



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 22, 2024 – 06:22 PM EDT

PDB ID : 4V84
Title : Crystal structure of a complex containing domain 3 of CrPV IGR IRES RNA bound to the 70S ribosome.
Authors : Zhu, J.; Korostelev, A.; Costantino, D.; Noller, H.F.; Kieft, J.S.
Deposited on : 2010-12-13
Resolution : 3.40 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

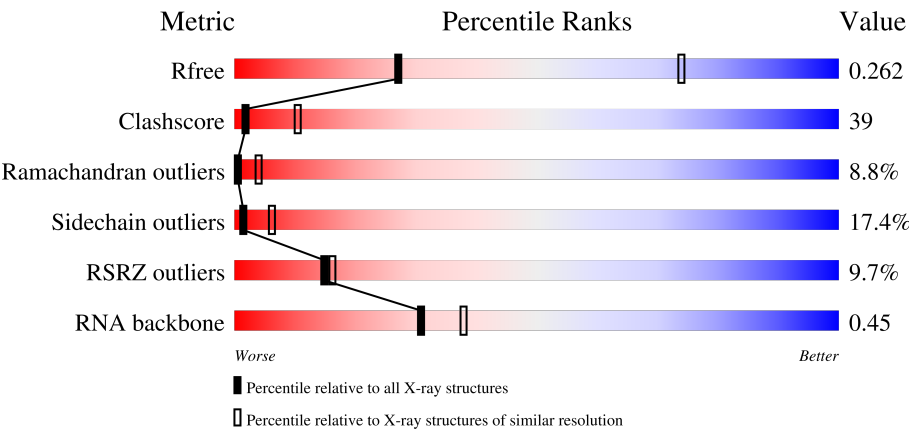
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.40 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	1140 (3.46-3.34)
Clashscore	180529	1172 (3.46-3.34)
Ramachandran outliers	177936	1172 (3.46-3.34)
Sidechain outliers	177891	1172 (3.46-3.34)
RSRZ outliers	164620	1140 (3.46-3.34)
RNA backbone	3690	1033 (3.80-3.00)

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	AA	1506	<div><div>5%</div><div>20%</div><div>63%</div><div>16%</div><div>.</div></div>
1	CA	1506	<div><div>5%</div><div>19%</div><div>64%</div><div>18%</div></div>
2	AB	234	<div><div>13%</div><div>33%</div><div>53%</div><div>13%</div></div>
2	CB	234	<div><div>13%</div><div>32%</div><div>56%</div><div>12%</div></div>

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Mol	Chain	Length	Quality of chain
3	AC	206	
3	CC	206	
4	AD	208	
4	CD	208	
5	AE	151	
5	CE	151	
6	AF	101	
6	CF	101	
7	AG	155	
7	CG	155	
8	AH	138	
8	CH	138	
9	AI	127	
9	CI	127	
10	AJ	98	
10	CJ	98	
11	AK	119	
11	CK	119	
12	AL	124	
12	CL	124	
13	AM	116	
13	CM	116	
14	AN	60	
14	CN	60	
15	AO	88	

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Mol	Chain	Length	Quality of chain
15	CO	88	
16	AP	83	
16	CP	83	
17	AQ	99	
17	CQ	99	
18	AR	70	
18	CR	70	
19	AS	78	
19	CS	78	
20	AT	99	
20	CT	99	
21	AU	24	
21	CU	24	
22	AV	43	
22	CV	43	
23	BA	2879	
23	DA	2879	
24	BB	119	
24	DB	119	
25	BC	271	
25	DC	271	
26	BD	204	
26	DD	204	
27	BE	202	
27	DE	202	

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Mol	Chain	Length	Quality of chain
28	BF	181	
28	DF	181	
29	BG	159	
29	DG	159	
30	BH	145	
30	DH	145	
31	BI	65	
31	DI	65	
32	BJ	137	
32	DJ	137	
33	BK	122	
33	DK	122	
34	BL	146	
34	DL	146	
35	BM	136	
35	DM	136	
36	BN	117	
36	DN	117	
37	BO	98	
37	DO	98	
38	BP	137	
38	DP	137	
39	BQ	116	
39	DQ	116	
40	BR	101	

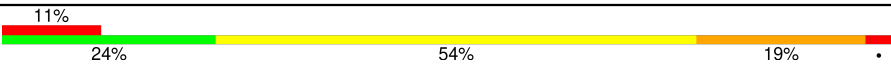
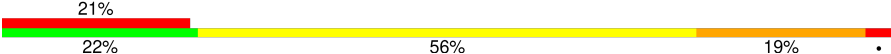
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Mol	Chain	Length	Quality of chain
40	DR	101	
41	BS	112	
41	DS	112	
42	BT	92	
42	DT	92	
43	BU	100	
43	DU	100	
44	BV	188	
44	DV	188	
45	BW	76	
45	DW	76	
46	BX	88	
46	DX	88	
47	BY	62	
47	DY	62	
48	BZ	59	
48	DZ	59	
49	B1	30	
49	D1	30	
50	B2	52	
50	D2	52	
51	B3	44	
51	D3	44	
52	B4	48	
52	D4	48	

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Mol	Chain	Length	Quality of chain
53	B5	63	
53	D5	63	

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
54	MG	BA	3031	-	-	-	X
54	MG	CA	1685	-	-	-	X
54	MG	DA	3260	-	-	-	X

2 Entry composition

There are 55 unique types of molecules in this entry. The entry contains 282142 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 RNA chain called ribosomal RNA 16S.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1506	Total	C	N	O	P	0	0	0
			32372	14409	5999	10459	1505			
1	CA	1506	Total	C	N	O	P	0	0	0
			32372	14409	5999	10459	1505			

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	234	Total	C	N	O	S	0	0	0
			1901	1213	341	342	5			
2	CB	234	Total	C	N	O	S	0	0	0
			1901	1213	341	342	5			

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	206	Total	C	N	O	S	0	0	0
			1613	1016	314	282	1			
3	CC	206	Total	C	N	O	S	0	0	0
			1613	1016	314	282	1			

- Molecule 4 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			
4	CD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 5 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	151	Total	C	N	O	S	0	0	0
			1156	729	218	205	4			
5	CE	151	Total	C	N	O	S	0	0	0
			1156	729	218	205	4			

- Molecule 6 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			
6	CF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 7 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			
7	CG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 8 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			
8	CH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 9 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AI	127	Total	C	N	O		0	0	0
			1011	639	198	174				
9	CI	127	Total	C	N	O		0	0	0
			1011	639	198	174				

- Molecule 10 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	98	Total	C	N	O	S	0	0	0
			795	499	156	139	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CJ	98	Total	C	N	O	S	0	0	0
			795	499	156	139	1			

- Molecule 11 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AK	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			
11	CK	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

- Molecule 12 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AL	124	Total	C	N	O	S	0	0	0
			971	611	195	164	1			
12	CL	124	Total	C	N	O	S	0	0	0
			971	611	195	164	1			

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	116	Total	C	N	O	S	0	0	0
			929	574	191	162	2			
13	CM	116	Total	C	N	O	S	0	0	0
			929	574	191	162	2			

- Molecule 14 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			
14	CN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 15 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			
15	CO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	83	Total	C	N	O	S	0	0	0
			701	443	139	118	1			
16	CP	83	Total	C	N	O	S	0	0	0
			701	443	139	118	1			

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	99	Total	C	N	O	S	0	0	0
			824	528	152	142	2			
17	CQ	99	Total	C	N	O	S	0	0	0
			824	528	152	142	2			

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	70	Total	C	N	O	0	0	0
			574	367	112	95			
18	CR	70	Total	C	N	O	0	0	0
			574	367	112	95			

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	78	Total	C	N	O	S	0	0	0
			630	403	114	111	2			
19	CS	78	Total	C	N	O	S	0	0	0
			630	403	114	111	2			

- Molecule 20 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AT	99	Total	C	N	O	S	0	0	0
			762	469	162	129	2			
20	CT	99	Total	C	N	O	S	0	0	0
			762	469	162	129	2			

- Molecule 21 is a protein called 30S ribosomal protein Thx.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	AU	24	Total	C	N	O	0	0	0
			209	128	50	31			
21	CU	24	Total	C	N	O	0	0	0
			209	128	50	31			

- Molecule 22 is a RNA chain called RNA (34-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	34	Total	C	N	O	P	0	0	0
			719	323	125	238	33			
22	CV	34	Total	C	N	O	P	0	0	0
			719	323	125	238	33			

- Molecule 23 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	BA	2760	Total	C	N	O	P	0	0	0
			59440	26455	11114	19112	2759			
23	DA	2760	Total	C	N	O	P	0	0	0
			59442	26456	11114	19113	2759			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BA	1142	U	C	conflict	GB 46197919
BA	2825	U	G	conflict	GB 46197919
DA	1142	U	C	conflict	GB 46197919
DA	2825	U	G	conflict	GB 46197919

- Molecule 24 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			
24	DB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			

- Molecule 25 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BC	271	Total	C	N	O	S	0	0	0
			2105	1329	416	357	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	DC	271	Total	C	N	O	S	0	0	0
			2105	1329	416	357	3			

- Molecule 26 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BD	204	Total	C	N	O	S	0	0	0
			1564	988	299	271	6			
26	DD	204	Total	C	N	O	S	0	0	0
			1564	988	299	271	6			

- Molecule 27 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BE	202	Total	C	N	O	S	0	0	0
			1587	1011	297	276	3			
27	DE	202	Total	C	N	O	S	0	0	0
			1587	1011	297	276	3			

- Molecule 28 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BF	181	Total	C	N	O	S	0	0	0
			1475	943	268	260	4			
28	DF	181	Total	C	N	O	S	0	0	0
			1475	943	268	260	4			

- Molecule 29 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BG	159	Total	C	N	O	S	0	0	0
			1223	773	228	221	1			
29	DG	159	Total	C	N	O	S	0	0	0
			1223	773	228	221	1			

- Molecule 30 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BH	145	Total	C	N	O	S	0	0	0
			1133	724	200	208	1			
30	DH	145	Total	C	N	O	S	0	0	0
			1133	724	200	208	1			

- Molecule 31 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
31	BI	32	Total	C	N	O	0	0	0
			254	157	49	48			
31	DI	32	Total	C	N	O	0	0	0
			254	157	49	48			

- Molecule 32 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BJ	137	Total	C	N	O	S	0	0	0
			1097	707	205	182	3			
32	DJ	137	Total	C	N	O	S	0	0	0
			1097	707	205	182	3			

- Molecule 33 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BK	122	Total	C	N	O	S	0	0	0
			932	587	171	170	4			
33	DK	122	Total	C	N	O	S	0	0	0
			932	587	171	170	4			

- Molecule 34 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BL	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			
34	DL	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

- Molecule 35 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BM	136	Total	C	N	O	S	0	0	0
			1079	688	204	182	5			
35	DM	136	Total	C	N	O	S	0	0	0
			1079	688	204	182	5			

- Molecule 36 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
36	BN	117	Total	C	N	O	0	0	0
			960	599	202	159			
36	DN	117	Total	C	N	O	0	0	0
			960	599	202	159			

- Molecule 37 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
37	BO	98	Total	C	N	O	0	0	0
			771	486	154	131			
37	DO	98	Total	C	N	O	0	0	0
			771	486	154	131			

- Molecule 38 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BP	137	Total	C	N	O	S	0	0	0
			1144	713	234	196	1			
38	DP	137	Total	C	N	O	S	0	0	0
			1144	713	234	196	1			

- Molecule 39 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BQ	116	Total	C	N	O	S	0	0	0
			953	601	201	150	1			
39	DQ	116	Total	C	N	O	S	0	0	0
			953	601	201	150	1			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BQ	?	-	PHE	deletion	UNP Q72L76
DQ	?	-	PHE	deletion	UNP Q72L76

- Molecule 40 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BR	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
40	DR	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 41 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BS	112	Total	C	N	O	S	0	0	0
			891	560	175	154	2			
41	DS	112	Total	C	N	O	S	0	0	0
			891	560	175	154	2			

- Molecule 42 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BT	92	Total	C	N	O		0	0	0
			726	471	131	124				
42	DT	92	Total	C	N	O		0	0	0
			726	471	131	124				

- Molecule 43 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BU	100	Total	C	N	O	S	0	0	0
			776	500	148	124	4			
43	DU	100	Total	C	N	O	S	0	0	0
			776	500	148	124	4			

- Molecule 44 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BV	188	Total	C	N	O	S	0	0	0
			1492	950	265	275	2			
44	DV	188	Total	C	N	O	S	0	0	0
			1492	950	265	275	2			

- Molecule 45 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BW	76	Total	C	N	O	S	0	0	0
			605	376	126	102	1			
45	DW	76	Total	C	N	O	S	0	0	0
			605	376	126	102	1			

- Molecule 46 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
46	BX	88	Total	C	N	O	0	0	0
			695	435	141	119			
46	DX	88	Total	C	N	O	0	0	0
			695	435	141	119			

- Molecule 47 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BY	62	Total	C	N	O	S	0	0	0
			521	325	102	92	2			
47	DY	62	Total	C	N	O	S	0	0	0
			521	325	102	92	2			

- Molecule 48 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BZ	59	Total	C	N	O	S	0	0	0
			468	298	90	79	1			
48	DZ	59	Total	C	N	O	S	0	0	0
			468	298	90	79	1			

- Molecule 49 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	B1	30	Total	C	N	O	S	0	0	0
			226	142	36	44	4			
49	D1	30	Total	C	N	O	S	0	0	0
			226	142	36	44	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B2	52	Total	C	N	O	S	0	0	0
			405	255	79	66	5			
50	D2	52	Total	C	N	O	S	0	0	0
			405	255	79	66	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	B3	44	Total	C	N	O	S	0	0	0
			381	235	77	65	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	D3	44	Total	C	N	O	S	0	0	0
			381	235	77	65	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B4	48	Total	C	N	O	S	0	0	0
			419	257	104	56	2			
52	D4	48	Total	C	N	O	S	0	0	0
			419	257	104	56	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	B5	63	Total	C	N	O	S	0	0	0
			508	326	101	79	2			
53	D5	63	Total	C	N	O	S	0	0	0
			508	326	101	79	2			

- Molecule 54 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	AA	163	Total	Mg	0	0
			163	163		
54	AD	1	Total	Mg	0	0
			1	1		
54	AV	4	Total	Mg	0	0
			4	4		
54	BA	408	Total	Mg	0	0
			408	408		
54	BB	17	Total	Mg	0	0
			17	17		
54	BK	1	Total	Mg	0	0
			1	1		
54	B2	1	Total	Mg	0	0
			1	1		
54	CA	140	Total	Mg	0	0
			140	140		
54	CP	1	Total	Mg	0	0
			1	1		
54	CV	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	DA	436	Total 436	Mg 436	0	0
54	DB	17	Total 17	Mg 17	0	0
54	DE	1	Total 1	Mg 1	0	0
54	DG	1	Total 1	Mg 1	0	0
54	D2	1	Total 1	Mg 1	0	0
54	D4	1	Total 1	Mg 1	0	0

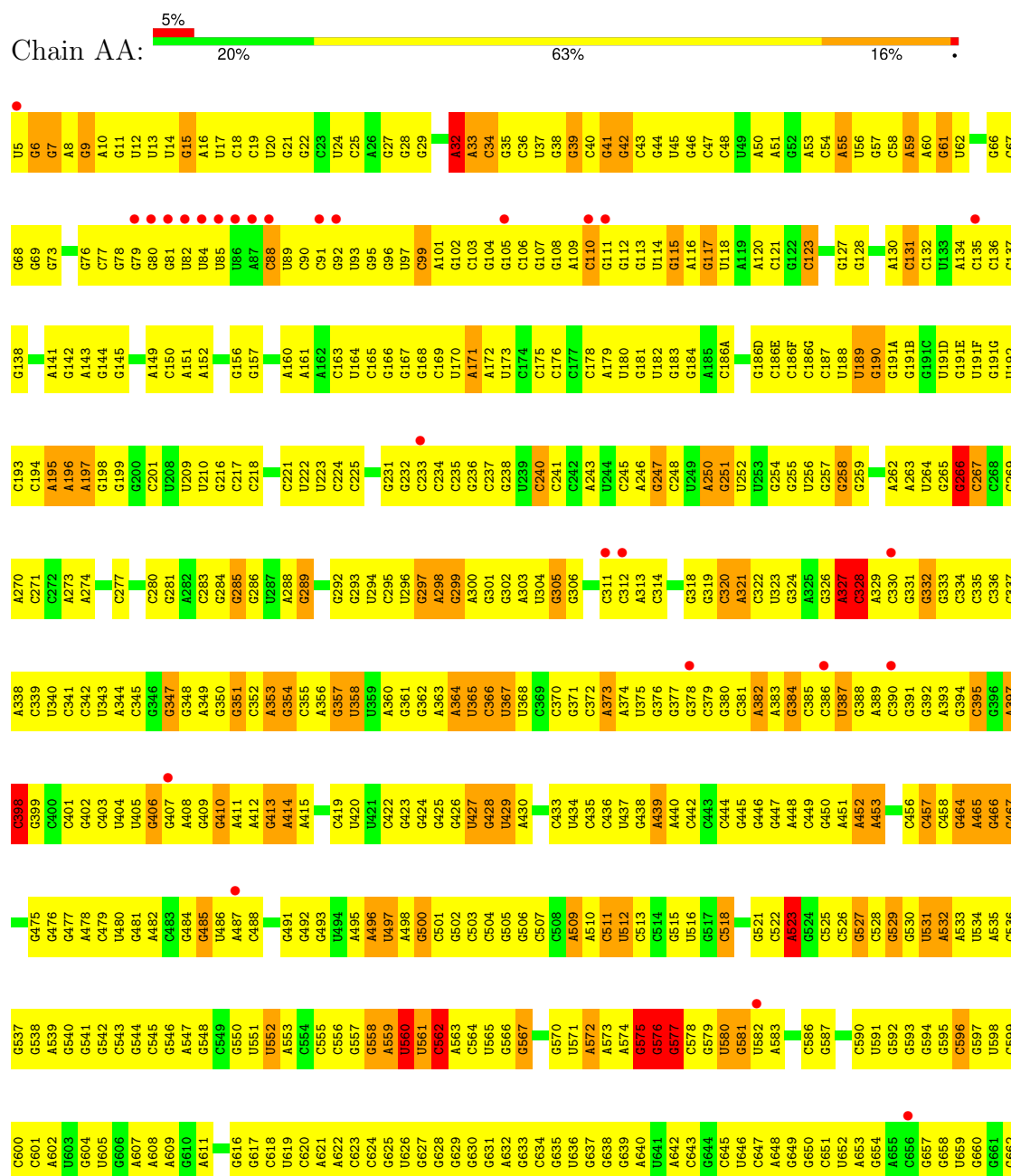
- Molecule 55 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	AD	1	Total 1	Zn 1	0	0
55	AN	1	Total 1	Zn 1	0	0
55	CD	1	Total 1	Zn 1	0	0
55	CN	1	Total 1	Zn 1	0	0

3 Residue-property plots

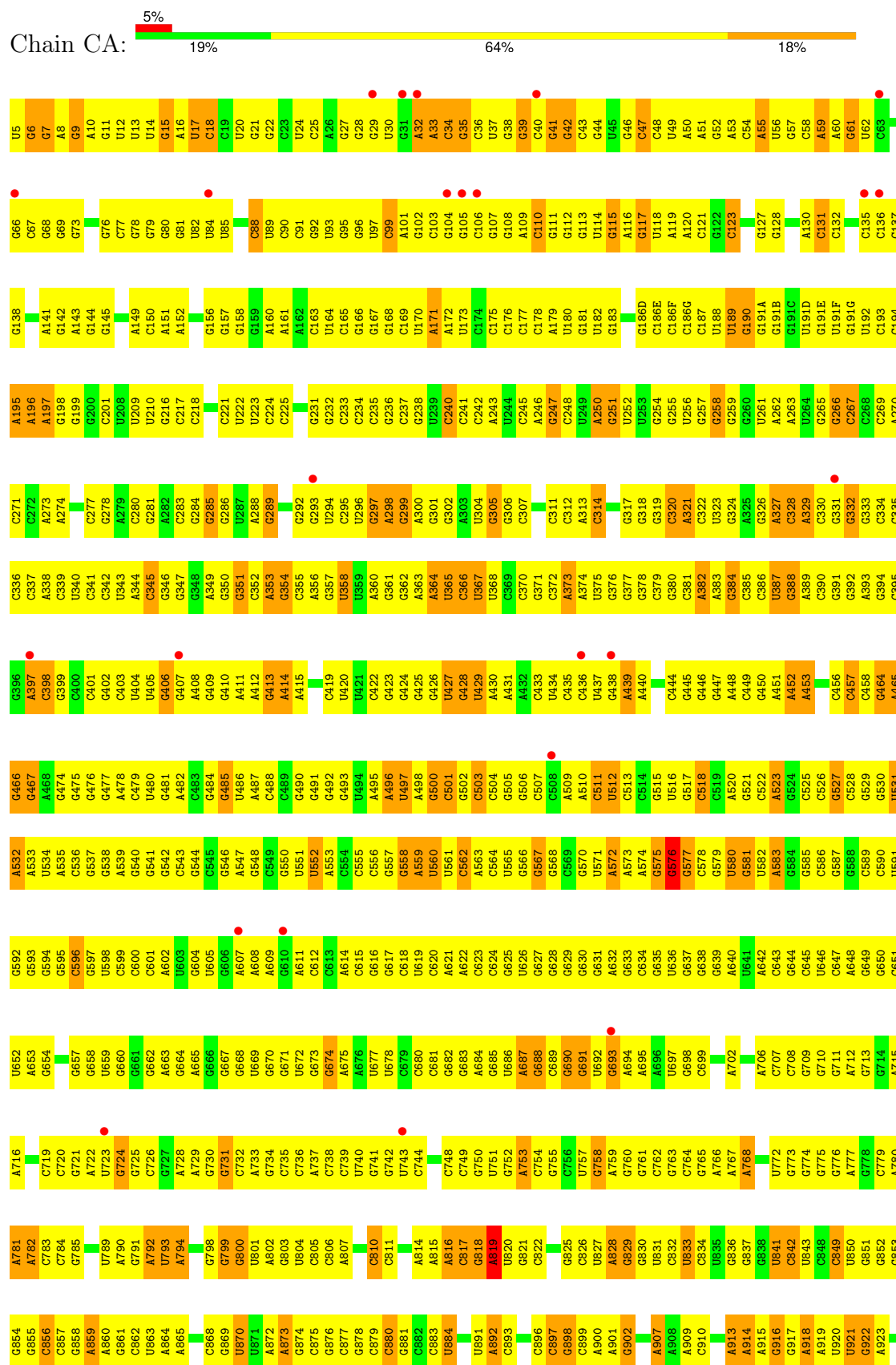
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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.

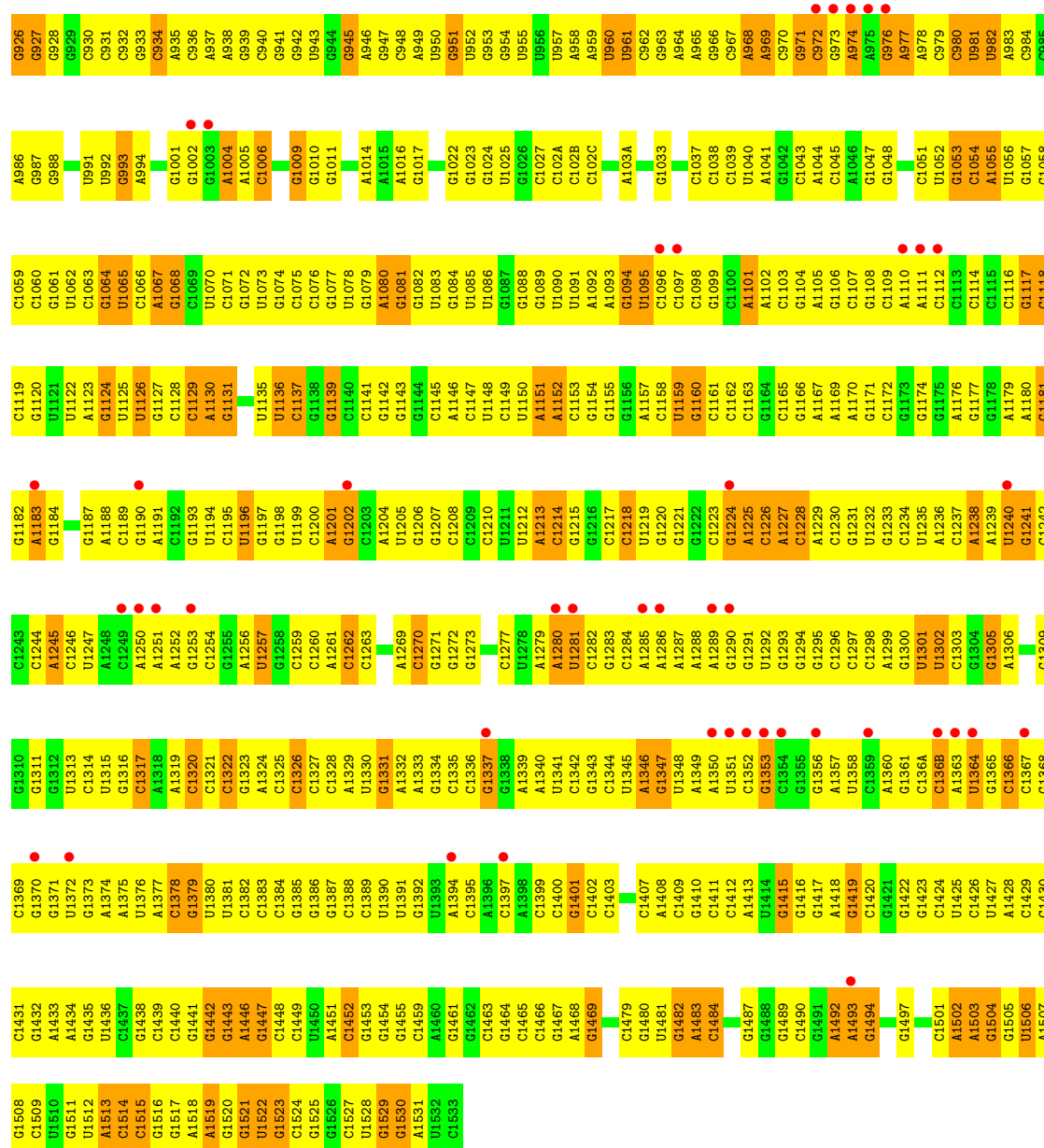
• Molecule 1: ribosomal RNA 16S



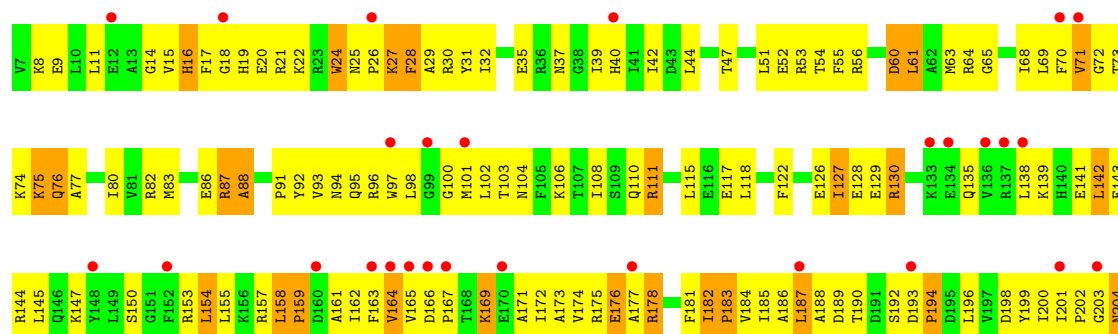
G1517	A1446	U1380	C1320	A1252	G1190	U1125	C1063	U992	C931	G861	A790	C726	A663
A1518	G1447	U1381	C1321	G1253	A1191	U1126	G1064	G993	C932	C862	G791	G727	G664
A1519	C1448	C1382	G1322	G1254	G1192	G1127	U1065	A994	G933	U863	A792	A728	A665
G1520	C1449	C1383	G1323	G1255	G1193	G1128	C1066	U997	C934	A864	A793	A729	G666
G1521	U1450	A1324	A1324	A1256	U1194	C1129	A1067	G998A	A935	A865	A794	G730	G667
U1522	G1365	C1325	C1325	U1257	C1195	A1130	G1068	U997	C936	C797	C732	G731	G668
G1523	C1452	C1326	C1326	G1258	U1196	U1131	C1069	G998A	A937	C868	C797	G732	U669
C1524	G1453	G1327	C1327	C1259	G1197	U1135	U1070	A1000	A938	C869	G796	A733	G670
G1525	G1454	C1328	C1328	C1260	G1198	U1136	C1071	G1001	G939	U870	G796	A733	G671
G1526	C1389	A1261	C1329	A1261	U1199	U1136	C1072	G1002	G940	C880	G799	C735	U672
C1527	C1459	U1330	U1330	C1262	C1200	C1137	U1073	G1003	G941	A873	U801	C736	G673
U1528	U1391	A1331	A1331	C1263	A1201	G1138	G1074	A1004	G942	C874	A802	A737	G674
G1529	G1460	C1392	C1392	C1263	G1202	G1139	C1075	A1005	U943	C875	G803	C738	A675
G1530	G1461	A1332	A1332	C1270	G1203	C1140	C1076	G1006	G944	C876	U804	C739	A676
U1531	G1464	C1333	C1333	G1271	A1204	C1141	G1077	U1009	G945	C877	C805	U677	U678
U1532	C1395	G1334	C1334	G1272	U1205	G1142	A1080	G1010	A946	C878	C806	G741	U679
C1533	C1466	G1273	G1273	G1273	G1206	G1143	G1011	G1011	G947	C879	A807	G742	U680
	G1467	G1337	G1337	C1277	G1207	G1144	G1081	U1014	G948	C880	C810	C744	G682
	A1468	A1338	A1338	U1278	C1208	C1145	G1082	A1015	A949	C881	C811		G683
G1469	G1399	A1339	A1339	A1279	G1209	C1146	U1083	A1016	U950	C882			G684
G1470	C1400	A1340	A1340	U1280	U1211	C1147	G1084	A1017	G951	U884	A814	C748	G685
G1471	C1401	U1341	U1341	U1281	U1212	U1148	U1085	G1017	G952	U884	A815	C749	U686
U1472	C1402	C1342	C1342	U1282	A1213	C1149	U1086	G1022	G953	C892	A816	G750	A687
	C1403	G1343	G1343	C1283	G1214	U1150	G1087	G1023	G954	C893	A817	U751	G688
		C1344	C1344	C1284	A1151	U1151	G1088	G1024	U955	C894	G818	G752	C689
G1480	G1407	U1345	U1345	A1285	A1152	A1152	G1089	G1025	U956	C895	G819	A753	G690
U1481	G1410	A1346	A1346	C1217	C1153	C1153	U1090	U1026	U957	C896	U820	C754	G691
G1482	C1411	G1347	G1347	C1218	G1154	G1154	U1091	C102A	A958	C897	G821	C756	U692
A1483	C1412	U1348	U1348	U1219	G1155	G1155	G1094	G1031	U959	C898	C822	U757	A694
C1484	A1413	A1349	A1349	U1220	G1156	G1156	U1095	U1031	U961	C901	C826	A759	U697
U1485	U1414	A1350	A1350	G1221	U1157	C1158	C1096	A103A	G962	G902	U827	G760	U698
G1486	G1415	C1351	C1351	G1222	C1159	U1159	C1097	C1037	G963	G903	A828	G761	C699
G1487	G1488	G1352	G1352	C1223	U1160	C1160	C1098	C1037	A964	C904	G829	C762	G700
G1488	C1490	G1353	G1353	A1225	C1161	C1161	C1099	C1037	G965	U905	G830	G763	C701
G1491	C1420	U1357	U1357	C1226	C1162	C1162	C1100	C1039	G966	G906	U831	G764	A702
A1492	G1421	U1358	U1358	C1227	C1163	G1164	C1101	U1040	C967	A907	C832	G765	G703
A1493	G1422	C1359	C1359	C1228	G1165	C1165	A1102	A968	A968	A908	U833	G766	A704
G1494	G1423	G1360	G1360	A1229	C1166	C1166	C1103	A969	C970	C910	C834	A767	U705
G1495	C1424	G1361	G1361	G1230	C1167	A1167	C1104	C1043	G971	A768	U835	A768	A706
	U1425	C1362	C1362	G1231	A1168	A1168	A1105	C1044	C972	G769	G836	C770	C707
C1426	C1426	C1363	C1363	G1232	C1169	C1169	G1106	A1045	G973	C837	G837	C770	G708
U1427	U1301	A1364	A1364	C1233	G1170	C1170	C1107	C1046	A974	A914	G838	G771	G709
A1428	U1302	U1365	U1365	C1234	C1171	C1171	C1108	A1046	A975	A915	U841	U772	G710
A1429	C1303	C1366	C1366	U1235	C1172	C1172	C1109	G1047	A976	G916	U842	U773	G711
A1500	G1304	G1367	G1367	A1236	A1176	A1176	A1110	U1048	G977	A917	U843	G774	G712
A1501	C1430	C1368	C1368	C1237	G1177	G1177	A1111	G1051	A978	A918	U844	G775	G713
A1502	G1504	A1369	A1369	G1238	G1178	G1178	C1113	C1052	C979	A919	C849	G776	G714
G1505	G1432	G1368	G1368	A1239	U1179	U1179	C1114	U1053	C980	U920	U850	A777	A715
U1506	A1433	C1369	C1369	U1240	A1180	A1180	C1115	G1054	U981	C922	G851	G778	A716
A1507	A1434	G1370	G1370	G1241	G1181	G1181	C1116	C1055	U982	C923	G852	C779	G717
G1508	U1435	C1371	C1371	C1242	A1182	A1182	C1117	A1056	A983	C924	G853	A780	G718
C1509	U1436	G1372	G1372	C1243	G1183	G1183	C1118	U1057	C984	G925	G854	A781	C719
U1437	C1437	C1373	C1373	C1244	A1184	A1184	C1119	G1058	G985	G926	G855	A782	G720
G1438	A1374	A1374	A1374	A1245	G1185	G1185	C1120	G1059	G986	G927	C857	C784	G721
C1439	A1375	U1376	U1376	C1246	G1186	G1186	U1121	C1060	G987	G928	G858	G785	A722
A1513	C1440	U1377	U1377	U1247	G1187	G1187	U1122	U1062	G988	G929	G859	G786	U723
C1514	G1441	C1378	C1378	A1250	A1188	A1188	A1123	U1062	U991	C930	A860	U789	G725
C1515	G1442	A1318	A1318	A1251	C1189	C1189	G1124						
G1516		A1319	A1319										

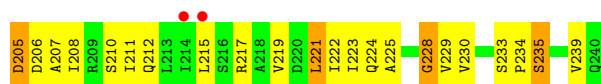
● Molecule 1: ribosomal RNA 16S



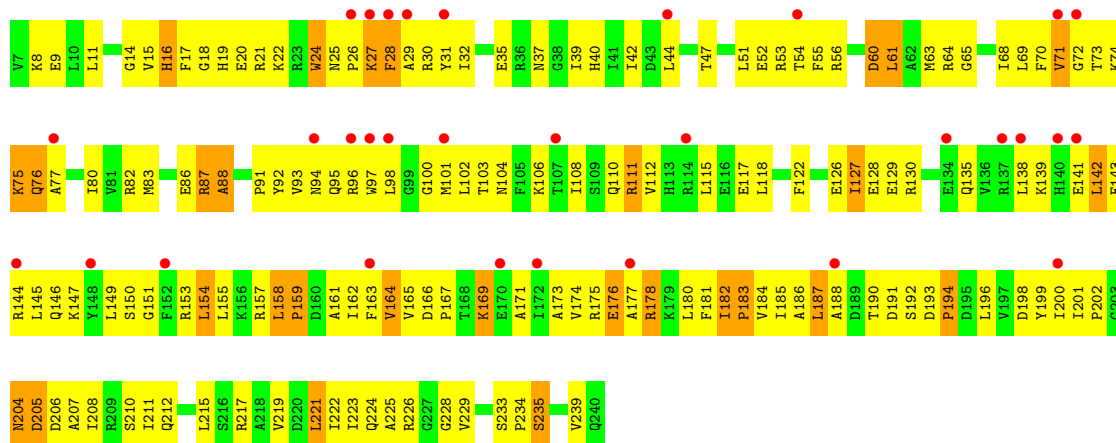


• Molecule 2: 30S ribosomal protein S2

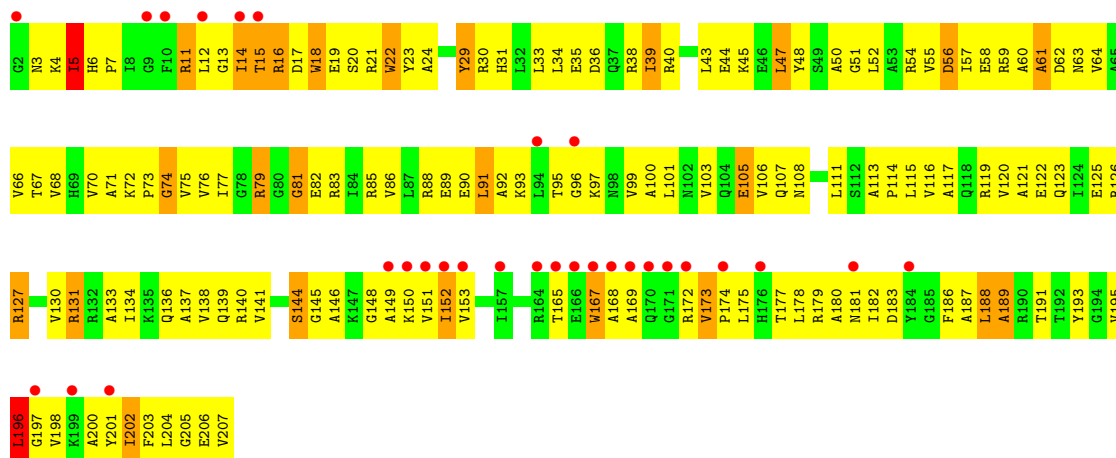




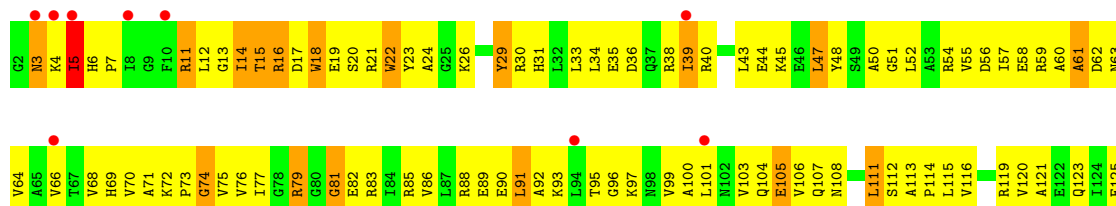
• Molecule 2: 30S ribosomal protein S2

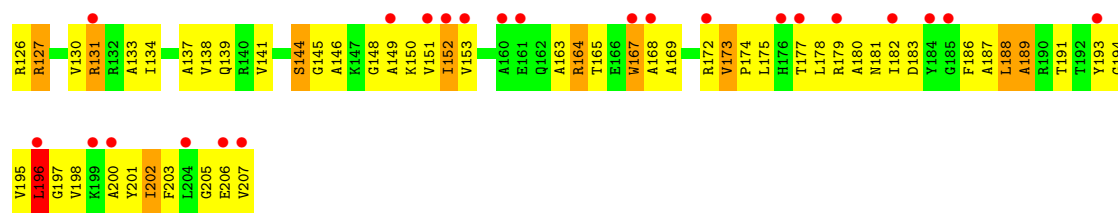


• Molecule 3: 30S ribosomal protein S3

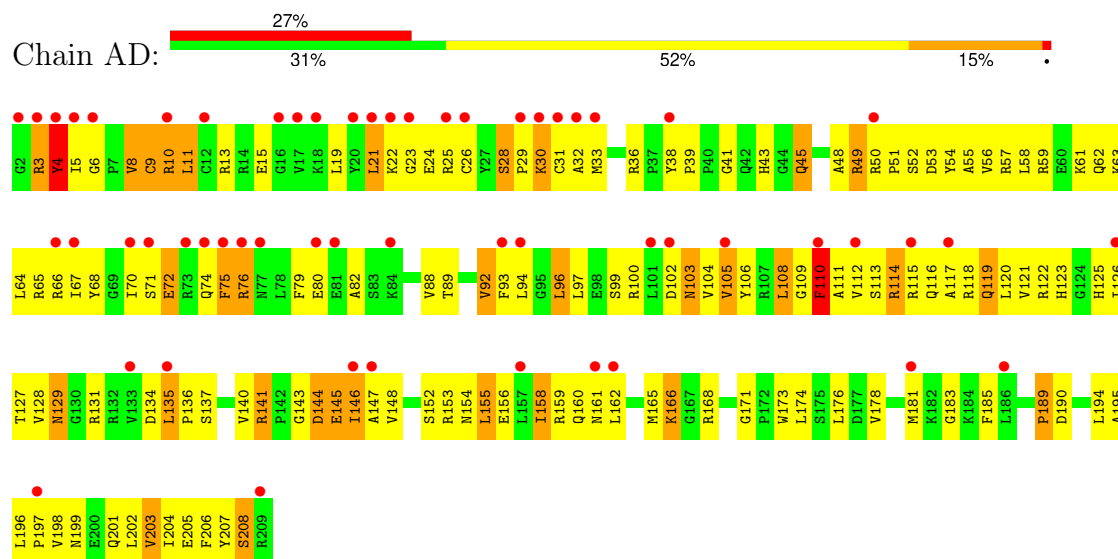


• Molecule 3: 30S ribosomal protein S3

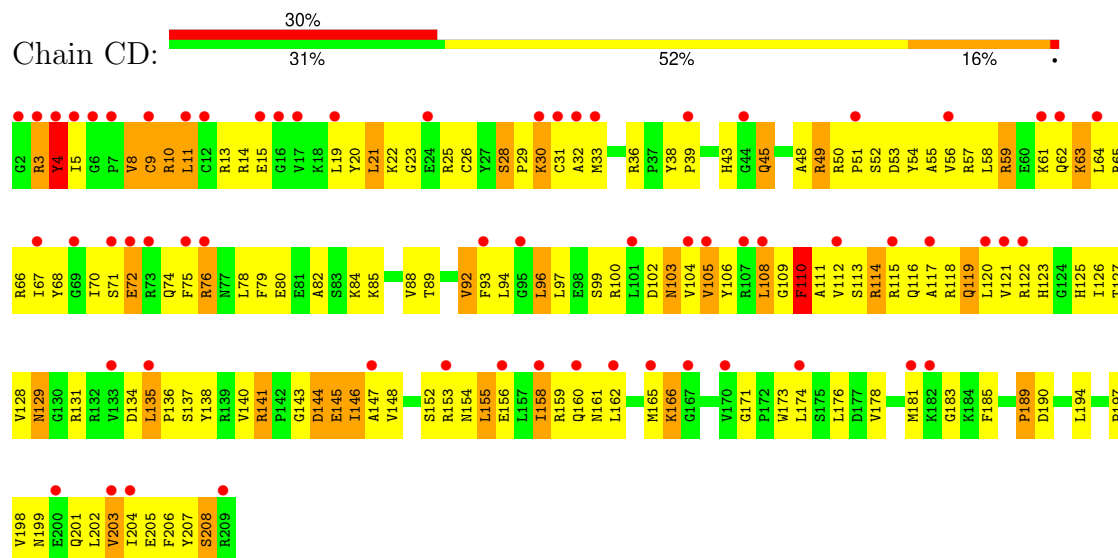




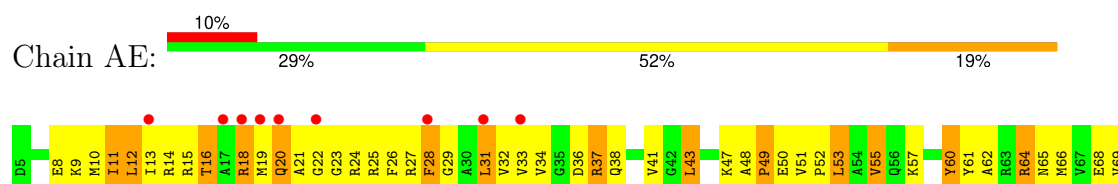
• Molecule 4: 30S ribosomal protein S4

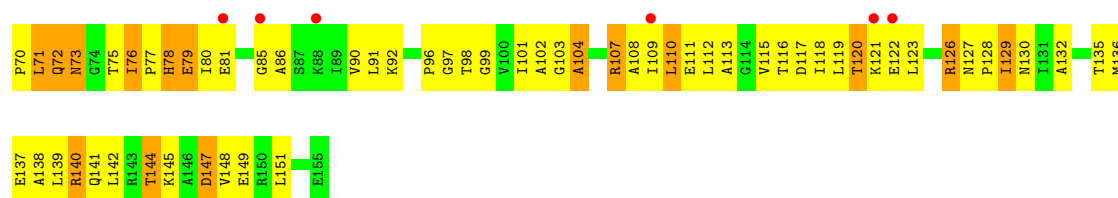


• Molecule 4: 30S ribosomal protein S4

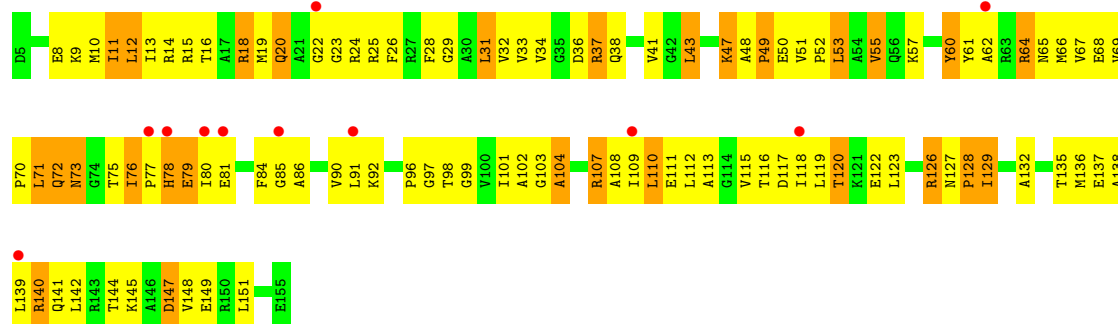


• Molecule 5: 30S ribosomal protein S5

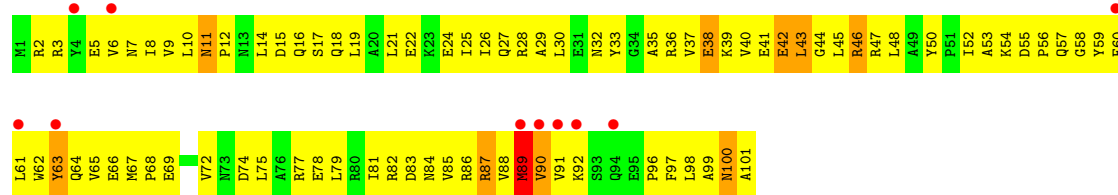




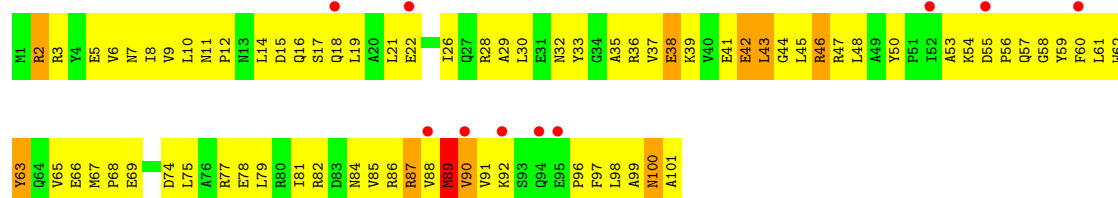
• Molecule 5: 30S ribosomal protein S5



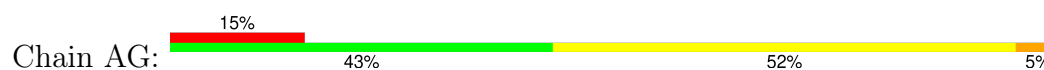
• Molecule 6: 30S ribosomal protein S6

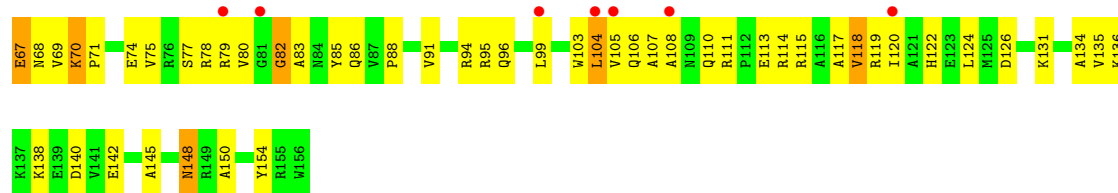


• Molecule 6: 30S ribosomal protein S6

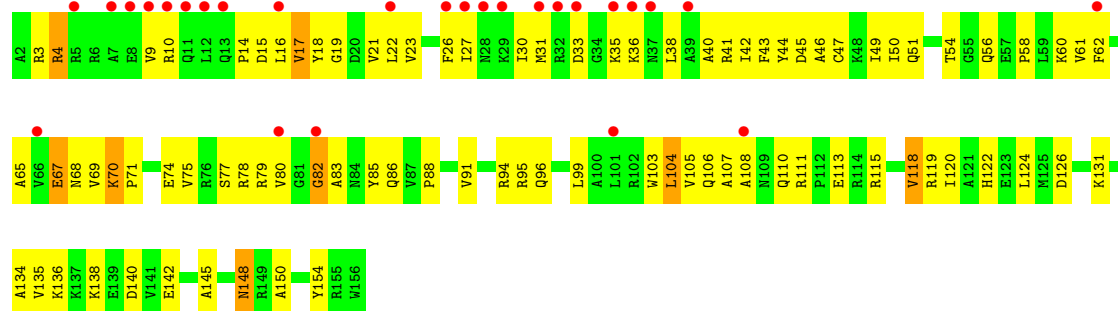


• Molecule 7: 30S ribosomal protein S7

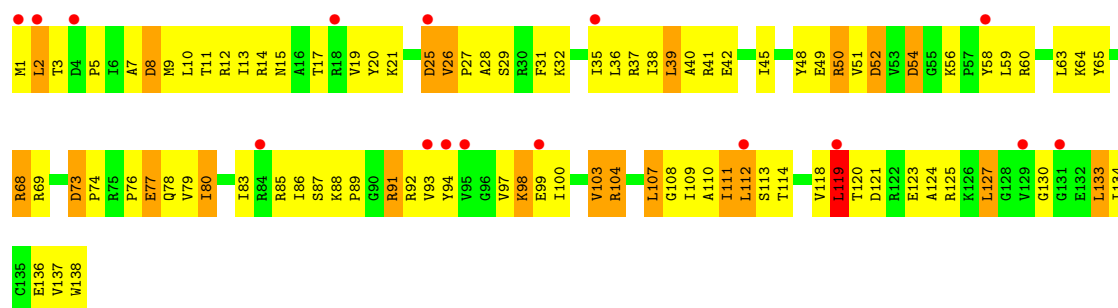




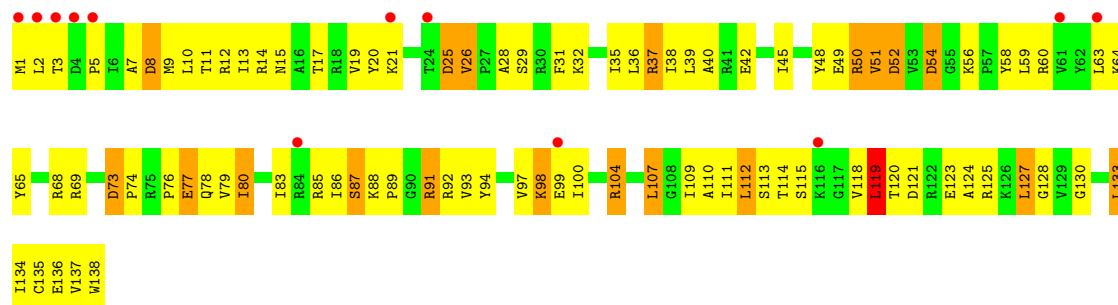
• Molecule 7: 30S ribosomal protein S7



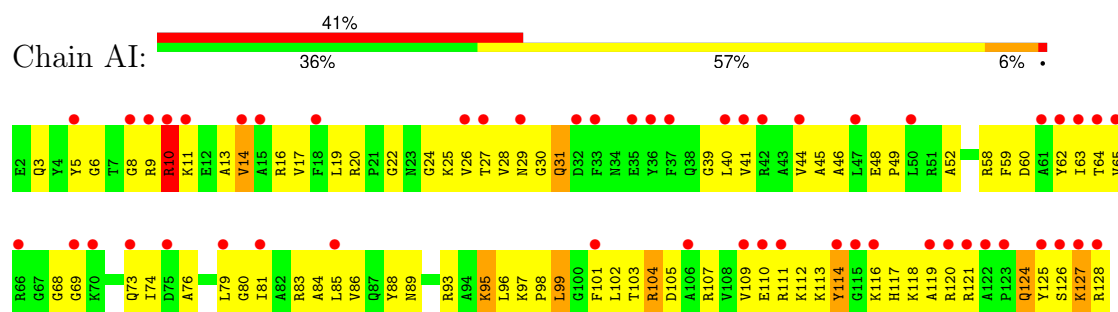
• Molecule 8: 30S ribosomal protein S8



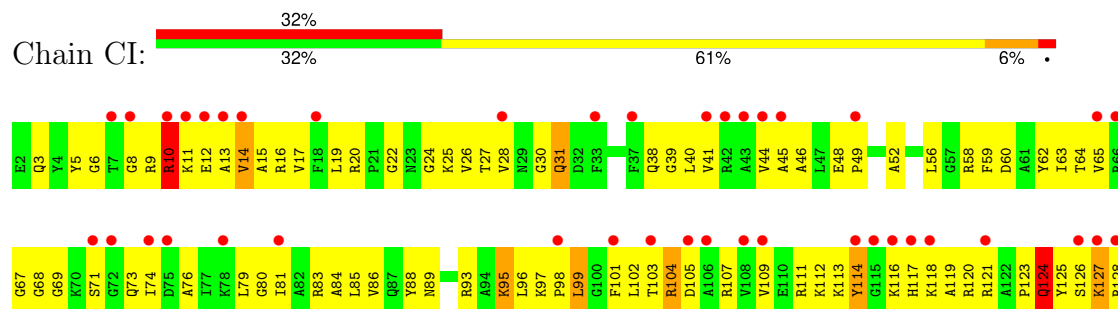
• Molecule 8: 30S ribosomal protein S8



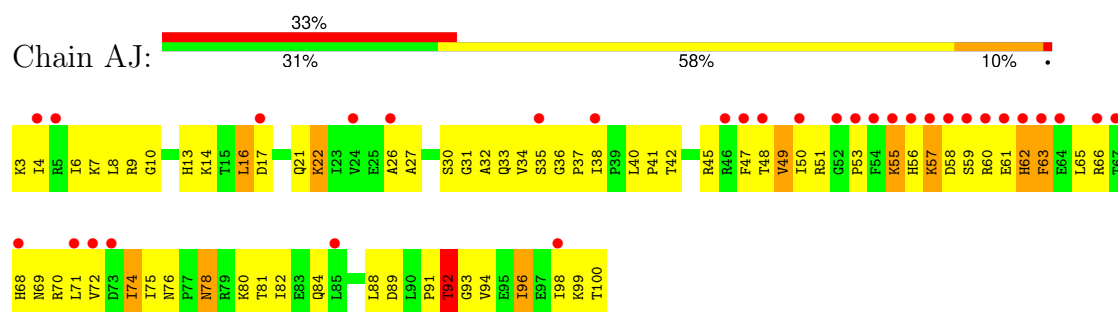
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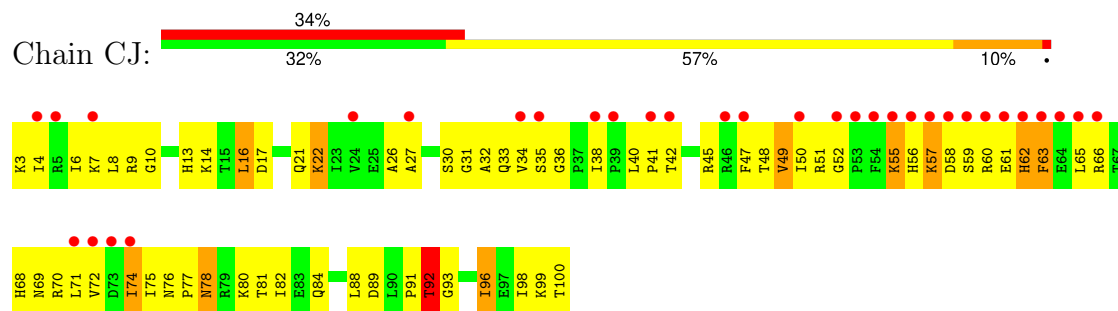
• Molecule 9: 30S ribosomal protein S9



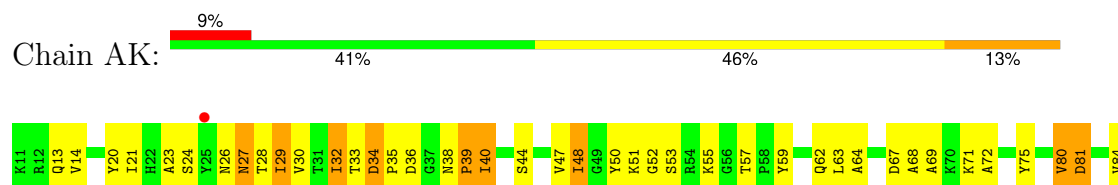
• Molecule 10: 30S ribosomal protein S10

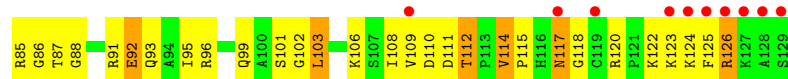


• Molecule 10: 30S ribosomal protein S10

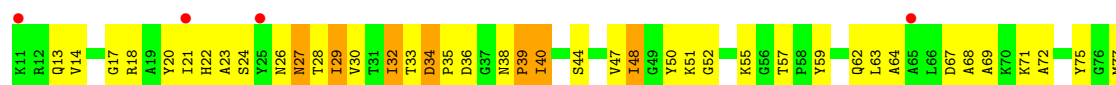


• Molecule 11: 30S ribosomal protein S11

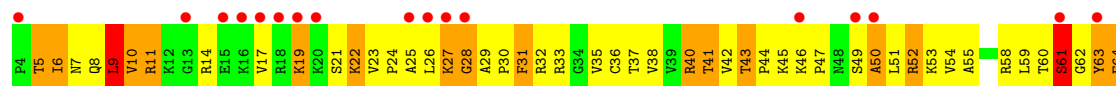




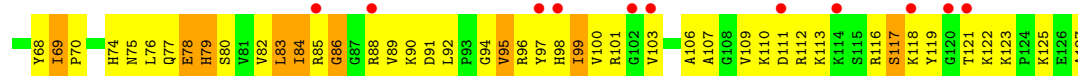
- Molecule 11: 30S ribosomal protein S11



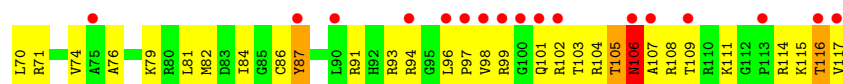
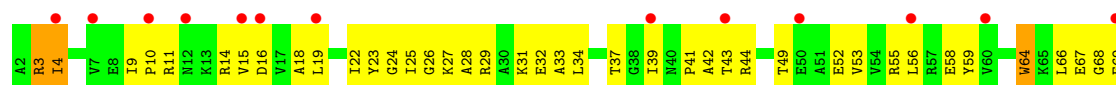
- Molecule 12: 30S ribosomal protein S12



- Molecule 12: 30S ribosomal protein S12

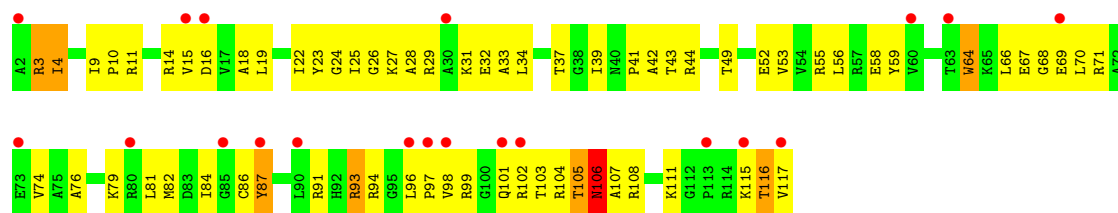


- Molecule 13: 30S ribosomal protein S13

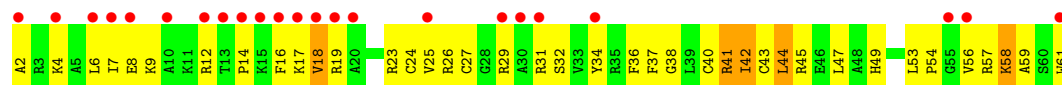


- Molecule 13: 30S ribosomal protein S13

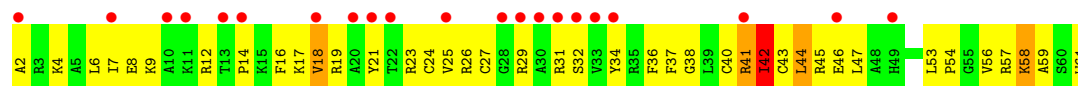




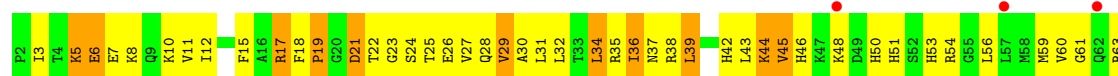
• Molecule 14: 30S ribosomal protein S14 type Z



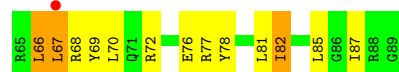
• Molecule 14: 30S ribosomal protein S14 type Z



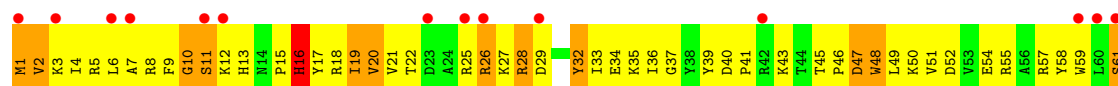
• Molecule 15: 30S ribosomal protein S15

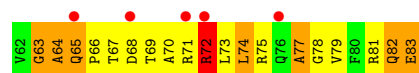


• Molecule 15: 30S ribosomal protein S15

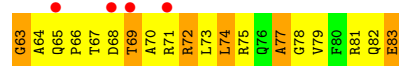
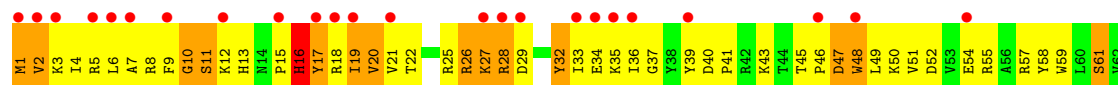


• Molecule 16: 30S ribosomal protein S16

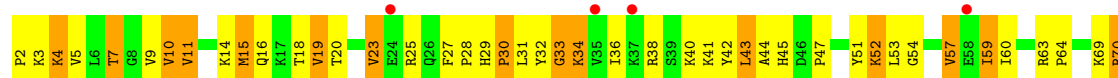
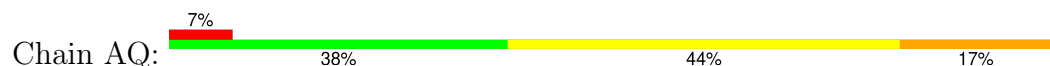




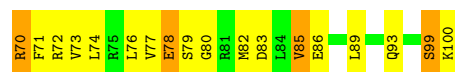
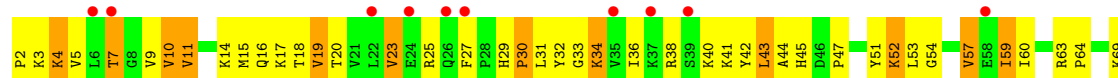
- Molecule 16: 30S ribosomal protein S16



- Molecule 17: 30S ribosomal protein S17



- Molecule 17: 30S ribosomal protein S17

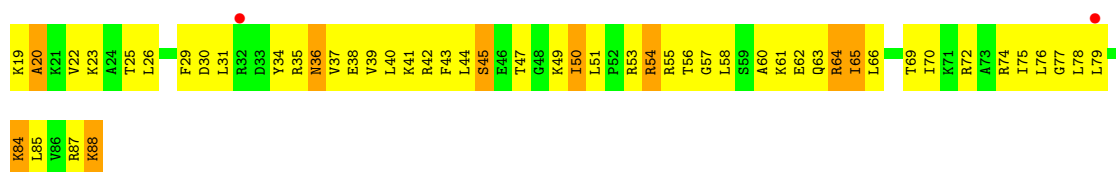


- Molecule 18: 30S ribosomal protein S18

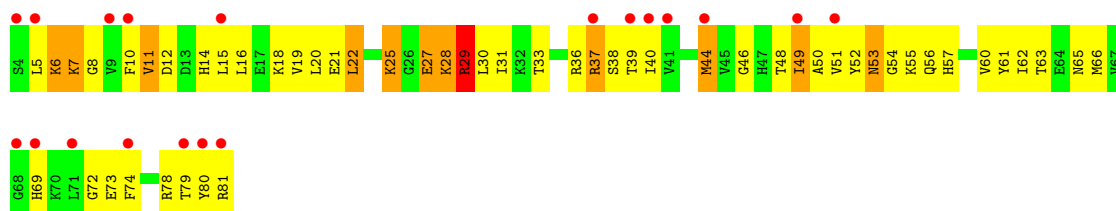


- Molecule 18: 30S ribosomal protein S18

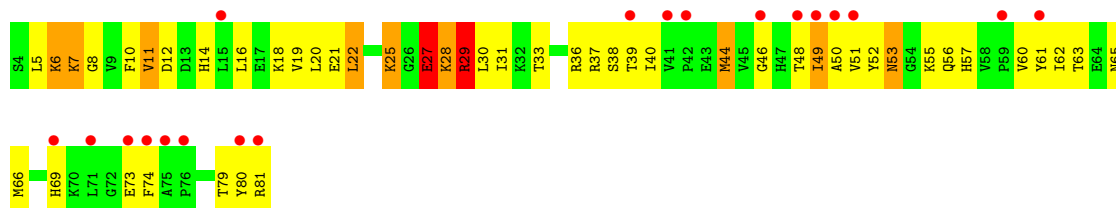




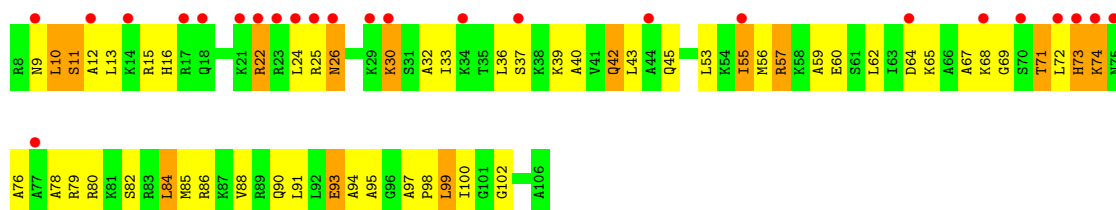
• Molecule 19: 30S ribosomal protein S19



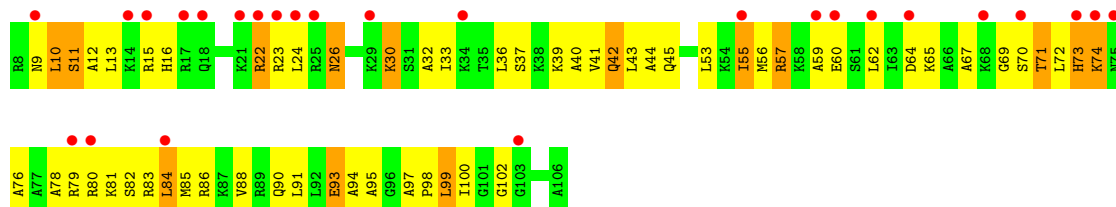
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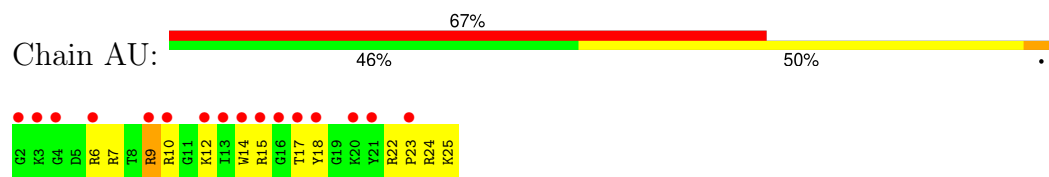
• Molecule 20: 30S ribosomal protein S20



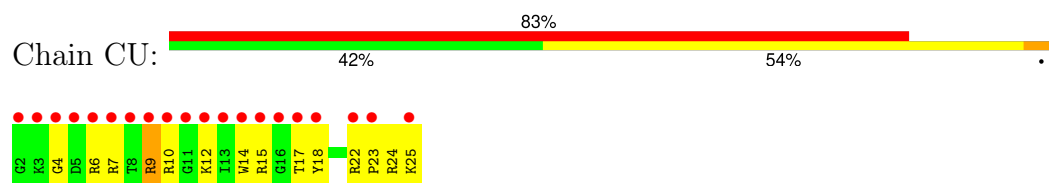
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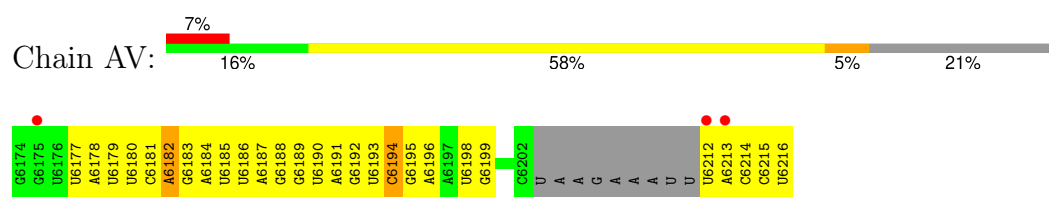
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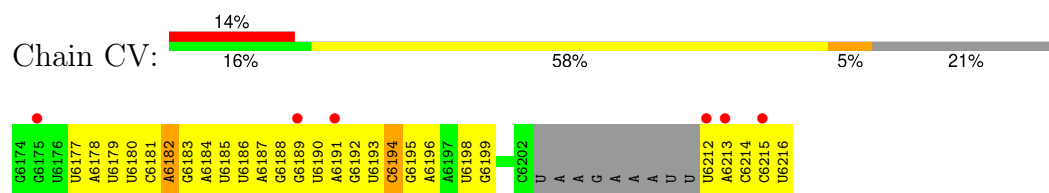
- Molecule 21: 30S ribosomal protein Thx



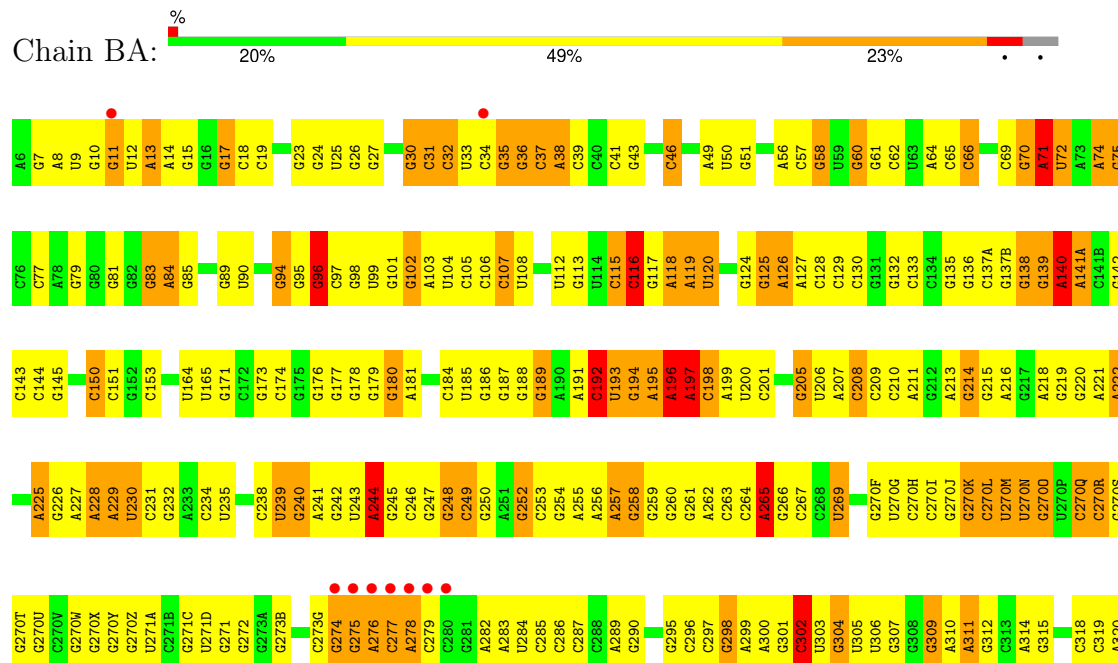
- Molecule 22: RNA (34-MER)



- Molecule 22: RNA (34-MER)



- Molecule 23: 23S ribosomal RNA



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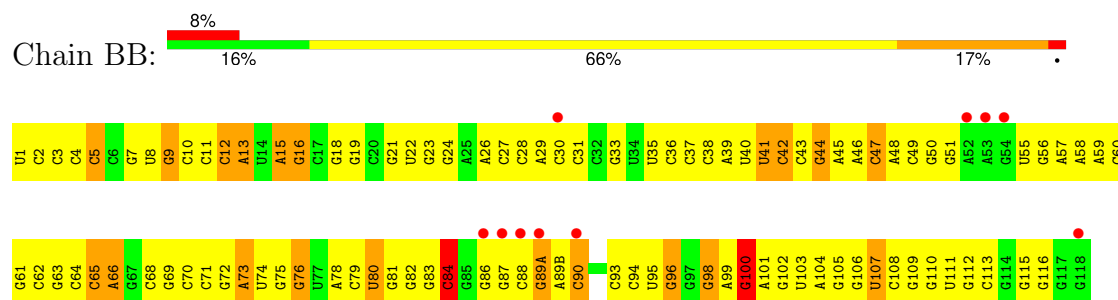


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A1027	A967	C902	C834	U773	A705	G641	C581	C516	G452	C377		G270J	A216	C141B
A1028	G968	C903	A835	U774	A706	G642	G582	C517	G453	C378	A310	G270K	G217	G142
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A1032	U972	U907	U839	G778		A646	A586	U524	A457		A314	U270O	G221	U147
U1033	G973	C908	C840	U779	G715	G647	C587	U525	G458	U384	G315	G270P	A221	C148
G1034	A974	A909	A841	G780	A716	G648	U588	U526	U459	C385	C316	C270Q	A222	A149
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G1036	G975	A911	G843	A782	A718	C650	A590	C527	C461	U387	C318	G270S	G224	G151
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	G977	U913	G845	A784		G652	G593	A529	G463	G389	A320	G270U	G226	C153
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G1051		C924	G853	G792	C730	G661	C601	C537	G473	G400	A331	U271C	G234	G175
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G1053		C926	G855	G794	G732	G663	G603	G540	U475		A333	G271E		
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A990		G928	C857	C796	A734	C665	C605	G542		C404	C335	G271G		
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C992		G930	G859	G798	C736	U667	U607	C544	A480	G406	C337	G271I		
G993		G931	U860	G799	C737		A608	G545	G481	G407	G338	U271J		
C994		A932	A861	G738	G738		A609A	C546	A482	G408	U339	C273G		
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A996		C935	A863	A802	U740	C672	C610	A548	C484	G410		G275	G245	
G997		G936	C865	U803	G741	C673	G611	G549	C485	G411		G276	G246	
G998		U937	A866	A804	G742	G674	G612	G550	C486		C343	G277	G247	
U999		G938	C867	G675	G743	A675	G615		C487	C414	G344	C278	G248	
C1000		G939	U868	G676	G744	A676	G616	U553	G488	A415	A345	C279	G249	
A1001		A940	C869	U807	G745	C677	A616	U554	G489	C416		C280	G250	
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G1007		G946	G875	U813	A751	C683	A621	G561	G496	G424		C286	A256	
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A1009		G948	U877	C815	C753	A685	G623	G563	G498	A428		C288	G258	
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C1012		G952	G881	G818	C756	U688	U626	U566	A501	U431				
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U1014		G954			G760	C892	G628	U568	A503			A295	C263	
C1015		C955	C886	U822	A761	C893	G629	U569	U504			G296	C264	
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A1022		G962	C897	A829	G768	G700	G636	U576	U511			U303	G270F	
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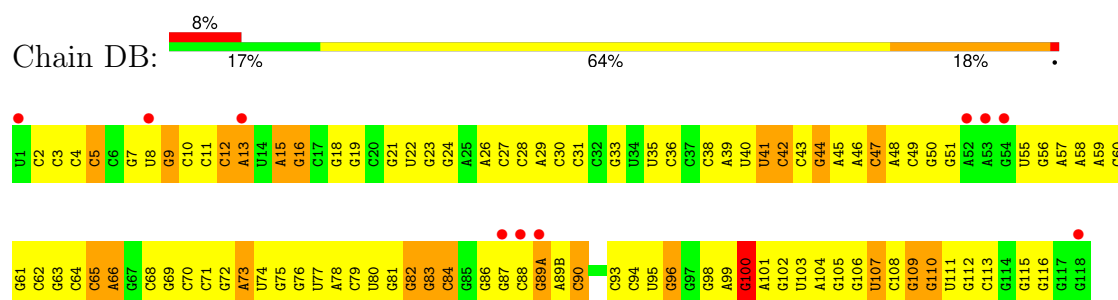
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G2006	A1802	C1734	C1658	U1536	A1470	C1411	A1349	C1289	G1219	G1154	C
C2007	A1803	C1735	U1659	A1535	G1471	G1412	C1350	C1290	A1220	A1155	G
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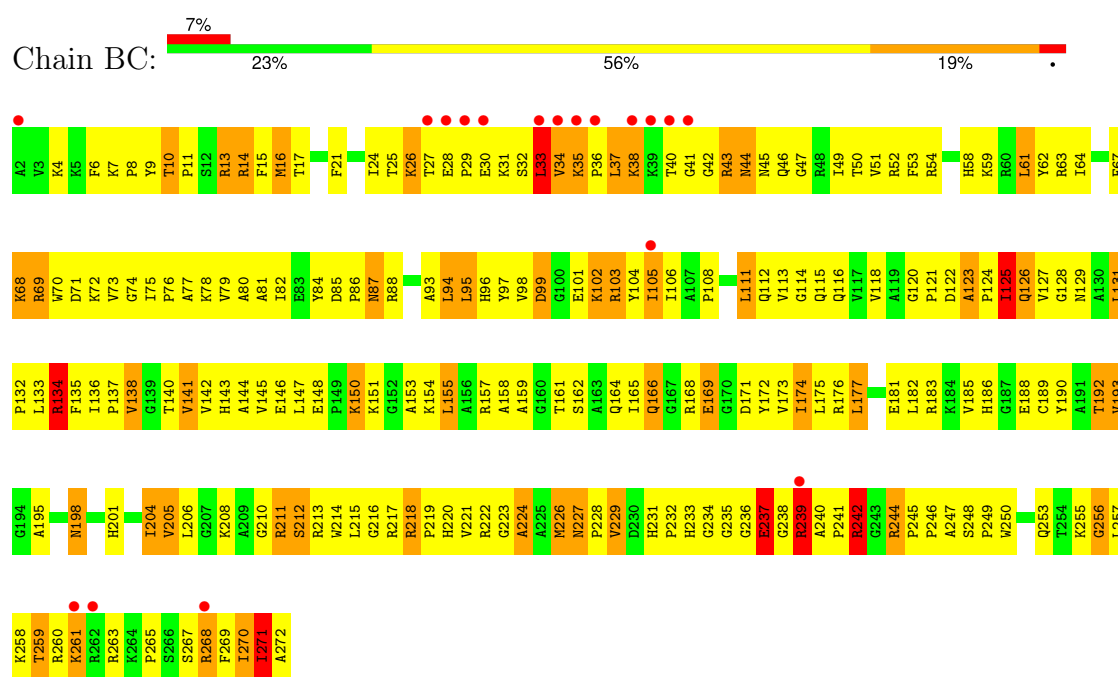
- Molecule 24: 5S ribosomal RNA

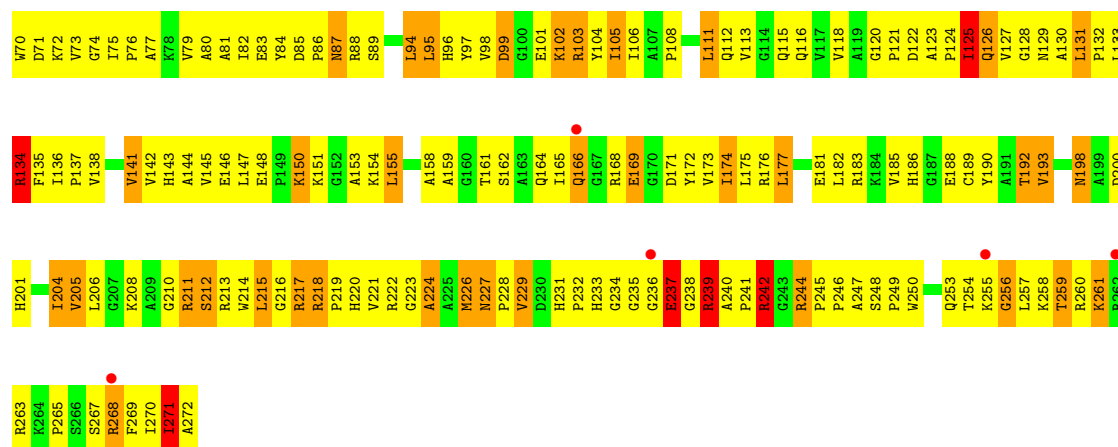


- Molecule 24: 5S ribosomal RNA

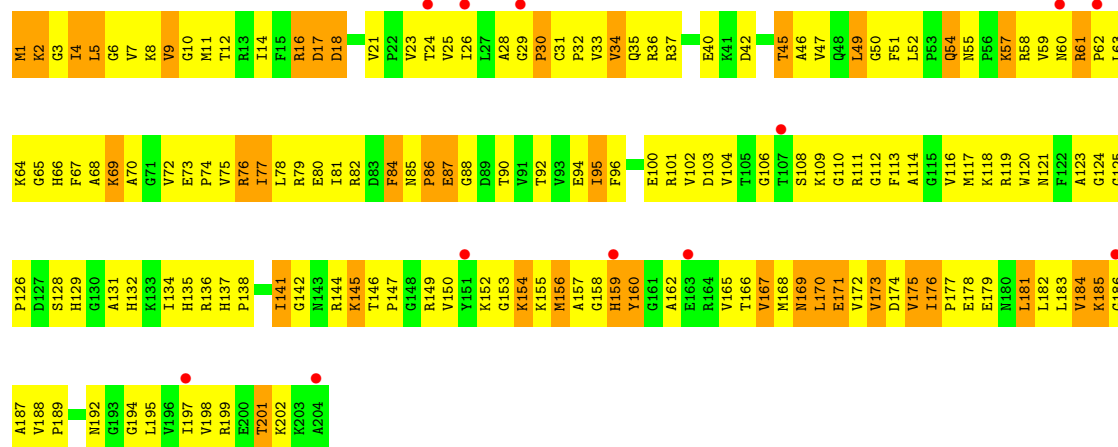


- Molecule 25: 50S ribosomal protein L2

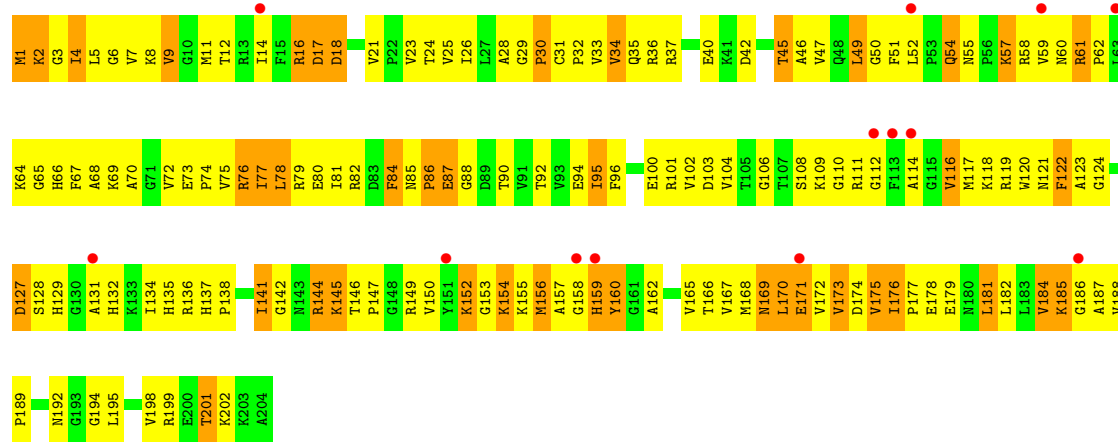




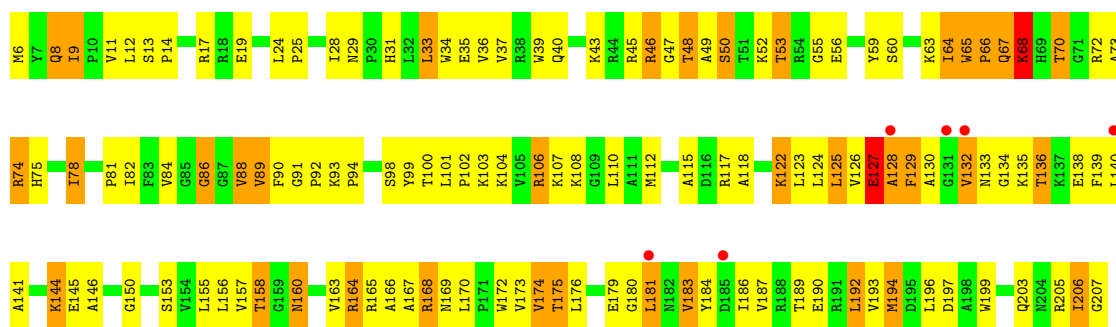
• Molecule 26: 50S ribosomal protein L3



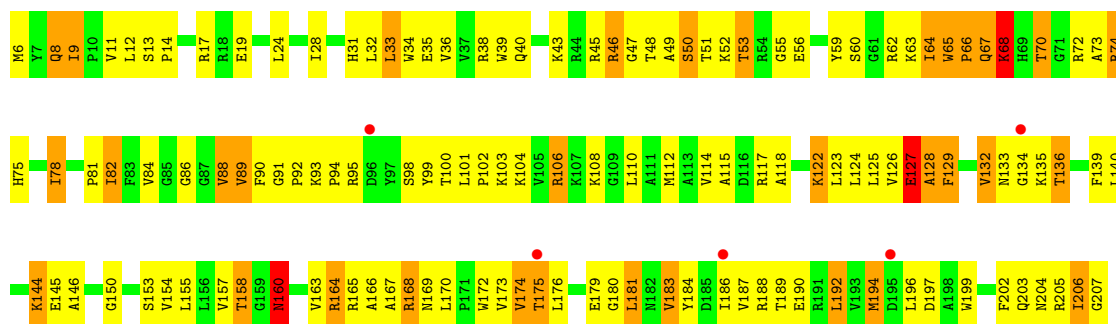
• Molecule 26: 50S ribosomal protein L3



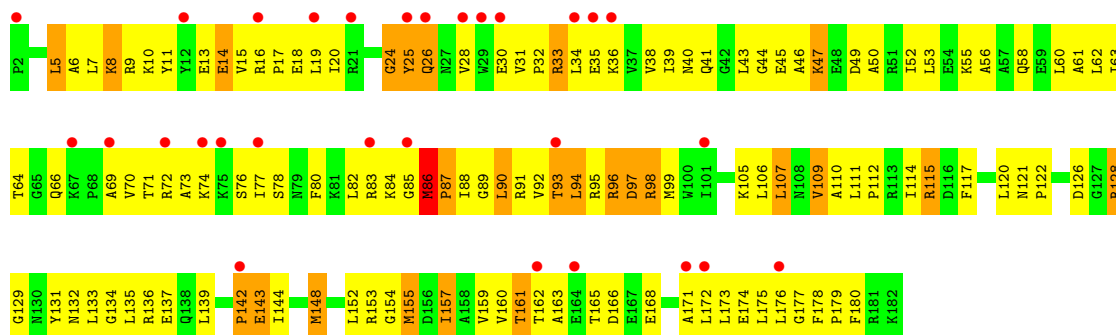
• Molecule 27: 50S ribosomal protein L4



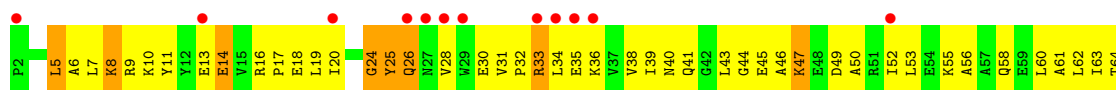
• Molecule 27: 50S ribosomal protein L4

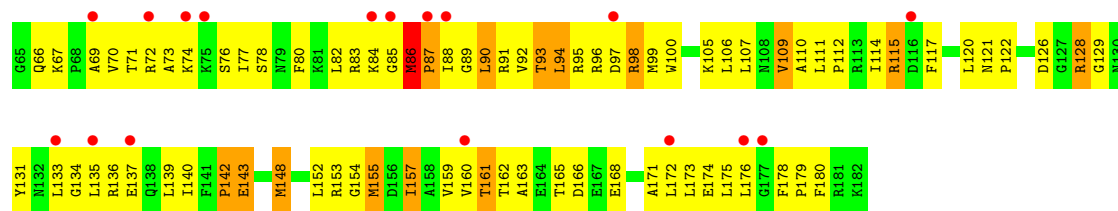


• Molecule 28: 50S ribosomal protein L5

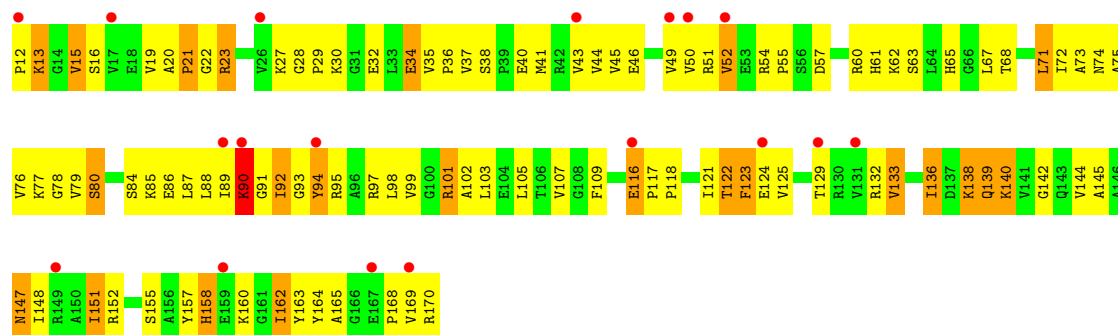


• Molecule 28: 50S ribosomal protein L5

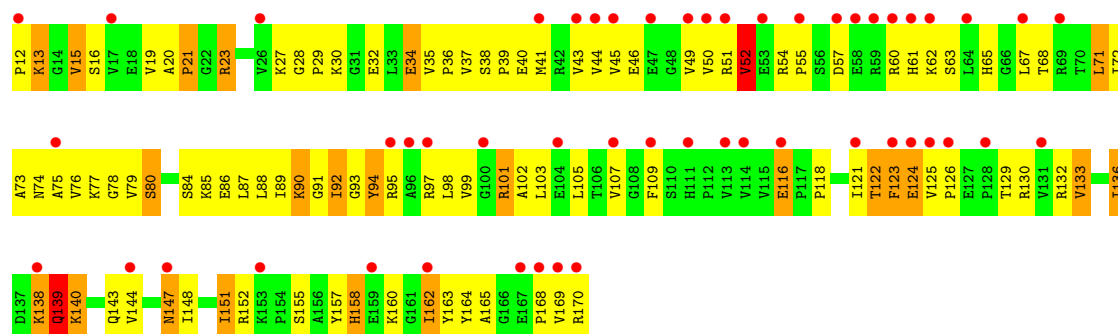




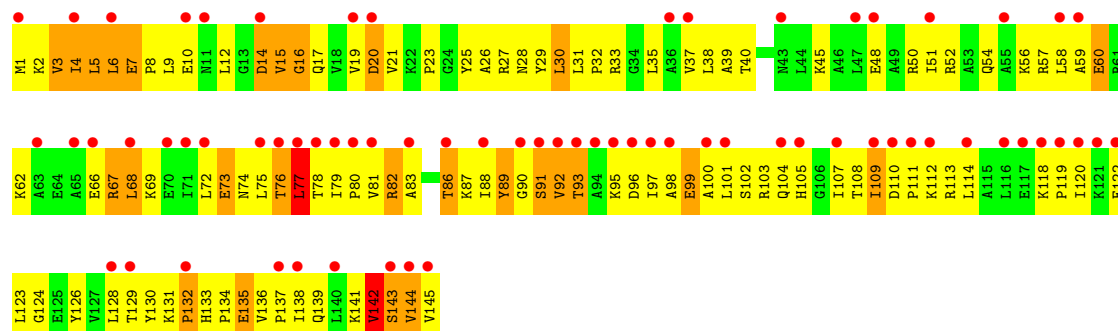
• Molecule 29: 50S ribosomal protein L6



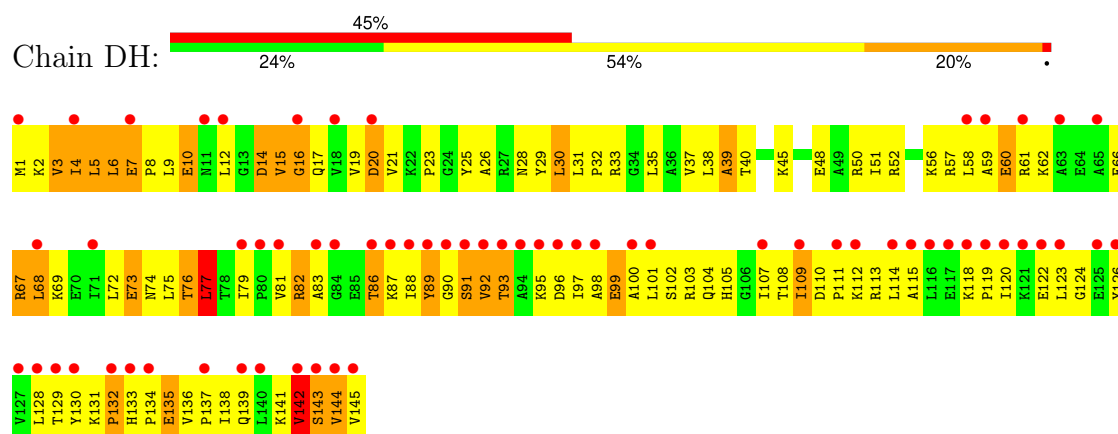
• Molecule 29: 50S ribosomal protein L6



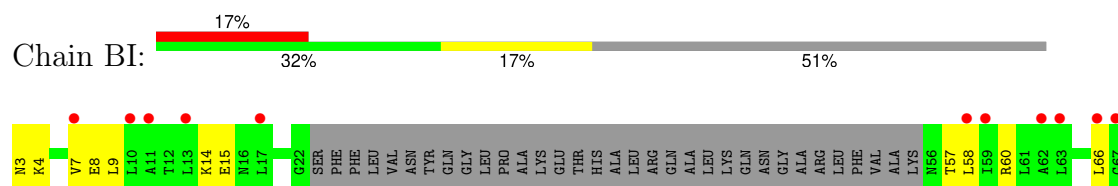
• Molecule 30: 50S ribosomal protein L9



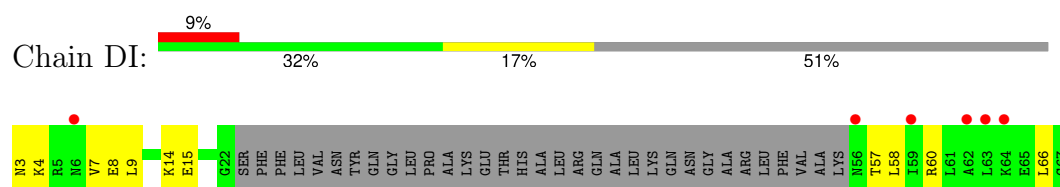
- Molecule 30: 50S ribosomal protein L9



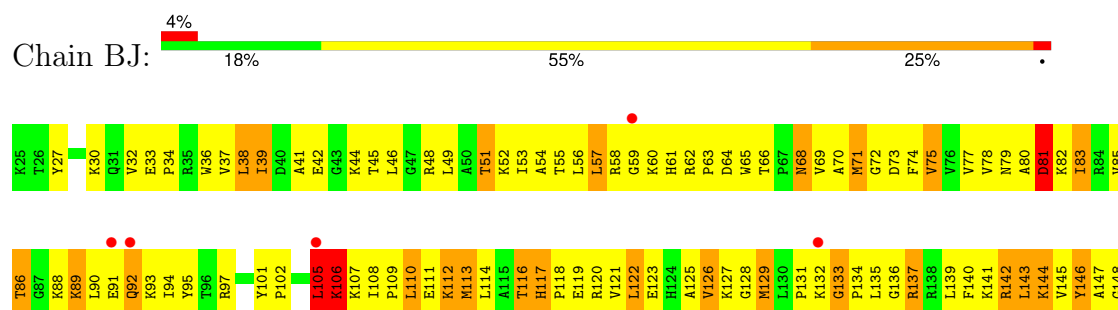
- Molecule 31: 50S ribosomal protein L10



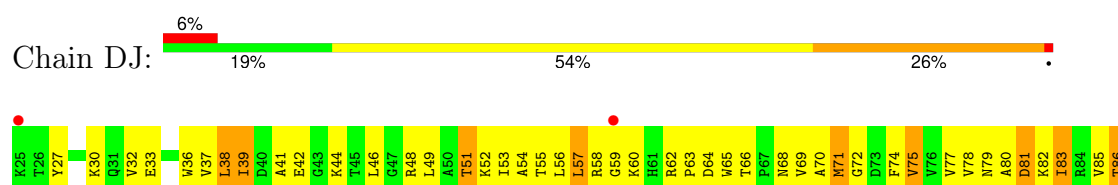
- Molecule 31: 50S ribosomal protein L10

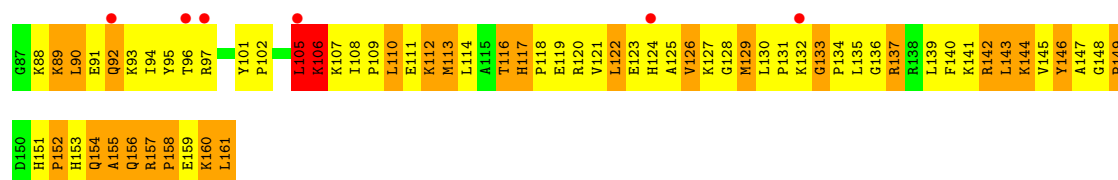


- Molecule 32: 50S ribosomal protein L13

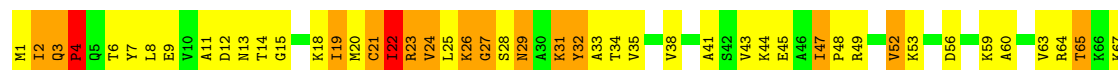


- Molecule 32: 50S ribosomal protein L13





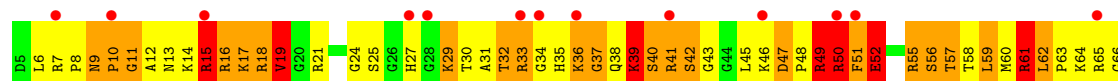
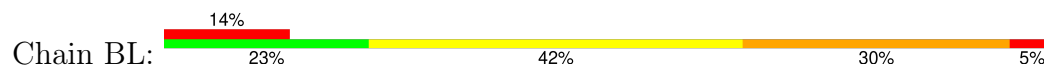
- Molecule 33: 50S ribosomal protein L14



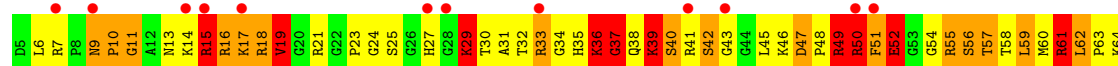
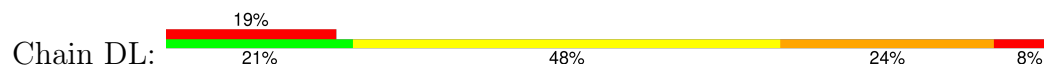
- Molecule 33: 50S ribosomal protein L14

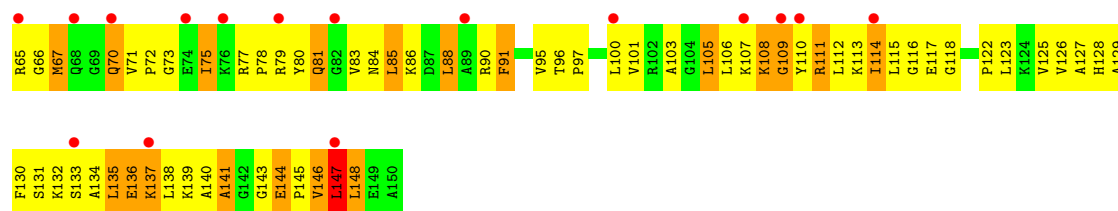


- Molecule 34: 50S ribosomal protein L15

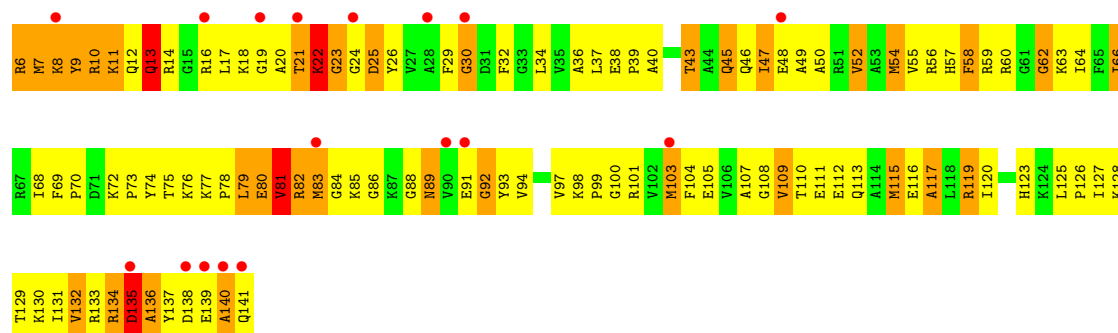


- Molecule 34: 50S ribosomal protein L15

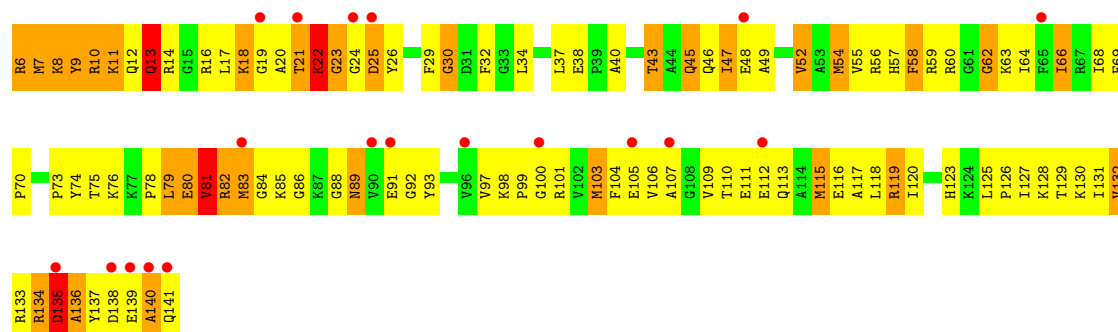




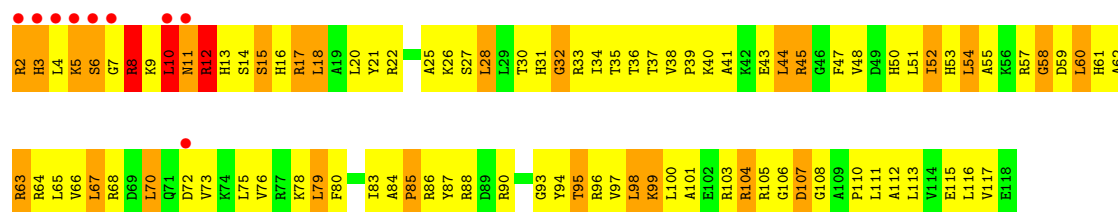
• Molecule 35: 50S ribosomal protein L16



• Molecule 35: 50S ribosomal protein L16

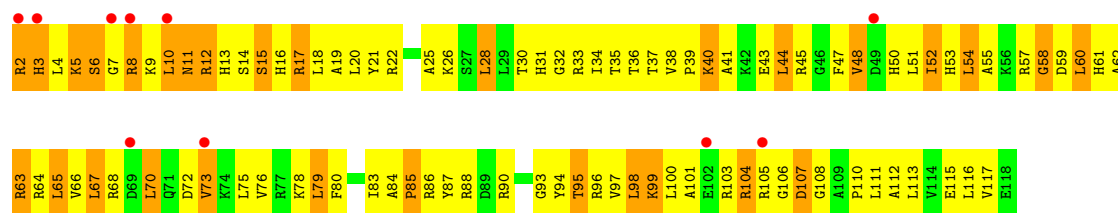


• Molecule 36: 50S ribosomal protein L17

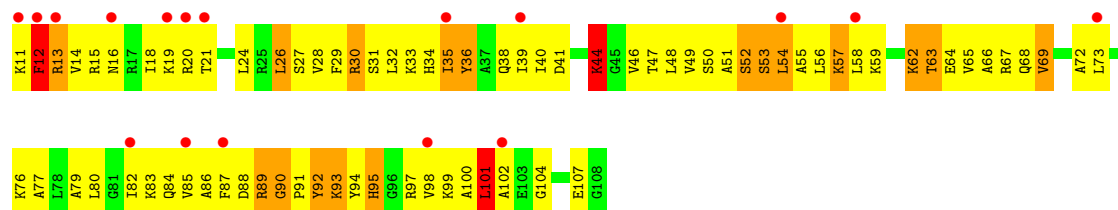


• Molecule 36: 50S ribosomal protein L17

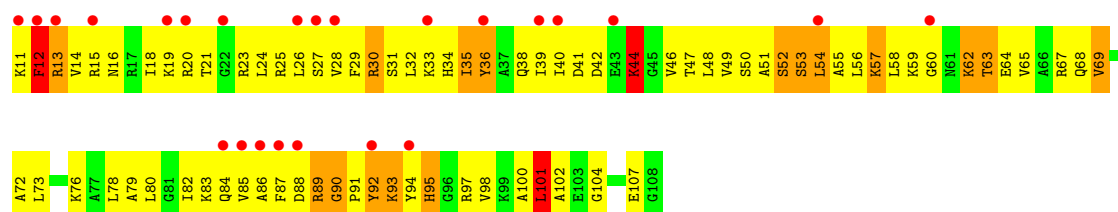




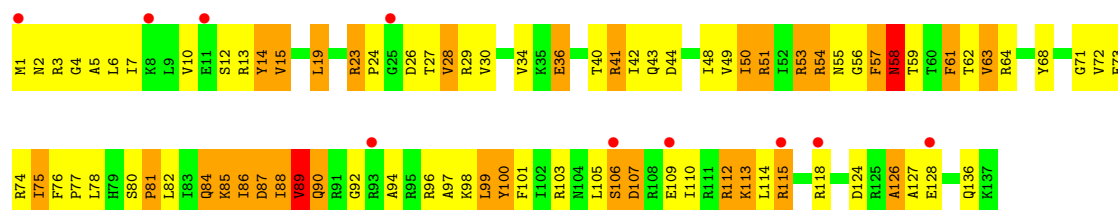
• Molecule 37: 50S ribosomal protein L18



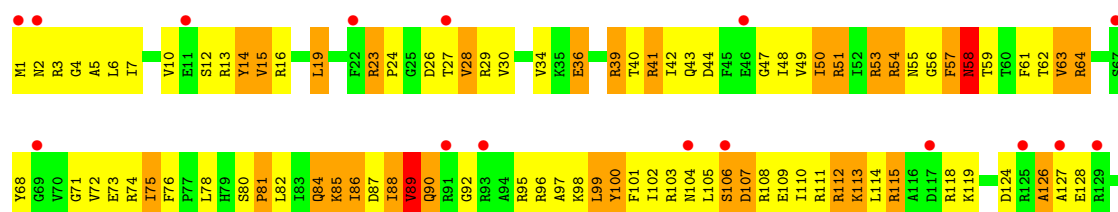
• Molecule 37: 50S ribosomal protein L18



• Molecule 38: 50S ribosomal protein L19



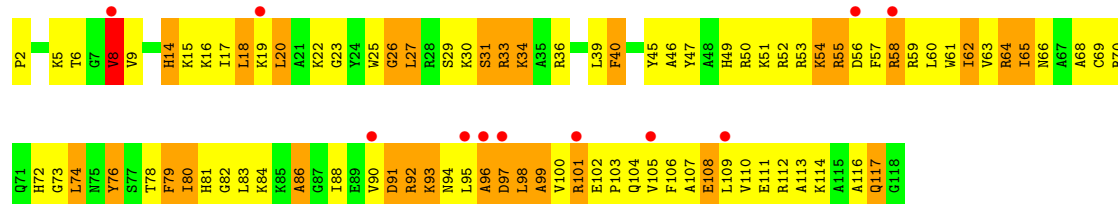
• Molecule 38: 50S ribosomal protein L19



Q136
R137

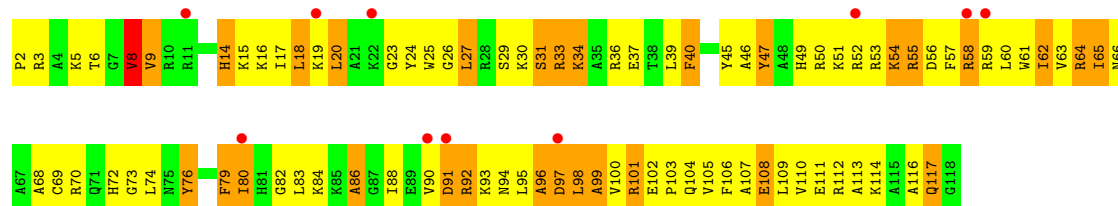
- Molecule 39: 50S ribosomal protein L20

Chain BQ: 



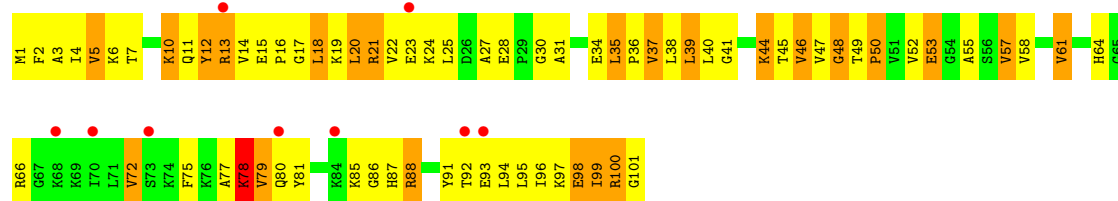
- Molecule 39: 50S ribosomal protein L20

Chain DQ: 



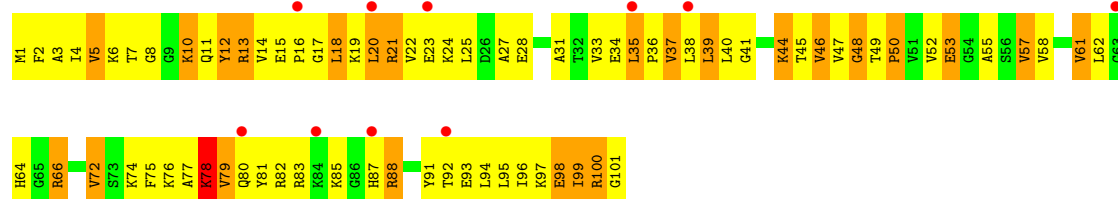
- Molecule 40: 50S ribosomal protein L21

Chain BR: 



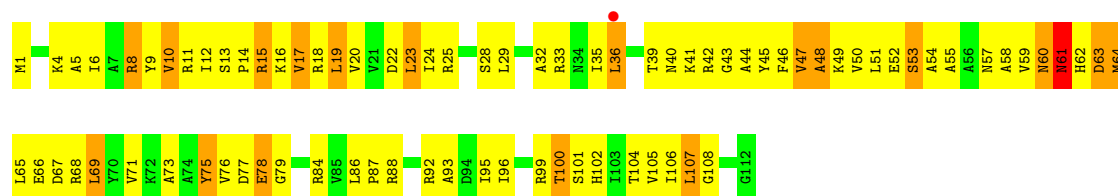
- Molecule 40: 50S ribosomal protein L21

Chain DR: 



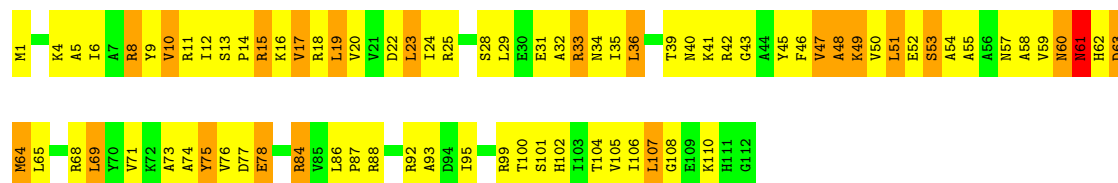
- Molecule 41: 50S ribosomal protein L22

Chain BS: 



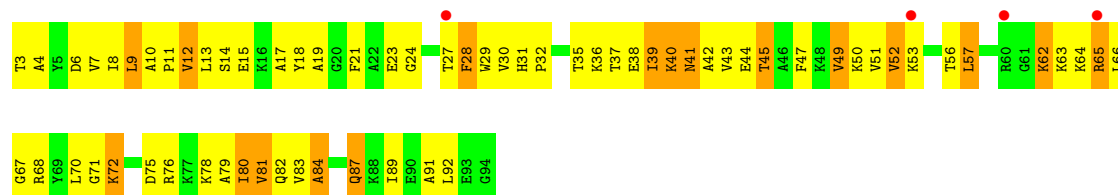
• Molecule 41: 50S ribosomal protein L22

Chain DS: 29% 52% 19%



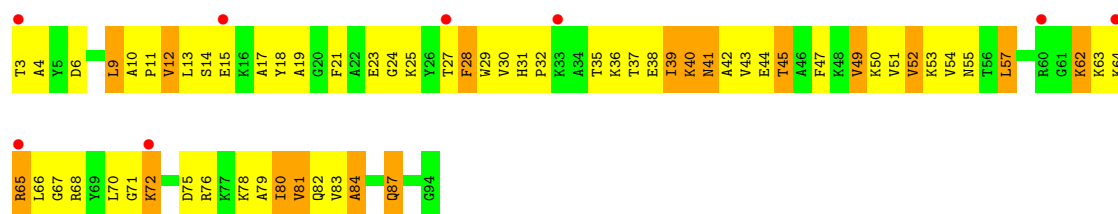
• Molecule 42: 50S ribosomal protein L23

Chain BT: 4% 28% 53% 18%



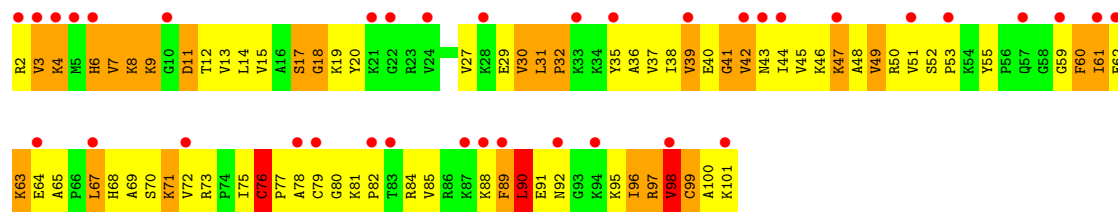
• Molecule 42: 50S ribosomal protein L23

Chain DT: 9% 32% 50% 18%

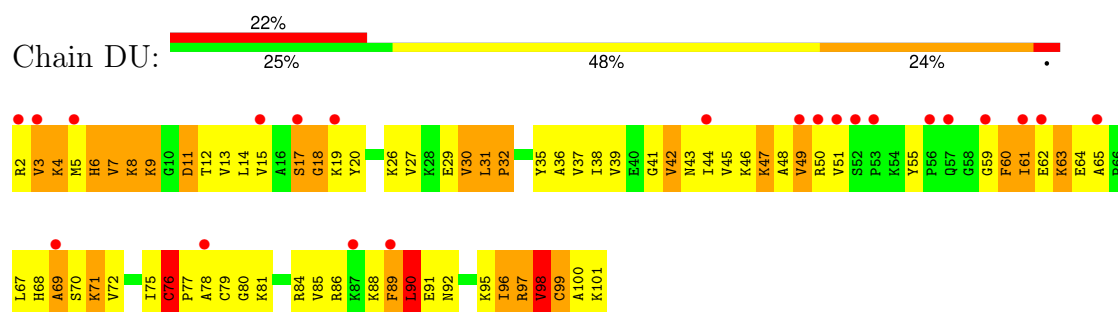


• Molecule 43: 50S ribosomal protein L24

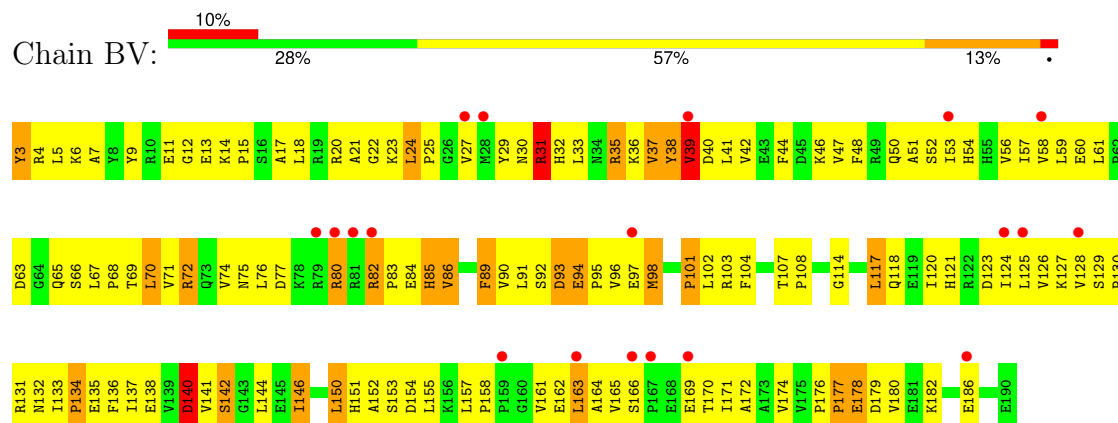
Chain BU: 37% 23% 48% 26%



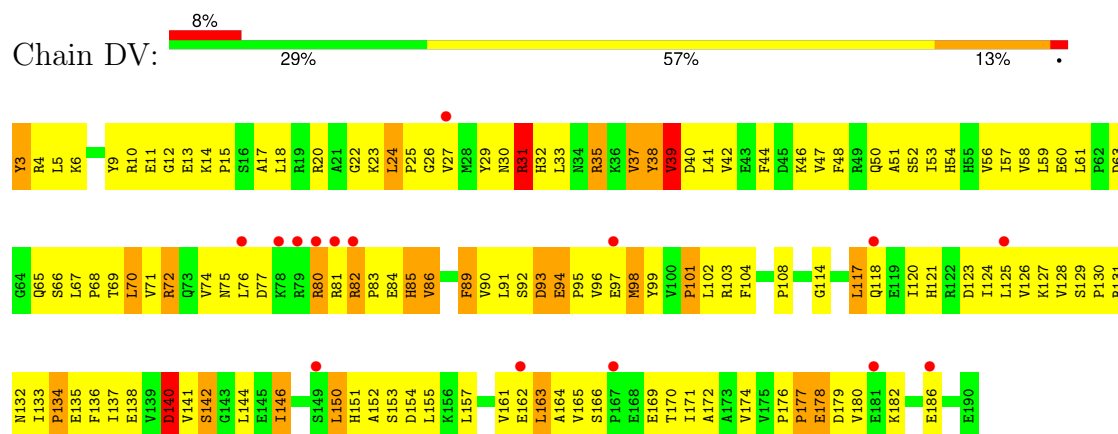
• Molecule 43: 50S ribosomal protein L24



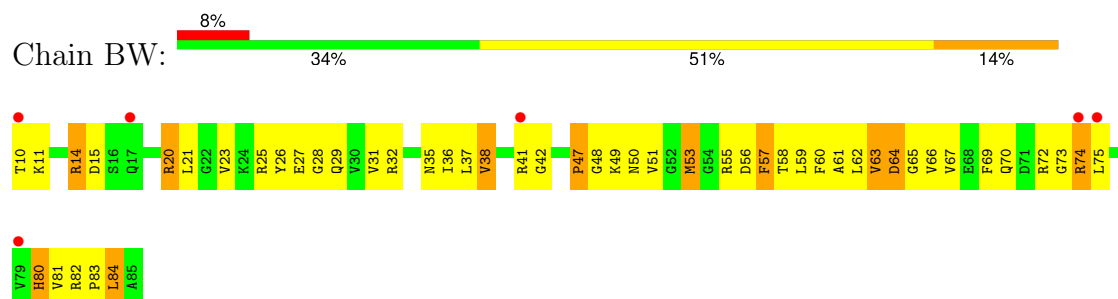
- Molecule 44: 50S ribosomal protein L25



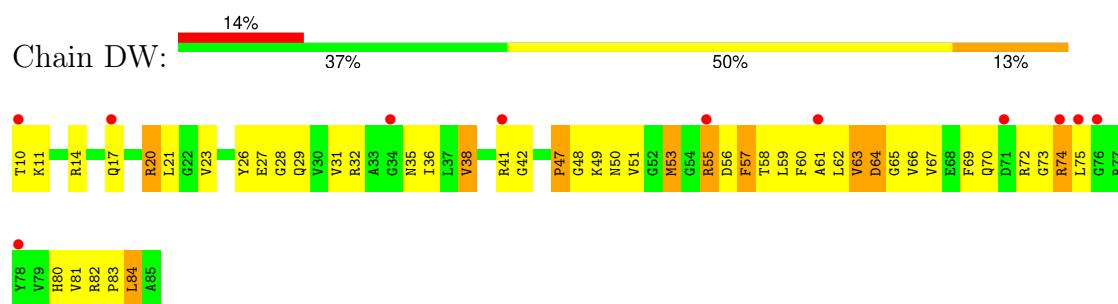
- Molecule 44: 50S ribosomal protein L25



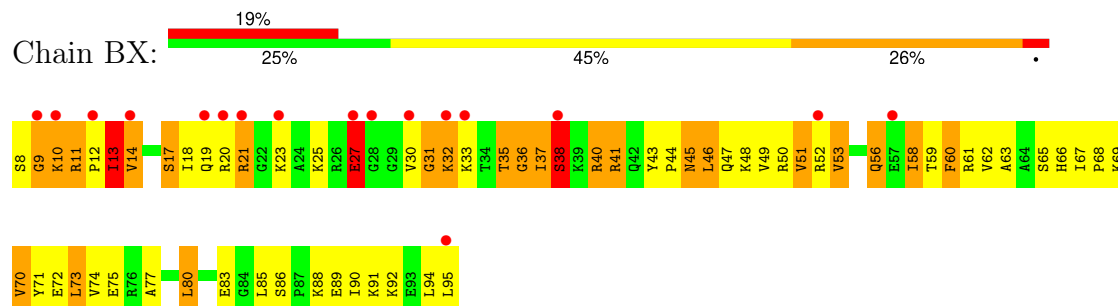
- Molecule 45: 50S ribosomal protein L27



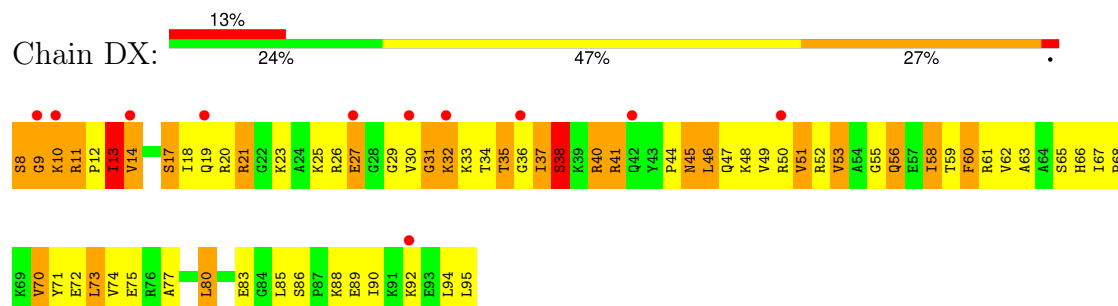
- Molecule 45: 50S ribosomal protein L27



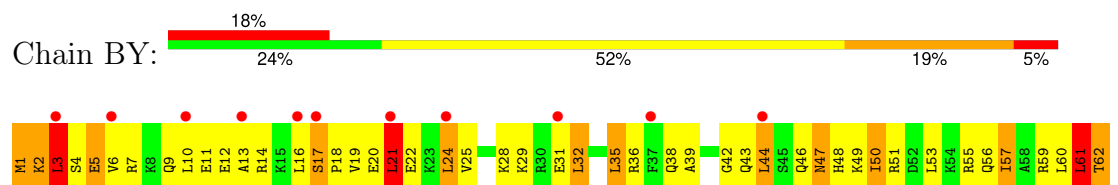
• Molecule 46: 50S ribosomal protein L28



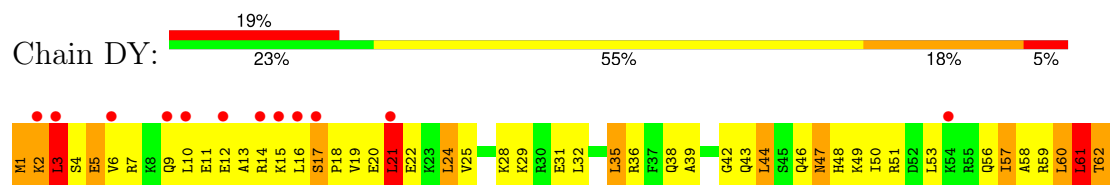
• Molecule 46: 50S ribosomal protein L28



• Molecule 47: 50S ribosomal protein L29

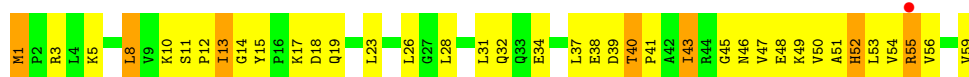


• Molecule 47: 50S ribosomal protein L29

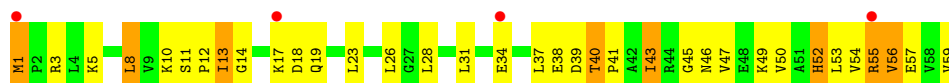


• Molecule 48: 50S ribosomal protein L30

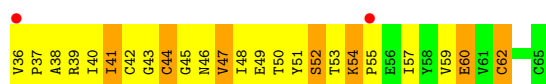




- Molecule 48: 50S ribosomal protein L30



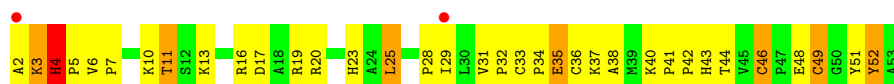
- Molecule 49: 50S ribosomal protein L31



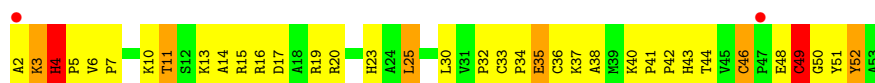
- Molecule 49: 50S ribosomal protein L31



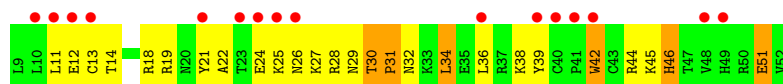
- Molecule 50: 50S ribosomal protein L32



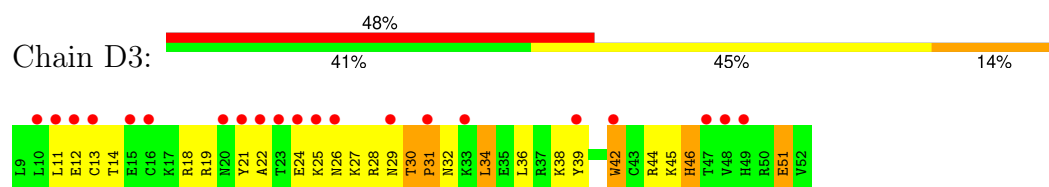
- Molecule 50: 50S ribosomal protein L32



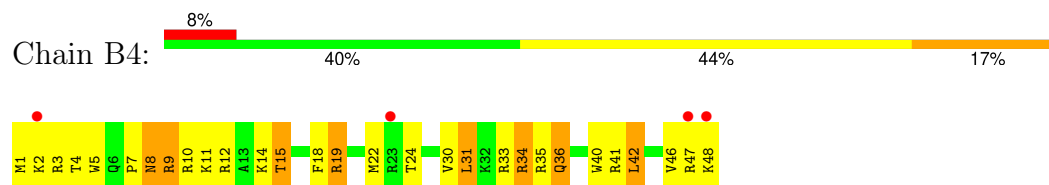
- Molecule 51: 50S ribosomal protein L33



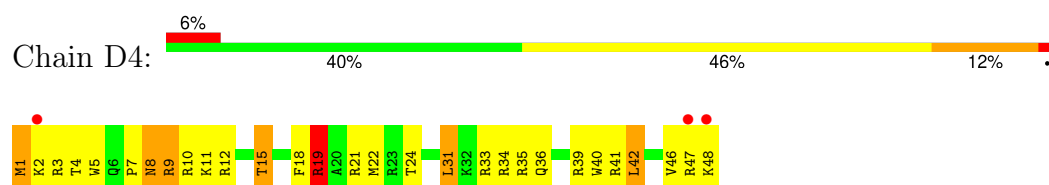
- Molecule 51: 50S ribosomal protein L33



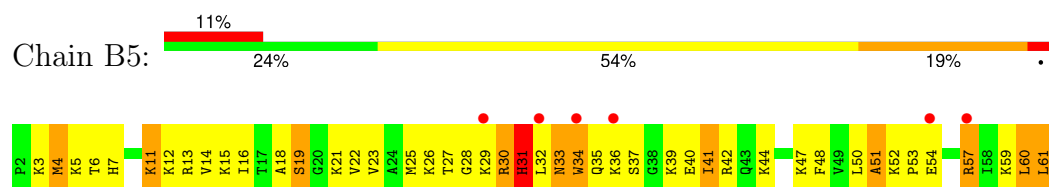
- Molecule 52: 50S ribosomal protein L34



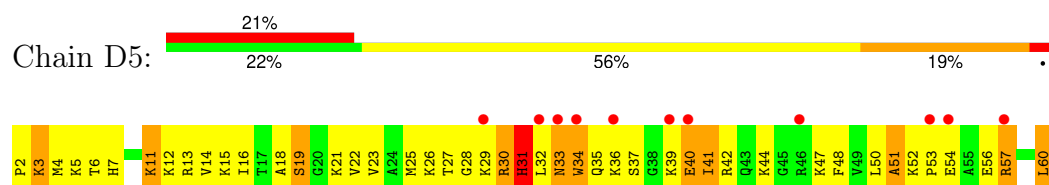
- Molecule 52: 50S ribosomal protein L34



- Molecule 53: 50S ribosomal protein L35



- Molecule 53: 50S ribosomal protein L35



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	210.69Å 451.66Å 614.25Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.52 – 3.40 49.52 – 3.40	Depositor EDS
% Data completeness (in resolution range)	97.5 (49.52-3.40) 97.5 (49.52-3.40)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.28 (at 3.40Å)	Xtriage
Refinement program	PHENIX 1.6.1_357, CNS	Depositor
R, R_{free}	0.228 , 0.266 0.224 , 0.262	Depositor DCC
R_{free} test set	7701 reflections (0.99%)	wwPDB-VP
Wilson B-factor (Å ²)	86.0	Xtriage
Anisotropy	0.391	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.27 , 95.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.27$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	282142	wwPDB-VP
Average B, all atoms (Å ²)	110.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.68% 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: ZN, MG

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	AA	0.63	4/36238 (0.0%)	1.02	99/56561 (0.2%)
1	CA	0.57	0/36238	0.96	75/56561 (0.1%)
2	AB	0.31	0/1936	0.51	0/2609
2	CB	0.28	0/1936	0.50	0/2609
3	AC	0.31	0/1637	0.47	0/2205
3	CC	0.29	0/1637	0.47	0/2205
4	AD	0.41	0/1733	0.59	0/2318
4	CD	0.34	0/1733	0.56	0/2318
5	AE	0.41	0/1172	0.61	0/1576
5	CE	0.36	0/1172	0.57	0/1576
6	AF	0.33	0/856	0.57	0/1154
6	CF	0.37	0/856	0.59	0/1154
7	AG	0.27	0/1276	0.46	0/1709
7	CG	0.27	0/1276	0.46	0/1709
8	AH	0.39	0/1136	0.61	0/1527
8	CH	0.33	0/1136	0.58	0/1527
9	AI	0.29	0/1029	0.45	0/1378
9	CI	0.27	0/1029	0.45	0/1378
10	AJ	0.28	0/808	0.48	0/1085
10	CJ	0.27	0/808	0.46	0/1085
11	AK	0.39	0/900	0.59	0/1213
11	CK	0.41	0/900	0.61	0/1213
12	AL	0.47	0/987	0.70	1/1320 (0.1%)
12	CL	0.44	0/987	0.68	0/1320
13	AM	0.25	0/939	0.44	0/1258
13	CM	0.24	0/939	0.44	0/1258
14	AN	0.31	0/501	0.50	0/664
14	CN	0.31	0/501	0.52	0/664
15	AO	0.39	0/745	0.57	0/992
15	CO	0.37	0/745	0.56	0/992
16	AP	0.42	0/717	0.62	0/963
16	CP	0.34	0/717	0.59	0/963

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AQ	0.43	0/837	0.60	0/1117
17	CQ	0.37	0/837	0.56	0/1117
18	AR	0.38	0/579	0.61	0/768
18	CR	0.37	0/579	0.60	0/768
19	AS	0.25	0/643	0.43	0/865
19	CS	0.25	0/643	0.42	0/865
20	AT	0.38	0/764	0.57	0/1006
20	CT	0.33	0/764	0.54	0/1006
21	AU	0.23	0/213	0.43	0/277
21	CU	0.24	0/213	0.42	0/277
22	AV	0.43	0/802	0.68	0/1245
22	CV	0.43	0/802	0.69	0/1245
23	BA	1.07	153/66570 (0.2%)	1.48	1344/103918 (1.3%)
23	DA	1.19	253/66575 (0.4%)	1.59	1756/103930 (1.7%)
24	BB	0.58	0/2853	1.00	9/4451 (0.2%)
24	DB	0.59	0/2853	1.04	3/4451 (0.1%)
25	BC	0.71	1/2155 (0.0%)	0.90	3/2905 (0.1%)
25	DC	0.74	1/2155 (0.0%)	0.91	5/2905 (0.2%)
26	BD	0.58	0/1597	0.77	0/2153
26	DD	0.62	1/1597 (0.1%)	0.81	0/2153
27	BE	0.63	0/1622	0.77	0/2194
27	DE	0.67	0/1622	0.78	0/2194
28	BF	0.28	0/1500	0.49	0/2017
28	DF	0.28	0/1500	0.49	0/2017
29	BG	0.32	0/1246	0.58	0/1682
29	DG	0.44	0/1246	0.64	0/1682
30	BH	0.33	0/1148	0.56	0/1552
30	DH	0.38	0/1148	0.56	0/1552
31	BI	0.25	0/252	0.44	0/333
31	DI	0.27	0/252	0.46	0/333
32	BJ	0.56	0/1124	0.75	0/1515
32	DJ	0.59	0/1124	0.76	0/1515
33	BK	0.57	0/942	0.76	0/1268
33	DK	0.61	0/942	0.77	0/1268
34	BL	0.74	1/1131 (0.1%)	1.01	1/1504 (0.1%)
34	DL	0.75	2/1131 (0.2%)	1.03	5/1504 (0.3%)
35	BM	0.61	0/1099	0.83	2/1468 (0.1%)
35	DM	0.60	0/1099	0.83	1/1468 (0.1%)
36	BN	0.59	0/974	0.85	0/1302
36	DN	0.59	0/974	0.83	1/1302 (0.1%)
37	BO	0.36	0/779	0.58	0/1036
37	DO	0.39	0/779	0.61	0/1036
38	BP	0.50	0/1158	0.68	0/1544

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DP	0.51	0/1158	0.69	0/1544
39	BQ	0.63	0/970	0.81	0/1290
39	DQ	0.67	0/970	0.81	0/1290
40	BR	0.58	0/790	0.73	1/1057 (0.1%)
40	DR	0.61	0/790	0.74	1/1057 (0.1%)
41	BS	0.63	0/902	0.78	0/1209
41	DS	0.66	0/902	0.76	0/1209
42	BT	0.64	0/740	0.79	0/993
42	DT	0.74	0/740	0.84	0/993
43	BU	0.53	0/789	0.76	0/1051
43	DU	0.56	0/789	0.76	0/1051
44	BV	0.36	0/1524	0.57	0/2068
44	DV	0.38	0/1524	0.57	0/2068
45	BW	0.50	0/613	0.71	0/816
45	DW	0.52	0/613	0.72	0/816
46	BX	0.73	0/702	0.98	2/932 (0.2%)
46	DX	0.82	0/702	1.04	2/932 (0.2%)
47	BY	0.55	0/523	0.87	1/690 (0.1%)
47	DY	0.72	0/523	0.98	3/690 (0.4%)
48	BZ	0.52	0/473	0.68	0/634
48	DZ	0.50	0/473	0.65	0/634
49	B1	0.23	0/229	0.40	0/309
49	D1	0.22	0/229	0.41	0/309
50	B2	0.61	0/419	0.80	0/567
50	D2	0.58	0/419	0.79	0/567
51	B3	0.28	0/388	0.46	0/518
51	D3	0.27	0/388	0.46	0/518
52	B4	0.72	0/427	0.89	0/561
52	D4	0.84	0/427	1.05	1/561 (0.2%)
53	B5	0.68	0/516	0.88	0/679
53	D5	0.69	0/516	0.88	1/679 (0.1%)
All	All	0.85	416/305211 (0.1%)	1.21	3317/456064 (0.7%)

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
25	DC	0	1
27	BE	0	1
27	DE	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
34	BL	0	5
34	DL	0	5
35	BM	0	1
35	DM	0	1
36	BN	0	1
36	DN	0	1
39	BQ	0	2
39	DQ	0	2
All	All	0	21

All (416) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DA	774	A	N9-C4	-13.87	1.29	1.37
23	DA	1332	G	N9-C4	-11.99	1.28	1.38
23	DA	1602	U	C4-O4	11.31	1.32	1.23
23	BA	1332	G	N9-C4	-11.02	1.29	1.38
23	DA	2249	U	C4-O4	10.67	1.32	1.23
23	DA	1614	A	N9-C4	-10.65	1.31	1.37
23	DA	761	A	C5-C4	10.24	1.46	1.38
23	DA	71	A	N9-C4	-10.23	1.31	1.37
23	DA	676	A	N9-C4	-9.99	1.31	1.37
23	DA	2593	U	C4-O4	9.50	1.31	1.23
23	BA	570	G	C6-O6	9.46	1.32	1.24
23	DA	761	A	C6-N1	9.44	1.42	1.35
23	BA	676	A	N9-C4	-9.32	1.32	1.37
23	BA	1678	G	N9-C4	-9.10	1.30	1.38
23	DA	677	A	N9-C4	-9.09	1.32	1.37
23	BA	1783	A	N3-C4	-8.94	1.29	1.34
23	DA	1671	U	C4-O4	8.93	1.30	1.23
23	BA	1786	A	N3-C4	-8.91	1.29	1.34
23	DA	774	A	N3-C4	-8.90	1.29	1.34
23	BA	774	A	N9-C4	-8.86	1.32	1.37
23	DA	677	A	N3-C4	-8.81	1.29	1.34
23	BA	1332	G	C2-N3	-8.54	1.25	1.32
23	DA	797	C	N1-C6	-8.37	1.32	1.37
23	DA	783	A	N9-C4	-8.32	1.32	1.37
23	BA	503	A	N3-C4	-8.11	1.29	1.34
23	BA	1971	A	N3-C4	-8.09	1.29	1.34
23	DA	575	A	N9-C4	-8.06	1.33	1.37
23	BA	761	A	C6-N1	7.89	1.41	1.35
23	BA	2028	U	C4-O4	7.87	1.29	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BA	192	C	N1-C6	-7.77	1.32	1.37
34	DL	39	LYS	CB-CG	7.73	1.73	1.52
23	DA	1322	A	N3-C4	-7.73	1.30	1.34
23	DA	1678	G	N9-C4	-7.70	1.31	1.38
34	BL	39	LYS	CB-CG	7.70	1.73	1.52
23	BA	675	A	N9-C4	-7.63	1.33	1.37
23	BA	1783	A	N9-C4	-7.62	1.33	1.37
23	BA	800	A	N9-C4	-7.53	1.33	1.37
23	BA	2448	A	N9-C4	-7.52	1.33	1.37
23	DA	2028	U	C4-O4	7.49	1.29	1.23
23	BA	1786	A	N9-C4	-7.48	1.33	1.37
23	DA	1829	A	N9-C4	-7.45	1.33	1.37
23	DA	945	A	N7-C5	-7.41	1.34	1.39
23	DA	265	A	N9-C4	-7.38	1.33	1.37
23	DA	2032	G	N7-C5	7.32	1.43	1.39
23	DA	761	A	C6-N6	7.30	1.39	1.33
23	BA	1308	A	N9-C4	-7.30	1.33	1.37
23	DA	1614	A	N7-C5	-7.27	1.34	1.39
23	BA	330	A	N9-C4	-7.22	1.33	1.37
23	DA	748	G	C5-C4	-7.22	1.33	1.38
23	BA	2057	A	N3-C4	-7.15	1.30	1.34
23	BA	2057	A	N9-C4	-7.15	1.33	1.37
23	DA	1367	A	C6-N1	-7.12	1.30	1.35
23	BA	2433	A	N3-C4	-7.11	1.30	1.34
23	DA	450	G	C6-O6	7.10	1.30	1.24
23	BA	1021	A	N9-C4	-7.07	1.33	1.37
23	DA	678	C	N3-C4	-7.07	1.28	1.33
23	BA	1786	A	N7-C5	-7.01	1.35	1.39
23	BA	655	A	N9-C4	6.99	1.42	1.37
23	DA	211	A	N3-C4	-6.96	1.30	1.34
23	BA	2518	A	N9-C4	-6.94	1.33	1.37
23	BA	1902	C	N3-C4	-6.94	1.29	1.33
23	BA	761	A	C5-C4	6.92	1.43	1.38
23	BA	2028	U	C2-N3	6.90	1.42	1.37
23	DA	1802	A	N3-C4	-6.88	1.30	1.34
23	DA	676	A	N3-C4	-6.87	1.30	1.34
23	DA	2497	A	N9-C4	-6.85	1.33	1.37
23	BA	1332	G	N3-C4	-6.83	1.30	1.35
23	DA	945	A	C5-C6	-6.81	1.34	1.41
23	DA	2518	A	N9-C4	-6.81	1.33	1.37
23	DA	761	A	N1-C2	6.79	1.40	1.34
23	DA	2506	U	N1-C2	6.78	1.44	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DA	2028	U	C2-N3	6.76	1.42	1.37
23	BA	584	C	N1-C6	-6.74	1.33	1.37
23	DA	1783	A	N3-C4	-6.73	1.30	1.34
23	DA	450	G	N9-C8	-6.72	1.33	1.37
23	DA	742	G	C5-C4	-6.72	1.33	1.38
23	DA	752	A	N3-C4	-6.72	1.30	1.34
23	BA	783	A	N9-C4	-6.72	1.33	1.37
23	BA	2010	G	N7-C5	-6.71	1.35	1.39
23	DA	2713	A	N9-C4	-6.70	1.33	1.37
23	DA	1378	A	N3-C4	-6.68	1.30	1.34
23	DA	114(B)	A	N9-C4	-6.68	1.33	1.37
23	DA	1308	A	N9-C4	-6.67	1.33	1.37
23	BA	2506	U	N1-C2	6.67	1.44	1.38
23	DA	774	A	C5-C6	-6.67	1.35	1.41
23	BA	528	A	N9-C4	-6.67	1.33	1.37
23	BA	764	A	N9-C4	-6.64	1.33	1.37
23	DA	2427	C	N1-C6	-6.64	1.33	1.37
23	DA	340	A	N3-C4	-6.64	1.30	1.34
23	BA	2713	A	N9-C4	-6.62	1.33	1.37
23	BA	1671	U	C4-O4	6.62	1.28	1.23
23	BA	453	C	N1-C6	-6.61	1.33	1.37
23	DA	126	A	C5-C4	-6.61	1.34	1.38
23	BA	761	A	C6-N6	6.61	1.39	1.33
23	BA	2058	A	N3-C4	-6.56	1.30	1.34
23	DA	2054	A	N7-C5	-6.56	1.35	1.39
23	DA	472	A	N9-C4	-6.55	1.33	1.37
23	DA	2061	G	C6-O6	6.55	1.30	1.24
23	DA	778	G	N1-C2	-6.55	1.32	1.37
23	DA	575	A	N7-C5	-6.54	1.35	1.39
23	BA	945	A	N7-C5	-6.53	1.35	1.39
23	DA	2242	G	N9-C8	-6.51	1.33	1.37
23	BA	1827	C	N1-C6	-6.49	1.33	1.37
23	BA	457	A	N9-C4	-6.48	1.33	1.37
23	DA	570	G	C6-O6	6.46	1.29	1.24
23	DA	752	A	C6-N1	-6.45	1.31	1.35
23	BA	677	A	N9-C4	-6.44	1.33	1.37
23	DA	71	A	N3-C4	-6.43	1.30	1.34
23	BA	1977	A	N9-C4	-6.43	1.33	1.37
23	DA	1609	A	N9-C4	-6.42	1.33	1.37
23	DA	1619	G	N3-C4	-6.42	1.30	1.35
23	BA	734	A	N9-C4	-6.41	1.34	1.37
23	DA	676	A	C5-C4	6.41	1.43	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DA	676	A	N9-C8	6.40	1.42	1.37
23	DA	2430	A	N7-C5	-6.37	1.35	1.39
23	DA	1777	U	C2-N3	-6.36	1.33	1.37
23	DA	774	A	N7-C5	-6.33	1.35	1.39
23	DA	1780	A	N7-C5	-6.32	1.35	1.39
23	BA	568	U	C4-O4	6.32	1.28	1.23
23	DA	1978	A	N9-C4	-6.32	1.34	1.37
23	DA	2588	G	P-OP2	6.32	1.59	1.49
23	BA	570	G	C5-C6	6.31	1.48	1.42
23	DA	116	C	N1-C6	-6.31	1.33	1.37
25	DC	239	ARG	CG-CD	6.30	1.67	1.51
23	DA	585	G	C6-N1	-6.30	1.35	1.39
23	BA	460	A	N9-C4	-6.29	1.34	1.37
23	BA	2009	G	C5-C4	-6.29	1.33	1.38
23	DA	457	A	N9-C4	-6.29	1.34	1.37
23	BA	764	A	C5-C6	-6.29	1.35	1.41
23	DA	2448	A	N9-C4	-6.28	1.34	1.37
23	BA	31	C	N1-C6	-6.26	1.33	1.37
23	BA	800	A	N3-C4	-6.25	1.31	1.34
25	BC	239	ARG	CG-CD	6.25	1.67	1.51
23	DA	1899	G	N9-C4	-6.25	1.32	1.38
23	DA	678	C	N1-C6	-6.22	1.33	1.37
23	DA	2057	A	N3-C4	-6.22	1.31	1.34
23	BA	1829	A	N9-C4	-6.22	1.34	1.37
23	BA	2069	G	N9-C4	-6.22	1.32	1.38
23	DA	2059	A	N9-C4	-6.21	1.34	1.37
23	DA	2432	A	N9-C4	-6.21	1.34	1.37
23	DA	1776	G	C6-N1	-6.20	1.35	1.39
23	DA	1614	A	N3-C4	-6.19	1.31	1.34
23	BA	2510	C	N1-C6	-6.19	1.33	1.37
23	DA	1783	A	N9-C4	-6.19	1.34	1.37
23	BA	575	A	N9-C4	-6.18	1.34	1.37
23	DA	1332	G	C2-N3	-6.18	1.27	1.32
23	DA	1271	G	N9-C8	-6.17	1.33	1.37
23	BA	808	G	N9-C8	-6.15	1.33	1.37
23	BA	2032	G	N9-C8	6.15	1.42	1.37
23	DA	1770	G	N3-C4	-6.14	1.31	1.35
23	BA	1786	A	C5-C6	-6.13	1.35	1.41
23	DA	2689	U	C2-N3	-6.13	1.33	1.37
23	DA	1902	C	N3-C4	-6.12	1.29	1.33
1	AA	901	A	N9-C4	-6.12	1.34	1.37
23	BA	460	A	N3-C4	-6.11	1.31	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DA	2058	A	N3-C4	-6.11	1.31	1.34
23	BA	2587	A	N9-C4	-6.11	1.34	1.37
23	DA	1569	A	N3-C4	-6.11	1.31	1.34
23	DA	1603	A	N3-C4	-6.10	1.31	1.34
23	BA	1313	U	N1-C2	-6.10	1.33	1.38
23	BA	265	A	N9-C4	-6.09	1.34	1.37
23	BA	1971	A	N9-C4	-6.06	1.34	1.37
23	DA	2717	G	N9-C8	-6.06	1.33	1.37
23	DA	2452	C	N1-C6	-6.05	1.33	1.37
23	DA	1332	G	N9-C8	6.03	1.42	1.37
23	DA	1619	G	C6-N1	-6.03	1.35	1.39
23	BA	1978	A	N9-C4	-6.02	1.34	1.37
23	DA	655	A	N9-C4	6.02	1.41	1.37
23	DA	2512	C	N1-C6	-6.02	1.33	1.37
23	BA	2453	A	C6-N1	-6.01	1.31	1.35
23	DA	783	A	N3-C4	-6.01	1.31	1.34
23	BA	2062	A	P-O5'	-6.01	1.53	1.59
23	BA	2430	A	N7-C5	-6.01	1.35	1.39
23	DA	2591	C	N1-C6	-6.01	1.33	1.37
23	DA	1606	G	C6-N1	-6.00	1.35	1.39
23	BA	2497	A	N9-C4	-5.99	1.34	1.37
23	BA	676	A	C5-C6	-5.98	1.35	1.41
23	BA	1000	A	C6-N1	-5.98	1.31	1.35
23	DA	1378	A	N9-C4	-5.98	1.34	1.37
23	DA	567	A	P-OP1	5.97	1.59	1.49
23	DA	2063	C	N3-C4	-5.96	1.29	1.33
23	BA	1352	U	C2-N3	-5.95	1.33	1.37
23	DA	2242	G	C5-C4	-5.95	1.34	1.38
23	BA	737	C	N1-C6	-5.94	1.33	1.37
23	DA	2256	G	N3-C4	-5.93	1.31	1.35
23	BA	2496	C	N1-C6	-5.92	1.33	1.37
23	DA	814	C	N1-C6	-5.92	1.33	1.37
23	BA	2060	A	N9-C4	-5.89	1.34	1.37
23	DA	706	A	N9-C4	-5.89	1.34	1.37
23	DA	2055	C	N1-C6	-5.89	1.33	1.37
23	DA	983	A	N9-C4	-5.88	1.34	1.37
23	DA	449	A	C6-N1	-5.87	1.31	1.35
23	BA	1774	C	P-OP1	5.86	1.58	1.49
23	DA	2032	G	N9-C8	5.85	1.42	1.37
23	DA	114(B)	A	N7-C5	-5.85	1.35	1.39
23	BA	2601	C	N1-C6	-5.84	1.33	1.37
23	DA	216	A	N7-C5	-5.84	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BA	1991	U	C2-N3	-5.84	1.33	1.37
23	BA	2430	A	N3-C4	-5.82	1.31	1.34
23	DA	2080	G	C6-N1	-5.81	1.35	1.39
23	DA	453	C	N1-C6	-5.79	1.33	1.37
23	BA	71	A	N9-C4	-5.78	1.34	1.37
23	DA	211	A	N9-C4	-5.76	1.34	1.37
23	BA	787	U	P-OP1	5.75	1.58	1.49
23	DA	204	A	N9-C4	-5.75	1.34	1.37
23	BA	1780	A	N9-C4	-5.74	1.34	1.37
23	BA	2595	G	C5-C4	-5.74	1.34	1.38
23	DA	2577	A	C6-N1	-5.73	1.31	1.35
23	BA	114(B)	A	N7-C5	-5.72	1.35	1.39
23	DA	2057	A	N9-C4	-5.72	1.34	1.37
23	BA	432	A	N9-C4	-5.72	1.34	1.37
23	BA	945	A	C5-C6	-5.72	1.35	1.41
23	DA	787	U	P-OP1	5.72	1.58	1.49
23	BA	929	G	N7-C5	-5.71	1.35	1.39
23	DA	698	C	C2-O2	5.71	1.29	1.24
23	DA	195	A	N3-C4	-5.71	1.31	1.34
23	BA	2005	A	N9-C4	-5.69	1.34	1.37
23	DA	1619	G	C5-C4	-5.67	1.34	1.38
23	DA	782	A	N9-C4	-5.66	1.34	1.37
23	DA	782	A	C5-C4	-5.65	1.34	1.38
23	BA	676	A	N7-C5	-5.62	1.35	1.39
23	DA	2033	A	C6-N1	-5.62	1.31	1.35
23	BA	1899	G	N9-C8	5.62	1.41	1.37
23	DA	2054	A	C5-C6	-5.62	1.35	1.41
23	DA	1802	A	N9-C4	-5.62	1.34	1.37
23	DA	241	A	N9-C4	-5.61	1.34	1.37
23	DA	766	C	N1-C6	-5.61	1.33	1.37
23	DA	1616	A	C5-C6	-5.61	1.36	1.41
23	DA	2227	A	N9-C4	-5.58	1.34	1.37
23	BA	1664	A	N9-C4	-5.58	1.34	1.37
23	BA	1617	C	N1-C6	-5.58	1.33	1.37
23	BA	1678	G	C2-N3	-5.57	1.28	1.32
23	DA	1777	U	N3-C4	-5.57	1.33	1.38
23	BA	1676	A	N3-C4	-5.55	1.31	1.34
23	DA	2446	G	C5-C4	-5.55	1.34	1.38
23	BA	1841	U	C4-O4	5.55	1.28	1.23
23	DA	199	A	C5-C4	-5.55	1.34	1.38
23	DA	2741	A	N9-C4	-5.54	1.34	1.37
23	DA	693	C	N1-C6	-5.53	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DA	211	A	C6-N1	-5.53	1.31	1.35
23	DA	569	U	N1-C6	-5.53	1.32	1.38
23	DA	1201	C	N1-C6	-5.53	1.33	1.37
1	AA	1523	G	N3-C4	-5.52	1.31	1.35
23	DA	2346	A	N3-C4	-5.52	1.31	1.34
23	DA	387	U	C4-O4	5.51	1.28	1.23
23	BA	1602	U	C4-O4	5.51	1.28	1.23
23	DA	2242	G	N7-C5	-5.51	1.35	1.39
23	BA	2346	A	N3-C4	-5.51	1.31	1.34
23	BA	1571	A	N9-C4	-5.50	1.34	1.37
23	DA	1824	G	N9-C8	-5.50	1.34	1.37
23	DA	2070	G	N9-C8	-5.50	1.34	1.37
23	DA	2060	A	N3-C4	-5.49	1.31	1.34
23	BA	1827	C	N3-C4	-5.49	1.30	1.33
23	BA	764	A	N7-C5	-5.48	1.35	1.39
23	DA	2062	A	C5'-C4'	-5.48	1.44	1.51
23	BA	244	A	N3-C4	-5.47	1.31	1.34
23	DA	1782	C	N1-C6	-5.47	1.33	1.37
23	DA	204	A	C6-N1	-5.46	1.31	1.35
23	DA	2054	A	N9-C4	-5.46	1.34	1.37
23	BA	575	A	N3-C4	-5.46	1.31	1.34
23	DA	1606	G	C5-C4	-5.46	1.34	1.38
23	DA	1662	C	N3-C4	-5.46	1.30	1.33
23	BA	1309	G	N3-C4	-5.46	1.31	1.35
23	DA	2085	C	N1-C6	-5.45	1.33	1.37
23	DA	1776	G	C6-O6	-5.44	1.19	1.24
23	DA	1633	G	N7-C5	-5.44	1.35	1.39
23	DA	1376	C	C4-C5	-5.43	1.38	1.43
23	BA	837	C	C4-C5	-5.42	1.38	1.43
23	DA	1775	U	C2-N3	-5.42	1.33	1.37
23	DA	1341	U	C2-N3	5.42	1.41	1.37
23	DA	2447	G	N3-C4	-5.42	1.31	1.35
23	DA	57	C	N1-C6	-5.42	1.33	1.37
23	BA	2430	A	N9-C4	-5.41	1.34	1.37
23	DA	2231	C	N1-C6	-5.41	1.33	1.37
23	BA	114(B)	A	C5-C6	-5.41	1.36	1.41
23	DA	2587	A	N3-C4	-5.40	1.31	1.34
23	BA	677	A	N3-C4	-5.40	1.31	1.34
23	DA	2447	G	N9-C4	-5.40	1.33	1.38
23	DA	1802	A	N7-C5	-5.40	1.36	1.39
23	BA	824	A	N9-C4	-5.40	1.34	1.37
23	BA	2681	C	N3-C4	-5.39	1.30	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DA	2432	A	N7-C5	-5.39	1.36	1.39
23	DA	195	A	N9-C4	-5.39	1.34	1.37
23	DA	1609	A	N3-C4	-5.39	1.31	1.34
23	DA	794	G	C6-N1	-5.38	1.35	1.39
1	AA	909	A	N9-C4	-5.38	1.34	1.37
23	DA	2502	G	N9-C8	-5.38	1.34	1.37
23	DA	122	G	N3-C4	-5.37	1.31	1.35
23	DA	1616	A	P-O5'	-5.37	1.54	1.59
23	DA	454	A	N9-C4	-5.36	1.34	1.37
23	DA	330	A	N9-C4	-5.36	1.34	1.37
23	BA	2054	A	N7-C5	-5.35	1.36	1.39
23	DA	2601	C	N1-C6	-5.35	1.33	1.37
23	DA	114(B)	A	N3-C4	-5.35	1.31	1.34
23	BA	2595	G	N9-C4	-5.34	1.33	1.38
23	BA	2741	A	N9-C4	-5.34	1.34	1.37
23	BA	114(B)	A	N9-C4	-5.34	1.34	1.37
23	DA	2445	G	C6-N1	-5.34	1.35	1.39
23	DA	330	A	C5-C6	-5.33	1.36	1.41
23	DA	1786	A	N7-C5	-5.33	1.36	1.39
23	DA	786	C	N1-C6	-5.32	1.33	1.37
23	BA	2440	C	N1-C2	-5.32	1.34	1.40
23	BA	2018	G	C6-N1	-5.32	1.35	1.39
23	BA	2060	A	N3-C4	-5.32	1.31	1.34
23	BA	585	G	C6-N1	-5.32	1.35	1.39
23	DA	2584	U	C4-O4	5.31	1.27	1.23
23	DA	2448	A	C5-C6	-5.31	1.36	1.41
23	DA	2577	A	N7-C5	-5.31	1.36	1.39
23	DA	1331	A	N9-C4	-5.31	1.34	1.37
23	BA	1678	G	N3-C4	-5.30	1.31	1.35
23	BA	2440	C	N1-C6	-5.30	1.33	1.37
23	DA	1614	A	N1-C2	5.30	1.39	1.34
23	DA	798	G	N7-C5	-5.29	1.36	1.39
23	DA	2256	G	C5-C4	-5.29	1.34	1.38
23	DA	1248	G	C5-C4	-5.29	1.34	1.38
23	BA	1776	G	C8-N7	-5.29	1.27	1.30
23	DA	2577	A	C5-C4	-5.28	1.35	1.38
23	DA	777	A	N3-C4	-5.28	1.31	1.34
23	DA	1029	A	N9-C4	-5.28	1.34	1.37
26	DD	127	ASP	CB-CG	5.27	1.62	1.51
23	BA	2059	A	C5-C4	-5.26	1.35	1.38
23	DA	1674	G	N9-C8	-5.26	1.34	1.37
23	DA	2058	A	C5-C4	-5.26	1.35	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DA	2709	G	N9-C8	-5.26	1.34	1.37
23	DA	1332	G	N3-C4	-5.26	1.31	1.35
23	DA	2232	U	C4-O4	5.26	1.27	1.23
23	DA	457	A	C5-C4	-5.25	1.35	1.38
23	DA	473	G	C6-N1	-5.25	1.35	1.39
23	DA	1257	C	N1-C6	-5.25	1.33	1.37
23	DA	36	G	N3-C4	-5.25	1.31	1.35
23	DA	1624	G	C5-C4	-5.25	1.34	1.38
23	BA	2433	A	C6-N1	-5.25	1.31	1.35
23	DA	46	C	N3-C4	-5.24	1.30	1.33
23	BA	2392	A	N7-C5	-5.24	1.36	1.39
23	DA	761	A	C5-C6	-5.24	1.36	1.41
23	BA	2010	G	C5-C6	-5.24	1.37	1.42
23	DA	2257	U	N1-C2	-5.24	1.33	1.38
23	DA	1698	A	N9-C4	-5.23	1.34	1.37
23	BA	764	A	N3-C4	-5.23	1.31	1.34
23	BA	1675	C	N1-C6	-5.22	1.34	1.37
23	BA	2448	A	N3-C4	-5.22	1.31	1.34
23	DA	36	G	C6-N1	-5.22	1.35	1.39
23	DA	531	C	N1-C6	-5.22	1.34	1.37
1	AA	32	A	N3-C4	-5.21	1.31	1.34
23	BA	676	A	N3-C4	-5.21	1.31	1.34
23	DA	116	C	N3-C4	-5.20	1.30	1.33
23	DA	223	A	N9-C8	-5.20	1.33	1.37
23	DA	2060	A	C5-C4	-5.20	1.35	1.38
23	DA	2084	C	N1-C6	-5.20	1.34	1.37
23	DA	2014	A	N9-C4	-5.19	1.34	1.37
23	BA	114(B)	A	N3-C4	-5.19	1.31	1.34
23	DA	943	U	N1-C2	-5.19	1.33	1.38
23	DA	751	A	C6-N1	-5.18	1.31	1.35
23	BA	2517	C	N1-C6	-5.18	1.34	1.37
23	DA	1792	G	N7-C5	-5.18	1.36	1.39
23	DA	1815	A	C6-N1	-5.17	1.31	1.35
23	DA	2248	C	N1-C6	-5.17	1.34	1.37
23	DA	2227	A	N3-C4	-5.17	1.31	1.34
23	DA	678	C	N1-C2	-5.16	1.34	1.40
23	DA	251	A	N7-C5	-5.16	1.36	1.39
23	DA	1616	A	N9-C4	-5.15	1.34	1.37
23	DA	2588	G	P-OP1	5.15	1.57	1.49
23	DA	2488	A	C5-C4	-5.14	1.35	1.38
23	BA	1671	U	C2-N3	5.14	1.41	1.37
23	DA	812	C	N1-C6	-5.14	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DA	2434	A	N3-C4	-5.13	1.31	1.34
34	DL	36	LYS	CD-CE	5.13	1.64	1.51
23	DA	2587	A	N9-C4	-5.12	1.34	1.37
23	DA	2588	G	C6-N1	-5.12	1.35	1.39
23	BA	575	A	C5-C4	-5.11	1.35	1.38
23	DA	2505	G	N3-C4	-5.11	1.31	1.35
23	DA	2765	A	N7-C5	-5.11	1.36	1.39
23	BA	1571	A	N3-C4	-5.11	1.31	1.34
23	DA	995	C	N1-C6	-5.10	1.34	1.37
23	BA	196	A	C6-N1	-5.10	1.31	1.35
23	DA	1606	G	N1-C2	-5.10	1.33	1.37
23	BA	836	G	N9-C4	-5.09	1.33	1.38
23	BA	1278	A	N3-C4	-5.09	1.31	1.34
23	BA	2249	U	C4-O4	5.09	1.27	1.23
23	BA	1997	G	C6-N1	-5.09	1.35	1.39
23	DA	2588	G	N3-C4	-5.09	1.31	1.35
23	BA	2009	G	N3-C4	-5.08	1.31	1.35
23	DA	1776	G	P-OP2	5.08	1.57	1.49
23	DA	799	G	N1-C2	-5.08	1.33	1.37
23	DA	805	G	N7-C5	-5.07	1.36	1.39
23	DA	2448	A	N3-C4	-5.07	1.31	1.34
23	DA	732	C	N1-C6	-5.07	1.34	1.37
23	BA	2198	A	N9-C4	-5.07	1.34	1.37
23	DA	769	G	N1-C2	-5.07	1.33	1.37
23	DA	784	A	N9-C4	-5.07	1.34	1.37
23	BA	2069	G	N3-C4	-5.06	1.31	1.35
23	DA	2510	C	N1-C6	-5.06	1.34	1.37
23	DA	473	G	N3-C4	-5.06	1.31	1.35
23	DA	751	A	P-OP1	5.06	1.57	1.49
23	BA	684	G	N3-C4	-5.06	1.31	1.35
23	BA	1264	G	N3-C4	-5.05	1.31	1.35
23	BA	2199	A	N3-C4	-5.05	1.31	1.34
23	BA	2463	C	N1-C6	-5.05	1.34	1.37
23	DA	1780	A	C5-C6	-5.05	1.36	1.41
23	DA	1760	A	C6-N1	-5.05	1.32	1.35
23	BA	1941	C	N1-C6	-5.05	1.34	1.37
23	DA	1780	A	N9-C4	-5.04	1.34	1.37
23	BA	802	A	N3-C4	-5.03	1.31	1.34
23	DA	2451	A	N3-C4	-5.03	1.31	1.34
23	DA	564	C	N3-C4	-5.03	1.30	1.33
23	DA	582	G	N9-C8	-5.03	1.34	1.37
23	DA	467	G	N9-C4	-5.02	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DA	566	U	C2-N3	-5.02	1.34	1.37
23	BA	1902	C	C2-N3	-5.02	1.31	1.35
23	DA	736	C	N1-C6	-5.02	1.34	1.37
23	BA	244	A	N9-C4	-5.02	1.34	1.37
23	BA	462	C	N3-C4	-5.02	1.30	1.33
23	DA	192	C	N1-C6	-5.02	1.34	1.37
23	DA	2062	A	P-O5'	-5.01	1.54	1.59
23	DA	452	G	N3-C4	-5.00	1.31	1.35
23	DA	795	C	N1-C6	-5.00	1.34	1.37

All (3317) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	761	A	N1-C6-N6	30.82	137.09	118.60
23	BA	761	A	N1-C6-N6	25.08	133.65	118.60
23	DA	1332	G	N3-C4-N9	-24.42	111.35	126.00
23	DA	1332	G	N3-C4-C5	23.85	140.52	128.60
23	BA	1332	G	N3-C4-N9	-22.46	112.52	126.00
23	DA	761	A	C6-C5-N7	-21.62	117.17	132.30
23	BA	1332	G	N3-C4-C5	21.41	139.31	128.60
23	DA	1602	U	N3-C4-C5	-19.94	102.64	114.60
23	BA	676	A	C2-N3-C4	-19.31	100.94	110.60
23	DA	761	A	C5-C6-N1	-19.15	108.12	117.70
23	DA	676	A	C2-N3-C4	-19.01	101.09	110.60
23	DA	761	A	C5-N7-C8	-18.20	94.80	103.90
23	BA	761	A	C6-C5-N7	-17.81	119.83	132.30
23	DA	761	A	C4-C5-N7	17.34	119.37	110.70
23	DA	761	A	N9-C4-C5	-17.20	98.92	105.80
23	DA	2028	U	N3-C4-C5	-17.14	104.32	114.60
23	DA	1332	G	C2-N3-C4	-16.96	103.42	111.90
23	DA	774	A	C2-N3-C4	-16.91	102.14	110.60
23	BA	2028	U	N3-C4-C5	-16.41	104.75	114.60
23	DA	676	A	C5-N7-C8	-15.45	96.17	103.90
23	BA	761	A	C5-N7-C8	-14.95	96.42	103.90
23	DA	2028	U	C6-N1-C2	-14.94	112.03	121.00
23	BA	1678	G	N3-C4-C5	14.81	136.01	128.60
23	DA	1999	C	C6-N1-C2	14.72	126.19	120.30
23	BA	761	A	C4-C5-N7	14.67	118.03	110.70
23	BA	1678	G	N3-C4-N9	-14.62	117.23	126.00
23	DA	2028	U	N3-C4-O4	14.44	129.51	119.40
23	DA	1678	G	N3-C4-C5	14.37	135.78	128.60
23	DA	1962	C	N1-C2-O2	14.20	127.42	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	761	A	C2-N3-C4	-14.19	103.50	110.60
23	BA	761	A	N9-C4-C5	-14.12	100.15	105.80
23	DA	1678	G	N3-C4-N9	-14.08	117.55	126.00
23	BA	2501	C	C6-N1-C2	14.00	125.90	120.30
23	DA	783	A	C5-N7-C8	-13.85	96.98	103.90
23	DA	2505	G	C5-C6-O6	13.63	136.78	128.60
23	BA	1962	C	N1-C2-O2	13.58	127.05	118.90
23	DA	1671	U	N3-C4-C5	-13.42	106.55	114.60
23	DA	2249	U	N3-C4-C5	-13.40	106.56	114.60
23	BA	774	A	C2-N3-C4	-13.36	103.92	110.60
23	BA	1899	G	N3-C4-N9	-13.30	118.02	126.00
23	BA	2571	C	C6-N1-C2	13.17	125.57	120.30
23	BA	1999	C	C6-N1-C2	13.05	125.52	120.30
23	DA	2593	U	N3-C4-C5	-12.93	106.84	114.60
23	DA	761	A	C4-C5-C6	12.90	123.45	117.00
23	BA	2028	U	N3-C4-O4	12.80	128.36	119.40
23	BA	676	A	C5-C6-N1	-12.74	111.33	117.70
23	DA	450	G	C5-C6-N1	-12.71	105.15	111.50
23	DA	1602	U	N3-C4-O4	12.71	128.29	119.40
23	BA	1332	G	C2-N3-C4	-12.68	105.56	111.90
23	BA	2028	U	C6-N1-C2	-12.61	113.43	121.00
23	BA	1786	A	C5-N7-C8	-12.59	97.60	103.90
23	BA	676	A	C5-N7-C8	-12.56	97.62	103.90
23	BA	761	A	C5-C6-N1	-12.54	111.43	117.70
23	DA	761	A	N7-C8-N9	12.41	120.01	113.80
23	DA	1602	U	C6-N1-C2	-12.37	113.58	121.00
23	BA	1602	U	C6-N1-C2	-12.33	113.61	121.00
23	BA	570	G	C5-C6-N1	-12.25	105.37	111.50
23	BA	1602	U	N3-C4-C5	-12.24	107.26	114.60
23	BA	1671	U	N3-C4-O4	12.21	127.94	119.40
23	BA	1671	U	N3-C4-C5	-12.16	107.30	114.60
23	DA	124	G	C8-N9-C4	12.13	111.25	106.40
23	DA	945	A	C6-C5-N7	-12.12	123.81	132.30
23	DA	676	A	N7-C8-N9	12.10	119.85	113.80
23	DA	1332	G	N3-C2-N2	-12.06	111.46	119.90
23	DA	2626	C	C6-N1-C2	12.01	125.10	120.30
23	BA	945	A	C6-C5-N7	-11.99	123.91	132.30
23	DA	1602	U	C4-C5-C6	11.96	126.88	119.70
23	DA	2579	C	C6-N1-C2	11.96	125.08	120.30
23	BA	1332	G	N3-C2-N2	-11.92	111.56	119.90
23	DA	774	A	C5-N7-C8	-11.91	97.95	103.90
23	BA	1786	A	N7-C8-N9	11.87	119.74	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1616	A	C5-N7-C8	-11.87	97.97	103.90
23	DA	783	A	N7-C8-N9	11.85	119.73	113.80
23	DA	2619	C	C6-N1-C2	11.84	125.03	120.30
23	DA	2830	G	N1-C6-O6	11.77	126.96	119.90
23	DA	57	C	C6-N1-C2	11.74	125.00	120.30
23	BA	1790	C	N3-C4-C5	11.74	126.59	121.90
23	BA	1786	A	C8-N9-C4	-11.73	101.11	105.80
23	DA	1332	G	C8-N9-C1'	11.69	142.20	127.00
23	DA	1021	A	C2-N3-C4	-11.66	104.77	110.60
23	DA	1698	A	C2-N3-C4	-11.64	104.78	110.60
23	BA	2571	C	C5-C6-N1	-11.64	115.18	121.00
23	BA	1899	G	C2-N3-C4	-11.59	106.10	111.90
23	DA	1614	A	C2-N3-C4	-11.57	104.82	110.60
23	BA	2502	G	N1-C6-O6	11.55	126.83	119.90
23	DA	676	A	C4-C5-N7	11.44	116.42	110.70
23	DA	265	A	C2-N3-C4	-11.39	104.91	110.60
23	BA	761	A	N7-C8-N9	11.35	119.48	113.80
23	DA	71	A	C5-N7-C8	-11.30	98.25	103.90
23	BA	570	G	C4-C5-N7	-11.29	106.28	110.80
23	DA	1899	G	N3-C4-N9	-11.29	119.23	126.00
23	DA	570	G	C5-C6-O6	11.21	135.33	128.60
23	BA	570	G	C5-C6-O6	11.20	135.32	128.60
23	DA	761	A	C5-C6-N6	-11.15	114.78	123.70
23	DA	1671	U	N3-C4-O4	11.13	127.19	119.40
23	DA	2648	C	C6-N1-C2	11.12	124.75	120.30
23	BA	1899	G	N3-C4-C5	11.10	134.15	128.60
23	BA	2829	C	C6-N1-C2	11.08	124.73	120.30
23	DA	2571	C	C6-N1-C2	11.04	124.72	120.30
23	DA	201	C	C6-N1-C2	11.03	124.71	120.30
23	DA	1332	G	C4-N9-C1'	-10.98	112.22	126.50
23	BA	761	A	C5-C6-N6	-10.97	114.92	123.70
23	DA	2581	G	C5-C6-O6	10.91	135.15	128.60
23	BA	1332	G	C8-N9-C1'	10.91	141.18	127.00
23	BA	2498	C	C6-N1-C2	10.91	124.66	120.30
23	DA	570	G	C4-C5-N7	-10.89	106.44	110.80
23	DA	450	G	C4-C5-C6	10.88	125.33	118.80
23	DA	1614	A	C5-C6-N1	-10.84	112.28	117.70
23	DA	676	A	N3-C4-C5	10.82	134.38	126.80
23	DA	2501	C	C6-N1-C2	10.80	124.62	120.30
23	DA	210	C	C6-N1-C2	10.79	124.62	120.30
23	BA	210	C	C6-N1-C2	10.74	124.60	120.30
23	DA	2689	U	C5-C4-O4	10.71	132.33	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	330	A	C2-N3-C4	-10.69	105.25	110.60
23	DA	1616	A	N1-C6-N6	10.69	125.02	118.60
23	DA	1899	G	N3-C4-C5	10.65	133.92	128.60
23	BA	2579	C	C6-N1-C2	10.60	124.54	120.30
1	CA	123	C	C6-N1-C2	10.59	124.53	120.30
23	BA	2502	G	C5-C6-O6	-10.58	122.25	128.60
23	BA	676	A	N7-C8-N9	10.57	119.09	113.80
23	BA	2456	C	N3-C4-C5	10.57	126.13	121.90
23	DA	2544	G	N1-C6-O6	10.57	126.24	119.90
23	BA	1786	A	C6-C5-N7	-10.56	124.91	132.30
23	DA	208	C	C6-N1-C2	10.56	124.53	120.30
23	DA	1786	A	C5-N7-C8	-10.55	98.63	103.90
23	DA	2050	C	N1-C2-O2	-10.54	112.58	118.90
23	DA	1007	C	C6-N1-C2	10.53	124.51	120.30
23	BA	847	U	C5-C6-N1	-10.52	117.44	122.70
23	DA	2593	U	N3-C4-O4	10.52	126.76	119.40
23	BA	678	C	N3-C4-C5	10.50	126.10	121.90
23	DA	1786	A	N7-C8-N9	10.43	119.01	113.80
23	BA	945	A	N1-C6-N6	10.39	124.83	118.60
23	DA	676	A	N1-C2-N3	10.39	134.50	129.30
23	DA	2689	U	C2-N1-C1'	-10.37	105.26	117.70
23	BA	2648	C	C6-N1-C2	10.32	124.43	120.30
23	BA	676	A	N3-C4-C5	10.32	134.02	126.80
23	BA	1261	C	C6-N1-C2	10.31	124.43	120.30
23	DA	1999	C	C5-C6-N1	-10.25	115.88	121.00
23	BA	761	A	C4-C5-C6	10.24	122.12	117.00
23	BA	691	C	C6-N1-C2	10.23	124.39	120.30
23	BA	2430	A	C4-C5-C6	10.23	122.12	117.00
23	BA	1786	A	C2-N3-C4	-10.22	105.49	110.60
23	DA	1616	A	C4-C5-N7	10.22	115.81	110.70
23	BA	2010	G	C6-C5-N7	-10.20	124.28	130.40
23	DA	1614	A	C4-C5-C6	10.14	122.07	117.00
23	BA	676	A	N1-C6-N6	10.05	124.63	118.60
23	DA	2028	U	C4-C5-C6	10.05	125.73	119.70
23	BA	1790	C	C2-N3-C4	-10.03	114.89	119.90
23	BA	1332	G	C4-N9-C1'	-10.01	113.49	126.50
23	DA	945	A	N7-C8-N9	9.98	118.79	113.80
23	DA	408	G	C8-N9-C4	9.97	110.39	106.40
23	DA	1698	A	N1-C6-N6	9.97	124.58	118.60
23	BA	2330	G	C8-N9-C4	9.97	110.39	106.40
23	BA	1021	A	C2-N3-C4	-9.95	105.63	110.60
23	BA	444	C	C6-N1-C2	9.94	124.28	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	114(B)	A	C2-N3-C4	-9.93	105.64	110.60
23	DA	2464	C	C6-N1-C2	9.91	124.27	120.30
23	DA	209	C	C6-N1-C2	9.90	124.26	120.30
23	DA	210	C	C5-C6-N1	-9.89	116.05	121.00
23	DA	2330	G	C8-N9-C4	9.88	110.35	106.40
23	BA	2689	U	C2-N1-C1'	-9.87	105.86	117.70
23	DA	461	C	N1-C2-O2	-9.86	112.99	118.90
23	DA	330	A	N1-C6-N6	9.86	124.51	118.60
23	DA	1790	C	C6-N1-C2	9.85	124.24	120.30
23	DA	1614	A	C6-C5-N7	-9.84	125.41	132.30
23	DA	265	A	C5-N7-C8	-9.83	98.99	103.90
23	DA	2518	A	C5-N7-C8	-9.82	98.99	103.90
23	DA	2430	A	C6-C5-N7	-9.79	125.45	132.30
23	DA	1791	A	C8-N9-C4	9.78	109.71	105.80
23	DA	945	A	C4-N9-C1'	9.75	143.84	126.30
23	BA	2463	C	C6-N1-C2	9.74	124.20	120.30
23	BA	1962	C	C2-N1-C1'	9.71	129.47	118.80
23	DA	2502	G	C5-C6-O6	-9.70	122.78	128.60
23	DA	2498	C	C6-N1-C2	9.69	124.18	120.30
23	DA	71	A	N1-C6-N6	9.69	124.41	118.60
23	DA	1572	A	C8-N9-C4	9.68	109.67	105.80
23	DA	570	G	C5-C6-N1	-9.65	106.68	111.50
23	DA	2430	A	N1-C6-N6	9.64	124.39	118.60
23	BA	1898	U	C5-C4-O4	9.64	131.68	125.90
23	BA	2871	C	C6-N1-C2	9.63	124.15	120.30
23	DA	774	A	N1-C6-N6	9.63	124.38	118.60
23	BA	945	A	C4-N9-C1'	9.62	143.61	126.30
23	DA	809	G	N1-C6-O6	9.61	125.66	119.90
23	DA	783	A	C2-N3-C4	-9.59	105.80	110.60
23	DA	1618	A	N1-C6-N6	9.59	124.35	118.60
23	DA	1648	C	N1-C2-O2	-9.58	113.15	118.90
23	DA	141(A)	A	C5-N7-C8	-9.58	99.11	103.90
23	DA	2689	U	N3-C4-O4	-9.58	112.69	119.40
23	BA	2044	C	C6-N1-C2	9.57	124.13	120.30
23	BA	783	A	N1-C6-N6	9.56	124.34	118.60
23	BA	1241	A	C2-N3-C4	-9.56	105.82	110.60
23	DA	2050	C	C2-N3-C4	-9.55	115.12	119.90
23	DA	397	G	C8-N9-C4	9.55	110.22	106.40
23	BA	2713	A	N1-C6-N6	9.54	124.32	118.60
23	DA	783	A	C4-C5-N7	9.54	115.47	110.70
23	DA	2032	G	C5-N7-C8	-9.54	99.53	104.30
23	BA	2689	U	C5-C4-O4	9.53	131.62	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	664	C	C6-N1-C2	9.51	124.11	120.30
23	DA	1331	A	C2-N3-C4	-9.51	105.84	110.60
23	BA	2032	G	C5-N7-C8	-9.50	99.55	104.30
23	DA	130	C	N3-C4-C5	9.48	125.69	121.90
23	BA	2043	C	C6-N1-C2	9.47	124.09	120.30
23	DA	2713	A	N1-C6-N6	9.46	124.28	118.60
23	DA	1257	C	C5-C6-N1	-9.46	116.27	121.00
23	DA	1899	G	C2-N3-C4	-9.45	107.17	111.90
23	DA	330	A	C2-N3-C4	-9.44	105.88	110.60
23	DA	2829	C	C6-N1-C2	9.40	124.06	120.30
23	BA	828	U	N3-C4-O4	-9.40	112.82	119.40
23	BA	2028	U	C4-C5-C6	9.39	125.33	119.70
23	BA	2240	C	C6-N1-C2	9.38	124.05	120.30
23	DA	1994	C	C6-N1-C2	9.37	124.05	120.30
23	BA	2713	A	C5-N7-C8	-9.36	99.22	103.90
23	BA	2430	A	N1-C6-N6	9.32	124.19	118.60
23	BA	2084	C	C6-N1-C2	9.31	124.03	120.30
23	DA	586	A	C8-N9-C4	9.29	109.52	105.80
23	BA	640	C	C6-N1-C2	9.28	124.01	120.30
23	DA	979	G	C4-C5-N7	9.28	114.51	110.80
23	DA	2580	U	C5-C4-O4	9.27	131.46	125.90
23	DA	1671	U	C4-C5-C6	9.27	125.26	119.70
23	BA	679	C	N1-C2-O2	-9.25	113.35	118.90
23	DA	2681	C	C5-C6-N1	-9.23	116.38	121.00
23	BA	2571	C	C2-N3-C4	-9.23	115.28	119.90
23	DA	1257	C	C2-N3-C4	-9.23	115.29	119.90
23	BA	2010	G	C4-C5-N7	9.22	114.49	110.80
23	DA	2028	U	C5-C6-N1	9.22	127.31	122.70
23	DA	784	A	N1-C6-N6	-9.22	113.07	118.60
23	BA	2502	G	C6-C5-N7	-9.21	124.88	130.40
23	BA	2619	C	C6-N1-C2	9.19	123.98	120.30
23	DA	678	C	N3-C4-C5	9.20	125.58	121.90
23	BA	1614	A	C2-N3-C4	-9.19	106.01	110.60
23	DA	2648	C	N1-C2-O2	-9.19	113.39	118.90
23	DA	397	G	N1-C6-O6	9.18	125.41	119.90
23	DA	945	A	C5-N7-C8	-9.18	99.31	103.90
23	BA	330	A	N1-C6-N6	9.18	124.11	118.60
23	DA	1264	G	C8-N9-C4	-9.17	102.73	106.40
23	BA	2084	C	C5-C6-N1	-9.17	116.42	121.00
23	DA	2066	C	C6-N1-C2	9.16	123.97	120.30
23	DA	133	C	C6-N1-C2	9.16	123.96	120.30
23	DA	527	C	N3-C4-N4	-9.15	111.59	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2742	C	C6-N1-C2	9.15	123.96	120.30
23	DA	2448	A	N1-C6-N6	9.14	124.09	118.60
23	BA	580	C	C5-C6-N1	-9.14	116.43	121.00
23	DA	1616	A	C6-C5-N7	-9.13	125.91	132.30
23	DA	1614	A	N1-C6-N6	9.11	124.07	118.60
23	BA	676	A	C4-C5-N7	9.11	115.25	110.70
23	BA	2430	A	C6-C5-N7	-9.10	125.93	132.30
23	DA	1616	A	N7-C8-N9	9.10	118.35	113.80
23	DA	130	C	C6-N1-C2	9.09	123.94	120.30
23	DA	676	A	C5-C6-N1	-9.09	113.16	117.70
23	DA	2043	C	C6-N1-C2	9.08	123.93	120.30
23	BA	2066	C	N3-C4-C5	9.07	125.53	121.90
23	DA	189	G	C8-N9-C4	9.04	110.02	106.40
23	BA	560	C	C6-N1-C2	9.04	123.92	120.30
23	DA	2231	C	N1-C2-O2	-9.03	113.48	118.90
23	DA	774	A	N1-C2-N3	9.01	133.81	129.30
23	DA	1678	G	C4-N9-C1'	-9.01	114.79	126.50
23	DA	387	U	N3-C4-C5	-8.99	109.21	114.60
23	BA	708	C	C6-N1-C2	8.98	123.89	120.30
23	DA	1698	A	C5-N7-C8	-8.98	99.41	103.90
23	BA	1934	C	C6-N1-C2	8.98	123.89	120.30
23	BA	761	A	C2-N3-C4	-8.96	106.12	110.60
23	BA	1783	A	N9-C4-C5	8.96	109.39	105.80
23	BA	1902	C	N3-C4-N4	-8.95	111.73	118.00
23	BA	945	A	C4-C5-C6	8.95	121.48	117.00
23	BA	1779	U	C6-N1-C2	8.95	126.37	121.00
23	DA	1962	C	C2-N1-C1'	8.94	128.63	118.80
23	DA	679	C	C2-N3-C4	-8.93	115.44	119.90
23	DA	1349	A	N1-C6-N6	8.92	123.95	118.60
23	BA	1244	G	C8-N9-C4	8.92	109.97	106.40
23	BA	1830	C	N1-C2-O2	-8.91	113.55	118.90
23	DA	659	C	C6-N1-C2	8.91	123.86	120.30
23	DA	2571	C	N3-C4-C5	8.90	125.46	121.90
23	BA	2391	G	N1-C6-O6	-8.87	114.58	119.90
23	DA	774	A	N3-C4-C5	8.87	133.01	126.80
23	DA	2578	G	C5-C6-O6	-8.87	123.28	128.60
23	BA	528	A	C2-N3-C4	-8.85	106.17	110.60
23	DA	568	U	N3-C4-C5	-8.84	109.30	114.60
23	DA	783	A	C6-C5-N7	-8.82	126.12	132.30
23	DA	1786	A	C6-C5-N7	-8.82	126.12	132.30
23	DA	774	A	C4-C5-N7	8.82	115.11	110.70
23	DA	2010	G	N1-C6-O6	8.82	125.19	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1678	G	C8-N9-C1'	8.82	138.47	127.00
1	AA	299	G	C5-C6-N1	-8.82	107.09	111.50
23	BA	676	A	C6-C5-N7	-8.81	126.13	132.30
23	DA	1786	A	C2-N3-C4	-8.81	106.19	110.60
23	DA	1979	C	N1-C2-O2	-8.81	113.61	118.90
23	DA	1790	C	N3-C4-C5	8.79	125.42	121.90
23	DA	678	C	C6-N1-C2	8.78	123.81	120.30
23	BA	2010	G	N1-C6-O6	8.77	125.16	119.90
23	BA	945	A	C8-N9-C1'	-8.76	111.94	127.70
23	DA	1605	C	C6-N1-C2	-8.75	116.80	120.30
23	DA	2830	G	C5-C6-O6	-8.73	123.36	128.60
23	BA	265	A	C5-N7-C8	-8.73	99.54	103.90
23	DA	1698	A	C6-C5-N7	-8.73	126.19	132.30
23	DA	2502	G	N1-C6-O6	8.73	125.14	119.90
23	BA	2050	C	N1-C2-O2	-8.72	113.67	118.90
23	BA	847	U	C2-N1-C1'	-8.72	107.24	117.70
23	BA	783	A	C5-N7-C8	-8.71	99.55	103.90
23	BA	1839	G	N3-C4-N9	-8.71	120.78	126.00
23	DA	945	A	N1-C6-N6	8.70	123.82	118.60
23	BA	461	C	N1-C2-O2	-8.69	113.69	118.90
23	DA	774	A	C6-C5-N7	-8.69	126.22	132.30
23	DA	2505	G	N1-C6-O6	-8.69	114.69	119.90
23	BA	1614	A	C5-C6-N1	-8.69	113.36	117.70
23	DA	2581	G	N1-C6-O6	-8.69	114.69	119.90
23	BA	1572	A	C8-N9-C4	8.68	109.27	105.80
23	DA	1616	A	C2-N3-C4	-8.68	106.26	110.60
23	BA	929	G	N1-C6-O6	8.68	125.11	119.90
23	DA	2648	C	C5-C6-N1	-8.67	116.67	121.00
23	BA	2713	A	C2-N3-C4	-8.67	106.27	110.60
23	DA	671	C	N1-C2-O2	-8.66	113.70	118.90
23	DA	114(B)	A	C6-C5-N7	-8.66	126.24	132.30
23	DA	57	C	N3-C4-C5	8.65	125.36	121.90
23	BA	2693	A	N1-C6-N6	-8.65	113.41	118.60
23	DA	2496	C	C6-N1-C2	8.65	123.76	120.30
23	DA	1698	A	C4-C5-N7	8.64	115.02	110.70
23	DA	2248	C	C2-N3-C4	-8.64	115.58	119.90
23	DA	1678	G	C2-N3-C4	-8.64	107.58	111.90
23	DA	265	A	C5-C6-N1	-8.64	113.38	117.70
23	BA	1325	G	N9-C4-C5	8.63	108.85	105.40
23	BA	1332	G	N1-C2-N2	8.63	123.96	116.20
23	DA	945	A	C4-C5-C6	8.63	121.31	117.00
23	BA	535	C	C6-N1-C2	8.62	123.75	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1602	U	C2-N3-C4	8.62	132.17	127.00
23	DA	684	G	C8-N9-C4	-8.60	102.96	106.40
23	DA	211	A	C2-N3-C4	-8.59	106.31	110.60
23	DA	945	A	C8-N9-C4	-8.59	102.36	105.80
23	DA	2689	U	C6-N1-C1'	8.57	133.19	121.20
23	DA	2713	A	C5-N7-C8	-8.57	99.62	103.90
23	DA	211	A	N1-C2-N3	8.56	133.58	129.30
23	DA	377	C	C6-N1-C2	8.56	123.72	120.30
23	DA	676	A	C6-C5-N7	-8.55	126.31	132.30
23	DA	2647	U	C5-C6-N1	-8.55	118.42	122.70
23	DA	2451	A	N9-C4-C5	8.54	109.22	105.80
23	BA	1698	A	N1-C6-N6	8.54	123.72	118.60
23	BA	1614	A	C6-C5-N7	-8.54	126.33	132.30
23	BA	1788	C	C5-C6-N1	-8.51	116.75	121.00
23	DA	140	A	C5-N7-C8	-8.50	99.65	103.90
23	DA	570	G	N9-C4-C5	8.49	108.80	105.40
23	BA	330	A	N9-C4-C5	-8.49	102.40	105.80
23	BA	2581	G	C8-N9-C4	-8.49	103.00	106.40
23	DA	2688	U	C5-C4-O4	8.49	131.00	125.90
23	DA	677	A	C2-N3-C4	-8.48	106.36	110.60
23	DA	2010	G	C6-C5-N7	-8.48	125.31	130.40
23	DA	194	G	C8-N9-C4	8.48	109.79	106.40
23	BA	2828	C	C5-C6-N1	-8.47	116.77	121.00
23	BA	2433	A	N1-C2-N3	8.47	133.53	129.30
23	BA	1683	C	N1-C2-O2	-8.47	113.82	118.90
23	BA	2066	C	C2-N3-C4	-8.47	115.67	119.90
23	BA	2057	A	N1-C2-N3	8.46	133.53	129.30
23	BA	970	C	C6-N1-C2	8.44	123.67	120.30
23	BA	1772	G	C8-N9-C4	8.43	109.77	106.40
23	BA	2057	A	C2-N3-C4	-8.42	106.39	110.60
23	BA	1979	C	N1-C2-O2	-8.42	113.85	118.90
23	BA	1261	C	N3-C4-C5	8.42	125.27	121.90
23	BA	2430	A	C2-N3-C4	-8.41	106.39	110.60
23	DA	71	A	C4-C5-N7	8.41	114.91	110.70
23	BA	783	A	C2-N3-C4	-8.41	106.40	110.60
23	DA	450	G	C4-C5-N7	-8.40	107.44	110.80
23	DA	2053	G	N1-C6-O6	8.40	124.94	119.90
23	BA	397	G	N1-C6-O6	8.40	124.94	119.90
23	DA	458	G	C2-N3-C4	8.40	116.10	111.90
23	DA	2500	U	C5-C6-N1	-8.39	118.50	122.70
23	BA	2699	C	C5-C6-N1	-8.39	116.81	121.00
23	DA	1417	C	C6-N1-C2	8.38	123.65	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	787	U	C5-C6-N1	-8.37	118.52	122.70
23	BA	671	C	N1-C2-O2	-8.37	113.88	118.90
23	BA	2010	G	C8-N9-C4	-8.37	103.05	106.40
23	BA	1602	U	N3-C4-O4	8.37	125.26	119.40
23	BA	2689	U	N3-C4-O4	-8.37	113.54	119.40
23	BA	2505	G	C5-C6-O6	8.36	133.61	128.60
23	BA	677	A	C2-N3-C4	-8.35	106.42	110.60
23	BA	2544	G	N1-C6-O6	8.35	124.91	119.90
23	BA	1253	A	C5-N7-C8	-8.35	99.73	103.90
23	DA	945	A	C4-C5-N7	8.35	114.87	110.70
23	BA	655	A	C8-N9-C4	-8.34	102.46	105.80
23	BA	1971	A	N1-C6-N6	8.34	123.60	118.60
23	BA	2681	C	N3-C4-N4	-8.34	112.16	118.00
23	DA	2503	A	N1-C2-N3	-8.34	125.13	129.30
23	DA	568	U	C4-C5-C6	8.34	124.70	119.70
23	DA	937	U	C5-C6-N1	-8.33	118.53	122.70
23	BA	2441	C	C6-N1-C2	8.32	123.63	120.30
23	DA	1934	C	C6-N1-C2	8.32	123.63	120.30
23	BA	2392	A	C2-N3-C4	-8.31	106.44	110.60
23	DA	761	A	C8-N9-C1'	-8.31	112.74	127.70
23	DA	1962	C	C6-N1-C1'	-8.31	110.83	120.80
23	DA	2057	A	C2-N3-C4	-8.30	106.45	110.60
23	BA	731	C	C6-N1-C2	8.30	123.62	120.30
23	DA	1021	A	C5-N7-C8	-8.30	99.75	103.90
23	DA	1010	A	C8-N9-C4	8.29	109.11	105.80
1	AA	123	C	C6-N1-C2	8.28	123.61	120.30
23	DA	472	A	C8-N9-C4	8.28	109.11	105.80
23	DA	2699	C	C6-N1-C2	8.28	123.61	120.30
23	DA	2463	C	C6-N1-C2	8.28	123.61	120.30
23	BA	189	G	C8-N9-C4	8.28	109.71	106.40
23	DA	1935	G	C8-N9-C4	8.27	109.71	106.40
23	BA	1771	C	N1-C2-O2	-8.27	113.94	118.90
23	BA	265	A	C2-N3-C4	-8.27	106.47	110.60
23	DA	2056	G	C4-C5-N7	8.25	114.10	110.80
23	BA	1999	C	C5-C6-N1	-8.25	116.88	121.00
23	BA	2226	C	C6-N1-C2	8.24	123.60	120.30
23	BA	2463	C	C5-C6-N1	-8.24	116.88	121.00
23	DA	2061	G	C5-C6-N1	-8.23	107.39	111.50
23	DA	2417	C	C6-N1-C2	8.22	123.59	120.30
23	BA	828	U	C5-C4-O4	8.21	130.83	125.90
23	DA	1264	G	N9-C4-C5	8.20	108.68	105.40
23	BA	807	U	C2-N1-C1'	-8.19	107.87	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2432	A	C2-N3-C4	-8.19	106.51	110.60
23	BA	444	C	C5-C6-N1	-8.18	116.91	121.00
23	BA	676	A	N3-C4-N9	-8.18	120.85	127.40
23	DA	2706	G	C5-C6-O6	-8.18	123.69	128.60
23	DA	676	A	N3-C4-N9	-8.18	120.86	127.40
23	DA	1161	C	C6-N1-C2	-8.18	117.03	120.30
23	DA	2739	U	C5-C6-N1	-8.17	118.61	122.70
23	DA	270(B)	A	C8-N9-C4	8.16	109.06	105.80
23	BA	1962	C	C6-N1-C1'	-8.16	111.01	120.80
23	BA	1653	G	C8-N9-C4	8.15	109.66	106.40
23	BA	2713	A	C4-C5-N7	8.15	114.78	110.70
23	BA	574	C	C6-N1-C2	8.15	123.56	120.30
23	DA	2593	U	C4-C5-C6	8.14	124.59	119.70
23	DA	2430	A	C4-C5-C6	8.14	121.07	117.00
23	BA	2506	U	N3-C2-O2	-8.14	116.50	122.20
23	BA	2424	C	C6-N1-C2	8.13	123.55	120.30
23	DA	2712	U	N1-C2-N3	8.13	119.78	114.90
23	BA	1253	A	C4-C5-C6	-8.12	112.94	117.00
23	BA	1786	A	N1-C2-N3	8.12	133.36	129.30
23	BA	1325	G	C8-N9-C1'	8.11	137.54	127.00
23	BA	1800	C	C6-N1-C2	8.11	123.54	120.30
23	DA	1309	G	C8-N9-C4	8.11	109.64	106.40
23	BA	1614	A	C5-N7-C8	-8.11	99.85	103.90
23	BA	764	A	C5-N7-C8	-8.09	99.85	103.90
23	DA	2515	C	C6-N1-C2	8.09	123.54	120.30
23	BA	814	C	C6-N1-C2	8.09	123.54	120.30
23	DA	786	C	C5-C6-N1	-8.08	116.96	121.00
23	DA	2681	C	N3-C4-N4	-8.08	112.34	118.00
23	BA	1204	A	C5-N7-C8	-8.08	99.86	103.90
23	DA	528	A	C2-N3-C4	-8.07	106.56	110.60
23	DA	71	A	C2-N3-C4	-8.07	106.57	110.60
23	DA	2510	C	C6-N1-C2	8.07	123.53	120.30
23	BA	141(A)	A	C5-N7-C8	-8.06	99.87	103.90
23	BA	840	C	C6-N1-C2	8.05	123.52	120.30
23	BA	2081	C	N1-C2-O2	-8.06	114.07	118.90
23	DA	1783	A	N9-C4-C5	8.06	109.02	105.80
23	DA	2626	C	C5-C6-N1	-8.06	116.97	121.00
23	DA	114(B)	A	N1-C6-N6	8.05	123.43	118.60
23	DA	408	G	N7-C8-N9	-8.05	109.08	113.10
23	DA	664	C	C6-N1-C2	8.05	123.52	120.30
23	BA	2777	G	C8-N9-C4	8.05	109.62	106.40
23	BA	1790	C	C5-C6-N1	-8.03	116.99	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	698	C	C6-N1-C2	8.03	123.51	120.30
1	AA	1512	U	C5-C6-N1	-8.02	118.69	122.70
23	DA	2518	A	C4-C5-N7	8.02	114.71	110.70
47	DY	21	LEU	CA-CB-CG	8.02	133.74	115.30
23	BA	945	A	C5-N7-C8	-8.01	99.89	103.90
23	DA	1022	G	N1-C6-O6	-8.00	115.10	119.90
23	BA	1678	G	C8-N9-C1'	8.00	137.40	127.00
23	BA	2596	U	C2-N1-C1'	-8.00	108.11	117.70
23	DA	1627	G	N1-C6-O6	8.00	124.70	119.90
23	BA	2028	U	C5-C6-N1	7.99	126.70	122.70
23	BA	2017	U	N1-C2-N3	7.99	119.69	114.90
23	BA	529	A	N1-C6-N6	7.98	123.39	118.60
23	DA	840	C	C6-N1-C2	7.98	123.49	120.30
23	BA	1898	U	N3-C4-C5	-7.98	109.81	114.60
23	DA	2505	G	C4-C5-N7	-7.98	107.61	110.80
23	BA	1820	U	C5-C6-N1	-7.98	118.71	122.70
23	DA	465	G	C8-N9-C4	-7.97	103.21	106.40
23	DA	1341	U	N3-C4-O4	7.97	124.98	119.40
23	BA	32	C	N1-C2-O2	-7.96	114.12	118.90
23	DA	1644	C	N1-C2-O2	7.96	123.68	118.90
23	BA	114(B)	A	C6-C5-N7	-7.95	126.74	132.30
23	DA	1332	G	C5-N7-C8	-7.94	100.33	104.30
1	CA	285	G	C8-N9-C4	7.94	109.58	106.40
23	DA	2014	A	C8-N9-C4	7.94	108.97	105.80
23	DA	2581	G	N9-C4-C5	7.94	108.58	105.40
23	BA	1614	A	N7-C8-N9	7.93	117.77	113.80
23	DA	2591	C	C5-C6-N1	-7.93	117.03	121.00
23	DA	809	G	C5-C6-O6	-7.93	123.84	128.60
23	BA	1678	G	C2-N3-C4	-7.92	107.94	111.90
23	BA	535	C	C5-C6-N1	-7.92	117.04	121.00
23	BA	2346	A	C2-N3-C4	-7.91	106.64	110.60
23	BA	2699	C	C6-N1-C2	7.91	123.46	120.30
23	DA	783	A	C8-N9-C4	-7.90	102.64	105.80
23	BA	189	G	N9-C4-C5	-7.90	102.24	105.40
23	BA	2028	U	C2-N3-C4	7.90	131.74	127.00
23	DA	273(A)	G	C8-N9-C4	7.90	109.56	106.40
46	BX	35	THR	N-CA-C	7.90	132.33	111.00
23	BA	2499	C	C2-N3-C4	-7.90	115.95	119.90
23	DA	2567	G	N1-C6-O6	7.90	124.64	119.90
23	DA	783	A	N1-C6-N6	7.90	123.34	118.60
23	BA	2524	G	C8-N9-C4	7.89	109.56	106.40
23	BA	1786	A	C4-C5-N7	7.89	114.64	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	107	C	C6-N1-C2	7.88	123.45	120.30
23	BA	2010	G	C5-N7-C8	-7.88	100.36	104.30
23	DA	971	C	N1-C2-O2	-7.88	114.17	118.90
23	DA	1989	G	N1-C6-O6	7.88	124.63	119.90
23	BA	298	G	C5-N7-C8	-7.88	100.36	104.30
23	DA	2451	A	C8-N9-C4	-7.88	102.65	105.80
23	BA	2593	U	N3-C4-C5	-7.88	109.87	114.60
23	DA	736	C	C6-N1-C2	7.87	123.45	120.30
23	DA	1007	C	C5-C6-N1	-7.87	117.06	121.00
23	BA	2518	A	C5-N7-C8	-7.87	99.97	103.90
47	BY	21	LEU	CA-CB-CG	7.87	133.39	115.30
23	DA	2424	C	C6-N1-C2	7.86	123.44	120.30
23	DA	2324	C	C5-C6-N1	-7.85	117.07	121.00
23	BA	1671	U	C5-C6-N1	7.85	126.62	122.70
23	DA	1820	U	C5-C6-N1	-7.85	118.78	122.70
1	CA	1053	G	C4-N9-C1'	-7.85	116.30	126.50
23	BA	530	G	C8-N9-C4	-7.84	103.26	106.40
23	DA	2713	A	C2-N3-C4	-7.84	106.68	110.60
23	DA	2430	A	C2-N3-C4	-7.84	106.68	110.60
23	DA	814	C	C6-N1-C2	7.84	123.43	120.30
23	BA	1704	G	C8-N9-C4	7.83	109.53	106.40
23	BA	945	A	C4-C5-N7	7.83	114.62	110.70
23	BA	1332	G	C5-N7-C8	-7.83	100.39	104.30
23	DA	1261	C	C6-N1-C2	7.83	123.43	120.30
23	BA	1323	U	N1-C2-O2	-7.83	117.32	122.80
23	DA	2685	G	C5-C6-N1	-7.83	107.59	111.50
23	DA	141(A)	A	C4-C5-N7	7.82	114.61	110.70
23	DA	761	A	C4-N9-C1'	7.82	140.37	126.30
23	DA	1201	C	C6-N1-C2	7.82	123.43	120.30
23	BA	1899	G	C8-N9-C4	-7.81	103.27	106.40
23	DA	945	A	C8-N9-C1'	-7.81	113.64	127.70
23	DA	2232	U	C5-C6-N1	-7.81	118.80	122.70
23	DA	1600	C	N1-C2-O2	-7.80	114.22	118.90
23	DA	2053	G	C5-C6-O6	-7.79	123.92	128.60
23	DA	2544	G	C5-C6-O6	-7.79	123.93	128.60
23	DA	2244	U	N3-C2-O2	-7.78	116.75	122.20
23	DA	2054	A	N1-C6-N6	7.77	123.27	118.60
23	DA	1592	C	C6-N1-C2	7.77	123.41	120.30
23	DA	2066	C	N3-C4-C5	7.76	125.01	121.90
23	BA	566	U	C5-C6-N1	-7.76	118.82	122.70
23	BA	783	A	C6-C5-N7	-7.76	126.87	132.30
23	BA	1827	C	C2-N3-C4	-7.75	116.02	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	676	A	N1-C2-N3	7.75	133.17	129.30
23	DA	530	G	C8-N9-C4	-7.74	103.30	106.40
23	DA	601	C	C6-N1-C2	7.74	123.39	120.30
23	DA	828	U	C5-C4-O4	7.74	130.54	125.90
23	BA	1204	A	N7-C8-N9	7.73	117.66	113.80
23	BA	2391	G	C5-C6-O6	7.72	133.23	128.60
23	DA	2713	A	C6-C5-N7	-7.72	126.90	132.30
1	AA	896	C	C6-N1-C2	7.72	123.39	120.30
23	DA	784	A	N9-C4-C5	7.71	108.89	105.80
23	BA	2010	G	N7-C8-N9	7.71	116.95	113.10
23	BA	929	G	C6-C5-N7	-7.70	125.78	130.40
23	BA	1648	C	N1-C2-O2	-7.70	114.28	118.90
23	DA	979	G	C5-N7-C8	-7.70	100.45	104.30
23	DA	1325	G	C8-N9-C1'	7.70	137.00	127.00
23	BA	2588	G	N1-C2-N3	7.69	128.52	123.90
23	BA	835	A	C8-N9-C4	7.69	108.88	105.80
23	DA	2061	G	N1-C6-O6	7.69	124.52	119.90
23	BA	570	G	N9-C4-C5	7.68	108.47	105.40
23	DA	450	G	N1-C6-O6	7.68	124.51	119.90
23	BA	1994	C	C6-N1-C2	7.68	123.37	120.30
23	DA	1618	A	C5-C6-N6	-7.68	117.56	123.70
23	DA	57	C	C5-C6-N1	-7.68	117.16	121.00
23	DA	2571	C	C5-C6-N1	-7.68	117.16	121.00
23	DA	2503	A	C5-C6-N1	7.67	121.54	117.70
23	DA	1665	A	N1-C6-N6	7.67	123.20	118.60
23	BA	945	A	N7-C8-N9	7.67	117.64	113.80
23	BA	1154	G	N1-C6-O6	-7.67	115.30	119.90
23	BA	774	A	N3-C4-C5	7.66	132.16	126.80
23	BA	1678	G	C4-N9-C1'	-7.65	116.55	126.50
23	DA	2596	U	C2-N1-C1'	-7.65	108.52	117.70
23	BA	83	G	N3-C4-C5	7.65	132.43	128.60
23	BA	568	U	N3-C4-C5	-7.65	110.01	114.60
23	DA	2010	G	C2-N3-C4	-7.65	108.07	111.90
23	BA	774	A	C5-C6-N1	-7.65	113.88	117.70
23	BA	2689	U	C6-N1-C1'	7.64	131.90	121.20
1	CA	1415	G	N1-C6-O6	7.64	124.48	119.90
23	DA	2827	C	C5-C6-N1	-7.64	117.18	121.00
23	DA	847	U	C2-N1-C1'	-7.64	108.53	117.70
23	BA	779	U	C6-N1-C2	7.64	125.58	121.00
23	BA	1627	G	N1-C6-O6	7.63	124.48	119.90
23	BA	2091	U	C5-C6-N1	-7.63	118.88	122.70
23	DA	929	G	N1-C6-O6	7.63	124.48	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2454	G	N7-C8-N9	-7.62	109.29	113.10
23	DA	2502	G	N9-C4-C5	-7.62	102.35	105.40
23	DA	1786	A	C8-N9-C4	-7.62	102.75	105.80
23	BA	580	C	C2-N3-C4	-7.61	116.09	119.90
1	CA	117	G	N1-C6-O6	7.61	124.47	119.90
23	DA	2346	A	C2-N3-C4	-7.61	106.79	110.60
23	BA	2841	C	C6-N1-C2	7.61	123.34	120.30
23	BA	2505	G	C4-C5-N7	-7.60	107.76	110.80
23	DA	328	U	C5-C6-N1	-7.60	118.90	122.70
23	BA	210	C	C5-C6-N1	-7.60	117.20	121.00
23	BA	580	C	C6-N1-C2	7.59	123.33	120.30
23	BA	31	C	C6-N1-C2	7.58	123.33	120.30
23	DA	57	C	C2-N3-C4	-7.58	116.11	119.90
23	BA	2540	C	C5-C6-N1	-7.58	117.21	121.00
46	DX	35	THR	N-CA-C	7.58	131.45	111.00
23	DA	684	G	N7-C8-N9	7.57	116.89	113.10
1	AA	903	G	C8-N9-C4	7.57	109.43	106.40
23	DA	466	A	C2-N3-C4	-7.57	106.81	110.60
23	DA	956	G	C8-N9-C4	7.57	109.43	106.40
23	DA	979	G	N1-C6-O6	7.57	124.44	119.90
23	DA	580	C	C6-N1-C2	7.57	123.33	120.30
23	DA	2601	C	C2-N3-C4	-7.57	116.12	119.90
23	BA	1614	A	N1-C6-N6	7.56	123.14	118.60
24	BB	100	G	C8-N9-C4	7.56	109.42	106.40
23	DA	2591	C	C4-C5-C6	7.56	121.18	117.40
23	DA	265	A	N7-C8-N9	7.55	117.58	113.80
23	DA	915	C	C6-N1-C2	-7.55	117.28	120.30
1	AA	34	C	C6-N1-C2	7.54	123.32	120.30
23	BA	1349	A	N1-C6-N6	7.54	123.12	118.60
23	DA	1839	G	N3-C4-N9	-7.54	121.48	126.00
23	DA	2614	A	C5-C6-N1	7.54	121.47	117.70
1	CA	299	G	C4-C5-N7	-7.54	107.78	110.80
1	AA	901	A	C2-N3-C4	-7.54	106.83	110.60
23	BA	2699	C	C2-N1-C1'	-7.54	110.51	118.80
23	DA	2510	C	N3-C4-C5	7.54	124.91	121.90
23	DA	2248	C	C5-C6-N1	-7.53	117.23	121.00
23	DA	114(B)	A	N1-C2-N3	7.53	133.07	129.30
23	DA	1031	G	N1-C6-O6	7.53	124.42	119.90
23	DA	148	C	C5-C6-N1	-7.52	117.24	121.00
23	BA	2626	C	C6-N1-C2	7.52	123.31	120.30
23	DA	676	A	C8-N9-C4	-7.52	102.79	105.80
23	BA	2081	C	C2-N3-C4	-7.52	116.14	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	424	G	C5-C6-O6	-7.52	124.09	128.60
23	DA	530	G	N1-C6-O6	-7.51	115.39	119.90
23	DA	2065	C	N3-C4-C5	7.51	124.91	121.90
23	BA	771	G	N1-C6-O6	7.50	124.40	119.90
1	CA	1053	G	C8-N9-C1'	7.50	136.75	127.00
23	BA	2250	G	C8-N9-C4	-7.50	103.40	106.40
23	BA	1161	C	C6-N1-C2	-7.49	117.30	120.30
23	DA	1352	U	C5-C6-N1	-7.49	118.95	122.70
23	BA	1770	G	N1-C2-N3	7.49	128.39	123.90
23	DA	141(A)	A	N7-C8-N9	7.48	117.54	113.80
23	DA	815	C	N3-C4-C5	7.48	124.89	121.90
23	BA	784	A	N1-C6-N6	-7.47	114.12	118.60
23	BA	1671	U	C6-N1-C2	-7.47	116.52	121.00
23	BA	1686	C	N1-C2-O2	-7.47	114.42	118.90
23	DA	140	A	C4-C5-N7	7.46	114.43	110.70
52	D4	19	ARG	NE-CZ-NH2	-7.46	116.57	120.30
23	DA	786	C	C6-N1-C2	7.46	123.28	120.30
23	BA	764	A	C4-C5-N7	7.45	114.42	110.70
23	BA	2588	G	C2-N3-C4	-7.45	108.18	111.90
23	DA	2503	A	C2-N3-C4	7.45	114.32	110.60
23	DA	1261	C	N1-C2-O2	-7.45	114.43	118.90
23	DA	1304	C	C2-N3-C4	-7.45	116.18	119.90
23	BA	557	U	C5-C6-N1	-7.43	118.98	122.70
23	DA	1349	A	C2-N3-C4	-7.43	106.89	110.60
23	BA	1793	C	C6-N1-C2	7.43	123.27	120.30
23	DA	1348	G	N1-C6-O6	7.43	124.36	119.90
23	DA	2363	C	C6-N1-C2	7.42	123.27	120.30
23	BA	530	G	N1-C6-O6	-7.42	115.45	119.90
23	BA	2713	A	C6-C5-N7	-7.42	127.11	132.30
23	DA	595	C	C5-C6-N1	-7.42	117.29	121.00
23	DA	736	C	N1-C2-O2	-7.42	114.45	118.90
1	AA	868	C	C6-N1-C2	-7.42	117.33	120.30
23	DA	1215	G	C8-N9-C4	7.41	109.36	106.40
23	BA	130	C	C6-N1-C2	7.41	123.26	120.30
23	BA	512	G	N3-C4-N9	-7.41	121.55	126.00
23	DA	1786	A	C4-C5-N7	7.41	114.41	110.70
23	BA	2828	C	C2-N3-C4	-7.40	116.20	119.90
23	DA	676	A	N1-C6-N6	7.40	123.04	118.60
23	DA	1252	G	C8-N9-C4	7.40	109.36	106.40
1	AA	1053	G	C8-N9-C1'	7.40	136.62	127.00
23	DA	2028	U	C2-N3-C4	7.39	131.44	127.00
23	DA	2505	G	N9-C4-C5	7.39	108.36	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1224	C	N1-C2-O2	-7.39	114.47	118.90
23	DA	1998	G	C8-N9-C4	7.39	109.36	106.40
23	DA	137(B)	G	N1-C6-O6	7.38	124.33	119.90
23	BA	2634	G	C8-N9-C4	7.38	109.35	106.40
23	BA	826	U	C5-C6-N1	-7.38	119.01	122.70
23	DA	2547	U	C5-C6-N1	-7.38	119.01	122.70
23	DA	527	C	N3-C4-C5	7.38	124.85	121.90
23	BA	2346	A	N1-C2-N3	7.37	132.99	129.30
23	BA	2430	A	C5-C6-N1	-7.37	114.01	117.70
23	BA	1309	G	C8-N9-C1'	-7.37	117.42	127.00
1	CA	552	U	C5-C6-N1	-7.37	119.02	122.70
23	DA	298	G	C5-N7-C8	-7.37	100.62	104.30
23	DA	513	A	C8-N9-C4	-7.36	102.86	105.80
23	BA	1254	A	N1-C2-N3	7.36	132.98	129.30
23	BA	1769	G	C8-N9-C4	-7.36	103.45	106.40
23	DA	1653	G	N1-C6-O6	7.36	124.32	119.90
23	BA	298	G	C4-C5-N7	7.36	113.74	110.80
23	BA	2032	G	N7-C8-N9	7.36	116.78	113.10
23	BA	2719	G	N3-C4-N9	7.35	130.41	126.00
23	BA	2595	G	C5-C6-O6	-7.34	124.19	128.60
23	DA	141(A)	A	N1-C6-N6	7.34	123.01	118.60
23	DA	1325	G	N9-C4-C5	7.34	108.34	105.40
23	DA	124	G	N7-C8-N9	-7.34	109.43	113.10
23	BA	1602	U	C4-C5-C6	7.34	124.10	119.70
23	BA	1210	A	C2-N3-C4	-7.33	106.93	110.60
23	BA	1252	G	C8-N9-C4	7.33	109.33	106.40
23	BA	2056	G	C4-C5-N7	7.33	113.73	110.80
23	DA	265	A	N1-C6-N6	7.33	123.00	118.60
23	DA	1652	A	N1-C6-N6	7.32	122.99	118.60
23	BA	968	G	C5-C6-O6	-7.32	124.21	128.60
23	DA	330	A	C6-C5-N7	-7.32	127.18	132.30
23	BA	2648	C	C5-C6-N1	-7.32	117.34	121.00
23	BA	640	C	C5-C6-N1	-7.32	117.34	121.00
23	BA	1254	A	C6-N1-C2	-7.32	114.21	118.60
23	DA	2588	G	N1-C2-N3	7.32	128.29	123.90
23	DA	2589	A	C8-N9-C4	7.32	108.73	105.80
23	BA	114(B)	A	N1-C6-N6	7.31	122.99	118.60
23	DA	2037	G	N1-C6-O6	-7.31	115.52	119.90
23	DA	428	A	C2-N3-C4	-7.30	106.95	110.60
23	BA	2017	U	C4-C5-C6	7.30	124.08	119.70
23	DA	679	C	N3-C4-C5	7.30	124.82	121.90
23	DA	857	C	N1-C2-O2	-7.30	114.52	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1996	C	N1-C2-O2	-7.30	114.52	118.90
23	DA	800	A	N1-C6-N6	-7.30	114.22	118.60
23	DA	2055	C	N3-C4-C5	-7.30	118.98	121.90
23	BA	2502	G	C4-C5-N7	7.29	113.72	110.80
23	DA	2464	C	C5-C6-N1	-7.29	117.35	121.00
1	AA	1053	G	C4-N9-C1'	-7.29	117.03	126.50
23	DA	761	A	C6-N1-C2	7.28	122.97	118.60
23	DA	1024	G	C8-N9-C4	7.28	109.31	106.40
23	BA	1201	C	C6-N1-C2	7.28	123.21	120.30
23	BA	2595	G	C8-N9-C4	7.27	109.31	106.40
23	DA	1209	G	N1-C6-O6	-7.27	115.54	119.90
23	DA	2593	U	C6-N1-C2	-7.27	116.64	121.00
23	BA	1261	C	C5-C6-N1	-7.27	117.36	121.00
23	DA	1663	C	C5-C6-N1	-7.27	117.36	121.00
23	BA	1999	C	C2-N1-C1'	-7.27	110.81	118.80
23	BA	2081	C	C5-C6-N1	-7.26	117.37	121.00
23	DA	1898	U	N3-C4-C5	-7.26	110.24	114.60
23	DA	56	A	C2-N3-C4	-7.26	106.97	110.60
23	DA	2580	U	N3-C4-C5	-7.25	110.25	114.60
23	BA	772	C	C6-N1-C2	7.25	123.20	120.30
23	DA	945	A	C5-C6-N6	-7.25	117.90	123.70
23	DA	197	A	N1-C6-N6	7.25	122.95	118.60
23	DA	2532	G	C5-C6-O6	-7.24	124.25	128.60
23	DA	2712	U	N3-C2-O2	-7.24	117.13	122.20
23	BA	570	G	C5-N7-C8	7.24	107.92	104.30
23	DA	961	C	N3-C4-C5	-7.24	119.00	121.90
23	BA	676	A	C8-N9-C4	-7.24	102.91	105.80
23	BA	1698	A	C6-C5-N7	-7.23	127.24	132.30
23	DA	756	C	C6-N1-C2	7.23	123.19	120.30
23	DA	1332	G	N1-C2-N2	7.23	122.70	116.20
23	BA	1328	G	C6-C5-N7	-7.22	126.06	130.40
23	DA	2249	U	C4-C5-C6	7.22	124.03	119.70
23	BA	2581	G	N9-C4-C5	7.22	108.29	105.40
23	DA	570	G	C8-N9-C4	-7.22	103.51	106.40
23	DA	2648	C	N3-C2-O2	7.22	126.96	121.90
23	DA	1645	G	C5-C6-N1	7.22	115.11	111.50
23	DA	2689	U	N1-C2-N3	7.22	119.23	114.90
23	BA	471	A	C8-N9-C4	7.22	108.69	105.80
23	BA	2825	U	N3-C4-C5	7.22	118.93	114.60
23	DA	1367	A	C2-N3-C4	-7.21	106.99	110.60
23	DA	2448	A	C5-C6-N6	-7.21	117.93	123.70
23	BA	783	A	C5-C6-N1	-7.20	114.10	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2447	G	C4-N9-C1'	-7.20	117.14	126.50
23	BA	2007	C	C6-N1-C2	7.20	123.18	120.30
23	DA	2532	G	N1-C6-O6	7.20	124.22	119.90
23	DA	737	C	C6-N1-C2	7.20	123.18	120.30
23	DA	774	A	N3-C4-N9	-7.20	121.64	127.40
23	BA	2700	C	C5-C6-N1	-7.20	117.40	121.00
23	DA	2081	C	C5-C6-N1	-7.20	117.40	121.00
23	DA	2700	C	C6-N1-C2	7.19	123.18	120.30
23	BA	2451	A	N9-C4-C5	7.19	108.68	105.80
23	BA	529	A	C5-C6-N6	-7.19	117.95	123.70
23	BA	808	G	C8-N9-C4	7.19	109.28	106.40
23	DA	979	G	C5-C6-O6	-7.19	124.29	128.60
23	DA	189	G	N9-C4-C5	-7.19	102.53	105.40
23	BA	561	G	C8-N9-C4	7.18	109.27	106.40
23	DA	747	U	C5-C6-N1	-7.18	119.11	122.70
23	DA	2448	A	C5-N7-C8	-7.18	100.31	103.90
23	DA	1614	A	C5-N7-C8	-7.18	100.31	103.90
23	DA	83	G	N3-C4-N9	-7.18	121.69	126.00
23	DA	1332	G	C4-C5-C6	-7.18	114.50	118.80
23	BA	2515	C	N3-C4-C5	7.17	124.77	121.90
23	DA	1363	C	C2-N3-C4	-7.17	116.31	119.90
23	DA	458	G	N3-C4-C5	-7.17	125.01	128.60
23	BA	2498	C	C5-C6-N1	-7.17	117.41	121.00
23	DA	918	A	N1-C6-N6	7.17	122.90	118.60
23	DA	2232	U	C5-C4-O4	7.17	130.20	125.90
23	DA	298	G	C4-C5-N7	7.16	113.67	110.80
23	DA	1021	A	C4-C5-N7	7.16	114.28	110.70
23	DA	2871	C	C6-N1-C2	7.16	123.16	120.30
23	DA	397	G	N9-C4-C5	-7.16	102.54	105.40
23	DA	2681	C	C5-C4-N4	7.16	125.21	120.20
23	BA	760	G	C4-C5-N7	7.15	113.66	110.80
23	BA	2392	A	C8-N9-C4	-7.15	102.94	105.80
23	DA	2257	U	N3-C2-O2	7.15	127.20	122.20
23	DA	265	A	C4-C5-N7	7.15	114.27	110.70
23	DA	2553	G	C5-C6-O6	-7.15	124.31	128.60
23	BA	836	G	N3-C4-C5	7.14	132.17	128.60
23	DA	444	C	C6-N1-C2	7.14	123.16	120.30
1	AA	297	G	C8-N9-C4	7.13	109.25	106.40
23	DA	1902	C	N3-C4-N4	-7.13	113.01	118.00
23	BA	535	C	N3-C4-C5	7.13	124.75	121.90
23	BA	698	C	C6-N1-C2	7.12	123.15	120.30
23	BA	1698	A	C5-N7-C8	-7.12	100.34	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	746	A	C6-N1-C2	-7.12	114.33	118.60
23	DA	1795	C	N1-C2-O2	-7.12	114.63	118.90
23	DA	2231	C	C2-N3-C4	-7.12	116.34	119.90
23	BA	2614	A	C6-N1-C2	-7.12	114.33	118.60
23	DA	2553	G	C5-C6-N1	7.11	115.06	111.50
1	CA	43	C	C6-N1-C2	7.11	123.14	120.30
23	BA	2441	C	N3-C2-O2	7.11	126.87	121.90
23	BA	17	G	C5-C6-O6	-7.10	124.34	128.60
23	DA	737	C	N3-C4-C5	7.10	124.74	121.90
23	BA	1655	A	C8-N9-C4	7.10	108.64	105.80
23	DA	557	U	C5-C6-N1	-7.10	119.15	122.70
23	DA	1570	A	C8-N9-C4	7.09	108.64	105.80
23	BA	1325	G	C8-N9-C4	-7.09	103.56	106.40
23	DA	2619	C	N3-C4-C5	7.09	124.74	121.90
1	AA	43	C	C6-N1-C2	7.09	123.14	120.30
1	CA	299	G	C5-C6-O6	7.09	132.85	128.60
23	DA	124	G	N9-C4-C5	-7.09	102.56	105.40
23	BA	563	G	N1-C6-O6	-7.09	115.65	119.90
23	BA	1982	C	N1-C2-O2	-7.09	114.65	118.90
23	DA	2050	C	C5-C6-N1	-7.09	117.46	121.00
35	BM	81	VAL	N-CA-C	7.08	130.12	111.00
23	BA	708	C	C5-C6-N1	-7.08	117.46	121.00
23	BA	1602	U	N1-C2-N3	7.07	119.14	114.90
1	AA	756	C	C6-N1-C2	7.07	123.13	120.30
23	DA	2032	G	N7-C8-N9	7.07	116.64	113.10
23	BA	974(A)	G	C8-N9-C4	-7.07	103.57	106.40
23	DA	577	G	C8-N9-C4	7.07	109.23	106.40
23	DA	1791	A	N7-C8-N9	-7.07	110.27	113.80
23	BA	2571	C	N3-C4-C5	7.06	124.73	121.90
23	BA	2249	U	N3-C4-C5	-7.06	110.36	114.60
23	DA	377	C	C5-C6-N1	-7.06	117.47	121.00
23	BA	2430	A	N1-C2-N3	7.05	132.83	129.30
23	DA	265	A	C6-C5-N7	-7.05	127.36	132.30
23	BA	1790	C	N3-C4-N4	-7.05	113.07	118.00
23	DA	210	C	C2-N3-C4	-7.05	116.38	119.90
23	DA	2515	C	C5-C6-N1	-7.05	117.48	121.00
1	AA	576	G	N1-C6-O6	7.04	124.13	119.90
23	DA	2518	A	N7-C8-N9	7.04	117.32	113.80
23	DA	1620	G	C8-N9-C4	7.04	109.22	106.40
23	BA	1902	C	C5-C4-N4	7.04	125.12	120.20
23	DA	1602	U	N1-C2-N3	7.03	119.12	114.90
23	BA	2587	A	C8-N9-C4	7.03	108.61	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1786	A	N1-C6-N6	7.03	122.82	118.60
1	CA	892	A	N1-C6-N6	7.02	122.81	118.60
23	BA	30	G	C8-N9-C4	7.02	109.21	106.40
23	DA	1900	A	N1-C6-N6	-7.02	114.39	118.60
23	DA	1138	G	N3-C4-N9	7.02	130.21	126.00
23	DA	1698	A	N1-C2-N3	7.02	132.81	129.30
23	BA	979	G	C5-N7-C8	-7.01	100.79	104.30
35	DM	81	VAL	N-CA-C	7.01	129.94	111.00
23	DA	678	C	C5-C6-N1	-7.01	117.50	121.00
23	DA	847	U	C5-C6-N1	-7.01	119.19	122.70
23	DA	2699	C	C5-C6-N1	-7.01	117.50	121.00
23	DA	2713	A	C4-C5-N7	7.01	114.21	110.70
23	DA	330	A	C5-C6-N1	-7.01	114.20	117.70
23	DA	1304	C	N3-C4-C5	7.00	124.70	121.90
23	DA	2394	C	C5-C6-N1	-7.00	117.50	121.00
23	DA	2500	U	N1-C2-O2	-7.00	117.90	122.80
23	BA	2499	C	C5-C6-N1	-7.00	117.50	121.00
23	DA	270(Y)	G	C5-C6-N1	-7.00	108.00	111.50
23	DA	1380	G	C8-N9-C4	7.00	109.20	106.40
23	BA	835	A	N7-C8-N9	-6.99	110.30	113.80
23	DA	77	C	C6-N1-C2	6.99	123.10	120.30
23	BA	976	C	C5-C6-N1	-6.99	117.51	121.00
23	DA	734	A	C8-N9-C4	6.99	108.60	105.80
23	BA	761	A	C4-N9-C1'	6.99	138.87	126.30
23	DA	993	G	N1-C6-O6	-6.98	115.71	119.90
23	BA	2050	C	C2-N3-C4	-6.97	116.42	119.90
23	DA	2260	C	C6-N1-C2	6.97	123.09	120.30
23	BA	2386	C	C5-C6-N1	-6.97	117.52	121.00
23	DA	933	A	C5-N7-C8	-6.97	100.42	103.90
23	BA	1493	C	C2-N1-C1'	6.97	126.46	118.80
23	BA	2232	U	N3-C4-C5	-6.96	110.42	114.60
23	BA	736	C	C6-N1-C2	6.96	123.08	120.30
23	BA	1698	A	C4-C5-N7	6.96	114.18	110.70
23	BA	1830	C	N3-C2-O2	6.96	126.77	121.90
23	DA	1615	C	C6-N1-C2	6.96	123.08	120.30
23	DA	2579	C	C5-C6-N1	-6.96	117.52	121.00
23	BA	1332	G	C4-C5-C6	-6.95	114.63	118.80
23	DA	1204	A	C2-N3-C4	-6.95	107.12	110.60
23	DA	1776	G	C5-C6-N1	6.95	114.98	111.50
23	BA	783	A	N7-C8-N9	6.95	117.28	113.80
23	BA	671	C	C4-C5-C6	6.95	120.87	117.40
23	BA	1332	G	C5-C6-N1	-6.95	108.03	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2593	U	N1-C2-O2	-6.95	117.94	122.80
23	BA	561	G	N7-C8-N9	-6.95	109.63	113.10
23	BA	1323	U	N3-C4-O4	6.94	124.26	119.40
23	BA	2236	C	C6-N1-C2	6.94	123.08	120.30
23	BA	2454	G	C5-N7-C8	6.93	107.77	104.30
23	DA	1341	U	N3-C4-C5	-6.93	110.44	114.60
23	DA	2399	G	C8-N9-C4	6.93	109.17	106.40
23	BA	2386	C	C6-N1-C2	6.93	123.07	120.30
23	BA	761	A	C8-N9-C1'	-6.93	115.22	127.70
23	BA	1332	G	N9-C4-C5	6.93	108.17	105.40
23	DA	1764	G	N1-C6-O6	-6.93	115.74	119.90
23	BA	640	C	N3-C4-C5	6.93	124.67	121.90
23	BA	1788	C	C2-N3-C4	-6.93	116.44	119.90
23	DA	1493	C	C2-N1-C1'	6.92	126.42	118.80
23	BA	140	A	N1-C6-N6	6.92	122.75	118.60
23	DA	2028	U	N1-C2-N3	6.91	119.05	114.90
23	BA	771	G	C5-C6-O6	-6.91	124.45	128.60
23	DA	1309	G	N1-C6-O6	6.91	124.05	119.90
23	DA	2787	C	C6-N1-C2	-6.91	117.54	120.30
23	DA	2430	A	N1-C2-N3	6.91	132.75	129.30
23	BA	309	G	C5-C6-N1	-6.91	108.05	111.50
23	BA	2035	G	N1-C6-O6	-6.90	115.76	119.90
23	BA	1786	A	C4-C5-C6	6.90	120.45	117.00
34	DL	37	GLY	N-CA-C	6.90	130.35	113.10
23	DA	2699	C	C2-N1-C1'	-6.90	111.21	118.80
23	BA	837	C	C6-N1-C2	-6.89	117.54	120.30
23	BA	976	C	C6-N1-C2	6.89	123.06	120.30
23	DA	746	A	C6-N1-C2	-6.89	114.46	118.60
23	DA	2515	C	C2-N3-C4	-6.89	116.45	119.90
23	BA	2441	C	N1-C2-O2	-6.89	114.77	118.90
23	DA	444	C	C5-C6-N1	-6.89	117.56	121.00
23	DA	450	G	C4-N9-C1'	6.88	135.45	126.50
23	BA	2044	C	N3-C4-C5	6.88	124.65	121.90
23	BA	650	C	C6-N1-C2	6.88	123.05	120.30
23	BA	2287	A	C2-N3-C4	-6.88	107.16	110.60
23	DA	140	A	N7-C8-N9	6.88	117.24	113.80
23	BA	568	U	C5-C4-O4	6.87	130.02	125.90
23	BA	1323	U	C4-C5-C6	6.87	123.83	119.70
23	DA	2614	A	C6-N1-C2	-6.87	114.48	118.60
23	BA	1653	G	N1-C6-O6	6.87	124.02	119.90
23	DA	2719	G	C4-C5-N7	6.87	113.55	110.80
23	BA	83	G	N3-C4-N9	-6.86	121.88	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	397	G	C2-N3-C4	-6.86	108.47	111.90
23	DA	582	G	C8-N9-C4	6.86	109.14	106.40
23	DA	1790	C	C2-N1-C1'	-6.86	111.25	118.80
23	DA	2049	G	C8-N9-C4	6.86	109.14	106.40
23	BA	1225	G	C5-C6-O6	6.86	132.72	128.60
23	DA	2447	G	C4-N9-C1'	-6.86	117.59	126.50
23	DA	678	C	C2-N3-C4	-6.85	116.47	119.90
23	BA	2828	C	C6-N1-C2	6.85	123.04	120.30
23	DA	2503	A	C5-C6-N6	-6.85	118.22	123.70
23	BA	966	G	C8-N9-C4	6.85	109.14	106.40
23	BA	2532	G	N1-C6-O6	6.85	124.01	119.90
23	BA	2708	G	C8-N9-C4	6.85	109.14	106.40
23	BA	1616	A	C6-C5-N7	-6.85	127.51	132.30
23	DA	1614	A	N1-C2-N3	6.85	132.72	129.30
23	DA	223	A	C4-C5-C6	6.84	120.42	117.00
23	BA	265	A	N7-C8-N9	6.84	117.22	113.80
23	BA	1021	A	C5-N7-C8	-6.84	100.48	103.90
23	DA	1030	G	C8-N9-C4	6.84	109.13	106.40
23	DA	1332	G	C5-C6-N1	-6.84	108.08	111.50
23	BA	1123	C	C6-N1-C2	6.83	123.03	120.30
23	BA	929	G	C5-C6-N1	-6.83	108.08	111.50
23	DA	1962	C	C5-C6-N1	6.83	124.41	121.00
23	DA	2451	A	N1-C6-N6	-6.83	114.50	118.60
23	BA	673	C	N3-C4-C5	6.83	124.63	121.90
23	DA	2647	U	C6-N1-C2	6.83	125.09	121.00
23	DA	1021	A	N3-C4-C5	6.82	131.57	126.80
23	BA	1962	C	N3-C2-O2	-6.82	117.13	121.90
23	DA	1332	G	N9-C4-C5	6.82	108.13	105.40
23	BA	494	G	N1-C6-O6	6.82	123.99	119.90
23	DA	2826	A	C2-N3-C4	-6.82	107.19	110.60
23	BA	1898	U	C6-N1-C1'	6.81	130.73	121.20
23	DA	2517	C	C6-N1-C2	6.81	123.02	120.30
23	BA	840	C	N3-C4-C5	6.80	124.62	121.90
23	DA	1022	G	C8-N9-C4	-6.80	103.68	106.40
23	DA	192	C	C6-N1-C2	6.80	123.02	120.30
23	BA	678	C	C6-N1-C2	6.80	123.02	120.30
23	BA	1962	C	C5-C6-N1	6.80	124.40	121.00
23	DA	375	C	C6-N1-C2	6.80	123.02	120.30
23	DA	1261	C	C5-C6-N1	-6.80	117.60	121.00
23	DA	2504	U	C5-C6-N1	-6.80	119.30	122.70
23	BA	535	C	C2-N3-C4	-6.80	116.50	119.90
23	BA	1675	C	N3-C4-C5	-6.80	119.18	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2520	C	C6-N1-C2	6.80	123.02	120.30
23	BA	1323	U	N1-C2-N3	6.80	118.98	114.90
23	DA	65	C	N1-C2-O2	-6.80	114.82	118.90
23	DA	1349	A	C4-C5-N7	6.80	114.10	110.70
23	DA	1201	C	C5-C6-N1	-6.79	117.60	121.00
23	BA	141(A)	A	C4-C5-N7	6.79	114.10	110.70
23	BA	527	C	N3-C4-N4	-6.79	113.25	118.00
23	BA	1982	C	C5-C4-N4	-6.79	115.44	120.20
23	DA	697	C	C6-N1-C2	6.79	123.02	120.30
23	BA	330	A	C4-C5-N7	6.78	114.09	110.70
23	DA	543	C	C6-N1-C2	6.78	123.01	120.30
23	DA	807	U	C2-N1-C1'	-6.78	109.56	117.70
23	DA	450	G	C8-N9-C1'	-6.78	118.19	127.00
23	BA	2447	G	C8-N9-C1'	6.78	135.81	127.00
23	BA	1775	U	C5-C6-N1	-6.78	119.31	122.70
23	BA	2010	G	C5-C6-O6	-6.78	124.53	128.60
23	DA	704	G	C8-N9-C4	6.78	109.11	106.40
23	DA	2588	G	C2-N3-C4	-6.77	108.52	111.90
23	BA	729	G	C4-C5-N7	6.76	113.50	110.80
23	DA	530	G	N1-C2-N2	-6.76	110.11	116.20
23	BA	141(A)	A	C2-N3-C4	-6.76	107.22	110.60
23	BA	327	G	N1-C6-O6	6.76	123.96	119.90
23	DA	71	A	C6-C5-N7	-6.76	127.57	132.30
23	DA	1333	C	C6-N1-C2	6.76	123.00	120.30
23	BA	1814	G	C8-N9-C4	6.75	109.10	106.40
23	BA	2500	U	C5-C6-N1	-6.75	119.32	122.70
23	DA	58	G	C8-N9-C1'	-6.75	118.22	127.00
1	AA	357	G	N1-C6-O6	6.75	123.95	119.90
23	DA	655	A	C8-N9-C4	-6.75	103.10	105.80
23	BA	330	A	C6-C5-N7	-6.74	127.58	132.30
23	BA	2392	A	N7-C8-N9	6.74	117.17	113.80
23	BA	503	A	N1-C2-N3	6.74	132.67	129.30
23	DA	2711	A	C2-N3-C4	-6.74	107.23	110.60
23	BA	2825	U	C4-C5-C6	-6.73	115.66	119.70
23	BA	2505	G	N9-C4-C5	6.73	108.09	105.40
23	DA	774	A	C5-C6-N1	-6.73	114.34	117.70
23	BA	2709	G	N1-C6-O6	6.72	123.94	119.90
23	DA	240	G	C5-C6-O6	6.72	132.63	128.60
23	DA	2699	C	C2-N3-C4	-6.72	116.54	119.90
23	DA	828	U	N3-C4-O4	-6.72	114.70	119.40
23	DA	2434	A	N9-C4-C5	6.72	108.49	105.80
23	DA	1651	G	C5-C6-O6	-6.71	124.57	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2597	G	C8-N9-C4	6.71	109.08	106.40
23	BA	2053	G	N1-C6-O6	6.71	123.93	119.90
23	BA	2544	G	C5-C6-O6	-6.71	124.57	128.60
23	BA	474	G	N1-C6-O6	-6.71	115.87	119.90
23	DA	2430	A	C5-N7-C8	-6.71	100.55	103.90
23	BA	267	C	C6-N1-C2	6.71	122.98	120.30
23	BA	2489	G	N1-C6-O6	6.71	123.92	119.90
23	BA	444	C	N1-C2-O2	-6.70	114.88	118.90
23	DA	1304	C	C5-C6-N1	-6.70	117.65	121.00
23	DA	2699	C	N1-C2-O2	-6.70	114.88	118.90
1	AA	822	C	C6-N1-C2	6.70	122.98	120.30
23	BA	1200	C	N1-C2-O2	-6.70	114.88	118.90
23	DA	2248	C	N3-C4-C5	6.70	124.58	121.90
23	DA	1815	A	N1-C2-N3	6.70	132.65	129.30
23	DA	2438	U	C5-C6-N1	-6.70	119.35	122.70
23	BA	2053	G	C5-C6-O6	-6.69	124.58	128.60
23	DA	1653	G	C8-N9-C4	6.69	109.08	106.40
23	BA	187	G	N3-C4-N9	6.69	130.01	126.00
23	BA	2555	U	C5-C4-O4	6.69	129.91	125.90
23	DA	1771	C	N1-C2-O2	-6.69	114.89	118.90
23	DA	2065	C	C5-C4-N4	-6.69	115.52	120.20
23	BA	265	A	C5-C6-N1	-6.69	114.36	117.70
1	AA	285	G	C8-N9-C4	6.68	109.07	106.40
23	DA	1624	G	C8-N9-C4	6.68	109.07	106.40
23	BA	808	G	N7-C8-N9	-6.68	109.76	113.10
23	BA	1652	A	N1-C6-N6	6.68	122.61	118.60
23	DA	18	C	C6-N1-C2	6.68	122.97	120.30
23	DA	1788	C	N3-C4-C5	6.68	124.57	121.90
23	DA	2227	A	C2-N3-C4	-6.68	107.26	110.60
23	BA	971	C	N1-C2-O2	-6.68	114.89	118.90
1	CA	299	G	N9-C4-C5	6.67	108.07	105.40
23	BA	248	G	C4-C5-N7	6.67	113.47	110.80
23	BA	265	A	N1-C6-N6	6.67	122.60	118.60
23	DA	1651	G	N1-C6-O6	6.67	123.90	119.90
23	DA	2488	A	C5-C6-N1	6.67	121.03	117.70
23	DA	2638	G	N1-C6-O6	-6.67	115.90	119.90
23	BA	659	C	C6-N1-C2	6.67	122.97	120.30
23	DA	2699	C	N3-C4-C5	6.66	124.57	121.90
23	BA	1648	C	C2-N3-C4	-6.66	116.57	119.90
23	DA	1253	A	C4-C5-C6	-6.66	113.67	117.00
23	DA	594	U	C5-C4-O4	6.66	129.90	125.90
23	DA	657	U	C5-C6-N1	-6.66	119.37	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	129	C	C5-C6-N1	-6.66	117.67	121.00
23	BA	697	C	C6-N1-C2	6.65	122.96	120.30
23	BA	949	C	N3-C4-C5	6.65	124.56	121.90
23	BA	2681	C	C5-C4-N4	6.65	124.86	120.20
23	DA	1210	A	C2-N3-C4	-6.65	107.28	110.60
23	DA	2383	G	C6-C5-N7	-6.65	126.41	130.40
23	DA	129	C	C5-C6-N1	-6.65	117.68	121.00
23	DA	1778	U	C5-C6-N1	-6.65	119.38	122.70
23	DA	2249	U	C2-N3-C4	6.65	130.99	127.00
23	DA	36	G	C4-C5-N7	-6.64	108.14	110.80
23	DA	667	U	C4-C5-C6	6.64	123.69	119.70
23	DA	1962	C	C2-N3-C4	6.64	123.22	119.90
23	BA	587	C	N3-C4-C5	-6.64	119.24	121.90
23	BA	2271	G	N3-C4-N9	6.64	129.98	126.00
23	DA	141(A)	A	C2-N3-C4	-6.64	107.28	110.60
23	BA	602	G	N7-C8-N9	-6.64	109.78	113.10
23	DA	1572	A	N7-C8-N9	-6.64	110.48	113.80
23	DA	2397	G	C8-N9-C4	-6.64	103.75	106.40
23	DA	2706	G	N1-C6-O6	6.63	123.88	119.90
1	CA	896	C	C6-N1-C2	6.63	122.95	120.30
1	AA	576	G	C6-C5-N7	-6.63	126.42	130.40
23	BA	2036	C	C6-N1-C2	-6.63	117.65	120.30
23	DA	807	U	C6-N1-C1'	6.63	130.48	121.20
23	BA	1615	C	C6-N1-C2	6.62	122.95	120.30
23	BA	1634	A	N1-C6-N6	-6.62	114.63	118.60
23	DA	1962	C	N1-C2-N3	-6.62	114.56	119.20
23	DA	530	G	N7-C8-N9	6.62	116.41	113.10
23	DA	1309	G	C8-N9-C1'	-6.62	118.40	127.00
23	DA	1999	C	C2-N1-C1'	-6.62	111.52	118.80
23	DA	2514	U	C5-C6-N1	-6.62	119.39	122.70
23	BA	807	U	C6-N1-C1'	6.61	130.46	121.20
23	BA	1190	G	C4-C5-N7	6.61	113.44	110.80
23	BA	2593	U	C6-N1-C2	-6.61	117.03	121.00
23	BA	782	A	C8-N9-C4	6.61	108.44	105.80
23	DA	1775	U	C5-C6-N1	-6.61	119.40	122.70
23	BA	194	G	C8-N9-C4	6.61	109.04	106.40
23	BA	650	C	C5-C6-N1	-6.61	117.70	121.00
23	DA	239	U	C5-C6-N1	-6.61	119.40	122.70
23	DA	114(B)	A	C4-C5-C6	6.61	120.30	117.00
23	DA	2689	U	C5-C6-N1	-6.60	119.40	122.70
23	DA	2709	G	C8-N9-C4	6.60	109.04	106.40
23	BA	2544	G	C4-C5-N7	6.60	113.44	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	497	A	C8-N9-C4	6.59	108.44	105.80
23	DA	1417	C	C5-C6-N1	-6.59	117.70	121.00
23	BA	2688	U	C5-C4-O4	6.59	129.86	125.90
1	AA	328	C	C6-N1-C2	6.59	122.94	120.30
1	AA	691	G	N3-C4-N9	6.59	129.96	126.00
23	DA	580	C	N3-C4-C5	6.59	124.54	121.90
23	DA	1443	G	N1-C6-O6	6.59	123.85	119.90
23	BA	2464	C	C6-N1-C2	6.59	122.94	120.30
23	DA	2830	G	C6-C5-N7	-6.59	126.45	130.40
23	BA	2032	G	C4-C5-N7	6.59	113.44	110.80
23	DA	2346	A	N1-C2-N3	6.58	132.59	129.30
23	BA	1680	U	C5-C4-O4	6.58	129.85	125.90
23	BA	774	A	N1-C6-N6	6.57	122.54	118.60
23	BA	814	C	C5-C6-N1	-6.57	117.71	121.00
23	BA	933	A	C2-N3-C4	-6.57	107.31	110.60
23	BA	2037	G	N1-C2-N3	6.57	127.84	123.90
23	DA	2271	G	N3-C4-N9	6.57	129.94	126.00
23	BA	2830	G	N1-C6-O6	6.57	123.84	119.90
23	DA	2591	C	C6-N1-C2	6.57	122.93	120.30
23	DA	2233	U	C2-N3-C4	-6.57	123.06	127.00
23	DA	2715	C	N3-C4-C5	6.57	124.53	121.90
1	AA	264	U	N3-C2-O2	-6.57	117.60	122.20
23	DA	66	C	C6-N1-C2	6.56	122.92	120.30
23	BA	2828	C	N3-C4-C5	6.56	124.53	121.90
23	DA	458	G	C5-C6-N1	6.56	114.78	111.50
23	DA	71	A	N7-C8-N9	6.56	117.08	113.80
23	DA	1644	C	N3-C2-O2	-6.56	117.31	121.90
23	DA	937	U	C6-N1-C2	6.55	124.93	121.00
23	BA	2438	U	C5-C6-N1	-6.55	119.42	122.70
23	BA	2084	C	C2-N3-C4	-6.55	116.63	119.90
23	BA	671	C	N3-C4-C5	-6.54	119.28	121.90
23	BA	1616	A	N1-C6-N6	6.54	122.53	118.60
23	DA	397	G	C5-C6-O6	-6.54	124.68	128.60
23	DA	2330	G	N9-C4-C5	-6.54	102.78	105.40
23	DA	2072	G	N3-C4-C5	6.54	131.87	128.60
23	DA	112	U	C5-C6-N1	-6.53	119.43	122.70
23	BA	1976	U	N1-C2-N3	6.53	118.82	114.90
23	DA	667	U	C5-C6-N1	-6.53	119.44	122.70
23	DA	2007	C	C5-C6-N1	-6.53	117.74	121.00
23	BA	1815	A	N1-C2-N3	6.52	132.56	129.30
1	CA	1519	A	N1-C2-N3	6.52	132.56	129.30
23	BA	1969	A	C8-N9-C4	-6.52	103.19	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2394	C	C6-N1-C2	6.52	122.91	120.30
23	DA	1996	C	C6-N1-C2	6.51	122.91	120.30
23	DA	933	A	C6-C5-N7	-6.51	127.74	132.30
23	DA	1783	A	C8-N9-C4	-6.51	103.20	105.80
23	BA	1698	A	C2-N3-C4	-6.51	107.35	110.60
23	BA	2378	A	C8-N9-C4	6.51	108.40	105.80
23	DA	1027	A	C8-N9-C4	6.51	108.40	105.80
23	BA	933	A	N7-C8-N9	6.50	117.05	113.80
1	CA	1521	G	C8-N9-C4	-6.50	103.80	106.40
23	DA	114(B)	A	C5-N7-C8	-6.50	100.65	103.90
23	BA	789	A	C5-C6-N6	-6.50	118.50	123.70
23	BA	1204	A	C8-N9-C4	-6.50	103.20	105.80
23	DA	1798	U	N3-C4-C5	6.50	118.50	114.60
1	CA	768	A	C8-N9-C4	6.50	108.40	105.80
23	DA	768	G	N3-C4-N9	6.49	129.89	126.00
1	AA	529	G	N1-C6-O6	6.49	123.79	119.90
1	AA	815	A	N1-C6-N6	-6.49	114.71	118.60
23	DA	2249	U	N3-C4-O4	6.49	123.94	119.40
23	DA	2553	G	N9-C4-C5	-6.49	102.80	105.40
23	BA	561	G	C5-N7-C8	6.49	107.54	104.30
23	BA	736	C	N3-C4-C5	6.48	124.49	121.90
1	AA	1523	G	N1-C6-O6	6.48	123.79	119.90
23	DA	935	C	C6-N1-C2	6.48	122.89	120.30
23	BA	104	U	C5-C6-N1	-6.48	119.46	122.70
23	BA	1304	C	C6-N1-C2	6.48	122.89	120.30
23	BA	2063	C	N3-C4-C5	-6.48	119.31	121.90
23	BA	2626	C	N3-C4-C5	6.48	124.49	121.90
23	DA	795	C	N1-C2-O2	-6.48	115.01	118.90
23	DA	1322	A	N9-C4-C5	6.48	108.39	105.80
23	BA	1329	U	C5-C6-N1	-6.47	119.46	122.70
23	BA	2647	U	C5-C6-N1	-6.47	119.46	122.70
24	BB	98	G	C8-N9-C1'	-6.47	118.58	127.00
23	DA	1935	G	N3-C4-C5	6.47	131.84	128.60
23	BA	2045	C	C6-N1-C2	6.47	122.89	120.30
23	BA	2540	C	C2-N3-C4	-6.47	116.67	119.90
23	DA	2231	C	C5-C6-N1	-6.47	117.77	121.00
23	DA	204	A	C2-N3-C4	-6.46	107.37	110.60
23	DA	765	G	C8-N9-C4	6.46	108.99	106.40
23	BA	265	A	C4-C5-N7	6.46	113.93	110.70
23	BA	1190	G	C5-C6-O6	-6.46	124.72	128.60
23	DA	736	C	N3-C2-O2	6.46	126.42	121.90
23	DA	1323	U	N3-C4-C5	-6.46	110.72	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2432	A	C5-N7-C8	-6.46	100.67	103.90
23	DA	330	A	C4-C5-N7	6.46	113.93	110.70
23	DA	1674	G	C8-N9-C4	6.46	108.98	106.40
23	DA	2688	U	N3-C2-O2	-6.45	117.68	122.20
23	BA	512	G	C8-N9-C1'	6.45	135.38	127.00
23	BA	729	G	C6-C5-N7	-6.45	126.53	130.40
23	BA	1241	A	C5-C6-N1	-6.45	114.47	117.70
23	BA	1499	C	C6-N1-C2	6.45	122.88	120.30
23	BA	2707	G	C8-N9-C4	6.45	108.98	106.40
23	DA	2581	G	N3-C4-N9	-6.45	122.13	126.00
23	DA	815	C	C6-N1-C2	6.45	122.88	120.30
23	DA	1786	A	N1-C6-N6	6.44	122.47	118.60
1	AA	398	C	C6-N1-C2	6.44	122.88	120.30
23	BA	1352	U	C5-C6-N1	-6.44	119.48	122.70
23	BA	2596	U	N3-C4-O4	-6.43	114.90	119.40
23	DA	802	A	C8-N9-C1'	-6.43	116.12	127.70
23	DA	1444	G	C8-N9-C4	6.43	108.97	106.40
23	DA	1310	G	N1-C6-O6	6.43	123.76	119.90
23	DA	811	U	C5-C6-N1	-6.42	119.49	122.70
23	BA	2359	C	C6-N1-C2	6.42	122.87	120.30
23	DA	2685	G	N1-C6-O6	6.42	123.75	119.90
23	DA	1348	G	C5-C6-O6	-6.42	124.75	128.60
23	DA	434	U	N3-C2-O2	6.42	126.69	122.20
23	DA	1355	G	C5-C6-N1	6.42	114.71	111.50
23	DA	2206	C	N3-C4-N4	-6.42	113.51	118.00
23	DA	1257	C	C4-C5-C6	6.42	120.61	117.40
23	DA	1493	C	C5-C6-N1	6.42	124.21	121.00
23	BA	66	C	C6-N1-C2	6.41	122.87	120.30
23	BA	1602	U	C5-C6-N1	6.41	125.91	122.70
1	CA	1524	C	N3-C4-C5	6.41	124.47	121.90
23	DA	2386	C	C5-C6-N1	-6.41	117.79	121.00
23	DA	1309	G	N9-C4-C5	-6.41	102.83	105.40
23	DA	2197	U	C6-N1-C2	6.41	124.85	121.00
23	DA	1190	G	C5-C6-O6	-6.41	124.75	128.60
23	DA	1315	C	C6-N1-C2	-6.41	117.74	120.30
23	DA	1258	C	C5-C6-N1	-6.41	117.80	121.00
1	AA	903	G	N7-C8-N9	-6.40	109.90	113.10
1	AA	896	C	C5-C6-N1	-6.40	117.80	121.00
23	DA	1342	A	N1-C6-N6	6.40	122.44	118.60
23	BA	2053	G	C4-C5-N7	6.40	113.36	110.80
23	DA	1021	A	N7-C8-N9	6.40	117.00	113.80
23	BA	809	G	N1-C6-O6	6.39	123.73	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1824	G	C6-N1-C2	-6.39	121.27	125.10
23	BA	956	G	C5-C6-N1	-6.39	108.31	111.50
23	DA	1022	G	N9-C4-C5	6.39	107.95	105.40
23	BA	728	G	C8-N9-C4	6.39	108.95	106.40
23	BA	1443	G	N1-C6-O6	6.39	123.73	119.90
23	BA	1804	C	C5-C6-N1	-6.39	117.81	121.00
23	BA	951	C	C6-N1-C2	6.38	122.85	120.30
23	BA	1983	C	N3-C4-C5	6.38	124.45	121.90
23	DA	2618	G	N1-C2-N3	6.38	127.73	123.90
23	DA	1322	A	N1-C2-N3	6.38	132.49	129.30
23	DA	1655	A	C8-N9-C4	6.38	108.35	105.80
23	BA	789	A	N1-C6-N6	6.38	122.43	118.60
23	DA	265	A	N3-C4-C5	6.38	131.26	126.80
23	DA	1342	A	C5-C6-N6	-6.38	118.60	123.70
23	DA	2502	G	N3-C4-N9	6.38	129.83	126.00
23	BA	2532	G	C6-C5-N7	-6.38	126.57	130.40
23	BA	36	G	N7-C8-N9	-6.38	109.91	113.10
23	DA	1779	U	C6-N1-C2	6.38	124.83	121.00
23	BA	1355	G	N1-C6-O6	-6.37	116.08	119.90
23	DA	294	A	C8-N9-C4	6.37	108.35	105.80
23	DA	2397	G	N7-C8-N9	6.37	116.29	113.10
23	BA	840	C	C5-C6-N1	-6.37	117.81	121.00
23	DA	586	A	N7-C8-N9	-6.37	110.61	113.80
23	BA	2502	G	C5-N7-C8	-6.37	101.11	104.30
23	DA	330	A	C5-N7-C8	-6.37	100.72	103.90
23	BA	1605	C	N1-C2-O2	-6.37	115.08	118.90
23	DA	2010	G	N1-C2-N3	6.37	127.72	123.90
1	AA	299	G	C5-C6-O6	6.36	132.42	128.60
23	DA	1786	A	C5-C6-N1	-6.36	114.52	117.70
23	DA	1998	G	N7-C8-N9	-6.36	109.92	113.10
23	DA	1996	C	N3-C2-O2	6.36	126.35	121.90
23	DA	2706	G	C4-C5-N7	6.36	113.34	110.80
23	BA	602	G	C8-N9-C4	6.36	108.94	106.40
23	BA	692	C	N3-C4-C5	6.36	124.44	121.90
23	BA	949	C	C6-N1-C2	6.36	122.84	120.30
23	DA	2502	G	C6-C5-N7	-6.36	126.59	130.40
25	DC	177	LEU	CA-CB-CG	-6.36	100.68	115.30
23	DA	2454	G	C8-N9-C4	6.35	108.94	106.40
23	BA	2043	C	C5-C6-N1	-6.35	117.82	121.00
23	BA	1128	A	N7-C8-N9	-6.34	110.63	113.80
23	DA	584	C	N3-C4-C5	6.34	124.44	121.90
23	DA	1351	C	C5-C6-N1	-6.34	117.83	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1633	G	C6-C5-N7	-6.34	126.60	130.40
1	AA	357	G	C5-C6-N1	-6.34	108.33	111.50
23	DA	746	A	N1-C2-N3	6.34	132.47	129.30
23	BA	2387	U	C5-C6-N1	-6.33	119.53	122.70
23	DA	1144	G	C4-C5-N7	6.33	113.33	110.80
23	DA	2518	A	C2-N3-C4	-6.33	107.43	110.60
23	DA	657	U	N3-C2-O2	-6.33	117.77	122.20
23	DA	2087	G	C8-N9-C4	6.33	108.93	106.40
23	DA	2465	C	N3-C4-C5	6.33	124.43	121.90
23	DA	2688	U	N3-C4-O4	-6.33	114.97	119.40
23	DA	2719	G	N3-C4-N9	6.33	129.80	126.00
23	DA	1200	C	N1-C2-O2	-6.33	115.10	118.90
23	DA	2507	C	C5-C6-N1	-6.33	117.84	121.00
23	BA	783	A	C4-C5-N7	6.33	113.86	110.70
23	DA	2448	A	C4-C5-N7	6.33	113.86	110.70
23	BA	1798	U	C5-C6-N1	-6.32	119.54	122.70
23	DA	2250	G	C8-N9-C4	-6.32	103.87	106.40
23	BA	240	G	C5-C6-N1	-6.32	108.34	111.50
23	BA	691	C	C5-C6-N1	-6.32	117.84	121.00
23	BA	1138	G	N3-C4-N9	6.32	129.79	126.00
23	BA	2555	U	N1-C2-N3	6.32	118.69	114.90
23	DA	2043	C	C5-C6-N1	-6.32	117.84	121.00
23	DA	2332	U	C5-C6-N1	-6.32	119.54	122.70
23	DA	784	A	C5-C6-N6	6.31	128.75	123.70
23	DA	1021	A	C5-C6-N1	-6.31	114.54	117.70
23	BA	2521	C	C6-N1-C2	6.31	122.82	120.30
23	DA	2374	C	C6-N1-C2	6.31	122.83	120.30
23	BA	124	G	C8-N9-C4	6.31	108.92	106.40
23	BA	2742	C	C5-C6-N1	-6.31	117.85	121.00
23	DA	768	G	C8-N9-C4	6.31	108.92	106.40
23	BA	2625	G	C8-N9-C4	6.30	108.92	106.40
23	DA	1302	A	N9-C4-C5	6.30	108.32	105.80
23	BA	2066	C	C6-N1-C2	6.30	122.82	120.30
23	DA	2638	G	N9-C4-C5	6.29	107.92	105.40
23	BA	298	G	N7-C8-N9	6.29	116.25	113.10
23	BA	686	G	C5-C6-O6	-6.29	124.83	128.60
23	DA	2538	C	C5-C6-N1	-6.29	117.86	121.00
23	BA	298	G	C5-C6-O6	-6.29	124.83	128.60
23	BA	704	G	C4-C5-N7	6.29	113.31	110.80
23	BA	1663	C	C6-N1-C2	6.28	122.81	120.30
23	DA	1834	U	C2-N1-C1'	6.28	125.24	117.70
23	DA	2010	G	C4-C5-N7	6.28	113.31	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2056	G	N9-C4-C5	-6.28	102.89	105.40
23	DA	2206	C	N3-C4-C5	6.28	124.41	121.90
23	BA	2501	C	N3-C4-C5	6.28	124.41	121.90
23	DA	2227	A	C5-C6-N1	-6.28	114.56	117.70
23	BA	2206	C	N3-C4-C5	6.28	124.41	121.90
23	DA	2080	G	N1-C2-N3	6.28	127.67	123.90
23	BA	560	C	C5-C6-N1	-6.27	117.86	121.00
23	DA	798	G	N1-C2-N3	6.27	127.66	123.90
24	BB	84	C	C6-N1-C2	-6.27	117.79	120.30
23	DA	774	A	N7-C8-N9	6.27	116.94	113.80
23	DA	1832	C	C2-N3-C4	-6.27	116.77	119.90
1	AA	297	G	N7-C8-N9	-6.27	109.97	113.10
23	BA	1188	U	N3-C2-O2	-6.27	117.81	122.20
23	DA	748	G	C5-C6-N1	6.27	114.63	111.50
23	DA	2091	U	C5-C6-N1	-6.27	119.57	122.70
23	BA	1899	G	C5-C6-O6	6.27	132.36	128.60
23	DA	1802	A	N1-C2-N3	6.27	132.43	129.30
23	DA	2427	C	N3-C4-C5	-6.26	119.39	121.90
23	BA	1964	G	N3-C4-N9	6.26	129.76	126.00
23	BA	933	A	C5-N7-C8	-6.26	100.77	103.90
23	BA	2839	G	N1-C6-O6	6.26	123.66	119.90
23	DA	750	A	C5-N7-C8	-6.26	100.77	103.90
23	DA	2462	U	C6-N1-C2	6.26	124.76	121.00
23	BA	596	G	N1-C6-O6	6.26	123.66	119.90
23	DA	2066	C	C2-N3-C4	-6.26	116.77	119.90
23	DA	2447	G	C8-N9-C1'	6.26	135.14	127.00
1	AA	691	G	N9-C4-C5	-6.26	102.90	105.40
23	BA	1323	U	N3-C4-C5	-6.26	110.85	114.60
23	DA	2501	C	N3-C4-C5	6.26	124.40	121.90
23	DA	2638	G	C5-C6-O6	6.26	132.35	128.60
23	BA	1780	A	C2-N3-C4	-6.25	107.47	110.60
23	DA	2061	G	C4-C5-C6	6.25	122.55	118.80
23	BA	1935	G	N3-C4-C5	6.25	131.73	128.60
23	DA	283	A	N1-C6-N6	-6.25	114.85	118.60
23	DA	1983	C	C6-N1-C2	6.25	122.80	120.30
23	BA	2515	C	C6-N1-C2	6.25	122.80	120.30
23	BA	802	A	C8-N9-C1'	-6.25	116.45	127.70
23	BA	265	A	C6-C5-N7	-6.24	127.93	132.30
23	BA	444	C	C2-N1-C1'	-6.24	111.93	118.80
23	DA	798	G	C6-N1-C2	-6.24	121.35	125.10
23	DA	98	G	N1-C6-O6	6.24	123.64	119.90
23	DA	1824	G	C5-C6-N1	6.24	114.62	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2713	A	N9-C4-C5	-6.24	103.31	105.80
23	DA	1773	A	N1-C6-N6	6.24	122.34	118.60
24	BB	76	G	C5-C6-O6	-6.24	124.86	128.60
53	D5	62	LEU	CA-CB-CG	-6.24	100.96	115.30
23	DA	250	G	C8-N9-C4	-6.23	103.91	106.40
23	BA	2506	U	N1-C2-O2	6.23	127.16	122.80
23	BA	13	A	N1-C6-N6	-6.23	114.86	118.60
23	DA	976	C	C6-N1-C2	6.23	122.79	120.30
1	AA	815	A	N9-C4-C5	6.23	108.29	105.80
23	DA	826	U	C5-C6-N1	-6.23	119.59	122.70
23	BA	1779	U	C5-C6-N1	-6.22	119.59	122.70
23	BA	2578	G	C5-C6-O6	-6.22	124.87	128.60
23	BA	2279	G	N1-C6-O6	-6.22	116.17	119.90
23	BA	2622	C	N3-C4-C5	6.22	124.39	121.90
23	DA	1201	C	N1-C2-O2	-6.22	115.17	118.90
23	DA	1367	A	N7-C8-N9	-6.22	110.69	113.80
23	BA	1653	G	N9-C4-C5	-6.21	102.91	105.40
23	DA	1299	G	N9-C4-C5	-6.21	102.91	105.40
23	DA	1366	A	C2-N3-C4	-6.21	107.49	110.60
23	DA	2489	G	N1-C6-O6	6.21	123.63	119.90
23	DA	2822	G	C8-N9-C4	6.21	108.89	106.40
1	AA	1415	G	N1-C6-O6	6.21	123.63	119.90
23	BA	594	U	N1-C2-N3	6.21	118.63	114.90
23	BA	1776	G	C5-C6-N1	6.21	114.60	111.50
23	DA	640	C	C6-N1-C2	6.21	122.78	120.30
23	BA	1899	G	N1-C2-N3	6.20	127.62	123.90
23	DA	1304	C	C6-N1-C2	6.20	122.78	120.30
23	BA	512	G	C5-N7-C8	-6.20	101.20	104.30
23	BA	798	G	N1-C2-N3	6.20	127.62	123.90
23	BA	2069	G	C8-N9-C4	6.20	108.88	106.40
23	DA	328	U	C4-C5-C6	6.20	123.42	119.70
23	DA	2559	C	C2-N3-C4	-6.20	116.80	119.90
23	DA	1480	G	N1-C6-O6	6.20	123.62	119.90
23	BA	1264	G	N1-C2-N3	6.20	127.62	123.90
23	DA	1698	A	N9-C4-C5	-6.20	103.32	105.80
23	DA	704	G	N1-C6-O6	6.19	123.61	119.90
23	BA	1704	G	N7-C8-N9	-6.19	110.00	113.10
23	BA	2689	U	C5-C6-N1	-6.19	119.60	122.70
23	DA	965	C	C6-N1-C2	-6.19	117.82	120.30
23	DA	1253	A	C5-N7-C8	-6.19	100.81	103.90
23	DA	662	G	C8-N9-C4	6.19	108.88	106.40
23	BA	1674	G	C8-N9-C4	6.18	108.87	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2005	A	C2-N3-C4	-6.18	107.51	110.60
23	DA	450	G	C5-N7-C8	6.18	107.39	104.30
23	DA	686	G	C5-C6-O6	-6.18	124.89	128.60
23	BA	956	G	N1-C6-O6	6.18	123.61	119.90
23	BA	2700	C	C2-N3-C4	-6.18	116.81	119.90
23	BA	2506	U	C2-N1-C1'	6.18	125.11	117.70
23	DA	466	A	N1-C2-N3	6.18	132.39	129.30
23	DA	794	G	N1-C2-N3	6.18	127.61	123.90
23	BA	528	A	N1-C2-N3	6.18	132.39	129.30
23	DA	1341	U	N3-C2-O2	6.18	126.52	122.20
23	DA	768	G	N1-C2-N3	6.17	127.61	123.90
23	DA	1770	G	N1-C2-N3	6.17	127.61	123.90
23	DA	2542	A	N7-C8-N9	-6.17	110.71	113.80
23	BA	1675	C	C4-C5-C6	6.17	120.49	117.40
23	BA	1821	A	C8-N9-C4	6.17	108.27	105.80
23	BA	1937	A	N1-C2-N3	6.17	132.39	129.30
23	DA	2571	C	C2-N3-C4	-6.17	116.81	119.90
23	BA	847	U	C2-N3-C4	-6.17	123.30	127.00
23	DA	1403	C	C5-C6-N1	-6.17	117.92	121.00
23	BA	1792	G	N9-C4-C5	6.17	107.87	105.40
23	DA	141(A)	A	C6-C5-N7	-6.17	127.98	132.30
23	DA	58	G	C4-N9-C1'	6.16	134.51	126.50
23	DA	180	G	C8-N9-C4	6.16	108.86	106.40
23	DA	1802	A	N9-C4-C5	6.16	108.27	105.80
23	DA	2043	C	C2-N3-C4	-6.16	116.82	119.90
23	BA	197	A	N1-C6-N6	6.16	122.30	118.60
23	BA	586	A	C8-N9-C4	6.16	108.26	105.80
23	BA	945	A	C5-C6-N6	-6.16	118.77	123.70
1	CA	299	G	C5-C6-N1	-6.16	108.42	111.50
23	DA	2712	U	C2-N3-C4	-6.16	123.30	127.00
23	BA	2059	A	C8-N9-C4	6.16	108.26	105.80
23	DA	94	G	N3-C4-N9	6.16	129.69	126.00
23	DA	273(C)	C	C5-C6-N1	-6.16	117.92	121.00
23	DA	933	A	N7-C8-N9	6.16	116.88	113.80
23	DA	72	U	N3-C2-O2	-6.16	117.89	122.20
23	BA	564	C	C6-N1-C2	-6.15	117.84	120.30
23	DA	777	A	N1-C2-N3	6.15	132.38	129.30
23	BA	458	G	C5-C6-O6	-6.15	124.91	128.60
23	BA	114(B)	A	C2-N3-C4	-6.15	107.52	110.60
23	BA	1677	A	C8-N9-C4	-6.15	103.34	105.80
23	BA	2053	G	N9-C4-C5	-6.15	102.94	105.40
23	BA	2440	C	N1-C2-O2	-6.15	115.21	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2724	C	N1-C2-O2	-6.15	115.21	118.90
23	BA	678	C	C2-N3-C4	-6.15	116.83	119.90
23	DA	971	C	N3-C2-O2	6.15	126.20	121.90
23	DA	2517	C	C5-C6-N1	-6.15	117.93	121.00
23	BA	786	C	C2-N3-C4	-6.15	116.83	119.90
23	BA	1225	G	N1-C6-O6	-6.15	116.21	119.90
23	BA	2829	C	C5-C6-N1	-6.15	117.93	121.00
23	DA	273(A)	G	N7-C8-N9	-6.15	110.03	113.10
1	AA	918	A	N1-C6-N6	-6.14	114.91	118.60
23	DA	1183	G	N1-C6-O6	6.14	123.59	119.90
34	BL	61	ARG	NE-CZ-NH1	6.14	123.37	120.30
23	DA	83	G	N3-C4-C5	6.14	131.67	128.60
23	DA	132	G	C8-N9-C4	6.14	108.86	106.40
23	DA	1138	G	N3-C4-C5	-6.14	125.53	128.60
23	DA	2550	G	C8-N9-C4	6.14	108.86	106.40
23	BA	1010	A	C8-N9-C4	6.14	108.25	105.80
23	BA	1678	G	C4-C5-C6	-6.14	115.12	118.80
23	DA	512	G	C8-N9-C1'	6.14	134.98	127.00
23	DA	1331	A	N1-C2-N3	6.14	132.37	129.30
23	DA	2345	G	C4-C5-N7	-6.14	108.35	110.80
23	BA	509	C	C6-N1-C2	6.13	122.75	120.30
23	DA	2510	C	C2-N3-C4	-6.13	116.84	119.90
23	BA	570	G	C4-C5-C6	6.12	122.47	118.80
23	BA	760	G	N3-C4-C5	6.12	131.66	128.60
23	DA	444	C	C2-N3-C4	-6.12	116.84	119.90
23	DA	933	A	C4-C5-N7	6.12	113.76	110.70
23	DA	1898	U	C5-C4-O4	6.12	129.57	125.90
23	DA	2044	C	N3-C4-C5	6.12	124.35	121.90
23	DA	458	G	N3-C4-N9	6.12	129.67	126.00
23	DA	752	A	N1-C2-N3	6.12	132.36	129.30
23	DA	947	G	C8-N9-C4	6.12	108.85	106.40
23	DA	1031	G	C2-N3-C4	-6.12	108.84	111.90
23	DA	582	G	N7-C8-N9	-6.11	110.04	113.10
23	DA	994	C	C4-C5-C6	6.11	120.45	117.40
23	DA	2070	G	N1-C2-N3	6.11	127.56	123.90
23	DA	2719	G	C4-N9-C1'	6.11	134.44	126.50
23	DA	1663	C	C6-N1-C2	6.11	122.74	120.30
23	BA	787	U	C5-C6-N1	-6.11	119.65	122.70
23	BA	1614	A	C4-C5-C6	6.11	120.05	117.00
23	BA	2681	C	C5-C6-N1	-6.10	117.95	121.00
23	DA	1790	C	C5-C6-N1	-6.10	117.95	121.00
23	DA	2838	G	C5-C6-O6	-6.10	124.94	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	494	G	C5-C6-O6	-6.10	124.94	128.60
23	BA	1208	C	C6-N1-C2	6.10	122.74	120.30
23	DA	2463	C	N1-C2-O2	-6.10	115.24	118.90
23	DA	2675	A	C8-N9-C4	6.10	108.24	105.80
23	BA	543	C	C6-N1-C2	6.10	122.74	120.30
23	BA	1783	A	N3-C4-N9	-6.10	122.52	127.40
23	DA	86	C	C6-N1-C2	6.10	122.74	120.30
23	DA	1392	A	N1-C6-N6	-6.10	114.94	118.60
23	DA	1790	C	C2-N3-C4	-6.10	116.85	119.90
23	BA	807	U	C5-C6-N1	-6.10	119.65	122.70
23	DA	564	C	C6-N1-C2	-6.10	117.86	120.30
23	BA	993	G	N9-C4-C5	6.10	107.84	105.40
23	DA	801	G	N9-C4-C5	6.10	107.84	105.40
23	DA	1022	G	N3-C4-C5	-6.10	125.55	128.60
23	BA	1827	C	C5-C6-N1	-6.09	117.95	121.00
23	DA	1830	C	C6-N1-C2	6.09	122.74	120.30
23	BA	1648	C	C5-C6-N1	-6.09	117.95	121.00
23	DA	2249	U	C6-N1-C2	-6.09	117.35	121.00
1	CA	856	C	C6-N1-C2	-6.08	117.87	120.30
23	BA	450	G	C8-N9-C1'	-6.08	119.09	127.00
23	DA	1400	G	N3-C4-N9	6.08	129.65	126.00
24	DB	83	G	N1-C6-O6	6.08	123.55	119.90
23	DA	1331	A	C5-C6-N1	-6.08	114.66	117.70
23	BA	2831	G	N3-C4-N9	-6.08	122.36	126.00
23	DA	126	A	N1-C6-N6	6.08	122.25	118.60
23	DA	1655	A	C2-N3-C4	-6.08	107.56	110.60
23	DA	1902	C	C5-C4-N4	6.08	124.45	120.20
23	BA	333	G	C8-N9-C1'	-6.07	119.11	127.00
23	DA	1258	C	C6-N1-C2	6.07	122.73	120.30
23	DA	2503	A	C4-C5-C6	-6.07	113.96	117.00
23	BA	83	G	C4-N9-C1'	-6.07	118.61	126.50
23	BA	333	G	C4-N9-C1'	6.07	134.39	126.50
23	BA	1613	G	N1-C6-O6	-6.07	116.26	119.90
23	BA	1899	G	N3-C2-N2	-6.07	115.65	119.90
23	DA	2426	A	C5-N7-C8	-6.07	100.86	103.90
23	BA	2066	C	C5-C6-N1	-6.07	117.97	121.00
23	DA	2080	G	C6-N1-C2	-6.07	121.46	125.10
23	DA	141(A)	A	C8-N9-C4	-6.07	103.37	105.80
23	DA	1937	A	C2-N3-C4	-6.07	107.57	110.60
23	BA	2250	G	N1-C6-O6	-6.06	116.26	119.90
23	BA	2510	C	C5-C6-N1	-6.06	117.97	121.00
23	DA	216	A	C5-N7-C8	-6.06	100.87	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	270(A)	A	C2-N3-C4	-6.06	107.57	110.60
23	BA	2453	A	N1-C2-N3	6.06	132.33	129.30
23	DA	60	G	P-O3'-C3'	6.06	126.98	119.70
23	DA	296	C	C6-N1-C2	6.06	122.72	120.30
23	DA	1286	A	N1-C2-N3	6.06	132.33	129.30
23	BA	1983	C	C2-N3-C4	-6.06	116.87	119.90
23	BA	528	A	C5-N7-C8	-6.06	100.87	103.90
23	BA	1248	G	C5-C6-O6	-6.06	124.96	128.60
23	BA	2330	G	N7-C8-N9	-6.06	110.07	113.10
23	DA	2436	G	N1-C6-O6	6.06	123.53	119.90
23	DA	296	C	C5-C6-N1	-6.06	117.97	121.00
23	DA	2440	C	C5-C4-N4	6.06	124.44	120.20
23	DA	133	C	C5-C6-N1	-6.05	117.97	121.00
23	DA	794	G	N1-C6-O6	-6.05	116.27	119.90
23	BA	2033	A	N1-C2-N3	6.05	132.33	129.30
23	DA	104	U	C5-C6-N1	-6.05	119.67	122.70
23	DA	224	G	C8-N9-C4	6.05	108.82	106.40
23	BA	1899	G	N9-C4-C5	6.05	107.82	105.40
23	DA	198	C	N3-C4-C5	6.05	124.32	121.90
23	DA	783	A	C5-C6-N1	-6.05	114.67	117.70
1	AA	876	G	C8-N9-C4	6.05	108.82	106.40
23	DA	2681	C	C2-N1-C1'	-6.05	112.15	118.80
23	BA	780	G	C8-N9-C4	6.04	108.82	106.40
23	BA	974(B)	C	N3-C4-C5	6.04	124.32	121.90
23	DA	2456	C	N3-C4-C5	6.04	124.32	121.90
23	DA	482	A	N1-C6-N6	6.04	122.22	118.60
23	DA	528	A	N1-C2-N3	6.04	132.32	129.30
23	DA	2584	U	N3-C4-O4	6.04	123.63	119.40
23	BA	201	C	C6-N1-C2	6.04	122.72	120.30
23	BA	209	C	C6-N1-C2	6.04	122.72	120.30
23	DA	2058	A	C8-N9-C4	6.04	108.21	105.80
23	BA	141(A)	A	N7-C8-N9	6.03	116.82	113.80
23	BA	2825	U	N3-C4-O4	-6.03	115.18	119.40
23	BA	1261	C	C2-N3-C4	-6.03	116.88	119.90
23	DA	1360	A	C8-N9-C4	-6.03	103.39	105.80
23	DA	1782	C	C6-N1-C2	6.03	122.71	120.30
23	BA	2454	G	C8-N9-C4	6.03	108.81	106.40
23	DA	1161	C	C5-C6-N1	6.03	124.01	121.00
23	DA	1707	G	C2-N3-C4	-6.03	108.89	111.90
23	DA	1843	C	N3-C4-C5	6.03	124.31	121.90
23	DA	2033	A	N1-C2-N3	6.02	132.31	129.30
23	BA	595	C	C6-N1-C2	6.02	122.71	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2059	A	C6-N1-C2	-6.02	114.99	118.60
23	DA	204	A	N7-C8-N9	-6.02	110.79	113.80
23	DA	2681	C	C2-N3-C4	-6.02	116.89	119.90
23	DA	2719	G	C8-N9-C1'	-6.02	119.17	127.00
23	BA	1677	A	N7-C8-N9	6.02	116.81	113.80
23	DA	247	G	C8-N9-C4	6.02	108.81	106.40
23	DA	1528	A	C8-N9-C4	-6.02	103.39	105.80
23	BA	808	G	C5-N7-C8	6.02	107.31	104.30
23	BA	1837	C	C6-N1-C2	-6.02	117.89	120.30
23	BA	2032	G	N3-C4-N9	-6.02	122.39	126.00
23	BA	2390	U	N3-C2-O2	-6.02	117.99	122.20
23	DA	2056	G	C5-N7-C8	-6.02	101.29	104.30
23	DA	2595	G	C5-C6-N1	6.02	114.51	111.50
23	BA	1000	A	C5-C6-N6	6.01	128.51	123.70
23	DA	667	U	N1-C2-N3	6.01	118.51	114.90
23	DA	1778	U	C2-N3-C4	-6.01	123.39	127.00
23	BA	1252	G	N7-C8-N9	-6.01	110.09	113.10
23	BA	2626	C	C2-N1-C1'	-6.01	112.19	118.80
23	BA	1123	C	C5-C6-N1	-6.01	118.00	121.00
23	DA	747	U	C2-N3-C4	-6.01	123.39	127.00
23	DA	1614	A	N7-C8-N9	6.01	116.81	113.80
23	DA	86	C	C5-C6-N1	-6.01	118.00	121.00
23	DA	1903	G	N1-C6-O6	-6.00	116.30	119.90
23	DA	2713	A	C5-C6-N6	-6.00	118.90	123.70
23	DA	1032	A	C8-N9-C4	6.00	108.20	105.80
23	DA	2601	C	C5-C6-N1	-6.00	118.00	121.00
23	BA	843	G	N1-C6-O6	6.00	123.50	119.90
23	DA	2283	C	N1-C2-O2	-6.00	115.30	118.90
23	BA	2508	G	C8-N9-C4	6.00	108.80	106.40
23	DA	138	G	C8-N9-C4	-6.00	104.00	106.40
23	DA	2240	C	C6-N1-C2	6.00	122.70	120.30
23	BA	509	C	N3-C4-C5	6.00	124.30	121.90
23	BA	1977	A	C2-N3-C4	-6.00	107.60	110.60
23	DA	1367	A	C8-N9-C4	6.00	108.20	105.80
23	DA	2249	U	C5-C4-O4	6.00	129.50	125.90
23	BA	2345	G	C4-C5-N7	-6.00	108.40	110.80
23	DA	472	A	N7-C8-N9	-6.00	110.80	113.80
23	DA	2711	A	C8-N9-C4	6.00	108.20	105.80
23	DA	31	C	C5-C4-N4	-5.99	116.00	120.20
23	BA	575	A	C8-N9-C4	5.99	108.20	105.80
23	DA	434	U	N1-C2-O2	-5.99	118.61	122.80
23	DA	2283	C	N3-C2-O2	5.99	126.09	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1204	A	C5-N7-C8	-5.99	100.91	103.90
23	DA	1963	U	N1-C2-O2	5.99	126.99	122.80
23	DA	1815	A	N9-C4-C5	5.99	108.20	105.80
23	DA	225	A	C2-N3-C4	-5.99	107.61	110.60
23	DA	1325	G	C5-C6-N1	5.99	114.49	111.50
23	BA	571	A	C4-C5-C6	-5.99	114.01	117.00
23	BA	1309	G	C8-N9-C4	5.99	108.79	106.40
23	DA	109	G	C8-N9-C4	5.99	108.79	106.40
23	DA	197	A	C5-N7-C8	-5.99	100.91	103.90
23	DA	2770	G	C4-C5-N7	-5.99	108.41	110.80
23	DA	189	G	C8-N9-C1'	-5.98	119.22	127.00
23	DA	945	A	O4'-C1'-N9	5.98	112.99	108.20
23	BA	1839	G	N3-C4-C5	5.98	131.59	128.60
23	BA	1839	G	C5-C6-O6	5.98	132.19	128.60
23	BA	2498	C	C2-N3-C4	-5.98	116.91	119.90
23	DA	1825	A	C6-N1-C2	-5.98	115.01	118.60
23	DA	1977	A	C2-N3-C4	-5.98	107.61	110.60
23	BA	600	G	N1-C6-O6	5.98	123.49	119.90
23	BA	1797	C	C6-N1-C2	5.98	122.69	120.30
23	DA	537	C	C6-N1-C2	5.98	122.69	120.30
23	DA	746	A	C4-C5-C6	5.98	119.99	117.00
23	BA	114(B)	A	C4-C5-C6	5.98	119.99	117.00
23	DA	2596	U	C5-C6-N1	-5.98	119.71	122.70
23	BA	1804	C	C2-N3-C4	-5.97	116.91	119.90
23	DA	1617	C	N1-C2-O2	-5.97	115.31	118.90
23	BA	1796	U	C5-C6-N1	-5.97	119.71	122.70
23	BA	1961	C	C5-C6-N1	-5.97	118.01	121.00
23	BA	704	G	N9-C4-C5	-5.97	103.01	105.40
23	DA	26	G	C8-N9-C4	5.97	108.79	106.40
23	BA	594	U	N3-C2-O2	-5.97	118.02	122.20
23	DA	2430	A	N7-C8-N9	5.97	116.78	113.80
23	DA	2590	A	N1-C2-N3	5.97	132.28	129.30
23	BA	129	C	C6-N1-C2	5.96	122.69	120.30
23	DA	72	U	C2-N3-C4	-5.96	123.42	127.00
23	DA	584	C	C2-N3-C4	-5.96	116.92	119.90
23	DA	1841	U	N3-C4-O4	5.96	123.58	119.40
23	DA	529	A	C5-C6-N6	-5.96	118.93	123.70
23	DA	2605	U	C5-C4-O4	5.96	129.48	125.90
23	DA	2875	C	C6-N1-C2	5.96	122.69	120.30
23	DA	840	C	C5-C6-N1	-5.96	118.02	121.00
23	BA	1956	U	C5-C6-N1	-5.96	119.72	122.70
23	BA	1980	G	N3-C4-C5	-5.96	125.62	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	322	A	N1-C6-N6	-5.96	115.03	118.60
23	DA	532	A	N1-C6-N6	-5.96	115.03	118.60
23	DA	1699	G	C4-C5-N7	-5.96	108.42	110.80
23	DA	2014	A	N1-C6-N6	5.96	122.17	118.60
23	DA	270(Z)	G	C5-C6-O6	5.96	132.17	128.60
23	BA	2086	U	C5-C4-O4	5.95	129.47	125.90
23	BA	2433	A	C4-C5-C6	5.95	119.98	117.00
23	DA	1210	A	N7-C8-N9	5.95	116.78	113.80
23	DA	1616	A	C8-N9-C4	-5.95	103.42	105.80
23	DA	2567	G	C5-C6-O6	-5.95	125.03	128.60
23	DA	2762	G	C6-C5-N7	-5.95	126.83	130.40
1	CA	926	G	N9-C4-C5	5.95	107.78	105.40
23	DA	1261	C	N3-C2-O2	5.95	126.06	121.90
23	DA	2061	G	C8-N9-C1'	-5.95	119.27	127.00
23	BA	929	G	C4-C5-C6	5.95	122.37	118.80
23	BA	933	A	C6-C5-N7	-5.95	128.14	132.30
23	DA	2521	C	C6-N1-C2	5.95	122.68	120.30
47	DY	21	LEU	CB-CG-CD1	5.95	121.11	111.00
1	AA	918	A	N9-C4-C5	5.95	108.18	105.80
23	BA	138	G	C8-N9-C4	-5.95	104.02	106.40
23	BA	1164	G	C4-N9-C1'	5.95	134.23	126.50
23	BA	2719	G	C6-C5-N7	-5.95	126.83	130.40
23	DA	2532	G	C6-C5-N7	-5.95	126.83	130.40
23	DA	933	A	C2-N3-C4	-5.94	107.63	110.60
23	DA	2442	C	C5-C6-N1	-5.94	118.03	121.00
23	BA	2092	U	C5-C4-O4	5.94	129.47	125.90
23	BA	2232	U	C5-C4-O4	5.94	129.47	125.90
23	DA	2505	G	C5-C6-N1	-5.94	108.53	111.50
23	DA	273(C)	C	C6-N1-C2	5.94	122.68	120.30
23	DA	1820	U	C6-N1-C2	5.94	124.56	121.00
23	DA	677	A	C8-N9-C4	5.94	108.17	105.80
23	DA	1385	G	C4-N9-C1'	-5.94	118.78	126.50
23	DA	1827	C	C2-N3-C4	-5.94	116.93	119.90
23	DA	2454	G	N7-C8-N9	-5.94	110.13	113.10
23	DA	2550	G	N1-C6-O6	5.94	123.46	119.90
23	DA	2597	G	N7-C8-N9	-5.94	110.13	113.10
23	BA	1770	G	C2-N3-C4	-5.93	108.93	111.90
23	DA	1989	G	C5-C6-O6	-5.93	125.04	128.60
1	AA	299	G	C4-C5-N7	-5.93	108.43	110.80
23	BA	452	G	C5-C6-O6	-5.93	125.04	128.60
23	BA	1790	C	C6-N1-C2	5.93	122.67	120.30
23	BA	1000	A	N1-C6-N6	-5.93	115.04	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2006	C	C5-C6-N1	-5.93	118.04	121.00
23	DA	2233	U	N3-C4-C5	5.93	118.16	114.60
23	DA	734	A	N1-C6-N6	5.92	122.16	118.60
23	DA	2327	A	C8-N9-C4	5.92	108.17	105.80
23	BA	570	G	C8-N9-C4	-5.92	104.03	106.40
23	DA	1126	A	C8-N9-C4	5.92	108.17	105.80
23	DA	1679	U	N1-C2-O2	-5.92	118.65	122.80
23	BA	529	A	C4-C5-N7	5.92	113.66	110.70
23	BA	140	A	C5-N7-C8	-5.92	100.94	103.90
1	CA	810	C	C5-C6-N1	-5.92	118.04	121.00
23	DA	2578	G	N1-C6-O6	5.92	123.45	119.90
23	BA	2070	G	C8-N9-C4	5.92	108.77	106.40
23	BA	2544	G	C2-N3-C4	-5.92	108.94	111.90
23	BA	1655	A	N1-C6-N6	5.92	122.15	118.60
23	BA	1798	U	N1-C2-O2	-5.92	118.66	122.80
23	DA	187	G	N3-C4-N9	5.91	129.55	126.00
23	DA	2518	A	N3-C4-C5	5.91	130.94	126.80
23	BA	141(A)	A	N1-C6-N6	5.91	122.15	118.60
23	BA	1957	C	C6-N1-C2	5.91	122.67	120.30
23	BA	2524	G	N7-C8-N9	-5.91	110.14	113.10
23	DA	187	G	C8-N9-C1'	-5.91	119.32	127.00
23	BA	2007	C	C5-C6-N1	-5.91	118.05	121.00
23	BA	2719	G	N9-C4-C5	-5.91	103.04	105.40
23	DA	2057	A	N1-C2-N3	5.91	132.25	129.30
23	BA	1121	C	C6-N1-C2	5.91	122.66	120.30
23	DA	723	G	C5-C6-N1	-5.91	108.55	111.50
23	DA	1395	A	N1-C2-N3	-5.91	126.35	129.30
23	BA	1333	C	C5-C4-N4	-5.90	116.07	120.20
23	BA	2831	G	N3-C4-C5	5.90	131.55	128.60
23	DA	543	C	C5-C6-N1	-5.90	118.05	121.00
23	DA	570	G	C5-N7-C8	5.90	107.25	104.30
23	DA	2050	C	N1-C2-N3	5.90	123.33	119.20
23	BA	806	C	C6-N1-C2	-5.90	117.94	120.30
23	BA	1264	G	N9-C4-C5	5.90	107.76	105.40
23	BA	2593	U	C4-C5-C6	5.90	123.24	119.70
23	DA	298	G	N1-C6-O6	5.90	123.44	119.90
23	BA	1769	G	N7-C8-N9	5.89	116.05	113.10
1	AA	810	C	C5-C6-N1	-5.89	118.05	121.00
23	BA	1901	A	N1-C6-N6	-5.89	115.07	118.60
23	BA	2719	G	C8-N9-C1'	-5.89	119.34	127.00
23	BA	509	C	C2-N1-C1'	-5.89	112.32	118.80
23	DA	693	C	C4-C5-C6	5.89	120.34	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1325	G	C4-N9-C1'	-5.89	118.84	126.50
23	BA	530	G	N7-C8-N9	5.89	116.04	113.10
23	DA	2232	U	C4-C5-C6	5.88	123.23	119.70
23	DA	2510	C	C5-C6-N1	-5.88	118.06	121.00
23	BA	1313	U	C5-C6-N1	5.88	125.64	122.70
23	BA	2593	U	N1-C2-N3	5.88	118.43	114.90
23	BA	2719	G	C4-N9-C1'	5.88	134.15	126.50
23	DA	1783	A	C6-N1-C2	-5.88	115.07	118.60
23	BA	1291	C	C6-N1-C2	5.88	122.65	120.30
1	CA	1513	A	N7-C8-N9	-5.88	110.86	113.80
23	DA	1266	G	C8-N9-C4	5.88	108.75	106.40
23	DA	1335	U	C5-C6-N1	-5.88	119.76	122.70
23	BA	840	C	C2-N3-C4	-5.88	116.96	119.90
23	BA	2544	G	C6-C5-N7	-5.88	126.87	130.40
23	BA	847	U	C6-N1-C1'	5.88	129.43	121.20
1	AA	904	C	C5-C6-N1	-5.87	118.06	121.00
23	BA	1982	C	N3-C4-N4	5.87	122.11	118.00
25	BC	177	LEU	CA-CB-CG	-5.87	101.79	115.30
23	DA	808	G	C6-N1-C2	-5.87	121.58	125.10
23	DA	841	A	C6-N1-C2	-5.87	115.08	118.60
23	DA	2549	G	N1-C2-N3	5.87	127.42	123.90
23	BA	1769	G	C6-C5-N7	-5.87	126.88	130.40
23	BA	2822	G	C8-N9-C4	5.87	108.75	106.40
23	DA	263	C	C6-N1-C2	5.87	122.65	120.30
23	DA	2587	A	C8-N9-C4	5.87	108.15	105.80
23	DA	2506	U	N3-C2-O2	-5.87	118.09	122.20
23	BA	640	C	N3-C4-N4	-5.87	113.89	118.00
23	DA	940	G	N3-C4-C5	-5.87	125.67	128.60
23	BA	239	U	C2-N1-C1'	-5.86	110.67	117.70
23	BA	1617	C	C5-C6-N1	-5.86	118.07	121.00
23	DA	298	G	C5-C6-O6	-5.86	125.08	128.60
23	DA	760	G	C8-N9-C4	5.86	108.75	106.40
23	DA	1264	G	C5-C6-O6	5.86	132.12	128.60
23	DA	1589	C	C6-N1-C2	-5.86	117.95	120.30
23	DA	2033	A	C2-N3-C4	-5.86	107.67	110.60
23	DA	2324	C	C2-N3-C4	-5.86	116.97	119.90
23	BA	968	G	N1-C6-O6	5.86	123.42	119.90
23	BA	1250	G	C8-N9-C4	5.86	108.75	106.40
23	BA	1666	G	N3-C4-C5	5.86	131.53	128.60
23	DA	2497	A	C2-N3-C4	-5.86	107.67	110.60
23	BA	799	G	C5-C6-N1	5.86	114.43	111.50
23	DA	40	C	C5-C6-N1	-5.86	118.07	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	224	G	N3-C4-C5	5.86	131.53	128.60
23	DA	2550	G	C5-C6-O6	-5.86	125.08	128.60
23	DA	2278	A	C8-N9-C4	-5.86	103.46	105.80
1	AA	1522	U	N1-C2-N3	5.86	118.41	114.90
23	BA	1325	G	C4-N9-C1'	-5.86	118.89	126.50
23	BA	2003	G	C8-N9-C4	5.86	108.74	106.40
23	BA	2496	C	C2-N3-C4	-5.86	116.97	119.90
23	DA	2392	A	C8-N9-C4	-5.85	103.46	105.80
23	DA	2581	G	C4-C5-N7	-5.85	108.46	110.80
23	BA	811	U	C5-C6-N1	-5.85	119.77	122.70
23	BA	2227	A	C2-N3-C4	-5.85	107.67	110.60
1	CA	1522	U	N1-C2-N3	5.85	118.41	114.90
23	DA	1031	G	C4-C5-N7	5.85	113.14	110.80
23	DA	1125	G	N3-C4-C5	5.85	131.52	128.60
23	BA	734	A	C2-N3-C4	-5.85	107.68	110.60
23	BA	834	C	C2-N3-C4	-5.85	116.98	119.90
1	CA	1415	G	C6-C5-N7	-5.85	126.89	130.40
23	BA	1614	A	C4-C5-N7	5.84	113.62	110.70
23	DA	1252	G	N7-C8-N9	-5.84	110.18	113.10
23	DA	1780	A	C2-N3-C4	-5.84	107.68	110.60
23	DA	2427	C	C4-C5-C6	5.84	120.32	117.40
23	BA	94	G	C6-C5-N7	-5.84	126.89	130.40
23	DA	71	A	N3-C4-C5	5.84	130.89	126.80
23	DA	213	A	C8-N9-C4	5.84	108.14	105.80
23	DA	1215	G	N7-C8-N9	-5.84	110.18	113.10
23	BA	2032	G	N3-C4-C5	5.84	131.52	128.60
23	DA	949	C	C6-N1-C2	5.84	122.64	120.30
23	DA	1349	A	C5-N7-C8	-5.84	100.98	103.90
23	DA	377	C	C2-N1-C1'	-5.84	112.38	118.80
23	DA	1302	A	N1-C6-N6	-5.84	115.10	118.60
23	BA	330	A	N3-C4-C5	5.83	130.88	126.80
23	DA	204	A	N1-C6-N6	-5.83	115.10	118.60
23	DA	2447	G	N3-C4-N9	-5.83	122.50	126.00
23	DA	2553	G	C4-C5-N7	5.83	113.13	110.80
1	AA	811	C	C6-N1-C2	5.83	122.63	120.30
23	BA	1798	U	C2-N3-C4	-5.83	123.50	127.00
23	DA	752	A	N1-C6-N6	-5.83	115.10	118.60
23	DA	1286	A	N9-C4-C5	5.83	108.13	105.80
23	DA	1402	C	C6-N1-C2	-5.83	117.97	120.30
23	DA	1898	U	C6-N1-C1'	5.83	129.37	121.20
23	BA	1253	A	C4-C5-N7	5.83	113.62	110.70
23	BA	1965	C	N1-C2-O2	5.83	122.40	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	333	G	C4-N9-C1'	5.83	134.08	126.50
23	DA	1258	C	C2-N3-C4	-5.83	116.98	119.90
1	CA	811	C	C2-N3-C4	-5.83	116.99	119.90
23	DA	1297	C	N1-C2-O2	-5.83	115.40	118.90
23	BA	2281	C	C6-N1-C2	5.83	122.63	120.30
23	BA	450	G	C4-C5-C6	5.82	122.29	118.80
23	BA	1396	U	C5-C6-N1	-5.82	119.79	122.70
23	BA	2392	A	C5-C6-N1	-5.82	114.79	117.70
23	DA	1602	U	C5-C6-N1	5.82	125.61	122.70
23	DA	2063	C	C5-C4-N4	5.82	124.28	120.20
23	DA	658	C	C5-C6-N1	-5.82	118.09	121.00
23	BA	1609	A	C2-N3-C4	-5.82	107.69	110.60
23	DA	2004	G	C6-C5-N7	-5.82	126.91	130.40
23	DA	731	C	C6-N1-C2	5.82	122.63	120.30
23	BA	138	G	N3-C4-C5	-5.82	125.69	128.60
23	BA	1369	G	C5-C6-O6	-5.82	125.11	128.60
23	DA	2086	U	C5-C4-O4	5.82	129.39	125.90
1	AA	1486	G	N1-C6-O6	5.82	123.39	119.90
23	BA	1161	C	C2-N1-C1'	5.82	125.20	118.80
23	DA	681	G	C8-N9-C1'	-5.82	119.44	127.00
23	DA	847	U	C6-N1-C1'	5.82	129.34	121.20
23	DA	676	A	O4'-C1'-N9	5.81	112.85	108.20
23	BA	2053	G	C6-C5-N7	-5.81	126.91	130.40
23	DA	1349	A	C6-C5-N7	-5.81	128.23	132.30
23	DA	2593	U	N1-C2-N3	5.81	118.39	114.90
23	BA	2253	G	C8-N9-C1'	-5.81	119.45	127.00
23	DA	1031	G	C6-C5-N7	-5.81	126.92	130.40
23	DA	1258	C	N3-C4-C5	5.81	124.22	121.90
23	DA	1306	C	N3-C4-C5	5.81	124.22	121.90
23	DA	2244	U	N1-C2-O2	5.81	126.87	122.80
23	BA	1655	A	C2-N3-C4	-5.81	107.70	110.60
23	BA	248	G	C5-C6-O6	-5.80	125.12	128.60
23	BA	1841	U	N3-C4-O4	5.80	123.46	119.40
23	DA	244	A	C5-C6-N1	5.80	120.60	117.70
23	BA	2697	G	N1-C6-O6	5.80	123.38	119.90
23	DA	784	A	C8-N9-C1'	5.80	138.14	127.70
23	DA	1190	G	C4-C5-N7	5.80	113.12	110.80
1	AA	1512	U	N1-C2-N3	5.80	118.38	114.90
23	BA	1392	A	N1-C6-N6	-5.80	115.12	118.60
23	BA	2876	G	C8-N9-C4	5.80	108.72	106.40
23	DA	570	G	C4-C5-C6	5.79	122.28	118.80
23	DA	2532	G	C8-N9-C1'	-5.79	119.47	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	107	C	C6-N1-C2	5.79	122.62	120.30
23	BA	655	A	N7-C8-N9	5.79	116.70	113.80
23	BA	2280	G	C5-C6-N1	5.79	114.40	111.50
23	DA	61	G	C8-N9-C4	5.79	108.72	106.40
23	DA	407	G	C8-N9-C1'	-5.79	119.47	127.00
23	DA	768	G	C8-N9-C1'	-5.79	119.47	127.00
23	DA	1698	A	C5-C6-N1	-5.79	114.80	117.70
23	BA	764	A	N1-C6-N6	5.79	122.08	118.60
23	BA	834	C	C5-C6-N1	-5.79	118.10	121.00
24	BB	76	G	N1-C6-O6	5.79	123.38	119.90
23	DA	2056	G	C5-C6-O6	-5.79	125.12	128.60
1	AA	1200	C	C6-N1-C2	5.79	122.62	120.30
23	BA	379	G	C8-N9-C4	5.79	108.72	106.40
23	BA	1248	G	C5-C6-N1	5.79	114.39	111.50
23	BA	1674	G	C8-N9-C1'	-5.79	119.47	127.00
23	BA	1933	G	N1-C6-O6	-5.79	116.43	119.90
23	DA	1804	C	C2-N3-C4	-5.79	117.01	119.90
23	DA	787	U	C2-N3-C4	-5.78	123.53	127.00
23	BA	1324	G	C4-C5-N7	5.78	113.11	110.80
23	BA	302	C	C2-N1-C1'	-5.78	112.44	118.80
23	BA	377	C	C2-N1-C1'	-5.78	112.44	118.80
23	DA	1396	U	C5-C6-N1	-5.78	119.81	122.70
23	BA	2456	C	C6-N1-C2	5.78	122.61	120.30
23	DA	2436	G	C5-C6-N1	-5.78	108.61	111.50
23	BA	450	G	C4-N9-C1'	5.78	134.01	126.50
23	DA	2248	C	C6-N1-C2	5.77	122.61	120.30
23	BA	847	U	N1-C2-N3	5.77	118.36	114.90
23	BA	979	G	N1-C6-O6	5.77	123.36	119.90
23	DA	39	C	N1-C2-O2	-5.77	115.44	118.90
23	DA	126	A	C5-C6-N6	-5.77	119.08	123.70
23	BA	2250	G	N9-C4-C5	5.77	107.71	105.40
23	BA	2875	C	N1-C2-O2	-5.77	115.44	118.90
1	AA	1472	U	N3-C4-O4	-5.77	115.36	119.40
1	CA	297	G	C8-N9-C4	5.77	108.71	106.40
23	DA	129	C	C6-N1-C2	5.77	122.61	120.30
23	DA	240	G	C5-C6-N1	-5.77	108.62	111.50
23	DA	803	U	C4-C5-C6	5.77	123.16	119.70
23	DA	1209	G	C5-C6-O6	5.77	132.06	128.60
23	DA	2638	G	C8-N9-C4	-5.77	104.09	106.40
23	BA	2648	C	N1-C2-O2	-5.77	115.44	118.90
23	DA	1315	C	N1-C2-N3	5.77	123.24	119.20
34	DL	61	ARG	NE-CZ-NH1	5.77	123.18	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1329	U	C6-N1-C2	5.77	124.46	121.00
23	DA	661	C	C5-C6-N1	-5.77	118.12	121.00
23	DA	782	A	C8-N9-C4	5.77	108.11	105.80
23	DA	2272	U	C5-C6-N1	5.77	125.58	122.70
23	DA	2714	G	C4-N9-C1'	5.76	133.99	126.50
23	DA	1156	A	C5-N7-C8	-5.76	101.02	103.90
23	BA	1332	G	N1-C6-O6	5.76	123.36	119.90
23	DA	333	G	C8-N9-C1'	-5.76	119.51	127.00
23	BA	1262	A	C5-C6-N1	5.76	120.58	117.70
1	AA	754	C	N3-C2-O2	-5.76	117.87	121.90
23	BA	1007	C	C6-N1-C2	5.76	122.60	120.30
1	CA	896	C	C5-C6-N1	-5.76	118.12	121.00
23	BA	2042	A	N1-C6-N6	5.75	122.05	118.60
23	BA	2253	G	C4-N9-C1'	5.75	133.98	126.50
23	BA	2700	C	C6-N1-C2	5.75	122.60	120.30
23	DA	1764	G	C5-C6-N1	5.75	114.38	111.50
23	BA	2050	C	C5-C6-N1	-5.75	118.12	121.00
23	DA	2043	C	N3-C4-C5	5.75	124.20	121.90
23	BA	587	C	C4-C5-C6	5.75	120.28	117.40
23	DA	1627	G	C5-C6-N1	-5.75	108.63	111.50
23	BA	2486	G	N1-C6-O6	5.75	123.35	119.90
23	DA	530	G	N3-C2-N2	5.75	123.92	119.90
23	DA	2614	A	C5-C6-N6	-5.75	119.10	123.70
23	BA	675	A	N3-C4-C5	5.75	130.82	126.80
23	DA	1379	A	N1-C6-N6	5.75	122.05	118.60
23	BA	675	A	C2-N3-C4	-5.74	107.73	110.60
23	BA	2501	C	N1-C2-N3	-5.74	115.18	119.20
23	DA	263	C	C5-C6-N1	-5.74	118.13	121.00
23	DA	2719	G	N9-C4-C5	-5.74	103.10	105.40
23	BA	575	A	C2-N3-C4	-5.74	107.73	110.60
23	DA	1021	A	N1-C6-N6	5.74	122.05	118.60
23	DA	2501	C	C5-C6-N1	-5.74	118.13	121.00
23	DA	2625	G	N1-C2-N3	5.74	127.34	123.90
23	BA	1308	A	C2-N3-C4	-5.74	107.73	110.60
23	BA	1333	C	C6-N1-C1'	-5.74	113.91	120.80
23	DA	2500	U	C4-C5-C6	5.74	123.14	119.70
23	BA	1821	A	N1-C2-N3	5.74	132.17	129.30
23	DA	1403	C	N1-C2-N3	5.74	123.22	119.20
23	BA	2596	U	C5-C6-N1	-5.74	119.83	122.70
23	DA	1680	U	C6-N1-C2	-5.74	117.56	121.00
23	DA	1901	A	C5-C6-N1	5.74	120.57	117.70
23	DA	2072	G	C2-N3-C4	-5.74	109.03	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1376	C	N1-C2-O2	-5.74	115.46	118.90
23	BA	2386	C	C2-N3-C4	-5.74	117.03	119.90
23	DA	244	A	C4-C5-C6	-5.74	114.13	117.00
23	BA	1304	C	N3-C4-C5	5.73	124.19	121.90
23	DA	769	G	C5-C6-N1	5.73	114.37	111.50
23	DA	756	C	C5-C6-N1	-5.73	118.13	121.00
23	DA	802	A	C6-N1-C2	-5.73	115.16	118.60
23	BA	1809	A	C4-C5-C6	5.73	119.87	117.00
23	DA	980	A	C2-N3-C4	-5.73	107.73	110.60
23	DA	1253	A	N1-C2-N3	-5.73	126.44	129.30
23	DA	1368	G	C6-N1-C2	-5.73	121.66	125.10
23	BA	114(B)	A	C5-N7-C8	-5.73	101.04	103.90
23	BA	31	C	C5-C6-N1	-5.72	118.14	121.00
23	BA	1031	G	C2-N3-C4	-5.72	109.04	111.90
23	BA	1617	C	C2-N3-C4	-5.72	117.04	119.90
1	CA	758	G	N1-C6-O6	5.72	123.33	119.90
23	DA	1325	G	C8-N9-C4	-5.72	104.11	106.40
23	BA	2518	A	N7-C8-N9	5.72	116.66	113.80
23	DA	2084	C	C5-C6-N1	-5.72	118.14	121.00
23	DA	2502	G	C8-N9-C4	5.72	108.69	106.40
23	DA	1210	A	C6-C5-N7	-5.72	128.29	132.30
23	BA	1671	U	C4-C5-C6	5.72	123.13	119.70
23	BA	807	U	C2-N3-C4	-5.72	123.57	127.00
23	BA	2601	C	C5-C6-N1	-5.72	118.14	121.00
23	BA	594	U	N3-C4-C5	-5.72	111.17	114.60
23	BA	804	A	N1-C2-N3	5.72	132.16	129.30
23	BA	2433	A	C2-N3-C4	-5.72	107.74	110.60
23	DA	816	C	C5-C4-N4	-5.72	116.20	120.20
23	DA	979	G	N3-C4-C5	5.72	131.46	128.60
23	DA	1210	A	C5-N7-C8	-5.72	101.04	103.90
23	DA	1765	C	N1-C2-O2	-5.72	115.47	118.90
23	DA	1798	U	C2-N3-C4	-5.72	123.57	127.00
23	DA	2442	C	C6-N1-C2	5.72	122.59	120.30
23	BA	37	C	N3-C4-C5	5.71	124.19	121.90
23	BA	2451	A	N1-C6-N6	-5.71	115.17	118.60
23	BA	322	A	N9-C4-C5	5.71	108.08	105.80
1	AA	904	C	C2-N3-C4	-5.71	117.04	119.90
23	DA	2503	A	C4-C5-N7	5.71	113.56	110.70
23	BA	71	A	C4-C5-N7	5.71	113.55	110.70
23	DA	1123	C	C6-N1-C2	5.71	122.58	120.30
23	DA	424	G	N1-C6-O6	5.71	123.32	119.90
23	DA	1901	A	N1-C6-N6	-5.71	115.18	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	580	C	C5-C6-N1	-5.70	118.15	121.00
23	DA	2640	G	C8-N9-C4	5.70	108.68	106.40
1	AA	529	G	C5-C6-O6	-5.70	125.18	128.60
23	BA	566	U	C2-N1-C1'	-5.70	110.86	117.70
1	CA	880	C	C5-C6-N1	-5.70	118.15	121.00
23	DA	2066	C	C5-C6-N1	-5.70	118.15	121.00
23	BA	1841	U	N1-C2-O2	-5.70	118.81	122.80
23	BA	2713	A	N7-C8-N9	5.70	116.65	113.80
23	DA	2463	C	N3-C2-O2	5.70	125.89	121.90
23	DA	2553	G	C8-N9-C4	5.70	108.68	106.40
23	BA	36	G	C5-N7-C8	5.70	107.15	104.30
23	DA	2059	A	C8-N9-C4	5.70	108.08	105.80
23	BA	71	A	C5-N7-C8	-5.70	101.05	103.90
25	DC	242	ARG	N-CA-C	-5.70	95.62	111.00
23	BA	330	A	C5-C6-N1	-5.69	114.85	117.70
23	DA	2443	C	N3-C4-C5	5.69	124.18	121.90
23	BA	1804	C	N1-C2-O2	-5.69	115.48	118.90
23	BA	1827	C	N3-C4-C5	5.69	124.18	121.90
23	BA	2510	C	C2-N3-C4	-5.69	117.05	119.90
23	DA	2515	C	N3-C4-C5	5.69	124.18	121.90
23	BA	847	U	C5-C4-O4	5.69	129.31	125.90
23	DA	197	A	C6-C5-N7	-5.69	128.32	132.30
23	DA	374	A	C2-N3-C4	-5.69	107.75	110.60
23	DA	407	G	C4-N9-C1'	5.69	133.90	126.50
1	AA	1523	G	N3-C2-N2	-5.69	115.92	119.90
23	DA	2518	A	N1-C6-N6	5.69	122.01	118.60
23	DA	1819	A	N1-C2-N3	5.69	132.14	129.30
23	DA	1839	G	N3-C4-C5	5.69	131.44	128.60
23	DA	2048	G	N1-C6-O6	-5.69	116.49	119.90
23	DA	2292	C	C6-N1-C2	5.68	122.57	120.30
23	DA	568	U	C5-C4-O4	5.68	129.31	125.90
23	DA	1310	G	C5-C6-O6	-5.68	125.19	128.60
23	DA	1555	G	C8-N9-C1'	-5.68	119.61	127.00
23	DA	2742	C	C5-C6-N1	-5.68	118.16	121.00
23	DA	1499	C	C6-N1-C2	5.68	122.57	120.30
23	BA	330	A	C8-N9-C4	5.68	108.07	105.80
23	BA	1935	G	C8-N9-C4	5.68	108.67	106.40
23	BA	1948	G	N1-C6-O6	-5.68	116.49	119.90
23	DA	2084	C	C6-N1-C2	5.68	122.57	120.30
23	BA	38	A	C5-C6-N1	5.67	120.54	117.70
23	BA	836	G	C8-N9-C4	5.67	108.67	106.40
23	DA	61	G	N7-C8-N9	-5.67	110.26	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	794	G	C2-N3-C4	-5.67	109.06	111.90
23	DA	2544	G	C6-C5-N7	-5.67	127.00	130.40
23	BA	2232	U	C4-C5-C6	5.67	123.10	119.70
23	DA	2506	U	C2-N1-C1'	5.67	124.51	117.70
23	DA	146	G	C5-C6-O6	-5.67	125.20	128.60
23	DA	1241	A	C5-C6-N1	-5.67	114.86	117.70
23	BA	810	U	N3-C2-O2	-5.67	118.23	122.20
23	BA	1330	C	N3-C4-C5	5.67	124.17	121.90
23	DA	1333	C	C6-N1-C1'	-5.67	114.00	120.80
1	AA	879	C	C6-N1-C2	5.67	122.57	120.30
23	BA	512	G	N3-C4-C5	5.67	131.43	128.60
23	BA	2648	C	C2-N1-C1'	-5.67	112.57	118.80
23	DA	794	G	N1-C2-N2	-5.67	111.10	116.20
23	DA	837	C	C6-N1-C2	-5.67	118.03	120.30
23	DA	1815	A	N1-C6-N6	-5.67	115.20	118.60
23	DA	1970	A	C6-N1-C2	-5.67	115.20	118.60
23	DA	2592	G	N3-C4-C5	-5.67	125.77	128.60
23	BA	2392	A	N1-C2-N3	5.66	132.13	129.30
23	BA	798	G	N3-C4-N9	5.66	129.40	126.00
23	DA	848	G	C8-N9-C4	5.66	108.67	106.40
23	DA	2744	G	N3-C4-C5	5.66	131.43	128.60
23	DA	2054	A	C2-N3-C4	-5.66	107.77	110.60
23	BA	1496	A	C8-N9-C4	-5.66	103.54	105.80
1	CA	501	C	C6-N1-C2	-5.66	118.04	120.30
23	DA	497	A	N1-C6-N6	5.66	122.00	118.60
23	DA	1633	G	C8-N9-C4	-5.66	104.14	106.40
23	DA	2440	C	C2-N1-C1'	-5.66	112.58	118.80
23	DA	1123	C	C5-C6-N1	-5.66	118.17	121.00
23	DA	1323	U	N1-C2-O2	-5.66	118.84	122.80
1	AA	117	G	N1-C6-O6	5.66	123.29	119.90
23	BA	779	U	C5-C6-N1	-5.66	119.87	122.70
23	DA	529	A	N1-C6-N6	5.66	121.99	118.60
23	DA	2057	A	C8-N9-C4	5.66	108.06	105.80
23	DA	2253	G	C4-N9-C1'	5.66	133.85	126.50
23	BA	945	A	O4'-C1'-N9	5.65	112.72	108.20
23	DA	194	G	N9-C4-C5	-5.65	103.14	105.40
23	DA	589	C	C5-C6-N1	-5.65	118.17	121.00
23	BA	1820	U	C6-N1-C2	5.65	124.39	121.00
23	DA	1131	G	C8-N9-C4	5.65	108.66	106.40
23	BA	1313	U	N3-C4-O4	5.65	123.35	119.40
23	DA	272	G	C4-N9-C1'	-5.65	119.16	126.50
23	DA	994	C	N1-C2-N3	5.65	123.15	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1994	C	C5-C6-N1	-5.65	118.17	121.00
23	BA	2453	A	C2-N3-C4	-5.65	107.78	110.60
35	BM	81	VAL	CB-CA-C	-5.65	100.67	111.40
23	DA	1128	A	N1-C6-N6	-5.65	115.21	118.60
23	DA	1271	G	C8-N9-C4	5.65	108.66	106.40
23	DA	2520	C	C5-C6-N1	-5.65	118.18	121.00
23	BA	1982	C	N3-C2-O2	5.65	125.85	121.90
23	DA	684	G	C5-N7-C8	-5.65	101.48	104.30
23	BA	968	G	C4-C5-N7	5.64	113.06	110.80
23	BA	1605	C	C6-N1-C2	-5.64	118.04	120.30
23	DA	2510	C	C5-C4-N4	-5.64	116.25	120.20
23	BA	2032	G	C8-N9-C4	-5.64	104.14	106.40
23	DA	1617	C	C6-N1-C2	5.64	122.56	120.30
23	BA	964	C	C4-C5-C6	-5.64	114.58	117.40
23	BA	974(B)	C	C2-N3-C4	-5.64	117.08	119.90
23	DA	729	G	C4-C5-N7	5.64	113.06	110.80
23	DA	1620	G	N7-C8-N9	-5.64	110.28	113.10
23	DA	1999	C	N3-C4-C5	5.64	124.16	121.90
23	BA	1271	G	N3-C4-N9	5.64	129.38	126.00
23	DA	801	G	N1-C6-O6	-5.64	116.52	119.90
23	DA	1264	G	C4-C5-N7	-5.64	108.55	110.80
23	BA	484	C	N3-C4-C5	5.63	124.15	121.90
23	BA	1899	G	C5-N7-C8	-5.63	101.48	104.30
23	BA	1976	U	N3-C2-O2	-5.63	118.26	122.20
23	DA	253	C	N3-C4-C5	-5.63	119.65	121.90
23	DA	2346	A	C5-C6-N1	-5.63	114.88	117.70
23	DA	2540	C	C5-C6-N1	-5.63	118.18	121.00
23	BA	537	C	C6-N1-C2	5.63	122.55	120.30
23	BA	1776	G	C8-N9-C4	5.63	108.65	106.40
23	BA	2009	G	N9-C4-C5	5.63	107.65	105.40
23	DA	1980	G	N1-C2-N3	5.63	127.28	123.90
23	DA	2324	C	C2-N1-C1'	-5.63	112.61	118.80
1	CA	576	G	C4-N9-C1'	5.63	133.82	126.50
23	BA	330	A	C5-N7-C8	-5.63	101.09	103.90
23	BA	580	C	N3-C4-C5	5.63	124.15	121.90
23	BA	1655	A	N9-C4-C5	-5.63	103.55	105.80
23	BA	1898	U	C2-N1-C1'	-5.63	110.95	117.70
23	BA	1979	C	N3-C2-O2	5.63	125.84	121.90
23	DA	77	C	N3-C4-C5	5.63	124.15	121.90
23	BA	671	C	N1-C2-N3	5.63	123.14	119.20
23	BA	1314	C	C2-N1-C1'	5.63	124.99	118.80
23	BA	2035	G	C5-C6-N1	5.63	114.31	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1678	G	C4-C5-C6	-5.63	115.42	118.80
23	DA	2869	G	C8-N9-C4	-5.63	104.15	106.40
23	DA	2589	A	N7-C8-N9	-5.62	110.99	113.80
23	BA	1031	G	N1-C6-O6	5.62	123.27	119.90
23	DA	30	G	C8-N9-C4	5.62	108.65	106.40
23	DA	1304	C	N1-C2-O2	-5.62	115.53	118.90
23	BA	1021	A	N3-C4-C5	5.62	130.73	126.80
23	BA	2640	G	C8-N9-C4	5.62	108.65	106.40
23	BA	529	A	C6-C5-N7	-5.62	128.37	132.30
23	BA	809	G	C5-C6-N1	-5.62	108.69	111.50
23	BA	1671	U	C2-N3-C4	5.62	130.37	127.00
23	DA	116	C	C5-C6-N1	-5.62	118.19	121.00
23	BA	58	G	C4-N9-C1'	5.62	133.80	126.50
23	DA	1302	A	C5-C6-N6	5.62	128.19	123.70
23	BA	1979	C	C2-N1-C1'	-5.62	112.62	118.80
1	AA	576	G	C4-N9-C1'	5.61	133.80	126.50
23	BA	530	G	C5-C6-O6	5.61	131.97	128.60
23	BA	1286	A	C4-C5-C6	5.61	119.81	117.00
23	DA	197	A	C4-C5-N7	5.61	113.51	110.70
23	DA	836	G	N3-C4-C5	5.61	131.41	128.60
1	AA	756	C	C5-C6-N1	-5.61	118.19	121.00
23	BA	809	G	C4-C5-C6	5.61	122.17	118.80
23	BA	1926	U	C2-N1-C1'	-5.61	110.97	117.70
23	BA	2073	C	C5-C6-N1	-5.61	118.19	121.00
23	DA	961	C	C4-C5-C6	5.61	120.20	117.40
23	DA	1674	G	C8-N9-C1'	-5.61	119.71	127.00
23	DA	1801	G	C5-C6-O6	-5.61	125.23	128.60
23	BA	2624	G	C8-N9-C4	5.61	108.64	106.40
23	BA	760	G	C2-N3-C4	-5.61	109.10	111.90
23	BA	1309	G	C4-N9-C1'	5.61	133.79	126.50
23	BA	2271	G	C8-N9-C1'	-5.61	119.71	127.00
23	DA	1287	A	C5-N7-C8	-5.61	101.10	103.90
23	BA	2606	C	N1-C2-O2	-5.61	115.54	118.90
23	DA	188	G	C6-C5-N7	-5.61	127.04	130.40
23	DA	580	C	C2-N3-C4	-5.61	117.10	119.90
23	DA	1323	U	N3-C4-O4	5.61	123.32	119.40
23	BA	60	G	O4'-C1'-N9	5.60	112.68	108.20
23	BA	2324	C	C2-N1-C1'	-5.60	112.64	118.80
23	DA	1444	G	N7-C8-N9	-5.60	110.30	113.10
23	BA	1678	G	C5-N7-C8	-5.60	101.50	104.30
1	CA	314	C	C6-N1-C2	-5.60	118.06	120.30
23	DA	2719	G	C6-C5-N7	-5.60	127.04	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1007	C	C5-C6-N1	-5.60	118.20	121.00
23	BA	434	U	N1-C2-O2	-5.60	118.88	122.80
23	DA	210	C	N3-C4-C5	5.60	124.14	121.90
23	DA	1271	G	N3-C4-N9	5.60	129.36	126.00
23	DA	2634	G	C8-N9-C4	5.60	108.64	106.40
23	DA	2675	A	N7-C8-N9	-5.60	111.00	113.80
23	DA	845	G	C4-N9-C1'	5.60	133.78	126.50
23	BA	1154	G	C5-C6-O6	5.59	131.96	128.60
23	DA	248	G	C8-N9-C4	5.59	108.64	106.40
23	DA	2056	G	C6-C5-N7	-5.59	127.04	130.40
23	DA	2456	C	C6-N1-C2	5.59	122.54	120.30
23	DA	148	C	C4-C5-C6	5.59	120.20	117.40
23	BA	1834	U	C2-N1-C1'	5.59	124.41	117.70
23	BA	2056	G	C6-C5-N7	-5.59	127.05	130.40
23	DA	322	A	N9-C4-C5	5.59	108.04	105.80
23	DA	340	A	N1-C2-N3	5.59	132.09	129.30
23	DA	1901	A	C6-N1-C2	-5.59	115.25	118.60
23	BA	469	G	C8-N9-C4	5.59	108.63	106.40
23	BA	659	C	C5-C6-N1	-5.59	118.21	121.00
23	DA	71	A	C5-C6-N1	-5.59	114.91	117.70
23	DA	1570	A	N7-C8-N9	-5.59	111.01	113.80
23	DA	1821	A	C8-N9-C4	5.59	108.03	105.80
23	DA	2009	G	C4-C5-N7	-5.59	108.57	110.80
23	DA	70	G	C8-N9-C4	-5.58	104.17	106.40
23	DA	657	U	N1-C2-O2	5.58	126.71	122.80
23	DA	1325	G	N1-C6-O6	-5.58	116.55	119.90
23	DA	2233	U	C5-C6-N1	-5.58	119.91	122.70
23	BA	697	C	N3-C4-C5	5.58	124.13	121.90
23	BA	773	U	C5-C6-N1	-5.58	119.91	122.70
23	DA	127	A	C5-C6-N1	5.58	120.49	117.70
1	CA	815	A	N9-C4-C5	5.58	108.03	105.80
23	DA	2496	C	C5-C6-N1	-5.58	118.21	121.00
23	BA	1841	U	N3-C4-C5	-5.58	111.25	114.60
23	DA	815	C	C2-N3-C4	-5.58	117.11	119.90
23	DA	1826	G	N7-C8-N9	-5.58	110.31	113.10
23	BA	2235	G	C5-C6-O6	-5.58	125.25	128.60
23	DA	2206	C	C6-N1-C2	5.58	122.53	120.30
36	DN	65	LEU	CA-CB-CG	-5.58	102.47	115.30
23	BA	1341	U	C5-C6-N1	5.58	125.49	122.70
23	BA	1385	G	C4-N9-C1'	-5.58	119.25	126.50
23	DA	1603	A	C8-N9-C4	-5.58	103.57	105.80
23	DA	1613	G	N3-C2-N2	5.58	123.80	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1804	C	N1-C2-N3	5.58	123.10	119.20
23	DA	843	G	N1-C6-O6	5.57	123.24	119.90
23	DA	1022	G	C5-C6-O6	5.57	131.94	128.60
23	BA	1787	A	C8-N9-C4	5.57	108.03	105.80
23	DA	1332	G	N1-C6-O6	5.57	123.24	119.90
23	DA	2053	G	C4-C5-N7	5.57	113.03	110.80
47	DY	60	LEU	CA-CB-CG	-5.57	102.48	115.30
1	AA	523	A	N1-C6-N6	5.57	121.94	118.60
23	BA	332	A	N1-C2-N3	5.57	132.09	129.30
23	BA	1309	G	N1-C2-N3	5.57	127.24	123.90
23	BA	2510	C	C6-N1-C2	5.57	122.53	120.30
23	DA	1770	G	N1-C6-O6	5.57	123.24	119.90
23	DA	2507	C	C2-N3-C4	-5.57	117.11	119.90
23	BA	2647	U	C6-N1-C2	5.57	124.34	121.00
23	DA	535	C	N1-C2-O2	-5.57	115.56	118.90
23	BA	192	C	C5-C6-N1	-5.57	118.22	121.00
23	DA	1898	U	C2-N1-C1'	-5.57	111.02	117.70
23	DA	2488	A	C6-N1-C2	-5.57	115.26	118.60
1	AA	552	U	C5-C6-N1	-5.57	119.92	122.70
23	BA	700	G	N1-C6-O6	5.57	123.24	119.90
23	BA	1842	G	N1-C6-O6	5.57	123.24	119.90
23	BA	2450	A	C6-N1-C2	-5.57	115.26	118.60
23	DA	2279	G	N1-C6-O6	-5.57	116.56	119.90
23	DA	2698	U	C5-C6-N1	-5.57	119.92	122.70
24	DB	84	C	C6-N1-C2	-5.57	118.07	120.30
23	BA	180	G	C8-N9-C4	5.56	108.62	106.40
23	BA	1769	G	C4-N9-C1'	5.56	133.73	126.50
23	BA	2700	C	N1-C2-O2	-5.56	115.56	118.90
23	BA	1576	U	N3-C2-O2	-5.56	118.31	122.20
23	BA	1839	G	N9-C4-C5	5.56	107.62	105.40
23	BA	2614	A	C5-C6-N1	5.56	120.48	117.70
23	DA	1496	A	N7-C8-N9	5.56	116.58	113.80
23	DA	1692	U	N3-C4-O4	-5.56	115.51	119.40
23	BA	1270	C	C2-N1-C1'	-5.56	112.69	118.80
23	DA	826	U	C6-N1-C2	5.56	124.33	121.00
23	DA	2506	U	N1-C2-O2	5.56	126.69	122.80
23	DA	2239	G	C2-N3-C4	-5.56	109.12	111.90
23	DA	2430	A	C4-C5-N7	5.56	113.48	110.70
1	AA	768	A	N1-C2-N3	5.55	132.08	129.30
23	BA	115	C	C4-C5-C6	5.55	120.18	117.40
23	BA	2056	G	N9-C4-C5	-5.55	103.18	105.40
23	DA	2010	G	C5-C6-O6	-5.55	125.27	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1443	G	N9-C4-C5	-5.55	103.18	105.40
23	BA	847	U	N1-C2-O2	-5.55	118.91	122.80
23	BA	1899	G	N7-C8-N9	5.55	115.88	113.10
23	DA	85	G	C8-N9-C4	5.55	108.62	106.40
23	DA	1191	G	C4-C5-N7	-5.55	108.58	110.80
23	DA	1665	A	C6-C5-N7	-5.55	128.41	132.30
23	DA	2542	A	C8-N9-C4	5.55	108.02	105.80
23	BA	512	G	C4-N9-C1'	-5.55	119.29	126.50
23	DA	194	G	N7-C8-N9	-5.55	110.33	113.10
23	DA	2417	C	C5-C6-N1	-5.55	118.22	121.00
23	DA	2235	G	C4-C5-N7	5.55	113.02	110.80
23	DA	2827	C	C6-N1-C2	5.55	122.52	120.30
23	BA	1402	C	C6-N1-C2	-5.55	118.08	120.30
23	DA	340	A	C2-N3-C4	-5.55	107.83	110.60
23	BA	1260	G	C5-C6-N1	5.54	114.27	111.50
23	BA	2072	G	C5-C6-N1	-5.54	108.73	111.50
23	DA	1962	C	N3-C2-O2	-5.54	118.02	121.90
23	BA	214	G	C8-N9-C1'	5.54	134.20	127.00
23	BA	587	C	C5-C4-N4	5.54	124.08	120.20
23	DA	73	A	N1-C6-N6	-5.54	115.28	118.60
23	DA	1287	A	N1-C6-N6	5.54	121.92	118.60
23	DA	111	A	C2-N3-C4	-5.54	107.83	110.60
1	AA	1522	U	C5-C4-O4	5.54	129.22	125.90
23	BA	213	A	C8-N9-C4	5.54	108.02	105.80
23	DA	933	A	N1-C6-N6	5.54	121.92	118.60
23	DA	239	U	C2-N1-C1'	-5.54	111.06	117.70
23	DA	1232	G	N1-C6-O6	5.54	123.22	119.90
23	BA	1128	A	C8-N9-C4	5.53	108.01	105.80
23	BA	1328	G	C4-C5-N7	5.53	113.01	110.80
23	DA	2081	C	C6-N1-C2	5.53	122.51	120.30
23	DA	2426	A	N7-C8-N9	5.53	116.57	113.80
23	DA	2441	C	N1-C2-O2	-5.53	115.58	118.90
23	BA	1780	A	N1-C2-N3	5.53	132.07	129.30
23	BA	453	C	N3-C4-N4	5.53	121.87	118.00
23	BA	2361	A	C8-N9-C4	5.53	108.01	105.80
23	DA	2075	U	C6-N1-C2	5.53	124.32	121.00
23	BA	794	G	C2-N3-C4	-5.53	109.14	111.90
23	BA	1349	A	C4-C5-N7	5.53	113.46	110.70
1	CA	892	A	C5-C6-N6	-5.53	119.28	123.70
23	BA	1977	A	C8-N9-C4	5.53	108.01	105.80
23	BA	2241	A	C2-N3-C4	-5.52	107.84	110.60
23	BA	2614	A	C5-C6-N6	-5.52	119.28	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	114(B)	A	C4-C5-N7	5.52	113.46	110.70
23	DA	2257	U	N1-C2-O2	-5.52	118.93	122.80
1	AA	576	G	C8-N9-C1'	-5.52	119.83	127.00
23	DA	2042	A	N1-C6-N6	5.52	121.91	118.60
23	BA	94	G	N3-C4-C5	-5.52	125.84	128.60
23	DA	216	A	C4-C5-N7	5.52	113.46	110.70
23	BA	527	C	N3-C4-C5	5.51	124.11	121.90
23	DA	799	G	C5-C6-N1	5.51	114.26	111.50
23	DA	1855	G	C8-N9-C4	5.51	108.61	106.40
23	DA	2544	G	N9-C4-C5	-5.51	103.19	105.40
23	BA	461	C	N3-C2-O2	5.51	125.76	121.90
23	DA	2431	U	C5-C6-N1	-5.51	119.94	122.70
23	BA	83	G	C8-N9-C4	5.51	108.60	106.40
23	BA	1976	U	C6-N1-C2	-5.51	117.69	121.00
23	DA	1791	A	N9-C4-C5	-5.51	103.60	105.80
1	AA	691	G	C5-C6-O6	-5.51	125.29	128.60
23	BA	1571	A	C8-N9-C4	5.51	108.00	105.80
1	CA	918	A	N9-C4-C5	5.51	108.00	105.80
23	DA	513	A	N7-C8-N9	5.51	116.56	113.80
23	DA	825	C	C4-C5-C6	5.51	120.16	117.40
23	DA	1496	A	C4-N9-C1'	5.51	136.22	126.30
23	DA	1960	A	C8-N9-C4	5.51	108.00	105.80
23	DA	2521	C	C5-C6-N1	-5.51	118.25	121.00
23	BA	664	C	C5-C6-N1	-5.51	118.25	121.00
23	BA	844	C	C2-N3-C4	-5.51	117.15	119.90
23	BA	789	A	C4-C5-N7	5.50	113.45	110.70
23	BA	676	A	C6-N1-C2	5.50	121.90	118.60
23	BA	1286	A	N9-C4-C5	5.50	108.00	105.80
23	BA	2646	C	N1-C2-O2	-5.50	115.60	118.90
1	CA	695	A	C2-N3-C4	-5.50	107.85	110.60
1	CA	1524	C	C6-N1-C2	5.50	122.50	120.30
23	DA	409	C	C6-N1-C2	5.50	122.50	120.30
23	DA	1983	C	C5-C6-N1	-5.50	118.25	121.00
23	DA	2635	C	C5-C6-N1	-5.50	118.25	121.00
23	BA	1840	G	N1-C6-O6	5.50	123.20	119.90
23	DA	1670	C	N1-C2-O2	-5.50	115.60	118.90
23	BA	23	G	N3-C2-N2	-5.50	116.05	119.90
23	DA	1622	G	N1-C2-N3	5.50	127.20	123.90
23	DA	2022	U	C5-C4-O4	-5.50	122.60	125.90
23	DA	2702	U	C5-C6-N1	-5.50	119.95	122.70
23	BA	972	G	N3-C4-N9	5.49	129.30	126.00
23	DA	2044	C	C6-N1-C2	5.49	122.50	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	148	C	C2-N3-C4	-5.49	117.15	119.90
23	DA	737	C	C5-C4-N4	-5.49	116.36	120.20
23	BA	2053	G	C2-N3-C4	-5.49	109.16	111.90
23	DA	734	A	N9-C4-C5	-5.49	103.60	105.80
23	BA	564	C	N3-C4-C5	-5.49	119.70	121.90
23	BA	804	A	C6-N1-C2	-5.49	115.31	118.60
23	DA	1832	C	C5-C6-N1	-5.49	118.26	121.00
1	AA	720	C	C2-N1-C1'	5.48	124.83	118.80
23	DA	1295	C	C5-C6-N1	-5.48	118.26	121.00
23	BA	1616	A	C5-N7-C8	-5.48	101.16	103.90
23	DA	388	G	C6-C5-N7	5.48	133.69	130.40
23	DA	1157	G	N1-C6-O6	5.48	123.19	119.90
23	BA	2005	A	N1-C6-N6	5.48	121.89	118.60
1	CA	799	G	N1-C6-O6	5.48	123.19	119.90
23	DA	1704	G	C8-N9-C4	5.48	108.59	106.40
23	BA	36	G	C4-C5-N7	-5.48	108.61	110.80
23	BA	126	A	N1-C6-N6	5.48	121.89	118.60
23	BA	571	A	C8-N9-C4	-5.48	103.61	105.80
23	BA	408	G	N3-C4-C5	5.48	131.34	128.60
23	BA	589	C	N1-C2-O2	-5.48	115.61	118.90
23	DA	1782	C	N1-C2-O2	5.48	122.19	118.90
23	BA	334	C	N1-C2-O2	-5.47	115.62	118.90
23	BA	845	G	C4-N9-C1'	5.47	133.62	126.50
23	BA	1190	G	N1-C6-O6	5.47	123.19	119.90
23	BA	2076	U	C5-C4-O4	5.47	129.18	125.90
23	DA	513	A	N1-C2-N3	5.47	132.04	129.30
23	DA	114(B)	A	C5-C6-N1	-5.47	114.96	117.70
23	DA	1683	C	N1-C2-O2	-5.47	115.61	118.90
23	DA	2085	C	C5-C6-N1	-5.47	118.26	121.00
23	BA	768	G	C4-C5-C6	5.47	122.08	118.80
23	BA	786	C	C5-C6-N1	-5.47	118.26	121.00
23	DA	2358	G	C8-N9-C4	-5.47	104.21	106.40
12	AL	9	LEU	CA-CB-CG	-5.47	102.72	115.30
23	DA	1830	C	C5-C4-N4	-5.47	116.37	120.20
23	BA	675	A	C5-C6-N1	-5.47	114.97	117.70
23	BA	2719	G	C4-C5-N7	5.47	112.99	110.80
23	DA	784	A	N3-C4-N9	-5.47	123.02	127.40
23	DA	1657	C	N1-C2-O2	-5.47	115.62	118.90
23	BA	2513	G	N1-C6-O6	-5.47	116.62	119.90
1	AA	55	A	C8-N9-C4	-5.47	103.61	105.80
23	BA	2634	G	N7-C8-N9	-5.47	110.37	113.10
1	CA	35	G	N1-C6-O6	5.47	123.18	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2676	C	N1-C2-O2	-5.47	115.62	118.90
23	BA	512	G	N1-C6-O6	-5.46	116.62	119.90
23	DA	512	G	N3-C4-N9	-5.46	122.72	126.00
23	DA	2007	C	C2-N3-C4	-5.46	117.17	119.90
23	BA	94	G	N3-C4-N9	5.46	129.28	126.00
23	BA	1309	G	N1-C6-O6	5.46	123.18	119.90
23	BA	2556	C	N3-C4-N4	5.46	121.82	118.00
23	DA	681	G	C8-N9-C4	5.46	108.58	106.40
23	DA	2254	C	N1-C2-O2	-5.46	115.62	118.90
1	AA	1484	C	C6-N1-C2	5.46	122.48	120.30
23	DA	1368	G	C5-C6-N1	5.46	114.23	111.50
23	BA	2244	U	N3-C2-O2	-5.46	118.38	122.20
23	BA	2601	C	C6-N1-C2	5.46	122.48	120.30
23	BA	2619	C	C5-C6-N1	-5.46	118.27	121.00
23	DA	1604	C	N3-C4-N4	5.46	121.82	118.00
25	BC	46	GLN	N-CA-C	-5.46	96.27	111.00
1	CA	117	G	C5-C6-O6	-5.46	125.33	128.60
23	DA	802	A	N1-C2-N3	5.46	132.03	129.30
23	BA	494	G	C8-N9-C4	5.45	108.58	106.40
23	BA	1235	G	C5-C6-N1	-5.45	108.77	111.50
23	DA	261	G	N1-C6-O6	5.45	123.17	119.90
23	DA	1669	A	C8-N9-C4	-5.45	103.62	105.80
23	DA	1839	G	N3-C2-N2	-5.45	116.08	119.90
23	BA	71	A	C2-N3-C4	-5.45	107.88	110.60
23	DA	333	G	N1-C6-O6	5.45	123.17	119.90
23	DA	1294	U	N3-C2-O2	-5.45	118.39	122.20
23	DA	1325	G	C6-C5-N7	5.45	133.67	130.40
23	BA	722	A	C2-N3-C4	-5.45	107.88	110.60
23	DA	749	C	N3-C4-C5	5.45	124.08	121.90
23	DA	1982	C	N1-C2-O2	-5.45	115.63	118.90
23	DA	249	C	C6-N1-C2	5.45	122.48	120.30
23	BA	1677	A	N1-C2-N3	5.45	132.02	129.30
23	BA	2708	G	C5-C6-N1	-5.45	108.78	111.50
23	DA	1902	C	C5-C6-N1	-5.45	118.28	121.00
1	AA	1432	G	C5-C6-N1	-5.44	108.78	111.50
23	BA	774	A	N1-C2-N3	5.44	132.02	129.30
23	DA	2000	G	N1-C6-O6	-5.44	116.63	119.90
1	AA	45	U	C6-N1-C2	5.44	124.27	121.00
1	AA	1414	U	C6-N1-C2	5.44	124.27	121.00
23	BA	972	G	N3-C4-C5	-5.44	125.88	128.60
23	BA	2253	G	C6-C5-N7	-5.44	127.13	130.40
23	DA	2061	G	C6-C5-N7	-5.44	127.13	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	466	A	C8-N9-C4	5.44	107.98	105.80
23	DA	1624	G	C6-N1-C2	-5.44	121.83	125.10
23	DA	1964	G	N3-C4-N9	5.44	129.26	126.00
23	BA	104	U	C2-N1-C1'	-5.44	111.17	117.70
23	BA	1271	G	C8-N9-C1'	-5.44	119.93	127.00
23	BA	150	C	C6-N1-C2	5.44	122.47	120.30
23	DA	915	C	C5-C6-N1	5.44	123.72	121.00
23	BA	1616	A	C2-N3-C4	-5.43	107.88	110.60
23	DA	512	G	C4-N9-C1'	-5.43	119.44	126.50
23	DA	2448	A	C6-C5-N7	-5.43	128.50	132.30
23	DA	2648	C	C2-N1-C1'	-5.43	112.82	118.80
23	DA	2766	G	C4-N9-C1'	5.43	133.57	126.50
23	BA	807	U	N1-C2-N3	5.43	118.16	114.90
23	BA	1991	U	C5-C6-N1	-5.43	119.98	122.70
23	DA	1332	G	C6-C5-N7	5.43	133.66	130.40
23	BA	1763	G	C2-N3-C4	-5.43	109.19	111.90
23	DA	1689	A	N1-C6-N6	-5.43	115.34	118.60
23	DA	387	U	N3-C4-O4	5.43	123.20	119.40
23	BA	1516	U	N3-C2-O2	-5.43	118.40	122.20
23	DA	979	G	N7-C8-N9	5.43	115.81	113.10
23	DA	2253	G	C6-C5-N7	-5.43	127.14	130.40
23	DA	2544	G	C4-C5-N7	5.43	112.97	110.80
1	AA	327	A	C8-N9-C4	-5.43	103.63	105.80
1	CA	1523	G	C8-N9-C4	5.43	108.57	106.40
23	DA	116	C	N1-C2-O2	-5.43	115.64	118.90
23	BA	58	G	C8-N9-C1'	-5.42	119.95	127.00
23	BA	2028	U	N1-C2-O2	-5.42	119.00	122.80
1	CA	791	G	C8-N9-C4	5.42	108.57	106.40
23	BA	239	U	N1-C2-O2	-5.42	119.00	122.80
23	BA	510	C	N1-C2-O2	-5.42	115.65	118.90
23	BA	799	G	C5-C6-O6	-5.42	125.35	128.60
23	BA	1994	C	C5-C6-N1	-5.42	118.29	121.00
23	DA	2498	C	N1-C2-O2	-5.42	115.65	118.90
23	DA	694	U	N1-C2-O2	5.42	126.59	122.80
23	DA	1213	A	C8-N9-C4	5.42	107.97	105.80
23	DA	1323	U	C4-C5-C6	5.42	122.95	119.70
23	DA	1302	A	C4-C5-N7	-5.42	107.99	110.70
23	DA	2544	G	C8-N9-C4	5.42	108.57	106.40
1	AA	1527	C	C6-N1-C2	5.41	122.47	120.30
23	BA	2675	A	C8-N9-C4	5.41	107.97	105.80
23	DA	286	C	C6-N1-C2	5.41	122.47	120.30
23	DA	1403	C	C2-N3-C4	-5.41	117.19	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1572	A	N9-C4-C5	-5.41	103.64	105.80
23	DA	444	C	C2-N1-C1'	-5.41	112.85	118.80
23	DA	1842	G	C8-N9-C4	5.41	108.56	106.40
23	BA	2502	G	N9-C4-C5	-5.41	103.24	105.40
23	DA	258	G	N1-C6-O6	5.41	123.14	119.90
23	DA	936	C	C5-C6-N1	-5.41	118.30	121.00
23	DA	130	C	C2-N3-C4	-5.41	117.20	119.90
23	BA	2249	U	C6-N1-C2	-5.41	117.76	121.00
23	DA	2590	A	C2-N3-C4	-5.41	107.90	110.60
23	BA	193	U	C5-C6-N1	-5.40	120.00	122.70
23	BA	723	G	C8-N9-C4	5.40	108.56	106.40
23	DA	968	G	C8-N9-C4	5.40	108.56	106.40
23	BA	208	C	C6-N1-C2	5.40	122.46	120.30
23	BA	1789	A	C5-C6-N1	5.40	120.40	117.70
23	DA	271(B)	C	C6-N1-C2	5.40	122.46	120.30
23	DA	461	C	N3-C2-O2	5.40	125.68	121.90
23	DA	793	A	C8-N9-C4	-5.40	103.64	105.80
23	DA	2619	C	C2-N1-C1'	-5.40	112.86	118.80
23	BA	397	G	C6-C5-N7	-5.40	127.16	130.40
23	BA	1496	A	N7-C8-N9	5.40	116.50	113.80
1	CA	503	C	C5-C6-N1	5.40	123.70	121.00
23	DA	204	A	C8-N9-C4	5.40	107.96	105.80
1	AA	577	G	C8-N9-C4	5.40	108.56	106.40
1	AA	766	A	N1-C6-N6	5.40	121.84	118.60
23	BA	594	U	C4-C5-C6	5.40	122.94	119.70
23	BA	845	G	N3-C4-N9	5.40	129.24	126.00
23	DA	729	G	C4-N9-C1'	5.40	133.52	126.50
23	DA	2383	G	C4-N9-C1'	5.39	133.51	126.50
23	BA	124	G	N1-C6-O6	5.39	123.14	119.90
25	BC	242	ARG	N-CA-C	-5.39	96.44	111.00
23	DA	1204	A	N7-C8-N9	5.39	116.50	113.80
23	DA	2392	A	N7-C8-N9	5.39	116.50	113.80
23	DA	2519	U	C5-C6-N1	-5.39	120.00	122.70
23	BA	309	G	N1-C6-O6	5.39	123.13	119.90
23	BA	459	U	C5-C6-N1	-5.39	120.01	122.70
1	CA	899	C	C6-N1-C2	5.39	122.46	120.30
23	DA	2841	C	C6-N1-C2	5.39	122.46	120.30
23	DA	976	C	C5-C6-N1	-5.39	118.31	121.00
23	DA	1646	C	C6-N1-C2	5.39	122.45	120.30
23	DA	2846	G	C4-C5-N7	5.39	112.95	110.80
23	BA	535	C	N1-C2-O2	-5.39	115.67	118.90
23	BA	1290	C	C5-C6-N1	-5.39	118.31	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	312	G	C8-N9-C4	5.39	108.56	106.40
23	DA	1521	G	C8-N9-C4	-5.39	104.25	106.40
23	DA	1802	A	C4-C5-C6	5.39	119.69	117.00
23	DA	2253	G	C8-N9-C1'	-5.39	120.00	127.00
23	BA	1683	C	N3-C2-O2	5.38	125.67	121.90
1	CA	918	A	C8-N9-C4	-5.38	103.65	105.80
23	BA	1628	G	N1-C6-O6	5.38	123.13	119.90
23	BA	602	G	C6-C5-N7	5.38	133.63	130.40
23	BA	1204	A	C6-C5-N7	-5.38	128.53	132.30
23	DA	211	A	N7-C8-N9	-5.38	111.11	113.80
23	DA	814	C	C5-C6-N1	-5.38	118.31	121.00
23	DA	993	G	C6-C5-N7	5.38	133.63	130.40
23	BA	83	G	C6-N1-C2	5.38	128.33	125.10
23	DA	1801	G	C4-C5-N7	5.38	112.95	110.80
23	BA	1244	G	N7-C8-N9	-5.38	110.41	113.10
23	DA	375	C	C5-C6-N1	-5.38	118.31	121.00
23	DA	1309	G	N7-C8-N9	-5.38	110.41	113.10
23	DA	1423	G	C8-N9-C4	5.38	108.55	106.40
23	DA	1662	C	N1-C2-N3	5.38	122.97	119.20
23	BA	682	G	N1-C6-O6	-5.38	116.67	119.90
23	BA	2061	G	N1-C6-O6	5.38	123.13	119.90
23	BA	2496	C	N3-C2-O2	-5.38	118.14	121.90
23	DA	1792	G	N9-C4-C5	5.38	107.55	105.40
23	BA	1792	G	C8-N9-C4	-5.38	104.25	106.40
23	DA	1600	C	N3-C2-O2	5.38	125.66	121.90
23	BA	956	G	C8-N9-C4	5.37	108.55	106.40
23	BA	1934	C	C2-N1-C1'	-5.37	112.89	118.80
23	DA	1698	A	N7-C8-N9	5.37	116.49	113.80
23	DA	2592	G	C6-N1-C2	-5.37	121.88	125.10
23	DA	1164	G	C8-N9-C1'	-5.37	120.02	127.00
23	BA	2044	C	C5-C4-N4	-5.37	116.44	120.20
23	BA	2688	U	N3-C4-O4	-5.37	115.64	119.40
23	DA	55	G	C6-N1-C2	-5.37	121.88	125.10
23	BA	2596	U	C5-C4-O4	5.37	129.12	125.90
23	DA	681	G	N7-C8-N9	-5.37	110.42	113.10
23	DA	798	G	C5-C6-O6	-5.37	125.38	128.60
25	DC	46	GLN	N-CA-C	-5.37	96.50	111.00
23	BA	1286	A	C4-C5-N7	-5.37	108.02	110.70
23	DA	1980	G	N1-C2-N2	-5.37	111.37	116.20
23	BA	1264	G	C8-N9-C4	-5.37	104.25	106.40
23	DA	138	G	N7-C8-N9	5.37	115.78	113.10
1	AA	562	C	N3-C4-C5	5.36	124.05	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1616	A	C4-C5-N7	5.36	113.38	110.70
23	BA	2005	A	C8-N9-C4	5.36	107.94	105.80
23	DA	704	G	C5-C6-O6	-5.36	125.38	128.60
23	BA	1788	C	N3-C4-C5	5.36	124.04	121.90
23	DA	298	G	N7-C8-N9	5.36	115.78	113.10
23	DA	1555	G	C4-N9-C1'	5.36	133.47	126.50
23	DA	2824	C	N1-C2-O2	-5.36	115.68	118.90
23	BA	1161	C	C5-C6-N1	5.36	123.68	121.00
23	DA	1268	A	N1-C2-N3	5.36	131.98	129.30
23	BA	272	G	C4-N9-C1'	-5.36	119.53	126.50
23	BA	1385	G	C8-N9-C1'	5.36	133.97	127.00
23	DA	2713	A	N1-C2-N3	5.36	131.98	129.30
1	AA	266	G	N3-C4-C5	5.36	131.28	128.60
23	BA	746	A	C5-C6-N1	5.36	120.38	117.70
23	BA	1555	G	C4-N9-C1'	5.36	133.46	126.50
23	BA	2022	U	N1-C2-N3	-5.36	111.69	114.90
23	DA	489	G	C8-N9-C4	-5.36	104.26	106.40
23	DA	1429	G	C5-C6-O6	5.36	131.81	128.60
23	DA	2219	G	C8-N9-C4	5.36	108.54	106.40
23	DA	2743	C	N1-C2-O2	-5.36	115.69	118.90
23	DA	841	A	C5-C6-N1	5.35	120.38	117.70
23	DA	2082	A	C5-C6-N6	-5.35	119.42	123.70
1	AA	1480	G	C5-C6-O6	-5.35	125.39	128.60
23	BA	1783	A	N1-C2-N3	5.35	131.98	129.30
23	BA	2447	G	C5-C6-O6	-5.35	125.39	128.60
23	BA	2507	C	N3-C4-N4	-5.35	114.25	118.00
23	DA	83	G	C6-N1-C2	5.35	128.31	125.10
23	DA	2010	G	C5-N7-C8	-5.35	101.62	104.30
23	DA	586	A	N9-C4-C5	-5.35	103.66	105.80
23	DA	1802	A	C6-N1-C2	-5.35	115.39	118.60
23	BA	1385	G	N3-C4-N9	-5.35	122.79	126.00
23	DA	661	C	C2-N3-C4	-5.35	117.22	119.90
23	BA	434	U	N3-C2-O2	5.35	125.94	122.20
23	DA	133	C	C2-N3-C4	-5.35	117.23	119.90
23	BA	773	U	N1-C2-O2	-5.35	119.06	122.80
23	BA	797	C	C5-C6-N1	-5.35	118.33	121.00
23	BA	208	C	N3-C4-C5	5.34	124.04	121.90
23	DA	729	G	C6-C5-N7	-5.34	127.19	130.40
23	DA	2748	A	C8-N9-C4	-5.34	103.66	105.80
23	BA	578	A	N1-C6-N6	-5.34	115.39	118.60
23	BA	1163	G	N3-C2-N2	-5.34	116.16	119.90
23	DA	967	C	C5-C6-N1	-5.34	118.33	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2208	U	N3-C2-O2	5.34	125.94	122.20
23	DA	2324	C	N3-C4-N4	-5.34	114.26	118.00
23	BA	1022	G	C8-N9-C4	-5.34	104.27	106.40
23	DA	322	A	C8-N9-C4	-5.34	103.67	105.80
23	DA	827	U	C6-N1-C2	5.34	124.20	121.00
23	DA	2514	U	C6-N1-C2	5.34	124.20	121.00
23	DA	2707	G	C8-N9-C4	5.34	108.53	106.40
23	BA	1555	G	N3-C4-N9	5.33	129.20	126.00
23	BA	1400	G	N3-C4-C5	-5.33	125.93	128.60
23	BA	1496	A	C4-N9-C1'	5.33	135.90	126.30
23	BA	2280	G	C2-N3-C4	5.33	114.57	111.90
23	DA	179	G	N1-C6-O6	5.33	123.10	119.90
23	DA	2081	C	C2-N3-C4	-5.33	117.23	119.90
23	BA	1937	A	C2-N3-C4	-5.33	107.93	110.60
23	BA	2840	C	C6-N1-C2	5.33	122.43	120.30
1	CA	17	U	N3-C2-O2	-5.33	118.47	122.20
23	DA	2075	U	C5-C6-N1	-5.33	120.03	122.70
23	DA	2826	A	N1-C2-N3	5.33	131.97	129.30
23	BA	1495	A	N1-C2-N3	-5.33	126.64	129.30
23	BA	2507	C	C5-C6-N1	-5.33	118.33	121.00
23	DA	2007	C	C6-N1-C2	5.33	122.43	120.30
46	DX	29	GLY	N-CA-C	-5.33	99.78	113.10
23	DA	459	U	C5-C6-N1	-5.33	120.04	122.70
23	BA	1617	C	C6-N1-C2	5.33	122.43	120.30
23	DA	1317	A	C8-N9-C4	5.33	107.93	105.80
23	BA	211	A	C8-N9-C4	5.32	107.93	105.80
23	BA	1791	A	C8-N9-C4	5.32	107.93	105.80
23	DA	727	A	N1-C6-N6	5.32	121.79	118.60
23	DA	1700	A	N1-C6-N6	5.32	121.80	118.60
23	DA	1348	G	C4-C5-N7	5.32	112.93	110.80
23	DA	1606	G	C5-C6-N1	5.32	114.16	111.50
23	DA	1790	C	N3-C4-N4	-5.32	114.28	118.00
23	DA	2232	U	N3-C4-C5	-5.32	111.41	114.60
23	DA	2519	U	C6-N1-C2	5.32	124.19	121.00
23	BA	1191	G	N1-C6-O6	-5.32	116.71	119.90
23	BA	1664	A	C2-N3-C4	-5.32	107.94	110.60
23	DA	151	C	C6-N1-C2	5.32	122.43	120.30
23	DA	707	G	C8-N9-C4	5.32	108.53	106.40
23	DA	2419	U	C5-C4-O4	5.32	129.09	125.90
23	DA	1286	A	N1-C6-N6	-5.32	115.41	118.60
23	DA	2005	A	C5-C6-N1	-5.32	115.04	117.70
23	BA	2056	G	C8-N9-C1'	-5.32	120.09	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	34	C	C6-N1-C2	5.32	122.43	120.30
1	CA	926	G	C4-C5-N7	-5.32	108.67	110.80
23	DA	2433	A	C5-N7-C8	-5.32	101.24	103.90
23	BA	583	G	C5-C6-N1	5.32	114.16	111.50
23	BA	1200	C	N3-C2-O2	5.32	125.62	121.90
23	BA	1671	U	N1-C2-O2	-5.32	119.08	122.80
23	DA	2227	A	N3-C4-N9	-5.32	123.15	127.40
23	DA	1843	C	C2-N3-C4	-5.31	117.24	119.90
23	DA	2397	G	C6-C5-N7	-5.31	127.21	130.40
23	DA	2762	G	N1-C6-O6	5.31	123.09	119.90
34	DL	54	GLY	N-CA-C	-5.31	99.82	113.10
23	BA	1342	A	C4-C5-N7	5.31	113.36	110.70
23	BA	2004	G	N1-C6-O6	5.31	123.09	119.90
23	DA	958	U	C2-N1-C1'	5.31	124.08	117.70
23	DA	1327	C	N3-C4-C5	-5.31	119.78	121.90
23	BA	661	C	C5-C6-N1	-5.31	118.34	121.00
23	BA	1765	C	N1-C2-O2	-5.31	115.71	118.90
23	BA	2519	U	C5-C6-N1	-5.31	120.05	122.70
23	DA	408	G	N3-C4-C5	5.31	131.25	128.60
23	BA	211	A	N7-C8-N9	-5.31	111.15	113.80
23	DA	197	A	C5-C6-N6	-5.31	119.45	123.70
23	DA	300	A	N1-C6-N6	5.31	121.78	118.60
23	DA	1164	G	C4-N9-C1'	5.31	133.40	126.50
1	AA	1192	C	C5-C6-N1	5.31	123.65	121.00
23	BA	1775	U	N3-C4-O4	-5.31	115.69	119.40
1	AA	1053	G	N3-C4-C5	5.30	131.25	128.60
23	BA	1971	A	C5-C6-N6	-5.30	119.46	123.70
23	DA	2828	C	C6-N1-C2	5.30	122.42	120.30
23	BA	2345	G	C5-C6-O6	5.30	131.78	128.60
23	DA	138	G	C5-C6-N1	5.30	114.15	111.50
23	BA	116	C	C4-C5-C6	5.30	120.05	117.40
23	DA	115	C	C2-N3-C4	-5.30	117.25	119.90
23	DA	2271	G	C8-N9-C1'	-5.30	120.11	127.00
23	BA	1964	G	C8-N9-C1'	-5.30	120.11	127.00
23	BA	1204	A	C4-C5-N7	5.30	113.35	110.70
23	DA	1802	A	C8-N9-C4	-5.30	103.68	105.80
23	BA	126	A	C8-N9-C4	5.30	107.92	105.80
23	BA	945	A	N9-C4-C5	-5.30	103.68	105.80
23	BA	2688	U	C5-C6-N1	-5.30	120.05	122.70
23	DA	1400	G	N3-C4-C5	-5.30	125.95	128.60
23	DA	1613	G	N1-C2-N2	-5.30	111.43	116.20
23	DA	2250	G	N9-C4-C5	5.30	107.52	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	811	U	C2-N1-C1'	-5.29	111.35	117.70
23	DA	180	G	N9-C4-C5	-5.29	103.28	105.40
23	DA	334	C	N1-C2-O2	-5.29	115.72	118.90
23	DA	1268	A	C6-N1-C2	-5.29	115.42	118.60
23	DA	2399	G	N7-C8-N9	-5.29	110.45	113.10
23	BA	772	C	N3-C4-C5	5.29	124.02	121.90
23	BA	859	G	C8-N9-C4	5.29	108.52	106.40
23	BA	1309	G	C2-N3-C4	-5.29	109.25	111.90
24	BB	80	U	C5-C6-N1	-5.29	120.05	122.70
23	DA	783	A	N3-C4-C5	5.29	130.50	126.80
23	DA	1835	G	C5-C6-N1	5.29	114.14	111.50
23	DA	210	C	C2-N1-C1'	-5.29	112.98	118.80
23	DA	178	G	C8-N9-C4	5.29	108.52	106.40
23	BA	141(A)	A	C6-C5-N7	-5.29	128.60	132.30
23	BA	2075	U	C5-C6-N1	-5.29	120.06	122.70
1	CA	1415	G	C8-N9-C1'	-5.29	120.13	127.00
23	DA	2280	G	C5-C6-N1	5.29	114.14	111.50
23	BA	1138	G	N3-C4-C5	-5.28	125.96	128.60
23	BA	1615	C	N1-C2-O2	-5.28	115.73	118.90
23	BA	1942	C	C5-C6-N1	5.28	123.64	121.00
23	DA	72	U	N1-C2-N3	5.28	118.07	114.90
23	DA	1524	G	N3-C4-C5	-5.28	125.96	128.60
23	DA	2440	C	N3-C4-C5	-5.28	119.79	121.90
1	CA	55	A	C8-N9-C4	-5.28	103.69	105.80
23	DA	450	G	C6-C5-N7	-5.28	127.23	130.40
23	DA	687	C	N3-C4-C5	5.28	124.01	121.90
23	DA	1602	U	C5-C4-O4	5.28	129.07	125.90
23	DA	2524	G	N7-C8-N9	-5.28	110.46	113.10
23	DA	2626	C	C2-N1-C1'	-5.28	112.99	118.80
23	DA	2762	G	C4-C5-N7	5.28	112.91	110.80
23	DA	270(B)	A	N7-C8-N9	-5.28	111.16	113.80
23	DA	2685	G	C4-C5-C6	5.28	121.97	118.80
23	BA	244	A	C2-N3-C4	-5.28	107.96	110.60
23	BA	1614	A	C4-N9-C1'	5.28	135.80	126.30
23	BA	2081	C	C6-N1-C2	5.28	122.41	120.30
23	BA	2252	G	N1-C2-N3	5.28	127.07	123.90
23	BA	2271	G	N3-C2-N2	5.28	123.59	119.90
23	BA	2499	C	C4-C5-C6	5.28	120.04	117.40
1	CA	1515	C	C5-C6-N1	-5.28	118.36	121.00
23	DA	798	G	C6-C5-N7	-5.28	127.23	130.40
23	DA	802	A	C8-N9-C4	5.28	107.91	105.80
23	BA	94	G	C4-N9-C1'	5.28	133.36	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	531	C	C2-N3-C4	-5.28	117.26	119.90
23	BA	2513	G	C5-C6-N1	5.28	114.14	111.50
23	DA	2713	A	N7-C8-N9	5.28	116.44	113.80
23	DA	1385	G	C8-N9-C1'	5.27	133.86	127.00
23	DA	2252	G	C8-N9-C4	5.27	108.51	106.40
23	DA	2578	G	C8-N9-C4	5.27	108.51	106.40
23	BA	32	C	N3-C2-O2	5.27	125.59	121.90
23	BA	388	G	N3-C4-N9	-5.27	122.84	126.00
23	BA	937	U	C5-C6-N1	-5.27	120.06	122.70
23	BA	2783	G	N3-C4-N9	5.27	129.16	126.00
23	DA	1349	A	C5-C6-N6	-5.27	119.48	123.70
23	DA	2383	G	C8-N9-C1'	-5.27	120.15	127.00
23	BA	397	G	C8-N9-C4	5.27	108.51	106.40
23	BA	2574	G	N1-C2-N3	5.27	127.06	123.90
23	DA	2432	A	C4-C5-N7	5.27	113.33	110.70
23	BA	197	A	C5-C6-N6	-5.27	119.49	123.70
23	BA	720	C	C6-N1-C2	5.27	122.41	120.30
23	BA	738	G	C5-C6-O6	-5.27	125.44	128.60
23	BA	845	G	C8-N9-C1'	-5.27	120.15	127.00
23	DA	214	G	C4-N9-C1'	-5.27	119.65	126.50
23	DA	2276	G	C5-C6-O6	-5.27	125.44	128.60
23	DA	2564	A	N1-C6-N6	5.27	121.76	118.60
25	DC	52	ARG	NE-CZ-NH1	-5.27	117.67	120.30
23	DA	861	A	N7-C8-N9	5.27	116.43	113.80
23	DA	945	A	C1'-O4'-C4'	-5.27	105.69	109.90
23	DA	2555	U	C2-N1-C1'	-5.27	111.38	117.70
1	CA	819	A	N1-C6-N6	5.26	121.76	118.60
23	DA	2092	U	N1-C2-N3	5.26	118.06	114.90
23	DA	2271	G	N3-C2-N2	5.26	123.58	119.90
23	DA	2524	G	C8-N9-C4	5.26	108.51	106.40
23	BA	768	G	C8-N9-C1'	-5.26	120.16	127.00
1	CA	552	U	C2-N3-C4	-5.26	123.84	127.00
23	DA	677	A	N1-C2-N3	5.26	131.93	129.30
23	DA	2035	G	C4-C5-N7	-5.26	108.69	110.80
23	BA	806	C	C2-N1-C1'	5.26	124.59	118.80
23	BA	847	U	N3-C4-O4	-5.26	115.72	119.40
1	CA	918	A	N1-C6-N6	-5.26	115.44	118.60
23	DA	138	G	N3-C4-C5	-5.26	125.97	128.60
23	DA	1182	A	C8-N9-C4	-5.26	103.70	105.80
23	BA	1824	G	C6-N1-C2	-5.26	121.94	125.10
23	DA	340	A	C5-C6-N1	-5.26	115.07	117.70
23	DA	777	A	N1-C6-N6	-5.26	115.44	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1261	C	C2-N1-C1'	-5.26	113.02	118.80
23	BA	979	G	N7-C8-N9	5.26	115.73	113.10
23	BA	568	U	C2-N3-C4	5.25	130.15	127.00
23	DA	1282	U	C6-N1-C2	-5.25	117.85	121.00
23	BA	1493	C	C6-N1-C1'	-5.25	114.50	120.80
23	DA	1008	C	C6-N1-C2	5.25	122.40	120.30
23	DA	1322	A	C6-N1-C2	-5.25	115.45	118.60
23	DA	2570	G	C2-N3-C4	-5.25	109.27	111.90
23	DA	114	U	C2-N1-C1'	5.25	124.00	117.70
23	DA	2251	G	C6-N1-C2	-5.25	121.95	125.10
23	DA	2624	G	C8-N9-C4	5.25	108.50	106.40
23	DA	2055	C	C4-C5-C6	5.25	120.03	117.40
23	DA	1663	C	C2-N3-C4	-5.25	117.28	119.90
23	BA	801	G	N9-C4-C5	5.25	107.50	105.40
24	BB	98	G	C4-N9-C1'	5.25	133.32	126.50
23	DA	704	G	N9-C4-C5	-5.25	103.30	105.40
23	DA	746	A	C8-N9-C4	-5.25	103.70	105.80
23	DA	1190	G	N1-C6-O6	5.25	123.05	119.90
23	DA	1658	C	N3-C4-C5	5.25	124.00	121.90
23	BA	945	A	C1'-O4'-C4'	-5.25	105.70	109.90
23	BA	2501	C	C2-N1-C1'	-5.25	113.03	118.80
23	DA	1306	C	C6-N1-C2	5.25	122.40	120.30
23	DA	49	A	N1-C2-N3	-5.24	126.68	129.30
23	DA	1271	G	C8-N9-C1'	-5.24	120.18	127.00
23	DA	2789	C	C6-N1-C2	5.24	122.40	120.30
23	BA	444	C	N3-C2-O2	5.24	125.57	121.90
23	BA	1138	G	C4-N9-C1'	5.24	133.31	126.50
23	BA	1190	G	C5-N7-C8	-5.24	101.68	104.30
23	BA	2392	A	C4-C5-C6	5.24	119.62	117.00
23	BA	2464	C	C5-C6-N1	-5.24	118.38	121.00
23	DA	2391	G	C4-C5-N7	-5.24	108.70	110.80
23	DA	2574	G	N3-C4-N9	5.24	129.14	126.00
23	DA	929	G	C6-C5-N7	-5.24	127.26	130.40
23	DA	1655	A	N9-C4-C5	-5.24	103.70	105.80
23	BA	1647	G	C8-N9-C4	5.24	108.50	106.40
23	DA	2053	G	C6-C5-N7	-5.24	127.26	130.40
1	CA	1513	A	C8-N9-C4	5.24	107.89	105.80
23	DA	1345	C	C2-N3-C4	-5.24	117.28	119.90
23	DA	2378	A	C8-N9-C4	5.24	107.89	105.80
23	DA	2439	A	P-O3'-C3'	5.23	125.98	119.70
1	AA	1053	G	N3-C4-N9	-5.23	122.86	126.00
23	BA	1348	G	N1-C6-O6	5.23	123.04	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	576	G	C6-C5-N7	-5.23	127.26	130.40
1	CA	781	A	C4-C5-N7	5.23	113.32	110.70
23	DA	56	A	N1-C2-N3	5.23	131.92	129.30
23	DA	1898	U	C4-C5-C6	5.23	122.84	119.70
23	DA	1905	C	C6-N1-C2	5.23	122.39	120.30
23	DA	1977	A	C8-N9-C4	5.23	107.89	105.80
23	DA	2504	U	C5-C4-O4	5.23	129.04	125.90
23	BA	2236	C	C5-C6-N1	-5.23	118.39	121.00
23	DA	845	G	C8-N9-C1'	-5.23	120.20	127.00
23	DA	2250	G	N1-C6-O6	-5.23	116.76	119.90
23	DA	2581	G	C6-C5-N7	5.23	133.54	130.40
23	BA	1842	G	C8-N9-C1'	-5.23	120.20	127.00
1	AA	770	C	N3-C4-C5	5.23	123.99	121.90
23	BA	996	A	N1-C6-N6	5.23	121.74	118.60
23	BA	1558	A	C2-N3-C4	-5.23	107.99	110.60
23	BA	1980	G	N3-C4-N9	5.23	129.14	126.00
23	DA	1318	C	N3-C4-C5	5.23	123.99	121.90
23	DA	2049	G	C5-C6-O6	-5.23	125.47	128.60
23	BA	474	G	N3-C4-C5	-5.22	125.99	128.60
23	BA	723	G	C2-N3-C4	-5.22	109.29	111.90
23	BA	1612	C	C4-C5-C6	5.22	120.01	117.40
23	BA	2059	A	C5-C6-N1	5.22	120.31	117.70
23	DA	258	G	C5-C6-N1	-5.22	108.89	111.50
23	DA	1671	U	C6-N1-C2	-5.22	117.87	121.00
23	DA	993	G	N9-C4-C5	5.22	107.49	105.40
23	BA	1760	A	N1-C6-N6	-5.22	115.47	118.60
23	BA	811	U	C2-N1-C1'	-5.22	111.44	117.70
23	DA	698	C	C2-N1-C1'	-5.22	113.06	118.80
23	DA	727	A	C5-N7-C8	-5.22	101.29	103.90
23	DA	2247	A	N1-C2-N3	5.22	131.91	129.30
23	BA	1790	C	C2-N1-C1'	-5.22	113.06	118.80
23	DA	1842	G	C8-N9-C1'	-5.22	120.22	127.00
23	DA	2014	A	N9-C4-C5	-5.22	103.71	105.80
23	BA	1313	U	N1-C2-O2	-5.22	119.15	122.80
23	DA	131	G	C5-C6-N1	5.22	114.11	111.50
23	DA	810	U	N3-C2-O2	-5.22	118.55	122.20
23	DA	1021	A	C6-C5-N7	-5.22	128.65	132.30
23	DA	1617	C	N3-C2-O2	5.22	125.55	121.90
23	BA	705	A	C2-N3-C4	-5.21	107.99	110.60
23	BA	2091	U	C4-C5-C6	5.21	122.83	119.70
1	CA	811	C	C5-C6-N1	-5.21	118.39	121.00
23	DA	1496	A	C8-N9-C4	-5.21	103.71	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1677	A	C4-C5-C6	5.21	119.61	117.00
23	DA	1783	A	N1-C6-N6	-5.21	115.47	118.60
23	BA	1204	A	C2-N3-C4	-5.21	107.99	110.60
23	DA	729	G	C5-N7-C8	-5.21	101.69	104.30
23	DA	2427	C	N1-C2-O2	-5.21	115.77	118.90
23	BA	1821	A	N7-C8-N9	-5.21	111.19	113.80
23	DA	1589	C	N3-C4-C5	-5.21	119.81	121.90
23	BA	393	C	N1-C2-O2	-5.21	115.77	118.90
23	DA	945	A	C6-N1-C2	-5.21	115.47	118.60
23	DA	2088	G	N1-C2-N3	5.21	127.03	123.90
23	DA	2438	U	C2-N3-C4	-5.21	123.87	127.00
23	BA	1779	U	C5-C4-O4	-5.21	122.78	125.90
23	BA	2595	G	N9-C4-C5	-5.21	103.32	105.40
1	AA	904	C	N3-C2-O2	-5.21	118.25	121.90
23	BA	2328	A	C8-N9-C4	5.21	107.88	105.80
1	CA	1515	C	C4-C5-C6	5.21	120.00	117.40
23	DA	40	C	C2-N3-C4	-5.21	117.30	119.90
23	DA	2239	G	N1-C2-N3	5.21	127.02	123.90
24	BB	100	G	N9-C4-C5	-5.21	103.32	105.40
23	BA	1619	G	C8-N9-C4	5.20	108.48	106.40
23	BA	1663	C	C5-C6-N1	-5.20	118.40	121.00
23	DA	1624	G	N7-C8-N9	-5.20	110.50	113.10
23	DA	1699	G	N9-C4-C5	5.20	107.48	105.40
1	AA	1524	C	C6-N1-C2	5.20	122.38	120.30
23	DA	140	A	N1-C6-N6	5.20	121.72	118.60
23	DA	1398	C	N3-C4-C5	-5.20	119.82	121.90
23	DA	2377	A	C8-N9-C4	5.20	107.88	105.80
23	DA	2434	A	C8-N9-C4	-5.20	103.72	105.80
24	DB	100	G	C8-N9-C4	5.20	108.48	106.40
23	DA	74	A	C8-N9-C4	-5.20	103.72	105.80
23	DA	332	A	N1-C2-N3	5.20	131.90	129.30
23	DA	1443	G	C5-C6-O6	-5.20	125.48	128.60
23	DA	1605	C	C5-C6-N1	5.20	123.60	121.00
23	BA	679	C	N3-C2-O2	5.20	125.54	121.90
23	BA	1355	G	C5-C6-N1	5.20	114.10	111.50
23	BA	116	C	C5-C6-N1	-5.20	118.40	121.00
23	BA	959	A	C2-N3-C4	-5.20	108.00	110.60
23	BA	1645	G	N1-C6-O6	-5.20	116.78	119.90
23	BA	1776	G	N9-C4-C5	-5.20	103.32	105.40
23	BA	2241	A	N1-C2-N3	5.20	131.90	129.30
23	BA	2249	U	C5-C4-O4	5.20	129.02	125.90
23	DA	1030	G	N7-C8-N9	-5.20	110.50	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2717	G	N3-C4-C5	-5.20	126.00	128.60
1	CA	720	C	N1-C2-O2	5.19	122.02	118.90
23	DA	1330	C	N3-C2-O2	5.19	125.54	121.90
23	DA	2498	C	N3-C2-O2	5.19	125.54	121.90
23	DA	2774	C	C6-N1-C2	5.19	122.38	120.30
23	BA	773	U	N1-C2-N3	5.19	118.02	114.90
23	BA	1409	C	C6-N1-C2	5.19	122.38	120.30
23	DA	83	G	C5-C6-O6	5.19	131.72	128.60
23	DA	211	A	C5-C6-N6	5.19	127.85	123.70
23	DA	678	C	N3-C4-N4	-5.19	114.36	118.00
23	DA	1241	A	C2-N3-C4	-5.19	108.00	110.60
23	DA	2197	U	C5-C6-N1	-5.19	120.10	122.70
23	BA	1690	A	N1-C6-N6	-5.19	115.49	118.60
23	DA	247	G	N9-C4-C5	-5.19	103.32	105.40
23	DA	270(Z)	G	N3-C4-N9	-5.19	122.89	126.00
23	DA	1632	A	N1-C6-N6	5.19	121.72	118.60
23	DA	422	A	N1-C6-N6	-5.19	115.49	118.60
23	BA	298	G	C8-N9-C4	-5.19	104.33	106.40
23	BA	407	G	C4-N9-C1'	5.19	133.25	126.50
23	DA	443	A	N9-C4-C5	5.19	107.88	105.80
23	DA	647	G	C8-N9-C4	-5.19	104.33	106.40
23	DA	1558	A	C2-N3-C4	-5.19	108.01	110.60
23	DA	2522	U	C5-C6-N1	-5.19	120.11	122.70
23	DA	2670	A	C8-N9-C4	5.19	107.88	105.80
23	DA	69	C	C4-C5-C6	5.19	119.99	117.40
23	DA	70	G	N3-C4-C5	-5.18	126.01	128.60
23	DA	397	G	N3-C4-C5	5.18	131.19	128.60
23	DA	2032	G	N3-C4-N9	-5.18	122.89	126.00
23	DA	2876	G	C8-N9-C4	5.18	108.47	106.40
23	BA	1555	G	C8-N9-C1'	-5.18	120.27	127.00
23	DA	2070	G	C5-N7-C8	5.18	106.89	104.30
1	AA	576	G	C5-C6-N1	-5.18	108.91	111.50
23	BA	849	A	C4-C5-N7	5.18	113.29	110.70
23	DA	74	A	N1-C6-N6	-5.18	115.49	118.60
23	DA	473	G	N1-C2-N3	5.18	127.01	123.90
23	DA	2093	G	N1-C6-O6	5.18	123.01	119.90
23	DA	2547	U	C2-N3-C4	-5.18	123.89	127.00
1	AA	778	G	C4-N9-C1'	5.18	133.23	126.50
23	DA	455	C	N3-C4-C5	5.18	123.97	121.90
23	BA	458	G	N3-C4-N9	5.18	129.11	126.00
23	BA	774	A	N3-C4-N9	-5.18	123.26	127.40
23	DA	1926	U	C2-N1-C1'	-5.18	111.49	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1671	U	N1-C2-O2	-5.17	119.18	122.80
23	BA	1244	G	N9-C4-C5	-5.17	103.33	105.40
23	DA	1963	U	N3-C2-O2	-5.17	118.58	122.20
23	BA	2017	U	C5-C6-N1	-5.17	120.11	122.70
23	BA	2450	A	N1-C2-N3	5.17	131.89	129.30
1	CA	691	G	N9-C4-C5	-5.17	103.33	105.40
23	DA	1604	C	C5-C4-N4	-5.17	116.58	120.20
23	DA	1827	C	C5-C6-N1	-5.17	118.41	121.00
23	BA	849	A	N1-C6-N6	5.17	121.70	118.60
23	DA	116	C	C4-C5-C6	5.17	119.98	117.40
23	DA	1971	A	N9-C4-C5	-5.17	103.73	105.80
1	AA	395	C	C6-N1-C2	5.17	122.37	120.30
23	BA	935	C	C6-N1-C2	5.17	122.37	120.30
23	BA	1677	A	C5-N7-C8	-5.17	101.32	103.90
23	BA	2456	C	C4-C5-C6	-5.17	114.82	117.40
23	DA	1603	A	N7-C8-N9	5.17	116.38	113.80
1	AA	1508	G	C8-N9-C4	5.17	108.47	106.40
23	BA	1245	G	C8-N9-C4	5.17	108.47	106.40
23	BA	1769	G	N1-C2-N3	5.17	127.00	123.90
23	DA	271	G	C2-N3-C4	-5.17	109.32	111.90
1	AA	815	A	C5-C6-N6	5.17	127.83	123.70
23	BA	575	A	N7-C8-N9	-5.16	111.22	113.80
23	BA	1681	G	N1-C6-O6	5.16	123.00	119.90
23	DA	861	A	C8-N9-C4	-5.16	103.73	105.80
23	DA	1138	G	C8-N9-C1'	-5.16	120.29	127.00
23	DA	2253	G	N1-C6-O6	5.16	123.00	119.90
23	DA	2578	G	C4-C5-N7	5.16	112.86	110.80
23	BA	1783	A	C8-N9-C4	-5.16	103.73	105.80
23	BA	2675	A	N3-C4-C5	5.16	130.41	126.80
23	DA	1622	G	C2-N3-C4	-5.16	109.32	111.90
23	BA	96	G	C8-N9-C1'	-5.16	120.29	127.00
23	BA	2773	C	C6-N1-C2	5.16	122.36	120.30
23	DA	734	A	C2-N3-C4	-5.16	108.02	110.60
23	DA	1321	A	C2-N3-C4	-5.16	108.02	110.60
23	DA	1555	G	N3-C4-N9	5.16	129.10	126.00
23	DA	2017	U	N1-C2-N3	5.16	118.00	114.90
23	DA	520	G	N3-C4-N9	5.16	129.09	126.00
23	DA	819	A	C5-N7-C8	-5.16	101.32	103.90
23	BA	813	U	N1-C2-N3	5.16	117.99	114.90
23	BA	1666	G	N3-C4-N9	-5.16	122.91	126.00
23	BA	2824	C	C6-N1-C2	5.16	122.36	120.30
23	DA	809	G	C6-C5-N7	-5.16	127.31	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2846	G	N1-C6-O6	5.16	122.99	119.90
23	BA	802	A	C8-N9-C4	5.16	107.86	105.80
23	BA	1803	A	N7-C8-N9	-5.16	111.22	113.80
1	CA	1484	C	C6-N1-C2	5.16	122.36	120.30
23	DA	908	C	N1-C2-O2	-5.16	115.81	118.90
23	DA	1770	G	C6-C5-N7	-5.16	127.31	130.40
23	DA	2532	G	N9-C4-C5	-5.16	103.34	105.40
23	BA	384	U	C5-C6-N1	-5.15	120.12	122.70
23	DA	1996	C	C5-C6-N1	-5.15	118.42	121.00
23	BA	803	U	C4-C5-C6	5.15	122.79	119.70
23	BA	2688	U	N3-C2-O2	-5.15	118.59	122.20
23	DA	1395	A	C5-C6-N1	5.15	120.28	117.70
1	AA	264	U	N1-C2-N3	5.15	117.99	114.90
23	BA	114(B)	A	C4-C5-N7	5.15	113.28	110.70
23	BA	2253	G	N1-C6-O6	5.15	122.99	119.90
46	BX	27	GLU	N-CA-C	5.15	124.91	111.00
23	DA	302	C	C2-N1-C1'	-5.15	113.14	118.80
23	BA	706	A	C2-N3-C4	-5.15	108.03	110.60
23	BA	2395	C	C6-N1-C2	5.15	122.36	120.30
23	BA	140	A	N7-C8-N9	5.15	116.37	113.80
23	BA	397	G	C2-N3-C4	-5.15	109.33	111.90
23	BA	530	G	N1-C2-N2	-5.15	111.57	116.20
23	BA	660	G	C8-N9-C4	5.15	108.46	106.40
23	BA	2681	C	C2-N3-C4	-5.15	117.33	119.90
34	DL	61	ARG	NE-CZ-NH2	-5.15	117.73	120.30
23	BA	1832	C	N1-C2-O2	-5.14	115.81	118.90
23	DA	1616	A	C5-C6-N6	-5.14	119.58	123.70
23	DA	2419	U	C2-N1-C1'	-5.14	111.53	117.70
23	DA	2605	U	N1-C2-N3	5.14	117.99	114.90
23	DA	2724	C	N3-C4-C5	5.14	123.96	121.90
23	DA	1815	A	C4-C5-N7	-5.14	108.13	110.70
23	DA	2505	G	N3-C4-N9	-5.14	122.92	126.00
23	BA	460	A	C2-N3-C4	-5.14	108.03	110.60
23	BA	1122	G	C4-N9-C1'	-5.14	119.82	126.50
23	DA	2766	G	C8-N9-C4	-5.14	104.34	106.40
1	AA	1415	G	C5-C6-N1	-5.14	108.93	111.50
1	CA	576	G	N1-C6-O6	5.14	122.98	119.90
23	DA	114(B)	A	N7-C8-N9	5.14	116.37	113.80
23	BA	2584	U	N3-C4-O4	5.14	123.00	119.40
1	CA	768	A	N7-C8-N9	-5.14	111.23	113.80
23	DA	2078	C	N3-C4-C5	5.14	123.95	121.90
23	BA	1841	U	N3-C2-O2	5.14	125.80	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	750	A	C5-C6-N6	-5.14	119.59	123.70
23	DA	1005	C	N3-C4-C5	5.14	123.95	121.90
23	DA	1024	G	N9-C4-C5	-5.14	103.34	105.40
23	DA	1573	G	C8-N9-C4	5.14	108.45	106.40
23	DA	2626	C	N3-C4-C5	5.14	123.95	121.90
23	BA	429	A	C6-N1-C2	-5.13	115.52	118.60
23	BA	774	A	C5-N7-C8	-5.13	101.33	103.90
23	BA	1157	G	N1-C6-O6	5.13	122.98	119.90
1	CA	674	G	N1-C6-O6	5.13	122.98	119.90
1	CA	1053	G	N3-C4-C5	5.13	131.17	128.60
23	DA	588	U	N3-C4-C5	-5.13	111.52	114.60
40	DR	18	LEU	CA-CB-CG	5.13	127.11	115.30
23	BA	1670	C	N1-C2-O2	-5.13	115.82	118.90
23	DA	681	G	N1-C2-N3	5.13	126.98	123.90
23	BA	2454	G	C4-C5-N7	-5.13	108.75	110.80
23	BA	2590	A	N1-C6-N6	5.13	121.68	118.60
23	BA	2597	G	N3-C4-C5	5.13	131.17	128.60
24	BB	80	U	C2-N1-C1'	-5.13	111.54	117.70
23	DA	62	C	C5-C6-N1	-5.13	118.43	121.00
23	DA	104	U	C2-N1-C1'	-5.13	111.54	117.70
23	DA	2564	A	C5-N7-C8	-5.13	101.33	103.90
1	CA	43	C	C5-C6-N1	-5.13	118.44	121.00
23	DA	1363	C	N1-C2-N3	5.13	122.79	119.20
23	BA	140	A	C6-C5-N7	-5.13	128.71	132.30
23	BA	795	C	C2-N3-C4	-5.13	117.33	119.90
23	DA	2345	G	C5-C6-N1	-5.13	108.94	111.50
1	AA	922	G	N1-C6-O6	5.13	122.98	119.90
23	BA	2555	U	C6-N1-C1'	5.13	128.38	121.20
23	DA	1673	U	C5-C4-O4	-5.13	122.82	125.90
23	DA	561	G	C8-N9-C4	5.12	108.45	106.40
23	DA	2762	G	C5-C6-O6	-5.12	125.53	128.60
1	AA	758	G	N1-C6-O6	5.12	122.97	119.90
23	BA	1680	U	N3-C2-O2	-5.12	118.61	122.20
23	DA	1666	G	N3-C4-N9	-5.12	122.93	126.00
23	DA	2445	G	C2-N3-C4	-5.12	109.34	111.90
23	DA	2502	G	C4-C5-N7	5.12	112.85	110.80
23	DA	2680	C	C6-N1-C2	5.12	122.35	120.30
23	BA	2563	U	C5-C6-N1	-5.12	120.14	122.70
23	DA	2078	C	C5-C4-N4	-5.12	116.61	120.20
23	DA	2244	U	C2-N1-C1'	5.12	123.85	117.70
23	DA	2330	G	N3-C4-C5	5.12	131.16	128.60
23	DA	934	G	N1-C6-O6	5.12	122.97	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2002	G	C4-C5-C6	-5.12	115.73	118.80
23	DA	802	A	C4-N9-C1'	5.12	135.51	126.30
23	DA	1788	C	C2-N3-C4	-5.12	117.34	119.90
23	BA	979	G	N3-C2-N2	-5.12	116.32	119.90
1	CA	1482	G	N9-C4-C5	-5.12	103.35	105.40
23	DA	1235	G	C8-N9-C1'	-5.12	120.35	127.00
23	DA	2627	G	C4-C5-N7	5.12	112.85	110.80
23	BA	378	C	N1-C2-O2	-5.11	115.83	118.90
23	BA	387	U	N1-C2-N3	5.11	117.97	114.90
23	BA	687	C	N1-C2-O2	-5.11	115.83	118.90
23	BA	1902	C	N3-C2-O2	-5.11	118.32	121.90
23	BA	2433	A	C6-N1-C2	-5.11	115.53	118.60
23	DA	97	C	C5-C6-N1	-5.11	118.44	121.00
23	DA	150	C	N3-C4-C5	5.11	123.94	121.90
23	DA	773	U	N1-C2-N3	5.11	117.97	114.90
23	DA	2054	A	C6-C5-N7	-5.11	128.72	132.30
23	DA	2681	C	C4-C5-C6	5.11	119.96	117.40
1	AA	1053	G	N1-C2-N3	-5.11	120.83	123.90
23	BA	338	G	N3-C4-N9	5.11	129.07	126.00
23	BA	572	A	C5-C6-N6	-5.11	119.61	123.70
23	BA	1224	C	N3-C2-O2	5.11	125.48	121.90
23	BA	2041	U	C2-N3-C4	-5.11	123.93	127.00
23	BA	2432	A	C4-C5-C6	5.11	119.56	117.00
23	BA	2574	G	C6-N1-C2	-5.11	122.03	125.10
23	DA	336	C	C4-C5-C6	5.11	119.96	117.40
23	DA	2392	A	C2-N3-C4	-5.11	108.05	110.60
23	DA	2600	A	C8-N9-C4	5.11	107.84	105.80
23	BA	1309	G	C6-C5-N7	-5.11	127.33	130.40
23	BA	1612	C	N1-C2-O2	-5.11	115.83	118.90
23	BA	1980	G	C5-C6-N1	5.11	114.06	111.50
1	CA	583	A	N1-C6-N6	5.11	121.67	118.60
1	CA	898	G	C8-N9-C4	5.11	108.44	106.40
23	BA	1138	G	C8-N9-C1'	-5.11	120.36	127.00
23	BA	1627	G	C6-C5-N7	-5.11	127.33	130.40
23	BA	2056	G	C5-N7-C8	-5.11	101.75	104.30
23	BA	2581	G	N3-C4-N9	-5.11	122.94	126.00
23	DA	428	A	N1-C2-N3	5.11	131.85	129.30
23	DA	768	G	C5-N7-C8	5.11	106.85	104.30
23	DA	1603	A	N1-C2-N3	5.11	131.85	129.30
23	DA	2681	C	C6-N1-C2	5.11	122.34	120.30
23	BA	559	G	C8-N9-C4	5.11	108.44	106.40
23	BA	760	G	N9-C4-C5	-5.11	103.36	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1778	U	C5-C6-N1	-5.11	120.15	122.70
23	BA	1962	C	C2-N3-C4	5.11	122.45	119.90
23	DA	1710	C	C6-N1-C2	5.11	122.34	120.30
23	DA	1899	G	C5-C6-N1	-5.11	108.95	111.50
23	DA	1960	A	N7-C8-N9	-5.11	111.25	113.80
23	DA	2036	C	N3-C4-N4	5.11	121.57	118.00
23	BA	1325	G	C6-C5-N7	5.10	133.46	130.40
23	BA	1941	C	C6-N1-C2	5.10	122.34	120.30
23	DA	845	G	C6-C5-N7	-5.10	127.34	130.40
23	BA	970	C	C5-C4-N4	-5.10	116.63	120.20
23	BA	987	G	N3-C2-N2	-5.10	116.33	119.90
23	DA	2048	G	C5-C6-N1	5.10	114.05	111.50
23	DA	2539	C	C5-C6-N1	-5.10	118.45	121.00
23	DA	2673	G	C6-C5-N7	-5.10	127.34	130.40
1	AA	895	G	C8-N9-C4	5.10	108.44	106.40
23	DA	207	A	C6-N1-C2	-5.10	115.54	118.60
23	BA	1253	A	C5-C6-N1	5.10	120.25	117.70
23	DA	65	C	N3-C2-O2	5.10	125.47	121.90
23	DA	120	U	C6-N1-C2	5.10	124.06	121.00
23	DA	203	C	C5-C6-N1	-5.10	118.45	121.00
23	DA	1611	C	C5-C4-N4	-5.10	116.63	120.20
23	DA	2086	U	N3-C2-O2	-5.10	118.63	122.20
23	DA	2232	U	C2-N1-C1'	-5.10	111.58	117.70
23	BA	1942	C	C6-N1-C2	-5.10	118.26	120.30
23	DA	190	A	C6-N1-C2	-5.10	115.54	118.60
23	DA	332	A	N9-C4-C5	5.10	107.84	105.80
23	DA	452	G	C5-C6-O6	-5.10	125.54	128.60
23	DA	746	A	N9-C4-C5	5.10	107.84	105.80
23	DA	2742	C	C6-N1-C2	5.10	122.34	120.30
23	BA	1444	G	C8-N9-C4	5.10	108.44	106.40
23	DA	655	A	N7-C8-N9	5.10	116.35	113.80
23	BA	1776	G	N1-C2-N2	-5.09	111.61	116.20
23	DA	1341	U	C2-N3-C4	5.09	130.06	127.00
23	DA	98	G	C4-C5-N7	5.09	112.84	110.80
23	DA	2580	U	C6-N1-C1'	5.09	128.33	121.20
23	BA	2032	G	C4-C5-C6	-5.09	115.75	118.80
23	BA	2841	C	N3-C4-C5	5.09	123.94	121.90
23	DA	140	A	C6-C5-N7	-5.09	128.74	132.30
23	DA	465	G	C6-C5-N7	-5.09	127.34	130.40
23	DA	640	C	N3-C4-C5	5.09	123.94	121.90
23	BA	1342	A	C5-N7-C8	-5.09	101.36	103.90
23	BA	1551	C	C6-N1-C2	-5.09	118.26	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1573	G	N7-C8-N9	-5.09	110.56	113.10
23	BA	2061	G	C6-C5-N7	-5.09	127.35	130.40
23	DA	211	A	C8-N9-C4	5.09	107.83	105.80
23	DA	595	C	C2-N3-C4	-5.09	117.36	119.90
23	DA	1817	G	C2-N3-C4	-5.09	109.36	111.90
23	BA	387	U	N1-C2-O2	-5.09	119.24	122.80
23	BA	2714	G	C4-N9-C1'	5.09	133.11	126.50
23	DA	135	G	N1-C6-O6	5.09	122.95	119.90
23	DA	677	A	N7-C8-N9	-5.09	111.26	113.80
23	DA	784	A	C4-N9-C1'	-5.09	117.14	126.30
23	DA	2006	C	C4-C5-C6	5.09	119.94	117.40
23	DA	2462	U	C5-C4-O4	-5.09	122.85	125.90
23	DA	294	A	N9-C4-C5	-5.08	103.77	105.80
23	DA	795	C	C6-N1-C2	5.08	122.33	120.30
23	BA	566	U	C2-N3-C4	-5.08	123.95	127.00
23	BA	848	G	N9-C4-C5	-5.08	103.37	105.40
23	BA	114(B)	A	C4-N9-C1'	5.08	135.45	126.30
23	DA	847	U	N1-C2-N3	5.08	117.95	114.90
23	DA	2619	C	N3-C2-O2	5.08	125.46	121.90
23	BA	565	C	N3-C4-C5	-5.08	119.87	121.90
23	BA	677	A	N3-C4-C5	5.08	130.36	126.80
23	DA	458	G	N3-C2-N2	5.08	123.46	119.90
23	DA	566	U	C5-C6-N1	-5.08	120.16	122.70
23	BA	2489	G	C2-N3-C4	-5.08	109.36	111.90
23	DA	98	G	C6-C5-N7	-5.08	127.35	130.40
23	DA	1904	G	N1-C6-O6	-5.08	116.85	119.90
23	DA	2497	A	N3-C4-C5	5.08	130.35	126.80
25	DC	215	LEU	CA-CB-CG	-5.08	103.62	115.30
23	BA	1137	G	N1-C6-O6	5.08	122.95	119.90
23	BA	1662	C	C5-C6-N1	-5.08	118.46	121.00
23	BA	1803	A	C8-N9-C4	5.08	107.83	105.80
23	DA	1672	C	N3-C4-N4	5.08	121.55	118.00
23	DA	2724	C	C2-N3-C4	-5.08	117.36	119.90
23	BA	640	C	C2-N3-C4	-5.08	117.36	119.90
23	DA	532	A	C5-N7-C8	5.08	106.44	103.90
23	DA	789	A	N1-C6-N6	5.08	121.64	118.60
23	DA	1378	A	N9-C4-C5	5.08	107.83	105.80
23	DA	1571	A	C8-N9-C4	5.08	107.83	105.80
23	DA	2238	G	C6-C5-N7	-5.08	127.36	130.40
23	BA	2279	G	N3-C4-C5	-5.07	126.06	128.60
1	CA	907	A	C8-N9-C4	-5.07	103.77	105.80
23	DA	1825	A	C5-C6-N1	5.07	120.24	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	867	C	N3-C4-C5	-5.07	119.87	121.90
23	BA	582	G	C8-N9-C4	5.07	108.43	106.40
23	BA	738	G	N1-C6-O6	5.07	122.94	119.90
23	BA	2544	G	C5-N7-C8	-5.07	101.77	104.30
23	DA	240	G	C4-C5-N7	-5.07	108.77	110.80
23	DA	509	C	C5-C6-N1	-5.07	118.47	121.00
23	DA	1592	C	C5-C6-N1	-5.07	118.46	121.00
23	DA	2698	U	C4-C5-C6	5.07	122.74	119.70
34	DL	50	ARG	NE-CZ-NH2	-5.07	117.77	120.30
1	AA	560	U	C2-N1-C1'	5.07	123.78	117.70
23	BA	2004	G	C2-N3-C4	-5.07	109.37	111.90
23	BA	2697	G	C2-N3-C4	-5.07	109.37	111.90
23	DA	1128	A	C2-N3-C4	5.07	113.13	110.60
23	DA	1128	A	C5-C6-N1	5.07	120.23	117.70
23	DA	2715	C	C6-N1-C2	5.07	122.33	120.30
23	BA	844	C	C5-C6-N1	-5.07	118.47	121.00
23	BA	1332	G	C6-C5-N7	5.07	133.44	130.40
23	BA	2432	A	C2-N3-C4	-5.07	108.07	110.60
23	DA	366(B)	C	N1-C2-O2	-5.07	115.86	118.90
23	DA	748	G	N7-C8-N9	-5.07	110.57	113.10
23	DA	1024	G	C8-N9-C1'	-5.07	120.42	127.00
23	DA	797	C	C4-C5-C6	5.06	119.93	117.40
23	DA	1286	A	C5-C6-N6	5.06	127.75	123.70
23	BA	2028	U	N1-C2-N3	5.06	117.94	114.90
23	BA	2346	A	C8-N9-C4	-5.06	103.78	105.80
23	DA	500	G	C8-N9-C4	5.06	108.42	106.40
23	DA	582	G	N1-C2-N3	5.06	126.94	123.90
23	DA	1225	G	N3-C2-N2	5.06	123.44	119.90
23	DA	1825	A	N1-C2-N3	5.06	131.83	129.30
23	DA	2435	A	C5-N7-C8	-5.06	101.37	103.90
23	BA	189	G	C8-N9-C1'	-5.06	120.42	127.00
23	BA	2035	G	C6-C5-N7	5.06	133.44	130.40
23	BA	2084	C	N3-C4-C5	5.06	123.92	121.90
40	BR	18	LEU	CA-CB-CG	5.06	126.94	115.30
23	DA	771	G	C5-C6-O6	-5.06	125.56	128.60
23	DA	2087	G	N1-C6-O6	5.06	122.94	119.90
1	AA	901	A	C5-N7-C8	-5.06	101.37	103.90
23	BA	1998	G	C8-N9-C4	5.06	108.42	106.40
23	DA	201	C	C5-C6-N1	-5.06	118.47	121.00
23	DA	600	G	C8-N9-C4	5.06	108.42	106.40
23	DA	956	G	C2-N3-C4	-5.06	109.37	111.90
23	DA	1631	A	N1-C2-N3	5.06	131.83	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2233	U	N1-C2-O2	-5.06	119.26	122.80
1	AA	1529	G	C4-N9-C1'	5.06	133.07	126.50
23	DA	2876	G	N9-C4-C5	-5.06	103.38	105.40
1	AA	819	A	N1-C6-N6	5.05	121.63	118.60
23	BA	120	U	C6-N1-C2	5.05	124.03	121.00
23	BA	1807	G	N1-C6-O6	-5.05	116.87	119.90
23	BA	2698	U	C5-C4-O4	5.05	128.93	125.90
23	DA	263	C	N3-C4-C5	5.05	123.92	121.90
23	DA	2026	C	N1-C2-O2	-5.05	115.87	118.90
23	BA	70	G	N3-C4-C5	-5.05	126.07	128.60
23	BA	1240	U	N3-C4-C5	-5.05	111.57	114.60
23	BA	2056	G	C5-C6-O6	-5.05	125.57	128.60
23	BA	2391	G	N9-C4-C5	5.05	107.42	105.40
1	AA	1512	U	C4-C5-C6	5.05	122.73	119.70
23	BA	761	A	N3-C4-N9	5.05	131.44	127.40
23	BA	1634	A	N9-C4-C5	5.05	107.82	105.80
23	DA	771	G	C4-C5-N7	5.05	112.82	110.80
23	BA	374	A	C8-N9-C4	5.05	107.82	105.80
23	BA	2059	A	N7-C8-N9	-5.05	111.28	113.80
23	BA	2346	A	N7-C8-N9	5.05	116.33	113.80
23	DA	1686	C	N1-C2-O2	-5.05	115.87	118.90
23	DA	1496	A	C6-C5-N7	-5.05	128.77	132.30
23	DA	1677	A	N9-C4-C5	5.05	107.82	105.80
23	DA	1951	U	C5-C6-N1	-5.05	120.18	122.70
23	BA	334	C	C3'-C2'-C1'	5.05	105.54	101.50
23	BA	675	A	C5-N7-C8	-5.05	101.38	103.90
23	BA	681	G	C8-N9-C1'	-5.05	120.44	127.00
23	BA	807	U	N3-C4-O4	-5.05	115.87	119.40
23	BA	1649	G	C2-N3-C4	-5.05	109.38	111.90
23	DA	1634	A	C8-N9-C4	5.05	107.82	105.80
23	DA	1687	G	C5-C6-N1	-5.05	108.98	111.50
23	BA	2426	A	C5-N7-C8	-5.04	101.38	103.90
23	BA	2518	A	C2-N3-C4	-5.04	108.08	110.60
23	BA	2777	G	N7-C8-N9	-5.04	110.58	113.10
23	DA	1658	C	C6-N1-C1'	-5.04	114.75	120.80
23	DA	2497	A	N3-C4-N9	-5.04	123.36	127.40
1	AA	1530	G	N1-C6-O6	5.04	122.93	119.90
1	CA	691	G	C6-C5-N7	-5.04	127.37	130.40
23	DA	334	C	C3'-C2'-C1'	5.04	105.53	101.50
23	DA	1368	G	N1-C6-O6	-5.04	116.87	119.90
23	BA	1210	A	C5-C6-N1	-5.04	115.18	117.70
23	BA	1903	G	C8-N9-C4	5.04	108.42	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2580	U	N1-C2-N3	5.04	117.92	114.90
1	CA	720	C	C2-N1-C1'	5.04	124.35	118.80
23	DA	389	G	C8-N9-C4	5.04	108.42	106.40
1	AA	810	C	C4-C5-C6	5.04	119.92	117.40
23	BA	19	C	C2-N3-C4	-5.04	117.38	119.90
23	BA	1198	U	N1-C2-N3	5.04	117.92	114.90
23	DA	337	C	C2-N1-C1'	-5.04	113.26	118.80
23	DA	441	U	C6-N1-C2	5.04	124.02	121.00
23	DA	2572	A	N1-C6-N6	5.04	121.62	118.60
23	DA	2448	A	C2-N3-C4	-5.04	108.08	110.60
23	BA	543	C	C5-C6-N1	-5.04	118.48	121.00
23	BA	1155	A	C8-N9-C4	-5.04	103.79	105.80
23	DA	1203	G	C4-C5-N7	-5.04	108.79	110.80
23	DA	1351	C	C6-N1-C2	5.04	122.31	120.30
23	DA	1633	G	C5-C6-N1	-5.04	108.98	111.50
23	DA	1644	C	C2-N1-C1'	5.04	124.34	118.80
23	DA	2323	G	C8-N9-C4	5.04	108.41	106.40
23	DA	2327	A	N1-C6-N6	5.04	121.62	118.60
1	AA	1097	C	C6-N1-C2	-5.03	118.29	120.30
23	DA	681	G	N3-C4-N9	5.03	129.02	126.00
23	DA	1122	G	C4-N9-C1'	-5.03	119.96	126.50
1	AA	575	G	N1-C6-O6	-5.03	116.88	119.90
23	BA	784	A	C4-N9-C1'	-5.03	117.24	126.30
23	BA	2538	C	C5-C6-N1	-5.03	118.48	121.00
23	DA	686	G	N1-C6-O6	5.03	122.92	119.90
23	BA	1899	G	C8-N9-C1'	5.03	133.54	127.00
23	BA	2327	A	C8-N9-C4	5.03	107.81	105.80
23	BA	2839	G	C5-C6-O6	-5.03	125.58	128.60
23	DA	31	C	N3-C4-C5	5.03	123.91	121.90
23	DA	202	U	C5-C4-O4	-5.03	122.88	125.90
23	DA	1022	G	N1-C2-N3	5.03	126.92	123.90
23	DA	2490	G	N9-C4-C5	-5.03	103.39	105.40
23	DA	1653	G	C8-N9-C1'	-5.03	120.46	127.00
23	BA	1558	A	C5-C6-N1	-5.03	115.19	117.70
23	BA	1971	A	C4-C5-N7	5.03	113.21	110.70
23	DA	809	G	N1-C2-N3	5.03	126.92	123.90
23	DA	1365	A	C5-N7-C8	-5.03	101.39	103.90
23	DA	1499	C	C2-N1-C1'	-5.03	113.27	118.80
23	DA	2731	G	C5-C6-N1	5.03	114.01	111.50
23	BA	2440	C	C2-N1-C1'	-5.03	113.27	118.80
23	BA	2597	G	C2-N3-C4	-5.03	109.39	111.90
23	DA	1661	G	C5-C6-N1	5.03	114.01	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	835	A	C5-N7-C8	5.02	106.41	103.90
23	DA	855	G	C8-N9-C4	-5.02	104.39	106.40
23	DA	1299	G	C8-N9-C4	5.02	108.41	106.40
23	BA	834	C	N3-C4-N4	-5.02	114.48	118.00
1	CA	552	U	N3-C4-O4	-5.02	115.89	119.40
23	DA	671	C	N3-C4-N4	5.02	121.52	118.00
23	DA	1022	G	C4-C5-N7	-5.02	108.79	110.80
23	BA	802	A	C4-N9-C1'	5.02	135.34	126.30
23	DA	450	G	N3-C4-C5	-5.02	126.09	128.60
23	DA	727	A	C8-N9-C4	-5.02	103.79	105.80
23	DA	2333	A	C8-N9-C4	5.02	107.81	105.80
23	BA	2766	G	C4-N9-C1'	5.02	133.03	126.50
23	DA	473	G	C8-N9-C4	5.02	108.41	106.40
23	DA	1493	C	C6-N1-C1'	-5.02	114.78	120.80
23	DA	1792	G	C8-N9-C4	-5.02	104.39	106.40
23	BA	1270	C	C6-N1-C1'	5.02	126.82	120.80
23	DA	1375	C	C5-C4-N4	-5.02	116.69	120.20
23	BA	789	A	N9-C4-C5	-5.01	103.79	105.80
23	BA	2064	C	C6-N1-C2	-5.01	118.29	120.30
23	BA	2555	U	C2-N1-C1'	-5.01	111.68	117.70
23	DA	803	U	N1-C2-N3	5.01	117.91	114.90
23	DA	968	G	N9-C4-C5	-5.01	103.39	105.40
23	DA	1185	C	N3-C4-C5	5.01	123.91	121.90
23	BA	2448	A	C2-N3-C4	-5.01	108.09	110.60
23	DA	2330	G	N7-C8-N9	-5.01	110.59	113.10
1	AA	917	G	C4-N9-C1'	5.01	133.01	126.50
23	BA	964	C	N3-C4-C5	5.01	123.91	121.90
23	BA	1325	G	N3-C4-N9	-5.01	122.99	126.00
23	BA	1948	G	N3-C4-C5	-5.01	126.09	128.60
23	BA	2443	C	N1-C2-O2	5.01	121.91	118.90
23	BA	2596	U	C6-N1-C2	5.01	124.01	121.00
23	DA	530	G	C5-C6-O6	5.01	131.61	128.60
23	BA	815	C	N3-C4-C5	5.01	123.90	121.90
23	BA	2056	G	C6-N1-C2	-5.01	122.09	125.10
23	BA	2498	C	N1-C2-O2	-5.01	115.89	118.90
23	DA	728	G	N1-C2-N3	5.01	126.91	123.90
23	DA	1652	A	C5-C6-N6	-5.01	119.69	123.70
23	DA	2374	C	C5-C6-N1	-5.01	118.50	121.00
23	BA	1310	G	C5-C6-O6	-5.01	125.59	128.60
23	BA	1330	C	C4-C5-C6	-5.01	114.90	117.40
23	BA	1188	U	C6-N1-C2	-5.01	118.00	121.00
1	CA	18	C	C6-N1-C2	-5.01	118.30	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1397	U	N1-C2-O2	5.01	126.30	122.80
23	DA	1429	G	N1-C2-N3	5.01	126.90	123.90
23	DA	1677	A	C8-N9-C4	-5.01	103.80	105.80
23	DA	1928	A	C8-N9-C4	5.01	107.80	105.80
23	DA	2447	G	N1-C2-N3	5.01	126.90	123.90
23	BA	62	C	C6-N1-C2	5.00	122.30	120.30
23	BA	2252	G	C8-N9-C4	5.00	108.40	106.40
23	DA	961	C	N3-C2-O2	-5.00	118.40	121.90
23	BA	1632	A	N1-C6-N6	5.00	121.60	118.60
23	DA	337	C	C6-N1-C2	5.00	122.30	120.30
23	DA	2831	G	N3-C4-N9	-5.00	123.00	126.00
23	BA	1677	A	C2-N3-C4	-5.00	108.10	110.60

There are no chirality outliers.

All (21) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
27	BE	47	GLY	Peptide
34	BL	29	LYS	Peptide
34	BL	37	GLY	Peptide
34	BL	39	LYS	Peptide
34	BL	52	GLU	Peptide
34	BL	9	ASN	Peptide
35	BM	7	MET	Peptide
36	BN	11	ASN	Peptide
39	BQ	33	ARG	Peptide
39	BQ	91	ASP	Peptide
25	DC	237	GLU	Peptide
27	DE	47	GLY	Peptide
34	DL	29	LYS	Peptide
34	DL	37	GLY	Peptide
34	DL	39	LYS	Peptide
34	DL	52	GLU	Peptide
34	DL	9	ASN	Peptide
35	DM	7	MET	Peptide
36	DN	11	ASN	Peptide
39	DQ	33	ARG	Peptide
39	DQ	91	ASP	Peptide

5.2 Too-close contacts ⓘ

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	AA	32372	0	16339	1680	0
1	CA	32372	0	16339	1784	0
2	AB	1901	0	1951	173	0
2	CB	1901	0	1951	180	0
3	AC	1613	0	1677	180	0
3	CC	1613	0	1677	186	0
4	AD	1703	0	1764	192	0
4	CD	1703	0	1764	182	1
5	AE	1156	0	1213	141	0
5	CE	1156	0	1213	141	0
6	AF	843	0	857	96	1
6	CF	843	0	857	93	0
7	AG	1257	0	1296	95	0
7	CG	1257	0	1296	92	0
8	AH	1116	0	1177	133	0
8	CH	1116	0	1177	140	0
9	AI	1011	0	1043	100	0
9	CI	1011	0	1043	112	0
10	AJ	795	0	840	93	0
10	CJ	795	0	840	92	0
11	AK	885	0	904	76	0
11	CK	885	0	904	72	0
12	AL	971	0	1057	126	0
12	CL	971	0	1057	139	0
13	AM	929	0	987	83	0
13	CM	929	0	987	83	0
14	AN	492	0	530	49	0
14	CN	492	0	532	61	0
15	AO	734	0	771	66	0
15	CO	734	0	771	60	0
16	AP	701	0	720	96	0
16	CP	701	0	720	90	0
17	AQ	824	0	893	66	0
17	CQ	824	0	893	77	0
18	AR	574	0	644	70	0
18	CR	574	0	644	70	0
19	AS	630	0	652	70	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	CS	630	0	652	60	0
20	AT	762	0	859	64	0
20	CT	762	0	859	70	0
21	AU	209	0	221	16	0
21	CU	209	0	221	17	0
22	AV	719	0	366	58	0
22	CV	719	0	366	57	0
23	BA	59440	0	29964	2618	0
23	DA	59442	0	29965	2593	0
24	BB	2551	0	1295	147	0
24	DB	2551	0	1295	148	0
25	BC	2105	0	2182	353	0
25	DC	2105	0	2182	347	0
26	BD	1564	0	1629	224	0
26	DD	1564	0	1629	224	0
27	BE	1587	0	1632	147	0
27	DE	1587	0	1632	155	0
28	BF	1475	0	1537	155	0
28	DF	1475	0	1537	150	0
29	BG	1223	0	1282	114	0
29	DG	1223	0	1282	121	0
30	BH	1133	0	1220	131	0
30	DH	1133	0	1220	133	0
31	BI	254	0	275	8	0
31	DI	254	0	275	8	0
32	BJ	1097	0	1168	170	0
32	DJ	1097	0	1168	158	0
33	BK	932	0	994	97	0
33	DK	932	0	994	100	0
34	BL	1114	0	1187	270	0
34	DL	1114	0	1187	279	0
35	BM	1079	0	1127	170	0
35	DM	1079	0	1127	172	0
36	BN	960	0	1021	153	0
36	DN	960	0	1021	142	0
37	BO	771	0	832	95	0
37	DO	771	0	832	100	0
38	BP	1144	0	1211	129	0
38	DP	1144	0	1211	132	0
39	BQ	953	0	1013	150	0
39	DQ	953	0	1013	155	0
40	BR	779	0	852	131	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	DR	779	0	852	128	0
41	BS	891	0	951	106	0
41	DS	891	0	951	110	0
42	BT	726	0	778	88	0
42	DT	726	0	778	92	0
43	BU	776	0	870	138	0
43	DU	776	0	870	139	0
44	BV	1492	0	1513	174	0
44	DV	1492	0	1513	171	0
45	BW	605	0	628	71	0
45	DW	605	0	628	63	0
46	BX	695	0	764	112	0
46	DX	695	0	764	106	0
47	BY	521	0	575	81	0
47	DY	521	0	575	81	0
48	BZ	468	0	523	46	0
48	DZ	468	0	523	46	0
49	B1	226	0	225	23	0
49	D1	226	0	225	24	0
50	B2	405	0	420	61	0
50	D2	405	0	420	64	0
51	B3	381	0	391	25	0
51	D3	381	0	391	26	0
52	B4	419	0	467	50	0
52	D4	419	0	467	48	0
53	B5	508	0	576	111	0
53	D5	508	0	576	110	0
54	AA	163	0	0	0	0
54	AD	1	0	0	0	0
54	AV	4	0	0	0	0
54	B2	1	0	0	0	0
54	BA	408	0	0	0	0
54	BB	17	0	0	0	0
54	BK	1	0	0	0	0
54	CA	140	0	0	0	0
54	CP	1	0	0	0	0
54	CV	1	0	0	0	0
54	D2	1	0	0	0	0
54	D4	1	0	0	0	0
54	DA	436	0	0	0	0
54	DB	17	0	0	0	0
54	DE	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	DG	1	0	0	0	0
55	AD	1	0	0	0	0
55	AN	1	0	0	0	0
55	CD	1	0	0	0	0
55	CN	1	0	0	0	0
All	All	282142	0	191729	18333	1

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 39.

All (18333) 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)
34:DL:57:THR:HG23	34:DL:59:LEU:HD22	1.22	1.20
34:DL:59:LEU:HA	34:DL:61:ARG:NE	1.55	1.20
35:BM:81:VAL:O	35:BM:82:ARG:HG2	1.39	1.19
34:BL:57:THR:HG23	34:BL:59:LEU:HD22	1.21	1.19
52:D4:8:ASN:HD22	52:D4:8:ASN:C	1.42	1.18
47:BY:2:LYS:HE2	47:BY:2:LYS:H	1.08	1.16
23:BA:2389:G:H5''	23:BA:2390:U:H5'	1.19	1.16
43:BU:7:VAL:HG12	43:BU:8:LYS:HG3	1.25	1.16
47:DY:2:LYS:H	47:DY:2:LYS:HE2	1.02	1.15
34:DL:114:ILE:H	34:DL:114:ILE:HD12	1.11	1.15
1:AA:1123:A:H4'	10:AJ:36:GLY:HA3	1.30	1.14
52:B4:8:ASN:C	52:B4:8:ASN:HD22	1.46	1.14
23:DA:2015:A:H1'	50:D2:2:ALA:HA	1.30	1.14
23:DA:2439:A:H5'	23:DA:2439:A:C8	1.83	1.13
34:BL:59:LEU:HA	34:BL:61:ARG:NE	1.63	1.13
23:BA:2015:A:H1'	50:B2:2:ALA:HA	1.28	1.12
26:BD:201:THR:HG22	26:BD:202:LYS:H	1.08	1.12
47:DY:2:LYS:HE2	47:DY:2:LYS:N	1.63	1.12
26:DD:101:ARG:HD3	26:DD:169:ASN:HD21	1.13	1.11
35:DM:81:VAL:O	35:DM:82:ARG:HG2	1.49	1.11
36:DN:12:ARG:HG2	36:DN:16:HIS:CD2	1.84	1.11
23:BA:1174:A:H3'	23:BA:1175:U:H5''	1.24	1.11
23:BA:2781:A:H5''	23:BA:2782:G:H5'	1.11	1.11
47:BY:2:LYS:HE2	47:BY:2:LYS:N	1.65	1.11
23:DA:1541:U:H3'	23:DA:1542:G:H3'	1.13	1.11
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.32	1.11
45:BW:23:VAL:HA	45:BW:38:VAL:HG22	1.26	1.11
45:DW:23:VAL:HA	45:DW:38:VAL:HG22	1.28	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1541:U:H3'	23:BA:1542:G:H3'	1.13	1.10
23:BA:2272:U:H5''	23:BA:2272:U:H6	1.16	1.10
25:BC:155:LEU:HD23	25:BC:177:LEU:HD21	1.32	1.10
7:CG:113:GLU:HB2	7:CG:119:ARG:HG2	1.32	1.10
43:DU:7:VAL:HG12	43:DU:8:LYS:HG3	1.20	1.10
23:DA:1174:A:H3'	23:DA:1175:U:H5''	1.24	1.09
38:DP:51:ARG:HH11	38:DP:51:ARG:HG3	1.08	1.09
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.29	1.09
28:DF:60:LEU:HD11	28:DF:92:VAL:HG11	1.33	1.09
34:BL:128:HIS:HA	34:BL:147:LEU:HB3	1.14	1.09
23:DA:2781:A:H5''	23:DA:2782:G:H5'	1.15	1.09
1:AA:82:U:H2'	1:AA:85:U:H5	1.18	1.09
23:BA:807:U:OP2	34:BL:39:LYS:HG3	1.52	1.09
1:AA:979:C:H3'	1:AA:980:C:H5''	1.34	1.09
1:CA:1347:G:C8	9:CI:107:ARG:HB3	1.87	1.09
34:DL:128:HIS:HA	34:DL:147:LEU:HB3	1.15	1.09
22:AV:6194:C:H2'	22:AV:6195:G:H8	1.14	1.08
23:BA:2439:A:C8	23:BA:2439:A:H5'	1.87	1.08
26:BD:101:ARG:HD3	26:BD:169:ASN:HD21	1.16	1.08
2:CB:111:ARG:HH11	2:CB:111:ARG:HG2	1.10	1.08
26:DD:201:THR:HG22	26:DD:202:LYS:H	1.07	1.08
28:BF:60:LEU:HD11	28:BF:92:VAL:HG11	1.31	1.08
7:AG:113:GLU:HB2	7:AG:119:ARG:HG2	1.33	1.08
10:CJ:48:THR:HA	10:CJ:62:HIS:HB3	1.32	1.08
1:CA:82:U:H2'	1:CA:85:U:H5	1.18	1.07
34:BL:33:ARG:N	34:BL:36:LYS:HE2	1.70	1.07
1:AA:365:U:H5''	1:AA:366:C:OP1	1.52	1.07
2:AB:111:ARG:HH11	2:AB:111:ARG:HG2	1.11	1.07
23:BA:2186:G:H2'	23:BA:2187:G:H8	1.17	1.07
36:BN:12:ARG:HG2	36:BN:16:HIS:CD2	1.88	1.07
5:CE:101:ILE:HD11	5:CE:119:LEU:HD23	1.31	1.07
25:BC:10:THR:HG23	25:BC:13:ARG:HB3	1.31	1.07
22:CV:6194:C:H2'	22:CV:6195:G:H8	1.16	1.07
38:DP:54:ARG:HH11	38:DP:54:ARG:HG3	1.14	1.07
1:AA:955:U:H1'	1:AA:1227:A:H61	1.18	1.06
5:AE:101:ILE:HD11	5:AE:119:LEU:HD23	1.31	1.06
38:BP:51:ARG:HH11	38:BP:51:ARG:HG3	1.15	1.06
1:CA:979:C:H3'	1:CA:980:C:H5''	1.32	1.06
23:DA:807:U:OP2	34:DL:39:LYS:HG3	1.55	1.06
23:DA:2389:G:H5''	23:DA:2390:U:H5'	1.20	1.06
1:CA:365:U:H5''	1:CA:366:C:OP1	1.56	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:67:GLN:O	27:BE:67:GLN:HG3	1.56	1.06
53:B5:30:ARG:O	53:B5:31:HIS:HB3	1.52	1.06
27:DE:67:GLN:O	27:DE:67:GLN:HG3	1.54	1.06
34:BL:114:ILE:HD12	34:BL:114:ILE:H	1.17	1.05
23:BA:2502:G:H5'	23:BA:2503:A:H5''	1.36	1.05
34:DL:62:LEU:H	34:DL:62:LEU:HD22	1.19	1.05
42:DT:63:LYS:HD2	42:DT:72:LYS:HA	1.05	1.05
37:BO:11:LYS:HG2	37:BO:12:PHE:H	1.18	1.05
38:BP:54:ARG:HG3	38:BP:54:ARG:HH11	1.15	1.05
34:DL:33:ARG:H	34:DL:36:LYS:HE2	1.21	1.05
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.30	1.05
23:DA:2272:U:H6	23:DA:2272:U:H5''	1.20	1.04
26:DD:201:THR:O	26:DD:202:LYS:HD3	1.57	1.04
32:BJ:157:ARG:H	32:BJ:158:PRO:HD3	1.18	1.04
23:DA:1899:G:H22	23:DA:1902:C:N4	1.54	1.04
23:DA:2186:G:H2'	23:DA:2187:G:H8	1.18	1.04
1:CA:1123:A:H4'	10:CJ:36:GLY:HA3	1.37	1.04
23:BA:1899:G:H22	23:BA:1902:C:N4	1.56	1.04
23:DA:2502:G:H5'	23:DA:2503:A:H5''	1.34	1.03
25:DC:10:THR:HG23	25:DC:13:ARG:HB3	1.36	1.03
26:BD:132:HIS:CD2	26:BD:135:HIS:NE2	2.27	1.02
34:DL:33:ARG:HE	34:DL:36:LYS:HD3	1.23	1.02
34:BL:64:LYS:O	34:BL:66:GLY:N	1.92	1.02
1:CA:955:U:H1'	1:CA:1227:A:H61	1.19	1.02
34:BL:57:THR:CG2	34:BL:59:LEU:HD22	1.88	1.02
34:BL:62:LEU:HD22	34:BL:62:LEU:H	1.19	1.02
34:DL:33:ARG:N	34:DL:36:LYS:HE2	1.73	1.02
23:BA:973:A:OP2	40:BR:78:LYS:NZ	1.91	1.01
23:BA:1021:A:H62	23:BA:1141:U:H3	1.04	1.01
26:BD:201:THR:O	26:BD:202:LYS:HD3	1.59	1.01
27:BE:164:ARG:HH11	27:BE:164:ARG:HG2	1.23	1.01
34:BL:33:ARG:H	34:BL:36:LYS:HE2	1.22	1.01
29:DG:101:ARG:H	29:DG:101:ARG:NE	1.57	1.01
29:BG:101:ARG:H	29:BG:101:ARG:NE	1.58	1.01
42:BT:63:LYS:HD2	42:BT:72:LYS:HA	1.05	1.01
23:DA:1658:C:OP1	26:DD:132:HIS:ND1	1.94	1.01
32:DJ:157:ARG:H	32:DJ:158:PRO:HD3	1.20	1.01
42:DT:50:LYS:H	42:DT:87:GLN:HE22	1.07	1.01
23:DA:1264:G:H5'	50:D2:11:THR:HG21	1.42	1.01
36:DN:38:VAL:HB	36:DN:39:PRO:HD3	1.42	1.01
41:BS:12:ILE:HD13	41:BS:17:VAL:HG13	1.40	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:676:A:H8	23:BA:2069:G:H21	1.06	1.00
52:B4:9:ARG:HE	52:B4:48:LYS:HB2	1.24	1.00
27:DE:164:ARG:HH11	27:DE:164:ARG:HG2	1.22	1.00
23:BA:603:A:H61	23:BA:655:A:C4'	1.75	1.00
47:DY:14:ARG:HA	47:DY:17:SER:HB2	1.41	1.00
23:BA:919:G:H5'	24:BB:81:G:H1'	1.44	1.00
28:BF:84:LYS:HG3	28:BF:85:GLY:H	1.27	1.00
23:BA:2579:C:O3'	26:BD:131:ALA:HB2	1.61	1.00
9:CI:13:ALA:HB2	9:CI:68:GLY:HA3	1.44	1.00
52:D4:9:ARG:HE	52:D4:48:LYS:HB2	1.22	1.00
39:DQ:88:ILE:HB	39:DQ:90:VAL:HG12	1.42	1.00
34:BL:33:ARG:HE	34:BL:36:LYS:HD3	1.25	0.99
32:BJ:157:ARG:H	32:BJ:158:PRO:CD	1.70	0.99
25:DC:33:LEU:O	25:DC:35:LYS:N	1.93	0.99
35:DM:75:THR:HA	35:DM:88:GLY:HA2	1.43	0.99
32:DJ:157:ARG:H	32:DJ:158:PRO:CD	1.72	0.99
23:BA:1899:G:H22	23:BA:1902:C:H41	1.01	0.99
25:BC:106:ILE:H	25:BC:106:ILE:HD12	1.28	0.99
23:DA:1614:A:H62	41:DS:93:ALA:HB2	1.25	0.99
23:DA:860:U:H5	23:DA:917:A:N7	1.59	0.99
23:BA:1826:G:H4'	25:BC:242:ARG:HE	1.27	0.99
32:BJ:154:GLN:HE21	32:BJ:155:ALA:HB3	1.28	0.99
34:DL:40:SER:O	34:DL:41:ARG:HD3	1.62	0.99
23:BA:810:U:H3	34:BL:36:LYS:HZ3	1.03	0.98
42:BT:50:LYS:H	42:BT:87:GLN:HE22	1.07	0.98
1:AA:673:G:H2'	1:AA:674:G:C8	1.98	0.98
9:AI:13:ALA:HB2	9:AI:68:GLY:HA3	1.44	0.98
32:DJ:154:GLN:HE21	32:DJ:155:ALA:HB3	1.27	0.98
50:B2:20:ARG:HA	50:B2:23:HIS:HD2	1.25	0.98
23:DA:1021:A:H62	23:DA:1141:U:H3	1.03	0.98
28:DF:84:LYS:HG3	28:DF:85:GLY:H	1.24	0.98
38:DP:24:PRO:HA	38:DP:49:VAL:HG13	1.45	0.98
3:AC:20:SER:HB2	3:AC:40:ARG:HH12	1.27	0.98
30:BH:83:ALA:HB2	30:BH:123:LEU:HD12	1.45	0.98
16:CP:4:ILE:HG12	16:CP:21:VAL:HG12	1.45	0.98
50:D2:20:ARG:HA	50:D2:23:HIS:HD2	1.28	0.98
41:DS:12:ILE:HD13	41:DS:17:VAL:HG13	1.44	0.98
23:BA:1544:C:H6	23:BA:1544:C:OP1	1.45	0.98
40:BR:2:PHE:CE2	40:BR:13:ARG:HD3	1.97	0.98
34:DL:64:LYS:O	34:DL:66:GLY:N	1.94	0.98
42:BT:11:PRO:HA	42:BT:28:PHE:HB3	1.43	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D5:30:ARG:O	53:D5:31:HIS:HB3	1.61	0.98
4:AD:49:ARG:NH2	4:AD:50:ARG:HB2	1.79	0.97
23:BA:1614:A:H62	41:BS:93:ALA:HB2	1.29	0.97
23:BA:2729:G:H1'	26:BD:187:ALA:HB2	1.47	0.97
39:BQ:88:ILE:HB	39:BQ:90:VAL:HG12	1.45	0.97
1:CA:673:G:H2'	1:CA:674:G:C8	1.99	0.97
34:BL:40:SER:O	34:BL:41:ARG:HD3	1.65	0.97
23:DA:2729:G:H1'	26:DD:187:ALA:HB2	1.44	0.97
26:DD:201:THR:HG22	26:DD:202:LYS:N	1.80	0.97
28:DF:128:ARG:HE	28:DF:129:GLY:H	1.12	0.97
37:DO:11:LYS:HG2	37:DO:12:PHE:H	1.25	0.97
16:AP:4:ILE:HG12	16:AP:21:VAL:HG12	1.43	0.97
23:BA:1541:U:C3'	23:BA:1542:G:H3'	1.95	0.97
25:BC:87:ASN:H	25:BC:87:ASN:HD22	1.06	0.97
47:BY:14:ARG:HA	47:BY:17:SER:HB2	1.44	0.97
4:CD:49:ARG:NH2	4:CD:50:ARG:HB2	1.79	0.97
25:DC:155:LEU:HD23	25:DC:177:LEU:HD21	1.46	0.97
3:CC:20:SER:HB2	3:CC:40:ARG:HH12	1.26	0.97
32:BJ:38:LEU:HD23	32:BJ:157:ARG:HG3	1.46	0.97
23:DA:2579:C:O3'	26:DD:131:ALA:HB2	1.65	0.97
43:BU:29:GLU:HB3	43:BU:38:ILE:HB	1.46	0.97
3:AC:182:ILE:HG12	3:AC:203:PHE:HA	1.45	0.96
23:DA:676:A:H8	23:DA:2069:G:H21	1.11	0.96
4:AD:104:VAL:HG11	4:AD:146:ILE:HD13	1.45	0.96
23:BA:1658:C:OP1	26:BD:132:HIS:ND1	1.98	0.96
23:DA:603:A:H61	23:DA:655:A:C4'	1.77	0.96
42:DT:84:ALA:HB3	42:DT:87:GLN:HE21	1.27	0.96
12:AL:26:LEU:HG	12:AL:32:ARG:HH11	1.28	0.96
25:BC:33:LEU:O	25:BC:35:LYS:N	1.98	0.96
4:CD:65:ARG:HG3	4:CD:75:PHE:CD1	1.99	0.96
23:BA:860:U:H5	23:BA:917:A:N7	1.61	0.96
33:BK:119:PRO:HB2	38:BP:68:TYR:CE1	2.01	0.96
42:BT:63:LYS:HD2	42:BT:72:LYS:CA	1.96	0.96
1:CA:392:G:H2'	1:CA:393:A:H8	1.30	0.96
23:DA:1541:U:C3'	23:DA:1542:G:H3'	1.93	0.96
32:DJ:38:LEU:HD23	32:DJ:157:ARG:HG3	1.45	0.96
4:AD:9:CYS:HB3	4:AD:32:ALA:HB2	1.47	0.96
23:BA:252:G:OP2	34:BL:50:ARG:NH2	1.98	0.96
3:CC:182:ILE:HG12	3:CC:203:PHE:HA	1.46	0.96
4:CD:104:VAL:HG11	4:CD:146:ILE:HD13	1.47	0.96
52:D4:19:ARG:HH11	52:D4:19:ARG:HG3	1.27	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1320:C:H42	19:AS:36:ARG:HG3	1.28	0.96
34:BL:62:LEU:HD22	34:BL:62:LEU:N	1.80	0.96
35:BM:75:THR:HA	35:BM:88:GLY:CA	1.94	0.96
23:DA:1813:G:H1'	25:DC:50:THR:HG21	1.47	0.96
40:DR:2:PHE:CE2	40:DR:13:ARG:HD3	2.01	0.96
34:DL:57:THR:CG2	34:DL:59:LEU:HD22	1.94	0.96
35:DM:75:THR:HA	35:DM:88:GLY:CA	1.96	0.95
4:CD:22:LYS:HB2	4:CD:26:CYS:SG	2.05	0.95
23:DA:1541:U:H3'	23:DA:1542:G:C3'	1.95	0.95
47:DY:6:VAL:HG12	47:DY:10:LEU:HD11	1.48	0.95
1:AA:691:G:C6	11:AK:52:GLY:HA2	2.02	0.95
47:BY:35:LEU:HD12	47:BY:53:LEU:HD12	1.45	0.95
2:CB:174:VAL:O	2:CB:178:ARG:HB2	1.66	0.95
25:DC:106:ILE:HD12	25:DC:106:ILE:H	1.30	0.95
42:DT:11:PRO:HA	42:DT:28:PHE:HB3	1.48	0.95
13:CM:52:GLU:HA	13:CM:55:ARG:HB3	1.46	0.95
23:BA:1813:G:H1'	25:BC:50:THR:HG21	1.46	0.94
47:BY:6:VAL:HG12	47:BY:10:LEU:HD11	1.48	0.94
30:DH:83:ALA:HB2	30:DH:123:LEU:HD12	1.47	0.94
13:AM:52:GLU:HA	13:AM:55:ARG:HB3	1.46	0.94
16:AP:28:ARG:HH11	16:AP:28:ARG:HG2	1.30	0.94
20:AT:26:ASN:HB2	20:AT:71:THR:HG23	1.47	0.94
26:BD:36:ARG:HD3	26:BD:85:ASN:HD21	1.29	0.94
25:DC:158:ALA:HB3	25:DC:161:THR:HG21	1.47	0.94
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.32	0.94
23:BA:1541:U:H3'	23:BA:1542:G:C3'	1.97	0.94
34:BL:114:ILE:HD11	34:BL:127:ALA:HB3	1.48	0.94
1:AA:1253:G:H1	1:AA:1284:C:H42	1.14	0.94
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.02	0.94
4:AD:22:LYS:HB2	4:AD:26:CYS:SG	2.07	0.94
23:DA:2712:U:H1'	23:DA:712(B):A:C8	2.00	0.94
23:BA:197:A:H8	23:BA:197:A:H5'	1.30	0.94
25:BC:31:LYS:O	25:BC:35:LYS:HB2	1.67	0.94
25:BC:96:HIS:CD2	25:BC:102:LYS:HD3	2.02	0.94
23:DA:1544:C:OP1	23:DA:1544:C:H6	1.49	0.94
43:DU:14:LEU:HD23	43:DU:15:VAL:N	1.83	0.94
23:BA:94:G:H21	47:BY:47:ASN:ND2	1.64	0.94
35:BM:75:THR:HA	35:BM:88:GLY:HA2	1.44	0.94
39:BQ:55:ARG:HA	39:BQ:58:ARG:HD2	1.47	0.94
40:BR:39:LEU:HD12	40:BR:47:VAL:HG11	1.49	0.94
8:CH:121:ASP:O	8:CH:125:ARG:HB2	1.68	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:101:ARG:HE	29:DG:101:ARG:N	1.66	0.94
34:DL:62:LEU:HD22	34:DL:62:LEU:N	1.80	0.94
23:DA:973:A:OP2	40:DR:78:LYS:NZ	2.00	0.94
3:CC:172:ARG:O	3:CC:173:VAL:HG23	1.66	0.94
34:DL:38:GLN:HG3	34:DL:39:LYS:H	1.33	0.94
52:D4:8:ASN:C	52:D4:8:ASN:ND2	2.18	0.94
3:CC:173:VAL:O	3:CC:173:VAL:HG12	1.69	0.93
23:BA:804:A:H5'	23:BA:805:G:OP1	1.68	0.93
1:CA:91:C:H2'	1:CA:92:G:H8	1.33	0.93
28:DF:38:VAL:HG22	28:DF:93:THR:HG23	1.49	0.93
34:DL:114:ILE:HD11	34:DL:127:ALA:HB3	1.49	0.93
23:BA:1210:A:C5'	23:BA:1210:A:H8	1.81	0.93
35:BM:74:TYR:CD2	35:BM:91:GLU:HB2	2.04	0.93
35:BM:74:TYR:HD2	35:BM:91:GLU:HB2	1.29	0.93
23:BA:1287:A:N7	36:BN:107:ASP:HB3	1.84	0.93
28:BF:128:ARG:HE	28:BF:129:GLY:H	1.14	0.93
16:CP:28:ARG:HH11	16:CP:28:ARG:HG2	1.34	0.93
20:CT:26:ASN:HB2	20:CT:71:THR:HG23	1.48	0.93
28:DF:5:LEU:HD21	49:D1:50:THR:HG23	1.51	0.93
52:D4:11:LYS:O	52:D4:15:THR:HG23	1.69	0.93
23:BA:2210:G:N2	23:BA:2211:G:H5'	1.84	0.93
39:DQ:92:ARG:HG2	40:DR:11:GLN:NE2	1.84	0.93
4:AD:65:ARG:HG3	4:AD:75:PHE:CD1	2.03	0.93
23:BA:547:A:H2'	23:BA:548:A:C8	2.03	0.93
39:BQ:92:ARG:HG2	40:BR:11:GLN:NE2	1.81	0.93
23:BA:1405:U:H2'	23:BA:1406:U:C6	2.04	0.93
23:DA:252:G:OP2	34:DL:50:ARG:NH2	2.02	0.93
23:DA:547:A:H2'	23:DA:548:A:C8	2.03	0.93
49:D1:59:VAL:HG12	49:D1:60:GLU:H	1.34	0.93
2:AB:174:VAL:O	2:AB:178:ARG:HB2	1.69	0.93
22:AV:6213:A:H2'	22:AV:6214:C:C6	2.04	0.93
26:BD:201:THR:HG22	26:BD:202:LYS:N	1.83	0.93
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.51	0.93
23:DA:919:G:H5'	24:DB:81:G:H1'	1.49	0.93
1:AA:38:G:N2	1:AA:397:A:H5'	1.84	0.92
23:BA:140:A:H8	23:BA:1408:C:HO2'	0.96	0.92
3:CC:134:ILE:HG23	3:CC:151:VAL:HB	1.51	0.92
23:DA:1287:A:N7	36:DN:107:ASP:HB3	1.84	0.92
23:DA:1826:G:H4'	25:DC:242:ARG:HE	1.32	0.92
32:DJ:105:LEU:HD12	32:DJ:106:LYS:H	1.34	0.92
35:DM:74:TYR:HD2	35:DM:91:GLU:HB2	1.35	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DT:63:LYS:HD2	42:DT:72:LYS:CA	1.97	0.92
28:BF:38:VAL:HG22	28:BF:93:THR:HG23	1.51	0.92
29:BG:101:ARG:HE	29:BG:101:ARG:N	1.67	0.92
23:DA:1899:G:H22	23:DA:1902:C:H41	1.05	0.92
23:BA:1209:G:H21	23:BA:1210:A:H62	1.15	0.92
23:BA:2439:A:H5'	23:BA:2439:A:H8	1.31	0.92
4:AD:108:LEU:HD21	4:AD:183:GLY:HA3	1.52	0.92
23:DA:1170:G:H1	23:DA:1179:C:H42	1.17	0.92
8:AH:121:ASP:O	8:AH:125:ARG:HB2	1.70	0.92
44:DV:48:PHE:HA	44:DV:51:ALA:HB3	1.51	0.92
1:AA:91:C:H2'	1:AA:92:G:H8	1.34	0.92
16:AP:19:ILE:HG22	16:AP:36:ILE:HG13	1.51	0.92
26:BD:5:LEU:HB2	26:BD:51:PHE:HD2	1.34	0.92
35:BM:47:ILE:HG22	35:BM:48:GLU:N	1.82	0.92
42:BT:84:ALA:HB3	42:BT:87:GLN:HE21	1.34	0.92
12:CL:26:LEU:HG	12:CL:32:ARG:HH11	1.32	0.92
23:DA:94:G:H21	47:DY:47:ASN:ND2	1.67	0.92
29:BG:68:THR:O	29:BG:72:ILE:HG12	1.70	0.92
26:DD:132:HIS:CD2	26:DD:135:HIS:NE2	2.37	0.92
27:DE:9:ILE:HD11	27:DE:125:LEU:HG	1.48	0.92
41:BS:75:TYR:CE2	41:BS:104:THR:HB	2.04	0.92
23:DA:1021:A:H3'	23:DA:1021:A:H8	1.34	0.92
1:CA:38:G:N2	1:CA:397:A:H5'	1.84	0.92
23:DA:330:A:HO2'	23:DA:331:A:H8	1.16	0.92
39:BQ:91:ASP:OD1	39:BQ:96:ALA:HB2	1.68	0.92
23:DA:860:U:O2'	23:DA:861:A:H5'	1.69	0.92
23:DA:2210:G:N2	23:DA:2211:G:H5'	1.85	0.92
23:BA:1405:U:H2'	23:BA:1406:U:H6	1.30	0.91
23:BA:2219:G:C2'	23:BA:2224:G:H5'	2.01	0.91
25:DC:31:LYS:O	25:DC:35:LYS:HB2	1.70	0.91
23:DA:2068:U:H3	23:DA:2430:A:H2	0.93	0.91
23:BA:1021:A:H3'	23:BA:1021:A:H8	1.32	0.91
39:BQ:83:LEU:HG	39:BQ:88:ILE:HD11	1.50	0.91
3:AC:172:ARG:O	3:AC:173:VAL:HG23	1.69	0.91
23:BA:1170:G:H1	23:BA:1179:C:H42	1.16	0.91
23:BA:2681:C:H5	23:BA:2725:A:H62	0.96	0.91
39:BQ:92:ARG:NH2	40:BR:11:GLN:H	1.67	0.91
3:CC:14:ILE:HG23	3:CC:15:THR:H	1.35	0.91
23:BA:2219:G:H2'	23:BA:2224:G:H5'	1.49	0.91
23:DA:363(A):G:H2'	23:DA:363(B):A:H8	1.33	0.91
23:DA:1405:U:H2'	23:DA:1406:U:H6	1.32	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1405:U:H2'	23:DA:1406:U:C6	2.05	0.91
23:DA:2267:A:H5''	23:DA:2268:A:H5'	1.51	0.91
23:DA:2392:A:H2	23:DA:2424:C:H42	1.17	0.91
23:BA:363(A):G:H2'	23:BA:363(B):A:H8	1.34	0.91
23:DA:662:G:OP1	34:DL:18:ARG:HD2	1.71	0.91
1:AA:392:G:H2'	1:AA:393:A:H8	1.34	0.91
23:BA:2068:U:N3	23:BA:2430:A:H2	1.67	0.91
23:BA:2887:U:H2'	23:BA:2888:C:H6	1.34	0.91
3:CC:33:LEU:HD21	14:CN:53:LEU:HD22	1.52	0.91
47:DY:2:LYS:H	47:DY:2:LYS:CE	1.84	0.91
3:AC:33:LEU:HD21	14:AN:53:LEU:HD22	1.52	0.91
25:BC:158:ALA:HB3	25:BC:161:THR:HG21	1.50	0.91
45:BW:23:VAL:HA	45:BW:38:VAL:CG2	2.01	0.91
23:DA:197:A:H8	23:DA:197:A:H5'	1.34	0.91
26:DD:101:ARG:HD3	26:DD:169:ASN:ND2	1.85	0.91
2:AB:71:VAL:HG23	2:AB:164:VAL:HG13	1.52	0.91
1:CA:265:G:H2'	1:CA:266:G:H5''	1.52	0.91
28:DF:76:SER:HB3	28:DF:82:LEU:HB3	1.52	0.91
34:DL:35:HIS:O	34:DL:36:LYS:HB2	1.69	0.91
40:DR:39:LEU:HD12	40:DR:47:VAL:HG11	1.51	0.91
27:BE:167:ALA:HB1	27:BE:173:VAL:HG11	1.52	0.91
6:CF:86:ARG:O	6:CF:87:ARG:HB2	1.71	0.90
27:DE:64:ILE:HD12	27:DE:64:ILE:O	1.71	0.90
40:DR:38:LEU:O	40:DR:39:LEU:HD13	1.71	0.90
42:DT:63:LYS:CD	42:DT:72:LYS:HA	2.00	0.90
23:BA:2272:U:H5''	23:BA:2272:U:C6	2.06	0.90
23:BA:2712:U:H1'	23:BA:712(B):A:C8	2.06	0.90
26:DD:36:ARG:HD3	26:DD:85:ASN:HD21	1.32	0.90
23:BA:141(A):A:H8	23:BA:1595:G:H21	1.18	0.90
23:BA:2267:A:H5''	23:BA:2268:A:H5'	1.51	0.90
1:CA:1201:A:H1'	1:CA:1202:G:OP2	1.71	0.90
4:CD:9:CYS:HB3	4:CD:32:ALA:HB2	1.52	0.90
23:DA:1771:C:HO2'	23:DA:1786:A:H8	0.98	0.90
53:D5:33:ASN:HD22	53:D5:34:TRP:H	1.15	0.90
22:AV:6194:C:H2'	22:AV:6195:G:C8	2.05	0.90
1:CA:38:G:H22	1:CA:397:A:H5'	1.35	0.90
26:DD:49:LEU:HD22	26:DD:49:LEU:H	1.36	0.90
23:BA:2185:C:H2'	23:BA:2186:G:C8	2.06	0.90
49:B1:59:VAL:HG12	49:B1:60:GLU:H	1.34	0.90
23:DA:1264:G:H5'	50:D2:11:THR:CG2	2.01	0.90
39:DQ:55:ARG:HA	39:DQ:58:ARG:HD2	1.52	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DW:23:VAL:HA	45:DW:38:VAL:CG2	2.02	0.90
47:DY:35:LEU:HD12	47:DY:53:LEU:HD12	1.51	0.90
41:BS:4:LYS:HA	41:BS:106:ILE:HG22	1.53	0.90
5:CE:43:LEU:HD22	5:CE:136:MET:HG3	1.51	0.90
23:DA:2185:C:H2'	23:DA:2186:G:C8	2.07	0.90
39:DQ:91:ASP:OD1	39:DQ:96:ALA:HB2	1.72	0.90
34:DL:59:LEU:HA	34:DL:61:ARG:CD	2.01	0.90
1:AA:38:G:H22	1:AA:397:A:H5'	1.36	0.90
6:AF:86:ARG:O	6:AF:87:ARG:HB2	1.70	0.90
44:BV:48:PHE:HA	44:BV:51:ALA:HB3	1.52	0.90
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.05	0.90
25:DC:96:HIS:CD2	25:DC:102:LYS:HD3	2.06	0.90
36:DN:10:LEU:HB3	36:DN:17:ARG:NE	1.87	0.90
23:BA:810:U:H3	34:BL:36:LYS:NZ	1.70	0.90
22:CV:6213:A:H2'	22:CV:6214:C:C6	2.06	0.90
5:AE:43:LEU:HD22	5:AE:136:MET:HG3	1.53	0.90
1:CA:737:A:H2'	1:CA:738:C:C6	2.07	0.90
1:CA:1253:G:H1	1:CA:1284:C:H42	1.15	0.90
22:CV:6194:C:H2'	22:CV:6195:G:C8	2.07	0.90
23:DA:2887:U:H2'	23:DA:2888:C:H6	1.35	0.90
30:DH:56:LYS:HA	30:DH:59:ALA:HB3	1.53	0.90
43:DU:29:GLU:HB3	43:DU:38:ILE:HB	1.53	0.90
3:AC:134:ILE:HG23	3:AC:151:VAL:HB	1.53	0.89
4:AD:15:GLU:HG2	4:AD:63:LYS:HG3	1.52	0.89
25:BC:231:HIS:HD2	25:BC:249:PRO:HA	1.35	0.89
16:CP:19:ILE:HG22	16:CP:36:ILE:HG13	1.54	0.89
20:AT:57:ARG:NH1	20:AT:102:GLY:HA2	1.87	0.89
30:BH:56:LYS:HA	30:BH:59:ALA:HB3	1.54	0.89
37:DO:69:VAL:O	37:DO:72:ALA:HB3	1.70	0.89
1:AA:199:G:H1	1:AA:218:C:H42	1.17	0.89
23:BA:1899:G:N2	23:BA:1902:C:H41	1.70	0.89
23:BA:2186:G:H2'	23:BA:2187:G:C8	2.06	0.89
12:AL:69:ILE:HG23	12:AL:99:ILE:HG21	1.53	0.89
23:BA:860:U:O2'	23:BA:861:A:H5'	1.72	0.89
34:BL:57:THR:HG23	34:BL:59:LEU:CD2	2.02	0.89
1:CA:1097:C:H2'	1:CA:1098:C:H6	1.35	0.89
2:CB:111:ARG:HG2	2:CB:111:ARG:NH1	1.83	0.89
26:DD:5:LEU:HB2	26:DD:51:PHE:HD2	1.37	0.89
37:DO:11:LYS:HG2	37:DO:12:PHE:N	1.87	0.89
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.53	0.89
23:DA:810:U:H3	34:DL:36:LYS:HZ1	1.18	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1286:A:O2'	23:DA:1288:U:OP2	1.89	0.89
23:DA:2542:A:H5''	23:DA:2542:A:N3	1.87	0.89
24:DB:79:C:H2'	24:DB:80:U:O4'	1.72	0.89
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.37	0.89
11:AK:57:THR:HG22	11:AK:59:TYR:H	1.36	0.89
28:BF:76:SER:HB3	28:BF:82:LEU:HB3	1.52	0.89
35:BM:68:ILE:HD13	35:BM:103:MET:HG2	1.55	0.89
41:BS:9:TYR:H	41:BS:102:HIS:HD2	1.21	0.89
42:BT:35:THR:O	42:BT:39:ILE:HG12	1.73	0.89
44:BV:132:ASN:O	44:BV:134:PRO:HD3	1.71	0.89
23:DA:2439:A:C5'	23:DA:2439:A:H8	1.85	0.89
23:BA:2542:A:H5''	23:BA:2542:A:N3	1.87	0.89
13:CM:10:PRO:HB2	13:CM:18:ALA:HB1	1.55	0.89
23:DA:94:G:H21	47:DY:47:ASN:HD22	1.19	0.89
1:AA:386:C:H2'	1:AA:387:U:H5''	1.54	0.89
8:AH:91:ARG:HH11	8:AH:91:ARG:CG	1.85	0.89
28:BF:5:LEU:HD21	49:B1:50:THR:HG23	1.52	0.89
6:CF:91:VAL:HG12	6:CF:92:LYS:O	1.73	0.89
39:DQ:92:ARG:NH2	40:DR:11:GLN:H	1.70	0.89
1:AA:955:U:H1'	1:AA:1227:A:N6	1.87	0.88
8:AH:92:ARG:HB3	8:AH:94:TYR:HE2	1.39	0.88
23:BA:94:G:H21	47:BY:47:ASN:HD22	1.17	0.88
23:BA:1771:C:HO2'	23:BA:1786:A:H8	0.94	0.88
2:CB:187:LEU:HD11	2:CB:205:ASP:HB3	1.54	0.88
25:DC:87:ASN:H	25:DC:87:ASN:HD22	1.16	0.88
34:DL:114:ILE:HD13	34:DL:130:PHE:CD1	2.08	0.88
29:DG:68:THR:O	29:DG:72:ILE:HG12	1.71	0.88
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.38	0.88
23:BA:1021:A:H3'	23:BA:1021:A:C8	2.08	0.88
52:B4:19:ARG:HG3	52:B4:19:ARG:HH11	1.37	0.88
11:CK:57:THR:HG22	11:CK:59:TYR:H	1.35	0.88
23:DA:1437:C:H2'	23:DA:1438:U:H6	1.37	0.88
23:DA:2439:A:C8	23:DA:2439:A:C5'	2.56	0.88
41:DS:4:LYS:HA	41:DS:106:ILE:HG22	1.55	0.88
19:CS:63:THR:HG22	19:CS:66:MET:HG2	1.55	0.88
23:DA:2439:A:H5'	23:DA:2439:A:H8	1.34	0.88
25:DC:67:PHE:CE2	25:DC:106:ILE:HD11	2.07	0.88
2:AB:111:ARG:HG2	2:AB:111:ARG:NH1	1.85	0.88
7:AG:107:ALA:HB2	7:AG:134:ALA:HB2	1.54	0.88
48:BZ:40:THR:HG23	48:BZ:43:ILE:HG12	1.52	0.88
1:CA:386:C:H2'	1:CA:387:U:H5''	1.55	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2186:G:H2'	23:DA:2187:G:C8	2.07	0.88
34:DL:33:ARG:HB3	34:DL:36:LYS:HG3	1.54	0.88
2:AB:187:LEU:HD11	2:AB:205:ASP:HB3	1.54	0.88
6:AF:7:ASN:HD21	18:AR:34:TYR:HE1	1.21	0.88
1:CA:199:G:H1	1:CA:218:C:H42	1.17	0.88
1:CA:955:U:H1'	1:CA:1227:A:N6	1.87	0.88
4:CD:119:GLN:HG3	4:CD:123:HIS:CD2	2.09	0.88
25:DC:231:HIS:HD2	25:DC:249:PRO:HA	1.37	0.88
1:AA:265:G:H2'	1:AA:266:G:H5''	1.53	0.88
23:BA:2353:G:C5	23:BA:2353:G:N1	2.36	0.88
32:BJ:105:LEU:HD12	32:BJ:106:LYS:H	1.36	0.88
53:B5:33:ASN:HD22	53:B5:34:TRP:N	1.71	0.88
1:CA:1329:A:H5''	13:CM:26:GLY:H	1.38	0.88
9:CI:3:GLN:HG2	9:CI:20:ARG:HG2	1.55	0.88
35:DM:74:TYR:CD2	35:DM:91:GLU:HB2	2.08	0.88
48:DZ:40:THR:HG23	48:DZ:43:ILE:HG12	1.56	0.88
25:BC:70:TRP:HZ3	25:BC:146:GLU:OE1	1.57	0.88
37:DO:24:LEU:HD12	37:DO:84:GLN:HB3	1.56	0.88
3:AC:14:ILE:HG23	3:AC:15:THR:H	1.37	0.88
50:B2:25:LEU:HD12	50:B2:25:LEU:H	1.39	0.88
3:CC:92:ALA:HB2	3:CC:99:VAL:HG13	1.56	0.88
27:BE:9:ILE:HD11	27:BE:125:LEU:HG	1.55	0.88
41:DS:13:SER:HB3	41:DS:16:LYS:HD3	1.54	0.88
46:DX:13:ILE:HG12	46:DX:63:ALA:HB2	1.55	0.88
1:AA:1201:A:H1'	1:AA:1202:G:OP2	1.73	0.87
23:BA:96:G:H4'	47:BY:48:HIS:CE1	2.09	0.87
37:BO:11:LYS:HG2	37:BO:12:PHE:N	1.84	0.87
11:CK:24:SER:HB3	11:CK:27:ASN:O	1.73	0.87
53:D5:33:ASN:HD22	53:D5:34:TRP:N	1.70	0.87
9:AI:3:GLN:HG2	9:AI:20:ARG:HG2	1.55	0.87
26:BD:101:ARG:HD3	26:BD:169:ASN:ND2	1.89	0.87
10:CJ:32:ALA:HB3	10:CJ:76:ASN:HB2	1.54	0.87
40:DR:35:LEU:HB2	40:DR:57:VAL:HG13	1.55	0.87
1:AA:448:A:O2'	1:AA:449:C:H5'	1.74	0.87
28:BF:34:LEU:HD23	28:BF:161:THR:HG23	1.55	0.87
35:BM:81:VAL:O	35:BM:82:ARG:CG	2.22	0.87
50:B2:20:ARG:HA	50:B2:23:HIS:CD2	2.09	0.87
23:DA:1899:G:N2	23:DA:1902:C:H41	1.71	0.87
37:BO:24:LEU:HD12	37:BO:84:GLN:HB3	1.55	0.87
36:DN:55:ALA:HA	36:DN:80:PHE:CE1	2.09	0.87
37:DO:24:LEU:O	37:DO:86:ALA:HB3	1.73	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D5:32:LEU:HD23	53:D5:33:ASN:H	1.37	0.87
1:CA:57:G:H2'	1:CA:58:C:H6	1.40	0.87
12:CL:69:ILE:HG23	12:CL:99:ILE:HG21	1.54	0.87
23:DA:1021:A:H3'	23:DA:1021:A:C8	2.08	0.87
34:DL:59:LEU:CA	34:DL:61:ARG:NE	2.37	0.87
2:AB:187:LEU:HA	2:AB:201:ILE:HB	1.55	0.87
23:BA:744:G:OP1	26:BD:132:HIS:HB3	1.75	0.87
34:BL:59:LEU:HA	34:BL:61:ARG:CD	2.05	0.87
23:DA:2681:C:H5	23:DA:2725:A:H62	0.91	0.87
23:BA:1437:C:H2'	23:BA:1438:U:H6	1.39	0.87
46:BX:73:LEU:HD11	46:BX:94:LEU:HB3	1.56	0.87
52:B4:8:ASN:HD21	52:B4:11:LYS:H	1.22	0.87
43:DU:81:LYS:HD3	43:DU:97:ARG:H	1.39	0.87
4:AD:153:ARG:HH11	4:AD:181:MET:HE3	1.38	0.87
10:AJ:32:ALA:HB3	10:AJ:76:ASN:HB2	1.55	0.87
24:BB:66:A:N6	24:BB:107:U:H2'	1.90	0.87
26:BD:49:LEU:H	26:BD:49:LEU:HD22	1.38	0.87
30:DH:77:LEU:O	30:DH:143:SER:HB3	1.75	0.87
37:DO:89:ARG:HG3	37:DO:94:TYR:HB2	1.57	0.87
2:CB:71:VAL:HG23	2:CB:164:VAL:HG13	1.54	0.87
23:DA:84:A:H5''	43:DU:9:LYS:HD2	1.55	0.87
1:AA:1347:G:C8	9:AI:107:ARG:HB3	2.09	0.86
26:BD:120:TRP:CD2	26:BD:155:LYS:HD3	2.09	0.86
36:BN:11:ASN:OD1	36:BN:12:ARG:N	2.08	0.86
1:CA:688:G:H2'	1:CA:689:C:H6	1.40	0.86
1:CA:1295:G:H21	1:CA:1302:U:H3	1.23	0.86
5:CE:126:ARG:HH11	5:CE:126:ARG:CG	1.88	0.86
8:CH:91:ARG:HH11	8:CH:91:ARG:CG	1.87	0.86
8:AH:20:TYR:HA	8:AH:65:TYR:CE2	2.10	0.86
23:BA:323:G:H5'	27:BE:169:ASN:HD21	1.40	0.86
25:BC:87:ASN:HD22	25:BC:87:ASN:N	1.71	0.86
3:CC:88:ARG:HB3	3:CC:99:VAL:HG21	1.55	0.86
23:DA:2068:U:N3	23:DA:2430:A:H2	1.72	0.86
23:DA:2267:A:H5''	23:DA:2268:A:C5'	2.05	0.86
4:AD:108:LEU:HB3	4:AD:110:PHE:CE2	2.10	0.86
42:BT:71:GLY:O	42:BT:72:LYS:HG3	1.75	0.86
23:DA:1209:G:H21	23:DA:1210:A:H62	1.21	0.86
36:DN:51:LEU:HD23	36:DN:66:VAL:HG22	1.57	0.86
50:D2:25:LEU:H	50:D2:25:LEU:HD12	1.40	0.86
4:AD:128:VAL:HG12	4:AD:129:ASN:OD1	1.75	0.86
11:AK:24:SER:HB3	11:AK:27:ASN:O	1.72	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:59:TYR:CE1	11:AK:63:LEU:HD21	2.10	0.86
25:BC:172:TYR:CD1	25:BC:186:HIS:HA	2.09	0.86
36:BN:10:LEU:HB3	36:BN:17:ARG:NE	1.91	0.86
43:BU:17:SER:HA	43:BU:71:LYS:HD2	1.57	0.86
25:DC:172:TYR:CD1	25:DC:186:HIS:HA	2.10	0.86
35:DM:58:PHE:O	35:DM:58:PHE:HD1	1.59	0.86
40:BR:38:LEU:O	40:BR:39:LEU:HD13	1.75	0.86
23:DA:1587:A:H2'	23:DA:1588:C:C6	2.11	0.86
26:DD:120:TRP:CD2	26:DD:155:LYS:HD3	2.11	0.86
28:DF:34:LEU:HD23	28:DF:161:THR:HG23	1.55	0.86
5:AE:122:GLU:O	5:AE:123:LEU:HD23	1.76	0.86
20:CT:57:ARG:NH1	20:CT:102:GLY:HA2	1.90	0.86
46:DX:13:ILE:HB	46:DX:62:VAL:HG23	1.57	0.86
52:D4:19:ARG:HH11	52:D4:19:ARG:CG	1.87	0.86
3:AC:92:ALA:HB2	3:AC:99:VAL:HG13	1.56	0.86
23:BA:1529:A:H62	23:BA:1542:G:N2	1.74	0.86
23:BA:2439:A:H8	23:BA:2439:A:C5'	1.88	0.86
12:CL:52:ARG:CG	12:CL:52:ARG:HH11	1.89	0.86
23:DA:603:A:H61	23:DA:655:A:H4'	1.41	0.86
44:DV:132:ASN:O	44:DV:134:PRO:HD3	1.75	0.86
52:D4:8:ASN:HD22	52:D4:9:ARG:N	1.73	0.86
23:BA:674:G:H1'	27:BE:74:ARG:HD3	1.54	0.86
1:CA:250:A:H4'	1:CA:251:G:O5'	1.75	0.86
40:DR:66:ARG:HD2	40:DR:88:ARG:CZ	2.06	0.86
24:BB:79:C:H2'	24:BB:80:U:O4'	1.76	0.86
38:BP:24:PRO:HA	38:BP:49:VAL:HG13	1.55	0.86
1:CA:965:A:C2	1:CA:969:A:C2	2.64	0.86
2:CB:138:LEU:HD12	2:CB:141:GLU:HG3	1.58	0.86
42:DT:71:GLY:O	42:DT:72:LYS:HG3	1.74	0.86
1:AA:1295:G:H21	1:AA:1302:U:H3	1.21	0.85
20:AT:26:ASN:HD22	20:AT:26:ASN:H	1.21	0.85
24:DB:66:A:N6	24:DB:107:U:H2'	1.90	0.85
34:DL:59:LEU:HA	34:DL:61:ARG:HE	1.35	0.85
1:AA:971:G:C8	1:AA:1365:G:H4'	2.11	0.85
19:AS:63:THR:HG22	19:AS:66:MET:HG2	1.55	0.85
23:BA:2015:A:C1'	50:B2:2:ALA:HA	2.06	0.85
1:CA:1124:G:H5'	10:CJ:35:SER:HB2	1.57	0.85
41:DS:29:LEU:HD21	41:DS:33:ARG:HE	1.41	0.85
3:AC:88:ARG:HB3	3:AC:99:VAL:HG21	1.56	0.85
23:DA:2219:G:H2'	23:DA:2224:G:H5'	1.57	0.85
36:BN:55:ALA:HA	36:BN:80:PHE:CE1	2.11	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:59:A:H1'	1:CA:354:G:N2	1.92	0.85
35:DM:47:ILE:HG22	35:DM:48:GLU:N	1.91	0.85
37:DO:51:ALA:HB1	37:DO:72:ALA:HB1	1.58	0.85
43:BU:14:LEU:HD23	43:BU:15:VAL:N	1.90	0.85
53:B5:32:LEU:HD23	53:B5:33:ASN:H	1.42	0.85
23:DA:2219:G:C2'	23:DA:2224:G:H5'	2.06	0.85
24:DB:80:U:H2'	24:DB:81:G:H21	1.39	0.85
43:DU:17:SER:HA	43:DU:71:LYS:HD2	1.57	0.85
23:BA:197:A:H5'	23:BA:197:A:C8	2.12	0.85
23:BA:1264:G:H5'	50:B2:11:THR:HG21	1.58	0.85
4:CD:15:GLU:HG2	4:CD:63:LYS:HG3	1.56	0.85
23:DA:2272:U:H5''	23:DA:2272:U:C6	2.11	0.85
41:DS:75:TYR:CE2	41:DS:104:THR:HB	2.11	0.85
2:AB:26:PRO:HG2	2:AB:27:LYS:HD3	1.57	0.85
4:AD:119:GLN:HG3	4:AD:123:HIS:CD2	2.11	0.85
33:BK:77:ILE:HD13	38:BP:74:ARG:HG3	1.56	0.85
53:B5:34:TRP:CG	53:B5:35:GLN:N	2.40	0.85
6:CF:35:ALA:HB1	6:CF:65:VAL:HG21	1.58	0.85
35:DM:81:VAL:O	35:DM:82:ARG:CG	2.25	0.85
38:DP:56:GLY:O	38:DP:59:THR:HG22	1.76	0.85
26:BD:201:THR:CG2	26:BD:202:LYS:H	1.90	0.85
30:BH:113:ARG:HB2	30:BH:130:TYR:CZ	2.11	0.85
36:BN:38:VAL:HB	36:BN:39:PRO:HD3	1.56	0.85
43:BU:15:VAL:HG22	43:BU:72:VAL:HG12	1.59	0.85
1:CA:737:A:H2'	1:CA:738:C:H6	1.39	0.85
12:CL:26:LEU:HG	12:CL:32:ARG:NH1	1.92	0.85
23:DA:1343:G:H5'	23:DA:1343:G:C8	2.11	0.85
1:AA:1124:G:H5'	10:AJ:35:SER:HB2	1.59	0.85
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.57	0.85
23:BA:2875:C:H4'	38:BP:5:ALA:HB2	1.59	0.85
30:BH:77:LEU:O	30:BH:143:SER:HB3	1.76	0.85
41:BS:29:LEU:HD21	41:BS:33:ARG:HE	1.41	0.85
1:CA:320:C:H5''	1:CA:321:A:OP2	1.77	0.85
1:CA:392:G:H2'	1:CA:393:A:C8	2.11	0.85
6:CF:7:ASN:HD21	18:CR:34:TYR:HE1	1.21	0.85
29:DG:44:VAL:HG12	29:DG:45:VAL:H	1.42	0.85
23:BA:529:A:H62	23:BA:2041:U:H3	1.22	0.85
23:BA:2377:A:H2'	23:BA:2378:A:C8	2.11	0.85
25:BC:67:PHE:CE2	25:BC:106:ILE:HD11	2.11	0.85
1:CA:82:U:H2'	1:CA:85:U:C5	2.10	0.85
7:CG:107:ALA:HB2	7:CG:134:ALA:HB2	1.56	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:141(A):A:H8	23:DA:1595:G:H21	1.20	0.85
29:DG:19:VAL:HG12	29:DG:20:ALA:H	1.42	0.85
45:DW:42:GLY:HA2	45:DW:57:PHE:CD2	2.11	0.85
4:CD:128:VAL:HG12	4:CD:129:ASN:OD1	1.77	0.84
23:DA:2502:G:H5'	23:DA:2503:A:C5'	2.07	0.84
29:DG:148:ILE:O	29:DG:151:ILE:HG12	1.77	0.84
34:DL:16:ARG:C	34:DL:16:ARG:HE	1.79	0.84
50:D2:20:ARG:HA	50:D2:23:HIS:CD2	2.11	0.84
1:AA:57:G:H2'	1:AA:58:C:H6	1.42	0.84
3:AC:66:VAL:HB	3:AC:101:LEU:HD23	1.59	0.84
27:BE:164:ARG:HG3	27:BE:175:THR:OG1	1.78	0.84
40:DR:27:ALA:HB3	40:DR:61:VAL:HG11	1.59	0.84
5:AE:126:ARG:CG	5:AE:126:ARG:HH11	1.89	0.84
12:AL:26:LEU:HG	12:AL:32:ARG:NH1	1.91	0.84
12:AL:52:ARG:HH11	12:AL:52:ARG:CG	1.90	0.84
1:CA:971:G:C8	1:CA:1365:G:H4'	2.12	0.84
23:DA:322:A:H3'	27:DE:169:ASN:ND2	1.91	0.84
23:DA:1156:A:C8	39:DQ:51:LYS:HD2	2.12	0.84
26:DD:31:CYS:HB3	26:DD:49:LEU:HB3	1.56	0.84
1:AA:250:A:H4'	1:AA:251:G:O5'	1.76	0.84
3:AC:195:VAL:HG12	3:AC:196:LEU:H	1.43	0.84
5:AE:78:HIS:HD2	8:AH:104:ARG:HG2	1.42	0.84
23:BA:2781:A:C5'	23:BA:2782:G:H5'	2.02	0.84
8:CH:92:ARG:HB3	8:CH:94:TYR:HE2	1.41	0.84
18:CR:58:LEU:HD23	18:CR:62:GLU:HB3	1.59	0.84
32:DJ:142:ARG:HG3	32:DJ:142:ARG:HH11	1.42	0.84
34:DL:33:ARG:HB3	34:DL:36:LYS:CD	2.07	0.84
42:DT:9:LEU:HB2	42:DT:29:TRP:O	1.77	0.84
46:DX:27:GLU:HB2	46:DX:33:LYS:HA	1.59	0.84
23:BA:2307:G:H2'	23:BA:2308:G:H5'	1.59	0.84
23:BA:2391:G:OP1	53:B5:32:LEU:HB2	1.77	0.84
32:BJ:85:VAL:HG22	32:BJ:89:LYS:HG3	1.59	0.84
35:BM:6:ARG:O	35:BM:7:MET:HG3	1.77	0.84
37:BO:89:ARG:HG3	37:BO:94:TYR:HB2	1.56	0.84
1:CA:57:G:H2'	1:CA:58:C:C6	2.11	0.84
3:CC:195:VAL:HG12	3:CC:196:LEU:H	1.42	0.84
12:CL:68:TYR:O	12:CL:99:ILE:HG22	1.77	0.84
23:DA:2307:G:H2'	23:DA:2308:G:H5'	1.59	0.84
30:DH:113:ARG:HB2	30:DH:130:TYR:CZ	2.12	0.84
39:DQ:91:ASP:CG	39:DQ:96:ALA:HB2	1.98	0.84
42:DT:35:THR:O	42:DT:39:ILE:HG12	1.77	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:35:ALA:HB1	6:AF:65:VAL:HG21	1.59	0.84
23:BA:1379:A:H4'	23:BA:1380:G:OP2	1.78	0.84
29:BG:84:SER:HA	29:BG:133:VAL:O	1.77	0.84
38:BP:62:THR:HG22	38:BP:75:ILE:HG13	1.59	0.84
11:CK:108:ILE:HG21	18:CR:88:LYS:HG2	1.59	0.84
23:BA:84:A:H5''	43:BU:9:LYS:HD2	1.59	0.84
26:BD:111:ARG:HD2	26:BD:160:TYR:HE1	1.42	0.84
34:BL:38:GLN:HG3	34:BL:39:LYS:H	1.42	0.84
43:BU:81:LYS:CD	43:BU:97:ARG:HB3	2.07	0.84
5:CE:122:GLU:O	5:CE:123:LEU:HD23	1.78	0.84
23:DA:1495:A:H5''	23:DA:1496:A:OP2	1.78	0.84
29:DG:46:GLU:HG3	29:DG:51:ARG:NE	1.91	0.84
46:DX:73:LEU:HD11	46:DX:94:LEU:HB3	1.57	0.84
53:D5:34:TRP:CG	53:D5:35:GLN:N	2.40	0.84
12:AL:68:TYR:O	12:AL:99:ILE:HG22	1.77	0.84
23:BA:1343:G:C8	23:BA:1343:G:H5'	2.12	0.84
23:BA:2562:U:H1'	33:BK:23:ARG:HH11	1.42	0.84
24:BB:80:U:H2'	24:BB:81:G:H21	1.42	0.84
41:BS:13:SER:HB3	41:BS:16:LYS:HD3	1.59	0.84
46:BX:11:ARG:HB3	46:BX:12:PRO:CD	2.08	0.84
23:DA:2577:A:H5''	23:DA:2578:G:H5'	1.60	0.84
32:DJ:53:ILE:HG23	32:DJ:75:VAL:HG11	1.60	0.84
33:BK:35:VAL:HG23	33:BK:65:THR:HG23	1.60	0.84
34:BL:33:ARG:HB3	34:BL:36:LYS:HG3	1.58	0.84
47:BY:2:LYS:H	47:BY:2:LYS:CE	1.90	0.84
1:CA:721:G:H4'	1:CA:722:A:O4'	1.77	0.84
20:CT:26:ASN:H	20:CT:26:ASN:HD22	1.25	0.84
1:AA:965:A:C2	1:AA:969:A:C2	2.66	0.84
2:AB:87:ARG:HG3	2:AB:233:SER:HB3	1.60	0.84
23:BA:1544:C:OP1	23:BA:1544:C:C6	2.30	0.84
26:BD:9:VAL:HG13	26:BD:25:VAL:O	1.77	0.84
40:BR:39:LEU:HB3	40:BR:47:VAL:HG21	1.60	0.84
1:CA:1320:C:H42	19:CS:36:ARG:HG3	1.43	0.84
35:DM:75:THR:CA	35:DM:88:GLY:HA2	2.08	0.84
41:DS:9:TYR:H	41:DS:102:HIS:HD2	1.23	0.84
1:AA:1329:A:H5''	13:AM:26:GLY:H	1.41	0.83
2:AB:138:LEU:HD12	2:AB:141:GLU:HG3	1.58	0.83
23:BA:2786:U:H4'	26:BD:65:GLY:O	1.77	0.83
23:BA:2808:U:H2'	23:BA:2809:A:H5'	1.60	0.83
24:BB:11:C:H3'	24:BB:12:C:H6	1.42	0.83
1:CA:448:A:O2'	1:CA:449:C:H5'	1.78	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:322:A:H3'	27:DE:169:ASN:HD21	1.41	0.83
1:AA:82:U:H2'	1:AA:85:U:C5	2.10	0.83
39:BQ:83:LEU:HD12	39:BQ:113:ALA:HB2	1.61	0.83
47:BY:17:SER:HB3	47:BY:18:PRO:HD3	1.59	0.83
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	1.59	0.83
15:CO:18:PHE:CE1	15:CO:21:ASP:HB2	2.12	0.83
39:DQ:83:LEU:HG	39:DQ:88:ILE:HD11	1.59	0.83
43:DU:81:LYS:CD	43:DU:97:ARG:HB3	2.08	0.83
30:BH:133:HIS:CD2	30:BH:135:GLU:HG2	2.13	0.83
1:CA:877:C:H5''	8:CH:88:LYS:HD3	1.60	0.83
23:DA:96:G:H4'	47:DY:48:HIS:CE1	2.12	0.83
23:DA:1401:G:H2'	23:DA:1402:C:H6	1.43	0.83
29:DG:84:SER:HA	29:DG:133:VAL:O	1.77	0.83
34:DL:114:ILE:HD12	34:DL:114:ILE:N	1.92	0.83
1:AA:57:G:H2'	1:AA:58:C:C6	2.14	0.83
23:BA:1495:A:H5''	23:BA:1496:A:OP2	1.78	0.83
23:BA:1858:G:H1'	23:BA:1884:A:N6	1.94	0.83
23:DA:2391:G:OP1	53:D5:32:LEU:HB2	1.79	0.83
26:DD:201:THR:CG2	26:DD:202:LYS:H	1.91	0.83
32:DJ:85:VAL:HG22	32:DJ:89:LYS:HG3	1.59	0.83
43:DU:8:LYS:H	43:DU:8:LYS:HZ2	1.24	0.83
25:BC:79:VAL:HG21	25:BC:111:LEU:HD11	1.61	0.83
29:BG:46:GLU:HG3	29:BG:51:ARG:NE	1.94	0.83
40:BR:27:ALA:HB3	40:BR:61:VAL:HG11	1.58	0.83
41:BS:40:ASN:O	41:BS:41:LYS:HG2	1.78	0.83
46:BX:27:GLU:HB2	46:BX:33:LYS:HA	1.58	0.83
23:DA:2015:A:C1'	50:D2:2:ALA:HA	2.07	0.83
38:DP:53:ARG:HH11	38:DP:53:ARG:HG2	1.42	0.83
4:AD:92:VAL:HG12	4:AD:96:LEU:HD23	1.61	0.83
23:BA:2267:A:H5''	23:BA:2268:A:C5'	2.07	0.83
23:BA:2790:A:H2'	23:BA:2791:C:H5''	1.60	0.83
53:B5:33:ASN:HD22	53:B5:34:TRP:H	1.21	0.83
4:CD:153:ARG:HH11	4:CD:181:MET:HE3	1.42	0.83
23:DA:2781:A:C5'	23:DA:2782:G:H5'	2.04	0.83
27:DE:167:ALA:HB1	27:DE:173:VAL:HG11	1.60	0.83
30:DH:100:ALA:HA	30:DH:103:ARG:HB2	1.61	0.83
35:DM:6:ARG:O	35:DM:7:MET:HG3	1.79	0.83
23:BA:2577:A:H5''	23:BA:2578:G:H5'	1.59	0.83
52:B4:8:ASN:C	52:B4:8:ASN:ND2	2.23	0.83
4:CD:108:LEU:HD21	4:CD:183:GLY:HA3	1.58	0.83
23:DA:1019:U:H3	23:DA:114(B):A:N6	1.77	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2787:C:H1'	26:DD:62:PRO:HB3	1.60	0.83
19:AS:19:VAL:HG21	19:AS:44:MET:HG3	1.60	0.83
23:BA:1210:A:H8	23:BA:1210:A:H5''	1.43	0.83
23:BA:1264:G:H5'	50:B2:11:THR:CG2	2.09	0.83
39:BQ:91:ASP:CG	39:BQ:96:ALA:HB2	1.98	0.83
52:B4:11:LYS:O	52:B4:15:THR:HG23	1.78	0.83
2:CB:26:PRO:HG2	2:CB:27:LYS:HD3	1.60	0.83
2:CB:111:ARG:HH11	2:CB:111:ARG:CG	1.92	0.83
8:CH:20:TYR:HA	8:CH:65:TYR:CE2	2.12	0.83
40:BR:35:LEU:HB2	40:BR:57:VAL:HG13	1.61	0.83
42:BT:9:LEU:HB2	42:BT:29:TRP:O	1.79	0.83
46:BX:13:ILE:HG12	46:BX:63:ALA:HB2	1.61	0.83
46:BX:19:GLN:HG3	46:BX:41:ARG:HE	1.43	0.83
23:DA:848:G:H2'	23:DA:849:A:C8	2.14	0.83
23:DA:1510:A:H2'	23:DA:1511:A:C8	2.14	0.83
30:DH:92:VAL:HG23	30:DH:96:ASP:HB2	1.60	0.83
1:AA:320:C:H5''	1:AA:321:A:OP2	1.77	0.83
25:BC:132:PRO:HD3	25:BC:190:TYR:CZ	2.14	0.83
27:BE:101:LEU:HD12	27:BE:102:PRO:HD2	1.58	0.83
4:CD:126:ILE:HG22	4:CD:127:THR:H	1.43	0.83
6:CF:26:ILE:O	6:CF:30:LEU:HD12	1.78	0.83
23:DA:2598:A:OP1	25:DC:235:GLY:HA3	1.79	0.83
1:AA:1238:A:N7	1:AA:1303:C:H1'	1.94	0.82
22:AV:6213:A:H2'	22:AV:6214:C:H6	1.43	0.82
23:BA:2502:G:H5'	23:BA:2503:A:C5'	2.08	0.82
47:BY:9:GLN:O	47:BY:12:GLU:HB3	1.78	0.82
23:DA:674:G:H1'	27:DE:74:ARG:HD3	1.59	0.82
23:DA:1055:G:H2'	23:DA:1056:G:C8	2.14	0.82
47:DY:9:GLN:O	47:DY:12:GLU:HB3	1.78	0.82
1:AA:818:G:O2'	1:AA:819:A:H5'	1.80	0.82
23:DA:2327:A:H2'	23:DA:2328:A:C8	2.14	0.82
35:DM:68:ILE:HD13	35:DM:103:MET:HG2	1.60	0.82
39:DQ:82:GLY:HA3	39:DQ:113:ALA:HB1	1.62	0.82
52:D4:12:ARG:HG3	52:D4:12:ARG:HH11	1.43	0.82
23:BA:1188:U:O2'	23:BA:1189:A:H5'	1.78	0.82
2:CB:87:ARG:HG3	2:CB:233:SER:HB3	1.61	0.82
1:AA:737:A:H2'	1:AA:738:C:C6	2.14	0.82
1:AA:1152:A:H2'	1:AA:1153:C:H6	1.44	0.82
26:BD:31:CYS:HB3	26:BD:49:LEU:HB3	1.59	0.82
32:BJ:53:ILE:HG23	32:BJ:75:VAL:HG11	1.61	0.82
1:CA:1294:G:H2'	1:CA:1295:G:C8	2.15	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:475:G:H2'	1:AA:476:G:H8	1.45	0.82
1:AA:987:G:H1	1:AA:1218:C:H42	1.28	0.82
23:BA:2009:G:H2'	23:BA:2010:G:H5'	1.60	0.82
8:CH:83:ILE:HG13	8:CH:137:VAL:HG22	1.60	0.82
25:DC:166:GLN:CA	25:DC:166:GLN:HE21	1.93	0.82
23:BA:1587:A:H2'	23:BA:1588:C:C6	2.14	0.82
25:BC:106:ILE:HD12	25:BC:106:ILE:N	1.95	0.82
40:BR:24:LYS:HA	40:BR:92:THR:HG23	1.62	0.82
8:CH:12:ARG:HH12	8:CH:26:VAL:HA	1.44	0.82
23:DA:528:A:H8	23:DA:528:A:H3'	1.44	0.82
32:DJ:93:LYS:HE3	32:DJ:95:TYR:HE1	1.45	0.82
52:D4:8:ASN:HD21	52:D4:11:LYS:H	1.27	0.82
34:BL:33:ARG:HG2	34:BL:34:GLY:N	1.93	0.82
43:BU:8:LYS:HZ2	43:BU:8:LYS:H	1.24	0.82
1:CA:1154:G:H2'	1:CA:1155:G:H8	1.44	0.82
33:DK:113:LYS:O	33:DK:117:LEU:HD12	1.79	0.82
1:AA:877:C:H5''	8:AH:88:LYS:HD3	1.61	0.82
23:BA:242:G:H5''	53:B5:63:PRO:HG2	1.62	0.82
23:BA:2306:C:H3'	23:BA:2307:G:C8	2.15	0.82
34:BL:35:HIS:O	34:BL:36:LYS:HB2	1.79	0.82
33:DK:77:ILE:HD13	38:DP:74:ARG:HG3	1.62	0.82
39:BQ:92:ARG:CD	39:BQ:94:ASN:HB3	2.10	0.82
23:DA:2808:U:H2'	23:DA:2809:A:H5'	1.59	0.82
33:DK:99:PHE:N	33:DK:99:PHE:HD1	1.77	0.82
25:BC:21:PHE:HB3	25:BC:24:ILE:HD12	1.60	0.82
29:BG:148:ILE:O	29:BG:151:ILE:HG12	1.78	0.82
18:CR:54:ARG:H	18:CR:54:ARG:HD2	1.44	0.82
25:DC:21:PHE:HB3	25:DC:24:ILE:HD12	1.59	0.82
27:DE:8:GLN:CD	27:DE:8:GLN:H	1.82	0.82
27:DE:101:LEU:HD12	27:DE:102:PRO:HD2	1.60	0.82
34:DL:33:ARG:HB3	34:DL:36:LYS:CG	2.10	0.82
46:DX:11:ARG:HB3	46:DX:12:PRO:CD	2.10	0.82
1:AA:1294:G:H2'	1:AA:1295:G:C8	2.15	0.81
8:AH:112:LEU:HA	8:AH:134:ILE:HG12	1.62	0.81
23:BA:1510:A:H2'	23:BA:1511:A:C8	2.14	0.81
23:BA:1614:A:N6	41:BS:87:PRO:HA	1.95	0.81
4:CD:108:LEU:HB3	4:CD:110:PHE:CE2	2.15	0.81
23:DA:2306:C:H3'	23:DA:2307:G:H8	1.45	0.81
23:DA:2377:A:H2'	23:DA:2378:A:C8	2.15	0.81
40:DR:34:GLU:O	40:DR:36:PRO:HD3	1.80	0.81
15:AO:18:PHE:CE1	15:AO:21:ASP:HB2	2.15	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:53:LEU:HD11	17:AQ:85:VAL:HG21	1.62	0.81
23:BA:2787:C:H1'	26:BD:62:PRO:HB3	1.62	0.81
35:BM:75:THR:CA	35:BM:88:GLY:HA2	2.08	0.81
1:CA:624:C:H4'	16:CP:11:SER:H	1.43	0.81
19:CS:19:VAL:HG21	19:CS:44:MET:HG3	1.60	0.81
23:DA:2393:A:H5''	34:DL:62:LEU:HD12	1.60	0.81
40:DR:24:LYS:HA	40:DR:92:THR:HG23	1.61	0.81
48:DZ:43:ILE:HD13	48:DZ:43:ILE:N	1.94	0.81
53:D5:28:GLY:O	53:D5:32:LEU:HD21	1.80	0.81
5:AE:76:ILE:HG12	5:AE:77:PRO:HD2	1.61	0.81
23:BA:603:A:H61	23:BA:655:A:H4'	1.45	0.81
23:BA:1055:G:H2'	23:BA:1056:G:C8	2.14	0.81
23:BA:1110:G:HO2'	23:BA:1111:A:H8	0.84	0.81
23:BA:2068:U:H3	23:BA:2430:A:H2	0.86	0.81
23:BA:2777:G:H5''	23:BA:2778:A:H5'	1.61	0.81
29:BG:19:VAL:HG12	29:BG:20:ALA:H	1.43	0.81
32:BJ:142:ARG:HH11	32:BJ:142:ARG:HG3	1.44	0.81
37:BO:104:GLY:HA2	37:BO:107:GLU:HG2	1.62	0.81
38:BP:53:ARG:HH11	38:BP:53:ARG:HG2	1.45	0.81
5:CE:76:ILE:HG12	5:CE:77:PRO:HD2	1.62	0.81
11:CK:34:ASP:N	11:CK:40:ILE:HD11	1.95	0.81
23:DA:242:G:H5''	53:D5:63:PRO:HG2	1.61	0.81
23:DA:860:U:C5	23:DA:917:A:N7	2.48	0.81
23:DA:996:A:H4'	39:DQ:92:ARG:NH1	1.95	0.81
23:DA:1174:A:C3'	23:DA:1175:U:H5''	2.10	0.81
23:DA:1401:G:H2'	23:DA:1402:C:C6	2.15	0.81
23:DA:1529:A:H62	23:DA:1542:G:N2	1.78	0.81
23:DA:1544:C:OP1	23:DA:1544:C:C6	2.33	0.81
23:DA:1858:G:H1'	23:DA:1884:A:N6	1.96	0.81
23:DA:2887:U:H2'	23:DA:2888:C:C6	2.15	0.81
37:DO:104:GLY:HA2	37:DO:107:GLU:HG2	1.63	0.81
46:DX:27:GLU:CD	46:DX:33:LYS:HE3	2.01	0.81
1:AA:721:G:H4'	1:AA:722:A:O4'	1.81	0.81
27:BE:64:ILE:O	27:BE:64:ILE:HD12	1.80	0.81
33:BK:113:LYS:O	33:BK:117:LEU:HD12	1.79	0.81
37:BO:69:VAL:O	37:BO:72:ALA:HB3	1.80	0.81
7:CG:115:ARG:O	7:CG:118:VAL:HG22	1.80	0.81
33:BK:19:ILE:H	33:BK:19:ILE:HD13	1.43	0.81
36:BN:63:ARG:HH11	36:BN:63:ARG:HB2	1.45	0.81
33:DK:35:VAL:HG23	33:DK:65:THR:HG23	1.60	0.81
42:DT:53:LYS:HB3	42:DT:82:GLN:HB3	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:111:ARG:HH11	2:AB:111:ARG:CG	1.93	0.81
11:AK:108:ILE:HG21	18:AR:88:LYS:HG2	1.62	0.81
23:BA:910:A:C5	35:BM:13:GLN:OE1	2.33	0.81
23:BA:1286:A:O2'	23:BA:1288:U:OP2	1.98	0.81
23:BA:2306:C:H3'	23:BA:2307:G:H8	1.45	0.81
37:BO:31:SER:HB3	37:BO:34:HIS:HB2	1.63	0.81
1:CA:818:G:O2'	1:CA:819:A:H5'	1.80	0.81
23:DA:330:A:O2'	23:DA:331:A:H8	1.62	0.81
23:BA:848:G:H2'	23:BA:849:A:C8	2.16	0.81
30:BH:92:VAL:HG23	30:BH:96:ASP:HB2	1.63	0.81
34:BL:114:ILE:HD13	34:BL:130:PHE:CD1	2.15	0.81
42:BT:53:LYS:HB3	42:BT:82:GLN:HB3	1.61	0.81
1:CA:979:C:H42	14:CN:18:VAL:HG12	1.44	0.81
16:CP:39:TYR:CD1	16:CP:73:LEU:HD13	2.16	0.81
45:DW:42:GLY:HA2	45:DW:57:PHE:CE2	2.15	0.81
5:AE:31:LEU:HD21	5:AE:43:LEU:HD12	1.63	0.81
5:AE:57:LYS:O	5:AE:61:TYR:HD2	1.63	0.81
16:AP:39:TYR:CD1	16:AP:73:LEU:HD13	2.16	0.81
23:BA:996:A:H4'	39:BQ:92:ARG:NH1	1.96	0.81
23:BA:2009:G:C2'	23:BA:2010:G:H5'	2.11	0.81
23:BA:2887:U:H2'	23:BA:2888:C:C6	2.14	0.81
1:CA:1152:A:H2'	1:CA:1153:C:H6	1.45	0.81
4:CD:100:ARG:HH21	4:CD:118:ARG:HH12	1.29	0.81
23:DA:1418:G:H8	23:DA:1418:G:O5'	1.63	0.81
26:DD:111:ARG:HD2	26:DD:160:TYR:HE1	1.41	0.81
38:DP:51:ARG:HH11	38:DP:51:ARG:CG	1.93	0.81
42:DT:41:ASN:O	42:DT:45:THR:HG23	1.81	0.81
8:AH:92:ARG:HB3	8:AH:94:TYR:CE2	2.15	0.81
24:BB:82:G:O2'	24:BB:83:G:H5'	1.80	0.81
5:CE:78:HIS:HD2	8:CH:104:ARG:HG2	1.43	0.81
25:DC:27:THR:HG23	25:DC:27:THR:O	1.79	0.81
41:DS:40:ASN:O	41:DS:41:LYS:HG2	1.81	0.81
1:AA:1281:U:H4'	1:AA:1282:C:OP2	1.81	0.81
20:CT:45:GLN:HB2	20:CT:91:LEU:HD13	1.63	0.81
23:DA:810:U:H3	34:DL:36:LYS:NZ	1.79	0.81
28:DF:128:ARG:NE	28:DF:129:GLY:H	1.78	0.81
39:DQ:83:LEU:HD12	39:DQ:113:ALA:HB2	1.61	0.81
1:AA:781:A:C3'	1:AA:782:A:H5'	2.11	0.80
1:AA:957:U:H4'	19:AS:79:THR:HB	1.62	0.80
4:AD:166:LYS:HE2	25:DC:134:ARG:HH21	1.45	0.80
23:BA:2327:A:H2'	23:BA:2328:A:C8	2.16	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BX:13:ILE:HB	46:BX:62:VAL:HG23	1.60	0.80
2:CB:167:PRO:O	2:CB:171:ALA:HB2	1.80	0.80
11:CK:59:TYR:CE1	11:CK:63:LEU:HD21	2.16	0.80
44:DV:125:LEU:HD22	44:DV:164:ALA:HB3	1.63	0.80
53:D5:62:LEU:HB3	53:D5:63:PRO:HD3	1.61	0.80
1:AA:392:G:H2'	1:AA:393:A:C8	2.16	0.80
23:BA:661:C:H4'	34:BL:18:ARG:HG2	1.62	0.80
25:BC:87:ASN:H	25:BC:87:ASN:ND2	1.79	0.80
23:DA:875:G:H4'	44:DV:170:THR:HG21	1.63	0.80
23:DA:1210:A:H8	23:DA:1210:A:C5'	1.94	0.80
23:DA:2306:C:H3'	23:DA:2307:G:C8	2.16	0.80
36:DN:63:ARG:HB2	36:DN:63:ARG:HH11	1.46	0.80
2:AB:187:LEU:CD1	2:AB:205:ASP:HB3	2.11	0.80
7:AG:115:ARG:O	7:AG:118:VAL:HG22	1.80	0.80
37:BO:24:LEU:O	37:BO:86:ALA:HB3	1.81	0.80
23:DA:529:A:H62	23:DA:2041:U:H3	1.27	0.80
23:DA:744:G:OP1	26:DD:132:HIS:HB3	1.81	0.80
23:DA:804:A:H5''	23:DA:805:G:OP1	1.80	0.80
38:DP:62:THR:HG22	38:DP:75:ILE:HG13	1.64	0.80
1:AA:1064:G:H21	1:AA:1190:G:H2'	1.45	0.80
4:AD:25:ARG:HG2	4:AD:30:LYS:HG3	1.63	0.80
6:AF:91:VAL:HG12	6:AF:92:LYS:O	1.81	0.80
8:AH:12:ARG:HH12	8:AH:26:VAL:HA	1.43	0.80
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.16	0.80
1:CA:1238:A:N7	1:CA:1303:C:H1'	1.96	0.80
32:DJ:118:PRO:O	32:DJ:121:VAL:HG22	1.81	0.80
34:DL:16:ARG:HH21	34:DL:17:LYS:HA	1.46	0.80
1:AA:175:C:H2'	1:AA:176:C:H6	1.46	0.80
1:AA:737:A:H2'	1:AA:738:C:H6	1.46	0.80
25:BC:233:HIS:HE1	25:BC:247:ALA:H	1.29	0.80
27:BE:157:VAL:HB	27:BE:194:MET:HB3	1.62	0.80
44:BV:69:THR:HG22	44:BV:90:VAL:HA	1.62	0.80
53:B5:28:GLY:O	53:B5:32:LEU:HD21	1.82	0.80
1:CA:1281:U:H4'	1:CA:1282:C:OP2	1.82	0.80
23:DA:329:G:OP2	43:DU:71:LYS:HE3	1.82	0.80
39:DQ:92:ARG:HB2	39:DQ:92:ARG:HH11	1.44	0.80
1:AA:59:A:H1'	1:AA:354:G:N2	1.96	0.80
1:AA:324:G:N2	1:AA:327:A:C8	2.50	0.80
1:AA:1191:A:H5''	3:AC:4:LYS:NZ	1.96	0.80
2:AB:167:PRO:O	2:AB:171:ALA:HB2	1.81	0.80
3:AC:173:VAL:HG12	3:AC:173:VAL:O	1.81	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:7:G:H1	23:BA:2896:C:H42	1.28	0.80
23:BA:1487:G:H2'	23:BA:1488:G:H8	1.46	0.80
27:BE:8:GLN:CD	27:BE:8:GLN:H	1.83	0.80
41:BS:29:LEU:CD2	41:BS:33:ARG:HE	1.94	0.80
8:CH:112:LEU:HA	8:CH:134:ILE:HG12	1.64	0.80
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.64	0.80
18:AR:54:ARG:HD2	18:AR:54:ARG:H	1.45	0.80
23:BA:1174:A:C3'	23:BA:1175:U:H5''	2.10	0.80
3:CC:66:VAL:HB	3:CC:101:LEU:HD23	1.61	0.80
23:DA:363(A):G:H2'	23:DA:363(B):A:C8	2.17	0.80
23:DA:528:A:H2	23:DA:2043:C:C5'	1.95	0.80
30:DH:133:HIS:CD2	30:DH:135:GLU:HG2	2.16	0.80
34:DL:147:LEU:HD13	34:DL:148:LEU:O	1.81	0.80
39:DQ:92:ARG:CD	39:DQ:94:ASN:HB3	2.12	0.80
1:AA:625:G:C4	1:AA:626:U:C5	2.70	0.80
26:BD:54:GLN:HG2	26:BD:76:ARG:HG3	1.64	0.80
1:CA:324:G:N2	1:CA:327:A:C8	2.49	0.80
6:CF:26:ILE:HG22	6:CF:30:LEU:HD11	1.64	0.80
23:DA:1658:C:OP1	26:DD:132:HIS:O	2.00	0.80
27:DE:89:VAL:HG12	27:DE:90:PHE:N	1.97	0.80
53:D5:57:ARG:HB2	53:D5:57:ARG:NH1	1.96	0.80
1:AA:1117:G:H21	1:AA:1180:A:H1'	1.45	0.80
8:AH:83:ILE:HG13	8:AH:137:VAL:HG22	1.63	0.80
32:BJ:27:TYR:CD2	39:BQ:100:VAL:HG11	2.17	0.80
40:BR:66:ARG:HD2	40:BR:88:ARG:CZ	2.10	0.80
40:BR:100:ARG:HG3	40:BR:100:ARG:O	1.80	0.80
22:CV:6213:A:H2'	22:CV:6214:C:H6	1.46	0.80
23:DA:910:A:C5	35:DM:13:GLN:OE1	2.34	0.80
23:DA:2777:G:H5''	23:DA:2778:A:H5'	1.64	0.80
27:DE:103:LYS:HA	27:DE:106:ARG:HG3	1.62	0.80
33:DK:101:PRO:O	33:DK:102:VAL:HG13	1.82	0.80
47:DY:46:GLN:HB2	47:DY:49:LYS:NZ	1.96	0.80
1:AA:1154:G:H2'	1:AA:1155:G:H8	1.46	0.80
5:AE:126:ARG:HH11	5:AE:126:ARG:HG2	1.47	0.80
23:BA:605:C:H1'	23:BA:657:U:O2'	1.82	0.80
23:BA:733:G:N7	23:BA:761:A:C6	2.50	0.80
35:BM:58:PHE:HD1	35:BM:58:PHE:O	1.65	0.80
42:BT:24:GLY:HA3	42:BT:82:GLN:HE22	1.47	0.80
1:CA:710:G:OP1	6:CF:54:LYS:HE2	1.82	0.80
23:DA:197:A:H5'	23:DA:197:A:C8	2.17	0.80
23:DA:1110:G:HO2'	23:DA:1111:A:H8	0.81	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DB:11:C:H3'	24:DB:12:C:H6	1.46	0.80
2:AB:101:MET:HA	2:AB:108:ILE:HG13	1.63	0.79
23:BA:875:G:H4'	44:BV:170:THR:HG21	1.64	0.79
23:BA:1373:A:H2'	23:BA:1374:G:O4'	1.82	0.79
25:BC:8:PRO:HB3	25:BC:14:ARG:HB2	1.62	0.79
28:BF:39:ILE:HG12	28:BF:157:ILE:HG22	1.64	0.79
3:CC:43:LEU:HD22	3:CC:47:LEU:HD22	1.62	0.79
23:DA:557:U:H2'	23:DA:558:G:H8	1.46	0.79
33:DK:119:PRO:HB2	38:DP:68:TYR:CE1	2.18	0.79
23:BA:330:A:HO2'	23:BA:331:A:H8	1.30	0.79
34:BL:33:ARG:HB3	34:BL:36:LYS:CD	2.12	0.79
1:CA:475:G:H2'	1:CA:476:G:C8	2.17	0.79
2:CB:187:LEU:CD1	2:CB:205:ASP:HB3	2.13	0.79
5:CE:57:LYS:O	5:CE:61:TYR:HD2	1.66	0.79
5:CE:126:ARG:HH11	5:CE:126:ARG:HG2	1.45	0.79
23:DA:752:A:H3'	52:D4:1:MET:HE3	1.65	0.79
23:DA:1110:G:O2'	23:DA:1111:A:H8	1.64	0.79
47:DY:17:SER:HB3	47:DY:18:PRO:HD3	1.63	0.79
1:AA:828:A:H5''	1:AA:859:A:C2	2.17	0.79
3:AC:152:ILE:HD11	3:AC:167:TRP:CD1	2.17	0.79
8:AH:20:TYR:HA	8:AH:65:TYR:HE2	1.47	0.79
38:BP:54:ARG:HH11	38:BP:54:ARG:CG	1.94	0.79
1:CA:475:G:H2'	1:CA:476:G:H8	1.45	0.79
1:CA:828:A:H5''	1:CA:859:A:C2	2.16	0.79
15:CO:30:ALA:HA	15:CO:85:LEU:HD11	1.64	0.79
23:DA:1952:A:C5	33:DK:22:ILE:HD11	2.18	0.79
34:BL:59:LEU:HA	34:BL:61:ARG:HE	1.46	0.79
42:BT:41:ASN:O	42:BT:45:THR:HG23	1.81	0.79
23:DA:605:C:H1'	23:DA:657:U:O2'	1.82	0.79
23:DA:1487:G:H2'	23:DA:1488:G:H8	1.45	0.79
25:DC:70:TRP:HZ3	25:DC:146:GLU:OE1	1.65	0.79
40:DR:39:LEU:HB3	40:DR:47:VAL:HG21	1.65	0.79
45:DW:36:ILE:HD12	45:DW:58:THR:HG21	1.63	0.79
1:AA:556:C:H2'	1:AA:556:C:O2	1.83	0.79
23:BA:363(A):G:H2'	23:BA:363(B):A:C8	2.17	0.79
23:BA:1019:U:H3	23:BA:114(B):A:N6	1.79	0.79
26:BD:51:PHE:CD1	26:BD:52:LEU:HD12	2.18	0.79
29:BG:44:VAL:HG12	29:BG:45:VAL:H	1.45	0.79
3:CC:138:VAL:HG23	3:CC:151:VAL:HG23	1.64	0.79
3:CC:152:ILE:HD11	3:CC:167:TRP:CD1	2.17	0.79
4:CD:92:VAL:HG12	4:CD:96:LEU:HD23	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:52:ARG:HH11	12:CL:52:ARG:HG3	1.46	0.79
23:DA:2208:U:O2'	23:DA:2209:C:H5'	1.82	0.79
23:DA:2790:A:H2'	23:DA:2791:C:H5''	1.61	0.79
37:DO:31:SER:HB3	37:DO:34:HIS:HB2	1.64	0.79
44:DV:69:THR:HG22	44:DV:90:VAL:HA	1.63	0.79
19:AS:6:LYS:HG2	19:AS:7:LYS:HD3	1.63	0.79
23:BA:857:C:H4'	45:BW:23:VAL:HG21	1.64	0.79
52:B4:8:ASN:ND2	52:B4:11:LYS:H	1.81	0.79
1:AA:1329:A:H5''	13:AM:26:GLY:N	1.97	0.79
3:AC:43:LEU:HD22	3:AC:47:LEU:HD22	1.63	0.79
30:BH:66:GLU:HG2	30:BH:67:ARG:NH2	1.96	0.79
30:BH:83:ALA:CB	30:BH:123:LEU:HD12	2.13	0.79
33:DK:90:GLN:O	33:DK:91:LEU:HB2	1.83	0.79
41:DS:29:LEU:CD2	41:DS:33:ARG:HE	1.94	0.79
23:BA:760:G:C2'	23:BA:761:A:H5'	2.13	0.79
34:BL:16:ARG:NH1	34:BL:18:ARG:HG3	1.97	0.79
39:BQ:92:ARG:HH11	39:BQ:92:ARG:HB2	1.47	0.79
52:B4:19:ARG:HH11	52:B4:19:ARG:CG	1.96	0.79
18:CR:26:LEU:HD11	18:CR:42:ARG:HD2	1.62	0.79
23:DA:1437:C:H2'	23:DA:1438:U:C6	2.18	0.79
34:DL:132:LYS:HD3	34:DL:132:LYS:H	1.48	0.79
46:DX:13:ILE:HG12	46:DX:63:ALA:CB	2.13	0.79
1:AA:91:C:H2'	1:AA:92:G:C8	2.18	0.79
1:AA:832:C:H42	1:AA:854:G:H1	1.31	0.79
1:AA:950:U:OP2	13:AM:102:ARG:HG3	1.81	0.79
43:BU:17:SER:CA	43:BU:71:LYS:HD2	2.12	0.79
1:CA:370:C:O2'	1:CA:371:G:H5'	1.82	0.79
13:CM:67:GLU:HG3	13:CM:68:GLY:H	1.48	0.79
28:DF:39:ILE:HG12	28:DF:157:ILE:HG22	1.64	0.79
42:DT:84:ALA:HB3	42:DT:87:GLN:NE2	1.97	0.79
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.18	0.79
4:AD:126:ILE:HG22	4:AD:127:THR:H	1.48	0.79
6:AF:98:LEU:HD13	6:AF:101:ALA:HB2	1.64	0.79
15:AO:56:LEU:O	15:AO:60:VAL:HG23	1.83	0.79
27:BE:132:VAL:HG23	27:BE:133:ASN:H	1.49	0.79
34:BL:16:ARG:C	34:BL:16:ARG:HE	1.85	0.79
53:B5:57:ARG:NH1	53:B5:57:ARG:HB2	1.97	0.79
1:CA:1371:G:OP1	9:CI:11:LYS:HB3	1.82	0.79
23:DA:1373:A:H2'	23:DA:1374:G:O4'	1.82	0.79
38:DP:51:ARG:HG3	38:DP:51:ARG:NH1	1.88	0.79
23:BA:780:G:H21	23:BA:783:A:H62	1.27	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BL:59:LEU:CA	34:BL:61:ARG:NE	2.45	0.78
1:CA:556:C:O2	1:CA:556:C:H2'	1.83	0.78
2:CB:101:MET:HA	2:CB:108:ILE:HG13	1.64	0.78
39:DQ:91:ASP:OD2	39:DQ:96:ALA:HB2	1.81	0.78
1:AA:476:G:H2'	1:AA:477:G:H8	1.48	0.78
5:AE:78:HIS:CD2	8:AH:104:ARG:HG2	2.19	0.78
23:BA:2531:A:H5'	29:BG:157:TYR:CZ	2.18	0.78
27:BE:53:THR:HG23	27:BE:56:GLU:OE1	1.83	0.78
38:BP:51:ARG:HG3	38:BP:51:ARG:NH1	1.94	0.78
38:DP:54:ARG:HH11	38:DP:54:ARG:CG	1.94	0.78
40:DR:100:ARG:O	40:DR:100:ARG:HG3	1.81	0.78
46:DX:19:GLN:HG3	46:DX:41:ARG:HE	1.47	0.78
3:AC:59:ARG:HG2	3:AC:64:VAL:HG22	1.65	0.78
4:AD:100:ARG:NH1	4:AD:137:SER:HA	1.99	0.78
23:BA:2219:G:H2'	23:BA:2224:G:C5'	2.14	0.78
28:BF:41:GLN:HB3	28:BF:43:LEU:HD13	1.66	0.78
1:CA:266:G:H5'	1:CA:267:C:C5	2.18	0.78
3:CC:105:GLU:HG2	3:CC:106:VAL:H	1.48	0.78
8:CH:92:ARG:HB3	8:CH:94:TYR:CE2	2.17	0.78
32:DJ:63:PRO:O	39:DQ:64:ARG:HD2	1.81	0.78
43:DU:17:SER:CA	43:DU:71:LYS:HD2	2.13	0.78
1:AA:99:C:O2'	1:AA:101:A:H5''	1.84	0.78
30:BH:100:ALA:HA	30:BH:103:ARG:HB2	1.64	0.78
52:B4:12:ARG:HH11	52:B4:12:ARG:HG3	1.49	0.78
23:DA:528:A:H3'	23:DA:528:A:C8	2.19	0.78
13:AM:67:GLU:HG3	13:AM:68:GLY:H	1.48	0.78
18:AR:58:LEU:HD23	18:AR:62:GLU:HB3	1.63	0.78
42:BT:63:LYS:CD	42:BT:72:LYS:HA	2.01	0.78
53:B5:62:LEU:HB3	53:B5:63:PRO:HD3	1.65	0.78
1:CA:91:C:H2'	1:CA:92:G:C8	2.18	0.78
1:CA:1154:G:H2'	1:CA:1155:G:C8	2.17	0.78
23:DA:1046:A:H3'	23:DA:1047:G:H5''	1.66	0.78
30:BH:5:LEU:HD23	30:BH:5:LEU:H	1.47	0.78
23:DA:106:C:H1'	43:DU:2:ARG:HE	1.49	0.78
27:DE:157:VAL:HB	27:DE:194:MET:HB3	1.65	0.78
20:AT:45:GLN:HB2	20:AT:91:LEU:HD13	1.64	0.78
29:BG:144:VAL:O	29:BG:148:ILE:HG12	1.82	0.78
34:BL:114:ILE:HD11	34:BL:127:ALA:CB	2.12	0.78
52:B4:8:ASN:HD22	52:B4:9:ARG:N	1.82	0.78
1:CA:987:G:H1	1:CA:1218:C:H42	1.32	0.78
1:CA:1010:G:H2'	1:CA:1011:G:C8	2.19	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:195:VAL:HG12	3:CC:196:LEU:N	1.99	0.78
23:DA:971:C:H2'	23:DA:972:G:H5'	1.65	0.78
23:DA:1658:C:OP1	26:DD:132:HIS:CE1	2.36	0.78
42:DT:57:LEU:CD1	42:DT:78:LYS:HB2	2.14	0.78
50:D2:41:PRO:HG2	50:D2:44:THR:HG21	1.65	0.78
1:AA:475:G:H2'	1:AA:476:G:C8	2.18	0.78
1:AA:495:A:H4'	1:AA:496:A:OP1	1.83	0.78
1:AA:601:C:H2'	1:AA:602:A:C8	2.19	0.78
1:AA:688:G:H2'	1:AA:689:C:H6	1.48	0.78
5:AE:50:GLU:OE2	5:AE:51:VAL:HG23	1.83	0.78
13:AM:91:ARG:HH11	19:AS:81:ARG:HH22	1.31	0.78
23:BA:1209:G:H21	23:BA:1210:A:N6	1.81	0.78
24:BB:49:C:OP1	37:BO:97:ARG:HG3	1.84	0.78
28:BF:109:VAL:HG11	28:BF:142:PRO:HG3	1.66	0.78
29:BG:95:ARG:HH22	29:BG:97:ARG:NH2	1.82	0.78
23:DA:661:C:H4'	34:DL:18:ARG:HG2	1.64	0.78
25:DC:8:PRO:HB3	25:DC:14:ARG:HB2	1.65	0.78
42:DT:24:GLY:HA3	42:DT:82:GLN:HE22	1.48	0.78
10:AJ:51:ARG:HB2	10:AJ:60:ARG:HA	1.66	0.78
23:BA:1520:U:H2'	23:BA:1521:G:O4'	1.84	0.78
26:BD:111:ARG:HA	36:BN:2:ARG:HH11	1.49	0.78
44:BV:125:LEU:HD22	44:BV:164:ALA:HB3	1.66	0.78
2:CB:8:LYS:HA	2:CB:217:ARG:HH12	1.49	0.78
23:DA:2875:C:H4'	38:DP:5:ALA:HB2	1.66	0.78
25:DC:87:ASN:HD22	25:DC:87:ASN:N	1.79	0.78
26:DD:51:PHE:CD1	26:DD:52:LEU:HD12	2.18	0.78
34:DL:33:ARG:HB3	34:DL:36:LYS:HD3	1.66	0.78
43:DU:2:ARG:HG2	43:DU:3:VAL:HG23	1.66	0.78
1:AA:1129:C:H1'	1:AA:1130:A:OP2	1.84	0.78
3:AC:195:VAL:HG12	3:AC:196:LEU:N	1.99	0.78
25:BC:27:THR:O	25:BC:27:THR:HG23	1.83	0.78
39:BQ:82:GLY:HA3	39:BQ:113:ALA:HB1	1.64	0.78
1:CA:1117:G:H21	1:CA:1180:A:H1'	1.47	0.78
36:DN:38:VAL:HB	36:DN:39:PRO:CD	2.14	0.78
1:AA:509:A:H5'	4:AD:54:TYR:HD2	1.49	0.77
3:AC:105:GLU:HG2	3:AC:106:VAL:H	1.49	0.77
4:AD:3:ARG:HD3	4:AD:5:ILE:HD11	1.64	0.77
4:AD:204:ILE:HG21	5:AE:98:THR:O	1.84	0.77
32:BJ:81:ASP:CG	32:BJ:147:ALA:HB1	2.04	0.77
23:DA:389:G:N1	34:DL:71:VAL:HG23	1.99	0.77
29:DG:30:LYS:HE2	29:DG:80:SER:O	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:662:G:OP1	34:BL:18:ARG:HD2	1.83	0.77
23:BA:1437:C:H2'	23:BA:1438:U:C6	2.19	0.77
32:BJ:93:LYS:HE3	32:BJ:95:TYR:HE1	1.49	0.77
23:DA:1021:A:N6	23:DA:1141:U:H3	1.82	0.77
25:DC:125:ILE:HG22	25:DC:125:ILE:O	1.84	0.77
34:DL:114:ILE:HD13	34:DL:130:PHE:CE1	2.20	0.77
36:DN:11:ASN:OD1	36:DN:12:ARG:N	2.17	0.77
42:DT:49:VAL:HG21	42:DT:83:VAL:HG12	1.65	0.77
1:AA:1154:G:H2'	1:AA:1155:G:C8	2.19	0.77
2:AB:8:LYS:HA	2:AB:217:ARG:HH12	1.49	0.77
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD13	1.48	0.77
23:BA:1658:C:OP1	26:BD:132:HIS:CE1	2.37	0.77
24:BB:15:A:H5'	24:BB:16:G:C8	2.19	0.77
25:DC:28:GLU:HB3	25:DC:29:PRO:HD3	1.67	0.77
25:DC:106:ILE:HD12	25:DC:106:ILE:N	1.98	0.77
10:AJ:75:ILE:HG13	10:AJ:76:ASN:H	1.49	0.77
25:BC:33:LEU:O	25:BC:36:PRO:HD2	1.84	0.77
40:BR:34:GLU:O	40:BR:36:PRO:HD3	1.84	0.77
1:CA:377:G:OP1	16:CP:3:LYS:HD2	1.84	0.77
6:CF:78:GLU:O	6:CF:81:ILE:HG13	1.84	0.77
25:DC:33:LEU:O	25:DC:36:PRO:HD2	1.84	0.77
32:DJ:81:ASP:CG	32:DJ:147:ALA:HB1	2.04	0.77
34:DL:16:ARG:NE	34:DL:16:ARG:O	2.17	0.77
34:DL:97:PRO:HD3	34:DL:126:VAL:HG12	1.66	0.77
36:DN:2:ARG:C	36:DN:4:LEU:H	1.87	0.77
4:AD:108:LEU:HB3	4:AD:110:PHE:HE2	1.47	0.77
10:AJ:48:THR:HG22	10:AJ:62:HIS:ND1	2.00	0.77
23:BA:860:U:C5	23:BA:917:A:N7	2.52	0.77
23:BA:1546:A:N7	23:BA:154(B):C:O2	2.18	0.77
23:BA:1963:U:H2'	23:BA:1963:U:O2	1.84	0.77
34:BL:147:LEU:HD13	34:BL:148:LEU:O	1.84	0.77
42:BT:49:VAL:HG21	42:BT:83:VAL:HG12	1.67	0.77
43:BU:44:ILE:HG22	43:BU:45:VAL:H	1.49	0.77
1:CA:625:G:C4	1:CA:626:U:C5	2.72	0.77
1:CA:1129:C:H1'	1:CA:1130:A:OP2	1.84	0.77
23:DA:2286:A:H4'	23:DA:2287:A:O4'	1.85	0.77
23:DA:2531:A:H5'	29:DG:157:TYR:CZ	2.19	0.77
23:DA:2562:U:H1'	33:DK:23:ARG:HH11	1.49	0.77
23:DA:2687:U:C4	23:DA:2688:U:C5	2.73	0.77
27:DE:164:ARG:HG3	27:DE:175:THR:OG1	1.84	0.77
29:DG:88:LEU:HB3	29:DG:90:LYS:HD3	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DK:99:PHE:N	33:DK:99:PHE:CD1	2.50	0.77
1:AA:790:A:H5'	22:AV:6192:G:H4'	1.67	0.77
13:AM:23:TYR:CZ	13:AM:71:ARG:HD3	2.20	0.77
23:BA:380:U:C2	46:BX:20:ARG:NH2	2.52	0.77
23:DA:114(B):A:H4'	32:DJ:48:ARG:HH22	1.48	0.77
52:D4:11:LYS:HD2	52:D4:15:THR:CG2	2.14	0.77
1:AA:1010:G:H2'	1:AA:1011:G:C8	2.20	0.77
23:BA:528:A:H2	23:BA:2043:C:C5'	1.98	0.77
23:BA:528:A:H3'	23:BA:528:A:H8	1.49	0.77
25:BC:125:ILE:HG22	25:BC:125:ILE:O	1.85	0.77
33:BK:99:PHE:N	33:BK:99:PHE:HD1	1.81	0.77
36:BN:2:ARG:C	36:BN:4:LEU:H	1.87	0.77
47:BY:6:VAL:O	47:BY:10:LEU:HG	1.85	0.77
1:CA:1064:G:H21	1:CA:1190:G:H2'	1.48	0.77
4:CD:25:ARG:HG2	4:CD:30:LYS:HG3	1.65	0.77
26:DD:77:ILE:HD13	26:DD:195:LEU:HD12	1.65	0.77
32:DJ:38:LEU:CD2	32:DJ:157:ARG:HG3	2.15	0.77
33:DK:98:VAL:HG11	33:DK:114:ILE:HG23	1.66	0.77
1:AA:370:C:O2'	1:AA:371:G:H5'	1.85	0.77
23:BA:1046:A:H3'	23:BA:1047:G:H5''	1.66	0.77
47:BY:1:MET:SD	47:BY:5:GLU:HG2	2.25	0.77
1:CA:781:A:C3'	1:CA:782:A:H5'	2.14	0.77
10:CJ:75:ILE:HG13	10:CJ:76:ASN:H	1.49	0.77
23:DA:7:G:H1	23:DA:2896:C:H42	1.31	0.77
23:DA:323:G:H5'	27:DE:169:ASN:HD21	1.48	0.77
25:DC:10:THR:HG23	25:DC:13:ARG:CB	2.13	0.77
29:DG:101:ARG:H	29:DG:101:ARG:HE	0.81	0.77
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.50	0.77
23:BA:2781:A:H5''	23:BA:2782:G:C5'	2.05	0.77
25:BC:233:HIS:CE1	25:BC:247:ALA:H	2.03	0.77
28:BF:128:ARG:NE	28:BF:129:GLY:H	1.81	0.77
35:BM:76:LYS:N	35:BM:88:GLY:HA2	1.99	0.77
43:BU:50:ARG:HD3	43:BU:51:VAL:H	1.48	0.77
1:CA:1191:A:H5''	3:CC:4:LYS:NZ	2.00	0.77
4:CD:28:SER:HB3	4:CD:29:PRO:HD2	1.67	0.77
25:DC:25:THR:CG2	25:DC:82:ILE:H	1.98	0.77
42:DT:31:HIS:ND1	42:DT:32:PRO:HD2	2.00	0.77
43:DU:7:VAL:HG12	43:DU:8:LYS:CG	2.07	0.77
23:BA:389:G:N1	34:BL:71:VAL:HG23	2.01	0.77
23:BA:2353:G:C5	23:BA:2353:G:O6	2.38	0.77
28:BF:77:ILE:HG22	28:BF:80:PHE:H	1.50	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BQ:98:LEU:O	39:BQ:100:VAL:N	2.17	0.77
11:CK:21:ILE:HA	11:CK:30:VAL:HG12	1.67	0.77
24:DB:78:A:C2	24:DB:99:A:C4	2.73	0.77
32:DJ:105:LEU:CD1	32:DJ:106:LYS:H	1.98	0.77
34:DL:7:ARG:O	34:DL:10:PRO:HD3	1.85	0.77
53:D5:52:LYS:H	53:D5:53:PRO:HD2	1.50	0.77
53:D5:62:LEU:HB3	53:D5:63:PRO:CD	2.15	0.77
1:AA:625:G:H2'	1:AA:626:U:H6	1.47	0.76
8:AH:58:TYR:O	8:AH:59:LEU:HD23	1.85	0.76
23:BA:1210:A:C5'	23:BA:1210:A:C8	2.67	0.76
23:BA:2598:A:OP1	25:BC:235:GLY:HA3	1.84	0.76
23:BA:2688:U:H3'	23:BA:2688:U:O2	1.85	0.76
34:BL:33:ARG:HB3	34:BL:36:LYS:CG	2.15	0.76
43:DU:44:ILE:HG22	43:DU:45:VAL:H	1.48	0.76
1:AA:106:C:O2'	1:AA:107:G:H5'	1.85	0.76
1:AA:735:C:H2'	1:AA:736:C:H6	1.50	0.76
23:BA:1019:U:H2'	23:BA:1020:A:H8	1.50	0.76
23:BA:1683:C:H42	23:BA:1705:G:H1	1.31	0.76
23:BA:2393:A:H5''	34:BL:62:LEU:HD12	1.66	0.76
25:BC:28:GLU:HB3	25:BC:29:PRO:HD3	1.67	0.76
38:BP:42:ILE:HD12	38:BP:42:ILE:O	1.86	0.76
53:B5:62:LEU:HB3	53:B5:63:PRO:CD	2.15	0.76
1:CA:106:C:O2'	1:CA:107:G:H5'	1.85	0.76
23:DA:71:A:H2	42:DT:31:HIS:CE1	2.03	0.76
23:DA:733:G:N7	23:DA:761:A:C6	2.53	0.76
23:DA:1520:U:H2'	23:DA:1521:G:O4'	1.84	0.76
27:DE:203:GLN:HA	27:DE:206:ILE:O	1.85	0.76
30:DH:5:LEU:HD23	30:DH:5:LEU:H	1.50	0.76
4:AD:100:ARG:HH21	4:AD:118:ARG:HH12	1.32	0.76
23:BA:256:A:C2'	23:BA:257:A:H5'	2.15	0.76
25:BC:238:GLY:O	25:BC:239:ARG:C	2.22	0.76
40:BR:27:ALA:CB	40:BR:61:VAL:HG11	2.14	0.76
48:BZ:43:ILE:N	48:BZ:43:ILE:HD13	2.01	0.76
23:DA:270(H):C:H2'	23:DA:270(I):C:H6	1.49	0.76
1:AA:1422:G:H5''	33:BK:48:PRO:HB3	1.67	0.76
25:BC:166:GLN:HE21	25:BC:166:GLN:CA	1.97	0.76
1:CA:738:C:H2'	1:CA:739:C:C6	2.20	0.76
23:DA:226:G:N2	23:DA:228:A:H62	1.83	0.76
27:DE:34:TRP:HB2	34:DL:10:PRO:O	1.86	0.76
1:AA:262:A:H2'	1:AA:263:A:C8	2.20	0.76
23:BA:270(H):C:H2'	23:BA:270(I):C:H6	1.49	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:114(B):A:H4'	32:BJ:48:ARG:HH22	1.51	0.76
45:BW:36:ILE:HD12	45:BW:58:THR:HG21	1.65	0.76
23:DA:911:A:H2'	35:DM:9:TYR:OH	1.83	0.76
25:DC:87:ASN:N	25:DC:87:ASN:ND2	2.32	0.76
34:DL:33:ARG:HG2	34:DL:34:GLY:N	2.00	0.76
1:AA:266:G:H5'	1:AA:267:C:C5	2.21	0.76
2:AB:63:MET:HG2	2:AB:225:ALA:HB1	1.67	0.76
13:AM:27:LYS:HE2	13:AM:31:LYS:HE3	1.66	0.76
23:BA:1475:G:N2	23:BA:1519:G:C4	2.54	0.76
25:BC:10:THR:HG23	25:BC:13:ARG:CB	2.11	0.76
45:BW:56:ASP:O	45:BW:57:PHE:HB2	1.85	0.76
53:B5:22:VAL:HB	53:B5:54:GLU:HG3	1.68	0.76
1:CA:170:U:O2'	1:CA:171:A:H5'	1.84	0.76
1:CA:476:G:H2'	1:CA:477:G:H8	1.49	0.76
1:CA:957:U:H4'	19:CS:79:THR:HB	1.67	0.76
3:CC:59:ARG:HG2	3:CC:64:VAL:HG22	1.67	0.76
5:CE:78:HIS:CD2	8:CH:104:ARG:HG2	2.20	0.76
10:CJ:48:THR:HG22	10:CJ:62:HIS:ND1	1.99	0.76
23:DA:960:A:H5''	23:DA:961:C:OP2	1.85	0.76
28:DF:128:ARG:HE	28:DF:129:GLY:N	1.84	0.76
34:DL:16:ARG:NH1	34:DL:18:ARG:HG3	2.01	0.76
36:DN:97:VAL:HA	36:DN:113:LEU:O	1.85	0.76
1:AA:624:C:H4'	16:AP:11:SER:H	1.51	0.76
6:AF:26:ILE:O	6:AF:30:LEU:HD12	1.85	0.76
11:AK:34:ASP:N	11:AK:40:ILE:HD11	2.00	0.76
22:AV:6182:A:C2	22:AV:6183:G:C4	2.74	0.76
23:BA:65:C:H2'	23:BA:66:C:C6	2.20	0.76
27:BE:34:TRP:HB2	34:BL:10:PRO:O	1.86	0.76
40:BR:40:LEU:HD23	40:BR:47:VAL:HG23	1.68	0.76
43:BU:42:VAL:HG12	43:BU:65:ALA:HB3	1.66	0.76
1:CA:625:G:H2'	1:CA:626:U:H6	1.50	0.76
19:CS:6:LYS:HG2	19:CS:7:LYS:HD3	1.67	0.76
23:DA:1614:A:H62	41:DS:93:ALA:CB	1.98	0.76
25:DC:233:HIS:CE1	25:DC:247:ALA:H	2.03	0.76
26:DD:54:GLN:HG2	26:DD:76:ARG:HG3	1.66	0.76
40:DR:25:LEU:H	40:DR:92:THR:HG21	1.47	0.76
1:AA:555:C:H2'	1:AA:556:C:H6	1.51	0.76
10:AJ:74:ILE:H	10:AJ:74:ILE:HD13	1.49	0.76
23:BA:2250:G:C6	35:BM:82:ARG:HD2	2.21	0.76
26:BD:4:ILE:HG12	26:BD:28:ALA:HB1	1.68	0.76
29:BG:30:LYS:HE2	29:BG:80:SER:O	1.86	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BN:51:LEU:HD23	36:BN:66:VAL:HG22	1.66	0.76
38:BP:56:GLY:O	38:BP:59:THR:HG22	1.84	0.76
39:BQ:91:ASP:OD2	39:BQ:96:ALA:HB2	1.85	0.76
8:CH:58:TYR:O	8:CH:59:LEU:HD23	1.84	0.76
22:CV:6182:A:C2	22:CV:6183:G:C4	2.74	0.76
23:DA:286:C:H2'	23:DA:287:C:H6	1.48	0.76
4:AD:110:PHE:HD2	4:AD:110:PHE:H	1.34	0.76
32:BJ:38:LEU:CD2	32:BJ:157:ARG:HG3	2.16	0.76
43:BU:81:LYS:HD3	43:BU:97:ARG:H	1.51	0.76
1:CA:265:G:H5'	17:CQ:64:PRO:O	1.86	0.76
1:CA:643:C:H5'	8:CH:31:PHE:CE1	2.20	0.76
13:CM:27:LYS:HE2	13:CM:31:LYS:HE3	1.67	0.76
23:DA:256:A:C2'	23:DA:257:A:H5'	2.16	0.76
23:DA:780:G:H21	23:DA:783:A:H62	1.34	0.76
29:DG:85:LYS:HD3	29:DG:86:GLU:OE2	1.85	0.76
34:DL:50:ARG:HD2	34:DL:51:PHE:N	2.01	0.76
43:DU:15:VAL:HG22	43:DU:72:VAL:HG12	1.66	0.76
3:AC:138:VAL:HG23	3:AC:151:VAL:HG23	1.68	0.76
18:AR:26:LEU:HD11	18:AR:42:ARG:HD2	1.67	0.76
26:BD:5:LEU:HB2	26:BD:51:PHE:CD2	2.21	0.76
33:BK:90:GLN:O	33:BK:91:LEU:HB2	1.85	0.76
4:CD:117:ALA:O	4:CD:121:VAL:HG23	1.86	0.76
23:DA:760:G:C2'	23:DA:761:A:H5'	2.16	0.76
23:DA:1379:A:H4'	23:DA:1380:G:OP2	1.86	0.76
23:DA:2786:U:H4'	26:DD:65:GLY:O	1.85	0.76
28:DF:77:ILE:HG22	28:DF:80:PHE:H	1.50	0.76
32:DJ:27:TYR:CD2	39:DQ:100:VAL:HG11	2.21	0.76
43:DU:50:ARG:HD3	43:DU:51:VAL:H	1.50	0.76
2:AB:72:GLY:O	2:AB:94:ASN:HA	1.86	0.75
20:AT:26:ASN:H	20:AT:26:ASN:ND2	1.83	0.75
25:BC:182:LEU:H	25:BC:272:ALA:HB3	1.51	0.75
27:BE:103:LYS:HA	27:BE:106:ARG:HG3	1.68	0.75
43:BU:2:ARG:HG2	43:BU:3:VAL:HG23	1.67	0.75
45:BW:53:MET:HB2	45:BW:59:LEU:HD23	1.68	0.75
1:CA:971:G:H1'	1:CA:1365:G:O2'	1.86	0.75
17:CQ:15:MET:HB3	17:CQ:18:THR:HB	1.68	0.75
18:CR:26:LEU:HD21	18:CR:42:ARG:HH11	1.49	0.75
20:CT:26:ASN:H	20:CT:26:ASN:ND2	1.84	0.75
23:DA:966:G:H2'	23:DA:967:C:H6	1.49	0.75
23:DA:1045:A:H5''	23:DA:1047:G:O4'	1.86	0.75
23:DA:1778:U:H2'	23:DA:1784:A:N6	2.01	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:114:ILE:HB	28:DF:117:PHE:HB2	1.67	0.75
34:DL:57:THR:HG23	34:DL:59:LEU:CD2	2.12	0.75
38:DP:100:TYR:HB3	38:DP:103:ARG:NH1	2.01	0.75
2:AB:178:ARG:HH22	2:AB:196:LEU:HA	1.51	0.75
15:AO:30:ALA:HA	15:AO:85:LEU:HD11	1.67	0.75
23:BA:1434:A:H61	23:BA:1558:A:N6	1.84	0.75
23:BA:2439:A:C8	23:BA:2439:A:C5'	2.63	0.75
32:BJ:118:PRO:O	32:BJ:121:VAL:HG22	1.86	0.75
38:BP:26:ASP:HB2	38:BP:90:GLN:O	1.86	0.75
43:BU:47:LYS:HA	43:BU:60:PHE:CE2	2.21	0.75
47:BY:46:GLN:HB2	47:BY:49:LYS:NZ	2.01	0.75
3:CC:18:TRP:CD1	14:CN:54:PRO:HA	2.21	0.75
17:CQ:40:LYS:HD2	17:CQ:42:TYR:CE1	2.22	0.75
23:DA:2593:U:H2'	23:DA:2594:C:C6	2.21	0.75
44:DV:136:PHE:C	44:DV:137:ILE:HD12	2.05	0.75
23:BA:733:G:N7	23:BA:761:A:N6	2.34	0.75
23:BA:773:U:C4'	25:BC:47:GLY:HA3	2.17	0.75
23:BA:1110:G:O2'	23:BA:1111:A:H8	1.65	0.75
24:BB:78:A:C2	24:BB:99:A:C4	2.73	0.75
25:BC:77:ALA:HB2	25:BC:97:TYR:HA	1.68	0.75
23:DA:857:C:H4'	45:DW:23:VAL:HG21	1.68	0.75
26:DD:117:MET:CE	26:DD:124:GLY:HA3	2.17	0.75
27:DE:132:VAL:HG23	27:DE:133:ASN:H	1.51	0.75
43:DU:76:CYS:HB3	43:DU:77:PRO:HD2	1.68	0.75
1:AA:712:A:O2'	1:AA:713:G:H5'	1.87	0.75
23:BA:330:A:O2'	23:BA:331:A:H8	1.69	0.75
23:BA:580:C:H2'	23:BA:581:C:H6	1.52	0.75
23:BA:1679:U:C2'	23:BA:1680:U:H5'	2.17	0.75
4:CD:9:CYS:CB	4:CD:32:ALA:HB2	2.15	0.75
13:CM:9:ILE:HG22	13:CM:11:ARG:HG3	1.69	0.75
15:CO:56:LEU:O	15:CO:60:VAL:HG23	1.87	0.75
23:DA:547:A:H2'	23:DA:548:A:H8	1.48	0.75
23:DA:1475:G:N2	23:DA:1519:G:C4	2.54	0.75
24:DB:8:U:H5''	37:DO:15:ARG:HH22	1.51	0.75
24:DB:66:A:H61	24:DB:107:U:H2'	1.50	0.75
28:DF:41:GLN:HB3	28:DF:43:LEU:HD13	1.67	0.75
52:D4:8:ASN:ND2	52:D4:11:LYS:H	1.85	0.75
22:AV:6177:U:H2'	22:AV:6178:A:C8	2.20	0.75
23:BA:388:G:OP1	46:BX:33:LYS:HB3	1.86	0.75
23:BA:557:U:H2'	23:BA:558:G:H8	1.49	0.75
23:BA:2593:U:H2'	23:BA:2594:C:C6	2.22	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:111:ARG:HA	36:BN:2:ARG:HD3	1.69	0.75
28:BF:114:ILE:HB	28:BF:117:PHE:HB2	1.68	0.75
46:BX:27:GLU:CD	46:BX:33:LYS:HE3	2.07	0.75
47:BY:1:MET:HE1	47:BY:5:GLU:HG2	1.69	0.75
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.49	0.75
22:CV:6177:U:H2'	22:CV:6178:A:C8	2.20	0.75
23:DA:773:U:H4'	25:DC:47:GLY:HA3	1.69	0.75
24:DB:15:A:H5'	24:DB:16:G:C8	2.22	0.75
25:DC:133:LEU:C	25:DC:135:PHE:H	1.89	0.75
25:DC:242:ARG:HG2	25:DC:242:ARG:HH11	1.51	0.75
43:DU:81:LYS:HD3	43:DU:97:ARG:N	2.01	0.75
46:DX:46:LEU:HD21	46:DX:61:ARG:HE	1.52	0.75
8:AH:12:ARG:NH1	8:AH:26:VAL:HA	2.01	0.75
29:BG:92:ILE:HG22	29:BG:93:GLY:N	2.02	0.75
29:BG:101:ARG:H	29:BG:101:ARG:HE	0.82	0.75
37:BO:15:ARG:O	37:BO:19:LYS:HG3	1.87	0.75
12:CL:32:ARG:O	12:CL:84:ILE:HD12	1.85	0.75
23:DA:861:A:H2'	23:DA:862:G:H5'	1.68	0.75
23:DA:1132:A:O2'	23:DA:1133:U:H5'	1.86	0.75
23:DA:2210:G:H3'	23:DA:2210:G:N3	2.02	0.75
25:DC:87:ASN:H	25:DC:87:ASN:ND2	1.84	0.75
28:DF:109:VAL:HG11	28:DF:142:PRO:HG3	1.66	0.75
29:DG:95:ARG:HH22	29:DG:97:ARG:NH2	1.83	0.75
40:DR:20:LEU:HD23	40:DR:94:LEU:HB2	1.69	0.75
11:AK:21:ILE:HA	11:AK:30:VAL:HG12	1.69	0.75
23:BA:1021:A:N6	23:BA:1141:U:H3	1.83	0.75
24:BB:21:G:H1	24:BB:62:C:H42	1.34	0.75
24:BB:75:G:H21	44:BV:85:HIS:HE1	1.33	0.75
25:BC:72:LYS:HD2	25:BC:75:ILE:HD12	1.68	0.75
27:BE:183:VAL:O	27:BE:187:VAL:HG23	1.86	0.75
34:BL:114:ILE:HD13	34:BL:130:PHE:CE1	2.21	0.75
36:BN:97:VAL:HA	36:BN:113:LEU:O	1.87	0.75
42:BT:31:HIS:ND1	42:BT:32:PRO:HD2	2.00	0.75
1:CA:1226:C:N4	13:CM:104:ARG:HD2	2.01	0.75
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	1.67	0.75
6:CF:98:LEU:HD13	6:CF:101:ALA:HB2	1.68	0.75
25:DC:131:LEU:HA	25:DC:190:TYR:CE2	2.22	0.75
5:AE:77:PRO:HD2	5:AE:142:LEU:HD22	1.69	0.75
23:BA:1401:G:H2'	23:BA:1402:C:C6	2.21	0.75
23:BA:1418:G:H8	23:BA:1418:G:O5'	1.70	0.75
23:BA:2210:G:N3	23:BA:2210:G:H3'	2.01	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2637:U:H5''	26:BD:82:ARG:NH2	2.00	0.75
24:BB:15:A:H5'	24:BB:16:G:H8	1.52	0.75
25:BC:155:LEU:CD2	25:BC:177:LEU:HD21	2.14	0.75
26:BD:5:LEU:HD23	26:BD:5:LEU:N	2.00	0.75
30:BH:2:LYS:HG3	30:BH:39:ALA:HB3	1.69	0.75
36:BN:54:LEU:HD22	36:BN:66:VAL:HG23	1.69	0.75
13:CM:91:ARG:HH11	19:CS:81:ARG:HH22	1.31	0.75
23:DA:2015:A:H1'	50:D2:2:ALA:CA	2.14	0.75
23:DA:2688:U:H3'	23:DA:2688:U:O2	1.86	0.75
30:DH:83:ALA:CB	30:DH:123:LEU:HD12	2.16	0.75
40:DR:40:LEU:HD23	40:DR:47:VAL:HG23	1.67	0.75
43:DU:27:VAL:O	43:DU:27:VAL:HG23	1.85	0.75
1:AA:913:A:H1'	1:AA:914:A:OP2	1.87	0.75
1:AA:1152:A:H2'	1:AA:1153:C:C6	2.21	0.75
23:BA:380:U:O2'	46:BX:20:ARG:HB3	1.86	0.75
23:BA:1679:U:H2'	23:BA:1680:U:H5'	1.69	0.75
25:BC:106:ILE:H	25:BC:106:ILE:CD1	2.00	0.75
42:BT:28:PHE:N	42:BT:28:PHE:CD1	2.55	0.75
46:BX:11:ARG:HH11	46:BX:11:ARG:HG3	1.52	0.75
5:CE:50:GLU:OE2	5:CE:51:VAL:HG23	1.87	0.75
23:DA:1541:U:H5''	23:DA:1543:A:P	2.27	0.75
25:DC:132:PRO:HG3	25:DC:190:TYR:CE1	2.22	0.75
26:DD:111:ARG:HA	36:DN:2:ARG:HD3	1.68	0.75
3:AC:18:TRP:CD1	14:AN:54:PRO:HA	2.21	0.74
12:AL:110:LYS:O	12:AL:111:ASP:HB2	1.86	0.74
23:BA:773:U:H4'	25:BC:47:GLY:HA3	1.67	0.74
23:BA:1543:A:H3'	23:BA:1543:A:H8	1.51	0.74
28:BF:128:ARG:HE	28:BF:129:GLY:N	1.84	0.74
43:BU:7:VAL:HG12	43:BU:8:LYS:CG	2.12	0.74
43:BU:27:VAL:HG23	43:BU:27:VAL:O	1.86	0.74
1:CA:1152:A:H2'	1:CA:1153:C:C6	2.22	0.74
9:CI:19:LEU:HD21	9:CI:59:PHE:HB3	1.68	0.74
23:DA:917:A:H5'	23:DA:918:A:OP2	1.87	0.74
23:DA:1543:A:H3'	23:DA:1543:A:H8	1.51	0.74
24:DB:18:G:H1	24:DB:65:C:H42	1.35	0.74
35:DM:66:ILE:HG22	35:DM:104:PHE:CD2	2.22	0.74
43:DU:47:LYS:HA	43:DU:60:PHE:CE2	2.21	0.74
47:DY:6:VAL:O	47:DY:10:LEU:HG	1.86	0.74
1:AA:337:C:H2'	1:AA:338:A:H8	1.52	0.74
1:AA:691:G:O6	11:AK:52:GLY:HA2	1.87	0.74
3:AC:43:LEU:O	3:AC:47:LEU:HB3	1.88	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:547:A:H2'	23:BA:548:A:H8	1.48	0.74
23:BA:2747:G:O6	23:BA:2755:C:H5''	1.87	0.74
33:BK:31:LYS:HB3	33:BK:32:TYR:CE1	2.23	0.74
1:CA:832:C:H42	1:CA:854:G:H1	1.35	0.74
1:CA:1226:C:H2'	13:CM:103:THR:HB	1.69	0.74
1:CA:1259:C:H1'	1:CA:1283:G:H21	1.53	0.74
21:CU:18:TYR:HD2	21:CU:22:ARG:HG2	1.52	0.74
23:DA:257:A:H2'	23:DA:258:G:O5'	1.87	0.74
23:DA:1596:A:C2'	23:DA:1597:A:H5'	2.17	0.74
26:DD:5:LEU:N	26:DD:5:LEU:HD23	2.02	0.74
38:DP:26:ASP:HB2	38:DP:90:GLN:O	1.87	0.74
43:DU:8:LYS:HD2	43:DU:13:VAL:HG21	1.69	0.74
20:AT:72:LEU:HD23	20:AT:73:HIS:N	2.02	0.74
44:BV:58:VAL:HA	44:BV:67:LEU:O	1.87	0.74
23:DA:662:G:P	34:DL:18:ARG:HD2	2.27	0.74
37:DO:15:ARG:O	37:DO:19:LYS:HG3	1.87	0.74
40:DR:40:LEU:H	40:DR:47:VAL:HG22	1.51	0.74
1:AA:39:G:C2	1:AA:40:C:C6	2.75	0.74
2:AB:127:ILE:N	2:AB:127:ILE:HD13	2.02	0.74
7:AG:131:LYS:HE3	7:AG:136:LYS:NZ	2.03	0.74
42:BT:30:VAL:HG12	42:BT:31:HIS:N	2.02	0.74
23:DA:333:G:C6	23:DA:334:C:N4	2.55	0.74
23:DA:388:G:OP1	46:DX:33:LYS:HB3	1.86	0.74
23:DA:737:C:C2'	23:DA:738:G:H5'	2.18	0.74
23:DA:1209:G:H21	23:DA:1210:A:N6	1.85	0.74
23:DA:1331:A:HO2'	23:DA:1332:G:H8	1.36	0.74
32:DJ:38:LEU:HD12	32:DJ:39:ILE:N	2.02	0.74
42:DT:28:PHE:N	42:DT:28:PHE:CD1	2.55	0.74
23:BA:911:A:H2'	35:BM:9:TYR:OH	1.87	0.74
33:BK:98:VAL:HG11	33:BK:114:ILE:HG23	1.69	0.74
33:BK:119:PRO:HB2	38:BP:68:TYR:HE1	1.53	0.74
35:BM:120:ILE:O	35:BM:123:HIS:HB2	1.87	0.74
46:BX:11:ARG:HH12	46:BX:61:ARG:H	1.35	0.74
1:CA:175:C:H2'	1:CA:176:C:H6	1.53	0.74
1:CA:376:G:OP2	16:CP:67:THR:HG21	1.86	0.74
3:CC:43:LEU:O	3:CC:47:LEU:HB3	1.87	0.74
16:CP:22:THR:HG22	16:CP:32:TYR:HB3	1.68	0.74
23:DA:1188:U:O2'	23:DA:1189:A:H5'	1.87	0.74
25:DC:238:GLY:O	25:DC:239:ARG:C	2.26	0.74
44:DV:179:ASP:OD1	44:DV:180:VAL:HG13	1.87	0.74
46:DX:31:GLY:O	46:DX:32:LYS:HB2	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:841:U:O2'	1:AA:842:C:H5''	1.86	0.74
1:AA:979:C:H3'	1:AA:980:C:C5'	2.16	0.74
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.03	0.74
4:AD:117:ALA:O	4:AD:121:VAL:HG23	1.86	0.74
12:AL:32:ARG:O	12:AL:84:ILE:HD12	1.87	0.74
23:BA:528:A:H2	23:BA:2043:C:H5'	1.51	0.74
23:BA:1401:G:H2'	23:BA:1402:C:H6	1.51	0.74
25:BC:132:PRO:HG3	25:BC:190:TYR:CE1	2.23	0.74
32:BJ:105:LEU:CD1	32:BJ:106:LYS:H	1.99	0.74
43:BU:63:LYS:HG3	43:BU:64:GLU:H	1.53	0.74
1:CA:495:A:H4'	1:CA:496:A:OP1	1.87	0.74
2:CB:77:ALA:HB2	2:CB:211:ILE:HD13	1.69	0.74
4:CD:3:ARG:HD3	4:CD:5:ILE:HD11	1.69	0.74
23:DA:17:G:H4'	39:DQ:25:TRP:CH2	2.22	0.74
40:DR:13:ARG:C	40:DR:13:ARG:HD2	2.08	0.74
47:DY:28:LYS:HE3	47:DY:56:GLN:HE22	1.50	0.74
50:D2:40:LYS:NZ	50:D2:49:CYS:HB3	2.03	0.74
1:AA:170:U:O2'	1:AA:171:A:H5'	1.88	0.74
24:BB:66:A:H61	24:BB:107:U:H2'	1.50	0.74
29:BG:95:ARG:HH22	29:BG:97:ARG:HH21	1.34	0.74
40:BR:13:ARG:HD2	40:BR:13:ARG:C	2.08	0.74
40:BR:64:HIS:CD2	40:BR:92:THR:HG22	2.22	0.74
1:CA:262:A:H2'	1:CA:263:A:C8	2.23	0.74
1:CA:1057:G:H4'	3:CC:197:GLY:H	1.52	0.74
1:CA:1329:A:N7	21:CU:7:ARG:NH2	2.36	0.74
16:CP:17:TYR:H	16:CP:17:TYR:HD1	1.33	0.74
23:DA:1434:A:H61	23:DA:1558:A:N6	1.83	0.74
40:DR:91:TYR:O	40:DR:91:TYR:CG	2.39	0.74
23:BA:966:G:H2'	23:BA:967:C:H6	1.52	0.74
41:BS:9:TYR:H	41:BS:102:HIS:CD2	2.04	0.74
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.23	0.74
22:CV:6192:G:H2'	22:CV:6193:U:C6	2.23	0.74
23:DA:1019:U:H3	23:DA:114(B):A:H62	1.35	0.74
23:DA:1566:A:OP1	25:DC:211:ARG:NH1	2.21	0.74
23:DA:1614:A:N6	41:DS:87:PRO:HA	2.02	0.74
23:DA:1639:U:C2'	23:DA:1640:C:H5''	2.18	0.74
23:DA:2846:G:H2'	23:DA:2847:U:H6	1.53	0.74
25:DC:79:VAL:HG21	25:DC:111:LEU:HD11	1.70	0.74
1:AA:828:A:H2'	1:AA:829:G:O4'	1.88	0.74
23:BA:2815:C:O2'	50:B2:43:HIS:HD2	1.69	0.74
13:CM:23:TYR:CZ	13:CM:71:ARG:HD3	2.22	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:66:LEU:O	18:CR:70:ILE:HG13	1.87	0.74
23:DA:1799:G:H8	25:DC:181:GLU:OE1	1.69	0.74
23:DA:2219:G:H2'	23:DA:2224:G:C5'	2.18	0.74
23:DA:2681:C:H5	23:DA:2725:A:N6	1.76	0.74
30:DH:66:GLU:HG2	30:DH:67:ARG:NH2	2.02	0.74
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.67	0.74
13:AM:9:ILE:HG22	13:AM:11:ARG:HG3	1.69	0.74
23:BA:1952:A:C5	33:BK:22:ILE:HD11	2.22	0.74
23:BA:2208:U:O2'	23:BA:2209:C:H5'	1.87	0.74
25:BC:231:HIS:CD2	25:BC:249:PRO:HA	2.21	0.74
26:BD:170:LEU:HD23	26:BD:170:LEU:N	2.03	0.74
1:CA:828:A:H2'	1:CA:829:G:O4'	1.88	0.74
3:CC:20:SER:HB2	3:CC:40:ARG:NH1	2.03	0.74
20:CT:13:LEU:HD12	20:CT:13:LEU:H	1.53	0.74
20:CT:72:LEU:HD23	20:CT:73:HIS:N	2.03	0.74
23:DA:1404:C:H2'	23:DA:1404:C:O2	1.87	0.74
23:DA:1826:G:OP1	25:DC:233:HIS:HD2	1.71	0.74
24:DB:49:C:OP1	37:DO:97:ARG:HG3	1.87	0.74
25:DC:176:ARG:HH11	25:DC:176:ARG:HG2	1.52	0.74
27:DE:164:ARG:HG2	27:DE:164:ARG:NH1	1.98	0.74
32:DJ:154:GLN:NE2	32:DJ:155:ALA:HB3	2.03	0.74
34:DL:47:ASP:OD1	34:DL:49:ARG:HG2	1.88	0.74
10:AJ:4:ILE:HD12	10:AJ:100:THR:HG22	1.70	0.73
23:BA:1541:U:H5''	23:BA:1543:A:P	2.27	0.73
25:BC:76:PRO:HB3	25:BC:116:GLN:HE21	1.53	0.73
27:BE:101:LEU:O	27:BE:106:ARG:NH1	2.20	0.73
53:B5:51:ALA:H	53:B5:54:GLU:HB2	1.52	0.73
1:CA:735:C:H2'	1:CA:736:C:H6	1.52	0.73
8:CH:91:ARG:HH11	8:CH:91:ARG:HG3	1.52	0.73
10:CJ:51:ARG:HB2	10:CJ:60:ARG:HA	1.70	0.73
28:DF:36:LYS:HB3	28:DF:160:VAL:HB	1.70	0.73
36:DN:54:LEU:HD22	36:DN:66:VAL:HG23	1.70	0.73
4:AD:9:CYS:CB	4:AD:32:ALA:HB2	2.17	0.73
9:AI:19:LEU:HG	9:AI:60:ASP:O	1.87	0.73
17:AQ:31:LEU:HD23	17:AQ:32:TYR:CZ	2.22	0.73
18:AR:26:LEU:HD21	18:AR:42:ARG:HH11	1.52	0.73
43:BU:30:VAL:HG23	43:BU:37:VAL:HG12	1.71	0.73
1:CA:93:U:H2'	1:CA:95:G:C8	2.23	0.73
1:CA:99:C:O2'	1:CA:101:A:H5''	1.87	0.73
4:CD:36:ARG:HG2	4:CD:38:TYR:OH	1.89	0.73
6:CF:87:ARG:HH11	6:CF:87:ARG:HG3	1.51	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DB:21:G:H1	24:DB:62:C:H42	1.36	0.73
6:AF:87:ARG:HH11	6:AF:87:ARG:HG3	1.53	0.73
12:AL:45:LYS:HG3	12:AL:91:ASP:O	1.87	0.73
22:AV:6192:G:H2'	22:AV:6193:U:C6	2.23	0.73
23:BA:2015:A:H1'	50:B2:2:ALA:CA	2.13	0.73
23:BA:2101:G:H2'	23:BA:2102:U:H5'	1.70	0.73
25:BC:201:HIS:O	25:BC:204:ILE:HG13	1.89	0.73
34:BL:7:ARG:O	34:BL:10:PRO:HD3	1.87	0.73
38:BP:89:VAL:O	38:BP:90:GLN:HB2	1.87	0.73
1:CA:659:U:O2'	1:CA:660:G:H5'	1.87	0.73
1:CA:1432:G:OP1	38:DP:107:ASP:HB2	1.87	0.73
10:CJ:74:ILE:HD13	10:CJ:74:ILE:H	1.53	0.73
23:DA:140:A:H8	23:DA:1408:C:HO2'	1.36	0.73
23:DA:2784:C:H1'	26:DD:37:ARG:HH12	1.53	0.73
1:AA:17:U:H1'	1:AA:1080:A:N3	2.04	0.73
1:AA:136(A):C:C2'	1:AA:136(B):C:H5''	2.17	0.73
4:AD:166:LYS:HE2	25:DC:134:ARG:NH2	2.03	0.73
20:AT:57:ARG:HH11	20:AT:102:GLY:HA2	1.53	0.73
23:BA:322:A:H3'	27:BE:169:ASN:ND2	2.03	0.73
23:BA:971:C:H2'	23:BA:972:G:H5'	1.69	0.73
23:BA:2286:A:H4'	23:BA:2287:A:O4'	1.88	0.73
34:BL:16:ARG:O	34:BL:16:ARG:NE	2.19	0.73
37:BO:51:ALA:HB1	37:BO:72:ALA:HB1	1.68	0.73
46:BX:37:ILE:HG23	46:BX:38:SER:N	2.02	0.73
1:CA:136(A):C:C2'	1:CA:136(B):C:H5''	2.18	0.73
23:DA:2389:G:H5''	23:DA:2390:U:C5'	2.12	0.73
34:DL:38:GLN:CG	34:DL:39:LYS:H	2.00	0.73
35:DM:54:MET:HG2	35:DM:64:ILE:HD13	1.70	0.73
5:AE:50:GLU:HG3	5:AE:52:PRO:HD2	1.69	0.73
23:BA:71:A:H2	42:BT:31:HIS:CE1	2.07	0.73
35:BM:141:GLN:H	44:BV:53:ILE:HB	1.53	0.73
1:CA:601:C:H2'	1:CA:602:A:C8	2.22	0.73
23:DA:1495:A:N3	23:DA:1496:A:C2	2.56	0.73
25:DC:223:GLY:HA3	25:DC:231:HIS:CE1	2.23	0.73
35:DM:58:PHE:O	35:DM:58:PHE:CD1	2.41	0.73
1:AA:457:C:H2'	1:AA:457:C:O2	1.87	0.73
1:AA:971:G:H1'	1:AA:1365:G:O2'	1.87	0.73
1:AA:973:G:H3'	1:AA:974:A:H5''	1.69	0.73
23:BA:330:A:H2	23:BA:1210:A:H2'	1.53	0.73
23:BA:1270:C:H5''	23:BA:1271:G:O5'	1.88	0.73
23:BA:1388:G:H2'	23:BA:1389:G:H8	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BR:40:LEU:H	40:BR:47:VAL:HG22	1.53	0.73
44:BV:30:ASN:OD1	44:BV:33:LEU:HB3	1.88	0.73
1:CA:457:C:H2'	1:CA:457:C:O2	1.89	0.73
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.04	0.73
23:DA:1210:A:H8	23:DA:1210:A:H5''	1.51	0.73
23:DA:2101:G:H2'	23:DA:2102:U:H5'	1.70	0.73
26:DD:167:VAL:HG22	26:DD:170:LEU:HD21	1.71	0.73
27:DE:183:VAL:O	27:DE:187:VAL:HG23	1.87	0.73
29:DG:92:ILE:HG22	29:DG:93:GLY:N	2.01	0.73
35:DM:20:ALA:HB1	35:DM:99:PRO:O	1.89	0.73
35:DM:141:GLN:H	44:DV:53:ILE:HB	1.52	0.73
1:AA:659:U:O2'	1:AA:660:G:H5'	1.88	0.73
2:AB:173:ALA:O	2:AB:176:GLU:HB2	1.89	0.73
6:AF:26:ILE:HG22	6:AF:30:LEU:HD11	1.71	0.73
23:BA:2210:G:H21	23:BA:2211:G:C5'	2.01	0.73
28:BF:36:LYS:HB3	28:BF:160:VAL:HB	1.69	0.73
47:BY:35:LEU:CD1	47:BY:53:LEU:HD12	2.19	0.73
23:DA:1358:G:O2'	23:DA:1359:A:H5''	1.89	0.73
44:DV:58:VAL:HA	44:DV:67:LEU:O	1.88	0.73
23:BA:105:C:H2'	23:BA:106:C:H6	1.53	0.73
34:BL:16:ARG:NH2	34:BL:18:ARG:H	1.87	0.73
8:CH:5:PRO:O	8:CH:8:ASP:HB3	1.89	0.73
23:DA:1963:U:O2	23:DA:1963:U:H2'	1.87	0.73
27:DE:101:LEU:HD12	27:DE:102:PRO:CD	2.18	0.73
43:DU:42:VAL:HG12	43:DU:65:ALA:HB3	1.71	0.73
1:AA:1259:C:H1'	1:AA:1283:G:H21	1.52	0.73
23:BA:65:C:H2'	23:BA:66:C:H6	1.54	0.73
23:BA:286:C:H2'	23:BA:287:C:H6	1.54	0.73
23:BA:1019:U:H3	23:BA:114(B):A:H62	1.36	0.73
23:BA:1022:G:H8	32:BJ:92:GLN:HE22	1.37	0.73
24:BB:8:U:H5''	37:BO:15:ARG:HH22	1.51	0.73
39:BQ:5:LYS:HG2	39:BQ:6:THR:N	2.03	0.73
1:CA:555:C:H2'	1:CA:556:C:H6	1.54	0.73
1:CA:820:U:H4'	1:CA:821:G:OP2	1.88	0.73
2:CB:97:TRP:HZ2	2:CB:102:LEU:HD13	1.52	0.73
10:CJ:4:ILE:HD12	10:CJ:100:THR:HG22	1.70	0.73
11:CK:44:SER:OG	11:CK:47:VAL:HG23	1.89	0.73
23:DA:2210:G:H21	23:DA:2211:G:C5'	2.02	0.73
34:DL:49:ARG:CG	34:DL:50:ARG:H	2.02	0.73
46:DX:11:ARG:HG3	46:DX:11:ARG:HH11	1.54	0.73
1:AA:1014:A:H5'	19:AS:14:HIS:CD2	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:134:ASP:O	4:AD:136:PRO:HD3	1.87	0.73
21:AU:18:TYR:HD2	21:AU:22:ARG:HG2	1.53	0.73
25:BC:176:ARG:HH11	25:BC:176:ARG:HG2	1.54	0.73
30:BH:5:LEU:HD23	30:BH:5:LEU:N	2.03	0.73
35:BM:20:ALA:HB1	35:BM:99:PRO:O	1.89	0.73
1:CA:1064:G:H1'	1:CA:1065:U:OP2	1.89	0.73
4:CD:134:ASP:O	4:CD:136:PRO:HD3	1.89	0.73
5:CE:31:LEU:HD21	5:CE:43:LEU:HD12	1.70	0.73
5:CE:50:GLU:HG3	5:CE:52:PRO:HD2	1.71	0.73
8:CH:51:VAL:HG21	8:CH:60:ARG:HG3	1.71	0.73
17:CQ:53:LEU:HD11	17:CQ:85:VAL:HG21	1.69	0.73
23:DA:2658:C:H4'	29:DG:158:HIS:CE1	2.24	0.73
25:DC:31:LYS:HG3	25:DC:33:LEU:HG	1.71	0.73
25:DC:233:HIS:HE1	25:DC:247:ALA:H	1.37	0.73
26:DD:111:ARG:HA	36:DN:2:ARG:HH11	1.53	0.73
35:DM:76:LYS:N	35:DM:88:GLY:HA2	2.04	0.73
1:AA:216:G:H2'	1:AA:217:C:C6	2.24	0.72
1:AA:556:C:C2'	1:AA:557:G:H5'	2.19	0.72
8:AH:51:VAL:HG21	8:AH:60:ARG:HG3	1.70	0.72
23:BA:941:A:H4'	34:BL:35:HIS:CE1	2.24	0.72
23:BA:1156:A:C8	39:BQ:51:LYS:HD2	2.24	0.72
23:BA:2392:A:H2	23:BA:2424:C:H42	1.35	0.72
1:CA:841:U:O2'	1:CA:842:C:H5''	1.88	0.72
1:CA:1281:U:H5'	1:CA:1282:C:H5	1.54	0.72
3:CC:91:LEU:HD22	3:CC:99:VAL:HG12	1.71	0.72
7:CG:131:LYS:HE3	7:CG:136:LYS:NZ	2.02	0.72
8:CH:20:TYR:HA	8:CH:65:TYR:HE2	1.52	0.72
12:CL:45:LYS:HG3	12:CL:91:ASP:O	1.89	0.72
23:DA:540:G:H2'	23:DA:541:C:H6	1.54	0.72
24:DB:70:C:H2'	24:DB:71:C:H6	1.54	0.72
25:DC:30:GLU:HG3	25:DC:63:ARG:CZ	2.18	0.72
34:DL:33:ARG:HE	34:DL:36:LYS:CD	2.00	0.72
41:DS:9:TYR:H	41:DS:102:HIS:CD2	2.07	0.72
46:DX:11:ARG:HB2	46:DX:13:ILE:HG22	1.71	0.72
46:DX:27:GLU:CB	46:DX:33:LYS:HG3	2.19	0.72
1:AA:706:A:O4'	11:AK:29:ILE:HD11	1.87	0.72
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.21	0.72
1:AA:1234:C:H1'	1:AA:1364:U:O2	1.88	0.72
23:BA:954:G:C5	23:BA:955:C:C5	2.77	0.72
32:BJ:63:PRO:O	39:BQ:64:ARG:HD2	1.89	0.72
34:BL:33:ARG:HB3	34:BL:36:LYS:HD3	1.69	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BV:179:ASP:OD1	44:BV:180:VAL:HG13	1.89	0.72
45:BW:42:GLY:HA2	45:BW:57:PHE:CD2	2.24	0.72
2:CB:27:LYS:HG3	2:CB:194:PRO:HD2	1.71	0.72
40:DR:64:HIS:CD2	40:DR:92:THR:HG22	2.23	0.72
46:DX:40:ARG:HG2	46:DX:41:ARG:N	2.04	0.72
6:AF:78:GLU:O	6:AF:81:ILE:HG13	1.89	0.72
23:BA:1871:A:H2'	23:BA:1872:A:C8	2.23	0.72
23:BA:2353:G:H5''	45:BW:32:ARG:NH2	2.05	0.72
23:BA:2846:G:H2'	23:BA:2847:U:H6	1.54	0.72
1:CA:1468:A:H2'	1:CA:1469:G:O4'	1.89	0.72
2:CB:72:GLY:O	2:CB:94:ASN:HA	1.88	0.72
12:CL:110:LYS:O	12:CL:111:ASP:HB2	1.89	0.72
23:DA:277:C:H3'	23:DA:278:A:H5''	1.71	0.72
23:DA:966:G:C4	23:DA:967:C:C5	2.76	0.72
24:DB:82:G:O2'	24:DB:83:G:H5'	1.89	0.72
34:DL:114:ILE:HD11	34:DL:127:ALA:CB	2.18	0.72
44:DV:13:GLU:HB3	44:DV:18:LEU:HD11	1.71	0.72
46:DX:46:LEU:CD2	46:DX:61:ARG:HE	2.03	0.72
47:DY:1:MET:SD	47:DY:5:GLU:HG2	2.29	0.72
1:AA:376:G:OP2	16:AP:67:THR:HG21	1.90	0.72
23:BA:1639:U:C2'	23:BA:1640:C:H5''	2.19	0.72
23:BA:2210:G:H21	23:BA:2211:G:H5'	1.52	0.72
23:BA:2658:C:H4'	29:BG:158:HIS:CE1	2.24	0.72
2:CB:70:PHE:O	2:CB:92:TYR:HA	1.89	0.72
2:CB:173:ALA:O	2:CB:176:GLU:HB2	1.89	0.72
25:DC:228:PRO:HD3	25:DC:234:GLY:O	1.89	0.72
26:DD:120:TRP:CE3	26:DD:155:LYS:HD3	2.23	0.72
27:DE:50:SER:HA	27:DE:92:PRO:O	1.90	0.72
40:DR:38:LEU:O	40:DR:52:VAL:HG12	1.89	0.72
47:DY:31:GLU:O	47:DY:35:LEU:HB2	1.89	0.72
23:BA:1045:A:H5''	23:BA:1047:G:O4'	1.89	0.72
23:BA:1331:A:HO2'	23:BA:1332:G:H8	1.34	0.72
24:BB:18:G:H1	24:BB:65:C:H42	1.37	0.72
29:BG:88:LEU:HB3	29:BG:90:LYS:HD3	1.69	0.72
35:BM:76:LYS:H	35:BM:88:GLY:HA2	1.54	0.72
40:BR:2:PHE:HE2	40:BR:13:ARG:HD3	1.50	0.72
53:B5:30:ARG:O	53:B5:31:HIS:CB	2.30	0.72
1:CA:38:G:C2	1:CA:397:A:C2	2.77	0.72
23:DA:2415:G:H1'	34:DL:67:MET:HE1	1.71	0.72
25:DC:76:PRO:HB3	25:DC:116:GLN:HE21	1.54	0.72
26:DD:5:LEU:HB2	26:DD:51:PHE:CD2	2.23	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:117:ARG:HD2	27:DE:190:GLU:O	1.89	0.72
38:DP:1:MET:C	38:DP:3:ARG:H	1.91	0.72
39:DQ:5:LYS:HG2	39:DQ:6:THR:N	2.03	0.72
40:DR:13:ARG:HD2	40:DR:14:VAL:N	2.03	0.72
43:DU:13:VAL:HG11	43:DU:72:VAL:HB	1.72	0.72
1:AA:950:U:O4	13:AM:105:THR:HG21	1.89	0.72
3:AC:18:TRP:HB3	3:AC:20:SER:O	1.89	0.72
23:BA:300:A:OP1	43:BU:84:ARG:NH2	2.21	0.72
23:BA:534:U:O2'	39:BQ:49:HIS:CD2	2.43	0.72
25:BC:131:LEU:HA	25:BC:190:TYR:CE2	2.23	0.72
32:BJ:38:LEU:HD12	32:BJ:39:ILE:N	2.04	0.72
1:CA:39:G:C2	1:CA:40:C:C6	2.77	0.72
1:CA:1053:G:H3'	1:CA:1054:C:H5'	1.72	0.72
4:CD:100:ARG:NH1	4:CD:137:SER:HA	2.04	0.72
4:CD:108:LEU:HB3	4:CD:110:PHE:HE2	1.54	0.72
23:DA:2009:G:C2'	23:DA:2010:G:H5'	2.19	0.72
25:DC:106:ILE:H	25:DC:106:ILE:CD1	2.03	0.72
32:DJ:38:LEU:HD23	32:DJ:157:ARG:CG	2.19	0.72
39:DQ:114:LYS:O	39:DQ:117:GLN:HB2	1.90	0.72
23:BA:2687:U:C4	23:BA:2688:U:C5	2.78	0.72
27:BE:89:VAL:HG12	27:BE:90:PHE:N	2.04	0.72
42:BT:57:LEU:CD1	42:BT:78:LYS:HB2	2.20	0.72
1:CA:556:C:C2'	1:CA:557:G:H5'	2.20	0.72
8:CH:86:ILE:HB	8:CH:133:LEU:HD22	1.71	0.72
23:DA:301:G:C4	23:DA:302:C:C5	2.77	0.72
23:DA:534:U:O2'	39:DQ:49:HIS:CD2	2.42	0.72
23:DA:774:A:H2	23:DA:787:U:HO2'	1.37	0.72
29:DG:144:VAL:O	29:DG:148:ILE:HG12	1.89	0.72
46:DX:10:LYS:O	46:DX:11:ARG:HG2	1.88	0.72
12:AL:52:ARG:HH11	12:AL:52:ARG:HG3	1.51	0.72
21:AU:6:ARG:HG3	21:AU:15:ARG:NH1	2.05	0.72
23:BA:1348:G:H2'	23:BA:1349:A:H5''	1.71	0.72
23:BA:1966:A:H4'	23:BA:1967:C:OP1	1.89	0.72
25:BC:31:LYS:HG3	25:BC:33:LEU:HG	1.72	0.72
1:CA:216:G:H2'	1:CA:217:C:C6	2.25	0.72
1:CA:556:C:H2'	1:CA:557:G:H5'	1.72	0.72
1:CA:1234:C:H1'	1:CA:1364:U:O2	1.89	0.72
23:DA:2285:C:H2'	23:DA:2286:A:H5''	1.71	0.72
1:AA:93:U:H2'	1:AA:95:G:C8	2.24	0.72
1:AA:1220:G:H2'	1:AA:1221:G:H8	1.53	0.72
9:AI:19:LEU:HD21	9:AI:59:PHE:HB3	1.69	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2850:A:OP2	23:BA:2866:U:H5	1.72	0.72
32:BJ:160:LYS:HE3	32:BJ:161:LEU:H	1.54	0.72
40:BR:38:LEU:O	40:BR:52:VAL:HG12	1.89	0.72
50:B2:33:CYS:HG	50:B2:49:CYS:HG	1.31	0.72
1:CA:1129:C:H4'	1:CA:1130:A:O5'	1.89	0.72
23:DA:1019:U:H2'	23:DA:1020:A:H8	1.55	0.72
23:DA:1396:U:O2	23:DA:1396:U:H2'	1.88	0.72
23:DA:2787:C:C1'	26:DD:62:PRO:HB3	2.18	0.72
33:DK:2:ILE:HG12	33:DK:8:LEU:HD11	1.72	0.72
52:D4:12:ARG:HG3	52:D4:12:ARG:NH1	2.04	0.72
1:AA:91:C:O2'	1:AA:92:G:H5'	1.90	0.72
2:AB:70:PHE:O	2:AB:92:TYR:HA	1.90	0.72
16:AP:74:LEU:O	16:AP:79:VAL:HG23	1.89	0.72
23:BA:256:A:O2'	23:BA:257:A:H5'	1.90	0.72
23:BA:330:A:C2	23:BA:1210:A:H2'	2.25	0.72
23:BA:1007:C:O2'	32:BJ:131:PRO:HA	1.90	0.72
25:BC:30:GLU:HG3	25:BC:63:ARG:CZ	2.19	0.72
27:BE:67:GLN:O	27:BE:67:GLN:CG	2.35	0.72
34:BL:16:ARG:HH21	34:BL:17:LYS:HA	1.54	0.72
34:BL:45:LEU:HD23	34:BL:46:LYS:N	2.05	0.72
38:BP:51:ARG:HH11	38:BP:51:ARG:CG	1.99	0.72
39:BQ:79:PHE:C	39:BQ:79:PHE:CD1	2.62	0.72
42:BT:84:ALA:HB3	42:BT:87:GLN:NE2	2.04	0.72
1:CA:266:G:H5'	1:CA:267:C:H5	1.53	0.72
1:CA:913:A:H1'	1:CA:914:A:OP2	1.89	0.72
1:CA:1191:A:H5''	3:CC:4:LYS:HZ2	1.51	0.72
2:CB:162:ILE:O	2:CB:185:ILE:HG12	1.90	0.72
23:DA:1388:G:H2'	23:DA:1389:G:H8	1.55	0.72
43:DU:81:LYS:NZ	43:DU:98:VAL:HG12	2.05	0.72
1:AA:1136:U:H5''	1:AA:1137:C:OP2	1.90	0.71
23:BA:528:A:H3'	23:BA:528:A:C8	2.25	0.71
23:BA:917:A:H5'	23:BA:918:A:OP2	1.91	0.71
23:BA:1332:G:N2	23:BA:1610:A:C8	2.57	0.71
23:BA:1495:A:N3	23:BA:1496:A:C2	2.58	0.71
34:BL:61:ARG:C	34:BL:62:LEU:HD13	2.11	0.71
34:BL:132:LYS:HD3	34:BL:132:LYS:H	1.55	0.71
40:BR:20:LEU:HD23	40:BR:94:LEU:HB2	1.72	0.71
1:CA:1329:A:H5''	13:CM:26:GLY:N	2.04	0.71
1:CA:1443:G:N2	38:DP:119:LYS:HA	2.05	0.71
2:CB:178:ARG:HH22	2:CB:196:LEU:HA	1.53	0.71
3:CC:58:GLU:O	3:CC:59:ARG:HG3	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:204:ILE:HG21	5:CE:98:THR:O	1.89	0.71
35:DM:120:ILE:O	35:DM:123:HIS:HB2	1.90	0.71
40:DR:27:ALA:CB	40:DR:61:VAL:HG11	2.20	0.71
17:AQ:15:MET:HB3	17:AQ:18:THR:HB	1.72	0.71
20:AT:13:LEU:H	20:AT:13:LEU:HD12	1.54	0.71
24:BB:70:C:H2'	24:BB:71:C:H6	1.55	0.71
25:BC:87:ASN:N	25:BC:87:ASN:ND2	2.29	0.71
27:BE:205:ARG:O	27:BE:206:ILE:HG23	1.90	0.71
28:BF:5:LEU:CD2	28:BF:6:ALA:H	2.04	0.71
29:BG:85:LYS:HD3	29:BG:86:GLU:OE2	1.90	0.71
43:BU:8:LYS:HD2	43:BU:13:VAL:HG21	1.71	0.71
47:BY:28:LYS:HE3	47:BY:56:GLN:HE22	1.55	0.71
1:CA:1053:G:C3'	1:CA:1054:C:H5'	2.20	0.71
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.24	0.71
23:DA:2443:C:O2'	23:DA:2444:G:H5'	1.89	0.71
23:DA:2781:A:H5''	23:DA:2782:G:C5'	2.09	0.71
26:DD:11:MET:HB2	26:DD:23:VAL:O	1.89	0.71
30:DH:79:ILE:HG22	30:DH:81:VAL:HG23	1.72	0.71
37:DO:87:PHE:CE1	37:DO:102:ALA:HB2	2.25	0.71
53:D5:30:ARG:O	53:D5:31:HIS:CB	2.37	0.71
1:AA:430:A:OP1	4:AD:9:CYS:HB2	1.90	0.71
1:AA:1191:A:H5''	3:AC:4:LYS:HZ2	1.52	0.71
23:BA:1329:U:H5''	23:BA:1330:C:H5	1.54	0.71
23:BA:1799:G:H8	25:BC:181:GLU:OE1	1.73	0.71
23:BA:2092:U:C5	23:BA:2226:C:OP2	2.42	0.71
25:BC:231:HIS:CD2	25:BC:232:PRO:HD2	2.25	0.71
40:BR:5:VAL:CG1	40:BR:14:VAL:HG21	2.20	0.71
43:BU:76:CYS:HB3	43:BU:77:PRO:HD2	1.70	0.71
46:BX:11:ARG:HB2	46:BX:13:ILE:HG22	1.71	0.71
1:CA:91:C:O2'	1:CA:92:G:H5'	1.90	0.71
9:CI:19:LEU:HG	9:CI:60:ASP:O	1.90	0.71
23:DA:773:U:C4'	25:DC:47:GLY:HA3	2.20	0.71
23:DA:1541:U:O3'	23:DA:1543:A:OP1	2.07	0.71
23:DA:2639:A:H2'	23:DA:2640:G:H5'	1.72	0.71
24:DB:15:A:H5'	24:DB:16:G:H8	1.54	0.71
44:DV:23:LYS:HB3	44:DV:38:TYR:HD1	1.54	0.71
1:AA:690:G:H2'	1:AA:691:G:C8	2.24	0.71
1:AA:1289:A:OP1	21:AU:10:ARG:HD3	1.90	0.71
23:BA:813:U:H2'	23:BA:814:C:C6	2.24	0.71
26:BD:11:MET:HE3	26:BD:186:GLY:HA2	1.72	0.71
40:BR:13:ARG:HD2	40:BR:14:VAL:N	2.06	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:393:A:C2	1:CA:394:G:C8	2.78	0.71
1:CA:1530:G:H4'	1:CA:1530:G:OP1	1.90	0.71
22:CV:6182:A:N1	22:CV:6195:G:C2	2.59	0.71
28:DF:84:LYS:HG3	28:DF:85:GLY:N	2.04	0.71
33:DK:19:ILE:HD13	33:DK:19:ILE:H	1.54	0.71
4:AD:28:SER:HB3	4:AD:29:PRO:HD2	1.72	0.71
9:AI:113:LYS:HG2	9:AI:119:ALA:HA	1.73	0.71
20:AT:26:ASN:HD22	20:AT:26:ASN:N	1.88	0.71
23:BA:2294:C:H2'	23:BA:2295:C:C6	2.24	0.71
23:BA:2353:G:N1	23:BA:2353:G:O6	2.23	0.71
25:BC:133:LEU:C	25:BC:135:PHE:H	1.93	0.71
26:BD:36:ARG:HD3	26:BD:85:ASN:ND2	2.06	0.71
32:BJ:38:LEU:HD23	32:BJ:157:ARG:CG	2.20	0.71
34:BL:50:ARG:HD2	34:BL:51:PHE:N	2.04	0.71
34:BL:114:ILE:HD12	34:BL:114:ILE:N	1.99	0.71
35:BM:66:ILE:HG22	35:BM:104:PHE:CD2	2.25	0.71
44:BV:39:VAL:HG21	44:BV:44:PHE:HB2	1.72	0.71
1:CA:691:G:C6	11:CK:52:GLY:HA2	2.25	0.71
1:CA:735:C:O2'	1:CA:736:C:H5'	1.89	0.71
2:CB:63:MET:HG2	2:CB:225:ALA:HB1	1.70	0.71
12:CL:86:GLY:HA2	12:CL:97:TYR:HA	1.71	0.71
21:CU:6:ARG:HG3	21:CU:15:ARG:NH1	2.04	0.71
23:DA:2305:A:H5''	28:DF:134:GLY:HA3	1.73	0.71
34:DL:16:ARG:NH2	34:DL:18:ARG:H	1.89	0.71
1:AA:556:C:H2'	1:AA:557:G:H5'	1.71	0.71
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.20	0.71
1:AA:1117:G:O3'	9:AI:104:ARG:HG3	1.89	0.71
2:AB:162:ILE:O	2:AB:185:ILE:HG12	1.91	0.71
23:BA:404:C:H4'	23:BA:405:U:H5'	1.72	0.71
23:BA:1778:U:H2'	23:BA:1784:A:N6	2.05	0.71
23:BA:2346:A:H5''	23:BA:2383:G:H1'	1.73	0.71
28:BF:25:TYR:CD1	28:BF:30:GLU:HB3	2.25	0.71
28:BF:174:GLU:HG2	28:BF:180:PHE:CE1	2.26	0.71
45:BW:72:ARG:CZ	45:BW:75:LEU:HD13	2.21	0.71
1:CA:650:G:O2'	1:CA:651:C:H5'	1.90	0.71
1:CA:712:A:O2'	1:CA:713:G:H5'	1.91	0.71
23:DA:256:A:O2'	23:DA:257:A:H5'	1.90	0.71
23:DA:1543:A:H3'	23:DA:1543:A:C8	2.26	0.71
23:DA:1817:G:OP1	25:DC:88:ARG:NH2	2.21	0.71
23:DA:1966:A:H4'	23:DA:1967:C:OP1	1.91	0.71
23:DA:2469:A:H2	23:DA:2481:G:H21	1.39	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:121:PRO:HB3	25:DC:135:PHE:CE2	2.25	0.71
27:DE:9:ILE:HD11	27:DE:125:LEU:CG	2.21	0.71
28:DF:5:LEU:CD2	28:DF:6:ALA:H	2.03	0.71
34:DL:101:VAL:HB	34:DL:106:LEU:HB3	1.71	0.71
44:DV:39:VAL:HG21	44:DV:44:PHE:HB2	1.71	0.71
1:AA:820:U:H4'	1:AA:821:G:OP2	1.89	0.71
1:AA:1129:C:H4'	1:AA:1130:A:O5'	1.91	0.71
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.54	0.71
1:AA:1530:G:OP1	1:AA:1530:G:H4'	1.91	0.71
23:BA:105:C:H2'	23:BA:106:C:C6	2.25	0.71
23:BA:2768:C:C4	23:BA:2769:C:C5	2.79	0.71
33:BK:101:PRO:O	33:BK:102:VAL:HG13	1.90	0.71
44:BV:13:GLU:HB3	44:BV:18:LEU:HD11	1.72	0.71
1:CA:819:A:H4'	1:CA:820:U:OP2	1.90	0.71
2:CB:167:PRO:HG2	2:CB:192:SER:OG	1.91	0.71
3:CC:23:TYR:CD2	3:CC:24:ALA:N	2.59	0.71
38:DP:53:ARG:HG2	38:DP:53:ARG:NH1	2.01	0.71
46:DX:37:ILE:HG23	46:DX:38:SER:N	2.06	0.71
1:AA:266:G:H5'	1:AA:267:C:H5	1.54	0.71
1:AA:376:G:O2'	1:AA:377:G:H5'	1.90	0.71
1:AA:386:C:C2'	1:AA:387:U:H5''	2.20	0.71
8:AH:91:ARG:HH11	8:AH:91:ARG:HG3	1.55	0.71
12:AL:86:GLY:HA2	12:AL:97:TYR:HA	1.72	0.71
17:AQ:40:LYS:HD2	17:AQ:42:TYR:CE1	2.26	0.71
23:BA:960:A:H5''	23:BA:961:C:OP2	1.90	0.71
23:BA:2415:G:H1'	34:BL:67:MET:HE1	1.73	0.71
23:BA:2784:C:H1'	26:BD:37:ARG:HH12	1.55	0.71
26:BD:101:ARG:HH21	26:BD:171:GLU:HB3	1.54	0.71
34:BL:33:ARG:HG2	34:BL:34:GLY:H	1.56	0.71
1:CA:1136:U:H5''	1:CA:1137:C:OP2	1.90	0.71
23:DA:357:A:H2'	23:DA:358:U:H6	1.54	0.71
23:DA:580:C:H2'	23:DA:581:C:H6	1.55	0.71
23:DA:1329:U:H5''	23:DA:1330:C:H5	1.56	0.71
28:DF:50:ALA:O	28:DF:53:LEU:HB3	1.91	0.71
34:DL:49:ARG:HG3	34:DL:50:ARG:H	1.54	0.71
43:DU:81:LYS:HZ3	43:DU:98:VAL:N	1.88	0.71
1:AA:735:C:O2'	1:AA:736:C:H5'	1.91	0.71
1:AA:914:A:H2'	1:AA:915:A:H5'	1.73	0.71
16:AP:8:ARG:O	16:AP:9:PHE:CD2	2.44	0.71
23:BA:1528:A:C2	23:BA:1529:A:C2	2.79	0.71
25:BC:25:THR:HG21	25:BC:81:ALA:HA	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BN:7:GLY:O	36:BN:8:ARG:HB3	1.91	0.71
43:BU:81:LYS:HD3	43:BU:97:ARG:HB3	1.72	0.71
5:CE:77:PRO:HD2	5:CE:142:LEU:HD22	1.72	0.71
22:CV:6188:G:N2	22:CV:6216:U:C2	2.58	0.71
23:DA:1270:C:H5''	23:DA:1271:G:O5'	1.91	0.71
26:DD:108:SER:O	26:DD:162:ALA:HA	1.90	0.71
28:DF:25:TYR:CD1	28:DF:30:GLU:HB3	2.25	0.71
34:DL:146:VAL:HG13	34:DL:147:LEU:HD12	1.73	0.71
2:AB:27:LYS:HG3	2:AB:194:PRO:HD2	1.72	0.71
3:AC:20:SER:HB2	3:AC:40:ARG:NH1	2.04	0.71
17:AQ:19:VAL:HG23	17:AQ:44:ALA:HB3	1.72	0.71
25:BC:70:TRP:C	25:BC:70:TRP:CD1	2.64	0.71
39:BQ:92:ARG:CG	40:BR:11:GLN:NE2	2.53	0.71
52:B4:9:ARG:NE	52:B4:48:LYS:HB2	2.04	0.71
1:CA:538:G:O3'	12:CL:113:LYS:HG3	1.90	0.71
23:DA:404:C:H4'	23:DA:405:U:H5'	1.73	0.71
23:DA:1679:U:C2'	23:DA:1680:U:H5'	2.20	0.71
29:DG:95:ARG:HH22	29:DG:97:ARG:HH21	1.36	0.71
30:DH:62:LYS:HB2	30:DH:133:HIS:CE1	2.25	0.71
47:DY:6:VAL:HG12	47:DY:10:LEU:CD1	2.20	0.71
3:AC:58:GLU:O	3:AC:59:ARG:HG3	1.91	0.70
23:BA:784:A:H5'	23:BA:785:G:OP1	1.90	0.70
39:BQ:79:PHE:C	39:BQ:79:PHE:HD1	1.93	0.70
1:CA:337:C:H2'	1:CA:338:A:H8	1.54	0.70
2:CB:162:ILE:HD11	2:CB:184:VAL:HG13	1.73	0.70
16:CP:74:LEU:O	16:CP:79:VAL:HG23	1.91	0.70
23:DA:1290:C:H2'	23:DA:1291:C:H6	1.56	0.70
23:DA:2768:C:C4	23:DA:2769:C:C5	2.79	0.70
25:DC:125:ILE:O	25:DC:125:ILE:CG2	2.39	0.70
26:DD:46:ALA:HB2	26:DD:82:ARG:HA	1.73	0.70
35:DM:23:GLY:HA3	35:DM:98:LYS:HB2	1.73	0.70
36:DN:57:ARG:HG2	36:DN:58:GLY:H	1.56	0.70
40:DR:5:VAL:CG1	40:DR:14:VAL:HG21	2.20	0.70
43:DU:8:LYS:HZ3	43:DU:8:LYS:C	1.93	0.70
1:AA:16:A:O2'	1:AA:17:U:H5'	1.91	0.70
1:AA:1053:G:H3'	1:AA:1054:C:H5'	1.72	0.70
2:AB:167:PRO:HG2	2:AB:192:SER:OG	1.91	0.70
23:BA:333:G:C6	23:BA:334:C:N4	2.59	0.70
23:BA:863:A:OP1	35:BM:21:THR:HB	1.90	0.70
23:BA:1794:U:H2'	23:BA:1795:C:H6	1.56	0.70
25:BC:121:PRO:HB3	25:BC:135:PHE:CE2	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:120:TRP:CE3	26:BD:155:LYS:HD3	2.26	0.70
43:BU:8:LYS:HZ2	43:BU:8:LYS:N	1.88	0.70
1:CA:323:U:O3'	20:CT:22:ARG:HG2	1.91	0.70
1:CA:1347:G:H8	9:CI:107:ARG:HB3	1.55	0.70
17:CQ:19:VAL:HG23	17:CQ:44:ALA:HB3	1.73	0.70
23:DA:249:C:O2	53:D5:12:LYS:HE3	1.91	0.70
23:DA:588:U:H2'	23:DA:589:C:C6	2.26	0.70
23:DA:733:G:N7	23:DA:761:A:N6	2.39	0.70
23:DA:784:A:H5'	23:DA:785:G:OP1	1.90	0.70
23:DA:861:A:C2'	23:DA:862:G:H5'	2.20	0.70
23:DA:1546:A:N7	23:DA:154(B):C:O2	2.24	0.70
30:DH:68:LEU:O	30:DH:138:ILE:HD13	1.91	0.70
41:DS:22:ASP:HA	41:DS:25:ARG:HH12	1.56	0.70
4:AD:3:ARG:HD2	4:AD:3:ARG:N	2.06	0.70
6:AF:79:LEU:HB2	6:AF:88:VAL:HG21	1.72	0.70
8:AH:86:ILE:HB	8:AH:133:LEU:HD22	1.73	0.70
16:AP:22:THR:HG22	16:AP:32:TYR:HB3	1.73	0.70
22:AV:6182:A:N1	22:AV:6195:G:C2	2.59	0.70
23:BA:861:A:H2'	23:BA:862:G:H5'	1.73	0.70
23:BA:1386:C:H2'	23:BA:1387:C:H6	1.54	0.70
23:BA:2631:G:N3	23:BA:2810:A:H2	1.88	0.70
47:BY:6:VAL:HG12	47:BY:10:LEU:CD1	2.22	0.70
8:CH:12:ARG:NH1	8:CH:26:VAL:HA	2.06	0.70
23:DA:910:A:H62	35:DM:12:GLN:HA	1.56	0.70
23:DA:2402:C:H5'	23:DA:2403:C:OP2	1.90	0.70
30:DH:5:LEU:HD23	30:DH:5:LEU:N	2.05	0.70
1:AA:255:G:H2'	1:AA:256:U:H6	1.57	0.70
1:AA:1066:C:H2'	1:AA:1066:C:O2	1.89	0.70
6:AF:3:ARG:HG3	6:AF:66:GLU:HG2	1.72	0.70
23:BA:1358:G:O2'	23:BA:1359:A:H5''	1.90	0.70
26:BD:108:SER:O	26:BD:162:ALA:HA	1.91	0.70
32:BJ:154:GLN:NE2	32:BJ:155:ALA:HB3	2.03	0.70
36:BN:2:ARG:C	36:BN:4:LEU:N	2.43	0.70
38:BP:53:ARG:HG2	38:BP:53:ARG:NH1	2.03	0.70
1:CA:105:G:H2'	1:CA:106:C:H6	1.55	0.70
1:CA:979:C:H3'	1:CA:980:C:C5'	2.15	0.70
6:CF:79:LEU:HB2	6:CF:88:VAL:HG21	1.72	0.70
12:CL:44:PRO:HG3	12:CL:52:ARG:HE	1.55	0.70
23:DA:18:C:O3'	39:DQ:23:GLY:HA2	1.90	0.70
23:DA:1728:G:H8	23:DA:1728:G:O5'	1.74	0.70
25:DC:132:PRO:HD3	25:DC:190:TYR:CZ	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DO:38:GLN:HB3	37:DO:47:THR:HG21	1.73	0.70
43:DU:2:ARG:O	43:DU:4:LYS:N	2.23	0.70
1:AA:1064:G:H1'	1:AA:1065:U:OP2	1.90	0.70
12:AL:26:LEU:HB3	12:AL:29:ALA:HB3	1.74	0.70
23:BA:828:U:H3'	23:BA:828:U:O2	1.91	0.70
23:BA:1309:G:H3'	52:B4:9:ARG:NH1	2.05	0.70
23:BA:2639:A:H2'	23:BA:2640:G:H5'	1.74	0.70
27:BE:63:LYS:NZ	27:BE:67:GLN:HE21	1.88	0.70
28:BF:50:ALA:O	28:BF:53:LEU:HB3	1.92	0.70
32:BJ:69:VAL:HG13	32:BJ:71:MET:HG3	1.73	0.70
33:BK:99:PHE:N	33:BK:99:PHE:CD1	2.52	0.70
34:BL:85:LEU:HA	34:BL:88:LEU:HB2	1.73	0.70
34:BL:97:PRO:HD3	34:BL:126:VAL:HG12	1.72	0.70
8:CH:97:VAL:O	8:CH:100:ILE:HG13	1.91	0.70
12:CL:44:PRO:HG3	12:CL:52:ARG:NE	2.07	0.70
23:DA:2747:G:O6	23:DA:2755:C:H5''	1.91	0.70
27:DE:205:ARG:O	27:DE:206:ILE:HG23	1.92	0.70
29:DG:55:PRO:HG2	29:DG:61:HIS:CE1	2.27	0.70
11:AK:57:THR:HG22	11:AK:59:TYR:N	2.07	0.70
23:BA:126:A:O5'	52:B4:19:ARG:HG2	1.92	0.70
23:BA:140:A:H8	23:BA:1408:C:O2'	1.70	0.70
23:BA:774:A:H2	23:BA:787:U:HO2'	1.37	0.70
23:BA:1541:U:O3'	23:BA:1543:A:OP1	2.10	0.70
26:BD:77:ILE:HD13	26:BD:195:LEU:HD12	1.74	0.70
50:B2:40:LYS:NZ	50:B2:49:CYS:HB3	2.06	0.70
1:CA:579:G:H2'	1:CA:580:U:H6	1.57	0.70
1:CA:922:G:C6	1:CA:923:A:C6	2.80	0.70
1:CA:1346:A:N1	1:CA:1374:A:H5''	2.07	0.70
1:CA:1423:G:H5''	33:DK:49:ARG:HH22	1.56	0.70
3:CC:206:GLU:HG2	3:CC:207:VAL:HG23	1.73	0.70
9:CI:97:LYS:HD3	9:CI:102:LEU:HD12	1.72	0.70
23:DA:125:G:H4'	23:DA:126:A:OP2	1.90	0.70
23:DA:2661:G:O2'	23:DA:2662:A:H5'	1.91	0.70
40:DR:98:GLU:HG2	40:DR:100:ARG:HD3	1.74	0.70
1:AA:38:G:C2	1:AA:397:A:C2	2.80	0.70
1:AA:393:A:C2	1:AA:394:G:C8	2.80	0.70
1:AA:579:G:H2'	1:AA:580:U:H6	1.55	0.70
1:AA:940:C:C2	1:AA:941:G:C8	2.79	0.70
1:AA:1157:A:H4'	1:AA:1158:C:O5'	1.92	0.70
8:AH:5:PRO:O	8:AH:8:ASP:HB3	1.91	0.70
8:AH:58:TYR:C	8:AH:59:LEU:HD23	2.12	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:97:LYS:HD3	9:AI:102:LEU:HD12	1.72	0.70
23:BA:547:A:C6	23:BA:548:A:C6	2.80	0.70
23:BA:1396:U:H2'	23:BA:1396:U:O2	1.90	0.70
23:BA:1596:A:C2'	23:BA:1597:A:H5'	2.20	0.70
45:BW:49:LYS:HB2	45:BW:80:HIS:HB3	1.74	0.70
46:BX:31:GLY:O	46:BX:32:LYS:HB2	1.91	0.70
48:BZ:28:LEU:HD12	48:BZ:28:LEU:N	2.06	0.70
1:CA:386:C:C2'	1:CA:387:U:H5''	2.21	0.70
5:CE:43:LEU:HD22	5:CE:136:MET:CG	2.21	0.70
11:CK:57:THR:HG22	11:CK:59:TYR:N	2.06	0.70
16:CP:8:ARG:O	16:CP:9:PHE:CD2	2.45	0.70
16:CP:20:VAL:HG23	16:CP:34:GLU:O	1.92	0.70
17:CQ:31:LEU:HD23	17:CQ:32:TYR:CZ	2.27	0.70
23:DA:1170:G:H1	23:DA:1179:C:N4	1.90	0.70
29:DG:19:VAL:HG12	29:DG:20:ALA:N	2.05	0.70
29:DG:27:LYS:HG2	29:DG:32:GLU:HG3	1.74	0.70
34:DL:18:ARG:NH1	34:DL:18:ARG:HB3	2.07	0.70
34:DL:45:LEU:HD23	34:DL:46:LYS:N	2.07	0.70
38:DP:89:VAL:O	38:DP:90:GLN:HB2	1.90	0.70
40:DR:2:PHE:HE2	40:DR:13:ARG:HD3	1.56	0.70
4:AD:51:PRO:HB3	4:AD:55:ALA:HB3	1.73	0.70
23:BA:1411:C:H2'	23:BA:1412:A:H8	1.57	0.70
23:BA:1543:A:H3'	23:BA:1543:A:C8	2.26	0.70
44:BV:37:VAL:HG23	44:BV:38:TYR:N	2.06	0.70
53:B5:52:LYS:H	53:B5:53:PRO:HD2	1.57	0.70
1:CA:1292:U:H2'	1:CA:1293:G:H8	1.56	0.70
23:DA:1411:C:H2'	23:DA:1412:A:H8	1.55	0.70
23:DA:2353:G:H5''	45:DW:32:ARG:NH2	2.07	0.70
30:DH:2:LYS:HG3	30:DH:39:ALA:HB3	1.72	0.70
44:DV:30:ASN:O	44:DV:32:HIS:N	2.25	0.70
45:DW:49:LYS:HB2	45:DW:80:HIS:HB3	1.74	0.70
2:AB:126:GLU:C	2:AB:127:ILE:HD13	2.12	0.70
11:AK:23:ALA:HA	11:AK:28:THR:OG1	1.92	0.70
16:AP:43:LYS:HG2	16:AP:48:TRP:CD2	2.27	0.70
23:BA:116:C:H2'	23:BA:117:G:C8	2.27	0.70
23:BA:1728:G:H8	23:BA:1728:G:O5'	1.75	0.70
29:BG:30:LYS:HB2	29:BG:79:VAL:HA	1.74	0.70
30:BH:62:LYS:HB2	30:BH:133:HIS:CE1	2.27	0.70
34:BL:14:LYS:O	34:BL:15:ARG:HB2	1.90	0.70
41:BS:59:VAL:HG12	41:BS:60:ASN:OD1	1.92	0.70
1:CA:505:G:C6	1:CA:535:A:C2	2.80	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:77:LYS:HA	29:DG:80:SER:HB2	1.72	0.70
1:AA:66:G:H4'	1:AA:173:U:C5	2.26	0.70
1:AA:914:A:C2'	1:AA:915:A:H5'	2.22	0.70
1:AA:1022:G:H2'	1:AA:1023:G:H8	1.57	0.70
1:AA:1295:G:N2	1:AA:1302:U:H3	1.90	0.70
3:AC:206:GLU:HG2	3:AC:207:VAL:HG23	1.73	0.70
5:AE:57:LYS:O	5:AE:61:TYR:CD2	2.45	0.70
8:AH:97:VAL:HG13	8:AH:98:LYS:H	1.57	0.70
23:BA:301:G:C4	23:BA:302:C:C5	2.80	0.70
23:BA:729:G:OP2	25:BC:13:ARG:NH1	2.25	0.70
44:BV:23:LYS:HB3	44:BV:38:TYR:HD1	1.55	0.70
1:CA:668:G:H1'	15:CO:46:HIS:HD2	1.56	0.70
1:CA:862:C:C2'	1:CA:863:U:H5'	2.22	0.70
4:CD:67:ILE:HG22	4:CD:68:TYR:CD1	2.26	0.70
6:CF:90:VAL:HG12	6:CF:91:VAL:N	2.06	0.70
12:CL:44:PRO:HG3	12:CL:52:ARG:CD	2.22	0.70
23:DA:1046:A:N3	31:DI:4:LYS:HD3	2.07	0.70
23:DA:2346:A:H5''	23:DA:2383:G:H1'	1.72	0.70
25:DC:70:TRP:CD1	25:DC:70:TRP:C	2.64	0.70
28:DF:41:GLN:HG2	28:DF:155:MET:HB3	1.74	0.70
39:DQ:98:LEU:O	39:DQ:100:VAL:N	2.25	0.70
53:D5:22:VAL:HB	53:D5:54:GLU:HG3	1.74	0.70
1:AA:15:G:H4'	5:AE:24:ARG:HH12	1.56	0.69
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.06	0.69
3:AC:91:LEU:HD22	3:AC:99:VAL:HG12	1.74	0.69
23:BA:1170:G:H1	23:BA:1179:C:N4	1.89	0.69
23:BA:1639:U:H2'	23:BA:1640:C:H5''	1.74	0.69
23:BA:1857:G:N2	23:BA:1886:C:N4	2.40	0.69
40:BR:25:LEU:H	40:BR:92:THR:HG21	1.57	0.69
1:CA:729:A:H2'	1:CA:730:G:H8	1.56	0.69
4:CD:3:ARG:N	4:CD:3:ARG:HD2	2.07	0.69
20:CT:57:ARG:HH11	20:CT:102:GLY:HA2	1.55	0.69
9:AI:22:GLY:HA3	9:AI:60:ASP:OD2	1.92	0.69
23:BA:826:U:H4'	34:BL:55:ARG:HB2	1.72	0.69
23:BA:990:A:H5''	23:BA:991:C:P	2.32	0.69
23:BA:2731:G:C6	23:BA:2732:G:O6	2.45	0.69
27:BE:203:GLN:HA	27:BE:206:ILE:O	1.92	0.69
33:BK:25:LEU:HB2	33:BK:38:VAL:O	1.91	0.69
36:BN:2:ARG:O	36:BN:4:LEU:N	2.25	0.69
43:BU:81:LYS:NZ	43:BU:98:VAL:HG12	2.07	0.69
4:CD:119:GLN:HG3	4:CD:123:HIS:HD2	1.55	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:113:LYS:HG2	9:CI:119:ALA:HA	1.73	0.69
23:DA:987:G:H2'	23:DA:988:A:H5'	1.74	0.69
23:DA:1309:G:H3'	52:D4:9:ARG:NH1	2.07	0.69
23:DA:1871:A:H2'	23:DA:1872:A:C8	2.27	0.69
32:DJ:160:LYS:HE3	32:DJ:161:LEU:H	1.55	0.69
44:DV:22:GLY:O	44:DV:41:LEU:HB2	1.91	0.69
45:DW:53:MET:HB2	45:DW:59:LEU:HD23	1.73	0.69
1:AA:1292:U:H2'	1:AA:1293:G:H8	1.57	0.69
23:BA:314:A:O2'	23:BA:315:G:H5'	1.92	0.69
23:BA:1607:C:H4'	23:BA:1608:A:O5'	1.92	0.69
29:BG:77:LYS:HA	29:BG:80:SER:HB2	1.75	0.69
34:BL:49:ARG:CG	34:BL:50:ARG:H	2.04	0.69
35:BM:23:GLY:HA3	35:BM:98:LYS:HB2	1.74	0.69
40:BR:91:TYR:O	40:BR:91:TYR:CD2	2.44	0.69
45:BW:72:ARG:HB3	45:BW:75:LEU:HD12	1.73	0.69
1:CA:625:G:H4'	16:CP:16:HIS:CD2	2.26	0.69
1:CA:940:C:C2	1:CA:941:G:C8	2.79	0.69
1:CA:1426:C:H2'	1:CA:1427:U:H6	1.58	0.69
6:CF:3:ARG:HG3	6:CF:66:GLU:HG2	1.74	0.69
13:CM:10:PRO:HG3	13:CM:22:ILE:HD11	1.74	0.69
23:DA:1679:U:H2'	23:DA:1680:U:H5'	1.72	0.69
25:DC:77:ALA:HB2	25:DC:97:TYR:HA	1.74	0.69
26:DD:37:ARG:O	26:DD:45:THR:HA	1.92	0.69
26:DD:101:ARG:HH21	26:DD:171:GLU:HB3	1.57	0.69
27:DE:199:TRP:O	27:DE:203:GLN:HG2	1.92	0.69
46:DX:86:SER:O	46:DX:90:ILE:HG12	1.93	0.69
51:D3:42:TRP:CE3	51:D3:42:TRP:HA	2.27	0.69
1:AA:650:G:O2'	1:AA:651:C:H5'	1.91	0.69
1:AA:963:G:H2'	1:AA:964:A:H8	1.58	0.69
8:AH:51:VAL:HG21	8:AH:60:ARG:CG	2.22	0.69
25:BC:35:LYS:HE2	25:BC:103:ARG:HA	1.74	0.69
32:BJ:142:ARG:HG3	32:BJ:142:ARG:NH1	2.07	0.69
36:BN:52:ILE:HG21	36:BN:94:TYR:CG	2.27	0.69
1:CA:690:G:H2'	1:CA:691:G:C8	2.26	0.69
16:CP:17:TYR:CD1	16:CP:17:TYR:N	2.59	0.69
23:DA:863:A:OP1	35:DM:21:THR:HB	1.93	0.69
32:DJ:57:LEU:O	32:DJ:72:GLY:HA3	1.92	0.69
23:BA:603:A:N6	23:BA:655:A:H4'	2.07	0.69
23:BA:1826:G:OP1	25:BC:233:HIS:HD2	1.74	0.69
29:BG:98:LEU:HD12	29:BG:99:VAL:N	2.06	0.69
34:BL:101:VAL:HB	34:BL:106:LEU:HB3	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BY:31:GLU:O	47:BY:35:LEU:HB2	1.92	0.69
50:B2:41:PRO:HG2	50:B2:44:THR:HG21	1.73	0.69
53:B5:22:VAL:HG12	53:B5:50:LEU:HD12	1.73	0.69
23:DA:737:C:H2'	23:DA:738:G:H5'	1.73	0.69
23:DA:1746:G:C2	23:DA:1747:G:C8	2.80	0.69
23:DA:2092:U:C5	23:DA:2226:C:OP2	2.45	0.69
26:DD:4:ILE:HG12	26:DD:28:ALA:HB1	1.73	0.69
27:DE:67:GLN:O	27:DE:67:GLN:CG	2.32	0.69
27:DE:89:VAL:HG12	27:DE:90:PHE:H	1.57	0.69
28:DF:7:LEU:HD23	28:DF:10:LYS:HD2	1.75	0.69
44:DV:94:GLU:CD	44:DV:94:GLU:H	1.94	0.69
47:DY:9:GLN:C	47:DY:12:GLU:HB3	2.12	0.69
1:AA:1446:A:H61	38:BP:118:ARG:NH2	1.89	0.69
23:BA:861:A:C2'	23:BA:862:G:H5'	2.22	0.69
27:BE:46:ARG:HH11	27:BE:46:ARG:HG2	1.57	0.69
29:BG:19:VAL:HG12	29:BG:20:ALA:N	2.07	0.69
34:BL:112:LEU:HD23	34:BL:113:LYS:N	2.07	0.69
37:BO:87:PHE:CE1	37:BO:102:ALA:HB2	2.28	0.69
40:BR:91:TYR:O	40:BR:91:TYR:CG	2.45	0.69
44:BV:53:ILE:HG22	44:BV:71:VAL:O	1.92	0.69
1:CA:255:G:H2'	1:CA:256:U:H6	1.57	0.69
1:CA:833:U:H2'	1:CA:834:C:C6	2.28	0.69
1:CA:909:A:H2'	1:CA:910:C:O4'	1.92	0.69
3:CC:76:VAL:HG21	3:CC:103:VAL:HG11	1.75	0.69
23:DA:924:C:H2'	23:DA:925:C:H6	1.57	0.69
23:DA:1248:G:OP1	39:DQ:2:PRO:HD2	1.92	0.69
23:DA:1348:G:H2'	23:DA:1349:A:H5''	1.75	0.69
26:DD:2:LYS:HE2	26:DD:95:ILE:O	1.93	0.69
36:DN:7:GLY:O	36:DN:8:ARG:HB3	1.93	0.69
1:AA:819:A:H4'	1:AA:820:U:OP2	1.92	0.69
1:AA:862:C:C2'	1:AA:863:U:H5'	2.23	0.69
23:BA:277:C:H3'	23:BA:278:A:H5''	1.72	0.69
23:BA:1909:C:C2	23:BA:1922:G:N2	2.61	0.69
23:BA:2285:C:H2'	23:BA:2286:A:H5''	1.73	0.69
23:BA:2787:C:C1'	26:BD:62:PRO:HB3	2.22	0.69
25:BC:77:ALA:CB	25:BC:97:TYR:HA	2.22	0.69
25:BC:96:HIS:HD2	25:BC:102:LYS:HD3	1.57	0.69
26:BD:11:MET:HB2	26:BD:23:VAL:O	1.93	0.69
26:BD:46:ALA:HB2	26:BD:82:ARG:HA	1.72	0.69
1:CA:16:A:O2'	1:CA:17:U:H5'	1.93	0.69
1:CA:1157:A:H4'	1:CA:1158:C:O5'	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1194:U:H2'	1:CA:1195:C:C6	2.28	0.69
1:CA:1220:G:H2'	1:CA:1221:G:H8	1.54	0.69
13:CM:76:ALA:HA	13:CM:79:LYS:HE2	1.73	0.69
20:CT:90:GLN:O	20:CT:93:GLU:HB3	1.93	0.69
23:DA:65:C:H2'	23:DA:66:C:C6	2.27	0.69
23:DA:105:C:H2'	23:DA:106:C:H6	1.58	0.69
23:DA:603:A:N6	23:DA:655:A:H4'	2.07	0.69
23:DA:1754:C:OP1	38:DP:96:ARG:NH1	2.23	0.69
23:DA:2815:C:O2'	50:D2:43:HIS:HD2	1.75	0.69
23:DA:2850:A:OP2	23:DA:2866:U:H5	1.76	0.69
25:DC:72:LYS:HD2	25:DC:75:ILE:HD12	1.74	0.69
33:DK:31:LYS:HB3	33:DK:32:TYR:CE1	2.27	0.69
34:DL:59:LEU:CA	34:DL:61:ARG:HE	2.01	0.69
34:DL:62:LEU:O	34:DL:62:LEU:HD23	1.92	0.69
43:DU:78:ALA:HB3	43:DU:81:LYS:HE3	1.74	0.69
1:AA:600:C:H2'	1:AA:601:C:C6	2.28	0.69
1:AA:979:C:H5''	1:AA:980:C:OP2	1.93	0.69
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.28	0.69
8:AH:77:GLU:HG3	8:AH:78:GLN:N	2.08	0.69
8:AH:97:VAL:HG13	8:AH:98:LYS:N	2.08	0.69
10:AJ:55:LYS:O	10:AJ:55:LYS:HD2	1.93	0.69
12:AL:44:PRO:HG3	12:AL:52:ARG:CD	2.23	0.69
13:AM:76:ALA:HA	13:AM:79:LYS:HE2	1.73	0.69
13:AM:107:ALA:O	13:AM:111:LYS:HG3	1.92	0.69
19:AS:19:VAL:O	19:AS:22:LEU:HB2	1.93	0.69
23:BA:1021:A:C8	23:BA:1021:A:C3'	2.75	0.69
23:BA:1021:A:H2'	23:BA:1023:U:H5'	1.73	0.69
23:BA:1046:A:N3	31:BI:4:LYS:HD3	2.08	0.69
23:BA:1290:C:H2'	23:BA:1291:C:H6	1.57	0.69
23:BA:1537:C:H2'	23:BA:1538:G:O4'	1.93	0.69
23:BA:1606:G:H5''	23:BA:1607:C:OP1	1.92	0.69
23:BA:2402:C:H5'	23:BA:2403:C:OP2	1.92	0.69
23:BA:2415:G:H4'	34:BL:66:GLY:CA	2.23	0.69
23:BA:2433:A:H5''	23:BA:2434:A:P	2.32	0.69
25:BC:25:THR:CG2	25:BC:82:ILE:H	2.04	0.69
25:BC:228:PRO:HD3	25:BC:234:GLY:O	1.93	0.69
27:BE:39:TRP:O	27:BE:43:LYS:HG2	1.93	0.69
34:BL:33:ARG:HE	34:BL:36:LYS:CD	2.04	0.69
38:BP:1:MET:C	38:BP:3:ARG:H	1.96	0.69
39:BQ:108:GLU:HG3	40:BR:44:LYS:HG2	1.72	0.69
40:BR:79:VAL:O	40:BR:79:VAL:HG13	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BW:42:GLY:HA2	45:BW:57:PHE:CE2	2.27	0.69
53:B5:50:LEU:O	53:B5:51:ALA:HB2	1.93	0.69
1:CA:1022:G:H2'	1:CA:1023:G:H8	1.57	0.69
1:CA:1368:G:O2'	1:CA:1369:C:H5'	1.93	0.69
1:CA:1426:C:H2'	1:CA:1427:U:C6	2.26	0.69
23:DA:9:U:C4	23:DA:2629:A:C6	2.80	0.69
23:DA:273(G):C:H2'	23:DA:274:G:H5''	1.74	0.69
34:DL:138:LEU:HD11	34:DL:144:GLU:HB3	1.75	0.69
42:DT:57:LEU:HD11	42:DT:78:LYS:HB2	1.74	0.69
44:DV:30:ASN:OD1	44:DV:33:LEU:HB3	1.92	0.69
52:D4:9:ARG:NE	52:D4:48:LYS:HB2	2.03	0.69
23:BA:993:G:C5	23:BA:994:C:H5	2.10	0.69
23:BA:1404:C:O2	23:BA:1404:C:H2'	1.92	0.69
25:BC:226:MET:C	25:BC:227:ASN:HD22	1.95	0.69
30:BH:66:GLU:HG2	30:BH:67:ARG:CZ	2.23	0.69
38:BP:88:ILE:HD12	38:BP:89:VAL:H	1.58	0.69
40:BR:47:VAL:O	40:BR:49:THR:O	2.11	0.69
43:BU:78:ALA:HB3	43:BU:81:LYS:HE3	1.75	0.69
43:BU:81:LYS:HD3	43:BU:97:ARG:N	2.08	0.69
23:DA:1812:A:C2'	23:DA:1813:G:H5'	2.23	0.69
32:DJ:77:VAL:HB	32:DJ:145:VAL:HG22	1.74	0.69
39:DQ:79:PHE:CD1	39:DQ:79:PHE:C	2.66	0.69
47:DY:1:MET:CE	47:DY:5:GLU:HG2	2.22	0.69
53:D5:32:LEU:HD23	53:D5:33:ASN:N	2.08	0.69
1:AA:482:A:H2'	1:AA:482:A:N3	2.08	0.69
1:AA:833:U:H2'	1:AA:834:C:H6	1.58	0.69
1:AA:1081:G:OP1	5:AE:18:ARG:HG2	1.93	0.69
11:AK:44:SER:OG	11:AK:47:VAL:HG23	1.92	0.69
16:AP:28:ARG:HH11	16:AP:28:ARG:CG	2.05	0.69
23:BA:94:G:N2	47:BY:47:ASN:ND2	2.39	0.69
23:BA:760:G:H2'	23:BA:761:A:H5'	1.72	0.69
23:BA:1386:C:OP2	23:BA:1396:U:H5	1.75	0.69
25:BC:25:THR:HG21	25:BC:81:ALA:CA	2.22	0.69
27:BE:199:TRP:O	27:BE:203:GLN:HG2	1.92	0.69
44:BV:136:PHE:C	44:BV:137:ILE:HD12	2.13	0.69
1:CA:688:G:H2'	1:CA:689:C:C6	2.25	0.69
1:CA:833:U:H2'	1:CA:834:C:H6	1.57	0.69
1:CA:1410:G:O2'	1:CA:1411:C:H5'	1.93	0.69
1:CA:1483:A:H5''	1:CA:1484:C:OP2	1.93	0.69
11:CK:23:ALA:HA	11:CK:28:THR:OG1	1.93	0.69
23:DA:987:G:C2'	23:DA:988:A:H5'	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1024:G:H8	23:DA:1024:G:O5'	1.76	0.69
23:DA:1264:G:C5'	50:D2:11:THR:HG21	2.22	0.69
23:DA:1332:G:N2	23:DA:1610:A:C8	2.61	0.69
23:DA:1343:G:H5'	23:DA:1343:G:H8	1.56	0.69
23:DA:2712:U:H1'	23:DA:712(B):A:H8	1.57	0.69
25:DC:25:THR:HG21	25:DC:81:ALA:CA	2.23	0.69
25:DC:231:HIS:CD2	25:DC:249:PRO:HA	2.26	0.69
29:DG:140:LYS:O	29:DG:144:VAL:HG23	1.93	0.69
40:DR:79:VAL:O	40:DR:79:VAL:HG13	1.91	0.69
43:DU:8:LYS:HZ2	43:DU:8:LYS:N	1.91	0.69
43:DU:81:LYS:HD3	43:DU:97:ARG:HB3	1.74	0.69
45:DW:56:ASP:O	45:DW:57:PHE:HB2	1.92	0.69
50:D2:33:CYS:HG	50:D2:49:CYS:HG	1.34	0.69
2:AB:22:LYS:HZ2	2:AB:22:LYS:HA	1.57	0.68
6:AF:33:TYR:CE1	6:AF:75:LEU:HA	2.28	0.68
23:BA:2364:C:C2'	23:BA:2365:G:H5'	2.22	0.68
24:BB:11:C:H3'	24:BB:12:C:C6	2.26	0.68
26:BD:167:VAL:HG22	26:BD:170:LEU:HD21	1.74	0.68
27:BE:31:HIS:ND1	34:BL:13:ASN:HB2	2.07	0.68
29:BG:102:ALA:HB2	29:BG:116:GLU:HA	1.75	0.68
53:B5:31:HIS:C	53:B5:33:ASN:N	2.45	0.68
1:CA:105:G:H2'	1:CA:106:C:C6	2.27	0.68
1:CA:397:A:H3'	1:CA:397:A:N3	2.08	0.68
3:CC:13:GLY:CA	14:CN:57:ARG:HE	2.07	0.68
13:CM:39:ILE:HD11	13:CM:52:GLU:HG2	1.74	0.68
23:DA:609(B):G:N2	23:DA:619:G:H1'	2.07	0.68
23:DA:1276:A:H1'	36:DN:16:HIS:HE1	1.58	0.68
28:DF:174:GLU:HG2	28:DF:180:PHE:CE1	2.28	0.68
43:DU:6:HIS:HD2	43:DU:35:TYR:CE1	2.11	0.68
1:AA:332:G:OP2	20:AT:10:LEU:HD23	1.93	0.68
1:AA:729:A:H2'	1:AA:730:G:H8	1.58	0.68
13:AM:25:ILE:HD11	13:AM:66:LEU:HD13	1.75	0.68
13:AM:96:LEU:HB3	13:AM:97:PRO:HD2	1.75	0.68
23:BA:270(J):G:HO2'	23:BA:270(K):G:H8	1.41	0.68
23:BA:2636:U:H4'	26:BD:80:GLU:CD	2.13	0.68
23:BA:2724:C:OP1	26:BD:118:LYS:HE3	1.92	0.68
36:BN:57:ARG:HG2	36:BN:58:GLY:H	1.56	0.68
40:BR:98:GLU:HG2	40:BR:100:ARG:HD3	1.73	0.68
43:BU:29:GLU:CB	43:BU:38:ILE:HB	2.21	0.68
1:CA:600:C:H2'	1:CA:601:C:C6	2.29	0.68
1:CA:1066:C:O2	1:CA:1066:C:H2'	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:330:A:H2	23:DA:1210:A:H2'	1.58	0.68
23:DA:580:C:H2'	23:DA:581:C:C6	2.29	0.68
23:DA:630:G:N2	23:DA:632:A:H3'	2.09	0.68
27:DE:31:HIS:ND1	34:DL:13:ASN:HB2	2.08	0.68
32:DJ:157:ARG:N	32:DJ:158:PRO:CD	2.52	0.68
1:AA:498:A:H4'	1:AA:500:G:OP1	1.93	0.68
10:AJ:40:LEU:HB2	10:AJ:69:ASN:HB3	1.75	0.68
23:BA:651:G:OP1	53:B5:19:SER:HB3	1.93	0.68
23:BA:999:U:H5''	23:BA:1154:G:O6	1.93	0.68
23:BA:2305:A:H5''	28:BF:134:GLY:HA3	1.76	0.68
28:BF:84:LYS:O	28:BF:86:MET:HG3	1.93	0.68
41:BS:65:LEU:HB2	41:BS:68:ARG:HE	1.57	0.68
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.29	0.68
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.28	0.68
6:CF:33:TYR:CE1	6:CF:75:LEU:HA	2.28	0.68
23:DA:330:A:C2	23:DA:1210:A:H2'	2.29	0.68
23:DA:481:G:C4	23:DA:507:A:C2	2.81	0.68
23:DA:993:G:C5	23:DA:994:C:H5	2.11	0.68
23:DA:2009:G:H2'	23:DA:2010:G:H5'	1.74	0.68
25:DC:257:LEU:C	25:DC:257:LEU:HD23	2.13	0.68
28:DF:5:LEU:HD23	28:DF:6:ALA:H	1.59	0.68
3:AC:89:GLU:O	3:AC:93:LYS:HB2	1.92	0.68
3:AC:153:VAL:HG12	3:AC:198:VAL:HG22	1.75	0.68
5:AE:101:ILE:O	5:AE:120:THR:HG23	1.92	0.68
23:BA:603:A:C2	23:BA:655:A:N3	2.61	0.68
23:BA:1786:A:H4'	23:BA:1787:A:OP2	1.92	0.68
27:BE:36:VAL:O	27:BE:40:GLN:HG3	1.93	0.68
29:BG:27:LYS:HG2	29:BG:32:GLU:HG3	1.76	0.68
34:BL:62:LEU:O	34:BL:62:LEU:HD23	1.93	0.68
45:BW:36:ILE:HG23	45:BW:58:THR:HG23	1.76	0.68
47:BY:1:MET:CE	47:BY:5:GLU:HG2	2.24	0.68
47:BY:9:GLN:C	47:BY:12:GLU:HB3	2.12	0.68
1:CA:914:A:C2'	1:CA:915:A:H5'	2.24	0.68
8:CH:58:TYR:C	8:CH:59:LEU:HD23	2.14	0.68
23:DA:813:U:H2'	23:DA:814:C:C6	2.28	0.68
23:DA:1386:C:OP2	23:DA:1396:U:H5	1.77	0.68
35:DM:76:LYS:H	35:DM:88:GLY:HA2	1.56	0.68
38:DP:74:ARG:HD3	38:DP:76:PHE:CE2	2.28	0.68
39:DQ:88:ILE:HD12	39:DQ:90:VAL:CG1	2.23	0.68
1:AA:674:G:H2'	1:AA:675:A:H8	1.58	0.68
2:AB:185:ILE:CG2	2:AB:199:TYR:HB2	2.17	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:45:ARG:HB3	10:AJ:47:PHE:CZ	2.29	0.68
23:BA:1899:G:O2'	23:BA:1900:A:OP2	2.10	0.68
41:BS:73:ALA:O	41:BS:106:ILE:HG12	1.94	0.68
44:BV:22:GLY:O	44:BV:41:LEU:HB2	1.93	0.68
1:CA:482:A:H2'	1:CA:482:A:N3	2.08	0.68
23:DA:300:A:OP1	43:DU:84:ARG:NH2	2.26	0.68
23:DA:2438:U:O3'	23:DA:2439:A:H3'	1.94	0.68
25:DC:166:GLN:HE21	25:DC:166:GLN:HA	1.59	0.68
26:DD:9:VAL:HG13	26:DD:25:VAL:O	1.92	0.68
36:DN:99:LYS:CD	36:DN:99:LYS:H	2.04	0.68
38:DP:51:ARG:HD3	38:DP:62:THR:HG23	1.75	0.68
40:DR:6:LYS:HG3	40:DR:11:GLN:HG2	1.76	0.68
47:DY:1:MET:HE1	47:DY:5:GLU:HG2	1.74	0.68
1:AA:833:U:H2'	1:AA:834:C:C6	2.28	0.68
1:AA:919:A:O2'	1:AA:920:U:H5'	1.93	0.68
10:AJ:96:ILE:H	10:AJ:96:ILE:HD13	1.59	0.68
13:AM:33:ALA:HB1	13:AM:56:LEU:HD21	1.74	0.68
23:BA:329:G:OP2	43:BU:71:LYS:HE3	1.94	0.68
23:BA:987:G:C2'	23:BA:988:A:H5'	2.23	0.68
23:BA:2740:A:H2'	23:BA:2741:A:C8	2.29	0.68
33:BK:2:ILE:HG12	33:BK:8:LEU:HD11	1.73	0.68
34:BL:109:GLY:O	34:BL:111:ARG:N	2.27	0.68
38:BP:100:TYR:HB3	38:BP:103:ARG:NH1	2.08	0.68
1:CA:1152:A:OP1	10:CJ:68:HIS:CD2	2.47	0.68
10:CJ:48:THR:HA	10:CJ:62:HIS:CB	2.18	0.68
12:CL:74:HIS:HD2	12:CL:76:LEU:H	1.39	0.68
16:CP:19:ILE:HB	16:CP:37:GLY:O	1.94	0.68
17:CQ:45:HIS:CD2	17:CQ:47:PRO:HD3	2.28	0.68
23:DA:84:A:C5'	43:DU:9:LYS:HD2	2.24	0.68
23:DA:547:A:C6	23:DA:548:A:C6	2.81	0.68
23:DA:1537:C:H2'	23:DA:1538:G:O4'	1.94	0.68
23:DA:1607:C:H4'	23:DA:1608:A:O5'	1.94	0.68
23:DA:2210:G:H21	23:DA:2211:G:H5'	1.54	0.68
23:DA:2433:A:H5''	23:DA:2434:A:P	2.34	0.68
28:DF:8:LYS:HD3	28:DF:9:ARG:HG3	1.74	0.68
29:DG:30:LYS:HB2	29:DG:79:VAL:HA	1.75	0.68
34:DL:38:GLN:HG3	34:DL:39:LYS:N	2.07	0.68
36:DN:55:ALA:HA	36:DN:80:PHE:HE1	1.56	0.68
47:DY:2:LYS:HA	47:DY:5:GLU:OE2	1.94	0.68
51:D3:30:THR:HG22	51:D3:31:PRO:HD2	1.75	0.68
1:AA:909:A:H2'	1:AA:910:C:O4'	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:23:TYR:CD2	3:AC:24:ALA:N	2.62	0.68
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.75	0.68
20:AT:71:THR:HG22	20:AT:72:LEU:H	1.59	0.68
23:BA:357:A:H2'	23:BA:358:U:H6	1.58	0.68
23:BA:918:A:N3	24:BB:80:U:O2'	2.27	0.68
23:BA:1946:U:H2'	23:BA:1947:C:H6	1.59	0.68
23:BA:2209:C:O2	23:BA:2216:G:C2	2.47	0.68
1:CA:10:A:H2'	1:CA:11:G:H8	1.59	0.68
1:CA:345:C:OP2	38:DP:39:ARG:NH2	2.20	0.68
1:CA:350:G:O2'	1:CA:351:G:H5'	1.94	0.68
2:CB:163:PHE:HD1	2:CB:185:ILE:HG13	1.59	0.68
3:CC:195:VAL:CG1	3:CC:196:LEU:H	2.07	0.68
4:CD:51:PRO:HB3	4:CD:55:ALA:HB3	1.75	0.68
23:DA:1536:A:H5''	23:DA:1537:C:OP2	1.94	0.68
23:DA:1862:G:H2'	23:DA:1863:G:H8	1.59	0.68
25:DC:201:HIS:O	25:DC:204:ILE:HG13	1.93	0.68
34:DL:85:LEU:HA	34:DL:88:LEU:HB2	1.74	0.68
42:DT:30:VAL:HG12	42:DT:31:HIS:N	2.09	0.68
1:AA:106:C:C2'	1:AA:107:G:H5'	2.24	0.68
1:AA:629:G:H2'	1:AA:630:G:C8	2.29	0.68
5:AE:96:PRO:HA	5:AE:117:ASP:CG	2.13	0.68
23:BA:1343:G:H5'	23:BA:1343:G:H8	1.56	0.68
23:BA:1566:A:OP1	25:BC:211:ARG:NH1	2.27	0.68
23:BA:2469:A:H2	23:BA:2481:G:H21	1.42	0.68
42:BT:51:VAL:HG11	42:BT:81:VAL:HG12	1.76	0.68
1:CA:629:G:H2'	1:CA:630:G:C8	2.29	0.68
3:CC:18:TRP:HB3	3:CC:20:SER:O	1.93	0.68
3:CC:150:LYS:HB3	3:CC:201:TYR:HB2	1.76	0.68
10:CJ:45:ARG:HB3	10:CJ:47:PHE:CZ	2.29	0.68
10:CJ:96:ILE:HD13	10:CJ:96:ILE:H	1.59	0.68
23:DA:999:U:H5''	23:DA:1154:G:O6	1.94	0.68
23:DA:1019:U:N3	23:DA:114(B):A:N6	2.42	0.68
23:DA:1528:A:C2	23:DA:1529:A:C2	2.81	0.68
23:DA:2093:G:H1	23:DA:2196:C:H42	1.39	0.68
32:DJ:101:TYR:HB3	32:DJ:102:PRO:HD2	1.75	0.68
42:DT:63:LYS:HZ1	42:DT:72:LYS:HB3	1.58	0.68
1:AA:108:G:H5'	1:AA:109:A:H5''	1.75	0.68
1:AA:625:G:H4'	16:AP:16:HIS:CD2	2.29	0.68
1:AA:976:G:N2	1:AA:136(A):C:H2'	2.08	0.68
1:AA:987:G:H1	1:AA:1218:C:N4	1.90	0.68
1:AA:1016:A:H2'	1:AA:1017:G:O4'	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:115:LEU:HD12	2:AB:118:LEU:HD12	1.74	0.68
10:AJ:48:THR:CA	10:AJ:62:HIS:HB3	2.18	0.68
18:AR:66:LEU:O	18:AR:70:ILE:HG13	1.94	0.68
23:BA:847:U:OP2	23:BA:929:G:O6	2.12	0.68
23:BA:1310:G:OP2	52:B4:9:ARG:NH1	2.27	0.68
26:BD:120:TRP:CD1	26:BD:155:LYS:HB3	2.27	0.68
34:BL:146:VAL:HG13	34:BL:147:LEU:HD12	1.74	0.68
35:BM:8:LYS:HG3	35:BM:9:TYR:H	1.59	0.68
35:BM:54:MET:HG2	35:BM:64:ILE:HD13	1.74	0.68
38:BP:54:ARG:HG3	38:BP:54:ARG:NH1	1.96	0.68
39:BQ:90:VAL:HG13	39:BQ:91:ASP:H	1.59	0.68
40:BR:40:LEU:C	40:BR:45:THR:HB	2.15	0.68
1:CA:89:U:H2'	1:CA:90:C:C6	2.29	0.68
1:CA:108:G:H5'	1:CA:109:A:H5''	1.76	0.68
2:CB:185:ILE:CG2	2:CB:199:TYR:HB2	2.18	0.68
23:DA:918:A:N3	24:DB:80:U:O2'	2.26	0.68
36:DN:2:ARG:O	36:DN:4:LEU:N	2.27	0.68
39:DQ:57:PHE:O	39:DQ:58:ARG:C	2.32	0.68
39:DQ:92:ARG:HH11	39:DQ:92:ARG:CB	2.06	0.68
8:AH:97:VAL:O	8:AH:100:ILE:HG13	1.94	0.68
10:AJ:48:THR:HA	10:AJ:62:HIS:CB	2.18	0.68
15:AO:53:HIS:HE1	23:BA:715:G:O6	1.77	0.68
23:BA:273(G):C:H2'	23:BA:274:G:H5''	1.74	0.68
34:BL:126:VAL:HA	34:BL:145:PRO:HG2	1.75	0.68
35:BM:32:PHE:HZ	35:BM:111:GLU:HG2	1.58	0.68
43:BU:17:SER:OG	43:BU:18:GLY:N	2.25	0.68
53:B5:32:LEU:HD23	53:B5:33:ASN:N	2.08	0.68
1:CA:376:G:O2'	1:CA:377:G:H5'	1.94	0.68
5:CE:96:PRO:HA	5:CE:117:ASP:CG	2.14	0.68
8:CH:64:LYS:HB3	8:CH:79:VAL:HG11	1.75	0.68
10:CJ:40:LEU:HB2	10:CJ:69:ASN:HB3	1.74	0.68
13:CM:99:ARG:HB2	13:CM:101:GLN:NE2	2.09	0.68
23:DA:760:G:H2'	23:DA:761:A:H5'	1.76	0.68
23:DA:1476:C:H3'	23:DA:1476:C:H6	1.59	0.68
23:DA:2871:C:H5''	23:DA:2872:G:OP1	1.94	0.68
34:DL:35:HIS:O	34:DL:36:LYS:CB	2.41	0.68
38:DP:24:PRO:HA	38:DP:49:VAL:CG1	2.23	0.68
38:DP:86:ILE:HG12	38:DP:86:ILE:O	1.94	0.68
44:DV:29:TYR:HA	44:DV:33:LEU:O	1.94	0.68
1:AA:24:U:H2'	1:AA:25:C:H6	1.57	0.67
1:AA:105:G:H2'	1:AA:106:C:H6	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:521:G:O2'	1:AA:522:C:H5'	1.94	0.67
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.28	0.67
22:AV:6189:G:O2'	22:AV:6190:U:H5'	1.94	0.67
23:BA:1654:A:OP1	36:BN:2:ARG:N	2.27	0.67
40:BR:38:LEU:HD23	40:BR:39:LEU:N	2.09	0.67
46:BX:13:ILE:HG12	46:BX:63:ALA:CB	2.23	0.67
1:CA:552:U:O2'	1:CA:553:A:H5'	1.95	0.67
8:CH:51:VAL:HG21	8:CH:60:ARG:CG	2.24	0.67
13:CM:33:ALA:HB1	13:CM:56:LEU:HD21	1.75	0.67
23:DA:2335:A:O2'	23:DA:2336:A:H5''	1.94	0.67
26:DD:30:PRO:O	26:DD:32:PRO:HD3	1.94	0.67
32:DJ:80:ALA:O	32:DJ:82:LYS:N	2.27	0.67
1:AA:1051:C:H42	1:AA:1207:G:H1	1.43	0.67
3:AC:76:VAL:HG21	3:AC:103:VAL:HG11	1.75	0.67
12:AL:6:ILE:HD12	12:AL:6:ILE:H	1.59	0.67
13:AM:10:PRO:HG3	13:AM:22:ILE:HD11	1.76	0.67
21:AU:6:ARG:HG3	21:AU:15:ARG:HH12	1.58	0.67
23:BA:492:A:H2'	23:BA:493:G:O4'	1.95	0.67
23:BA:2637:U:H5''	26:BD:82:ARG:HH21	1.57	0.67
24:BB:30:C:H2'	24:BB:31:C:H5'	1.77	0.67
26:BD:2:LYS:HE2	26:BD:95:ILE:O	1.95	0.67
28:BF:41:GLN:HG2	28:BF:155:MET:HB3	1.76	0.67
28:BF:86:MET:H	28:BF:87:PRO:CD	2.08	0.67
32:BJ:157:ARG:HG2	32:BJ:157:ARG:O	1.93	0.67
1:CA:624:C:O3'	16:CP:10:GLY:HA2	1.94	0.67
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.78	0.67
3:CC:153:VAL:HG12	3:CC:198:VAL:HG22	1.76	0.67
6:CF:26:ILE:HG22	6:CF:30:LEU:CD1	2.25	0.67
23:DA:227:A:H5'	23:DA:228:A:C2	2.29	0.67
23:DA:1021:A:C8	23:DA:1021:A:C3'	2.76	0.67
1:AA:89:U:H2'	1:AA:90:C:C6	2.28	0.67
4:AD:36:ARG:HG2	4:AD:38:TYR:OH	1.94	0.67
10:AJ:92:THR:HG23	10:AJ:93:GLY:H	1.59	0.67
15:AO:69:TYR:HD1	15:AO:72:ARG:HH21	1.40	0.67
22:AV:6177:U:H2'	22:AV:6178:A:H8	1.60	0.67
23:BA:603:A:N6	23:BA:655:A:C4'	2.55	0.67
25:BC:242:ARG:HH11	25:BC:242:ARG:HG2	1.59	0.67
36:BN:99:LYS:CD	36:BN:99:LYS:H	2.05	0.67
38:BP:86:ILE:HG12	38:BP:86:ILE:O	1.93	0.67
53:B5:50:LEU:O	53:B5:51:ALA:CB	2.42	0.67
1:CA:255:G:C4	1:CA:256:U:C5	2.82	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:100:ARG:HH21	4:CD:118:ARG:NH1	1.91	0.67
6:CF:12:PRO:HG2	6:CF:55:ASP:OD2	1.94	0.67
23:DA:229:A:H5'	23:DA:230:U:H5'	1.76	0.67
23:DA:528:A:H2	23:DA:2043:C:H5'	1.58	0.67
23:DA:971:C:C2'	23:DA:972:G:H5'	2.24	0.67
23:DA:1007:C:O2'	32:DJ:131:PRO:HA	1.93	0.67
23:DA:1669:A:O3'	23:DA:2549:G:H5'	1.94	0.67
34:DL:16:ARG:CZ	34:DL:18:ARG:H	2.07	0.67
5:AE:51:VAL:O	5:AE:55:VAL:HG23	1.94	0.67
8:AH:21:LYS:O	8:AH:63:LEU:HD12	1.95	0.67
23:BA:322:A:H3'	27:BE:169:ASN:HD21	1.57	0.67
23:BA:1141:U:OP2	32:BJ:86:THR:CG2	2.43	0.67
23:BA:1658:C:OP1	26:BD:132:HIS:O	2.13	0.67
23:BA:1862:G:H2'	23:BA:1863:G:H8	1.60	0.67
25:BC:132:PRO:O	25:BC:136:ILE:HD12	1.95	0.67
33:BK:102:VAL:HG23	33:BK:121:VAL:HA	1.76	0.67
1:CA:1301:U:H3'	1:CA:1302:U:H5''	1.76	0.67
13:CM:107:ALA:O	13:CM:111:LYS:HG3	1.93	0.67
19:CS:19:VAL:O	19:CS:22:LEU:HB2	1.94	0.67
23:DA:242:G:C5'	53:D5:63:PRO:HG2	2.25	0.67
23:DA:314:A:O2'	23:DA:315:G:H5'	1.94	0.67
23:DA:357:A:H2'	23:DA:358:U:C6	2.30	0.67
23:DA:380:U:C2	46:DX:20:ARG:NH2	2.61	0.67
23:DA:565:C:H2'	23:DA:566:U:O5'	1.95	0.67
23:DA:628:G:H2'	23:DA:629:G:H8	1.58	0.67
23:DA:2277:G:H5''	35:DM:85:LYS:HB2	1.74	0.67
29:DG:102:ALA:HB2	29:DG:116:GLU:HA	1.75	0.67
36:DN:4:LEU:O	36:DN:6:SER:N	2.27	0.67
42:DT:52:VAL:HG23	42:DT:82:GLN:O	1.94	0.67
43:DU:13:VAL:CG1	43:DU:72:VAL:HB	2.24	0.67
1:AA:625:G:H2'	1:AA:626:U:C6	2.29	0.67
1:AA:692:U:O2'	1:AA:694:A:N7	2.22	0.67
3:AC:175:LEU:O	3:AC:175:LEU:HD23	1.94	0.67
8:AH:64:LYS:HB3	8:AH:79:VAL:HG11	1.76	0.67
9:AI:17:VAL:HG13	9:AI:63:ILE:HD11	1.77	0.67
23:BA:335:C:H2'	23:BA:336:C:H6	1.59	0.67
23:BA:910:A:H62	35:BM:12:GLN:HA	1.59	0.67
23:BA:2275:C:H5'	23:BA:2275:C:H6	1.60	0.67
25:BC:70:TRP:CZ3	25:BC:146:GLU:OE1	2.45	0.67
36:BN:44:LEU:HD13	36:BN:44:LEU:O	1.95	0.67
1:CA:37:U:P	12:CL:122:LYS:HG3	2.34	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:66:G:H4'	1:CA:173:U:C5	2.30	0.67
1:CA:973:G:H3'	1:CA:974:A:H5''	1.74	0.67
1:CA:976:G:C8	1:CA:1358:U:H2'	2.29	0.67
22:CV:6177:U:H2'	22:CV:6178:A:H8	1.60	0.67
23:DA:116:C:H2'	23:DA:117:G:C8	2.29	0.67
23:DA:826:U:H4'	34:DL:55:ARG:HB2	1.76	0.67
23:DA:941:A:H4'	34:DL:35:HIS:CE1	2.28	0.67
23:DA:2631:G:N3	23:DA:2810:A:H2	1.91	0.67
1:AA:397:A:H3'	1:AA:397:A:N3	2.09	0.67
1:AA:438:G:H4'	4:AD:123:HIS:ND1	2.09	0.67
1:AA:1368:G:O2'	1:AA:1369:C:H5'	1.93	0.67
4:AD:71:SER:HB2	4:AD:74:GLN:HB2	1.76	0.67
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.76	0.67
22:AV:6182:A:C2	22:AV:6195:G:C2	2.83	0.67
25:BC:79:VAL:HG12	25:BC:113:VAL:HA	1.77	0.67
28:BF:129:GLY:HA3	28:BF:163:ALA:HB3	1.76	0.67
38:BP:51:ARG:HD3	38:BP:62:THR:HG23	1.77	0.67
40:BR:28:GLU:OE1	40:BR:31:ALA:HB2	1.95	0.67
44:BV:30:ASN:O	44:BV:32:HIS:N	2.27	0.67
51:B3:30:THR:HG22	51:B3:31:PRO:HD2	1.75	0.67
1:CA:914:A:H2'	1:CA:915:A:H5'	1.76	0.67
2:CB:127:ILE:N	2:CB:127:ILE:HD13	2.09	0.67
3:CC:89:GLU:O	3:CC:93:LYS:HB2	1.94	0.67
13:CM:25:ILE:HD11	13:CM:66:LEU:HD13	1.76	0.67
21:CU:6:ARG:HG3	21:CU:15:ARG:HH12	1.58	0.67
23:DA:94:G:N2	47:DY:47:ASN:ND2	2.41	0.67
23:DA:588:U:H1'	27:DE:90:PHE:CD1	2.30	0.67
23:DA:729:G:OP2	25:DC:13:ARG:NH1	2.26	0.67
23:DA:1596:A:H2'	23:DA:1597:A:H5'	1.76	0.67
23:DA:1909:C:C2	23:DA:1922:G:N2	2.63	0.67
30:DH:111:PRO:HG2	30:DH:112:LYS:HE2	1.77	0.67
35:DM:134:ARG:O	35:DM:136:ALA:N	2.28	0.67
1:AA:511:C:H1'	4:AD:43:HIS:NE2	2.10	0.67
1:AA:1468:A:H2'	1:AA:1469:G:O4'	1.94	0.67
2:AB:69:LEU:HD13	2:AB:91:PRO:HB2	1.77	0.67
4:AD:119:GLN:HG3	4:AD:123:HIS:HD2	1.57	0.67
5:AE:33:VAL:HG11	5:AE:109:ILE:HA	1.77	0.67
23:BA:1158:C:O2'	23:BA:1159:U:H5'	1.95	0.67
23:BA:1858:G:HO2'	23:BA:1859:A:H8	1.41	0.67
23:BA:2036:C:H5'	23:BA:2036:C:H6	1.60	0.67
23:BA:2322:A:H3'	23:BA:2323:G:H8	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2840:C:H4'	36:BN:53:HIS:CD2	2.30	0.67
30:BH:79:ILE:HG22	30:BH:81:VAL:HG23	1.74	0.67
32:BJ:160:LYS:HE3	32:BJ:161:LEU:N	2.08	0.67
34:BL:38:GLN:HG3	34:BL:39:LYS:N	2.10	0.67
39:BQ:79:PHE:O	39:BQ:83:LEU:HD13	1.95	0.67
51:B3:42:TRP:HA	51:B3:42:TRP:CE3	2.28	0.67
53:B5:57:ARG:HA	53:B5:57:ARG:NE	2.10	0.67
1:CA:579:G:C5	1:CA:580:U:C5	2.82	0.67
1:CA:1229:A:H2'	1:CA:1230:C:C6	2.30	0.67
1:CA:1347:G:N7	9:CI:107:ARG:HB3	2.08	0.67
2:CB:97:TRP:CH2	2:CB:176:GLU:HG3	2.30	0.67
12:CL:22:LYS:O	12:CL:96:ARG:HD2	1.94	0.67
12:CL:26:LEU:HB3	12:CL:29:ALA:HB3	1.77	0.67
23:DA:1021:A:H2'	23:DA:1023:U:H5'	1.76	0.67
23:DA:1593:G:H2'	23:DA:1594:G:C8	2.30	0.67
25:DC:95:LEU:O	25:DC:95:LEU:HD12	1.95	0.67
26:DD:84:PHE:CZ	26:DD:86:PRO:HG3	2.30	0.67
37:DO:12:PHE:HE1	37:DO:16:ASN:HD21	1.43	0.67
39:DQ:108:GLU:HG3	40:DR:44:LYS:HG2	1.76	0.67
42:DT:29:TRP:CZ3	42:DT:78:LYS:HG3	2.29	0.67
45:DW:72:ARG:HB3	45:DW:75:LEU:HD12	1.77	0.67
1:AA:411:A:N7	1:AA:429:U:H5	1.93	0.67
1:AA:1512:U:H3	1:AA:1523:G:H1	1.43	0.67
7:AG:142:GLU:O	7:AG:145:ALA:HB3	1.94	0.67
20:AT:90:GLN:O	20:AT:93:GLU:HB3	1.95	0.67
23:BA:540:G:H2'	23:BA:541:C:H6	1.59	0.67
23:BA:807:U:OP2	34:BL:39:LYS:CG	2.38	0.67
25:BC:166:GLN:HE21	25:BC:166:GLN:N	1.93	0.67
1:CA:433:C:H2'	1:CA:434:U:H6	1.59	0.67
1:CA:937:A:H1'	1:CA:1379:G:N2	2.10	0.67
23:DA:1946:U:H2'	23:DA:1947:C:H6	1.59	0.67
23:DA:2723:C:O3'	36:DN:2:ARG:NH2	2.27	0.67
24:DB:83:G:H5''	48:DZ:52:HIS:CE1	2.29	0.67
25:DC:231:HIS:CD2	25:DC:232:PRO:HD2	2.30	0.67
34:DL:33:ARG:H	34:DL:36:LYS:CE	2.03	0.67
34:DL:112:LEU:HD23	34:DL:113:LYS:N	2.09	0.67
35:DM:116:GLU:OE1	35:DM:116:GLU:HA	1.94	0.67
39:DQ:5:LYS:HG2	39:DQ:6:THR:H	1.58	0.67
43:DU:17:SER:OG	43:DU:18:GLY:N	2.27	0.67
43:DU:63:LYS:HG3	43:DU:64:GLU:H	1.58	0.67
11:AK:21:ILE:HD12	11:AK:21:ILE:N	2.10	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:580:C:H2'	23:BA:581:C:C6	2.30	0.67
23:BA:2389:G:H5''	23:BA:2390:U:C5'	2.11	0.67
23:BA:2871:C:H5''	23:BA:2872:G:OP1	1.94	0.67
25:BC:145:VAL:HG12	25:BC:146:GLU:O	1.94	0.67
32:BJ:101:TYR:HB3	32:BJ:102:PRO:HD2	1.77	0.67
44:BV:94:GLU:CD	44:BV:94:GLU:H	1.99	0.67
44:BV:132:ASN:C	44:BV:134:PRO:HD3	2.14	0.67
1:CA:300:A:H1'	1:CA:565:U:O2	1.95	0.67
1:CA:950:U:H4'	1:CA:971:G:N2	2.10	0.67
1:CA:1250:A:H5'	9:CI:67:GLY:HA2	1.77	0.67
6:CF:37:VAL:HG12	6:CF:38:GLU:O	1.94	0.67
9:CI:113:LYS:H	9:CI:119:ALA:HA	1.60	0.67
22:CV:6182:A:C2	22:CV:6195:G:C2	2.83	0.67
23:DA:637:A:OP2	34:DL:115:LEU:HB2	1.94	0.67
23:DA:1683:C:H42	23:DA:1705:G:H1	1.41	0.67
23:DA:2322:A:H3'	23:DA:2323:G:H8	1.60	0.67
23:DA:2415:G:H4'	34:DL:66:GLY:CA	2.24	0.67
23:DA:2599:G:C8	25:DC:237:GLU:HG3	2.30	0.67
35:DM:60:ARG:H	44:DV:179:ASP:CG	1.99	0.67
37:DO:34:HIS:CE1	37:DO:54:LEU:HB3	2.29	0.67
40:DR:28:GLU:OE1	40:DR:31:ALA:HB2	1.95	0.67
53:D5:57:ARG:NE	53:D5:57:ARG:HA	2.10	0.67
1:AA:24:U:H2'	1:AA:25:C:C6	2.30	0.67
3:AC:13:GLY:CA	14:AN:57:ARG:HE	2.07	0.67
3:AC:195:VAL:CG1	3:AC:196:LEU:H	2.07	0.67
4:AD:94:LEU:HA	4:AD:97:LEU:HD12	1.76	0.67
23:BA:534:U:O2'	39:BQ:49:HIS:HD2	1.78	0.67
23:BA:971:C:H2'	23:BA:972:G:C5'	2.25	0.67
23:BA:2705:A:H2	36:BN:64:ARG:NH1	1.93	0.67
28:BF:7:LEU:HD23	28:BF:10:LYS:HD2	1.75	0.67
39:BQ:92:ARG:HH11	39:BQ:92:ARG:CB	2.08	0.67
46:BX:62:VAL:HG22	46:BX:63:ALA:N	2.10	0.67
52:B4:11:LYS:HD2	52:B4:15:THR:CG2	2.25	0.67
1:CA:346:G:OP1	38:DP:41:ARG:NH2	2.27	0.67
10:CJ:55:LYS:O	10:CJ:55:LYS:HD2	1.95	0.67
23:DA:1310:G:OP2	52:D4:9:ARG:NH1	2.28	0.67
23:DA:1786:A:H4'	23:DA:1787:A:OP2	1.94	0.67
25:DC:77:ALA:CB	25:DC:97:TYR:HA	2.25	0.67
25:DC:134:ARG:HD3	25:DC:135:PHE:CE1	2.30	0.67
29:DG:98:LEU:HD12	29:DG:99:VAL:N	2.09	0.67
32:DJ:127:LYS:HB2	32:DJ:140:PHE:CE1	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DM:43:THR:OG1	35:DM:45:GLN:HG2	1.95	0.67
1:AA:105:G:H2'	1:AA:106:C:C6	2.30	0.66
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.30	0.66
3:AC:40:ARG:O	3:AC:44:GLU:HG2	1.94	0.66
6:AF:63:TYR:N	6:AF:63:TYR:HD2	1.92	0.66
8:AH:7:ALA:HB2	8:AH:85:ARG:HD3	1.76	0.66
9:AI:113:LYS:H	9:AI:119:ALA:HA	1.60	0.66
12:AL:6:ILE:O	12:AL:10:VAL:HG23	1.95	0.66
15:AO:15:PHE:O	15:AO:27:VAL:HG22	1.95	0.66
23:BA:7:G:H2'	23:BA:8:A:C8	2.30	0.66
23:BA:978:G:C2'	23:BA:979:G:H5'	2.25	0.66
23:BA:2593:U:H2'	23:BA:2594:C:H6	1.58	0.66
1:CA:532:A:H2	1:CA:1207:G:H4'	1.60	0.66
1:CA:564:C:C2	17:CQ:31:LEU:HD11	2.30	0.66
1:CA:632:A:C8	1:CA:633:G:C8	2.83	0.66
19:CS:49:ILE:H	19:CS:49:ILE:HD12	1.60	0.66
23:DA:389:G:H1	34:DL:71:VAL:H	1.43	0.66
23:DA:971:C:H2'	23:DA:972:G:C5'	2.24	0.66
24:DB:75:G:H21	44:DV:85:HIS:HE1	1.40	0.66
33:DK:103:ALA:HB1	33:DK:105:GLU:OE1	1.95	0.66
43:DU:76:CYS:SG	43:DU:77:PRO:HD3	2.35	0.66
1:AA:1111:A:H8	1:AA:1111:A:O5'	1.79	0.66
1:AA:1426:C:H2'	1:AA:1427:U:C6	2.30	0.66
8:AH:91:ARG:HH11	8:AH:91:ARG:HG2	1.59	0.66
13:AM:99:ARG:HB2	13:AM:101:GLN:NE2	2.10	0.66
16:AP:20:VAL:HG21	16:AP:32:TYR:CD1	2.30	0.66
22:AV:6188:G:N2	22:AV:6216:U:C2	2.63	0.66
23:BA:1858:G:O2'	23:BA:1859:A:H8	1.77	0.66
23:BA:2661:G:O2'	23:BA:2662:A:H5'	1.95	0.66
23:BA:2758:A:C4	29:BG:67:LEU:HD21	2.30	0.66
28:BF:5:LEU:HD23	28:BF:6:ALA:H	1.60	0.66
32:BJ:157:ARG:N	32:BJ:158:PRO:HD3	2.02	0.66
35:BM:134:ARG:O	35:BM:136:ALA:N	2.27	0.66
36:BN:9:LYS:C	36:BN:10:LEU:HG	2.14	0.66
1:CA:24:U:H2'	1:CA:25:C:H6	1.59	0.66
4:CD:126:ILE:HG22	4:CD:127:THR:N	2.09	0.66
7:CG:27:ILE:HD11	7:CG:43:PHE:HD2	1.59	0.66
20:CT:71:THR:HG22	20:CT:72:LEU:H	1.60	0.66
25:DC:166:GLN:HA	25:DC:166:GLN:NE2	2.10	0.66
41:DS:4:LYS:HD3	41:DS:6:ILE:HD11	1.77	0.66
1:AA:433:C:H2'	1:AA:434:U:H6	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:707:C:H2'	1:AA:708:C:H6	1.60	0.66
1:AA:710:G:OP1	6:AF:54:LYS:HE2	1.94	0.66
1:AA:1229:A:H2'	1:AA:1230:C:C6	2.30	0.66
1:AA:1410:G:O2'	1:AA:1411:C:H5'	1.95	0.66
11:AK:32:ILE:HD12	11:AK:72:ALA:HB2	1.78	0.66
16:AP:17:TYR:N	16:AP:17:TYR:CD1	2.63	0.66
17:AQ:18:THR:HG23	17:AQ:69:LYS:HE3	1.77	0.66
23:BA:227:A:H5'	23:BA:228:A:C2	2.30	0.66
23:BA:1141:U:OP2	32:BJ:86:THR:HG23	1.94	0.66
23:BA:1546:A:C8	23:BA:154(B):C:O2	2.48	0.66
23:BA:1683:C:N4	23:BA:1705:G:H1	1.93	0.66
23:BA:1813:G:C1'	25:BC:50:THR:HG21	2.22	0.66
23:BA:2277:G:H5''	35:BM:85:LYS:HB2	1.76	0.66
46:BX:10:LYS:O	46:BX:11:ARG:HG2	1.95	0.66
3:CC:35:GLU:HA	3:CC:38:ARG:HG2	1.77	0.66
16:CP:43:LYS:HG2	16:CP:48:TRP:CD2	2.29	0.66
23:DA:814:C:H41	34:DL:27:HIS:CD2	2.13	0.66
23:DA:1386:C:H2'	23:DA:1387:C:H6	1.61	0.66
23:DA:1495:A:N3	23:DA:1495:A:H2'	2.08	0.66
23:DA:1606:G:H5''	23:DA:1607:C:OP1	1.95	0.66
23:DA:2036:C:H5'	23:DA:2036:C:H6	1.58	0.66
24:DB:11:C:H3'	24:DB:12:C:C6	2.30	0.66
34:DL:91:PHE:CD1	34:DL:91:PHE:N	2.63	0.66
34:DL:91:PHE:N	34:DL:91:PHE:HD1	1.93	0.66
35:DM:8:LYS:HG3	35:DM:9:TYR:H	1.59	0.66
39:DQ:79:PHE:C	39:DQ:79:PHE:HD1	1.98	0.66
40:DR:91:TYR:O	40:DR:91:TYR:CD2	2.48	0.66
1:AA:738:C:H2'	1:AA:739:C:C6	2.30	0.66
1:AA:1010:G:H2'	1:AA:1011:G:H8	1.59	0.66
1:AA:1252:A:H61	1:AA:1285:A:H61	1.44	0.66
8:AH:39:LEU:HB3	8:AH:45:ILE:HG23	1.78	0.66
12:AL:44:PRO:HG3	12:AL:52:ARG:HE	1.61	0.66
23:BA:609(B):G:N2	23:BA:619:G:H1'	2.09	0.66
23:BA:752:A:H3'	52:B4:1:MET:HE3	1.78	0.66
23:BA:796:C:H2'	23:BA:797:C:C6	2.31	0.66
23:BA:966:G:C4	23:BA:967:C:C5	2.83	0.66
23:BA:1536:A:H5''	23:BA:1537:C:OP2	1.94	0.66
23:BA:1746:G:C2	23:BA:1747:G:C8	2.84	0.66
23:BA:1856:G:N2	23:BA:1886:C:O2	2.28	0.66
37:BO:34:HIS:CE1	37:BO:54:LEU:HB3	2.30	0.66
40:BR:7:THR:HG23	40:BR:22:VAL:HG11	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BV:24:LEU:HD11	44:BV:86:VAL:HG22	1.77	0.66
1:CA:498:A:H4'	1:CA:500:G:OP1	1.95	0.66
9:CI:22:GLY:HA3	9:CI:60:ASP:OD2	1.94	0.66
13:CM:96:LEU:HB3	13:CM:97:PRO:HD2	1.76	0.66
23:DA:855:G:H5''	23:DA:856:C:OP2	1.95	0.66
23:DA:1828:G:OP2	25:DC:239:ARG:NH1	2.28	0.66
1:AA:57:G:C5	1:AA:58:C:C4	2.84	0.66
1:AA:255:G:C4	1:AA:256:U:C5	2.84	0.66
1:AA:976:G:C8	1:AA:1358:U:H2'	2.31	0.66
1:AA:1226:C:N4	13:AM:104:ARG:HD2	2.10	0.66
23:BA:481:G:C4	23:BA:507:A:C2	2.84	0.66
23:BA:814:C:H41	34:BL:27:HIS:CD2	2.14	0.66
23:BA:2785:C:H2'	23:BA:2786:U:O4'	1.96	0.66
25:BC:108:PRO:HB3	25:BC:143:HIS:CE1	2.31	0.66
28:BF:94:LEU:HD12	28:BF:99:MET:HA	1.78	0.66
28:BF:105:LYS:HZ3	49:B1:52:SER:HB2	1.61	0.66
41:BS:22:ASP:HA	41:BS:25:ARG:HH12	1.61	0.66
43:BU:2:ARG:O	43:BU:4:LYS:N	2.24	0.66
1:CA:862:C:H2'	1:CA:863:U:H5'	1.77	0.66
1:CA:1016:A:H2'	1:CA:1017:G:O4'	1.95	0.66
2:CB:97:TRP:HH2	2:CB:176:GLU:HG3	1.60	0.66
5:CE:33:VAL:HG11	5:CE:109:ILE:HA	1.76	0.66
6:CF:63:TYR:N	6:CF:63:TYR:HD2	1.94	0.66
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.77	0.66
10:CJ:7:LYS:O	10:CJ:8:LEU:HD12	1.95	0.66
10:CJ:92:THR:HG23	10:CJ:93:GLY:H	1.60	0.66
12:CL:6:ILE:O	12:CL:10:VAL:HG23	1.96	0.66
23:DA:1331:A:O2'	23:DA:1332:G:H8	1.78	0.66
23:DA:2294:C:H2'	23:DA:2295:C:C6	2.30	0.66
25:DC:155:LEU:CD2	25:DC:177:LEU:HD21	2.23	0.66
39:DQ:18:LEU:HD11	39:DQ:31:SER:H	1.60	0.66
46:DX:45:ASN:HD21	46:DX:47:GLN:HE21	1.41	0.66
3:AC:35:GLU:HA	3:AC:38:ARG:HG2	1.76	0.66
6:AF:15:ASP:OD1	6:AF:17:SER:HB2	1.95	0.66
13:AM:39:ILE:HD11	13:AM:52:GLU:HG2	1.76	0.66
16:AP:19:ILE:HB	16:AP:37:GLY:O	1.96	0.66
23:BA:9:U:C4	23:BA:2629:A:C6	2.83	0.66
23:BA:1019:U:N3	23:BA:114(B):A:N6	2.43	0.66
23:BA:1614:A:H62	41:BS:93:ALA:CB	2.05	0.66
24:BB:21:G:H1	24:BB:62:C:N4	1.93	0.66
28:BF:84:LYS:HG3	28:BF:85:GLY:N	2.07	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:55:PRO:HG2	29:BG:61:HIS:CE1	2.29	0.66
29:BG:98:LEU:HD12	29:BG:99:VAL:H	1.60	0.66
30:BH:111:PRO:HG2	30:BH:112:LYS:HE2	1.77	0.66
50:B2:40:LYS:HZ3	50:B2:49:CYS:HB3	1.59	0.66
1:CA:373:A:O2'	1:CA:374:A:H5'	1.96	0.66
28:DF:70:VAL:HG12	28:DF:90:LEU:HD22	1.77	0.66
40:DR:38:LEU:HD23	40:DR:39:LEU:N	2.11	0.66
49:D1:50:THR:HG22	49:D1:51:TYR:H	1.60	0.66
1:AA:668:G:H1'	15:AO:46:HIS:HD2	1.60	0.66
22:AV:6182:A:C6	22:AV:6183:G:C5	2.84	0.66
23:BA:18:C:O3'	39:BQ:23:GLY:HA2	1.96	0.66
23:BA:2729:G:H2'	23:BA:2730:C:H6	1.61	0.66
23:BA:2773:C:OP1	26:BD:166:THR:OG1	2.13	0.66
34:BL:18:ARG:HB3	34:BL:18:ARG:NH1	2.10	0.66
2:CB:115:LEU:HD12	2:CB:118:LEU:HD12	1.76	0.66
4:CD:105:VAL:HG13	4:CD:110:PHE:HB2	1.78	0.66
5:CE:57:LYS:O	5:CE:61:TYR:CD2	2.49	0.66
8:CH:7:ALA:HB2	8:CH:85:ARG:HD3	1.76	0.66
22:CV:6189:G:O2'	22:CV:6190:U:H5'	1.96	0.66
23:DA:628:G:H2'	23:DA:629:G:C8	2.31	0.66
23:DA:912:C:O2	23:DA:912:C:H2'	1.96	0.66
23:DA:1411:C:H2'	23:DA:1412:A:C8	2.30	0.66
26:DD:170:LEU:N	26:DD:170:LEU:HD23	2.09	0.66
29:DG:94:TYR:HD1	29:DG:94:TYR:H	1.44	0.66
34:DL:75:ILE:H	34:DL:75:ILE:HD12	1.61	0.66
45:DW:36:ILE:HG23	45:DW:58:THR:HG23	1.76	0.66
46:DX:62:VAL:HG22	46:DX:63:ALA:N	2.11	0.66
51:D3:42:TRP:HA	51:D3:42:TRP:HE3	1.60	0.66
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.30	0.66
12:AL:74:HIS:HD2	12:AL:76:LEU:H	1.41	0.66
16:AP:17:TYR:H	16:AP:17:TYR:HD1	1.42	0.66
16:AP:72:ARG:O	16:AP:73:LEU:HD23	1.96	0.66
23:BA:328:U:H4'	43:BU:68:HIS:ND1	2.11	0.66
23:BA:1248:G:OP1	39:BQ:2:PRO:HD2	1.96	0.66
23:BA:2599:G:C8	25:BC:237:GLU:HG3	2.31	0.66
23:BA:2780:G:H4'	23:BA:2781:A:OP2	1.95	0.66
46:BX:11:ARG:HH12	46:BX:61:ARG:N	1.94	0.66
52:B4:12:ARG:HG3	52:B4:12:ARG:NH1	2.10	0.66
1:CA:222:U:H2'	1:CA:223:U:H6	1.59	0.66
1:CA:444:C:O2'	1:CA:445:G:H5'	1.96	0.66
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:64:LYS:HG2	8:CH:79:VAL:HG21	1.78	0.66
9:CI:97:LYS:HB3	9:CI:98:PRO:HD3	1.78	0.66
15:CO:15:PHE:O	15:CO:27:VAL:HG22	1.96	0.66
23:DA:582:G:OP1	39:DQ:14:HIS:HD2	1.78	0.66
23:DA:603:A:C2	23:DA:655:A:N3	2.64	0.66
23:DA:651:G:OP1	53:D5:19:SER:HB3	1.96	0.66
23:DA:1794:U:H2'	23:DA:1795:C:H6	1.59	0.66
23:DA:1813:G:C1'	25:DC:50:THR:HG21	2.24	0.66
23:DA:2051:A:H4'	26:DD:141:ILE:HG23	1.78	0.66
25:DC:134:ARG:HG3	25:DC:135:PHE:CD1	2.31	0.66
32:DJ:114:LEU:HA	32:DJ:118:PRO:HB3	1.77	0.66
32:DJ:148:GLY:HA3	32:DJ:149:PRO:O	1.96	0.66
32:DJ:160:LYS:HE3	32:DJ:161:LEU:N	2.10	0.66
42:DT:51:VAL:HG11	42:DT:81:VAL:HG12	1.76	0.66
44:DV:132:ASN:C	44:DV:134:PRO:HD3	2.16	0.66
44:DV:134:PRO:O	44:DV:136:PHE:N	2.28	0.66
1:AA:300:A:H8	1:AA:300:A:O5'	1.79	0.66
1:AA:1126:U:H2'	1:AA:1127:G:C8	2.31	0.66
1:AA:1483:A:H5''	1:AA:1484:C:OP2	1.96	0.66
10:AJ:63:PHE:HD1	14:AN:58:LYS:HA	1.60	0.66
17:AQ:45:HIS:CD2	17:AQ:47:PRO:HD3	2.31	0.66
23:BA:737:C:C2'	23:BA:738:G:H5'	2.26	0.66
23:BA:1218:C:O2'	23:BA:1219:G:H5'	1.95	0.66
25:BC:238:GLY:O	25:BC:239:ARG:O	2.13	0.66
25:BC:257:LEU:HD23	25:BC:257:LEU:C	2.17	0.66
36:BN:85:PRO:O	36:BN:87:TYR:N	2.29	0.66
1:CA:20:U:C2'	1:CA:21:G:H5'	2.26	0.66
1:CA:1081:G:OP1	5:CE:18:ARG:HG2	1.96	0.66
1:CA:1346:A:C8	7:CG:10:ARG:NH2	2.64	0.66
8:CH:97:VAL:HG13	8:CH:98:LYS:N	2.11	0.66
16:CP:72:ARG:O	16:CP:73:LEU:HD23	1.96	0.66
23:DA:1156:A:H4'	23:DA:1157:G:OP2	1.96	0.66
23:DA:1210:A:C5'	23:DA:1210:A:C8	2.79	0.66
23:DA:2190:G:H2'	23:DA:2191:G:H8	1.60	0.66
23:DA:2724:C:OP1	26:DD:118:LYS:HE3	1.96	0.66
23:DA:2846:G:H2'	23:DA:2847:U:C6	2.31	0.66
26:DD:120:TRP:CD1	26:DD:155:LYS:HB3	2.31	0.66
30:DH:102:SER:HA	30:DH:107:ILE:O	1.95	0.66
39:DQ:90:VAL:HG13	39:DQ:91:ASP:H	1.61	0.66
1:AA:579:G:C5	1:AA:580:U:C5	2.84	0.66
1:AA:1306:A:H1'	1:AA:1332:A:C2	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1446:A:H4'	1:AA:1446:A:OP1	1.96	0.66
2:AB:97:TRP:CH2	2:AB:176:GLU:HG3	2.31	0.66
2:AB:118:LEU:HD13	2:AB:142:LEU:HB2	1.77	0.66
3:AC:150:LYS:HB3	3:AC:201:TYR:HB2	1.76	0.66
6:AF:8:ILE:HD11	6:AF:79:LEU:HD13	1.78	0.66
23:BA:125:G:H4'	23:BA:126:A:OP2	1.95	0.66
27:BE:101:LEU:HD12	27:BE:102:PRO:CD	2.27	0.66
30:BH:102:SER:HA	30:BH:107:ILE:O	1.95	0.66
33:BK:80:ASP:OD2	38:BP:71:GLY:HA3	1.94	0.66
36:BN:4:LEU:O	36:BN:6:SER:N	2.28	0.66
39:BQ:88:ILE:HD12	39:BQ:90:VAL:CG1	2.26	0.66
49:B1:50:THR:HG22	49:B1:51:TYR:H	1.59	0.66
4:CD:110:PHE:HD2	4:CD:110:PHE:H	1.43	0.66
8:CH:39:LEU:HB3	8:CH:45:ILE:HG23	1.76	0.66
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.31	0.66
44:DV:53:ILE:HG22	44:DV:71:VAL:O	1.96	0.66
1:AA:551:U:H5'	12:AL:118:LYS:NZ	2.10	0.65
1:AA:1298:C:H4'	1:AA:1299:A:N9	2.11	0.65
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.10	0.65
5:AE:43:LEU:HD22	5:AE:136:MET:CG	2.24	0.65
9:AI:28:VAL:HG22	9:AI:63:ILE:HB	1.78	0.65
23:BA:588:U:H2'	23:BA:589:C:C6	2.31	0.65
23:BA:1710:C:O2'	23:BA:1711:C:H5'	1.95	0.65
28:BF:70:VAL:HG12	28:BF:90:LEU:HD22	1.77	0.65
34:BL:58:THR:O	34:BL:61:ARG:NE	2.26	0.65
35:BM:60:ARG:H	44:BV:179:ASP:CG	1.99	0.65
39:BQ:57:PHE:O	39:BQ:58:ARG:C	2.34	0.65
43:BU:6:HIS:HD2	43:BU:35:TYR:CE1	2.14	0.65
1:CA:57:G:C5	1:CA:58:C:C4	2.84	0.65
23:DA:558:G:OP1	32:DJ:134:PRO:HD2	1.94	0.65
23:DA:1726:G:H2'	23:DA:1727:U:C6	2.31	0.65
24:DB:30:C:H2'	24:DB:31:C:H5'	1.78	0.65
32:DJ:86:THR:O	32:DJ:89:LYS:HG2	1.95	0.65
34:DL:14:LYS:O	34:DL:15:ARG:HB2	1.95	0.65
37:DO:38:GLN:HB3	37:DO:47:THR:CG2	2.26	0.65
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.31	0.65
1:AA:1448:C:H2'	1:AA:1449:C:H6	1.59	0.65
2:AB:97:TRP:HH2	2:AB:176:GLU:HG3	1.61	0.65
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.78	0.65
3:AC:130:VAL:HG11	3:AC:153:VAL:HG21	1.78	0.65
4:AD:155:LEU:HD23	4:AD:156:GLU:H	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:4:ILE:HB	16:AP:66:PRO:HB3	1.76	0.65
19:AS:6:LYS:CG	19:AS:7:LYS:HD3	2.26	0.65
23:BA:106:C:H1'	43:BU:2:ARG:HE	1.60	0.65
23:BA:226:G:N2	23:BA:228:A:H62	1.92	0.65
23:BA:773:U:H5'	25:BC:47:GLY:HA3	1.78	0.65
23:BA:987:G:H2'	23:BA:988:A:H5'	1.77	0.65
23:BA:1153:C:H5'	39:BQ:76:TYR:HE2	1.60	0.65
23:BA:1754:C:OP1	38:BP:96:ARG:NH1	2.25	0.65
23:BA:2093:G:H1	23:BA:2196:C:H42	1.44	0.65
39:BQ:92:ARG:HD3	39:BQ:94:ASN:HB3	1.78	0.65
1:CA:397:A:N7	1:CA:548:G:C8	2.65	0.65
1:CA:521:G:O6	1:CA:529:G:C2	2.50	0.65
1:CA:622:A:C8	1:CA:623:C:C6	2.84	0.65
4:CD:94:LEU:HA	4:CD:97:LEU:HD12	1.78	0.65
23:DA:1493:C:C4	23:DA:2210:G:O2'	2.49	0.65
23:DA:1893:C:C5	23:DA:1894:C:C5	2.84	0.65
23:DA:2740:A:H2'	23:DA:2741:A:C8	2.32	0.65
23:DA:2773:C:OP1	26:DD:166:THR:OG1	2.14	0.65
36:DN:2:ARG:C	36:DN:4:LEU:N	2.47	0.65
39:DQ:79:PHE:O	39:DQ:83:LEU:HD13	1.96	0.65
41:DS:65:LEU:HB2	41:DS:68:ARG:HE	1.60	0.65
1:AA:707:C:H2'	1:AA:708:C:C6	2.32	0.65
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	1.78	0.65
12:AL:37:THR:O	12:AL:78:GLU:HG2	1.96	0.65
23:BA:17:G:H4'	39:BQ:25:TRP:CH2	2.31	0.65
23:BA:430:G:H5''	23:BA:431:U:OP2	1.96	0.65
23:BA:662:G:P	34:BL:18:ARG:HD2	2.36	0.65
23:BA:1430:C:H2'	23:BA:1431:U:C6	2.31	0.65
26:BD:30:PRO:O	26:BD:32:PRO:HD3	1.96	0.65
30:BH:68:LEU:O	30:BH:138:ILE:HD13	1.95	0.65
34:BL:61:ARG:HA	34:BL:62:LEU:HD13	1.77	0.65
38:BP:27:THR:CG2	38:BP:90:GLN:HB3	2.26	0.65
40:BR:21:ARG:CZ	40:BR:91:TYR:HE1	2.09	0.65
42:BT:30:VAL:HG11	42:BT:39:ILE:CD1	2.27	0.65
42:BT:57:LEU:HD11	42:BT:78:LYS:HB2	1.78	0.65
43:BU:81:LYS:HZ3	43:BU:98:VAL:N	1.93	0.65
1:CA:106:C:C2'	1:CA:107:G:H5'	2.27	0.65
1:CA:457:C:H42	1:CA:475:G:H1	1.44	0.65
1:CA:692:U:O2'	1:CA:694:A:N7	2.28	0.65
1:CA:1306:A:H1'	1:CA:1332:A:C2	2.32	0.65
1:CA:1411:C:O2'	1:CA:1412:C:H5'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:155:LEU:HD23	4:CD:156:GLU:H	1.61	0.65
8:CH:97:VAL:HG13	8:CH:98:LYS:H	1.60	0.65
9:CI:17:VAL:HG13	9:CI:63:ILE:HD11	1.77	0.65
12:CL:41:THR:HA	12:CL:52:ARG:O	1.95	0.65
16:CP:20:VAL:HG21	16:CP:32:TYR:CD1	2.32	0.65
23:DA:335:C:H2'	23:DA:336:C:H6	1.61	0.65
23:DA:795:C:H2'	23:DA:796:C:H6	1.60	0.65
23:DA:942:G:H5'	34:DL:35:HIS:HB3	1.78	0.65
27:DE:46:ARG:HH11	27:DE:46:ARG:HG2	1.61	0.65
27:DE:127:GLU:O	27:DE:129:PHE:N	2.28	0.65
47:DY:28:LYS:HE3	47:DY:56:GLN:NE2	2.11	0.65
1:AA:552:U:O2'	1:AA:553:A:H5'	1.96	0.65
1:AA:691:G:N1	11:AK:52:GLY:HA2	2.12	0.65
1:AA:1301:U:H3'	1:AA:1302:U:H5''	1.77	0.65
22:AV:6182:A:H2'	22:AV:6183:G:O4'	1.97	0.65
23:BA:865:C:H4'	23:BA:866:A:N7	2.11	0.65
23:BA:1165:U:H2'	23:BA:1166:C:C6	2.31	0.65
26:BD:158:GLY:O	26:BD:159:HIS:C	2.34	0.65
32:BJ:74:PHE:CE1	32:BJ:142:ARG:HD2	2.30	0.65
40:BR:21:ARG:CZ	40:BR:91:TYR:CE1	2.79	0.65
46:BX:46:LEU:CD2	46:BX:61:ARG:HE	2.10	0.65
1:CA:332:G:OP2	20:CT:10:LEU:HD23	1.97	0.65
1:CA:411:A:C4	1:CA:413:G:O4'	2.50	0.65
1:CA:500:G:N2	1:CA:546:G:H1'	2.10	0.65
1:CA:1430:C:H2'	1:CA:1431:C:C6	2.31	0.65
3:CC:130:VAL:HG11	3:CC:153:VAL:HG21	1.78	0.65
5:CE:147:ASP:O	5:CE:151:LEU:HG	1.96	0.65
7:CG:142:GLU:O	7:CG:145:ALA:HB3	1.96	0.65
23:DA:184:C:H2'	23:DA:185:U:H6	1.60	0.65
23:DA:924:C:H2'	23:DA:925:C:C6	2.31	0.65
23:DA:2840:C:H4'	36:DN:53:HIS:CD2	2.31	0.65
24:DB:104:A:O4'	44:DV:29:TYR:HE1	1.80	0.65
25:DC:79:VAL:HG12	25:DC:113:VAL:HA	1.77	0.65
38:DP:74:ARG:HD3	38:DP:76:PHE:CZ	2.31	0.65
39:DQ:30:LYS:O	39:DQ:31:SER:CB	2.45	0.65
15:AO:37:ASN:HD22	15:AO:37:ASN:H	1.45	0.65
23:BA:828:U:O2	23:BA:828:U:C2'	2.42	0.65
23:BA:2636:U:H4'	26:BD:80:GLU:OE1	1.95	0.65
23:BA:2889:C:H2'	23:BA:2891:G:C8	2.31	0.65
27:BE:164:ARG:HG2	27:BE:164:ARG:NH1	2.01	0.65
35:BM:58:PHE:O	35:BM:58:PHE:CD1	2.47	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BU:13:VAL:HG11	43:BU:72:VAL:HB	1.79	0.65
44:BV:134:PRO:O	44:BV:136:PHE:N	2.30	0.65
1:CA:193:C:H2'	1:CA:194:C:C6	2.31	0.65
1:CA:707:C:H2'	1:CA:708:C:C6	2.31	0.65
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.31	0.65
1:CA:1430:C:H2'	1:CA:1431:C:H6	1.60	0.65
9:CI:28:VAL:HG22	9:CI:63:ILE:HB	1.77	0.65
10:CJ:48:THR:CA	10:CJ:62:HIS:HB3	2.18	0.65
23:DA:461:C:O2'	23:DA:462:C:H5'	1.96	0.65
23:DA:2056:G:N2	50:D2:4:HIS:O	2.30	0.65
23:DA:2219:G:O2'	23:DA:2224:G:H5'	1.96	0.65
23:DA:2780:G:H4'	23:DA:2781:A:OP2	1.96	0.65
25:DC:70:TRP:CH2	25:DC:150:LYS:HA	2.31	0.65
25:DC:166:GLN:HE21	25:DC:166:GLN:N	1.94	0.65
25:DC:172:TYR:HD1	25:DC:185:VAL:O	1.80	0.65
27:DE:13:SER:OG	27:DE:14:PRO:HD2	1.96	0.65
52:D4:11:LYS:HD2	52:D4:15:THR:HG21	1.77	0.65
1:AA:323:U:O3'	20:AT:22:ARG:HG2	1.96	0.65
7:AG:27:ILE:HD11	7:AG:43:PHE:HD2	1.61	0.65
19:AS:49:ILE:H	19:AS:49:ILE:HD12	1.61	0.65
23:BA:1478:G:HO2'	23:BA:1558:A:H2	1.44	0.65
25:BC:125:ILE:O	25:BC:125:ILE:CG2	2.44	0.65
37:BO:38:GLN:HB3	37:BO:47:THR:HG21	1.79	0.65
38:BP:64:ARG:HD2	38:BP:73:GLU:HG2	1.78	0.65
44:BV:180:VAL:C	44:BV:182:LYS:H	2.00	0.65
46:BX:32:LYS:HG2	46:BX:33:LYS:H	1.62	0.65
52:B4:35:ARG:HG3	52:B4:42:LEU:HD11	1.79	0.65
1:CA:339:C:OP2	33:DK:97:ARG:NH1	2.29	0.65
1:CA:501:C:OP1	12:CL:116:ARG:NH2	2.30	0.65
1:CA:974:A:OP1	1:CA:974:A:H8	1.80	0.65
1:CA:1295:G:N2	1:CA:1302:U:H3	1.92	0.65
4:CD:63:LYS:HD2	4:CD:198:VAL:HG22	1.77	0.65
6:CF:63:TYR:N	6:CF:63:TYR:CD2	2.65	0.65
7:CG:138:LYS:HE2	7:CG:142:GLU:OE2	1.97	0.65
12:CL:23:VAL:HG13	12:CL:97:TYR:CE2	2.32	0.65
15:CO:69:TYR:HD1	15:CO:72:ARG:HH21	1.43	0.65
23:DA:140:A:H8	23:DA:1408:C:O2'	1.79	0.65
23:DA:1141:U:H6	32:DJ:86:THR:OG1	1.80	0.65
34:DL:33:ARG:HG2	34:DL:34:GLY:H	1.60	0.65
43:DU:30:VAL:HG23	43:DU:37:VAL:HG12	1.79	0.65
45:DW:35:ASN:H	45:DW:35:ASN:HD22	1.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D5:11:LYS:O	53:D5:11:LYS:HE2	1.96	0.65
2:AB:135:GLN:O	2:AB:139:LYS:HG2	1.96	0.65
23:BA:197:A:H8	23:BA:197:A:C5'	2.06	0.65
23:BA:828:U:O2	23:BA:828:U:C3'	2.45	0.65
23:BA:912:C:H2'	23:BA:912:C:O2	1.96	0.65
23:BA:1210:A:H8	23:BA:1210:A:H5'	1.62	0.65
23:BA:1596:A:H2'	23:BA:1597:A:H5'	1.77	0.65
32:BJ:127:LYS:HB2	32:BJ:140:PHE:CE1	2.32	0.65
35:BM:48:GLU:O	35:BM:52:VAL:HG12	1.96	0.65
36:BN:9:LYS:HE2	36:BN:43:GLU:OE2	1.97	0.65
51:B3:42:TRP:HA	51:B3:42:TRP:HE3	1.61	0.65
1:CA:1010:G:H2'	1:CA:1011:G:H8	1.58	0.65
2:CB:69:LEU:HD13	2:CB:91:PRO:HB2	1.78	0.65
2:CB:173:ALA:HA	2:CB:176:GLU:HG3	1.77	0.65
10:CJ:63:PHE:HD1	14:CN:58:LYS:HA	1.61	0.65
23:DA:17:G:H4'	39:DQ:25:TRP:CZ3	2.32	0.65
23:DA:222:A:H5''	23:DA:421:U:OP1	1.97	0.65
23:DA:226:G:N2	23:DA:228:A:N6	2.45	0.65
23:DA:528:A:C2	23:DA:2043:C:C5'	2.80	0.65
23:DA:992:C:O3'	40:DR:72:VAL:HG11	1.96	0.65
23:DA:1899:G:N2	23:DA:1902:C:C5	2.65	0.65
1:AA:350:G:O2'	1:AA:351:G:H5'	1.97	0.65
1:AA:754:C:H6	15:AO:69:TYR:CE2	2.14	0.65
2:AB:80:ILE:HD12	2:AB:211:ILE:HB	1.78	0.65
8:AH:119:LEU:HB2	8:AH:124:ALA:HB2	1.77	0.65
12:AL:5:THR:HG23	12:AL:8:GLN:HG3	1.78	0.65
23:BA:277:C:H5'	23:BA:278:A:OP2	1.97	0.65
23:BA:979:G:H3'	23:BA:980:A:H5''	1.79	0.65
23:BA:1434:A:H61	23:BA:1558:A:H62	1.44	0.65
23:BA:2846:G:H2'	23:BA:2847:U:C6	2.31	0.65
25:BC:244:ARG:HB2	25:BC:245:PRO:CD	2.26	0.65
26:BD:52:LEU:O	26:BD:76:ARG:N	2.30	0.65
32:BJ:80:ALA:O	32:BJ:83:ILE:CG1	2.45	0.65
32:BJ:80:ALA:O	32:BJ:83:ILE:HG12	1.97	0.65
32:BJ:90:LEU:O	32:BJ:111:GLU:HG3	1.97	0.65
34:BL:75:ILE:H	34:BL:75:ILE:HD12	1.61	0.65
46:BX:27:GLU:CB	46:BX:33:LYS:HG3	2.26	0.65
46:BX:30:VAL:HG12	46:BX:30:VAL:O	1.97	0.65
1:CA:579:G:C4	1:CA:580:U:C5	2.84	0.65
1:CA:1298:C:H4'	1:CA:1299:A:N9	2.11	0.65
3:CC:15:THR:HG21	3:CC:181:ASN:HA	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:277:C:H5'	23:DA:278:A:OP2	1.96	0.65
23:DA:322:A:OP2	27:DE:169:ASN:HB2	1.97	0.65
24:DB:2:C:H2'	24:DB:3:C:C6	2.32	0.65
24:DB:31:C:O2	24:DB:31:C:H2'	1.97	0.65
27:DE:31:HIS:CG	34:DL:13:ASN:HB2	2.32	0.65
27:DE:39:TRP:O	27:DE:43:LYS:HG2	1.96	0.65
35:DM:32:PHE:HZ	35:DM:111:GLU:HG2	1.60	0.65
40:DR:47:VAL:O	40:DR:49:THR:O	2.14	0.65
42:DT:30:VAL:HG11	42:DT:39:ILE:CD1	2.26	0.65
44:DV:5:LEU:HG	44:DV:47:VAL:HG21	1.79	0.65
44:DV:5:LEU:HD23	44:DV:6:LYS:N	2.11	0.65
1:AA:377:G:OP1	16:AP:3:LYS:HD2	1.97	0.65
14:AN:44:LEU:O	14:AN:44:LEU:HD12	1.96	0.65
23:BA:2476:A:C2	23:BA:2477:C:C6	2.85	0.65
25:BC:172:TYR:HD1	25:BC:186:HIS:HA	1.57	0.65
32:BJ:68:ASN:H	32:BJ:68:ASN:ND2	1.95	0.65
36:BN:38:VAL:HB	36:BN:39:PRO:CD	2.26	0.65
36:BN:100:LEU:HD21	36:BN:113:LEU:HB2	1.79	0.65
42:BT:39:ILE:O	42:BT:43:VAL:HG12	1.96	0.65
1:CA:382:A:H2'	1:CA:383:A:C8	2.32	0.65
1:CA:965:A:H2	1:CA:969:A:C2	2.14	0.65
8:CH:77:GLU:HG3	8:CH:78:GLN:N	2.12	0.65
10:CJ:4:ILE:HB	10:CJ:74:ILE:HD11	1.79	0.65
23:DA:1141:U:OP2	32:DJ:86:THR:HG23	1.97	0.65
23:DA:1710:C:O2'	23:DA:1711:C:H5'	1.97	0.65
23:DA:1973:G:H2'	23:DA:1974:C:H6	1.62	0.65
25:DC:186:HIS:CD2	25:DC:188:GLU:H	2.15	0.65
37:DO:89:ARG:O	37:DO:90:GLY:O	2.14	0.65
40:DR:41:GLY:HA3	40:DR:45:THR:OG1	1.97	0.65
44:DV:51:ALA:HB1	44:DV:57:ILE:HD11	1.77	0.65
47:DY:2:LYS:HA	47:DY:5:GLU:CD	2.17	0.65
1:AA:386:C:H2'	1:AA:387:U:C5'	2.27	0.65
1:AA:457:C:H42	1:AA:475:G:H1	1.45	0.65
1:AA:968:A:H8	1:AA:968:A:OP1	1.80	0.65
1:AA:1448:C:H2'	1:AA:1449:C:C6	2.32	0.65
6:AF:44:GLY:HA2	6:AF:59:TYR:CZ	2.32	0.65
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	1.78	0.65
23:BA:1288:U:C2	23:BA:1327:C:O2	2.50	0.65
26:BD:32:PRO:HA	26:BD:90:THR:HG22	1.78	0.65
27:BE:31:HIS:CG	34:BL:13:ASN:HB2	2.32	0.65
33:BK:87:ILE:HG13	33:BK:91:LEU:HD12	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:91:LEU:HB3	3:CC:99:VAL:HG11	1.79	0.65
3:CC:134:ILE:CG2	3:CC:151:VAL:HB	2.26	0.65
5:CE:51:VAL:O	5:CE:55:VAL:HG23	1.95	0.65
23:DA:557:U:H2'	23:DA:558:G:C8	2.31	0.65
23:DA:1857:G:N2	23:DA:1886:C:N4	2.45	0.65
23:DA:2637:U:H5''	26:DD:82:ARG:NH2	2.11	0.65
28:DF:161:THR:HG21	28:DF:172:LEU:HD23	1.79	0.65
37:DO:36:TYR:N	37:DO:36:TYR:CD1	2.65	0.65
38:DP:27:THR:CG2	38:DP:90:GLN:HB3	2.27	0.65
41:DS:73:ALA:O	41:DS:106:ILE:HG12	1.97	0.65
53:D5:50:LEU:O	53:D5:51:ALA:CB	2.44	0.65
1:AA:334:C:H2'	1:AA:335:C:H6	1.63	0.64
3:AC:134:ILE:HG21	3:AC:168:ALA:HB3	1.79	0.64
23:BA:1006:C:H1'	32:BJ:129:MET:HB3	1.79	0.64
23:BA:1614:A:H61	41:BS:88:ARG:H	1.45	0.64
23:BA:2219:G:O2'	23:BA:2224:G:H5'	1.96	0.64
23:BA:2815:C:O2'	50:B2:43:HIS:CD2	2.50	0.64
24:BB:103:U:O2'	24:BB:104:A:H5'	1.96	0.64
25:BC:172:TYR:HD1	25:BC:185:VAL:O	1.79	0.64
1:CA:1446:A:OP1	1:CA:1446:A:H4'	1.97	0.64
15:CO:44:LYS:HZ3	15:CO:44:LYS:HB2	1.61	0.64
22:CV:6182:A:H2'	22:CV:6183:G:O4'	1.96	0.64
23:DA:380:U:O2'	46:DX:20:ARG:HB3	1.97	0.64
23:DA:626:U:O2	34:DL:105:LEU:HB3	1.97	0.64
23:DA:1268:A:H2'	23:DA:1269:A:O5'	1.97	0.64
23:DA:2364:C:C2'	23:DA:2365:G:H5'	2.27	0.64
25:DC:80:ALA:HB3	25:DC:94:LEU:HD13	1.78	0.64
26:DD:16:ARG:O	26:DD:18:ASP:N	2.29	0.64
27:DE:117:ARG:NH2	27:DE:187:VAL:HA	2.12	0.64
28:DF:36:LYS:HD3	28:DF:160:VAL:HG21	1.79	0.64
30:DH:66:GLU:HG2	30:DH:67:ARG:CZ	2.27	0.64
39:DQ:83:LEU:HD12	39:DQ:113:ALA:CB	2.27	0.64
1:AA:222:U:H2'	1:AA:223:U:H6	1.62	0.64
1:AA:579:G:C4	1:AA:580:U:C5	2.84	0.64
1:AA:1180:A:H5'	9:AI:103:THR:HG23	1.78	0.64
19:AS:5:LEU:HD12	19:AS:8:GLY:O	1.97	0.64
23:BA:114(B):A:H4'	32:BJ:48:ARG:NH2	2.11	0.64
23:BA:1162:G:C2'	23:BA:1163:G:H5'	2.28	0.64
23:BA:1971:A:C2	25:BC:241:PRO:HD3	2.31	0.64
23:BA:2346:A:H5''	23:BA:2383:G:C1'	2.27	0.64
23:BA:2394:C:OP1	34:BL:63:PRO:HD2	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2698:U:H2'	23:BA:2699:C:C6	2.33	0.64
23:BA:2852:G:O2'	23:BA:2853:C:H5'	1.97	0.64
38:BP:90:GLN:HA	38:BP:90:GLN:NE2	2.12	0.64
43:BU:29:GLU:HB3	43:BU:38:ILE:CB	2.26	0.64
44:BV:51:ALA:HB1	44:BV:57:ILE:HD11	1.77	0.64
1:CA:1311:G:H1	1:CA:1326:C:H42	1.43	0.64
4:CD:49:ARG:NE	4:CD:50:ARG:H	1.95	0.64
11:CK:95:ILE:HG21	11:CK:108:ILE:HD13	1.79	0.64
12:CL:6:ILE:H	12:CL:6:ILE:HD12	1.61	0.64
23:DA:847:U:OP2	23:DA:929:G:O6	2.15	0.64
23:DA:2209:C:O2	23:DA:2216:G:C2	2.51	0.64
23:DA:2262:U:H2'	23:DA:2263:C:H6	1.62	0.64
23:DA:2758:A:C4	29:DG:67:LEU:HD21	2.32	0.64
23:DA:2892:A:H2'	23:DA:2893:G:H5'	1.79	0.64
25:DC:25:THR:HG21	25:DC:81:ALA:HA	1.77	0.64
25:DC:35:LYS:HE2	25:DC:103:ARG:HA	1.79	0.64
34:DL:109:GLY:O	34:DL:111:ARG:N	2.30	0.64
37:DO:51:ALA:HB1	37:DO:72:ALA:CB	2.26	0.64
1:AA:186(D):G:C6	1:AA:191(E):G:N1	2.65	0.64
1:AA:444:C:O2'	1:AA:445:G:H5'	1.96	0.64
1:AA:781:A:C2'	1:AA:782:A:H5'	2.28	0.64
4:AD:21:LEU:H	4:AD:21:LEU:HD12	1.61	0.64
5:AE:140:ARG:HG2	5:AE:140:ARG:O	1.96	0.64
10:AJ:45:ARG:HH12	14:AN:36:PHE:HD2	1.45	0.64
23:BA:565:C:H2'	23:BA:566:U:O5'	1.95	0.64
27:BE:127:GLU:O	27:BE:129:PHE:N	2.28	0.64
38:BP:84:GLN:HE21	38:BP:84:GLN:HA	1.62	0.64
1:CA:738:C:H2'	1:CA:739:C:H6	1.59	0.64
4:CD:21:LEU:H	4:CD:21:LEU:HD12	1.63	0.64
20:CT:26:ASN:HD22	20:CT:26:ASN:N	1.91	0.64
23:DA:1654:A:OP1	36:DN:2:ARG:N	2.30	0.64
23:DA:2275:C:H5'	23:DA:2275:C:H6	1.62	0.64
23:DA:2593:U:H2'	23:DA:2594:C:H6	1.60	0.64
26:DD:1:MET:HB3	26:DD:84:PHE:HB2	1.79	0.64
34:DL:62:LEU:CD2	53:D5:25:MET:HB2	2.27	0.64
34:DL:95:VAL:HG23	34:DL:125:VAL:HG23	1.79	0.64
53:D5:11:LYS:HD2	53:D5:64:TYR:CZ	2.33	0.64
12:AL:44:PRO:HG3	12:AL:52:ARG:NE	2.12	0.64
12:AL:85:ARG:HB2	12:AL:100:VAL:HG23	1.80	0.64
12:AL:103:VAL:O	12:AL:106:ALA:HB3	1.96	0.64
23:BA:1411:C:H2'	23:BA:1412:A:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1486:A:N6	23:BA:1504:C:H42	1.95	0.64
25:BC:223:GLY:HA3	25:BC:231:HIS:CE1	2.32	0.64
29:BG:140:LYS:O	29:BG:144:VAL:HG23	1.96	0.64
34:BL:95:VAL:HG23	34:BL:125:VAL:HG23	1.78	0.64
44:BV:5:LEU:HG	44:BV:47:VAL:HG21	1.78	0.64
1:CA:17:U:H1'	1:CA:1080:A:N3	2.12	0.64
1:CA:397:A:N6	1:CA:548:G:C5	2.66	0.64
1:CA:979:C:H5''	1:CA:980:C:OP2	1.96	0.64
2:CB:118:LEU:HD13	2:CB:142:LEU:HB2	1.78	0.64
16:CP:28:ARG:HH11	16:CP:28:ARG:CG	2.09	0.64
23:DA:960:A:H61	35:DM:82:ARG:NH2	1.96	0.64
23:DA:2212:A:H1'	23:DA:2215:G:C4	2.33	0.64
23:DA:2365:G:H4'	45:DW:60:PHE:CZ	2.33	0.64
23:DA:2820:A:O4'	36:DN:5:LYS:HG3	1.97	0.64
24:DB:13:A:C8	45:DW:74:ARG:NH2	2.65	0.64
24:DB:21:G:H1	24:DB:62:C:N4	1.94	0.64
26:DD:52:LEU:O	26:DD:76:ARG:N	2.31	0.64
28:DF:71:THR:HG22	28:DF:89:GLY:O	1.98	0.64
30:DH:82:ARG:C	30:DH:89:TYR:HB2	2.18	0.64
36:DN:85:PRO:O	36:DN:87:TYR:N	2.30	0.64
36:DN:100:LEU:HD21	36:DN:113:LEU:HB2	1.80	0.64
53:D5:22:VAL:HG12	53:D5:50:LEU:HD12	1.79	0.64
53:D5:23:VAL:CG1	53:D5:47:LYS:HB3	2.27	0.64
1:AA:411:A:C5	1:AA:429:U:C5	2.86	0.64
4:AD:173:TRP:CD1	4:AD:174:LEU:HG	2.33	0.64
8:AH:77:GLU:HG3	8:AH:78:GLN:H	1.61	0.64
23:BA:855:G:H5''	23:BA:856:C:OP2	1.97	0.64
23:BA:990:A:H5''	23:BA:991:C:OP2	1.96	0.64
29:BG:54:ARG:HB3	29:BG:65:HIS:CD2	2.33	0.64
32:BJ:157:ARG:N	32:BJ:158:PRO:CD	2.51	0.64
37:BO:12:PHE:HE1	37:BO:16:ASN:HD21	1.45	0.64
39:BQ:114:LYS:O	39:BQ:117:GLN:HB2	1.97	0.64
43:BU:89:PHE:H	43:BU:90:LEU:HD23	1.62	0.64
1:CA:625:G:H2'	1:CA:626:U:C6	2.31	0.64
1:CA:987:G:H1	1:CA:1218:C:N4	1.94	0.64
1:CA:1252:A:H61	1:CA:1285:A:H61	1.45	0.64
1:CA:1448:C:H2'	1:CA:1449:C:H6	1.63	0.64
22:CV:6198:U:H2'	22:CV:6199:G:H8	1.63	0.64
23:DA:176:G:C2'	23:DA:177:G:H5'	2.27	0.64
23:DA:492:A:H2'	23:DA:493:G:O4'	1.96	0.64
23:DA:1006:C:H1'	32:DJ:129:MET:HB3	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1510:A:H2'	23:DA:1511:A:H8	1.61	0.64
23:DA:2036:C:H5'	23:DA:2036:C:C6	2.32	0.64
23:DA:2828:C:O2'	23:DA:2829:C:H5'	1.98	0.64
28:DF:84:LYS:O	28:DF:86:MET:HG3	1.96	0.64
29:DG:54:ARG:HB3	29:DG:65:HIS:CD2	2.32	0.64
32:DJ:53:ILE:O	32:DJ:57:LEU:HD22	1.96	0.64
35:DM:22:LYS:O	35:DM:22:LYS:HD3	1.98	0.64
46:DX:11:ARG:HB3	46:DX:12:PRO:HD2	1.80	0.64
50:D2:4:HIS:HB3	50:D2:5:PRO:HD3	1.79	0.64
1:AA:937:A:H1'	1:AA:1379:G:N2	2.12	0.64
1:AA:950:U:H4'	1:AA:971:G:N2	2.12	0.64
1:AA:1111:A:C2	3:AC:177:THR:HG23	2.33	0.64
16:AP:28:ARG:NH1	16:AP:29:ASP:OD1	2.30	0.64
23:BA:952:G:P	35:BM:16:ARG:HH22	2.21	0.64
23:BA:1833:U:C2	23:BA:1834:U:C5	2.86	0.64
23:BA:2190:G:H2'	23:BA:2191:G:H8	1.61	0.64
23:BA:2886:G:O2'	23:BA:2887:U:H5'	1.98	0.64
24:BB:31:C:H2'	24:BB:31:C:O2	1.98	0.64
25:BC:134:ARG:HG3	25:BC:135:PHE:CD1	2.32	0.64
27:BE:9:ILE:HD11	27:BE:125:LEU:CG	2.28	0.64
35:BM:22:LYS:O	35:BM:22:LYS:HD3	1.98	0.64
35:BM:37:LEU:HG	35:BM:128:LYS:O	1.97	0.64
46:BX:13:ILE:HG23	46:BX:14:VAL:H	1.63	0.64
46:BX:45:ASN:HD21	46:BX:47:GLN:HE21	1.45	0.64
1:CA:638:G:O2'	1:CA:639:G:H5'	1.96	0.64
1:CA:781:A:C2'	1:CA:782:A:H5'	2.27	0.64
4:CD:79:PHE:CG	4:CD:207:TYR:HD1	2.16	0.64
5:CE:109:ILE:HG22	5:CE:110:LEU:HD23	1.80	0.64
23:DA:1475:G:N2	23:DA:1519:G:C5	2.66	0.64
25:DC:182:LEU:H	25:DC:272:ALA:HB3	1.62	0.64
25:DC:242:ARG:HG2	25:DC:242:ARG:NH1	2.11	0.64
38:DP:57:PHE:O	38:DP:59:THR:N	2.31	0.64
1:AA:1411:C:O2'	1:AA:1412:C:H5'	1.97	0.64
24:BB:2:C:H2'	24:BB:3:C:C6	2.33	0.64
26:BD:47:VAL:HG21	26:BD:86:PRO:HD3	1.78	0.64
27:BE:13:SER:OG	27:BE:14:PRO:HD2	1.97	0.64
28:BF:174:GLU:HG2	28:BF:180:PHE:CD1	2.33	0.64
1:CA:255:G:H4'	17:CQ:17:LYS:HD3	1.79	0.64
1:CA:622:A:C8	1:CA:623:C:C5	2.85	0.64
1:CA:1126:U:H2'	1:CA:1127:G:C8	2.32	0.64
1:CA:1512:U:H3	1:CA:1523:G:H1	1.46	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:45:ARG:HH12	14:CN:36:PHE:HD2	1.46	0.64
11:CK:48:ILE:HD11	11:CK:64:ALA:HA	1.80	0.64
23:DA:1187:G:H5''	40:DR:81:TYR:CE2	2.33	0.64
23:DA:2655:G:N2	23:DA:2664:G:C5	2.66	0.64
32:DJ:69:VAL:HG13	32:DJ:71:MET:HG3	1.79	0.64
51:D3:38:LYS:HG2	51:D3:39:TYR:H	1.63	0.64
1:AA:862:C:H2'	1:AA:863:U:H5'	1.80	0.64
1:AA:922:G:C6	1:AA:923:A:C6	2.85	0.64
2:AB:97:TRP:HZ2	2:AB:102:LEU:CD1	2.11	0.64
2:AB:158:LEU:H	2:AB:158:LEU:HD12	1.63	0.64
7:AG:50:ILE:HD12	7:AG:61:VAL:HG11	1.80	0.64
23:BA:60:G:H4'	23:BA:61:G:P	2.37	0.64
23:BA:588:U:H1'	27:BE:90:PHE:CD1	2.33	0.64
27:BE:181:LEU:HD21	27:BE:186:ILE:HD11	1.80	0.64
29:BG:54:ARG:HB3	29:BG:65:HIS:HD2	1.63	0.64
32:BJ:148:GLY:HA3	32:BJ:149:PRO:O	1.98	0.64
44:BV:9:TYR:CZ	44:BV:61:LEU:HD13	2.33	0.64
1:CA:1111:A:H8	1:CA:1111:A:O5'	1.80	0.64
1:CA:1443:G:H3'	1:CA:1446:A:H5''	1.79	0.64
15:CO:76:GLU:HA	15:CO:76:GLU:OE2	1.98	0.64
23:DA:83:G:H1	23:DA:102:G:HO2'	0.66	0.64
23:DA:2401:U:H2'	23:DA:2402:C:H5''	1.80	0.64
25:DC:172:TYR:HD1	25:DC:186:HIS:HA	1.60	0.64
26:DD:59:VAL:HG12	26:DD:59:VAL:O	1.98	0.64
32:DJ:157:ARG:O	32:DJ:157:ARG:HG2	1.96	0.64
42:DT:63:LYS:NZ	42:DT:72:LYS:HB3	2.13	0.64
1:AA:382:A:H2'	1:AA:383:A:C8	2.33	0.64
23:BA:1493:C:C4	23:BA:2210:G:O2'	2.51	0.64
23:BA:1669:A:O3'	23:BA:2549:G:H5'	1.98	0.64
23:BA:2892:A:H2'	23:BA:2893:G:H5'	1.80	0.64
35:BM:80:GLU:HA	35:BM:80:GLU:OE2	1.97	0.64
36:BN:11:ASN:O	36:BN:12:ARG:HB2	1.98	0.64
40:BR:41:GLY:HA3	40:BR:45:THR:OG1	1.98	0.64
43:BU:76:CYS:SG	43:BU:77:PRO:HD3	2.38	0.64
44:BV:120:ILE:N	44:BV:120:ILE:HD13	2.12	0.64
1:CA:775:G:C2'	1:CA:776:G:H5'	2.27	0.64
6:CF:18:GLN:HA	6:CF:21:LEU:HD23	1.80	0.64
23:DA:65:C:H2'	23:DA:66:C:H6	1.60	0.64
23:DA:1786:A:H1'	23:DA:1938:A:N6	2.13	0.64
23:DA:2785:C:H2'	23:DA:2786:U:O4'	1.98	0.64
25:DC:85:ASP:OD2	25:DC:86:PRO:HD2	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:98:LEU:HD12	29:DG:99:VAL:H	1.62	0.64
30:DH:92:VAL:CG2	30:DH:97:ILE:HG12	2.27	0.64
36:DN:50:HIS:O	36:DN:54:LEU:HB2	1.97	0.64
37:DO:12:PHE:O	37:DO:15:ARG:HG3	1.97	0.64
40:DR:7:THR:HG23	40:DR:22:VAL:HG11	1.79	0.64
46:DX:27:GLU:CG	46:DX:33:LYS:HG3	2.28	0.64
1:AA:160:A:H2'	1:AA:161:A:O4'	1.98	0.64
1:AA:632:A:C8	1:AA:633:G:C8	2.85	0.64
3:AC:152:ILE:HD11	3:AC:167:TRP:HD1	1.60	0.64
5:AE:102:ALA:HB2	5:AE:120:THR:CG2	2.28	0.64
6:AF:26:ILE:HG22	6:AF:30:LEU:CD1	2.28	0.64
6:AF:53:ALA:HB3	6:AF:86:ARG:NH1	2.13	0.64
19:AS:63:THR:N	19:AS:66:MET:HE3	2.13	0.64
23:BA:242:G:C5'	53:B5:63:PRO:HG2	2.27	0.64
23:BA:626:U:O2	34:BL:105:LEU:HB3	1.98	0.64
23:BA:992:C:O3'	40:BR:72:VAL:HG11	1.98	0.64
23:BA:1495:A:N3	23:BA:1495:A:H2'	2.13	0.64
23:BA:2846:G:C5	23:BA:2847:U:C5	2.85	0.64
34:BL:45:LEU:HD23	34:BL:46:LYS:H	1.61	0.64
42:BT:44:GLU:OE2	42:BT:50:LYS:HG2	1.97	0.64
53:B5:11:LYS:HD2	53:B5:64:TYR:CZ	2.33	0.64
1:CA:53:A:N1	1:CA:54:C:C2	2.67	0.64
8:CH:21:LYS:O	8:CH:63:LEU:HD12	1.98	0.64
23:DA:2723:C:H4'	36:DN:2:ARG:NH2	2.12	0.64
23:DA:2842:G:H1	23:DA:2875:C:H42	1.43	0.64
25:DC:260:ARG:O	25:DC:261:LYS:O	2.15	0.64
26:DD:21:VAL:HG12	26:DD:23:VAL:HG13	1.80	0.64
36:DN:38:VAL:CB	36:DN:39:PRO:HD3	2.24	0.64
40:DR:21:ARG:CZ	40:DR:91:TYR:CE1	2.81	0.64
1:AA:688:G:H2'	1:AA:689:C:C6	2.33	0.63
1:AA:735:C:H2'	1:AA:736:C:C6	2.32	0.63
1:AA:976:G:H21	1:AA:136(A):C:H2'	1.62	0.63
2:AB:162:ILE:O	2:AB:162:ILE:HD12	1.97	0.63
2:AB:173:ALA:HA	2:AB:176:GLU:HG3	1.80	0.63
3:AC:77:ILE:C	3:AC:83:ARG:HB3	2.18	0.63
8:AH:89:PRO:HA	8:AH:92:ARG:NH1	2.11	0.63
10:AJ:42:THR:HG23	10:AJ:68:HIS:HA	1.79	0.63
22:AV:6198:U:H2'	22:AV:6199:G:H8	1.63	0.63
26:BD:1:MET:HB3	26:BD:84:PHE:HB2	1.80	0.63
28:BF:71:THR:HG22	28:BF:89:GLY:O	1.98	0.63
30:BH:82:ARG:C	30:BH:89:TYR:HB2	2.19	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BL:58:THR:C	34:BL:61:ARG:HE	2.01	0.63
34:BL:62:LEU:CD2	53:B5:25:MET:HB2	2.28	0.63
1:CA:674:G:H2'	1:CA:675:A:H8	1.63	0.63
1:CA:735:C:H2'	1:CA:736:C:C6	2.34	0.63
2:CB:162:ILE:O	2:CB:162:ILE:HD12	1.97	0.63
19:CS:6:LYS:CG	19:CS:7:LYS:HD3	2.28	0.63
22:CV:6182:A:C6	22:CV:6183:G:C5	2.85	0.63
23:DA:1870:C:O2	23:DA:1870:C:H2'	1.97	0.63
23:DA:2365:G:O6	53:D5:39:LYS:HE3	1.98	0.63
26:DD:26:ILE:N	26:DD:26:ILE:HD13	2.14	0.63
27:DE:53:THR:HG23	27:DE:56:GLU:OE1	1.98	0.63
44:DV:72:ARG:HG2	44:DV:89:PHE:HB2	1.80	0.63
1:AA:1352:C:C2	1:AA:1371:G:C2	2.86	0.63
2:AB:163:PHE:HD1	2:AB:185:ILE:HG13	1.63	0.63
8:AH:20:TYR:HD1	8:AH:65:TYR:CD2	2.16	0.63
23:BA:222:A:H5''	23:BA:421:U:OP1	1.98	0.63
34:BL:16:ARG:CZ	34:BL:18:ARG:H	2.10	0.63
35:BM:10:ARG:HB3	35:BM:11:LYS:HG2	1.79	0.63
46:BX:46:LEU:HD21	46:BX:61:ARG:HE	1.62	0.63
1:CA:551:U:O2'	12:CL:85:ARG:HD2	1.99	0.63
1:CA:626:U:H2'	1:CA:627:G:C8	2.34	0.63
1:CA:980:C:O2	14:CN:21:TYR:HD1	1.81	0.63
2:CB:22:LYS:H	2:CB:22:LYS:HZ3	1.46	0.63
2:CB:135:GLN:O	2:CB:139:LYS:HG2	1.96	0.63
12:CL:103:VAL:O	12:CL:106:ALA:HB3	1.97	0.63
16:CP:28:ARG:NH1	16:CP:29:ASP:OD1	2.31	0.63
18:CR:47:THR:OG1	18:CR:49:LYS:HG2	1.98	0.63
23:DA:226:G:H21	23:DA:228:A:H62	1.46	0.63
23:DA:903:C:H2'	23:DA:904:C:H6	1.64	0.63
23:DA:966:G:C6	23:DA:967:C:N4	2.67	0.63
23:DA:1162:G:C2'	23:DA:1163:G:H5'	2.28	0.63
23:DA:1218:C:O2'	23:DA:1219:G:H5'	1.98	0.63
23:DA:1546:A:C8	23:DA:154(B):C:O2	2.51	0.63
23:DA:1856:G:N2	23:DA:1886:C:O2	2.32	0.63
23:DA:2335:A:C8	23:DA:2337:G:C5	2.86	0.63
25:DC:33:LEU:HD23	25:DC:33:LEU:N	2.13	0.63
29:DG:109:PHE:CE2	29:DG:152:ARG:NH1	2.66	0.63
34:DL:18:ARG:HB3	34:DL:18:ARG:CZ	2.27	0.63
36:DN:9:LYS:HE2	36:DN:43:GLU:OE2	1.98	0.63
38:DP:42:ILE:O	38:DP:42:ILE:HD12	1.98	0.63
1:AA:677:U:H3	1:AA:713:G:H22	1.45	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:162:ILE:HD11	2:AB:184:VAL:HG13	1.79	0.63
4:AD:64:LEU:HD12	4:AD:64:LEU:O	1.99	0.63
4:AD:99:SER:O	4:AD:140:VAL:HG23	1.99	0.63
6:AF:37:VAL:HG12	6:AF:38:GLU:O	1.98	0.63
23:BA:302:C:H2'	23:BA:303:U:C6	2.34	0.63
23:BA:528:A:C2	23:BA:2043:C:C5'	2.80	0.63
23:BA:2461:C:H2'	23:BA:2461:C:O2	1.99	0.63
23:BA:2820:A:O4'	36:BN:5:LYS:HG3	1.97	0.63
25:BC:25:THR:O	25:BC:25:THR:HG23	1.99	0.63
25:BC:143:HIS:HD2	25:BC:144:ALA:CB	2.12	0.63
32:BJ:57:LEU:O	32:BJ:72:GLY:HA3	1.97	0.63
41:BS:4:LYS:HD3	41:BS:6:ILE:HD11	1.80	0.63
44:BV:121:HIS:HB3	44:BV:123:ASP:O	1.98	0.63
53:B5:52:LYS:HD3	53:B5:52:LYS:N	2.12	0.63
2:CB:24:TRP:CE3	2:CB:25:ASN:O	2.52	0.63
16:CP:4:ILE:HB	16:CP:66:PRO:HB3	1.80	0.63
23:DA:571:A:C8	23:DA:2030:A:N6	2.66	0.63
23:DA:603:A:N6	23:DA:655:A:C4'	2.58	0.63
23:DA:966:G:H2'	23:DA:967:C:C6	2.32	0.63
23:DA:114(B):A:H4'	32:DJ:48:ARG:NH2	2.13	0.63
23:DA:1152:C:H5''	39:DQ:80:ILE:HG22	1.80	0.63
29:DG:54:ARG:HB3	29:DG:65:HIS:HD2	1.62	0.63
38:DP:48:ILE:HD12	38:DP:48:ILE:H	1.62	0.63
47:DY:35:LEU:CD1	47:DY:53:LEU:HD12	2.28	0.63
53:D5:60:LEU:O	53:D5:62:LEU:HB2	1.99	0.63
1:AA:10:A:H2'	1:AA:11:G:H8	1.63	0.63
6:AF:14:LEU:HD23	6:AF:15:ASP:O	1.98	0.63
9:AI:17:VAL:HA	9:AI:63:ILE:HG13	1.81	0.63
10:AJ:4:ILE:HB	10:AJ:74:ILE:HD11	1.78	0.63
16:AP:20:VAL:HG23	16:AP:34:GLU:O	1.98	0.63
23:BA:1439:A:C2	23:BA:1553:A:C5	2.86	0.63
23:BA:2185:C:H2'	23:BA:2186:G:H8	1.63	0.63
23:BA:2655:G:N2	23:BA:2664:G:C5	2.67	0.63
23:BA:2849:U:H4'	23:BA:2868:A:C2	2.33	0.63
34:BL:50:ARG:HB2	53:B5:60:LEU:HD11	1.81	0.63
37:BO:36:TYR:N	37:BO:36:TYR:CD1	2.66	0.63
46:BX:23:LYS:O	46:BX:23:LYS:HG3	1.98	0.63
50:B2:36:CYS:SG	50:B2:37:LYS:N	2.72	0.63
1:CA:186(D):G:C6	1:CA:191(E):G:N1	2.67	0.63
1:CA:677:U:H3	1:CA:713:G:H22	1.46	0.63
1:CA:1040:U:H2'	1:CA:1041:A:C8	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:30:ARG:HG3	2:CB:31:TYR:CD2	2.33	0.63
3:CC:152:ILE:HD11	3:CC:167:TRP:HD1	1.60	0.63
3:CC:173:VAL:N	3:CC:174:PRO:HD3	2.13	0.63
13:CM:34:LEU:HD13	13:CM:41:PRO:HG3	1.80	0.63
23:DA:828:U:H3'	23:DA:828:U:O2	1.96	0.63
23:DA:954:G:H5''	35:DM:13:GLN:CG	2.28	0.63
23:DA:1541:U:H2'	23:DA:1541:U:O2	1.97	0.63
27:DE:101:LEU:O	27:DE:106:ARG:NH1	2.24	0.63
29:DG:23:ARG:HD3	29:DG:23:ARG:N	2.14	0.63
1:AA:186(D):G:C4	1:AA:191(E):G:N2	2.66	0.63
1:AA:1053:G:C4	1:AA:1199:U:C5	2.87	0.63
1:AA:1123:A:H4'	10:AJ:36:GLY:CA	2.17	0.63
12:AL:6:ILE:H	12:AL:6:ILE:CD1	2.11	0.63
18:AR:70:ILE:O	18:AR:74:ARG:HG3	1.99	0.63
23:BA:140:A:C8	23:BA:1408:C:O2'	2.49	0.63
23:BA:1930:G:N2	23:BA:1968:G:H2'	2.14	0.63
26:BD:117:MET:CE	26:BD:124:GLY:HA3	2.28	0.63
32:BJ:80:ALA:O	32:BJ:82:LYS:N	2.32	0.63
53:B5:26:LYS:HA	53:B5:48:PHE:HE2	1.64	0.63
1:CA:222:U:H2'	1:CA:223:U:C6	2.33	0.63
7:CG:99:LEU:HB3	7:CG:103:TRP:CZ3	2.33	0.63
8:CH:87:SER:HA	8:CH:93:VAL:HG23	1.79	0.63
10:CJ:45:ARG:NH1	14:CN:36:PHE:CD2	2.67	0.63
13:CM:33:ALA:HA	13:CM:59:TYR:HE2	1.64	0.63
23:DA:990:A:H5''	23:DA:991:C:P	2.38	0.63
25:DC:143:HIS:HD2	25:DC:144:ALA:CB	2.11	0.63
25:DC:267:SER:O	25:DC:269:PHE:N	2.32	0.63
27:DE:155:LEU:HD12	27:DE:174:VAL:HB	1.80	0.63
33:DK:87:ILE:HG13	33:DK:91:LEU:HD12	1.79	0.63
35:DM:43:THR:HG23	35:DM:46:GLN:OE1	1.97	0.63
44:DV:37:VAL:HG23	44:DV:38:TYR:N	2.13	0.63
44:DV:104:PHE:HB3	44:DV:141:VAL:HG11	1.79	0.63
45:DW:23:VAL:HB	45:DW:26:TYR:CE2	2.34	0.63
1:AA:511:C:H1'	4:AD:43:HIS:HE2	1.63	0.63
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.81	0.63
15:AO:76:GLU:OE2	15:AO:76:GLU:HA	1.98	0.63
23:BA:1899:G:N2	23:BA:1902:C:C5	2.66	0.63
23:BA:2432:A:H2'	23:BA:2433:A:C8	2.33	0.63
25:BC:237:GLU:OE2	25:BC:237:GLU:O	2.17	0.63
37:BO:11:LYS:O	37:BO:12:PHE:HB3	1.99	0.63
39:BQ:30:LYS:O	39:BQ:31:SER:CB	2.46	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BV:24:LEU:CB	44:BV:41:LEU:HG	2.28	0.63
47:BY:14:ARG:HA	47:BY:17:SER:CB	2.23	0.63
1:CA:40:C:H2'	1:CA:41:G:O4'	1.99	0.63
1:CA:186(D):G:C4	1:CA:191(E):G:N2	2.67	0.63
1:CA:648:A:H2'	1:CA:649:G:H8	1.64	0.63
1:CA:1051:C:H42	1:CA:1207:G:H1	1.47	0.63
2:CB:11:LEU:HD12	2:CB:217:ARG:NH2	2.14	0.63
2:CB:80:ILE:HD12	2:CB:211:ILE:HB	1.79	0.63
12:CL:5:THR:HG23	12:CL:8:GLN:HG3	1.80	0.63
23:DA:185:U:H2'	23:DA:186:G:C8	2.33	0.63
32:DJ:94:ILE:CG2	32:DJ:107:LYS:HB3	2.28	0.63
33:DK:11:ALA:HB3	33:DK:85:VAL:HG23	1.80	0.63
34:DL:62:LEU:N	34:DL:62:LEU:CD2	2.52	0.63
37:DO:33:LYS:O	37:DO:54:LEU:HG	1.98	0.63
39:DQ:62:ILE:O	39:DQ:63:VAL:C	2.37	0.63
40:DR:40:LEU:C	40:DR:45:THR:HB	2.18	0.63
50:D2:40:LYS:HZ1	50:D2:49:CYS:HB3	1.64	0.63
1:AA:643:C:H5'	8:AH:31:PHE:CE1	2.33	0.63
1:AA:805:C:H2'	1:AA:806:C:H6	1.64	0.63
10:AJ:7:LYS:O	10:AJ:8:LEU:HD12	1.98	0.63
23:BA:1132:A:O2'	23:BA:1133:U:H5'	1.98	0.63
23:BA:1726:G:H2'	23:BA:1727:U:C6	2.34	0.63
23:BA:2036:C:H5'	23:BA:2036:C:C6	2.34	0.63
25:BC:35:LYS:CE	25:BC:103:ARG:HA	2.29	0.63
26:BD:51:PHE:HB3	26:BD:77:ILE:HD12	1.80	0.63
28:BF:8:LYS:HD3	28:BF:9:ARG:HG3	1.80	0.63
28:BF:105:LYS:NZ	49:B1:52:SER:HB2	2.13	0.63
29:BG:94:TYR:H	29:BG:94:TYR:HD1	1.44	0.63
34:BL:91:PHE:N	34:BL:91:PHE:CD1	2.66	0.63
35:BM:43:THR:HG23	35:BM:46:GLN:OE1	1.98	0.63
40:BR:22:VAL:HG12	40:BR:23:GLU:N	2.13	0.63
45:BW:50:ASN:C	45:BW:62:LEU:HB2	2.19	0.63
23:DA:296:C:O2'	23:DA:297:C:H5'	1.99	0.63
25:DC:244:ARG:HB2	25:DC:245:PRO:CD	2.29	0.63
26:DD:176:ILE:HG22	26:DD:176:ILE:O	1.96	0.63
28:DF:55:LYS:HD2	28:DF:58:GLN:HE21	1.63	0.63
28:DF:86:MET:H	28:DF:87:PRO:CD	2.11	0.63
35:DM:80:GLU:OE2	35:DM:80:GLU:HA	1.98	0.63
36:DN:44:LEU:HD13	36:DN:44:LEU:O	1.99	0.63
36:DN:67:LEU:HD22	36:DN:76:VAL:HG11	1.81	0.63
39:DQ:92:ARG:CG	40:DR:11:GLN:NE2	2.57	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:364:A:C2	1:AA:365:U:O4	2.51	0.63
2:AB:106:LYS:HE2	2:AB:110:GLN:NE2	2.14	0.63
6:AF:18:GLN:HA	6:AF:21:LEU:HD23	1.80	0.63
7:AG:9:VAL:HG22	7:AG:94:ARG:HH11	1.62	0.63
7:AG:138:LYS:HE2	7:AG:142:GLU:OE2	1.98	0.63
23:BA:379:G:H1	46:BX:20:ARG:HH22	1.45	0.63
23:BA:1558:A:H1'	23:BA:1559:G:OP2	1.98	0.63
23:BA:2541:A:H5''	23:BA:2542:A:OP2	1.99	0.63
23:BA:2543:G:H2'	23:BA:2544:G:C8	2.34	0.63
35:BM:43:THR:HG23	35:BM:46:GLN:CD	2.19	0.63
47:BY:2:LYS:HA	47:BY:5:GLU:CD	2.19	0.63
1:CA:781:A:H2'	1:CA:782:A:H5'	1.80	0.63
1:CA:1347:G:C6	9:CI:107:ARG:NH2	2.61	0.63
7:CG:9:VAL:HG22	7:CG:94:ARG:HH11	1.63	0.63
17:CQ:18:THR:HG23	17:CQ:69:LYS:HE3	1.79	0.63
23:DA:336:C:H2'	23:DA:336:C:O2	1.98	0.63
23:DA:1022:G:H8	32:DJ:92:GLN:HE22	1.45	0.63
23:DA:1139:G:OP1	32:DJ:125:ALA:HB2	1.99	0.63
23:DA:2485:G:H5''	35:DM:46:GLN:HE21	1.64	0.63
23:DA:2531:A:H5'	29:DG:157:TYR:CE1	2.34	0.63
29:DG:168:PRO:O	29:DG:170:ARG:HG3	1.97	0.63
34:DL:61:ARG:C	34:DL:62:LEU:HD13	2.18	0.63
35:DM:48:GLU:O	35:DM:52:VAL:HG12	1.99	0.63
39:DQ:92:ARG:HD3	39:DQ:94:ASN:HB3	1.79	0.63
2:AB:30:ARG:HG3	2:AB:31:TYR:CD2	2.33	0.63
10:AJ:45:ARG:NH1	14:AN:36:PHE:CD2	2.67	0.63
23:BA:310:A:OP1	43:BU:18:GLY:HA2	1.99	0.63
23:BA:1141:U:H6	32:BJ:86:THR:OG1	1.80	0.63
23:BA:1476:C:H6	23:BA:1476:C:H3'	1.63	0.63
23:BA:2712:U:H1'	23:BA:712(B):A:H8	1.64	0.63
26:BD:37:ARG:O	26:BD:45:THR:HA	1.99	0.63
38:BP:48:ILE:H	38:BP:48:ILE:HD12	1.63	0.63
44:BV:5:LEU:HD23	44:BV:6:LYS:N	2.12	0.63
44:BV:104:PHE:HB3	44:BV:141:VAL:HG11	1.81	0.63
44:BV:108:PRO:HA	44:BV:142:SER:O	1.99	0.63
51:B3:38:LYS:HG2	51:B3:39:TYR:H	1.63	0.63
1:CA:386:C:H2'	1:CA:387:U:C5'	2.27	0.63
4:CD:109:GLY:C	4:CD:111:ALA:H	2.01	0.63
6:CF:15:ASP:OD1	6:CF:17:SER:HB2	1.97	0.63
6:CF:90:VAL:CG1	6:CF:91:VAL:N	2.61	0.63
9:CI:10:ARG:HD3	9:CI:11:LYS:HG3	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:270(J):G:HO2'	23:DA:270(K):G:H8	1.44	0.63
23:DA:628:G:H5''	53:D5:18:ALA:CB	2.29	0.63
23:DA:1010:A:H1'	23:DA:1153:C:H1'	1.81	0.63
23:DA:1162:G:H2'	23:DA:1163:G:H5'	1.81	0.63
23:DA:1165:U:H2'	23:DA:1166:C:C6	2.34	0.63
23:DA:2476:A:C2	23:DA:2477:C:C6	2.87	0.63
23:DA:2808:U:C2'	23:DA:2809:A:H5'	2.29	0.63
23:DA:2846:G:C5	23:DA:2847:U:C5	2.86	0.63
28:DF:174:GLU:HG2	28:DF:180:PHE:CD1	2.34	0.63
32:DJ:94:ILE:HG21	32:DJ:107:LYS:HB3	1.81	0.63
34:DL:49:ARG:CG	34:DL:50:ARG:N	2.59	0.63
34:DL:58:THR:C	34:DL:61:ARG:HE	2.02	0.63
38:DP:89:VAL:O	38:DP:89:VAL:HG22	1.98	0.63
38:DP:90:GLN:HA	38:DP:90:GLN:NE2	2.13	0.63
53:D5:50:LEU:O	53:D5:51:ALA:HB2	1.99	0.63
53:D5:51:ALA:H	53:D5:54:GLU:HB2	1.63	0.63
1:AA:1152:A:OP1	10:AJ:68:HIS:CD2	2.52	0.62
1:AA:1328:C:OP1	13:AM:28:ALA:HB2	1.99	0.62
3:AC:91:LEU:HB3	3:AC:99:VAL:HG11	1.79	0.62
3:AC:195:VAL:O	3:AC:196:LEU:HB2	1.98	0.62
23:BA:229:A:H5'	23:BA:230:U:H5'	1.80	0.62
23:BA:336:C:O2	23:BA:336:C:H2'	1.98	0.62
23:BA:114(B):A:C4	23:BA:1144:G:C8	2.87	0.62
23:BA:1794:U:H2'	23:BA:1795:C:C6	2.34	0.62
23:BA:2335:A:O2'	23:BA:2336:A:H5''	1.98	0.62
23:BA:2747:G:C6	23:BA:2754:U:C5	2.86	0.62
24:BB:93:C:H2'	24:BB:94:C:H6	1.65	0.62
25:BC:235:GLY:O	25:BC:237:GLU:N	2.32	0.62
28:BF:32:PRO:HB2	28:BF:172:LEU:HD22	1.80	0.62
32:BJ:93:LYS:CE	32:BJ:95:TYR:HE1	2.12	0.62
34:BL:138:LEU:HD11	34:BL:144:GLU:HB3	1.81	0.62
37:BO:72:ALA:O	37:BO:76:LYS:HG3	1.99	0.62
40:BR:66:ARG:HD2	40:BR:88:ARG:NH1	2.13	0.62
1:CA:736:C:H2'	1:CA:737:A:C8	2.34	0.62
1:CA:1083:U:C5	1:CA:1084:G:C5	2.88	0.62
23:DA:1434:A:H61	23:DA:1558:A:H62	1.46	0.62
23:DA:1900:A:N1	23:DA:1970:A:C6	2.68	0.62
23:DA:2378:A:O2'	37:DO:21:THR:HG21	1.99	0.62
25:DC:267:SER:O	25:DC:270:ILE:HG13	1.99	0.62
30:DH:15:VAL:O	30:DH:17:GLN:N	2.32	0.62
34:DL:128:HIS:CA	34:DL:147:LEU:HB3	2.10	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DX:13:ILE:C	46:DX:13:ILE:HD12	2.19	0.62
1:AA:505:G:H2'	1:AA:506:G:H8	1.64	0.62
2:AB:215:LEU:O	2:AB:219:VAL:HG23	1.99	0.62
3:AC:126:ARG:O	3:AC:127:ARG:HB2	1.99	0.62
6:AF:63:TYR:N	6:AF:63:TYR:CD2	2.63	0.62
15:AO:7:GLU:O	15:AO:11:VAL:HG23	1.99	0.62
23:BA:483:A:H4'	43:BU:49:VAL:HG23	1.81	0.62
23:BA:795:C:H2'	23:BA:796:C:H6	1.64	0.62
23:BA:1449:G:H2'	23:BA:1450:C:C6	2.34	0.62
23:BA:2597:G:O2'	23:BA:2598:A:H5'	1.98	0.62
27:BE:53:THR:N	27:BE:56:GLU:OE1	2.32	0.62
36:BN:54:LEU:HD23	36:BN:62:ALA:HB1	1.80	0.62
42:BT:49:VAL:HG23	42:BT:50:LYS:N	2.13	0.62
1:CA:24:U:H2'	1:CA:25:C:C6	2.33	0.62
1:CA:509:A:H5'	4:CD:54:TYR:HD2	1.64	0.62
1:CA:1352:C:C2	1:CA:1371:G:C2	2.87	0.62
15:CO:7:GLU:O	15:CO:11:VAL:HG23	1.99	0.62
23:DA:270(I):C:O2	23:DA:270(I):C:H2'	1.97	0.62
23:DA:628:G:H5''	53:D5:18:ALA:HB2	1.82	0.62
23:DA:1486:A:N6	23:DA:1504:C:H42	1.97	0.62
23:DA:2185:C:H2'	23:DA:2186:G:H8	1.63	0.62
25:DC:40:THR:HG22	25:DC:41:GLY:N	2.14	0.62
25:DC:145:VAL:HG12	25:DC:146:GLU:O	1.99	0.62
29:DG:43:VAL:HG12	29:DG:52:VAL:HG22	1.81	0.62
30:DH:79:ILE:HB	30:DH:144:VAL:HA	1.81	0.62
30:DH:88:ILE:CG2	30:DH:90:GLY:H	2.12	0.62
33:DK:102:VAL:HG23	33:DK:121:VAL:HA	1.80	0.62
35:DM:69:PHE:CD1	35:DM:70:PRO:HD2	2.33	0.62
40:DR:40:LEU:H	40:DR:47:VAL:CG2	2.10	0.62
46:DX:32:LYS:HG2	46:DX:33:LYS:H	1.64	0.62
1:AA:648:A:H2'	1:AA:649:G:H8	1.63	0.62
1:AA:1201:A:C1'	1:AA:1202:G:OP2	2.47	0.62
1:AA:1430:C:H2'	1:AA:1431:C:H6	1.64	0.62
23:BA:1156:A:H4'	23:BA:1157:G:OP2	1.98	0.62
30:BH:130:TYR:O	30:BH:132:PRO:HD3	1.99	0.62
43:BU:13:VAL:CG1	43:BU:72:VAL:HB	2.28	0.62
1:CA:160:A:H2'	1:CA:161:A:O4'	1.99	0.62
1:CA:1111:A:C2	3:CC:177:THR:HG23	2.34	0.62
2:CB:32:ILE:HD11	2:CB:190:THR:HG21	1.81	0.62
5:CE:14:ARG:NH1	5:CE:129:ILE:HD11	2.14	0.62
5:CE:43:LEU:HD11	5:CE:132:ALA:HB1	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:119:LEU:HB2	8:CH:124:ALA:HB2	1.80	0.62
23:DA:1051:G:C6	23:DA:1052:C:N3	2.67	0.62
23:DA:1592:C:H2'	23:DA:1593:G:H8	1.64	0.62
23:DA:1899:G:N2	23:DA:1902:C:N4	2.35	0.62
23:DA:2329:G:H2'	23:DA:2330:G:C8	2.34	0.62
24:DB:16:G:C6	24:DB:69:G:C2	2.87	0.62
27:DE:66:PRO:HB3	27:DE:68:LYS:NZ	2.15	0.62
32:DJ:142:ARG:HG3	32:DJ:142:ARG:NH1	2.07	0.62
40:DR:55:ALA:HA	40:DR:101:GLY:O	1.99	0.62
1:AA:349:A:O2'	1:AA:350:G:H5'	1.99	0.62
1:AA:505:G:C6	1:AA:535:A:C2	2.87	0.62
1:AA:920:U:H2'	1:AA:921:U:H6	1.64	0.62
1:AA:963:G:H2'	1:AA:964:A:C8	2.34	0.62
1:AA:1083:U:C5	1:AA:1084:G:C5	2.87	0.62
1:AA:1124:G:H4'	10:AJ:38:ILE:HD11	1.80	0.62
1:AA:1179:A:H4'	9:AI:103:THR:HA	1.81	0.62
1:AA:1430:C:H2'	1:AA:1431:C:C6	2.35	0.62
2:AB:11:LEU:HD12	2:AB:217:ARG:NH2	2.13	0.62
2:AB:63:MET:CG	2:AB:225:ALA:HB1	2.30	0.62
5:AE:41:VAL:HG11	5:AE:113:ALA:CB	2.28	0.62
5:AE:145:LYS:HE3	5:AE:149:GLU:OE1	1.99	0.62
23:BA:2371:G:O2'	51:B3:45:LYS:HB3	2.00	0.62
25:BC:31:LYS:O	25:BC:35:LYS:CB	2.46	0.62
32:BJ:94:ILE:HG21	32:BJ:107:LYS:HB3	1.82	0.62
34:BL:49:ARG:HG3	34:BL:50:ARG:H	1.63	0.62
34:BL:91:PHE:N	34:BL:91:PHE:HD1	1.96	0.62
36:BN:50:HIS:O	36:BN:54:LEU:HB2	1.99	0.62
41:BS:36:LEU:HD12	41:BS:48:ALA:HA	1.80	0.62
46:BX:19:GLN:HG3	46:BX:41:ARG:NE	2.13	0.62
46:BX:19:GLN:CG	46:BX:41:ARG:HE	2.10	0.62
1:CA:799:G:H2'	1:CA:800:G:O5'	1.99	0.62
1:CA:878:G:H5'	8:CH:89:PRO:HG2	1.81	0.62
1:CA:950:U:H2'	1:CA:951:G:H8	1.63	0.62
3:CC:173:VAL:O	3:CC:173:VAL:CG1	2.41	0.62
5:CE:15:ARG:HG2	5:CE:15:ARG:O	1.98	0.62
6:CF:14:LEU:HD23	6:CF:15:ASP:O	1.98	0.62
7:CG:47:CYS:O	7:CG:50:ILE:HB	1.99	0.62
23:DA:1449:G:H2'	23:DA:1450:C:C6	2.35	0.62
25:DC:158:ALA:O	25:DC:161:THR:HG23	2.00	0.62
26:DD:111:ARG:HD2	26:DD:160:TYR:CE1	2.31	0.62
32:DJ:143:LEU:C	32:DJ:143:LEU:HD13	2.18	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DK:80:ASP:OD2	38:DP:71:GLY:HA3	1.99	0.62
34:DL:140:ALA:O	34:DL:141:ALA:HB2	1.99	0.62
38:DP:84:GLN:HA	38:DP:84:GLN:HE21	1.64	0.62
43:DU:89:PHE:H	43:DU:90:LEU:HD23	1.64	0.62
1:AA:300:A:H1'	1:AA:565:U:O2	1.99	0.62
1:AA:376:G:OP1	16:AP:5:ARG:HB2	1.99	0.62
2:AB:95:GLN:HG3	2:AB:147:LYS:O	2.00	0.62
3:AC:11:ARG:HH21	3:AC:180:ALA:HB3	1.64	0.62
3:AC:173:VAL:N	3:AC:174:PRO:HD3	2.15	0.62
9:AI:69:GLY:O	9:AI:73:GLN:HG3	1.99	0.62
23:BA:257:A:H2'	23:BA:258:G:O5'	1.99	0.62
23:BA:2212:A:H1'	23:BA:2215:G:C4	2.34	0.62
23:BA:2485:G:H5''	35:BM:46:GLN:HE21	1.63	0.62
24:BB:13:A:C8	45:BW:74:ARG:NH2	2.68	0.62
34:BL:59:LEU:HA	34:BL:61:ARG:HD2	1.80	0.62
35:BM:47:ILE:CG2	35:BM:48:GLU:N	2.56	0.62
40:BR:5:VAL:HG21	40:BR:35:LEU:HG	1.80	0.62
40:BR:6:LYS:HG3	40:BR:11:GLN:HG2	1.80	0.62
50:B2:20:ARG:CA	50:B2:23:HIS:HD2	2.08	0.62
2:CB:177:ALA:HB1	2:CB:182:ILE:HB	1.82	0.62
6:CF:74:ASP:HB3	6:CF:77:ARG:HH22	1.64	0.62
9:CI:17:VAL:HA	9:CI:63:ILE:HG13	1.81	0.62
10:CJ:42:THR:HG23	10:CJ:68:HIS:HA	1.80	0.62
22:CV:6195:G:N2	22:CV:6196:A:C4	2.67	0.62
23:DA:991:C:C5	23:DA:1185:C:C4	2.88	0.62
23:DA:2718:G:H2'	23:DA:2719:G:H8	1.64	0.62
25:DC:108:PRO:HB3	25:DC:143:HIS:CE1	2.34	0.62
32:DJ:113:MET:O	32:DJ:116:THR:O	2.17	0.62
34:DL:58:THR:O	34:DL:61:ARG:NE	2.29	0.62
43:DU:76:CYS:HB3	43:DU:77:PRO:CD	2.29	0.62
1:AA:193:C:H2'	1:AA:194:C:C6	2.34	0.62
1:AA:405:U:H5''	1:AA:406:G:O4'	2.00	0.62
1:AA:1040:U:H2'	1:AA:1041:A:C8	2.34	0.62
1:AA:1311:G:H1	1:AA:1326:C:H42	1.45	0.62
4:AD:100:ARG:HH21	4:AD:118:ARG:NH1	1.95	0.62
6:AF:74:ASP:HB3	6:AF:77:ARG:HH22	1.64	0.62
12:AL:23:VAL:HG13	12:AL:97:TYR:CE2	2.35	0.62
23:BA:1055:G:H2'	23:BA:1056:G:H8	1.63	0.62
23:BA:2090:G:H21	46:BX:45:ASN:HD21	1.46	0.62
23:BA:2101:G:C2'	23:BA:2102:U:H5'	2.30	0.62
25:BC:155:LEU:HD23	25:BC:177:LEU:CD2	2.20	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:76:SER:HB2	28:BF:83:ARG:C	2.19	0.62
39:BQ:83:LEU:HA	39:BQ:86:ALA:HB3	1.82	0.62
1:CA:137:C:O4'	16:CP:63:GLY:HA3	1.99	0.62
1:CA:324:G:OP1	20:CT:70:SER:HB2	2.00	0.62
6:CF:8:ILE:HD11	6:CF:79:LEU:HD13	1.82	0.62
23:DA:7:G:H2'	23:DA:8:A:C8	2.34	0.62
28:DF:129:GLY:HA3	28:DF:163:ALA:HB3	1.80	0.62
29:DG:89:ILE:HG22	29:DG:89:ILE:O	1.99	0.62
37:DO:90:GLY:O	37:DO:92:TYR:N	2.33	0.62
1:AA:102:G:H2'	1:AA:103:C:C6	2.35	0.62
8:AH:86:ILE:HG21	8:AH:133:LEU:HD13	1.82	0.62
11:AK:95:ILE:HG21	11:AK:108:ILE:HD13	1.81	0.62
12:AL:41:THR:HA	12:AL:52:ARG:O	1.99	0.62
23:BA:2218:G:O2'	23:BA:2219:G:H5'	2.00	0.62
26:BD:149:ARG:HG3	26:BD:150:VAL:N	2.15	0.62
32:BJ:114:LEU:HA	32:BJ:118:PRO:HB3	1.81	0.62
35:BM:21:THR:O	35:BM:23:GLY:N	2.33	0.62
39:BQ:30:LYS:O	39:BQ:31:SER:HB3	1.99	0.62
1:CA:836:G:C6	1:CA:851:G:C6	2.88	0.62
15:CO:78:TYR:O	15:CO:82:ILE:HG22	2.00	0.62
23:DA:556:G:H2'	23:DA:557:U:C6	2.34	0.62
23:DA:978:G:C2'	23:DA:979:G:H5'	2.30	0.62
23:DA:1018:C:N3	23:DA:1019:U:C5	2.68	0.62
23:DA:1142:U:H5''	23:DA:114(B):A:H5'	1.80	0.62
23:DA:1586:A:N6	23:DA:1587:A:C2	2.68	0.62
23:DA:2273:A:O2'	23:DA:2274:A:H5'	2.00	0.62
24:DB:93:C:H2'	24:DB:94:C:H6	1.64	0.62
26:DD:36:ARG:HD3	26:DD:85:ASN:ND2	2.10	0.62
1:AA:152:A:H62	1:AA:169:C:N4	1.97	0.62
1:AA:1347:G:H22	1:AA:1373:G:H2'	1.64	0.62
1:AA:1443:G:H3'	1:AA:1446:A:H5''	1.80	0.62
4:AD:93:PHE:O	4:AD:97:LEU:HG	1.99	0.62
7:AG:47:CYS:O	7:AG:50:ILE:HB	1.99	0.62
14:AN:26:ARG:NH1	14:AN:47:LEU:HD21	2.15	0.62
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.35	0.62
22:AV:6191:A:H2'	22:AV:6192:G:C8	2.34	0.62
23:BA:903:C:H2'	23:BA:904:C:H6	1.65	0.62
23:BA:1586:A:N6	23:BA:1587:A:C2	2.67	0.62
23:BA:2847:U:OP1	38:BP:98:LYS:HD3	2.00	0.62
26:BD:111:ARG:HD2	26:BD:160:TYR:CE1	2.30	0.62
30:BH:79:ILE:HB	30:BH:144:VAL:HA	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BR:39:LEU:CB	40:BR:47:VAL:HG21	2.30	0.62
51:B3:34:LEU:O	51:B3:34:LEU:HD22	2.00	0.62
1:CA:919:A:O2'	1:CA:920:U:H5'	1.99	0.62
9:CI:79:LEU:HD23	9:CI:101:PHE:O	1.99	0.62
23:DA:244:A:C2	23:DA:255:A:C4	2.88	0.62
23:DA:245:G:H2'	23:DA:246:C:H6	1.63	0.62
23:DA:1858:G:O2'	23:DA:1859:A:H8	1.82	0.62
23:DA:2729:G:H1'	26:DD:187:ALA:CB	2.26	0.62
25:DC:155:LEU:HD23	25:DC:177:LEU:CD2	2.26	0.62
40:DR:21:ARG:CZ	40:DR:91:TYR:HE1	2.12	0.62
52:D4:19:ARG:HG3	52:D4:19:ARG:NH1	2.03	0.62
53:D5:33:ASN:HA	53:D5:36:LYS:HD3	1.81	0.62
1:AA:736:C:H2'	1:AA:737:A:C8	2.35	0.62
1:AA:920:U:H2'	1:AA:921:U:C6	2.35	0.62
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.35	0.62
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.00	0.62
5:AE:147:ASP:O	5:AE:151:LEU:HG	1.99	0.62
9:AI:10:ARG:HD3	9:AI:11:LYS:HG3	1.81	0.62
23:BA:924:C:H2'	23:BA:925:C:C6	2.35	0.62
23:BA:1010:A:H1'	23:BA:1153:C:H1'	1.82	0.62
23:BA:2262:U:H2'	23:BA:2263:C:H6	1.65	0.62
23:BA:2401:U:H2'	23:BA:2402:C:H5''	1.81	0.62
30:BH:88:ILE:HG12	30:BH:123:LEU:HA	1.82	0.62
36:BN:52:ILE:CD1	36:BN:79:LEU:HD21	2.29	0.62
40:BR:22:VAL:CG1	40:BR:23:GLU:N	2.62	0.62
44:BV:117:LEU:O	44:BV:117:LEU:HG	2.00	0.62
1:CA:405:U:H5''	1:CA:406:G:O4'	1.99	0.62
1:CA:623:C:C4	1:CA:624:C:C5	2.88	0.62
1:CA:1053:G:C4	1:CA:1199:U:C5	2.87	0.62
2:CB:158:LEU:H	2:CB:158:LEU:HD12	1.65	0.62
2:CB:215:LEU:O	2:CB:219:VAL:HG23	1.99	0.62
4:CD:3:ARG:HH21	4:CD:118:ARG:HD3	1.65	0.62
7:CG:69:VAL:O	7:CG:71:PRO:HD3	2.00	0.62
7:CG:71:PRO:HG3	7:CG:103:TRP:HZ3	1.65	0.62
15:CO:30:ALA:CA	15:CO:85:LEU:HD11	2.29	0.62
23:DA:1343:G:H8	23:DA:1343:G:C5'	2.13	0.62
24:DB:45:A:H1'	28:DF:95:ARG:NH2	2.15	0.62
25:DC:142:VAL:HG23	25:DC:193:VAL:HA	1.82	0.62
30:DH:88:ILE:HG22	30:DH:90:GLY:H	1.65	0.62
36:DN:54:LEU:HD23	36:DN:62:ALA:HB1	1.81	0.62
40:DR:20:LEU:HD23	40:DR:20:LEU:O	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:558:G:OP1	32:BJ:134:PRO:HD2	2.00	0.62
23:BA:1331:A:O2'	23:BA:1332:G:H8	1.82	0.62
29:BG:109:PHE:CE2	29:BG:152:ARG:NH1	2.68	0.62
34:BL:30:THR:HG22	34:BL:31:ALA:N	2.15	0.62
35:BM:119:ARG:HG2	35:BM:120:ILE:HD13	1.82	0.62
36:BN:55:ALA:HA	36:BN:80:PHE:HE1	1.59	0.62
38:BP:26:ASP:HB3	38:BP:92:GLY:H	1.64	0.62
39:BQ:16:LYS:O	39:BQ:20:LEU:HD22	2.00	0.62
53:B5:23:VAL:CG1	53:B5:47:LYS:HB3	2.30	0.62
1:CA:109:A:N6	1:CA:326:G:C5	2.68	0.62
1:CA:304:U:H2'	1:CA:305:G:C8	2.35	0.62
1:CA:781:A:H4'	1:CA:1522:U:O2'	2.00	0.62
1:CA:1117:G:O3'	9:CI:104:ARG:HG3	1.99	0.62
2:CB:106:LYS:HE2	2:CB:110:GLN:NE2	2.15	0.62
2:CB:126:GLU:C	2:CB:127:ILE:HD13	2.20	0.62
4:CD:57:ARG:HB3	4:CD:206:PHE:HB2	1.82	0.62
12:CL:85:ARG:HB2	12:CL:100:VAL:HG23	1.81	0.62
19:CS:5:LEU:HD12	19:CS:8:GLY:O	1.99	0.62
21:CU:24:ARG:HG3	21:CU:25:LYS:H	1.65	0.62
23:DA:573:G:O2'	23:DA:574:C:H3'	1.99	0.62
23:DA:1153:C:H5'	39:DQ:76:TYR:HE2	1.65	0.62
23:DA:1558:A:H1'	23:DA:1559:G:OP2	2.00	0.62
27:DE:108:LYS:O	27:DE:112:MET:HG3	2.00	0.62
30:DH:88:ILE:HG12	30:DH:123:LEU:HA	1.81	0.62
34:DL:59:LEU:HA	34:DL:61:ARG:HD2	1.79	0.62
36:DN:11:ASN:O	36:DN:12:ARG:HB2	1.98	0.62
42:DT:49:VAL:HG23	42:DT:50:LYS:N	2.15	0.62
1:AA:193:C:O4'	20:AT:60:GLU:OE2	2.17	0.61
1:AA:406:G:N2	1:AA:437:U:C2	2.68	0.61
2:AB:25:ASN:HB3	2:AB:26:PRO:HD2	1.82	0.61
3:AC:134:ILE:CG2	3:AC:168:ALA:HB3	2.30	0.61
5:AE:31:LEU:HD21	5:AE:43:LEU:CD1	2.29	0.61
11:AK:59:TYR:CZ	11:AK:63:LEU:HD11	2.35	0.61
13:AM:33:ALA:HA	13:AM:59:TYR:HE2	1.64	0.61
17:AQ:7:THR:O	17:AQ:23:VAL:HG13	2.00	0.61
20:AT:71:THR:HG22	20:AT:72:LEU:N	2.15	0.61
23:BA:1981:A:H5''	23:BA:1982:C:OP2	2.00	0.61
25:BC:95:LEU:HD12	25:BC:95:LEU:O	2.00	0.61
25:BC:166:GLN:HA	25:BC:166:GLN:NE2	2.15	0.61
26:BD:117:MET:HE2	26:BD:124:GLY:HA3	1.82	0.61
36:BN:99:LYS:HA	36:BN:112:ALA:CB	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BO:41:ASP:OD2	37:BO:44:LYS:HD3	2.00	0.61
40:BR:64:HIS:CD2	40:BR:92:THR:CG2	2.83	0.61
42:BT:14:SER:O	42:BT:17:ALA:N	2.33	0.61
5:CE:102:ALA:HB2	5:CE:120:THR:CG2	2.28	0.61
11:CK:92:GLU:HA	11:CK:95:ILE:HG13	1.81	0.61
16:CP:67:THR:HG22	16:CP:68:ASP:H	1.64	0.61
18:CR:54:ARG:HD2	18:CR:54:ARG:N	2.14	0.61
23:DA:188:G:H2'	23:DA:189:G:H5'	1.81	0.61
23:DA:356:G:H2'	23:DA:357:A:H8	1.64	0.61
23:DA:1487:G:N3	23:DA:1488:G:C8	2.68	0.61
23:DA:2705:A:H2	36:DN:64:ARG:NH1	1.98	0.61
30:DH:88:ILE:HD11	30:DH:123:LEU:HG	1.82	0.61
40:DR:58:VAL:HG12	40:DR:97:LYS:HB2	1.82	0.61
1:AA:114:U:H2'	1:AA:115:G:C8	2.35	0.61
1:AA:781:A:H2'	1:AA:782:A:H5'	1.82	0.61
8:AH:48:TYR:HA	8:AH:60:ARG:O	2.00	0.61
18:AR:19:LYS:O	18:AR:20:ALA:HB2	1.99	0.61
23:BA:357:A:H2'	23:BA:358:U:C6	2.35	0.61
23:BA:1216:G:OP1	39:BQ:8:VAL:HG12	2.00	0.61
23:BA:2064:C:H2'	23:BA:2065:C:C6	2.36	0.61
23:BA:2086:U:OP2	25:BC:263:ARG:HD3	2.01	0.61
23:BA:2273:A:O2'	23:BA:2274:A:H5'	1.99	0.61
27:BE:117:ARG:NH2	27:BE:187:VAL:HA	2.14	0.61
34:BL:50:ARG:HG3	53:B5:7:HIS:CD2	2.35	0.61
37:BO:39:ILE:HG13	37:BO:73:LEU:HD13	1.81	0.61
39:BQ:15:LYS:O	39:BQ:19:LYS:HG3	2.00	0.61
39:BQ:92:ARG:NH2	40:BR:11:GLN:N	2.44	0.61
43:BU:81:LYS:NZ	43:BU:97:ARG:HD3	2.14	0.61
44:BV:39:VAL:HG23	44:BV:40:ASP:N	2.14	0.61
3:CC:40:ARG:O	3:CC:44:GLU:HG2	1.98	0.61
5:CE:140:ARG:O	5:CE:140:ARG:HG2	2.00	0.61
5:CE:151:LEU:HD13	8:CH:77:GLU:HG2	1.82	0.61
6:CF:16:GLN:CD	6:CF:16:GLN:H	2.03	0.61
11:CK:63:LEU:N	11:CK:63:LEU:HD23	2.15	0.61
14:CN:36:PHE:CD1	14:CN:36:PHE:O	2.54	0.61
19:CS:63:THR:N	19:CS:66:MET:HE3	2.16	0.61
23:DA:310:A:OP1	43:DU:18:GLY:HA2	1.99	0.61
23:DA:860:U:HO2'	23:DA:861:A:H5'	1.65	0.61
23:DA:1046:A:H3'	23:DA:1047:G:C5'	2.30	0.61
23:DA:1389:G:H2'	23:DA:1390:U:C6	2.35	0.61
23:DA:2531:A:C5'	29:DG:157:TYR:CZ	2.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2542:A:H4'	23:DA:2542:A:OP1	1.97	0.61
29:DG:73:ALA:O	29:DG:77:LYS:HG2	2.00	0.61
29:DG:144:VAL:HA	29:DG:147:ASN:HB2	1.82	0.61
35:DM:43:THR:HG23	35:DM:46:GLN:CD	2.20	0.61
39:DQ:15:LYS:O	39:DQ:19:LYS:HG3	1.99	0.61
40:DR:66:ARG:HD2	40:DR:88:ARG:NH1	2.15	0.61
44:DV:39:VAL:HG23	44:DV:40:ASP:N	2.14	0.61
44:DV:127:LYS:HD3	44:DV:162:GLU:OE1	1.99	0.61
1:AA:373:A:O2'	1:AA:374:A:H5'	1.99	0.61
1:AA:625:G:C5	1:AA:626:U:C5	2.88	0.61
1:AA:950:U:H2'	1:AA:951:G:H8	1.66	0.61
1:AA:1223:C:P	1:AA:1224:G:H2'	2.40	0.61
1:AA:1257:U:O4'	1:AA:1257:U:OP2	2.18	0.61
7:AG:69:VAL:O	7:AG:71:PRO:HD3	1.99	0.61
7:AG:99:LEU:HB3	7:AG:103:TRP:CZ3	2.34	0.61
13:AM:34:LEU:HD13	13:AM:41:PRO:HG3	1.81	0.61
21:AU:18:TYR:HD2	21:AU:22:ARG:CG	2.13	0.61
23:BA:942:G:H5'	34:BL:35:HIS:HB3	1.81	0.61
23:BA:1141:U:H6	32:BJ:86:THR:HG1	1.45	0.61
23:BA:1812:A:C2'	23:BA:1813:G:H5'	2.30	0.61
23:BA:2531:A:H5'	29:BG:157:TYR:CE1	2.35	0.61
23:BA:2808:U:C2'	23:BA:2809:A:H5'	2.30	0.61
24:BB:104:A:O4'	44:BV:29:TYR:HE1	1.83	0.61
25:BC:40:THR:HG22	25:BC:41:GLY:N	2.14	0.61
36:BN:4:LEU:O	36:BN:4:LEU:HD23	1.99	0.61
38:BP:26:ASP:HB3	38:BP:92:GLY:N	2.15	0.61
42:BT:50:LYS:H	42:BT:87:GLN:NE2	1.89	0.61
44:BV:29:TYR:HA	44:BV:33:LEU:O	2.00	0.61
1:CA:552:U:H4'	12:CL:85:ARG:HG2	1.82	0.61
1:CA:1130:A:H5'	1:CA:1131:G:OP2	1.99	0.61
1:CA:1324:A:H4'	1:CA:136(A):C:O3'	2.00	0.61
4:CD:62:GLN:O	4:CD:66:ARG:HG3	2.01	0.61
6:CF:44:GLY:HA2	6:CF:59:TYR:CZ	2.35	0.61
11:CK:21:ILE:HD12	11:CK:21:ILE:N	2.15	0.61
24:DB:103:U:O2'	44:DV:72:ARG:HG3	2.00	0.61
26:DD:47:VAL:HG21	26:DD:86:PRO:HD3	1.81	0.61
32:DJ:74:PHE:CE1	32:DJ:142:ARG:HD2	2.35	0.61
34:DL:32:THR:HG21	34:DL:37:GLY:HA2	1.82	0.61
37:DO:41:ASP:OD2	37:DO:44:LYS:HD3	2.01	0.61
38:DP:64:ARG:HD2	38:DP:73:GLU:OE2	1.99	0.61
45:DW:23:VAL:HB	45:DW:26:TYR:HE2	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:222:U:H2'	1:AA:223:U:C6	2.35	0.61
1:AA:501:C:OP1	12:AL:116:ARG:NH2	2.33	0.61
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.01	0.61
1:AA:1083:U:H5	1:AA:1084:G:C6	2.19	0.61
1:AA:1130:A:H5'	1:AA:1131:G:OP2	1.99	0.61
2:AB:24:TRP:C	2:AB:25:ASN:HD22	2.03	0.61
2:AB:82:ARG:HA	2:AB:92:TYR:CE1	2.36	0.61
17:AQ:5:VAL:HG22	17:AQ:60:ILE:HG13	1.81	0.61
18:AR:47:THR:OG1	18:AR:49:LYS:HG2	2.00	0.61
23:BA:783:A:H2'	23:BA:785:G:OP1	2.00	0.61
23:BA:1024:G:H8	23:BA:1024:G:O5'	1.83	0.61
23:BA:1264:G:C5'	50:B2:11:THR:HG21	2.31	0.61
23:BA:1541:U:H2'	23:BA:1541:U:O2	1.98	0.61
26:BD:132:HIS:CG	26:BD:135:HIS:NE2	2.68	0.61
30:BH:92:VAL:O	30:BH:120:ILE:HD12	2.01	0.61
32:BJ:77:VAL:HB	32:BJ:145:VAL:HG22	1.82	0.61
37:BO:14:VAL:HG12	37:BO:18:ILE:HD11	1.82	0.61
1:CA:265:G:C2'	1:CA:266:G:H5''	2.28	0.61
1:CA:376:G:C4	1:CA:389:A:C2	2.89	0.61
1:CA:599:C:H2'	1:CA:600:C:C6	2.36	0.61
1:CA:707:C:H2'	1:CA:708:C:H6	1.64	0.61
1:CA:968:A:OP1	1:CA:968:A:H8	1.82	0.61
1:CA:1201:A:C1'	1:CA:1202:G:OP2	2.46	0.61
3:CC:17:ASP:HB3	3:CC:21:ARG:NH2	2.15	0.61
21:CU:18:TYR:HD2	21:CU:22:ARG:CG	2.12	0.61
23:DA:991:C:C5	23:DA:1185:C:N4	2.69	0.61
23:DA:2233:U:H2'	23:DA:2234:G:C8	2.35	0.61
23:DA:2746:U:H2'	23:DA:2747:G:O5'	2.01	0.61
34:DL:48:PRO:O	34:DL:49:ARG:O	2.18	0.61
35:DM:119:ARG:HG2	35:DM:120:ILE:HD13	1.81	0.61
37:DO:11:LYS:O	37:DO:12:PHE:HB3	2.00	0.61
48:DZ:43:ILE:N	48:DZ:43:ILE:CD1	2.63	0.61
1:AA:365:U:C5'	1:AA:366:C:OP1	2.40	0.61
1:AA:476:G:H2'	1:AA:477:G:C8	2.34	0.61
1:AA:624:C:O3'	16:AP:10:GLY:HA2	2.00	0.61
18:AR:54:ARG:HD2	18:AR:54:ARG:N	2.14	0.61
22:AV:6192:G:C2	22:AV:6193:U:C2	2.89	0.61
23:BA:628:G:H5''	53:B5:18:ALA:CB	2.30	0.61
23:BA:1336:A:OP1	42:BT:64:LYS:HD3	2.01	0.61
23:BA:2365:G:O6	53:B5:39:LYS:HE3	2.01	0.61
23:BA:2728:U:O2	23:BA:2729:G:C8	2.54	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2854:G:H2'	23:BA:2855:C:H6	1.65	0.61
29:BG:139:GLN:HG3	29:BG:140:LYS:N	2.14	0.61
34:BL:47:ASP:OD1	34:BL:49:ARG:HG2	2.01	0.61
39:BQ:83:LEU:HD12	39:BQ:113:ALA:CB	2.28	0.61
46:BX:13:ILE:C	46:BX:13:ILE:HD12	2.21	0.61
1:CA:1257:U:O4'	1:CA:1257:U:OP2	2.19	0.61
1:CA:1418:A:C2	1:CA:1483:A:C2	2.88	0.61
1:CA:1513:A:H2'	1:CA:1514:C:H6	1.63	0.61
15:CO:81:LEU:O	15:CO:85:LEU:HB2	2.00	0.61
23:DA:910:A:C6	23:DA:911:A:C6	2.88	0.61
23:DA:979:G:H3'	23:DA:980:A:H5''	1.83	0.61
23:DA:2461:C:O2	23:DA:2461:C:H2'	2.01	0.61
23:DA:2774:C:H2'	23:DA:2775:A:O4'	2.00	0.61
24:DB:66:A:C5	24:DB:108:C:C5	2.88	0.61
27:DE:11:VAL:O	27:DE:12:LEU:HD12	2.00	0.61
40:DR:5:VAL:HG21	40:DR:35:LEU:HG	1.83	0.61
43:DU:8:LYS:H	43:DU:8:LYS:NZ	1.98	0.61
44:DV:121:HIS:HB3	44:DV:123:ASP:O	1.99	0.61
1:AA:623:C:C4	1:AA:624:C:C5	2.89	0.61
1:AA:775:G:C2'	1:AA:776:G:H5'	2.31	0.61
3:AC:17:ASP:HB3	3:AC:21:ARG:NH2	2.15	0.61
6:AF:12:PRO:HG2	6:AF:55:ASP:OD2	2.00	0.61
11:AK:21:ILE:HB	11:AK:84:VAL:HG12	1.82	0.61
19:AS:63:THR:HG23	19:AS:65:ASN:H	1.65	0.61
22:AV:6195:G:N2	22:AV:6196:A:C4	2.68	0.61
25:BC:134:ARG:HD3	25:BC:135:PHE:CE1	2.36	0.61
26:BD:46:ALA:CB	26:BD:82:ARG:HA	2.30	0.61
26:BD:176:ILE:HB	26:BD:181:LEU:HB2	1.82	0.61
28:BF:32:PRO:CB	28:BF:172:LEU:HD22	2.30	0.61
29:BG:144:VAL:HA	29:BG:147:ASN:HB2	1.81	0.61
32:BJ:65:TRP:O	39:BQ:64:ARG:NH1	2.33	0.61
42:BT:14:SER:O	42:BT:15:GLU:C	2.39	0.61
43:BU:59:GLY:HA3	43:BU:61:ILE:HG12	1.83	0.61
44:BV:127:LYS:HD3	44:BV:162:GLU:OE1	2.01	0.61
1:CA:551:U:H5'	12:CL:118:LYS:NZ	2.15	0.61
1:CA:1057:G:H2'	1:CA:1058:G:O4'	1.99	0.61
1:CA:1483:A:H2	23:DA:1959:G:N3	1.99	0.61
3:CC:34:LEU:HG	14:CN:25:VAL:HG11	1.83	0.61
3:CC:175:LEU:O	3:CC:175:LEU:HD23	1.99	0.61
20:CT:56:MET:O	20:CT:59:ALA:HB3	2.01	0.61
23:DA:105:C:H2'	23:DA:106:C:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:302:C:H2'	23:DA:303:U:C6	2.36	0.61
23:DA:484:C:H2'	23:DA:485:C:C6	2.36	0.61
23:DA:1164:G:C6	23:DA:1165:U:C4	2.88	0.61
23:DA:2100:G:N2	23:DA:2101:G:H1'	2.15	0.61
23:DA:2727:G:C4	23:DA:2728:U:C5	2.89	0.61
25:DC:25:THR:CG2	25:DC:82:ILE:N	2.64	0.61
25:DC:25:THR:HG22	25:DC:82:ILE:O	2.00	0.61
34:DL:62:LEU:HD23	53:D5:25:MET:HB2	1.82	0.61
44:DV:108:PRO:HA	44:DV:142:SER:O	2.01	0.61
1:AA:175:C:H2'	1:AA:176:C:C6	2.34	0.61
1:AA:638:G:O2'	1:AA:639:G:H5'	2.01	0.61
3:AC:34:LEU:HG	14:AN:25:VAL:HG11	1.83	0.61
5:AE:151:LEU:HD13	8:AH:77:GLU:HG2	1.81	0.61
21:AU:24:ARG:HG3	21:AU:25:LYS:H	1.65	0.61
23:BA:249:C:O2	53:B5:12:LYS:HE3	2.00	0.61
23:BA:737:C:H2'	23:BA:738:G:H5'	1.83	0.61
23:BA:966:G:C6	23:BA:967:C:N4	2.69	0.61
23:BA:1018:C:N3	23:BA:1019:U:C5	2.69	0.61
23:BA:1232:G:H2'	23:BA:1233:C:H6	1.65	0.61
23:BA:2758:A:C5	29:BG:67:LEU:HD21	2.36	0.61
33:BK:19:ILE:HD13	33:BK:19:ILE:N	2.15	0.61
35:BM:8:LYS:CG	35:BM:9:TYR:H	2.13	0.61
36:BN:103:ARG:NH1	36:BN:110:PRO:HG3	2.15	0.61
37:BO:51:ALA:HB1	37:BO:72:ALA:CB	2.31	0.61
38:BP:29:ARG:HD2	38:BP:44:ASP:OD2	2.01	0.61
1:CA:404:U:H2'	1:CA:405:U:H6	1.66	0.61
1:CA:411:A:N7	1:CA:429:U:H5	1.97	0.61
2:CB:174:VAL:O	2:CB:178:ARG:CB	2.46	0.61
7:CG:50:ILE:HD12	7:CG:61:VAL:HG11	1.83	0.61
8:CH:20:TYR:HD1	8:CH:65:TYR:CD2	2.19	0.61
8:CH:91:ARG:HH11	8:CH:91:ARG:HG2	1.64	0.61
23:DA:483:A:H4'	43:DU:49:VAL:HG23	1.82	0.61
23:DA:114(B):A:C4	23:DA:1144:G:C8	2.88	0.61
23:DA:2101:G:C2'	23:DA:2102:U:H5'	2.29	0.61
23:DA:2639:A:C2'	23:DA:2640:G:H5'	2.30	0.61
25:DC:30:GLU:HG3	25:DC:63:ARG:NH2	2.14	0.61
25:DC:31:LYS:O	25:DC:35:LYS:CB	2.47	0.61
33:DK:76:ALA:HB3	38:DP:75:ILE:HB	1.83	0.61
34:DL:33:ARG:O	34:DL:35:HIS:O	2.17	0.61
34:DL:45:LEU:HD23	34:DL:46:LYS:H	1.66	0.61
36:DN:52:ILE:HG21	36:DN:94:TYR:CG	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DU:81:LYS:NZ	43:DU:97:ARG:HD3	2.15	0.61
44:DV:180:VAL:C	44:DV:182:LYS:H	2.03	0.61
46:DX:46:LEU:HD23	46:DX:46:LEU:C	2.21	0.61
53:D5:57:ARG:HB2	53:D5:57:ARG:HH11	1.65	0.61
2:AB:24:TRP:CE3	2:AB:25:ASN:O	2.54	0.61
7:AG:86:GLN:HB2	7:AG:148:ASN:HD22	1.65	0.61
10:AJ:63:PHE:HA	14:AN:59:ALA:H	1.65	0.61
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.15	0.61
23:BA:528:A:C2	23:BA:2043:C:H4'	2.36	0.61
23:BA:1162:G:H2'	23:BA:1163:G:H5'	1.82	0.61
23:BA:1448:G:N3	23:BA:1529:A:H2	1.98	0.61
23:BA:1973:G:H2'	23:BA:1974:C:H6	1.65	0.61
23:BA:2329:G:H2'	23:BA:2330:G:C8	2.35	0.61
23:BA:2712:U:O2'	23:BA:712(B):A:H5''	2.01	0.61
23:BA:2731:G:C6	23:BA:2732:G:C6	2.88	0.61
24:BB:28:C:H2'	24:BB:29:A:H8	1.66	0.61
24:BB:75:G:H21	44:BV:85:HIS:CE1	2.18	0.61
25:BC:155:LEU:N	25:BC:155:LEU:CD1	2.63	0.61
25:BC:158:ALA:O	25:BC:161:THR:HG23	2.01	0.61
28:BF:84:LYS:CG	28:BF:85:GLY:H	2.09	0.61
33:BK:11:ALA:HB3	33:BK:85:VAL:HG23	1.81	0.61
34:BL:61:ARG:CA	34:BL:62:LEU:HD13	2.30	0.61
36:BN:67:LEU:HD22	36:BN:76:VAL:HG11	1.81	0.61
1:CA:356:A:O2'	1:CA:357:G:H5'	2.00	0.61
1:CA:563:A:N7	1:CA:567:G:H1'	2.15	0.61
1:CA:963:G:H2'	1:CA:964:A:H8	1.66	0.61
3:CC:191:THR:HB	3:CC:193:TYR:CE2	2.35	0.61
8:CH:48:TYR:HA	8:CH:60:ARG:O	2.00	0.61
12:CL:26:LEU:HD12	12:CL:29:ALA:HB2	1.83	0.61
17:CQ:5:VAL:HG22	17:CQ:60:ILE:HG13	1.82	0.61
23:DA:115:C:C2'	23:DA:116:C:H5'	2.31	0.61
23:DA:1216:G:OP1	39:DQ:8:VAL:HG12	2.00	0.61
23:DA:1430:C:H2'	23:DA:1431:U:C6	2.36	0.61
23:DA:1657:C:H2'	23:DA:1658:C:H6	1.63	0.61
23:DA:2392:A:OP2	53:D5:31:HIS:CE1	2.54	0.61
23:DA:2723:C:C2'	23:DA:2724:C:O5'	2.48	0.61
23:DA:2853:C:H2'	23:DA:2854:G:H8	1.64	0.61
25:DC:133:LEU:C	25:DC:135:PHE:N	2.54	0.61
26:DD:2:LYS:HD3	26:DD:95:ILE:HB	1.83	0.61
37:DO:12:PHE:CD1	37:DO:12:PHE:C	2.74	0.61
39:DQ:98:LEU:O	39:DQ:101:ARG:O	2.19	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D3:38:LYS:HD3	51:D3:46:HIS:ND1	2.16	0.61
1:AA:540:G:H2'	1:AA:541:G:O4'	2.01	0.61
1:AA:622:A:C8	1:AA:623:C:C5	2.89	0.61
4:AD:3:ARG:HH21	4:AD:118:ARG:HD3	1.64	0.61
6:AF:90:VAL:HG12	6:AF:91:VAL:N	2.16	0.61
19:AS:53:ASN:HD21	19:AS:55:LYS:HB3	1.66	0.61
23:BA:628:G:H5''	53:B5:18:ALA:HB2	1.83	0.61
23:BA:858:U:C2	23:BA:2268:A:C2	2.88	0.61
23:BA:861:A:H2'	23:BA:862:G:C5'	2.31	0.61
23:BA:1142:U:H5''	23:BA:114(B):A:H5'	1.82	0.61
23:BA:1899:G:HO2'	23:BA:1900:A:P	2.23	0.61
24:BB:45:A:H1'	28:BF:95:ARG:NH2	2.15	0.61
24:BB:111:U:O2	24:BB:112:G:C8	2.54	0.61
30:BH:92:VAL:CG2	30:BH:97:ILE:HG12	2.31	0.61
40:BR:64:HIS:HD2	40:BR:92:THR:HG22	1.65	0.61
42:BT:30:VAL:CG1	42:BT:31:HIS:N	2.64	0.61
44:BV:177:PRO:O	44:BV:178:GLU:HB3	2.01	0.61
46:BX:86:SER:O	46:BX:90:ILE:HG12	2.00	0.61
1:CA:1291:G:H4'	9:CI:38:GLN:O	2.00	0.61
4:CD:173:TRP:CD1	4:CD:174:LEU:HG	2.35	0.61
7:CG:26:PHE:CE2	7:CG:30:ILE:HD11	2.36	0.61
8:CH:77:GLU:HG3	8:CH:78:GLN:H	1.66	0.61
14:CN:26:ARG:NH1	14:CN:47:LEU:HD21	2.15	0.61
23:DA:865:C:H4'	23:DA:866:A:N7	2.15	0.61
23:DA:994:C:O2'	23:DA:996:A:OP1	2.19	0.61
23:DA:1495:A:C5'	23:DA:1496:A:OP2	2.48	0.61
23:DA:1916:A:H2'	23:DA:1917:U:O4'	2.01	0.61
23:DA:2416:C:H2'	23:DA:2417:C:H6	1.66	0.61
23:DA:2432:A:H5''	23:DA:2433:A:OP2	2.01	0.61
23:DA:2712:U:O2'	23:DA:712(B):A:H5''	2.00	0.61
24:DB:56:G:H4'	24:DB:57:A:C8	2.36	0.61
24:DB:103:U:O2'	24:DB:104:A:H5'	2.00	0.61
25:DC:75:ILE:O	25:DC:118:VAL:HG23	2.01	0.61
25:DC:136:ILE:HG23	25:DC:137:PRO:HD2	1.83	0.61
28:DF:105:LYS:NZ	49:D1:52:SER:HB2	2.16	0.61
34:DL:126:VAL:HA	34:DL:145:PRO:HG2	1.82	0.61
37:DO:93:LYS:HB2	37:DO:93:LYS:NZ	2.15	0.61
42:DT:28:PHE:N	42:DT:28:PHE:HD1	1.99	0.61
2:AB:32:ILE:HD11	2:AB:190:THR:CG2	2.31	0.61
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.21	0.61
14:AN:25:VAL:HG23	14:AN:38:GLY:O	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:637:A:OP2	34:BL:115:LEU:HB2	1.99	0.61
23:BA:706:A:H2'	23:BA:707:G:O4'	2.01	0.61
23:BA:2723:C:H4'	36:BN:2:ARG:NH2	2.16	0.61
30:BH:82:ARG:HB3	30:BH:89:TYR:CD1	2.35	0.61
32:BJ:113:MET:O	32:BJ:116:THR:O	2.19	0.61
35:BM:116:GLU:HA	35:BM:116:GLU:OE1	1.99	0.61
39:BQ:102:GLU:HG3	40:BR:2:PHE:CD1	2.36	0.61
42:BT:57:LEU:HD12	42:BT:57:LEU:N	2.16	0.61
44:BV:74:VAL:HG22	44:BV:86:VAL:HG13	1.83	0.61
45:BW:56:ASP:O	45:BW:57:PHE:CB	2.48	0.61
1:CA:555:C:H2'	1:CA:556:C:C6	2.36	0.61
1:CA:920:U:H2'	1:CA:921:U:C6	2.35	0.61
7:CG:27:ILE:HD11	7:CG:43:PHE:CD2	2.36	0.61
11:CK:125:PHE:N	11:CK:125:PHE:CD1	2.66	0.61
18:CR:66:LEU:HG	18:CR:70:ILE:HD11	1.83	0.61
23:DA:528:A:C8	23:DA:528:A:C3'	2.83	0.61
23:DA:639:U:H2'	23:DA:640:C:C6	2.35	0.61
23:DA:2637:U:H5''	26:DD:82:ARG:HH21	1.66	0.61
25:DC:133:LEU:O	25:DC:135:PHE:N	2.33	0.61
26:DD:158:GLY:O	26:DD:159:HIS:C	2.39	0.61
29:DG:94:TYR:OH	29:DG:160:LYS:HD3	2.00	0.61
30:DH:87:LYS:HA	30:DH:122:GLU:HA	1.83	0.61
30:DH:118:LYS:HG2	30:DH:119:PRO:N	2.16	0.61
32:DJ:80:ALA:O	32:DJ:83:ILE:CG1	2.49	0.61
36:DN:9:LYS:C	36:DN:10:LEU:HG	2.21	0.61
39:DQ:88:ILE:O	39:DQ:88:ILE:HG13	2.01	0.61
39:DQ:95:LEU:HD13	40:DR:4:ILE:HG23	1.83	0.61
1:AA:102:G:H2'	1:AA:103:C:H6	1.66	0.60
1:AA:599:C:H2'	1:AA:600:C:C6	2.36	0.60
1:AA:622:A:C8	1:AA:623:C:C6	2.89	0.60
1:AA:799:G:H2'	1:AA:800:G:O5'	2.00	0.60
1:AA:965:A:H2	1:AA:969:A:C2	2.15	0.60
5:AE:68:GLU:O	5:AE:68:GLU:HG3	2.01	0.60
19:AS:6:LYS:H	19:AS:6:LYS:HD2	1.64	0.60
23:BA:966:G:H2'	23:BA:967:C:C6	2.34	0.60
23:BA:1208:C:C4	23:BA:1209:G:N7	2.69	0.60
23:BA:2279:G:O6	45:BW:14:ARG:HD2	2.01	0.60
23:BA:2531:A:C5'	29:BG:157:TYR:CZ	2.84	0.60
25:BC:242:ARG:HG2	25:BC:242:ARG:NH1	2.15	0.60
53:B5:11:LYS:O	53:B5:11:LYS:HE2	2.00	0.60
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:11:ARG:HH21	3:CC:180:ALA:HB3	1.65	0.60
19:CS:6:LYS:HD3	19:CS:7:LYS:HD3	1.83	0.60
22:CV:6192:G:C2	22:CV:6193:U:C2	2.89	0.60
23:DA:83:G:N1	23:DA:102:G:O2'	1.96	0.60
23:DA:184:C:H2'	23:DA:185:U:C6	2.36	0.60
23:DA:379:G:H1	46:DX:20:ARG:HH22	1.47	0.60
23:DA:686:G:O6	52:D4:12:ARG:HG3	2.01	0.60
23:DA:1178:C:O2'	23:DA:1179:C:H5'	2.00	0.60
23:DA:1451:C:N3	23:DA:1459:G:O6	2.34	0.60
23:DA:1503:U:C2	23:DA:1504:C:C5	2.89	0.60
24:DB:7:G:H5''	37:DO:29:PHE:CE2	2.35	0.60
25:DC:25:THR:O	25:DC:25:THR:HG23	2.01	0.60
25:DC:35:LYS:CE	25:DC:103:ARG:HA	2.31	0.60
32:DJ:93:LYS:CE	32:DJ:95:TYR:HE1	2.14	0.60
37:DO:72:ALA:O	37:DO:76:LYS:HG3	2.01	0.60
38:DP:1:MET:C	38:DP:3:ARG:N	2.54	0.60
41:DS:29:LEU:O	41:DS:33:ARG:HD2	2.01	0.60
1:AA:40:C:H2'	1:AA:41:G:O4'	2.01	0.60
1:AA:501:C:H2'	1:AA:502:G:H8	1.67	0.60
1:AA:868:C:H2'	1:AA:869:G:O4'	2.01	0.60
1:AA:960:U:C5	1:AA:1225:A:H1'	2.36	0.60
4:AD:63:LYS:HD2	4:AD:198:VAL:HG22	1.83	0.60
17:AQ:10:VAL:HG11	17:AQ:52:LYS:O	2.00	0.60
23:BA:558:G:P	32:BJ:134:PRO:HD2	2.42	0.60
23:BA:692:C:O2'	23:BA:693:C:H5'	2.01	0.60
23:BA:1152:C:H5''	39:BQ:80:ILE:HG22	1.82	0.60
23:BA:1178:C:O2'	23:BA:1179:C:H5'	2.00	0.60
23:BA:2233:U:H2'	23:BA:2234:G:C8	2.35	0.60
23:BA:2485:G:C5'	35:BM:46:GLN:HE21	2.14	0.60
26:BD:59:VAL:HG12	26:BD:59:VAL:O	1.99	0.60
28:BF:148:MET:HA	28:BF:148:MET:HE3	1.82	0.60
32:BJ:94:ILE:CG2	32:BJ:107:LYS:HB3	2.30	0.60
39:BQ:88:ILE:O	39:BQ:88:ILE:HG13	1.99	0.60
41:BS:45:TYR:HD2	41:BS:46:PHE:CD1	2.19	0.60
47:BY:2:LYS:HA	47:BY:5:GLU:OE2	2.00	0.60
1:CA:59:A:H5''	1:CA:60:A:H5''	1.83	0.60
1:CA:334:C:H2'	1:CA:335:C:H6	1.65	0.60
1:CA:805:C:H2'	1:CA:806:C:H6	1.65	0.60
1:CA:1083:U:H5	1:CA:1084:G:C5	2.19	0.60
3:CC:47:LEU:HD21	3:CC:68:VAL:HG11	1.83	0.60
3:CC:57:ILE:CD1	3:CC:66:VAL:HG22	2.30	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:101:ILE:O	5:CE:120:THR:HG23	2.01	0.60
7:CG:131:LYS:HE3	7:CG:136:LYS:HZ2	1.66	0.60
9:CI:69:GLY:O	9:CI:73:GLN:HG3	2.01	0.60
11:CK:32:ILE:HD12	11:CK:72:ALA:HB2	1.82	0.60
19:CS:53:ASN:HD21	19:CS:55:LYS:HB3	1.66	0.60
23:DA:257:A:C2'	23:DA:258:G:O5'	2.48	0.60
23:DA:692:C:O2'	23:DA:693:C:H5'	2.01	0.60
23:DA:2485:G:C5'	35:DM:46:GLN:HE21	2.14	0.60
23:DA:2739:U:H2'	23:DA:2739:U:O2	1.99	0.60
25:DC:132:PRO:O	25:DC:136:ILE:HD12	2.01	0.60
34:DL:46:LYS:HG2	34:DL:52:GLU:OE1	2.01	0.60
41:DS:36:LEU:HD12	41:DS:48:ALA:HA	1.83	0.60
44:DV:41:LEU:HD21	44:DV:83:PRO:HG2	1.83	0.60
1:AA:1083:U:H5	1:AA:1084:G:C5	2.19	0.60
6:AF:87:ARG:HG3	6:AF:87:ARG:NH1	2.15	0.60
7:AG:26:PHE:CE2	7:AG:30:ILE:HD11	2.36	0.60
7:AG:71:PRO:HG3	7:AG:103:TRP:HZ3	1.64	0.60
23:BA:448:U:H1'	27:BE:84:VAL:HG21	1.83	0.60
23:BA:943:U:OP2	34:BL:38:GLN:CD	2.39	0.60
23:BA:1963:U:O2	23:BA:1963:U:C2'	2.50	0.60
23:BA:2842:G:H1	23:BA:2875:C:H42	1.47	0.60
25:BC:186:HIS:CD2	25:BC:188:GLU:H	2.20	0.60
25:BC:227:ASN:HD22	25:BC:227:ASN:N	1.98	0.60
26:BD:16:ARG:O	26:BD:18:ASP:N	2.34	0.60
28:BF:128:ARG:NH2	28:BF:161:THR:O	2.34	0.60
29:BG:168:PRO:O	29:BG:170:ARG:HG3	2.01	0.60
36:BN:30:THR:HG22	36:BN:31:HIS:ND1	2.16	0.60
37:BO:12:PHE:C	37:BO:12:PHE:CD1	2.74	0.60
37:BO:93:LYS:HB2	37:BO:93:LYS:NZ	2.16	0.60
47:BY:18:PRO:O	47:BY:22:GLU:HG3	2.02	0.60
1:CA:15:G:H4'	5:CE:24:ARG:HH12	1.66	0.60
1:CA:53:A:C2	1:CA:54:C:H1'	2.36	0.60
1:CA:102:G:H2'	1:CA:103:C:C6	2.36	0.60
1:CA:318:G:N2	1:CA:319:G:C4	2.69	0.60
1:CA:1422:G:H5''	33:DK:48:PRO:HB3	1.82	0.60
4:CD:105:VAL:O	4:CD:105:VAL:HG12	2.01	0.60
12:CL:37:THR:O	12:CL:78:GLU:HG2	2.00	0.60
23:DA:9:U:N3	23:DA:2629:A:N6	2.49	0.60
23:DA:1543:A:H5'	23:DA:1544:C:O5'	2.01	0.60
23:DA:1547:C:H2'	23:DA:1548:C:H6	1.67	0.60
23:DA:2847:U:OP1	38:DP:98:LYS:HD3	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:70:TRP:CZ3	25:DC:146:GLU:OE1	2.51	0.60
32:DJ:81:ASP:OD2	32:DJ:147:ALA:HB1	2.01	0.60
32:DJ:88:LYS:O	32:DJ:89:LYS:C	2.40	0.60
40:DR:22:VAL:HG12	40:DR:23:GLU:N	2.15	0.60
1:AA:411:A:C4	1:AA:413:G:O4'	2.54	0.60
1:AA:715:A:O2'	1:AA:716:A:H5'	2.01	0.60
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.01	0.60
2:AB:31:TYR:O	2:AB:32:ILE:HD12	2.01	0.60
3:AC:107:GLN:CD	3:AC:107:GLN:H	2.04	0.60
3:AC:191:THR:HB	3:AC:193:TYR:CE2	2.36	0.60
4:AD:49:ARG:NE	4:AD:50:ARG:H	1.98	0.60
23:BA:282:A:C5	23:BA:359:A:C2	2.89	0.60
23:BA:322:A:O4'	23:BA:340:A:H1'	2.01	0.60
23:BA:1510:A:H2'	23:BA:1511:A:H8	1.64	0.60
23:BA:1526:G:C6	23:BA:1527:G:C2	2.90	0.60
23:BA:2090:G:H21	46:BX:45:ASN:ND2	2.00	0.60
23:BA:2365:G:H4'	45:BW:60:PHE:CZ	2.36	0.60
23:BA:2727:G:C4	23:BA:2728:U:C5	2.90	0.60
23:BA:2739:U:O2	23:BA:2739:U:H2'	2.00	0.60
24:BB:2:C:H2'	24:BB:3:C:H6	1.67	0.60
24:BB:46:A:H2'	24:BB:47:C:C6	2.36	0.60
24:BB:83:G:H5''	48:BZ:52:HIS:CE1	2.36	0.60
29:BG:43:VAL:HG12	29:BG:52:VAL:HG22	1.83	0.60
32:BJ:85:VAL:CG2	32:BJ:89:LYS:HG3	2.30	0.60
53:B5:60:LEU:O	53:B5:62:LEU:HB2	2.01	0.60
1:CA:44:G:OP2	16:CP:12:LYS:HB2	2.02	0.60
1:CA:521:G:O2'	1:CA:522:C:H5'	2.00	0.60
1:CA:522:C:C2'	1:CA:523:A:H5'	2.31	0.60
1:CA:691:G:O6	11:CK:52:GLY:HA2	2.00	0.60
1:CA:1443:G:H3'	1:CA:1446:A:C5'	2.30	0.60
10:CJ:75:ILE:HG13	10:CJ:76:ASN:N	2.15	0.60
23:DA:270(Q):C:HO2'	23:DA:270(R):C:H6	1.48	0.60
23:DA:380:U:O2	23:DA:381:G:C8	2.53	0.60
23:DA:389:G:H22	34:DL:72:PRO:HD3	1.66	0.60
23:DA:461:C:C2'	23:DA:462:C:H5'	2.31	0.60
23:DA:643:A:C2	23:DA:644:A:C4	2.90	0.60
24:DB:81:G:C6	24:DB:82:G:C5	2.89	0.60
25:DC:226:MET:C	25:DC:227:ASN:HD22	2.05	0.60
27:DE:110:LEU:HD11	27:DE:181:LEU:HD13	1.84	0.60
30:DH:88:ILE:HG12	30:DH:123:LEU:CA	2.31	0.60
33:DK:25:LEU:HB2	33:DK:38:VAL:O	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DN:4:LEU:O	36:DN:4:LEU:HD23	2.01	0.60
37:DO:36:TYR:N	37:DO:36:TYR:HD1	1.99	0.60
46:DX:30:VAL:O	46:DX:30:VAL:HG12	2.01	0.60
51:D3:34:LEU:HD22	51:D3:34:LEU:O	2.01	0.60
1:AA:500:G:N2	1:AA:546:G:H1'	2.17	0.60
1:AA:1084:G:OP1	1:AA:1086:U:C2	2.54	0.60
2:AB:177:ALA:HB1	2:AB:182:ILE:HB	1.82	0.60
4:AD:62:GLN:O	4:AD:66:ARG:HG3	2.01	0.60
10:AJ:45:ARG:NH1	14:AN:36:PHE:HD2	1.98	0.60
23:BA:924:C:H2'	23:BA:925:C:H6	1.66	0.60
23:BA:1105:U:O2'	23:BA:1106:G:H5'	2.02	0.60
23:BA:1210:A:H5''	23:BA:1210:A:C8	2.29	0.60
25:BC:246:PRO:HD2	25:BC:255:LYS:HB3	1.84	0.60
26:BD:7:VAL:HA	26:BD:194:GLY:O	2.02	0.60
32:BJ:86:THR:O	32:BJ:89:LYS:HG2	2.01	0.60
34:BL:49:ARG:CG	34:BL:50:ARG:N	2.62	0.60
34:BL:84:ASN:HA	34:BL:115:LEU:O	2.00	0.60
36:BN:9:LYS:O	36:BN:10:LEU:HD23	2.02	0.60
36:BN:79:LEU:HD23	36:BN:83:ILE:HB	1.84	0.60
38:BP:74:ARG:HD3	38:BP:76:PHE:CE2	2.36	0.60
42:BT:28:PHE:N	42:BT:28:PHE:HD1	1.97	0.60
42:BT:63:LYS:NZ	42:BT:72:LYS:HB3	2.16	0.60
44:BV:33:LEU:HD23	44:BV:90:VAL:HG21	1.84	0.60
1:CA:66:G:C2	1:CA:67:C:C6	2.88	0.60
1:CA:505:G:H2'	1:CA:506:G:H8	1.66	0.60
1:CA:1076:C:C2	1:CA:1082:G:N2	2.69	0.60
1:CA:1279:A:H5''	1:CA:1280:A:OP1	2.00	0.60
23:DA:1159:U:H2'	23:DA:1160:G:H8	1.67	0.60
23:DA:1433:U:O2'	23:DA:1434:A:H5'	2.02	0.60
23:DA:1794:U:H2'	23:DA:1795:C:C6	2.35	0.60
23:DA:2577:A:H5''	23:DA:2578:G:C5'	2.32	0.60
30:DH:109:ILE:N	30:DH:109:ILE:HD13	2.16	0.60
38:DP:26:ASP:HB3	38:DP:92:GLY:H	1.67	0.60
44:DV:120:ILE:N	44:DV:120:ILE:HD13	2.16	0.60
44:DV:177:PRO:O	44:DV:178:GLU:HB3	2.01	0.60
46:DX:23:LYS:O	46:DX:23:LYS:HG3	2.01	0.60
46:DX:45:ASN:HD22	46:DX:46:LEU:N	1.99	0.60
1:AA:509:A:H5'	4:AD:54:TYR:CD2	2.33	0.60
1:AA:522:C:C2'	1:AA:523:A:H5'	2.30	0.60
3:AC:134:ILE:CG2	3:AC:151:VAL:HB	2.30	0.60
11:AK:92:GLU:HA	11:AK:95:ILE:HG13	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:783:A:C8	23:BA:783:A:H3'	2.36	0.60
23:BA:860:U:O2'	23:BA:861:A:C5'	2.48	0.60
23:BA:1046:A:H3'	23:BA:1047:G:C5'	2.31	0.60
23:BA:1121:C:O5'	23:BA:1121:C:H6	1.85	0.60
23:BA:1209:G:N2	23:BA:1210:A:H62	1.95	0.60
24:BB:56:G:H4'	24:BB:57:A:C8	2.36	0.60
27:BE:50:SER:HA	27:BE:92:PRO:O	2.00	0.60
28:BF:143:GLU:CD	28:BF:143:GLU:H	2.04	0.60
30:BH:88:ILE:CG2	30:BH:90:GLY:H	2.14	0.60
34:BL:38:GLN:CG	34:BL:39:LYS:H	2.11	0.60
37:BO:33:LYS:O	37:BO:54:LEU:HG	2.02	0.60
37:BO:38:GLN:HB3	37:BO:47:THR:CG2	2.31	0.60
43:BU:2:ARG:N	43:BU:4:LYS:HZ2	1.99	0.60
1:CA:537:G:H5''	12:CL:112:ARG:NH2	2.16	0.60
1:CA:1159:U:H4'	1:CA:1160:G:OP1	2.01	0.60
3:CC:107:GLN:CD	3:CC:107:GLN:H	2.03	0.60
6:CF:53:ALA:HB3	6:CF:86:ARG:NH1	2.17	0.60
11:CK:67:ASP:OD1	11:CK:71:LYS:HE3	2.02	0.60
17:CQ:40:LYS:HD2	17:CQ:42:TYR:CZ	2.37	0.60
19:CS:63:THR:HG23	19:CS:65:ASN:H	1.66	0.60
23:DA:356:G:H2'	23:DA:357:A:C8	2.35	0.60
23:DA:1169:G:H1	23:DA:1180:C:H42	1.49	0.60
23:DA:1268:A:C2'	23:DA:1269:A:O5'	2.50	0.60
23:DA:1946:U:H2'	23:DA:1947:C:C6	2.37	0.60
23:DA:2852:G:O2'	23:DA:2853:C:H5'	2.01	0.60
26:DD:11:MET:HE3	26:DD:24:THR:HB	1.84	0.60
30:DH:92:VAL:O	30:DH:120:ILE:HD12	2.01	0.60
38:DP:54:ARG:HG3	38:DP:54:ARG:NH1	1.95	0.60
44:DV:24:LEU:CD1	44:DV:85:HIS:HA	2.32	0.60
47:DY:60:LEU:C	47:DY:62:THR:H	2.04	0.60
1:AA:1279:A:H5''	1:AA:1280:A:OP1	2.02	0.60
1:AA:1443:G:H3'	1:AA:1446:A:C5'	2.32	0.60
2:AB:8:LYS:HA	2:AB:217:ARG:NH1	2.16	0.60
5:AE:10:MET:CB	5:AE:32:VAL:HG22	2.31	0.60
16:AP:7:ALA:O	16:AP:9:PHE:HD2	1.85	0.60
20:AT:56:MET:O	20:AT:59:ALA:HB3	2.02	0.60
23:BA:631:A:H2'	23:BA:632:A:O4'	2.01	0.60
23:BA:639:U:H2'	23:BA:640:C:C6	2.36	0.60
23:BA:997:G:C2'	23:BA:998:C:H5'	2.32	0.60
23:BA:1019:U:H2'	23:BA:1020:A:C8	2.36	0.60
23:BA:1153:C:H5'	39:BQ:76:TYR:CE2	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1328:G:H2'	23:BA:1330:C:C5	2.37	0.60
23:BA:1335:U:O2'	23:BA:1336:A:H5'	2.02	0.60
23:BA:1356:G:C5	23:BA:1357:U:C5	2.89	0.60
23:BA:1812:A:O2'	23:BA:1813:G:H5'	2.02	0.60
23:BA:2284:C:H1'	23:BA:2325:G:C2	2.37	0.60
25:BC:166:GLN:CA	25:BC:166:GLN:NE2	2.65	0.60
28:BF:161:THR:HG21	28:BF:172:LEU:HD23	1.82	0.60
32:BJ:143:LEU:HD13	32:BJ:143:LEU:C	2.22	0.60
34:BL:50:ARG:HB2	53:B5:60:LEU:CD1	2.32	0.60
35:BM:37:LEU:HD23	35:BM:37:LEU:N	2.16	0.60
37:BO:90:GLY:O	37:BO:92:TYR:N	2.35	0.60
45:BW:31:VAL:HG23	45:BW:32:ARG:O	2.02	0.60
1:CA:152:A:H62	1:CA:169:C:N4	2.00	0.60
1:CA:1448:C:H2'	1:CA:1449:C:C6	2.35	0.60
5:CE:12:LEU:C	5:CE:12:LEU:HD22	2.22	0.60
6:CF:87:ARG:HG3	6:CF:87:ARG:NH1	2.13	0.60
23:DA:286:C:H2'	23:DA:287:C:C6	2.34	0.60
23:DA:631:A:H2'	23:DA:632:A:O4'	2.01	0.60
23:DA:886:C:O2'	23:DA:887:A:H4'	2.01	0.60
23:DA:954:G:C5	23:DA:955:C:C5	2.89	0.60
23:DA:1141:U:H6	32:DJ:86:THR:HG1	1.45	0.60
23:DA:1208:C:C4	23:DA:1209:G:N7	2.70	0.60
23:DA:1343:G:C8	23:DA:1343:G:C5'	2.82	0.60
23:DA:1778:U:H2'	23:DA:1784:A:H62	1.66	0.60
23:DA:1981:A:H5''	23:DA:1982:C:OP2	2.01	0.60
23:DA:2681:C:C5	23:DA:2725:A:N6	2.58	0.60
25:DC:237:GLU:O	25:DC:237:GLU:OE2	2.18	0.60
26:DD:32:PRO:HA	26:DD:90:THR:HG22	1.82	0.60
26:DD:117:MET:HE2	26:DD:124:GLY:HA3	1.81	0.60
26:DD:181:LEU:HD21	38:DP:7:ILE:CG2	2.30	0.60
27:DE:53:THR:N	27:DE:56:GLU:OE1	2.35	0.60
28:DF:76:SER:HB2	28:DF:83:ARG:C	2.21	0.60
36:DN:99:LYS:HA	36:DN:112:ALA:CB	2.32	0.60
53:D5:26:LYS:HA	53:D5:48:PHE:HE2	1.66	0.60
1:AA:44:G:OP2	16:AP:12:LYS:HB2	2.01	0.60
5:AE:51:VAL:HB	5:AE:52:PRO:CD	2.25	0.60
23:BA:568:U:O4	40:BR:78:LYS:CE	2.50	0.60
23:BA:886:C:O2'	23:BA:887:A:H4'	2.02	0.60
23:BA:958:U:OP2	35:BM:14:ARG:NH1	2.35	0.60
23:BA:1514:U:H2'	23:BA:1515:C:H6	1.67	0.60
23:BA:1543:A:N7	23:BA:1545:A:H5''	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1946:U:H2'	23:BA:1947:C:C6	2.36	0.60
23:BA:2621:A:OP1	26:BD:119:ARG:NH2	2.35	0.60
25:BC:124:PRO:HG2	25:BC:129:ASN:ND2	2.17	0.60
28:BF:9:ARG:HD3	28:BF:13:GLU:OE1	2.01	0.60
32:BJ:38:LEU:HD12	32:BJ:39:ILE:H	1.66	0.60
39:BQ:18:LEU:HD11	39:BQ:31:SER:H	1.67	0.60
41:BS:24:ILE:HG21	41:BS:36:LEU:HD21	1.81	0.60
53:B5:33:ASN:HA	53:B5:36:LYS:HD3	1.83	0.60
1:CA:1251:A:H5''	9:CI:12:GLU:OE1	2.02	0.60
14:CN:25:VAL:HG23	14:CN:38:GLY:O	2.01	0.60
23:DA:225:A:N6	23:DA:226:G:N1	2.50	0.60
23:DA:226:G:H21	23:DA:228:A:N6	1.98	0.60
23:DA:747:U:C4	50:D2:2:ALA:N	2.70	0.60
23:DA:861:A:H2'	23:DA:862:G:C5'	2.32	0.60
23:DA:1996:C:H4'	23:DA:1997:G:OP1	2.02	0.60
23:DA:2879:C:H4'	23:DA:2880:C:OP1	2.02	0.60
28:DF:32:PRO:HB2	28:DF:172:LEU:HD22	1.83	0.60
32:DJ:38:LEU:HD12	32:DJ:39:ILE:H	1.65	0.60
34:DL:80:TYR:CD1	34:DL:111:ARG:HB3	2.37	0.60
34:DL:111:ARG:HG3	34:DL:128:HIS:CB	2.32	0.60
36:DN:52:ILE:CD1	36:DN:79:LEU:HD21	2.32	0.60
39:DQ:34:LYS:HA	39:DQ:34:LYS:HE3	1.83	0.60
41:DS:59:VAL:HG12	41:DS:60:ASN:OD1	2.02	0.60
44:DV:24:LEU:CB	44:DV:41:LEU:HG	2.32	0.60
53:D5:14:VAL:CG1	53:D5:22:VAL:HG13	2.32	0.60
1:AA:190:G:H4'	1:AA:191(A):G:OP2	2.01	0.60
1:AA:1372:U:H2'	1:AA:1373:G:O4'	1.99	0.60
3:AC:105:GLU:HG2	3:AC:106:VAL:N	2.16	0.60
20:AT:42:GLN:HG3	20:AT:43:LEU:HD23	1.84	0.60
23:BA:753:C:OP1	52:B4:1:MET:HE3	2.01	0.60
23:BA:1503:U:C2	23:BA:1504:C:C5	2.89	0.60
23:BA:1593:G:H2'	23:BA:1594:G:C8	2.37	0.60
23:BA:1893:C:C5	23:BA:1894:C:C5	2.89	0.60
23:BA:1953:A:H2	23:BA:2549:G:N3	2.00	0.60
23:BA:2718:G:H2'	23:BA:2719:G:H8	1.67	0.60
27:BE:192:LEU:HD22	27:BE:194:MET:HG2	1.82	0.60
35:BM:43:THR:OG1	35:BM:45:GLN:HG2	2.02	0.60
38:BP:89:VAL:O	38:BP:89:VAL:HG22	2.01	0.60
43:BU:42:VAL:HG23	43:BU:67:LEU:HD11	1.83	0.60
47:BY:35:LEU:HD12	47:BY:53:LEU:CD1	2.28	0.60
47:BY:57:ILE:HG22	47:BY:61:LEU:HD22	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:59:VAL:HG12	49:B1:60:GLU:N	2.14	0.60
4:CD:71:SER:HB2	4:CD:74:GLN:HB2	1.84	0.60
4:CD:111:ALA:HA	4:CD:161:ASN:ND2	2.17	0.60
5:CE:53:LEU:H	5:CE:53:LEU:HD23	1.67	0.60
5:CE:145:LYS:HE3	5:CE:149:GLU:OE1	2.01	0.60
22:CV:6191:A:H2'	22:CV:6192:G:C8	2.37	0.60
23:DA:241:A:H5'	23:DA:243:U:H1'	1.83	0.60
23:DA:2655:G:N2	23:DA:2664:G:C4	2.69	0.60
27:DE:150:GLY:HA2	27:DE:172:TRP:CD2	2.37	0.60
28:DF:94:LEU:HD12	28:DF:99:MET:HA	1.83	0.60
32:DJ:65:TRP:O	39:DQ:64:ARG:NH1	2.35	0.60
45:DW:72:ARG:CZ	45:DW:75:LEU:HD13	2.32	0.60
2:AB:187:LEU:HD11	2:AB:204:ASN:O	2.02	0.60
5:AE:41:VAL:HG11	5:AE:113:ALA:HB2	1.82	0.60
6:AF:16:GLN:CD	6:AF:16:GLN:H	2.04	0.60
6:AF:62:TRP:O	6:AF:62:TRP:CE3	2.55	0.60
7:AG:27:ILE:HD11	7:AG:43:PHE:CD2	2.37	0.60
15:AO:30:ALA:CA	15:AO:85:LEU:HD11	2.32	0.60
23:BA:630:G:N2	23:BA:632:A:H3'	2.17	0.60
23:BA:773:U:C5'	25:BC:47:GLY:HA3	2.31	0.60
25:BC:108:PRO:HB3	25:BC:143:HIS:HE1	1.67	0.60
26:BD:2:LYS:HD3	26:BD:95:ILE:HB	1.82	0.60
27:BE:117:ARG:HD2	27:BE:190:GLU:O	2.02	0.60
34:BL:35:HIS:O	34:BL:36:LYS:CB	2.49	0.60
35:BM:75:THR:HA	35:BM:88:GLY:HA3	1.81	0.60
43:BU:20:TYR:CE1	43:BU:42:VAL:HA	2.37	0.60
43:BU:30:VAL:CG2	43:BU:37:VAL:HG12	2.32	0.60
1:CA:44:G:N3	1:CA:399:G:C2	2.70	0.60
1:CA:540:G:H2'	1:CA:541:G:O4'	2.00	0.60
1:CA:1083:U:H5	1:CA:1084:G:C6	2.19	0.60
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.17	0.60
2:CB:31:TYR:O	2:CB:32:ILE:HD12	2.01	0.60
3:CC:105:GLU:HG2	3:CC:106:VAL:N	2.15	0.60
8:CH:86:ILE:HG21	8:CH:133:LEU:HD13	1.84	0.60
10:CJ:63:PHE:HA	14:CN:59:ALA:H	1.67	0.60
12:CL:33:ARG:O	12:CL:60:THR:HG23	2.01	0.60
14:CN:44:LEU:HD12	14:CN:44:LEU:O	2.01	0.60
23:DA:415:A:H2'	23:DA:416:C:H6	1.66	0.60
23:DA:528:A:C2	23:DA:2043:C:H4'	2.36	0.60
23:DA:828:U:O2	23:DA:828:U:C2'	2.49	0.60
23:DA:1141:U:OP2	32:DJ:86:THR:CG2	2.50	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2277:G:H5''	35:DM:85:LYS:CB	2.32	0.60
23:DA:2394:C:OP1	34:DL:63:PRO:HD2	2.02	0.60
24:DB:50:G:C5	24:DB:51:G:C8	2.89	0.60
26:DD:11:MET:CB	26:DD:24:THR:HA	2.32	0.60
26:DD:106:GLY:HA3	26:DD:189:PRO:HB2	1.84	0.60
29:DG:86:GLU:O	29:DG:86:GLU:HG2	2.01	0.60
30:DH:130:TYR:O	30:DH:132:PRO:HD3	2.01	0.60
37:DO:14:VAL:HG12	37:DO:18:ILE:HD11	1.84	0.60
38:DP:23:ARG:CG	38:DP:23:ARG:HH11	2.15	0.60
47:DY:46:GLN:HB2	47:DY:49:LYS:HZ1	1.64	0.60
52:D4:19:ARG:NH1	52:D4:19:ARG:HB3	2.17	0.60
1:AA:781:A:H4'	1:AA:1522:U:O2'	2.02	0.59
1:AA:1238:A:C8	1:AA:1303:C:H1'	2.37	0.59
12:AL:33:ARG:O	12:AL:60:THR:HG23	2.02	0.59
23:BA:1343:G:C8	23:BA:1343:G:C5'	2.84	0.59
23:BA:1386:C:OP2	23:BA:1396:U:C5	2.55	0.59
23:BA:1543:A:C8	23:BA:1545:A:O4'	2.55	0.59
23:BA:1711:C:O2'	23:BA:1712:C:H5'	2.02	0.59
25:BC:34:VAL:O	25:BC:35:LYS:HD3	2.02	0.59
25:BC:43:ARG:HB2	25:BC:49:ILE:HA	1.84	0.59
26:BD:181:LEU:HD21	38:BP:7:ILE:CG2	2.32	0.59
28:BF:134:GLY:C	28:BF:135:LEU:HD12	2.22	0.59
30:BH:123:LEU:HD23	30:BH:124:GLY:N	2.17	0.59
34:BL:62:LEU:N	34:BL:62:LEU:HD13	2.17	0.59
1:CA:1112:C:H42	3:CC:177:THR:HA	1.66	0.59
1:CA:1372:U:H2'	1:CA:1373:G:O4'	2.01	0.59
3:CC:77:ILE:C	3:CC:83:ARG:HB3	2.22	0.59
5:CE:43:LEU:CD1	5:CE:132:ALA:HB1	2.32	0.59
23:DA:229:A:H5'	23:DA:230:U:C5'	2.31	0.59
23:DA:496:G:H1'	41:DS:61:ASN:HD21	1.67	0.59
23:DA:796:C:H2'	23:DA:797:C:C6	2.37	0.59
23:DA:1773:A:H2'	23:DA:1774:C:H5'	1.84	0.59
23:DA:2346:A:H5''	23:DA:2383:G:C1'	2.32	0.59
23:DA:2347:C:OP1	51:D3:39:TYR:HE1	1.84	0.59
26:DD:100:GLU:O	26:DD:172:VAL:HG23	2.02	0.59
29:DG:67:LEU:O	29:DG:71:LEU:HD23	2.01	0.59
38:DP:26:ASP:HB3	38:DP:92:GLY:N	2.17	0.59
48:DZ:52:HIS:CD2	48:DZ:52:HIS:H	2.18	0.59
1:AA:20:U:C2'	1:AA:21:G:H5'	2.31	0.59
1:AA:623:C:O5'	1:AA:623:C:H6	1.84	0.59
1:AA:1076:C:C2	1:AA:1082:G:N2	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	1.83	0.59
1:AA:1423:G:H2'	1:AA:1424:C:H6	1.67	0.59
2:AB:61:LEU:HD21	2:AB:161:ALA:HB3	1.84	0.59
5:AE:36:ASP:O	5:AE:37:ARG:HB2	2.02	0.59
7:AG:74:GLU:O	7:AG:88:PRO:HA	2.02	0.59
9:AI:79:LEU:HD23	9:AI:101:PHE:O	2.02	0.59
10:AJ:6:ILE:HG22	10:AJ:98:ILE:HG23	1.84	0.59
23:BA:136:G:C5	23:BA:137(A):C:C5	2.90	0.59
23:BA:1870:C:H2'	23:BA:1870:C:O2	2.01	0.59
23:BA:2056:G:N2	50:B2:4:HIS:O	2.35	0.59
23:BA:2655:G:N2	23:BA:2664:G:C4	2.70	0.59
25:BC:80:ALA:HB3	25:BC:94:LEU:HD13	1.82	0.59
38:BP:57:PHE:O	38:BP:59:THR:N	2.36	0.59
1:CA:715:A:O2'	1:CA:716:A:H5'	2.02	0.59
1:CA:136(A):C:O2'	1:CA:136(B):C:H5''	2.02	0.59
5:CE:10:MET:CB	5:CE:32:VAL:HG22	2.32	0.59
5:CE:51:VAL:HB	5:CE:52:PRO:CD	2.31	0.59
20:CT:71:THR:HG22	20:CT:72:LEU:N	2.17	0.59
23:DA:49:A:H4'	23:DA:50:U:H5''	1.84	0.59
23:DA:142:G:H1'	42:DT:37:THR:HG21	1.84	0.59
23:DA:282:A:C5	23:DA:359:A:C2	2.90	0.59
23:DA:1149:G:H2'	23:DA:1150:C:C6	2.36	0.59
23:DA:1657:C:H2'	23:DA:1658:C:C6	2.37	0.59
23:DA:2401:U:C2'	23:DA:2402:C:H5''	2.32	0.59
23:DA:2436:G:C5	23:DA:2437:U:C5	2.90	0.59
25:DC:71:ASP:OD2	25:DC:103:ARG:NH2	2.35	0.59
26:DD:50:GLY:HA2	26:DD:78:LEU:HB3	1.84	0.59
29:DG:52:VAL:HG12	29:DG:52:VAL:O	2.02	0.59
30:DH:123:LEU:HD23	30:DH:124:GLY:N	2.17	0.59
33:DK:14:THR:HG22	33:DK:52:VAL:HB	1.83	0.59
38:DP:64:ARG:HA	38:DP:72:VAL:O	2.02	0.59
44:DV:25:PRO:O	44:DV:85:HIS:HB2	2.02	0.59
46:DX:11:ARG:HH12	46:DX:61:ARG:H	1.50	0.59
1:AA:376:G:C4	1:AA:389:A:C2	2.89	0.59
2:AB:32:ILE:HD11	2:AB:190:THR:HG21	1.82	0.59
5:AE:10:MET:HB2	5:AE:32:VAL:HG22	1.82	0.59
5:AE:109:ILE:HG22	5:AE:110:LEU:HD23	1.84	0.59
8:AH:50:ARG:HH11	8:AH:50:ARG:HG2	1.68	0.59
15:AO:81:LEU:O	15:AO:85:LEU:HB2	2.01	0.59
23:BA:184:C:H2'	23:BA:185:U:H6	1.66	0.59
23:BA:557:U:H2'	23:BA:558:G:C8	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:781:A:H2	23:BA:1776:G:N3	2.01	0.59
23:BA:1188:U:H4'	40:BR:79:VAL:HG22	1.84	0.59
23:BA:2051:A:H4'	26:BD:141:ILE:HG23	1.83	0.59
25:BC:33:LEU:N	25:BC:33:LEU:HD23	2.16	0.59
25:BC:85:ASP:OD2	25:BC:86:PRO:HD2	2.03	0.59
28:BF:36:LYS:HD3	28:BF:160:VAL:HG21	1.83	0.59
34:BL:140:ALA:O	34:BL:141:ALA:HB2	2.02	0.59
44:BV:13:GLU:HB3	44:BV:18:LEU:CD1	2.33	0.59
44:BV:24:LEU:CD1	44:BV:85:HIS:HA	2.32	0.59
44:BV:72:ARG:HG2	44:BV:89:PHE:HB2	1.84	0.59
46:BX:53:VAL:HG22	46:BX:74:VAL:HG13	1.85	0.59
48:BZ:40:THR:CG2	48:BZ:43:ILE:HG12	2.28	0.59
3:CC:57:ILE:HD13	3:CC:66:VAL:HG22	1.84	0.59
6:CF:47:ARG:HH11	6:CF:47:ARG:HG2	1.66	0.59
17:CQ:7:THR:HA	17:CQ:57:VAL:O	2.02	0.59
17:CQ:59:ILE:HG23	17:CQ:71:PHE:CD1	2.38	0.59
19:CS:6:LYS:HD2	19:CS:6:LYS:H	1.68	0.59
22:CV:6189:G:H2'	22:CV:6190:U:H6	1.67	0.59
23:DA:565:C:C2'	23:DA:566:U:O5'	2.51	0.59
23:DA:661:C:O3'	34:DL:18:ARG:HG2	2.03	0.59
23:DA:828:U:O2	23:DA:828:U:C3'	2.51	0.59
23:DA:1514:U:H2'	23:DA:1515:C:H6	1.66	0.59
23:DA:1639:U:H2'	23:DA:1640:C:H5''	1.83	0.59
23:DA:2272:U:H6	23:DA:2272:U:C5'	2.07	0.59
24:DB:45:A:H2'	24:DB:45:A:N3	2.17	0.59
25:DC:218:ARG:HB3	25:DC:219:PRO:HD2	1.83	0.59
27:DE:158:THR:HG23	27:DE:160:ASN:N	2.17	0.59
32:DJ:157:ARG:N	32:DJ:158:PRO:HD3	2.05	0.59
35:DM:37:LEU:HG	35:DM:128:LYS:O	2.02	0.59
43:DU:29:GLU:OE2	43:DU:29:GLU:HA	2.03	0.59
45:DW:50:ASN:C	45:DW:62:LEU:HB2	2.22	0.59
50:D2:36:CYS:SG	50:D2:37:LYS:N	2.75	0.59
52:D4:8:ASN:ND2	52:D4:9:ARG:N	2.46	0.59
1:AA:391:G:C6	1:AA:392:G:C5	2.91	0.59
1:AA:1333:A:C8	1:AA:1334:G:C8	2.90	0.59
5:AE:15:ARG:HG2	5:AE:15:ARG:O	2.01	0.59
5:AE:43:LEU:CD1	5:AE:132:ALA:HB1	2.33	0.59
16:AP:55:ARG:HB3	16:AP:55:ARG:NH1	2.18	0.59
16:AP:55:ARG:O	16:AP:58:TYR:HB3	2.01	0.59
23:BA:1159:U:H2'	23:BA:1160:G:H8	1.67	0.59
23:BA:1187:G:H5''	40:BR:81:TYR:CE2	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1475:G:N2	23:BA:1519:G:C5	2.69	0.59
23:BA:1516:U:H2'	23:BA:1517:G:C8	2.37	0.59
37:BO:20:ARG:HH12	45:BW:47:PRO:HB2	1.68	0.59
38:BP:51:ARG:O	38:BP:61:PHE:HA	2.02	0.59
40:BR:55:ALA:HA	40:BR:101:GLY:O	2.02	0.59
44:BV:41:LEU:HD21	44:BV:83:PRO:HG2	1.83	0.59
46:BX:45:ASN:O	46:BX:63:ALA:HA	2.01	0.59
1:CA:625:G:C5	1:CA:626:U:C5	2.89	0.59
1:CA:750:G:C2	1:CA:751:U:C6	2.90	0.59
1:CA:868:C:H2'	1:CA:869:G:O4'	2.01	0.59
2:CB:223:ILE:C	2:CB:225:ALA:H	2.06	0.59
3:CC:22:TRP:HE3	3:CC:23:TYR:O	1.84	0.59
4:CD:79:PHE:CZ	4:CD:204:ILE:HA	2.37	0.59
4:CD:109:GLY:O	4:CD:111:ALA:N	2.35	0.59
5:CE:10:MET:HB2	5:CE:32:VAL:HG22	1.83	0.59
6:CF:96:PRO:HB3	18:CR:30:ASP:CG	2.23	0.59
15:CO:5:LYS:HD3	15:CO:6:GLU:H	1.67	0.59
17:CQ:7:THR:O	17:CQ:23:VAL:HG13	2.02	0.59
23:DA:528:A:C2	23:DA:2042:A:H2'	2.37	0.59
23:DA:534:U:O2'	39:DQ:49:HIS:HD2	1.81	0.59
23:DA:1396:U:O2	23:DA:1396:U:C2'	2.50	0.59
23:DA:1448:G:N3	23:DA:1529:A:H2	1.99	0.59
23:DA:1495:A:C2	23:DA:1496:A:C2	2.91	0.59
23:DA:1971:A:N3	25:DC:240:ALA:HA	2.17	0.59
23:DA:2889:C:H2'	23:DA:2891:G:C8	2.37	0.59
26:DD:46:ALA:CB	26:DD:82:ARG:HA	2.32	0.59
27:DE:181:LEU:HD21	27:DE:186:ILE:HD11	1.83	0.59
34:DL:59:LEU:O	34:DL:59:LEU:HD23	2.03	0.59
34:DL:84:ASN:HA	34:DL:115:LEU:O	2.02	0.59
43:DU:20:TYR:CE1	43:DU:42:VAL:HA	2.38	0.59
46:DX:12:PRO:O	46:DX:14:VAL:HG23	2.03	0.59
1:AA:113:G:O2'	1:AA:114:U:H5'	2.02	0.59
1:AA:186(A):C:H5'	20:AT:78:ALA:HB1	1.82	0.59
1:AA:555:C:H2'	1:AA:556:C:C6	2.35	0.59
1:AA:1095:U:H2'	1:AA:1096:C:H6	1.67	0.59
1:AA:1394:A:H4'	1:AA:1395:C:OP2	2.01	0.59
1:AA:1442:G:N7	1:AA:1446:A:C2	2.71	0.59
5:AE:43:LEU:HD11	5:AE:132:ALA:HB1	1.83	0.59
8:AH:87:SER:HA	8:AH:93:VAL:HG23	1.83	0.59
23:BA:389:G:H1	34:BL:71:VAL:H	1.50	0.59
23:BA:528:A:C2	23:BA:2042:A:H2'	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:825:C:O2	34:BL:55:ARG:NH2	2.34	0.59
23:BA:919:G:N2	23:BA:2269:A:OP2	2.36	0.59
23:BA:1268:A:H2'	23:BA:1269:A:O5'	2.03	0.59
23:BA:1478:G:C2	23:BA:1479:G:C8	2.90	0.59
23:BA:1817:G:OP1	25:BC:88:ARG:NH2	2.31	0.59
23:BA:2393:A:H5'	34:BL:60:MET:O	2.02	0.59
24:BB:103:U:O2'	44:BV:72:ARG:HG3	2.03	0.59
28:BF:55:LYS:HD2	28:BF:58:GLN:HE21	1.65	0.59
30:BH:87:LYS:HA	30:BH:122:GLU:HA	1.84	0.59
33:BK:86:ILE:H	33:BK:86:ILE:HD12	1.68	0.59
37:BO:27:SER:HA	37:BO:88:ASP:HB3	1.84	0.59
49:B1:38:ALA:HA	49:B1:55:PRO:HA	1.84	0.59
50:B2:48:GLU:O	50:B2:49:CYS:HB2	2.03	0.59
53:B5:22:VAL:CG1	53:B5:50:LEU:HD12	2.32	0.59
1:CA:355:C:C4	1:CA:356:A:N7	2.71	0.59
1:CA:447:G:H2'	1:CA:485:G:N2	2.18	0.59
1:CA:685:G:C2	1:CA:686:U:C4	2.90	0.59
1:CA:1234:C:O2'	1:CA:1235:U:H5'	2.02	0.59
1:CA:1326:C:O2	1:CA:1326:C:H2'	2.03	0.59
1:CA:1351:U:O2'	1:CA:1352:C:H5'	2.02	0.59
1:CA:1353:G:H1	1:CA:1369:C:H42	1.49	0.59
1:CA:1442:G:N7	1:CA:1446:A:C2	2.70	0.59
3:CC:131:ARG:HE	5:CE:50:GLU:HG2	1.67	0.59
22:CV:6213:A:C6	22:CV:6214:C:N4	2.70	0.59
23:DA:1973:G:H2'	23:DA:1974:C:C6	2.37	0.59
35:DM:47:ILE:CG2	35:DM:48:GLU:N	2.61	0.59
39:DQ:92:ARG:NH2	40:DR:11:GLN:N	2.48	0.59
44:DV:13:GLU:HB3	44:DV:18:LEU:CD1	2.33	0.59
45:DW:14:ARG:CZ	45:DW:14:ARG:HB2	2.32	0.59
1:AA:265:G:C2'	1:AA:266:G:H5''	2.28	0.59
1:AA:630:G:O2'	1:AA:631:G:H5'	2.03	0.59
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.17	0.59
1:AA:1239:A:H4'	1:AA:1240:U:C5'	2.33	0.59
1:AA:1253:G:H1	1:AA:1284:C:N4	1.94	0.59
1:AA:1326:C:H2'	1:AA:1326:C:O2	2.03	0.59
17:AQ:83:ASP:O	17:AQ:86:GLU:HB2	2.03	0.59
23:BA:184:C:H2'	23:BA:185:U:C6	2.38	0.59
23:BA:270(I):C:H2'	23:BA:270(I):C:O2	2.01	0.59
23:BA:1188:U:C2'	23:BA:1189:A:H5'	2.32	0.59
23:BA:1218:C:C2'	23:BA:1219:G:H5'	2.33	0.59
23:BA:1332:G:N2	23:BA:1609:A:O2'	2.34	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1786:A:H1'	23:BA:1938:A:N6	2.18	0.59
23:BA:2774:C:H2'	23:BA:2775:A:O4'	2.03	0.59
24:BB:16:G:C6	24:BB:69:G:C2	2.91	0.59
24:BB:66:A:C5	24:BB:108:C:C5	2.91	0.59
25:BC:86:PRO:HD2	25:BC:87:ASN:ND2	2.18	0.59
26:BD:175:VAL:O	26:BD:177:PRO:HD3	2.03	0.59
30:BH:88:ILE:HG12	30:BH:123:LEU:CA	2.32	0.59
39:BQ:65:ILE:O	39:BQ:66:ASN:C	2.40	0.59
41:BS:52:GLU:OE2	41:BS:52:GLU:HA	2.02	0.59
41:BS:75:TYR:CE2	41:BS:104:THR:CB	2.84	0.59
47:BY:28:LYS:HE3	47:BY:56:GLN:NE2	2.17	0.59
48:BZ:40:THR:HG23	48:BZ:43:ILE:CG1	2.28	0.59
1:CA:527:G:C2'	1:CA:528:C:H5'	2.33	0.59
5:CE:68:GLU:O	5:CE:68:GLU:HG3	2.02	0.59
10:CJ:6:ILE:HG22	10:CJ:98:ILE:HG23	1.84	0.59
15:CO:37:ASN:H	15:CO:37:ASN:HD22	1.49	0.59
23:DA:191:A:H2'	23:DA:192:C:C6	2.38	0.59
23:DA:270(M):U:H3'	23:DA:270(N):U:H5''	1.85	0.59
23:DA:819:A:OP2	23:DA:1187:G:N2	2.24	0.59
23:DA:1526:G:C6	23:DA:1527:G:C2	2.91	0.59
23:DA:2317:C:H2'	23:DA:2318:G:H5'	1.85	0.59
23:DA:2565:A:H5''	23:DA:2566:A:OP2	2.03	0.59
23:DA:2836:U:C4	23:DA:2883:A:N6	2.69	0.59
25:DC:108:PRO:HG3	25:DC:143:HIS:CE1	2.38	0.59
33:DK:26:LYS:O	33:DK:27:GLY:O	2.21	0.59
45:DW:35:ASN:HD22	45:DW:35:ASN:N	2.01	0.59
47:DY:13:ALA:O	47:DY:17:SER:OG	2.05	0.59
1:AA:428:G:O4'	1:AA:430:A:C8	2.56	0.59
1:AA:136(A):C:H2'	1:AA:136(B):C:H5''	1.83	0.59
7:AG:131:LYS:HE3	7:AG:136:LYS:HZ2	1.67	0.59
13:AM:29:ARG:HB3	13:AM:64:TRP:CZ2	2.38	0.59
23:BA:83:G:N1	23:BA:102:G:O2'	1.97	0.59
23:BA:207:A:H2'	23:BA:208:C:O4'	2.02	0.59
23:BA:2438:U:O3'	23:BA:2439:A:H3'	2.02	0.59
23:BA:2443:C:O2'	23:BA:2444:G:H5'	2.03	0.59
23:BA:2542:A:OP1	23:BA:2542:A:H4'	2.02	0.59
23:BA:2879:C:H4'	23:BA:2880:C:OP1	2.01	0.59
29:BG:89:ILE:HG22	29:BG:89:ILE:O	2.03	0.59
32:BJ:141:LYS:O	32:BJ:144:LYS:HE3	2.02	0.59
34:BL:18:ARG:HB3	34:BL:18:ARG:CZ	2.32	0.59
34:BL:46:LYS:HG2	34:BL:52:GLU:OE1	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BL:105:LEU:HD12	34:BL:105:LEU:H	1.66	0.59
37:BO:12:PHE:O	37:BO:15:ARG:HG3	2.03	0.59
1:CA:55:A:C4	1:CA:56:U:C6	2.91	0.59
1:CA:1349:A:H2'	1:CA:1350:A:O4'	2.02	0.59
1:CA:1503:A:OP1	1:CA:1531:A:O2'	2.20	0.59
2:CB:63:MET:CG	2:CB:225:ALA:HB1	2.31	0.59
3:CC:195:VAL:O	3:CC:196:LEU:HB2	2.02	0.59
18:CR:70:ILE:O	18:CR:74:ARG:HG3	2.02	0.59
23:DA:753:C:OP1	52:D4:1:MET:HE3	2.02	0.59
23:DA:2036:C:H6	23:DA:2036:C:C5'	2.16	0.59
23:DA:2716:U:O2'	23:DA:2717:G:H5'	2.02	0.59
25:DC:24:ILE:CD1	25:DC:84:TYR:HB2	2.32	0.59
26:DD:57:LYS:HG3	26:DD:58:ARG:H	1.68	0.59
28:DF:43:LEU:O	28:DF:88:ILE:HG23	2.02	0.59
39:DQ:102:GLU:HG3	40:DR:2:PHE:CD1	2.38	0.59
47:DY:6:VAL:CG1	47:DY:10:LEU:HD11	2.28	0.59
1:AA:224:C:H2'	1:AA:225:C:C6	2.38	0.59
1:AA:318:G:N2	1:AA:319:G:C4	2.71	0.59
1:AA:1159:U:H4'	1:AA:1160:G:OP1	2.02	0.59
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.16	0.59
3:AC:57:ILE:CD1	3:AC:66:VAL:HG22	2.32	0.59
5:AE:12:LEU:C	5:AE:12:LEU:HD22	2.23	0.59
9:AI:52:ALA:HB1	9:AI:95:LYS:NZ	2.18	0.59
11:AK:48:ILE:HD11	11:AK:64:ALA:HA	1.83	0.59
17:AQ:59:ILE:HG23	17:AQ:71:PHE:CD1	2.38	0.59
23:BA:2100:G:N2	23:BA:2101:G:H1'	2.17	0.59
23:BA:2469:A:H2	23:BA:2481:G:N2	2.00	0.59
24:BB:30:C:OP2	37:BO:32:LEU:HD11	2.03	0.59
29:BG:86:GLU:HG2	29:BG:164:TYR:O	2.02	0.59
34:BL:33:ARG:CG	34:BL:34:GLY:N	2.65	0.59
37:BO:36:TYR:N	37:BO:36:TYR:HD1	2.00	0.59
46:BX:11:ARG:HB3	46:BX:12:PRO:HD2	1.83	0.59
46:BX:45:ASN:HD22	46:BX:46:LEU:N	2.01	0.59
1:CA:179:A:H2'	1:CA:180:U:C6	2.38	0.59
1:CA:863:U:H2'	1:CA:865:A:OP2	2.03	0.59
2:CB:163:PHE:CD1	2:CB:185:ILE:HG13	2.37	0.59
6:CF:62:TRP:CE3	6:CF:62:TRP:O	2.55	0.59
9:CI:52:ALA:HB1	9:CI:95:LYS:NZ	2.18	0.59
15:CO:8:LYS:O	15:CO:12:ILE:HG13	2.03	0.59
23:DA:61:G:H5'	47:DY:50:ILE:HG21	1.85	0.59
23:DA:71:A:C2	42:DT:31:HIS:CE1	2.89	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:958:U:OP2	35:DM:14:ARG:NH1	2.36	0.59
23:DA:993:G:C4	23:DA:994:C:H5	2.20	0.59
23:DA:1901:A:N3	23:DA:1901:A:H2'	2.16	0.59
25:DC:96:HIS:HD2	25:DC:102:LYS:HD3	1.63	0.59
27:DE:36:VAL:O	27:DE:40:GLN:HG3	2.03	0.59
28:DF:128:ARG:NH2	28:DF:161:THR:O	2.34	0.59
30:DH:68:LEU:C	30:DH:138:ILE:HD13	2.23	0.59
38:DP:64:ARG:HD2	38:DP:73:GLU:HG2	1.85	0.59
40:DR:22:VAL:CG1	40:DR:23:GLU:N	2.64	0.59
44:DV:102:LEU:HD21	44:DV:124:ILE:CD1	2.33	0.59
48:DZ:40:THR:HG23	48:DZ:43:ILE:CG1	2.31	0.59
1:AA:362:G:O2'	12:AL:32:ARG:NH2	2.36	0.59
1:AA:685:G:C2	1:AA:686:U:C4	2.91	0.59
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.03	0.59
23:BA:747:U:OP2	50:B2:3:LYS:HD3	2.03	0.59
23:BA:910:A:C6	23:BA:911:A:C6	2.91	0.59
23:BA:1433:U:O2'	23:BA:1434:A:H5'	2.03	0.59
23:BA:2705:A:C2	36:BN:64:ARG:NH1	2.71	0.59
24:BB:33:G:C2	24:BB:50:G:C2	2.91	0.59
24:BB:81:G:C6	24:BB:82:G:C5	2.91	0.59
25:BC:75:ILE:O	25:BC:118:VAL:HG23	2.02	0.59
26:BD:167:VAL:HG11	26:BD:189:PRO:HD3	1.84	0.59
28:BF:133:LEU:N	28:BF:133:LEU:HD23	2.18	0.59
29:BG:23:ARG:HD3	29:BG:23:ARG:N	2.18	0.59
38:BP:109:GLU:O	38:BP:112:ARG:HG3	2.03	0.59
40:BR:49:THR:HB	40:BR:50:PRO:HD2	1.83	0.59
42:BT:29:TRP:CZ3	42:BT:78:LYS:HG3	2.38	0.59
44:BV:92:SER:HB2	44:BV:94:GLU:OE2	2.03	0.59
1:CA:178:C:O2'	1:CA:179:A:H5'	2.03	0.59
1:CA:391:G:C6	1:CA:392:G:C5	2.91	0.59
1:CA:458:C:H2'	1:CA:464:G:O4'	2.03	0.59
1:CA:1223:C:P	1:CA:1224:G:H2'	2.42	0.59
2:CB:102:LEU:HD12	2:CB:102:LEU:N	2.18	0.59
2:CB:187:LEU:HD11	2:CB:204:ASN:O	2.03	0.59
23:DA:727:A:C2	25:DC:9:TYR:CD2	2.90	0.59
23:DA:1288:U:C2	23:DA:1327:C:O2	2.55	0.59
23:DA:1833:U:C2'	23:DA:1834:U:H5'	2.33	0.59
25:DC:43:ARG:HB2	25:DC:49:ILE:HA	1.83	0.59
28:DF:7:LEU:HA	28:DF:10:LYS:HB2	1.85	0.59
32:DJ:89:LYS:O	32:DJ:90:LEU:C	2.41	0.59
35:DM:134:ARG:HA	35:DM:134:ARG:NE	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DQ:92:ARG:HD2	39:DQ:95:LEU:HG	1.85	0.59
1:AA:1281:U:C5'	1:AA:1282:C:H5	2.15	0.59
6:AF:91:VAL:HG13	18:AR:72:ARG:NH2	2.17	0.59
23:BA:94:G:N2	47:BY:47:ASN:HD22	1.97	0.59
23:BA:971:C:C2'	23:BA:972:G:H5'	2.32	0.59
23:BA:1850:G:C6	23:BA:1851:U:C4	2.91	0.59
23:BA:1858:G:O2'	23:BA:1859:A:C8	2.53	0.59
23:BA:2378:A:O2'	37:BO:21:THR:HG21	2.03	0.59
23:BA:2506:U:H5	23:BA:2507:C:C5	2.21	0.59
24:BB:82:G:C2'	24:BB:83:G:H5'	2.33	0.59
25:BC:260:ARG:O	25:BC:261:LYS:O	2.21	0.59
28:BF:131:TYR:HE2	28:BF:133:LEU:HB3	1.68	0.59
32:BJ:89:LYS:O	32:BJ:90:LEU:C	2.39	0.59
38:BP:74:ARG:HD3	38:BP:76:PHE:CZ	2.37	0.59
39:BQ:65:ILE:O	39:BQ:68:ALA:N	2.35	0.59
41:BS:29:LEU:HD21	41:BS:33:ARG:NE	2.16	0.59
41:BS:62:HIS:C	41:BS:64:MET:H	2.06	0.59
1:CA:782:A:H2'	1:CA:783:C:H5'	1.84	0.59
2:CB:32:ILE:HD11	2:CB:190:THR:CG2	2.33	0.59
3:CC:126:ARG:O	3:CC:127:ARG:HB2	2.01	0.59
5:CE:11:ILE:HB	5:CE:31:LEU:HB3	1.85	0.59
5:CE:33:VAL:HG13	5:CE:109:ILE:HD13	1.85	0.59
18:CR:63:GLN:O	18:CR:66:LEU:HB3	2.03	0.59
20:CT:76:ALA:O	20:CT:80:ARG:HG2	2.03	0.59
23:DA:84:A:H2	23:DA:98:G:N3	2.01	0.59
23:DA:185:U:H2'	23:DA:186:G:H8	1.68	0.59
23:DA:1019:U:O2'	23:DA:1021:A:C2	2.55	0.59
23:DA:1105:U:O2'	23:DA:1106:G:H5'	2.03	0.59
27:DE:59:TYR:HB3	27:DE:78:ILE:HD12	1.84	0.59
28:DF:143:GLU:CD	28:DF:143:GLU:H	2.05	0.59
32:DJ:146:TYR:N	32:DJ:146:TYR:CD1	2.70	0.59
35:DM:62:GLY:O	44:DV:178:GLU:HG2	2.02	0.59
40:DR:1:MET:H2	40:DR:16:PRO:HD3	1.67	0.59
41:DS:24:ILE:HG21	41:DS:36:LEU:HD21	1.84	0.59
1:AA:663:A:O2'	1:AA:664:G:H5'	2.03	0.58
1:AA:749:C:OP2	1:AA:750:G:OP2	2.21	0.58
1:AA:1349:A:P	9:AI:118:LYS:NZ	2.76	0.58
6:AF:47:ARG:HH11	6:AF:47:ARG:HG2	1.67	0.58
8:AH:114:THR:HG22	8:AH:130:GLY:O	2.02	0.58
10:AJ:62:HIS:O	14:AN:59:ALA:HB3	2.03	0.58
11:AK:109:VAL:CG1	18:AR:84:LYS:HB2	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:26:LEU:HD12	12:AL:29:ALA:HB2	1.84	0.58
16:AP:54:GLU:O	16:AP:57:ARG:HB2	2.03	0.58
20:AT:26:ASN:O	20:AT:30:LYS:HB2	2.03	0.58
23:BA:1778:U:H2'	23:BA:1784:A:H62	1.66	0.58
23:BA:1826:G:H4'	25:BC:242:ARG:NE	2.08	0.58
23:BA:2038:G:H2'	23:BA:2039:C:H6	1.68	0.58
23:BA:2729:G:H2'	23:BA:2730:C:C6	2.37	0.58
25:BC:25:THR:HG22	25:BC:82:ILE:O	2.02	0.58
25:BC:108:PRO:CG	25:BC:143:HIS:HE1	2.15	0.58
26:BD:11:MET:CB	26:BD:24:THR:HA	2.33	0.58
27:BE:63:LYS:HZ3	27:BE:67:GLN:NE2	2.01	0.58
27:BE:158:THR:HG23	27:BE:160:ASN:N	2.17	0.58
32:BJ:114:LEU:HD21	32:BJ:121:VAL:HG21	1.83	0.58
34:BL:33:ARG:O	34:BL:35:HIS:O	2.20	0.58
37:BO:89:ARG:O	37:BO:90:GLY:O	2.21	0.58
38:BP:124:ASP:O	38:BP:128:GLU:HB2	2.02	0.58
48:BZ:17:LYS:HD3	48:BZ:17:LYS:C	2.23	0.58
53:B5:14:VAL:CG1	53:B5:22:VAL:HG13	2.33	0.58
1:CA:342:C:C2'	1:CA:343:U:H5'	2.33	0.58
1:CA:663:A:O2'	1:CA:664:G:H5'	2.02	0.58
1:CA:920:U:H2'	1:CA:921:U:H6	1.66	0.58
1:CA:960:U:C5	1:CA:1225:A:H1'	2.37	0.58
1:CA:1084:G:OP1	1:CA:1086:U:C2	2.56	0.58
1:CA:1360:A:H8	1:CA:1360:A:OP1	1.86	0.58
7:CG:120:ILE:HG22	7:CG:124:LEU:HD12	1.85	0.58
12:CL:40:ARG:HG2	12:CL:41:THR:N	2.16	0.58
23:DA:1771:C:H1'	23:DA:1786:A:C8	2.38	0.58
23:DA:2058:A:N6	23:DA:2059:A:N6	2.51	0.58
23:DA:2730:C:O2'	23:DA:2731:G:H5'	2.02	0.58
23:DA:2808:U:H2'	23:DA:2809:A:C5'	2.32	0.58
26:DD:132:HIS:CG	26:DD:135:HIS:NE2	2.70	0.58
30:DH:82:ARG:HB3	30:DH:89:TYR:CD1	2.38	0.58
32:DJ:90:LEU:O	32:DJ:111:GLU:HG3	2.02	0.58
43:DU:29:GLU:CB	43:DU:38:ILE:HB	2.31	0.58
1:AA:191(G):G:H2'	1:AA:192:U:H6	1.68	0.58
1:AA:1292:U:H2'	1:AA:1293:G:C8	2.38	0.58
2:AB:20:GLU:HB2	2:AB:190:THR:OG1	2.02	0.58
12:AL:116:ARG:O	12:AL:118:LYS:N	2.36	0.58
23:BA:953:A:OP2	35:BM:16:ARG:NH2	2.35	0.58
23:BA:1266:G:O5'	41:BS:15:ARG:NH2	2.36	0.58
23:BA:1971:A:N3	25:BC:241:PRO:HD3	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2317:C:H2'	23:BA:2318:G:C5'	2.32	0.58
23:BA:2808:U:H2'	23:BA:2809:A:C5'	2.33	0.58
26:BD:57:LYS:HG3	26:BD:58:ARG:N	2.18	0.58
32:BJ:81:ASP:OD2	32:BJ:147:ALA:HB1	2.02	0.58
34:BL:33:ARG:CG	34:BL:34:GLY:H	2.16	0.58
35:BM:43:THR:OG1	35:BM:46:GLN:HG3	2.03	0.58
35:BM:134:ARG:NE	35:BM:134:ARG:HA	2.18	0.58
41:BS:12:ILE:HG12	41:BS:13:SER:N	2.18	0.58
45:BW:23:VAL:HB	45:BW:26:TYR:CE2	2.38	0.58
1:CA:349:A:O2'	1:CA:350:G:H5'	2.03	0.58
1:CA:632:A:N7	1:CA:633:G:C5	2.70	0.58
1:CA:664:G:P	18:CR:64:ARG:HH21	2.25	0.58
1:CA:816:A:OP2	1:CA:1527:C:H4'	2.04	0.58
1:CA:1095:U:H2'	1:CA:1096:C:H6	1.68	0.58
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.67	0.58
3:CC:130:VAL:O	3:CC:134:ILE:HG13	2.03	0.58
10:CJ:45:ARG:NH1	14:CN:36:PHE:HD2	2.00	0.58
11:CK:21:ILE:HB	11:CK:84:VAL:HG12	1.84	0.58
16:CP:55:ARG:HB3	16:CP:55:ARG:NH1	2.19	0.58
18:CR:19:LYS:O	18:CR:20:ALA:HB2	2.03	0.58
18:CR:26:LEU:HD21	18:CR:42:ARG:NH1	2.17	0.58
23:DA:207:A:H2'	23:DA:208:C:O4'	2.02	0.58
23:DA:903:C:H2'	23:DA:904:C:C6	2.38	0.58
23:DA:1266:G:O5'	41:DS:15:ARG:NH2	2.36	0.58
23:DA:1746:G:C2	23:DA:1747:G:N7	2.71	0.58
23:DA:2287:A:O2'	23:DA:2288:A:O5'	2.20	0.58
23:DA:2787:C:H1'	26:DD:62:PRO:CB	2.33	0.58
27:DE:65:TRP:CZ3	27:DE:72:ARG:HB3	2.39	0.58
28:DF:84:LYS:CG	28:DF:85:GLY:H	2.07	0.58
29:DG:13:LYS:O	29:DG:15:VAL:HG13	2.03	0.58
36:DN:57:ARG:HD2	36:DN:59:ASP:OD2	2.03	0.58
39:DQ:30:LYS:O	39:DQ:31:SER:HB3	2.03	0.58
44:DV:11:GLU:HG3	44:DV:12:GLY:N	2.18	0.58
53:D5:57:ARG:CZ	53:D5:57:ARG:CA	2.81	0.58
1:AA:42:G:H8	1:AA:42:G:OP2	1.86	0.58
1:AA:404:U:H2'	1:AA:405:U:H6	1.67	0.58
1:AA:921:U:O2	5:AE:19:MET:HB2	2.04	0.58
1:AA:979:C:H42	14:AN:18:VAL:HG12	1.67	0.58
1:AA:1418:A:C2	1:AA:1483:A:C2	2.92	0.58
1:AA:1426:C:H2'	1:AA:1427:U:H6	1.67	0.58
1:AA:1464:G:O2'	1:AA:1465:C:H5'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:47:LEU:HD23	3:AC:52:LEU:HD13	1.85	0.58
18:AR:63:GLN:O	18:AR:66:LEU:HB3	2.04	0.58
19:AS:16:LEU:O	19:AS:20:LEU:HG	2.04	0.58
23:BA:142:G:H1'	42:BT:37:THR:CG2	2.33	0.58
23:BA:185:U:H2'	23:BA:186:G:C8	2.37	0.58
23:BA:188:G:H2'	23:BA:189:G:H5'	1.85	0.58
23:BA:270(H):C:H2'	23:BA:270(I):C:C6	2.35	0.58
23:BA:528:A:C8	23:BA:528:A:C3'	2.87	0.58
23:BA:556:G:H2'	23:BA:557:U:C6	2.38	0.58
23:BA:830:G:H4'	23:BA:831:G:OP2	2.04	0.58
23:BA:1141:U:P	32:BJ:86:THR:HG21	2.44	0.58
23:BA:1389:G:H2'	23:BA:1390:U:C6	2.38	0.58
23:BA:1459:G:H2'	23:BA:1459:G:N3	2.18	0.58
23:BA:1845:G:OP1	25:BC:258:LYS:HE3	2.04	0.58
23:BA:1916:A:H2'	23:BA:1917:U:O4'	2.02	0.58
23:BA:2272:U:H6	23:BA:2272:U:C5'	2.03	0.58
24:BB:7:G:H5''	37:BO:29:PHE:CE2	2.38	0.58
24:BB:116:G:H4'	37:BO:55:ALA:O	2.03	0.58
27:BE:14:PRO:HD3	27:BE:128:ALA:HB2	1.86	0.58
28:BF:43:LEU:O	28:BF:88:ILE:HG23	2.03	0.58
28:BF:165:THR:OG1	28:BF:168:GLU:HG3	2.02	0.58
30:BH:15:VAL:HG12	30:BH:16:GLY:H	1.68	0.58
34:BL:49:ARG:HG3	53:B5:60:LEU:HD21	1.84	0.58
35:BM:140:ALA:HB3	44:BV:53:ILE:HG12	1.85	0.58
45:BW:70:GLN:OE1	45:BW:72:ARG:HD3	2.03	0.58
1:CA:247:G:OP2	17:CQ:100:LYS:N	2.36	0.58
1:CA:377:G:O2'	1:CA:378:G:H5'	2.01	0.58
1:CA:411:A:C5	1:CA:429:U:C5	2.91	0.58
1:CA:826:C:H2'	8:CH:15:ASN:HD22	1.68	0.58
1:CA:1316:G:O2'	14:CN:18:VAL:HG21	2.02	0.58
1:CA:1333:A:C8	1:CA:1334:G:C8	2.90	0.58
12:CL:54:VAL:HG12	12:CL:55:ALA:H	1.68	0.58
23:DA:270(H):C:H2'	23:DA:270(I):C:C6	2.36	0.58
23:DA:706:A:H2'	23:DA:707:G:O4'	2.03	0.58
23:DA:1158:C:C2'	23:DA:1159:U:H5'	2.33	0.58
23:DA:1389:G:O2'	23:DA:1390:U:H5'	2.04	0.58
23:DA:1793:C:H2'	23:DA:1794:U:C6	2.39	0.58
23:DA:2755:C:O2'	23:DA:2756:U:H2'	2.03	0.58
24:DB:81:G:C5	24:DB:82:G:C8	2.91	0.58
26:DD:132:HIS:HA	26:DD:135:HIS:CE1	2.38	0.58
34:DL:61:ARG:CD	53:D5:13:ARG:HD2	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DN:107:ASP:C	36:DN:107:ASP:OD2	2.40	0.58
38:DP:80:SER:C	38:DP:82:LEU:H	2.06	0.58
38:DP:124:ASP:O	38:DP:128:GLU:HB2	2.03	0.58
40:DR:39:LEU:CB	40:DR:47:VAL:HG21	2.32	0.58
44:DV:9:TYR:CZ	44:DV:61:LEU:HD13	2.37	0.58
1:AA:109:A:N6	1:AA:326:G:C5	2.72	0.58
1:AA:521:G:O6	1:AA:529:G:C2	2.57	0.58
1:AA:946:A:H2'	1:AA:947:G:H8	1.68	0.58
1:AA:1080:A:H5''	1:AA:1081:G:OP2	2.03	0.58
5:AE:79:GLU:CD	5:AE:79:GLU:H	2.06	0.58
7:AG:136:LYS:O	7:AG:140:ASP:HB2	2.04	0.58
8:AH:123:GLU:O	8:AH:127:LEU:HB2	2.04	0.58
12:AL:63:TYR:O	12:AL:64:GLU:HB2	2.01	0.58
12:AL:116:ARG:NH2	12:AL:123:LYS:HB2	2.18	0.58
17:AQ:4:LYS:HG3	17:AQ:5:VAL:N	2.18	0.58
19:AS:63:THR:HG22	19:AS:66:MET:CG	2.32	0.58
22:AV:6189:G:H2'	22:AV:6190:U:H6	1.69	0.58
23:BA:225:A:N6	23:BA:226:G:N1	2.50	0.58
23:BA:1190:G:H5''	34:BL:35:HIS:HA	1.84	0.58
23:BA:1991:U:H2'	23:BA:1992:G:H5'	1.85	0.58
23:BA:2511:U:O3'	26:BD:123:ALA:HB3	2.04	0.58
25:BC:108:PRO:HG3	25:BC:143:HIS:CE1	2.38	0.58
25:BC:133:LEU:C	25:BC:135:PHE:N	2.57	0.58
32:BJ:66:THR:O	32:BJ:69:VAL:HG12	2.03	0.58
32:BJ:118:PRO:HD2	32:BJ:119:GLU:OE1	2.04	0.58
33:BK:24:VAL:HB	33:BK:33:ALA:HB2	1.86	0.58
50:B2:4:HIS:HB3	50:B2:5:PRO:HD3	1.84	0.58
1:CA:266:G:C5'	1:CA:267:C:H5	2.16	0.58
1:CA:409:G:H2'	1:CA:410:G:O5'	2.03	0.58
1:CA:491:G:H2'	1:CA:492:G:H8	1.67	0.58
1:CA:972:C:H4'	10:CJ:57:LYS:HG3	1.84	0.58
1:CA:1349:A:OP1	9:CI:120:ARG:HB2	2.03	0.58
23:DA:226:G:C2	23:DA:228:A:N6	2.72	0.58
23:DA:661:C:C4'	34:DL:18:ARG:HG2	2.32	0.58
23:DA:952:G:OP1	35:DM:16:ARG:NH2	2.33	0.58
23:DA:1158:C:O2'	23:DA:1159:U:H5'	2.03	0.58
23:DA:1478:G:C2	23:DA:1479:G:C8	2.92	0.58
23:DA:2698:U:H2'	23:DA:2699:C:C6	2.38	0.58
24:DB:48:A:H4'	37:DO:95:HIS:CD2	2.38	0.58
26:DD:111:ARG:CD	26:DD:160:TYR:HE1	2.14	0.58
28:DF:88:ILE:HD11	28:DF:90:LEU:CD2	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DL:49:ARG:HG3	53:D5:60:LEU:HD21	1.84	0.58
34:DL:81:GLN:HG2	34:DL:106:LEU:HD22	1.85	0.58
1:AA:232:G:H1'	1:AA:262:A:N1	2.19	0.58
1:AA:991:U:O2'	1:AA:993:G:C8	2.56	0.58
1:AA:1057:G:C2	1:AA:1204:A:C2	2.92	0.58
1:AA:1411:C:H2'	1:AA:1412:C:H6	1.68	0.58
2:AB:223:ILE:C	2:AB:225:ALA:H	2.06	0.58
4:AD:67:ILE:HG22	4:AD:68:TYR:CD1	2.38	0.58
12:AL:22:LYS:O	12:AL:96:ARG:HD2	2.04	0.58
23:BA:61:G:H5'	47:BY:50:ILE:HG21	1.86	0.58
23:BA:1901:A:H2'	23:BA:1901:A:N3	2.19	0.58
23:BA:1996:C:H4'	23:BA:1997:G:OP1	2.03	0.58
23:BA:2183:C:O2	23:BA:2183:C:H2'	2.04	0.58
23:BA:2335:A:C8	23:BA:2337:G:C5	2.91	0.58
24:BB:28:C:H2'	24:BB:29:A:C8	2.39	0.58
26:BD:57:LYS:HG3	26:BD:58:ARG:H	1.67	0.58
48:BZ:40:THR:OG1	48:BZ:41:PRO:HD2	2.04	0.58
1:CA:262:A:C6	1:CA:263:A:C6	2.92	0.58
1:CA:630:G:O2'	1:CA:631:G:H5'	2.03	0.58
1:CA:136(A):C:H2'	1:CA:136(B):C:H5''	1.84	0.58
2:CB:20:GLU:HB2	2:CB:190:THR:OG1	2.03	0.58
16:CP:54:GLU:O	16:CP:57:ARG:HB2	2.04	0.58
20:CT:13:LEU:H	20:CT:13:LEU:CD1	2.15	0.58
21:CU:22:ARG:HD2	21:CU:23:PRO:HD2	1.84	0.58
23:DA:640:C:H2'	23:DA:641:C:C6	2.37	0.58
23:DA:2320:A:N3	23:DA:2320:A:H2'	2.19	0.58
24:DB:78:A:C2	24:DB:99:A:C5	2.91	0.58
26:DD:6:GLY:HA2	26:DD:51:PHE:HE2	1.69	0.58
34:DL:136:GLU:O	34:DL:137:LYS:C	2.42	0.58
38:DP:29:ARG:HD2	38:DP:44:ASP:OD2	2.03	0.58
45:DW:70:GLN:OE1	45:DW:72:ARG:HD3	2.03	0.58
48:DZ:43:ILE:HD13	48:DZ:43:ILE:H	1.64	0.58
53:D5:29:LYS:NZ	53:D5:29:LYS:HB3	2.19	0.58
1:AA:273:A:N6	1:AA:274:A:N6	2.52	0.58
1:AA:465:A:N7	1:AA:467:G:C6	2.72	0.58
1:AA:1298:C:H4'	1:AA:1299:A:C8	2.38	0.58
1:AA:1349:A:OP2	9:AI:118:LYS:NZ	2.36	0.58
7:AG:70:LYS:HE2	7:AG:96:GLN:NE2	2.19	0.58
8:AH:86:ILE:CB	8:AH:133:LEU:HD22	2.32	0.58
14:AN:12:ARG:HG2	14:AN:14:PRO:HD3	1.86	0.58
18:AR:66:LEU:HG	18:AR:70:ILE:HD11	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:389:G:H22	34:BL:72:PRO:HD3	1.69	0.58
23:BA:1006:C:C2	23:BA:1138:G:N2	2.71	0.58
23:BA:1858:G:H1'	23:BA:1884:A:H62	1.68	0.58
24:BB:48:A:H4'	37:BO:95:HIS:CD2	2.38	0.58
26:BD:23:VAL:HA	26:BD:184:VAL:O	2.03	0.58
28:BF:88:ILE:HD11	28:BF:90:LEU:CD2	2.33	0.58
34:BL:55:ARG:CG	34:BL:56:SER:N	2.63	0.58
34:BL:111:ARG:HG3	34:BL:128:HIS:CB	2.33	0.58
38:BP:64:ARG:HA	38:BP:72:VAL:O	2.03	0.58
41:BS:86:LEU:HD12	41:BS:87:PRO:HD2	1.86	0.58
1:CA:643:C:H5'	8:CH:31:PHE:CD1	2.38	0.58
2:CB:72:GLY:HA3	2:CB:165:VAL:CG1	2.34	0.58
19:CS:16:LEU:O	19:CS:20:LEU:HG	2.03	0.58
23:DA:46:C:H42	23:DA:179:G:H1	1.52	0.58
23:DA:399:G:H2'	23:DA:400:G:H5'	1.85	0.58
23:DA:530:G:C5	23:DA:2022:U:H5''	2.39	0.58
23:DA:558:G:P	32:DJ:134:PRO:HD2	2.44	0.58
23:DA:819:A:C4	23:DA:1189:A:C2	2.91	0.58
23:DA:1055:G:H2'	23:DA:1056:G:H8	1.63	0.58
23:DA:2709:G:C2'	23:DA:2710:C:H5'	2.34	0.58
23:DA:2758:A:C5	29:DG:67:LEU:HD21	2.38	0.58
25:DC:25:THR:HG21	25:DC:82:ILE:H	1.68	0.58
25:DC:25:THR:O	25:DC:27:THR:HB	2.04	0.58
26:DD:6:GLY:HA2	26:DD:51:PHE:CE2	2.37	0.58
26:DD:51:PHE:HB3	26:DD:77:ILE:HD12	1.84	0.58
35:DM:40:ALA:HB2	35:DM:127:ILE:HD12	1.85	0.58
43:DU:59:GLY:HA3	43:DU:61:ILE:HG12	1.84	0.58
46:DX:11:ARG:HH12	46:DX:61:ARG:N	2.01	0.58
1:AA:590:C:H2'	1:AA:591:U:H6	1.68	0.58
1:AA:626:U:H2'	1:AA:627:G:C8	2.37	0.58
1:AA:723:U:H5''	1:AA:724:G:OP2	2.04	0.58
1:AA:1151:A:O2'	1:AA:1152:A:C8	2.55	0.58
2:AB:207:ALA:O	2:AB:211:ILE:HG13	2.04	0.58
4:AD:57:ARG:HB3	4:AD:206:PHE:HB2	1.85	0.58
5:AE:48:ALA:O	5:AE:50:GLU:N	2.37	0.58
8:AH:111:ILE:O	8:AH:112:LEU:HB3	2.04	0.58
14:AN:36:PHE:CD1	14:AN:36:PHE:O	2.57	0.58
23:BA:661:C:C4'	34:BL:18:ARG:HG2	2.33	0.58
23:BA:727:A:C2	25:BC:9:TYR:CD2	2.92	0.58
23:BA:903:C:H2'	23:BA:904:C:C6	2.38	0.58
23:BA:954:G:H5''	35:BM:13:GLN:CG	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:997:G:O2'	23:BA:998:C:H5'	2.04	0.58
23:BA:1343:G:H8	23:BA:1343:G:C5'	2.16	0.58
23:BA:1529:A:C8	23:BA:1530:G:C8	2.91	0.58
23:BA:2188:C:H2'	23:BA:2189:U:O4'	2.04	0.58
23:BA:2392:A:OP1	53:B5:32:LEU:HB3	2.04	0.58
23:BA:2828:C:O2'	23:BA:2829:C:H5'	2.03	0.58
32:BJ:146:TYR:N	32:BJ:146:TYR:CD1	2.71	0.58
33:BK:35:VAL:HG11	33:BK:103:ALA:HB3	1.85	0.58
39:BQ:20:LEU:HB2	39:BQ:39:LEU:HD11	1.85	0.58
39:BQ:25:TRP:CD1	39:BQ:25:TRP:C	2.76	0.58
39:BQ:95:LEU:HD13	40:BR:4:ILE:HG23	1.85	0.58
40:BR:64:HIS:HD2	40:BR:92:THR:CG2	2.17	0.58
1:CA:102:G:H2'	1:CA:103:C:H6	1.68	0.58
1:CA:104:G:C2	1:CA:105:G:C8	2.91	0.58
1:CA:356:A:H2'	1:CA:357:G:H8	1.68	0.58
1:CA:365:U:C5'	1:CA:366:C:OP1	2.42	0.58
1:CA:538:G:OP1	12:CL:112:ARG:HG3	2.04	0.58
1:CA:723:U:H5''	1:CA:724:G:OP2	2.03	0.58
1:CA:1298:C:H4'	1:CA:1299:A:C8	2.38	0.58
11:CK:109:VAL:CG1	18:CR:84:LYS:HB2	2.34	0.58
23:DA:851:U:O2	23:DA:928:G:C2	2.57	0.58
23:DA:953:A:OP2	35:DM:16:ARG:NH2	2.36	0.58
23:DA:997:G:O2'	23:DA:998:C:H5'	2.04	0.58
23:DA:2604:U:O2	23:DA:2604:U:H2'	2.02	0.58
23:DA:2723:C:H2'	23:DA:2724:C:O5'	2.03	0.58
24:DB:111:U:O2	24:DB:112:G:C8	2.56	0.58
26:DD:24:THR:HB	26:DD:186:GLY:HA2	1.85	0.58
26:DD:175:VAL:O	26:DD:177:PRO:HD3	2.03	0.58
28:DF:105:LYS:HZ3	49:D1:52:SER:HB2	1.69	0.58
29:DG:86:GLU:HG2	29:DG:164:TYR:O	2.04	0.58
38:DP:88:ILE:HD12	38:DP:89:VAL:H	1.67	0.58
39:DQ:69:CYS:CB	39:DQ:79:PHE:HD2	2.17	0.58
42:DT:40:LYS:O	42:DT:42:ALA:N	2.36	0.58
50:D2:20:ARG:CA	50:D2:23:HIS:HD2	2.10	0.58
1:AA:178:C:O2'	1:AA:179:A:H5'	2.03	0.58
1:AA:458:C:H2'	1:AA:464:G:O4'	2.03	0.58
1:AA:542:G:O2'	1:AA:543:C:H5'	2.03	0.58
1:AA:630:G:C2'	1:AA:631:G:H5'	2.33	0.58
1:AA:649:G:H2'	1:AA:650:G:H8	1.67	0.58
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.86	0.58
1:AA:1351:U:O2'	1:AA:1352:C:H5'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:103:ASN:OD1	4:AD:114:ARG:NH2	2.36	0.58
9:AI:114:TYR:HD1	10:AJ:60:ARG:CG	2.17	0.58
11:AK:36:ASP:HB2	11:AK:38:ASN:OD1	2.04	0.58
15:AO:36:ILE:HG22	15:AO:37:ASN:N	2.18	0.58
23:BA:530:G:N1	23:BA:2022:U:OP1	2.36	0.58
23:BA:991:C:C5	23:BA:1185:C:N4	2.72	0.58
23:BA:991:C:C5	23:BA:1185:C:C4	2.92	0.58
23:BA:1449:G:H2'	23:BA:1450:C:H6	1.69	0.58
23:BA:2531:A:H4'	29:BG:157:TYR:CD2	2.39	0.58
23:BA:2853:C:H2'	23:BA:2854:G:H8	1.69	0.58
24:BB:45:A:H2'	24:BB:45:A:N3	2.19	0.58
25:BC:25:THR:CG2	25:BC:82:ILE:N	2.66	0.58
40:BR:52:VAL:HG13	40:BR:55:ALA:HB3	1.84	0.58
1:CA:525:C:OP1	12:CL:90:LYS:HG2	2.03	0.58
1:CA:921:U:O2	5:CE:19:MET:HB2	2.04	0.58
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.66	0.58
5:CE:70:PRO:HB3	5:CE:144:THR:HG22	1.86	0.58
5:CE:90:VAL:O	5:CE:120:THR:HA	2.04	0.58
12:CL:24:PRO:HD2	12:CL:97:TYR:OH	2.04	0.58
16:CP:55:ARG:O	16:CP:58:TYR:HB3	2.03	0.58
23:DA:773:U:H5'	25:DC:47:GLY:HA3	1.85	0.58
23:DA:1403:C:H5''	23:DA:1471:A:H1'	1.85	0.58
23:DA:1429:G:H2'	23:DA:1430:C:C6	2.39	0.58
23:DA:1711:C:O2'	23:DA:1712:C:H5'	2.03	0.58
23:DA:2815:C:O2'	50:D2:43:HIS:CD2	2.56	0.58
24:DB:84:C:H2'	24:DB:84:C:O2	2.02	0.58
24:DB:113:C:O2'	37:DO:46:VAL:HG13	2.04	0.58
26:DD:54:GLN:OE1	26:DD:55:ASN:N	2.36	0.58
42:DT:44:GLU:OE2	42:DT:50:LYS:HG2	2.04	0.58
43:DU:81:LYS:CG	43:DU:97:ARG:HB3	2.34	0.58
44:DV:137:ILE:HD12	44:DV:137:ILE:N	2.18	0.58
45:DW:28:GLY:HA2	45:DW:66:VAL:CG1	2.34	0.58
47:DY:14:ARG:HA	47:DY:17:SER:CB	2.25	0.58
49:D1:38:ALA:HA	49:D1:55:PRO:HA	1.85	0.58
1:AA:342:C:C2'	1:AA:343:U:H5'	2.34	0.58
2:AB:22:LYS:H	2:AB:22:LYS:HZ3	1.49	0.58
23:BA:270(M):U:H3'	23:BA:270(N):U:H5''	1.84	0.58
23:BA:322:A:OP2	27:BE:169:ASN:HB2	2.04	0.58
23:BA:356:G:H2'	23:BA:357:A:C8	2.39	0.58
23:BA:907:U:O2'	35:BM:101:ARG:NH2	2.36	0.58
23:BA:1859:A:C6	23:BA:1884:A:C8	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2287:A:O2'	23:BA:2288:A:O5'	2.22	0.58
26:BD:84:PHE:CZ	26:BD:86:PRO:HG3	2.38	0.58
1:CA:328:C:H4'	1:CA:329:A:H5'	1.85	0.58
1:CA:1070:U:C2	1:CA:1071:C:C5	2.92	0.58
1:CA:1292:U:H2'	1:CA:1293:G:C8	2.37	0.58
2:CB:15:VAL:C	2:CB:16:HIS:CG	2.77	0.58
17:CQ:10:VAL:HG11	17:CQ:52:LYS:O	2.04	0.58
17:CQ:33:GLY:O	17:CQ:34:LYS:C	2.41	0.58
23:DA:126:A:O5'	52:D4:19:ARG:HG2	2.03	0.58
23:DA:848:G:O6	23:DA:929:G:H2'	2.04	0.58
23:DA:952:G:P	35:DM:16:ARG:HH22	2.26	0.58
23:DA:2284:C:H1'	23:DA:2325:G:C2	2.39	0.58
23:DA:2842:G:H1	23:DA:2875:C:N4	2.02	0.58
25:DC:172:TYR:HD1	25:DC:185:VAL:C	2.06	0.58
32:DJ:101:TYR:HB3	32:DJ:102:PRO:CD	2.33	0.58
34:DL:50:ARG:HG3	53:D5:7:HIS:CD2	2.38	0.58
36:DN:44:LEU:HD13	36:DN:44:LEU:C	2.23	0.58
39:DQ:61:TRP:O	39:DQ:64:ARG:N	2.37	0.58
40:DR:77:ALA:O	40:DR:79:VAL:N	2.37	0.58
41:DS:29:LEU:HD21	41:DS:33:ARG:NE	2.15	0.58
42:DT:35:THR:HG22	42:DT:36:LYS:H	1.69	0.58
1:AA:37:U:H2'	1:AA:38:G:H8	1.69	0.58
1:AA:59:A:H5''	1:AA:60:A:H5''	1.86	0.58
1:AA:816:A:OP2	1:AA:1527:C:H4'	2.04	0.58
1:AA:1288:A:C6	1:AA:1289:A:C6	2.92	0.58
1:AA:1316:G:N2	1:AA:1319:A:OP2	2.37	0.58
4:AD:30:LYS:C	4:AD:32:ALA:H	2.06	0.58
23:BA:952:G:OP1	35:BM:16:ARG:NH2	2.35	0.58
23:BA:1547:C:H2'	23:BA:1548:C:H6	1.68	0.58
23:BA:2485:G:H5''	35:BM:46:GLN:NE2	2.19	0.58
23:BA:2604:U:H2'	23:BA:2604:U:O2	2.03	0.58
25:BC:166:GLN:HE21	25:BC:166:GLN:HA	1.68	0.58
26:BD:132:HIS:HA	26:BD:135:HIS:CE1	2.37	0.58
27:BE:46:ARG:HH11	27:BE:46:ARG:CG	2.17	0.58
29:BG:38:SER:HB3	29:BG:41:MET:HG2	1.86	0.58
32:BJ:57:LEU:HD21	32:BJ:143:LEU:HB2	1.85	0.58
35:BM:37:LEU:O	35:BM:99:PRO:HB3	2.03	0.58
40:BR:40:LEU:H	40:BR:47:VAL:CG2	2.15	0.58
43:BU:2:ARG:C	43:BU:4:LYS:H	2.06	0.58
44:BV:11:GLU:HG3	44:BV:12:GLY:N	2.19	0.58
46:BX:11:ARG:HB3	46:BX:12:PRO:HD3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BZ:23:LEU:HD12	48:BZ:23:LEU:N	2.19	0.58
1:CA:478:A:H2'	1:CA:479:C:H6	1.69	0.58
1:CA:1130:A:N1	1:CA:1146:A:N1	2.51	0.58
1:CA:1239:A:H4'	1:CA:1240:U:C5'	2.33	0.58
1:CA:1386:G:O2'	1:CA:1387:G:H5'	2.04	0.58
1:CA:1423:G:C5'	33:DK:49:ARG:HH22	2.16	0.58
11:CK:102:GLY:O	11:CK:103:LEU:HD13	2.04	0.58
13:CM:27:LYS:CE	13:CM:31:LYS:HE3	2.33	0.58
23:DA:142:G:H1'	42:DT:37:THR:CG2	2.34	0.58
23:DA:553:U:C2'	23:DA:554:U:H5'	2.34	0.58
23:DA:1332:G:N2	23:DA:1609:A:O2'	2.36	0.58
23:DA:2317:C:H2'	23:DA:2318:G:C5'	2.34	0.58
25:DC:227:ASN:HD22	25:DC:227:ASN:N	2.02	0.58
26:DD:57:LYS:HG3	26:DD:58:ARG:N	2.19	0.58
32:DJ:127:LYS:HB2	32:DJ:140:PHE:HE1	1.68	0.58
34:DL:33:ARG:CB	34:DL:36:LYS:HD3	2.33	0.58
34:DL:41:ARG:NH2	34:DL:45:LEU:HD12	2.19	0.58
35:DM:8:LYS:CG	35:DM:9:TYR:H	2.16	0.58
39:DQ:65:ILE:O	39:DQ:68:ALA:N	2.34	0.58
46:DX:19:GLN:CG	46:DX:41:ARG:HE	2.17	0.58
1:AA:123:C:OP1	1:AA:312:C:H5'	2.04	0.57
1:AA:506:G:C5	1:AA:507:C:C5	2.92	0.57
1:AA:563:A:N7	1:AA:567:G:H1'	2.18	0.57
1:AA:750:G:C2	1:AA:751:U:C6	2.92	0.57
1:AA:782:A:H2'	1:AA:783:C:H5'	1.86	0.57
4:AD:161:ASN:O	4:AD:165:MET:HB2	2.03	0.57
13:AM:106:ASN:O	13:AM:107:ALA:HB3	2.04	0.57
17:AQ:33:GLY:O	17:AQ:34:LYS:C	2.42	0.57
20:AT:76:ALA:O	20:AT:80:ARG:HG2	2.04	0.57
23:BA:587:C:N4	34:BL:33:ARG:HB2	2.19	0.57
23:BA:603:A:N1	23:BA:655:A:N3	2.52	0.57
23:BA:1051:G:C6	23:BA:1052:C:N3	2.72	0.57
23:BA:1448:G:H2'	23:BA:149(B):A:C8	2.39	0.57
23:BA:1543:A:H5'	23:BA:1544:C:O5'	2.02	0.57
23:BA:2058:A:N6	23:BA:2059:A:N6	2.52	0.57
24:BB:50:G:C5	24:BB:51:G:C8	2.91	0.57
24:BB:78:A:C2	24:BB:99:A:C5	2.91	0.57
25:BC:253:GLN:OE1	25:BC:255:LYS:HD3	2.04	0.57
27:BE:179:GLU:CD	27:BE:179:GLU:H	2.06	0.57
39:BQ:5:LYS:HG2	39:BQ:6:THR:H	1.68	0.57
1:CA:114:U:H2'	1:CA:115:G:C8	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:376:G:OP1	16:CP:5:ARG:HB2	2.03	0.57
1:CA:522:C:N4	1:CA:528:C:H42	2.01	0.57
1:CA:542:G:O2'	1:CA:543:C:H5'	2.04	0.57
1:CA:618:C:N3	1:CA:622:A:N6	2.52	0.57
1:CA:979:C:N4	14:CN:18:VAL:HG12	2.16	0.57
1:CA:1014:A:H5'	19:CS:14:HIS:CD2	2.39	0.57
1:CA:1281:U:C5'	1:CA:1282:C:H5	2.16	0.57
1:CA:1288:A:C6	1:CA:1289:A:C6	2.92	0.57
2:CB:22:LYS:HZ2	2:CB:22:LYS:HA	1.69	0.57
12:CL:63:TYR:O	12:CL:64:GLU:HB2	2.04	0.57
13:CM:15:VAL:O	13:CM:19:LEU:HD23	2.04	0.57
15:CO:61:GLY:O	15:CO:64:ARG:HB3	2.04	0.57
20:CT:97:ALA:O	20:CT:99:LEU:N	2.37	0.57
23:DA:880:G:H2'	23:DA:881:G:C8	2.39	0.57
23:DA:1218:C:C2'	23:DA:1219:G:H5'	2.34	0.57
23:DA:1487:G:C4	23:DA:1488:G:C8	2.91	0.57
23:DA:2371:G:O2'	51:D3:45:LYS:HB3	2.04	0.57
27:DE:66:PRO:HB3	27:DE:68:LYS:HZ3	1.68	0.57
28:DF:148:MET:HA	28:DF:148:MET:HE3	1.86	0.57
34:DL:50:ARG:HB2	53:D5:60:LEU:HD11	1.86	0.57
43:DU:2:ARG:C	43:DU:4:LYS:H	2.07	0.57
46:DX:53:VAL:HG22	46:DX:74:VAL:HG13	1.85	0.57
53:D5:31:HIS:C	53:D5:33:ASN:N	2.49	0.57
1:AA:265:G:H5'	17:AQ:64:PRO:O	2.03	0.57
1:AA:377:G:O2'	1:AA:378:G:H5'	2.04	0.57
1:AA:836:G:C6	1:AA:851:G:C6	2.91	0.57
1:AA:1051:C:N4	1:AA:1207:G:H1	2.02	0.57
1:AA:1130:A:N1	1:AA:1146:A:N1	2.52	0.57
1:AA:1353:G:H1	1:AA:1369:C:H42	1.50	0.57
9:AI:9:ARG:HG3	9:AI:14:VAL:HG13	1.86	0.57
20:AT:13:LEU:H	20:AT:13:LEU:CD1	2.18	0.57
22:AV:6191:A:H2'	22:AV:6192:G:O4'	2.04	0.57
23:BA:72:U:O4	23:BA:112:U:H4'	2.03	0.57
23:BA:311:A:C6	23:BA:328:U:C4	2.93	0.57
23:BA:1028:A:N6	23:BA:1125:G:H2'	2.19	0.57
23:BA:1149:G:H2'	23:BA:1150:C:C6	2.40	0.57
23:BA:1680:U:O2	23:BA:1763:G:H3'	2.04	0.57
23:BA:1899:G:N2	23:BA:1902:C:N4	2.37	0.57
23:BA:1973:G:H2'	23:BA:1974:C:C6	2.39	0.57
23:BA:2401:U:C2'	23:BA:2402:C:H5''	2.33	0.57
23:BA:2755:C:O2'	23:BA:2756:U:H2'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2850:A:OP2	23:BA:2866:U:C5	2.54	0.57
25:BC:218:ARG:HB3	25:BC:219:PRO:HD2	1.86	0.57
25:BC:267:SER:O	25:BC:269:PHE:N	2.36	0.57
25:BC:268:ARG:HD2	25:BC:269:PHE:CE1	2.38	0.57
26:BD:73:GLU:OE2	26:BD:74:PRO:HD2	2.04	0.57
29:BG:67:LEU:O	29:BG:71:LEU:HD23	2.04	0.57
30:BH:88:ILE:HD11	30:BH:123:LEU:HG	1.87	0.57
30:BH:118:LYS:HG2	30:BH:119:PRO:N	2.18	0.57
36:BN:11:ASN:O	36:BN:12:ARG:NH1	2.32	0.57
36:BN:63:ARG:HB2	36:BN:63:ARG:NH1	2.18	0.57
42:BT:52:VAL:HG23	42:BT:82:GLN:O	2.03	0.57
45:BW:31:VAL:O	45:BW:64:ASP:HA	2.04	0.57
53:B5:62:LEU:C	53:B5:64:TYR:H	2.08	0.57
1:CA:364:A:C2	1:CA:365:U:O4	2.57	0.57
1:CA:375:U:C4	1:CA:376:G:N7	2.72	0.57
1:CA:476:G:H2'	1:CA:477:G:C8	2.35	0.57
1:CA:506:G:C5	1:CA:507:C:C5	2.91	0.57
1:CA:638:G:C2'	1:CA:639:G:H5'	2.35	0.57
1:CA:1202:G:H4'	14:CN:29:ARG:CD	2.34	0.57
1:CA:1288:A:N6	1:CA:1289:A:C6	2.72	0.57
2:CB:219:VAL:HA	2:CB:222:ILE:HG12	1.86	0.57
4:CD:161:ASN:O	4:CD:165:MET:HB2	2.03	0.57
5:CE:31:LEU:HD21	5:CE:43:LEU:CD1	2.34	0.57
7:CG:86:GLN:HB2	7:CG:148:ASN:HD22	1.70	0.57
9:CI:99:LEU:HD13	9:CI:99:LEU:O	2.04	0.57
9:CI:114:TYR:HD1	10:CJ:60:ARG:CG	2.16	0.57
16:CP:34:GLU:HG2	16:CP:35:LYS:N	2.19	0.57
23:DA:511:U:C5	23:DA:512:G:C5	2.92	0.57
23:DA:571:A:H4'	23:DA:572:A:OP1	2.03	0.57
23:DA:781:A:H2	23:DA:1776:G:N3	2.02	0.57
23:DA:871:U:H4'	35:DM:69:PHE:CE2	2.38	0.57
23:DA:1414:G:H2'	23:DA:1415:U:H6	1.69	0.57
23:DA:2261:C:O2'	23:DA:2262:U:H5'	2.04	0.57
23:DA:2747:G:C6	23:DA:2754:U:C5	2.91	0.57
23:DA:2780:G:OP2	32:DJ:141:LYS:HD3	2.03	0.57
28:DF:32:PRO:CB	28:DF:172:LEU:HD22	2.34	0.57
32:DJ:118:PRO:HD2	32:DJ:119:GLU:OE1	2.04	0.57
34:DL:105:LEU:H	34:DL:105:LEU:HD12	1.69	0.57
37:DO:39:ILE:HG13	37:DO:73:LEU:HD13	1.85	0.57
41:DS:45:TYR:HD2	41:DS:46:PHE:CD1	2.22	0.57
43:DU:76:CYS:CB	43:DU:77:PRO:CD	2.81	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DV:17:ALA:HA	44:DV:20:ARG:NH1	2.19	0.57
1:AA:179:A:H2'	1:AA:180:U:C6	2.39	0.57
1:AA:1065:U:C5	1:AA:1190:G:H1'	2.40	0.57
1:AA:1360:A:OP1	1:AA:1360:A:H8	1.87	0.57
5:AE:144:THR:O	5:AE:148:VAL:HG23	2.05	0.57
7:AG:71:PRO:HG3	7:AG:103:TRP:CZ3	2.39	0.57
16:AP:67:THR:HG22	16:AP:68:ASP:H	1.68	0.57
20:AT:56:MET:HG3	20:AT:88:VAL:HG21	1.85	0.57
23:BA:83:G:H1	23:BA:102:G:HO2'	0.59	0.57
23:BA:484:C:H2'	23:BA:485:C:C6	2.39	0.57
23:BA:1104:C:O2'	23:BA:1105:U:H5'	2.05	0.57
23:BA:2716:U:O2'	23:BA:2717:G:H5'	2.03	0.57
23:BA:2723:C:O3'	36:BN:2:ARG:NH2	2.34	0.57
25:BC:133:LEU:HD13	25:BC:173:VAL:HG11	1.85	0.57
30:BH:8:PRO:HB3	30:BH:14:ASP:OD1	2.03	0.57
36:BN:10:LEU:HB3	36:BN:17:ARG:CD	2.35	0.57
44:BV:179:ASP:CG	44:BV:180:VAL:HG13	2.24	0.57
51:B3:38:LYS:HD3	51:B3:46:HIS:ND1	2.18	0.57
1:CA:224:C:H2'	1:CA:225:C:C6	2.39	0.57
1:CA:630:G:C2'	1:CA:631:G:H5'	2.34	0.57
2:CB:8:LYS:HA	2:CB:217:ARG:NH1	2.17	0.57
2:CB:24:TRP:C	2:CB:25:ASN:HD22	2.08	0.57
2:CB:127:ILE:HG22	2:CB:135:GLN:HE21	1.69	0.57
7:CG:70:LYS:HE2	7:CG:96:GLN:NE2	2.19	0.57
23:DA:582:G:OP1	39:DQ:14:HIS:CD2	2.58	0.57
23:DA:1104:C:O2'	23:DA:1105:U:H5'	2.04	0.57
23:DA:1516:U:H2'	23:DA:1517:G:C8	2.39	0.57
23:DA:1543:A:C8	23:DA:1545:A:O4'	2.57	0.57
23:DA:2572:A:H62	26:DD:145:LYS:HG3	1.69	0.57
25:DC:11:PRO:O	25:DC:13:ARG:N	2.37	0.57
26:DD:181:LEU:N	26:DD:181:LEU:HD13	2.18	0.57
32:DJ:80:ALA:O	32:DJ:83:ILE:HG12	2.04	0.57
32:DJ:141:LYS:O	32:DJ:144:LYS:HE3	2.04	0.57
33:DK:24:VAL:HB	33:DK:33:ALA:HB2	1.84	0.57
34:DL:52:GLU:OE1	34:DL:52:GLU:HA	2.04	0.57
35:DM:78:PRO:O	35:DM:79:LEU:HB2	2.04	0.57
40:DR:64:HIS:CD2	40:DR:92:THR:CG2	2.86	0.57
43:DU:42:VAL:HG23	43:DU:67:LEU:HD11	1.87	0.57
1:AA:53:A:N1	1:AA:54:C:C2	2.72	0.57
1:AA:104:G:C2	1:AA:105:G:C8	2.92	0.57
1:AA:110:C:H2'	1:AA:111:G:O4'	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:375:U:C4	1:AA:376:G:N7	2.72	0.57
1:AA:397:A:N7	1:AA:548:G:C8	2.73	0.57
1:AA:684:A:H2'	1:AA:685:G:C8	2.38	0.57
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.40	0.57
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.40	0.57
3:AC:150:LYS:HG3	3:AC:169:ALA:HB2	1.86	0.57
3:AC:172:ARG:HB3	3:AC:174:PRO:HD3	1.87	0.57
8:AH:63:LEU:HB2	8:AH:65:TYR:CE1	2.39	0.57
21:AU:22:ARG:HD2	21:AU:23:PRO:HD2	1.87	0.57
23:BA:415:A:H2'	23:BA:416:C:H6	1.70	0.57
23:BA:686:G:O6	52:B4:12:ARG:HG3	2.04	0.57
23:BA:1326:U:O2'	23:BA:2010:G:H1'	2.03	0.57
24:BB:43:C:H4'	28:BF:98:ARG:HH12	1.70	0.57
25:BC:32:SER:O	25:BC:33:LEU:O	2.22	0.57
26:BD:54:GLN:OE1	26:BD:55:ASN:N	2.37	0.57
30:BH:88:ILE:HG22	30:BH:90:GLY:H	1.69	0.57
38:BP:1:MET:C	38:BP:3:ARG:N	2.57	0.57
38:BP:53:ARG:HH11	38:BP:53:ARG:CG	2.17	0.57
39:BQ:105:VAL:HG11	40:BR:40:LEU:HD13	1.87	0.57
41:BS:55:ALA:O	41:BS:58:ALA:HB3	2.05	0.57
43:BU:14:LEU:HD23	43:BU:15:VAL:C	2.25	0.57
53:B5:57:ARG:HB2	53:B5:57:ARG:HH11	1.68	0.57
2:CB:175:ARG:O	2:CB:178:ARG:HB3	2.05	0.57
6:CF:60:PHE:C	6:CF:61:LEU:HD12	2.25	0.57
11:CK:34:ASP:H	11:CK:40:ILE:HD11	1.68	0.57
23:DA:739:G:H4'	23:DA:740:U:OP1	2.05	0.57
23:DA:784:A:C5	25:DC:229:VAL:HG21	2.40	0.57
23:DA:812:C:H5'	34:DL:25:SER:O	2.03	0.57
23:DA:914:C:H5	23:DA:915:C:C6	2.21	0.57
23:DA:1386:C:OP2	23:DA:1396:U:C5	2.58	0.57
23:DA:1439:A:C2	23:DA:1553:A:C5	2.93	0.57
23:DA:1893:C:C6	23:DA:1894:C:C5	2.92	0.57
23:DA:2563:U:H4'	33:DK:28:SER:HA	1.85	0.57
26:DD:4:ILE:CG1	26:DD:28:ALA:HB1	2.34	0.57
26:DD:7:VAL:HA	26:DD:194:GLY:O	2.04	0.57
28:DF:9:ARG:HD3	28:DF:13:GLU:OE1	2.04	0.57
32:DJ:143:LEU:O	32:DJ:144:LYS:HD2	2.04	0.57
34:DL:32:THR:HG21	34:DL:37:GLY:H	1.67	0.57
41:DS:55:ALA:O	41:DS:58:ALA:HB3	2.05	0.57
42:DT:43:VAL:HG23	42:DT:47:PHE:CD1	2.39	0.57
43:DU:8:LYS:NZ	43:DU:8:LYS:CA	2.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DU:14:LEU:HD23	43:DU:15:VAL:C	2.24	0.57
1:AA:304:U:H2'	1:AA:305:G:C8	2.40	0.57
1:AA:1159:U:C6	1:AA:1182:G:C2	2.92	0.57
8:AH:97:VAL:C	8:AH:99:GLU:H	2.08	0.57
9:AI:99:LEU:HD13	9:AI:99:LEU:O	2.04	0.57
15:AO:5:LYS:HD3	15:AO:6:GLU:H	1.69	0.57
15:AO:39:LEU:CD1	15:AO:56:LEU:HB2	2.35	0.57
18:AR:45:SER:H	18:AR:51:LEU:HD11	1.68	0.57
23:BA:173:G:H2'	23:BA:174:C:C6	2.40	0.57
23:BA:399:G:H2'	23:BA:400:G:H5'	1.86	0.57
23:BA:496:G:H1'	41:BS:61:ASN:HD21	1.68	0.57
23:BA:774:A:H2	23:BA:787:U:O2'	1.88	0.57
23:BA:1275:A:C4	36:BN:16:HIS:CE1	2.93	0.57
23:BA:1773:A:H2'	23:BA:1774:C:H5'	1.87	0.57
23:BA:1857:G:N2	23:BA:1886:C:C4	2.72	0.57
23:BA:2036:C:H6	23:BA:2036:C:C5'	2.18	0.57
23:BA:2639:A:C2'	23:BA:2640:G:H5'	2.35	0.57
23:BA:2854:G:H2'	23:BA:2855:C:C6	2.39	0.57
24:BB:7:G:H1'	37:BO:38:GLN:NE2	2.19	0.57
25:BC:141:VAL:HG23	25:BC:162:SER:OG	2.04	0.57
27:BE:65:TRP:CZ3	27:BE:72:ARG:HB3	2.39	0.57
35:BM:68:ILE:HD13	35:BM:103:MET:CG	2.32	0.57
43:BU:29:GLU:HA	43:BU:29:GLU:OE2	2.03	0.57
47:BY:36:ARG:HA	47:BY:39:ALA:CB	2.34	0.57
1:CA:190:G:H4'	1:CA:191(A):G:OP2	2.02	0.57
1:CA:1220:G:H2'	1:CA:1221:G:C8	2.38	0.57
3:CC:134:ILE:HG21	3:CC:168:ALA:HB3	1.85	0.57
3:CC:182:ILE:HG23	3:CC:202:ILE:C	2.25	0.57
4:CD:9:CYS:SG	4:CD:31:CYS:C	2.83	0.57
8:CH:80:ILE:H	8:CH:80:ILE:HD12	1.68	0.57
8:CH:86:ILE:CB	8:CH:133:LEU:HD22	2.33	0.57
12:CL:6:ILE:H	12:CL:6:ILE:CD1	2.15	0.57
15:CO:44:LYS:HB2	15:CO:44:LYS:NZ	2.19	0.57
22:CV:6191:A:H2'	22:CV:6192:G:O4'	2.04	0.57
23:DA:24:G:O2'	41:DS:77:ASP:HB3	2.04	0.57
23:DA:328:U:H4'	43:DU:68:HIS:ND1	2.20	0.57
23:DA:729:G:C8	25:DC:208:LYS:HD3	2.39	0.57
23:DA:807:U:OP2	34:DL:39:LYS:CG	2.42	0.57
23:DA:997:G:C2'	23:DA:998:C:H5'	2.34	0.57
23:DA:1538:G:H2'	23:DA:1539:G:C8	2.40	0.57
23:DA:1797:C:O2'	25:DC:259:THR:HG23	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2093:G:H1	23:DA:2196:C:N4	2.03	0.57
23:DA:2531:A:H4'	29:DG:157:TYR:CD2	2.38	0.57
24:DB:33:G:C2	24:DB:50:G:C2	2.93	0.57
25:DC:76:PRO:CB	25:DC:116:GLN:HE21	2.17	0.57
29:DG:94:TYR:CZ	29:DG:160:LYS:HD3	2.40	0.57
36:DN:63:ARG:HB2	36:DN:63:ARG:NH1	2.17	0.57
38:DP:51:ARG:O	38:DP:61:PHE:HA	2.05	0.57
1:AA:53:A:C2	1:AA:54:C:H1'	2.39	0.57
1:AA:1220:G:H2'	1:AA:1221:G:C8	2.37	0.57
3:AC:16:ARG:HB2	3:AC:16:ARG:NH1	2.20	0.57
3:AC:57:ILE:HD13	3:AC:66:VAL:HG22	1.87	0.57
5:AE:11:ILE:HB	5:AE:31:LEU:HB3	1.86	0.57
5:AE:53:LEU:HD23	5:AE:53:LEU:H	1.68	0.57
13:AM:15:VAL:O	13:AM:19:LEU:HD23	2.04	0.57
19:AS:6:LYS:HD3	19:AS:7:LYS:HD3	1.87	0.57
23:BA:244:A:C2	23:BA:255:A:C4	2.93	0.57
23:BA:289:A:H2'	23:BA:290:G:O4'	2.05	0.57
23:BA:390:A:C5	34:BL:71:VAL:HG21	2.40	0.57
23:BA:1550:C:H2'	23:BA:1551:C:H6	1.70	0.57
23:BA:1788:C:OP1	25:BC:222:ARG:NH2	2.37	0.57
23:BA:2565:A:H5''	23:BA:2566:A:OP2	2.04	0.57
25:BC:182:LEU:H	25:BC:272:ALA:CB	2.16	0.57
25:BC:186:HIS:HD2	25:BC:188:GLU:HB2	1.70	0.57
26:BD:11:MET:HB2	26:BD:24:THR:HA	1.87	0.57
36:BN:57:ARG:HD2	36:BN:59:ASP:OD2	2.05	0.57
38:BP:126:ALA:O	38:BP:128:GLU:N	2.37	0.57
41:BS:43:GLY:O	41:BS:47:VAL:HG23	2.03	0.57
46:BX:9:GLY:O	46:BX:13:ILE:HG21	2.05	0.57
48:BZ:26:LEU:HD21	48:BZ:46:ASN:HB2	1.86	0.57
1:CA:10:A:H2'	1:CA:11:G:C8	2.37	0.57
1:CA:278:G:OP2	17:CQ:41:LYS:HE2	2.05	0.57
1:CA:300:A:H3'	1:CA:300:A:C8	2.40	0.57
1:CA:950:U:OP2	13:CM:102:ARG:HG3	2.04	0.57
1:CA:1238:A:C8	1:CA:1303:C:H1'	2.39	0.57
8:CH:63:LEU:HB2	8:CH:65:TYR:CE1	2.40	0.57
9:CI:46:ALA:O	9:CI:49:PRO:HD2	2.04	0.57
20:CT:64:ASP:O	20:CT:67:ALA:HB3	2.05	0.57
22:CV:6188:G:N2	22:CV:6216:U:N3	2.52	0.57
23:DA:919:G:N2	23:DA:2269:A:OP2	2.38	0.57
23:DA:1171:G:H2'	23:DA:1173:G:O4'	2.05	0.57
23:DA:1459:G:H2'	23:DA:1459:G:N3	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1568:G:P	25:DC:63:ARG:HH22	2.27	0.57
23:DA:1826:G:H4'	25:DC:242:ARG:NE	2.13	0.57
23:DA:1991:U:H2'	23:DA:1992:G:H5'	1.87	0.57
23:DA:2183:C:H2'	23:DA:2183:C:O2	2.04	0.57
23:DA:2393:A:H5'	34:DL:60:MET:O	2.04	0.57
23:DA:2636:U:H4'	26:DD:80:GLU:CD	2.25	0.57
24:DB:2:C:H2'	24:DB:3:C:H6	1.67	0.57
24:DB:28:C:H2'	24:DB:29:A:H8	1.70	0.57
25:DC:238:GLY:O	25:DC:239:ARG:O	2.22	0.57
29:DG:20:ALA:HB3	29:DG:23:ARG:O	2.04	0.57
36:DN:63:ARG:HA	36:DN:80:PHE:CE2	2.39	0.57
41:DS:22:ASP:HA	41:DS:25:ARG:NH1	2.19	0.57
41:DS:25:ARG:HH11	41:DS:25:ARG:HB2	1.69	0.57
1:AA:865:A:C2	1:AA:918:A:H4'	2.39	0.57
1:AA:1386:G:O2'	1:AA:1387:G:H5'	2.05	0.57
1:AA:1435:G:H2'	1:AA:1436:U:C5	2.39	0.57
3:AC:22:TRP:HE3	3:AC:23:TYR:O	1.88	0.57
4:AD:105:VAL:HG13	4:AD:110:PHE:HB2	1.87	0.57
7:AG:120:ILE:HG22	7:AG:124:LEU:HD12	1.87	0.57
12:AL:116:ARG:O	12:AL:117:SER:C	2.43	0.57
22:AV:6198:U:H2'	22:AV:6199:G:C8	2.40	0.57
23:BA:165:U:N3	23:BA:171:G:C8	2.72	0.57
23:BA:226:G:N2	23:BA:228:A:N6	2.52	0.57
23:BA:356:G:H2'	23:BA:357:A:H8	1.69	0.57
23:BA:1027:A:N6	23:BA:1126:A:C4	2.73	0.57
23:BA:1158:C:C2'	23:BA:1159:U:H5'	2.35	0.57
23:BA:1312:U:H4'	23:BA:1313:U:O5'	2.04	0.57
25:BC:71:ASP:OD2	25:BC:103:ARG:NH2	2.37	0.57
27:BE:59:TYR:HB3	27:BE:78:ILE:HD12	1.87	0.57
27:BE:63:LYS:NZ	27:BE:67:GLN:NE2	2.53	0.57
29:BG:151:ILE:N	29:BG:151:ILE:HD13	2.20	0.57
33:BK:49:ARG:HA	33:BK:53:LYS:NZ	2.20	0.57
34:BL:101:VAL:HG23	34:BL:107:LYS:H	1.70	0.57
38:BP:80:SER:C	38:BP:82:LEU:H	2.08	0.57
1:CA:254:G:H2'	1:CA:255:G:H8	1.69	0.57
1:CA:363:A:C8	12:CL:32:ARG:NH2	2.72	0.57
1:CA:754:C:H6	15:CO:69:TYR:CE2	2.23	0.57
1:CA:1151:A:O2'	1:CA:1152:A:C8	2.52	0.57
2:CB:82:ARG:HA	2:CB:92:TYR:CE1	2.39	0.57
2:CB:207:ALA:O	2:CB:211:ILE:HG13	2.03	0.57
3:CC:35:GLU:HA	3:CC:38:ARG:CG	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:11:THR:HA	8:CH:14:ARG:NH1	2.19	0.57
13:CM:106:ASN:O	13:CM:107:ALA:HB3	2.04	0.57
15:CO:53:HIS:HE1	23:DA:715:G:O6	1.86	0.57
16:CP:7:ALA:O	16:CP:9:PHE:HD2	1.88	0.57
23:DA:127:A:H5'	23:DA:128:C:C6	2.39	0.57
23:DA:270(K):G:H2'	23:DA:270(L):C:O4'	2.05	0.57
23:DA:1046:A:H2	31:DI:8:GLU:OE1	1.88	0.57
23:DA:1115:G:O2'	23:DA:1116:C:H5'	2.04	0.57
23:DA:1188:U:C2'	23:DA:1189:A:H5'	2.34	0.57
23:DA:1204:A:N1	23:DA:1241:A:H2	2.03	0.57
23:DA:2543:G:H2'	23:DA:2544:G:C8	2.39	0.57
28:DF:131:TYR:HE2	28:DF:133:LEU:HB3	1.70	0.57
28:DF:165:THR:OG1	28:DF:168:GLU:HG3	2.04	0.57
34:DL:50:ARG:HD2	34:DL:51:PHE:CA	2.35	0.57
35:DM:37:LEU:O	35:DM:99:PRO:HB3	2.04	0.57
36:DN:99:LYS:H	36:DN:99:LYS:HD2	1.69	0.57
38:DP:55:ASN:H	38:DP:59:THR:HB	1.69	0.57
46:DX:13:ILE:HG23	46:DX:14:VAL:H	1.68	0.57
52:D4:19:ARG:HH11	52:D4:19:ARG:CB	2.17	0.57
1:AA:527:G:C2'	1:AA:528:C:H5'	2.34	0.57
1:AA:1068:G:N3	1:AA:1191:A:C2	2.72	0.57
1:AA:1368:G:OP2	9:AI:112:LYS:HD3	2.05	0.57
3:AC:130:VAL:CG1	3:AC:153:VAL:HG21	2.35	0.57
9:AI:28:VAL:HG13	9:AI:63:ILE:O	2.05	0.57
10:AJ:49:VAL:HG21	14:AN:41:ARG:HB3	1.87	0.57
12:AL:78:GLU:O	12:AL:79:HIS:CD2	2.58	0.57
23:BA:564:C:O2'	23:BA:565:C:H5'	2.05	0.57
23:BA:1171:G:H2'	23:BA:1173:G:O4'	2.05	0.57
23:BA:1193:G:O2'	23:BA:1194:A:H5'	2.05	0.57
23:BA:1828:G:OP2	25:BC:239:ARG:NH1	2.38	0.57
23:BA:1856:G:H2'	23:BA:1857:G:O4'	2.05	0.57
23:BA:2023:G:H5'	23:BA:2617:C:H4'	1.87	0.57
23:BA:2517:C:C6	23:BA:2542:A:C2	2.92	0.57
36:BN:47:PHE:CE2	36:BN:51:LEU:HD11	2.40	0.57
39:BQ:69:CYS:CB	39:BQ:79:PHE:HD2	2.18	0.57
41:BS:29:LEU:O	41:BS:33:ARG:HD2	2.04	0.57
52:B4:5:TRP:NE1	52:B4:7:PRO:HG3	2.20	0.57
1:CA:465:A:N7	1:CA:467:G:C6	2.72	0.57
1:CA:642:A:N3	8:CH:113:SER:OG	2.26	0.57
1:CA:1492:A:H2'	23:DA:1913:A:C2	2.40	0.57
2:CB:95:GLN:HG3	2:CB:147:LYS:O	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:119:ARG:O	3:CC:123:GLN:HG3	2.05	0.57
3:CC:172:ARG:HB3	3:CC:174:PRO:HD3	1.86	0.57
20:CT:26:ASN:O	20:CT:30:LYS:HB2	2.04	0.57
23:DA:289:A:H2'	23:DA:290:G:O4'	2.04	0.57
23:DA:631:A:OP1	34:DL:64:LYS:HE3	2.04	0.57
23:DA:749:C:O2	23:DA:1618:A:H2'	2.05	0.57
23:DA:1187:G:H8	23:DA:1187:G:O5'	1.88	0.57
23:DA:2243:U:H2'	23:DA:2244:U:C6	2.39	0.57
28:DF:137:GLU:HG2	28:DF:152:LEU:HD22	1.85	0.57
30:DH:142:VAL:HG12	30:DH:143:SER:H	1.69	0.57
33:DK:88:ASN:ND2	33:DK:90:GLN:HB3	2.20	0.57
35:DM:133:ARG:O	35:DM:134:ARG:HB2	2.04	0.57
43:DU:47:LYS:HA	43:DU:60:PHE:CZ	2.40	0.57
46:DX:45:ASN:O	46:DX:63:ALA:HA	2.04	0.57
1:AA:355:C:C4	1:AA:356:A:N7	2.73	0.57
1:AA:409:G:H2'	1:AA:410:G:O5'	2.05	0.57
1:AA:535:A:H4'	1:AA:536:C:OP2	2.05	0.57
1:AA:562:C:N4	1:AA:884:U:C6	2.73	0.57
1:AA:632:A:N7	1:AA:633:G:C5	2.72	0.57
1:AA:636:U:C5'	17:AQ:2:PRO:HG3	2.35	0.57
3:AC:120:VAL:HG21	3:AC:137:ALA:HB2	1.87	0.57
22:AV:6181:C:O2'	22:AV:6182:A:H8	1.88	0.57
23:BA:296:C:O2'	23:BA:297:C:H5'	2.04	0.57
23:BA:993:G:C4	23:BA:994:C:H5	2.22	0.57
23:BA:1478:G:O2'	23:BA:1558:A:H2	1.88	0.57
23:BA:2197:U:O3'	23:BA:2198:A:H8	1.88	0.57
23:BA:2320:A:H2'	23:BA:2320:A:N3	2.19	0.57
23:BA:2392:A:OP2	53:B5:31:HIS:CE1	2.58	0.57
23:BA:2476:A:N3	23:BA:2476:A:H2'	2.20	0.57
23:BA:2531:A:H2	23:BA:2658:C:O2	1.88	0.57
26:BD:101:ARG:HB3	26:BD:169:ASN:ND2	2.20	0.57
30:BH:15:VAL:O	30:BH:17:GLN:N	2.37	0.57
30:BH:82:ARG:HB3	30:BH:89:TYR:CG	2.39	0.57
30:BH:109:ILE:N	30:BH:109:ILE:HD13	2.20	0.57
34:BL:41:ARG:NH2	34:BL:45:LEU:HD12	2.20	0.57
35:BM:26:TYR:O	35:BM:26:TYR:CD1	2.58	0.57
37:BO:36:TYR:HD1	37:BO:36:TYR:H	1.52	0.57
39:BQ:92:ARG:HD2	39:BQ:95:LEU:HG	1.86	0.57
45:BW:28:GLY:HA2	45:BW:66:VAL:CG1	2.35	0.57
47:BY:38:GLN:HB3	47:BY:44:LEU:O	2.05	0.57
1:CA:232:G:H1'	1:CA:262:A:N1	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:501:C:H2'	1:CA:502:G:H8	1.69	0.57
1:CA:928:G:C2	1:CA:1390:U:O2	2.58	0.57
1:CA:1043:C:H2'	1:CA:1044:A:H8	1.70	0.57
1:CA:1394:A:H4'	1:CA:1395:C:OP2	2.04	0.57
2:CB:91:PRO:HG3	2:CB:154:LEU:HD21	1.87	0.57
9:CI:114:TYR:HD1	10:CJ:60:ARG:HG3	1.70	0.57
16:CP:67:THR:HG22	16:CP:68:ASP:N	2.20	0.57
20:CT:56:MET:HG3	20:CT:88:VAL:HG21	1.87	0.57
23:DA:18:C:OP1	39:DQ:26:GLY:HA2	2.05	0.57
23:DA:1587:A:H2'	23:DA:1588:C:H6	1.62	0.57
23:DA:2469:A:H2	23:DA:2481:G:N2	2.00	0.57
25:DC:253:GLN:OE1	25:DC:255:LYS:HD3	2.04	0.57
26:DD:149:ARG:HG3	26:DD:150:VAL:N	2.19	0.57
32:DJ:49:LEU:O	32:DJ:53:ILE:HG13	2.05	0.57
35:DM:19:GLY:O	35:DM:98:LYS:HD3	2.04	0.57
52:D4:19:ARG:CG	52:D4:19:ARG:NH1	2.56	0.57
1:AA:136(A):C:O2'	1:AA:136(B):C:H5''	2.05	0.57
2:AB:37:ASN:O	2:AB:39:ILE:HD12	2.05	0.57
2:AB:219:VAL:HA	2:AB:222:ILE:HG12	1.86	0.57
3:AC:173:VAL:O	3:AC:173:VAL:CG1	2.53	0.57
8:AH:80:ILE:H	8:AH:80:ILE:HD12	1.70	0.57
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	1.87	0.57
23:BA:84:A:C5'	43:BU:9:LYS:HD2	2.31	0.57
23:BA:219:G:N3	23:BA:234:C:O2'	2.36	0.57
23:BA:880:G:H2'	23:BA:881:G:C8	2.39	0.57
23:BA:1139:G:OP1	32:BJ:125:ALA:HB2	2.05	0.57
23:BA:1504:C:O2'	23:BA:1505:C:O5'	2.23	0.57
23:BA:2347:C:OP1	51:B3:39:TYR:HE1	1.88	0.57
23:BA:2464:C:C2	23:BA:2487:G:N2	2.73	0.57
23:BA:2688:U:C5	23:BA:2720:U:OP2	2.57	0.57
25:BC:35:LYS:HZ1	25:BC:104:TYR:H	1.53	0.57
29:BG:73:ALA:O	29:BG:77:LYS:HG2	2.05	0.57
32:BJ:49:LEU:O	32:BJ:53:ILE:HG13	2.05	0.57
32:BJ:74:PHE:CZ	32:BJ:142:ARG:HD2	2.40	0.57
40:BR:2:PHE:O	40:BR:41:GLY:HA2	2.04	0.57
40:BR:20:LEU:HD23	40:BR:20:LEU:O	2.05	0.57
43:BU:15:VAL:HG13	43:BU:17:SER:HB3	1.87	0.57
1:CA:927:G:C2	1:CA:1391:U:O2	2.58	0.57
1:CA:1145:C:H4'	1:CA:1146:A:H8	1.70	0.57
1:CA:1253:G:H1	1:CA:1284:C:N4	1.94	0.57
4:CD:103:ASN:OD1	4:CD:114:ARG:NH2	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:91:VAL:HG13	18:CR:72:ARG:NH2	2.20	0.57
8:CH:114:THR:HG22	8:CH:130:GLY:O	2.05	0.57
16:CP:22:THR:HG22	16:CP:32:TYR:CB	2.33	0.57
19:CS:6:LYS:CD	19:CS:7:LYS:HD3	2.35	0.57
23:DA:1530:G:N1	23:DA:1542:G:N2	2.53	0.57
23:DA:1831:G:C5	23:DA:1832:C:C5	2.92	0.57
23:DA:2188:C:H2'	23:DA:2189:U:O4'	2.05	0.57
23:DA:2476:A:N1	23:DA:2477:C:C4	2.73	0.57
23:DA:2727:G:C5	23:DA:2728:U:C5	2.93	0.57
26:DD:134:ILE:HA	26:DD:137:HIS:CD2	2.39	0.57
27:DE:206:ILE:O	27:DE:206:ILE:HD12	2.04	0.57
30:DH:15:VAL:HG12	30:DH:16:GLY:H	1.70	0.57
30:DH:92:VAL:CG2	30:DH:96:ASP:HB2	2.34	0.57
32:DJ:90:LEU:HA	32:DJ:110:LEU:HD13	1.87	0.57
33:DK:49:ARG:HA	33:DK:53:LYS:NZ	2.20	0.57
33:DK:97:ARG:N	33:DK:117:LEU:HD22	2.20	0.57
35:DM:29:PHE:O	35:DM:30:GLY:O	2.23	0.57
38:DP:126:ALA:O	38:DP:128:GLU:N	2.38	0.57
1:AA:66:G:C2	1:AA:67:C:C6	2.93	0.56
11:AK:59:TYR:CE2	11:AK:63:LEU:HD11	2.40	0.56
16:AP:34:GLU:HG2	16:AP:35:LYS:N	2.19	0.56
23:BA:380:U:O2	46:BX:20:ARG:NH2	2.38	0.56
23:BA:627:A:C6	23:BA:637:A:C8	2.93	0.56
23:BA:974(B):C:OP2	23:BA:974(B):C:H4'	2.05	0.56
26:BD:21:VAL:HG12	26:BD:23:VAL:HG13	1.85	0.56
27:BE:89:VAL:HG12	27:BE:90:PHE:H	1.68	0.56
28:BF:86:MET:N	28:BF:87:PRO:CD	2.66	0.56
30:BH:68:LEU:HD21	30:BH:107:ILE:HD11	1.87	0.56
34:BL:33:ARG:H	34:BL:36:LYS:CE	2.06	0.56
34:BL:52:GLU:OE1	34:BL:52:GLU:HA	2.04	0.56
34:BL:62:LEU:HD23	53:B5:25:MET:HB2	1.87	0.56
39:BQ:98:LEU:O	39:BQ:101:ARG:O	2.23	0.56
43:BU:81:LYS:CG	43:BU:97:ARG:HB3	2.34	0.56
1:CA:173:U:C6	1:CA:197:A:C2	2.93	0.56
1:CA:236:G:H1'	17:CQ:4:LYS:HE3	1.87	0.56
1:CA:342:C:O2'	1:CA:343:U:H5'	2.04	0.56
1:CA:962:C:H42	1:CA:973:G:H1	1.53	0.56
1:CA:963:G:H2'	1:CA:964:A:C8	2.39	0.56
1:CA:1103:C:H5''	2:CB:98:LEU:HD22	1.85	0.56
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.87	0.56
7:CG:115:ARG:HB2	7:CG:118:VAL:CG1	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:78:GLU:O	12:CL:79:HIS:CD2	2.58	0.56
17:CQ:54:GLY:HA3	17:CQ:82:MET:SD	2.45	0.56
23:DA:1028:A:N6	23:DA:1125:G:H2'	2.20	0.56
23:DA:1326:U:O2'	23:DA:2010:G:H1'	2.05	0.56
23:DA:1543:A:N7	23:DA:1545:A:H5''	2.19	0.56
23:DA:2078:C:O2'	23:DA:2079:U:H5'	2.05	0.56
26:DD:23:VAL:HA	26:DD:184:VAL:O	2.04	0.56
26:DD:128:SER:OG	26:DD:129:HIS:N	2.37	0.56
27:DE:192:LEU:HD22	27:DE:194:MET:HG2	1.85	0.56
32:DJ:114:LEU:HD21	32:DJ:121:VAL:HG21	1.86	0.56
42:DT:50:LYS:H	42:DT:87:GLN:NE2	1.90	0.56
43:DU:95:LYS:HD3	43:DU:99:CYS:O	2.05	0.56
1:AA:814:A:N7	1:AA:816:A:C4	2.73	0.56
1:AA:1288:A:N6	1:AA:1289:A:C6	2.73	0.56
2:AB:15:VAL:C	2:AB:16:HIS:CG	2.78	0.56
13:AM:27:LYS:CE	13:AM:31:LYS:HE3	2.33	0.56
18:AR:26:LEU:HD21	18:AR:42:ARG:NH1	2.17	0.56
23:BA:142:G:H1'	42:BT:37:THR:HG21	1.86	0.56
23:BA:284:U:H2'	23:BA:285:C:C6	2.40	0.56
23:BA:1388:G:H4'	23:BA:1525:G:O2'	2.05	0.56
23:BA:1607:C:N4	23:BA:1621:U:H3'	2.20	0.56
23:BA:1757:U:C2'	23:BA:1758:G:OP1	2.53	0.56
23:BA:1797:C:O2'	25:BC:259:THR:HG23	2.04	0.56
25:BC:70:TRP:CH2	25:BC:150:LYS:HA	2.41	0.56
33:BK:14:THR:HG22	33:BK:14:THR:O	2.05	0.56
35:BM:62:GLY:O	44:BV:178:GLU:HG2	2.05	0.56
43:BU:68:HIS:O	43:BU:70:SER:N	2.37	0.56
44:BV:17:ALA:HA	44:BV:20:ARG:NH1	2.20	0.56
45:BW:35:ASN:HD22	45:BW:35:ASN:H	1.53	0.56
49:B1:40:ILE:HG23	49:B1:59:VAL:HG21	1.86	0.56
1:CA:273:A:N6	1:CA:274:A:N6	2.53	0.56
1:CA:294:U:H2'	1:CA:295:C:H6	1.69	0.56
1:CA:525:C:H5''	12:CL:90:LYS:HE3	1.86	0.56
1:CA:626:U:H2'	1:CA:627:G:H8	1.68	0.56
1:CA:1224:G:H4'	13:CM:102:ARG:HH22	1.68	0.56
1:CA:1226:C:C5	13:CM:104:ARG:HB2	2.39	0.56
3:CC:70:VAL:HG12	3:CC:71:ALA:N	2.21	0.56
14:CN:17:LYS:C	14:CN:19:ARG:H	2.09	0.56
18:CR:45:SER:H	18:CR:51:LEU:HD11	1.70	0.56
19:CS:63:THR:HG22	19:CS:66:MET:CG	2.32	0.56
23:DA:115:C:O2'	23:DA:116:C:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:988:A:C2'	23:DA:989:G:O5'	2.53	0.56
26:DD:101:ARG:HB3	26:DD:169:ASN:ND2	2.20	0.56
30:DH:7:GLU:CD	30:DH:8:PRO:HD2	2.26	0.56
35:DM:97:VAL:HG12	35:DM:97:VAL:O	2.05	0.56
35:DM:140:ALA:HB3	44:DV:53:ILE:HG12	1.87	0.56
36:DN:10:LEU:HB3	36:DN:17:ARG:CD	2.35	0.56
36:DN:93:GLY:O	36:DN:117:VAL:HG11	2.05	0.56
40:DR:49:THR:HB	40:DR:50:PRO:HD2	1.87	0.56
46:DX:19:GLN:O	46:DX:20:ARG:HG3	2.06	0.56
48:DZ:17:LYS:HD3	48:DZ:17:LYS:C	2.26	0.56
52:D4:5:TRP:NE1	52:D4:7:PRO:HG3	2.19	0.56
1:AA:173:U:C6	1:AA:197:A:C2	2.93	0.56
1:AA:294:U:H2'	1:AA:295:C:H6	1.71	0.56
1:AA:376:G:N3	1:AA:389:A:C2	2.73	0.56
1:AA:478:A:H2'	1:AA:479:C:H6	1.70	0.56
1:AA:497:U:O2	1:AA:497:U:H2'	2.06	0.56
1:AA:542:G:P	4:AD:10:ARG:HH21	2.28	0.56
1:AA:683:G:C6	1:AA:684:A:C5	2.93	0.56
1:AA:863:U:H2'	1:AA:865:A:OP2	2.05	0.56
1:AA:942:G:N2	1:AA:943:U:C2	2.73	0.56
1:AA:1047:G:C2'	1:AA:1048:G:H5'	2.34	0.56
1:AA:1226:C:H2'	13:AM:103:THR:HB	1.87	0.56
3:AC:131:ARG:HE	5:AE:50:GLU:HG2	1.71	0.56
3:AC:180:ALA:HB1	3:AC:182:ILE:HG13	1.87	0.56
4:AD:64:LEU:HD23	4:AD:203:VAL:HG21	1.87	0.56
4:AD:79:PHE:CG	4:AD:207:TYR:HD1	2.23	0.56
4:AD:111:ALA:HB1	4:AD:116:GLN:HG2	1.87	0.56
5:AE:64:ARG:HG3	5:AE:65:ASN:N	2.20	0.56
9:AI:114:TYR:HD1	10:AJ:60:ARG:HG3	1.69	0.56
11:AK:84:VAL:HG23	11:AK:110:ASP:OD1	2.05	0.56
12:AL:26:LEU:HD13	12:AL:27:LYS:N	2.20	0.56
12:AL:69:ILE:HG23	12:AL:99:ILE:CG2	2.31	0.56
23:BA:229:A:H5'	23:BA:230:U:C5'	2.35	0.56
23:BA:270(K):G:H2'	23:BA:270(L):C:O4'	2.04	0.56
23:BA:459:U:H4'	52:B4:40:TRP:CZ3	2.41	0.56
23:BA:461:C:C2'	23:BA:462:C:H5'	2.36	0.56
23:BA:747:U:C4	50:B2:2:ALA:N	2.73	0.56
23:BA:1015:G:C2'	23:BA:1016:G:H5'	2.34	0.56
23:BA:1495:A:C2	23:BA:1496:A:C2	2.93	0.56
23:BA:1793:C:H2'	23:BA:1794:U:C6	2.40	0.56
23:BA:2038:G:H2'	23:BA:2039:C:C6	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2287:A:C4	23:BA:2289:G:C8	2.93	0.56
23:BA:2317:C:H2'	23:BA:2318:G:H5'	1.85	0.56
23:BA:2476:A:N1	23:BA:2477:C:C4	2.73	0.56
23:BA:2476:A:H2	23:BA:2477:C:C6	2.24	0.56
25:BC:24:ILE:CD1	25:BC:84:TYR:HB2	2.35	0.56
25:BC:68:LYS:O	25:BC:70:TRP:CE3	2.57	0.56
26:BD:100:GLU:O	26:BD:172:VAL:HG23	2.05	0.56
27:BE:108:LYS:O	27:BE:112:MET:HG3	2.04	0.56
27:BE:181:LEU:CD2	27:BE:186:ILE:HD11	2.35	0.56
29:BG:94:TYR:OH	29:BG:160:LYS:HD3	2.05	0.56
30:BH:6:LEU:O	30:BH:7:GLU:HB2	2.05	0.56
33:BK:19:ILE:HB	33:BK:41:ALA:HB1	1.87	0.56
35:BM:47:ILE:HD11	35:BM:68:ILE:HD12	1.87	0.56
36:BN:30:THR:HG22	36:BN:31:HIS:CE1	2.41	0.56
40:BR:61:VAL:O	40:BR:61:VAL:HG23	2.04	0.56
43:BU:95:LYS:HD3	43:BU:99:CYS:O	2.05	0.56
44:BV:5:LEU:HD23	44:BV:6:LYS:H	1.69	0.56
44:BV:38:TYR:O	44:BV:38:TYR:CD1	2.59	0.56
1:CA:327:A:C4	1:CA:329:A:C8	2.93	0.56
1:CA:428:G:O4'	1:CA:430:A:C8	2.58	0.56
1:CA:520:A:OP2	12:CL:50:ALA:O	2.23	0.56
1:CA:590:C:H2'	1:CA:591:U:H6	1.69	0.56
1:CA:724:G:C2	1:CA:725:G:C8	2.93	0.56
1:CA:817:C:H4'	1:CA:818:G:OP1	2.05	0.56
1:CA:950:U:O4	13:CM:105:THR:HG21	2.05	0.56
1:CA:1292:U:C2	1:CA:1293:G:C8	2.93	0.56
2:CB:17:PHE:CD1	2:CB:44:LEU:HD21	2.40	0.56
2:CB:97:TRP:HH2	2:CB:176:GLU:CG	2.19	0.56
3:CC:47:LEU:HD23	3:CC:52:LEU:HD13	1.86	0.56
6:CF:12:PRO:HG3	6:CF:57:GLN:O	2.05	0.56
8:CH:50:ARG:HH11	8:CH:50:ARG:HG2	1.70	0.56
8:CH:80:ILE:HD12	8:CH:80:ILE:N	2.21	0.56
8:CH:97:VAL:C	8:CH:99:GLU:H	2.09	0.56
9:CI:10:ARG:CZ	9:CI:11:LYS:HE3	2.35	0.56
9:CI:83:ARG:HA	9:CI:86:VAL:HG12	1.87	0.56
13:CM:29:ARG:HB3	13:CM:64:TRP:CZ2	2.40	0.56
23:DA:954:G:H5''	35:DM:13:GLN:HG3	1.87	0.56
23:DA:974(B):C:OP2	23:DA:974(B):C:H4'	2.05	0.56
23:DA:1175:U:H2'	23:DA:1176:G:H8	1.70	0.56
23:DA:1210:A:H5''	23:DA:1210:A:C8	2.37	0.56
23:DA:1812:A:O2'	25:DC:45:ASN:HB3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1899:G:O2'	23:DA:1900:A:OP2	2.20	0.56
23:DA:2427:C:H5''	23:DA:2428:G:OP1	2.06	0.56
23:DA:2709:G:O2'	23:DA:2710:C:H5'	2.05	0.56
23:DA:2755:C:HO2'	23:DA:2756:U:H6	1.53	0.56
23:DA:2886:G:O2'	23:DA:2887:U:H5'	2.05	0.56
24:DB:75:G:N1	24:DB:102:G:N2	2.53	0.56
25:DC:108:PRO:HB3	25:DC:143:HIS:HE1	1.69	0.56
26:DD:52:LEU:HB2	26:DD:76:ARG:HB2	1.87	0.56
26:DD:181:LEU:HD21	38:DP:7:ILE:HG23	1.88	0.56
27:DE:52:LYS:HB3	27:DE:56:GLU:HB2	1.87	0.56
28:DF:86:MET:N	28:DF:87:PRO:CD	2.68	0.56
28:DF:134:GLY:C	28:DF:135:LEU:HD12	2.26	0.56
30:DH:58:LEU:C	30:DH:60:GLU:H	2.08	0.56
34:DL:55:ARG:CG	34:DL:56:SER:N	2.66	0.56
40:DR:64:HIS:HD2	40:DR:92:THR:HG22	1.66	0.56
44:DV:117:LEU:O	44:DV:117:LEU:HG	2.05	0.56
50:D2:4:HIS:HB3	50:D2:5:PRO:CD	2.34	0.56
1:AA:137:C:O4'	16:AP:63:GLY:HA3	2.05	0.56
1:AA:1040:U:H2'	1:AA:1041:A:H8	1.71	0.56
1:AA:1309:G:H22	1:AA:1329:A:H1'	1.70	0.56
2:AB:127:ILE:HG22	2:AB:135:GLN:HE21	1.70	0.56
5:AE:90:VAL:O	5:AE:120:THR:HA	2.05	0.56
9:AI:24:GLY:O	9:AI:26:VAL:HG23	2.05	0.56
12:AL:75:ASN:OD1	12:AL:107:ALA:HB3	2.06	0.56
12:AL:116:ARG:O	12:AL:119:TYR:N	2.37	0.56
16:AP:19:ILE:HG22	16:AP:19:ILE:O	2.05	0.56
23:BA:24:G:O2'	41:BS:77:ASP:HB3	2.05	0.56
23:BA:1164:G:C6	23:BA:1165:U:C4	2.94	0.56
23:BA:2020:A:OP1	39:BQ:27:LEU:HB2	2.06	0.56
23:BA:2641:G:OP1	32:BJ:97:ARG:HD3	2.05	0.56
23:BA:2730:C:O2'	23:BA:2731:G:H5'	2.04	0.56
23:BA:2846:G:OP2	38:BP:54:ARG:HB2	2.06	0.56
27:BE:88:VAL:HG13	27:BE:89:VAL:O	2.05	0.56
27:BE:155:LEU:HD12	27:BE:174:VAL:HB	1.87	0.56
34:BL:81:GLN:HG2	34:BL:106:LEU:HD22	1.87	0.56
35:BM:40:ALA:HB2	35:BM:127:ILE:HD12	1.88	0.56
38:BP:23:ARG:HH11	38:BP:23:ARG:CG	2.19	0.56
41:BS:62:HIS:O	41:BS:64:MET:N	2.38	0.56
44:BV:179:ASP:CG	44:BV:180:VAL:H	2.08	0.56
53:B5:51:ALA:C	53:B5:52:LYS:HD3	2.26	0.56
1:CA:113:G:O2'	1:CA:114:U:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:324:G:N1	1:CA:327:A:OP2	2.39	0.56
1:CA:991:U:O2'	1:CA:993:G:C8	2.58	0.56
1:CA:1068:G:N3	1:CA:1191:A:C2	2.73	0.56
3:CC:36:ASP:OD2	3:CC:57:ILE:HG21	2.06	0.56
3:CC:120:VAL:HG21	3:CC:137:ALA:HB2	1.87	0.56
3:CC:149:ALA:HA	3:CC:201:TYR:O	2.06	0.56
5:CE:98:THR:HG22	5:CE:99:GLY:N	2.20	0.56
9:CI:112:LYS:HA	9:CI:119:ALA:HB2	1.87	0.56
12:CL:82:VAL:HG13	12:CL:83:LEU:N	2.21	0.56
20:CT:26:ASN:ND2	20:CT:26:ASN:N	2.52	0.56
20:CT:82:SER:O	20:CT:86:ARG:HB2	2.06	0.56
23:DA:165:U:N3	23:DA:171:G:C8	2.73	0.56
23:DA:1683:C:N4	23:DA:1705:G:H1	2.01	0.56
23:DA:1858:G:O2'	23:DA:1859:A:C8	2.57	0.56
23:DA:2729:G:H2'	23:DA:2730:C:H6	1.70	0.56
34:DL:50:ARG:HH11	34:DL:50:ARG:HB3	1.69	0.56
34:DL:61:ARG:HA	34:DL:62:LEU:HD13	1.87	0.56
35:DM:37:LEU:N	35:DM:37:LEU:HD23	2.20	0.56
36:DN:79:LEU:HD23	36:DN:83:ILE:HB	1.87	0.56
38:DP:36:GLU:OE2	38:DP:41:ARG:HD3	2.05	0.56
40:DR:38:LEU:C	40:DR:39:LEU:HD13	2.25	0.56
48:DZ:8:LEU:HD13	48:DZ:31:LEU:HD12	1.85	0.56
53:D5:7:HIS:HB2	53:D5:60:LEU:HB3	1.86	0.56
53:D5:52:LYS:N	53:D5:53:PRO:HD2	2.19	0.56
1:AA:55:A:C4	1:AA:56:U:C6	2.93	0.56
1:AA:652:U:O4	1:AA:752:G:O2'	2.15	0.56
1:AA:1118:C:P	9:AI:104:ARG:HG3	2.45	0.56
3:AC:35:GLU:HA	3:AC:38:ARG:CG	2.36	0.56
5:AE:70:PRO:HB3	5:AE:144:THR:HG22	1.87	0.56
6:AF:60:PHE:C	6:AF:61:LEU:HD12	2.26	0.56
6:AF:90:VAL:CG1	6:AF:91:VAL:N	2.68	0.56
23:BA:565:C:C2'	23:BA:566:U:O5'	2.53	0.56
23:BA:1169:G:H1	23:BA:1180:C:H42	1.54	0.56
23:BA:1771:C:H1'	23:BA:1786:A:C8	2.41	0.56
23:BA:2338:G:O2'	23:BA:2339:G:H5'	2.05	0.56
23:BA:2598:A:H2'	23:BA:2599:G:O5'	2.05	0.56
23:BA:2681:C:C5	23:BA:2725:A:N6	2.63	0.56
25:BC:52:ARG:HB3	25:BC:53:PHE:CD2	2.40	0.56
25:BC:172:TYR:HD1	25:BC:185:VAL:C	2.08	0.56
26:BD:4:ILE:CG1	26:BD:28:ALA:HB1	2.36	0.56
32:BJ:53:ILE:O	32:BJ:57:LEU:HD22	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BL:136:GLU:O	34:BL:137:LYS:C	2.44	0.56
35:BM:68:ILE:HG21	35:BM:103:MET:HG3	1.88	0.56
36:BN:55:ALA:O	36:BN:57:ARG:O	2.24	0.56
1:CA:177:C:OP1	20:CT:65:LYS:NZ	2.30	0.56
1:CA:327:A:C2	1:CA:329:A:C4	2.93	0.56
1:CA:865:A:C2	1:CA:918:A:H4'	2.40	0.56
2:CB:235:SER:O	2:CB:239:VAL:HG23	2.05	0.56
12:CL:26:LEU:HD13	12:CL:27:LYS:N	2.21	0.56
12:CL:53:LYS:HB3	12:CL:69:ILE:HG13	1.88	0.56
19:CS:28:LYS:HB3	19:CS:29:ARG:NH1	2.21	0.56
23:DA:89:G:C4	23:DA:90:U:C5	2.94	0.56
23:DA:966:G:C4	23:DA:967:C:H5	2.21	0.56
23:DA:966:G:C5	23:DA:967:C:C5	2.94	0.56
23:DA:1265:A:H5'	23:DA:1267:U:H1'	1.86	0.56
23:DA:1338:G:C2'	23:DA:1339:G:H5'	2.35	0.56
23:DA:1773:A:C2'	23:DA:1774:C:H5'	2.35	0.56
23:DA:2309:A:N6	23:DA:2310:A:N1	2.54	0.56
23:DA:2356:C:O3'	45:DW:20:ARG:HD3	2.04	0.56
24:DB:50:G:OP2	37:DO:62:LYS:HD3	2.04	0.56
25:DC:25:THR:HG22	25:DC:82:ILE:H	1.69	0.56
26:DD:24:THR:HG21	26:DD:188:VAL:HG12	1.87	0.56
34:DL:85:LEU:CD2	34:DL:85:LEU:H	2.18	0.56
35:DM:26:TYR:CD1	35:DM:26:TYR:O	2.59	0.56
40:DR:87:HIS:O	40:DR:87:HIS:CD2	2.59	0.56
42:DT:39:ILE:O	42:DT:43:VAL:HG12	2.04	0.56
44:DV:38:TYR:CD1	44:DV:38:TYR:O	2.59	0.56
46:DX:65:SER:OG	46:DX:66:HIS:CD2	2.58	0.56
48:DZ:40:THR:CG2	48:DZ:43:ILE:HG12	2.34	0.56
48:DZ:50:VAL:O	48:DZ:54:VAL:HG22	2.04	0.56
50:D2:4:HIS:CB	50:D2:5:PRO:HD3	2.35	0.56
1:AA:15:G:C4	1:AA:16:A:C8	2.93	0.56
1:AA:57:G:C8	1:AA:58:C:C5	2.93	0.56
1:AA:781:A:O2'	1:AA:1522:U:O2	2.23	0.56
1:AA:913:A:C1'	1:AA:914:A:OP2	2.54	0.56
1:AA:1167:A:N7	1:AA:1169:A:C6	2.74	0.56
3:AC:33:LEU:HD21	14:AN:53:LEU:CD2	2.32	0.56
3:AC:77:ILE:O	3:AC:83:ARG:HB3	2.06	0.56
6:AF:14:LEU:HD21	6:AF:18:GLN:HB2	1.87	0.56
9:AI:46:ALA:O	9:AI:49:PRO:HD2	2.05	0.56
13:AM:66:LEU:O	13:AM:69:GLU:HG2	2.05	0.56
23:BA:241:A:H5'	23:BA:243:U:H1'	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:640:C:H2'	23:BA:641:C:C6	2.41	0.56
23:BA:914:C:H3'	23:BA:914:C:H6	1.71	0.56
23:BA:2681:C:H5	23:BA:2725:A:N6	1.82	0.56
25:BC:30:GLU:HG3	25:BC:63:ARG:NH2	2.20	0.56
26:BD:134:ILE:HA	26:BD:137:HIS:CD2	2.40	0.56
33:BK:14:THR:HG22	33:BK:52:VAL:HB	1.87	0.56
34:BL:132:LYS:HD3	34:BL:132:LYS:N	2.20	0.56
44:BV:24:LEU:O	44:BV:24:LEU:HG	2.04	0.56
1:CA:109:A:N7	1:CA:326:G:C4	2.74	0.56
1:CA:110:C:H2'	1:CA:111:G:O4'	2.05	0.56
1:CA:749:C:OP2	1:CA:750:G:OP2	2.23	0.56
1:CA:1065:U:C5	1:CA:1190:G:H1'	2.39	0.56
3:CC:134:ILE:CG2	3:CC:168:ALA:HB3	2.35	0.56
9:CI:25:LYS:O	9:CI:60:ASP:HA	2.05	0.56
9:CI:28:VAL:HG13	9:CI:63:ILE:O	2.06	0.56
12:CL:78:GLU:O	12:CL:79:HIS:CG	2.59	0.56
23:DA:322:A:OP1	27:DE:168:ARG:HD3	2.06	0.56
23:DA:830:G:H4'	23:DA:831:G:OP2	2.04	0.56
23:DA:1152:C:H5''	39:DQ:80:ILE:CG2	2.35	0.56
23:DA:1153:C:H5'	39:DQ:76:TYR:CE2	2.40	0.56
23:DA:1762:A:H8	23:DA:1762:A:O5'	1.88	0.56
23:DA:1850:G:C6	23:DA:1851:U:C4	2.93	0.56
23:DA:2228:G:OP2	25:DC:263:ARG:NH2	2.39	0.56
23:DA:2480:C:H2'	23:DA:2481:G:H5'	1.88	0.56
23:DA:2511:U:O3'	26:DD:123:ALA:HB3	2.06	0.56
25:DC:44:ASN:CG	25:DC:45:ASN:N	2.58	0.56
30:DH:68:LEU:HD21	30:DH:107:ILE:HD11	1.86	0.56
35:DM:68:ILE:HD13	35:DM:103:MET:CG	2.33	0.56
35:DM:68:ILE:HG21	35:DM:103:MET:HG3	1.87	0.56
39:DQ:16:LYS:O	39:DQ:20:LEU:HD22	2.05	0.56
42:DT:14:SER:O	42:DT:15:GLU:C	2.42	0.56
42:DT:30:VAL:HG11	42:DT:39:ILE:HD13	1.86	0.56
43:DU:81:LYS:HD2	43:DU:96:ILE:CD1	2.35	0.56
44:DV:94:GLU:HB2	44:DV:95:PRO:HD2	1.88	0.56
50:D2:3:LYS:O	50:D2:4:HIS:C	2.43	0.56
1:AA:46:G:O2'	1:AA:365:U:H1'	2.06	0.56
1:AA:300:A:H3'	1:AA:300:A:C8	2.41	0.56
1:AA:411:A:N7	1:AA:429:U:C5	2.74	0.56
1:AA:618:C:N3	1:AA:622:A:N6	2.53	0.56
1:AA:832:C:N4	1:AA:854:G:H1	2.01	0.56
4:AD:70:ILE:HG12	4:AD:71:SER:N	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:32:VAL:O	5:AE:43:LEU:HA	2.06	0.56
9:AI:112:LYS:HA	9:AI:119:ALA:HB2	1.88	0.56
10:AJ:34:VAL:HG13	10:AJ:74:ILE:HG22	1.88	0.56
15:AO:78:TYR:O	15:AO:82:ILE:HG22	2.05	0.56
20:AT:64:ASP:O	20:AT:67:ALA:HB3	2.06	0.56
23:BA:176:G:C2'	23:BA:177:G:H5'	2.36	0.56
23:BA:729:G:C8	25:BC:208:LYS:HD3	2.41	0.56
23:BA:880:G:H2'	23:BA:881:G:H8	1.71	0.56
23:BA:1266:G:C6	41:BS:16:LYS:HD2	2.40	0.56
23:BA:1317:A:C6	23:BA:1318:C:C4	2.93	0.56
23:BA:2836:U:C4	23:BA:2883:A:N6	2.74	0.56
24:BB:40:U:O2'	24:BB:41:U:H5'	2.06	0.56
24:BB:115:G:H5'	37:BO:50:SER:OG	2.05	0.56
28:BF:7:LEU:HA	28:BF:10:LYS:HB2	1.86	0.56
30:BH:97:ILE:O	30:BH:101:LEU:HB2	2.05	0.56
34:BL:59:LEU:CA	34:BL:61:ARG:HE	2.13	0.56
34:BL:61:ARG:CD	53:B5:13:ARG:HD2	2.36	0.56
47:BY:46:GLN:HB2	47:BY:49:LYS:HZ3	1.70	0.56
53:B5:29:LYS:HB2	53:B5:44:LYS:HB3	1.86	0.56
1:CA:1254:C:OP1	10:CJ:45:ARG:HA	2.06	0.56
1:CA:1428:A:H2'	1:CA:1429:C:O4'	2.05	0.56
4:CD:109:GLY:C	4:CD:111:ALA:N	2.59	0.56
20:CT:11:SER:HA	20:CT:13:LEU:HD13	1.88	0.56
23:DA:533:G:N3	39:DQ:45:TYR:CE1	2.74	0.56
23:DA:662:G:OP1	34:DL:18:ARG:NH1	2.39	0.56
23:DA:718:A:H8	23:DA:718:A:O5'	1.89	0.56
23:DA:814:C:O2'	23:DA:815:C:H5'	2.05	0.56
23:DA:1121:C:H6	23:DA:1121:C:O5'	1.88	0.56
23:DA:1414:G:C5	23:DA:1415:U:C5	2.94	0.56
25:DC:31:LYS:O	25:DC:36:PRO:HD3	2.06	0.56
25:DC:186:HIS:HD2	25:DC:188:GLU:HB2	1.70	0.56
26:DD:176:ILE:HB	26:DD:181:LEU:HB2	1.88	0.56
32:DJ:74:PHE:CZ	32:DJ:142:ARG:HD2	2.39	0.56
33:DK:86:ILE:H	33:DK:86:ILE:HD12	1.71	0.56
35:DM:43:THR:OG1	35:DM:46:GLN:HG3	2.06	0.56
35:DM:75:THR:HA	35:DM:88:GLY:HA3	1.86	0.56
37:DO:39:ILE:HG22	37:DO:39:ILE:O	2.06	0.56
38:DP:50:ILE:HA	38:DP:99:LEU:HD11	1.87	0.56
51:D3:25:LYS:HD3	53:D5:34:TRP:CZ3	2.41	0.56
1:AA:262:A:C6	1:AA:263:A:C6	2.94	0.56
1:AA:270:A:C6	1:AA:271:C:C4	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:300:A:H2'	1:AA:301:G:H5'	1.88	0.56
1:AA:342:C:O2'	1:AA:343:U:H5'	2.05	0.56
1:AA:439:A:H2'	1:AA:440:A:H5'	1.88	0.56
1:AA:456:C:H42	1:AA:476:G:H1	1.54	0.56
1:AA:729:A:H2'	1:AA:730:G:C8	2.40	0.56
1:AA:1043:C:H2'	1:AA:1044:A:H8	1.70	0.56
1:AA:1239:A:H4'	1:AA:1240:U:H5'	1.88	0.56
3:AC:47:LEU:HD21	3:AC:68:VAL:HG11	1.87	0.56
3:AC:149:ALA:HA	3:AC:201:TYR:O	2.06	0.56
9:AI:10:ARG:CZ	9:AI:11:LYS:HE3	2.35	0.56
22:AV:6182:A:N1	22:AV:6183:G:C5	2.74	0.56
23:BA:84:A:H2	23:BA:98:G:N3	2.03	0.56
23:BA:142:G:H4'	42:BT:35:THR:HG21	1.87	0.56
23:BA:1168:G:C2	23:BA:1182:A:C2	2.94	0.56
23:BA:1478:G:N3	23:BA:1479:G:C8	2.74	0.56
26:BD:149:ARG:CG	26:BD:150:VAL:N	2.69	0.56
29:BG:85:LYS:O	29:BG:132:ARG:HA	2.06	0.56
47:BY:60:LEU:C	47:BY:62:THR:H	2.09	0.56
1:CA:1207:G:H2'	1:CA:1208:C:H6	1.71	0.56
1:CA:1494:G:N2	23:DA:1912:A:N3	2.53	0.56
1:CA:1501:C:C5	1:CA:1504:G:C5	2.94	0.56
3:CC:55:VAL:HG22	3:CC:55:VAL:O	2.06	0.56
7:CG:136:LYS:O	7:CG:140:ASP:HB2	2.06	0.56
13:CM:14:ARG:HG2	13:CM:44:ARG:NH1	2.21	0.56
23:DA:173:G:H2'	23:DA:174:C:C6	2.41	0.56
23:DA:243:U:C2'	23:DA:244:A:H5'	2.36	0.56
23:DA:1204:A:N1	23:DA:1241:A:C2	2.74	0.56
25:DC:61:LEU:CB	25:DC:63:ARG:NH1	2.69	0.56
25:DC:198:ASN:HD22	25:DC:198:ASN:C	2.09	0.56
27:DE:14:PRO:HD3	27:DE:128:ALA:HB2	1.87	0.56
29:DG:54:ARG:NH2	29:DG:62:LYS:HE2	2.19	0.56
32:DJ:85:VAL:CG2	32:DJ:89:LYS:HG3	2.32	0.56
37:DO:36:TYR:HD1	37:DO:36:TYR:H	1.53	0.56
40:DR:13:ARG:HH11	40:DR:13:ARG:HG3	1.70	0.56
43:DU:81:LYS:CE	43:DU:97:ARG:HB3	2.36	0.56
49:D1:59:VAL:HG12	49:D1:60:GLU:N	2.13	0.56
1:AA:42:G:OP2	1:AA:42:G:C8	2.58	0.56
1:AA:1231:G:H2'	1:AA:1232:U:H6	1.71	0.56
10:AJ:33:GLN:HB2	10:AJ:75:ILE:HD11	1.88	0.56
17:AQ:99:SER:O	17:AQ:100:LYS:HD3	2.05	0.56
23:BA:83:G:C4	23:BA:102:G:N2	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:191:A:H2'	23:BA:192:C:C6	2.40	0.56
23:BA:300:A:P	43:BU:84:ARG:NH2	2.78	0.56
23:BA:637:A:P	34:BL:116:GLY:HA2	2.46	0.56
23:BA:871:U:H4'	35:BM:69:PHE:CE2	2.41	0.56
23:BA:973:A:O4'	23:BA:1188:U:C6	2.58	0.56
23:BA:1538:G:H2'	23:BA:1539:G:C8	2.41	0.56
23:BA:2301:C:H2'	23:BA:2302:G:H8	1.70	0.56
23:BA:2415:G:O3'	34:BL:66:GLY:HA3	2.06	0.56
23:BA:2599:G:N7	25:BC:237:GLU:HG3	2.20	0.56
23:BA:2688:U:O2	23:BA:2688:U:C3'	2.54	0.56
23:BA:2709:G:O2'	23:BA:2710:C:H5'	2.04	0.56
39:BQ:102:GLU:HG3	40:BR:2:PHE:CE1	2.41	0.56
43:BU:76:CYS:HB3	43:BU:77:PRO:CD	2.35	0.56
43:BU:81:LYS:HZ1	43:BU:98:VAL:HG12	1.70	0.56
46:BX:65:SER:OG	46:BX:66:HIS:CD2	2.59	0.56
1:CA:37:U:H2'	1:CA:38:G:H8	1.71	0.56
1:CA:285:G:O2'	1:CA:286:G:H5'	2.05	0.56
1:CA:577:G:H1'	1:CA:816:A:N3	2.20	0.56
1:CA:1084:G:C5	1:CA:1085:U:C4	2.94	0.56
1:CA:1101:A:N3	1:CA:1102:A:H1'	2.21	0.56
1:CA:1124:G:H4'	10:CJ:38:ILE:HD11	1.88	0.56
1:CA:1167:A:N7	1:CA:1169:A:C6	2.74	0.56
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.40	0.56
3:CC:13:GLY:HA2	14:CN:57:ARG:HE	1.71	0.56
3:CC:150:LYS:HG3	3:CC:169:ALA:HB2	1.88	0.56
5:CE:36:ASP:O	5:CE:37:ARG:HB2	2.06	0.56
23:DA:530:G:N1	23:DA:2022:U:OP1	2.39	0.56
23:DA:666:G:H5''	34:DL:47:ASP:O	2.06	0.56
23:DA:1022:G:H22	23:DA:114(B):A:H2	1.53	0.56
23:DA:1263:U:O2'	50:D2:11:THR:HG23	2.06	0.56
23:DA:1448:G:H2'	23:DA:149(B):A:C8	2.40	0.56
23:DA:1495:A:H2'	23:DA:1496:A:N3	2.21	0.56
23:DA:1833:U:C2	23:DA:1834:U:C5	2.93	0.56
23:DA:2064:C:H2'	23:DA:2065:C:C6	2.40	0.56
23:DA:2392:A:H2	23:DA:2424:C:N4	1.95	0.56
26:DD:8:LYS:HG2	26:DD:192:ASN:HD22	1.70	0.56
26:DD:11:MET:HB2	26:DD:24:THR:HA	1.86	0.56
34:DL:75:ILE:H	34:DL:75:ILE:CD1	2.17	0.56
39:DQ:88:ILE:HG22	40:DR:47:VAL:O	2.05	0.56
44:DV:23:LYS:HB3	44:DV:38:TYR:CD1	2.40	0.56
44:DV:39:VAL:CG2	44:DV:44:PHE:HB2	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DW:11:LYS:O	45:DW:14:ARG:NH2	2.37	0.56
46:DX:10:LYS:O	46:DX:11:ARG:CB	2.54	0.56
47:DY:36:ARG:HA	47:DY:39:ALA:CB	2.35	0.56
48:DZ:26:LEU:HD21	48:DZ:46:ASN:HB2	1.86	0.56
1:AA:254:G:H2'	1:AA:255:G:H8	1.70	0.56
1:AA:456:C:N4	1:AA:476:G:H1	2.03	0.56
1:AA:638:G:C2'	1:AA:639:G:H5'	2.36	0.56
1:AA:951:G:H1'	1:AA:970:C:O2'	2.05	0.56
1:AA:1128:C:H42	1:AA:1143:G:H1	1.53	0.56
4:AD:9:CYS:SG	4:AD:31:CYS:C	2.85	0.56
6:AF:61:LEU:HB3	6:AF:63:TYR:HE2	1.71	0.56
12:AL:19:LYS:HD3	12:AL:19:LYS:H	1.71	0.56
19:AS:6:LYS:CD	19:AS:7:LYS:HD3	2.36	0.56
23:BA:270(O):G:O2'	23:BA:270(Q):C:H5'	2.06	0.56
23:BA:363(C):G:H2'	23:BA:363(D):G:H8	1.70	0.56
23:BA:1022:G:O2'	23:BA:1023:U:OP2	2.15	0.56
23:BA:1512:G:C6	23:BA:1513:C:N3	2.73	0.56
23:BA:1587:A:H2'	23:BA:1588:C:H6	1.66	0.56
23:BA:1592:C:H2'	23:BA:1593:G:H8	1.71	0.56
23:BA:1900:A:N1	23:BA:1970:A:C6	2.74	0.56
23:BA:2307:G:H8	23:BA:2307:G:O5'	1.89	0.56
23:BA:712(B):A:H5''	23:BA:2713:A:OP2	2.06	0.56
23:BA:2727:G:C5	23:BA:2728:U:H5	2.23	0.56
23:BA:2787:C:H1'	26:BD:62:PRO:CB	2.36	0.56
25:BC:61:LEU:CB	25:BC:63:ARG:NH1	2.69	0.56
25:BC:265:PRO:C	25:BC:267:SER:H	2.08	0.56
41:BS:95:ILE:O	41:BS:95:ILE:HG13	2.06	0.56
48:BZ:43:ILE:N	48:BZ:43:ILE:CD1	2.69	0.56
1:CA:1226:C:C4	13:CM:104:ARG:HB2	2.41	0.56
1:CA:1239:A:H4'	1:CA:1240:U:H5'	1.88	0.56
2:CB:205:ASP:C	2:CB:207:ALA:H	2.09	0.56
3:CC:13:GLY:HA3	14:CN:57:ARG:HE	1.70	0.56
3:CC:180:ALA:HB1	3:CC:182:ILE:HG13	1.88	0.56
4:CD:4:TYR:HE1	4:CD:11:LEU:HD11	1.71	0.56
5:CE:144:THR:O	5:CE:148:VAL:HG23	2.06	0.56
9:CI:9:ARG:HG3	9:CI:14:VAL:HG13	1.87	0.56
13:CM:66:LEU:O	13:CM:69:GLU:HG2	2.06	0.56
22:CV:6198:U:H2'	22:CV:6199:G:C8	2.40	0.56
23:DA:363(C):G:H2'	23:DA:363(D):G:H8	1.71	0.56
23:DA:568:U:O4	40:DR:78:LYS:NZ	2.39	0.56
23:DA:914:C:H6	23:DA:914:C:H3'	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1252:G:C2	23:DA:1253:A:C2	2.94	0.56
23:DA:1368:G:C2	23:DA:1369:G:C8	2.94	0.56
23:DA:1757:U:C2'	23:DA:1758:G:OP1	2.54	0.56
23:DA:1820:U:O2	25:DC:201:HIS:HB3	2.05	0.56
23:DA:2392:A:OP1	53:D5:32:LEU:HB3	2.06	0.56
24:DB:90:C:OP2	35:DM:16:ARG:HD2	2.05	0.56
26:DD:11:MET:HE3	26:DD:186:GLY:HA2	1.87	0.56
29:DG:151:ILE:HD13	29:DG:151:ILE:N	2.20	0.56
30:DH:77:LEU:HD12	30:DH:101:LEU:HD13	1.88	0.56
42:DT:12:VAL:HG12	42:DT:28:PHE:HA	1.86	0.56
43:DU:11:ASP:OD1	43:DU:12:THR:N	2.39	0.56
44:DV:5:LEU:HD23	44:DV:6:LYS:H	1.71	0.56
49:D1:40:ILE:HG23	49:D1:59:VAL:HG21	1.87	0.56
1:AA:397:A:N6	1:AA:548:G:C5	2.74	0.55
1:AA:632:A:H2'	1:AA:633:G:H5'	1.89	0.55
1:AA:712:A:N6	1:AA:713:G:C6	2.74	0.55
1:AA:974:A:H8	1:AA:974:A:OP1	1.88	0.55
1:AA:1057:G:H4'	3:AC:197:GLY:H	1.71	0.55
1:AA:1075:C:OP1	2:AB:103:THR:HG21	2.06	0.55
9:AI:39:GLY:O	9:AI:40:LEU:HD23	2.06	0.55
11:AK:63:LEU:HD23	11:AK:63:LEU:N	2.20	0.55
17:AQ:40:LYS:HD2	17:AQ:42:TYR:CZ	2.40	0.55
19:AS:28:LYS:HB3	19:AS:29:ARG:NH1	2.21	0.55
23:BA:9:U:N3	23:BA:2629:A:N6	2.53	0.55
23:BA:530:G:C5	23:BA:2022:U:H5''	2.41	0.55
23:BA:533:G:N3	39:BQ:45:TYR:CE1	2.74	0.55
23:BA:848:G:N9	23:BA:933:A:H8	2.05	0.55
23:BA:1028:A:N3	23:BA:2486:G:O2'	2.30	0.55
23:BA:1487:G:C4	23:BA:1488:G:C8	2.95	0.55
23:BA:2098:U:O2'	23:BA:2099:U:O5'	2.24	0.55
23:BA:2309:A:N6	23:BA:2310:A:N1	2.54	0.55
25:BC:44:ASN:CG	25:BC:45:ASN:N	2.59	0.55
26:BD:26:ILE:N	26:BD:26:ILE:HD13	2.21	0.55
28:BF:76:SER:HB2	28:BF:83:ARG:N	2.21	0.55
29:BG:19:VAL:CG1	29:BG:20:ALA:H	2.17	0.55
32:BJ:51:THR:HG22	32:BJ:52:LYS:N	2.21	0.55
32:BJ:62:ARG:HH21	32:BJ:64:ASP:CG	2.10	0.55
43:BU:81:LYS:CE	43:BU:97:ARG:HB3	2.35	0.55
50:B2:33:CYS:SG	50:B2:40:LYS:HE3	2.47	0.55
1:CA:414:A:H2'	1:CA:415:A:H8	1.70	0.55
1:CA:814:A:N7	1:CA:816:A:C4	2.73	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1159:U:C6	1:CA:1182:G:C2	2.94	0.55
1:CA:1187:G:H2'	1:CA:1188:A:H8	1.71	0.55
3:CC:182:ILE:HG23	3:CC:202:ILE:O	2.06	0.55
6:CF:8:ILE:HG22	6:CF:10:LEU:HD12	1.87	0.55
7:CG:71:PRO:HG3	7:CG:103:TRP:CZ3	2.41	0.55
13:CM:91:ARG:HH11	19:CS:81:ARG:NH2	2.02	0.55
19:CS:31:ILE:HG23	19:CS:49:ILE:HA	1.88	0.55
23:DA:553:U:O2'	23:DA:554:U:H5'	2.05	0.55
23:DA:1335:U:O2'	23:DA:1336:A:H5'	2.06	0.55
23:DA:1394:U:C5	23:DA:1395:A:C5	2.94	0.55
23:DA:1918:A:O2'	23:DA:1920:C:N4	2.39	0.55
23:DA:2279:G:O6	45:DW:14:ARG:HD2	2.05	0.55
23:DA:2284:C:C2'	23:DA:2285:C:H5'	2.36	0.55
23:DA:2480:C:N4	23:DA:2481:G:C6	2.74	0.55
25:DC:24:ILE:HD11	25:DC:84:TYR:HB2	1.87	0.55
29:DG:118:PRO:O	29:DG:121:ILE:HG22	2.06	0.55
29:DG:139:GLN:HG3	29:DG:140:LYS:N	2.20	0.55
32:DJ:53:ILE:HD12	32:DJ:122:LEU:HD11	1.88	0.55
32:DJ:62:ARG:HH21	32:DJ:64:ASP:CG	2.10	0.55
32:DJ:68:ASN:ND2	32:DJ:68:ASN:H	2.04	0.55
32:DJ:90:LEU:HD12	32:DJ:90:LEU:H	1.72	0.55
47:DY:9:GLN:HG3	47:DY:12:GLU:OE1	2.05	0.55
47:DY:60:LEU:O	47:DY:62:THR:N	2.38	0.55
1:AA:491:G:H2'	1:AA:492:G:H8	1.72	0.55
1:AA:590:C:H2'	1:AA:591:U:C6	2.41	0.55
1:AA:601:C:H2'	1:AA:602:A:H8	1.70	0.55
1:AA:781:A:H3'	1:AA:782:A:H5'	1.86	0.55
1:AA:851:G:O2'	1:AA:852:G:H5'	2.06	0.55
1:AA:1005:A:H2'	1:AA:1006:C:H5'	1.88	0.55
1:AA:1349:A:H2'	1:AA:1350:A:O4'	2.05	0.55
5:AE:98:THR:HG22	5:AE:99:GLY:N	2.21	0.55
8:AH:11:THR:HA	8:AH:14:ARG:NH1	2.20	0.55
12:AL:53:LYS:HB3	12:AL:69:ILE:HG13	1.89	0.55
20:AT:26:ASN:HB2	20:AT:71:THR:CG2	2.31	0.55
23:BA:49:A:H4'	23:BA:50:U:H5''	1.87	0.55
23:BA:1130:U:O2	26:BD:149:ARG:NH2	2.39	0.55
23:BA:1204:A:N1	23:BA:1241:A:H2	2.03	0.55
23:BA:1210:A:C8	23:BA:1210:A:H5'	2.40	0.55
23:BA:1530:G:N1	23:BA:1542:G:N2	2.55	0.55
23:BA:2097:C:O2'	23:BA:2098:U:H5'	2.06	0.55
23:BA:2416:C:H2'	23:BA:2417:C:H6	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:122:LYS:N	27:BE:122:LYS:HD2	2.20	0.55
30:BH:58:LEU:C	30:BH:60:GLU:H	2.09	0.55
35:BM:43:THR:O	35:BM:46:GLN:HB2	2.07	0.55
35:BM:78:PRO:O	35:BM:79:LEU:HB2	2.05	0.55
38:BP:36:GLU:OE2	38:BP:41:ARG:HD3	2.06	0.55
41:BS:24:ILE:HG21	41:BS:36:LEU:CD2	2.35	0.55
45:BW:50:ASN:O	45:BW:62:LEU:HB2	2.05	0.55
48:BZ:52:HIS:CD2	48:BZ:52:HIS:H	2.23	0.55
1:CA:142:G:N2	1:CA:143:A:C4	2.74	0.55
1:CA:649:G:H2'	1:CA:650:G:H8	1.70	0.55
1:CA:1194:U:H4'	5:CE:22:GLY:O	2.05	0.55
3:CC:182:ILE:HG12	3:CC:203:PHE:CA	2.29	0.55
6:CF:14:LEU:HD21	6:CF:18:GLN:HB2	1.88	0.55
6:CF:88:VAL:HG12	6:CF:89:MET:N	2.22	0.55
11:CK:124:LYS:HD2	11:CK:125:PHE:HE1	1.70	0.55
17:CQ:63:ARG:HG2	17:CQ:64:PRO:HD2	1.88	0.55
18:CR:22:VAL:HG11	18:CR:42:ARG:O	2.06	0.55
23:DA:2086:U:OP2	25:DC:263:ARG:HD3	2.06	0.55
25:DC:25:THR:HG21	25:DC:82:ILE:N	2.22	0.55
25:DC:108:PRO:CG	25:DC:143:HIS:HE1	2.19	0.55
28:DF:40:ASN:O	28:DF:155:MET:HB2	2.05	0.55
29:DG:19:VAL:CG1	29:DG:20:ALA:H	2.17	0.55
29:DG:84:SER:CA	29:DG:133:VAL:O	2.51	0.55
38:DP:89:VAL:O	38:DP:89:VAL:CG2	2.53	0.55
41:DS:18:ARG:HH11	41:DS:18:ARG:HG2	1.72	0.55
1:AA:266:G:C5'	1:AA:267:C:H5	2.19	0.55
1:AA:626:U:H2'	1:AA:627:G:H8	1.71	0.55
1:AA:960:U:H5	1:AA:1225:A:H1'	1.71	0.55
1:AA:1399:C:C4	1:AA:1502:A:N1	2.75	0.55
3:AC:13:GLY:HA2	14:AN:57:ARG:HE	1.71	0.55
4:AD:3:ARG:HG2	4:AD:5:ILE:HD13	1.88	0.55
4:AD:111:ALA:HB1	4:AD:116:GLN:OE1	2.06	0.55
6:AF:98:LEU:CD1	6:AF:101:ALA:HB2	2.36	0.55
11:AK:67:ASP:OD1	11:AK:71:LYS:HE3	2.07	0.55
20:AT:97:ALA:O	20:AT:99:LEU:N	2.37	0.55
23:BA:71:A:C2	42:BT:31:HIS:CE1	2.92	0.55
23:BA:806:C:OP2	34:BL:39:LYS:HD3	2.06	0.55
23:BA:1543:A:C8	23:BA:1543:A:C3'	2.88	0.55
25:BC:231:HIS:HD2	25:BC:249:PRO:CA	2.13	0.55
32:BJ:101:TYR:HB3	32:BJ:102:PRO:CD	2.36	0.55
41:BS:86:LEU:HD12	41:BS:87:PRO:CD	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BT:23:GLU:OE1	42:BT:23:GLU:HA	2.05	0.55
43:BU:90:LEU:HG	43:BU:91:GLU:N	2.21	0.55
46:BX:17:SER:HA	46:BX:44:PRO:HD3	1.88	0.55
46:BX:40:ARG:HG2	46:BX:41:ARG:N	2.22	0.55
1:CA:515:G:C2	1:CA:537:G:C2	2.94	0.55
1:CA:562:C:H1'	12:CL:14:ARG:HB3	1.87	0.55
20:CT:42:GLN:HG3	20:CT:43:LEU:HD23	1.87	0.55
23:DA:330:A:O2'	23:DA:331:A:C8	2.50	0.55
23:DA:637:A:P	34:DL:116:GLY:HA2	2.46	0.55
23:DA:1445:C:C2	23:DA:1446:C:C5	2.95	0.55
23:DA:2038:G:H2'	23:DA:2039:C:C6	2.41	0.55
23:DA:2250:G:C6	35:DM:82:ARG:HD2	2.41	0.55
23:DA:2287:A:C4	23:DA:2289:G:C8	2.95	0.55
27:DE:181:LEU:CD2	27:DE:186:ILE:HD11	2.37	0.55
30:DH:88:ILE:HG22	30:DH:90:GLY:N	2.21	0.55
35:DM:89:ASN:C	35:DM:92:GLY:H	2.09	0.55
36:DN:8:ARG:HD3	36:DN:43:GLU:OE1	2.06	0.55
38:DP:109:GLU:O	38:DP:112:ARG:HG3	2.05	0.55
39:DQ:50:ARG:HH12	40:DR:72:VAL:HG12	1.72	0.55
44:DV:38:TYR:O	44:DV:38:TYR:CG	2.59	0.55
47:DY:57:ILE:HG22	47:DY:61:LEU:HD22	1.88	0.55
1:AA:44:G:N3	1:AA:399:G:C2	2.75	0.55
1:AA:62:U:O2'	1:AA:379:C:H1'	2.06	0.55
1:AA:247:G:OP2	17:AQ:100:LYS:N	2.38	0.55
1:AA:255:G:H2'	1:AA:256:U:C6	2.40	0.55
1:AA:256:U:H2'	1:AA:257:G:C8	2.41	0.55
1:AA:671:G:H2'	1:AA:672:U:H6	1.71	0.55
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.41	0.55
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.07	0.55
2:AB:52:GLU:O	2:AB:56:ARG:HG3	2.05	0.55
3:AC:70:VAL:HG12	3:AC:71:ALA:N	2.21	0.55
3:AC:188:LEU:O	3:AC:189:ALA:HB2	2.07	0.55
4:AD:104:VAL:C	4:AD:106:TYR:H	2.09	0.55
4:AD:105:VAL:HG12	4:AD:105:VAL:O	2.05	0.55
8:AH:31:PHE:O	8:AH:35:ILE:HG12	2.07	0.55
12:AL:46:LYS:HB3	12:AL:47:PRO:HD3	1.89	0.55
18:AR:53:ARG:C	18:AR:55:ARG:H	2.09	0.55
19:AS:6:LYS:HD2	19:AS:6:LYS:N	2.22	0.55
23:BA:125:G:OP2	52:B4:19:ARG:NH1	2.38	0.55
23:BA:328:U:H4'	43:BU:68:HIS:CE1	2.40	0.55
23:BA:1046:A:H2	31:BI:8:GLU:OE1	1.90	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1495:A:C5'	23:BA:1496:A:OP2	2.51	0.55
23:BA:2727:G:C5	23:BA:2728:U:C5	2.94	0.55
23:BA:2746:U:O3'	29:BG:138:LYS:HD3	2.06	0.55
27:BE:63:LYS:HZ1	27:BE:67:GLN:HE21	1.51	0.55
32:BJ:59:GLY:O	32:BJ:65:TRP:HE3	1.89	0.55
46:BX:11:ARG:O	46:BX:12:PRO:C	2.44	0.55
46:BX:67:ILE:HB	46:BX:68:PRO:HD3	1.87	0.55
53:B5:62:LEU:C	53:B5:64:TYR:N	2.60	0.55
1:CA:255:G:H2'	1:CA:256:U:C6	2.40	0.55
1:CA:406:G:N2	1:CA:437:U:C2	2.74	0.55
1:CA:632:A:H2'	1:CA:633:G:H5'	1.88	0.55
1:CA:1128:C:H42	1:CA:1143:G:H1	1.55	0.55
1:CA:1333:A:H2'	1:CA:1334:G:O4'	2.06	0.55
3:CC:186:PHE:HZ	3:CC:188:LEU:HD13	1.71	0.55
4:CD:99:SER:O	4:CD:140:VAL:HG23	2.06	0.55
5:CE:18:ARG:HH21	5:CE:25:ARG:CB	2.20	0.55
5:CE:64:ARG:HG3	5:CE:65:ASN:N	2.21	0.55
19:CS:53:ASN:ND2	19:CS:55:LYS:HB3	2.21	0.55
23:DA:1184:G:C5	23:DA:1185:C:C5	2.94	0.55
23:DA:1726:G:H2'	23:DA:1727:U:H6	1.70	0.55
23:DA:1789:A:OP1	25:DC:222:ARG:HG3	2.07	0.55
23:DA:1812:A:O2'	23:DA:1813:G:H5'	2.06	0.55
23:DA:1858:G:H1'	23:DA:1884:A:H61	1.71	0.55
23:DA:2032:G:H21	26:DD:146:THR:HG23	1.72	0.55
23:DA:2218:G:O2'	23:DA:2219:G:H5'	2.05	0.55
23:DA:2727:G:C5	23:DA:2728:U:H5	2.24	0.55
30:DH:6:LEU:O	30:DH:7:GLU:HB2	2.06	0.55
34:DL:80:TYR:CE1	34:DL:111:ARG:HG2	2.42	0.55
42:DT:12:VAL:HG13	42:DT:27:THR:O	2.06	0.55
43:DU:19:LYS:HB3	43:DU:20:TYR:CD1	2.40	0.55
46:DX:14:VAL:HG12	46:DX:14:VAL:O	2.07	0.55
1:AA:339:C:OP2	33:BK:97:ARG:NH1	2.39	0.55
1:AA:592:G:C2	1:AA:593:G:N7	2.74	0.55
3:AC:55:VAL:HG22	3:AC:55:VAL:O	2.06	0.55
3:AC:182:ILE:HG23	3:AC:202:ILE:C	2.27	0.55
4:AD:111:ALA:HA	4:AD:161:ASN:ND2	2.21	0.55
22:AV:6182:A:N1	22:AV:6183:G:C4	2.74	0.55
23:BA:115:C:C2'	23:BA:116:C:H5'	2.36	0.55
23:BA:848:G:C4	23:BA:933:A:H8	2.25	0.55
23:BA:114(B):A:C5	23:BA:1144:G:C5	2.95	0.55
23:BA:1332:G:N2	23:BA:1610:A:H8	2.03	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1336:A:H2'	23:BA:1337:G:C8	2.42	0.55
23:BA:2364:C:O2'	23:BA:2365:G:H5'	2.07	0.55
23:BA:2723:C:C2'	23:BA:2724:C:O5'	2.54	0.55
26:BD:24:THR:HB	26:BD:186:GLY:HA2	1.88	0.55
32:BJ:37:VAL:HG12	32:BJ:38:LEU:H	1.72	0.55
32:BJ:88:LYS:O	32:BJ:89:LYS:C	2.44	0.55
38:BP:27:THR:HG22	38:BP:90:GLN:HB3	1.88	0.55
53:B5:29:LYS:HB3	53:B5:29:LYS:NZ	2.21	0.55
1:CA:187:C:O2	1:CA:191(A):G:C6	2.59	0.55
1:CA:503:C:C2	1:CA:504:C:C5	2.94	0.55
1:CA:1225:A:H5''	1:CA:1226:C:OP2	2.05	0.55
1:CA:1372:U:H5''	9:CI:71:SER:HB3	1.88	0.55
1:CA:1480:G:C5	1:CA:1481:U:C5	2.95	0.55
3:CC:14:ILE:HG12	3:CC:15:THR:N	2.21	0.55
7:CG:69:VAL:O	7:CG:69:VAL:HG12	2.07	0.55
22:CV:6182:A:N1	22:CV:6183:G:C5	2.75	0.55
23:DA:528:A:C2	23:DA:2043:C:O5'	2.60	0.55
23:DA:1188:U:H4'	40:DR:79:VAL:HG22	1.87	0.55
23:DA:1538:G:H2'	23:DA:1539:G:H8	1.71	0.55
23:DA:2097:C:C2'	23:DA:2098:U:H5'	2.36	0.55
23:DA:2284:C:H2'	23:DA:2285:C:H5'	1.89	0.55
23:DA:2399:G:H2'	23:DA:2400:G:O4'	2.06	0.55
34:DL:97:PRO:HA	34:DL:112:LEU:HD12	1.87	0.55
35:DM:73:PRO:HB3	35:DM:93:TYR:CE2	2.41	0.55
39:DQ:79:PHE:CD1	39:DQ:83:LEU:HD13	2.41	0.55
42:DT:75:ASP:O	42:DT:76:ARG:HG3	2.06	0.55
44:DV:24:LEU:HD11	44:DV:86:VAL:HG22	1.89	0.55
48:DZ:28:LEU:HD12	48:DZ:28:LEU:N	2.20	0.55
1:AA:191(D):U:H2'	1:AA:191(E):G:C8	2.42	0.55
1:AA:712:A:C2'	1:AA:713:G:H5'	2.37	0.55
1:AA:853:G:C2'	1:AA:854:G:H5'	2.36	0.55
1:AA:1225:A:H5''	1:AA:1226:C:OP2	2.07	0.55
1:AA:1228:C:N4	1:AA:1229:A:H62	2.04	0.55
8:AH:80:ILE:HD12	8:AH:80:ILE:N	2.21	0.55
9:AI:95:LYS:HD3	9:AI:96:LEU:N	2.22	0.55
22:AV:6192:G:H2'	22:AV:6193:U:O4'	2.07	0.55
23:BA:18:C:OP1	39:BQ:26:GLY:HA2	2.05	0.55
23:BA:242:G:N7	53:B5:5:LYS:HG2	2.22	0.55
23:BA:461:C:O2'	23:BA:462:C:H5'	2.07	0.55
23:BA:848:G:O6	23:BA:929:G:H2'	2.07	0.55
23:BA:1138:G:O2'	32:BJ:128:GLY:HA3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1270:C:H5''	23:BA:1271:G:C5'	2.37	0.55
23:BA:1414:G:H2'	23:BA:1415:U:H6	1.70	0.55
23:BA:1506:C:H2'	23:BA:1508:A:C8	2.42	0.55
23:BA:2277:G:H5''	35:BM:85:LYS:CB	2.35	0.55
27:BE:206:ILE:O	27:BE:206:ILE:HD12	2.06	0.55
28:BF:137:GLU:HG2	28:BF:152:LEU:HD22	1.87	0.55
36:BN:8:ARG:HD3	36:BN:43:GLU:OE1	2.06	0.55
38:BP:28:VAL:HA	38:BP:89:VAL:HG12	1.89	0.55
43:BU:2:ARG:HG2	43:BU:3:VAL:N	2.22	0.55
43:BU:76:CYS:CB	43:BU:77:PRO:CD	2.85	0.55
45:BW:23:VAL:HB	45:BW:26:TYR:HE2	1.71	0.55
50:B2:17:ASP:O	50:B2:20:ARG:HB2	2.07	0.55
53:B5:26:LYS:HA	53:B5:48:PHE:CE2	2.41	0.55
1:CA:38:G:H22	1:CA:397:A:C5'	2.16	0.55
1:CA:46:G:O2'	1:CA:365:U:H1'	2.07	0.55
1:CA:62:U:O2'	1:CA:379:C:H1'	2.06	0.55
1:CA:300:A:H8	1:CA:300:A:O5'	1.88	0.55
1:CA:577:G:H1'	1:CA:816:A:C4	2.42	0.55
1:CA:689:C:H2'	1:CA:690:G:O4'	2.07	0.55
1:CA:1071:C:H5''	5:CE:49:PRO:HG2	1.89	0.55
5:CE:102:ALA:HB2	5:CE:120:THR:HG23	1.88	0.55
7:CG:40:ALA:O	7:CG:44:TYR:CD1	2.60	0.55
22:CV:6192:G:H2'	22:CV:6193:U:O4'	2.07	0.55
23:DA:482:A:C2	23:DA:506:G:C5	2.95	0.55
23:DA:860:U:O2	23:DA:860:U:O4'	2.22	0.55
23:DA:898:C:H2'	23:DA:899:A:O4'	2.06	0.55
23:DA:1022:G:O2'	23:DA:1023:U:OP2	2.21	0.55
23:DA:2097:C:O2'	23:DA:2098:U:H5'	2.07	0.55
23:DA:2279:G:N2	23:DA:2280:G:H1'	2.21	0.55
23:DA:2301:C:H2'	23:DA:2302:G:H8	1.71	0.55
24:DB:30:C:OP2	37:DO:32:LEU:HD11	2.06	0.55
25:DC:33:LEU:HD23	25:DC:33:LEU:H	1.72	0.55
27:DE:124:LEU:HD12	27:DE:125:LEU:O	2.06	0.55
30:DH:82:ARG:HB3	30:DH:89:TYR:CG	2.41	0.55
34:DL:32:THR:HG21	34:DL:37:GLY:CA	2.36	0.55
34:DL:111:ARG:HD2	34:DL:128:HIS:CD2	2.41	0.55
50:D2:48:GLU:O	50:D2:49:CYS:HB2	2.06	0.55
1:AA:447:G:H2'	1:AA:485:G:N2	2.21	0.55
1:AA:659:U:C2	1:AA:660:G:C8	2.94	0.55
1:AA:1112:C:C5	3:AC:178:LEU:HD23	2.41	0.55
1:AA:1145:C:H4'	1:AA:1146:A:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:11:ILE:CB	5:AE:31:LEU:HD13	2.37	0.55
8:AH:50:ARG:HG2	8:AH:50:ARG:NH1	2.21	0.55
23:BA:2037:G:C6	23:BA:2038:G:C6	2.95	0.55
23:BA:2284:C:C2'	23:BA:2285:C:H5'	2.36	0.55
23:BA:2284:C:H2'	23:BA:2285:C:H5'	1.89	0.55
24:BB:90:C:OP2	35:BM:16:ARG:HD2	2.07	0.55
30:BH:142:VAL:HG12	30:BH:143:SER:H	1.72	0.55
33:BK:76:ALA:HB3	38:BP:75:ILE:HB	1.88	0.55
41:BS:54:ALA:HB1	41:BS:107:LEU:HD22	1.88	0.55
44:BV:44:PHE:CE2	44:BV:86:VAL:HG11	2.41	0.55
46:BX:48:LYS:NZ	46:BX:50:ARG:NH1	2.55	0.55
51:B3:25:LYS:HD3	53:B5:34:TRP:CZ3	2.41	0.55
1:CA:337:C:H2'	1:CA:338:A:C8	2.40	0.55
1:CA:590:C:H2'	1:CA:591:U:C6	2.42	0.55
1:CA:1357:A:C6	1:CA:1358:U:N3	2.75	0.55
2:CB:61:LEU:HD21	2:CB:161:ALA:HB3	1.87	0.55
4:CD:64:LEU:HD23	4:CD:203:VAL:HG21	1.87	0.55
5:CE:75:THR:HG23	5:CE:76:ILE:N	2.22	0.55
5:CE:79:GLU:CD	5:CE:79:GLU:H	2.08	0.55
15:CO:24:SER:O	15:CO:28:GLN:HG3	2.07	0.55
23:DA:270(O):G:O2'	23:DA:270(Q):C:H5'	2.06	0.55
23:DA:969:U:H2'	23:DA:970:C:C6	2.41	0.55
23:DA:1382:G:O2'	23:DA:1383:C:H5'	2.06	0.55
23:DA:1448:G:N2	23:DA:149(B):A:N6	2.54	0.55
23:DA:1884:A:C2	23:DA:1885:A:C8	2.94	0.55
23:DA:1952:A:C6	33:DK:22:ILE:CD1	2.89	0.55
23:DA:2541:A:H5''	23:DA:2542:A:OP2	2.06	0.55
23:DA:2599:G:N7	25:DC:237:GLU:HG3	2.22	0.55
25:DC:15:PHE:O	25:DC:205:VAL:HG11	2.06	0.55
27:DE:46:ARG:HH11	27:DE:46:ARG:CG	2.19	0.55
39:DQ:90:VAL:O	39:DQ:92:ARG:N	2.39	0.55
46:DX:52:ARG:O	46:DX:56:GLN:O	2.25	0.55
48:DZ:23:LEU:HD12	48:DZ:23:LEU:N	2.20	0.55
53:D5:6:THR:HG21	53:D5:64:TYR:HD1	1.72	0.55
1:AA:503:C:H2'	1:AA:504:C:H6	1.72	0.55
1:AA:728:A:H2'	1:AA:729:A:C8	2.42	0.55
1:AA:1286:A:N7	21:AU:22:ARG:NH2	2.53	0.55
1:AA:1435:G:H2'	1:AA:1436:U:H6	1.67	0.55
1:AA:1480:G:C5	1:AA:1481:U:C5	2.95	0.55
7:AG:115:ARG:HB2	7:AG:118:VAL:CG1	2.36	0.55
7:AG:138:LYS:O	7:AG:142:GLU:HG3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:125:PHE:N	11:AK:125:PHE:CD1	2.70	0.55
13:AM:91:ARG:HH11	19:AS:81:ARG:NH2	2.02	0.55
23:BA:810:U:H6	23:BA:810:U:O5'	1.89	0.55
23:BA:864:G:O2'	23:BA:865:C:H5'	2.06	0.55
23:BA:1152:C:HO2'	39:BQ:76:TYR:HE2	1.55	0.55
23:BA:1276:A:H1'	36:BN:16:HIS:HE1	1.71	0.55
23:BA:1338:G:C2'	23:BA:1339:G:H5'	2.36	0.55
23:BA:1414:G:C5	23:BA:1415:U:C5	2.95	0.55
23:BA:1476:C:C5	23:BA:1477:A:N7	2.75	0.55
23:BA:1917:U:C2'	23:BA:1918:A:H5'	2.36	0.55
23:BA:2356:C:O3'	45:BW:20:ARG:HD3	2.07	0.55
26:BD:52:LEU:HB2	26:BD:76:ARG:HB2	1.88	0.55
26:BD:114:ALA:O	26:BD:157:ALA:HB1	2.07	0.55
26:BD:181:LEU:HD21	38:BP:7:ILE:HG23	1.88	0.55
30:BH:77:LEU:HD12	30:BH:101:LEU:HD13	1.88	0.55
36:BN:31:HIS:O	36:BN:33:ARG:N	2.39	0.55
36:BN:100:LEU:HD23	36:BN:100:LEU:N	2.21	0.55
53:B5:52:LYS:N	53:B5:53:PRO:HD2	2.21	0.55
1:CA:101:A:C4	1:CA:102:G:C8	2.95	0.55
1:CA:318:G:O2'	1:CA:319:G:H5'	2.07	0.55
1:CA:535:A:H4'	1:CA:536:C:OP2	2.07	0.55
1:CA:671:G:H2'	1:CA:672:U:H6	1.72	0.55
1:CA:781:A:O2'	1:CA:1522:U:O2	2.24	0.55
1:CA:1005:A:H2'	1:CA:1006:C:H5'	1.88	0.55
1:CA:1080:A:H5''	1:CA:1081:G:OP2	2.07	0.55
8:CH:10:LEU:HB3	8:CH:83:ILE:HD13	1.89	0.55
8:CH:111:ILE:O	8:CH:112:LEU:HB3	2.07	0.55
10:CJ:33:GLN:HB2	10:CJ:75:ILE:HD11	1.89	0.55
23:DA:634:C:H2'	23:DA:635:C:C6	2.41	0.55
23:DA:993:G:C5	23:DA:994:C:C5	2.95	0.55
23:DA:1540:G:H3'	23:DA:1541:U:H6	1.72	0.55
23:DA:1614:A:N6	41:DS:93:ALA:HB2	2.08	0.55
23:DA:1777:U:O2'	23:DA:1778:U:H5'	2.05	0.55
23:DA:2090:G:H21	46:DX:45:ASN:ND2	2.05	0.55
23:DA:2633:G:O2'	26:DD:61:ARG:HD3	2.07	0.55
24:DB:43:C:H4'	28:DF:98:ARG:HH12	1.70	0.55
28:DF:161:THR:C	28:DF:163:ALA:H	2.10	0.55
34:DL:101:VAL:HG23	34:DL:107:LYS:H	1.72	0.55
34:DL:132:LYS:HD3	34:DL:132:LYS:N	2.18	0.55
36:DN:10:LEU:CB	36:DN:17:ARG:NE	2.67	0.55
45:DW:31:VAL:O	45:DW:64:ASP:HA	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:118:U:O4	1:AA:288:A:H2'	2.07	0.55
1:AA:324:G:N1	1:AA:327:A:OP2	2.40	0.55
5:AE:11:ILE:HG12	5:AE:33:VAL:HG23	1.89	0.55
12:AL:74:HIS:HB2	12:AL:76:LEU:CD2	2.36	0.55
14:AN:17:LYS:C	14:AN:19:ARG:H	2.10	0.55
17:AQ:63:ARG:HG2	17:AQ:64:PRO:HD2	1.89	0.55
19:AS:31:ILE:HG23	19:AS:49:ILE:HA	1.88	0.55
19:AS:53:ASN:ND2	19:AS:55:LYS:HB3	2.22	0.55
23:BA:72:U:C4	23:BA:112:U:H4'	2.42	0.55
23:BA:1445:C:C2	23:BA:1446:C:C5	2.95	0.55
23:BA:1757:U:H2'	23:BA:1758:G:OP1	2.07	0.55
23:BA:2468:G:O2'	23:BA:2476:A:N7	2.40	0.55
23:BA:2636:U:H4'	26:BD:80:GLU:OE2	2.07	0.55
25:BC:25:THR:O	25:BC:27:THR:HB	2.07	0.55
32:BJ:127:LYS:HB2	32:BJ:140:PHE:HE1	1.71	0.55
33:BK:26:LYS:O	33:BK:27:GLY:O	2.24	0.55
1:CA:266:G:C5'	1:CA:267:C:C5	2.90	0.55
1:CA:729:A:H2'	1:CA:730:G:C8	2.38	0.55
1:CA:1089:G:C5	1:CA:1090:U:C5	2.94	0.55
2:CB:75:LYS:HD3	2:CB:75:LYS:C	2.27	0.55
4:CD:63:LYS:HD2	4:CD:198:VAL:CG2	2.37	0.55
5:CE:41:VAL:HG11	5:CE:113:ALA:CB	2.36	0.55
7:CG:74:GLU:O	7:CG:88:PRO:HA	2.07	0.55
23:DA:142:G:H4'	42:DT:35:THR:HG21	1.88	0.55
23:DA:399:G:C2'	23:DA:400:G:H5'	2.36	0.55
23:DA:1141:U:H4'	23:DA:114(B):A:O4'	2.07	0.55
23:DA:1407:C:H2'	23:DA:1408:C:H6	1.72	0.55
23:DA:1476:C:C2'	23:DA:1477:A:H5'	2.37	0.55
23:DA:1478:G:N3	23:DA:1479:G:C8	2.75	0.55
23:DA:1920:C:O2	23:DA:1920:C:H2'	2.07	0.55
23:DA:2307:G:H8	23:DA:2307:G:O5'	1.90	0.55
24:DB:71:C:C2	24:DB:72:G:C8	2.95	0.55
27:DE:28:ILE:O	27:DE:28:ILE:HG13	2.07	0.55
27:DE:31:HIS:O	27:DE:34:TRP:HB3	2.07	0.55
29:DG:123:PHE:HB3	29:DG:133:VAL:HG13	1.88	0.55
34:DL:61:ARG:HD3	53:D5:13:ARG:HD2	1.89	0.55
35:DM:137:TYR:HB3	44:DV:76:LEU:HD21	1.89	0.55
42:DT:28:PHE:HD1	42:DT:28:PHE:H	1.53	0.55
44:DV:37:VAL:O	44:DV:38:TYR:HB3	2.07	0.55
48:DZ:26:LEU:HB2	48:DZ:28:LEU:CD1	2.36	0.55
53:D5:26:LYS:HG2	53:D5:48:PHE:CD2	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:92:G:C6	1:AA:93:U:C2	2.95	0.55
1:AA:187:C:O2	1:AA:191(A):G:C6	2.60	0.55
1:AA:636:U:H5'	17:AQ:2:PRO:HG3	1.88	0.55
1:AA:927:G:C2	1:AA:1391:U:O2	2.60	0.55
1:AA:1375:A:C2	1:AA:1376:U:C2	2.95	0.55
2:AB:163:PHE:CD1	2:AB:185:ILE:HG13	2.41	0.55
3:AC:18:TRP:HD1	14:AN:54:PRO:HA	1.72	0.55
12:AL:78:GLU:O	12:AL:79:HIS:CG	2.60	0.55
18:AR:36:ASN:HB2	18:AR:39:VAL:HG23	1.87	0.55
20:AT:13:LEU:HD12	20:AT:13:LEU:N	2.21	0.55
23:BA:481:G:H4'	23:BA:481:G:OP1	2.06	0.55
23:BA:666:G:H5''	34:BL:47:ASP:O	2.07	0.55
23:BA:932:G:H4'	23:BA:933:A:O5'	2.06	0.55
23:BA:1175:U:H2'	23:BA:1176:G:H8	1.72	0.55
23:BA:1487:G:N3	23:BA:1488:G:C8	2.74	0.55
24:BB:71:C:C2	24:BB:72:G:C8	2.95	0.55
25:BC:15:PHE:O	25:BC:205:VAL:HG11	2.07	0.55
25:BC:76:PRO:CB	25:BC:116:GLN:HE21	2.19	0.55
26:BD:111:ARG:CD	26:BD:160:TYR:HE1	2.15	0.55
32:BJ:143:LEU:O	32:BJ:144:LYS:HD2	2.06	0.55
34:BL:135:LEU:HD13	34:BL:139:LYS:HB2	1.89	0.55
40:BR:1:MET:H2	40:BR:16:PRO:HD3	1.72	0.55
44:BV:3:TYR:N	44:BV:3:TYR:CD1	2.74	0.55
44:BV:24:LEU:HB3	44:BV:41:LEU:HG	1.88	0.55
46:BX:10:LYS:O	46:BX:11:ARG:CB	2.55	0.55
46:BX:11:ARG:NH1	46:BX:61:ARG:N	2.55	0.55
47:BY:53:LEU:O	47:BY:57:ILE:HG13	2.07	0.55
1:CA:92:G:C2'	1:CA:93:U:H5'	2.37	0.55
1:CA:392:G:C4	1:CA:393:A:C8	2.95	0.55
1:CA:623:C:H6	1:CA:623:C:O5'	1.89	0.55
1:CA:1047:G:C2'	1:CA:1048:G:H5'	2.37	0.55
1:CA:1309:G:C6	1:CA:1329:A:C2	2.95	0.55
1:CA:1316:G:N2	1:CA:1319:A:OP2	2.39	0.55
1:CA:1346:A:H61	1:CA:1374:A:H3'	1.72	0.55
1:CA:1369:C:OP1	9:CI:111:ARG:HG3	2.07	0.55
2:CB:52:GLU:O	2:CB:56:ARG:HG3	2.06	0.55
4:CD:111:ALA:HB1	4:CD:116:GLN:OE1	2.07	0.55
7:CG:40:ALA:O	7:CG:44:TYR:HD1	1.89	0.55
7:CG:67:GLU:OE1	7:CG:70:LYS:HD2	2.06	0.55
8:CH:31:PHE:O	8:CH:35:ILE:HG12	2.07	0.55
9:CI:17:VAL:HG21	9:CI:80:GLY:HA3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:123:LYS:O	11:CK:126:ARG:HB2	2.07	0.55
12:CL:116:ARG:O	12:CL:119:TYR:N	2.35	0.55
18:CR:53:ARG:C	18:CR:55:ARG:H	2.11	0.55
23:DA:83:G:C4	23:DA:102:G:N2	2.75	0.55
23:DA:231:C:N4	23:DA:232:G:N1	2.55	0.55
23:DA:263:C:H2'	23:DA:264:C:O4'	2.07	0.55
23:DA:1275:A:C4	36:DN:16:HIS:CE1	2.95	0.55
23:DA:1607:C:N4	23:DA:1621:U:H3'	2.22	0.55
23:DA:2038:G:C5	23:DA:2039:C:C5	2.94	0.55
23:DA:2771:C:H2'	23:DA:2771:C:O2	2.07	0.55
23:DA:2854:G:H2'	23:DA:2855:C:H6	1.71	0.55
24:DB:40:U:O2'	24:DB:41:U:H5'	2.06	0.55
25:DC:108:PRO:HG3	25:DC:143:HIS:HE1	1.72	0.55
25:DC:131:LEU:HD11	25:DC:136:ILE:HG13	1.88	0.55
33:DK:35:VAL:HG11	33:DK:103:ALA:HB3	1.87	0.55
36:DN:79:LEU:HD23	36:DN:83:ILE:HG13	1.89	0.55
42:DT:23:GLU:HG3	42:DT:24:GLY:H	1.72	0.55
43:DU:15:VAL:HG13	43:DU:17:SER:HB3	1.88	0.55
47:DY:36:ARG:HA	47:DY:39:ALA:HB3	1.89	0.55
1:AA:648:A:H2'	1:AA:649:G:C8	2.41	0.54
1:AA:748:C:H4'	1:AA:749:C:O5'	2.07	0.54
1:AA:1309:G:C6	1:AA:1329:A:C2	2.95	0.54
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.07	0.54
3:AC:139:GLN:OE1	3:AC:139:GLN:HA	2.07	0.54
3:AC:182:ILE:HG12	3:AC:203:PHE:CA	2.29	0.54
3:AC:186:PHE:CZ	3:AC:188:LEU:HD13	2.43	0.54
9:AI:25:LYS:O	9:AI:60:ASP:HA	2.07	0.54
23:BA:628:G:H2'	23:BA:629:G:C8	2.42	0.54
23:BA:1022:G:H22	23:BA:114(B):A:H2	1.54	0.54
23:BA:1777:U:C2'	23:BA:1778:U:H5'	2.37	0.54
23:BA:2399:G:H2'	23:BA:2400:G:O4'	2.07	0.54
24:BB:83:G:C2	24:BB:84:C:C6	2.95	0.54
24:BB:84:C:H2'	24:BB:84:C:O2	2.06	0.54
29:BG:118:PRO:O	29:BG:121:ILE:HG22	2.07	0.54
39:BQ:92:ARG:HD2	39:BQ:95:LEU:H	1.72	0.54
1:CA:518:C:C5	1:CA:530:G:C4	2.95	0.54
1:CA:682:G:C6	1:CA:709:G:C6	2.95	0.54
1:CA:974:A:OP2	14:CN:41:ARG:NH1	2.40	0.54
3:CC:130:VAL:CG1	3:CC:153:VAL:HG21	2.37	0.54
10:CJ:6:ILE:O	10:CJ:71:LEU:HD12	2.07	0.54
10:CJ:49:VAL:HG21	14:CN:41:ARG:HB3	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:6181:C:O2'	22:CV:6182:A:H8	1.89	0.54
23:DA:9:U:C4	23:DA:2629:A:N6	2.75	0.54
23:DA:587:C:N4	34:DL:33:ARG:HB2	2.22	0.54
23:DA:1993:U:H4'	26:DD:128:SER:CB	2.37	0.54
23:DA:2219:G:C2'	23:DA:2224:G:C5'	2.81	0.54
23:DA:2476:A:H2'	23:DA:2476:A:N3	2.22	0.54
23:DA:2527:C:C4	23:DA:2528:U:C5	2.95	0.54
23:DA:2846:G:OP2	38:DP:54:ARG:HB2	2.07	0.54
23:DA:2850:A:OP2	23:DA:2866:U:C5	2.58	0.54
24:DB:73:A:C4	24:DB:74:U:C6	2.95	0.54
31:DI:14:LYS:HE2	31:DI:14:LYS:HA	1.89	0.54
33:DK:7:TYR:HE1	33:DK:20:MET:HE3	1.72	0.54
33:DK:97:ARG:H	33:DK:117:LEU:HD22	1.73	0.54
34:DL:125:VAL:O	34:DL:145:PRO:HD2	2.06	0.54
37:DO:69:VAL:O	37:DO:72:ALA:CB	2.52	0.54
38:DP:56:GLY:O	38:DP:59:THR:CG2	2.50	0.54
40:DR:52:VAL:HG13	40:DR:55:ALA:HB3	1.89	0.54
41:DS:14:PRO:O	41:DS:16:LYS:N	2.39	0.54
41:DS:24:ILE:HG21	41:DS:36:LEU:CD2	2.37	0.54
42:DT:14:SER:O	42:DT:17:ALA:N	2.39	0.54
46:DX:70:VAL:O	46:DX:74:VAL:HG23	2.07	0.54
1:AA:99:C:C2	1:AA:101:A:C8	2.95	0.54
1:AA:579:G:C4	1:AA:580:U:C6	2.95	0.54
1:AA:724:G:C2	1:AA:725:G:C8	2.95	0.54
1:AA:962:C:H42	1:AA:973:G:H1	1.53	0.54
1:AA:1423:G:H2'	1:AA:1424:C:C6	2.42	0.54
3:AC:130:VAL:O	3:AC:134:ILE:HG13	2.07	0.54
11:AK:124:LYS:HD2	11:AK:125:PHE:HE1	1.73	0.54
12:AL:31:PHE:HD2	12:AL:85:ARG:HA	1.72	0.54
17:AQ:40:LYS:HG2	17:AQ:41:LYS:N	2.23	0.54
23:BA:749:C:O2	23:BA:1618:A:H2'	2.07	0.54
23:BA:1348:G:C2'	23:BA:1349:A:H5''	2.35	0.54
23:BA:1638:C:H4'	23:BA:2710:C:O2	2.07	0.54
23:BA:1657:C:H2'	23:BA:1658:C:H6	1.72	0.54
23:BA:2243:U:H2'	23:BA:2244:U:C6	2.42	0.54
23:BA:2346:A:C2	23:BA:2383:G:C2	2.95	0.54
23:BA:2711:A:OP1	23:BA:712(B):A:OP1	2.25	0.54
23:BA:2842:G:H1	23:BA:2875:C:N4	2.05	0.54
25:BC:136:ILE:HG23	25:BC:137:PRO:HD2	1.88	0.54
25:BC:148:GLU:HB2	25:BC:151:LYS:HD2	1.89	0.54
26:BD:11:MET:HE3	26:BD:24:THR:HB	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:88:ILE:HG12	30:BH:123:LEU:N	2.22	0.54
35:BM:75:THR:C	35:BM:88:GLY:HA2	2.28	0.54
37:BO:65:VAL:O	37:BO:69:VAL:HG12	2.06	0.54
38:BP:24:PRO:HA	38:BP:49:VAL:CG1	2.33	0.54
40:BR:2:PHE:HE2	40:BR:13:ARG:CD	2.18	0.54
44:BV:37:VAL:O	44:BV:38:TYR:HB3	2.07	0.54
1:CA:57:G:C8	1:CA:58:C:C5	2.95	0.54
1:CA:1296:C:C5	1:CA:1297:C:H5	2.24	0.54
1:CA:1371:G:H5''	9:CI:69:GLY:H	1.72	0.54
3:CC:121:ALA:HB1	3:CC:188:LEU:O	2.07	0.54
3:CC:186:PHE:CZ	3:CC:188:LEU:HD13	2.43	0.54
7:CG:26:PHE:HB2	7:CG:62:PHE:HZ	1.72	0.54
8:CH:89:PRO:HA	8:CH:92:ARG:NH1	2.22	0.54
9:CI:86:VAL:HG23	9:CI:93:ARG:HB2	1.90	0.54
11:CK:59:TYR:CZ	11:CK:63:LEU:HD11	2.42	0.54
23:DA:480:A:OP2	43:DU:46:LYS:HE2	2.07	0.54
23:DA:907:U:O2'	35:DM:101:ARG:NH2	2.40	0.54
23:DA:1449:G:H2'	23:DA:1450:C:H6	1.71	0.54
23:DA:1963:U:O2	23:DA:1963:U:C2'	2.54	0.54
23:DA:2023:G:H5'	23:DA:2617:C:H4'	1.90	0.54
26:DD:73:GLU:OE2	26:DD:74:PRO:HD2	2.08	0.54
26:DD:167:VAL:HG11	26:DD:189:PRO:HD3	1.88	0.54
38:DP:105:LEU:O	38:DP:107:ASP:CG	2.46	0.54
39:DQ:105:VAL:HG11	40:DR:40:LEU:HD13	1.89	0.54
42:DT:11:PRO:HG2	42:DT:13:LEU:HD21	1.89	0.54
44:DV:24:LEU:HD11	44:DV:85:HIS:HA	1.90	0.54
44:DV:24:LEU:O	44:DV:24:LEU:HG	2.07	0.54
44:DV:85:HIS:C	44:DV:85:HIS:ND1	2.61	0.54
47:DY:38:GLN:HB3	47:DY:44:LEU:O	2.07	0.54
50:D2:52:TYR:CD1	50:D2:52:TYR:C	2.80	0.54
1:AA:20:U:O2'	1:AA:21:G:H5'	2.07	0.54
1:AA:258:G:H2'	1:AA:259:G:H8	1.72	0.54
1:AA:564:C:C2	17:AQ:31:LEU:HD11	2.42	0.54
1:AA:1068:G:N7	1:AA:1094:G:C8	2.75	0.54
1:AA:1381:U:O2'	1:AA:1382:C:H5'	2.07	0.54
1:AA:1387:G:H2'	1:AA:1388:C:H6	1.71	0.54
2:AB:24:TRP:CZ3	2:AB:29:ALA:HB2	2.42	0.54
2:AB:235:SER:O	2:AB:239:VAL:HG23	2.07	0.54
3:AC:13:GLY:HA3	14:AN:57:ARG:HE	1.70	0.54
5:AE:139:LEU:HA	5:AE:142:LEU:HD12	1.89	0.54
8:AH:119:LEU:N	8:AH:119:LEU:HD23	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:464:U:H4'	52:B4:5:TRP:CZ3	2.43	0.54
23:BA:784:A:C5	25:BC:229:VAL:HG21	2.43	0.54
23:BA:994:C:O2'	23:BA:996:A:OP1	2.25	0.54
23:BA:1115:G:O2'	23:BA:1116:C:H5'	2.07	0.54
23:BA:1762:A:H8	23:BA:1762:A:O5'	1.91	0.54
23:BA:1918:A:O2'	23:BA:1920:C:N4	2.40	0.54
23:BA:1921:G:O2'	23:BA:1922:G:H5'	2.08	0.54
23:BA:2079:U:H2'	23:BA:2080:G:O5'	2.06	0.54
29:BG:86:GLU:HG2	29:BG:86:GLU:O	2.07	0.54
30:BH:7:GLU:CD	30:BH:8:PRO:HD2	2.28	0.54
30:BH:88:ILE:HG22	30:BH:90:GLY:N	2.22	0.54
32:BJ:65:TRP:HA	32:BJ:71:MET:HE1	1.89	0.54
32:BJ:112:LYS:O	32:BJ:116:THR:HG23	2.07	0.54
39:BQ:62:ILE:HD12	39:BQ:76:TYR:CE1	2.42	0.54
40:BR:28:GLU:O	40:BR:61:VAL:HG21	2.07	0.54
40:BR:58:VAL:HG12	40:BR:97:LYS:HB2	1.88	0.54
46:BX:62:VAL:CG2	46:BX:63:ALA:N	2.70	0.54
48:BZ:23:LEU:N	48:BZ:23:LEU:CD1	2.70	0.54
1:CA:20:U:O2'	1:CA:21:G:H5'	2.07	0.54
1:CA:712:A:N6	1:CA:713:G:C6	2.75	0.54
1:CA:1040:U:H2'	1:CA:1041:A:H8	1.70	0.54
2:CB:37:ASN:O	2:CB:39:ILE:HD12	2.07	0.54
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.88	0.54
23:DA:271(C):G:N7	23:DA:421:U:H2'	2.23	0.54
23:DA:603:A:N1	23:DA:655:A:N3	2.55	0.54
23:DA:993:G:C4	23:DA:994:C:C5	2.95	0.54
23:DA:1388:G:H4'	23:DA:1525:G:O2'	2.06	0.54
23:DA:1390:U:O2'	23:DA:1391:U:H5'	2.06	0.54
23:DA:1777:U:C2'	23:DA:1778:U:H5'	2.36	0.54
23:DA:1845:G:OP1	25:DC:258:LYS:HE3	2.07	0.54
23:DA:1856:G:C2	23:DA:1887:C:N3	2.76	0.54
23:DA:1856:G:H2'	23:DA:1857:G:O4'	2.07	0.54
23:DA:2364:C:H2'	23:DA:2365:G:O4'	2.08	0.54
25:DC:126:GLN:HG2	25:DC:127:VAL:N	2.22	0.54
25:DC:133:LEU:HD13	25:DC:173:VAL:HG11	1.89	0.54
26:DD:114:ALA:O	26:DD:157:ALA:HB1	2.06	0.54
28:DF:133:LEU:HD23	28:DF:133:LEU:N	2.22	0.54
42:DT:23:GLU:HA	42:DT:23:GLU:OE1	2.06	0.54
44:DV:3:TYR:CD1	44:DV:3:TYR:N	2.74	0.54
48:DZ:26:LEU:HD21	48:DZ:46:ASN:CB	2.37	0.54
1:AA:17:U:H2'	1:AA:18:C:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:285:G:O2'	1:AA:286:G:H5'	2.08	0.54
1:AA:859:A:H2'	1:AA:860:A:O4'	2.07	0.54
1:AA:1366:C:C4	1:AA:1367:C:C4	2.95	0.54
2:AB:22:LYS:HA	2:AB:22:LYS:NZ	2.22	0.54
3:AC:12:LEU:HD13	3:AC:12:LEU:O	2.06	0.54
3:AC:36:ASP:OD2	3:AC:57:ILE:HG21	2.07	0.54
4:AD:79:PHE:CZ	4:AD:204:ILE:HA	2.43	0.54
12:AL:31:PHE:HB3	12:AL:84:ILE:O	2.06	0.54
16:AP:22:THR:HG22	16:AP:32:TYR:CB	2.37	0.54
23:BA:195:A:OP1	34:BL:46:LYS:HE2	2.07	0.54
23:BA:783:A:C8	23:BA:783:A:C3'	2.89	0.54
23:BA:914:C:H5	23:BA:915:C:C6	2.25	0.54
23:BA:1257:C:OP1	27:BE:72:ARG:NH1	2.40	0.54
23:BA:1670:C:OP2	23:BA:2550:G:OP1	2.25	0.54
28:BF:10:LYS:O	28:BF:14:GLU:HB3	2.08	0.54
34:BL:32:THR:HB	34:BL:36:LYS:HB2	1.89	0.54
35:BM:69:PHE:CD1	35:BM:70:PRO:HD2	2.42	0.54
41:BS:22:ASP:HA	41:BS:25:ARG:NH1	2.21	0.54
1:CA:506:G:C6	1:CA:507:C:C4	2.95	0.54
1:CA:667:G:H4'	15:CO:51:HIS:ND1	2.22	0.54
1:CA:1366:C:C4	1:CA:1367:C:C4	2.96	0.54
2:CB:96:ARG:HD2	2:CB:96:ARG:H	1.72	0.54
2:CB:154:LEU:HD13	2:CB:155:LEU:N	2.22	0.54
23:DA:176:G:O2'	23:DA:177:G:H5'	2.07	0.54
23:DA:390:A:C5	34:DL:71:VAL:HG21	2.43	0.54
23:DA:544:C:O5'	23:DA:544:C:H6	1.90	0.54
23:DA:611:C:C2	23:DA:612:G:C8	2.95	0.54
23:DA:114(B):A:C5	23:DA:1144:G:C5	2.95	0.54
23:DA:1257:C:OP1	27:DE:72:ARG:NH1	2.40	0.54
23:DA:1451:C:H42	23:DA:1459:G:H1	1.56	0.54
23:DA:2330:G:O2'	45:DW:41:ARG:HB2	2.08	0.54
23:DA:2572:A:H2'	26:DD:144:ARG:HG3	1.89	0.54
24:DB:35:U:O2'	24:DB:36:C:H5'	2.08	0.54
26:DD:110:GLY:O	36:DN:5:LYS:NZ	2.39	0.54
34:DL:49:ARG:O	34:DL:50:ARG:C	2.46	0.54
36:DN:14:SER:O	36:DN:15:SER:C	2.44	0.54
38:DP:1:MET:O	38:DP:3:ARG:N	2.41	0.54
44:DV:48:PHE:CZ	44:DV:52:SER:HA	2.42	0.54
53:D5:22:VAL:CG1	53:D5:50:LEU:HD12	2.37	0.54
1:AA:356:A:O2'	1:AA:357:G:H5'	2.08	0.54
1:AA:392:G:C4	1:AA:393:A:C8	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:518:C:C5	1:AA:530:G:C4	2.96	0.54
1:AA:1262:C:OP2	21:AU:25:LYS:HD3	2.08	0.54
1:AA:1357:A:C6	1:AA:1358:U:N3	2.75	0.54
4:AD:9:CYS:SG	4:AD:31:CYS:O	2.66	0.54
5:AE:10:MET:HG3	5:AE:13:ILE:HD11	1.90	0.54
6:AF:12:PRO:HG3	6:AF:57:GLN:O	2.08	0.54
16:AP:21:VAL:HG23	16:AP:33:ILE:HB	1.90	0.54
18:AR:56:THR:HB	18:AR:58:LEU:CD1	2.38	0.54
23:BA:263:C:H2'	23:BA:264:C:O4'	2.07	0.54
23:BA:399:G:C2'	23:BA:400:G:H5'	2.38	0.54
23:BA:898:C:H2'	23:BA:899:A:O4'	2.07	0.54
23:BA:1027:A:C2	23:BA:2488:A:H5'	2.43	0.54
23:BA:1231:G:O2'	23:BA:1232:G:H5'	2.08	0.54
23:BA:1268:A:C2'	23:BA:1269:A:O5'	2.56	0.54
23:BA:1813:G:O2'	25:BC:50:THR:HG21	2.07	0.54
23:BA:2097:C:C2'	23:BA:2098:U:H5'	2.37	0.54
25:BC:25:THR:HG22	25:BC:82:ILE:H	1.73	0.54
25:BC:108:PRO:HG3	25:BC:143:HIS:HE1	1.73	0.54
35:BM:38:GLU:HB2	35:BM:127:ILE:CG1	2.38	0.54
36:BN:93:GLY:O	36:BN:117:VAL:HG11	2.07	0.54
42:BT:75:ASP:O	42:BT:76:ARG:HG3	2.07	0.54
43:BU:47:LYS:HA	43:BU:60:PHE:CZ	2.42	0.54
53:B5:57:ARG:CZ	53:B5:57:ARG:CA	2.84	0.54
1:CA:127:G:C2	1:CA:128:G:C8	2.96	0.54
1:CA:160:A:H4'	1:CA:344:A:C6	2.43	0.54
1:CA:332:G:O2'	1:CA:333:G:H5'	2.07	0.54
1:CA:356:A:H2'	1:CA:357:G:C8	2.43	0.54
1:CA:565:U:C6	1:CA:566:G:C8	2.95	0.54
1:CA:744:C:C6	1:CA:744:C:H3'	2.42	0.54
1:CA:946:A:H2'	1:CA:947:G:H8	1.72	0.54
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.07	0.54
1:CA:1217:C:H5''	14:CN:9:LYS:HZ1	1.72	0.54
1:CA:1309:G:H22	1:CA:1329:A:H1'	1.72	0.54
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.42	0.54
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.07	0.54
3:CC:16:ARG:NH1	3:CC:16:ARG:HB2	2.22	0.54
8:CH:38:ILE:HD11	8:CH:118:VAL:O	2.07	0.54
19:CS:53:ASN:HD22	19:CS:55:LYS:H	1.53	0.54
23:DA:125:G:OP2	52:D4:19:ARG:NH1	2.40	0.54
23:DA:334:C:O2'	23:DA:335:C:P	2.66	0.54
23:DA:1414:G:C4	23:DA:1415:U:C5	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1953:A:H2	23:DA:2549:G:N3	2.04	0.54
23:DA:2098:U:O2'	23:DA:2099:U:O5'	2.24	0.54
23:DA:2894:G:H2'	23:DA:2894:G:N3	2.22	0.54
24:DB:46:A:H2'	24:DB:47:C:C6	2.43	0.54
29:DG:46:GLU:O	29:DG:49:VAL:HG22	2.08	0.54
34:DL:30:THR:HG22	34:DL:31:ALA:N	2.22	0.54
38:DP:27:THR:HG22	38:DP:90:GLN:HB3	1.89	0.54
41:DS:23:LEU:HD22	50:D2:25:LEU:HD13	1.88	0.54
44:DV:33:LEU:HD23	44:DV:90:VAL:HG21	1.89	0.54
1:AA:386:C:C3'	1:AA:387:U:H5''	2.37	0.54
1:AA:1305:G:OP2	1:AA:1305:G:C8	2.61	0.54
1:AA:1389:C:H2'	1:AA:1390:U:O4'	2.08	0.54
2:AB:70:PHE:O	2:AB:71:VAL:HG13	2.07	0.54
2:AB:154:LEU:HD13	2:AB:155:LEU:N	2.23	0.54
3:AC:86:VAL:O	3:AC:90:GLU:HG2	2.07	0.54
3:AC:111:LEU:HD23	3:AC:146:ALA:HB2	1.89	0.54
3:AC:150:LYS:O	3:AC:200:ALA:HA	2.07	0.54
7:AG:40:ALA:O	7:AG:44:TYR:HD1	1.90	0.54
11:AK:20:TYR:O	11:AK:30:VAL:HA	2.08	0.54
12:AL:23:VAL:O	12:AL:23:VAL:HG12	2.06	0.54
14:AN:43:CYS:SG	14:AN:44:LEU:N	2.81	0.54
23:BA:57:C:H2'	23:BA:58:G:O4'	2.08	0.54
23:BA:573:G:O2'	23:BA:574:C:H3'	2.07	0.54
23:BA:1746:G:C2	23:BA:1747:G:N7	2.76	0.54
34:BL:33:ARG:CB	34:BL:36:LYS:HD3	2.38	0.54
39:BQ:88:ILE:HG22	40:BR:47:VAL:O	2.07	0.54
45:BW:27:GLU:HB2	45:BW:69:PHE:HD1	1.72	0.54
1:CA:439:A:H2'	1:CA:440:A:H5'	1.89	0.54
1:CA:592:G:C2	1:CA:593:G:N7	2.75	0.54
2:CB:8:LYS:HG2	2:CB:217:ARG:NH1	2.22	0.54
8:CH:123:GLU:O	8:CH:127:LEU:HB2	2.08	0.54
12:CL:31:PHE:HB3	12:CL:84:ILE:O	2.08	0.54
23:DA:205:G:HO2'	23:DA:206:U:P	2.28	0.54
23:DA:1015:G:C2'	23:DA:1016:G:H5'	2.37	0.54
24:DB:28:C:H2'	24:DB:29:A:O4'	2.08	0.54
27:DE:126:VAL:O	27:DE:196:LEU:HG	2.07	0.54
30:DH:12:LEU:N	30:DH:12:LEU:HD22	2.23	0.54
33:DK:60:ALA:HB2	33:DK:86:ILE:HA	1.87	0.54
40:DR:61:VAL:HG23	40:DR:61:VAL:O	2.07	0.54
46:DX:10:LYS:O	46:DX:11:ARG:CG	2.55	0.54
53:D5:29:LYS:HB2	53:D5:44:LYS:HB3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:10:A:H2'	1:AA:11:G:C8	2.42	0.54
1:AA:11:G:C5	1:AA:12:U:C5	2.95	0.54
1:AA:328:C:H4'	1:AA:329:A:H5'	1.88	0.54
1:AA:716:A:N3	11:AK:118:GLY:HA2	2.23	0.54
1:AA:1292:U:C2	1:AA:1293:G:C8	2.96	0.54
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.43	0.54
2:AB:181:PHE:O	2:AB:183:PRO:HD3	2.07	0.54
4:AD:4:TYR:HE1	4:AD:11:LEU:HD11	1.72	0.54
7:AG:113:GLU:CB	7:AG:119:ARG:HG2	2.23	0.54
9:AI:83:ARG:HA	9:AI:86:VAL:HG12	1.88	0.54
9:AI:85:LEU:O	9:AI:89:ASN:HB2	2.07	0.54
23:BA:185:U:H2'	23:BA:186:G:H8	1.73	0.54
23:BA:752:A:H3'	52:B4:1:MET:CE	2.37	0.54
23:BA:1241:A:N6	23:BA:1242:A:C6	2.76	0.54
23:BA:1568:G:OP2	25:BC:63:ARG:NH2	2.38	0.54
23:BA:2607:G:H2'	23:BA:2608:G:O4'	2.06	0.54
25:BC:126:GLN:HG2	25:BC:127:VAL:N	2.22	0.54
25:BC:210:GLY:HA2	25:BC:213:ARG:HG3	1.89	0.54
27:BE:150:GLY:HA2	27:BE:172:TRP:CD2	2.41	0.54
28:BF:40:ASN:O	28:BF:155:MET:HB2	2.08	0.54
38:BP:56:GLY:C	38:BP:57:PHE:O	2.45	0.54
43:BU:8:LYS:HZ3	43:BU:8:LYS:C	2.09	0.54
1:CA:199:G:H1	1:CA:218:C:N4	1.98	0.54
1:CA:386:C:C3'	1:CA:387:U:H5''	2.37	0.54
1:CA:497:U:H2'	1:CA:497:U:O2	2.07	0.54
1:CA:616:G:H1'	1:CA:625:G:N2	2.22	0.54
3:CC:12:LEU:HD13	3:CC:12:LEU:O	2.08	0.54
5:CE:103:GLY:O	5:CE:104:ALA:C	2.46	0.54
5:CE:110:LEU:O	5:CE:113:ALA:HB3	2.08	0.54
10:CJ:34:VAL:HG13	10:CJ:74:ILE:HG22	1.90	0.54
19:CS:40:ILE:HD13	19:CS:62:ILE:HD11	1.90	0.54
23:DA:7:G:N2	23:DA:2897:U:C4	2.76	0.54
23:DA:140:A:C8	23:DA:1408:C:O2'	2.55	0.54
23:DA:307:G:N1	23:DA:310:A:OP2	2.41	0.54
23:DA:430:G:H5''	23:DA:431:U:OP2	2.08	0.54
23:DA:752:A:H3'	52:D4:1:MET:CE	2.37	0.54
23:DA:806:C:OP2	34:DL:39:LYS:HD3	2.08	0.54
23:DA:858:U:C2	23:DA:2268:A:C2	2.95	0.54
23:DA:880:G:H2'	23:DA:881:G:H8	1.72	0.54
23:DA:1266:G:C6	41:DS:16:LYS:HD2	2.43	0.54
23:DA:1465:G:C2	23:DA:1466:G:C8	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2432:A:H2'	23:DA:2433:A:C8	2.43	0.54
23:DA:2705:A:C2	36:DN:64:ARG:NH1	2.76	0.54
24:DB:116:G:H4'	37:DO:55:ALA:O	2.07	0.54
26:DD:24:THR:HG21	26:DD:188:VAL:CG1	2.38	0.54
43:DU:68:HIS:O	43:DU:70:SER:N	2.41	0.54
43:DU:81:LYS:CD	43:DU:96:ILE:HG13	2.37	0.54
44:DV:44:PHE:CE2	44:DV:86:VAL:HG11	2.43	0.54
1:AA:145:G:C2	1:AA:178:C:N3	2.76	0.54
1:AA:191(F):U:H2'	1:AA:191(G):G:H8	1.72	0.54
1:AA:546:G:P	4:AD:72:GLU:HB2	2.47	0.54
1:AA:832:C:N4	1:AA:855:G:C6	2.76	0.54
3:AC:175:LEU:HD11	3:AC:201:TYR:HE2	1.72	0.54
4:AD:129:ASN:OD1	4:AD:129:ASN:N	2.41	0.54
7:AG:26:PHE:HB2	7:AG:62:PHE:HZ	1.73	0.54
10:AJ:63:PHE:HB3	14:AN:57:ARG:O	2.08	0.54
12:AL:52:ARG:CG	12:AL:52:ARG:NH1	2.61	0.54
15:AO:24:SER:O	15:AO:28:GLN:HG3	2.07	0.54
19:AS:53:ASN:HD22	19:AS:55:LYS:H	1.54	0.54
22:AV:6213:A:C6	22:AV:6214:C:N4	2.76	0.54
23:BA:81:G:H21	43:BU:2:ARG:NH2	2.05	0.54
23:BA:528:A:OP2	32:BJ:134:PRO:HB3	2.08	0.54
23:BA:1022:G:H8	32:BJ:92:GLN:NE2	2.05	0.54
23:BA:1141:U:H4'	23:BA:114(B):A:O4'	2.06	0.54
23:BA:1204:A:N1	23:BA:1241:A:C2	2.75	0.54
23:BA:1403:C:H5''	23:BA:1471:A:H1'	1.90	0.54
23:BA:1414:G:C4	23:BA:1415:U:C5	2.96	0.54
23:BA:1496:A:N7	23:BA:1498:C:N3	2.55	0.54
23:BA:1543:A:C8	23:BA:1545:A:H5''	2.42	0.54
23:BA:1726:G:C2	23:BA:1735:U:O2	2.61	0.54
23:BA:2579:C:O4'	26:BD:134:ILE:HG12	2.08	0.54
23:BA:2894:G:N3	23:BA:2894:G:H2'	2.23	0.54
29:BG:84:SER:CA	29:BG:133:VAL:O	2.53	0.54
36:BN:96:ARG:HD3	36:BN:98:LEU:HD21	1.90	0.54
36:BN:107:ASP:OD2	36:BN:107:ASP:C	2.44	0.54
41:BS:29:LEU:HD21	41:BS:33:ARG:HH21	1.73	0.54
48:BZ:10:LYS:HB3	48:BZ:53:LEU:HD23	1.89	0.54
1:CA:258:G:H2'	1:CA:259:G:H8	1.73	0.54
1:CA:270:A:C6	1:CA:271:C:C4	2.95	0.54
1:CA:728:A:H2'	1:CA:729:A:C8	2.43	0.54
2:CB:24:TRP:CZ3	2:CB:29:ALA:HB2	2.42	0.54
3:CC:139:GLN:HA	3:CC:139:GLN:OE1	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:111:GLU:C	5:CE:113:ALA:H	2.12	0.54
10:CJ:62:HIS:O	14:CN:59:ALA:HB3	2.08	0.54
12:CL:31:PHE:HD2	12:CL:85:ARG:HA	1.71	0.54
13:CM:3:ARG:HG2	13:CM:9:ILE:CD1	2.37	0.54
17:CQ:4:LYS:HG3	17:CQ:5:VAL:N	2.22	0.54
23:DA:298:G:OP2	43:DU:85:VAL:HG22	2.07	0.54
23:DA:1478:G:O2'	23:DA:1558:A:H2	1.91	0.54
23:DA:2038:G:H2'	23:DA:2039:C:H6	1.72	0.54
23:DA:2419:U:O4	53:D5:30:ARG:NH1	2.40	0.54
23:DA:2562:U:H2'	23:DA:2563:U:H5'	1.89	0.54
25:DC:86:PRO:HD2	25:DC:87:ASN:ND2	2.23	0.54
25:DC:246:PRO:HD2	25:DC:255:LYS:HB3	1.90	0.54
26:DD:117:MET:HE1	26:DD:124:GLY:HA3	1.89	0.54
27:DE:93:LYS:HB3	27:DE:94:PRO:HD2	1.89	0.54
30:DH:57:ARG:HG2	30:DH:57:ARG:O	2.08	0.54
44:DV:74:VAL:HG22	44:DV:86:VAL:HG13	1.88	0.54
44:DV:97:GLU:HB3	44:DV:125:LEU:HD21	1.89	0.54
44:DV:179:ASP:CG	44:DV:180:VAL:HG13	2.27	0.54
45:DW:51:VAL:HG21	45:DW:80:HIS:HA	1.89	0.54
50:D2:40:LYS:CD	50:D2:46:CYS:HB3	2.38	0.54
1:AA:15:G:H2'	1:AA:16:A:H8	1.71	0.54
1:AA:616:G:H1'	1:AA:625:G:N2	2.23	0.54
1:AA:926:G:C6	1:AA:1505:G:C5	2.96	0.54
1:AA:1089:G:C5	1:AA:1090:U:C5	2.96	0.54
1:AA:1428:A:H2'	1:AA:1429:C:O4'	2.08	0.54
3:AC:81:GLY:O	3:AC:85:ARG:HD3	2.08	0.54
5:AE:79:GLU:HB3	5:AE:92:LYS:HA	1.89	0.54
7:AG:49:ILE:HG22	7:AG:49:ILE:O	2.08	0.54
10:AJ:13:HIS:CE1	10:AJ:14:LYS:HG3	2.43	0.54
13:AM:14:ARG:HG2	13:AM:44:ARG:NH1	2.21	0.54
20:AT:11:SER:HA	20:AT:13:LEU:HD13	1.89	0.54
23:BA:282:A:N6	23:BA:284:U:C2	2.76	0.54
23:BA:482:A:C2	23:BA:506:G:C5	2.96	0.54
23:BA:1407:C:H2'	23:BA:1408:C:C6	2.43	0.54
23:BA:1408:C:H42	23:BA:1594:G:H1	1.55	0.54
23:BA:1589:C:O2	23:BA:1589:C:H2'	2.08	0.54
23:BA:1689:A:H62	23:BA:1698:A:H2	1.56	0.54
23:BA:1971:A:C5	25:BC:241:PRO:HG3	2.43	0.54
23:BA:2602:A:OP2	23:BA:2602:A:H4'	2.08	0.54
23:BA:2852:G:H2'	23:BA:2853:C:C6	2.43	0.54
26:BD:176:ILE:HG22	26:BD:176:ILE:O	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BP:89:VAL:O	38:BP:90:GLN:CB	2.55	0.54
39:BQ:47:TYR:CD2	39:BQ:47:TYR:C	2.80	0.54
41:BS:45:TYR:C	41:BS:45:TYR:CD2	2.81	0.54
47:BY:28:LYS:HG3	47:BY:60:LEU:HD12	1.90	0.54
1:CA:9:G:H2'	1:CA:10:A:H8	1.73	0.54
1:CA:376:G:N3	1:CA:389:A:C2	2.75	0.54
1:CA:414:A:H2'	1:CA:415:A:C8	2.43	0.54
1:CA:456:C:N4	1:CA:476:G:H1	2.06	0.54
1:CA:862:C:H2'	1:CA:863:U:C5'	2.38	0.54
1:CA:1364:U:O2'	1:CA:1365:G:H5'	2.08	0.54
1:CA:1378:C:H3'	1:CA:1379:G:H5''	1.90	0.54
2:CB:181:PHE:O	2:CB:183:PRO:HD3	2.08	0.54
3:CC:125:GLU:OE2	3:CC:189:ALA:HA	2.08	0.54
3:CC:150:LYS:O	3:CC:200:ALA:HA	2.08	0.54
4:CD:31:CYS:O	4:CD:32:ALA:HB3	2.08	0.54
4:CD:100:ARG:NH2	4:CD:118:ARG:HH12	2.03	0.54
8:CH:9:MET:O	8:CH:12:ARG:HB2	2.08	0.54
9:CI:99:LEU:HD12	9:CI:101:PHE:CE2	2.43	0.54
14:CN:12:ARG:HG2	14:CN:14:PRO:HD3	1.89	0.54
22:CV:6182:A:N1	22:CV:6183:G:C4	2.75	0.54
23:DA:205:G:O2'	23:DA:206:U:OP2	2.19	0.54
23:DA:433:C:H2'	23:DA:434:U:C6	2.43	0.54
23:DA:748:G:C8	23:DA:750:A:C8	2.96	0.54
23:DA:1336:A:OP1	42:DT:64:LYS:HD3	2.08	0.54
23:DA:2564:A:OP1	23:DA:2648:C:H4'	2.08	0.54
23:DA:2731:G:C6	23:DA:2732:G:O6	2.61	0.54
25:DC:34:VAL:O	25:DC:35:LYS:HD3	2.07	0.54
34:DL:115:LEU:HA	34:DL:134:ALA:CB	2.38	0.54
35:DM:73:PRO:HA	35:DM:93:TYR:CD2	2.43	0.54
39:DQ:102:GLU:HG3	40:DR:2:PHE:CE1	2.43	0.54
41:DS:29:LEU:HD22	41:DS:69:LEU:HD11	1.90	0.54
42:DT:4:ALA:C	42:DT:6:ASP:H	2.11	0.54
42:DT:63:LYS:HE3	42:DT:72:LYS:HG2	1.89	0.54
48:DZ:10:LYS:HB3	48:DZ:53:LEU:HD23	1.89	0.54
1:AA:17:U:O4'	1:AA:1080:A:H1'	2.07	0.54
1:AA:419:C:O2	1:AA:425:G:C2	2.61	0.54
1:AA:698:G:C6	1:AA:699:C:C4	2.96	0.54
1:AA:1513:A:H2'	1:AA:1514:C:H6	1.71	0.54
2:AB:183:PRO:HA	2:AB:198:ASP:OD1	2.08	0.54
3:AC:31:HIS:O	3:AC:35:GLU:HG2	2.08	0.54
7:AG:38:LEU:O	7:AG:42:ILE:HG13	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:69:VAL:O	7:AG:69:VAL:HG12	2.08	0.54
10:AJ:6:ILE:O	10:AJ:71:LEU:HD12	2.08	0.54
11:AK:86:GLY:C	11:AK:88:GLY:H	2.11	0.54
23:BA:226:G:C2	23:BA:228:A:N6	2.76	0.54
23:BA:253:C:H2'	23:BA:254:G:O4'	2.08	0.54
23:BA:1717:G:C6	23:BA:1743:G:C6	2.96	0.54
23:BA:1812:A:O2'	25:BC:45:ASN:HB3	2.08	0.54
23:BA:2658:C:H4'	29:BG:158:HIS:NE2	2.23	0.54
25:BC:133:LEU:O	25:BC:135:PHE:N	2.40	0.54
25:BC:142:VAL:HG23	25:BC:193:VAL:HA	1.90	0.54
26:BD:50:GLY:HA2	26:BD:78:LEU:HB3	1.89	0.54
28:BF:86:MET:N	28:BF:87:PRO:HD3	2.23	0.54
29:BG:13:LYS:O	29:BG:15:VAL:HG13	2.08	0.54
30:BH:68:LEU:C	30:BH:138:ILE:HD13	2.27	0.54
32:BJ:90:LEU:H	32:BJ:90:LEU:HD12	1.73	0.54
33:BK:63:VAL:HB	33:BK:102:VAL:HG12	1.90	0.54
35:BM:21:THR:C	35:BM:23:GLY:N	2.60	0.54
35:BM:83:MET:O	35:BM:83:MET:HG3	2.08	0.54
39:BQ:92:ARG:NE	39:BQ:94:ASN:HB3	2.23	0.54
42:BT:71:GLY:C	42:BT:72:LYS:HG3	2.28	0.54
44:BV:102:LEU:HD21	44:BV:124:ILE:CD1	2.38	0.54
1:CA:44:G:C2	1:CA:399:G:C2	2.96	0.54
1:CA:92:G:C6	1:CA:93:U:C2	2.95	0.54
1:CA:781:A:H3'	1:CA:782:A:H5'	1.91	0.54
1:CA:841:U:C2'	1:CA:842:C:H5''	2.38	0.54
1:CA:1167:A:N7	1:CA:1169:A:C5	2.76	0.54
1:CA:1231:G:H2'	1:CA:1232:U:H6	1.72	0.54
1:CA:1353:G:OP2	1:CA:1353:G:H8	1.91	0.54
5:CE:41:VAL:HG11	5:CE:113:ALA:HB2	1.90	0.54
7:CG:138:LYS:O	7:CG:142:GLU:HG3	2.08	0.54
9:CI:24:GLY:O	9:CI:26:VAL:HG23	2.08	0.54
18:CR:84:LYS:NZ	18:CR:84:LYS:HB3	2.23	0.54
23:DA:370:G:H4'	23:DA:371:A:OP2	2.08	0.54
23:DA:564:C:O2'	23:DA:565:C:H5'	2.08	0.54
23:DA:909:A:C2	23:DA:912:C:C6	2.96	0.54
23:DA:1403:C:H5''	23:DA:1471:A:C1'	2.37	0.54
23:DA:1493:C:H2'	23:DA:1493:C:O2	2.08	0.54
23:DA:2038:G:C6	23:DA:2039:C:C4	2.96	0.54
23:DA:2443:C:C2'	23:DA:2444:G:H5'	2.38	0.54
25:DC:186:HIS:CD2	25:DC:188:GLU:HB2	2.42	0.54
29:DG:44:VAL:HG12	29:DG:45:VAL:N	2.18	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DI:57:THR:HG23	31:DI:60:ARG:HH12	1.73	0.54
34:DL:33:ARG:CG	34:DL:34:GLY:N	2.71	0.54
35:DM:16:ARG:C	35:DM:17:LEU:HD23	2.28	0.54
36:DN:30:THR:HG22	36:DN:31:HIS:ND1	2.23	0.54
41:DS:62:HIS:C	41:DS:64:MET:H	2.12	0.54
42:DT:64:LYS:HG2	42:DT:65:ARG:HH21	1.73	0.54
43:DU:36:ALA:HA	43:DU:67:LEU:O	2.08	0.54
45:DW:27:GLU:HB2	45:DW:69:PHE:HD1	1.71	0.54
46:DX:17:SER:HA	46:DX:44:PRO:HD3	1.90	0.54
46:DX:45:ASN:ND2	46:DX:47:GLN:HE21	2.06	0.54
1:AA:101:A:C4	1:AA:102:G:C8	2.96	0.53
1:AA:160:A:H4'	1:AA:344:A:C6	2.42	0.53
1:AA:620:C:H2'	1:AA:621:A:O4'	2.07	0.53
1:AA:1118:C:C5'	9:AI:104:ARG:HG3	2.38	0.53
1:AA:1207:G:H2'	1:AA:1208:C:H6	1.72	0.53
1:AA:1346:A:H5''	9:AI:120:ARG:HH12	1.74	0.53
2:AB:74:LYS:CB	2:AB:74:LYS:HZ2	2.20	0.53
2:AB:97:TRP:CZ2	2:AB:102:LEU:HD13	2.37	0.53
3:AC:116:VAL:HG21	3:AC:202:ILE:HD11	1.90	0.53
7:AG:40:ALA:O	7:AG:44:TYR:CD1	2.60	0.53
23:BA:89:G:C4	23:BA:90:U:C5	2.96	0.53
23:BA:531:C:H4'	23:BA:532:A:H5''	1.89	0.53
23:BA:1329:U:H5''	23:BA:1330:C:C5	2.40	0.53
23:BA:1538:G:H2'	23:BA:1539:G:H8	1.73	0.53
23:BA:1647:G:H3'	23:BA:1647:G:OP2	2.09	0.53
23:BA:2478:A:H2'	23:BA:2479:G:O4'	2.07	0.53
23:BA:2771:C:O2	23:BA:2771:C:H2'	2.07	0.53
25:BC:186:HIS:CD2	25:BC:188:GLU:HB2	2.43	0.53
33:BK:103:ALA:HB1	33:BK:105:GLU:OE1	2.08	0.53
35:BM:55:VAL:HG22	35:BM:56:ARG:N	2.23	0.53
39:BQ:92:ARG:HH22	40:BR:11:GLN:H	1.53	0.53
44:BV:94:GLU:HB2	44:BV:95:PRO:HD2	1.89	0.53
47:BY:3:LEU:O	47:BY:4:SER:C	2.47	0.53
2:CB:22:LYS:HA	2:CB:22:LYS:NZ	2.23	0.53
3:CC:29:TYR:HD1	3:CC:29:TYR:O	1.90	0.53
4:CD:93:PHE:O	4:CD:97:LEU:HG	2.07	0.53
17:CQ:29:HIS:CE1	17:CQ:32:TYR:CD1	2.96	0.53
19:CS:25:LYS:HB3	19:CS:27:GLU:OE1	2.08	0.53
23:DA:276:A:N7	23:DA:278:A:H8	2.06	0.53
23:DA:444:C:H4'	27:DE:49:ALA:HB2	1.91	0.53
23:DA:492:A:C2'	23:DA:493:G:H5'	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:627:A:C6	23:DA:637:A:C8	2.95	0.53
23:DA:1356:G:C5	23:DA:1357:U:C5	2.96	0.53
23:DA:1504:C:O2'	23:DA:1505:C:O5'	2.26	0.53
23:DA:1615:C:C2	41:DS:87:PRO:HG2	2.43	0.53
23:DA:2079:U:H2'	23:DA:2080:G:O5'	2.09	0.53
23:DA:2602:A:OP2	23:DA:2602:A:H4'	2.09	0.53
23:DA:2607:G:H2'	23:DA:2608:G:O4'	2.08	0.53
23:DA:2729:G:H2'	23:DA:2730:C:C6	2.43	0.53
25:DC:208:LYS:HG3	25:DC:211:ARG:H	1.73	0.53
26:DD:102:VAL:HA	26:DD:199:ARG:O	2.08	0.53
26:DD:171:GLU:HG2	26:DD:185:LYS:HG2	1.90	0.53
27:DE:153:SER:OG	27:DE:190:GLU:HG3	2.08	0.53
28:DF:111:LEU:HB2	28:DF:112:PRO:HD3	1.90	0.53
35:DM:88:GLY:C	35:DM:89:ASN:CG	2.67	0.53
39:DQ:92:ARG:NE	39:DQ:94:ASN:HB3	2.22	0.53
1:AA:408:A:H2'	1:AA:409:G:H8	1.73	0.53
1:AA:938:A:C6	1:AA:939:G:C5	2.96	0.53
1:AA:1202:G:H4'	14:AN:29:ARG:CD	2.38	0.53
5:AE:126:ARG:CG	5:AE:126:ARG:NH1	2.60	0.53
12:AL:24:PRO:HD2	12:AL:97:TYR:OH	2.08	0.53
12:AL:26:LEU:HB3	12:AL:29:ALA:CB	2.38	0.53
16:AP:43:LYS:HG2	16:AP:48:TRP:CG	2.43	0.53
19:AS:40:ILE:HD13	19:AS:62:ILE:HD11	1.89	0.53
23:BA:49:A:H5''	23:BA:51:G:O4'	2.07	0.53
23:BA:819:A:C4	23:BA:1189:A:C2	2.95	0.53
23:BA:988:A:C2'	23:BA:989:G:O5'	2.56	0.53
23:BA:1025:G:C4	23:BA:1135:C:H1'	2.43	0.53
23:BA:2352:A:H2'	23:BA:2353:G:H5'	1.90	0.53
23:BA:2527:C:C4	23:BA:2528:U:C5	2.96	0.53
23:BA:2598:A:C2'	23:BA:2599:G:O5'	2.56	0.53
23:BA:2723:C:OP2	26:BD:109:LYS:NZ	2.40	0.53
24:BB:81:G:C5	24:BB:82:G:C8	2.96	0.53
25:BC:33:LEU:C	25:BC:35:LYS:N	2.61	0.53
27:BE:132:VAL:HG23	27:BE:133:ASN:N	2.22	0.53
28:BF:111:LEU:HB2	28:BF:112:PRO:HD3	1.89	0.53
29:BG:12:PRO:HB2	29:BG:49:VAL:HA	1.91	0.53
49:B1:51:TYR:O	49:B1:52:SER:HB2	2.07	0.53
1:CA:191(G):G:H2'	1:CA:192:U:H6	1.73	0.53
1:CA:659:U:C2	1:CA:660:G:C8	2.95	0.53
1:CA:748:C:H4'	1:CA:749:C:O5'	2.08	0.53
1:CA:814:A:C8	1:CA:816:A:C8	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:859:A:H2'	1:CA:860:A:O4'	2.07	0.53
1:CA:1252:A:O2'	1:CA:1253:G:H5'	2.08	0.53
3:CC:33:LEU:HD21	14:CN:53:LEU:CD2	2.32	0.53
4:CD:120:LEU:O	4:CD:125:HIS:HB2	2.08	0.53
7:CG:80:VAL:HG23	7:CG:83:ALA:HB3	1.90	0.53
11:CK:20:TYR:O	11:CK:30:VAL:HA	2.07	0.53
12:CL:19:LYS:HD3	12:CL:19:LYS:H	1.74	0.53
12:CL:74:HIS:HD2	12:CL:76:LEU:N	2.06	0.53
12:CL:116:ARG:O	12:CL:118:LYS:N	2.42	0.53
23:DA:833:U:H2'	23:DA:834:C:C6	2.42	0.53
23:DA:1511:A:H2'	23:DA:1512:G:C8	2.42	0.53
23:DA:1529:A:C8	23:DA:1530:G:C8	2.96	0.53
23:DA:1862:G:H2'	23:DA:1863:G:C8	2.41	0.53
23:DA:2058:A:C6	23:DA:2059:A:N6	2.76	0.53
23:DA:2338:G:O2'	23:DA:2339:G:H5'	2.08	0.53
23:DA:2822:G:H2'	23:DA:2823:A:H5''	1.88	0.53
25:DC:58:HIS:HD2	25:DC:59:LYS:O	1.91	0.53
25:DC:131:LEU:HG	25:DC:136:ILE:HD11	1.91	0.53
29:DG:105:LEU:HD23	29:DG:105:LEU:N	2.23	0.53
33:DK:9:GLU:OE1	33:DK:18:LYS:HE2	2.08	0.53
34:DL:132:LYS:O	34:DL:136:GLU:HG2	2.08	0.53
36:DN:99:LYS:HD2	36:DN:99:LYS:N	2.23	0.53
38:DP:41:ARG:HH11	38:DP:41:ARG:HB3	1.73	0.53
38:DP:81:PRO:C	38:DP:82:LEU:HD23	2.28	0.53
41:DS:43:GLY:O	41:DS:47:VAL:HG23	2.07	0.53
42:DT:35:THR:HG22	42:DT:36:LYS:N	2.24	0.53
45:DW:31:VAL:HG23	45:DW:32:ARG:O	2.07	0.53
52:D4:1:MET:O	52:D4:2:LYS:C	2.46	0.53
53:D5:51:ALA:C	53:D5:52:LYS:HD3	2.29	0.53
1:AA:362:G:O3'	12:AL:32:ARG:NH2	2.42	0.53
1:AA:413:G:H21	1:AA:428:G:H1'	1.74	0.53
1:AA:741:G:H2'	1:AA:742:G:O4'	2.08	0.53
1:AA:841:U:C2'	1:AA:842:C:H5''	2.38	0.53
1:AA:1296:C:C5	1:AA:1297:C:H5	2.27	0.53
3:AC:119:ARG:O	3:AC:123:GLN:HG3	2.07	0.53
3:AC:151:VAL:O	3:AC:152:ILE:HG13	2.09	0.53
5:AE:41:VAL:CG1	5:AE:113:ALA:HA	2.37	0.53
16:AP:67:THR:HG22	16:AP:68:ASP:N	2.22	0.53
17:AQ:53:LEU:HD12	17:AQ:54:GLY:H	1.74	0.53
23:BA:275:G:OP2	23:BA:363(A):G:N2	2.42	0.53
23:BA:575:A:H2'	23:BA:575:A:N3	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:943:U:OP2	34:BL:38:GLN:OE1	2.26	0.53
23:BA:1209:G:N2	23:BA:1210:A:N6	2.52	0.53
23:BA:1389:G:O2'	23:BA:1390:U:H5'	2.08	0.53
23:BA:2039:C:H2'	23:BA:2040:C:H6	1.72	0.53
23:BA:2213:U:H5''	23:BA:2215:G:OP2	2.08	0.53
23:BA:2296:U:O2	23:BA:2333:A:N3	2.42	0.53
23:BA:2420:C:OP1	53:B5:34:TRP:HA	2.08	0.53
23:BA:2493:U:C4	23:BA:2494:G:C8	2.95	0.53
23:BA:2592:G:C5	23:BA:2593:U:C5	2.97	0.53
24:BB:73:A:C4	24:BB:104:A:C2	2.96	0.53
34:BL:125:VAL:HG11	34:BL:138:LEU:HD22	1.89	0.53
34:BL:125:VAL:O	34:BL:145:PRO:HD2	2.09	0.53
35:BM:20:ALA:O	35:BM:21:THR:O	2.26	0.53
46:BX:27:GLU:HB2	46:BX:33:LYS:CA	2.37	0.53
1:CA:145:G:C2	1:CA:178:C:N3	2.76	0.53
1:CA:224:C:C2	1:CA:225:C:C5	2.97	0.53
1:CA:509:A:C6	1:CA:510:A:N1	2.77	0.53
1:CA:648:A:H2'	1:CA:649:G:C8	2.43	0.53
1:CA:785:G:N2	1:CA:798:G:C4	2.76	0.53
1:CA:933:G:N7	7:CG:3:ARG:NH2	2.56	0.53
4:CD:121:VAL:O	4:CD:134:ASP:HA	2.08	0.53
8:CH:50:ARG:HG2	8:CH:50:ARG:NH1	2.23	0.53
12:CL:10:VAL:HG11	17:CQ:36:ILE:HG21	1.90	0.53
18:CR:36:ASN:HB2	18:CR:39:VAL:HG23	1.90	0.53
18:CR:56:THR:HB	18:CR:58:LEU:CD1	2.38	0.53
23:DA:219:G:N3	23:DA:234:C:O2'	2.37	0.53
23:DA:988:A:H2'	23:DA:989:G:O5'	2.08	0.53
23:DA:1407:C:H2'	23:DA:1408:C:C6	2.43	0.53
23:DA:1467:C:H42	23:DA:1525:G:H1	1.55	0.53
23:DA:1647:G:H3'	23:DA:1647:G:OP2	2.07	0.53
23:DA:2854:G:H2'	23:DA:2855:C:C6	2.43	0.53
24:DB:7:G:H5''	37:DO:29:PHE:CD2	2.43	0.53
28:DF:25:TYR:OH	28:DF:32:PRO:HD3	2.08	0.53
35:DM:89:ASN:O	35:DM:92:GLY:N	2.40	0.53
39:DQ:79:PHE:HE2	39:DQ:106:PHE:CZ	2.25	0.53
41:DS:52:GLU:OE2	41:DS:52:GLU:HA	2.08	0.53
43:DU:2:ARG:N	43:DU:4:LYS:HZ2	2.06	0.53
46:DX:13:ILE:HA	46:DX:66:HIS:ND1	2.23	0.53
46:DX:31:GLY:O	46:DX:32:LYS:CB	2.57	0.53
1:AA:506:G:C6	1:AA:507:C:C4	2.97	0.53
1:AA:515:G:C2	1:AA:537:G:C2	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:545:C:O2'	1:AA:546:G:O5'	2.26	0.53
2:AB:97:TRP:HH2	2:AB:176:GLU:CG	2.20	0.53
6:AF:9:VAL:HA	6:AF:59:TYR:O	2.08	0.53
11:AK:102:GLY:O	11:AK:103:LEU:HD13	2.08	0.53
17:AQ:7:THR:HA	17:AQ:57:VAL:O	2.08	0.53
23:BA:379:G:N1	46:BX:20:ARG:NH2	2.55	0.53
23:BA:553:U:O2'	23:BA:554:U:H5'	2.08	0.53
23:BA:1252:G:C2	23:BA:1253:A:C2	2.96	0.53
23:BA:1451:C:N3	23:BA:1459:G:O6	2.42	0.53
23:BA:2279:G:N2	23:BA:2280:G:H1'	2.23	0.53
23:BA:2338:G:C2'	23:BA:2339:G:H5'	2.38	0.53
23:BA:2564:A:OP1	23:BA:2648:C:H4'	2.09	0.53
23:BA:2638:G:OP2	26:BD:82:ARG:NH2	2.42	0.53
23:BA:2821:A:OP2	36:BN:5:LYS:NZ	2.37	0.53
23:BA:2862:G:C6	23:BA:2863:C:C4	2.96	0.53
24:BB:35:U:O2'	24:BB:36:C:H5'	2.09	0.53
25:BC:11:PRO:O	25:BC:13:ARG:N	2.40	0.53
25:BC:86:PRO:HD2	25:BC:87:ASN:HD21	1.73	0.53
29:BG:21:PRO:HB2	29:BG:23:ARG:NH1	2.24	0.53
34:BL:80:TYR:CD1	34:BL:111:ARG:HB3	2.43	0.53
34:BL:113:LYS:HA	34:BL:129:ALA:O	2.08	0.53
35:BM:89:ASN:C	35:BM:92:GLY:H	2.12	0.53
39:BQ:90:VAL:HG13	39:BQ:91:ASP:N	2.22	0.53
39:BQ:98:LEU:O	39:BQ:99:ALA:C	2.47	0.53
44:BV:97:GLU:HB3	44:BV:125:LEU:HD21	1.89	0.53
1:CA:8:A:N7	4:CD:208:SER:OG	2.40	0.53
1:CA:15:G:C4	1:CA:16:A:C8	2.97	0.53
1:CA:42:G:OP2	1:CA:42:G:C8	2.62	0.53
1:CA:123:C:OP1	1:CA:312:C:H5'	2.09	0.53
1:CA:413:G:H21	1:CA:428:G:H1'	1.73	0.53
1:CA:658:G:C5	1:CA:659:U:C5	2.96	0.53
1:CA:689:C:H2'	1:CA:689:C:O2	2.09	0.53
1:CA:878:G:H1'	8:CH:3:THR:HG21	1.90	0.53
1:CA:913:A:C1'	1:CA:914:A:OP2	2.57	0.53
1:CA:942:G:N2	1:CA:943:U:C2	2.76	0.53
1:CA:1202:G:H4'	14:CN:29:ARG:HD3	1.90	0.53
1:CA:1386:G:C2	1:CA:1387:G:C8	2.96	0.53
2:CB:80:ILE:HD11	2:CB:208:ILE:CG2	2.38	0.53
8:CH:109:ILE:HG12	8:CH:110:ALA:N	2.23	0.53
8:CH:119:LEU:HD23	8:CH:119:LEU:N	2.24	0.53
18:CR:44:LEU:HA	18:CR:49:LYS:O	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:53:LEU:HD13	20:CT:102:GLY:HA3	1.91	0.53
23:DA:8:A:H2'	23:DA:9:U:C6	2.44	0.53
23:DA:195:A:H4'	23:DA:251:A:O2'	2.08	0.53
23:DA:556:G:H2'	23:DA:557:U:H6	1.72	0.53
23:DA:1543:A:H5'	23:DA:1544:C:P	2.48	0.53
23:DA:1614:A:H61	41:DS:88:ARG:H	1.56	0.53
23:DA:2531:A:H2	23:DA:2658:C:O2	1.92	0.53
23:DA:2831:G:O4'	23:DA:2883:A:C2	2.62	0.53
24:DB:83:G:C2	24:DB:84:C:C6	2.96	0.53
25:DC:72:LYS:HE2	25:DC:101:GLU:HG2	1.90	0.53
39:DQ:46:ALA:O	39:DQ:47:TYR:C	2.47	0.53
43:DU:29:GLU:HB3	43:DU:38:ILE:CB	2.33	0.53
45:DW:56:ASP:O	45:DW:57:PHE:CB	2.56	0.53
45:DW:66:VAL:O	45:DW:81:VAL:HA	2.09	0.53
46:DX:27:GLU:CB	46:DX:33:LYS:HA	2.35	0.53
53:D5:62:LEU:C	53:D5:64:TYR:H	2.12	0.53
1:AA:1167:A:N7	1:AA:1169:A:C5	2.76	0.53
1:AA:1221:G:H1'	19:AS:54:GLY:HA3	1.88	0.53
1:AA:1503:A:OP1	1:AA:1531:A:O2'	2.26	0.53
8:AH:19:VAL:HG23	8:AH:21:LYS:HG2	1.91	0.53
11:AK:34:ASP:HB2	11:AK:35:PRO:CD	2.39	0.53
12:AL:125:LYS:HE2	12:AL:127:ALA:H	1.73	0.53
15:AO:61:GLY:O	15:AO:64:ARG:HB3	2.08	0.53
20:AT:82:SER:O	20:AT:86:ARG:HB2	2.08	0.53
23:BA:9:U:C4	23:BA:2629:A:N6	2.77	0.53
23:BA:276:A:N7	23:BA:278:A:H8	2.06	0.53
23:BA:812:C:H5'	34:BL:25:SER:O	2.08	0.53
23:BA:993:G:C5	23:BA:994:C:C5	2.94	0.53
23:BA:1190:G:H2'	23:BA:1191:G:C8	2.43	0.53
23:BA:1486:A:H2'	23:BA:1487:G:H8	1.73	0.53
23:BA:2419:U:O4	53:B5:30:ARG:NH1	2.42	0.53
23:BA:2633:G:O2'	26:BD:61:ARG:HD3	2.08	0.53
23:BA:2746:U:H2'	23:BA:2747:G:O5'	2.09	0.53
25:BC:148:GLU:HB2	25:BC:151:LYS:CD	2.38	0.53
25:BC:267:SER:O	25:BC:270:ILE:HG13	2.08	0.53
28:BF:19:LEU:HD11	28:BF:172:LEU:HD13	1.90	0.53
35:BM:29:PHE:O	35:BM:30:GLY:O	2.27	0.53
39:BQ:62:ILE:HD11	39:BQ:93:LYS:HG2	1.91	0.53
46:BX:27:GLU:CB	46:BX:33:LYS:HA	2.34	0.53
47:BY:9:GLN:HG3	47:BY:12:GLU:OE1	2.08	0.53
47:BY:42:GLY:O	47:BY:44:LEU:N	2.32	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B2:4:HIS:HB3	50:B2:5:PRO:CD	2.39	0.53
52:B4:19:ARG:NH1	52:B4:19:ARG:HB3	2.23	0.53
1:CA:498:A:H4'	1:CA:500:G:H5'	1.91	0.53
1:CA:851:G:O2'	1:CA:852:G:H5'	2.08	0.53
2:CB:83:MET:O	2:CB:87:ARG:HB2	2.09	0.53
2:CB:163:PHE:HA	2:CB:185:ILE:O	2.08	0.53
5:CE:139:LEU:HA	5:CE:142:LEU:HD12	1.89	0.53
12:CL:46:LYS:HB3	12:CL:47:PRO:HD3	1.90	0.53
15:CO:36:ILE:HG22	15:CO:37:ASN:N	2.22	0.53
17:CQ:45:HIS:HB3	17:CQ:72:ARG:HG2	1.90	0.53
23:DA:84:A:C2	23:DA:98:G:N3	2.76	0.53
23:DA:580:C:O2'	23:DA:581:C:H5'	2.09	0.53
23:DA:681:G:C2'	23:DA:682:G:O5'	2.56	0.53
23:DA:772:C:O2	23:DA:772:C:H2'	2.08	0.53
23:DA:1046:A:H8	23:DA:1046:A:O5'	1.92	0.53
23:DA:1726:G:C2	23:DA:1735:U:O2	2.61	0.53
23:DA:1813:G:H1'	25:DC:50:THR:CG2	2.30	0.53
23:DA:1857:G:N2	23:DA:1886:C:C4	2.76	0.53
23:DA:1921:G:O2'	23:DA:1922:G:H5'	2.08	0.53
23:DA:2338:G:C2'	23:DA:2339:G:H5'	2.39	0.53
23:DA:2506:U:H5	23:DA:2507:C:C5	2.26	0.53
24:DB:28:C:H2'	24:DB:29:A:C8	2.42	0.53
24:DB:78:A:H61	24:DB:98:G:H1'	1.74	0.53
25:DC:33:LEU:C	25:DC:35:LYS:N	2.61	0.53
30:DH:132:PRO:O	30:DH:134:PRO:HD3	2.08	0.53
31:DI:9:LEU:O	31:DI:9:LEU:HD23	2.09	0.53
32:DJ:57:LEU:HD21	32:DJ:143:LEU:HB2	1.88	0.53
34:DL:50:ARG:HB2	53:D5:60:LEU:CD1	2.39	0.53
35:DM:22:LYS:HD3	35:DM:22:LYS:C	2.29	0.53
42:DT:12:VAL:CG1	42:DT:28:PHE:HA	2.38	0.53
42:DT:30:VAL:CG1	42:DT:31:HIS:N	2.71	0.53
53:D5:57:ARG:NE	53:D5:57:ARG:CA	2.70	0.53
1:AA:327:A:C2	1:AA:329:A:C4	2.96	0.53
1:AA:337:C:H2'	1:AA:338:A:C8	2.38	0.53
1:AA:586:C:H1'	1:AA:878:G:O2'	2.09	0.53
1:AA:1446:A:N1	38:BP:118:ARG:CZ	2.71	0.53
2:AB:17:PHE:CD1	2:AB:44:LEU:HD21	2.44	0.53
2:AB:72:GLY:HA3	2:AB:165:VAL:CG1	2.38	0.53
2:AB:96:ARG:H	2:AB:96:ARG:HD2	1.73	0.53
6:AF:8:ILE:HG22	6:AF:10:LEU:HD12	1.90	0.53
6:AF:63:TYR:O	6:AF:65:VAL:HG12	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:80:VAL:HG23	7:AG:83:ALA:HB3	1.90	0.53
8:AH:28:ALA:HA	8:AH:59:LEU:HD21	1.88	0.53
9:AI:17:VAL:HG21	9:AI:80:GLY:HA3	1.89	0.53
13:AM:84:ILE:CG2	19:AS:74:PHE:HE1	2.21	0.53
13:AM:96:LEU:HD22	13:AM:103:THR:HG21	1.89	0.53
23:BA:492:A:C2'	23:BA:493:G:H5'	2.39	0.53
23:BA:628:G:H2'	23:BA:629:G:H8	1.73	0.53
23:BA:828:U:H4'	23:BA:831:G:N1	2.24	0.53
23:BA:2436:G:C5	23:BA:2437:U:C5	2.97	0.53
26:BD:170:LEU:N	26:BD:170:LEU:CD2	2.72	0.53
26:BD:173:VAL:HG12	26:BD:174:ASP:H	1.73	0.53
27:BE:164:ARG:NH1	27:BE:164:ARG:CG	2.70	0.53
33:BK:97:ARG:N	33:BK:117:LEU:HD22	2.23	0.53
36:BN:66:VAL:HG13	36:BN:70:LEU:HD12	1.91	0.53
37:BO:28:VAL:HG21	37:BO:87:PHE:CE1	2.44	0.53
37:BO:52:SER:O	37:BO:53:SER:HB2	2.08	0.53
39:BQ:92:ARG:HG2	40:BR:11:GLN:HE21	1.70	0.53
43:BU:75:ILE:HG13	43:BU:79:CYS:HA	1.91	0.53
44:BV:48:PHE:CZ	44:BV:52:SER:HA	2.43	0.53
52:B4:1:MET:O	52:B4:2:LYS:C	2.47	0.53
1:CA:44:G:N2	1:CA:399:G:C4	2.76	0.53
1:CA:105:G:C4	1:CA:106:C:C5	2.96	0.53
1:CA:579:G:C4	1:CA:580:U:C6	2.96	0.53
4:CD:28:SER:HB3	4:CD:29:PRO:CD	2.36	0.53
4:CD:70:ILE:HG12	4:CD:71:SER:N	2.22	0.53
5:CE:10:MET:HG3	5:CE:13:ILE:HD11	1.91	0.53
12:CL:21:SER:O	12:CL:23:VAL:N	2.42	0.53
12:CL:74:HIS:CD2	12:CL:76:LEU:H	2.25	0.53
15:CO:50:HIS:O	15:CO:53:HIS:HB3	2.07	0.53
20:CT:37:SER:O	20:CT:40:ALA:HB3	2.09	0.53
23:DA:532:A:C8	23:DA:2021:C:C5	2.97	0.53
23:DA:598:G:H5'	34:DL:15:ARG:HG2	1.89	0.53
23:DA:673:C:H5''	27:DE:81:PRO:HD2	1.89	0.53
23:DA:1003:G:O2'	23:DA:1010:A:N1	2.36	0.53
23:DA:2572:A:P	26:DD:144:ARG:HB2	2.49	0.53
23:DA:2641:G:OP1	32:DJ:97:ARG:HD3	2.08	0.53
23:DA:2739:U:O2	23:DA:2739:U:C2'	2.55	0.53
25:DC:141:VAL:HG23	25:DC:162:SER:OG	2.08	0.53
25:DC:268:ARG:HD2	25:DC:269:PHE:CE1	2.43	0.53
30:DH:129:THR:HA	30:DH:138:ILE:O	2.09	0.53
32:DJ:112:LYS:O	32:DJ:116:THR:HG23	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DM:55:VAL:HG22	35:DM:56:ARG:N	2.23	0.53
38:DP:98:LYS:HB3	38:DP:100:TYR:CE1	2.43	0.53
42:DT:66:LEU:HD23	42:DT:67:GLY:N	2.24	0.53
47:DY:9:GLN:HA	47:DY:12:GLU:HB3	1.91	0.53
50:D2:40:LYS:HZ3	50:D2:49:CYS:HB3	1.74	0.53
53:D5:52:LYS:N	53:D5:52:LYS:HD3	2.22	0.53
1:AA:57:G:C5	1:AA:58:C:C5	2.97	0.53
1:AA:92:G:C2'	1:AA:93:U:H5'	2.38	0.53
1:AA:738:C:H2'	1:AA:739:C:H6	1.70	0.53
1:AA:841:U:O2	1:AA:841:U:H3'	2.09	0.53
1:AA:1369:C:H2'	1:AA:1370:G:O4'	2.09	0.53
2:AB:69:LEU:HD12	2:AB:70:PHE:N	2.24	0.53
3:AC:186:PHE:HZ	3:AC:188:LEU:HD13	1.72	0.53
11:AK:123:LYS:O	11:AK:126:ARG:HB2	2.09	0.53
12:AL:40:ARG:HG2	12:AL:41:THR:N	2.24	0.53
13:AM:3:ARG:HG2	13:AM:9:ILE:CD1	2.38	0.53
23:BA:2228:G:OP2	25:BC:263:ARG:NH2	2.41	0.53
23:BA:2334:G:H4'	23:BA:2335:A:OP2	2.09	0.53
26:BD:6:GLY:HA2	26:BD:51:PHE:CE2	2.43	0.53
29:BG:123:PHE:HB3	29:BG:133:VAL:HG13	1.91	0.53
32:BJ:119:GLU:OE1	32:BJ:119:GLU:N	2.29	0.53
35:BM:43:THR:HG1	35:BM:45:GLN:HG2	1.72	0.53
39:BQ:73:GLY:O	39:BQ:74:LEU:HB3	2.09	0.53
41:BS:86:LEU:HD12	41:BS:86:LEU:C	2.27	0.53
46:BX:12:PRO:O	46:BX:14:VAL:HG23	2.08	0.53
1:CA:42:G:OP2	1:CA:42:G:H8	1.90	0.53
1:CA:644:G:C5'	8:CH:92:ARG:HH21	2.22	0.53
1:CA:960:U:H5	1:CA:1225:A:H1'	1.73	0.53
1:CA:1423:G:H2'	1:CA:1424:C:H6	1.73	0.53
7:CG:80:VAL:CG2	7:CG:83:ALA:HB3	2.39	0.53
9:CI:85:LEU:O	9:CI:89:ASN:HB2	2.09	0.53
10:CJ:17:ASP:O	10:CJ:21:GLN:HB2	2.09	0.53
11:CK:59:TYR:CE2	11:CK:63:LEU:HD11	2.44	0.53
12:CL:75:ASN:OD1	12:CL:107:ALA:HB3	2.09	0.53
23:DA:319:C:H2'	23:DA:320:A:C8	2.44	0.53
23:DA:351:G:H5''	23:DA:352:G:OP1	2.09	0.53
23:DA:773:U:C5'	25:DC:47:GLY:HA3	2.38	0.53
23:DA:1543:A:C8	23:DA:1543:A:C3'	2.88	0.53
23:DA:2364:C:O2'	23:DA:2365:G:H5'	2.09	0.53
23:DA:2415:G:O3'	34:DL:66:GLY:HA3	2.08	0.53
23:DA:2416:C:C2	23:DA:2417:C:C5	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:76:SER:HB2	28:DF:83:ARG:N	2.24	0.53
30:DH:77:LEU:HD21	30:DH:104:GLN:HB2	1.91	0.53
34:DL:47:ASP:CB	34:DL:51:PHE:HB2	2.38	0.53
34:DL:135:LEU:HD13	34:DL:139:LYS:HB2	1.90	0.53
39:DQ:83:LEU:HA	39:DQ:86:ALA:HB3	1.89	0.53
41:DS:14:PRO:C	41:DS:16:LYS:N	2.62	0.53
44:DV:92:SER:HB2	44:DV:94:GLU:OE2	2.09	0.53
45:DW:14:ARG:CZ	45:DW:14:ARG:CB	2.86	0.53
46:DX:46:LEU:HD21	46:DX:61:ARG:HG3	1.90	0.53
46:DX:48:LYS:NZ	46:DX:50:ARG:CZ	2.72	0.53
1:AA:433:C:H2'	1:AA:434:U:C6	2.43	0.53
1:AA:664:G:P	18:AR:64:ARG:HH21	2.32	0.53
1:AA:677:U:H2'	1:AA:678:U:C6	2.43	0.53
1:AA:1070:U:C2	1:AA:1071:C:C5	2.97	0.53
1:AA:1346:A:C8	7:AG:10:ARG:NH2	2.77	0.53
1:AA:1364:U:O2'	1:AA:1365:G:H5'	2.08	0.53
2:AB:173:ALA:O	2:AB:176:GLU:N	2.42	0.53
3:AC:182:ILE:HG23	3:AC:202:ILE:O	2.09	0.53
5:AE:11:ILE:HG22	5:AE:12:LEU:N	2.24	0.53
9:AI:99:LEU:HD12	9:AI:101:PHE:CE2	2.44	0.53
18:AR:22:VAL:HG11	18:AR:42:ARG:O	2.08	0.53
23:BA:226:G:H21	23:BA:228:A:N6	2.07	0.53
23:BA:270(J):G:O2'	23:BA:270(K):G:H8	1.91	0.53
23:BA:336:C:O2	23:BA:336:C:C2'	2.57	0.53
23:BA:681:G:C2'	23:BA:682:G:O5'	2.56	0.53
23:BA:833:U:H2'	23:BA:834:C:C6	2.44	0.53
23:BA:1336:A:H2'	23:BA:1337:G:H8	1.73	0.53
23:BA:1493:C:O2	23:BA:1493:C:H2'	2.08	0.53
23:BA:1684:C:C2	23:BA:1705:G:N2	2.77	0.53
23:BA:2026:C:C2	23:BA:2027:G:C8	2.97	0.53
23:BA:2557:G:H2'	23:BA:2558:C:C6	2.44	0.53
23:BA:2755:C:HO2'	23:BA:2756:U:H6	1.57	0.53
29:BG:35:VAL:HG21	29:BG:75:ALA:HB2	1.90	0.53
33:BK:19:ILE:HG22	33:BK:43:VAL:HA	1.89	0.53
36:BN:44:LEU:HD13	36:BN:44:LEU:C	2.28	0.53
37:BO:67:ARG:HG3	37:BO:100:ALA:HB1	1.90	0.53
38:BP:89:VAL:O	38:BP:89:VAL:CG2	2.57	0.53
42:BT:12:VAL:CG1	42:BT:28:PHE:HA	2.39	0.53
46:BX:11:ARG:CG	46:BX:61:ARG:O	2.56	0.53
46:BX:77:ALA:HA	46:BX:80:LEU:HB2	1.91	0.53
48:BZ:26:LEU:HB2	48:BZ:28:LEU:HD13	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:57:G:C5	1:CA:58:C:C5	2.97	0.53
1:CA:142:G:C2	1:CA:143:A:C5	2.97	0.53
1:CA:373:A:C2	1:CA:482:A:N6	2.77	0.53
1:CA:841:U:H3'	1:CA:841:U:O2	2.08	0.53
1:CA:939:G:H2'	1:CA:940:C:C6	2.44	0.53
1:CA:1489:G:C6	1:CA:1490:C:N4	2.77	0.53
4:CD:31:CYS:C	4:CD:33:MET:H	2.11	0.53
23:DA:270(H):C:C5	23:DA:270(I):C:H5	2.27	0.53
23:DA:270(Q):C:O2'	23:DA:270(R):C:H6	1.91	0.53
23:DA:518:G:H4'	41:DS:18:ARG:NH1	2.23	0.53
23:DA:848:G:C4	23:DA:933:A:H8	2.26	0.53
23:DA:114(B):A:C4'	32:DJ:48:ARG:HH22	2.20	0.53
23:DA:1281:G:C5	23:DA:1282:U:C5	2.97	0.53
23:DA:2267:A:H5''	23:DA:2268:A:H5''	1.91	0.53
23:DA:2485:G:H5''	35:DM:46:GLN:NE2	2.23	0.53
24:DB:7:G:H1'	37:DO:38:GLN:NE2	2.23	0.53
27:DE:132:VAL:HG23	27:DE:133:ASN:N	2.23	0.53
32:DJ:119:GLU:OE1	32:DJ:119:GLU:N	2.33	0.53
34:DL:125:VAL:HG11	34:DL:138:LEU:HD22	1.90	0.53
42:DT:71:GLY:C	42:DT:72:LYS:HG3	2.29	0.53
46:DX:27:GLU:HB2	46:DX:33:LYS:CA	2.36	0.53
47:DY:46:GLN:HB2	47:DY:49:LYS:HZ3	1.71	0.53
1:AA:180:U:H2'	1:AA:181:G:H5'	1.89	0.53
1:AA:327:A:C4	1:AA:329:A:C8	2.96	0.53
1:AA:518:C:O2	1:AA:529:G:C6	2.62	0.53
1:AA:560:U:H5'	1:AA:566:G:N2	2.24	0.53
1:AA:682:G:C6	1:AA:709:G:C6	2.96	0.53
1:AA:1037:C:H2'	1:AA:1038:C:H6	1.73	0.53
2:AB:80:ILE:HD11	2:AB:208:ILE:CG2	2.39	0.53
5:AE:75:THR:HG23	5:AE:76:ILE:N	2.24	0.53
5:AE:102:ALA:HB2	5:AE:120:THR:HG23	1.90	0.53
7:AG:115:ARG:HB2	7:AG:118:VAL:HG11	1.90	0.53
23:BA:197:A:C8	23:BA:197:A:C5'	2.87	0.53
23:BA:582:G:OP1	39:BQ:14:HIS:HD2	1.92	0.53
23:BA:634:C:H2'	23:BA:635:C:C6	2.44	0.53
23:BA:1798:U:H5''	25:BC:259:THR:O	2.09	0.53
23:BA:2562:U:H2'	23:BA:2563:U:H5'	1.90	0.53
24:BB:71:C:C4	24:BB:72:G:N7	2.77	0.53
28:BF:49:ASP:HB3	28:BF:52:ILE:HG12	1.91	0.53
31:BI:9:LEU:O	31:BI:9:LEU:HD23	2.09	0.53
34:BL:85:LEU:CD2	34:BL:85:LEU:H	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BX:11:ARG:HG3	46:BX:61:ARG:O	2.09	0.53
46:BX:27:GLU:CG	46:BX:33:LYS:HG3	2.38	0.53
48:BZ:26:LEU:HD21	48:BZ:46:ASN:CB	2.38	0.53
49:B1:43:GLY:O	49:B1:44:CYS:HB3	2.08	0.53
1:CA:197:A:C5	1:CA:221:C:H4'	2.44	0.53
1:CA:376:G:C2	1:CA:377:G:C8	2.97	0.53
1:CA:380:G:C2	1:CA:384:G:C6	2.96	0.53
1:CA:506:G:C4	1:CA:507:C:C5	2.97	0.53
1:CA:832:C:N4	1:CA:855:G:C6	2.77	0.53
1:CA:951:G:H1'	1:CA:970:C:O2'	2.09	0.53
4:CD:152:SER:O	4:CD:155:LEU:HB2	2.09	0.53
7:CG:113:GLU:CB	7:CG:119:ARG:HG2	2.23	0.53
12:CL:61:SER:C	12:CL:63:TYR:H	2.12	0.53
17:CQ:40:LYS:HG2	17:CQ:41:LYS:N	2.24	0.53
23:DA:527:C:O4'	23:DA:527:C:O2	2.23	0.53
23:DA:681:G:H2'	23:DA:682:G:O5'	2.09	0.53
23:DA:1144:G:C4	23:DA:1145:C:C5	2.97	0.53
23:DA:1746:G:N3	23:DA:1747:G:C8	2.77	0.53
23:DA:1937:A:N7	23:DA:1939:U:H2'	2.23	0.53
23:DA:2345:G:OP2	51:D3:39:TYR:HA	2.09	0.53
23:DA:2582:G:C2	23:DA:2583:G:C8	2.96	0.53
25:DC:35:LYS:HZ1	25:DC:104:TYR:H	1.57	0.53
25:DC:265:PRO:C	25:DC:267:SER:H	2.11	0.53
28:DF:60:LEU:O	28:DF:64:THR:HG22	2.09	0.53
34:DL:62:LEU:N	34:DL:62:LEU:HD13	2.23	0.53
41:DS:12:ILE:HG12	41:DS:13:SER:N	2.23	0.53
46:DX:19:GLN:HG3	46:DX:41:ARG:NE	2.20	0.53
1:AA:1228:C:N4	1:AA:1229:A:N6	2.57	0.53
1:AA:1446:A:H61	38:BP:118:ARG:HH21	1.54	0.53
12:AL:74:HIS:HD2	12:AL:76:LEU:N	2.07	0.53
15:AO:8:LYS:O	15:AO:12:ILE:HG13	2.09	0.53
15:AO:44:LYS:HB2	15:AO:44:LYS:HZ3	1.74	0.53
23:BA:7:G:N2	23:BA:2897:U:C4	2.77	0.53
23:BA:270(H):C:C4	23:BA:270(I):C:H5	2.26	0.53
23:BA:860:U:C4	23:BA:2268:A:C8	2.96	0.53
23:BA:114(B):A:O2'	23:BA:1143:A:H3'	2.08	0.53
23:BA:2459:A:C2	23:BA:2460:U:H1'	2.44	0.53
23:BA:2709:G:C2'	23:BA:2710:C:H5'	2.39	0.53
27:BE:139:PHE:HB2	27:BE:166:ALA:HB1	1.90	0.53
29:BG:54:ARG:NH2	29:BG:62:LYS:HE2	2.24	0.53
29:BG:94:TYR:N	29:BG:94:TYR:CD1	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BL:132:LYS:O	34:BL:136:GLU:HG2	2.09	0.53
35:BM:89:ASN:O	35:BM:92:GLY:N	2.40	0.53
39:BQ:102:GLU:N	39:BQ:103:PRO:CD	2.72	0.53
45:BW:35:ASN:HD22	45:BW:35:ASN:N	2.07	0.53
1:CA:236:G:OP1	17:CQ:40:LYS:NZ	2.42	0.53
1:CA:408:A:H2'	1:CA:409:G:H8	1.74	0.53
1:CA:1057:G:C2	1:CA:1204:A:C2	2.97	0.53
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.44	0.53
1:CA:1228:C:N4	1:CA:1229:A:H62	2.07	0.53
1:CA:1378:C:H5	1:CA:1379:G:N9	2.07	0.53
6:CF:9:VAL:HA	6:CF:59:TYR:O	2.09	0.53
7:CG:113:GLU:O	7:CG:119:ARG:HD3	2.09	0.53
11:CK:36:ASP:HB2	11:CK:38:ASN:OD1	2.08	0.53
23:DA:270(H):C:C4	23:DA:270(I):C:H5	2.25	0.53
23:DA:389:G:H1	34:DL:71:VAL:HG23	1.74	0.53
23:DA:685:A:H1'	23:DA:688:U:O4	2.09	0.53
23:DA:786:C:C2'	23:DA:787:U:H5'	2.39	0.53
23:DA:1658:C:H2'	23:DA:1659:U:C6	2.44	0.53
23:DA:1884:A:C4	23:DA:1885:A:C8	2.97	0.53
23:DA:1904:G:O2'	23:DA:1905:C:H5'	2.08	0.53
23:DA:2289:G:H2'	23:DA:2289:G:N3	2.23	0.53
24:DB:115:G:H5'	37:DO:50:SER:OG	2.09	0.53
27:DE:74:ARG:HG2	27:DE:74:ARG:O	2.08	0.53
28:DF:83:ARG:HG3	28:DF:84:LYS:N	2.24	0.53
32:DJ:59:GLY:O	32:DJ:65:TRP:HE3	1.91	0.53
34:DL:33:ARG:CG	34:DL:34:GLY:H	2.20	0.53
35:DM:134:ARG:NH1	35:DM:138:ASP:OD1	2.39	0.53
37:DO:12:PHE:C	37:DO:12:PHE:HD1	2.12	0.53
37:DO:28:VAL:HG21	37:DO:87:PHE:CE1	2.44	0.53
39:DQ:92:ARG:HD2	39:DQ:95:LEU:N	2.24	0.53
1:AA:579:G:H2'	1:AA:580:U:C6	2.42	0.52
1:AA:775:G:O2'	1:AA:776:G:H5'	2.09	0.52
1:AA:1117:G:N2	1:AA:1180:A:H1'	2.21	0.52
1:AA:1187:G:H2'	1:AA:1188:A:H8	1.74	0.52
1:AA:1328:C:H5''	13:AM:28:ALA:CB	2.39	0.52
1:AA:1378:C:H5	1:AA:1379:G:N9	2.07	0.52
4:AD:23:GLY:CA	4:AD:112:VAL:HG22	2.39	0.52
4:AD:152:SER:O	4:AD:155:LEU:HB2	2.09	0.52
6:AF:62:TRP:CG	18:AR:35:ARG:NH1	2.77	0.52
8:AH:63:LEU:HB2	8:AH:65:TYR:HE1	1.74	0.52
12:AL:92:LEU:HB2	12:AL:95:VAL:HG21	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:2:ALA:HB1	14:AN:6:LEU:HD12	1.92	0.52
15:AO:44:LYS:HB2	15:AO:44:LYS:NZ	2.23	0.52
23:BA:466:A:O3'	52:B4:33:ARG:NH1	2.43	0.52
23:BA:2636:U:H2'	23:BA:2637:U:H6	1.74	0.52
24:BB:21:G:H2'	24:BB:22:U:H6	1.74	0.52
24:BB:113:C:O2'	37:BO:46:VAL:HG13	2.09	0.52
25:BC:27:THR:O	25:BC:27:THR:CG2	2.54	0.52
29:BG:52:VAL:HG12	29:BG:52:VAL:O	2.06	0.52
29:BG:94:TYR:CZ	29:BG:160:LYS:HD3	2.44	0.52
30:BH:81:VAL:HG11	30:BH:90:GLY:HA3	1.90	0.52
33:BK:1:MET:HE2	33:BK:32:TYR:CG	2.44	0.52
34:BL:105:LEU:HD12	34:BL:105:LEU:N	2.24	0.52
35:BM:38:GLU:HB2	35:BM:127:ILE:HG12	1.91	0.52
38:BP:55:ASN:H	38:BP:59:THR:HB	1.73	0.52
40:BR:72:VAL:O	40:BR:72:VAL:HG23	2.09	0.52
42:BT:11:PRO:HG2	42:BT:13:LEU:HD21	1.92	0.52
42:BT:28:PHE:HD1	42:BT:28:PHE:H	1.56	0.52
42:BT:66:LEU:HD23	42:BT:67:GLY:N	2.24	0.52
1:CA:15:G:H2'	1:CA:16:A:H8	1.74	0.52
1:CA:632:A:H8	1:CA:633:G:C8	2.27	0.52
1:CA:740:U:O2'	1:CA:741:G:H5'	2.08	0.52
1:CA:973:G:OP1	10:CJ:57:LYS:NZ	2.41	0.52
1:CA:1076:C:C2	1:CA:1082:G:C2	2.97	0.52
11:CK:85:ARG:HA	11:CK:112:THR:OG1	2.09	0.52
12:CL:92:LEU:HB2	12:CL:95:VAL:HG21	1.91	0.52
23:DA:841:A:C2	23:DA:938:G:C2	2.96	0.52
23:DA:912:C:C2	23:DA:913:U:C5	2.97	0.52
23:DA:975:G:H1'	23:DA:990:A:C2	2.43	0.52
23:DA:1270:C:H5''	23:DA:1271:G:C5'	2.38	0.52
23:DA:1312:U:H4'	23:DA:1313:U:O5'	2.09	0.52
23:DA:1387:C:C2	23:DA:1388:G:C8	2.97	0.52
23:DA:2213:U:H5''	23:DA:2215:G:OP2	2.08	0.52
23:DA:2276:G:O2'	23:DA:2277:G:H5'	2.09	0.52
23:DA:2476:A:H2	23:DA:2477:C:C6	2.27	0.52
23:DA:2657:A:H5''	23:DA:2658:C:OP2	2.09	0.52
25:DC:27:THR:O	25:DC:27:THR:CG2	2.51	0.52
25:DC:148:GLU:HB2	25:DC:151:LYS:CD	2.39	0.52
25:DC:212:SER:O	25:DC:217:ARG:HG3	2.09	0.52
25:DC:242:ARG:N	25:DC:242:ARG:HD3	2.24	0.52
30:DH:88:ILE:HG12	30:DH:123:LEU:N	2.24	0.52
30:DH:113:ARG:HB2	30:DH:130:TYR:CE1	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:133:HIS:HD2	30:DH:135:GLU:HG2	1.73	0.52
33:DK:7:TYR:CZ	33:DK:44:LYS:HG3	2.43	0.52
34:DL:18:ARG:C	34:DL:19:VAL:HG22	2.29	0.52
36:DN:103:ARG:NH1	36:DN:110:PRO:HG3	2.24	0.52
38:DP:56:GLY:C	38:DP:57:PHE:O	2.43	0.52
45:DW:36:ILE:HG23	45:DW:58:THR:CG2	2.39	0.52
46:DX:46:LEU:HD23	46:DX:46:LEU:O	2.07	0.52
1:AA:8:A:N7	4:AD:208:SER:OG	2.42	0.52
1:AA:38:G:H22	1:AA:397:A:C5'	2.16	0.52
1:AA:197:A:C5	1:AA:221:C:H4'	2.43	0.52
1:AA:380:G:C2	1:AA:384:G:C6	2.96	0.52
1:AA:977:A:H5''	1:AA:977:A:N3	2.24	0.52
1:AA:1076:C:C2	1:AA:1082:G:C2	2.97	0.52
1:AA:1347:G:H8	9:AI:107:ARG:HB3	1.70	0.52
4:AD:100:ARG:NH2	4:AD:118:ARG:HH12	2.06	0.52
13:AM:14:ARG:HB3	13:AM:16:ASP:OD2	2.09	0.52
19:AS:5:LEU:HG	19:AS:10:PHE:HB3	1.91	0.52
20:AT:10:LEU:C	20:AT:10:LEU:HD12	2.30	0.52
23:BA:238:C:O2'	23:BA:608:A:H1'	2.08	0.52
23:BA:993:G:C4	23:BA:994:C:C5	2.96	0.52
23:BA:1015:G:H2'	23:BA:1016:G:H5'	1.91	0.52
23:BA:1027:A:C6	23:BA:1126:A:C4	2.97	0.52
23:BA:1105:U:C2	23:BA:1106:G:C8	2.97	0.52
23:BA:1235:G:C6	23:BA:1236:G:N1	2.76	0.52
23:BA:1429:G:H2'	23:BA:1430:C:C6	2.44	0.52
23:BA:1773:A:C2'	23:BA:1774:C:H5'	2.40	0.52
23:BA:2315:G:H2'	23:BA:2316:C:C6	2.43	0.52
23:BA:2723:C:H2'	23:BA:2724:C:O5'	2.09	0.52
23:BA:2756:U:H4'	23:BA:2757:A:OP1	2.09	0.52
26:BD:6:GLY:HA2	26:BD:51:PHE:HE2	1.74	0.52
26:BD:128:SER:OG	26:BD:129:HIS:N	2.38	0.52
30:BH:92:VAL:CG2	30:BH:96:ASP:HB2	2.36	0.52
35:BM:134:ARG:NH1	35:BM:138:ASP:OD1	2.38	0.52
39:BQ:79:PHE:CD1	39:BQ:83:LEU:HD13	2.45	0.52
40:BR:5:VAL:HG12	40:BR:14:VAL:HG21	1.92	0.52
41:BS:32:ALA:O	41:BS:33:ARG:C	2.46	0.52
42:BT:43:VAL:HG23	42:BT:47:PHE:CD1	2.44	0.52
1:CA:92:G:H2'	1:CA:93:U:H5'	1.91	0.52
1:CA:1148:U:C2	9:CI:16:ARG:NH2	2.77	0.52
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.77	0.52
4:CD:49:ARG:CZ	4:CD:50:ARG:H	2.21	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:68:TYR:CE2	4:CD:97:LEU:HB3	2.43	0.52
4:CD:111:ALA:HB1	4:CD:116:GLN:HG2	1.90	0.52
6:CF:22:GLU:OE1	6:CF:84:ASN:HB2	2.09	0.52
7:CG:70:LYS:CG	7:CG:96:GLN:HB3	2.39	0.52
11:CK:59:TYR:O	11:CK:63:LEU:HG	2.10	0.52
22:CV:6189:G:C6	22:CV:6190:U:C4	2.97	0.52
23:DA:301:G:OP1	23:DA:301:G:H4'	2.09	0.52
23:DA:322:A:O4'	23:DA:340:A:H1'	2.09	0.52
23:DA:909:A:C4	23:DA:912:C:C5	2.96	0.52
23:DA:1190:G:H5''	34:DL:35:HIS:HA	1.90	0.52
23:DA:2598:A:H2'	23:DA:2599:G:O5'	2.09	0.52
23:DA:2756:U:H4'	23:DA:2757:A:OP1	2.08	0.52
25:DC:68:LYS:O	25:DC:70:TRP:CE3	2.63	0.52
26:DD:111:ARG:CD	26:DD:160:TYR:CE1	2.92	0.52
26:DD:137:HIS:HB3	26:DD:138:PRO:HD2	1.90	0.52
29:DG:43:VAL:HG12	29:DG:52:VAL:CG2	2.39	0.52
34:DL:75:ILE:HD12	34:DL:75:ILE:N	2.25	0.52
35:DM:10:ARG:HB3	35:DM:11:LYS:HG2	1.90	0.52
35:DM:43:THR:O	35:DM:46:GLN:HB2	2.10	0.52
43:DU:81:LYS:HZ1	43:DU:98:VAL:HG12	1.72	0.52
44:DV:68:PRO:O	44:DV:91:LEU:HB2	2.08	0.52
53:D5:62:LEU:C	53:D5:64:TYR:N	2.61	0.52
1:AA:527:G:O2'	1:AA:528:C:H5'	2.09	0.52
1:AA:761:G:H2'	1:AA:762:C:H6	1.75	0.52
1:AA:1237:C:OP1	1:AA:1238:A:H1'	2.10	0.52
1:AA:1252:A:O2'	1:AA:1253:G:H5'	2.10	0.52
2:AB:83:MET:O	2:AB:87:ARG:HB2	2.09	0.52
4:AD:3:ARG:HD2	4:AD:3:ARG:H	1.73	0.52
5:AE:11:ILE:HB	5:AE:31:LEU:HD13	1.92	0.52
5:AE:69:VAL:HG12	5:AE:71:LEU:HG	1.92	0.52
7:AG:86:GLN:HB2	7:AG:148:ASN:ND2	2.23	0.52
12:AL:49:SER:O	12:AL:50:ALA:HB2	2.07	0.52
22:AV:6191:A:H2'	22:AV:6192:G:H8	1.73	0.52
23:BA:151:C:C2	23:BA:176:G:N2	2.77	0.52
23:BA:271(C):G:N7	23:BA:421:U:H2'	2.25	0.52
23:BA:568:U:O4	40:BR:78:LYS:NZ	2.42	0.52
23:BA:908:C:OP1	35:BM:22:LYS:HD2	2.09	0.52
23:BA:1505:C:H2'	23:BA:1506:C:C6	2.44	0.52
23:BA:1615:C:C2	41:BS:87:PRO:HG2	2.44	0.52
23:BA:1858:G:H1'	23:BA:1884:A:H61	1.69	0.52
23:BA:2584:U:H5''	23:BA:2585:U:OP2	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BK:115:VAL:O	33:BK:118:ALA:HB3	2.09	0.52
34:BL:48:PRO:O	34:BL:49:ARG:O	2.28	0.52
37:BO:28:VAL:O	37:BO:92:TYR:HE1	1.92	0.52
39:BQ:76:TYR:CZ	39:BQ:80:ILE:HG12	2.44	0.52
41:BS:25:ARG:HB2	41:BS:25:ARG:HH11	1.75	0.52
46:BX:9:GLY:O	46:BX:13:ILE:CG2	2.57	0.52
1:CA:411:A:N7	1:CA:429:U:C5	2.77	0.52
1:CA:420:U:O2	1:CA:424:G:N1	2.42	0.52
1:CA:712:A:C2'	1:CA:713:G:H5'	2.39	0.52
1:CA:741:G:H2'	1:CA:742:G:O4'	2.10	0.52
1:CA:1305:G:OP2	1:CA:1305:G:C8	2.62	0.52
1:CA:1408:A:H4'	23:DA:1912:A:N6	2.25	0.52
2:CB:31:TYR:O	2:CB:42:ILE:HD12	2.09	0.52
3:CC:134:ILE:HG23	3:CC:151:VAL:CB	2.33	0.52
3:CC:188:LEU:O	3:CC:189:ALA:HB2	2.09	0.52
8:CH:42:GLU:HG3	8:CH:109:ILE:HD12	1.92	0.52
23:DA:464:U:H4'	52:D4:5:TRP:CZ3	2.44	0.52
23:DA:783:A:H2'	23:DA:785:G:OP1	2.10	0.52
23:DA:955:C:H5''	35:DM:85:LYS:HE2	1.92	0.52
23:DA:1027:A:C2	23:DA:2488:A:H5'	2.44	0.52
23:DA:1130:U:O2	26:DD:149:ARG:NH2	2.41	0.52
23:DA:1324:G:N2	23:DA:1331:A:C4	2.78	0.52
23:DA:1917:U:C2'	23:DA:1918:A:H5'	2.40	0.52
23:DA:2598:A:C2'	23:DA:2599:G:O5'	2.58	0.52
25:DC:25:THR:HG21	25:DC:81:ALA:CB	2.38	0.52
25:DC:74:GLY:O	25:DC:76:PRO:HD3	2.09	0.52
29:DG:94:TYR:CD1	29:DG:94:TYR:N	2.76	0.52
35:DM:16:ARG:O	35:DM:17:LEU:HD23	2.09	0.52
36:DN:11:ASN:O	36:DN:12:ARG:NH1	2.38	0.52
39:DQ:62:ILE:N	39:DQ:62:ILE:HD13	2.24	0.52
47:DY:29:LYS:HD3	47:DY:57:ILE:HG21	1.92	0.52
48:DZ:26:LEU:HB2	48:DZ:28:LEU:HD13	1.92	0.52
1:AA:674:G:H2'	1:AA:675:A:C8	2.43	0.52
1:AA:1107:C:C4	1:AA:1108:G:C8	2.97	0.52
1:AA:1346:A:H61	1:AA:1374:A:H3'	1.74	0.52
2:AB:182:ILE:HG22	2:AB:182:ILE:O	2.08	0.52
7:AG:67:GLU:OE1	7:AG:70:LYS:HD2	2.09	0.52
8:AH:109:ILE:HG12	8:AH:110:ALA:N	2.24	0.52
15:AO:29:VAL:HG12	15:AO:85:LEU:CD1	2.39	0.52
23:BA:77:C:O3'	47:BY:7:ARG:NH1	2.43	0.52
23:BA:103:A:H8	23:BA:103:A:O5'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:270(H):C:C5	23:BA:270(I):C:H5	2.28	0.52
23:BA:363(C):G:O2'	23:BA:363(D):G:H5'	2.10	0.52
23:BA:1184:G:C5	23:BA:1185:C:C5	2.98	0.52
23:BA:1589:C:C2	23:BA:1590:U:C5	2.97	0.52
23:BA:1709:U:H2'	23:BA:1710:C:C6	2.44	0.52
23:BA:1785:A:O2'	23:BA:1786:A:H2'	2.10	0.52
23:BA:1813:G:H1'	25:BC:50:THR:CG2	2.31	0.52
23:BA:1922:G:H2'	23:BA:1923:U:O4'	2.10	0.52
23:BA:2093:G:H1	23:BA:2196:C:N4	2.08	0.52
23:BA:2443:C:C2'	23:BA:2444:G:H5'	2.39	0.52
23:BA:2780:G:OP2	32:BJ:141:LYS:HD3	2.08	0.52
23:BA:2886:G:N2	23:BA:2887:U:C2	2.78	0.52
25:BC:58:HIS:HD2	25:BC:59:LYS:O	1.92	0.52
28:BF:83:ARG:HG3	28:BF:84:LYS:N	2.25	0.52
29:BG:46:GLU:O	29:BG:49:VAL:HG22	2.09	0.52
35:BM:133:ARG:O	35:BM:134:ARG:HB2	2.08	0.52
40:BR:38:LEU:C	40:BR:39:LEU:HD13	2.29	0.52
41:BS:45:TYR:O	41:BS:45:TYR:CG	2.62	0.52
46:BX:14:VAL:HG12	46:BX:14:VAL:O	2.10	0.52
47:BY:6:VAL:CG1	47:BY:10:LEU:HD11	2.30	0.52
52:B4:11:LYS:HD2	52:B4:15:THR:HG21	1.91	0.52
1:CA:99:C:C2	1:CA:101:A:C8	2.97	0.52
1:CA:376:G:O3'	16:CP:5:ARG:HD2	2.09	0.52
1:CA:620:C:H2'	1:CA:621:A:O4'	2.09	0.52
1:CA:1051:C:N4	1:CA:1207:G:H1	2.06	0.52
1:CA:1246:C:H2'	1:CA:1247:U:C6	2.44	0.52
1:CA:1357:A:N7	1:CA:1358:U:C4	2.78	0.52
3:CC:86:VAL:O	3:CC:90:GLU:HG2	2.08	0.52
3:CC:130:VAL:HA	3:CC:133:ALA:HB3	1.90	0.52
6:CF:97:PHE:CD2	18:CR:31:LEU:HD21	2.45	0.52
9:CI:95:LYS:HD3	9:CI:96:LEU:N	2.25	0.52
23:DA:277:C:H3'	23:DA:278:A:C5'	2.39	0.52
23:DA:415:A:H2'	23:DA:416:C:C6	2.44	0.52
23:DA:459:U:H4'	52:D4:40:TRP:CZ3	2.45	0.52
23:DA:598:G:H5'	34:DL:15:ARG:HB3	1.91	0.52
23:DA:795:C:H2'	23:DA:796:C:C6	2.43	0.52
23:DA:861:A:N3	24:DB:79:C:O2'	2.38	0.52
23:DA:1476:C:H3'	23:DA:1476:C:C6	2.42	0.52
23:DA:1506:C:H2'	23:DA:1508:A:C8	2.44	0.52
23:DA:1757:U:H2'	23:DA:1758:G:OP1	2.09	0.52
23:DA:2100:G:H21	23:DA:2101:G:H1'	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2584:U:H6	23:DA:2584:U:O5'	1.92	0.52
25:DC:181:GLU:HA	25:DC:272:ALA:HB3	1.90	0.52
26:DD:5:LEU:CB	26:DD:51:PHE:HD2	2.17	0.52
26:DD:25:VAL:C	26:DD:26:ILE:HD13	2.29	0.52
28:DF:8:LYS:HD3	28:DF:9:ARG:CG	2.40	0.52
33:DK:63:VAL:HB	33:DK:102:VAL:HG12	1.89	0.52
35:DM:43:THR:HG1	35:DM:45:GLN:HG2	1.74	0.52
46:DX:67:ILE:HB	46:DX:68:PRO:HD3	1.92	0.52
1:AA:617:G:H5'	16:AP:45:THR:HG22	1.92	0.52
1:AA:712:A:C6	1:AA:713:G:C6	2.98	0.52
1:AA:1128:C:O2	1:AA:1130:A:N6	2.43	0.52
1:AA:1351:U:H4'	7:AG:33:ASP:OD2	2.09	0.52
1:AA:1411:C:H2'	1:AA:1412:C:C6	2.44	0.52
2:AB:174:VAL:O	2:AB:178:ARG:CB	2.50	0.52
6:AF:97:PHE:CD2	18:AR:31:LEU:HD21	2.45	0.52
8:AH:54:ASP:O	8:AH:56:LYS:HG3	2.10	0.52
11:AK:34:ASP:H	11:AK:40:ILE:HD11	1.74	0.52
11:AK:59:TYR:O	11:AK:63:LEU:HG	2.09	0.52
11:AK:85:ARG:HA	11:AK:112:THR:OG1	2.09	0.52
20:AT:53:LEU:HD13	20:AT:102:GLY:HA3	1.91	0.52
23:BA:389:G:H1	34:BL:71:VAL:HG23	1.75	0.52
23:BA:544:C:H6	23:BA:544:C:O5'	1.93	0.52
23:BA:1104:C:C4	23:BA:1105:U:H5	2.28	0.52
23:BA:1109:C:N4	23:BA:1110:G:C2	2.78	0.52
23:BA:1543:A:H5'	23:BA:1544:C:P	2.49	0.52
23:BA:1952:A:C6	33:BK:22:ILE:CD1	2.93	0.52
23:BA:2460:U:C4	23:BA:2461:C:C5	2.97	0.52
23:BA:2713:A:H3'	23:BA:2714:G:C5'	2.39	0.52
25:BC:77:ALA:HB1	25:BC:96:HIS:O	2.09	0.52
25:BC:108:PRO:CB	25:BC:143:HIS:HE1	2.23	0.52
28:BF:25:TYR:OH	28:BF:32:PRO:HD3	2.10	0.52
29:BG:44:VAL:HG12	29:BG:45:VAL:N	2.20	0.52
30:BH:66:GLU:HB3	30:BH:67:ARG:NH1	2.23	0.52
30:BH:133:HIS:HD2	30:BH:135:GLU:HG2	1.72	0.52
40:BR:2:PHE:CE2	40:BR:13:ARG:CD	2.85	0.52
44:BV:68:PRO:O	44:BV:91:LEU:HB2	2.09	0.52
50:B2:4:HIS:CB	50:B2:5:PRO:HD3	2.39	0.52
1:CA:1313:U:OP1	19:CS:6:LYS:HG3	2.10	0.52
1:CA:1387:G:H2'	1:CA:1388:C:H6	1.73	0.52
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.75	0.52
2:CB:72:GLY:HA3	2:CB:165:VAL:HG11	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:78:GLU:HA	6:CF:81:ILE:HD11	1.89	0.52
9:CI:39:GLY:O	9:CI:40:LEU:HD23	2.09	0.52
13:CM:84:ILE:CG2	19:CS:74:PHE:HE1	2.21	0.52
23:DA:336:C:O2	23:DA:336:C:C2'	2.57	0.52
23:DA:480:A:H2'	23:DA:480:A:N3	2.24	0.52
23:DA:908:C:OP1	35:DM:22:LYS:HD2	2.08	0.52
23:DA:991:C:C6	23:DA:1185:C:N3	2.78	0.52
23:DA:2296:U:O2	23:DA:2333:A:N3	2.43	0.52
23:DA:2396:G:H4'	46:DX:31:GLY:HA2	1.92	0.52
25:DC:25:THR:HG21	25:DC:81:ALA:HB1	1.92	0.52
30:DH:142:VAL:O	30:DH:143:SER:HB2	2.09	0.52
37:DO:52:SER:O	37:DO:53:SER:HB2	2.09	0.52
37:DO:65:VAL:O	37:DO:69:VAL:HG12	2.08	0.52
37:DO:67:ARG:HG3	37:DO:100:ALA:HB1	1.92	0.52
43:DU:2:ARG:HG2	43:DU:3:VAL:N	2.24	0.52
43:DU:90:LEU:HG	43:DU:91:GLU:N	2.23	0.52
46:DX:13:ILE:O	46:DX:14:VAL:HB	2.10	0.52
46:DX:68:PRO:O	46:DX:71:TYR:N	2.42	0.52
50:D2:52:TYR:CD1	50:D2:52:TYR:O	2.62	0.52
1:AA:551:U:H5'	12:AL:118:LYS:HZ2	1.73	0.52
1:AA:658:G:C5	1:AA:659:U:C5	2.98	0.52
1:AA:1084:G:C5	1:AA:1085:U:C4	2.98	0.52
1:AA:1112:C:C4	3:AC:178:LEU:HD23	2.45	0.52
2:AB:8:LYS:HG2	2:AB:217:ARG:NH1	2.24	0.52
2:AB:205:ASP:C	2:AB:207:ALA:H	2.12	0.52
6:AF:22:GLU:OE1	6:AF:84:ASN:HB2	2.10	0.52
7:AG:47:CYS:O	7:AG:58:PRO:HG3	2.10	0.52
12:AL:100:VAL:O	12:AL:100:VAL:HG12	2.09	0.52
23:BA:370:G:H4'	23:BA:371:A:OP2	2.09	0.52
23:BA:491:G:O6	41:BS:49:LYS:HD3	2.10	0.52
23:BA:598:G:H5'	34:BL:15:ARG:HB3	1.91	0.52
23:BA:773:U:H4'	25:BC:47:GLY:CA	2.39	0.52
23:BA:811:U:OP2	34:BL:24:GLY:HA2	2.10	0.52
23:BA:966:G:C5	23:BA:967:C:C5	2.98	0.52
23:BA:988:A:H2'	23:BA:989:G:O5'	2.10	0.52
23:BA:1324:G:C5	23:BA:1328:G:O6	2.63	0.52
23:BA:1467:C:H42	23:BA:1525:G:H1	1.58	0.52
23:BA:2865:U:C5	23:BA:2866:U:C4	2.98	0.52
25:BC:174:ILE:N	25:BC:174:ILE:CD1	2.72	0.52
26:BD:201:THR:C	26:BD:202:LYS:HD3	2.29	0.52
29:BG:88:LEU:O	29:BG:162:ILE:HA	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BI:14:LYS:HE2	31:BI:14:LYS:HA	1.91	0.52
34:BL:10:PRO:CD	34:BL:11:GLY:N	2.69	0.52
37:BO:12:PHE:C	37:BO:12:PHE:HD1	2.12	0.52
43:BU:19:LYS:HB3	43:BU:20:TYR:CD1	2.44	0.52
46:BX:48:LYS:NZ	46:BX:50:ARG:CZ	2.72	0.52
53:B5:33:ASN:O	53:B5:34:TRP:HB3	2.09	0.52
53:B5:57:ARG:CZ	53:B5:57:ARG:CB	2.87	0.52
1:CA:632:A:N7	1:CA:633:G:C4	2.77	0.52
1:CA:942:G:H21	9:CI:124:GLN:NE2	2.07	0.52
1:CA:977:A:H5''	1:CA:977:A:N3	2.24	0.52
1:CA:1055:A:N7	1:CA:1200:C:N4	2.53	0.52
1:CA:1056:U:H5	1:CA:1200:C:N4	2.08	0.52
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.43	0.52
1:CA:1494:G:N2	23:DA:1912:A:C2	2.78	0.52
2:CB:69:LEU:HD12	2:CB:70:PHE:N	2.23	0.52
4:CD:105:VAL:O	4:CD:105:VAL:CG1	2.57	0.52
4:CD:199:ASN:ND2	4:CD:202:LEU:HG	2.24	0.52
5:CE:11:ILE:HG12	5:CE:33:VAL:HG23	1.91	0.52
7:CG:79:ARG:HA	7:CG:83:ALA:O	2.10	0.52
13:CM:14:ARG:HB3	13:CM:16:ASP:OD2	2.09	0.52
14:CN:24:CYS:HG	14:CN:27:CYS:HG	1.55	0.52
23:DA:270(S):G:H2'	23:DA:270(T):G:C8	2.45	0.52
23:DA:275:G:OP2	23:DA:363(A):G:N2	2.41	0.52
23:DA:379:G:N1	46:DX:20:ARG:NH2	2.56	0.52
23:DA:481:G:OP1	23:DA:481:G:H4'	2.09	0.52
23:DA:932:G:H4'	23:DA:933:A:O5'	2.10	0.52
23:DA:1493:C:H4'	23:DA:1494:A:OP1	2.09	0.52
23:DA:1590:U:O2	23:DA:1591:G:C8	2.63	0.52
23:DA:2352:A:H2'	23:DA:2353:G:H5'	1.90	0.52
23:DA:2886:G:H2'	23:DA:2887:U:H6	1.73	0.52
24:DB:103:U:C2'	24:DB:104:A:H5'	2.39	0.52
25:DC:30:GLU:CG	25:DC:63:ARG:NH2	2.73	0.52
29:DG:21:PRO:HB2	29:DG:23:ARG:NH1	2.24	0.52
30:DH:12:LEU:HD22	30:DH:12:LEU:H	1.75	0.52
32:DJ:70:ALA:HB2	32:DJ:135:LEU:HD11	1.90	0.52
32:DJ:95:TYR:HB2	32:DJ:108:ILE:O	2.10	0.52
34:DL:59:LEU:HD23	34:DL:59:LEU:C	2.30	0.52
44:DV:9:TYR:CG	44:DV:35:ARG:NH1	2.78	0.52
46:DX:11:ARG:HG3	46:DX:11:ARG:NH1	2.24	0.52
1:AA:224:C:C2	1:AA:225:C:C5	2.98	0.52
1:AA:332:G:O2'	1:AA:333:G:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:334:C:O2'	1:AA:335:C:H5'	2.10	0.52
1:AA:353:A:C2'	1:AA:354:G:OP2	2.57	0.52
1:AA:356:A:H2'	1:AA:357:G:H8	1.73	0.52
1:AA:522:C:H2'	1:AA:523:A:H5'	1.90	0.52
1:AA:1052:U:H2'	1:AA:1055:A:OP1	2.09	0.52
1:AA:1233:G:OP2	9:AI:124:GLN:HB2	2.09	0.52
1:AA:1246:C:H2'	1:AA:1247:U:C6	2.45	0.52
4:AD:51:PRO:HB3	4:AD:55:ALA:CB	2.40	0.52
6:AF:88:VAL:HG12	6:AF:89:MET:N	2.25	0.52
7:AG:80:VAL:CG2	7:AG:83:ALA:HB3	2.40	0.52
23:BA:527:C:O4'	23:BA:527:C:O2	2.28	0.52
23:BA:948:G:N2	23:BA:970:C:O2	2.42	0.52
23:BA:114(B):A:C4'	32:BJ:48:ARG:HH22	2.21	0.52
23:BA:1439:A:C8	23:BA:1440:G:C8	2.98	0.52
23:BA:2058:A:C6	23:BA:2059:A:N6	2.78	0.52
30:BH:29:TYR:C	30:BH:32:PRO:HD2	2.30	0.52
32:BJ:69:VAL:O	32:BJ:70:ALA:HB3	2.10	0.52
32:BJ:95:TYR:HB2	32:BJ:108:ILE:O	2.10	0.52
34:BL:86:LYS:HB3	34:BL:118:GLY:HA3	1.91	0.52
38:BP:81:PRO:C	38:BP:82:LEU:HD23	2.29	0.52
43:BU:59:GLY:C	43:BU:61:ILE:H	2.12	0.52
45:BW:14:ARG:CZ	45:BW:14:ARG:CB	2.86	0.52
45:BW:66:VAL:HG12	45:BW:67:VAL:N	2.25	0.52
50:B2:3:LYS:O	50:B2:4:HIS:C	2.48	0.52
1:CA:156:G:C2	1:CA:166:G:C2	2.98	0.52
1:CA:294:U:C2	1:CA:295:C:C5	2.98	0.52
1:CA:376:G:H1	1:CA:387:U:H3	1.57	0.52
1:CA:512:U:O2'	1:CA:513:C:H5'	2.10	0.52
1:CA:819:A:N6	1:CA:1529:G:C5	2.78	0.52
1:CA:1107:C:C4	1:CA:1108:G:C8	2.98	0.52
1:CA:1226:C:H42	13:CM:104:ARG:HD2	1.73	0.52
1:CA:1237:C:OP1	1:CA:1238:A:H1'	2.10	0.52
1:CA:1346:A:C2	1:CA:1348:U:O4	2.63	0.52
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.45	0.52
4:CD:21:LEU:HD12	4:CD:22:LYS:H	1.73	0.52
7:CG:47:CYS:O	7:CG:58:PRO:HG3	2.09	0.52
7:CG:115:ARG:HB2	7:CG:118:VAL:HG11	1.90	0.52
10:CJ:13:HIS:CE1	10:CJ:14:LYS:HG3	2.44	0.52
11:CK:34:ASP:HB2	11:CK:35:PRO:CD	2.40	0.52
23:DA:72:U:O4	23:DA:112:U:H4'	2.09	0.52
23:DA:81:G:H21	43:DU:2:ARG:NH2	2.07	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:806:C:H6	23:DA:806:C:O5'	1.93	0.52
23:DA:1414:G:C6	23:DA:1415:U:C4	2.97	0.52
23:DA:2352:A:C2'	23:DA:2353:G:H5'	2.39	0.52
26:DD:173:VAL:HG12	26:DD:174:ASP:H	1.74	0.52
28:DF:19:LEU:HD11	28:DF:172:LEU:HD13	1.92	0.52
33:DK:28:SER:O	33:DK:29:ASN:HB3	2.10	0.52
46:DX:48:LYS:NZ	46:DX:50:ARG:NH1	2.57	0.52
49:D1:43:GLY:O	49:D1:44:CYS:HB3	2.08	0.52
52:D4:12:ARG:HH11	52:D4:12:ARG:CG	2.15	0.52
1:AA:68:G:C6	1:AA:69:G:N7	2.78	0.52
1:AA:109:A:N7	1:AA:326:G:C4	2.78	0.52
1:AA:137:C:O2'	1:AA:138:G:H5'	2.10	0.52
1:AA:862:C:H2'	1:AA:863:U:C5'	2.40	0.52
2:AB:102:LEU:HD12	2:AB:102:LEU:N	2.24	0.52
3:AC:121:ALA:HB1	3:AC:188:LEU:O	2.10	0.52
17:AQ:11:VAL:O	17:AQ:11:VAL:HG13	2.10	0.52
22:AV:6189:G:C6	22:AV:6190:U:C4	2.98	0.52
23:BA:277:C:H3'	23:BA:278:A:C5'	2.40	0.52
23:BA:389:G:C6	34:BL:71:VAL:HG23	2.44	0.52
23:BA:780:G:H21	23:BA:783:A:N6	2.03	0.52
23:BA:1344:G:H5'	23:BA:1384:A:C6	2.44	0.52
23:BA:2028:U:O4	23:BA:2033:A:OP1	2.27	0.52
23:BA:2317:C:C2'	23:BA:2318:G:H5'	2.40	0.52
26:BD:179:GLU:HB3	26:BD:181:LEU:HD22	1.92	0.52
28:BF:18:GLU:HG2	28:BF:175:LEU:HD22	1.91	0.52
32:BJ:59:GLY:O	32:BJ:65:TRP:CE3	2.63	0.52
34:BL:47:ASP:OD1	34:BL:49:ARG:N	2.42	0.52
36:BN:10:LEU:CB	36:BN:17:ARG:NE	2.70	0.52
38:BP:88:ILE:HG13	38:BP:89:VAL:N	2.24	0.52
45:BW:14:ARG:CZ	45:BW:14:ARG:HB2	2.40	0.52
46:BX:19:GLN:O	46:BX:20:ARG:HG3	2.10	0.52
46:BX:73:LEU:O	46:BX:73:LEU:HG	2.08	0.52
1:CA:527:G:O2'	1:CA:528:C:H5'	2.10	0.52
1:CA:878:G:C5'	8:CH:89:PRO:HG2	2.40	0.52
23:DA:284:U:H2'	23:DA:285:C:C6	2.45	0.52
23:DA:568:U:O4	40:DR:78:LYS:CE	2.58	0.52
23:DA:900:A:C4	23:DA:901:A:C8	2.97	0.52
23:DA:1028:A:N3	23:DA:2486:G:O2'	2.29	0.52
23:DA:1047:G:H1'	23:DA:1110:G:N2	2.24	0.52
23:DA:1235:G:C6	23:DA:1236:G:N1	2.78	0.52
23:DA:1301:A:H2'	23:DA:1301:A:N3	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1636:C:H2'	23:DA:1637:A:C8	2.43	0.52
23:DA:2317:C:C2'	23:DA:2318:G:H5'	2.40	0.52
23:DA:2342:C:O2'	23:DA:2374:C:H5''	2.08	0.52
23:DA:2415:G:H1'	34:DL:67:MET:CE	2.37	0.52
23:DA:2461:C:O2	23:DA:2461:C:C2'	2.55	0.52
25:DC:25:THR:HG22	25:DC:82:ILE:N	2.25	0.52
27:DE:36:VAL:HG11	27:DE:183:VAL:HG11	1.90	0.52
28:DF:10:LYS:O	28:DF:14:GLU:HB3	2.09	0.52
30:DH:29:TYR:C	30:DH:32:PRO:HD2	2.29	0.52
36:DN:66:VAL:HG13	36:DN:70:LEU:HD12	1.92	0.52
40:DR:64:HIS:HD2	40:DR:92:THR:CG2	2.21	0.52
43:DU:59:GLY:C	43:DU:61:ILE:H	2.12	0.52
45:DW:31:VAL:HG11	45:DW:67:VAL:HG23	1.92	0.52
45:DW:50:ASN:O	45:DW:62:LEU:HB2	2.10	0.52
48:DZ:11:SER:OG	48:DZ:13:ILE:HG13	2.10	0.52
1:AA:318:G:O2'	1:AA:319:G:H5'	2.09	0.52
1:AA:673:G:H5''	6:AF:87:ARG:NH1	2.24	0.52
1:AA:1022:G:H2'	1:AA:1023:G:C8	2.43	0.52
1:AA:1508:G:H2'	1:AA:1509:C:O4'	2.09	0.52
6:AF:86:ARG:O	6:AF:87:ARG:CB	2.50	0.52
9:AI:103:THR:HG22	9:AI:105:ASP:H	1.75	0.52
12:AL:6:ILE:HD12	12:AL:6:ILE:N	2.25	0.52
23:BA:84:A:C2	23:BA:98:G:N3	2.78	0.52
23:BA:568:U:O4	40:BR:78:LYS:HE2	2.09	0.52
23:BA:1636:C:H2'	23:BA:1637:A:C8	2.45	0.52
23:BA:1952:A:C5	33:BK:22:ILE:CD1	2.93	0.52
23:BA:1993:U:H4'	26:BD:128:SER:CB	2.40	0.52
23:BA:2287:A:C6	23:BA:2289:G:C4	2.98	0.52
26:BD:137:HIS:HB3	26:BD:138:PRO:HD2	1.90	0.52
30:BH:113:ARG:HB2	30:BH:130:TYR:CE1	2.42	0.52
35:BM:8:LYS:HG3	35:BM:9:TYR:N	2.24	0.52
38:BP:75:ILE:HG22	38:BP:75:ILE:O	2.10	0.52
41:BS:19:LEU:HB3	50:B2:25:LEU:HD11	1.90	0.52
46:BX:52:ARG:O	46:BX:56:GLN:O	2.27	0.52
47:BY:16:LEU:HB2	47:BY:20:GLU:HG3	1.92	0.52
1:CA:1369:C:H2'	1:CA:1370:G:O4'	2.10	0.52
1:CA:1381:U:O2'	1:CA:1382:C:H5'	2.10	0.52
2:CB:25:ASN:HB3	2:CB:26:PRO:HD2	1.91	0.52
4:CD:9:CYS:SG	4:CD:32:ALA:HB2	2.50	0.52
4:CD:23:GLY:CA	4:CD:112:VAL:HG22	2.40	0.52
4:CD:30:LYS:C	4:CD:32:ALA:H	2.13	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:41:VAL:HG12	5:CE:112:LEU:O	2.09	0.52
6:CF:18:GLN:O	6:CF:21:LEU:HB2	2.09	0.52
6:CF:22:GLU:O	6:CF:26:ILE:HG13	2.10	0.52
10:CJ:63:PHE:HB3	14:CN:57:ARG:O	2.10	0.52
16:CP:39:TYR:CD2	16:CP:40:ASP:N	2.78	0.52
20:CT:13:LEU:HD12	20:CT:13:LEU:N	2.22	0.52
23:DA:1210:A:H8	23:DA:1210:A:H5'	1.73	0.52
23:DA:1478:G:N2	23:DA:1479:G:C4	2.77	0.52
23:DA:2020:A:OP1	39:DQ:27:LEU:HB2	2.09	0.52
23:DA:2723:C:OP2	26:DD:109:LYS:NZ	2.42	0.52
23:DA:2862:G:C6	23:DA:2863:C:C4	2.98	0.52
24:DB:55:U:O2'	24:DB:56:G:H5'	2.10	0.52
25:DC:120:GLY:HA2	25:DC:190:TYR:OH	2.10	0.52
25:DC:168:ARG:O	25:DC:169:GLU:HB2	2.10	0.52
26:DD:201:THR:C	26:DD:202:LYS:HD3	2.27	0.52
27:DE:179:GLU:CD	27:DE:179:GLU:H	2.12	0.52
33:DK:97:ARG:H	33:DK:117:LEU:CD2	2.23	0.52
34:DL:47:ASP:OD1	34:DL:49:ARG:N	2.43	0.52
35:DM:84:GLY:HA3	45:DW:10:THR:CG2	2.39	0.52
44:DV:58:VAL:HG11	44:DV:66:SER:HB2	1.92	0.52
44:DV:68:PRO:HG2	44:DV:91:LEU:O	2.09	0.52
1:AA:11:G:C6	1:AA:12:U:C4	2.98	0.52
1:AA:105:G:C4	1:AA:106:C:C5	2.98	0.52
1:AA:414:A:H2'	1:AA:415:A:H8	1.75	0.52
1:AA:600:C:H2'	1:AA:601:C:H6	1.73	0.52
1:AA:689:C:OP1	11:AK:27:ASN:ND2	2.43	0.52
1:AA:754:C:O5'	15:AO:72:ARG:NH2	2.43	0.52
1:AA:801:U:H2'	1:AA:802:A:C8	2.45	0.52
1:AA:939:G:H2'	1:AA:940:C:C6	2.44	0.52
1:AA:1068:G:H8	1:AA:1068:G:OP2	1.92	0.52
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.51	0.52
5:AE:18:ARG:HH21	5:AE:25:ARG:CB	2.23	0.52
12:AL:61:SER:C	12:AL:63:TYR:H	2.12	0.52
23:BA:322:A:OP1	27:BE:168:ARG:HD3	2.10	0.52
23:BA:1680:U:C2'	23:BA:1681:G:O5'	2.58	0.52
23:BA:2046:G:O5'	50:B2:19:ARG:HA	2.09	0.52
23:BA:2215:G:OP2	23:BA:2215:G:H8	1.93	0.52
23:BA:2506:U:C5	23:BA:2507:C:H5	2.27	0.52
24:BB:73:A:C4	24:BB:74:U:C6	2.98	0.52
28:BF:92:VAL:O	28:BF:92:VAL:HG13	2.09	0.52
28:BF:161:THR:C	28:BF:163:ALA:H	2.11	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:1:MET:HG3	30:BH:23:PRO:HG3	1.92	0.52
34:BL:128:HIS:CA	34:BL:147:LEU:HB3	2.10	0.52
35:BM:20:ALA:HB2	35:BM:99:PRO:HB2	1.91	0.52
36:BN:63:ARG:HA	36:BN:80:PHE:CE2	2.45	0.52
39:BQ:90:VAL:O	39:BQ:92:ARG:N	2.43	0.52
46:BX:86:SER:HB3	46:BX:89:GLU:HB2	1.92	0.52
50:B2:52:TYR:CD1	50:B2:52:TYR:O	2.63	0.52
1:CA:406:G:H2'	1:CA:407:G:H8	1.75	0.52
1:CA:563:A:C8	1:CA:567:G:H1'	2.44	0.52
1:CA:577:G:C5	1:CA:578:C:C5	2.99	0.52
1:CA:1325:C:O3'	21:CU:17:THR:HG21	2.10	0.52
1:CA:1389:C:H2'	1:CA:1390:U:O4'	2.09	0.52
5:CE:10:MET:HA	5:CE:32:VAL:HA	1.91	0.52
10:CJ:30:SER:HB2	10:CJ:80:LYS:CG	2.40	0.52
23:DA:36:G:C5	23:DA:37:C:C5	2.98	0.52
23:DA:253:C:H2'	23:DA:254:G:O4'	2.10	0.52
23:DA:466:A:H5''	23:DA:467:G:OP2	2.10	0.52
23:DA:779:U:P	25:DC:49:ILE:HD12	2.50	0.52
23:DA:1105:U:C2	23:DA:1106:G:C8	2.98	0.52
23:DA:1799:G:H8	25:DC:181:GLU:CD	2.14	0.52
23:DA:1850:G:C5	23:DA:1851:U:C5	2.98	0.52
23:DA:1922:G:H2'	23:DA:1923:U:O4'	2.10	0.52
23:DA:2335:A:N7	23:DA:2337:G:C5	2.78	0.52
23:DA:2721:A:H1'	23:DA:2873:A:O2'	2.08	0.52
23:DA:2731:G:C6	23:DA:2732:G:C6	2.98	0.52
24:DB:75:G:H21	44:DV:85:HIS:CE1	2.27	0.52
25:DC:127:VAL:HA	25:DC:193:VAL:HG12	1.92	0.52
32:DJ:62:ARG:NH2	32:DJ:64:ASP:OD2	2.38	0.52
34:DL:86:LYS:HB3	34:DL:118:GLY:HA3	1.91	0.52
40:DR:98:GLU:HG2	40:DR:100:ARG:CD	2.39	0.52
44:DV:152:ALA:C	44:DV:154:ASP:H	2.13	0.52
51:D3:11:LEU:O	51:D3:24:GLU:HB2	2.10	0.52
53:D5:60:LEU:HD23	53:D5:60:LEU:N	2.25	0.52
1:AA:407:G:H4'	4:AD:116:GLN:HA	1.92	0.51
1:AA:575:G:OP1	1:AA:575:G:H4'	2.11	0.51
1:AA:1112:C:H42	3:AC:177:THR:HA	1.75	0.51
1:AA:1353:G:H8	1:AA:1353:G:OP2	1.92	0.51
3:AC:23:TYR:HB2	10:AJ:93:GLY:O	2.10	0.51
3:AC:76:VAL:HG23	3:AC:77:ILE:HG13	1.92	0.51
4:AD:21:LEU:HD12	4:AD:22:LYS:H	1.75	0.51
9:AI:10:ARG:CD	9:AI:11:LYS:HG3	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:86:VAL:HG23	9:AI:93:ARG:HB2	1.90	0.51
18:AR:76:LEU:N	18:AR:76:LEU:HD22	2.24	0.51
23:BA:286:C:H2'	23:BA:287:C:C6	2.39	0.51
23:BA:480:A:OP2	43:BU:46:LYS:HE2	2.09	0.51
23:BA:699:A:H2'	23:BA:700:G:O4'	2.09	0.51
23:BA:909:A:C2	23:BA:912:C:C6	2.98	0.51
23:BA:1893:C:C6	23:BA:1894:C:C5	2.99	0.51
23:BA:2432:A:H5''	23:BA:2433:A:OP2	2.09	0.51
23:BA:2480:C:N4	23:BA:2481:G:C6	2.78	0.51
25:BC:31:LYS:O	25:BC:36:PRO:HD3	2.11	0.51
25:BC:265:PRO:C	25:BC:267:SER:N	2.62	0.51
28:BF:18:GLU:HG2	28:BF:175:LEU:CD2	2.40	0.51
28:BF:69:ALA:O	28:BF:90:LEU:HD13	2.10	0.51
34:BL:114:ILE:H	34:BL:114:ILE:CD1	2.01	0.51
43:BU:8:LYS:H	43:BU:8:LYS:NZ	2.02	0.51
43:BU:8:LYS:HD2	43:BU:13:VAL:CG2	2.40	0.51
43:BU:63:LYS:HG3	43:BU:64:GLU:N	2.23	0.51
43:BU:95:LYS:HE2	43:BU:100:ALA:HB2	1.91	0.51
1:CA:780:A:C2	1:CA:803:G:N1	2.78	0.51
1:CA:782:A:C2	1:CA:801:U:O2	2.63	0.51
1:CA:790:A:H5'	22:CV:6192:G:H4'	1.91	0.51
1:CA:1037:C:H2'	1:CA:1038:C:H6	1.75	0.51
1:CA:1112:C:O2	3:CC:179:ARG:HD3	2.11	0.51
1:CA:1502:A:C8	1:CA:1505:G:N2	2.77	0.51
3:CC:175:LEU:HD11	3:CC:201:TYR:HE2	1.75	0.51
4:CD:64:LEU:O	4:CD:64:LEU:HD12	2.10	0.51
5:CE:41:VAL:CG1	5:CE:113:ALA:HA	2.39	0.51
6:CF:63:TYR:O	6:CF:65:VAL:HG12	2.09	0.51
7:CG:38:LEU:O	7:CG:42:ILE:HG13	2.09	0.51
9:CI:114:TYR:HD2	9:CI:114:TYR:N	2.08	0.51
10:CJ:13:HIS:HB3	10:CJ:68:HIS:NE2	2.25	0.51
19:CS:31:ILE:CG2	19:CS:49:ILE:HA	2.39	0.51
23:DA:379:G:C2	46:DX:20:ARG:NH2	2.77	0.51
23:DA:389:G:C6	34:DL:71:VAL:HG23	2.45	0.51
23:DA:449:A:C2'	23:DA:450:G:H5'	2.40	0.51
23:DA:593:G:H4'	53:D5:62:LEU:CD1	2.40	0.51
23:DA:774:A:H2	23:DA:787:U:O2'	1.92	0.51
23:DA:943:U:OP2	34:DL:38:GLN:CD	2.48	0.51
23:DA:2688:U:O2	23:DA:2688:U:C3'	2.57	0.51
24:DB:45:A:H1'	28:DF:95:ARG:CZ	2.40	0.51
28:DF:86:MET:N	28:DF:87:PRO:HD3	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:97:ILE:O	30:DH:101:LEU:HB2	2.11	0.51
32:DJ:93:LYS:HE3	32:DJ:95:TYR:CE1	2.35	0.51
36:DN:47:PHE:CE2	36:DN:51:LEU:HD11	2.45	0.51
36:DN:48:VAL:O	36:DN:51:LEU:N	2.43	0.51
38:DP:88:ILE:HG13	38:DP:89:VAL:N	2.25	0.51
39:DQ:92:ARG:HH22	40:DR:11:GLN:H	1.55	0.51
39:DQ:102:GLU:N	39:DQ:103:PRO:CD	2.74	0.51
41:DS:45:TYR:CD2	41:DS:45:TYR:C	2.84	0.51
44:DV:165:VAL:HG23	44:DV:166:SER:O	2.10	0.51
49:D1:51:TYR:O	49:D1:52:SER:HB2	2.09	0.51
52:D4:19:ARG:NH1	52:D4:19:ARG:CB	2.73	0.51
1:AA:376:G:O2'	1:AA:377:G:C5'	2.59	0.51
1:AA:1061:G:O4'	10:AJ:56:HIS:CE1	2.63	0.51
1:AA:1101:A:N3	1:AA:1102:A:H1'	2.25	0.51
1:AA:1298:C:N4	7:AG:114:ARG:HD3	2.25	0.51
2:AB:17:PHE:CB	2:AB:44:LEU:HD21	2.39	0.51
3:AC:182:ILE:HD11	3:AC:203:PHE:CD1	2.45	0.51
4:AD:109:GLY:C	4:AD:111:ALA:H	2.13	0.51
4:AD:144:ASP:O	4:AD:146:ILE:HG13	2.10	0.51
7:AG:70:LYS:CG	7:AG:96:GLN:HB3	2.39	0.51
8:AH:20:TYR:HD1	8:AH:65:TYR:CE2	2.28	0.51
10:AJ:13:HIS:HB3	10:AJ:68:HIS:NE2	2.24	0.51
12:AL:31:PHE:CB	12:AL:83:LEU:HD11	2.40	0.51
12:AL:52:ARG:HH11	12:AL:52:ARG:HG2	1.71	0.51
19:AS:25:LYS:HB3	19:AS:27:GLU:OE1	2.10	0.51
20:AT:57:ARG:HH12	20:AT:102:GLY:HA2	1.71	0.51
23:BA:17:G:H4'	39:BQ:25:TRP:CZ3	2.45	0.51
23:BA:95:G:N2	23:BA:96:G:H1'	2.25	0.51
23:BA:480:A:H2'	23:BA:480:A:N3	2.25	0.51
23:BA:771:G:H2'	23:BA:772:C:H6	1.76	0.51
23:BA:851:U:O2	23:BA:928:G:C2	2.63	0.51
23:BA:975:G:H1'	23:BA:990:A:C2	2.45	0.51
23:BA:1232:G:C5	23:BA:1233:C:C5	2.98	0.51
23:BA:1390:U:O2'	23:BA:1391:U:H5'	2.10	0.51
23:BA:1487:G:O2'	23:BA:1488:G:H5'	2.10	0.51
23:BA:1567:A:H5''	25:BC:58:HIS:CD2	2.45	0.51
23:BA:1568:G:H5''	25:BC:61:LEU:HD22	1.92	0.51
23:BA:1862:G:H2'	23:BA:1863:G:C8	2.43	0.51
23:BA:1932:A:H2'	23:BA:1933:G:O4'	2.11	0.51
23:BA:2027:G:H2'	23:BA:2028:U:O4'	2.10	0.51
23:BA:2345:G:OP2	51:B3:39:TYR:HA	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2352:A:C2'	23:BA:2353:G:H5'	2.40	0.51
23:BA:2482:G:H2'	23:BA:2483:C:O4'	2.11	0.51
23:BA:2689:U:P	23:BA:2719:G:H22	2.34	0.51
23:BA:2734:A:H2'	23:BA:2735:G:H5'	1.93	0.51
25:BC:25:THR:HG21	25:BC:82:ILE:N	2.26	0.51
25:BC:127:VAL:HA	25:BC:193:VAL:CG1	2.40	0.51
26:BD:132:HIS:CD2	26:BD:135:HIS:CE1	2.97	0.51
27:BE:110:LEU:HD11	27:BE:181:LEU:HD13	1.92	0.51
28:BF:76:SER:HB2	28:BF:83:ARG:CA	2.40	0.51
29:BG:35:VAL:HG21	29:BG:75:ALA:CB	2.41	0.51
38:BP:64:ARG:HD2	38:BP:73:GLU:CG	2.40	0.51
43:BU:11:ASP:OD1	43:BU:12:THR:N	2.43	0.51
1:CA:128:G:O2'	17:CQ:3:LYS:HE2	2.09	0.51
1:CA:191(D):U:H2'	1:CA:191(E):G:C8	2.44	0.51
1:CA:408:A:C4	1:CA:409:G:C8	2.98	0.51
1:CA:433:C:H2'	1:CA:434:U:C6	2.41	0.51
1:CA:1068:G:N7	1:CA:1094:G:C8	2.78	0.51
3:CC:172:ARG:HE	3:CC:174:PRO:HG2	1.75	0.51
4:CD:13:ARG:CD	4:CD:38:TYR:O	2.59	0.51
4:CD:79:PHE:CE1	4:CD:204:ILE:HA	2.45	0.51
5:CE:11:ILE:CB	5:CE:31:LEU:HD13	2.39	0.51
5:CE:48:ALA:O	5:CE:50:GLU:N	2.43	0.51
10:CJ:10:GLY:HA3	10:CJ:16:LEU:HD21	1.92	0.51
23:DA:141(A):A:N6	23:DA:1596:A:H5'	2.26	0.51
23:DA:537:C:H2'	23:DA:539:G:H8	1.75	0.51
23:DA:769:G:C2'	23:DA:770:G:H5'	2.40	0.51
23:DA:771:G:H2'	23:DA:772:C:H6	1.75	0.51
23:DA:1680:U:O2	23:DA:1763:G:H3'	2.10	0.51
23:DA:1894:C:H2'	23:DA:1895:C:H6	1.75	0.51
23:DA:1993:U:H4'	26:DD:128:SER:HB3	1.92	0.51
23:DA:2090:G:H21	46:DX:45:ASN:HD21	1.59	0.51
23:DA:2305:A:H3'	23:DA:2306:C:H5''	1.92	0.51
23:DA:2473:U:C4	23:DA:2474:C:C4	2.98	0.51
23:DA:2718:G:H2'	23:DA:2719:G:C8	2.45	0.51
24:DB:40:U:O2	24:DB:43:C:C6	2.63	0.51
24:DB:81:G:C6	24:DB:82:G:N7	2.78	0.51
26:DD:24:THR:HG22	26:DD:186:GLY:H	1.74	0.51
38:DP:54:ARG:CG	38:DP:54:ARG:NH1	2.60	0.51
46:DX:62:VAL:CG2	46:DX:63:ALA:N	2.73	0.51
50:D2:40:LYS:HZ1	50:D2:49:CYS:CB	2.22	0.51
1:AA:9:G:H2'	1:AA:10:A:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:19:C:H5''	5:AE:86:ALA:HB1	1.91	0.51
1:AA:1270:C:O2'	1:AA:1314:C:H5'	2.10	0.51
1:AA:1349:A:C2	1:AA:1350:A:H1'	2.46	0.51
2:AB:75:LYS:HD3	2:AB:75:LYS:C	2.31	0.51
2:AB:175:ARG:O	2:AB:178:ARG:HB3	2.10	0.51
5:AE:14:ARG:NH1	5:AE:129:ILE:HD11	2.25	0.51
5:AE:111:GLU:C	5:AE:113:ALA:H	2.13	0.51
8:AH:91:ARG:HG3	8:AH:91:ARG:NH1	2.24	0.51
12:AL:26:LEU:O	12:AL:28:GLY:N	2.43	0.51
16:AP:18:ARG:HD3	16:AP:35:LYS:HE3	1.91	0.51
20:AT:10:LEU:O	20:AT:12:ALA:N	2.37	0.51
23:BA:142:G:H2'	23:BA:143:C:C6	2.46	0.51
23:BA:270(S):G:H2'	23:BA:270(T):G:C8	2.45	0.51
23:BA:616:A:C4	27:BE:180:GLY:HA2	2.45	0.51
23:BA:643:A:C2	23:BA:644:A:C4	2.98	0.51
23:BA:1131:G:N2	23:BA:1132:A:C4	2.79	0.51
23:BA:1439:A:H2'	23:BA:1440:G:H5'	1.92	0.51
23:BA:2065:C:H2'	23:BA:2066:C:C6	2.44	0.51
23:BA:2330:G:O2'	45:BW:41:ARG:HB2	2.09	0.51
23:BA:2745:C:C4	23:BA:2746:U:C4	2.98	0.51
23:BA:2850:A:C4	23:BA:2851:A:C8	2.99	0.51
23:BA:2862:G:C5	23:BA:2863:C:C5	2.98	0.51
25:BC:168:ARG:O	25:BC:169:GLU:HB2	2.10	0.51
25:BC:185:VAL:HG12	25:BC:186:HIS:N	2.25	0.51
27:BE:31:HIS:O	27:BE:34:TRP:HB3	2.10	0.51
35:BM:84:GLY:HA3	45:BW:10:THR:CG2	2.41	0.51
39:BQ:106:PHE:O	39:BQ:110:VAL:HG23	2.11	0.51
40:BR:28:GLU:HB2	40:BR:31:ALA:CB	2.40	0.51
43:BU:9:LYS:O	43:BU:27:VAL:HG21	2.10	0.51
47:BY:9:GLN:HA	47:BY:12:GLU:HB3	1.92	0.51
1:CA:37:U:OP2	12:CL:122:LYS:HE3	2.09	0.51
1:CA:175:C:H2'	1:CA:176:C:C6	2.39	0.51
1:CA:444:C:H2'	1:CA:445:G:H8	1.75	0.51
1:CA:518:C:O2	1:CA:529:G:C6	2.63	0.51
1:CA:1038:C:H2'	1:CA:1039:C:C6	2.46	0.51
1:CA:1128:C:O2	1:CA:1130:A:N6	2.43	0.51
1:CA:1171:G:H2'	1:CA:1172:C:C6	2.45	0.51
1:CA:1464:G:O2'	1:CA:1465:C:H5'	2.11	0.51
2:CB:22:LYS:HZ3	2:CB:22:LYS:N	2.09	0.51
2:CB:32:ILE:HG12	2:CB:40:HIS:HD2	1.74	0.51
3:CC:14:ILE:HG23	3:CC:15:THR:N	2.14	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:18:TRP:HD1	14:CN:54:PRO:HA	1.72	0.51
3:CC:81:GLY:O	3:CC:85:ARG:HD3	2.10	0.51
4:CD:104:VAL:C	4:CD:106:TYR:H	2.14	0.51
12:CL:37:THR:OG1	12:CL:38:VAL:N	2.42	0.51
12:CL:69:ILE:HG23	12:CL:99:ILE:CG2	2.35	0.51
16:CP:19:ILE:HG22	16:CP:19:ILE:O	2.08	0.51
23:DA:197:A:H8	23:DA:197:A:C5'	2.14	0.51
23:DA:1104:C:C4	23:DA:1105:U:H5	2.28	0.51
23:DA:1241:A:N6	23:DA:1242:A:C6	2.79	0.51
24:DB:60:C:C2	24:DB:61:G:C8	2.98	0.51
25:DC:44:ASN:CG	25:DC:45:ASN:H	2.12	0.51
28:DF:82:LEU:HD22	28:DF:87:PRO:HG3	1.92	0.51
34:DL:16:ARG:NH2	34:DL:18:ARG:N	2.57	0.51
34:DL:32:THR:HG21	34:DL:37:GLY:N	2.25	0.51
35:DM:20:ALA:O	35:DM:21:THR:O	2.28	0.51
35:DM:111:GLU:O	35:DM:115:MET:HB2	2.10	0.51
37:DO:34:HIS:ND1	37:DO:54:LEU:HB3	2.26	0.51
39:DQ:20:LEU:HB2	39:DQ:39:LEU:HD11	1.90	0.51
41:DS:29:LEU:CG	41:DS:33:ARG:HE	2.22	0.51
43:DU:9:LYS:O	43:DU:27:VAL:HG21	2.09	0.51
44:DV:102:LEU:HD21	44:DV:124:ILE:HD11	1.93	0.51
53:D5:57:ARG:CZ	53:D5:57:ARG:CB	2.87	0.51
1:AA:197:A:N7	1:AA:221:C:H4'	2.25	0.51
1:AA:402:G:H8	1:AA:402:G:O5'	1.93	0.51
1:AA:512:U:O2'	1:AA:513:C:H5'	2.10	0.51
1:AA:797:C:OP1	11:AK:124:LYS:HE2	2.09	0.51
1:AA:966:G:H2'	1:AA:967:C:C6	2.45	0.51
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.46	0.51
1:AA:1525:G:OP1	11:AK:120:ARG:NH2	2.43	0.51
2:AB:32:ILE:HG12	2:AB:40:HIS:HD2	1.75	0.51
3:AC:14:ILE:HG23	3:AC:15:THR:N	2.17	0.51
3:AC:14:ILE:HG12	3:AC:15:THR:N	2.26	0.51
5:AE:28:PHE:N	5:AE:28:PHE:CD1	2.78	0.51
5:AE:139:LEU:O	5:AE:141:GLN:N	2.43	0.51
12:AL:21:SER:O	12:AL:23:VAL:N	2.43	0.51
15:AO:50:HIS:O	15:AO:53:HIS:HB3	2.11	0.51
18:AR:84:LYS:HB3	18:AR:84:LYS:NZ	2.25	0.51
23:BA:273(B):G:C2	23:BA:364:C:N3	2.78	0.51
23:BA:335:C:C2	23:BA:336:C:C5	2.98	0.51
23:BA:1017:G:C2	23:BA:1146:C:O2	2.63	0.51
23:BA:1047:G:H1'	23:BA:1110:G:N2	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1376:C:N4	23:BA:1377:G:C6	2.79	0.51
23:BA:1414:G:C6	23:BA:1415:U:C4	2.98	0.51
23:BA:1759:A:C8	23:BA:2696:U:H1'	2.45	0.51
23:BA:1839:G:C8	23:BA:1927:A:H1'	2.46	0.51
23:BA:2026:C:C4	23:BA:2027:G:N7	2.79	0.51
23:BA:2065:C:H2'	23:BA:2066:C:H6	1.74	0.51
23:BA:2727:G:C4	23:BA:2728:U:H5	2.29	0.51
23:BA:2822:G:H2'	23:BA:2823:A:H5''	1.92	0.51
26:BD:1:MET:O	26:BD:2:LYS:O	2.28	0.51
44:BV:38:TYR:O	44:BV:38:TYR:CG	2.63	0.51
45:BW:51:VAL:HG21	45:BW:80:HIS:HA	1.91	0.51
46:BX:67:ILE:N	46:BX:68:PRO:HD2	2.25	0.51
1:CA:261:U:OP2	20:CT:79:ARG:NH2	2.42	0.51
1:CA:640:A:N3	8:CH:115:SER:CB	2.74	0.51
1:CA:750:G:C6	1:CA:751:U:C5	2.99	0.51
1:CA:836:G:OP1	18:CR:61:LYS:HE2	2.10	0.51
1:CA:1052:U:H2'	1:CA:1055:A:OP1	2.10	0.51
1:CA:1375:A:C2	1:CA:1376:U:C2	2.99	0.51
1:CA:1435:G:H2'	1:CA:1436:U:C5	2.45	0.51
2:CB:184:VAL:O	2:CB:198:ASP:HB2	2.11	0.51
3:CC:137:ALA:O	3:CC:141:VAL:HG23	2.11	0.51
4:CD:61:LYS:HA	4:CD:203:VAL:HG22	1.92	0.51
5:CE:36:ASP:OD2	5:CE:38:GLN:HB3	2.10	0.51
6:CF:35:ALA:O	6:CF:37:VAL:N	2.43	0.51
9:CI:26:VAL:HG12	9:CI:26:VAL:O	2.09	0.51
15:CO:48:LYS:HE2	15:CO:48:LYS:HA	1.92	0.51
19:CS:6:LYS:HD2	19:CS:6:LYS:N	2.24	0.51
23:DA:95:G:HO2'	47:DY:48:HIS:CE1	2.24	0.51
23:DA:548:A:H2'	23:DA:549:G:H5'	1.91	0.51
23:DA:747:U:O2	23:DA:2014:A:H1'	2.10	0.51
23:DA:2277:G:C5'	35:DM:85:LYS:HB2	2.40	0.51
23:DA:2776:A:H4'	23:DA:2777:G:H5''	1.92	0.51
26:DD:49:LEU:H	26:DD:49:LEU:CD2	2.16	0.51
27:DE:64:ILE:HG23	27:DE:65:TRP:NE1	2.25	0.51
28:DF:171:ALA:O	28:DF:175:LEU:HG	2.11	0.51
32:DJ:80:ALA:O	32:DJ:83:ILE:HG13	2.09	0.51
34:DL:113:LYS:HA	34:DL:129:ALA:O	2.10	0.51
36:DN:73:VAL:O	36:DN:76:VAL:HG22	2.11	0.51
46:DX:51:VAL:HG13	46:DX:53:VAL:HG23	1.92	0.51
47:DY:16:LEU:HB2	47:DY:20:GLU:HG3	1.91	0.51
47:DY:48:HIS:O	47:DY:49:LYS:C	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:D1:47:VAL:HG12	49:D1:49:GLU:OE1	2.11	0.51
1:AA:199:G:H1	1:AA:218:C:N4	1.98	0.51
1:AA:552:U:C2'	1:AA:553:A:H5'	2.41	0.51
1:AA:1147:C:H6	1:AA:1147:C:O5'	1.93	0.51
1:AA:1224:G:H4'	13:AM:102:ARG:HH22	1.76	0.51
4:AD:21:LEU:H	4:AD:21:LEU:CD1	2.22	0.51
5:AE:36:ASP:OD2	5:AE:38:GLN:HB3	2.10	0.51
8:AH:9:MET:O	8:AH:12:ARG:HB2	2.11	0.51
23:BA:137(B):G:H2'	23:BA:139:G:N7	2.25	0.51
23:BA:270(Q):C:O2'	23:BA:270(R):C:C6	2.64	0.51
23:BA:270(Q):C:O2'	23:BA:270(R):C:H6	1.93	0.51
23:BA:1127:A:H2'	23:BA:1128:A:H5''	1.91	0.51
23:BA:1495:A:H2'	23:BA:1496:A:N3	2.26	0.51
23:BA:2287:A:O2'	23:BA:2288:A:P	2.69	0.51
23:BA:2289:G:N3	23:BA:2289:G:H2'	2.25	0.51
23:BA:2364:C:H2'	23:BA:2365:G:O4'	2.09	0.51
23:BA:2459:A:C4	23:BA:2460:U:C6	2.99	0.51
23:BA:2776:A:H4'	23:BA:2777:G:H5''	1.91	0.51
27:BE:124:LEU:HD12	27:BE:125:LEU:O	2.11	0.51
29:BG:20:ALA:HB3	29:BG:23:ARG:O	2.10	0.51
32:BJ:90:LEU:HA	32:BJ:110:LEU:HD13	1.92	0.51
34:BL:16:ARG:NH2	34:BL:18:ARG:N	2.57	0.51
35:BM:16:ARG:C	35:BM:17:LEU:HD23	2.31	0.51
36:BN:84:ALA:O	36:BN:85:PRO:C	2.47	0.51
37:BO:79:ALA:O	37:BO:80:LEU:HD23	2.11	0.51
41:BS:45:TYR:CD2	41:BS:45:TYR:O	2.63	0.51
44:BV:152:ALA:C	44:BV:154:ASP:H	2.14	0.51
1:CA:59:A:H3'	1:CA:331:G:H22	1.75	0.51
1:CA:197:A:N6	1:CA:221:C:C5'	2.74	0.51
1:CA:503:C:H2'	1:CA:504:C:H6	1.75	0.51
1:CA:509:A:H5'	4:CD:54:TYR:CD2	2.45	0.51
1:CA:874:G:C5	1:CA:875:C:C5	2.99	0.51
1:CA:927:G:C2	1:CA:1391:U:C2	2.98	0.51
1:CA:938:A:C6	1:CA:939:G:C5	2.98	0.51
1:CA:1270:C:O2'	1:CA:1314:C:H5'	2.11	0.51
1:CA:1379:G:O2'	1:CA:1380:U:H5'	2.10	0.51
2:CB:17:PHE:CB	2:CB:44:LEU:HD21	2.40	0.51
6:CF:26:ILE:C	6:CF:30:LEU:HD12	2.31	0.51
12:CL:74:HIS:HB2	12:CL:76:LEU:CD2	2.41	0.51
23:DA:242:G:P	53:D5:3:LYS:HZ1	2.33	0.51
23:DA:270(J):G:O2'	23:DA:270(K):G:H8	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:443:A:H1'	23:DA:1201:C:O4'	2.09	0.51
23:DA:998:C:H2'	23:DA:999:U:O5'	2.11	0.51
23:DA:1348:G:C2'	23:DA:1349:A:H5''	2.39	0.51
23:DA:1404:C:O2	23:DA:1404:C:C2'	2.55	0.51
23:DA:1796:U:H4'	25:DC:256:GLY:HA2	1.92	0.51
23:DA:2101:G:H2'	23:DA:2102:U:C5'	2.40	0.51
23:DA:2477:C:O2'	23:DA:2478:A:P	2.69	0.51
23:DA:2605:U:H2'	23:DA:2606:C:C6	2.45	0.51
25:DC:150:LYS:HA	25:DC:150:LYS:HE3	1.92	0.51
27:DE:88:VAL:HG13	27:DE:89:VAL:O	2.11	0.51
28:DF:83:ARG:HG3	28:DF:84:LYS:H	1.75	0.51
31:DI:4:LYS:HG2	31:DI:4:LYS:O	2.11	0.51
36:DN:18:LEU:HD11	36:DN:22:ARG:NE	2.26	0.51
39:DQ:90:VAL:HG13	39:DQ:91:ASP:N	2.24	0.51
39:DQ:92:ARG:HD2	39:DQ:95:LEU:H	1.74	0.51
40:DR:5:VAL:HG12	40:DR:14:VAL:HG21	1.93	0.51
43:DU:14:LEU:HD23	43:DU:14:LEU:C	2.31	0.51
45:DW:42:GLY:CA	45:DW:57:PHE:CD2	2.90	0.51
46:DX:11:ARG:O	46:DX:12:PRO:C	2.48	0.51
46:DX:27:GLU:OE2	46:DX:33:LYS:HE3	2.10	0.51
47:DY:7:ARG:NE	47:DY:11:GLU:OE2	2.44	0.51
1:AA:444:C:H2'	1:AA:445:G:H8	1.76	0.51
1:AA:562:C:C4	1:AA:884:U:C5	2.98	0.51
1:AA:592:G:N1	1:AA:648:A:C6	2.79	0.51
1:AA:599:C:H2'	1:AA:600:C:H6	1.76	0.51
1:AA:1054:C:H3'	1:AA:1054:C:O2	2.10	0.51
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.11	0.51
3:AC:29:TYR:O	3:AC:29:TYR:HD1	1.93	0.51
5:AE:34:VAL:O	5:AE:41:VAL:HA	2.11	0.51
23:BA:142:G:C1'	42:BT:37:THR:HG21	2.40	0.51
23:BA:577:G:OP1	23:BA:2502:G:H2'	2.11	0.51
23:BA:954:G:H5''	35:BM:13:GLN:HG3	1.91	0.51
23:BA:1173:G:H3'	23:BA:1174:A:C5'	2.41	0.51
23:BA:1677:A:H2'	23:BA:1678:G:O4'	2.10	0.51
23:BA:2219:G:C2'	23:BA:2224:G:C5'	2.77	0.51
23:BA:2648:C:H2'	23:BA:2649:U:C6	2.45	0.51
25:BC:198:ASN:C	25:BC:198:ASN:HD22	2.13	0.51
27:BE:53:THR:HG23	27:BE:56:GLU:CD	2.30	0.51
28:BF:85:GLY:C	28:BF:86:MET:HG3	2.30	0.51
32:BJ:119:GLU:H	32:BJ:119:GLU:CD	2.08	0.51
38:BP:98:LYS:HB3	38:BP:100:TYR:CE1	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BX:51:VAL:HG13	46:BX:53:VAL:HG23	1.93	0.51
47:BY:38:GLN:HB3	47:BY:44:LEU:HB3	1.92	0.51
53:B5:6:THR:HG21	53:B5:64:TYR:HD1	1.75	0.51
1:CA:16:A:C2	1:CA:17:U:C6	2.99	0.51
1:CA:180:U:H2'	1:CA:181:G:H5'	1.91	0.51
1:CA:373:A:C8	1:CA:482:A:C8	2.98	0.51
1:CA:445:G:H2'	1:CA:446:G:H8	1.75	0.51
1:CA:735:C:H1'	18:CR:75:ILE:HD11	1.93	0.51
1:CA:767:A:H2'	1:CA:768:A:O4'	2.10	0.51
1:CA:830:G:C2	1:CA:831:U:C2	2.99	0.51
1:CA:1176:A:H2'	1:CA:1177:G:C8	2.46	0.51
3:CC:33:LEU:O	3:CC:36:ASP:HB3	2.11	0.51
12:CL:116:ARG:O	12:CL:117:SER:C	2.49	0.51
13:CM:49:THR:O	13:CM:53:VAL:HG23	2.11	0.51
23:DA:94:G:N2	47:DY:47:ASN:HD22	1.98	0.51
23:DA:107:C:C2'	23:DA:108:U:H5'	2.41	0.51
23:DA:699:A:H2'	23:DA:700:G:O4'	2.11	0.51
23:DA:1141:U:P	32:DJ:86:THR:HG21	2.50	0.51
23:DA:1496:A:N7	23:DA:1498:C:N3	2.59	0.51
23:DA:1859:A:C6	23:DA:1884:A:C8	2.98	0.51
23:DA:2197:U:O3'	23:DA:2198:A:H8	1.93	0.51
23:DA:2744:G:H1'	23:DA:2761:G:H22	1.75	0.51
23:DA:2773:C:P	26:DD:166:THR:HG1	2.34	0.51
28:DF:120:LEU:HD13	28:DF:133:LEU:HD13	1.93	0.51
29:DG:67:LEU:HG	29:DG:71:LEU:HD23	1.92	0.51
32:DJ:66:THR:O	32:DJ:69:VAL:HG12	2.11	0.51
34:DL:136:GLU:O	34:DL:138:LEU:N	2.44	0.51
36:DN:60:LEU:HA	36:DN:63:ARG:HB3	1.93	0.51
40:DR:47:VAL:HG11	40:DR:50:PRO:O	2.11	0.51
1:AA:294:U:C2	1:AA:295:C:C5	2.98	0.51
1:AA:754:C:C6	15:AO:69:TYR:CE2	2.99	0.51
1:AA:1014:A:H4'	19:AS:14:HIS:CE1	2.46	0.51
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.11	0.51
3:AC:68:VAL:HG12	3:AC:70:VAL:HG23	1.93	0.51
3:AC:76:VAL:CG2	3:AC:77:ILE:HG13	2.40	0.51
3:AC:91:LEU:CD1	3:AC:101:LEU:HD21	2.41	0.51
4:AD:127:THR:OG1	4:AD:128:VAL:N	2.43	0.51
4:AD:155:LEU:HD23	4:AD:156:GLU:OE2	2.11	0.51
12:AL:82:VAL:HG13	12:AL:83:LEU:N	2.24	0.51
17:AQ:54:GLY:HA3	17:AQ:82:MET:SD	2.51	0.51
23:BA:330:A:O2'	23:BA:331:A:C8	2.55	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:510:C:H2'	23:BA:511:U:O4'	2.11	0.51
23:BA:900:A:C4	23:BA:901:A:C8	2.98	0.51
23:BA:955:C:OP1	35:BM:85:LYS:HE2	2.10	0.51
23:BA:1478:G:O2'	23:BA:1558:A:C2	2.64	0.51
23:BA:2078:C:O2'	23:BA:2079:U:H5'	2.10	0.51
23:BA:2225:A:H1'	23:BA:2226:C:OP2	2.11	0.51
23:BA:2302:G:C2'	23:BA:2303:G:H5'	2.41	0.51
24:BB:40:U:O2	24:BB:43:C:C6	2.63	0.51
24:BB:103:U:C2'	24:BB:104:A:H5'	2.41	0.51
25:BC:76:PRO:HA	25:BC:118:VAL:HG23	1.92	0.51
25:BC:94:LEU:C	25:BC:94:LEU:HD22	2.31	0.51
26:BD:24:THR:HG21	26:BD:188:VAL:CG1	2.41	0.51
27:BE:199:TRP:CZ2	27:BE:203:GLN:NE2	2.79	0.51
28:BF:121:ASN:ND2	28:BF:122:PRO:HD2	2.26	0.51
34:BL:126:VAL:CA	34:BL:145:PRO:HG2	2.41	0.51
40:BR:75:PHE:CD1	40:BR:75:PHE:C	2.84	0.51
40:BR:98:GLU:HG2	40:BR:100:ARG:CD	2.38	0.51
50:B2:52:TYR:CD1	50:B2:52:TYR:C	2.82	0.51
1:CA:394:G:C2	1:CA:395:C:C5	2.99	0.51
1:CA:575:G:C5	1:CA:881:G:N2	2.78	0.51
1:CA:684:A:H2'	1:CA:685:G:C8	2.45	0.51
1:CA:685:G:N2	1:CA:686:U:C4	2.79	0.51
1:CA:1296:C:C6	1:CA:1297:C:H5	2.28	0.51
1:CA:1349:A:C2	1:CA:1350:A:H1'	2.45	0.51
3:CC:172:ARG:HE	3:CC:174:PRO:CG	2.24	0.51
4:CD:82:ALA:HB1	4:CD:89:THR:HG23	1.92	0.51
6:CF:50:TYR:CE1	18:CR:74:ARG:O	2.64	0.51
6:CF:86:ARG:O	6:CF:87:ARG:CB	2.49	0.51
8:CH:11:THR:O	8:CH:12:ARG:C	2.49	0.51
8:CH:63:LEU:HB2	8:CH:65:TYR:HE1	1.75	0.51
10:CJ:40:LEU:HB2	10:CJ:69:ASN:CB	2.41	0.51
10:CJ:50:ILE:CG2	14:CN:41:ARG:HH21	2.24	0.51
23:DA:198:C:H5'	23:DA:2244:U:OP1	2.10	0.51
23:DA:379:G:C5	23:DA:380:U:C5	2.99	0.51
23:DA:1025:G:C4	23:DA:1135:C:H1'	2.46	0.51
23:DA:1173:G:H3'	23:DA:1174:A:C5'	2.40	0.51
23:DA:2190:G:H2'	23:DA:2191:G:C8	2.44	0.51
25:DC:223:GLY:O	25:DC:224:ALA:C	2.49	0.51
26:DD:149:ARG:CG	26:DD:150:VAL:N	2.72	0.51
36:DN:79:LEU:CD2	36:DN:83:ILE:HB	2.41	0.51
39:DQ:113:ALA:HA	39:DQ:116:ALA:HB3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DS:45:TYR:CG	41:DS:45:TYR:O	2.63	0.51
46:DX:11:ARG:CG	46:DX:61:ARG:O	2.59	0.51
46:DX:73:LEU:O	46:DX:73:LEU:HG	2.10	0.51
47:DY:42:GLY:O	47:DY:44:LEU:N	2.36	0.51
47:DY:53:LEU:O	47:DY:57:ILE:HG13	2.11	0.51
1:AA:95:G:H2'	1:AA:96:G:O4'	2.11	0.51
1:AA:238:G:P	17:AQ:25:ARG:HH22	2.33	0.51
1:AA:487:A:H2'	1:AA:488:C:O4'	2.10	0.51
1:AA:513:C:C2	1:AA:539:A:C2	2.98	0.51
1:AA:671:G:H2'	1:AA:672:U:C6	2.46	0.51
5:AE:10:MET:HA	5:AE:32:VAL:HA	1.92	0.51
11:AK:29:ILE:HB	11:AK:44:SER:HB3	1.93	0.51
23:BA:243:U:C2'	23:BA:244:A:H5'	2.41	0.51
23:BA:298:G:OP2	43:BU:85:VAL:HG22	2.11	0.51
23:BA:861:A:N3	24:BB:79:C:O2'	2.38	0.51
23:BA:1046:A:H8	23:BA:1046:A:O5'	1.93	0.51
23:BA:1451:C:H42	23:BA:1459:G:H1	1.57	0.51
23:BA:1952:A:C6	23:BA:1953:A:C6	2.98	0.51
23:BA:1971:A:N3	25:BC:240:ALA:HA	2.25	0.51
23:BA:2287:A:C5	23:BA:2289:G:N7	2.79	0.51
23:BA:2415:G:H1'	34:BL:67:MET:CE	2.41	0.51
23:BA:2744:G:N2	23:BA:2761:G:C4	2.79	0.51
23:BA:2886:G:H2'	23:BA:2887:U:H6	1.75	0.51
24:BB:50:G:OP2	37:BO:62:LYS:HD3	2.10	0.51
25:BC:25:THR:HG22	25:BC:82:ILE:N	2.26	0.51
32:BJ:32:VAL:HG12	32:BJ:33:GLU:N	2.26	0.51
33:BK:100:GLY:O	33:BK:101:PRO:O	2.29	0.51
36:BN:59:ASP:OD1	36:BN:61:HIS:HB3	2.11	0.51
37:BO:11:LYS:CG	37:BO:12:PHE:N	2.65	0.51
41:BS:45:TYR:CD2	41:BS:46:PHE:CD1	2.99	0.51
44:BV:137:ILE:HD12	44:BV:137:ILE:N	2.26	0.51
1:CA:68:G:N1	1:CA:69:G:C5	2.79	0.51
1:CA:302:G:N3	1:CA:556:C:H4'	2.25	0.51
1:CA:321:A:C2	1:CA:333:G:C2	2.99	0.51
1:CA:392:G:N3	1:CA:393:A:C8	2.78	0.51
1:CA:401:C:C6	1:CA:401:C:H3'	2.46	0.51
1:CA:579:G:H2'	1:CA:580:U:C6	2.43	0.51
1:CA:801:U:H2'	1:CA:802:A:H8	1.76	0.51
1:CA:1226:C:H6	13:CM:103:THR:OG1	1.93	0.51
4:CD:126:ILE:CG2	4:CD:127:THR:H	2.19	0.51
9:CI:103:THR:HG22	9:CI:105:ASP:H	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:282:A:N6	23:DA:284:U:C2	2.78	0.51
23:DA:510:C:H2'	23:DA:511:U:O4'	2.10	0.51
23:DA:844:C:C2'	23:DA:845:G:H5'	2.40	0.51
23:DA:962:G:H2'	23:DA:963:U:O4'	2.11	0.51
23:DA:1109:C:N4	23:DA:1110:G:N2	2.59	0.51
23:DA:1389:G:C2	23:DA:1390:U:C2	2.99	0.51
23:DA:1486:A:H2'	23:DA:1487:G:H8	1.75	0.51
23:DA:1568:G:OP2	25:DC:63:ARG:NH2	2.35	0.51
23:DA:2287:A:C2	23:DA:2289:G:C8	2.99	0.51
23:DA:2335:A:C8	23:DA:2337:G:N7	2.79	0.51
23:DA:2728:U:H2'	23:DA:2728:U:O2	2.10	0.51
23:DA:2837:G:C5	23:DA:2838:G:N7	2.78	0.51
24:DB:75:G:H1	24:DB:102:G:N2	2.09	0.51
26:DD:170:LEU:HB3	26:DD:185:LYS:HB2	1.93	0.51
29:DG:38:SER:HB3	29:DG:41:MET:HG2	1.92	0.51
29:DG:85:LYS:O	29:DG:132:ARG:HA	2.11	0.51
30:DH:135:GLU:O	30:DH:135:GLU:HG3	2.11	0.51
33:DK:19:ILE:HG22	33:DK:43:VAL:HA	1.92	0.51
34:DL:85:LEU:H	34:DL:85:LEU:HD22	1.74	0.51
40:DR:66:ARG:HD2	40:DR:88:ARG:NE	2.26	0.51
44:DV:24:LEU:HB2	44:DV:41:LEU:HG	1.93	0.51
44:DV:94:GLU:CD	44:DV:94:GLU:N	2.63	0.51
53:D5:22:VAL:CG2	53:D5:54:GLU:HG3	2.40	0.51
53:D5:33:ASN:O	53:D5:34:TRP:HB3	2.10	0.51
1:AA:92:G:H2'	1:AA:93:U:H5'	1.92	0.51
1:AA:171:A:H2'	1:AA:172:A:C8	2.45	0.51
1:AA:353:A:H2'	1:AA:354:G:OP2	2.11	0.51
1:AA:539:A:C6	1:AA:540:G:C6	2.99	0.51
1:AA:629:G:C2	1:AA:630:G:O6	2.64	0.51
1:AA:692:U:H5	11:AK:26:ASN:ND2	2.09	0.51
1:AA:1038:C:H2'	1:AA:1039:C:C6	2.46	0.51
1:AA:1103:C:C2	1:AA:1104:G:C8	2.98	0.51
2:AB:98:LEU:HB2	2:AB:101:MET:CG	2.40	0.51
5:AE:61:TYR:HA	5:AE:64:ARG:HB3	1.93	0.51
6:AF:33:TYR:HE1	6:AF:75:LEU:HA	1.75	0.51
15:AO:7:GLU:HG3	15:AO:10:LYS:HD3	1.93	0.51
17:AQ:29:HIS:CE1	17:AQ:32:TYR:CD1	2.99	0.51
20:AT:39:LYS:O	20:AT:43:LEU:HG	2.11	0.51
20:AT:84:LEU:HD13	20:AT:85:MET:N	2.26	0.51
22:AV:6191:A:O2'	22:AV:6192:G:H5'	2.10	0.51
23:BA:13:A:N3	23:BA:15:G:C6	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:226:G:H21	23:BA:228:A:H62	1.56	0.51
23:BA:374:A:H3'	23:BA:375:C:H6	1.75	0.51
23:BA:433:C:C4	23:BA:434:U:O4	2.64	0.51
23:BA:1173:G:H1'	23:BA:1177:A:H61	1.75	0.51
23:BA:1343:G:O2'	23:BA:1344:G:H5'	2.11	0.51
23:BA:1471:A:C2	23:BA:1472:A:C8	2.99	0.51
23:BA:1568:G:P	25:BC:63:ARG:HH22	2.34	0.51
23:BA:1717:G:C5	23:BA:1743:G:C2	2.99	0.51
23:BA:2305:A:C4	28:BF:154:GLY:HA3	2.46	0.51
23:BA:2361:A:OP1	53:B5:27:THR:OG1	2.25	0.51
23:BA:2638:G:P	26:BD:82:ARG:HH22	2.34	0.51
26:BD:106:GLY:HA3	26:BD:189:PRO:HB2	1.91	0.51
26:BD:146:THR:HA	26:BD:147:PRO:C	2.31	0.51
28:BF:121:ASN:HD22	28:BF:122:PRO:HD2	1.75	0.51
30:BH:101:LEU:O	30:BH:107:ILE:HG22	2.11	0.51
32:BJ:53:ILE:HD12	32:BJ:122:LEU:HD11	1.93	0.51
34:BL:64:LYS:HB2	53:B5:25:MET:HG3	1.93	0.51
35:BM:22:LYS:HD3	35:BM:22:LYS:C	2.32	0.51
35:BM:111:GLU:O	35:BM:115:MET:HB2	2.10	0.51
36:BN:99:LYS:HD2	36:BN:99:LYS:N	2.26	0.51
37:BO:98:VAL:O	37:BO:101:LEU:HB3	2.11	0.51
46:BX:11:ARG:CB	46:BX:12:PRO:CD	2.86	0.51
47:BY:9:GLN:CA	47:BY:12:GLU:HB3	2.41	0.51
1:CA:131:C:H2'	1:CA:132:C:C6	2.46	0.51
1:CA:600:C:H2'	1:CA:601:C:H6	1.74	0.51
1:CA:765:G:H5''	1:CA:766:A:OP1	2.11	0.51
1:CA:1254:C:OP1	10:CJ:45:ARG:HD3	2.11	0.51
5:CE:11:ILE:HB	5:CE:31:LEU:HD13	1.93	0.51
7:CG:61:VAL:O	7:CG:65:ALA:HB2	2.11	0.51
8:CH:87:SER:HB2	8:CH:93:VAL:HB	1.91	0.51
16:CP:18:ARG:HD3	16:CP:35:LYS:HE3	1.93	0.51
16:CP:50:LYS:O	16:CP:51:VAL:HG23	2.11	0.51
20:CT:32:ALA:O	20:CT:36:LEU:HD23	2.10	0.51
20:CT:72:LEU:HD21	20:CT:76:ALA:C	2.30	0.51
23:DA:825:C:O2	34:DL:55:ARG:NH2	2.41	0.51
23:DA:910:A:C4	35:DM:13:GLN:OE1	2.63	0.51
23:DA:947:G:N2	23:DA:971:C:C2	2.79	0.51
23:DA:1005:C:O2'	32:DJ:51:THR:HG21	2.11	0.51
23:DA:1045:A:H4'	23:DA:1046:A:H5''	1.93	0.51
23:DA:1526:G:O2'	23:DA:1527:G:H5'	2.10	0.51
23:DA:1705:G:O2'	23:DA:1706:U:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2688:U:C5	23:DA:2720:U:OP2	2.64	0.51
23:DA:2689:U:P	23:DA:2719:G:H22	2.34	0.51
28:DF:92:VAL:O	28:DF:92:VAL:HG13	2.10	0.51
29:DG:46:GLU:HG3	29:DG:51:ARG:CZ	2.41	0.51
30:DH:8:PRO:HB3	30:DH:14:ASP:OD1	2.11	0.51
35:DM:20:ALA:HB2	35:DM:99:PRO:HB2	1.91	0.51
38:DP:78:LEU:HD13	38:DP:78:LEU:O	2.10	0.51
40:DR:6:LYS:CG	40:DR:11:GLN:HG2	2.41	0.51
41:DS:29:LEU:HD21	41:DS:33:ARG:HH21	1.76	0.51
44:DV:179:ASP:CG	44:DV:180:VAL:H	2.13	0.51
1:AA:632:A:H8	1:AA:633:G:C8	2.29	0.51
9:AI:27:THR:O	9:AI:62:TYR:HA	2.11	0.51
19:AS:31:ILE:CG2	19:AS:49:ILE:HA	2.40	0.51
20:AT:72:LEU:HD21	20:AT:76:ALA:C	2.31	0.51
22:AV:6194:C:C2'	22:AV:6195:G:H8	2.05	0.51
23:BA:245:G:H2'	23:BA:246:C:H6	1.75	0.51
23:BA:718:A:H8	23:BA:718:A:O5'	1.93	0.51
23:BA:762:U:H4'	23:BA:763:G:O5'	2.10	0.51
23:BA:848:G:C4	23:BA:933:A:C8	2.99	0.51
23:BA:860:U:O4'	23:BA:860:U:O2	2.28	0.51
23:BA:1471:A:C2	23:BA:1472:A:N9	2.79	0.51
23:BA:1657:C:H2'	23:BA:1658:C:C6	2.46	0.51
23:BA:1851:U:C4	23:BA:1852:C:C4	2.99	0.51
23:BA:2101:G:H2'	23:BA:2102:U:C5'	2.39	0.51
23:BA:2320:A:C8	23:BA:2333:A:N6	2.79	0.51
30:BH:129:THR:HA	30:BH:138:ILE:O	2.10	0.51
30:BH:135:GLU:O	30:BH:135:GLU:HG3	2.09	0.51
34:BL:47:ASP:CB	34:BL:51:PHE:HB2	2.40	0.51
35:BM:21:THR:O	35:BM:22:LYS:C	2.48	0.51
37:BO:58:LEU:HD12	37:BO:58:LEU:N	2.26	0.51
38:BP:27:THR:HG23	38:BP:90:GLN:HB3	1.93	0.51
38:BP:27:THR:O	38:BP:89:VAL:HG13	2.11	0.51
39:BQ:92:ARG:HD2	39:BQ:95:LEU:N	2.25	0.51
40:BR:47:VAL:O	40:BR:48:GLY:C	2.50	0.51
41:BS:36:LEU:HD12	41:BS:48:ALA:CA	2.41	0.51
51:B3:11:LEU:O	51:B3:24:GLU:HB2	2.11	0.51
1:CA:419:C:O2	1:CA:425:G:C2	2.63	0.51
1:CA:639:G:H2'	1:CA:640:A:H8	1.75	0.51
1:CA:657:G:O2'	1:CA:658:G:H5'	2.10	0.51
1:CA:782:A:O3'	1:CA:1515:C:H4'	2.11	0.51
1:CA:966:G:H2'	1:CA:967:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1150:U:H5''	1:CA:1151:A:OP2	2.12	0.51
1:CA:1228:C:N4	1:CA:1229:A:N6	2.59	0.51
2:CB:70:PHE:O	2:CB:71:VAL:HG13	2.10	0.51
2:CB:173:ALA:O	2:CB:176:GLU:N	2.44	0.51
11:CK:84:VAL:HG23	11:CK:110:ASP:OD1	2.10	0.51
19:CS:5:LEU:HG	19:CS:10:PHE:HB3	1.93	0.51
22:CV:6191:A:O2'	22:CV:6192:G:H5'	2.11	0.51
23:DA:137(B):G:H2'	23:DA:139:G:N7	2.26	0.51
23:DA:1442:G:C2	23:DA:1550:C:O2	2.64	0.51
23:DA:1728:G:O5'	23:DA:1728:G:C8	2.62	0.51
23:DA:1884:A:N3	23:DA:1885:A:C8	2.79	0.51
23:DA:2051:A:H4'	26:DD:141:ILE:CG2	2.41	0.51
23:DA:2250:G:OP2	23:DA:2275:C:H2'	2.11	0.51
23:DA:2328:A:C2	23:DA:2329:G:C4	2.99	0.51
23:DA:2837:G:C6	23:DA:2838:G:C5	2.99	0.51
25:DC:127:VAL:HA	25:DC:193:VAL:CG1	2.41	0.51
27:DE:164:ARG:HH11	27:DE:164:ARG:CG	2.08	0.51
28:DF:18:GLU:HG2	28:DF:175:LEU:HD22	1.93	0.51
29:DG:91:GLY:O	29:DG:92:ILE:O	2.29	0.51
29:DG:102:ALA:CB	29:DG:116:GLU:HA	2.41	0.51
39:DQ:47:TYR:C	39:DQ:47:TYR:CD2	2.84	0.51
39:DQ:106:PHE:O	39:DQ:110:VAL:HG23	2.11	0.51
41:DS:86:LEU:HD12	41:DS:87:PRO:HD2	1.92	0.51
43:DU:8:LYS:N	43:DU:8:LYS:NZ	2.57	0.51
43:DU:44:ILE:HG22	43:DU:45:VAL:N	2.24	0.51
47:DY:17:SER:O	47:DY:21:LEU:N	2.22	0.51
1:AA:156:G:C2	1:AA:166:G:C2	2.99	0.50
1:AA:632:A:N7	1:AA:633:G:C4	2.79	0.50
1:AA:785:G:N2	1:AA:798:G:C4	2.79	0.50
1:AA:874:G:C5	1:AA:875:C:C5	3.00	0.50
1:AA:1149:C:O2'	1:AA:1280:A:N1	2.43	0.50
1:AA:1501:C:C5	1:AA:1504:G:C5	2.98	0.50
5:AE:33:VAL:HG13	5:AE:109:ILE:HD13	1.93	0.50
10:AJ:65:LEU:HD13	14:AN:56:VAL:HG22	1.93	0.50
12:AL:74:HIS:CD2	12:AL:76:LEU:H	2.26	0.50
15:AO:3:ILE:HA	15:AO:38:ARG:NH2	2.27	0.50
22:AV:6188:G:N2	22:AV:6216:U:N3	2.59	0.50
22:AV:6191:A:N1	22:AV:6213:A:C6	2.80	0.50
23:BA:36:G:C5	23:BA:37:C:C5	2.99	0.50
23:BA:1105:U:H2'	23:BA:1106:G:H8	1.75	0.50
23:BA:1403:C:H5''	23:BA:1471:A:C1'	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1909:C:N3	23:BA:1922:G:C2	2.79	0.50
23:BA:2287:A:C5	23:BA:2289:G:C5	2.99	0.50
23:BA:2342:C:O2'	23:BA:2374:C:H5''	2.11	0.50
24:BB:30:C:H1'	24:BB:58:A:N1	2.27	0.50
25:BC:24:ILE:HD11	25:BC:84:TYR:HB2	1.93	0.50
27:BE:68:LYS:C	27:BE:70:THR:H	2.14	0.50
27:BE:93:LYS:HB3	27:BE:94:PRO:HD2	1.92	0.50
30:BH:82:ARG:HB3	30:BH:89:TYR:HB2	1.94	0.50
35:BM:19:GLY:O	35:BM:98:LYS:HD3	2.11	0.50
35:BM:20:ALA:HA	35:BM:98:LYS:HB3	1.92	0.50
36:BN:73:VAL:O	36:BN:76:VAL:HG22	2.11	0.50
41:BS:59:VAL:HG12	41:BS:60:ASN:N	2.25	0.50
44:BV:23:LYS:HB3	44:BV:38:TYR:CD1	2.40	0.50
47:BY:36:ARG:HA	47:BY:39:ALA:HB3	1.93	0.50
47:BY:46:GLN:HB2	47:BY:49:LYS:HZ1	1.73	0.50
49:B1:47:VAL:HG12	49:B1:49:GLU:OE1	2.11	0.50
1:CA:278:G:OP2	17:CQ:41:LYS:NZ	2.43	0.50
1:CA:292:G:C5	1:CA:293:G:H1'	2.46	0.50
1:CA:376:G:P	16:CP:67:THR:HG21	2.51	0.50
1:CA:457:C:N4	1:CA:475:G:H1	2.09	0.50
1:CA:575:G:C5	1:CA:881:G:C2	3.00	0.50
1:CA:671:G:H2'	1:CA:672:U:C6	2.46	0.50
1:CA:1217:C:H5''	14:CN:9:LYS:NZ	2.26	0.50
2:CB:187:LEU:HD22	2:CB:188:ALA:N	2.26	0.50
3:CC:151:VAL:O	3:CC:152:ILE:HG13	2.10	0.50
5:CE:11:ILE:HG22	5:CE:12:LEU:N	2.26	0.50
8:CH:28:ALA:HA	8:CH:59:LEU:HD21	1.93	0.50
12:CL:54:VAL:HG12	12:CL:55:ALA:N	2.26	0.50
13:CM:99:ARG:HB2	13:CM:101:GLN:HE21	1.76	0.50
14:CN:43:CYS:SG	14:CN:44:LEU:N	2.84	0.50
18:CR:76:LEU:N	18:CR:76:LEU:HD22	2.26	0.50
22:CV:6191:A:H2'	22:CV:6192:G:H8	1.76	0.50
23:DA:57:C:H2'	23:DA:58:G:O4'	2.11	0.50
23:DA:449:A:H2'	23:DA:450:G:H5'	1.92	0.50
23:DA:587:C:O2	34:DL:33:ARG:HD3	2.10	0.50
23:DA:966:G:C5	23:DA:967:C:H5	2.29	0.50
23:DA:1159:U:H2'	23:DA:1160:G:C8	2.45	0.50
23:DA:2531:A:H4'	29:DG:157:TYR:CE2	2.46	0.50
25:DC:124:PRO:HG2	25:DC:129:ASN:ND2	2.26	0.50
27:DE:199:TRP:CZ2	27:DE:203:GLN:NE2	2.79	0.50
30:DH:81:VAL:HG11	30:DH:90:GLY:HA3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DJ:69:VAL:O	32:DJ:70:ALA:HB3	2.11	0.50
33:DK:19:ILE:HB	33:DK:41:ALA:HB1	1.93	0.50
34:DL:61:ARG:CA	34:DL:62:LEU:HD13	2.41	0.50
35:DM:55:VAL:CG2	35:DM:56:ARG:N	2.74	0.50
35:DM:83:MET:HG3	35:DM:83:MET:O	2.11	0.50
37:DO:27:SER:HA	37:DO:88:ASP:HB3	1.93	0.50
38:DP:50:ILE:HA	38:DP:99:LEU:CD1	2.41	0.50
46:DX:67:ILE:N	46:DX:68:PRO:HD2	2.25	0.50
48:DZ:23:LEU:N	48:DZ:23:LEU:CD1	2.73	0.50
48:DZ:40:THR:OG1	48:DZ:41:PRO:HD2	2.10	0.50
1:AA:488:C:O5'	1:AA:488:C:H6	1.94	0.50
1:AA:878:G:H1'	8:AH:3:THR:HG21	1.92	0.50
1:AA:934:C:C2	1:AA:1344:C:C5	3.00	0.50
1:AA:1009:G:O2'	1:AA:1010:G:H5'	2.11	0.50
1:AA:1149:C:OP1	9:AI:14:VAL:HG21	2.12	0.50
1:AA:1318:A:O2'	19:AS:37:ARG:HB2	2.10	0.50
4:AD:79:PHE:O	4:AD:82:ALA:HB3	2.12	0.50
23:BA:761:A:H8	23:BA:761:A:O5'	1.94	0.50
23:BA:1045:A:H4'	23:BA:1046:A:H5''	1.93	0.50
23:BA:1290:C:H2'	23:BA:1291:C:C6	2.42	0.50
23:BA:1508:A:N6	23:BA:1509:A:C6	2.79	0.50
23:BA:1641:A:H2'	23:BA:1642:G:O4'	2.11	0.50
23:BA:2572:A:H62	26:BD:145:LYS:HG3	1.76	0.50
23:BA:2687:U:H2'	23:BA:2688:U:O4'	2.12	0.50
24:BB:45:A:H1'	28:BF:95:ARG:CZ	2.41	0.50
25:BC:72:LYS:HE2	25:BC:101:GLU:HG2	1.93	0.50
26:BD:11:MET:CE	26:BD:186:GLY:HA2	2.41	0.50
30:BH:57:ARG:HG2	30:BH:57:ARG:O	2.11	0.50
30:BH:76:THR:HG22	30:BH:141:LYS:HB2	1.92	0.50
33:BK:49:ARG:HA	33:BK:53:LYS:HZ2	1.76	0.50
35:BM:54:MET:O	35:BM:57:HIS:HB3	2.10	0.50
36:BN:99:LYS:CD	36:BN:99:LYS:N	2.74	0.50
41:BS:29:LEU:CG	41:BS:33:ARG:HE	2.24	0.50
45:BW:31:VAL:HG11	45:BW:67:VAL:HG23	1.93	0.50
46:BX:13:ILE:HA	46:BX:66:HIS:ND1	2.26	0.50
47:BY:1:MET:CE	47:BY:4:SER:HB2	2.40	0.50
47:BY:17:SER:HB3	47:BY:18:PRO:CD	2.37	0.50
53:B5:57:ARG:HB2	53:B5:57:ARG:CZ	2.41	0.50
1:CA:73:G:H8	1:CA:73:G:O5'	1.94	0.50
1:CA:76:G:O2'	1:CA:77:C:H5'	2.10	0.50
1:CA:402:G:C6	1:CA:403:C:C5	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:677:U:H2'	1:CA:678:U:C6	2.46	0.50
1:CA:1022:G:H2'	1:CA:1023:G:C8	2.43	0.50
1:CA:1504:G:H4'	1:CA:1505:G:C4	2.45	0.50
1:CA:1508:G:H2'	1:CA:1509:C:O4'	2.11	0.50
2:CB:53:ARG:HA	2:CB:56:ARG:HD2	1.93	0.50
2:CB:73:THR:HG22	2:CB:94:ASN:O	2.10	0.50
5:CE:53:LEU:HD23	5:CE:53:LEU:N	2.25	0.50
23:DA:30:G:H2'	23:DA:31:C:C6	2.46	0.50
23:DA:301:G:HO2'	23:DA:302:C:H6	1.58	0.50
23:DA:1105:U:H2'	23:DA:1106:G:H8	1.75	0.50
23:DA:1680:U:C2'	23:DA:1681:G:O5'	2.59	0.50
26:DD:117:MET:HE3	26:DD:136:ARG:HA	1.93	0.50
28:DF:49:ASP:HB3	28:DF:52:ILE:HG12	1.92	0.50
29:DG:78:GLY:O	29:DG:136:ILE:HG22	2.11	0.50
33:DK:7:TYR:CE1	33:DK:20:MET:HB3	2.46	0.50
33:DK:71:ARG:NH2	33:DK:77:ILE:HG21	2.26	0.50
36:DN:25:ALA:O	36:DN:26:LYS:C	2.47	0.50
36:DN:57:ARG:CD	36:DN:59:ASP:OD2	2.59	0.50
36:DN:67:LEU:O	36:DN:70:LEU:O	2.28	0.50
40:DR:2:PHE:HE2	40:DR:13:ARG:CD	2.23	0.50
41:DS:42:ARG:HG2	41:DS:42:ARG:HH11	1.76	0.50
43:DU:90:LEU:HD12	43:DU:91:GLU:HG3	1.93	0.50
44:DV:63:ASP:HB3	44:DV:65:GLN:HG3	1.93	0.50
1:AA:363:A:C6	1:AA:364:A:C6	2.99	0.50
1:AA:501:C:H2'	1:AA:502:G:C8	2.47	0.50
1:AA:826:C:H2'	8:AH:15:ASN:HD22	1.76	0.50
1:AA:1055:A:N7	1:AA:1200:C:N4	2.57	0.50
1:AA:1167:A:H62	1:AA:1169:A:N6	2.09	0.50
1:AA:1347:G:C6	9:AI:107:ARG:NH2	2.75	0.50
3:AC:191:THR:HB	3:AC:193:TYR:CD2	2.46	0.50
4:AD:13:ARG:HD2	4:AD:38:TYR:O	2.12	0.50
6:AF:90:VAL:O	6:AF:91:VAL:HG23	2.10	0.50
7:AG:61:VAL:O	7:AG:65:ALA:HB2	2.11	0.50
8:AH:87:SER:HB2	8:AH:93:VAL:HB	1.92	0.50
22:AV:6181:C:C2	22:AV:6182:A:C8	3.00	0.50
23:BA:414:C:H2'	23:BA:415:A:H8	1.75	0.50
23:BA:598:G:H5'	34:BL:15:ARG:HG2	1.93	0.50
23:BA:1050:A:C2	23:BA:2751:G:C5	2.99	0.50
23:BA:1118:C:H5''	44:BV:80:ARG:NH2	2.26	0.50
23:BA:1204:A:N6	23:BA:1240:U:O2'	2.44	0.50
23:BA:1324:G:N2	23:BA:1331:A:C4	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1354:A:C8	23:BA:1355:G:C8	3.00	0.50
23:BA:1516:U:H2'	23:BA:1517:G:H8	1.75	0.50
23:BA:1856:G:C2	23:BA:1887:C:N3	2.79	0.50
23:BA:2703:C:O2'	23:BA:2704:C:H5'	2.11	0.50
24:BB:60:C:C2	24:BB:61:G:C8	2.99	0.50
29:BG:86:GLU:OE2	29:BG:86:GLU:N	2.42	0.50
30:BH:25:TYR:CD1	30:BH:30:LEU:HD11	2.47	0.50
32:BJ:49:LEU:O	32:BJ:49:LEU:HD12	2.11	0.50
33:BK:34:THR:HG23	33:BK:35:VAL:N	2.27	0.50
34:BL:50:ARG:HB2	53:B5:60:LEU:HD21	1.93	0.50
34:BL:50:ARG:HH11	34:BL:50:ARG:HB3	1.76	0.50
35:BM:88:GLY:C	35:BM:89:ASN:CG	2.67	0.50
38:BP:56:GLY:O	38:BP:59:THR:CG2	2.55	0.50
40:BR:72:VAL:HG23	40:BR:85:LYS:HB3	1.92	0.50
43:BU:14:LEU:HD23	43:BU:14:LEU:C	2.31	0.50
43:BU:76:CYS:SG	43:BU:77:PRO:CD	2.99	0.50
50:B2:35:GLU:HB2	50:B2:49:CYS:SG	2.51	0.50
1:CA:68:G:C6	1:CA:69:G:N7	2.79	0.50
1:CA:109:A:N6	1:CA:326:G:C6	2.79	0.50
1:CA:191(F):U:H2'	1:CA:191(G):G:H8	1.76	0.50
1:CA:353:A:C2'	1:CA:354:G:OP2	2.59	0.50
1:CA:799:G:C2'	1:CA:800:G:O5'	2.59	0.50
1:CA:853:G:C2'	1:CA:854:G:H5'	2.42	0.50
1:CA:879:C:O2'	1:CA:880:C:H5'	2.11	0.50
3:CC:31:HIS:O	3:CC:35:GLU:HG2	2.11	0.50
4:CD:3:ARG:HG2	4:CD:5:ILE:HD13	1.92	0.50
6:CF:61:LEU:HB3	6:CF:63:TYR:HE2	1.76	0.50
8:CH:86:ILE:HG22	8:CH:93:VAL:HG21	1.92	0.50
13:CM:96:LEU:HD22	13:CM:103:THR:HG21	1.92	0.50
18:CR:26:LEU:CD1	18:CR:42:ARG:HD2	2.39	0.50
23:DA:954:G:H5''	35:DM:13:GLN:HG2	1.93	0.50
23:DA:1019:U:H2'	23:DA:1020:A:C8	2.40	0.50
23:DA:1109:C:N4	23:DA:1110:G:C2	2.78	0.50
23:DA:1173:G:H1'	23:DA:1177:A:H61	1.75	0.50
23:DA:1344:G:H5'	23:DA:1384:A:C6	2.46	0.50
23:DA:1502:C:H2'	23:DA:1503:U:C6	2.47	0.50
23:DA:1709:U:H2'	23:DA:1710:C:C6	2.45	0.50
23:DA:1833:U:O2'	23:DA:1834:U:H5'	2.11	0.50
23:DA:2017:U:O2	50:D2:10:LYS:HB2	2.11	0.50
23:DA:2302:G:C2'	23:DA:2303:G:H5'	2.42	0.50
23:DA:2324:C:H42	23:DA:2331:G:H1	1.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2468:G:O2'	23:DA:2476:A:N7	2.41	0.50
23:DA:2563:U:O2	23:DA:2565:A:H8	1.94	0.50
23:DA:2638:G:OP2	26:DD:82:ARG:NH2	2.44	0.50
24:DB:78:A:N3	24:DB:99:A:C5	2.80	0.50
28:DF:72:ARG:HB3	28:DF:87:PRO:HD2	1.92	0.50
32:DJ:119:GLU:H	32:DJ:119:GLU:CD	2.11	0.50
33:DK:19:ILE:HD13	33:DK:19:ILE:N	2.22	0.50
39:DQ:36:ARG:HD3	39:DQ:40:PHE:CZ	2.46	0.50
39:DQ:72:HIS:CE1	39:DQ:107:ALA:HA	2.47	0.50
43:DU:46:LYS:O	43:DU:48:ALA:N	2.44	0.50
53:D5:39:LYS:HA	53:D5:42:ARG:NH1	2.27	0.50
1:AA:562:C:H1'	12:AL:14:ARG:HB3	1.93	0.50
1:AA:619:U:N3	4:AD:135:LEU:HD11	2.26	0.50
1:AA:817:C:H4'	1:AA:818:G:OP1	2.10	0.50
1:AA:1053:G:H3'	1:AA:1054:C:C5'	2.41	0.50
1:AA:1171:G:H2'	1:AA:1172:C:C6	2.47	0.50
1:AA:1226:C:O2'	13:AM:111:LYS:NZ	2.45	0.50
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.46	0.50
1:AA:1378:C:H3'	1:AA:1379:G:H5''	1.93	0.50
2:AB:73:THR:HG22	2:AB:94:ASN:O	2.11	0.50
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.80	0.50
4:AD:82:ALA:HB1	4:AD:89:THR:HG23	1.93	0.50
7:AG:79:ARG:HA	7:AG:83:ALA:O	2.12	0.50
10:AJ:30:SER:HB2	10:AJ:80:LYS:CG	2.42	0.50
23:BA:189:G:H2'	23:BA:205:G:N2	2.27	0.50
23:BA:786:C:C2'	23:BA:787:U:H5'	2.42	0.50
23:BA:1022:G:C6	23:BA:1140:C:C4	2.99	0.50
23:BA:1476:C:H3'	23:BA:1476:C:C6	2.45	0.50
23:BA:1502:C:H6	23:BA:1502:C:H3'	1.76	0.50
23:BA:1502:C:H2'	23:BA:1503:U:C6	2.46	0.50
23:BA:1678:G:H2'	23:BA:1678:G:N3	2.27	0.50
23:BA:2078:C:C2'	23:BA:2079:U:H5'	2.41	0.50
23:BA:2506:U:C5	23:BA:2507:C:C5	3.00	0.50
23:BA:2579:C:O2'	26:BD:131:ALA:HB3	2.12	0.50
23:BA:2726:U:O2	23:BA:2726:U:H5'	2.11	0.50
23:BA:2750:A:C2	23:BA:2753:A:H2	2.28	0.50
24:BB:49:C:O5'	24:BB:49:C:H6	1.95	0.50
24:BB:55:U:O2'	24:BB:56:G:H5'	2.11	0.50
26:BD:11:MET:CE	26:BD:186:GLY:CA	2.90	0.50
28:BF:88:ILE:HD12	28:BF:89:GLY:N	2.26	0.50
32:BJ:37:VAL:HG12	32:BJ:38:LEU:N	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BV:163:LEU:CD2	44:BV:163:LEU:H	2.25	0.50
46:BX:10:LYS:O	46:BX:11:ARG:HB2	2.10	0.50
51:B3:38:LYS:HG2	51:B3:39:TYR:N	2.27	0.50
52:B4:10:ARG:NE	52:B4:14:LYS:HD2	2.26	0.50
1:CA:376:G:C5	1:CA:389:A:N1	2.80	0.50
1:CA:391:G:C6	1:CA:392:G:N7	2.79	0.50
1:CA:456:C:H42	1:CA:476:G:H1	1.57	0.50
1:CA:779:C:H2'	1:CA:780:A:O4'	2.11	0.50
1:CA:1074:G:C2	1:CA:1075:C:C2	3.00	0.50
2:CB:211:ILE:HG22	2:CB:215:LEU:HD23	1.93	0.50
3:CC:72:LYS:HG2	3:CC:74:GLY:H	1.75	0.50
8:CH:20:TYR:HD1	8:CH:65:TYR:CE2	2.30	0.50
12:CL:77:GLN:O	12:CL:79:HIS:N	2.43	0.50
13:CM:79:LYS:HA	13:CM:82:MET:HB3	1.93	0.50
16:CP:43:LYS:HG2	16:CP:48:TRP:CG	2.46	0.50
16:CP:45:THR:HB	16:CP:46:PRO:HD2	1.93	0.50
17:CQ:60:ILE:O	17:CQ:71:PHE:HA	2.12	0.50
17:CQ:85:VAL:O	17:CQ:89:LEU:HG	2.11	0.50
23:DA:270(H):C:C4	23:DA:270(I):C:C5	3.00	0.50
23:DA:644:A:C2	23:DA:646:A:C4	3.00	0.50
23:DA:810:U:O5'	23:DA:810:U:H6	1.94	0.50
23:DA:1126:A:H8	23:DA:1126:A:O5'	1.95	0.50
23:DA:2420:C:OP1	53:D5:34:TRP:HA	2.11	0.50
25:DC:260:ARG:O	25:DC:260:ARG:HG2	2.11	0.50
25:DC:265:PRO:C	25:DC:267:SER:N	2.65	0.50
25:DC:270:ILE:C	25:DC:271:ILE:HG12	2.32	0.50
26:DD:112:GLY:O	26:DD:159:HIS:HA	2.12	0.50
28:DF:55:LYS:HD2	28:DF:58:GLN:NE2	2.27	0.50
29:DG:86:GLU:OE2	29:DG:86:GLU:N	2.42	0.50
29:DG:88:LEU:O	29:DG:162:ILE:HA	2.11	0.50
34:DL:140:ALA:O	34:DL:141:ALA:CB	2.59	0.50
36:DN:101:ALA:HB2	50:D2:44:THR:HB	1.94	0.50
39:DQ:79:PHE:CE2	39:DQ:106:PHE:CE1	3.00	0.50
42:DT:3:THR:HA	42:DT:6:ASP:OD2	2.12	0.50
1:AA:44:G:C2	1:AA:399:G:C2	2.99	0.50
1:AA:173:U:C2	1:AA:197:A:C2	2.99	0.50
1:AA:191(G):G:C4	1:AA:192:U:C5	2.99	0.50
1:AA:408:A:C4	1:AA:409:G:C8	3.00	0.50
1:AA:799:G:C2'	1:AA:800:G:O5'	2.59	0.50
1:AA:938:A:N6	1:AA:939:G:C6	2.79	0.50
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:53:ARG:HA	2:AB:56:ARG:HD2	1.92	0.50
2:AB:68:ILE:CG2	2:AB:70:PHE:CE1	2.94	0.50
2:AB:91:PRO:HG3	2:AB:154:LEU:HD21	1.92	0.50
6:AF:18:GLN:O	6:AF:21:LEU:HB2	2.11	0.50
9:AI:114:TYR:N	9:AI:114:TYR:CD2	2.80	0.50
11:AK:21:ILE:HG13	11:AK:30:VAL:HG12	1.94	0.50
11:AK:120:ARG:NH1	11:AK:126:ARG:HE	2.08	0.50
16:AP:58:TYR:O	16:AP:61:SER:HB3	2.12	0.50
22:AV:6189:G:H2'	22:AV:6190:U:C6	2.46	0.50
23:BA:282:A:C4	23:BA:359:A:C2	2.99	0.50
23:BA:636:G:OP1	34:BL:132:LYS:HD3	2.11	0.50
23:BA:1382:G:O2'	23:BA:1383:C:H5'	2.12	0.50
23:BA:1478:G:N2	23:BA:1479:G:C4	2.79	0.50
23:BA:1487:G:H2'	23:BA:1488:G:C8	2.36	0.50
23:BA:1899:G:N2	23:BA:1902:C:C4	2.80	0.50
23:BA:2001:A:H2'	23:BA:2002:G:O4'	2.12	0.50
23:BA:2836:U:H2'	23:BA:2837:G:C8	2.47	0.50
25:BC:25:THR:HG21	25:BC:82:ILE:H	1.74	0.50
25:BC:181:GLU:HA	25:BC:272:ALA:HB3	1.92	0.50
28:BF:82:LEU:HD22	28:BF:87:PRO:HG3	1.92	0.50
32:BJ:51:THR:O	32:BJ:54:ALA:HB3	2.11	0.50
32:BJ:80:ALA:O	32:BJ:83:ILE:HG13	2.11	0.50
34:BL:97:PRO:HA	34:BL:112:LEU:HD12	1.92	0.50
35:BM:81:VAL:C	35:BM:82:ARG:HG2	2.25	0.50
37:BO:62:LYS:O	37:BO:65:VAL:HB	2.11	0.50
38:BP:28:VAL:HA	38:BP:89:VAL:CG1	2.41	0.50
44:BV:5:LEU:CG	44:BV:47:VAL:HG21	2.42	0.50
44:BV:39:VAL:CG2	44:BV:44:PHE:HB2	2.39	0.50
47:BY:7:ARG:NE	47:BY:11:GLU:OE2	2.44	0.50
53:B5:14:VAL:HG13	53:B5:22:VAL:HG13	1.93	0.50
1:CA:9:G:H2'	1:CA:10:A:C8	2.46	0.50
1:CA:353:A:H2'	1:CA:354:G:OP2	2.12	0.50
1:CA:363:A:C6	1:CA:364:A:C6	3.00	0.50
1:CA:592:G:N1	1:CA:648:A:C6	2.79	0.50
1:CA:600:C:OP1	8:CH:97:VAL:HG12	2.12	0.50
1:CA:697:U:H2'	1:CA:698:G:H5'	1.93	0.50
1:CA:953:G:C6	1:CA:1229:A:C6	3.00	0.50
1:CA:1290:G:N3	1:CA:1290:G:H2'	2.26	0.50
5:CE:34:VAL:O	5:CE:41:VAL:HA	2.11	0.50
6:CF:8:ILE:HD12	6:CF:26:ILE:HD13	1.93	0.50
11:CK:40:ILE:N	11:CK:40:ILE:HD13	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:39:TYR:CE1	16:CP:73:LEU:HD13	2.47	0.50
20:CT:71:THR:CG2	20:CT:72:LEU:H	2.19	0.50
22:CV:6191:A:N1	22:CV:6213:A:C6	2.79	0.50
23:DA:142:G:C1'	42:DT:37:THR:HG21	2.41	0.50
23:DA:783:A:H3'	23:DA:783:A:C8	2.47	0.50
23:DA:795:C:O5'	23:DA:795:C:H6	1.95	0.50
23:DA:825:C:C2'	23:DA:826:U:H5'	2.41	0.50
23:DA:1204:A:N6	23:DA:1240:U:O2'	2.45	0.50
23:DA:1232:G:H2'	23:DA:1233:C:H6	1.76	0.50
23:DA:1290:C:H2'	23:DA:1291:C:C6	2.41	0.50
23:DA:1317:A:C6	23:DA:1318:C:C4	2.99	0.50
23:DA:1771:C:O2'	23:DA:1786:A:H8	1.79	0.50
23:DA:1773:A:C5	23:DA:1829:A:H1'	2.46	0.50
23:DA:2078:C:C2'	23:DA:2079:U:H5'	2.42	0.50
23:DA:2346:A:C2	23:DA:2383:G:C2	2.98	0.50
23:DA:2713:A:H3'	23:DA:2714:G:C5'	2.40	0.50
23:DA:2886:G:H2'	23:DA:2887:U:C6	2.46	0.50
25:DC:158:ALA:C	25:DC:161:THR:HG23	2.31	0.50
26:DD:3:GLY:C	26:DD:81:ILE:HD13	2.32	0.50
26:DD:49:LEU:HD22	26:DD:49:LEU:N	2.17	0.50
28:DF:73:ALA:HB3	28:DF:76:SER:OG	2.12	0.50
30:DH:5:LEU:HD23	30:DH:17:GLN:O	2.11	0.50
30:DH:76:THR:HG22	30:DH:141:LYS:HB2	1.93	0.50
32:DJ:32:VAL:HG12	32:DJ:33:GLU:N	2.26	0.50
32:DJ:39:ILE:O	32:DJ:78:VAL:HG22	2.11	0.50
43:DU:76:CYS:SG	43:DU:77:PRO:CD	2.99	0.50
53:D5:22:VAL:CB	53:D5:54:GLU:HG3	2.41	0.50
1:AA:76:G:O2'	1:AA:77:C:H5'	2.11	0.50
1:AA:79:G:H2'	1:AA:80:G:C8	2.46	0.50
1:AA:173:U:N1	1:AA:197:A:C2	2.79	0.50
1:AA:376:G:H1	1:AA:387:U:H3	1.59	0.50
1:AA:457:C:O2	1:AA:457:C:C2'	2.58	0.50
1:AA:522:C:N4	1:AA:528:C:H42	2.09	0.50
1:AA:735:C:H1'	18:AR:75:ILE:HD11	1.93	0.50
1:AA:765:G:H5''	1:AA:766:A:OP1	2.11	0.50
1:AA:933:G:N7	7:AG:3:ARG:NH2	2.60	0.50
1:AA:1071:C:H5''	5:AE:49:PRO:HG2	1.92	0.50
1:AA:1072:G:C6	1:AA:1104:G:C2	2.99	0.50
1:AA:1357:A:N7	1:AA:1358:U:C4	2.79	0.50
2:AB:61:LEU:HG	2:AB:68:ILE:HD11	1.94	0.50
3:AC:113:ALA:HB2	3:AC:202:ILE:HG13	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:9:LYS:HB3	5:AE:112:LEU:HD11	1.94	0.50
5:AE:48:ALA:C	5:AE:50:GLU:H	2.14	0.50
6:AF:22:GLU:O	6:AF:26:ILE:HG13	2.11	0.50
8:AH:50:ARG:CD	8:AH:50:ARG:H	2.24	0.50
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.92	0.50
15:AO:53:HIS:CE1	23:BA:715:G:O6	2.62	0.50
16:AP:25:ARG:O	16:AP:26:ARG:C	2.50	0.50
17:AQ:45:HIS:HB3	17:AQ:72:ARG:HG2	1.93	0.50
17:AQ:45:HIS:O	17:AQ:73:VAL:HG23	2.12	0.50
20:AT:26:ASN:ND2	20:AT:26:ASN:N	2.49	0.50
23:BA:794:G:H2'	23:BA:795:C:C6	2.47	0.50
23:BA:994:C:OP1	39:BQ:53:ARG:NH2	2.45	0.50
23:BA:1511:A:H2'	23:BA:1512:G:C8	2.45	0.50
23:BA:1775:U:H2'	23:BA:1776:G:O5'	2.12	0.50
23:BA:1831:G:C5	23:BA:1832:C:C5	3.00	0.50
23:BA:2305:A:H3'	23:BA:2306:C:H5''	1.93	0.50
23:BA:2785:C:O2'	26:BD:66:HIS:CD2	2.64	0.50
23:BA:2862:G:C4	23:BA:2863:C:C5	2.99	0.50
28:BF:17:PRO:HA	28:BF:20:ILE:HG12	1.92	0.50
28:BF:28:VAL:O	28:BF:31:VAL:HG12	2.11	0.50
30:BH:142:VAL:O	30:BH:143:SER:HB2	2.12	0.50
32:BJ:62:ARG:NH2	32:BJ:64:ASP:OD2	2.40	0.50
32:BJ:156:GLN:O	32:BJ:157:ARG:HB2	2.12	0.50
34:BL:13:ASN:O	34:BL:14:LYS:C	2.50	0.50
44:BV:4:ARG:HD3	44:BV:60:GLU:HG3	1.94	0.50
44:BV:63:ASP:HB3	44:BV:65:GLN:HG3	1.94	0.50
49:B1:50:THR:HG22	49:B1:51:TYR:N	2.26	0.50
53:B5:57:ARG:NE	53:B5:57:ARG:CA	2.71	0.50
1:CA:105:G:C6	1:CA:106:C:C4	3.00	0.50
1:CA:109:A:C6	1:CA:326:G:C6	2.99	0.50
1:CA:137:C:O2'	1:CA:138:G:H5'	2.12	0.50
1:CA:362:G:O3'	12:CL:32:ARG:NH2	2.44	0.50
1:CA:488:C:H6	1:CA:488:C:O5'	1.95	0.50
1:CA:599:C:H2'	1:CA:600:C:H6	1.75	0.50
1:CA:619:U:H2'	4:CD:135:LEU:CD2	2.41	0.50
1:CA:642:A:O2'	8:CH:31:PHE:HE1	1.95	0.50
1:CA:760:G:H2'	1:CA:761:G:H5'	1.93	0.50
1:CA:1443:G:H22	38:DP:119:LYS:HB2	1.76	0.50
2:CB:61:LEU:HG	2:CB:68:ILE:HD11	1.94	0.50
3:CC:19:GLU:HG3	3:CC:54:ARG:HD2	1.93	0.50
8:CH:19:VAL:HG23	8:CH:21:LYS:HG2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:14:VAL:O	9:CI:65:VAL:HG23	2.10	0.50
13:CM:14:ARG:NH1	13:CM:42:ALA:HA	2.26	0.50
18:CR:56:THR:HB	18:CR:58:LEU:HD12	1.93	0.50
22:CV:6189:G:C5	22:CV:6190:U:C5	2.99	0.50
23:DA:455:C:N3	23:DA:472:A:H2'	2.27	0.50
23:DA:816:C:O2'	23:DA:817:C:H5'	2.12	0.50
23:DA:864:G:O2'	23:DA:865:C:H5'	2.12	0.50
23:DA:990:A:H5''	23:DA:991:C:OP2	2.10	0.50
23:DA:1858:G:H1'	23:DA:1884:A:H62	1.71	0.50
23:DA:1952:A:C5	33:DK:22:ILE:CD1	2.91	0.50
23:DA:2482:G:H2'	23:DA:2483:C:O4'	2.11	0.50
23:DA:2658:C:H4'	29:DG:158:HIS:NE2	2.27	0.50
23:DA:2687:U:H2'	23:DA:2688:U:O4'	2.12	0.50
24:DB:7:G:H4'	37:DO:29:PHE:CG	2.46	0.50
25:DC:198:ASN:C	25:DC:198:ASN:ND2	2.64	0.50
26:DD:16:ARG:O	26:DD:17:ASP:C	2.47	0.50
30:DH:128:LEU:O	30:DH:139:GLN:HA	2.11	0.50
34:DL:100:LEU:HD22	34:DL:100:LEU:H	1.77	0.50
35:DM:20:ALA:HA	35:DM:98:LYS:HB3	1.92	0.50
35:DM:40:ALA:CB	35:DM:127:ILE:HD12	2.40	0.50
40:DR:2:PHE:O	40:DR:41:GLY:HA2	2.12	0.50
40:DR:28:GLU:O	40:DR:61:VAL:HG21	2.12	0.50
53:D5:14:VAL:HG13	53:D5:22:VAL:HG13	1.93	0.50
1:AA:376:G:C5	1:AA:389:A:N1	2.79	0.50
1:AA:1004:A:H3'	1:AA:1004:A:N3	2.26	0.50
1:AA:1254:C:OP1	10:AJ:45:ARG:HD3	2.12	0.50
1:AA:1371:G:OP1	9:AI:11:LYS:HB3	2.10	0.50
1:AA:1386:G:C2	1:AA:1387:G:C8	2.99	0.50
2:AB:200:ILE:HG22	2:AB:202:PRO:HD3	1.92	0.50
4:AD:141:ARG:O	4:AD:144:ASP:OD2	2.29	0.50
5:AE:41:VAL:HG12	5:AE:112:LEU:O	2.11	0.50
9:AI:14:VAL:O	9:AI:65:VAL:HG23	2.11	0.50
10:AJ:33:GLN:O	10:AJ:75:ILE:HG12	2.11	0.50
18:AR:56:THR:HB	18:AR:58:LEU:HD12	1.93	0.50
23:BA:310:A:P	43:BU:18:GLY:HA2	2.52	0.50
23:BA:518:G:H4'	41:BS:18:ARG:NH1	2.27	0.50
23:BA:915:C:O2'	24:BB:100:G:H5'	2.12	0.50
23:BA:1104:C:C4	23:BA:1105:U:C5	3.00	0.50
23:BA:1241:A:N7	23:BA:1242:A:C4	2.80	0.50
23:BA:1408:C:C2	23:BA:1595:G:N2	2.80	0.50
23:BA:1439:A:C2	23:BA:1553:A:C4	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1897:G:H2'	23:BA:1898:U:O4'	2.11	0.50
23:BA:2302:G:O2'	23:BA:2303:G:H5'	2.11	0.50
24:BB:5:C:O2	24:BB:116:G:N2	2.44	0.50
28:BF:72:ARG:HB3	28:BF:87:PRO:HD2	1.94	0.50
28:BF:88:ILE:HD12	28:BF:89:GLY:H	1.77	0.50
30:BH:2:LYS:HB3	30:BH:20:ASP:OD1	2.12	0.50
30:BH:77:LEU:HD21	30:BH:104:GLN:HB2	1.93	0.50
36:BN:4:LEU:C	36:BN:6:SER:H	2.15	0.50
36:BN:99:LYS:H	36:BN:99:LYS:HD2	1.75	0.50
39:BQ:17:ILE:HG23	39:BQ:39:LEU:HD12	1.93	0.50
39:BQ:79:PHE:HE2	39:BQ:106:PHE:CZ	2.30	0.50
41:BS:42:ARG:HH11	41:BS:42:ARG:HG2	1.76	0.50
49:B1:45:GLY:O	49:B1:46:ASN:HB2	2.11	0.50
1:CA:33:A:H2'	1:CA:34:C:C6	2.46	0.50
1:CA:46:G:H8	1:CA:46:G:O5'	1.94	0.50
1:CA:247:G:C5	1:CA:248:C:C5	3.00	0.50
1:CA:503:C:OP1	12:CL:118:LYS:HE3	2.11	0.50
1:CA:670:G:N2	1:CA:736:C:O2	2.42	0.50
1:CA:683:G:C6	1:CA:684:A:C5	3.00	0.50
1:CA:685:G:O2'	1:CA:686:U:H5'	2.11	0.50
1:CA:738:C:C2	1:CA:739:C:C5	3.00	0.50
1:CA:832:C:N4	1:CA:855:G:O6	2.45	0.50
1:CA:934:C:C2	1:CA:1344:C:C5	2.99	0.50
1:CA:973:G:P	10:CJ:57:LYS:HZ3	2.34	0.50
1:CA:1009:G:O2'	1:CA:1010:G:H5'	2.12	0.50
1:CA:1324:A:O4'	1:CA:136(A):C:H4'	2.11	0.50
1:CA:1368:G:OP2	9:CI:112:LYS:HD3	2.11	0.50
1:CA:1501:C:C5	1:CA:1504:G:C4	2.99	0.50
2:CB:27:LYS:CG	2:CB:194:PRO:HD2	2.41	0.50
2:CB:98:LEU:HB2	2:CB:101:MET:CG	2.42	0.50
3:CC:23:TYR:HB2	10:CJ:93:GLY:O	2.11	0.50
3:CC:73:PRO:HA	3:CC:76:VAL:HG13	1.93	0.50
4:CD:72:GLU:OE1	4:CD:72:GLU:O	2.30	0.50
8:CH:127:LEU:HD13	8:CH:127:LEU:O	2.12	0.50
9:CI:10:ARG:CD	9:CI:11:LYS:HG3	2.40	0.50
10:CJ:9:ARG:HG2	10:CJ:69:ASN:OD1	2.12	0.50
12:CL:6:ILE:HD12	12:CL:6:ILE:N	2.25	0.50
17:CQ:83:ASP:O	17:CQ:86:GLU:HB2	2.12	0.50
23:DA:25:U:H2'	23:DA:26:G:C8	2.47	0.50
23:DA:184:C:C2	23:DA:185:U:C5	3.00	0.50
23:DA:188:G:C2'	23:DA:189:G:H5'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:188:G:H1	23:DA:208:C:H42	1.60	0.50
23:DA:252:G:O2'	23:DA:253:C:H5'	2.12	0.50
23:DA:618(B):C:H2'	23:DA:618(B):C:O2	2.12	0.50
23:DA:806:C:OP1	34:DL:39:LYS:HB3	2.12	0.50
23:DA:1164:G:H5'	23:DA:1165:U:OP2	2.12	0.50
23:DA:1209:G:N2	23:DA:1210:A:N6	2.58	0.50
23:DA:1398:C:O3'	42:DT:25:LYS:NZ	2.40	0.50
23:DA:1476:C:C6	23:DA:1476:C:C3'	2.94	0.50
23:DA:1542:G:OP2	23:DA:1543:A:OP1	2.29	0.50
23:DA:1567:A:C8	25:DC:84:TYR:CE2	3.00	0.50
23:DA:1850:G:C4	23:DA:1851:U:C5	3.00	0.50
23:DA:2250:G:H5''	23:DA:2250:G:N3	2.27	0.50
32:DJ:133:GLY:O	32:DJ:137:ARG:HG2	2.11	0.50
34:DL:101:VAL:CB	34:DL:106:LEU:HB3	2.42	0.50
41:DS:45:TYR:CD2	41:DS:45:TYR:O	2.65	0.50
42:DT:27:THR:HB	42:DT:80:ILE:HB	1.93	0.50
42:DT:57:LEU:HD12	42:DT:57:LEU:N	2.26	0.50
46:DX:58:ILE:HD11	46:DX:60:PHE:CE1	2.47	0.50
46:DX:77:ALA:HA	46:DX:80:LEU:HB2	1.92	0.50
1:AA:191(G):G:H2'	1:AA:192:U:C6	2.46	0.50
1:AA:392:G:N3	1:AA:393:A:C8	2.80	0.50
1:AA:457:C:N4	1:AA:475:G:H1	2.09	0.50
1:AA:503:C:C2	1:AA:504:C:C5	3.00	0.50
1:AA:767:A:H2'	1:AA:768:A:O4'	2.11	0.50
1:AA:1424:C:H2'	1:AA:1425:U:O4'	2.12	0.50
2:AB:31:TYR:O	2:AB:42:ILE:HD12	2.12	0.50
4:AD:110:PHE:N	4:AD:110:PHE:CD2	2.75	0.50
6:AF:8:ILE:HD12	6:AF:26:ILE:HD13	1.94	0.50
9:AI:104:ARG:O	9:AI:105:ASP:HB3	2.11	0.50
10:AJ:17:ASP:O	10:AJ:21:GLN:HB2	2.11	0.50
11:AK:34:ASP:HB2	11:AK:35:PRO:HD2	1.92	0.50
13:AM:99:ARG:HB2	13:AM:101:GLN:HE21	1.77	0.50
16:AP:39:TYR:CE1	16:AP:73:LEU:HD13	2.47	0.50
17:AQ:60:ILE:O	17:AQ:71:PHE:HA	2.12	0.50
18:AR:53:ARG:HH21	18:AR:60:ALA:N	2.09	0.50
19:AS:21:GLU:HG3	19:AS:22:LEU:HD23	1.93	0.50
23:BA:8:A:H2'	23:BA:9:U:C6	2.47	0.50
23:BA:270(O):G:C6	23:BA:270(Q):C:N4	2.80	0.50
23:BA:673:C:H5''	27:BE:81:PRO:HD2	1.94	0.50
23:BA:806:C:OP1	34:BL:39:LYS:HB3	2.11	0.50
23:BA:849:A:O2'	48:BZ:17:LYS:HE3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:909:A:C4	23:BA:912:C:C5	2.99	0.50
23:BA:1040:C:H2'	23:BA:1041:C:C6	2.46	0.50
23:BA:1188:U:H2'	23:BA:1189:A:C5'	2.42	0.50
23:BA:1345:C:O2'	23:BA:1346:G:H5'	2.11	0.50
23:BA:1658:C:H2'	23:BA:1659:U:C6	2.47	0.50
23:BA:1815:A:P	25:BC:54:ARG:HH22	2.35	0.50
24:BB:7:G:H1'	37:BO:38:GLN:HE21	1.75	0.50
25:BC:69:ARG:NH2	25:BC:128:GLY:O	2.44	0.50
34:BL:10:PRO:HD2	34:BL:11:GLY:N	2.26	0.50
34:BL:49:ARG:O	34:BL:50:ARG:C	2.50	0.50
35:BM:55:VAL:CG2	35:BM:56:ARG:N	2.74	0.50
38:BP:78:LEU:HD13	38:BP:78:LEU:O	2.11	0.50
42:BT:64:LYS:HG2	42:BT:65:ARG:HH21	1.77	0.50
46:BX:11:ARG:HG3	46:BX:11:ARG:NH1	2.23	0.50
1:CA:36:C:H4'	12:CL:121:THR:O	2.11	0.50
1:CA:629:G:C2	1:CA:630:G:O6	2.65	0.50
1:CA:744:C:C6	1:CA:744:C:C3'	2.95	0.50
1:CA:982:U:H5''	14:CN:6:LEU:HD13	1.93	0.50
1:CA:1147:C:O5'	1:CA:1147:C:H6	1.95	0.50
1:CA:1233:G:OP2	9:CI:124:GLN:HB2	2.11	0.50
2:CB:74:LYS:CB	2:CB:74:LYS:HZ2	2.24	0.50
10:CJ:31:GLY:HA3	10:CJ:81:THR:CG2	2.42	0.50
12:CL:70:PRO:O	12:CL:101:ARG:NH1	2.44	0.50
17:CQ:11:VAL:N	17:CQ:20:THR:O	2.45	0.50
23:DA:7:G:H2'	23:DA:8:A:O4'	2.12	0.50
23:DA:26:G:H1'	23:DA:514:A:N6	2.27	0.50
23:DA:94:G:N3	47:DY:47:ASN:ND2	2.60	0.50
23:DA:932:G:OP1	23:DA:932:G:H3'	2.12	0.50
23:DA:1015:G:O2'	23:DA:1016:G:H5'	2.12	0.50
23:DA:1040:C:H2'	23:DA:1041:C:C6	2.47	0.50
23:DA:1932:A:H2'	23:DA:1933:G:O4'	2.11	0.50
23:DA:2208:U:O4'	25:DC:151:LYS:HE3	2.12	0.50
23:DA:2352:A:C4	23:DA:2366:A:C2	3.00	0.50
25:DC:52:ARG:HB3	25:DC:53:PHE:CD2	2.47	0.50
26:DD:36:ARG:HH11	26:DD:85:ASN:ND2	2.09	0.50
26:DD:51:PHE:CD1	26:DD:51:PHE:C	2.85	0.50
28:DF:28:VAL:O	28:DF:31:VAL:HG12	2.11	0.50
35:DM:110:THR:OG1	35:DM:113:GLN:HB2	2.12	0.50
36:DN:100:LEU:HD23	36:DN:100:LEU:N	2.27	0.50
46:DX:11:ARG:HG3	46:DX:61:ARG:O	2.12	0.50
46:DX:27:GLU:HB3	46:DX:33:LYS:HG3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DY:9:GLN:CA	47:DY:12:GLU:HB3	2.41	0.50
47:DY:38:GLN:HB3	47:DY:44:LEU:HB3	1.93	0.50
1:AA:414:A:H2'	1:AA:415:A:C8	2.47	0.50
1:AA:498:A:H4'	1:AA:500:G:H5'	1.93	0.50
1:AA:538:G:N2	1:AA:539:A:H1'	2.27	0.50
1:AA:983:A:H5'	1:AA:984:C:OP2	2.12	0.50
3:AC:72:LYS:HG2	3:AC:74:GLY:H	1.76	0.50
5:AE:96:PRO:HA	5:AE:117:ASP:OD2	2.11	0.50
10:AJ:31:GLY:HA3	10:AJ:81:THR:CG2	2.42	0.50
10:AJ:58:ASP:O	10:AJ:60:ARG:N	2.45	0.50
11:AK:40:ILE:HD13	11:AK:40:ILE:N	2.27	0.50
16:AP:32:TYR:O	16:AP:32:TYR:HD2	1.95	0.50
17:AQ:54:GLY:HA3	17:AQ:82:MET:HE1	1.94	0.50
23:BA:270(H):C:C4	23:BA:270(I):C:C5	3.00	0.50
23:BA:270(H):C:C2	23:BA:270(I):C:C5	3.00	0.50
23:BA:351:G:H5''	23:BA:352:G:OP1	2.11	0.50
23:BA:409:C:O2'	23:BA:410:G:H5'	2.11	0.50
23:BA:681:G:H2'	23:BA:682:G:O5'	2.12	0.50
23:BA:962:G:H2'	23:BA:963:U:O4'	2.12	0.50
23:BA:1292:U:H2'	23:BA:1293:C:C6	2.47	0.50
23:BA:1396:U:O2	23:BA:1396:U:C2'	2.52	0.50
23:BA:1540:G:H3'	23:BA:1541:U:H6	1.75	0.50
23:BA:1971:A:C4	25:BC:241:PRO:HG3	2.47	0.50
23:BA:2276:G:O2'	23:BA:2277:G:H5'	2.11	0.50
23:BA:2393:A:H5''	34:BL:62:LEU:HB3	1.93	0.50
23:BA:2480:C:H2'	23:BA:2481:G:H5'	1.92	0.50
24:BB:7:G:H2'	24:BB:8:U:O4'	2.12	0.50
25:BC:182:LEU:O	25:BC:271:ILE:HG13	2.12	0.50
26:BD:4:ILE:HD11	26:BD:28:ALA:O	2.11	0.50
30:BH:45:LYS:HA	30:BH:48:GLU:HG2	1.93	0.50
32:BJ:39:ILE:O	32:BJ:78:VAL:HG22	2.11	0.50
34:BL:52:GLU:OE1	34:BL:52:GLU:CA	2.60	0.50
36:BN:25:ALA:O	36:BN:26:LYS:C	2.49	0.50
36:BN:93:GLY:C	36:BN:95:THR:H	2.15	0.50
40:BR:13:ARG:HG3	40:BR:13:ARG:HH11	1.77	0.50
40:BR:38:LEU:HD12	40:BR:57:VAL:HG12	1.94	0.50
1:CA:243:A:C2	1:CA:246:A:C8	3.00	0.50
1:CA:922:G:H5''	1:CA:923:A:OP2	2.12	0.50
3:CC:111:LEU:HD23	3:CC:146:ALA:HB2	1.94	0.50
3:CC:175:LEU:CD1	3:CC:201:TYR:CE2	2.95	0.50
4:CD:75:PHE:CZ	4:CD:93:PHE:HZ	2.29	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:86:GLN:HB2	7:CG:148:ASN:ND2	2.27	0.50
22:CV:6189:G:H2'	22:CV:6190:U:C6	2.45	0.50
22:CV:6192:G:C5	22:CV:6193:U:C4	3.00	0.50
23:DA:8:A:C5	23:DA:9:U:C4	3.00	0.50
23:DA:9:U:N3	23:DA:2629:A:C6	2.79	0.50
23:DA:270(Q):C:O2'	23:DA:270(R):C:C6	2.62	0.50
23:DA:828:U:H4'	23:DA:831:G:N1	2.27	0.50
23:DA:848:G:C4	23:DA:933:A:C8	3.00	0.50
23:DA:848:G:N9	23:DA:933:A:H8	2.09	0.50
23:DA:929:G:H8	23:DA:929:G:O5'	1.95	0.50
23:DA:960:A:H61	35:DM:82:ARG:HH21	1.59	0.50
23:DA:1444:G:N2	23:DA:1548:C:C2	2.80	0.50
23:DA:1487:G:O2'	23:DA:1488:G:H5'	2.12	0.50
23:DA:1511:A:O2'	23:DA:1512:G:H5'	2.10	0.50
23:DA:1523:U:H2'	23:DA:1524:G:H8	1.75	0.50
23:DA:1570:A:H2'	23:DA:1571:A:C8	2.47	0.50
23:DA:1593:G:C6	23:DA:1594:G:C6	3.00	0.50
23:DA:1909:C:N3	23:DA:1922:G:C2	2.79	0.50
23:DA:2215:G:OP2	23:DA:2215:G:H8	1.94	0.50
23:DA:2328:A:H2'	23:DA:2329:G:O4'	2.12	0.50
23:DA:2408:U:O5'	23:DA:2408:U:H6	1.95	0.50
23:DA:2477:C:HO2'	23:DA:2478:A:P	2.35	0.50
25:DC:40:THR:CG2	25:DC:41:GLY:N	2.75	0.50
25:DC:76:PRO:HA	25:DC:118:VAL:HG23	1.93	0.50
25:DC:105:ILE:HD13	25:DC:106:ILE:H	1.77	0.50
27:DE:65:TRP:HZ3	27:DE:73:ALA:O	1.94	0.50
27:DE:150:GLY:HA2	27:DE:172:TRP:CE3	2.47	0.50
32:DJ:65:TRP:HA	32:DJ:71:MET:HE1	1.93	0.50
32:DJ:122:LEU:O	32:DJ:126:VAL:HG22	2.11	0.50
36:DN:84:ALA:O	36:DN:85:PRO:C	2.50	0.50
37:DO:28:VAL:O	37:DO:92:TYR:HE1	1.94	0.50
40:DR:100:ARG:O	40:DR:100:ARG:CG	2.57	0.50
41:DS:47:VAL:HA	41:DS:50:VAL:HG12	1.94	0.50
43:DU:27:VAL:O	43:DU:27:VAL:CG2	2.56	0.50
44:DV:155:LEU:O	44:DV:157:LEU:HD12	2.12	0.50
45:DW:51:VAL:N	45:DW:62:LEU:HD12	2.26	0.50
45:DW:53:MET:HA	45:DW:58:THR:O	2.12	0.50
47:DY:3:LEU:O	47:DY:4:SER:C	2.51	0.50
49:D1:45:GLY:O	49:D1:46:ASN:HB2	2.11	0.50
53:D5:26:LYS:HA	53:D5:48:PHE:CE2	2.46	0.50
53:D5:53:PRO:O	53:D5:57:ARG:NH1	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:450:G:H4'	16:AP:41:PRO:HB2	1.94	0.49
1:AA:657:G:C2	1:AA:658:G:C8	3.01	0.49
1:AA:750:G:C6	1:AA:751:U:C5	3.00	0.49
1:AA:927:G:C2	1:AA:1391:U:C2	3.00	0.49
1:AA:1083:U:C5	1:AA:1084:G:C6	3.00	0.49
1:AA:1118:C:H5''	9:AI:104:ARG:CG	2.42	0.49
1:AA:1290:G:H2'	1:AA:1290:G:N3	2.27	0.49
1:AA:1446:A:O2'	1:AA:1447:G:H8	1.95	0.49
4:AD:49:ARG:CZ	4:AD:50:ARG:H	2.24	0.49
5:AE:103:GLY:O	5:AE:104:ALA:C	2.50	0.49
8:AH:25:ASP:C	8:AH:26:VAL:HG12	2.32	0.49
22:AV:6185:U:C5	22:AV:6186:U:C5	3.00	0.49
23:BA:27:G:C4	23:BA:512:G:N2	2.80	0.49
23:BA:46:C:H42	23:BA:179:G:H1	1.60	0.49
23:BA:85:G:N3	23:BA:103:A:C2	2.80	0.49
23:BA:1109:C:N4	23:BA:1110:G:N2	2.59	0.49
23:BA:1152:C:H5''	39:BQ:80:ILE:CG2	2.41	0.49
23:BA:1753:G:N1	23:BA:1756:G:C2	2.80	0.49
23:BA:1796:U:H4'	25:BC:256:GLY:HA2	1.94	0.49
23:BA:1813:G:O2'	25:BC:50:THR:CG2	2.60	0.49
23:BA:2366:A:H2'	23:BA:2367:G:O4'	2.11	0.49
23:BA:2563:U:H4'	33:BK:28:SER:HA	1.94	0.49
23:BA:2567:G:H2'	23:BA:2568:C:C6	2.47	0.49
23:BA:2577:A:H5''	23:BA:2578:G:C5'	2.36	0.49
23:BA:2657:A:H5''	23:BA:2658:C:OP2	2.12	0.49
23:BA:2893:G:H5''	23:BA:2894:G:O4'	2.12	0.49
24:BB:63:G:H2'	24:BB:64:C:C6	2.46	0.49
25:BC:94:LEU:HD22	25:BC:95:LEU:N	2.27	0.49
28:BF:171:ALA:O	28:BF:175:LEU:HG	2.11	0.49
30:BH:133:HIS:NE2	30:BH:135:GLU:HG2	2.27	0.49
33:BK:43:VAL:HG23	33:BK:56:ASP:O	2.12	0.49
35:BM:134:ARG:HA	35:BM:134:ARG:HE	1.77	0.49
36:BN:65:LEU:O	36:BN:68:ARG:HB2	2.12	0.49
42:BT:35:THR:HG22	42:BT:36:LYS:H	1.77	0.49
44:BV:68:PRO:HG2	44:BV:91:LEU:O	2.12	0.49
48:BZ:23:LEU:CD1	48:BZ:50:VAL:HG11	2.42	0.49
50:B2:52:TYR:O	50:B2:52:TYR:HD1	1.95	0.49
1:CA:380:G:C2	1:CA:384:G:N1	2.80	0.49
1:CA:402:G:H8	1:CA:402:G:O5'	1.94	0.49
1:CA:434:U:H2'	1:CA:435:C:C6	2.47	0.49
1:CA:522:C:N4	1:CA:528:C:N4	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:958:A:C6	1:CA:959:A:C6	3.00	0.49
1:CA:1004:A:H3'	1:CA:1004:A:N3	2.27	0.49
1:CA:1089:G:C6	1:CA:1090:U:C4	3.00	0.49
1:CA:1260:C:H4'	1:CA:1284:C:H5'	1.93	0.49
1:CA:1508:G:H2'	1:CA:1509:C:C6	2.47	0.49
6:CF:50:TYR:HE1	18:CR:74:ARG:O	1.95	0.49
12:CL:52:ARG:CG	12:CL:52:ARG:NH1	2.59	0.49
12:CL:92:LEU:HB2	12:CL:95:VAL:CG2	2.41	0.49
18:CR:22:VAL:HG12	18:CR:22:VAL:O	2.12	0.49
20:CT:10:LEU:O	20:CT:12:ALA:N	2.38	0.49
23:DA:265:A:H1'	23:DA:266:G:O4'	2.12	0.49
23:DA:322:A:P	27:DE:169:ASN:HB2	2.52	0.49
23:DA:674:G:C1'	27:DE:74:ARG:HD3	2.36	0.49
23:DA:1169:G:H1	23:DA:1180:C:N4	2.08	0.49
23:DA:1324:G:C5	23:DA:1328:G:O6	2.66	0.49
23:DA:1509:A:O2'	23:DA:1510:A:OP1	2.24	0.49
23:DA:1567:A:H5''	25:DC:58:HIS:CD2	2.47	0.49
23:DA:1689:A:H62	23:DA:1698:A:H2	1.60	0.49
23:DA:2305:A:C4	28:DF:154:GLY:HA3	2.47	0.49
23:DA:2750:A:C2	23:DA:2753:A:H2	2.30	0.49
26:DD:36:ARG:NH1	26:DD:86:PRO:HD2	2.27	0.49
26:DD:61:ARG:HB3	26:DD:62:PRO:HD2	1.94	0.49
26:DD:103:ASP:OD1	26:DD:201:THR:HG23	2.12	0.49
26:DD:104:VAL:HG22	26:DD:198:VAL:HG13	1.94	0.49
28:DF:7:LEU:HD22	28:DF:176:LEU:HD22	1.94	0.49
28:DF:76:SER:HB2	28:DF:83:ARG:CA	2.43	0.49
30:DH:113:ARG:O	30:DH:131:LYS:N	2.45	0.49
34:DL:132:LYS:N	34:DL:132:LYS:CD	2.75	0.49
35:DM:47:ILE:HD11	35:DM:68:ILE:HD12	1.93	0.49
35:DM:141:GLN:NE2	44:DV:89:PHE:HD1	2.10	0.49
36:DN:93:GLY:C	36:DN:95:THR:H	2.16	0.49
46:DX:49:VAL:HG11	46:DX:70:VAL:HG11	1.93	0.49
48:DZ:23:LEU:CD1	48:DZ:50:VAL:HG11	2.42	0.49
50:D2:52:TYR:O	50:D2:52:TYR:HD1	1.96	0.49
53:D5:57:ARG:HA	53:D5:57:ARG:CZ	2.42	0.49
1:AA:216:G:H2'	1:AA:217:C:H6	1.76	0.49
1:AA:356:A:H2'	1:AA:357:G:O5'	2.12	0.49
1:AA:556:C:O2	1:AA:556:C:C2'	2.55	0.49
1:AA:794:A:H4'	1:AA:1521:G:O2'	2.12	0.49
1:AA:946:A:H2'	1:AA:947:G:C8	2.47	0.49
1:AA:1438:G:C5	1:AA:1439:C:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:187:LEU:HD22	2:AB:188:ALA:N	2.27	0.49
3:AC:33:LEU:O	3:AC:36:ASP:HB3	2.13	0.49
3:AC:73:PRO:HA	3:AC:76:VAL:HG13	1.94	0.49
3:AC:130:VAL:HA	3:AC:133:ALA:HB3	1.94	0.49
5:AE:36:ASP:O	5:AE:37:ARG:CB	2.60	0.49
12:AL:10:VAL:HG11	17:AQ:36:ILE:HG21	1.94	0.49
18:AR:56:THR:O	18:AR:58:LEU:HD12	2.12	0.49
23:BA:7:G:H2'	23:BA:8:A:O4'	2.11	0.49
23:BA:955:C:H5''	35:BM:85:LYS:HE2	1.94	0.49
23:BA:1771:C:O2'	23:BA:1786:A:H8	1.76	0.49
23:BA:1833:U:C2'	23:BA:1834:U:H5'	2.41	0.49
23:BA:2297:C:H2'	23:BA:2298:A:H8	1.77	0.49
23:BA:2531:A:H4'	29:BG:157:TYR:CE2	2.47	0.49
23:BA:2584:U:O5'	23:BA:2584:U:H6	1.94	0.49
23:BA:2721:A:H1'	23:BA:2873:A:O2'	2.12	0.49
26:BD:36:ARG:HH11	26:BD:85:ASN:ND2	2.10	0.49
26:BD:171:GLU:HG2	26:BD:185:LYS:HG2	1.94	0.49
28:BF:60:LEU:O	28:BF:64:THR:HG22	2.11	0.49
41:BS:8:ARG:HA	41:BS:102:HIS:HA	1.94	0.49
45:BW:82:ARG:O	45:BW:84:LEU:HD23	2.12	0.49
1:CA:450:G:H4'	16:CP:41:PRO:HB2	1.94	0.49
1:CA:557:G:H2'	1:CA:558:G:O4'	2.12	0.49
1:CA:593:G:C2	1:CA:594:G:C4	2.99	0.49
1:CA:712:A:C6	1:CA:713:G:C6	3.01	0.49
1:CA:761:G:H2'	1:CA:762:C:H6	1.77	0.49
1:CA:801:U:H2'	1:CA:802:A:C8	2.47	0.49
1:CA:972:C:H4'	10:CJ:57:LYS:CG	2.42	0.49
1:CA:1104:G:C2	1:CA:1105:A:C5	3.01	0.49
3:CC:173:VAL:H	3:CC:174:PRO:HD3	1.75	0.49
4:CD:144:ASP:O	4:CD:146:ILE:HG13	2.12	0.49
17:CQ:27:PHE:O	17:CQ:36:ILE:N	2.43	0.49
19:CS:30:LEU:HD23	19:CS:31:ILE:N	2.27	0.49
23:DA:245:G:N3	23:DA:246:C:C6	2.80	0.49
23:DA:826:U:H2'	23:DA:828:U:O4'	2.12	0.49
23:DA:1360:A:H5'	23:DA:1361:G:OP2	2.12	0.49
23:DA:1828:G:OP2	25:DC:239:ARG:CZ	2.60	0.49
23:DA:1855:G:N1	23:DA:1888:G:C8	2.80	0.49
23:DA:2105:C:H2'	23:DA:2106:G:C8	2.47	0.49
23:DA:2372:G:O2'	51:D3:46:HIS:CE1	2.65	0.49
23:DA:2459:A:C2	23:DA:2460:U:H1'	2.47	0.49
23:DA:2517:C:C6	23:DA:2542:A:C2	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2579:C:H2'	23:DA:2580:U:O4'	2.12	0.49
23:DA:2893:G:H3'	23:DA:2894:G:H5'	1.95	0.49
24:DB:86:G:H2'	24:DB:87:G:C8	2.47	0.49
26:DD:1:MET:O	26:DD:2:LYS:O	2.30	0.49
30:DH:15:VAL:C	30:DH:17:GLN:H	2.16	0.49
32:DJ:110:LEU:O	32:DJ:113:MET:HB2	2.11	0.49
36:DN:107:ASP:OD2	36:DN:108:GLY:N	2.45	0.49
39:DQ:62:ILE:HD11	39:DQ:93:LYS:HG2	1.94	0.49
40:DR:28:GLU:HB2	40:DR:31:ALA:CB	2.42	0.49
41:DS:5:ALA:HB2	41:DS:54:ALA:HA	1.93	0.49
42:DT:30:VAL:HG21	42:DT:79:ALA:HB3	1.94	0.49
1:AA:16:A:O2'	5:AE:16:THR:HB	2.12	0.49
1:AA:68:G:N1	1:AA:69:G:C5	2.80	0.49
1:AA:243:A:C2	1:AA:246:A:C8	3.00	0.49
1:AA:595:G:H1'	1:AA:596:C:H5	1.77	0.49
1:AA:685:G:N2	1:AA:686:U:C4	2.81	0.49
1:AA:782:A:O3'	1:AA:1515:C:H4'	2.12	0.49
1:AA:830:G:C2	1:AA:831:U:C2	3.01	0.49
1:AA:836:G:OP1	18:AR:61:LYS:HE2	2.12	0.49
1:AA:958:A:C6	1:AA:959:A:C6	3.00	0.49
1:AA:1058:G:C6	1:AA:1059:C:N3	2.81	0.49
2:AB:70:PHE:CD2	2:AB:163:PHE:HB3	2.48	0.49
4:AD:28:SER:HB3	4:AD:29:PRO:CD	2.41	0.49
4:AD:49:ARG:O	4:AD:51:PRO:HD3	2.13	0.49
8:AH:10:LEU:HB3	8:AH:83:ILE:HD13	1.93	0.49
12:AL:5:THR:O	12:AL:8:GLN:HB2	2.12	0.49
22:AV:6189:G:C5	22:AV:6190:U:C5	3.00	0.49
23:BA:334:C:HO2'	23:BA:335:C:P	2.34	0.49
23:BA:334:C:O2'	23:BA:335:C:P	2.70	0.49
23:BA:466:A:H5''	23:BA:467:G:OP2	2.12	0.49
23:BA:479:A:H4'	23:BA:480:A:O5'	2.11	0.49
23:BA:548:A:H2'	23:BA:549:G:H5'	1.94	0.49
23:BA:553:U:C2'	23:BA:554:U:H5'	2.42	0.49
23:BA:772:C:H2'	23:BA:772:C:O2	2.11	0.49
23:BA:1131:G:C2	23:BA:1132:A:C5	3.00	0.49
23:BA:1493:C:H4'	23:BA:1494:A:OP1	2.11	0.49
23:BA:2065:C:O2'	23:BA:2066:C:H5'	2.11	0.49
23:BA:2605:U:H2'	23:BA:2606:C:C6	2.47	0.49
23:BA:2729:G:C5	23:BA:2730:C:C5	2.99	0.49
24:BB:28:C:H2'	24:BB:29:A:O4'	2.12	0.49
25:BC:67:PHE:HB3	25:BC:153:ALA:H	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:142:VAL:HG22	25:BC:143:HIS:N	2.27	0.49
25:BC:145:VAL:HG12	25:BC:146:GLU:N	2.28	0.49
25:BC:270:ILE:C	25:BC:271:ILE:HG12	2.33	0.49
28:BF:41:GLN:HB2	28:BF:90:LEU:HB2	1.94	0.49
30:BH:5:LEU:HD22	30:BH:19:VAL:HG12	1.94	0.49
30:BH:15:VAL:HG12	30:BH:16:GLY:N	2.27	0.49
31:BI:4:LYS:HG2	31:BI:4:LYS:O	2.11	0.49
33:BK:2:ILE:CD1	33:BK:82:ASN:HD22	2.26	0.49
34:BL:75:ILE:H	34:BL:75:ILE:CD1	2.21	0.49
35:BM:137:TYR:HB3	44:BV:76:LEU:HD21	1.93	0.49
47:BY:6:VAL:C	47:BY:10:LEU:HG	2.33	0.49
50:B2:25:LEU:HD12	50:B2:25:LEU:N	2.18	0.49
53:B5:26:LYS:HG2	53:B5:48:PHE:CD2	2.47	0.49
1:CA:171:A:H2'	1:CA:172:A:C8	2.48	0.49
1:CA:197:A:N7	1:CA:221:C:H4'	2.26	0.49
1:CA:408:A:H2'	1:CA:409:G:C8	2.48	0.49
1:CA:1014:A:C2	1:CA:1219:U:H1'	2.48	0.49
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.47	0.49
1:CA:1118:C:P	9:CI:104:ARG:HG3	2.53	0.49
1:CA:1169:A:N6	1:CA:1170:A:N1	2.60	0.49
1:CA:1232:U:H5''	9:CI:124:GLN:O	2.12	0.49
2:CB:97:TRP:HZ2	2:CB:102:LEU:CD1	2.20	0.49
3:CC:116:VAL:HG21	3:CC:202:ILE:HD11	1.92	0.49
3:CC:191:THR:C	3:CC:193:TYR:H	2.15	0.49
6:CF:5:GLU:OE1	6:CF:62:TRP:HZ2	1.95	0.49
7:CG:70:LYS:HG3	7:CG:96:GLN:HB3	1.93	0.49
8:CH:36:LEU:HA	8:CH:39:LEU:HB2	1.94	0.49
10:CJ:33:GLN:O	10:CJ:75:ILE:HG12	2.11	0.49
12:CL:44:PRO:HD2	12:CL:49:SER:HA	1.94	0.49
15:CO:7:GLU:HG3	15:CO:10:LYS:HD3	1.93	0.49
19:CS:21:GLU:HG3	19:CS:22:LEU:HD23	1.94	0.49
23:DA:243:U:H2'	23:DA:244:A:H5'	1.93	0.49
23:DA:335:C:C2	23:DA:336:C:C5	3.00	0.49
23:DA:363(C):G:O2'	23:DA:363(D):G:H5'	2.12	0.49
23:DA:747:U:N3	50:D2:2:ALA:N	2.61	0.49
23:DA:1122:G:H2'	23:DA:1122:G:N3	2.26	0.49
23:DA:1502:C:H3'	23:DA:1502:C:H6	1.77	0.49
23:DA:1542:G:P	23:DA:1543:A:OP1	2.70	0.49
23:DA:1543:A:C8	23:DA:1545:A:H5''	2.46	0.49
23:DA:1728:G:C8	23:DA:1728:G:H3'	2.47	0.49
23:DA:1881:C:H2'	23:DA:1882:C:H6	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2315:G:H2'	23:DA:2316:C:C6	2.47	0.49
23:DA:2343:C:O2'	23:DA:2373:G:O2'	2.24	0.49
23:DA:2378:A:H4'	37:DO:84:GLN:NE2	2.27	0.49
23:DA:2416:C:N3	23:DA:2417:C:C5	2.79	0.49
23:DA:2543:G:O4'	23:DA:2766:G:H5'	2.13	0.49
23:DA:2683:C:OP1	38:DP:53:ARG:NH2	2.45	0.49
23:DA:2711:A:OP1	23:DA:712(B):A:OP1	2.30	0.49
23:DA:2836:U:C5	23:DA:2883:A:N6	2.81	0.49
25:DC:182:LEU:O	25:DC:271:ILE:HG13	2.12	0.49
29:DG:40:GLU:O	29:DG:55:PRO:HG3	2.12	0.49
33:DK:49:ARG:HA	33:DK:53:LYS:HZ2	1.76	0.49
34:DL:107:LYS:O	34:DL:109:GLY:N	2.44	0.49
36:DN:99:LYS:CD	36:DN:99:LYS:N	2.74	0.49
43:DU:14:LEU:HD23	43:DU:15:VAL:CA	2.42	0.49
43:DU:81:LYS:HD2	43:DU:96:ILE:HD12	1.94	0.49
1:AA:46:G:H8	1:AA:46:G:O5'	1.95	0.49
1:AA:105:G:C6	1:AA:106:C:C4	3.00	0.49
1:AA:437:U:C4	1:AA:438:G:C6	3.00	0.49
1:AA:932:C:OP1	7:AG:4:ARG:HG2	2.12	0.49
1:AA:1320:C:N3	19:AS:72:GLY:HA3	2.26	0.49
1:AA:1321:C:C5	1:AA:1322:C:C2	3.01	0.49
1:AA:1432:G:OP1	38:BP:107:ASP:HB2	2.12	0.49
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.71	0.49
8:AH:17:THR:HG21	8:AH:80:ILE:HD13	1.94	0.49
8:AH:25:ASP:HA	8:AH:59:LEU:O	2.11	0.49
8:AH:88:LYS:HB3	8:AH:89:PRO:HD2	1.93	0.49
16:AP:21:VAL:HG23	16:AP:21:VAL:O	2.12	0.49
16:AP:71:ARG:C	16:AP:73:LEU:H	2.15	0.49
23:BA:257:A:C2'	23:BA:258:G:O5'	2.60	0.49
23:BA:337:C:H2'	23:BA:338:G:O5'	2.13	0.49
23:BA:1359:A:C8	23:BA:1372:U:O4	2.65	0.49
23:BA:1512:G:C2	23:BA:1513:C:C2	3.01	0.49
23:BA:1570:A:H2'	23:BA:1571:A:C8	2.47	0.49
23:BA:1746:G:N3	23:BA:1747:G:C8	2.80	0.49
23:BA:1953:A:C2	23:BA:2549:G:N3	2.80	0.49
23:BA:2295:C:N3	23:BA:2296:U:H5	2.10	0.49
23:BA:2479:G:H5''	23:BA:2537:U:O4'	2.13	0.49
25:BC:25:THR:HG21	25:BC:81:ALA:CB	2.43	0.49
25:BC:182:LEU:N	25:BC:272:ALA:HB3	2.22	0.49
29:BG:95:ARG:NH1	29:BG:97:ARG:HE	2.11	0.49
33:BK:97:ARG:H	33:BK:117:LEU:CD2	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BK:121:VAL:O	38:BP:43:GLN:NE2	2.44	0.49
34:BL:115:LEU:HA	34:BL:134:ALA:CB	2.42	0.49
38:BP:61:PHE:CE2	38:BP:76:PHE:HB2	2.47	0.49
39:BQ:46:ALA:O	39:BQ:47:TYR:C	2.50	0.49
39:BQ:53:ARG:O	39:BQ:56:ASP:HB2	2.12	0.49
40:BR:4:ILE:HD13	40:BR:13:ARG:HA	1.93	0.49
42:BT:30:VAL:HG11	42:BT:39:ILE:HD13	1.94	0.49
44:BV:179:ASP:CG	44:BV:180:VAL:N	2.65	0.49
1:CA:775:G:O2'	1:CA:776:G:H5'	2.12	0.49
1:CA:983:A:H5'	1:CA:984:C:OP2	2.12	0.49
1:CA:1329:A:C2	1:CA:1330:U:C2	3.00	0.49
1:CA:1402:C:C5	1:CA:1403:C:C4	3.00	0.49
2:CB:157:ARG:O	2:CB:159:PRO:HD3	2.12	0.49
10:CJ:48:THR:CG2	10:CJ:62:HIS:ND1	2.73	0.49
23:DA:298:G:P	43:DU:85:VAL:HG22	2.52	0.49
23:DA:727:A:H2	25:DC:9:TYR:CD2	2.30	0.49
23:DA:998:C:C2'	23:DA:999:U:O5'	2.60	0.49
23:DA:1815:A:P	25:DC:54:ARG:HH22	2.35	0.49
23:DA:2065:C:O2'	23:DA:2066:C:H5'	2.12	0.49
23:DA:2287:A:C6	23:DA:2289:G:C4	3.01	0.49
23:DA:2865:U:C5	23:DA:2866:U:C4	3.01	0.49
28:DF:131:TYR:CD2	28:DF:133:LEU:HD22	2.48	0.49
29:DG:46:GLU:HG3	29:DG:51:ARG:HE	1.73	0.49
29:DG:138:LYS:O	29:DG:139:GLN:C	2.51	0.49
33:DK:43:VAL:HG23	33:DK:56:ASP:O	2.12	0.49
39:DQ:98:LEU:O	39:DQ:99:ALA:C	2.51	0.49
39:DQ:111:GLU:HA	39:DQ:114:LYS:HB2	1.95	0.49
40:DR:19:LYS:HA	40:DR:94:LEU:O	2.12	0.49
42:DT:30:VAL:HG21	42:DT:79:ALA:CB	2.42	0.49
42:DT:44:GLU:HG2	42:DT:49:VAL:O	2.13	0.49
44:DV:54:HIS:CG	44:DV:101:PRO:HG3	2.47	0.49
1:AA:408:A:H2'	1:AA:409:G:C8	2.48	0.49
1:AA:1148:U:C2	9:AI:16:ARG:NH2	2.81	0.49
1:AA:1234:C:C2'	1:AA:1235:U:H5'	2.42	0.49
1:AA:1329:A:C2	1:AA:1330:U:C2	3.00	0.49
4:AD:21:LEU:HD12	4:AD:21:LEU:N	2.26	0.49
4:AD:75:PHE:CZ	4:AD:93:PHE:HZ	2.29	0.49
7:AG:113:GLU:O	7:AG:119:ARG:HD3	2.12	0.49
12:AL:46:LYS:CB	12:AL:47:PRO:HD3	2.43	0.49
23:BA:25:U:H2'	23:BA:26:G:C8	2.47	0.49
23:BA:107:C:C2'	23:BA:108:U:H5'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:587:C:C4	34:BL:33:ARG:HB2	2.48	0.49
23:BA:601:C:H4'	27:BE:104:LYS:HE2	1.95	0.49
23:BA:1268:A:C2	23:BA:2013:A:C4	3.01	0.49
23:BA:1442:G:C2	23:BA:1550:C:O2	2.65	0.49
23:BA:1818:U:H2'	25:BC:157:ARG:HG3	1.94	0.49
23:BA:2328:A:H2'	23:BA:2329:G:O4'	2.12	0.49
23:BA:2338:G:C2	23:BA:2339:G:C8	3.00	0.49
23:BA:2738:A:C2	23:BA:2739:U:N1	2.80	0.49
25:BC:40:THR:CG2	25:BC:41:GLY:N	2.75	0.49
25:BC:166:GLN:HB2	25:BC:174:ILE:HG22	1.94	0.49
28:BF:133:LEU:HD23	28:BF:133:LEU:H	1.78	0.49
29:BG:78:GLY:O	29:BG:136:ILE:HG22	2.13	0.49
30:BH:130:TYR:C	30:BH:132:PRO:HD3	2.33	0.49
35:BM:141:GLN:NE2	44:BV:89:PHE:HD1	2.10	0.49
38:BP:41:ARG:HH11	38:BP:41:ARG:HB3	1.78	0.49
42:BT:50:LYS:N	42:BT:87:GLN:HE22	1.91	0.49
45:BW:64:ASP:OD1	45:BW:64:ASP:N	2.46	0.49
47:BY:57:ILE:HA	47:BY:60:LEU:HB2	1.93	0.49
48:BZ:3:ARG:NH1	48:BZ:59:VAL:HG11	2.27	0.49
1:CA:404:U:C2	1:CA:405:U:C5	3.01	0.49
1:CA:635:G:C5	1:CA:636:U:C5	3.01	0.49
1:CA:1068:G:OP2	1:CA:1068:G:H8	1.96	0.49
3:CC:76:VAL:HG23	3:CC:77:ILE:HG13	1.94	0.49
3:CC:175:LEU:CD1	3:CC:201:TYR:HE2	2.25	0.49
8:CH:91:ARG:HG3	8:CH:91:ARG:NH1	2.22	0.49
12:CL:21:SER:C	12:CL:23:VAL:H	2.15	0.49
22:CV:6181:C:C2	22:CV:6182:A:C8	3.01	0.49
23:DA:117:G:H5''	23:DA:118:A:OP2	2.12	0.49
23:DA:447:A:C4	23:DA:473:G:N7	2.80	0.49
23:DA:805:G:H4'	23:DA:806:C:OP2	2.13	0.49
23:DA:851:U:O2'	48:DZ:45:GLY:HA3	2.12	0.49
23:DA:978:G:C2	23:DA:986:C:C2	3.01	0.49
23:DA:1512:G:C6	23:DA:1513:C:N3	2.81	0.49
23:DA:1717:G:C6	23:DA:1743:G:C6	3.00	0.49
23:DA:2478:A:H2'	23:DA:2479:G:O4'	2.12	0.49
23:DA:2703:C:O2'	23:DA:2704:C:H5'	2.12	0.49
24:DB:21:G:H2'	24:DB:22:U:H6	1.77	0.49
24:DB:63:G:H2'	24:DB:64:C:C6	2.47	0.49
25:DC:36:PRO:O	25:DC:37:LEU:HB2	2.12	0.49
29:DG:12:PRO:HB2	29:DG:49:VAL:HA	1.93	0.49
29:DG:95:ARG:NH1	29:DG:97:ARG:HE	2.10	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DM:8:LYS:HG3	35:DM:9:TYR:N	2.25	0.49
38:DP:28:VAL:HA	38:DP:89:VAL:HG12	1.94	0.49
40:DR:75:PHE:C	40:DR:75:PHE:CD1	2.84	0.49
41:DS:75:TYR:CE2	41:DS:104:THR:CB	2.91	0.49
44:DV:85:HIS:C	44:DV:85:HIS:HD1	2.16	0.49
1:AA:173:U:C2	1:AA:197:A:N1	2.81	0.49
1:AA:197:A:N6	1:AA:221:C:C5'	2.76	0.49
1:AA:236:G:H5''	17:AQ:42:TYR:OH	2.11	0.49
1:AA:611:A:H61	1:AA:629:G:H1	1.61	0.49
1:AA:754:C:C2'	1:AA:755:G:OP1	2.61	0.49
1:AA:832:C:N4	1:AA:855:G:O6	2.46	0.49
1:AA:1128:C:O2'	1:AA:1130:A:C4	2.65	0.49
1:AA:1311:G:N2	1:AA:1327:C:C2	2.81	0.49
3:AC:66:VAL:HB	3:AC:101:LEU:CD2	2.39	0.49
3:AC:79:ARG:O	3:AC:82:GLU:HG3	2.13	0.49
4:AD:105:VAL:O	4:AD:105:VAL:CG1	2.59	0.49
6:AF:44:GLY:HA2	6:AF:59:TYR:CE2	2.48	0.49
8:AH:42:GLU:HG3	8:AH:109:ILE:HD12	1.92	0.49
12:AL:70:PRO:O	12:AL:101:ARG:NH1	2.44	0.49
13:AM:84:ILE:HG23	19:AS:74:PHE:HE1	1.77	0.49
16:AP:39:TYR:CD2	16:AP:40:ASP:N	2.81	0.49
16:AP:47:ASP:O	16:AP:49:LEU:N	2.45	0.49
20:AT:69:GLY:O	20:AT:73:HIS:ND1	2.45	0.49
23:BA:57:C:H6	23:BA:57:C:O5'	1.95	0.49
23:BA:127:A:H5''	23:BA:128:C:C6	2.47	0.49
23:BA:380:U:O2	23:BA:380:U:H2'	2.12	0.49
23:BA:571:A:C8	23:BA:2030:A:N6	2.80	0.49
23:BA:932:G:OP1	23:BA:932:G:H3'	2.12	0.49
23:BA:963:U:H2'	23:BA:964:C:C6	2.47	0.49
23:BA:963:U:H2'	23:BA:964:C:H6	1.77	0.49
23:BA:1368:G:C2	23:BA:1369:G:C8	3.00	0.49
23:BA:1434:A:H2'	23:BA:1435:G:C8	2.48	0.49
23:BA:1682:G:H2'	23:BA:1683:C:C6	2.47	0.49
23:BA:1899:G:N2	23:BA:1902:C:H5	2.09	0.49
23:BA:2105:C:H2'	23:BA:2106:G:C8	2.47	0.49
23:BA:2473:U:C4	23:BA:2474:C:C4	3.00	0.49
23:BA:2831:G:O4'	23:BA:2883:A:C2	2.65	0.49
26:BD:72:VAL:O	26:BD:73:GLU:C	2.50	0.49
27:BE:153:SER:OG	27:BE:190:GLU:HG3	2.13	0.49
30:BH:128:LEU:O	30:BH:139:GLN:HA	2.12	0.49
32:BJ:68:ASN:H	32:BJ:68:ASN:HD22	1.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BL:80:TYR:CE1	34:BL:111:ARG:HG2	2.48	0.49
35:BM:40:ALA:CB	35:BM:127:ILE:HD12	2.41	0.49
37:BO:20:ARG:HH12	45:BW:48:GLY:H	1.60	0.49
37:BO:56:LEU:HG	37:BO:57:LYS:HB3	1.94	0.49
38:BP:54:ARG:CG	38:BP:54:ARG:NH1	2.61	0.49
40:BR:44:LYS:HB3	40:BR:46:VAL:HG13	1.95	0.49
42:BT:3:THR:HA	42:BT:6:ASP:OD2	2.13	0.49
43:BU:71:LYS:HB2	43:BU:71:LYS:NZ	2.27	0.49
44:BV:102:LEU:HD23	44:BV:137:ILE:HB	1.95	0.49
53:B5:7:HIS:HB2	53:B5:60:LEU:HB3	1.95	0.49
1:CA:373:A:C4	1:CA:482:A:N7	2.81	0.49
1:CA:525:C:O2'	1:CA:526:C:H5'	2.12	0.49
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.78	0.49
1:CA:1423:G:H2'	1:CA:1424:C:C6	2.47	0.49
1:CA:1446:A:O2'	1:CA:1447:G:H8	1.95	0.49
2:CB:91:PRO:HB3	2:CB:154:LEU:HD11	1.94	0.49
3:CC:113:ALA:HB2	3:CC:202:ILE:HG13	1.94	0.49
4:CD:79:PHE:CD1	4:CD:207:TYR:HD1	2.31	0.49
5:CE:9:LYS:HB3	5:CE:112:LEU:HD11	1.94	0.49
5:CE:32:VAL:O	5:CE:43:LEU:HA	2.12	0.49
5:CE:76:ILE:HG12	5:CE:142:LEU:HD22	1.94	0.49
12:CL:26:LEU:HB3	12:CL:29:ALA:CB	2.42	0.49
13:CM:84:ILE:HG23	19:CS:74:PHE:HE1	1.77	0.49
18:CR:44:LEU:HD11	18:CR:70:ILE:HG21	1.95	0.49
18:CR:56:THR:O	18:CR:58:LEU:N	2.45	0.49
19:CS:33:THR:HG23	19:CS:51:VAL:HA	1.94	0.49
20:CT:69:GLY:O	20:CT:73:HIS:CE1	2.66	0.49
23:DA:318:C:O2'	23:DA:319:C:H5'	2.13	0.49
23:DA:773:U:H4'	25:DC:47:GLY:CA	2.41	0.49
23:DA:114(B):A:O2'	23:DA:1143:A:H3'	2.13	0.49
23:DA:1322:A:O3'	41:DS:84:ARG:NH2	2.41	0.49
23:DA:1465:G:H21	23:DA:1466:G:H1'	1.78	0.49
23:DA:1577:C:H5''	23:DA:1578:U:OP2	2.12	0.49
23:DA:1798:U:H5''	25:DC:259:THR:O	2.13	0.49
23:DA:2102:U:C4	23:DA:2103:C:N4	2.81	0.49
23:DA:2439:A:H8	23:DA:2439:A:H5''	1.76	0.49
23:DA:2723:C:O5'	23:DA:2723:C:H6	1.96	0.49
23:DA:2734:A:H2'	23:DA:2735:G:H5'	1.95	0.49
25:DC:185:VAL:HG12	25:DC:186:HIS:N	2.28	0.49
25:DC:267:SER:C	25:DC:269:PHE:H	2.14	0.49
28:DF:88:ILE:HD12	28:DF:89:GLY:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:106:LEU:HD12	28:DF:110:ALA:HB3	1.95	0.49
30:DH:45:LYS:HA	30:DH:48:GLU:HG2	1.94	0.49
32:DJ:151:HIS:CD2	32:DJ:151:HIS:C	2.86	0.49
39:DQ:61:TRP:O	39:DQ:62:ILE:C	2.51	0.49
47:DY:49:LYS:HD2	47:DY:49:LYS:H	1.77	0.49
48:DZ:23:LEU:HD12	48:DZ:50:VAL:HG11	1.92	0.49
51:D3:38:LYS:HG2	51:D3:39:TYR:N	2.26	0.49
53:D5:21:LYS:HA	53:D5:54:GLU:OE2	2.12	0.49
53:D5:57:ARG:HB2	53:D5:57:ARG:CZ	2.42	0.49
1:AA:127:G:C2	1:AA:128:G:C8	3.00	0.49
1:AA:256:U:C2	1:AA:257:G:C8	3.00	0.49
1:AA:321:A:O2'	1:AA:322:C:H5'	2.11	0.49
1:AA:639:G:H2'	1:AA:640:A:H8	1.77	0.49
1:AA:801:U:H2'	1:AA:802:A:H8	1.77	0.49
1:AA:947:G:O3'	13:AM:109:THR:OG1	2.28	0.49
1:AA:987:G:H2'	1:AA:988:G:H8	1.78	0.49
1:AA:1089:G:C6	1:AA:1090:U:C4	3.01	0.49
1:AA:1123:A:H1'	10:AJ:37:PRO:O	2.12	0.49
2:AB:184:VAL:O	2:AB:198:ASP:HB2	2.13	0.49
3:AC:182:ILE:HD11	3:AC:203:PHE:HD1	1.77	0.49
3:AC:195:VAL:CG1	3:AC:196:LEU:N	2.65	0.49
6:AF:82:ARG:HB2	6:AF:85:VAL:CG2	2.43	0.49
7:AG:70:LYS:HG3	7:AG:96:GLN:HB3	1.94	0.49
11:AK:32:ILE:O	11:AK:40:ILE:HG12	2.13	0.49
20:AT:32:ALA:O	20:AT:36:LEU:HD23	2.13	0.49
22:AV:6192:G:C5	22:AV:6193:U:C4	3.00	0.49
23:BA:105:C:C2	23:BA:106:C:C5	3.00	0.49
23:BA:661:C:O3'	34:BL:18:ARG:HG2	2.13	0.49
23:BA:1187:G:H8	23:BA:1187:G:O5'	1.96	0.49
23:BA:1726:G:H2'	23:BA:1727:U:H6	1.73	0.49
23:BA:1902:C:H2'	23:BA:1903:G:O5'	2.13	0.49
23:BA:2495:G:C2'	23:BA:2496:C:O5'	2.60	0.49
23:BA:2593:U:C2	23:BA:2594:C:C5	3.01	0.49
23:BA:2681:C:O2	23:BA:2681:C:O5'	2.31	0.49
25:BC:30:GLU:HG3	25:BC:63:ARG:NE	2.27	0.49
25:BC:61:LEU:HB3	25:BC:63:ARG:NH1	2.28	0.49
25:BC:120:GLY:HA2	25:BC:190:TYR:OH	2.13	0.49
28:BF:83:ARG:HG3	28:BF:84:LYS:H	1.77	0.49
30:BH:5:LEU:N	30:BH:5:LEU:CD2	2.76	0.49
33:BK:71:ARG:NH2	33:BK:77:ILE:HG21	2.27	0.49
33:BK:88:ASN:ND2	33:BK:90:GLN:HB3	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BL:57:THR:CG2	34:BL:59:LEU:CD2	2.75	0.49
38:BP:50:ILE:HA	38:BP:99:LEU:CD1	2.43	0.49
38:BP:58:ASN:HD22	38:BP:58:ASN:C	2.16	0.49
39:BQ:50:ARG:HH12	40:BR:72:VAL:HG12	1.77	0.49
40:BR:12:TYR:CD2	40:BR:12:TYR:N	2.81	0.49
43:BU:42:VAL:CG1	43:BU:65:ALA:HB3	2.41	0.49
1:CA:20:U:H2'	1:CA:21:G:H5'	1.94	0.49
1:CA:32:A:H2'	1:CA:33:A:C8	2.47	0.49
1:CA:76:G:C6	1:CA:77:C:N4	2.81	0.49
1:CA:380:G:N1	1:CA:384:G:C6	2.80	0.49
1:CA:522:C:H2'	1:CA:523:A:H5'	1.94	0.49
1:CA:551:U:HO2'	12:CL:85:ARG:HD2	1.78	0.49
1:CA:562:C:N4	1:CA:884:U:C6	2.80	0.49
1:CA:586:C:H1'	1:CA:878:G:O2'	2.12	0.49
1:CA:1531:A:H8	1:CA:1531:A:O5'	1.95	0.49
3:CC:76:VAL:CG2	3:CC:77:ILE:HG13	2.43	0.49
3:CC:77:ILE:O	3:CC:83:ARG:HB3	2.12	0.49
4:CD:162:LEU:HD11	4:CD:181:MET:HG2	1.94	0.49
9:CI:114:TYR:N	9:CI:114:TYR:CD2	2.77	0.49
12:CL:23:VAL:HG12	12:CL:23:VAL:O	2.10	0.49
16:CP:3:LYS:O	16:CP:21:VAL:HA	2.13	0.49
16:CP:13:HIS:C	16:CP:15:PRO:HD3	2.33	0.49
20:CT:12:ALA:O	20:CT:15:ARG:HB2	2.13	0.49
21:CU:12:LYS:HB3	21:CU:17:THR:O	2.13	0.49
23:DA:57:C:O5'	23:DA:57:C:H6	1.95	0.49
23:DA:226:G:N2	23:DA:227:A:C2	2.81	0.49
23:DA:304:G:N2	23:DA:314:A:C4	2.80	0.49
23:DA:762:U:H4'	23:DA:763:G:O5'	2.12	0.49
23:DA:1343:G:O2'	23:DA:1344:G:H5'	2.13	0.49
23:DA:1476:C:C5	23:DA:1477:A:N7	2.80	0.49
23:DA:1746:G:N2	23:DA:1747:G:C4	2.80	0.49
23:DA:1952:A:C6	33:DK:22:ILE:HD11	2.48	0.49
23:DA:2225:A:H1'	23:DA:2226:C:OP2	2.13	0.49
23:DA:2287:A:O2'	23:DA:2288:A:P	2.70	0.49
28:DF:74:LYS:HE3	28:DF:74:LYS:HA	1.94	0.49
28:DF:77:ILE:CG2	28:DF:80:PHE:H	2.23	0.49
32:DJ:32:VAL:HG12	32:DJ:33:GLU:O	2.12	0.49
32:DJ:143:LEU:C	32:DJ:143:LEU:CD1	2.81	0.49
33:DK:9:GLU:O	33:DK:83:ALA:HA	2.13	0.49
36:DN:79:LEU:HA	36:DN:83:ILE:HG13	1.95	0.49
43:DU:81:LYS:HD3	43:DU:96:ILE:HG13	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DV:91:LEU:CD2	44:DV:96:VAL:HG11	2.43	0.49
44:DV:163:LEU:H	44:DV:163:LEU:CD2	2.25	0.49
1:AA:44:G:N2	1:AA:399:G:C4	2.80	0.49
1:AA:73:G:O5'	1:AA:73:G:H8	1.95	0.49
1:AA:1064:G:C1'	1:AA:1065:U:OP2	2.61	0.49
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.48	0.49
1:AA:1260:C:H4'	1:AA:1284:C:H5'	1.94	0.49
1:AA:1327:C:O2'	1:AA:1328:C:H5'	2.12	0.49
1:AA:1480:G:C4	1:AA:1481:U:C6	3.00	0.49
4:AD:13:ARG:CD	4:AD:38:TYR:O	2.61	0.49
6:AF:12:PRO:HD3	6:AF:58:GLY:HA2	1.95	0.49
6:AF:82:ARG:HB2	6:AF:85:VAL:HG23	1.94	0.49
16:AP:49:LEU:HG	16:AP:50:LYS:N	2.28	0.49
18:AR:44:LEU:HD11	18:AR:70:ILE:HG21	1.95	0.49
22:AV:6190:U:C4	22:AV:6191:A:N7	2.81	0.49
22:AV:6190:U:O4	22:AV:6191:A:N6	2.45	0.49
23:BA:137(B):G:C4	23:BA:139:G:N7	2.81	0.49
23:BA:851:U:O2'	48:BZ:45:GLY:HA3	2.13	0.49
23:BA:852:G:H2'	23:BA:853:G:C8	2.48	0.49
23:BA:929:G:H8	23:BA:929:G:O5'	1.96	0.49
23:BA:1241:A:N6	23:BA:1242:A:N1	2.60	0.49
23:BA:1444:G:N2	23:BA:1548:C:C2	2.81	0.49
23:BA:1496:A:C8	23:BA:1577:C:O2'	2.65	0.49
23:BA:1511:A:O2'	23:BA:1512:G:H5'	2.12	0.49
23:BA:1665:A:H4'	33:BK:67:LYS:HB2	1.95	0.49
23:BA:1678:G:N3	23:BA:1678:G:C2'	2.74	0.49
23:BA:2307:G:C8	23:BA:2307:G:O5'	2.66	0.49
23:BA:2784:C:H2'	23:BA:2785:C:C6	2.47	0.49
23:BA:2875:C:C4'	38:BP:5:ALA:HB2	2.36	0.49
24:BB:86:G:H2'	24:BB:87:G:C8	2.48	0.49
33:BK:88:ASN:N	33:BK:92:GLU:O	2.39	0.49
34:BL:50:ARG:HB2	53:B5:60:LEU:CD2	2.42	0.49
43:BU:27:VAL:O	43:BU:27:VAL:CG2	2.58	0.49
1:CA:79:G:H2'	1:CA:80:G:C8	2.48	0.49
1:CA:95:G:H2'	1:CA:96:G:O4'	2.12	0.49
1:CA:294:U:H2'	1:CA:295:C:C6	2.47	0.49
1:CA:397:A:N6	1:CA:548:G:N7	2.61	0.49
1:CA:618:C:N4	1:CA:621:A:N7	2.60	0.49
1:CA:743:U:O2'	1:CA:744:C:H5'	2.13	0.49
1:CA:945:G:C6	1:CA:1337:G:C6	3.01	0.49
1:CA:1061:G:OP2	3:CC:3:ASN:ND2	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1311:G:N2	1:CA:1327:C:C2	2.81	0.49
2:CB:15:VAL:H	2:CB:16:HIS:CE1	2.31	0.49
3:CC:191:THR:HB	3:CC:193:TYR:CD2	2.47	0.49
4:CD:3:ARG:HD2	4:CD:3:ARG:H	1.76	0.49
7:CG:49:ILE:HG22	7:CG:49:ILE:O	2.11	0.49
8:CH:54:ASP:O	8:CH:56:LYS:HG3	2.12	0.49
8:CH:120:THR:H	8:CH:123:GLU:HB2	1.78	0.49
9:CI:27:THR:O	9:CI:62:TYR:HA	2.12	0.49
9:CI:118:LYS:O	9:CI:119:ALA:HB3	2.12	0.49
12:CL:44:PRO:CG	12:CL:52:ARG:HE	2.24	0.49
17:CQ:11:VAL:O	17:CQ:11:VAL:HG13	2.12	0.49
23:DA:245:G:C4	23:DA:246:C:C5	3.00	0.49
23:DA:270(O):G:C6	23:DA:270(Q):C:N4	2.81	0.49
23:DA:286:C:C2	23:DA:287:C:C5	3.01	0.49
23:DA:319:C:N4	23:DA:320:A:C6	2.81	0.49
23:DA:636:G:OP1	34:DL:132:LYS:HD3	2.13	0.49
23:DA:702:G:C2	23:DA:731:C:C2	3.01	0.49
23:DA:1394:U:C5	23:DA:1395:A:C4	3.00	0.49
23:DA:1401:G:C2'	23:DA:1402:C:H6	2.22	0.49
23:DA:1930:G:N2	23:DA:1968:G:H2'	2.28	0.49
23:DA:2024:G:H2'	23:DA:2025:C:H6	1.77	0.49
23:DA:2435:A:H2'	23:DA:2436:G:O5'	2.11	0.49
23:DA:2648:C:H2'	23:DA:2649:U:C6	2.48	0.49
23:DA:2886:G:N2	23:DA:2887:U:C2	2.81	0.49
24:DB:7:G:H2'	24:DB:8:U:O4'	2.12	0.49
24:DB:71:C:C4	24:DB:72:G:N7	2.81	0.49
26:DD:84:PHE:CD2	26:DD:84:PHE:C	2.86	0.49
28:DF:41:GLN:HB2	28:DF:90:LEU:HB2	1.94	0.49
29:DG:20:ALA:HB1	29:DG:21:PRO:HD2	1.94	0.49
30:DH:1:MET:HG3	30:DH:23:PRO:HG3	1.95	0.49
36:DN:30:THR:HG22	36:DN:31:HIS:CE1	2.48	0.49
37:DO:84:GLN:C	37:DO:86:ALA:H	2.16	0.49
38:DP:27:THR:O	38:DP:89:VAL:HG13	2.12	0.49
39:DQ:65:ILE:O	39:DQ:66:ASN:C	2.51	0.49
46:DX:10:LYS:O	46:DX:11:ARG:HB2	2.11	0.49
1:AA:420:U:O2	1:AA:424:G:N1	2.46	0.49
1:AA:525:C:OP1	12:AL:90:LYS:HG2	2.12	0.49
1:AA:754:C:P	15:AO:72:ARG:HH22	2.36	0.49
1:AA:1047:G:O2'	1:AA:1048:G:H5'	2.13	0.49
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.12	0.49
1:AA:1465:C:H2'	1:AA:1466:C:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:113:GLU:HB3	7:AG:118:VAL:CG2	2.42	0.49
10:AJ:50:ILE:CG2	14:AN:41:ARG:HH21	2.26	0.49
12:AL:92:LEU:HB2	12:AL:95:VAL:CG2	2.43	0.49
13:AM:14:ARG:NH1	13:AM:42:ALA:HA	2.27	0.49
13:AM:49:THR:O	13:AM:53:VAL:HG23	2.12	0.49
23:BA:231:C:N4	23:BA:232:G:N1	2.61	0.49
23:BA:379:G:C2	46:BX:20:ARG:NH2	2.81	0.49
23:BA:556:G:H2'	23:BA:557:U:H6	1.77	0.49
23:BA:1465:G:C2	23:BA:1466:G:C8	3.01	0.49
23:BA:1567:A:C8	25:BC:84:TYR:CE2	3.01	0.49
23:BA:2026:C:N3	23:BA:2027:G:C8	2.81	0.49
23:BA:2261:C:O2'	23:BA:2262:U:H5'	2.12	0.49
23:BA:2563:U:O2	23:BA:2565:A:H8	1.96	0.49
23:BA:2846:G:P	38:BP:54:ARG:HB2	2.52	0.49
25:BC:212:SER:O	25:BC:217:ARG:HG3	2.13	0.49
26:BD:112:GLY:O	26:BD:159:HIS:HA	2.13	0.49
30:BH:51:ILE:HG22	30:BH:52:ARG:N	2.28	0.49
33:BK:9:GLU:O	33:BK:83:ALA:HA	2.13	0.49
36:BN:103:ARG:HH12	36:BN:110:PRO:HG3	1.78	0.49
37:BO:53:SER:O	37:BO:56:LEU:HB3	2.13	0.49
41:BS:78:GLU:OE2	41:BS:99:ARG:HD3	2.13	0.49
50:B2:40:LYS:CD	50:B2:46:CYS:HB3	2.43	0.49
52:B4:36:GLN:HG2	52:B4:36:GLN:O	2.09	0.49
1:CA:149:A:H2'	1:CA:150:C:C6	2.48	0.49
1:CA:385:C:H3'	1:CA:385:C:H6	1.77	0.49
1:CA:525:C:H5''	12:CL:90:LYS:CE	2.43	0.49
1:CA:938:A:N6	1:CA:939:G:C6	2.81	0.49
1:CA:987:G:H2'	1:CA:988:G:H8	1.78	0.49
1:CA:1053:G:H3'	1:CA:1054:C:C5'	2.41	0.49
1:CA:1511:G:C6	1:CA:1512:U:C4	3.01	0.49
9:CI:28:VAL:HG13	9:CI:63:ILE:HG22	1.95	0.49
11:CK:21:ILE:HG13	11:CK:30:VAL:HG12	1.95	0.49
17:CQ:45:HIS:O	17:CQ:73:VAL:HG23	2.12	0.49
20:CT:39:LYS:O	20:CT:43:LEU:HG	2.12	0.49
23:DA:343:C:O2'	23:DA:344:G:H5'	2.12	0.49
23:DA:860:U:O2'	23:DA:861:A:C5'	2.52	0.49
23:DA:1168:G:C2	23:DA:1182:A:C2	3.01	0.49
23:DA:1314:C:C2'	23:DA:1315:C:H5'	2.43	0.49
23:DA:1465:G:N2	23:DA:1466:G:H1'	2.28	0.49
23:DA:1542:G:H3'	23:DA:1542:G:P	2.53	0.49
23:DA:1678:G:H22	23:DA:1989:G:H22	1.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1749:A:H2'	23:DA:1750:G:O4'	2.12	0.49
23:DA:2190:G:C4	23:DA:2191:G:C8	3.00	0.49
23:DA:2636:U:H2'	23:DA:2637:U:H6	1.77	0.49
23:DA:2679:A:H4'	26:DD:165:VAL:HG11	1.94	0.49
23:DA:2828:C:C2'	23:DA:2829:C:H5'	2.41	0.49
23:DA:2836:U:H2'	23:DA:2837:G:C8	2.47	0.49
25:DC:83:GLU:OE1	25:DC:104:TYR:OH	2.19	0.49
25:DC:134:ARG:HD3	25:DC:135:PHE:HE1	1.74	0.49
28:DF:85:GLY:C	28:DF:86:MET:HG3	2.32	0.49
40:DR:13:ARG:HG3	40:DR:13:ARG:NH1	2.28	0.49
41:DS:54:ALA:HB1	41:DS:107:LEU:HD22	1.95	0.49
43:DU:30:VAL:CG2	43:DU:37:VAL:HG12	2.42	0.49
45:DW:47:PRO:HB2	45:DW:48:GLY:H	1.47	0.49
45:DW:82:ARG:O	45:DW:84:LEU:HD23	2.13	0.49
47:DY:1:MET:CE	47:DY:4:SER:HB2	2.42	0.49
1:AA:6:G:O2'	1:AA:7:G:H5'	2.13	0.49
1:AA:413:G:H22	1:AA:429:U:P	2.36	0.49
1:AA:506:G:C4	1:AA:507:C:C5	3.00	0.49
1:AA:632:A:C2'	1:AA:633:G:H5'	2.42	0.49
1:AA:672:U:O2'	1:AA:673:G:H5'	2.13	0.49
1:AA:689:C:H2'	1:AA:690:G:O4'	2.11	0.49
1:AA:926:G:C6	1:AA:1505:G:C6	3.01	0.49
1:AA:941:G:C6	1:AA:1343:G:C6	3.00	0.49
1:AA:958:A:N6	1:AA:959:A:N6	2.61	0.49
1:AA:1369:C:OP1	9:AI:111:ARG:HG3	2.12	0.49
3:AC:134:ILE:HG23	3:AC:151:VAL:CB	2.35	0.49
3:AC:172:ARG:HE	3:AC:174:PRO:CG	2.26	0.49
3:AC:179:ARG:O	3:AC:179:ARG:HG3	2.13	0.49
4:AD:162:LEU:HD11	4:AD:181:MET:HG2	1.95	0.49
8:AH:38:ILE:HD11	8:AH:118:VAL:O	2.13	0.49
9:AI:114:TYR:N	9:AI:114:TYR:HD2	2.10	0.49
13:AM:79:LYS:HA	13:AM:82:MET:HB3	1.95	0.49
13:AM:91:ARG:NH1	19:AS:81:ARG:NH2	2.61	0.49
14:AN:37:PHE:CE1	14:AN:53:LEU:HD13	2.48	0.49
19:AS:33:THR:HG23	19:AS:51:VAL:HA	1.94	0.49
20:AT:13:LEU:O	20:AT:16:HIS:N	2.46	0.49
23:BA:569:U:C4	23:BA:570:G:C6	3.00	0.49
23:BA:727:A:H2	25:BC:9:TYR:CD2	2.30	0.49
23:BA:1542:G:OP2	23:BA:1543:A:OP1	2.30	0.49
23:BA:1842:G:H1'	25:BC:255:LYS:HZ3	1.78	0.49
23:BA:2025:C:H2'	23:BA:2026:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BB:7:G:H5''	37:BO:29:PHE:CD2	2.47	0.49
28:BF:56:ALA:O	28:BF:60:LEU:HB2	2.12	0.49
28:BF:111:LEU:HA	28:BF:114:ILE:HD11	1.95	0.49
29:BG:43:VAL:HG12	29:BG:52:VAL:CG2	2.43	0.49
35:BM:141:GLN:OE1	44:BV:97:GLU:O	2.31	0.49
46:BX:45:ASN:ND2	46:BX:47:GLN:HE21	2.11	0.49
46:BX:49:VAL:HG11	46:BX:70:VAL:HG11	1.94	0.49
52:B4:18:PHE:CE2	52:B4:22:MET:HG3	2.48	0.49
1:CA:102:G:C4	1:CA:103:C:C5	3.01	0.49
1:CA:327:A:C6	1:CA:329:A:C5	3.01	0.49
1:CA:632:A:C2'	1:CA:633:G:H5'	2.42	0.49
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.47	0.49
1:CA:1493:A:H4'	1:CA:1494:G:OP2	2.13	0.49
1:CA:1525:G:OP1	11:CK:120:ARG:NH2	2.46	0.49
3:CC:179:ARG:O	3:CC:179:ARG:HG3	2.13	0.49
4:CD:127:THR:OG1	4:CD:128:VAL:N	2.46	0.49
5:CE:78:HIS:HE1	5:CE:142:LEU:HA	1.77	0.49
5:CE:79:GLU:HB3	5:CE:92:LYS:HA	1.93	0.49
7:CG:113:GLU:HB3	7:CG:118:VAL:CG2	2.43	0.49
11:CK:32:ILE:HD11	11:CK:68:ALA:HB1	1.95	0.49
16:CP:8:ARG:O	16:CP:9:PHE:HD2	1.95	0.49
19:CS:52:TYR:CE1	19:CS:56:GLN:HA	2.48	0.49
23:DA:26:G:C6	23:DA:27:G:N1	2.80	0.49
23:DA:103:A:H8	23:DA:103:A:O5'	1.96	0.49
23:DA:915:C:O2'	24:DB:100:G:H5'	2.13	0.49
23:DA:1289:C:H2'	23:DA:1290:C:C6	2.47	0.49
23:DA:1389:G:N2	23:DA:1390:U:C2	2.80	0.49
23:DA:1503:U:N3	23:DA:1504:C:N4	2.61	0.49
23:DA:1608:A:HO2'	23:DA:1610:A:P	2.36	0.49
23:DA:1926:U:O2	23:DA:1929:G:C2	2.66	0.49
23:DA:2361:A:OP1	53:D5:27:THR:OG1	2.30	0.49
23:DA:2681:C:O2	23:DA:2681:C:O5'	2.30	0.49
23:DA:2746:U:C2'	23:DA:2747:G:O5'	2.61	0.49
23:DA:2849:U:H4'	23:DA:2868:A:C2	2.47	0.49
25:DC:105:ILE:HD13	25:DC:106:ILE:N	2.28	0.49
29:DG:86:GLU:O	29:DG:86:GLU:CG	2.61	0.49
35:DM:21:THR:O	35:DM:23:GLY:N	2.45	0.49
35:DM:29:PHE:N	35:DM:105:GLU:OE2	2.45	0.49
36:DN:72:ASP:O	36:DN:76:VAL:HG13	2.12	0.49
36:DN:78:LYS:O	36:DN:83:ILE:HG12	2.12	0.49
37:DO:87:PHE:CD1	37:DO:102:ALA:HB2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DP:27:THR:HG23	38:DP:90:GLN:HB3	1.94	0.49
38:DP:28:VAL:HA	38:DP:89:VAL:CG1	2.42	0.49
39:DQ:117:GLN:HA	39:DQ:117:GLN:OE1	2.13	0.49
1:AA:149:A:H2'	1:AA:150:C:C6	2.47	0.48
1:AA:187:C:H2'	1:AA:188:U:O4'	2.13	0.48
1:AA:394:G:C4	1:AA:395:C:C5	3.01	0.48
1:AA:780:A:C2	1:AA:803:G:N1	2.81	0.48
1:AA:862:C:O2'	1:AA:863:U:H5'	2.12	0.48
1:AA:928:G:C2	1:AA:1390:U:O2	2.66	0.48
1:AA:1190:G:OP1	3:AC:4:LYS:HA	2.13	0.48
2:AB:141:GLU:O	2:AB:145:LEU:HD23	2.13	0.48
2:AB:211:ILE:HG22	2:AB:215:LEU:HD23	1.94	0.48
3:AC:114:PRO:HD3	3:AC:183:ASP:OD1	2.13	0.48
4:AD:143:GLY:H	4:AD:185:PHE:HB3	1.78	0.48
5:AE:101:ILE:HG12	5:AE:118:ILE:O	2.13	0.48
6:AF:46:ARG:HH12	18:AR:37:VAL:HG21	1.78	0.48
12:AL:44:PRO:HG3	12:AL:52:ARG:HD3	1.95	0.48
12:AL:52:ARG:HG3	12:AL:52:ARG:NH1	2.24	0.48
16:AP:45:THR:HB	16:AP:46:PRO:HD2	1.94	0.48
23:BA:444:C:OP2	39:BQ:2:PRO:HD3	2.12	0.48
23:BA:493:G:H2'	23:BA:494:G:O4'	2.13	0.48
23:BA:966:G:C4	23:BA:967:C:H5	2.30	0.48
23:BA:114(B):A:C4	23:BA:1144:G:N7	2.81	0.48
23:BA:1401:G:C5	23:BA:1402:C:C5	3.01	0.48
23:BA:2100:G:H21	23:BA:2101:G:H1'	1.76	0.48
23:BA:2863:C:O2'	23:BA:2864:G:H5'	2.12	0.48
26:BD:102:VAL:HA	26:BD:199:ARG:O	2.13	0.48
28:BF:64:THR:HG23	28:BF:66:GLN:N	2.28	0.48
29:BG:67:LEU:HG	29:BG:71:LEU:HD23	1.95	0.48
30:BH:98:ALA:O	30:BH:109:ILE:HD11	2.13	0.48
33:BK:2:ILE:CD1	33:BK:82:ASN:ND2	2.76	0.48
34:BL:135:LEU:O	34:BL:139:LYS:HB2	2.13	0.48
36:BN:38:VAL:CB	36:BN:39:PRO:HD3	2.36	0.48
38:BP:50:ILE:HA	38:BP:99:LEU:HD11	1.94	0.48
38:BP:84:GLN:HG3	38:BP:85:LYS:HG3	1.95	0.48
39:BQ:69:CYS:SG	39:BQ:79:PHE:CD2	3.06	0.48
43:BU:68:HIS:C	43:BU:70:SER:H	2.16	0.48
45:BW:11:LYS:O	45:BW:14:ARG:NH2	2.40	0.48
1:CA:827:U:H2'	1:CA:870:U:O4	2.13	0.48
1:CA:1292:U:N3	1:CA:1293:G:N7	2.61	0.48
1:CA:1400:C:O5'	1:CA:1400:C:H6	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:31:CYS:O	4:CD:31:CYS:SG	2.71	0.48
4:CD:190:ASP:O	4:CD:194:LEU:HD23	2.13	0.48
5:CE:139:LEU:O	5:CE:141:GLN:N	2.45	0.48
8:CH:39:LEU:C	8:CH:45:ILE:HG12	2.34	0.48
14:CN:2:ALA:HB1	14:CN:6:LEU:HD12	1.95	0.48
15:CO:5:LYS:HD3	15:CO:5:LYS:N	2.27	0.48
20:CT:26:ASN:HB2	20:CT:71:THR:CG2	2.33	0.48
23:DA:46:C:N4	23:DA:179:G:H1	2.11	0.48
23:DA:301:G:C6	23:DA:302:C:N4	2.81	0.48
23:DA:443:A:N7	27:DE:45:ARG:HG2	2.28	0.48
23:DA:569:U:O2'	23:DA:983:A:N1	2.45	0.48
23:DA:811:U:OP2	34:DL:24:GLY:HA2	2.13	0.48
23:DA:1241:A:N6	23:DA:1242:A:N1	2.61	0.48
23:DA:1788:C:OP1	25:DC:222:ARG:NH2	2.46	0.48
23:DA:1971:A:C2	25:DC:241:PRO:HD3	2.47	0.48
23:DA:2620:C:C4'	26:DD:156:MET:HG3	2.43	0.48
23:DA:2738:A:C2	23:DA:2739:U:N1	2.81	0.48
23:DA:2862:G:C4	23:DA:2863:C:C5	3.01	0.48
23:DA:2887:U:C2	23:DA:2888:C:C5	3.00	0.48
24:DB:44:G:N3	24:DB:47:C:N4	2.60	0.48
24:DB:75:G:HO2'	44:DV:85:HIS:CD2	2.31	0.48
27:DE:122:LYS:HD2	27:DE:122:LYS:N	2.28	0.48
27:DE:127:GLU:O	27:DE:127:GLU:OE2	2.31	0.48
28:DF:56:ALA:O	28:DF:60:LEU:HB2	2.13	0.48
30:DH:28:ASN:C	30:DH:32:PRO:HG2	2.34	0.48
30:DH:82:ARG:HB3	30:DH:89:TYR:HB2	1.95	0.48
33:DK:12:ASP:HA	33:DK:98:VAL:HA	1.94	0.48
33:DK:14:THR:HG22	33:DK:14:THR:O	2.11	0.48
34:DL:55:ARG:HG3	34:DL:56:SER:N	2.28	0.48
36:DN:104:ARG:HH11	36:DN:104:ARG:CB	2.25	0.48
37:DO:89:ARG:O	37:DO:89:ARG:HG2	2.13	0.48
41:DS:69:LEU:HA	41:DS:108:GLY:O	2.13	0.48
45:DW:64:ASP:OD1	45:DW:64:ASP:N	2.45	0.48
1:AA:32:A:H2'	1:AA:33:A:C8	2.48	0.48
1:AA:134:A:N6	16:AP:25:ARG:HH12	2.09	0.48
1:AA:552:U:H4'	12:AL:85:ARG:HG2	1.95	0.48
1:AA:1014:A:C2	1:AA:1219:U:H1'	2.48	0.48
1:AA:1038:C:C2	1:AA:1039:C:C5	3.01	0.48
1:AA:1074:G:C2	1:AA:1075:C:C2	3.01	0.48
1:AA:1296:C:C6	1:AA:1297:C:H5	2.30	0.48
3:AC:19:GLU:HG3	3:AC:54:ARG:HD2	1.93	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:26:VAL:O	9:AI:26:VAL:HG12	2.12	0.48
12:AL:51:LEU:HD12	12:AL:51:LEU:N	2.28	0.48
12:AL:116:ARG:HH21	12:AL:123:LYS:HB2	1.77	0.48
13:AM:32:GLU:CD	13:AM:64:TRP:CH2	2.86	0.48
20:AT:69:GLY:O	20:AT:73:HIS:CE1	2.67	0.48
22:AV:6189:G:N2	22:AV:6215:C:C2	2.81	0.48
23:BA:270(Z):G:C2	23:BA:271(A):U:O4	2.66	0.48
23:BA:588:U:C2	23:BA:589:C:C5	3.01	0.48
23:BA:611:C:C2	23:BA:612:G:C8	3.02	0.48
23:BA:814:C:C5	34:BL:27:HIS:NE2	2.81	0.48
23:BA:1164:G:H5'	23:BA:1165:U:OP2	2.12	0.48
23:BA:1323:U:H2'	23:BA:1324:G:H5'	1.95	0.48
23:BA:1937:A:N7	23:BA:1939:U:H2'	2.28	0.48
23:BA:2032:G:H21	26:BD:146:THR:HG23	1.77	0.48
23:BA:2102:U:C4	23:BA:2103:C:N4	2.81	0.48
23:BA:2250:G:H5''	23:BA:2250:G:N3	2.28	0.48
23:BA:2334:G:C4	37:BO:12:PHE:HZ	2.32	0.48
23:BA:2477:C:O2'	23:BA:2478:A:P	2.70	0.48
23:BA:2712:U:O2'	23:BA:2713:A:H5'	2.13	0.48
23:BA:2718:G:H2'	23:BA:2719:G:C8	2.48	0.48
23:BA:2746:U:H4'	29:BG:138:LYS:HD3	1.95	0.48
24:BB:7:G:H4'	37:BO:29:PHE:CG	2.48	0.48
26:BD:170:LEU:HB3	26:BD:185:LYS:HB2	1.95	0.48
27:BE:78:ILE:H	27:BE:78:ILE:HG13	1.27	0.48
28:BF:131:TYR:CD2	28:BF:133:LEU:HD22	2.48	0.48
29:BG:44:VAL:O	29:BG:50:VAL:HG13	2.12	0.48
32:BJ:133:GLY:O	32:BJ:137:ARG:HG2	2.12	0.48
34:BL:132:LYS:N	34:BL:132:LYS:CD	2.76	0.48
39:BQ:36:ARG:HD3	39:BQ:40:PHE:CZ	2.49	0.48
39:BQ:92:ARG:O	39:BQ:94:ASN:N	2.46	0.48
41:BS:75:TYR:CD2	41:BS:104:THR:HB	2.46	0.48
44:BV:150:LEU:HD23	44:BV:171:ILE:HB	1.94	0.48
1:CA:356:A:H2'	1:CA:357:G:O5'	2.13	0.48
1:CA:560:U:O5'	1:CA:566:G:N2	2.46	0.48
1:CA:627:G:O2'	1:CA:628:G:H5'	2.13	0.48
1:CA:657:G:C2	1:CA:658:G:C8	3.01	0.48
1:CA:941:G:C6	1:CA:1343:G:C6	3.01	0.48
1:CA:1072:G:C6	1:CA:1104:G:C2	3.01	0.48
1:CA:1083:U:C5	1:CA:1084:G:C6	3.01	0.48
1:CA:1106:G:C2	1:CA:1107:C:C5	3.01	0.48
1:CA:1321:C:C5	1:CA:1322:C:C2	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1368:G:OP1	9:CI:111:ARG:NH2	2.44	0.48
2:CB:76:GLN:H	2:CB:76:GLN:NE2	2.11	0.48
6:CF:46:ARG:HH12	18:CR:37:VAL:HG21	1.78	0.48
8:CH:13:ILE:O	8:CH:17:THR:HG23	2.13	0.48
12:CL:51:LEU:HD12	12:CL:51:LEU:N	2.28	0.48
16:CP:28:ARG:CG	16:CP:28:ARG:NH1	2.74	0.48
23:DA:306:U:H2'	23:DA:307:G:O4'	2.13	0.48
23:DA:516:C:P	50:D2:13:LYS:HZ1	2.35	0.48
23:DA:1118:C:H5''	44:DV:80:ARG:NH2	2.27	0.48
23:DA:1152:C:HO2'	39:DQ:76:TYR:HE2	1.58	0.48
23:DA:1331:A:O2'	23:DA:1332:G:C8	2.63	0.48
23:DA:1788:C:H2'	23:DA:1789:A:O4'	2.12	0.48
23:DA:1827:C:O2'	23:DA:1828:G:H5'	2.13	0.48
23:DA:2100:G:N2	23:DA:2101:G:N3	2.61	0.48
23:DA:2228:G:P	25:DC:263:ARG:HH21	2.36	0.48
23:DA:2320:A:C8	23:DA:2333:A:N6	2.80	0.48
23:DA:2416:C:H6	23:DA:2416:C:O5'	1.96	0.48
23:DA:2738:A:C6	23:DA:2739:U:C5	3.01	0.48
23:DA:2813:A:H2'	23:DA:2814:C:O4'	2.13	0.48
23:DA:2862:G:C5	23:DA:2863:C:C5	3.00	0.48
24:DB:12:C:O2'	45:DW:74:ARG:HG2	2.13	0.48
25:DC:222:ARG:NH1	25:DC:224:ALA:HB3	2.27	0.48
25:DC:235:GLY:O	25:DC:237:GLU:N	2.46	0.48
27:DE:89:VAL:O	27:DE:91:GLY:N	2.44	0.48
32:DJ:157:ARG:O	32:DJ:158:PRO:C	2.49	0.48
34:DL:40:SER:C	34:DL:41:ARG:HD3	2.32	0.48
34:DL:105:LEU:HD12	34:DL:105:LEU:N	2.27	0.48
35:DM:60:ARG:HA	44:DV:179:ASP:HB2	1.95	0.48
48:DZ:26:LEU:HD13	48:DZ:47:VAL:HG22	1.94	0.48
1:AA:152:A:H62	1:AA:169:C:H42	1.61	0.48
1:AA:406:G:H2'	1:AA:407:G:H8	1.78	0.48
1:AA:976:G:H5''	1:AA:1358:U:O2'	2.14	0.48
1:AA:1502:A:C8	1:AA:1505:G:N2	2.82	0.48
3:AC:175:LEU:CD1	3:AC:201:TYR:CE2	2.96	0.48
10:AJ:34:VAL:CG1	10:AJ:74:ILE:HG22	2.43	0.48
18:AR:56:THR:O	18:AR:58:LEU:N	2.46	0.48
23:BA:637:A:OP1	34:BL:133:SER:HB3	2.13	0.48
23:BA:649:G:H2'	23:BA:650:C:C6	2.48	0.48
23:BA:725:G:C6	23:BA:726:G:N1	2.82	0.48
23:BA:814:C:O2'	23:BA:815:C:H5'	2.13	0.48
23:BA:1015:G:O2'	23:BA:1016:G:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1188:U:C2'	23:BA:1189:A:C5'	2.91	0.48
23:BA:1386:C:H2'	23:BA:1387:C:C6	2.43	0.48
23:BA:1881:C:H2'	23:BA:1882:C:H6	1.78	0.48
23:BA:1929:G:H5''	23:BA:1929:G:N3	2.28	0.48
23:BA:2062:A:O2'	23:BA:2063:C:H5'	2.13	0.48
23:BA:2190:G:H2'	23:BA:2191:G:C8	2.45	0.48
23:BA:2272:U:C6	23:BA:2272:U:C5'	2.88	0.48
23:BA:2388:A:C8	23:BA:2389:G:C5	3.02	0.48
23:BA:2396:G:N3	23:BA:2421:G:C2	2.81	0.48
23:BA:2465:C:O2	23:BA:2486:G:C2	2.66	0.48
23:BA:2557:G:H2'	23:BA:2558:C:H6	1.78	0.48
23:BA:2853:C:O2'	23:BA:2854:G:H5'	2.13	0.48
23:BA:2893:G:H3'	23:BA:2894:G:H5'	1.95	0.48
24:BB:56:G:H4'	24:BB:57:A:H8	1.79	0.48
24:BB:78:A:N3	24:BB:99:A:C5	2.81	0.48
25:BC:155:LEU:N	25:BC:155:LEU:HD12	2.28	0.48
25:BC:267:SER:C	25:BC:269:PHE:H	2.17	0.48
26:BD:61:ARG:HB3	26:BD:62:PRO:HD2	1.95	0.48
26:BD:111:ARG:CD	26:BD:160:TYR:CE1	2.92	0.48
27:BE:118:ALA:HB2	27:BE:123:LEU:HD23	1.96	0.48
28:BF:128:ARG:HH21	28:BF:129:GLY:C	2.16	0.48
30:BH:132:PRO:O	30:BH:134:PRO:HD3	2.12	0.48
35:BM:130:LYS:HZ2	44:BV:80:ARG:HE	1.60	0.48
35:BM:131:ILE:HG22	35:BM:132:VAL:N	2.28	0.48
39:BQ:62:ILE:O	39:BQ:63:VAL:C	2.49	0.48
40:BR:77:ALA:O	40:BR:79:VAL:N	2.46	0.48
43:BU:8:LYS:NZ	43:BU:8:LYS:CA	2.76	0.48
44:BV:151:HIS:O	44:BV:171:ILE:HG12	2.14	0.48
48:BZ:26:LEU:HB2	48:BZ:28:LEU:CD1	2.43	0.48
52:B4:8:ASN:ND2	52:B4:9:ARG:N	2.56	0.48
53:B5:39:LYS:HA	53:B5:42:ARG:NH1	2.27	0.48
1:CA:112:G:C2	1:CA:113:G:C8	3.01	0.48
1:CA:1048:G:OP1	14:CN:4:LYS:HB2	2.13	0.48
1:CA:1244:C:H2'	1:CA:1245:A:C8	2.49	0.48
1:CA:1315:U:H2'	1:CA:1316:G:O4'	2.13	0.48
2:CB:91:PRO:CB	2:CB:154:LEU:HD11	2.44	0.48
3:CC:91:LEU:CD1	3:CC:101:LEU:HD21	2.43	0.48
6:CF:90:VAL:O	6:CF:91:VAL:HG23	2.12	0.48
8:CH:50:ARG:CD	8:CH:50:ARG:H	2.27	0.48
11:CK:34:ASP:HB2	11:CK:35:PRO:HD2	1.95	0.48
14:CN:37:PHE:CE1	14:CN:53:LEU:HD13	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:69:LYS:C	17:CQ:70:ARG:HD2	2.32	0.48
23:DA:105:C:C2	23:DA:106:C:C5	3.02	0.48
23:DA:814:C:H2'	23:DA:815:C:H6	1.78	0.48
23:DA:973:A:O4'	23:DA:1188:U:C6	2.66	0.48
23:DA:1327:C:H2'	23:DA:1328:G:O4'	2.14	0.48
23:DA:1505:C:H2'	23:DA:1506:C:C6	2.49	0.48
23:DA:2638:G:P	26:DD:82:ARG:HH22	2.36	0.48
23:DA:2663:G:C5	23:DA:2664:G:C5	3.01	0.48
23:DA:2734:A:C8	23:DA:2735:G:C8	3.01	0.48
24:DB:7:G:H1'	37:DO:38:GLN:HE21	1.78	0.48
26:DD:4:ILE:HD11	26:DD:28:ALA:O	2.13	0.48
32:DJ:58:ARG:O	32:DJ:60:LYS:N	2.46	0.48
34:DL:80:TYR:CE1	34:DL:111:ARG:CG	2.96	0.48
36:DN:10:LEU:HB3	36:DN:17:ARG:CZ	2.42	0.48
36:DN:55:ALA:O	36:DN:57:ARG:O	2.32	0.48
37:DO:93:LYS:O	37:DO:93:LYS:HG3	2.13	0.48
42:DT:49:VAL:HG21	42:DT:83:VAL:CG1	2.42	0.48
43:DU:75:ILE:HG13	43:DU:79:CYS:HA	1.94	0.48
44:DV:4:ARG:HD3	44:DV:60:GLU:HG3	1.94	0.48
48:DZ:52:HIS:H	48:DZ:52:HIS:HD2	1.58	0.48
1:AA:691:G:H2'	1:AA:692:U:C6	2.49	0.48
1:AA:772:U:C2'	1:AA:773:G:H5'	2.44	0.48
1:AA:1051:C:C4	1:AA:1052:U:C4	3.02	0.48
1:AA:1504:G:H4'	1:AA:1505:G:C4	2.48	0.48
2:AB:68:ILE:HG22	2:AB:70:PHE:CE1	2.48	0.48
12:AL:6:ILE:O	12:AL:10:VAL:CG2	2.59	0.48
13:AM:108:ARG:HA	13:AM:111:LYS:HB2	1.93	0.48
17:AQ:69:LYS:C	17:AQ:70:ARG:HD2	2.34	0.48
20:AT:12:ALA:O	20:AT:15:ARG:HB2	2.13	0.48
23:BA:30:G:H2'	23:BA:31:C:C6	2.49	0.48
23:BA:226:G:N2	23:BA:227:A:C2	2.82	0.48
23:BA:442:G:C4'	27:BE:46:ARG:HD3	2.44	0.48
23:BA:447:A:C4	23:BA:473:G:N7	2.82	0.48
23:BA:1122:G:N3	23:BA:1122:G:H2'	2.29	0.48
23:BA:1141:U:OP2	32:BJ:86:THR:HG21	2.14	0.48
23:BA:1301:A:N3	23:BA:1301:A:H2'	2.28	0.48
23:BA:1309:G:H3'	52:B4:9:ARG:HH12	1.78	0.48
23:BA:2461:C:O2	23:BA:2461:C:C2'	2.52	0.48
25:BC:33:LEU:HD23	25:BC:33:LEU:H	1.78	0.48
29:BG:102:ALA:CB	29:BG:116:GLU:HA	2.41	0.48
38:BP:54:ARG:HA	38:BP:59:THR:OG1	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BR:3:ALA:HB1	40:BR:38:LEU:HD21	1.95	0.48
41:BS:18:ARG:HH11	41:BS:18:ARG:HG2	1.78	0.48
43:BU:9:LYS:O	43:BU:27:VAL:CG2	2.61	0.48
44:BV:102:LEU:HD21	44:BV:124:ILE:HD11	1.96	0.48
44:BV:128:VAL:CG2	44:BV:132:ASN:HB2	2.43	0.48
44:BV:155:LEU:O	44:BV:157:LEU:HD12	2.13	0.48
48:BZ:8:LEU:HD13	48:BZ:31:LEU:HD12	1.94	0.48
1:CA:238:G:P	17:CQ:25:ARG:HH22	2.36	0.48
1:CA:256:U:H2'	1:CA:257:G:C8	2.48	0.48
1:CA:373:A:C2	1:CA:374:A:C8	3.01	0.48
1:CA:464:G:O6	1:CA:466:G:H5'	2.12	0.48
1:CA:556:C:O2	1:CA:556:C:C2'	2.55	0.48
1:CA:564:C:C4	17:CQ:31:LEU:HD11	2.49	0.48
1:CA:575:G:H4'	1:CA:575:G:OP1	2.13	0.48
1:CA:687:A:H1'	1:CA:688:G:OP2	2.13	0.48
1:CA:1234:C:C2'	1:CA:1235:U:H5'	2.43	0.48
1:CA:1296:C:C5	1:CA:1297:C:C5	3.02	0.48
1:CA:1328:C:H5''	13:CM:28:ALA:CB	2.42	0.48
12:CL:82:VAL:CG1	12:CL:83:LEU:N	2.76	0.48
23:DA:904:C:H2'	23:DA:905:U:C6	2.48	0.48
23:DA:122(A):C:H2'	23:DA:1222:C:H6	1.78	0.48
23:DA:1264:G:H5'	50:D2:11:THR:HG23	1.94	0.48
23:DA:1900:A:C2	23:DA:1970:A:C5	3.00	0.48
23:DA:2079:U:H2'	23:DA:2080:G:O4'	2.14	0.48
23:DA:2261:C:H1'	23:DA:2388:A:N3	2.28	0.48
23:DA:2305:A:O2'	28:DF:136:ARG:NE	2.46	0.48
23:DA:2784:C:H2'	23:DA:2785:C:C6	2.49	0.48
24:DB:75:G:O2'	44:DV:85:HIS:CD2	2.66	0.48
24:DB:76:G:OP1	44:DV:15:PRO:HG3	2.13	0.48
25:DC:17:THR:H	25:DC:205:VAL:HG12	1.77	0.48
25:DC:141:VAL:O	25:DC:141:VAL:HG22	2.14	0.48
28:DF:18:GLU:HG2	28:DF:175:LEU:CD2	2.43	0.48
32:DJ:59:GLY:O	32:DJ:65:TRP:CE3	2.65	0.48
32:DJ:156:GLN:O	32:DJ:157:ARG:HB2	2.13	0.48
35:DM:38:GLU:HB2	35:DM:127:ILE:CG1	2.43	0.48
41:DS:95:ILE:O	41:DS:95:ILE:HG13	2.13	0.48
43:DU:63:LYS:HG3	43:DU:64:GLU:N	2.28	0.48
1:AA:66:G:H5'	1:AA:173:U:O4	2.13	0.48
1:AA:236:G:H1'	17:AQ:4:LYS:HE3	1.95	0.48
1:AA:356:A:H2'	1:AA:357:G:C8	2.48	0.48
1:AA:401:C:H3'	1:AA:401:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:444:C:H2'	1:AA:445:G:C8	2.49	0.48
1:AA:515:G:N2	1:AA:537:G:C4	2.82	0.48
1:AA:597:G:C8	1:AA:598:U:C5	3.02	0.48
1:AA:760:G:H2'	1:AA:761:G:H5'	1.96	0.48
1:AA:779:C:H2'	1:AA:780:A:O4'	2.13	0.48
1:AA:878:G:C1'	8:AH:3:THR:HG21	2.43	0.48
1:AA:1088:G:C5	1:AA:1089:G:N7	2.82	0.48
1:AA:1298:C:C5	7:AG:114:ARG:NH1	2.80	0.48
3:AC:6:HIS:HD2	3:AC:7:PRO:HD2	1.78	0.48
4:AD:109:GLY:O	4:AD:111:ALA:N	2.46	0.48
5:AE:139:LEU:C	5:AE:141:GLN:H	2.17	0.48
7:AG:30:ILE:HD13	7:AG:105:VAL:HG13	1.94	0.48
16:AP:12:LYS:O	16:AP:13:HIS:HB2	2.11	0.48
22:AV:6192:G:C6	22:AV:6193:U:C4	3.01	0.48
23:BA:176:G:O2'	23:BA:177:G:H5'	2.14	0.48
23:BA:247:G:H4'	23:BA:386:G:C5	2.49	0.48
23:BA:343:C:O2'	23:BA:344:G:H5'	2.14	0.48
23:BA:566:U:H2'	23:BA:567:A:O4'	2.14	0.48
23:BA:857:C:C2	23:BA:858:U:C5	3.02	0.48
23:BA:1582:C:O5'	23:BA:1582:C:H6	1.97	0.48
23:BA:2210:G:N3	23:BA:2210:G:C3'	2.75	0.48
26:BD:24:THR:HG21	26:BD:188:VAL:HG12	1.95	0.48
28:BF:74:LYS:HA	28:BF:74:LYS:HE3	1.95	0.48
30:BH:86:THR:HG22	30:BH:86:THR:O	2.14	0.48
38:BP:80:SER:C	38:BP:82:LEU:N	2.67	0.48
41:BS:14:PRO:O	41:BS:16:LYS:N	2.46	0.48
42:BT:35:THR:HG22	42:BT:36:LYS:N	2.28	0.48
44:BV:58:VAL:HG11	44:BV:66:SER:HB2	1.95	0.48
47:BY:1:MET:SD	47:BY:1:MET:O	2.71	0.48
50:B2:35:GLU:OE2	50:B2:51:TYR:HA	2.12	0.48
1:CA:42:G:N2	1:CA:401:C:O2	2.47	0.48
1:CA:394:G:C2	1:CA:395:C:C6	3.01	0.48
1:CA:408:A:C2	1:CA:409:G:C4	3.02	0.48
1:CA:409:G:C2'	1:CA:410:G:O5'	2.61	0.48
1:CA:487:A:H2'	1:CA:488:C:O4'	2.13	0.48
1:CA:501:C:H2'	1:CA:502:G:C8	2.49	0.48
1:CA:698:G:C6	1:CA:699:C:C4	3.02	0.48
1:CA:706:A:O4'	11:CK:29:ILE:HD11	2.14	0.48
1:CA:832:C:N4	1:CA:854:G:H1	2.05	0.48
1:CA:971:G:H1'	1:CA:1365:G:HO2'	1.78	0.48
1:CA:1423:G:H5''	33:DK:49:ARG:NH2	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:148:GLY:HA3	3:CC:203:PHE:HB3	1.94	0.48
7:CG:77:SER:HA	7:CG:85:TYR:O	2.14	0.48
11:CK:120:ARG:NH1	11:CK:126:ARG:HE	2.11	0.48
15:CO:29:VAL:HG12	15:CO:85:LEU:CD1	2.42	0.48
23:DA:260:G:C6	23:DA:261:G:C8	3.02	0.48
23:DA:328:U:H4'	43:DU:68:HIS:CE1	2.48	0.48
23:DA:693:C:H2'	23:DA:694:U:H6	1.77	0.48
23:DA:914:C:C5	23:DA:915:C:C6	3.02	0.48
23:DA:1773:A:N7	23:DA:1829:A:H1'	2.28	0.48
23:DA:1826:G:P	25:DC:233:HIS:HD2	2.36	0.48
23:DA:1929:G:H5''	23:DA:1929:G:N3	2.29	0.48
23:DA:2025:C:H2'	23:DA:2026:C:C6	2.48	0.48
23:DA:2094:G:C2	23:DA:2196:C:C2	3.02	0.48
23:DA:2307:G:C8	23:DA:2307:G:O5'	2.67	0.48
23:DA:2392:A:OP2	53:D5:31:HIS:HE1	1.95	0.48
23:DA:2636:U:H4'	26:DD:80:GLU:OE1	2.14	0.48
25:DC:15:PHE:O	25:DC:205:VAL:CG1	2.62	0.48
25:DC:79:VAL:HG11	25:DC:111:LEU:CD1	2.43	0.48
26:DD:3:GLY:HA3	26:DD:81:ILE:HD13	1.95	0.48
29:DG:23:ARG:HD3	29:DG:23:ARG:H	1.78	0.48
29:DG:87:LEU:CD2	29:DG:164:TYR:HD1	2.25	0.48
30:DH:101:LEU:O	30:DH:107:ILE:HG22	2.13	0.48
34:DL:13:ASN:O	34:DL:14:LYS:C	2.51	0.48
36:DN:96:ARG:HD3	36:DN:98:LEU:HD21	1.95	0.48
39:DQ:53:ARG:O	39:DQ:56:ASP:HB2	2.14	0.48
44:DV:5:LEU:CG	44:DV:47:VAL:HG21	2.42	0.48
44:DV:179:ASP:CG	44:DV:180:VAL:N	2.66	0.48
1:AA:76:G:C6	1:AA:95:G:N1	2.82	0.48
1:AA:142:G:N2	1:AA:143:A:C4	2.81	0.48
1:AA:175:C:H4'	20:AT:25:ARG:NH1	2.29	0.48
1:AA:294:U:H2'	1:AA:295:C:C6	2.49	0.48
5:AE:91:LEU:HD22	5:AE:110:LEU:HD11	1.95	0.48
8:AH:97:VAL:CG1	8:AH:98:LYS:H	2.24	0.48
8:AH:120:THR:H	8:AH:123:GLU:HB2	1.78	0.48
18:AR:45:SER:H	18:AR:51:LEU:CD1	2.26	0.48
18:AR:66:LEU:CG	18:AR:70:ILE:HD11	2.44	0.48
23:BA:71:A:OP2	23:BA:113:G:H5'	2.14	0.48
23:BA:739:G:H4'	23:BA:740:U:OP1	2.14	0.48
23:BA:795:C:H6	23:BA:795:C:O5'	1.97	0.48
23:BA:1152:C:O2'	23:BA:1153:C:H5'	2.14	0.48
23:BA:1188:U:H2'	23:BA:1189:A:O5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1503:U:H2'	23:BA:1504:C:C6	2.49	0.48
23:BA:2190:G:C4	23:BA:2191:G:C8	3.02	0.48
23:BA:2277:G:C5'	35:BM:85:LYS:HB2	2.43	0.48
23:BA:2516:G:C6	23:BA:2517:C:N4	2.81	0.48
23:BA:2631:G:N3	23:BA:2810:A:C2	2.77	0.48
23:BA:2739:U:O2	23:BA:2739:U:C2'	2.54	0.48
25:BC:30:GLU:CG	25:BC:63:ARG:NH2	2.77	0.48
25:BC:122:ASP:CG	25:BC:123:ALA:N	2.67	0.48
29:BG:46:GLU:HG3	29:BG:51:ARG:CZ	2.43	0.48
34:BL:50:ARG:HD2	34:BL:51:PHE:CA	2.44	0.48
36:BN:72:ASP:O	36:BN:76:VAL:HG13	2.13	0.48
44:BV:30:ASN:HA	44:BV:89:PHE:HE2	1.78	0.48
46:BX:10:LYS:O	46:BX:11:ARG:CG	2.61	0.48
1:CA:386:C:H2'	1:CA:387:U:O4'	2.14	0.48
1:CA:403:C:O2'	1:CA:404:U:H5'	2.13	0.48
1:CA:438:G:H4'	4:CD:123:HIS:ND1	2.28	0.48
1:CA:451:A:N7	1:CA:481:G:C6	2.82	0.48
1:CA:672:U:O2'	1:CA:673:G:H5'	2.14	0.48
1:CA:1160:G:C6	1:CA:1181:G:O6	2.66	0.48
1:CA:1351:U:H4'	7:CG:33:ASP:OD2	2.13	0.48
1:CA:1452:C:H1'	1:CA:1453:G:N2	2.29	0.48
3:CC:68:VAL:HG12	3:CC:70:VAL:HG23	1.95	0.48
12:CL:31:PHE:CB	12:CL:83:LEU:HD11	2.43	0.48
17:CQ:99:SER:O	17:CQ:100:LYS:HD3	2.14	0.48
23:DA:312:G:N3	23:DA:312:G:H2'	2.29	0.48
23:DA:618(A):G:H2'	23:DA:618(B):C:H6	1.77	0.48
23:DA:1313:U:H4'	23:DA:1332:G:H4'	1.94	0.48
23:DA:1412:A:H2'	23:DA:1413:G:O4'	2.14	0.48
23:DA:2334:G:C4	37:DO:12:PHE:HZ	2.32	0.48
32:DJ:38:LEU:C	32:DJ:39:ILE:HG12	2.33	0.48
32:DJ:116:THR:OG1	32:DJ:117:HIS:N	2.46	0.48
33:DK:32:TYR:CD1	33:DK:32:TYR:N	2.80	0.48
35:DM:134:ARG:HA	35:DM:134:ARG:HE	1.78	0.48
38:DP:34:VAL:HG21	38:DP:43:GLN:HB2	1.96	0.48
43:DU:6:HIS:CD2	43:DU:35:TYR:CE1	2.97	0.48
1:AA:9:G:H5''	5:AE:122:GLU:OE1	2.13	0.48
1:AA:76:G:C6	1:AA:77:C:N4	2.82	0.48
1:AA:178:C:C2'	1:AA:179:A:H5'	2.44	0.48
1:AA:1294:G:H2'	1:AA:1295:G:H8	1.74	0.48
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.13	0.48
8:AH:36:LEU:HA	8:AH:39:LEU:HD23	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:14:TRP:HE3	21:AU:15:ARG:HG2	1.78	0.48
22:AV:6182:A:C2	22:AV:6195:G:N2	2.82	0.48
23:BA:141(A):A:N6	23:BA:1596:A:H5'	2.29	0.48
23:BA:194:G:H2'	23:BA:195:A:O4'	2.13	0.48
23:BA:861:A:C2	23:BA:917:A:C4	3.01	0.48
23:BA:1407:C:H2'	23:BA:1408:C:H6	1.77	0.48
23:BA:1523:U:H2'	23:BA:1524:G:H8	1.77	0.48
23:BA:1917:U:O2'	23:BA:1918:A:H5'	2.13	0.48
23:BA:2728:U:O2	23:BA:2728:U:H2'	2.13	0.48
23:BA:2729:G:H1'	26:BD:187:ALA:CB	2.31	0.48
25:BC:182:LEU:HA	25:BC:182:LEU:HD23	1.55	0.48
26:BD:36:ARG:NH1	26:BD:86:PRO:HD2	2.28	0.48
26:BD:51:PHE:CD1	26:BD:51:PHE:C	2.86	0.48
26:BD:176:ILE:N	26:BD:176:ILE:CD1	2.76	0.48
28:BF:8:LYS:HD3	28:BF:9:ARG:CG	2.44	0.48
29:BG:29:PRO:HD2	29:BG:79:VAL:O	2.13	0.48
31:BI:57:THR:HG23	31:BI:60:ARG:HH12	1.77	0.48
35:BM:70:PRO:HA	35:BM:94:VAL:O	2.14	0.48
36:BN:17:ARG:O	36:BN:20:LEU:HB3	2.14	0.48
36:BN:85:PRO:HA	36:BN:88:ARG:HH11	1.78	0.48
41:BS:29:LEU:HD22	41:BS:69:LEU:HD11	1.96	0.48
42:BT:12:VAL:HG12	42:BT:28:PHE:HA	1.95	0.48
45:BW:37:LEU:HG	45:BW:60:PHE:HA	1.96	0.48
46:BX:46:LEU:HD23	46:BX:46:LEU:C	2.34	0.48
53:B5:21:LYS:HA	53:B5:54:GLU:OE2	2.14	0.48
1:CA:114:U:H2'	1:CA:115:G:H8	1.79	0.48
1:CA:754:C:C2'	1:CA:755:G:OP1	2.62	0.48
1:CA:806:C:O2	1:CA:807:A:C8	2.67	0.48
1:CA:1047:G:O2'	1:CA:1048:G:H5'	2.14	0.48
1:CA:1056:U:H2'	1:CA:1056:U:O2	2.13	0.48
1:CA:1058:G:C6	1:CA:1059:C:N3	2.81	0.48
1:CA:1327:C:O2'	1:CA:1328:C:H5'	2.14	0.48
1:CA:1415:G:O2'	1:CA:1416:G:H5'	2.14	0.48
1:CA:1443:G:N2	38:DP:119:LYS:CA	2.74	0.48
3:CC:6:HIS:HD2	3:CC:7:PRO:HD2	1.79	0.48
6:CF:78:GLU:HA	6:CF:81:ILE:CD1	2.44	0.48
7:CG:69:VAL:HG22	7:CG:135:VAL:HG22	1.95	0.48
12:CL:44:PRO:HG3	12:CL:52:ARG:HD3	1.93	0.48
13:CM:105:THR:O	13:CM:106:ASN:O	2.30	0.48
15:CO:39:LEU:CD1	15:CO:56:LEU:HB2	2.44	0.48
22:CV:6189:G:N2	22:CV:6215:C:C2	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:6213:A:C4	22:CV:6214:C:C5	3.01	0.48
23:DA:118:A:C8	23:DA:119:A:C8	3.02	0.48
23:DA:220:G:N1	23:DA:428:A:OP2	2.32	0.48
23:DA:531:C:H4'	23:DA:532:A:H5''	1.94	0.48
23:DA:641:C:O2'	23:DA:2350:C:OP1	2.28	0.48
23:DA:1104:C:C4	23:DA:1105:U:C5	3.01	0.48
23:DA:1188:U:H2'	23:DA:1189:A:C5'	2.44	0.48
23:DA:1336:A:H2'	23:DA:1337:G:C8	2.49	0.48
23:DA:1826:G:OP1	25:DC:233:HIS:CD2	2.59	0.48
23:DA:1827:C:C2'	23:DA:1828:G:H5'	2.44	0.48
23:DA:1839:G:C8	23:DA:1927:A:H1'	2.48	0.48
24:DB:30:C:H1'	24:DB:58:A:N1	2.28	0.48
25:DC:94:LEU:C	25:DC:94:LEU:HD22	2.34	0.48
30:DH:4:ILE:HA	30:DH:17:GLN:O	2.13	0.48
35:DM:21:THR:C	35:DM:23:GLY:N	2.67	0.48
37:DO:20:ARG:HH12	45:DW:48:GLY:H	1.61	0.48
49:D1:50:THR:HG22	49:D1:51:TYR:N	2.26	0.48
50:D2:40:LYS:HD3	50:D2:46:CYS:HB3	1.95	0.48
1:AA:29:G:C2	1:AA:555:C:N3	2.82	0.48
1:AA:109:A:C6	1:AA:326:G:C6	3.02	0.48
1:AA:391:G:C6	1:AA:392:G:N7	2.81	0.48
1:AA:954:G:H2'	1:AA:955:U:C6	2.48	0.48
1:AA:972:C:H4'	10:AJ:57:LYS:HG3	1.96	0.48
1:AA:977:A:HO2'	1:AA:978:A:H5''	1.78	0.48
1:AA:1152:A:C4	1:AA:1153:C:C5	3.02	0.48
1:AA:1195:C:H5''	1:AA:1196:U:OP2	2.14	0.48
2:AB:76:GLN:NE2	2:AB:76:GLN:H	2.12	0.48
2:AB:167:PRO:HG3	2:AB:188:ALA:HB2	1.94	0.48
4:AD:199:ASN:ND2	4:AD:202:LEU:HG	2.28	0.48
5:AE:20:GLN:O	5:AE:23:GLY:O	2.31	0.48
6:AF:35:ALA:O	6:AF:37:VAL:N	2.47	0.48
17:AQ:11:VAL:N	17:AQ:20:THR:O	2.45	0.48
18:AR:38:GLU:HA	18:AR:38:GLU:OE2	2.13	0.48
23:BA:415:A:H2'	23:BA:416:C:C6	2.48	0.48
23:BA:516:C:P	50:B2:13:LYS:HZ1	2.37	0.48
23:BA:1467:C:C2'	23:BA:1468:C:H5'	2.43	0.48
23:BA:1639:U:H4'	23:BA:2699:C:H4'	1.94	0.48
23:BA:1799:G:H8	25:BC:181:GLU:CD	2.16	0.48
23:BA:1909:C:C2	23:BA:1922:G:C2	3.01	0.48
23:BA:2352:A:C4	23:BA:2366:A:C2	3.02	0.48
23:BA:2410:G:H2'	23:BA:2411:A:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2470:G:C6	23:BA:2471:C:C5	3.02	0.48
23:BA:2549:G:C2'	23:BA:2550:G:H5'	2.43	0.48
23:BA:2717:G:C6	23:BA:2718:G:C5	3.02	0.48
24:BB:75:G:HO2'	44:BV:85:HIS:CD2	2.31	0.48
24:BB:78:A:H61	24:BB:98:G:H1'	1.79	0.48
25:BC:45:ASN:OD1	25:BC:45:ASN:C	2.50	0.48
25:BC:52:ARG:CB	25:BC:53:PHE:CD2	2.97	0.48
32:BJ:157:ARG:O	32:BJ:158:PRO:C	2.51	0.48
34:BL:18:ARG:C	34:BL:19:VAL:HG22	2.33	0.48
34:BL:32:THR:HG21	34:BL:37:GLY:HA2	1.94	0.48
34:BL:61:ARG:HD3	53:B5:13:ARG:HD2	1.96	0.48
36:BN:84:ALA:HB3	36:BN:85:PRO:HD3	1.94	0.48
39:BQ:106:PHE:O	39:BQ:109:LEU:N	2.46	0.48
42:BT:44:GLU:HG2	42:BT:49:VAL:O	2.14	0.48
44:BV:82:ARG:HG2	44:BV:83:PRO:HD2	1.96	0.48
44:BV:126:VAL:HG12	44:BV:163:LEU:HA	1.96	0.48
47:BY:24:LEU:HD22	47:BY:60:LEU:CD1	2.43	0.48
1:CA:35:G:C2	1:CA:550:G:C2	3.01	0.48
1:CA:173:U:N1	1:CA:197:A:C2	2.82	0.48
1:CA:235:C:H2'	1:CA:236:G:H8	1.77	0.48
1:CA:300:A:H2'	1:CA:301:G:H5'	1.96	0.48
1:CA:324:G:OP1	20:CT:70:SER:CB	2.61	0.48
1:CA:826:C:C2'	8:CH:15:ASN:HD22	2.25	0.48
1:CA:1182:G:H4'	1:CA:1183:A:C5'	2.44	0.48
7:CG:46:ALA:O	7:CG:50:ILE:HG12	2.14	0.48
8:CH:36:LEU:HA	8:CH:39:LEU:HD23	1.96	0.48
10:CJ:98:ILE:O	10:CJ:99:LYS:HD3	2.13	0.48
18:CR:66:LEU:CG	18:CR:70:ILE:HD11	2.43	0.48
20:CT:84:LEU:HD13	20:CT:85:MET:N	2.28	0.48
22:CV:6182:A:C6	22:CV:6195:G:N1	2.82	0.48
23:DA:151:C:C2	23:DA:176:G:N2	2.81	0.48
23:DA:528:A:N1	23:DA:2043:C:O5'	2.47	0.48
23:DA:533:G:N3	39:DQ:45:TYR:HE1	2.11	0.48
23:DA:1174:A:H3'	23:DA:1175:U:C5'	2.17	0.48
23:DA:1486:A:C6	23:DA:1504:C:N4	2.80	0.48
23:DA:1583:A:H8	23:DA:1583:A:O5'	1.97	0.48
23:DA:1812:A:H2'	23:DA:1813:G:H5'	1.95	0.48
23:DA:1862:G:C2	23:DA:1863:G:C5	3.01	0.48
23:DA:2297:C:H2'	23:DA:2298:A:H8	1.78	0.48
25:DC:172:TYR:CE1	25:DC:186:HIS:HA	2.49	0.48
26:DD:5:LEU:C	26:DD:51:PHE:HE2	2.17	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:62:LEU:HB3	28:DF:143:GLU:HG3	1.96	0.48
28:DF:161:THR:C	28:DF:163:ALA:N	2.67	0.48
30:DH:130:TYR:C	30:DH:132:PRO:HD3	2.34	0.48
34:DL:27:HIS:CD2	34:DL:27:HIS:C	2.86	0.48
34:DL:41:ARG:HA	34:DL:41:ARG:HD2	1.56	0.48
38:DP:58:ASN:C	38:DP:58:ASN:HD22	2.17	0.48
39:DQ:25:TRP:C	39:DQ:25:TRP:CD1	2.87	0.48
39:DQ:62:ILE:HD12	39:DQ:76:TYR:CE1	2.49	0.48
39:DQ:72:HIS:HE1	39:DQ:107:ALA:HA	1.77	0.48
39:DQ:106:PHE:O	39:DQ:109:LEU:N	2.47	0.48
41:DS:14:PRO:C	41:DS:16:LYS:H	2.16	0.48
44:DV:63:ASP:C	44:DV:65:GLN:H	2.16	0.48
1:AA:15:G:H4'	5:AE:24:ARG:NH1	2.27	0.48
1:AA:357:G:C2	1:AA:358:U:C5	3.02	0.48
1:AA:380:G:N1	1:AA:384:G:C6	2.82	0.48
1:AA:525:C:O2'	1:AA:526:C:H5'	2.14	0.48
1:AA:730:G:C5	1:AA:731:G:H1'	2.49	0.48
1:AA:934:C:C5	1:AA:1345:U:C6	3.02	0.48
1:AA:939:G:N1	1:AA:940:C:N4	2.62	0.48
1:AA:1056:U:O2	1:AA:1056:U:H2'	2.14	0.48
1:AA:1244:C:H2'	1:AA:1245:A:C8	2.49	0.48
1:AA:1366:C:C4	1:AA:1367:C:N4	2.82	0.48
1:AA:1401:G:C2	1:AA:1402:C:H1'	2.49	0.48
1:AA:1529:G:H4'	1:AA:1530:G:OP2	2.12	0.48
3:AC:19:GLU:HG2	3:AC:40:ARG:NH2	2.28	0.48
4:AD:79:PHE:CE1	4:AD:204:ILE:HA	2.48	0.48
7:AG:17:VAL:HG21	7:AG:44:TYR:CE2	2.48	0.48
7:AG:69:VAL:HG22	7:AG:135:VAL:HG22	1.96	0.48
8:AH:54:ASP:C	8:AH:56:LYS:H	2.17	0.48
11:AK:34:ASP:CB	11:AK:35:PRO:CD	2.92	0.48
13:AM:24:GLY:O	13:AM:25:ILE:HD13	2.13	0.48
14:AN:45:ARG:O	14:AN:49:HIS:CD2	2.67	0.48
18:AR:37:VAL:HG12	18:AR:78:LEU:HB3	1.95	0.48
23:BA:528:A:O2'	23:BA:529:A:H5'	2.13	0.48
23:BA:685:A:H1'	23:BA:688:U:O4	2.14	0.48
23:BA:849:A:H5''	23:BA:850:C:OP2	2.13	0.48
23:BA:1593:G:C6	23:BA:1594:G:C6	3.02	0.48
23:BA:2292:C:N4	23:BA:2293:C:N4	2.62	0.48
23:BA:2394:C:P	34:BL:63:PRO:HD2	2.54	0.48
26:BD:3:GLY:HA3	26:BD:81:ILE:HD13	1.96	0.48
26:BD:104:VAL:HG11	26:BD:188:VAL:HG21	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:126:VAL:O	27:BE:196:LEU:HG	2.13	0.48
30:BH:15:VAL:C	30:BH:17:GLN:H	2.17	0.48
34:BL:27:HIS:CD2	34:BL:27:HIS:C	2.87	0.48
36:BN:28:LEU:HD23	36:BN:28:LEU:HA	1.69	0.48
36:BN:52:ILE:CG2	36:BN:94:TYR:CG	2.97	0.48
38:BP:105:LEU:O	38:BP:107:ASP:CG	2.52	0.48
44:BV:9:TYR:CG	44:BV:35:ARG:NH1	2.82	0.48
44:BV:165:VAL:HG23	44:BV:166:SER:O	2.13	0.48
1:CA:300:A:C8	1:CA:300:A:C3'	2.96	0.48
1:CA:464:G:C6	1:CA:466:G:H5'	2.49	0.48
1:CA:669:U:C2	1:CA:670:G:C8	3.02	0.48
1:CA:958:A:N6	1:CA:959:A:N6	2.62	0.48
1:CA:1064:G:C1'	1:CA:1065:U:OP2	2.59	0.48
1:CA:1128:C:O2'	1:CA:1130:A:C4	2.65	0.48
5:CE:61:TYR:HA	5:CE:64:ARG:HB3	1.95	0.48
6:CF:12:PRO:HD3	6:CF:58:GLY:HA2	1.95	0.48
6:CF:97:PHE:HD2	18:CR:31:LEU:HD21	1.79	0.48
8:CH:119:LEU:HD12	8:CH:124:ALA:HA	1.94	0.48
15:CO:3:ILE:HA	15:CO:38:ARG:NH2	2.29	0.48
19:CS:40:ILE:HG13	19:CS:69:HIS:O	2.14	0.48
21:CU:14:TRP:HE3	21:CU:15:ARG:HG2	1.78	0.48
23:DA:30:G:C5	23:DA:31:C:C4	3.00	0.48
23:DA:442:G:C4'	27:DE:46:ARG:HD3	2.43	0.48
23:DA:1496:A:C8	23:DA:1577:C:O2'	2.67	0.48
23:DA:1678:G:H2'	23:DA:1678:G:N3	2.29	0.48
23:DA:1786:A:H2	23:DA:2606:C:H1'	1.78	0.48
23:DA:1871:A:O2'	23:DA:1872:A:H5'	2.14	0.48
23:DA:1909:C:C2	23:DA:1922:G:C2	3.02	0.48
23:DA:2506:U:OP2	23:DA:2576:G:N1	2.31	0.48
23:DA:2516:G:C6	23:DA:2517:C:N4	2.82	0.48
23:DA:2687:U:N3	23:DA:2688:U:C6	2.82	0.48
23:DA:2730:C:C2'	23:DA:2731:G:H5'	2.43	0.48
23:DA:2853:C:O2'	23:DA:2854:G:H5'	2.14	0.48
23:DA:2893:G:H5''	23:DA:2894:G:O4'	2.13	0.48
25:DC:108:PRO:CB	25:DC:143:HIS:HE1	2.26	0.48
32:DJ:95:TYR:CD2	32:DJ:113:MET:HG3	2.48	0.48
34:DL:32:THR:CG2	34:DL:37:GLY:H	2.27	0.48
34:DL:59:LEU:N	34:DL:61:ARG:HE	2.11	0.48
34:DL:64:LYS:HB2	53:D5:25:MET:HG3	1.95	0.48
35:DM:75:THR:C	35:DM:88:GLY:HA2	2.34	0.48
36:DN:48:VAL:HA	36:DN:51:LEU:HD12	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DP:80:SER:C	38:DP:82:LEU:N	2.66	0.48
39:DQ:27:LEU:O	39:DQ:27:LEU:HD23	2.14	0.48
42:DT:40:LYS:C	42:DT:42:ALA:N	2.67	0.48
1:AA:33:A:H2'	1:AA:34:C:C6	2.49	0.48
1:AA:382:A:C2	1:AA:383:A:C4	3.02	0.48
1:AA:545:C:OP2	4:AD:62:GLN:NE2	2.47	0.48
1:AA:669:U:C2	1:AA:670:G:C8	3.02	0.48
1:AA:850:U:O5'	1:AA:850:U:H6	1.97	0.48
1:AA:986:A:C6	1:AA:1220:G:N1	2.82	0.48
1:AA:1360:A:C6	1:AA:1361:G:C2	3.01	0.48
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.79	0.48
4:AD:106:TYR:O	4:AD:109:GLY:N	2.44	0.48
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.14	0.48
5:AE:53:LEU:HD23	5:AE:53:LEU:N	2.28	0.48
12:AL:54:VAL:HG12	12:AL:55:ALA:H	1.77	0.48
19:AS:30:LEU:HD23	19:AS:31:ILE:N	2.28	0.48
23:BA:96:G:O5'	47:BY:48:HIS:HE1	1.96	0.48
23:BA:631:A:OP1	34:BL:64:LYS:HE3	2.13	0.48
23:BA:732:C:H2'	23:BA:733:G:H5'	1.96	0.48
23:BA:1012:U:O4	32:BJ:48:ARG:HA	2.13	0.48
23:BA:1022:G:N2	23:BA:114(B):A:H2	2.12	0.48
23:BA:1264:G:H5'	50:B2:11:THR:HG23	1.92	0.48
23:BA:1387:C:C2	23:BA:1388:G:C8	3.02	0.48
23:BA:2039:C:C2	23:BA:2040:C:C5	3.02	0.48
23:BA:2744:G:C2	23:BA:2761:G:C6	3.01	0.48
23:BA:2846:G:C5	23:BA:2847:U:C4	3.02	0.48
24:BB:21:G:N2	24:BB:62:C:N3	2.58	0.48
24:BB:75:G:N1	24:BB:102:G:N2	2.62	0.48
25:BC:143:HIS:HD2	25:BC:144:ALA:HB2	1.79	0.48
26:BD:117:MET:CE	26:BD:136:ARG:HA	2.44	0.48
32:BJ:95:TYR:CD2	32:BJ:113:MET:HG3	2.49	0.48
32:BJ:116:THR:OG1	32:BJ:117:HIS:N	2.46	0.48
33:BK:3:GLN:HG3	33:BK:4:PRO:HD2	1.96	0.48
33:BK:9:GLU:OE1	33:BK:18:LYS:HE2	2.14	0.48
33:BK:97:ARG:H	33:BK:117:LEU:HD22	1.79	0.48
34:BL:85:LEU:HD23	34:BL:117:GLU:O	2.14	0.48
34:BL:135:LEU:HD22	34:BL:135:LEU:HA	1.53	0.48
35:BM:60:ARG:HA	44:BV:179:ASP:HB2	1.96	0.48
36:BN:14:SER:O	36:BN:15:SER:C	2.52	0.48
39:BQ:34:LYS:HA	39:BQ:34:LYS:HE3	1.96	0.48
42:BT:4:ALA:C	42:BT:6:ASP:H	2.16	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BU:36:ALA:HA	43:BU:67:LEU:O	2.13	0.48
44:BV:13:GLU:CD	44:BV:13:GLU:H	2.18	0.48
44:BV:53:ILE:CG2	44:BV:71:VAL:O	2.62	0.48
47:BY:60:LEU:O	47:BY:62:THR:N	2.47	0.48
1:CA:57:G:N2	1:CA:388:G:C6	2.82	0.48
1:CA:76:G:C6	1:CA:95:G:N1	2.81	0.48
1:CA:104:G:C2	1:CA:105:G:N7	2.82	0.48
1:CA:118:U:O4	1:CA:288:A:H2'	2.14	0.48
1:CA:198:G:O2'	1:CA:199:G:H5'	2.14	0.48
1:CA:428:G:C8	1:CA:430:A:C4	3.01	0.48
1:CA:608:A:C4	1:CA:609:A:C8	3.01	0.48
1:CA:624:C:H4'	16:CP:10:GLY:HA2	1.95	0.48
1:CA:754:C:H3'	1:CA:754:C:O2	2.14	0.48
1:CA:862:C:O2'	1:CA:863:U:H5'	2.14	0.48
1:CA:878:G:C1'	8:CH:3:THR:HG21	2.44	0.48
1:CA:969:A:C2'	1:CA:970:C:H5'	2.44	0.48
1:CA:1167:A:H62	1:CA:1169:A:N6	2.12	0.48
1:CA:1280:A:C8	10:CJ:41:PRO:HD3	2.49	0.48
1:CA:1409:C:OP1	23:DA:1916:A:H2	1.97	0.48
2:CB:17:PHE:CG	2:CB:44:LEU:HD21	2.49	0.48
3:CC:111:LEU:HD11	3:CC:144:SER:OG	2.13	0.48
5:CE:96:PRO:HA	5:CE:117:ASP:OD2	2.13	0.48
8:CH:97:VAL:CG1	8:CH:98:LYS:H	2.26	0.48
12:CL:6:ILE:O	12:CL:10:VAL:CG2	2.62	0.48
16:CP:47:ASP:O	16:CP:49:LEU:N	2.47	0.48
18:CR:37:VAL:HG23	18:CR:38:GLU:N	2.29	0.48
18:CR:38:GLU:OE2	18:CR:38:GLU:HA	2.12	0.48
23:DA:304:G:H2'	23:DA:305:U:O4'	2.14	0.48
23:DA:333:G:C4	23:DA:334:C:C5	3.01	0.48
23:DA:476:G:O4'	23:DA:505:A:C2	2.66	0.48
23:DA:903:C:O2'	23:DA:904:C:H5'	2.14	0.48
23:DA:114(B):A:C4	23:DA:1144:G:N7	2.82	0.48
23:DA:1292:U:H2'	23:DA:1293:C:C6	2.49	0.48
23:DA:1487:G:H2'	23:DA:1488:G:C8	2.35	0.48
23:DA:2416:C:C4	23:DA:2417:C:C5	3.02	0.48
23:DA:2746:U:O3'	29:DG:138:LYS:HD3	2.14	0.48
25:DC:155:LEU:HG	25:DC:177:LEU:HD22	1.95	0.48
26:DD:173:VAL:O	26:DD:174:ASP:C	2.51	0.48
27:DE:12:LEU:HD11	27:DE:17:ARG:HG2	1.96	0.48
32:DJ:51:THR:HG22	32:DJ:52:LYS:N	2.29	0.48
34:DL:50:ARG:HB2	53:D5:60:LEU:HD21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DM:26:TYR:O	35:DM:26:TYR:HD1	1.94	0.48
36:DN:4:LEU:C	36:DN:6:SER:N	2.66	0.48
37:DO:64:GLU:O	37:DO:68:GLN:HG3	2.13	0.48
38:DP:75:ILE:HG22	38:DP:75:ILE:O	2.13	0.48
40:DR:45:THR:O	40:DR:46:VAL:HG22	2.13	0.48
41:DS:42:ARG:HG2	41:DS:42:ARG:NH1	2.29	0.48
44:DV:144:LEU:HB3	44:DV:174:VAL:HG21	1.96	0.48
1:AA:9:G:H2'	1:AA:10:A:C8	2.49	0.47
1:AA:9:G:O2'	1:AA:10:A:H5'	2.13	0.47
1:AA:16:A:C2	1:AA:17:U:C6	3.02	0.47
1:AA:380:G:C2	1:AA:384:G:N1	2.82	0.47
1:AA:559:A:H4'	1:AA:560:U:H3'	1.96	0.47
1:AA:892:A:C2	1:AA:907:A:C4	3.02	0.47
1:AA:1180:A:OP1	9:AI:103:THR:OG1	2.27	0.47
1:AA:1182:G:H4'	1:AA:1183:A:H5''	1.96	0.47
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.13	0.47
1:AA:1346:A:C2	1:AA:1348:U:O4	2.67	0.47
3:AC:173:VAL:H	3:AC:174:PRO:HD3	1.77	0.47
6:AF:47:ARG:HH12	6:AF:56:PRO:HB2	1.79	0.47
8:AH:36:LEU:HA	8:AH:39:LEU:HB2	1.95	0.47
8:AH:127:LEU:O	8:AH:127:LEU:HD13	2.14	0.47
12:AL:37:THR:OG1	12:AL:38:VAL:N	2.47	0.47
12:AL:44:PRO:HD2	12:AL:49:SER:HA	1.96	0.47
21:AU:12:LYS:HB3	21:AU:17:THR:O	2.14	0.47
23:BA:828:U:O2	23:BA:828:U:H2'	2.14	0.47
23:BA:954:G:C6	23:BA:955:C:C5	3.02	0.47
23:BA:1175:U:H2'	23:BA:1176:G:C8	2.49	0.47
23:BA:1424:G:H2'	23:BA:1425:G:O4'	2.14	0.47
23:BA:1578:U:O2	23:BA:1578:U:H2'	2.14	0.47
23:BA:2393:A:C5'	34:BL:62:LEU:HD12	2.42	0.47
23:BA:2550:G:C6	23:BA:2551:C:C4	3.01	0.47
23:BA:2683:C:OP1	38:BP:55:ASN:ND2	2.41	0.47
23:BA:2886:G:H2'	23:BA:2887:U:C6	2.48	0.47
24:BB:21:G:H2'	24:BB:22:U:C6	2.48	0.47
25:BC:15:PHE:O	25:BC:205:VAL:CG1	2.61	0.47
28:BF:11:TYR:HB2	28:BF:176:LEU:HD21	1.96	0.47
28:BF:161:THR:C	28:BF:163:ALA:N	2.68	0.47
30:BH:12:LEU:HD22	30:BH:12:LEU:N	2.28	0.47
34:BL:41:ARG:HD2	34:BL:41:ARG:HA	1.50	0.47
34:BL:140:ALA:O	34:BL:141:ALA:CB	2.62	0.47
36:BN:67:LEU:O	36:BN:70:LEU:O	2.31	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BQ:113:ALA:HA	39:BQ:116:ALA:HB3	1.96	0.47
50:B2:33:CYS:HB2	50:B2:34:PRO:HD2	1.95	0.47
1:CA:381:C:H2'	1:CA:382:A:C8	2.49	0.47
1:CA:393:A:N3	1:CA:394:G:C8	2.82	0.47
1:CA:394:G:C4	1:CA:395:C:C5	3.01	0.47
1:CA:614:A:OP1	4:CD:85:LYS:HE2	2.14	0.47
1:CA:619:U:N3	4:CD:135:LEU:HD11	2.28	0.47
1:CA:737:A:C4	1:CA:738:C:C5	3.01	0.47
1:CA:841:U:H4'	1:CA:842:C:C5	2.49	0.47
1:CA:1152:A:C4	1:CA:1153:C:C5	3.02	0.47
1:CA:1183:A:H5''	1:CA:1184:G:OP2	2.14	0.47
1:CA:1407:C:O5'	1:CA:1407:C:H6	1.97	0.47
3:CC:15:THR:HG21	3:CC:181:ASN:CA	2.44	0.47
5:CE:126:ARG:CG	5:CE:126:ARG:NH1	2.59	0.47
5:CE:129:ILE:O	5:CE:132:ALA:HB3	2.13	0.47
9:CI:104:ARG:O	9:CI:105:ASP:HB3	2.13	0.47
23:DA:337:C:H2'	23:DA:338:G:O5'	2.14	0.47
23:DA:588:U:C2	27:DE:90:PHE:CE1	3.02	0.47
23:DA:616:A:C4	27:DE:180:GLY:HA2	2.49	0.47
23:DA:653:C:O5'	23:DA:653:C:H6	1.97	0.47
23:DA:1508:A:N6	23:DA:1509:A:C6	2.82	0.47
23:DA:1591:G:H2'	23:DA:1592:C:C6	2.49	0.47
23:DA:1592:C:H2'	23:DA:1593:G:C8	2.46	0.47
23:DA:1677:A:H2'	23:DA:1678:G:O4'	2.14	0.47
23:DA:1999:C:OP1	23:DA:2723:C:O2'	2.32	0.47
23:DA:2621:A:OP1	26:DD:119:ARG:NH2	2.46	0.47
23:DA:2846:G:H2'	23:DA:2847:U:O4'	2.14	0.47
27:DE:173:VAL:HG12	27:DE:174:VAL:N	2.28	0.47
28:DF:88:ILE:HD12	28:DF:89:GLY:H	1.79	0.47
28:DF:112:PRO:HB3	49:D1:62:CYS:O	2.14	0.47
30:DH:69:LYS:HD3	30:DH:138:ILE:HG12	1.95	0.47
30:DH:73:GLU:C	30:DH:75:LEU:H	2.18	0.47
36:DN:88:ARG:C	36:DN:90:ARG:H	2.17	0.47
40:DR:24:LYS:HA	40:DR:92:THR:CG2	2.39	0.47
40:DR:44:LYS:HB3	40:DR:46:VAL:HG13	1.95	0.47
40:DR:47:VAL:O	40:DR:48:GLY:C	2.51	0.47
41:DS:59:VAL:HG12	41:DS:60:ASN:N	2.29	0.47
43:DU:76:CYS:O	43:DU:77:PRO:C	2.52	0.47
49:D1:41:ILE:HD13	49:D1:47:VAL:HG13	1.96	0.47
1:AA:288:A:O2'	1:AA:289:G:H5'	2.14	0.47
1:AA:386:C:H2'	1:AA:387:U:O4'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:445:G:H2'	1:AA:446:G:H8	1.79	0.47
1:AA:531:U:O3'	1:AA:532:A:H4'	2.14	0.47
1:AA:564:C:C4	17:AQ:31:LEU:HD11	2.48	0.47
1:AA:635:G:C5	1:AA:636:U:C5	3.02	0.47
1:AA:818:G:N3	1:AA:820:U:C6	2.82	0.47
1:AA:1060:C:H5''	10:AJ:51:ARG:HG2	1.97	0.47
1:AA:1372:U:C5	1:AA:1373:G:C4	3.02	0.47
1:AA:1399:C:C4	1:AA:1502:A:C2	3.03	0.47
4:AD:61:LYS:HA	4:AD:203:VAL:HG22	1.96	0.47
4:AD:64:LEU:HB2	4:AD:198:VAL:HG11	1.95	0.47
4:AD:68:TYR:CE2	4:AD:97:LEU:HB3	2.49	0.47
7:AG:46:ALA:O	7:AG:50:ILE:HG12	2.14	0.47
7:AG:70:LYS:HE2	7:AG:96:GLN:CD	2.34	0.47
9:AI:111:ARG:HG3	14:AN:61:TRP:HE1	1.79	0.47
15:AO:48:LYS:HE2	15:AO:48:LYS:HA	1.96	0.47
17:AQ:59:ILE:CG2	17:AQ:71:PHE:CD1	2.97	0.47
23:BA:374:A:C2	23:BA:401:A:C4	3.02	0.47
23:BA:414:C:H2'	23:BA:415:A:C8	2.48	0.47
23:BA:630:G:N2	23:BA:633:A:OP2	2.33	0.47
23:BA:1281:G:C5	23:BA:1282:U:C5	3.01	0.47
23:BA:1368:G:O2'	23:BA:1369:G:H5'	2.15	0.47
23:BA:1381:G:H2'	23:BA:1382:G:H5'	1.95	0.47
23:BA:1512:G:C2	23:BA:1513:C:O2	2.67	0.47
23:BA:1542:G:P	23:BA:1543:A:OP1	2.72	0.47
23:BA:1545:A:O2'	23:BA:1546:A:H5'	2.13	0.47
23:BA:1832:C:H2'	23:BA:1833:U:O4'	2.14	0.47
23:BA:1923:U:H2'	23:BA:1924:C:C6	2.49	0.47
23:BA:2019:A:O4'	39:BQ:34:LYS:HD2	2.14	0.47
23:BA:2359:C:H2'	23:BA:2360:A:C8	2.49	0.47
23:BA:2744:G:H1'	23:BA:2761:G:H22	1.79	0.47
23:BA:2770:G:H5''	23:BA:2771:C:OP2	2.14	0.47
23:BA:2862:G:H2'	23:BA:2863:C:H6	1.78	0.47
26:BD:16:ARG:O	26:BD:17:ASP:C	2.52	0.47
26:BD:52:LEU:CB	26:BD:76:ARG:HB2	2.44	0.47
27:BE:11:VAL:O	27:BE:12:LEU:HD12	2.14	0.47
28:BF:131:TYR:CE2	28:BF:133:LEU:HB3	2.48	0.47
30:BH:88:ILE:CG2	30:BH:89:TYR:N	2.77	0.47
32:BJ:33:GLU:HA	32:BJ:34:PRO:HD3	1.75	0.47
34:BL:51:PHE:HB3	34:BL:52:GLU:H	1.37	0.47
34:BL:57:THR:OG1	34:BL:58:THR:N	2.46	0.47
34:BL:111:ARG:HD2	34:BL:128:HIS:CD2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BN:101:ALA:HB2	50:B2:44:THR:HB	1.96	0.47
37:BO:12:PHE:O	37:BO:12:PHE:HD1	1.97	0.47
45:BW:51:VAL:N	45:BW:62:LEU:HD12	2.29	0.47
46:BX:10:LYS:O	46:BX:13:ILE:CG2	2.62	0.47
47:BY:13:ALA:O	47:BY:17:SER:OG	2.22	0.47
48:BZ:43:ILE:HD13	48:BZ:43:ILE:H	1.76	0.47
53:B5:60:LEU:N	53:B5:60:LEU:HD23	2.29	0.47
1:CA:444:C:H2'	1:CA:445:G:C8	2.48	0.47
1:CA:539:A:C6	1:CA:540:G:C6	3.02	0.47
1:CA:540:G:C6	1:CA:541:G:C5	3.02	0.47
1:CA:595:G:H1'	1:CA:596:C:H5	1.79	0.47
1:CA:728:A:C6	15:CO:54:ARG:HD2	2.48	0.47
1:CA:921:U:H5''	1:CA:922:G:OP2	2.14	0.47
1:CA:1051:C:C4	1:CA:1052:U:C4	3.02	0.47
1:CA:1103:C:C2	1:CA:1104:G:C8	3.03	0.47
1:CA:1465:C:H2'	1:CA:1466:C:O4'	2.13	0.47
2:CB:106:LYS:HE2	2:CB:110:GLN:HE21	1.77	0.47
3:CC:59:ARG:HH21	3:CC:97:LYS:HE2	1.80	0.47
5:CE:81:GLU:HG2	5:CE:90:VAL:HG22	1.97	0.47
6:CF:90:VAL:CG1	6:CF:91:VAL:H	2.26	0.47
8:CH:36:LEU:O	8:CH:39:LEU:N	2.47	0.47
11:CK:111:ASP:O	11:CK:112:THR:C	2.52	0.47
12:CL:116:ARG:NH2	12:CL:123:LYS:HB2	2.29	0.47
13:CM:91:ARG:NH1	19:CS:81:ARG:NH2	2.61	0.47
15:CO:67:LEU:HD23	15:CO:78:TYR:HE1	1.78	0.47
16:CP:25:ARG:O	16:CP:26:ARG:C	2.50	0.47
20:CT:10:LEU:HD12	20:CT:10:LEU:C	2.34	0.47
23:DA:270(H):C:C2	23:DA:270(I):C:C5	3.03	0.47
23:DA:557:U:C2	23:DA:558:G:C8	3.02	0.47
23:DA:967:C:O2'	23:DA:968:G:H5'	2.14	0.47
23:DA:1175:U:H2'	23:DA:1176:G:C8	2.48	0.47
23:DA:1328:G:H2'	23:DA:1330:C:C5	2.49	0.47
23:DA:1456:G:C2'	23:DA:1457:A:H5'	2.45	0.47
23:DA:1465:G:C2	23:DA:1466:G:N9	2.82	0.47
23:DA:1478:G:O2'	23:DA:1558:A:C2	2.67	0.47
23:DA:1641:A:H2'	23:DA:1642:G:O4'	2.14	0.47
23:DA:1923:U:H2'	23:DA:1924:C:C6	2.49	0.47
23:DA:2308:G:HO2'	23:DA:2310:A:P	2.37	0.47
23:DA:2523:G:H2'	23:DA:2524:G:H5'	1.96	0.47
23:DA:2591:C:H2'	23:DA:2592:G:C8	2.49	0.47
23:DA:2694:G:C6	23:DA:2695:C:C4	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DB:10:C:N3	24:DB:11:C:C5	2.82	0.47
25:DC:210:GLY:HA2	25:DC:213:ARG:HG3	1.95	0.47
26:DD:117:MET:CE	26:DD:136:ARG:HA	2.44	0.47
27:DE:65:TRP:HB3	27:DE:66:PRO:HD2	1.96	0.47
27:DE:124:LEU:CD1	27:DE:125:LEU:O	2.62	0.47
27:DE:174:VAL:HG21	27:DE:189:THR:HG21	1.97	0.47
30:DH:69:LYS:HD2	30:DH:138:ILE:HG23	1.95	0.47
34:DL:115:LEU:HB3	34:DL:131:SER:HB2	1.96	0.47
36:DN:84:ALA:N	36:DN:85:PRO:HD2	2.29	0.47
42:DT:38:GLU:O	42:DT:39:ILE:C	2.48	0.47
1:AA:381:C:H2'	1:AA:382:A:C8	2.49	0.47
1:AA:402:G:C6	1:AA:403:C:C5	3.02	0.47
1:AA:451:A:N7	1:AA:481:G:C6	2.82	0.47
1:AA:574:A:H1'	1:AA:883:C:O4'	2.15	0.47
1:AA:575:G:C5	1:AA:881:G:C2	3.02	0.47
1:AA:577:G:H1'	1:AA:816:A:C4	2.49	0.47
1:AA:687:A:N3	1:AA:688:G:H1'	2.30	0.47
1:AA:879:C:O2'	1:AA:880:C:H5'	2.15	0.47
1:AA:960:U:C6	1:AA:1225:A:C8	3.01	0.47
1:AA:1105:A:C2	1:AA:1106:G:C8	3.01	0.47
2:AB:17:PHE:HB2	2:AB:44:LEU:HD21	1.96	0.47
2:AB:72:GLY:HA3	2:AB:165:VAL:HG11	1.95	0.47
2:AB:80:ILE:HD11	2:AB:208:ILE:HG22	1.95	0.47
5:AE:140:ARG:O	5:AE:140:ARG:CG	2.62	0.47
7:AG:77:SER:HA	7:AG:85:TYR:O	2.14	0.47
8:AH:49:GLU:HG3	8:AH:51:VAL:HG23	1.96	0.47
8:AH:112:LEU:HA	8:AH:134:ILE:H	1.79	0.47
10:AJ:9:ARG:HG2	10:AJ:69:ASN:OD1	2.14	0.47
22:AV:6213:A:C4	22:AV:6214:C:C5	3.02	0.47
23:BA:582:G:OP1	39:BQ:14:HIS:CD2	2.67	0.47
23:BA:664:C:H4'	23:BA:941:A:OP1	2.14	0.47
23:BA:674:G:C1'	27:BE:74:ARG:HD3	2.35	0.47
23:BA:910:A:C4	35:BM:13:GLN:OE1	2.66	0.47
23:BA:1127:A:C2'	23:BA:1128:A:H5''	2.43	0.47
23:BA:1265:A:H5'	23:BA:1267:U:H1'	1.95	0.47
23:BA:1486:A:C6	23:BA:1504:C:N4	2.75	0.47
23:BA:1796:U:H2'	23:BA:1797:C:C6	2.49	0.47
23:BA:1820:U:O2	25:BC:201:HIS:HB3	2.14	0.47
23:BA:1997:G:O2'	23:BA:1998:G:H5'	2.14	0.47
23:BA:2419:U:OP2	53:B5:41:ILE:CD1	2.62	0.47
23:BA:2495:G:H2'	23:BA:2496:C:O5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:131:LEU:HD11	25:BC:136:ILE:HG13	1.97	0.47
27:BE:28:ILE:O	27:BE:28:ILE:HG13	2.14	0.47
30:BH:26:ALA:HA	30:BH:30:LEU:HB2	1.95	0.47
30:BH:69:LYS:HD2	30:BH:138:ILE:HG23	1.95	0.47
34:BL:59:LEU:HD23	34:BL:59:LEU:C	2.35	0.47
35:BM:24:GLY:HA2	35:BM:101:ARG:HA	1.96	0.47
36:BN:88:ARG:C	36:BN:90:ARG:H	2.17	0.47
37:BO:49:VAL:HG11	37:BO:76:LYS:HB2	1.95	0.47
38:BP:61:PHE:CD2	38:BP:61:PHE:N	2.81	0.47
40:BR:19:LYS:HA	40:BR:94:LEU:O	2.13	0.47
52:B4:19:ARG:HH11	52:B4:19:ARG:CB	2.27	0.47
1:CA:55:A:C5	1:CA:56:U:C5	3.02	0.47
1:CA:112:G:OP1	16:CP:27:LYS:HE2	2.14	0.47
1:CA:328:C:H4'	1:CA:329:A:C5'	2.43	0.47
1:CA:552:U:C2'	1:CA:553:A:H5'	2.45	0.47
1:CA:572:A:H5''	1:CA:917:G:H4'	1.95	0.47
1:CA:922:G:C6	1:CA:923:A:N6	2.82	0.47
1:CA:977:A:H2'	1:CA:978:A:C5'	2.44	0.47
1:CA:1438:G:O2'	1:CA:1439:C:H5'	2.14	0.47
1:CA:1505:G:H4'	1:CA:1506:U:H5''	1.94	0.47
4:CD:155:LEU:HD23	4:CD:156:GLU:OE2	2.14	0.47
10:CJ:55:LYS:O	10:CJ:56:HIS:CG	2.67	0.47
11:CK:29:ILE:HB	11:CK:44:SER:HB3	1.95	0.47
15:CO:32:LEU:O	15:CO:35:ARG:N	2.46	0.47
16:CP:10:GLY:O	16:CP:11:SER:O	2.33	0.47
23:DA:1345:C:O2'	23:DA:1346:G:H5'	2.15	0.47
23:DA:1359:A:C8	23:DA:1372:U:O4	2.67	0.47
23:DA:1526:G:H2'	23:DA:1527:G:C8	2.49	0.47
23:DA:1550:C:H2'	23:DA:1551:C:H6	1.79	0.47
23:DA:1899:G:HO2'	23:DA:1900:A:P	2.37	0.47
23:DA:2001:A:H2'	23:DA:2002:G:O4'	2.14	0.47
23:DA:2334:G:H4'	23:DA:2335:A:OP2	2.15	0.47
23:DA:2785:C:O2'	26:DD:66:HIS:CD2	2.67	0.47
26:DD:6:GLY:CA	26:DD:51:PHE:HE2	2.27	0.47
26:DD:14:ILE:C	26:DD:14:ILE:HD12	2.34	0.47
29:DG:19:VAL:HG13	29:DG:43:VAL:CG2	2.44	0.47
30:DH:101:LEU:HD23	30:DH:109:ILE:HG13	1.96	0.47
32:DJ:80:ALA:C	32:DJ:82:LYS:H	2.17	0.47
35:DM:38:GLU:C	35:DM:127:ILE:HD11	2.34	0.47
38:DP:63:VAL:O	38:DP:73:GLU:HA	2.13	0.47
44:DV:140:ASP:OD2	44:DV:140:ASP:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:54:C:N4	1:AA:353:A:OP2	2.45	0.47
1:AA:88:C:H2'	1:AA:89:U:O4'	2.15	0.47
1:AA:407:G:C2	1:AA:436:C:C2	3.02	0.47
1:AA:627:G:O2'	1:AA:628:G:H5'	2.15	0.47
1:AA:783:C:H2'	1:AA:784:C:H6	1.80	0.47
1:AA:814:A:C8	1:AA:816:A:C8	3.03	0.47
1:AA:1291:G:C6	1:AA:1292:U:C4	3.02	0.47
5:AE:53:LEU:H	5:AE:53:LEU:CD2	2.27	0.47
5:AE:72:GLN:O	5:AE:73:ASN:CB	2.61	0.47
5:AE:76:ILE:HG12	5:AE:142:LEU:HD22	1.96	0.47
8:AH:97:VAL:CG1	8:AH:98:LYS:N	2.76	0.47
9:AI:28:VAL:HG13	9:AI:63:ILE:HG22	1.96	0.47
10:AJ:40:LEU:HB2	10:AJ:69:ASN:CB	2.42	0.47
11:AK:27:ASN:HA	11:AK:55:LYS:O	2.15	0.47
18:AR:22:VAL:O	18:AR:22:VAL:HG12	2.14	0.47
23:BA:270(G):U:H3	23:BA:270(U):G:H1	1.63	0.47
23:BA:627:A:H4'	23:BA:628:G:OP1	2.14	0.47
23:BA:904:C:H2'	23:BA:905:U:C6	2.49	0.47
23:BA:1919:A:H5''	23:BA:1920:C:OP2	2.14	0.47
23:BA:1970:A:H4'	23:BA:1971:A:OP1	2.14	0.47
23:BA:2094:G:C2	23:BA:2196:C:C2	3.02	0.47
23:BA:2305:A:O2'	28:BF:136:ARG:NE	2.48	0.47
24:BB:106:G:C6	24:BB:107:U:C4	3.03	0.47
26:BD:11:MET:HE3	26:BD:186:GLY:CA	2.41	0.47
27:BE:150:GLY:HA2	27:BE:172:TRP:CE3	2.49	0.47
27:BE:174:VAL:HG21	27:BE:189:THR:HG21	1.95	0.47
28:BF:7:LEU:HD22	28:BF:176:LEU:HD22	1.96	0.47
28:BF:62:LEU:HB3	28:BF:143:GLU:HG3	1.97	0.47
28:BF:129:GLY:HA3	28:BF:163:ALA:CB	2.44	0.47
29:BG:151:ILE:HD13	29:BG:151:ILE:H	1.79	0.47
30:BH:143:SER:O	30:BH:145:VAL:N	2.46	0.47
32:BJ:123:GLU:C	32:BJ:125:ALA:H	2.16	0.47
32:BJ:135:LEU:O	32:BJ:139:LEU:HG	2.14	0.47
34:BL:62:LEU:CD1	53:B5:27:THR:HG22	2.45	0.47
34:BL:62:LEU:HD21	53:B5:25:MET:HB2	1.96	0.47
34:BL:97:PRO:O	34:BL:101:VAL:HG12	2.15	0.47
35:BM:26:TYR:O	35:BM:26:TYR:HD1	1.97	0.47
35:BM:32:PHE:CZ	35:BM:111:GLU:HG2	2.45	0.47
36:BN:104:ARG:HH11	36:BN:104:ARG:CB	2.28	0.47
39:BQ:97:ASP:O	39:BQ:97:ASP:CG	2.52	0.47
40:BR:6:LYS:CG	40:BR:11:GLN:HG2	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BT:27:THR:HB	42:BT:80:ILE:HB	1.94	0.47
43:BU:14:LEU:HD23	43:BU:15:VAL:CA	2.43	0.47
43:BU:17:SER:CB	43:BU:71:LYS:HD2	2.43	0.47
1:CA:652:U:O4	1:CA:752:G:O2'	2.20	0.47
1:CA:932:C:OP1	7:CG:4:ARG:HG2	2.14	0.47
1:CA:981:U:OP1	14:CN:6:LEU:HD21	2.15	0.47
1:CA:1368:G:H5''	14:CN:61:TRP:HZ2	1.78	0.47
2:CB:83:MET:CE	2:CB:234:PRO:HG2	2.44	0.47
4:CD:13:ARG:HD2	4:CD:38:TYR:O	2.14	0.47
4:CD:13:ARG:O	4:CD:39:PRO:HA	2.14	0.47
4:CD:110:PHE:CD2	4:CD:110:PHE:N	2.82	0.47
4:CD:201:GLN:O	4:CD:205:GLU:HG3	2.13	0.47
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.97	0.47
10:CJ:65:LEU:HD13	14:CN:56:VAL:HG22	1.95	0.47
23:DA:189:G:H2'	23:DA:205:G:N2	2.29	0.47
23:DA:588:U:H2'	23:DA:589:C:H6	1.79	0.47
23:DA:673:C:C2'	23:DA:674:G:H5'	2.45	0.47
23:DA:815:C:C2	23:DA:816:C:C5	3.03	0.47
23:DA:1030:G:OP2	35:DM:128:LYS:HG2	2.15	0.47
23:DA:1109:C:H42	23:DA:1110:G:N2	2.12	0.47
23:DA:1184:G:C6	23:DA:1185:C:C4	3.03	0.47
23:DA:1443:G:H1	23:DA:1548:C:H42	1.63	0.47
23:DA:1516:U:H2'	23:DA:1517:G:H8	1.77	0.47
23:DA:1665:A:H4'	33:DK:67:LYS:HB2	1.95	0.47
23:DA:1952:A:C6	23:DA:1953:A:C6	3.03	0.47
23:DA:1971:A:C5	25:DC:241:PRO:HG3	2.50	0.47
23:DA:2193:G:O2'	23:DA:2194:G:H5'	2.14	0.47
23:DA:2251:G:C6	23:DA:2252:G:C6	3.03	0.47
23:DA:2746:U:H4'	29:DG:138:LYS:HD3	1.96	0.47
23:DA:2850:A:C4	23:DA:2851:A:C8	3.03	0.47
25:DC:9:TYR:C	25:DC:10:THR:HG22	2.34	0.47
25:DC:89:SER:HB2	25:DC:159:ALA:HB2	1.97	0.47
25:DC:143:HIS:CD2	25:DC:143:HIS:C	2.87	0.47
25:DC:176:ARG:HG2	25:DC:176:ARG:NH1	2.27	0.47
26:DD:52:LEU:CB	26:DD:76:ARG:HB2	2.45	0.47
28:DF:17:PRO:HA	28:DF:20:ILE:HG12	1.96	0.47
28:DF:25:TYR:CZ	28:DF:32:PRO:HD3	2.49	0.47
28:DF:178:PHE:O	28:DF:180:PHE:CD1	2.67	0.47
35:DM:125:LEU:HB3	35:DM:126:PRO:HD2	1.97	0.47
36:DN:2:ARG:O	36:DN:3:HIS:CG	2.68	0.47
40:DR:3:ALA:HB1	40:DR:38:LEU:HD21	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DW:50:ASN:HD22	45:DW:83:PRO:HD3	1.78	0.47
48:DZ:38:GLU:N	48:DZ:38:GLU:OE1	2.45	0.47
1:AA:90:C:N3	1:AA:91:C:C4	2.82	0.47
1:AA:240:C:H2'	1:AA:241:C:C6	2.49	0.47
1:AA:376:G:C2'	1:AA:377:G:O5'	2.62	0.47
1:AA:565:U:C6	1:AA:566:G:C8	3.03	0.47
1:AA:743:U:O2'	1:AA:744:C:H5'	2.13	0.47
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.44	0.47
3:AC:23:TYR:CD1	10:AJ:10:GLY:HA2	2.49	0.47
4:AD:23:GLY:HA3	4:AD:112:VAL:CG2	2.45	0.47
4:AD:109:GLY:C	4:AD:111:ALA:N	2.67	0.47
6:AF:5:GLU:OE1	6:AF:62:TRP:HZ2	1.96	0.47
6:AF:26:ILE:C	6:AF:30:LEU:HD12	2.35	0.47
18:AR:36:ASN:HB2	18:AR:39:VAL:CG2	2.45	0.47
23:BA:118:A:C8	23:BA:119:A:C8	3.02	0.47
23:BA:433:C:H2'	23:BA:434:U:C6	2.49	0.47
23:BA:540:G:C5	23:BA:541:C:C5	3.02	0.47
23:BA:540:G:C4	23:BA:541:C:C6	3.02	0.47
23:BA:850:C:O2'	48:BZ:46:ASN:ND2	2.47	0.47
23:BA:1159:U:H2'	23:BA:1160:G:C8	2.47	0.47
23:BA:1412:A:H2'	23:BA:1413:G:O4'	2.14	0.47
23:BA:1832:C:N4	23:BA:1833:U:C4	2.82	0.47
23:BA:1833:U:N3	23:BA:1834:U:C5	2.83	0.47
23:BA:1850:G:C5	23:BA:1851:U:C5	3.02	0.47
23:BA:2025:C:C2	23:BA:2026:C:C5	3.02	0.47
23:BA:2439:A:O2'	23:BA:2440:C:OP2	2.25	0.47
23:BA:2887:U:C2	23:BA:2888:C:C5	3.02	0.47
25:BC:141:VAL:HG22	25:BC:141:VAL:O	2.14	0.47
25:BC:176:ARG:HH11	25:BC:176:ARG:CG	2.26	0.47
28:BF:73:ALA:HB3	28:BF:76:SER:OG	2.14	0.47
29:BG:40:GLU:O	29:BG:55:PRO:HG3	2.13	0.47
30:BH:28:ASN:C	30:BH:32:PRO:HG2	2.34	0.47
30:BH:101:LEU:HD23	30:BH:109:ILE:HG13	1.97	0.47
35:BM:60:ARG:H	44:BV:179:ASP:CB	2.26	0.47
38:BP:64:ARG:HD2	38:BP:73:GLU:OE2	2.14	0.47
39:BQ:98:LEU:O	39:BQ:101:ARG:N	2.47	0.47
40:BR:12:TYR:CZ	40:BR:22:VAL:HG22	2.49	0.47
44:BV:63:ASP:C	44:BV:65:GLN:H	2.17	0.47
45:BW:62:LEU:O	45:BW:63:VAL:HG13	2.15	0.47
1:CA:832:C:O2'	1:CA:833:U:P	2.72	0.47
1:CA:950:U:H4'	1:CA:971:G:H22	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:993:G:N3	1:CA:993:G:H2'	2.29	0.47
1:CA:1054:C:O2	1:CA:1054:C:H3'	2.14	0.47
1:CA:1084:G:C6	1:CA:1085:U:O4	2.68	0.47
1:CA:1272:G:H2'	1:CA:1273:G:C8	2.49	0.47
1:CA:1289:A:OP1	21:CU:10:ARG:HD3	2.14	0.47
1:CA:1347:G:H22	1:CA:1373:G:C2'	2.28	0.47
1:CA:1461:G:H8	1:CA:1461:G:O5'	1.98	0.47
2:CB:17:PHE:HB2	2:CB:44:LEU:HD21	1.96	0.47
2:CB:80:ILE:HD11	2:CB:208:ILE:HG22	1.95	0.47
4:CD:8:VAL:HG11	4:CD:115:ARG:NH1	2.29	0.47
4:CD:51:PRO:HB3	4:CD:55:ALA:CB	2.43	0.47
4:CD:126:ILE:CG2	4:CD:127:THR:N	2.78	0.47
5:CE:139:LEU:C	5:CE:141:GLN:H	2.16	0.47
7:CG:70:LYS:HE2	7:CG:96:GLN:CD	2.35	0.47
9:CI:28:VAL:HG22	9:CI:63:ILE:H	1.78	0.47
12:CL:45:LYS:HB3	12:CL:46:LYS:H	1.39	0.47
12:CL:46:LYS:CB	12:CL:47:PRO:HD3	2.45	0.47
12:CL:49:SER:O	12:CL:50:ALA:HB2	2.15	0.47
14:CN:4:LYS:O	14:CN:7:ILE:HG13	2.15	0.47
18:CR:37:VAL:HG12	18:CR:78:LEU:HB3	1.97	0.47
19:CS:11:VAL:HG23	19:CS:38:SER:HB2	1.96	0.47
22:CV:6192:G:C6	22:CV:6193:U:C4	3.02	0.47
23:DA:13:A:N1	23:DA:525:U:C2	2.83	0.47
23:DA:136:G:C5	23:DA:137(A):C:C5	3.02	0.47
23:DA:137(B):G:O6	23:DA:139:G:O2'	2.29	0.47
23:DA:273(B):G:C2	23:DA:364:C:N3	2.82	0.47
23:DA:528:A:OP2	32:DJ:134:PRO:HB3	2.14	0.47
23:DA:627:A:C2	23:DA:636:G:N3	2.83	0.47
23:DA:1131:G:N2	23:DA:1132:A:C4	2.83	0.47
23:DA:1851:U:C4	23:DA:1852:C:C4	3.02	0.47
23:DA:2104:G:H2'	23:DA:2105:C:C6	2.49	0.47
23:DA:2287:A:C5	23:DA:2289:G:N7	2.83	0.47
23:DA:2299:G:C6	23:DA:2318:G:N2	2.83	0.47
23:DA:2302:G:O2'	23:DA:2303:G:H5'	2.15	0.47
23:DA:2406:U:O4	34:DL:70:GLN:HB3	2.13	0.47
23:DA:2428:G:H5''	23:DA:2429:G:O5'	2.14	0.47
23:DA:2629:A:H2'	23:DA:2629:A:N3	2.29	0.47
23:DA:2791:C:H4'	23:DA:2792:G:OP1	2.14	0.47
26:DD:179:GLU:HB3	26:DD:181:LEU:HD22	1.97	0.47
28:DF:111:LEU:HA	28:DF:114:ILE:HD11	1.96	0.47
30:DH:15:VAL:HG12	30:DH:16:GLY:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DK:1:MET:HE2	33:DK:32:TYR:CG	2.50	0.47
33:DK:60:ALA:CB	33:DK:86:ILE:HA	2.43	0.47
37:DO:53:SER:O	37:DO:56:LEU:HB3	2.14	0.47
39:DQ:92:ARG:HD2	39:DQ:95:LEU:CG	2.44	0.47
41:DS:17:VAL:O	41:DS:18:ARG:C	2.50	0.47
1:AA:130:A:C8	17:AQ:63:ARG:HG3	2.50	0.47
1:AA:448:A:H2'	1:AA:449:C:H6	1.78	0.47
1:AA:464:G:O6	1:AA:466:G:H5'	2.14	0.47
1:AA:618:C:N4	1:AA:621:A:N7	2.63	0.47
1:AA:757:U:O2'	1:AA:879:C:H1'	2.15	0.47
1:AA:977:A:H2'	1:AA:978:A:C5'	2.45	0.47
1:AA:1169:A:N6	1:AA:1170:A:N1	2.62	0.47
1:AA:1223:C:P	19:AS:78:ARG:HH21	2.37	0.47
1:AA:1531:A:O5'	1:AA:1531:A:H8	1.96	0.47
2:AB:193:ASP:O	2:AB:196:LEU:HG	2.15	0.47
4:AD:88:VAL:HG13	5:AE:97:GLY:CA	2.44	0.47
4:AD:166:LYS:O	4:AD:166:LYS:HD2	2.14	0.47
7:AG:31:MET:CG	7:AG:35:LYS:H	2.27	0.47
8:AH:50:ARG:CD	8:AH:50:ARG:N	2.77	0.47
8:AH:118:VAL:O	8:AH:118:VAL:HG12	2.14	0.47
12:AL:21:SER:C	12:AL:23:VAL:H	2.16	0.47
12:AL:54:VAL:HG12	12:AL:55:ALA:N	2.29	0.47
15:AO:29:VAL:O	15:AO:30:ALA:C	2.51	0.47
23:BA:197:A:C8	23:BA:197:A:C4'	2.98	0.47
23:BA:319:C:H2'	23:BA:320:A:C8	2.49	0.47
23:BA:826:U:H2'	23:BA:828:U:O4'	2.14	0.47
23:BA:967:C:O2'	23:BA:968:G:H5'	2.14	0.47
23:BA:1196:C:H1'	23:BA:1226:A:N3	2.29	0.47
23:BA:1945:G:H2'	23:BA:1946:U:C6	2.50	0.47
23:BA:1992:G:OP1	23:BA:1992:G:H8	1.96	0.47
23:BA:2189:U:H2'	23:BA:2189:U:O2	2.15	0.47
23:BA:2697:G:C2	23:BA:2711:A:C2	3.03	0.47
23:BA:2734:A:C8	23:BA:2735:G:C8	3.02	0.47
23:BA:2790:A:H2'	23:BA:2791:C:C5'	2.39	0.47
23:BA:2813:A:H2'	23:BA:2814:C:O4'	2.14	0.47
23:BA:2837:G:C6	23:BA:2838:G:C5	3.03	0.47
25:BC:6:PHE:HD1	25:BC:16:MET:O	1.97	0.47
25:BC:185:VAL:HG12	25:BC:186:HIS:H	1.80	0.47
26:BD:92:THR:O	26:BD:95:ILE:HG12	2.14	0.47
28:BF:33:ARG:HD3	28:BF:162:THR:HG21	1.96	0.47
30:BH:113:ARG:O	30:BH:131:LYS:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BM:10:ARG:HA	35:BM:10:ARG:HD3	1.71	0.47
36:BN:10:LEU:HB3	36:BN:17:ARG:CZ	2.44	0.47
37:BO:39:ILE:HG22	37:BO:39:ILE:O	2.14	0.47
38:BP:1:MET:O	38:BP:3:ARG:N	2.48	0.47
40:BR:87:HIS:O	40:BR:87:HIS:CD2	2.67	0.47
41:BS:17:VAL:O	41:BS:18:ARG:C	2.51	0.47
44:BV:24:LEU:HD12	44:BV:85:HIS:HA	1.94	0.47
47:BY:20:GLU:O	47:BY:21:LEU:C	2.52	0.47
1:CA:127:G:HO2'	17:CQ:2:PRO:N	2.13	0.47
1:CA:515:G:N2	1:CA:537:G:C4	2.83	0.47
1:CA:673:G:H5''	6:CF:87:ARG:NH1	2.29	0.47
1:CA:1126:U:H2'	1:CA:1127:G:H8	1.76	0.47
1:CA:1224:G:H4'	13:CM:102:ARG:NH2	2.30	0.47
1:CA:1372:U:C5	1:CA:1373:G:C4	3.03	0.47
4:CD:4:TYR:CE1	4:CD:11:LEU:HD11	2.49	0.47
4:CD:9:CYS:SG	4:CD:31:CYS:O	2.72	0.47
5:CE:126:ARG:HH11	5:CE:126:ARG:HG3	1.75	0.47
7:CG:106:GLN:O	7:CG:110:GLN:HG3	2.15	0.47
12:CL:38:VAL:HG12	12:CL:39:VAL:N	2.29	0.47
20:CT:69:GLY:O	20:CT:73:HIS:ND1	2.47	0.47
23:DA:13:A:N3	23:DA:15:G:C6	2.83	0.47
23:DA:338:G:N2	23:DA:339:U:H1'	2.29	0.47
23:DA:671:C:H2'	23:DA:672:C:H6	1.79	0.47
23:DA:779:U:OP1	25:DC:49:ILE:HD12	2.15	0.47
23:DA:783:A:C8	23:DA:783:A:C3'	2.98	0.47
23:DA:1017:G:C2	23:DA:1146:C:O2	2.68	0.47
23:DA:1050:A:C2	23:DA:2751:G:C5	3.02	0.47
23:DA:1248:G:C8	39:DQ:3:ARG:HB2	2.49	0.47
23:DA:1467:C:C2'	23:DA:1468:C:H5'	2.44	0.47
23:DA:2293:C:H5''	37:DO:89:ARG:NH1	2.30	0.47
23:DA:2433:A:H5''	23:DA:2434:A:OP1	2.15	0.47
23:DA:2460:U:C4	23:DA:2461:C:C5	3.02	0.47
23:DA:2846:G:C5	23:DA:2847:U:C4	3.02	0.47
24:DB:49:C:O5'	24:DB:49:C:H6	1.98	0.47
24:DB:56:G:H4'	24:DB:57:A:H8	1.80	0.47
25:DC:257:LEU:C	25:DC:257:LEU:CD2	2.83	0.47
28:DF:72:ARG:HG2	28:DF:86:MET:O	2.14	0.47
33:DK:90:GLN:O	33:DK:90:GLN:HG3	2.15	0.47
36:DN:59:ASP:OD1	36:DN:61:HIS:HB3	2.14	0.47
37:DO:14:VAL:O	37:DO:18:ILE:HG12	2.15	0.47
37:DO:79:ALA:O	37:DO:80:LEU:HD23	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DP:105:LEU:O	38:DP:106:SER:C	2.52	0.47
43:DU:29:GLU:O	43:DU:38:ILE:N	2.44	0.47
43:DU:68:HIS:ND1	43:DU:70:SER:HB3	2.29	0.47
43:DU:96:ILE:HD11	43:DU:99:CYS:SG	2.54	0.47
44:DV:56:VAL:HG12	44:DV:57:ILE:N	2.30	0.47
44:DV:126:VAL:HG12	44:DV:163:LEU:HA	1.96	0.47
48:DZ:5:LYS:HE2	48:DZ:34:GLU:OE1	2.14	0.47
53:D5:7:HIS:CB	53:D5:60:LEU:HB3	2.45	0.47
1:AA:78:G:N1	1:AA:92:G:C6	2.83	0.47
1:AA:165:C:H2'	1:AA:166:G:O4'	2.14	0.47
1:AA:236:G:OP1	17:AQ:40:LYS:NZ	2.48	0.47
1:AA:365:U:O4'	1:AA:365:U:O2	2.30	0.47
1:AA:376:G:P	16:AP:67:THR:HG21	2.54	0.47
1:AA:376:G:C2	1:AA:377:G:C8	3.03	0.47
1:AA:385:C:H6	1:AA:385:C:H3'	1.78	0.47
1:AA:409:G:C2'	1:AA:410:G:O5'	2.62	0.47
1:AA:428:G:C8	1:AA:430:A:C4	3.02	0.47
1:AA:560:U:C5'	1:AA:566:G:N2	2.77	0.47
1:AA:575:G:C5	1:AA:881:G:N2	2.83	0.47
1:AA:722:A:H2'	1:AA:724:G:C8	2.49	0.47
1:AA:841:U:H4'	1:AA:842:C:C5	2.49	0.47
1:AA:945:G:C6	1:AA:1337:G:C6	3.03	0.47
1:AA:953:G:C6	1:AA:1229:A:C6	3.02	0.47
1:AA:993:G:H2'	1:AA:993:G:N3	2.30	0.47
1:AA:1107:C:N3	1:AA:1108:G:C8	2.83	0.47
1:AA:1126:U:H2'	1:AA:1127:G:H8	1.74	0.47
1:AA:1194:U:H4'	5:AE:22:GLY:O	2.13	0.47
1:AA:1272:G:H2'	1:AA:1273:G:C8	2.50	0.47
1:AA:1403:C:H6	1:AA:1403:C:O5'	1.98	0.47
1:AA:1438:G:O2'	1:AA:1439:C:H5'	2.14	0.47
3:AC:15:THR:HG21	3:AC:181:ASN:CA	2.44	0.47
3:AC:148:GLY:HA3	3:AC:203:PHE:HB3	1.97	0.47
4:AD:38:TYR:CZ	4:AD:45:GLN:NE2	2.80	0.47
4:AD:176:LEU:HG	4:AD:178:VAL:HG22	1.96	0.47
7:AG:50:ILE:HB	7:AG:58:PRO:HG3	1.96	0.47
8:AH:119:LEU:HD12	8:AH:124:ALA:HA	1.96	0.47
9:AI:8:GLY:HA3	9:AI:76:ALA:O	2.13	0.47
14:AN:27:CYS:SG	14:AN:29:ARG:HB2	2.54	0.47
23:BA:115:C:O2'	23:BA:116:C:H5'	2.15	0.47
23:BA:198:C:H6	23:BA:198:C:O5'	1.98	0.47
23:BA:306:U:H2'	23:BA:307:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:333:G:C4	23:BA:334:C:C5	3.02	0.47
23:BA:500:G:N2	23:BA:502:A:H3'	2.29	0.47
23:BA:1109:C:H42	23:BA:1110:G:N2	2.12	0.47
23:BA:1190:G:H2'	23:BA:1191:G:H8	1.79	0.47
23:BA:1327:C:H2'	23:BA:1328:G:O4'	2.15	0.47
23:BA:1476:C:C2'	23:BA:1477:A:H5'	2.45	0.47
23:BA:1769:G:C5	23:BA:1984:G:C6	3.03	0.47
23:BA:1788:C:H2'	23:BA:1789:A:O4'	2.14	0.47
23:BA:1905:C:O2'	23:BA:1929:G:H1'	2.15	0.47
23:BA:2372:G:O2'	51:B3:46:HIS:CE1	2.67	0.47
23:BA:2791:C:H4'	23:BA:2792:G:OP1	2.14	0.47
24:BB:44:G:N3	24:BB:47:C:N4	2.62	0.47
25:BC:158:ALA:C	25:BC:161:THR:HG23	2.35	0.47
26:BD:120:TRP:NE1	26:BD:155:LYS:HB3	2.28	0.47
26:BD:137:HIS:CB	26:BD:138:PRO:HD2	2.44	0.47
26:BD:167:VAL:CG1	26:BD:189:PRO:HD3	2.44	0.47
27:BE:65:TRP:HB3	27:BE:66:PRO:HD2	1.96	0.47
28:BF:106:LEU:HD12	28:BF:110:ALA:HB3	1.95	0.47
29:BG:34:GLU:O	29:BG:36:PRO:HD3	2.15	0.47
29:BG:92:ILE:HD12	29:BG:92:ILE:N	2.29	0.47
30:BH:75:LEU:HG	30:BH:76:THR:O	2.15	0.47
32:BJ:58:ARG:O	32:BJ:60:LYS:N	2.48	0.47
33:BK:12:ASP:HA	33:BK:98:VAL:HA	1.95	0.47
34:BL:40:SER:C	34:BL:41:ARG:HD3	2.32	0.47
34:BL:61:ARG:HD2	53:B5:13:ARG:HD2	1.96	0.47
36:BN:4:LEU:C	36:BN:6:SER:N	2.68	0.47
36:BN:13:HIS:CE1	36:BN:15:SER:HB3	2.50	0.47
36:BN:96:ARG:HD2	36:BN:115:GLU:OE1	2.15	0.47
36:BN:113:LEU:HD12	36:BN:113:LEU:HA	1.49	0.47
37:BO:34:HIS:ND1	37:BO:54:LEU:HB3	2.28	0.47
39:BQ:54:LYS:O	39:BQ:55:ARG:C	2.51	0.47
41:BS:8:ARG:O	41:BS:9:TYR:HB2	2.15	0.47
41:BS:79:GLY:C	41:BS:100:THR:HG22	2.35	0.47
43:BU:76:CYS:O	43:BU:77:PRO:C	2.51	0.47
43:BU:81:LYS:HD2	43:BU:96:ILE:CD1	2.43	0.47
44:BV:30:ASN:HB3	44:BV:90:VAL:HB	1.97	0.47
45:BW:36:ILE:HG23	45:BW:58:THR:CG2	2.44	0.47
47:BY:17:SER:O	47:BY:21:LEU:N	2.23	0.47
48:BZ:19:GLN:HE22	48:BZ:52:HIS:CE1	2.32	0.47
49:B1:39:ARG:O	49:B1:57:ILE:HB	2.15	0.47
1:CA:54:C:N4	1:CA:353:A:OP2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:247:G:C4	1:CA:248:C:C5	3.03	0.47
1:CA:448:A:H2'	1:CA:449:C:H6	1.80	0.47
1:CA:513:C:C2	1:CA:539:A:C2	3.02	0.47
1:CA:562:C:C4	1:CA:884:U:C5	3.03	0.47
1:CA:640:A:N3	8:CH:115:SER:HB2	2.30	0.47
1:CA:934:C:C5	1:CA:1345:U:C6	3.03	0.47
1:CA:1053:G:C3'	1:CA:1054:C:C5'	2.92	0.47
1:CA:1116:C:N3	1:CA:1117:G:C8	2.83	0.47
1:CA:1149:C:O2'	1:CA:1280:A:N1	2.44	0.47
1:CA:1190:G:OP1	3:CC:4:LYS:HA	2.14	0.47
1:CA:1241:G:C2	1:CA:1242:C:C4	3.03	0.47
1:CA:1261:A:N7	1:CA:1262:C:C5	2.83	0.47
1:CA:1346:A:C2	1:CA:1348:U:C4	3.03	0.47
3:CC:19:GLU:HG2	3:CC:40:ARG:NH2	2.30	0.47
3:CC:79:ARG:O	3:CC:82:GLU:HG3	2.15	0.47
3:CC:182:ILE:HD11	3:CC:203:PHE:CD1	2.50	0.47
4:CD:61:LYS:HA	4:CD:203:VAL:CG2	2.45	0.47
4:CD:76:ARG:NH2	4:CD:80:GLU:OE1	2.48	0.47
5:CE:60:TYR:CD1	5:CE:60:TYR:C	2.87	0.47
6:CF:44:GLY:HA2	6:CF:59:TYR:CE2	2.50	0.47
8:CH:17:THR:HG21	8:CH:80:ILE:HD13	1.97	0.47
8:CH:50:ARG:CD	8:CH:50:ARG:N	2.77	0.47
9:CI:48:GLU:N	9:CI:49:PRO:CD	2.77	0.47
11:CK:101:SER:OG	11:CK:102:GLY:N	2.48	0.47
12:CL:44:PRO:CD	12:CL:50:ALA:H	2.28	0.47
12:CL:53:LYS:HD2	12:CL:53:LYS:N	2.30	0.47
13:CM:24:GLY:O	13:CM:25:ILE:HD13	2.15	0.47
13:CM:81:LEU:HD22	13:CM:86:CYS:SG	2.54	0.47
16:CP:20:VAL:CG2	16:CP:21:VAL:N	2.78	0.47
16:CP:32:TYR:O	16:CP:32:TYR:HD2	1.97	0.47
23:DA:49:A:H5''	23:DA:51:G:O4'	2.14	0.47
23:DA:72:U:C4	23:DA:112:U:H4'	2.49	0.47
23:DA:85:G:N3	23:DA:103:A:C2	2.83	0.47
23:DA:409:C:O2'	23:DA:410:G:H5'	2.15	0.47
23:DA:635:C:O2'	23:DA:639:U:OP1	2.33	0.47
23:DA:956:G:OP1	35:DM:86:GLY:N	2.47	0.47
23:DA:1000:A:H62	23:DA:1154:G:H2'	1.80	0.47
23:DA:1021:A:H8	23:DA:1022:G:H5''	1.79	0.47
23:DA:1056:G:N2	23:DA:1104:C:N3	2.63	0.47
23:DA:1231:G:O2'	23:DA:1232:G:H5'	2.15	0.47
23:DA:1356:G:C6	23:DA:1357:U:C4	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1364:G:OP2	46:DX:8:SER:HB2	2.14	0.47
23:DA:1503:U:H2'	23:DA:1504:C:C6	2.50	0.47
23:DA:1639:U:O2'	23:DA:1640:C:H5''	2.15	0.47
23:DA:1685:C:O2'	23:DA:1686:C:H5'	2.14	0.47
23:DA:1832:C:H2'	23:DA:1833:U:O4'	2.15	0.47
23:DA:1901:A:N3	23:DA:1901:A:C2'	2.78	0.47
23:DA:1902:C:H2'	23:DA:1903:G:O4'	2.14	0.47
23:DA:2039:C:H2'	23:DA:2040:C:H6	1.78	0.47
23:DA:2393:A:H5''	34:DL:62:LEU:HB3	1.96	0.47
23:DA:2506:U:C5	23:DA:2507:C:C5	3.03	0.47
23:DA:2760:C:H2'	23:DA:2760:C:O2	2.13	0.47
25:DC:143:HIS:CD2	25:DC:144:ALA:N	2.83	0.47
25:DC:257:LEU:HD23	25:DC:258:LYS:N	2.29	0.47
27:DE:164:ARG:NH1	27:DE:164:ARG:CG	2.71	0.47
30:DH:5:LEU:N	30:DH:5:LEU:CD2	2.77	0.47
30:DH:6:LEU:N	30:DH:6:LEU:HD23	2.29	0.47
30:DH:86:THR:HG22	30:DH:86:THR:O	2.14	0.47
30:DH:88:ILE:CG2	30:DH:89:TYR:N	2.78	0.47
30:DH:123:LEU:HD11	30:DH:145:VAL:OXT	2.14	0.47
32:DJ:37:VAL:HG12	32:DJ:38:LEU:H	1.80	0.47
32:DJ:119:GLU:O	32:DJ:123:GLU:HG3	2.14	0.47
32:DJ:160:LYS:HA	32:DJ:160:LYS:HD2	1.53	0.47
33:DK:34:THR:HG23	33:DK:35:VAL:N	2.29	0.47
35:DM:60:ARG:H	44:DV:179:ASP:CB	2.27	0.47
35:DM:75:THR:CA	35:DM:88:GLY:CA	2.78	0.47
36:DN:39:PRO:O	36:DN:40:LYS:C	2.53	0.47
36:DN:94:TYR:C	36:DN:117:VAL:HG12	2.35	0.47
37:DO:49:VAL:HG11	37:DO:76:LYS:HB2	1.97	0.47
37:DO:56:LEU:HG	37:DO:57:LYS:HB3	1.95	0.47
38:DP:57:PHE:CD2	38:DP:58:ASN:N	2.82	0.47
39:DQ:92:ARG:HG2	40:DR:11:GLN:HE21	1.74	0.47
41:DS:35:ILE:O	41:DS:36:LEU:C	2.52	0.47
41:DS:107:LEU:HD13	41:DS:107:LEU:N	2.29	0.47
44:DV:30:ASN:O	44:DV:33:LEU:N	2.48	0.47
44:DV:128:VAL:CG2	44:DV:132:ASN:HB2	2.44	0.47
47:DY:2:LYS:O	47:DY:5:GLU:HG3	2.15	0.47
1:AA:35:G:O2'	12:AL:117:SER:O	2.28	0.47
1:AA:101:A:C6	1:AA:102:G:C5	3.02	0.47
1:AA:403:C:O2'	1:AA:404:U:H5'	2.14	0.47
1:AA:408:A:C2	1:AA:409:G:C4	3.03	0.47
1:AA:479:C:C2	1:AA:480:U:C6	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:562:C:N3	1:AA:884:U:C5	2.83	0.47
1:AA:744:C:C6	1:AA:744:C:H3'	2.49	0.47
1:AA:749:C:O2	1:AA:749:C:H2'	2.14	0.47
1:AA:979:C:C5	1:AA:980:C:C6	3.03	0.47
1:AA:1056:U:H5	1:AA:1200:C:N4	2.13	0.47
1:AA:1308:U:OP1	13:AM:97:PRO:HA	2.15	0.47
1:AA:1400:C:H6	1:AA:1400:C:O5'	1.98	0.47
3:AC:175:LEU:CD1	3:AC:201:TYR:HE2	2.27	0.47
4:AD:63:LYS:HD2	4:AD:198:VAL:CG2	2.44	0.47
7:AG:9:VAL:HG12	7:AG:10:ARG:H	1.79	0.47
8:AH:51:VAL:HG21	8:AH:60:ARG:HG2	1.94	0.47
12:AL:19:LYS:HD3	12:AL:19:LYS:N	2.30	0.47
23:BA:94:G:N3	47:BY:47:ASN:ND2	2.62	0.47
23:BA:861:A:H2'	23:BA:862:G:O4'	2.14	0.47
23:BA:1056:G:N2	23:BA:1104:C:N3	2.63	0.47
23:BA:1314:C:OP1	23:BA:1332:G:H5''	2.15	0.47
23:BA:1668:A:N7	23:BA:1674:G:C6	2.83	0.47
23:BA:1678:G:H22	23:BA:1989:G:H22	1.63	0.47
23:BA:1790:C:H2'	23:BA:1791:A:C5	2.49	0.47
23:BA:1894:C:H2'	23:BA:1895:C:H6	1.80	0.47
23:BA:1920:C:O2	23:BA:1920:C:H2'	2.14	0.47
23:BA:2193:G:O2'	23:BA:2194:G:H5'	2.14	0.47
23:BA:2298:A:H2'	23:BA:2299:G:O4'	2.15	0.47
23:BA:2330:G:C2'	23:BA:2331:G:H5'	2.44	0.47
23:BA:2629:A:H2'	23:BA:2629:A:N3	2.29	0.47
23:BA:2663:G:C5	23:BA:2664:G:C5	3.02	0.47
24:BB:83:G:C6	24:BB:84:C:C5	3.03	0.47
25:BC:248:SER:HB2	25:BC:250:TRP:CE3	2.49	0.47
25:BC:260:ARG:O	25:BC:260:ARG:HG2	2.15	0.47
27:BE:156:LEU:HD12	27:BE:193:VAL:HG12	1.97	0.47
29:BG:92:ILE:O	29:BG:93:GLY:C	2.53	0.47
29:BG:105:LEU:HD23	29:BG:105:LEU:N	2.30	0.47
30:BH:69:LYS:HD3	30:BH:138:ILE:HG12	1.96	0.47
30:BH:110:ASP:OD2	30:BH:113:ARG:HG3	2.14	0.47
32:BJ:151:HIS:CD2	32:BJ:151:HIS:C	2.87	0.47
33:BK:90:GLN:O	33:BK:90:GLN:HG3	2.14	0.47
38:BP:88:ILE:CD1	38:BP:89:VAL:H	2.27	0.47
44:BV:85:HIS:ND1	44:BV:85:HIS:C	2.68	0.47
46:BX:46:LEU:HD21	46:BX:61:ARG:HG3	1.96	0.47
48:BZ:28:LEU:N	48:BZ:28:LEU:CD1	2.76	0.47
49:B1:40:ILE:HG23	49:B1:59:VAL:CG2	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:187:C:H2'	1:CA:188:U:O4'	2.14	0.47
1:CA:191(G):G:H2'	1:CA:192:U:C6	2.50	0.47
1:CA:191(G):G:C4	1:CA:192:U:C5	3.02	0.47
1:CA:437:U:C4	1:CA:438:G:C6	3.03	0.47
1:CA:650:G:C2	1:CA:651:C:C6	3.03	0.47
1:CA:730:G:C5	1:CA:731:G:H1'	2.50	0.47
1:CA:897:C:H42	1:CA:902:G:H1	1.63	0.47
1:CA:976:G:H5''	1:CA:1358:U:O2'	2.14	0.47
1:CA:1038:C:C2	1:CA:1039:C:C5	3.03	0.47
1:CA:1298:C:H4'	1:CA:1299:A:C4	2.49	0.47
1:CA:1429:C:H2'	1:CA:1430:C:C6	2.50	0.47
1:CA:1438:G:C5	1:CA:1439:C:C5	3.02	0.47
1:CA:1443:G:H22	38:DP:119:LYS:CB	2.28	0.47
1:CA:1530:G:H2'	1:CA:1531:A:C8	2.50	0.47
4:CD:128:VAL:HA	4:CD:145:GLU:O	2.15	0.47
6:CF:50:TYR:CE1	18:CR:77:GLY:HA2	2.50	0.47
8:CH:74:PRO:O	8:CH:76:PRO:HD3	2.13	0.47
17:CQ:59:ILE:HG23	17:CQ:71:PHE:HD1	1.79	0.47
23:DA:27:G:C4	23:DA:512:G:N2	2.82	0.47
23:DA:165:U:H2'	23:DA:171:G:O4'	2.14	0.47
23:DA:282:A:C4	23:DA:359:A:C2	3.03	0.47
23:DA:896:A:H1'	44:DV:176:PRO:HG3	1.96	0.47
23:DA:948:G:N2	23:DA:970:C:O2	2.48	0.47
23:DA:955:C:OP1	35:DM:85:LYS:HE2	2.14	0.47
23:DA:1799:G:C8	25:DC:181:GLU:CD	2.88	0.47
23:DA:2189:U:O2	23:DA:2189:U:H2'	2.14	0.47
23:DA:2401:U:O2'	23:DA:2402:C:H5''	2.14	0.47
23:DA:2697:G:C2	23:DA:2711:A:C2	3.02	0.47
23:DA:2723:C:H4'	36:DN:2:ARG:HH21	1.78	0.47
24:DB:19:G:N2	24:DB:65:C:C2	2.83	0.47
24:DB:59:A:H2'	24:DB:60:C:O4'	2.15	0.47
25:DC:223:GLY:HA3	25:DC:231:HIS:ND1	2.30	0.47
26:DD:57:LYS:CG	26:DD:58:ARG:N	2.78	0.47
26:DD:104:VAL:HG11	26:DD:188:VAL:HG21	1.95	0.47
27:DE:36:VAL:HG11	27:DE:183:VAL:CG1	2.45	0.47
27:DE:65:TRP:CH2	27:DE:75:HIS:HD2	2.33	0.47
28:DF:131:TYR:CE2	28:DF:133:LEU:HB3	2.49	0.47
29:DG:72:ILE:O	29:DG:75:ALA:N	2.47	0.47
30:DH:110:ASP:HB3	30:DH:111:PRO:HD2	1.95	0.47
32:DJ:37:VAL:HG12	32:DJ:38:LEU:N	2.29	0.47
32:DJ:101:TYR:N	32:DJ:101:TYR:CD1	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DN:47:PHE:O	36:DN:51:LEU:HD12	2.14	0.47
37:DO:58:LEU:HD12	37:DO:58:LEU:N	2.30	0.47
39:DQ:60:LEU:HD22	39:DQ:60:LEU:O	2.15	0.47
39:DQ:92:ARG:O	39:DQ:94:ASN:N	2.48	0.47
40:DR:47:VAL:CG1	40:DR:50:PRO:O	2.63	0.47
41:DS:10:VAL:HG23	41:DS:101:SER:O	2.15	0.47
41:DS:36:LEU:HD12	41:DS:48:ALA:CA	2.45	0.47
42:DT:18:TYR:N	42:DT:18:TYR:CD1	2.79	0.47
44:DV:13:GLU:CD	44:DV:13:GLU:H	2.18	0.47
44:DV:82:ARG:HG2	44:DV:83:PRO:HD2	1.97	0.47
46:DX:11:ARG:HB3	46:DX:12:PRO:HD3	1.91	0.47
48:DZ:50:VAL:O	48:DZ:50:VAL:HG23	2.14	0.47
1:AA:247:G:C5	1:AA:248:C:C5	3.03	0.47
1:AA:373:A:C2	1:AA:482:A:N6	2.82	0.47
1:AA:837:G:H1	1:AA:849:C:H42	1.63	0.47
1:AA:1261:A:N7	1:AA:1262:C:C5	2.83	0.47
1:AA:1292:U:N3	1:AA:1293:G:N7	2.63	0.47
1:AA:1530:G:H2'	1:AA:1531:A:C8	2.50	0.47
2:AB:27:LYS:CG	2:AB:194:PRO:HD2	2.41	0.47
2:AB:100:GLY:O	2:AB:104:ASN:N	2.47	0.47
3:AC:125:GLU:OE2	3:AC:189:ALA:HA	2.14	0.47
6:AF:50:TYR:CE1	18:AR:74:ARG:O	2.68	0.47
10:AJ:33:GLN:HB2	10:AJ:75:ILE:CD1	2.45	0.47
15:AO:18:PHE:O	15:AO:19:PRO:O	2.32	0.47
16:AP:1:MET:HG2	16:AP:2:VAL:O	2.14	0.47
23:BA:26:G:C6	23:BA:27:G:N1	2.83	0.47
23:BA:84:A:H4'	23:BA:85:G:O5'	2.15	0.47
23:BA:270(F):G:H2'	23:BA:270(G):U:O4'	2.14	0.47
23:BA:302:C:H2'	23:BA:303:U:H6	1.76	0.47
23:BA:747:U:N3	50:B2:2:ALA:N	2.63	0.47
23:BA:1021:A:H8	23:BA:1022:G:H5''	1.80	0.47
23:BA:1027:A:C6	23:BA:1126:A:C5	3.03	0.47
23:BA:1570:A:H4'	25:BC:38:LYS:HE2	1.96	0.47
23:BA:1751:C:H2'	23:BA:1752:C:C6	2.50	0.47
23:BA:2079:U:H2'	23:BA:2080:G:O4'	2.15	0.47
23:BA:2476:A:N3	23:BA:2476:A:C2'	2.77	0.47
24:BB:87:G:N2	24:BB:89(A):G:C8	2.83	0.47
26:BD:57:LYS:CG	26:BD:58:ARG:N	2.78	0.47
27:BE:66:PRO:HB3	27:BE:68:LYS:NZ	2.30	0.47
27:BE:173:VAL:HG12	27:BE:174:VAL:N	2.29	0.47
36:BN:60:LEU:HA	36:BN:63:ARG:HB3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BN:84:ALA:N	36:BN:85:PRO:HD2	2.30	0.47
40:BR:47:VAL:HG11	40:BR:50:PRO:O	2.15	0.47
1:CA:17:U:H2'	1:CA:18:C:C6	2.49	0.47
1:CA:37:U:H2'	1:CA:38:G:C8	2.50	0.47
1:CA:59:A:H5''	1:CA:60:A:C5'	2.44	0.47
1:CA:165:C:H2'	1:CA:166:G:O4'	2.14	0.47
1:CA:392:G:C4	1:CA:393:A:N7	2.83	0.47
1:CA:404:U:H2'	1:CA:405:U:C6	2.46	0.47
1:CA:576:G:N2	1:CA:759:A:OP1	2.48	0.47
1:CA:592:G:H2'	1:CA:593:G:H8	1.79	0.47
1:CA:692:U:H2'	1:CA:694:A:OP2	2.15	0.47
1:CA:954:G:H2'	1:CA:955:U:C6	2.50	0.47
1:CA:1075:C:OP1	2:CB:103:THR:HG21	2.15	0.47
1:CA:1301:U:H3'	1:CA:1302:U:C5'	2.45	0.47
1:CA:1367:C:C2	1:CA:1368:G:C8	3.03	0.47
1:CA:1386:G:N3	1:CA:1387:G:C8	2.83	0.47
1:CA:1480:G:C4	1:CA:1481:U:C6	3.03	0.47
4:CD:38:TYR:CZ	4:CD:45:GLN:NE2	2.81	0.47
6:CF:47:ARG:HH12	6:CF:56:PRO:HB2	1.80	0.47
6:CF:98:LEU:CD1	6:CF:101:ALA:HB2	2.41	0.47
7:CG:30:ILE:HD13	7:CG:105:VAL:HG13	1.97	0.47
9:CI:58:ARG:HG2	9:CI:58:ARG:O	2.14	0.47
11:CK:86:GLY:C	11:CK:88:GLY:H	2.18	0.47
11:CK:115:PRO:C	11:CK:117:ASN:H	2.17	0.47
17:CQ:29:HIS:CE1	17:CQ:32:TYR:HD1	2.32	0.47
23:DA:487:C:H1'	41:DS:53:SER:HB2	1.97	0.47
23:DA:1015:G:H2'	23:DA:1016:G:H5'	1.96	0.47
23:DA:1218:C:OP2	39:DQ:15:LYS:NZ	2.39	0.47
23:DA:1897:G:H2'	23:DA:1898:U:O4'	2.15	0.47
23:DA:2011:U:H2'	23:DA:2012:G:O4'	2.14	0.47
23:DA:2298:A:H2'	23:DA:2299:G:O4'	2.15	0.47
23:DA:2405:G:O2'	23:DA:2411:A:N6	2.46	0.47
23:DA:2409:G:C6	23:DA:2410:G:C5	3.03	0.47
23:DA:2439:A:O2'	23:DA:2440:C:OP2	2.25	0.47
23:DA:2562:U:C2'	23:DA:2563:U:H5'	2.45	0.47
23:DA:2617:C:O2'	23:DA:2618:G:H5'	2.14	0.47
23:DA:2744:G:N3	23:DA:2761:G:C2	2.83	0.47
26:DD:101:ARG:HB3	26:DD:169:ASN:HD22	1.80	0.47
26:DD:167:VAL:CG1	26:DD:189:PRO:HD3	2.44	0.47
28:DF:111:LEU:HA	28:DF:114:ILE:CD1	2.45	0.47
29:DG:29:PRO:HD2	29:DG:79:VAL:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:2:LYS:HB3	30:DH:20:ASP:OD1	2.15	0.47
30:DH:68:LEU:O	30:DH:72:LEU:HB2	2.15	0.47
34:DL:51:PHE:HB3	34:DL:52:GLU:H	1.39	0.47
34:DL:66:GLY:O	34:DL:67:MET:HB2	2.15	0.47
35:DM:32:PHE:CZ	35:DM:111:GLU:HG2	2.46	0.47
37:DO:62:LYS:O	37:DO:65:VAL:HB	2.14	0.47
38:DP:41:ARG:CB	38:DP:41:ARG:NH1	2.78	0.47
38:DP:51:ARG:CD	38:DP:62:THR:HG23	2.43	0.47
41:DS:48:ALA:O	41:DS:51:LEU:N	2.48	0.47
43:DU:17:SER:CB	43:DU:71:LYS:HD2	2.45	0.47
46:DX:9:GLY:O	46:DX:13:ILE:CG2	2.63	0.47
1:AA:84:U:H5''	1:AA:85:U:OP2	2.15	0.47
1:AA:376:G:C4	1:AA:389:A:N1	2.83	0.47
1:AA:1076:C:C2'	1:AA:1077:G:H5'	2.45	0.47
1:AA:1080:A:C5'	1:AA:1081:G:OP2	2.63	0.47
1:AA:1192:C:OP2	3:AC:4:LYS:NZ	2.36	0.47
1:AA:1493:A:H4'	1:AA:1494:G:OP2	2.15	0.47
6:AF:30:LEU:HD11	6:AF:63:TYR:CE1	2.50	0.47
6:AF:50:TYR:HE1	18:AR:74:ARG:O	1.97	0.47
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.78	0.47
10:AJ:55:LYS:O	10:AJ:56:HIS:CG	2.68	0.47
11:AK:111:ASP:O	11:AK:112:THR:C	2.53	0.47
23:BA:60:G:C6	23:BA:74:A:N6	2.83	0.47
23:BA:164:U:C4	23:BA:165:U:C4	3.03	0.47
23:BA:627:A:C5	23:BA:637:A:N7	2.83	0.47
23:BA:735:A:C8	23:BA:736:C:C5	3.03	0.47
23:BA:769:G:C2'	23:BA:770:G:H5'	2.45	0.47
23:BA:781:A:H2'	23:BA:1777:U:O2'	2.15	0.47
23:BA:987:G:H2'	23:BA:988:A:C5'	2.45	0.47
23:BA:1301:A:H2	23:BA:1626:G:N3	2.12	0.47
23:BA:1421:G:C2	23:BA:1422:G:C8	3.02	0.47
23:BA:1812:A:C2	23:BA:1813:G:C4	3.03	0.47
23:BA:1826:G:OP1	25:BC:233:HIS:CD2	2.63	0.47
23:BA:2291:U:O2'	23:BA:2374:C:O2	2.32	0.47
23:BA:2745:C:C4	23:BA:2746:U:C5	3.03	0.47
24:BB:81:G:C6	24:BB:82:G:N7	2.83	0.47
25:BC:134:ARG:HG3	25:BC:135:PHE:HD1	1.79	0.47
32:BJ:143:LEU:C	32:BJ:143:LEU:CD1	2.82	0.47
34:BL:10:PRO:CD	34:BL:11:GLY:H	2.26	0.47
34:BL:85:LEU:H	34:BL:85:LEU:HD22	1.79	0.47
36:BN:48:VAL:O	36:BN:51:LEU:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BU:17:SER:HB2	43:BU:71:LYS:HD2	1.98	0.47
53:B5:11:LYS:N	53:B5:61:LEU:HD21	2.30	0.47
53:B5:22:VAL:CB	53:B5:54:GLU:HG3	2.41	0.47
1:CA:101:A:C6	1:CA:102:G:C5	3.03	0.47
1:CA:391:G:C5	1:CA:392:G:C8	3.03	0.47
1:CA:1226:C:H2'	13:CM:103:THR:CB	2.42	0.47
1:CA:1305:G:H5''	21:CU:4:GLY:C	2.35	0.47
3:CC:114:PRO:HD3	3:CC:183:ASP:OD1	2.15	0.47
4:CD:21:LEU:HD12	4:CD:21:LEU:N	2.28	0.47
8:CH:49:GLU:HG3	8:CH:51:VAL:HG23	1.96	0.47
15:CO:81:LEU:O	15:CO:81:LEU:HD12	2.15	0.47
18:CR:45:SER:H	18:CR:51:LEU:CD1	2.28	0.47
23:DA:153:C:OP1	46:DX:92:LYS:HE2	2.15	0.47
23:DA:1024:G:OP2	23:DA:1025:G:H3'	2.16	0.47
23:DA:1586:A:H2'	23:DA:1587:A:H5'	1.97	0.47
23:DA:1894:C:C2	23:DA:1895:C:C5	3.02	0.47
23:DA:2477:C:O2'	23:DA:2478:A:OP2	2.30	0.47
23:DA:2584:U:O5'	23:DA:2584:U:C6	2.68	0.47
23:DA:2731:G:H2'	23:DA:2732:G:C8	2.50	0.47
28:DF:64:THR:HG23	28:DF:66:GLN:N	2.29	0.47
30:DH:79:ILE:HG22	30:DH:81:VAL:CG2	2.43	0.47
37:DO:20:ARG:HH12	45:DW:47:PRO:HB2	1.79	0.47
40:DR:76:LYS:O	40:DR:79:VAL:HG12	2.14	0.47
44:DV:46:LYS:O	44:DV:50:GLN:OE1	2.33	0.47
44:DV:92:SER:O	44:DV:93:ASP:HB3	2.14	0.47
48:DZ:19:GLN:O	48:DZ:23:LEU:HD13	2.14	0.47
50:D2:6:VAL:HG13	50:D2:7:PRO:HD2	1.97	0.47
53:D5:29:LYS:HG2	53:D5:29:LYS:O	2.15	0.47
1:AA:114:U:H2'	1:AA:115:G:H8	1.76	0.46
1:AA:236:G:C6	1:AA:237:C:C4	3.03	0.46
1:AA:398:C:O5'	1:AA:398:C:H6	1.98	0.46
1:AA:464:G:C6	1:AA:466:G:H5'	2.50	0.46
1:AA:654:G:H1'	1:AA:753:A:N1	2.31	0.46
1:AA:855:G:C6	1:AA:856:C:C4	3.03	0.46
1:AA:1059:C:O2	10:AJ:53:PRO:HG2	2.15	0.46
1:AA:1072:G:O6	1:AA:1104:G:C6	2.68	0.46
1:AA:1090:U:H2'	1:AA:1091:U:H6	1.80	0.46
1:AA:1116:C:N3	1:AA:1117:G:C8	2.83	0.46
4:AD:102:ASP:OD2	4:AD:136:PRO:HB3	2.15	0.46
8:AH:11:THR:O	8:AH:12:ARG:C	2.52	0.46
8:AH:107:LEU:HD23	8:AH:107:LEU:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:48:THR:CG2	10:AJ:62:HIS:ND1	2.75	0.46
14:AN:26:ARG:HD2	14:AN:47:LEU:HD11	1.96	0.46
18:AR:37:VAL:HG23	18:AR:38:GLU:N	2.30	0.46
20:AT:24:LEU:HD22	20:AT:24:LEU:H	1.80	0.46
23:BA:298:G:P	43:BU:85:VAL:HG22	2.55	0.46
23:BA:769:G:O2'	23:BA:770:G:H5'	2.15	0.46
23:BA:1313:U:H4'	23:BA:1332:G:H4'	1.98	0.46
23:BA:1471:A:N7	23:BA:1522:G:C6	2.83	0.46
23:BA:1486:A:N1	23:BA:1504:C:C4	2.83	0.46
23:BA:1728:G:H3'	23:BA:1728:G:C8	2.50	0.46
23:BA:1884:A:C2	23:BA:1885:A:C8	3.03	0.46
23:BA:2228:G:P	25:BC:263:ARG:HH21	2.38	0.46
23:BA:2416:C:O5'	23:BA:2416:C:H6	1.97	0.46
23:BA:2416:C:C4	23:BA:2417:C:C5	3.03	0.46
23:BA:2590:A:O2'	23:BA:2591:C:H5'	2.14	0.46
23:BA:2837:G:C5	23:BA:2838:G:N7	2.84	0.46
25:BC:79:VAL:HG11	25:BC:111:LEU:CD1	2.45	0.46
25:BC:198:ASN:C	25:BC:198:ASN:ND2	2.69	0.46
26:BD:86:PRO:HB2	26:BD:87:GLU:H	1.38	0.46
27:BE:46:ARG:HB3	27:BE:46:ARG:CZ	2.45	0.46
27:BE:52:LYS:HB3	27:BE:56:GLU:HB2	1.96	0.46
29:BG:20:ALA:HB1	29:BG:21:PRO:HD2	1.95	0.46
30:BH:82:ARG:HB3	30:BH:89:TYR:CB	2.45	0.46
32:BJ:69:VAL:CG1	32:BJ:71:MET:HG3	2.42	0.46
35:BM:77:LYS:NZ	35:BM:84:GLY:O	2.42	0.46
35:BM:116:GLU:O	35:BM:117:ALA:C	2.54	0.46
35:BM:125:LEU:N	35:BM:125:LEU:HD23	2.30	0.46
42:BT:40:LYS:O	42:BT:42:ALA:N	2.47	0.46
43:BU:6:HIS:CD2	43:BU:35:TYR:CE1	3.00	0.46
43:BU:31:LEU:HA	43:BU:32:PRO:HD3	1.74	0.46
43:BU:81:LYS:CD	43:BU:96:ILE:HG13	2.45	0.46
48:BZ:3:ARG:HH11	48:BZ:59:VAL:HG11	1.79	0.46
1:CA:6:G:O2'	1:CA:7:G:H5'	2.14	0.46
1:CA:11:G:C5	1:CA:12:U:C5	3.03	0.46
1:CA:78:G:N1	1:CA:92:G:C6	2.84	0.46
1:CA:84:U:H5''	1:CA:85:U:OP2	2.14	0.46
1:CA:152:A:H62	1:CA:169:C:H42	1.63	0.46
1:CA:173:U:C2	1:CA:197:A:C2	3.04	0.46
1:CA:376:G:O2'	1:CA:377:G:C5'	2.63	0.46
1:CA:560:U:C5'	1:CA:566:G:N2	2.78	0.46
1:CA:762:C:C2	1:CA:763:G:C8	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:850:U:H6	1:CA:850:U:O5'	1.98	0.46
1:CA:976:G:C8	1:CA:1358:U:C2'	2.96	0.46
1:CA:1104:G:N1	1:CA:1105:A:C5	2.82	0.46
1:CA:1244:C:H2'	1:CA:1245:A:H8	1.79	0.46
1:CA:1353:G:H1	1:CA:1369:C:N4	2.12	0.46
2:CB:167:PRO:HG3	2:CB:188:ALA:HB2	1.96	0.46
4:CD:52:SER:C	4:CD:54:TYR:N	2.67	0.46
4:CD:129:ASN:OD1	4:CD:129:ASN:N	2.48	0.46
7:CG:17:VAL:HG21	7:CG:44:TYR:CE2	2.50	0.46
7:CG:80:VAL:C	7:CG:82:GLY:H	2.19	0.46
8:CH:118:VAL:O	8:CH:118:VAL:HG12	2.15	0.46
10:CJ:33:GLN:HB2	10:CJ:75:ILE:CD1	2.46	0.46
10:CJ:58:ASP:C	10:CJ:60:ARG:N	2.69	0.46
12:CL:52:ARG:HH11	12:CL:52:ARG:HG2	1.73	0.46
13:CM:56:LEU:O	13:CM:59:TYR:HB3	2.14	0.46
13:CM:70:LEU:C	13:CM:70:LEU:HD23	2.35	0.46
16:CP:28:ARG:HG2	16:CP:28:ARG:NH1	2.14	0.46
16:CP:75:ARG:C	16:CP:77:ALA:H	2.18	0.46
17:CQ:54:GLY:HA3	17:CQ:82:MET:CE	2.45	0.46
23:DA:8:A:C5	23:DA:9:U:O4	2.68	0.46
23:DA:164:U:C4	23:DA:165:U:C4	3.03	0.46
23:DA:229:A:H5'	23:DA:230:U:O5'	2.15	0.46
23:DA:442:G:H4'	27:DE:46:ARG:HD3	1.96	0.46
23:DA:1418:G:O5'	23:DA:1418:G:C8	2.54	0.46
23:DA:1657:C:O2'	23:DA:1658:C:H5'	2.16	0.46
23:DA:2027:G:H2'	23:DA:2028:U:O4'	2.15	0.46
23:DA:2274:A:C5	23:DA:2276:G:C8	3.03	0.46
23:DA:2410:G:H2'	23:DA:2411:A:O4'	2.15	0.46
23:DA:2550:G:C6	23:DA:2551:C:C4	3.03	0.46
23:DA:2823:A:C5	23:DA:2824:C:C5	3.04	0.46
24:DB:21:G:H2'	24:DB:22:U:O4'	2.15	0.46
25:DC:134:ARG:HG3	25:DC:135:PHE:HD1	1.75	0.46
26:DD:35:GLN:HG2	26:DD:36:ARG:N	2.30	0.46
26:DD:137:HIS:CB	26:DD:138:PRO:HD2	2.44	0.46
29:DG:92:ILE:HD12	29:DG:92:ILE:N	2.30	0.46
34:DL:38:GLN:CG	34:DL:39:LYS:N	2.71	0.46
34:DL:62:LEU:HD21	53:D5:25:MET:HB2	1.97	0.46
34:DL:70:GLN:O	34:DL:73:GLY:N	2.48	0.46
38:DP:64:ARG:HD2	38:DP:73:GLU:CG	2.45	0.46
39:DQ:83:LEU:HD12	39:DQ:83:LEU:N	2.30	0.46
41:DS:45:TYR:CD2	41:DS:46:PHE:CD1	3.01	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DS:86:LEU:HD12	41:DS:86:LEU:C	2.35	0.46
43:DU:68:HIS:C	43:DU:70:SER:H	2.19	0.46
46:DX:9:GLY:O	46:DX:13:ILE:HG21	2.15	0.46
1:AA:102:G:C4	1:AA:103:C:C5	3.02	0.46
1:AA:394:G:C2	1:AA:395:C:C5	3.03	0.46
1:AA:419:C:C2'	1:AA:420:U:H5'	2.45	0.46
1:AA:556:C:H2'	1:AA:557:G:C5'	2.44	0.46
1:AA:624:C:H4'	16:AP:10:GLY:HA2	1.97	0.46
1:AA:645:C:H2'	1:AA:646:U:O4'	2.14	0.46
1:AA:1070:U:O2	1:AA:1106:G:C2	2.68	0.46
1:AA:1143:G:H8	1:AA:1143:G:O5'	1.99	0.46
1:AA:1160:G:C6	1:AA:1181:G:O6	2.68	0.46
1:AA:1288:A:C6	1:AA:1289:A:C5	3.03	0.46
2:AB:15:VAL:H	2:AB:16:HIS:CE1	2.33	0.46
2:AB:106:LYS:HE2	2:AB:110:GLN:HE21	1.76	0.46
3:AC:30:ARG:O	3:AC:34:LEU:HB2	2.15	0.46
3:AC:108:ASN:HB3	3:AC:111:LEU:HD12	1.97	0.46
3:AC:182:ILE:CG1	3:AC:203:PHE:HD1	2.27	0.46
6:AF:28:ARG:O	6:AF:32:ASN:N	2.48	0.46
9:AI:58:ARG:O	9:AI:58:ARG:HG2	2.15	0.46
10:AJ:98:ILE:O	10:AJ:99:LYS:HD3	2.15	0.46
23:BA:9:U:N3	23:BA:2629:A:C6	2.83	0.46
23:BA:771:G:C4	23:BA:772:C:C5	3.03	0.46
23:BA:1169:G:H1	23:BA:1180:C:N4	2.12	0.46
23:BA:1349:A:N6	23:BA:1598:C:N4	2.62	0.46
23:BA:1381:G:C2'	23:BA:1382:G:H5'	2.46	0.46
23:BA:1476:C:C6	23:BA:1476:C:C3'	2.98	0.46
23:BA:1503:U:C2	23:BA:1504:C:H5	2.33	0.46
23:BA:1678:G:H22	23:BA:1989:G:N2	2.13	0.46
23:BA:1734:C:H2'	23:BA:1735:U:O4'	2.16	0.46
23:BA:2014:A:H2'	23:BA:2015:A:C8	2.50	0.46
23:BA:2038:G:C5	23:BA:2039:C:C5	3.03	0.46
23:BA:2226:C:O5'	23:BA:2226:C:H6	1.98	0.46
23:BA:2287:A:H62	23:BA:2344:U:H3	1.63	0.46
23:BA:2435:A:H2'	23:BA:2436:G:O5'	2.15	0.46
23:BA:2477:C:O2'	23:BA:2478:A:OP2	2.33	0.46
23:BA:2850:A:H2'	23:BA:2851:A:O4'	2.16	0.46
24:BB:21:G:H2'	24:BB:22:U:O4'	2.14	0.46
25:BC:31:LYS:HE2	25:BC:102:LYS:NZ	2.29	0.46
25:BC:176:ARG:HG2	25:BC:176:ARG:NH1	2.27	0.46
25:BC:235:GLY:C	25:BC:237:GLU:H	2.17	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:103:ASP:OD2	26:BD:201:THR:HA	2.15	0.46
27:BE:139:PHE:CB	27:BE:166:ALA:HB1	2.44	0.46
33:BK:21:CYS:SG	33:BK:22:ILE:N	2.88	0.46
38:BP:105:LEU:HD23	38:BP:105:LEU:HA	1.70	0.46
39:BQ:83:LEU:CG	39:BQ:88:ILE:HD11	2.34	0.46
40:BR:66:ARG:HD2	40:BR:88:ARG:NE	2.29	0.46
41:BS:14:PRO:C	41:BS:16:LYS:N	2.66	0.46
43:BU:50:ARG:CD	43:BU:51:VAL:H	2.25	0.46
48:BZ:38:GLU:OE1	48:BZ:38:GLU:N	2.49	0.46
53:B5:29:LYS:HG2	53:B5:29:LYS:O	2.15	0.46
1:CA:130:A:C8	17:CQ:63:ARG:HG3	2.49	0.46
1:CA:511:C:C5	1:CA:541:G:N2	2.83	0.46
1:CA:565:U:C5	1:CA:566:G:C5	3.03	0.46
1:CA:636:U:O2'	1:CA:637:G:H5'	2.15	0.46
1:CA:857:C:H2'	1:CA:858:G:O4'	2.15	0.46
1:CA:1143:G:H8	1:CA:1143:G:O5'	1.98	0.46
1:CA:1182:G:H4'	1:CA:1183:A:H5''	1.96	0.46
1:CA:1366:C:C4	1:CA:1367:C:N4	2.83	0.46
1:CA:1424:C:H2'	1:CA:1425:U:O4'	2.15	0.46
1:CA:1441:G:O5'	1:CA:1441:G:H8	1.97	0.46
1:CA:1511:G:H2'	1:CA:1512:U:O4'	2.15	0.46
2:CB:183:PRO:HA	2:CB:198:ASP:OD1	2.14	0.46
4:CD:176:LEU:HG	4:CD:178:VAL:HG22	1.97	0.46
6:CF:42:GLU:HG2	6:CF:42:GLU:O	2.15	0.46
12:CL:26:LEU:O	12:CL:28:GLY:N	2.49	0.46
16:CP:1:MET:HG2	16:CP:2:VAL:O	2.15	0.46
20:CT:93:GLU:HG2	20:CT:93:GLU:O	2.15	0.46
22:CV:6190:U:C4	22:CV:6191:A:N7	2.83	0.46
23:DA:189:G:H1	23:DA:205:G:HO2'	1.62	0.46
23:DA:359:A:C8	23:DA:360:G:C8	3.03	0.46
23:DA:476:G:H4'	23:DA:502:A:N1	2.31	0.46
23:DA:532:A:C8	23:DA:2021:C:C4	3.03	0.46
23:DA:593:G:H4'	53:D5:62:LEU:HD11	1.96	0.46
23:DA:661:C:O3'	34:DL:18:ARG:HD2	2.15	0.46
23:DA:987:G:H2'	23:DA:988:A:C5'	2.45	0.46
23:DA:1678:G:H22	23:DA:1989:G:N2	2.12	0.46
23:DA:1682:G:H2'	23:DA:1683:C:C6	2.50	0.46
23:DA:1734:C:H2'	23:DA:1735:U:O4'	2.16	0.46
23:DA:2295:C:N3	23:DA:2296:U:H5	2.12	0.46
23:DA:2327:A:H2'	23:DA:2328:A:H8	1.75	0.46
23:DA:2837:G:C6	23:DA:2838:G:N7	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DB:10:C:C4	24:DB:11:C:C5	3.04	0.46
24:DB:73:A:N6	24:DB:104:A:H1'	2.29	0.46
24:DB:83:G:C6	24:DB:84:C:C5	3.03	0.46
25:DC:182:LEU:N	25:DC:272:ALA:HB3	2.28	0.46
28:DF:70:VAL:HG12	28:DF:90:LEU:CD2	2.44	0.46
28:DF:121:ASN:ND2	28:DF:122:PRO:HD2	2.30	0.46
29:DG:103:LEU:O	29:DG:103:LEU:HG	2.15	0.46
30:DH:5:LEU:HD22	30:DH:19:VAL:HG12	1.96	0.46
30:DH:14:ASP:H	30:DH:17:GLN:NE2	2.13	0.46
32:DJ:110:LEU:O	32:DJ:110:LEU:HD22	2.15	0.46
36:DN:84:ALA:HB3	36:DN:85:PRO:HD3	1.98	0.46
39:DQ:29:SER:OG	39:DQ:30:LYS:HE3	2.16	0.46
41:DS:45:TYR:CZ	41:DS:49:LYS:HE3	2.49	0.46
43:DU:9:LYS:O	43:DU:27:VAL:CG2	2.63	0.46
44:DV:30:ASN:HA	44:DV:89:PHE:HE2	1.81	0.46
44:DV:58:VAL:CG1	44:DV:66:SER:HB2	2.45	0.46
44:DV:131:ARG:HD2	44:DV:131:ARG:H	1.79	0.46
44:DV:134:PRO:C	44:DV:136:PHE:N	2.68	0.46
44:DV:151:HIS:O	44:DV:171:ILE:HG12	2.15	0.46
50:D2:32:PRO:HA	50:D2:38:ALA:O	2.16	0.46
1:AA:37:U:H2'	1:AA:38:G:C8	2.49	0.46
1:AA:557:G:H2'	1:AA:558:G:O4'	2.14	0.46
1:AA:692:U:O4	11:AK:52:GLY:C	2.54	0.46
1:AA:789:U:O5'	1:AA:789:U:H6	1.97	0.46
1:AA:1252:A:H61	1:AA:1285:A:N6	2.11	0.46
1:AA:1353:G:H1	1:AA:1369:C:N4	2.13	0.46
2:AB:83:MET:CE	2:AB:234:PRO:HG2	2.45	0.46
2:AB:158:LEU:HD12	2:AB:158:LEU:N	2.30	0.46
7:AG:15:ASP:OD1	7:AG:18:TYR:HD1	1.98	0.46
8:AH:68:ARG:HG2	8:AH:69:ARG:H	1.81	0.46
22:AV:6182:A:C6	22:AV:6195:G:N1	2.84	0.46
23:BA:38:A:H2'	23:BA:39:C:C6	2.50	0.46
23:BA:270(W):G:C4	23:BA:270(X):G:C8	3.03	0.46
23:BA:476:G:O4'	23:BA:505:A:C2	2.68	0.46
23:BA:575:A:OP2	23:BA:2499:C:O2'	2.31	0.46
23:BA:723:G:H2'	23:BA:724:U:O4'	2.15	0.46
23:BA:896:A:H1'	44:BV:176:PRO:HG3	1.98	0.46
23:BA:1438:U:O2'	23:BA:1439:A:H5'	2.15	0.46
23:BA:1496:A:C8	23:BA:1498:C:N3	2.84	0.46
23:BA:1542:G:H3'	23:BA:1542:G:P	2.55	0.46
23:BA:1717:G:O6	23:BA:1743:G:C6	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1761:C:H5''	23:BA:1762:A:OP2	2.16	0.46
23:BA:1894:C:C2	23:BA:1895:C:C5	3.04	0.46
23:BA:2331:G:H8	23:BA:2331:G:O5'	1.98	0.46
23:BA:2543:G:O4'	23:BA:2766:G:H5'	2.15	0.46
23:BA:2738:A:C2	23:BA:2739:U:H1'	2.50	0.46
23:BA:2846:G:H2'	23:BA:2847:U:O4'	2.14	0.46
25:BC:155:LEU:HD13	25:BC:155:LEU:H	1.80	0.46
26:BD:103:ASP:OD1	26:BD:201:THR:HG23	2.16	0.46
26:BD:117:MET:HE1	26:BD:136:ARG:HA	1.97	0.46
28:BF:25:TYR:CZ	28:BF:32:PRO:HD3	2.51	0.46
30:BH:8:PRO:HA	30:BH:14:ASP:HA	1.98	0.46
35:BM:36:ALA:O	35:BM:100:GLY:N	2.40	0.46
35:BM:125:LEU:HB3	35:BM:126:PRO:HD2	1.97	0.46
36:BN:9:LYS:C	36:BN:10:LEU:CG	2.82	0.46
37:BO:35:ILE:CG1	37:BO:101:LEU:HD23	2.46	0.46
43:BU:96:ILE:HD11	43:BU:99:CYS:HB2	1.97	0.46
44:BV:74:VAL:CG2	44:BV:86:VAL:HG13	2.45	0.46
44:BV:131:ARG:H	44:BV:131:ARG:HD2	1.80	0.46
50:B2:52:TYR:C	50:B2:52:TYR:HD1	2.18	0.46
53:B5:51:ALA:H	53:B5:54:GLU:CB	2.24	0.46
1:CA:90:C:N3	1:CA:91:C:C4	2.83	0.46
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.46	0.46
1:CA:574:A:H1'	1:CA:883:C:O4'	2.15	0.46
1:CA:631:G:N2	1:CA:632:A:C2	2.83	0.46
1:CA:654:G:H1'	1:CA:753:A:N1	2.29	0.46
1:CA:960:U:C6	1:CA:1225:A:C8	3.04	0.46
1:CA:1105:A:C2	1:CA:1106:G:C8	3.03	0.46
1:CA:1221:G:OP1	1:CA:1321:C:N3	2.47	0.46
1:CA:1367:C:N3	1:CA:1368:G:N7	2.63	0.46
4:CD:88:VAL:HG13	5:CE:97:GLY:CA	2.45	0.46
4:CD:110:PHE:HE1	4:CD:148:VAL:HG23	1.80	0.46
4:CD:166:LYS:O	4:CD:166:LYS:HD2	2.15	0.46
5:CE:38:GLN:HG2	5:CE:38:GLN:O	2.15	0.46
5:CE:69:VAL:HG12	5:CE:71:LEU:HG	1.98	0.46
12:CL:125:LYS:HE2	12:CL:127:ALA:H	1.79	0.46
16:CP:68:ASP:C	16:CP:70:ALA:H	2.19	0.46
23:DA:60:G:C6	23:DA:74:A:N6	2.82	0.46
23:DA:189:G:H3'	23:DA:189:G:C8	2.51	0.46
23:DA:414:C:H2'	23:DA:415:A:C8	2.51	0.46
23:DA:534:U:C2'	39:DQ:49:HIS:HD2	2.28	0.46
23:DA:637:A:OP1	34:DL:133:SER:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:775:G:C4	23:DA:794:G:C8	3.04	0.46
23:DA:861:A:O2'	35:DM:18:LYS:NZ	2.46	0.46
23:DA:1027:A:N6	23:DA:1126:A:C4	2.84	0.46
23:DA:1206:G:C6	23:DA:1207:C:C4	3.03	0.46
23:DA:1232:G:C5	23:DA:1233:C:C5	3.04	0.46
23:DA:1471:A:C2	23:DA:1472:A:C8	3.03	0.46
23:DA:1495:A:C4	23:DA:1496:A:C2	3.04	0.46
23:DA:2745:C:C4	23:DA:2746:U:C4	3.02	0.46
24:DB:5:C:O2'	24:DB:27:C:H1'	2.15	0.46
25:DC:172:TYR:CD1	25:DC:186:HIS:CA	2.92	0.46
25:DC:257:LEU:HD23	25:DC:258:LYS:O	2.16	0.46
28:DF:11:TYR:HB2	28:DF:176:LEU:HD21	1.96	0.46
29:DG:62:LYS:O	29:DG:63:SER:C	2.54	0.46
34:DL:122:PRO:HB3	34:DL:141:ALA:O	2.15	0.46
35:DM:141:GLN:OE1	44:DV:97:GLU:O	2.32	0.46
40:DR:22:VAL:O	40:DR:23:GLU:C	2.54	0.46
41:DS:31:GLU:O	41:DS:34:ASN:HB2	2.16	0.46
48:DZ:43:ILE:O	48:DZ:47:VAL:HG23	2.15	0.46
50:D2:52:TYR:C	50:D2:52:TYR:HD1	2.18	0.46
1:AA:142:G:C2	1:AA:143:A:C5	3.03	0.46
1:AA:373:A:C8	1:AA:482:A:C8	3.03	0.46
1:AA:819:A:N6	1:AA:1529:G:C5	2.83	0.46
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.51	0.46
6:AF:97:PHE:HD2	18:AR:31:LEU:HD21	1.80	0.46
11:AK:13:GLN:HG3	11:AK:75:TYR:O	2.16	0.46
12:AL:25:ALA:O	12:AL:26:LEU:HB2	2.15	0.46
13:AM:10:PRO:CG	13:AM:22:ILE:HD11	2.45	0.46
13:AM:56:LEU:O	13:AM:59:TYR:HB3	2.16	0.46
13:AM:71:ARG:O	13:AM:74:VAL:HB	2.15	0.46
23:BA:245:G:C5	23:BA:246:C:C5	3.04	0.46
23:BA:353:G:H2'	23:BA:354:G:H8	1.80	0.46
23:BA:444:C:H4'	27:BE:49:ALA:HB2	1.96	0.46
23:BA:533:G:N3	39:BQ:45:TYR:HE1	2.11	0.46
23:BA:653:C:H6	23:BA:653:C:O5'	1.96	0.46
23:BA:816:C:O2'	23:BA:817:C:H5'	2.16	0.46
23:BA:948:G:C2	23:BA:970:C:O2	2.68	0.46
23:BA:1590:U:O2	23:BA:1591:G:C8	2.68	0.46
23:BA:2078:C:H2'	23:BA:2079:U:C6	2.51	0.46
23:BA:2330:G:H1'	45:BW:41:ARG:HB3	1.96	0.46
28:BF:55:LYS:HD2	28:BF:58:GLN:NE2	2.29	0.46
35:BM:47:ILE:HG22	35:BM:48:GLU:H	1.73	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BM:141:GLN:OE1	44:BV:72:ARG:CZ	2.63	0.46
36:BN:52:ILE:HG21	36:BN:94:TYR:CB	2.44	0.46
44:BV:24:LEU:HD11	44:BV:85:HIS:HA	1.96	0.46
46:BX:13:ILE:O	46:BX:14:VAL:HB	2.16	0.46
47:BY:36:ARG:HA	47:BY:39:ALA:HB2	1.98	0.46
47:BY:49:LYS:H	47:BY:49:LYS:HD2	1.80	0.46
53:B5:57:ARG:HA	53:B5:57:ARG:CZ	2.45	0.46
1:CA:634:C:H2'	1:CA:635:G:H8	1.78	0.46
1:CA:1104:G:N3	1:CA:1105:A:C8	2.84	0.46
1:CA:1114:C:H6	1:CA:1114:C:O5'	1.98	0.46
1:CA:1279:A:O2'	1:CA:1282:C:N4	2.48	0.46
1:CA:1286:A:C8	1:CA:1288:A:OP1	2.69	0.46
1:CA:1379:G:C6	1:CA:1380:U:O4	2.69	0.46
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.15	0.46
4:CD:64:LEU:HB2	4:CD:198:VAL:HG11	1.98	0.46
5:CE:76:ILE:CG1	5:CE:77:PRO:HD2	2.40	0.46
6:CF:5:GLU:OE1	6:CF:62:TRP:CZ2	2.68	0.46
8:CH:25:ASP:C	8:CH:26:VAL:HG12	2.34	0.46
8:CH:113:SER:O	8:CH:114:THR:HG23	2.15	0.46
11:CK:18:ARG:HD2	11:CK:83:ILE:HD11	1.96	0.46
12:CL:52:ARG:HG3	12:CL:52:ARG:NH1	2.20	0.46
19:CS:60:VAL:HG21	19:CS:74:PHE:HB3	1.97	0.46
23:DA:238:C:O2'	23:DA:608:A:H1'	2.15	0.46
23:DA:380:U:O2	23:DA:380:U:H2'	2.13	0.46
23:DA:627:A:C5	23:DA:637:A:N7	2.83	0.46
23:DA:794:G:H2'	23:DA:795:C:C6	2.49	0.46
23:DA:1022:G:H8	32:DJ:92:GLN:NE2	2.12	0.46
23:DA:1324:G:C4	23:DA:1328:G:O6	2.69	0.46
23:DA:1404:C:C2'	23:DA:1405:U:H5'	2.46	0.46
23:DA:1523:U:H2'	23:DA:1524:G:C8	2.51	0.46
23:DA:1557:C:OP2	23:DA:1558:A:O2'	2.25	0.46
23:DA:2436:G:C4	23:DA:2437:U:C6	3.03	0.46
23:DA:2557:G:H2'	23:DA:2558:C:C6	2.50	0.46
23:DA:2572:A:C8	26:DD:144:ARG:HB3	2.50	0.46
23:DA:2809:A:C2	23:DA:2892:A:C4	3.03	0.46
26:DD:9:VAL:HG22	26:DD:25:VAL:HB	1.98	0.46
27:DE:68:LYS:C	27:DE:70:THR:H	2.19	0.46
27:DE:118:ALA:HB2	27:DE:123:LEU:HD23	1.97	0.46
28:DF:33:ARG:HD3	28:DF:162:THR:HG21	1.98	0.46
29:DG:151:ILE:HD13	29:DG:151:ILE:H	1.78	0.46
33:DK:2:ILE:CD1	33:DK:82:ASN:HD22	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DM:6:ARG:HE	35:DM:6:ARG:HB2	1.56	0.46
35:DM:38:GLU:HB2	35:DM:127:ILE:HG12	1.97	0.46
38:DP:96:ARG:CZ	38:DP:96:ARG:HB2	2.45	0.46
39:DQ:79:PHE:CE2	39:DQ:106:PHE:CZ	3.04	0.46
40:DR:2:PHE:CE2	40:DR:13:ARG:CD	2.88	0.46
42:DT:43:VAL:HG11	42:DT:81:VAL:HG11	1.97	0.46
44:DV:108:PRO:HG3	44:DV:141:VAL:HG22	1.96	0.46
44:DV:125:LEU:HD23	44:DV:126:VAL:N	2.31	0.46
45:DW:26:TYR:HB2	45:DW:29:GLN:NE2	2.30	0.46
1:AA:117:G:H2'	1:AA:118:U:O4'	2.16	0.46
1:AA:186(D):G:N1	1:AA:186(E):C:C4	2.84	0.46
1:AA:645:C:C2'	1:AA:646:U:H5'	2.45	0.46
1:AA:757:U:H2'	1:AA:758:G:O4'	2.15	0.46
1:AA:946:A:H61	1:AA:1235:U:H3	1.63	0.46
1:AA:1238:A:N3	1:AA:1238:A:H2'	2.30	0.46
1:AA:1244:C:H2'	1:AA:1245:A:H8	1.80	0.46
4:AD:135:LEU:N	4:AD:135:LEU:HD13	2.30	0.46
5:AE:72:GLN:O	5:AE:73:ASN:HB3	2.16	0.46
6:AF:41:GLU:O	6:AF:43:LEU:N	2.49	0.46
9:AI:58:ARG:NH2	9:AI:59:PHE:HE1	2.14	0.46
16:AP:5:ARG:CB	16:AP:67:THR:OG1	2.63	0.46
23:BA:188:G:C2'	23:BA:189:G:H5'	2.45	0.46
23:BA:363(B):A:C2	23:BA:363(C):G:C5	3.04	0.46
23:BA:580:C:O2'	23:BA:581:C:H5'	2.15	0.46
23:BA:997:G:H2'	23:BA:998:C:H5'	1.97	0.46
23:BA:1024:G:OP2	23:BA:1025:G:H3'	2.15	0.46
23:BA:1203:G:H3'	23:BA:1204:A:C5'	2.45	0.46
23:BA:2287:A:C2	23:BA:2289:G:C8	3.04	0.46
23:BA:2807:G:N1	23:BA:2893:G:O6	2.48	0.46
25:BC:159:ALA:HB1	25:BC:198:ASN:O	2.16	0.46
25:BC:175:LEU:HD23	25:BC:175:LEU:HA	1.76	0.46
26:BD:181:LEU:HD12	26:BD:181:LEU:HA	1.73	0.46
33:BK:28:SER:O	33:BK:29:ASN:HB3	2.15	0.46
34:BL:10:PRO:HD2	34:BL:11:GLY:H	1.81	0.46
34:BL:75:ILE:HD12	34:BL:75:ILE:N	2.30	0.46
35:BM:73:PRO:HB3	35:BM:93:TYR:CE2	2.50	0.46
36:BN:54:LEU:CD2	36:BN:62:ALA:HB1	2.45	0.46
37:BO:14:VAL:O	37:BO:18:ILE:HG12	2.16	0.46
40:BR:45:THR:O	40:BR:46:VAL:HG22	2.16	0.46
43:BU:81:LYS:HD3	43:BU:97:ARG:CB	2.42	0.46
45:BW:36:ILE:HD12	45:BW:58:THR:CG2	2.42	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BZ:5:LYS:HE2	48:BZ:34:GLU:OE1	2.16	0.46
53:B5:7:HIS:CB	53:B5:60:LEU:HB3	2.46	0.46
53:B5:22:VAL:HB	53:B5:54:GLU:CG	2.43	0.46
1:CA:278:G:OP2	17:CQ:41:LYS:CE	2.64	0.46
1:CA:382:A:C2	1:CA:383:A:C4	3.04	0.46
1:CA:515:G:C2	1:CA:537:G:N3	2.83	0.46
1:CA:599:C:H4'	8:CH:130:GLY:C	2.35	0.46
1:CA:642:A:C2'	8:CH:113:SER:OG	2.64	0.46
1:CA:789:U:O5'	1:CA:789:U:H6	1.99	0.46
1:CA:946:A:H2'	1:CA:947:G:C8	2.50	0.46
1:CA:1107:C:N3	1:CA:1108:G:C8	2.84	0.46
1:CA:1117:G:N2	1:CA:1180:A:H1'	2.23	0.46
1:CA:1145:C:H4'	1:CA:1146:A:C8	2.49	0.46
1:CA:1401:G:C2	1:CA:1402:C:H1'	2.50	0.46
2:CB:47:THR:HA	2:CB:202:PRO:HG2	1.97	0.46
3:CC:112:SER:O	3:CC:116:VAL:HG23	2.15	0.46
4:CD:75:PHE:CZ	4:CD:93:PHE:CZ	3.04	0.46
5:CE:48:ALA:C	5:CE:50:GLU:H	2.19	0.46
7:CG:50:ILE:HB	7:CG:58:PRO:HG3	1.98	0.46
8:CH:51:VAL:HG21	8:CH:60:ARG:HG2	1.98	0.46
8:CH:54:ASP:C	8:CH:56:LYS:H	2.19	0.46
9:CI:28:VAL:CG2	9:CI:63:ILE:HB	2.44	0.46
11:CK:87:THR:HA	11:CK:91:ARG:HH21	1.79	0.46
17:CQ:59:ILE:CG2	17:CQ:71:PHE:CD1	2.99	0.46
18:CR:56:THR:O	18:CR:58:LEU:HD12	2.16	0.46
19:CS:29:ARG:HD2	19:CS:30:LEU:N	2.30	0.46
22:CV:6190:U:O4	22:CV:6191:A:N6	2.48	0.46
23:DA:491:G:O6	41:DS:49:LYS:HD3	2.15	0.46
23:DA:737:C:H2'	23:DA:738:G:C5'	2.42	0.46
23:DA:809:G:O2'	23:DA:810:U:H5'	2.15	0.46
23:DA:991:C:C5	23:DA:1185:C:N3	2.84	0.46
23:DA:1127:A:H2'	23:DA:1128:A:H5''	1.97	0.46
23:DA:1309:G:P	52:D4:9:ARG:HD2	2.56	0.46
23:DA:1414:G:N2	23:DA:1589:C:C2	2.84	0.46
23:DA:2038:G:C5	23:DA:2039:C:C4	3.03	0.46
23:DA:2226:C:O5'	23:DA:2226:C:H6	1.99	0.46
23:DA:2361:A:H5'	53:D5:27:THR:OG1	2.15	0.46
23:DA:2591:C:H2'	23:DA:2592:G:H8	1.79	0.46
23:DA:2784:C:H2'	23:DA:2785:C:H6	1.81	0.46
28:DF:121:ASN:HD22	28:DF:122:PRO:HD2	1.80	0.46
28:DF:131:TYR:HD2	28:DF:133:LEU:HD22	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:16:SER:HB2	29:DG:27:LYS:HB2	1.98	0.46
29:DG:98:LEU:HB2	29:DG:125:VAL:CG2	2.46	0.46
36:DN:9:LYS:HG2	36:DN:43:GLU:OE2	2.15	0.46
38:DP:3:ARG:HD2	38:DP:6:LEU:HD23	1.97	0.46
44:DV:3:TYR:O	44:DV:57:ILE:HA	2.16	0.46
53:D5:32:LEU:HD23	53:D5:32:LEU:N	2.30	0.46
1:AA:41:G:O6	1:AA:401:C:N3	2.49	0.46
1:AA:160:A:N7	1:AA:161:A:C5	2.84	0.46
1:AA:198:G:O2'	1:AA:199:G:H5'	2.16	0.46
1:AA:300:A:C8	1:AA:300:A:C3'	2.98	0.46
1:AA:670:G:N2	1:AA:736:C:O2	2.47	0.46
1:AA:976:G:C8	1:AA:1358:U:C2'	2.97	0.46
1:AA:1279:A:O2'	1:AA:1282:C:N4	2.48	0.46
1:AA:1286:A:C8	1:AA:1288:A:OP1	2.69	0.46
1:AA:1508:G:H2'	1:AA:1509:C:C6	2.51	0.46
2:AB:91:PRO:CB	2:AB:154:LEU:HD11	2.46	0.46
2:AB:91:PRO:HB3	2:AB:154:LEU:HD11	1.98	0.46
8:AH:137:VAL:HG12	8:AH:138:TRP:N	2.31	0.46
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.97	0.46
12:AL:88:ARG:NH1	12:AL:90:LYS:HD3	2.31	0.46
15:AO:53:HIS:HE1	23:BA:715:G:C6	2.34	0.46
19:AS:52:TYR:CE1	19:AS:56:GLN:HA	2.51	0.46
19:AS:60:VAL:HG21	19:AS:74:PHE:HB3	1.97	0.46
23:BA:380:U:H4'	46:BX:21:ARG:O	2.15	0.46
23:BA:497:A:C6	23:BA:498:G:C5	3.04	0.46
23:BA:732:C:C2'	23:BA:733:G:H5'	2.45	0.46
23:BA:923:C:O2'	23:BA:924:C:H5'	2.16	0.46
23:BA:1289:C:H2'	23:BA:1290:C:C6	2.51	0.46
23:BA:1828:G:OP2	25:BC:239:ARG:CZ	2.64	0.46
23:BA:1844:C:O3'	25:BC:258:LYS:NZ	2.45	0.46
23:BA:2100:G:N2	23:BA:2101:G:N3	2.63	0.46
23:BA:2276:G:C2'	23:BA:2277:G:H5'	2.45	0.46
23:BA:2406:U:O4	34:BL:70:GLN:HB3	2.16	0.46
23:BA:2416:C:C2	23:BA:2417:C:C5	3.03	0.46
25:BC:105:ILE:HD13	25:BC:106:ILE:N	2.30	0.46
26:BD:169:ASN:HD22	26:BD:169:ASN:C	2.19	0.46
27:BE:89:VAL:O	27:BE:91:GLY:N	2.44	0.46
28:BF:58:GLN:O	28:BF:61:ALA:HB3	2.15	0.46
28:BF:60:LEU:HA	28:BF:63:ILE:HD11	1.97	0.46
28:BF:77:ILE:CG2	28:BF:80:PHE:H	2.23	0.46
28:BF:111:LEU:HA	28:BF:114:ILE:CD1	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:126:ASP:O	28:BF:128:ARG:N	2.42	0.46
32:BJ:36:TRP:N	32:BJ:36:TRP:CD1	2.81	0.46
36:BN:85:PRO:HA	36:BN:88:ARG:NH1	2.30	0.46
38:BP:41:ARG:HH11	38:BP:41:ARG:CB	2.29	0.46
40:BR:5:VAL:HG11	40:BR:14:VAL:HG21	1.98	0.46
40:BR:24:LYS:HA	40:BR:92:THR:CG2	2.41	0.46
40:BR:100:ARG:O	40:BR:100:ARG:CG	2.56	0.46
42:BT:18:TYR:N	42:BT:18:TYR:CD1	2.83	0.46
44:BV:144:LEU:HB3	44:BV:174:VAL:HG21	1.97	0.46
47:BY:1:MET:SD	47:BY:5:GLU:OE2	2.73	0.46
1:CA:262:A:H5'	20:CT:74:LYS:HG3	1.98	0.46
1:CA:321:A:O2'	1:CA:322:C:H5'	2.16	0.46
1:CA:451:A:C8	1:CA:481:G:C6	3.04	0.46
1:CA:527:G:H2'	1:CA:528:C:H5'	1.97	0.46
1:CA:551:U:H5'	12:CL:118:LYS:HZ3	1.80	0.46
1:CA:575:G:C8	1:CA:881:G:N2	2.83	0.46
1:CA:645:C:H2'	1:CA:646:U:O4'	2.16	0.46
1:CA:722:A:H2'	1:CA:724:G:C8	2.50	0.46
1:CA:1074:G:N3	1:CA:1102:A:C2	2.84	0.46
1:CA:1371:G:O3'	9:CI:69:GLY:HA3	2.15	0.46
1:CA:1386:G:C2	1:CA:1387:G:N7	2.83	0.46
1:CA:1399:C:C4	1:CA:1502:A:N1	2.83	0.46
2:CB:71:VAL:CG2	2:CB:164:VAL:HG13	2.38	0.46
3:CC:30:ARG:O	3:CC:34:LEU:HB2	2.15	0.46
7:CG:31:MET:CG	7:CG:35:LYS:H	2.28	0.46
12:CL:38:VAL:HG12	12:CL:39:VAL:H	1.81	0.46
14:CN:42:ILE:H	14:CN:42:ILE:HG12	1.60	0.46
19:CS:61:TYR:CG	19:CS:62:ILE:N	2.84	0.46
20:CT:73:HIS:CD2	20:CT:74:LYS:H	2.33	0.46
20:CT:84:LEU:HD13	20:CT:84:LEU:C	2.36	0.46
23:DA:448:U:H1'	27:DE:84:VAL:HG21	1.96	0.46
23:DA:493:G:H2'	23:DA:494:G:O4'	2.16	0.46
23:DA:1001:A:H2'	23:DA:1002:G:O4'	2.16	0.46
23:DA:1323:U:H2'	23:DA:1324:G:H5'	1.97	0.46
23:DA:1349:A:N6	23:DA:1598:C:N4	2.64	0.46
23:DA:1354:A:C8	23:DA:1355:G:C8	3.03	0.46
23:DA:1401:G:C5	23:DA:1402:C:C5	3.03	0.46
23:DA:1582:C:O5'	23:DA:1582:C:H6	1.98	0.46
23:DA:1639:U:H4'	23:DA:2699:C:H4'	1.98	0.46
23:DA:1904:G:C2'	23:DA:1905:C:H5'	2.46	0.46
23:DA:2495:G:H2'	23:DA:2496:C:O5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2718:G:C2'	23:DA:2719:G:O5'	2.64	0.46
25:DC:61:LEU:HB3	25:DC:63:ARG:NH1	2.30	0.46
25:DC:69:ARG:NH2	25:DC:128:GLY:O	2.49	0.46
25:DC:231:HIS:HD2	25:DC:249:PRO:CA	2.18	0.46
27:DE:144:LYS:O	27:DE:146:ALA:N	2.43	0.46
30:DH:66:GLU:HB3	30:DH:67:ARG:NH1	2.31	0.46
33:DK:88:ASN:HB3	33:DK:92:GLU:H	1.80	0.46
33:DK:96:THR:O	33:DK:97:ARG:C	2.54	0.46
34:DL:115:LEU:HA	34:DL:134:ALA:HB2	1.96	0.46
35:DM:34:LEU:HD11	35:DM:129:THR:HB	1.98	0.46
35:DM:34:LEU:HD12	35:DM:130:LYS:O	2.16	0.46
39:DQ:36:ARG:HD3	39:DQ:40:PHE:CE1	2.50	0.46
40:DR:12:TYR:CZ	40:DR:22:VAL:HG22	2.50	0.46
40:DR:38:LEU:HD12	40:DR:57:VAL:HG12	1.98	0.46
1:AA:104:G:C2	1:AA:105:G:N7	2.84	0.46
1:AA:450:G:C8	1:AA:481:G:C6	3.04	0.46
1:AA:643:C:H5'	8:AH:31:PHE:CD1	2.51	0.46
1:AA:671:G:C4	1:AA:672:U:C6	3.03	0.46
1:AA:697:U:H2'	1:AA:698:G:H5'	1.98	0.46
1:AA:974:A:OP2	14:AN:41:ARG:NH1	2.49	0.46
1:AA:1054:C:O2'	1:AA:1055:A:H5''	2.15	0.46
1:AA:1054:C:H6	1:AA:1196:U:O2	1.99	0.46
1:AA:1298:C:H4'	1:AA:1299:A:C4	2.50	0.46
1:AA:1330:U:O4	1:AA:1331:G:C2	2.69	0.46
1:AA:1372:U:C5	1:AA:1373:G:C5	3.03	0.46
1:AA:1501:C:C5	1:AA:1504:G:C4	3.04	0.46
4:AD:8:VAL:O	4:AD:10:ARG:N	2.48	0.46
10:AJ:56:HIS:O	10:AJ:58:ASP:N	2.46	0.46
10:AJ:58:ASP:C	10:AJ:60:ARG:N	2.68	0.46
11:AK:59:TYR:O	11:AK:62:GLN:HB3	2.16	0.46
12:AL:53:LYS:N	12:AL:53:LYS:HD2	2.31	0.46
19:AS:40:ILE:CD1	19:AS:62:ILE:HD11	2.46	0.46
20:AT:73:HIS:CD2	20:AT:74:LYS:H	2.34	0.46
23:BA:26:G:H1'	23:BA:514:A:N6	2.31	0.46
23:BA:79:G:H1	23:BA:107:C:H42	1.62	0.46
23:BA:844:C:C2'	23:BA:845:G:H5'	2.46	0.46
23:BA:1826:G:C4'	25:BC:242:ARG:HE	2.13	0.46
23:BA:2335:A:N7	23:BA:2337:G:C5	2.84	0.46
23:BA:2784:C:H2'	23:BA:2785:C:H6	1.81	0.46
24:BB:10:C:N3	24:BB:11:C:C5	2.83	0.46
25:BC:44:ASN:CG	25:BC:45:ASN:H	2.17	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:105:ILE:HD11	25:BC:192:THR:HG21	1.98	0.46
25:BC:257:LEU:HD23	25:BC:258:LYS:O	2.15	0.46
26:BD:5:LEU:C	26:BD:51:PHE:HE2	2.18	0.46
26:BD:59:VAL:C	26:BD:61:ARG:H	2.19	0.46
27:BE:33:LEU:HA	27:BE:33:LEU:HD12	1.68	0.46
27:BE:205:ARG:C	27:BE:206:ILE:HG13	2.36	0.46
29:BG:28:GLY:HA3	29:BG:79:VAL:HB	1.96	0.46
33:BK:31:LYS:HB3	33:BK:32:TYR:CD1	2.50	0.46
33:BK:63:VAL:HG23	33:BK:64:ARG:HG3	1.97	0.46
33:BK:86:ILE:HD12	33:BK:86:ILE:N	2.30	0.46
34:BL:101:VAL:CB	34:BL:106:LEU:HB3	2.43	0.46
35:BM:97:VAL:HG12	35:BM:97:VAL:O	2.14	0.46
37:BO:87:PHE:CD1	37:BO:102:ALA:HB2	2.50	0.46
41:BS:24:ILE:CG2	41:BS:36:LEU:HD21	2.46	0.46
42:BT:23:GLU:HG3	42:BT:24:GLY:H	1.80	0.46
43:BU:71:LYS:HB2	43:BU:71:LYS:HZ3	1.81	0.46
44:BV:134:PRO:C	44:BV:136:PHE:N	2.69	0.46
1:CA:321:A:C2	1:CA:333:G:N2	2.84	0.46
1:CA:375:U:C2'	1:CA:376:G:H5'	2.46	0.46
1:CA:413:G:H22	1:CA:429:U:P	2.39	0.46
1:CA:794:A:H4'	1:CA:1521:G:O2'	2.15	0.46
1:CA:825:G:N2	8:CH:11:THR:HG21	2.30	0.46
1:CA:950:U:O2'	1:CA:951:G:H5'	2.15	0.46
1:CA:1161:C:H2'	1:CA:1162:C:C6	2.50	0.46
1:CA:1366:C:OP1	9:CI:117:HIS:CE1	2.69	0.46
7:CG:44:TYR:O	7:CG:47:CYS:HB2	2.16	0.46
10:CJ:49:VAL:HG23	14:CN:34:TYR:OH	2.15	0.46
18:CR:88:LYS:OXT	18:CR:88:LYS:HG3	2.15	0.46
21:CU:14:TRP:CE3	21:CU:15:ARG:HG2	2.51	0.46
23:DA:8:A:C6	23:DA:9:U:O4	2.69	0.46
23:DA:270(S):G:H2'	23:DA:270(T):G:H8	1.81	0.46
23:DA:374:A:C2	23:DA:401:A:C4	3.04	0.46
23:DA:723:G:H2'	23:DA:724:U:O4'	2.16	0.46
23:DA:844:C:O2'	23:DA:845:G:H5'	2.16	0.46
23:DA:908:C:O2'	23:DA:909:A:H5'	2.16	0.46
23:DA:1301:A:H2	23:DA:1626:G:N3	2.14	0.46
23:DA:1540:G:C4	23:DA:1541:U:C6	3.03	0.46
23:DA:1670:C:OP2	23:DA:2550:G:OP1	2.34	0.46
23:DA:1903:G:OP2	25:DC:241:PRO:HB3	2.16	0.46
23:DA:2075:U:H2'	23:DA:2238:G:N2	2.31	0.46
23:DA:2276:G:C2'	23:DA:2277:G:H5'	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2462:U:H2'	23:DA:2463:C:O4'	2.16	0.46
23:DA:2584:U:H5''	23:DA:2585:U:OP2	2.15	0.46
24:DB:13:A:O4'	45:DW:74:ARG:NH2	2.49	0.46
24:DB:73:A:C4	24:DB:104:A:C2	3.04	0.46
25:DC:77:ALA:HB2	25:DC:97:TYR:CG	2.51	0.46
25:DC:143:HIS:HD2	25:DC:144:ALA:HB2	1.78	0.46
25:DC:182:LEU:HD23	25:DC:182:LEU:HA	1.50	0.46
28:DF:44:GLY:O	28:DF:47:LYS:HB2	2.16	0.46
30:DH:82:ARG:HB3	30:DH:89:TYR:CB	2.46	0.46
35:DM:141:GLN:OE1	44:DV:72:ARG:CZ	2.64	0.46
42:DT:63:LYS:CE	42:DT:72:LYS:HB3	2.45	0.46
47:DY:57:ILE:O	47:DY:61:LEU:HB2	2.15	0.46
50:D2:33:CYS:HB2	50:D2:34:PRO:HD2	1.97	0.46
1:AA:109:A:N6	1:AA:326:G:C6	2.83	0.46
1:AA:195:A:C5	1:AA:196:A:N1	2.84	0.46
1:AA:392:G:C4	1:AA:393:A:N7	2.84	0.46
1:AA:593:G:C2	1:AA:594:G:C4	3.03	0.46
1:AA:1461:G:H8	1:AA:1461:G:O5'	1.98	0.46
4:AD:3:ARG:O	4:AD:5:ILE:N	2.49	0.46
4:AD:88:VAL:HG13	5:AE:97:GLY:HA3	1.96	0.46
4:AD:190:ASP:O	4:AD:194:LEU:HD23	2.15	0.46
5:AE:60:TYR:C	5:AE:60:TYR:CD1	2.88	0.46
9:AI:58:ARG:NH2	9:AI:59:PHE:CE1	2.83	0.46
13:AM:70:LEU:HD23	13:AM:70:LEU:C	2.36	0.46
14:AN:4:LYS:O	14:AN:7:ILE:HG13	2.16	0.46
15:AO:17:ARG:NH1	15:AO:77:ARG:HH12	2.13	0.46
15:AO:60:VAL:HG11	23:BA:715:G:O4'	2.16	0.46
16:AP:5:ARG:HB2	16:AP:67:THR:HG1	1.80	0.46
19:AS:11:VAL:HG23	19:AS:38:SER:HB2	1.97	0.46
20:AT:86:ARG:O	20:AT:90:GLN:HG3	2.16	0.46
23:BA:912:C:O2	23:BA:912:C:C2'	2.63	0.46
23:BA:1144:G:C4	23:BA:1145:C:C5	3.03	0.46
23:BA:1519:G:O2'	23:BA:1520:U:H5'	2.16	0.46
23:BA:1614:A:C6	41:BS:87:PRO:HB3	2.50	0.46
23:BA:1657:C:O2'	23:BA:1658:C:H5'	2.16	0.46
23:BA:1687:G:H2'	23:BA:1688:U:H6	1.81	0.46
23:BA:2084:C:O2'	23:BA:2085:C:H5'	2.16	0.46
23:BA:2092:U:C4	23:BA:2226:C:OP2	2.68	0.46
23:BA:2408:U:O5'	23:BA:2408:U:H6	1.99	0.46
23:BA:2562:U:C2'	23:BA:2563:U:H5'	2.45	0.46
23:BA:2836:U:C5	23:BA:2883:A:N6	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BB:76:G:OP1	44:BV:15:PRO:HG3	2.15	0.46
25:BC:36:PRO:HA	25:BC:62:TYR:O	2.16	0.46
25:BC:74:GLY:O	25:BC:76:PRO:HD3	2.16	0.46
27:BE:74:ARG:O	27:BE:74:ARG:HG2	2.14	0.46
28:BF:133:LEU:HD21	28:BF:157:ILE:HG13	1.98	0.46
29:BG:92:ILE:CG2	29:BG:93:GLY:N	2.74	0.46
33:BK:88:ASN:HB3	33:BK:92:GLU:H	1.80	0.46
35:BM:24:GLY:HA2	35:BM:100:GLY:O	2.16	0.46
36:BN:9:LYS:HG2	36:BN:43:GLU:OE2	2.16	0.46
36:BN:47:PHE:O	36:BN:51:LEU:HD12	2.16	0.46
38:BP:13:ARG:C	38:BP:15:VAL:H	2.19	0.46
50:B2:32:PRO:HA	50:B2:38:ALA:O	2.15	0.46
51:B3:44:ARG:O	51:B3:45:LYS:HG2	2.15	0.46
52:B4:31:LEU:HD12	52:B4:31:LEU:HA	1.68	0.46
1:CA:47:C:O2	1:CA:49:U:C5	2.69	0.46
1:CA:130:A:OP2	1:CA:189:U:C2	2.69	0.46
1:CA:376:G:N3	1:CA:377:G:C8	2.83	0.46
1:CA:590:C:OP1	8:CH:29:SER:HA	2.16	0.46
1:CA:927:G:N1	1:CA:1391:U:C2	2.84	0.46
1:CA:1060:C:O2	1:CA:1198:G:C2	2.68	0.46
1:CA:1226:C:C2'	13:CM:103:THR:HB	2.43	0.46
1:CA:1446:A:N1	38:DP:118:ARG:CZ	2.78	0.46
4:CD:23:GLY:HA3	4:CD:112:VAL:CG2	2.46	0.46
4:CD:79:PHE:O	4:CD:82:ALA:HB3	2.16	0.46
4:CD:119:GLN:O	4:CD:123:HIS:CD2	2.68	0.46
5:CE:110:LEU:O	5:CE:115:VAL:HG23	2.16	0.46
7:CG:148:ASN:C	7:CG:150:ALA:H	2.19	0.46
12:CL:78:GLU:O	12:CL:78:GLU:CD	2.54	0.46
13:CM:32:GLU:CD	13:CM:64:TRP:CH2	2.89	0.46
13:CM:94:ARG:NH2	19:CS:80:TYR:HE2	2.14	0.46
16:CP:6:LEU:HB3	16:CP:17:TYR:HB3	1.97	0.46
18:CR:54:ARG:H	18:CR:54:ARG:CD	2.24	0.46
23:DA:363(B):A:C2	23:DA:363(C):G:C5	3.03	0.46
23:DA:646:A:H2'	23:DA:647:G:O5'	2.16	0.46
23:DA:1127:A:C2'	23:DA:1128:A:H5''	2.46	0.46
23:DA:1577:C:H2'	23:DA:1578:U:C1'	2.46	0.46
23:DA:1775:U:H2'	23:DA:1776:G:O5'	2.15	0.46
23:DA:1902:C:H2'	23:DA:1903:G:O5'	2.15	0.46
23:DA:2026:C:C4	23:DA:2027:G:N7	2.84	0.46
23:DA:2050:C:C2'	23:DA:2051:A:O5'	2.64	0.46
23:DA:2550:G:C5	23:DA:2551:C:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2892:A:C2'	23:DA:2893:G:H5'	2.45	0.46
24:DB:104:A:O4'	44:DV:29:TYR:CE1	2.66	0.46
27:DE:53:THR:C	27:DE:55:GLY:H	2.18	0.46
30:DH:98:ALA:HB1	30:DH:109:ILE:HG12	1.98	0.46
30:DH:110:ASP:OD2	30:DH:113:ARG:HG3	2.16	0.46
33:DK:22:ILE:HD13	33:DK:22:ILE:HA	1.42	0.46
38:DP:84:GLN:HG3	38:DP:85:LYS:HG3	1.98	0.46
43:DU:11:ASP:H	43:DU:27:VAL:HG22	1.81	0.46
44:DV:102:LEU:HD23	44:DV:137:ILE:HB	1.96	0.46
1:AA:194:C:O2'	20:AT:68:LYS:HD3	2.15	0.46
1:AA:434:U:H2'	1:AA:435:C:C6	2.50	0.46
1:AA:638:G:C6	1:AA:639:G:N7	2.83	0.46
1:AA:1150:U:H5''	1:AA:1151:A:OP2	2.15	0.46
1:AA:1311:G:H1	1:AA:1326:C:N4	2.13	0.46
1:AA:1347:G:C2	1:AA:1373:G:C5	3.04	0.46
1:AA:1441:G:H8	1:AA:1441:G:O5'	1.99	0.46
4:AD:4:TYR:OH	4:AD:66:ARG:HG2	2.15	0.46
4:AD:76:ARG:NH2	4:AD:80:GLU:OE1	2.49	0.46
5:AE:13:ILE:HA	5:AE:29:GLY:O	2.15	0.46
7:AG:106:GLN:O	7:AG:110:GLN:HG3	2.16	0.46
13:AM:3:ARG:HA	13:AM:9:ILE:HG12	1.97	0.46
15:AO:25:THR:OG1	15:AO:26:GLU:N	2.49	0.46
15:AO:39:LEU:HD23	15:AO:39:LEU:HA	1.80	0.46
16:AP:3:LYS:O	16:AP:21:VAL:HA	2.16	0.46
18:AR:53:ARG:O	18:AR:55:ARG:N	2.49	0.46
19:AS:29:ARG:HD2	19:AS:30:LEU:N	2.30	0.46
19:AS:61:TYR:CG	19:AS:62:ILE:N	2.82	0.46
19:AS:66:MET:HB3	19:AS:74:PHE:CZ	2.51	0.46
20:AT:22:ARG:O	20:AT:26:ASN:ND2	2.49	0.46
23:BA:8:A:C5	23:BA:9:U:C4	3.04	0.46
23:BA:95:G:HO2'	47:BY:48:HIS:CE1	2.28	0.46
23:BA:1239:G:C6	23:BA:1240:U:C4	3.04	0.46
23:BA:1360:A:C5'	23:BA:1361:G:OP2	2.64	0.46
23:BA:1465:G:N2	23:BA:1466:G:H1'	2.30	0.46
23:BA:1503:U:N3	23:BA:1504:C:N4	2.64	0.46
23:BA:1577:C:H5''	23:BA:1578:U:OP2	2.16	0.46
23:BA:2257:U:O2'	23:BA:2258:C:H5'	2.15	0.46
24:BB:19:G:N2	24:BB:65:C:C2	2.83	0.46
29:BG:98:LEU:HB2	29:BG:125:VAL:CG2	2.46	0.46
29:BG:138:LYS:O	29:BG:139:GLN:C	2.54	0.46
30:BH:88:ILE:CG1	30:BH:123:LEU:HA	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BJ:38:LEU:C	32:BJ:39:ILE:HG12	2.36	0.46
32:BJ:109:PRO:HG2	32:BJ:112:LYS:HB2	1.98	0.46
32:BJ:110:LEU:O	32:BJ:113:MET:HB2	2.15	0.46
36:BN:39:PRO:O	36:BN:40:LYS:C	2.54	0.46
38:BP:88:ILE:CG1	38:BP:89:VAL:N	2.78	0.46
39:BQ:62:ILE:N	39:BQ:62:ILE:HD13	2.30	0.46
39:BQ:79:PHE:CD1	39:BQ:79:PHE:O	2.69	0.46
39:BQ:111:GLU:HA	39:BQ:114:LYS:HB2	1.98	0.46
42:BT:14:SER:OG	42:BT:17:ALA:HB2	2.16	0.46
45:BW:55:ARG:NH1	45:BW:55:ARG:HB3	2.31	0.46
1:CA:66:G:H5'	1:CA:173:U:O4	2.15	0.46
1:CA:88:C:H2'	1:CA:89:U:O4'	2.16	0.46
1:CA:522:C:O2'	1:CA:523:A:H5'	2.16	0.46
1:CA:556:C:O2	1:CA:557:G:O4'	2.34	0.46
1:CA:611:A:H61	1:CA:629:G:H1	1.64	0.46
1:CA:757:U:H2'	1:CA:758:G:O4'	2.16	0.46
1:CA:783:C:H2'	1:CA:784:C:H6	1.79	0.46
1:CA:937:A:C2	1:CA:1379:G:C6	3.04	0.46
1:CA:1054:C:H6	1:CA:1196:U:O2	1.99	0.46
1:CA:1102:A:C5	1:CA:1103:C:C5	3.04	0.46
1:CA:1118:C:O4'	1:CA:1179:A:C4	2.69	0.46
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.51	0.46
2:CB:70:PHE:CD2	2:CB:163:PHE:HB3	2.51	0.46
3:CC:73:PRO:O	3:CC:76:VAL:HG22	2.16	0.46
4:CD:152:SER:O	4:CD:153:ARG:C	2.54	0.46
8:CH:97:VAL:CG1	8:CH:98:LYS:N	2.79	0.46
10:CJ:34:VAL:CG1	10:CJ:74:ILE:HG22	2.45	0.46
13:CM:86:CYS:HA	19:CS:73:GLU:O	2.16	0.46
16:CP:12:LYS:O	16:CP:13:HIS:HB2	2.16	0.46
17:CQ:31:LEU:O	17:CQ:31:LEU:HG	2.16	0.46
20:CT:13:LEU:O	20:CT:16:HIS:N	2.48	0.46
20:CT:30:LYS:O	20:CT:33:ILE:HB	2.16	0.46
20:CT:82:SER:O	20:CT:86:ARG:CB	2.64	0.46
22:CV:6193:U:C5	22:CV:6194:C:C5	3.04	0.46
23:DA:270(Z):G:C2	23:DA:271(A):U:O4	2.69	0.46
23:DA:629:G:H2'	23:DA:630:G:C8	2.51	0.46
23:DA:948:G:OP1	23:DA:962:G:OP1	2.34	0.46
23:DA:2495:G:C2'	23:DA:2496:C:O5'	2.63	0.46
23:DA:2630:G:H1'	23:DA:2894:G:H1'	1.97	0.46
23:DA:2729:G:C5	23:DA:2730:C:C5	3.04	0.46
24:DB:82:G:C2'	24:DB:83:G:H5'	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:68:LYS:H	27:DE:70:THR:HG22	1.80	0.46
28:DF:60:LEU:HA	28:DF:63:ILE:HG12	1.97	0.46
30:DH:51:ILE:HG22	30:DH:52:ARG:N	2.30	0.46
33:DK:2:ILE:CD1	33:DK:82:ASN:ND2	2.79	0.46
33:DK:3:GLN:HG3	33:DK:4:PRO:HD2	1.97	0.46
35:DM:141:GLN:OXT	44:DV:53:ILE:O	2.34	0.46
36:DN:4:LEU:C	36:DN:6:SER:H	2.19	0.46
36:DN:40:LYS:HB2	36:DN:40:LYS:HE3	1.77	0.46
36:DN:116:LEU:HD23	36:DN:116:LEU:HA	1.61	0.46
37:DO:98:VAL:O	37:DO:101:LEU:HB3	2.15	0.46
40:DR:1:MET:N	40:DR:16:PRO:HD3	2.30	0.46
42:DT:35:THR:HB	42:DT:38:GLU:H	1.81	0.46
44:DV:178:GLU:O	44:DV:178:GLU:HG3	2.16	0.46
53:D5:7:HIS:CD2	53:D5:60:LEU:HD13	2.51	0.46
1:AA:360:A:H2'	1:AA:361:G:C8	2.51	0.46
1:AA:433:C:C6	1:AA:434:U:H5	2.34	0.46
1:AA:649:G:N3	1:AA:650:G:C8	2.83	0.46
1:AA:950:U:O2'	1:AA:951:G:H5'	2.15	0.46
1:AA:1309:G:N2	1:AA:1329:A:H1'	2.30	0.46
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.16	0.46
2:AB:63:MET:C	2:AB:65:GLY:H	2.19	0.46
4:AD:108:LEU:HB3	4:AD:110:PHE:CD2	2.49	0.46
4:AD:119:GLN:O	4:AD:123:HIS:CD2	2.69	0.46
5:AE:38:GLN:HG2	5:AE:38:GLN:O	2.15	0.46
7:AG:115:ARG:O	7:AG:119:ARG:HG3	2.16	0.46
11:AK:32:ILE:HD11	11:AK:68:ALA:HB1	1.97	0.46
12:AL:89:VAL:O	12:AL:90:LYS:C	2.52	0.46
15:AO:42:HIS:CD2	15:AO:43:LEU:HD23	2.51	0.46
18:AR:35:ARG:O	18:AR:37:VAL:N	2.45	0.46
19:AS:18:LYS:HG2	19:AS:31:ILE:HD13	1.98	0.46
19:AS:40:ILE:HG13	19:AS:69:HIS:O	2.16	0.46
20:AT:93:GLU:O	20:AT:93:GLU:HG2	2.15	0.46
21:AU:14:TRP:CE3	21:AU:15:ARG:HG2	2.50	0.46
22:AV:6191:A:C2	22:AV:6192:G:C4	3.04	0.46
23:BA:323:G:H5'	27:BE:169:ASN:ND2	2.21	0.46
23:BA:696:G:H2'	23:BA:697:C:H6	1.81	0.46
23:BA:733:G:H8	23:BA:733:G:O5'	1.99	0.46
23:BA:806:C:O5'	23:BA:806:C:H6	1.99	0.46
23:BA:979:G:H3'	23:BA:980:A:C5'	2.46	0.46
23:BA:1455:G:C2	23:BA:1456:G:C8	3.03	0.46
23:BA:1603:A:OP1	23:BA:1604:C:OP2	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1717:G:C5	23:BA:1743:G:N1	2.84	0.46
23:BA:1728:G:O5'	23:BA:1728:G:C8	2.63	0.46
23:BA:1984:G:H2'	23:BA:1985:G:O5'	2.15	0.46
23:BA:2467:C:H4'	35:BM:123:HIS:ND1	2.31	0.46
23:BA:2582:G:C2	23:BA:2583:G:C8	3.04	0.46
23:BA:2620:C:C4'	26:BD:156:MET:HG3	2.46	0.46
23:BA:2636:U:C2	23:BA:2637:U:C5	3.04	0.46
23:BA:2661:G:H2'	23:BA:2662:A:O4'	2.16	0.46
27:BE:68:LYS:H	27:BE:70:THR:HG22	1.81	0.46
28:BF:16:ARG:O	28:BF:20:ILE:HG12	2.16	0.46
30:BH:88:ILE:HG13	30:BH:144:VAL:CG1	2.46	0.46
32:BJ:119:GLU:O	32:BJ:123:GLU:HG3	2.16	0.46
34:BL:16:ARG:C	34:BL:16:ARG:NE	2.61	0.46
39:BQ:72:HIS:CE1	39:BQ:107:ALA:HA	2.51	0.46
40:BR:1:MET:N	40:BR:16:PRO:HD3	2.31	0.46
40:BR:2:PHE:HE2	40:BR:13:ARG:CG	2.29	0.46
41:BS:47:VAL:HA	41:BS:50:VAL:HG12	1.98	0.46
1:CA:141:A:C5	1:CA:142:G:N7	2.84	0.46
1:CA:178:C:C2'	1:CA:179:A:H5'	2.46	0.46
1:CA:624:C:H4'	16:CP:11:SER:N	2.20	0.46
1:CA:638:G:C6	1:CA:639:G:N7	2.84	0.46
1:CA:892:A:C6	1:CA:893:C:C4	3.04	0.46
1:CA:1219:U:OP1	14:CN:19:ARG:NH2	2.35	0.46
1:CA:1288:A:C6	1:CA:1289:A:C5	3.03	0.46
1:CA:1291:G:C6	1:CA:1292:U:C4	3.04	0.46
1:CA:1347:G:C2	1:CA:1373:G:C5	3.03	0.46
3:CC:108:ASN:HB3	3:CC:111:LEU:HD12	1.98	0.46
5:CE:72:GLN:O	5:CE:73:ASN:CB	2.63	0.46
9:CI:111:ARG:HG3	14:CN:61:TRP:HE1	1.81	0.46
11:CK:86:GLY:N	11:CK:112:THR:OG1	2.43	0.46
11:CK:103:LEU:HD12	11:CK:103:LEU:HA	1.83	0.46
22:CV:6182:A:C2	22:CV:6195:G:N2	2.83	0.46
23:DA:242:G:N7	53:D5:5:LYS:HG2	2.31	0.46
23:DA:775:G:O5'	23:DA:777:A:H1'	2.15	0.46
23:DA:1820:U:H4'	23:DA:1821:A:OP2	2.16	0.46
23:DA:2287:A:C5	23:DA:2289:G:C5	3.04	0.46
23:DA:2393:A:H4'	34:DL:61:ARG:O	2.16	0.46
23:DA:2661:G:C6	23:DA:2662:A:C2	3.03	0.46
23:DA:2726:U:H5'	23:DA:2726:U:O2	2.15	0.46
23:DA:2728:U:O2	23:DA:2729:G:C8	2.68	0.46
23:DA:2846:G:P	38:DP:54:ARG:HB2	2.56	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DB:21:G:N2	24:DB:62:C:N3	2.59	0.46
25:DC:32:SER:O	25:DC:33:LEU:O	2.34	0.46
34:DL:50:ARG:HB2	53:D5:60:LEU:CD2	2.46	0.46
35:DM:21:THR:O	35:DM:22:LYS:C	2.54	0.46
35:DM:131:ILE:HG22	35:DM:132:VAL:N	2.31	0.46
37:DO:12:PHE:O	37:DO:12:PHE:HD1	1.98	0.46
42:DT:62:LYS:H	42:DT:62:LYS:HG2	1.58	0.46
44:DV:101:PRO:O	44:DV:102:LEU:HD23	2.16	0.46
46:DX:10:LYS:O	46:DX:13:ILE:CG2	2.64	0.46
48:DZ:56:VAL:O	48:DZ:57:GLU:HG2	2.16	0.46
50:D2:35:GLU:OE2	50:D2:51:TYR:HA	2.16	0.46
1:AA:130:A:OP2	1:AA:189:U:C2	2.69	0.45
1:AA:175:C:H4'	20:AT:25:ARG:HH11	1.81	0.45
1:AA:319:G:H2'	1:AA:320:C:O4'	2.16	0.45
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.47	0.45
1:AA:451:A:C8	1:AA:481:G:C6	3.04	0.45
1:AA:707:C:O2'	1:AA:708:C:H5'	2.16	0.45
1:AA:826:C:C5'	1:AA:827:U:OP2	2.65	0.45
1:AA:932:C:H2'	1:AA:933:G:H8	1.81	0.45
1:AA:1031:G:H2'	1:AA:103(A):A:O4'	2.16	0.45
1:AA:1183:A:H5''	1:AA:1184:G:OP2	2.15	0.45
1:AA:1221:G:OP1	1:AA:1321:C:N3	2.49	0.45
1:AA:1296:C:C5	1:AA:1297:C:C5	3.04	0.45
1:AA:1489:G:C6	1:AA:1490:C:N4	2.85	0.45
3:AC:91:LEU:HD12	3:AC:101:LEU:HD21	1.99	0.45
4:AD:110:PHE:HE1	4:AD:148:VAL:HG23	1.81	0.45
9:AI:45:ALA:O	9:AI:48:GLU:HB2	2.16	0.45
12:AL:68:TYR:HB3	12:AL:98:HIS:CD2	2.52	0.45
18:AR:44:LEU:HA	18:AR:49:LYS:O	2.15	0.45
23:BA:31:C:C4	23:BA:32:C:C5	3.05	0.45
23:BA:164:U:C4	23:BA:165:U:O4	2.69	0.45
23:BA:359:A:C8	23:BA:360:G:C8	3.05	0.45
23:BA:534:U:C2'	39:BQ:49:HIS:HD2	2.29	0.45
23:BA:662:G:OP1	34:BL:18:ARG:NH1	2.49	0.45
23:BA:857:C:N3	23:BA:858:U:C4	2.84	0.45
23:BA:860:U:C5	23:BA:2268:A:C8	3.05	0.45
23:BA:886:C:C2'	23:BA:887:A:H4'	2.46	0.45
23:BA:918:A:H5''	23:BA:919:G:OP2	2.16	0.45
23:BA:1204:A:C2	23:BA:1241:A:N1	2.84	0.45
23:BA:1749:A:H2'	23:BA:1750:G:O4'	2.15	0.45
23:BA:1971:A:H5''	23:BA:1971:A:H8	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1975:G:H2'	23:BA:1976:U:H6	1.81	0.45
23:BA:1993:U:H4'	26:BD:128:SER:HB3	1.97	0.45
23:BA:2104:G:H2'	23:BA:2105:C:C6	2.52	0.45
23:BA:2392:A:H2	23:BA:2424:C:N4	2.08	0.45
23:BA:2490:G:H4'	23:BA:2491:U:OP1	2.15	0.45
23:BA:2584:U:O5'	23:BA:2584:U:C6	2.68	0.45
23:BA:2738:A:C6	23:BA:2739:U:C5	3.04	0.45
23:BA:2809:A:C2	23:BA:2892:A:C4	3.04	0.45
24:BB:50:G:OP1	37:BO:63:THR:OG1	2.34	0.45
24:BB:95:U:H2'	24:BB:96:G:C8	2.51	0.45
25:BC:26:LYS:HB2	25:BC:26:LYS:HE3	1.69	0.45
25:BC:97:TYR:HB2	25:BC:101:GLU:O	2.16	0.45
25:BC:208:LYS:HG3	25:BC:211:ARG:H	1.80	0.45
26:BD:25:VAL:C	26:BD:26:ILE:HD13	2.37	0.45
27:BE:29:ASN:N	27:BE:112:MET:HE1	2.32	0.45
27:BE:65:TRP:HZ3	27:BE:73:ALA:O	1.99	0.45
27:BE:135:LYS:O	27:BE:136:THR:C	2.54	0.45
30:BH:5:LEU:HD23	30:BH:17:GLN:O	2.16	0.45
32:BJ:160:LYS:HA	32:BJ:160:LYS:HD2	1.58	0.45
33:BK:38:VAL:O	33:BK:38:VAL:HG23	2.15	0.45
34:BL:62:LEU:O	34:BL:62:LEU:CD2	2.62	0.45
36:BN:40:LYS:HE3	36:BN:40:LYS:HB2	1.73	0.45
39:BQ:83:LEU:HD12	39:BQ:83:LEU:N	2.31	0.45
40:BR:75:PHE:O	40:BR:75:PHE:HD1	1.98	0.45
44:BV:92:SER:O	44:BV:93:ASP:HB3	2.16	0.45
46:BX:11:ARG:C	46:BX:13:ILE:N	2.64	0.45
48:BZ:15:TYR:HB3	48:BZ:19:GLN:NE2	2.31	0.45
1:CA:236:G:H5''	17:CQ:42:TYR:OH	2.15	0.45
1:CA:319:G:H2'	1:CA:320:C:O4'	2.17	0.45
1:CA:531:U:O3'	1:CA:532:A:H4'	2.16	0.45
1:CA:582:U:OP1	15:CO:68:ARG:NH2	2.49	0.45
1:CA:642:A:H1'	8:CH:113:SER:OG	2.16	0.45
1:CA:744:C:H3'	1:CA:744:C:H6	1.81	0.45
1:CA:758:G:H4'	1:CA:880:C:H4'	1.98	0.45
1:CA:1004:A:H2	1:CA:1024:G:N3	2.14	0.45
1:CA:1090:U:H2'	1:CA:1091:U:H6	1.80	0.45
1:CA:1292:U:C2	1:CA:1293:G:N7	2.84	0.45
1:CA:1369:C:P	9:CI:111:ARG:HG3	2.56	0.45
2:CB:100:GLY:O	2:CB:104:ASN:N	2.49	0.45
4:CD:79:PHE:CD1	4:CD:207:TYR:CD1	3.04	0.45
4:CD:100:ARG:NH2	4:CD:118:ARG:NH1	2.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:115:ARG:O	7:CG:119:ARG:HG3	2.15	0.45
9:CI:58:ARG:NH2	9:CI:59:PHE:CE1	2.84	0.45
10:CJ:16:LEU:O	10:CJ:70:ARG:HD2	2.15	0.45
10:CJ:56:HIS:O	10:CJ:58:ASP:N	2.41	0.45
12:CL:46:LYS:HD3	12:CL:47:PRO:HG3	1.97	0.45
12:CL:68:TYR:HB3	12:CL:98:HIS:CD2	2.51	0.45
13:CM:3:ARG:HA	13:CM:9:ILE:HG12	1.98	0.45
13:CM:10:PRO:CG	13:CM:22:ILE:HD11	2.43	0.45
13:CM:108:ARG:HA	13:CM:111:LYS:HB2	1.99	0.45
15:CO:27:VAL:O	15:CO:28:GLN:C	2.54	0.45
22:CV:6194:C:C2	22:CV:6195:G:C8	3.04	0.45
23:DA:189:G:C8	23:DA:189:G:C3'	2.99	0.45
23:DA:414:C:H2'	23:DA:415:A:H8	1.80	0.45
23:DA:643:A:C2	23:DA:644:A:N9	2.84	0.45
23:DA:664:C:H4'	23:DA:941:A:OP1	2.16	0.45
23:DA:770:G:H2'	23:DA:771:G:O5'	2.16	0.45
23:DA:887:A:N3	23:DA:889:C:C5	2.84	0.45
23:DA:1471:A:C2	23:DA:1472:A:N9	2.84	0.45
23:DA:1477:A:C4	23:DA:1478:G:C8	3.04	0.45
23:DA:1899:G:N2	23:DA:1902:C:H5	2.10	0.45
23:DA:2359:C:H2'	23:DA:2360:A:C8	2.51	0.45
24:DB:31:C:O2	24:DB:31:C:C2'	2.64	0.45
25:DC:233:HIS:HE1	25:DC:247:ALA:N	2.11	0.45
30:DH:98:ALA:O	30:DH:109:ILE:HD11	2.15	0.45
34:DL:46:LYS:HB3	34:DL:52:GLU:HG2	1.98	0.45
36:DN:9:LYS:O	36:DN:10:LEU:HD23	2.17	0.45
37:DO:57:LYS:HB3	37:DO:58:LEU:HD12	1.98	0.45
37:DO:104:GLY:HA2	37:DO:107:GLU:CG	2.41	0.45
41:DS:86:LEU:HD12	41:DS:87:PRO:CD	2.46	0.45
45:DW:31:VAL:HG13	45:DW:65:GLY:O	2.16	0.45
45:DW:73:GLY:O	45:DW:74:ARG:C	2.54	0.45
46:DX:11:ARG:NH1	46:DX:61:ARG:N	2.63	0.45
53:D5:2:PRO:O	53:D5:3:LYS:HB2	2.16	0.45
1:AA:81:G:C5	1:AA:82:U:C4	3.05	0.45
1:AA:292:G:C5	1:AA:293:G:H1'	2.52	0.45
1:AA:302:G:N3	1:AA:556:C:H4'	2.32	0.45
1:AA:492:G:C4	1:AA:493:G:C8	3.05	0.45
1:AA:543:C:C2	1:AA:544:G:C8	3.05	0.45
1:AA:646:U:C4	1:AA:647:C:N4	2.84	0.45
1:AA:783:C:N4	1:AA:799:G:H1	2.14	0.45
1:AA:875:C:O2'	8:AH:14:ARG:NH1	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1182:G:H4'	1:AA:1183:A:C5'	2.45	0.45
3:AC:172:ARG:HE	3:AC:174:PRO:HG2	1.81	0.45
3:AC:181:ASN:HB3	3:AC:205:GLY:HA3	1.98	0.45
4:AD:4:TYR:CE1	4:AD:11:LEU:HD11	2.50	0.45
4:AD:152:SER:O	4:AD:153:ARG:C	2.54	0.45
10:AJ:6:ILE:HG22	10:AJ:98:ILE:HG12	1.98	0.45
13:AM:94:ARG:NH2	19:AS:80:TYR:HE2	2.15	0.45
16:AP:10:GLY:O	16:AP:11:SER:O	2.35	0.45
16:AP:47:ASP:C	16:AP:49:LEU:H	2.19	0.45
16:AP:50:LYS:HD3	16:AP:51:VAL:N	2.32	0.45
17:AQ:51:TYR:CD1	17:AQ:73:VAL:HG11	2.51	0.45
20:AT:84:LEU:HD13	20:AT:84:LEU:C	2.36	0.45
23:BA:13:A:N1	23:BA:525:U:C2	2.84	0.45
23:BA:85:G:N3	23:BA:103:A:H2	2.14	0.45
23:BA:153:C:OP1	46:BX:92:LYS:HE2	2.16	0.45
23:BA:374:A:H3'	23:BA:375:C:C6	2.51	0.45
23:BA:635:C:O2'	23:BA:639:U:OP1	2.32	0.45
23:BA:969:U:H2'	23:BA:970:C:C6	2.51	0.45
23:BA:978:G:C2	23:BA:986:C:C2	3.05	0.45
23:BA:1230:C:H2'	23:BA:1231:G:H8	1.81	0.45
23:BA:1360:A:H5'	23:BA:1361:G:OP2	2.16	0.45
23:BA:1417:C:H42	23:BA:1581:G:H1	1.64	0.45
23:BA:2330:G:H1'	45:BW:41:ARG:CB	2.46	0.45
23:BA:2730:C:C2'	23:BA:2731:G:H5'	2.46	0.45
23:BA:2892:A:C2'	23:BA:2893:G:H5'	2.46	0.45
26:BD:14:ILE:C	26:BD:14:ILE:HD12	2.36	0.45
26:BD:55:ASN:O	26:BD:59:VAL:HG23	2.16	0.45
26:BD:188:VAL:HA	26:BD:189:PRO:HD3	1.67	0.45
27:BE:84:VAL:C	27:BE:86:GLY:H	2.20	0.45
29:BG:87:LEU:CD2	29:BG:164:TYR:HD1	2.30	0.45
32:BJ:157:ARG:O	32:BJ:159:GLU:N	2.49	0.45
35:BM:34:LEU:HD12	35:BM:130:LYS:O	2.16	0.45
36:BN:99:LYS:HA	36:BN:112:ALA:HB2	1.98	0.45
37:BO:29:PHE:CD2	37:BO:92:TYR:OH	2.69	0.45
38:BP:101:PHE:CD2	38:BP:101:PHE:C	2.89	0.45
41:BS:20:VAL:O	41:BS:23:LEU:HB2	2.15	0.45
42:BT:39:ILE:HG12	42:BT:39:ILE:H	1.55	0.45
43:BU:42:VAL:CG2	43:BU:67:LEU:HD11	2.46	0.45
43:BU:50:ARG:HD3	43:BU:51:VAL:N	2.25	0.45
1:CA:245:C:O2	1:CA:283:C:N3	2.50	0.45
1:CA:357:G:C2	1:CA:358:U:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:389:A:C5	1:CA:390:C:H1'	2.51	0.45
1:CA:560:U:H5'	1:CA:566:G:N2	2.31	0.45
1:CA:638:G:C2	1:CA:639:G:C8	3.04	0.45
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.16	0.45
1:CA:1410:G:H2'	1:CA:1411:C:H6	1.81	0.45
3:CC:23:TYR:CD1	10:CJ:10:GLY:HA2	2.50	0.45
4:CD:23:GLY:HA3	4:CD:112:VAL:HG22	1.98	0.45
8:CH:107:LEU:N	8:CH:107:LEU:HD23	2.31	0.45
11:CK:13:GLN:HG3	11:CK:75:TYR:O	2.16	0.45
11:CK:32:ILE:O	11:CK:40:ILE:HG12	2.16	0.45
12:CL:25:ALA:O	12:CL:26:LEU:HB2	2.15	0.45
16:CP:50:LYS:HD3	16:CP:51:VAL:N	2.31	0.45
16:CP:58:TYR:O	16:CP:61:SER:HB3	2.16	0.45
19:CS:33:THR:CG2	19:CS:51:VAL:HA	2.46	0.45
22:CV:6185:U:C5	22:CV:6186:U:C5	3.04	0.45
23:DA:644:A:N1	23:DA:646:A:C4	2.84	0.45
23:DA:1329:U:H5''	23:DA:1330:C:C5	2.43	0.45
23:DA:1388:G:N3	23:DA:1389:G:C8	2.84	0.45
23:DA:1389:G:H2'	23:DA:1390:U:H6	1.80	0.45
23:DA:1833:U:H2'	23:DA:1834:U:H6	1.80	0.45
23:DA:2291:U:H2'	23:DA:2292:C:C6	2.51	0.45
23:DA:2712:U:HO2'	23:DA:712(B):A:H5''	1.80	0.45
23:DA:2727:G:C4	23:DA:2728:U:H5	2.30	0.45
25:DC:148:GLU:HB2	25:DC:151:LYS:HD3	1.97	0.45
29:DG:67:LEU:O	29:DG:71:LEU:HB2	2.16	0.45
32:DJ:126:VAL:O	32:DJ:127:LYS:C	2.55	0.45
33:DK:63:VAL:HG23	33:DK:64:ARG:HG3	1.98	0.45
34:DL:70:GLN:O	34:DL:71:VAL:C	2.53	0.45
38:DP:14:TYR:H	38:DP:14:TYR:HD1	1.62	0.45
40:DR:95:LEU:HD23	40:DR:96:ILE:N	2.31	0.45
41:DS:75:TYR:CD2	41:DS:75:TYR:C	2.90	0.45
42:DT:31:HIS:HA	42:DT:32:PRO:HD3	1.85	0.45
43:DU:8:LYS:HD2	43:DU:13:VAL:CG2	2.42	0.45
43:DU:46:LYS:O	43:DU:47:LYS:C	2.55	0.45
43:DU:95:LYS:HE2	43:DU:100:ALA:HB2	1.98	0.45
44:DV:121:HIS:CE1	44:DV:169:GLU:OE2	2.69	0.45
45:DW:31:VAL:HG21	45:DW:61:ALA:HB2	1.98	0.45
45:DW:81:VAL:O	45:DW:83:PRO:HD3	2.16	0.45
48:DZ:18:ASP:OD1	48:DZ:18:ASP:N	2.48	0.45
49:D1:40:ILE:HG23	49:D1:59:VAL:CG2	2.46	0.45
1:AA:15:G:H2'	1:AA:16:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:35:G:C6	1:AA:36:C:N4	2.84	0.45
1:AA:123:C:H5''	1:AA:311:C:O2'	2.16	0.45
1:AA:247:G:C4	1:AA:248:C:C5	3.04	0.45
1:AA:376:G:C2	1:AA:389:A:C2	3.03	0.45
1:AA:608:A:C4	1:AA:609:A:C8	3.03	0.45
1:AA:662:G:C2	1:AA:744:C:O2	2.70	0.45
1:AA:922:G:H5''	1:AA:923:A:OP2	2.16	0.45
1:AA:961:U:OP2	1:AA:1223:C:C1'	2.64	0.45
1:AA:1347:G:H22	1:AA:1373:G:C2'	2.27	0.45
1:AA:1376:U:O2'	1:AA:1377:A:H5'	2.16	0.45
1:AA:1378:C:H5	1:AA:1379:G:C8	2.35	0.45
3:AC:111:LEU:HD11	3:AC:144:SER:OG	2.15	0.45
4:AD:61:LYS:HA	4:AD:203:VAL:CG2	2.46	0.45
5:AE:80:ILE:HD12	5:AE:138:ALA:HB1	1.99	0.45
7:AG:50:ILE:O	7:AG:54:THR:O	2.34	0.45
8:AH:25:ASP:N	8:AH:25:ASP:OD1	2.49	0.45
8:AH:92:ARG:CB	8:AH:94:TYR:HE2	2.21	0.45
23:BA:220:G:N1	23:BA:428:A:OP2	2.35	0.45
23:BA:476:G:H4'	23:BA:502:A:N1	2.32	0.45
23:BA:537:C:H2'	23:BA:539:G:O4'	2.17	0.45
23:BA:908:C:O2'	23:BA:909:A:H5'	2.16	0.45
23:BA:1332:G:H22	23:BA:1610:A:H8	1.63	0.45
23:BA:2009:G:O2'	23:BA:2010:G:H5'	2.16	0.45
23:BA:2308:G:HO2'	23:BA:2310:A:P	2.39	0.45
23:BA:2661:G:C6	23:BA:2662:A:C2	3.04	0.45
23:BA:2753:A:H2'	23:BA:2754:U:H5'	1.98	0.45
25:BC:132:PRO:CG	25:BC:190:TYR:CE1	2.97	0.45
27:BE:53:THR:C	27:BE:55:GLY:H	2.19	0.45
27:BE:144:LYS:C	27:BE:146:ALA:H	2.20	0.45
27:BE:160:ASN:OD1	27:BE:163:VAL:HG23	2.15	0.45
28:BF:44:GLY:O	28:BF:47:LYS:HB2	2.17	0.45
29:BG:19:VAL:HG13	29:BG:43:VAL:CG2	2.47	0.45
32:BJ:112:LYS:O	32:BJ:116:THR:CG2	2.65	0.45
34:BL:62:LEU:N	34:BL:62:LEU:CD1	2.79	0.45
34:BL:122:PRO:HB3	34:BL:141:ALA:O	2.16	0.45
46:BX:91:LYS:HA	46:BX:94:LEU:HD23	1.99	0.45
52:B4:19:ARG:HG3	52:B4:19:ARG:NH1	2.16	0.45
53:B5:23:VAL:HG12	53:B5:47:LYS:HB3	1.97	0.45
1:CA:57:G:H2'	1:CA:58:C:O4'	2.16	0.45
1:CA:57:G:C6	1:CA:58:C:C4	3.04	0.45
1:CA:433:C:C6	1:CA:434:U:H5	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:725:G:H2'	1:CA:726:C:H6	1.81	0.45
1:CA:804:U:H5''	1:CA:805:C:OP2	2.16	0.45
1:CA:818:G:HO2'	1:CA:820:U:H6	1.61	0.45
1:CA:952:U:O2'	1:CA:953:G:H5'	2.17	0.45
1:CA:1360:A:C6	1:CA:1361:G:C2	3.04	0.45
2:CB:141:GLU:O	2:CB:145:LEU:HD23	2.16	0.45
3:CC:66:VAL:HB	3:CC:101:LEU:CD2	2.40	0.45
4:CD:143:GLY:H	4:CD:185:PHE:HB3	1.82	0.45
5:CE:79:GLU:OE2	8:CH:104:ARG:HA	2.16	0.45
5:CE:91:LEU:HD22	5:CE:110:LEU:HD11	1.98	0.45
9:CI:58:ARG:NH2	9:CI:59:PHE:HE1	2.14	0.45
13:CM:87:TYR:O	13:CM:91:ARG:HG2	2.16	0.45
14:CN:43:CYS:O	14:CN:46:GLU:N	2.49	0.45
15:CO:45:VAL:HG22	15:CO:46:HIS:ND1	2.32	0.45
15:CO:67:LEU:HD23	15:CO:78:TYR:CE1	2.51	0.45
18:CR:84:LYS:H	18:CR:84:LYS:HG2	1.35	0.45
23:DA:164:U:C4	23:DA:165:U:O4	2.69	0.45
23:DA:247:G:H4'	23:DA:386:G:C5	2.52	0.45
23:DA:300:A:P	43:DU:84:ARG:NH2	2.89	0.45
23:DA:540:G:H2'	23:DA:541:C:C6	2.43	0.45
23:DA:634:C:H2'	23:DA:635:C:H6	1.81	0.45
23:DA:768:G:C4	23:DA:769:G:C8	3.04	0.45
23:DA:1164:G:C5	23:DA:1165:U:C4	3.03	0.45
23:DA:1239:G:C6	23:DA:1240:U:C4	3.04	0.45
23:DA:1274:A:N3	23:DA:1297:C:HI1'	2.31	0.45
23:DA:1382:G:H4'	23:DA:1573:G:C2	2.52	0.45
23:DA:1439:A:H2'	23:DA:1440:G:H5'	1.99	0.45
24:DB:21:G:H2'	24:DB:22:U:C6	2.50	0.45
25:DC:45:ASN:OD1	25:DC:45:ASN:C	2.54	0.45
26:DD:146:THR:HA	26:DD:147:PRO:C	2.37	0.45
26:DD:169:ASN:HD22	26:DD:169:ASN:C	2.19	0.45
27:DE:46:ARG:HB3	27:DE:46:ARG:NH1	2.32	0.45
28:DF:32:PRO:HA	28:DF:162:THR:OG1	2.17	0.45
39:DQ:61:TRP:O	39:DQ:64:ARG:HB2	2.16	0.45
44:DV:180:VAL:C	44:DV:182:LYS:N	2.69	0.45
45:DW:62:LEU:O	45:DW:63:VAL:HG13	2.16	0.45
47:DY:18:PRO:O	47:DY:22:GLU:HG3	2.17	0.45
1:AA:404:U:C2	1:AA:405:U:C5	3.05	0.45
1:AA:939:G:C2	1:AA:940:C:C4	3.04	0.45
1:AA:969:A:C2'	1:AA:970:C:H5'	2.46	0.45
1:AA:1038:C:H2'	1:AA:1039:C:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1067:A:N3	1:AA:1068:G:H1'	2.31	0.45
1:AA:1118:C:O4'	1:AA:1179:A:C4	2.69	0.45
1:AA:1237:C:C5	1:AA:1336:C:N3	2.85	0.45
1:AA:1367:C:C2	1:AA:1368:G:C8	3.04	0.45
1:AA:1374:A:C4	1:AA:1375:A:C8	3.05	0.45
1:AA:1407:C:O5'	1:AA:1407:C:H6	1.99	0.45
1:AA:1455:G:H2'	1:AA:1459:C:C6	2.50	0.45
2:AB:157:ARG:O	2:AB:159:PRO:HD3	2.15	0.45
2:AB:221:LEU:HD22	2:AB:221:LEU:HA	1.86	0.45
4:AD:111:ALA:HB1	4:AD:116:GLN:CG	2.47	0.45
4:AD:158:ILE:HG22	4:AD:159:ARG:N	2.29	0.45
6:AF:5:GLU:OE1	6:AF:62:TRP:CZ2	2.70	0.45
6:AF:42:GLU:HG2	6:AF:42:GLU:O	2.16	0.45
10:AJ:26:ALA:HB1	10:AJ:84:GLN:HG2	1.99	0.45
11:AK:101:SER:OG	11:AK:102:GLY:N	2.48	0.45
16:AP:4:ILE:HA	16:AP:20:VAL:O	2.17	0.45
16:AP:8:ARG:O	16:AP:9:PHE:HD2	1.95	0.45
17:AQ:29:HIS:HA	17:AQ:30:PRO:HD2	1.64	0.45
18:AR:88:LYS:OXT	18:AR:88:LYS:HG3	2.15	0.45
23:BA:245:G:C4	23:BA:246:C:C5	3.04	0.45
23:BA:309:G:O3'	43:BU:18:GLY:HA2	2.16	0.45
23:BA:327:G:O2'	23:BA:328:U:H5'	2.17	0.45
23:BA:735:A:H3'	23:BA:736:C:H6	1.81	0.45
23:BA:804:A:C5'	23:BA:805:G:OP1	2.54	0.45
23:BA:814:C:H2'	23:BA:815:C:H6	1.81	0.45
23:BA:910:A:H2'	23:BA:2264:C:O2'	2.15	0.45
23:BA:1030:G:OP2	35:BM:128:LYS:HG2	2.16	0.45
23:BA:1930:G:O2'	23:BA:1931:U:P	2.75	0.45
23:BA:2308:G:O2'	23:BA:2310:A:P	2.74	0.45
23:BA:2347:C:H4'	51:B3:39:TYR:CE1	2.52	0.45
23:BA:2476:A:C2	23:BA:2477:C:C5	3.04	0.45
24:BB:13:A:O4'	45:BW:74:ARG:NH2	2.49	0.45
25:BC:105:ILE:HD13	25:BC:106:ILE:H	1.80	0.45
27:BE:157:VAL:HG21	27:BE:194:MET:HE3	1.97	0.45
30:BH:88:ILE:HG13	30:BH:144:VAL:HG11	1.99	0.45
33:BK:2:ILE:HD11	33:BK:82:ASN:ND2	2.32	0.45
33:BK:7:TYR:HE1	33:BK:20:MET:HE3	1.81	0.45
33:BK:26:LYS:HB3	33:BK:27:GLY:H	1.68	0.45
35:BM:38:GLU:C	35:BM:127:ILE:HD11	2.37	0.45
37:BO:11:LYS:O	37:BO:12:PHE:CB	2.64	0.45
43:BU:8:LYS:HB2	43:BU:8:LYS:HE2	1.55	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BU:20:TYR:CD1	43:BU:20:TYR:N	2.84	0.45
44:BV:56:VAL:HG12	44:BV:57:ILE:N	2.31	0.45
44:BV:140:ASP:OD2	44:BV:140:ASP:N	2.50	0.45
44:BV:180:VAL:C	44:BV:182:LYS:N	2.65	0.45
48:BZ:3:ARG:NH1	48:BZ:59:VAL:CG1	2.79	0.45
48:BZ:8:LEU:HD23	48:BZ:8:LEU:HA	1.74	0.45
1:CA:17:U:O4'	1:CA:1080:A:H1'	2.16	0.45
1:CA:170:U:HO2'	1:CA:171:A:H5'	1.81	0.45
1:CA:216:G:H2'	1:CA:217:C:H6	1.77	0.45
1:CA:233:C:C2'	1:CA:234:C:H5'	2.47	0.45
1:CA:255:G:C5	1:CA:256:U:C5	3.05	0.45
1:CA:376:G:C4	1:CA:389:A:N1	2.85	0.45
1:CA:376:G:C2'	1:CA:377:G:O5'	2.65	0.45
1:CA:407:G:C2	1:CA:436:C:C2	3.04	0.45
1:CA:543:C:C2	1:CA:544:G:C8	3.04	0.45
1:CA:556:C:H2'	1:CA:557:G:C5'	2.44	0.45
1:CA:716:A:N3	11:CK:118:GLY:HA2	2.31	0.45
1:CA:913:A:O2'	1:CA:914:A:OP2	2.32	0.45
1:CA:1056:U:C5	1:CA:1200:C:C4	3.05	0.45
1:CA:1340:A:C5	1:CA:1341:U:C6	3.04	0.45
1:CA:1529:G:H4'	1:CA:1530:G:OP2	2.16	0.45
4:CD:29:PRO:O	4:CD:30:LYS:CB	2.65	0.45
7:CG:95:ARG:CZ	7:CG:99:LEU:HD11	2.47	0.45
8:CH:36:LEU:C	8:CH:38:ILE:N	2.69	0.45
19:CS:18:LYS:HG2	19:CS:31:ILE:HD13	1.99	0.45
20:CT:94:ALA:O	20:CT:95:ALA:HB3	2.16	0.45
23:DA:139:G:N3	23:DA:141(A):A:N1	2.64	0.45
23:DA:245:G:C4	23:DA:246:C:C6	3.04	0.45
23:DA:540:G:C4	23:DA:541:C:C6	3.04	0.45
23:DA:569:U:C4	23:DA:570:G:C6	3.03	0.45
23:DA:601:C:H4'	27:DE:104:LYS:HE2	1.98	0.45
23:DA:1006:C:C2	23:DA:1138:G:N2	2.85	0.45
23:DA:1104:C:C2'	23:DA:1105:U:H5'	2.46	0.45
23:DA:1503:U:C2	23:DA:1504:C:H5	2.34	0.45
23:DA:2014:A:H2'	23:DA:2015:A:C8	2.51	0.45
23:DA:2100:G:C2	23:DA:2101:G:C4	3.04	0.45
23:DA:2366:A:H2'	23:DA:2367:G:O4'	2.16	0.45
23:DA:2502:G:C5'	23:DA:2503:A:C5'	2.89	0.45
23:DA:2745:C:C4	23:DA:2746:U:C5	3.04	0.45
26:DD:52:LEU:O	26:DD:75:VAL:HA	2.16	0.45
28:DF:86:MET:O	28:DF:87:PRO:O	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:26:ALA:HA	30:DH:30:LEU:HB2	1.98	0.45
30:DH:88:ILE:CG1	30:DH:123:LEU:HA	2.44	0.45
32:DJ:110:LEU:O	32:DJ:110:LEU:CD2	2.65	0.45
36:DN:57:ARG:HG2	36:DN:58:GLY:N	2.28	0.45
37:DO:69:VAL:HA	37:DO:72:ALA:HB2	1.98	0.45
39:DQ:76:TYR:CZ	39:DQ:80:ILE:HG12	2.52	0.45
39:DQ:88:ILE:HB	39:DQ:90:VAL:CG1	2.29	0.45
39:DQ:91:ASP:OD2	39:DQ:96:ALA:CB	2.61	0.45
39:DQ:98:LEU:O	39:DQ:101:ARG:N	2.50	0.45
41:DS:8:ARG:O	41:DS:9:TYR:HB2	2.16	0.45
42:DT:12:VAL:HG22	42:DT:17:ALA:HB2	1.99	0.45
46:DX:23:LYS:HB3	46:DX:37:ILE:CG1	2.47	0.45
51:D3:36:LEU:N	51:D3:36:LEU:HD23	2.31	0.45
52:D4:35:ARG:HG3	52:D4:42:LEU:HD11	1.98	0.45
53:D5:23:VAL:HG12	53:D5:47:LYS:HB3	1.99	0.45
1:AA:15:G:N3	1:AA:16:A:C8	2.85	0.45
1:AA:36:C:N4	1:AA:37:U:C4	2.85	0.45
1:AA:191(G):G:C5	1:AA:192:U:C5	3.04	0.45
1:AA:321:A:C2	1:AA:333:G:C2	3.05	0.45
1:AA:327:A:C6	1:AA:329:A:C5	3.04	0.45
1:AA:328:C:H4'	1:AA:329:A:C5'	2.46	0.45
1:AA:376:G:O3'	16:AP:5:ARG:HD2	2.16	0.45
1:AA:404:U:H2'	1:AA:405:U:C6	2.48	0.45
1:AA:527:G:H2'	1:AA:528:C:H5'	1.99	0.45
1:AA:657:G:O2'	1:AA:658:G:H5'	2.16	0.45
1:AA:1413:A:C6	1:AA:1414:U:C4	3.04	0.45
4:AD:106:TYR:C	4:AD:109:GLY:H	2.20	0.45
4:AD:201:GLN:O	4:AD:205:GLU:HG3	2.16	0.45
5:AE:65:ASN:O	5:AE:66:MET:HG3	2.17	0.45
7:AG:16:LEU:O	7:AG:17:VAL:HG23	2.17	0.45
7:AG:35:LYS:O	7:AG:38:LEU:N	2.49	0.45
7:AG:54:THR:C	7:AG:56:GLN:H	2.20	0.45
7:AG:80:VAL:C	7:AG:82:GLY:H	2.19	0.45
8:AH:64:LYS:CG	8:AH:79:VAL:HG21	2.45	0.45
8:AH:86:ILE:HG22	8:AH:93:VAL:HG21	1.98	0.45
9:AI:16:ARG:HB2	9:AI:64:THR:HB	1.99	0.45
10:AJ:49:VAL:HG23	14:AN:34:TYR:OH	2.16	0.45
13:AM:81:LEU:HD22	13:AM:86:CYS:SG	2.56	0.45
14:AN:32:SER:HB3	14:AN:41:ARG:HG2	1.99	0.45
16:AP:13:HIS:C	16:AP:15:PRO:HD3	2.37	0.45
23:BA:243:U:H2'	23:BA:244:A:H5'	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:503:A:C4	23:BA:506:G:N7	2.85	0.45
23:BA:1021:A:N6	23:BA:1141:U:N3	2.54	0.45
23:BA:1345:C:C2'	23:BA:1346:G:H5'	2.46	0.45
23:BA:1827:C:O2'	23:BA:1828:G:H5'	2.17	0.45
23:BA:1871:A:O2'	23:BA:1872:A:H5'	2.16	0.45
23:BA:2410:G:C2	23:BA:2411:A:H1'	2.52	0.45
24:BB:46:A:C5	24:BB:47:C:C4	3.05	0.45
26:BD:59:VAL:O	26:BD:61:ARG:N	2.50	0.45
32:BJ:66:THR:HB	32:BJ:71:MET:HE3	1.98	0.45
32:BJ:151:HIS:NE2	32:BJ:153:HIS:HA	2.32	0.45
34:BL:55:ARG:HG3	34:BL:56:SER:N	2.31	0.45
36:BN:94:TYR:C	36:BN:117:VAL:HG12	2.37	0.45
37:BO:57:LYS:HB3	37:BO:58:LEU:HD12	1.98	0.45
38:BP:24:PRO:O	38:BP:94:ALA:HB2	2.16	0.45
41:BS:36:LEU:HD11	41:BS:47:VAL:HB	1.97	0.45
44:BV:14:LYS:HB2	44:BV:17:ALA:HB3	1.98	0.45
46:BX:9:GLY:O	46:BX:10:LYS:O	2.35	0.45
46:BX:68:PRO:O	46:BX:70:VAL:N	2.50	0.45
49:B1:41:ILE:HD13	49:B1:47:VAL:HG13	1.97	0.45
53:B5:11:LYS:HD2	53:B5:64:TYR:CE2	2.50	0.45
1:CA:492:G:C4	1:CA:493:G:C8	3.05	0.45
1:CA:583:A:N6	1:CA:758:G:H1'	2.32	0.45
1:CA:639:G:O2'	1:CA:640:A:H5'	2.17	0.45
1:CA:711:G:N2	1:CA:712:A:N3	2.64	0.45
1:CA:913:A:C2'	1:CA:914:A:OP2	2.64	0.45
1:CA:946:A:H61	1:CA:1235:U:H3	1.63	0.45
1:CA:1014:A:H5'	19:CS:14:HIS:CG	2.50	0.45
1:CA:1088:G:C5	1:CA:1089:G:N7	2.85	0.45
1:CA:1330:U:O4	1:CA:1331:G:C2	2.69	0.45
1:CA:1346:A:H5''	9:CI:120:ARG:HH12	1.81	0.45
1:CA:1435:G:H2'	1:CA:1436:U:H6	1.70	0.45
2:CB:68:ILE:CG2	2:CB:70:PHE:CE1	2.99	0.45
4:CD:8:VAL:O	4:CD:10:ARG:N	2.49	0.45
4:CD:119:GLN:O	4:CD:123:HIS:HD2	1.99	0.45
5:CE:80:ILE:HD12	5:CE:138:ALA:HB1	1.98	0.45
6:CF:82:ARG:HB2	6:CF:85:VAL:CG2	2.46	0.45
7:CG:103:TRP:O	7:CG:104:LEU:C	2.55	0.45
8:CH:88:LYS:HB3	8:CH:89:PRO:HD2	1.97	0.45
10:CJ:27:ALA:HB1	10:CJ:34:VAL:HG21	1.98	0.45
17:CQ:51:TYR:CD1	17:CQ:73:VAL:HG11	2.51	0.45
23:DA:99:U:C6	23:DA:102:G:N1	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:205:G:O2'	23:DA:206:U:P	2.75	0.45
23:DA:537:C:H2'	23:DA:539:G:C8	2.51	0.45
23:DA:627:A:H4'	23:DA:628:G:OP1	2.17	0.45
23:DA:1204:A:C2	23:DA:1241:A:N1	2.85	0.45
23:DA:1484:G:H2'	23:DA:1485:G:H8	1.81	0.45
23:DA:1530:G:C6	23:DA:1531:C:C4	3.04	0.45
23:DA:1717:G:C5	23:DA:1743:G:C2	3.04	0.45
23:DA:1870:C:O2	23:DA:1870:C:C2'	2.65	0.45
23:DA:2037:G:C6	23:DA:2038:G:C6	3.05	0.45
23:DA:2210:G:N3	23:DA:2210:G:C3'	2.77	0.45
23:DA:2311:A:O2'	23:DA:2312:U:O4'	2.34	0.45
23:DA:2476:A:N3	23:DA:2476:A:C2'	2.80	0.45
23:DA:2850:A:H2'	23:DA:2851:A:O4'	2.16	0.45
23:DA:2863:C:O2'	23:DA:2864:G:H5'	2.16	0.45
25:DC:25:THR:CG2	25:DC:81:ALA:HB1	2.45	0.45
25:DC:61:LEU:HB2	25:DC:63:ARG:HH12	1.82	0.45
26:DD:96:PHE:HA	26:DD:100:GLU:OE1	2.16	0.45
26:DD:170:LEU:N	26:DD:170:LEU:CD2	2.79	0.45
28:DF:45:GLU:C	28:DF:47:LYS:H	2.19	0.45
28:DF:69:ALA:O	28:DF:90:LEU:HD13	2.15	0.45
29:DG:143:GLN:O	29:DG:144:VAL:C	2.54	0.45
30:DH:3:VAL:HG12	30:DH:37:VAL:O	2.17	0.45
34:DL:10:PRO:CD	34:DL:11:GLY:N	2.80	0.45
34:DL:52:GLU:OE1	34:DL:52:GLU:CA	2.63	0.45
35:DM:43:THR:HG1	35:DM:46:GLN:HG3	1.82	0.45
35:DM:115:MET:HE2	35:DM:115:MET:HA	1.98	0.45
35:DM:135:ASP:OD1	35:DM:135:ASP:N	2.49	0.45
36:DN:96:ARG:HD2	36:DN:115:GLU:OE1	2.17	0.45
41:DS:24:ILE:CG2	41:DS:36:LEU:HD21	2.46	0.45
44:DV:150:LEU:HD23	44:DV:171:ILE:HB	1.97	0.45
1:AA:373:A:C2	1:AA:374:A:C8	3.04	0.45
1:AA:505:G:O2'	1:AA:506:G:H5'	2.17	0.45
1:AA:687:A:H1'	1:AA:688:G:OP2	2.15	0.45
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.17	0.45
1:AA:946:A:OP2	13:AM:114:ARG:NH2	2.49	0.45
1:AA:978:A:H5''	1:AA:979:C:OP2	2.17	0.45
1:AA:1074:G:N3	1:AA:1102:A:C2	2.84	0.45
1:AA:1379:G:C6	1:AA:1380:U:O4	2.69	0.45
2:AB:9:GLU:CD	2:AB:9:GLU:C	2.75	0.45
2:AB:47:THR:HA	2:AB:202:PRO:HG2	1.99	0.45
4:AD:72:GLU:O	4:AD:72:GLU:OE1	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:78:HIS:HE1	5:AE:142:LEU:HA	1.80	0.45
7:AG:27:ILE:HD12	7:AG:40:ALA:HA	1.99	0.45
11:AK:81:ASP:OD1	11:AK:106:LYS:HB3	2.16	0.45
13:AM:91:ARG:NH1	19:AS:81:ARG:HH22	2.06	0.45
13:AM:105:THR:O	13:AM:106:ASN:O	2.35	0.45
16:AP:72:ARG:HD3	16:AP:73:LEU:HD21	1.99	0.45
23:BA:511:U:C5	23:BA:512:G:C5	3.05	0.45
23:BA:586:A:N1	23:BA:809:G:O2'	2.37	0.45
23:BA:1010:A:H5'	39:BQ:62:ILE:HG21	1.98	0.45
23:BA:1230:C:O2'	23:BA:1231:G:H5'	2.17	0.45
23:BA:1404:C:C2'	23:BA:1405:U:H5'	2.46	0.45
23:BA:1614:A:C6	41:BS:87:PRO:HA	2.50	0.45
23:BA:1685:C:O2'	23:BA:1686:C:H5'	2.16	0.45
23:BA:2380:C:O5'	23:BA:2380:C:H6	1.99	0.45
23:BA:2630:G:H1'	23:BA:2894:G:H1'	1.99	0.45
23:BA:2712:U:H5''	23:BA:2712:U:O2	2.15	0.45
23:BA:2744:G:N3	23:BA:2761:G:C2	2.85	0.45
24:BB:12:C:O2'	45:BW:74:ARG:HG2	2.16	0.45
24:BB:48:A:H2'	24:BB:49:C:C6	2.51	0.45
25:BC:127:VAL:HA	25:BC:193:VAL:HG12	1.96	0.45
26:BD:67:PHE:CD1	26:BD:74:PRO:HB3	2.50	0.45
27:BE:46:ARG:CG	27:BE:46:ARG:NH1	2.79	0.45
27:BE:155:LEU:HD12	27:BE:174:VAL:O	2.17	0.45
27:BE:179:GLU:CD	27:BE:179:GLU:N	2.69	0.45
30:BH:107:ILE:HD12	30:BH:108:THR:H	1.82	0.45
32:BJ:70:ALA:HB2	32:BJ:135:LEU:HD11	1.99	0.45
34:BL:21:ARG:H	34:BL:21:ARG:HG2	1.57	0.45
34:BL:57:THR:HG21	34:BL:59:LEU:HD22	1.89	0.45
39:BQ:84:LYS:HD3	39:BQ:84:LYS:HA	1.89	0.45
41:BS:14:PRO:O	41:BS:15:ARG:C	2.54	0.45
42:BT:12:VAL:HG22	42:BT:17:ALA:HB2	1.99	0.45
46:BX:11:ARG:NH1	46:BX:11:ARG:CG	2.79	0.45
46:BX:13:ILE:HG23	46:BX:14:VAL:N	2.29	0.45
1:CA:425:G:C6	1:CA:426:G:C5	3.05	0.45
1:CA:744:C:H6	1:CA:744:C:O5'	2.00	0.45
1:CA:883:C:C2'	1:CA:884:U:H5'	2.47	0.45
1:CA:891:U:O2	1:CA:891:U:H2'	2.17	0.45
1:CA:1064:G:O4'	1:CA:1066:C:C6	2.70	0.45
1:CA:1237:C:C5	1:CA:1336:C:N3	2.85	0.45
3:CC:35:GLU:O	3:CC:39:ILE:HG13	2.17	0.45
3:CC:70:VAL:CG1	3:CC:71:ALA:N	2.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:135:LEU:HD13	4:CD:135:LEU:N	2.32	0.45
8:CH:51:VAL:CG1	8:CH:52:ASP:N	2.79	0.45
8:CH:86:ILE:HG22	8:CH:87:SER:N	2.31	0.45
16:CP:18:ARG:O	16:CP:19:ILE:O	2.34	0.45
23:DA:96:G:O5'	47:DY:48:HIS:HE1	1.99	0.45
23:DA:270(F):G:H2'	23:DA:270(G):U:O4'	2.16	0.45
23:DA:1465:G:C2	23:DA:1466:G:C4	3.05	0.45
23:DA:1478:G:C2	23:DA:1479:G:C5	3.05	0.45
23:DA:1971:A:H8	23:DA:1971:A:H5''	1.82	0.45
23:DA:2338:G:C2	23:DA:2339:G:C8	3.04	0.45
23:DA:2572:A:OP2	26:DD:144:ARG:HB2	2.17	0.45
23:DA:2807:G:N1	23:DA:2893:G:O6	2.49	0.45
23:DA:2862:G:H2'	23:DA:2863:C:H6	1.82	0.45
24:DB:16:G:O6	24:DB:69:G:C2	2.69	0.45
24:DB:106:G:C6	24:DB:107:U:C4	3.04	0.45
26:DD:84:PHE:CE2	26:DD:86:PRO:HG3	2.52	0.45
26:DD:119:ARG:HD3	26:DD:120:TRP:NE1	2.31	0.45
28:DF:16:ARG:O	28:DF:20:ILE:HG12	2.16	0.45
28:DF:178:PHE:HA	28:DF:179:PRO:HD3	1.69	0.45
29:DG:73:ALA:O	29:DG:76:VAL:HB	2.17	0.45
30:DH:126:TYR:HB2	30:DH:142:VAL:HG21	1.98	0.45
30:DH:143:SER:O	30:DH:145:VAL:N	2.47	0.45
32:DJ:80:ALA:C	32:DJ:82:LYS:N	2.70	0.45
32:DJ:157:ARG:O	32:DJ:159:GLU:N	2.50	0.45
33:DK:86:ILE:HD12	33:DK:86:ILE:N	2.30	0.45
34:DL:126:VAL:HG23	34:DL:145:PRO:HG2	1.99	0.45
35:DM:74:TYR:O	35:DM:89:ASN:N	2.44	0.45
39:DQ:107:ALA:O	39:DQ:110:VAL:HB	2.17	0.45
49:D1:40:ILE:HD12	49:D1:40:ILE:N	2.31	0.45
1:AA:37:U:P	12:AL:122:LYS:HG3	2.57	0.45
1:AA:375:U:C2'	1:AA:376:G:H5'	2.47	0.45
1:AA:393:A:N3	1:AA:394:G:C8	2.85	0.45
1:AA:586:C:O2'	1:AA:878:G:H4'	2.17	0.45
1:AA:631:G:N2	1:AA:632:A:C2	2.84	0.45
1:AA:639:G:O2'	1:AA:640:A:H5'	2.16	0.45
1:AA:706:A:H2'	1:AA:707:C:H5'	1.99	0.45
1:AA:737:A:C4	1:AA:738:C:C5	3.05	0.45
1:AA:857:C:H2'	1:AA:858:G:O4'	2.17	0.45
1:AA:927:G:N1	1:AA:1391:U:C2	2.85	0.45
1:AA:946:A:C6	1:AA:1236:A:C2	3.04	0.45
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.52	0.45
1:AA:1452:C:H1'	1:AA:1453:G:N2	2.31	0.45
3:AC:205:GLY:O	3:AC:206:GLU:HB2	2.17	0.45
4:AD:52:SER:C	4:AD:54:TYR:N	2.70	0.45
7:AG:68:ASN:O	7:AG:135:VAL:HG13	2.17	0.45
8:AH:29:SER:OG	8:AH:32:LYS:HG3	2.17	0.45
8:AH:51:VAL:CG1	8:AH:52:ASP:N	2.79	0.45
9:AI:118:LYS:C	9:AI:120:ARG:H	2.20	0.45
10:AJ:22:LYS:NZ	10:AJ:88:LEU:HG	2.32	0.45
10:AJ:49:VAL:CG2	14:AN:41:ARG:HB3	2.46	0.45
12:AL:100:VAL:CG1	12:AL:103:VAL:HG23	2.46	0.45
15:AO:5:LYS:HD3	15:AO:5:LYS:N	2.30	0.45
15:AO:27:VAL:O	15:AO:28:GLN:C	2.53	0.45
18:AR:43:PHE:C	18:AR:44:LEU:HD12	2.37	0.45
23:BA:136:G:C4	23:BA:137(A):C:C5	3.05	0.45
23:BA:234:C:H2'	23:BA:235:U:C6	2.52	0.45
23:BA:260:G:N2	23:BA:261:G:H1'	2.32	0.45
23:BA:644:A:C2	23:BA:646:A:C4	3.04	0.45
23:BA:738:G:H2'	23:BA:739:G:C8	2.52	0.45
23:BA:1180:C:O2'	23:BA:1181:C:H5'	2.17	0.45
23:BA:1309:G:H3'	52:B4:9:ARG:HH11	1.80	0.45
23:BA:1478:G:C2	23:BA:1479:G:C5	3.05	0.45
23:BA:1612:C:H4'	52:B4:5:TRP:O	2.17	0.45
23:BA:2311:A:O2'	23:BA:2312:U:O4'	2.34	0.45
23:BA:2415:G:O2'	23:BA:2416:C:H5'	2.16	0.45
23:BA:2468:G:C2	23:BA:2481:G:N3	2.85	0.45
23:BA:2747:G:C6	23:BA:2754:U:C6	3.05	0.45
23:BA:2869:G:C6	23:BA:2870:C:C4	3.04	0.45
24:BB:10:C:C2	24:BB:11:C:C5	3.05	0.45
25:BC:17:THR:H	25:BC:205:VAL:HG12	1.80	0.45
25:BC:244:ARG:HB2	25:BC:245:PRO:HD3	1.99	0.45
28:BF:70:VAL:HG12	28:BF:90:LEU:CD2	2.44	0.45
29:BG:74:ASN:ND2	29:BG:138:LYS:HD2	2.31	0.45
30:BH:4:ILE:HA	30:BH:17:GLN:O	2.16	0.45
33:BK:3:GLN:CB	33:BK:4:PRO:HD2	2.47	0.45
34:BL:40:SER:O	34:BL:41:ARG:CD	2.52	0.45
36:BN:31:HIS:C	36:BN:33:ARG:H	2.19	0.45
37:BO:84:GLN:C	37:BO:86:ALA:H	2.20	0.45
38:BP:3:ARG:HD2	38:BP:6:LEU:HD23	1.97	0.45
39:BQ:17:ILE:HA	39:BQ:20:LEU:HD23	1.98	0.45
39:BQ:61:TRP:O	39:BQ:62:ILE:C	2.55	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BS:4:LYS:CD	41:BS:6:ILE:HD11	2.47	0.45
41:BS:75:TYR:CD2	41:BS:75:TYR:C	2.89	0.45
43:BU:44:ILE:HG22	43:BU:45:VAL:N	2.25	0.45
51:B3:18:ARG:HB3	51:B3:19:ARG:H	1.52	0.45
1:CA:36:C:N4	1:CA:37:U:C4	2.85	0.45
1:CA:277:C:OP1	17:CQ:41:LYS:HE3	2.16	0.45
1:CA:381:C:C2	1:CA:382:A:C8	3.05	0.45
1:CA:525:C:OP1	12:CL:90:LYS:HE2	2.16	0.45
1:CA:644:G:H5'	8:CH:92:ARG:HH21	1.81	0.45
1:CA:897:C:N4	1:CA:902:G:H1	2.15	0.45
1:CA:986:A:C6	1:CA:1220:G:N1	2.84	0.45
1:CA:1350:A:C6	1:CA:1351:U:N3	2.85	0.45
2:CB:72:GLY:HA2	2:CB:165:VAL:HG22	1.98	0.45
2:CB:122:PHE:HD1	2:CB:139:LYS:HZ2	1.65	0.45
2:CB:154:LEU:HD22	2:CB:154:LEU:C	2.37	0.45
4:CD:102:ASP:OD2	4:CD:136:PRO:HB3	2.17	0.45
7:CG:54:THR:C	7:CG:56:GLN:H	2.20	0.45
7:CG:68:ASN:O	7:CG:135:VAL:HG13	2.17	0.45
9:CI:45:ALA:O	9:CI:48:GLU:HB2	2.17	0.45
11:CK:34:ASP:CB	11:CK:35:PRO:CD	2.94	0.45
17:CQ:32:TYR:O	17:CQ:34:LYS:N	2.49	0.45
19:CS:66:MET:HB3	19:CS:74:PHE:CZ	2.52	0.45
23:DA:379:G:N2	46:DX:20:ARG:NH2	2.64	0.45
23:DA:483:A:H1'	43:DU:47:LYS:O	2.17	0.45
23:DA:651:G:OP1	53:D5:19:SER:CB	2.63	0.45
23:DA:1021:A:N6	23:DA:1141:U:N3	2.53	0.45
23:DA:1022:G:N2	23:DA:114(B):A:H2	2.13	0.45
23:DA:1411:C:O2'	23:DA:1412:A:H5'	2.17	0.45
23:DA:1900:A:N1	23:DA:1970:A:C5	2.85	0.45
23:DA:2511:U:O4	23:DA:2575:C:N3	2.49	0.45
23:DA:2744:G:N2	23:DA:2761:G:C4	2.85	0.45
25:DC:35:LYS:HD3	25:DC:35:LYS:HA	1.70	0.45
25:DC:86:PRO:HD2	25:DC:87:ASN:HD21	1.81	0.45
25:DC:97:TYR:HB2	25:DC:101:GLU:O	2.16	0.45
26:DD:55:ASN:O	26:DD:59:VAL:HG23	2.17	0.45
27:DE:53:THR:C	27:DE:55:GLY:N	2.69	0.45
29:DG:92:ILE:O	29:DG:93:GLY:C	2.55	0.45
34:DL:114:ILE:H	34:DL:114:ILE:CD1	1.98	0.45
35:DM:140:ALA:HB3	44:DV:53:ILE:CG1	2.47	0.45
36:DN:2:ARG:O	36:DN:3:HIS:CD2	2.69	0.45
36:DN:50:HIS:CD2	36:DN:50:HIS:C	2.89	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DQ:24:TYR:HE1	39:DQ:39:LEU:HD23	1.81	0.45
41:DS:57:ASN:O	41:DS:58:ALA:C	2.54	0.45
45:DW:73:GLY:O	45:DW:75:LEU:N	2.50	0.45
46:DX:51:VAL:HG12	46:DX:58:ILE:HG12	1.99	0.45
46:DX:68:PRO:O	46:DX:70:VAL:N	2.49	0.45
1:AA:9:G:OP2	5:AE:121:LYS:HG3	2.17	0.45
1:AA:236:G:C5	1:AA:237:C:C5	3.04	0.45
1:AA:750:G:O2'	15:AO:21:ASP:HA	2.16	0.45
1:AA:932:C:H2'	1:AA:933:G:C8	2.52	0.45
1:AA:948:C:OP1	13:AM:107:ALA:HA	2.17	0.45
1:AA:1135:U:H4'	1:AA:1136:U:C5	2.52	0.45
1:AA:1149:C:H2'	1:AA:1150:U:C6	2.52	0.45
1:AA:1186:G:H4'	9:AI:110:GLU:OE2	2.16	0.45
1:AA:1316:G:H2'	1:AA:1317:C:H5''	1.99	0.45
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	1.98	0.45
4:AD:29:PRO:O	4:AD:30:LYS:CB	2.64	0.45
4:AD:119:GLN:O	4:AD:123:HIS:HD2	2.00	0.45
5:AE:81:GLU:HG2	5:AE:90:VAL:HG22	1.98	0.45
9:AI:9:ARG:O	9:AI:10:ARG:HB2	2.17	0.45
15:AO:32:LEU:O	15:AO:35:ARG:N	2.50	0.45
23:BA:165:U:H2'	23:BA:171:G:O4'	2.16	0.45
23:BA:295:G:H4'	43:BU:2:ARG:NH1	2.32	0.45
23:BA:318:C:O2'	23:BA:319:C:H5'	2.16	0.45
23:BA:733:G:C5	23:BA:761:A:C6	3.05	0.45
23:BA:819:A:OP2	23:BA:1187:G:N2	2.30	0.45
23:BA:887:A:N3	23:BA:889:C:C5	2.84	0.45
23:BA:1104:C:C2'	23:BA:1105:U:H5'	2.47	0.45
23:BA:1314:C:C2'	23:BA:1315:C:H5'	2.47	0.45
23:BA:1439:A:C2'	23:BA:1440:G:H5'	2.47	0.45
23:BA:1751:C:H2'	23:BA:1752:C:H6	1.82	0.45
23:BA:1826:G:H2'	23:BA:1827:C:H6	1.82	0.45
23:BA:2579:C:O2'	26:BD:131:ALA:CB	2.64	0.45
23:BA:2679:A:H4'	26:BD:165:VAL:HG11	1.99	0.45
26:BD:125:GLY:HA2	26:BD:126:PRO:HD3	1.74	0.45
32:BJ:36:TRP:CZ2	32:BJ:74:PHE:CD2	3.05	0.45
33:BK:35:VAL:HG11	33:BK:103:ALA:CB	2.46	0.45
33:BK:104:ARG:HG2	33:BK:121:VAL:HG12	1.99	0.45
38:BP:41:ARG:CB	38:BP:41:ARG:NH1	2.80	0.45
38:BP:84:GLN:HG3	38:BP:85:LYS:CG	2.47	0.45
39:BQ:59:ARG:HE	39:BQ:59:ARG:HB2	1.53	0.45
41:BS:23:LEU:HD22	50:B2:25:LEU:HD13	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BU:19:LYS:HB3	43:BU:20:TYR:CE1	2.52	0.45
48:BZ:23:LEU:HD12	48:BZ:50:VAL:HG11	1.99	0.45
49:B1:40:ILE:HD12	49:B1:40:ILE:N	2.32	0.45
1:CA:186(G):C:H2'	1:CA:187:C:O4'	2.17	0.45
1:CA:236:G:H2'	1:CA:237:C:O4'	2.17	0.45
1:CA:474:G:H5'	16:CP:81:ARG:HG3	1.98	0.45
1:CA:687:A:N3	1:CA:688:G:H1'	2.32	0.45
1:CA:688:G:C4	1:CA:689:C:C5	3.04	0.45
1:CA:1072:G:C5	1:CA:1073:U:C4	3.04	0.45
1:CA:1076:C:C2'	1:CA:1077:G:H5'	2.47	0.45
1:CA:1327:C:H2'	1:CA:1328:C:C6	2.52	0.45
3:CC:182:ILE:HD11	3:CC:203:PHE:HD1	1.81	0.45
12:CL:88:ARG:NH1	12:CL:90:LYS:HD3	2.32	0.45
14:CN:24:CYS:SG	14:CN:27:CYS:SG	3.08	0.45
18:CR:23:LYS:C	18:CR:25:THR:H	2.19	0.45
22:CV:6195:G:N2	22:CV:6196:A:N3	2.65	0.45
23:DA:83:G:N2	23:DA:84:A:N6	2.65	0.45
23:DA:231:C:C5	23:DA:232:G:C6	3.05	0.45
23:DA:270(G):U:H3	23:DA:270(U):G:H1	1.64	0.45
23:DA:587:C:C4	34:DL:33:ARG:HB2	2.52	0.45
23:DA:629:G:H2'	23:DA:630:G:H8	1.81	0.45
23:DA:735:A:H3'	23:DA:736:C:H6	1.81	0.45
23:DA:988:A:C8	48:DZ:13:ILE:HD12	2.52	0.45
23:DA:993:G:C6	23:DA:994:C:C5	3.05	0.45
23:DA:1051:G:C5	23:DA:1052:C:N3	2.84	0.45
23:DA:1759:A:C8	23:DA:2696:U:H1'	2.52	0.45
23:DA:1786:A:C2	23:DA:2606:C:H1'	2.52	0.45
23:DA:2388:A:C8	23:DA:2389:G:C5	3.05	0.45
23:DA:2410:G:C2	23:DA:2411:A:H1'	2.52	0.45
23:DA:2470:G:C6	23:DA:2471:C:C5	3.05	0.45
23:DA:2852:G:H2'	23:DA:2853:C:C6	2.51	0.45
24:DB:87:G:N2	24:DB:89(A):G:C8	2.85	0.45
25:DC:25:THR:O	25:DC:27:THR:CB	2.64	0.45
25:DC:36:PRO:HA	25:DC:62:TYR:O	2.17	0.45
25:DC:50:THR:HG23	25:DC:51:VAL:N	2.32	0.45
26:DD:11:MET:CE	26:DD:186:GLY:CA	2.94	0.45
27:DE:67:GLN:O	27:DE:68:LYS:HB3	2.17	0.45
27:DE:144:LYS:C	27:DE:146:ALA:H	2.19	0.45
27:DE:203:GLN:OE1	27:DE:207:GLY:CA	2.64	0.45
28:DF:128:ARG:HH21	28:DF:129:GLY:C	2.20	0.45
32:DJ:123:GLU:C	32:DJ:125:ALA:H	2.19	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DJ:142:ARG:HH11	32:DJ:142:ARG:CG	2.20	0.45
34:DL:62:LEU:O	34:DL:62:LEU:CD2	2.62	0.45
34:DL:85:LEU:HD23	34:DL:117:GLU:O	2.16	0.45
35:DM:55:VAL:O	35:DM:56:ARG:C	2.54	0.45
41:DS:8:ARG:HA	41:DS:102:HIS:HA	1.98	0.45
41:DS:32:ALA:O	41:DS:33:ARG:C	2.55	0.45
43:DU:8:LYS:HE2	43:DU:8:LYS:HB2	1.51	0.45
43:DU:15:VAL:O	43:DU:15:VAL:HG12	2.17	0.45
44:DV:60:GLU:OE1	44:DV:66:SER:HB3	2.17	0.45
46:DX:86:SER:HB3	46:DX:89:GLU:HB2	1.99	0.45
47:DY:60:LEU:HA	47:DY:60:LEU:HD23	1.38	0.45
48:DZ:49:LYS:HD3	48:DZ:49:LYS:HA	1.44	0.45
1:AA:8:A:H5'	5:AE:120:THR:O	2.17	0.45
1:AA:166:G:O2'	1:AA:167:G:H5'	2.17	0.45
1:AA:356:A:H1'	1:AA:368:U:O2'	2.17	0.45
1:AA:391:G:C5	1:AA:392:G:C8	3.05	0.45
1:AA:413:G:H4'	1:AA:414:A:H5''	1.98	0.45
1:AA:436:C:H2'	1:AA:437:U:H6	1.81	0.45
1:AA:625:G:O2'	1:AA:626:U:H5'	2.17	0.45
1:AA:642:A:N3	8:AH:113:SER:OG	2.32	0.45
1:AA:806:C:O2	1:AA:807:A:C8	2.69	0.45
1:AA:976:G:H8	1:AA:1358:U:C2'	2.30	0.45
1:AA:1074:G:H1'	2:AB:104:ASN:HD22	1.82	0.45
1:AA:1241:G:C2	1:AA:1242:C:C4	3.04	0.45
1:AA:1327:C:H2'	1:AA:1328:C:C6	2.51	0.45
3:AC:59:ARG:HG2	3:AC:63:ASN:O	2.17	0.45
4:AD:75:PHE:CZ	4:AD:93:PHE:CZ	3.05	0.45
4:AD:126:ILE:CG2	4:AD:127:THR:H	2.22	0.45
5:AE:26:PHE:N	5:AE:26:PHE:CD1	2.84	0.45
5:AE:126:ARG:HG2	5:AE:126:ARG:NH1	2.24	0.45
6:AF:63:TYR:HD2	6:AF:63:TYR:H	1.59	0.45
7:AG:41:ARG:O	7:AG:45:ASP:N	2.40	0.45
8:AH:114:THR:OG1	8:AH:119:LEU:HG	2.17	0.45
9:AI:5:TYR:CG	9:AI:6:GLY:N	2.85	0.45
9:AI:28:VAL:HG22	9:AI:63:ILE:H	1.82	0.45
19:AS:33:THR:CG2	19:AS:51:VAL:HA	2.47	0.45
22:AV:6214:C:H2'	22:AV:6215:C:C6	2.52	0.45
23:BA:1214:A:H2'	23:BA:1215:G:O4'	2.17	0.45
23:BA:1260:G:H2'	23:BA:1261:C:O4'	2.17	0.45
23:BA:1275:A:C5	36:BN:16:HIS:ND1	2.85	0.45
23:BA:1394:U:C5	23:BA:1395:A:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1502:C:H3'	23:BA:1502:C:C6	2.52	0.45
23:BA:2082:A:H2'	23:BA:2083:G:O4'	2.15	0.45
23:BA:2300:G:C6	23:BA:2301:C:C4	3.05	0.45
24:BB:61:G:C6	24:BB:62:C:C4	3.05	0.45
25:BC:142:VAL:CG2	25:BC:192:THR:O	2.65	0.45
28:BF:60:LEU:HA	28:BF:63:ILE:HG12	1.99	0.45
30:BH:143:SER:O	30:BH:145:VAL:HG23	2.17	0.45
36:BN:2:ARG:HA	36:BN:2:ARG:HD2	1.44	0.45
38:BP:34:VAL:O	38:BP:40:THR:HA	2.17	0.45
40:BR:7:THR:CG2	40:BR:22:VAL:HG11	2.44	0.45
40:BR:30:GLY:HA2	40:BR:61:VAL:O	2.16	0.45
41:BS:42:ARG:HG2	41:BS:42:ARG:NH1	2.32	0.45
41:BS:60:ASN:OD1	41:BS:60:ASN:N	2.50	0.45
42:BT:51:VAL:HG11	42:BT:81:VAL:CG1	2.45	0.45
44:BV:18:LEU:O	44:BV:21:ALA:HB3	2.17	0.45
44:BV:101:PRO:O	44:BV:102:LEU:HD23	2.16	0.45
44:BV:125:LEU:HD23	44:BV:126:VAL:N	2.32	0.45
44:BV:137:ILE:HG22	44:BV:138:GLU:N	2.31	0.45
46:BX:70:VAL:O	46:BX:74:VAL:HG23	2.17	0.45
1:CA:36:C:O3'	12:CL:122:LYS:HA	2.17	0.45
1:CA:191(G):G:C5	1:CA:192:U:C5	3.05	0.45
1:CA:236:G:H1'	17:CQ:4:LYS:NZ	2.32	0.45
1:CA:401:C:C6	1:CA:401:C:C3'	3.00	0.45
1:CA:452:A:C4	1:CA:453:A:C8	3.05	0.45
1:CA:601:C:H2'	1:CA:602:A:H8	1.73	0.45
1:CA:614:A:P	4:CD:85:LYS:HE2	2.57	0.45
1:CA:724:G:N3	1:CA:725:G:C8	2.85	0.45
1:CA:1080:A:C5'	1:CA:1081:G:OP2	2.65	0.45
1:CA:1252:A:H61	1:CA:1285:A:N6	2.12	0.45
1:CA:1418:A:N3	23:DA:1959:G:H1'	2.32	0.45
2:CB:63:MET:C	2:CB:65:GLY:H	2.19	0.45
5:CE:28:PHE:CD1	5:CE:28:PHE:N	2.85	0.45
7:CG:36:LYS:NZ	7:CG:36:LYS:HB2	2.31	0.45
10:CJ:45:ARG:HB3	10:CJ:47:PHE:CE1	2.52	0.45
10:CJ:58:ASP:O	10:CJ:60:ARG:N	2.50	0.45
23:DA:30:G:C6	23:DA:31:C:C4	3.05	0.45
23:DA:528:A:O2'	23:DA:529:A:H5'	2.17	0.45
23:DA:1417:C:H42	23:DA:1581:G:H1	1.64	0.45
23:DA:1586:A:C2'	23:DA:1587:A:H5'	2.46	0.45
23:DA:1983:C:O2'	23:DA:1984:G:H5'	2.16	0.45
23:DA:2360:A:H8	23:DA:2360:A:O5'	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2468:G:C2	23:DA:2481:G:N3	2.84	0.45
23:DA:2587:A:H8	23:DA:2587:A:O5'	1.99	0.45
23:DA:2672:G:H2'	23:DA:2673:G:O5'	2.17	0.45
23:DA:2795:G:H3'	23:DA:2797:U:C5'	2.47	0.45
24:DB:95:U:H2'	24:DB:96:G:C8	2.51	0.45
25:DC:52:ARG:CZ	25:DC:53:PHE:CE2	3.00	0.45
25:DC:52:ARG:NH1	25:DC:53:PHE:HE2	2.15	0.45
25:DC:158:ALA:HB3	25:DC:161:THR:CG2	2.33	0.45
26:DD:12:THR:O	26:DD:23:VAL:O	2.35	0.45
29:DG:35:VAL:HG21	29:DG:75:ALA:HB2	1.98	0.45
30:DH:133:HIS:NE2	30:DH:135:GLU:HG2	2.32	0.45
36:DN:2:ARG:HA	36:DN:2:ARG:HD2	1.42	0.45
36:DN:12:ARG:CG	36:DN:16:HIS:CD2	2.78	0.45
36:DN:65:LEU:O	36:DN:68:ARG:HB2	2.17	0.45
40:DR:7:THR:CG2	40:DR:22:VAL:HG11	2.47	0.45
43:DU:81:LYS:HD3	43:DU:97:ARG:CB	2.43	0.45
47:DY:28:LYS:HG3	47:DY:60:LEU:HD12	1.99	0.45
49:D1:60:GLU:N	49:D1:60:GLU:CD	2.70	0.45
1:AA:224:C:H2'	1:AA:225:C:H6	1.81	0.45
1:AA:497:U:O2	1:AA:497:U:C2'	2.65	0.45
1:AA:577:G:H1'	1:AA:816:A:N3	2.32	0.45
1:AA:913:A:C2'	1:AA:914:A:OP2	2.64	0.45
1:AA:973:G:OP1	10:AJ:57:LYS:NZ	2.50	0.45
1:AA:1301:U:H3'	1:AA:1302:U:C5'	2.46	0.45
4:AD:31:CYS:O	4:AD:32:ALA:HB3	2.17	0.45
4:AD:92:VAL:O	4:AD:96:LEU:HB2	2.17	0.45
5:AE:136:MET:O	5:AE:139:LEU:N	2.50	0.45
8:AH:68:ARG:HG2	8:AH:69:ARG:N	2.32	0.45
12:AL:58:ARG:HA	12:AL:64:GLU:HG2	1.99	0.45
13:AM:37:THR:OG1	13:AM:56:LEU:HD23	2.17	0.45
14:AN:24:CYS:SG	14:AN:27:CYS:SG	3.15	0.45
17:AQ:85:VAL:O	17:AQ:89:LEU:HG	2.17	0.45
23:BA:17:G:H2'	23:BA:18:C:C6	2.52	0.45
23:BA:497:A:C5	23:BA:498:G:C8	3.05	0.45
23:BA:581:C:H2'	23:BA:582:G:H8	1.81	0.45
23:BA:606:U:H4'	23:BA:658:C:H4'	1.99	0.45
23:BA:838:C:C4	23:BA:839:U:C5	3.05	0.45
23:BA:1126:A:H8	23:BA:1126:A:O5'	2.00	0.45
23:BA:1564:C:O2'	23:BA:1565:C:H5'	2.17	0.45
23:BA:1632:A:C6	23:BA:1633:G:C6	3.05	0.45
23:BA:1632:A:H8	23:BA:1632:A:O5'	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1789:A:OP1	25:BC:222:ARG:HG3	2.16	0.45
23:BA:1889:A:H2'	23:BA:1890:A:O4'	2.17	0.45
23:BA:2079:U:C2'	23:BA:2080:G:O5'	2.64	0.45
23:BA:2416:C:N3	23:BA:2417:C:C5	2.85	0.45
23:BA:2766:G:H5''	23:BA:2767:C:OP2	2.16	0.45
23:BA:2846:G:C6	23:BA:2847:U:C4	3.04	0.45
25:BC:175:LEU:HD12	25:BC:185:VAL:HG21	1.99	0.45
25:BC:233:HIS:HE1	25:BC:247:ALA:N	2.06	0.45
33:BK:59:LYS:O	33:BK:86:ILE:HG23	2.16	0.45
34:BL:33:ARG:NE	34:BL:36:LYS:HD3	2.10	0.45
35:BM:111:GLU:OE2	35:BM:133:ARG:CZ	2.65	0.45
38:BP:34:VAL:HG21	38:BP:43:GLN:HB2	1.99	0.45
38:BP:114:LEU:HD23	38:BP:114:LEU:HA	1.56	0.45
44:BV:25:PRO:O	44:BV:85:HIS:HB2	2.17	0.45
53:B5:32:LEU:HD23	53:B5:32:LEU:N	2.32	0.45
1:CA:123:C:H5''	1:CA:311:C:O2'	2.17	0.45
1:CA:256:U:OP1	17:CQ:17:LYS:NZ	2.39	0.45
1:CA:324:G:C2	1:CA:327:A:C8	3.05	0.45
1:CA:362:G:O2'	12:CL:32:ARG:NH2	2.49	0.45
1:CA:645:C:C2'	1:CA:646:U:H5'	2.46	0.45
1:CA:671:G:C4	1:CA:672:U:C6	3.05	0.45
1:CA:710:G:C4	1:CA:711:G:C8	3.05	0.45
1:CA:949:A:C2	1:CA:1233:G:N3	2.85	0.45
1:CA:1149:C:H2'	1:CA:1150:U:C6	2.52	0.45
1:CA:1181:G:N2	1:CA:1182:G:N2	2.65	0.45
1:CA:1269:A:H5''	21:CU:24:ARG:NH1	2.32	0.45
1:CA:1339:A:H2'	1:CA:1340:A:O4'	2.17	0.45
1:CA:1372:U:C5	1:CA:1373:G:C5	3.04	0.45
5:CE:13:ILE:HA	5:CE:29:GLY:O	2.17	0.45
5:CE:72:GLN:O	5:CE:73:ASN:HB3	2.17	0.45
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.98	0.45
6:CF:82:ARG:HA	6:CF:82:ARG:HD2	1.79	0.45
8:CH:112:LEU:HD12	8:CH:114:THR:HG23	1.98	0.45
9:CI:8:GLY:HA3	9:CI:76:ALA:O	2.17	0.45
10:CJ:89:ASP:C	10:CJ:91:PRO:HD3	2.37	0.45
12:CL:7:ASN:HA	12:CL:10:VAL:HG23	1.99	0.45
18:CR:44:LEU:HG	18:CR:50:ILE:HD13	1.99	0.45
23:DA:247:G:N7	23:DA:249:C:C2	2.85	0.45
23:DA:496:G:C1'	41:DS:61:ASN:HD21	2.30	0.45
23:DA:575:A:N3	23:DA:575:A:H2'	2.32	0.45
23:DA:661:C:O3'	34:DL:18:ARG:CG	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:771:G:C4	23:DA:772:C:C5	3.05	0.45
23:DA:1241:A:N7	23:DA:1242:A:C4	2.85	0.45
23:DA:1413:G:C2'	23:DA:1414:G:H5'	2.47	0.45
23:DA:1425:G:N2	23:DA:1573:G:N7	2.64	0.45
23:DA:1438:U:O2'	23:DA:1439:A:H5'	2.16	0.45
23:DA:1578:U:H2'	23:DA:1578:U:O2	2.17	0.45
23:DA:1790:C:H2'	23:DA:1791:A:C5	2.51	0.45
23:DA:1835:G:C4	23:DA:1836:C:C5	3.05	0.45
23:DA:2046:G:O5'	50:D2:19:ARG:HA	2.16	0.45
23:DA:2286:A:C8	23:DA:2287:A:C6	3.05	0.45
23:DA:2347:C:H4'	51:D3:39:TYR:CE1	2.52	0.45
24:DB:27:C:N4	24:DB:28:C:N4	2.65	0.45
24:DB:68:C:H2'	24:DB:69:G:O4'	2.17	0.45
24:DB:95:U:C2	24:DB:96:G:N7	2.85	0.45
25:DC:221:VAL:HG22	25:DC:226:MET:CE	2.47	0.45
27:DE:89:VAL:CG1	27:DE:90:PHE:H	2.19	0.45
28:DF:73:ALA:H	28:DF:87:PRO:HD2	1.82	0.45
30:DH:75:LEU:HG	30:DH:76:THR:O	2.16	0.45
34:DL:49:ARG:O	34:DL:51:PHE:N	2.50	0.45
34:DL:57:THR:OG1	34:DL:58:THR:N	2.49	0.45
34:DL:61:ARG:HD2	53:D5:13:ARG:HD2	1.99	0.45
34:DL:97:PRO:O	34:DL:101:VAL:HG12	2.17	0.45
35:DM:116:GLU:O	35:DM:117:ALA:C	2.55	0.45
37:DO:88:ASP:O	37:DO:90:GLY:N	2.45	0.45
38:DP:41:ARG:HH11	38:DP:41:ARG:CB	2.28	0.45
38:DP:108:ARG:O	38:DP:111:ARG:HB2	2.17	0.45
40:DR:82:ARG:C	40:DR:83:ARG:HG2	2.37	0.45
41:DS:78:GLU:OE2	41:DS:99:ARG:HD3	2.17	0.45
42:DT:28:PHE:HE1	42:DT:81:VAL:CG2	2.30	0.45
42:DT:29:TRP:CZ3	42:DT:78:LYS:CG	3.00	0.45
44:DV:97:GLU:O	44:DV:98:MET:HB3	2.17	0.45
47:DY:60:LEU:C	47:DY:62:THR:N	2.70	0.45
50:D2:17:ASP:O	50:D2:20:ARG:HB2	2.16	0.45
1:AA:66:G:C4'	1:AA:173:U:C5	2.99	0.44
1:AA:236:G:H2'	1:AA:237:C:O4'	2.17	0.44
1:AA:378:G:C6	1:AA:379:C:N4	2.84	0.44
1:AA:501:C:H6	1:AA:501:C:H3'	1.82	0.44
1:AA:556:C:O2'	1:AA:557:G:H5'	2.17	0.44
1:AA:563:A:C8	1:AA:567:G:H1'	2.51	0.44
1:AA:994:A:H8	1:AA:994:A:O5'	2.00	0.44
1:AA:1104:G:C2	1:AA:1105:A:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1369:C:C2'	1:AA:1370:G:O4'	2.66	0.44
2:AB:189:ASP:OD1	2:AB:189:ASP:N	2.50	0.44
2:AB:228:GLY:O	2:AB:230:VAL:N	2.50	0.44
3:AC:59:ARG:HH21	3:AC:97:LYS:HE2	1.81	0.44
3:AC:191:THR:C	3:AC:193:TYR:H	2.21	0.44
7:AG:36:LYS:HB2	7:AG:36:LYS:NZ	2.32	0.44
8:AH:36:LEU:C	8:AH:38:ILE:N	2.69	0.44
12:AL:5:THR:O	12:AL:9:LEU:HD12	2.18	0.44
12:AL:82:VAL:CG1	12:AL:83:LEU:N	2.80	0.44
16:AP:28:ARG:CG	16:AP:28:ARG:NH1	2.71	0.44
19:AS:39:THR:HG22	19:AS:40:ILE:N	2.32	0.44
23:BA:603:A:C2	23:BA:655:A:C2	3.06	0.44
23:BA:795:C:H2'	23:BA:796:C:C6	2.47	0.44
23:BA:900:A:H2'	23:BA:901:A:O4'	2.17	0.44
23:BA:1184:G:C6	23:BA:1185:C:C4	3.04	0.44
23:BA:1475:G:C2	23:BA:1476:C:O2	2.70	0.44
23:BA:1922:G:C6	23:BA:1923:U:N3	2.84	0.44
23:BA:2550:G:C5	23:BA:2551:C:C5	3.05	0.44
25:BC:77:ALA:HB2	25:BC:97:TYR:CG	2.53	0.44
25:BC:131:LEU:HG	25:BC:136:ILE:HD11	1.99	0.44
25:BC:142:VAL:HG23	25:BC:192:THR:O	2.17	0.44
26:BD:8:LYS:HG2	26:BD:192:ASN:HD22	1.81	0.44
27:BE:117:ARG:HH21	27:BE:187:VAL:HA	1.82	0.44
28:BF:5:LEU:HD22	28:BF:6:ALA:H	1.81	0.44
29:BG:90:LYS:O	29:BG:94:TYR:HB2	2.17	0.44
30:BH:12:LEU:HD22	30:BH:12:LEU:H	1.81	0.44
36:BN:27:SER:O	36:BN:31:HIS:N	2.50	0.44
36:BN:57:ARG:CD	36:BN:59:ASP:OD2	2.64	0.44
37:BO:64:GLU:O	37:BO:68:GLN:HG3	2.17	0.44
38:BP:96:ARG:CZ	38:BP:96:ARG:HB2	2.47	0.44
38:BP:107:ASP:H	38:BP:110:ILE:HG13	1.82	0.44
39:BQ:79:PHE:HD1	39:BQ:79:PHE:O	1.98	0.44
39:BQ:92:ARG:HD2	39:BQ:95:LEU:CG	2.46	0.44
42:BT:43:VAL:HG11	42:BT:81:VAL:HG11	1.99	0.44
42:BT:63:LYS:HE3	42:BT:72:LYS:HG2	1.98	0.44
43:BU:63:LYS:CG	43:BU:64:GLU:N	2.80	0.44
43:BU:81:LYS:HZ3	43:BU:97:ARG:HD3	1.80	0.44
45:BW:14:ARG:O	45:BW:15:ASP:HB2	2.17	0.44
45:BW:49:LYS:HB2	45:BW:80:HIS:CB	2.46	0.44
46:BX:13:ILE:HD12	46:BX:13:ILE:O	2.17	0.44
46:BX:68:PRO:O	46:BX:71:TYR:N	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B4:3:ARG:HA	52:B4:3:ARG:HD3	1.74	0.44
1:CA:119:A:C4	1:CA:240:C:C4	3.05	0.44
1:CA:334:C:O2'	1:CA:335:C:H5'	2.17	0.44
1:CA:413:G:H4'	1:CA:414:A:H5''	1.98	0.44
1:CA:492:G:C6	1:CA:493:G:C5	3.05	0.44
1:CA:506:G:C6	1:CA:507:C:N4	2.84	0.44
1:CA:511:C:H1'	4:CD:43:HIS:HE2	1.81	0.44
1:CA:833:U:C2	1:CA:834:C:C5	3.05	0.44
1:CA:976:G:H8	1:CA:1358:U:C2'	2.29	0.44
1:CA:1135:U:H4'	1:CA:1136:U:C5	2.53	0.44
2:CB:204:ASN:CG	2:CB:205:ASP:H	2.20	0.44
3:CC:172:ARG:O	3:CC:173:VAL:CG2	2.52	0.44
4:CD:82:ALA:CB	4:CD:89:THR:HG23	2.47	0.44
4:CD:106:TYR:C	4:CD:109:GLY:H	2.19	0.44
7:CG:15:ASP:OD1	7:CG:18:TYR:HD1	1.99	0.44
15:CO:17:ARG:NH1	15:CO:77:ARG:HH12	2.16	0.44
15:CO:25:THR:OG1	15:CO:26:GLU:N	2.49	0.44
17:CQ:89:LEU:O	17:CQ:93:GLN:HG3	2.16	0.44
19:CS:39:THR:HG22	19:CS:40:ILE:N	2.32	0.44
20:CT:78:ALA:O	20:CT:79:ARG:C	2.55	0.44
23:DA:494:G:N2	41:DS:57:ASN:HD21	2.15	0.44
23:DA:540:G:C5	23:DA:541:C:C5	3.05	0.44
23:DA:662:G:H5'	34:DL:18:ARG:HA	1.97	0.44
23:DA:1022:G:C6	23:DA:1140:C:C4	3.05	0.44
23:DA:1540:G:C2	23:DA:1541:U:C2	3.05	0.44
23:DA:1541:U:O3'	23:DA:1542:G:H3'	2.16	0.44
23:DA:1647:G:H3'	23:DA:1647:G:P	2.57	0.44
23:DA:2009:G:O2'	23:DA:2010:G:H5'	2.17	0.44
23:DA:2026:C:C2	23:DA:2027:G:C8	3.05	0.44
23:DA:2231:C:H2'	23:DA:2232:U:O4'	2.17	0.44
23:DA:2305:A:C5'	28:DF:134:GLY:HA3	2.46	0.44
23:DA:2664:G:H2'	23:DA:2665:A:OP2	2.17	0.44
23:DA:2722:G:C5	23:DA:2723:C:C4	3.05	0.44
25:DC:25:THR:O	25:DC:26:LYS:C	2.55	0.44
25:DC:242:ARG:HH11	25:DC:242:ARG:H	1.64	0.44
26:DD:2:LYS:HD3	26:DD:95:ILE:O	2.16	0.44
26:DD:72:VAL:O	26:DD:73:GLU:C	2.54	0.44
27:DE:50:SER:OG	27:DE:51:THR:N	2.46	0.44
27:DE:64:ILE:HG23	27:DE:65:TRP:CD1	2.52	0.44
28:DF:133:LEU:HD23	28:DF:133:LEU:H	1.81	0.44
34:DL:47:ASP:HB2	34:DL:51:PHE:HB2	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DN:17:ARG:O	36:DN:20:LEU:HB3	2.17	0.44
36:DN:54:LEU:CD2	36:DN:62:ALA:HB1	2.45	0.44
47:DY:25:VAL:HG21	47:DY:61:LEU:HD13	1.98	0.44
1:AA:128:G:O2'	17:AQ:3:LYS:HE2	2.18	0.44
1:AA:186(G):C:H2'	1:AA:187:C:O4'	2.16	0.44
1:AA:512:U:H3	1:AA:539:A:H61	1.65	0.44
1:AA:649:G:C4	1:AA:650:G:C8	3.05	0.44
1:AA:832:C:O2'	1:AA:833:U:P	2.74	0.44
1:AA:1064:G:N2	1:AA:1190:G:H2'	2.22	0.44
1:AA:1067:A:N3	1:AA:1068:G:C1'	2.80	0.44
1:AA:1076:C:H2'	1:AA:1077:G:H5'	1.99	0.44
1:AA:1160:G:O2'	1:AA:1161:C:H5'	2.16	0.44
1:AA:1226:C:H42	13:AM:104:ARG:HD2	1.82	0.44
2:AB:164:VAL:O	2:AB:186:ALA:HB1	2.17	0.44
3:AC:59:ARG:CG	3:AC:64:VAL:HG22	2.43	0.44
8:AH:10:LEU:HD23	8:AH:10:LEU:N	2.32	0.44
8:AH:50:ARG:H	8:AH:50:ARG:HD3	1.81	0.44
15:AO:3:ILE:HG21	15:AO:34:LEU:HD23	1.99	0.44
15:AO:67:LEU:HD23	15:AO:78:TYR:HE1	1.83	0.44
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.17	0.44
23:BA:56:A:C2	23:BA:115:C:O2	2.70	0.44
23:BA:262:A:O2'	23:BA:263:C:H5'	2.17	0.44
23:BA:312:G:H2'	23:BA:312:G:N3	2.32	0.44
23:BA:571:A:H4'	23:BA:572:A:OP1	2.17	0.44
23:BA:1203:G:H3'	23:BA:1204:A:H5''	1.99	0.44
23:BA:1389:G:C2	23:BA:1390:U:C2	3.05	0.44
23:BA:1902:C:H2'	23:BA:1903:G:O4'	2.17	0.44
23:BA:2476:A:N1	23:BA:2477:C:C5	2.85	0.44
23:BA:2795:G:H3'	23:BA:2797:U:C5'	2.47	0.44
25:BC:164:GLN:O	25:BC:175:LEU:HD23	2.17	0.44
28:BF:73:ALA:H	28:BF:87:PRO:HD2	1.82	0.44
34:BL:33:ARG:O	34:BL:34:GLY:C	2.55	0.44
34:BL:66:GLY:O	34:BL:67:MET:HB2	2.17	0.44
38:BP:3:ARG:HB3	38:BP:6:LEU:HB3	1.99	0.44
44:BV:74:VAL:HG22	44:BV:86:VAL:CG1	2.47	0.44
44:BV:108:PRO:HG3	44:BV:141:VAL:HG22	1.99	0.44
47:BY:3:LEU:O	47:BY:5:GLU:N	2.50	0.44
48:BZ:18:ASP:OD1	48:BZ:18:ASP:N	2.49	0.44
51:B3:13:CYS:O	51:B3:21:TYR:HA	2.17	0.44
53:B5:15:LYS:CG	53:B5:16:ILE:N	2.80	0.44
1:CA:81:G:C5	1:CA:82:U:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:356:A:C2'	1:CA:357:G:O5'	2.65	0.44
1:CA:662:G:C2	1:CA:744:C:O2	2.71	0.44
1:CA:668:G:H2'	1:CA:669:U:H6	1.81	0.44
1:CA:930:C:C4	1:CA:931:C:C5	3.05	0.44
1:CA:1225:A:C5'	1:CA:1226:C:OP2	2.66	0.44
1:CA:1316:G:H2'	1:CA:1317:C:H5''	1.99	0.44
5:CE:36:ASP:O	5:CE:37:ARG:CB	2.65	0.44
5:CE:75:THR:HG23	5:CE:76:ILE:H	1.81	0.44
7:CG:27:ILE:HD12	7:CG:40:ALA:HA	1.99	0.44
7:CG:131:LYS:HE3	7:CG:136:LYS:HZ1	1.81	0.44
8:CH:25:ASP:OD1	8:CH:25:ASP:N	2.50	0.44
11:CK:109:VAL:HG11	18:CR:84:LYS:HB2	1.99	0.44
16:CP:49:LEU:HG	16:CP:50:LYS:N	2.32	0.44
17:CQ:53:LEU:HD12	17:CQ:54:GLY:H	1.82	0.44
23:DA:194:G:H2'	23:DA:195:A:O4'	2.17	0.44
23:DA:197:A:C8	23:DA:197:A:C5'	2.95	0.44
23:DA:498:G:O2'	43:DU:47:LYS:HD3	2.17	0.44
23:DA:748:G:OP2	41:DS:88:ARG:HG3	2.17	0.44
23:DA:814:C:C5	34:DL:27:HIS:NE2	2.85	0.44
23:DA:1027:A:C6	23:DA:1126:A:C4	3.04	0.44
23:DA:1203:G:H3'	23:DA:1204:A:C5'	2.47	0.44
23:DA:1454:U:C5	23:DA:2702:U:O4	2.71	0.44
23:DA:1454:U:O4'	36:DN:63:ARG:HD3	2.17	0.44
23:DA:1464:C:C2	23:DA:1465:G:C8	3.05	0.44
23:DA:1649:G:C6	23:DA:2009:G:C6	3.05	0.44
23:DA:1684:C:C2	23:DA:1705:G:N2	2.86	0.44
23:DA:1945:G:H2'	23:DA:1946:U:C6	2.52	0.44
23:DA:2467:C:C2'	23:DA:2468:G:H5'	2.47	0.44
23:DA:2747:G:O2'	23:DA:2748:A:O4'	2.27	0.44
24:DB:10:C:C2	24:DB:11:C:C5	3.06	0.44
24:DB:16:G:C6	24:DB:69:G:N2	2.85	0.44
25:DC:70:TRP:O	25:DC:70:TRP:HD1	2.01	0.44
25:DC:221:VAL:HG22	25:DC:226:MET:HE3	1.99	0.44
26:DD:87:GLU:O	26:DD:88:GLY:C	2.53	0.44
26:DD:176:ILE:N	26:DD:176:ILE:CD1	2.80	0.44
27:DE:64:ILE:O	27:DE:65:TRP:CD1	2.70	0.44
27:DE:135:LYS:O	27:DE:136:THR:C	2.56	0.44
33:DK:31:LYS:HB3	33:DK:32:TYR:CD1	2.53	0.44
34:DL:85:LEU:CA	34:DL:88:LEU:HB2	2.46	0.44
36:DN:79:LEU:HD23	36:DN:83:ILE:CB	2.47	0.44
38:DP:3:ARG:HB3	38:DP:6:LEU:HB3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DP:80:SER:O	38:DP:82:LEU:N	2.50	0.44
41:DS:4:LYS:CD	41:DS:6:ILE:HD11	2.45	0.44
43:DU:14:LEU:CD2	43:DU:15:VAL:N	2.69	0.44
44:DV:57:ILE:HG22	44:DV:59:LEU:HG	1.99	0.44
51:D3:18:ARG:HH22	51:D3:44:ARG:HB2	1.82	0.44
1:AA:407:G:N2	1:AA:436:C:C2	2.86	0.44
1:AA:575:G:C8	1:AA:881:G:N2	2.86	0.44
1:AA:949:A:C2	1:AA:1233:G:N3	2.85	0.44
1:AA:1072:G:C6	1:AA:1104:G:N1	2.85	0.44
1:AA:1238:A:C5	1:AA:1303:C:H1'	2.53	0.44
1:AA:1251:A:H1'	1:AA:1369:C:O2'	2.17	0.44
4:AD:128:VAL:HA	4:AD:145:GLU:O	2.17	0.44
6:AF:64:GLN:HE21	6:AF:64:GLN:HB2	1.60	0.44
9:AI:5:TYR:O	9:AI:84:ALA:HA	2.18	0.44
12:AL:46:LYS:HD3	12:AL:47:PRO:HG3	1.99	0.44
13:AM:86:CYS:HA	19:AS:73:GLU:O	2.17	0.44
23:BA:142:G:H2'	23:BA:143:C:H6	1.81	0.44
23:BA:273(B):G:C2	23:BA:364:C:C2	3.05	0.44
23:BA:443:A:H1'	23:BA:1201:C:O4'	2.18	0.44
23:BA:487:C:H1'	41:BS:53:SER:HB2	1.98	0.44
23:BA:724:U:H2'	23:BA:725:G:O4'	2.18	0.44
23:BA:1217:C:OP1	39:BQ:15:LYS:HE2	2.17	0.44
23:BA:1284:A:H2'	23:BA:1285:G:O4'	2.17	0.44
23:BA:1471:A:C2	23:BA:1472:A:C4	3.05	0.44
23:BA:1540:G:C2	23:BA:1541:U:C2	3.05	0.44
23:BA:1540:G:C4	23:BA:1541:U:C6	3.04	0.44
23:BA:1655:A:C8	23:BA:1656:C:C5	3.05	0.44
23:BA:1777:U:O2'	23:BA:1778:U:H5'	2.17	0.44
23:BA:1987:G:H2'	23:BA:1988:C:H6	1.83	0.44
23:BA:2295:C:C4	23:BA:2296:U:H5	2.36	0.44
23:BA:2401:U:O2'	23:BA:2402:C:H5''	2.16	0.44
23:BA:2427:C:H5''	23:BA:2428:G:OP1	2.17	0.44
23:BA:2572:A:C8	26:BD:144:ARG:HB3	2.52	0.44
23:BA:2794:C:N4	23:BA:2802:G:H1	2.15	0.44
24:BB:26:A:N7	24:BB:27:C:C4	2.85	0.44
25:BC:221:VAL:HG22	25:BC:226:MET:HE3	1.98	0.44
27:BE:37:VAL:HG23	27:BE:183:VAL:HG22	1.99	0.44
32:BJ:110:LEU:O	32:BJ:110:LEU:HD22	2.17	0.44
35:BM:140:ALA:HB3	44:BV:53:ILE:CG1	2.46	0.44
39:BQ:72:HIS:HE1	39:BQ:107:ALA:HA	1.82	0.44
39:BQ:78:THR:O	39:BQ:81:HIS:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BQ:79:PHE:HE1	39:BQ:83:LEU:CD2	2.29	0.44
41:BS:45:TYR:HD2	41:BS:46:PHE:CE1	2.34	0.44
42:BT:18:TYR:O	42:BT:19:ALA:C	2.56	0.44
43:BU:29:GLU:O	43:BU:38:ILE:N	2.40	0.44
43:BU:91:GLU:HB3	43:BU:92:ASN:H	1.65	0.44
48:BZ:11:SER:OG	48:BZ:13:ILE:HG13	2.17	0.44
48:BZ:32:GLN:HA	48:BZ:32:GLN:OE1	2.17	0.44
48:BZ:50:VAL:O	48:BZ:54:VAL:HG22	2.17	0.44
1:CA:69:G:H1	1:CA:99:C:H42	1.65	0.44
1:CA:173:U:C2	1:CA:197:A:N1	2.85	0.44
1:CA:393:A:C4	1:CA:394:G:C8	3.05	0.44
1:CA:445:G:H2'	1:CA:446:G:C8	2.52	0.44
1:CA:932:C:H2'	1:CA:933:G:C8	2.52	0.44
1:CA:948:C:OP1	13:CM:107:ALA:HA	2.17	0.44
1:CA:1417:G:N2	1:CA:1482:G:H2'	2.33	0.44
2:CB:9:GLU:CD	2:CB:9:GLU:C	2.75	0.44
2:CB:205:ASP:O	2:CB:207:ALA:N	2.49	0.44
4:CD:14:ARG:HD3	4:CD:14:ARG:HA	1.84	0.44
4:CD:79:PHE:HZ	4:CD:204:ILE:HA	1.81	0.44
4:CD:92:VAL:O	4:CD:96:LEU:HB2	2.17	0.44
5:CE:137:GLU:HG2	5:CE:140:ARG:NH1	2.31	0.44
11:CK:21:ILE:HG13	11:CK:30:VAL:CG1	2.47	0.44
16:CP:6:LEU:HB3	16:CP:17:TYR:HD2	1.82	0.44
23:DA:447:A:C4	23:DA:473:G:C8	3.05	0.44
23:DA:693:C:C2'	23:DA:694:U:O5'	2.66	0.44
23:DA:836:G:C5	23:DA:837:C:C4	3.05	0.44
23:DA:953:A:O2'	23:DA:954:G:H5'	2.17	0.44
23:DA:958:U:C2'	23:DA:959:A:OP2	2.65	0.44
23:DA:1381:G:H2'	23:DA:1382:G:H5'	1.97	0.44
23:DA:1576:U:N3	23:DA:1577:C:C5	2.85	0.44
23:DA:2280:G:C2'	23:DA:2281:C:H5'	2.47	0.44
23:DA:2330:G:H1'	45:DW:41:ARG:HB3	1.98	0.44
23:DA:2471:C:H2'	23:DA:2472:G:O4'	2.17	0.44
23:DA:2666:C:C6	23:DA:2667:C:C6	3.05	0.44
25:DC:10:THR:CG2	25:DC:13:ARG:CB	2.92	0.44
25:DC:164:GLN:O	25:DC:175:LEU:HD23	2.18	0.44
28:DF:52:ILE:HG23	28:DF:153:ARG:HH22	1.83	0.44
34:DL:50:ARG:HD2	34:DL:51:PHE:CB	2.47	0.44
34:DL:62:LEU:CD1	53:D5:27:THR:HG22	2.48	0.44
34:DL:126:VAL:CA	34:DL:145:PRO:HG2	2.46	0.44
35:DM:47:ILE:HG22	35:DM:48:GLU:H	1.78	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DS:41:LYS:C	41:DS:43:GLY:N	2.69	0.44
44:DV:39:VAL:HG21	44:DV:44:PHE:CD2	2.52	0.44
44:DV:137:ILE:HG22	44:DV:138:GLU:N	2.31	0.44
50:D2:14:ALA:O	50:D2:15:ARG:C	2.55	0.44
1:AA:131:C:H2'	1:AA:132:C:C6	2.53	0.44
1:AA:401:C:C6	1:AA:401:C:C3'	3.00	0.44
1:AA:430:A:OP1	4:AD:9:CYS:N	2.44	0.44
1:AA:515:G:C2	1:AA:537:G:N3	2.86	0.44
1:AA:577:G:C5	1:AA:578:C:C5	3.05	0.44
1:AA:762:C:C2	1:AA:763:G:C8	3.06	0.44
1:AA:978:A:O2'	1:AA:1322:C:N3	2.48	0.44
1:AA:1053:G:C3'	1:AA:1054:C:C5'	2.92	0.44
1:AA:1181:G:N2	1:AA:1182:G:N2	2.65	0.44
1:AA:1292:U:C2	1:AA:1293:G:N7	2.86	0.44
1:AA:1331:G:H4'	1:AA:1331:G:OP1	2.17	0.44
1:AA:1346:A:C2	1:AA:1348:U:C4	3.06	0.44
3:AC:186:PHE:CD1	3:AC:187:ALA:N	2.85	0.44
4:AD:19:LEU:O	4:AD:31:CYS:SG	2.75	0.44
4:AD:104:VAL:C	4:AD:106:TYR:N	2.70	0.44
5:AE:137:GLU:OE2	5:AE:137:GLU:O	2.35	0.44
8:AH:13:ILE:O	8:AH:17:THR:HG23	2.17	0.44
8:AH:36:LEU:O	8:AH:39:LEU:N	2.50	0.44
10:AJ:89:ASP:C	10:AJ:91:PRO:HD3	2.38	0.44
17:AQ:85:VAL:O	17:AQ:86:GLU:C	2.54	0.44
23:BA:483:A:N3	23:BA:483:A:H2'	2.33	0.44
23:BA:909:A:H2'	23:BA:912:C:H5	1.83	0.44
23:BA:956:G:OP1	35:BM:86:GLY:N	2.49	0.44
23:BA:997:G:OP1	39:BQ:93:LYS:HD2	2.17	0.44
23:BA:1299:G:H3'	23:BA:1639:U:O4	2.16	0.44
23:BA:1401:G:C5	23:BA:1402:C:C4	3.06	0.44
23:BA:1425:G:N2	23:BA:1573:G:N7	2.65	0.44
23:BA:1773:A:C5	23:BA:1829:A:H1'	2.52	0.44
23:BA:2210:G:N2	23:BA:2211:G:C5'	2.60	0.44
23:BA:2230:G:C6	23:BA:2231:C:C4	3.05	0.44
23:BA:2248:C:C2'	23:BA:2249:U:H5'	2.47	0.44
23:BA:2467:C:C2'	23:BA:2468:G:H5'	2.47	0.44
23:BA:2467:C:C5'	35:BM:123:HIS:CE1	3.00	0.44
23:BA:2723:C:H6	23:BA:2723:C:O5'	2.00	0.44
24:BB:10:C:C4	24:BB:11:C:C5	3.06	0.44
24:BB:68:C:H2'	24:BB:69:G:O4'	2.16	0.44
25:BC:155:LEU:CD1	25:BC:155:LEU:H	2.29	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:24:THR:HG22	26:BD:186:GLY:H	1.82	0.44
28:BF:45:GLU:C	28:BF:47:LYS:H	2.20	0.44
29:BG:91:GLY:O	29:BG:92:ILE:O	2.35	0.44
32:BJ:80:ALA:C	32:BJ:82:LYS:H	2.21	0.44
32:BJ:95:TYR:N	32:BJ:108:ILE:O	2.40	0.44
33:BK:96:THR:O	33:BK:97:ARG:C	2.56	0.44
36:BN:13:HIS:HE1	36:BN:15:SER:HB3	1.82	0.44
36:BN:79:LEU:CD2	36:BN:83:ILE:HB	2.46	0.44
40:BR:28:GLU:HB2	40:BR:31:ALA:HB2	1.99	0.44
40:BR:95:LEU:HD23	40:BR:96:ILE:N	2.33	0.44
42:BT:89:ILE:HG22	42:BT:91:ALA:HB3	1.99	0.44
44:BV:121:HIS:CE1	44:BV:169:GLU:OE2	2.71	0.44
45:BW:53:MET:HA	45:BW:58:THR:O	2.17	0.44
1:CA:67:C:O2'	1:CA:171:A:H1'	2.17	0.44
1:CA:349:A:C2'	1:CA:350:G:H5'	2.47	0.44
1:CA:411:A:N6	1:CA:413:G:N3	2.66	0.44
1:CA:521:G:C2	1:CA:522:C:C6	3.05	0.44
1:CA:559:A:H4'	1:CA:560:U:H3'	2.00	0.44
1:CA:828:A:C5'	1:CA:859:A:C2	2.96	0.44
1:CA:1038:C:H2'	1:CA:1039:C:H6	1.82	0.44
1:CA:1369:C:O2'	1:CA:1370:G:O4'	2.34	0.44
1:CA:1374:A:C4	1:CA:1375:A:C8	3.05	0.44
2:CB:28:PHE:CD1	2:CB:190:THR:HG22	2.53	0.44
2:CB:165:VAL:HG23	2:CB:166:ASP:N	2.33	0.44
3:CC:186:PHE:CD1	3:CC:187:ALA:N	2.86	0.44
5:CE:84:PHE:O	5:CE:86:ALA:N	2.45	0.44
9:CI:16:ARG:HB2	9:CI:64:THR:HB	1.99	0.44
10:CJ:22:LYS:NZ	10:CJ:88:LEU:HG	2.33	0.44
10:CJ:76:ASN:HA	10:CJ:77:PRO:HD3	1.87	0.44
23:DA:295:G:H4'	43:DU:2:ARG:NH1	2.32	0.44
23:DA:577:G:OP1	23:DA:2502:G:H2'	2.16	0.44
23:DA:608:A:C4	23:DA:621:A:C6	3.06	0.44
23:DA:679:C:H2'	23:DA:680:G:H8	1.83	0.44
23:DA:772:C:O2	23:DA:772:C:C2'	2.64	0.44
23:DA:1010:A:H5'	39:DQ:62:ILE:HG21	1.99	0.44
23:DA:1518:C:H2'	23:DA:1519:G:H8	1.82	0.44
23:DA:2490:G:H4'	23:DA:2491:U:OP1	2.17	0.44
23:DA:2604:U:O2	23:DA:2604:U:C2'	2.65	0.44
23:DA:2705:A:H3'	23:DA:2706:G:H8	1.83	0.44
23:DA:2712:U:O2'	23:DA:712(B):A:C5'	2.64	0.44
25:DC:166:GLN:CA	25:DC:166:GLN:NE2	2.62	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:166:GLN:HB2	25:DC:174:ILE:HG22	1.99	0.44
26:DD:3:GLY:HA3	26:DD:81:ILE:HG21	1.99	0.44
26:DD:172:VAL:HG13	26:DD:182:LEU:HD11	1.98	0.44
27:DE:67:GLN:O	27:DE:68:LYS:CB	2.65	0.44
28:DF:153:ARG:NH1	28:DF:153:ARG:HB3	2.32	0.44
29:DG:44:VAL:O	29:DG:50:VAL:HG13	2.18	0.44
33:DK:2:ILE:HD12	33:DK:2:ILE:HA	1.76	0.44
33:DK:7:TYR:HE1	33:DK:20:MET:CE	2.29	0.44
33:DK:35:VAL:HG11	33:DK:103:ALA:CB	2.47	0.44
34:DL:107:LYS:C	34:DL:109:GLY:H	2.20	0.44
37:DO:34:HIS:HB3	37:DO:36:TYR:CE1	2.53	0.44
38:DP:114:LEU:HD23	38:DP:114:LEU:HA	1.54	0.44
41:DS:14:PRO:O	41:DS:15:ARG:C	2.55	0.44
41:DS:19:LEU:HB3	50:D2:25:LEU:HD11	1.99	0.44
44:DV:74:VAL:CG2	44:DV:86:VAL:HG13	2.47	0.44
44:DV:163:LEU:H	44:DV:163:LEU:HD23	1.83	0.44
1:AA:340:U:H2'	1:AA:341:C:C6	2.52	0.44
1:AA:380:G:N2	1:AA:384:G:C5	2.86	0.44
1:AA:381:C:C2	1:AA:382:A:C8	3.05	0.44
1:AA:538:G:OP2	12:AL:114:LYS:HB2	2.17	0.44
1:AA:744:C:C6	1:AA:744:C:C3'	3.01	0.44
1:AA:921:U:H5''	1:AA:922:G:OP2	2.18	0.44
1:AA:939:G:H1	1:AA:1344:C:H42	1.66	0.44
1:AA:952:U:O2'	1:AA:953:G:H5'	2.18	0.44
1:AA:1004:A:H2	1:AA:1024:G:N3	2.15	0.44
1:AA:1367:C:N3	1:AA:1368:G:N7	2.66	0.44
3:AC:58:GLU:O	3:AC:64:VAL:HA	2.17	0.44
3:AC:61:ALA:O	3:AC:62:ASP:HB2	2.18	0.44
8:AH:69:ARG:HD3	8:AH:69:ARG:HA	1.79	0.44
13:AM:116:THR:O	13:AM:117:VAL:O	2.36	0.44
20:AT:91:LEU:HD23	20:AT:91:LEU:HA	1.67	0.44
23:BA:8:A:C5	23:BA:9:U:O4	2.71	0.44
23:BA:77:C:OP1	47:BY:59:ARG:HD3	2.16	0.44
23:BA:646:A:H2'	23:BA:647:G:O5'	2.17	0.44
23:BA:1001:A:H2'	23:BA:1002:G:O4'	2.16	0.44
23:BA:1422:G:C6	23:BA:1423:G:C5	3.06	0.44
23:BA:1434:A:C2	23:BA:1435:G:C4	3.05	0.44
23:BA:1746:G:N2	23:BA:1747:G:C4	2.85	0.44
23:BA:1902:C:C2'	23:BA:1903:G:O5'	2.65	0.44
23:BA:2001:A:H4'	23:BA:2689:U:O2'	2.16	0.44
23:BA:2051:A:H4'	26:BD:141:ILE:CG2	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2376:A:H2'	23:BA:2377:A:O4'	2.18	0.44
23:BA:2469:A:C2	23:BA:2470:G:C5	3.05	0.44
23:BA:2572:A:P	26:BD:144:ARG:HB2	2.57	0.44
23:BA:2596:U:C2'	23:BA:2597:G:H5'	2.47	0.44
23:BA:2757:A:H2'	23:BA:2758:A:H5'	2.00	0.44
23:BA:2823:A:C5	23:BA:2824:C:C5	3.05	0.44
25:BC:182:LEU:N	25:BC:272:ALA:CB	2.80	0.44
26:BD:153:GLY:O	26:BD:154:LYS:C	2.55	0.44
27:BE:46:ARG:HB3	27:BE:46:ARG:NH1	2.32	0.44
27:BE:63:LYS:CE	27:BE:67:GLN:HB3	2.48	0.44
29:BG:23:ARG:HD3	29:BG:23:ARG:H	1.83	0.44
30:BH:2:LYS:HG3	30:BH:39:ALA:CB	2.44	0.44
30:BH:6:LEU:HD23	30:BH:6:LEU:N	2.32	0.44
32:BJ:32:VAL:HG12	32:BJ:33:GLU:O	2.17	0.44
34:BL:46:LYS:HG2	34:BL:52:GLU:CD	2.38	0.44
34:BL:100:LEU:H	34:BL:100:LEU:HD22	1.82	0.44
35:BM:43:THR:HG1	35:BM:46:GLN:HG3	1.81	0.44
35:BM:141:GLN:N	44:BV:53:ILE:HB	2.29	0.44
38:BP:14:TYR:H	38:BP:14:TYR:HD1	1.64	0.44
38:BP:63:VAL:O	38:BP:73:GLU:HA	2.17	0.44
43:BU:46:LYS:O	43:BU:48:ALA:N	2.50	0.44
44:BV:24:LEU:HB2	44:BV:41:LEU:HG	1.97	0.44
52:B4:10:ARG:HE	52:B4:14:LYS:HD2	1.82	0.44
52:B4:19:ARG:CG	52:B4:19:ARG:NH1	2.65	0.44
1:CA:236:G:H1'	17:CQ:4:LYS:CE	2.47	0.44
1:CA:313:A:H2'	1:CA:314:C:C6	2.52	0.44
1:CA:436:C:H2'	1:CA:437:U:H6	1.81	0.44
1:CA:501:C:OP2	12:CL:123:LYS:HD2	2.18	0.44
1:CA:505:G:N3	1:CA:506:G:C8	2.85	0.44
1:CA:616:G:N3	1:CA:625:G:C2	2.85	0.44
1:CA:760:G:H2'	1:CA:761:G:C5'	2.48	0.44
1:CA:837:G:H1	1:CA:849:C:H42	1.65	0.44
1:CA:909:A:H3'	1:CA:910:C:H6	1.82	0.44
1:CA:977:A:C2'	1:CA:978:A:H5''	2.47	0.44
1:CA:1180:A:H5'	9:CI:103:THR:HG23	2.00	0.44
1:CA:1272:G:H2'	1:CA:1273:G:H8	1.82	0.44
1:CA:1349:A:P	9:CI:118:LYS:NZ	2.91	0.44
1:CA:1369:C:C2'	1:CA:1370:G:O4'	2.65	0.44
1:CA:1483:A:C2	23:DA:1959:G:N3	2.84	0.44
1:CA:1483:A:H1'	23:DA:1948:G:H1'	2.00	0.44
2:CB:96:ARG:HD2	2:CB:96:ARG:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:92:VAL:HG12	4:CD:96:LEU:CD2	2.41	0.44
4:CD:137:SER:O	4:CD:138:TYR:C	2.55	0.44
6:CF:60:PHE:CE2	18:CR:78:LEU:HD21	2.53	0.44
6:CF:62:TRP:CG	18:CR:35:ARG:NH1	2.86	0.44
7:CG:17:VAL:HG12	7:CG:18:TYR:CD1	2.52	0.44
8:CH:36:LEU:C	8:CH:38:ILE:H	2.21	0.44
11:CK:52:GLY:H	11:CK:55:LYS:HE2	1.83	0.44
11:CK:81:ASP:OD1	11:CK:106:LYS:HB3	2.18	0.44
23:DA:38:A:H2'	23:DA:39:C:C6	2.52	0.44
23:DA:270(W):G:C4	23:DA:270(X):G:C8	3.06	0.44
23:DA:333:G:C6	23:DA:334:C:C4	3.06	0.44
23:DA:466:A:O3'	52:D4:33:ARG:NH1	2.50	0.44
23:DA:646:A:H2'	23:DA:647:G:O4'	2.18	0.44
23:DA:2082:A:H2'	23:DA:2083:G:O4'	2.17	0.44
23:DA:2738:A:C2	23:DA:2739:U:C6	3.06	0.44
25:DC:175:LEU:HD23	25:DC:175:LEU:HA	1.84	0.44
25:DC:176:ARG:HH11	25:DC:176:ARG:CG	2.25	0.44
26:DD:59:VAL:O	26:DD:61:ARG:N	2.51	0.44
27:DE:140:LEU:HD12	27:DE:140:LEU:HA	1.80	0.44
28:DF:133:LEU:HD21	28:DF:157:ILE:HG13	1.99	0.44
29:DG:28:GLY:HA3	29:DG:79:VAL:HB	1.99	0.44
30:DH:25:TYR:CD1	30:DH:30:LEU:HD11	2.52	0.44
30:DH:143:SER:O	30:DH:145:VAL:HG23	2.18	0.44
32:DJ:41:ALA:HB3	32:DJ:79:ASN:O	2.18	0.44
32:DJ:121:VAL:HG23	32:DJ:122:LEU:N	2.33	0.44
33:DK:26:LYS:HB3	33:DK:27:GLY:H	1.65	0.44
33:DK:115:VAL:O	33:DK:118:ALA:HB3	2.17	0.44
39:DQ:79:PHE:HE1	39:DQ:83:LEU:CD2	2.31	0.44
40:DR:2:PHE:HE2	40:DR:13:ARG:CG	2.31	0.44
40:DR:28:GLU:HB2	40:DR:31:ALA:HB2	1.99	0.44
41:DS:9:TYR:N	41:DS:102:HIS:CD2	2.83	0.44
42:DT:75:ASP:C	42:DT:76:ARG:HG3	2.38	0.44
48:DZ:8:LEU:HD23	48:DZ:8:LEU:HA	1.75	0.44
1:AA:68:G:C6	1:AA:69:G:C5	3.06	0.44
1:AA:266:G:C5'	1:AA:267:C:C5	2.94	0.44
1:AA:411:A:N6	1:AA:413:G:N3	2.66	0.44
1:AA:689:C:H2'	1:AA:689:C:O2	2.16	0.44
1:AA:740:U:O2'	1:AA:741:G:H5'	2.18	0.44
1:AA:744:C:H6	1:AA:744:C:O5'	2.01	0.44
2:AB:20:GLU:HA	2:AB:20:GLU:OE1	2.17	0.44
2:AB:35:GLU:HG3	2:AB:40:HIS:HA	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:101:ILE:HD11	5:AE:119:LEU:CD2	2.23	0.44
11:AK:21:ILE:HG13	11:AK:30:VAL:CG1	2.46	0.44
15:AO:35:ARG:C	15:AO:59:MET:HE1	2.38	0.44
23:BA:192:C:H5''	23:BA:193:U:OP2	2.17	0.44
23:BA:298:G:H5''	23:BA:299:A:OP1	2.18	0.44
23:BA:307:G:N1	23:BA:310:A:OP2	2.50	0.44
23:BA:379:G:C5	23:BA:380:U:C5	3.05	0.44
23:BA:621:A:H5'	23:BA:622:G:OP2	2.17	0.44
23:BA:661:C:H5''	34:BL:18:ARG:HD3	2.00	0.44
23:BA:903:C:O2'	23:BA:904:C:H5'	2.17	0.44
23:BA:947:G:N3	23:BA:984:A:H2	2.16	0.44
23:BA:1027:A:N6	23:BA:1126:A:N9	2.66	0.44
23:BA:1477:A:C4	23:BA:1478:G:C8	3.06	0.44
23:BA:1587:A:C5	23:BA:1588:C:C4	3.06	0.44
23:BA:2039:C:H2'	23:BA:2040:C:C6	2.50	0.44
23:BA:2705:A:H2'	23:BA:2706:G:O4'	2.18	0.44
23:BA:2853:C:H2'	23:BA:2854:G:C8	2.51	0.44
23:BA:2889:C:H2'	23:BA:2891:G:H8	1.83	0.44
25:BC:25:THR:HG21	25:BC:81:ALA:HB1	2.00	0.44
27:BE:68:LYS:O	27:BE:70:THR:N	2.49	0.44
27:BE:112:MET:HA	27:BE:115:ALA:HB3	1.99	0.44
28:BF:131:TYR:HD2	28:BF:133:LEU:HD22	1.82	0.44
29:BG:62:LYS:O	29:BG:63:SER:C	2.56	0.44
30:BH:68:LEU:O	30:BH:72:LEU:HB2	2.17	0.44
34:BL:50:ARG:CD	34:BL:51:PHE:N	2.79	0.44
34:BL:84:ASN:HB3	34:BL:86:LYS:HG2	2.00	0.44
36:BN:2:ARG:O	36:BN:3:HIS:CG	2.71	0.44
41:BS:63:ASP:C	41:BS:63:ASP:OD2	2.56	0.44
42:BT:35:THR:HB	42:BT:38:GLU:H	1.83	0.44
44:BV:146:ILE:HG23	44:BV:174:VAL:HG12	1.99	0.44
46:BX:27:GLU:HB3	46:BX:33:LYS:HG3	1.97	0.44
47:BY:50:ILE:O	47:BY:51:ARG:C	2.55	0.44
1:CA:41:G:O6	1:CA:401:C:N3	2.51	0.44
1:CA:91:C:C2	1:CA:92:G:N7	2.86	0.44
1:CA:93:U:C2'	1:CA:95:G:C8	2.98	0.44
1:CA:186(D):G:N1	1:CA:186(E):C:C4	2.86	0.44
1:CA:358:U:O2	1:CA:358:U:H2'	2.16	0.44
1:CA:370:C:C2'	1:CA:371:G:H5'	2.48	0.44
1:CA:479:C:C2	1:CA:480:U:C6	3.05	0.44
1:CA:512:U:H3	1:CA:539:A:H61	1.65	0.44
1:CA:658:G:N1	1:CA:749:C:C4	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:926:G:C6	1:CA:1505:G:C6	3.05	0.44
1:CA:961:U:OP2	1:CA:1223:C:C1'	2.66	0.44
1:CA:977:A:H2'	1:CA:978:A:H5''	2.00	0.44
1:CA:979:C:C5	1:CA:980:C:C6	3.05	0.44
1:CA:1037:C:H2'	1:CA:1038:C:C6	2.53	0.44
4:CD:141:ARG:O	4:CD:144:ASP:OD2	2.36	0.44
7:CG:16:LEU:O	7:CG:17:VAL:HG23	2.17	0.44
8:CH:40:ALA:HB2	8:CH:45:ILE:HD11	1.99	0.44
10:CJ:13:HIS:CB	10:CJ:68:HIS:NE2	2.80	0.44
10:CJ:30:SER:HB2	10:CJ:80:LYS:HG3	1.99	0.44
10:CJ:49:VAL:CG2	14:CN:41:ARG:HB3	2.47	0.44
10:CJ:78:ASN:O	10:CJ:82:ILE:HG12	2.18	0.44
23:DA:195:A:N7	23:DA:197:A:OP1	2.51	0.44
23:DA:463:G:H5''	23:DA:464:U:OP2	2.17	0.44
23:DA:649:G:H2'	23:DA:650:C:C6	2.52	0.44
23:DA:886:C:C2'	23:DA:887:A:H4'	2.47	0.44
23:DA:926:A:H2'	23:DA:928:G:H8	1.83	0.44
23:DA:1368:G:N3	23:DA:1369:G:C8	2.85	0.44
23:DA:1803:A:H2	23:DA:1822:G:N3	2.15	0.44
23:DA:1956:U:H1'	23:DA:2552:U:OP1	2.17	0.44
23:DA:2248:C:H2'	23:DA:2249:U:O4'	2.16	0.44
23:DA:2467:C:H4'	35:DM:123:HIS:ND1	2.32	0.44
23:DA:2506:U:C5	23:DA:2507:C:H5	2.35	0.44
25:DC:30:GLU:HG3	25:DC:63:ARG:NE	2.32	0.44
25:DC:155:LEU:CD1	25:DC:155:LEU:N	2.80	0.44
26:DD:37:ARG:NH1	26:DD:42:ASP:OD1	2.51	0.44
26:DD:77:ILE:HD13	26:DD:195:LEU:CD1	2.42	0.44
27:DE:164:ARG:HA	27:DE:175:THR:OG1	2.17	0.44
30:DH:100:ALA:O	30:DH:104:GLN:HG3	2.17	0.44
38:DP:13:ARG:C	38:DP:15:VAL:H	2.20	0.44
38:DP:53:ARG:HH11	38:DP:53:ARG:CG	2.16	0.44
40:DR:12:TYR:N	40:DR:12:TYR:CD2	2.85	0.44
42:DT:21:PHE:O	42:DT:23:GLU:O	2.36	0.44
43:DU:71:LYS:HB2	43:DU:71:LYS:NZ	2.32	0.44
44:DV:179:ASP:O	44:DV:182:LYS:HB2	2.18	0.44
51:D3:44:ARG:O	51:D3:45:LYS:HG2	2.18	0.44
53:D5:11:LYS:HD2	53:D5:64:TYR:CE2	2.52	0.44
53:D5:15:LYS:HG3	53:D5:16:ILE:N	2.32	0.44
1:AA:186(E):C:H2'	1:AA:186(F):C:C6	2.53	0.44
1:AA:235:C:H2'	1:AA:236:G:H8	1.83	0.44
1:AA:367:U:C6	1:AA:394:G:C2	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:397:A:N6	1:AA:548:G:N7	2.66	0.44
1:AA:429:U:OP1	4:AD:9:CYS:O	2.35	0.44
1:AA:451:A:C5	1:AA:481:G:C5	3.05	0.44
1:AA:634:C:H2'	1:AA:635:G:H8	1.82	0.44
1:AA:650:G:C2	1:AA:651:C:C6	3.06	0.44
1:AA:708:C:O2'	1:AA:709:G:H5'	2.17	0.44
1:AA:936:C:H2'	1:AA:937:A:O4'	2.18	0.44
1:AA:942:G:H21	9:AI:124:GLN:NE2	2.16	0.44
1:AA:961:U:OP2	1:AA:1223:C:H1'	2.17	0.44
1:AA:1141:C:H2'	1:AA:1142:G:H8	1.83	0.44
2:AB:17:PHE:CG	2:AB:44:LEU:HD21	2.52	0.44
7:AG:17:VAL:HG12	7:AG:18:TYR:CD1	2.52	0.44
7:AG:78:ARG:HG2	7:AG:79:ARG:N	2.33	0.44
7:AG:111:ARG:CZ	7:AG:122:HIS:HB3	2.48	0.44
12:AL:44:PRO:CD	12:AL:50:ALA:H	2.31	0.44
18:AR:23:LYS:C	18:AR:25:THR:H	2.20	0.44
18:AR:74:ARG:HG3	18:AR:74:ARG:H	1.49	0.44
22:AV:6212:U:O2	22:AV:6212:U:H2'	2.17	0.44
23:BA:36:G:H4'	23:BA:451:C:C2	2.53	0.44
23:BA:99:U:C6	23:BA:102:G:N1	2.85	0.44
23:BA:189:G:H3'	23:BA:189:G:C8	2.53	0.44
23:BA:853:G:H1	23:BA:924:C:H42	1.65	0.44
23:BA:914:C:C5	23:BA:915:C:C6	3.05	0.44
23:BA:1523:U:H2'	23:BA:1524:G:C8	2.53	0.44
23:BA:2293:C:H5''	37:BO:89:ARG:NH1	2.33	0.44
23:BA:2462:U:H2'	23:BA:2463:C:O4'	2.18	0.44
23:BA:2572:A:H2'	26:BD:144:ARG:HG3	2.00	0.44
24:BB:9:G:C6	24:BB:10:C:C4	3.06	0.44
24:BB:41:U:OP1	24:BB:42:C:H5	1.99	0.44
24:BB:71:C:N3	24:BB:72:G:C8	2.86	0.44
24:BB:82:G:C4	24:BB:83:G:C8	3.06	0.44
25:BC:145:VAL:HB	25:BC:155:LEU:HB2	1.99	0.44
25:BC:238:GLY:C	25:BC:239:ARG:O	2.53	0.44
26:BD:24:THR:HG23	26:BD:184:VAL:HG23	1.99	0.44
32:BJ:41:ALA:O	32:BJ:44:LYS:HG2	2.17	0.44
36:BN:79:LEU:HD23	36:BN:79:LEU:HA	1.71	0.44
40:BR:88:ARG:H	40:BR:88:ARG:HG3	1.59	0.44
43:BU:68:HIS:C	43:BU:70:SER:N	2.71	0.44
45:BW:31:VAL:HG13	45:BW:65:GLY:O	2.17	0.44
46:BX:23:LYS:O	46:BX:23:LYS:CG	2.65	0.44
49:B1:60:GLU:N	49:B1:60:GLU:CD	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B4:9:ARG:O	52:B4:10:ARG:C	2.52	0.44
1:CA:76:G:C6	1:CA:77:C:C4	3.05	0.44
1:CA:255:G:H5'	17:CQ:16:GLN:O	2.17	0.44
1:CA:439:A:C8	1:CA:440:A:C8	3.06	0.44
1:CA:659:U:C2'	1:CA:660:G:H5'	2.48	0.44
1:CA:673:G:C4	1:CA:734:G:C2	3.06	0.44
1:CA:961:U:OP2	1:CA:1223:C:H1'	2.18	0.44
1:CA:1077:G:C2	1:CA:1081:G:C5	3.05	0.44
1:CA:1112:C:C5	3:CC:178:LEU:HD23	2.53	0.44
1:CA:1347:G:C8	9:CI:107:ARG:O	2.71	0.44
1:CA:1408:A:O2'	1:CA:1409:C:H5'	2.17	0.44
1:CA:1428:A:H2'	1:CA:1429:C:C6	2.53	0.44
2:CB:158:LEU:HD12	2:CB:158:LEU:N	2.32	0.44
3:CC:29:TYR:HE1	3:CC:33:LEU:HD22	1.83	0.44
4:CD:88:VAL:HG13	5:CE:97:GLY:HA3	1.99	0.44
8:CH:64:LYS:CG	8:CH:79:VAL:HG21	2.45	0.44
9:CI:114:TYR:HE1	10:CJ:60:ARG:O	2.00	0.44
12:CL:36:CYS:SG	12:CL:80:SER:HB2	2.58	0.44
19:CS:63:THR:HG23	19:CS:65:ASN:N	2.33	0.44
20:CT:41:VAL:O	20:CT:44:ALA:HB3	2.18	0.44
20:CT:57:ARG:C	20:CT:59:ALA:N	2.70	0.44
23:DA:479:A:H4'	23:DA:480:A:O5'	2.17	0.44
23:DA:841:A:C2	23:DA:938:G:N3	2.86	0.44
23:DA:861:A:C2	23:DA:917:A:C4	3.05	0.44
23:DA:998:C:H2'	23:DA:999:U:O4'	2.18	0.44
23:DA:1132:A:C2'	23:DA:1133:U:H5'	2.48	0.44
23:DA:1177:A:H5''	23:DA:1178:C:OP2	2.18	0.44
23:DA:1746:G:C2	23:DA:1747:G:C5	3.06	0.44
23:DA:2287:A:N1	23:DA:2346:A:H2	2.15	0.44
23:DA:2342:C:O2	23:DA:2374:C:H4'	2.18	0.44
23:DA:2692:C:H2'	23:DA:2693:A:O4'	2.18	0.44
23:DA:2746:U:H2'	23:DA:2747:G:C5'	2.47	0.44
23:DA:2867:G:O6	38:DP:23:ARG:HD3	2.17	0.44
24:DB:106:G:C2'	24:DB:107:U:H5'	2.48	0.44
25:DC:105:ILE:HD11	25:DC:192:THR:HG21	1.99	0.44
26:DD:116:VAL:HG13	26:DD:122:PHE:CD2	2.53	0.44
28:DF:58:GLN:O	28:DF:61:ALA:HB3	2.18	0.44
28:DF:60:LEU:HA	28:DF:63:ILE:HD11	1.99	0.44
28:DF:72:ARG:HD3	28:DF:86:MET:HA	2.00	0.44
29:DG:54:ARG:HA	29:DG:55:PRO:HD2	1.70	0.44
30:DH:31:LEU:HA	30:DH:31:LEU:HD13	1.73	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DK:59:LYS:O	33:DK:86:ILE:HG23	2.17	0.44
34:DL:21:ARG:H	34:DL:21:ARG:HG2	1.60	0.44
34:DL:114:ILE:CD1	34:DL:130:PHE:CE1	2.97	0.44
39:DQ:84:LYS:HD3	39:DQ:84:LYS:HA	1.89	0.44
44:DV:14:LYS:HB2	44:DV:17:ALA:HB3	1.99	0.44
47:DY:57:ILE:HA	47:DY:60:LEU:HB2	2.00	0.44
1:AA:67:C:O2'	1:AA:171:A:H1'	2.18	0.44
1:AA:130:A:H5''	1:AA:190:G:O2'	2.18	0.44
1:AA:356:A:C2'	1:AA:357:G:O5'	2.65	0.44
1:AA:406:G:OP1	4:AD:5:ILE:HG21	2.18	0.44
1:AA:452:A:C4	1:AA:453:A:C8	3.05	0.44
1:AA:803:G:H2'	1:AA:804:U:O4'	2.17	0.44
1:AA:960:U:C5	1:AA:1225:A:C8	3.06	0.44
1:AA:977:A:C2'	1:AA:978:A:H5''	2.48	0.44
1:AA:1064:G:O4'	1:AA:1066:C:C6	2.70	0.44
1:AA:1201:A:C2'	1:AA:1202:G:OP2	2.66	0.44
2:AB:17:PHE:CE1	2:AB:44:LEU:HD11	2.52	0.44
5:AE:129:ILE:O	5:AE:132:ALA:HB3	2.18	0.44
10:AJ:27:ALA:HB1	10:AJ:34:VAL:HG21	2.00	0.44
12:AL:43:THR:HA	12:AL:44:PRO:HD3	1.72	0.44
12:AL:69:ILE:HA	12:AL:70:PRO:HD3	1.69	0.44
13:AM:91:ARG:NH2	13:AM:96:LEU:HB3	2.33	0.44
16:AP:34:GLU:OE1	16:AP:55:ARG:NH1	2.51	0.44
22:AV:6193:U:C5	22:AV:6194:C:C5	3.06	0.44
23:BA:136:G:H2'	23:BA:137(A):C:H6	1.83	0.44
23:BA:242:G:C8	53:B5:5:LYS:HG2	2.53	0.44
23:BA:256:A:H2'	23:BA:257:A:H5'	1.97	0.44
23:BA:270(F):G:C6	23:BA:270(G):U:C4	3.05	0.44
23:BA:385:C:HO2'	23:BA:390:A:H2	1.65	0.44
23:BA:532:A:C8	23:BA:2021:C:C5	3.06	0.44
23:BA:772:C:O2	23:BA:772:C:C2'	2.65	0.44
23:BA:960:A:H61	35:BM:82:ARG:NH2	2.15	0.44
23:BA:1382:G:H4'	23:BA:1573:G:C2	2.53	0.44
23:BA:1389:G:C2	23:BA:1399:C:O2	2.71	0.44
23:BA:1497:U:H5'	23:BA:1498:C:H5	1.83	0.44
23:BA:1530:G:C6	23:BA:1531:C:C4	3.06	0.44
23:BA:1665:A:H2'	23:BA:1666:G:O4'	2.18	0.44
23:BA:1693:U:H4'	23:BA:1694:C:OP2	2.18	0.44
23:BA:1884:A:C4	23:BA:1885:A:C8	3.06	0.44
23:BA:1930:G:O2'	23:BA:1931:U:OP2	2.31	0.44
23:BA:2275:C:H6	23:BA:2275:C:C5'	2.29	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2469:A:C8	23:BA:2482:G:C4	3.06	0.44
23:BA:2672:G:H2'	23:BA:2673:G:O5'	2.17	0.44
23:BA:2676:C:C2'	23:BA:2677:G:H5'	2.47	0.44
25:BC:10:THR:CG2	25:BC:13:ARG:CB	2.90	0.44
26:BD:84:PHE:CD2	26:BD:84:PHE:C	2.91	0.44
28:BF:178:PHE:O	28:BF:180:PHE:CD1	2.71	0.44
30:BH:110:ASP:HB3	30:BH:111:PRO:HD2	1.99	0.44
33:BK:25:LEU:HD23	33:BK:25:LEU:HA	1.69	0.44
34:BL:49:ARG:O	34:BL:51:PHE:N	2.50	0.44
36:BN:11:ASN:O	36:BN:12:ARG:CB	2.64	0.44
36:BN:78:LYS:O	36:BN:83:ILE:HG12	2.18	0.44
39:BQ:104:GLN:HB3	40:BR:44:LYS:CE	2.48	0.44
39:BQ:105:VAL:CG1	40:BR:40:LEU:HD13	2.47	0.44
44:BV:75:ASN:O	44:BV:84:GLU:HB2	2.18	0.44
44:BV:92:SER:HB2	44:BV:94:GLU:CD	2.38	0.44
46:BX:35:THR:HB	46:BX:36:GLY:H	1.49	0.44
48:BZ:1:MET:HB3	48:BZ:39:ASP:HB3	2.00	0.44
51:B3:36:LEU:HD23	51:B3:36:LEU:N	2.32	0.44
1:CA:47:C:H5''	1:CA:365:U:C6	2.53	0.44
1:CA:53:A:C2	1:CA:54:C:C1'	3.00	0.44
1:CA:193:C:O4'	20:CT:60:GLU:OE2	2.36	0.44
1:CA:236:G:C6	1:CA:237:C:C4	3.06	0.44
1:CA:581:G:O2'	1:CA:582:U:H5'	2.16	0.44
1:CA:1001:G:H2'	1:CA:1002:G:O4'	2.18	0.44
2:CB:17:PHE:CE1	2:CB:44:LEU:HD11	2.53	0.44
3:CC:182:ILE:CG1	3:CC:203:PHE:HD1	2.30	0.44
4:CD:106:TYR:O	4:CD:109:GLY:N	2.46	0.44
4:CD:158:ILE:HG22	4:CD:159:ARG:N	2.32	0.44
5:CE:33:VAL:HG12	5:CE:34:VAL:N	2.32	0.44
7:CG:148:ASN:C	7:CG:150:ALA:N	2.70	0.44
10:CJ:6:ILE:HG12	10:CJ:72:VAL:O	2.17	0.44
10:CJ:26:ALA:HB1	10:CJ:84:GLN:HG2	2.00	0.44
10:CJ:32:ALA:HB3	10:CJ:76:ASN:CB	2.37	0.44
11:CK:38:ASN:HA	11:CK:39:PRO:HD2	1.74	0.44
13:CM:71:ARG:O	13:CM:74:VAL:HB	2.17	0.44
15:CO:61:GLY:O	15:CO:64:ARG:N	2.51	0.44
23:DA:150:C:H2'	23:DA:151:C:C6	2.53	0.44
23:DA:242:G:H5'	53:D5:63:PRO:CB	2.48	0.44
23:DA:259:G:C2	23:DA:260:G:C8	3.06	0.44
23:DA:589:C:O3'	27:DE:95:ARG:NH1	2.51	0.44
23:DA:606:U:H4'	23:DA:658:C:H4'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:718:A:H2'	23:DA:719:C:H5'	1.99	0.44
23:DA:900:A:H2'	23:DA:901:A:O4'	2.17	0.44
23:DA:1138:G:O2'	32:DJ:128:GLY:HA3	2.17	0.44
23:DA:1188:U:H2'	23:DA:1189:A:H5'	2.00	0.44
23:DA:2065:C:H2'	23:DA:2066:C:C6	2.52	0.44
23:DA:2304:G:H5'	23:DA:2305:A:OP2	2.18	0.44
23:DA:2479:G:H5''	23:DA:2537:U:O4'	2.17	0.44
23:DA:2846:G:C6	23:DA:2847:U:C4	3.05	0.44
23:DA:2849:U:OP2	38:DP:95:ARG:NH1	2.44	0.44
24:DB:43:C:H2'	24:DB:44:G:H5''	1.99	0.44
25:DC:122:ASP:CG	25:DC:123:ALA:N	2.71	0.44
25:DC:214:TRP:C	25:DC:216:GLY:H	2.21	0.44
27:DE:33:LEU:HD12	27:DE:33:LEU:HA	1.66	0.44
28:DF:161:THR:CG2	28:DF:172:LEU:HD23	2.47	0.44
29:DG:74:ASN:ND2	29:DG:138:LYS:HD2	2.32	0.44
32:DJ:36:TRP:HB2	32:DJ:156:GLN:CB	2.48	0.44
32:DJ:114:LEU:HA	32:DJ:118:PRO:CB	2.46	0.44
35:DM:24:GLY:HA2	35:DM:101:ARG:HA	1.99	0.44
41:DS:62:HIS:O	41:DS:64:MET:N	2.47	0.44
44:DV:182:LYS:O	44:DV:186:GLU:HB2	2.18	0.44
45:DW:36:ILE:HD12	45:DW:58:THR:CG2	2.41	0.44
46:DX:45:ASN:HD22	46:DX:46:LEU:H	1.63	0.44
49:D1:53:THR:C	49:D1:54:LYS:HD2	2.38	0.44
1:AA:104:G:N3	1:AA:105:G:C8	2.86	0.44
1:AA:450:G:H2'	1:AA:451:A:OP1	2.17	0.44
1:AA:592:G:H2'	1:AA:593:G:H8	1.82	0.44
2:AB:61:LEU:HG	2:AB:68:ILE:CG1	2.47	0.44
4:AD:79:PHE:C	4:AD:79:PHE:CD2	2.91	0.44
12:AL:44:PRO:CG	12:AL:52:ARG:HE	2.29	0.44
18:AR:54:ARG:H	18:AR:54:ARG:CD	2.24	0.44
23:BA:118:A:N3	23:BA:178:G:H1'	2.33	0.44
23:BA:966:G:C5	23:BA:967:C:H5	2.35	0.44
23:BA:1414:G:H2'	23:BA:1415:U:C6	2.51	0.44
23:BA:1820:U:H4'	23:BA:1821:A:OP2	2.18	0.44
23:BA:1855:G:N1	23:BA:1888:G:C8	2.86	0.44
23:BA:2074:U:O2'	23:BA:2597:G:H1'	2.18	0.44
23:BA:2464:C:C2	23:BA:2487:G:C2	3.06	0.44
23:BA:2563:U:O2	23:BA:2565:A:C8	2.71	0.44
23:BA:2722:G:C5	23:BA:2723:C:C4	3.06	0.44
26:BD:50:GLY:HA3	26:BD:75:VAL:HG11	2.00	0.44
28:BF:72:ARG:HD3	28:BF:86:MET:HA	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:81:VAL:HG12	30:BH:90:GLY:N	2.33	0.44
32:BJ:41:ALA:HB3	32:BJ:79:ASN:O	2.17	0.44
32:BJ:66:THR:HB	32:BJ:69:VAL:HG11	2.00	0.44
33:BK:20:MET:O	33:BK:20:MET:HG3	2.16	0.44
34:BL:47:ASP:HB3	34:BL:51:PHE:CB	2.47	0.44
34:BL:94:GLU:O	34:BL:96:THR:HG23	2.18	0.44
35:BM:73:PRO:HA	35:BM:93:TYR:CD2	2.53	0.44
35:BM:135:ASP:N	35:BM:135:ASP:OD1	2.50	0.44
37:BO:104:GLY:HA2	37:BO:107:GLU:CG	2.40	0.44
41:BS:23:LEU:HD12	41:BS:23:LEU:HA	1.79	0.44
44:BV:58:VAL:CG1	44:BV:66:SER:HB2	2.48	0.44
45:BW:73:GLY:O	45:BW:74:ARG:C	2.56	0.44
1:CA:296:U:H2'	1:CA:297:G:C8	2.52	0.44
1:CA:450:G:C8	1:CA:481:G:C6	3.06	0.44
1:CA:451:A:C5	1:CA:481:G:C5	3.05	0.44
1:CA:503:C:OP1	12:CL:118:LYS:CE	2.65	0.44
1:CA:565:U:C4	1:CA:566:G:C5	3.06	0.44
1:CA:693:G:H2'	1:CA:694:A:C8	2.53	0.44
1:CA:826:C:H5''	1:CA:827:U:OP2	2.18	0.44
1:CA:865:A:H2	1:CA:918:A:H4'	1.82	0.44
1:CA:946:A:C6	1:CA:1236:A:C2	3.06	0.44
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.53	0.44
1:CA:1089:G:C6	1:CA:1090:U:C5	3.06	0.44
1:CA:1160:G:O2'	1:CA:1161:C:H5'	2.17	0.44
1:CA:1293:G:O2'	1:CA:1294:G:H5'	2.18	0.44
1:CA:1441:G:H5''	1:CA:1442:G:O5'	2.17	0.44
5:CE:53:LEU:H	5:CE:53:LEU:CD2	2.24	0.44
7:CG:35:LYS:O	7:CG:38:LEU:N	2.49	0.44
8:CH:25:ASP:HA	8:CH:59:LEU:O	2.18	0.44
9:CI:125:TYR:CD1	9:CI:126:SER:N	2.86	0.44
10:CJ:6:ILE:HG22	10:CJ:98:ILE:HG12	1.99	0.44
12:CL:30:PRO:HD2	12:CL:31:PHE:H	1.83	0.44
13:CM:37:THR:OG1	13:CM:56:LEU:HD23	2.18	0.44
22:CV:6188:G:O2'	22:CV:6189:G:H5'	2.17	0.44
23:DA:245:G:C5	23:DA:246:C:C5	3.06	0.44
23:DA:587:C:C2	34:DL:33:ARG:HD3	2.53	0.44
23:DA:630:G:H22	23:DA:632:A:H3'	1.81	0.44
23:DA:725:G:C6	23:DA:726:G:N1	2.86	0.44
23:DA:849:A:O2'	48:DZ:17:LYS:HE3	2.17	0.44
23:DA:850:C:O2'	48:DZ:46:ASN:ND2	2.51	0.44
23:DA:997:G:OP1	39:DQ:93:LYS:HD2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1173:G:H8	23:DA:1173:G:O5'	2.01	0.44
23:DA:1592:C:O2'	23:DA:1593:G:H5'	2.18	0.44
23:DA:1800:C:OP2	25:DC:183:ARG:NH2	2.47	0.44
23:DA:2282:G:H4'	23:DA:2389:G:O2'	2.18	0.44
23:DA:2287:A:HO2'	23:DA:2288:A:C5'	2.30	0.44
23:DA:2305:A:H1'	28:DF:135:LEU:O	2.18	0.44
23:DA:2687:U:C4	23:DA:2688:U:H5	2.31	0.44
23:DA:2767:C:C2'	23:DA:2768:C:H5'	2.48	0.44
23:DA:2837:G:C4	23:DA:2838:G:C8	3.06	0.44
23:DA:2861:G:C2	23:DA:2862:G:C8	3.05	0.44
24:DB:5:C:O2	24:DB:116:G:N2	2.50	0.44
24:DB:26:A:N7	24:DB:27:C:C4	2.86	0.44
24:DB:50:G:OP1	37:DO:63:THR:OG1	2.36	0.44
26:DD:92:THR:O	26:DD:95:ILE:HG12	2.18	0.44
27:DE:110:LEU:HA	27:DE:110:LEU:HD12	1.70	0.44
27:DE:117:ARG:HH21	27:DE:187:VAL:HA	1.82	0.44
28:DF:20:ILE:O	28:DF:24:GLY:HA2	2.18	0.44
32:DJ:64:ASP:O	32:DJ:71:MET:HE1	2.17	0.44
32:DJ:137:ARG:HG2	32:DJ:137:ARG:H	1.55	0.44
34:DL:77:ARG:HA	34:DL:78:PRO:HD3	1.87	0.44
35:DM:130:LYS:HZ2	44:DV:80:ARG:HE	1.65	0.44
38:DP:113:LYS:O	38:DP:114:LEU:HD23	2.18	0.44
44:DV:121:HIS:C	44:DV:123:ASP:H	2.22	0.44
47:DY:17:SER:HB3	47:DY:18:PRO:CD	2.37	0.44
50:D2:16:ARG:HG2	50:D2:17:ASP:N	2.31	0.44
51:D3:18:ARG:HB3	51:D3:19:ARG:H	1.51	0.44
1:AA:636:U:O2'	1:AA:637:G:H5'	2.18	0.43
1:AA:925:G:C2	1:AA:1392:G:C2	3.06	0.43
1:AA:1060:C:O2	1:AA:1198:G:C2	2.71	0.43
1:AA:1145:C:H4'	1:AA:1146:A:C8	2.51	0.43
1:AA:1340:A:C5	1:AA:1341:U:C6	3.06	0.43
1:AA:1386:G:C2	1:AA:1387:G:N7	2.86	0.43
2:AB:72:GLY:HA2	2:AB:165:VAL:HG22	2.00	0.43
5:AE:104:ALA:O	5:AE:107:ARG:HB3	2.17	0.43
13:AM:87:TYR:O	13:AM:91:ARG:HG2	2.18	0.43
14:AN:31:ARG:O	14:AN:32:SER:HB2	2.18	0.43
16:AP:20:VAL:CG2	16:AP:21:VAL:N	2.81	0.43
20:AT:42:GLN:HG3	20:AT:43:LEU:N	2.33	0.43
23:BA:270(F):G:C5	23:BA:270(G):U:C5	3.06	0.43
23:BA:646:A:H2'	23:BA:647:G:O4'	2.17	0.43
23:BA:671:C:H2'	23:BA:672:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1266:G:O6	41:BS:16:LYS:HD2	2.18	0.43
23:BA:1387:C:N4	23:BA:1400:G:H1	2.16	0.43
23:BA:2100:G:C2	23:BA:2101:G:C4	3.05	0.43
23:BA:2209:C:C2	23:BA:2216:G:N1	2.86	0.43
23:BA:2313:C:H4'	28:BF:91:ARG:HG3	2.00	0.43
23:BA:2335:A:C8	23:BA:2337:G:N7	2.86	0.43
23:BA:2396:G:H4'	46:BX:31:GLY:HA2	2.00	0.43
23:BA:2511:U:O4	23:BA:2575:C:N3	2.50	0.43
25:BC:9:TYR:CZ	25:BC:13:ARG:HD3	2.52	0.43
26:BD:173:VAL:O	26:BD:174:ASP:C	2.56	0.43
28:BF:16:ARG:HB3	28:BF:17:PRO:HD3	1.99	0.43
30:BH:114:LEU:HD21	30:BH:128:LEU:HD13	1.99	0.43
32:BJ:122:LEU:O	32:BJ:126:VAL:HG22	2.18	0.43
32:BJ:137:ARG:HG2	32:BJ:137:ARG:H	1.50	0.43
33:BK:77:ILE:HD12	38:BP:73:GLU:O	2.18	0.43
34:BL:83:VAL:O	34:BL:114:ILE:HA	2.18	0.43
39:BQ:29:SER:C	39:BQ:30:LYS:HG2	2.37	0.43
39:BQ:62:ILE:CD1	39:BQ:93:LYS:HG2	2.48	0.43
42:BT:9:LEU:O	42:BT:10:ALA:HB2	2.18	0.43
43:BU:90:LEU:HD12	43:BU:91:GLU:HG3	2.00	0.43
1:CA:5:U:O2'	1:CA:6:G:C4	2.71	0.43
1:CA:17:U:N3	1:CA:18:C:C4	2.86	0.43
1:CA:104:G:N1	1:CA:105:G:C5	2.86	0.43
1:CA:104:G:N3	1:CA:105:G:C8	2.86	0.43
1:CA:195:A:C5	1:CA:196:A:N1	2.86	0.43
1:CA:336:C:H2'	1:CA:337:C:C6	2.52	0.43
1:CA:363:A:H8	12:CL:32:ARG:HH21	1.66	0.43
1:CA:502:G:H2'	1:CA:503:C:O4'	2.18	0.43
1:CA:577:G:C6	1:CA:578:C:C5	3.06	0.43
1:CA:674:G:H2'	1:CA:675:A:C8	2.47	0.43
1:CA:691:G:H2'	1:CA:692:U:C6	2.53	0.43
1:CA:774:G:N2	1:CA:806:C:C6	2.86	0.43
1:CA:932:C:H2'	1:CA:933:G:H8	1.81	0.43
1:CA:939:G:H2'	1:CA:940:C:H6	1.83	0.43
1:CA:1233:G:P	9:CI:124:GLN:H	2.41	0.43
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.53	0.43
3:CC:18:TRP:O	3:CC:19:GLU:C	2.57	0.43
3:CC:86:VAL:O	3:CC:89:GLU:HB3	2.18	0.43
3:CC:181:ASN:HB3	3:CC:205:GLY:HA3	2.00	0.43
3:CC:182:ILE:HA	3:CC:202:ILE:O	2.18	0.43
4:CD:156:GLU:O	4:CD:160:GLN:HG3	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:77:ARG:HB3	6:CF:77:ARG:CZ	2.48	0.43
7:CG:60:LYS:HD2	7:CG:60:LYS:HA	1.76	0.43
9:CI:41:VAL:O	9:CI:44:VAL:HG22	2.17	0.43
9:CI:58:ARG:HH21	9:CI:59:PHE:HE1	1.62	0.43
11:CK:59:TYR:O	11:CK:62:GLN:HB3	2.18	0.43
12:CL:118:LYS:C	12:CL:119:TYR:CD1	2.91	0.43
16:CP:21:VAL:HG23	16:CP:33:ILE:HB	2.00	0.43
20:CT:42:GLN:HG3	20:CT:43:LEU:N	2.33	0.43
23:DA:32:C:O2'	23:DA:33:U:H5'	2.18	0.43
23:DA:480:A:H5'	43:DU:46:LYS:HG3	2.00	0.43
23:DA:737:C:O2'	23:DA:738:G:H5'	2.18	0.43
23:DA:1309:G:H8	23:DA:1309:G:O5'	2.00	0.43
23:DA:1478:G:H2'	23:DA:1479:G:H8	1.83	0.43
23:DA:1502:C:H3'	23:DA:1502:C:C6	2.52	0.43
23:DA:1678:G:N3	23:DA:1678:G:C2'	2.75	0.43
23:DA:1991:U:H2'	23:DA:1992:G:C5'	2.48	0.43
23:DA:2476:A:C2	23:DA:2477:C:C5	3.06	0.43
23:DA:2515:C:O2	23:DA:2570:G:C2	2.71	0.43
23:DA:2768:C:C5	23:DA:2769:C:C5	3.05	0.43
24:DB:80:U:C2	24:DB:81:G:N2	2.86	0.43
24:DB:84:C:O2	24:DB:84:C:C2'	2.67	0.43
24:DB:116:G:H8	24:DB:116:G:O5'	2.01	0.43
25:DC:174:ILE:N	25:DC:174:ILE:CD1	2.81	0.43
26:DD:59:VAL:C	26:DD:61:ARG:H	2.21	0.43
27:DE:46:ARG:HB3	27:DE:46:ARG:CZ	2.48	0.43
29:DG:35:VAL:HG21	29:DG:75:ALA:CB	2.48	0.43
34:DL:107:LYS:C	34:DL:108:LYS:HG2	2.38	0.43
35:DM:30:GLY:CA	35:DM:107:ALA:HB2	2.48	0.43
36:DN:11:ASN:O	36:DN:12:ARG:CB	2.64	0.43
37:DO:11:LYS:O	37:DO:12:PHE:CB	2.64	0.43
38:DP:50:ILE:HD11	38:DP:102:ILE:HG12	2.00	0.43
46:DX:26:ARG:O	46:DX:27:GLU:HB3	2.18	0.43
49:D1:42:CYS:HB3	49:D1:59:VAL:HB	1.99	0.43
52:D4:9:ARG:O	52:D4:10:ARG:C	2.53	0.43
1:AA:39:G:N1	1:AA:40:C:C5	2.86	0.43
1:AA:69:G:H1	1:AA:99:C:H42	1.66	0.43
1:AA:160:A:H4'	1:AA:344:A:N1	2.33	0.43
1:AA:233:C:C2'	1:AA:234:C:H5'	2.48	0.43
1:AA:324:G:C2	1:AA:327:A:C8	3.07	0.43
1:AA:448:A:H2'	1:AA:449:C:C6	2.53	0.43
1:AA:551:U:O2'	12:AL:85:ARG:HD2	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:625:G:C6	1:AA:626:U:C4	3.06	0.43
1:AA:639:G:H2'	1:AA:640:A:C8	2.53	0.43
1:AA:983:A:H3'	1:AA:983:A:N3	2.34	0.43
1:AA:1064:G:H21	1:AA:1190:G:C2'	2.24	0.43
1:AA:1347:G:N7	9:AI:107:ARG:HB3	2.31	0.43
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.53	0.43
1:AA:1386:G:N3	1:AA:1387:G:C8	2.86	0.43
3:AC:70:VAL:CG1	3:AC:71:ALA:N	2.81	0.43
3:AC:73:PRO:O	3:AC:76:VAL:HG22	2.18	0.43
3:AC:137:ALA:O	3:AC:141:VAL:HG23	2.18	0.43
6:AF:78:GLU:HA	6:AF:81:ILE:HD11	2.00	0.43
6:AF:99:ALA:HB3	18:AR:29:PHE:CE1	2.53	0.43
10:AJ:3:LYS:N	10:AJ:75:ILE:HA	2.33	0.43
12:AL:64:GLU:C	12:AL:64:GLU:OE1	2.57	0.43
12:AL:78:GLU:O	12:AL:78:GLU:CD	2.57	0.43
16:AP:75:ARG:C	16:AP:77:ALA:H	2.21	0.43
23:BA:150:C:H2'	23:BA:151:C:C6	2.53	0.43
23:BA:242:G:H5'	53:B5:63:PRO:CB	2.48	0.43
23:BA:285:C:H2'	23:BA:286:C:C6	2.54	0.43
23:BA:442:G:H4'	27:BE:46:ARG:HD3	1.99	0.43
23:BA:566:U:H3	23:BA:575:A:H61	1.66	0.43
23:BA:603:A:H2	23:BA:655:A:N3	2.14	0.43
23:BA:825:C:H4'	23:BA:2428:G:N7	2.33	0.43
23:BA:853:G:H1	23:BA:924:C:N4	2.17	0.43
23:BA:1789:A:OP1	25:BC:221:VAL:HA	2.18	0.43
23:BA:2549:G:H2'	23:BA:2550:G:H5'	2.00	0.43
23:BA:2734:A:C2'	23:BA:2735:G:H5'	2.48	0.43
23:BA:2828:C:C2'	23:BA:2829:C:H5'	2.48	0.43
24:BB:5:C:O2'	24:BB:27:C:H1'	2.18	0.43
25:BC:25:THR:O	25:BC:26:LYS:C	2.57	0.43
25:BC:61:LEU:HD13	25:BC:61:LEU:HA	1.51	0.43
25:BC:134:ARG:HD3	25:BC:135:PHE:HE1	1.82	0.43
25:BC:172:TYR:CE1	25:BC:186:HIS:HA	2.50	0.43
25:BC:222:ARG:NH1	25:BC:224:ALA:HB3	2.33	0.43
27:BE:53:THR:C	27:BE:55:GLY:N	2.70	0.43
32:BJ:107:LYS:O	32:BJ:108:ILE:HD13	2.18	0.43
38:BP:14:TYR:CD1	38:BP:14:TYR:N	2.85	0.43
39:BQ:79:PHE:CE1	39:BQ:83:LEU:CD1	3.02	0.43
40:BR:49:THR:O	40:BR:50:PRO:C	2.56	0.43
42:BT:75:ASP:C	42:BT:76:ARG:HG3	2.39	0.43
44:BV:3:TYR:O	44:BV:57:ILE:HA	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BV:70:LEU:HD23	44:BV:70:LEU:H	1.83	0.43
44:BV:94:GLU:CD	44:BV:94:GLU:N	2.66	0.43
44:BV:120:ILE:HG12	44:BV:172:ALA:HA	1.99	0.43
44:BV:151:HIS:HA	44:BV:170:THR:HA	2.00	0.43
49:B1:42:CYS:HB3	49:B1:59:VAL:HB	2.00	0.43
1:CA:29:G:C2	1:CA:555:C:N3	2.86	0.43
1:CA:78:G:H2'	1:CA:79:G:C8	2.54	0.43
1:CA:256:U:P	17:CQ:17:LYS:HZ3	2.40	0.43
1:CA:323:U:H4'	20:CT:22:ARG:HB3	1.99	0.43
1:CA:397:A:C6	1:CA:548:G:N7	2.86	0.43
1:CA:510:A:H5''	1:CA:511:C:OP2	2.17	0.43
1:CA:708:C:O2'	1:CA:709:G:H5'	2.18	0.43
1:CA:993:G:H4'	1:CA:994:A:OP2	2.19	0.43
1:CA:1210:C:H4'	1:CA:1214:C:C5	2.52	0.43
1:CA:1238:A:H2'	1:CA:1238:A:N3	2.33	0.43
1:CA:1294:G:H2'	1:CA:1295:G:H8	1.74	0.43
1:CA:1463:C:OP1	38:DP:111:ARG:HD2	2.19	0.43
2:CB:61:LEU:HG	2:CB:68:ILE:CG1	2.48	0.43
2:CB:200:ILE:HG22	2:CB:202:PRO:HD3	2.00	0.43
4:CD:108:LEU:O	4:CD:110:PHE:CD2	2.71	0.43
5:CE:135:THR:O	5:CE:138:ALA:HB3	2.18	0.43
12:CL:100:VAL:O	12:CL:100:VAL:HG12	2.17	0.43
14:CN:32:SER:HB3	14:CN:41:ARG:HG2	2.00	0.43
15:CO:12:ILE:HG21	15:CO:22:THR:HG22	1.99	0.43
18:CR:53:ARG:O	18:CR:55:ARG:N	2.51	0.43
20:CT:78:ALA:O	20:CT:81:LYS:N	2.51	0.43
23:DA:660:G:O3'	27:DE:38:ARG:NH2	2.51	0.43
23:DA:914:C:H3'	23:DA:914:C:C6	2.52	0.43
23:DA:1248:G:OP1	39:DQ:2:PRO:CD	2.64	0.43
23:DA:1309:G:H3'	52:D4:9:ARG:HH12	1.79	0.43
23:DA:1358:G:H1'	23:DA:1373:A:H61	1.83	0.43
23:DA:1424:G:H2'	23:DA:1425:G:O4'	2.18	0.43
23:DA:1443:G:O2'	23:DA:1444:G:H5'	2.17	0.43
23:DA:1496:A:C8	23:DA:1498:C:N3	2.86	0.43
23:DA:1502:C:C6	23:DA:1502:C:C3'	3.01	0.43
23:DA:1629:U:H2'	23:DA:1630:G:O4'	2.18	0.43
23:DA:1833:U:H2'	23:DA:1834:U:H5'	1.98	0.43
23:DA:1842:G:H1'	25:DC:255:LYS:HZ3	1.83	0.43
23:DA:1930:G:O2'	23:DA:1931:U:P	2.76	0.43
23:DA:1980:G:H4'	23:DA:1981:A:OP2	2.17	0.43
23:DA:2435:A:C2'	23:DA:2436:G:O5'	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2564:A:C2	23:DA:2647:U:H4'	2.53	0.43
23:DA:2590:A:O2'	23:DA:2591:C:H5'	2.17	0.43
23:DA:2663:G:C6	23:DA:2664:G:C5	3.06	0.43
23:DA:2734:A:C2'	23:DA:2735:G:H5'	2.48	0.43
24:DB:27:C:C4	24:DB:28:C:C4	3.06	0.43
25:DC:24:ILE:HD13	25:DC:84:TYR:HB2	2.00	0.43
25:DC:148:GLU:HB2	25:DC:151:LYS:HD2	1.99	0.43
25:DC:220:HIS:C	25:DC:220:HIS:CD2	2.92	0.43
26:DD:68:ALA:C	26:DD:70:ALA:H	2.22	0.43
27:DE:160:ASN:OD1	27:DE:163:VAL:HG23	2.18	0.43
29:DG:169:VAL:O	29:DG:170:ARG:HB2	2.18	0.43
30:DH:88:ILE:HG13	30:DH:144:VAL:CG1	2.48	0.43
33:DK:3:GLN:CB	33:DK:4:PRO:HD2	2.48	0.43
34:DL:85:LEU:CD2	34:DL:85:LEU:N	2.79	0.43
34:DL:138:LEU:O	34:DL:141:ALA:N	2.51	0.43
35:DM:24:GLY:HA2	35:DM:100:GLY:O	2.18	0.43
35:DM:54:MET:O	35:DM:57:HIS:HB3	2.17	0.43
36:DN:85:PRO:HA	36:DN:88:ARG:HH11	1.82	0.43
38:DP:101:PHE:CD2	38:DP:101:PHE:C	2.91	0.43
40:DR:62:LEU:HD12	40:DR:62:LEU:HA	1.77	0.43
43:DU:43:ASN:OD1	43:DU:64:GLU:HA	2.18	0.43
43:DU:68:HIS:C	43:DU:70:SER:N	2.72	0.43
1:AA:167:G:C2'	1:AA:168:G:H5'	2.48	0.43
1:AA:294:U:N3	1:AA:295:C:C5	2.86	0.43
1:AA:349:A:C2'	1:AA:350:G:H5'	2.47	0.43
1:AA:506:G:C6	1:AA:507:C:N4	2.86	0.43
1:AA:754:C:H3'	1:AA:754:C:O2	2.17	0.43
1:AA:939:G:H2'	1:AA:940:C:H6	1.83	0.43
1:AA:964:A:N3	1:AA:969:A:O2'	2.48	0.43
1:AA:1037:C:H2'	1:AA:1038:C:C6	2.51	0.43
1:AA:1060:C:O2'	10:AJ:56:HIS:CD2	2.71	0.43
2:AB:21:ARG:O	2:AB:21:ARG:HG3	2.18	0.43
2:AB:22:LYS:HZ3	2:AB:22:LYS:N	2.14	0.43
2:AB:96:ARG:HD2	2:AB:96:ARG:N	2.33	0.43
7:AG:44:TYR:O	7:AG:47:CYS:HB2	2.19	0.43
8:AH:26:VAL:O	8:AH:27:PRO:C	2.55	0.43
8:AH:40:ALA:O	8:AH:41:ARG:C	2.56	0.43
9:AI:41:VAL:O	9:AI:44:VAL:HG22	2.18	0.43
10:AJ:61:GLU:OE2	14:AN:45:ARG:NH1	2.51	0.43
11:AK:124:LYS:HB2	11:AK:124:LYS:HE3	1.75	0.43
15:AO:45:VAL:HG22	15:AO:46:HIS:ND1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:55:ILE:HD12	20:AT:55:ILE:HA	1.84	0.43
22:AV:6194:C:C2	22:AV:6195:G:C8	3.07	0.43
23:BA:83:G:N2	23:BA:84:A:N6	2.66	0.43
23:BA:332:A:C4	23:BA:335:C:C4	3.06	0.43
23:BA:588:U:H2'	23:BA:589:C:H6	1.81	0.43
23:BA:737:C:H2'	23:BA:738:G:C5'	2.47	0.43
23:BA:978:G:O2'	23:BA:979:G:H5'	2.18	0.43
23:BA:1177:A:H5''	23:BA:1178:C:OP2	2.17	0.43
23:BA:1188:U:C2'	23:BA:1189:A:O5'	2.66	0.43
23:BA:1338:G:H2'	23:BA:1339:G:H5'	2.00	0.43
23:BA:1526:G:O2'	23:BA:1527:G:H5'	2.18	0.43
23:BA:1786:A:H2	23:BA:2606:C:H1'	1.82	0.43
23:BA:2096:U:H2'	23:BA:2097:C:C6	2.53	0.43
23:BA:2231:C:H2'	23:BA:2232:U:O4'	2.18	0.43
23:BA:2274:A:C5	23:BA:2276:G:C8	3.06	0.43
25:BC:52:ARG:CZ	25:BC:53:PHE:CE2	3.02	0.43
25:BC:172:TYR:CD1	25:BC:186:HIS:CA	2.93	0.43
26:BD:35:GLN:HG2	26:BD:36:ARG:N	2.33	0.43
26:BD:172:VAL:HG13	26:BD:182:LEU:HD11	2.00	0.43
28:BF:86:MET:O	28:BF:87:PRO:O	2.36	0.43
32:BJ:160:LYS:O	32:BJ:161:LEU:HD23	2.18	0.43
38:BP:23:ARG:CG	38:BP:23:ARG:NH1	2.82	0.43
53:B5:37:SER:OG	53:B5:40:GLU:HG2	2.18	0.43
1:CA:505:G:H5'	1:CA:534:U:C2	2.53	0.43
1:CA:731:G:C6	1:CA:732:C:C4	3.06	0.43
1:CA:818:G:N3	1:CA:820:U:C6	2.86	0.43
1:CA:855:G:C6	1:CA:856:C:C4	3.06	0.43
1:CA:892:A:C2	1:CA:907:A:C4	3.07	0.43
1:CA:1104:G:C2	1:CA:1105:A:C4	3.07	0.43
1:CA:1106:G:C2	1:CA:1107:C:C6	3.06	0.43
1:CA:1433:A:N1	1:CA:1434:A:C2	2.86	0.43
5:CE:101:ILE:HD11	5:CE:119:LEU:CD2	2.23	0.43
6:CF:28:ARG:O	6:CF:32:ASN:N	2.47	0.43
9:CI:5:TYR:CG	9:CI:6:GLY:N	2.85	0.43
12:CL:29:ALA:HA	12:CL:30:PRO:HD3	1.76	0.43
17:CQ:15:MET:CB	17:CQ:18:THR:HB	2.45	0.43
17:CQ:77:VAL:O	17:CQ:78:GLU:HB3	2.18	0.43
23:DA:107:C:H2'	23:DA:108:U:H5'	2.01	0.43
23:DA:273(G):C:H2'	23:DA:274:G:C5'	2.46	0.43
23:DA:880:G:N2	23:DA:898:C:C4	2.86	0.43
23:DA:948:G:C2	23:DA:970:C:O2	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:952:G:C6	23:DA:953:A:N7	2.87	0.43
23:DA:1021:A:N6	23:DA:1141:U:C2	2.87	0.43
23:DA:1131:G:C2	23:DA:1132:A:C5	3.06	0.43
23:DA:1221:C:H2'	23:DA:122(A):C:H6	1.83	0.43
23:DA:1541:U:H5''	23:DA:1543:A:OP2	2.17	0.43
23:DA:1779:U:C6	23:DA:1783:A:N7	2.86	0.43
23:DA:1953:A:C2	23:DA:2549:G:N3	2.84	0.43
23:DA:2259:G:C2	23:DA:2282:G:N1	2.87	0.43
23:DA:2292:C:N4	23:DA:2293:C:N4	2.66	0.43
23:DA:2658:C:O2	23:DA:2658:C:H2'	2.18	0.43
23:DA:2744:G:H1'	23:DA:2761:G:N2	2.33	0.43
25:DC:32:SER:O	25:DC:36:PRO:HD2	2.19	0.43
25:DC:147:LEU:HD13	25:DC:155:LEU:CD1	2.48	0.43
28:DF:106:LEU:HA	28:DF:110:ALA:HB3	2.00	0.43
30:DH:88:ILE:HG13	30:DH:144:VAL:HG11	2.00	0.43
33:DK:47:ILE:HD12	33:DK:47:ILE:HA	1.66	0.43
34:DL:46:LYS:HG2	34:DL:52:GLU:CD	2.38	0.43
34:DL:84:ASN:HB3	34:DL:86:LYS:HG2	1.99	0.43
34:DL:91:PHE:CE2	34:DL:95:VAL:HG12	2.53	0.43
38:DP:54:ARG:HA	38:DP:59:THR:OG1	2.19	0.43
39:DQ:57:PHE:O	39:DQ:60:LEU:N	2.52	0.43
39:DQ:79:PHE:CE1	39:DQ:83:LEU:CD1	3.02	0.43
40:DR:49:THR:O	40:DR:50:PRO:C	2.56	0.43
47:DY:24:LEU:HD22	47:DY:60:LEU:CD1	2.47	0.43
52:D4:3:ARG:HD3	52:D4:3:ARG:HA	1.72	0.43
1:AA:232:G:H2'	1:AA:233:C:O4'	2.18	0.43
1:AA:382:A:O2'	1:AA:383:A:H5'	2.19	0.43
1:AA:409:G:OP1	4:AD:24:GLU:N	2.51	0.43
1:AA:570:G:H2'	1:AA:571:U:C6	2.54	0.43
1:AA:582:U:OP1	15:AO:68:ARG:NH2	2.51	0.43
1:AA:673:G:C4	1:AA:734:G:C2	3.07	0.43
1:AA:692:U:H2'	1:AA:694:A:OP2	2.17	0.43
1:AA:792:A:H4'	1:AA:793:U:O5'	2.17	0.43
1:AA:826:C:H5''	1:AA:827:U:OP2	2.18	0.43
1:AA:1368:G:C2	1:AA:1369:C:C6	3.06	0.43
1:AA:1384:C:H2'	1:AA:1385:G:H8	1.83	0.43
1:AA:1415:G:C6	1:AA:1486:G:C6	3.06	0.43
1:AA:1504:G:H4'	1:AA:1505:G:O4'	2.18	0.43
6:AF:82:ARG:HA	6:AF:82:ARG:HD2	1.80	0.43
7:AG:108:ALA:O	7:AG:119:ARG:HD2	2.18	0.43
9:AI:29:ASN:ND2	9:AI:65:VAL:O	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.17	0.43
10:AJ:13:HIS:CB	10:AJ:68:HIS:NE2	2.81	0.43
11:AK:21:ILE:HD13	11:AK:84:VAL:HG12	2.00	0.43
16:AP:52:ASP:OD1	16:AP:54:GLU:HB2	2.17	0.43
17:AQ:14:LYS:H	17:AQ:14:LYS:HD2	1.84	0.43
23:BA:117:G:H5''	23:BA:118:A:OP2	2.18	0.43
23:BA:229:A:H5'	23:BA:230:U:O5'	2.16	0.43
23:BA:498:G:O2'	43:BU:47:LYS:HD3	2.18	0.43
23:BA:537:C:O5'	23:BA:537:C:H6	2.02	0.43
23:BA:690:G:H2'	23:BA:691:C:O4'	2.19	0.43
23:BA:747:U:O2	23:BA:2014:A:H1'	2.18	0.43
23:BA:753:C:H2'	23:BA:754:C:H6	1.83	0.43
23:BA:775:G:C4	23:BA:794:G:C8	3.05	0.43
23:BA:836:G:C5	23:BA:837:C:C4	3.05	0.43
23:BA:874:G:H2'	23:BA:875:G:O4'	2.19	0.43
23:BA:951:C:C2'	23:BA:952:G:H5'	2.49	0.43
23:BA:954:G:C4	23:BA:955:C:C6	3.06	0.43
23:BA:997:G:OP1	39:BQ:93:LYS:CD	2.66	0.43
23:BA:1019:U:C2	23:BA:1020:A:N7	2.86	0.43
23:BA:1454:U:O4'	36:BN:63:ARG:HD3	2.19	0.43
23:BA:1462:C:C4	23:BA:1463:C:C4	3.06	0.43
23:BA:1478:G:H2'	23:BA:1479:G:H8	1.83	0.43
23:BA:1607:C:N4	23:BA:1622:G:OP2	2.46	0.43
23:BA:1854:A:H62	23:BA:1888:G:H8	1.65	0.43
23:BA:2075:U:H2'	23:BA:2238:G:N2	2.34	0.43
23:BA:2275:C:H5'	23:BA:2275:C:C6	2.48	0.43
23:BA:2409:G:C6	23:BA:2410:G:C5	3.06	0.43
23:BA:2636:U:H2'	23:BA:2637:U:C6	2.53	0.43
23:BA:2650:U:O5'	23:BA:2650:U:H6	2.01	0.43
23:BA:2666:C:C6	23:BA:2667:C:C6	3.07	0.43
23:BA:2768:C:C5	23:BA:2769:C:C5	3.06	0.43
23:BA:2790:A:C2	23:BA:2791:C:H2'	2.54	0.43
24:BB:38:C:H2'	24:BB:39:A:H8	1.83	0.43
24:BB:46:A:H2'	24:BB:47:C:H6	1.81	0.43
25:BC:78:LYS:HG2	25:BC:114:GLY:O	2.18	0.43
26:BD:101:ARG:HB3	26:BD:169:ASN:HD22	1.82	0.43
27:BE:127:GLU:O	27:BE:127:GLU:OE2	2.37	0.43
28:BF:112:PRO:HB3	49:B1:62:CYS:O	2.17	0.43
28:BF:153:ARG:HB3	28:BF:153:ARG:NH1	2.32	0.43
29:BG:86:GLU:O	29:BG:87:LEU:HD23	2.17	0.43
29:BG:95:ARG:HH12	29:BG:97:ARG:HE	1.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BN:100:LEU:H	36:BN:112:ALA:HA	1.83	0.43
38:BP:87:ASP:N	38:BP:87:ASP:OD1	2.51	0.43
38:BP:105:LEU:O	38:BP:106:SER:C	2.56	0.43
44:BV:7:ALA:HB3	44:BV:61:LEU:HD23	2.01	0.43
44:BV:31:ARG:CZ	44:BV:94:GLU:HG3	2.49	0.43
53:B5:53:PRO:O	53:B5:57:ARG:NH1	2.51	0.43
53:B5:59:LYS:O	53:B5:62:LEU:HG	2.19	0.43
1:CA:59:A:H1'	1:CA:354:G:C2	2.53	0.43
1:CA:102:G:C5	1:CA:103:C:C5	3.07	0.43
1:CA:160:A:H4'	1:CA:344:A:N1	2.33	0.43
1:CA:294:U:N3	1:CA:295:C:C5	2.86	0.43
1:CA:565:U:OP2	1:CA:566:G:O2'	2.28	0.43
1:CA:749:C:O2	1:CA:749:C:H2'	2.18	0.43
1:CA:864:A:N1	1:CA:865:A:C2	2.86	0.43
1:CA:872:A:H2'	1:CA:872:A:N3	2.33	0.43
1:CA:1054:C:O2'	1:CA:1055:A:H5''	2.19	0.43
1:CA:1056:U:OP1	3:CC:163:ALA:N	2.49	0.43
1:CA:1071:C:O2	1:CA:1072:G:C8	2.71	0.43
1:CA:1232:U:O2	1:CA:1232:U:H2'	2.17	0.43
1:CA:1442:G:C8	1:CA:1446:A:C2	3.07	0.43
1:CA:1489:G:C6	1:CA:1490:C:C4	3.06	0.43
3:CC:19:GLU:HA	3:CC:54:ARG:NH2	2.33	0.43
4:CD:108:LEU:HB3	4:CD:110:PHE:CD2	2.51	0.43
5:CE:101:ILE:HG12	5:CE:118:ILE:O	2.17	0.43
8:CH:29:SER:OG	8:CH:32:LYS:HG3	2.19	0.43
8:CH:114:THR:OG1	8:CH:119:LEU:HG	2.18	0.43
9:CI:114:TYR:HD2	9:CI:114:TYR:H	1.62	0.43
12:CL:77:GLN:C	12:CL:79:HIS:H	2.22	0.43
13:CM:3:ARG:HG2	13:CM:9:ILE:HD13	1.99	0.43
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	2.00	0.43
23:DA:270(F):G:C6	23:DA:270(G):U:C4	3.06	0.43
23:DA:298:G:P	43:DU:85:VAL:CG2	3.06	0.43
23:DA:374:A:H3'	23:DA:375:C:H6	1.82	0.43
23:DA:593:G:C6	23:DA:594:U:C4	3.07	0.43
23:DA:814:C:H2'	23:DA:815:C:C6	2.53	0.43
23:DA:918:A:H5''	23:DA:919:G:OP2	2.17	0.43
23:DA:1285:G:C5	23:DA:1329:U:C4	3.06	0.43
23:DA:1297:C:H2'	23:DA:1298:C:H6	1.82	0.43
23:DA:1313:U:O2	23:DA:1313:U:C2'	2.64	0.43
23:DA:1332:G:N2	23:DA:1610:A:H8	2.13	0.43
23:DA:1401:G:C4	23:DA:1402:C:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1668:A:N7	23:DA:1674:G:C6	2.87	0.43
23:DA:1716:U:O2'	23:DA:1717:G:H5'	2.18	0.43
23:DA:1825:A:O3'	25:DC:233:HIS:CD2	2.71	0.43
23:DA:2493:U:C4	23:DA:2494:G:C8	3.07	0.43
23:DA:2809:A:N1	23:DA:2892:A:C4	2.86	0.43
28:DF:60:LEU:HA	28:DF:63:ILE:CG1	2.48	0.43
28:DF:86:MET:H	28:DF:87:PRO:HD2	1.83	0.43
32:DJ:135:LEU:O	32:DJ:136:GLY:C	2.56	0.43
32:DJ:143:LEU:HD13	32:DJ:144:LYS:N	2.34	0.43
34:DL:79:ARG:O	34:DL:111:ARG:HB2	2.19	0.43
34:DL:97:PRO:CD	34:DL:126:VAL:HG12	2.44	0.43
41:DS:65:LEU:HB2	41:DS:68:ARG:NE	2.31	0.43
43:DU:8:LYS:HZ3	43:DU:8:LYS:CA	2.30	0.43
43:DU:11:ASP:O	43:DU:26:LYS:HA	2.18	0.43
46:DX:53:VAL:O	46:DX:55:GLY:O	2.37	0.43
49:D1:39:ARG:O	49:D1:57:ILE:HB	2.17	0.43
52:D4:18:PHE:CE2	52:D4:22:MET:HG3	2.53	0.43
53:D5:23:VAL:HG11	53:D5:47:LYS:HD3	2.01	0.43
1:AA:76:G:C6	1:AA:77:C:C4	3.07	0.43
1:AA:269:C:H2'	1:AA:270:A:C8	2.53	0.43
1:AA:375:U:H4'	16:AP:17:TYR:CE2	2.53	0.43
1:AA:394:G:C2	1:AA:395:C:C6	3.07	0.43
1:AA:624:C:H4'	16:AP:11:SER:N	2.28	0.43
1:AA:883:C:C2'	1:AA:884:U:H5'	2.48	0.43
1:AA:922:G:H3'	1:AA:923:A:H8	1.84	0.43
1:AA:939:G:C6	1:AA:940:C:N4	2.86	0.43
1:AA:1084:G:C6	1:AA:1085:U:O4	2.71	0.43
1:AA:1088:G:C4	1:AA:1089:G:C8	3.06	0.43
1:AA:1225:A:C5'	1:AA:1226:C:OP2	2.66	0.43
1:AA:1442:G:C8	1:AA:1446:A:C2	3.07	0.43
4:AD:30:LYS:C	4:AD:32:ALA:N	2.70	0.43
4:AD:53:ASP:OD2	5:AE:107:ARG:HD2	2.18	0.43
5:AE:33:VAL:HG12	5:AE:34:VAL:N	2.33	0.43
9:AI:114:TYR:HE1	10:AJ:60:ARG:O	2.00	0.43
16:AP:50:LYS:O	16:AP:51:VAL:HG23	2.18	0.43
16:AP:71:ARG:O	16:AP:73:LEU:N	2.52	0.43
16:AP:82:GLN:HE21	16:AP:82:GLN:HB3	1.57	0.43
19:AS:46:GLY:HA2	19:AS:61:TYR:OH	2.18	0.43
20:AT:37:SER:O	20:AT:40:ALA:HB3	2.18	0.43
23:BA:252:G:O2'	23:BA:253:C:H5'	2.18	0.43
23:BA:270(S):G:H2'	23:BA:270(T):G:H8	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:494:G:N2	41:BS:57:ASN:HD21	2.16	0.43
23:BA:570:G:O6	23:BA:2499:C:OP1	2.37	0.43
23:BA:589:C:H2'	23:BA:590:A:C8	2.52	0.43
23:BA:661:C:O3'	34:BL:18:ARG:HD2	2.18	0.43
23:BA:880:G:H1	23:BA:897:C:H42	1.66	0.43
23:BA:1173:G:O5'	23:BA:1173:G:H8	2.01	0.43
23:BA:1324:G:C4	23:BA:1328:G:O6	2.71	0.43
23:BA:1356:G:C4	23:BA:1357:U:C6	3.06	0.43
23:BA:1509:A:O2'	23:BA:1510:A:OP1	2.27	0.43
23:BA:2713:A:H3'	23:BA:2714:G:H5'	1.99	0.43
23:BA:2727:G:C2	23:BA:2728:U:C5	3.07	0.43
23:BA:2731:G:H2'	23:BA:2732:G:C8	2.54	0.43
24:BB:59:A:H2'	24:BB:60:C:O4'	2.17	0.43
24:BB:106:G:C2'	24:BB:107:U:H5'	2.49	0.43
25:BC:132:PRO:HD3	25:BC:190:TYR:CE1	2.52	0.43
29:BG:86:GLU:O	29:BG:86:GLU:CG	2.65	0.43
37:BO:89:ARG:O	37:BO:89:ARG:HG2	2.18	0.43
44:BV:30:ASN:O	44:BV:31:ARG:C	2.56	0.43
44:BV:54:HIS:CG	44:BV:101:PRO:HG3	2.53	0.43
44:BV:178:GLU:O	44:BV:178:GLU:HG3	2.18	0.43
47:BY:53:LEU:O	47:BY:56:GLN:HB2	2.19	0.43
49:B1:53:THR:C	49:B1:54:LYS:HD2	2.39	0.43
50:B2:28:PRO:O	50:B2:29:ILE:HD13	2.19	0.43
53:B5:15:LYS:HG3	53:B5:16:ILE:N	2.33	0.43
1:CA:10:A:O2'	1:CA:11:G:H5'	2.18	0.43
1:CA:117:G:H2'	1:CA:118:U:O4'	2.18	0.43
1:CA:224:C:H2'	1:CA:225:C:H6	1.82	0.43
1:CA:240:C:H2'	1:CA:241:C:C6	2.54	0.43
1:CA:375:U:H2'	1:CA:376:G:H5'	1.99	0.43
1:CA:597:G:C8	1:CA:598:U:C5	3.07	0.43
1:CA:617:G:H5'	16:CP:45:THR:HG22	1.99	0.43
1:CA:658:G:O2'	1:CA:659:U:H5'	2.18	0.43
1:CA:668:G:H1'	15:CO:46:HIS:CD2	2.43	0.43
1:CA:829:G:H2'	1:CA:830:G:H8	1.83	0.43
1:CA:994:A:O5'	1:CA:994:A:H8	2.01	0.43
1:CA:1067:A:N3	1:CA:1068:G:N9	2.66	0.43
1:CA:1480:G:H2'	1:CA:1481:U:H6	1.83	0.43
2:CB:21:ARG:O	2:CB:21:ARG:HG3	2.18	0.43
3:CC:57:ILE:HD11	3:CC:66:VAL:HG22	1.99	0.43
4:CD:4:TYR:OH	4:CD:66:ARG:HG2	2.18	0.43
4:CD:19:LEU:O	4:CD:31:CYS:SG	2.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:104:VAL:CG1	4:CD:146:ILE:HD13	2.33	0.43
8:CH:10:LEU:N	8:CH:10:LEU:HD23	2.33	0.43
9:CI:13:ALA:HB2	9:CI:68:GLY:CA	2.32	0.43
12:CL:58:ARG:HA	12:CL:64:GLU:HG2	1.99	0.43
12:CL:63:TYR:HB3	12:CL:64:GLU:H	1.63	0.43
14:CN:31:ARG:O	14:CN:32:SER:HB2	2.18	0.43
16:CP:52:ASP:OD1	16:CP:54:GLU:HB2	2.18	0.43
17:CQ:43:LEU:HA	17:CQ:43:LEU:HD12	1.57	0.43
22:CV:6191:A:C2	22:CV:6192:G:C4	3.06	0.43
22:CV:6213:A:C2	22:CV:6214:C:C4	3.07	0.43
23:DA:94:G:C2	47:DY:47:ASN:ND2	2.86	0.43
23:DA:198:C:O5'	23:DA:198:C:H6	2.01	0.43
23:DA:394:A:O2'	23:DA:395:U:H5'	2.19	0.43
23:DA:458:G:O2'	52:D4:39:ARG:HD3	2.18	0.43
23:DA:686:G:O6	52:D4:12:ARG:NH1	2.51	0.43
23:DA:923:C:O2'	23:DA:924:C:H5'	2.18	0.43
23:DA:1051:G:C2	23:DA:1052:C:O2	2.71	0.43
23:DA:1180:C:O2'	23:DA:1181:C:H5'	2.18	0.43
23:DA:1188:U:C2'	23:DA:1189:A:C5'	2.96	0.43
23:DA:1227:G:OP2	39:DQ:16:LYS:NZ	2.48	0.43
23:DA:1591:G:H2'	23:DA:1592:C:H6	1.82	0.43
23:DA:1614:A:C6	41:DS:87:PRO:HA	2.54	0.43
23:DA:1728:G:C8	23:DA:1728:G:C3'	3.02	0.43
23:DA:2285:C:C4	23:DA:2346:A:N6	2.87	0.43
23:DA:2467:C:H5'	35:DM:123:HIS:CE1	2.53	0.43
23:DA:2766:G:H5''	23:DA:2767:C:OP2	2.18	0.43
24:DB:69:G:C6	24:DB:70:C:C4	3.07	0.43
26:DD:181:LEU:HD12	26:DD:181:LEU:HA	1.69	0.43
27:DE:112:MET:HE3	27:DE:112:MET:HB3	1.76	0.43
27:DE:167:ALA:O	27:DE:170:LEU:HB2	2.18	0.43
27:DE:203:GLN:O	27:DE:206:ILE:C	2.57	0.43
29:DG:124:GLU:N	29:DG:132:ARG:O	2.49	0.43
33:DK:6:THR:O	33:DK:20:MET:HA	2.18	0.43
34:DL:77:ARG:O	34:DL:77:ARG:HG3	2.18	0.43
35:DM:38:GLU:O	35:DM:127:ILE:HD11	2.19	0.43
41:DS:74:ALA:HA	41:DS:104:THR:O	2.18	0.43
43:DU:19:LYS:HB3	43:DU:20:TYR:CE1	2.53	0.43
43:DU:46:LYS:C	43:DU:48:ALA:N	2.71	0.43
44:DV:70:LEU:HD23	44:DV:70:LEU:H	1.82	0.43
44:DV:75:ASN:O	44:DV:84:GLU:HB2	2.17	0.43
44:DV:146:ILE:HG23	44:DV:174:VAL:HG12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DZ:52:HIS:CD2	48:DZ:52:HIS:N	2.85	0.43
51:D3:13:CYS:O	51:D3:21:TYR:HA	2.18	0.43
53:D5:11:LYS:N	53:D5:61:LEU:HD21	2.34	0.43
1:AA:32:A:C2	1:AA:33:A:C4	3.06	0.43
1:AA:373:A:C4	1:AA:482:A:N7	2.86	0.43
1:AA:522:C:N4	1:AA:528:C:N4	2.65	0.43
1:AA:604:G:C2'	1:AA:605:U:H5'	2.48	0.43
1:AA:758:G:H4'	1:AA:880:C:H4'	2.00	0.43
1:AA:1102:A:C5	1:AA:1103:C:C5	3.07	0.43
1:AA:1105:A:N3	1:AA:1106:G:C8	2.87	0.43
1:AA:1217:C:H5''	14:AN:9:LYS:HZ1	1.84	0.43
1:AA:1293:G:O2'	1:AA:1294:G:H5'	2.18	0.43
1:AA:1403:C:H1'	1:AA:1500:A:N1	2.34	0.43
1:AA:1479:C:H2'	1:AA:1480:G:H8	1.83	0.43
3:AC:19:GLU:HA	3:AC:54:ARG:NH2	2.32	0.43
3:AC:83:ARG:O	3:AC:86:VAL:HG22	2.19	0.43
6:AF:77:ARG:CZ	6:AF:77:ARG:HB3	2.48	0.43
7:AG:103:TRP:O	7:AG:104:LEU:C	2.57	0.43
8:AH:40:ALA:HB2	8:AH:45:ILE:HD11	1.99	0.43
10:AJ:45:ARG:HB3	10:AJ:47:PHE:CE1	2.53	0.43
11:AK:48:ILE:HD13	11:AK:48:ILE:N	2.33	0.43
12:AL:5:THR:CG2	12:AL:8:GLN:HG3	2.46	0.43
12:AL:77:GLN:O	12:AL:79:HIS:N	2.47	0.43
13:AM:3:ARG:HG2	13:AM:9:ILE:HD13	2.00	0.43
15:AO:17:ARG:NH1	15:AO:77:ARG:NH1	2.67	0.43
16:AP:39:TYR:HE1	16:AP:73:LEU:HD22	1.83	0.43
17:AQ:27:PHE:O	17:AQ:36:ILE:N	2.48	0.43
18:AR:26:LEU:CD1	18:AR:42:ARG:HD2	2.44	0.43
20:AT:82:SER:O	20:AT:86:ARG:CB	2.65	0.43
22:AV:6195:G:N2	22:AV:6196:A:N3	2.66	0.43
23:BA:198:C:H5'	23:BA:2244:U:OP1	2.18	0.43
23:BA:200:U:O4	23:BA:250:G:N2	2.52	0.43
23:BA:301:G:C6	23:BA:302:C:N4	2.86	0.43
23:BA:644:A:N1	23:BA:646:A:C4	2.86	0.43
23:BA:673:C:C2'	23:BA:674:G:H5'	2.49	0.43
23:BA:697:C:C2	23:BA:698:C:C5	3.07	0.43
23:BA:814:C:H2'	23:BA:815:C:C6	2.53	0.43
23:BA:1262:A:N3	50:B2:10:LYS:HE3	2.34	0.43
23:BA:1471:A:C5	23:BA:1522:G:N1	2.86	0.43
23:BA:1748:G:C2	23:BA:1749:A:C4	3.07	0.43
23:BA:2261:C:H1'	23:BA:2388:A:N3	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2286:A:C8	23:BA:2287:A:C6	3.06	0.43
23:BA:2319:G:O6	23:BA:2334:G:OP2	2.37	0.43
23:BA:2458:G:H21	23:BA:2459:A:N6	2.16	0.43
26:BD:111:ARG:CA	36:BN:2:ARG:HH11	2.26	0.43
27:BE:12:LEU:HD11	27:BE:17:ARG:HG2	2.01	0.43
30:BH:82:ARG:CA	30:BH:89:TYR:HB2	2.48	0.43
32:BJ:89:LYS:O	32:BJ:91:GLU:N	2.51	0.43
33:BK:2:ILE:HD12	33:BK:2:ILE:HA	1.75	0.43
36:BN:18:LEU:HD11	36:BN:22:ARG:NE	2.33	0.43
36:BN:57:ARG:HG2	36:BN:58:GLY:N	2.29	0.43
39:BQ:117:GLN:OE1	39:BQ:117:GLN:HA	2.17	0.43
41:BS:14:PRO:C	41:BS:16:LYS:H	2.22	0.43
47:BY:10:LEU:O	47:BY:13:ALA:HB3	2.18	0.43
50:B2:6:VAL:HG13	50:B2:7:PRO:HD2	2.00	0.43
50:B2:40:LYS:HD3	50:B2:46:CYS:HB3	1.99	0.43
50:B2:41:PRO:O	50:B2:44:THR:OG1	2.19	0.43
1:CA:179:A:C6	1:CA:180:U:C4	3.07	0.43
1:CA:515:G:H2'	1:CA:516:U:O4'	2.18	0.43
1:CA:711:G:N2	1:CA:712:A:C4	2.86	0.43
1:CA:757:U:O2'	1:CA:879:C:H1'	2.18	0.43
1:CA:763:G:H2'	1:CA:764:C:H6	1.83	0.43
1:CA:775:G:H2'	1:CA:776:G:H5'	2.00	0.43
1:CA:1376:U:O2'	1:CA:1377:A:H5'	2.18	0.43
2:CB:68:ILE:HG22	2:CB:70:PHE:CE1	2.54	0.43
2:CB:74:LYS:HD3	2:CB:76:GLN:OE1	2.19	0.43
3:CC:35:GLU:OE1	3:CC:38:ARG:HD2	2.19	0.43
3:CC:59:ARG:HG2	3:CC:63:ASN:O	2.18	0.43
4:CD:49:ARG:O	4:CD:51:PRO:HD3	2.19	0.43
6:CF:47:ARG:HH11	6:CF:47:ARG:CG	2.31	0.43
7:CG:21:VAL:HG23	7:CG:22:LEU:N	2.34	0.43
7:CG:50:ILE:O	7:CG:54:THR:O	2.36	0.43
7:CG:78:ARG:HG2	7:CG:79:ARG:N	2.33	0.43
8:CH:39:LEU:HB3	8:CH:45:ILE:CG2	2.46	0.43
8:CH:119:LEU:CD1	8:CH:124:ALA:HA	2.49	0.43
10:CJ:50:ILE:HG22	14:CN:41:ARG:HH21	1.84	0.43
10:CJ:52:GLY:O	14:CN:41:ARG:NH2	2.51	0.43
13:CM:23:TYR:CE1	13:CM:71:ARG:HD3	2.53	0.43
16:CP:32:TYR:C	16:CP:32:TYR:CD2	2.92	0.43
16:CP:47:ASP:C	16:CP:49:LEU:H	2.21	0.43
23:DA:173:G:H2'	23:DA:174:C:H6	1.84	0.43
23:DA:601:C:O2'	23:DA:605:C:H5''	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:709:U:C2	23:DA:723:G:N2	2.87	0.43
23:DA:1019:U:O2'	23:DA:1021:A:H2	2.01	0.43
23:DA:1476:C:H2'	23:DA:1477:A:H5'	2.00	0.43
23:DA:1587:A:C5	23:DA:1588:C:C4	3.06	0.43
23:DA:2092:U:C4	23:DA:2226:C:OP2	2.71	0.43
23:DA:2261:C:C2'	23:DA:2262:U:H5'	2.49	0.43
23:DA:2402:C:C3'	23:DA:2403:C:H5'	2.48	0.43
23:DA:2697:G:H2'	23:DA:2698:U:O4'	2.19	0.43
23:DA:2744:G:N7	23:DA:2755:C:C2	2.87	0.43
23:DA:2870:C:C5	23:DA:2871:C:C5	3.07	0.43
24:DB:71:C:N3	24:DB:72:G:C8	2.87	0.43
25:DC:126:GLN:HE21	25:DC:126:GLN:HB3	1.53	0.43
25:DC:145:VAL:O	25:DC:153:ALA:HA	2.18	0.43
26:DD:67:PHE:CD1	26:DD:74:PRO:HB3	2.53	0.43
27:DE:9:ILE:HD11	27:DE:125:LEU:CD1	2.49	0.43
34:DL:29:LYS:N	34:DL:29:LYS:HD2	2.34	0.43
37:DO:35:ILE:CG1	37:DO:101:LEU:HD23	2.49	0.43
39:DQ:24:TYR:CE1	39:DQ:39:LEU:HD23	2.53	0.43
40:DR:5:VAL:HG11	40:DR:14:VAL:HG21	1.98	0.43
41:DS:40:ASN:O	41:DS:41:LYS:CG	2.61	0.43
41:DS:60:ASN:OD1	41:DS:60:ASN:N	2.52	0.43
42:DT:14:SER:OG	42:DT:17:ALA:HB2	2.18	0.43
43:DU:50:ARG:HD3	43:DU:51:VAL:N	2.28	0.43
48:DZ:12:PRO:O	48:DZ:14:GLY:N	2.51	0.43
51:D3:25:LYS:HD3	53:D5:34:TRP:HZ3	1.83	0.43
1:AA:28:G:C6	1:AA:29:G:C5	3.07	0.43
1:AA:35:G:C2	1:AA:550:G:C2	3.05	0.43
1:AA:59:A:H5''	1:AA:60:A:C5'	2.48	0.43
1:AA:91:C:C2	1:AA:92:G:N7	2.86	0.43
1:AA:570:G:C6	1:AA:873:A:C2	3.07	0.43
1:AA:638:G:C2	1:AA:639:G:C8	3.07	0.43
1:AA:659:U:C2'	1:AA:660:G:H5'	2.49	0.43
1:AA:764:C:H2'	1:AA:765:G:O4'	2.18	0.43
1:AA:918:A:H2'	1:AA:919:A:C8	2.53	0.43
1:AA:1106:G:C2	1:AA:1107:C:C5	3.06	0.43
1:AA:1349:A:OP1	9:AI:120:ARG:HB2	2.19	0.43
3:AC:35:GLU:O	3:AC:39:ILE:HG13	2.18	0.43
3:AC:68:VAL:HG12	3:AC:70:VAL:CG2	2.49	0.43
4:AD:159:ARG:HA	4:AD:162:LEU:HB2	2.00	0.43
5:AE:102:ALA:HB2	5:AE:120:THR:HG21	1.98	0.43
6:AF:16:GLN:HA	6:AF:19:LEU:HB3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:29:ALA:HA	6:AF:32:ASN:OD1	2.18	0.43
10:AJ:48:THR:HG22	10:AJ:62:HIS:CG	2.54	0.43
10:AJ:50:ILE:HA	10:AJ:60:ARG:HB3	2.01	0.43
10:AJ:78:ASN:O	10:AJ:82:ILE:HG12	2.18	0.43
12:AL:30:PRO:HD2	12:AL:31:PHE:H	1.83	0.43
17:AQ:27:PHE:HB2	17:AQ:28:PRO:CD	2.49	0.43
23:BA:298:G:P	43:BU:85:VAL:CG2	3.06	0.43
23:BA:557:U:C2	23:BA:558:G:C8	3.07	0.43
23:BA:880:G:N2	23:BA:898:C:C4	2.86	0.43
23:BA:988:A:H8	23:BA:988:A:O5'	2.00	0.43
23:BA:1206:G:C6	23:BA:1207:C:C4	3.06	0.43
23:BA:1313:U:O2	23:BA:1313:U:C2'	2.65	0.43
23:BA:1502:C:C6	23:BA:1502:C:C3'	3.01	0.43
23:BA:1528:A:N1	23:BA:1529:A:C2	2.87	0.43
23:BA:1850:G:C4	23:BA:1851:U:C5	3.07	0.43
23:BA:1955:U:O4	23:BA:2554:U:H5	2.01	0.43
23:BA:2250:G:C5	35:BM:82:ARG:HD2	2.53	0.43
25:BC:181:GLU:HA	25:BC:272:ALA:CB	2.48	0.43
25:BC:257:LEU:C	25:BC:257:LEU:CD2	2.86	0.43
26:BD:110:GLY:O	36:BN:5:LYS:NZ	2.48	0.43
28:BF:86:MET:H	28:BF:87:PRO:HD2	1.79	0.43
30:BH:126:TYR:HB2	30:BH:142:VAL:HG21	1.99	0.43
32:BJ:143:LEU:C	32:BJ:144:LYS:HD2	2.39	0.43
33:BK:102:VAL:HB	33:BK:106:LEU:CD1	2.48	0.43
34:BL:88:LEU:HD12	34:BL:88:LEU:HA	1.39	0.43
36:BN:36:THR:HG23	36:BN:41:ALA:HB2	2.00	0.43
40:BR:77:ALA:C	40:BR:79:VAL:N	2.72	0.43
41:BS:45:TYR:CD2	41:BS:46:PHE:CE1	3.06	0.43
43:BU:100:ALA:O	43:BU:101:LYS:HB3	2.18	0.43
44:BV:163:LEU:N	44:BV:163:LEU:HD23	2.34	0.43
45:BW:31:VAL:HG21	45:BW:61:ALA:HB2	2.00	0.43
45:BW:49:LYS:N	45:BW:80:HIS:ND1	2.55	0.43
46:BX:67:ILE:HB	46:BX:68:PRO:CD	2.49	0.43
1:CA:41:G:C6	1:CA:42:G:C6	3.06	0.43
1:CA:186(E):C:H2'	1:CA:186(F):C:C6	2.53	0.43
1:CA:283:C:C2	1:CA:284:G:C8	3.06	0.43
1:CA:419:C:C2'	1:CA:420:U:H5'	2.49	0.43
1:CA:457:C:O2	1:CA:457:C:C2'	2.60	0.43
1:CA:556:C:O2'	1:CA:557:G:H5'	2.18	0.43
1:CA:803:G:H2'	1:CA:804:U:O4'	2.18	0.43
1:CA:1066:C:O2	1:CA:1066:C:C2'	2.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1104:G:C2	1:CA:1105:A:C8	3.07	0.43
1:CA:1119:C:H2'	1:CA:1120:G:C8	2.54	0.43
1:CA:1206:G:C6	1:CA:1207:G:C5	3.07	0.43
1:CA:1226:C:N4	13:CM:104:ARG:HB2	2.33	0.43
2:CB:60:ASP:O	2:CB:64:ARG:CG	2.66	0.43
2:CB:193:ASP:O	2:CB:196:LEU:HG	2.19	0.43
3:CC:205:GLY:O	3:CC:206:GLU:HB2	2.18	0.43
5:CE:110:LEU:HD23	5:CE:110:LEU:N	2.34	0.43
15:CO:39:LEU:HD23	15:CO:39:LEU:HA	1.79	0.43
15:CO:66:LEU:N	15:CO:66:LEU:CD1	2.82	0.43
16:CP:20:VAL:HG21	16:CP:32:TYR:CB	2.49	0.43
16:CP:72:ARG:HD3	16:CP:73:LEU:HD21	2.00	0.43
18:CR:36:ASN:HB2	18:CR:39:VAL:CG2	2.48	0.43
23:DA:186:G:H2'	23:DA:187:G:H8	1.83	0.43
23:DA:258:G:C4	23:DA:259:G:C8	3.07	0.43
23:DA:302:C:H2'	23:DA:303:U:H6	1.82	0.43
23:DA:511:U:H5	23:DA:512:G:C5	2.35	0.43
23:DA:549:G:H2'	23:DA:550:G:O4'	2.18	0.43
23:DA:631:A:OP2	53:D5:47:LYS:NZ	2.34	0.43
23:DA:675:A:OP1	27:DE:63:LYS:NZ	2.49	0.43
23:DA:1209:G:N2	23:DA:1210:A:H62	2.02	0.43
23:DA:1416:G:HO2'	23:DA:1417:C:H6	1.67	0.43
23:DA:1651:G:H2'	23:DA:1652:A:O4'	2.19	0.43
23:DA:2213:U:H6	23:DA:2213:U:O5'	2.02	0.43
23:DA:2295:C:H2'	23:DA:2296:U:O5'	2.19	0.43
23:DA:2313:C:H4'	28:DF:91:ARG:HG3	1.99	0.43
23:DA:2549:G:C2'	23:DA:2550:G:H5'	2.49	0.43
23:DA:2663:G:C5	23:DA:2664:G:N7	2.86	0.43
23:DA:2744:G:C2	23:DA:2761:G:C6	3.07	0.43
23:DA:2757:A:H2'	23:DA:2758:A:H5'	2.00	0.43
23:DA:2794:C:N4	23:DA:2802:G:H1	2.17	0.43
24:DB:70:C:C2	24:DB:71:C:C5	3.07	0.43
25:DC:245:PRO:HA	25:DC:246:PRO:HD3	1.84	0.43
28:DF:16:ARG:HB3	28:DF:17:PRO:HD3	1.99	0.43
29:DG:105:LEU:N	29:DG:105:LEU:CD2	2.82	0.43
33:DK:7:TYR:CD1	33:DK:20:MET:HB3	2.54	0.43
34:DL:143:GLY:O	34:DL:145:PRO:HD3	2.19	0.43
36:DN:55:ALA:CA	36:DN:80:PHE:CE1	2.93	0.43
38:DP:74:ARG:CD	38:DP:76:PHE:CZ	3.01	0.43
39:DQ:104:GLN:HB3	40:DR:44:LYS:CE	2.49	0.43
40:DR:47:VAL:HG12	40:DR:49:THR:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DS:32:ALA:O	41:DS:35:ILE:N	2.52	0.43
46:DX:11:ARG:CB	46:DX:12:PRO:CD	2.88	0.43
46:DX:59:THR:OG1	46:DX:60:PHE:N	2.51	0.43
50:D2:25:LEU:HD12	50:D2:25:LEU:N	2.19	0.43
50:D2:42:PRO:HB2	50:D2:43:HIS:CD2	2.54	0.43
53:D5:15:LYS:CG	53:D5:16:ILE:N	2.82	0.43
1:AA:57:G:C6	1:AA:58:C:C4	3.06	0.43
1:AA:59:A:H3'	1:AA:331:G:H22	1.83	0.43
1:AA:128:G:H4'	17:AQ:3:LYS:HG2	2.00	0.43
1:AA:395:C:O2	1:AA:395:C:H2'	2.18	0.43
1:AA:626:U:O2	1:AA:627:G:C8	2.71	0.43
1:AA:638:G:H2'	1:AA:639:G:H5'	2.01	0.43
1:AA:791:G:C6	1:AA:792:A:N7	2.87	0.43
1:AA:913:A:O2'	1:AA:914:A:OP2	2.36	0.43
1:AA:986:A:C4	1:AA:1220:G:N2	2.87	0.43
1:AA:987:G:H2'	1:AA:988:G:C8	2.54	0.43
1:AA:1014:A:H5'	19:AS:14:HIS:CG	2.52	0.43
6:AF:45:LEU:O	6:AF:46:ARG:HG2	2.19	0.43
7:AG:30:ILE:HD12	7:AG:120:ILE:HD11	2.01	0.43
10:AJ:10:GLY:HA3	10:AJ:16:LEU:HD21	2.00	0.43
11:AK:114:VAL:HA	11:AK:115:PRO:HD2	1.73	0.43
17:AQ:27:PHE:CE2	17:AQ:36:ILE:HG13	2.54	0.43
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	2.00	0.43
23:BA:319:C:C2	23:BA:333:G:N2	2.87	0.43
23:BA:593:G:H4'	53:B5:62:LEU:CD1	2.48	0.43
23:BA:697:C:N3	23:BA:698:C:C5	2.87	0.43
23:BA:702:G:C2	23:BA:731:C:C2	3.07	0.43
23:BA:858:U:O2	23:BA:2268:A:N3	2.51	0.43
23:BA:914:C:H3'	23:BA:914:C:C6	2.53	0.43
23:BA:1253:A:C3'	23:BA:1254:A:H5'	2.48	0.43
23:BA:1401:G:C4	23:BA:1402:C:C5	3.07	0.43
23:BA:1629:U:H2'	23:BA:1630:G:O4'	2.19	0.43
23:BA:2101:G:C6	23:BA:2102:U:C4	3.06	0.43
23:BA:2194:G:C6	23:BA:2195:C:C4	3.06	0.43
23:BA:2207:C:H2'	23:BA:2208:U:O4'	2.19	0.43
23:BA:2460:U:C2	23:BA:2461:C:C6	3.07	0.43
23:BA:2612:C:H2'	23:BA:2613:U:O5'	2.19	0.43
23:BA:2634:G:H5'	26:BD:61:ARG:NH1	2.33	0.43
23:BA:2703:C:C2'	23:BA:2704:C:H5'	2.49	0.43
23:BA:2713:A:C3'	23:BA:2714:G:C5'	2.96	0.43
23:BA:2744:G:H1'	23:BA:2761:G:N2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2864:G:C6	23:BA:2865:U:N3	2.87	0.43
25:BC:36:PRO:O	25:BC:37:LEU:HB2	2.18	0.43
25:BC:50:THR:HG23	25:BC:51:VAL:N	2.32	0.43
28:BF:120:LEU:HD13	28:BF:133:LEU:HD13	2.01	0.43
33:BK:7:TYR:CE1	33:BK:20:MET:HB3	2.54	0.43
34:BL:59:LEU:N	34:BL:61:ARG:HE	2.16	0.43
34:BL:126:VAL:HG23	34:BL:145:PRO:HG2	2.00	0.43
35:BM:30:GLY:CA	35:BM:107:ALA:HB2	2.48	0.43
39:BQ:18:LEU:HD12	39:BQ:18:LEU:HA	1.77	0.43
46:BX:45:ASN:HD22	46:BX:46:LEU:H	1.64	0.43
51:B3:30:THR:CG2	51:B3:31:PRO:HD2	2.48	0.43
1:CA:11:G:C6	1:CA:12:U:C4	3.06	0.43
1:CA:21:G:C2	1:CA:22:G:C6	3.06	0.43
1:CA:66:G:C6	1:CA:67:C:C5	3.07	0.43
1:CA:570:G:C6	1:CA:873:A:C2	3.06	0.43
1:CA:646:U:C4	1:CA:647:C:N4	2.87	0.43
1:CA:725:G:C4	1:CA:726:C:C5	3.06	0.43
1:CA:819:A:N7	1:CA:1529:G:C2	2.87	0.43
1:CA:918:A:C2	1:CA:919:A:C4	3.06	0.43
1:CA:918:A:H2'	1:CA:919:A:C8	2.54	0.43
1:CA:928:G:N2	1:CA:1390:U:O2	2.52	0.43
1:CA:946:A:N3	1:CA:1333:A:H2	2.16	0.43
1:CA:983:A:H3'	1:CA:983:A:N3	2.34	0.43
1:CA:1079:G:C2	1:CA:1080:A:C2	3.07	0.43
1:CA:1331:G:OP1	1:CA:1331:G:H4'	2.18	0.43
3:CC:22:TRP:HZ3	3:CC:24:ALA:HB2	1.83	0.43
3:CC:58:GLU:O	3:CC:64:VAL:HA	2.19	0.43
4:CD:106:TYR:HE1	4:CD:113:SER:HA	1.84	0.43
7:CG:9:VAL:HG12	7:CG:10:ARG:H	1.83	0.43
9:CI:5:TYR:O	9:CI:84:ALA:HA	2.19	0.43
15:CO:29:VAL:O	15:CO:30:ALA:C	2.56	0.43
16:CP:5:ARG:CB	16:CP:67:THR:OG1	2.67	0.43
16:CP:58:TYR:HE2	16:CP:59:TRP:CZ3	2.37	0.43
17:CQ:14:LYS:HD2	17:CQ:14:LYS:H	1.84	0.43
17:CQ:76:LEU:HD12	17:CQ:77:VAL:H	1.83	0.43
22:CV:6193:U:C4	22:CV:6194:C:C4	3.07	0.43
23:DA:384:U:H2'	23:DA:385:C:H6	1.83	0.43
23:DA:500:G:N2	23:DA:502:A:H3'	2.33	0.43
23:DA:1006:C:C2'	23:DA:1007:C:H5'	2.48	0.43
23:DA:1835:G:N3	23:DA:1835:G:H2'	2.34	0.43
23:DA:1917:U:O2'	23:DA:1918:A:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2194:G:C6	23:DA:2195:C:C4	3.07	0.43
23:DA:2634:G:O2'	23:DA:2635:C:H5'	2.19	0.43
23:DA:2695:C:H2'	23:DA:2696:U:C6	2.54	0.43
23:DA:2845:G:C2	23:DA:2846:G:C5	3.06	0.43
23:DA:2870:C:H2'	23:DA:2871:C:O4'	2.19	0.43
25:DC:136:ILE:HA	25:DC:137:PRO:HD3	1.81	0.43
25:DC:177:LEU:HD23	25:DC:177:LEU:HA	1.85	0.43
26:DD:50:GLY:HA3	26:DD:75:VAL:HG21	2.01	0.43
28:DF:41:GLN:HG2	28:DF:155:MET:CB	2.47	0.43
30:DH:2:LYS:HG3	30:DH:39:ALA:CB	2.46	0.43
30:DH:77:LEU:HD23	30:DH:105:HIS:HE1	1.83	0.43
32:DJ:66:THR:HB	32:DJ:71:MET:HE3	2.00	0.43
34:DL:32:THR:HB	34:DL:36:LYS:HB2	2.00	0.43
35:DM:45:GLN:O	35:DM:49:ALA:HB2	2.17	0.43
40:DR:34:GLU:O	40:DR:36:PRO:CD	2.59	0.43
44:DV:76:LEU:H	44:DV:76:LEU:HD12	1.83	0.43
45:DW:72:ARG:O	45:DW:73:GLY:C	2.56	0.43
47:DY:3:LEU:O	47:DY:5:GLU:N	2.52	0.43
48:DZ:1:MET:HB3	48:DZ:39:ASP:HB3	2.00	0.43
1:AA:164:U:H2'	1:AA:165:C:C6	2.54	0.43
1:AA:393:A:C4	1:AA:394:G:C8	3.07	0.43
1:AA:492:G:C6	1:AA:493:G:C5	3.06	0.43
1:AA:583:A:N6	1:AA:758:G:H1'	2.34	0.43
1:AA:892:A:C6	1:AA:893:C:C4	3.06	0.43
1:AA:991:U:O2'	1:AA:993:G:H8	2.01	0.43
1:AA:1430:C:C2	1:AA:1471:G:C2	3.06	0.43
6:AF:55:ASP:OD1	6:AF:56:PRO:HD2	2.19	0.43
6:AF:60:PHE:CE2	18:AR:78:LEU:HD21	2.54	0.43
7:AG:78:ARG:HH11	7:AG:154:TYR:HB3	1.84	0.43
16:AP:18:ARG:O	16:AP:19:ILE:O	2.37	0.43
16:AP:71:ARG:C	16:AP:73:LEU:N	2.71	0.43
20:AT:57:ARG:C	20:AT:59:ALA:N	2.72	0.43
23:BA:32:C:O2'	23:BA:33:U:H5'	2.19	0.43
23:BA:189:G:C8	23:BA:189:G:C3'	3.02	0.43
23:BA:310:A:N1	23:BA:312:G:H1'	2.34	0.43
23:BA:528:A:C2'	23:BA:529:A:O5'	2.66	0.43
23:BA:844:C:O2'	23:BA:845:G:H5'	2.19	0.43
23:BA:869:G:C4	23:BA:870:A:C8	3.07	0.43
23:BA:958:U:H5'	35:BM:14:ARG:HH11	1.83	0.43
23:BA:1166:C:H42	23:BA:1183:G:H1	1.67	0.43
23:BA:1210:A:H4'	23:BA:1211:U:O5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1263:U:O2'	50:B2:11:THR:HG23	2.19	0.43
23:BA:1370:C:H2'	23:BA:1371:G:C5'	2.49	0.43
23:BA:1449:G:C4	23:BA:1450:C:C5	3.07	0.43
23:BA:1640:C:H5'	23:BA:1640:C:H6	1.84	0.43
23:BA:1964:G:H4'	23:BA:1965:C:OP2	2.19	0.43
23:BA:2295:C:N3	23:BA:2296:U:C5	2.87	0.43
23:BA:2415:G:H4'	34:BL:67:MET:N	2.34	0.43
23:BA:2564:A:C2	23:BA:2647:U:H4'	2.54	0.43
24:BB:7:G:H5''	37:BO:29:PHE:CZ	2.53	0.43
25:BC:16:MET:HE2	25:BC:211:ARG:HD3	2.01	0.43
25:BC:205:VAL:O	25:BC:206:LEU:C	2.55	0.43
25:BC:221:VAL:HG22	25:BC:226:MET:CE	2.49	0.43
26:BD:37:ARG:HA	26:BD:42:ASP:OD2	2.19	0.43
27:BE:138:GLU:O	27:BE:141:ALA:HB3	2.18	0.43
33:BK:72:PRO:C	33:BK:74:GLY:H	2.21	0.43
34:BL:70:GLN:O	34:BL:71:VAL:C	2.56	0.43
41:BS:57:ASN:O	41:BS:58:ALA:C	2.56	0.43
41:BS:75:TYR:C	41:BS:75:TYR:HD2	2.22	0.43
42:BT:30:VAL:HG21	42:BT:79:ALA:HB3	2.00	0.43
46:BX:45:ASN:HD22	46:BX:45:ASN:C	2.22	0.43
46:BX:51:VAL:HG12	46:BX:58:ILE:HG12	2.00	0.43
46:BX:90:ILE:O	46:BX:94:LEU:HD22	2.18	0.43
47:BY:24:LEU:CD2	47:BY:28:LYS:HG2	2.49	0.43
47:BY:60:LEU:HA	47:BY:60:LEU:HD23	1.49	0.43
1:CA:160:A:N7	1:CA:161:A:C5	2.87	0.43
1:CA:164:U:H2'	1:CA:165:C:C6	2.54	0.43
1:CA:167:G:C2'	1:CA:168:G:H5'	2.48	0.43
1:CA:242:C:H2'	1:CA:243:A:H5''	2.01	0.43
1:CA:288:A:O2'	1:CA:289:G:H5'	2.19	0.43
1:CA:380:G:N2	1:CA:384:G:C5	2.87	0.43
1:CA:385:C:H3'	1:CA:385:C:C6	2.54	0.43
1:CA:392:G:C2	1:CA:393:A:C4	3.07	0.43
1:CA:427:U:O4	1:CA:428:G:N1	2.51	0.43
1:CA:551:U:H5'	12:CL:118:LYS:HZ2	1.83	0.43
1:CA:598:U:H4'	8:CH:94:TYR:CD1	2.54	0.43
1:CA:806:C:O2'	1:CA:807:A:H5'	2.18	0.43
1:CA:865:A:H5'	1:CA:1078:U:O4	2.19	0.43
1:CA:977:A:HO2'	1:CA:978:A:H5''	1.84	0.43
1:CA:1311:G:H1	1:CA:1326:C:N4	2.11	0.43
1:CA:1368:G:C2	1:CA:1369:C:C6	3.07	0.43
2:CB:144:ARG:O	2:CB:147:LYS:HB3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:180:LEU:C	2:CB:181:PHE:CD2	2.92	0.43
7:CG:26:PHE:O	7:CG:30:ILE:HG12	2.19	0.43
9:CI:9:ARG:O	9:CI:10:ARG:HB2	2.19	0.43
12:CL:19:LYS:HD3	12:CL:19:LYS:N	2.33	0.43
22:CV:6191:A:C6	22:CV:6192:G:C5	3.07	0.43
23:DA:77:C:OP1	47:DY:59:ARG:HD3	2.19	0.43
23:DA:270(F):G:C5	23:DA:270(G):U:C5	3.06	0.43
23:DA:380:U:H4'	46:DX:21:ARG:O	2.18	0.43
23:DA:475:U:C4	23:DA:481:G:O6	2.72	0.43
23:DA:852:G:H2'	23:DA:853:G:C8	2.54	0.43
23:DA:963:U:H2'	23:DA:964:C:H6	1.84	0.43
23:DA:1476:C:O2'	23:DA:1477:A:H5'	2.18	0.43
23:DA:1515:C:O2	23:DA:1515:C:H2'	2.19	0.43
23:DA:1603:A:OP1	23:DA:1604:C:OP2	2.37	0.43
23:DA:1902:C:C2'	23:DA:1903:G:O5'	2.67	0.43
23:DA:2392:A:H2'	23:DA:2393:A:H5'	2.00	0.43
23:DA:2563:U:O2	23:DA:2565:A:C8	2.71	0.43
23:DA:2636:U:C2	23:DA:2637:U:C5	3.07	0.43
23:DA:2846:G:C8	23:DA:2847:U:C5	3.06	0.43
24:DB:61:G:C6	24:DB:62:C:C4	3.07	0.43
25:DC:25:THR:O	25:DC:27:THR:HG22	2.18	0.43
25:DC:175:LEU:HD12	25:DC:185:VAL:HG21	2.00	0.43
26:DD:120:TRP:NE1	26:DD:155:LYS:HB3	2.34	0.43
26:DD:153:GLY:O	26:DD:154:LYS:C	2.55	0.43
27:DE:139:PHE:HB2	27:DE:166:ALA:HB1	2.00	0.43
29:DG:126:PRO:HG2	29:DG:130:ARG:HB3	2.01	0.43
30:DH:38:LEU:HD13	30:DH:38:LEU:HA	1.87	0.43
32:DJ:51:THR:O	32:DJ:54:ALA:HB3	2.19	0.43
33:DK:20:MET:O	33:DK:20:MET:HG3	2.17	0.43
33:DK:77:ILE:HD11	38:DP:72:VAL:CG1	2.49	0.43
33:DK:88:ASN:O	33:DK:91:LEU:HA	2.19	0.43
34:DL:50:ARG:CD	34:DL:51:PHE:N	2.78	0.43
36:DN:18:LEU:HD13	36:DN:19:ALA:N	2.34	0.43
36:DN:85:PRO:HA	36:DN:88:ARG:NH1	2.33	0.43
39:DQ:69:CYS:HB3	39:DQ:79:PHE:HD2	1.83	0.43
42:DT:80:ILE:O	42:DT:80:ILE:HG12	2.16	0.43
43:DU:81:LYS:HG2	43:DU:97:ARG:HB3	2.01	0.43
43:DU:100:ALA:O	43:DU:101:LYS:HB3	2.19	0.43
1:AA:20:U:H2'	1:AA:21:G:H5'	2.00	0.43
1:AA:36:C:H4'	12:AL:121:THR:O	2.19	0.43
1:AA:57:G:N7	1:AA:58:C:C5	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:194:C:H5''	20:AT:65:LYS:HG2	2.01	0.43
1:AA:409:G:H5'	4:AD:24:GLU:HB3	2.00	0.43
1:AA:438:G:O2'	1:AA:493:G:C2	2.65	0.43
1:AA:440:A:C8	1:AA:442:C:C5	3.07	0.43
1:AA:448:A:OP2	1:AA:485:G:N2	2.49	0.43
1:AA:509:A:C6	1:AA:510:A:N1	2.86	0.43
1:AA:909:A:H3'	1:AA:910:C:H6	1.83	0.43
1:AA:1089:G:H1	1:AA:1096:C:H42	1.67	0.43
1:AA:1119:C:H2'	1:AA:1120:G:C8	2.54	0.43
1:AA:1162:C:O2'	1:AA:1163:C:H5'	2.19	0.43
1:AA:1357:A:N6	1:AA:1358:U:H3	2.17	0.43
1:AA:1364:U:H5'	21:AU:14:TRP:CZ2	2.54	0.43
1:AA:1511:G:C6	1:AA:1512:U:C4	3.07	0.43
2:AB:144:ARG:O	2:AB:147:LYS:HB3	2.19	0.43
3:AC:17:ASP:HB3	3:AC:21:ARG:HH22	1.84	0.43
3:AC:57:ILE:HD11	3:AC:66:VAL:HG22	2.00	0.43
5:AE:79:GLU:CG	5:AE:92:LYS:HG3	2.49	0.43
6:AF:52:ILE:CD1	6:AF:87:ARG:HH21	2.31	0.43
7:AG:49:ILE:O	7:AG:49:ILE:CG2	2.66	0.43
8:AH:49:GLU:O	8:AH:51:VAL:N	2.45	0.43
13:AM:37:THR:OG1	13:AM:39:ILE:HG12	2.19	0.43
15:AO:3:ILE:HG21	15:AO:34:LEU:CD2	2.49	0.43
17:AQ:10:VAL:CG1	17:AQ:53:LEU:HA	2.48	0.43
17:AQ:70:ARG:HD2	17:AQ:70:ARG:N	2.34	0.43
18:AR:65:ILE:O	18:AR:69:THR:HG23	2.19	0.43
23:BA:173:G:H2'	23:BA:174:C:H6	1.83	0.43
23:BA:310:A:OP1	43:BU:17:SER:O	2.37	0.43
23:BA:954:G:H5''	35:BM:13:GLN:HG2	1.99	0.43
23:BA:1046:A:C3'	23:BA:1047:G:C5'	2.96	0.43
23:BA:1111:A:N3	23:BA:1112:G:H1'	2.34	0.43
23:BA:1232:G:C4	23:BA:1233:C:C5	3.07	0.43
23:BA:1344:G:H5'	23:BA:1384:A:N1	2.34	0.43
23:BA:1718:G:N2	23:BA:1742:C:C2	2.86	0.43
23:BA:1748:G:O2'	23:BA:1749:A:H5'	2.19	0.43
23:BA:1832:C:C4	23:BA:1833:U:C5	3.07	0.43
23:BA:1899:G:H21	23:BA:1902:C:H5	1.67	0.43
23:BA:1905:C:O4'	23:BA:1928:A:H2	2.02	0.43
23:BA:1952:A:C6	33:BK:22:ILE:HD11	2.53	0.43
23:BA:2579:C:H2'	23:BA:2580:U:O4'	2.19	0.43
23:BA:2604:U:O2	23:BA:2604:U:C2'	2.67	0.43
23:BA:2767:C:C2'	23:BA:2768:C:H5'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:32:SER:O	25:BC:36:PRO:HD2	2.18	0.43
25:BC:172:TYR:CD1	25:BC:185:VAL:O	2.66	0.43
25:BC:231:HIS:CG	25:BC:232:PRO:HD2	2.52	0.43
30:BH:25:TYR:CE1	30:BH:30:LEU:HD11	2.53	0.43
34:BL:80:TYR:CE1	34:BL:111:ARG:CG	3.02	0.43
34:BL:107:LYS:C	34:BL:109:GLY:H	2.22	0.43
36:BN:32:GLY:C	36:BN:33:ARG:HD2	2.38	0.43
36:BN:100:LEU:HG	36:BN:112:ALA:HA	2.01	0.43
43:BU:81:LYS:HD2	43:BU:96:ILE:HD12	2.00	0.43
44:BV:48:PHE:CE2	44:BV:71:VAL:HG21	2.54	0.43
44:BV:57:ILE:HG22	44:BV:59:LEU:HG	2.01	0.43
46:BX:59:THR:OG1	46:BX:60:PHE:N	2.51	0.43
1:CA:15:G:H2'	1:CA:16:A:C8	2.53	0.43
1:CA:99:C:O2'	1:CA:101:A:H8	2.01	0.43
1:CA:395:C:H2'	1:CA:395:C:O2	2.17	0.43
1:CA:397:A:N7	1:CA:548:G:H8	2.14	0.43
1:CA:448:A:H2'	1:CA:449:C:C6	2.54	0.43
1:CA:506:G:C5	1:CA:507:C:C4	3.07	0.43
1:CA:510:A:H1'	1:CA:543:C:O4'	2.19	0.43
1:CA:586:C:O2'	1:CA:878:G:H4'	2.18	0.43
1:CA:639:G:H2'	1:CA:640:A:C8	2.53	0.43
1:CA:651:C:O2'	1:CA:652:U:H5'	2.18	0.43
1:CA:664:G:N2	1:CA:742:G:C2	2.87	0.43
1:CA:1165:C:C2'	1:CA:1166:G:H5'	2.49	0.43
1:CA:1348:U:H4'	9:CI:120:ARG:HH11	1.84	0.43
2:CB:97:TRP:CE3	2:CB:98:LEU:O	2.72	0.43
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	2.01	0.43
4:CD:159:ARG:O	4:CD:162:LEU:N	2.52	0.43
5:CE:107:ARG:HG2	5:CE:108:ALA:N	2.34	0.43
11:CK:17:GLY:HA3	11:CK:77:MET:SD	2.59	0.43
13:CM:116:THR:O	13:CM:117:VAL:O	2.37	0.43
23:DA:69:C:O2'	23:DA:70:G:H5'	2.19	0.43
23:DA:142:G:H2'	23:DA:143:C:O4'	2.19	0.43
23:DA:241:A:H5'	23:DA:243:U:C1'	2.47	0.43
23:DA:479:A:N3	23:DA:481:G:H5''	2.34	0.43
23:DA:912:C:O2	23:DA:912:C:C2'	2.64	0.43
23:DA:1046:A:C3'	23:DA:1047:G:C5'	2.96	0.43
23:DA:1105:U:H2'	23:DA:1106:G:C8	2.54	0.43
23:DA:1144:G:C6	23:DA:1145:C:N4	2.87	0.43
23:DA:1275:A:C5	36:DN:16:HIS:ND1	2.87	0.43
23:DA:1399:C:H2'	23:DA:1400:G:H8	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1414:G:H2'	23:DA:1415:U:C6	2.51	0.43
23:DA:1471:A:C2	23:DA:1472:A:C4	3.07	0.43
23:DA:1607:C:N4	23:DA:1621:U:C3'	2.82	0.43
23:DA:1785:A:O2'	23:DA:1786:A:H2'	2.19	0.43
23:DA:1826:G:H2'	23:DA:1827:C:H6	1.83	0.43
23:DA:1856:G:C2	23:DA:1887:C:C2	3.06	0.43
23:DA:2001:A:H4'	23:DA:2689:U:O2'	2.19	0.43
23:DA:2258:C:H4'	23:DA:2259:G:OP2	2.19	0.43
23:DA:2738:A:H2'	23:DA:2739:U:O5'	2.19	0.43
24:DB:45:A:C2	24:DB:46:A:O4'	2.72	0.43
26:DD:37:ARG:HA	26:DD:42:ASP:OD2	2.19	0.43
27:DE:46:ARG:CG	27:DE:46:ARG:NH1	2.80	0.43
27:DE:173:VAL:CG1	27:DE:174:VAL:N	2.81	0.43
29:DG:92:ILE:HG22	29:DG:93:GLY:H	1.80	0.43
30:DH:107:ILE:HD12	30:DH:108:THR:H	1.84	0.43
32:DJ:143:LEU:C	32:DJ:144:LYS:HD2	2.39	0.43
33:DK:25:LEU:HD23	33:DK:25:LEU:HA	1.56	0.43
33:DK:75:SER:HB2	38:DP:75:ILE:O	2.19	0.43
34:DL:96:THR:HB	34:DL:97:PRO:HD2	2.01	0.43
35:DM:16:ARG:CG	35:DM:17:LEU:H	2.32	0.43
38:DP:14:TYR:CD1	38:DP:14:TYR:N	2.83	0.43
39:DQ:82:GLY:CA	39:DQ:113:ALA:HB1	2.42	0.43
49:D1:36:VAL:HB	49:D1:37:PRO:HD2	2.01	0.43
51:D3:13:CYS:HB2	51:D3:22:ALA:HB3	2.01	0.43
1:AA:78:G:H2'	1:AA:79:G:C8	2.54	0.42
1:AA:191(F):U:H2'	1:AA:191(G):G:C8	2.54	0.42
1:AA:347:G:N2	1:AA:348:G:H1'	2.34	0.42
1:AA:542:G:H5'	4:AD:41:GLY:HA3	2.00	0.42
1:AA:581:G:O2'	1:AA:582:U:H5'	2.19	0.42
1:AA:906:G:H8	1:AA:906:G:O5'	2.01	0.42
1:AA:922:G:C6	1:AA:923:A:N6	2.86	0.42
1:AA:976:G:H8	1:AA:1358:U:H2'	1.83	0.42
1:AA:1129:C:C1'	1:AA:1130:A:OP2	2.62	0.42
1:AA:1320:C:N4	19:AS:36:ARG:HG3	2.12	0.42
2:AB:17:PHE:CD1	2:AB:44:LEU:HD11	2.54	0.42
3:AC:73:PRO:C	3:AC:75:VAL:H	2.22	0.42
5:AE:107:ARG:HG2	5:AE:108:ALA:N	2.34	0.42
7:AG:60:LYS:HD2	7:AG:60:LYS:HA	1.78	0.42
9:AI:95:LYS:HD3	9:AI:95:LYS:C	2.39	0.42
10:AJ:6:ILE:HG12	10:AJ:72:VAL:O	2.19	0.42
10:AJ:30:SER:HB2	10:AJ:80:LYS:HG2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:12:ILE:HG21	15:AO:22:THR:HG22	2.00	0.42
18:AR:44:LEU:HG	18:AR:50:ILE:HD13	2.01	0.42
23:BA:69:C:O2'	23:BA:70:G:H5'	2.19	0.42
23:BA:302:C:O2'	23:BA:303:U:H5'	2.19	0.42
23:BA:322:A:P	27:BE:169:ASN:HB2	2.58	0.42
23:BA:333:G:C6	23:BA:334:C:C4	3.07	0.42
23:BA:447:A:C4	23:BA:473:G:C8	3.07	0.42
23:BA:570:G:C5	23:BA:2030:A:C2	3.07	0.42
23:BA:758:C:O2	23:BA:1981:A:H2	2.02	0.42
23:BA:880:G:H1	23:BA:897:C:N4	2.17	0.42
23:BA:1859:A:N6	23:BA:1884:A:C8	2.87	0.42
23:BA:1871:A:H2'	23:BA:1872:A:H8	1.80	0.42
23:BA:1903:G:OP2	25:BC:241:PRO:HB3	2.19	0.42
23:BA:1991:U:H2'	23:BA:1992:G:C5'	2.48	0.42
23:BA:2101:G:N2	23:BA:2189:U:C2	2.87	0.42
23:BA:2506:U:H5	23:BA:2507:C:H5	1.60	0.42
23:BA:2737:G:C6	23:BA:2738:A:N7	2.86	0.42
23:BA:2836:U:H2'	23:BA:2837:G:H8	1.84	0.42
24:BB:79:C:O5'	24:BB:79:C:H6	2.02	0.42
24:BB:104:A:O4'	44:BV:29:TYR:CE1	2.68	0.42
25:BC:70:TRP:HD1	25:BC:70:TRP:O	2.01	0.42
28:BF:137:GLU:HB3	28:BF:139:LEU:HG	2.01	0.42
32:BJ:154:GLN:O	32:BJ:155:ALA:HB2	2.19	0.42
34:BL:115:LEU:HA	34:BL:134:ALA:HB2	2.01	0.42
36:BN:50:HIS:CD2	36:BN:50:HIS:C	2.92	0.42
37:BO:88:ASP:O	37:BO:90:GLY:N	2.50	0.42
39:BQ:72:HIS:ND1	39:BQ:110:VAL:HG21	2.34	0.42
40:BR:75:PHE:CD1	40:BR:75:PHE:O	2.72	0.42
44:BV:70:LEU:CD2	44:BV:70:LEU:N	2.82	0.42
44:BV:129:SER:OG	44:BV:130:PRO:HD2	2.19	0.42
49:B1:48:ILE:H	49:B1:48:ILE:HD12	1.83	0.42
1:CA:68:G:C6	1:CA:69:G:C5	3.07	0.42
1:CA:197:A:N6	1:CA:221:C:H5'	2.34	0.42
1:CA:386:C:H2'	1:CA:387:U:C4'	2.49	0.42
1:CA:394:G:N3	1:CA:395:C:C6	2.87	0.42
1:CA:501:C:H3'	1:CA:501:C:H6	1.84	0.42
1:CA:570:G:H2'	1:CA:571:U:C6	2.54	0.42
1:CA:861:G:O2'	1:CA:862:C:H5'	2.19	0.42
1:CA:1060:C:C2	1:CA:1198:G:C2	3.07	0.42
1:CA:1202:G:O2'	14:CN:27:CYS:HB2	2.19	0.42
1:CA:1383:C:C6	1:CA:1384:C:H5	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:149:LEU:O	2:CB:151:GLY:N	2.51	0.42
5:CE:47:LYS:HE3	5:CE:47:LYS:HB2	1.85	0.42
5:CE:126:ARG:HG2	5:CE:126:ARG:NH1	2.22	0.42
7:CG:126:ASP:HB3	7:CG:131:LYS:O	2.19	0.42
9:CI:30:GLY:O	9:CI:31:GLN:O	2.36	0.42
9:CI:127:LYS:O	9:CI:128:ARG:O	2.37	0.42
23:DA:195:A:OP1	34:DL:46:LYS:HE2	2.19	0.42
23:DA:553:U:O4	23:DA:554:U:O4	2.37	0.42
23:DA:566:U:H2'	23:DA:567:A:O4'	2.18	0.42
23:DA:589:C:H2'	23:DA:590:A:C8	2.54	0.42
23:DA:705:A:C2	23:DA:727:A:H1'	2.53	0.42
23:DA:724:U:H2'	23:DA:725:G:O4'	2.18	0.42
23:DA:738:G:H2'	23:DA:739:G:C8	2.54	0.42
23:DA:876:C:H2'	23:DA:877:U:H5'	2.00	0.42
23:DA:947:G:N3	23:DA:984:A:H2	2.17	0.42
23:DA:958:U:O2'	23:DA:959:A:OP2	2.35	0.42
23:DA:1126:A:O5'	23:DA:1126:A:C8	2.71	0.42
23:DA:1210:A:H4'	23:DA:1211:U:O5'	2.19	0.42
23:DA:1625:C:H2'	23:DA:1626:G:O4'	2.19	0.42
23:DA:1686:C:N4	23:DA:1687:G:C6	2.87	0.42
23:DA:2188:C:C4	23:DA:2189:U:C6	3.07	0.42
23:DA:2450:A:C2	23:DA:2451:A:C4	3.06	0.42
23:DA:2552:U:H2'	23:DA:2554:U:OP2	2.19	0.42
23:DA:2703:C:C2'	23:DA:2704:C:H5'	2.48	0.42
23:DA:2748:A:C4	23:DA:2757:A:C6	3.07	0.42
23:DA:2790:A:C2	23:DA:2791:C:H2'	2.54	0.42
23:DA:2836:U:H2'	23:DA:2837:G:H8	1.84	0.42
23:DA:2881:C:C2	23:DA:2882:A:C8	3.07	0.42
24:DB:46:A:C5	24:DB:47:C:C4	3.07	0.42
25:DC:233:HIS:HE1	25:DC:246:PRO:HA	1.83	0.42
25:DC:246:PRO:HD2	25:DC:255:LYS:HD2	2.01	0.42
27:DE:102:PRO:O	27:DE:106:ARG:HG2	2.19	0.42
28:DF:137:GLU:HB3	28:DF:139:LEU:HG	2.01	0.42
30:DH:76:THR:HG22	30:DH:141:LYS:CB	2.49	0.42
30:DH:79:ILE:HB	30:DH:143:SER:O	2.19	0.42
31:DI:15:GLU:HG3	31:DI:66:LEU:HG	2.00	0.42
32:DJ:32:VAL:CG1	32:DJ:33:GLU:N	2.82	0.42
32:DJ:109:PRO:HG2	32:DJ:112:LYS:HB2	2.00	0.42
34:DL:115:LEU:CB	34:DL:131:SER:HB2	2.48	0.42
36:DN:6:SER:OG	36:DN:7:GLY:N	2.51	0.42
36:DN:52:ILE:HG21	36:DN:94:TYR:CB	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DO:14:VAL:HG21	37:DO:89:ARG:HH21	1.84	0.42
38:DP:50:ILE:HG22	38:DP:51:ARG:HB3	2.01	0.42
43:DU:17:SER:HB2	43:DU:71:LYS:HD2	2.00	0.42
44:DV:24:LEU:HB3	44:DV:41:LEU:HG	2.00	0.42
44:DV:53:ILE:C	44:DV:53:ILE:HD12	2.40	0.42
53:D5:30:ARG:HA	53:D5:30:ARG:HD3	1.72	0.42
1:AA:197:A:N6	1:AA:221:C:H5'	2.35	0.42
1:AA:318:G:C2	1:AA:319:G:C5	3.08	0.42
1:AA:616:G:N3	1:AA:625:G:C2	2.88	0.42
1:AA:619:U:H2'	4:AD:135:LEU:CD2	2.49	0.42
1:AA:710:G:C4	1:AA:711:G:C8	3.07	0.42
1:AA:1184:G:C5	1:AA:1185:G:N7	2.87	0.42
1:AA:1237:C:C5	1:AA:1336:C:C4	3.07	0.42
1:AA:1329:A:N7	21:AU:7:ARG:NH2	2.63	0.42
1:AA:1464:G:C2'	1:AA:1465:C:H5'	2.48	0.42
4:AD:106:TYR:HE1	4:AD:113:SER:HA	1.83	0.42
4:AD:153:ARG:HD3	4:AD:181:MET:HE3	2.00	0.42
5:AE:36:ASP:CG	5:AE:37:ARG:N	2.73	0.42
7:AG:51:GLN:HA	7:AG:54:THR:O	2.18	0.42
11:AK:26:ASN:O	11:AK:27:ASN:HB2	2.19	0.42
11:AK:99:GLN:HA	11:AK:99:GLN:OE1	2.20	0.42
12:AL:7:ASN:HA	12:AL:10:VAL:HG23	2.00	0.42
21:AU:22:ARG:HA	21:AU:23:PRO:HD3	1.83	0.42
23:BA:8:A:C6	23:BA:9:U:O4	2.72	0.42
23:BA:517:C:OP1	50:B2:16:ARG:NH2	2.52	0.42
23:BA:719:C:H6	23:BA:719:C:O5'	2.02	0.42
23:BA:805:G:H4'	23:BA:806:C:OP2	2.19	0.42
23:BA:864:G:C6	23:BA:865:C:N4	2.87	0.42
23:BA:1003:G:O2'	23:BA:1010:A:N1	2.45	0.42
23:BA:1005:C:O2'	32:BJ:51:THR:HG21	2.19	0.42
23:BA:1443:G:H1	23:BA:1548:C:H42	1.67	0.42
23:BA:1480:G:C2	23:BA:1481:U:C2	3.07	0.42
23:BA:1586:A:H2'	23:BA:1587:A:H5'	2.01	0.42
23:BA:1591:G:H2'	23:BA:1592:C:C6	2.54	0.42
23:BA:2016:U:H1'	50:B2:6:VAL:HG13	2.01	0.42
23:BA:2402:C:C3'	23:BA:2403:C:H5'	2.49	0.42
23:BA:2471:C:H2'	23:BA:2472:G:O4'	2.18	0.42
23:BA:2591:C:H2'	23:BA:2592:G:C8	2.54	0.42
23:BA:2640:G:H2'	23:BA:2641:G:O4'	2.19	0.42
23:BA:2718:G:C2'	23:BA:2719:G:O5'	2.67	0.42
23:BA:2737:G:C4	23:BA:2738:A:C8	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2744:G:N2	23:BA:2761:G:C5	2.88	0.42
23:BA:2753:A:C2'	23:BA:2754:U:H5'	2.49	0.42
25:BC:182:LEU:HB3	25:BC:271:ILE:HG13	2.01	0.42
28:BF:133:LEU:N	28:BF:133:LEU:CD2	2.83	0.42
34:BL:62:LEU:HD21	53:B5:25:MET:O	2.20	0.42
34:BL:85:LEU:CA	34:BL:88:LEU:HB2	2.45	0.42
34:BL:107:LYS:O	34:BL:109:GLY:N	2.50	0.42
35:BM:16:ARG:O	35:BM:17:LEU:HD23	2.18	0.42
36:BN:48:VAL:HA	36:BN:51:LEU:HD12	2.02	0.42
36:BN:79:LEU:HA	36:BN:83:ILE:HG13	2.00	0.42
36:BN:107:ASP:OD2	36:BN:108:GLY:N	2.52	0.42
38:BP:82:LEU:HD23	38:BP:82:LEU:N	2.34	0.42
41:BS:10:VAL:HG23	41:BS:101:SER:O	2.18	0.42
42:BT:21:PHE:O	42:BT:23:GLU:O	2.37	0.42
42:BT:41:ASN:N	42:BT:41:ASN:HD22	2.17	0.42
48:BZ:40:THR:HG23	48:BZ:43:ILE:CD1	2.49	0.42
51:B3:18:ARG:HH22	51:B3:44:ARG:HB2	1.83	0.42
52:B4:36:GLN:O	52:B4:36:GLN:CG	2.68	0.42
1:CA:414:A:C5	1:CA:431:A:C2	3.07	0.42
1:CA:583:A:H61	1:CA:758:G:H1'	1.84	0.42
1:CA:102(B):C:N4	1:CA:102(C):C:H41	2.17	0.42
1:CA:1141:C:H2'	1:CA:1142:G:H8	1.84	0.42
1:CA:1279:A:H62	3:CC:26:LYS:HE2	1.84	0.42
1:CA:1360:A:H3'	1:CA:1361:G:C8	2.55	0.42
1:CA:1501:C:C6	1:CA:1504:G:N7	2.87	0.42
4:CD:159:ARG:HA	4:CD:162:LEU:HB2	2.00	0.42
4:CD:190:ASP:O	4:CD:194:LEU:CD2	2.67	0.42
5:CE:36:ASP:CG	5:CE:37:ARG:N	2.72	0.42
5:CE:65:ASN:O	5:CE:66:MET:HG3	2.20	0.42
5:CE:139:LEU:O	5:CE:142:LEU:HD12	2.19	0.42
13:CM:37:THR:OG1	13:CM:39:ILE:HG12	2.19	0.42
14:CN:40:CYS:O	14:CN:44:LEU:HB3	2.19	0.42
16:CP:20:VAL:HG22	16:CP:21:VAL:N	2.34	0.42
17:CQ:51:TYR:CE1	17:CQ:73:VAL:HG11	2.54	0.42
18:CR:35:ARG:O	18:CR:37:VAL:N	2.46	0.42
20:CT:24:LEU:H	20:CT:24:LEU:HD22	1.84	0.42
20:CT:57:ARG:HH12	20:CT:102:GLY:HA2	1.75	0.42
23:DA:71:A:H4'	23:DA:72:U:H5''	2.00	0.42
23:DA:189:G:H1'	23:DA:207:A:H61	1.84	0.42
23:DA:257:A:H3'	23:DA:257:A:C8	2.54	0.42
23:DA:646:A:N3	23:DA:646:A:H5'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:673:C:H4'	27:DE:82:ILE:HD13	2.01	0.42
23:DA:997:G:H2'	23:DA:998:C:H5'	2.00	0.42
23:DA:1284:A:H2'	23:DA:1285:G:O4'	2.18	0.42
23:DA:1434:A:C2	23:DA:1435:G:C4	3.08	0.42
23:DA:2019:A:O4'	39:DQ:34:LYS:HD2	2.19	0.42
23:DA:2295:C:C4	23:DA:2296:U:H5	2.37	0.42
23:DA:2821:A:OP2	36:DN:5:LYS:NZ	2.46	0.42
26:DD:103:ASP:OD2	26:DD:168:MET:HE2	2.18	0.42
29:DG:101:ARG:NE	29:DG:101:ARG:N	2.43	0.42
30:DH:62:LYS:CB	30:DH:133:HIS:CE1	3.00	0.42
30:DH:114:LEU:HD21	30:DH:128:LEU:HD13	2.00	0.42
35:DM:45:GLN:CD	35:DM:45:GLN:H	2.21	0.42
35:DM:68:ILE:HG23	35:DM:103:MET:HA	2.01	0.42
40:DR:75:PHE:HD1	40:DR:75:PHE:O	2.02	0.42
44:DV:30:ASN:HB3	44:DV:90:VAL:HB	2.00	0.42
46:DX:13:ILE:HD12	46:DX:13:ILE:O	2.19	0.42
47:DY:1:MET:SD	47:DY:1:MET:O	2.77	0.42
50:D2:33:CYS:SG	50:D2:40:LYS:HE3	2.59	0.42
50:D2:40:LYS:HE2	50:D2:46:CYS:HB3	2.01	0.42
1:AA:21:G:C2	1:AA:22:G:C6	3.07	0.42
1:AA:55:A:C5	1:AA:56:U:C5	3.06	0.42
1:AA:101:A:H2'	1:AA:102:G:H8	1.85	0.42
1:AA:134:A:N1	16:AP:25:ARG:NH1	2.67	0.42
1:AA:135:C:H2'	1:AA:136:C:H5'	2.01	0.42
1:AA:179:A:C5	1:AA:180:U:C4	3.07	0.42
1:AA:191(G):G:O2'	20:AT:102:GLY:O	2.37	0.42
1:AA:555:C:C2	1:AA:556:C:C5	3.07	0.42
1:AA:668:G:H2'	1:AA:669:U:H6	1.82	0.42
1:AA:1077:G:C2	1:AA:1081:G:C5	3.08	0.42
1:AA:1217:C:H5''	14:AN:9:LYS:NZ	2.34	0.42
1:AA:1314:C:H5	19:AS:6:LYS:NZ	2.17	0.42
1:AA:1441:G:H5''	1:AA:1442:G:O5'	2.20	0.42
2:AB:60:ASP:O	2:AB:64:ARG:CG	2.68	0.42
7:AG:9:VAL:HG12	7:AG:10:ARG:N	2.33	0.42
7:AG:31:MET:HG3	7:AG:35:LYS:H	1.85	0.42
7:AG:75:VAL:O	7:AG:75:VAL:HG23	2.19	0.42
13:AM:4:ILE:HG12	13:AM:10:PRO:HD2	2.00	0.42
13:AM:98:VAL:O	13:AM:98:VAL:HG12	2.20	0.42
17:AQ:31:LEU:O	17:AQ:31:LEU:HG	2.19	0.42
19:AS:11:VAL:HG22	19:AS:12:ASP:N	2.33	0.42
19:AS:63:THR:HG23	19:AS:65:ASN:N	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:6179:U:H2'	22:AV:6180:U:C6	2.55	0.42
23:BA:32:C:C2'	23:BA:33:U:H5'	2.49	0.42
23:BA:89:G:C5	23:BA:90:U:C5	3.08	0.42
23:BA:205:G:O2'	23:BA:206:U:OP2	2.34	0.42
23:BA:399:G:H2'	23:BA:400:G:C5'	2.50	0.42
23:BA:443:A:N7	27:BE:45:ARG:HG2	2.34	0.42
23:BA:483:A:H1'	43:BU:47:LYS:O	2.19	0.42
23:BA:953:A:C2'	23:BA:954:G:H5'	2.50	0.42
23:BA:1019:U:O2'	23:BA:1021:A:C2	2.70	0.42
23:BA:1285:G:O6	23:BA:1329:U:C2	2.73	0.42
23:BA:1297:C:H2'	23:BA:1298:C:H6	1.83	0.42
23:BA:1409:C:C2	23:BA:1594:G:N2	2.88	0.42
23:BA:1647:G:H3'	23:BA:1647:G:P	2.59	0.42
23:BA:1668:A:C8	23:BA:1674:G:C6	3.07	0.42
23:BA:2208:U:O4'	25:BC:151:LYS:HE3	2.19	0.42
23:BA:2666:C:H5''	23:BA:2667:C:OP2	2.18	0.42
23:BA:2809:A:N1	23:BA:2892:A:C4	2.88	0.42
24:BB:43:C:H2'	24:BB:44:G:H5''	2.01	0.42
25:BC:35:LYS:H	25:BC:36:PRO:HD2	1.84	0.42
25:BC:147:LEU:HD13	25:BC:155:LEU:CD1	2.50	0.42
27:BE:34:TRP:CE3	27:BE:35:GLU:HG2	2.53	0.42
29:BG:72:ILE:O	29:BG:75:ALA:N	2.52	0.42
29:BG:103:LEU:O	29:BG:103:LEU:HG	2.18	0.42
33:BK:22:ILE:HA	33:BK:22:ILE:HD13	1.46	0.42
33:BK:23:ARG:HG3	33:BK:24:VAL:N	2.33	0.42
34:BL:49:ARG:HG3	53:B5:60:LEU:CD2	2.47	0.42
36:BN:2:ARG:O	36:BN:3:HIS:CD2	2.72	0.42
37:BO:51:ALA:HB3	37:BO:73:LEU:HG	2.01	0.42
44:BV:48:PHE:CE1	44:BV:52:SER:HA	2.55	0.42
44:BV:60:GLU:OE1	44:BV:66:SER:HB3	2.19	0.42
46:BX:23:LYS:HB3	46:BX:23:LYS:HE2	1.74	0.42
46:BX:23:LYS:HB3	46:BX:37:ILE:CG1	2.49	0.42
48:BZ:12:PRO:O	48:BZ:14:GLY:N	2.52	0.42
1:CA:32:A:C2	1:CA:33:A:C4	3.07	0.42
1:CA:564:C:N3	17:CQ:31:LEU:HD11	2.33	0.42
1:CA:680:C:H2'	1:CA:681:C:C6	2.54	0.42
1:CA:878:G:C6	1:CA:879:C:N4	2.88	0.42
1:CA:1067:A:N3	1:CA:1068:G:C1'	2.82	0.42
1:CA:1213:A:O2'	1:CA:1215:G:N7	2.47	0.42
1:CA:1357:A:N6	1:CA:1358:U:H3	2.17	0.42
1:CA:1366:C:N4	1:CA:1367:C:N4	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1371:G:H5''	9:CI:69:GLY:N	2.33	0.42
1:CA:1378:C:C5	1:CA:1379:G:N9	2.87	0.42
2:CB:20:GLU:HA	2:CB:20:GLU:OE1	2.19	0.42
2:CB:164:VAL:O	2:CB:186:ALA:HB1	2.19	0.42
4:CD:189:PRO:CB	4:CD:194:LEU:HD21	2.50	0.42
4:CD:199:ASN:HD22	4:CD:202:LEU:HG	1.83	0.42
5:CE:140:ARG:O	5:CE:140:ARG:CG	2.66	0.42
6:CF:2:ARG:H	6:CF:2:ARG:HG3	1.69	0.42
6:CF:75:LEU:HD21	6:CF:79:LEU:HD11	2.01	0.42
8:CH:37:ARG:HG2	8:CH:37:ARG:O	2.18	0.42
14:CN:26:ARG:HD2	14:CN:47:LEU:HD11	2.00	0.42
18:CR:19:LYS:O	18:CR:20:ALA:CB	2.67	0.42
18:CR:53:ARG:HH21	18:CR:60:ALA:N	2.16	0.42
19:CS:52:TYR:HA	19:CS:56:GLN:O	2.19	0.42
23:DA:194:G:C2'	23:DA:195:A:H5'	2.49	0.42
23:DA:273(B):G:C2	23:DA:364:C:C2	3.08	0.42
23:DA:450:G:O6	23:DA:453:C:OP1	2.38	0.42
23:DA:466:A:C3'	23:DA:467:G:H5'	2.49	0.42
23:DA:546:C:N4	23:DA:547:A:C6	2.87	0.42
23:DA:564:C:C2'	23:DA:565:C:H5'	2.49	0.42
23:DA:608:A:C6	23:DA:609(A):A:C6	3.07	0.42
23:DA:646:A:C2'	23:DA:647:G:O5'	2.67	0.42
23:DA:838:C:C4	23:DA:839:U:C5	3.07	0.42
23:DA:1320:C:H4'	23:DA:1321:A:OP1	2.18	0.42
23:DA:1461:G:C2'	23:DA:1462:C:H5'	2.50	0.42
23:DA:1464:C:H2'	23:DA:1465:G:H8	1.84	0.42
23:DA:1487:G:C2	23:DA:1488:G:C8	3.07	0.42
23:DA:1971:A:N3	25:DC:241:PRO:HD3	2.35	0.42
23:DA:2467:C:C5'	35:DM:123:HIS:CE1	3.02	0.42
23:DA:2523:G:C2'	23:DA:2524:G:H5'	2.49	0.42
23:DA:2618:G:O2'	26:DD:149:ARG:HG3	2.20	0.42
23:DA:2861:G:C4	23:DA:2862:G:C8	3.08	0.42
27:DE:32:LEU:O	27:DE:36:VAL:HG23	2.19	0.42
27:DE:205:ARG:C	27:DE:206:ILE:HG13	2.40	0.42
29:DG:90:LYS:O	29:DG:94:TYR:HB2	2.19	0.42
32:DJ:112:LYS:O	32:DJ:116:THR:CG2	2.67	0.42
33:DK:35:VAL:HG23	33:DK:65:THR:CG2	2.42	0.42
33:DK:102:VAL:HG21	33:DK:118:ALA:CB	2.49	0.42
35:DM:66:ILE:HG22	35:DM:104:PHE:HD2	1.79	0.42
35:DM:112:GLU:H	35:DM:112:GLU:CD	2.23	0.42
36:DN:34:ILE:HD13	36:DN:34:ILE:HA	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DO:78:LEU:C	37:DO:80:LEU:H	2.22	0.42
39:DQ:53:ARG:HA	39:DQ:56:ASP:HB2	2.02	0.42
39:DQ:105:VAL:CG1	40:DR:40:LEU:HD13	2.50	0.42
40:DR:78:LYS:O	40:DR:78:LYS:HG3	2.19	0.42
41:DS:45:TYR:HD2	41:DS:46:PHE:CE1	2.37	0.42
41:DS:63:ASP:OD2	41:DS:63:ASP:C	2.58	0.42
47:DY:6:VAL:C	47:DY:10:LEU:HG	2.39	0.42
48:DZ:55:ARG:HD3	48:DZ:55:ARG:HA	1.50	0.42
50:D2:35:GLU:HB2	50:D2:49:CYS:SG	2.58	0.42
1:AA:179:A:C6	1:AA:180:U:C4	3.08	0.42
1:AA:363:A:N6	1:AA:364:A:C6	2.87	0.42
1:AA:505:G:N3	1:AA:506:G:C8	2.88	0.42
1:AA:604:G:N7	1:AA:605:U:C5	2.87	0.42
1:AA:711:G:N2	1:AA:712:A:C4	2.87	0.42
1:AA:725:G:C4	1:AA:726:C:C5	3.07	0.42
1:AA:778:G:O2'	11:AK:120:ARG:O	2.30	0.42
1:AA:1001:G:H2'	1:AA:1002:G:O4'	2.18	0.42
1:AA:1048:G:OP1	14:AN:4:LYS:HB2	2.19	0.42
1:AA:1085:U:C6	1:AA:1094:G:N1	2.88	0.42
1:AA:1272:G:H2'	1:AA:1273:G:H8	1.84	0.42
1:AA:1328:C:H5''	13:AM:28:ALA:HB3	2.01	0.42
1:AA:1342:C:O3'	9:AI:125:TYR:HB3	2.19	0.42
1:AA:1402:C:C5	1:AA:1403:C:C4	3.07	0.42
2:AB:169:LYS:HE2	2:AB:169:LYS:C	2.39	0.42
6:AF:12:PRO:HB3	6:AF:58:GLY:N	2.34	0.42
7:AG:27:ILE:CD1	7:AG:43:PHE:CD2	3.03	0.42
7:AG:148:ASN:C	7:AG:150:ALA:N	2.72	0.42
9:AI:81:ILE:O	9:AI:85:LEU:HG	2.19	0.42
10:AJ:30:SER:HB2	10:AJ:80:LYS:HG3	2.00	0.42
10:AJ:32:ALA:HB3	10:AJ:76:ASN:CB	2.38	0.42
11:AK:50:TYR:O	11:AK:51:LYS:HG3	2.19	0.42
13:AM:24:GLY:HA2	13:AM:70:LEU:HD13	2.01	0.42
16:AP:64:ALA:O	16:AP:65:GLN:C	2.58	0.42
17:AQ:32:TYR:O	17:AQ:34:LYS:N	2.49	0.42
17:AQ:76:LEU:HD12	17:AQ:77:VAL:H	1.84	0.42
18:AR:74:ARG:HB2	18:AR:81:PHE:CZ	2.55	0.42
19:AS:7:LYS:HE3	19:AS:7:LYS:HB2	1.84	0.42
23:BA:582:G:H2'	23:BA:583:G:C8	2.54	0.42
23:BA:768:G:C4	23:BA:769:G:C8	3.08	0.42
23:BA:828:U:H4'	23:BA:831:G:C2	2.55	0.42
23:BA:991:C:C6	23:BA:1185:C:N3	2.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1225:G:OP1	40:BR:86:GLY:HA3	2.20	0.42
23:BA:1372:U:H2'	23:BA:1373:A:H8	1.85	0.42
23:BA:1434:A:C5	23:BA:1560:G:N2	2.87	0.42
23:BA:1475:G:C2	23:BA:1476:C:C2	3.08	0.42
23:BA:1754:C:P	38:BP:96:ARG:HH12	2.40	0.42
23:BA:1775:U:C2'	23:BA:1776:G:O5'	2.67	0.42
23:BA:2024:G:H2'	23:BA:2025:C:H6	1.85	0.42
23:BA:2304:G:H5'	23:BA:2305:A:OP2	2.19	0.42
23:BA:2342:C:O2	23:BA:2374:C:H4'	2.19	0.42
23:BA:2433:A:H5''	23:BA:2434:A:OP2	2.18	0.42
24:BB:116:G:H8	24:BB:116:G:O5'	2.02	0.42
25:BC:120:GLY:HA2	25:BC:121:PRO:HD3	1.79	0.42
25:BC:123:ALA:HB1	25:BC:124:PRO:HD2	2.02	0.42
25:BC:147:LEU:HA	25:BC:147:LEU:HD12	1.77	0.42
26:BD:52:LEU:O	26:BD:75:VAL:HA	2.19	0.42
28:BF:20:ILE:O	28:BF:24:GLY:HA2	2.19	0.42
30:BH:8:PRO:HD3	30:BH:15:VAL:CG2	2.50	0.42
30:BH:9:LEU:HB3	30:BH:12:LEU:HD23	2.01	0.42
33:BK:32:TYR:CD1	33:BK:32:TYR:N	2.87	0.42
38:BP:50:ILE:HA	38:BP:50:ILE:HD12	1.83	0.42
39:BQ:17:ILE:HA	39:BQ:20:LEU:CD2	2.50	0.42
39:BQ:79:PHE:CE2	39:BQ:106:PHE:CE1	3.07	0.42
40:BR:4:ILE:CD1	40:BR:13:ARG:HA	2.49	0.42
41:BS:5:ALA:HB2	41:BS:54:ALA:HA	2.00	0.42
41:BS:8:ARG:NH1	41:BS:9:TYR:HE2	2.16	0.42
42:BT:8:ILE:HD12	42:BT:8:ILE:N	2.34	0.42
44:BV:72:ARG:HD3	44:BV:72:ARG:HA	1.78	0.42
44:BV:76:LEU:H	44:BV:76:LEU:HD12	1.83	0.42
1:CA:27:G:H2'	1:CA:28:G:O4'	2.19	0.42
1:CA:292:G:N7	1:CA:293:G:H1'	2.34	0.42
1:CA:376:G:C2	1:CA:389:A:C2	3.07	0.42
1:CA:497:U:O2	1:CA:497:U:C2'	2.66	0.42
1:CA:556:C:O2	1:CA:557:G:C8	2.71	0.42
1:CA:585:G:C2'	1:CA:586:C:H5'	2.50	0.42
1:CA:721:G:O4'	1:CA:722:A:C4	2.73	0.42
1:CA:792:A:H4'	1:CA:793:U:O5'	2.19	0.42
1:CA:939:G:N1	1:CA:940:C:N4	2.67	0.42
1:CA:1182:G:H4'	1:CA:1183:A:O5'	2.19	0.42
1:CA:1205:U:H1'	3:CC:195:VAL:CG2	2.50	0.42
3:CC:83:ARG:O	3:CC:86:VAL:HG22	2.19	0.42
4:CD:29:PRO:O	4:CD:30:LYS:HB3	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:104:VAL:CG1	4:CD:146:ILE:HG21	2.50	0.42
5:CE:26:PHE:N	5:CE:26:PHE:CD1	2.87	0.42
7:CG:27:ILE:CD1	7:CG:43:PHE:CD2	3.01	0.42
8:CH:125:ARG:O	8:CH:128:GLY:N	2.51	0.42
11:CK:21:ILE:HD13	11:CK:84:VAL:HG12	2.02	0.42
13:CM:79:LYS:HB2	13:CM:79:LYS:HE3	1.78	0.42
16:CP:69:THR:O	16:CP:69:THR:OG1	2.37	0.42
19:CS:12:ASP:O	19:CS:16:LEU:HD13	2.20	0.42
19:CS:40:ILE:CD1	19:CS:62:ILE:HD11	2.50	0.42
22:CV:6212:U:O2	22:CV:6212:U:H2'	2.18	0.42
23:DA:1049:C:O2	23:DA:1113:U:H4'	2.19	0.42
23:DA:1188:U:H2'	23:DA:1189:A:O5'	2.19	0.42
23:DA:1191:G:OP1	34:DL:35:HIS:CE1	2.72	0.42
23:DA:1210:A:C8	23:DA:1210:A:H5'	2.52	0.42
23:DA:1359:A:N7	23:DA:1372:U:C4	2.87	0.42
23:DA:1504:C:O2'	23:DA:1505:C:H6	2.02	0.42
23:DA:1510:A:C2	23:DA:1511:A:C4	3.08	0.42
23:DA:1517:G:C2	23:DA:1518:C:C2	3.07	0.42
23:DA:1970:A:H4'	23:DA:1971:A:OP1	2.19	0.42
23:DA:2101:G:C6	23:DA:2102:U:C4	3.06	0.42
23:DA:2248:C:C2'	23:DA:2249:U:H5'	2.49	0.42
23:DA:2285:C:H5	51:D3:27:LYS:HZ2	1.68	0.42
23:DA:2393:A:C5'	34:DL:62:LEU:HD12	2.41	0.42
23:DA:2501:C:H6	23:DA:2501:C:H2'	1.68	0.42
23:DA:2727:G:C2	23:DA:2728:U:C5	3.07	0.42
23:DA:2737:G:C4	23:DA:2738:A:C8	3.08	0.42
23:DA:2776:A:C2	23:DA:2778:A:C4	3.07	0.42
24:DB:48:A:H2'	24:DB:49:C:C6	2.54	0.42
24:DB:83:G:N2	24:DB:84:C:H1'	2.33	0.42
25:DC:181:GLU:HA	25:DC:272:ALA:CB	2.49	0.42
27:DE:68:LYS:O	27:DE:68:LYS:HG3	2.19	0.42
29:DG:44:VAL:CG1	29:DG:45:VAL:H	2.24	0.42
30:DH:37:VAL:CG1	30:DH:38:LEU:N	2.83	0.42
30:DH:82:ARG:CA	30:DH:89:TYR:HB2	2.49	0.42
32:DJ:54:ALA:O	32:DJ:57:LEU:N	2.52	0.42
32:DJ:69:VAL:CG1	32:DJ:71:MET:HG3	2.45	0.42
32:DJ:89:LYS:O	32:DJ:91:GLU:N	2.52	0.42
36:DN:36:THR:HG23	36:DN:41:ALA:HB2	2.01	0.42
37:DO:30:ARG:HB3	37:DO:35:ILE:HD12	2.02	0.42
39:DQ:73:GLY:O	39:DQ:74:LEU:HB3	2.19	0.42
39:DQ:101:ARG:H	39:DQ:101:ARG:HG3	1.70	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DS:25:ARG:HB2	41:DS:25:ARG:NH1	2.34	0.42
44:DV:74:VAL:HG22	44:DV:86:VAL:CG1	2.49	0.42
47:DY:53:LEU:O	47:DY:56:GLN:HB2	2.19	0.42
48:DZ:3:ARG:NH1	48:DZ:59:VAL:HG11	2.34	0.42
1:AA:57:G:H2'	1:AA:58:C:O4'	2.20	0.42
1:AA:538:G:O2'	1:AA:539:A:H5'	2.19	0.42
1:AA:619:U:C2	4:AD:135:LEU:HD21	2.54	0.42
1:AA:651:C:O2'	1:AA:652:U:H5'	2.20	0.42
1:AA:711:G:N2	1:AA:712:A:N3	2.67	0.42
1:AA:909:A:H3'	1:AA:910:C:C6	2.55	0.42
1:AA:1015:A:H8	1:AA:1015:A:O5'	2.03	0.42
1:AA:1210:C:H4'	1:AA:1214:C:C5	2.54	0.42
3:AC:18:TRP:O	3:AC:19:GLU:C	2.57	0.42
4:AD:79:PHE:CD1	4:AD:207:TYR:HD1	2.38	0.42
4:AD:196:LEU:C	4:AD:198:VAL:H	2.22	0.42
5:AE:78:HIS:ND1	5:AE:78:HIS:N	2.68	0.42
9:AI:125:TYR:CD1	9:AI:126:SER:N	2.87	0.42
13:AM:24:GLY:CA	13:AM:70:LEU:HD13	2.49	0.42
15:AO:70:LEU:HD11	15:AO:77:ARG:HG3	2.02	0.42
23:BA:442:G:O4'	27:BE:46:ARG:HD3	2.19	0.42
23:BA:581:C:H2'	23:BA:582:G:C8	2.53	0.42
23:BA:646:A:C2'	23:BA:647:G:O5'	2.68	0.42
23:BA:876:C:H2'	23:BA:877:U:H5'	2.01	0.42
23:BA:1504:C:O2'	23:BA:1505:C:C6	2.72	0.42
23:BA:1864:U:OP1	23:BA:2410:G:O2'	2.36	0.42
23:BA:1928:A:H5''	23:BA:1929:G:OP2	2.20	0.42
23:BA:1958:C:C2'	23:BA:1959:G:H5'	2.50	0.42
23:BA:1999:C:OP1	23:BA:2723:C:O2'	2.36	0.42
23:BA:2267:A:H5''	23:BA:2268:A:H5''	1.95	0.42
23:BA:2392:A:OP2	53:B5:31:HIS:HE1	2.03	0.42
23:BA:2396:G:C2	23:BA:2421:G:C2	3.07	0.42
23:BA:2496:C:OP1	35:BM:81:VAL:HG12	2.19	0.42
23:BA:2542:A:O2'	23:BA:2543:G:OP2	2.31	0.42
23:BA:2617:C:O2'	23:BA:2618:G:H5'	2.18	0.42
23:BA:2690:C:OP2	36:BN:14:SER:HB3	2.19	0.42
23:BA:2712:U:HO2'	23:BA:712(B):A:H5''	1.83	0.42
23:BA:2722:G:H2'	23:BA:2723:C:C6	2.55	0.42
23:BA:2755:C:O2'	23:BA:2756:U:H6	2.02	0.42
24:BB:10:C:N4	24:BB:11:C:N4	2.68	0.42
24:BB:13:A:N6	24:BB:70:C:H5'	2.35	0.42
24:BB:73:A:C5	24:BB:104:A:N3	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:223:GLY:HA3	25:BC:231:HIS:ND1	2.34	0.42
26:BD:3:GLY:HA3	26:BD:81:ILE:HG21	2.02	0.42
26:BD:34:VAL:HG11	26:BD:78:LEU:CD1	2.49	0.42
26:BD:64:LYS:HD2	26:BD:64:LYS:HA	1.85	0.42
32:BJ:32:VAL:CG1	32:BJ:33:GLU:N	2.83	0.42
32:BJ:126:VAL:O	32:BJ:127:LYS:C	2.58	0.42
32:BJ:135:LEU:O	32:BJ:136:GLY:C	2.56	0.42
32:BJ:142:ARG:HH11	32:BJ:142:ARG:CG	2.21	0.42
34:BL:70:GLN:O	34:BL:73:GLY:N	2.52	0.42
35:BM:34:LEU:HD11	35:BM:129:THR:HB	2.02	0.42
36:BN:51:LEU:HD22	36:BN:70:LEU:HD11	2.00	0.42
37:BO:30:ARG:HD2	37:BO:30:ARG:C	2.39	0.42
38:BP:51:ARG:CD	38:BP:62:THR:HG23	2.48	0.42
46:BX:46:LEU:HD23	46:BX:46:LEU:O	2.19	0.42
51:B3:14:THR:HG22	51:B3:51:GLU:O	2.20	0.42
51:B3:25:LYS:HD3	53:B5:34:TRP:HZ3	1.83	0.42
52:B4:19:ARG:NH1	52:B4:19:ARG:CB	2.83	0.42
52:B4:30:VAL:O	52:B4:34:ARG:HG2	2.19	0.42
53:B5:60:LEU:O	53:B5:61:LEU:C	2.57	0.42
1:CA:149:A:O5'	1:CA:149:A:H8	2.03	0.42
1:CA:516:U:C5	1:CA:517:G:O6	2.72	0.42
1:CA:538:G:O2'	1:CA:539:A:H5'	2.20	0.42
1:CA:627:G:H2'	1:CA:628:G:H8	1.84	0.42
1:CA:1027:C:H2'	1:CA:102(A):C:O4'	2.19	0.42
1:CA:1232:U:N3	1:CA:1233:G:C8	2.87	0.42
1:CA:1309:G:N2	1:CA:1329:A:H1'	2.32	0.42
2:CB:221:LEU:HD22	2:CB:221:LEU:HA	1.85	0.42
3:CC:48:TYR:O	3:CC:51:GLY:N	2.52	0.42
3:CC:195:VAL:CG1	3:CC:196:LEU:N	2.65	0.42
7:CG:78:ARG:HH11	7:CG:154:TYR:HB3	1.83	0.42
9:CI:112:LYS:HE3	9:CI:116:LYS:O	2.20	0.42
10:CJ:61:GLU:OE2	14:CN:45:ARG:NH1	2.51	0.42
11:CK:26:ASN:O	11:CK:27:ASN:HB2	2.19	0.42
11:CK:40:ILE:HG22	11:CK:75:TYR:CD2	2.54	0.42
11:CK:50:TYR:O	11:CK:51:LYS:HG3	2.20	0.42
16:CP:81:ARG:HD3	16:CP:83:GLU:OE1	2.19	0.42
19:CS:29:ARG:HB2	19:CS:48:THR:H	1.85	0.42
23:DA:11:G:H2'	23:DA:12:U:O4'	2.19	0.42
23:DA:197:A:N6	23:DA:2430:A:H2'	2.34	0.42
23:DA:497:A:C5	23:DA:498:G:C8	3.07	0.42
23:DA:581:C:H2'	23:DA:582:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:723:G:C6	23:DA:724:U:C4	3.07	0.42
23:DA:957:A:N6	23:DA:2459:A:C8	2.88	0.42
23:DA:1223:G:C6	23:DA:1227:G:C6	3.08	0.42
23:DA:1445:C:C2	23:DA:1446:C:H5	2.37	0.42
23:DA:1493:C:N4	23:DA:2210:G:O2'	2.53	0.42
23:DA:2088:G:H2'	23:DA:2089:U:O4'	2.20	0.42
23:DA:2666:C:H5''	23:DA:2667:C:OP2	2.19	0.42
24:DB:10:C:N4	24:DB:11:C:N4	2.67	0.42
24:DB:109:G:H2'	24:DB:110:G:H8	1.85	0.42
26:DD:2:LYS:CE	26:DD:95:ILE:O	2.65	0.42
26:DD:11:MET:CE	26:DD:186:GLY:HA2	2.48	0.42
26:DD:59:VAL:C	26:DD:61:ARG:N	2.73	0.42
27:DE:112:MET:HA	27:DE:115:ALA:HB3	2.01	0.42
30:DH:30:LEU:O	30:DH:31:LEU:C	2.58	0.42
34:DL:112:LEU:HD22	34:DL:127:ALA:CB	2.50	0.42
35:DM:81:VAL:C	35:DM:82:ARG:HG2	2.32	0.42
37:DO:51:ALA:HB3	37:DO:73:LEU:HG	2.02	0.42
42:DT:54:VAL:C	42:DT:55:ASN:HD22	2.21	0.42
43:DU:20:TYR:CD1	43:DU:20:TYR:N	2.87	0.42
44:DV:10:ARG:HH21	44:DV:26:GLY:H	1.65	0.42
1:AA:149:A:H2'	1:AA:150:C:H6	1.84	0.42
1:AA:160:A:H1'	1:AA:344:A:N7	2.35	0.42
1:AA:180:U:C2'	1:AA:181:G:H5'	2.49	0.42
1:AA:303:A:H2'	1:AA:304:U:O4'	2.19	0.42
1:AA:375:U:H2'	1:AA:376:G:H5'	2.01	0.42
1:AA:439:A:C8	1:AA:440:A:C8	3.08	0.42
1:AA:565:U:C5	1:AA:566:G:C5	3.08	0.42
1:AA:587:G:C2	1:AA:755:G:C5	3.07	0.42
1:AA:761:G:C5	1:AA:762:C:C5	3.08	0.42
1:AA:969:A:OP1	10:AJ:55:LYS:NZ	2.52	0.42
1:AA:1104:G:N3	1:AA:1105:A:C8	2.87	0.42
4:AD:100:ARG:NH2	4:AD:118:ARG:NH1	2.63	0.42
4:AD:108:LEU:O	4:AD:110:PHE:CD2	2.72	0.42
4:AD:199:ASN:HD22	4:AD:202:LEU:HG	1.83	0.42
7:AG:126:ASP:HB3	7:AG:131:LYS:O	2.18	0.42
12:AL:118:LYS:C	12:AL:119:TYR:CD1	2.93	0.42
14:AN:7:ILE:HD12	14:AN:8:GLU:N	2.34	0.42
16:AP:28:ARG:HG2	16:AP:28:ARG:NH1	2.11	0.42
23:BA:11:G:H2'	23:BA:12:U:O4'	2.19	0.42
23:BA:17:G:H2'	23:BA:18:C:H6	1.85	0.42
23:BA:94:G:C2	47:BY:47:ASN:ND2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:390:A:N6	34:BL:71:VAL:HG22	2.35	0.42
23:BA:496:G:C1'	41:BS:61:ASN:HD21	2.31	0.42
23:BA:631:A:OP2	53:B5:47:LYS:NZ	2.39	0.42
23:BA:912:C:C2	23:BA:913:U:C5	3.08	0.42
23:BA:1021:A:N6	23:BA:1141:U:C2	2.88	0.42
23:BA:1049:C:O2	23:BA:1113:U:H4'	2.19	0.42
23:BA:1362:C:C6	23:BA:1362:C:H3'	2.54	0.42
23:BA:1465:G:C2	23:BA:1466:G:N9	2.88	0.42
23:BA:1495:A:C4	23:BA:1496:A:C2	3.07	0.42
23:BA:1517:G:C2	23:BA:1518:C:C2	3.07	0.42
23:BA:1833:U:H2'	23:BA:1834:U:H5'	2.01	0.42
23:BA:2017:U:O2	50:B2:10:LYS:HB2	2.20	0.42
23:BA:2293:C:H2'	23:BA:2294:C:C6	2.54	0.42
23:BA:2306:C:C4	23:BA:2311:A:N6	2.87	0.42
23:BA:2465:C:C2	23:BA:2486:G:C2	3.07	0.42
24:BB:42:C:O2	28:BF:93:THR:N	2.47	0.42
25:BC:10:THR:CG2	25:BC:13:ARG:HB3	2.23	0.42
25:BC:24:ILE:HD13	25:BC:84:TYR:HB2	2.00	0.42
26:BD:59:VAL:C	26:BD:61:ARG:N	2.71	0.42
30:BH:37:VAL:CG1	30:BH:38:LEU:N	2.82	0.42
30:BH:123:LEU:HD11	30:BH:145:VAL:OXT	2.19	0.42
39:BQ:22:LYS:HD3	39:BQ:22:LYS:HA	1.56	0.42
40:BR:93:GLU:O	40:BR:94:LEU:HD23	2.20	0.42
41:BS:66:GLU:O	41:BS:68:ARG:N	2.52	0.42
44:BV:9:TYR:CE1	44:BV:61:LEU:HD13	2.54	0.42
44:BV:39:VAL:HG21	44:BV:44:PHE:CD2	2.55	0.42
44:BV:92:SER:HB2	44:BV:94:GLU:OE1	2.19	0.42
49:B1:36:VAL:HB	49:B1:37:PRO:HD2	2.02	0.42
51:B3:11:LEU:HG	51:B3:26:ASN:HB2	2.01	0.42
1:CA:32:A:C6	1:CA:33:A:C6	3.07	0.42
1:CA:41:G:C6	1:CA:42:G:C5	3.07	0.42
1:CA:382:A:H2'	1:CA:383:A:H8	1.84	0.42
1:CA:568:G:O6	12:CL:4:PRO:HD3	2.19	0.42
1:CA:709:G:O2'	1:CA:710:G:H5'	2.20	0.42
1:CA:1022:G:C4	1:CA:1023:G:N7	2.88	0.42
1:CA:1206:G:O4'	3:CC:194:GLY:N	2.53	0.42
4:CD:53:ASP:OD2	5:CE:107:ARG:HD2	2.20	0.42
4:CD:64:LEU:HD11	4:CD:97:LEU:CD1	2.50	0.42
5:CE:76:ILE:HG23	5:CE:78:HIS:H	1.84	0.42
8:CH:68:ARG:HG2	8:CH:69:ARG:N	2.34	0.42
8:CH:107:LEU:HD23	8:CH:107:LEU:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:81:ILE:O	9:CI:85:LEU:HG	2.19	0.42
9:CI:114:TYR:HD1	10:CJ:60:ARG:HG2	1.84	0.42
10:CJ:30:SER:HB2	10:CJ:80:LYS:HG2	2.00	0.42
17:CQ:10:VAL:CG1	17:CQ:53:LEU:HA	2.50	0.42
18:CR:70:ILE:HG23	18:CR:79:LEU:CD1	2.49	0.42
20:CT:22:ARG:O	20:CT:26:ASN:ND2	2.52	0.42
23:DA:138:G:O2'	23:DA:139:G:H5'	2.19	0.42
23:DA:285:C:H2'	23:DA:286:C:C6	2.55	0.42
23:DA:468:G:H5''	27:DE:60:SER:HB2	2.02	0.42
23:DA:676:A:N1	23:DA:802:A:N1	2.67	0.42
23:DA:869:G:H2'	23:DA:870:A:H8	1.85	0.42
23:DA:876:C:C2'	23:DA:877:U:H5'	2.50	0.42
23:DA:963:U:H2'	23:DA:964:C:C6	2.54	0.42
23:DA:988:A:C5	48:DZ:13:ILE:HD12	2.55	0.42
23:DA:1158:C:H2'	23:DA:1159:U:H5'	2.01	0.42
23:DA:1193:G:O2'	23:DA:1194:A:H5'	2.19	0.42
23:DA:1421:G:C2	23:DA:1422:G:C8	3.08	0.42
23:DA:1480:G:C2	23:DA:1481:U:C2	3.07	0.42
23:DA:1665:A:H2'	23:DA:1666:G:O4'	2.20	0.42
23:DA:1769:G:O2'	23:DA:1958:C:OP1	2.26	0.42
23:DA:2293:C:H2'	23:DA:2294:C:C6	2.55	0.42
23:DA:2436:G:C4	23:DA:2437:U:C5	3.07	0.42
24:DB:9:G:C6	24:DB:10:C:C4	3.07	0.42
24:DB:70:C:H2'	24:DB:71:C:C6	2.45	0.42
25:DC:145:VAL:HB	25:DC:155:LEU:HB2	2.01	0.42
25:DC:244:ARG:HB2	25:DC:245:PRO:HD3	2.02	0.42
27:DE:63:LYS:CE	27:DE:67:GLN:HB3	2.49	0.42
29:DG:38:SER:OG	29:DG:39:PRO:HD2	2.19	0.42
34:DL:47:ASP:CB	34:DL:51:PHE:CB	2.98	0.42
36:DN:65:LEU:HD12	36:DN:65:LEU:HA	1.40	0.42
36:DN:99:LYS:HG2	50:D2:43:HIS:O	2.19	0.42
38:DP:105:LEU:HD23	38:DP:105:LEU:HA	1.72	0.42
39:DQ:54:LYS:O	39:DQ:55:ARG:C	2.57	0.42
39:DQ:95:LEU:C	39:DQ:97:ASP:H	2.23	0.42
42:DT:28:PHE:HE1	42:DT:81:VAL:HG22	1.84	0.42
47:DY:50:ILE:O	47:DY:51:ARG:C	2.57	0.42
51:D3:30:THR:CG2	51:D3:31:PRO:HD2	2.48	0.42
52:D4:18:PHE:C	52:D4:18:PHE:CD2	2.93	0.42
1:AA:407:G:H2'	1:AA:408:A:H8	1.84	0.42
1:AA:1048:G:C2	1:AA:1210:C:N3	2.87	0.42
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:74:LYS:HD3	2:AB:76:GLN:OE1	2.20	0.42
2:AB:212:GLN:HG3	2:AB:235:SER:HB2	2.01	0.42
4:AD:29:PRO:O	4:AD:30:LYS:HB3	2.19	0.42
5:AE:41:VAL:O	5:AE:66:MET:HA	2.20	0.42
5:AE:135:THR:O	5:AE:138:ALA:HB3	2.19	0.42
8:AH:31:PHE:CE2	8:AH:35:ILE:HD11	2.55	0.42
11:AK:38:ASN:HA	11:AK:39:PRO:HD2	1.77	0.42
12:AL:74:HIS:HB2	12:AL:76:LEU:HD23	2.01	0.42
13:AM:79:LYS:HE3	13:AM:79:LYS:HB2	1.79	0.42
17:AQ:29:HIS:CE1	17:AQ:32:TYR:HD1	2.37	0.42
17:AQ:51:TYR:CE1	17:AQ:73:VAL:HG11	2.55	0.42
23:BA:35:G:H1'	23:BA:454:A:N3	2.35	0.42
23:BA:259:G:C2	23:BA:260:G:C8	3.07	0.42
23:BA:265:A:H1'	23:BA:266:G:O4'	2.19	0.42
23:BA:549:G:H2'	23:BA:550:G:O4'	2.20	0.42
23:BA:860:U:HO2'	23:BA:861:A:H5'	1.80	0.42
23:BA:952:G:C6	23:BA:966:G:C6	3.08	0.42
23:BA:987:G:C6	23:BA:988:A:C4	3.08	0.42
23:BA:998:C:H2'	23:BA:999:U:O4'	2.19	0.42
23:BA:1006:C:O2'	23:BA:1007:C:H5'	2.19	0.42
23:BA:1021:A:H3'	23:BA:1022:G:H5''	2.01	0.42
23:BA:1127:A:H2'	23:BA:1128:A:C5'	2.49	0.42
23:BA:114(B):A:N3	23:BA:1144:G:C8	2.87	0.42
23:BA:1278:A:O3'	36:BN:34:ILE:HD12	2.19	0.42
23:BA:1442:G:C2	23:BA:1443:G:C4	3.08	0.42
23:BA:1542:G:H4'	23:BA:1543:A:O4'	2.19	0.42
23:BA:1592:C:H2'	23:BA:1593:G:C8	2.53	0.42
23:BA:1799:G:O2'	25:BC:181:GLU:OE2	2.37	0.42
23:BA:2587:A:H8	23:BA:2587:A:O5'	2.02	0.42
23:BA:2687:U:N3	23:BA:2688:U:C6	2.86	0.42
25:BC:4:LYS:NZ	25:BC:4:LYS:CB	2.82	0.42
25:BC:143:HIS:CD2	25:BC:143:HIS:C	2.92	0.42
26:BD:132:HIS:NE2	26:BD:135:HIS:NE2	2.66	0.42
28:BF:60:LEU:HA	28:BF:63:ILE:CG1	2.49	0.42
28:BF:106:LEU:O	28:BF:111:LEU:HG	2.20	0.42
32:BJ:36:TRP:HB2	32:BJ:156:GLN:HB2	2.01	0.42
32:BJ:61:HIS:CE1	32:BJ:73:ASP:OD2	2.73	0.42
35:BM:43:THR:HA	35:BM:94:VAL:HG12	2.02	0.42
35:BM:112:GLU:H	35:BM:112:GLU:CD	2.23	0.42
36:BN:79:LEU:HD23	36:BN:83:ILE:HG13	2.01	0.42
38:BP:112:ARG:HE	38:BP:112:ARG:HB2	1.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BQ:95:LEU:O	39:BQ:98:LEU:HG	2.20	0.42
40:BR:47:VAL:HG12	40:BR:49:THR:O	2.20	0.42
43:BU:71:LYS:NZ	43:BU:71:LYS:CB	2.83	0.42
43:BU:96:ILE:HD11	43:BU:99:CYS:SG	2.60	0.42
44:BV:46:LYS:O	44:BV:50:GLN:OE1	2.38	0.42
45:BW:25:ARG:HD2	45:BW:29:GLN:OE1	2.19	0.42
45:BW:70:GLN:HG2	45:BW:72:ARG:HG2	2.01	0.42
1:CA:166:G:O2'	1:CA:167:G:H5'	2.20	0.42
1:CA:179:A:C5	1:CA:180:U:C4	3.07	0.42
1:CA:189:U:C4	17:CQ:72:ARG:NH2	2.88	0.42
1:CA:398:C:O5'	1:CA:398:C:H6	2.03	0.42
1:CA:625:G:C6	1:CA:626:U:C4	3.08	0.42
1:CA:649:G:N3	1:CA:650:G:C8	2.88	0.42
1:CA:731:G:OP1	1:CA:766:A:H1'	2.19	0.42
1:CA:763:G:C4	1:CA:764:C:C5	3.08	0.42
1:CA:928:G:C2	1:CA:1390:U:C2	3.06	0.42
1:CA:939:G:C2	1:CA:940:C:C4	3.08	0.42
1:CA:1378:C:H5	1:CA:1379:G:C8	2.38	0.42
1:CA:1443:G:N2	38:DP:119:LYS:CB	2.83	0.42
1:CA:1504:G:H4'	1:CA:1505:G:O4'	2.19	0.42
4:CD:49:ARG:HD2	4:CD:49:ARG:HA	1.76	0.42
6:CF:33:TYR:HE1	6:CF:75:LEU:HA	1.78	0.42
7:CG:27:ILE:CD1	7:CG:43:PHE:HD2	2.30	0.42
9:CI:10:ARG:O	9:CI:11:LYS:HB2	2.20	0.42
11:CK:99:GLN:HA	11:CK:99:GLN:OE1	2.20	0.42
11:CK:121:PRO:O	11:CK:122:LYS:O	2.37	0.42
16:CP:71:ARG:C	16:CP:73:LEU:H	2.23	0.42
17:CQ:29:HIS:HA	17:CQ:30:PRO:HD2	1.68	0.42
22:CV:6193:U:H2'	22:CV:6194:C:H5'	2.02	0.42
23:DA:176:G:H2'	23:DA:177:G:H5'	1.99	0.42
23:DA:234:C:H2'	23:DA:235:U:C6	2.55	0.42
23:DA:270(I):C:O2	23:DA:270(I):C:C2'	2.65	0.42
23:DA:374:A:H3'	23:DA:375:C:C6	2.55	0.42
23:DA:595:C:H2'	23:DA:596:G:O4'	2.19	0.42
23:DA:861:A:H2'	23:DA:862:G:O4'	2.19	0.42
23:DA:1190:G:H2'	23:DA:1191:G:C8	2.55	0.42
23:DA:1338:G:H2'	23:DA:1339:G:H5'	2.00	0.42
23:DA:1360:A:C5'	23:DA:1361:G:OP2	2.68	0.42
23:DA:1431:U:H2'	23:DA:1432:C:C6	2.55	0.42
23:DA:1854:A:H62	23:DA:1888:G:H8	1.68	0.42
23:DA:1919:A:H5''	23:DA:1920:C:OP2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1984:G:H2'	23:DA:1985:G:O5'	2.20	0.42
23:DA:2035:G:H4'	23:DA:2036:C:OP2	2.19	0.42
23:DA:2682:U:O4	23:DA:2728:U:H1'	2.20	0.42
23:DA:2713:A:C3'	23:DA:2714:G:C5'	2.98	0.42
23:DA:2752:C:C2'	23:DA:2753:A:H5'	2.49	0.42
23:DA:2854:G:C4	23:DA:2864:G:N2	2.88	0.42
25:DC:143:HIS:CD2	25:DC:144:ALA:CB	2.99	0.42
30:DH:35:LEU:N	30:DH:35:LEU:HD23	2.33	0.42
32:DJ:58:ARG:HB2	32:DJ:60:LYS:HB2	2.01	0.42
34:DL:36:LYS:HB3	34:DL:36:LYS:HE3	1.81	0.42
34:DL:62:LEU:HD21	53:D5:25:MET:O	2.18	0.42
36:DN:59:ASP:OD2	36:DN:59:ASP:N	2.52	0.42
37:DO:11:LYS:CG	37:DO:12:PHE:N	2.69	0.42
39:DQ:79:PHE:HE2	39:DQ:106:PHE:CE1	2.36	0.42
40:DR:58:VAL:HB	40:DR:98:GLU:HB2	2.01	0.42
41:DS:75:TYR:CD2	41:DS:104:THR:HB	2.52	0.42
42:DT:50:LYS:N	42:DT:87:GLN:HE22	1.92	0.42
43:DU:81:LYS:HD2	43:DU:96:ILE:HG13	2.01	0.42
52:D4:21:ARG:HB3	52:D4:31:LEU:HD22	2.02	0.42
1:AA:15:G:C5	1:AA:16:A:N7	2.88	0.42
1:AA:245:C:O2	1:AA:283:C:N3	2.53	0.42
1:AA:312:C:H2'	1:AA:313:A:C8	2.55	0.42
1:AA:433:C:C5	1:AA:434:U:H5	2.38	0.42
1:AA:504:C:O2	1:AA:504:C:H2'	2.19	0.42
1:AA:565:U:C4	1:AA:566:G:C5	3.08	0.42
1:AA:685:G:O2'	1:AA:686:U:H5'	2.20	0.42
1:AA:759:A:H2'	1:AA:760:G:H5'	2.02	0.42
1:AA:1384:C:C2	1:AA:1385:G:C8	3.07	0.42
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.85	0.42
3:AC:29:TYR:HE1	3:AC:33:LEU:HD22	1.85	0.42
4:AD:104:VAL:CG1	4:AD:146:ILE:HG21	2.50	0.42
6:AF:50:TYR:O	6:AF:50:TYR:CD2	2.73	0.42
11:AK:92:GLU:CD	11:AK:93:GLN:N	2.73	0.42
12:AL:123:LYS:HA	12:AL:124:PRO:HD3	1.93	0.42
16:AP:81:ARG:HD3	16:AP:83:GLU:OE1	2.20	0.42
17:AQ:59:ILE:HG23	17:AQ:71:PHE:HD1	1.82	0.42
23:BA:262:A:C2'	23:BA:263:C:H5'	2.48	0.42
23:BA:459:U:H4'	52:B4:40:TRP:CH2	2.55	0.42
23:BA:547:A:C5	23:BA:548:A:C6	3.08	0.42
23:BA:587:C:O2	34:BL:33:ARG:HD3	2.19	0.42
23:BA:692:C:C2'	23:BA:693:C:H5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:869:G:H2'	23:BA:870:A:H8	1.84	0.42
23:BA:911:A:C2'	35:BM:9:TYR:OH	2.65	0.42
23:BA:1359:A:N7	23:BA:1372:U:C4	2.87	0.42
23:BA:1547:C:H2'	23:BA:1548:C:C6	2.52	0.42
23:BA:1625:C:H2'	23:BA:1626:G:O4'	2.19	0.42
23:BA:1716:U:O2'	23:BA:1717:G:H5'	2.20	0.42
23:BA:1856:G:C2	23:BA:1887:C:C2	3.08	0.42
23:BA:1862:G:C2	23:BA:1863:G:C5	3.08	0.42
23:BA:2322:A:H3'	23:BA:2323:G:C8	2.48	0.42
23:BA:2361:A:H5'	53:B5:27:THR:OG1	2.20	0.42
23:BA:2583:G:H3'	23:BA:2584:U:C5	2.55	0.42
23:BA:2692:C:H2'	23:BA:2693:A:O4'	2.20	0.42
23:BA:2885:C:H2'	23:BA:2886:G:O5'	2.19	0.42
24:BB:73:A:C8	24:BB:74:U:C5	3.08	0.42
25:BC:33:LEU:N	25:BC:33:LEU:CD2	2.81	0.42
27:BE:9:ILE:HD13	27:BE:9:ILE:O	2.19	0.42
27:BE:167:ALA:O	27:BE:168:ARG:C	2.58	0.42
29:BG:144:VAL:CA	29:BG:147:ASN:HB2	2.48	0.42
29:BG:169:VAL:O	29:BG:170:ARG:HB2	2.19	0.42
31:BI:15:GLU:HG3	31:BI:66:LEU:HG	2.02	0.42
35:BM:8:LYS:CG	35:BM:9:TYR:N	2.78	0.42
35:BM:21:THR:C	35:BM:23:GLY:H	2.22	0.42
35:BM:81:VAL:O	35:BM:81:VAL:HG12	2.19	0.42
40:BR:22:VAL:CG1	40:BR:23:GLU:H	2.33	0.42
44:BV:97:GLU:O	44:BV:98:MET:HB3	2.19	0.42
45:BW:66:VAL:O	45:BW:81:VAL:HA	2.19	0.42
48:BZ:26:LEU:HD13	48:BZ:47:VAL:HG22	2.02	0.42
48:BZ:49:LYS:HA	48:BZ:49:LYS:HD3	1.43	0.42
1:CA:44:G:OP2	16:CP:12:LYS:HE3	2.20	0.42
1:CA:448:A:OP2	1:CA:485:G:N2	2.48	0.42
1:CA:498:A:C4'	1:CA:500:G:OP1	2.67	0.42
1:CA:505:G:O2'	1:CA:506:G:H5'	2.20	0.42
1:CA:518:C:C6	1:CA:530:G:N3	2.88	0.42
1:CA:1226:C:O2'	13:CM:111:LYS:NZ	2.53	0.42
1:CA:1262:C:C2	1:CA:1263:C:C5	3.08	0.42
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.85	0.42
4:CD:108:LEU:CB	4:CD:110:PHE:HE2	2.29	0.42
6:CF:3:ARG:CG	6:CF:66:GLU:HG2	2.45	0.42
6:CF:12:PRO:HB3	6:CF:58:GLY:N	2.35	0.42
7:CG:23:VAL:CG1	7:CG:43:PHE:HE2	2.33	0.42
11:CK:110:ASP:HB3	18:CR:85:LEU:HB3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:70:LEU:HD11	15:CO:77:ARG:HG3	2.01	0.42
17:CQ:70:ARG:HD2	17:CQ:70:ARG:N	2.35	0.42
23:DA:255:A:O2'	23:DA:384:U:OP1	2.34	0.42
23:DA:481:G:C2	23:DA:507:A:C4	3.08	0.42
23:DA:498:G:C6	23:DA:499:U:C4	3.08	0.42
23:DA:729:G:H5'	23:DA:730:C:H5''	2.01	0.42
23:DA:1434:A:C5	23:DA:1560:G:N2	2.87	0.42
23:DA:1638:C:H4'	23:DA:2710:C:O2	2.20	0.42
23:DA:1813:G:O2'	25:DC:50:THR:HG21	2.19	0.42
23:DA:1946:U:C2	23:DA:1947:C:C5	3.08	0.42
23:DA:2101:G:N2	23:DA:2189:U:C2	2.88	0.42
23:DA:2188:C:H2'	23:DA:2189:U:C1'	2.50	0.42
23:DA:2476:A:N1	23:DA:2477:C:C5	2.87	0.42
23:DA:2636:U:H2'	23:DA:2637:U:C6	2.55	0.42
23:DA:2662:A:C5	23:DA:2663:G:H1'	2.55	0.42
24:DB:77:U:O2'	24:DB:78:A:H5'	2.20	0.42
25:DC:14:ARG:HG2	25:DC:15:PHE:CD1	2.55	0.42
26:DD:1:MET:HA	26:DD:1:MET:CE	2.50	0.42
27:DE:34:TRP:CE3	27:DE:35:GLU:HG2	2.54	0.42
28:DF:173:LEU:HB2	28:DF:180:PHE:HZ	1.84	0.42
29:DG:121:ILE:O	29:DG:122:THR:HG23	2.20	0.42
30:DH:61:ARG:HG2	30:DH:61:ARG:O	2.19	0.42
35:DM:8:LYS:CG	35:DM:9:TYR:N	2.81	0.42
38:DP:107:ASP:H	38:DP:110:ILE:HG13	1.83	0.42
40:DR:99:ILE:N	40:DR:99:ILE:HD13	2.34	0.42
44:DV:136:PHE:O	44:DV:137:ILE:HD12	2.19	0.42
44:DV:137:ILE:N	44:DV:137:ILE:CD1	2.83	0.42
46:DX:48:LYS:HZ3	46:DX:50:ARG:NH1	2.17	0.42
49:D1:48:ILE:H	49:D1:48:ILE:HD12	1.85	0.42
1:AA:5:U:O2'	1:AA:6:G:C4	2.73	0.42
1:AA:10:A:O2'	1:AA:11:G:H5'	2.20	0.42
1:AA:358:U:O2	1:AA:358:U:H2'	2.20	0.42
1:AA:465:A:O2'	1:AA:466:G:H5''	2.20	0.42
1:AA:821:G:C6	1:AA:822:C:N4	2.88	0.42
1:AA:827:U:H2'	1:AA:870:U:O4	2.19	0.42
1:AA:897:C:H5''	1:AA:898:G:OP2	2.20	0.42
1:AA:946:A:N1	1:AA:1236:A:C2	2.87	0.42
1:AA:1072:G:C5	1:AA:1073:U:C4	3.07	0.42
1:AA:1320:C:O2	19:AS:72:GLY:C	2.57	0.42
1:AA:1378:C:C5	1:AA:1379:G:N9	2.87	0.42
3:AC:182:ILE:HA	3:AC:202:ILE:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:189:PRO:CB	4:AD:194:LEU:HD21	2.50	0.42
9:AI:86:VAL:CG2	9:AI:93:ARG:HB2	2.50	0.42
10:AJ:58:ASP:C	10:AJ:60:ARG:H	2.23	0.42
19:AS:52:TYR:HA	19:AS:56:GLN:O	2.20	0.42
22:AV:6192:G:H2'	22:AV:6193:U:H6	1.82	0.42
23:BA:171:G:N3	23:BA:171:G:H2'	2.34	0.42
23:BA:231:C:C5	23:BA:232:G:C6	3.08	0.42
23:BA:519:U:H5''	41:BS:25:ARG:HH21	1.85	0.42
23:BA:528:A:H2'	23:BA:529:A:O5'	2.20	0.42
23:BA:546:C:N4	23:BA:547:A:C6	2.88	0.42
23:BA:1203:G:O6	23:BA:1204:A:N6	2.53	0.42
23:BA:1468:C:H2'	23:BA:1469:A:H8	1.84	0.42
23:BA:1478:G:C2	23:BA:1479:G:N7	2.88	0.42
23:BA:1512:G:C5	23:BA:1513:C:C4	3.08	0.42
23:BA:1581:G:H8	23:BA:1581:G:O5'	2.03	0.42
23:BA:1799:G:C8	25:BC:181:GLU:CD	2.93	0.42
23:BA:1835:G:C4	23:BA:1836:C:C5	3.08	0.42
23:BA:1901:A:N3	23:BA:1901:A:C2'	2.81	0.42
23:BA:2320:A:C5	23:BA:2333:A:C5	3.08	0.42
23:BA:2405:G:O2'	23:BA:2411:A:N6	2.52	0.42
23:BA:2433:A:H5''	23:BA:2434:A:OP1	2.20	0.42
23:BA:2641:G:OP1	32:BJ:97:ARG:CD	2.67	0.42
23:BA:2846:G:N7	23:BA:2847:U:C5	2.88	0.42
24:BB:37:C:C5	24:BB:38:C:C4	3.08	0.42
25:BC:215:LEU:HD23	25:BC:215:LEU:HA	1.61	0.42
26:BD:12:THR:O	26:BD:23:VAL:O	2.38	0.42
28:BF:5:LEU:O	28:BF:8:LYS:HB3	2.20	0.42
29:BG:92:ILE:HG22	29:BG:93:GLY:H	1.80	0.42
31:BI:4:LYS:HG3	31:BI:7:VAL:HB	2.02	0.42
32:BJ:77:VAL:HG12	32:BJ:78:VAL:N	2.35	0.42
34:BL:126:VAL:HG23	34:BL:145:PRO:CG	2.50	0.42
35:BM:39:PRO:O	35:BM:40:ALA:HB2	2.20	0.42
35:BM:141:GLN:OXT	44:BV:53:ILE:O	2.37	0.42
36:BN:34:ILE:HD13	36:BN:34:ILE:HA	1.84	0.42
38:BP:57:PHE:C	38:BP:59:THR:H	2.22	0.42
38:BP:73:GLU:OE2	38:BP:103:ARG:NE	2.51	0.42
40:BR:13:ARG:HG3	40:BR:13:ARG:NH1	2.35	0.42
40:BR:58:VAL:HB	40:BR:98:GLU:HB2	2.01	0.42
40:BR:77:ALA:O	40:BR:79:VAL:HB	2.20	0.42
41:BS:40:ASN:C	41:BS:41:LYS:HG2	2.40	0.42
46:BX:68:PRO:O	46:BX:69:LYS:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BX:92:LYS:HA	46:BX:92:LYS:HD2	1.92	0.42
53:B5:4:MET:H	53:B5:4:MET:HG2	1.61	0.42
1:CA:9:G:O2'	1:CA:10:A:H5'	2.19	0.42
1:CA:9:G:H5''	5:CE:122:GLU:OE1	2.20	0.42
1:CA:29:G:C4	1:CA:30:U:H5	2.38	0.42
1:CA:255:G:O3'	17:CQ:17:LYS:HD3	2.19	0.42
1:CA:357:G:H2'	1:CA:358:U:H6	1.84	0.42
1:CA:406:G:H5''	4:CD:5:ILE:CG2	2.50	0.42
1:CA:503:C:N3	1:CA:504:C:C5	2.87	0.42
1:CA:986:A:C4	1:CA:1220:G:N2	2.88	0.42
1:CA:1092:A:C8	1:CA:1093:A:N7	2.88	0.42
1:CA:1324:A:O2'	1:CA:136(A):C:H5''	2.19	0.42
1:CA:1371:G:C2	1:CA:1372:U:C2	3.08	0.42
2:CB:112:VAL:O	2:CB:115:LEU:HB3	2.20	0.42
3:CC:73:PRO:C	3:CC:75:VAL:H	2.23	0.42
3:CC:120:VAL:HG21	3:CC:137:ALA:CB	2.50	0.42
3:CC:186:PHE:CG	3:CC:187:ALA:N	2.88	0.42
5:CE:50:GLU:HB3	5:CE:53:LEU:HD11	2.01	0.42
8:CH:50:ARG:H	8:CH:50:ARG:HD3	1.85	0.42
9:CI:15:ALA:HA	9:CI:65:VAL:HA	2.02	0.42
9:CI:86:VAL:CG2	9:CI:93:ARG:HB2	2.49	0.42
11:CK:124:LYS:HB3	11:CK:125:PHE:CD1	2.55	0.42
12:CL:43:THR:HA	12:CL:44:PRO:HD3	1.79	0.42
19:CS:46:GLY:HA2	19:CS:61:TYR:OH	2.20	0.42
22:CV:6183:G:C6	22:CV:6184:A:C5	3.08	0.42
23:DA:9:U:C2	23:DA:2629:A:N6	2.88	0.42
23:DA:41:C:H2'	23:DA:43:G:O4'	2.20	0.42
23:DA:239:U:O2'	23:DA:240:G:H5'	2.20	0.42
23:DA:256:A:H2'	23:DA:257:A:H5'	1.96	0.42
23:DA:270(Q):C:O2'	23:DA:270(R):C:O5'	2.38	0.42
23:DA:417:C:H6	23:DA:417:C:O5'	2.03	0.42
23:DA:933:A:H2'	23:DA:934:G:O5'	2.20	0.42
23:DA:1253:A:C3'	23:DA:1254:A:H5'	2.50	0.42
23:DA:1709:U:N3	23:DA:1750:G:C2	2.88	0.42
23:DA:1743:G:H2'	23:DA:1746:G:H8	1.85	0.42
23:DA:1930:G:HO2'	23:DA:1931:U:P	2.43	0.42
23:DA:2350:C:H5''	53:D5:42:ARG:HD3	2.00	0.42
23:DA:2419:U:OP2	53:D5:41:ILE:CD1	2.67	0.42
24:DB:38:C:H2'	24:DB:39:A:H8	1.84	0.42
24:DB:42:C:O2	28:DF:93:THR:N	2.48	0.42
26:DD:188:VAL:HG23	26:DD:189:PRO:HD2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:5:LEU:O	28:DF:8:LYS:HB3	2.20	0.42
30:DH:86:THR:C	30:DH:87:LYS:HG3	2.39	0.42
34:DL:86:LYS:HB3	34:DL:117:GLU:O	2.19	0.42
34:DL:100:LEU:HD22	34:DL:100:LEU:N	2.34	0.42
34:DL:112:LEU:HD23	34:DL:112:LEU:C	2.40	0.42
35:DM:55:VAL:O	35:DM:58:PHE:N	2.53	0.42
37:DO:30:ARG:C	37:DO:30:ARG:HD2	2.40	0.42
37:DO:84:GLN:O	37:DO:86:ALA:N	2.53	0.42
38:DP:88:ILE:CG1	38:DP:89:VAL:N	2.82	0.42
41:DS:75:TYR:C	41:DS:75:TYR:HD2	2.23	0.42
44:DV:24:LEU:HD12	44:DV:85:HIS:HA	2.00	0.42
44:DV:151:HIS:HA	44:DV:170:THR:HA	2.02	0.42
46:DX:23:LYS:HB3	46:DX:37:ILE:HG12	2.01	0.42
47:DY:28:LYS:HD3	47:DY:28:LYS:HA	1.78	0.42
1:AA:165:C:O2'	1:AA:166:G:H5'	2.20	0.42
1:AA:376:G:H2'	1:AA:377:G:O5'	2.19	0.42
1:AA:445:G:C5	1:AA:446:G:N7	2.88	0.42
1:AA:450:G:N7	1:AA:481:G:C6	2.88	0.42
1:AA:658:G:H5''	15:AO:31:LEU:HD21	2.00	0.42
1:AA:763:G:C4	1:AA:764:C:C5	3.07	0.42
1:AA:1369:C:O2'	1:AA:1370:G:O4'	2.36	0.42
1:AA:1371:G:N1	1:AA:1372:U:N3	2.68	0.42
2:AB:143:GLU:O	2:AB:147:LYS:HB2	2.19	0.42
2:AB:204:ASN:CG	2:AB:205:ASP:H	2.23	0.42
5:AE:126:ARG:HH11	5:AE:126:ARG:HG3	1.75	0.42
8:AH:25:ASP:O	8:AH:26:VAL:HG12	2.20	0.42
8:AH:39:LEU:HD13	8:AH:39:LEU:HA	1.72	0.42
8:AH:119:LEU:HG	8:AH:119:LEU:H	1.55	0.42
8:AH:119:LEU:CD1	8:AH:124:ALA:HA	2.50	0.42
9:AI:16:ARG:O	9:AI:63:ILE:HG23	2.20	0.42
9:AI:117:HIS:C	9:AI:118:LYS:HG3	2.40	0.42
13:AM:23:TYR:CE1	13:AM:71:ARG:HD3	2.53	0.42
13:AM:106:ASN:HB2	13:AM:107:ALA:H	1.56	0.42
16:AP:9:PHE:HB2	16:AP:16:HIS:O	2.20	0.42
18:AR:70:ILE:HG23	18:AR:79:LEU:CD1	2.49	0.42
20:AT:73:HIS:O	20:AT:74:LYS:C	2.59	0.42
22:AV:6188:G:O2'	22:AV:6189:G:H5'	2.20	0.42
23:BA:132:G:C2'	23:BA:133:C:H5'	2.50	0.42
23:BA:139:G:N3	23:BA:141(A):A:N1	2.68	0.42
23:BA:390:A:C6	34:BL:71:VAL:CG2	3.03	0.42
23:BA:449:A:C2'	23:BA:450:G:H5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:563:G:C4	23:BA:2018:G:C2	3.08	0.42
23:BA:1022:G:C5	23:BA:1140:C:N4	2.88	0.42
23:BA:1461:G:C2'	23:BA:1462:C:H5'	2.49	0.42
23:BA:1467:C:O2'	23:BA:1468:C:H5'	2.20	0.42
23:BA:1787:A:H2'	23:BA:1787:A:N3	2.34	0.42
23:BA:1835:G:N3	23:BA:1835:G:H2'	2.35	0.42
23:BA:1975:G:H2'	23:BA:1976:U:C6	2.55	0.42
23:BA:1983:C:O2'	23:BA:1984:G:H5'	2.20	0.42
23:BA:2183:C:O2	23:BA:2183:C:C2'	2.67	0.42
23:BA:2258:C:H4'	23:BA:2259:G:OP2	2.19	0.42
23:BA:2350:C:H5''	53:B5:42:ARG:HD3	2.00	0.42
23:BA:2845:G:C2	23:BA:2846:G:C5	3.07	0.42
23:BA:2846:G:C8	23:BA:2847:U:C5	3.08	0.42
24:BB:93:C:C2	24:BB:94:C:C5	3.07	0.42
25:BC:214:TRP:C	25:BC:216:GLY:H	2.21	0.42
29:BG:77:LYS:HA	29:BG:80:SER:CB	2.47	0.42
32:BJ:36:TRP:HB2	32:BJ:156:GLN:CB	2.50	0.42
32:BJ:160:LYS:C	32:BJ:161:LEU:HD23	2.40	0.42
35:BM:110:THR:OG1	35:BM:113:GLN:HB2	2.20	0.42
40:BR:34:GLU:O	40:BR:36:PRO:CD	2.63	0.42
41:BS:69:LEU:HA	41:BS:108:GLY:O	2.19	0.42
43:BU:68:HIS:ND1	43:BU:70:SER:HB3	2.35	0.42
43:BU:81:LYS:HD3	43:BU:96:ILE:HG13	2.01	0.42
47:BY:28:LYS:HD3	47:BY:28:LYS:HA	1.84	0.42
47:BY:32:LEU:HD23	47:BY:32:LEU:HA	1.71	0.42
48:BZ:43:ILE:O	48:BZ:47:VAL:HG23	2.20	0.42
48:BZ:48:GLU:O	48:BZ:51:ALA:HB2	2.19	0.42
53:B5:22:VAL:CG2	53:B5:54:GLU:HG3	2.50	0.42
1:CA:751:U:O2	1:CA:751:U:H2'	2.19	0.42
1:CA:825:G:H21	8:CH:11:THR:HG21	1.84	0.42
1:CA:936:C:H2'	1:CA:937:A:O4'	2.19	0.42
1:CA:1076:C:H2'	1:CA:1077:G:H5'	2.02	0.42
1:CA:1166:G:N2	1:CA:1170:A:OP2	2.52	0.42
1:CA:1340:A:H2'	1:CA:1341:U:O4'	2.20	0.42
1:CA:1419:G:C6	1:CA:1420:C:C4	3.08	0.42
2:CB:37:ASN:HD22	2:CB:37:ASN:HA	1.68	0.42
2:CB:142:LEU:HG	2:CB:146:GLN:HG3	2.01	0.42
3:CC:163:ALA:O	3:CC:164:ARG:HB2	2.19	0.42
4:CD:58:LEU:HD13	4:CD:59:ARG:N	2.34	0.42
5:CE:14:ARG:CZ	5:CE:129:ILE:HD11	2.49	0.42
15:CO:17:ARG:CZ	15:CO:17:ARG:HB3	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:11:VAL:HG22	19:CS:12:ASP:N	2.34	0.42
23:DA:278:A:O2'	23:DA:279:C:C1'	2.68	0.42
23:DA:317:G:C6	23:DA:318:C:C4	3.07	0.42
23:DA:663:G:O3'	34:DL:21:ARG:NH1	2.52	0.42
23:DA:817:C:O2'	23:DA:839:U:H5''	2.20	0.42
23:DA:1127:A:O2'	23:DA:1128:A:H5''	2.20	0.42
23:DA:1203:G:H3'	23:DA:1204:A:H5''	2.01	0.42
23:DA:1208:C:C4	23:DA:1209:G:C8	3.08	0.42
23:DA:1268:A:C2	23:DA:2013:A:C4	3.08	0.42
23:DA:1336:A:H2'	23:DA:1337:G:H8	1.84	0.42
23:DA:1345:C:C2'	23:DA:1346:G:H5'	2.50	0.42
23:DA:1653:G:O6	36:DN:11:ASN:HB2	2.20	0.42
23:DA:1717:G:C5	23:DA:1743:G:N1	2.88	0.42
23:DA:2300:G:C6	23:DA:2301:C:C4	3.08	0.42
23:DA:2705:A:H2'	23:DA:2706:G:O4'	2.18	0.42
23:DA:2770:G:H5''	23:DA:2771:C:OP2	2.19	0.42
24:DB:111:U:H2'	24:DB:112:G:H8	1.84	0.42
25:DC:142:VAL:CG2	25:DC:192:THR:O	2.68	0.42
25:DC:161:THR:O	25:DC:162:SER:HB2	2.19	0.42
26:DD:103:ASP:OD1	26:DD:169:ASN:N	2.51	0.42
26:DD:116:VAL:CG1	26:DD:122:PHE:CD2	3.03	0.42
29:DG:95:ARG:HH12	29:DG:97:ARG:HE	1.67	0.42
33:DK:13:ASN:C	33:DK:15:GLY:N	2.73	0.42
34:DL:47:ASP:HB3	34:DL:51:PHE:CB	2.50	0.42
34:DL:122:PRO:HA	34:DL:141:ALA:O	2.19	0.42
35:DM:84:GLY:HA3	45:DW:10:THR:HG23	2.01	0.42
38:DP:47:GLY:C	38:DP:63:VAL:HG12	2.40	0.42
38:DP:82:LEU:HD23	38:DP:82:LEU:N	2.34	0.42
44:DV:103:ARG:HG3	44:DV:136:PHE:CD1	2.55	0.42
51:D3:11:LEU:HG	51:D3:26:ASN:HB2	2.02	0.42
51:D3:14:THR:HG22	51:D3:51:GLU:O	2.20	0.42
1:AA:67:C:H2'	1:AA:68:G:C8	2.55	0.41
1:AA:313:A:H2'	1:AA:314:C:C6	2.55	0.41
1:AA:542:G:H2'	1:AA:543:C:H6	1.85	0.41
1:AA:953:G:O6	1:AA:1228:C:N4	2.53	0.41
1:AA:1067:A:N3	1:AA:1068:G:N9	2.68	0.41
1:AA:1151:A:OP1	10:AJ:41:PRO:HA	2.19	0.41
1:AA:1229:A:H2'	1:AA:1230:C:H6	1.82	0.41
2:AB:74:LYS:HZ2	2:AB:74:LYS:HB2	1.83	0.41
2:AB:154:LEU:C	2:AB:154:LEU:HD22	2.39	0.41
3:AC:122:GLU:OE2	3:AC:126:ARG:NH2	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:8:VAL:HG11	4:AD:115:ARG:NH1	2.34	0.41
5:AE:79:GLU:CD	5:AE:79:GLU:N	2.73	0.41
6:AF:3:ARG:CG	6:AF:66:GLU:HG2	2.47	0.41
8:AH:103:VAL:HB	8:AH:108:GLY:C	2.40	0.41
9:AI:30:GLY:O	9:AI:31:GLN:O	2.37	0.41
9:AI:111:ARG:O	9:AI:113:LYS:HE3	2.20	0.41
12:AL:7:ASN:O	12:AL:11:ARG:HG3	2.20	0.41
14:AN:4:LYS:HD2	14:AN:7:ILE:HD11	2.03	0.41
18:AR:84:LYS:H	18:AR:84:LYS:HG2	1.33	0.41
20:AT:32:ALA:O	20:AT:33:ILE:C	2.58	0.41
23:BA:137(A):C:O2	23:BA:137(A):C:H2'	2.19	0.41
23:BA:526:A:O2'	23:BA:2043:C:O2	2.34	0.41
23:BA:540:G:C4	23:BA:541:C:C5	3.08	0.41
23:BA:559:G:H22	39:BQ:49:HIS:CD2	2.38	0.41
23:BA:577:G:O6	23:BA:578:A:N6	2.53	0.41
23:BA:637:A:OP1	34:BL:133:SER:CB	2.68	0.41
23:BA:662:G:H5'	34:BL:18:ARG:HA	2.01	0.41
23:BA:855:G:C6	23:BA:856:C:C4	3.08	0.41
23:BA:1164:G:C5	23:BA:1165:U:C4	3.08	0.41
23:BA:1170:G:N2	23:BA:1180:C:N3	2.68	0.41
23:BA:1188:U:C4'	40:BR:79:VAL:HG22	2.50	0.41
23:BA:1317:A:C6	23:BA:1318:C:N4	2.88	0.41
23:BA:1444:G:C2	23:BA:1548:C:C2	3.08	0.41
23:BA:1496:A:C8	23:BA:1498:C:C4	3.08	0.41
23:BA:1526:G:H2'	23:BA:1527:G:C8	2.55	0.41
23:BA:1635:G:H2'	23:BA:1636:C:C6	2.55	0.41
23:BA:1773:A:N7	23:BA:1829:A:H1'	2.35	0.41
23:BA:1983:C:C2'	23:BA:1984:G:H5'	2.50	0.41
23:BA:2063:C:O2	23:BA:2450:A:N1	2.53	0.41
23:BA:2305:A:H1'	28:BF:135:LEU:O	2.20	0.41
23:BA:2357:U:OP1	45:BW:20:ARG:HD3	2.20	0.41
23:BA:2415:G:H2'	23:BA:2416:C:C6	2.54	0.41
23:BA:2436:G:C4	23:BA:2437:U:C6	3.08	0.41
23:BA:2663:G:C5	23:BA:2664:G:N7	2.88	0.41
23:BA:2749:A:H4'	29:BG:62:LYS:HB3	2.01	0.41
23:BA:2842:G:H2'	23:BA:2843:G:O4'	2.20	0.41
23:BA:2884:U:H2'	23:BA:2885:C:H5'	2.02	0.41
25:BC:133:LEU:HG	25:BC:189:CYS:O	2.19	0.41
25:BC:242:ARG:HH11	25:BC:242:ARG:H	1.67	0.41
26:BD:49:LEU:N	26:BD:49:LEU:HD13	2.35	0.41
26:BD:144:ARG:HB3	26:BD:145:LYS:H	1.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:161:THR:CG2	28:BF:172:LEU:HD23	2.48	0.41
32:BJ:30:LYS:O	32:BJ:32:VAL:HG23	2.20	0.41
33:BK:6:THR:O	33:BK:20:MET:HA	2.20	0.41
33:BK:122:LEU:HA	33:BK:122:LEU:HD23	1.80	0.41
34:BL:77:ARG:O	34:BL:77:ARG:HG3	2.20	0.41
34:BL:86:LYS:HB3	34:BL:117:GLU:O	2.20	0.41
35:BM:6:ARG:HE	35:BM:6:ARG:HB2	1.60	0.41
39:BQ:20:LEU:HD22	39:BQ:20:LEU:H	1.85	0.41
39:BQ:27:LEU:O	39:BQ:27:LEU:HD23	2.20	0.41
41:BS:9:TYR:N	41:BS:102:HIS:CD2	2.83	0.41
42:BT:40:LYS:C	42:BT:42:ALA:N	2.73	0.41
43:BU:43:ASN:OD1	43:BU:64:GLU:HA	2.19	0.41
43:BU:81:LYS:CE	43:BU:97:ARG:HD3	2.50	0.41
44:BV:163:LEU:H	44:BV:163:LEU:HD23	1.84	0.41
45:BW:32:ARG:HA	45:BW:64:ASP:HB3	2.02	0.41
47:BY:25:VAL:HG21	47:BY:61:LEU:HD13	2.02	0.41
52:B4:10:ARG:HG3	52:B4:14:LYS:HD2	2.02	0.41
53:B5:23:VAL:HG11	53:B5:47:LYS:HD3	2.01	0.41
1:CA:105:G:C5	1:CA:106:C:C5	3.08	0.41
1:CA:216:G:C6	1:CA:217:C:N4	2.87	0.41
1:CA:256:U:C2	1:CA:257:G:C8	3.08	0.41
1:CA:269:C:H2'	1:CA:270:A:H8	1.85	0.41
1:CA:312:C:H2'	1:CA:313:A:C8	2.54	0.41
1:CA:350:G:C2'	1:CA:351:G:H5'	2.49	0.41
1:CA:363:A:N6	1:CA:364:A:C6	2.88	0.41
1:CA:448:A:C4	1:CA:487:A:C2	3.08	0.41
1:CA:555:C:C2	1:CA:556:C:C5	3.08	0.41
1:CA:922:G:H4'	5:CE:20:GLN:HA	2.01	0.41
1:CA:978:A:H5''	1:CA:979:C:OP2	2.20	0.41
1:CA:1070:U:O2	1:CA:1106:G:C2	2.73	0.41
1:CA:1262:C:OP2	21:CU:25:LYS:HD3	2.20	0.41
1:CA:1384:C:H2'	1:CA:1385:G:H8	1.84	0.41
1:CA:1399:C:C4	1:CA:1502:A:C2	3.08	0.41
1:CA:1446:A:O2'	1:CA:1447:G:C8	2.73	0.41
1:CA:1455:G:H2'	1:CA:1459:C:C6	2.55	0.41
2:CB:111:ARG:NH1	2:CB:111:ARG:HA	2.35	0.41
2:CB:182:ILE:HG22	2:CB:182:ILE:O	2.18	0.41
4:CD:3:ARG:O	4:CD:5:ILE:N	2.52	0.41
5:CE:20:GLN:O	5:CE:23:GLY:O	2.38	0.41
7:CG:51:GLN:HA	7:CG:54:THR:O	2.20	0.41
8:CH:68:ARG:HG2	8:CH:69:ARG:H	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:44:PRO:HG2	12:CL:50:ALA:N	2.35	0.41
15:CO:3:ILE:HG21	15:CO:34:LEU:HD23	2.01	0.41
15:CO:50:HIS:O	15:CO:51:HIS:C	2.57	0.41
17:CQ:85:VAL:O	17:CQ:86:GLU:C	2.55	0.41
23:DA:270(Q):C:O2'	23:DA:270(R):C:P	2.78	0.41
23:DA:465:G:C2	23:DA:466:A:C2	3.08	0.41
23:DA:503:A:C4	23:DA:506:G:N7	2.88	0.41
23:DA:623:G:H2'	23:DA:624:C:C6	2.56	0.41
23:DA:797:C:O2'	23:DA:798:G:H5'	2.20	0.41
23:DA:865:C:H4'	23:DA:866:A:OP1	2.19	0.41
23:DA:909:A:H2'	23:DA:912:C:H5	1.85	0.41
23:DA:1121:C:H2'	23:DA:1122:G:O4'	2.19	0.41
23:DA:1128:A:N7	23:DA:2489:G:O2'	2.51	0.41
23:DA:1131:G:N2	23:DA:1132:A:N3	2.68	0.41
23:DA:1377:G:H8	23:DA:1377:G:O5'	2.03	0.41
23:DA:1519:G:O2'	23:DA:1520:U:H5'	2.19	0.41
23:DA:1545:A:O2'	23:DA:1546:A:H5'	2.20	0.41
23:DA:2330:G:H1'	45:DW:41:ARG:CB	2.50	0.41
23:DA:2369:A:H2'	23:DA:2370:G:C8	2.55	0.41
23:DA:2376:A:H2'	23:DA:2377:A:O4'	2.20	0.41
23:DA:2415:G:H4'	34:DL:66:GLY:HA3	1.99	0.41
23:DA:2415:G:O2'	23:DA:2416:C:H5'	2.20	0.41
23:DA:2579:C:O4'	26:DD:134:ILE:HG12	2.19	0.41
23:DA:2631:G:C6	23:DA:2632:A:C5	3.08	0.41
23:DA:2727:G:C6	23:DA:2728:U:C5	3.08	0.41
23:DA:2737:G:C6	23:DA:2738:A:N7	2.88	0.41
24:DB:95:U:N3	24:DB:96:G:N7	2.67	0.41
25:DC:67:PHE:HB3	25:DC:153:ALA:H	1.85	0.41
27:DE:101:LEU:O	27:DE:106:ARG:HD3	2.19	0.41
27:DE:204:ASN:C	27:DE:206:ILE:N	2.73	0.41
28:DF:67:LYS:H	28:DF:67:LYS:HG3	1.70	0.41
28:DF:173:LEU:HD22	28:DF:178:PHE:CE1	2.55	0.41
30:DH:92:VAL:HG22	30:DH:93:THR:O	2.20	0.41
30:DH:114:LEU:HA	30:DH:130:TYR:CD1	2.55	0.41
31:DI:4:LYS:HG3	31:DI:7:VAL:HB	2.01	0.41
32:DJ:130:LEU:HD23	32:DJ:130:LEU:HA	1.85	0.41
32:DJ:140:PHE:O	32:DJ:140:PHE:CD2	2.73	0.41
34:DL:111:ARG:HG3	34:DL:128:HIS:HB2	2.02	0.41
36:DN:32:GLY:C	36:DN:33:ARG:HD2	2.39	0.41
36:DN:99:LYS:HA	36:DN:112:ALA:HB2	2.00	0.41
37:DO:23:ARG:HB3	37:DO:24:LEU:HG	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DP:16:ARG:HD3	38:DP:16:ARG:HA	1.91	0.41
38:DP:84:GLN:HG3	38:DP:85:LYS:CG	2.50	0.41
40:DR:15:GLU:HB3	40:DR:16:PRO:HD2	2.02	0.41
40:DR:77:ALA:C	40:DR:79:VAL:N	2.72	0.41
42:DT:40:LYS:C	42:DT:42:ALA:H	2.23	0.41
43:DU:12:THR:HG22	43:DU:13:VAL:N	2.35	0.41
43:DU:50:ARG:CD	43:DU:51:VAL:H	2.27	0.41
50:D2:40:LYS:CE	50:D2:46:CYS:HB3	2.50	0.41
1:AA:99:C:O2'	1:AA:101:A:H8	2.03	0.41
1:AA:451:A:H61	1:AA:481:G:C5'	2.33	0.41
1:AA:769:G:H4'	1:AA:1513:A:H4'	2.01	0.41
1:AA:833:U:C2	1:AA:834:C:C5	3.08	0.41
1:AA:956:U:O2'	1:AA:957:U:H5'	2.21	0.41
1:AA:1107:C:N4	1:AA:1108:G:N7	2.68	0.41
1:AA:1145:C:H1'	1:AA:1147:C:N4	2.35	0.41
1:AA:1350:A:C6	1:AA:1351:U:N3	2.88	0.41
2:AB:28:PHE:O	2:AB:32:ILE:HD13	2.20	0.41
2:AB:31:TYR:HE1	2:AB:200:ILE:HG21	1.85	0.41
2:AB:203:GLY:O	2:AB:204:ASN:O	2.38	0.41
5:AE:27:ARG:C	5:AE:28:PHE:CD1	2.94	0.41
5:AE:75:THR:HG23	5:AE:76:ILE:H	1.85	0.41
6:AF:61:LEU:HD12	6:AF:61:LEU:N	2.35	0.41
7:AG:57:GLU:O	7:AG:61:VAL:HG23	2.20	0.41
9:AI:46:ALA:HB2	9:AI:74:ILE:HG22	2.02	0.41
10:AJ:16:LEU:HD21	10:AJ:94:VAL:HG13	2.02	0.41
11:AK:38:ASN:O	11:AK:40:ILE:HD13	2.20	0.41
11:AK:87:THR:HA	11:AK:91:ARG:HH21	1.84	0.41
12:AL:50:ALA:O	12:AL:51:LEU:C	2.57	0.41
12:AL:61:SER:O	12:AL:63:TYR:N	2.52	0.41
15:AO:18:PHE:O	15:AO:21:ASP:HB3	2.20	0.41
16:AP:58:TYR:HE2	16:AP:59:TRP:CZ3	2.39	0.41
18:AR:44:LEU:O	18:AR:45:SER:O	2.38	0.41
23:BA:286:C:H6	23:BA:286:C:O5'	2.02	0.41
23:BA:528:A:C2	23:BA:2043:C:O5'	2.73	0.41
23:BA:781:A:C2	23:BA:1776:G:N3	2.85	0.41
23:BA:822:U:O2'	23:BA:823:G:H5'	2.20	0.41
23:BA:993:G:C6	23:BA:994:C:C5	3.08	0.41
23:BA:1348:G:H1	23:BA:1598:C:H42	1.67	0.41
23:BA:1690:A:H5''	23:BA:1691:C:OP2	2.20	0.41
23:BA:2287:A:HO2'	23:BA:2288:A:C5'	2.32	0.41
23:BA:2712:U:O2'	23:BA:712(B):A:C5'	2.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2746:U:H2'	23:BA:2747:G:C5'	2.50	0.41
24:BB:95:U:N3	24:BB:96:G:N7	2.68	0.41
24:BB:95:U:C2	24:BB:96:G:N7	2.88	0.41
24:BB:111:U:H2'	24:BB:112:G:H8	1.84	0.41
25:BC:28:GLU:HB3	25:BC:29:PRO:CD	2.46	0.41
25:BC:35:LYS:HA	25:BC:64:ILE:HD12	2.01	0.41
25:BC:70:TRP:CD1	25:BC:70:TRP:O	2.72	0.41
25:BC:137:PRO:O	25:BC:138:VAL:C	2.58	0.41
25:BC:140:THR:O	25:BC:165:ILE:HD12	2.19	0.41
26:BD:96:PHE:O	26:BD:175:VAL:HG11	2.19	0.41
27:BE:107:LYS:O	27:BE:108:LYS:C	2.59	0.41
27:BE:173:VAL:CG1	27:BE:174:VAL:N	2.82	0.41
28:BF:72:ARG:HG2	28:BF:87:PRO:O	2.20	0.41
29:BG:142:GLY:O	29:BG:145:ALA:HB3	2.20	0.41
30:BH:3:VAL:HG12	30:BH:37:VAL:O	2.20	0.41
30:BH:14:ASP:H	30:BH:17:GLN:NE2	2.17	0.41
30:BH:92:VAL:HG22	30:BH:93:THR:O	2.20	0.41
32:BJ:62:ARG:HA	32:BJ:63:PRO:HD3	1.89	0.41
33:BK:88:ASN:O	33:BK:91:LEU:HA	2.20	0.41
36:BN:21:TYR:OH	36:BN:43:GLU:HG2	2.21	0.41
36:BN:55:ALA:CA	36:BN:80:PHE:CE1	2.94	0.41
36:BN:65:LEU:HD12	36:BN:65:LEU:HA	1.38	0.41
37:BO:30:ARG:HB3	37:BO:35:ILE:HD12	2.02	0.41
37:BO:66:ALA:HA	37:BO:69:VAL:HG13	2.01	0.41
37:BO:69:VAL:HA	37:BO:72:ALA:HB2	2.02	0.41
38:BP:19:LEU:H	38:BP:19:LEU:HG	1.29	0.41
38:BP:41:ARG:NH1	38:BP:41:ARG:HB2	2.35	0.41
41:BS:29:LEU:O	41:BS:29:LEU:HG	2.19	0.41
41:BS:35:ILE:O	41:BS:36:LEU:C	2.58	0.41
44:BV:30:ASN:CG	44:BV:90:VAL:HB	2.41	0.41
1:CA:20:U:H2'	1:CA:21:G:O4'	2.20	0.41
1:CA:59:A:H2'	1:CA:59:A:N3	2.34	0.41
1:CA:61:G:OP2	20:CT:10:LEU:HD13	2.19	0.41
1:CA:363:A:H5''	12:CL:33:ARG:HB2	2.02	0.41
1:CA:520:A:N1	1:CA:536:C:H1'	2.35	0.41
1:CA:612:C:OP1	4:CD:84:LYS:HE3	2.19	0.41
1:CA:618:C:H5''	1:CA:619:U:H5''	2.02	0.41
1:CA:625:G:O2'	1:CA:626:U:H5'	2.20	0.41
1:CA:680:C:H2'	1:CA:681:C:H6	1.85	0.41
1:CA:987:G:H2'	1:CA:988:G:C8	2.54	0.41
1:CA:1195:C:H5''	1:CA:1196:U:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1205:U:H3'	1:CA:1205:U:H6	1.84	0.41
1:CA:1250:A:H4'	9:CI:68:GLY:N	2.34	0.41
6:CF:47:ARG:HB3	6:CF:47:ARG:CZ	2.49	0.41
8:CH:112:LEU:HA	8:CH:134:ILE:H	1.85	0.41
12:CL:32:ARG:O	12:CL:84:ILE:CD1	2.64	0.41
12:CL:69:ILE:HA	12:CL:70:PRO:HD3	1.69	0.41
14:CN:4:LYS:HD2	14:CN:7:ILE:HD11	2.02	0.41
15:CO:17:ARG:HH11	15:CO:17:ARG:HG3	1.85	0.41
18:CR:64:ARG:O	18:CR:66:LEU:N	2.53	0.41
19:CS:53:ASN:C	19:CS:55:LYS:H	2.24	0.41
20:CT:60:GLU:OE1	20:CT:85:MET:HE1	2.20	0.41
23:DA:529:A:N6	23:DA:2041:U:C2	2.89	0.41
23:DA:581:C:H2'	23:DA:582:G:H8	1.85	0.41
23:DA:1173:G:H3'	23:DA:1174:A:H5''	2.02	0.41
23:DA:1173:G:OP2	23:DA:1173:G:C8	2.74	0.41
23:DA:1285:G:O6	23:DA:1329:U:C2	2.73	0.41
23:DA:1408:C:C2	23:DA:1595:G:N2	2.88	0.41
23:DA:1496:A:C8	23:DA:1498:C:C4	3.08	0.41
23:DA:1568:G:H5''	25:DC:61:LEU:HD22	2.01	0.41
23:DA:1686:C:C4	23:DA:1687:G:C5	3.08	0.41
23:DA:1786:A:C4'	23:DA:1787:A:OP2	2.67	0.41
23:DA:2293:C:H5''	37:DO:89:ARG:HH12	1.85	0.41
23:DA:2331:G:H8	23:DA:2331:G:O5'	2.03	0.41
23:DA:2634:G:H5'	26:DD:61:ARG:NH1	2.35	0.41
23:DA:2741:A:H2'	23:DA:2742:C:O4'	2.21	0.41
25:DC:52:ARG:CB	25:DC:53:PHE:CD2	3.02	0.41
25:DC:215:LEU:HA	25:DC:215:LEU:HD23	1.55	0.41
30:DH:77:LEU:O	30:DH:79:ILE:HG12	2.20	0.41
32:DJ:55:THR:O	32:DJ:55:THR:HG22	2.20	0.41
32:DJ:139:LEU:O	32:DJ:140:PHE:C	2.58	0.41
37:DO:13:ARG:HG3	37:DO:14:VAL:H	1.85	0.41
37:DO:25:ARG:NH2	37:DO:42:ASP:OD2	2.53	0.41
38:DP:57:PHE:C	38:DP:59:THR:H	2.22	0.41
40:DR:4:ILE:HD13	40:DR:13:ARG:HA	2.02	0.41
43:DU:37:VAL:HG13	43:DU:69:ALA:HA	2.01	0.41
43:DU:91:GLU:HB3	43:DU:92:ASN:H	1.67	0.41
45:DW:70:GLN:HG2	45:DW:72:ARG:CG	2.51	0.41
52:D4:11:LYS:HD2	52:D4:15:THR:HG23	1.99	0.41
1:AA:112:G:C2	1:AA:113:G:C8	3.08	0.41
1:AA:376:G:N3	1:AA:377:G:C8	2.88	0.41
1:AA:510:A:H5''	1:AA:511:C:OP2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:542:G:P	4:AD:10:ARG:NH2	2.93	0.41
1:AA:1410:G:H2'	1:AA:1411:C:H6	1.84	0.41
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.55	0.41
5:AE:36:ASP:OD2	5:AE:38:GLN:N	2.53	0.41
6:AF:11:ASN:HA	6:AF:12:PRO:HD2	1.94	0.41
7:AG:21:VAL:HG23	7:AG:22:LEU:N	2.35	0.41
7:AG:46:ALA:HB2	7:AG:117:ALA:O	2.19	0.41
7:AG:148:ASN:C	7:AG:150:ALA:H	2.24	0.41
8:AH:97:VAL:C	8:AH:99:GLU:N	2.73	0.41
11:AK:103:LEU:HA	11:AK:103:LEU:HD12	1.79	0.41
16:AP:68:ASP:C	16:AP:70:ALA:H	2.22	0.41
17:AQ:16:GLN:HE21	17:AQ:16:GLN:HB3	1.76	0.41
22:AV:6193:U:C4	22:AV:6194:C:C4	3.07	0.41
23:BA:30:G:C5	23:BA:31:C:C4	3.08	0.41
23:BA:46:C:N4	23:BA:179:G:H1	2.18	0.41
23:BA:75:G:H4'	47:BY:55:ARG:NH2	2.35	0.41
23:BA:278:A:O2'	23:BA:279:C:O4'	2.35	0.41
23:BA:468:G:H5''	27:BE:60:SER:HB2	2.00	0.41
23:BA:693:C:C2'	23:BA:694:U:O5'	2.69	0.41
23:BA:814:C:H5	34:BL:27:HIS:CD2	2.39	0.41
23:BA:815:C:H2'	23:BA:816:C:C6	2.56	0.41
23:BA:122(A):C:H2'	23:BA:1222:C:H6	1.85	0.41
23:BA:1309:G:H8	23:BA:1309:G:O5'	2.03	0.41
23:BA:1510:A:C2	23:BA:1511:A:C4	3.08	0.41
23:BA:1541:U:O2	23:BA:1541:U:C2'	2.66	0.41
23:BA:1686:C:N4	23:BA:1687:G:C6	2.88	0.41
23:BA:1824:G:C2'	23:BA:1825:A:H5'	2.51	0.41
23:BA:1826:G:P	25:BC:233:HIS:HD2	2.43	0.41
23:BA:2358:G:C5	23:BA:2359:C:C5	3.08	0.41
23:BA:2477:C:HO2'	23:BA:2478:A:P	2.40	0.41
23:BA:2521:C:O2'	23:BA:2564:A:N3	2.47	0.41
23:BA:2523:G:H2'	23:BA:2524:G:H5'	2.02	0.41
23:BA:2711:A:OP1	23:BA:712(B):A:P	2.79	0.41
23:BA:2717:G:C6	23:BA:2718:G:N7	2.89	0.41
23:BA:2737:G:C5	23:BA:2738:A:N7	2.88	0.41
23:BA:2743:C:H2'	23:BA:2744:G:O4'	2.20	0.41
23:BA:2816:C:O2	23:BA:2883:A:O2'	2.38	0.41
23:BA:2864:G:C2	23:BA:2865:U:O2	2.73	0.41
25:BC:245:PRO:HA	25:BC:246:PRO:HD3	1.89	0.41
26:BD:3:GLY:C	26:BD:81:ILE:HD13	2.40	0.41
26:BD:103:ASP:OD2	26:BD:168:MET:HE2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:188:VAL:HG23	26:BD:189:PRO:HD2	2.02	0.41
29:BG:73:ALA:O	29:BG:76:VAL:HB	2.20	0.41
30:BH:76:THR:HG22	30:BH:141:LYS:CB	2.49	0.41
30:BH:86:THR:C	30:BH:87:LYS:HG3	2.40	0.41
30:BH:95:LYS:O	30:BH:99:GLU:N	2.46	0.41
30:BH:136:VAL:HG12	30:BH:136:VAL:O	2.20	0.41
32:BJ:143:LEU:HD13	32:BJ:144:LYS:N	2.35	0.41
32:BJ:156:GLN:O	32:BJ:157:ARG:CB	2.68	0.41
36:BN:3:HIS:C	36:BN:5:LYS:N	2.72	0.41
38:BP:77:PRO:HB2	38:BP:80:SER:HB2	2.01	0.41
41:BS:36:LEU:CD1	41:BS:47:VAL:HB	2.49	0.41
43:BU:2:ARG:CG	43:BU:3:VAL:N	2.83	0.41
44:BV:179:ASP:O	44:BV:182:LYS:HB2	2.20	0.41
1:CA:101:A:H2'	1:CA:102:G:H8	1.84	0.41
1:CA:180:U:C2'	1:CA:181:G:H5'	2.50	0.41
1:CA:375:U:H4'	16:CP:17:TYR:CE2	2.54	0.41
1:CA:475:G:C2	1:CA:476:G:C4	3.09	0.41
1:CA:587:G:H4'	8:CH:3:THR:O	2.21	0.41
1:CA:589:C:H42	1:CA:650:G:H1	1.69	0.41
1:CA:604:G:H2'	1:CA:605:U:H5'	2.02	0.41
1:CA:636:U:H5'	17:CQ:2:PRO:HG3	2.02	0.41
1:CA:764:C:C2	1:CA:765:G:C8	3.08	0.41
1:CA:874:G:C6	1:CA:875:C:C4	3.08	0.41
1:CA:946:A:N1	1:CA:1236:A:C2	2.88	0.41
1:CA:1349:A:H2'	1:CA:1350:A:C8	2.55	0.41
1:CA:1357:A:C5	1:CA:1358:U:C4	3.09	0.41
1:CA:1479:C:H2'	1:CA:1480:G:H8	1.86	0.41
2:CB:86:GLU:C	2:CB:88:ALA:H	2.24	0.41
2:CB:212:GLN:HG3	2:CB:235:SER:HB2	2.01	0.41
3:CC:36:ASP:HA	3:CC:39:ILE:HD12	2.02	0.41
5:CE:41:VAL:O	5:CE:66:MET:HA	2.19	0.41
5:CE:144:THR:HG23	5:CE:147:ASP:OD1	2.21	0.41
6:CF:99:ALA:HB3	18:CR:29:PHE:CE1	2.56	0.41
9:CI:117:HIS:C	9:CI:118:LYS:HG3	2.40	0.41
18:CR:64:ARG:C	18:CR:66:LEU:N	2.73	0.41
21:CU:22:ARG:HA	21:CU:23:PRO:HD3	1.82	0.41
23:DA:189:G:H1'	23:DA:207:A:N6	2.35	0.41
23:DA:379:G:C5	23:DA:380:U:C6	3.07	0.41
23:DA:528:A:C2'	23:DA:529:A:O5'	2.69	0.41
23:DA:781:A:C2	23:DA:1776:G:H2'	2.56	0.41
23:DA:781:A:C2	23:DA:1776:G:N3	2.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:987:G:O6	23:DA:988:A:C2	2.74	0.41
23:DA:1019:U:H5'	23:DA:1121:C:H1'	2.03	0.41
23:DA:1335:U:H2'	23:DA:1336:A:O5'	2.19	0.41
23:DA:1403:C:H5''	23:DA:1471:A:O4'	2.20	0.41
23:DA:1833:U:N3	23:DA:1834:U:C5	2.88	0.41
23:DA:1889:A:H2'	23:DA:1890:A:O4'	2.20	0.41
23:DA:1997:G:O2'	23:DA:1998:G:H5'	2.21	0.41
23:DA:2287:A:H62	23:DA:2344:U:H3	1.68	0.41
23:DA:2415:G:H2'	23:DA:2416:C:C6	2.56	0.41
23:DA:2676:C:C2'	23:DA:2677:G:H5'	2.50	0.41
23:DA:2684:U:O2'	23:DA:2685:G:H5'	2.20	0.41
23:DA:2768:C:N4	23:DA:2769:C:C4	2.89	0.41
23:DA:2880:C:O3'	36:DN:90:ARG:NH1	2.53	0.41
27:DE:65:TRP:CZ3	27:DE:73:ALA:O	2.72	0.41
27:DE:184:TYR:O	27:DE:188:ARG:HB2	2.19	0.41
28:DF:110:ALA:O	28:DF:140:ILE:HD12	2.19	0.41
28:DF:126:ASP:O	28:DF:128:ARG:N	2.46	0.41
30:DH:95:LYS:O	30:DH:99:GLU:HB2	2.21	0.41
32:DJ:90:LEU:HA	32:DJ:110:LEU:HB3	2.03	0.41
32:DJ:120:ARG:O	32:DJ:121:VAL:C	2.58	0.41
33:DK:18:LYS:HG3	33:DK:45:GLU:OE2	2.20	0.41
35:DM:47:ILE:HD11	35:DM:68:ILE:CD1	2.51	0.41
42:DT:41:ASN:N	42:DT:41:ASN:HD22	2.18	0.41
44:DV:56:VAL:O	44:DV:57:ILE:HD12	2.19	0.41
46:DX:13:ILE:HG23	46:DX:14:VAL:N	2.33	0.41
47:DY:49:LYS:H	47:DY:49:LYS:CD	2.33	0.41
53:D5:37:SER:OG	53:D5:40:GLU:HG2	2.20	0.41
1:AA:269:C:H2'	1:AA:270:A:H8	1.84	0.41
1:AA:277:C:OP1	17:AQ:41:LYS:HE3	2.20	0.41
1:AA:334:C:C2'	1:AA:335:C:H5'	2.51	0.41
1:AA:374:A:C6	1:AA:375:U:C4	3.08	0.41
1:AA:386:C:H2'	1:AA:387:U:C4'	2.51	0.41
1:AA:977:A:H2'	1:AA:978:A:H5''	2.02	0.41
1:AA:986:A:C2	1:AA:1220:G:C2	3.08	0.41
1:AA:993:G:H4'	1:AA:994:A:OP2	2.19	0.41
1:AA:1089:G:C6	1:AA:1090:U:C5	3.09	0.41
1:AA:1122:U:H2'	1:AA:1123:A:C8	2.56	0.41
1:AA:1202:G:H4'	14:AN:29:ARG:HD3	2.03	0.41
1:AA:1433:A:N1	1:AA:1434:A:C2	2.89	0.41
1:AA:1505:G:H4'	1:AA:1506:U:H5''	2.02	0.41
4:AD:6:GLY:O	4:AD:8:VAL:HG12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:108:LEU:CB	4:AD:110:PHE:HE2	2.23	0.41
5:AE:76:ILE:CG1	5:AE:77:PRO:HD2	2.41	0.41
7:AG:107:ALA:CB	7:AG:134:ALA:HB2	2.38	0.41
8:AH:21:LYS:O	8:AH:65:TYR:OH	2.29	0.41
8:AH:107:LEU:HD23	8:AH:107:LEU:H	1.84	0.41
9:AI:28:VAL:CG2	9:AI:63:ILE:HB	2.46	0.41
9:AI:112:LYS:HE3	9:AI:116:LYS:O	2.21	0.41
10:AJ:16:LEU:O	10:AJ:70:ARG:HD2	2.19	0.41
10:AJ:16:LEU:HD22	10:AJ:94:VAL:HG22	2.03	0.41
13:AM:15:VAL:HG13	13:AM:43:THR:O	2.20	0.41
23:BA:14:A:H8	23:BA:14:A:O5'	2.03	0.41
23:BA:83:G:N2	23:BA:84:A:H62	2.19	0.41
23:BA:394:A:O2'	23:BA:395:U:H5'	2.20	0.41
23:BA:686:G:O6	52:B4:12:ARG:NH1	2.51	0.41
23:BA:947:G:N2	23:BA:971:C:C2	2.89	0.41
23:BA:1121:C:H2'	23:BA:1122:G:O4'	2.20	0.41
23:BA:1356:G:C6	23:BA:1357:U:C4	3.07	0.41
23:BA:1366:A:H2'	23:BA:1367:A:O4'	2.20	0.41
23:BA:1798:U:C5'	25:BC:259:THR:O	2.69	0.41
23:BA:2025:C:N3	23:BA:2026:C:C4	2.89	0.41
23:BA:2194:G:C5	23:BA:2195:C:C5	3.08	0.41
23:BA:2562:U:H2'	23:BA:2563:U:C5'	2.50	0.41
23:BA:2663:G:C6	23:BA:2664:G:C5	3.08	0.41
23:BA:2769:C:H2'	23:BA:2769:C:O2	2.20	0.41
25:BC:98:VAL:HG23	25:BC:99:ASP:N	2.35	0.41
26:BD:5:LEU:CB	26:BD:51:PHE:HD2	2.17	0.41
26:BD:55:ASN:C	26:BD:57:LYS:N	2.74	0.41
28:BF:84:LYS:O	28:BF:87:PRO:HD3	2.21	0.41
32:BJ:90:LEU:HA	32:BJ:110:LEU:HB3	2.01	0.41
33:BK:3:GLN:CG	33:BK:4:PRO:HD2	2.50	0.41
33:BK:114:ILE:O	33:BK:118:ALA:N	2.52	0.41
35:BM:84:GLY:HA3	45:BW:10:THR:HG23	2.02	0.41
37:BO:34:HIS:HB3	37:BO:36:TYR:CE1	2.55	0.41
39:BQ:60:LEU:HD13	39:BQ:60:LEU:C	2.41	0.41
41:BS:71:VAL:HA	41:BS:107:LEU:HD12	2.03	0.41
42:BT:27:THR:HA	42:BT:80:ILE:HA	2.02	0.41
44:BV:77:ASP:HB2	44:BV:84:GLU:CG	2.50	0.41
45:BW:81:VAL:O	45:BW:83:PRO:HD3	2.20	0.41
46:BX:31:GLY:O	46:BX:32:LYS:CB	2.63	0.41
47:BY:61:LEU:HD12	47:BY:61:LEU:HA	1.49	0.41
1:CA:367:U:C6	1:CA:394:G:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:448:A:C2	1:CA:487:A:C2	3.08	0.41
1:CA:506:G:H2'	1:CA:507:C:H6	1.86	0.41
1:CA:523:A:N1	12:CL:91:ASP:HB2	2.35	0.41
1:CA:542:G:C4	1:CA:543:C:C5	3.09	0.41
1:CA:542:G:H2'	1:CA:543:C:H6	1.85	0.41
1:CA:909:A:H3'	1:CA:910:C:C6	2.55	0.41
1:CA:914:A:OP2	1:CA:914:A:O4'	2.37	0.41
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.20	0.41
1:CA:1237:C:C5	1:CA:1336:C:C4	3.08	0.41
1:CA:1238:A:C5	1:CA:1303:C:H1'	2.53	0.41
2:CB:74:LYS:HZ3	2:CB:166:ASP:HB2	1.85	0.41
4:CD:111:ALA:HB1	4:CD:116:GLN:CG	2.50	0.41
7:CG:108:ALA:O	7:CG:119:ARG:HD2	2.20	0.41
8:CH:31:PHE:CE2	8:CH:35:ILE:HD11	2.55	0.41
9:CI:95:LYS:HD3	9:CI:95:LYS:C	2.41	0.41
10:CJ:48:THR:HG22	10:CJ:62:HIS:CG	2.53	0.41
12:CL:5:THR:CG2	12:CL:8:GLN:HG3	2.46	0.41
13:CM:91:ARG:NH2	13:CM:96:LEU:HB3	2.35	0.41
16:CP:5:ARG:HB2	16:CP:67:THR:HG1	1.85	0.41
17:CQ:54:GLY:HA3	17:CQ:82:MET:HE1	2.01	0.41
19:CS:7:LYS:HE3	19:CS:7:LYS:HB2	1.88	0.41
20:CT:32:ALA:O	20:CT:33:ILE:C	2.58	0.41
23:DA:84:A:H4'	23:DA:85:G:O5'	2.20	0.41
23:DA:497:A:C6	23:DA:498:G:C5	3.08	0.41
23:DA:575:A:OP2	23:DA:2499:C:O2'	2.34	0.41
23:DA:603:A:C2	23:DA:655:A:C2	3.08	0.41
23:DA:718:A:C8	23:DA:719:C:C6	3.08	0.41
23:DA:732:C:C2'	23:DA:733:G:H5'	2.50	0.41
23:DA:910:A:H2'	23:DA:2264:C:O2'	2.20	0.41
23:DA:956:G:H2'	23:DA:957:A:H2'	2.01	0.41
23:DA:1141:U:H5''	23:DA:114(B):A:O4'	2.21	0.41
23:DA:1230:C:H2'	23:DA:1231:G:H8	1.84	0.41
23:DA:1381:G:C2'	23:DA:1382:G:H5'	2.49	0.41
23:DA:1434:A:H2'	23:DA:1435:G:C8	2.55	0.41
23:DA:1486:A:N1	23:DA:1504:C:C4	2.87	0.41
23:DA:1971:A:C4	25:DC:241:PRO:HG3	2.54	0.41
23:DA:2078:C:H2'	23:DA:2079:U:C6	2.54	0.41
23:DA:2244:U:H1'	23:DA:2434:A:C4	2.55	0.41
23:DA:2330:G:C2'	23:DA:2331:G:H5'	2.51	0.41
23:DA:2663:G:C4	23:DA:2664:G:C8	3.08	0.41
23:DA:2722:G:H2'	23:DA:2723:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2738:A:C2	23:DA:2739:U:H1'	2.55	0.41
23:DA:2747:G:C6	23:DA:2754:U:C6	3.09	0.41
23:DA:2771:C:O2	23:DA:2771:C:C2'	2.67	0.41
23:DA:2795:G:H3'	23:DA:2797:U:H5''	2.03	0.41
24:DB:7:G:H5''	37:DO:29:PHE:CZ	2.56	0.41
24:DB:41:U:H5	28:DF:70:VAL:H	1.67	0.41
25:DC:143:HIS:NE2	25:DC:192:THR:OG1	2.53	0.41
27:DE:64:ILE:C	27:DE:65:TRP:CD1	2.93	0.41
30:DH:4:ILE:HD12	30:DH:5:LEU:N	2.35	0.41
32:DJ:49:LEU:O	32:DJ:49:LEU:HD12	2.21	0.41
32:DJ:160:LYS:C	32:DJ:161:LEU:HD23	2.41	0.41
33:DK:2:ILE:HD11	33:DK:82:ASN:ND2	2.35	0.41
33:DK:19:ILE:HA	33:DK:42:SER:O	2.20	0.41
37:DO:56:LEU:HG	37:DO:57:LYS:N	2.35	0.41
42:DT:18:TYR:O	42:DT:19:ALA:C	2.58	0.41
42:DT:62:LYS:C	42:DT:63:LYS:HD3	2.40	0.41
43:DU:2:ARG:HG3	43:DU:2:ARG:HH11	1.85	0.41
44:DV:31:ARG:CZ	44:DV:94:GLU:HG3	2.51	0.41
44:DV:120:ILE:N	44:DV:120:ILE:CD1	2.83	0.41
46:DX:23:LYS:HB3	46:DX:23:LYS:HE2	1.74	0.41
53:D5:62:LEU:HA	53:D5:62:LEU:HD23	1.29	0.41
1:AA:27:G:H2'	1:AA:28:G:O4'	2.20	0.41
1:AA:32:A:C6	1:AA:33:A:C6	3.08	0.41
1:AA:515:G:H2'	1:AA:516:U:O4'	2.20	0.41
1:AA:688:G:C4	1:AA:689:C:C5	3.09	0.41
1:AA:725:G:H2'	1:AA:726:C:H6	1.85	0.41
1:AA:763:G:H2'	1:AA:764:C:H6	1.84	0.41
1:AA:853:G:C4	1:AA:854:G:C8	3.08	0.41
1:AA:937:A:C2	1:AA:1379:G:C6	3.08	0.41
1:AA:1104:G:C2	1:AA:1105:A:C4	3.09	0.41
1:AA:1186:G:H4'	9:AI:110:GLU:CD	2.41	0.41
1:AA:1206:G:C6	1:AA:1207:G:C5	3.09	0.41
1:AA:1227:A:OP1	13:AM:94:ARG:NH2	2.54	0.41
1:AA:1252:A:H2'	1:AA:1253:G:O4'	2.21	0.41
1:AA:1366:C:N4	1:AA:1367:C:N4	2.68	0.41
1:AA:1466:C:H2'	1:AA:1467:G:O4'	2.21	0.41
4:AD:6:GLY:O	4:AD:8:VAL:CG1	2.69	0.41
4:AD:23:GLY:HA3	4:AD:112:VAL:CG1	2.50	0.41
4:AD:126:ILE:CG2	4:AD:127:THR:N	2.79	0.41
5:AE:110:LEU:O	5:AE:115:VAL:HG23	2.20	0.41
6:AF:89:MET:CE	18:AR:76:LEU:HD21	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:131:LYS:HE3	7:AG:136:LYS:HZ1	1.80	0.41
8:AH:50:ARG:HH11	8:AH:50:ARG:CG	2.33	0.41
8:AH:112:LEU:HB3	8:AH:133:LEU:HA	2.02	0.41
10:AJ:34:VAL:CG2	10:AJ:74:ILE:HG22	2.50	0.41
11:AK:115:PRO:C	11:AK:117:ASN:H	2.22	0.41
14:AN:40:CYS:O	14:AN:44:LEU:HB3	2.20	0.41
16:AP:4:ILE:HB	16:AP:66:PRO:CB	2.47	0.41
16:AP:32:TYR:CD2	16:AP:32:TYR:C	2.94	0.41
19:AS:22:LEU:HD13	19:AS:27:GLU:CB	2.51	0.41
23:BA:30:G:C6	23:BA:31:C:C4	3.09	0.41
23:BA:464:U:C4'	52:B4:5:TRP:CZ3	3.03	0.41
23:BA:571:A:C5	23:BA:575:A:C8	3.08	0.41
23:BA:693:C:H2'	23:BA:694:U:H6	1.85	0.41
23:BA:998:C:OP2	39:BQ:93:LYS:NZ	2.53	0.41
23:BA:1285:G:C5	23:BA:1329:U:C4	3.08	0.41
23:BA:1413:G:C2'	23:BA:1414:G:H5'	2.50	0.41
23:BA:1497:U:O2	23:BA:1497:U:O4'	2.38	0.41
23:BA:1772:G:N1	23:BA:1980:G:C6	2.89	0.41
23:BA:2039:C:C2	23:BA:2040:C:C6	3.09	0.41
23:BA:2056:G:C8	23:BA:2577:A:C6	3.08	0.41
23:BA:2188:C:H2'	23:BA:2189:U:C1'	2.51	0.41
23:BA:2194:G:H2'	23:BA:2195:C:H6	1.86	0.41
23:BA:2470:G:C2	23:BA:2471:C:C6	3.09	0.41
23:BA:2697:G:H2'	23:BA:2698:U:O4'	2.20	0.41
23:BA:2846:G:C4	23:BA:2847:U:C5	3.09	0.41
24:BB:73:A:N6	24:BB:104:A:H1'	2.35	0.41
25:BC:120:GLY:O	25:BC:131:LEU:HB3	2.19	0.41
25:BC:143:HIS:CD2	25:BC:144:ALA:N	2.88	0.41
26:BD:4:ILE:HG13	26:BD:5:LEU:N	2.36	0.41
28:BF:52:ILE:HG23	28:BF:153:ARG:HH22	1.84	0.41
30:BH:98:ALA:HA	30:BH:109:ILE:HG13	2.01	0.41
32:BJ:52:LYS:O	32:BJ:55:THR:N	2.54	0.41
32:BJ:122:LEU:HD22	32:BJ:122:LEU:HA	1.88	0.41
32:BJ:151:HIS:CD2	32:BJ:152:PRO:C	2.94	0.41
34:BL:32:THR:CA	34:BL:36:LYS:HE2	2.51	0.41
35:BM:47:ILE:O	35:BM:50:ALA:N	2.52	0.41
35:BM:60:ARG:H	44:BV:179:ASP:HB2	1.85	0.41
39:BQ:60:LEU:HD22	39:BQ:60:LEU:O	2.20	0.41
39:BQ:83:LEU:HD12	39:BQ:83:LEU:H	1.86	0.41
40:BR:38:LEU:HD23	40:BR:39:LEU:H	1.84	0.41
40:BR:49:THR:HB	40:BR:50:PRO:CD	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BU:2:ARG:HH11	43:BU:2:ARG:HG3	1.85	0.41
44:BV:103:ARG:HG3	44:BV:136:PHE:CD1	2.54	0.41
1:CA:102:G:C6	1:CA:103:C:N4	2.88	0.41
1:CA:170:U:C2'	1:CA:171:A:H5'	2.50	0.41
1:CA:285:G:C2'	1:CA:286:G:H5'	2.50	0.41
1:CA:356:A:H1'	1:CA:368:U:O2'	2.20	0.41
1:CA:407:G:N2	1:CA:436:C:C2	2.88	0.41
1:CA:408:A:N3	1:CA:409:G:C8	2.88	0.41
1:CA:604:G:C2'	1:CA:605:U:H5'	2.49	0.41
1:CA:692:U:O4	11:CK:52:GLY:C	2.59	0.41
1:CA:706:A:H2'	1:CA:707:C:H5'	2.02	0.41
1:CA:822:C:H42	1:CA:878:G:H1	1.69	0.41
1:CA:897:C:O2	1:CA:897:C:H2'	2.21	0.41
1:CA:960:U:C5	1:CA:1225:A:C8	3.09	0.41
1:CA:1056:U:H5	1:CA:1200:C:C4	2.38	0.41
1:CA:1088:G:C4	1:CA:1089:G:C8	3.09	0.41
1:CA:1098:C:H2'	1:CA:1099:G:O4'	2.20	0.41
1:CA:1105:A:N3	1:CA:1106:G:C8	2.88	0.41
1:CA:1106:G:C4	1:CA:1107:C:C5	3.08	0.41
1:CA:1107:C:N4	1:CA:1108:G:N7	2.69	0.41
1:CA:1270:C:H2'	1:CA:1271:G:O4'	2.20	0.41
1:CA:1371:G:N1	1:CA:1372:U:N3	2.68	0.41
1:CA:1403:C:O5'	1:CA:1403:C:H6	2.04	0.41
2:CB:17:PHE:CD1	2:CB:44:LEU:HD11	2.56	0.41
2:CB:143:GLU:O	2:CB:147:LYS:HB2	2.20	0.41
3:CC:68:VAL:HG12	3:CC:70:VAL:CG2	2.50	0.41
4:CD:79:PHE:CD2	4:CD:79:PHE:C	2.93	0.41
4:CD:110:PHE:CE1	4:CD:148:VAL:HG23	2.56	0.41
5:CE:102:ALA:HB2	5:CE:120:THR:HG21	2.00	0.41
5:CE:137:GLU:OE2	5:CE:137:GLU:O	2.37	0.41
9:CI:117:HIS:O	9:CI:118:LYS:HG3	2.20	0.41
12:CL:68:TYR:HB3	12:CL:98:HIS:HD2	1.86	0.41
13:CM:4:ILE:HG12	13:CM:10:PRO:HD2	2.03	0.41
13:CM:15:VAL:HG13	13:CM:43:THR:O	2.20	0.41
13:CM:98:VAL:HG12	13:CM:98:VAL:O	2.20	0.41
13:CM:106:ASN:O	13:CM:107:ALA:CB	2.67	0.41
13:CM:106:ASN:HB2	13:CM:107:ALA:H	1.54	0.41
15:CO:39:LEU:HD13	15:CO:56:LEU:HB2	2.00	0.41
15:CO:42:HIS:CD2	15:CO:43:LEU:HD23	2.54	0.41
22:CV:6193:U:C2'	22:CV:6194:C:H5'	2.50	0.41
23:DA:104:U:C5	23:DA:105:C:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:464:U:C4'	52:D4:5:TRP:CZ3	3.03	0.41
23:DA:660:G:H5'	27:DE:99:TYR:CD2	2.55	0.41
23:DA:880:G:H1	23:DA:897:C:N4	2.18	0.41
23:DA:910:A:N7	35:DM:12:GLN:HG3	2.36	0.41
23:DA:911:A:C5	35:DM:9:TYR:CE1	3.09	0.41
23:DA:978:G:H2'	23:DA:979:G:H5'	2.02	0.41
23:DA:1152:C:O2'	23:DA:1153:C:H5'	2.21	0.41
23:DA:1761:C:H5''	23:DA:1762:A:OP2	2.21	0.41
23:DA:2209:C:C2	23:DA:2216:G:N1	2.89	0.41
23:DA:2257:U:O2'	23:DA:2258:C:H5'	2.20	0.41
23:DA:2306:C:N4	23:DA:2311:A:N6	2.68	0.41
23:DA:2567:G:H2'	23:DA:2568:C:C6	2.56	0.41
25:DC:35:LYS:HA	25:DC:64:ILE:HD12	2.01	0.41
27:DE:179:GLU:CD	27:DE:179:GLU:N	2.74	0.41
32:DJ:30:LYS:O	32:DJ:32:VAL:HG23	2.21	0.41
32:DJ:83:ILE:HG13	32:DJ:83:ILE:H	1.59	0.41
36:DN:84:ALA:N	36:DN:85:PRO:CD	2.84	0.41
42:DT:10:ALA:HB1	42:DT:11:PRO:HD2	2.02	0.41
43:DU:2:ARG:NH1	43:DU:2:ARG:HG3	2.36	0.41
44:DV:70:LEU:N	44:DV:70:LEU:CD2	2.82	0.41
44:DV:163:LEU:HD23	44:DV:163:LEU:N	2.35	0.41
46:DX:9:GLY:O	46:DX:10:LYS:O	2.38	0.41
50:D2:30:LEU:HD23	50:D2:30:LEU:HA	1.89	0.41
1:AA:17:U:N3	1:AA:18:C:C4	2.88	0.41
1:AA:69:G:H2'	1:AA:73:G:C8	2.54	0.41
1:AA:141:A:C5	1:AA:142:G:N7	2.88	0.41
1:AA:186(F):C:H42	1:AA:191(B):G:H1	1.67	0.41
1:AA:270:A:C5	1:AA:271:C:C5	3.09	0.41
1:AA:283:C:H2'	1:AA:284:G:O4'	2.20	0.41
1:AA:760:G:H2'	1:AA:761:G:C5'	2.50	0.41
1:AA:774:G:N2	1:AA:806:C:C6	2.89	0.41
1:AA:838:G:H8	1:AA:838:G:O5'	2.04	0.41
1:AA:925:G:C4	1:AA:1392:G:N2	2.88	0.41
1:AA:949:A:OP1	13:AM:101:GLN:HB3	2.21	0.41
1:AA:1022:G:C4	1:AA:1023:G:N7	2.88	0.41
1:AA:1056:U:C5	1:AA:1200:C:C4	3.09	0.41
1:AA:1084:G:H5'	1:AA:1102:A:OP2	2.20	0.41
2:AB:61:LEU:HD12	2:AB:61:LEU:O	2.20	0.41
4:AD:31:CYS:C	4:AD:33:MET:H	2.23	0.41
4:AD:49:ARG:HD2	4:AD:49:ARG:HA	1.76	0.41
5:AE:80:ILE:HD11	5:AE:91:LEU:HD12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:25:ILE:HD13	6:AF:25:ILE:HA	1.80	0.41
6:AF:83:ASP:OD1	6:AF:83:ASP:N	2.54	0.41
8:AH:97:VAL:O	8:AH:99:GLU:N	2.52	0.41
15:AO:50:HIS:O	15:AO:51:HIS:C	2.58	0.41
16:AP:39:TYR:CD2	16:AP:39:TYR:C	2.94	0.41
19:AS:12:ASP:O	19:AS:16:LEU:HD13	2.20	0.41
23:BA:194:G:C2'	23:BA:195:A:H5'	2.50	0.41
23:BA:646:A:N3	23:BA:646:A:H5'	2.36	0.41
23:BA:781:A:C2	23:BA:1776:G:H2'	2.55	0.41
23:BA:1019:U:H5'	23:BA:1121:C:H1'	2.01	0.41
23:BA:1131:G:N2	23:BA:1132:A:N3	2.69	0.41
23:BA:1230:C:H2'	23:BA:1231:G:C8	2.56	0.41
23:BA:1320:C:H4'	23:BA:1321:A:OP1	2.21	0.41
23:BA:1323:U:C2'	23:BA:1324:G:H5'	2.50	0.41
23:BA:1355:G:H2'	23:BA:1356:G:O4'	2.20	0.41
23:BA:1479:G:C4	23:BA:1480:G:C8	3.08	0.41
23:BA:1800:C:OP2	25:BC:183:ARG:NH2	2.54	0.41
23:BA:1888:G:N3	23:BA:1888:G:H5''	2.36	0.41
23:BA:2088:G:H2'	23:BA:2089:U:O4'	2.20	0.41
23:BA:2213:U:O5'	23:BA:2213:U:H6	2.03	0.41
23:BA:2262:U:H4'	23:BA:2328:A:C2	2.55	0.41
23:BA:2287:A:C6	23:BA:2289:G:C5	3.09	0.41
23:BA:2441:C:H4'	23:BA:2441:C:OP1	2.20	0.41
23:BA:2523:G:C2'	23:BA:2524:G:H5'	2.51	0.41
23:BA:2705:A:H3'	23:BA:2706:G:H8	1.85	0.41
23:BA:2837:G:C6	23:BA:2838:G:N7	2.89	0.41
23:BA:2861:G:C4	23:BA:2862:G:C8	3.08	0.41
25:BC:53:PHE:CE1	25:BC:220:HIS:HA	2.56	0.41
27:BE:124:LEU:CD1	27:BE:125:LEU:O	2.68	0.41
30:BH:79:ILE:HG22	30:BH:81:VAL:CG2	2.45	0.41
30:BH:82:ARG:CB	30:BH:89:TYR:HB2	2.50	0.41
30:BH:97:ILE:HG21	30:BH:114:LEU:HD11	2.01	0.41
30:BH:136:VAL:N	30:BH:137:PRO:HD3	2.36	0.41
32:BJ:45:THR:HB	32:BJ:48:ARG:HG3	2.02	0.41
32:BJ:121:VAL:HG23	32:BJ:122:LEU:N	2.36	0.41
34:BL:91:PHE:CE2	34:BL:95:VAL:HG12	2.56	0.41
35:BM:108:GLY:O	35:BM:109:VAL:HG13	2.21	0.41
35:BM:111:GLU:OE2	35:BM:133:ARG:NH2	2.54	0.41
35:BM:141:GLN:HA	44:BV:72:ARG:HA	2.02	0.41
36:BN:79:LEU:HD23	36:BN:83:ILE:CB	2.51	0.41
37:BO:44:LYS:NZ	37:BO:44:LYS:CB	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BQ:53:ARG:HA	39:BQ:56:ASP:HB2	2.02	0.41
39:BQ:54:LYS:O	39:BQ:56:ASP:N	2.53	0.41
43:BU:8:LYS:N	43:BU:8:LYS:NZ	2.62	0.41
43:BU:39:VAL:O	43:BU:40:GLU:CD	2.59	0.41
44:BV:56:VAL:O	44:BV:57:ILE:HD12	2.20	0.41
44:BV:91:LEU:CD2	44:BV:96:VAL:HG11	2.49	0.41
48:BZ:52:HIS:H	48:BZ:52:HIS:HD2	1.64	0.41
51:B3:13:CYS:HB2	51:B3:22:ALA:HB3	2.03	0.41
1:CA:46:G:OP1	1:CA:307:C:H4'	2.21	0.41
1:CA:261:U:C5	20:CT:79:ARG:CZ	3.03	0.41
1:CA:317:G:C4	1:CA:318:G:C8	3.08	0.41
1:CA:376:G:H2'	1:CA:377:G:O5'	2.21	0.41
1:CA:538:G:N2	1:CA:539:A:H1'	2.36	0.41
1:CA:565:U:C4	1:CA:566:G:C6	3.08	0.41
1:CA:649:G:C4	1:CA:650:G:C8	3.09	0.41
1:CA:1085:U:O4'	1:CA:1094:G:C2	2.73	0.41
2:CB:16:HIS:HB3	2:CB:210:SER:HA	2.03	0.41
2:CB:54:THR:HG21	2:CB:201:ILE:CD1	2.46	0.41
2:CB:95:GLN:HA	2:CB:95:GLN:OE1	2.20	0.41
2:CB:223:ILE:C	2:CB:225:ALA:N	2.73	0.41
2:CB:223:ILE:HA	2:CB:226:ARG:HB3	2.03	0.41
3:CC:69:HIS:HA	3:CC:104:GLN:O	2.20	0.41
4:CD:31:CYS:O	4:CD:32:ALA:CB	2.69	0.41
4:CD:146:ILE:HG22	4:CD:146:ILE:O	2.20	0.41
5:CE:36:ASP:OD2	5:CE:38:GLN:N	2.53	0.41
5:CE:127:ASN:O	5:CE:128:PRO:C	2.59	0.41
6:CF:8:ILE:HG22	6:CF:9:VAL:N	2.34	0.41
6:CF:14:LEU:HD21	6:CF:19:LEU:N	2.36	0.41
6:CF:45:LEU:O	6:CF:46:ARG:HG2	2.20	0.41
12:CL:89:VAL:O	12:CL:90:LYS:C	2.58	0.41
16:CP:21:VAL:HG11	16:CP:59:TRP:CD1	2.56	0.41
23:DA:95:G:N2	23:DA:96:G:H1'	2.36	0.41
23:DA:103:A:O5'	23:DA:103:A:C8	2.74	0.41
23:DA:225:A:N6	23:DA:226:G:C6	2.89	0.41
23:DA:280:C:C2'	23:DA:281:G:H5'	2.50	0.41
23:DA:547:A:C5	23:DA:548:A:C6	3.08	0.41
23:DA:577:G:C6	23:DA:578:A:C6	3.08	0.41
23:DA:911:A:C6	35:DM:9:TYR:CE1	3.09	0.41
23:DA:914:C:C6	23:DA:914:C:C3'	3.03	0.41
23:DA:988:A:N7	48:DZ:13:ILE:HD12	2.36	0.41
23:DA:1248:G:C5	39:DQ:3:ARG:HB2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1270:C:H5'	23:DA:1271:G:H5'	2.03	0.41
23:DA:1389:G:C2	23:DA:1399:C:O2	2.73	0.41
23:DA:1441:G:H2'	23:DA:1442:G:H8	1.86	0.41
23:DA:1504:C:O2'	23:DA:1505:C:C6	2.72	0.41
23:DA:1547:C:H2'	23:DA:1548:C:C6	2.51	0.41
23:DA:1718:G:N2	23:DA:1742:C:C2	2.88	0.41
23:DA:1985:G:O2'	23:DA:1986:A:H5'	2.20	0.41
23:DA:2306:C:C4	23:DA:2311:A:N6	2.88	0.41
23:DA:2308:G:O2'	23:DA:2310:A:P	2.78	0.41
23:DA:2337:G:N3	23:DA:2337:G:H2'	2.36	0.41
23:DA:2760:C:O2	23:DA:2760:C:C2'	2.68	0.41
23:DA:2881:C:C2'	23:DA:2882:A:H5'	2.49	0.41
24:DB:3:C:H2'	24:DB:4:C:C6	2.54	0.41
25:DC:89:SER:HB2	25:DC:159:ALA:CB	2.50	0.41
25:DC:177:LEU:HD12	25:DC:181:GLU:HB3	2.03	0.41
26:DD:55:ASN:C	26:DD:57:LYS:N	2.74	0.41
26:DD:70:ALA:O	26:DD:72:VAL:HG23	2.21	0.41
26:DD:85:ASN:HA	26:DD:86:PRO:HD3	1.76	0.41
26:DD:102:VAL:HB	26:DD:198:VAL:HG12	2.02	0.41
32:DJ:151:HIS:CD2	32:DJ:152:PRO:C	2.94	0.41
33:DK:23:ARG:HG3	33:DK:24:VAL:N	2.35	0.41
33:DK:77:ILE:HD12	38:DP:73:GLU:O	2.20	0.41
34:DL:83:VAL:O	34:DL:114:ILE:HA	2.20	0.41
34:DL:125:VAL:O	34:DL:125:VAL:HG13	2.21	0.41
35:DM:10:ARG:HD3	35:DM:10:ARG:HA	1.67	0.41
37:DO:51:ALA:O	37:DO:52:SER:O	2.39	0.41
38:DP:109:GLU:HA	38:DP:112:ARG:CG	2.50	0.41
39:DQ:17:ILE:HA	39:DQ:20:LEU:HD23	2.03	0.41
39:DQ:40:PHE:HD2	39:DQ:40:PHE:HA	1.71	0.41
40:DR:35:LEU:C	40:DR:37:VAL:N	2.74	0.41
40:DR:44:LYS:HB3	40:DR:46:VAL:CG1	2.50	0.41
41:DS:71:VAL:HA	41:DS:107:LEU:HD12	2.02	0.41
43:DU:86:ARG:NH1	43:DU:95:LYS:HE3	2.35	0.41
50:D2:4:HIS:CB	50:D2:5:PRO:CD	2.95	0.41
53:D5:50:LEU:HD23	53:D5:50:LEU:HA	1.87	0.41
1:AA:192:U:O2'	1:AA:193:C:H5'	2.21	0.41
1:AA:427:U:O4	1:AA:428:G:N1	2.54	0.41
1:AA:437:U:O4	1:AA:438:G:C6	2.74	0.41
1:AA:604:G:C5	1:AA:605:U:C5	3.08	0.41
1:AA:616:G:C2	1:AA:617:G:N7	2.89	0.41
1:AA:627:G:H2'	1:AA:628:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:751:U:O2	1:AA:751:U:H2'	2.21	0.41
1:AA:781:A:C3'	1:AA:782:A:C5'	2.91	0.41
1:AA:924:C:H2'	1:AA:925:G:C8	2.56	0.41
1:AA:976:G:H8	1:AA:1358:U:O2'	2.04	0.41
1:AA:977:A:H8	1:AA:1223:C:C4	2.38	0.41
1:AA:997:U:C4	1:AA:998(A):G:N7	2.89	0.41
1:AA:1070:U:OP1	5:AE:25:ARG:NH1	2.53	0.41
1:AA:1104:G:N1	1:AA:1105:A:C5	2.88	0.41
1:AA:1446:A:O2'	1:AA:1447:G:C8	2.74	0.41
3:AC:18:TRP:H	3:AC:18:TRP:HE3	1.69	0.41
4:AD:159:ARG:O	4:AD:162:LEU:N	2.54	0.41
5:AE:11:ILE:N	5:AE:31:LEU:O	2.51	0.41
11:AK:40:ILE:HG22	11:AK:75:TYR:CD2	2.55	0.41
11:AK:52:GLY:H	11:AK:55:LYS:HE2	1.85	0.41
12:AL:26:LEU:HD22	12:AL:27:LYS:H	1.85	0.41
14:AN:23:ARG:HG3	14:AN:24:CYS:N	2.36	0.41
15:AO:37:ASN:HD22	15:AO:37:ASN:N	2.14	0.41
19:AS:29:ARG:HB2	19:AS:48:THR:H	1.86	0.41
22:AV:6191:A:C6	22:AV:6192:G:C5	3.08	0.41
23:BA:71:A:H4'	23:BA:72:U:H5''	2.01	0.41
23:BA:239:U:O2'	23:BA:240:G:H5'	2.20	0.41
23:BA:269:U:C4	23:BA:271(A):U:C2	3.09	0.41
23:BA:479:A:N3	23:BA:481:G:H5''	2.36	0.41
23:BA:603:A:H2	23:BA:655:A:C2	2.38	0.41
23:BA:1116:C:H2'	23:BA:1117:G:O4'	2.21	0.41
23:BA:1173:G:H3'	23:BA:1174:A:H5''	2.02	0.41
23:BA:1203:G:C6	23:BA:1204:A:C6	3.08	0.41
23:BA:1434:A:H2'	23:BA:1435:G:H8	1.86	0.41
23:BA:1583:A:H8	23:BA:1583:A:O5'	2.04	0.41
23:BA:1589:C:O2	23:BA:1589:C:C2'	2.69	0.41
23:BA:2310:A:H2'	23:BA:2311:A:H5'	2.03	0.41
23:BA:2738:A:C2	23:BA:2739:U:C1'	3.03	0.41
23:BA:2753:A:H2'	23:BA:2754:U:C5'	2.51	0.41
23:BA:2768:C:N4	23:BA:2769:C:C4	2.88	0.41
23:BA:2819:G:H2'	23:BA:2821:A:N7	2.34	0.41
23:BA:2861:G:O2'	23:BA:2862:G:H5'	2.20	0.41
24:BB:69:G:C6	24:BB:70:C:C4	3.09	0.41
24:BB:82:G:H2'	24:BB:83:G:H8	1.85	0.41
25:BC:168:ARG:HA	25:BC:173:VAL:HA	2.01	0.41
26:BD:84:PHE:O	26:BD:84:PHE:CG	2.74	0.41
26:BD:87:GLU:O	26:BD:88:GLY:C	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:104:VAL:HG22	26:BD:198:VAL:HG13	2.01	0.41
29:BG:16:SER:HB2	29:BG:27:LYS:HB2	2.01	0.41
30:BH:73:GLU:C	30:BH:75:LEU:H	2.23	0.41
32:BJ:110:LEU:O	32:BJ:110:LEU:CD2	2.68	0.41
36:BN:53:HIS:HB2	36:BN:94:TYR:CE1	2.56	0.41
36:BN:67:LEU:HD22	36:BN:67:LEU:HA	1.91	0.41
36:BN:85:PRO:C	36:BN:87:TYR:N	2.74	0.41
37:BO:51:ALA:O	37:BO:52:SER:O	2.38	0.41
37:BO:99:LYS:O	37:BO:100:ALA:C	2.58	0.41
39:BQ:76:TYR:O	39:BQ:80:ILE:HB	2.19	0.41
40:BR:35:LEU:C	40:BR:37:VAL:N	2.73	0.41
44:BV:182:LYS:O	44:BV:186:GLU:HB2	2.21	0.41
45:BW:50:ASN:HD22	45:BW:83:PRO:HD3	1.85	0.41
45:BW:72:ARG:CZ	45:BW:75:LEU:CD1	2.96	0.41
1:CA:42:G:C2	1:CA:401:C:O2	2.74	0.41
1:CA:186(F):C:H42	1:CA:191(B):G:H1	1.67	0.41
1:CA:269:C:H2'	1:CA:270:A:C8	2.55	0.41
1:CA:444:C:C4	1:CA:491:G:N1	2.89	0.41
1:CA:577:G:C1'	1:CA:816:A:C4	3.03	0.41
1:CA:710:G:C6	1:CA:711:G:N7	2.89	0.41
1:CA:759:A:H2'	1:CA:760:G:H5'	2.03	0.41
1:CA:781:A:C3'	1:CA:782:A:C5'	2.93	0.41
1:CA:816:A:OP2	1:CA:1527:C:C4'	2.68	0.41
1:CA:915:A:N7	1:CA:916:G:C8	2.89	0.41
1:CA:1072:G:O6	1:CA:1104:G:C6	2.73	0.41
1:CA:1342:C:O2'	1:CA:1343:G:H5'	2.21	0.41
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	2.24	0.41
3:CC:17:ASP:HB3	3:CC:21:ARG:HH22	1.84	0.41
4:CD:31:CYS:C	4:CD:33:MET:N	2.74	0.41
7:CG:30:ILE:HD12	7:CG:120:ILE:HD11	2.03	0.41
8:CH:137:VAL:HG12	8:CH:138:TRP:N	2.36	0.41
12:CL:5:THR:HG23	12:CL:8:GLN:CG	2.49	0.41
15:CO:17:ARG:NH1	15:CO:77:ARG:NH1	2.69	0.41
23:DA:26:G:H1'	23:DA:514:A:H61	1.86	0.41
23:DA:32:C:C2'	23:DA:33:U:H5'	2.50	0.41
23:DA:89:G:C5	23:DA:90:U:C5	3.08	0.41
23:DA:142:G:H2'	23:DA:143:C:C6	2.56	0.41
23:DA:328:U:C2'	23:DA:329:G:OP1	2.68	0.41
23:DA:537:C:H2'	23:DA:539:G:O4'	2.20	0.41
23:DA:577:G:O6	23:DA:578:A:N6	2.54	0.41
23:DA:673:C:H2'	23:DA:674:G:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:753:C:H2'	23:DA:754:C:H6	1.85	0.41
23:DA:822:U:O2'	23:DA:823:G:H5'	2.19	0.41
23:DA:880:G:H1	23:DA:897:C:H42	1.67	0.41
23:DA:1035:U:H2'	23:DA:1036:G:C8	2.56	0.41
23:DA:1370:C:H2'	23:DA:1371:G:C5'	2.51	0.41
23:DA:1491:G:C5	23:DA:1500:G:N2	2.89	0.41
23:DA:1512:G:C2	23:DA:1513:C:C2	3.09	0.41
23:DA:1717:G:O6	23:DA:1743:G:C6	2.74	0.41
23:DA:1775:U:C2'	23:DA:1776:G:O5'	2.68	0.41
23:DA:1900:A:C2	23:DA:1970:A:C4	3.09	0.41
23:DA:1949:G:H2'	23:DA:1950:G:O4'	2.20	0.41
23:DA:2238:G:N3	23:DA:2238:G:H2'	2.36	0.41
23:DA:2290:G:C2	23:DA:2343:C:O2	2.74	0.41
23:DA:2737:G:C5	23:DA:2738:A:N7	2.89	0.41
23:DA:2854:G:C6	23:DA:2864:G:N1	2.89	0.41
25:DC:61:LEU:HD13	25:DC:61:LEU:HA	1.53	0.41
25:DC:211:ARG:HH11	25:DC:211:ARG:HD2	1.74	0.41
28:DF:72:ARG:HG2	28:DF:87:PRO:O	2.21	0.41
30:DH:9:LEU:O	30:DH:10:GLU:C	2.59	0.41
32:DJ:41:ALA:O	32:DJ:44:LYS:HG2	2.21	0.41
34:DL:135:LEU:O	34:DL:139:LYS:HB2	2.20	0.41
35:DM:69:PHE:CG	35:DM:70:PRO:HD2	2.55	0.41
35:DM:140:ALA:HB1	44:DV:99:TYR:HB2	2.02	0.41
36:DN:100:LEU:H	36:DN:112:ALA:HA	1.85	0.41
36:DN:101:ALA:HB2	50:D2:44:THR:CB	2.51	0.41
38:DP:10:VAL:C	38:DP:12:SER:N	2.74	0.41
38:DP:19:LEU:H	38:DP:19:LEU:HG	1.33	0.41
38:DP:61:PHE:CE2	38:DP:76:PHE:HB2	2.56	0.41
42:DT:65:ARG:N	42:DT:65:ARG:HE	2.19	0.41
44:DV:48:PHE:CE1	44:DV:52:SER:HA	2.56	0.41
46:DX:90:ILE:O	46:DX:94:LEU:HD22	2.20	0.41
50:D2:50:GLY:O	50:D2:51:TYR:HB2	2.20	0.41
1:AA:69:G:C6	1:AA:101:A:N6	2.88	0.41
1:AA:296:U:H2'	1:AA:297:G:C8	2.56	0.41
1:AA:324:G:P	20:AT:22:ARG:HG2	2.61	0.41
1:AA:367:U:C5	1:AA:394:G:N1	2.89	0.41
1:AA:560:U:O5'	1:AA:566:G:N2	2.54	0.41
1:AA:572:A:H5''	1:AA:917:G:H4'	2.03	0.41
1:AA:658:G:N1	1:AA:749:C:C4	2.88	0.41
1:AA:738:C:C2	1:AA:739:C:C5	3.09	0.41
1:AA:1063:C:C5	1:AA:1064:G:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1071:C:O2	1:AA:1072:G:C8	2.73	0.41
2:AB:159:PRO:HB3	2:AB:161:ALA:O	2.21	0.41
2:AB:165:VAL:HG23	2:AB:166:ASP:N	2.35	0.41
2:AB:172:ILE:H	2:AB:172:ILE:HG13	1.57	0.41
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	2.03	0.41
3:AC:58:GLU:C	3:AC:59:ARG:HG3	2.41	0.41
3:AC:120:VAL:HG21	3:AC:137:ALA:CB	2.50	0.41
3:AC:186:PHE:CG	3:AC:187:ALA:N	2.88	0.41
4:AD:110:PHE:CE1	4:AD:148:VAL:HG23	2.56	0.41
5:AE:76:ILE:HG23	5:AE:78:HIS:H	1.86	0.41
6:AF:47:ARG:HH11	6:AF:47:ARG:CG	2.32	0.41
8:AH:64:LYS:CB	8:AH:79:VAL:HG21	2.51	0.41
12:AL:7:ASN:CA	12:AL:10:VAL:HG23	2.51	0.41
15:AO:6:GLU:HG2	15:AO:7:GLU:N	2.35	0.41
15:AO:67:LEU:HD23	15:AO:78:TYR:CE1	2.55	0.41
16:AP:72:ARG:O	16:AP:72:ARG:HG2	2.20	0.41
23:BA:41:C:H2'	23:BA:43:G:O4'	2.20	0.41
23:BA:260:G:C2	23:BA:261:G:H1'	2.56	0.41
23:BA:301:G:OP1	23:BA:301:G:H4'	2.20	0.41
23:BA:304:G:H2'	23:BA:305:U:O4'	2.21	0.41
23:BA:306:U:H6	23:BA:306:U:H3'	1.86	0.41
23:BA:333:G:C2'	23:BA:334:C:H5'	2.51	0.41
23:BA:528:A:N1	23:BA:2043:C:O5'	2.54	0.41
23:BA:748:G:C8	23:BA:750:A:C8	3.09	0.41
23:BA:914:C:C6	23:BA:914:C:C3'	3.04	0.41
23:BA:1105:U:C2'	23:BA:1106:G:H5'	2.50	0.41
23:BA:1515:C:O2	23:BA:1515:C:H2'	2.21	0.41
23:BA:1801:G:N3	23:BA:1801:G:H2'	2.36	0.41
23:BA:2446:G:N2	23:BA:2449:U:O2	2.53	0.41
23:BA:2615:U:N1	50:B2:7:PRO:HA	2.35	0.41
23:BA:2621:A:H5'	26:BD:119:ARG:HH22	1.85	0.41
23:BA:2631:G:C6	23:BA:2632:A:C5	3.08	0.41
23:BA:2752:C:C2'	23:BA:2753:A:H5'	2.51	0.41
23:BA:2870:C:H2'	23:BA:2871:C:O4'	2.21	0.41
24:BB:41:U:H5	28:BF:70:VAL:H	1.68	0.41
24:BB:112:G:N3	24:BB:112:G:H2'	2.36	0.41
25:BC:7:LYS:HG3	25:BC:8:PRO:HD2	2.03	0.41
25:BC:150:LYS:HA	25:BC:150:LYS:HE3	2.01	0.41
27:BE:167:ALA:O	27:BE:170:LEU:HB2	2.21	0.41
28:BF:106:LEU:HA	28:BF:110:ALA:HB3	2.01	0.41
28:BF:107:LEU:HD13	28:BF:177:GLY:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:78:THR:O	30:BH:80:PRO:HD3	2.21	0.41
32:BJ:136:GLY:O	32:BJ:139:LEU:HB2	2.20	0.41
33:BK:13:ASN:C	33:BK:15:GLY:N	2.74	0.41
35:BM:45:GLN:O	35:BM:49:ALA:HB2	2.21	0.41
36:BN:52:ILE:HD12	36:BN:79:LEU:HD21	2.02	0.41
36:BN:116:LEU:HD23	36:BN:116:LEU:HA	1.68	0.41
40:BR:47:VAL:CG1	40:BR:50:PRO:O	2.69	0.41
41:BS:65:LEU:HB2	41:BS:68:ARG:NE	2.27	0.41
45:BW:70:GLN:HG2	45:BW:72:ARG:CG	2.51	0.41
1:CA:55:A:C4	1:CA:56:U:C5	3.08	0.41
1:CA:232:G:H2'	1:CA:233:C:O4'	2.20	0.41
1:CA:630:G:H2'	1:CA:631:G:O4'	2.21	0.41
1:CA:636:U:C5'	17:CQ:2:PRO:HG3	2.50	0.41
1:CA:673:G:C6	1:CA:674:G:C6	3.09	0.41
1:CA:976:G:H8	1:CA:1358:U:O2'	2.03	0.41
1:CA:1072:G:C6	1:CA:1104:G:N1	2.89	0.41
1:CA:1163:C:C2	1:CA:1174:G:C2	3.08	0.41
1:CA:1384:C:C2	1:CA:1385:G:C8	3.09	0.41
2:CB:138:LEU:HA	2:CB:141:GLU:HG3	2.02	0.41
3:CC:91:LEU:HD12	3:CC:101:LEU:HD21	2.01	0.41
4:CD:94:LEU:HD23	4:CD:97:LEU:HD12	2.01	0.41
5:CE:50:GLU:HB3	5:CE:53:LEU:CD1	2.51	0.41
6:CF:62:TRP:O	6:CF:62:TRP:CD2	2.74	0.41
7:CG:41:ARG:O	7:CG:45:ASP:N	2.42	0.41
7:CG:111:ARG:CZ	7:CG:122:HIS:HB3	2.50	0.41
8:CH:134:ILE:O	8:CH:135:CYS:HB3	2.21	0.41
9:CI:16:ARG:O	9:CI:63:ILE:HG23	2.20	0.41
13:CM:24:GLY:CA	13:CM:70:LEU:HD13	2.50	0.41
23:DA:161:U:O2	23:DA:165:U:O4	2.39	0.41
23:DA:189:G:C2'	23:DA:190:A:O5'	2.69	0.41
23:DA:310:A:P	43:DU:18:GLY:HA2	2.60	0.41
23:DA:524:U:H4'	23:DA:554:U:H4'	2.03	0.41
23:DA:621:A:H5'	23:DA:622:G:OP2	2.20	0.41
23:DA:1669:A:H2'	23:DA:1670:C:H5'	2.02	0.41
23:DA:2393:A:H5''	34:DL:62:LEU:CD1	2.41	0.41
23:DA:2393:A:N6	23:DA:2422:A:C2	2.89	0.41
23:DA:2542:A:C8	23:DA:2544:G:O6	2.73	0.41
23:DA:2755:C:O5'	23:DA:2755:C:H6	2.03	0.41
24:DB:70:C:C2	24:DB:71:C:C6	3.09	0.41
25:DC:172:TYR:CD1	25:DC:185:VAL:C	2.91	0.41
29:DG:34:GLU:O	29:DG:36:PRO:HD3	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:87:LEU:CD2	29:DG:164:TYR:CD1	3.03	0.41
32:DJ:36:TRP:HB2	32:DJ:156:GLN:HB2	2.02	0.41
32:DJ:157:ARG:CG	32:DJ:157:ARG:O	2.67	0.41
33:DK:48:PRO:C	33:DK:49:ARG:HG2	2.41	0.41
35:DM:111:GLU:OE2	35:DM:133:ARG:CZ	2.68	0.41
36:DN:103:ARG:HH12	36:DN:110:PRO:HG3	1.84	0.41
37:DO:34:HIS:CB	37:DO:36:TYR:HE1	2.33	0.41
40:DR:8:GLY:O	40:DR:10:LYS:HG3	2.21	0.41
40:DR:93:GLU:O	40:DR:94:LEU:HD23	2.21	0.41
41:DS:17:VAL:O	41:DS:20:VAL:N	2.53	0.41
50:D2:40:LYS:HE2	50:D2:46:CYS:SG	2.60	0.41
1:AA:61:G:H2'	1:AA:62:U:O4'	2.20	0.41
1:AA:106:C:H2'	1:AA:107:G:H5'	2.00	0.41
1:AA:145:G:N2	1:AA:178:C:N3	2.69	0.41
1:AA:157:G:C2	1:AA:165:C:N3	2.89	0.41
1:AA:216:G:C6	1:AA:217:C:N4	2.89	0.41
1:AA:385:C:H3'	1:AA:385:C:C6	2.54	0.41
1:AA:438:G:C4'	4:AD:123:HIS:ND1	2.82	0.41
1:AA:482:A:N3	1:AA:482:A:C2'	2.81	0.41
1:AA:522:C:O2'	1:AA:523:A:H5'	2.21	0.41
1:AA:619:U:O2	4:AD:135:LEU:HD22	2.20	0.41
1:AA:628:G:O2'	1:AA:629:G:H5'	2.20	0.41
1:AA:720:C:H5'	18:AR:50:ILE:O	2.21	0.41
1:AA:818:G:N3	1:AA:820:U:C5	2.89	0.41
1:AA:918:A:C2	1:AA:919:A:C4	3.09	0.41
1:AA:930:C:C4	1:AA:931:C:C5	3.08	0.41
1:AA:950:U:H4'	1:AA:971:G:H22	1.81	0.41
1:AA:962:C:N4	1:AA:973:G:H1	2.19	0.41
1:AA:102(A):C:O5'	1:AA:102(A):C:H6	2.04	0.41
1:AA:1109:C:H2'	1:AA:1110:A:O4'	2.21	0.41
1:AA:1114:C:O5'	1:AA:1114:C:H6	2.03	0.41
1:AA:1165:C:C2'	1:AA:1166:G:H5'	2.51	0.41
1:AA:1270:C:H2'	1:AA:1271:G:O4'	2.21	0.41
2:AB:37:ASN:HD22	2:AB:37:ASN:HA	1.67	0.41
2:AB:51:LEU:HB3	2:AB:55:PHE:CE2	2.56	0.41
2:AB:61:LEU:HG	2:AB:68:ILE:HG13	2.02	0.41
2:AB:86:GLU:C	2:AB:88:ALA:H	2.25	0.41
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	2.02	0.41
3:AC:4:LYS:O	3:AC:5:ILE:C	2.58	0.41
3:AC:16:ARG:HB2	3:AC:16:ARG:HH11	1.83	0.41
4:AD:8:VAL:O	4:AD:11:LEU:HG	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:70:ILE:HG12	4:AD:71:SER:H	1.84	0.41
4:AD:82:ALA:CB	4:AD:89:THR:HG23	2.50	0.41
5:AE:144:THR:HG23	5:AE:147:ASP:OD1	2.21	0.41
6:AF:24:GLU:O	6:AF:27:GLN:HB2	2.21	0.41
6:AF:100:ASN:C	6:AF:100:ASN:HD22	2.24	0.41
8:AH:39:LEU:C	8:AH:45:ILE:HG12	2.41	0.41
8:AH:64:LYS:HB3	8:AH:79:VAL:HG21	2.02	0.41
12:AL:74:HIS:CD2	12:AL:76:LEU:HB2	2.56	0.41
13:AM:67:GLU:HG3	13:AM:68:GLY:N	2.27	0.41
13:AM:79:LYS:O	13:AM:82:MET:HB3	2.20	0.41
16:AP:43:LYS:HA	16:AP:48:TRP:CB	2.51	0.41
17:AQ:43:LEU:HD12	17:AQ:43:LEU:HA	1.54	0.41
18:AR:65:ILE:H	18:AR:65:ILE:HG12	1.52	0.41
23:BA:189:G:H1'	23:BA:207:A:H61	1.85	0.41
23:BA:278:A:O2'	23:BA:279:C:C1'	2.69	0.41
23:BA:278:A:C2	23:BA:279:C:C2	3.09	0.41
23:BA:284:U:H2'	23:BA:285:C:H6	1.85	0.41
23:BA:414:C:O2'	23:BA:415:A:H5'	2.20	0.41
23:BA:503:A:C6	23:BA:506:G:C6	3.09	0.41
23:BA:618(B):C:O2	23:BA:618(B):C:H2'	2.20	0.41
23:BA:660:G:H5'	27:BE:99:TYR:CD2	2.56	0.41
23:BA:761:A:C3'	23:BA:761:A:C8	3.04	0.41
23:BA:768:G:C6	23:BA:769:G:C5	3.08	0.41
23:BA:876:C:C2'	23:BA:877:U:H5'	2.51	0.41
23:BA:991:C:O2	23:BA:991:C:H2'	2.21	0.41
23:BA:1131:G:C2	23:BA:1132:A:C4	3.09	0.41
23:BA:1173:G:OP2	23:BA:1173:G:C8	2.73	0.41
23:BA:1188:U:H2'	23:BA:1189:A:H5'	2.01	0.41
23:BA:1232:G:H2'	23:BA:1233:C:C6	2.51	0.41
23:BA:1335:U:H2'	23:BA:1336:A:O5'	2.21	0.41
23:BA:1464:C:H2'	23:BA:1465:G:H8	1.85	0.41
23:BA:1946:U:C2	23:BA:1947:C:C5	3.09	0.41
23:BA:1993:U:H4'	26:BD:128:SER:HB2	2.03	0.41
23:BA:2188:C:C4	23:BA:2189:U:C6	3.09	0.41
23:BA:2230:G:O3'	46:BX:43:TYR:HB2	2.21	0.41
23:BA:2287:A:C4	23:BA:2289:G:N7	2.89	0.41
23:BA:2291:U:H2'	23:BA:2292:C:C6	2.56	0.41
23:BA:2292:C:O5'	23:BA:2292:C:H6	2.04	0.41
23:BA:2293:C:H2'	23:BA:2294:C:H6	1.85	0.41
23:BA:2306:C:N4	23:BA:2311:A:N6	2.68	0.41
23:BA:2346:A:H5''	23:BA:2383:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2415:G:H4'	34:BL:66:GLY:HA3	2.01	0.41
23:BA:2415:G:C2	23:BA:2416:C:C2	3.09	0.41
23:BA:2489:G:O2'	23:BA:2518:A:N6	2.52	0.41
23:BA:2515:C:O2	23:BA:2570:G:C2	2.74	0.41
24:BB:13:A:H8	45:BW:74:ARG:NH2	2.19	0.41
25:BC:25:THR:O	25:BC:27:THR:CB	2.68	0.41
25:BC:257:LEU:HD23	25:BC:258:LYS:N	2.36	0.41
26:BD:4:ILE:HG13	26:BD:5:LEU:O	2.21	0.41
26:BD:183:LEU:HD12	26:BD:183:LEU:HA	1.79	0.41
27:BE:65:TRP:CH2	27:BE:75:HIS:HD2	2.38	0.41
28:BF:72:ARG:HG2	28:BF:86:MET:O	2.21	0.41
28:BF:111:LEU:N	28:BF:112:PRO:CD	2.84	0.41
28:BF:139:LEU:HA	28:BF:144:ILE:HG21	2.03	0.41
29:BG:117:PRO:HA	29:BG:118:PRO:HD2	1.90	0.41
30:BH:30:LEU:O	30:BH:31:LEU:C	2.58	0.41
30:BH:77:LEU:HD23	30:BH:105:HIS:HE1	1.86	0.41
32:BJ:36:TRP:CH2	32:BJ:74:PHE:CD2	3.09	0.41
32:BJ:66:THR:HB	32:BJ:69:VAL:CG1	2.50	0.41
32:BJ:120:ARG:O	32:BJ:121:VAL:C	2.58	0.41
32:BJ:151:HIS:O	32:BJ:151:HIS:CG	2.73	0.41
33:BK:47:ILE:HA	33:BK:47:ILE:HD12	1.61	0.41
33:BK:60:ALA:HB2	33:BK:86:ILE:HA	2.02	0.41
35:BM:29:PHE:N	35:BM:105:GLU:OE2	2.53	0.41
35:BM:72:LYS:O	35:BM:93:TYR:HA	2.20	0.41
36:BN:105:ARG:HG2	36:BN:106:GLY:N	2.34	0.41
37:BO:28:VAL:HG21	37:BO:87:PHE:HE1	1.86	0.41
37:BO:79:ALA:C	37:BO:80:LEU:HD23	2.41	0.41
37:BO:98:VAL:HG23	37:BO:99:LYS:N	2.36	0.41
38:BP:126:ALA:C	38:BP:128:GLU:H	2.23	0.41
39:BQ:79:PHE:CE2	39:BQ:106:PHE:CZ	3.09	0.41
39:BQ:107:ALA:O	39:BQ:110:VAL:HB	2.20	0.41
40:BR:10:LYS:HB2	40:BR:10:LYS:HE3	1.83	0.41
40:BR:99:ILE:N	40:BR:99:ILE:HD13	2.36	0.41
42:BT:49:VAL:HG21	42:BT:83:VAL:CG1	2.45	0.41
42:BT:83:VAL:O	42:BT:84:ALA:C	2.58	0.41
42:BT:92:LEU:HD23	42:BT:92:LEU:HA	1.91	0.41
43:BU:46:LYS:C	43:BU:48:ALA:N	2.74	0.41
43:BU:52:SER:HA	43:BU:53:PRO:HD3	1.92	0.41
44:BV:85:HIS:C	44:BV:85:HIS:HD1	2.24	0.41
44:BV:120:ILE:H	44:BV:172:ALA:HA	1.86	0.41
44:BV:157:LEU:HA	44:BV:158:PRO:HD2	1.92	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BW:72:ARG:O	45:BW:73:GLY:C	2.60	0.41
46:BX:23:LYS:HB3	46:BX:37:ILE:HG12	2.02	0.41
47:BY:1:MET:HE1	47:BY:4:SER:HB2	2.02	0.41
48:BZ:55:ARG:HD3	48:BZ:55:ARG:HA	1.45	0.41
50:B2:29:ILE:O	50:B2:42:PRO:HD3	2.21	0.41
50:B2:40:LYS:NZ	50:B2:49:CYS:CB	2.81	0.41
50:B2:42:PRO:HB2	50:B2:43:HIS:CD2	2.55	0.41
1:CA:15:G:N3	1:CA:16:A:C8	2.89	0.41
1:CA:61:G:H2'	1:CA:62:U:O4'	2.21	0.41
1:CA:66:G:C4'	1:CA:173:U:C5	3.02	0.41
1:CA:90:C:H2'	1:CA:91:C:O4'	2.21	0.41
1:CA:104:G:C2	1:CA:105:G:C5	3.09	0.41
1:CA:135:C:H2'	1:CA:136:C:H5'	2.01	0.41
1:CA:157:G:H2'	1:CA:158:G:H8	1.85	0.41
1:CA:186(E):C:H2'	1:CA:186(F):C:H6	1.86	0.41
1:CA:190:G:OP1	1:CA:190:G:H8	2.03	0.41
1:CA:254:G:H2'	1:CA:255:G:C8	2.53	0.41
1:CA:259:G:OP2	20:CT:83:ARG:HD3	2.21	0.41
1:CA:318:G:C2	1:CA:319:G:C5	3.09	0.41
1:CA:360:A:H2'	1:CA:361:G:C8	2.55	0.41
1:CA:365:U:O4'	1:CA:365:U:O2	2.32	0.41
1:CA:393:A:O2'	1:CA:394:G:H5'	2.21	0.41
1:CA:407:G:H2'	1:CA:408:A:H8	1.86	0.41
1:CA:425:G:O2'	1:CA:426:G:H5'	2.20	0.41
1:CA:448:A:OP2	1:CA:485:G:N1	2.52	0.41
1:CA:450:G:H2'	1:CA:451:A:OP1	2.21	0.41
1:CA:504:C:O2	1:CA:504:C:H2'	2.21	0.41
1:CA:658:G:C4	1:CA:659:U:C5	3.08	0.41
1:CA:909:A:C8	1:CA:910:C:C5	3.08	0.41
1:CA:922:G:H3'	1:CA:923:A:H8	1.85	0.41
1:CA:939:G:C6	1:CA:940:C:N4	2.89	0.41
1:CA:986:A:C2	1:CA:1220:G:C2	3.08	0.41
1:CA:1067:A:N3	1:CA:1068:G:H1'	2.36	0.41
1:CA:1251:A:H1'	1:CA:1369:C:O2'	2.20	0.41
1:CA:1464:G:C2'	1:CA:1465:C:H5'	2.51	0.41
2:CB:51:LEU:HB3	2:CB:55:PHE:CE2	2.56	0.41
3:CC:152:ILE:O	3:CC:152:ILE:HG22	2.21	0.41
4:CD:23:GLY:HA3	4:CD:112:VAL:CG1	2.51	0.41
4:CD:67:ILE:HG22	4:CD:68:TYR:CE1	2.56	0.41
5:CE:101:ILE:CD1	5:CE:119:LEU:HD23	2.24	0.41
6:CF:74:ASP:HA	6:CF:77:ARG:NH1	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:9:VAL:HG12	7:CG:10:ARG:N	2.35	0.41
7:CG:15:ASP:HB3	7:CG:19:GLY:H	1.86	0.41
10:CJ:3:LYS:N	10:CJ:75:ILE:HA	2.35	0.41
11:CK:69:ALA:O	11:CK:72:ALA:HB3	2.21	0.41
12:CL:7:ASN:CA	12:CL:10:VAL:HG23	2.50	0.41
12:CL:51:LEU:HD12	12:CL:51:LEU:H	1.85	0.41
13:CM:67:GLU:HG3	13:CM:68:GLY:N	2.27	0.41
14:CN:7:ILE:HD12	14:CN:8:GLU:N	2.36	0.41
15:CO:85:LEU:HD23	15:CO:85:LEU:HA	1.83	0.41
18:CR:43:PHE:C	18:CR:44:LEU:HD12	2.41	0.41
21:CU:9:ARG:HG3	21:CU:10:ARG:N	2.36	0.41
23:DA:24:G:C6	23:DA:25:U:C4	3.09	0.41
23:DA:96:G:C4'	47:DY:48:HIS:CE1	2.96	0.41
23:DA:171:G:N3	23:DA:171:G:H2'	2.35	0.41
23:DA:385:C:HO2'	23:DA:390:A:H2	1.69	0.41
23:DA:559:G:H22	39:DQ:49:HIS:CD2	2.38	0.41
23:DA:674:G:H4'	27:DE:74:ARG:HG3	2.02	0.41
23:DA:674:G:H2'	23:DA:804:A:H61	1.86	0.41
23:DA:753:C:OP1	52:D4:1:MET:CE	2.67	0.41
23:DA:857:C:C2	23:DA:858:U:C5	3.09	0.41
23:DA:872:A:C6	23:DA:906:G:C2	3.09	0.41
23:DA:911:A:C2'	35:DM:9:TYR:OH	2.62	0.41
23:DA:1217:C:OP1	39:DQ:15:LYS:HE2	2.20	0.41
23:DA:1234:U:H2'	23:DA:1235:G:O4'	2.21	0.41
23:DA:1281:G:C4	23:DA:1282:U:C6	3.09	0.41
23:DA:1323:U:C2'	23:DA:1324:G:H5'	2.50	0.41
23:DA:1423:G:N2	23:DA:1576:U:H1'	2.35	0.41
23:DA:1444:G:C2	23:DA:1548:C:C2	3.08	0.41
23:DA:1884:A:N1	23:DA:1885:A:C5	2.89	0.41
23:DA:1914:C:O2	23:DA:1914:C:O4'	2.39	0.41
23:DA:1993:U:H4'	26:DD:128:SER:HB2	2.03	0.41
23:DA:2052:G:O4'	26:DD:142:GLY:HA3	2.21	0.41
23:DA:2085:C:H2'	23:DA:2086:U:O4'	2.21	0.41
23:DA:2190:G:O2'	23:DA:2191:G:H5'	2.21	0.41
23:DA:2292:C:H6	23:DA:2292:C:O5'	2.03	0.41
23:DA:2415:G:H4'	34:DL:67:MET:N	2.36	0.41
23:DA:2459:A:C4	23:DA:2460:U:C6	3.08	0.41
23:DA:2639:A:H2'	23:DA:2640:G:C5'	2.46	0.41
23:DA:2694:G:C4	23:DA:2695:C:C5	3.09	0.41
23:DA:2712:U:O2'	23:DA:2713:A:H5'	2.21	0.41
23:DA:2743:C:H2'	23:DA:2744:G:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2758:A:C2	23:DA:2759:G:C1'	3.04	0.41
23:DA:2790:A:H2'	23:DA:2791:C:C5'	2.40	0.41
23:DA:2818:G:O2'	23:DA:2819:G:H5'	2.20	0.41
23:DA:2842:G:H2'	23:DA:2843:G:O4'	2.21	0.41
23:DA:2853:C:H2'	23:DA:2854:G:C8	2.49	0.41
23:DA:2869:G:C6	23:DA:2870:C:C4	3.08	0.41
23:DA:2885:C:H2'	23:DA:2886:G:O5'	2.21	0.41
25:DC:28:GLU:HB3	25:DC:29:PRO:CD	2.44	0.41
25:DC:70:TRP:CD1	25:DC:70:TRP:O	2.73	0.41
26:DD:50:GLY:HA3	26:DD:75:VAL:HG11	2.01	0.41
26:DD:64:LYS:HD2	26:DD:64:LYS:HA	1.81	0.41
26:DD:86:PRO:HB2	26:DD:87:GLU:H	1.43	0.41
27:DE:89:VAL:C	27:DE:91:GLY:H	2.24	0.41
29:DG:55:PRO:HG2	29:DG:61:HIS:ND1	2.36	0.41
29:DG:140:LYS:HB2	29:DG:140:LYS:HE3	1.88	0.41
30:DH:104:GLN:HE21	30:DH:104:GLN:HB3	1.68	0.41
34:DL:40:SER:O	34:DL:41:ARG:CD	2.49	0.41
35:DM:134:ARG:O	35:DM:135:ASP:C	2.59	0.41
37:DO:29:PHE:CD2	37:DO:92:TYR:OH	2.74	0.41
38:DP:62:THR:HA	38:DP:74:ARG:O	2.20	0.41
40:DR:64:HIS:HA	40:DR:92:THR:HA	2.03	0.41
40:DR:72:VAL:HG23	40:DR:85:LYS:HB3	2.03	0.41
41:DS:41:LYS:O	41:DS:42:ARG:C	2.60	0.41
43:DU:89:PHE:HD1	43:DU:89:PHE:HA	1.68	0.41
44:DV:120:ILE:HG12	44:DV:172:ALA:HA	2.03	0.41
44:DV:129:SER:OG	44:DV:130:PRO:HD2	2.21	0.41
50:D2:51:TYR:CZ	50:D2:52:TYR:CE1	3.09	0.41
1:AA:20:U:H2'	1:AA:21:G:O4'	2.21	0.41
1:AA:255:G:O6	1:AA:266:G:O6	2.39	0.41
1:AA:298:A:H2'	1:AA:299:G:O4'	2.21	0.41
1:AA:559:A:H4'	1:AA:560:U:C3'	2.51	0.41
1:AA:576:G:N2	1:AA:759:A:OP1	2.53	0.41
1:AA:638:G:H2'	1:AA:639:G:C5'	2.50	0.41
1:AA:838:G:N2	1:AA:849:C:C4	2.89	0.41
1:AA:897:C:H42	1:AA:902:G:H1	1.69	0.41
1:AA:1085:U:O4'	1:AA:1094:G:C2	2.74	0.41
1:AA:1095:U:H5'	1:AA:1109:C:O2	2.21	0.41
1:AA:1262:C:C2	1:AA:1263:C:C5	3.09	0.41
1:AA:1281:U:H3'	1:AA:1282:C:C6	2.56	0.41
1:AA:1342:C:O2'	1:AA:1343:G:H5'	2.21	0.41
1:AA:1371:G:C6	1:AA:1372:U:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:22:TRP:HZ3	3:AC:24:ALA:HB2	1.85	0.41
4:AD:13:ARG:O	4:AD:39:PRO:HA	2.21	0.41
4:AD:55:ALA:O	4:AD:58:LEU:HB3	2.21	0.41
4:AD:120:LEU:O	4:AD:125:HIS:HB2	2.21	0.41
5:AE:14:ARG:CZ	5:AE:129:ILE:HD11	2.50	0.41
8:AH:36:LEU:C	8:AH:38:ILE:H	2.23	0.41
11:AK:69:ALA:O	11:AK:72:ALA:HB3	2.21	0.41
17:AQ:98:LEU:HD23	17:AQ:98:LEU:HA	1.70	0.41
18:AR:53:ARG:C	18:AR:55:ARG:N	2.73	0.41
19:AS:62:ILE:C	19:AS:66:MET:HE3	2.41	0.41
22:AV:6183:G:C6	22:AV:6184:A:C5	3.09	0.41
23:BA:196:A:N3	23:BA:196:A:H2'	2.36	0.41
23:BA:245:G:C4	23:BA:246:C:C6	3.09	0.41
23:BA:304:G:N2	23:BA:314:A:C4	2.89	0.41
23:BA:528:A:C2	23:BA:2043:C:C4'	3.04	0.41
23:BA:572:A:H2'	23:BA:573:G:O4'	2.21	0.41
23:BA:641:C:O2'	23:BA:2350:C:OP1	2.30	0.41
23:BA:663:G:O3'	34:BL:21:ARG:NH1	2.53	0.41
23:BA:718:A:H2'	23:BA:719:C:H5'	2.03	0.41
23:BA:1416:G:O2'	23:BA:1417:C:P	2.78	0.41
23:BA:1418:G:O5'	23:BA:1418:G:C8	2.61	0.41
23:BA:1577:C:H2'	23:BA:1578:U:C1'	2.51	0.41
23:BA:1586:A:C2'	23:BA:1587:A:H5'	2.50	0.41
23:BA:1652:A:OP1	36:BN:9:LYS:HD2	2.21	0.41
23:BA:1684:C:C2	23:BA:1705:G:C2	3.08	0.41
23:BA:1838:C:HO2'	23:BA:1898:U:H5	1.68	0.41
23:BA:1884:A:N3	23:BA:1885:A:C8	2.89	0.41
23:BA:2097:C:H6	23:BA:2097:C:O5'	2.04	0.41
23:BA:2428:G:H5''	23:BA:2429:G:O5'	2.20	0.41
23:BA:2626:C:H2'	23:BA:2627:G:O4'	2.21	0.41
23:BA:2755:C:O5'	23:BA:2755:C:H6	2.04	0.41
23:BA:2786:U:OP1	26:BD:69:LYS:HE3	2.21	0.41
25:BC:98:VAL:CG2	25:BC:99:ASP:N	2.84	0.41
26:BD:68:ALA:C	26:BD:70:ALA:H	2.25	0.41
26:BD:96:PHE:HA	26:BD:100:GLU:OE1	2.20	0.41
27:BE:37:VAL:HG22	27:BE:184:TYR:HA	2.03	0.41
27:BE:130:ALA:O	27:BE:132:VAL:N	2.54	0.41
29:BG:21:PRO:HB2	29:BG:22:GLY:H	1.71	0.41
29:BG:121:ILE:O	29:BG:122:THR:HG23	2.21	0.41
30:BH:54:GLN:HA	30:BH:57:ARG:HB3	2.03	0.41
30:BH:88:ILE:HG12	30:BH:122:GLU:C	2.42	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BK:35:VAL:HG23	33:BK:65:THR:CG2	2.41	0.41
34:BL:36:LYS:HB3	34:BL:36:LYS:HE3	1.84	0.41
34:BL:148:LEU:HD13	34:BL:148:LEU:H	1.86	0.41
39:BQ:92:ARG:HD3	39:BQ:94:ASN:CB	2.49	0.41
43:BU:89:PHE:HD1	43:BU:89:PHE:HA	1.68	0.41
44:BV:107:THR:HA	44:BV:108:PRO:HD3	1.77	0.41
44:BV:129:SER:HA	44:BV:130:PRO:HD3	1.90	0.41
45:BW:26:TYR:HB2	45:BW:29:GLN:NE2	2.37	0.41
53:B5:32:LEU:CD2	53:B5:33:ASN:N	2.82	0.41
1:CA:29:G:C4	1:CA:30:U:C5	3.09	0.41
1:CA:52:G:O2'	1:CA:53:A:H5'	2.21	0.41
1:CA:67:C:H2'	1:CA:68:G:C8	2.56	0.41
1:CA:145:G:N2	1:CA:178:C:N3	2.68	0.41
1:CA:642:A:C1'	8:CH:113:SER:OG	2.69	0.41
1:CA:941:G:C2	1:CA:942:G:C8	3.09	0.41
1:CA:1102:A:C6	1:CA:1103:C:C4	3.09	0.41
1:CA:1122:U:H2'	1:CA:1123:A:C8	2.56	0.41
1:CA:1438:G:H2'	1:CA:1439:C:H6	1.86	0.41
1:CA:1480:G:C6	1:CA:1481:U:C4	3.09	0.41
2:CB:35:GLU:HG3	2:CB:40:HIS:HA	2.03	0.41
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	2.02	0.41
6:CF:29:ALA:O	6:CF:30:LEU:C	2.59	0.41
6:CF:41:GLU:O	6:CF:43:LEU:N	2.54	0.41
6:CF:100:ASN:C	6:CF:100:ASN:HD22	2.24	0.41
8:CH:64:LYS:CB	8:CH:79:VAL:HG21	2.52	0.41
9:CI:56:LEU:C	9:CI:56:LEU:HD23	2.41	0.41
9:CI:118:LYS:C	9:CI:120:ARG:H	2.24	0.41
11:CK:22:HIS:HB3	11:CK:29:ILE:HG12	2.03	0.41
15:CO:56:LEU:HD23	15:CO:60:VAL:CG2	2.51	0.41
19:CS:16:LEU:H	19:CS:16:LEU:HD12	1.86	0.41
22:CV:6179:U:H2'	22:CV:6180:U:C6	2.56	0.41
23:DA:97:C:O2	23:DA:97:C:H2'	2.19	0.41
23:DA:379:G:C6	23:DA:380:U:C5	3.09	0.41
23:DA:1006:C:O2'	23:DA:1007:C:H5'	2.21	0.41
23:DA:1144:G:C6	23:DA:1145:C:C4	3.09	0.41
23:DA:1439:A:C2	23:DA:1553:A:C4	3.09	0.41
23:DA:1632:A:C6	23:DA:1633:G:C6	3.09	0.41
23:DA:1894:C:N3	23:DA:1895:C:C5	2.89	0.41
23:DA:2285:C:C2'	23:DA:2286:A:H5''	2.46	0.41
23:DA:2448:A:OP1	23:DA:2499:C:OP1	2.39	0.41
23:DA:2461:C:H42	23:DA:2489:G:H1	1.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2859:G:O2'	23:DA:2860:A:H5'	2.21	0.41
25:DC:4:LYS:CB	25:DC:4:LYS:NZ	2.84	0.41
27:DE:114:VAL:HG11	27:DE:202:PHE:CZ	2.55	0.41
29:DG:92:ILE:CD1	29:DG:92:ILE:H	2.34	0.41
32:DJ:151:HIS:NE2	32:DJ:153:HIS:HA	2.36	0.41
34:DL:101:VAL:C	34:DL:103:ALA:N	2.75	0.41
37:DO:25:ARG:CG	37:DO:88:ASP:HB2	2.51	0.41
39:DQ:69:CYS:HB3	39:DQ:79:PHE:CD2	2.56	0.41
39:DQ:72:HIS:ND1	39:DQ:110:VAL:HG21	2.36	0.41
40:DR:99:ILE:HD13	40:DR:99:ILE:H	1.86	0.41
41:DS:9:TYR:N	41:DS:102:HIS:HD2	2.04	0.41
43:DU:31:LEU:HA	43:DU:32:PRO:HD3	1.80	0.41
44:DV:77:ASP:HB2	44:DV:84:GLU:CG	2.51	0.41
53:D5:13:ARG:O	53:D5:14:VAL:HG23	2.20	0.41
1:AA:429:U:H1'	1:AA:430:A:H5''	2.03	0.40
1:AA:551:U:H5'	12:AL:118:LYS:HZ3	1.86	0.40
1:AA:828:A:C5'	1:AA:859:A:C2	2.96	0.40
1:AA:892:A:O2'	1:AA:1415:G:H4'	2.21	0.40
2:AB:122:PHE:O	2:AB:122:PHE:CD2	2.74	0.40
2:AB:182:ILE:O	2:AB:183:PRO:C	2.59	0.40
2:AB:184:VAL:H	2:AB:198:ASP:HB2	1.86	0.40
3:AC:136:GLN:O	3:AC:140:ARG:N	2.54	0.40
4:AD:195:ALA:C	4:AD:196:LEU:HD12	2.41	0.40
7:AG:23:VAL:CG1	7:AG:43:PHE:HE2	2.34	0.40
8:AH:74:PRO:O	8:AH:76:PRO:HD3	2.21	0.40
12:AL:44:PRO:HB3	12:AL:91:ASP:OD1	2.21	0.40
12:AL:125:LYS:HD2	12:AL:125:LYS:HA	1.84	0.40
19:AS:12:ASP:HB2	19:AS:15:LEU:HD23	2.03	0.40
20:AT:30:LYS:HD3	20:AT:30:LYS:HA	1.93	0.40
23:BA:136:G:C4	23:BA:137(A):C:C6	3.10	0.40
23:BA:144:C:H2'	23:BA:145:G:H8	1.86	0.40
23:BA:180:G:N1	23:BA:214:G:N7	2.62	0.40
23:BA:270(X):G:O2'	23:BA:270(Y):G:H5'	2.21	0.40
23:BA:273(B):G:N2	23:BA:364:C:C2	2.89	0.40
23:BA:466:A:C3'	23:BA:467:G:H5'	2.50	0.40
23:BA:608:A:C4	23:BA:621:A:C6	3.09	0.40
23:BA:732:C:H2'	23:BA:733:G:C5'	2.51	0.40
23:BA:737:C:O2'	23:BA:738:G:H5'	2.21	0.40
23:BA:878:A:C6	23:BA:900:A:N7	2.89	0.40
23:BA:960:A:H2	23:BA:2495:G:N3	2.19	0.40
23:BA:978:G:H2'	23:BA:979:G:H5'	1.99	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1191:G:OP1	34:BL:35:HIS:CE1	2.74	0.40
23:BA:1386:C:C2	23:BA:1387:C:C5	3.08	0.40
23:BA:1389:G:N2	23:BA:1390:U:C2	2.89	0.40
23:BA:1416:G:O2'	23:BA:1417:C:H6	2.04	0.40
23:BA:1448:G:N2	23:BA:149(B):A:N6	2.69	0.40
23:BA:1465:G:H21	23:BA:1466:G:H1'	1.85	0.40
23:BA:1484:G:H2'	23:BA:1485:G:H8	1.85	0.40
23:BA:1541:U:H5''	23:BA:1543:A:OP2	2.19	0.40
23:BA:1728:G:C8	23:BA:1728:G:C3'	3.04	0.40
23:BA:1769:G:C6	23:BA:1984:G:C6	3.09	0.40
23:BA:1833:U:H2'	23:BA:1834:U:H6	1.86	0.40
23:BA:2006:C:H6	23:BA:2006:C:O5'	2.04	0.40
23:BA:2013:A:N6	23:BA:2014:A:C6	2.89	0.40
23:BA:2280:G:C2'	23:BA:2281:C:H5'	2.52	0.40
23:BA:2508:G:H2'	23:BA:2509:G:O4'	2.20	0.40
23:BA:2738:A:H2'	23:BA:2739:U:O5'	2.21	0.40
23:BA:2760:C:O2	23:BA:2760:C:H2'	2.21	0.40
23:BA:2776:A:C2	23:BA:2778:A:C4	3.09	0.40
23:BA:2840:C:H5''	36:BN:53:HIS:CG	2.56	0.40
24:BB:100:G:H2'	24:BB:101:A:O4'	2.21	0.40
25:BC:81:ALA:O	25:BC:93:ALA:HA	2.20	0.40
25:BC:162:SER:HB2	25:BC:195:ALA:CB	2.51	0.40
25:BC:165:ILE:C	25:BC:166:GLN:HE21	2.24	0.40
26:BD:34:VAL:HG11	26:BD:78:LEU:HD12	2.03	0.40
27:BE:39:TRP:CH2	27:BE:106:ARG:NE	2.89	0.40
27:BE:89:VAL:CG1	27:BE:90:PHE:H	2.28	0.40
27:BE:106:ARG:H	27:BE:106:ARG:HG2	1.46	0.40
27:BE:140:LEU:HD12	27:BE:140:LEU:HA	1.90	0.40
33:BK:7:TYR:CZ	33:BK:44:LYS:HG3	2.56	0.40
34:BL:59:LEU:HD23	34:BL:59:LEU:O	2.20	0.40
37:BO:13:ARG:HG3	37:BO:14:VAL:H	1.85	0.40
38:BP:62:THR:HA	38:BP:74:ARG:O	2.20	0.40
40:BR:99:ILE:HD13	40:BR:99:ILE:H	1.86	0.40
42:BT:31:HIS:HA	42:BT:32:PRO:HD3	1.92	0.40
43:BU:73:ARG:HH22	43:BU:82:PRO:HD3	1.86	0.40
44:BV:30:ASN:O	44:BV:33:LEU:N	2.53	0.40
47:BY:29:LYS:HD3	47:BY:57:ILE:HG21	2.02	0.40
47:BY:60:LEU:C	47:BY:62:THR:N	2.74	0.40
1:CA:340:U:H2'	1:CA:341:C:C6	2.56	0.40
1:CA:433:C:C5	1:CA:434:U:H5	2.39	0.40
1:CA:658:G:C4'	15:CO:22:THR:HB	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:973:G:OP1	10:CJ:57:LYS:HE2	2.21	0.40
1:CA:973:G:OP1	10:CJ:57:LYS:CE	2.69	0.40
1:CA:1056:U:C5	1:CA:1200:C:N4	2.88	0.40
1:CA:1085:U:O4'	1:CA:1094:G:N1	2.54	0.40
1:CA:1201:A:C2'	1:CA:1202:G:OP2	2.68	0.40
1:CA:1351:U:C2'	1:CA:1352:C:H5'	2.50	0.40
2:CB:61:LEU:O	2:CB:61:LEU:HD12	2.21	0.40
2:CB:169:LYS:HE2	2:CB:169:LYS:C	2.41	0.40
3:CC:4:LYS:O	3:CC:5:ILE:C	2.58	0.40
3:CC:16:ARG:HB2	3:CC:16:ARG:HH11	1.86	0.40
5:CE:109:ILE:O	5:CE:113:ALA:HB2	2.20	0.40
7:CG:23:VAL:HG13	7:CG:43:PHE:CE2	2.56	0.40
8:CH:39:LEU:HA	8:CH:39:LEU:HD13	1.77	0.40
8:CH:64:LYS:HB3	8:CH:79:VAL:HG21	2.02	0.40
9:CI:46:ALA:HB2	9:CI:74:ILE:HG22	2.03	0.40
12:CL:5:THR:O	12:CL:9:LEU:HD12	2.21	0.40
13:CM:24:GLY:HA2	13:CM:70:LEU:HD13	2.02	0.40
13:CM:76:ALA:CA	13:CM:79:LYS:HE2	2.45	0.40
15:CO:66:LEU:H	15:CO:66:LEU:HD13	1.86	0.40
16:CP:4:ILE:HA	16:CP:20:VAL:O	2.21	0.40
23:DA:256:A:HO2'	23:DA:257:A:H5'	1.84	0.40
23:DA:265:A:C8	23:DA:266:G:H1'	2.56	0.40
23:DA:743:G:O2'	23:DA:744:G:H5'	2.21	0.40
23:DA:1107:G:H2'	23:DA:1108:U:H6	1.86	0.40
23:DA:1178:C:H2'	23:DA:1179:C:H6	1.86	0.40
23:DA:1242:A:C8	23:DA:1243:G:C8	3.08	0.40
23:DA:1248:G:N7	39:DQ:3:ARG:HB2	2.36	0.40
23:DA:1286:A:O2'	23:DA:1288:U:P	2.79	0.40
23:DA:1299:G:H3'	23:DA:1639:U:O4	2.22	0.40
23:DA:1486:A:C2	23:DA:1487:G:C5	3.09	0.40
23:DA:1541:U:H3'	23:DA:1542:G:C2'	2.50	0.40
23:DA:1640:C:H5'	23:DA:1640:C:H6	1.85	0.40
23:DA:1709:U:C2	23:DA:1750:G:N2	2.88	0.40
23:DA:1733:G:H8	23:DA:1733:G:O5'	2.03	0.40
23:DA:1797:C:O2'	25:DC:259:THR:CG2	2.69	0.40
23:DA:2207:C:H2'	23:DA:2208:U:O4'	2.22	0.40
23:DA:2310:A:H2'	23:DA:2311:A:H5'	2.03	0.40
23:DA:2380:C:H6	23:DA:2380:C:O5'	2.03	0.40
23:DA:2562:U:H2'	23:DA:2563:U:C5'	2.50	0.40
23:DA:2812:G:H2'	23:DA:2813:A:O5'	2.21	0.40
24:DB:41:U:OP1	24:DB:42:C:H5	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DB:73:A:C8	24:DB:74:U:C5	3.09	0.40
25:DC:172:TYR:CD1	25:DC:185:VAL:O	2.67	0.40
25:DC:248:SER:HB2	25:DC:250:TRP:CE3	2.56	0.40
28:DF:97:ASP:HA	28:DF:100:TRP:HD1	1.86	0.40
33:DK:88:ASN:N	33:DK:92:GLU:O	2.40	0.40
34:DL:23:PRO:O	34:DL:29:LYS:O	2.38	0.40
34:DL:80:TYR:CZ	34:DL:111:ARG:HG2	2.55	0.40
35:DM:30:GLY:HA2	35:DM:107:ALA:HB2	2.02	0.40
36:DN:18:LEU:HD11	36:DN:22:ARG:CZ	2.50	0.40
36:DN:21:TYR:OH	36:DN:43:GLU:HG2	2.21	0.40
36:DN:28:LEU:HA	36:DN:28:LEU:HD23	1.70	0.40
39:DQ:59:ARG:HE	39:DQ:59:ARG:HB2	1.50	0.40
40:DR:99:ILE:HD13	40:DR:100:ARG:H	1.86	0.40
43:DU:3:VAL:C	43:DU:5:MET:H	2.23	0.40
43:DU:61:ILE:HG12	43:DU:61:ILE:H	1.54	0.40
46:DX:34:THR:C	46:DX:35:THR:HG23	2.41	0.40
47:DY:2:LYS:O	47:DY:5:GLU:CD	2.59	0.40
47:DY:48:HIS:C	47:DY:50:ILE:N	2.72	0.40
48:DZ:40:THR:HG23	48:DZ:43:ILE:CD1	2.50	0.40
1:AA:102:G:C5	1:AA:103:C:C5	3.09	0.40
1:AA:245:C:C2	1:AA:284:G:C2	3.09	0.40
1:AA:450:G:H5''	16:AP:41:PRO:O	2.22	0.40
1:AA:451:A:H1'	1:AA:452:A:N7	2.37	0.40
1:AA:540:G:C6	1:AA:541:G:C5	3.09	0.40
1:AA:562:C:H1'	12:AL:14:ARG:HD2	2.02	0.40
1:AA:690:G:C5	1:AA:691:G:C6	3.09	0.40
1:AA:700:G:H4'	1:AA:704:A:H1'	2.04	0.40
1:AA:1098:C:H2'	1:AA:1099:G:O4'	2.21	0.40
1:AA:1118:C:H5''	9:AI:104:ARG:HG2	2.04	0.40
1:AA:1151:A:O2'	1:AA:1152:A:O4'	2.39	0.40
1:AA:1292:U:H6	1:AA:1292:U:O5'	2.04	0.40
2:AB:52:GLU:HG2	2:AB:56:ARG:HE	1.86	0.40
2:AB:74:LYS:HB2	2:AB:74:LYS:NZ	2.36	0.40
2:AB:100:GLY:N	2:AB:176:GLU:OE2	2.41	0.40
3:AC:48:TYR:O	3:AC:51:GLY:N	2.51	0.40
6:AF:91:VAL:HG13	18:AR:72:ARG:HH21	1.87	0.40
8:AH:17:THR:O	8:AH:78:GLN:NE2	2.54	0.40
12:AL:36:CYS:SG	12:AL:80:SER:HB2	2.61	0.40
13:AM:56:LEU:O	13:AM:56:LEU:HD13	2.21	0.40
17:AQ:3:LYS:O	17:AQ:5:VAL:HG23	2.21	0.40
19:AS:53:ASN:C	19:AS:55:LYS:H	2.24	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:380:U:O2	23:BA:381:G:C8	2.74	0.40
23:BA:455:C:N3	23:BA:472:A:H2'	2.36	0.40
23:BA:958:U:C2'	23:BA:959:A:OP2	2.69	0.40
23:BA:1448:G:H1'	23:BA:1528:A:N1	2.36	0.40
23:BA:1509:A:O3'	23:BA:1510:A:O4'	2.39	0.40
23:BA:1607:C:N4	23:BA:1621:U:C3'	2.84	0.40
23:BA:1926:U:O2	23:BA:1929:G:C2	2.75	0.40
23:BA:2052:G:O4'	26:BD:142:GLY:HA3	2.21	0.40
23:BA:2285:C:H5	51:B3:27:LYS:HZ2	1.69	0.40
23:BA:2388:A:H8	23:BA:2389:G:C5	2.40	0.40
23:BA:2575:C:H5'	26:BD:144:ARG:HG2	2.02	0.40
23:BA:2792:G:C6	23:BA:2805:G:N1	2.90	0.40
23:BA:2823:A:OP1	26:BD:113:PHE:HB2	2.21	0.40
24:BB:16:G:O6	24:BB:69:G:C2	2.74	0.40
26:BD:61:ARG:HB2	26:BD:63:LEU:HB2	2.04	0.40
26:BD:158:GLY:O	26:BD:159:HIS:O	2.38	0.40
27:BE:144:LYS:O	27:BE:146:ALA:N	2.44	0.40
30:BH:27:ARG:HD2	46:BX:71:TYR:CE1	2.56	0.40
34:BL:90:ARG:C	34:BL:91:PHE:HD1	2.24	0.40
35:BM:83:MET:O	35:BM:83:MET:CG	2.70	0.40
36:BN:59:ASP:OD2	36:BN:59:ASP:N	2.53	0.40
41:BS:107:LEU:N	41:BS:107:LEU:HD13	2.36	0.40
42:BT:63:LYS:HZ1	42:BT:72:LYS:HB3	1.85	0.40
44:BV:36:LYS:C	44:BV:37:VAL:CG1	2.88	0.40
46:BX:23:LYS:HE2	46:BX:37:ILE:HD11	2.03	0.40
50:B2:31:VAL:HG13	50:B2:42:PRO:HG3	2.02	0.40
53:B5:7:HIS:CD2	53:B5:60:LEU:HD13	2.56	0.40
1:CA:448:A:C6	1:CA:487:A:N3	2.89	0.40
1:CA:562:C:N3	1:CA:884:U:C5	2.89	0.40
1:CA:604:G:N7	1:CA:605:U:C5	2.89	0.40
1:CA:614:A:H2'	1:CA:615:C:C6	2.56	0.40
1:CA:638:G:H2'	1:CA:639:G:C5'	2.51	0.40
1:CA:862:C:C5	1:CA:863:U:C5	3.09	0.40
1:CA:1102:A:N6	1:CA:1103:C:N4	2.70	0.40
2:CB:61:LEU:HD21	2:CB:161:ALA:CB	2.51	0.40
2:CB:61:LEU:HG	2:CB:68:ILE:HG13	2.03	0.40
2:CB:74:LYS:NZ	2:CB:74:LYS:HB2	2.36	0.40
3:CC:18:TRP:H	3:CC:18:TRP:HE3	1.68	0.40
3:CC:21:ARG:O	3:CC:22:TRP:HB3	2.21	0.40
4:CD:68:TYR:CD1	4:CD:68:TYR:N	2.88	0.40
5:CE:79:GLU:CG	5:CE:92:LYS:HG3	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:29:ALA:HA	6:CF:32:ASN:OD1	2.21	0.40
6:CF:55:ASP:OD1	6:CF:56:PRO:HD2	2.22	0.40
7:CG:75:VAL:HG23	7:CG:75:VAL:O	2.21	0.40
14:CN:36:PHE:CD1	14:CN:36:PHE:C	2.94	0.40
15:CO:43:LEU:HD23	15:CO:43:LEU:HA	1.87	0.40
15:CO:63:ARG:O	15:CO:67:LEU:HD12	2.21	0.40
17:CQ:63:ARG:HG2	17:CQ:64:PRO:CD	2.52	0.40
18:CR:40:LEU:HD23	18:CR:40:LEU:HA	1.88	0.40
18:CR:53:ARG:C	18:CR:55:ARG:N	2.74	0.40
23:DA:72:U:H1'	47:DY:58:ALA:CB	2.52	0.40
23:DA:283:A:H4'	23:DA:284:U:OP2	2.21	0.40
23:DA:288:C:O2'	23:DA:289:A:H5'	2.21	0.40
23:DA:415:A:H2'	23:DA:416:C:O4'	2.22	0.40
23:DA:415:A:C5	23:DA:416:C:C5	3.09	0.40
23:DA:692:C:C2'	23:DA:693:C:H5'	2.52	0.40
23:DA:769:G:O2'	23:DA:770:G:H5'	2.21	0.40
23:DA:855:G:C6	23:DA:856:C:C4	3.10	0.40
23:DA:902:C:H2'	23:DA:903:C:C6	2.56	0.40
23:DA:998:C:OP2	39:DQ:93:LYS:NZ	2.55	0.40
23:DA:1332:G:H22	23:DA:1610:A:H8	1.68	0.40
23:DA:1416:G:O2'	23:DA:1417:C:H6	2.03	0.40
23:DA:1555:G:O2'	23:DA:1556:C:H5'	2.21	0.40
23:DA:1632:A:H8	23:DA:1632:A:O5'	2.04	0.40
23:DA:2039:C:H2'	23:DA:2040:C:C6	2.54	0.40
23:DA:2183:C:O2	23:DA:2183:C:C2'	2.67	0.40
23:DA:2197:U:H1'	23:DA:2198:A:C8	2.56	0.40
23:DA:2208:U:C1'	25:DC:151:LYS:HE3	2.51	0.40
23:DA:2299:G:O6	23:DA:2318:G:N2	2.54	0.40
23:DA:2305:A:H5''	28:DF:134:GLY:CA	2.48	0.40
23:DA:2396:G:N3	23:DA:2421:G:C2	2.89	0.40
23:DA:2464:C:C2	23:DA:2487:G:N2	2.90	0.40
23:DA:2749:A:H4'	29:DG:62:LYS:HB3	2.02	0.40
23:DA:2846:G:C4	23:DA:2847:U:C5	3.09	0.40
24:DB:72:G:N2	24:DB:103:U:C5	2.89	0.40
25:DC:205:VAL:CG1	25:DC:205:VAL:O	2.68	0.40
26:DD:110:GLY:CA	26:DD:162:ALA:HB2	2.52	0.40
27:DE:123:LEU:HD11	27:DE:125:LEU:HD23	2.03	0.40
27:DE:167:ALA:O	27:DE:168:ARG:C	2.60	0.40
30:DH:9:LEU:HB3	30:DH:12:LEU:HD23	2.04	0.40
30:DH:97:ILE:HG21	30:DH:114:LEU:HD11	2.04	0.40
34:DL:51:PHE:O	34:DL:52:GLU:C	2.59	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DN:103:ARG:NH1	36:DN:108:GLY:O	2.55	0.40
36:DN:105:ARG:HG2	36:DN:106:GLY:N	2.37	0.40
37:DO:34:HIS:HB3	37:DO:36:TYR:HE1	1.86	0.40
38:DP:126:ALA:C	38:DP:128:GLU:H	2.24	0.40
44:DV:9:TYR:CD2	44:DV:35:ARG:CZ	3.03	0.40
45:DW:55:ARG:NH1	45:DW:55:ARG:HB3	2.36	0.40
49:D1:59:VAL:CG1	49:D1:60:GLU:H	2.15	0.40
53:D5:53:PRO:HA	53:D5:56:GLU:HB2	2.04	0.40
1:AA:53:A:C2	1:AA:54:C:C1'	3.04	0.40
1:AA:59:A:C2	1:AA:354:G:C4	3.10	0.40
1:AA:92:G:H2'	1:AA:93:U:O4'	2.22	0.40
1:AA:184:G:N2	1:AA:194:C:C2	2.90	0.40
1:AA:425:G:C6	1:AA:426:G:C5	3.10	0.40
1:AA:448:A:C2	1:AA:487:A:C2	3.08	0.40
1:AA:538:G:O3'	12:AL:113:LYS:HG3	2.22	0.40
1:AA:560:U:H4'	1:AA:561:U:O5'	2.21	0.40
1:AA:565:U:C4	1:AA:566:G:C6	3.09	0.40
1:AA:630:G:H2'	1:AA:631:G:O4'	2.22	0.40
1:AA:658:G:C4	1:AA:659:U:C5	3.10	0.40
1:AA:658:G:O2'	1:AA:659:U:H5'	2.22	0.40
1:AA:731:G:C6	1:AA:732:C:C4	3.09	0.40
1:AA:754:C:H1'	15:AO:69:TYR:CG	2.56	0.40
1:AA:781:A:H3'	1:AA:782:A:C5'	2.50	0.40
1:AA:953:G:C6	1:AA:954:G:C4	3.10	0.40
1:AA:1066:C:H3'	1:AA:1067:A:C8	2.56	0.40
2:AB:16:HIS:HB3	2:AB:210:SER:HA	2.03	0.40
3:AC:33:LEU:O	3:AC:33:LEU:HD12	2.21	0.40
3:AC:172:ARG:O	3:AC:173:VAL:CG2	2.56	0.40
5:AE:12:LEU:HD22	5:AE:12:LEU:O	2.22	0.40
5:AE:51:VAL:O	5:AE:52:PRO:C	2.57	0.40
5:AE:77:PRO:CD	5:AE:142:LEU:HD22	2.45	0.40
5:AE:127:ASN:HB3	5:AE:130:ASN:HB2	2.04	0.40
8:AH:2:LEU:HD23	8:AH:2:LEU:HA	1.88	0.40
8:AH:111:ILE:O	8:AH:112:LEU:CB	2.70	0.40
8:AH:120:THR:O	8:AH:121:ASP:C	2.60	0.40
9:AI:127:LYS:O	9:AI:128:ARG:O	2.38	0.40
12:AL:100:VAL:HG12	12:AL:103:VAL:HG23	2.03	0.40
15:AO:45:VAL:HG22	15:AO:46:HIS:N	2.36	0.40
15:AO:85:LEU:HA	15:AO:85:LEU:HD23	1.83	0.40
16:AP:6:LEU:HB3	16:AP:17:TYR:HD2	1.85	0.40
20:AT:78:ALA:O	20:AT:79:ARG:C	2.60	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:578:A:H5'	23:BA:1254:A:OP1	2.21	0.40
23:BA:588:U:H1'	27:BE:90:PHE:HB3	2.04	0.40
23:BA:588:U:C2	27:BE:90:PHE:CE1	3.10	0.40
23:BA:674:G:H2'	23:BA:804:A:H61	1.85	0.40
23:BA:748:G:OP2	41:BS:88:ARG:HG3	2.21	0.40
23:BA:799:G:N1	23:BA:800:A:N6	2.70	0.40
23:BA:830:G:C8	23:BA:2448:A:C2	3.09	0.40
23:BA:865:C:C4'	23:BA:866:A:N7	2.82	0.40
23:BA:1051:G:C5	23:BA:1052:C:N3	2.89	0.40
23:BA:1335:U:OP2	42:BT:65:ARG:NH1	2.54	0.40
23:BA:1411:C:O2'	23:BA:1412:A:H5'	2.21	0.40
23:BA:1649:G:C6	23:BA:2009:G:C6	3.09	0.40
23:BA:1687:G:H2'	23:BA:1688:U:C6	2.56	0.40
23:BA:2244:U:H1'	23:BA:2434:A:C4	2.55	0.40
23:BA:2305:A:C5'	28:BF:134:GLY:HA3	2.48	0.40
23:BA:2378:A:H4'	37:BO:84:GLN:NE2	2.35	0.40
23:BA:2415:G:H4'	34:BL:67:MET:H	1.86	0.40
23:BA:2552:U:H6	23:BA:2552:U:O5'	2.04	0.40
23:BA:2615:U:C2	50:B2:7:PRO:HA	2.56	0.40
23:BA:2682:U:O4	23:BA:2728:U:H1'	2.21	0.40
23:BA:2722:G:O2'	36:BN:5:LYS:HB2	2.22	0.40
23:BA:2727:G:C6	23:BA:2728:U:C5	3.08	0.40
23:BA:2746:U:C2'	23:BA:2747:G:O5'	2.69	0.40
23:BA:2861:G:C2	23:BA:2862:G:C8	3.09	0.40
24:BB:3:C:H2'	24:BB:4:C:C6	2.57	0.40
24:BB:83:G:N2	24:BB:84:C:H1'	2.36	0.40
25:BC:8:PRO:CB	25:BC:14:ARG:HB2	2.42	0.40
26:BD:6:GLY:CA	26:BD:51:PHE:HE2	2.33	0.40
26:BD:67:PHE:HB3	26:BD:72:VAL:O	2.20	0.40
30:BH:79:ILE:H	30:BH:145:VAL:HG23	1.87	0.40
33:BK:18:LYS:HG3	33:BK:45:GLU:OE2	2.22	0.40
34:BL:6:LEU:HD12	34:BL:8:PRO:HD2	2.01	0.40
34:BL:32:THR:C	34:BL:36:LYS:HE2	2.36	0.40
34:BL:122:PRO:O	34:BL:123:LEU:HB3	2.22	0.40
35:BM:127:ILE:HG23	35:BM:128:LYS:N	2.36	0.40
38:BP:113:LYS:O	38:BP:114:LEU:HD23	2.21	0.40
39:BQ:79:PHE:CE1	39:BQ:83:LEU:HD13	2.57	0.40
40:BR:15:GLU:HB3	40:BR:16:PRO:HD2	2.04	0.40
42:BT:7:VAL:HG13	42:BT:30:VAL:HG13	2.02	0.40
42:BT:62:LYS:C	42:BT:63:LYS:HD3	2.42	0.40
1:CA:20:U:O2	1:CA:916:G:C2	2.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:69:G:H2'	1:CA:73:G:C8	2.56	0.40
1:CA:130:A:H5''	1:CA:190:G:O2'	2.21	0.40
1:CA:402:G:H2'	1:CA:403:C:H5'	2.03	0.40
1:CA:451:A:H61	1:CA:481:G:C5'	2.34	0.40
1:CA:465:A:O2'	1:CA:466:G:H5''	2.21	0.40
1:CA:772:U:C2'	1:CA:773:G:H5'	2.51	0.40
1:CA:897:C:H5''	1:CA:898:G:OP2	2.21	0.40
1:CA:900:A:H2'	1:CA:901:A:C8	2.56	0.40
1:CA:972:C:OP2	10:CJ:57:LYS:HD2	2.22	0.40
1:CA:977:A:H8	1:CA:1223:C:C4	2.40	0.40
1:CA:1048:G:C2	1:CA:1210:C:N3	2.88	0.40
1:CA:1060:C:H5''	10:CJ:51:ARG:HG2	2.03	0.40
1:CA:1077:G:C6	1:CA:1081:G:C6	3.10	0.40
1:CA:1371:G:H4'	9:CI:69:GLY:HA3	2.04	0.40
1:CA:1410:G:H2'	1:CA:1411:C:C6	2.57	0.40
2:CB:52:GLU:HG2	2:CB:56:ARG:HE	1.86	0.40
5:CE:104:ALA:O	5:CE:107:ARG:HB3	2.21	0.40
5:CE:136:MET:O	5:CE:139:LEU:N	2.54	0.40
6:CF:88:VAL:CG1	6:CF:89:MET:N	2.83	0.40
8:CH:69:ARG:HA	8:CH:69:ARG:HD3	1.80	0.40
12:CL:6:ILE:O	12:CL:7:ASN:C	2.60	0.40
13:CM:93:ARG:HA	13:CM:93:ARG:HE	1.87	0.40
18:CR:65:ILE:O	18:CR:69:THR:HG23	2.21	0.40
20:CT:15:ARG:HD3	20:CT:15:ARG:HA	1.89	0.40
20:CT:55:ILE:C	20:CT:57:ARG:N	2.74	0.40
23:DA:528:A:H2'	23:DA:529:A:O5'	2.21	0.40
23:DA:770:G:C2'	23:DA:771:G:O5'	2.69	0.40
23:DA:791:C:H4'	23:DA:792:G:OP1	2.21	0.40
23:DA:814:C:H41	34:DL:27:HIS:HD2	1.64	0.40
23:DA:857:C:N3	23:DA:858:U:C4	2.89	0.40
23:DA:900:A:C5	23:DA:901:A:C8	3.10	0.40
23:DA:1105:U:C2'	23:DA:1106:G:H5'	2.51	0.40
23:DA:114(B):A:N3	23:DA:1144:G:C8	2.90	0.40
23:DA:1314:C:H2'	23:DA:1315:C:H5'	2.04	0.40
23:DA:1401:G:C5	23:DA:1402:C:C4	3.09	0.40
23:DA:1416:G:O2'	23:DA:1417:C:P	2.78	0.40
23:DA:1417:C:N4	23:DA:1581:G:H1	2.20	0.40
23:DA:1596:A:O2'	23:DA:1597:A:H5'	2.22	0.40
23:DA:1599:C:H2'	23:DA:1600:C:C6	2.57	0.40
23:DA:1614:A:C6	41:DS:87:PRO:HB3	2.56	0.40
23:DA:1652:A:OP1	36:DN:9:LYS:HD2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1718:G:H2'	23:DA:1725:G:H8	1.87	0.40
23:DA:1805:U:H2'	23:DA:1806:C:C6	2.56	0.40
23:DA:1856:G:C2	23:DA:1857:G:H1'	2.56	0.40
23:DA:1881:C:O2'	23:DA:1882:C:H5'	2.21	0.40
23:DA:2036:C:C6	23:DA:2036:C:C5'	2.99	0.40
23:DA:2063:C:O2	23:DA:2450:A:N1	2.54	0.40
23:DA:2242:G:H2'	23:DA:2243:U:O4'	2.21	0.40
23:DA:2592:G:C5	23:DA:2593:U:C5	3.09	0.40
23:DA:2661:G:H2'	23:DA:2662:A:O4'	2.21	0.40
23:DA:2755:C:O2'	23:DA:2756:U:H6	2.03	0.40
25:DC:32:SER:HA	25:DC:36:PRO:HG3	2.03	0.40
25:DC:98:VAL:HG23	25:DC:99:ASP:N	2.36	0.40
25:DC:130:ALA:CB	25:DC:192:THR:HA	2.51	0.40
25:DC:133:LEU:HG	25:DC:189:CYS:O	2.20	0.40
25:DC:147:LEU:HD13	25:DC:155:LEU:HD13	2.03	0.40
25:DC:185:VAL:HG12	25:DC:186:HIS:H	1.85	0.40
26:DD:2:LYS:CD	26:DD:95:ILE:O	2.69	0.40
26:DD:34:VAL:HG11	26:DD:78:LEU:CD1	2.52	0.40
26:DD:47:VAL:HG21	26:DD:85:ASN:HA	2.02	0.40
27:DE:101:LEU:CD1	27:DE:102:PRO:HD2	2.42	0.40
27:DE:154:VAL:O	27:DE:174:VAL:HG23	2.21	0.40
33:DK:114:ILE:O	33:DK:118:ALA:N	2.49	0.40
33:DK:119:PRO:HB2	38:DP:68:TYR:HE1	1.76	0.40
34:DL:16:ARG:O	34:DL:18:ARG:N	2.55	0.40
35:DM:34:LEU:HB2	35:DM:118:LEU:HD13	2.02	0.40
35:DM:54:MET:CG	35:DM:64:ILE:HD13	2.46	0.40
35:DM:74:TYR:N	35:DM:92:GLY:O	2.45	0.40
36:DN:13:HIS:CE1	36:DN:15:SER:HB3	2.56	0.40
38:DP:34:VAL:O	38:DP:40:THR:HA	2.21	0.40
39:DQ:47:TYR:CE1	40:DR:74:LYS:HE3	2.56	0.40
39:DQ:60:LEU:C	39:DQ:60:LEU:HD13	2.41	0.40
39:DQ:106:PHE:O	39:DQ:109:LEU:HB2	2.21	0.40
41:DS:6:ILE:HG12	41:DS:104:THR:OG1	2.21	0.40
41:DS:45:TYR:CD2	41:DS:46:PHE:CE1	3.10	0.40
42:DT:35:THR:O	42:DT:39:ILE:CG1	2.61	0.40
43:DU:63:LYS:CG	43:DU:64:GLU:N	2.84	0.40
47:DY:36:ARG:HA	47:DY:39:ALA:HB2	2.02	0.40
50:D2:51:TYR:CZ	50:D2:52:TYR:CZ	3.09	0.40
1:AA:186(D):G:C6	1:AA:186(E):C:C4	3.09	0.40
1:AA:336:C:H2'	1:AA:337:C:C6	2.56	0.40
1:AA:505:G:OP2	1:AA:534:U:H2'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:650:G:C2'	1:AA:651:C:H5'	2.51	0.40
1:AA:690:G:C6	1:AA:691:G:N1	2.89	0.40
1:AA:724:G:N3	1:AA:725:G:C8	2.89	0.40
1:AA:728:A:C6	15:AO:54:ARG:HD2	2.57	0.40
1:AA:853:G:H2'	1:AA:854:G:H5'	2.03	0.40
3:AC:56:ASP:HB3	3:AC:67:THR:HB	2.04	0.40
3:AC:146:ALA:HA	3:AC:204:LEU:HD23	2.04	0.40
4:AD:146:ILE:HG22	4:AD:146:ILE:O	2.21	0.40
4:AD:156:GLU:O	4:AD:160:GLN:HG3	2.21	0.40
6:AF:96:PRO:HB3	18:AR:30:ASP:OD2	2.21	0.40
7:AG:95:ARG:CZ	7:AG:99:LEU:HD11	2.50	0.40
11:AK:93:GLN:HA	11:AK:96:ARG:HB2	2.04	0.40
13:AM:33:ALA:HB1	13:AM:56:LEU:CD2	2.47	0.40
15:AO:81:LEU:O	15:AO:81:LEU:HD12	2.20	0.40
16:AP:32:TYR:HD2	16:AP:32:TYR:C	2.25	0.40
23:BA:189:G:H1'	23:BA:207:A:N6	2.36	0.40
23:BA:243:U:OP1	53:B5:6:THR:CG2	2.70	0.40
23:BA:286:C:C2	23:BA:287:C:C5	3.09	0.40
23:BA:337:C:C2'	23:BA:338:G:O5'	2.70	0.40
23:BA:379:G:N2	46:BX:20:ARG:NH2	2.70	0.40
23:BA:380:U:C2'	46:BX:20:ARG:HE	2.35	0.40
23:BA:814:C:H41	34:BL:27:HIS:HD2	1.64	0.40
23:BA:953:A:O2'	23:BA:954:G:H5'	2.21	0.40
23:BA:1234:U:H2'	23:BA:1235:G:O4'	2.22	0.40
23:BA:1341:U:H4'	42:BT:56:THR:O	2.21	0.40
23:BA:1389:G:H2'	23:BA:1390:U:H6	1.85	0.40
23:BA:1679:U:C3'	23:BA:1680:U:H5'	2.52	0.40
23:BA:2075:U:C4	23:BA:2238:G:C6	3.09	0.40
23:BA:2436:G:C4	23:BA:2437:U:C5	3.10	0.40
23:BA:2791:C:H2'	23:BA:2791:C:O2	2.21	0.40
24:BB:72:G:N2	24:BB:103:U:C5	2.90	0.40
25:BC:206:LEU:HA	25:BC:211:ARG:HE	1.86	0.40
25:BC:232:PRO:HG3	25:BC:248:SER:O	2.21	0.40
26:BD:9:VAL:CG2	26:BD:10:GLY:N	2.85	0.40
27:BE:64:ILE:HG23	27:BE:65:TRP:NE1	2.36	0.40
28:BF:41:GLN:HG2	28:BF:155:MET:CB	2.48	0.40
28:BF:96:ARG:HB2	28:BF:97:ASP:H	1.63	0.40
30:BH:35:LEU:N	30:BH:35:LEU:HD23	2.36	0.40
32:BJ:91:GLU:HA	32:BJ:111:GLU:OE2	2.21	0.40
34:BL:107:LYS:C	34:BL:108:LYS:HG2	2.41	0.40
34:BL:112:LEU:HD23	34:BL:112:LEU:C	2.42	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BL:131:SER:HB3	34:BL:134:ALA:H	1.86	0.40
36:BN:45:ARG:HG3	36:BN:95:THR:CG2	2.51	0.40
36:BN:84:ALA:N	36:BN:85:PRO:CD	2.84	0.40
37:BO:26:LEU:HD23	37:BO:38:GLN:O	2.21	0.40
37:BO:73:LEU:O	37:BO:77:ALA:N	2.54	0.40
41:BS:29:LEU:HD21	41:BS:33:ARG:NH2	2.36	0.40
43:BU:2:ARG:NH1	43:BU:2:ARG:HG3	2.35	0.40
50:B2:51:TYR:CZ	50:B2:52:TYR:CE1	3.09	0.40
1:CA:39:G:N1	1:CA:40:C:C5	2.90	0.40
1:CA:311:C:OP1	16:CP:26:ARG:NH2	2.45	0.40
1:CA:357:G:H8	1:CA:357:G:O5'	2.04	0.40
1:CA:654:G:C2	1:CA:753:A:C4	3.08	0.40
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.21	0.40
1:CA:725:G:H2'	1:CA:726:C:C6	2.56	0.40
1:CA:1129:C:C1'	1:CA:1130:A:OP2	2.63	0.40
1:CA:1139:G:N2	1:CA:1143:G:N1	2.70	0.40
1:CA:1233:G:OP1	9:CI:123:PRO:HA	2.21	0.40
1:CA:1371:G:C6	1:CA:1372:U:C4	3.10	0.40
1:CA:1466:C:H2'	1:CA:1467:G:O4'	2.22	0.40
2:CB:83:MET:HE2	2:CB:234:PRO:HG2	2.04	0.40
3:CC:61:ALA:O	3:CC:62:ASP:HB2	2.22	0.40
3:CC:141:VAL:HG11	3:CC:202:ILE:HG23	2.04	0.40
4:CD:78:LEU:HD23	4:CD:78:LEU:HA	1.93	0.40
9:CI:111:ARG:O	9:CI:113:LYS:HE3	2.20	0.40
11:CK:13:GLN:HG3	11:CK:75:TYR:C	2.42	0.40
12:CL:64:GLU:OE1	12:CL:64:GLU:C	2.59	0.40
13:CM:79:LYS:O	13:CM:82:MET:HB3	2.22	0.40
16:CP:18:ARG:O	16:CP:19:ILE:C	2.59	0.40
20:CT:23:ARG:O	20:CT:26:ASN:ND2	2.55	0.40
23:DA:53:A:H2'	23:DA:54:G:O4'	2.22	0.40
23:DA:553:U:C4	23:DA:554:U:C4	3.10	0.40
23:DA:826:U:O2	23:DA:832:G:C2	2.75	0.40
23:DA:1116:C:H2'	23:DA:1117:G:O4'	2.22	0.40
23:DA:1263:U:O4'	50:D2:10:LYS:HG3	2.22	0.40
23:DA:1314:C:O2'	23:DA:1315:C:H5'	2.21	0.40
23:DA:1388:G:C4	23:DA:1389:G:C8	3.10	0.40
23:DA:1448:G:H1'	23:DA:1528:A:N1	2.35	0.40
23:DA:1497:U:O2	23:DA:1497:U:O4'	2.38	0.40
23:DA:1798:U:C5'	25:DC:259:THR:O	2.70	0.40
23:DA:1889:A:C6	23:DA:1890:A:C6	3.09	0.40
23:DA:1952:A:C6	33:DK:22:ILE:HD12	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1999:C:O2	23:DA:2687:U:O2'	2.29	0.40
23:DA:2295:C:N3	23:DA:2296:U:C5	2.89	0.40
23:DA:2322:A:H3'	23:DA:2323:G:C8	2.48	0.40
23:DA:2358:G:C5	23:DA:2359:C:C5	3.10	0.40
23:DA:2370:G:O2'	51:D3:45:LYS:HE3	2.21	0.40
23:DA:2766:G:C2	23:DA:2767:C:C5	3.10	0.40
23:DA:2837:G:N1	23:DA:2838:G:C5	2.90	0.40
23:DA:2846:G:N7	23:DA:2847:U:C5	2.90	0.40
24:DB:81:G:C5	24:DB:82:G:N7	2.90	0.40
25:DC:26:LYS:HB2	25:DC:26:LYS:HE3	1.68	0.40
25:DC:70:TRP:CH2	25:DC:150:LYS:CA	3.03	0.40
25:DC:205:VAL:O	25:DC:206:LEU:C	2.57	0.40
26:DD:24:THR:CB	26:DD:186:GLY:HA2	2.50	0.40
28:DF:25:TYR:HD1	28:DF:30:GLU:HB3	1.79	0.40
30:DH:129:THR:HG22	30:DH:130:TYR:H	1.87	0.40
30:DH:136:VAL:N	30:DH:137:PRO:HD3	2.37	0.40
35:DM:138:ASP:HB3	35:DM:139:GLU:H	1.53	0.40
39:DQ:8:VAL:O	39:DQ:9:VAL:C	2.59	0.40
39:DQ:34:LYS:HE3	39:DQ:37:GLU:OE1	2.21	0.40
44:DV:48:PHE:CE2	44:DV:71:VAL:HG21	2.57	0.40
44:DV:56:VAL:C	44:DV:57:ILE:HD12	2.41	0.40
44:DV:146:ILE:H	44:DV:146:ILE:HG12	1.62	0.40
46:DX:67:ILE:N	46:DX:68:PRO:CD	2.83	0.40
47:DY:35:LEU:HD12	47:DY:53:LEU:CD1	2.35	0.40
50:D2:33:CYS:SG	50:D2:38:ALA:HB3	2.62	0.40
52:D4:31:LEU:HD12	52:D4:31:LEU:HA	1.84	0.40
1:AA:39:G:N2	1:AA:40:C:N1	2.69	0.40
1:AA:407:G:N3	1:AA:408:A:C8	2.90	0.40
1:AA:658:G:O4'	15:AO:22:THR:HB	2.22	0.40
1:AA:675:A:O2'	11:AK:114:VAL:O	2.38	0.40
1:AA:702:A:O4'	23:BA:1848:A:H1'	2.22	0.40
1:AA:806:C:O2'	1:AA:807:A:H5'	2.21	0.40
1:AA:914:A:OP2	1:AA:914:A:O4'	2.39	0.40
1:AA:929:G:C6	1:AA:930:C:C4	3.10	0.40
1:AA:941:G:C2	1:AA:942:G:C8	3.09	0.40
1:AA:979:C:P	1:AA:981:U:O4	2.80	0.40
1:AA:1166:G:N2	1:AA:1170:A:OP2	2.54	0.40
1:AA:1232:U:H5''	9:AI:124:GLN:O	2.21	0.40
1:AA:1399:C:N3	1:AA:1502:A:N1	2.69	0.40
1:AA:1419:G:C6	1:AA:1420:C:C4	3.09	0.40
1:AA:1501:C:C6	1:AA:1504:G:N7	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:108:LEU:HD23	4:AD:110:PHE:CE2	2.56	0.40
6:AF:62:TRP:CD1	18:AR:35:ARG:NH1	2.89	0.40
9:AI:128:ARG:CZ	22:AV:6184:A:OP2	2.69	0.40
17:AQ:14:LYS:H	17:AQ:14:LYS:CD	2.34	0.40
21:AU:9:ARG:HG3	21:AU:10:ARG:N	2.37	0.40
23:BA:136:G:C6	23:BA:137(A):C:C5	3.10	0.40
23:BA:245:G:N3	23:BA:246:C:C6	2.89	0.40
23:BA:270(Q):C:O2'	23:BA:270(R):C:P	2.79	0.40
23:BA:460:A:H2'	23:BA:461:C:O4'	2.21	0.40
23:BA:774:A:C2'	23:BA:775:G:OP2	2.68	0.40
23:BA:848:G:N9	23:BA:933:A:C8	2.89	0.40
23:BA:998:C:C2'	23:BA:999:U:O5'	2.69	0.40
23:BA:1162:G:O4'	40:BR:23:GLU:HG3	2.21	0.40
23:BA:1270:C:H5''	23:BA:1271:G:H5'	2.04	0.40
23:BA:1503:U:H2'	23:BA:1504:C:H6	1.87	0.40
23:BA:1615:C:O2'	23:BA:1617:C:H5''	2.22	0.40
23:BA:1632:A:N6	23:BA:1633:G:N1	2.70	0.40
23:BA:2284:C:H1'	23:BA:2325:G:N2	2.37	0.40
23:BA:2404:C:C4	23:BA:2414:G:N1	2.89	0.40
23:BA:2516:G:C6	23:BA:2517:C:C4	3.09	0.40
23:BA:2517:C:C5	23:BA:2542:A:C2	3.10	0.40
23:BA:2695:C:H2'	23:BA:2696:U:C6	2.55	0.40
23:BA:2758:A:C2	23:BA:2759:G:C1'	3.05	0.40
23:BA:2811:G:C6	23:BA:2891:G:N2	2.90	0.40
24:BB:1:U:O2	24:BB:1:U:H2'	2.21	0.40
24:BB:28:C:H3'	24:BB:28:C:C6	2.57	0.40
24:BB:41:U:O4	28:BF:71:THR:HA	2.21	0.40
24:BB:80:U:C2	24:BB:81:G:N2	2.90	0.40
25:BC:121:PRO:CB	25:BC:135:PHE:CE2	3.00	0.40
26:BD:37:ARG:NH1	26:BD:42:ASP:OD1	2.55	0.40
27:BE:199:TRP:CZ3	27:BE:203:GLN:HG3	2.57	0.40
27:BE:203:GLN:OE1	27:BE:207:GLY:CA	2.69	0.40
28:BF:11:TYR:HE2	28:BF:16:ARG:HH21	1.69	0.40
28:BF:15:VAL:HG22	28:BF:175:LEU:HB3	2.03	0.40
28:BF:173:LEU:HB2	28:BF:180:PHE:HZ	1.87	0.40
28:BF:178:PHE:HA	28:BF:179:PRO:HD3	1.68	0.40
33:BK:75:SER:HB2	38:BP:75:ILE:O	2.21	0.40
35:BM:74:TYR:CE2	35:BM:91:GLU:HB2	2.52	0.40
35:BM:85:LYS:HD2	35:BM:86:GLY:H	1.85	0.40
35:BM:138:ASP:HB3	35:BM:139:GLU:H	1.55	0.40
38:BP:10:VAL:C	38:BP:12:SER:N	2.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BP:57:PHE:CD2	38:BP:58:ASN:N	2.89	0.40
41:BS:44:ALA:O	41:BS:46:PHE:N	2.54	0.40
42:BT:62:LYS:O	42:BT:63:LYS:HD3	2.22	0.40
43:BU:41:GLY:O	43:BU:42:VAL:C	2.60	0.40
50:B2:40:LYS:HE2	50:B2:46:CYS:HB3	2.04	0.40
53:B5:62:LEU:HA	53:B5:62:LEU:HD23	1.32	0.40
1:CA:80:G:H8	1:CA:80:G:OP2	2.04	0.40
1:CA:298:A:H2'	1:CA:299:G:O4'	2.22	0.40
1:CA:425:G:C2'	1:CA:426:G:H5'	2.52	0.40
1:CA:490:G:H2'	1:CA:491:G:H8	1.86	0.40
1:CA:737:A:C5	1:CA:738:C:C5	3.09	0.40
1:CA:754:C:O5'	15:CO:72:ARG:NH2	2.55	0.40
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.22	0.40
1:CA:922:G:H3'	1:CA:923:A:C8	2.56	0.40
1:CA:979:C:P	1:CA:981:U:O4	2.80	0.40
1:CA:1053:G:C5	1:CA:1199:U:C6	3.09	0.40
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.22	0.40
1:CA:1292:U:O5'	1:CA:1292:U:H6	2.04	0.40
2:CB:80:ILE:O	2:CB:80:ILE:HG22	2.22	0.40
5:CE:41:VAL:HG23	5:CE:67:VAL:HG13	2.04	0.40
5:CE:51:VAL:O	5:CE:52:PRO:C	2.60	0.40
14:CN:23:ARG:HG3	14:CN:24:CYS:N	2.36	0.40
18:CR:40:LEU:C	18:CR:42:ARG:N	2.74	0.40
18:CR:74:ARG:HG3	18:CR:74:ARG:H	1.50	0.40
20:CT:72:LEU:HD23	20:CT:72:LEU:C	2.42	0.40
23:DA:14:A:O5'	23:DA:14:A:H8	2.03	0.40
23:DA:71:A:C2	42:DT:31:HIS:HE1	2.36	0.40
23:DA:295:G:C5	23:DA:296:C:C5	3.09	0.40
23:DA:588:U:H1'	27:DE:90:PHE:CG	2.56	0.40
23:DA:815:C:H2'	23:DA:816:C:C6	2.56	0.40
23:DA:991:C:O2	23:DA:991:C:H2'	2.22	0.40
23:DA:1362:C:C6	23:DA:1362:C:H3'	2.57	0.40
23:DA:1442:G:C2	23:DA:1443:G:C4	3.09	0.40
23:DA:1478:G:C2	23:DA:1479:G:N7	2.90	0.40
23:DA:1542:G:H4'	23:DA:1543:A:O4'	2.21	0.40
23:DA:1747:G:C2	23:DA:1748:G:C8	3.10	0.40
23:DA:1799:G:O2'	25:DC:181:GLU:OE2	2.38	0.40
23:DA:1987:G:H2'	23:DA:1988:C:H6	1.85	0.40
23:DA:2194:G:C5	23:DA:2195:C:C5	3.09	0.40
23:DA:2872:G:C2	23:DA:2873:A:N6	2.89	0.40
24:DB:73:A:C5	24:DB:74:U:C6	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:165:ILE:C	25:DC:166:GLN:HE21	2.24	0.40
25:DC:176:ARG:NH1	25:DC:176:ARG:CG	2.83	0.40
26:DD:103:ASP:OD2	26:DD:201:THR:HA	2.21	0.40
26:DD:152:LYS:HE3	26:DD:152:LYS:HB3	1.77	0.40
30:DH:8:PRO:HA	30:DH:14:ASP:HA	2.03	0.40
33:DK:112:MET:HA	33:DK:115:VAL:HG13	2.03	0.40
34:DL:33:ARG:NE	34:DL:36:LYS:CD	2.77	0.40
34:DL:88:LEU:CD2	34:DL:114:ILE:HG21	2.51	0.40
37:DO:90:GLY:O	37:DO:92:TYR:O	2.40	0.40
39:DQ:69:CYS:SG	39:DQ:79:PHE:CD2	3.14	0.40
40:DR:49:THR:HB	40:DR:50:PRO:CD	2.51	0.40
41:DS:23:LEU:HD12	41:DS:23:LEU:HA	1.79	0.40
41:DS:24:ILE:CG2	41:DS:36:LEU:CD2	3.00	0.40
41:DS:65:LEU:HD23	41:DS:65:LEU:HA	1.76	0.40
43:DU:96:ILE:HD11	43:DU:99:CYS:HB2	2.03	0.40
44:DV:30:ASN:O	44:DV:31:ARG:C	2.59	0.40
44:DV:91:LEU:HD21	44:DV:96:VAL:HG11	2.02	0.40
44:DV:92:SER:HB2	44:DV:94:GLU:OE1	2.22	0.40
47:DY:1:MET:O	47:DY:1:MET:HE2	2.22	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:15:ASP:OD1	4:CD:20:TYR:OH[4_555]	2.18	0.02

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
2	AB	232/234 (99%)	172 (74%)	40 (17%)	20 (9%)	0 4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	CB	232/234 (99%)	173 (75%)	38 (16%)	21 (9%)	0	4
3	AC	204/206 (99%)	136 (67%)	43 (21%)	25 (12%)	0	2
3	CC	204/206 (99%)	134 (66%)	45 (22%)	25 (12%)	0	2
4	AD	206/208 (99%)	152 (74%)	38 (18%)	16 (8%)	1	5
4	CD	206/208 (99%)	151 (73%)	40 (19%)	15 (7%)	1	5
5	AE	149/151 (99%)	103 (69%)	34 (23%)	12 (8%)	1	4
5	CE	149/151 (99%)	104 (70%)	34 (23%)	11 (7%)	1	5
6	AF	99/101 (98%)	71 (72%)	17 (17%)	11 (11%)	0	2
6	CF	99/101 (98%)	71 (72%)	18 (18%)	10 (10%)	0	3
7	AG	153/155 (99%)	121 (79%)	27 (18%)	5 (3%)	3	18
7	CG	153/155 (99%)	121 (79%)	27 (18%)	5 (3%)	3	18
8	AH	136/138 (99%)	97 (71%)	29 (21%)	10 (7%)	1	5
8	CH	136/138 (99%)	98 (72%)	28 (21%)	10 (7%)	1	5
9	AI	125/127 (98%)	91 (73%)	31 (25%)	3 (2%)	5	23
9	CI	125/127 (98%)	89 (71%)	32 (26%)	4 (3%)	3	18
10	AJ	96/98 (98%)	72 (75%)	20 (21%)	4 (4%)	2	14
10	CJ	96/98 (98%)	74 (77%)	18 (19%)	4 (4%)	2	14
11	AK	117/119 (98%)	83 (71%)	29 (25%)	5 (4%)	2	14
11	CK	117/119 (98%)	82 (70%)	30 (26%)	5 (4%)	2	14
12	AL	122/124 (98%)	78 (64%)	28 (23%)	16 (13%)	0	1
12	CL	122/124 (98%)	80 (66%)	27 (22%)	15 (12%)	0	2
13	AM	114/116 (98%)	93 (82%)	17 (15%)	4 (4%)	3	17
13	CM	114/116 (98%)	93 (82%)	17 (15%)	4 (4%)	3	17
14	AN	58/60 (97%)	46 (79%)	9 (16%)	3 (5%)	1	10
14	CN	58/60 (97%)	46 (79%)	9 (16%)	3 (5%)	1	10
15	AO	86/88 (98%)	62 (72%)	17 (20%)	7 (8%)	1	4
15	CO	86/88 (98%)	61 (71%)	19 (22%)	6 (7%)	1	6
16	AP	81/83 (98%)	46 (57%)	24 (30%)	11 (14%)	0	1
16	CP	81/83 (98%)	46 (57%)	25 (31%)	10 (12%)	0	2
17	AQ	97/99 (98%)	74 (76%)	16 (16%)	7 (7%)	1	6
17	CQ	97/99 (98%)	75 (77%)	16 (16%)	6 (6%)	1	8

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	AR	68/70 (97%)	40 (59%)	19 (28%)	9 (13%)	0	1
18	CR	68/70 (97%)	41 (60%)	18 (26%)	9 (13%)	0	1
19	AS	76/78 (97%)	51 (67%)	21 (28%)	4 (5%)	1	10
19	CS	76/78 (97%)	50 (66%)	21 (28%)	5 (7%)	1	7
20	AT	97/99 (98%)	67 (69%)	23 (24%)	7 (7%)	1	6
20	CT	97/99 (98%)	67 (69%)	23 (24%)	7 (7%)	1	6
21	AU	22/24 (92%)	13 (59%)	8 (36%)	1 (4%)	2	13
21	CU	22/24 (92%)	13 (59%)	8 (36%)	1 (4%)	2	13
25	BC	269/271 (99%)	213 (79%)	36 (13%)	20 (7%)	1	5
25	DC	269/271 (99%)	210 (78%)	39 (14%)	20 (7%)	1	5
26	BD	202/204 (99%)	154 (76%)	34 (17%)	14 (7%)	1	6
26	DD	202/204 (99%)	155 (77%)	32 (16%)	15 (7%)	1	5
27	BE	200/202 (99%)	152 (76%)	32 (16%)	16 (8%)	1	5
27	DE	200/202 (99%)	155 (78%)	30 (15%)	15 (8%)	1	5
28	BF	179/181 (99%)	136 (76%)	31 (17%)	12 (7%)	1	7
28	DF	179/181 (99%)	136 (76%)	31 (17%)	12 (7%)	1	7
29	BG	157/159 (99%)	112 (71%)	35 (22%)	10 (6%)	1	7
29	DG	157/159 (99%)	111 (71%)	36 (23%)	10 (6%)	1	7
30	BH	143/145 (99%)	95 (66%)	29 (20%)	19 (13%)	0	1
30	DH	143/145 (99%)	91 (64%)	31 (22%)	21 (15%)	0	1
31	BI	28/65 (43%)	25 (89%)	3 (11%)	0	100	100
31	DI	28/65 (43%)	25 (89%)	3 (11%)	0	100	100
32	BJ	135/137 (98%)	97 (72%)	26 (19%)	12 (9%)	0	4
32	DJ	135/137 (98%)	97 (72%)	24 (18%)	14 (10%)	0	3
33	BK	120/122 (98%)	100 (83%)	11 (9%)	9 (8%)	1	5
33	DK	120/122 (98%)	98 (82%)	14 (12%)	8 (7%)	1	7
34	BL	144/146 (99%)	87 (60%)	31 (22%)	26 (18%)	0	0
34	DL	144/146 (99%)	86 (60%)	35 (24%)	23 (16%)	0	0
35	BM	134/136 (98%)	86 (64%)	28 (21%)	20 (15%)	0	0
35	DM	134/136 (98%)	86 (64%)	30 (22%)	18 (13%)	0	1
36	BN	115/117 (98%)	91 (79%)	13 (11%)	11 (10%)	0	3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
36	DN	115/117 (98%)	90 (78%)	15 (13%)	10 (9%)	0	4
37	BO	96/98 (98%)	57 (59%)	23 (24%)	16 (17%)	0	0
37	DO	96/98 (98%)	54 (56%)	25 (26%)	17 (18%)	0	0
38	BP	135/137 (98%)	101 (75%)	18 (13%)	16 (12%)	0	2
38	DP	135/137 (98%)	100 (74%)	19 (14%)	16 (12%)	0	2
39	BQ	114/116 (98%)	78 (68%)	22 (19%)	14 (12%)	0	2
39	DQ	114/116 (98%)	82 (72%)	20 (18%)	12 (10%)	0	3
40	BR	99/101 (98%)	70 (71%)	20 (20%)	9 (9%)	0	4
40	DR	99/101 (98%)	70 (71%)	20 (20%)	9 (9%)	0	4
41	BS	110/112 (98%)	88 (80%)	17 (16%)	5 (4%)	2	13
41	DS	110/112 (98%)	87 (79%)	17 (16%)	6 (6%)	1	10
42	BT	90/92 (98%)	69 (77%)	16 (18%)	5 (6%)	1	10
42	DT	90/92 (98%)	67 (74%)	18 (20%)	5 (6%)	1	10
43	BU	98/100 (98%)	55 (56%)	24 (24%)	19 (19%)	0	0
43	DU	98/100 (98%)	58 (59%)	21 (21%)	19 (19%)	0	0
44	BV	186/188 (99%)	135 (73%)	34 (18%)	17 (9%)	0	4
44	DV	186/188 (99%)	135 (73%)	34 (18%)	17 (9%)	0	4
45	BW	74/76 (97%)	61 (82%)	10 (14%)	3 (4%)	2	15
45	DW	74/76 (97%)	60 (81%)	10 (14%)	4 (5%)	1	10
46	BX	86/88 (98%)	57 (66%)	16 (19%)	13 (15%)	0	0
46	DX	86/88 (98%)	54 (63%)	19 (22%)	13 (15%)	0	0
47	BY	60/62 (97%)	45 (75%)	8 (13%)	7 (12%)	0	2
47	DY	60/62 (97%)	41 (68%)	12 (20%)	7 (12%)	0	2
48	BZ	57/59 (97%)	49 (86%)	7 (12%)	1 (2%)	7	27
48	DZ	57/59 (97%)	50 (88%)	6 (10%)	1 (2%)	7	27
49	B1	28/30 (93%)	15 (54%)	7 (25%)	6 (21%)	0	0
49	D1	28/30 (93%)	15 (54%)	7 (25%)	6 (21%)	0	0
50	B2	50/52 (96%)	40 (80%)	6 (12%)	4 (8%)	1	5
50	D2	50/52 (96%)	39 (78%)	7 (14%)	4 (8%)	1	5
51	B3	42/44 (96%)	26 (62%)	11 (26%)	5 (12%)	0	2
51	D3	42/44 (96%)	26 (62%)	11 (26%)	5 (12%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
52	B4	46/48 (96%)	42 (91%)	3 (6%)	1 (2%)	5	24
52	D4	46/48 (96%)	42 (91%)	3 (6%)	1 (2%)	5	24
53	B5	61/63 (97%)	43 (70%)	12 (20%)	6 (10%)	0	3
53	D5	61/63 (97%)	44 (72%)	10 (16%)	7 (12%)	0	2
All	All	11192/11458 (98%)	8080 (72%)	2125 (19%)	987 (9%)	0	4

All (987) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	204	ASN
3	AC	189	ALA
3	AC	196	LEU
4	AD	28	SER
4	AD	30	LYS
5	AE	37	ARG
5	AE	140	ARG
6	AF	6	VAL
6	AF	36	ARG
6	AF	39	LYS
6	AF	42	GLU
6	AF	87	ARG
10	AJ	92	THR
11	AK	27	ASN
12	AL	50	ALA
12	AL	63	TYR
12	AL	117	SER
13	AM	106	ASN
15	AO	29	VAL
16	AP	11	SER
16	AP	19	ILE
17	AQ	79	SER
17	AQ	99	SER
18	AR	20	ALA
19	AS	28	LYS
20	AT	71	THR
20	AT	99	LEU
25	BC	26	LYS
25	BC	33	LEU
25	BC	34	VAL
25	BC	236	GLY
25	BC	237	GLU

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Mol	Chain	Res	Type
25	BC	271	ILE
26	BD	2	LYS
26	BD	17	ASP
27	BE	89	VAL
27	BE	128	ALA
27	BE	168	ARG
28	BF	86	MET
28	BF	87	PRO
29	BG	92	ILE
29	BG	165	ALA
30	BH	10	GLU
30	BH	82	ARG
30	BH	132	PRO
30	BH	142	VAL
30	BH	143	SER
32	BJ	149	PRO
32	BJ	155	ALA
32	BJ	157	ARG
33	BK	4	PRO
33	BK	27	GLY
33	BK	29	ASN
33	BK	91	LEU
33	BK	101	PRO
34	BL	11	GLY
34	BL	15	ARG
34	BL	17	LYS
34	BL	36	LYS
34	BL	39	LYS
34	BL	49	ARG
34	BL	50	ARG
34	BL	65	ARG
34	BL	110	TYR
34	BL	141	ALA
34	BL	147	LEU
35	BM	8	LYS
35	BM	13	GLN
35	BM	18	LYS
35	BM	21	THR
35	BM	25	ASP
35	BM	30	GLY
35	BM	82	ARG
35	BM	134	ARG

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Mol	Chain	Res	Type
35	BM	135	ASP
36	BN	3	HIS
36	BN	5	LYS
36	BN	6	SER
36	BN	12	ARG
36	BN	86	ARG
37	BO	12	PHE
37	BO	35	ILE
37	BO	44	LYS
37	BO	52	SER
37	BO	53	SER
37	BO	59	LYS
38	BP	58	ASN
38	BP	89	VAL
38	BP	90	GLN
38	BP	107	ASP
38	BP	136	GLN
39	BQ	9	VAL
39	BQ	31	SER
39	BQ	33	ARG
39	BQ	99	ALA
40	BR	35	LEU
40	BR	78	LYS
43	BU	7	VAL
43	BU	49	VAL
43	BU	76	CYS
43	BU	88	LYS
44	BV	31	ARG
44	BV	93	ASP
44	BV	177	PRO
45	BW	47	PRO
46	BX	10	LYS
46	BX	11	ARG
46	BX	32	LYS
46	BX	85	LEU
47	BY	3	LEU
47	BY	44	LEU
48	BZ	13	ILE
49	B1	44	CYS
49	B1	52	SER
50	B2	4	HIS
50	B2	35	GLU

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Mol	Chain	Res	Type
50	B2	49	CYS
51	B3	28	ARG
51	B3	51	GLU
53	B5	31	HIS
53	B5	34	TRP
53	B5	51	ALA
53	B5	62	LEU
2	CB	204	ASN
3	CC	189	ALA
3	CC	196	LEU
4	CD	30	LYS
5	CE	37	ARG
5	CE	140	ARG
6	CF	6	VAL
6	CF	36	ARG
6	CF	39	LYS
6	CF	42	GLU
6	CF	87	ARG
10	CJ	92	THR
11	CK	27	ASN
11	CK	122	LYS
12	CL	50	ALA
12	CL	63	TYR
12	CL	117	SER
13	CM	106	ASN
15	CO	29	VAL
16	CP	11	SER
16	CP	19	ILE
17	CQ	79	SER
17	CQ	99	SER
18	CR	20	ALA
19	CS	28	LYS
20	CT	71	THR
20	CT	99	LEU
25	DC	26	LYS
25	DC	33	LEU
25	DC	34	VAL
25	DC	271	ILE
26	DD	2	LYS
26	DD	17	ASP
26	DD	86	PRO
27	DE	68	LYS

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Mol	Chain	Res	Type
27	DE	89	VAL
27	DE	128	ALA
27	DE	168	ARG
28	DF	86	MET
28	DF	87	PRO
29	DG	92	ILE
29	DG	165	ALA
30	DH	10	GLU
30	DH	15	VAL
30	DH	82	ARG
30	DH	132	PRO
30	DH	142	VAL
30	DH	143	SER
32	DJ	81	ASP
32	DJ	149	PRO
32	DJ	155	ALA
32	DJ	157	ARG
33	DK	27	GLY
33	DK	29	ASN
33	DK	101	PRO
34	DL	15	ARG
34	DL	17	LYS
34	DL	36	LYS
34	DL	39	LYS
34	DL	49	ARG
34	DL	50	ARG
34	DL	65	ARG
34	DL	110	TYR
34	DL	141	ALA
34	DL	147	LEU
35	DM	8	LYS
35	DM	13	GLN
35	DM	21	THR
35	DM	25	ASP
35	DM	30	GLY
35	DM	82	ARG
35	DM	134	ARG
36	DN	3	HIS
36	DN	5	LYS
36	DN	6	SER
36	DN	12	ARG
36	DN	86	ARG

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Mol	Chain	Res	Type
37	DO	12	PHE
37	DO	35	ILE
37	DO	44	LYS
37	DO	52	SER
37	DO	53	SER
37	DO	59	LYS
38	DP	58	ASN
38	DP	89	VAL
38	DP	90	GLN
38	DP	97	ALA
38	DP	107	ASP
38	DP	136	GLN
39	DQ	9	VAL
39	DQ	31	SER
39	DQ	33	ARG
39	DQ	99	ALA
40	DR	35	LEU
40	DR	78	LYS
43	DU	7	VAL
43	DU	17	SER
43	DU	49	VAL
43	DU	76	CYS
43	DU	88	LYS
44	DV	31	ARG
44	DV	93	ASP
44	DV	177	PRO
45	DW	47	PRO
45	DW	74	ARG
46	DX	11	ARG
46	DX	13	ILE
46	DX	32	LYS
46	DX	85	LEU
47	DY	3	LEU
47	DY	44	LEU
48	DZ	13	ILE
49	D1	44	CYS
49	D1	52	SER
50	D2	4	HIS
50	D2	35	GLU
50	D2	49	CYS
51	D3	28	ARG
51	D3	51	GLU

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Mol	Chain	Res	Type
53	D5	31	HIS
53	D5	34	TRP
53	D5	51	ALA
53	D5	62	LEU
2	AB	14	GLY
2	AB	19	HIS
2	AB	24	TRP
2	AB	129	GLU
2	AB	176	GLU
2	AB	205	ASP
2	AB	229	VAL
3	AC	14	ILE
3	AC	22	TRP
3	AC	56	ASP
3	AC	100	ALA
3	AC	144	SER
3	AC	188	LEU
4	AD	4	TYR
4	AD	110	PHE
4	AD	145	GLU
4	AD	171	GLY
6	AF	2	ARG
6	AF	89	MET
7	AG	4	ARG
8	AH	2	LEU
8	AH	133	LEU
9	AI	31	GLN
10	AJ	59	SER
11	AK	122	LYS
12	AL	22	LYS
12	AL	27	LYS
12	AL	64	GLU
15	AO	6	GLU
15	AO	19	PRO
16	AP	10	GLY
16	AP	16	HIS
16	AP	26	ARG
16	AP	48	TRP
16	AP	64	ALA
18	AR	45	SER
18	AR	54	ARG
18	AR	57	GLY

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Mol	Chain	Res	Type
19	AS	11	VAL
20	AT	11	SER
20	AT	42	GLN
20	AT	74	LYS
21	AU	9	ARG
25	BC	169	GLU
25	BC	261	LYS
25	BC	268	ARG
26	BD	29	GLY
26	BD	86	PRO
27	BE	19	GLU
27	BE	68	LYS
27	BE	132	VAL
28	BF	26	GLN
28	BF	96	ARG
28	BF	115	ARG
29	BG	21	PRO
29	BG	138	LYS
30	BH	15	VAL
30	BH	16	GLY
30	BH	74	ASN
30	BH	91	SER
30	BH	92	VAL
32	BJ	81	ASP
32	BJ	89	LYS
34	BL	32	THR
34	BL	137	LYS
35	BM	47	ILE
35	BM	136	ALA
35	BM	140	ALA
36	BN	8	ARG
37	BO	57	LYS
37	BO	82	ILE
37	BO	90	GLY
37	BO	95	HIS
38	BP	2	ASN
38	BP	36	GLU
38	BP	57	PHE
38	BP	97	ALA
38	BP	106	SER
38	BP	115	ARG
38	BP	126	ALA

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Mol	Chain	Res	Type
38	BP	127	ALA
39	BQ	54	LYS
39	BQ	98	LEU
39	BQ	117	GLN
40	BR	46	VAL
40	BR	100	ARG
41	BS	61	ASN
41	BS	63	ASP
43	BU	3	VAL
43	BU	11	ASP
43	BU	17	SER
43	BU	69	ALA
43	BU	98	VAL
44	BV	80	ARG
44	BV	135	GLU
44	BV	178	GLU
45	BW	74	ARG
46	BX	13	ILE
47	BY	43	GLN
47	BY	61	LEU
2	CB	14	GLY
2	CB	18	GLY
2	CB	19	HIS
2	CB	24	TRP
2	CB	129	GLU
2	CB	176	GLU
2	CB	205	ASP
2	CB	229	VAL
3	CC	14	ILE
3	CC	22	TRP
3	CC	56	ASP
3	CC	100	ALA
3	CC	144	SER
3	CC	188	LEU
4	CD	4	TYR
4	CD	28	SER
4	CD	110	PHE
4	CD	145	GLU
4	CD	171	GLY
5	CE	85	GLY
6	CF	2	ARG
6	CF	89	MET

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Mol	Chain	Res	Type
7	CG	4	ARG
8	CH	2	LEU
8	CH	133	LEU
9	CI	31	GLN
10	CJ	57	LYS
10	CJ	59	SER
12	CL	22	LYS
12	CL	27	LYS
12	CL	64	GLU
12	CL	78	GLU
13	CM	4	ILE
15	CO	6	GLU
16	CP	10	GLY
16	CP	16	HIS
16	CP	26	ARG
16	CP	48	TRP
16	CP	64	ALA
18	CR	54	ARG
18	CR	57	GLY
19	CS	11	VAL
20	CT	11	SER
21	CU	9	ARG
25	DC	43	ARG
25	DC	125	ILE
25	DC	134	ARG
25	DC	169	GLU
25	DC	236	GLY
25	DC	237	GLU
25	DC	261	LYS
25	DC	268	ARG
26	DD	29	GLY
27	DE	19	GLU
27	DE	132	VAL
28	DF	26	GLN
28	DF	96	ARG
28	DF	115	ARG
29	DG	21	PRO
29	DG	138	LYS
30	DH	16	GLY
30	DH	74	ASN
30	DH	91	SER
30	DH	92	VAL

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Mol	Chain	Res	Type
32	DJ	89	LYS
33	DK	91	LEU
34	DL	11	GLY
34	DL	42	SER
34	DL	52	GLU
34	DL	136	GLU
34	DL	137	LYS
35	DM	18	LYS
35	DM	47	ILE
35	DM	135	ASP
35	DM	136	ALA
35	DM	140	ALA
37	DO	57	LYS
37	DO	82	ILE
37	DO	85	VAL
37	DO	89	ARG
37	DO	90	GLY
37	DO	95	HIS
38	DP	2	ASN
38	DP	4	GLY
38	DP	36	GLU
38	DP	57	PHE
38	DP	106	SER
38	DP	115	ARG
38	DP	126	ALA
38	DP	127	ALA
39	DQ	117	GLN
40	DR	46	VAL
40	DR	100	ARG
41	DS	48	ALA
41	DS	61	ASN
43	DU	3	VAL
43	DU	98	VAL
44	DV	80	ARG
44	DV	135	GLU
44	DV	178	GLU
45	DW	57	PHE
46	DX	10	LYS
46	DX	38	SER
47	DY	43	GLN
47	DY	61	LEU
2	AB	18	GLY

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Mol	Chain	Res	Type
2	AB	88	ALA
2	AB	130	ARG
2	AB	183	PRO
2	AB	206	ASP
2	AB	235	SER
3	AC	15	THR
3	AC	47	LEU
3	AC	60	ALA
3	AC	81	GLY
3	AC	91	LEU
3	AC	127	ARG
4	AD	105	VAL
5	AE	21	ALA
5	AE	49	PRO
5	AE	85	GLY
7	AG	14	PRO
8	AH	77	GLU
8	AH	98	LYS
8	AH	112	LEU
8	AH	119	LEU
10	AJ	57	LYS
12	AL	11	ARG
12	AL	61	SER
12	AL	78	GLU
12	AL	88	ARG
13	AM	4	ILE
15	AO	21	ASP
16	AP	77	ALA
17	AQ	78	GLU
17	AQ	80	GLY
20	AT	84	LEU
25	BC	35	LYS
25	BC	42	GLY
25	BC	43	ARG
25	BC	115	GLN
25	BC	125	ILE
25	BC	134	ARG
26	BD	159	HIS
27	BE	66	PRO
27	BE	86	GLY
27	BE	145	GLU
27	BE	176	LEU

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Mol	Chain	Res	Type
28	BF	14	GLU
28	BF	148	MET
29	BG	80	SER
29	BG	155	SER
30	BH	30	LEU
30	BH	77	LEU
30	BH	99	GLU
30	BH	144	VAL
32	BJ	152	PRO
34	BL	12	ALA
34	BL	42	SER
34	BL	43	GLY
34	BL	52	GLU
34	BL	90	ARG
34	BL	136	GLU
35	BM	10	ARG
35	BM	22	LYS
35	BM	54	MET
36	BN	32	GLY
37	BO	83	LYS
37	BO	85	VAL
37	BO	89	ARG
37	BO	91	PRO
39	BQ	93	LYS
39	BQ	96	ALA
40	BR	61	VAL
42	BT	72	LYS
43	BU	42	VAL
43	BU	90	LEU
43	BU	99	CYS
44	BV	38	TYR
44	BV	117	LEU
44	BV	142	SER
44	BV	153	SER
45	BW	57	PHE
46	BX	56	GLN
46	BX	83	GLU
47	BY	17	SER
50	B2	46	CYS
51	B3	31	PRO
51	B3	32	ASN
51	B3	46	HIS

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Mol	Chain	Res	Type
53	B5	3	LYS
2	CB	88	ALA
2	CB	130	ARG
2	CB	150	SER
2	CB	206	ASP
2	CB	235	SER
3	CC	15	THR
3	CC	47	LEU
3	CC	60	ALA
3	CC	81	GLY
3	CC	105	GLU
3	CC	127	ARG
5	CE	72	GLN
5	CE	128	PRO
7	CG	14	PRO
8	CH	87	SER
8	CH	98	LYS
8	CH	112	LEU
8	CH	119	LEU
12	CL	61	SER
14	CN	18	VAL
15	CO	19	PRO
15	CO	21	ASP
16	CP	77	ALA
17	CQ	78	GLU
17	CQ	80	GLY
18	CR	45	SER
20	CT	42	GLN
20	CT	74	LYS
25	DC	35	LYS
25	DC	37	LEU
25	DC	42	GLY
25	DC	239	ARG
26	DD	69	LYS
26	DD	159	HIS
26	DD	185	LYS
27	DE	86	GLY
27	DE	134	GLY
27	DE	145	GLU
27	DE	176	LEU
28	DF	14	GLU
28	DF	148	MET

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Mol	Chain	Res	Type
29	DG	80	SER
29	DG	155	SER
30	DH	30	LEU
30	DH	39	ALA
30	DH	77	LEU
30	DH	99	GLU
32	DJ	124	HIS
32	DJ	152	PRO
33	DK	4	PRO
34	DL	108	LYS
35	DM	10	ARG
35	DM	62	GLY
36	DN	8	ARG
39	DQ	8	VAL
39	DQ	54	LYS
39	DQ	96	ALA
39	DQ	98	LEU
40	DR	53	GLU
40	DR	61	VAL
41	DS	49	LYS
41	DS	64	MET
42	DT	41	ASN
42	DT	87	GLN
43	DU	11	ASP
43	DU	39	VAL
43	DU	42	VAL
43	DU	69	ALA
43	DU	90	LEU
43	DU	99	CYS
44	DV	38	TYR
44	DV	39	VAL
44	DV	117	LEU
44	DV	142	SER
44	DV	153	SER
46	DX	9	GLY
46	DX	56	GLN
46	DX	83	GLU
47	DY	17	SER
47	DY	47	ASN
49	D1	62	CYS
50	D2	46	CYS
51	D3	31	PRO

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Mol	Chain	Res	Type
51	D3	32	ASN
51	D3	46	HIS
53	D5	3	LYS
2	AB	150	SER
2	AB	182	ILE
2	AB	224	GLN
3	AC	18	TRP
3	AC	45	LYS
3	AC	61	ALA
3	AC	105	GLU
3	AC	145	GLY
4	AD	10	ARG
5	AE	62	ALA
5	AE	72	GLN
5	AE	104	ALA
5	AE	128	PRO
6	AF	38	GLU
10	AJ	78	ASN
11	AK	39	PRO
12	AL	28	GLY
12	AL	86	GLY
13	AM	116	THR
14	AN	18	VAL
15	AO	23	GLY
17	AQ	33	GLY
17	AQ	34	LYS
18	AR	41	LYS
19	AS	25	LYS
25	BC	37	LEU
25	BC	224	ALA
25	BC	239	ARG
25	BC	256	GLY
26	BD	60	ASN
26	BD	87	GLU
26	BD	178	GLU
26	BD	185	LYS
27	BE	48	THR
27	BE	127	GLU
28	BF	24	GLY
28	BF	25	TYR
28	BF	46	ALA
29	BG	107	VAL

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Mol	Chain	Res	Type
30	BH	7	GLU
30	BH	60	GLU
32	BJ	156	GLN
32	BJ	158	PRO
33	BK	21	CYS
33	BK	97	ARG
34	BL	47	ASP
34	BL	70	GLN
34	BL	109	GLY
37	BO	62	LYS
38	BP	4	GLY
40	BR	48	GLY
40	BR	53	GLU
41	BS	48	ALA
41	BS	64	MET
42	BT	40	LYS
42	BT	41	ASN
42	BT	87	GLN
43	BU	39	VAL
43	BU	80	GLY
44	BV	39	VAL
44	BV	101	PRO
46	BX	9	GLY
49	B1	41	ILE
49	B1	54	LYS
49	B1	62	CYS
52	B4	47	ARG
53	B5	61	LEU
2	CB	224	GLN
3	CC	18	TRP
3	CC	61	ALA
3	CC	91	LEU
3	CC	145	GLY
3	CC	164	ARG
4	CD	147	ALA
5	CE	49	PRO
5	CE	104	ALA
5	CE	107	ARG
6	CF	38	GLU
8	CH	77	GLU
11	CK	39	PRO
12	CL	11	ARG

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Mol	Chain	Res	Type
12	CL	28	GLY
12	CL	86	GLY
13	CM	116	THR
14	CN	58	LYS
15	CO	23	GLY
17	CQ	34	LYS
18	CR	36	ASN
19	CS	25	LYS
20	CT	84	LEU
25	DC	115	GLN
25	DC	256	GLY
26	DD	60	ASN
26	DD	87	GLU
26	DD	94	GLU
26	DD	127	ASP
26	DD	178	GLU
27	DE	127	GLU
28	DF	24	GLY
28	DF	25	TYR
29	DG	107	VAL
30	DH	7	GLU
30	DH	86	THR
30	DH	144	VAL
32	DJ	133	GLY
32	DJ	158	PRO
33	DK	21	CYS
33	DK	22	ILE
33	DK	97	ARG
34	DL	43	GLY
34	DL	47	ASP
34	DL	109	GLY
35	DM	22	LYS
37	DO	62	LYS
37	DO	83	LYS
37	DO	91	PRO
38	DP	14	TYR
39	DQ	58	ARG
41	DS	63	ASP
42	DT	40	LYS
42	DT	72	LYS
43	DU	80	GLY
49	D1	41	ILE

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Mol	Chain	Res	Type
49	D1	54	LYS
52	D4	47	ARG
53	D5	61	LEU
4	AD	75	PHE
4	AD	146	ILE
4	AD	147	ALA
4	AD	168	ARG
5	AE	11	ILE
5	AE	107	ARG
8	AH	37	ARG
8	AH	68	ARG
9	AI	10	ARG
9	AI	127	LYS
11	AK	80	VAL
12	AL	79	HIS
13	AM	3	ARG
14	AN	58	LYS
16	AP	72	ARG
17	AQ	30	PRO
18	AR	64	ARG
18	AR	87	ARG
19	AS	29	ARG
26	BD	69	LYS
26	BD	94	GLU
27	BE	134	GLY
29	BG	15	VAL
29	BG	90	LYS
30	BH	86	THR
30	BH	93	THR
32	BJ	75	VAL
32	BJ	105	LEU
32	BJ	106	LYS
33	BK	120	GLU
34	BL	108	LYS
35	BM	117	ALA
36	BN	10	LEU
36	BN	45	ARG
36	BN	85	PRO
38	BP	14	TYR
39	BQ	58	ARG
39	BQ	86	ALA
41	BS	67	ASP

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Mol	Chain	Res	Type
43	BU	47	LYS
44	BV	140	ASP
46	BX	36	GLY
46	BX	38	SER
46	BX	53	VAL
47	BY	47	ASN
2	CB	182	ILE
2	CB	183	PRO
2	CB	228	GLY
3	CC	45	LYS
4	CD	10	ARG
4	CD	48	ALA
4	CD	105	VAL
4	CD	146	ILE
5	CE	11	ILE
5	CE	62	ALA
5	CE	129	ILE
6	CF	11	ASN
8	CH	73	ASP
9	CI	10	ARG
9	CI	124	GLN
9	CI	127	LYS
10	CJ	78	ASN
11	CK	80	VAL
12	CL	79	HIS
13	CM	3	ARG
16	CP	78	GLY
18	CR	41	LYS
18	CR	64	ARG
18	CR	87	ARG
19	CS	29	ARG
25	DC	224	ALA
26	DD	201	THR
27	DE	144	LYS
27	DE	160	ASN
28	DF	46	ALA
29	DG	15	VAL
30	DH	60	GLU
30	DH	76	THR
30	DH	93	THR
30	DH	115	ALA
32	DJ	75	VAL

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Mol	Chain	Res	Type
32	DJ	90	LEU
32	DJ	105	LEU
32	DJ	156	GLN
34	DL	70	GLN
34	DL	90	ARG
35	DM	23	GLY
36	DN	45	ARG
36	DN	85	PRO
37	DO	101	LEU
39	DQ	86	ALA
40	DR	48	GLY
41	DS	110	LYS
43	DU	47	LYS
44	DV	101	PRO
44	DV	140	ASP
45	DW	55	ARG
47	DY	15	LYS
53	D5	40	GLU
2	AB	228	GLY
3	AC	5	ILE
3	AC	74	GLY
3	AC	96	GLY
3	AC	117	ALA
4	AD	48	ALA
6	AF	11	ASN
6	AF	90	VAL
7	AG	17	VAL
8	AH	73	ASP
11	AK	112	THR
12	AL	94	GLY
16	AP	63	GLY
16	AP	78	GLY
18	AR	36	ASN
20	AT	98	PRO
26	BD	201	THR
27	BE	144	LYS
30	BH	76	THR
33	BK	22	ILE
35	BM	62	GLY
37	BO	101	LEU
44	BV	114	GLY
44	BV	133	ILE

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Mol	Chain	Res	Type
44	BV	134	PRO
2	CB	191	ASP
3	CC	96	GLY
4	CD	63	LYS
4	CD	189	PRO
7	CG	17	VAL
8	CH	37	ARG
11	CK	112	THR
14	CN	42	ILE
17	CQ	30	PRO
19	CS	27	GLU
20	CT	98	PRO
26	DD	61	ARG
27	DE	66	PRO
29	DG	139	GLN
32	DJ	106	LYS
35	DM	54	MET
43	DU	41	GLY
44	DV	133	ILE
44	DV	134	PRO
46	DX	53	VAL
3	AC	173	VAL
4	AD	189	PRO
7	AG	82	GLY
12	AL	62	GLY
14	AN	42	ILE
18	AR	27	GLY
26	BD	61	ARG
27	BE	206	ILE
32	BJ	133	GLY
34	BL	19	VAL
35	BM	23	GLY
39	BQ	26	GLY
39	BQ	65	ILE
44	BV	37	VAL
3	CC	5	ILE
3	CC	74	GLY
3	CC	173	VAL
7	CG	82	GLY
12	CL	94	GLY
15	CO	87	ILE
16	CP	63	GLY

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Mol	Chain	Res	Type
26	DD	30	PRO
27	DE	206	ILE
40	DR	50	PRO
42	DT	84	ALA
43	DU	18	GLY
43	DU	96	ILE
44	DV	114	GLY
46	DX	36	GLY
15	AO	36	ILE
15	AO	87	ILE
43	BU	18	GLY
43	BU	41	GLY
43	BU	55	TYR
43	BU	96	ILE
46	BX	31	GLY
2	CB	159	PRO
3	CC	39	ILE
4	CD	197	PRO
36	DN	73	VAL
38	DP	81	PRO
2	AB	159	PRO
2	AB	194	PRO
4	AD	197	PRO
6	AF	40	VAL
25	BC	123	ALA
26	BD	30	PRO
27	BE	25	PRO
36	BN	58	GLY
38	BP	81	PRO
40	BR	50	PRO
42	BT	84	ALA
2	CB	194	PRO
12	CL	62	GLY
36	DN	58	GLY
40	DR	17	GLY
44	DV	37	VAL
3	AC	39	ILE
4	AD	56	VAL
5	AE	129	ILE
8	AH	103	VAL
12	AL	17	VAL
28	BF	109	VAL

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Mol	Chain	Res	Type
28	BF	142	PRO
34	BL	10	PRO
35	BM	81	VAL
35	BM	92	GLY
39	BQ	8	VAL
40	BR	17	GLY
47	BY	50	ILE
4	CD	56	VAL
6	CF	90	VAL
7	CG	70	LYS
8	CH	51	VAL
12	CL	17	VAL
29	DG	52	VAL
34	DL	10	PRO
35	DM	81	VAL
39	DQ	65	ILE
43	DU	55	TYR
46	DX	14	VAL
46	DX	31	GLY
7	AG	70	LYS
29	BG	52	VAL
34	BL	125	VAL
46	BX	14	VAL
49	B1	47	VAL
18	CR	50	ILE
25	DC	10	THR
28	DF	109	VAL
28	DF	142	PRO
34	DL	19	VAL
37	DO	60	GLY
49	D1	47	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.

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AB	202/202 (100%)	178 (88%)	24 (12%)	4	16
2	CB	202/202 (100%)	179 (89%)	23 (11%)	4	17
3	AC	160/160 (100%)	146 (91%)	14 (9%)	8	28
3	CC	160/160 (100%)	145 (91%)	15 (9%)	7	25
4	AD	180/180 (100%)	150 (83%)	30 (17%)	2	7
4	CD	180/180 (100%)	150 (83%)	30 (17%)	2	7
5	AE	116/116 (100%)	92 (79%)	24 (21%)	1	2
5	CE	116/116 (100%)	94 (81%)	22 (19%)	1	4
6	AF	90/90 (100%)	82 (91%)	8 (9%)	8	27
6	CF	90/90 (100%)	83 (92%)	7 (8%)	10	33
7	AG	126/126 (100%)	121 (96%)	5 (4%)	27	52
7	CG	126/126 (100%)	121 (96%)	5 (4%)	27	52
8	AH	119/119 (100%)	102 (86%)	17 (14%)	2	10
8	CH	119/119 (100%)	104 (87%)	15 (13%)	3	14
9	AI	98/98 (100%)	88 (90%)	10 (10%)	6	22
9	CI	98/98 (100%)	88 (90%)	10 (10%)	6	22
10	AJ	88/88 (100%)	78 (89%)	10 (11%)	4	17
10	CJ	88/88 (100%)	78 (89%)	10 (11%)	4	17
11	AK	90/90 (100%)	75 (83%)	15 (17%)	2	7
11	CK	90/90 (100%)	76 (84%)	14 (16%)	2	8
12	AL	104/104 (100%)	83 (80%)	21 (20%)	1	3
12	CL	104/104 (100%)	83 (80%)	21 (20%)	1	3
13	AM	94/94 (100%)	87 (93%)	7 (7%)	11	35
13	CM	94/94 (100%)	87 (93%)	7 (7%)	11	35
14	AN	49/49 (100%)	45 (92%)	4 (8%)	9	31
14	CN	49/49 (100%)	45 (92%)	4 (8%)	9	31
15	AO	79/79 (100%)	69 (87%)	10 (13%)	3	14
15	CO	79/79 (100%)	69 (87%)	10 (13%)	3	14
16	AP	72/72 (100%)	57 (79%)	15 (21%)	1	2
16	CP	72/72 (100%)	56 (78%)	16 (22%)	1	2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
17	AQ	94/94 (100%)	78 (83%)	16 (17%)	1	6
17	CQ	94/94 (100%)	79 (84%)	15 (16%)	2	8
18	AR	61/61 (100%)	58 (95%)	3 (5%)	21	48
18	CR	61/61 (100%)	58 (95%)	3 (5%)	21	48
19	AS	69/69 (100%)	60 (87%)	9 (13%)	3	13
19	CS	69/69 (100%)	60 (87%)	9 (13%)	3	13
20	AT	76/76 (100%)	65 (86%)	11 (14%)	2	10
20	CT	76/76 (100%)	65 (86%)	11 (14%)	2	10
21	AU	19/19 (100%)	19 (100%)	0	100	100
21	CU	19/19 (100%)	19 (100%)	0	100	100
25	BC	213/213 (100%)	164 (77%)	49 (23%)	0	2
25	DC	213/213 (100%)	162 (76%)	51 (24%)	0	1
26	BD	165/165 (100%)	129 (78%)	36 (22%)	1	2
26	DD	165/165 (100%)	129 (78%)	36 (22%)	1	2
27	BE	161/161 (100%)	124 (77%)	37 (23%)	0	2
27	DE	161/161 (100%)	124 (77%)	37 (23%)	0	2
28	BF	155/155 (100%)	132 (85%)	23 (15%)	2	9
28	DF	155/155 (100%)	134 (86%)	21 (14%)	3	12
29	BG	132/132 (100%)	108 (82%)	24 (18%)	1	5
29	DG	132/132 (100%)	107 (81%)	25 (19%)	1	4
30	BH	122/122 (100%)	103 (84%)	19 (16%)	2	8
30	DH	122/122 (100%)	103 (84%)	19 (16%)	2	8
31	BI	27/53 (51%)	25 (93%)	2 (7%)	11	35
31	DI	27/53 (51%)	25 (93%)	2 (7%)	11	35
32	BJ	116/116 (100%)	84 (72%)	32 (28%)	0	1
32	DJ	116/116 (100%)	85 (73%)	31 (27%)	0	1
33	BK	100/100 (100%)	78 (78%)	22 (22%)	1	2
33	DK	100/100 (100%)	78 (78%)	22 (22%)	1	2
34	BL	112/112 (100%)	75 (67%)	37 (33%)	0	0
34	DL	112/112 (100%)	76 (68%)	36 (32%)	0	0
35	BM	106/106 (100%)	82 (77%)	24 (23%)	1	2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
35	DM	106/106 (100%)	81 (76%)	25 (24%)	0	1
36	BN	100/100 (100%)	75 (75%)	25 (25%)	0	1
36	DN	100/100 (100%)	76 (76%)	24 (24%)	0	1
37	BO	77/77 (100%)	63 (82%)	14 (18%)	1	5
37	DO	77/77 (100%)	63 (82%)	14 (18%)	1	5
38	BP	121/121 (100%)	96 (79%)	25 (21%)	1	2
38	DP	121/121 (100%)	94 (78%)	27 (22%)	1	2
39	BQ	92/92 (100%)	71 (77%)	21 (23%)	0	2
39	DQ	92/92 (100%)	71 (77%)	21 (23%)	0	2
40	BR	82/82 (100%)	63 (77%)	19 (23%)	0	2
40	DR	82/82 (100%)	61 (74%)	21 (26%)	0	1
41	BS	91/91 (100%)	65 (71%)	26 (29%)	0	1
41	DS	91/91 (100%)	65 (71%)	26 (29%)	0	1
42	BT	74/74 (100%)	60 (81%)	14 (19%)	1	4
42	DT	74/74 (100%)	60 (81%)	14 (19%)	1	4
43	BU	84/84 (100%)	66 (79%)	18 (21%)	1	2
43	DU	84/84 (100%)	67 (80%)	17 (20%)	1	3
44	BV	163/163 (100%)	142 (87%)	21 (13%)	3	13
44	DV	163/163 (100%)	141 (86%)	22 (14%)	3	12
45	BW	61/61 (100%)	52 (85%)	9 (15%)	2	9
45	DW	61/61 (100%)	53 (87%)	8 (13%)	3	13
46	BX	73/73 (100%)	50 (68%)	23 (32%)	0	1
46	DX	73/73 (100%)	50 (68%)	23 (32%)	0	1
47	BY	58/58 (100%)	46 (79%)	12 (21%)	1	2
47	DY	58/58 (100%)	46 (79%)	12 (21%)	1	2
48	BZ	51/51 (100%)	43 (84%)	8 (16%)	2	8
48	DZ	51/51 (100%)	43 (84%)	8 (16%)	2	8
49	B1	27/27 (100%)	26 (96%)	1 (4%)	29	54
49	D1	27/27 (100%)	26 (96%)	1 (4%)	29	54
50	B2	45/45 (100%)	40 (89%)	5 (11%)	5	18
50	D2	45/45 (100%)	39 (87%)	6 (13%)	3	12

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
51	B3	43/43 (100%)	38 (88%)	5 (12%)	4	17
51	D3	43/43 (100%)	38 (88%)	5 (12%)	4	17
52	B4	41/41 (100%)	29 (71%)	12 (29%)	0	1
52	D4	41/41 (100%)	28 (68%)	13 (32%)	0	1
53	B5	53/53 (100%)	42 (79%)	11 (21%)	1	2
53	D5	53/53 (100%)	43 (81%)	10 (19%)	1	4
All	All	9462/9514 (100%)	7811 (83%)	1651 (17%)	1	6

All (1651) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	16	HIS
2	AB	27	LYS
2	AB	28	PHE
2	AB	60	ASP
2	AB	61	LEU
2	AB	71	VAL
2	AB	75	LYS
2	AB	76	GLN
2	AB	87	ARG
2	AB	93	VAL
2	AB	111	ARG
2	AB	117	GLU
2	AB	127	ILE
2	AB	128	GLU
2	AB	130	ARG
2	AB	142	LEU
2	AB	153	ARG
2	AB	154	LEU
2	AB	158	LEU
2	AB	164	VAL
2	AB	169	LYS
2	AB	178	ARG
2	AB	187	LEU
2	AB	221	LEU
3	AC	3	ASN
3	AC	5	ILE
3	AC	11	ARG
3	AC	16	ARG
3	AC	29	TYR

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Mol	Chain	Res	Type
3	AC	79	ARG
3	AC	95	THR
3	AC	115	LEU
3	AC	131	ARG
3	AC	152	ILE
3	AC	165	THR
3	AC	167	TRP
3	AC	196	LEU
3	AC	202	ILE
4	AD	3	ARG
4	AD	4	TYR
4	AD	8	VAL
4	AD	9	CYS
4	AD	11	LEU
4	AD	21	LEU
4	AD	45	GLN
4	AD	49	ARG
4	AD	59	ARG
4	AD	72	GLU
4	AD	76	ARG
4	AD	92	VAL
4	AD	96	LEU
4	AD	103	ASN
4	AD	108	LEU
4	AD	110	PHE
4	AD	114	ARG
4	AD	119	GLN
4	AD	122	ARG
4	AD	129	ASN
4	AD	131	ARG
4	AD	135	LEU
4	AD	141	ARG
4	AD	144	ASP
4	AD	154	ASN
4	AD	155	LEU
4	AD	158	ILE
4	AD	166	LYS
4	AD	203	VAL
4	AD	208	SER
5	AE	8	GLU
5	AE	12	LEU
5	AE	16	THR

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Mol	Chain	Res	Type
5	AE	18	ARG
5	AE	20	GLN
5	AE	28	PHE
5	AE	31	LEU
5	AE	43	LEU
5	AE	47	LYS
5	AE	53	LEU
5	AE	55	VAL
5	AE	60	TYR
5	AE	64	ARG
5	AE	71	LEU
5	AE	73	ASN
5	AE	76	ILE
5	AE	78	HIS
5	AE	79	GLU
5	AE	110	LEU
5	AE	116	THR
5	AE	120	THR
5	AE	126	ARG
5	AE	144	THR
5	AE	147	ASP
6	AF	43	LEU
6	AF	46	ARG
6	AF	48	LEU
6	AF	63	TYR
6	AF	69	GLU
6	AF	72	VAL
6	AF	89	MET
6	AF	100	ASN
7	AG	67	GLU
7	AG	91	VAL
7	AG	104	LEU
7	AG	118	VAL
7	AG	148	ASN
8	AH	1	MET
8	AH	8	ASP
8	AH	25	ASP
8	AH	26	VAL
8	AH	39	LEU
8	AH	50	ARG
8	AH	52	ASP
8	AH	54	ASP

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Mol	Chain	Res	Type
8	AH	73	ASP
8	AH	80	ILE
8	AH	91	ARG
8	AH	104	ARG
8	AH	107	LEU
8	AH	111	ILE
8	AH	119	LEU
8	AH	127	LEU
8	AH	136	GLU
9	AI	10	ARG
9	AI	14	VAL
9	AI	88	TYR
9	AI	95	LYS
9	AI	99	LEU
9	AI	104	ARG
9	AI	109	VAL
9	AI	114	TYR
9	AI	121	ARG
9	AI	124	GLN
10	AJ	16	LEU
10	AJ	22	LYS
10	AJ	49	VAL
10	AJ	55	LYS
10	AJ	62	HIS
10	AJ	63	PHE
10	AJ	66	ARG
10	AJ	74	ILE
10	AJ	92	THR
10	AJ	96	ILE
11	AK	14	VAL
11	AK	29	ILE
11	AK	32	ILE
11	AK	33	THR
11	AK	34	ASP
11	AK	40	ILE
11	AK	48	ILE
11	AK	53	SER
11	AK	80	VAL
11	AK	81	ASP
11	AK	92	GLU
11	AK	103	LEU
11	AK	114	VAL

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Mol	Chain	Res	Type
11	AK	117	ASN
11	AK	126	ARG
12	AL	5	THR
12	AL	6	ILE
12	AL	9	LEU
12	AL	10	VAL
12	AL	19	LYS
12	AL	31	PHE
12	AL	35	VAL
12	AL	40	ARG
12	AL	41	THR
12	AL	42	VAL
12	AL	43	THR
12	AL	52	ARG
12	AL	59	LEU
12	AL	61	SER
12	AL	65	VAL
12	AL	69	ILE
12	AL	83	LEU
12	AL	84	ILE
12	AL	95	VAL
12	AL	99	ILE
12	AL	109	VAL
13	AM	58	GLU
13	AM	64	TRP
13	AM	87	TYR
13	AM	93	ARG
13	AM	105	THR
13	AM	106	ASN
13	AM	115	LYS
14	AN	16	PHE
14	AN	41	ARG
14	AN	42	ILE
14	AN	44	LEU
15	AO	5	LYS
15	AO	17	ARG
15	AO	34	LEU
15	AO	39	LEU
15	AO	44	LYS
15	AO	45	VAL
15	AO	63	ARG
15	AO	66	LEU

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Mol	Chain	Res	Type
15	AO	67	LEU
15	AO	82	ILE
16	AP	1	MET
16	AP	2	VAL
16	AP	16	HIS
16	AP	20	VAL
16	AP	27	LYS
16	AP	28	ARG
16	AP	32	TYR
16	AP	47	ASP
16	AP	61	SER
16	AP	65	GLN
16	AP	69	THR
16	AP	72	ARG
16	AP	74	LEU
16	AP	82	GLN
16	AP	83	GLU
17	AQ	4	LYS
17	AQ	7	THR
17	AQ	9	VAL
17	AQ	10	VAL
17	AQ	11	VAL
17	AQ	15	MET
17	AQ	19	VAL
17	AQ	23	VAL
17	AQ	38	ARG
17	AQ	43	LEU
17	AQ	52	LYS
17	AQ	57	VAL
17	AQ	59	ILE
17	AQ	70	ARG
17	AQ	74	LEU
17	AQ	85	VAL
18	AR	65	ILE
18	AR	84	LYS
18	AR	88	LYS
19	AS	6	LYS
19	AS	7	LYS
19	AS	22	LEU
19	AS	27	GLU
19	AS	29	ARG
19	AS	37	ARG

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Mol	Chain	Res	Type
19	AS	44	MET
19	AS	49	ILE
19	AS	53	ASN
20	AT	9	ASN
20	AT	10	LEU
20	AT	22	ARG
20	AT	26	ASN
20	AT	30	LYS
20	AT	55	ILE
20	AT	57	ARG
20	AT	62	LEU
20	AT	73	HIS
20	AT	93	GLU
20	AT	100	ILE
25	BC	10	THR
25	BC	13	ARG
25	BC	14	ARG
25	BC	16	MET
25	BC	33	LEU
25	BC	38	LYS
25	BC	44	ASN
25	BC	61	LEU
25	BC	68	LYS
25	BC	69	ARG
25	BC	73	VAL
25	BC	87	ASN
25	BC	94	LEU
25	BC	95	LEU
25	BC	99	ASP
25	BC	102	LYS
25	BC	103	ARG
25	BC	105	ILE
25	BC	111	LEU
25	BC	112	GLN
25	BC	125	ILE
25	BC	126	GLN
25	BC	131	LEU
25	BC	134	ARG
25	BC	138	VAL
25	BC	141	VAL
25	BC	150	LYS
25	BC	154	LYS

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Mol	Chain	Res	Type
25	BC	155	LEU
25	BC	166	GLN
25	BC	171	ASP
25	BC	174	ILE
25	BC	192	THR
25	BC	193	VAL
25	BC	198	ASN
25	BC	204	ILE
25	BC	205	VAL
25	BC	211	ARG
25	BC	212	SER
25	BC	218	ARG
25	BC	226	MET
25	BC	227	ASN
25	BC	229	VAL
25	BC	237	GLU
25	BC	242	ARG
25	BC	244	ARG
25	BC	259	THR
25	BC	270	ILE
25	BC	271	ILE
26	BD	1	MET
26	BD	4	ILE
26	BD	5	LEU
26	BD	9	VAL
26	BD	16	ARG
26	BD	18	ASP
26	BD	33	VAL
26	BD	34	VAL
26	BD	40	GLU
26	BD	45	THR
26	BD	49	LEU
26	BD	54	GLN
26	BD	57	LYS
26	BD	76	ARG
26	BD	77	ILE
26	BD	79	ARG
26	BD	84	PHE
26	BD	95	ILE
26	BD	116	VAL
26	BD	121	ASN
26	BD	141	ILE

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Mol	Chain	Res	Type
26	BD	145	LYS
26	BD	152	LYS
26	BD	154	LYS
26	BD	156	MET
26	BD	160	TYR
26	BD	167	VAL
26	BD	169	ASN
26	BD	170	LEU
26	BD	171	GLU
26	BD	173	VAL
26	BD	175	VAL
26	BD	176	ILE
26	BD	181	LEU
26	BD	184	VAL
26	BD	197	ILE
27	BE	6	MET
27	BE	8	GLN
27	BE	9	ILE
27	BE	24	LEU
27	BE	33	LEU
27	BE	46	ARG
27	BE	48	THR
27	BE	50	SER
27	BE	53	THR
27	BE	64	ILE
27	BE	65	TRP
27	BE	67	GLN
27	BE	68	LYS
27	BE	70	THR
27	BE	74	ARG
27	BE	78	ILE
27	BE	82	ILE
27	BE	88	VAL
27	BE	98	SER
27	BE	100	THR
27	BE	106	ARG
27	BE	122	LYS
27	BE	125	LEU
27	BE	127	GLU
27	BE	129	PHE
27	BE	136	THR
27	BE	158	THR

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Mol	Chain	Res	Type
27	BE	160	ASN
27	BE	164	ARG
27	BE	165	ARG
27	BE	174	VAL
27	BE	175	THR
27	BE	181	LEU
27	BE	183	VAL
27	BE	192	LEU
27	BE	194	MET
27	BE	197	ASP
28	BF	5	LEU
28	BF	8	LYS
28	BF	26	GLN
28	BF	33	ARG
28	BF	35	GLU
28	BF	47	LYS
28	BF	78	SER
28	BF	86	MET
28	BF	90	LEU
28	BF	93	THR
28	BF	94	LEU
28	BF	97	ASP
28	BF	98	ARG
28	BF	107	LEU
28	BF	115	ARG
28	BF	128	ARG
28	BF	132	ASN
28	BF	143	GLU
28	BF	155	MET
28	BF	157	ILE
28	BF	159	VAL
28	BF	161	THR
28	BF	166	ASP
29	BG	13	LYS
29	BG	23	ARG
29	BG	34	GLU
29	BG	37	VAL
29	BG	57	ASP
29	BG	60	ARG
29	BG	71	LEU
29	BG	90	LYS
29	BG	94	TYR

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Mol	Chain	Res	Type
29	BG	101	ARG
29	BG	116	GLU
29	BG	122	THR
29	BG	123	PHE
29	BG	124	GLU
29	BG	129	THR
29	BG	133	VAL
29	BG	136	ILE
29	BG	139	GLN
29	BG	140	LYS
29	BG	147	ASN
29	BG	151	ILE
29	BG	158	HIS
29	BG	162	ILE
29	BG	163	TYR
30	BH	3	VAL
30	BH	4	ILE
30	BH	5	LEU
30	BH	6	LEU
30	BH	14	ASP
30	BH	20	ASP
30	BH	21	VAL
30	BH	33	ARG
30	BH	40	THR
30	BH	50	ARG
30	BH	67	ARG
30	BH	68	LEU
30	BH	73	GLU
30	BH	77	LEU
30	BH	89	TYR
30	BH	91	SER
30	BH	109	ILE
30	BH	135	GLU
30	BH	142	VAL
31	BI	3	ASN
31	BI	58	LEU
32	BJ	38	LEU
32	BJ	39	ILE
32	BJ	42	GLU
32	BJ	46	LEU
32	BJ	51	THR
32	BJ	56	LEU

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Mol	Chain	Res	Type
32	BJ	57	LEU
32	BJ	68	ASN
32	BJ	71	MET
32	BJ	81	ASP
32	BJ	83	ILE
32	BJ	86	THR
32	BJ	92	GLN
32	BJ	105	LEU
32	BJ	106	LYS
32	BJ	110	LEU
32	BJ	112	LYS
32	BJ	113	MET
32	BJ	116	THR
32	BJ	117	HIS
32	BJ	122	LEU
32	BJ	126	VAL
32	BJ	129	MET
32	BJ	132	LYS
32	BJ	137	ARG
32	BJ	142	ARG
32	BJ	143	LEU
32	BJ	144	LYS
32	BJ	146	TYR
32	BJ	154	GLN
32	BJ	160	LYS
32	BJ	161	LEU
33	BK	2	ILE
33	BK	3	GLN
33	BK	4	PRO
33	BK	19	ILE
33	BK	22	ILE
33	BK	23	ARG
33	BK	24	VAL
33	BK	26	LYS
33	BK	31	LYS
33	BK	32	TYR
33	BK	47	ILE
33	BK	52	VAL
33	BK	65	THR
33	BK	78	ARG
33	BK	87	ILE
33	BK	89	ASN

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Mol	Chain	Res	Type
33	BK	90	GLN
33	BK	91	LEU
33	BK	98	VAL
33	BK	99	PHE
33	BK	102	VAL
33	BK	115	VAL
34	BL	9	ASN
34	BL	15	ARG
34	BL	16	ARG
34	BL	18	ARG
34	BL	19	VAL
34	BL	29	LYS
34	BL	33	ARG
34	BL	39	LYS
34	BL	40	SER
34	BL	41	ARG
34	BL	42	SER
34	BL	49	ARG
34	BL	50	ARG
34	BL	51	PHE
34	BL	52	GLU
34	BL	55	ARG
34	BL	56	SER
34	BL	57	THR
34	BL	59	LEU
34	BL	61	ARG
34	BL	62	LEU
34	BL	67	MET
34	BL	75	ILE
34	BL	81	GLN
34	BL	83	VAL
34	BL	85	LEU
34	BL	88	LEU
34	BL	91	PHE
34	BL	105	LEU
34	BL	111	ARG
34	BL	114	ILE
34	BL	123	LEU
34	BL	135	LEU
34	BL	144	GLU
34	BL	146	VAL
34	BL	147	LEU

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Mol	Chain	Res	Type
34	BL	148	LEU
35	BM	6	ARG
35	BM	9	TYR
35	BM	11	LYS
35	BM	13	GLN
35	BM	22	LYS
35	BM	25	ASP
35	BM	43	THR
35	BM	45	GLN
35	BM	52	VAL
35	BM	58	PHE
35	BM	59	ARG
35	BM	63	LYS
35	BM	66	ILE
35	BM	79	LEU
35	BM	80	GLU
35	BM	81	VAL
35	BM	83	MET
35	BM	89	ASN
35	BM	103	MET
35	BM	109	VAL
35	BM	115	MET
35	BM	119	ARG
35	BM	132	VAL
35	BM	135	ASP
36	BN	2	ARG
36	BN	8	ARG
36	BN	10	LEU
36	BN	12	ARG
36	BN	15	SER
36	BN	17	ARG
36	BN	18	LEU
36	BN	28	LEU
36	BN	35	THR
36	BN	37	THR
36	BN	44	LEU
36	BN	52	ILE
36	BN	54	LEU
36	BN	60	LEU
36	BN	63	ARG
36	BN	67	LEU
36	BN	70	LEU

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Mol	Chain	Res	Type
36	BN	75	LEU
36	BN	79	LEU
36	BN	95	THR
36	BN	98	LEU
36	BN	99	LYS
36	BN	104	ARG
36	BN	107	ASP
36	BN	111	LEU
37	BO	12	PHE
37	BO	13	ARG
37	BO	26	LEU
37	BO	30	ARG
37	BO	36	TYR
37	BO	40	ILE
37	BO	44	LYS
37	BO	48	LEU
37	BO	54	LEU
37	BO	63	THR
37	BO	69	VAL
37	BO	92	TYR
37	BO	93	LYS
37	BO	101	LEU
38	BP	15	VAL
38	BP	19	LEU
38	BP	23	ARG
38	BP	28	VAL
38	BP	30	VAL
38	BP	41	ARG
38	BP	50	ILE
38	BP	51	ARG
38	BP	53	ARG
38	BP	54	ARG
38	BP	58	ASN
38	BP	61	PHE
38	BP	63	VAL
38	BP	75	ILE
38	BP	84	GLN
38	BP	85	LYS
38	BP	86	ILE
38	BP	87	ASP
38	BP	88	ILE
38	BP	89	VAL

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Mol	Chain	Res	Type
38	BP	99	LEU
38	BP	100	TYR
38	BP	112	ARG
38	BP	113	LYS
38	BP	115	ARG
39	BQ	8	VAL
39	BQ	14	HIS
39	BQ	18	LEU
39	BQ	20	LEU
39	BQ	27	LEU
39	BQ	34	LYS
39	BQ	40	PHE
39	BQ	52	ARG
39	BQ	55	ARG
39	BQ	62	ILE
39	BQ	64	ARG
39	BQ	70	ARG
39	BQ	74	LEU
39	BQ	76	TYR
39	BQ	79	PHE
39	BQ	80	ILE
39	BQ	92	ARG
39	BQ	97	ASP
39	BQ	101	ARG
39	BQ	108	GLU
39	BQ	112	ARG
40	BR	5	VAL
40	BR	10	LYS
40	BR	12	TYR
40	BR	13	ARG
40	BR	18	LEU
40	BR	20	LEU
40	BR	21	ARG
40	BR	37	VAL
40	BR	39	LEU
40	BR	44	LYS
40	BR	53	GLU
40	BR	57	VAL
40	BR	72	VAL
40	BR	78	LYS
40	BR	79	VAL
40	BR	80	GLN

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Mol	Chain	Res	Type
40	BR	88	ARG
40	BR	98	GLU
40	BR	99	ILE
41	BS	1	MET
41	BS	8	ARG
41	BS	10	VAL
41	BS	11	ARG
41	BS	15	ARG
41	BS	17	VAL
41	BS	19	LEU
41	BS	23	LEU
41	BS	28	SER
41	BS	36	LEU
41	BS	39	THR
41	BS	47	VAL
41	BS	51	LEU
41	BS	53	SER
41	BS	60	ASN
41	BS	61	ASN
41	BS	69	LEU
41	BS	75	TYR
41	BS	76	VAL
41	BS	78	GLU
41	BS	84	ARG
41	BS	92	ARG
41	BS	96	ILE
41	BS	100	THR
41	BS	105	VAL
41	BS	107	LEU
42	BT	9	LEU
42	BT	12	VAL
42	BT	28	PHE
42	BT	39	ILE
42	BT	45	THR
42	BT	49	VAL
42	BT	52	VAL
42	BT	57	LEU
42	BT	62	LYS
42	BT	65	ARG
42	BT	68	ARG
42	BT	70	LEU
42	BT	80	ILE

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Mol	Chain	Res	Type
42	BT	81	VAL
43	BU	4	LYS
43	BU	6	HIS
43	BU	8	LYS
43	BU	9	LYS
43	BU	30	VAL
43	BU	31	LEU
43	BU	32	PRO
43	BU	60	PHE
43	BU	61	ILE
43	BU	62	GLU
43	BU	63	LYS
43	BU	67	LEU
43	BU	71	LYS
43	BU	76	CYS
43	BU	89	PHE
43	BU	90	LEU
43	BU	97	ARG
43	BU	98	VAL
44	BV	3	TYR
44	BV	24	LEU
44	BV	27	VAL
44	BV	31	ARG
44	BV	35	ARG
44	BV	39	VAL
44	BV	42	VAL
44	BV	70	LEU
44	BV	72	ARG
44	BV	82	ARG
44	BV	85	HIS
44	BV	86	VAL
44	BV	89	PHE
44	BV	94	GLU
44	BV	98	MET
44	BV	118	GLN
44	BV	140	ASP
44	BV	146	ILE
44	BV	150	LEU
44	BV	161	VAL
44	BV	163	LEU
45	BW	14	ARG
45	BW	20	ARG

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Mol	Chain	Res	Type
45	BW	21	LEU
45	BW	38	VAL
45	BW	53	MET
45	BW	63	VAL
45	BW	64	ASP
45	BW	80	HIS
45	BW	84	LEU
46	BX	8	SER
46	BX	13	ILE
46	BX	17	SER
46	BX	18	ILE
46	BX	21	ARG
46	BX	25	LYS
46	BX	27	GLU
46	BX	37	ILE
46	BX	38	SER
46	BX	40	ARG
46	BX	41	ARG
46	BX	45	ASN
46	BX	46	LEU
46	BX	51	VAL
46	BX	58	ILE
46	BX	60	PHE
46	BX	70	VAL
46	BX	72	GLU
46	BX	73	LEU
46	BX	75	GLU
46	BX	80	LEU
46	BX	88	LYS
46	BX	95	LEU
47	BY	1	MET
47	BY	2	LYS
47	BY	3	LEU
47	BY	5	GLU
47	BY	19	VAL
47	BY	21	LEU
47	BY	24	LEU
47	BY	32	LEU
47	BY	35	LEU
47	BY	57	ILE
47	BY	61	LEU
47	BY	62	THR

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Mol	Chain	Res	Type
48	BZ	1	MET
48	BZ	8	LEU
48	BZ	37	LEU
48	BZ	40	THR
48	BZ	43	ILE
48	BZ	52	HIS
48	BZ	55	ARG
48	BZ	56	VAL
49	B1	60	GLU
50	B2	3	LYS
50	B2	4	HIS
50	B2	11	THR
50	B2	25	LEU
50	B2	52	TYR
51	B3	12	GLU
51	B3	29	ASN
51	B3	30	THR
51	B3	34	LEU
51	B3	42	TRP
52	B4	4	THR
52	B4	8	ASN
52	B4	9	ARG
52	B4	15	THR
52	B4	19	ARG
52	B4	24	THR
52	B4	31	LEU
52	B4	34	ARG
52	B4	36	GLN
52	B4	41	ARG
52	B4	42	LEU
52	B4	46	VAL
53	B5	4	MET
53	B5	11	LYS
53	B5	19	SER
53	B5	30	ARG
53	B5	31	HIS
53	B5	33	ASN
53	B5	41	ILE
53	B5	57	ARG
53	B5	60	LEU
53	B5	62	LEU
53	B5	64	TYR

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Mol	Chain	Res	Type
2	CB	16	HIS
2	CB	27	LYS
2	CB	28	PHE
2	CB	60	ASP
2	CB	61	LEU
2	CB	71	VAL
2	CB	75	LYS
2	CB	76	GLN
2	CB	87	ARG
2	CB	93	VAL
2	CB	111	ARG
2	CB	117	GLU
2	CB	127	ILE
2	CB	128	GLU
2	CB	142	LEU
2	CB	153	ARG
2	CB	154	LEU
2	CB	158	LEU
2	CB	164	VAL
2	CB	169	LYS
2	CB	178	ARG
2	CB	187	LEU
2	CB	221	LEU
3	CC	3	ASN
3	CC	5	ILE
3	CC	11	ARG
3	CC	16	ARG
3	CC	29	TYR
3	CC	79	ARG
3	CC	95	THR
3	CC	111	LEU
3	CC	115	LEU
3	CC	131	ARG
3	CC	152	ILE
3	CC	165	THR
3	CC	167	TRP
3	CC	196	LEU
3	CC	202	ILE
4	CD	3	ARG
4	CD	4	TYR
4	CD	8	VAL
4	CD	9	CYS

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Mol	Chain	Res	Type
4	CD	11	LEU
4	CD	21	LEU
4	CD	45	GLN
4	CD	49	ARG
4	CD	59	ARG
4	CD	72	GLU
4	CD	76	ARG
4	CD	92	VAL
4	CD	96	LEU
4	CD	103	ASN
4	CD	108	LEU
4	CD	110	PHE
4	CD	114	ARG
4	CD	119	GLN
4	CD	122	ARG
4	CD	129	ASN
4	CD	131	ARG
4	CD	135	LEU
4	CD	141	ARG
4	CD	144	ASP
4	CD	154	ASN
4	CD	155	LEU
4	CD	158	ILE
4	CD	166	LYS
4	CD	203	VAL
4	CD	208	SER
5	CE	8	GLU
5	CE	12	LEU
5	CE	16	THR
5	CE	18	ARG
5	CE	20	GLN
5	CE	31	LEU
5	CE	43	LEU
5	CE	47	LYS
5	CE	53	LEU
5	CE	55	VAL
5	CE	60	TYR
5	CE	64	ARG
5	CE	71	LEU
5	CE	73	ASN
5	CE	76	ILE
5	CE	78	HIS

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Mol	Chain	Res	Type
5	CE	79	GLU
5	CE	110	LEU
5	CE	116	THR
5	CE	120	THR
5	CE	126	ARG
5	CE	147	ASP
6	CF	43	LEU
6	CF	46	ARG
6	CF	48	LEU
6	CF	63	TYR
6	CF	69	GLU
6	CF	89	MET
6	CF	100	ASN
7	CG	67	GLU
7	CG	91	VAL
7	CG	104	LEU
7	CG	118	VAL
7	CG	148	ASN
8	CH	1	MET
8	CH	8	ASP
8	CH	25	ASP
8	CH	26	VAL
8	CH	50	ARG
8	CH	52	ASP
8	CH	54	ASP
8	CH	73	ASP
8	CH	80	ILE
8	CH	91	ARG
8	CH	104	ARG
8	CH	107	LEU
8	CH	119	LEU
8	CH	127	LEU
8	CH	136	GLU
9	CI	10	ARG
9	CI	14	VAL
9	CI	88	TYR
9	CI	95	LYS
9	CI	99	LEU
9	CI	104	ARG
9	CI	109	VAL
9	CI	114	TYR
9	CI	121	ARG

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Mol	Chain	Res	Type
9	CI	124	GLN
10	CJ	16	LEU
10	CJ	22	LYS
10	CJ	49	VAL
10	CJ	55	LYS
10	CJ	62	HIS
10	CJ	63	PHE
10	CJ	66	ARG
10	CJ	74	ILE
10	CJ	92	THR
10	CJ	96	ILE
11	CK	14	VAL
11	CK	29	ILE
11	CK	32	ILE
11	CK	33	THR
11	CK	34	ASP
11	CK	40	ILE
11	CK	48	ILE
11	CK	80	VAL
11	CK	81	ASP
11	CK	92	GLU
11	CK	103	LEU
11	CK	114	VAL
11	CK	117	ASN
11	CK	126	ARG
12	CL	5	THR
12	CL	6	ILE
12	CL	9	LEU
12	CL	10	VAL
12	CL	19	LYS
12	CL	31	PHE
12	CL	35	VAL
12	CL	40	ARG
12	CL	41	THR
12	CL	42	VAL
12	CL	43	THR
12	CL	52	ARG
12	CL	59	LEU
12	CL	61	SER
12	CL	65	VAL
12	CL	69	ILE
12	CL	83	LEU

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Mol	Chain	Res	Type
12	CL	84	ILE
12	CL	95	VAL
12	CL	99	ILE
12	CL	109	VAL
13	CM	58	GLU
13	CM	64	TRP
13	CM	87	TYR
13	CM	93	ARG
13	CM	105	THR
13	CM	106	ASN
13	CM	115	LYS
14	CN	16	PHE
14	CN	41	ARG
14	CN	42	ILE
14	CN	44	LEU
15	CO	5	LYS
15	CO	17	ARG
15	CO	34	LEU
15	CO	39	LEU
15	CO	44	LYS
15	CO	45	VAL
15	CO	63	ARG
15	CO	66	LEU
15	CO	67	LEU
15	CO	82	ILE
16	CP	1	MET
16	CP	2	VAL
16	CP	16	HIS
16	CP	17	TYR
16	CP	20	VAL
16	CP	27	LYS
16	CP	28	ARG
16	CP	32	TYR
16	CP	47	ASP
16	CP	61	SER
16	CP	65	GLN
16	CP	69	THR
16	CP	72	ARG
16	CP	74	LEU
16	CP	82	GLN
16	CP	83	GLU
17	CQ	4	LYS

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Mol	Chain	Res	Type
17	CQ	7	THR
17	CQ	9	VAL
17	CQ	10	VAL
17	CQ	11	VAL
17	CQ	19	VAL
17	CQ	23	VAL
17	CQ	38	ARG
17	CQ	43	LEU
17	CQ	52	LYS
17	CQ	57	VAL
17	CQ	59	ILE
17	CQ	70	ARG
17	CQ	74	LEU
17	CQ	85	VAL
18	CR	65	ILE
18	CR	84	LYS
18	CR	88	LYS
19	CS	6	LYS
19	CS	7	LYS
19	CS	22	LEU
19	CS	27	GLU
19	CS	29	ARG
19	CS	37	ARG
19	CS	44	MET
19	CS	49	ILE
19	CS	53	ASN
20	CT	9	ASN
20	CT	10	LEU
20	CT	22	ARG
20	CT	26	ASN
20	CT	30	LYS
20	CT	55	ILE
20	CT	57	ARG
20	CT	62	LEU
20	CT	73	HIS
20	CT	93	GLU
20	CT	100	ILE
25	DC	10	THR
25	DC	13	ARG
25	DC	14	ARG
25	DC	16	MET
25	DC	33	LEU

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Mol	Chain	Res	Type
25	DC	38	LYS
25	DC	44	ASN
25	DC	61	LEU
25	DC	68	LYS
25	DC	69	ARG
25	DC	73	VAL
25	DC	87	ASN
25	DC	94	LEU
25	DC	95	LEU
25	DC	99	ASP
25	DC	102	LYS
25	DC	103	ARG
25	DC	105	ILE
25	DC	111	LEU
25	DC	112	GLN
25	DC	125	ILE
25	DC	126	GLN
25	DC	131	LEU
25	DC	134	ARG
25	DC	138	VAL
25	DC	141	VAL
25	DC	150	LYS
25	DC	154	LYS
25	DC	155	LEU
25	DC	166	GLN
25	DC	171	ASP
25	DC	174	ILE
25	DC	192	THR
25	DC	193	VAL
25	DC	198	ASN
25	DC	200	ASP
25	DC	204	ILE
25	DC	205	VAL
25	DC	211	ARG
25	DC	212	SER
25	DC	217	ARG
25	DC	218	ARG
25	DC	226	MET
25	DC	227	ASN
25	DC	229	VAL
25	DC	237	GLU
25	DC	242	ARG

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Mol	Chain	Res	Type
25	DC	244	ARG
25	DC	254	THR
25	DC	259	THR
25	DC	271	ILE
26	DD	1	MET
26	DD	4	ILE
26	DD	9	VAL
26	DD	16	ARG
26	DD	18	ASP
26	DD	33	VAL
26	DD	34	VAL
26	DD	40	GLU
26	DD	45	THR
26	DD	49	LEU
26	DD	54	GLN
26	DD	57	LYS
26	DD	76	ARG
26	DD	77	ILE
26	DD	78	LEU
26	DD	79	ARG
26	DD	84	PHE
26	DD	95	ILE
26	DD	116	VAL
26	DD	121	ASN
26	DD	122	PHE
26	DD	141	ILE
26	DD	144	ARG
26	DD	145	LYS
26	DD	152	LYS
26	DD	154	LYS
26	DD	156	MET
26	DD	160	TYR
26	DD	169	ASN
26	DD	170	LEU
26	DD	171	GLU
26	DD	173	VAL
26	DD	175	VAL
26	DD	176	ILE
26	DD	181	LEU
26	DD	184	VAL
27	DE	6	MET
27	DE	8	GLN

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Mol	Chain	Res	Type
27	DE	9	ILE
27	DE	24	LEU
27	DE	33	LEU
27	DE	46	ARG
27	DE	48	THR
27	DE	50	SER
27	DE	53	THR
27	DE	62	ARG
27	DE	64	ILE
27	DE	65	TRP
27	DE	67	GLN
27	DE	68	LYS
27	DE	70	THR
27	DE	74	ARG
27	DE	78	ILE
27	DE	82	ILE
27	DE	88	VAL
27	DE	98	SER
27	DE	100	THR
27	DE	106	ARG
27	DE	122	LYS
27	DE	127	GLU
27	DE	129	PHE
27	DE	136	THR
27	DE	158	THR
27	DE	160	ASN
27	DE	164	ARG
27	DE	165	ARG
27	DE	174	VAL
27	DE	175	THR
27	DE	181	LEU
27	DE	183	VAL
27	DE	192	LEU
27	DE	194	MET
27	DE	197	ASP
28	DF	5	LEU
28	DF	8	LYS
28	DF	26	GLN
28	DF	33	ARG
28	DF	35	GLU
28	DF	47	LYS
28	DF	78	SER

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Mol	Chain	Res	Type
28	DF	86	MET
28	DF	90	LEU
28	DF	93	THR
28	DF	94	LEU
28	DF	98	ARG
28	DF	107	LEU
28	DF	115	ARG
28	DF	128	ARG
28	DF	143	GLU
28	DF	155	MET
28	DF	157	ILE
28	DF	159	VAL
28	DF	161	THR
28	DF	166	ASP
29	DG	13	LYS
29	DG	23	ARG
29	DG	34	GLU
29	DG	37	VAL
29	DG	52	VAL
29	DG	57	ASP
29	DG	60	ARG
29	DG	71	LEU
29	DG	90	LYS
29	DG	94	TYR
29	DG	101	ARG
29	DG	116	GLU
29	DG	122	THR
29	DG	123	PHE
29	DG	124	GLU
29	DG	129	THR
29	DG	133	VAL
29	DG	136	ILE
29	DG	139	GLN
29	DG	140	LYS
29	DG	147	ASN
29	DG	151	ILE
29	DG	158	HIS
29	DG	162	ILE
29	DG	163	TYR
30	DH	3	VAL
30	DH	4	ILE
30	DH	5	LEU

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Mol	Chain	Res	Type
30	DH	6	LEU
30	DH	14	ASP
30	DH	20	ASP
30	DH	21	VAL
30	DH	33	ARG
30	DH	40	THR
30	DH	50	ARG
30	DH	67	ARG
30	DH	68	LEU
30	DH	73	GLU
30	DH	77	LEU
30	DH	89	TYR
30	DH	91	SER
30	DH	109	ILE
30	DH	135	GLU
30	DH	142	VAL
31	DI	3	ASN
31	DI	58	LEU
32	DJ	38	LEU
32	DJ	39	ILE
32	DJ	42	GLU
32	DJ	46	LEU
32	DJ	51	THR
32	DJ	56	LEU
32	DJ	57	LEU
32	DJ	71	MET
32	DJ	83	ILE
32	DJ	86	THR
32	DJ	92	GLN
32	DJ	96	THR
32	DJ	105	LEU
32	DJ	106	LYS
32	DJ	110	LEU
32	DJ	112	LYS
32	DJ	113	MET
32	DJ	116	THR
32	DJ	117	HIS
32	DJ	122	LEU
32	DJ	126	VAL
32	DJ	129	MET
32	DJ	132	LYS
32	DJ	137	ARG

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Mol	Chain	Res	Type
32	DJ	142	ARG
32	DJ	143	LEU
32	DJ	144	LYS
32	DJ	146	TYR
32	DJ	154	GLN
32	DJ	160	LYS
32	DJ	161	LEU
33	DK	2	ILE
33	DK	3	GLN
33	DK	4	PRO
33	DK	19	ILE
33	DK	22	ILE
33	DK	23	ARG
33	DK	24	VAL
33	DK	26	LYS
33	DK	31	LYS
33	DK	32	TYR
33	DK	47	ILE
33	DK	52	VAL
33	DK	65	THR
33	DK	78	ARG
33	DK	87	ILE
33	DK	89	ASN
33	DK	90	GLN
33	DK	91	LEU
33	DK	98	VAL
33	DK	99	PHE
33	DK	102	VAL
33	DK	115	VAL
34	DL	6	LEU
34	DL	9	ASN
34	DL	15	ARG
34	DL	16	ARG
34	DL	18	ARG
34	DL	19	VAL
34	DL	29	LYS
34	DL	33	ARG
34	DL	39	LYS
34	DL	40	SER
34	DL	42	SER
34	DL	49	ARG
34	DL	50	ARG

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Mol	Chain	Res	Type
34	DL	51	PHE
34	DL	52	GLU
34	DL	55	ARG
34	DL	56	SER
34	DL	57	THR
34	DL	59	LEU
34	DL	61	ARG
34	DL	62	LEU
34	DL	67	MET
34	DL	75	ILE
34	DL	81	GLN
34	DL	85	LEU
34	DL	88	LEU
34	DL	91	PHE
34	DL	105	LEU
34	DL	111	ARG
34	DL	114	ILE
34	DL	123	LEU
34	DL	135	LEU
34	DL	144	GLU
34	DL	146	VAL
34	DL	147	LEU
34	DL	148	LEU
35	DM	6	ARG
35	DM	9	TYR
35	DM	11	LYS
35	DM	13	GLN
35	DM	22	LYS
35	DM	25	ASP
35	DM	43	THR
35	DM	45	GLN
35	DM	52	VAL
35	DM	58	PHE
35	DM	59	ARG
35	DM	63	LYS
35	DM	66	ILE
35	DM	79	LEU
35	DM	80	GLU
35	DM	81	VAL
35	DM	83	MET
35	DM	89	ASN
35	DM	103	MET

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Mol	Chain	Res	Type
35	DM	106	VAL
35	DM	109	VAL
35	DM	115	MET
35	DM	119	ARG
35	DM	132	VAL
35	DM	135	ASP
36	DN	2	ARG
36	DN	10	LEU
36	DN	15	SER
36	DN	17	ARG
36	DN	28	LEU
36	DN	35	THR
36	DN	37	THR
36	DN	40	LYS
36	DN	44	LEU
36	DN	48	VAL
36	DN	52	ILE
36	DN	54	LEU
36	DN	60	LEU
36	DN	63	ARG
36	DN	67	LEU
36	DN	70	LEU
36	DN	75	LEU
36	DN	79	LEU
36	DN	95	THR
36	DN	98	LEU
36	DN	99	LYS
36	DN	104	ARG
36	DN	107	ASP
36	DN	111	LEU
37	DO	12	PHE
37	DO	13	ARG
37	DO	26	LEU
37	DO	30	ARG
37	DO	36	TYR
37	DO	40	ILE
37	DO	44	LYS
37	DO	48	LEU
37	DO	54	LEU
37	DO	63	THR
37	DO	69	VAL
37	DO	92	TYR

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Mol	Chain	Res	Type
37	DO	93	LYS
37	DO	101	LEU
38	DP	15	VAL
38	DP	19	LEU
38	DP	23	ARG
38	DP	28	VAL
38	DP	30	VAL
38	DP	39	ARG
38	DP	41	ARG
38	DP	50	ILE
38	DP	51	ARG
38	DP	53	ARG
38	DP	54	ARG
38	DP	58	ASN
38	DP	63	VAL
38	DP	64	ARG
38	DP	75	ILE
38	DP	84	GLN
38	DP	85	LYS
38	DP	86	ILE
38	DP	87	ASP
38	DP	88	ILE
38	DP	89	VAL
38	DP	99	LEU
38	DP	100	TYR
38	DP	104	ASN
38	DP	112	ARG
38	DP	113	LYS
38	DP	115	ARG
39	DQ	8	VAL
39	DQ	14	HIS
39	DQ	18	LEU
39	DQ	20	LEU
39	DQ	27	LEU
39	DQ	34	LYS
39	DQ	40	PHE
39	DQ	47	TYR
39	DQ	52	ARG
39	DQ	55	ARG
39	DQ	62	ILE
39	DQ	64	ARG
39	DQ	70	ARG

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Mol	Chain	Res	Type
39	DQ	76	TYR
39	DQ	79	PHE
39	DQ	80	ILE
39	DQ	92	ARG
39	DQ	97	ASP
39	DQ	101	ARG
39	DQ	108	GLU
39	DQ	112	ARG
40	DR	5	VAL
40	DR	10	LYS
40	DR	12	TYR
40	DR	13	ARG
40	DR	18	LEU
40	DR	20	LEU
40	DR	21	ARG
40	DR	33	VAL
40	DR	37	VAL
40	DR	39	LEU
40	DR	44	LYS
40	DR	53	GLU
40	DR	57	VAL
40	DR	66	ARG
40	DR	72	VAL
40	DR	78	LYS
40	DR	79	VAL
40	DR	80	GLN
40	DR	88	ARG
40	DR	98	GLU
40	DR	99	ILE
41	DS	1	MET
41	DS	8	ARG
41	DS	10	VAL
41	DS	11	ARG
41	DS	15	ARG
41	DS	17	VAL
41	DS	19	LEU
41	DS	23	LEU
41	DS	28	SER
41	DS	33	ARG
41	DS	36	LEU
41	DS	39	THR
41	DS	47	VAL

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Mol	Chain	Res	Type
41	DS	51	LEU
41	DS	53	SER
41	DS	60	ASN
41	DS	61	ASN
41	DS	69	LEU
41	DS	75	TYR
41	DS	76	VAL
41	DS	78	GLU
41	DS	84	ARG
41	DS	92	ARG
41	DS	100	THR
41	DS	105	VAL
41	DS	107	LEU
42	DT	9	LEU
42	DT	12	VAL
42	DT	28	PHE
42	DT	39	ILE
42	DT	45	THR
42	DT	49	VAL
42	DT	52	VAL
42	DT	57	LEU
42	DT	62	LYS
42	DT	65	ARG
42	DT	68	ARG
42	DT	70	LEU
42	DT	80	ILE
42	DT	81	VAL
43	DU	4	LYS
43	DU	6	HIS
43	DU	8	LYS
43	DU	9	LYS
43	DU	30	VAL
43	DU	31	LEU
43	DU	32	PRO
43	DU	60	PHE
43	DU	61	ILE
43	DU	62	GLU
43	DU	63	LYS
43	DU	71	LYS
43	DU	76	CYS
43	DU	89	PHE
43	DU	90	LEU

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Mol	Chain	Res	Type
43	DU	97	ARG
43	DU	98	VAL
44	DV	3	TYR
44	DV	24	LEU
44	DV	27	VAL
44	DV	31	ARG
44	DV	35	ARG
44	DV	39	VAL
44	DV	42	VAL
44	DV	70	LEU
44	DV	72	ARG
44	DV	81	ARG
44	DV	82	ARG
44	DV	85	HIS
44	DV	86	VAL
44	DV	89	PHE
44	DV	94	GLU
44	DV	98	MET
44	DV	118	GLN
44	DV	140	ASP
44	DV	146	ILE
44	DV	150	LEU
44	DV	161	VAL
44	DV	163	LEU
45	DW	17	GLN
45	DW	20	ARG
45	DW	21	LEU
45	DW	38	VAL
45	DW	53	MET
45	DW	63	VAL
45	DW	64	ASP
45	DW	84	LEU
46	DX	8	SER
46	DX	13	ILE
46	DX	17	SER
46	DX	18	ILE
46	DX	21	ARG
46	DX	25	LYS
46	DX	27	GLU
46	DX	37	ILE
46	DX	38	SER
46	DX	40	ARG

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Mol	Chain	Res	Type
46	DX	41	ARG
46	DX	45	ASN
46	DX	46	LEU
46	DX	51	VAL
46	DX	58	ILE
46	DX	60	PHE
46	DX	70	VAL
46	DX	72	GLU
46	DX	73	LEU
46	DX	75	GLU
46	DX	80	LEU
46	DX	88	LYS
46	DX	95	LEU
47	DY	1	MET
47	DY	2	LYS
47	DY	3	LEU
47	DY	5	GLU
47	DY	19	VAL
47	DY	21	LEU
47	DY	24	LEU
47	DY	32	LEU
47	DY	35	LEU
47	DY	57	ILE
47	DY	61	LEU
47	DY	62	THR
48	DZ	1	MET
48	DZ	8	LEU
48	DZ	37	LEU
48	DZ	40	THR
48	DZ	43	ILE
48	DZ	52	HIS
48	DZ	55	ARG
48	DZ	56	VAL
49	D1	60	GLU
50	D2	3	LYS
50	D2	4	HIS
50	D2	11	THR
50	D2	25	LEU
50	D2	49	CYS
50	D2	52	TYR
51	D3	12	GLU
51	D3	29	ASN

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Mol	Chain	Res	Type
51	D3	30	THR
51	D3	34	LEU
51	D3	42	TRP
52	D4	1	MET
52	D4	4	THR
52	D4	8	ASN
52	D4	9	ARG
52	D4	15	THR
52	D4	19	ARG
52	D4	24	THR
52	D4	31	LEU
52	D4	34	ARG
52	D4	36	GLN
52	D4	41	ARG
52	D4	42	LEU
52	D4	46	VAL
53	D5	4	MET
53	D5	11	LYS
53	D5	19	SER
53	D5	30	ARG
53	D5	31	HIS
53	D5	33	ASN
53	D5	41	ILE
53	D5	57	ARG
53	D5	60	LEU
53	D5	62	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (245) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	37	ASN
2	AB	40	HIS
2	AB	110	GLN
2	AB	135	GLN
2	AB	212	GLN
3	AC	28	GLN
3	AC	31	HIS
3	AC	69	HIS
3	AC	136	GLN
3	AC	170	GLN
3	AC	176	HIS
4	AD	42	GLN

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Mol	Chain	Res	Type
4	AD	62	GLN
6	AF	100	ASN
7	AG	13	GLN
7	AG	96	GLN
8	AH	82	HIS
9	AI	23	ASN
9	AI	73	GLN
9	AI	117	HIS
9	AI	124	GLN
10	AJ	56	HIS
10	AJ	78	ASN
11	AK	26	ASN
12	AL	48	ASN
12	AL	74	HIS
12	AL	79	HIS
13	AM	101	GLN
15	AO	37	ASN
15	AO	46	HIS
15	AO	53	HIS
16	AP	82	GLN
19	AS	14	HIS
19	AS	53	ASN
19	AS	57	HIS
19	AS	65	ASN
20	AT	18	GLN
20	AT	26	ASN
25	BC	58	HIS
25	BC	87	ASN
25	BC	116	GLN
25	BC	126	GLN
25	BC	166	GLN
25	BC	186	HIS
25	BC	198	ASN
25	BC	220	HIS
25	BC	227	ASN
25	BC	231	HIS
25	BC	233	HIS
26	BD	60	ASN
26	BD	66	HIS
26	BD	85	ASN
26	BD	132	HIS
26	BD	143	ASN

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Mol	Chain	Res	Type
26	BD	169	ASN
26	BD	192	ASN
27	BE	67	GLN
27	BE	75	HIS
27	BE	160	ASN
27	BE	169	ASN
28	BF	58	GLN
28	BF	108	ASN
28	BF	121	ASN
28	BF	132	ASN
29	BG	65	HIS
29	BG	147	ASN
30	BH	17	GLN
30	BH	104	GLN
30	BH	133	HIS
31	BI	3	ASN
31	BI	56	ASN
32	BJ	61	HIS
32	BJ	68	ASN
32	BJ	79	ASN
32	BJ	151	HIS
32	BJ	153	HIS
32	BJ	154	GLN
33	BK	82	ASN
34	BL	70	GLN
35	BM	45	GLN
36	BN	3	HIS
36	BN	16	HIS
36	BN	53	HIS
36	BN	61	HIS
36	BN	71	GLN
36	BN	91	GLN
38	BP	58	ASN
38	BP	84	GLN
38	BP	90	GLN
39	BQ	14	HIS
39	BQ	49	HIS
39	BQ	72	HIS
39	BQ	75	ASN
40	BR	11	GLN
40	BR	64	HIS
40	BR	87	HIS

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Mol	Chain	Res	Type
41	BS	34	ASN
41	BS	57	ASN
41	BS	61	ASN
41	BS	102	HIS
42	BT	31	HIS
42	BT	41	ASN
42	BT	55	ASN
42	BT	82	GLN
42	BT	87	GLN
43	BU	6	HIS
44	BV	73	GLN
44	BV	121	HIS
45	BW	35	ASN
45	BW	50	ASN
46	BX	45	ASN
46	BX	56	GLN
46	BX	66	HIS
47	BY	47	ASN
47	BY	56	GLN
48	BZ	19	GLN
48	BZ	46	ASN
48	BZ	52	HIS
50	B2	22	HIS
50	B2	23	HIS
50	B2	43	HIS
51	B3	29	ASN
52	B4	8	ASN
53	B5	33	ASN
2	CB	37	ASN
2	CB	40	HIS
2	CB	110	GLN
2	CB	135	GLN
2	CB	212	GLN
3	CC	28	GLN
3	CC	31	HIS
3	CC	69	HIS
3	CC	170	GLN
4	CD	62	GLN
4	CD	123	HIS
4	CD	161	ASN
6	CF	100	ASN
7	CG	13	GLN

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Mol	Chain	Res	Type
7	CG	96	GLN
8	CH	15	ASN
8	CH	82	HIS
9	CI	23	ASN
9	CI	117	HIS
9	CI	124	GLN
10	CJ	56	HIS
10	CJ	78	ASN
11	CK	26	ASN
12	CL	48	ASN
12	CL	74	HIS
12	CL	79	HIS
13	CM	101	GLN
15	CO	37	ASN
15	CO	46	HIS
15	CO	53	HIS
16	CP	82	GLN
19	CS	14	HIS
19	CS	53	ASN
19	CS	57	HIS
19	CS	65	ASN
20	CT	18	GLN
20	CT	26	ASN
25	DC	58	HIS
25	DC	87	ASN
25	DC	116	GLN
25	DC	126	GLN
25	DC	143	HIS
25	DC	166	GLN
25	DC	186	HIS
25	DC	198	ASN
25	DC	220	HIS
25	DC	227	ASN
25	DC	231	HIS
25	DC	233	HIS
26	DD	60	ASN
26	DD	66	HIS
26	DD	85	ASN
26	DD	143	ASN
26	DD	169	ASN
26	DD	192	ASN
27	DE	67	GLN

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Mol	Chain	Res	Type
27	DE	75	HIS
27	DE	160	ASN
27	DE	169	ASN
28	DF	58	GLN
28	DF	108	ASN
28	DF	121	ASN
28	DF	132	ASN
29	DG	65	HIS
29	DG	147	ASN
30	DH	17	GLN
30	DH	104	GLN
30	DH	133	HIS
31	DI	3	ASN
31	DI	56	ASN
32	DJ	61	HIS
32	DJ	68	ASN
32	DJ	79	ASN
32	DJ	151	HIS
32	DJ	154	GLN
33	DK	82	ASN
34	DL	70	GLN
36	DN	3	HIS
36	DN	16	HIS
36	DN	61	HIS
36	DN	71	GLN
36	DN	91	GLN
38	DP	58	ASN
38	DP	84	GLN
38	DP	90	GLN
39	DQ	14	HIS
39	DQ	49	HIS
39	DQ	72	HIS
39	DQ	75	ASN
40	DR	11	GLN
40	DR	87	HIS
41	DS	34	ASN
41	DS	57	ASN
41	DS	61	ASN
41	DS	102	HIS
42	DT	31	HIS
42	DT	41	ASN
42	DT	55	ASN

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Mol	Chain	Res	Type
42	DT	82	GLN
42	DT	87	GLN
43	DU	6	HIS
44	DV	73	GLN
44	DV	121	HIS
45	DW	35	ASN
45	DW	50	ASN
46	DX	45	ASN
46	DX	56	GLN
46	DX	66	HIS
47	DY	47	ASN
47	DY	56	GLN
48	DZ	19	GLN
48	DZ	46	ASN
48	DZ	52	HIS
50	D2	22	HIS
50	D2	23	HIS
50	D2	43	HIS
51	D3	29	ASN
51	D3	49	HIS
52	D4	8	ASN
53	D5	31	HIS
53	D5	33	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1505/1506 (99%)	293 (19%)	14 (0%)
1	CA	1505/1506 (99%)	294 (19%)	14 (0%)
22	AV	32/43 (74%)	3 (9%)	0
22	CV	32/43 (74%)	3 (9%)	0
23	BA	2755/2879 (95%)	584 (21%)	27 (0%)
23	DA	2757/2879 (95%)	589 (21%)	29 (1%)
24	BB	118/119 (99%)	26 (22%)	0
24	DB	118/119 (99%)	27 (22%)	0
All	All	8822/9094 (97%)	1819 (20%)	84 (0%)

All (1819) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	6	G

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Mol	Chain	Res	Type
1	AA	7	G
1	AA	9	G
1	AA	13	U
1	AA	14	U
1	AA	15	G
1	AA	32	A
1	AA	33	A
1	AA	39	G
1	AA	41	G
1	AA	42	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	59	A
1	AA	61	G
1	AA	88	C
1	AA	97	U
1	AA	99	C
1	AA	110	C
1	AA	115	G
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	131	C
1	AA	144	G
1	AA	151	A
1	AA	163	C
1	AA	171	A
1	AA	182	U
1	AA	183	G
1	AA	189	U
1	AA	190	G
1	AA	195	A
1	AA	196	A
1	AA	197	A
1	AA	201	C
1	AA	209	U
1	AA	210	U
1	AA	231	G
1	AA	240	C
1	AA	247	G

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Mol	Chain	Res	Type
1	AA	250	A
1	AA	251	G
1	AA	252	U
1	AA	258	G
1	AA	266	G
1	AA	267	C
1	AA	280	C
1	AA	281	G
1	AA	289	G
1	AA	298	A
1	AA	305	G
1	AA	306	G
1	AA	320	C
1	AA	321	A
1	AA	328	C
1	AA	330	C
1	AA	332	G
1	AA	345	C
1	AA	347	G
1	AA	351	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	358	U
1	AA	364	A
1	AA	365	U
1	AA	366	C
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	382	A
1	AA	384	G
1	AA	387	U
1	AA	388	G
1	AA	397	A
1	AA	398	C
1	AA	406	G
1	AA	410	G
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	422	C

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Mol	Chain	Res	Type
1	AA	423	G
1	AA	427	U
1	AA	429	U
1	AA	439	A
1	AA	452	A
1	AA	453	A
1	AA	457	C
1	AA	464	G
1	AA	465	A
1	AA	466	G
1	AA	467	G
1	AA	484	G
1	AA	485	G
1	AA	486	U
1	AA	496	A
1	AA	497	U
1	AA	500	G
1	AA	509	A
1	AA	511	C
1	AA	512	U
1	AA	518	C
1	AA	523	A
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	547	A
1	AA	558	G
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	567	G
1	AA	572	A
1	AA	573	A
1	AA	575	G
1	AA	576	G
1	AA	577	G
1	AA	580	U
1	AA	581	G
1	AA	596	C
1	AA	607	A

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Mol	Chain	Res	Type
1	AA	653	A
1	AA	665	A
1	AA	687	A
1	AA	688	G
1	AA	690	G
1	AA	693	G
1	AA	702	A
1	AA	718	G
1	AA	731	G
1	AA	733	A
1	AA	753	A
1	AA	777	A
1	AA	782	A
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	800	G
1	AA	810	C
1	AA	816	A
1	AA	817	C
1	AA	818	G
1	AA	819	A
1	AA	828	A
1	AA	829	G
1	AA	833	U
1	AA	841	U
1	AA	842	C
1	AA	843	U
1	AA	849	C
1	AA	859	A
1	AA	870	U
1	AA	873	A
1	AA	876	G
1	AA	884	U
1	AA	897	C
1	AA	902	G
1	AA	914	A
1	AA	916	G
1	AA	921	U
1	AA	922	G
1	AA	927	G
1	AA	934	C

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Mol	Chain	Res	Type
1	AA	935	A
1	AA	945	G
1	AA	951	G
1	AA	960	U
1	AA	961	U
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	974	A
1	AA	976	G
1	AA	977	A
1	AA	980	C
1	AA	981	U
1	AA	982	U
1	AA	992	U
1	AA	993	G
1	AA	1004	A
1	AA	1006	C
1	AA	1009	G
1	AA	1025	U
1	AA	1045	C
1	AA	1054	C
1	AA	1055	A
1	AA	1065	U
1	AA	1067	A
1	AA	1068	G
1	AA	1080	A
1	AA	1081	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1117	G
1	AA	1118	C
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1136	U
1	AA	1137	C

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Mol	Chain	Res	Type
1	AA	1139	G
1	AA	1151	A
1	AA	1152	A
1	AA	1159	U
1	AA	1160	G
1	AA	1181	G
1	AA	1183	A
1	AA	1189	C
1	AA	1193	G
1	AA	1196	U
1	AA	1197	G
1	AA	1202	G
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1218	C
1	AA	1224	G
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1228	C
1	AA	1238	A
1	AA	1240	U
1	AA	1241	G
1	AA	1245	A
1	AA	1256	A
1	AA	1257	U
1	AA	1262	C
1	AA	1270	C
1	AA	1277	C
1	AA	1280	A
1	AA	1281	U
1	AA	1287	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1305	G
1	AA	1317	C
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1326	C

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Mol	Chain	Res	Type
1	AA	1331	G
1	AA	1335	C
1	AA	1337	G
1	AA	1346	A
1	AA	1347	G
1	AA	1353	G
1	AA	136(B)	C
1	AA	1363	A
1	AA	1364	U
1	AA	1366	C
1	AA	1378	C
1	AA	1379	G
1	AA	1397	C
1	AA	1401	G
1	AA	1419	G
1	AA	1440	C
1	AA	1442	G
1	AA	1443	G
1	AA	1446	A
1	AA	1447	G
1	AA	1451	A
1	AA	1452	C
1	AA	1454	G
1	AA	1469	G
1	AA	1483	A
1	AA	1487	G
1	AA	1492	A
1	AA	1494	G
1	AA	1497	G
1	AA	1502	A
1	AA	1503	A
1	AA	1504	G
1	AA	1506	U
1	AA	1514	C
1	AA	1517	G
1	AA	1519	A
1	AA	1520	G
1	AA	1528	U
1	AA	1529	G
1	AA	1530	G
22	AV	6182	A
22	AV	6187	A

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Mol	Chain	Res	Type
22	AV	6194	C
23	BA	10	G
23	BA	11	G
23	BA	34	C
23	BA	35	G
23	BA	46	C
23	BA	64	A
23	BA	71	A
23	BA	72	U
23	BA	74	A
23	BA	75	G
23	BA	84	A
23	BA	96	G
23	BA	97	C
23	BA	101	G
23	BA	102	G
23	BA	116	C
23	BA	118	A
23	BA	119	A
23	BA	120	U
23	BA	125	G
23	BA	135	G
23	BA	138	G
23	BA	139	G
23	BA	140	A
23	BA	181	A
23	BA	192	C
23	BA	195	A
23	BA	196	A
23	BA	197	A
23	BA	198	C
23	BA	199	A
23	BA	205	G
23	BA	215	G
23	BA	216	A
23	BA	218	A
23	BA	221	A
23	BA	222	A
23	BA	225	A
23	BA	228	A
23	BA	229	A
23	BA	230	U

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Mol	Chain	Res	Type
23	BA	244	A
23	BA	248	G
23	BA	249	C
23	BA	252	G
23	BA	257	A
23	BA	258	G
23	BA	265	A
23	BA	269	U
23	BA	270(K)	G
23	BA	270(L)	C
23	BA	270(M)	U
23	BA	270(N)	U
23	BA	270(O)	G
23	BA	270(Q)	C
23	BA	270(R)	C
23	BA	271(D)	U
23	BA	271	G
23	BA	274	G
23	BA	275	G
23	BA	276	A
23	BA	277	C
23	BA	278	A
23	BA	283	A
23	BA	302	C
23	BA	304	G
23	BA	311	A
23	BA	323	G
23	BA	324	A
23	BA	329	G
23	BA	330	A
23	BA	334	C
23	BA	335	C
23	BA	345	A
23	BA	352	G
23	BA	353	G
23	BA	360	G
23	BA	363(A)	G
23	BA	372	G
23	BA	386	G
23	BA	396	G
23	BA	405	U
23	BA	406	G

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Mol	Chain	Res	Type
23	BA	407	G
23	BA	411	G
23	BA	416	C
23	BA	421	U
23	BA	444	C
23	BA	455	C
23	BA	456	C
23	BA	457	A
23	BA	464	U
23	BA	467	G
23	BA	480	A
23	BA	481	G
23	BA	483	A
23	BA	491	G
23	BA	504	U
23	BA	505	A
23	BA	508	G
23	BA	509	C
23	BA	530	G
23	BA	531	C
23	BA	532	A
23	BA	533	G
23	BA	546	C
23	BA	547	A
23	BA	548	A
23	BA	558	G
23	BA	563	G
23	BA	566	U
23	BA	573	G
23	BA	575	A
23	BA	580	C
23	BA	586	A
23	BA	593	G
23	BA	595	C
23	BA	599	G
23	BA	603	A
23	BA	609(A)	A
23	BA	615	G
23	BA	617	G
23	BA	620	G
23	BA	627	A
23	BA	632	A

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Mol	Chain	Res	Type
23	BA	637	A
23	BA	645	C
23	BA	646	A
23	BA	654	U
23	BA	655	A
23	BA	682	G
23	BA	686	G
23	BA	694	U
23	BA	695	G
23	BA	717	G
23	BA	730	C
23	BA	739	G
23	BA	746	A
23	BA	747	U
23	BA	775	G
23	BA	776	G
23	BA	777	A
23	BA	782	A
23	BA	784	A
23	BA	785	G
23	BA	787	U
23	BA	792	G
23	BA	805	G
23	BA	812	C
23	BA	819	A
23	BA	822	U
23	BA	827	U
23	BA	828	U
23	BA	832	G
23	BA	846	C
23	BA	855	G
23	BA	857	C
23	BA	859	G
23	BA	868	U
23	BA	869	G
23	BA	878	A
23	BA	887	A
23	BA	889	C
23	BA	890	A
23	BA	896	A
23	BA	897	C
23	BA	910	A

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Mol	Chain	Res	Type
23	BA	914	C
23	BA	915	C
23	BA	917	A
23	BA	919	G
23	BA	932	G
23	BA	933	A
23	BA	934	G
23	BA	938	G
23	BA	941	A
23	BA	946	G
23	BA	948	G
23	BA	957	A
23	BA	958	U
23	BA	959	A
23	BA	961	C
23	BA	964	C
23	BA	974(A)	G
23	BA	974(B)	C
23	BA	975	G
23	BA	979	G
23	BA	983	A
23	BA	989	G
23	BA	990	A
23	BA	991	C
23	BA	996	A
23	BA	1005	C
23	BA	1009	A
23	BA	1010	A
23	BA	1011	G
23	BA	1012	U
23	BA	1013	C
23	BA	1020	A
23	BA	1022	G
23	BA	1023	U
23	BA	1025	G
23	BA	1026	U
23	BA	1030	G
23	BA	1033	U
23	BA	1046	A
23	BA	1047	G
23	BA	1053	C
23	BA	1105	U

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Mol	Chain	Res	Type
23	BA	1110	G
23	BA	1112	G
23	BA	1122	G
23	BA	1126	A
23	BA	1129	A
23	BA	1130	U
23	BA	1135	C
23	BA	1136	G
23	BA	1139	G
23	BA	1142	U
23	BA	114(B)	A
23	BA	1143	A
23	BA	1144	G
23	BA	1151	G
23	BA	1155	A
23	BA	1156	A
23	BA	1174	A
23	BA	1175	U
23	BA	1177	A
23	BA	1178	C
23	BA	1190	G
23	BA	1205	U
23	BA	1210	A
23	BA	1211	U
23	BA	1212	G
23	BA	1220	A
23	BA	1221	C
23	BA	1227	G
23	BA	1236	G
23	BA	1248	G
23	BA	1253	A
23	BA	1256	G
23	BA	1269	A
23	BA	1271	G
23	BA	1272	A
23	BA	1273	U
23	BA	1287	A
23	BA	1288	U
23	BA	1289	C
23	BA	1300	U
23	BA	1301	A
23	BA	1310	G

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Mol	Chain	Res	Type
23	BA	1313	U
23	BA	1314	C
23	BA	1317	A
23	BA	1329	U
23	BA	1332	G
23	BA	1338	G
23	BA	1343	G
23	BA	1344	G
23	BA	1345	C
23	BA	1349	A
23	BA	1352	U
23	BA	1359	A
23	BA	1360	A
23	BA	1365	A
23	BA	1368	G
23	BA	1380	G
23	BA	1384	A
23	BA	1385	G
23	BA	1396	U
23	BA	1405	U
23	BA	1416	G
23	BA	1417	C
23	BA	1420	U
23	BA	1427	A
23	BA	1428	C
23	BA	1434	A
23	BA	144(B)	A
23	BA	1453	A
23	BA	1458	C
23	BA	1459	G
23	BA	1467	C
23	BA	1469	A
23	BA	1483	G
23	BA	1490	A
23	BA	1493	C
23	BA	1494	A
23	BA	1495	A
23	BA	1496	A
23	BA	1497	U
23	BA	1505	C
23	BA	1509	A
23	BA	1510	A

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Mol	Chain	Res	Type
23	BA	1519	G
23	BA	1535	U
23	BA	1537	C
23	BA	1542	G
23	BA	1543	A
23	BA	1544	C
23	BA	1545	A
23	BA	1547	C
23	BA	1558	A
23	BA	1559	G
23	BA	1565	C
23	BA	1566	A
23	BA	1569	A
23	BA	1578	U
23	BA	1585	C
23	BA	1586	A
23	BA	1588	C
23	BA	1598	C
23	BA	1599	C
23	BA	1608	A
23	BA	1609	A
23	BA	1610	A
23	BA	1616	A
23	BA	1617	C
23	BA	1618	A
23	BA	1631	A
23	BA	1639	U
23	BA	1640	C
23	BA	1644	C
23	BA	1647	G
23	BA	1648	C
23	BA	1651	G
23	BA	1654	A
23	BA	1669	A
23	BA	1674	G
23	BA	1677	A
23	BA	1680	U
23	BA	1681	G
23	BA	1690	A
23	BA	1696	G
23	BA	1703	G
23	BA	1727	U

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Mol	Chain	Res	Type
23	BA	1729	A
23	BA	1743	G
23	BA	1750	G
23	BA	1756	G
23	BA	1761	C
23	BA	1763	G
23	BA	1764	G
23	BA	1767	C
23	BA	1773	A
23	BA	1778	U
23	BA	1787	A
23	BA	1791	A
23	BA	1800	C
23	BA	1801	G
23	BA	1811	G
23	BA	1813	G
23	BA	1816	G
23	BA	1829	A
23	BA	1835	G
23	BA	1838	C
23	BA	1840	G
23	BA	1847	A
23	BA	1870	C
23	BA	1887	C
23	BA	1888	G
23	BA	1889	A
23	BA	1896	G
23	BA	1900	A
23	BA	1902	C
23	BA	1903	G
23	BA	1906	G
23	BA	1913	A
23	BA	1914	C
23	BA	1929	G
23	BA	1930	G
23	BA	1936	A
23	BA	1938	A
23	BA	1939	U
23	BA	1955	U
23	BA	1956	U
23	BA	1960	A
23	BA	1963	U

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Mol	Chain	Res	Type
23	BA	1964	G
23	BA	1966	A
23	BA	1967	C
23	BA	1970	A
23	BA	1971	A
23	BA	1972	A
23	BA	1974	C
23	BA	1975	G
23	BA	1981	A
23	BA	1982	C
23	BA	1985	G
23	BA	1991	U
23	BA	1992	G
23	BA	1993	U
23	BA	1997	G
23	BA	2007	C
23	BA	2010	G
23	BA	2020	A
23	BA	2023	G
23	BA	2031	A
23	BA	2032	G
23	BA	2033	A
23	BA	2034	U
23	BA	2036	C
23	BA	2043	C
23	BA	2049	G
23	BA	2051	A
23	BA	2055	C
23	BA	2056	G
23	BA	2060	A
23	BA	2061	G
23	BA	2062	A
23	BA	2063	C
23	BA	2067	G
23	BA	2069	G
23	BA	2079	U
23	BA	2080	G
23	BA	2086	U
23	BA	2099	U
23	BA	2183	C
23	BA	2189	U
23	BA	2190	G

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Mol	Chain	Res	Type
23	BA	2198	A
23	BA	2211	G
23	BA	2212	A
23	BA	2213	U
23	BA	2215	G
23	BA	2225	A
23	BA	2226	C
23	BA	2227	A
23	BA	2228	G
23	BA	2235	G
23	BA	2238	G
23	BA	2239	G
23	BA	2267	A
23	BA	2268	A
23	BA	2269	A
23	BA	2272	U
23	BA	2273	A
23	BA	2275	C
23	BA	2278	A
23	BA	2283	C
23	BA	2287	A
23	BA	2288	A
23	BA	2305	A
23	BA	2306	C
23	BA	2307	G
23	BA	2309	A
23	BA	2310	A
23	BA	2319	G
23	BA	2320	A
23	BA	2322	A
23	BA	2325	G
23	BA	2334	G
23	BA	2336	A
23	BA	2343	C
23	BA	2346	A
23	BA	2347	C
23	BA	2350	C
23	BA	2358	G
23	BA	2361	A
23	BA	2365	G
23	BA	2379	G
23	BA	2383	G

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Mol	Chain	Res	Type
23	BA	2384	G
23	BA	2385	C
23	BA	2388	A
23	BA	2389	G
23	BA	2394	C
23	BA	2402	C
23	BA	2403	C
23	BA	2405	G
23	BA	2406	U
23	BA	2410	G
23	BA	2413	G
23	BA	2414	G
23	BA	2422	A
23	BA	2423	U
23	BA	2424	C
23	BA	2425	A
23	BA	2429	G
23	BA	2430	A
23	BA	2431	U
23	BA	2434	A
23	BA	2436	G
23	BA	2439	A
23	BA	2440	C
23	BA	2441	C
23	BA	2448	A
23	BA	2468	G
23	BA	2469	A
23	BA	2470	G
23	BA	2474	C
23	BA	2476	A
23	BA	2477	C
23	BA	2478	A
23	BA	2484	G
23	BA	2491	U
23	BA	2496	C
23	BA	2502	G
23	BA	2503	A
23	BA	2505	G
23	BA	2515	C
23	BA	2518	A
23	BA	2520	C
23	BA	2525	G

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Mol	Chain	Res	Type
23	BA	2529	G
23	BA	2532	G
23	BA	2535	G
23	BA	2541	A
23	BA	2542	A
23	BA	2543	G
23	BA	2550	G
23	BA	2554	U
23	BA	2566	A
23	BA	2567	G
23	BA	2574	G
23	BA	2585	U
23	BA	2593	U
23	BA	2599	G
23	BA	2602	A
23	BA	2603	G
23	BA	2604	U
23	BA	2609	U
23	BA	2612	C
23	BA	2613	U
23	BA	2615	U
23	BA	2617	C
23	BA	2621	A
23	BA	2636	U
23	BA	2637	U
23	BA	2638	G
23	BA	2647	U
23	BA	2657	A
23	BA	2660	A
23	BA	2665	A
23	BA	2679	A
23	BA	2682	U
23	BA	2683	C
23	BA	2684	U
23	BA	2689	U
23	BA	2691	C
23	BA	2693	A
23	BA	2700	C
23	BA	2702	U
23	BA	2703	C
23	BA	2705	A
23	BA	2707	G

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Mol	Chain	Res	Type
23	BA	2712	U
23	BA	712(B)	A
23	BA	2713	A
23	BA	2714	G
23	BA	2719	G
23	BA	2724	C
23	BA	2726	U
23	BA	2730	C
23	BA	2731	G
23	BA	2733	A
23	BA	2748	A
23	BA	2751	G
23	BA	2755	C
23	BA	2757	A
23	BA	2758	A
23	BA	2764	A
23	BA	2765	A
23	BA	2766	G
23	BA	2768	C
23	BA	2778	A
23	BA	2779	U
23	BA	2781	A
23	BA	2790	A
23	BA	2791	C
23	BA	2792	G
23	BA	2808	U
23	BA	2818	G
23	BA	2820	A
23	BA	2821	A
23	BA	2825	U
23	BA	2833	G
23	BA	2834	G
23	BA	2835	A
23	BA	2836	U
23	BA	2872	G
23	BA	2874	C
23	BA	2886	G
23	BA	2892	A
23	BA	2894	G
24	BB	5	C
24	BB	9	G
24	BB	12	C

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Mol	Chain	Res	Type
24	BB	13	A
24	BB	15	A
24	BB	16	G
24	BB	23	G
24	BB	24	G
24	BB	41	U
24	BB	42	C
24	BB	44	G
24	BB	47	C
24	BB	65	C
24	BB	66	A
24	BB	73	A
24	BB	84	C
24	BB	88	C
24	BB	89(A)	G
24	BB	89(B)	A
24	BB	90	C
24	BB	96	G
24	BB	100	G
24	BB	105	G
24	BB	107	U
24	BB	109	G
24	BB	110	G
1	CA	6	G
1	CA	7	G
1	CA	9	G
1	CA	13	U
1	CA	14	U
1	CA	15	G
1	CA	32	A
1	CA	33	A
1	CA	39	G
1	CA	41	G
1	CA	42	G
1	CA	47	C
1	CA	48	C
1	CA	50	A
1	CA	51	A
1	CA	59	A
1	CA	61	G
1	CA	88	C
1	CA	97	U

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Mol	Chain	Res	Type
1	CA	99	C
1	CA	110	C
1	CA	115	G
1	CA	116	A
1	CA	120	A
1	CA	121	C
1	CA	131	C
1	CA	144	G
1	CA	151	A
1	CA	163	C
1	CA	171	A
1	CA	182	U
1	CA	183	G
1	CA	189	U
1	CA	190	G
1	CA	195	A
1	CA	196	A
1	CA	197	A
1	CA	201	C
1	CA	209	U
1	CA	210	U
1	CA	231	G
1	CA	240	C
1	CA	247	G
1	CA	250	A
1	CA	251	G
1	CA	252	U
1	CA	258	G
1	CA	266	G
1	CA	267	C
1	CA	280	C
1	CA	281	G
1	CA	289	G
1	CA	298	A
1	CA	305	G
1	CA	306	G
1	CA	320	C
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	332	G

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Mol	Chain	Res	Type
1	CA	345	C
1	CA	347	G
1	CA	351	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	358	U
1	CA	364	A
1	CA	365	U
1	CA	366	C
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	382	A
1	CA	384	G
1	CA	387	U
1	CA	388	G
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	422	C
1	CA	423	G
1	CA	427	U
1	CA	429	U
1	CA	439	A
1	CA	452	A
1	CA	453	A
1	CA	457	C
1	CA	464	G
1	CA	465	A
1	CA	466	G
1	CA	467	G
1	CA	484	G
1	CA	485	G
1	CA	486	U
1	CA	496	A
1	CA	497	U
1	CA	500	G
1	CA	511	C

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Mol	Chain	Res	Type
1	CA	512	U
1	CA	518	C
1	CA	523	A
1	CA	527	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	547	A
1	CA	558	G
1	CA	559	A
1	CA	560	U
1	CA	561	U
1	CA	562	C
1	CA	567	G
1	CA	572	A
1	CA	573	A
1	CA	575	G
1	CA	576	G
1	CA	577	G
1	CA	580	U
1	CA	581	G
1	CA	596	C
1	CA	607	A
1	CA	653	A
1	CA	665	A
1	CA	687	A
1	CA	688	G
1	CA	690	G
1	CA	693	G
1	CA	702	A
1	CA	724	G
1	CA	731	G
1	CA	733	A
1	CA	753	A
1	CA	777	A
1	CA	782	A
1	CA	792	A
1	CA	793	U
1	CA	794	A
1	CA	800	G
1	CA	810	C
1	CA	816	A

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Mol	Chain	Res	Type
1	CA	817	C
1	CA	818	G
1	CA	819	A
1	CA	828	A
1	CA	829	G
1	CA	833	U
1	CA	841	U
1	CA	842	C
1	CA	843	U
1	CA	849	C
1	CA	859	A
1	CA	870	U
1	CA	873	A
1	CA	876	G
1	CA	884	U
1	CA	897	C
1	CA	902	G
1	CA	914	A
1	CA	916	G
1	CA	921	U
1	CA	922	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	945	G
1	CA	951	G
1	CA	960	U
1	CA	961	U
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	972	C
1	CA	974	A
1	CA	976	G
1	CA	977	A
1	CA	980	C
1	CA	981	U
1	CA	982	U
1	CA	992	U
1	CA	993	G
1	CA	1004	A
1	CA	1006	C

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Mol	Chain	Res	Type
1	CA	1009	G
1	CA	1025	U
1	CA	103(A)	A
1	CA	1033	G
1	CA	1045	C
1	CA	1054	C
1	CA	1055	A
1	CA	1065	U
1	CA	1067	A
1	CA	1068	G
1	CA	1080	A
1	CA	1081	G
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1117	G
1	CA	1118	C
1	CA	1124	G
1	CA	1125	U
1	CA	1126	U
1	CA	1129	C
1	CA	1130	A
1	CA	1131	G
1	CA	1136	U
1	CA	1137	C
1	CA	1139	G
1	CA	1151	A
1	CA	1152	A
1	CA	1159	U
1	CA	1160	G
1	CA	1181	G
1	CA	1183	A
1	CA	1189	C
1	CA	1193	G
1	CA	1196	U
1	CA	1197	G
1	CA	1202	G
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C
1	CA	1218	C
1	CA	1224	G

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Mol	Chain	Res	Type
1	CA	1225	A
1	CA	1226	C
1	CA	1227	A
1	CA	1228	C
1	CA	1238	A
1	CA	1240	U
1	CA	1241	G
1	CA	1245	A
1	CA	1256	A
1	CA	1257	U
1	CA	1262	C
1	CA	1270	C
1	CA	1277	C
1	CA	1280	A
1	CA	1281	U
1	CA	1287	A
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1305	G
1	CA	1317	C
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1326	C
1	CA	1331	G
1	CA	1335	C
1	CA	1337	G
1	CA	1346	A
1	CA	1347	G
1	CA	1353	G
1	CA	136(B)	C
1	CA	1363	A
1	CA	1364	U
1	CA	1366	C
1	CA	1378	C
1	CA	1379	G
1	CA	1397	C
1	CA	1401	G
1	CA	1419	G
1	CA	1440	C
1	CA	1442	G

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Mol	Chain	Res	Type
1	CA	1443	G
1	CA	1446	A
1	CA	1447	G
1	CA	1451	A
1	CA	1452	C
1	CA	1454	G
1	CA	1469	G
1	CA	1483	A
1	CA	1487	G
1	CA	1492	A
1	CA	1494	G
1	CA	1497	G
1	CA	1502	A
1	CA	1503	A
1	CA	1504	G
1	CA	1506	U
1	CA	1514	C
1	CA	1517	G
1	CA	1519	A
1	CA	1520	G
1	CA	1528	U
1	CA	1529	G
1	CA	1530	G
22	CV	6182	A
22	CV	6187	A
22	CV	6194	C
23	DA	10	G
23	DA	11	G
23	DA	34	C
23	DA	35	G
23	DA	46	C
23	DA	60	G
23	DA	61	G
23	DA	64	A
23	DA	71	A
23	DA	72	U
23	DA	74	A
23	DA	75	G
23	DA	84	A
23	DA	96	G
23	DA	97	C
23	DA	101	G

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Mol	Chain	Res	Type
23	DA	102	G
23	DA	110	G
23	DA	116	C
23	DA	117	G
23	DA	118	A
23	DA	119	A
23	DA	120	U
23	DA	125	G
23	DA	129	C
23	DA	135	G
23	DA	138	G
23	DA	139	G
23	DA	140	A
23	DA	181	A
23	DA	192	C
23	DA	195	A
23	DA	196	A
23	DA	197	A
23	DA	199	A
23	DA	205	G
23	DA	215	G
23	DA	216	A
23	DA	218	A
23	DA	221	A
23	DA	222	A
23	DA	225	A
23	DA	228	A
23	DA	229	A
23	DA	230	U
23	DA	233	A
23	DA	244	A
23	DA	248	G
23	DA	249	C
23	DA	252	G
23	DA	257	A
23	DA	258	G
23	DA	265	A
23	DA	269	U
23	DA	270(K)	G
23	DA	270(L)	C
23	DA	270(M)	U
23	DA	270(N)	U

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Mol	Chain	Res	Type
23	DA	270(O)	G
23	DA	270(Q)	C
23	DA	270(R)	C
23	DA	271(D)	U
23	DA	271	G
23	DA	274	G
23	DA	275	G
23	DA	276	A
23	DA	277	C
23	DA	278	A
23	DA	283	A
23	DA	301	G
23	DA	302	C
23	DA	304	G
23	DA	311	A
23	DA	323	G
23	DA	324	A
23	DA	329	G
23	DA	330	A
23	DA	334	C
23	DA	335	C
23	DA	345	A
23	DA	352	G
23	DA	353	G
23	DA	360	G
23	DA	363(A)	G
23	DA	372	G
23	DA	386	G
23	DA	396	G
23	DA	405	U
23	DA	406	G
23	DA	407	G
23	DA	411	G
23	DA	416	C
23	DA	421	U
23	DA	444	C
23	DA	455	C
23	DA	456	C
23	DA	457	A
23	DA	463	G
23	DA	464	U
23	DA	467	G

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Mol	Chain	Res	Type
23	DA	480	A
23	DA	481	G
23	DA	483	A
23	DA	491	G
23	DA	504	U
23	DA	505	A
23	DA	508	G
23	DA	509	C
23	DA	530	G
23	DA	531	C
23	DA	532	A
23	DA	533	G
23	DA	546	C
23	DA	547	A
23	DA	548	A
23	DA	558	G
23	DA	563	G
23	DA	566	U
23	DA	573	G
23	DA	575	A
23	DA	580	C
23	DA	586	A
23	DA	593	G
23	DA	595	C
23	DA	599	G
23	DA	603	A
23	DA	609(A)	A
23	DA	615	G
23	DA	617	G
23	DA	620	G
23	DA	627	A
23	DA	632	A
23	DA	637	A
23	DA	645	C
23	DA	646	A
23	DA	647	G
23	DA	654	U
23	DA	655	A
23	DA	664	C
23	DA	682	G
23	DA	686	G
23	DA	694	U

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Mol	Chain	Res	Type
23	DA	695	G
23	DA	717	G
23	DA	730	C
23	DA	739	G
23	DA	746	A
23	DA	747	U
23	DA	761	A
23	DA	775	G
23	DA	776	G
23	DA	777	A
23	DA	782	A
23	DA	784	A
23	DA	785	G
23	DA	787	U
23	DA	792	G
23	DA	805	G
23	DA	812	C
23	DA	819	A
23	DA	822	U
23	DA	826	U
23	DA	827	U
23	DA	828	U
23	DA	832	G
23	DA	846	C
23	DA	855	G
23	DA	857	C
23	DA	858	U
23	DA	859	G
23	DA	869	G
23	DA	878	A
23	DA	887	A
23	DA	889	C
23	DA	890	A
23	DA	896	A
23	DA	897	C
23	DA	910	A
23	DA	914	C
23	DA	915	C
23	DA	917	A
23	DA	919	G
23	DA	932	G
23	DA	933	A

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Mol	Chain	Res	Type
23	DA	934	G
23	DA	938	G
23	DA	941	A
23	DA	946	G
23	DA	957	A
23	DA	958	U
23	DA	959	A
23	DA	961	C
23	DA	964	C
23	DA	974(A)	G
23	DA	974(B)	C
23	DA	975	G
23	DA	979	G
23	DA	983	A
23	DA	989	G
23	DA	990	A
23	DA	991	C
23	DA	996	A
23	DA	1005	C
23	DA	1009	A
23	DA	1010	A
23	DA	1011	G
23	DA	1012	U
23	DA	1013	C
23	DA	1020	A
23	DA	1022	G
23	DA	1023	U
23	DA	1025	G
23	DA	1026	U
23	DA	1030	G
23	DA	1033	U
23	DA	1046	A
23	DA	1047	G
23	DA	1053	C
23	DA	1105	U
23	DA	1110	G
23	DA	1112	G
23	DA	1122	G
23	DA	1126	A
23	DA	1129	A
23	DA	1130	U
23	DA	1135	C

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Mol	Chain	Res	Type
23	DA	1136	G
23	DA	1139	G
23	DA	1142	U
23	DA	114(B)	A
23	DA	1143	A
23	DA	1151	G
23	DA	1155	A
23	DA	1156	A
23	DA	1174	A
23	DA	1175	U
23	DA	1177	A
23	DA	1178	C
23	DA	1190	G
23	DA	1205	U
23	DA	1210	A
23	DA	1211	U
23	DA	1212	G
23	DA	1220	A
23	DA	1221	C
23	DA	1227	G
23	DA	1236	G
23	DA	1241	A
23	DA	1253	A
23	DA	1256	G
23	DA	1269	A
23	DA	1271	G
23	DA	1272	A
23	DA	1273	U
23	DA	1287	A
23	DA	1288	U
23	DA	1289	C
23	DA	1300	U
23	DA	1301	A
23	DA	1310	G
23	DA	1313	U
23	DA	1314	C
23	DA	1329	U
23	DA	1332	G
23	DA	1338	G
23	DA	1343	G
23	DA	1344	G
23	DA	1345	C

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Mol	Chain	Res	Type
23	DA	1349	A
23	DA	1352	U
23	DA	1359	A
23	DA	1360	A
23	DA	1365	A
23	DA	1368	G
23	DA	1380	G
23	DA	1384	A
23	DA	1385	G
23	DA	1386	C
23	DA	1396	U
23	DA	1416	G
23	DA	1417	C
23	DA	1420	U
23	DA	1427	A
23	DA	1428	C
23	DA	1434	A
23	DA	144(B)	A
23	DA	1453	A
23	DA	1459	G
23	DA	1467	C
23	DA	1469	A
23	DA	1483	G
23	DA	1490	A
23	DA	1493	C
23	DA	1494	A
23	DA	1495	A
23	DA	1496	A
23	DA	1497	U
23	DA	1505	C
23	DA	1509	A
23	DA	1510	A
23	DA	1519	G
23	DA	1535	U
23	DA	1537	C
23	DA	1542	G
23	DA	1543	A
23	DA	1544	C
23	DA	1545	A
23	DA	1547	C
23	DA	1558	A
23	DA	1559	G

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Mol	Chain	Res	Type
23	DA	1565	C
23	DA	1566	A
23	DA	1569	A
23	DA	1578	U
23	DA	1585	C
23	DA	1586	A
23	DA	1587	A
23	DA	1588	C
23	DA	1598	C
23	DA	1599	C
23	DA	1608	A
23	DA	1609	A
23	DA	1610	A
23	DA	1617	C
23	DA	1618	A
23	DA	1631	A
23	DA	1639	U
23	DA	1640	C
23	DA	1644	C
23	DA	1647	G
23	DA	1648	C
23	DA	1651	G
23	DA	1654	A
23	DA	1674	G
23	DA	1677	A
23	DA	1680	U
23	DA	1681	G
23	DA	1690	A
23	DA	1696	G
23	DA	1703	G
23	DA	1727	U
23	DA	1729	A
23	DA	1743	G
23	DA	1750	G
23	DA	1756	G
23	DA	1763	G
23	DA	1764	G
23	DA	1767	C
23	DA	1773	A
23	DA	1778	U
23	DA	1787	A
23	DA	1788	C

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Mol	Chain	Res	Type
23	DA	1791	A
23	DA	1800	C
23	DA	1801	G
23	DA	1811	G
23	DA	1813	G
23	DA	1816	G
23	DA	1829	A
23	DA	1835	G
23	DA	1838	C
23	DA	1840	G
23	DA	1847	A
23	DA	1870	C
23	DA	1887	C
23	DA	1888	G
23	DA	1889	A
23	DA	1896	G
23	DA	1900	A
23	DA	1902	C
23	DA	1903	G
23	DA	1906	G
23	DA	1913	A
23	DA	1914	C
23	DA	1929	G
23	DA	1936	A
23	DA	1938	A
23	DA	1939	U
23	DA	1955	U
23	DA	1956	U
23	DA	1960	A
23	DA	1963	U
23	DA	1964	G
23	DA	1966	A
23	DA	1967	C
23	DA	1970	A
23	DA	1971	A
23	DA	1972	A
23	DA	1974	C
23	DA	1975	G
23	DA	1981	A
23	DA	1982	C
23	DA	1985	G
23	DA	1991	U

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Mol	Chain	Res	Type
23	DA	1992	G
23	DA	1993	U
23	DA	1997	G
23	DA	2007	C
23	DA	2010	G
23	DA	2020	A
23	DA	2023	G
23	DA	2031	A
23	DA	2032	G
23	DA	2033	A
23	DA	2034	U
23	DA	2036	C
23	DA	2043	C
23	DA	2049	G
23	DA	2051	A
23	DA	2055	C
23	DA	2056	G
23	DA	2060	A
23	DA	2061	G
23	DA	2062	A
23	DA	2069	G
23	DA	2079	U
23	DA	2080	G
23	DA	2086	U
23	DA	2099	U
23	DA	2183	C
23	DA	2189	U
23	DA	2190	G
23	DA	2196	C
23	DA	2198	A
23	DA	2205	C
23	DA	2211	G
23	DA	2212	A
23	DA	2213	U
23	DA	2215	G
23	DA	2225	A
23	DA	2226	C
23	DA	2227	A
23	DA	2228	G
23	DA	2235	G
23	DA	2238	G
23	DA	2239	G

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Mol	Chain	Res	Type
23	DA	2267	A
23	DA	2268	A
23	DA	2269	A
23	DA	2272	U
23	DA	2273	A
23	DA	2275	C
23	DA	2278	A
23	DA	2283	C
23	DA	2287	A
23	DA	2288	A
23	DA	2305	A
23	DA	2306	C
23	DA	2307	G
23	DA	2309	A
23	DA	2310	A
23	DA	2319	G
23	DA	2320	A
23	DA	2322	A
23	DA	2325	G
23	DA	2334	G
23	DA	2336	A
23	DA	2343	C
23	DA	2346	A
23	DA	2347	C
23	DA	2350	C
23	DA	2358	G
23	DA	2360	A
23	DA	2361	A
23	DA	2365	G
23	DA	2379	G
23	DA	2383	G
23	DA	2384	G
23	DA	2385	C
23	DA	2388	A
23	DA	2389	G
23	DA	2394	C
23	DA	2402	C
23	DA	2403	C
23	DA	2405	G
23	DA	2406	U
23	DA	2410	G
23	DA	2413	G

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Mol	Chain	Res	Type
23	DA	2414	G
23	DA	2422	A
23	DA	2423	U
23	DA	2424	C
23	DA	2425	A
23	DA	2429	G
23	DA	2430	A
23	DA	2434	A
23	DA	2436	G
23	DA	2439	A
23	DA	2440	C
23	DA	2441	C
23	DA	2448	A
23	DA	2468	G
23	DA	2469	A
23	DA	2470	G
23	DA	2474	C
23	DA	2476	A
23	DA	2477	C
23	DA	2478	A
23	DA	2484	G
23	DA	2491	U
23	DA	2496	C
23	DA	2502	G
23	DA	2503	A
23	DA	2505	G
23	DA	2515	C
23	DA	2518	A
23	DA	2520	C
23	DA	2525	G
23	DA	2529	G
23	DA	2532	G
23	DA	2535	G
23	DA	2542	A
23	DA	2543	G
23	DA	2554	U
23	DA	2566	A
23	DA	2567	G
23	DA	2574	G
23	DA	2584	U
23	DA	2585	U
23	DA	2599	G

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Mol	Chain	Res	Type
23	DA	2602	A
23	DA	2603	G
23	DA	2604	U
23	DA	2609	U
23	DA	2612	C
23	DA	2613	U
23	DA	2615	U
23	DA	2617	C
23	DA	2621	A
23	DA	2636	U
23	DA	2637	U
23	DA	2638	G
23	DA	2647	U
23	DA	2657	A
23	DA	2660	A
23	DA	2665	A
23	DA	2679	A
23	DA	2680	C
23	DA	2682	U
23	DA	2683	C
23	DA	2684	U
23	DA	2689	U
23	DA	2691	C
23	DA	2693	A
23	DA	2700	C
23	DA	2702	U
23	DA	2705	A
23	DA	2707	G
23	DA	2711	A
23	DA	2712	U
23	DA	712(B)	A
23	DA	2713	A
23	DA	2714	G
23	DA	2719	G
23	DA	2724	C
23	DA	2726	U
23	DA	2730	C
23	DA	2731	G
23	DA	2733	A
23	DA	2748	A
23	DA	2751	G
23	DA	2752	C

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Mol	Chain	Res	Type
23	DA	2755	C
23	DA	2757	A
23	DA	2758	A
23	DA	2764	A
23	DA	2765	A
23	DA	2766	G
23	DA	2768	C
23	DA	2778	A
23	DA	2779	U
23	DA	2781	A
23	DA	2790	A
23	DA	2791	C
23	DA	2792	G
23	DA	2808	U
23	DA	2818	G
23	DA	2820	A
23	DA	2821	A
23	DA	2825	U
23	DA	2833	G
23	DA	2834	G
23	DA	2835	A
23	DA	2836	U
23	DA	2872	G
23	DA	2874	C
23	DA	2886	G
23	DA	2892	A
23	DA	2894	G
24	DB	5	C
24	DB	9	G
24	DB	12	C
24	DB	13	A
24	DB	15	A
24	DB	16	G
24	DB	23	G
24	DB	24	G
24	DB	41	U
24	DB	42	C
24	DB	44	G
24	DB	47	C
24	DB	65	C
24	DB	66	A
24	DB	73	A

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Mol	Chain	Res	Type
24	DB	82	G
24	DB	88	C
24	DB	89(A)	G
24	DB	89(B)	A
24	DB	90	C
24	DB	96	G
24	DB	100	G
24	DB	101	A
24	DB	105	G
24	DB	107	U
24	DB	109	G
24	DB	110	G

All (84) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	251	G
1	AA	327	A
1	AA	364	A
1	AA	428	G
1	AA	560	U
1	AA	687	A
1	AA	793	U
1	AA	913	A
1	AA	1064	G
1	AA	1067	A
1	AA	1129	C
1	AA	1201	A
1	AA	1493	A
1	AA	1529	G
23	BA	196	A
23	BA	257	A
23	BA	385	C
23	BA	479	A
23	BA	685	A
23	BA	746	A
23	BA	791	C
23	BA	974(A)	G
23	BA	1022	G
23	BA	1210	A
23	BA	1343	G
23	BA	1379	A

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Mol	Chain	Res	Type
23	BA	1558	A
23	BA	1608	A
23	BA	1609	A
23	BA	1617	C
23	BA	1786	A
23	BA	1936	A
23	BA	2062	A
23	BA	2225	A
23	BA	2272	U
23	BA	2275	C
23	BA	2405	G
23	BA	2433	A
23	BA	2439	A
23	BA	2542	A
23	BA	2778	A
1	CA	251	G
1	CA	327	A
1	CA	364	A
1	CA	428	G
1	CA	560	U
1	CA	687	A
1	CA	793	U
1	CA	913	A
1	CA	1064	G
1	CA	1067	A
1	CA	1129	C
1	CA	1201	A
1	CA	1493	A
1	CA	1529	G
23	DA	60	G
23	DA	196	A
23	DA	257	A
23	DA	385	C
23	DA	479	A
23	DA	685	A
23	DA	746	A
23	DA	791	C
23	DA	858	U
23	DA	974(A)	G
23	DA	1022	G
23	DA	1210	A
23	DA	1343	G

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Mol	Chain	Res	Type
23	DA	1379	A
23	DA	1558	A
23	DA	1608	A
23	DA	1609	A
23	DA	1617	C
23	DA	1786	A
23	DA	1936	A
23	DA	2062	A
23	DA	2225	A
23	DA	2272	U
23	DA	2275	C
23	DA	2405	G
23	DA	2433	A
23	DA	2435	A
23	DA	2439	A
23	DA	2542	A

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 1198 ligands modelled in this entry, 1198 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	AA	1506/1506 (100%)	0.45	79 (5%) 34 30	51, 122, 245, 498	0
1	CA	1506/1506 (100%)	0.48	68 (4%) 39 34	51, 126, 251, 414	0
2	AB	234/234 (100%)	0.92	30 (12%) 9 11	113, 174, 244, 298	0
2	CB	234/234 (100%)	0.97	31 (13%) 8 11	111, 177, 259, 325	0
3	AC	206/206 (100%)	0.94	30 (14%) 7 9	106, 160, 225, 263	0
3	CC	206/206 (100%)	0.92	32 (15%) 6 8	105, 161, 226, 271	0
4	AD	208/208 (100%)	1.48	56 (26%) 2 4	90, 142, 199, 247	0
4	CD	208/208 (100%)	1.62	63 (30%) 1 3	94, 146, 220, 300	0
5	AE	151/151 (100%)	0.64	15 (9%) 14 16	73, 114, 172, 272	0
5	CE	151/151 (100%)	0.55	11 (7%) 22 22	72, 117, 188, 252	0
6	AF	101/101 (100%)	0.81	10 (9%) 14 16	83, 135, 192, 270	0
6	CF	101/101 (100%)	0.65	10 (9%) 14 16	79, 131, 184, 246	0
7	AG	155/155 (100%)	0.97	24 (15%) 6 8	118, 187, 237, 333	0
7	CG	155/155 (100%)	1.06	27 (17%) 5 7	119, 187, 237, 286	0
8	AH	138/138 (100%)	0.97	16 (11%) 11 14	77, 121, 166, 199	0
8	CH	138/138 (100%)	0.77	12 (8%) 17 18	81, 123, 167, 219	0
9	AI	127/127 (100%)	1.99	52 (40%) 1 1	119, 225, 289, 345	0
9	CI	127/127 (100%)	1.69	41 (32%) 1 2	121, 225, 286, 354	0
10	AJ	98/98 (100%)	1.53	32 (32%) 1 2	118, 198, 278, 356	0
10	CJ	98/98 (100%)	1.58	33 (33%) 1 2	122, 197, 264, 351	0
11	AK	119/119 (100%)	0.57	11 (9%) 16 17	71, 111, 171, 263	0
11	CK	119/119 (100%)	0.63	13 (10%) 12 14	74, 111, 178, 264	0
12	AL	124/124 (100%)	1.16	25 (20%) 3 6	67, 107, 165, 268	0
12	CL	124/124 (100%)	1.46	28 (22%) 3 5	70, 109, 178, 252	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AM	116/116 (100%)	1.54	30 (25%) 2 4	134, 213, 299, 335	0
13	CM	116/116 (100%)	1.07	20 (17%) 5 7	135, 214, 309, 362	0
14	AN	60/60 (100%)	1.74	23 (38%) 1 1	114, 166, 217, 235	0
14	CN	60/60 (100%)	1.89	21 (35%) 1 2	116, 167, 227, 281	0
15	AO	88/88 (100%)	0.37	4 (4%) 39 34	66, 108, 159, 227	0
15	CO	88/88 (100%)	0.49	4 (4%) 39 34	67, 110, 166, 241	0
16	AP	83/83 (100%)	1.54	19 (22%) 2 5	84, 118, 174, 214	0
16	CP	83/83 (100%)	1.61	28 (33%) 1 2	87, 123, 177, 210	0
17	AQ	99/99 (100%)	0.71	7 (7%) 23 23	78, 112, 169, 216	0
17	CQ	99/99 (100%)	0.96	10 (10%) 14 16	79, 116, 166, 215	0
18	AR	70/70 (100%)	0.63	5 (7%) 23 23	84, 128, 183, 284	0
18	CR	70/70 (100%)	0.53	2 (2%) 54 46	82, 128, 192, 232	0
19	AS	78/78 (100%)	1.33	19 (24%) 2 4	152, 210, 275, 321	0
19	CS	78/78 (100%)	1.39	19 (24%) 2 4	151, 216, 291, 350	0
20	AT	99/99 (100%)	1.48	25 (25%) 2 4	86, 134, 203, 241	0
20	CT	99/99 (100%)	1.65	26 (26%) 2 4	92, 136, 212, 269	0
21	AU	24/24 (100%)	3.10	16 (66%) 0 0	160, 225, 264, 322	0
21	CU	24/24 (100%)	3.68	20 (83%) 0 0	163, 218, 265, 364	0
22	AV	34/43 (79%)	0.73	3 (8%) 17 18	89, 196, 324, 362	0
22	CV	34/43 (79%)	0.97	6 (17%) 4 7	92, 198, 333, 339	0
23	BA	2760/2879 (95%)	-0.32	28 (1%) 79 71	27, 65, 180, 398	0
23	DA	2760/2879 (95%)	-0.26	33 (1%) 76 68	25, 63, 178, 410	0
24	BB	119/119 (100%)	0.41	10 (8%) 18 19	76, 129, 182, 232	0
24	DB	119/119 (100%)	0.44	10 (8%) 18 19	78, 129, 184, 236	0
25	BC	271/271 (100%)	0.16	18 (6%) 26 25	25, 58, 109, 175	0
25	DC	271/271 (100%)	0.11	13 (4%) 36 32	18, 57, 109, 177	0
26	BD	204/204 (100%)	0.30	12 (5%) 29 28	36, 73, 146, 341	0
26	DD	204/204 (100%)	0.31	13 (6%) 27 26	33, 71, 145, 347	0
27	BE	202/202 (100%)	0.21	6 (2%) 52 45	31, 73, 155, 246	0
27	DE	202/202 (100%)	0.16	5 (2%) 58 50	25, 73, 155, 192	0
28	BF	181/181 (100%)	1.01	29 (16%) 6 8	102, 182, 254, 314	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	DF	181/181 (100%)	0.98	29 (16%) 6 8	104, 185, 268, 331	0
29	BG	159/159 (100%)	0.89	18 (11%) 11 14	85, 143, 221, 343	0
29	DG	159/159 (100%)	1.78	51 (32%) 1 2	79, 136, 186, 235	0
30	BH	145/145 (100%)	2.32	69 (47%) 0 1	67, 243, 391, 482	0
30	DH	145/145 (100%)	2.33	65 (44%) 1 1	64, 236, 379, 480	0
31	BI	32/65 (49%)	1.52	11 (34%) 1 2	171, 246, 347, 355	0
31	DI	32/65 (49%)	1.38	6 (18%) 4 6	168, 253, 310, 334	0
32	BJ	137/137 (100%)	0.33	5 (3%) 46 39	51, 81, 142, 201	0
32	DJ	137/137 (100%)	0.37	8 (5%) 30 28	52, 81, 146, 194	0
33	BK	122/122 (100%)	-0.00	1 (0%) 82 75	42, 70, 111, 150	0
33	DK	122/122 (100%)	-0.01	1 (0%) 82 75	41, 69, 111, 162	0
34	BL	146/146 (100%)	0.92	21 (14%) 7 9	34, 97, 166, 309	0
34	DL	146/146 (100%)	1.12	28 (19%) 4 6	32, 97, 163, 293	0
35	BM	136/136 (100%)	0.66	17 (12%) 9 12	49, 89, 199, 370	0
35	DM	136/136 (100%)	0.79	19 (13%) 7 10	48, 88, 205, 406	0
36	BN	117/117 (100%)	0.48	9 (7%) 21 21	45, 73, 137, 249	0
36	DN	117/117 (100%)	0.47	10 (8%) 18 19	43, 73, 134, 235	0
37	BO	98/98 (100%)	1.20	17 (17%) 5 7	82, 137, 197, 223	0
37	DO	98/98 (100%)	1.30	24 (24%) 2 4	80, 136, 190, 215	0
38	BP	137/137 (100%)	0.50	10 (7%) 22 22	58, 93, 185, 250	0
38	DP	137/137 (100%)	0.76	16 (11%) 10 14	55, 92, 190, 272	0
39	BQ	116/116 (100%)	0.36	11 (9%) 15 17	35, 75, 124, 239	0
39	DQ	116/116 (100%)	0.61	10 (8%) 18 19	26, 74, 126, 248	0
40	BR	101/101 (100%)	0.74	9 (8%) 17 18	41, 105, 164, 264	0
40	DR	101/101 (100%)	0.95	10 (9%) 14 16	41, 110, 156, 259	0
41	BS	112/112 (100%)	0.04	1 (0%) 81 73	44, 59, 137, 254	0
41	DS	112/112 (100%)	-0.10	0 100 100	43, 59, 134, 255	0
42	BT	92/92 (100%)	0.54	4 (4%) 40 35	45, 77, 129, 170	0
42	DT	92/92 (100%)	0.66	8 (8%) 17 18	36, 73, 127, 169	0
43	BU	100/100 (100%)	1.69	37 (37%) 1 1	62, 104, 257, 396	0
43	DU	100/100 (100%)	1.27	22 (22%) 3 5	61, 102, 251, 408	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BV	188/188 (100%)	0.77	19 (10%) 14 16	83, 138, 195, 245	0
44	DV	188/188 (100%)	0.72	15 (7%) 20 20	83, 139, 194, 230	0
45	BW	76/76 (100%)	0.41	6 (7%) 20 20	58, 84, 138, 261	0
45	DW	76/76 (100%)	0.78	11 (14%) 7 9	59, 84, 135, 256	0
46	BX	88/88 (100%)	1.02	17 (19%) 4 6	37, 74, 153, 322	0
46	DX	88/88 (100%)	0.87	11 (12%) 9 12	39, 70, 153, 326	0
47	BY	62/62 (100%)	1.12	11 (17%) 4 7	57, 98, 209, 292	0
47	DY	62/62 (100%)	1.33	12 (19%) 4 6	51, 96, 212, 328	0
48	BZ	59/59 (100%)	0.42	1 (1%) 69 59	43, 81, 156, 299	0
48	DZ	59/59 (100%)	0.59	4 (6%) 25 24	45, 85, 157, 305	0
49	B1	30/30 (100%)	0.56	2 (6%) 25 25	184, 253, 295, 311	0
49	D1	30/30 (100%)	0.59	3 (10%) 14 16	183, 261, 306, 358	0
50	B2	52/52 (100%)	0.30	2 (3%) 44 38	26, 71, 187, 233	0
50	D2	52/52 (100%)	0.33	2 (3%) 44 38	21, 72, 197, 229	0
51	B3	44/44 (100%)	1.91	16 (36%) 1 1	139, 249, 299, 320	0
51	D3	44/44 (100%)	2.12	21 (47%) 0 1	141, 245, 312, 333	0
52	B4	48/48 (100%)	0.28	4 (8%) 19 20	33, 43, 93, 194	0
52	D4	48/48 (100%)	0.09	3 (6%) 27 26	21, 41, 91, 200	0
53	B5	63/63 (100%)	0.64	7 (11%) 12 14	45, 68, 131, 215	0
53	D5	63/63 (100%)	0.93	13 (20%) 3 5	45, 70, 132, 216	0
All	All	20230/20552 (98%)	0.50	1960 (9%) 15 16	18, 104, 241, 498	0

All (1960) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
12	CL	27	LYS	11.4
35	BM	140	ALA	10.9
13	AM	99	ARG	10.8
30	BH	72	LEU	10.6
1	AA	82	U	10.3
30	DH	92	VAL	9.5
4	AD	4	TYR	9.4
21	CU	2	GLY	9.4
9	CI	128	ARG	9.3
47	BY	3	LEU	9.3

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Mol	Chain	Res	Type	RSRZ
1	AA	81	G	9.0
29	DG	169	VAL	8.8
38	DP	106	SER	8.8
20	CT	9	ASN	8.7
43	BU	3	VAL	8.6
30	BH	68	LEU	8.5
43	DU	3	VAL	8.5
30	BH	111	PRO	8.5
9	CI	66	ARG	8.4
9	AI	66	ARG	8.1
30	DH	87	LYS	7.9
12	CL	28	GLY	7.9
37	BO	11	LYS	7.9
11	CK	128	ALA	7.7
21	CU	10	ARG	7.7
28	DF	85	GLY	7.7
21	AU	14	TRP	7.6
30	DH	114	LEU	7.6
7	CG	33	ASP	7.6
4	CD	4	TYR	7.5
2	CB	141	GLU	7.5
35	DM	24	GLY	7.5
30	BH	79	ILE	7.4
30	DH	88	ILE	7.4
46	BX	10	LYS	7.3
11	AK	128	ALA	7.3
9	AI	64	THR	7.3
29	DG	60	ARG	7.2
36	BN	3	HIS	7.2
52	D4	47	ARG	7.2
30	DH	90	GLY	7.1
20	AT	25	ARG	7.1
52	B4	47	ARG	7.0
30	BH	1	MET	7.0
17	CQ	24	GLU	7.0
30	DH	119	PRO	6.9
2	AB	165	VAL	6.9
46	DX	30	VAL	6.9
4	AD	5	ILE	6.9
30	DH	120	ILE	6.9
47	DY	16	LEU	6.7
14	AN	14	PRO	6.7

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Mol	Chain	Res	Type	RSRZ
37	DO	11	LYS	6.7
50	D2	2	ALA	6.7
31	DI	59	ILE	6.7
10	AJ	58	ASP	6.7
29	DG	12	PRO	6.6
16	AP	29	ASP	6.6
21	AU	6	ARG	6.6
43	DU	17	SER	6.6
36	DN	3	HIS	6.6
1	AA	86	U	6.5
14	CN	32	SER	6.5
30	BH	97	ILE	6.4
17	CQ	37	LYS	6.4
45	DW	17	GLN	6.4
35	BM	24	GLY	6.4
19	AS	41	VAL	6.4
25	BC	34	VAL	6.4
4	CD	32	ALA	6.3
2	CB	144	ARG	6.3
1	AA	85	U	6.3
9	AI	62	TYR	6.3
30	DH	94	ALA	6.2
35	DM	140	ALA	6.2
11	CK	129	SER	6.2
30	BH	93	THR	6.2
9	CI	127	LYS	6.2
8	AH	1	MET	6.2
47	DY	14	ARG	6.2
1	AA	80	G	6.2
44	BV	97	GLU	6.2
2	AB	163	PHE	6.1
14	AN	20	ALA	6.1
21	CU	6	ARG	6.1
23	DA	508	G	6.1
2	CB	138	LEU	6.1
20	CT	14	LYS	6.1
46	BX	30	VAL	6.0
12	AL	27	LYS	6.0
3	AC	152	ILE	6.0
26	BD	186	GLY	6.0
30	BH	140	LEU	6.0
2	AB	12	GLU	6.0

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Mol	Chain	Res	Type	RSRZ
13	AM	102	ARG	5.9
20	CT	70	SER	5.9
25	DC	34	VAL	5.9
34	DL	27	HIS	5.9
9	AI	115	GLY	5.9
36	DN	8	ARG	5.8
43	BU	83	THR	5.8
30	BH	100	ALA	5.8
30	DH	86	THR	5.8
37	BO	13	ARG	5.7
2	CB	101	MET	5.7
21	CU	16	GLY	5.7
51	B3	41	PRO	5.7
30	DH	91	SER	5.7
34	BL	50	ARG	5.7
4	CD	5	ILE	5.7
35	BM	141	GLN	5.7
30	DH	116	LEU	5.6
30	DH	121	LYS	5.6
1	AA	1129	C	5.6
47	DY	3	LEU	5.6
16	AP	12	LYS	5.6
35	BM	139	GLU	5.6
19	CS	41	VAL	5.6
20	AT	75	ASN	5.6
53	B5	32	LEU	5.6
8	AH	94	TYR	5.5
1	AA	1224	G	5.5
2	AB	187	LEU	5.4
30	BH	92	VAL	5.4
8	AH	25	ASP	5.4
51	D3	20	ASN	5.4
21	AU	16	GLY	5.4
47	BY	10	LEU	5.3
9	AI	65	VAL	5.3
37	DO	28	VAL	5.3
20	AT	70	SER	5.3
30	DH	97	ILE	5.3
23	DA	2602	A	5.3
1	CA	1351	U	5.3
2	AB	170	GLU	5.3
14	AN	18	VAL	5.3

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Mol	Chain	Res	Type	RSRZ
28	BF	2	PRO	5.2
19	AS	4	SER	5.2
30	DH	140	LEU	5.2
46	DX	10	LYS	5.2
10	CJ	61	GLU	5.2
20	AT	9	ASN	5.2
4	CD	104	VAL	5.2
20	AT	68	LYS	5.1
37	DO	85	VAL	5.1
50	B2	2	ALA	5.1
7	AG	26	PHE	5.1
30	BH	144	VAL	5.1
8	AH	99	GLU	5.0
12	AL	16	LYS	5.0
30	BH	109	ILE	5.0
29	DG	167	GLU	5.0
46	BX	27	GLU	5.0
4	CD	11	LEU	5.0
6	AF	6	VAL	5.0
29	DG	61	HIS	5.0
1	AA	87	A	5.0
51	B3	40	CYS	5.0
1	CA	1352	C	4.9
12	CL	23	VAL	4.9
12	CL	31	PHE	4.9
4	AD	32	ALA	4.9
14	CN	14	PRO	4.9
21	AU	18	TYR	4.9
34	BL	110	TYR	4.9
2	CB	97	TRP	4.9
16	CP	54	GLU	4.9
47	DY	12	GLU	4.9
30	DH	83	ALA	4.9
47	DY	15	LYS	4.9
51	B3	23	THR	4.9
34	DL	89	ALA	4.8
17	AQ	93	GLN	4.8
1	CA	975	A	4.8
16	CP	1	MET	4.8
9	AI	26	VAL	4.8
30	DH	144	VAL	4.8
9	CI	115	GLY	4.8

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Mol	Chain	Res	Type	RSRZ
30	DH	16	GLY	4.8
29	DG	43	VAL	4.8
9	AI	63	ILE	4.8
30	BH	120	ILE	4.8
20	CT	73	HIS	4.8
20	AT	14	LYS	4.8
30	DH	118	LYS	4.8
30	DH	1	MET	4.8
1	CA	1289	A	4.7
10	CJ	38	ILE	4.7
12	AL	46	LYS	4.7
30	DH	89	TYR	4.7
11	AK	129	SER	4.7
19	CS	49	ILE	4.7
47	DY	10	LEU	4.7
2	CB	148	TYR	4.7
26	BD	204	ALA	4.7
24	DB	89(A)	G	4.7
35	DM	100	GLY	4.7
16	CP	65	GLN	4.7
30	DH	115	ALA	4.7
35	DM	135	ASP	4.7
30	BH	145	VAL	4.6
1	CA	1353	G	4.6
29	DG	111	HIS	4.6
4	CD	120	LEU	4.6
10	CJ	63	PHE	4.6
22	CV	6212	U	4.6
12	CL	97	TYR	4.6
2	CB	98	LEU	4.6
4	CD	101	LEU	4.6
21	CU	14	TRP	4.6
3	CC	206	GLU	4.6
7	CG	62	PHE	4.6
35	BM	21	THR	4.6
10	CJ	50	ILE	4.6
4	AD	31	CYS	4.6
14	AN	17	LYS	4.6
20	CT	25	ARG	4.6
9	AI	14	VAL	4.5
37	BO	85	VAL	4.5
20	CT	74	LYS	4.5

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Mol	Chain	Res	Type	RSRZ
28	BF	28	VAL	4.5
29	DG	49	VAL	4.5
37	DO	13	ARG	4.5
16	AP	7	ALA	4.5
9	AI	116	LYS	4.5
20	CT	18	GLN	4.5
21	AU	15	ARG	4.5
34	BL	27	HIS	4.5
28	DF	34	LEU	4.5
4	CD	95	GLY	4.5
16	AP	25	ARG	4.5
43	BU	78	ALA	4.5
34	BL	51	PHE	4.5
26	DD	159	HIS	4.4
37	DO	87	PHE	4.4
6	AF	63	TYR	4.4
10	CJ	59	SER	4.4
14	CN	2	ALA	4.4
30	BH	94	ALA	4.4
29	DG	58	GLU	4.4
5	AE	18	ARG	4.4
14	CN	41	ARG	4.4
21	CU	8	THR	4.4
16	AP	1	MET	4.4
30	BH	65	ALA	4.4
3	AC	151	VAL	4.4
51	D3	49	HIS	4.4
7	CG	37	ASN	4.4
21	CU	13	ILE	4.4
9	CI	7	THR	4.4
12	AL	28	GLY	4.4
9	AI	32	ASP	4.4
43	DU	59	GLY	4.4
39	DQ	97	ASP	4.4
10	CJ	64	GLU	4.4
2	CB	71	VAL	4.3
10	CJ	58	ASP	4.3
30	DH	101	LEU	4.3
8	AH	95	VAL	4.3
10	CJ	55	LYS	4.3
3	AC	170	GLN	4.3
19	AS	71	LEU	4.3

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Mol	Chain	Res	Type	RSRZ
38	BP	11	GLU	4.3
21	AU	17	THR	4.3
30	BH	20	ASP	4.3
14	CN	31	ARG	4.3
7	AG	37	ASN	4.3
3	AC	201	TYR	4.3
19	AS	74	PHE	4.3
10	CJ	57	LYS	4.2
35	DM	139	GLU	4.2
10	CJ	73	ASP	4.2
29	DG	114	VAL	4.2
23	BA	2602	A	4.2
38	BP	106	SER	4.2
1	CA	136	C	4.2
32	BJ	59	GLY	4.2
23	DA	1026	U	4.2
20	CT	55	ILE	4.2
9	CI	121	ARG	4.2
47	BY	21	LEU	4.2
12	AL	63	TYR	4.2
4	CD	69	GLY	4.2
34	BL	36	LYS	4.2
9	CI	117	HIS	4.2
13	AM	60	VAL	4.2
7	CG	39	ALA	4.2
2	AB	201	ILE	4.2
30	DH	93	THR	4.2
13	AM	90	LEU	4.2
46	BX	20	ARG	4.2
30	BH	95	LYS	4.2
9	CI	65	VAL	4.2
34	DL	50	ARG	4.2
52	D4	48	LYS	4.2
29	BG	169	VAL	4.1
29	DG	44	VAL	4.1
42	DT	60	ARG	4.1
30	BH	128	LEU	4.1
6	AF	90	VAL	4.1
51	B3	49	HIS	4.1
30	BH	71	ILE	4.1
53	D5	54	GLU	4.1
28	BF	85	GLY	4.1

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Mol	Chain	Res	Type	RSRZ
4	AD	71	SER	4.1
43	BU	47	LYS	4.1
30	BH	110	ASP	4.1
29	DG	45	VAL	4.1
10	AJ	59	SER	4.1
30	DH	111	PRO	4.1
44	BV	125	LEU	4.1
10	CJ	54	PHE	4.1
30	BH	117	GLU	4.1
30	DH	122	GLU	4.1
38	DP	11	GLU	4.1
6	AF	89	MET	4.1
12	AL	17	VAL	4.1
12	CL	121	THR	4.1
16	AP	68	ASP	4.1
2	CB	188	ALA	4.1
9	AI	106	ALA	4.1
12	AL	19	LYS	4.1
30	BH	118	LYS	4.1
29	DG	55	PRO	4.1
24	DB	52	A	4.1
9	CI	8	GLY	4.0
36	DN	7	GLY	4.0
13	AM	116	THR	4.0
3	CC	199	LYS	4.0
6	CF	55	ASP	4.0
16	CP	35	LYS	4.0
43	BU	2	ARG	4.0
3	CC	204	LEU	4.0
2	CB	170	GLU	4.0
4	CD	200	GLU	4.0
28	BF	29	TRP	4.0
34	BL	109	GLY	4.0
46	DX	92	LYS	4.0
2	CB	29	ALA	4.0
12	CL	30	PRO	4.0
30	DH	128	LEU	4.0
10	AJ	62	HIS	4.0
28	BF	26	GLN	4.0
6	AF	92	LYS	4.0
1	AA	1492	A	4.0
23	BA	275	G	4.0

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Mol	Chain	Res	Type	RSRZ
4	CD	33	MET	4.0
23	BA	34	C	4.0
29	DG	170	ARG	4.0
51	B3	25	LYS	4.0
29	BG	159	GLU	4.0
2	CB	163	PHE	4.0
1	AA	84	U	4.0
38	DP	69	GLY	4.0
34	DL	110	TYR	3.9
11	AK	124	LYS	3.9
20	CT	22	ARG	3.9
34	BL	65	ARG	3.9
4	AD	133	VAL	3.9
23	BA	1420	U	3.9
13	CM	30	ALA	3.9
7	AG	28	ASN	3.9
30	BH	43	ASN	3.9
1	CA	508	C	3.9
9	AI	114	TYR	3.9
13	AM	87	TYR	3.9
29	DG	57	ASP	3.9
7	CG	12	LEU	3.9
44	BV	169	GLU	3.9
10	CJ	53	PRO	3.9
19	CS	81	ARG	3.9
5	AE	19	MET	3.9
19	CS	71	LEU	3.9
53	D5	32	LEU	3.9
25	BC	28	GLU	3.9
43	DU	2	ARG	3.9
43	DU	5	MET	3.9
3	CC	152	ILE	3.9
24	DB	88	C	3.9
4	CD	182	LYS	3.9
3	AC	181	ASN	3.9
35	DM	90	VAL	3.9
17	AQ	95	TYR	3.9
8	AH	119	LEU	3.9
9	CI	116	LYS	3.9
44	DV	78	LYS	3.9
34	DL	7	ARG	3.9
42	DT	65	ARG	3.9

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Mol	Chain	Res	Type	RSRZ
28	BF	35	GLU	3.8
37	BO	12	PHE	3.8
4	CD	121	VAL	3.8
9	CI	41	VAL	3.8
19	CS	48	THR	3.8
3	CC	3	ASN	3.8
7	CG	13	GLN	3.8
9	AI	61	ALA	3.8
20	AT	21	LYS	3.8
21	CU	5	ASP	3.8
10	AJ	72	VAL	3.8
35	DM	21	THR	3.8
21	CU	12	LYS	3.8
52	B4	48	LYS	3.8
34	DL	65	ARG	3.8
13	AM	113	PRO	3.8
29	DG	64	LEU	3.8
10	AJ	57	LYS	3.8
12	CL	19	LYS	3.8
14	CN	34	TYR	3.8
37	DO	12	PHE	3.8
1	AA	1358	U	3.8
8	AH	93	VAL	3.8
13	CM	98	VAL	3.8
29	DG	50	VAL	3.8
44	BV	128	VAL	3.8
53	D5	63	PRO	3.8
19	AS	49	ILE	3.8
26	BD	26	ILE	3.8
3	CC	177	THR	3.8
28	DF	33	ARG	3.8
13	CM	2	ALA	3.8
34	DL	109	GLY	3.8
38	DP	104	ASN	3.8
17	CQ	26	GLN	3.8
10	AJ	47	PHE	3.8
39	BQ	97	ASP	3.8
5	AE	85	GLY	3.8
53	D5	64	TYR	3.8
43	BU	92	ASN	3.7
4	AD	73	ARG	3.7
9	AI	42	ARG	3.7

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Mol	Chain	Res	Type	RSRZ
1	AA	136(B)	C	3.7
23	DA	271(D)	U	3.7
8	AH	2	LEU	3.7
47	DY	21	LEU	3.7
4	AD	209	ARG	3.7
22	CV	6213	A	3.7
44	DV	181	GLU	3.7
3	CC	160	ALA	3.7
4	AD	21	LEU	3.7
13	CM	96	LEU	3.7
35	DM	141	GLN	3.7
7	CG	28	ASN	3.7
20	AT	26	ASN	3.7
46	DX	32	LYS	3.7
7	CG	32	ARG	3.7
9	AI	121	ARG	3.7
10	AJ	46	ARG	3.7
21	AU	13	ILE	3.7
29	BG	89	ILE	3.7
51	D3	21	TYR	3.7
13	AM	96	LEU	3.7
28	BF	34	LEU	3.7
13	CM	101	GLN	3.7
12	CL	88	ARG	3.7
25	DC	28	GLU	3.7
30	DH	117	GLU	3.7
16	CP	9	PHE	3.7
11	CK	127	LYS	3.7
25	DC	40	THR	3.7
51	B3	39	TYR	3.7
12	CL	85	ARG	3.7
3	AC	157	ILE	3.7
16	CP	36	ILE	3.7
30	DH	132	PRO	3.7
1	AA	1001	G	3.7
28	BF	176	LEU	3.6
21	CU	9	ARG	3.6
9	AI	123	PRO	3.6
14	CN	28	GLY	3.6
7	CG	16	LEU	3.6
10	AJ	54	PHE	3.6
14	CN	29	ARG	3.6

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Mol	Chain	Res	Type	RSRZ
16	CP	18	ARG	3.6
21	CU	15	ARG	3.6
45	BW	17	GLN	3.6
4	CD	117	ALA	3.6
20	AT	29	LYS	3.6
21	CU	11	GLY	3.6
19	AS	81	ARG	3.6
19	CS	15	LEU	3.6
35	DM	105	GLU	3.6
9	CI	108	VAL	3.6
30	DH	127	VAL	3.6
20	AT	73	HIS	3.6
31	BI	59	ILE	3.6
29	BG	12	PRO	3.6
3	AC	167	TRP	3.6
7	AG	36	LYS	3.6
23	DA	34	C	3.6
34	BL	46	LYS	3.6
51	B3	13	CYS	3.6
14	AN	2	ALA	3.6
4	CD	135	LEU	3.6
24	BB	52	A	3.6
14	CN	22	THR	3.6
51	D3	23	THR	3.6
2	AB	26	PRO	3.6
30	DH	95	LYS	3.6
34	BL	7	ARG	3.6
37	DO	20	ARG	3.6
24	BB	54	G	3.6
43	BU	51	VAL	3.6
9	AI	29	ASN	3.6
28	DF	35	GLU	3.6
40	BR	80	GLN	3.5
14	AN	19	ARG	3.5
30	BH	6	LEU	3.5
46	BX	23	LYS	3.5
9	AI	128	ARG	3.5
38	DP	93	ARG	3.5
4	CD	62	GLN	3.5
9	CI	33	PHE	3.5
21	CU	18	TYR	3.5
30	BH	80	PRO	3.5

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Mol	Chain	Res	Type	RSRZ
51	D3	47	THR	3.5
4	CD	165	MET	3.5
10	CJ	47	PHE	3.5
35	DM	19	GLY	3.5
10	CJ	72	VAL	3.5
8	CH	21	LYS	3.5
4	CD	12	CYS	3.5
4	AD	38	TYR	3.5
31	BI	63	LEU	3.5
3	CC	167	TRP	3.5
16	AP	65	GLN	3.5
35	BM	90	VAL	3.5
9	AI	127	LYS	3.5
9	CI	78	LYS	3.5
43	BU	87	LYS	3.5
43	DU	44	ILE	3.5
10	CJ	46	ARG	3.5
4	CD	31	CYS	3.5
51	D3	13	CYS	3.5
4	CD	108	LEU	3.5
7	AG	16	LEU	3.5
30	DH	123	LEU	3.5
23	BA	276	A	3.5
7	CG	9	VAL	3.5
19	CS	74	PHE	3.5
21	AU	2	GLY	3.5
20	CT	23	ARG	3.5
34	DL	100	LEU	3.4
51	B3	11	LEU	3.4
35	BM	19	GLY	3.4
20	CT	21	LYS	3.4
25	DC	166	GLN	3.4
9	CI	74	ILE	3.4
28	BF	101	ILE	3.4
11	CK	126	ARG	3.4
25	DC	30	GLU	3.4
21	AU	23	PRO	3.4
8	CH	1	MET	3.4
9	AI	18	PHE	3.4
46	DX	14	VAL	3.4
13	CM	85	GLY	3.4
37	BO	20	ARG	3.4

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Mol	Chain	Res	Type	RSRZ
12	CL	26	LEU	3.4
30	BH	116	LEU	3.4
1	AA	92	G	3.4
4	AD	197	PRO	3.4
12	AL	15	GLU	3.4
29	DG	126	PRO	3.4
13	CM	117	VAL	3.4
14	CN	11	LYS	3.4
16	CP	39	TYR	3.4
20	AT	74	LYS	3.4
29	DG	97	ARG	3.4
30	DH	4	ILE	3.4
1	CA	1280	A	3.4
20	AT	30	LYS	3.4
21	CU	3	LYS	3.4
25	DC	39	LYS	3.4
28	BF	67	LYS	3.4
43	BU	101	LYS	3.4
6	AF	91	VAL	3.4
9	CI	44	VAL	3.4
16	AP	23	ASP	3.4
16	CP	29	ASP	3.4
26	DD	113	PHE	3.4
30	BH	90	GLY	3.4
29	DG	59	ARG	3.4
36	BN	6	SER	3.4
28	DF	74	LYS	3.4
32	BJ	132	LYS	3.4
52	B4	2	LYS	3.4
2	AB	167	PRO	3.4
12	CL	29	ALA	3.4
30	DH	65	ALA	3.4
4	CD	133	VAL	3.4
7	CG	26	PHE	3.4
30	BH	81	VAL	3.4
46	DX	27	GLU	3.4
14	AN	34	TYR	3.4
13	AM	19	LEU	3.3
28	DF	176	LEU	3.3
51	D3	26	ASN	3.3
4	AD	30	LYS	3.3
23	DA	1542	G	3.3

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Mol	Chain	Res	Type	RSRZ
19	CS	76	PRO	3.3
4	AD	115	ARG	3.3
16	AP	26	ARG	3.3
38	DP	125	ARG	3.3
34	DL	14	LYS	3.3
38	DP	1	MET	3.3
7	AG	7	ALA	3.3
8	CH	61	VAL	3.3
21	AU	10	ARG	3.3
30	DH	134	PRO	3.3
4	CD	15	GLU	3.3
43	BU	64	GLU	3.3
21	AU	21	TYR	3.3
1	AA	1128	C	3.3
39	DQ	19	LYS	3.3
40	BR	68	LYS	3.3
5	AE	20	GLN	3.3
4	AD	26	CYS	3.3
9	AI	15	ALA	3.3
9	CI	106	ALA	3.3
29	DG	17	VAL	3.3
30	BH	19	VAL	3.3
45	DW	61	ALA	3.3
51	D3	22	ALA	3.3
53	D5	46	ARG	3.3
6	CF	95	GLU	3.3
11	CK	25	TYR	3.3
29	DG	67	LEU	3.3
7	CG	29	LYS	3.3
12	CL	118	LYS	3.3
3	AC	172	ARG	3.3
23	DA	2319	G	3.3
30	BH	91	SER	3.3
34	DL	15	ARG	3.3
46	BX	19	GLN	3.3
43	BU	43	ASN	3.3
1	AA	977	A	3.3
16	AP	6	LEU	3.3
20	AT	72	LEU	3.3
30	DH	126	TYR	3.3
43	BU	4	LYS	3.3
34	BL	67	MET	3.3

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Mol	Chain	Res	Type	RSRZ
30	BH	59	ALA	3.3
43	DU	51	VAL	3.3
4	CD	16	GLY	3.3
10	AJ	52	GLY	3.3
13	AM	56	LEU	3.3
23	DA	2804	C	3.2
9	AI	125	TYR	3.2
30	DH	130	TYR	3.2
9	AI	27	THR	3.2
28	BF	72	ARG	3.2
38	DP	91	ARG	3.2
39	DQ	58	ARG	3.2
45	DW	10	THR	3.2
10	AJ	63	PHE	3.2
28	BF	171	ALA	3.2
47	BY	13	ALA	3.2
4	CD	67	ILE	3.2
43	DU	52	SER	3.2
16	CP	12	LYS	3.2
34	DL	82	GLY	3.2
51	B3	42	TRP	3.2
14	AN	13	THR	3.2
9	AI	119	ALA	3.2
15	AO	62	GLN	3.2
32	BJ	92	GLN	3.2
51	B3	10	LEU	3.2
2	AB	203	GLY	3.2
34	DL	43	GLY	3.2
2	AB	137	ARG	3.2
2	CB	96	ARG	3.2
53	D5	34	TRP	3.2
30	BH	63	ALA	3.2
30	DH	63	ALA	3.2
2	CB	27	LYS	3.2
3	AC	199	LYS	3.2
4	AD	101	LEU	3.2
1	CA	407	G	3.2
5	AE	22	GLY	3.2
20	CT	103	GLY	3.2
24	BB	89(A)	G	3.2
13	AM	106	ASN	3.2
20	CT	75	ASN	3.2

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Mol	Chain	Res	Type	RSRZ
5	AE	81	GLU	3.2
29	DG	116	GLU	3.2
30	DH	125	GLU	3.2
34	BL	71	VAL	3.2
16	CP	3	LYS	3.2
37	DO	19	LYS	3.2
38	DP	27	THR	3.2
43	DU	19	LYS	3.2
51	D3	25	LYS	3.2
53	D5	29	LYS	3.2
1	AA	5	U	3.2
4	AD	94	LEU	3.2
27	BE	181	LEU	3.2
7	AG	81	GLY	3.2
4	AD	33	MET	3.2
7	CG	31	MET	3.2
53	B5	64	TYR	3.2
7	CG	66	VAL	3.2
9	AI	44	VAL	3.2
1	AA	1202	G	3.2
20	CT	68	LYS	3.2
18	AR	78	LEU	3.2
19	AS	39	THR	3.2
44	DV	76	LEU	3.2
39	BQ	56	ASP	3.1
3	CC	153	VAL	3.1
9	CI	109	VAL	3.1
5	CE	81	GLU	3.1
26	DD	171	GLU	3.1
53	B5	29	LYS	3.1
1	AA	88	C	3.1
23	DA	2803	C	3.1
3	CC	39	ILE	3.1
7	AG	99	LEU	3.1
8	CH	63	LEU	3.1
16	CP	6	LEU	3.1
30	BH	51	ILE	3.1
30	BH	114	LEU	3.1
4	AD	12	CYS	3.1
4	CD	9	CYS	3.1
1	AA	1130	A	3.1
1	AA	1374	A	3.1

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Mol	Chain	Res	Type	RSRZ
10	AJ	60	ARG	3.1
44	DV	82	ARG	3.1
4	CD	6	GLY	3.1
2	AB	166	ASP	3.1
22	AV	6212	U	3.1
30	BH	112	LYS	3.1
35	DM	48	GLU	3.1
37	BO	87	PHE	3.1
37	BO	102	ALA	3.1
5	CE	139	LEU	3.1
14	CN	7	ILE	3.1
20	CT	15	ARG	3.1
1	CA	63	C	3.1
16	CP	15	PRO	3.1
7	CG	82	GLY	3.1
30	DH	84	GLY	3.1
9	CI	118	LYS	3.1
25	DC	26	LYS	3.1
29	DG	41	MET	3.1
34	BL	107	LYS	3.1
39	DQ	90	VAL	3.1
39	DQ	91	ASP	3.1
37	DO	86	ALA	3.1
23	BA	1026	U	3.1
34	DL	33	ARG	3.1
3	CC	185	GLY	3.1
46	BX	14	VAL	3.1
7	AG	10	ARG	3.1
34	DL	9	ASN	3.1
34	BL	34	GLY	3.1
28	BF	74	LYS	3.1
28	DF	26	GLN	3.1
4	CD	17	VAL	3.1
4	AD	93	PHE	3.1
14	CN	49	HIS	3.1
19	AS	69	HIS	3.1
40	DR	20	LEU	3.1
47	BY	24	LEU	3.1
19	CS	50	ALA	3.1
20	CT	80	ARG	3.1
28	BF	16	ARG	3.1
31	DI	62	ALA	3.1

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Mol	Chain	Res	Type	RSRZ
4	CD	158	ILE	3.1
9	AI	81	ILE	3.1
9	CI	105	ASP	3.0
20	AT	64	ASP	3.0
27	DE	96	ASP	3.0
29	BG	90	LYS	3.0
36	BN	5	LYS	3.0
7	AG	13	GLN	3.0
31	DI	63	LEU	3.0
36	BN	4	LEU	3.0
23	BA	274	G	3.0
23	BA	2211	G	3.0
23	DA	11	G	3.0
11	CK	65	ALA	3.0
39	DQ	80	ILE	3.0
9	AI	75	ASP	3.0
16	AP	59	TRP	3.0
43	BU	62	GLU	3.0
21	AU	3	LYS	3.0
34	DL	17	LYS	3.0
2	CB	26	PRO	3.0
20	AT	37	SER	3.0
28	DF	2	PRO	3.0
35	BM	83	MET	3.0
42	DT	3	THR	3.0
30	DH	81	VAL	3.0
31	BI	7	VAL	3.0
44	BV	39	VAL	3.0
4	CD	162	LEU	3.0
9	AI	50	LEU	3.0
9	AI	120	ARG	3.0
39	BQ	58	ARG	3.0
45	BW	41	ARG	3.0
39	BQ	96	ALA	3.0
43	DU	61	ILE	3.0
44	DV	162	GLU	3.0
44	DV	186	GLU	3.0
1	AA	105	G	3.0
12	AL	111	ASP	3.0
34	BL	28	GLY	3.0
8	CH	24	THR	3.0
13	AM	98	VAL	3.0

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Mol	Chain	Res	Type	RSRZ
13	AM	109	THR	3.0
28	BF	162	THR	3.0
10	CJ	5	ARG	3.0
32	BJ	105	LEU	3.0
1	CA	1367	C	3.0
1	AA	1357	A	3.0
8	AH	35	ILE	3.0
26	DD	151	TYR	3.0
44	DV	97	GLU	3.0
12	AL	102	GLY	3.0
21	CU	4	GLY	3.0
35	DM	25	ASP	3.0
4	CD	209	ARG	3.0
7	AG	12	LEU	3.0
18	CR	32	ARG	3.0
44	BV	166	SER	3.0
2	CB	94	ASN	3.0
4	AD	67	ILE	3.0
16	CP	19	ILE	3.0
26	DD	131	ALA	3.0
43	BU	44	ILE	3.0
40	BR	84	LYS	3.0
1	AA	1346	A	3.0
5	CE	22	GLY	3.0
28	DF	29	TRP	3.0
34	BL	33	ARG	3.0
43	BU	24	VAL	3.0
43	DU	50	ARG	3.0
25	BC	33	LEU	3.0
31	BI	10	LEU	3.0
30	BH	96	ASP	3.0
40	BR	73	SER	3.0
2	AB	177	ALA	3.0
31	DI	6	ASN	3.0
53	D5	39	LYS	2.9
2	AB	40	HIS	2.9
4	CD	115	ARG	2.9
4	AD	80	GLU	2.9
5	CE	77	PRO	2.9
43	BU	5	MET	2.9
45	DW	41	ARG	2.9
5	AE	33	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
14	CN	33	VAL	2.9
30	BH	77	LEU	2.9
31	BI	66	LEU	2.9
51	B3	12	GLU	2.9
53	B5	54	GLU	2.9
4	CD	3	ARG	2.9
28	BF	83	ARG	2.9
3	CC	184	TYR	2.9
5	CE	85	GLY	2.9
46	BX	28	GLY	2.9
28	DF	52	ILE	2.9
29	DG	62	LYS	2.9
16	AP	11	SER	2.9
28	DF	72	ARG	2.9
2	AB	71	VAL	2.9
9	AI	47	LEU	2.9
12	AL	94	GLY	2.9
29	DG	131	VAL	2.9
31	BI	58	LEU	2.9
43	BU	22	GLY	2.9
45	BW	75	LEU	2.9
51	D3	11	LEU	2.9
4	AD	18	LYS	2.9
17	CQ	58	GLU	2.9
21	AU	12	LYS	2.9
30	BH	121	LYS	2.9
13	AM	4	ILE	2.9
30	BH	107	ILE	2.9
34	DL	51	PHE	2.9
45	DW	71	ASP	2.9
10	AJ	5	ARG	2.9
20	AT	22	ARG	2.9
28	BF	21	ARG	2.9
38	DP	2	ASN	2.9
1	CA	973	G	2.9
12	CL	103	VAL	2.9
19	AS	9	VAL	2.9
13	CM	97	PRO	2.9
9	CI	11	LYS	2.9
11	AK	127	LYS	2.9
7	CG	8	GLU	2.9
7	CG	27	ILE	2.9

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Mol	Chain	Res	Type	RSRZ
38	DP	46	GLU	2.9
35	BM	28	ALA	2.9
2	CB	107	THR	2.9
10	AJ	48	THR	2.9
4	CD	73	ARG	2.9
42	BT	65	ARG	2.9
6	CF	18	GLN	2.9
7	CG	11	GLN	2.9
4	CD	19	LEU	2.9
10	AJ	71	LEU	2.9
30	BH	101	LEU	2.9
2	AB	133	LYS	2.9
4	CD	167	GLY	2.9
14	CN	18	VAL	2.9
28	BF	75	LYS	2.9
2	CB	152	PHE	2.9
1	AA	1002	G	2.8
1	CA	31	G	2.8
2	AB	134	GLU	2.8
29	DG	104	GLU	2.8
14	CN	10	ALA	2.8
39	DQ	52	ARG	2.8
49	D1	44	CYS	2.8
21	CU	17	THR	2.8
4	CD	174	LEU	2.8
19	AS	5	LEU	2.8
31	BI	17	LEU	2.8
38	BP	1	MET	2.8
2	CB	140	HIS	2.8
3	CC	151	VAL	2.8
8	AH	4	ASP	2.8
10	AJ	35	SER	2.8
45	DW	76	GLY	2.8
13	AM	97	PRO	2.8
51	B3	26	ASN	2.8
19	AS	10	PHE	2.8
19	CS	80	TYR	2.8
34	BL	74	GLU	2.8
2	CB	137	ARG	2.8
9	AI	9	ARG	2.8
10	CJ	60	ARG	2.8
16	AP	42	ARG	2.8

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Mol	Chain	Res	Type	RSRZ
45	DW	55	ARG	2.8
1	AA	311	C	2.8
23	BA	2402	C	2.8
24	BB	88	C	2.8
37	DO	54	LEU	2.8
1	CA	1190	G	2.8
1	CA	1253	G	2.8
29	DG	26	VAL	2.8
44	BV	27	VAL	2.8
13	AM	10	PRO	2.8
28	DF	87	PRO	2.8
11	AK	125	PHE	2.8
30	DH	107	ILE	2.8
7	CG	10	ARG	2.8
12	AL	50	ALA	2.8
35	DM	107	ALA	2.8
36	BN	2	ARG	2.8
20	CT	24	LEU	2.8
26	DD	52	LEU	2.8
10	AJ	55	LYS	2.8
23	DA	2629	A	2.8
24	DB	53	A	2.8
4	AD	70	ILE	2.8
7	AG	43	PHE	2.8
14	AN	31	ARG	2.8
37	DO	36	TYR	2.8
42	BT	60	ARG	2.8
1	CA	331	G	2.8
9	CI	45	ALA	2.8
30	DH	98	ALA	2.8
32	BJ	91	GLU	2.8
51	D3	12	GLU	2.8
8	CH	116	LYS	2.8
11	CK	123	LYS	2.8
17	CQ	6	LEU	2.8
32	DJ	132	LYS	2.8
46	BX	95	LEU	2.8
2	AB	164	VAL	2.8
4	CD	203	VAL	2.8
9	AI	41	VAL	2.8
28	DF	160	VAL	2.8
13	AM	43	THR	2.8

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Mol	Chain	Res	Type	RSRZ
5	AE	13	ILE	2.8
10	CJ	41	PRO	2.8
14	AN	16	PHE	2.8
16	CP	33	ILE	2.8
30	DH	109	ILE	2.8
43	BU	61	ILE	2.8
51	D3	31	PRO	2.8
1	CA	974	A	2.8
1	CA	1359	C	2.8
4	AD	25	ARG	2.8
13	AM	94	ARG	2.8
14	AN	12	ARG	2.8
25	BC	268	ARG	2.8
9	CI	75	ASP	2.8
12	AL	49	SER	2.8
29	BG	94	TYR	2.8
30	DH	143	SER	2.8
10	CJ	71	LEU	2.8
21	AU	20	LYS	2.8
13	AM	117	VAL	2.8
23	BA	363(A)	G	2.8
23	BA	389	G	2.8
24	DB	54	G	2.8
4	AD	110	PHE	2.8
4	CD	107	ARG	2.7
4	CD	160	GLN	2.7
20	CT	17	ARG	2.7
30	DH	79	ILE	2.8
30	BH	104	GLN	2.7
30	BH	119	PRO	2.7
44	BV	79	ARG	2.7
1	CA	84	U	2.7
1	CA	743	U	2.7
30	BH	55	ALA	2.7
2	AB	97	TRP	2.7
12	CL	111	ASP	2.7
25	BC	39	LYS	2.7
26	BD	151	TYR	2.7
28	BF	25	TYR	2.7
7	CG	101	LEU	2.7
1	CA	1354	C	2.7
2	AB	214	ILE	2.7

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Mol	Chain	Res	Type	RSRZ
2	CB	54	THR	2.7
9	AI	33	PHE	2.7
9	AI	37	PHE	2.7
12	AL	18	ARG	2.7
16	CP	5	ARG	2.7
34	BL	15	ARG	2.7
45	BW	74	ARG	2.7
46	BX	52	ARG	2.7
6	CF	94	GLN	2.7
46	DX	19	GLN	2.7
1	AA	378	G	2.7
1	CA	1290	G	2.7
9	CI	13	ALA	2.7
24	BB	87	G	2.7
23	BA	2585	U	2.7
28	BF	12	TYR	2.7
28	DF	133	LEU	2.7
37	BO	54	LEU	2.7
2	AB	160	ASP	2.7
17	CQ	39	SER	2.7
3	AC	166	GLU	2.7
4	CD	156	GLU	2.7
9	CI	14	VAL	2.7
36	BN	11	ASN	2.7
37	BO	16	ASN	2.7
1	CA	1183	A	2.7
34	DL	79	ARG	2.7
38	BP	115	ARG	2.7
3	AC	2	GLY	2.7
9	CI	81	ILE	2.7
10	AJ	67	THR	2.7
3	AC	176	HIS	2.7
19	CS	69	HIS	2.7
30	DH	80	PRO	2.7
4	AD	147	ALA	2.7
20	CT	59	ALA	2.7
51	D3	33	LYS	2.7
4	AD	186	LEU	2.7
10	AJ	85	LEU	2.7
4	CD	112	VAL	2.7
16	CP	2	VAL	2.7
17	AQ	35	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
1	CA	976	G	2.7
1	CA	1356	G	2.7
13	AM	50	GLU	2.7
23	DA	2655	G	2.7
13	AM	100	GLY	2.7
37	DO	22	GLY	2.7
17	CQ	7	THR	2.7
1	CA	1111	A	2.7
28	BF	36	LYS	2.7
30	DH	112	LYS	2.7
39	DQ	22	LYS	2.7
42	DT	72	LYS	2.7
43	BU	82	PRO	2.7
46	BX	32	LYS	2.7
7	CG	7	ALA	2.7
13	AM	101	GLN	2.7
14	AN	30	ALA	2.7
30	BH	98	ALA	2.7
1	CA	1249	C	2.7
30	BH	47	LEU	2.7
19	AS	80	TYR	2.7
4	AD	3	ARG	2.7
8	CH	84	ARG	2.7
11	AK	126	ARG	2.7
48	DZ	55	ARG	2.7
10	AJ	73	ASP	2.7
30	BH	10	GLU	2.7
30	DH	96	ASP	2.7
30	DH	11	ASN	2.7
9	AI	8	GLY	2.7
15	CO	48	LYS	2.7
21	CU	25	LYS	2.7
30	DH	129	THR	2.7
37	BO	21	THR	2.7
45	BW	10	THR	2.7
1	CA	105	G	2.7
9	AI	122	ALA	2.7
20	CT	84	LEU	2.7
9	CI	114	TYR	2.7
1	AA	390	C	2.7
1	AA	934	C	2.7
7	AG	27	ILE	2.6

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Mol	Chain	Res	Type	RSRZ
37	BO	39	ILE	2.6
27	DE	134	GLY	2.6
28	DF	75	LYS	2.6
35	BM	8	LYS	2.6
36	BN	7	GLY	2.6
30	DH	58	LEU	2.6
31	BI	11	ALA	2.6
40	DR	35	LEU	2.6
40	DR	92	THR	2.6
14	AN	56	VAL	2.6
25	BC	239	ARG	2.6
47	DY	6	VAL	2.6
16	CP	17	TYR	2.6
1	AA	1003	G	2.6
1	CA	29	G	2.6
1	CA	1363	A	2.6
9	CI	101	PHE	2.6
10	CJ	52	GLY	2.6
19	CS	73	GLU	2.6
46	DX	9	GLY	2.6
23	DA	277	C	2.6
26	BD	60	ASN	2.6
28	BF	142	PRO	2.6
29	DG	128	PRO	2.6
43	DU	78	ALA	2.6
2	CB	114	ARG	2.6
3	CC	131	ARG	2.6
7	AG	79	ARG	2.6
12	AL	88	ARG	2.6
29	BG	50	VAL	2.6
40	DR	80	GLN	2.6
1	CA	1281	U	2.6
9	AI	70	LYS	2.6
12	AL	118	LYS	2.6
9	CI	18	PHE	2.6
2	CB	72	GLY	2.6
9	AI	35	GLU	2.6
18	AR	62	GLU	2.6
25	BC	30	GLU	2.6
30	DH	68	LEU	2.6
36	BN	10	LEU	2.6
37	BO	58	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
44	DV	125	LEU	2.6
49	D1	65	CYS	2.6
1	AA	1183	A	2.6
9	AI	126	SER	2.6
23	BA	508	G	2.6
30	BH	137	PRO	2.6
44	BV	159	PRO	2.6
4	AD	77	ASN	2.6
1	AA	110	C	2.6
4	AD	50	ARG	2.6
9	AI	10	ARG	2.6
30	BH	78	THR	2.6
40	BR	92	THR	2.6
28	DF	28	VAL	2.6
47	BY	6	VAL	2.6
30	DH	139	GLN	2.6
6	CF	92	LYS	2.6
25	BC	38	LYS	2.6
25	DC	35	LYS	2.6
43	BU	94	LYS	2.6
2	CB	172	ILE	2.6
5	CE	80	ILE	2.6
19	CS	42	PRO	2.6
13	CM	102	ARG	2.6
16	CP	68	ASP	2.6
4	AD	161	ASN	2.6
10	AJ	56	HIS	2.6
26	BD	107	THR	2.6
29	DG	107	VAL	2.6
23	DA	1460	A	2.6
23	DA	2801	A	2.6
5	CE	118	ILE	2.6
20	AT	55	ILE	2.6
22	CV	6189	G	2.6
23	BA	277	C	2.6
24	BB	90	C	2.6
24	BB	118	G	2.6
4	CD	93	PHE	2.6
9	CI	37	PHE	2.6
2	AB	138	LEU	2.6
25	BC	41	GLY	2.6
26	DD	186	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
28	BF	172	LEU	2.6
1	AA	1281	U	2.6
23	DA	12	U	2.6
9	CI	12	GLU	2.6
14	CN	20	ALA	2.6
16	CP	34	GLU	2.6
4	CD	39	PRO	2.6
46	DX	50	ARG	2.6
12	AL	20	LYS	2.6
16	CP	21	VAL	2.6
30	BH	143	SER	2.6
8	CH	3	THR	2.6
8	AH	112	LEU	2.5
20	CT	62	LEU	2.5
28	DF	135	LEU	2.5
26	DD	112	GLY	2.5
1	CA	135	C	2.5
21	AU	9	ARG	2.5
34	BL	79	ARG	2.5
36	DN	105	ARG	2.5
53	D5	57	ARG	2.5
3	CC	161	GLU	2.5
23	DA	2211	G	2.5
19	AS	44	MET	2.5
1	CA	723	U	2.5
29	BG	26	VAL	2.5
40	DR	84	LYS	2.5
3	AC	15	THR	2.5
9	CI	103	THR	2.5
10	CJ	62	HIS	2.5
28	DF	172	LEU	2.5
11	AK	25	TYR	2.5
51	D3	39	TYR	2.5
4	AD	16	GLY	2.5
12	CL	102	GLY	2.5
25	DC	41	GLY	2.5
4	AD	66	ARG	2.5
35	BM	16	ARG	2.5
46	BX	21	ARG	2.5
25	BC	2	ALA	2.5
33	DK	51	ALA	2.5
1	AA	1318	A	2.5

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Mol	Chain	Res	Type	RSRZ
23	BA	655	A	2.5
2	CB	134	GLU	2.5
4	AD	22	LYS	2.5
28	BF	164	GLU	2.5
29	DG	159	GLU	2.5
30	BH	122	GLU	2.5
35	DM	91	GLU	2.5
44	BV	186	GLU	2.5
11	AK	109	VAL	2.5
30	BH	37	VAL	2.5
14	AN	7	ILE	2.5
30	DH	133	HIS	2.5
1	CA	1224	G	2.5
1	CA	1337	G	2.5
37	DO	27	SER	2.5
3	AC	12	LEU	2.5
32	DJ	105	LEU	2.5
39	BQ	95	LEU	2.5
41	BS	36	LEU	2.5
4	CD	2	GLY	2.5
4	CD	76	ARG	2.5
9	AI	5	TYR	2.5
27	BE	131	GLY	2.5
51	B3	21	TYR	2.5
12	AL	90	LYS	2.5
13	AM	107	ALA	2.5
4	CD	170	VAL	2.5
14	CN	25	VAL	2.5
16	CP	46	PRO	2.5
21	CU	23	PRO	2.5
50	B2	29	ILE	2.5
16	CP	69	THR	2.5
34	BL	41	ARG	2.5
1	AA	1364	U	2.5
29	DG	147	ASN	2.5
30	BH	11	ASN	2.5
2	AB	148	TYR	2.5
3	AC	150	LYS	2.5
7	CG	36	LYS	2.5
13	CM	87	TYR	2.5
20	CT	29	LYS	2.5
47	DY	2	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
1	CA	293	G	2.5
3	CC	66	VAL	2.5
10	CJ	39	PRO	2.5
19	CS	59	PRO	2.5
39	BQ	90	VAL	2.5
14	CN	46	GLU	2.5
17	AQ	24	GLU	2.5
37	DO	43	GLU	2.5
5	AE	31	LEU	2.5
10	CJ	65	LEU	2.5
4	CD	122	ARG	2.5
12	CL	18	ARG	2.5
25	BC	40	THR	2.5
45	DW	74	ARG	2.5
9	AI	69	GLY	2.5
9	CI	71	SER	2.5
43	BU	79	CYS	2.5
34	BL	89	ALA	2.5
1	AA	1317	C	2.5
1	CA	1372	U	2.5
23	BA	2798	C	2.5
8	CH	99	GLU	2.5
37	DO	39	ILE	2.4
4	AD	135	LEU	2.4
6	AF	61	LEU	2.4
7	CG	22	LEU	2.4
34	DL	147	LEU	2.4
1	AA	971	G	2.4
15	AO	68	ARG	2.4
17	AQ	75	ARG	2.4
43	DU	89	PHE	2.4
3	AC	165	THR	2.4
14	CN	13	THR	2.4
8	AH	131	GLY	2.4
37	DO	84	GLN	2.4
7	AG	15	ASP	2.4
19	CS	61	TYR	2.4
44	BV	28	MET	2.4
10	AJ	24	VAL	2.4
19	AS	51	VAL	2.4
23	DA	1412	A	2.4
30	DH	18	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
30	DH	145	VAL	2.4
9	CI	98	PRO	2.4
5	CE	109	ILE	2.4
29	BG	167	GLU	2.4
29	DG	162	ILE	2.4
15	CO	57	LEU	2.4
20	AT	24	LEU	2.4
35	BM	48	GLU	2.4
51	D3	15	GLU	2.4
43	BU	21	LYS	2.4
21	AU	4	GLY	2.4
30	DH	100	ALA	2.4
1	AA	1127	G	2.4
1	AA	1331	G	2.4
1	CA	1003	G	2.4
3	AC	153	VAL	2.4
24	DB	87	G	2.4
29	BG	49	VAL	2.4
37	DO	88	ASP	2.4
8	CH	5	PRO	2.4
7	AG	120	ILE	2.4
45	DW	75	LEU	2.4
1	AA	1287	A	2.4
23	BA	2892	A	2.4
40	BR	93	GLU	2.4
40	DR	23	GLU	2.4
46	BX	57	GLU	2.4
9	AI	101	PHE	2.4
47	DY	54	LYS	2.4
1	AA	136(A)	C	2.4
4	AD	6	GLY	2.4
49	D1	53	THR	2.4
3	AC	168	ALA	2.4
4	AD	105	VAL	2.4
4	CD	105	VAL	2.4
12	CL	17	VAL	2.4
32	DJ	92	GLN	2.4
35	DM	96	VAL	2.4
43	DU	49	VAL	2.4
43	DU	57	GLN	2.4
37	DO	94	TYR	2.4
9	CI	49	PRO	2.4

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Mol	Chain	Res	Type	RSRZ
49	B1	55	PRO	2.4
28	DF	97	ASP	2.4
30	BH	75	LEU	2.4
37	BO	82	ILE	2.4
47	BY	16	LEU	2.4
7	CG	35	LYS	2.4
28	DF	36	LYS	2.4
1	AA	79	G	2.4
1	AA	407	G	2.4
1	AA	933	G	2.4
1	CA	104	G	2.4
1	CA	1370	G	2.4
28	DF	13	GLU	2.4
29	BG	124	GLU	2.4
29	DG	109	PHE	2.4
1	AA	1286	A	2.4
1	CA	1285	A	2.4
23	DA	2320	A	2.4
43	BU	6	HIS	2.4
4	AD	181	MET	2.4
7	AG	40	ALA	2.4
24	DB	1	U	2.4
14	AN	61	TRP	2.4
42	BT	27	THR	2.4
2	AB	136	VAL	2.4
29	DG	144	VAL	2.4
39	BQ	105	VAL	2.4
44	BV	58	VAL	2.4
44	DV	118	GLN	2.4
1	AA	1325	C	2.4
26	BD	62	PRO	2.4
38	DP	129	ARG	2.4
3	CC	94	LEU	2.4
4	CD	71	SER	2.4
5	AE	109	ILE	2.4
15	AO	57	LEU	2.4
19	AS	15	LEU	2.4
26	DD	63	LEU	2.4
28	DF	20	ILE	2.4
34	DL	133	SER	2.4
37	DO	40	ILE	2.4
47	BY	17	SER	2.4

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Mol	Chain	Res	Type	RSRZ
4	CD	61	LYS	2.4
28	DF	116	ASP	2.4
3	CC	10	PHE	2.4
6	CF	60	PHE	2.4
43	BU	89	PHE	2.4
12	AL	13	GLY	2.4
28	DF	69	ALA	2.4
30	BH	83	ALA	2.4
30	DH	59	ALA	2.4
7	AG	105	VAL	2.4
29	BG	131	VAL	2.4
23	DA	10	G	2.4
14	AN	29	ARG	2.4
23	BA	1460	A	2.4
23	DA	2799	A	2.4
24	DB	8	U	2.4
6	AF	4	TYR	2.3
10	AJ	4	ILE	2.3
11	CK	121	PRO	2.3
29	DG	168	PRO	2.3
30	BH	132	PRO	2.3
40	BR	70	ILE	2.3
51	D3	10	LEU	2.3
14	AN	4	LYS	2.3
2	AB	152	PHE	2.3
17	CQ	27	PHE	2.3
4	AD	81	GLU	2.3
4	CD	24	GLU	2.3
29	DG	53	GLU	2.3
3	AC	9	GLY	2.3
4	AD	2	GLY	2.3
30	BH	36	ALA	2.3
43	BU	10	GLY	2.3
43	BU	59	GLY	2.3
6	CF	90	VAL	2.3
13	AM	15	VAL	2.3
43	BU	39	VAL	2.3
13	CM	80	ARG	2.3
25	BC	27	THR	2.3
29	DG	95	ARG	2.3
32	DJ	96	THR	2.3
38	BP	118	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
44	DV	81	ARG	2.3
4	AD	157	LEU	2.3
5	AE	121	LYS	2.3
17	CQ	22	LEU	2.3
10	CJ	74	ILE	2.3
12	CL	22	LYS	2.3
20	AT	34	LYS	2.3
34	DL	114	ILE	2.3
43	BU	33	LYS	2.3
44	BV	53	ILE	2.3
1	CA	1286	A	2.3
1	CA	66	G	2.3
38	DP	67	SER	2.3
47	DY	17	SER	2.3
38	DP	117	ASP	2.3
13	AM	69	GLU	2.3
1	AA	91	C	2.3
1	AA	330	C	2.3
3	AC	169	ALA	2.3
3	CC	168	ALA	2.3
3	CC	200	ALA	2.3
14	CN	30	ALA	2.3
23	DA	1589	C	2.3
27	BE	128	ALA	2.3
29	BG	149	ARG	2.3
12	AL	26	LEU	2.3
12	CL	45	LYS	2.3
15	CO	67	LEU	2.3
36	DN	10	LEU	2.3
51	D3	42	TRP	2.3
52	D4	2	LYS	2.3
19	AS	79	THR	2.3
3	AC	14	ILE	2.3
10	AJ	50	ILE	2.3
11	CK	21	ILE	2.3
9	AI	73	GLN	2.3
44	BV	167	PRO	2.3
9	AI	36	TYR	2.3
5	AE	28	PHE	2.3
1	AA	1257	U	2.3
1	AA	728	A	2.3
7	AG	33	ASP	2.3

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Mol	Chain	Res	Type	RSRZ
8	CH	4	ASP	2.3
10	CJ	66	ARG	2.3
12	AL	126	GLU	2.3
13	CM	73	GLU	2.3
14	AN	8	GLU	2.3
20	CT	79	ARG	2.3
30	DH	20	ASP	2.3
3	CC	207	VAL	2.3
8	AH	129	VAL	2.3
13	AM	75	ALA	2.3
14	AN	10	ALA	2.3
29	BG	43	VAL	2.3
29	BG	52	VAL	2.3
29	DG	75	ALA	2.3
29	DG	153	LYS	2.3
30	BH	105	HIS	2.3
48	DZ	17	LYS	2.3
7	AG	104	LEU	2.3
27	BE	140	LEU	2.3
37	DO	26	LEU	2.3
2	CB	200	ILE	2.3
10	AJ	98	ILE	2.3
1	AA	962	C	2.3
23	BA	2107	C	2.3
23	DA	2402	C	2.3
10	AJ	53	PRO	2.3
16	AP	71	ARG	2.3
2	AB	99	GLY	2.3
7	CG	108	ALA	2.3
10	CJ	27	ALA	2.3
12	AL	61	SER	2.3
9	CI	72	GLY	2.3
14	AN	25	VAL	2.3
43	BU	98	VAL	2.3
46	BX	38	SER	2.3
12	CL	46	LYS	2.3
16	AP	3	LYS	2.3
19	AS	68	GLY	2.3
31	BI	67	GLY	2.3
34	DL	74	GLU	2.3
37	DO	33	LYS	2.3
38	BP	128	GLU	2.3

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Mol	Chain	Res	Type	RSRZ
43	BU	28	LYS	2.3
51	D3	24	GLU	2.3
1	AA	723	U	2.3
7	AG	59	LEU	2.3
35	BM	135	ASP	2.3
44	BV	163	LEU	2.3
1	AA	1000	A	2.3
1	AA	1493	A	2.3
1	CA	1250	A	2.3
26	BD	24	THR	2.3
43	BU	53	PRO	2.3
44	DV	167	PRO	2.3
4	AD	75	PHE	2.3
3	AC	184	TYR	2.3
34	DL	68	GLN	2.3
47	DY	9	GLN	2.3
23	DA	2334	G	2.3
1	CA	1112	C	2.3
1	CA	136(B)	C	2.3
23	DA	280	C	2.3
21	CU	7	ARG	2.3
25	DC	262	ARG	2.3
40	BR	13	ARG	2.3
44	DV	79	ARG	2.3
3	CC	4	LYS	2.3
4	AD	84	LYS	2.3
11	CK	114	VAL	2.3
14	AN	15	LYS	2.3
12	CL	50	ALA	2.3
19	CS	51	VAL	2.3
20	CT	34	LYS	2.3
29	BG	17	VAL	2.3
37	BO	19	LYS	2.3
51	B3	48	VAL	2.3
4	CD	44	GLY	2.3
26	BD	29	GLY	2.3
35	BM	30	GLY	2.3
2	AB	215	LEU	2.3
18	CR	79	LEU	2.3
51	B3	36	LEU	2.3
3	CC	176	HIS	2.2
4	AD	126	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
10	AJ	68	HIS	2.2
10	CJ	4	ILE	2.2
35	BM	138	ASP	2.2
1	CA	1110	A	2.2
3	CC	193	TYR	2.2
23	BA	278	A	2.2
24	BB	53	A	2.2
37	DO	92	TYR	2.2
45	DW	78	TYR	2.2
9	CI	42	ARG	2.2
32	DJ	97	ARG	2.2
15	AO	48	LYS	2.2
32	DJ	25	LYS	2.2
4	AD	17	VAL	2.2
17	CQ	35	VAL	2.2
37	BO	98	VAL	2.2
2	AB	18	GLY	2.2
9	CI	43	ALA	2.2
25	DC	236	GLY	2.2
37	BO	73	LEU	2.2
43	BU	67	LEU	2.2
46	DX	36	GLY	2.2
1	CA	1202	G	2.2
6	CF	22	GLU	2.2
10	AJ	61	GLU	2.2
28	BF	30	GLU	2.2
40	BR	23	GLU	2.2
4	CD	204	ILE	2.2
53	D5	33	ASN	2.2
30	BH	129	THR	2.2
16	CP	28	ARG	2.2
52	B4	23	ARG	2.2
1	CA	1251	A	2.2
8	CH	2	LEU	2.2
9	AI	40	LEU	2.2
23	BA	2799	A	2.2
23	DA	2333	A	2.2
26	DD	114	ALA	2.2
3	AC	171	GLY	2.2
4	AD	23	GLY	2.2
37	DO	60	GLY	2.2
46	BX	9	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
26	BD	197	ILE	2.2
30	BH	138	ILE	2.2
35	BM	91	GLU	2.2
35	DM	112	GLU	2.2
26	BD	159	HIS	2.2
1	AA	386	C	2.2
1	AA	656	C	2.2
1	AA	1223	C	2.2
1	CA	1397	C	2.2
11	CK	125	PHE	2.2
20	CT	64	ASP	2.2
7	CG	5	ARG	2.2
18	AR	72	ARG	2.2
25	BC	262	ARG	2.2
38	BP	93	ARG	2.2
44	BV	81	ARG	2.2
1	AA	1323	G	2.2
19	CS	39	THR	2.2
34	DL	137	LYS	2.2
8	AH	58	TYR	2.2
12	CL	63	TYR	2.2
35	DM	83	MET	2.2
7	CG	80	VAL	2.2
10	CJ	34	VAL	2.2
47	BY	44	LEU	2.2
1	AA	982	U	2.2
1	CA	1364	U	2.2
20	AT	77	ALA	2.2
28	BF	69	ALA	2.2
29	DG	100	GLY	2.2
28	DF	88	ILE	2.2
1	CA	32	A	2.2
17	AQ	58	GLU	2.2
20	CT	60	GLU	2.2
23	DA	2062	A	2.2
23	DA	2758	A	2.2
28	DF	137	GLU	2.2
30	BH	48	GLU	2.2
38	BP	109	GLU	2.2
48	DZ	34	GLU	2.2
51	B3	24	GLU	2.2
4	CD	75	PHE	2.2

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Mol	Chain	Res	Type	RSRZ
9	CI	10	ARG	2.2
29	DG	123	PHE	2.2
12	CL	20	LYS	2.2
13	CM	115	LYS	2.2
15	CO	2	PRO	2.2
39	BQ	101	ARG	2.2
53	B5	57	ARG	2.2
28	DF	27	ASN	2.2
42	DT	33	LYS	2.2
30	BH	76	THR	2.2
30	BH	86	THR	2.2
4	AD	74	GLN	2.2
9	AI	79	LEU	2.2
13	CM	15	VAL	2.2
13	CM	90	LEU	2.2
36	DN	73	VAL	2.2
39	BQ	8	VAL	2.2
43	BU	35	TYR	2.2
45	BW	79	VAL	2.2
7	AG	108	ALA	2.2
12	CL	120	GLY	2.2
19	CS	46	GLY	2.2
34	DL	28	GLY	2.2
3	CC	5	ILE	2.2
2	AB	70	PHE	2.2
2	CB	28	PHE	2.2
4	AD	10	ARG	2.2
4	CD	153	ARG	2.2
8	AH	84	ARG	2.2
9	AI	111	ARG	2.2
11	CK	116	HIS	2.2
29	BG	116	GLU	2.2
25	BC	261	LYS	2.2
38	DP	22	PHE	2.2
53	B5	36	LYS	2.2
12	AL	4	PRO	2.2
13	CM	113	PRO	2.2
1	AA	1250	A	2.2
1	AA	1398	A	2.2
1	CA	397	A	2.2
1	CA	1394	A	2.2
11	AK	117	ASN	2.2

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Mol	Chain	Res	Type	RSRZ
48	DZ	1	MET	2.2
51	D3	29	ASN	2.2
3	AC	94	LEU	2.2
4	AD	112	VAL	2.2
5	CE	91	LEU	2.2
13	CM	63	THR	2.2
14	AN	6	LEU	2.2
28	BF	19	LEU	2.2
31	BI	13	LEU	2.2
36	DN	69	ASP	2.2
2	CB	77	ALA	2.1
12	AL	25	ALA	2.1
33	BK	90	GLN	2.2
14	AN	55	GLY	2.1
38	BP	25	GLY	2.1
4	AD	146	ILE	2.1
1	CA	1097	C	2.1
3	CC	179	ARG	2.1
16	AP	72	ARG	2.1
29	DG	51	ARG	2.1
44	DV	80	ARG	2.1
42	DT	64	LYS	2.1
1	AA	939	G	2.1
1	AA	1190	G	2.1
1	CA	1002	G	2.1
4	CD	7	PRO	2.1
22	CV	6175	G	2.1
23	BA	1534	G	2.1
23	DA	2182	G	2.1
23	DA	2397	G	2.1
24	DB	118	G	2.1
34	BL	10	PRO	2.1
40	DR	16	PRO	2.1
53	D5	53	PRO	2.1
4	CD	56	VAL	2.1
7	AG	9	VAL	2.1
10	CJ	35	SER	2.1
29	DG	125	VAL	2.1
43	BU	42	VAL	2.1
44	DV	149	SER	2.1
4	AD	20	TYR	2.1
31	BI	62	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
1	AA	975	A	2.1
1	CA	1350	A	2.1
22	CV	6191	A	2.1
13	AM	39	ILE	2.1
26	DD	14	ILE	2.1
30	DH	71	ILE	2.1
37	BO	35	ILE	2.1
44	BV	124	ILE	2.1
8	AH	18	ARG	2.1
10	AJ	66	ARG	2.1
10	CJ	7	LYS	2.1
6	AF	60	PHE	2.1
9	AI	110	GLU	2.1
30	BH	70	GLU	2.1
32	DJ	124	HIS	2.1
43	DU	62	GLU	2.1
23	BA	790	C	2.1
50	D2	47	PRO	2.1
4	CD	181	MET	2.1
6	CF	88	VAL	2.1
44	DV	27	VAL	2.1
1	CA	1240	U	2.1
28	BF	93	THR	2.1
6	AF	94	GLN	2.1
10	AJ	17	ASP	2.1
13	CM	16	ASP	2.1
16	AP	76	GLN	2.1
22	AV	6175	G	2.1
23	BA	11	G	2.1
30	BH	14	ASP	2.1
19	AS	37	ARG	2.1
25	DC	255	LYS	2.1
29	DG	138	LYS	2.1
34	DL	41	ARG	2.1
34	DL	76	LYS	2.1
34	DL	107	LYS	2.1
42	BT	53	LYS	2.1
43	DU	87	LYS	2.1
1	CA	1493	A	2.1
24	DB	13	A	2.1
25	BC	29	PRO	2.1
26	BD	163	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
30	DH	7	GLU	2.1
42	DT	15	GLU	2.1
43	DU	56	PRO	2.1
47	BY	31	GLU	2.1
4	CD	64	LEU	2.1
30	BH	58	LEU	2.1
30	DH	12	LEU	2.1
9	CI	28	VAL	2.1
26	DD	59	VAL	2.1
29	DG	113	VAL	2.1
51	D3	48	VAL	2.1
1	AA	233	C	2.1
1	AA	312	C	2.1
23	BA	280	C	2.1
9	CI	126	SER	2.1
10	CJ	42	THR	2.1
1	AA	1065	U	2.1
1	AA	1330	U	2.1
2	CB	31	TYR	2.1
19	AS	40	ILE	2.1
30	BH	88	ILE	2.1
3	AC	164	ARG	2.1
4	AD	76	ARG	2.1
5	AE	88	LYS	2.1
11	AK	123	LYS	2.1
16	CP	71	ARG	2.1
17	AQ	37	LYS	2.1
18	AR	68	LYS	2.1
21	CU	22	ARG	2.1
25	BC	35	LYS	2.1
28	DF	84	LYS	2.1
28	DF	177	GLY	2.1
37	DO	15	ARG	2.1
38	BP	8	LYS	2.1
39	DQ	11	ARG	2.1
39	DQ	59	ARG	2.1
46	DX	42	GLN	2.1
4	AD	102	ASP	2.1
1	AA	111	G	2.1
1	AA	1050	G	2.1
1	AA	1233	G	2.1
1	CA	693	G	2.1

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Mol	Chain	Res	Type	RSRZ
2	AB	101	MET	2.1
3	CC	196	LEU	2.1
4	AD	29	PRO	2.1
4	AD	162	LEU	2.1
12	AL	93	PRO	2.1
16	AP	60	LEU	2.1
29	DG	124	GLU	2.1
30	DH	137	PRO	2.1
35	BM	103	MET	2.1
46	BX	12	PRO	2.1
1	AA	487	A	2.1
1	AA	1451	A	2.1
16	CP	48	TRP	2.1
30	DH	142	VAL	2.1
43	DU	15	VAL	2.1
53	B5	34	TRP	2.1
4	AD	117	ALA	2.1
10	AJ	26	ALA	2.1
16	CP	7	ALA	2.1
38	DP	127	ALA	2.1
43	DU	65	ALA	2.1
3	CC	172	ARG	2.1
9	AI	11	LYS	2.1
20	AT	17	ARG	2.1
29	DG	121	ILE	2.1
39	BQ	19	LYS	2.1
44	BV	82	ARG	2.1
48	BZ	55	ARG	2.1
3	AC	96	GLY	2.1
14	CN	21	TYR	2.1
26	DD	158	GLY	2.1
16	AP	61	SER	2.1
34	DL	70	GLN	2.1
1	CA	972	C	2.1
2	AB	193	ASP	2.1
22	CV	6215	C	2.1
23	BA	279	C	2.1
36	BN	72	ASP	2.1
36	DN	49	ASP	2.1
5	CE	78	HIS	2.1
12	CL	98	HIS	2.1
13	AM	7	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
43	DU	53	PRO	2.1
5	AE	122	GLU	2.1
51	D3	16	CYS	2.1
53	D5	40	GLU	2.1
3	AC	149	ALA	2.0
3	CC	149	ALA	2.0
5	CE	62	ALA	2.0
6	CF	52	ILE	2.0
7	AG	2	ALA	2.0
16	CP	27	LYS	2.0
18	AR	32	ARG	2.0
27	DE	186	ILE	2.0
28	BF	77	ILE	2.0
29	DG	96	ALA	2.0
30	DH	61	ARG	2.0
43	BU	88	LYS	2.0
1	AA	974	A	2.0
1	CA	607	A	2.0
12	CL	13	GLY	2.0
22	AV	6213	A	2.0
23	DA	2308	G	2.0
32	DJ	59	GLY	2.0
27	DE	175	THR	2.0
20	AT	18	GLN	2.0
43	BU	57	GLN	2.0
2	CB	44	LEU	2.0
3	CC	101	LEU	2.0
9	AI	85	LEU	2.0
13	AM	16	ASP	2.0
27	BE	185	ASP	2.0
35	DM	138	ASP	2.0
1	AA	1259	C	2.0
1	CA	40	C	2.0
1	CA	106	C	2.0
1	CA	436	C	2.0
3	AC	174	PRO	2.0
23	BA	645	C	2.0
23	DA	1590	U	2.0
25	BC	36	PRO	2.0
43	BU	72	VAL	2.0
49	B1	36	VAL	2.0
12	CL	114	LYS	2.0

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Mol	Chain	Res	Type	RSRZ
29	DG	47	GLU	2.0
30	BH	66	GLU	2.0
36	DN	2	ARG	2.0
36	DN	102	GLU	2.0
46	BX	33	LYS	2.0
53	D5	36	LYS	2.0
3	CC	182	ILE	2.0
5	AE	17	ALA	2.0
10	AJ	38	ILE	2.0
20	AT	44	ALA	2.0
30	BH	4	ILE	2.0
3	AC	197	GLY	2.0
40	DR	63	GLY	2.0
29	BG	129	THR	2.0
42	DT	27	THR	2.0
3	AC	10	PHE	2.0
35	DM	65	PHE	2.0
47	BY	37	PHE	2.0
39	BQ	109	LEU	2.0
40	DR	38	LEU	2.0
13	AM	12	ASN	2.0
31	DI	56	ASN	2.0
1	AA	1316	G	2.0
1	CA	438	G	2.0
1	CA	610	G	2.0
9	AI	109	VAL	2.0
10	CJ	24	VAL	2.0
13	CM	60	VAL	2.0
23	BA	2319	G	2.0
24	BB	86	G	2.0
27	BE	132	VAL	2.0
27	DE	195	ASP	2.0
4	CD	51	PRO	2.0
4	CD	30	LYS	2.0
10	CJ	56	HIS	2.0
11	CK	11	LYS	2.0
20	AT	23	ARG	2.0
25	DC	268	ARG	2.0
29	DG	69	ARG	2.0
31	DI	64	LYS	2.0
40	DR	87	HIS	2.0
44	BV	80	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
4	CD	72	GLU	2.0
1	AA	582	U	2.0
2	CB	177	ALA	2.0
3	CC	8	ILE	2.0
4	CD	147	ALA	2.0
10	AJ	64	GLU	2.0
13	CM	69	GLU	2.0
19	CS	75	ALA	2.0
20	AT	12	ALA	2.0
25	BC	105	ILE	2.0
43	DU	69	ALA	2.0
1	AA	135	C	2.0
1	AA	980	C	2.0
1	CA	1096	C	2.0
11	AK	119	CYS	2.0
23	DA	1411	C	2.0
24	BB	30	C	2.0
45	DW	34	GLY	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(\AA^2)	Q<0.9
54	MG	AA	1762	1/1	0.03	0.24	155,155,155,155	0
54	MG	DA	3084	1/1	0.12	0.32	146,146,146,146	0
54	MG	DA	3313	1/1	0.24	0.20	107,107,107,107	0
54	MG	BA	3236	1/1	0.30	0.32	119,119,119,119	0
54	MG	DA	3184	1/1	0.30	0.14	117,117,117,117	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	CA	1668	1/1	0.30	0.25	116,116,116,116	0
54	MG	BA	3278	1/1	0.33	0.32	115,115,115,115	0
54	MG	CA	1658	1/1	0.36	0.32	110,110,110,110	0
54	MG	BA	3305	1/1	0.44	0.11	103,103,103,103	0
54	MG	AV	6302	1/1	0.44	0.27	121,121,121,121	0
54	MG	CA	1701	1/1	0.45	0.27	112,112,112,112	0
54	MG	CA	1704	1/1	0.46	0.17	108,108,108,108	0
54	MG	BA	3217	1/1	0.46	0.22	111,111,111,111	0
54	MG	DA	3312	1/1	0.49	0.16	66,66,66,66	0
54	MG	AA	1682	1/1	0.49	0.17	85,85,85,85	0
54	MG	CA	1670	1/1	0.52	0.26	128,128,128,128	0
54	MG	CA	1696	1/1	0.52	0.21	133,133,133,133	0
54	MG	DA	3234	1/1	0.53	0.18	130,130,130,130	0
54	MG	DA	3276	1/1	0.53	0.20	128,128,128,128	0
54	MG	AA	1739	1/1	0.53	0.21	129,129,129,129	0
54	MG	CA	1637	1/1	0.53	0.19	112,112,112,112	0
54	MG	DA	3317	1/1	0.53	0.26	97,97,97,97	0
54	MG	CA	1698	1/1	0.55	0.12	117,117,117,117	0
54	MG	AA	1754	1/1	0.56	0.19	110,110,110,110	0
54	MG	DA	3116	1/1	0.56	0.15	115,115,115,115	0
54	MG	CA	1730	1/1	0.58	0.13	122,122,122,122	0
54	MG	DA	3265	1/1	0.58	0.18	120,120,120,120	0
54	MG	BA	3287	1/1	0.60	0.21	74,74,74,74	0
54	MG	BA	3079	1/1	0.60	0.24	86,86,86,86	0
54	MG	BA	3272	1/1	0.60	0.11	119,119,119,119	0
54	MG	BA	3061	1/1	0.60	0.15	91,91,91,91	0
54	MG	CA	1648	1/1	0.61	0.11	64,64,64,64	0
54	MG	BA	3083	1/1	0.61	0.10	87,87,87,87	0
54	MG	AA	1728	1/1	0.61	0.27	105,105,105,105	0
54	MG	AA	1718	1/1	0.62	0.33	98,98,98,98	0
54	MG	BA	3275	1/1	0.62	0.26	87,87,87,87	0
54	MG	BA	3189	1/1	0.62	0.17	88,88,88,88	0
54	MG	DA	3269	1/1	0.63	0.35	91,91,91,91	0
54	MG	CA	1703	1/1	0.63	0.21	108,108,108,108	0
54	MG	CA	1650	1/1	0.63	0.11	108,108,108,108	0
54	MG	BA	3271	1/1	0.63	0.20	91,91,91,91	0
54	MG	CA	1688	1/1	0.63	0.24	99,99,99,99	0
54	MG	DA	3163	1/1	0.64	0.14	83,83,83,83	0
54	MG	BA	3157	1/1	0.64	0.15	68,68,68,68	0
54	MG	DA	3284	1/1	0.64	0.23	134,134,134,134	0
54	MG	DA	2983	1/1	0.66	0.17	70,70,70,70	0
54	MG	DA	3033	1/1	0.66	0.20	101,101,101,101	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3186	1/1	0.66	0.14	90,90,90,90	0
54	MG	DA	3212	1/1	0.66	0.36	78,78,78,78	0
54	MG	AA	1684	1/1	0.66	0.26	95,95,95,95	0
54	MG	BA	3006	1/1	0.66	0.28	77,77,77,77	0
54	MG	CA	1617	1/1	0.67	0.24	90,90,90,90	0
54	MG	CA	1710	1/1	0.67	0.18	119,119,119,119	0
54	MG	CA	1725	1/1	0.67	0.17	105,105,105,105	0
54	MG	BA	3163	1/1	0.67	0.15	72,72,72,72	0
54	MG	DA	3316	1/1	0.67	0.09	97,97,97,97	0
54	MG	AA	1761	1/1	0.67	0.16	104,104,104,104	0
54	MG	DA	3011	1/1	0.68	0.17	99,99,99,99	0
54	MG	AA	1623	1/1	0.68	0.21	93,93,93,93	0
54	MG	AA	1706	1/1	0.68	0.07	103,103,103,103	0
54	MG	DA	2938	1/1	0.68	0.29	66,66,66,66	0
54	MG	CA	1718	1/1	0.68	0.10	78,78,78,78	0
54	MG	DA	3169	1/1	0.68	0.17	112,112,112,112	0
54	MG	DA	2972	1/1	0.69	0.22	47,47,47,47	0
54	MG	AA	1699	1/1	0.69	0.08	91,91,91,91	0
54	MG	AA	1669	1/1	0.69	0.21	110,110,110,110	0
54	MG	DA	3311	1/1	0.69	0.13	95,95,95,95	0
54	MG	AA	1696	1/1	0.69	0.19	132,132,132,132	0
54	MG	CA	1678	1/1	0.69	0.10	107,107,107,107	0
54	MG	BK	201	1/1	0.69	0.20	91,91,91,91	0
54	MG	DA	3152	1/1	0.69	0.16	77,77,77,77	0
54	MG	DG	201	1/1	0.69	0.24	101,101,101,101	0
54	MG	AA	1657	1/1	0.70	0.11	101,101,101,101	0
54	MG	DA	3087	1/1	0.70	0.21	67,67,67,67	0
54	MG	AA	1691	1/1	0.70	0.11	78,78,78,78	0
54	MG	DB	215	1/1	0.70	0.22	103,103,103,103	0
54	MG	BA	3172	1/1	0.70	0.12	102,102,102,102	0
54	MG	AA	1643	1/1	0.71	0.15	70,70,70,70	0
54	MG	BA	3190	1/1	0.71	0.18	115,115,115,115	0
54	MG	AA	1734	1/1	0.71	0.16	103,103,103,103	0
54	MG	BB	211	1/1	0.71	0.23	112,112,112,112	0
54	MG	DA	3278	1/1	0.71	0.25	75,75,75,75	0
54	MG	BA	3039	1/1	0.71	0.11	94,94,94,94	0
54	MG	CA	1614	1/1	0.71	0.21	89,89,89,89	0
54	MG	CA	1740	1/1	0.71	0.15	117,117,117,117	0
54	MG	AA	1625	1/1	0.71	0.35	88,88,88,88	0
54	MG	DA	3181	1/1	0.71	0.08	106,106,106,106	0
54	MG	DA	2970	1/1	0.71	0.19	67,67,67,67	0
54	MG	BA	3073	1/1	0.71	0.11	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3176	1/1	0.71	0.18	99,99,99,99	0
54	MG	DA	3014	1/1	0.72	0.22	69,69,69,69	0
54	MG	BA	3129	1/1	0.72	0.07	75,75,75,75	0
54	MG	DA	3047	1/1	0.72	0.16	66,66,66,66	0
54	MG	AA	1653	1/1	0.72	0.17	89,89,89,89	0
54	MG	BA	3070	1/1	0.72	0.12	75,75,75,75	0
54	MG	AA	1735	1/1	0.72	0.06	104,104,104,104	0
54	MG	AA	1679	1/1	0.72	0.09	78,78,78,78	0
54	MG	DA	3162	1/1	0.72	0.13	143,143,143,143	0
54	MG	BA	3058	1/1	0.72	0.12	114,114,114,114	0
54	MG	DA	3086	1/1	0.73	0.26	92,92,92,92	0
54	MG	AA	1701	1/1	0.73	0.21	83,83,83,83	0
54	MG	BA	3204	1/1	0.73	0.27	74,74,74,74	0
54	MG	BA	3031	1/1	0.73	0.47	87,87,87,87	0
54	MG	AA	1685	1/1	0.73	0.17	106,106,106,106	0
54	MG	BA	3240	1/1	0.73	0.18	114,114,114,114	0
54	MG	AA	1648	1/1	0.73	0.24	76,76,76,76	0
54	MG	AA	1722	1/1	0.73	0.23	83,83,83,83	0
54	MG	DA	3128	1/1	0.74	0.13	114,114,114,114	0
54	MG	DA	3268	1/1	0.74	0.26	81,81,81,81	0
54	MG	BA	3118	1/1	0.74	0.21	109,109,109,109	0
54	MG	CA	1728	1/1	0.74	0.12	82,82,82,82	0
54	MG	DA	3017	1/1	0.74	0.17	93,93,93,93	0
54	MG	BA	3027	1/1	0.74	0.24	62,62,62,62	0
54	MG	BA	3255	1/1	0.74	0.21	57,57,57,57	0
54	MG	AA	1650	1/1	0.74	0.25	103,103,103,103	0
54	MG	BA	3192	1/1	0.74	0.28	52,52,52,52	0
54	MG	AA	1641	1/1	0.74	0.27	85,85,85,85	0
54	MG	BA	3117	1/1	0.74	0.26	77,77,77,77	0
54	MG	DA	3318	1/1	0.74	0.12	101,101,101,101	0
54	MG	DA	3235	1/1	0.74	0.32	90,90,90,90	0
54	MG	DA	3257	1/1	0.74	0.14	94,94,94,94	0
54	MG	D2	101	1/1	0.74	0.23	66,66,66,66	0
54	MG	CV	6301	1/1	0.75	0.08	98,98,98,98	0
54	MG	AA	1729	1/1	0.75	0.16	75,75,75,75	0
54	MG	DA	3259	1/1	0.75	0.10	108,108,108,108	0
54	MG	DB	206	1/1	0.75	0.16	99,99,99,99	0
54	MG	DA	2968	1/1	0.75	0.14	56,56,56,56	0
54	MG	AA	1700	1/1	0.75	0.08	98,98,98,98	0
54	MG	CA	1685	1/1	0.75	0.40	106,106,106,106	0
54	MG	DA	3147	1/1	0.76	0.18	78,78,78,78	0
54	MG	BA	3225	1/1	0.76	0.19	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	2999	1/1	0.76	0.30	76,76,76,76	0
54	MG	CA	1723	1/1	0.76	0.20	141,141,141,141	0
54	MG	DA	3166	1/1	0.76	0.16	87,87,87,87	0
54	MG	BA	3109	1/1	0.76	0.09	90,90,90,90	0
54	MG	DA	3291	1/1	0.76	0.19	78,78,78,78	0
54	MG	DA	3296	1/1	0.76	0.07	104,104,104,104	0
54	MG	AA	1760	1/1	0.76	0.16	84,84,84,84	0
54	MG	AA	1680	1/1	0.76	0.14	90,90,90,90	0
54	MG	BA	3265	1/1	0.76	0.17	80,80,80,80	0
54	MG	DA	3209	1/1	0.76	0.30	80,80,80,80	0
54	MG	AA	1745	1/1	0.76	0.08	97,97,97,97	0
54	MG	AA	1646	1/1	0.76	0.23	99,99,99,99	0
54	MG	BA	3158	1/1	0.76	0.12	105,105,105,105	0
54	MG	DA	3238	1/1	0.76	0.08	58,58,58,58	0
54	MG	BA	3213	1/1	0.76	0.20	101,101,101,101	0
54	MG	AV	6304	1/1	0.76	0.16	118,118,118,118	0
54	MG	AA	1609	1/1	0.77	0.27	70,70,70,70	0
54	MG	AA	1694	1/1	0.77	0.21	129,129,129,129	0
54	MG	CA	1633	1/1	0.77	0.26	102,102,102,102	0
54	MG	BA	3218	1/1	0.77	0.24	75,75,75,75	0
54	MG	DA	3094	1/1	0.77	0.10	76,76,76,76	0
54	MG	DA	3300	1/1	0.77	0.11	68,68,68,68	0
54	MG	CA	1639	1/1	0.77	0.20	66,66,66,66	0
54	MG	BA	3116	1/1	0.77	0.14	85,85,85,85	0
54	MG	BA	3075	1/1	0.77	0.13	67,67,67,67	0
54	MG	DA	3253	1/1	0.77	0.11	92,92,92,92	0
54	MG	BA	3283	1/1	0.77	0.09	76,76,76,76	0
54	MG	BA	3198	1/1	0.77	0.33	81,81,81,81	0
54	MG	BA	3248	1/1	0.77	0.13	77,77,77,77	0
54	MG	DB	211	1/1	0.77	0.08	109,109,109,109	0
54	MG	BA	3036	1/1	0.77	0.12	92,92,92,92	0
54	MG	BA	3263	1/1	0.77	0.09	80,80,80,80	0
54	MG	DA	3272	1/1	0.77	0.25	41,41,41,41	0
54	MG	CA	1675	1/1	0.78	0.24	107,107,107,107	0
54	MG	BA	3107	1/1	0.78	0.16	87,87,87,87	0
54	MG	AA	1737	1/1	0.78	0.08	86,86,86,86	0
54	MG	DA	3042	1/1	0.78	0.32	79,79,79,79	0
54	MG	DA	3175	1/1	0.78	0.14	81,81,81,81	0
54	MG	DA	3281	1/1	0.78	0.17	73,73,73,73	0
54	MG	DA	3178	1/1	0.78	0.17	83,83,83,83	0
54	MG	CA	1628	1/1	0.78	0.13	100,100,100,100	0
54	MG	BA	3115	1/1	0.78	0.09	91,91,91,91	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	AA	1634	1/1	0.78	0.14	70,70,70,70	0
54	MG	AA	1726	1/1	0.78	0.14	108,108,108,108	0
54	MG	AA	1752	1/1	0.78	0.28	81,81,81,81	0
54	MG	DA	3220	1/1	0.78	0.13	70,70,70,70	0
54	MG	DA	3109	1/1	0.78	0.12	54,54,54,54	0
54	MG	DA	3110	1/1	0.78	0.12	86,86,86,86	0
54	MG	AA	1665	1/1	0.78	0.19	82,82,82,82	0
54	MG	DA	3127	1/1	0.78	0.28	90,90,90,90	0
54	MG	BA	3080	1/1	0.78	0.11	73,73,73,73	0
54	MG	BB	213	1/1	0.78	0.33	84,84,84,84	0
54	MG	DA	3260	1/1	0.78	0.41	102,102,102,102	0
54	MG	BA	2986	1/1	0.78	0.10	67,67,67,67	0
54	MG	CA	1622	1/1	0.79	0.17	79,79,79,79	0
54	MG	AA	1612	1/1	0.79	0.16	64,64,64,64	0
54	MG	AA	1613	1/1	0.79	0.14	47,47,47,47	0
54	MG	AA	1621	1/1	0.79	0.35	74,74,74,74	0
54	MG	DA	3271	1/1	0.79	0.07	97,97,97,97	0
54	MG	AA	1622	1/1	0.79	0.33	88,88,88,88	0
54	MG	BA	3300	1/1	0.79	0.15	83,83,83,83	0
54	MG	BA	3212	1/1	0.79	0.09	69,69,69,69	0
54	MG	BB	207	1/1	0.79	0.10	105,105,105,105	0
54	MG	DA	3052	1/1	0.79	0.21	107,107,107,107	0
54	MG	DA	3182	1/1	0.79	0.12	86,86,86,86	0
54	MG	DA	3295	1/1	0.79	0.12	63,63,63,63	0
54	MG	DA	3055	1/1	0.79	0.13	93,93,93,93	0
54	MG	DA	3185	1/1	0.79	0.14	108,108,108,108	0
54	MG	CA	1661	1/1	0.79	0.25	92,92,92,92	0
54	MG	DA	3085	1/1	0.79	0.10	89,89,89,89	0
54	MG	CA	1666	1/1	0.79	0.15	116,116,116,116	0
54	MG	BB	208	1/1	0.79	0.14	109,109,109,109	0
54	MG	DA	3224	1/1	0.79	0.26	72,72,72,72	0
54	MG	AA	1678	1/1	0.79	0.11	115,115,115,115	0
54	MG	CA	1672	1/1	0.79	0.10	62,62,62,62	0
54	MG	BA	3187	1/1	0.79	0.28	40,40,40,40	0
54	MG	DB	214	1/1	0.79	0.15	90,90,90,90	0
54	MG	BA	3266	1/1	0.79	0.28	98,98,98,98	0
54	MG	DB	216	1/1	0.79	0.15	88,88,88,88	0
54	MG	BA	3135	1/1	0.79	0.09	77,77,77,77	0
54	MG	BA	3219	1/1	0.79	0.24	66,66,66,66	0
54	MG	DA	3256	1/1	0.80	0.14	82,82,82,82	0
54	MG	BA	3302	1/1	0.80	0.08	121,121,121,121	0
54	MG	DA	3115	1/1	0.80	0.12	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3243	1/1	0.80	0.14	82,82,82,82	0
54	MG	CP	101	1/1	0.80	0.10	96,96,96,96	0
54	MG	BA	3004	1/1	0.80	0.28	74,74,74,74	0
54	MG	DA	3141	1/1	0.80	0.06	95,95,95,95	0
54	MG	BA	3149	1/1	0.80	0.31	82,82,82,82	0
54	MG	BA	3152	1/1	0.80	0.09	75,75,75,75	0
54	MG	BA	3049	1/1	0.80	0.18	86,86,86,86	0
54	MG	AA	1714	1/1	0.80	0.29	58,58,58,58	0
54	MG	DA	3280	1/1	0.80	0.17	84,84,84,84	0
54	MG	CA	1684	1/1	0.80	0.07	117,117,117,117	0
54	MG	BA	3059	1/1	0.80	0.14	60,60,60,60	0
54	MG	CA	1616	1/1	0.80	0.14	75,75,75,75	0
54	MG	CA	1689	1/1	0.80	0.20	83,83,83,83	0
54	MG	BA	3009	1/1	0.80	0.12	87,87,87,87	0
54	MG	DA	3029	1/1	0.80	0.09	70,70,70,70	0
54	MG	DA	3305	1/1	0.80	0.11	110,110,110,110	0
54	MG	BA	3026	1/1	0.80	0.11	82,82,82,82	0
54	MG	CA	1623	1/1	0.80	0.25	99,99,99,99	0
54	MG	AA	1757	1/1	0.80	0.09	89,89,89,89	0
54	MG	DA	3200	1/1	0.80	0.14	87,87,87,87	0
54	MG	BA	3281	1/1	0.80	0.14	84,84,84,84	0
54	MG	CA	1708	1/1	0.80	0.10	143,143,143,143	0
54	MG	BA	3226	1/1	0.80	0.12	81,81,81,81	0
54	MG	CA	1711	1/1	0.80	0.18	87,87,87,87	0
54	MG	DA	3230	1/1	0.80	0.11	63,63,63,63	0
54	MG	BA	3284	1/1	0.80	0.17	85,85,85,85	0
54	MG	AA	1652	1/1	0.80	0.18	89,89,89,89	0
54	MG	BA	3299	1/1	0.80	0.15	80,80,80,80	0
54	MG	AA	1693	1/1	0.80	0.12	74,74,74,74	0
54	MG	CA	1736	1/1	0.81	0.19	115,115,115,115	0
54	MG	BA	2978	1/1	0.81	0.29	59,59,59,59	0
54	MG	DA	3064	1/1	0.81	0.20	80,80,80,80	0
54	MG	DA	3069	1/1	0.81	0.11	81,81,81,81	0
54	MG	AA	1702	1/1	0.81	0.36	94,94,94,94	0
54	MG	BA	3119	1/1	0.81	0.15	64,64,64,64	0
54	MG	AA	1647	1/1	0.81	0.12	85,85,85,85	0
54	MG	BA	3229	1/1	0.81	0.21	62,62,62,62	0
54	MG	DA	3286	1/1	0.81	0.06	98,98,98,98	0
54	MG	DA	3187	1/1	0.81	0.22	90,90,90,90	0
54	MG	DA	3091	1/1	0.81	0.08	125,125,125,125	0
54	MG	BB	214	1/1	0.81	0.20	101,101,101,101	0
54	MG	DA	3299	1/1	0.81	0.15	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3105	1/1	0.81	0.20	75,75,75,75	0
54	MG	AA	1618	1/1	0.81	0.19	91,91,91,91	0
54	MG	DA	3307	1/1	0.81	0.14	73,73,73,73	0
54	MG	BA	3136	1/1	0.81	0.10	87,87,87,87	0
54	MG	DA	2986	1/1	0.81	0.14	55,55,55,55	0
54	MG	AD	302	1/1	0.81	0.11	87,87,87,87	0
54	MG	BA	3022	1/1	0.81	0.27	77,77,77,77	0
54	MG	CA	1713	1/1	0.81	0.07	80,80,80,80	0
54	MG	DA	3242	1/1	0.81	0.26	96,96,96,96	0
54	MG	AA	1755	1/1	0.81	0.15	103,103,103,103	0
54	MG	DA	3143	1/1	0.81	0.07	77,77,77,77	0
54	MG	DA	3028	1/1	0.81	0.18	78,78,78,78	0
54	MG	AA	1629	1/1	0.81	0.35	72,72,72,72	0
54	MG	BA	3072	1/1	0.81	0.12	67,67,67,67	0
54	MG	BA	3303	1/1	0.81	0.17	98,98,98,98	0
54	MG	CA	1687	1/1	0.81	0.17	64,64,64,64	0
54	MG	CA	1739	1/1	0.82	0.07	99,99,99,99	0
54	MG	DA	3170	1/1	0.82	0.10	80,80,80,80	0
54	MG	BA	3025	1/1	0.82	0.14	65,65,65,65	0
54	MG	DA	3274	1/1	0.82	0.14	62,62,62,62	0
54	MG	DA	3072	1/1	0.82	0.13	73,73,73,73	0
54	MG	DA	3074	1/1	0.82	0.17	64,64,64,64	0
54	MG	DA	3080	1/1	0.82	0.11	69,69,69,69	0
54	MG	AA	1673	1/1	0.82	0.09	61,61,61,61	0
54	MG	CA	1694	1/1	0.82	0.17	59,59,59,59	0
54	MG	CA	1646	1/1	0.82	0.08	78,78,78,78	0
54	MG	DA	3290	1/1	0.82	0.10	85,85,85,85	0
54	MG	BB	212	1/1	0.82	0.06	89,89,89,89	0
54	MG	AA	1724	1/1	0.82	0.13	85,85,85,85	0
54	MG	BA	3165	1/1	0.82	0.15	71,71,71,71	0
54	MG	DA	3103	1/1	0.82	0.24	79,79,79,79	0
54	MG	BA	3170	1/1	0.82	0.09	64,64,64,64	0
54	MG	CA	1706	1/1	0.82	0.30	101,101,101,101	0
54	MG	AA	1732	1/1	0.82	0.09	63,63,63,63	0
54	MG	BA	3175	1/1	0.82	0.09	85,85,85,85	0
54	MG	BA	3067	1/1	0.82	0.11	86,86,86,86	0
54	MG	CA	1621	1/1	0.82	0.21	67,67,67,67	0
54	MG	DA	3022	1/1	0.82	0.18	60,60,60,60	0
54	MG	CA	1674	1/1	0.82	0.14	74,74,74,74	0
54	MG	AA	1733	1/1	0.82	0.11	91,91,91,91	0
54	MG	DA	3319	1/1	0.82	0.06	83,83,83,83	0
54	MG	DA	3322	1/1	0.82	0.11	95,95,95,95	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	CA	1724	1/1	0.82	0.09	74,74,74,74	0
54	MG	BA	3038	1/1	0.82	0.15	65,65,65,65	0
54	MG	CA	1627	1/1	0.82	0.09	67,67,67,67	0
54	MG	DA	3264	1/1	0.82	0.16	61,61,61,61	0
54	MG	BB	206	1/1	0.82	0.07	70,70,70,70	0
54	MG	DA	3267	1/1	0.82	0.13	76,76,76,76	0
54	MG	AA	1644	1/1	0.82	0.19	53,53,53,53	0
54	MG	BA	3285	1/1	0.83	0.08	87,87,87,87	0
54	MG	AA	1651	1/1	0.83	0.17	97,97,97,97	0
54	MG	DA	3097	1/1	0.83	0.18	94,94,94,94	0
54	MG	DA	3279	1/1	0.83	0.11	88,88,88,88	0
54	MG	DA	3101	1/1	0.83	0.21	72,72,72,72	0
54	MG	BA	3112	1/1	0.83	0.07	68,68,68,68	0
54	MG	CA	1722	1/1	0.83	0.22	108,108,108,108	0
54	MG	DA	3021	1/1	0.83	0.12	67,67,67,67	0
54	MG	BA	3114	1/1	0.83	0.26	78,78,78,78	0
54	MG	DA	3113	1/1	0.83	0.09	71,71,71,71	0
54	MG	AA	1763	1/1	0.83	0.20	96,96,96,96	0
54	MG	BA	3258	1/1	0.83	0.12	104,104,104,104	0
54	MG	DA	3119	1/1	0.83	0.14	88,88,88,88	0
54	MG	DA	3120	1/1	0.83	0.23	66,66,66,66	0
54	MG	BA	3160	1/1	0.83	0.08	106,106,106,106	0
54	MG	AA	1614	1/1	0.83	0.31	85,85,85,85	0
54	MG	DA	3244	1/1	0.83	0.15	87,87,87,87	0
54	MG	DA	3246	1/1	0.83	0.26	67,67,67,67	0
54	MG	BA	3060	1/1	0.83	0.23	74,74,74,74	0
54	MG	DA	3254	1/1	0.83	0.11	79,79,79,79	0
54	MG	BA	3037	1/1	0.83	0.11	93,93,93,93	0
54	MG	BB	210	1/1	0.83	0.18	100,100,100,100	0
54	MG	CA	1647	1/1	0.83	0.24	77,77,77,77	0
54	MG	BA	2996	1/1	0.83	0.17	54,54,54,54	0
54	MG	DA	3323	1/1	0.83	0.08	69,69,69,69	0
54	MG	DA	3334	1/1	0.83	0.07	72,72,72,72	0
54	MG	DA	2924	1/1	0.83	0.24	41,41,41,41	0
54	MG	BA	3222	1/1	0.83	0.50	91,91,91,91	0
54	MG	BA	3121	1/1	0.83	0.05	77,77,77,77	0
54	MG	BA	3093	1/1	0.83	0.26	83,83,83,83	0
54	MG	CA	1663	1/1	0.83	0.19	86,86,86,86	0
54	MG	BA	3103	1/1	0.83	0.13	88,88,88,88	0
54	MG	AA	1632	1/1	0.83	0.21	68,68,68,68	0
54	MG	CA	1717	1/1	0.84	0.26	84,84,84,84	0
54	MG	CA	1636	1/1	0.84	0.12	93,93,93,93	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	AA	1645	1/1	0.84	0.24	79,79,79,79	0
54	MG	AA	1681	1/1	0.84	0.15	99,99,99,99	0
54	MG	DA	3298	1/1	0.84	0.18	79,79,79,79	0
54	MG	DA	2971	1/1	0.84	0.30	47,47,47,47	0
54	MG	DA	3104	1/1	0.84	0.07	99,99,99,99	0
54	MG	BA	3150	1/1	0.84	0.06	79,79,79,79	0
54	MG	DA	3258	1/1	0.84	0.23	72,72,72,72	0
54	MG	DA	3180	1/1	0.84	0.08	77,77,77,77	0
54	MG	BA	3294	1/1	0.84	0.12	64,64,64,64	0
54	MG	DA	3060	1/1	0.84	0.10	87,87,87,87	0
54	MG	AA	1758	1/1	0.84	0.06	73,73,73,73	0
54	MG	DA	3066	1/1	0.84	0.35	85,85,85,85	0
54	MG	DA	2994	1/1	0.84	0.17	67,67,67,67	0
54	MG	CA	1676	1/1	0.84	0.15	82,82,82,82	0
54	MG	DA	3320	1/1	0.84	0.18	58,58,58,58	0
54	MG	BA	3253	1/1	0.84	0.13	76,76,76,76	0
54	MG	DA	3012	1/1	0.84	0.11	45,45,45,45	0
54	MG	AV	6301	1/1	0.84	0.07	72,72,72,72	0
54	MG	DA	3134	1/1	0.84	0.11	71,71,71,71	0
54	MG	DA	3222	1/1	0.84	0.23	70,70,70,70	0
54	MG	AA	1723	1/1	0.84	0.17	81,81,81,81	0
54	MG	CA	1662	1/1	0.84	0.23	86,86,86,86	0
54	MG	AA	1649	1/1	0.84	0.15	89,89,89,89	0
54	MG	DA	3090	1/1	0.84	0.10	71,71,71,71	0
54	MG	DA	3154	1/1	0.84	0.34	94,94,94,94	0
54	MG	AA	1667	1/1	0.85	0.35	61,61,61,61	0
54	MG	BA	2994	1/1	0.85	0.21	56,56,56,56	0
54	MG	BA	3267	1/1	0.85	0.28	86,86,86,86	0
54	MG	BA	3162	1/1	0.85	0.15	94,94,94,94	0
54	MG	AA	1677	1/1	0.85	0.11	64,64,64,64	0
54	MG	BA	3101	1/1	0.85	0.21	75,75,75,75	0
54	MG	CA	1665	1/1	0.85	0.17	89,89,89,89	0
54	MG	BB	216	1/1	0.85	0.14	79,79,79,79	0
54	MG	BA	3166	1/1	0.85	0.09	74,74,74,74	0
54	MG	CA	1610	1/1	0.85	0.15	77,77,77,77	0
54	MG	BA	3122	1/1	0.85	0.12	101,101,101,101	0
54	MG	BA	3123	1/1	0.85	0.13	52,52,52,52	0
54	MG	BA	3173	1/1	0.85	0.19	80,80,80,80	0
54	MG	DA	3297	1/1	0.85	0.15	49,49,49,49	0
54	MG	CA	1620	1/1	0.85	0.14	79,79,79,79	0
54	MG	DA	3051	1/1	0.85	0.11	89,89,89,89	0
54	MG	CA	1733	1/1	0.85	0.06	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3302	1/1	0.85	0.18	77,77,77,77	0
54	MG	DA	3236	1/1	0.85	0.23	63,63,63,63	0
54	MG	DA	3129	1/1	0.85	0.14	63,63,63,63	0
54	MG	BA	3174	1/1	0.85	0.11	84,84,84,84	0
54	MG	DA	3136	1/1	0.85	0.17	68,68,68,68	0
54	MG	BA	3032	1/1	0.85	0.27	59,59,59,59	0
54	MG	DA	3251	1/1	0.85	0.23	63,63,63,63	0
54	MG	DA	3142	1/1	0.85	0.17	109,109,109,109	0
54	MG	BA	3291	1/1	0.85	0.09	68,68,68,68	0
54	MG	CA	1686	1/1	0.85	0.29	60,60,60,60	0
54	MG	BA	3238	1/1	0.85	0.17	91,91,91,91	0
54	MG	BA	3034	1/1	0.85	0.37	102,102,102,102	0
54	MG	AA	1631	1/1	0.85	0.17	70,70,70,70	0
54	MG	DA	2940	1/1	0.85	0.28	51,51,51,51	0
54	MG	DB	203	1/1	0.85	0.20	82,82,82,82	0
54	MG	DA	3263	1/1	0.85	0.17	63,63,63,63	0
54	MG	AA	1712	1/1	0.85	0.26	75,75,75,75	0
54	MG	DB	212	1/1	0.85	0.10	70,70,70,70	0
54	MG	DA	3168	1/1	0.85	0.18	94,94,94,94	0
54	MG	AA	1713	1/1	0.85	0.16	93,93,93,93	0
54	MG	AA	1749	1/1	0.85	0.11	90,90,90,90	0
54	MG	AA	1750	1/1	0.85	0.10	109,109,109,109	0
54	MG	BA	3199	1/1	0.85	0.25	68,68,68,68	0
54	MG	CA	1726	1/1	0.86	0.11	87,87,87,87	0
54	MG	BA	3017	1/1	0.86	0.21	69,69,69,69	0
54	MG	DA	3153	1/1	0.86	0.06	85,85,85,85	0
54	MG	BA	3207	1/1	0.86	0.24	94,94,94,94	0
54	MG	DA	3063	1/1	0.86	0.16	79,79,79,79	0
54	MG	BA	2905	1/1	0.86	0.19	12,12,12,12	0
54	MG	CA	1681	1/1	0.86	0.19	81,81,81,81	0
54	MG	DA	3275	1/1	0.86	0.16	78,78,78,78	0
54	MG	CA	1630	1/1	0.86	0.18	70,70,70,70	0
54	MG	BB	209	1/1	0.86	0.14	83,83,83,83	0
54	MG	BA	3124	1/1	0.86	0.09	89,89,89,89	0
54	MG	DA	3078	1/1	0.86	0.08	79,79,79,79	0
54	MG	AA	1637	1/1	0.86	0.26	61,61,61,61	0
54	MG	BA	3178	1/1	0.86	0.14	72,72,72,72	0
54	MG	BA	3184	1/1	0.86	0.19	42,42,42,42	0
54	MG	DA	2939	1/1	0.86	0.22	40,40,40,40	0
54	MG	BA	3293	1/1	0.86	0.09	86,86,86,86	0
54	MG	DA	2965	1/1	0.86	0.22	57,57,57,57	0
54	MG	AA	1741	1/1	0.86	0.12	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3092	1/1	0.86	0.12	98,98,98,98	0
54	MG	CA	1697	1/1	0.86	0.18	74,74,74,74	0
54	MG	DA	3095	1/1	0.86	0.14	67,67,67,67	0
54	MG	BB	217	1/1	0.86	0.08	78,78,78,78	0
54	MG	DA	3098	1/1	0.86	0.20	71,71,71,71	0
54	MG	CA	1699	1/1	0.86	0.22	71,71,71,71	0
54	MG	CA	1652	1/1	0.86	0.14	85,85,85,85	0
54	MG	DA	3226	1/1	0.86	0.10	80,80,80,80	0
54	MG	BA	3295	1/1	0.86	0.32	70,70,70,70	0
54	MG	CA	1660	1/1	0.86	0.07	100,100,100,100	0
54	MG	DA	3315	1/1	0.86	0.17	52,52,52,52	0
54	MG	CA	1705	1/1	0.86	0.08	54,54,54,54	0
54	MG	DA	3002	1/1	0.86	0.17	59,59,59,59	0
54	MG	CA	1601	1/1	0.86	0.32	53,53,53,53	0
54	MG	CA	1606	1/1	0.86	0.21	68,68,68,68	0
54	MG	DA	3243	1/1	0.86	0.12	72,72,72,72	0
54	MG	CA	1709	1/1	0.86	0.34	81,81,81,81	0
54	MG	BA	3298	1/1	0.86	0.16	74,74,74,74	0
54	MG	DA	3327	1/1	0.86	0.13	68,68,68,68	0
54	MG	CA	1664	1/1	0.86	0.19	82,82,82,82	0
54	MG	DA	3122	1/1	0.86	0.12	87,87,87,87	0
54	MG	AA	1624	1/1	0.86	0.27	67,67,67,67	0
54	MG	DA	3025	1/1	0.86	0.16	69,69,69,69	0
54	MG	BA	3145	1/1	0.86	0.07	67,67,67,67	0
54	MG	BA	3148	1/1	0.86	0.13	68,68,68,68	0
54	MG	BA	3011	1/1	0.86	0.12	83,83,83,83	0
54	MG	BA	3082	1/1	0.86	0.10	61,61,61,61	0
54	MG	CA	1673	1/1	0.86	0.08	73,73,73,73	0
54	MG	BA	3308	1/1	0.86	0.09	94,94,94,94	0
54	MG	BA	3066	1/1	0.87	0.19	56,56,56,56	0
54	MG	DA	3273	1/1	0.87	0.17	85,85,85,85	0
54	MG	BA	3030	1/1	0.87	0.16	57,57,57,57	0
54	MG	DA	3176	1/1	0.87	0.17	83,83,83,83	0
54	MG	DA	3089	1/1	0.87	0.11	76,76,76,76	0
54	MG	BA	3274	1/1	0.87	0.16	78,78,78,78	0
54	MG	BA	2988	1/1	0.87	0.16	60,60,60,60	0
54	MG	AA	1639	1/1	0.87	0.18	79,79,79,79	0
54	MG	AA	1692	1/1	0.87	0.19	84,84,84,84	0
54	MG	DA	2987	1/1	0.87	0.22	70,70,70,70	0
54	MG	AA	1655	1/1	0.87	0.16	72,72,72,72	0
54	MG	DA	3287	1/1	0.87	0.14	69,69,69,69	0
54	MG	AA	1738	1/1	0.87	0.17	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3199	1/1	0.87	0.36	38,38,38,38	0
54	MG	AA	1610	1/1	0.87	0.18	78,78,78,78	0
54	MG	AA	1687	1/1	0.87	0.10	73,73,73,73	0
54	MG	CA	1607	1/1	0.87	0.17	52,52,52,52	0
54	MG	DA	3013	1/1	0.87	0.13	44,44,44,44	0
54	MG	DA	3106	1/1	0.87	0.17	67,67,67,67	0
54	MG	BA	3288	1/1	0.87	0.12	62,62,62,62	0
54	MG	CA	1611	1/1	0.87	0.15	76,76,76,76	0
54	MG	CA	1612	1/1	0.87	0.24	58,58,58,58	0
54	MG	BA	3042	1/1	0.87	0.09	90,90,90,90	0
54	MG	BA	3084	1/1	0.87	0.20	51,51,51,51	0
54	MG	BA	3090	1/1	0.87	0.15	69,69,69,69	0
54	MG	AA	1707	1/1	0.87	0.10	100,100,100,100	0
54	MG	BA	3143	1/1	0.87	0.17	84,84,84,84	0
54	MG	BA	3250	1/1	0.87	0.12	95,95,95,95	0
54	MG	CA	1680	1/1	0.87	0.26	58,58,58,58	0
54	MG	BA	3252	1/1	0.87	0.15	92,92,92,92	0
54	MG	DA	3130	1/1	0.87	0.10	82,82,82,82	0
54	MG	BA	3097	1/1	0.87	0.15	53,53,53,53	0
54	MG	BA	3054	1/1	0.87	0.13	46,46,46,46	0
54	MG	BA	2935	1/1	0.87	0.24	34,34,34,34	0
54	MG	BA	2949	1/1	0.87	0.17	47,47,47,47	0
54	MG	AA	1747	1/1	0.87	0.26	75,75,75,75	0
54	MG	DB	202	1/1	0.87	0.32	64,64,64,64	0
54	MG	BA	3110	1/1	0.87	0.09	86,86,86,86	0
54	MG	DA	2934	1/1	0.87	0.24	25,25,25,25	0
54	MG	DB	209	1/1	0.87	0.07	75,75,75,75	0
54	MG	DA	3070	1/1	0.87	0.21	70,70,70,70	0
54	MG	CA	1693	1/1	0.87	0.17	65,65,65,65	0
54	MG	AA	1748	1/1	0.87	0.10	96,96,96,96	0
54	MG	CA	1645	1/1	0.87	0.16	72,72,72,72	0
54	MG	DA	2941	1/1	0.87	0.19	37,37,37,37	0
54	MG	BA	3270	1/1	0.87	0.10	61,61,61,61	0
54	MG	DA	2966	1/1	0.87	0.23	70,70,70,70	0
54	MG	BA	3185	1/1	0.88	0.28	56,56,56,56	0
54	MG	DA	3065	1/1	0.88	0.14	56,56,56,56	0
54	MG	DA	3215	1/1	0.88	0.31	39,39,39,39	0
54	MG	BA	3301	1/1	0.88	0.17	66,66,66,66	0
54	MG	BA	3077	1/1	0.88	0.17	75,75,75,75	0
54	MG	DA	3289	1/1	0.88	0.07	92,92,92,92	0
54	MG	CA	1715	1/1	0.88	0.18	74,74,74,74	0
54	MG	BA	3279	1/1	0.88	0.11	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3304	1/1	0.88	0.09	124,124,124,124	0
54	MG	DA	3233	1/1	0.88	0.09	57,57,57,57	0
54	MG	BA	2939	1/1	0.88	0.21	26,26,26,26	0
54	MG	DA	3138	1/1	0.88	0.08	70,70,70,70	0
54	MG	BA	2912	1/1	0.88	0.33	36,36,36,36	0
54	MG	CA	1651	1/1	0.88	0.13	99,99,99,99	0
54	MG	BB	205	1/1	0.88	0.10	71,71,71,71	0
54	MG	BA	3050	1/1	0.88	0.05	41,41,41,41	0
54	MG	DA	3150	1/1	0.88	0.08	62,62,62,62	0
54	MG	DA	3310	1/1	0.88	0.08	52,52,52,52	0
54	MG	CA	1727	1/1	0.88	0.13	75,75,75,75	0
54	MG	BA	3259	1/1	0.88	0.14	75,75,75,75	0
54	MG	BA	2992	1/1	0.88	0.22	70,70,70,70	0
54	MG	BA	3071	1/1	0.88	0.16	72,72,72,72	0
54	MG	BA	3289	1/1	0.88	0.18	65,65,65,65	0
54	MG	DA	3018	1/1	0.88	0.13	73,73,73,73	0
54	MG	BA	2971	1/1	0.88	0.28	65,65,65,65	0
54	MG	CA	1626	1/1	0.88	0.17	65,65,65,65	0
54	MG	AA	1666	1/1	0.88	0.11	100,100,100,100	0
54	MG	DA	3262	1/1	0.88	0.16	82,82,82,82	0
54	MG	CA	1700	1/1	0.88	0.15	65,65,65,65	0
54	MG	DA	2904	1/1	0.88	0.29	4,4,4,4	0
54	MG	DA	3329	1/1	0.88	0.25	69,69,69,69	0
54	MG	CA	1667	1/1	0.88	0.08	67,67,67,67	0
54	MG	DA	3037	1/1	0.88	0.14	77,77,77,77	0
54	MG	DA	2929	1/1	0.88	0.22	39,39,39,39	0
54	MG	BA	3019	1/1	0.88	0.18	58,58,58,58	0
54	MG	BA	3098	1/1	0.88	0.16	78,78,78,78	0
54	MG	CA	1671	1/1	0.88	0.09	74,74,74,74	0
54	MG	CA	1632	1/1	0.88	0.14	79,79,79,79	0
54	MG	BA	3244	1/1	0.88	0.33	47,47,47,47	0
54	MG	DA	3193	1/1	0.88	0.20	51,51,51,51	0
54	MG	DA	3118	1/1	0.88	0.27	62,62,62,62	0
54	MG	DB	217	1/1	0.88	0.04	74,74,74,74	0
54	MG	BA	3215	1/1	0.88	0.35	68,68,68,68	0
54	MG	DA	3207	1/1	0.88	0.14	42,42,42,42	0
54	MG	DA	3131	1/1	0.89	0.12	66,66,66,66	0
54	MG	DA	3133	1/1	0.89	0.12	89,89,89,89	0
54	MG	BA	3154	1/1	0.89	0.07	89,89,89,89	0
54	MG	DA	3004	1/1	0.89	0.21	67,67,67,67	0
54	MG	DA	3231	1/1	0.89	0.34	60,60,60,60	0
54	MG	DA	3006	1/1	0.89	0.08	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3155	1/1	0.89	0.13	85,85,85,85	0
54	MG	AA	1606	1/1	0.89	0.27	53,53,53,53	0
54	MG	BA	3100	1/1	0.89	0.07	77,77,77,77	0
54	MG	AA	1746	1/1	0.89	0.20	100,100,100,100	0
54	MG	CA	1640	1/1	0.89	0.19	69,69,69,69	0
54	MG	CA	1641	1/1	0.89	0.06	85,85,85,85	0
54	MG	AA	1675	1/1	0.89	0.07	77,77,77,77	0
54	MG	DA	2932	1/1	0.89	0.20	38,38,38,38	0
54	MG	DA	3249	1/1	0.89	0.11	56,56,56,56	0
54	MG	CA	1608	1/1	0.89	0.19	61,61,61,61	0
54	MG	BA	3193	1/1	0.89	0.15	53,53,53,53	0
54	MG	BA	3194	1/1	0.89	0.27	45,45,45,45	0
54	MG	DA	3100	1/1	0.89	0.11	59,59,59,59	0
54	MG	DA	3030	1/1	0.89	0.24	71,71,71,71	0
54	MG	BA	3106	1/1	0.89	0.10	70,70,70,70	0
54	MG	CA	1716	1/1	0.89	0.14	77,77,77,77	0
54	MG	DA	2942	1/1	0.89	0.23	39,39,39,39	0
54	MG	DA	3043	1/1	0.89	0.11	70,70,70,70	0
54	MG	DA	2959	1/1	0.89	0.26	56,56,56,56	0
54	MG	AA	1642	1/1	0.89	0.26	97,97,97,97	0
54	MG	BA	3014	1/1	0.89	0.16	47,47,47,47	0
54	MG	BA	2990	1/1	0.89	0.12	54,54,54,54	0
54	MG	AA	1640	1/1	0.89	0.28	106,106,106,106	0
54	MG	BA	3286	1/1	0.89	0.11	67,67,67,67	0
54	MG	AA	1664	1/1	0.89	0.09	103,103,103,103	0
54	MG	BA	3257	1/1	0.89	0.30	64,64,64,64	0
54	MG	DB	207	1/1	0.89	0.12	72,72,72,72	0
54	MG	DA	3198	1/1	0.89	0.19	26,26,26,26	0
54	MG	DA	3121	1/1	0.89	0.08	69,69,69,69	0
54	MG	BA	3024	1/1	0.89	0.21	67,67,67,67	0
54	MG	DA	3125	1/1	0.89	0.18	81,81,81,81	0
54	MG	BA	2960	1/1	0.89	0.20	40,40,40,40	0
54	MG	DA	2993	1/1	0.89	0.16	69,69,69,69	0
54	MG	BA	3096	1/1	0.89	0.17	65,65,65,65	0
54	MG	BA	3003	1/1	0.89	0.09	48,48,48,48	0
54	MG	DA	3221	1/1	0.89	0.10	68,68,68,68	0
54	MG	DA	3099	1/1	0.90	0.15	81,81,81,81	0
54	MG	BA	2968	1/1	0.90	0.33	51,51,51,51	0
54	MG	AA	1705	1/1	0.90	0.06	92,92,92,92	0
54	MG	DA	3183	1/1	0.90	0.07	83,83,83,83	0
54	MG	BA	3012	1/1	0.90	0.16	91,91,91,91	0
54	MG	DA	3020	1/1	0.90	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
54	MG	CA	1683	1/1	0.90	0.18	91,91,91,91	0
54	MG	BA	3209	1/1	0.90	0.18	69,69,69,69	0
54	MG	DA	3282	1/1	0.90	0.08	96,96,96,96	0
54	MG	BA	3211	1/1	0.90	0.28	59,59,59,59	0
54	MG	DA	3027	1/1	0.90	0.32	53,53,53,53	0
54	MG	CA	1638	1/1	0.90	0.07	65,65,65,65	0
54	MG	BA	2977	1/1	0.90	0.15	52,52,52,52	0
54	MG	BA	3081	1/1	0.90	0.11	65,65,65,65	0
54	MG	BA	3045	1/1	0.90	0.09	80,80,80,80	0
54	MG	CA	1692	1/1	0.90	0.22	78,78,78,78	0
54	MG	CA	1644	1/1	0.90	0.22	77,77,77,77	0
54	MG	AA	1756	1/1	0.90	0.21	106,106,106,106	0
54	MG	BA	2983	1/1	0.90	0.28	62,62,62,62	0
54	MG	BA	2914	1/1	0.90	0.23	31,31,31,31	0
54	MG	DA	3223	1/1	0.90	0.37	45,45,45,45	0
54	MG	BA	2916	1/1	0.90	0.35	38,38,38,38	0
54	MG	BA	3280	1/1	0.90	0.09	70,70,70,70	0
54	MG	DA	3057	1/1	0.90	0.12	59,59,59,59	0
54	MG	BA	3094	1/1	0.90	0.14	70,70,70,70	0
54	MG	BA	2932	1/1	0.90	0.18	41,41,41,41	0
54	MG	DA	3132	1/1	0.90	0.11	70,70,70,70	0
54	MG	DA	2949	1/1	0.90	0.20	41,41,41,41	0
54	MG	DA	3314	1/1	0.90	0.25	102,102,102,102	0
54	MG	DA	2953	1/1	0.90	0.22	58,58,58,58	0
54	MG	CA	1656	1/1	0.90	0.07	79,79,79,79	0
54	MG	AA	1616	1/1	0.90	0.21	63,63,63,63	0
54	MG	DA	3140	1/1	0.90	0.11	67,67,67,67	0
54	MG	BA	3230	1/1	0.90	0.32	44,44,44,44	0
54	MG	BA	3232	1/1	0.90	0.24	24,24,24,24	0
54	MG	AA	1697	1/1	0.90	0.08	80,80,80,80	0
54	MG	BA	3138	1/1	0.90	0.07	100,100,100,100	0
54	MG	DA	3325	1/1	0.90	0.15	92,92,92,92	0
54	MG	DA	3326	1/1	0.90	0.05	85,85,85,85	0
54	MG	BA	3028	1/1	0.90	0.23	62,62,62,62	0
54	MG	BA	3241	1/1	0.90	0.09	60,60,60,60	0
54	MG	DA	3333	1/1	0.90	0.09	126,126,126,126	0
54	MG	BA	2945	1/1	0.90	0.20	72,72,72,72	0
54	MG	DA	3336	1/1	0.90	0.15	89,89,89,89	0
54	MG	BA	3188	1/1	0.90	0.24	45,45,45,45	0
54	MG	DA	3157	1/1	0.90	0.17	71,71,71,71	0
54	MG	DA	3161	1/1	0.90	0.07	74,74,74,74	0
54	MG	BA	3069	1/1	0.90	0.12	109,109,109,109	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	AA	1753	1/1	0.90	0.10	102,102,102,102	0
54	MG	BA	3251	1/1	0.90	0.14	64,64,64,64	0
54	MG	CA	1720	1/1	0.90	0.12	63,63,63,63	0
54	MG	BA	3191	1/1	0.90	0.14	76,76,76,76	0
54	MG	AA	1744	1/1	0.90	0.09	82,82,82,82	0
54	MG	DA	3173	1/1	0.90	0.09	97,97,97,97	0
54	MG	BA	3108	1/1	0.90	0.21	99,99,99,99	0
54	MG	BA	2963	1/1	0.90	0.18	54,54,54,54	0
54	MG	BA	3008	1/1	0.90	0.15	57,57,57,57	0
54	MG	DA	3088	1/1	0.91	0.13	70,70,70,70	0
54	MG	BA	3088	1/1	0.91	0.18	73,73,73,73	0
54	MG	DA	2998	1/1	0.91	0.13	68,68,68,68	0
54	MG	CA	1679	1/1	0.91	0.05	93,93,93,93	0
54	MG	BA	2974	1/1	0.91	0.09	45,45,45,45	0
54	MG	BA	3159	1/1	0.91	0.26	78,78,78,78	0
54	MG	BA	3282	1/1	0.91	0.09	62,62,62,62	0
54	MG	DA	3177	1/1	0.91	0.06	62,62,62,62	0
54	MG	BA	3242	1/1	0.91	0.15	44,44,44,44	0
54	MG	DA	3179	1/1	0.91	0.05	68,68,68,68	0
54	MG	BA	3007	1/1	0.91	0.16	55,55,55,55	0
54	MG	AA	1638	1/1	0.91	0.13	63,63,63,63	0
54	MG	CA	1734	1/1	0.91	0.12	117,117,117,117	0
54	MG	BA	3200	1/1	0.91	0.16	64,64,64,64	0
54	MG	DA	3285	1/1	0.91	0.19	113,113,113,113	0
54	MG	CA	1737	1/1	0.91	0.10	70,70,70,70	0
54	MG	DA	3019	1/1	0.91	0.21	51,51,51,51	0
54	MG	CA	1738	1/1	0.91	0.16	81,81,81,81	0
54	MG	BA	3033	1/1	0.91	0.11	67,67,67,67	0
54	MG	DA	3190	1/1	0.91	0.20	27,27,27,27	0
54	MG	BA	3068	1/1	0.91	0.08	59,59,59,59	0
54	MG	DA	3196	1/1	0.91	0.25	39,39,39,39	0
54	MG	DA	3024	1/1	0.91	0.15	36,36,36,36	0
54	MG	B2	101	1/1	0.91	0.20	64,64,64,64	0
54	MG	AA	1727	1/1	0.91	0.12	100,100,100,100	0
54	MG	DA	3201	1/1	0.91	0.08	72,72,72,72	0
54	MG	DA	3301	1/1	0.91	0.10	80,80,80,80	0
54	MG	DA	3205	1/1	0.91	0.17	48,48,48,48	0
54	MG	CA	1649	1/1	0.91	0.14	80,80,80,80	0
54	MG	DA	3117	1/1	0.91	0.17	87,87,87,87	0
54	MG	CA	1605	1/1	0.91	0.13	56,56,56,56	0
54	MG	AA	1704	1/1	0.91	0.05	81,81,81,81	0
54	MG	BA	3132	1/1	0.91	0.23	79,79,79,79	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3133	1/1	0.91	0.22	67,67,67,67	0
54	MG	BA	2984	1/1	0.91	0.13	41,41,41,41	0
54	MG	AA	1620	1/1	0.91	0.20	56,56,56,56	0
54	MG	BA	3260	1/1	0.91	0.13	62,62,62,62	0
54	MG	AA	1742	1/1	0.91	0.15	87,87,87,87	0
54	MG	AA	1731	1/1	0.91	0.12	76,76,76,76	0
54	MG	DA	3053	1/1	0.91	0.22	61,61,61,61	0
54	MG	DA	3054	1/1	0.91	0.12	75,75,75,75	0
54	MG	BA	3220	1/1	0.91	0.14	56,56,56,56	0
54	MG	CA	1707	1/1	0.91	0.11	104,104,104,104	0
54	MG	DA	3324	1/1	0.91	0.24	78,78,78,78	0
54	MG	DA	2956	1/1	0.91	0.09	45,45,45,45	0
54	MG	CA	1618	1/1	0.91	0.34	63,63,63,63	0
54	MG	BA	3043	1/1	0.91	0.13	70,70,70,70	0
54	MG	BA	2958	1/1	0.91	0.17	42,42,42,42	0
54	MG	DA	2967	1/1	0.91	0.27	54,54,54,54	0
54	MG	AA	1720	1/1	0.91	0.14	69,69,69,69	0
54	MG	AA	1658	1/1	0.91	0.19	94,94,94,94	0
54	MG	DB	201	1/1	0.91	0.22	63,63,63,63	0
54	MG	CA	1625	1/1	0.91	0.09	94,94,94,94	0
54	MG	DA	3148	1/1	0.91	0.21	99,99,99,99	0
54	MG	BB	202	1/1	0.91	0.14	75,75,75,75	0
54	MG	DA	3151	1/1	0.91	0.17	82,82,82,82	0
54	MG	DA	3077	1/1	0.91	0.26	67,67,67,67	0
54	MG	BB	203	1/1	0.91	0.11	83,83,83,83	0
54	MG	AA	1654	1/1	0.91	0.25	76,76,76,76	0
54	MG	AA	1671	1/1	0.91	0.13	114,114,114,114	0
54	MG	DA	3159	1/1	0.91	0.31	87,87,87,87	0
54	MG	DA	2988	1/1	0.91	0.20	41,41,41,41	0
54	MG	DA	2991	1/1	0.91	0.13	31,31,31,31	0
54	MG	BA	3005	1/1	0.91	0.16	69,69,69,69	0
54	MG	DA	3164	1/1	0.91	0.13	88,88,88,88	0
54	MG	D4	101	1/1	0.91	0.19	55,55,55,55	0
54	MG	BA	3126	1/1	0.92	0.05	54,54,54,54	0
54	MG	AA	1736	1/1	0.92	0.09	79,79,79,79	0
54	MG	DA	3108	1/1	0.92	0.07	50,50,50,50	0
54	MG	BA	3095	1/1	0.92	0.05	83,83,83,83	0
54	MG	BA	3181	1/1	0.92	0.29	22,22,22,22	0
54	MG	BA	3064	1/1	0.92	0.15	40,40,40,40	0
54	MG	BA	3134	1/1	0.92	0.16	64,64,64,64	0
54	MG	CA	1655	1/1	0.92	0.09	80,80,80,80	0
54	MG	CA	1702	1/1	0.92	0.25	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3186	1/1	0.92	0.24	52,52,52,52	0
54	MG	DA	2945	1/1	0.92	0.17	41,41,41,41	0
54	MG	BA	2929	1/1	0.92	0.20	37,37,37,37	0
54	MG	DA	3292	1/1	0.92	0.25	33,33,33,33	0
54	MG	DA	3293	1/1	0.92	0.06	67,67,67,67	0
54	MG	DA	3048	1/1	0.92	0.09	66,66,66,66	0
54	MG	DA	3049	1/1	0.92	0.10	56,56,56,56	0
54	MG	DA	3124	1/1	0.92	0.03	90,90,90,90	0
54	MG	DA	2952	1/1	0.92	0.19	50,50,50,50	0
54	MG	AA	1674	1/1	0.92	0.12	79,79,79,79	0
54	MG	DA	3214	1/1	0.92	0.16	46,46,46,46	0
54	MG	AA	1668	1/1	0.92	0.10	90,90,90,90	0
54	MG	BA	3141	1/1	0.92	0.17	78,78,78,78	0
54	MG	DA	3303	1/1	0.92	0.18	66,66,66,66	0
54	MG	BA	3246	1/1	0.92	0.13	73,73,73,73	0
54	MG	BA	2937	1/1	0.92	0.20	36,36,36,36	0
54	MG	DA	3308	1/1	0.92	0.07	91,91,91,91	0
54	MG	BA	3035	1/1	0.92	0.08	44,44,44,44	0
54	MG	BA	3104	1/1	0.92	0.15	63,63,63,63	0
54	MG	BA	3105	1/1	0.92	0.12	60,60,60,60	0
54	MG	CA	1619	1/1	0.92	0.08	61,61,61,61	0
54	MG	DA	3137	1/1	0.92	0.08	68,68,68,68	0
54	MG	AA	1672	1/1	0.92	0.18	101,101,101,101	0
54	MG	AA	1688	1/1	0.92	0.07	68,68,68,68	0
54	MG	AA	1689	1/1	0.92	0.06	68,68,68,68	0
54	MG	BA	2957	1/1	0.92	0.22	35,35,35,35	0
54	MG	DA	3073	1/1	0.92	0.12	80,80,80,80	0
54	MG	DA	3146	1/1	0.92	0.08	95,95,95,95	0
54	MG	BA	3016	1/1	0.92	0.14	60,60,60,60	0
54	MG	DA	3076	1/1	0.92	0.12	63,63,63,63	0
54	MG	BA	2910	1/1	0.92	0.30	27,27,27,27	0
54	MG	BA	3306	1/1	0.92	0.08	74,74,74,74	0
54	MG	DA	3079	1/1	0.92	0.07	38,38,38,38	0
54	MG	CA	1677	1/1	0.92	0.15	85,85,85,85	0
54	MG	DA	2995	1/1	0.92	0.18	48,48,48,48	0
54	MG	DA	3332	1/1	0.92	0.15	60,60,60,60	0
54	MG	BA	3262	1/1	0.92	0.10	60,60,60,60	0
54	MG	BA	2991	1/1	0.92	0.06	36,36,36,36	0
54	MG	AA	1743	1/1	0.92	0.17	83,83,83,83	0
54	MG	DA	3003	1/1	0.92	0.11	41,41,41,41	0
54	MG	BA	2961	1/1	0.92	0.25	43,43,43,43	0
54	MG	BA	2962	1/1	0.92	0.08	17,17,17,17	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3009	1/1	0.92	0.09	49,49,49,49	0
54	MG	BA	3056	1/1	0.92	0.10	62,62,62,62	0
54	MG	BA	3086	1/1	0.92	0.17	102,102,102,102	0
54	MG	DB	210	1/1	0.92	0.08	74,74,74,74	0
54	MG	BA	2999	1/1	0.92	0.10	45,45,45,45	0
54	MG	BA	3273	1/1	0.92	0.07	83,83,83,83	0
54	MG	BA	3000	1/1	0.92	0.08	65,65,65,65	0
54	MG	BA	3221	1/1	0.92	0.11	48,48,48,48	0
54	MG	CA	1691	1/1	0.92	0.07	85,85,85,85	0
54	MG	BA	3091	1/1	0.92	0.09	56,56,56,56	0
54	MG	DA	3102	1/1	0.92	0.20	68,68,68,68	0
54	MG	AA	1670	1/1	0.92	0.09	85,85,85,85	0
54	MG	DA	2906	1/1	0.92	0.25	27,27,27,27	0
54	MG	BA	3156	1/1	0.93	0.10	80,80,80,80	0
54	MG	BA	3203	1/1	0.93	0.16	41,41,41,41	0
54	MG	DA	3149	1/1	0.93	0.18	74,74,74,74	0
54	MG	DA	3059	1/1	0.93	0.07	67,67,67,67	0
54	MG	DA	2946	1/1	0.93	0.19	24,24,24,24	0
54	MG	AA	1608	1/1	0.93	0.23	47,47,47,47	0
54	MG	BA	3206	1/1	0.93	0.12	60,60,60,60	0
54	MG	BA	3047	1/1	0.93	0.17	65,65,65,65	0
54	MG	BA	3208	1/1	0.93	0.10	48,48,48,48	0
54	MG	DA	3158	1/1	0.93	0.07	59,59,59,59	0
54	MG	BA	3264	1/1	0.93	0.08	116,116,116,116	0
54	MG	DA	2960	1/1	0.93	0.22	42,42,42,42	0
54	MG	BA	3018	1/1	0.93	0.10	68,68,68,68	0
54	MG	BA	3210	1/1	0.93	0.10	48,48,48,48	0
54	MG	AA	1708	1/1	0.93	0.08	101,101,101,101	0
54	MG	BA	3268	1/1	0.93	0.18	58,58,58,58	0
54	MG	CA	1654	1/1	0.93	0.05	111,111,111,111	0
54	MG	BA	3021	1/1	0.93	0.27	60,60,60,60	0
54	MG	BA	3120	1/1	0.93	0.10	57,57,57,57	0
54	MG	DA	3171	1/1	0.93	0.08	61,61,61,61	0
54	MG	DA	2977	1/1	0.93	0.04	47,47,47,47	0
54	MG	CA	1657	1/1	0.93	0.11	78,78,78,78	0
54	MG	DA	2985	1/1	0.93	0.20	48,48,48,48	0
54	MG	BA	3214	1/1	0.93	0.22	53,53,53,53	0
54	MG	CA	1659	1/1	0.93	0.13	71,71,71,71	0
54	MG	BA	2993	1/1	0.93	0.28	58,58,58,58	0
54	MG	BA	3023	1/1	0.93	0.16	64,64,64,64	0
54	MG	BA	3168	1/1	0.93	0.14	76,76,76,76	0
54	MG	CA	1603	1/1	0.93	0.29	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3169	1/1	0.93	0.18	75,75,75,75	0
54	MG	AA	1711	1/1	0.93	0.16	53,53,53,53	0
54	MG	AA	1698	1/1	0.93	0.08	88,88,88,88	0
54	MG	DA	3001	1/1	0.93	0.18	56,56,56,56	0
54	MG	AA	1659	1/1	0.93	0.12	51,51,51,51	0
54	MG	BA	3127	1/1	0.93	0.18	56,56,56,56	0
54	MG	BA	3062	1/1	0.93	0.12	76,76,76,76	0
54	MG	DA	3195	1/1	0.93	0.18	51,51,51,51	0
54	MG	BA	3228	1/1	0.93	0.12	66,66,66,66	0
54	MG	DA	3008	1/1	0.93	0.17	59,59,59,59	0
54	MG	CA	1613	1/1	0.93	0.11	87,87,87,87	0
54	MG	DA	3010	1/1	0.93	0.19	51,51,51,51	0
54	MG	CA	1729	1/1	0.93	0.11	98,98,98,98	0
54	MG	DA	3203	1/1	0.93	0.12	46,46,46,46	0
54	MG	BA	2966	1/1	0.93	0.13	75,75,75,75	0
54	MG	CA	1731	1/1	0.93	0.04	90,90,90,90	0
54	MG	BA	3002	1/1	0.93	0.20	45,45,45,45	0
54	MG	DA	3016	1/1	0.93	0.08	74,74,74,74	0
54	MG	DA	3111	1/1	0.93	0.19	67,67,67,67	0
54	MG	AA	1690	1/1	0.93	0.07	117,117,117,117	0
54	MG	CA	1735	1/1	0.93	0.13	61,61,61,61	0
54	MG	BA	3182	1/1	0.93	0.22	20,20,20,20	0
54	MG	AA	1759	1/1	0.93	0.04	81,81,81,81	0
54	MG	BA	3239	1/1	0.93	0.10	82,82,82,82	0
54	MG	BA	3292	1/1	0.93	0.13	72,72,72,72	0
54	MG	BA	2973	1/1	0.93	0.16	61,61,61,61	0
54	MG	DA	3227	1/1	0.93	0.16	34,34,34,34	0
54	MG	AA	1717	1/1	0.93	0.13	81,81,81,81	0
54	MG	BA	3139	1/1	0.93	0.18	78,78,78,78	0
54	MG	AA	1662	1/1	0.93	0.08	53,53,53,53	0
54	MG	AA	1683	1/1	0.93	0.07	102,102,102,102	0
54	MG	DA	2914	1/1	0.93	0.26	27,27,27,27	0
54	MG	DA	2916	1/1	0.93	0.15	22,22,22,22	0
54	MG	DA	3237	1/1	0.93	0.34	87,87,87,87	0
54	MG	DA	3035	1/1	0.93	0.21	77,77,77,77	0
54	MG	DB	204	1/1	0.93	0.10	75,75,75,75	0
54	MG	DB	205	1/1	0.93	0.04	79,79,79,79	0
54	MG	DA	2920	1/1	0.93	0.25	30,30,30,30	0
54	MG	DA	3038	1/1	0.93	0.24	71,71,71,71	0
54	MG	DA	3041	1/1	0.93	0.07	51,51,51,51	0
54	MG	AA	1605	1/1	0.93	0.31	42,42,42,42	0
54	MG	BA	2941	1/1	0.93	0.38	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3046	1/1	0.93	0.13	76,76,76,76	0
54	MG	BA	3249	1/1	0.93	0.09	37,37,37,37	0
54	MG	AA	1602	1/1	0.93	0.30	49,49,49,49	0
54	MG	DA	2936	1/1	0.93	0.16	27,27,27,27	0
54	MG	BA	3013	1/1	0.93	0.07	90,90,90,90	0
54	MG	AA	1751	1/1	0.93	0.08	72,72,72,72	0
54	MG	BA	3113	1/1	0.93	0.10	71,71,71,71	0
54	MG	AA	1635	1/1	0.93	0.11	68,68,68,68	0
54	MG	AA	1617	1/1	0.94	0.14	77,77,77,77	0
54	MG	BA	3164	1/1	0.94	0.17	88,88,88,88	0
54	MG	BA	2989	1/1	0.94	0.27	53,53,53,53	0
54	MG	DA	3034	1/1	0.94	0.20	65,65,65,65	0
54	MG	DA	3250	1/1	0.94	0.34	74,74,74,74	0
54	MG	BA	3111	1/1	0.94	0.25	46,46,46,46	0
54	MG	BA	3224	1/1	0.94	0.15	45,45,45,45	0
54	MG	BA	3065	1/1	0.94	0.09	61,61,61,61	0
54	MG	DA	3255	1/1	0.94	0.13	101,101,101,101	0
54	MG	AA	1604	1/1	0.94	0.11	57,57,57,57	0
54	MG	DA	2933	1/1	0.94	0.26	30,30,30,30	0
54	MG	BA	3227	1/1	0.94	0.12	48,48,48,48	0
54	MG	BA	2943	1/1	0.94	0.21	42,42,42,42	0
54	MG	AV	6303	1/1	0.94	0.09	67,67,67,67	0
54	MG	BA	3290	1/1	0.94	0.15	42,42,42,42	0
54	MG	BA	2948	1/1	0.94	0.26	39,39,39,39	0
54	MG	DA	3050	1/1	0.94	0.09	105,105,105,105	0
54	MG	AA	1626	1/1	0.94	0.13	62,62,62,62	0
54	MG	DA	3266	1/1	0.94	0.11	83,83,83,83	0
54	MG	BA	2955	1/1	0.94	0.10	50,50,50,50	0
54	MG	BA	2997	1/1	0.94	0.18	57,57,57,57	0
54	MG	CA	1629	1/1	0.94	0.09	106,106,106,106	0
54	MG	BA	2901	1/1	0.94	0.29	23,23,23,23	0
54	MG	CA	1695	1/1	0.94	0.13	80,80,80,80	0
54	MG	DA	3058	1/1	0.94	0.06	54,54,54,54	0
54	MG	CA	1631	1/1	0.94	0.08	68,68,68,68	0
54	MG	DA	2954	1/1	0.94	0.19	28,28,28,28	0
54	MG	DA	3061	1/1	0.94	0.18	75,75,75,75	0
54	MG	DA	3277	1/1	0.94	0.17	52,52,52,52	0
54	MG	BA	3297	1/1	0.94	0.13	67,67,67,67	0
54	MG	DA	2957	1/1	0.94	0.16	63,63,63,63	0
54	MG	BA	3074	1/1	0.94	0.05	61,61,61,61	0
54	MG	CA	1635	1/1	0.94	0.06	67,67,67,67	0
54	MG	DA	3068	1/1	0.94	0.21	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	AA	1660	1/1	0.94	0.19	59,59,59,59	0
54	MG	BA	3001	1/1	0.94	0.17	59,59,59,59	0
54	MG	AA	1721	1/1	0.94	0.31	66,66,66,66	0
54	MG	AA	1709	1/1	0.94	0.12	83,83,83,83	0
54	MG	DA	3288	1/1	0.94	0.07	78,78,78,78	0
54	MG	AA	1710	1/1	0.94	0.15	65,65,65,65	0
54	MG	DA	3172	1/1	0.94	0.17	81,81,81,81	0
54	MG	BA	3128	1/1	0.94	0.17	59,59,59,59	0
54	MG	DA	3174	1/1	0.94	0.10	42,42,42,42	0
54	MG	CA	1642	1/1	0.94	0.06	71,71,71,71	0
54	MG	DA	2975	1/1	0.94	0.09	58,58,58,58	0
54	MG	CA	1643	1/1	0.94	0.06	58,58,58,58	0
54	MG	DA	2979	1/1	0.94	0.06	69,69,69,69	0
54	MG	DA	3083	1/1	0.94	0.10	67,67,67,67	0
54	MG	DA	2980	1/1	0.94	0.18	63,63,63,63	0
54	MG	DA	2981	1/1	0.94	0.20	55,55,55,55	0
54	MG	AA	1661	1/1	0.94	0.24	65,65,65,65	0
54	MG	BA	2964	1/1	0.94	0.16	30,30,30,30	0
54	MG	BA	3041	1/1	0.94	0.05	67,67,67,67	0
54	MG	DA	3304	1/1	0.94	0.11	59,59,59,59	0
54	MG	BB	201	1/1	0.94	0.26	56,56,56,56	0
54	MG	CA	1712	1/1	0.94	0.12	78,78,78,78	0
54	MG	BA	2919	1/1	0.94	0.16	24,24,24,24	0
54	MG	DA	3309	1/1	0.94	0.21	30,30,30,30	0
54	MG	DA	3189	1/1	0.94	0.11	37,37,37,37	0
54	MG	CA	1714	1/1	0.94	0.13	74,74,74,74	0
54	MG	DA	3093	1/1	0.94	0.19	69,69,69,69	0
54	MG	BA	3087	1/1	0.94	0.06	69,69,69,69	0
54	MG	BB	204	1/1	0.94	0.09	87,87,87,87	0
54	MG	DA	3197	1/1	0.94	0.17	28,28,28,28	0
54	MG	BA	2924	1/1	0.94	0.23	47,47,47,47	0
54	MG	BA	3044	1/1	0.94	0.14	64,64,64,64	0
54	MG	CA	1653	1/1	0.94	0.11	84,84,84,84	0
54	MG	BA	2926	1/1	0.94	0.19	31,31,31,31	0
54	MG	BA	3046	1/1	0.94	0.30	87,87,87,87	0
54	MG	DA	3204	1/1	0.94	0.14	54,54,54,54	0
54	MG	BA	3202	1/1	0.94	0.32	63,63,63,63	0
54	MG	BA	3261	1/1	0.94	0.17	53,53,53,53	0
54	MG	BA	2927	1/1	0.94	0.20	37,37,37,37	0
54	MG	BA	3048	1/1	0.94	0.13	67,67,67,67	0
54	MG	DA	3213	1/1	0.94	0.24	66,66,66,66	0
54	MG	AA	1725	1/1	0.94	0.15	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3331	1/1	0.94	0.09	52,52,52,52	0
54	MG	BA	2976	1/1	0.94	0.18	70,70,70,70	0
54	MG	DA	3217	1/1	0.94	0.11	56,56,56,56	0
54	MG	BA	3051	1/1	0.94	0.09	66,66,66,66	0
54	MG	DA	3335	1/1	0.94	0.09	90,90,90,90	0
54	MG	BA	3099	1/1	0.94	0.17	78,78,78,78	0
54	MG	CA	1732	1/1	0.94	0.15	73,73,73,73	0
54	MG	DA	3015	1/1	0.94	0.27	74,74,74,74	0
54	MG	DA	3114	1/1	0.94	0.19	83,83,83,83	0
54	MG	BA	3052	1/1	0.94	0.18	56,56,56,56	0
54	MG	BA	2931	1/1	0.94	0.17	32,32,32,32	0
54	MG	DA	3228	1/1	0.94	0.19	51,51,51,51	0
54	MG	DA	3229	1/1	0.94	0.17	64,64,64,64	0
54	MG	DB	208	1/1	0.94	0.05	96,96,96,96	0
54	MG	BA	3055	1/1	0.94	0.05	60,60,60,60	0
54	MG	AA	1695	1/1	0.94	0.14	83,83,83,83	0
54	MG	DA	3232	1/1	0.94	0.14	39,39,39,39	0
54	MG	BA	2981	1/1	0.94	0.08	48,48,48,48	0
54	MG	BA	2933	1/1	0.94	0.21	32,32,32,32	0
54	MG	BA	3216	1/1	0.94	0.17	65,65,65,65	0
54	MG	BA	3276	1/1	0.94	0.11	65,65,65,65	0
54	MG	CA	1609	1/1	0.94	0.14	93,93,93,93	0
54	MG	AA	1628	1/1	0.94	0.18	62,62,62,62	0
54	MG	DA	3240	1/1	0.94	0.22	60,60,60,60	0
54	MG	AA	1740	1/1	0.94	0.11	80,80,80,80	0
54	MG	DA	3032	1/1	0.95	0.09	49,49,49,49	0
54	MG	AA	1703	1/1	0.95	0.07	83,83,83,83	0
54	MG	DA	3107	1/1	0.95	0.20	67,67,67,67	0
54	MG	AA	1656	1/1	0.95	0.09	72,72,72,72	0
54	MG	BA	3201	1/1	0.95	0.14	80,80,80,80	0
54	MG	DA	2962	1/1	0.95	0.14	37,37,37,37	0
54	MG	DA	2963	1/1	0.95	0.25	53,53,53,53	0
54	MG	DA	3040	1/1	0.95	0.09	41,41,41,41	0
54	MG	BA	2942	1/1	0.95	0.12	22,22,22,22	0
54	MG	BA	3076	1/1	0.95	0.14	68,68,68,68	0
54	MG	BA	2980	1/1	0.95	0.09	40,40,40,40	0
54	MG	CA	1624	1/1	0.95	0.04	66,66,66,66	0
54	MG	DA	2969	1/1	0.95	0.16	42,42,42,42	0
54	MG	BA	3205	1/1	0.95	0.12	38,38,38,38	0
54	MG	BA	3254	1/1	0.95	0.11	81,81,81,81	0
54	MG	BA	2918	1/1	0.95	0.23	17,17,17,17	0
54	MG	BA	2982	1/1	0.95	0.13	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	AA	1730	1/1	0.95	0.16	49,49,49,49	0
54	MG	DA	2978	1/1	0.95	0.12	44,44,44,44	0
54	MG	DA	3126	1/1	0.95	0.07	77,77,77,77	0
54	MG	BA	2920	1/1	0.95	0.15	28,28,28,28	0
54	MG	DA	3294	1/1	0.95	0.21	61,61,61,61	0
54	MG	BA	2922	1/1	0.95	0.26	25,25,25,25	0
54	MG	DA	3210	1/1	0.95	0.09	59,59,59,59	0
54	MG	BA	2987	1/1	0.95	0.17	59,59,59,59	0
54	MG	DA	2982	1/1	0.95	0.08	33,33,33,33	0
54	MG	BA	3085	1/1	0.95	0.09	68,68,68,68	0
54	MG	BA	2952	1/1	0.95	0.16	38,38,38,38	0
54	MG	DA	3216	1/1	0.95	0.17	46,46,46,46	0
54	MG	BA	3020	1/1	0.95	0.28	62,62,62,62	0
54	MG	DA	3062	1/1	0.95	0.15	65,65,65,65	0
54	MG	DA	3135	1/1	0.95	0.05	65,65,65,65	0
54	MG	BA	2953	1/1	0.95	0.12	37,37,37,37	0
54	MG	DA	3306	1/1	0.95	0.07	51,51,51,51	0
54	MG	BA	2923	1/1	0.95	0.17	29,29,29,29	0
54	MG	BA	3171	1/1	0.95	0.07	68,68,68,68	0
54	MG	DA	3225	1/1	0.95	0.09	80,80,80,80	0
54	MG	DA	3139	1/1	0.95	0.08	60,60,60,60	0
54	MG	BA	3125	1/1	0.95	0.17	87,87,87,87	0
54	MG	CA	1690	1/1	0.95	0.18	61,61,61,61	0
54	MG	BA	3269	1/1	0.95	0.09	63,63,63,63	0
54	MG	DA	2997	1/1	0.95	0.06	35,35,35,35	0
54	MG	DA	3144	1/1	0.95	0.07	72,72,72,72	0
54	MG	AA	1611	1/1	0.95	0.08	49,49,49,49	0
54	MG	BA	3092	1/1	0.95	0.05	63,63,63,63	0
54	MG	BA	2925	1/1	0.95	0.19	29,29,29,29	0
54	MG	AA	1607	1/1	0.95	0.20	54,54,54,54	0
54	MG	DA	2915	1/1	0.95	0.21	14,14,14,14	0
54	MG	AA	1627	1/1	0.95	0.15	85,85,85,85	0
54	MG	BB	215	1/1	0.95	0.10	131,131,131,131	0
54	MG	BA	2995	1/1	0.95	0.16	47,47,47,47	0
54	MG	DA	2928	1/1	0.95	0.25	43,43,43,43	0
54	MG	BA	2902	1/1	0.95	0.22	16,16,16,16	0
54	MG	BA	3029	1/1	0.95	0.21	63,63,63,63	0
54	MG	DA	3245	1/1	0.95	0.24	54,54,54,54	0
54	MG	DA	3330	1/1	0.95	0.08	69,69,69,69	0
54	MG	BA	2903	1/1	0.95	0.13	14,14,14,14	0
54	MG	DA	3247	1/1	0.95	0.17	40,40,40,40	0
54	MG	DA	3248	1/1	0.95	0.21	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3160	1/1	0.95	0.12	71,71,71,71	0
54	MG	BA	2904	1/1	0.95	0.23	13,13,13,13	0
54	MG	DA	2935	1/1	0.95	0.22	30,30,30,30	0
54	MG	AA	1716	1/1	0.95	0.07	120,120,120,120	0
54	MG	BA	2934	1/1	0.95	0.22	28,28,28,28	0
54	MG	BA	3234	1/1	0.95	0.09	61,61,61,61	0
54	MG	DA	3167	1/1	0.95	0.04	68,68,68,68	0
54	MG	BA	3235	1/1	0.95	0.05	62,62,62,62	0
54	MG	BA	3142	1/1	0.95	0.09	89,89,89,89	0
54	MG	BA	3237	1/1	0.95	0.08	60,60,60,60	0
54	MG	DA	2944	1/1	0.95	0.20	35,35,35,35	0
54	MG	DA	3261	1/1	0.95	0.28	73,73,73,73	0
54	MG	DA	3096	1/1	0.95	0.18	40,40,40,40	0
54	MG	BA	2969	1/1	0.95	0.08	37,37,37,37	0
54	MG	BA	2970	1/1	0.95	0.23	45,45,45,45	0
54	MG	BA	3146	1/1	0.95	0.19	83,83,83,83	0
54	MG	DA	3026	1/1	0.95	0.09	48,48,48,48	0
54	MG	AA	1676	1/1	0.95	0.03	63,63,63,63	0
54	MG	BA	2936	1/1	0.95	0.15	43,43,43,43	0
54	MG	BA	3197	1/1	0.95	0.22	57,57,57,57	0
54	MG	DA	3270	1/1	0.95	0.10	81,81,81,81	0
54	MG	AA	1601	1/1	0.95	0.24	31,31,31,31	0
55	ZN	CN	101	1/1	0.95	0.06	144,144,144,144	0
54	MG	BA	3053	1/1	0.96	0.28	67,67,67,67	0
54	MG	DA	2925	1/1	0.96	0.21	24,24,24,24	0
54	MG	DA	2927	1/1	0.96	0.13	22,22,22,22	0
54	MG	BA	3183	1/1	0.96	0.17	27,27,27,27	0
54	MG	AA	1633	1/1	0.96	0.10	73,73,73,73	0
54	MG	DA	3039	1/1	0.96	0.29	48,48,48,48	0
54	MG	BA	2911	1/1	0.96	0.17	23,23,23,23	0
54	MG	CA	1721	1/1	0.96	0.10	101,101,101,101	0
54	MG	AA	1719	1/1	0.96	0.22	78,78,78,78	0
54	MG	DA	2990	1/1	0.96	0.06	35,35,35,35	0
54	MG	DA	3044	1/1	0.96	0.05	59,59,59,59	0
54	MG	BA	3057	1/1	0.96	0.17	63,63,63,63	0
54	MG	BA	2928	1/1	0.96	0.27	42,42,42,42	0
54	MG	BA	2965	1/1	0.96	0.15	47,47,47,47	0
54	MG	BA	2938	1/1	0.96	0.08	10,10,10,10	0
54	MG	DA	2996	1/1	0.96	0.15	43,43,43,43	0
54	MG	CA	1634	1/1	0.96	0.06	60,60,60,60	0
54	MG	BA	3245	1/1	0.96	0.19	54,54,54,54	0
54	MG	BA	2954	1/1	0.96	0.12	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3000	1/1	0.96	0.10	35,35,35,35	0
54	MG	DA	3241	1/1	0.96	0.31	54,54,54,54	0
54	MG	DA	3112	1/1	0.96	0.06	60,60,60,60	0
54	MG	BA	3167	1/1	0.96	0.08	50,50,50,50	0
54	MG	BA	2921	1/1	0.96	0.18	21,21,21,21	0
54	MG	BA	3063	1/1	0.96	0.08	56,56,56,56	0
54	MG	DA	2947	1/1	0.96	0.15	40,40,40,40	0
54	MG	DA	2948	1/1	0.96	0.20	52,52,52,52	0
54	MG	DA	3007	1/1	0.96	0.08	43,43,43,43	0
54	MG	CA	1669	1/1	0.96	0.09	66,66,66,66	0
54	MG	BA	3307	1/1	0.96	0.11	68,68,68,68	0
54	MG	BA	3195	1/1	0.96	0.10	53,53,53,53	0
54	MG	BA	3015	1/1	0.96	0.12	58,58,58,58	0
54	MG	BA	2985	1/1	0.96	0.26	54,54,54,54	0
54	MG	DA	3067	1/1	0.96	0.08	63,63,63,63	0
54	MG	BA	2907	1/1	0.96	0.15	7,7,7,7	0
54	MG	BA	2909	1/1	0.96	0.18	24,24,24,24	0
54	MG	DA	3188	1/1	0.96	0.23	9,9,9,9	0
54	MG	BA	3256	1/1	0.96	0.18	79,79,79,79	0
54	MG	DA	3071	1/1	0.96	0.08	64,64,64,64	0
54	MG	DA	3192	1/1	0.96	0.15	30,30,30,30	0
54	MG	BA	2972	1/1	0.96	0.18	49,49,49,49	0
54	MG	DA	3194	1/1	0.96	0.15	10,10,10,10	0
54	MG	BA	3153	1/1	0.96	0.08	67,67,67,67	0
54	MG	DA	2901	1/1	0.96	0.22	7,7,7,7	0
54	MG	BA	2959	1/1	0.96	0.13	55,55,55,55	0
54	MG	BA	3177	1/1	0.96	0.18	93,93,93,93	0
54	MG	DA	2909	1/1	0.96	0.15	5,5,5,5	0
54	MG	DA	2911	1/1	0.96	0.15	7,7,7,7	0
54	MG	DA	3023	1/1	0.96	0.09	49,49,49,49	0
54	MG	DA	3202	1/1	0.96	0.36	44,44,44,44	0
54	MG	DA	3081	1/1	0.96	0.07	71,71,71,71	0
54	MG	DA	3082	1/1	0.96	0.20	70,70,70,70	0
54	MG	DA	2913	1/1	0.96	0.26	17,17,17,17	0
54	MG	DA	3206	1/1	0.96	0.20	37,37,37,37	0
54	MG	BA	3089	1/1	0.96	0.17	59,59,59,59	0
54	MG	DA	3208	1/1	0.96	0.24	49,49,49,49	0
54	MG	CA	1682	1/1	0.96	0.10	97,97,97,97	0
54	MG	DA	2974	1/1	0.96	0.07	46,46,46,46	0
54	MG	DB	213	1/1	0.96	0.23	63,63,63,63	0
54	MG	DA	3211	1/1	0.96	0.14	38,38,38,38	0
54	MG	BA	3179	1/1	0.96	0.22	19,19,19,19	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3145	1/1	0.96	0.17	70,70,70,70	0
54	MG	BA	2917	1/1	0.96	0.12	8,8,8,8	0
54	MG	DA	2922	1/1	0.96	0.16	7,7,7,7	0
54	MG	DA	3031	1/1	0.96	0.09	62,62,62,62	0
54	MG	DA	2923	1/1	0.96	0.07	17,17,17,17	0
54	MG	DA	3218	1/1	0.96	0.13	48,48,48,48	0
54	MG	AA	1615	1/1	0.97	0.15	42,42,42,42	0
54	MG	BA	2998	1/1	0.97	0.13	46,46,46,46	0
54	MG	DA	3252	1/1	0.97	0.05	44,44,44,44	0
54	MG	BA	2906	1/1	0.97	0.08	5,5,5,5	0
54	MG	DA	2903	1/1	0.97	0.17	7,7,7,7	0
54	MG	DA	3005	1/1	0.97	0.05	33,33,33,33	0
54	MG	BA	3161	1/1	0.97	0.07	62,62,62,62	0
54	MG	DA	2905	1/1	0.97	0.17	9,9,9,9	0
54	MG	BA	2950	1/1	0.97	0.09	32,32,32,32	0
54	MG	DA	3056	1/1	0.97	0.08	48,48,48,48	0
54	MG	BA	3277	1/1	0.97	0.11	71,71,71,71	0
54	MG	AA	1663	1/1	0.97	0.14	70,70,70,70	0
54	MG	CA	1615	1/1	0.97	0.06	51,51,51,51	0
54	MG	BA	3137	1/1	0.97	0.15	54,54,54,54	0
54	MG	BA	2967	1/1	0.97	0.10	24,24,24,24	0
54	MG	BA	2908	1/1	0.97	0.25	18,18,18,18	0
54	MG	DA	2917	1/1	0.97	0.18	22,22,22,22	0
54	MG	DA	2918	1/1	0.97	0.18	15,15,15,15	0
54	MG	DA	3321	1/1	0.97	0.22	30,30,30,30	0
54	MG	DA	2919	1/1	0.97	0.13	45,45,45,45	0
54	MG	DA	3165	1/1	0.97	0.12	71,71,71,71	0
54	MG	BA	3078	1/1	0.97	0.12	83,83,83,83	0
54	MG	DA	2921	1/1	0.97	0.20	17,17,17,17	0
54	MG	DA	3219	1/1	0.97	0.17	67,67,67,67	0
54	MG	DA	2973	1/1	0.97	0.30	50,50,50,50	0
54	MG	CA	1719	1/1	0.97	0.06	78,78,78,78	0
54	MG	AA	1715	1/1	0.97	0.19	63,63,63,63	0
54	MG	BA	3223	1/1	0.97	0.08	54,54,54,54	0
54	MG	BA	3196	1/1	0.97	0.23	51,51,51,51	0
54	MG	AA	1630	1/1	0.97	0.14	70,70,70,70	0
54	MG	BA	3144	1/1	0.97	0.08	75,75,75,75	0
54	MG	DA	3123	1/1	0.97	0.05	59,59,59,59	0
54	MG	DA	3075	1/1	0.97	0.05	64,64,64,64	0
54	MG	BA	2956	1/1	0.97	0.14	35,35,35,35	0
54	MG	DA	3283	1/1	0.97	0.29	53,53,53,53	0
54	MG	DA	2930	1/1	0.97	0.20	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	2940	1/1	0.97	0.20	29,29,29,29	0
54	MG	BA	3147	1/1	0.97	0.05	72,72,72,72	0
54	MG	BA	3102	1/1	0.97	0.16	69,69,69,69	0
54	MG	BA	2930	1/1	0.97	0.16	34,34,34,34	0
54	MG	BA	3233	1/1	0.97	0.20	52,52,52,52	0
54	MG	DA	2989	1/1	0.97	0.12	45,45,45,45	0
54	MG	AA	1603	1/1	0.97	0.14	35,35,35,35	0
54	MG	BA	3151	1/1	0.97	0.29	56,56,56,56	0
54	MG	DA	2992	1/1	0.97	0.07	46,46,46,46	0
54	MG	BA	2975	1/1	0.97	0.04	37,37,37,37	0
54	MG	AA	1619	1/1	0.97	0.12	80,80,80,80	0
54	MG	CA	1602	1/1	0.97	0.10	64,64,64,64	0
54	MG	BA	2913	1/1	0.97	0.19	16,16,16,16	0
54	MG	CA	1604	1/1	0.97	0.13	59,59,59,59	0
54	MG	DE	301	1/1	0.97	0.09	44,44,44,44	0
54	MG	BA	2946	1/1	0.97	0.18	33,33,33,33	0
54	MG	DA	3045	1/1	0.97	0.17	48,48,48,48	0
54	MG	BA	2979	1/1	0.97	0.09	40,40,40,40	0
54	MG	BA	3130	1/1	0.97	0.04	78,78,78,78	0
54	MG	AA	1636	1/1	0.98	0.09	76,76,76,76	0
54	MG	BA	3296	1/1	0.98	0.08	47,47,47,47	0
54	MG	BA	3180	1/1	0.98	0.17	26,26,26,26	0
54	MG	BA	3247	1/1	0.98	0.13	52,52,52,52	0
54	MG	DA	2907	1/1	0.98	0.19	7,7,7,7	0
54	MG	DA	2908	1/1	0.98	0.14	24,24,24,24	0
54	MG	BA	3040	1/1	0.98	0.06	58,58,58,58	0
54	MG	DA	3239	1/1	0.98	0.12	42,42,42,42	0
54	MG	DA	3191	1/1	0.98	0.18	24,24,24,24	0
54	MG	DA	2910	1/1	0.98	0.09	6,6,6,6	0
54	MG	BA	3131	1/1	0.98	0.07	67,67,67,67	0
54	MG	DA	3036	1/1	0.98	0.06	51,51,51,51	0
54	MG	DA	2912	1/1	0.98	0.15	18,18,18,18	0
54	MG	BA	3231	1/1	0.98	0.09	22,22,22,22	0
54	MG	DA	2951	1/1	0.98	0.10	38,38,38,38	0
54	MG	DA	2931	1/1	0.98	0.12	23,23,23,23	0
54	MG	DA	2976	1/1	0.98	0.09	37,37,37,37	0
54	MG	BA	3010	1/1	0.98	0.06	37,37,37,37	0
54	MG	BA	2944	1/1	0.98	0.09	17,17,17,17	0
54	MG	DA	2955	1/1	0.98	0.14	40,40,40,40	0
54	MG	DA	3155	1/1	0.98	0.06	124,124,124,124	0
54	MG	DA	3328	1/1	0.98	0.11	45,45,45,45	0
54	MG	AA	1686	1/1	0.98	0.10	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	2915	1/1	0.98	0.06	4,4,4,4	0
54	MG	DA	2902	1/1	0.98	0.17	10,10,10,10	0
55	ZN	CD	301	1/1	0.98	0.18	131,131,131,131	0
54	MG	DA	2937	1/1	0.98	0.14	25,25,25,25	0
54	MG	BA	2947	1/1	0.99	0.03	14,14,14,14	0
54	MG	DA	2964	1/1	0.99	0.08	34,34,34,34	0
54	MG	DA	2950	1/1	0.99	0.06	29,29,29,29	0
54	MG	DA	2984	1/1	0.99	0.09	66,66,66,66	0
54	MG	BA	2951	1/1	0.99	0.13	28,28,28,28	0
54	MG	DA	3156	1/1	0.99	0.06	78,78,78,78	0
54	MG	DA	2958	1/1	0.99	0.04	2,2,2,2	0
54	MG	BA	3140	1/1	0.99	0.08	76,76,76,76	0
54	MG	DA	2926	1/1	0.99	0.16	43,43,43,43	0
55	ZN	AN	101	1/1	0.99	0.06	120,120,120,120	0
54	MG	DA	2961	1/1	0.99	0.08	29,29,29,29	0
54	MG	DA	2943	1/1	0.99	0.16	32,32,32,32	0
55	ZN	AD	301	1/1	1.00	0.19	80,80,80,80	0

6.5 Other polymers [i](#)

There are no such residues in this entry.