:1438:U:C4	24:DA:1555:G:N1	2.88	0.42
24:DA:1440:U:H2'	24:DA:1441:G:C8	2.50	0.42
24:DA:1446:C:N4	24:DA:1447:C:N4	2.67	0.42
24:DA:1480:C:H2'	24:DA:1481:U:O4'	2.20	0.42
24:DA:1585:C:H2'	24:DA:1586:A:O5'	2.19	0.42
24:DA:1787:A:N3	24:DA:1788:C:C5	2.88	0.42
24:DA:1948:G:O2'	24:DA:1949:G:H5'	2.19	0.42
24:DA:2016:U:C4	24:DA:2017:U:O4	2.73	0.42
24:DA:2251:G:C8	24:DA:2450:A:H4'	2.54	0.42
24:DA:2415:G:H4'	35:DL:66:PHE:CB	2.38	0.42
24:DA:2657:A:H2'	24:DA:2658:C:C6	2.55	0.42
24:DA:2710:C:H2'	24:DA:2711:A:H8	1.84	0.42
24:DA:2738:A:H2	24:DA:2766:A:N6	2.11	0.42
24:DA:2750:A:HO2'	24:DA:2752:C:H41	1.66	0.42
24:DA:2800:A:C2	24:DA:2801:G:N3	2.87	0.42
24:DA:2816:G:H4'	50:D0:40:HIS:HB3	2.02	0.42
26:DC:79:ARG:HD2	26:DC:92:LEU:HD22	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DD:62:LYS:HE3	27:DD:62:LYS:CA	2.50	0.42
27:DD:73:VAL:O	27:DD:74:GLU:HB2	2.20	0.42
28:DE:129:PRO:HG3	28:DE:159:LEU:HB3	2.01	0.42
29:DF:19:PHE:HB3	29:DF:21:TYR:CE2	2.55	0.42
29:DF:105:ILE:HG22	29:DF:105:ILE:O	2.20	0.42
29:DF:155:ILE:HD12	29:DF:155:ILE:N	2.34	0.42
32:DI:32:VAL:HG13	32:DI:58:ILE:HD12	2.01	0.42
33:DJ:41:LYS:C	33:DJ:43:GLU:N	2.73	0.42
34:DK:118:LEU:HD23	34:DK:118:LEU:N	2.35	0.42
35:DL:65:GLY:O	35:DL:66:PHE:HB2	2.20	0.42
36:DM:73:ILE:HD13	36:DM:73:ILE:HA	1.77	0.42
36:DM:126:ILE:O	36:DM:128:THR:HG23	2.19	0.42
38:DO:41:ALA:O	38:DO:43:ASN:N	2.52	0.42
39:DP:87:ARG:HG2	39:DP:88:ARG:N	2.34	0.42
39:DP:91:VAL:HG11	39:DP:96:LEU:HD21	2.02	0.42
45:DV:31:TYR:CD1	45:DV:31:TYR:C	2.93	0.42
46:DW:32:ALA:O	46:DW:34:SER:N	2.52	0.42
1:AB:103:TRP:HE1	1:AB:150:ILE:HG13	1.85	0.41
1:AB:168:GLU:O	1:AB:172:ILE:HG13	2.20	0.41
4:AE:56:PRO:O	4:AE:58:ALA:N	2.53	0.41
4:AE:94:PHE:CZ	4:AE:96:GLN:HG2	2.55	0.41
5:AF:8:PHE:HB3	5:AF:78:PHE:CE1	2.55	0.41
5:AF:11:HIS:HA	5:AF:12:PRO:HD2	1.91	0.41
5:AF:21:MET:HE2	5:AF:25:TYR:CE1	2.55	0.41
6:AG:34:LYS:NZ	21:AA:1290:G:H5'	2.34	0.41
6:AG:132:THR:O	6:AG:135:LYS:HB3	2.20	0.41
11:AL:2:THR:HB	11:AL:5:GLN:CB	2.50	0.41
13:AN:63:CYS:O	13:AN:65:GLN:N	2.53	0.41
15:AP:41:PRO:HB2	21:AA:450:G:H4'	2.01	0.41
15:AP:70:ARG:HH12	21:AA:451:A:H5'	1.85	0.41
21:AA:9:G:C6	21:AA:26:A:C6	3.08	0.41
21:AA:126:G:C2'	21:AA:127:G:O5'	2.68	0.41
21:AA:130:A:O2'	21:AA:131:A:O5'	2.37	0.41
21:AA:140:U:H2'	21:AA:141:G:O4'	2.20	0.41
21:AA:472:U:C4	21:AA:473:U:O4	2.73	0.41
21:AA:545:C:O2'	21:AA:549:C:H5''	2.20	0.41
21:AA:596:A:N1	21:AA:645:G:C4	2.88	0.41
21:AA:793:U:O4	21:AA:1517:G:H5''	2.20	0.41
21:AA:973:G:H3'	21:AA:974:A:H5''	2.01	0.41
21:AA:1032:G:O2'	21:AA:1033:G:C5'	2.65	0.41
21:AA:1134:G:C6	21:AA:1135:U:N3	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1151:A:HO2'	21:AA:1152:A:P	2.43	0.41
21:AA:1258:G:O2'	21:AA:1259:C:H6	2.02	0.41
21:AA:1323:G:H2'	21:AA:1324:A:C8	2.54	0.41
24:BA:92:U:H5''	24:BA:92:U:C6	2.52	0.41
24:BA:536:G:C2	24:BA:558:U:O2	2.73	0.41
24:BA:635:C:C2'	24:BA:636:G:H5'	2.50	0.41
24:BA:672:C:C2'	24:BA:673:C:H5'	2.50	0.41
24:BA:695:G:H1'	24:BA:768:G:N2	2.35	0.41
24:BA:812:C:O2'	24:BA:813:U:H5'	2.20	0.41
24:BA:954:G:C6	24:BA:955:U:C5	3.08	0.41
24:BA:977:G:C4	24:BA:978:G:C8	3.08	0.41
24:BA:1073:A:N7	24:BA:1074:G:H8	2.18	0.41
24:BA:1304:A:C2	24:BA:1305:C:C2	3.08	0.41
24:BA:1342:A:C6	24:BA:1345:C:N3	2.88	0.41
24:BA:1917:U:O2'	24:BA:1918:A:H5'	2.19	0.41
24:BA:2062:A:O2'	24:BA:2063:C:H5'	2.19	0.41
24:BA:2077:A:C2	24:BA:2078:C:C5	3.09	0.41
24:BA:2081:U:C5	24:BA:2237:G:N1	2.88	0.41
24:BA:2232:C:P	47:BX:26:ARG:HH22	2.43	0.41
24:BA:2415:G:H4'	35:BL:66:PHE:HB2	2.02	0.41
24:BA:2617:U:C2'	24:BA:2618:G:H5'	2.50	0.41
24:BA:2841:C:H2'	24:BA:2842:G:C8	2.55	0.41
25:BB:51:G:H5''	38:BO:64:TYR:CD2	2.54	0.41
26:BC:104:LEU:HB3	26:BC:105:ALA:H	1.63	0.41
27:BD:124:ARG:HG2	27:BD:125:TRP:CD1	2.54	0.41
28:BE:23:PHE:CE1	28:BE:28:VAL:HG11	2.55	0.41
28:BE:84:THR:HB	28:BE:85:PHE:CD2	2.55	0.41
28:BE:150:THR:HG23	28:BE:153:LEU:H	1.85	0.41
29:BF:39:VAL:HG13	29:BF:84:ILE:HD12	2.02	0.41
30:BG:9:VAL:O	30:BG:11:PRO:HD3	2.20	0.41
31:BH:95:GLY:C	31:BH:97:ARG:N	2.73	0.41
32:BI:53:PRO:HB2	32:BI:74:PRO:CG	2.50	0.41
36:BM:47:GLU:O	36:BM:50:ARG:N	2.53	0.41
37:BN:52:ILE:O	37:BN:54:LEU:N	2.53	0.41
37:BN:71:ARG:HG3	37:BN:71:ARG:NH2	2.35	0.41
38:BO:5:SER:O	38:BO:6:ALA:C	2.59	0.41
39:BP:21:PRO:HA	39:BP:46:VAL:HG12	2.02	0.41
40:BQ:16:ILE:O	40:BQ:17:LEU:C	2.58	0.41
45:BV:88:HIS:CG	45:BV:89:ILE:N	2.88	0.41
48:BY:18:LEU:HA	48:BY:18:LEU:HD22	1.84	0.41
49:BZ:22:THR:HG23	49:BZ:46:MET:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:81:ASP:CG	1:CB:82:ALA:N	2.73	0.41
2:CC:149:LYS:HE2	2:CC:149:LYS:HB3	1.93	0.41
2:CC:203:LYS:HE3	2:CC:203:LYS:HB3	1.94	0.41
3:CD:167:PRO:CG	3:CD:170:LEU:HD11	2.50	0.41
6:CG:75:LYS:HE2	6:CG:76:SER:N	2.26	0.41
7:CH:1:SER:C	7:CH:3:GLN:N	2.74	0.41
9:CJ:82:LYS:HZ2	9:CJ:82:LYS:HG3	1.78	0.41
10:CK:117:HIS:ND1	55:CA:675:A:H1'	2.34	0.41
12:CM:18:LEU:HD12	12:CM:18:LEU:N	2.35	0.41
55:CA:110:C:O2'	55:CA:111:G:O4'	2.32	0.41
55:CA:177:G:C2'	55:CA:178:C:H5'	2.48	0.41
55:CA:198:G:O2'	55:CA:199:A:C5'	2.68	0.41
55:CA:339:C:O2	55:CA:351:G:N2	2.53	0.41
55:CA:577:G:O2'	55:CA:578:C:O5'	2.36	0.41
55:CA:596:A:O2'	55:CA:597:G:C5'	2.68	0.41
55:CA:765:G:N7	55:CA:812:G:C4	2.88	0.41
55:CA:924:C:O2'	55:CA:925:G:H5'	2.20	0.41
55:CA:954:G:C5	55:CA:955:U:N3	2.88	0.41
55:CA:966:G:H2'	55:CA:967:C:C6	2.55	0.41
55:CA:1208:C:C2	55:CA:1209:C:C6	3.08	0.41
55:CA:1301:U:H4'	55:CA:1302:C:OP1	2.20	0.41
55:CA:1422:G:H5''	34:DK:48:PRO:HB3	2.00	0.41
55:CA:1484:C:H2'	55:CA:1485:U:H6	1.84	0.41
24:DA:197:A:N3	24:DA:197:A:H2'	2.33	0.41
24:DA:240:C:OP2	24:DA:241:A:H3'	2.19	0.41
24:DA:320:A:N7	28:DE:132:LYS:HB2	2.35	0.41
24:DA:396:G:O2'	24:DA:397:U:H5'	2.20	0.41
24:DA:866:A:O2'	24:DA:867:C:C5'	2.68	0.41
24:DA:1071:G:O5'	24:DA:1072:C:H5	2.03	0.41
24:DA:1203:U:H3	24:DA:1204:A:N6	2.17	0.41
24:DA:1517:G:N2	24:DA:1732:C:C6	2.88	0.41
24:DA:1537:G:O2'	24:DA:1538:G:H4'	2.17	0.41
24:DA:1613:G:C6	24:DA:1619:G:C6	3.08	0.41
24:DA:1631:G:H1'	24:DA:1635:A:N6	2.35	0.41
24:DA:1653:G:O6	37:DN:10:LEU:O	2.38	0.41
24:DA:1889:A:C6	24:DA:1890:A:C6	3.07	0.41
24:DA:1919:A:O5'	24:DA:1919:A:C8	2.60	0.41
24:DA:2062:A:C6	24:DA:2503:A:N7	2.88	0.41
24:DA:2397:G:C6	24:DA:2420:C:N3	2.87	0.41
24:DA:2511:U:H3'	24:DA:2511:U:H6	1.83	0.41
24:DA:2592:G:H2'	24:DA:2593:U:C6	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2624:G:C5	24:DA:2625:G:C8	3.08	0.41
24:DA:2644:G:C6	24:DA:2645:G:C2	3.08	0.41
56:DB:14:U:H6	56:DB:14:U:H2'	1.64	0.41
26:DC:171:VAL:HG12	26:DC:173:LEU:HD13	2.01	0.41
29:DF:41:GLU:HG2	29:DF:42:ALA:N	2.26	0.41
29:DF:49:LEU:HD13	29:DF:149:ARG:HH21	1.84	0.41
29:DF:109:ARG:NH1	29:DF:135:ILE:HG21	2.35	0.41
31:DH:53:GLU:C	31:DH:55:GLU:N	2.74	0.41
32:DI:69:VAL:O	32:DI:69:VAL:HG13	2.19	0.41
33:DJ:74:TYR:CE2	33:DJ:103:ILE:HD11	2.55	0.41
33:DJ:116:ARG:HD2	33:DJ:116:ARG:HA	1.84	0.41
34:DK:11:ALA:HB2	34:DK:64:ARG:NH1	2.35	0.41
34:DK:22:ILE:HG12	34:DK:40:LYS:O	2.19	0.41
40:DQ:27:ARG:HE	40:DQ:37:ALA:HB1	1.85	0.41
40:DQ:91:ARG:CZ	41:DR:11:GLN:H	2.33	0.41
42:DS:32:ALA:HA	42:DS:35:ILE:CD1	2.47	0.41
43:DT:53:VAL:HG21	43:DT:92:ASN:HD22	1.85	0.41
45:DV:63:ILE:HD12	45:DV:63:ILE:N	2.34	0.41
45:DV:77:VAL:HG11	45:DV:79:ARG:HH21	1.84	0.41
47:DX:26:ARG:O	47:DX:27:ARG:HB3	2.20	0.41
49:DZ:31:ILE:O	49:DZ:31:ILE:HG13	2.19	0.41
1:AB:53:LEU:HA	1:AB:56:LEU:CB	2.46	0.41
1:AB:209:VAL:O	1:AB:210:THR:C	2.59	0.41
2:AC:190:THR:HG21	2:AC:192:TYR:OH	2.20	0.41
3:AD:28:ASP:OD1	3:AD:33:ILE:HG12	2.19	0.41
3:AD:62:ARG:NE	3:AD:62:ARG:CA	2.77	0.41
4:AE:57:ALA:HA	4:AE:60:GLN:OE1	2.19	0.41
7:AH:118:ALA:HB3	7:AH:120:LEU:HD11	2.02	0.41
8:AI:12:LYS:HD3	21:AA:1371:G:OP1	2.20	0.41
10:AK:81:LEU:HD23	10:AK:81:LEU:H	1.85	0.41
11:AL:118:VAL:HG12	11:AL:119:LYS:N	2.36	0.41
12:AM:102:LYS:O	12:AM:103:THR:HG23	2.19	0.41
14:AO:67:ASP:O	14:AO:70:LYS:HB3	2.19	0.41
15:AP:1:MET:HG2	15:AP:2:VAL:N	2.34	0.41
21:AA:212:G:O2'	21:AA:213:G:P	2.78	0.41
21:AA:439:U:H2'	21:AA:440:C:C5'	2.50	0.41
21:AA:624:C:H2'	21:AA:625:U:O4'	2.20	0.41
21:AA:675:A:H2'	21:AA:676:A:O4'	2.20	0.41
21:AA:859:G:H2'	21:AA:860:A:C8	2.55	0.41
21:AA:920:U:O4'	21:AA:1080:A:C2	2.73	0.41
21:AA:1007:U:C4	21:AA:1008:U:H5	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1154:G:O2'	21:AA:1155:A:H5'	2.20	0.41
21:AA:1219:A:N1	21:AA:1220:G:C6	2.88	0.41
21:AA:1283:U:O2'	21:AA:1284:C:O4'	2.29	0.41
21:AA:1363:A:C4	21:AA:1365:G:C6	3.08	0.41
21:AA:1533:C:H3'	21:AA:1534:A:C5'	2.43	0.41
24:BA:83:A:H5''	24:BA:84:A:P	2.60	0.41
24:BA:558:U:H5''	33:BJ:111:LYS:CE	2.50	0.41
24:BA:929:U:O2	49:BZ:25:GLY:HA2	2.19	0.41
24:BA:995:C:OP2	40:BQ:53:LYS:HE2	2.20	0.41
24:BA:1080:A:C2	24:BA:1081:U:C6	3.08	0.41
24:BA:1082:U:C2	24:BA:1086:A:N6	2.87	0.41
24:BA:1187:G:HO2'	24:BA:1188:U:H6	1.65	0.41
24:BA:1257:C:C4	24:BA:1258:U:C5	3.08	0.41
24:BA:1555:G:HO2'	24:BA:1556:C:H5'	1.81	0.41
24:BA:1608:A:C5	24:BA:1611:C:C4	3.08	0.41
24:BA:1638:C:H4'	24:BA:2710:C:O2	2.20	0.41
24:BA:1853:A:N1	24:BA:1854:A:C2	2.89	0.41
24:BA:1911:U:C4	24:BA:1918:A:C5	3.07	0.41
24:BA:2453:A:O2'	24:BA:2572:A:H1'	2.20	0.41
25:BB:71:C:H2'	25:BB:72:G:C5'	2.50	0.41
25:BB:104:A:H2'	25:BB:105:G:O4'	2.20	0.41
29:BF:137:PHE:HA	29:BF:138:PRO:HD3	1.90	0.41
30:BG:115:GLN:O	30:BG:115:GLN:HG2	2.19	0.41
33:BJ:16:TYR:CA	33:BJ:138:GLN:O	2.67	0.41
33:BJ:102:GLU:HG3	33:BJ:124:VAL:HG11	2.01	0.41
36:BM:31:PHE:O	36:BM:104:GLU:HA	2.20	0.41
36:BM:35:ALA:HB3	36:BM:99:GLY:H	1.84	0.41
36:BM:43:ALA:HA	36:BM:46:ILE:CG1	2.51	0.41
37:BN:96:ARG:HH22	37:BN:116:VAL:HG23	1.85	0.41
40:BQ:51:GLN:O	40:BQ:52:ARG:C	2.59	0.41
48:BY:53:VAL:O	48:BY:56:LEU:O	2.38	0.41
51:B1:9:LYS:HG2	51:B1:9:LYS:O	2.20	0.41
53:B3:16:THR:HB	53:B3:17:GLY:H	1.53	0.41
1:CB:137:THR:O	1:CB:140:LEU:N	2.53	0.41
3:CD:98:ASP:HB3	3:CD:132:ALA:HB1	2.03	0.41
4:CE:39:GLY:HA2	4:CE:45:VAL:HA	2.01	0.41
4:CE:80:LEU:CB	4:CE:97:PRO:HB3	2.49	0.41
4:CE:145:ASN:O	7:CH:72:GLU:OE2	2.38	0.41
7:CH:89:ASP:OD1	7:CH:89:ASP:N	2.53	0.41
7:CH:94:VAL:HG23	7:CH:101:ALA:HB2	2.02	0.41
12:CM:47:LEU:HD21	12:CM:52:ILE:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:41:HIS:O	14:CO:45:HIS:CE1	2.73	0.41
17:CR:32:ILE:HG22	17:CR:38:ILE:HA	2.01	0.41
55:CA:313:A:H2'	55:CA:314:C:H6	1.83	0.41
55:CA:407:U:C2	55:CA:408:A:C8	3.08	0.41
55:CA:426:U:H2'	55:CA:427:U:H6	1.85	0.41
55:CA:837:U:H2'	55:CA:838:G:C8	2.54	0.41
55:CA:848:C:H2'	55:CA:849:G:O4'	2.20	0.41
55:CA:934:C:H4'	55:CA:935:A:OP1	2.20	0.41
55:CA:1052:U:O4	55:CA:1200:C:C2	2.73	0.41
55:CA:1161:C:O2'	55:CA:1162:C:O5'	2.38	0.41
55:CA:1163:A:H2'	55:CA:1164:G:C8	2.55	0.41
55:CA:1220:G:C2	55:CA:1221:G:C4	3.09	0.41
55:CA:1268:G:N2	55:CA:1327:C:H1'	2.35	0.41
55:CA:1293:C:H2'	55:CA:1294:G:H8	1.81	0.41
22:CV:33:U:H2'	22:CV:35:A:N7	2.34	0.41
24:DA:36:G:N1	24:DA:445:C:C4	2.88	0.41
24:DA:142:A:C4	24:DA:143:C:C5	3.07	0.41
24:DA:206:U:HO2'	24:DA:207:A:H5'	1.78	0.41
24:DA:212:G:H2'	24:DA:213:A:O4'	2.19	0.41
24:DA:301:G:C4	24:DA:302:C:C4	3.08	0.41
24:DA:379:G:N1	24:DA:396:G:C6	2.88	0.41
24:DA:389:G:C4	24:DA:2413:G:H4'	2.54	0.41
24:DA:690:G:H1'	24:DA:779:U:O3'	2.20	0.41
24:DA:737:C:H2'	24:DA:738:G:O4'	2.20	0.41
24:DA:1127:A:O2'	24:DA:1128:G:C5'	2.62	0.41
24:DA:1149:G:C6	24:DA:1150:C:C4	3.08	0.41
24:DA:1238:G:C2	24:DA:1239:G:C5	3.08	0.41
24:DA:1270:C:C4	24:DA:1648:U:C4	3.08	0.41
24:DA:1373:A:H2'	24:DA:1374:G:O4'	2.20	0.41
24:DA:1680:U:C4	24:DA:1681:G:C2	3.08	0.41
24:DA:1742:U:H2'	24:DA:1743:G:C8	2.55	0.41
24:DA:1766:G:C2	24:DA:1987:A:N3	2.88	0.41
24:DA:1767:G:N2	24:DA:1986:C:C2	2.88	0.41
24:DA:2027:G:C6	24:DA:2028:U:C4	3.08	0.41
24:DA:2238:G:H8	59:DA:3525:HOH:O	2.03	0.41
24:DA:2297:A:O2'	24:DA:2298:A:H5'	2.20	0.41
24:DA:2349:G:C2	24:DA:2350:C:H1'	2.55	0.41
24:DA:2411:A:H2'	24:DA:2412:A:C8	2.55	0.41
24:DA:2574:G:C5	24:DA:2575:C:C5	3.08	0.41
24:DA:2654:A:H4'	24:DA:2655:G:O5'	2.19	0.41
24:DA:2665:A:C2	24:DA:2666:C:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2837:A:N6	24:DA:2882:A:C6	2.88	0.41
24:DA:2850:A:H2'	24:DA:2851:A:C8	2.55	0.41
56:DB:37:C:C4	56:DB:49:C:H1'	2.55	0.41
30:DG:145:ALA:HA	30:DG:148:ARG:HG2	2.01	0.41
35:DL:112:LEU:O	35:DL:112:LEU:HD23	2.20	0.41
37:DN:55:ALA:CB	37:DN:79:LEU:HD22	2.51	0.41
41:DR:2:TYR:H	41:DR:42:ALA:HB2	1.86	0.41
41:DR:2:TYR:CD2	41:DR:42:ALA:HB2	2.56	0.41
41:DR:38:VAL:N	41:DR:53:PHE:HB3	2.36	0.41
41:DR:86:GLN:HE21	41:DR:86:GLN:HB2	1.67	0.41
44:DU:82:VAL:HG23	44:DU:83:GLY:H	1.85	0.41
45:DV:26:PHE:CD2	45:DV:42:LEU:HB2	2.56	0.41
48:DY:37:LEU:HD13	48:DY:42:LEU:CD1	2.50	0.41
53:D3:41:ARG:CG	53:D3:41:ARG:NH2	2.75	0.41
1:AB:89:PHE:HD2	1:AB:148:GLY:O	2.03	0.41
4:AE:61:LYS:NZ	21:AA:1073:U:P	2.93	0.41
4:AE:93:VAL:CG2	4:AE:138:ALA:HB3	2.50	0.41
6:AG:145:GLU:HA	6:AG:148:LYS:HE2	2.03	0.41
13:AN:22:LYS:HG3	13:AN:23:ARG:N	2.36	0.41
15:AP:52:LEU:CD2	15:AP:75:ILE:HG12	2.45	0.41
21:AA:43:C:H2'	21:AA:44:A:O4'	2.20	0.41
21:AA:146:G:C6	21:AA:147:G:C5	3.09	0.41
21:AA:188:C:O2	21:AA:188:C:H2'	2.19	0.41
21:AA:289:G:N1	21:AA:290:C:C4	2.88	0.41
21:AA:327:A:O3'	21:AA:328:C:H4'	2.20	0.41
21:AA:344:A:O2'	39:BP:36:LYS:HE2	2.20	0.41
21:AA:346:G:N2	21:AA:347:G:C4	2.88	0.41
21:AA:489:C:O2'	21:AA:490:C:H5'	2.20	0.41
21:AA:1099:G:C6	21:AA:1100:C:N3	2.88	0.41
21:AA:1220:G:C2	21:AA:1221:G:C4	3.08	0.41
21:AA:1443:C:H2'	21:AA:1444:U:H6	1.86	0.41
24:BA:14:A:H3'	24:BA:15:G:H5''	2.01	0.41
24:BA:207:A:H2'	24:BA:208:C:O4'	2.19	0.41
24:BA:579:G:C8	24:BA:2017:U:C4	3.08	0.41
24:BA:659:G:H21	28:BE:30:GLN:NE2	2.18	0.41
24:BA:991:C:N3	24:BA:1185:G:C6	2.88	0.41
24:BA:1037:G:C2	24:BA:1119:U:O2	2.73	0.41
24:BA:1056:G:H21	24:BA:1103:A:H62	1.68	0.41
24:BA:1085:A:H1'	24:BA:1105:U:H1'	2.01	0.41
24:BA:1217:U:H2'	24:BA:1218:G:O5'	2.21	0.41
24:BA:1286:A:C6	24:BA:1329:U:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1343:G:C6	24:BA:1344:U:O4	2.73	0.41
24:BA:1423:G:N2	24:BA:1424:G:H1'	2.35	0.41
24:BA:1484:U:H2'	24:BA:1485:U:H6	1.85	0.41
24:BA:1662:U:O2	24:BA:2687:U:H4'	2.21	0.41
24:BA:1709:U:H2'	24:BA:1710:G:H8	1.84	0.41
24:BA:1900:A:C2	24:BA:1970:A:C5	3.08	0.41
24:BA:1959:G:C6	24:BA:1960:A:C5	3.08	0.41
24:BA:2146:C:H4'	24:BA:2147:A:C4'	2.50	0.41
24:BA:2305:U:H5''	29:BF:130:GLY:CA	2.45	0.41
24:BA:2305:U:H1'	29:BF:132:ARG:N	2.28	0.41
24:BA:2357:G:N2	24:BA:2361:G:C5	2.88	0.41
24:BA:2577:A:H1'	24:BA:2612:C:N3	2.34	0.41
24:BA:2582:G:N3	24:BA:2582:G:H2'	2.35	0.41
25:BB:20:G:N2	25:BB:64:G:C4	2.89	0.41
26:BC:43:ASN:CG	26:BC:44:ASN:H	2.22	0.41
26:BC:70:LYS:HD2	26:BC:99:GLU:OE1	2.21	0.41
26:BC:90:ILE:CG2	26:BC:102:TYR:HD1	2.32	0.41
26:BC:195:GLY:O	26:BC:196:ASN:CB	2.68	0.41
27:BD:151:THR:O	27:BD:152:PRO:C	2.58	0.41
28:BE:178:VAL:HG13	28:BE:179:SER:H	1.85	0.41
31:BH:2:GLN:O	31:BH:3:VAL:CG2	2.62	0.41
31:BH:72:ILE:O	31:BH:72:ILE:HG23	2.19	0.41
31:BH:94:ILE:HD12	31:BH:98:ASP:O	2.19	0.41
36:BM:96:ILE:C	36:BM:96:ILE:CD1	2.85	0.41
39:BP:5:LYS:C	39:BP:7:LEU:N	2.73	0.41
39:BP:28:LYS:HB2	39:BP:82:SER:HB3	2.02	0.41
39:BP:85:VAL:HG13	39:BP:86:LYS:N	2.34	0.41
40:BQ:63:ARG:NH2	40:BQ:96:ASP:CA	2.83	0.41
40:BQ:98:ALA:HB2	40:BQ:105:PHE:CE2	2.55	0.41
44:BU:48:VAL:O	44:BU:48:VAL:HG13	2.20	0.41
45:BV:26:PHE:HZ	45:BV:47:VAL:HG11	1.85	0.41
1:CB:100:LEU:HD12	1:CB:100:LEU:N	2.35	0.41
3:CD:33:ILE:HD12	3:CD:34:GLU:H	1.83	0.41
3:CD:166:LYS:HA	3:CD:167:PRO:HD2	1.70	0.41
5:CF:47:LEU:HD12	5:CF:55:HIS:HA	2.02	0.41
6:CG:59:GLU:HG3	6:CG:60:ALA:H	1.83	0.41
6:CG:100:MET:H	6:CG:100:MET:CE	2.28	0.41
9:CJ:76:ILE:HG22	9:CJ:77:VAL:H	1.84	0.41
12:CM:5:GLY:C	12:CM:6:ILE:HG13	2.40	0.41
12:CM:72:ILE:HG13	55:CA:1309:G:O2'	2.20	0.41
13:CN:100:TRP:CD1	13:CN:100:TRP:C	2.94	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:12:VAL:HG22	16:CQ:12:VAL:O	2.21	0.41
17:CR:49:LYS:O	17:CR:49:LYS:HD2	2.21	0.41
18:CS:57:VAL:HA	18:CS:58:PRO:HD2	1.88	0.41
18:CS:60:PHE:CG	18:CS:61:VAL:N	2.87	0.41
19:CT:42:ASP:O	19:CT:44:ALA:N	2.53	0.41
55:CA:243:A:C2	55:CA:245:U:H2'	2.54	0.41
55:CA:596:A:O2'	55:CA:597:G:O5'	2.38	0.41
55:CA:939:G:C6	55:CA:940:C:N4	2.88	0.41
55:CA:961:U:N3	55:CA:983:A:C2	2.88	0.41
55:CA:977:A:H4'	55:CA:981:U:O2	2.20	0.41
55:CA:1043:G:C6	55:CA:1044:A:N6	2.89	0.41
55:CA:1053:G:O5'	55:CA:1054:C:H3'	2.20	0.41
55:CA:1120:C:C2	55:CA:1154:G:N2	2.88	0.41
55:CA:1134:G:N2	55:CA:1141:C:C2	2.88	0.41
55:CA:1250:A:C2	55:CA:1370:G:H1'	2.56	0.41
55:CA:1448:C:O2'	55:CA:1449:C:H6	2.02	0.41
24:DA:120:U:C2	24:DA:149:A:C5	3.08	0.41
24:DA:139:U:H5''	24:DA:140:C:C5	2.56	0.41
24:DA:296:U:H5''	44:DU:91:LYS:HZ3	1.85	0.41
24:DA:395:U:O2'	24:DA:396:G:O5'	2.38	0.41
24:DA:447:A:H5'	24:DA:449:A:C4	2.56	0.41
24:DA:454:A:HO2'	24:DA:455:C:P	2.43	0.41
24:DA:657:U:O2'	24:DA:658:U:C5'	2.68	0.41
24:DA:666:A:H5''	35:DL:48:ARG:HG2	2.03	0.41
24:DA:806:C:O2'	24:DA:807:U:H5'	2.20	0.41
24:DA:866:A:N6	24:DA:913:U:O2'	2.46	0.41
24:DA:1057:A:C6	24:DA:1058:U:C4	3.08	0.41
24:DA:1112:G:H2'	24:DA:1113:U:C5	2.55	0.41
24:DA:1248:G:C4	40:DQ:2:ARG:HG2	2.55	0.41
24:DA:1288:G:C8	24:DA:1327:A:N6	2.88	0.41
24:DA:1301:A:H2'	24:DA:1301:A:N3	2.35	0.41
24:DA:1437:C:C2	24:DA:1438:U:C5	3.08	0.41
24:DA:1449:G:H2'	24:DA:1450:G:O4'	2.20	0.41
24:DA:1597:A:O3'	24:DA:1598:A:H8	2.03	0.41
24:DA:1848:A:C2	24:DA:1849:G:C4	3.09	0.41
24:DA:2006:C:C2	24:DA:2007:U:C5	3.08	0.41
24:DA:2254:C:H2'	24:DA:2255:G:O4'	2.20	0.41
24:DA:2287:A:HO2'	24:DA:2288:A:C3'	2.22	0.41
24:DA:2329:U:H2'	24:DA:2330:G:O4'	2.19	0.41
24:DA:2348:U:O2'	24:DA:2349:G:C5'	2.69	0.41
24:DA:2643:G:H2'	24:DA:2644:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2800:A:N1	24:DA:2801:G:N3	2.68	0.41
26:DC:31:PRO:C	26:DC:32:LEU:HG	2.41	0.41
26:DC:77:VAL:HG23	26:DC:111:ALA:HA	2.01	0.41
26:DC:105:ALA:HA	26:DC:106:PRO:HD3	1.68	0.41
27:DD:4:LEU:HD23	27:DD:101:PHE:CZ	2.54	0.41
29:DF:13:LYS:HD2	29:DF:13:LYS:N	2.35	0.41
29:DF:102:LEU:C	29:DF:103:ILE:HD12	2.41	0.41
30:DG:169:ARG:O	30:DG:170:THR:HB	2.20	0.41
34:DK:104:THR:C	34:DK:106:GLU:H	2.24	0.41
40:DQ:40:LYS:HD2	40:DQ:44:TYR:HE2	1.85	0.41
42:DS:5:ALA:HB3	42:DS:54:ALA:HB2	2.01	0.41
47:DX:9:LYS:HD2	47:DX:53:LYS:HE3	2.01	0.41
47:DX:63:ILE:H	47:DX:63:ILE:HG13	1.59	0.41
51:D1:16:THR:CG2	51:D1:41:VAL:HB	2.50	0.41
1:AB:68:PHE:HD2	1:AB:89:PHE:O	2.03	0.41
1:AB:73:ARG:O	1:AB:73:ARG:HG3	2.20	0.41
1:AB:164:ASP:OD1	1:AB:203:ASP:OD1	2.38	0.41
2:AC:191:THR:HG21	21:AA:421:U:O2	2.20	0.41
3:AD:115:GLN:CD	3:AD:119:HIS:CE1	2.94	0.41
5:AF:46:GLN:HE21	5:AF:56:LYS:HG2	1.84	0.41
7:AH:29:SER:HB2	7:AH:32:LYS:HZ2	1.81	0.41
7:AH:52:GLY:HA3	7:AH:56:PRO:HA	2.01	0.41
11:AL:2:THR:HB	11:AL:5:GLN:HB2	2.02	0.41
14:AO:31:LEU:HD13	14:AO:58:MET:O	2.20	0.41
15:AP:17:TYR:CD1	15:AP:17:TYR:N	2.87	0.41
18:AS:77:ARG:HD2	21:AA:1225:A:H1'	2.01	0.41
21:AA:39:G:H2'	21:AA:40:C:H6	1.85	0.41
21:AA:144:G:C2	21:AA:145:G:C4	3.08	0.41
21:AA:203:G:N2	21:AA:215:C:C2	2.89	0.41
21:AA:515:G:C6	21:AA:516:U:N3	2.89	0.41
21:AA:695:A:H61	21:AA:797:C:H1'	1.85	0.41
21:AA:1049:U:H4'	21:AA:1050:G:H5'	2.02	0.41
21:AA:1131:G:O2'	21:AA:1132:C:O5'	2.33	0.41
21:AA:1220:G:C6	21:AA:1221:G:C5	3.08	0.41
21:AA:1356:G:C2	21:AA:1367:C:O2	2.74	0.41
21:AA:1433:A:C4	21:AA:1468:A:C2	3.08	0.41
21:AA:1478:U:H2'	21:AA:1479:C:H6	1.84	0.41
24:BA:146:A:C2	24:BA:147:C:C2	3.09	0.41
24:BA:200:U:C2'	24:BA:201:C:H5'	2.51	0.41
24:BA:288:U:H2'	24:BA:289:G:C8	2.50	0.41
24:BA:310:A:OP1	44:BU:15:GLY:N	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:391:A:C5	24:BA:411:G:C2	3.08	0.41
24:BA:503:A:H5''	24:BA:504:A:OP1	2.20	0.41
24:BA:584:C:N4	24:BA:585:G:C6	2.89	0.41
24:BA:698:C:C4	24:BA:762:U:C4	3.09	0.41
24:BA:778:G:C5	24:BA:779:U:C5	3.09	0.41
24:BA:1000:A:C4	24:BA:1155:A:C6	3.08	0.41
24:BA:1276:A:C2	24:BA:1277:G:N7	2.88	0.41
24:BA:1495:A:H2'	24:BA:1496:A:C8	2.54	0.41
24:BA:1859:U:H2'	24:BA:1860:G:C8	2.56	0.41
24:BA:2097:A:C2	24:BA:2193:G:C2	3.08	0.41
24:BA:2198:A:C2	31:BH:29:PHE:HB2	2.56	0.41
24:BA:2390:U:O2	24:BA:2391:G:C8	2.73	0.41
24:BA:2557:G:C4	24:BA:2558:C:C5	3.08	0.41
24:BA:2673:G:H2'	24:BA:2674:G:H8	1.84	0.41
25:BB:90:C:H6	25:BB:90:C:C5'	2.26	0.41
25:BB:94:A:OP1	45:BV:19:ARG:HD3	2.20	0.41
26:BC:67:LYS:HE2	26:BC:149:LYS:O	2.20	0.41
27:BD:124:ARG:HG2	27:BD:125:TRP:NE1	2.35	0.41
28:BE:52:VAL:O	28:BE:74:LYS:HE2	2.20	0.41
30:BG:29:ASN:OD1	30:BG:30:GLY:N	2.53	0.41
31:BH:67:ALA:HA	31:BH:138:VAL:CB	2.48	0.41
32:BI:30:GLN:NE2	32:BI:32:VAL:HB	2.35	0.41
34:BK:118:LEU:N	34:BK:118:LEU:CD1	2.84	0.41
36:BM:33:LEU:HD21	36:BM:128:THR:HB	2.01	0.41
36:BM:68:PHE:HA	36:BM:69:PRO:HD2	1.77	0.41
38:BO:10:ARG:NH2	38:BO:96:GLY:O	2.49	0.41
40:BQ:69:ARG:HB2	40:BQ:69:ARG:NH2	2.08	0.41
41:BR:93:PHE:CD1	41:BR:93:PHE:C	2.93	0.41
43:BT:19:LYS:O	43:BT:23:ALA:CB	2.68	0.41
50:B0:38:LEU:H	50:B0:38:LEU:HG	1.65	0.41
54:B4:9:LYS:HB2	54:B4:9:LYS:HE2	1.92	0.41
2:CC:84:GLU:HA	2:CC:87:ARG:HB2	2.03	0.41
3:CD:109:THR:O	3:CD:113:ALA:N	2.46	0.41
6:CG:2:ARG:HG2	6:CG:3:ARG:N	2.34	0.41
6:CG:69:ARG:HA	6:CG:70:PRO:HD3	1.79	0.41
6:CG:89:GLU:O	6:CG:90:VAL:HG13	2.20	0.41
10:CK:90:PRO:O	10:CK:91:GLY:C	2.59	0.41
11:CL:3:VAL:HG23	11:CL:4:ASN:N	2.36	0.41
11:CL:32:VAL:O	11:CL:33:CYS:HB3	2.20	0.41
13:CN:22:LYS:O	13:CN:26:LEU:HB2	2.20	0.41
13:CN:76:PHE:CE2	13:CN:92:ILE:HG21	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CS:6:LYS:HD2	18:CS:6:LYS:N	2.35	0.41
18:CS:11:ASP:OD1	18:CS:11:ASP:N	2.53	0.41
19:CT:59:ARG:C	19:CT:61:ALA:H	2.23	0.41
20:CU:3:ILE:O	20:CU:4:LYS:HG2	2.21	0.41
20:CU:31:VAL:HG12	20:CU:32:ARG:N	2.36	0.41
55:CA:152:A:H3'	55:CA:153:C:H6	1.85	0.41
55:CA:299:G:H2'	55:CA:300:A:C8	2.55	0.41
55:CA:401:C:C2	55:CA:402:G:C8	3.09	0.41
55:CA:669:G:C2	55:CA:670:G:C4	3.09	0.41
55:CA:709:U:O2'	55:CA:710:G:H5'	2.20	0.41
55:CA:735:C:O2'	55:CA:736:C:C5'	2.69	0.41
55:CA:874:G:O2'	55:CA:875:U:C5'	2.64	0.41
55:CA:938:A:C6	55:CA:939:G:C6	3.08	0.41
55:CA:1162:C:O2'	55:CA:1163:A:O4'	2.29	0.41
55:CA:1213:A:C8	55:CA:1215:G:N7	2.88	0.41
55:CA:1463:U:H2'	55:CA:1464:U:H6	1.85	0.41
22:CV:37:A:C6	22:CV:38:A:C4	3.08	0.41
24:DA:36:G:C2	24:DA:445:C:C4	3.09	0.41
24:DA:70:G:H8	24:DA:70:G:OP2	2.03	0.41
24:DA:103:A:O2'	24:DA:104:A:H5'	2.20	0.41
24:DA:215:G:C4'	24:DA:216:A:H4'	2.50	0.41
24:DA:762:U:O2	24:DA:1431:A:H5''	2.20	0.41
24:DA:764:A:H5''	26:DC:208:GLY:HA3	2.03	0.41
24:DA:815:C:H2'	24:DA:816:C:C6	2.55	0.41
24:DA:995:C:H1'	40:DQ:60:TRP:CZ2	2.55	0.41
24:DA:1313:U:O2	24:DA:1313:U:C2'	2.66	0.41
24:DA:1400:U:C2'	24:DA:1401:G:O4'	2.65	0.41
24:DA:1667:G:N2	24:DA:1992:G:OP2	2.42	0.41
24:DA:1878:G:H2'	24:DA:1879:C:C6	2.55	0.41
24:DA:1941:C:O2'	24:DA:1942:C:C5'	2.68	0.41
24:DA:1955:U:H5'	24:DA:2551:C:O2'	2.21	0.41
24:DA:2197:U:O2'	24:DA:2198:A:O5'	2.38	0.41
24:DA:2284:A:OP1	51:D1:4:ILE:HB	2.19	0.41
24:DA:2458:G:O2'	24:DA:2460:U:O4	2.36	0.41
24:DA:2489:U:O4	24:DA:2490:G:N1	2.52	0.41
24:DA:2620:C:H2'	24:DA:2621:G:O4'	2.20	0.41
24:DA:2641:G:H5''	33:DJ:78:THR:HB	2.02	0.41
26:DC:44:ASN:O	26:DC:46:GLY:N	2.53	0.41
27:DD:56:LYS:NZ	27:DD:56:LYS:HB3	2.35	0.41
29:DF:11:VAL:HG13	29:DF:171:ALA:HB2	2.03	0.41
30:DG:31:GLU:O	30:DG:32:LEU:HB2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DG:92:GLY:O	30:DG:93:TYR:C	2.59	0.41
30:DG:117:PRO:HG2	30:DG:143:VAL:CG1	2.49	0.41
30:DG:157:LYS:HE2	30:DG:157:LYS:HB2	1.84	0.41
31:DH:53:GLU:C	31:DH:55:GLU:H	2.23	0.41
32:DI:49:GLU:HG3	32:DI:54:ILE:HD11	2.02	0.41
34:DK:7:MET:HA	34:DK:7:MET:HE3	2.01	0.41
34:DK:59:LYS:HG2	34:DK:89:ASN:HA	2.01	0.41
38:DO:51:ALA:HB2	38:DO:81:ARG:HD2	2.02	0.41
41:DR:19:THR:HG22	41:DR:20:VAL:H	1.84	0.41
41:DR:19:THR:HG22	41:DR:20:VAL:N	2.35	0.41
42:DS:66:ILE:H	42:DS:66:ILE:CD1	2.33	0.41
44:DU:90:LYS:HB2	44:DU:92:VAL:HG13	2.03	0.41
45:DV:14:LYS:O	45:DV:15:GLY:C	2.58	0.41
1:AB:162:VAL:HG22	1:AB:184:ALA:CB	2.50	0.41
1:AB:165:ALA:HA	1:AB:172:ILE:HD11	2.03	0.41
3:AD:56:GLU:OE1	3:AD:56:GLU:HA	2.20	0.41
3:AD:77:GLU:HA	3:AD:77:GLU:OE1	2.20	0.41
4:AE:91:SER:OG	4:AE:134:ASN:HB2	2.21	0.41
4:AE:94:PHE:CD1	4:AE:94:PHE:C	2.91	0.41
6:AG:30:MET:HG3	6:AG:34:LYS:O	2.20	0.41
6:AG:38:ALA:O	6:AG:42:VAL:HG23	2.21	0.41
7:AH:94:VAL:O	7:AH:95:MET:C	2.59	0.41
11:AL:6:LEU:HD21	11:AL:11:ARG:NE	2.35	0.41
15:AP:62:GLY:C	15:AP:64:GLY:H	2.22	0.41
19:AT:30:PHE:O	19:AT:33:LYS:HB2	2.20	0.41
19:AT:73:ARG:HD3	21:AA:261:U:O4	2.20	0.41
21:AA:9:G:O6	21:AA:26:A:N6	2.52	0.41
21:AA:330:C:O2'	21:AA:331:G:C8	2.69	0.41
21:AA:414:A:O2'	21:AA:415:A:C5'	2.46	0.41
21:AA:481:G:OP1	21:AA:481:G:H4'	2.21	0.41
21:AA:502:A:C4	21:AA:503:C:C6	3.09	0.41
21:AA:582:C:C4	21:AA:583:A:N7	2.89	0.41
21:AA:1130:A:H61	21:AA:1144:G:H1'	1.84	0.41
21:AA:1166:G:H8	21:AA:1166:G:O5'	2.04	0.41
21:AA:1228:C:O2'	21:AA:1229:A:O5'	2.38	0.41
21:AA:1310:G:H2'	21:AA:1311:A:O4'	2.20	0.41
21:AA:1403:C:O2'	21:AA:1404:C:H5'	2.20	0.41
24:BA:97:C:C2	24:BA:98:G:C8	3.09	0.41
24:BA:107:G:C2	24:BA:108:G:C8	3.09	0.41
24:BA:261:G:N3	24:BA:261:G:H2'	2.35	0.41
24:BA:302:C:H5'	44:BU:78:LYS:HZ3	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:399:U:C2'	24:BA:400:G:H5'	2.50	0.41
24:BA:406:G:H2'	24:BA:407:G:C8	2.55	0.41
24:BA:480:A:OP2	44:BU:43:LYS:HD2	2.20	0.41
24:BA:513:A:H2'	24:BA:514:A:C8	2.55	0.41
24:BA:542:C:O2	24:BA:542:C:C2'	2.67	0.41
24:BA:563:A:C2	24:BA:2018:G:H1'	2.55	0.41
24:BA:622:G:C6	24:BA:623:C:N4	2.88	0.41
24:BA:636:G:H4'	24:BA:638:G:O3'	2.20	0.41
24:BA:916:G:O5'	24:BA:916:G:H8	2.04	0.41
24:BA:958:U:H3	36:BM:16:ARG:HD3	1.85	0.41
24:BA:972:A:H8	24:BA:972:A:O5'	2.04	0.41
24:BA:992:C:C2	24:BA:993:G:C8	3.08	0.41
24:BA:1021:A:N3	24:BA:1021:A:C2'	2.84	0.41
24:BA:1145:C:H2'	24:BA:1146:C:C6	2.56	0.41
24:BA:1349:C:H2'	24:BA:1350:C:C6	2.55	0.41
24:BA:1496:A:H4'	24:BA:1497:U:H5	1.84	0.41
24:BA:1754:A:N1	24:BA:2716:C:O2'	2.53	0.41
24:BA:1829:A:N6	24:BA:1977:A:N6	2.69	0.41
24:BA:1866:A:C4	24:BA:1876:A:C6	3.09	0.41
24:BA:2210:U:H4'	24:BA:2211:A:O5'	2.21	0.41
24:BA:2518:A:N3	24:BA:2518:A:H2'	2.36	0.41
24:BA:2602:A:H4'	24:BA:2603:G:H5'	2.03	0.41
24:BA:2851:A:N6	24:BA:2852:G:C6	2.88	0.41
26:BC:12:ARG:HD2	26:BC:15:VAL:HG21	2.01	0.41
26:BC:239:PHE:O	26:BC:241:LYS:HG2	2.20	0.41
26:BC:250:GLN:H	26:BC:250:GLN:NE2	2.17	0.41
27:BD:186:LEU:HD12	27:BD:186:LEU:HA	1.71	0.41
28:BE:57:LYS:CG	28:BE:58:LYS:N	2.78	0.41
28:BE:160:ALA:C	28:BE:162:ARG:H	2.24	0.41
29:BF:40:GLY:C	29:BF:84:ILE:HD11	2.41	0.41
29:BF:135:ILE:C	29:BF:137:PHE:N	2.74	0.41
30:BG:24:THR:OG1	30:BG:34:ARG:HB3	2.20	0.41
30:BG:164:ALA:C	30:BG:166:GLU:N	2.74	0.41
33:BJ:37:ARG:HG3	33:BJ:118:MET:HE1	2.03	0.41
33:BJ:140:LEU:CD1	33:BJ:140:LEU:C	2.89	0.41
34:BK:99:ILE:CG2	34:BK:100:PHE:N	2.82	0.41
36:BM:43:ALA:HA	36:BM:46:ILE:HG12	2.02	0.41
39:BP:69:VAL:O	39:BP:69:VAL:HG22	2.17	0.41
43:BT:29:THR:HA	43:BT:86:THR:CA	2.51	0.41
44:BU:66:VAL:O	44:BU:69:VAL:HG22	2.21	0.41
49:BZ:43:ILE:O	49:BZ:47:ILE:HG13	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BZ:53:MET:O	49:BZ:54:VAL:HG13	2.21	0.41
1:CB:212:TYR:C	1:CB:215:ALA:H	2.24	0.41
2:CC:83:VAL:O	2:CC:87:ARG:HG3	2.20	0.41
4:CE:38:VAL:CG1	4:CE:39:GLY:H	2.11	0.41
4:CE:68:ARG:O	4:CE:69:ASN:C	2.58	0.41
6:CG:25:PHE:HD1	6:CG:100:MET:SD	2.44	0.41
9:CJ:92:LEU:HD22	9:CJ:92:LEU:H	1.86	0.41
10:CK:90:PRO:HB2	10:CK:91:GLY:H	1.65	0.41
14:CO:63:ARG:HE	14:CO:63:ARG:HB2	1.58	0.41
17:CR:22:TYR:CE1	17:CR:64:LEU:HD12	2.52	0.41
18:CS:59:VAL:HG11	18:CS:73:PHE:HB3	2.03	0.41
20:CU:13:VAL:CG2	20:CU:15:LEU:HD23	2.47	0.41
55:CA:302:G:C5	55:CA:303:A:N7	2.89	0.41
55:CA:370:C:H2'	55:CA:371:A:C8	2.53	0.41
55:CA:814:A:C5'	55:CA:1511:G:H4'	2.51	0.41
55:CA:829:G:C6	55:CA:858:G:N2	2.88	0.41
55:CA:914:A:O2'	55:CA:915:A:O4'	2.39	0.41
55:CA:976:G:N7	55:CA:1358:U:C2	2.88	0.41
55:CA:1099:G:C6	55:CA:1100:C:N3	2.88	0.41
55:CA:1256:A:C2	55:CA:1278:G:H2'	2.56	0.41
55:CA:1304:G:H1'	55:CA:1333:A:H61	1.85	0.41
55:CA:1386:G:H2'	55:CA:1387:G:C8	2.54	0.41
24:DA:70:G:HO2'	24:DA:71:A:H2	1.60	0.41
24:DA:147:C:O2'	24:DA:148:U:H5'	2.20	0.41
24:DA:197:A:N7	24:DA:2430:A:C8	2.89	0.41
24:DA:363:G:H2'	24:DA:364:C:H5	1.85	0.41
24:DA:389:G:H8	24:DA:389:G:O5'	2.03	0.41
24:DA:408:G:H2'	24:DA:409:G:H8	1.85	0.41
24:DA:415:A:C6	24:DA:416:U:C4	3.07	0.41
24:DA:511:U:H5'	24:DA:1236:G:OP1	2.20	0.41
24:DA:604:G:N3	24:DA:605:G:C8	2.89	0.41
24:DA:614:A:H4'	24:DA:616:A:N7	2.35	0.41
24:DA:726:G:H3'	24:DA:1432:G:O2'	2.21	0.41
24:DA:771:G:N3	24:DA:772:C:C6	2.88	0.41
24:DA:800:A:N1	24:DA:802:A:C8	2.88	0.41
24:DA:945:A:C8	24:DA:2448:A:C2	3.08	0.41
24:DA:1049:C:H6	24:DA:1049:C:H2'	1.41	0.41
24:DA:1345:C:H2'	24:DA:1346:G:H8	1.85	0.41
24:DA:1659:G:C2	24:DA:2002:G:N3	2.88	0.41
24:DA:1742:U:C4	24:DA:1743:G:C6	3.08	0.41
24:DA:1796:U:H2'	24:DA:1797:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1809:A:O2'	24:DA:1810:A:P	2.78	0.41
24:DA:1853:A:H1'	24:DA:2234:G:H5'	2.03	0.41
24:DA:2287:A:HO2'	24:DA:2288:A:C5'	2.27	0.41
24:DA:2446:G:C5	24:DA:2501:C:H2'	2.55	0.41
24:DA:2454:G:N2	24:DA:2499:C:C2	2.88	0.41
24:DA:2524:G:O2'	24:DA:2741:A:N1	2.40	0.41
56:DB:115:A:H2'	56:DB:116:G:H8	1.80	0.41
26:DC:189:ALA:O	26:DC:190:THR:HB	2.21	0.41
28:DE:3:LEU:HD12	28:DE:3:LEU:HA	1.95	0.41
29:DF:8:LYS:HB2	29:DF:8:LYS:HZ1	1.83	0.41
29:DF:37:MET:N	29:DF:151:LEU:HB3	2.35	0.41
31:DH:83:LYS:HG3	31:DH:149:GLU:HB2	2.02	0.41
33:DJ:37:ARG:NH2	33:DJ:39:LYS:HZ1	2.18	0.41
33:DJ:49:ASP:HB2	33:DJ:121:LYS:NZ	2.35	0.41
34:DK:13:ASN:ND2	34:DK:97:THR:H	2.04	0.41
34:DK:71:ARG:HD2	34:DK:71:ARG:HA	1.89	0.41
34:DK:99:ILE:HG13	34:DK:118:LEU:HD12	2.03	0.41
35:DL:111:ILE:HA	35:DL:128:THR:OG1	2.21	0.41
39:DP:54:LEU:O	39:DP:54:LEU:HG	2.20	0.41
42:DS:9:HIS:H	42:DS:102:HIS:CE1	2.38	0.41
44:DU:16:LYS:HA	44:DU:16:LYS:HD3	1.87	0.41
44:DU:58:VAL:CG1	44:DU:60:LYS:HG2	2.51	0.41
50:D0:28:SER:HB3	50:D0:39:ARG:CZ	2.50	0.41
51:D1:5:ARG:CD	51:D1:25:ASN:HB2	2.50	0.41
52:D2:35:ARG:C	52:D2:38:GLY:H	2.24	0.41
53:D3:63:TYR:O	53:D3:64:ALA:O	2.38	0.41
1:AB:32:GLY:HA3	1:AB:39:ILE:CG1	2.51	0.41
1:AB:67:LEU:HD22	1:AB:69:VAL:CG2	2.50	0.41
1:AB:185:ILE:HG22	1:AB:199:ILE:HB	2.03	0.41
2:AC:41:TYR:CZ	2:AC:89:VAL:HG21	2.55	0.41
2:AC:111:ASP:O	2:AC:115:VAL:HG23	2.21	0.41
8:AI:33:SER:OG	8:AI:34:LEU:N	2.53	0.41
9:AJ:11:LYS:HB3	9:AJ:71:LEU:CD1	2.47	0.41
9:AJ:38:GLY:O	9:AJ:74:VAL:O	2.38	0.41
13:AN:68:ARG:HA	13:AN:69:PRO:HD2	1.79	0.41
16:AQ:68:LYS:O	21:AA:254:G:OP1	2.39	0.41
20:AU:38:GLU:CG	21:AA:1527:U:OP2	2.69	0.41
21:AA:50:A:O2'	21:AA:360:G:N2	2.53	0.41
21:AA:57:G:C6	21:AA:58:C:N4	2.89	0.41
21:AA:253:A:H2'	21:AA:254:G:H8	1.84	0.41
21:AA:511:C:C4	21:AA:512:U:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:774:G:C5	21:AA:775:G:N7	2.89	0.41
21:AA:778:G:H2'	21:AA:779:C:C6	2.55	0.41
21:AA:925:G:H2'	21:AA:927:G:H8	1.86	0.41
21:AA:961:U:O2'	21:AA:962:C:H5'	2.20	0.41
21:AA:982:U:C2	21:AA:983:A:N1	2.89	0.41
21:AA:1294:G:C6	21:AA:1295:U:N3	2.89	0.41
21:AA:1449:C:O2'	21:AA:1450:U:O4'	2.30	0.41
21:AA:1501:C:C5	21:AA:1504:G:C4	3.09	0.41
24:BA:78:U:C2	24:BA:79:C:C5	3.09	0.41
24:BA:312:G:N3	24:BA:313:G:C8	2.89	0.41
24:BA:342:A:N1	24:BA:343:C:C2	2.88	0.41
24:BA:607:U:O4	24:BA:620:G:O4'	2.38	0.41
24:BA:611:C:C2'	24:BA:612:G:H5'	2.51	0.41
24:BA:640:C:O2'	24:BA:641:U:H5'	2.20	0.41
24:BA:662:G:O3'	35:BL:16:GLY:HA2	2.20	0.41
24:BA:971:G:C6	24:BA:972:A:C4	3.09	0.41
24:BA:987:C:N4	24:BA:988:A:C5	2.89	0.41
24:BA:1062:G:N7	24:BA:1088:A:C8	2.88	0.41
24:BA:1122:G:N3	24:BA:1122:G:C2'	2.84	0.41
24:BA:1255:U:H3	24:BA:2060:A:C5'	2.34	0.41
24:BA:1567:G:H2'	26:BC:84:PRO:HG3	2.03	0.41
24:BA:1652:A:H2	24:BA:2006:C:N3	2.13	0.41
24:BA:1652:A:H62	37:BN:11:ASN:HD21	1.69	0.41
24:BA:1654:A:N3	24:BA:1655:A:C8	2.88	0.41
24:BA:1731:G:H1'	24:BA:1733:G:C8	2.55	0.41
24:BA:1798:U:P	26:BC:255:LYS:O	2.79	0.41
24:BA:1803:A:H5''	24:BA:1804:C:OP2	2.20	0.41
24:BA:1864:U:OP1	24:BA:2411:A:H5'	2.20	0.41
24:BA:1899:A:H3'	24:BA:1899:A:C8	2.56	0.41
24:BA:2235:G:H2'	24:BA:2236:U:C6	2.56	0.41
24:BA:2287:A:C5	24:BA:2289:G:N7	2.89	0.41
24:BA:2353:G:O2'	46:BW:31:LEU:CD2	2.65	0.41
24:BA:2534:A:H2'	24:BA:2535:G:O4'	2.21	0.41
24:BA:2853:C:C2'	24:BA:2854:G:H5'	2.50	0.41
24:BA:2897:U:H2'	24:BA:2898:U:C6	2.56	0.41
29:BF:125:GLY:O	29:BF:126:ASN:OD1	2.39	0.41
31:BH:85:GLY:HA3	31:BH:91:PHE:HB3	2.01	0.41
32:BI:50:LYS:HE2	32:BI:50:LYS:HB2	1.87	0.41
34:BK:2:ILE:N	34:BK:2:ILE:CD1	2.82	0.41
36:BM:46:ILE:O	36:BM:47:GLU:C	2.59	0.41
36:BM:133:LYS:O	36:BM:134:THR:CB	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BN:64:ARG:O	37:BN:67:PHE:HB3	2.21	0.41
38:BO:31:THR:HG22	38:BO:34:HIS:O	2.20	0.41
39:BP:24:THR:HG22	39:BP:87:ARG:N	2.33	0.41
43:BT:19:LYS:O	43:BT:20:ALA:C	2.58	0.41
43:BT:28:ASN:C	43:BT:91:GLN:HE22	2.24	0.41
46:BW:74:LYS:O	46:BW:75:ASN:C	2.58	0.41
48:BY:42:LEU:O	48:BY:43:LEU:C	2.58	0.41
54:B4:15:LYS:O	54:B4:16:ILE:O	2.38	0.41
1:CB:25:LYS:O	1:CB:192:PRO:HG3	2.20	0.41
1:CB:96:LEU:HD22	55:CA:1103:C:C5'	2.51	0.41
1:CB:151:LYS:HG3	1:CB:152:ASP:H	1.85	0.41
1:CB:169:HIS:CG	1:CB:170:ILE:N	2.89	0.41
2:CC:99:GLN:O	2:CC:100:ILE:C	2.59	0.41
2:CC:131:ARG:CA	2:CC:134:LYS:HD2	2.50	0.41
2:CC:152:VAL:HG23	2:CC:156:LEU:HD11	2.03	0.41
5:CF:59:TYR:HE2	17:CR:66:LEU:CD2	2.33	0.41
6:CG:112:ASP:CB	6:CG:118:ARG:HA	2.51	0.41
9:CJ:71:LEU:HD12	9:CJ:72:ARG:H	1.86	0.41
15:CP:66:THR:CG2	15:CP:67:ILE:N	2.83	0.41
16:CQ:24:ILE:HD12	16:CQ:24:ILE:N	2.35	0.41
17:CR:70:THR:OG1	17:CR:71:ASP:N	2.53	0.41
18:CS:50:VAL:CG1	18:CS:70:LEU:HB3	2.48	0.41
55:CA:198:G:O2'	55:CA:199:A:O4'	2.37	0.41
55:CA:316:C:C2	55:CA:317:U:C5	3.09	0.41
55:CA:317:U:N3	55:CA:337:G:C2	2.89	0.41
55:CA:397:A:C6	55:CA:548:G:C5	3.08	0.41
55:CA:411:A:C6	55:CA:429:U:C5	3.08	0.41
55:CA:562:U:C4	55:CA:884:U:C5	3.09	0.41
55:CA:727:G:C2	55:CA:731:G:C2	3.07	0.41
55:CA:763:G:C4	55:CA:764:C:C5	3.09	0.41
55:CA:833:G:C2	55:CA:834:U:C2	3.08	0.41
55:CA:914:A:H2'	55:CA:915:A:C8	2.56	0.41
55:CA:946:A:H2'	55:CA:947:G:H8	1.85	0.41
55:CA:1250:A:C5	55:CA:1287:A:C5	3.09	0.41
24:DA:13:A:C5'	24:DA:14:A:OP1	2.67	0.41
24:DA:61:C:N4	24:DA:94:A:C6	2.89	0.41
24:DA:79:C:O2'	24:DA:346:A:H1'	2.20	0.41
24:DA:132:G:H2'	24:DA:133:U:C6	2.55	0.41
24:DA:229:C:HO2'	24:DA:230:G:P	2.43	0.41
24:DA:241:A:C1'	24:DA:243:U:C4	3.03	0.41
24:DA:302:C:O2'	24:DA:303:G:O5'	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:719:C:O2'	24:DA:720:U:H5'	2.20	0.41
24:DA:735:A:N3	24:DA:735:A:H2'	2.36	0.41
24:DA:738:G:N1	24:DA:739:A:C2	2.89	0.41
24:DA:1047:G:C2	24:DA:1110:G:C4	3.08	0.41
24:DA:1062:G:O2'	24:DA:1063:G:C8	2.29	0.41
24:DA:1287:A:OP1	37:DN:103:ARG:CG	2.69	0.41
24:DA:1355:G:C6	24:DA:1377:G:C2	3.09	0.41
24:DA:1707:G:C8	24:DA:1756:G:N7	2.89	0.41
24:DA:1753:G:C2	24:DA:1756:G:C2	3.09	0.41
24:DA:1830:C:H5'	26:DC:14:HIS:HE1	1.80	0.41
24:DA:1844:C:N3	24:DA:1845:G:N7	2.69	0.41
24:DA:2136:G:H2'	24:DA:2137:U:H6	1.83	0.41
24:DA:2285:C:OP2	51:D1:5:ARG:NH1	2.54	0.41
24:DA:2439:A:H1'	24:DA:2587:A:H5'	2.02	0.41
24:DA:2654:A:H4'	24:DA:2655:G:OP1	2.19	0.41
24:DA:2823:A:C4	24:DA:2824:C:C6	3.08	0.41
24:DA:2850:A:N7	24:DA:2868:A:O2'	2.53	0.41
56:DB:42:C:O2	29:DF:89:THR:N	2.52	0.41
56:DB:66:A:C6	56:DB:107:G:C4	3.09	0.41
56:DB:98:G:H1	45:DV:14:LYS:H	1.68	0.41
27:DD:15:PHE:HA	27:DD:20:VAL:O	2.21	0.41
27:DD:40:LEU:HD12	27:DD:40:LEU:N	2.35	0.41
28:DE:46:GLN:CB	28:DE:86:ALA:HB1	2.45	0.41
28:DE:134:LEU:HA	28:DE:137:LYS:CB	2.51	0.41
29:DF:82:TYR:HA	29:DF:83:PRO:HD2	1.86	0.41
33:DJ:97:PRO:C	33:DJ:99:ARG:N	2.74	0.41
33:DJ:123:LYS:N	33:DJ:123:LYS:HD2	2.35	0.41
37:DN:51:LEU:HA	37:DN:51:LEU:HD23	1.87	0.41
38:DO:18:LEU:HD21	38:DO:91:SER:CB	2.50	0.41
39:DP:54:LEU:HA	39:DP:76:HIS:CD2	2.55	0.41
41:DR:68:ARG:NH1	41:DR:90:ARG:HG2	2.34	0.41
42:DS:27:LYS:O	42:DS:28:LYS:C	2.59	0.41
44:DU:100:GLU:O	44:DU:101:THR:C	2.59	0.41
46:DW:17:ALA:O	46:DW:18:LYS:CB	2.56	0.41
1:AB:67:LEU:HG	1:AB:149:GLY:HA3	2.02	0.41
1:AB:81:ASP:CG	1:AB:82:ALA:H	2.24	0.41
3:AD:117:VAL:HA	3:AD:122:ILE:CD1	2.48	0.41
4:AE:57:ALA:HA	4:AE:60:GLN:HB3	2.03	0.41
5:AF:53:LYS:HZ3	21:AA:710:G:H5''	1.79	0.41
5:AF:71:ILE:HD11	5:AF:89:VAL:HG21	2.02	0.41
9:AJ:74:VAL:O	9:AJ:75:ASP:CB	2.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:22:ILE:CG1	10:AK:85:VAL:HA	2.50	0.41
10:AK:25:SER:OG	10:AK:26:PHE:N	2.53	0.41
10:AK:44:ALA:HB3	10:AK:69:CYS:HB2	2.01	0.41
10:AK:125:LYS:O	20:AU:33:ARG:CZ	2.68	0.41
11:AL:82:ARG:HG2	11:AL:82:ARG:HH11	1.84	0.41
12:AM:70:ARG:HG2	12:AM:71:GLU:CB	2.50	0.41
14:AO:20:ASP:OD1	21:AA:750:C:O2'	2.37	0.41
14:AO:68:TYR:OH	21:AA:752:G:O3'	2.38	0.41
18:AS:77:ARG:NH2	21:AA:1322:C:P	2.92	0.41
18:AS:79:TYR:O	18:AS:80:ARG:HB3	2.21	0.41
21:AA:62:U:H2'	21:AA:63:C:C6	2.56	0.41
21:AA:109:A:C5	21:AA:326:G:C2	3.09	0.41
21:AA:112:G:C6	21:AA:330:C:N4	2.89	0.41
21:AA:113:G:H1'	21:AA:354:G:H5'	2.03	0.41
21:AA:211:G:H2'	21:AA:212:G:O4'	2.20	0.41
21:AA:252:U:O2'	21:AA:275:G:N2	2.54	0.41
21:AA:454:G:C2'	21:AA:455:G:H5'	2.50	0.41
21:AA:506:G:C6	21:AA:507:C:C4	3.09	0.41
21:AA:868:C:H2'	21:AA:869:G:O4'	2.21	0.41
21:AA:1039:G:C6	21:AA:1040:U:C4	3.08	0.41
21:AA:1081:A:C2	21:AA:1082:A:C8	3.09	0.41
21:AA:1382:C:O2'	21:AA:1383:C:C6	2.69	0.41
21:AA:1501:C:C6	21:AA:1504:G:C8	3.09	0.41
22:AV:27:G:H8	22:AV:27:G:C5'	2.28	0.41
24:BA:217:A:C4	24:BA:218:A:C8	3.08	0.41
24:BA:445:C:O2	24:BA:449:A:H2	2.04	0.41
24:BA:448:U:H5'	28:BE:79:ARG:NH2	2.36	0.41
24:BA:477:A:H2'	24:BA:478:A:C8	2.55	0.41
24:BA:528:A:H2	24:BA:2043:C:C5'	2.30	0.41
24:BA:602:A:H1'	24:BA:656:G:N2	2.36	0.41
24:BA:681:G:C4	24:BA:682:G:C8	3.09	0.41
24:BA:705:A:C2	24:BA:706:A:C4	3.08	0.41
24:BA:747:U:O3'	42:BS:89:ALA:HB3	2.21	0.41
24:BA:783:A:H2'	24:BA:784:G:H4'	2.02	0.41
24:BA:988:A:C2	24:BA:989:G:N2	2.88	0.41
24:BA:1125:G:N1	24:BA:1126:A:N6	2.69	0.41
24:BA:1300:G:C4'	24:BA:1301:A:H5''	2.49	0.41
24:BA:1398:C:H5''	43:BT:59:ASN:HD21	1.84	0.41
24:BA:1655:A:H5'	27:BD:118:PHE:CD2	2.56	0.41
24:BA:1753:G:N1	24:BA:1756:G:OP2	2.53	0.41
24:BA:1970:A:H1'	24:BA:1972:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2149:U:H2'	24:BA:2150:C:O4'	2.20	0.41
24:BA:2185:U:OP2	24:BA:2185:U:H6	2.04	0.41
24:BA:2186:G:C2	24:BA:2187:U:H1'	2.56	0.41
24:BA:2207:C:C2	24:BA:2218:G:C2	3.09	0.41
24:BA:2291:U:N3	24:BA:2292:U:C4	2.89	0.41
24:BA:2516:A:C6	24:BA:2517:C:C4	3.09	0.41
24:BA:2667:C:C2'	24:BA:2668:G:H5'	2.51	0.41
24:BA:2824:C:H2'	24:BA:2825:G:O5'	2.20	0.41
28:BE:172:ALA:O	28:BE:175:ILE:HG22	2.21	0.41
28:BE:176:ASP:OD2	28:BE:179:SER:HB3	2.21	0.41
30:BG:1:SER:O	30:BG:2:ARG:HB2	2.20	0.41
30:BG:83:THR:O	30:BG:84:LYS:HD3	2.20	0.41
30:BG:102:ILE:HG21	30:BG:130:ILE:HD13	2.03	0.41
32:BI:72:THR:HB	32:BI:112:LYS:HZ1	1.84	0.41
36:BM:33:LEU:HD23	36:BM:33:LEU:HA	1.83	0.41
39:BP:20:ARG:HA	39:BP:21:PRO:HD2	1.85	0.41
41:BR:49:ILE:HG22	41:BR:54:VAL:N	2.35	0.41
42:BS:46:LEU:HD23	42:BS:46:LEU:HA	1.88	0.41
43:BT:32:LEU:N	43:BT:83:ALA:HB3	2.31	0.41
46:BW:14:ASP:HB3	46:BW:15:SER:H	1.31	0.41
49:BZ:8:GLN:HB3	49:BZ:31:ILE:HA	2.02	0.41
1:CB:94:ARG:HE	55:CA:1099:G:H5''	1.86	0.41
2:CC:36:PHE:HE1	13:CN:91:GLU:OE1	2.03	0.41
3:CD:32:LYS:HE3	55:CA:413:G:C2	2.55	0.41
4:CE:104:ILE:O	4:CE:104:ILE:CG2	2.68	0.41
4:CE:148:SER:O	4:CE:152:VAL:N	2.53	0.41
9:CJ:92:LEU:O	9:CJ:94:ALA:N	2.54	0.41
11:CL:113:ARG:NH2	11:CL:120:ARG:HA	2.35	0.41
12:CM:27:THR:HG21	55:CA:1328:C:H5''	2.03	0.41
14:CO:53:ARG:NH1	55:CA:728:A:C8	2.88	0.41
14:CO:69:LEU:CD1	14:CO:77:TYR:HB2	2.50	0.41
15:CP:32:PHE:O	15:CP:32:PHE:HD1	2.04	0.41
17:CR:37:LYS:CD	20:CU:22:CYS:HB3	2.51	0.41
18:CS:46:LEU:HD23	18:CS:46:LEU:H	1.85	0.41
19:CT:23:ARG:CB	19:CT:65:LEU:HD11	2.51	0.41
20:CU:24:LYS:HZ2	20:CU:25:ALA:HB2	1.86	0.41
55:CA:85:U:O2	55:CA:85:U:O4'	2.38	0.41
55:CA:468:A:H5''	55:CA:469:C:H5	1.86	0.41
55:CA:640:A:C2	55:CA:642:A:N6	2.88	0.41
55:CA:663:A:H5'	55:CA:836:G:OP1	2.20	0.41
55:CA:669:G:H2'	55:CA:670:G:H8	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:809:G:C6	55:CA:810:C:C5	3.09	0.41
55:CA:981:U:C5	55:CA:982:U:O2	2.74	0.41
55:CA:1026:G:H22	55:CA:1036:A:N6	2.17	0.41
55:CA:1042:A:H2'	55:CA:1043:G:O4'	2.21	0.41
55:CA:1065:U:O4	55:CA:1189:U:N3	2.53	0.41
55:CA:1441:A:N6	55:CA:1462:C:H1'	2.36	0.41
22:CV:30:G:C2	22:CV:31:A:N9	2.89	0.41
24:DA:8:C:O2'	24:DA:9:G:H5'	2.21	0.41
24:DA:30:G:OP1	40:DQ:4:LYS:HG3	2.21	0.41
24:DA:50:U:H4'	24:DA:51:G:OP2	2.20	0.41
24:DA:71:A:C8	24:DA:73:A:N6	2.89	0.41
24:DA:228:C:H4'	24:DA:229:C:C6	2.56	0.41
24:DA:363:G:H2'	24:DA:364:C:C5	2.56	0.41
24:DA:379:G:O6	24:DA:380:G:C6	2.73	0.41
24:DA:380:G:H4'	47:DX:15:ASN:O	2.21	0.41
24:DA:396:G:O2'	24:DA:397:U:C6	2.55	0.41
24:DA:411:G:C4'	24:DA:412:A:OP1	2.67	0.41
24:DA:511:U:H4'	24:DA:1235:G:H4'	2.02	0.41
24:DA:682:G:H5'	52:D2:26:ASN:OD1	2.20	0.41
24:DA:728:G:C4	24:DA:730:A:C8	3.09	0.41
24:DA:807:U:C1'	24:DA:2445:G:H5'	2.51	0.41
24:DA:810:U:HO2'	24:DA:811:U:H5	1.68	0.41
24:DA:866:A:C8	24:DA:914:G:C6	3.09	0.41
24:DA:903:C:H2'	24:DA:904:G:H8	1.83	0.41
24:DA:948:C:H2'	24:DA:949:G:H8	1.84	0.41
24:DA:952:G:C4	24:DA:966:G:N2	2.89	0.41
24:DA:959:A:O2'	24:DA:960:A:O4'	2.32	0.41
24:DA:963:U:O2'	24:DA:964:C:C6	2.72	0.41
24:DA:1136:G:O2'	24:DA:1137:G:C8	2.70	0.41
24:DA:1392:A:H61	43:DT:18:GLU:HG3	1.86	0.41
24:DA:1398:C:O2'	24:DA:1399:C:O5'	2.39	0.41
24:DA:1407:G:H2'	24:DA:1408:G:H8	1.86	0.41
24:DA:1475:G:N3	24:DA:1514:G:O6	2.54	0.41
24:DA:1923:U:O2'	24:DA:1924:C:H5'	2.20	0.41
24:DA:2235:G:O2'	24:DA:2236:U:H5'	2.21	0.41
24:DA:2413:G:C4	24:DA:2414:G:C8	3.09	0.41
24:DA:2426:A:H3'	24:DA:2427:C:C5'	2.50	0.41
24:DA:2543:G:N3	24:DA:2765:A:H2'	2.35	0.41
24:DA:2577:A:H2	50:D0:1:ALA:H2	1.65	0.41
24:DA:2647:U:O2'	24:DA:2648:G:H5'	2.20	0.41
24:DA:2751:G:N3	30:DG:2:ARG:NH2	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:51:G:H3'	38:DO:64:TYR:CE1	2.56	0.41
56:DB:52:A:H1'	56:DB:53:A:N7	2.36	0.41
56:DB:76:G:O2'	45:DV:21:ARG:NH2	2.53	0.41
29:DF:33:ILE:HB	29:DF:90:LEU:HD23	2.03	0.41
29:DF:48:LEU:O	29:DF:52:ALA:CB	2.69	0.41
29:DF:74:ALA:HB1	29:DF:76:PHE:CE2	2.54	0.41
29:DF:122:ASP:HB3	29:DF:126:ASN:ND2	2.36	0.41
30:DG:94:ARG:HG2	30:DG:104:LEU:HA	2.03	0.41
31:DH:2:GLN:HB3	31:DH:18:GLN:CG	2.51	0.41
31:DH:4:ILE:O	31:DH:36:ALA:HB1	2.20	0.41
33:DJ:15:TRP:HA	33:DJ:53:TYR:O	2.20	0.41
33:DJ:35:ARG:HA	33:DJ:40:HIS:CD2	2.56	0.41
33:DJ:64:VAL:CG1	33:DJ:65:THR:N	2.83	0.41
34:DK:61:VAL:HG13	34:DK:87:LEU:HD21	2.03	0.41
35:DL:96:LYS:HE2	35:DL:102:GLY:O	2.21	0.41
39:DP:24:THR:O	39:DP:25:VAL:C	2.58	0.41
43:DT:18:GLU:HB2	43:DT:19:LYS:H	1.45	0.41
43:DT:61:LEU:HD12	43:DT:61:LEU:C	2.41	0.41
45:DV:15:GLY:O	45:DV:19:ARG:HG3	2.20	0.41
46:DW:17:ALA:CB	46:DW:36:ILE:HA	2.50	0.41
50:D0:43:THR:HG23	50:D0:47:TYR:O	2.21	0.41
51:D1:36:LYS:HA	51:D1:47:ILE:HA	2.03	0.41
1:AB:219:THR:HG23	1:AB:220:VAL:H	1.86	0.41
2:AC:17:TRP:CZ2	13:AN:95:LEU:O	2.72	0.41
3:AD:109:THR:HG23	3:AD:112:GLU:CB	2.51	0.41
3:AD:119:HIS:HA	21:AA:439:U:O4'	2.21	0.41
3:AD:191:SER:O	3:AD:192:ALA:CB	2.69	0.41
4:AE:155:LYS:HG2	7:AH:65:PHE:CB	2.51	0.41
5:AF:40:GLU:HB2	5:AF:42:TRP:NE1	2.28	0.41
8:AI:79:ARG:O	8:AI:79:ARG:HD2	2.20	0.41
10:AK:32:THR:HG23	10:AK:42:GLY:O	2.20	0.41
14:AO:16:ARG:HD3	14:AO:20:ASP:OD2	2.21	0.41
14:AO:44:GLU:O	14:AO:45:HIS:HB2	2.20	0.41
16:AQ:46:HIS:HE2	16:AQ:48:GLU:HB2	1.85	0.41
18:AS:43:MET:HA	18:AS:46:LEU:HD12	2.02	0.41
19:AT:4:LYS:HB3	21:AA:332:G:OP2	2.20	0.41
19:AT:79:THR:O	19:AT:80:ALA:C	2.59	0.41
20:AU:13:VAL:HG13	20:AU:15:LEU:HD11	2.02	0.41
20:AU:46:ARG:HA	20:AU:49:ALA:HB3	2.02	0.41
21:AA:451:A:N7	21:AA:481:G:C2	2.89	0.41
21:AA:530:G:O2'	21:AA:531:U:P	2.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:613:C:O5'	21:AA:613:C:H6	2.04	0.41
21:AA:1261:A:C2	21:AA:1275:A:C5	3.09	0.41
21:AA:1356:G:N2	21:AA:1357:A:N3	2.69	0.41
21:AA:1453:G:N3	21:AA:1453:G:C2'	2.76	0.41
21:AA:1487:G:H2'	21:AA:1488:G:H8	1.86	0.41
24:BA:14:A:C5'	24:BA:15:G:OP2	2.65	0.41
24:BA:36:G:C5	24:BA:37:C:C5	3.08	0.41
24:BA:301:G:C6	24:BA:302:C:N4	2.89	0.41
24:BA:307:G:N2	24:BA:309:A:H3'	2.35	0.41
24:BA:590:A:H2'	24:BA:591:U:C6	2.56	0.41
24:BA:626:A:H2'	35:BL:78:ARG:NH1	2.36	0.41
24:BA:752:A:O2'	24:BA:753:A:P	2.79	0.41
24:BA:988:A:H2	24:BA:989:G:N2	2.19	0.41
24:BA:990:A:N6	24:BA:1186:G:H1'	2.35	0.41
24:BA:1157:G:O2'	49:BZ:31:ILE:HD11	2.21	0.41
24:BA:1214:A:H2'	24:BA:1215:G:O4'	2.20	0.41
24:BA:1321:A:H2'	24:BA:1322:A:O4'	2.20	0.41
24:BA:1353:A:H2'	24:BA:1354:A:C8	2.55	0.41
24:BA:1421:G:N3	24:BA:1422:G:C8	2.88	0.41
24:BA:1805:A:H2'	24:BA:1806:C:H6	1.86	0.41
24:BA:1809:A:O2'	24:BA:1810:A:O4'	2.39	0.41
24:BA:1838:C:N4	24:BA:1899:A:C4	2.88	0.41
24:BA:2037:A:C6	24:BA:2038:G:C6	3.09	0.41
24:BA:2195:U:O2'	24:BA:2196:C:H5'	2.20	0.41
24:BA:2262:U:O2'	24:BA:2328:A:H1'	2.21	0.41
24:BA:2305:U:H6	29:BF:152:ASP:HB3	1.85	0.41
24:BA:2534:A:C5	24:BA:2535:G:C8	3.09	0.41
24:BA:2564:A:N1	24:BA:2646:C:O2'	2.50	0.41
24:BA:2808:G:C2	24:BA:2891:U:C6	3.08	0.41
25:BB:97:C:H2'	25:BB:98:G:O4'	2.21	0.41
25:BB:105:G:O2'	25:BB:106:G:H5'	2.21	0.41
26:BC:185:ALA:C	26:BC:187:CYS:H	2.24	0.41
28:BE:62:GLN:HE21	28:BE:62:GLN:HB2	1.58	0.41
30:BG:25:ILE:HG22	30:BG:78:VAL:HG21	2.01	0.41
33:BJ:69:ARG:O	33:BJ:90:GLU:HG2	2.20	0.41
34:BK:7:MET:SD	34:BK:20:MET:HB2	2.61	0.41
34:BK:61:VAL:HG22	34:BK:87:LEU:HD11	2.02	0.41
34:BK:113:MET:SD	34:BK:116:ILE:HD11	2.61	0.41
34:BK:118:LEU:HB3	34:BK:119:ALA:H	1.58	0.41
36:BM:97:GLN:CD	36:BM:97:GLN:H	2.24	0.41
38:BO:57:ALA:C	38:BO:59:ALA:N	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BP:26:GLU:HB2	39:BP:43:GLU:HB2	2.02	0.41
39:BP:112:ARG:O	39:BP:113:LEU:C	2.58	0.41
44:BU:48:VAL:O	44:BU:53:GLN:HB3	2.21	0.41
47:BX:34:SER:CA	47:BX:49:ARG:HA	2.46	0.41
51:B1:34:GLU:HG2	51:B1:49:LYS:HG3	2.02	0.41
54:B4:37:GLN:O	54:B4:37:GLN:HG2	2.21	0.41
1:CB:74:ALA:C	1:CB:206:ILE:HD11	2.41	0.41
1:CB:125:PHE:HD2	1:CB:125:PHE:N	2.18	0.41
2:CC:2:GLN:HB3	2:CC:2:GLN:HE21	1.51	0.41
3:CD:103:ARG:O	3:CD:104:MET:HB2	2.21	0.41
3:CD:145:ARG:NH2	55:CA:490:C:OP1	2.54	0.41
4:CE:74:ALA:O	4:CE:75:LEU:HB2	2.20	0.41
5:CF:35:LYS:HE2	5:CF:37:HIS:CE1	2.52	0.41
9:CJ:52:LEU:HB2	13:CN:80:ARG:HD2	2.03	0.41
9:CJ:52:LEU:HA	9:CJ:62:ARG:HA	2.01	0.41
11:CL:98:ARG:O	11:CL:117:GLY:HA3	2.20	0.41
11:CL:118:VAL:O	55:CA:36:C:H4'	2.21	0.41
15:CP:4:ILE:O	15:CP:71:VAL:HG11	2.21	0.41
20:CU:31:VAL:HG12	20:CU:32:ARG:H	1.86	0.41
55:CA:10:A:C6	55:CA:25:C:N3	2.89	0.41
55:CA:71:A:C5	55:CA:100:G:C4	3.09	0.41
55:CA:236:A:H2'	55:CA:237:G:H8	1.86	0.41
55:CA:506:G:H2'	55:CA:507:C:C6	2.55	0.41
55:CA:519:C:O2'	55:CA:520:A:H5'	2.21	0.41
55:CA:818:G:H3'	55:CA:819:A:C5'	2.51	0.41
55:CA:976:G:OP1	55:CA:976:G:H4'	2.20	0.41
55:CA:994:A:N6	55:CA:1215:G:O2'	2.54	0.41
55:CA:1073:U:H2'	55:CA:1074:G:O4'	2.21	0.41
55:CA:1386:G:C2	55:CA:1387:G:C5	3.09	0.41
24:DA:42:A:C2	24:DA:438:G:C2	3.09	0.41
24:DA:181:A:C2	24:DA:434:U:H1'	2.55	0.41
24:DA:183:C:H2'	24:DA:184:C:H5'	2.03	0.41
24:DA:216:A:O2'	24:DA:217:A:C8	2.25	0.41
24:DA:527:C:O2	24:DA:527:C:C2'	2.69	0.41
24:DA:647:G:N2	24:DA:2350:C:O2'	2.47	0.41
24:DA:790:U:O2'	24:DA:791:C:H6	2.03	0.41
24:DA:900:A:H3'	24:DA:901:C:C6	2.56	0.41
24:DA:957:C:OP2	36:DM:75:GLU:HA	2.21	0.41
24:DA:1064:C:C4	24:DA:1065:U:C4	3.09	0.41
24:DA:1139:G:C6	24:DA:1140:C:C4	3.08	0.41
24:DA:1223:G:O5'	24:DA:1223:G:H8	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1308:A:H3'	24:DA:1309:G:C8	2.55	0.41
24:DA:1380:G:C2	24:DA:1381:G:C8	3.09	0.41
24:DA:1442:U:C4	24:DA:1443:U:O4	2.74	0.41
24:DA:1879:C:H2'	24:DA:1880:U:O4'	2.20	0.41
24:DA:1994:C:H2'	24:DA:1995:U:C6	2.46	0.41
24:DA:2693:G:N3	24:DA:2694:G:C8	2.89	0.41
24:DA:2744:G:C6	24:DA:2761:A:C6	3.09	0.41
24:DA:2787:C:O2'	24:DA:2788:C:H5'	2.21	0.41
26:DC:19:VAL:O	26:DC:19:VAL:HG12	2.21	0.41
26:DC:67:LYS:HD3	26:DC:148:GLY:O	2.21	0.41
26:DC:141:HIS:HB3	26:DC:190:THR:HB	2.01	0.41
31:DH:66:ASN:O	31:DH:67:ALA:HB3	2.21	0.41
32:DI:112:LYS:HZ3	32:DI:128:ILE:HD12	1.85	0.41
33:DJ:48:VAL:HG12	33:DJ:49:ASP:N	2.36	0.41
34:DK:22:ILE:HD11	34:DK:40:LYS:HG3	2.03	0.41
35:DL:121:THR:OG1	35:DL:141:LYS:HE3	2.20	0.41
38:DO:2:ASP:O	38:DO:4:LYS:N	2.53	0.41
38:DO:77:ALA:O	38:DO:81:ARG:HG3	2.20	0.41
40:DQ:23:TYR:HB2	40:DQ:28:SER:HB3	2.02	0.41
44:DU:80:ASP:N	44:DU:80:ASP:OD1	2.53	0.41
44:DU:94:PHE:O	44:DU:94:PHE:HD2	2.04	0.41
46:DW:28:GLU:H	46:DW:31:LEU:CD2	2.19	0.41
46:DW:37:VAL:CG2	46:DW:38:ARG:HH11	2.33	0.41
48:DY:27:ASN:HD22	48:DY:27:ASN:HA	1.73	0.41
52:D2:28:ARG:C	52:D2:30:VAL:N	2.74	0.41
1:AB:44:LYS:HD2	1:AB:44:LYS:HA	1.76	0.41
1:AB:131:LYS:HG3	1:AB:135:MET:HE3	2.02	0.41
2:AC:120:THR:HG23	2:AC:188:ALA:CB	2.50	0.41
2:AC:155:ARG:HG2	2:AC:159:ALA:O	2.21	0.41
3:AD:69:ARG:HA	3:AD:69:ARG:HE	1.86	0.41
4:AE:34:ALA:O	4:AE:49:TYR:CD2	2.74	0.41
5:AF:4:TYR:O	5:AF:63:ASN:HA	2.21	0.41
5:AF:79:ARG:CA	5:AF:79:ARG:NE	2.84	0.41
5:AF:98:GLU:HG3	5:AF:99:ALA:N	2.36	0.41
6:AG:128:GLU:O	6:AG:130:LYS:HG2	2.21	0.41
7:AH:74:ILE:HD13	7:AH:128:VAL:HG22	2.01	0.41
7:AH:79:ARG:HG3	7:AH:82:LEU:H	1.86	0.41
7:AH:84:ILE:HD13	7:AH:84:ILE:HA	1.75	0.41
7:AH:85:TYR:HE2	7:AH:123:GLU:OE2	2.03	0.41
8:AI:11:ARG:HA	8:AI:105:ARG:HH12	1.86	0.41
8:AI:21:LYS:HE3	8:AI:61:ASP:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:28:VAL:O	8:AI:28:VAL:HG12	2.20	0.41
9:AJ:74:VAL:HB	9:AJ:75:ASP:H	1.67	0.41
10:AK:96:ILE:HG13	10:AK:97:ARG:N	2.35	0.41
11:AL:43:LYS:CD	11:AL:43:LYS:N	2.80	0.41
11:AL:43:LYS:HB2	11:AL:44:PRO:HD3	2.03	0.41
11:AL:115:LYS:O	11:AL:116:TYR:CB	2.68	0.41
12:AM:70:ARG:HG3	29:BF:112:ASP:HA	2.03	0.41
12:AM:75:SER:O	12:AM:78:ARG:HB3	2.21	0.41
14:AO:57:ARG:HB3	14:AO:57:ARG:HH11	1.83	0.41
15:AP:5:ARG:HB2	21:AA:376:G:H5''	2.03	0.41
15:AP:25:ARG:HE	15:AP:25:ARG:HB2	1.62	0.41
15:AP:51:ARG:O	15:AP:52:LEU:HB2	2.20	0.41
16:AQ:32:ILE:HG22	16:AQ:33:TYR:N	2.35	0.41
20:AU:43:GLU:C	20:AU:45:LYS:N	2.75	0.41
20:AU:44:ARG:HD2	20:AU:44:ARG:H	1.85	0.41
20:AU:52:VAL:CG1	20:AU:53:LYS:H	2.23	0.41
21:AA:76:G:N2	21:AA:95:C:N3	2.68	0.41
21:AA:76:G:N2	21:AA:95:C:C4	2.88	0.41
21:AA:312:C:H2'	21:AA:313:A:O4'	2.20	0.41
21:AA:625:U:O2	21:AA:625:U:H2'	2.20	0.41
21:AA:652:U:O2'	21:AA:653:U:H6	2.02	0.41
21:AA:694:A:H2'	21:AA:695:A:O4'	2.20	0.41
21:AA:760:G:H2'	21:AA:761:G:C5'	2.51	0.41
21:AA:760:G:H2'	21:AA:761:G:H5'	2.03	0.41
21:AA:770:C:O2	21:AA:810:C:O2	2.38	0.41
21:AA:977:A:O2'	21:AA:978:A:H5''	2.21	0.41
21:AA:1050:G:N1	21:AA:1209:C:C2	2.89	0.41
21:AA:1167:A:C8	21:AA:1169:A:N6	2.89	0.41
21:AA:1211:U:O2'	21:AA:1212:U:OP2	2.35	0.41
21:AA:1360:A:C2'	21:AA:1361:G:H8	2.33	0.41
21:AA:1528:U:O2'	21:AA:1529:G:H3'	2.20	0.41
21:AA:1534:A:H2'	21:AA:1534:A:N3	2.36	0.41
23:AW:5:U:C4	23:AW:6:U:O4	2.74	0.41
24:BA:235:U:O2	24:BA:430:A:C5	2.74	0.41
24:BA:341:C:H2'	24:BA:342:A:O4'	2.21	0.41
24:BA:414:C:H2'	24:BA:415:A:C8	2.56	0.41
24:BA:433:C:O2	24:BA:433:C:H2'	2.18	0.41
24:BA:447:A:C8	24:BA:473:G:C6	3.09	0.41
24:BA:556:A:C8	24:BA:557:C:C5	3.09	0.41
24:BA:615:U:C3'	24:BA:616:A:H5'	2.50	0.41
24:BA:656:G:O2'	24:BA:657:U:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:769:U:H2'	24:BA:770:G:O4'	2.20	0.41
24:BA:817:C:H2'	24:BA:818:G:O4'	2.21	0.41
24:BA:851:C:H2'	24:BA:852:U:C6	2.56	0.41
24:BA:857:G:H1'	46:BW:19:ARG:CD	2.51	0.41
24:BA:864:G:C6	24:BA:865:C:C4	3.09	0.41
24:BA:972:A:H3'	24:BA:973:A:H2'	2.02	0.41
24:BA:992:C:O2	24:BA:992:C:H2'	2.20	0.41
24:BA:1022:G:C6	24:BA:1140:C:C4	3.09	0.41
24:BA:1071:G:H4'	24:BA:1088:A:O2'	2.21	0.41
24:BA:1071:G:C4	24:BA:1089:A:C6	3.09	0.41
24:BA:1205:A:C6	28:BE:165:HIS:CG	3.08	0.41
24:BA:1253:A:C3'	24:BA:1254:A:C5'	2.99	0.41
24:BA:1416:G:O2'	24:BA:1417:C:P	2.78	0.41
24:BA:1450:G:H2'	24:BA:1451:C:H6	1.86	0.41
24:BA:1528:A:C2'	24:BA:1529:G:H5'	2.50	0.41
24:BA:1623:G:C2	24:BA:1624:U:C6	3.09	0.41
24:BA:1730:C:O2'	24:BA:1731:G:H5''	2.21	0.41
24:BA:1755:A:N6	24:BA:2694:G:O2'	2.53	0.41
24:BA:1760:C:H2'	24:BA:1761:C:C6	2.56	0.41
24:BA:1853:A:N1	24:BA:2087:G:H1'	2.35	0.41
24:BA:1882:U:O2'	24:BA:1883:U:H5'	2.20	0.41
24:BA:2455:G:N2	24:BA:2456:C:C2	2.89	0.41
24:BA:2550:G:C6	24:BA:2551:C:N4	2.89	0.41
24:BA:2597:G:H2'	24:BA:2598:A:C8	2.56	0.41
24:BA:2702:G:H2'	24:BA:2703:C:C6	2.56	0.41
24:BA:2840:C:H2'	24:BA:2841:C:H6	1.85	0.41
25:BB:46:A:C5	25:BB:47:C:C4	3.09	0.41
25:BB:54:G:N3	25:BB:55:U:C6	2.89	0.41
26:BC:47:ARG:NH1	26:BC:47:ARG:HG3	2.36	0.41
26:BC:108:GLY:O	26:BC:109:LEU:C	2.59	0.41
26:BC:144:GLU:HG2	26:BC:151:GLY:N	2.35	0.41
26:BC:247:TRP:C	26:BC:249:VAL:H	2.24	0.41
26:BC:255:LYS:C	26:BC:257:ARG:N	2.73	0.41
27:BD:4:LEU:CD1	27:BD:100:LEU:HD23	2.50	0.41
27:BD:91:THR:O	27:BD:91:THR:OG1	2.38	0.41
27:BD:174:SER:O	27:BD:175:LEU:HB2	2.21	0.41
28:BE:5:LEU:HA	28:BE:120:VAL:HG13	2.02	0.41
28:BE:7:ASP:CG	28:BE:8:ALA:N	2.74	0.41
28:BE:24:ASN:C	28:BE:24:ASN:ND2	2.74	0.41
28:BE:72:SER:O	28:BE:74:LYS:N	2.54	0.41
29:BF:53:ALA:C	29:BF:55:ASP:N	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:144:LYS:HD3	29:BF:144:LYS:HA	1.90	0.41
30:BG:72:ASN:C	30:BG:72:ASN:ND2	2.74	0.41
31:BH:90:LEU:HD22	31:BH:123:ARG:HA	2.02	0.41
32:BI:49:GLU:HG2	32:BI:50:LYS:H	1.85	0.41
32:BI:57:VAL:HG12	32:BI:58:ILE:N	2.36	0.41
32:BI:80:LYS:HA	32:BI:85:ILE:O	2.21	0.41
33:BJ:35:ARG:O	33:BJ:36:LEU:C	2.57	0.41
34:BK:58:LEU:HD23	34:BK:58:LEU:N	2.36	0.41
35:BL:18:ARG:HH11	35:BL:18:ARG:HD3	1.71	0.41
35:BL:47:ARG:HG3	35:BL:50:PHE:HB2	2.03	0.41
37:BN:33:ILE:HG13	37:BN:118:ARG:HD2	2.03	0.41
37:BN:37:THR:OG1	37:BN:40:LYS:HD2	2.21	0.41
37:BN:49:GLU:HB2	37:BN:50:PRO:HD3	2.03	0.41
37:BN:116:VAL:O	37:BN:117:ASP:CB	2.69	0.41
38:BO:85:LYS:HB3	38:BO:85:LYS:HE3	1.87	0.41
38:BO:93:ASP:C	38:BO:95:SER:N	2.74	0.41
39:BP:19:PHE:N	39:BP:19:PHE:CD2	2.85	0.41
40:BQ:56:PHE:HB3	40:BQ:60:TRP:CZ2	2.55	0.41
40:BQ:114:ALA:C	40:BQ:116:LEU:N	2.74	0.41
42:BS:29:VAL:O	42:BS:33:LEU:HD22	2.21	0.41
43:BT:7:LEU:C	43:BT:9:LYS:H	2.24	0.41
43:BT:49:LYS:O	43:BT:50:LEU:C	2.58	0.41
44:BU:35:VAL:CB	44:BU:38:ILE:HG13	2.48	0.41
44:BU:94:PHE:O	44:BU:94:PHE:CD1	2.73	0.41
46:BW:10:ARG:O	46:BW:11:ASN:HB2	2.21	0.41
46:BW:47:GLY:C	46:BW:49:ASN:N	2.75	0.41
47:BX:5:GLN:HE21	47:BX:49:ARG:CB	2.34	0.41
47:BX:50:VAL:HG12	47:BX:51:SER:N	2.35	0.41
47:BX:54:GLY:O	47:BX:57:VAL:HB	2.20	0.41
1:CB:67:LEU:HA	1:CB:67:LEU:HD23	1.87	0.41
1:CB:100:LEU:C	1:CB:102:ASN:N	2.74	0.41
1:CB:134:LEU:HD22	1:CB:138:ARG:HH21	1.85	0.41
1:CB:212:TYR:O	1:CB:216:VAL:N	2.49	0.41
2:CC:36:PHE:CE1	13:CN:91:GLU:HB3	2.55	0.41
3:CD:75:TYR:OH	3:CD:204:SER:HB3	2.21	0.41
3:CD:98:ASP:O	3:CD:113:ALA:HB1	2.21	0.41
4:CE:37:VAL:HG11	4:CE:116:VAL:HG21	2.03	0.41
4:CE:47:PHE:CD1	4:CE:140:ILE:HD12	2.56	0.41
4:CE:75:LEU:HA	4:CE:75:LEU:HD22	1.73	0.41
6:CG:48:THR:O	6:CG:52:ARG:HD3	2.20	0.41
6:CG:52:ARG:C	6:CG:54:GLY:H	2.23	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:118:ARG:HH12	55:CA:1239:A:H5''	1.85	0.41
7:CH:1:SER:H1	55:CA:877:G:N2	2.17	0.41
7:CH:33:VAL:C	7:CH:35:ILE:N	2.75	0.41
8:CI:49:GLN:O	8:CI:50:PRO:C	2.58	0.41
9:CJ:64:GLN:CB	13:CN:98:ALA:HB3	2.51	0.41
10:CK:19:VAL:CB	10:CK:34:THR:O	2.68	0.41
10:CK:73:VAL:C	10:CK:75:GLU:H	2.24	0.41
11:CL:24:GLU:O	11:CL:25:ALA:CB	2.66	0.41
11:CL:71:HIS:HB3	11:CL:98:ARG:NH2	2.36	0.41
14:CO:44:GLU:HG2	14:CO:45:HIS:N	2.36	0.41
17:CR:69:TYR:CE2	55:CA:674:G:H1'	2.56	0.41
18:CS:51:HIS:HA	18:CS:55:GLN:O	2.21	0.41
19:CT:61:ALA:CA	19:CT:67:HIS:HA	2.51	0.41
55:CA:51:A:C5	55:CA:116:A:C8	3.09	0.41
55:CA:86:G:O2'	55:CA:87:C:P	2.79	0.41
55:CA:166:U:C2'	55:CA:167:A:H5'	2.49	0.41
55:CA:198:G:C6	55:CA:220:G:C2	3.09	0.41
55:CA:204:G:C4	55:CA:205:A:C8	3.09	0.41
55:CA:206:C:O5'	55:CA:207:C:OP2	2.38	0.41
55:CA:242:G:C6	55:CA:245:U:O4	2.74	0.41
55:CA:277:C:O2'	55:CA:278:G:H5'	2.21	0.41
55:CA:315:A:C5'	55:CA:317:U:OP2	2.68	0.41
55:CA:330:C:HO2'	55:CA:331:G:H8	1.68	0.41
55:CA:353:A:C2'	55:CA:354:G:OP2	2.69	0.41
55:CA:410:G:C2	55:CA:429:U:C2	3.09	0.41
55:CA:513:C:H2'	55:CA:514:C:C6	2.55	0.41
55:CA:675:A:H2'	55:CA:676:A:O4'	2.21	0.41
55:CA:859:G:H2'	55:CA:860:A:C8	2.56	0.41
55:CA:980:C:C4	55:CA:981:U:C2	3.09	0.41
55:CA:1162:C:O2'	55:CA:1163:A:H5'	2.21	0.41
55:CA:1165:U:C4	55:CA:1166:G:C5	3.09	0.41
55:CA:1216:A:O2'	55:CA:1217:C:C5'	2.69	0.41
55:CA:1242:G:O2'	55:CA:1243:C:P	2.79	0.41
55:CA:1295:U:O5'	55:CA:1295:U:H6	2.04	0.41
55:CA:1395:C:O2'	55:CA:1396:A:H5'	2.20	0.41
24:DA:76:C:O3'	48:DY:52:ARG:HG2	2.20	0.41
24:DA:98:G:H2'	24:DA:98:G:N3	2.36	0.41
24:DA:145:C:H2'	24:DA:146:A:C8	2.56	0.41
24:DA:181:A:H1'	24:DA:435:C:O4'	2.21	0.41
24:DA:202:U:N3	24:DA:203:A:C2	2.89	0.41
24:DA:214:G:O2'	24:DA:216:A:O3'	2.31	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:243:U:H2'	24:DA:244:A:H8	1.86	0.41
24:DA:362:A:N7	24:DA:363:G:N7	2.68	0.41
24:DA:456:C:O2'	43:DT:73:ARG:CG	2.64	0.41
24:DA:520:G:H2'	24:DA:521:U:H6	1.80	0.41
24:DA:528:A:H2	24:DA:2043:C:C5'	2.34	0.41
24:DA:591:U:N3	24:DA:592:A:C5	2.89	0.41
24:DA:601:C:H2'	24:DA:602:A:O4'	2.21	0.41
24:DA:605:G:C5	24:DA:606:U:C5	3.09	0.41
24:DA:607:U:C5	24:DA:619:G:C5	3.03	0.41
24:DA:739:A:HO2'	24:DA:740:C:H5	1.66	0.41
24:DA:790:U:HO2'	24:DA:791:C:P	2.44	0.41
24:DA:845:A:C2	24:DA:847:U:N1	2.89	0.41
24:DA:856:G:H1'	46:DW:23:LYS:HB3	2.03	0.41
24:DA:876:C:O2	24:DA:876:C:O4'	2.38	0.41
24:DA:975:A:C2'	24:DA:976:G:H8	2.29	0.41
24:DA:980:A:N6	24:DA:2027:G:O2'	2.54	0.41
24:DA:1071:G:H2'	24:DA:1072:C:C6	2.56	0.41
24:DA:1171:G:H2'	24:DA:1172:C:C1'	2.51	0.41
24:DA:1171:G:C6	24:DA:1179:G:C2	3.08	0.41
24:DA:1276:A:N1	24:DA:1277:G:C6	2.88	0.41
24:DA:1376:C:C4	24:DA:1377:G:C6	3.09	0.41
24:DA:1435:G:C2	24:DA:1436:G:C8	3.09	0.41
24:DA:1477:A:C8	24:DA:1515:A:N6	2.89	0.41
24:DA:1507:C:C2	24:DA:1508:A:H1'	2.56	0.41
24:DA:1652:A:H3'	24:DA:1653:G:H8	1.80	0.41
24:DA:1670:C:N4	24:DA:1674:G:O5'	2.54	0.41
24:DA:1812:U:H1'	26:DC:43:ASN:ND2	2.36	0.41
24:DA:1816:C:O3'	24:DA:1817:G:C8	2.64	0.41
24:DA:1844:C:N3	24:DA:1845:G:C8	2.89	0.41
24:DA:1917:U:H2'	24:DA:1918:A:H5'	2.03	0.41
24:DA:2023:C:O2'	24:DA:2024:G:P	2.78	0.41
24:DA:2070:A:C2	24:DA:2442:C:C2	3.08	0.41
24:DA:2199:A:O2'	24:DA:2200:C:H5'	2.21	0.41
24:DA:2283:C:H2'	24:DA:2284:A:C8	2.55	0.41
24:DA:2347:C:HO2'	24:DA:2348:U:H6	1.65	0.41
24:DA:2349:G:C6	24:DA:2350:C:C2	3.08	0.41
24:DA:2360:G:O4'	35:DL:60:ARG:NH2	2.53	0.41
24:DA:2363:G:C6	24:DA:2364:C:C4	3.09	0.41
24:DA:2389:G:H5''	24:DA:2390:U:H5'	2.02	0.41
24:DA:2429:G:N7	35:DL:55:MET:HE3	2.35	0.41
24:DA:2435:A:C4	24:DA:2436:G:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2595:G:C6	24:DA:2599:G:C6	3.09	0.41
24:DA:2654:A:C4	24:DA:2656:U:N3	2.88	0.41
24:DA:2697:G:C5	24:DA:2698:U:C5	3.08	0.41
24:DA:2902:C:O2'	24:DA:2903:U:C6	2.73	0.41
24:DA:2902:C:O2'	24:DA:2903:U:P	2.79	0.41
56:DB:13:G:O2'	56:DB:14:U:H5''	2.21	0.41
56:DB:16:G:O6	56:DB:69:G:C5	2.73	0.41
56:DB:104:A:H2'	56:DB:105:G:C5'	2.51	0.41
26:DC:209:ALA:O	26:DC:212:TRP:CD1	2.74	0.41
27:DD:14:ILE:HG23	27:DD:22:ILE:HB	2.02	0.41
27:DD:16:THR:HG22	27:DD:20:VAL:HB	2.02	0.41
27:DD:16:THR:CG2	27:DD:20:VAL:HB	2.51	0.41
27:DD:22:ILE:HA	27:DD:23:PRO:HD2	1.97	0.41
28:DE:149:ILE:HG12	28:DE:188:MET:HG3	2.02	0.41
29:DF:92:GLY:O	29:DF:95:MET:HB3	2.19	0.41
29:DF:137:PHE:O	29:DF:138:PRO:C	2.59	0.41
32:DI:54:ILE:HG23	32:DI:70:THR:HG21	2.03	0.41
33:DJ:89:PHE:CE2	33:DJ:100:VAL:HG11	2.56	0.41
35:DL:93:ASN:O	35:DL:95:LEU:HG	2.20	0.41
37:DN:97:ILE:HD12	37:DN:99:LYS:HD3	2.03	0.41
38:DO:7:ARG:NH2	38:DO:29:HIS:HD2	2.19	0.41
38:DO:26:LEU:HB3	38:DO:92:PHE:CD1	2.55	0.41
38:DO:34:HIS:O	38:DO:35:ILE:HG12	2.21	0.41
40:DQ:61:ILE:HD12	40:DQ:61:ILE:H	1.83	0.41
40:DQ:69:ARG:NH2	40:DQ:74:SER:HB2	2.35	0.41
40:DQ:91:ARG:CZ	40:DQ:93:ILE:HG21	2.51	0.41
41:DR:33:VAL:CG2	41:DR:61:ALA:HB3	2.48	0.41
43:DT:28:ASN:O	43:DT:29:THR:CG2	2.69	0.41
43:DT:39:THR:CG2	43:DT:42:GLU:HB2	2.31	0.41
47:DX:58:ILE:HG12	47:DX:66:VAL:HG11	2.03	0.41
52:D2:6:GLN:HA	52:D2:7:PRO:HD2	1.80	0.41
53:D3:50:SER:O	53:D3:52:GLY:N	2.54	0.41
53:D3:57:VAL:HG12	53:D3:61:LEU:HD11	2.03	0.41
3:AD:154:VAL:O	3:AD:157:ALA:HB3	2.20	0.41
4:AE:35:LEU:HD12	4:AE:36:THR:O	2.20	0.41
5:AF:68:GLN:HE21	5:AF:68:GLN:HB3	1.57	0.41
6:AG:78:ARG:HD2	6:AG:83:THR:CA	2.44	0.41
6:AG:91:ARG:HA	6:AG:92:PRO:HD3	1.96	0.41
8:AI:43:ALA:HB1	8:AI:46:VAL:HG21	2.02	0.41
8:AI:51:LEU:HA	8:AI:54:VAL:HG23	2.03	0.41
10:AK:122:PRO:O	10:AK:123:PRO:O	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:20:VAL:N	11:AL:21:PRO:CD	2.84	0.41
15:AP:28:ARG:HH11	15:AP:29:ASN:ND2	2.15	0.41
16:AQ:29:LYS:HE2	16:AQ:29:LYS:HB3	1.89	0.41
20:AU:24:LYS:CG	20:AU:25:ALA:H	2.33	0.41
21:AA:78:A:H8	21:AA:78:A:O5'	2.04	0.41
21:AA:201:G:H2'	21:AA:202:G:O4'	2.21	0.41
21:AA:251:G:C2	21:AA:266:G:C6	3.09	0.41
21:AA:567:G:H1'	59:AA:1818:HOH:O	2.20	0.41
21:AA:615:G:N3	21:AA:616:G:C8	2.89	0.41
21:AA:827:U:C4	21:AA:870:U:C2	3.09	0.41
21:AA:893:C:H2'	21:AA:894:G:C8	2.55	0.41
21:AA:1023:U:H2'	21:AA:1024:G:O4'	2.21	0.41
21:AA:1072:G:C5	21:AA:1073:U:C4	3.09	0.41
21:AA:1170:A:O2'	21:AA:1171:A:H5'	2.21	0.41
21:AA:1175:G:C2	21:AA:1176:A:C8	3.09	0.41
21:AA:1234:C:C2'	21:AA:1235:U:H5'	2.51	0.41
22:AV:34:G:OP1	22:AV:34:G:C8	2.66	0.41
24:BA:532:A:H4'	24:BA:533:G:C8	2.56	0.41
24:BA:626:A:H2'	35:BL:78:ARG:CZ	2.51	0.41
24:BA:789:A:OP1	24:BA:790:U:C5	2.70	0.41
24:BA:827:U:H2'	24:BA:2068:U:O2	2.21	0.41
24:BA:854:C:H2'	24:BA:855:G:H5'	2.02	0.41
24:BA:858:G:C4	24:BA:2268:A:C2	3.08	0.41
24:BA:1429:G:C2	24:BA:1430:G:C5	3.09	0.41
24:BA:1567:G:H1'	24:BA:1568:G:C6	2.55	0.41
24:BA:1649:G:C6	24:BA:2009:A:N6	2.89	0.41
24:BA:1677:A:N6	24:BA:1678:A:N6	2.69	0.41
24:BA:1703:G:N3	24:BA:1703:G:H2'	2.36	0.41
24:BA:1981:A:H8	24:BA:1981:A:H2'	1.53	0.41
24:BA:2521:C:C4	24:BA:2522:U:C4	3.09	0.41
24:BA:2860:A:C3'	24:BA:2860:A:H8	2.30	0.41
25:BB:12:C:C4	46:BW:72:GLY:HA3	2.56	0.41
25:BB:58:A:H2'	25:BB:59:A:H8	1.86	0.41
28:BE:25:GLU:OE1	35:BL:6:LEU:HA	2.21	0.41
29:BF:42:ALA:HB2	29:BF:49:LEU:HB2	2.01	0.41
30:BG:149:ALA:O	30:BG:151:ARG:N	2.53	0.41
31:BH:14:SER:OG	31:BH:17:ASP:HB2	2.21	0.41
31:BH:75:LEU:HD22	31:BH:143:ILE:HG12	2.02	0.41
32:BI:85:ILE:H	32:BI:85:ILE:HG13	1.66	0.41
33:BJ:25:LEU:O	33:BJ:25:LEU:HD13	2.20	0.41
33:BJ:40:HIS:H	33:BJ:40:HIS:CD2	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BK:5:GLN:NE2	34:BK:5:GLN:HA	2.35	0.41
35:BL:127:VAL:HG23	35:BL:131:ALA:HB3	2.01	0.41
38:BO:16:ARG:HD3	38:BO:16:ARG:HA	1.81	0.41
41:BR:10:LYS:HZ2	41:BR:10:LYS:HG2	1.49	0.41
42:BS:19:LEU:HD12	42:BS:19:LEU:HA	1.87	0.41
47:BX:40:GLU:HG3	47:BX:43:LYS:NZ	2.36	0.41
51:B1:9:LYS:NZ	51:B1:50:GLU:OE2	2.47	0.41
51:B1:29:LYS:NZ	51:B1:29:LYS:HB3	2.36	0.41
54:B4:1:MET:SD	54:B4:36:ARG:HB2	2.61	0.41
2:CC:35:ASP:CG	2:CC:56:ILE:HD12	2.42	0.41
4:CE:114:LEU:CD1	4:CE:122:VAL:HG11	2.51	0.41
5:CF:90:MET:HE3	17:CR:60:ARG:NH1	2.36	0.41
6:CG:14:ASP:OD2	6:CG:15:PRO:CD	2.69	0.41
6:CG:14:ASP:HA	6:CG:15:PRO:HD2	1.84	0.41
6:CG:92:PRO:CA	6:CG:95:ARG:HB2	2.51	0.41
7:CH:55:LYS:NZ	55:CA:653:U:H5'	2.36	0.41
8:CI:63:TYR:C	8:CI:63:TYR:HD1	2.23	0.41
9:CJ:5:ARG:HH21	9:CJ:77:VAL:HG22	1.86	0.41
9:CJ:40:ILE:HA	9:CJ:41:PRO:HD2	1.90	0.41
15:CP:75:ILE:C	15:CP:77:GLU:H	2.23	0.41
20:CU:3:ILE:HG22	20:CU:19:LYS:NZ	2.35	0.41
55:CA:10:A:N6	55:CA:25:C:N4	2.69	0.41
55:CA:18:C:C4	55:CA:19:A:N7	2.89	0.41
55:CA:149:A:C2	55:CA:150:U:C2	3.08	0.41
55:CA:513:C:HO2'	55:CA:514:C:H6	1.68	0.41
55:CA:560:A:C8	55:CA:566:G:C4	3.09	0.41
55:CA:885:G:H8	55:CA:885:G:OP2	2.03	0.41
55:CA:922:G:C6	55:CA:923:A:C6	3.09	0.41
55:CA:1160:G:C6	55:CA:1181:G:C6	3.08	0.41
24:DA:26:G:N2	24:DA:513:A:N7	2.69	0.41
24:DA:37:C:H2'	24:DA:38:A:C8	2.56	0.41
24:DA:55:G:N2	24:DA:127:A:C2	2.85	0.41
24:DA:117:G:C6	24:DA:119:A:N6	2.89	0.41
24:DA:227:A:N6	24:DA:410:G:H1'	2.35	0.41
24:DA:249:C:P	24:DA:2394:C:O2'	2.79	0.41
24:DA:366:C:H2'	24:DA:367:G:O5'	2.21	0.41
24:DA:383:C:C2	24:DA:385:C:C5	3.09	0.41
24:DA:412:A:N6	24:DA:2411:A:C2'	2.84	0.41
24:DA:507:A:H5''	24:DA:509:C:C2	2.55	0.41
24:DA:515:A:C2	24:DA:1260:A:N3	2.84	0.41
24:DA:529:A:C4	24:DA:2023:C:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:743:A:O2'	24:DA:1659:G:OP1	2.39	0.41
24:DA:980:A:H2	24:DA:2038:G:H1'	1.85	0.41
24:DA:991:C:OP2	24:DA:1186:G:OP2	2.39	0.41
24:DA:1000:A:N6	24:DA:1001:A:C6	2.89	0.41
24:DA:1169:A:C2	24:DA:1181:U:O2	2.74	0.41
24:DA:1314:C:O2'	24:DA:1315:C:H5'	2.21	0.41
24:DA:1354:A:H2'	24:DA:1355:G:O4'	2.20	0.41
24:DA:1637:A:H4'	24:DA:2711:A:O2'	2.21	0.41
24:DA:1805:A:O2'	26:DC:49:THR:HA	2.21	0.41
24:DA:1968:G:O2'	24:DA:1973:G:H4'	2.21	0.41
24:DA:2084:C:C5	24:DA:2085:U:C5	3.09	0.41
24:DA:2154:A:OP2	24:DA:2154:A:H8	2.04	0.41
24:DA:2248:C:H3'	24:DA:2249:U:C6	2.56	0.41
24:DA:2259:U:O2'	24:DA:2260:C:H5'	2.21	0.41
24:DA:2265:U:O2'	36:DM:13:HIS:CE1	2.74	0.41
24:DA:2293:G:H5''	38:DO:94:ARG:NH1	2.36	0.41
24:DA:2306:C:H3'	24:DA:2307:G:C5'	2.51	0.41
24:DA:2372:U:H2'	24:DA:2373:G:C8	2.56	0.41
24:DA:2409:G:C6	24:DA:2410:G:C5	3.08	0.41
24:DA:2459:A:N6	24:DA:2494:G:C2	2.89	0.41
24:DA:2598:A:H8	24:DA:2598:A:O5'	2.04	0.41
24:DA:2746:U:C2	24:DA:2759:G:C2	3.09	0.41
56:DB:113:C:O2'	38:DO:46:GLU:HA	2.20	0.41
26:DC:83:ASP:HA	26:DC:84:PRO:HD2	1.89	0.41
26:DC:180:MET:CE	26:DC:268:ARG:HE	2.33	0.41
26:DC:212:TRP:O	26:DC:212:TRP:HD1	2.03	0.41
28:DE:28:VAL:HG23	35:DL:6:LEU:HD21	2.02	0.41
29:DF:169:LEU:HD23	29:DF:176:PHE:CZ	2.55	0.41
30:DG:25:ILE:O	30:DG:25:ILE:HG22	2.20	0.41
30:DG:43:LYS:HB2	30:DG:50:THR:O	2.21	0.41
36:DM:38:ARG:HG2	36:DM:98:PRO:CG	2.51	0.41
37:DN:28:LEU:O	37:DN:32:GLU:N	2.42	0.41
39:DP:3:ILE:C	39:DP:5:LYS:H	2.25	0.41
40:DQ:63:ARG:O	40:DQ:64:ILE:C	2.59	0.41
41:DR:1:MET:CG	41:DR:101:ILE:HD12	2.42	0.41
42:DS:31:GLN:O	42:DS:33:LEU:N	2.54	0.41
45:DV:87:GLN:O	45:DV:88:HIS:HB2	2.21	0.41
47:DX:1:SER:O	47:DX:2:ARG:C	2.59	0.41
48:DY:45:GLN:C	48:DY:47:ARG:N	2.74	0.41
54:D4:7:VAL:HG22	54:D4:25:VAL:CG2	2.52	0.41
1:AB:23:ASN:HA	1:AB:24:PRO:HD3	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:46:VAL:N	1:AB:47:PRO:CD	2.84	0.40
1:AB:53:LEU:HD13	1:AB:56:LEU:HG	2.02	0.40
3:AD:29:THR:C	3:AD:30:LYS:HE2	2.41	0.40
4:AE:30:PHE:CD1	4:AE:30:PHE:N	2.89	0.40
4:AE:135:VAL:HG13	4:AE:136:VAL:N	2.36	0.40
5:AF:79:ARG:HE	5:AF:79:ARG:N	2.20	0.40
7:AH:10:LEU:HB3	7:AH:74:ILE:HG12	2.01	0.40
7:AH:13:ILE:HD11	7:AH:60:LEU:HD12	2.02	0.40
9:AJ:73:LEU:HD13	9:AJ:73:LEU:O	2.21	0.40
10:AK:93:GLU:O	10:AK:96:ILE:HG12	2.20	0.40
15:AP:6:LEU:HB2	21:AA:375:U:O3'	2.20	0.40
15:AP:29:ASN:O	21:AA:309:A:H5''	2.20	0.40
17:AR:37:LYS:CB	21:AA:719:C:H1'	2.51	0.40
18:AS:17:LYS:HE3	18:AS:32:THR:HG23	2.03	0.40
21:AA:615:G:C6	21:AA:626:G:C6	3.09	0.40
21:AA:734:G:C5	21:AA:735:C:C4	3.09	0.40
21:AA:1015:G:O2'	21:AA:1016:A:H5'	2.21	0.40
21:AA:1097:C:N4	21:AA:1098:C:N4	2.69	0.40
21:AA:1234:C:O2'	21:AA:1364:U:H6	2.00	0.40
21:AA:1256:A:C1'	21:AA:1258:G:C5	3.02	0.40
24:BA:81:G:C2	24:BA:106:C:C2	3.09	0.40
24:BA:110:G:C2	24:BA:111:A:C8	3.09	0.40
24:BA:292:U:N3	24:BA:293:U:C5	2.89	0.40
24:BA:498:G:N3	24:BA:499:U:C6	2.89	0.40
24:BA:640:C:H2'	24:BA:641:U:C6	2.56	0.40
24:BA:791:C:N4	24:BA:794:A:H1'	2.36	0.40
24:BA:1065:U:O4	24:BA:1074:G:N3	2.54	0.40
24:BA:1154:G:H5''	24:BA:1155:A:OP2	2.21	0.40
24:BA:1385:A:H1'	24:BA:1386:C:C5	2.55	0.40
24:BA:1388:G:C4	24:BA:1389:G:C8	3.09	0.40
24:BA:1404:C:C2	24:BA:1405:U:C5	3.09	0.40
24:BA:1659:G:H2'	24:BA:1660:G:O5'	2.21	0.40
24:BA:1661:G:C6	24:BA:1662:U:C4	3.10	0.40
24:BA:1716:U:O2'	24:BA:1717:A:C5'	2.67	0.40
24:BA:1735:A:C4	24:BA:1736:U:C5	3.09	0.40
24:BA:1806:C:O2	24:BA:1806:C:H2'	2.21	0.40
24:BA:1844:C:C2'	24:BA:1845:G:H5'	2.51	0.40
24:BA:2194:U:C4	24:BA:2195:U:C4	3.08	0.40
24:BA:2255:G:N7	24:BA:2256:G:N7	2.69	0.40
24:BA:2327:A:H2'	24:BA:2328:A:H8	1.75	0.40
24:BA:2442:C:H2'	24:BA:2443:C:H6	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2525:G:N2	24:BA:2539:C:C2	2.89	0.40
24:BA:2607:G:H2'	24:BA:2608:G:O4'	2.20	0.40
24:BA:2799:A:C5	24:BA:2801:G:C8	3.09	0.40
24:BA:2816:G:O2'	24:BA:2817:U:H5'	2.21	0.40
24:BA:2816:G:H2'	24:BA:2817:U:H6	1.86	0.40
27:BD:12:THR:HG22	27:BD:13:ARG:H	1.80	0.40
27:BD:39:ASP:OD2	27:BD:40:LEU:N	2.54	0.40
29:BF:12:VAL:HG13	29:BF:13:LYS:H	1.86	0.40
30:BG:84:LYS:CD	30:BG:133:LYS:HG2	2.51	0.40
33:BJ:132:HIS:O	33:BJ:133:ALA:C	2.59	0.40
36:BM:47:GLU:OE2	36:BM:51:ARG:NH1	2.53	0.40
38:BO:61:GLN:O	38:BO:61:GLN:HG3	2.21	0.40
39:BP:13:LYS:HG3	39:BP:76:HIS:HA	2.03	0.40
44:BU:5:ARG:O	44:BU:6:ARG:C	2.59	0.40
45:BV:44:HIS:CE1	45:BV:85:LYS:HB2	2.56	0.40
48:BY:19:LEU:HA	48:BY:22:LEU:HB3	2.03	0.40
49:BZ:5:LYS:HA	49:BZ:35:VAL:O	2.22	0.40
51:B1:18:HIS:CG	51:B1:19:PHE:N	2.89	0.40
53:B3:31:ILE:O	53:B3:35:LYS:HE3	2.21	0.40
1:CB:68:PHE:HB2	1:CB:90:PHE:CB	2.51	0.40
1:CB:206:ILE:HD13	1:CB:209:VAL:CG2	2.51	0.40
2:CC:80:GLY:HA2	2:CC:83:VAL:HG13	2.02	0.40
3:CD:63:ILE:O	3:CD:110:ARG:HD2	2.20	0.40
4:CE:43:GLY:HA2	4:CE:117:ALA:O	2.21	0.40
5:CF:67:PRO:O	5:CF:69:GLU:N	2.54	0.40
7:CH:87:ARG:NH2	55:CA:633:G:OP2	2.54	0.40
9:CJ:28:THR:O	9:CJ:32:THR:HG22	2.21	0.40
10:CK:13:LYS:H	10:CK:13:LYS:HG3	1.75	0.40
10:CK:78:ILE:HD13	10:CK:78:ILE:H	1.87	0.40
10:CK:121:ARG:NH2	20:CU:35:GLU:HB2	2.36	0.40
10:CK:126:ARG:HH21	55:CA:796:C:C3'	2.33	0.40
15:CP:35:ARG:NH1	15:CP:38:PHE:HB3	2.35	0.40
16:CQ:66:LEU:O	16:CQ:67:SER:HB3	2.20	0.40
16:CQ:67:SER:HA	55:CA:265:G:O3'	2.21	0.40
17:CR:27:THR:O	17:CR:30:ASN:HB3	2.21	0.40
18:CS:52:ASN:HD21	18:CS:55:GLN:N	2.15	0.40
19:CT:9:ARG:HG2	55:CA:108:G:C6	2.56	0.40
55:CA:149:A:N6	55:CA:174:A:N6	2.68	0.40
55:CA:329:A:C4	55:CA:332:G:C5	3.10	0.40
55:CA:352:C:H5''	55:CA:352:C:C6	2.53	0.40
55:CA:393:A:C4	55:CA:394:G:C8	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:550:G:H2'	55:CA:551:U:H6	1.85	0.40
55:CA:563:A:N6	59:CA:1821:HOH:O	2.54	0.40
55:CA:577:G:H4'	55:CA:816:A:H2'	2.03	0.40
55:CA:650:G:N3	55:CA:650:G:H2'	2.37	0.40
55:CA:733:G:HO2'	55:CA:734:G:P	2.44	0.40
55:CA:780:A:C2	55:CA:803:G:C6	3.09	0.40
55:CA:1242:G:C2	55:CA:1243:C:C1'	2.99	0.40
55:CA:1242:G:H2'	55:CA:1243:C:O5'	2.20	0.40
55:CA:1244:G:C5	55:CA:1245:C:C4	3.09	0.40
55:CA:1255:G:C6	55:CA:1279:G:C5	3.09	0.40
55:CA:1410:A:C6	55:CA:1411:C:N4	2.89	0.40
24:DA:324:A:H2'	24:DA:325:G:H8	1.86	0.40
24:DA:538:A:O2'	24:DA:539:G:H5'	2.20	0.40
24:DA:668:A:C5	24:DA:670:A:C8	3.09	0.40
24:DA:685:A:C5	24:DA:774:G:N2	2.88	0.40
24:DA:685:A:C8	24:DA:774:G:N1	2.89	0.40
24:DA:807:U:H2'	24:DA:808:G:C8	2.56	0.40
24:DA:845:A:N3	24:DA:847:U:H1'	2.36	0.40
24:DA:1034:G:O6	24:DA:1122:G:C6	2.75	0.40
24:DA:1062:G:H8	24:DA:1070:A:OP2	2.04	0.40
24:DA:1557:C:C4	24:DA:1558:C:C2	3.09	0.40
24:DA:1599:U:OP1	43:DT:40:LYS:HB2	2.21	0.40
24:DA:1676:A:H2'	24:DA:1677:A:C8	2.56	0.40
24:DA:1945:G:H2'	24:DA:1946:U:C5	2.55	0.40
24:DA:1955:U:O2'	24:DA:1956:U:P	2.78	0.40
24:DA:2010:G:C5	24:DA:2011:U:C5	3.10	0.40
24:DA:2251:G:H2'	24:DA:2252:G:C8	2.56	0.40
24:DA:2262:U:H4'	24:DA:2328:A:N3	2.37	0.40
24:DA:2635:A:C2	24:DA:2784:U:N3	2.89	0.40
24:DA:2644:G:N1	24:DA:2645:G:N2	2.68	0.40
24:DA:2674:G:C4	24:DA:2675:A:C8	3.09	0.40
24:DA:2756:U:C1'	24:DA:2757:A:H5''	2.50	0.40
56:DB:44:G:OP1	29:DF:91:ARG:NH1	2.54	0.40
26:DC:44:ASN:C	26:DC:46:GLY:N	2.74	0.40
26:DC:99:GLU:HG2	26:DC:100:ARG:H	1.84	0.40
27:DD:94:GLN:O	27:DD:95:SER:C	2.58	0.40
27:DD:150:GLN:O	27:DD:151:THR:C	2.59	0.40
29:DF:11:VAL:O	29:DF:12:VAL:HB	2.21	0.40
30:DG:34:ARG:O	30:DG:35:THR:HG23	2.21	0.40
30:DG:102:ILE:HB	30:DG:114:HIS:O	2.21	0.40
33:DJ:22:GLY:O	33:DJ:23:LYS:C	2.59	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DJ:54:ILE:O	33:DJ:122:LEU:HD12	2.21	0.40
34:DK:4:GLU:HA	34:DK:21:CYS:SG	2.61	0.40
34:DK:108:ARG:CA	34:DK:116:ILE:HD13	2.49	0.40
35:DL:4:ASN:HD22	35:DL:4:ASN:HA	1.58	0.40
35:DL:128:THR:HG22	35:DL:129:LYS:N	2.36	0.40
36:DM:41:LEU:HB3	36:DM:46:ILE:HG23	2.02	0.40
39:DP:25:VAL:HG23	39:DP:25:VAL:O	2.21	0.40
39:DP:90:ALA:HB3	39:DP:110:LYS:HB2	2.03	0.40
39:DP:91:VAL:HG11	39:DP:96:LEU:CD1	2.49	0.40
41:DR:48:LYS:HD2	41:DR:48:LYS:N	2.33	0.40
43:DT:55:VAL:HG22	43:DT:56:GLU:N	2.36	0.40
44:DU:40:LEU:HA	44:DU:61:GLU:HA	2.03	0.40
53:D3:35:LYS:HB2	53:D3:40:LYS:HD3	2.03	0.40
1:AB:56:LEU:HD11	1:AB:220:VAL:HG23	2.02	0.40
1:AB:185:ILE:HG13	1:AB:203:ASP:HB3	2.03	0.40
2:AC:4:VAL:HB	21:AA:1190:G:P	2.61	0.40
2:AC:129:PHE:CD2	2:AC:129:PHE:C	2.95	0.40
3:AD:187:ARG:HD2	3:AD:187:ARG:HA	1.89	0.40
4:AE:32:PHE:CE2	4:AE:54:GLU:HA	2.57	0.40
4:AE:107:GLY:O	4:AE:111:ARG:CZ	2.68	0.40
5:AF:16:GLU:HB2	3:CD:188:SER:HA	2.03	0.40
6:AG:35:LYS:HD2	21:AA:1373:G:H5''	2.02	0.40
8:AI:98:ARG:NE	8:AI:103:VAL:HG21	2.36	0.40
8:AI:105:ARG:HE	21:AA:1117:A:C4'	2.33	0.40
14:AO:54:GLY:O	14:AO:58:MET:HG3	2.22	0.40
15:AP:42:ILE:O	15:AP:43:ALA:HB3	2.21	0.40
20:AU:9:GLU:C	2:CC:48:LYS:HZ3	2.24	0.40
20:AU:24:LYS:CG	20:AU:25:ALA:N	2.84	0.40
21:AA:116:A:O5'	21:AA:116:A:H8	2.04	0.40
21:AA:155:A:C2	21:AA:167:A:C2	3.09	0.40
21:AA:624:C:C4	21:AA:625:U:C5	3.09	0.40
21:AA:901:A:C5	21:AA:902:G:H1'	2.56	0.40
21:AA:940:C:H2'	21:AA:941:G:O4'	2.21	0.40
21:AA:1061:G:C6	21:AA:1062:U:N3	2.90	0.40
21:AA:1092:A:C6	21:AA:1093:A:C6	3.10	0.40
21:AA:1120:C:O2'	21:AA:1121:U:H5'	2.21	0.40
21:AA:1225:A:N3	21:AA:1225:A:C2'	2.81	0.40
21:AA:1282:C:O2'	21:AA:1283:U:C6	2.68	0.40
21:AA:1312:G:N2	21:AA:1326:U:C2	2.89	0.40
21:AA:1508:A:H2'	21:AA:1509:C:O4'	2.22	0.40
24:BA:352:A:OP2	24:BA:352:A:H8	2.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:656:G:H2'	24:BA:657:U:O4'	2.21	0.40
24:BA:827:U:OP2	24:BA:828:U:C2	2.74	0.40
24:BA:855:G:N3	46:BW:23:LYS:HG2	2.36	0.40
24:BA:1255:U:H3	24:BA:2060:A:H5'	1.87	0.40
24:BA:1299:G:H2'	24:BA:1639:C:N4	2.37	0.40
24:BA:1352:U:C2'	24:BA:1353:A:H5'	2.50	0.40
24:BA:1403:A:C4	24:BA:1404:C:C5	3.09	0.40
24:BA:1427:A:C4	24:BA:1428:C:N4	2.89	0.40
24:BA:1528:A:H2'	24:BA:1529:G:H5'	2.03	0.40
24:BA:1574:C:O5'	24:BA:1574:C:H6	2.04	0.40
24:BA:1800:C:OP1	26:BC:259:ASN:ND2	2.54	0.40
24:BA:1829:A:O2'	26:BC:14:HIS:CE1	2.74	0.40
24:BA:1878:G:H2'	24:BA:1879:C:O4'	2.22	0.40
24:BA:2186:G:C6	24:BA:2187:U:C2	3.10	0.40
24:BA:2204:G:C6	24:BA:2205:A:C5	3.10	0.40
24:BA:2263:C:O2'	24:BA:2264:C:H5'	2.21	0.40
24:BA:2282:G:C6	24:BA:2425:A:N1	2.90	0.40
24:BA:2470:G:C2'	24:BA:2471:A:H5'	2.51	0.40
24:BA:2862:G:H2'	24:BA:2863:C:C6	2.56	0.40
25:BB:16:G:C5	25:BB:69:G:C2	3.09	0.40
26:BC:43:ASN:ND2	26:BC:44:ASN:H	2.19	0.40
29:BF:8:LYS:O	29:BF:12:VAL:CG1	2.70	0.40
32:BI:58:ILE:HG22	32:BI:60:VAL:CG2	2.52	0.40
33:BJ:114:LEU:O	33:BJ:114:LEU:CD2	2.68	0.40
35:BL:21:ARG:HD3	35:BL:21:ARG:HA	1.49	0.40
36:BM:45:GLN:NE2	36:BM:125:PRO:HD3	2.35	0.40
36:BM:47:GLU:O	36:BM:48:ALA:C	2.60	0.40
40:BQ:77:LYS:O	40:BQ:78:PHE:C	2.59	0.40
43:BT:22:THR:HA	43:BT:25:GLU:HB3	2.04	0.40
44:BU:100:GLU:O	44:BU:101:THR:CB	2.69	0.40
49:BZ:23:LEU:HD21	49:BZ:53:MET:HE1	2.02	0.40
51:B1:39:ASP:HA	51:B1:40:PRO:HD2	1.79	0.40
1:CB:46:VAL:HA	1:CB:49:PHE:CE2	2.56	0.40
1:CB:55:GLU:N	1:CB:55:GLU:OE1	2.54	0.40
2:CC:109:GLU:CB	2:CC:143:LEU:HD22	2.47	0.40
2:CC:127:VAL:O	2:CC:127:VAL:HG23	2.21	0.40
4:CE:94:PHE:CG	4:CE:95:MET:N	2.89	0.40
4:CE:95:MET:CA	4:CE:124:ALA:HB2	2.47	0.40
4:CE:104:ILE:H	4:CE:122:VAL:H	1.70	0.40
5:CF:57:ALA:HB3	5:CF:59:TYR:CE1	2.55	0.40
10:CK:34:THR:CB	10:CK:40:ALA:HA	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:19:ASN:HD22	11:CL:19:ASN:H	1.65	0.40
11:CL:43:LYS:CB	11:CL:44:PRO:CD	2.74	0.40
12:CM:11:HIS:O	12:CM:12:LYS:HG2	2.21	0.40
19:CT:4:LYS:C	19:CT:6:ALA:N	2.75	0.40
55:CA:61:G:C6	55:CA:107:G:N1	2.89	0.40
55:CA:109:A:N6	55:CA:326:G:N7	2.69	0.40
55:CA:241:G:N2	55:CA:286:C:C2	2.89	0.40
55:CA:330:C:O2'	55:CA:331:G:H5'	2.20	0.40
55:CA:562:U:H4'	55:CA:563:A:O5'	2.21	0.40
55:CA:687:A:C2	55:CA:704:A:N6	2.89	0.40
55:CA:803:G:C6	55:CA:804:U:N3	2.89	0.40
55:CA:853:C:O2'	55:CA:854:U:H5'	2.20	0.40
55:CA:987:G:H2'	55:CA:988:G:H8	1.86	0.40
55:CA:1144:G:N2	55:CA:1146:A:H62	2.20	0.40
55:CA:1156:G:HO2'	55:CA:1180:A:N6	2.18	0.40
55:CA:1201:A:HO2'	55:CA:1202:U:P	2.39	0.40
55:CA:1242:G:N2	55:CA:1302:C:O2	2.54	0.40
55:CA:1258:G:O2'	55:CA:1259:C:H5'	2.20	0.40
24:DA:194:G:C6	24:DA:195:A:C5	3.09	0.40
24:DA:241:A:C8	24:DA:243:U:N3	2.89	0.40
24:DA:264:C:H5'	24:DA:265:A:OP1	2.22	0.40
24:DA:364:C:H2'	24:DA:365:U:H6	1.73	0.40
24:DA:408:G:N3	24:DA:409:G:C8	2.90	0.40
24:DA:410:G:C6	24:DA:2407:A:N6	2.89	0.40
24:DA:577:G:O2'	24:DA:1254:A:OP1	2.39	0.40
24:DA:605:G:O2'	24:DA:606:U:C5'	2.69	0.40
24:DA:671:C:O2'	24:DA:672:C:P	2.79	0.40
24:DA:734:A:H2'	24:DA:735:A:H8	1.86	0.40
24:DA:849:A:C4	24:DA:850:U:C5	3.10	0.40
24:DA:964:C:O3'	24:DA:2273:A:O2'	2.33	0.40
24:DA:1113:U:O2'	24:DA:1114:C:P	2.80	0.40
24:DA:1280:G:C2'	24:DA:1281:G:H5'	2.52	0.40
24:DA:1296:G:C2	24:DA:1645:G:C5	3.09	0.40
24:DA:1415:U:C2	24:DA:1588:G:N1	2.89	0.40
24:DA:1456:G:N2	24:DA:2704:C:C2	2.90	0.40
24:DA:1616:A:C2	24:DA:1647:U:C5	3.09	0.40
24:DA:1819:A:OP1	26:DC:155:ARG:N	2.50	0.40
24:DA:1878:G:C6	24:DA:1879:C:C4	3.09	0.40
24:DA:1910:G:C2	24:DA:1921:G:C4	3.09	0.40
24:DA:1956:U:O2'	24:DA:1957:C:O5'	2.40	0.40
24:DA:2261:C:O2'	24:DA:2262:U:C5'	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2286:G:H4'	24:DA:2287:A:C1'	2.51	0.40
24:DA:2345:G:C6	24:DA:2347:C:N4	2.89	0.40
24:DA:2539:C:N4	24:DA:2540:C:H41	2.19	0.40
24:DA:2543:G:C1'	24:DA:2766:A:H5''	2.51	0.40
24:DA:2567:G:H2'	24:DA:2568:U:C6	2.56	0.40
24:DA:2665:A:H2'	24:DA:2666:C:O2	2.21	0.40
24:DA:2844:G:O2'	24:DA:2845:U:H5'	2.21	0.40
24:DA:2868:A:O2'	24:DA:2869:G:C5'	2.69	0.40
56:DB:73:A:H2	45:DV:37:PRO:HB3	1.87	0.40
26:DC:2:VAL:O	26:DC:3:VAL:CB	2.66	0.40
26:DC:212:TRP:C	26:DC:212:TRP:HD1	2.25	0.40
28:DE:147:LEU:HD21	28:DE:179:SER:HB2	2.02	0.40
30:DG:91:VAL:N	30:DG:93:TYR:CD2	2.90	0.40
32:DI:72:THR:HA	32:DI:73:PRO:HD2	1.83	0.40
35:DL:29:LYS:HG2	35:DL:29:LYS:O	2.21	0.40
35:DL:56:PRO:CB	35:DL:58:TYR:CE2	3.03	0.40
35:DL:95:LEU:HA	35:DL:98:ALA:HB3	2.03	0.40
39:DP:83:ILE:HD13	39:DP:83:ILE:O	2.21	0.40
40:DQ:63:ARG:NH1	40:DQ:99:VAL:CG2	2.84	0.40
42:DS:6:LYS:HB2	42:DS:103:ILE:O	2.21	0.40
44:DU:64:ILE:O	44:DU:64:ILE:HG12	2.21	0.40
47:DX:62:GLY:O	47:DX:66:VAL:HG23	2.21	0.40
52:D2:43:THR:HG23	52:D2:45:SER:OG	2.21	0.40
1:AB:52:ALA:O	1:AB:54:ALA:N	2.55	0.40
1:AB:137:THR:CA	1:AB:140:LEU:HD13	2.30	0.40
2:AC:5:HIS:NE2	2:AC:7:ASN:HB3	2.36	0.40
2:AC:135:ARG:HD3	2:AC:135:ARG:HA	1.89	0.40
3:AD:36:ALA:HB1	21:AA:426:U:H5''	2.02	0.40
6:AG:100:MET:HB2	6:AG:100:MET:HE3	1.99	0.40
6:AG:101:ARG:CZ	21:AA:939:G:H5'	2.51	0.40
8:AI:17:ARG:HH22	21:AA:1129:C:H5'	1.85	0.40
10:AK:34:THR:OG1	10:AK:39:ASN:N	2.52	0.40
10:AK:124:LYS:O	10:AK:125:LYS:O	2.39	0.40
15:AP:36:VAL:HG22	15:AP:36:VAL:O	2.22	0.40
18:AS:29:PRO:HA	18:AS:47:THR:OG1	2.21	0.40
21:AA:126:G:N1	21:AA:236:A:C6	2.90	0.40
21:AA:587:G:O2'	21:AA:588:G:H5'	2.21	0.40
21:AA:595:A:C5	21:AA:641:U:C4	3.09	0.40
21:AA:670:G:C6	21:AA:671:G:N7	2.90	0.40
21:AA:792:A:C5	21:AA:794:A:N6	2.89	0.40
21:AA:792:A:C1'	21:AA:794:A:N7	2.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:920:U:O2'	21:AA:921:U:H5'	2.21	0.40
21:AA:928:G:H2'	21:AA:929:G:H8	1.87	0.40
21:AA:956:U:N3	21:AA:957:U:C5	2.89	0.40
21:AA:1068:G:OP2	21:AA:1094:G:H8	2.04	0.40
21:AA:1463:U:H2'	21:AA:1464:U:H6	1.86	0.40
24:BA:144:A:C6	24:BA:145:C:C4	3.10	0.40
24:BA:506:G:H4'	24:BA:509:C:O2	2.21	0.40
24:BA:764:A:OP1	26:BC:206:LYS:HE3	2.22	0.40
24:BA:944:C:H2'	59:BA:3356:HOH:O	2.22	0.40
24:BA:995:C:OP2	40:BQ:53:LYS:HE3	2.20	0.40
24:BA:1072:C:N4	24:BA:1093:G:H1	2.19	0.40
24:BA:1266:G:N7	42:BS:16:LYS:HE3	2.35	0.40
24:BA:1327:A:OP2	59:BA:3618:HOH:O	2.21	0.40
24:BA:1340:U:C5	24:BA:1603:A:C8	3.08	0.40
24:BA:1380:G:C2	24:BA:1381:G:N7	2.90	0.40
24:BA:1471:G:H2'	24:BA:1472:C:C6	2.56	0.40
24:BA:1821:A:H8	24:BA:1821:A:O5'	2.04	0.40
24:BA:1839:G:C8	24:BA:1927:A:O4'	2.75	0.40
24:BA:1899:A:C2'	24:BA:1900:A:OP2	2.70	0.40
24:BA:2047:C:O2'	24:BA:2823:A:N1	2.43	0.40
24:BA:2261:C:H1'	24:BA:2388:A:N3	2.36	0.40
24:BA:2716:C:H2'	24:BA:2717:C:H6	1.86	0.40
24:BA:2784:U:H4'	27:BD:42:ASN:HD21	1.86	0.40
24:BA:2814:A:O5'	24:BA:2814:A:H8	2.04	0.40
24:BA:2843:G:H21	24:BA:2844:G:H1'	1.86	0.40
25:BB:14:U:C3'	25:BB:15:A:H5''	2.51	0.40
25:BB:67:G:N2	25:BB:68:C:H1'	2.36	0.40
25:BB:71:C:H2'	25:BB:72:G:H5'	2.03	0.40
25:BB:80:U:H2'	25:BB:81:G:C8	2.57	0.40
27:BD:16:THR:CG2	27:BD:18:ASP:OD1	2.61	0.40
27:BD:34:VAL:HG22	27:BD:94:GLN:N	2.35	0.40
29:BF:147:ARG:HG3	29:BF:149:ARG:H	1.87	0.40
30:BG:93:TYR:HD2	30:BG:93:TYR:HA	1.65	0.40
35:BL:92:LEU:HD23	35:BL:125:LEU:HD23	2.04	0.40
36:BM:43:ALA:C	36:BM:45:GLN:N	2.74	0.40
37:BN:55:ALA:HA	37:BN:80:PHE:CD1	2.57	0.40
37:BN:69:ARG:H	37:BN:69:ARG:HG2	1.42	0.40
39:BP:48:ALA:CB	39:BP:95:LYS:HG3	2.51	0.40
39:BP:50:ARG:HB3	39:BP:57:ALA:O	2.21	0.40
40:BQ:57:ARG:HA	40:BQ:60:TRP:CE3	2.56	0.40
42:BS:66:ILE:HD13	42:BS:67:ASP:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BT:29:THR:CA	43:BT:86:THR:H	2.34	0.40
43:BT:32:LEU:N	43:BT:32:LEU:CD2	2.83	0.40
44:BU:44:HIS:O	44:BU:45:GLN:C	2.59	0.40
44:BU:92:VAL:HG13	44:BU:93:ARG:O	2.21	0.40
44:BU:94:PHE:O	44:BU:94:PHE:CG	2.75	0.40
48:BY:19:LEU:HD12	48:BY:22:LEU:HD23	2.03	0.40
51:B1:27:ARG:C	51:B1:29:LYS:H	2.25	0.40
1:CB:34:ARG:HD3	1:CB:35:ASN:N	2.36	0.40
1:CB:80:LYS:C	1:CB:81:ASP:OD1	2.60	0.40
2:CC:39:ARG:HG2	2:CC:54:ILE:HG21	2.03	0.40
2:CC:59:PRO:HB2	2:CC:60:ALA:H	1.58	0.40
2:CC:162:ALA:HB2	55:CA:1056:U:O5'	2.20	0.40
3:CD:107:GLY:N	3:CD:157:ALA:CB	2.84	0.40
4:CE:75:LEU:HD13	4:CE:79:THR:O	2.21	0.40
5:CF:49:TYR:CE1	17:CR:65:SER:HA	2.56	0.40
6:CG:94:ARG:HB3	6:CG:98:LEU:HD11	2.03	0.40
8:CI:5:TYR:O	8:CI:19:PHE:HA	2.21	0.40
8:CI:59:LYS:HB3	8:CI:59:LYS:HE2	1.63	0.40
8:CI:128:LYS:HD2	8:CI:128:LYS:HA	1.83	0.40
12:CM:2:ARG:HH11	12:CM:8:ILE:HG21	1.86	0.40
12:CM:105:ALA:O	12:CM:109:LYS:N	2.54	0.40
15:CP:26:ASN:OD1	15:CP:31:ARG:HB3	2.21	0.40
20:CU:9:GLU:HB2	20:CU:11:PHE:CE2	2.57	0.40
55:CA:39:G:H2'	55:CA:40:C:C6	2.56	0.40
55:CA:253:A:O2'	55:CA:254:G:O5'	2.35	0.40
55:CA:291:U:O2'	55:CA:292:G:H5'	2.21	0.40
55:CA:571:U:H3'	55:CA:572:A:H5''	2.03	0.40
55:CA:764:C:N4	55:CA:812:G:N1	2.70	0.40
55:CA:767:A:C4	55:CA:768:A:C8	3.10	0.40
55:CA:880:C:O2	55:CA:880:C:C2'	2.58	0.40
55:CA:928:G:O2'	55:CA:1533:C:P	2.78	0.40
55:CA:1023:U:C2	55:CA:1024:G:N7	2.90	0.40
55:CA:1163:A:C6	55:CA:1174:G:C6	3.09	0.40
55:CA:1246:A:O2'	55:CA:1247:U:C5'	2.69	0.40
55:CA:1266:G:N1	55:CA:1270:G:O6	2.54	0.40
55:CA:1266:G:N2	55:CA:1269:A:OP2	2.54	0.40
55:CA:1361:G:H2'	55:CA:1362:A:H5''	2.04	0.40
55:CA:1507:A:C6	55:CA:1530:G:C5	3.08	0.40
24:DA:14:A:C6	24:DA:526:A:C2	3.09	0.40
24:DA:64:A:C6	24:DA:91:A:N6	2.89	0.40
24:DA:70:G:H5'	24:DA:71:A:OP1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:271:G:C4	24:DA:272:A:N7	2.89	0.40
24:DA:432:A:H2'	24:DA:433:C:C6	2.57	0.40
24:DA:571:U:N3	24:DA:2030:A:C6	2.89	0.40
24:DA:929:U:N3	24:DA:930:G:C5	2.89	0.40
24:DA:975:A:N6	24:DA:989:G:H1'	2.36	0.40
24:DA:996:A:C4	24:DA:997:G:C8	3.10	0.40
24:DA:1112:G:O2'	24:DA:1113:U:C6	2.66	0.40
24:DA:1203:U:C4	24:DA:1204:A:C5	3.09	0.40
24:DA:1345:C:C2	24:DA:1346:G:C8	3.09	0.40
24:DA:1442:U:C4	24:DA:1443:U:C4	3.09	0.40
24:DA:1493:C:OP2	24:DA:1493:C:H6	2.03	0.40
24:DA:1655:A:H4'	27:DD:118:PHE:CE1	2.55	0.40
24:DA:1721:G:O2'	24:DA:1739:A:N6	2.53	0.40
24:DA:1833:C:O2	24:DA:1969:A:H2	2.03	0.40
24:DA:1851:U:H2'	24:DA:1852:U:O4'	2.22	0.40
24:DA:2262:U:H5''	46:DW:38:ARG:HH22	1.86	0.40
24:DA:2365:G:OP1	46:DW:54:ARG:HG3	2.22	0.40
24:DA:2378:A:O2'	38:DO:21:LEU:HD13	2.21	0.40
24:DA:2423:U:C1'	24:DA:2425:A:N7	2.83	0.40
24:DA:2558:C:C2'	24:DA:2559:C:H5'	2.52	0.40
24:DA:2560:A:C6	24:DA:2561:U:C4	3.10	0.40
24:DA:2611:C:C2'	24:DA:2612:C:H6	2.35	0.40
24:DA:2697:G:O2'	24:DA:2698:U:H5'	2.21	0.40
56:DB:78:A:C2	56:DB:99:A:C4	3.09	0.40
26:DC:6:LYS:HA	26:DC:7:PRO:HD3	1.94	0.40
28:DE:141:MET:O	28:DE:142:ALA:HB3	2.22	0.40
32:DI:5:GLN:HB2	32:DI:7:TYR:CE2	2.56	0.40
32:DI:64:ARG:CZ	32:DI:64:ARG:HB2	2.51	0.40
33:DJ:23:LYS:HE2	33:DJ:142:ILE:HG13	2.04	0.40
36:DM:72:PRO:HA	36:DM:92:TRP:CE3	2.56	0.40
41:DR:39:LEU:HB2	41:DR:49:ILE:CD1	2.51	0.40
44:DU:20:LYS:C	44:DU:20:LYS:HD3	2.42	0.40
44:DU:64:ILE:O	44:DU:65:GLN:O	2.40	0.40
45:DV:21:ARG:HE	45:DV:87:GLN:HG2	1.86	0.40
45:DV:80:HIS:CD2	45:DV:83:LYS:N	2.89	0.40
46:DW:25:PHE:CG	46:DW:26:GLY:N	2.88	0.40
51:D1:52:LYS:HB2	51:D1:52:LYS:NZ	2.36	0.40
1:AB:30:ILE:HD11	1:AB:38:HIS:CD2	2.57	0.40
1:AB:116:LEU:O	1:AB:119:GLN:NE2	2.54	0.40
1:AB:153:MET:CE	1:AB:157:PRO:HG3	2.51	0.40
1:AB:177:ASN:OD1	1:AB:177:ASN:C	2.59	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:78:LYS:O	2:AC:79:LYS:HB2	2.22	0.40
2:AC:108:PRO:CB	2:AC:114:LEU:HD13	2.52	0.40
3:AD:21:LYS:O	3:AD:22:SER:C	2.59	0.40
4:AE:17:VAL:HA	4:AE:33:THR:O	2.22	0.40
10:AK:71:ASP:OD1	10:AK:72:ALA:N	2.55	0.40
13:AN:78:LEU:HB2	13:AN:83:VAL:CG2	2.51	0.40
21:AA:313:A:H2'	21:AA:314:C:C6	2.56	0.40
21:AA:328:C:O2	21:AA:328:C:H2'	2.22	0.40
21:AA:469:C:C4	21:AA:470:C:C4	3.10	0.40
21:AA:953:G:C6	21:AA:954:G:C5	3.09	0.40
21:AA:1022:A:C6	21:AA:1023:U:N3	2.90	0.40
21:AA:1171:A:C6	21:AA:1172:C:C4	3.09	0.40
21:AA:1239:A:C6	21:AA:1298:U:C5	3.10	0.40
22:AV:35:A:C2'	22:AV:36:A:O5'	2.70	0.40
24:BA:30:G:C6	24:BA:511:U:O2	2.75	0.40
24:BA:35:G:HO2'	24:BA:36:G:C5'	2.30	0.40
24:BA:287:G:N2	24:BA:354:A:C4	2.89	0.40
24:BA:725:G:O6	24:BA:726:G:N1	2.54	0.40
24:BA:996:A:C6	24:BA:1160:G:C6	3.08	0.40
24:BA:1014:A:H2'	24:BA:1015:U:C6	2.56	0.40
24:BA:1538:G:O2'	24:BA:1539:U:C5'	2.69	0.40
24:BA:1569:A:C6	24:BA:1570:A:N1	2.90	0.40
24:BA:1601:G:H2'	24:BA:1602:U:O4'	2.22	0.40
24:BA:1730:C:OP1	24:BA:1730:C:H4'	2.20	0.40
24:BA:1787:A:O2'	24:BA:1788:C:H5'	2.21	0.40
24:BA:1997:C:O2'	24:BA:1998:A:C5'	2.64	0.40
24:BA:2093:G:C5	24:BA:2225:A:C5	3.09	0.40
24:BA:2096:C:H2'	24:BA:2097:A:C8	2.57	0.40
24:BA:2182:U:C2'	24:BA:2183:A:OP1	2.69	0.40
24:BA:2214:C:H6	24:BA:2214:C:H5'	1.85	0.40
24:BA:2255:G:C5	24:BA:2256:G:C8	3.09	0.40
24:BA:2283:C:N4	24:BA:2389:G:C5	2.90	0.40
24:BA:2545:G:H2'	24:BA:2546:U:H5'	2.03	0.40
24:BA:2765:A:N3	24:BA:2766:A:H5'	2.36	0.40
24:BA:2791:G:C4	24:BA:2792:A:C8	3.09	0.40
25:BB:116:G:H4'	38:BO:54:VAL:HG22	2.03	0.40
26:BC:245:THR:C	26:BC:247:TRP:N	2.74	0.40
26:BC:245:THR:C	26:BC:247:TRP:H	2.25	0.40
28:BE:108:ILE:HD11	28:BE:180:LEU:HD13	2.03	0.40
28:BE:133:LEU:HD23	28:BE:133:LEU:HA	1.89	0.40
29:BF:8:LYS:HB2	29:BF:9:ASP:H	1.62	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:41:GLU:HB2	29:BF:48:LEU:HD23	2.04	0.40
29:BF:100:GLU:O	29:BF:102:LEU:N	2.55	0.40
30:BG:26:LYS:HB3	30:BG:32:LEU:CB	2.51	0.40
30:BG:26:LYS:HB3	30:BG:32:LEU:HA	2.03	0.40
30:BG:95:ALA:HB2	30:BG:104:LEU:HD23	2.02	0.40
32:BI:52:LEU:HA	32:BI:53:PRO:HD3	1.97	0.40
32:BI:64:ARG:HA	32:BI:64:ARG:HD2	1.98	0.40
33:BJ:37:ARG:HA	33:BJ:118:MET:HE2	2.02	0.40
34:BK:116:ILE:HG13	34:BK:116:ILE:H	1.74	0.40
36:BM:43:ALA:O	36:BM:47:GLU:HB2	2.21	0.40
36:BM:96:ILE:O	36:BM:96:ILE:CD1	2.70	0.40
36:BM:136:MET:HE2	36:BM:136:MET:HB3	1.87	0.40
38:BO:34:HIS:CD2	38:BO:53:THR:OG1	2.74	0.40
39:BP:50:ARG:H	39:BP:50:ARG:HG3	1.72	0.40
43:BT:34:VAL:HG23	43:BT:34:VAL:O	2.21	0.40
46:BW:51:GLY:O	46:BW:52:CYS:C	2.58	0.40
2:CC:168:ARG:CG	2:CC:169:GLU:N	2.84	0.40
5:CF:43:GLY:O	5:CF:44:ARG:C	2.59	0.40
6:CG:135:LYS:O	6:CG:139:ASP:N	2.54	0.40
7:CH:76:ARG:HD3	7:CH:76:ARG:C	2.41	0.40
9:CJ:47:GLU:CB	9:CJ:67:ILE:HG13	2.44	0.40
9:CJ:48:ARG:HB3	13:CN:100:TRP:HZ2	1.86	0.40
12:CM:97:ARG:HB3	55:CA:1308:U:OP2	2.22	0.40
13:CN:2:LYS:HA	55:CA:1048:G:OP1	2.22	0.40
13:CN:19:TYR:CE2	13:CN:51:PRO:HG3	2.56	0.40
18:CS:72:GLU:HG2	55:CA:1320:C:H4'	2.03	0.40
19:CT:22:SER:HA	19:CT:25:SER:OG	2.21	0.40
19:CT:73:ARG:NH1	55:CA:261:U:C5	2.89	0.40
19:CT:81:GLN:HE22	55:CA:258:G:H5'	1.76	0.40
20:CU:15:LEU:HD13	20:CU:17:ARG:HE	1.86	0.40
55:CA:94:G:H4'	55:CA:95:C:H5''	2.03	0.40
55:CA:162:A:H2'	55:CA:163:C:O4'	2.22	0.40
55:CA:615:G:N2	55:CA:626:G:C4	2.90	0.40
55:CA:876:C:H2'	55:CA:877:G:H8	1.87	0.40
55:CA:889:A:O2'	55:CA:890:G:H4'	2.21	0.40
55:CA:1201:A:H4'	55:CA:1203:C:OP2	2.20	0.40
55:CA:1292:G:C6	55:CA:1293:C:C4	3.10	0.40
24:DA:19:A:N1	24:DA:522:A:C6	2.90	0.40
24:DA:36:G:H4'	24:DA:451:U:N3	2.37	0.40
24:DA:38:A:C6	24:DA:39:G:C5	3.10	0.40
24:DA:126:A:H8	52:D2:46:LYS:HE2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:187:G:C2	24:DA:210:C:C2	3.10	0.40
24:DA:252:G:N2	24:DA:253:C:C2	2.89	0.40
24:DA:447:A:H5'	24:DA:449:A:C8	2.57	0.40
24:DA:511:U:H5''	24:DA:512:G:OP2	2.21	0.40
24:DA:532:A:H5'	24:DA:533:G:O4'	2.22	0.40
24:DA:567:U:N3	24:DA:568:U:C4	2.89	0.40
24:DA:825:A:C6	24:DA:826:U:N3	2.89	0.40
24:DA:871:U:H2'	24:DA:872:U:C6	2.57	0.40
24:DA:1047:G:N2	24:DA:1110:G:C4	2.89	0.40
24:DA:1055:G:H3'	24:DA:1056:G:H5'	2.02	0.40
24:DA:1343:G:H2'	24:DA:1344:U:C5	2.56	0.40
24:DA:1803:A:H3'	24:DA:1804:C:C6	2.56	0.40
24:DA:1959:G:C6	24:DA:1960:A:C5	3.10	0.40
24:DA:1965:C:H3'	24:DA:1966:A:H5''	2.00	0.40
24:DA:2051:A:C4'	24:DA:2052:A:OP1	2.54	0.40
24:DA:2102:G:C2	24:DA:2188:U:C2	3.09	0.40
56:DB:54:G:H2'	56:DB:55:U:C6	2.57	0.40
56:DB:57:A:H2'	56:DB:58:A:H8	1.85	0.40
26:DC:94:LEU:HB2	26:DC:100:ARG:HD2	2.03	0.40
27:DD:138:LEU:N	27:DD:138:LEU:HD13	2.37	0.40
27:DD:202:ILE:N	27:DD:202:ILE:HD12	2.37	0.40
29:DF:146:ASP:HB3	29:DF:147:ARG:H	1.60	0.40
33:DJ:30:THR:CG2	33:DJ:31:GLU:H	2.34	0.40
37:DN:57:THR:O	37:DN:80:PHE:HD1	2.04	0.40
40:DQ:48:ASP:HA	40:DQ:51:GLN:HB2	2.04	0.40
42:DS:4:ILE:CG2	42:DS:106:VAL:HG22	2.51	0.40
42:DS:24:ILE:HB	42:DS:32:ALA:HB1	2.03	0.40
47:DX:2:ARG:HH21	47:DX:32:LEU:HD23	1.87	0.40
50:D0:21:LEU:HD23	50:D0:21:LEU:HA	1.94	0.40
51:D1:8:ILE:HG21	51:D1:51:ALA:HB1	2.03	0.40
51:D1:43:ARG:NH2	51:D1:43:ARG:HB2	2.36	0.40
2:AC:41:TYR:OH	2:AC:89:VAL:HG21	2.22	0.40
2:AC:63:ILE:O	2:AC:98:ALA:HA	2.21	0.40
2:AC:116:ALA:HB1	2:AC:186:SER:HB3	2.04	0.40
3:AD:195:ASN:N	3:AD:195:ASN:ND2	2.66	0.40
6:AG:149:ALA:HB1	10:AK:58:THR:CB	2.52	0.40
11:AL:14:LYS:HE3	11:AL:14:LYS:HB2	1.77	0.40
16:AQ:12:VAL:CG1	16:AQ:16:MET:HE1	2.49	0.40
20:AU:9:GLU:N	20:AU:10:PRO:CD	2.84	0.40
21:AA:19:A:C6	21:AA:20:U:C4	3.10	0.40
21:AA:148:G:N3	21:AA:1446:A:H2	2.19	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:158:G:H2'	21:AA:159:G:H5''	2.02	0.40
21:AA:613:C:H2'	21:AA:614:C:C6	2.57	0.40
21:AA:666:G:N1	21:AA:741:G:C5	2.90	0.40
21:AA:724:G:H4'	21:AA:724:G:OP2	2.22	0.40
21:AA:838:G:H1'	21:AA:849:G:N2	2.36	0.40
21:AA:845:A:H8	21:AA:846:G:C4'	2.35	0.40
21:AA:878:A:H2'	21:AA:879:C:O4'	2.21	0.40
21:AA:961:U:C2	21:AA:983:A:C4	3.10	0.40
21:AA:1075:U:H4'	21:AA:1101:A:N6	2.36	0.40
21:AA:1081:A:C2	21:AA:1082:A:N9	2.90	0.40
21:AA:1106:G:C6	21:AA:1107:C:C5	3.10	0.40
21:AA:1124:G:N2	21:AA:1150:A:C2	2.90	0.40
24:BA:27:G:C2	24:BA:512:G:O2'	2.74	0.40
24:BA:55:G:N3	24:BA:127:A:H2	2.20	0.40
24:BA:63:A:H2'	24:BA:64:A:H8	1.87	0.40
24:BA:177:G:H3'	24:BA:178:G:C8	2.56	0.40
24:BA:262:A:H2'	24:BA:263:G:O4'	2.22	0.40
24:BA:327:G:C5	24:BA:328:U:C4	3.09	0.40
24:BA:363:G:H2'	24:BA:364:C:C5	2.57	0.40
24:BA:541:A:C6	24:BA:553:G:C6	3.09	0.40
24:BA:556:A:N7	24:BA:557:C:C5	2.90	0.40
24:BA:580:U:O3'	40:BQ:30:VAL:CG1	2.69	0.40
24:BA:594:U:H2'	24:BA:595:C:C6	2.57	0.40
24:BA:751:A:C2	24:BA:789:A:C4	3.09	0.40
24:BA:760:G:H4'	24:BA:1776:G:OP1	2.21	0.40
24:BA:827:U:C4	24:BA:2430:A:C5	3.09	0.40
24:BA:861:A:H2'	24:BA:862:G:O4'	2.21	0.40
24:BA:1297:C:OP1	24:BA:2710:C:H4'	2.21	0.40
24:BA:1655:A:H3'	24:BA:1656:C:C6	2.57	0.40
24:BA:1767:G:C2	24:BA:1768:C:C6	3.10	0.40
24:BA:1819:A:H5''	26:BC:159:THR:HG21	2.03	0.40
24:BA:1853:A:C6	24:BA:1854:A:N1	2.89	0.40
24:BA:2248:C:O2	24:BA:2248:C:H2'	2.22	0.40
24:BA:2714:G:H2'	24:BA:2715:C:C6	2.56	0.40
24:BA:2782:G:C2'	24:BA:2783:U:H5'	2.52	0.40
24:BA:2818:U:H1'	24:BA:2829:A:H2	1.85	0.40
24:BA:2840:C:H5''	37:BN:53:THR:HG21	2.03	0.40
26:BC:163:ILE:HD13	26:BC:173:LEU:HD11	2.03	0.40
26:BC:268:ARG:HH11	26:BC:268:ARG:CB	2.34	0.40
27:BD:90:PHE:O	27:BD:92:VAL:N	2.55	0.40
28:BE:47:LYS:HD3	28:BE:51:GLU:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:127:TYR:O	29:BF:128:SER:CB	2.69	0.40
30:BG:11:PRO:O	30:BG:12:ALA:C	2.60	0.40
31:BH:133:GLN:OE1	31:BH:133:GLN:HA	2.22	0.40
33:BJ:13:ARG:HD3	33:BJ:51:GLY:O	2.22	0.40
34:BK:1:MET:CE	34:BK:32:TYR:CE1	3.04	0.40
34:BK:68:GLY:O	34:BK:69:VAL:HG23	2.21	0.40
36:BM:5:LYS:O	36:BM:6:ARG:HB2	2.21	0.40
36:BM:81:ARG:HA	36:BM:81:ARG:HD3	1.80	0.40
38:BO:53:THR:O	38:BO:53:THR:OG1	2.39	0.40
38:BO:76:LYS:O	38:BO:79:ALA:HB3	2.22	0.40
43:BT:68:LYS:CG	43:BT:69:ARG:H	2.35	0.40
46:BW:9:THR:HG23	46:BW:10:ARG:N	2.36	0.40
46:BW:23:LYS:CD	46:BW:24:ARG:N	2.83	0.40
47:BX:70:LEU:O	47:BX:74:GLY:N	2.51	0.40
48:BY:47:ARG:HH21	48:BY:47:ARG:CG	2.34	0.40
49:BZ:19:HIS:O	49:BZ:22:THR:HB	2.22	0.40
50:B0:54:ILE:HD13	50:B0:54:ILE:HA	1.93	0.40
54:B4:30:GLU:HB3	54:B4:33:HIS:CE1	2.57	0.40
1:CB:153:MET:C	1:CB:155:GLY:H	2.24	0.40
2:CC:131:ARG:O	2:CC:132:ALA:C	2.59	0.40
2:CC:183:TYR:CE1	2:CC:200:TRP:CE2	3.10	0.40
3:CD:80:ARG:H	3:CD:80:ARG:HG3	1.58	0.40
4:CE:55:VAL:N	4:CE:56:PRO:CD	2.83	0.40
4:CE:76:ASN:O	4:CE:79:THR:HG22	2.22	0.40
4:CE:111:ARG:O	4:CE:113:VAL:N	2.55	0.40
4:CE:152:VAL:C	4:CE:154:ALA:H	2.24	0.40
5:CF:12:PRO:HA	5:CF:15:SER:HB2	2.03	0.40
6:CG:29:LEU:HG	55:CA:1240:U:N3	2.37	0.40
6:CG:78:ARG:NH2	55:CA:1382:C:H4'	2.37	0.40
14:CO:87:ARG:HA	14:CO:87:ARG:HD2	1.93	0.40
16:CQ:10:ARG:HA	16:CQ:57:VAL:HA	2.03	0.40
16:CQ:26:ARG:CG	16:CQ:39:ARG:HB2	2.52	0.40
55:CA:173:U:H5'	55:CA:197:A:O4'	2.21	0.40
55:CA:345:C:H4'	55:CA:346:G:H5''	2.03	0.40
55:CA:451:A:H61	55:CA:481:G:H5'	1.86	0.40
55:CA:545:C:H2'	55:CA:546:A:O4'	2.21	0.40
55:CA:859:G:C8	55:CA:869:G:N2	2.90	0.40
55:CA:1115:U:H2'	55:CA:1116:U:H6	1.87	0.40
55:CA:1117:A:C5	55:CA:1184:G:O6	2.74	0.40
55:CA:1289:A:H2	55:CA:1371:G:H21	1.69	0.40
55:CA:1301:U:H5''	55:CA:1302:C:OP1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CA:1410:A:N1	55:CA:1491:G:C6	2.90	0.40
55:CA:1497:G:C2'	55:CA:1498:U:O5'	2.70	0.40
24:DA:86:G:C2	24:DA:87:U:C5	3.10	0.40
24:DA:183:C:C2'	24:DA:184:C:H5'	2.51	0.40
24:DA:197:A:C6	24:DA:2430:A:N3	2.89	0.40
24:DA:246:C:C2'	24:DA:247:G:H5'	2.51	0.40
24:DA:370:G:O6	24:DA:424:G:C6	2.75	0.40
24:DA:392:U:H2'	24:DA:393:C:C6	2.56	0.40
24:DA:539:G:C2	24:DA:540:C:C2	3.10	0.40
24:DA:581:C:H2'	24:DA:582:A:O4'	2.21	0.40
24:DA:961:C:C4	24:DA:2031:A:C4	3.10	0.40
24:DA:980:A:H2	24:DA:2038:G:C1'	2.35	0.40
24:DA:1048:A:N6	24:DA:1111:A:C5	2.89	0.40
24:DA:1060:U:H1'	24:DA:1062:G:OP2	2.21	0.40
24:DA:1062:G:OP1	24:DA:1070:A:C4'	2.66	0.40
24:DA:1085:A:H3'	24:DA:1086:A:C2	2.57	0.40
24:DA:1210:G:P	24:DA:1212:G:H5'	2.62	0.40
24:DA:1300:G:H5''	24:DA:1301:A:O5'	2.21	0.40
24:DA:1351:C:H4'	24:DA:1572:A:O4'	2.22	0.40
24:DA:1819:A:H1'	24:DA:1821:A:C5	2.56	0.40
24:DA:1951:U:C2	24:DA:1953:A:OP2	2.74	0.40
24:DA:2024:G:C5	24:DA:2040:G:C2	3.10	0.40
24:DA:2074:U:C4	24:DA:2075:U:O4	2.73	0.40
24:DA:2289:G:H2'	24:DA:2290:G:H8	1.86	0.40
24:DA:2298:A:N1	24:DA:2321:U:C5	2.90	0.40
24:DA:2438:U:H5''	24:DA:2600:A:OP1	2.21	0.40
24:DA:2453:A:O2'	24:DA:2572:A:H1'	2.21	0.40
24:DA:2558:C:C4	24:DA:2559:C:C4	3.09	0.40
24:DA:2768:U:C4	24:DA:2769:U:C4	3.10	0.40
56:DB:34:A:C5	56:DB:44:G:N7	2.89	0.40
56:DB:102:G:C5	56:DB:103:U:C5	3.10	0.40
26:DC:65:ASP:OD2	26:DC:68:ARG:HG2	2.22	0.40
26:DC:198:GLU:HG3	26:DC:198:GLU:O	2.22	0.40
27:DD:78:GLY:C	27:DD:79:LEU:HD13	2.42	0.40
30:DG:122:ALA:HB2	30:DG:132:LEU:HA	2.03	0.40
33:DJ:18:VAL:HG12	33:DJ:54:ILE:HD11	2.03	0.40
33:DJ:37:ARG:NH2	33:DJ:39:LYS:NZ	2.69	0.40
33:DJ:56:VAL:CG2	33:DJ:124:VAL:HA	2.51	0.40
33:DJ:125:TYR:HE2	33:DJ:132:HIS:CD2	2.40	0.40
35:DL:79:LEU:HD22	35:DL:115:GLU:O	2.21	0.40
36:DM:76:LYS:HA	36:DM:77:PRO:HD3	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DM:108:VAL:HA	36:DM:109:PRO:HD3	1.85	0.40
37:DN:14:SER:C	37:DN:16:HIS:N	2.75	0.40
40:DQ:26:ALA:O	40:DQ:30:VAL:HB	2.22	0.40
43:DT:12:ARG:HG3	48:DY:29:ARG:NH1	2.37	0.40
43:DT:28:ASN:O	43:DT:29:THR:HG22	2.22	0.40
45:DV:26:PHE:HA	45:DV:27:PRO:HD2	1.75	0.40
46:DW:44:PHE:HE2	46:DW:76:ARG:HE	1.66	0.40
47:DX:36:ARG:HA	47:DX:47:THR:HA	2.03	0.40
47:DX:39:VAL:O	47:DX:41:SER:N	2.49	0.40
51:D1:29:LYS:HE2	51:D1:31:GLU:OE2	2.21	0.40
52:D2:31:LEU:CA	52:D2:34:ARG:HB2	2.44	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	AB	216/241 (90%)	119 (55%)	69 (32%)	28 (13%)	0	4
1	CB	216/241 (90%)	144 (67%)	50 (23%)	22 (10%)	0	7
2	AC	204/233 (88%)	140 (69%)	48 (24%)	16 (8%)	1	11
2	CC	204/233 (88%)	136 (67%)	52 (26%)	16 (8%)	1	11
3	AD	203/206 (98%)	143 (70%)	43 (21%)	17 (8%)	0	9
3	CD	203/206 (98%)	136 (67%)	46 (23%)	21 (10%)	0	6
4	AE	148/167 (89%)	105 (71%)	27 (18%)	16 (11%)	0	5
4	CE	148/167 (89%)	100 (68%)	34 (23%)	14 (10%)	0	8
5	AF	98/135 (73%)	68 (69%)	22 (22%)	8 (8%)	1	9
5	CF	98/135 (73%)	65 (66%)	27 (28%)	6 (6%)	1	16
6	AG	149/179 (83%)	103 (69%)	36 (24%)	10 (7%)	1	14

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	CG	148/179 (83%)	84 (57%)	44 (30%)	20 (14%)	0	3
7	AH	127/130 (98%)	90 (71%)	27 (21%)	10 (8%)	1	11
7	CH	127/130 (98%)	88 (69%)	30 (24%)	9 (7%)	1	13
8	AI	125/130 (96%)	81 (65%)	32 (26%)	12 (10%)	0	7
8	CI	125/130 (96%)	88 (70%)	33 (26%)	4 (3%)	3	26
9	AJ	96/103 (93%)	69 (72%)	16 (17%)	11 (12%)	0	4
9	CJ	96/103 (93%)	62 (65%)	22 (23%)	12 (12%)	0	4
10	AK	115/129 (89%)	84 (73%)	22 (19%)	9 (8%)	1	11
10	CK	115/129 (89%)	86 (75%)	19 (16%)	10 (9%)	0	9
11	AL	121/124 (98%)	82 (68%)	27 (22%)	12 (10%)	0	7
11	CL	121/124 (98%)	86 (71%)	26 (22%)	9 (7%)	1	12
12	AM	112/118 (95%)	89 (80%)	16 (14%)	7 (6%)	1	15
12	CM	111/118 (94%)	71 (64%)	28 (25%)	12 (11%)	0	5
13	AN	92/101 (91%)	63 (68%)	18 (20%)	11 (12%)	0	4
13	CN	91/101 (90%)	62 (68%)	24 (26%)	5 (6%)	1	17
14	AO	86/89 (97%)	64 (74%)	20 (23%)	2 (2%)	5	31
14	CO	86/89 (97%)	67 (78%)	19 (22%)	0	100	100
15	AP	80/82 (98%)	52 (65%)	22 (28%)	6 (8%)	1	12
15	CP	78/82 (95%)	52 (67%)	20 (26%)	6 (8%)	1	11
16	AQ	78/84 (93%)	47 (60%)	20 (26%)	11 (14%)	0	3
16	CQ	78/84 (93%)	57 (73%)	16 (20%)	5 (6%)	1	15
17	AR	53/75 (71%)	39 (74%)	11 (21%)	3 (6%)	1	16
17	CR	53/75 (71%)	39 (74%)	11 (21%)	3 (6%)	1	16
18	AS	77/92 (84%)	61 (79%)	13 (17%)	3 (4%)	2	22
18	CS	77/92 (84%)	55 (71%)	20 (26%)	2 (3%)	4	29
19	AT	83/87 (95%)	63 (76%)	14 (17%)	6 (7%)	1	13
19	CT	83/87 (95%)	59 (71%)	21 (25%)	3 (4%)	3	24
20	AU	49/71 (69%)	26 (53%)	16 (33%)	7 (14%)	0	3
20	CU	49/71 (69%)	23 (47%)	17 (35%)	9 (18%)	0	1
26	BC	269/273 (98%)	192 (71%)	48 (18%)	29 (11%)	0	5
26	DC	269/273 (98%)	169 (63%)	73 (27%)	27 (10%)	0	7

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
27	BD	207/209 (99%)	141 (68%)	35 (17%)	31 (15%)	0	3
27	DD	207/209 (99%)	129 (62%)	48 (23%)	30 (14%)	0	3
28	BE	199/201 (99%)	138 (69%)	41 (21%)	20 (10%)	0	7
28	DE	199/201 (99%)	129 (65%)	49 (25%)	21 (11%)	0	6
29	BF	175/179 (98%)	133 (76%)	26 (15%)	16 (9%)	0	8
29	DF	176/179 (98%)	94 (53%)	43 (24%)	39 (22%)	0	0
30	BG	174/177 (98%)	114 (66%)	34 (20%)	26 (15%)	0	3
30	DG	174/177 (98%)	109 (63%)	36 (21%)	29 (17%)	0	2
31	BH	147/149 (99%)	63 (43%)	53 (36%)	31 (21%)	0	1
31	DH	147/149 (99%)	78 (53%)	48 (33%)	21 (14%)	0	3
32	BI	139/142 (98%)	84 (60%)	42 (30%)	13 (9%)	0	8
32	DI	139/142 (98%)	81 (58%)	39 (28%)	19 (14%)	0	3
33	BJ	140/142 (99%)	100 (71%)	22 (16%)	18 (13%)	0	4
33	DJ	140/142 (99%)	95 (68%)	31 (22%)	14 (10%)	0	7
34	BK	120/123 (98%)	86 (72%)	17 (14%)	17 (14%)	0	3
34	DK	120/123 (98%)	79 (66%)	22 (18%)	19 (16%)	0	2
35	BL	141/144 (98%)	106 (75%)	23 (16%)	12 (8%)	0	9
35	DL	141/144 (98%)	80 (57%)	42 (30%)	19 (14%)	0	3
36	BM	134/136 (98%)	95 (71%)	16 (12%)	23 (17%)	0	2
36	DM	134/136 (98%)	89 (66%)	32 (24%)	13 (10%)	0	7
37	BN	118/127 (93%)	85 (72%)	23 (20%)	10 (8%)	0	9
37	DN	118/127 (93%)	73 (62%)	32 (27%)	13 (11%)	0	5
38	BO	114/117 (97%)	84 (74%)	20 (18%)	10 (9%)	0	9
38	DO	114/117 (97%)	80 (70%)	28 (25%)	6 (5%)	1	18
39	BP	112/115 (97%)	74 (66%)	23 (20%)	15 (13%)	0	3
39	DP	112/115 (97%)	67 (60%)	30 (27%)	15 (13%)	0	3
40	BQ	115/118 (98%)	85 (74%)	23 (20%)	7 (6%)	1	16
40	DQ	115/118 (98%)	85 (74%)	22 (19%)	8 (7%)	1	13
41	BR	101/103 (98%)	75 (74%)	14 (14%)	12 (12%)	0	4
41	DR	101/103 (98%)	71 (70%)	20 (20%)	10 (10%)	0	7
42	BS	108/110 (98%)	81 (75%)	20 (18%)	7 (6%)	1	15

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
42	DS	108/110 (98%)	80 (74%)	18 (17%)	10 (9%)	0	8
43	BT	91/100 (91%)	55 (60%)	20 (22%)	16 (18%)	0	2
43	DT	91/100 (91%)	47 (52%)	30 (33%)	14 (15%)	0	3
44	BU	100/104 (96%)	68 (68%)	16 (16%)	16 (16%)	0	2
44	DU	100/104 (96%)	49 (49%)	29 (29%)	22 (22%)	0	0
45	BV	92/94 (98%)	76 (83%)	15 (16%)	1 (1%)	12	43
45	DV	92/94 (98%)	59 (64%)	25 (27%)	8 (9%)	0	9
46	BW	77/85 (91%)	32 (42%)	18 (23%)	27 (35%)	0	0
46	DW	77/85 (91%)	34 (44%)	25 (32%)	18 (23%)	0	0
47	BX	75/78 (96%)	58 (77%)	12 (16%)	5 (7%)	1	14
47	DX	75/78 (96%)	49 (65%)	19 (25%)	7 (9%)	0	8
48	BY	61/63 (97%)	39 (64%)	15 (25%)	7 (12%)	0	4
48	DY	61/63 (97%)	45 (74%)	11 (18%)	5 (8%)	1	9
49	BZ	56/59 (95%)	43 (77%)	10 (18%)	3 (5%)	1	17
49	DZ	56/59 (95%)	35 (62%)	14 (25%)	7 (12%)	0	4
50	B0	54/57 (95%)	39 (72%)	8 (15%)	7 (13%)	0	4
50	D0	54/57 (95%)	39 (72%)	8 (15%)	7 (13%)	0	4
51	B1	48/55 (87%)	32 (67%)	9 (19%)	7 (15%)	0	3
51	D1	48/55 (87%)	37 (77%)	7 (15%)	4 (8%)	0	9
52	B2	44/46 (96%)	36 (82%)	6 (14%)	2 (4%)	2	20
52	D2	44/46 (96%)	30 (68%)	9 (20%)	5 (11%)	0	5
53	B3	62/65 (95%)	50 (81%)	10 (16%)	2 (3%)	3	26
53	D3	62/65 (95%)	42 (68%)	15 (24%)	5 (8%)	1	10
54	B4	36/38 (95%)	27 (75%)	6 (17%)	3 (8%)	0	9
54	D4	36/38 (95%)	22 (61%)	8 (22%)	6 (17%)	0	2
All	All	11238/11970 (94%)	7515 (67%)	2516 (22%)	1207 (11%)	0	5

All (1207) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	AB	20	ARG
1	AB	22	TRP
1	AB	37	VAL

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Mol	Chain	Res	Type
1	AB	71	THR
1	AB	125	PHE
1	AB	127	LYS
1	AB	200	PRO
2	AC	11	LEU
2	AC	16	PRO
2	AC	100	ILE
2	AC	145	ALA
3	AD	22	SER
3	AD	28	ASP
3	AD	124	VAL
3	AD	192	ALA
4	AE	110	MET
4	AE	121	ASN
5	AF	86	ARG
6	AG	145	GLU
7	AH	66	GLN
8	AI	40	ARG
8	AI	43	ALA
8	AI	71	ILE
9	AJ	57	VAL
9	AJ	61	ALA
10	AK	13	LYS
10	AK	123	PRO
10	AK	125	LYS
10	AK	126	ARG
11	AL	23	LEU
11	AL	33	CYS
11	AL	73	LEU
11	AL	75	GLU
12	AM	46	GLU
13	AN	33	VAL
13	AN	51	PRO
13	AN	61	ASN
16	AQ	12	VAL
16	AQ	17	GLU
16	AQ	50	ASN
16	AQ	52	CYS
16	AQ	70	LYS
17	AR	47	ARG
18	AS	48	ILE
19	AT	67	HIS

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Mol	Chain	Res	Type
20	AU	8	ASN
20	AU	34	ARG
20	AU	36	PHE
26	BC	35	LYS
26	BC	77	VAL
26	BC	104	LEU
26	BC	106	PRO
26	BC	110	LYS
26	BC	120	ASP
26	BC	121	ALA
26	BC	196	ASN
27	BD	43	ASP
27	BD	54	ALA
27	BD	73	VAL
27	BD	99	GLU
27	BD	103	ASP
27	BD	104	VAL
27	BD	119	ALA
27	BD	122	VAL
27	BD	169	ARG
27	BD	192	ALA
28	BE	6	LYS
28	BE	8	ALA
28	BE	46	GLN
28	BE	153	LEU
28	BE	175	ILE
29	BF	8	LYS
29	BF	111	ARG
29	BF	134	GLN
30	BG	7	PRO
30	BG	8	VAL
30	BG	9	VAL
30	BG	33	THR
30	BG	53	PRO
30	BG	84	LYS
30	BG	94	ARG
30	BG	118	ALA
30	BG	170	THR
31	BH	3	VAL
31	BH	8	LYS
31	BH	9	VAL
31	BH	10	ALA

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Mol	Chain	Res	Type
31	BH	14	SER
31	BH	28	ASN
31	BH	30	LEU
31	BH	31	VAL
31	BH	32	PRO
31	BH	33	GLN
31	BH	35	LYS
31	BH	121	VAL
32	BI	65	SER
32	BI	92	PRO
33	BJ	2	LYS
33	BJ	4	PHE
33	BJ	14	ASP
33	BJ	21	THR
33	BJ	44	TYR
33	BJ	45	THR
33	BJ	73	VAL
33	BJ	81	ILE
33	BJ	111	LYS
34	BK	13	ASN
34	BK	16	ALA
34	BK	35	VAL
34	BK	49	ARG
34	BK	71	ARG
34	BK	72	PRO
34	BK	118	LEU
34	BK	119	ALA
35	BL	15	ALA
35	BL	66	PHE
35	BL	81	ASP
35	BL	88	GLY
36	BM	2	LEU
36	BM	13	HIS
36	BM	15	GLY
36	BM	35	ALA
36	BM	36	VAL
36	BM	54	THR
36	BM	55	ARG
36	BM	60	GLN
36	BM	69	PRO
36	BM	77	PRO
37	BN	2	ARG

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Mol	Chain	Res	Type
37	BN	15	SER
38	BO	3	LYS
38	BO	68	LYS
39	BP	25	VAL
39	BP	50	ARG
39	BP	103	THR
39	BP	105	LYS
40	BQ	87	VAL
41	BR	55	ASP
41	BR	91	GLN
42	BS	3	THR
42	BS	14	ALA
42	BS	19	LEU
43	BT	16	VAL
43	BT	27	SER
43	BT	29	THR
43	BT	49	LYS
43	BT	69	ARG
43	BT	88	LYS
44	BU	6	ARG
44	BU	18	LYS
44	BU	51	LEU
44	BU	88	ASP
44	BU	98	ASN
45	BV	69	GLU
46	BW	9	THR
46	BW	23	LYS
46	BW	30	VAL
46	BW	36	ILE
46	BW	51	GLY
47	BX	34	SER
48	BY	22	LEU
48	BY	23	ARG
49	BZ	3	THR
50	B0	35	GLU
50	B0	54	ILE
51	B1	4	ILE
52	B2	44	VAL
53	B3	22	LYS
53	B3	31	ILE
54	B4	4	ARG
1	CB	80	LYS

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Mol	Chain	Res	Type
1	CB	129	THR
1	CB	150	ILE
1	CB	188	THR
2	CC	87	ARG
2	CC	112	ALA
2	CC	130	ARG
3	CD	24	VAL
3	CD	25	ARG
3	CD	33	ILE
3	CD	35	GLN
3	CD	80	ARG
3	CD	104	MET
3	CD	181	PHE
3	CD	186	GLU
4	CE	89	THR
4	CE	108	GLY
5	CF	68	GLN
5	CF	98	GLU
6	CG	29	LEU
6	CG	30	MET
6	CG	31	VAL
6	CG	62	GLU
8	CI	71	ILE
8	CI	122	ARG
9	CJ	46	LYS
9	CJ	93	ALA
10	CK	90	PRO
10	CK	125	LYS
10	CK	126	ARG
11	CL	34	THR
11	CL	43	LYS
11	CL	92	VAL
12	CM	14	ALA
12	CM	46	GLU
13	CN	95	LEU
20	CU	4	LYS
20	CU	15	LEU
20	CU	23	GLU
20	CU	31	VAL
20	CU	34	ARG
26	DC	9	SER
26	DC	28	PRO

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Mol	Chain	Res	Type
26	DC	186	ASP
26	DC	269	ARG
27	DD	11	MET
27	DD	14	ILE
27	DD	31	ALA
27	DD	74	GLU
27	DD	77	ARG
27	DD	136	ASN
27	DD	150	GLN
27	DD	164	GLN
27	DD	170	VAL
27	DD	175	LEU
27	DD	194	PRO
28	DE	41	GLN
28	DE	55	SER
28	DE	99	LYS
28	DE	116	ASP
29	DF	10	GLU
29	DF	12	VAL
29	DF	32	LYS
29	DF	36	ASN
29	DF	42	ALA
29	DF	112	ASP
29	DF	114	ARG
29	DF	120	SER
29	DF	122	ASP
29	DF	137	PHE
29	DF	138	PRO
30	DG	49	LEU
30	DG	95	ALA
30	DG	149	ALA
30	DG	164	ALA
30	DG	165	ASP
31	DH	3	VAL
31	DH	9	VAL
31	DH	10	ALA
31	DH	49	ALA
31	DH	72	ILE
31	DH	76	GLU
31	DH	98	ASP
31	DH	102	ALA
32	DI	22	PRO

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Mol	Chain	Res	Type
32	DI	23	VAL
32	DI	29	GLN
32	DI	52	LEU
32	DI	58	ILE
32	DI	69	VAL
33	DJ	45	THR
33	DJ	81	ILE
33	DJ	87	ALA
33	DJ	95	ARG
34	DK	18	ARG
34	DK	35	VAL
34	DK	49	ARG
34	DK	71	ARG
34	DK	72	PRO
34	DK	93	GLN
34	DK	110	GLU
34	DK	120	PRO
35	DL	4	ASN
35	DL	41	ARG
35	DL	82	LEU
35	DL	85	VAL
35	DL	89	VAL
35	DL	101	ILE
35	DL	111	ILE
36	DM	2	LEU
36	DM	72	PRO
36	DM	77	PRO
36	DM	135	VAL
37	DN	30	ARG
37	DN	63	ARG
37	DN	104	ALA
38	DO	90	VAL
39	DP	25	VAL
39	DP	50	ARG
39	DP	83	ILE
39	DP	109	ILE
39	DP	112	ARG
42	DS	28	LYS
42	DS	33	LEU
42	DS	72	THR
43	DT	14	PRO
43	DT	15	HIS

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Mol	Chain	Res	Type
43	DT	20	ALA
43	DT	29	THR
43	DT	56	GLU
43	DT	88	LYS
44	DU	65	GLN
44	DU	82	VAL
44	DU	92	VAL
44	DU	95	PHE
44	DU	96	LYS
44	DU	97	SER
45	DV	56	PHE
45	DV	58	SER
46	DW	9	THR
46	DW	34	SER
46	DW	35	ILE
47	DX	2	ARG
49	DZ	13	ILE
49	DZ	30	ARG
50	D0	54	ILE
53	D3	29	ARG
54	D4	8	LYS
54	D4	20	ASP
1	AB	18	GLN
1	AB	40	ILE
1	AB	52	ALA
1	AB	72	LYS
1	AB	119	GLN
1	AB	120	SER
1	AB	187	ASP
1	AB	189	ASN
2	AC	35	ASP
2	AC	60	ALA
2	AC	99	GLN
2	AC	167	TYR
3	AD	32	LYS
3	AD	150	LYS
3	AD	174	ALA
3	AD	197	HIS
4	AE	77	ASN
4	AE	97	PRO
4	AE	137	ARG
5	AF	54	LEU

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Mol	Chain	Res	Type
6	AG	16	LYS
6	AG	78	ARG
7	AH	77	VAL
7	AH	78	SER
7	AH	87	ARG
8	AI	8	THR
8	AI	128	LYS
9	AJ	75	ASP
9	AJ	92	LEU
11	AL	24	GLU
12	AM	3	ILE
12	AM	6	ILE
13	AN	28	ALA
13	AN	52	ARG
15	AP	10	GLY
15	AP	52	LEU
15	AP	80	LYS
16	AQ	11	VAL
18	AS	61	VAL
20	AU	12	ASP
20	AU	23	GLU
26	BC	9	SER
26	BC	22	GLU
26	BC	43	ASN
26	BC	57	HIS
26	BC	140	VAL
26	BC	141	HIS
26	BC	239	PHE
27	BD	72	GLY
27	BD	77	ARG
27	BD	92	VAL
27	BD	94	GLN
27	BD	107	VAL
27	BD	144	GLY
27	BD	183	GLU
27	BD	191	GLY
28	BE	11	ALA
28	BE	43	THR
28	BE	78	TRP
29	BF	113	PHE
29	BF	149	ARG
29	BF	175	PRO

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Mol	Chain	Res	Type
30	BG	28	LYS
30	BG	30	GLY
30	BG	31	GLU
30	BG	44	HIS
30	BG	45	ALA
30	BG	60	GLY
30	BG	164	ALA
30	BG	168	VAL
31	BH	25	TYR
31	BH	34	GLY
31	BH	54	LEU
31	BH	81	ALA
31	BH	83	LYS
31	BH	101	ASP
31	BH	131	SER
32	BI	30	GLN
32	BI	59	THR
33	BJ	13	ARG
33	BJ	39	LYS
33	BJ	41	LYS
34	BK	3	GLN
34	BK	93	GLN
34	BK	108	ARG
35	BL	65	GLY
35	BL	111	ILE
36	BM	14	LYS
36	BM	56	ALA
37	BN	3	HIS
37	BN	101	GLY
37	BN	117	ASP
37	BN	118	ARG
38	BO	22	GLY
38	BO	95	SER
38	BO	100	HIS
38	BO	112	GLU
39	BP	2	ASN
39	BP	4	ILE
39	BP	15	ASP
39	BP	65	ASN
39	BP	93	LYS
40	BQ	86	SER
42	BS	64	ALA

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Mol	Chain	Res	Type
43	BT	35	ALA
43	BT	68	LYS
43	BT	70	HIS
43	BT	84	TYR
43	BT	86	THR
44	BU	16	LYS
44	BU	87	GLU
46	BW	15	SER
46	BW	17	ALA
46	BW	18	LYS
46	BW	25	PHE
46	BW	26	GLY
46	BW	27	GLY
46	BW	33	GLY
46	BW	47	GLY
46	BW	50	VAL
47	BX	18	SER
47	BX	53	LYS
48	BY	24	GLU
48	BY	37	LEU
48	BY	44	LYS
50	B0	34	GLY
50	B0	51	ARG
51	B1	51	ALA
54	B4	16	ILE
1	CB	10	LYS
1	CB	22	TRP
1	CB	85	SER
1	CB	163	ILE
1	CB	203	ASP
1	CB	218	ALA
2	CC	27	GLU
2	CC	47	ALA
2	CC	59	PRO
2	CC	188	ALA
3	CD	27	ILE
3	CD	69	ARG
3	CD	107	GLY
4	CE	31	SER
4	CE	56	PRO
4	CE	75	LEU
4	CE	81	GLN

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Mol	Chain	Res	Type
6	CG	9	ARG
6	CG	10	LYS
6	CG	36	SER
6	CG	52	ARG
6	CG	95	ARG
6	CG	107	ALA
6	CG	113	LYS
6	CG	133	ALA
7	CH	29	SER
8	CI	58	GLU
9	CJ	57	VAL
9	CJ	87	LEU
10	CK	40	ALA
10	CK	70	ALA
11	CL	88	ASP
12	CM	4	ALA
12	CM	65	GLU
12	CM	76	ILE
13	CN	52	ARG
15	CP	47	GLU
15	CP	53	ASP
15	CP	54	LEU
15	CP	78	VAL
16	CQ	78	VAL
17	CR	69	TYR
18	CS	46	LEU
19	CT	43	LYS
19	CT	82	ILE
20	CU	7	GLU
20	CU	8	ASN
26	DC	3	VAL
26	DC	37	SER
26	DC	45	ASN
26	DC	94	LEU
26	DC	121	ALA
26	DC	140	VAL
26	DC	195	GLY
26	DC	232	GLY
26	DC	239	PHE
27	DD	93	GLY
27	DD	102	ALA
27	DD	107	VAL

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Mol	Chain	Res	Type
27	DD	112	THR
27	DD	118	PHE
27	DD	119	ALA
27	DD	120	GLY
28	DE	62	GLN
28	DE	79	ARG
28	DE	80	SER
28	DE	127	GLU
28	DE	153	LEU
29	DF	8	LYS
29	DF	37	MET
29	DF	43	ILE
29	DF	67	THR
29	DF	76	PHE
29	DF	113	PHE
29	DF	133	GLU
29	DF	145	VAL
29	DF	148	VAL
30	DG	59	ASP
30	DG	80	GLU
30	DG	83	THR
30	DG	85	LYS
30	DG	86	LEU
30	DG	93	TYR
30	DG	150	TYR
31	DH	61	VAL
31	DH	66	ASN
31	DH	86	ASP
31	DH	97	ARG
32	DI	9	LYS
32	DI	30	GLN
32	DI	51	GLY
32	DI	62	ALA
32	DI	140	GLU
33	DJ	112	GLY
34	DK	16	ALA
34	DK	46	ALA
34	DK	104	THR
35	DL	29	LYS
36	DM	14	LYS
36	DM	73	ILE
37	DN	8	ARG

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Mol	Chain	Res	Type
37	DN	105	GLY
38	DO	3	LYS
38	DO	8	ILE
38	DO	72	ALA
39	DP	32	VAL
39	DP	33	GLU
39	DP	85	VAL
39	DP	108	ARG
40	DQ	23	TYR
40	DQ	86	SER
40	DQ	88	GLU
40	DQ	91	ARG
41	DR	3	ALA
41	DR	40	MET
42	DS	3	THR
42	DS	40	ASN
43	DT	39	THR
43	DT	68	LYS
44	DU	4	ILE
44	DU	54	PRO
44	DU	87	GLU
44	DU	88	ASP
44	DU	89	GLY
45	DV	33	GLY
45	DV	55	GLU
46	DW	18	LYS
46	DW	24	ARG
46	DW	33	GLY
46	DW	39	GLN
46	DW	53	GLY
46	DW	57	THR
46	DW	71	LYS
46	DW	83	ALA
47	DX	41	SER
47	DX	49	ARG
47	DX	63	ILE
48	DY	9	LYS
48	DY	22	LEU
48	DY	37	LEU
49	DZ	4	ILE
50	D0	21	LEU
50	D0	55	ALA

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Mol	Chain	Res	Type
51	D1	4	ILE
51	D1	36	LYS
52	D2	24	THR
52	D2	40	ALA
53	D3	3	ILE
53	D3	6	VAL
53	D3	51	LYS
54	D4	4	ARG
1	AB	63	LYS
1	AB	94	ARG
1	AB	95	TRP
1	AB	105	THR
1	AB	128	LEU
1	AB	147	LEU
2	AC	26	LYS
2	AC	192	TYR
3	AD	125	ASN
3	AD	155	LYS
3	AD	166	LYS
3	AD	172	VAL
4	AE	50	GLY
4	AE	56	PRO
4	AE	57	ALA
4	AE	79	THR
4	AE	124	ALA
5	AF	39	LEU
6	AG	95	ARG
6	AG	112	ASP
6	AG	129	ASN
8	AI	9	GLY
8	AI	13	SER
8	AI	120	ALA
9	AJ	36	VAL
9	AJ	74	VAL
9	AJ	101	SER
10	AK	105	ARG
11	AL	22	ALA
11	AL	43	LYS
11	AL	87	LYS
12	AM	4	ALA
12	AM	23	GLY
12	AM	70	ARG

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Mol	Chain	Res	Type
12	AM	84	CYS
13	AN	27	LYS
15	AP	49	GLY
16	AQ	5	ARG
17	AR	54	LEU
18	AS	27	LYS
19	AT	4	LYS
19	AT	5	SER
19	AT	40	ALA
26	BC	8	THR
26	BC	94	LEU
26	BC	105	ALA
26	BC	157	ALA
26	BC	189	ALA
26	BC	237	ARG
26	BC	243	PRO
27	BD	17	GLU
27	BD	106	LYS
27	BD	118	PHE
27	BD	184	ARG
27	BD	190	LYS
28	BE	79	ARG
28	BE	80	SER
29	BF	11	VAL
29	BF	20	ASN
29	BF	133	GLU
29	BF	147	ARG
29	BF	174	PHE
30	BG	61	TRP
31	BH	40	THR
31	BH	106	ALA
31	BH	111	ALA
32	BI	105	LEU
33	BJ	65	THR
33	BJ	68	LYS
34	BK	17	ARG
34	BK	46	ALA
34	BK	50	GLY
35	BL	29	LYS
35	BL	30	THR
36	BM	59	ARG
36	BM	79	ALA

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Mol	Chain	Res	Type
36	BM	81	ARG
37	BN	80	PHE
38	BO	58	ILE
38	BO	94	ARG
38	BO	113	ALA
39	BP	5	LYS
39	BP	20	ARG
39	BP	34	GLY
39	BP	51	ASN
39	BP	86	LYS
40	BQ	5	ARG
40	BQ	90	ASP
41	BR	31	GLU
41	BR	53	PHE
42	BS	18	ARG
43	BT	38	ALA
43	BT	39	THR
44	BU	38	ILE
44	BU	39	ASN
44	BU	74	ALA
44	BU	83	GLY
44	BU	92	VAL
46	BW	16	GLU
46	BW	29	SER
46	BW	34	SER
46	BW	74	LYS
47	BX	17	ARG
47	BX	20	ALA
48	BY	57	LEU
49	BZ	34	THR
50	B0	12	ARG
51	B1	18	HIS
51	B1	26	LYS
51	B1	43	ARG
51	B1	50	GLU
1	CB	17	HIS
1	CB	44	LYS
1	CB	81	ASP
1	CB	148	GLY
1	CB	149	GLY
1	CB	205	ALA
3	CD	29	THR

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Mol	Chain	Res	Type
3	CD	47	LEU
3	CD	82	LYS
3	CD	166	LYS
3	CD	187	ARG
3	CD	192	ALA
4	CE	29	ILE
4	CE	51	LYS
5	CF	85	ILE
5	CF	99	ALA
6	CG	15	PRO
6	CG	17	PHE
6	CG	49	LEU
6	CG	75	LYS
7	CH	30	LYS
7	CH	78	SER
7	CH	98	LEU
8	CI	119	LYS
9	CJ	82	LYS
10	CK	120	CYS
11	CL	22	ALA
11	CL	121	PRO
12	CM	45	SER
12	CM	92	ARG
13	CN	99	SER
15	CP	28	ARG
16	CQ	29	LYS
16	CQ	81	ALA
20	CU	37	TYR
26	DC	36	ASN
26	DC	59	GLN
26	DC	69	ASN
26	DC	98	GLY
26	DC	141	HIS
26	DC	147	PRO
26	DC	237	ARG
27	DD	95	SER
27	DD	99	GLU
27	DD	162	ALA
28	DE	13	THR
28	DE	63	LYS
28	DE	165	HIS
28	DE	187	VAL

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Mol	Chain	Res	Type
28	DE	188	MET
29	DF	41	GLU
29	DF	70	ARG
29	DF	116	LEU
30	DG	9	VAL
30	DG	11	PRO
30	DG	46	ASP
30	DG	91	VAL
30	DG	117	PRO
30	DG	125	PRO
30	DG	169	ARG
31	DH	99	ILE
31	DH	144	VAL
32	DI	35	MET
33	DJ	13	ARG
33	DJ	44	TYR
34	DK	14	SER
34	DK	17	ARG
34	DK	103	VAL
35	DL	19	LEU
35	DL	99	ASN
35	DL	100	ILE
35	DL	115	GLU
36	DM	16	ARG
36	DM	111	GLU
37	DN	2	ARG
37	DN	5	LYS
37	DN	10	LEU
37	DN	13	ASN
39	DP	94	ALA
39	DP	113	LEU
40	DQ	6	GLY
40	DQ	29	ARG
40	DQ	87	VAL
41	DR	98	ILE
42	DS	61	ASN
43	DT	19	LYS
43	DT	38	ALA
44	DU	8	ASP
44	DU	40	LEU
45	DV	79	ARG
46	DW	36	ILE

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Mol	Chain	Res	Type
46	DW	46	ALA
47	DX	35	HIS
47	DX	69	GLU
50	D0	32	THR
51	D1	35	LEU
52	D2	29	GLN
52	D2	39	ARG
53	D3	22	LYS
54	D4	3	VAL
54	D4	37	GLN
1	AB	21	TYR
2	AC	92	ASP
2	AC	107	LYS
2	AC	171	ARG
3	AD	24	VAL
3	AD	29	THR
4	AE	24	VAL
4	AE	132	PRO
5	AF	7	VAL
5	AF	69	GLU
6	AG	71	THR
8	AI	33	SER
8	AI	54	VAL
8	AI	55	ASP
9	AJ	35	GLN
10	AK	119	GLY
11	AL	28	GLN
13	AN	2	LYS
13	AN	21	ALA
13	AN	64	ARG
14	AO	43	ALA
15	AP	36	VAL
16	AQ	10	ARG
16	AQ	49	ASN
19	AT	10	ALA
20	AU	11	PHE
26	BC	109	LEU
26	BC	204	LEU
26	BC	246	PRO
27	BD	164	GLN
27	BD	170	VAL
27	BD	182	ALA

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Mol	Chain	Res	Type
27	BD	187	LEU
28	BE	45	ALA
28	BE	49	ARG
28	BE	73	ILE
29	BF	2	LYS
29	BF	54	ALA
30	BG	55	ASP
30	BG	97	VAL
30	BG	113	ASP
30	BG	117	PRO
31	BH	7	ASP
31	BH	29	PHE
31	BH	67	ALA
31	BH	89	LYS
31	BH	96	THR
32	BI	6	ALA
33	BJ	36	LEU
33	BJ	102	GLU
33	BJ	125	TYR
34	BK	48	PRO
34	BK	69	VAL
35	BL	25	SER
35	BL	64	PHE
36	BM	84	LYS
36	BM	134	THR
37	BN	17	ARG
38	BO	77	ALA
39	BP	33	GLU
40	BQ	4	LYS
41	BR	49	ILE
41	BR	71	LYS
42	BS	96	ILE
43	BT	18	GLU
46	BW	14	ASP
46	BW	56	HIS
50	B0	3	GLN
51	B1	16	THR
52	B2	2	LYS
54	B4	37	GLN
1	CB	26	MET
1	CB	86	CYS
1	CB	101	THR

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Mol	Chain	Res	Type
2	CC	100	ILE
2	CC	180	ASP
3	CD	21	LYS
3	CD	39	GLN
4	CE	69	ASN
4	CE	111	ARG
5	CF	63	ASN
6	CG	88	VAL
7	CH	22	ALA
7	CH	47	ASP
7	CH	107	LYS
10	CK	88	PRO
10	CK	91	GLY
10	CK	118	ASN
12	CM	42	VAL
12	CM	77	LYS
13	CN	51	PRO
15	CP	42	ILE
16	CQ	67	SER
16	CQ	79	GLU
18	CS	29	PRO
19	CT	65	LEU
26	DC	106	PRO
26	DC	196	ASN
26	DC	204	LEU
27	DD	48	ILE
27	DD	197	THR
28	DE	69	ARG
28	DE	96	VAL
28	DE	126	VAL
28	DE	148	ILE
29	DF	94	ARG
29	DF	104	THR
29	DF	130	GLY
30	DG	40	VAL
30	DG	45	ALA
30	DG	123	GLU
31	DH	39	ALA
31	DH	105	ALA
32	DI	19	PRO
32	DI	87	SER
32	DI	119	ALA

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Mol	Chain	Res	Type
33	DJ	5	THR
33	DJ	6	ALA
33	DJ	25	LEU
33	DJ	113	PRO
34	DK	5	GLN
34	DK	6	THR
35	DL	30	THR
36	DM	13	HIS
36	DM	106	ASP
37	DN	82	GLU
39	DP	20	ARG
39	DP	51	ASN
40	DQ	58	GLN
41	DR	15	SER
41	DR	29	THR
41	DR	65	ALA
42	DS	71	VAL
43	DT	11	LEU
46	DW	23	LYS
46	DW	41	GLY
48	DY	2	LYS
48	DY	46	VAL
49	DZ	52	PHE
50	D0	26	SER
50	D0	53	VAL
54	D4	16	ILE
1	AB	85	SER
1	AB	150	ILE
2	AC	53	ARG
2	AC	65	VAL
3	AD	191	SER
5	AF	63	ASN
5	AF	94	HIS
5	AF	99	ALA
6	AG	120	ALA
7	AH	49	LYS
7	AH	69	ALA
7	AH	99	GLY
7	AH	103	VAL
9	AJ	33	GLY
9	AJ	39	PRO
9	AJ	41	PRO

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Mol	Chain	Res	Type
10	AK	14	GLN
11	AL	72	ASN
11	AL	77	SER
13	AN	80	ARG
14	AO	45	HIS
17	AR	24	ASP
26	BC	37	SER
26	BC	64	VAL
26	BC	150	GLY
27	BD	109	VAL
27	BD	145	SER
27	BD	151	THR
28	BE	59	PRO
28	BE	71	GLY
28	BE	83	VAL
28	BE	96	VAL
30	BG	16	VAL
30	BG	32	LEU
30	BG	109	SER
31	BH	103	VAL
32	BI	3	LYS
32	BI	7	TYR
32	BI	20	SER
32	BI	64	ARG
32	BI	83	ALA
34	BK	92	GLU
36	BM	47	GLU
36	BM	73	ILE
43	BT	28	ASN
43	BT	55	VAL
44	BU	63	ALA
44	BU	67	SER
44	BU	85	ARG
46	BW	40	ARG
46	BW	78	PHE
48	BY	17	GLU
49	BZ	4	ILE
2	CC	46	LEU
2	CC	140	ALA
2	CC	145	ALA
2	CC	167	TYR
3	CD	38	GLY

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Mol	Chain	Res	Type
4	CE	144	GLU
7	CH	72	GLU
9	CJ	36	VAL
9	CJ	75	ASP
11	CL	60	PHE
12	CM	62	PHE
13	CN	50	LEU
17	CR	72	ARG
26	DC	64	VAL
26	DC	246	PRO
27	DD	106	LYS
27	DD	109	VAL
27	DD	169	ARG
28	DE	60	TRP
29	DF	82	TYR
29	DF	125	GLY
29	DF	156	THR
30	DG	39	ALA
30	DG	119	GLY
30	DG	126	THR
30	DG	136	ASP
30	DG	152	ARG
31	DH	89	LYS
31	DH	121	VAL
31	DH	124	THR
31	DH	143	ILE
33	DJ	43	GLU
34	DK	119	ALA
35	DL	48	ARG
35	DL	88	GLY
35	DL	93	ASN
36	DM	69	PRO
36	DM	134	THR
37	DN	59	SER
37	DN	71	ARG
37	DN	72	ASP
39	DP	63	ILE
41	DR	53	PHE
42	DS	32	ALA
43	DT	18	GLU
43	DT	50	LEU
44	DU	6	ARG

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Mol	Chain	Res	Type
44	DU	41	VAL
44	DU	52	ASN
44	DU	101	THR
47	DX	17	ARG
49	DZ	27	GLY
50	D0	33	SER
51	D1	50	GLU
1	AB	53	LEU
1	AB	75	ALA
3	AD	31	CYS
4	AE	152	VAL
6	AG	57	GLU
7	AH	96	ALA
10	AK	97	ARG
13	AN	44	VAL
15	AP	42	ILE
26	BC	226	PRO
28	BE	123	LYS
28	BE	148	ILE
29	BF	61	GLY
29	BF	83	PRO
31	BH	13	GLY
31	BH	107	GLY
33	BJ	96	ARG
35	BL	23	ILE
35	BL	40	SER
36	BM	46	ILE
36	BM	133	LYS
37	BN	32	GLU
40	BQ	43	GLN
40	BQ	115	ALA
41	BR	28	ALA
41	BR	51	VAL
41	BR	65	ALA
41	BR	98	ILE
42	BS	29	VAL
44	BU	53	GLN
46	BW	68	PHE
1	CB	128	LEU
2	CC	65	VAL
3	CD	191	SER
4	CE	58	ALA

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Mol	Chain	Res	Type
4	CE	104	ILE
5	CF	7	VAL
6	CG	74	VAL
9	CJ	42	LEU
9	CJ	74	VAL
10	CK	127	ARG
17	CR	51	GLN
28	DE	45	ALA
29	DF	68	LYS
29	DF	69	ALA
29	DF	83	PRO
29	DF	86	CYS
30	DG	92	GLY
30	DG	170	THR
32	DI	31	GLY
32	DI	83	ALA
35	DL	36	LYS
35	DL	66	PHE
38	DO	42	PRO
44	DU	12	VAL
44	DU	35	VAL
44	DU	47	PRO
45	DV	57	TYR
45	DV	84	PRO
46	DW	16	GLU
49	DZ	29	ARG
49	DZ	32	GLY
52	D2	43	THR
2	AC	14	VAL
3	AD	100	VAL
11	AL	41	PRO
28	BE	187	VAL
30	BG	110	HIS
32	BI	31	GLY
36	BM	72	PRO
41	BR	64	VAL
46	BW	41	GLY
1	CB	200	PRO
6	CG	68	VAL
9	CJ	33	GLY
27	DD	44	GLY
27	DD	143	PRO

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Mol	Chain	Res	Type
28	DE	129	PRO
29	DF	175	PRO
32	DI	138	VAL
33	DJ	96	ARG
38	DO	27	VAL
39	DP	4	ILE
41	DR	8	GLY
46	DW	26	GLY
1	AB	163	ILE
4	AE	78	GLY
4	AE	131	ASN
20	AU	52	VAL
27	BD	93	GLY
46	BW	37	VAL
46	BW	73	PRO
1	CB	154	GLY
2	CC	77	GLY
9	CJ	38	GLY
12	CM	3	ILE
26	DC	2	VAL
27	DD	122	VAL
27	DD	144	GLY
29	DF	88	VAL
32	DI	28	GLY
34	DK	2	ILE
41	DR	27	ILE
42	DS	96	ILE
43	DT	16	VAL
46	DW	22	VAL
8	AI	25	GLY
10	AK	38	GLY
31	BH	80	ILE
20	CU	9	GLU
29	DF	81	GLY
29	DF	136	ILE
31	DH	103	VAL
36	DM	36	VAL
41	DR	75	VAL
44	DU	64	ILE
45	DV	15	GLY
1	AB	181	PRO
4	AE	104	ILE

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Mol	Chain	Res	Type
6	AG	79	VAL
7	AH	102	VAL
16	AQ	57	VAL
19	AT	3	ILE
29	BF	135	ILE
32	BI	23	VAL
36	BM	23	GLY
37	BN	84	GLY
46	BW	70	VAL
50	B0	53	VAL
2	CC	76	ILE
4	CE	116	VAL
6	CG	92	PRO
7	CH	6	ILE
9	CJ	84	VAL
11	CL	83	GLY
29	DF	108	PRO
33	DJ	56	VAL
34	DK	48	PRO
35	DL	114	GLY
44	DU	33	VAL
16	AQ	9	GLY
41	BR	30	GLY
11	CL	117	GLY
12	CM	93	GLY
26	DC	217	PRO
29	DF	84	ILE
42	DS	29	VAL

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	AB	180/199 (90%)	147 (82%)	33 (18%)	1 9
1	CB	180/199 (90%)	158 (88%)	22 (12%)	4 20
2	AC	170/190 (90%)	148 (87%)	22 (13%)	3 19

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	CC	170/190 (90%)	146 (86%)	24 (14%)	3	17
3	AD	172/173 (99%)	147 (86%)	25 (14%)	2	16
3	CD	172/173 (99%)	152 (88%)	20 (12%)	4	22
4	AE	113/126 (90%)	93 (82%)	20 (18%)	1	10
4	CE	113/126 (90%)	100 (88%)	13 (12%)	4	22
5	AF	87/116 (75%)	75 (86%)	12 (14%)	3	17
5	CF	87/116 (75%)	74 (85%)	13 (15%)	2	15
6	AG	124/147 (84%)	117 (94%)	7 (6%)	17	45
6	CG	123/147 (84%)	95 (77%)	28 (23%)	0	5
7	AH	104/105 (99%)	92 (88%)	12 (12%)	4	22
7	CH	104/105 (99%)	91 (88%)	13 (12%)	3	19
8	AI	105/107 (98%)	90 (86%)	15 (14%)	2	16
8	CI	105/107 (98%)	91 (87%)	14 (13%)	3	18
9	AJ	86/90 (96%)	74 (86%)	12 (14%)	3	17
9	CJ	86/90 (96%)	77 (90%)	9 (10%)	5	25
10	AK	90/99 (91%)	80 (89%)	10 (11%)	5	24
10	CK	90/99 (91%)	80 (89%)	10 (11%)	5	24
11	AL	103/104 (99%)	85 (82%)	18 (18%)	1	10
11	CL	103/104 (99%)	88 (85%)	15 (15%)	2	15
12	AM	92/96 (96%)	87 (95%)	5 (5%)	18	46
12	CM	91/96 (95%)	74 (81%)	17 (19%)	1	8
13	AN	79/84 (94%)	73 (92%)	6 (8%)	11	36
13	CN	79/84 (94%)	68 (86%)	11 (14%)	3	17
14	AO	76/77 (99%)	72 (95%)	4 (5%)	19	46
14	CO	76/77 (99%)	72 (95%)	4 (5%)	19	46
15	AP	65/65 (100%)	60 (92%)	5 (8%)	10	36
15	CP	65/65 (100%)	59 (91%)	6 (9%)	7	30
16	AQ	74/78 (95%)	60 (81%)	14 (19%)	1	8
16	CQ	74/78 (95%)	64 (86%)	10 (14%)	3	18
17	AR	48/65 (74%)	46 (96%)	2 (4%)	25	51
17	CR	48/65 (74%)	46 (96%)	2 (4%)	25	51

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	AS	70/79 (89%)	63 (90%)	7 (10%)	6	26
18	CS	70/79 (89%)	59 (84%)	11 (16%)	2	14
19	AT	65/66 (98%)	55 (85%)	10 (15%)	2	14
19	CT	65/66 (98%)	56 (86%)	9 (14%)	3	17
20	AU	44/61 (72%)	37 (84%)	7 (16%)	2	13
20	CU	44/61 (72%)	35 (80%)	9 (20%)	1	7
26	BC	216/218 (99%)	173 (80%)	43 (20%)	1	7
26	DC	216/218 (99%)	191 (88%)	25 (12%)	4	22
27	BD	164/164 (100%)	136 (83%)	28 (17%)	1	11
27	DD	164/164 (100%)	144 (88%)	20 (12%)	4	20
28	BE	165/165 (100%)	130 (79%)	35 (21%)	1	6
28	DE	165/165 (100%)	152 (92%)	13 (8%)	10	35
29	BF	148/150 (99%)	130 (88%)	18 (12%)	4	20
29	DF	149/150 (99%)	124 (83%)	25 (17%)	1	11
30	BG	137/138 (99%)	107 (78%)	30 (22%)	1	6
30	DG	137/138 (99%)	120 (88%)	17 (12%)	4	20
31	BH	114/114 (100%)	97 (85%)	17 (15%)	2	15
31	DH	114/114 (100%)	95 (83%)	19 (17%)	2	12
32	BI	109/110 (99%)	94 (86%)	15 (14%)	3	17
32	DI	109/110 (99%)	102 (94%)	7 (6%)	14	41
33	BJ	116/116 (100%)	90 (78%)	26 (22%)	1	5
33	DJ	116/116 (100%)	106 (91%)	10 (9%)	8	33
34	BK	103/104 (99%)	84 (82%)	19 (18%)	1	8
34	DK	103/104 (99%)	85 (82%)	18 (18%)	1	10
35	BL	102/103 (99%)	81 (79%)	21 (21%)	1	6
35	DL	102/103 (99%)	90 (88%)	12 (12%)	4	21
36	BM	109/109 (100%)	90 (83%)	19 (17%)	1	10
36	DM	109/109 (100%)	100 (92%)	9 (8%)	9	34
37	BN	100/103 (97%)	81 (81%)	19 (19%)	1	8
37	DN	100/103 (97%)	85 (85%)	15 (15%)	2	15
38	BO	86/87 (99%)	69 (80%)	17 (20%)	1	7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
38	DO	86/87 (99%)	78 (91%)	8 (9%)	7	29
39	BP	99/100 (99%)	79 (80%)	20 (20%)	1	7
39	DP	99/100 (99%)	91 (92%)	8 (8%)	9	34
40	BQ	89/90 (99%)	73 (82%)	16 (18%)	1	9
40	DQ	89/90 (99%)	79 (89%)	10 (11%)	5	23
41	BR	84/84 (100%)	69 (82%)	15 (18%)	1	9
41	DR	84/84 (100%)	70 (83%)	14 (17%)	2	12
42	BS	93/93 (100%)	73 (78%)	20 (22%)	1	6
42	DS	93/93 (100%)	79 (85%)	14 (15%)	2	15
43	BT	80/84 (95%)	61 (76%)	19 (24%)	0	4
43	DT	80/84 (95%)	74 (92%)	6 (8%)	11	37
44	BU	83/85 (98%)	69 (83%)	14 (17%)	1	11
44	DU	83/85 (98%)	72 (87%)	11 (13%)	3	18
45	BV	78/78 (100%)	64 (82%)	14 (18%)	1	9
45	DV	78/78 (100%)	68 (87%)	10 (13%)	3	19
46	BW	59/63 (94%)	43 (73%)	16 (27%)	0	2
46	DW	59/63 (94%)	44 (75%)	15 (25%)	0	4
47	BX	67/68 (98%)	53 (79%)	14 (21%)	1	6
47	DX	67/68 (98%)	58 (87%)	9 (13%)	3	18
48	BY	55/55 (100%)	44 (80%)	11 (20%)	1	7
48	DY	55/55 (100%)	52 (94%)	3 (6%)	18	46
49	BZ	48/49 (98%)	34 (71%)	14 (29%)	0	2
49	DZ	48/49 (98%)	41 (85%)	7 (15%)	2	15
50	B0	47/48 (98%)	42 (89%)	5 (11%)	5	25
50	D0	47/48 (98%)	42 (89%)	5 (11%)	5	25
51	B1	45/49 (92%)	37 (82%)	8 (18%)	1	10
51	D1	45/49 (92%)	41 (91%)	4 (9%)	8	31
52	B2	38/38 (100%)	32 (84%)	6 (16%)	2	14
52	D2	38/38 (100%)	34 (90%)	4 (10%)	5	25
53	B3	51/52 (98%)	44 (86%)	7 (14%)	3	18
53	D3	51/52 (98%)	42 (82%)	9 (18%)	1	10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
54	B4	34/34 (100%)	30 (88%)	4 (12%)	4	21
54	D4	34/34 (100%)	29 (85%)	5 (15%)	2	15
All	All	9331/9756 (96%)	7983 (86%)	1348 (14%)	2	16

All (1348) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	AB	8	MET
1	AB	10	LYS
1	AB	15	PHE
1	AB	19	THR
1	AB	22	TRP
1	AB	30	ILE
1	AB	36	LYS
1	AB	41	ASN
1	AB	48	MET
1	AB	57	ASN
1	AB	88	GLN
1	AB	94	ARG
1	AB	100	LEU
1	AB	101	THR
1	AB	108	GLN
1	AB	111	LYS
1	AB	115	ASP
1	AB	117	GLU
1	AB	119	GLN
1	AB	125	PHE
1	AB	128	LEU
1	AB	129	THR
1	AB	130	LYS
1	AB	138	ARG
1	AB	139	GLU
1	AB	156	LEU
1	AB	158	ASP
1	AB	170	ILE
1	AB	177	ASN
1	AB	183	PHE
1	AB	189	ASN
1	AB	206	ILE
1	AB	219	THR
2	AC	2	GLN

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Mol	Chain	Res	Type
2	AC	13	ILE
2	AC	17	TRP
2	AC	24	ASN
2	AC	30	ASP
2	AC	36	PHE
2	AC	57	GLU
2	AC	78	LYS
2	AC	79	LYS
2	AC	101	ASN
2	AC	106	ARG
2	AC	120	THR
2	AC	130	ARG
2	AC	139	ASN
2	AC	143	LEU
2	AC	148	ILE
2	AC	149	LYS
2	AC	165	GLU
2	AC	166	TRP
2	AC	167	TYR
2	AC	184	ASN
2	AC	190	THR
3	AD	2	ARG
3	AD	10	LEU
3	AD	25	ARG
3	AD	32	LYS
3	AD	43	ARG
3	AD	55	ARG
3	AD	57	LYS
3	AD	58	GLN
3	AD	69	ARG
3	AD	99	ASN
3	AD	103	ARG
3	AD	109	THR
3	AD	115	GLN
3	AD	117	VAL
3	AD	122	ILE
3	AD	123	MET
3	AD	127	ARG
3	AD	131	ILE
3	AD	141	VAL
3	AD	160	LEU
3	AD	163	GLN

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Mol	Chain	Res	Type
3	AD	166	LYS
3	AD	193	ASP
3	AD	195	ASN
3	AD	205	LYS
4	AE	11	GLN
4	AE	14	LEU
4	AE	19	ARG
4	AE	24	VAL
4	AE	25	LYS
4	AE	31	SER
4	AE	42	ASN
4	AE	59	ILE
4	AE	77	ASN
4	AE	81	GLN
4	AE	95	MET
4	AE	100	GLU
4	AE	113	VAL
4	AE	121	ASN
4	AE	130	THR
4	AE	133	ILE
4	AE	139	THR
4	AE	144	GLU
4	AE	145	ASN
4	AE	155	LYS
5	AF	14	GLN
5	AF	17	GLN
5	AF	24	ARG
5	AF	39	LEU
5	AF	46	GLN
5	AF	55	HIS
5	AF	62	MET
5	AF	68	GLN
5	AF	69	GLU
5	AF	77	THR
5	AF	79	ARG
5	AF	86	ARG
6	AG	3	ARG
6	AG	20	GLU
6	AG	85	GLN
6	AG	105	GLU
6	AG	123	LEU
6	AG	142	ARG

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Mol	Chain	Res	Type
6	AG	147	ASN
7	AH	21	LYS
7	AH	59	GLU
7	AH	76	ARG
7	AH	78	SER
7	AH	86	LYS
7	AH	89	ASP
7	AH	98	LEU
7	AH	106	SER
7	AH	110	MET
7	AH	111	THR
7	AH	120	LEU
7	AH	124	ILE
8	AI	21	LYS
8	AI	35	GLU
8	AI	44	ARG
8	AI	48	ARG
8	AI	54	VAL
8	AI	56	MET
8	AI	62	LEU
8	AI	67	LYS
8	AI	72	SER
8	AI	87	MET
8	AI	89	TYR
8	AI	105	ARG
8	AI	115	VAL
8	AI	126	PHE
8	AI	128	LYS
9	AJ	22	THR
9	AJ	32	THR
9	AJ	35	GLN
9	AJ	46	LYS
9	AJ	48	ARG
9	AJ	59	LYS
9	AJ	60	ASP
9	AJ	73	LEU
9	AJ	76	ILE
9	AJ	85	ASP
9	AJ	89	ARG
9	AJ	91	ASP
10	AK	17	ASP
10	AK	25	SER

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Mol	Chain	Res	Type
10	AK	51	PHE
10	AK	64	VAL
10	AK	78	ILE
10	AK	106	ILE
10	AK	124	LYS
10	AK	125	LYS
10	AK	127	ARG
10	AK	128	VAL
11	AL	3	VAL
11	AL	17	LYS
11	AL	20	VAL
11	AL	28	GLN
11	AL	34	THR
11	AL	35	ARG
11	AL	40	THR
11	AL	43	LYS
11	AL	49	ARG
11	AL	51	VAL
11	AL	63	THR
11	AL	66	ILE
11	AL	75	GLU
11	AL	87	LYS
11	AL	88	ASP
11	AL	89	LEU
11	AL	94	TYR
11	AL	109	ARG
12	AM	7	ASN
12	AM	42	VAL
12	AM	70	ARG
12	AM	74	MET
12	AM	103	THR
13	AN	3	GLN
13	AN	47	LEU
13	AN	59	GLN
13	AN	61	ASN
13	AN	96	LYS
13	AN	99	SER
14	AO	16	ARG
14	AO	24	THR
14	AO	36	ASN
14	AO	63	ARG
15	AP	6	LEU

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Mol	Chain	Res	Type
15	AP	16	PHE
15	AP	19	VAL
15	AP	46	LYS
15	AP	52	LEU
16	AQ	3	LYS
16	AQ	10	ARG
16	AQ	16	MET
16	AQ	20	ILE
16	AQ	28	VAL
16	AQ	37	ILE
16	AQ	47	ASP
16	AQ	49	ASN
16	AQ	51	GLU
16	AQ	60	ILE
16	AQ	64	ARG
16	AQ	74	LEU
16	AQ	79	GLU
16	AQ	80	LYS
17	AR	24	ASP
17	AR	35	SER
18	AS	20	LYS
18	AS	32	THR
18	AS	42	ASN
18	AS	54	ARG
18	AS	60	PHE
18	AS	61	VAL
18	AS	64	GLU
19	AT	4	LYS
19	AT	13	SER
19	AT	23	ARG
19	AT	27	MET
19	AT	35	TYR
19	AT	42	ASP
19	AT	67	HIS
19	AT	75	LYS
19	AT	77	ASN
19	AT	84	LYS
20	AU	4	LYS
20	AU	8	ASN
20	AU	18	PHE
20	AU	19	LYS
20	AU	33	ARG

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Mol	Chain	Res	Type
20	AU	37	TYR
20	AU	42	THR
26	BC	12	ARG
26	BC	18	VAL
26	BC	20	ASN
26	BC	27	LYS
26	BC	35	LYS
26	BC	38	LYS
26	BC	43	ASN
26	BC	71	ASP
26	BC	73	ILE
26	BC	77	VAL
26	BC	85	ASN
26	BC	90	ILE
26	BC	93	VAL
26	BC	104	LEU
26	BC	109	LEU
26	BC	110	LYS
26	BC	114	GLN
26	BC	115	ILE
26	BC	120	ASP
26	BC	123	ILE
26	BC	129	LEU
26	BC	132	ARG
26	BC	142	ASN
26	BC	155	ARG
26	BC	164	VAL
26	BC	171	VAL
26	BC	172	THR
26	BC	173	LEU
26	BC	175	LEU
26	BC	176	ARG
26	BC	201	LEU
26	BC	202	ARG
26	BC	203	VAL
26	BC	212	TRP
26	BC	213	ARG
26	BC	215	VAL
26	BC	227	VAL
26	BC	250	GLN
26	BC	252	LYS
26	BC	254	LYS

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Mol	Chain	Res	Type
26	BC	261	ARG
26	BC	268	ARG
26	BC	269	ARG
27	BD	4	LEU
27	BD	14	ILE
27	BD	16	THR
27	BD	17	GLU
27	BD	40	LEU
27	BD	42	ASN
27	BD	43	ASP
27	BD	45	TYR
27	BD	60	VAL
27	BD	73	VAL
27	BD	89	GLU
27	BD	90	PHE
27	BD	91	THR
27	BD	98	VAL
27	BD	106	LYS
27	BD	114	LYS
27	BD	118	PHE
27	BD	124	ARG
27	BD	131	ASP
27	BD	139	SER
27	BD	140	HIS
27	BD	150	GLN
27	BD	159	LYS
27	BD	169	ARG
27	BD	171	THR
27	BD	176	ASP
27	BD	183	GLU
27	BD	186	LEU
28	BE	12	LEU
28	BE	14	VAL
28	BE	24	ASN
28	BE	44	ARG
28	BE	48	THR
28	BE	61	ARG
28	BE	65	THR
28	BE	69	ARG
28	BE	70	SER
28	BE	77	ILE
28	BE	78	TRP

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Mol	Chain	Res	Type
28	BE	80	SER
28	BE	84	THR
28	BE	90	GLN
28	BE	91	ASP
28	BE	108	ILE
28	BE	109	LEU
28	BE	111	GLU
28	BE	113	VAL
28	BE	116	ASP
28	BE	118	LEU
28	BE	119	ILE
28	BE	121	VAL
28	BE	123	LYS
28	BE	127	GLU
28	BE	144	GLU
28	BE	146	VAL
28	BE	153	LEU
28	BE	159	LEU
28	BE	163	ASN
28	BE	170	ARG
28	BE	171	ASP
28	BE	178	VAL
28	BE	186	VAL
28	BE	189	THR
29	BF	3	LEU
29	BF	9	ASP
29	BF	12	VAL
29	BF	24	VAL
29	BF	34	THR
29	BF	35	LEU
29	BF	36	ASN
29	BF	46	LYS
29	BF	65	LEU
29	BF	82	TYR
29	BF	90	LEU
29	BF	103	ILE
29	BF	109	ARG
29	BF	111	ARG
29	BF	114	ARG
29	BF	132	ARG
29	BF	134	GLN
29	BF	154	THR

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Mol	Chain	Res	Type
30	BG	8	VAL
30	BG	15	ASP
30	BG	21	GLN
30	BG	29	ASN
30	BG	32	LEU
30	BG	34	ARG
30	BG	35	THR
30	BG	37	ASN
30	BG	40	VAL
30	BG	55	ASP
30	BG	59	ASP
30	BG	68	ARG
30	BG	72	ASN
30	BG	78	VAL
30	BG	80	GLU
30	BG	84	LYS
30	BG	86	LEU
30	BG	91	VAL
30	BG	93	TYR
30	BG	101	VAL
30	BG	116	LEU
30	BG	120	ILE
30	BG	121	THR
30	BG	123	GLU
30	BG	126	THR
30	BG	132	LEU
30	BG	138	GLN
30	BG	148	ARG
30	BG	170	THR
30	BG	174	LYS
31	BH	6	LEU
31	BH	12	LEU
31	BH	14	SER
31	BH	15	LEU
31	BH	18	GLN
31	BH	28	ASN
31	BH	31	VAL
31	BH	48	GLU
31	BH	50	ARG
31	BH	54	LEU
31	BH	68	ARG
31	BH	75	LEU

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Mol	Chain	Res	Type
31	BH	83	LYS
31	BH	96	THR
31	BH	97	ARG
31	BH	125	THR
31	BH	135	HIS
32	BI	2	LYS
32	BI	10	LEU
32	BI	11	GLN
32	BI	23	VAL
32	BI	37	PHE
32	BI	39	LYS
32	BI	49	GLU
32	BI	61	TYR
32	BI	71	LYS
32	BI	81	LYS
32	BI	86	LYS
32	BI	95	ASP
32	BI	107	GLU
32	BI	126	ARG
32	BI	135	MET
33	BJ	1	MET
33	BJ	2	LYS
33	BJ	3	THR
33	BJ	7	LYS
33	BJ	24	THR
33	BJ	25	LEU
33	BJ	30	THR
33	BJ	31	GLU
33	BJ	36	LEU
33	BJ	40	HIS
33	BJ	41	LYS
33	BJ	43	GLU
33	BJ	44	TYR
33	BJ	54	ILE
33	BJ	55	ILE
33	BJ	65	THR
33	BJ	72	LYS
33	BJ	86	GLN
33	BJ	88	THR
33	BJ	90	GLU
33	BJ	103	ILE
33	BJ	111	LYS

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Mol	Chain	Res	Type
33	BJ	114	LEU
33	BJ	129	GLU
33	BJ	139	VAL
33	BJ	140	LEU
34	BK	2	ILE
34	BK	3	GLN
34	BK	8	LEU
34	BK	18	ARG
34	BK	21	CYS
34	BK	23	LYS
34	BK	47	ILE
34	BK	51	LYS
34	BK	52	VAL
34	BK	54	LYS
34	BK	58	LEU
34	BK	69	VAL
34	BK	73	ASP
34	BK	88	ASN
34	BK	89	ASN
34	BK	93	GLN
34	BK	105	ARG
34	BK	111	LYS
34	BK	114	LYS
35	BL	3	LEU
35	BL	4	ASN
35	BL	6	LEU
35	BL	13	LYS
35	BL	14	LYS
35	BL	19	LEU
35	BL	21	ARG
35	BL	27	LEU
35	BL	46	VAL
35	BL	47	ARG
35	BL	55	MET
35	BL	61	LEU
35	BL	66	PHE
35	BL	91	ASP
35	BL	93	ASN
35	BL	94	THR
35	BL	101	ILE
35	BL	112	LEU
35	BL	121	THR

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Mol	Chain	Res	Type
35	BL	122	VAL
35	BL	135	ILE
36	BM	8	LYS
36	BM	10	ARG
36	BM	12	MET
36	BM	25	ASP
36	BM	33	LEU
36	BM	36	VAL
36	BM	58	LYS
36	BM	70	ASP
36	BM	75	GLU
36	BM	90	GLU
36	BM	95	LEU
36	BM	96	ILE
36	BM	97	GLN
36	BM	100	LYS
36	BM	102	LEU
36	BM	110	GLU
36	BM	131	VAL
36	BM	133	LYS
36	BM	134	THR
37	BN	2	ARG
37	BN	3	HIS
37	BN	8	ARG
37	BN	10	LEU
37	BN	14	SER
37	BN	15	SER
37	BN	20	MET
37	BN	23	ASN
37	BN	33	ILE
37	BN	35	LYS
37	BN	38	LEU
37	BN	51	LEU
37	BN	69	ARG
37	BN	71	ARG
37	BN	75	ILE
37	BN	79	LEU
37	BN	83	LEU
37	BN	95	THR
37	BN	120	GLU
38	BO	4	LYS
38	BO	9	ARG

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Mol	Chain	Res	Type
38	BO	16	ARG
38	BO	17	LYS
38	BO	28	VAL
38	BO	31	THR
38	BO	36	TYR
38	BO	52	SER
38	BO	53	THR
38	BO	65	THR
38	BO	80	GLU
38	BO	83	LEU
38	BO	84	GLU
38	BO	94	ARG
38	BO	100	HIS
38	BO	103	VAL
38	BO	111	ARG
39	BP	3	ILE
39	BP	6	GLN
39	BP	14	GLN
39	BP	16	VAL
39	BP	24	THR
39	BP	36	LYS
39	BP	37	LYS
39	BP	38	ARG
39	BP	61	ARG
39	BP	69	VAL
39	BP	75	THR
39	BP	77	SER
39	BP	79	VAL
39	BP	83	ILE
39	BP	91	VAL
39	BP	92	ARG
39	BP	93	LYS
39	BP	95	LYS
39	BP	96	LEU
39	BP	99	LEU
40	BQ	2	ARG
40	BQ	8	ILE
40	BQ	10	ARG
40	BQ	40	LYS
40	BQ	50	ARG
40	BQ	59	LEU
40	BQ	63	ARG

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Mol	Chain	Res	Type
40	BQ	65	ASN
40	BQ	69	ARG
40	BQ	88	GLU
40	BQ	91	ARG
40	BQ	93	ILE
40	BQ	94	LEU
40	BQ	96	ASP
40	BQ	97	ILE
40	BQ	103	VAL
41	BR	10	LYS
41	BR	14	VAL
41	BR	37	GLU
41	BR	38	VAL
41	BR	39	LEU
41	BR	43	ASN
41	BR	46	GLU
41	BR	48	LYS
41	BR	54	VAL
41	BR	63	VAL
41	BR	72	VAL
41	BR	83	TYR
41	BR	85	LYS
41	BR	86	GLN
41	BR	97	LYS
42	BS	3	THR
42	BS	4	ILE
42	BS	7	HIS
42	BS	30	SER
42	BS	36	LEU
42	BS	41	LYS
42	BS	45	VAL
42	BS	48	LYS
42	BS	66	ILE
42	BS	68	ASP
42	BS	70	LYS
42	BS	71	VAL
42	BS	73	LYS
42	BS	76	VAL
42	BS	84	ARG
42	BS	88	ARG
42	BS	96	ILE
42	BS	101	SER

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Mol	Chain	Res	Type
42	BS	107	VAL
42	BS	109	ASP
43	BT	2	ILE
43	BT	3	ARG
43	BT	4	GLU
43	BT	8	LEU
43	BT	17	SER
43	BT	19	LYS
43	BT	29	THR
43	BT	30	ILE
43	BT	31	VAL
43	BT	43	ILE
43	BT	48	GLN
43	BT	49	LYS
43	BT	50	LEU
43	BT	64	LYS
43	BT	67	VAL
43	BT	68	LYS
43	BT	69	ARG
43	BT	73	ARG
43	BT	74	ILE
44	BU	6	ARG
44	BU	8	ASP
44	BU	10	VAL
44	BU	33	VAL
44	BU	42	LYS
44	BU	43	LYS
44	BU	52	ASN
44	BU	61	GLU
44	BU	64	ILE
44	BU	67	SER
44	BU	80	ASP
44	BU	86	PHE
44	BU	99	SER
44	BU	102	ILE
45	BV	1	MET
45	BV	3	THR
45	BV	5	ASN
45	BV	8	VAL
45	BV	10	LYS
45	BV	20	LEU
45	BV	29	ILE

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Mol	Chain	Res	Type
45	BV	41	GLU
45	BV	42	LEU
45	BV	43	ASP
45	BV	46	LYS
45	BV	51	GLN
45	BV	61	LEU
45	BV	66	ASP
46	BW	14	ASP
46	BW	15	SER
46	BW	19	ARG
46	BW	23	LYS
46	BW	24	ARG
46	BW	25	PHE
46	BW	38	ARG
46	BW	40	ARG
46	BW	45	HIS
46	BW	49	ASN
46	BW	54	ARG
46	BW	58	LEU
46	BW	67	LYS
46	BW	71	LYS
46	BW	77	LYS
46	BW	80	SER
47	BX	6	VAL
47	BX	10	ARG
47	BX	17	ARG
47	BX	19	HIS
47	BX	24	THR
47	BX	26	ARG
47	BX	27	ARG
47	BX	29	LEU
47	BX	47	THR
47	BX	53	LYS
47	BX	65	THR
47	BX	71	ARG
47	BX	73	ARG
47	BX	77	TYR
48	BY	9	LYS
48	BY	10	SER
48	BY	14	LEU
48	BY	18	LEU
48	BY	19	LEU

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Mol	Chain	Res	Type
48	BY	22	LEU
48	BY	37	LEU
48	BY	42	LEU
48	BY	56	LEU
48	BY	57	LEU
48	BY	59	GLU
49	BZ	2	LYS
49	BZ	3	THR
49	BZ	4	ILE
49	BZ	5	LYS
49	BZ	8	GLN
49	BZ	9	THR
49	BZ	15	ARG
49	BZ	23	LEU
49	BZ	29	ARG
49	BZ	30	ARG
49	BZ	37	ARG
49	BZ	38	GLU
49	BZ	43	ILE
49	BZ	58	GLU
50	B0	9	ARG
50	B0	27	LEU
50	B0	28	SER
50	B0	39	ARG
50	B0	42	ILE
51	B1	4	ILE
51	B1	9	LYS
51	B1	16	THR
51	B1	21	THR
51	B1	33	LEU
51	B1	35	LEU
51	B1	42	VAL
51	B1	43	ARG
52	B2	1	MET
52	B2	3	ARG
52	B2	12	ARG
52	B2	16	HIS
52	B2	21	ARG
52	B2	39	ARG
53	B3	5	THR
53	B3	7	ARG
53	B3	22	LYS

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Mol	Chain	Res	Type
53	B3	31	ILE
53	B3	34	LYS
53	B3	49	VAL
53	B3	51	LYS
54	B4	1	MET
54	B4	4	ARG
54	B4	9	LYS
54	B4	13	ASN
1	CB	8	MET
1	CB	10	LYS
1	CB	17	HIS
1	CB	19	THR
1	CB	26	MET
1	CB	29	PHE
1	CB	34	ARG
1	CB	36	LYS
1	CB	39	ILE
1	CB	46	VAL
1	CB	57	ASN
1	CB	61	SER
1	CB	69	VAL
1	CB	88	GLN
1	CB	92	ASN
1	CB	103	TRP
1	CB	124	THR
1	CB	125	PHE
1	CB	162	VAL
1	CB	172	ILE
1	CB	191	ASP
1	CB	196	ASP
2	CC	2	GLN
2	CC	26	LYS
2	CC	27	GLU
2	CC	35	ASP
2	CC	38	VAL
2	CC	41	TYR
2	CC	53	ARG
2	CC	54	ILE
2	CC	58	ARG
2	CC	102	ILE
2	CC	106	ARG
2	CC	110	LEU

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Mol	Chain	Res	Type
2	CC	123	LEU
2	CC	134	LYS
2	CC	139	ASN
2	CC	161	ILE
2	CC	164	THR
2	CC	166	TRP
2	CC	174	LEU
2	CC	178	ARG
2	CC	182	ASP
2	CC	190	THR
2	CC	194	VAL
2	CC	205	GLU
3	CD	2	ARG
3	CD	12	ARG
3	CD	30	LYS
3	CD	34	GLU
3	CD	55	ARG
3	CD	57	LYS
3	CD	58	GLN
3	CD	62	ARG
3	CD	99	ASN
3	CD	106	PHE
3	CD	116	LEU
3	CD	125	ASN
3	CD	127	ARG
3	CD	147	LYS
3	CD	153	ARG
3	CD	163	GLN
3	CD	170	LEU
3	CD	187	ARG
3	CD	188	SER
3	CD	199	ILE
4	CE	11	GLN
4	CE	13	LYS
4	CE	25	LYS
4	CE	35	LEU
4	CE	59	ILE
4	CE	64	GLU
4	CE	67	ARG
4	CE	75	LEU
4	CE	76	ASN
4	CE	131	ASN

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Mol	Chain	Res	Type
4	CE	133	ILE
4	CE	136	VAL
4	CE	144	GLU
5	CF	7	VAL
5	CF	17	GLN
5	CF	33	GLU
5	CF	38	ARG
5	CF	56	LYS
5	CF	61	LEU
5	CF	72	ASP
5	CF	73	GLU
5	CF	81	ASN
5	CF	84	VAL
5	CF	85	ILE
5	CF	86	ARG
5	CF	98	GLU
6	CG	3	ARG
6	CG	8	GLN
6	CG	10	LYS
6	CG	11	ILE
6	CG	12	LEU
6	CG	16	LYS
6	CG	22	LEU
6	CG	48	THR
6	CG	55	LYS
6	CG	58	LEU
6	CG	59	GLU
6	CG	62	GLU
6	CG	65	LEU
6	CG	66	GLU
6	CG	67	ASN
6	CG	75	LYS
6	CG	77	ARG
6	CG	78	ARG
6	CG	85	GLN
6	CG	100	MET
6	CG	102	TRP
6	CG	115	MET
6	CG	119	LEU
6	CG	123	LEU
6	CG	137	ARG
6	CG	139	ASP

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Mol	Chain	Res	Type
6	CG	148	LYS
6	CG	150	PHE
7	CH	2	MET
7	CH	29	SER
7	CH	33	VAL
7	CH	37	ASN
7	CH	42	GLU
7	CH	45	ILE
7	CH	46	GLU
7	CH	76	ARG
7	CH	82	LEU
7	CH	89	ASP
7	CH	93	LYS
7	CH	98	LEU
7	CH	110	MET
8	CI	4	GLN
8	CI	37	TYR
8	CI	45	MET
8	CI	47	VAL
8	CI	53	LEU
8	CI	54	VAL
8	CI	63	TYR
8	CI	71	ILE
8	CI	72	SER
8	CI	87	MET
8	CI	89	TYR
8	CI	111	GLU
8	CI	125	GLN
8	CI	126	PHE
9	CJ	11	LYS
9	CJ	15	HIS
9	CJ	59	LYS
9	CJ	63	ASP
9	CJ	67	ILE
9	CJ	69	THR
9	CJ	80	THR
9	CJ	82	LYS
9	CJ	92	LEU
10	CK	27	ASN
10	CK	45	THR
10	CK	55	ARG
10	CK	73	VAL

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Mol	Chain	Res	Type
10	CK	78	ILE
10	CK	80	ASN
10	CK	81	LEU
10	CK	105	ARG
10	CK	106	ILE
10	CK	117	HIS
11	CL	5	GLN
11	CL	7	VAL
11	CL	14	LYS
11	CL	19	ASN
11	CL	28	GLN
11	CL	48	LEU
11	CL	49	ARG
11	CL	56	LEU
11	CL	62	VAL
11	CL	65	TYR
11	CL	72	ASN
11	CL	88	ASP
11	CL	107	LYS
11	CL	111	GLN
11	CL	120	ARG
12	CM	2	ARG
12	CM	7	ASN
12	CM	8	ILE
12	CM	12	LYS
12	CM	13	HIS
12	CM	24	VAL
12	CM	28	ARG
12	CM	32	ILE
12	CM	46	GLU
12	CM	53	ASP
12	CM	68	LEU
12	CM	77	LYS
12	CM	91	ARG
12	CM	92	ARG
12	CM	99	GLN
12	CM	100	ARG
12	CM	113	LYS
13	CN	3	GLN
13	CN	17	ASP
13	CN	27	LYS
13	CN	30	ILE

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Mol	Chain	Res	Type
13	CN	41	TRP
13	CN	52	ARG
13	CN	53	ASP
13	CN	58	ARG
13	CN	65	GLN
13	CN	72	PHE
13	CN	96	LYS
14	CO	13	GLU
14	CO	16	ARG
14	CO	63	ARG
14	CO	80	LEU
15	CP	3	THR
15	CP	6	LEU
15	CP	19	VAL
15	CP	35	ARG
15	CP	46	LYS
15	CP	67	ILE
16	CQ	3	LYS
16	CQ	20	ILE
16	CQ	27	PHE
16	CQ	39	ARG
16	CQ	51	GLU
16	CQ	52	CYS
16	CQ	60	ILE
16	CQ	73	THR
16	CQ	75	VAL
16	CQ	80	LYS
17	CR	69	TYR
17	CR	72	ARG
18	CS	5	LYS
18	CS	10	ILE
18	CS	11	ASP
18	CS	38	THR
18	CS	43	MET
18	CS	52	ASN
18	CS	54	ARG
18	CS	55	GLN
18	CS	56	HIS
18	CS	62	THR
18	CS	79	TYR
19	CT	26	MET
19	CT	30	PHE

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Mol	Chain	Res	Type
19	CT	47	GLN
19	CT	53	MET
19	CT	68	LYS
19	CT	69	ASN
19	CT	73	ARG
19	CT	77	ASN
19	CT	82	ILE
20	CU	4	LYS
20	CU	17	ARG
20	CU	18	PHE
20	CU	19	LYS
20	CU	32	ARG
20	CU	33	ARG
20	CU	37	TYR
20	CU	39	LYS
20	CU	53	LYS
26	DC	18	VAL
26	DC	23	LEU
26	DC	35	LYS
26	DC	51	ARG
26	DC	53	ILE
26	DC	57	HIS
26	DC	62	ARG
26	DC	90	ILE
26	DC	102	TYR
26	DC	124	LYS
26	DC	129	LEU
26	DC	152	GLN
26	DC	172	THR
26	DC	173	LEU
26	DC	183	VAL
26	DC	187	CYS
26	DC	188	ARG
26	DC	193	GLU
26	DC	212	TRP
26	DC	213	ARG
26	DC	220	ARG
26	DC	227	VAL
26	DC	235	GLU
26	DC	256	THR
26	DC	269	ARG
27	DD	24	VAL

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Mol	Chain	Res	Type
27	DD	28	GLU
27	DD	33	ARG
27	DD	35	THR
27	DD	38	LYS
27	DD	50	VAL
27	DD	55	LYS
27	DD	62	LYS
27	DD	79	LEU
27	DD	84	LEU
27	DD	106	LYS
27	DD	121	THR
27	DD	138	LEU
27	DD	141	ARG
27	DD	148	GLN
27	DD	150	GLN
27	DD	159	LYS
27	DD	168	GLU
27	DD	189	VAL
27	DD	193	VAL
28	DE	53	THR
28	DE	57	LYS
28	DE	67	ARG
28	DE	77	ILE
28	DE	108	ILE
28	DE	117	ARG
28	DE	126	VAL
28	DE	139	LYS
28	DE	149	ILE
28	DE	157	LEU
28	DE	163	ASN
28	DE	164	LEU
28	DE	166	LYS
29	DF	13	LYS
29	DF	47	LYS
29	DF	48	LEU
29	DF	49	LEU
29	DF	76	PHE
29	DF	82	TYR
29	DF	94	ARG
29	DF	97	GLU
29	DF	109	ARG
29	DF	110	ILE

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Mol	Chain	Res	Type
29	DF	111	ARG
29	DF	113	PHE
29	DF	119	LYS
29	DF	131	VAL
29	DF	133	GLU
29	DF	134	GLN
29	DF	135	ILE
29	DF	139	GLU
29	DF	142	TYR
29	DF	147	ARG
29	DF	151	LEU
29	DF	160	LYS
29	DF	166	ARG
29	DF	172	PHE
29	DF	177	ARG
30	DG	2	ARG
30	DG	18	ILE
30	DG	19	ASN
30	DG	21	GLN
30	DG	34	ARG
30	DG	35	THR
30	DG	40	VAL
30	DG	51	PHE
30	DG	72	ASN
30	DG	84	LYS
30	DG	91	VAL
30	DG	93	TYR
30	DG	120	ILE
30	DG	162	ARG
30	DG	163	TYR
30	DG	166	GLU
30	DG	176	LYS
31	DH	8	LYS
31	DH	22	LYS
31	DH	25	TYR
31	DH	27	ARG
31	DH	28	ASN
31	DH	48	GLU
31	DH	50	ARG
31	DH	57	LYS
31	DH	66	ASN
31	DH	68	ARG

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Mol	Chain	Res	Type
31	DH	76	GLU
31	DH	86	ASP
31	DH	90	LEU
31	DH	91	PHE
31	DH	103	VAL
31	DH	104	THR
31	DH	109	GLU
31	DH	132	PHE
31	DH	144	VAL
32	DI	7	TYR
32	DI	9	LYS
32	DI	16	MET
32	DI	30	GLN
32	DI	58	ILE
32	DI	68	PHE
32	DI	93	ASN
33	DJ	3	THR
33	DJ	25	LEU
33	DJ	43	GLU
33	DJ	47	HIS
33	DJ	54	ILE
33	DJ	57	LEU
33	DJ	95	ARG
33	DJ	106	LYS
33	DJ	129	GLU
33	DJ	139	VAL
34	DK	3	GLN
34	DK	7	MET
34	DK	10	VAL
34	DK	13	ASN
34	DK	21	CYS
34	DK	25	LEU
34	DK	39	ILE
34	DK	41	ILE
34	DK	47	ILE
34	DK	49	ARG
34	DK	54	LYS
34	DK	87	LEU
34	DK	103	VAL
34	DK	105	ARG
34	DK	106	GLU
34	DK	107	LEU

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Mol	Chain	Res	Type
34	DK	111	LYS
34	DK	114	LYS
35	DL	3	LEU
35	DL	4	ASN
35	DL	47	ARG
35	DL	79	LEU
35	DL	82	LEU
35	DL	92	LEU
35	DL	99	ASN
35	DL	103	ILE
35	DL	111	ILE
35	DL	112	LEU
35	DL	141	LYS
35	DL	143	GLU
36	DM	8	LYS
36	DM	50	ARG
36	DM	78	LEU
36	DM	96	ILE
36	DM	97	GLN
36	DM	102	LEU
36	DM	105	MET
36	DM	115	GLU
36	DM	126	ILE
37	DN	14	SER
37	DN	18	GLN
37	DN	20	MET
37	DN	29	VAL
37	DN	33	ILE
37	DN	53	THR
37	DN	54	LEU
37	DN	62	ASN
37	DN	63	ARG
37	DN	69	ARG
37	DN	81	ASN
37	DN	94	TYR
37	DN	95	THR
37	DN	98	LEU
37	DN	114	GLU
38	DO	17	LYS
38	DO	30	ARG
38	DO	31	THR
38	DO	65	THR

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Mol	Chain	Res	Type
38	DO	68	LYS
38	DO	90	VAL
38	DO	115	LEU
38	DO	117	PHE
39	DP	6	GLN
39	DP	13	LYS
39	DP	28	LYS
39	DP	31	VAL
39	DP	83	ILE
39	DP	86	LYS
39	DP	95	LYS
39	DP	101	GLU
40	DQ	3	VAL
40	DQ	10	ARG
40	DQ	12	ARG
40	DQ	35	PHE
40	DQ	50	ARG
40	DQ	54	ARG
40	DQ	57	ARG
40	DQ	63	ARG
40	DQ	69	ARG
40	DQ	79	ILE
41	DR	6	GLN
41	DR	10	LYS
41	DR	13	ARG
41	DR	37	GLU
41	DR	48	LYS
41	DR	58	VAL
41	DR	75	VAL
41	DR	80	ARG
41	DR	81	LYS
41	DR	83	TYR
41	DR	86	GLN
41	DR	90	ARG
41	DR	93	PHE
41	DR	95	ASP
42	DS	6	LYS
42	DS	22	ASP
42	DS	23	LEU
42	DS	31	GLN
42	DS	45	VAL
42	DS	46	LEU

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Mol	Chain	Res	Type
42	DS	66	ILE
42	DS	70	LYS
42	DS	74	ILE
42	DS	76	VAL
42	DS	84	ARG
42	DS	85	ILE
42	DS	86	MET
42	DS	88	ARG
43	DT	9	LYS
43	DT	12	ARG
43	DT	18	GLU
43	DT	39	THR
43	DT	50	LEU
43	DT	54	GLU
44	DU	13	LEU
44	DU	14	THR
44	DU	20	LYS
44	DU	21	ARG
44	DU	40	LEU
44	DU	45	GLN
44	DU	81	ARG
44	DU	82	VAL
44	DU	85	ARG
44	DU	94	PHE
44	DU	95	PHE
45	DV	26	PHE
45	DV	40	ILE
45	DV	51	GLN
45	DV	61	LEU
45	DV	65	VAL
45	DV	69	GLU
45	DV	70	ILE
45	DV	76	ASP
45	DV	77	VAL
45	DV	90	ASP
46	DW	18	LYS
46	DW	20	LEU
46	DW	22	VAL
46	DW	23	LYS
46	DW	25	PHE
46	DW	30	VAL
46	DW	37	VAL

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Mol	Chain	Res	Type
46	DW	38	ARG
46	DW	39	GLN
46	DW	40	ARG
46	DW	44	PHE
46	DW	58	LEU
46	DW	68	PHE
46	DW	76	ARG
46	DW	77	LYS
47	DX	5	GLN
47	DX	26	ARG
47	DX	31	ASN
47	DX	33	HIS
47	DX	46	VAL
47	DX	47	THR
47	DX	57	VAL
47	DX	63	ILE
47	DX	73	ARG
48	DY	1	MET
48	DY	4	LYS
48	DY	28	LEU
49	DZ	16	LEU
49	DZ	24	LEU
49	DZ	28	LEU
49	DZ	29	ARG
49	DZ	50	VAL
49	DZ	53	MET
49	DZ	55	LYS
50	D0	3	GLN
50	D0	5	ASN
50	D0	41	HIS
50	D0	42	ILE
50	D0	49	ARG
51	D1	10	LEU
51	D1	20	TYR
51	D1	35	LEU
51	D1	44	GLN
52	D2	8	SER
52	D2	22	MET
52	D2	26	ASN
52	D2	33	ARG
53	D3	12	ARG
53	D3	14	LYS

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Mol	Chain	Res	Type
53	D3	27	ASN
53	D3	29	ARG
53	D3	41	ARG
53	D3	46	LYS
53	D3	48	MET
53	D3	51	LYS
53	D3	61	LEU
54	D4	2	LYS
54	D4	9	LYS
54	D4	13	ASN
54	D4	15	LYS
54	D4	17	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (323) such sidechains are listed below:

Mol	Chain	Res	Type
1	AB	14	HIS
1	AB	17	HIS
1	AB	18	GLN
1	AB	38	HIS
1	AB	41	ASN
1	AB	57	ASN
1	AB	88	GLN
1	AB	93	HIS
1	AB	102	ASN
1	AB	108	GLN
1	AB	119	GLN
1	AB	189	ASN
2	AC	24	ASN
2	AC	68	HIS
2	AC	139	ASN
2	AC	184	ASN
3	AD	58	GLN
3	AD	73	ASN
3	AD	99	ASN
3	AD	115	GLN
3	AD	119	HIS
3	AD	135	GLN
3	AD	163	GLN
3	AD	195	ASN
4	AE	42	ASN
4	AE	69	ASN

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Mol	Chain	Res	Type
4	AE	72	ASN
4	AE	76	ASN
4	AE	77	ASN
4	AE	121	ASN
4	AE	145	ASN
5	AF	11	HIS
5	AF	46	GLN
5	AF	52	ASN
5	AF	68	GLN
6	AG	121	ASN
6	AG	147	ASN
7	AH	15	ASN
7	AH	117	GLN
8	AI	4	GLN
8	AI	74	GLN
8	AI	80	HIS
8	AI	125	GLN
9	AJ	15	HIS
9	AJ	20	GLN
9	AJ	35	GLN
10	AK	21	HIS
10	AK	28	ASN
10	AK	108	ASN
10	AK	118	ASN
11	AL	45	ASN
11	AL	95	HIS
11	AL	111	GLN
13	AN	34	ASN
13	AN	48	GLN
13	AN	61	ASN
14	AO	36	ASN
14	AO	37	HIS
14	AO	61	GLN
15	AP	18	GLN
15	AP	29	ASN
16	AQ	44	HIS
17	AR	30	ASN
17	AR	53	GLN
18	AS	42	ASN
19	AT	20	ASN
19	AT	60	GLN
19	AT	74	HIS

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Mol	Chain	Res	Type
19	AT	77	ASN
19	AT	83	ASN
20	AU	8	ASN
26	BC	14	HIS
26	BC	20	ASN
26	BC	43	ASN
26	BC	59	GLN
26	BC	89	ASN
26	BC	114	GLN
26	BC	152	GLN
26	BC	225	ASN
26	BC	242	HIS
26	BC	250	GLN
26	BC	259	ASN
27	BD	32	ASN
27	BD	49	GLN
27	BD	126	ASN
27	BD	130	GLN
28	BE	24	ASN
28	BE	30	GLN
28	BE	62	GLN
28	BE	97	ASN
28	BE	136	GLN
28	BE	163	ASN
29	BF	22	ASN
29	BF	26	GLN
29	BF	134	GLN
30	BG	72	ASN
30	BG	114	HIS
30	BG	138	GLN
31	BH	18	GLN
31	BH	33	GLN
31	BH	43	ASN
31	BH	145	ASN
32	BI	5	GLN
32	BI	30	GLN
32	BI	110	GLN
33	BJ	40	HIS
33	BJ	58	ASN
33	BJ	76	HIS
33	BJ	77	HIS
33	BJ	128	ASN

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Mol	Chain	Res	Type
33	BJ	130	HIS
34	BK	5	GLN
34	BK	88	ASN
34	BK	89	ASN
35	BL	4	ASN
35	BL	54	GLN
35	BL	93	ASN
35	BL	99	ASN
35	BL	104	GLN
37	BN	9	GLN
37	BN	11	ASN
37	BN	18	GLN
37	BN	23	ASN
37	BN	62	ASN
37	BN	73	ASN
38	BO	34	HIS
38	BO	38	GLN
39	BP	9	GLN
39	BP	74	GLN
40	BQ	13	HIS
40	BQ	51	GLN
40	BQ	65	ASN
41	BR	6	GLN
41	BR	43	ASN
41	BR	82	HIS
42	BS	9	HIS
42	BS	57	ASN
42	BS	61	ASN
43	BT	48	GLN
43	BT	70	HIS
43	BT	72	GLN
43	BT	91	GLN
44	BU	52	ASN
44	BU	65	GLN
44	BU	73	ASN
45	BV	5	ASN
45	BV	51	GLN
45	BV	80	HIS
46	BW	39	GLN
46	BW	49	ASN
47	BX	5	GLN
47	BX	22	ASN

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Mol	Chain	Res	Type
47	BX	33	HIS
48	BY	15	ASN
48	BY	27	ASN
48	BY	31	GLN
48	BY	41	HIS
52	B2	13	ASN
52	B2	26	ASN
53	B3	27	ASN
54	B4	35	GLN
1	CB	14	HIS
1	CB	92	ASN
1	CB	145	ASN
1	CB	167	HIS
1	CB	176	ASN
2	CC	2	GLN
2	CC	18	ASN
2	CC	31	ASN
2	CC	122	GLN
2	CC	139	ASN
2	CC	184	ASN
3	CD	39	GLN
3	CD	84	ASN
3	CD	119	HIS
3	CD	125	ASN
3	CD	163	GLN
4	CE	11	GLN
4	CE	60	GLN
4	CE	76	ASN
4	CE	77	ASN
4	CE	88	HIS
4	CE	121	ASN
4	CE	131	ASN
4	CE	147	ASN
5	CF	11	HIS
5	CF	81	ASN
6	CG	85	GLN
7	CH	3	GLN
7	CH	15	ASN
7	CH	37	ASN
8	CI	3	ASN
8	CI	4	GLN
8	CI	24	ASN

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Mol	Chain	Res	Type
8	CI	30	ASN
8	CI	49	GLN
8	CI	74	GLN
8	CI	109	GLN
8	CI	125	GLN
9	CJ	56	HIS
9	CJ	64	GLN
9	CJ	70	HIS
10	CK	21	HIS
10	CK	27	ASN
10	CK	118	ASN
11	CL	4	ASN
11	CL	19	ASN
11	CL	28	GLN
11	CL	72	ASN
11	CL	74	GLN
11	CL	95	HIS
11	CL	111	GLN
12	CM	11	HIS
12	CM	99	GLN
12	CM	104	ASN
13	CN	59	GLN
13	CN	65	GLN
13	CN	70	HIS
14	CO	27	GLN
16	CQ	49	ASN
18	CS	13	HIS
18	CS	51	HIS
18	CS	52	ASN
19	CT	12	GLN
19	CT	51	ASN
19	CT	69	ASN
19	CT	81	GLN
26	DC	14	HIS
26	DC	20	ASN
26	DC	43	ASN
26	DC	52	HIS
26	DC	57	HIS
26	DC	59	GLN
26	DC	89	ASN
26	DC	116	GLN
26	DC	133	ASN

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Mol	Chain	Res	Type
27	DD	32	ASN
27	DD	36	GLN
27	DD	49	GLN
27	DD	58	ASN
27	DD	185	ASN
28	DE	30	GLN
28	DE	41	GLN
29	DF	4	HIS
29	DF	126	ASN
29	DF	134	GLN
30	DG	19	ASN
30	DG	37	ASN
30	DG	44	HIS
30	DG	103	ASN
30	DG	138	GLN
31	DH	2	GLN
31	DH	28	ASN
31	DH	43	ASN
31	DH	66	ASN
32	DI	42	ASN
32	DI	93	ASN
32	DI	106	GLN
33	DJ	40	HIS
33	DJ	138	GLN
34	DK	3	GLN
34	DK	9	ASN
34	DK	13	ASN
34	DK	89	ASN
35	DL	4	ASN
35	DL	54	GLN
36	DM	3	GLN
36	DM	13	HIS
37	DN	3	HIS
37	DN	16	HIS
37	DN	23	ASN
37	DN	31	HIS
37	DN	73	ASN
37	DN	107	ASN
38	DO	29	HIS
39	DP	6	GLN
39	DP	9	GLN
39	DP	11	GLN

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Mol	Chain	Res	Type
39	DP	65	ASN
39	DP	114	ASN
40	DQ	19	GLN
40	DQ	71	ASN
41	DR	6	GLN
41	DR	12	HIS
41	DR	66	HIS
41	DR	82	HIS
41	DR	86	GLN
41	DR	87	GLN
42	DS	31	GLN
42	DS	57	ASN
43	DT	15	HIS
43	DT	48	GLN
43	DT	91	GLN
43	DT	92	ASN
44	DU	44	HIS
44	DU	45	GLN
44	DU	52	ASN
44	DU	53	GLN
45	DV	51	GLN
45	DV	78	GLN
45	DV	80	HIS
47	DX	15	ASN
47	DX	22	ASN
47	DX	31	ASN
47	DX	33	HIS
47	DX	35	HIS
48	DY	15	ASN
48	DY	20	ASN
48	DY	41	HIS
48	DY	45	GLN
48	DY	58	ASN
49	DZ	19	HIS
50	D0	18	HIS
50	D0	41	HIS
52	D2	6	GLN
52	D2	16	HIS
52	D2	26	ASN
52	D2	29	GLN
53	D3	25	HIS
53	D3	27	ASN

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Mol	Chain	Res	Type
53	D3	30	HIS
53	D3	42	HIS
54	D4	37	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
21	AA	1532/1533 (99%)	465 (30%)	230 (15%)
22	AV	17/17 (100%)	2 (11%)	1 (5%)
22	AX	17/17 (100%)	2 (11%)	1 (5%)
22	CV	17/17 (100%)	3 (17%)	1 (5%)
22	CX	16/17 (94%)	2 (12%)	0
23	AW	5/6 (83%)	3 (60%)	1 (20%)
23	CW	5/6 (83%)	1 (20%)	1 (20%)
24	BA	2850/2903 (98%)	925 (32%)	497 (17%)
24	DA	2838/2903 (97%)	1020 (35%)	505 (17%)
25	BB	117/118 (99%)	32 (27%)	22 (18%)
55	CA	1529/1530 (99%)	516 (33%)	245 (16%)
56	DB	116/117 (99%)	29 (25%)	13 (11%)
All	All	9059/9184 (98%)	3000 (33%)	1517 (16%)

All (3000) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
21	AA	5	U
21	AA	6	G
21	AA	7	A
21	AA	9	G
21	AA	13	U
21	AA	14	U
21	AA	15	G
21	AA	31	G
21	AA	32	A
21	AA	33	A
21	AA	39	G
21	AA	47	C
21	AA	48	C
21	AA	50	A
21	AA	51	A
21	AA	52	C
21	AA	53	A

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Mol	Chain	Res	Type
21	AA	61	G
21	AA	65	A
21	AA	66	A
21	AA	67	C
21	AA	70	U
21	AA	71	A
21	AA	72	A
21	AA	73	C
21	AA	74	A
21	AA	75	G
21	AA	76	G
21	AA	77	A
21	AA	78	A
21	AA	79	G
21	AA	82	G
21	AA	83	C
21	AA	85	U
21	AA	86	G
21	AA	87	C
21	AA	88	U
21	AA	89	U
21	AA	90	C
21	AA	91	U
21	AA	92	U
21	AA	94	G
21	AA	95	C
21	AA	97	G
21	AA	109	A
21	AA	110	C
21	AA	111	G
21	AA	116	A
21	AA	117	G
21	AA	119	A
21	AA	120	A
21	AA	121	U
21	AA	122	G
21	AA	127	G
21	AA	129	A
21	AA	130	A
21	AA	131	A
21	AA	132	C
21	AA	141	G

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Mol	Chain	Res	Type
21	AA	143	A
21	AA	159	G
21	AA	163	C
21	AA	164	G
21	AA	174	A
21	AA	175	C
21	AA	181	A
21	AA	182	A
21	AA	184	G
21	AA	185	U
21	AA	192	A
21	AA	197	A
21	AA	198	G
21	AA	199	A
21	AA	202	G
21	AA	205	A
21	AA	207	C
21	AA	208	U
21	AA	209	U
21	AA	210	C
21	AA	211	G
21	AA	212	G
21	AA	213	G
21	AA	214	C
21	AA	240	G
21	AA	243	A
21	AA	244	U
21	AA	245	U
21	AA	246	A
21	AA	247	G
21	AA	248	C
21	AA	250	A
21	AA	251	G
21	AA	252	U
21	AA	253	A
21	AA	266	G
21	AA	267	C
21	AA	268	U
21	AA	274	A
21	AA	275	G
21	AA	276	G
21	AA	279	A

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Mol	Chain	Res	Type
21	AA	280	C
21	AA	285	C
21	AA	289	G
21	AA	305	G
21	AA	306	A
21	AA	307	C
21	AA	313	A
21	AA	315	A
21	AA	316	C
21	AA	317	U
21	AA	321	A
21	AA	327	A
21	AA	328	C
21	AA	329	A
21	AA	330	C
21	AA	331	G
21	AA	332	G
21	AA	344	A
21	AA	345	C
21	AA	346	G
21	AA	347	G
21	AA	352	C
21	AA	353	A
21	AA	354	G
21	AA	367	U
21	AA	369	G
21	AA	370	C
21	AA	373	A
21	AA	374	A
21	AA	384	G
21	AA	388	G
21	AA	389	A
21	AA	390	U
21	AA	398	U
21	AA	406	G
21	AA	411	A
21	AA	412	A
21	AA	413	G
21	AA	414	A
21	AA	415	A
21	AA	421	U
21	AA	422	C

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Mol	Chain	Res	Type
21	AA	423	G
21	AA	424	G
21	AA	428	G
21	AA	429	U
21	AA	430	A
21	AA	431	A
21	AA	441	A
21	AA	451	A
21	AA	452	A
21	AA	453	G
21	AA	454	G
21	AA	456	A
21	AA	458	U
21	AA	459	A
21	AA	461	A
21	AA	462	G
21	AA	463	U
21	AA	465	A
21	AA	466	A
21	AA	467	U
21	AA	468	A
21	AA	481	G
21	AA	484	G
21	AA	485	U
21	AA	486	U
21	AA	496	A
21	AA	497	G
21	AA	498	A
21	AA	500	G
21	AA	501	C
21	AA	505	G
21	AA	508	U
21	AA	509	A
21	AA	510	A
21	AA	511	C
21	AA	512	U
21	AA	517	G
21	AA	518	C
21	AA	519	C
21	AA	520	A
21	AA	524	G
21	AA	527	G

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Mol	Chain	Res	Type
21	AA	531	U
21	AA	532	A
21	AA	533	A
21	AA	534	U
21	AA	536	C
21	AA	537	G
21	AA	548	G
21	AA	549	C
21	AA	550	G
21	AA	556	C
21	AA	559	A
21	AA	560	A
21	AA	562	U
21	AA	563	A
21	AA	564	C
21	AA	566	G
21	AA	567	G
21	AA	568	G
21	AA	572	A
21	AA	573	A
21	AA	575	G
21	AA	576	C
21	AA	577	G
21	AA	578	C
21	AA	588	G
21	AA	595	A
21	AA	604	G
21	AA	623	C
21	AA	653	U
21	AA	654	G
21	AA	655	A
21	AA	665	A
21	AA	688	G
21	AA	689	C
21	AA	700	G
21	AA	701	U
21	AA	702	A
21	AA	703	G
21	AA	704	A
21	AA	705	G
21	AA	719	C
21	AA	721	G

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Mol	Chain	Res	Type
21	AA	722	G
21	AA	723	U
21	AA	724	G
21	AA	725	G
21	AA	731	G
21	AA	748	G
21	AA	752	G
21	AA	754	C
21	AA	755	G
21	AA	792	A
21	AA	793	U
21	AA	794	A
21	AA	795	C
21	AA	796	C
21	AA	810	C
21	AA	812	G
21	AA	813	U
21	AA	814	A
21	AA	815	A
21	AA	816	A
21	AA	817	C
21	AA	819	A
21	AA	828	U
21	AA	841	C
21	AA	843	U
21	AA	845	A
21	AA	846	G
21	AA	859	G
21	AA	871	U
21	AA	873	A
21	AA	874	G
21	AA	875	U
21	AA	876	C
21	AA	884	U
21	AA	885	G
21	AA	886	G
21	AA	887	G
21	AA	889	A
21	AA	890	G
21	AA	891	U
21	AA	892	A
21	AA	913	A

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Mol	Chain	Res	Type
21	AA	914	A
21	AA	915	A
21	AA	916	U
21	AA	926	G
21	AA	927	G
21	AA	934	C
21	AA	935	A
21	AA	936	C
21	AA	942	G
21	AA	960	U
21	AA	961	U
21	AA	962	C
21	AA	966	G
21	AA	967	C
21	AA	968	A
21	AA	969	A
21	AA	972	C
21	AA	974	A
21	AA	975	A
21	AA	976	G
21	AA	977	A
21	AA	978	A
21	AA	979	C
21	AA	982	U
21	AA	983	A
21	AA	984	C
21	AA	985	C
21	AA	991	U
21	AA	992	U
21	AA	993	G
21	AA	994	A
21	AA	995	C
21	AA	1004	A
21	AA	1008	U
21	AA	1017	U
21	AA	1022	A
21	AA	1025	U
21	AA	1029	U
21	AA	1030	U
21	AA	1031	C
21	AA	1032	G
21	AA	1033	G

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Mol	Chain	Res	Type
21	AA	1034	G
21	AA	1037	C
21	AA	1050	G
21	AA	1051	C
21	AA	1052	U
21	AA	1053	G
21	AA	1054	C
21	AA	1055	A
21	AA	1064	G
21	AA	1065	U
21	AA	1066	C
21	AA	1068	G
21	AA	1069	C
21	AA	1080	A
21	AA	1085	U
21	AA	1086	U
21	AA	1087	G
21	AA	1088	G
21	AA	1094	G
21	AA	1097	C
21	AA	1101	A
21	AA	1102	A
21	AA	1103	C
21	AA	1104	G
21	AA	1107	C
21	AA	1113	C
21	AA	1124	G
21	AA	1125	U
21	AA	1126	U
21	AA	1130	A
21	AA	1131	G
21	AA	1132	C
21	AA	1133	G
21	AA	1135	U
21	AA	1137	C
21	AA	1138	G
21	AA	1140	C
21	AA	1141	C
21	AA	1142	G
21	AA	1144	G
21	AA	1145	A
21	AA	1146	A

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Mol	Chain	Res	Type
21	AA	1154	G
21	AA	1158	C
21	AA	1159	U
21	AA	1160	G
21	AA	1161	C
21	AA	1167	A
21	AA	1168	U
21	AA	1169	A
21	AA	1170	A
21	AA	1181	G
21	AA	1183	U
21	AA	1184	G
21	AA	1185	G
21	AA	1192	C
21	AA	1193	G
21	AA	1196	A
21	AA	1197	A
21	AA	1198	G
21	AA	1200	C
21	AA	1201	A
21	AA	1202	U
21	AA	1203	C
21	AA	1212	U
21	AA	1213	A
21	AA	1214	C
21	AA	1215	G
21	AA	1216	A
21	AA	1224	U
21	AA	1225	A
21	AA	1226	C
21	AA	1227	A
21	AA	1228	C
21	AA	1229	A
21	AA	1238	A
21	AA	1240	U
21	AA	1241	G
21	AA	1242	G
21	AA	1256	A
21	AA	1257	A
21	AA	1258	G
21	AA	1259	C
21	AA	1260	G

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Mol	Chain	Res	Type
21	AA	1278	G
21	AA	1280	A
21	AA	1282	C
21	AA	1283	U
21	AA	1285	A
21	AA	1286	U
21	AA	1287	A
21	AA	1288	A
21	AA	1289	A
21	AA	1298	U
21	AA	1299	A
21	AA	1303	C
21	AA	1304	G
21	AA	1305	G
21	AA	1317	C
21	AA	1320	C
21	AA	1321	U
21	AA	1322	C
21	AA	1323	G
21	AA	1324	A
21	AA	1332	A
21	AA	1336	C
21	AA	1337	G
21	AA	1338	G
21	AA	1340	A
21	AA	1346	A
21	AA	1348	U
21	AA	1349	A
21	AA	1353	G
21	AA	1362	A
21	AA	1364	U
21	AA	1365	G
21	AA	1366	C
21	AA	1378	C
21	AA	1381	U
21	AA	1382	C
21	AA	1383	C
21	AA	1395	C
21	AA	1398	A
21	AA	1399	C
21	AA	1400	C
21	AA	1441	A

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Mol	Chain	Res	Type
21	AA	1446	A
21	AA	1447	A
21	AA	1448	C
21	AA	1449	C
21	AA	1450	U
21	AA	1451	U
21	AA	1452	C
21	AA	1453	G
21	AA	1454	G
21	AA	1455	G
21	AA	1469	C
21	AA	1475	G
21	AA	1487	G
21	AA	1492	A
21	AA	1497	G
21	AA	1499	A
21	AA	1500	A
21	AA	1502	A
21	AA	1503	A
21	AA	1505	G
21	AA	1507	A
21	AA	1508	A
21	AA	1517	G
21	AA	1520	C
21	AA	1528	U
21	AA	1529	G
21	AA	1530	G
21	AA	1531	A
22	AV	34	G
22	AV	36	A
23	AW	3	U
23	AW	5	U
23	AW	6	U
22	AX	28	G
22	AX	34	G
24	BA	10	A
24	BA	13	A
24	BA	14	A
24	BA	15	G
24	BA	28	A
24	BA	34	U
24	BA	35	G

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Mol	Chain	Res	Type
24	BA	36	G
24	BA	40	U
24	BA	43	G
24	BA	46	G
24	BA	49	A
24	BA	50	U
24	BA	51	G
24	BA	61	C
24	BA	62	U
24	BA	63	A
24	BA	70	G
24	BA	71	A
24	BA	73	A
24	BA	74	A
24	BA	75	G
24	BA	84	A
24	BA	85	G
24	BA	86	G
24	BA	87	U
24	BA	91	A
24	BA	92	U
24	BA	93	G
24	BA	99	U
24	BA	101	A
24	BA	103	A
24	BA	118	A
24	BA	119	A
24	BA	120	U
24	BA	121	G
24	BA	122	G
24	BA	125	A
24	BA	126	A
24	BA	127	A
24	BA	128	C
24	BA	135	U
24	BA	137	U
24	BA	138	U
24	BA	139	U
24	BA	140	C
24	BA	141	G
24	BA	142	A
24	BA	143	C

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Mol	Chain	Res	Type
24	BA	144	A
24	BA	162	U
24	BA	163	C
24	BA	164	C
24	BA	177	G
24	BA	178	G
24	BA	180	G
24	BA	182	A
24	BA	188	G
24	BA	196	A
24	BA	197	A
24	BA	199	A
24	BA	200	U
24	BA	201	C
24	BA	204	A
24	BA	205	G
24	BA	206	U
24	BA	207	A
24	BA	215	G
24	BA	216	A
24	BA	217	A
24	BA	221	A
24	BA	222	A
24	BA	223	A
24	BA	227	A
24	BA	228	C
24	BA	229	C
24	BA	230	G
24	BA	232	G
24	BA	233	A
24	BA	234	U
24	BA	241	A
24	BA	242	G
24	BA	243	U
24	BA	244	A
24	BA	248	G
24	BA	249	C
24	BA	250	G
24	BA	255	A
24	BA	265	A
24	BA	266	G
24	BA	267	C

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Mol	Chain	Res	Type
24	BA	272	A
24	BA	273	G
24	BA	276	U
24	BA	277	G
24	BA	278	A
24	BA	279	A
24	BA	280	U
24	BA	285	G
24	BA	298	G
24	BA	299	A
24	BA	301	G
24	BA	302	C
24	BA	303	G
24	BA	310	A
24	BA	311	A
24	BA	312	G
24	BA	313	G
24	BA	322	A
24	BA	329	G
24	BA	330	A
24	BA	333	G
24	BA	334	C
24	BA	346	A
24	BA	347	A
24	BA	349	U
24	BA	352	A
24	BA	353	C
24	BA	359	G
24	BA	361	G
24	BA	362	A
24	BA	367	G
24	BA	370	G
24	BA	371	A
24	BA	372	G
24	BA	383	C
24	BA	387	U
24	BA	388	G
24	BA	390	U
24	BA	395	U
24	BA	396	G
24	BA	399	U
24	BA	404	A

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Mol	Chain	Res	Type
24	BA	405	U
24	BA	412	A
24	BA	419	U
24	BA	422	A
24	BA	424	G
24	BA	433	C
24	BA	435	C
24	BA	436	C
24	BA	437	U
24	BA	443	A
24	BA	446	G
24	BA	447	A
24	BA	449	A
24	BA	454	A
24	BA	455	C
24	BA	459	U
24	BA	460	A
24	BA	461	C
24	BA	475	C
24	BA	476	G
24	BA	479	A
24	BA	480	A
24	BA	481	G
24	BA	482	A
24	BA	483	A
24	BA	490	C
24	BA	491	G
24	BA	492	A
24	BA	504	A
24	BA	505	A
24	BA	506	G
24	BA	507	A
24	BA	508	A
24	BA	509	C
24	BA	510	C
24	BA	512	G
24	BA	513	A
24	BA	514	A
24	BA	515	A
24	BA	528	A
24	BA	529	A
24	BA	530	G

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Mol	Chain	Res	Type
24	BA	531	C
24	BA	532	A
24	BA	533	G
24	BA	534	U
24	BA	543	G
24	BA	544	C
24	BA	545	U
24	BA	546	U
24	BA	547	A
24	BA	548	G
24	BA	549	G
24	BA	550	C
24	BA	563	A
24	BA	566	U
24	BA	572	A
24	BA	573	U
24	BA	575	A
24	BA	586	A
24	BA	587	C
24	BA	588	U
24	BA	589	U
24	BA	603	A
24	BA	604	G
24	BA	605	G
24	BA	613	A
24	BA	614	A
24	BA	615	U
24	BA	616	A
24	BA	617	G
24	BA	621	A
24	BA	622	G
24	BA	627	A
24	BA	628	G
24	BA	631	A
24	BA	634	C
24	BA	637	A
24	BA	638	G
24	BA	639	U
24	BA	645	C
24	BA	646	U
24	BA	647	G
24	BA	653	U

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Mol	Chain	Res	Type
24	BA	654	A
24	BA	655	A
24	BA	656	G
24	BA	657	U
24	BA	669	G
24	BA	670	A
24	BA	682	G
24	BA	684	G
24	BA	685	A
24	BA	686	U
24	BA	687	C
24	BA	688	U
24	BA	689	A
24	BA	690	G
24	BA	705	A
24	BA	713	G
24	BA	714	U
24	BA	715	A
24	BA	717	C
24	BA	727	A
24	BA	728	G
24	BA	729	G
24	BA	730	A
24	BA	738	G
24	BA	740	C
24	BA	743	A
24	BA	744	U
24	BA	747	U
24	BA	748	G
24	BA	749	A
24	BA	751	A
24	BA	753	A
24	BA	754	U
24	BA	763	G
24	BA	764	A
24	BA	765	C
24	BA	766	U
24	BA	775	G
24	BA	776	G
24	BA	777	G
24	BA	782	A
24	BA	783	A

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Mol	Chain	Res	Type
24	BA	784	G
24	BA	785	G
24	BA	789	A
24	BA	790	U
24	BA	791	C
24	BA	792	A
24	BA	800	A
24	BA	801	G
24	BA	802	A
24	BA	803	U
24	BA	805	G
24	BA	806	C
24	BA	810	U
24	BA	811	U
24	BA	812	C
24	BA	813	U
24	BA	819	A
24	BA	827	U
24	BA	828	U
24	BA	830	G
24	BA	845	A
24	BA	846	U
24	BA	847	U
24	BA	856	G
24	BA	858	G
24	BA	859	G
24	BA	860	U
24	BA	865	C
24	BA	866	A
24	BA	867	C
24	BA	868	U
24	BA	896	A
24	BA	897	C
24	BA	900	A
24	BA	910	A
24	BA	914	G
24	BA	915	C
24	BA	916	G
24	BA	927	A
24	BA	931	U
24	BA	932	U
24	BA	933	A

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Mol	Chain	Res	Type
24	BA	934	U
24	BA	941	A
24	BA	945	A
24	BA	946	C
24	BA	947	A
24	BA	950	G
24	BA	957	C
24	BA	958	U
24	BA	959	A
24	BA	961	C
24	BA	962	G
24	BA	963	U
24	BA	973	A
24	BA	974	G
24	BA	975	A
24	BA	976	G
24	BA	983	A
24	BA	984	A
24	BA	985	C
24	BA	990	A
24	BA	991	C
24	BA	995	C
24	BA	996	A
24	BA	997	G
24	BA	1005	C
24	BA	1006	C
24	BA	1008	A
24	BA	1009	A
24	BA	1010	A
24	BA	1011	G
24	BA	1012	U
24	BA	1013	C
24	BA	1017	G
24	BA	1021	A
24	BA	1022	G
24	BA	1023	U
24	BA	1024	G
24	BA	1025	G
24	BA	1026	G
24	BA	1027	A
24	BA	1028	A
24	BA	1033	U

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Mol	Chain	Res	Type
24	BA	1034	G
24	BA	1035	U
24	BA	1045	C
24	BA	1046	A
24	BA	1047	G
24	BA	1060	U
24	BA	1061	U
24	BA	1062	G
24	BA	1063	G
24	BA	1065	U
24	BA	1066	U
24	BA	1070	A
24	BA	1071	G
24	BA	1072	C
24	BA	1073	A
24	BA	1074	G
24	BA	1078	U
24	BA	1083	U
24	BA	1084	A
24	BA	1088	A
24	BA	1091	G
24	BA	1092	C
24	BA	1098	A
24	BA	1104	C
24	BA	1110	G
24	BA	1111	A
24	BA	1112	G
24	BA	1113	U
24	BA	1126	A
24	BA	1127	A
24	BA	1128	G
24	BA	1129	A
24	BA	1130	U
24	BA	1132	U
24	BA	1133	A
24	BA	1135	C
24	BA	1136	G
24	BA	1137	G
24	BA	1139	G
24	BA	1142	A
24	BA	1144	A
24	BA	1145	C

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Mol	Chain	Res	Type
24	BA	1154	G
24	BA	1155	A
24	BA	1157	G
24	BA	1158	C
24	BA	1174	U
24	BA	1175	A
24	BA	1176	U
24	BA	1180	U
24	BA	1181	U
24	BA	1204	A
24	BA	1205	A
24	BA	1206	G
24	BA	1207	C
24	BA	1210	G
24	BA	1211	C
24	BA	1215	G
24	BA	1236	G
24	BA	1237	A
24	BA	1238	G
24	BA	1240	U
24	BA	1247	A
24	BA	1248	G
24	BA	1249	U
24	BA	1250	G
24	BA	1251	C
24	BA	1253	A
24	BA	1254	A
24	BA	1256	G
24	BA	1265	A
24	BA	1266	G
24	BA	1268	A
24	BA	1271	G
24	BA	1272	A
24	BA	1273	U
24	BA	1274	A
24	BA	1275	A
24	BA	1276	A
24	BA	1277	G
24	BA	1281	G
24	BA	1287	A
24	BA	1288	G
24	BA	1289	C

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Mol	Chain	Res	Type
24	BA	1290	C
24	BA	1300	G
24	BA	1301	A
24	BA	1303	G
24	BA	1310	G
24	BA	1320	C
24	BA	1321	A
24	BA	1324	G
24	BA	1325	U
24	BA	1326	U
24	BA	1327	A
24	BA	1329	U
24	BA	1330	C
24	BA	1332	G
24	BA	1333	G
24	BA	1334	G
24	BA	1340	U
24	BA	1341	G
24	BA	1343	G
24	BA	1344	U
24	BA	1345	C
24	BA	1352	U
24	BA	1365	A
24	BA	1368	G
24	BA	1378	A
24	BA	1379	U
24	BA	1380	G
24	BA	1383	A
24	BA	1385	A
24	BA	1386	C
24	BA	1387	A
24	BA	1396	U
24	BA	1397	U
24	BA	1398	C
24	BA	1403	A
24	BA	1416	G
24	BA	1419	A
24	BA	1420	A
24	BA	1421	G
24	BA	1427	A
24	BA	1428	C
24	BA	1429	G

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Mol	Chain	Res	Type
24	BA	1430	G
24	BA	1451	C
24	BA	1452	G
24	BA	1453	A
24	BA	1455	G
24	BA	1458	U
24	BA	1459	G
24	BA	1460	U
24	BA	1461	C
24	BA	1476	U
24	BA	1477	A
24	BA	1482	G
24	BA	1490	A
24	BA	1491	G
24	BA	1492	G
24	BA	1493	C
24	BA	1496	A
24	BA	1497	U
24	BA	1498	C
24	BA	1499	C
24	BA	1504	A
24	BA	1508	A
24	BA	1509	A
24	BA	1510	G
24	BA	1511	G
24	BA	1515	A
24	BA	1522	A
24	BA	1523	U
24	BA	1531	C
24	BA	1533	C
24	BA	1534	U
24	BA	1536	C
24	BA	1537	G
24	BA	1538	G
24	BA	1539	U
24	BA	1540	G
24	BA	1555	G
24	BA	1556	C
24	BA	1557	C
24	BA	1558	C
24	BA	1559	U
24	BA	1560	G

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Mol	Chain	Res	Type
24	BA	1561	C
24	BA	1568	G
24	BA	1569	A
24	BA	1578	U
24	BA	1581	G
24	BA	1583	A
24	BA	1584	U
24	BA	1585	C
24	BA	1602	U
24	BA	1603	A
24	BA	1604	C
24	BA	1607	C
24	BA	1608	A
24	BA	1610	A
24	BA	1611	C
24	BA	1612	C
24	BA	1616	A
24	BA	1619	G
24	BA	1625	C
24	BA	1635	A
24	BA	1647	U
24	BA	1648	U
24	BA	1649	G
24	BA	1654	A
24	BA	1655	A
24	BA	1669	A
24	BA	1670	C
24	BA	1674	G
24	BA	1675	C
24	BA	1677	A
24	BA	1682	G
24	BA	1683	U
24	BA	1694	C
24	BA	1695	G
24	BA	1696	G
24	BA	1697	G
24	BA	1698	A
24	BA	1699	G
24	BA	1700	A
24	BA	1701	A
24	BA	1706	C
24	BA	1707	G

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Mol	Chain	Res	Type
24	BA	1708	C
24	BA	1713	A
24	BA	1714	U
24	BA	1715	G
24	BA	1716	U
24	BA	1717	A
24	BA	1723	G
24	BA	1729	U
24	BA	1730	C
24	BA	1731	G
24	BA	1732	C
24	BA	1733	G
24	BA	1738	G
24	BA	1743	G
24	BA	1744	A
24	BA	1746	A
24	BA	1758	U
24	BA	1759	A
24	BA	1760	C
24	BA	1761	C
24	BA	1764	C
24	BA	1770	G
24	BA	1773	A
24	BA	1776	G
24	BA	1780	A
24	BA	1782	U
24	BA	1784	A
24	BA	1785	A
24	BA	1786	A
24	BA	1787	A
24	BA	1788	C
24	BA	1791	A
24	BA	1800	C
24	BA	1802	A
24	BA	1803	A
24	BA	1806	C
24	BA	1808	A
24	BA	1809	A
24	BA	1810	A
24	BA	1813	G
24	BA	1815	A
24	BA	1816	C

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Mol	Chain	Res	Type
24	BA	1817	G
24	BA	1818	U
24	BA	1821	A
24	BA	1822	C
24	BA	1825	U
24	BA	1828	G
24	BA	1829	A
24	BA	1830	C
24	BA	1833	C
24	BA	1838	C
24	BA	1839	G
24	BA	1847	A
24	BA	1858	A
24	BA	1859	U
24	BA	1866	A
24	BA	1867	G
24	BA	1871	A
24	BA	1872	A
24	BA	1876	A
24	BA	1884	G
24	BA	1885	A
24	BA	1900	A
24	BA	1906	G
24	BA	1913	A
24	BA	1914	C
24	BA	1915	U
24	BA	1918	A
24	BA	1919	A
24	BA	1927	A
24	BA	1929	G
24	BA	1930	G
24	BA	1931	U
24	BA	1932	A
24	BA	1937	A
24	BA	1938	A
24	BA	1941	C
24	BA	1942	C
24	BA	1943	U
24	BA	1944	U
24	BA	1945	G
24	BA	1946	U
24	BA	1955	U

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Mol	Chain	Res	Type
24	BA	1956	U
24	BA	1957	C
24	BA	1960	A
24	BA	1963	U
24	BA	1965	C
24	BA	1966	A
24	BA	1967	C
24	BA	1968	G
24	BA	1970	A
24	BA	1971	U
24	BA	1972	G
24	BA	1977	A
24	BA	1981	A
24	BA	1982	U
24	BA	1992	G
24	BA	1993	U
24	BA	1994	C
24	BA	1996	C
24	BA	1997	C
24	BA	2006	C
24	BA	2021	C
24	BA	2022	U
24	BA	2023	C
24	BA	2024	G
24	BA	2030	A
24	BA	2031	A
24	BA	2032	G
24	BA	2033	A
24	BA	2035	G
24	BA	2036	C
24	BA	2037	A
24	BA	2043	C
24	BA	2051	A
24	BA	2052	A
24	BA	2055	C
24	BA	2056	G
24	BA	2059	A
24	BA	2060	A
24	BA	2061	G
24	BA	2062	A
24	BA	2063	C
24	BA	2064	C

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Mol	Chain	Res	Type
24	BA	2068	U
24	BA	2069	G
24	BA	2072	C
24	BA	2092	U
24	BA	2093	G
24	BA	2095	A
24	BA	2104	C
24	BA	2106	U
24	BA	2107	G
24	BA	2109	U
24	BA	2110	G
24	BA	2134	A
24	BA	2135	A
24	BA	2136	G
24	BA	2137	U
24	BA	2140	G
24	BA	2143	C
24	BA	2144	G
24	BA	2145	C
24	BA	2146	C
24	BA	2147	A
24	BA	2148	G
24	BA	2149	U
24	BA	2150	C
24	BA	2151	U
24	BA	2155	U
24	BA	2156	G
24	BA	2180	U
24	BA	2181	U
24	BA	2183	A
24	BA	2184	A
24	BA	2185	U
24	BA	2187	U
24	BA	2197	U
24	BA	2198	A
24	BA	2199	A
24	BA	2200	C
24	BA	2201	G
24	BA	2204	G
24	BA	2210	U
24	BA	2211	A
24	BA	2212	A

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Mol	Chain	Res	Type
24	BA	2214	C
24	BA	2215	C
24	BA	2225	A
24	BA	2226	C
24	BA	2227	A
24	BA	2228	G
24	BA	2238	G
24	BA	2239	G
24	BA	2249	U
24	BA	2250	G
24	BA	2252	G
24	BA	2253	G
24	BA	2256	G
24	BA	2259	U
24	BA	2266	A
24	BA	2267	A
24	BA	2268	A
24	BA	2269	G
24	BA	2273	A
24	BA	2275	C
24	BA	2278	A
24	BA	2283	C
24	BA	2284	A
24	BA	2286	G
24	BA	2287	A
24	BA	2288	A
24	BA	2296	U
24	BA	2297	A
24	BA	2298	A
24	BA	2305	U
24	BA	2307	G
24	BA	2308	G
24	BA	2309	A
24	BA	2310	C
24	BA	2312	U
24	BA	2313	C
24	BA	2319	G
24	BA	2320	U
24	BA	2321	U
24	BA	2323	G
24	BA	2325	G
24	BA	2327	A

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Mol	Chain	Res	Type
24	BA	2328	A
24	BA	2333	A
24	BA	2334	U
24	BA	2335	A
24	BA	2336	A
24	BA	2337	G
24	BA	2345	G
24	BA	2347	C
24	BA	2348	U
24	BA	2350	C
24	BA	2354	C
24	BA	2361	G
24	BA	2372	U
24	BA	2382	G
24	BA	2383	G
24	BA	2384	U
24	BA	2385	C
24	BA	2386	A
24	BA	2388	A
24	BA	2389	G
24	BA	2391	G
24	BA	2392	A
24	BA	2402	U
24	BA	2406	A
24	BA	2407	A
24	BA	2423	U
24	BA	2424	C
24	BA	2425	A
24	BA	2426	A
24	BA	2427	C
24	BA	2428	G
24	BA	2429	G
24	BA	2430	A
24	BA	2431	U
24	BA	2435	A
24	BA	2439	A
24	BA	2440	C
24	BA	2441	U
24	BA	2447	G
24	BA	2448	A
24	BA	2450	A
24	BA	2459	A

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Mol	Chain	Res	Type
24	BA	2465	C
24	BA	2469	A
24	BA	2470	G
24	BA	2476	A
24	BA	2477	U
24	BA	2490	G
24	BA	2491	U
24	BA	2492	U
24	BA	2493	U
24	BA	2498	C
24	BA	2499	C
24	BA	2502	G
24	BA	2503	A
24	BA	2504	U
24	BA	2505	G
24	BA	2506	U
24	BA	2517	C
24	BA	2518	A
24	BA	2520	C
24	BA	2521	C
24	BA	2529	G
24	BA	2542	A
24	BA	2543	G
24	BA	2554	U
24	BA	2566	A
24	BA	2567	G
24	BA	2568	U
24	BA	2573	C
24	BA	2574	G
24	BA	2579	C
24	BA	2581	G
24	BA	2582	G
24	BA	2583	G
24	BA	2585	U
24	BA	2586	U
24	BA	2589	A
24	BA	2603	G
24	BA	2609	U
24	BA	2610	C
24	BA	2611	C
24	BA	2612	C
24	BA	2613	U

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Mol	Chain	Res	Type
24	BA	2614	A
24	BA	2615	U
24	BA	2630	G
24	BA	2631	G
24	BA	2639	A
24	BA	2640	G
24	BA	2646	C
24	BA	2654	A
24	BA	2655	G
24	BA	2658	C
24	BA	2663	G
24	BA	2664	G
24	BA	2668	G
24	BA	2681	C
24	BA	2682	A
24	BA	2683	C
24	BA	2689	U
24	BA	2690	U
24	BA	2691	C
24	BA	2692	G
24	BA	2714	G
24	BA	2724	U
24	BA	2727	A
24	BA	2728	U
24	BA	2729	G
24	BA	2732	G
24	BA	2733	A
24	BA	2748	A
24	BA	2750	A
24	BA	2751	G
24	BA	2753	A
24	BA	2756	U
24	BA	2757	A
24	BA	2765	A
24	BA	2769	U
24	BA	2777	G
24	BA	2778	A
24	BA	2779	U
24	BA	2781	A
24	BA	2791	G
24	BA	2792	A
24	BA	2793	C

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Mol	Chain	Res	Type
24	BA	2798	U
24	BA	2799	A
24	BA	2800	A
24	BA	2801	G
24	BA	2808	G
24	BA	2809	A
24	BA	2810	A
24	BA	2812	G
24	BA	2820	A
24	BA	2821	A
24	BA	2822	G
24	BA	2824	C
24	BA	2825	G
24	BA	2833	U
24	BA	2834	G
24	BA	2835	A
24	BA	2836	U
24	BA	2837	A
24	BA	2848	G
24	BA	2849	U
24	BA	2850	A
24	BA	2851	A
24	BA	2861	U
24	BA	2866	U
24	BA	2867	G
24	BA	2868	A
24	BA	2869	G
24	BA	2874	C
24	BA	2879	A
24	BA	2880	C
24	BA	2883	A
24	BA	2884	U
24	BA	2886	A
24	BA	2894	G
24	BA	2895	G
24	BA	2896	C
25	BB	3	C
25	BB	12	C
25	BB	13	G
25	BB	14	U
25	BB	15	A
25	BB	16	G

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Mol	Chain	Res	Type
25	BB	24	G
25	BB	25	U
25	BB	26	C
25	BB	35	C
25	BB	37	C
25	BB	38	C
25	BB	41	G
25	BB	42	C
25	BB	43	C
25	BB	44	G
25	BB	45	A
25	BB	52	A
25	BB	53	A
25	BB	54	G
25	BB	57	A
25	BB	58	A
25	BB	66	A
25	BB	67	G
25	BB	87	U
25	BB	88	C
25	BB	89	U
25	BB	90	C
25	BB	91	C
25	BB	99	A
25	BB	108	A
25	BB	109	A
55	CA	6	G
55	CA	7	A
55	CA	8	A
55	CA	9	G
55	CA	10	A
55	CA	13	U
55	CA	14	U
55	CA	15	G
55	CA	22	G
55	CA	31	G
55	CA	32	A
55	CA	33	A
55	CA	39	G
55	CA	40	C
55	CA	47	C
55	CA	48	C

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Mol	Chain	Res	Type
55	CA	49	U
55	CA	51	A
55	CA	52	C
55	CA	53	A
55	CA	61	G
55	CA	62	U
55	CA	64	G
55	CA	65	A
55	CA	66	A
55	CA	67	C
55	CA	70	U
55	CA	71	A
55	CA	72	A
55	CA	76	G
55	CA	77	A
55	CA	80	A
55	CA	81	A
55	CA	82	G
55	CA	83	C
55	CA	84	U
55	CA	85	U
55	CA	86	G
55	CA	87	C
55	CA	88	U
55	CA	89	U
55	CA	90	C
55	CA	91	U
55	CA	92	U
55	CA	94	G
55	CA	95	C
55	CA	96	U
55	CA	97	G
55	CA	110	C
55	CA	111	G
55	CA	116	A
55	CA	117	G
55	CA	119	A
55	CA	120	A
55	CA	121	U
55	CA	122	G
55	CA	131	A
55	CA	132	C

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Mol	Chain	Res	Type
55	CA	133	U
55	CA	143	A
55	CA	144	G
55	CA	155	A
55	CA	159	G
55	CA	164	G
55	CA	166	U
55	CA	175	C
55	CA	178	C
55	CA	182	A
55	CA	197	A
55	CA	198	G
55	CA	199	A
55	CA	200	G
55	CA	206	C
55	CA	207	C
55	CA	208	U
55	CA	209	U
55	CA	210	C
55	CA	211	G
55	CA	212	G
55	CA	213	G
55	CA	214	C
55	CA	239	U
55	CA	240	G
55	CA	243	A
55	CA	244	U
55	CA	245	U
55	CA	247	G
55	CA	248	C
55	CA	250	A
55	CA	251	G
55	CA	252	U
55	CA	253	A
55	CA	254	G
55	CA	266	G
55	CA	267	C
55	CA	275	G
55	CA	276	G
55	CA	277	C
55	CA	280	C
55	CA	282	A

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Mol	Chain	Res	Type
55	CA	283	U
55	CA	289	G
55	CA	306	A
55	CA	316	C
55	CA	317	U
55	CA	328	C
55	CA	329	A
55	CA	330	C
55	CA	331	G
55	CA	332	G
55	CA	338	A
55	CA	344	A
55	CA	345	C
55	CA	346	G
55	CA	347	G
55	CA	348	G
55	CA	352	C
55	CA	353	A
55	CA	354	G
55	CA	367	U
55	CA	369	G
55	CA	370	C
55	CA	372	C
55	CA	373	A
55	CA	374	A
55	CA	381	C
55	CA	383	A
55	CA	384	G
55	CA	389	A
55	CA	397	A
55	CA	398	U
55	CA	406	G
55	CA	411	A
55	CA	412	A
55	CA	413	G
55	CA	414	A
55	CA	415	A
55	CA	421	U
55	CA	422	C
55	CA	423	G
55	CA	424	G
55	CA	425	G

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Mol	Chain	Res	Type
55	CA	428	G
55	CA	429	U
55	CA	430	A
55	CA	431	A
55	CA	436	C
55	CA	439	U
55	CA	440	C
55	CA	452	A
55	CA	453	G
55	CA	454	G
55	CA	456	A
55	CA	457	G
55	CA	458	U
55	CA	459	A
55	CA	460	A
55	CA	461	A
55	CA	462	G
55	CA	463	U
55	CA	464	U
55	CA	465	A
55	CA	466	A
55	CA	467	U
55	CA	468	A
55	CA	469	C
55	CA	474	G
55	CA	476	U
55	CA	478	A
55	CA	479	U
55	CA	481	G
55	CA	482	A
55	CA	483	C
55	CA	484	G
55	CA	485	U
55	CA	486	U
55	CA	487	A
55	CA	496	A
55	CA	497	G
55	CA	498	A
55	CA	499	A
55	CA	500	G
55	CA	501	C
55	CA	505	G

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Mol	Chain	Res	Type
55	CA	508	U
55	CA	509	A
55	CA	510	A
55	CA	511	C
55	CA	512	U
55	CA	513	C
55	CA	514	C
55	CA	517	G
55	CA	518	C
55	CA	519	C
55	CA	520	A
55	CA	521	G
55	CA	527	G
55	CA	531	U
55	CA	532	A
55	CA	533	A
55	CA	534	U
55	CA	536	C
55	CA	537	G
55	CA	538	G
55	CA	548	G
55	CA	549	C
55	CA	559	A
55	CA	560	A
55	CA	562	U
55	CA	563	A
55	CA	564	C
55	CA	565	U
55	CA	566	G
55	CA	567	G
55	CA	568	G
55	CA	572	A
55	CA	573	A
55	CA	575	G
55	CA	576	C
55	CA	577	G
55	CA	578	C
55	CA	596	A
55	CA	597	G
55	CA	611	C
55	CA	617	G
55	CA	642	A

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Mol	Chain	Res	Type
55	CA	643	C
55	CA	644	U
55	CA	653	U
55	CA	654	G
55	CA	655	A
55	CA	665	A
55	CA	666	G
55	CA	688	G
55	CA	689	C
55	CA	693	G
55	CA	694	A
55	CA	695	A
55	CA	699	C
55	CA	700	G
55	CA	701	U
55	CA	702	A
55	CA	703	G
55	CA	704	A
55	CA	705	G
55	CA	718	A
55	CA	721	G
55	CA	722	G
55	CA	723	U
55	CA	724	G
55	CA	725	G
55	CA	731	G
55	CA	733	G
55	CA	734	G
55	CA	735	C
55	CA	736	C
55	CA	748	G
55	CA	753	A
55	CA	754	C
55	CA	755	G
55	CA	756	C
55	CA	777	A
55	CA	781	A
55	CA	782	A
55	CA	784	A
55	CA	785	G
55	CA	787	A
55	CA	792	A

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Mol	Chain	Res	Type
55	CA	793	U
55	CA	794	A
55	CA	795	C
55	CA	799	G
55	CA	803	G
55	CA	804	U
55	CA	810	C
55	CA	812	G
55	CA	814	A
55	CA	815	A
55	CA	816	A
55	CA	817	C
55	CA	818	G
55	CA	819	A
55	CA	820	U
55	CA	821	G
55	CA	822	U
55	CA	828	U
55	CA	829	G
55	CA	841	C
55	CA	842	U
55	CA	843	U
55	CA	844	G
55	CA	845	A
55	CA	846	G
55	CA	849	G
55	CA	871	U
55	CA	874	G
55	CA	875	U
55	CA	876	C
55	CA	880	C
55	CA	885	G
55	CA	886	G
55	CA	889	A
55	CA	890	G
55	CA	891	U
55	CA	892	A
55	CA	914	A
55	CA	915	A
55	CA	926	G
55	CA	927	G
55	CA	934	C

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Mol	Chain	Res	Type
55	CA	935	A
55	CA	936	C
55	CA	939	G
55	CA	942	G
55	CA	945	G
55	CA	960	U
55	CA	961	U
55	CA	962	C
55	CA	966	G
55	CA	968	A
55	CA	969	A
55	CA	970	C
55	CA	971	G
55	CA	972	C
55	CA	975	A
55	CA	976	G
55	CA	977	A
55	CA	978	A
55	CA	982	U
55	CA	983	A
55	CA	984	C
55	CA	990	C
55	CA	992	U
55	CA	993	G
55	CA	995	C
55	CA	996	A
55	CA	1000	A
55	CA	1004	A
55	CA	1019	A
55	CA	1020	G
55	CA	1022	A
55	CA	1029	U
55	CA	1031	C
55	CA	1032	G
55	CA	1036	A
55	CA	1037	C
55	CA	1044	A
55	CA	1045	C
55	CA	1046	A
55	CA	1049	U
55	CA	1050	G
55	CA	1051	C

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Mol	Chain	Res	Type
55	CA	1052	U
55	CA	1053	G
55	CA	1054	C
55	CA	1055	A
55	CA	1056	U
55	CA	1064	G
55	CA	1065	U
55	CA	1066	C
55	CA	1068	G
55	CA	1069	C
55	CA	1070	U
55	CA	1085	U
55	CA	1086	U
55	CA	1087	G
55	CA	1094	G
55	CA	1095	U
55	CA	1101	A
55	CA	1102	A
55	CA	1103	C
55	CA	1113	C
55	CA	1125	U
55	CA	1127	G
55	CA	1128	C
55	CA	1129	C
55	CA	1130	A
55	CA	1137	C
55	CA	1138	G
55	CA	1139	G
55	CA	1140	C
55	CA	1141	C
55	CA	1142	G
55	CA	1143	G
55	CA	1145	A
55	CA	1146	A
55	CA	1152	A
55	CA	1157	A
55	CA	1158	C
55	CA	1159	U
55	CA	1160	G
55	CA	1161	C
55	CA	1162	C
55	CA	1169	A

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Mol	Chain	Res	Type
55	CA	1178	G
55	CA	1179	A
55	CA	1181	G
55	CA	1183	U
55	CA	1184	G
55	CA	1185	G
55	CA	1196	A
55	CA	1197	A
55	CA	1200	C
55	CA	1201	A
55	CA	1202	U
55	CA	1203	C
55	CA	1212	U
55	CA	1213	A
55	CA	1214	C
55	CA	1215	G
55	CA	1216	A
55	CA	1219	A
55	CA	1222	G
55	CA	1224	U
55	CA	1225	A
55	CA	1226	C
55	CA	1228	C
55	CA	1229	A
55	CA	1230	C
55	CA	1238	A
55	CA	1239	A
55	CA	1240	U
55	CA	1241	G
55	CA	1242	G
55	CA	1243	C
55	CA	1250	A
55	CA	1251	A
55	CA	1256	A
55	CA	1257	A
55	CA	1263	C
55	CA	1266	G
55	CA	1270	G
55	CA	1278	G
55	CA	1279	G
55	CA	1280	A
55	CA	1281	C

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Mol	Chain	Res	Type
55	CA	1282	C
55	CA	1283	U
55	CA	1284	C
55	CA	1285	A
55	CA	1286	U
55	CA	1287	A
55	CA	1288	A
55	CA	1289	A
55	CA	1290	G
55	CA	1294	G
55	CA	1297	G
55	CA	1299	A
55	CA	1300	G
55	CA	1301	U
55	CA	1302	C
55	CA	1303	C
55	CA	1305	G
55	CA	1312	G
55	CA	1316	G
55	CA	1317	C
55	CA	1319	A
55	CA	1320	C
55	CA	1322	C
55	CA	1323	G
55	CA	1324	A
55	CA	1325	C
55	CA	1338	G
55	CA	1346	A
55	CA	1348	U
55	CA	1349	A
55	CA	1353	G
55	CA	1362	A
55	CA	1364	U
55	CA	1365	G
55	CA	1366	C
55	CA	1370	G
55	CA	1379	G
55	CA	1381	U
55	CA	1382	C
55	CA	1383	C
55	CA	1394	A
55	CA	1395	C

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Mol	Chain	Res	Type
55	CA	1396	A
55	CA	1398	A
55	CA	1400	C
55	CA	1411	C
55	CA	1419	G
55	CA	1429	A
55	CA	1432	G
55	CA	1441	A
55	CA	1442	G
55	CA	1443	C
55	CA	1446	A
55	CA	1447	A
55	CA	1448	C
55	CA	1449	C
55	CA	1451	U
55	CA	1452	C
55	CA	1453	G
55	CA	1454	G
55	CA	1455	G
55	CA	1456	A
55	CA	1492	A
55	CA	1494	G
55	CA	1497	G
55	CA	1498	U
55	CA	1499	A
55	CA	1500	A
55	CA	1502	A
55	CA	1503	A
55	CA	1505	G
55	CA	1507	A
55	CA	1508	A
55	CA	1517	G
55	CA	1519	A
55	CA	1520	C
55	CA	1529	G
55	CA	1530	G
55	CA	1531	A
55	CA	1534	A
22	CV	28	G
22	CV	34	G
22	CV	36	A
23	CW	5	U

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Mol	Chain	Res	Type
22	CX	34	G
22	CX	36	A
24	DA	10	A
24	DA	12	U
24	DA	14	A
24	DA	15	G
24	DA	16	C
24	DA	34	U
24	DA	35	G
24	DA	36	G
24	DA	37	C
24	DA	39	G
24	DA	40	U
24	DA	46	G
24	DA	49	A
24	DA	50	U
24	DA	51	G
24	DA	52	A
24	DA	53	A
24	DA	60	G
24	DA	61	C
24	DA	62	U
24	DA	70	G
24	DA	71	A
24	DA	73	A
24	DA	74	A
24	DA	75	G
24	DA	76	C
24	DA	77	G
24	DA	79	C
24	DA	83	A
24	DA	84	A
24	DA	85	G
24	DA	86	G
24	DA	87	U
24	DA	91	A
24	DA	92	U
24	DA	93	G
24	DA	100	U
24	DA	101	A
24	DA	102	U
24	DA	103	A

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Mol	Chain	Res	Type
24	DA	104	A
24	DA	118	A
24	DA	119	A
24	DA	120	U
24	DA	121	G
24	DA	122	G
24	DA	126	A
24	DA	128	C
24	DA	129	C
24	DA	134	G
24	DA	139	U
24	DA	140	C
24	DA	141	G
24	DA	142	A
24	DA	143	C
24	DA	144	A
24	DA	155	A
24	DA	156	A
24	DA	160	A
24	DA	162	U
24	DA	164	C
24	DA	165	A
24	DA	171	U
24	DA	180	G
24	DA	181	A
24	DA	193	U
24	DA	196	A
24	DA	197	A
24	DA	198	C
24	DA	199	A
24	DA	204	A
24	DA	205	G
24	DA	206	U
24	DA	207	A
24	DA	216	A
24	DA	217	A
24	DA	218	A
24	DA	221	A
24	DA	222	A
24	DA	223	A
24	DA	224	U
24	DA	225	C

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Mol	Chain	Res	Type
24	DA	226	A
24	DA	227	A
24	DA	228	C
24	DA	229	C
24	DA	230	G
24	DA	231	A
24	DA	233	A
24	DA	234	U
24	DA	235	U
24	DA	241	A
24	DA	242	G
24	DA	243	U
24	DA	244	A
24	DA	245	G
24	DA	248	G
24	DA	249	C
24	DA	250	G
24	DA	251	A
24	DA	252	G
24	DA	255	A
24	DA	264	C
24	DA	265	A
24	DA	266	G
24	DA	271	G
24	DA	272	A
24	DA	273	G
24	DA	277	G
24	DA	281	C
24	DA	284	U
24	DA	285	G
24	DA	295	G
24	DA	299	A
24	DA	301	G
24	DA	302	C
24	DA	303	G
24	DA	311	A
24	DA	312	G
24	DA	314	C
24	DA	315	G
24	DA	322	A
24	DA	323	C
24	DA	324	A

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Mol	Chain	Res	Type
24	DA	325	G
24	DA	326	G
24	DA	329	G
24	DA	330	A
24	DA	334	C
24	DA	335	C
24	DA	343	C
24	DA	351	C
24	DA	353	C
24	DA	362	A
24	DA	363	G
24	DA	364	C
24	DA	365	U
24	DA	367	G
24	DA	370	G
24	DA	371	A
24	DA	372	G
24	DA	374	A
24	DA	375	G
24	DA	383	C
24	DA	386	G
24	DA	387	U
24	DA	388	G
24	DA	389	G
24	DA	390	U
24	DA	391	A
24	DA	392	U
24	DA	396	G
24	DA	397	U
24	DA	398	C
24	DA	399	U
24	DA	404	A
24	DA	405	U
24	DA	406	G
24	DA	407	G
24	DA	411	G
24	DA	412	A
24	DA	413	C
24	DA	421	C
24	DA	422	A
24	DA	423	A
24	DA	424	G

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Mol	Chain	Res	Type
24	DA	430	A
24	DA	437	U
24	DA	442	G
24	DA	443	A
24	DA	444	C
24	DA	445	C
24	DA	446	G
24	DA	447	A
24	DA	449	A
24	DA	450	G
24	DA	451	U
24	DA	452	G
24	DA	455	C
24	DA	457	A
24	DA	459	U
24	DA	460	A
24	DA	461	C
24	DA	462	C
24	DA	475	C
24	DA	476	G
24	DA	477	A
24	DA	479	A
24	DA	480	A
24	DA	481	G
24	DA	482	A
24	DA	489	G
24	DA	490	C
24	DA	491	G
24	DA	492	A
24	DA	498	G
24	DA	502	A
24	DA	503	A
24	DA	504	A
24	DA	505	A
24	DA	506	G
24	DA	507	A
24	DA	509	C
24	DA	510	C
24	DA	511	U
24	DA	512	G
24	DA	527	C
24	DA	528	A

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Mol	Chain	Res	Type
24	DA	529	A
24	DA	530	G
24	DA	531	C
24	DA	532	A
24	DA	533	G
24	DA	534	U
24	DA	544	C
24	DA	546	U
24	DA	547	A
24	DA	548	G
24	DA	549	G
24	DA	550	C
24	DA	556	A
24	DA	563	A
24	DA	571	U
24	DA	572	A
24	DA	573	U
24	DA	575	A
24	DA	576	U
24	DA	586	A
24	DA	587	C
24	DA	589	U
24	DA	590	A
24	DA	603	A
24	DA	604	G
24	DA	605	G
24	DA	613	A
24	DA	614	A
24	DA	615	U
24	DA	616	A
24	DA	617	G
24	DA	620	G
24	DA	621	A
24	DA	622	G
24	DA	627	A
24	DA	638	G
24	DA	639	U
24	DA	645	C
24	DA	647	G
24	DA	648	G
24	DA	654	A
24	DA	655	A

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Mol	Chain	Res	Type
24	DA	656	G
24	DA	657	U
24	DA	658	U
24	DA	662	G
24	DA	669	G
24	DA	670	A
24	DA	671	C
24	DA	672	C
24	DA	673	C
24	DA	686	U
24	DA	687	C
24	DA	688	U
24	DA	699	A
24	DA	717	C
24	DA	718	A
24	DA	727	A
24	DA	728	G
24	DA	729	G
24	DA	730	A
24	DA	740	C
24	DA	741	U
24	DA	746	U
24	DA	747	U
24	DA	748	G
24	DA	752	A
24	DA	753	A
24	DA	754	U
24	DA	755	U
24	DA	757	G
24	DA	763	G
24	DA	764	A
24	DA	765	C
24	DA	766	U
24	DA	775	G
24	DA	776	G
24	DA	777	G
24	DA	778	G
24	DA	779	U
24	DA	781	A
24	DA	782	A
24	DA	783	A
24	DA	784	G

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Mol	Chain	Res	Type
24	DA	785	G
24	DA	789	A
24	DA	790	U
24	DA	791	C
24	DA	792	A
24	DA	793	A
24	DA	794	A
24	DA	795	C
24	DA	800	A
24	DA	801	G
24	DA	802	A
24	DA	803	U
24	DA	805	G
24	DA	806	C
24	DA	812	C
24	DA	819	A
24	DA	827	U
24	DA	828	U
24	DA	830	G
24	DA	831	G
24	DA	832	U
24	DA	846	U
24	DA	847	U
24	DA	858	G
24	DA	859	G
24	DA	861	A
24	DA	866	A
24	DA	867	C
24	DA	868	U
24	DA	874	G
24	DA	875	G
24	DA	877	A
24	DA	878	A
24	DA	902	C
24	DA	910	A
24	DA	912	C
24	DA	914	G
24	DA	915	C
24	DA	916	G
24	DA	921	C
24	DA	922	C
24	DA	932	U

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Mol	Chain	Res	Type
24	DA	933	A
24	DA	934	U
24	DA	941	A
24	DA	944	C
24	DA	946	C
24	DA	947	A
24	DA	958	U
24	DA	959	A
24	DA	960	A
24	DA	961	C
24	DA	962	G
24	DA	964	C
24	DA	973	A
24	DA	974	G
24	DA	975	A
24	DA	976	G
24	DA	983	A
24	DA	985	C
24	DA	990	A
24	DA	991	C
24	DA	995	C
24	DA	996	A
24	DA	1008	A
24	DA	1009	A
24	DA	1010	A
24	DA	1011	G
24	DA	1012	U
24	DA	1013	C
24	DA	1014	A
24	DA	1020	A
24	DA	1021	A
24	DA	1022	G
24	DA	1023	U
24	DA	1024	G
24	DA	1025	G
24	DA	1026	G
24	DA	1027	A
24	DA	1033	U
24	DA	1034	G
24	DA	1035	U
24	DA	1036	G
24	DA	1044	C

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Mol	Chain	Res	Type
24	DA	1045	C
24	DA	1046	A
24	DA	1047	G
24	DA	1049	C
24	DA	1050	A
24	DA	1056	G
24	DA	1057	A
24	DA	1060	U
24	DA	1061	U
24	DA	1062	G
24	DA	1063	G
24	DA	1064	C
24	DA	1066	U
24	DA	1068	G
24	DA	1070	A
24	DA	1071	G
24	DA	1072	C
24	DA	1073	A
24	DA	1074	G
24	DA	1075	C
24	DA	1076	C
24	DA	1079	C
24	DA	1080	A
24	DA	1083	U
24	DA	1086	A
24	DA	1088	A
24	DA	1089	A
24	DA	1090	A
24	DA	1091	G
24	DA	1097	U
24	DA	1100	C
24	DA	1111	A
24	DA	1112	G
24	DA	1113	U
24	DA	1114	C
24	DA	1115	G
24	DA	1126	A
24	DA	1127	A
24	DA	1128	G
24	DA	1129	A
24	DA	1130	U
24	DA	1131	G

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Mol	Chain	Res	Type
24	DA	1132	U
24	DA	1133	A
24	DA	1135	C
24	DA	1136	G
24	DA	1137	G
24	DA	1142	A
24	DA	1144	A
24	DA	1145	C
24	DA	1155	A
24	DA	1157	G
24	DA	1158	C
24	DA	1159	U
24	DA	1169	A
24	DA	1171	G
24	DA	1172	C
24	DA	1174	U
24	DA	1176	U
24	DA	1204	A
24	DA	1205	A
24	DA	1206	G
24	DA	1207	C
24	DA	1211	C
24	DA	1213	A
24	DA	1214	A
24	DA	1227	G
24	DA	1235	G
24	DA	1236	G
24	DA	1237	A
24	DA	1241	A
24	DA	1242	U
24	DA	1247	A
24	DA	1248	G
24	DA	1253	A
24	DA	1255	U
24	DA	1256	G
24	DA	1262	A
24	DA	1265	A
24	DA	1266	G
24	DA	1267	U
24	DA	1268	A
24	DA	1271	G
24	DA	1272	A

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Mol	Chain	Res	Type
24	DA	1273	U
24	DA	1274	A
24	DA	1275	A
24	DA	1276	A
24	DA	1277	G
24	DA	1278	C
24	DA	1286	A
24	DA	1290	C
24	DA	1291	C
24	DA	1300	G
24	DA	1301	A
24	DA	1303	G
24	DA	1304	A
24	DA	1311	G
24	DA	1313	U
24	DA	1314	C
24	DA	1315	C
24	DA	1321	A
24	DA	1324	G
24	DA	1325	U
24	DA	1326	U
24	DA	1327	A
24	DA	1328	A
24	DA	1329	U
24	DA	1330	C
24	DA	1331	G
24	DA	1332	G
24	DA	1333	G
24	DA	1334	G
24	DA	1336	A
24	DA	1337	G
24	DA	1340	U
24	DA	1341	G
24	DA	1342	A
24	DA	1345	C
24	DA	1349	C
24	DA	1365	A
24	DA	1374	G
24	DA	1376	C
24	DA	1379	U
24	DA	1381	G
24	DA	1382	G

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Mol	Chain	Res	Type
24	DA	1385	A
24	DA	1386	C
24	DA	1387	A
24	DA	1397	U
24	DA	1398	C
24	DA	1399	C
24	DA	1400	U
24	DA	1401	G
24	DA	1403	A
24	DA	1404	C
24	DA	1416	G
24	DA	1419	A
24	DA	1421	G
24	DA	1426	G
24	DA	1428	C
24	DA	1430	G
24	DA	1434	A
24	DA	1438	U
24	DA	1440	U
24	DA	1452	G
24	DA	1453	A
24	DA	1454	C
24	DA	1455	G
24	DA	1456	G
24	DA	1459	G
24	DA	1460	U
24	DA	1461	C
24	DA	1462	C
24	DA	1463	C
24	DA	1470	A
24	DA	1475	G
24	DA	1476	U
24	DA	1477	A
24	DA	1478	G
24	DA	1479	G
24	DA	1482	G
24	DA	1483	G
24	DA	1490	A
24	DA	1493	C
24	DA	1494	A
24	DA	1497	U
24	DA	1498	C

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Mol	Chain	Res	Type
24	DA	1499	C
24	DA	1501	G
24	DA	1507	C
24	DA	1508	A
24	DA	1509	A
24	DA	1510	G
24	DA	1511	G
24	DA	1512	C
24	DA	1520	U
24	DA	1522	A
24	DA	1523	U
24	DA	1524	G
24	DA	1528	A
24	DA	1531	C
24	DA	1532	A
24	DA	1534	U
24	DA	1535	A
24	DA	1536	C
24	DA	1537	G
24	DA	1538	G
24	DA	1539	U
24	DA	1540	G
24	DA	1555	G
24	DA	1556	C
24	DA	1558	C
24	DA	1559	U
24	DA	1560	G
24	DA	1561	C
24	DA	1562	U
24	DA	1565	C
24	DA	1566	A
24	DA	1567	G
24	DA	1569	A
24	DA	1583	A
24	DA	1584	U
24	DA	1585	C
24	DA	1586	A
24	DA	1598	A
24	DA	1600	C
24	DA	1603	A
24	DA	1607	C
24	DA	1608	A

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Mol	Chain	Res	Type
24	DA	1610	A
24	DA	1611	C
24	DA	1612	C
24	DA	1613	G
24	DA	1616	A
24	DA	1617	C
24	DA	1620	G
24	DA	1622	G
24	DA	1626	A
24	DA	1634	A
24	DA	1635	A
24	DA	1636	U
24	DA	1640	A
24	DA	1646	C
24	DA	1647	U
24	DA	1648	U
24	DA	1649	G
24	DA	1650	A
24	DA	1654	A
24	DA	1655	A
24	DA	1663	G
24	DA	1667	G
24	DA	1668	A
24	DA	1669	A
24	DA	1670	C
24	DA	1674	G
24	DA	1675	C
24	DA	1676	A
24	DA	1677	A
24	DA	1680	U
24	DA	1682	G
24	DA	1683	U
24	DA	1684	G
24	DA	1694	C
24	DA	1695	G
24	DA	1696	G
24	DA	1697	G
24	DA	1698	A
24	DA	1699	G
24	DA	1700	A
24	DA	1701	A
24	DA	1706	C

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Mol	Chain	Res	Type
24	DA	1707	G
24	DA	1713	A
24	DA	1714	U
24	DA	1715	G
24	DA	1716	U
24	DA	1717	A
24	DA	1718	G
24	DA	1722	A
24	DA	1723	G
24	DA	1728	C
24	DA	1729	U
24	DA	1730	C
24	DA	1731	G
24	DA	1732	C
24	DA	1733	G
24	DA	1734	G
24	DA	1735	A
24	DA	1739	A
24	DA	1740	G
24	DA	1758	U
24	DA	1759	A
24	DA	1760	C
24	DA	1761	C
24	DA	1764	C
24	DA	1773	A
24	DA	1774	C
24	DA	1776	G
24	DA	1780	A
24	DA	1781	U
24	DA	1782	U
24	DA	1783	A
24	DA	1784	A
24	DA	1785	A
24	DA	1786	A
24	DA	1788	C
24	DA	1789	A
24	DA	1800	C
24	DA	1802	A
24	DA	1808	A
24	DA	1809	A
24	DA	1810	A
24	DA	1811	G

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Mol	Chain	Res	Type
24	DA	1815	A
24	DA	1816	C
24	DA	1817	G
24	DA	1819	A
24	DA	1820	U
24	DA	1821	A
24	DA	1822	C
24	DA	1829	A
24	DA	1832	C
24	DA	1833	C
24	DA	1835	G
24	DA	1839	G
24	DA	1840	G
24	DA	1847	A
24	DA	1848	A
24	DA	1857	G
24	DA	1866	A
24	DA	1869	G
24	DA	1870	C
24	DA	1873	G
24	DA	1875	G
24	DA	1877	A
24	DA	1884	G
24	DA	1886	U
24	DA	1889	A
24	DA	1906	G
24	DA	1912	A
24	DA	1914	C
24	DA	1915	U
24	DA	1916	A
24	DA	1917	U
24	DA	1919	A
24	DA	1920	C
24	DA	1927	A
24	DA	1929	G
24	DA	1930	G
24	DA	1931	U
24	DA	1932	A
24	DA	1937	A
24	DA	1938	A
24	DA	1939	U
24	DA	1941	C

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Mol	Chain	Res	Type
24	DA	1942	C
24	DA	1943	U
24	DA	1944	U
24	DA	1945	G
24	DA	1946	U
24	DA	1954	G
24	DA	1955	U
24	DA	1956	U
24	DA	1957	C
24	DA	1963	U
24	DA	1964	G
24	DA	1965	C
24	DA	1966	A
24	DA	1967	C
24	DA	1968	G
24	DA	1970	A
24	DA	1971	U
24	DA	1972	G
24	DA	1980	G
24	DA	1981	A
24	DA	1982	U
24	DA	1983	G
24	DA	1991	U
24	DA	1993	U
24	DA	1994	C
24	DA	1996	C
24	DA	1997	C
24	DA	1998	A
24	DA	2018	G
24	DA	2020	A
24	DA	2022	U
24	DA	2023	C
24	DA	2024	G
24	DA	2030	A
24	DA	2031	A
24	DA	2032	G
24	DA	2033	A
24	DA	2034	U
24	DA	2035	G
24	DA	2036	C
24	DA	2037	A
24	DA	2038	G

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Mol	Chain	Res	Type
24	DA	2043	C
24	DA	2050	C
24	DA	2051	A
24	DA	2052	A
24	DA	2055	C
24	DA	2056	G
24	DA	2060	A
24	DA	2061	G
24	DA	2062	A
24	DA	2063	C
24	DA	2064	C
24	DA	2068	U
24	DA	2069	G
24	DA	2070	A
24	DA	2072	C
24	DA	2080	A
24	DA	2092	U
24	DA	2093	G
24	DA	2094	A
24	DA	2100	G
24	DA	2104	C
24	DA	2105	U
24	DA	2107	G
24	DA	2108	A
24	DA	2109	U
24	DA	2110	G
24	DA	2134	A
24	DA	2135	A
24	DA	2136	G
24	DA	2138	G
24	DA	2143	C
24	DA	2144	G
24	DA	2145	C
24	DA	2147	A
24	DA	2148	G
24	DA	2149	U
24	DA	2152	G
24	DA	2153	C
24	DA	2154	A
24	DA	2155	U
24	DA	2156	G
24	DA	2157	G

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Mol	Chain	Res	Type
24	DA	2180	U
24	DA	2181	U
24	DA	2183	A
24	DA	2187	U
24	DA	2190	G
24	DA	2191	A
24	DA	2192	U
24	DA	2198	A
24	DA	2199	A
24	DA	2200	C
24	DA	2204	G
24	DA	2210	U
24	DA	2211	A
24	DA	2212	A
24	DA	2213	U
24	DA	2214	C
24	DA	2215	C
24	DA	2216	G
24	DA	2226	C
24	DA	2227	A
24	DA	2238	G
24	DA	2239	G
24	DA	2240	U
24	DA	2241	A
24	DA	2249	U
24	DA	2250	G
24	DA	2251	G
24	DA	2252	G
24	DA	2259	U
24	DA	2260	C
24	DA	2261	C
24	DA	2266	A
24	DA	2267	A
24	DA	2268	A
24	DA	2275	C
24	DA	2279	G
24	DA	2283	C
24	DA	2284	A
24	DA	2286	G
24	DA	2288	A
24	DA	2289	G
24	DA	2290	G

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Mol	Chain	Res	Type
24	DA	2297	A
24	DA	2298	A
24	DA	2305	U
24	DA	2308	G
24	DA	2309	A
24	DA	2310	C
24	DA	2311	A
24	DA	2312	U
24	DA	2313	C
24	DA	2314	A
24	DA	2320	U
24	DA	2321	U
24	DA	2322	A
24	DA	2323	G
24	DA	2325	G
24	DA	2334	U
24	DA	2335	A
24	DA	2337	G
24	DA	2338	C
24	DA	2339	C
24	DA	2345	G
24	DA	2347	C
24	DA	2348	U
24	DA	2357	G
24	DA	2358	A
24	DA	2361	G
24	DA	2379	G
24	DA	2382	G
24	DA	2383	G
24	DA	2384	U
24	DA	2385	C
24	DA	2386	A
24	DA	2387	U
24	DA	2392	A
24	DA	2399	G
24	DA	2401	U
24	DA	2402	U
24	DA	2403	C
24	DA	2405	G
24	DA	2406	A
24	DA	2407	A
24	DA	2408	U

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Mol	Chain	Res	Type
24	DA	2409	G
24	DA	2410	G
24	DA	2424	C
24	DA	2425	A
24	DA	2426	A
24	DA	2427	C
24	DA	2428	G
24	DA	2429	G
24	DA	2430	A
24	DA	2431	U
24	DA	2435	A
24	DA	2439	A
24	DA	2440	C
24	DA	2441	U
24	DA	2447	G
24	DA	2448	A
24	DA	2450	A
24	DA	2457	U
24	DA	2459	A
24	DA	2460	U
24	DA	2461	A
24	DA	2468	A
24	DA	2475	C
24	DA	2476	A
24	DA	2490	G
24	DA	2491	U
24	DA	2492	U
24	DA	2493	U
24	DA	2494	G
24	DA	2498	C
24	DA	2499	C
24	DA	2500	U
24	DA	2502	G
24	DA	2503	A
24	DA	2504	U
24	DA	2505	G
24	DA	2506	U
24	DA	2517	C
24	DA	2518	A
24	DA	2519	U
24	DA	2520	C
24	DA	2521	C

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Mol	Chain	Res	Type
24	DA	2522	U
24	DA	2529	G
24	DA	2534	A
24	DA	2543	G
24	DA	2544	G
24	DA	2547	A
24	DA	2554	U
24	DA	2566	A
24	DA	2567	G
24	DA	2573	C
24	DA	2574	G
24	DA	2576	G
24	DA	2578	G
24	DA	2582	G
24	DA	2583	G
24	DA	2585	U
24	DA	2586	U
24	DA	2602	A
24	DA	2603	G
24	DA	2604	U
24	DA	2609	U
24	DA	2610	C
24	DA	2611	C
24	DA	2612	C
24	DA	2613	U
24	DA	2614	A
24	DA	2615	U
24	DA	2616	C
24	DA	2617	U
24	DA	2629	U
24	DA	2630	G
24	DA	2631	G
24	DA	2632	A
24	DA	2645	G
24	DA	2646	C
24	DA	2654	A
24	DA	2655	G
24	DA	2656	U
24	DA	2657	A
24	DA	2667	C
24	DA	2682	A
24	DA	2683	C

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Mol	Chain	Res	Type
24	DA	2689	U
24	DA	2690	U
24	DA	2691	C
24	DA	2692	G
24	DA	2713	U
24	DA	2714	G
24	DA	2715	C
24	DA	2718	G
24	DA	2726	A
24	DA	2727	A
24	DA	2728	U
24	DA	2739	U
24	DA	2748	A
24	DA	2751	G
24	DA	2752	C
24	DA	2753	A
24	DA	2756	U
24	DA	2757	A
24	DA	2758	A
24	DA	2760	C
24	DA	2765	A
24	DA	2766	A
24	DA	2777	G
24	DA	2778	A
24	DA	2779	U
24	DA	2781	A
24	DA	2782	G
24	DA	2791	G
24	DA	2796	U
24	DA	2799	A
24	DA	2800	A
24	DA	2801	G
24	DA	2808	G
24	DA	2820	A
24	DA	2826	A
24	DA	2833	U
24	DA	2834	G
24	DA	2835	A
24	DA	2836	U
24	DA	2837	A
24	DA	2838	G
24	DA	2848	G

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Mol	Chain	Res	Type
24	DA	2850	A
24	DA	2851	A
24	DA	2861	U
24	DA	2866	U
24	DA	2867	G
24	DA	2872	A
24	DA	2874	C
24	DA	2875	C
24	DA	2879	A
24	DA	2883	A
24	DA	2894	G
24	DA	2895	G
24	DA	2896	C
24	DA	2902	C
56	DB	12	C
56	DB	13	G
56	DB	15	A
56	DB	16	G
56	DB	17	C
56	DB	18	G
56	DB	24	G
56	DB	30	C
56	DB	35	C
56	DB	36	C
56	DB	40	U
56	DB	41	G
56	DB	42	C
56	DB	43	C
56	DB	44	G
56	DB	45	A
56	DB	46	A
56	DB	48	U
56	DB	57	A
56	DB	58	A
56	DB	63	C
56	DB	64	G
56	DB	87	U
56	DB	88	C
56	DB	89	U
56	DB	90	C
56	DB	91	C
56	DB	99	A

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Mol	Chain	Res	Type
56	DB	109	A

All (1517) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
21	AA	5	U
21	AA	9	G
21	AA	13	U
21	AA	14	U
21	AA	30	U
21	AA	32	A
21	AA	47	C
21	AA	51	A
21	AA	52	C
21	AA	60	A
21	AA	61	G
21	AA	64	G
21	AA	66	A
21	AA	70	U
21	AA	72	A
21	AA	73	C
21	AA	82	G
21	AA	84	U
21	AA	87	C
21	AA	90	C
21	AA	94	G
21	AA	95	C
21	AA	109	A
21	AA	110	C
21	AA	115	G
21	AA	116	A
21	AA	119	A
21	AA	121	U
21	AA	129	A
21	AA	130	A
21	AA	131	A
21	AA	132	C
21	AA	173	U
21	AA	174	A
21	AA	181	A
21	AA	184	G
21	AA	197	A

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Mol	Chain	Res	Type
21	AA	212	G
21	AA	213	G
21	AA	243	A
21	AA	245	U
21	AA	246	A
21	AA	247	G
21	AA	250	A
21	AA	252	U
21	AA	266	G
21	AA	267	C
21	AA	274	A
21	AA	275	G
21	AA	279	A
21	AA	305	G
21	AA	306	A
21	AA	315	A
21	AA	316	C
21	AA	327	A
21	AA	331	G
21	AA	344	A
21	AA	346	G
21	AA	351	G
21	AA	352	C
21	AA	353	A
21	AA	366	A
21	AA	368	U
21	AA	369	G
21	AA	372	C
21	AA	373	A
21	AA	388	G
21	AA	389	A
21	AA	411	A
21	AA	414	A
21	AA	422	C
21	AA	423	G
21	AA	428	G
21	AA	429	U
21	AA	430	A
21	AA	431	A
21	AA	451	A
21	AA	452	A
21	AA	453	G

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Mol	Chain	Res	Type
21	AA	465	A
21	AA	466	A
21	AA	467	U
21	AA	484	G
21	AA	486	U
21	AA	495	A
21	AA	496	A
21	AA	497	G
21	AA	499	A
21	AA	500	G
21	AA	508	U
21	AA	509	A
21	AA	510	A
21	AA	517	G
21	AA	519	C
21	AA	530	G
21	AA	533	A
21	AA	534	U
21	AA	536	C
21	AA	547	A
21	AA	548	G
21	AA	549	C
21	AA	559	A
21	AA	563	A
21	AA	564	C
21	AA	566	G
21	AA	567	G
21	AA	575	G
21	AA	577	G
21	AA	653	U
21	AA	654	G
21	AA	687	A
21	AA	688	G
21	AA	702	A
21	AA	704	A
21	AA	719	C
21	AA	721	G
21	AA	722	G
21	AA	724	G
21	AA	753	A
21	AA	754	C
21	AA	755	G

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Mol	Chain	Res	Type
21	AA	792	A
21	AA	794	A
21	AA	795	C
21	AA	812	G
21	AA	813	U
21	AA	821	G
21	AA	870	U
21	AA	874	G
21	AA	875	U
21	AA	884	U
21	AA	885	G
21	AA	889	A
21	AA	891	U
21	AA	913	A
21	AA	914	A
21	AA	934	C
21	AA	935	A
21	AA	960	U
21	AA	961	U
21	AA	965	U
21	AA	966	G
21	AA	968	A
21	AA	974	A
21	AA	976	G
21	AA	977	A
21	AA	978	A
21	AA	982	U
21	AA	984	C
21	AA	991	U
21	AA	994	A
21	AA	995	C
21	AA	1031	C
21	AA	1032	G
21	AA	1049	U
21	AA	1050	G
21	AA	1051	C
21	AA	1054	C
21	AA	1055	A
21	AA	1064	G
21	AA	1066	C
21	AA	1068	G
21	AA	1085	U

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Mol	Chain	Res	Type
21	AA	1087	G
21	AA	1101	A
21	AA	1102	A
21	AA	1103	C
21	AA	1125	U
21	AA	1127	G
21	AA	1129	C
21	AA	1131	G
21	AA	1137	C
21	AA	1138	G
21	AA	1140	C
21	AA	1141	C
21	AA	1153	G
21	AA	1157	A
21	AA	1158	C
21	AA	1160	G
21	AA	1168	U
21	AA	1169	A
21	AA	1182	G
21	AA	1184	G
21	AA	1192	C
21	AA	1196	A
21	AA	1197	A
21	AA	1201	A
21	AA	1202	U
21	AA	1212	U
21	AA	1215	G
21	AA	1224	U
21	AA	1228	C
21	AA	1239	A
21	AA	1241	G
21	AA	1257	A
21	AA	1258	G
21	AA	1282	C
21	AA	1285	A
21	AA	1287	A
21	AA	1288	A
21	AA	1297	G
21	AA	1303	C
21	AA	1319	A
21	AA	1320	C
21	AA	1321	U

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Mol	Chain	Res	Type
21	AA	1323	G
21	AA	1331	G
21	AA	1332	A
21	AA	1345	U
21	AA	1348	U
21	AA	1363	A
21	AA	1365	G
21	AA	1380	U
21	AA	1381	U
21	AA	1382	C
21	AA	1394	A
21	AA	1395	C
21	AA	1398	A
21	AA	1399	C
21	AA	1449	C
21	AA	1451	U
21	AA	1453	G
21	AA	1454	G
21	AA	1498	U
21	AA	1499	A
21	AA	1502	A
21	AA	1505	G
21	AA	1507	A
21	AA	1528	U
21	AA	1530	G
22	AV	27	G
23	AW	5	U
22	AX	27	G
24	BA	13	A
24	BA	27	G
24	BA	33	C
24	BA	35	G
24	BA	49	A
24	BA	52	A
24	BA	60	G
24	BA	61	C
24	BA	62	U
24	BA	63	A
24	BA	70	G
24	BA	73	A
24	BA	74	A
24	BA	75	G

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Mol	Chain	Res	Type
24	BA	83	A
24	BA	84	A
24	BA	85	G
24	BA	86	G
24	BA	91	A
24	BA	92	U
24	BA	100	U
24	BA	103	A
24	BA	119	A
24	BA	121	G
24	BA	125	A
24	BA	126	A
24	BA	137	U
24	BA	138	U
24	BA	139	U
24	BA	140	C
24	BA	141	G
24	BA	142	A
24	BA	162	U
24	BA	164	C
24	BA	177	G
24	BA	178	G
24	BA	196	A
24	BA	197	A
24	BA	199	A
24	BA	200	U
24	BA	204	A
24	BA	206	U
24	BA	215	G
24	BA	216	A
24	BA	221	A
24	BA	223	A
24	BA	227	A
24	BA	229	C
24	BA	232	G
24	BA	233	A
24	BA	241	A
24	BA	243	U
24	BA	249	C
24	BA	250	G
24	BA	265	A
24	BA	266	G

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Mol	Chain	Res	Type
24	BA	271	G
24	BA	272	A
24	BA	301	G
24	BA	302	C
24	BA	310	A
24	BA	312	G
24	BA	321	U
24	BA	324	A
24	BA	328	U
24	BA	329	G
24	BA	333	G
24	BA	345	A
24	BA	369	U
24	BA	370	G
24	BA	373	U
24	BA	386	G
24	BA	388	G
24	BA	390	U
24	BA	395	U
24	BA	404	A
24	BA	406	G
24	BA	411	G
24	BA	421	C
24	BA	434	U
24	BA	435	C
24	BA	436	C
24	BA	442	G
24	BA	446	G
24	BA	449	A
24	BA	454	A
24	BA	459	U
24	BA	460	A
24	BA	474	G
24	BA	475	C
24	BA	479	A
24	BA	480	A
24	BA	481	G
24	BA	482	A
24	BA	489	G
24	BA	491	G
24	BA	503	A
24	BA	505	A

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Mol	Chain	Res	Type
24	BA	506	G
24	BA	507	A
24	BA	508	A
24	BA	509	C
24	BA	512	G
24	BA	513	A
24	BA	527	C
24	BA	529	A
24	BA	530	G
24	BA	531	C
24	BA	533	G
24	BA	571	U
24	BA	572	A
24	BA	575	A
24	BA	587	C
24	BA	588	U
24	BA	603	A
24	BA	604	G
24	BA	614	A
24	BA	616	A
24	BA	620	G
24	BA	621	A
24	BA	627	A
24	BA	628	G
24	BA	637	A
24	BA	638	G
24	BA	645	C
24	BA	646	U
24	BA	652	U
24	BA	653	U
24	BA	654	A
24	BA	655	A
24	BA	656	G
24	BA	669	G
24	BA	671	C
24	BA	685	A
24	BA	687	C
24	BA	688	U
24	BA	704	G
24	BA	726	G
24	BA	727	A
24	BA	729	G

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Mol	Chain	Res	Type
24	BA	739	A
24	BA	746	U
24	BA	747	U
24	BA	752	A
24	BA	753	A
24	BA	762	U
24	BA	763	G
24	BA	764	A
24	BA	765	C
24	BA	774	G
24	BA	781	A
24	BA	788	A
24	BA	790	U
24	BA	794	A
24	BA	800	A
24	BA	802	A
24	BA	805	G
24	BA	806	C
24	BA	811	U
24	BA	812	C
24	BA	829	A
24	BA	858	G
24	BA	860	U
24	BA	865	C
24	BA	866	A
24	BA	913	U
24	BA	914	G
24	BA	915	C
24	BA	931	U
24	BA	933	A
24	BA	934	U
24	BA	945	A
24	BA	946	C
24	BA	957	C
24	BA	958	U
24	BA	959	A
24	BA	961	C
24	BA	962	G
24	BA	975	A
24	BA	984	A
24	BA	989	G
24	BA	990	A

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Mol	Chain	Res	Type
24	BA	995	C
24	BA	996	A
24	BA	1008	A
24	BA	1009	A
24	BA	1011	G
24	BA	1020	A
24	BA	1022	G
24	BA	1023	U
24	BA	1025	G
24	BA	1026	G
24	BA	1033	U
24	BA	1034	G
24	BA	1045	C
24	BA	1060	U
24	BA	1062	G
24	BA	1070	A
24	BA	1072	C
24	BA	1091	G
24	BA	1110	G
24	BA	1112	G
24	BA	1126	A
24	BA	1127	A
24	BA	1128	G
24	BA	1129	A
24	BA	1135	C
24	BA	1141	U
24	BA	1144	A
24	BA	1156	A
24	BA	1157	G
24	BA	1174	U
24	BA	1180	U
24	BA	1204	A
24	BA	1206	G
24	BA	1210	G
24	BA	1236	G
24	BA	1247	A
24	BA	1249	U
24	BA	1250	G
24	BA	1254	A
24	BA	1265	A
24	BA	1267	U
24	BA	1272	A

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Mol	Chain	Res	Type
24	BA	1274	A
24	BA	1275	A
24	BA	1276	A
24	BA	1286	A
24	BA	1287	A
24	BA	1289	C
24	BA	1300	G
24	BA	1303	G
24	BA	1311	G
24	BA	1324	G
24	BA	1326	U
24	BA	1329	U
24	BA	1330	C
24	BA	1332	G
24	BA	1333	G
24	BA	1340	U
24	BA	1343	G
24	BA	1378	A
24	BA	1379	U
24	BA	1385	A
24	BA	1386	C
24	BA	1396	U
24	BA	1398	C
24	BA	1427	A
24	BA	1429	G
24	BA	1451	C
24	BA	1458	U
24	BA	1459	G
24	BA	1461	C
24	BA	1475	G
24	BA	1476	U
24	BA	1490	A
24	BA	1491	G
24	BA	1495	A
24	BA	1497	U
24	BA	1498	C
24	BA	1499	C
24	BA	1508	A
24	BA	1509	A
24	BA	1510	G
24	BA	1522	A
24	BA	1535	A

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Mol	Chain	Res	Type
24	BA	1537	G
24	BA	1538	G
24	BA	1539	U
24	BA	1554	U
24	BA	1555	G
24	BA	1556	C
24	BA	1557	C
24	BA	1558	C
24	BA	1560	G
24	BA	1568	G
24	BA	1602	U
24	BA	1603	A
24	BA	1606	C
24	BA	1611	C
24	BA	1615	C
24	BA	1634	A
24	BA	1647	U
24	BA	1648	U
24	BA	1649	G
24	BA	1653	G
24	BA	1654	A
24	BA	1674	G
24	BA	1675	C
24	BA	1681	G
24	BA	1682	G
24	BA	1693	U
24	BA	1695	G
24	BA	1696	G
24	BA	1698	A
24	BA	1700	A
24	BA	1706	C
24	BA	1707	G
24	BA	1713	A
24	BA	1714	U
24	BA	1716	U
24	BA	1732	C
24	BA	1733	G
24	BA	1758	U
24	BA	1759	A
24	BA	1760	C
24	BA	1780	A
24	BA	1782	U

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Mol	Chain	Res	Type
24	BA	1784	A
24	BA	1785	A
24	BA	1786	A
24	BA	1787	A
24	BA	1799	G
24	BA	1808	A
24	BA	1809	A
24	BA	1815	A
24	BA	1816	C
24	BA	1817	G
24	BA	1821	A
24	BA	1828	G
24	BA	1829	A
24	BA	1838	C
24	BA	1839	G
24	BA	1857	G
24	BA	1858	A
24	BA	1865	U
24	BA	1866	A
24	BA	1870	C
24	BA	1871	A
24	BA	1884	G
24	BA	1885	A
24	BA	1900	A
24	BA	1913	A
24	BA	1914	C
24	BA	1918	A
24	BA	1919	A
24	BA	1929	G
24	BA	1931	U
24	BA	1936	A
24	BA	1941	C
24	BA	1942	C
24	BA	1943	U
24	BA	1945	G
24	BA	1954	G
24	BA	1956	U
24	BA	1962	C
24	BA	1964	G
24	BA	1965	C
24	BA	1966	A
24	BA	1967	C

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Mol	Chain	Res	Type
24	BA	1970	A
24	BA	1971	U
24	BA	1980	G
24	BA	1981	A
24	BA	1992	G
24	BA	1993	U
24	BA	1996	C
24	BA	1997	C
24	BA	2021	C
24	BA	2023	C
24	BA	2030	A
24	BA	2034	U
24	BA	2035	G
24	BA	2036	C
24	BA	2051	A
24	BA	2052	A
24	BA	2060	A
24	BA	2062	A
24	BA	2063	C
24	BA	2067	G
24	BA	2068	U
24	BA	2092	U
24	BA	2093	G
24	BA	2134	A
24	BA	2135	A
24	BA	2136	G
24	BA	2146	C
24	BA	2148	G
24	BA	2197	U
24	BA	2199	A
24	BA	2200	C
24	BA	2210	U
24	BA	2214	C
24	BA	2225	A
24	BA	2226	C
24	BA	2238	G
24	BA	2249	U
24	BA	2258	C
24	BA	2266	A
24	BA	2272	U
24	BA	2273	A
24	BA	2275	C

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Mol	Chain	Res	Type
24	BA	2282	G
24	BA	2283	C
24	BA	2286	G
24	BA	2287	A
24	BA	2296	U
24	BA	2297	A
24	BA	2307	G
24	BA	2309	A
24	BA	2319	G
24	BA	2321	U
24	BA	2326	C
24	BA	2327	A
24	BA	2333	A
24	BA	2335	A
24	BA	2336	A
24	BA	2344	U
24	BA	2347	C
24	BA	2382	G
24	BA	2383	G
24	BA	2384	U
24	BA	2385	C
24	BA	2391	G
24	BA	2406	A
24	BA	2407	A
24	BA	2423	U
24	BA	2424	C
24	BA	2425	A
24	BA	2427	C
24	BA	2428	G
24	BA	2439	A
24	BA	2447	G
24	BA	2450	A
24	BA	2458	G
24	BA	2459	A
24	BA	2468	A
24	BA	2490	G
24	BA	2492	U
24	BA	2497	A
24	BA	2498	C
24	BA	2503	A
24	BA	2504	U
24	BA	2517	C

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Mol	Chain	Res	Type
24	BA	2520	C
24	BA	2542	A
24	BA	2543	G
24	BA	2566	A
24	BA	2567	G
24	BA	2572	A
24	BA	2573	C
24	BA	2574	G
24	BA	2581	G
24	BA	2582	G
24	BA	2585	U
24	BA	2602	A
24	BA	2603	G
24	BA	2609	U
24	BA	2611	C
24	BA	2613	U
24	BA	2615	U
24	BA	2629	U
24	BA	2630	G
24	BA	2638	G
24	BA	2639	A
24	BA	2645	G
24	BA	2654	A
24	BA	2663	G
24	BA	2681	C
24	BA	2682	A
24	BA	2689	U
24	BA	2691	C
24	BA	2712	C
24	BA	2725	A
24	BA	2727	A
24	BA	2728	U
24	BA	2732	G
24	BA	2750	A
24	BA	2752	C
24	BA	2756	U
24	BA	2757	A
24	BA	2776	A
24	BA	2777	G
24	BA	2778	A
24	BA	2781	A
24	BA	2790	U

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Mol	Chain	Res	Type
24	BA	2791	G
24	BA	2792	A
24	BA	2797	U
24	BA	2799	A
24	BA	2800	A
24	BA	2808	G
24	BA	2809	A
24	BA	2820	A
24	BA	2833	U
24	BA	2835	A
24	BA	2836	U
24	BA	2848	G
24	BA	2850	A
24	BA	2866	U
24	BA	2868	A
24	BA	2873	A
24	BA	2879	A
24	BA	2880	C
24	BA	2893	A
24	BA	2894	G
24	BA	2895	G
25	BB	12	C
25	BB	13	G
25	BB	16	G
25	BB	24	G
25	BB	25	U
25	BB	37	C
25	BB	40	U
25	BB	42	C
25	BB	43	C
25	BB	44	G
25	BB	45	A
25	BB	52	A
25	BB	53	A
25	BB	56	G
25	BB	57	A
25	BB	66	A
25	BB	88	C
25	BB	89	U
25	BB	90	C
25	BB	91	C
25	BB	108	A

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Mol	Chain	Res	Type
25	BB	109	A
55	CA	6	G
55	CA	9	G
55	CA	13	U
55	CA	14	U
55	CA	30	U
55	CA	32	A
55	CA	47	C
55	CA	51	A
55	CA	52	C
55	CA	60	A
55	CA	61	G
55	CA	65	A
55	CA	66	A
55	CA	67	C
55	CA	70	U
55	CA	71	A
55	CA	72	A
55	CA	81	A
55	CA	82	G
55	CA	84	U
55	CA	86	G
55	CA	87	C
55	CA	89	U
55	CA	90	C
55	CA	91	U
55	CA	94	G
55	CA	95	C
55	CA	96	U
55	CA	109	A
55	CA	110	C
55	CA	115	G
55	CA	116	A
55	CA	119	A
55	CA	132	C
55	CA	173	U
55	CA	174	A
55	CA	181	A
55	CA	183	C
55	CA	197	A
55	CA	198	G
55	CA	199	A

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Mol	Chain	Res	Type
55	CA	210	C
55	CA	211	G
55	CA	212	G
55	CA	243	A
55	CA	245	U
55	CA	247	G
55	CA	248	C
55	CA	251	G
55	CA	252	U
55	CA	253	A
55	CA	274	A
55	CA	275	G
55	CA	276	G
55	CA	279	A
55	CA	282	A
55	CA	317	U
55	CA	327	A
55	CA	328	C
55	CA	330	C
55	CA	331	G
55	CA	344	A
55	CA	347	G
55	CA	348	G
55	CA	351	G
55	CA	352	C
55	CA	353	A
55	CA	366	A
55	CA	369	G
55	CA	372	C
55	CA	373	A
55	CA	381	C
55	CA	382	A
55	CA	383	A
55	CA	388	G
55	CA	411	A
55	CA	414	A
55	CA	421	U
55	CA	423	G
55	CA	424	G
55	CA	428	G
55	CA	429	U
55	CA	430	A

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Mol	Chain	Res	Type
55	CA	439	U
55	CA	451	A
55	CA	452	A
55	CA	453	G
55	CA	460	A
55	CA	462	G
55	CA	463	U
55	CA	464	U
55	CA	481	G
55	CA	482	A
55	CA	484	G
55	CA	486	U
55	CA	495	A
55	CA	496	A
55	CA	497	G
55	CA	499	A
55	CA	500	G
55	CA	508	U
55	CA	509	A
55	CA	510	A
55	CA	512	U
55	CA	513	C
55	CA	517	G
55	CA	519	C
55	CA	520	A
55	CA	531	U
55	CA	534	U
55	CA	536	C
55	CA	537	G
55	CA	547	A
55	CA	548	G
55	CA	559	A
55	CA	564	C
55	CA	566	G
55	CA	567	G
55	CA	575	G
55	CA	577	G
55	CA	595	A
55	CA	596	A
55	CA	641	U
55	CA	643	C
55	CA	652	U

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Mol	Chain	Res	Type
55	CA	654	G
55	CA	686	U
55	CA	688	G
55	CA	702	A
55	CA	704	A
55	CA	717	U
55	CA	721	G
55	CA	722	G
55	CA	723	U
55	CA	724	G
55	CA	735	C
55	CA	752	G
55	CA	754	C
55	CA	755	G
55	CA	792	A
55	CA	794	A
55	CA	802	A
55	CA	803	G
55	CA	815	A
55	CA	816	A
55	CA	817	C
55	CA	821	G
55	CA	870	U
55	CA	874	G
55	CA	875	U
55	CA	876	C
55	CA	884	U
55	CA	885	G
55	CA	890	G
55	CA	891	U
55	CA	913	A
55	CA	914	A
55	CA	934	C
55	CA	935	A
55	CA	960	U
55	CA	961	U
55	CA	968	A
55	CA	970	C
55	CA	974	A
55	CA	976	G
55	CA	977	A
55	CA	982	U

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Mol	Chain	Res	Type
55	CA	983	A
55	CA	984	C
55	CA	992	U
55	CA	995	C
55	CA	1045	C
55	CA	1049	U
55	CA	1051	C
55	CA	1053	G
55	CA	1054	C
55	CA	1055	A
55	CA	1064	G
55	CA	1066	C
55	CA	1068	G
55	CA	1085	U
55	CA	1086	U
55	CA	1101	A
55	CA	1102	A
55	CA	1124	G
55	CA	1127	G
55	CA	1128	C
55	CA	1139	G
55	CA	1140	C
55	CA	1141	C
55	CA	1142	G
55	CA	1157	A
55	CA	1158	C
55	CA	1160	G
55	CA	1161	C
55	CA	1162	C
55	CA	1170	A
55	CA	1181	G
55	CA	1184	G
55	CA	1201	A
55	CA	1202	U
55	CA	1213	A
55	CA	1215	G
55	CA	1224	U
55	CA	1228	C
55	CA	1240	U
55	CA	1241	G
55	CA	1242	G
55	CA	1278	G

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Mol	Chain	Res	Type
55	CA	1282	C
55	CA	1283	U
55	CA	1285	A
55	CA	1296	C
55	CA	1299	A
55	CA	1300	G
55	CA	1301	U
55	CA	1302	C
55	CA	1338	G
55	CA	1345	U
55	CA	1348	U
55	CA	1364	U
55	CA	1365	G
55	CA	1366	C
55	CA	1380	U
55	CA	1381	U
55	CA	1382	C
55	CA	1394	A
55	CA	1395	C
55	CA	1397	C
55	CA	1399	C
55	CA	1442	G
55	CA	1447	A
55	CA	1448	C
55	CA	1449	C
55	CA	1452	C
55	CA	1453	G
55	CA	1454	G
55	CA	1455	G
55	CA	1498	U
55	CA	1499	A
55	CA	1502	A
55	CA	1505	G
55	CA	1507	A
55	CA	1528	U
55	CA	1530	G
22	CV	27	G
23	CW	5	U
24	DA	13	A
24	DA	14	A
24	DA	15	G
24	DA	33	C

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Mol	Chain	Res	Type
24	DA	35	G
24	DA	50	U
24	DA	52	A
24	DA	61	C
24	DA	70	G
24	DA	73	A
24	DA	74	A
24	DA	75	G
24	DA	76	C
24	DA	84	A
24	DA	85	G
24	DA	86	G
24	DA	87	U
24	DA	91	A
24	DA	92	U
24	DA	93	G
24	DA	100	U
24	DA	103	A
24	DA	104	A
24	DA	119	A
24	DA	121	G
24	DA	122	G
24	DA	125	A
24	DA	128	C
24	DA	140	C
24	DA	141	G
24	DA	142	A
24	DA	164	C
24	DA	179	C
24	DA	196	A
24	DA	197	A
24	DA	204	A
24	DA	206	U
24	DA	207	A
24	DA	215	G
24	DA	216	A
24	DA	222	A
24	DA	223	A
24	DA	224	U
24	DA	225	C
24	DA	227	A
24	DA	229	C

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Mol	Chain	Res	Type
24	DA	230	G
24	DA	232	G
24	DA	234	U
24	DA	241	A
24	DA	243	U
24	DA	244	A
24	DA	249	C
24	DA	250	G
24	DA	251	A
24	DA	271	G
24	DA	272	A
24	DA	301	G
24	DA	302	C
24	DA	303	G
24	DA	311	A
24	DA	312	G
24	DA	321	U
24	DA	324	A
24	DA	325	G
24	DA	329	G
24	DA	333	G
24	DA	334	C
24	DA	364	C
24	DA	370	G
24	DA	374	A
24	DA	386	G
24	DA	388	G
24	DA	389	G
24	DA	390	U
24	DA	391	A
24	DA	395	U
24	DA	396	G
24	DA	397	U
24	DA	404	A
24	DA	406	G
24	DA	411	G
24	DA	412	A
24	DA	421	C
24	DA	422	A
24	DA	423	A
24	DA	436	C
24	DA	437	U

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Mol	Chain	Res	Type
24	DA	442	G
24	DA	444	C
24	DA	445	C
24	DA	446	G
24	DA	449	A
24	DA	454	A
24	DA	459	U
24	DA	474	G
24	DA	475	C
24	DA	476	G
24	DA	479	A
24	DA	480	A
24	DA	482	A
24	DA	483	A
24	DA	489	G
24	DA	491	G
24	DA	503	A
24	DA	505	A
24	DA	506	G
24	DA	509	C
24	DA	510	C
24	DA	527	C
24	DA	528	A
24	DA	529	A
24	DA	530	G
24	DA	531	C
24	DA	533	G
24	DA	571	U
24	DA	572	A
24	DA	575	A
24	DA	588	U
24	DA	589	U
24	DA	603	A
24	DA	604	G
24	DA	605	G
24	DA	616	A
24	DA	620	G
24	DA	621	A
24	DA	637	A
24	DA	638	G
24	DA	647	G
24	DA	655	A

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Mol	Chain	Res	Type
24	DA	656	G
24	DA	657	U
24	DA	670	A
24	DA	672	C
24	DA	685	A
24	DA	687	C
24	DA	726	G
24	DA	730	A
24	DA	752	A
24	DA	753	A
24	DA	754	U
24	DA	762	U
24	DA	763	G
24	DA	765	C
24	DA	766	U
24	DA	775	G
24	DA	777	G
24	DA	778	G
24	DA	782	A
24	DA	783	A
24	DA	784	G
24	DA	785	G
24	DA	789	A
24	DA	791	C
24	DA	792	A
24	DA	794	A
24	DA	800	A
24	DA	802	A
24	DA	830	G
24	DA	831	G
24	DA	858	G
24	DA	860	U
24	DA	865	C
24	DA	867	C
24	DA	913	U
24	DA	915	C
24	DA	933	A
24	DA	945	A
24	DA	946	C
24	DA	947	A
24	DA	957	C
24	DA	958	U

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Mol	Chain	Res	Type
24	DA	959	A
24	DA	963	U
24	DA	973	A
24	DA	975	A
24	DA	984	A
24	DA	989	G
24	DA	990	A
24	DA	991	C
24	DA	1008	A
24	DA	1009	A
24	DA	1010	A
24	DA	1011	G
24	DA	1013	C
24	DA	1020	A
24	DA	1021	A
24	DA	1022	G
24	DA	1023	U
24	DA	1026	G
24	DA	1027	A
24	DA	1033	U
24	DA	1034	G
24	DA	1035	U
24	DA	1046	A
24	DA	1048	A
24	DA	1049	C
24	DA	1060	U
24	DA	1061	U
24	DA	1062	G
24	DA	1069	A
24	DA	1071	G
24	DA	1072	C
24	DA	1073	A
24	DA	1075	C
24	DA	1076	C
24	DA	1078	U
24	DA	1079	C
24	DA	1089	A
24	DA	1090	A
24	DA	1110	G
24	DA	1112	G
24	DA	1113	U
24	DA	1126	A

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Mol	Chain	Res	Type
24	DA	1129	A
24	DA	1130	U
24	DA	1131	G
24	DA	1135	C
24	DA	1136	G
24	DA	1141	U
24	DA	1144	A
24	DA	1156	A
24	DA	1157	G
24	DA	1158	C
24	DA	1204	A
24	DA	1206	G
24	DA	1210	G
24	DA	1213	A
24	DA	1236	G
24	DA	1247	A
24	DA	1249	U
24	DA	1256	G
24	DA	1265	A
24	DA	1267	U
24	DA	1272	A
24	DA	1274	A
24	DA	1275	A
24	DA	1276	A
24	DA	1277	G
24	DA	1286	A
24	DA	1289	C
24	DA	1290	C
24	DA	1300	G
24	DA	1303	G
24	DA	1312	U
24	DA	1313	U
24	DA	1314	C
24	DA	1325	U
24	DA	1326	U
24	DA	1327	A
24	DA	1330	C
24	DA	1333	G
24	DA	1340	U
24	DA	1341	G
24	DA	1345	C
24	DA	1385	A

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Mol	Chain	Res	Type
24	DA	1386	C
24	DA	1395	A
24	DA	1399	C
24	DA	1427	A
24	DA	1429	G
24	DA	1451	C
24	DA	1455	G
24	DA	1460	U
24	DA	1462	C
24	DA	1475	G
24	DA	1476	U
24	DA	1477	A
24	DA	1478	G
24	DA	1497	U
24	DA	1498	C
24	DA	1508	A
24	DA	1510	G
24	DA	1511	G
24	DA	1536	C
24	DA	1537	G
24	DA	1539	U
24	DA	1554	U
24	DA	1555	G
24	DA	1556	C
24	DA	1558	C
24	DA	1560	G
24	DA	1561	C
24	DA	1566	A
24	DA	1568	G
24	DA	1569	A
24	DA	1607	C
24	DA	1611	C
24	DA	1612	C
24	DA	1616	A
24	DA	1619	G
24	DA	1634	A
24	DA	1635	A
24	DA	1647	U
24	DA	1648	U
24	DA	1649	G
24	DA	1654	A
24	DA	1667	G

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Mol	Chain	Res	Type
24	DA	1669	A
24	DA	1676	A
24	DA	1681	G
24	DA	1682	G
24	DA	1683	U
24	DA	1693	U
24	DA	1695	G
24	DA	1696	G
24	DA	1698	A
24	DA	1700	A
24	DA	1713	A
24	DA	1716	U
24	DA	1717	A
24	DA	1722	A
24	DA	1731	G
24	DA	1733	G
24	DA	1734	G
24	DA	1738	G
24	DA	1739	A
24	DA	1758	U
24	DA	1759	A
24	DA	1760	C
24	DA	1780	A
24	DA	1783	A
24	DA	1784	A
24	DA	1785	A
24	DA	1786	A
24	DA	1787	A
24	DA	1788	C
24	DA	1799	G
24	DA	1802	A
24	DA	1808	A
24	DA	1809	A
24	DA	1810	A
24	DA	1815	A
24	DA	1816	C
24	DA	1819	A
24	DA	1838	C
24	DA	1839	G
24	DA	1857	G
24	DA	1913	A
24	DA	1914	C

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Mol	Chain	Res	Type
24	DA	1915	U
24	DA	1916	A
24	DA	1929	G
24	DA	1931	U
24	DA	1937	A
24	DA	1941	C
24	DA	1942	C
24	DA	1943	U
24	DA	1945	G
24	DA	1954	G
24	DA	1956	U
24	DA	1962	C
24	DA	1963	U
24	DA	1964	G
24	DA	1965	C
24	DA	1967	C
24	DA	1970	A
24	DA	1971	U
24	DA	1972	G
24	DA	1980	G
24	DA	1981	A
24	DA	1982	U
24	DA	1992	G
24	DA	1993	U
24	DA	1996	C
24	DA	1997	C
24	DA	2021	C
24	DA	2023	C
24	DA	2024	G
24	DA	2031	A
24	DA	2034	U
24	DA	2036	C
24	DA	2037	A
24	DA	2051	A
24	DA	2061	G
24	DA	2063	C
24	DA	2064	C
24	DA	2067	G
24	DA	2068	U
24	DA	2069	G
24	DA	2092	U
24	DA	2093	G

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Mol	Chain	Res	Type
24	DA	2135	A
24	DA	2148	G
24	DA	2179	C
24	DA	2198	A
24	DA	2199	A
24	DA	2210	U
24	DA	2214	C
24	DA	2215	C
24	DA	2225	A
24	DA	2226	C
24	DA	2238	G
24	DA	2239	G
24	DA	2240	U
24	DA	2249	U
24	DA	2251	G
24	DA	2258	C
24	DA	2259	U
24	DA	2260	C
24	DA	2266	A
24	DA	2267	A
24	DA	2282	G
24	DA	2283	C
24	DA	2288	A
24	DA	2289	G
24	DA	2296	U
24	DA	2297	A
24	DA	2310	C
24	DA	2311	A
24	DA	2313	C
24	DA	2322	A
24	DA	2334	U
24	DA	2336	A
24	DA	2337	G
24	DA	2338	C
24	DA	2344	U
24	DA	2347	C
24	DA	2382	G
24	DA	2383	G
24	DA	2386	A
24	DA	2391	G
24	DA	2401	U
24	DA	2402	U

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Mol	Chain	Res	Type
24	DA	2403	C
24	DA	2406	A
24	DA	2408	U
24	DA	2425	A
24	DA	2427	C
24	DA	2428	G
24	DA	2439	A
24	DA	2440	C
24	DA	2447	G
24	DA	2450	A
24	DA	2458	G
24	DA	2459	A
24	DA	2460	U
24	DA	2490	G
24	DA	2492	U
24	DA	2493	U
24	DA	2497	A
24	DA	2498	C
24	DA	2499	C
24	DA	2503	A
24	DA	2504	U
24	DA	2505	G
24	DA	2518	A
24	DA	2520	C
24	DA	2521	C
24	DA	2542	A
24	DA	2543	G
24	DA	2544	G
24	DA	2566	A
24	DA	2572	A
24	DA	2573	C
24	DA	2581	G
24	DA	2582	G
24	DA	2585	U
24	DA	2586	U
24	DA	2601	C
24	DA	2603	G
24	DA	2610	C
24	DA	2611	C
24	DA	2613	U
24	DA	2615	U
24	DA	2616	C

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Mol	Chain	Res	Type
24	DA	2629	U
24	DA	2630	G
24	DA	2645	G
24	DA	2654	A
24	DA	2656	U
24	DA	2657	A
24	DA	2681	C
24	DA	2682	A
24	DA	2689	U
24	DA	2691	C
24	DA	2713	U
24	DA	2714	G
24	DA	2726	A
24	DA	2727	A
24	DA	2728	U
24	DA	2750	A
24	DA	2752	C
24	DA	2756	U
24	DA	2757	A
24	DA	2776	A
24	DA	2777	G
24	DA	2778	A
24	DA	2781	A
24	DA	2782	G
24	DA	2798	U
24	DA	2800	A
24	DA	2837	A
24	DA	2848	G
24	DA	2850	A
24	DA	2866	U
24	DA	2867	G
24	DA	2873	A
24	DA	2874	C
24	DA	2875	C
24	DA	2893	A
24	DA	2894	G
24	DA	2895	G
24	DA	2896	C
24	DA	2902	C
56	DB	12	C
56	DB	13	G
56	DB	16	G

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Mol	Chain	Res	Type
56	DB	17	C
56	DB	40	U
56	DB	41	G
56	DB	42	C
56	DB	43	C
56	DB	45	A
56	DB	56	G
56	DB	58	A
56	DB	87	U
56	DB	90	C

5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 365 ligands modelled in this entry, 365 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AB	218/241 (90%)	0.81	31 (14%) 7 10	170, 274, 284, 290	0
1	CB	218/241 (90%)	0.25	9 (4%) 42 31	159, 222, 233, 241	0
2	AC	206/233 (88%)	-0.35	0 100 100	133, 162, 187, 202	0
2	CC	206/233 (88%)	0.03	1 (0%) 87 72	140, 172, 212, 228	0
3	AD	205/206 (99%)	-0.04	4 (1%) 64 47	122, 157, 195, 218	0
3	CD	205/206 (99%)	0.06	6 (2%) 54 38	112, 131, 152, 165	0
4	AE	150/167 (89%)	1.60	43 (28%) 1 3	108, 211, 223, 227	0
4	CE	150/167 (89%)	0.49	10 (6%) 25 21	100, 156, 171, 176	0
5	AF	100/135 (74%)	-0.01	2 (2%) 64 47	197, 229, 250, 260	0
5	CF	100/135 (74%)	-0.02	3 (3%) 52 38	164, 186, 203, 209	0
6	AG	151/179 (84%)	-0.05	3 (1%) 64 47	158, 192, 220, 237	0
6	CG	150/179 (83%)	0.59	11 (7%) 22 19	142, 194, 228, 244	0
7	AH	129/130 (99%)	-0.18	0 100 100	127, 155, 181, 193	0
7	CH	129/130 (99%)	0.01	1 (0%) 82 66	152, 177, 195, 203	0
8	AI	127/130 (97%)	0.36	7 (5%) 32 24	142, 193, 220, 233	0
8	CI	127/130 (97%)	0.53	12 (9%) 15 14	155, 195, 223, 232	0
9	AJ	98/103 (95%)	0.32	5 (5%) 34 26	135, 181, 216, 239	0
9	CJ	98/103 (95%)	0.34	5 (5%) 34 26	155, 196, 230, 240	0
10	AK	117/129 (90%)	-0.26	1 (0%) 81 64	132, 195, 243, 254	0
10	CK	117/129 (90%)	-0.05	1 (0%) 81 64	125, 155, 181, 196	0
11	AL	123/124 (99%)	0.07	5 (4%) 42 31	89, 106, 131, 150	0
11	CL	123/124 (99%)	0.32	5 (4%) 42 31	117, 139, 155, 161	0
12	AM	114/118 (96%)	0.05	2 (1%) 67 49	157, 219, 252, 264	0
12	CM	113/118 (95%)	0.44	7 (6%) 28 22	195, 269, 309, 322	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AN	96/101 (95%)	0.42	6 (6%) 27 22	142, 165, 217, 227	0
13	CN	95/101 (94%)	0.66	6 (6%) 27 22	155, 207, 265, 284	0
14	AO	88/89 (98%)	-0.17	1 (1%) 77 59	138, 168, 199, 219	0
14	CO	88/89 (98%)	0.05	3 (3%) 48 35	142, 174, 193, 201	0
15	AP	82/82 (100%)	0.01	1 (1%) 76 57	117, 144, 178, 192	0
15	CP	80/82 (97%)	0.47	4 (5%) 35 27	151, 180, 203, 207	0
16	AQ	80/84 (95%)	0.16	1 (1%) 74 55	90, 113, 135, 144	0
16	CQ	80/84 (95%)	0.02	0 100 100	99, 123, 145, 163	0
17	AR	55/75 (73%)	-0.06	0 100 100	175, 198, 219, 234	0
17	CR	55/75 (73%)	-0.16	0 100 100	148, 165, 180, 187	0
18	AS	79/92 (85%)	0.07	2 (2%) 58 42	171, 203, 244, 257	0
18	CS	79/92 (85%)	0.40	7 (8%) 17 15	223, 265, 319, 334	0
19	AT	85/87 (97%)	0.06	3 (3%) 47 34	114, 141, 164, 180	0
19	CT	85/87 (97%)	0.76	11 (12%) 9 11	194, 242, 275, 283	0
20	AU	51/71 (71%)	0.48	5 (9%) 14 14	133, 168, 248, 252	0
20	CU	51/71 (71%)	0.25	4 (7%) 20 17	126, 150, 183, 193	0
21	AA	1533/1533 (100%)	-0.33	18 (1%) 76 57	76, 150, 233, 282	0
22	AV	17/17 (100%)	0.08	0 100 100	142, 154, 182, 203	0
22	AX	17/17 (100%)	-0.53	0 100 100	139, 144, 186, 195	0
22	CV	17/17 (100%)	0.05	1 (5%) 29 23	158, 162, 193, 208	0
22	CX	17/17 (100%)	0.15	0 100 100	187, 193, 221, 222	0
23	AW	6/6 (100%)	0.41	0 100 100	136, 138, 143, 152	0
23	CW	6/6 (100%)	0.41	0 100 100	160, 160, 168, 179	0
24	BA	2854/2903 (98%)	-0.53	33 (1%) 76 57	52, 81, 194, 355	0
24	DA	2841/2903 (97%)	0.52	126 (4%) 39 29	132, 200, 303, 402	0
25	BB	118/118 (100%)	-0.53	0 100 100	66, 101, 133, 171	0
26	BC	271/273 (99%)	0.02	8 (2%) 52 38	60, 99, 129, 161	0
26	DC	271/273 (99%)	0.76	35 (12%) 9 11	133, 157, 179, 190	0
27	BD	209/209 (100%)	-0.25	0 100 100	55, 75, 114, 129	0
27	DD	209/209 (100%)	0.85	29 (13%) 7 10	147, 200, 232, 242	0
28	BE	201/201 (100%)	-0.31	0 100 100	56, 96, 129, 157	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	DE	201/201 (100%)	0.93	38 (18%) 4 6	154, 282, 335, 351	0
29	BF	177/179 (98%)	0.12	3 (1%) 69 50	120, 166, 201, 215	0
29	DF	178/179 (99%)	0.16	5 (2%) 55 40	307, 314, 321, 323	0
30	BG	176/177 (99%)	-0.25	1 (0%) 85 70	83, 108, 134, 152	0
30	DG	176/177 (99%)	0.23	6 (3%) 48 35	186, 221, 245, 259	0
31	BH	149/149 (100%)	0.26	3 (2%) 64 47	110, 239, 259, 264	0
31	DH	149/149 (100%)	0.66	16 (10%) 12 13	186, 240, 256, 260	0
32	BI	141/142 (99%)	0.48	6 (4%) 40 30	243, 307, 359, 366	0
32	DI	141/142 (99%)	0.28	4 (2%) 55 40	367, 394, 412, 419	0
33	BJ	142/142 (100%)	-0.23	0 100 100	59, 76, 102, 132	0
33	DJ	142/142 (100%)	0.65	13 (9%) 16 15	161, 201, 223, 233	0
34	BK	122/123 (99%)	-0.26	4 (3%) 49 35	55, 73, 113, 169	0
34	DK	122/123 (99%)	0.18	4 (3%) 49 35	151, 171, 189, 198	0
35	BL	143/144 (99%)	-0.02	4 (2%) 55 40	55, 93, 124, 136	0
35	DL	143/144 (99%)	1.23	35 (24%) 2 3	166, 240, 288, 297	0
36	BM	136/136 (100%)	-0.26	0 100 100	58, 81, 111, 138	0
36	DM	136/136 (100%)	0.43	8 (5%) 29 23	144, 181, 210, 232	0
37	BN	120/127 (94%)	-0.21	1 (0%) 82 66	61, 76, 96, 141	0
37	DN	120/127 (94%)	0.98	22 (18%) 4 6	183, 222, 252, 266	0
38	BO	116/117 (99%)	-0.15	0 100 100	96, 105, 123, 147	0
38	DO	116/117 (99%)	0.48	5 (4%) 40 30	286, 293, 297, 303	0
39	BP	114/115 (99%)	-0.42	0 100 100	64, 81, 119, 134	0
39	DP	114/115 (99%)	0.56	7 (6%) 28 22	179, 203, 220, 230	0
40	BQ	117/118 (99%)	-0.24	0 100 100	56, 77, 99, 120	0
40	DQ	117/118 (99%)	1.14	23 (19%) 3 6	184, 211, 240, 247	0
41	BR	103/103 (100%)	-0.16	1 (0%) 79 62	55, 87, 114, 131	0
41	DR	103/103 (100%)	0.88	18 (17%) 5 7	173, 249, 271, 277	0
42	BS	110/110 (100%)	-0.34	2 (1%) 67 49	55, 70, 105, 159	0
42	DS	110/110 (100%)	1.07	20 (18%) 4 7	159, 223, 269, 278	0
43	BT	93/100 (93%)	0.43	6 (6%) 26 21	65, 105, 142, 151	0
43	DT	93/100 (93%)	0.95	17 (18%) 4 6	206, 253, 285, 294	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BU	102/104 (98%)	0.20	5 (4%) 36 27	89, 114, 136, 158	0
44	DU	102/104 (98%)	0.98	12 (11%) 10 12	272, 312, 355, 358	0
45	BV	94/94 (100%)	-0.33	0 100 100	71, 90, 116, 126	0
45	DV	94/94 (100%)	0.36	4 (4%) 40 30	228, 241, 252, 254	0
46	BW	79/85 (92%)	0.40	8 (10%) 14 14	68, 86, 136, 156	0
46	DW	79/85 (92%)	0.77	10 (12%) 9 11	156, 216, 233, 252	0
47	BX	77/78 (98%)	-0.03	0 100 100	65, 101, 124, 137	0
47	DX	77/78 (98%)	1.19	15 (19%) 4 6	157, 185, 209, 224	0
48	BY	63/63 (100%)	-0.04	2 (3%) 50 36	101, 123, 149, 159	0
48	DY	63/63 (100%)	1.27	14 (22%) 3 4	264, 288, 316, 329	0
49	BZ	58/59 (98%)	-0.10	0 100 100	64, 74, 111, 141	0
49	DZ	58/59 (98%)	0.91	6 (10%) 13 13	188, 215, 238, 248	0
50	B0	56/57 (98%)	-0.47	0 100 100	54, 77, 113, 132	0
50	D0	56/57 (98%)	0.66	5 (8%) 17 15	157, 230, 260, 265	0
51	B1	50/55 (90%)	-0.29	0 100 100	76, 100, 118, 132	0
51	D1	50/55 (90%)	0.42	4 (8%) 20 16	174, 207, 228, 238	0
52	B2	46/46 (100%)	-0.09	1 (2%) 62 44	62, 75, 103, 137	0
52	D2	46/46 (100%)	1.56	15 (32%) 1 2	155, 182, 198, 202	0
53	B3	64/65 (98%)	-0.04	0 100 100	58, 73, 96, 120	0
53	D3	64/65 (98%)	1.99	30 (46%) 0 1	180, 194, 211, 215	0
54	B4	38/38 (100%)	0.06	1 (2%) 57 41	69, 84, 110, 120	0
54	D4	38/38 (100%)	1.95	15 (39%) 1 1	171, 187, 198, 203	0
55	CA	1530/1530 (100%)	0.11	32 (2%) 63 45	109, 171, 272, 362	0
56	DB	117/117 (100%)	0.34	1 (0%) 81 64	219, 294, 300, 302	0
All	All	20511/21154 (96%)	0.14	930 (4%) 39 29	52, 166, 293, 419	0

All (930) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
4	AE	114	LEU	10.8
8	CI	129	ARG	7.7
11	CL	123	ALA	7.7
4	AE	130	THR	7.4
39	DP	109	ILE	7.4

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Mol	Chain	Res	Type	RSRZ
48	DY	13	GLU	7.4
42	DS	97	LEU	7.4
47	DX	19	HIS	7.3
11	AL	123	ALA	7.3
47	DX	17	ARG	6.8
35	DL	72	ALA	6.7
8	AI	129	ARG	6.6
28	DE	89	PRO	6.5
4	AE	106	ALA	6.4
4	AE	113	VAL	6.3
24	DA	947	A	6.3
28	DE	90	GLN	6.3
40	DQ	3	VAL	6.3
27	DD	26	VAL	6.2
11	AL	24	GLU	6.2
27	DD	143	PRO	6.2
47	DX	12	VAL	6.1
35	DL	74	THR	6.1
24	DA	587	C	6.1
35	DL	31	GLY	5.8
53	D3	47	ALA	5.7
34	BK	71	ARG	5.7
6	CG	145	GLU	5.7
1	AB	194	GLY	5.6
28	DE	86	ALA	5.6
19	CT	63	LYS	5.6
24	DA	33	C	5.5
8	AI	128	LYS	5.5
24	DA	1536	C	5.4
37	DN	29	VAL	5.4
48	DY	21	LEU	5.3
48	DY	5	GLU	5.3
54	D4	26	ILE	5.3
44	DU	78	LYS	5.3
9	CJ	48	ARG	5.2
26	DC	222	THR	5.2
53	D3	55	GLY	5.2
1	AB	106	VAL	5.2
28	DE	178	VAL	5.1
53	D3	27	ASN	5.1
53	D3	60	CYS	5.1
55	CA	86	G	5.1

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Mol	Chain	Res	Type	RSRZ
19	CT	67	HIS	5.1
24	DA	446	G	4.9
53	D3	56	LEU	4.9
4	AE	109	ALA	4.9
15	CP	17	TYR	4.9
52	D2	33	ARG	4.8
35	DL	71	ALA	4.8
24	BA	2148	G	4.8
35	DL	16	GLY	4.8
46	BW	40	ARG	4.8
32	BI	132	ALA	4.8
21	AA	78	A	4.7
35	DL	18	ARG	4.7
4	AE	105	ILE	4.7
26	DC	126	GLY	4.7
18	CS	2	ARG	4.7
47	DX	45	PHE	4.7
55	CA	85	U	4.7
24	BA	546	U	4.7
28	DE	177	PRO	4.7
4	AE	110	MET	4.6
24	BA	2146	C	4.6
26	DC	238	ASN	4.6
12	CM	97	ARG	4.6
24	BA	2147	A	4.6
1	AB	59	ILE	4.6
6	CG	149	ALA	4.5
24	BA	2179	C	4.5
36	DM	129	THR	4.5
27	DD	202	ILE	4.5
26	DC	30	ALA	4.5
42	DS	80	PRO	4.5
24	BA	2180	U	4.5
24	BA	2309	A	4.4
28	DE	42	GLY	4.4
35	DL	33	ARG	4.4
44	DU	30	SER	4.4
52	D2	1	MET	4.4
27	DD	157	LYS	4.4
54	D4	31	PRO	4.4
35	DL	17	LYS	4.4
28	DE	50	ALA	4.4

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Mol	Chain	Res	Type	RSRZ
41	DR	52	PRO	4.4
26	BC	239	PHE	4.3
42	DS	45	VAL	4.3
43	DT	62	VAL	4.3
8	CI	107	ALA	4.3
24	DA	2000	C	4.3
42	DS	99	ARG	4.3
53	D3	24	LYS	4.2
31	DH	99	ILE	4.2
24	DA	2799	A	4.2
28	DE	24	ASN	4.2
24	BA	2144	G	4.2
42	DS	85	ILE	4.2
46	DW	51	GLY	4.2
30	DG	165	ASP	4.1
53	D3	14	LYS	4.1
28	DE	88	ARG	4.1
27	DD	142	VAL	4.1
37	DN	38	LEU	4.1
24	DA	2021	C	4.1
6	CG	76	SER	4.1
35	BL	27	LEU	4.1
4	AE	124	ALA	4.1
40	DQ	40	LYS	4.1
1	AB	103	TRP	4.1
26	DC	271	SER	4.1
10	AK	128	VAL	4.1
46	DW	73	PRO	4.1
53	D3	36	ALA	4.1
37	DN	21	PHE	4.1
40	DQ	17	LEU	4.1
24	DA	1172	C	4.0
24	DA	805	G	4.0
55	CA	1224	U	4.0
41	DR	27	ILE	4.0
40	DQ	36	GLN	4.0
42	DS	91	GLY	4.0
35	DL	42	SER	4.0
4	AE	143	LEU	4.0
24	DA	795	C	4.0
24	DA	2295	C	4.0
55	CA	81	A	4.0

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Mol	Chain	Res	Type	RSRZ
6	AG	79	VAL	4.0
52	D2	2	LYS	3.9
48	DY	24	GLU	3.9
24	BA	1093	G	3.9
26	DC	11	GLY	3.9
41	DR	50	GLY	3.9
24	DA	1661	G	3.9
11	CL	19	ASN	3.9
54	D4	17	VAL	3.9
13	CN	31	SER	3.9
29	DF	66	ILE	3.9
46	BW	75	ASN	3.8
40	DQ	79	ILE	3.8
54	D4	30	GLU	3.8
28	DE	87	ALA	3.8
4	AE	15	ILE	3.8
4	CE	106	ALA	3.8
24	DA	1217	U	3.8
50	D0	8	THR	3.8
4	AE	132	PRO	3.8
24	BA	2154	A	3.8
8	AI	115	VAL	3.8
1	AB	195	VAL	3.7
52	D2	28	ARG	3.7
53	D3	22	LYS	3.7
6	CG	60	ALA	3.7
31	DH	111	ALA	3.7
26	DC	103	ILE	3.7
24	DA	1538	G	3.7
53	D3	25	HIS	3.7
27	DD	9	VAL	3.7
30	DG	51	PHE	3.7
9	AJ	60	ASP	3.7
4	AE	128	GLY	3.7
24	DA	1614	A	3.7
26	DC	1	ALA	3.7
35	DL	38	GLN	3.6
24	DA	30	G	3.6
36	DM	124	LEU	3.6
55	CA	1362	A	3.6
26	DC	237	ARG	3.6
24	DA	1325	U	3.6

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Mol	Chain	Res	Type	RSRZ
24	DA	1537	G	3.6
14	CO	47	LYS	3.6
20	AU	46	ARG	3.6
5	AF	100	SER	3.5
54	D4	35	GLN	3.5
21	AA	86	G	3.5
24	DA	34	U	3.5
28	DE	180	LEU	3.5
44	DU	8	ASP	3.5
52	D2	23	ALA	3.5
54	D4	10	LEU	3.5
40	DQ	31	TYR	3.5
4	AE	73	VAL	3.5
24	DA	948	C	3.5
55	CA	87	C	3.5
41	DR	75	VAL	3.5
39	DP	21	PRO	3.5
24	DA	2238	G	3.5
46	BW	45	HIS	3.5
4	AE	140	ILE	3.5
18	CS	10	ILE	3.5
8	AI	50	PRO	3.5
29	BF	79	ARG	3.5
44	DU	4	ILE	3.5
20	AU	42	THR	3.4
1	AB	109	SER	3.4
54	D4	8	LYS	3.4
1	AB	178	LEU	3.4
24	DA	1216	G	3.4
28	DE	73	ILE	3.4
54	D4	28	SER	3.4
4	AE	55	VAL	3.4
4	CE	113	VAL	3.4
37	DN	37	THR	3.4
53	D3	35	LYS	3.4
4	AE	123	LEU	3.4
21	AA	87	C	3.4
24	DA	1075	C	3.4
4	AE	136	VAL	3.4
13	AN	28	ALA	3.4
24	DA	588	U	3.4
48	DY	56	LEU	3.4

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Mol	Chain	Res	Type	RSRZ
53	D3	58	ILE	3.4
52	D2	18	PHE	3.4
28	DE	76	PRO	3.4
8	CI	67	LYS	3.4
42	DS	11	ARG	3.3
37	DN	28	LEU	3.3
45	DV	47	VAL	3.3
44	DU	71	ILE	3.3
24	DA	1743	G	3.3
1	AB	67	LEU	3.3
30	DG	6	ALA	3.3
15	CP	16	PHE	3.3
24	DA	2133	G	3.3
26	DC	70	LYS	3.3
24	DA	566	U	3.3
28	DE	57	LYS	3.3
6	CG	73	GLU	3.3
1	AB	100	LEU	3.2
33	DJ	122	LEU	3.2
51	D1	18	HIS	3.2
52	D2	44	VAL	3.2
53	D3	10	ALA	3.2
39	DP	111	GLU	3.2
1	AB	147	LEU	3.2
24	BA	2138	G	3.2
24	DA	1249	U	3.2
27	DD	121	THR	3.2
24	BA	1072	C	3.2
42	DS	98	LYS	3.2
51	D1	40	PRO	3.2
26	DC	251	THR	3.2
42	DS	96	ILE	3.2
4	AE	95	MET	3.2
48	DY	1	MET	3.2
24	BA	1180	U	3.2
52	D2	14	ARG	3.2
12	AM	104	ASN	3.2
24	BA	2145	C	3.2
40	DQ	6	GLY	3.2
5	CF	10	VAL	3.2
1	AB	104	LYS	3.2
24	DA	1173	U	3.2

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Mol	Chain	Res	Type	RSRZ
4	AE	139	THR	3.2
24	DA	1171	G	3.2
34	DK	31	ARG	3.2
55	CA	223	A	3.2
40	DQ	4	LYS	3.2
31	BH	85	GLY	3.2
33	DJ	112	GLY	3.2
43	DT	10	VAL	3.2
40	DQ	5	ARG	3.2
4	CE	109	ALA	3.2
32	DI	76	ALA	3.2
24	DA	1132	U	3.1
31	DH	98	ASP	3.1
35	DL	29	LYS	3.1
40	DQ	7	VAL	3.1
43	DT	34	VAL	3.1
21	AA	88	U	3.1
37	DN	113	ILE	3.1
13	CN	95	LEU	3.1
26	DC	226	PRO	3.1
12	CM	19	THR	3.1
26	DC	58	LYS	3.1
24	BA	2885	G	3.1
24	DA	1983	G	3.1
28	DE	32	VAL	3.1
1	CB	161	PHE	3.1
4	AE	145	ASN	3.1
24	BA	2155	U	3.1
35	DL	75	ALA	3.1
20	CU	37	TYR	3.1
28	DE	84	THR	3.1
53	D3	21	PHE	3.1
1	AB	102	ASN	3.1
21	AA	79	G	3.1
47	DX	44	ARG	3.1
11	CL	111	GLN	3.1
40	DQ	58	GLN	3.1
16	AQ	69	THR	3.1
32	DI	77	VAL	3.1
46	DW	42	THR	3.1
8	CI	65	THR	3.0
4	AE	101	GLY	3.0

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Mol	Chain	Res	Type	RSRZ
12	CM	18	LEU	3.0
27	DD	160	LYS	3.0
31	DH	88	GLY	3.0
34	BK	26	GLY	3.0
47	DX	2	ARG	3.0
4	AE	23	THR	3.0
36	DM	15	GLY	3.0
9	AJ	62	ARG	3.0
27	DD	128	ARG	3.0
31	DH	94	ILE	3.0
38	DO	28	VAL	3.0
41	DR	4	VAL	3.0
1	AB	156	LEU	3.0
27	DD	186	LEU	3.0
35	DL	19	LEU	3.0
43	DT	7	LEU	3.0
21	AA	1104	G	3.0
24	DA	2029	G	3.0
53	D3	11	LYS	3.0
4	AE	90	GLY	3.0
4	AE	108	GLY	3.0
21	AA	977	A	3.0
35	DL	15	ALA	3.0
26	DC	241	LYS	3.0
26	DC	254	LYS	3.0
28	DE	83	VAL	3.0
40	DQ	94	LEU	3.0
43	BT	7	LEU	3.0
49	DZ	24	LEU	3.0
27	DD	137	SER	3.0
51	D1	21	THR	3.0
24	BA	2093	G	2.9
19	CT	32	LYS	2.9
50	D0	2	VAL	2.9
24	DA	1764	C	2.9
19	CT	64	GLY	2.9
46	BW	13	ARG	2.9
4	AE	59	ILE	2.9
28	DE	46	GLN	2.9
33	DJ	123	LYS	2.9
31	DH	110	VAL	2.9
48	BY	13	GLU	2.9

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Mol	Chain	Res	Type	RSRZ
29	DF	153	ILE	2.9
24	DA	2055	C	2.9
24	DA	2743	U	2.9
43	BT	16	VAL	2.9
13	AN	9	GLU	2.9
26	DC	99	GLU	2.9
28	DE	144	GLU	2.9
26	DC	10	PRO	2.9
40	DQ	10	ARG	2.9
35	DL	40	SER	2.9
14	CO	43	ALA	2.9
31	DH	125	THR	2.9
27	DD	201	LEU	2.9
51	D1	20	TYR	2.9
24	DA	1077	A	2.9
13	AN	60	ARG	2.9
24	DA	1530	G	2.9
35	BL	18	ARG	2.9
28	DE	108	ILE	2.9
40	DQ	21	LYS	2.9
30	DG	154	GLU	2.9
28	DE	69	ARG	2.9
53	D3	39	ARG	2.9
8	AI	78	ILE	2.9
43	DT	74	ILE	2.9
46	BW	36	ILE	2.9
32	DI	75	ALA	2.9
35	DL	45	GLY	2.9
35	DL	53	GLY	2.9
24	DA	62	U	2.9
24	DA	1130	U	2.9
53	D3	13	PHE	2.9
24	DA	32	C	2.9
31	DH	115	VAL	2.9
55	CA	1510	C	2.9
24	DA	695	G	2.9
24	DA	1770	G	2.9
24	DA	2242	G	2.9
41	DR	79	ARG	2.9
11	AL	17	LYS	2.9
44	BU	46	LYS	2.9
35	DL	101	ILE	2.8

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Mol	Chain	Res	Type	RSRZ
11	CL	16	ALA	2.8
6	AG	32	ASP	2.8
19	AT	67	HIS	2.8
31	DH	113	SER	2.8
42	DS	81	SER	2.8
27	DD	25	THR	2.8
34	DK	18	ARG	2.8
41	DR	78	ARG	2.8
55	CA	1463	U	2.8
26	BC	241	LYS	2.8
24	BA	2306	C	2.8
43	DT	11	LEU	2.8
21	AA	42	G	2.8
36	DM	89	VAL	2.8
38	DO	2	ASP	2.8
35	DL	27	LEU	2.8
55	CA	121	U	2.8
48	DY	46	VAL	2.8
53	D3	53	ASP	2.8
20	CU	23	GLU	2.8
41	DR	31	GLU	2.8
24	DA	60	G	2.8
27	DD	152	PRO	2.8
19	CT	62	ALA	2.8
28	DE	68	ALA	2.8
37	DN	26	GLY	2.8
54	D4	29	ALA	2.8
8	CI	128	LYS	2.8
42	DS	42	LYS	2.8
43	DT	36	LYS	2.8
13	CN	41	TRP	2.8
24	DA	2402	U	2.8
43	DT	37	ASP	2.8
19	CT	66	ILE	2.8
43	BT	28	ASN	2.8
54	D4	13	ASN	2.8
4	AE	17	VAL	2.8
8	AI	47	VAL	2.8
50	D0	11	LYS	2.8
26	DC	63	ILE	2.8
27	DD	165	MET	2.8
43	BT	24	MET	2.8

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Mol	Chain	Res	Type	RSRZ
29	DF	65	LEU	2.8
32	DI	93	ASN	2.8
55	CA	632	U	2.8
55	CA	412	A	2.8
1	CB	163	ILE	2.7
24	DA	318	C	2.7
26	DC	201	LEU	2.7
1	AB	161	PHE	2.7
35	BL	115	GLU	2.7
6	AG	4	ARG	2.7
37	DN	14	SER	2.7
38	DO	5	SER	2.7
9	CJ	61	ALA	2.7
37	DN	25	ALA	2.7
40	DQ	67	ALA	2.7
22	CV	27	G	2.7
24	DA	2152	G	2.7
29	DF	129	MET	2.7
30	DG	169	ARG	2.7
4	AE	144	GLU	2.7
31	DH	114	GLU	2.7
40	DQ	55	GLN	2.7
1	AB	216	VAL	2.7
31	BH	100	ALA	2.7
32	BI	113	ALA	2.7
6	CG	150	PHE	2.7
8	CI	43	ALA	2.7
31	DH	124	THR	2.7
39	DP	11	GLN	2.7
24	DA	39	G	2.7
46	DW	32	ALA	2.7
24	DA	2288	A	2.7
44	BU	52	ASN	2.7
24	BA	2143	C	2.7
37	DN	17	ARG	2.7
4	AE	119	VAL	2.7
28	DE	62	GLN	2.7
48	BY	5	GLU	2.7
18	AS	63	ASP	2.7
28	DE	176	ASP	2.7
54	D4	6	SER	2.7
3	CD	27	ILE	2.7

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Mol	Chain	Res	Type	RSRZ
6	CG	46	LEU	2.7
28	DE	105	LEU	2.7
28	DE	175	ILE	2.7
33	DJ	81	ILE	2.7
44	DU	102	ILE	2.7
35	DL	64	PHE	2.7
3	AD	24	VAL	2.7
4	AE	50	GLY	2.7
4	AE	102	THR	2.7
27	DD	129	THR	2.7
39	DP	8	GLU	2.7
53	D3	38	LYS	2.7
1	CB	17	HIS	2.6
24	DA	2062	A	2.6
8	CI	124	PRO	2.6
35	DL	8	PRO	2.6
49	DZ	9	THR	2.6
14	CO	46	LYS	2.6
1	CB	106	VAL	2.6
4	AE	24	VAL	2.6
38	DO	109	ALA	2.6
1	CB	99	MET	2.6
24	BA	2137	U	2.6
24	DA	441	U	2.6
26	BC	237	ARG	2.6
43	DT	35	ALA	2.6
8	CI	118	ARG	2.6
24	DA	442	G	2.6
24	DA	236	C	2.6
24	DA	2616	C	2.6
24	DA	2723	C	2.6
24	BA	2402	U	2.6
4	AE	45	VAL	2.6
41	DR	33	VAL	2.6
9	AJ	61	ALA	2.6
19	CT	60	GLN	2.6
18	CS	3	SER	2.6
24	DA	341	C	2.6
24	DA	982	C	2.6
31	DH	100	ALA	2.6
19	CT	3	ILE	2.6
44	DU	32	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
18	AS	2	ARG	2.6
4	AE	107	GLY	2.6
15	CP	18	GLN	2.6
24	DA	586	A	2.6
24	DA	1321	A	2.6
41	DR	72	VAL	2.6
1	AB	56	LEU	2.6
3	CD	76	LYS	2.6
26	DC	91	ALA	2.6
36	DM	40	ARG	2.6
26	DC	45	ASN	2.6
26	DC	247	TRP	2.6
8	CI	110	VAL	2.5
24	DA	1031	G	2.5
42	DS	47	VAL	2.5
53	D3	43	LEU	2.5
54	D4	2	LYS	2.5
1	AB	66	ILE	2.5
46	DW	46	ALA	2.5
4	AE	21	SER	2.5
21	AA	1362	A	2.5
44	DU	29	SER	2.5
27	DD	168	GLU	2.5
37	DN	44	LEU	2.5
5	AF	71	ILE	2.5
19	AT	6	ALA	2.5
24	DA	11	C	2.5
40	DQ	85	ALA	2.5
42	DS	93	ALA	2.5
1	AB	158	ASP	2.5
42	DS	12	SER	2.5
28	DE	82	GLY	2.5
52	D2	26	ASN	2.5
24	DA	2553	G	2.5
4	AE	149	PRO	2.5
35	DL	51	GLU	2.5
37	DN	100	CYS	2.5
49	DZ	47	ILE	2.5
41	DR	26	ASP	2.5
1	AB	98	GLY	2.5
6	CG	18	GLY	2.5
46	DW	6	GLY	2.5

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Mol	Chain	Res	Type	RSRZ
18	CS	79	TYR	2.5
33	DJ	74	TYR	2.5
35	DL	70	LYS	2.5
41	DR	81	LYS	2.5
32	BI	111	THR	2.5
24	DA	1131	G	2.5
24	DA	2895	G	2.5
55	CA	250	A	2.5
55	CA	890	G	2.5
52	B2	46	LYS	2.5
1	AB	157	PRO	2.5
8	CI	86	LEU	2.5
9	CJ	17	LEU	2.5
11	CL	15	VAL	2.5
45	DV	91	PHE	2.5
55	CA	210	C	2.5
13	AN	45	LEU	2.5
9	CJ	74	VAL	2.5
48	DY	50	VAL	2.5
52	D2	21	ARG	2.5
4	AE	133	ILE	2.5
35	DL	106	GLU	2.5
24	DA	379	G	2.4
18	CS	9	PHE	2.4
26	DC	46	GLY	2.4
27	DD	10	GLY	2.4
6	CG	103	ILE	2.4
12	CM	40	GLU	2.4
20	AU	23	GLU	2.4
27	DD	162	ALA	2.4
33	DJ	78	THR	2.4
24	BA	2094	A	2.4
24	DA	1420	A	2.4
24	DA	2406	A	2.4
28	DE	147	LEU	2.4
27	DD	158	GLY	2.4
4	CE	110	MET	2.4
53	D3	48	MET	2.4
27	DD	14	ILE	2.4
24	DA	2724	U	2.4
28	DE	85	PHE	2.4
14	AO	61	GLN	2.4

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Mol	Chain	Res	Type	RSRZ
43	DT	82	LYS	2.4
15	CP	25	ARG	2.4
47	DX	10	ARG	2.4
47	DX	49	ARG	2.4
48	DY	48	ARG	2.4
55	CA	175	C	2.4
53	D3	49	VAL	2.4
40	DQ	16	ILE	2.4
24	DA	2070	A	2.4
1	CB	109	SER	2.4
3	AD	28	ASP	2.4
8	AI	77	ALA	2.4
35	DL	36	LYS	2.4
44	DU	74	ALA	2.4
46	BW	14	ASP	2.4
54	B4	9	LYS	2.4
26	DC	250	GLN	2.4
35	DL	57	LEU	2.4
37	DN	46	ARG	2.4
53	D3	44	ARG	2.4
55	CA	209	U	2.4
24	DA	2383	G	2.4
28	DE	96	VAL	2.4
42	BS	82	MET	2.4
21	AA	316	C	2.4
24	DA	1278	C	2.4
6	CG	133	ALA	2.4
44	BU	74	ALA	2.4
47	DX	23	ALA	2.4
4	CE	53	ARG	2.4
18	CS	70	LEU	2.4
55	CA	353	A	2.4
4	AE	135	VAL	2.4
5	CF	18	VAL	2.4
24	DA	767	U	2.4
45	DV	6	ALA	2.4
24	DA	995	C	2.4
24	DA	2310	C	2.4
27	DD	112	THR	2.3
44	DU	82	VAL	2.3
43	BT	88	LYS	2.3
21	AA	412	A	2.3

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Mol	Chain	Res	Type	RSRZ
24	DA	821	A	2.3
37	DN	109	PRO	2.3
28	DE	36	ALA	2.3
24	BA	138	U	2.3
24	DA	235	U	2.3
26	BC	242	HIS	2.3
40	DQ	90	ASP	2.3
48	DY	20	ASN	2.3
27	DD	110	THR	2.3
35	BL	26	GLY	2.3
42	DS	79	GLY	2.3
40	DQ	35	PHE	2.3
43	DT	64	LYS	2.3
21	AA	1529	G	2.3
24	DA	245	G	2.3
24	DA	660	C	2.3
24	DA	946	C	2.3
24	DA	2712	C	2.3
24	DA	342	A	2.3
53	D3	23	HIS	2.3
12	CM	96	VAL	2.3
34	DK	75	SER	2.3
42	DS	13	SER	2.3
4	AE	131	ASN	2.3
13	AN	27	LYS	2.3
35	DL	39	LYS	2.3
4	CE	108	GLY	2.3
24	DA	2265	U	2.3
24	DA	2384	U	2.3
47	DX	13	THR	2.3
18	CS	8	PRO	2.3
31	DH	81	ALA	2.3
40	DQ	8	ILE	2.3
26	BC	27	LYS	2.3
10	CK	51	PHE	2.3
24	BA	2136	G	2.3
24	DA	1245	G	2.3
24	DA	2067	G	2.3
24	DA	2659	G	2.3
55	CA	47	C	2.3
19	AT	17	ARG	2.3
24	DA	804	A	2.3

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Mol	Chain	Res	Type	RSRZ
47	DX	11	PRO	2.3
52	D2	36	ALA	2.3
53	D3	45	PRO	2.3
30	BG	120	ILE	2.3
37	BN	21	PHE	2.3
35	DL	26	GLY	2.3
36	DM	6	ARG	2.3
48	DY	49	ASP	2.3
28	DE	34	ALA	2.3
37	DN	68	ALA	2.3
46	BW	48	ALA	2.3
6	CG	15	PRO	2.3
37	DN	39	PRO	2.3
24	DA	961	C	2.3
1	AB	110	ILE	2.3
3	CD	199	ILE	2.3
4	CE	136	VAL	2.3
21	AA	1105	A	2.3
24	BA	2110	G	2.3
24	DA	1250	G	2.3
24	DA	2885	G	2.3
54	D4	12	ARG	2.3
1	CB	128	LEU	2.3
28	DE	200	LEU	2.3
19	CT	36	ALA	2.3
3	CD	146	GLU	2.2
39	DP	91	VAL	2.2
8	CI	126	PHE	2.2
35	DL	41	ARG	2.2
50	D0	41	HIS	2.2
24	DA	1615	C	2.2
33	DJ	79	GLY	2.2
34	DK	58	LEU	2.2
35	DL	43	GLY	2.2
42	DS	46	LEU	2.2
12	AM	29	SER	2.2
21	AA	842	U	2.2
24	DA	448	U	2.2
28	DE	91	ASP	2.2
31	DH	79	THR	2.2
43	DT	27	SER	2.2
55	CA	1464	U	2.2

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Mol	Chain	Res	Type	RSRZ
24	DA	2848	G	2.2
54	D4	32	LYS	2.2
55	CA	318	G	2.2
31	DH	127	GLU	2.2
41	DR	12	HIS	2.2
4	AE	26	GLY	2.2
39	DP	110	LYS	2.2
53	D3	26	ALA	2.2
38	DO	8	ILE	2.2
44	DU	11	ILE	2.2
1	CB	209	VAL	2.2
24	DA	1644	C	2.2
24	DA	2022	U	2.2
24	DA	2336	A	2.2
55	CA	891	U	2.2
55	CA	958	A	2.2
32	BI	78	LEU	2.2
52	D2	10	LEU	2.2
24	DA	1660	G	2.2
24	DA	2630	G	2.2
26	DC	233	GLY	2.2
4	AE	25	LYS	2.2
26	DC	35	LYS	2.2
32	BI	112	LYS	2.2
41	DR	76	LYS	2.2
33	DJ	1	MET	2.2
4	AE	29	ILE	2.2
31	BH	99	ILE	2.2
52	D2	4	THR	2.2
20	CU	32	ARG	2.2
26	DC	186	ASP	2.2
27	DD	127	PHE	2.2
33	DJ	37	ARG	2.2
9	AJ	24	GLU	2.2
32	BI	10	LEU	2.2
45	DV	69	GLU	2.2
46	DW	12	GLY	2.2
53	D3	51	LYS	2.2
19	CT	12	GLN	2.2
21	AA	80	A	2.2
26	DC	180	MET	2.2
54	D4	1	MET	2.2

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Mol	Chain	Res	Type	RSRZ
55	CA	1534	A	2.2
26	DC	164	VAL	2.2
28	DE	78	TRP	2.2
33	DJ	100	VAL	2.2
35	DL	46	VAL	2.2
41	DR	80	ARG	2.2
42	DS	104	THR	2.2
44	DU	33	VAL	2.2
47	DX	24	THR	2.2
9	CJ	14	ASP	2.2
12	CM	20	SER	2.2
35	DL	61	LEU	2.2
52	D2	31	LEU	2.2
24	DA	2428	G	2.2
27	DD	159	LYS	2.2
36	DM	8	LYS	2.2
43	DT	9	LYS	2.2
1	CB	16	GLY	2.2
28	DE	81	GLY	2.2
35	DL	44	GLY	2.2
37	DN	18	GLN	2.2
47	DX	33	HIS	2.2
53	D3	59	ALA	2.2
31	DH	130	VAL	2.2
37	DN	60	VAL	2.2
46	DW	50	VAL	2.2
24	DA	2585	U	2.2
24	DA	125	A	2.2
1	AB	85	SER	2.2
24	DA	565	C	2.2
24	DA	794	A	2.2
24	DA	2134	A	2.2
48	DY	43	LEU	2.2
55	CA	841	C	2.2
55	CA	1230	C	2.2
46	DW	11	ASN	2.2
41	DR	23	GLU	2.1
42	DS	78	GLU	2.1
3	AD	65	GLY	2.1
41	DR	8	GLY	2.1
29	DF	80	GLN	2.1
13	CN	73	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
24	DA	696	G	2.1
24	DA	2110	G	2.1
24	DA	2782	G	2.1
29	BF	116	LEU	2.1
55	CA	926	G	2.1
27	DD	151	THR	2.1
33	DJ	110	PRO	2.1
35	DL	84	LYS	2.1
41	DR	24	LYS	2.1
1	AB	81	ASP	2.1
1	AB	166	ASP	2.1
21	AA	121	U	2.1
24	BA	2585	U	2.1
24	DA	390	U	2.1
24	DA	2151	U	2.1
3	CD	75	TYR	2.1
24	DA	504	A	2.1
24	DA	671	C	2.1
34	BK	29	HIS	2.1
37	DN	111	ALA	2.1
43	DT	23	ALA	2.1
44	BU	1	ALA	2.1
35	DL	104	GLN	2.1
56	DB	12	C	2.1
1	AB	183	PHE	2.1
26	DC	175	LEU	2.1
13	CN	69	PRO	2.1
20	AU	41	THR	2.1
4	AE	147	ASN	2.1
11	AL	19	ASN	2.1
46	DW	15	SER	2.1
47	DX	34	SER	2.1
4	CE	142	GLY	2.1
27	DD	59	ARG	2.1
24	BA	1903	G	2.1
24	DA	187	G	2.1
24	DA	1334	G	2.1
55	CA	108	G	2.1
34	BK	35	VAL	2.1
48	DY	45	GLN	2.1
24	DA	810	U	2.1
24	DA	2297	A	2.1

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Mol	Chain	Res	Type	RSRZ
55	CA	1229	A	2.1
24	DA	1348	C	2.1
37	DN	70	THR	2.1
52	D2	43	THR	2.1
1	AB	189	ASN	2.1
4	AE	27	GLY	2.1
11	AL	81	ILE	2.1
26	DC	39	SER	2.1
49	DZ	11	SER	2.1
13	CN	32	ASP	2.1
33	DJ	49	ASP	2.1
9	AJ	51	VAL	2.1
26	DC	204	LEU	2.1
47	DX	3	VAL	2.1
26	BC	243	PRO	2.1
36	DM	125	PRO	2.1
24	BA	2149	U	2.1
24	DA	137	U	2.1
24	DA	615	U	2.1
15	AP	14	ARG	2.1
43	DT	42	GLU	2.1
24	BA	1073	A	2.1
26	BC	265	PHE	2.1
48	DY	3	ALA	2.1
37	DN	40	LYS	2.1
53	D3	57	VAL	2.1
42	DS	95	ARG	2.1
28	DE	181	ILE	2.1
4	CE	30	PHE	2.1
4	CE	157	GLY	2.1
41	BR	70	GLU	2.1
37	DN	65	LEU	2.1
43	BT	8	LEU	2.1
43	DT	81	LYS	2.1
1	AB	162	VAL	2.1
3	CD	73	ASN	2.1
7	CH	1	SER	2.1
21	AA	91	U	2.0
24	BA	2151	U	2.0
40	DQ	28	SER	2.1
24	BA	1074	G	2.0
24	BA	2152	G	2.0

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Mol	Chain	Res	Type	RSRZ
24	DA	1247	A	2.0
24	DA	1381	G	2.0
55	CA	80	A	2.0
5	CF	91	ARG	2.0
20	CU	46	ARG	2.0
42	BS	95	ARG	2.0
21	AA	1397	C	2.0
24	DA	1305	C	2.0
55	CA	1462	C	2.0
28	DE	48	THR	2.0
13	AN	97	LYS	2.0
19	CT	65	LEU	2.0
3	AD	146	GLU	2.0
26	DC	253	GLY	2.0
26	DC	264	LYS	2.0
27	DD	153	GLY	2.0
30	DG	5	LYS	2.0
44	BU	59	GLU	2.0
27	DD	199	SER	2.0
29	BF	152	ASP	2.0
12	CM	100	ARG	2.0
26	DC	47	ARG	2.0
24	DA	2092	U	2.0
24	DA	2296	U	2.0
2	CC	206	ILE	2.0
43	DT	43	ILE	2.0
1	AB	134	LEU	2.0
1	AB	160	LEU	2.0
1	AB	91	VAL	2.0
20	AU	35	GLU	2.0
26	BC	91	ALA	2.0
46	BW	50	VAL	2.0
55	CA	366	A	2.0
40	DQ	88	GLU	2.0
24	DA	333	G	2.0
24	BA	1064	C	2.0
49	DZ	51	SER	2.0
8	CI	109	GLN	2.0
1	AB	10	LYS	2.0
49	DZ	55	LYS	2.0
53	D3	46	LYS	2.0
33	DJ	109	LEU	2.0

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Mol	Chain	Res	Type	RSRZ
50	D0	27	LEU	2.0

6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
57	MG	CA	1636	1/1	-0.09	0.74	120,120,120,120	0
57	MG	DA	3020	1/1	-0.01	0.32	229,229,229,229	0
57	MG	DA	3128	1/1	0.01	0.42	132,132,132,132	0
57	MG	DA	3058	1/1	0.18	0.42	162,162,162,162	0
57	MG	DA	3060	1/1	0.19	0.68	132,132,132,132	0
57	MG	DA	3072	1/1	0.26	0.18	182,182,182,182	0
57	MG	BA	3131	1/1	0.27	0.54	68,68,68,68	0
57	MG	DA	3129	1/1	0.28	0.63	132,132,132,132	0
57	MG	DA	3074	1/1	0.29	0.37	187,187,187,187	0
57	MG	CA	1640	1/1	0.30	0.39	118,118,118,118	0
57	MG	DA	3063	1/1	0.30	0.78	157,157,157,157	0
57	MG	DA	3003	1/1	0.31	0.21	229,229,229,229	0
57	MG	CA	1619	1/1	0.37	0.30	135,135,135,135	0
57	MG	CA	1617	1/1	0.40	0.10	183,183,183,183	0
57	MG	DA	3002	1/1	0.42	0.34	212,212,212,212	0
57	MG	DA	3015	1/1	0.42	0.28	164,164,164,164	0
57	MG	CA	1627	1/1	0.44	0.20	136,136,136,136	0
57	MG	DA	3094	1/1	0.44	0.17	173,173,173,173	0
57	MG	DA	3092	1/1	0.45	0.15	198,198,198,198	0
57	MG	D4	101	1/1	0.45	0.35	183,183,183,183	0
57	MG	BA	3124	1/1	0.46	0.59	59,59,59,59	0
57	MG	AA	1627	1/1	0.47	0.48	142,142,142,142	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
57	MG	CA	1610	1/1	0.48	0.15	181,181,181,181	0
57	MG	BA	3062	1/1	0.49	0.51	55,55,55,55	0
57	MG	DA	3013	1/1	0.50	0.17	165,165,165,165	0
57	MG	DA	3005	1/1	0.51	0.23	197,197,197,197	0
57	MG	DA	3132	1/1	0.52	0.15	198,198,198,198	0
57	MG	BA	3070	1/1	0.52	0.15	158,158,158,158	0
57	MG	DA	3030	1/1	0.53	0.21	164,164,164,164	0
57	MG	DA	3059	1/1	0.53	0.20	136,136,136,136	0
57	MG	DA	3082	1/1	0.53	0.14	220,220,220,220	0
57	MG	DA	3045	1/1	0.54	0.16	188,188,188,188	0
57	MG	DA	3078	1/1	0.54	0.33	144,144,144,144	0
57	MG	CA	1614	1/1	0.54	0.29	146,146,146,146	0
57	MG	DA	3069	1/1	0.55	0.24	139,139,139,139	0
57	MG	CA	1628	1/1	0.56	0.38	99,99,99,99	0
57	MG	DA	3007	1/1	0.58	0.14	250,250,250,250	0
57	MG	AA	1630	1/1	0.59	0.26	99,99,99,99	0
57	MG	DA	3016	1/1	0.60	0.23	175,175,175,175	0
57	MG	DA	3042	1/1	0.61	0.12	179,179,179,179	0
57	MG	DA	3108	1/1	0.61	0.19	172,172,172,172	0
57	MG	BA	3058	1/1	0.61	0.47	63,63,63,63	0
57	MG	DA	3022	1/1	0.62	0.21	152,152,152,152	0
57	MG	CA	1625	1/1	0.62	0.21	127,127,127,127	0
57	MG	CA	1629	1/1	0.63	0.13	157,157,157,157	0
57	MG	AA	1641	1/1	0.64	0.30	108,108,108,108	0
57	MG	AA	1607	1/1	0.64	0.19	113,113,113,113	0
57	MG	DA	3076	1/1	0.65	0.30	145,145,145,145	0
57	MG	CA	1603	1/1	0.65	0.19	141,141,141,141	0
57	MG	DA	3039	1/1	0.66	0.11	186,186,186,186	0
57	MG	DA	3109	1/1	0.66	0.21	145,145,145,145	0
57	MG	DA	3091	1/1	0.66	0.20	174,174,174,174	0
57	MG	AA	1637	1/1	0.67	0.21	118,118,118,118	0
57	MG	CA	1602	1/1	0.67	0.14	177,177,177,177	0
57	MG	DA	3064	1/1	0.67	0.10	157,157,157,157	0
57	MG	DA	3111	1/1	0.68	0.11	160,160,160,160	0
57	MG	DA	3123	1/1	0.68	0.17	225,225,225,225	0
57	MG	DA	3075	1/1	0.68	0.25	155,155,155,155	0
57	MG	DA	3097	1/1	0.68	0.18	156,156,156,156	0
57	MG	AA	1619	1/1	0.68	0.22	162,162,162,162	0
57	MG	DC	301	1/1	0.68	0.09	135,135,135,135	0
57	MG	DJ	201	1/1	0.68	0.11	183,183,183,183	0
57	MG	DA	3006	1/1	0.68	0.09	296,296,296,296	0
57	MG	DA	3018	1/1	0.69	0.18	248,248,248,248	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	DA	3036	1/1	0.70	0.22	212,212,212,212	0
57	MG	DA	3026	1/1	0.70	0.23	160,160,160,160	0
57	MG	DA	3096	1/1	0.71	0.14	190,190,190,190	0
57	MG	BA	3075	1/1	0.72	0.28	58,58,58,58	0
57	MG	DA	3011	1/1	0.72	0.25	184,184,184,184	0
57	MG	DA	3049	1/1	0.72	0.07	249,249,249,249	0
57	MG	DA	3019	1/1	0.72	0.16	245,245,245,245	0
57	MG	DA	3106	1/1	0.72	0.17	228,228,228,228	0
57	MG	DA	3014	1/1	0.73	0.14	162,162,162,162	0
57	MG	DA	3071	1/1	0.73	0.15	184,184,184,184	0
57	MG	DA	3083	1/1	0.74	0.07	303,303,303,303	0
57	MG	DA	3110	1/1	0.74	0.10	219,219,219,219	0
57	MG	AA	1636	1/1	0.74	0.13	154,154,154,154	0
57	MG	CA	1620	1/1	0.74	0.18	150,150,150,150	0
57	MG	AA	1621	1/1	0.74	0.16	80,80,80,80	0
57	MG	DA	3073	1/1	0.75	0.11	312,312,312,312	0
57	MG	DA	3098	1/1	0.75	0.13	170,170,170,170	0
57	MG	DA	3010	1/1	0.76	0.16	210,210,210,210	0
57	MG	DA	3057	1/1	0.76	0.24	133,133,133,133	0
57	MG	CA	1622	1/1	0.76	0.11	216,216,216,216	0
57	MG	CA	1601	1/1	0.76	0.12	224,224,224,224	0
57	MG	AA	1617	1/1	0.76	0.20	150,150,150,150	0
57	MG	DA	3062	1/1	0.76	0.24	160,160,160,160	0
57	MG	DA	3095	1/1	0.77	0.10	152,152,152,152	0
57	MG	DA	3125	1/1	0.77	0.13	187,187,187,187	0
57	MG	AA	1624	1/1	0.77	0.10	131,131,131,131	0
57	MG	DA	3028	1/1	0.77	0.14	165,165,165,165	0
57	MG	BA	3004	1/1	0.78	0.18	86,86,86,86	0
57	MG	CA	1607	1/1	0.78	0.10	134,134,134,134	0
57	MG	BA	3035	1/1	0.78	0.29	72,72,72,72	0
57	MG	DA	3027	1/1	0.78	0.10	171,171,171,171	0
57	MG	DA	3038	1/1	0.79	0.12	197,197,197,197	0
57	MG	DA	3107	1/1	0.79	0.12	137,137,137,137	0
57	MG	BB	201	1/1	0.80	0.30	118,118,118,118	0
57	MG	DA	3084	1/1	0.80	0.17	214,214,214,214	0
57	MG	DA	3043	1/1	0.80	0.08	208,208,208,208	0
57	MG	BA	3061	1/1	0.80	0.32	56,56,56,56	0
57	MG	DA	3100	1/1	0.80	0.12	150,150,150,150	0
57	MG	DA	3113	1/1	0.80	0.10	182,182,182,182	0
57	MG	BA	3098	1/1	0.80	0.30	72,72,72,72	0
57	MG	DA	3121	1/1	0.81	0.19	206,206,206,206	0
57	MG	DA	3088	1/1	0.81	0.10	180,180,180,180	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	AA	1628	1/1	0.81	0.10	134,134,134,134	0
57	MG	DA	3029	1/1	0.81	0.15	179,179,179,179	0
57	MG	BA	3112	1/1	0.81	0.12	64,64,64,64	0
57	MG	CA	1616	1/1	0.81	0.17	199,199,199,199	0
57	MG	BA	3115	1/1	0.81	0.30	65,65,65,65	0
57	MG	AA	1625	1/1	0.81	0.18	114,114,114,114	0
57	MG	BA	3028	1/1	0.81	0.26	57,57,57,57	0
57	MG	DA	3131	1/1	0.82	0.22	181,181,181,181	0
57	MG	CA	1606	1/1	0.82	0.09	124,124,124,124	0
57	MG	DB	201	1/1	0.82	0.14	224,224,224,224	0
57	MG	BA	3093	1/1	0.82	0.17	104,104,104,104	0
57	MG	BA	3015	1/1	0.82	0.40	55,55,55,55	0
57	MG	DA	3130	1/1	0.82	0.13	170,170,170,170	0
57	MG	DA	3048	1/1	0.83	0.10	203,203,203,203	0
57	MG	BA	3133	1/1	0.83	0.38	73,73,73,73	0
57	MG	DA	3079	1/1	0.83	0.10	148,148,148,148	0
57	MG	DA	3114	1/1	0.83	0.16	135,135,135,135	0
57	MG	DA	3093	1/1	0.83	0.16	208,208,208,208	0
57	MG	BA	3136	1/1	0.83	0.38	64,64,64,64	0
57	MG	DA	3044	1/1	0.83	0.15	210,210,210,210	0
57	MG	CA	1637	1/1	0.83	0.17	112,112,112,112	0
57	MG	DA	3017	1/1	0.84	0.13	187,187,187,187	0
57	MG	DA	3052	1/1	0.84	0.09	144,144,144,144	0
57	MG	BA	3030	1/1	0.84	0.33	58,58,58,58	0
57	MG	DA	3103	1/1	0.84	0.12	150,150,150,150	0
57	MG	CA	1615	1/1	0.84	0.11	156,156,156,156	0
57	MG	AA	1604	1/1	0.84	0.07	157,157,157,157	0
57	MG	CA	1611	1/1	0.84	0.11	132,132,132,132	0
57	MG	CA	1613	1/1	0.84	0.10	121,121,121,121	0
57	MG	DA	3047	1/1	0.85	0.18	208,208,208,208	0
57	MG	AA	1610	1/1	0.85	0.10	155,155,155,155	0
57	MG	DA	3080	1/1	0.85	0.09	134,134,134,134	0
57	MG	DA	3001	1/1	0.85	0.16	206,206,206,206	0
57	MG	DA	3117	1/1	0.85	0.15	170,170,170,170	0
57	MG	DA	3118	1/1	0.85	0.16	181,181,181,181	0
57	MG	AA	1616	1/1	0.85	0.20	161,161,161,161	0
57	MG	AA	1620	1/1	0.85	0.09	186,186,186,186	0
57	MG	CA	1608	1/1	0.85	0.11	121,121,121,121	0
57	MG	CA	1632	1/1	0.86	0.12	210,210,210,210	0
57	MG	CA	1612	1/1	0.86	0.09	124,124,124,124	0
57	MG	DA	3086	1/1	0.86	0.11	196,196,196,196	0
57	MG	BA	3060	1/1	0.86	0.31	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	AA	1629	1/1	0.86	0.16	161,161,161,161	0
57	MG	CA	1623	1/1	0.86	0.16	123,123,123,123	0
57	MG	AA	1611	1/1	0.87	0.14	126,126,126,126	0
57	MG	AA	1602	1/1	0.87	0.24	97,97,97,97	0
57	MG	DA	3033	1/1	0.87	0.12	162,162,162,162	0
57	MG	CA	1630	1/1	0.87	0.20	99,99,99,99	0
57	MG	DA	3037	1/1	0.87	0.12	204,204,204,204	0
57	MG	CA	1642	1/1	0.87	0.07	170,170,170,170	0
57	MG	DA	3068	1/1	0.87	0.19	143,143,143,143	0
57	MG	DA	3085	1/1	0.87	0.12	167,167,167,167	0
57	MG	DA	3051	1/1	0.87	0.08	160,160,160,160	0
57	MG	BA	3007	1/1	0.87	0.14	111,111,111,111	0
57	MG	DA	3054	1/1	0.87	0.12	155,155,155,155	0
57	MG	DA	3055	1/1	0.87	0.07	136,136,136,136	0
57	MG	DA	3056	1/1	0.87	0.12	141,141,141,141	0
57	MG	CA	1634	1/1	0.87	0.07	153,153,153,153	0
57	MG	DA	3101	1/1	0.88	0.10	155,155,155,155	0
57	MG	BA	3056	1/1	0.88	0.25	64,64,64,64	0
57	MG	BA	3088	1/1	0.88	0.15	77,77,77,77	0
57	MG	DA	3032	1/1	0.89	0.11	161,161,161,161	0
57	MG	BA	3046	1/1	0.89	0.11	77,77,77,77	0
57	MG	AA	1614	1/1	0.89	0.08	150,150,150,150	0
57	MG	BA	3014	1/1	0.89	0.28	55,55,55,55	0
57	MG	DA	3127	1/1	0.89	0.23	138,138,138,138	0
57	MG	DC	302	1/1	0.89	0.12	140,140,140,140	0
57	MG	BA	3092	1/1	0.89	0.08	127,127,127,127	0
57	MG	DA	3099	1/1	0.89	0.07	211,211,211,211	0
57	MG	DA	3004	1/1	0.90	0.16	206,206,206,206	0
57	MG	DA	3023	1/1	0.90	0.11	148,148,148,148	0
57	MG	DA	3025	1/1	0.90	0.08	135,135,135,135	0
57	MG	DA	3065	1/1	0.90	0.08	152,152,152,152	0
57	MG	DA	3067	1/1	0.90	0.08	147,147,147,147	0
57	MG	DA	3034	1/1	0.90	0.14	158,158,158,158	0
57	MG	BA	3113	1/1	0.90	0.09	54,54,54,54	0
57	MG	AA	1609	1/1	0.90	0.09	118,118,118,118	0
57	MG	BA	3003	1/1	0.90	0.10	90,90,90,90	0
57	MG	DA	3009	1/1	0.90	0.18	199,199,199,199	0
57	MG	DA	3087	1/1	0.90	0.06	208,208,208,208	0
57	MG	DA	3061	1/1	0.90	0.09	134,134,134,134	0
57	MG	BA	3095	1/1	0.91	0.10	92,92,92,92	0
57	MG	DA	3115	1/1	0.91	0.07	154,154,154,154	0
57	MG	BA	3077	1/1	0.91	0.15	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	BA	3101	1/1	0.91	0.15	54,54,54,54	0
57	MG	BA	3019	1/1	0.91	0.09	86,86,86,86	0
57	MG	CA	1631	1/1	0.91	0.09	130,130,130,130	0
57	MG	AA	1615	1/1	0.91	0.06	153,153,153,153	0
57	MG	BA	3011	1/1	0.91	0.28	62,62,62,62	0
57	MG	CA	1635	1/1	0.91	0.07	142,142,142,142	0
57	MG	DA	3050	1/1	0.92	0.07	180,180,180,180	0
57	MG	BA	3081	1/1	0.92	0.14	56,56,56,56	0
57	MG	BA	3085	1/1	0.92	0.36	59,59,59,59	0
57	MG	DA	3053	1/1	0.92	0.12	144,144,144,144	0
57	MG	BA	3086	1/1	0.92	0.10	60,60,60,60	0
57	MG	DA	3081	1/1	0.92	0.08	182,182,182,182	0
57	MG	DA	3012	1/1	0.92	0.15	168,168,168,168	0
57	MG	AA	1608	1/1	0.92	0.13	105,105,105,105	0
57	MG	CA	1638	1/1	0.92	0.08	226,226,226,226	0
57	MG	DA	3035	1/1	0.92	0.13	155,155,155,155	0
57	MG	CA	1639	1/1	0.92	0.05	266,266,266,266	0
57	MG	BA	3048	1/1	0.92	0.14	91,91,91,91	0
57	MG	DA	3119	1/1	0.92	0.08	147,147,147,147	0
57	MG	AA	1631	1/1	0.92	0.17	114,114,114,114	0
57	MG	DA	3089	1/1	0.92	0.12	179,179,179,179	0
57	MG	CA	1609	1/1	0.92	0.08	131,131,131,131	0
57	MG	DA	3040	1/1	0.92	0.09	171,171,171,171	0
57	MG	DA	3041	1/1	0.92	0.11	176,176,176,176	0
57	MG	BA	3032	1/1	0.92	0.10	57,57,57,57	0
57	MG	BA	3135	1/1	0.92	0.31	60,60,60,60	0
57	MG	AA	1601	1/1	0.92	0.07	133,133,133,133	0
57	MG	BA	3099	1/1	0.92	0.11	58,58,58,58	0
57	MG	DA	3046	1/1	0.92	0.12	172,172,172,172	0
57	MG	BB	202	1/1	0.92	0.11	127,127,127,127	0
57	MG	BD	301	1/1	0.92	0.15	55,55,55,55	0
57	MG	DA	3008	1/1	0.92	0.06	198,198,198,198	0
57	MG	DA	3102	1/1	0.92	0.07	141,141,141,141	0
57	MG	BA	3051	1/1	0.93	0.15	57,57,57,57	0
57	MG	DA	3124	1/1	0.93	0.18	168,168,168,168	0
57	MG	BA	3005	1/1	0.93	0.09	91,91,91,91	0
57	MG	BA	3071	1/1	0.93	0.30	55,55,55,55	0
57	MG	BA	3089	1/1	0.93	0.18	66,66,66,66	0
57	MG	DA	3066	1/1	0.93	0.09	150,150,150,150	0
57	MG	BA	3119	1/1	0.93	0.28	68,68,68,68	0
57	MG	BA	3123	1/1	0.93	0.07	79,79,79,79	0
57	MG	CA	1604	1/1	0.93	0.06	117,117,117,117	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
57	MG	AA	1632	1/1	0.93	0.09	117,117,117,117	0
57	MG	BA	3047	1/1	0.93	0.09	78,78,78,78	0
57	MG	BA	3079	1/1	0.93	0.07	110,110,110,110	0
57	MG	BA	3080	1/1	0.93	0.10	93,93,93,93	0
57	MG	BA	3002	1/1	0.93	0.35	61,61,61,61	0
57	MG	BA	3076	1/1	0.94	0.07	62,62,62,62	0
57	MG	BA	3021	1/1	0.94	0.24	59,59,59,59	0
57	MG	BA	3026	1/1	0.94	0.34	59,59,59,59	0
57	MG	DA	3077	1/1	0.94	0.07	162,162,162,162	0
57	MG	DA	3024	1/1	0.94	0.07	162,162,162,162	0
57	MG	BB	204	1/1	0.94	0.07	74,74,74,74	0
57	MG	CA	1633	1/1	0.94	0.09	123,123,123,123	0
57	MG	BA	3009	1/1	0.94	0.07	61,61,61,61	0
57	MG	AA	1613	1/1	0.94	0.10	95,95,95,95	0
57	MG	BA	3114	1/1	0.94	0.07	88,88,88,88	0
57	MG	AA	1603	1/1	0.94	0.07	93,93,93,93	0
57	MG	DA	3105	1/1	0.94	0.06	159,159,159,159	0
57	MG	AA	1633	1/1	0.94	0.08	128,128,128,128	0
57	MG	CA	1621	1/1	0.94	0.08	115,115,115,115	0
57	MG	BA	3037	1/1	0.94	0.26	58,58,58,58	0
57	MG	BA	3066	1/1	0.94	0.10	61,61,61,61	0
57	MG	BA	3044	1/1	0.94	0.08	88,88,88,88	0
57	MG	BA	3016	1/1	0.94	0.27	56,56,56,56	0
57	MG	DA	3112	1/1	0.94	0.07	143,143,143,143	0
57	MG	AA	1635	1/1	0.94	0.07	148,148,148,148	0
57	MG	BA	3022	1/1	0.95	0.16	55,55,55,55	0
57	MG	BA	3064	1/1	0.95	0.09	55,55,55,55	0
57	MG	BA	3103	1/1	0.95	0.10	81,81,81,81	0
57	MG	DA	3126	1/1	0.95	0.12	199,199,199,199	0
57	MG	CA	1626	1/1	0.95	0.16	139,139,139,139	0
57	MG	DA	3070	1/1	0.95	0.05	147,147,147,147	0
57	MG	BA	3132	1/1	0.95	0.25	61,61,61,61	0
57	MG	BA	3107	1/1	0.95	0.09	67,67,67,67	0
57	MG	AA	1612	1/1	0.95	0.06	106,106,106,106	0
57	MG	CA	1641	1/1	0.95	0.07	151,151,151,151	0
57	MG	DA	3116	1/1	0.95	0.09	133,133,133,133	0
57	MG	BA	3059	1/1	0.95	0.13	69,69,69,69	0
57	MG	AA	1639	1/1	0.95	0.07	143,143,143,143	0
57	MG	BA	3083	1/1	0.95	0.11	59,59,59,59	0
57	MG	AA	1634	1/1	0.95	0.05	121,121,121,121	0
57	MG	DA	3090	1/1	0.96	0.05	200,200,200,200	0
57	MG	DA	3122	1/1	0.96	0.13	146,146,146,146	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	BA	3053	1/1	0.96	0.10	57,57,57,57	0
57	MG	BA	3072	1/1	0.96	0.30	55,55,55,55	0
57	MG	AA	1606	1/1	0.96	0.06	119,119,119,119	0
57	MG	AA	1638	1/1	0.96	0.10	107,107,107,107	0
57	MG	AA	1623	1/1	0.96	0.07	129,129,129,129	0
57	MG	BA	3068	1/1	0.96	0.08	65,65,65,65	0
57	MG	DA	3031	1/1	0.96	0.06	159,159,159,159	0
57	MG	CA	1624	1/1	0.96	0.15	99,99,99,99	0
57	MG	BA	3105	1/1	0.96	0.07	55,55,55,55	0
57	MG	BA	3127	1/1	0.96	0.09	57,57,57,57	0
57	MG	BA	3128	1/1	0.96	0.06	64,64,64,64	0
57	MG	BA	3045	1/1	0.96	0.21	80,80,80,80	0
57	MG	BA	3111	1/1	0.96	0.12	55,55,55,55	0
57	MG	DA	3104	1/1	0.96	0.12	142,142,142,142	0
57	MG	DA	3120	1/1	0.96	0.11	159,159,159,159	0
57	MG	BA	3074	1/1	0.97	0.13	54,54,54,54	0
57	MG	BA	3042	1/1	0.97	0.05	68,68,68,68	0
57	MG	BA	3125	1/1	0.97	0.11	58,58,58,58	0
57	MG	BA	3126	1/1	0.97	0.07	70,70,70,70	0
57	MG	AA	1618	1/1	0.97	0.06	131,131,131,131	0
57	MG	AA	1605	1/1	0.97	0.10	124,124,124,124	0
57	MG	AA	1643	1/1	0.97	0.05	101,101,101,101	0
57	MG	AA	1622	1/1	0.97	0.05	113,113,113,113	0
57	MG	BA	3010	1/1	0.97	0.05	64,64,64,64	0
57	MG	BA	3049	1/1	0.97	0.07	61,61,61,61	0
57	MG	BA	3109	1/1	0.97	0.07	60,60,60,60	0
57	MG	BA	3110	1/1	0.97	0.06	61,61,61,61	0
57	MG	CA	1618	1/1	0.97	0.09	148,148,148,148	0
57	MG	AA	1626	1/1	0.97	0.14	136,136,136,136	0
57	MG	BA	3069	1/1	0.97	0.05	65,65,65,65	0
57	MG	DA	3021	1/1	0.97	0.21	151,151,151,151	0
57	MG	BA	3039	1/1	0.97	0.06	57,57,57,57	0
57	MG	BA	3040	1/1	0.97	0.07	58,58,58,58	0
57	MG	BA	3090	1/1	0.97	0.07	63,63,63,63	0
57	MG	BA	3057	1/1	0.97	0.26	61,61,61,61	0
57	MG	BA	3122	1/1	0.97	0.06	57,57,57,57	0
57	MG	CA	1605	1/1	0.97	0.05	115,115,115,115	0
58	ZN	D4	102	1/1	0.97	0.14	99,99,99,99	0
57	MG	BA	3006	1/1	0.98	0.04	101,101,101,101	0
57	MG	BA	3106	1/1	0.98	0.05	58,58,58,58	0
57	MG	BA	3087	1/1	0.98	0.05	61,61,61,61	0
57	MG	BA	3020	1/1	0.98	0.22	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	AA	1640	1/1	0.98	0.04	160,160,160,160	0
57	MG	BA	3063	1/1	0.98	0.09	54,54,54,54	0
57	MG	BA	3091	1/1	0.98	0.05	88,88,88,88	0
57	MG	BA	3052	1/1	0.98	0.04	54,54,54,54	0
57	MG	BA	3078	1/1	0.98	0.04	100,100,100,100	0
57	MG	BA	3094	1/1	0.98	0.05	92,92,92,92	0
57	MG	BA	3118	1/1	0.98	0.06	60,60,60,60	0
57	MG	BA	3043	1/1	0.98	0.07	68,68,68,68	0
57	MG	BA	3120	1/1	0.98	0.04	59,59,59,59	0
57	MG	BA	3121	1/1	0.98	0.10	64,64,64,64	0
57	MG	BA	3034	1/1	0.98	0.04	57,57,57,57	0
57	MG	BA	3001	1/1	0.98	0.11	61,61,61,61	0
57	MG	BA	3100	1/1	0.98	0.05	74,74,74,74	0
57	MG	BA	3036	1/1	0.98	0.05	65,65,65,65	0
57	MG	BA	3102	1/1	0.98	0.17	57,57,57,57	0
57	MG	AA	1642	1/1	0.98	0.09	90,90,90,90	0
57	MG	BA	3104	1/1	0.98	0.06	55,55,55,55	0
57	MG	BA	3067	1/1	0.99	0.06	57,57,57,57	0
57	MG	BA	3134	1/1	0.99	0.04	55,55,55,55	0
57	MG	BA	3029	1/1	0.99	0.07	54,54,54,54	0
57	MG	BA	3041	1/1	0.99	0.06	60,60,60,60	0
57	MG	BA	3054	1/1	0.99	0.03	62,62,62,62	0
57	MG	BA	3055	1/1	0.99	0.07	62,62,62,62	0
57	MG	BB	203	1/1	0.99	0.04	69,69,69,69	0
57	MG	BA	3017	1/1	0.99	0.04	56,56,56,56	0
57	MG	BA	3073	1/1	0.99	0.03	61,61,61,61	0
57	MG	BA	3018	1/1	0.99	0.03	80,80,80,80	0
57	MG	BA	3116	1/1	0.99	0.09	55,55,55,55	0
57	MG	BA	3117	1/1	0.99	0.04	67,67,67,67	0
57	MG	BA	3033	1/1	0.99	0.06	56,56,56,56	0
57	MG	BA	3024	1/1	0.99	0.06	60,60,60,60	0
57	MG	BA	3096	1/1	0.99	0.17	61,61,61,61	0
57	MG	BA	3097	1/1	0.99	0.06	65,65,65,65	0
57	MG	BA	3025	1/1	0.99	0.03	59,59,59,59	0
57	MG	BA	3012	1/1	0.99	0.04	54,54,54,54	0
57	MG	BA	3027	1/1	0.99	0.09	59,59,59,59	0
57	MG	BA	3038	1/1	0.99	0.03	59,59,59,59	0
57	MG	BA	3050	1/1	0.99	0.05	56,56,56,56	0
57	MG	BA	3082	1/1	0.99	0.04	55,55,55,55	0
57	MG	BA	3065	1/1	0.99	0.08	55,55,55,55	0
57	MG	BA	3129	1/1	0.99	0.04	55,55,55,55	0
57	MG	BA	3130	1/1	0.99	0.09	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	BA	3084	1/1	0.99	0.18	61,61,61,61	0
58	ZN	B4	101	1/1	0.99	0.02	99,99,99,99	0
57	MG	BA	3008	1/1	0.99	0.04	59,59,59,59	0
57	MG	BA	3023	1/1	1.00	0.05	59,59,59,59	0
57	MG	BA	3108	1/1	1.00	0.09	58,58,58,58	0
57	MG	BA	3013	1/1	1.00	0.05	55,55,55,55	0
57	MG	BA	3031	1/1	1.00	0.08	59,59,59,59	0

6.5 Other polymers [i](#)

There are no such residues in this entry.