Full wwPDB EM Validation Report (i)

Jun 29, 2025 – 03:21 am BST

PDB ID	:	7QY7 / pdb_00007qy7
EMDB ID	:	EMD-14209
Title	:	Proteasome-ZFAND5 Complex Z-A state
Authors	:	Zhu, Y.; Lu, Y.
Deposited on	:	2022-01-27
Resolution	:	4.70 Å(reported)

This is a Full wwPDB EM 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/EMValidationReportHelp
with specific help available everywhere you see the (i) 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 (1)) were used in the production of this report:

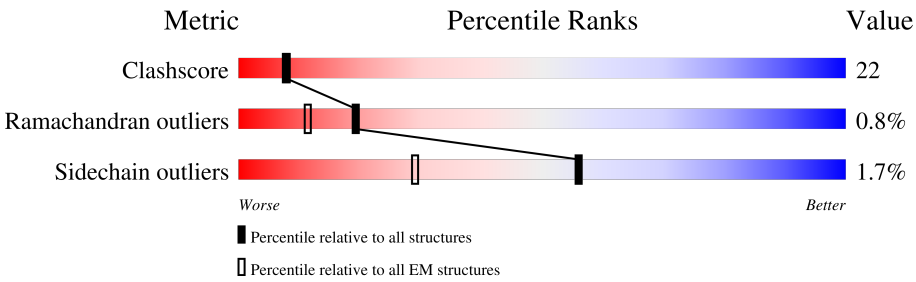
EMDB validation analysis	:	0.0.1.dev118
Mogul	:	1.8.4, CSD as541be (2020)
MolProbity	:	4-5-2 with Phenix2.0rc1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.44

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 4.70 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)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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 <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	a	376	37%, 62%, 36%, • •
2	b	377	32%, 38%, 12%, 49%
3	c	309	21%, 49%, 37%, • • 10%
4	d	349	32%, 46%, 25%, • 26%
5	e	70	37%, 33%, 17%, • • 43%
6	f	908	53%, 49%, 27%, 24%
7	U	953	16%, 51%, 33%, • 15%
8	V	533	30%, 54%, 34%, • 11%

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Mol	Chain	Length	Quality of chain
9	W	456	53% 52% 45%
10	X	422	17% 34% 21% 43%
11	Y	389	12% 59% 37%
12	Z	324	24% 48% 36% 12%
13	A	433	27% 52% 25% 21%
14	B	440	22% 55% 24% 20%
15	C	394	18% 53% 33% 5% 8%
16	D	418	18% 47% 36% 5% 10%
17	E	403	33% 59% 33% 7%
18	F	439	47% 51% 30% 14%
19	G	245	11% 62% 34%
19	g	245	6% 61% 36%
20	H	233	8% 68% 28%
20	h	233	12% 69% 28%
21	I	260	12% 58% 35% 5%
21	i	260	14% 58% 36%
22	J	247	71% 24%
22	j	247	13% 72% 24%
23	K	240	5% 62% 31% 5%
23	k	240	10% 60% 32% 5%
24	L	268	61% 28% 11%
24	l	268	61% 28% 11%
25	M	254	9% 58% 36% 6%
25	m	254	6% 59% 35% 6%
26	N	238	53% 27% 20%

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Mol	Chain	Length	Quality of chain
26	n	238	53% 26% 20%
27	O	276	56% 24% 20%
27	o	276	56% 24% 20%
28	P	204	76% 24%
28	p	204	72% 28%
29	Q	201	74% 25%
29	q	201	71% 28%
30	R	262	53% 24% 23%
30	r	262	53% 24% 23%
31	S	240	63% 26% 11%
31	s	240	62% 27% 11%
32	T	263	59% 22% 18%
32	t	263	59% 23% 18%

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
34	ATP	B	501	-	-	X	-
34	ATP	D	501	-	-	X	-
34	ATP	E	401	-	-	X	-

2 Entry composition (i)

There are 34 unique types of molecules in this entry. The entry contains 99911 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called 26S proteasome non-ATPase regulatory subunit 13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	a	373	2995	1911	510	559	15	0	0

- Molecule 2 is a protein called 26S proteasome non-ATPase regulatory subunit 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	b	191	1458	910	261	279	8	0	0

- Molecule 3 is a protein called 26S proteasome non-ATPase regulatory subunit 14.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	c	278	2187	1389	374	406	18	0	0

- Molecule 4 is a protein called 26S proteasome non-ATPase regulatory subunit 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	d	257	2116	1371	346	390	9	0	0

- Molecule 5 is a protein called 26S proteasome complex subunit SEM1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	e	40	334	200	55	77	2	0	0

- Molecule 6 is a protein called 26S proteasome non-ATPase regulatory subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	f	689	5319	3343	904	1037	35	0	0

- Molecule 7 is a protein called 26S proteasome non-ATPase regulatory subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	U	806	6287	3990	1075	1178	44	0	0

- Molecule 8 is a protein called 26S proteasome non-ATPase regulatory subunit 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	V	472	3799	2413	675	697	14	0	0

- Molecule 9 is a protein called 26S proteasome non-ATPase regulatory subunit 12.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	W	456	3703	2339	635	704	25	0	0

- Molecule 10 is a protein called 26S proteasome non-ATPase regulatory subunit 11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	X	241	1905	1212	320	365	8	0	0

- Molecule 11 is a protein called 26S proteasome non-ATPase regulatory subunit 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	Y	378	3115	1987	533	578	17	0	0

- Molecule 12 is a protein called 26S proteasome non-ATPase regulatory subunit 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	Z	286	2281	1457	392	427	5	0	0

- Molecule 13 is a protein called 26S protease regulatory subunit 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	A	342	2672	1684	475	497	16	0	0

- Molecule 14 is a protein called 26S protease regulatory subunit 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	B	350	2706	1703	458	533	12	0	0

- Molecule 15 is a protein called PSMC5 isoform 15.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	C	362	2850	1799	512	522	17	0	0

- Molecule 16 is a protein called 26S protease regulatory subunit 6B.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	D	378	3021	1912	520	576	13	0	0

- Molecule 17 is a protein called 26S proteasome regulatory subunit 10B.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	E	375	2860	1796	512	536	16	0	0

- Molecule 18 is a protein called 26S protease regulatory subunit 6A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	F	376	2859	1802	496	546	15	0	0

- Molecule 19 is a protein called Proteasome subunit alpha type-6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
19	G	239	1820	1157	304	346	13	0	0
19	g	240	1826	1160	305	348	13	0	0

- Molecule 20 is a protein called Proteasome subunit alpha type-2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
20	H	230	1688	1070	284	329	5	0	0
20	h	232	1708	1081	289	333	5	0	0

- Molecule 21 is a protein called Proteasome subunit alpha type-4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
21	I	248	1895	1195	324	368	8	0	0
21	i	250	1912	1204	329	371	8	0	0

- Molecule 22 is a protein called Proteasome subunit alpha type-7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
22	J	239	1704	1056	308	335	5	0	0
22	j	239	1704	1056	308	335	5	0	0

- Molecule 23 is a protein called Proteasome subunit alpha type-5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
23	K	228	1729	1086	284	349	10	0	0
23	k	228	1722	1080	284	348	10	0	0

- Molecule 24 is a protein called Isoform Long of Proteasome subunit alpha type-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
24	L	238	1850	1159	334	346	11	0	0
24	l	238	1850	1159	334	346	11	0	0

- Molecule 25 is a protein called Proteasome subunit alpha type-3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
25	M	240	1856	1178	314	353	11	0	0
25	m	240	1856	1178	314	353	11	0	0

- Molecule 26 is a protein called Proteasome subunit beta type-6.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	N	191	Total	C	N	O	S	0	0
			1430	893	245	280	12		
26	n	191	Total	C	N	O	S	0	0
			1430	893	245	280	12		

- Molecule 27 is a protein called Proteasome subunit beta type-7.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	O	220	Total	C	N	O	S	0	0
			1643	1033	280	318	12		
27	o	220	Total	C	N	O	S	0	0
			1643	1033	280	318	12		

- Molecule 28 is a protein called Proteasome subunit beta type-3.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	P	204	Total	C	N	O	S	0	0
			1585	1010	262	294	19		
28	p	204	Total	C	N	O	S	0	0
			1585	1010	262	294	19		

- Molecule 29 is a protein called Proteasome subunit beta type-2.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	Q	199	Total	C	N	O	S	0	0
			1570	1006	265	290	9		
29	q	199	Total	C	N	O	S	0	0
			1570	1006	265	290	9		

- Molecule 30 is a protein called Proteasome subunit beta type-5.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	R	201	Total	C	N	O	S	0	0
			1548	974	273	292	9		
30	r	201	Total	C	N	O	S	0	0
			1548	974	273	292	9		

- Molecule 31 is a protein called Proteasome subunit beta type-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	S	213	Total	C	N	O	S	0	0
			1641	1036	282	313	10		

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
31	s	213	1641	1036	282	313	10	0	0

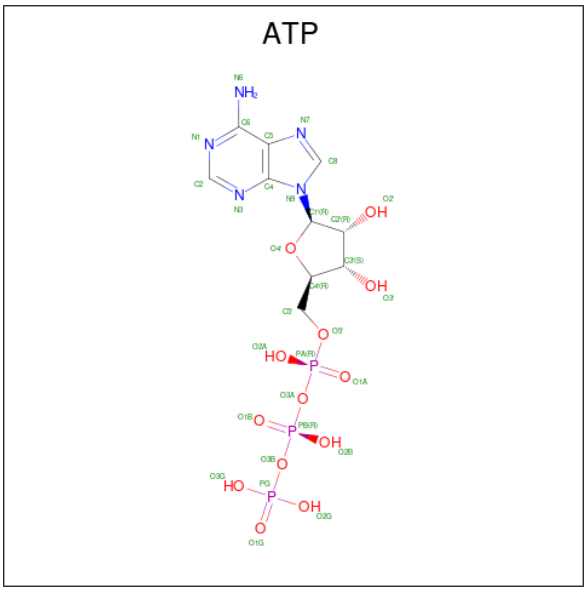
- Molecule 32 is a protein called Proteasome subunit beta type-4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
32	T	215	1667	1052	285	318	12	0	0
32	t	215	1667	1052	285	318	12	0	0

- Molecule 33 is ZINC ION (CCD ID: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
			Total	Zn	
33	c	1	1	1	0

- Molecule 34 is ADENOSINE-5'-TRIPHOSPHATE (CCD ID: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
34	A	1	31	10	5	13	3	0
34	B	1	31	10	5	13	3	0

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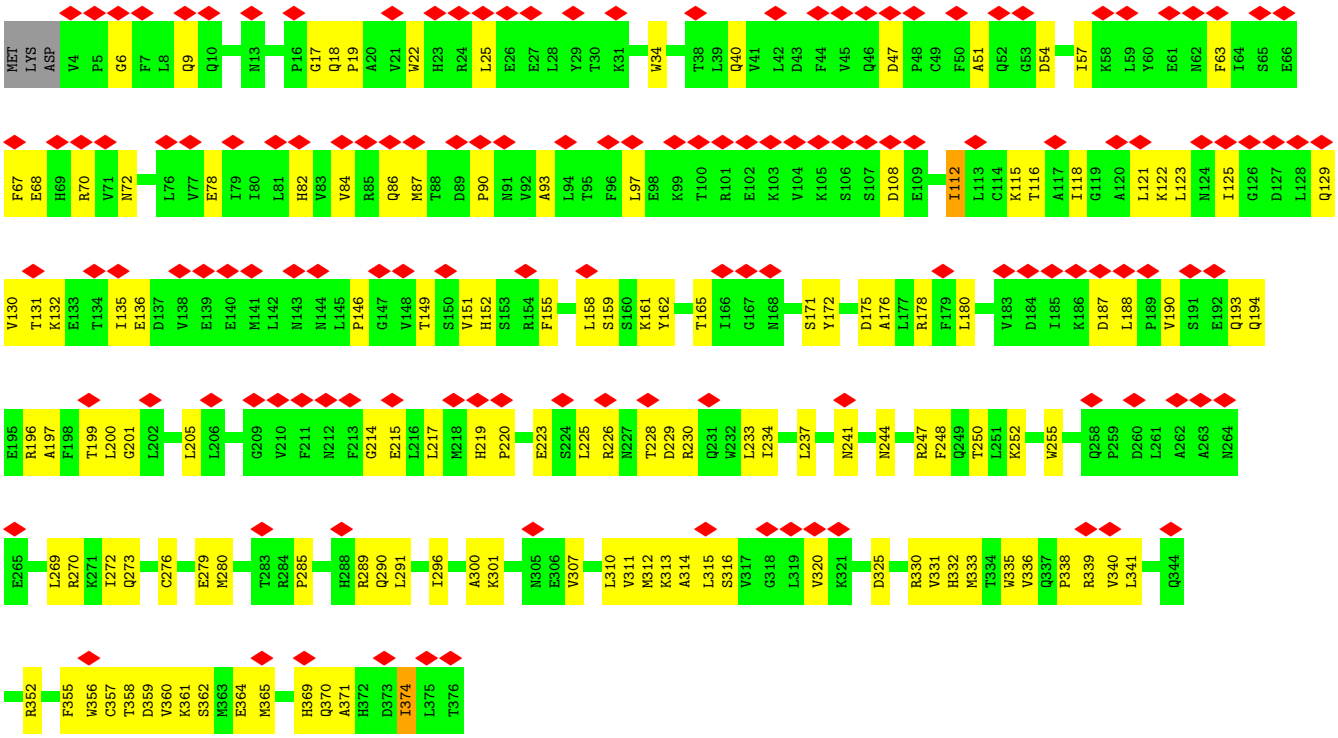
Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
34	D	1	31	10	5	13	3	0
			Total	C	N	O	P	
34	D	1	31	10	5	13	3	0
			Total	C	N	O	P	
34	E	1	31	10	5	13	3	0

3 Residue-property plots (i)

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 atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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.

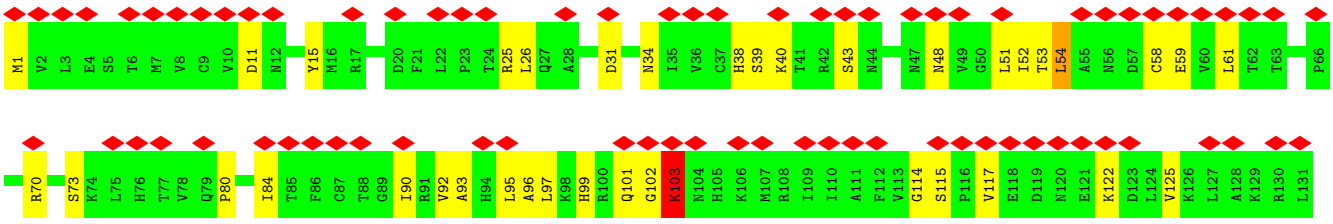
- Molecule 1: 26S proteasome non-ATPase regulatory subunit 13

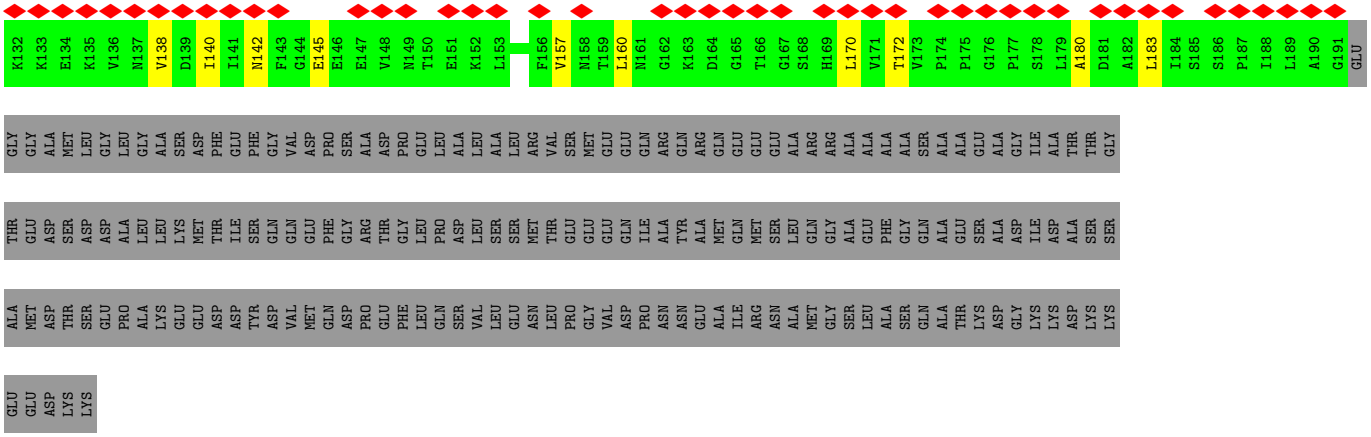
Chain a:



- Molecule 2: 26S proteasome non-ATPase regulatory subunit 4

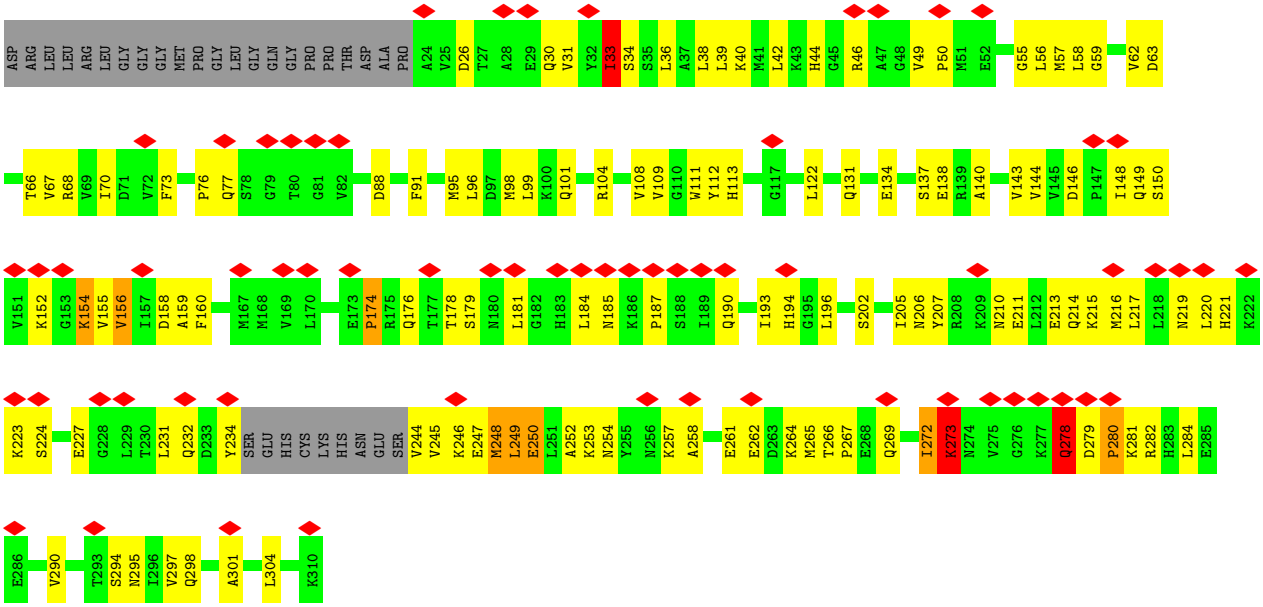
Chain b:





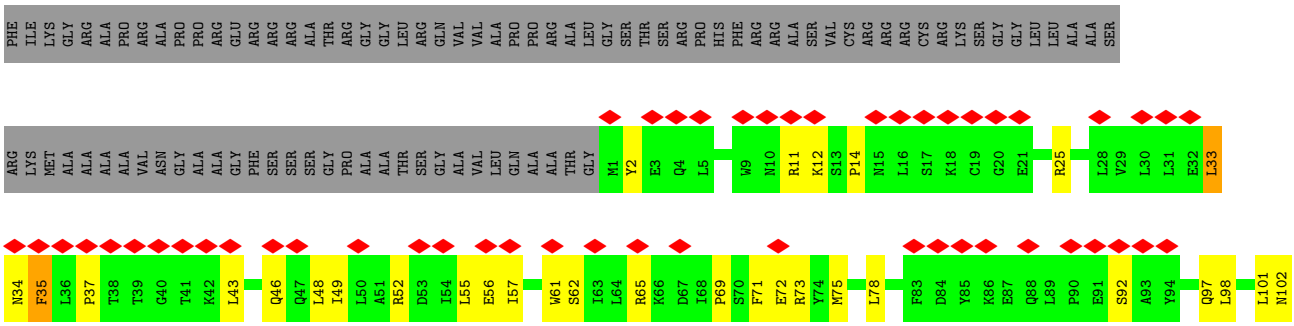
• Molecule 3: 26S proteasome non-ATPase regulatory subunit 14

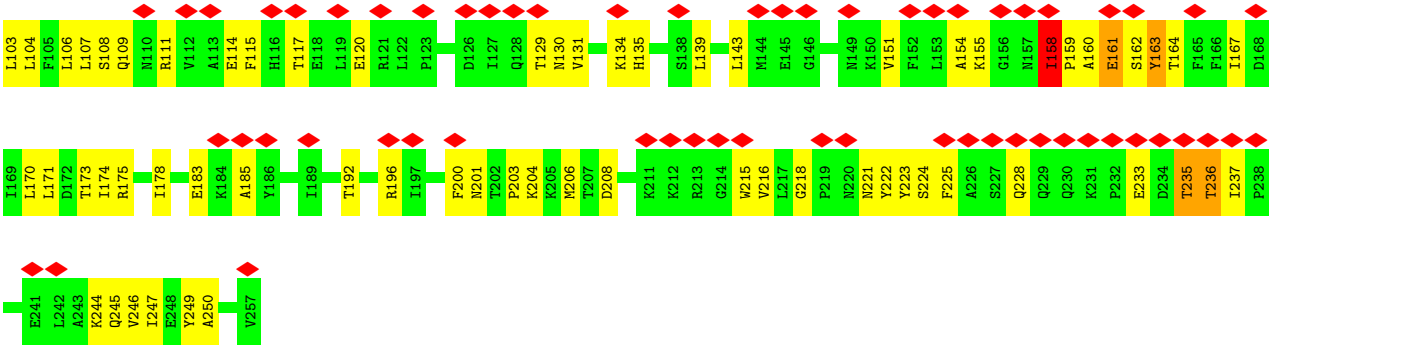
Chain c:



• Molecule 4: 26S proteasome non-ATPase regulatory subunit 8

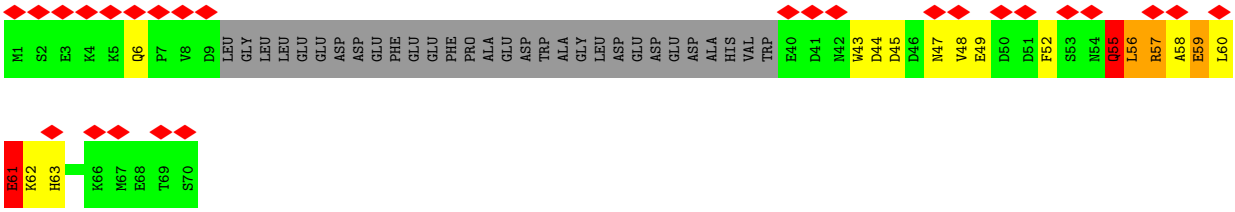
Chain d:





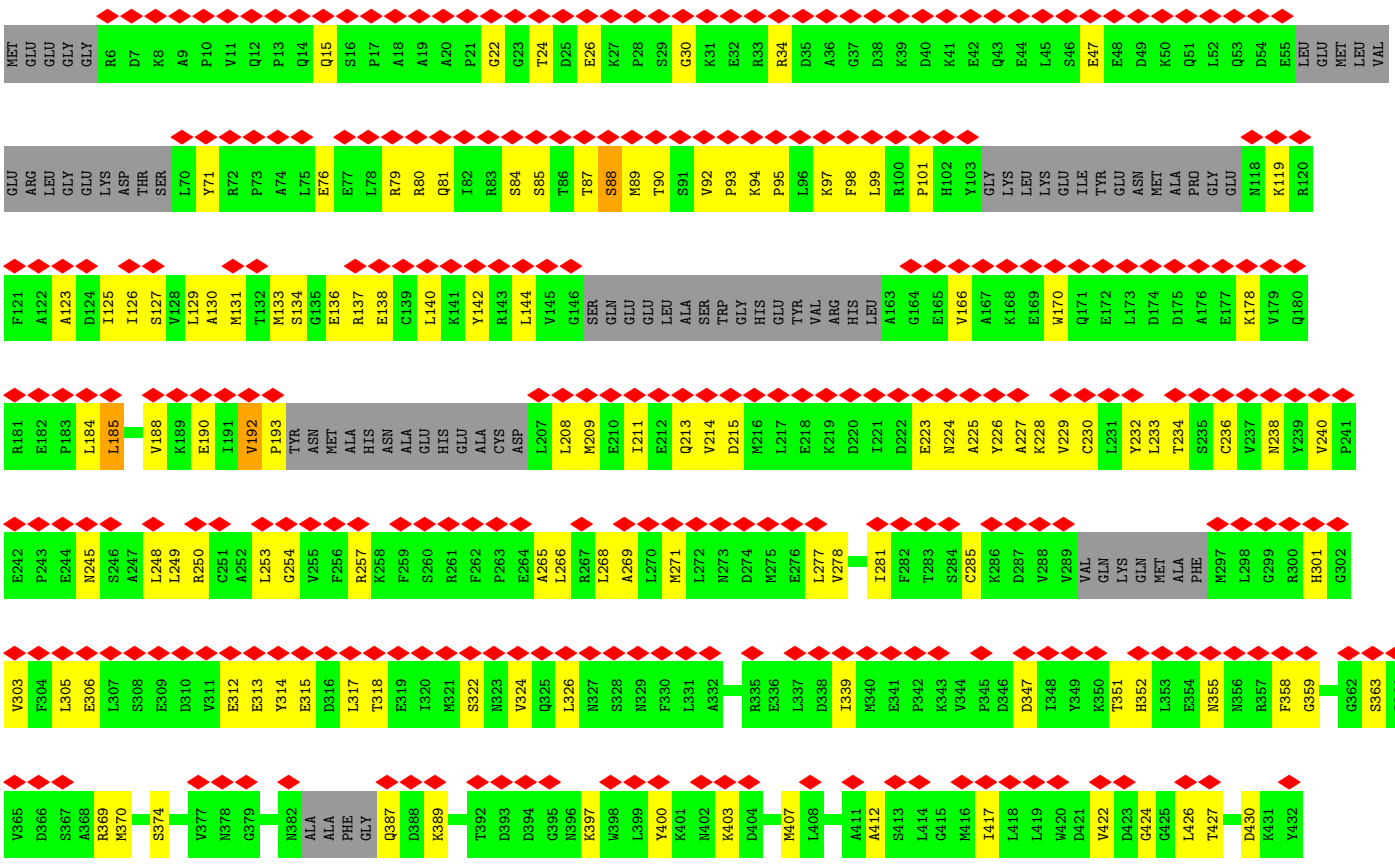
- Molecule 5: 26S proteasome complex subunit SEM1

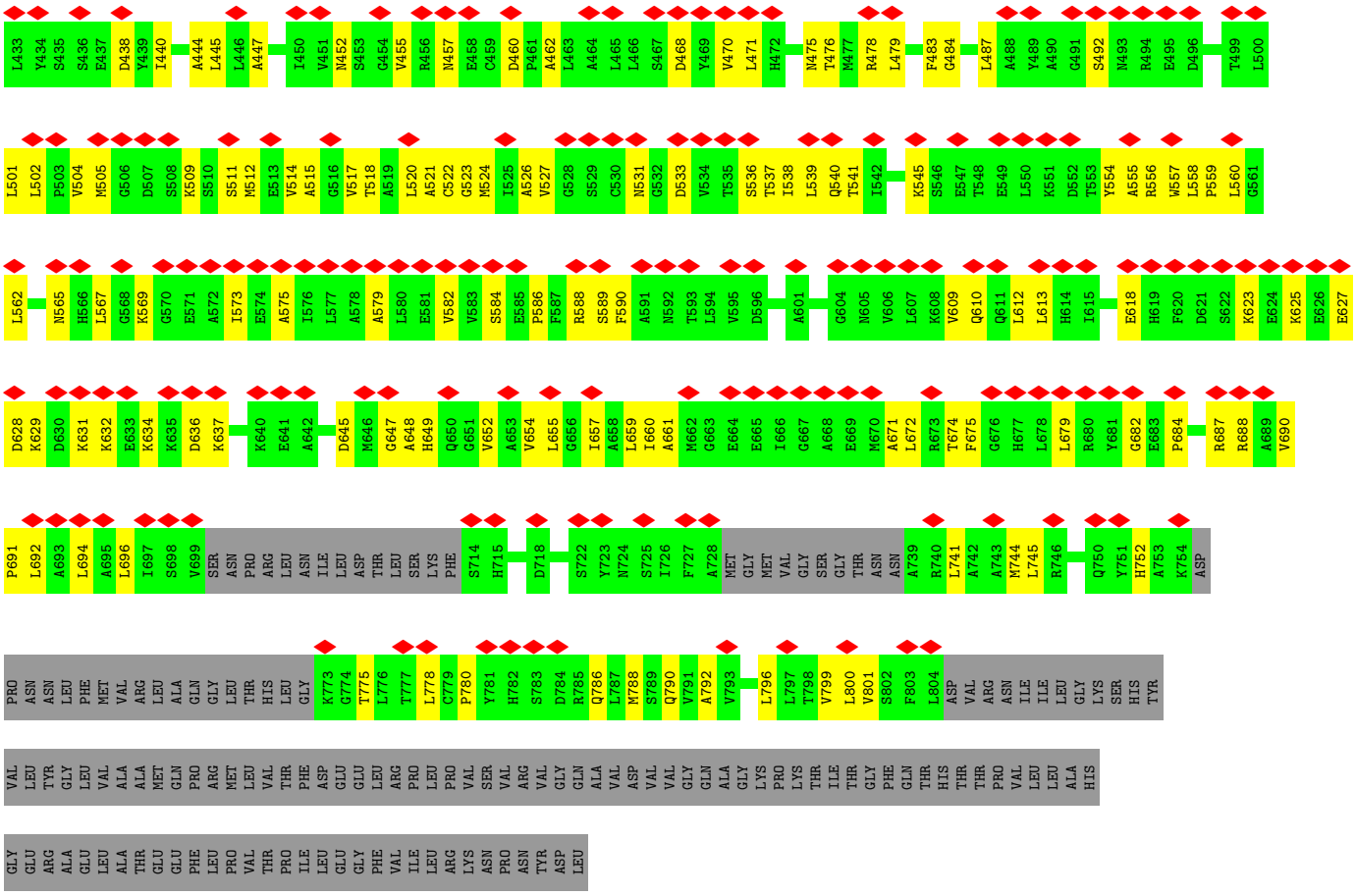
Chain e:



- Molecule 6: 26S proteasome non-ATPase regulatory subunit 2

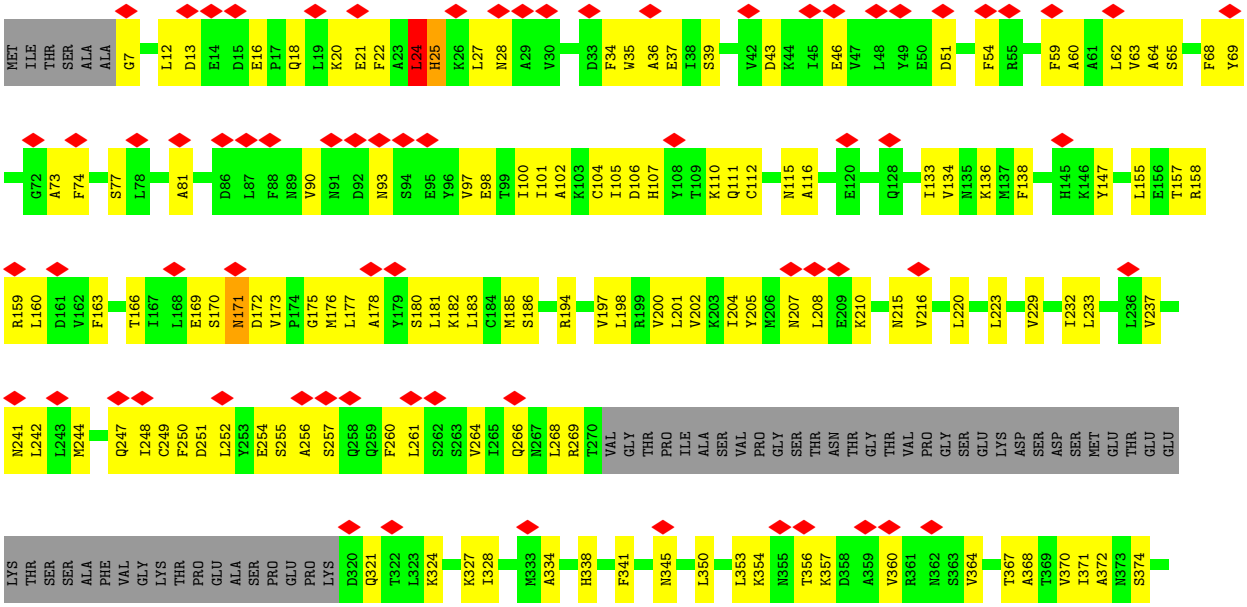
Chain f:

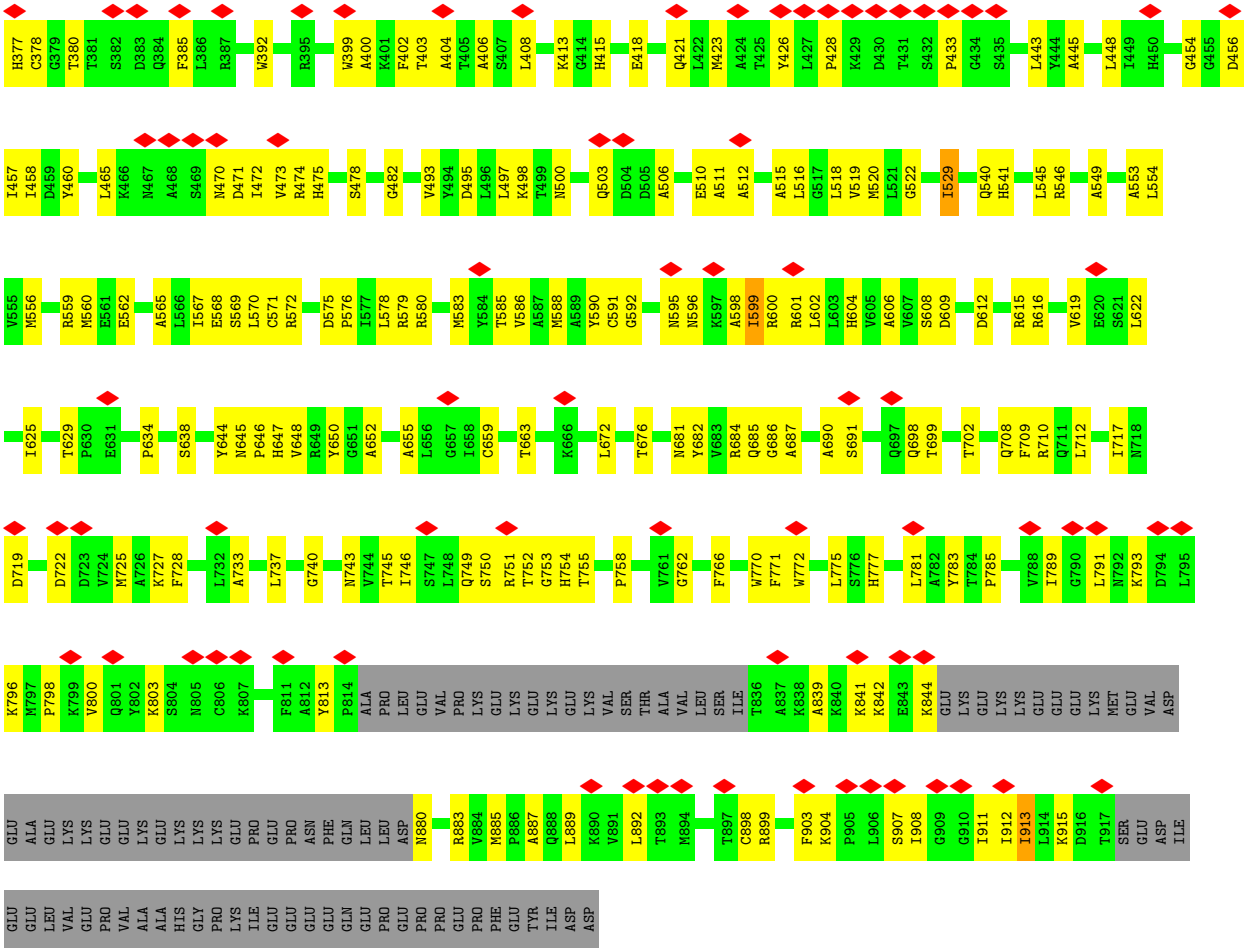




- Molecule 7: 26S proteasome non-ATPase regulatory subunit 1

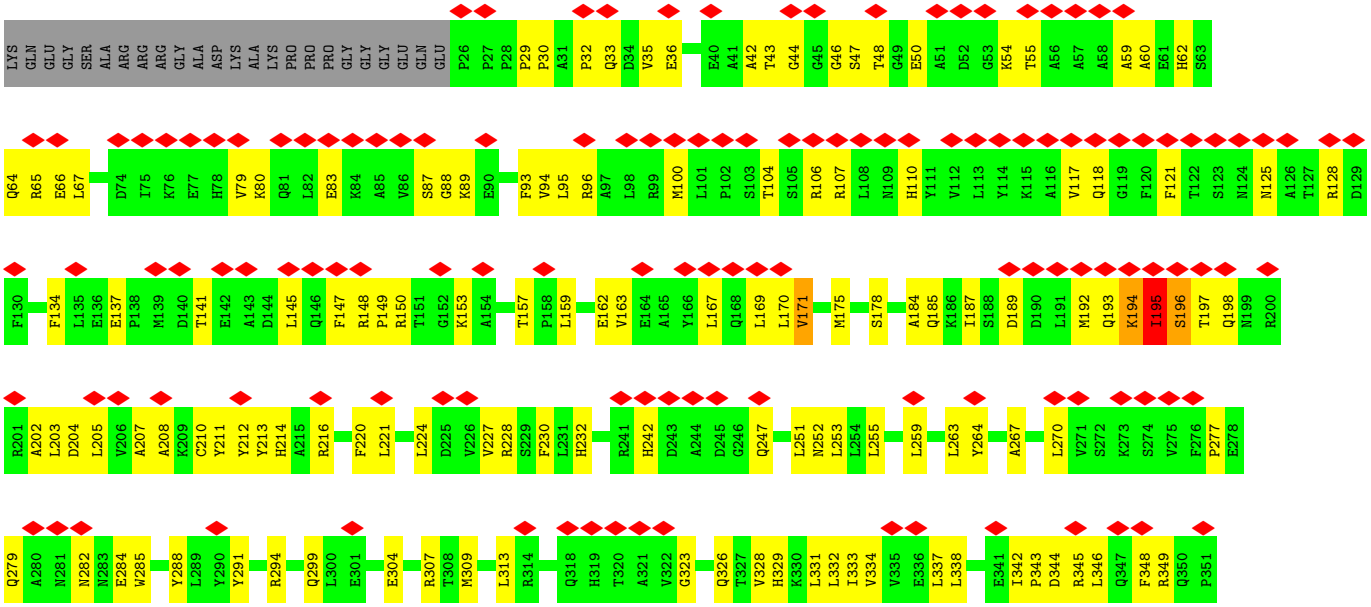
Chain U:

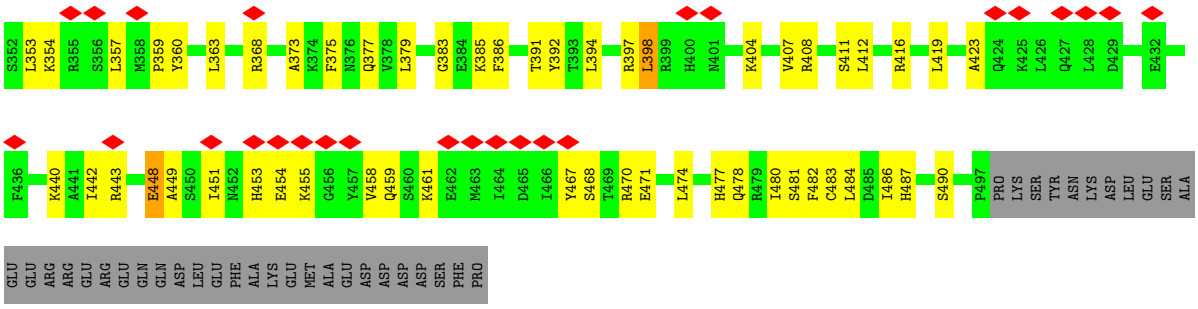




- Molecule 8: 26S proteasome non-ATPase regulatory subunit 3

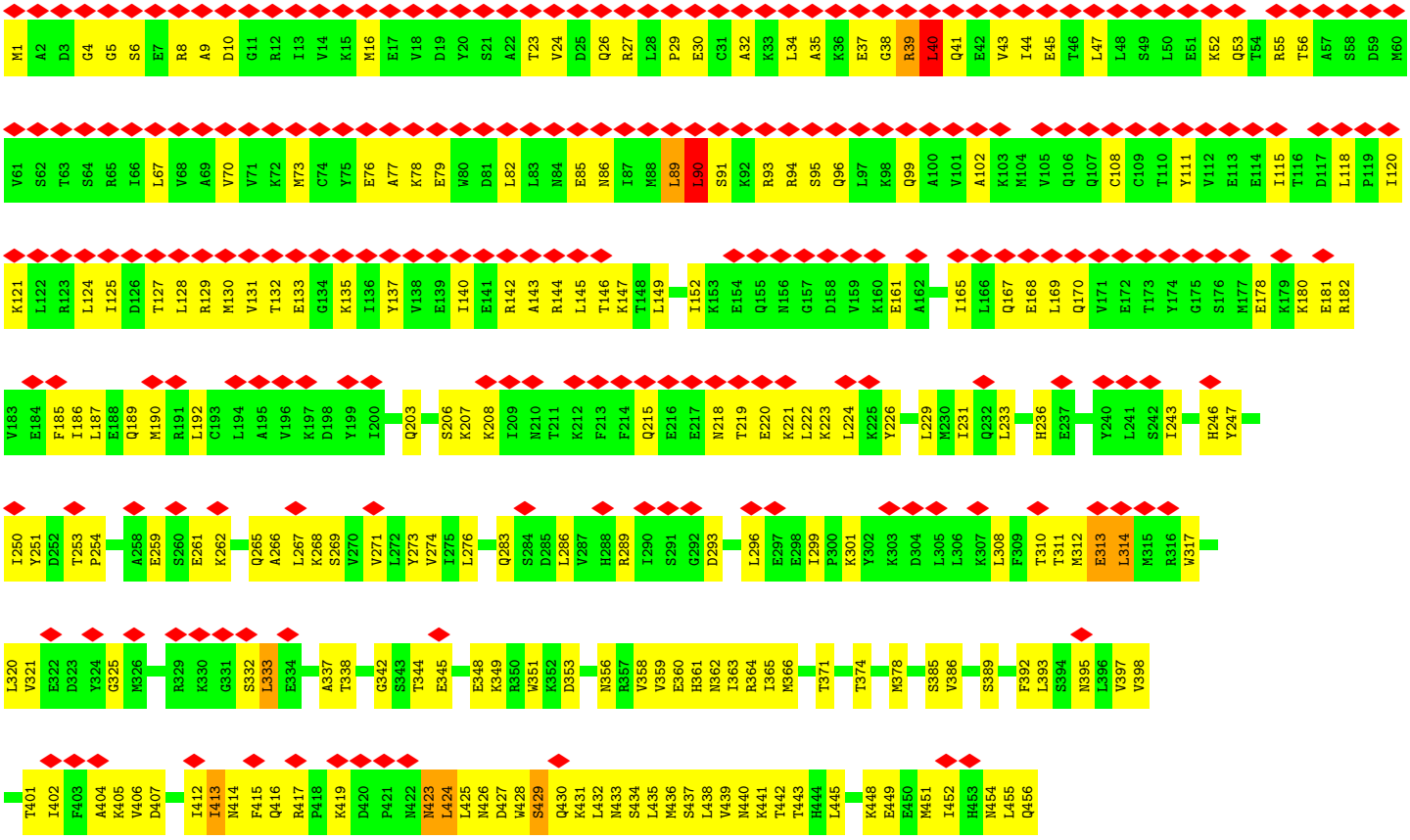
Chain V:





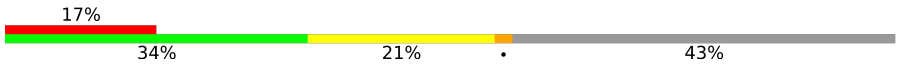
• Molecule 9: 26S proteasome non-ATPase regulatory subunit 12

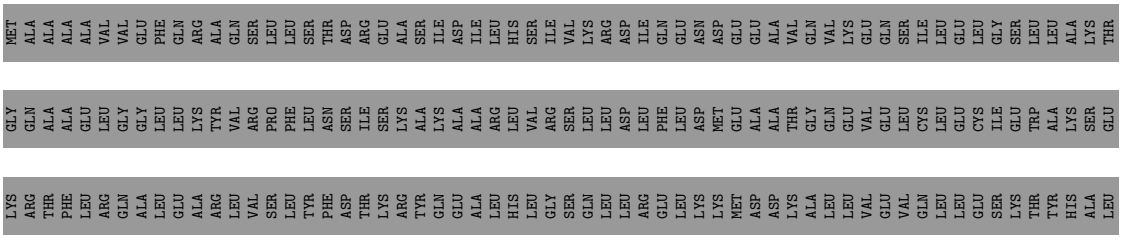
Chain W:

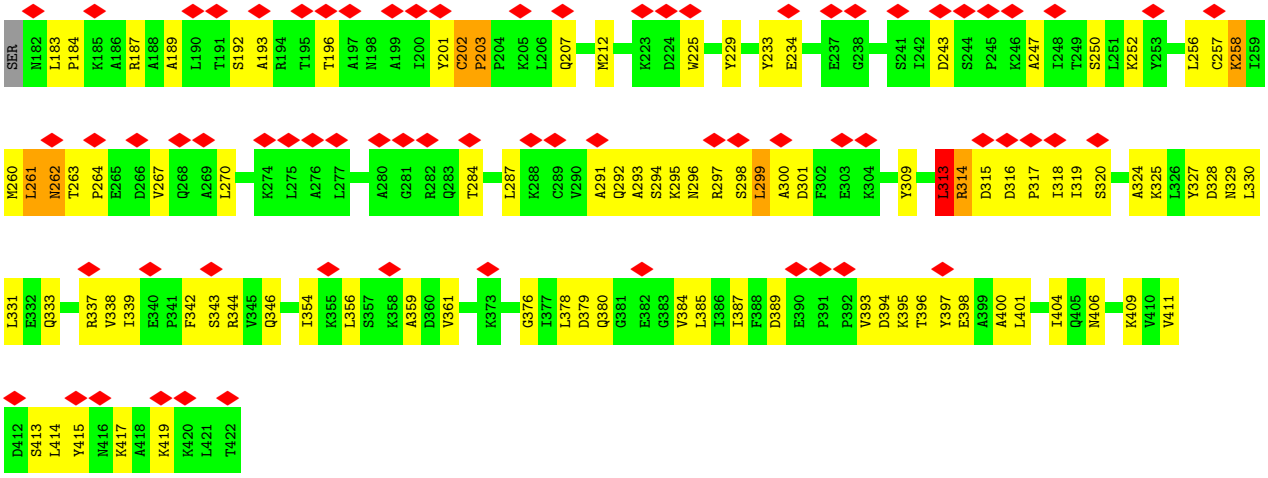


• Molecule 10: 26S proteasome non-ATPase regulatory subunit 11

Chain X:

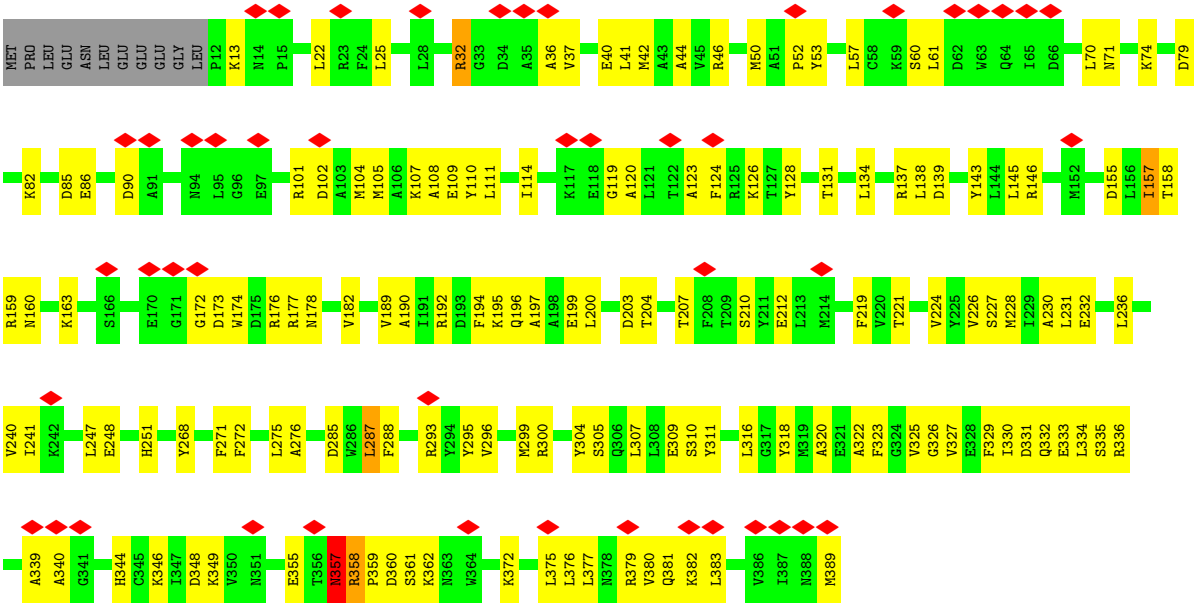






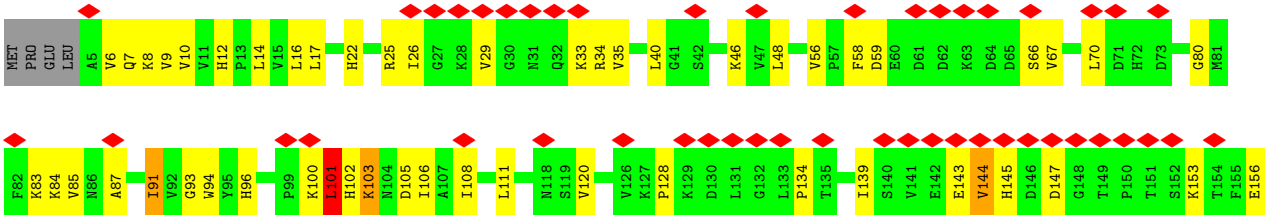
• Molecule 11: 26S proteasome non-ATPase regulatory subunit 6

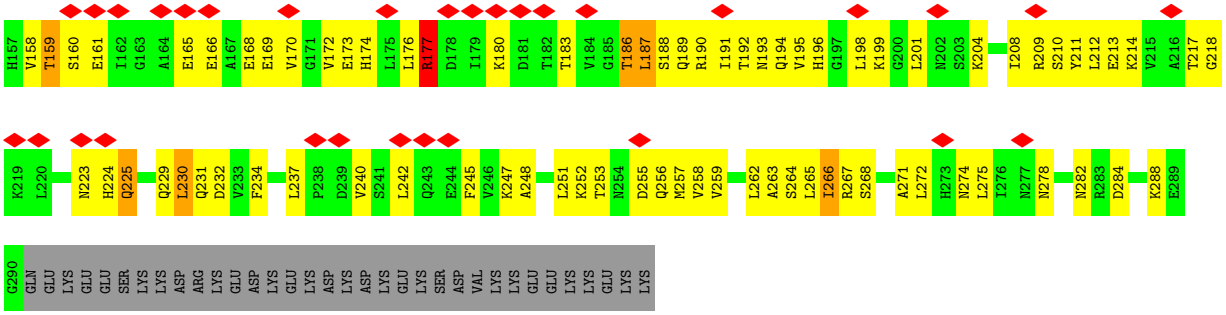
Chain Y:



• Molecule 12: 26S proteasome non-ATPase regulatory subunit 7

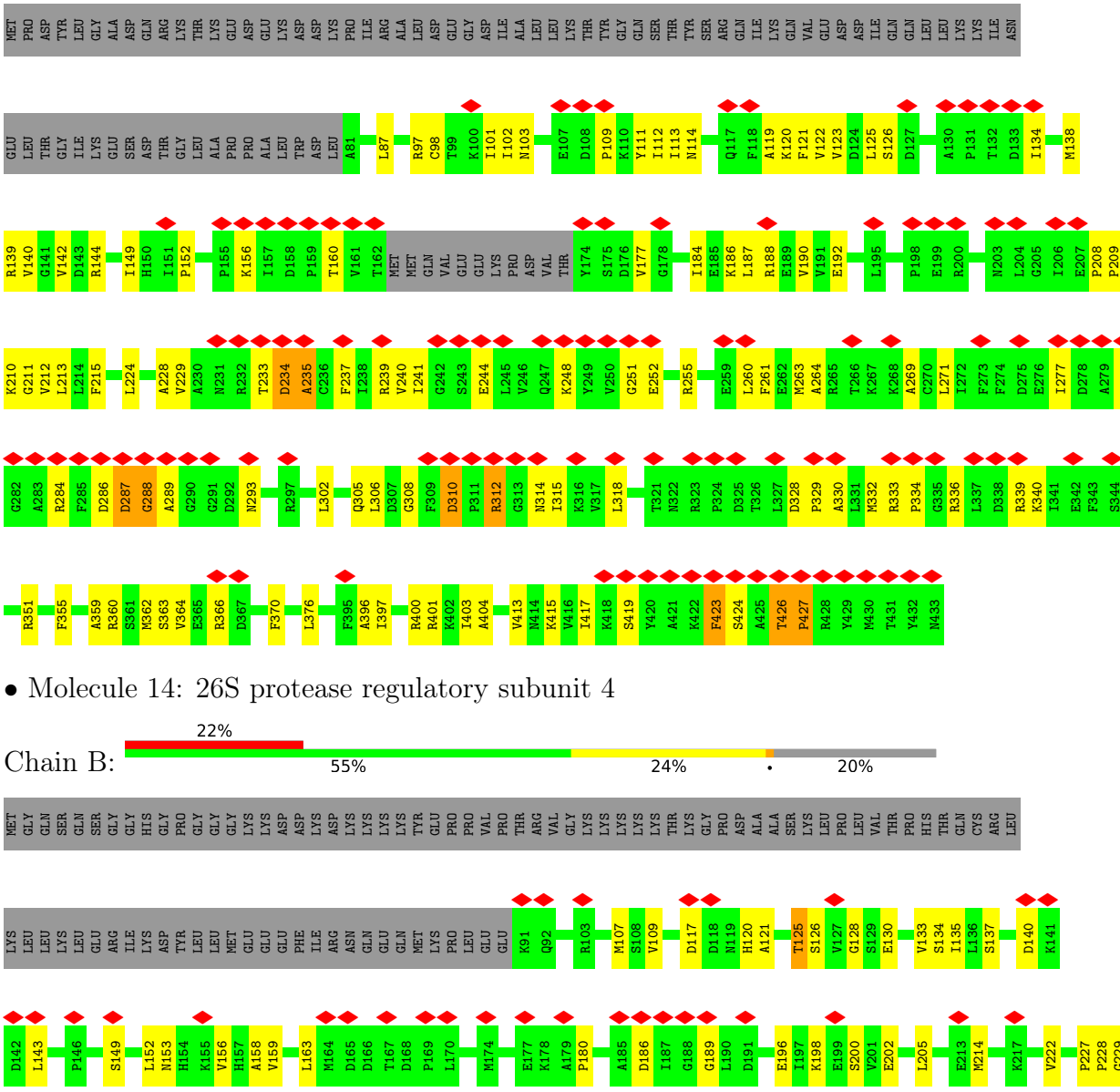
Chain Z:





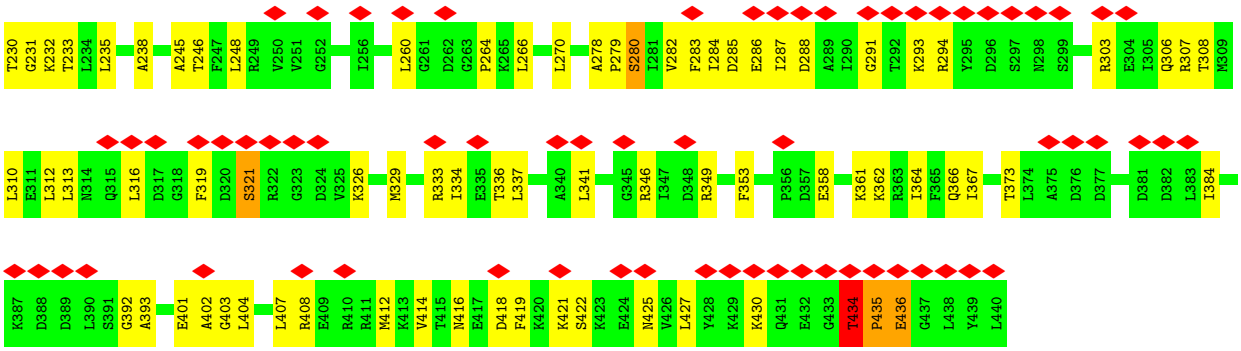
- Molecule 13: 26S protease regulatory subunit 7

Chain A:



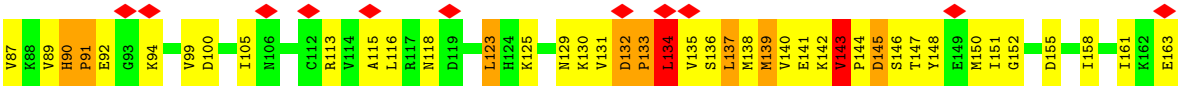
- Molecule 14: 26S protease regulatory subunit 4

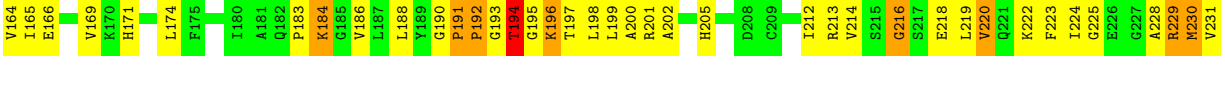
Chain B:

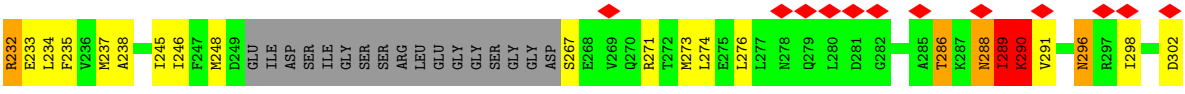


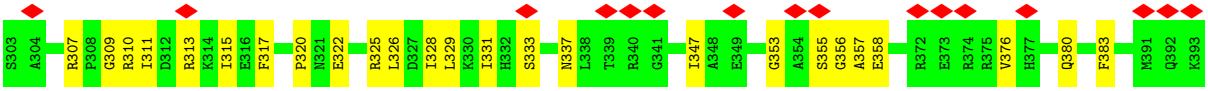
- Molecule 15: PSMC5 isoform 15

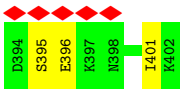
Chain C:





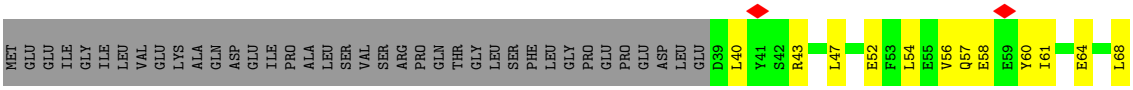


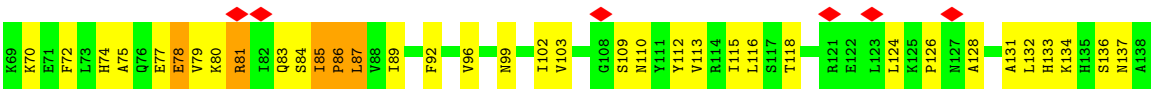


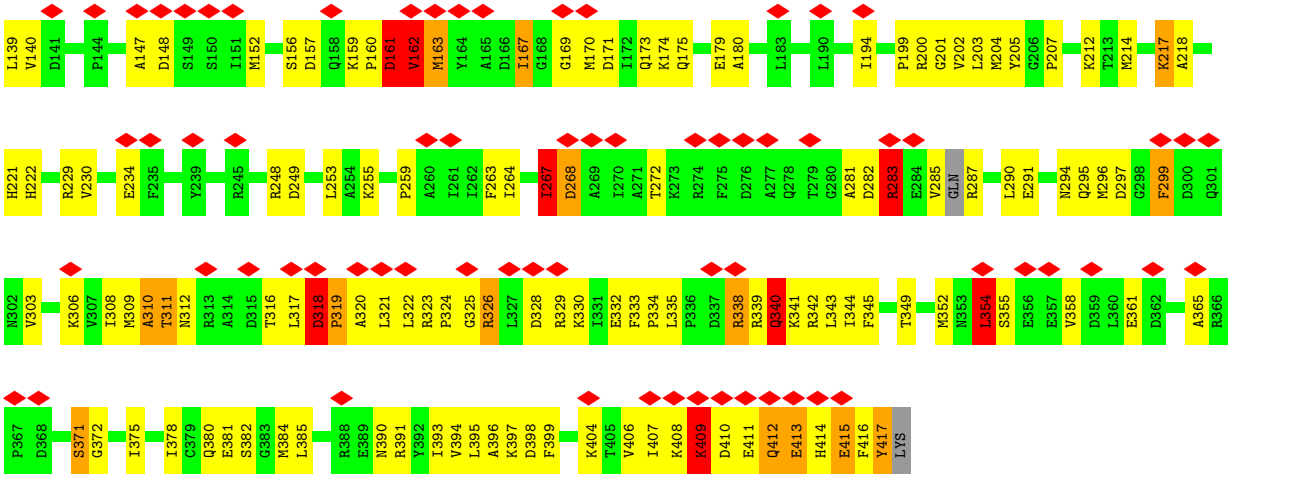


- Molecule 16: 26S protease regulatory subunit 6B

Chain D:

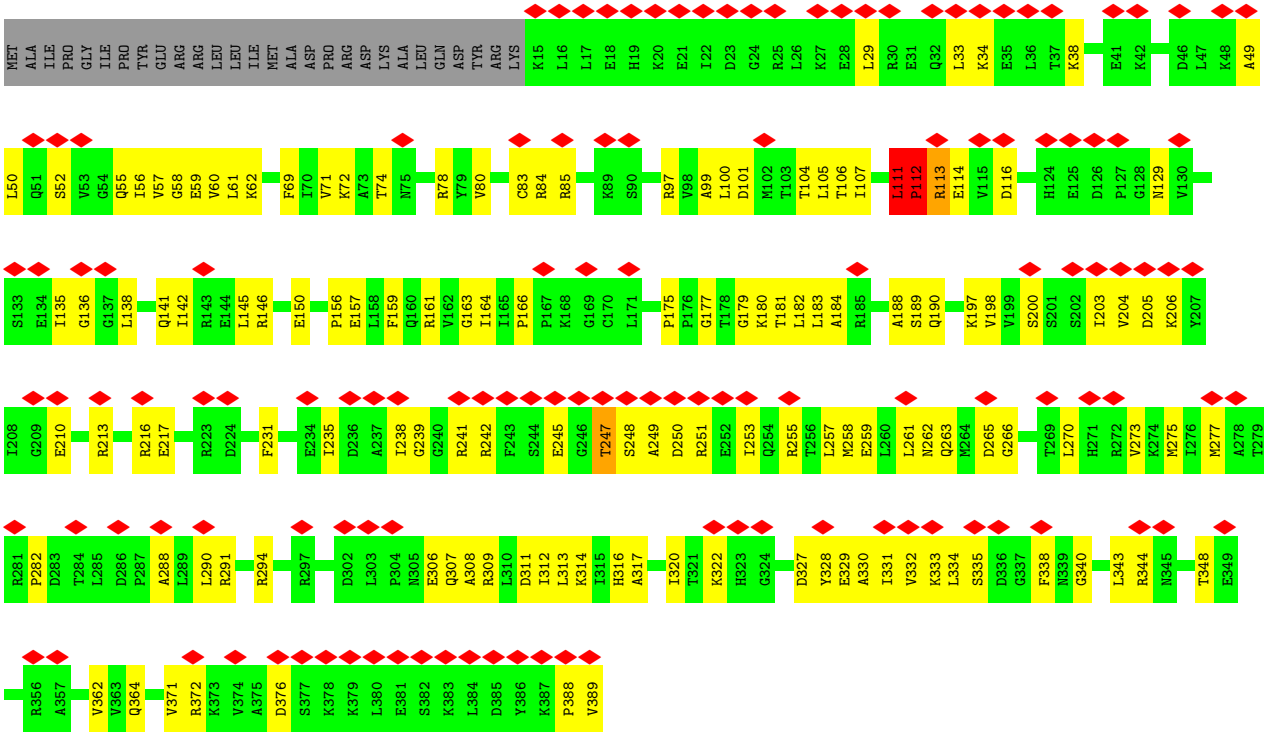






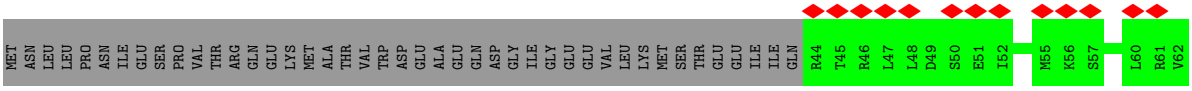
- Molecule 17: 26S proteasome regulatory subunit 10B

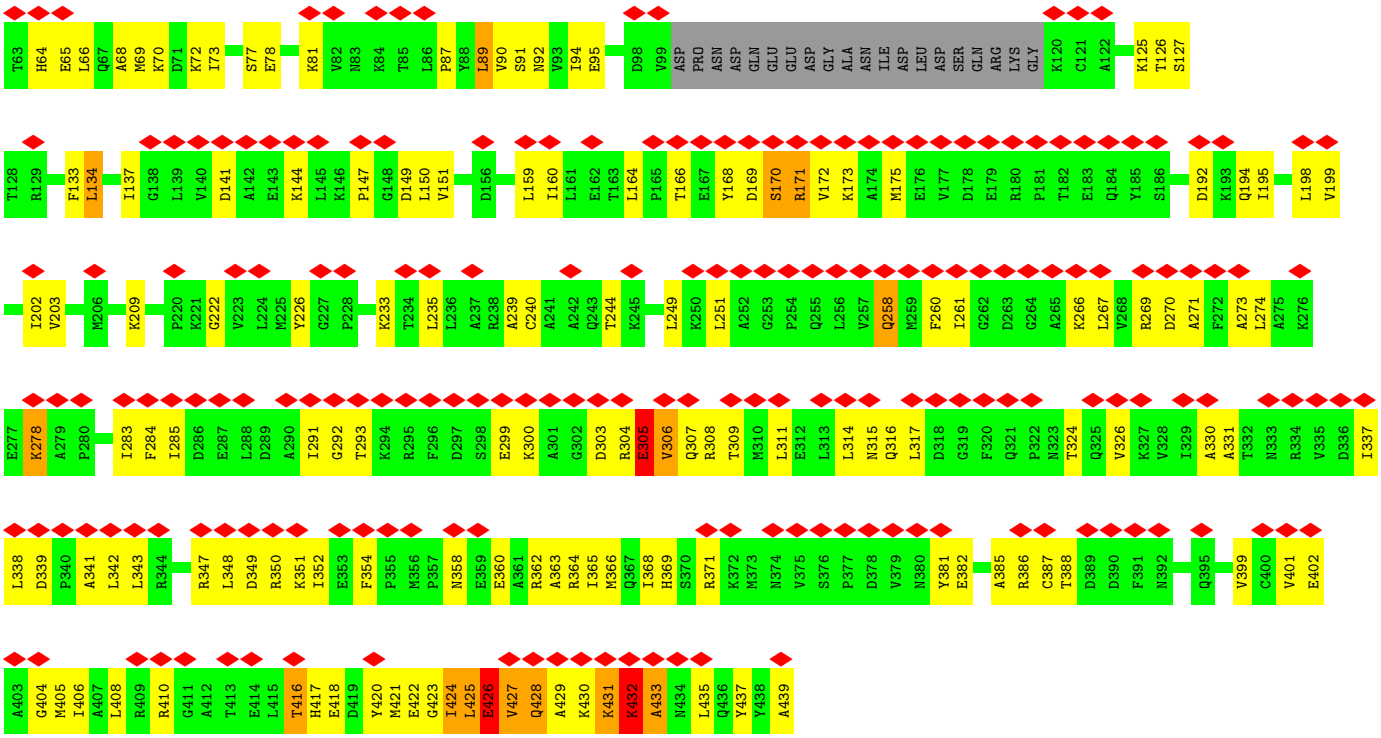
Chain E:



- Molecule 18: 26S protease regulatory subunit 6A

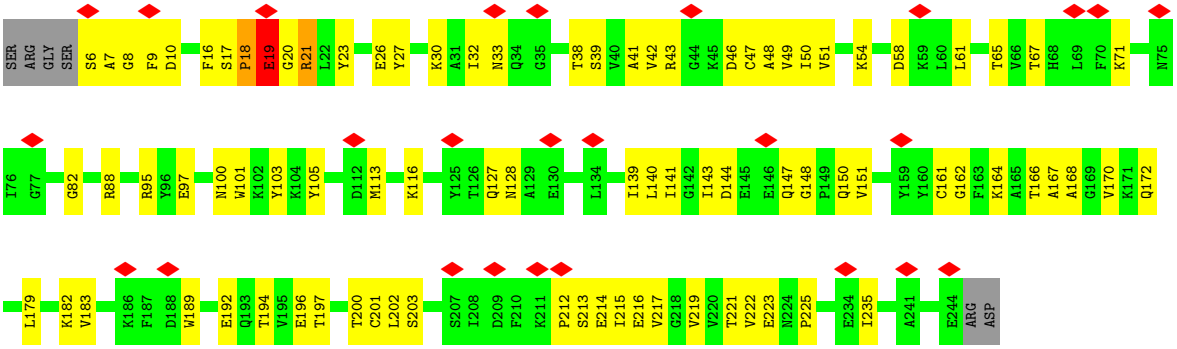
Chain F:





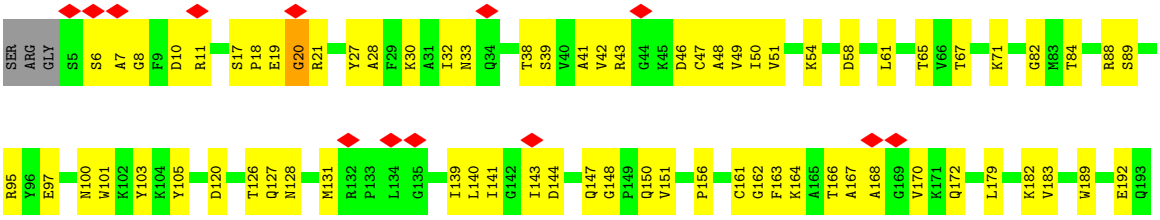
- Molecule 19: Proteasome subunit alpha type-6

Chain G:

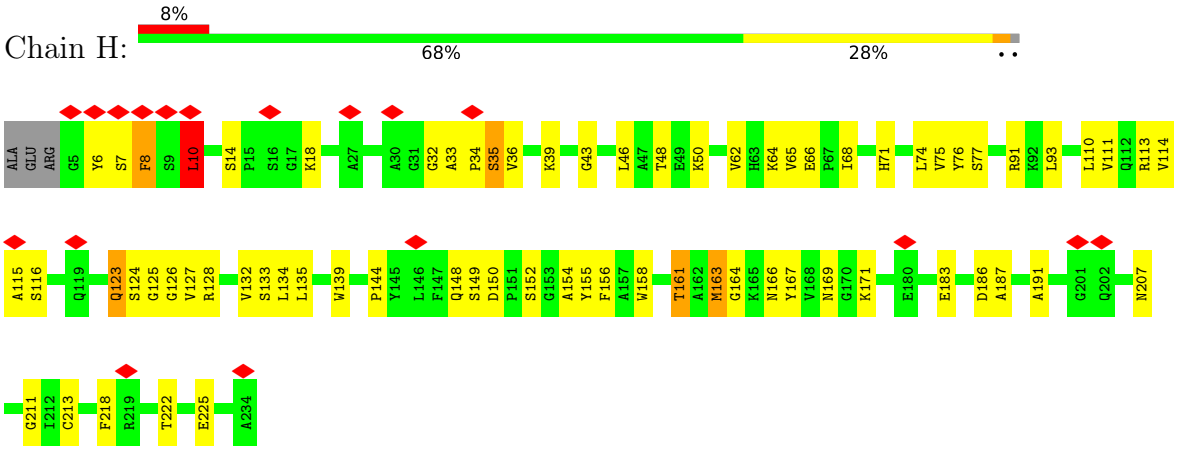


- Molecule 19: Proteasome subunit alpha type-6

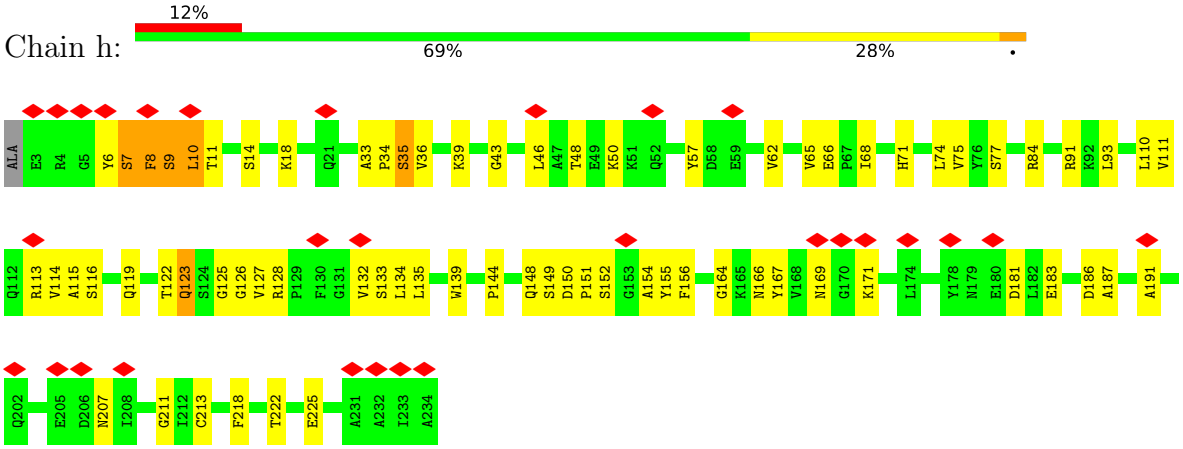
Chain g:



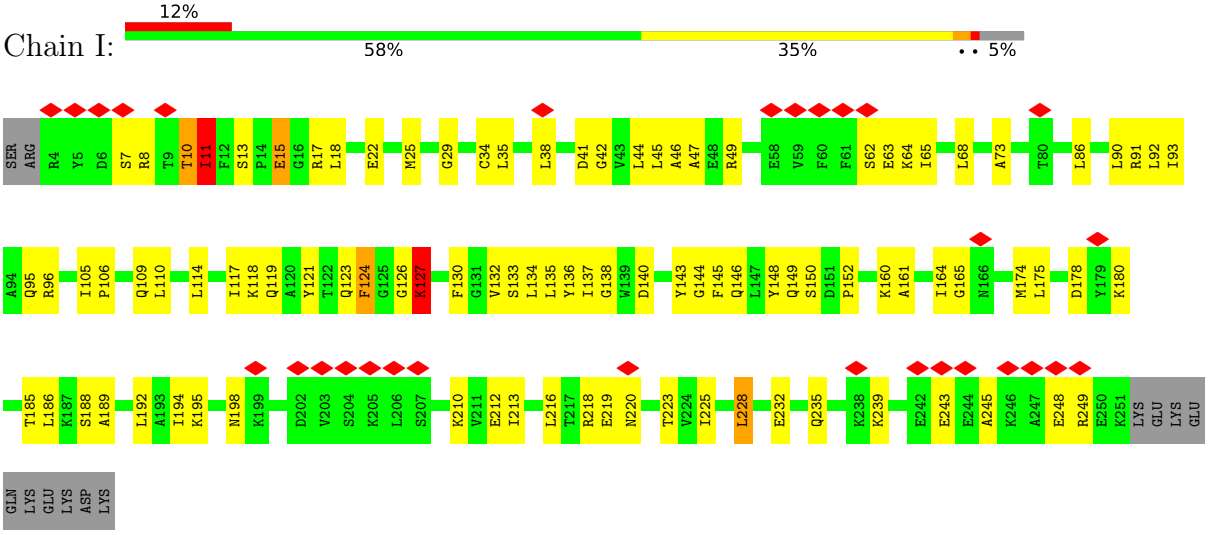
• Molecule 20: Proteasome subunit alpha type-2



• Molecule 20: Proteasome subunit alpha type-2

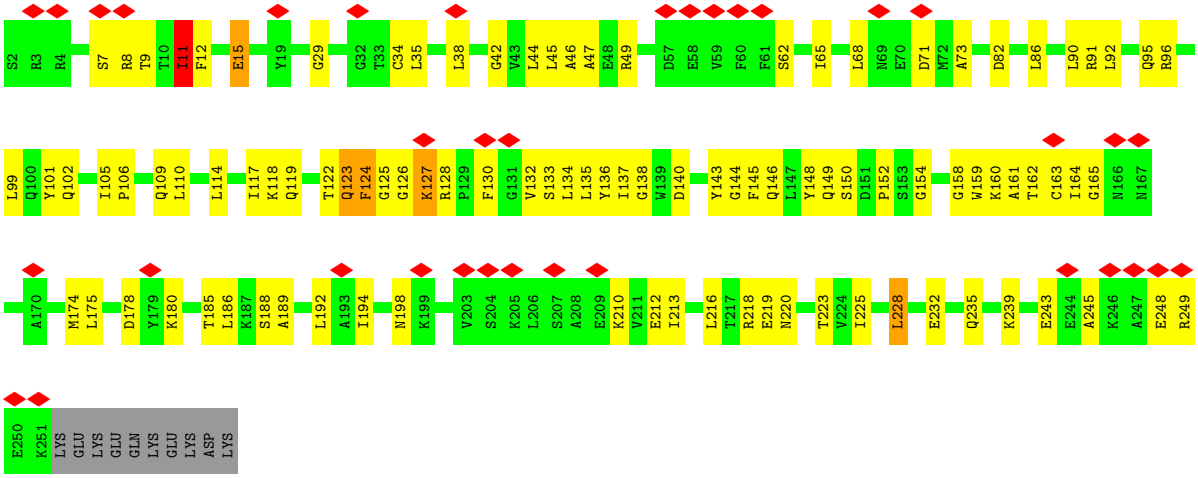


• Molecule 21: Proteasome subunit alpha type-4



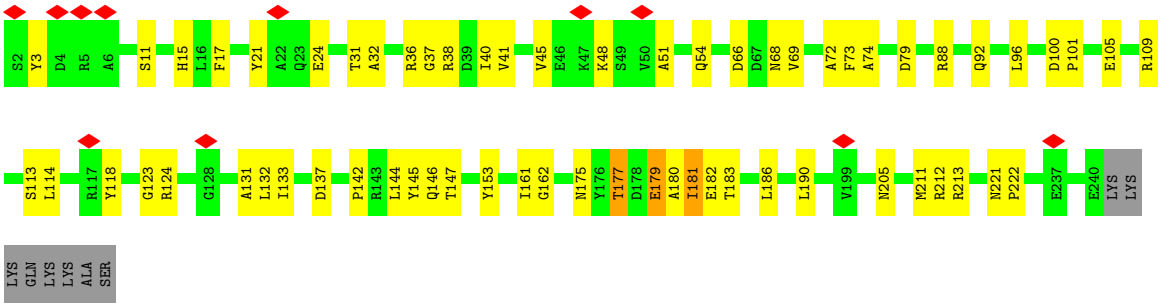
• Molecule 21: Proteasome subunit alpha type-4

Chain i:



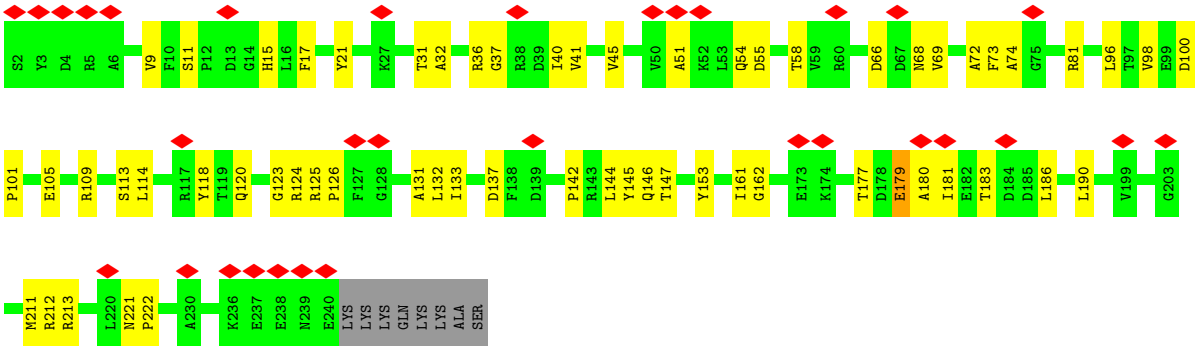
• Molecule 22: Proteasome subunit alpha type-7

Chain J:



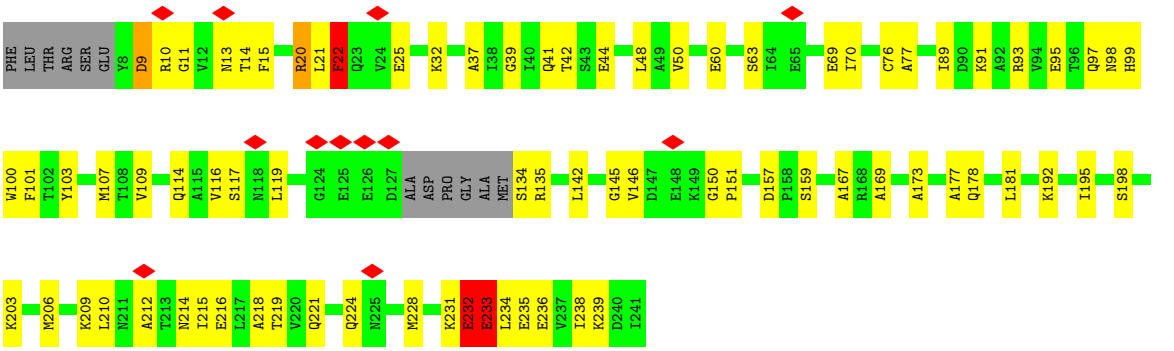
• Molecule 22: Proteasome subunit alpha type-7

Chain j:



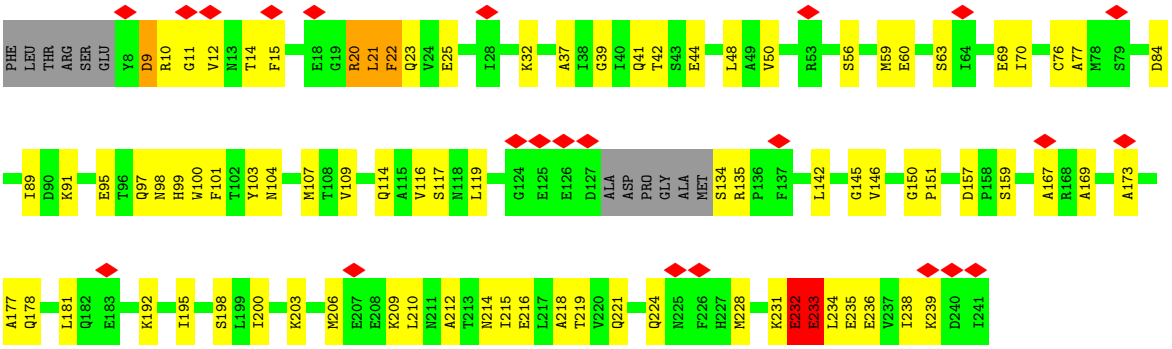
• Molecule 23: Proteasome subunit alpha type-5

Chain K:



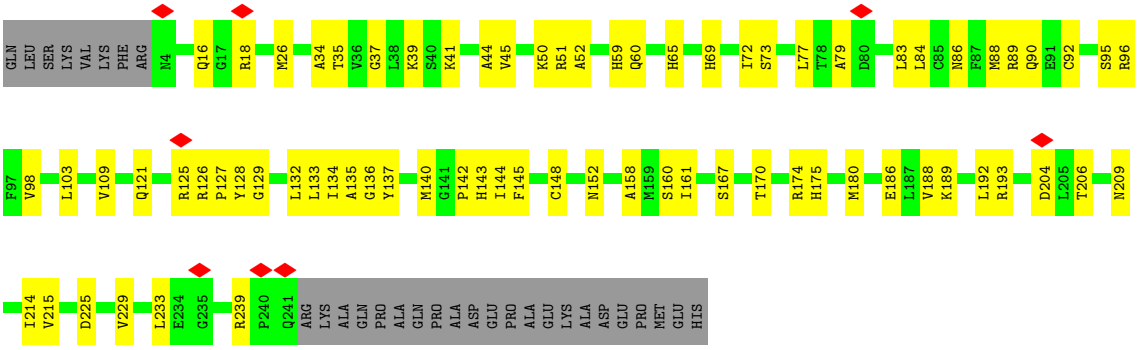
• Molecule 23: Proteasome subunit alpha type-5

Chain k:



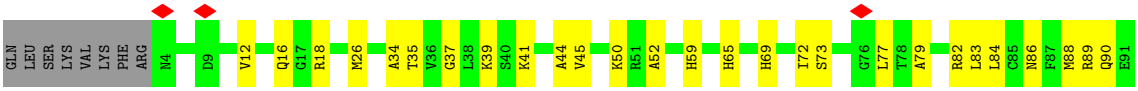
• Molecule 24: Isoform Long of Proteasome subunit alpha type-1

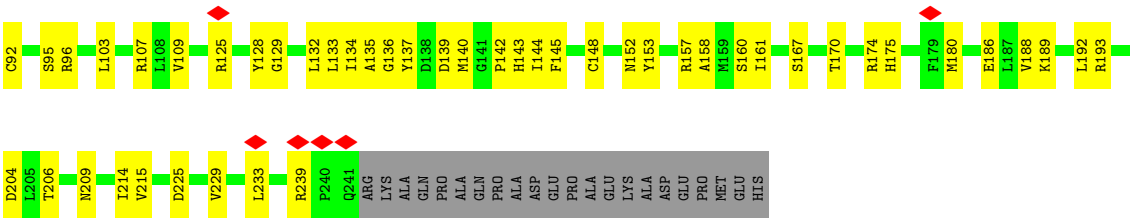
Chain L:



• Molecule 24: Isoform Long of Proteasome subunit alpha type-1

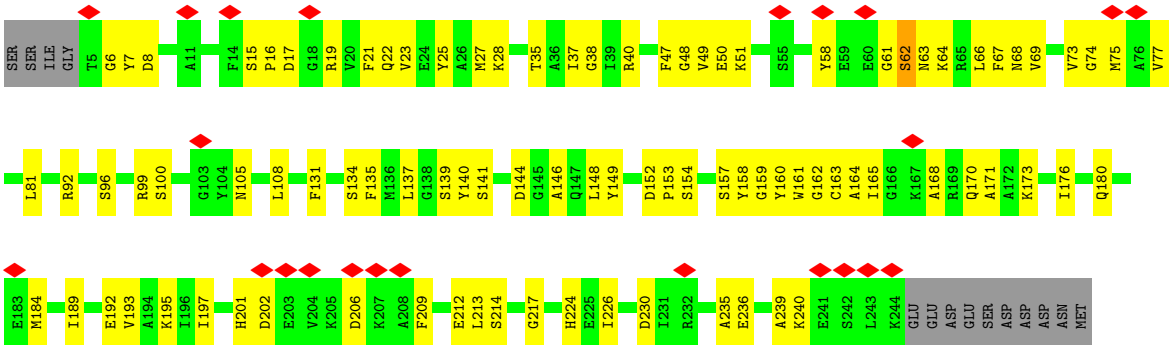
Chain l:





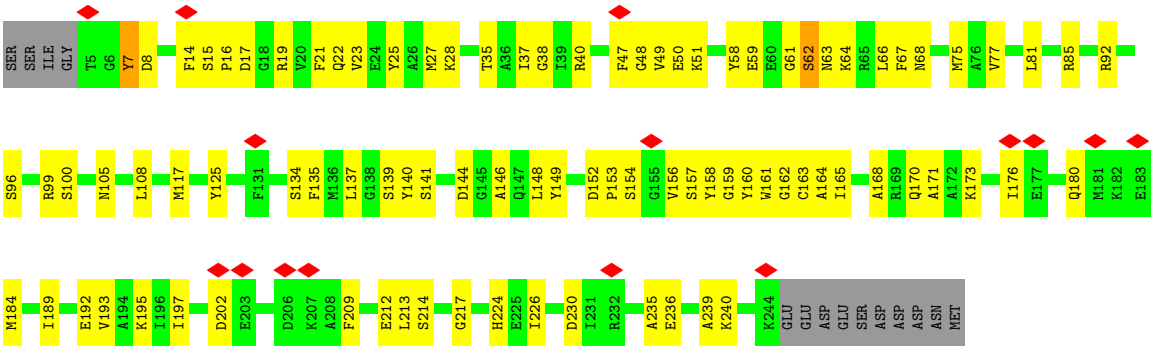
• Molecule 25: Proteasome subunit alpha type-3

Chain M:



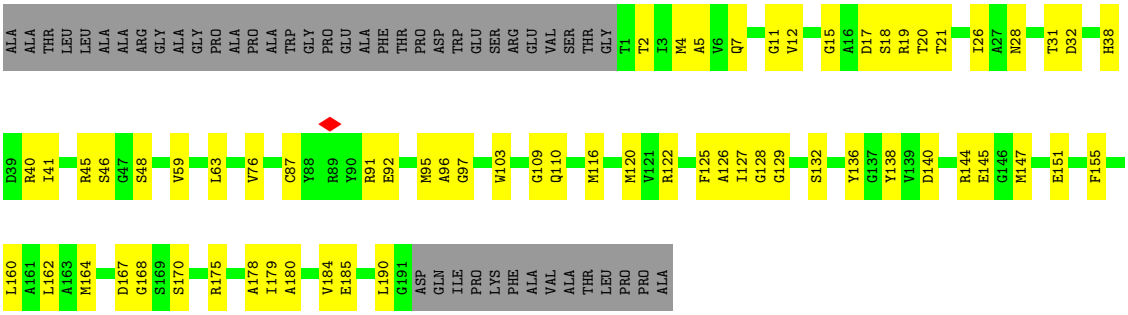
• Molecule 25: Proteasome subunit alpha type-3

Chain m:



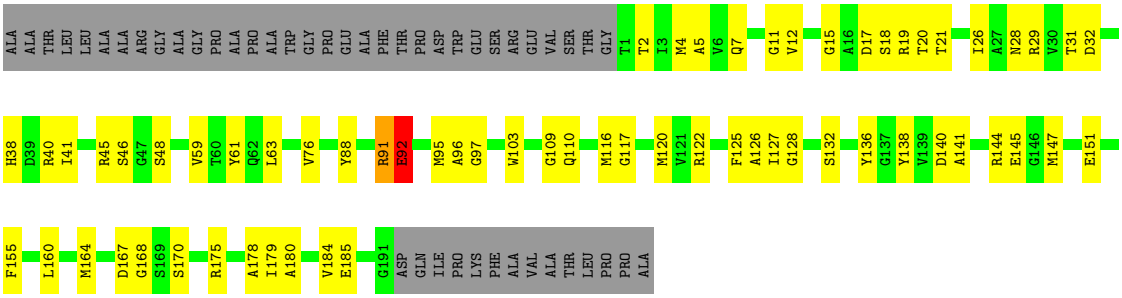
• Molecule 26: Proteasome subunit beta type-6

Chain N:



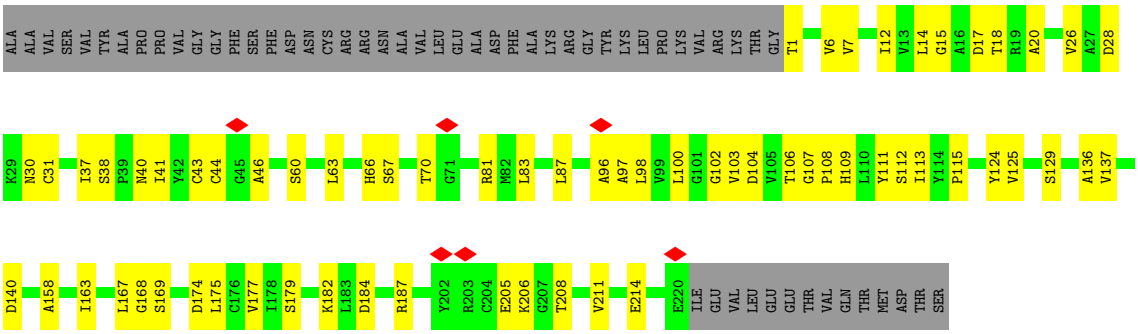
• Molecule 26: Proteasome subunit beta type-6

Chain n:



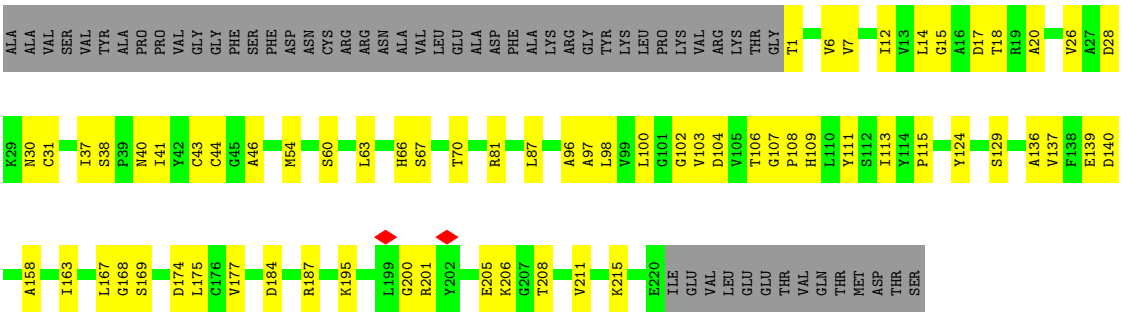
• Molecule 27: Proteasome subunit beta type-7

Chain O:



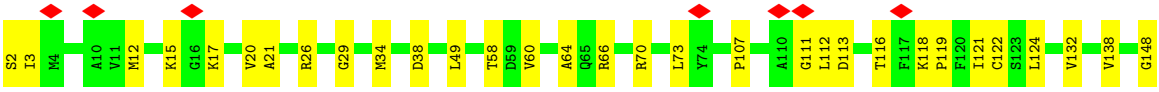
• Molecule 27: Proteasome subunit beta type-7

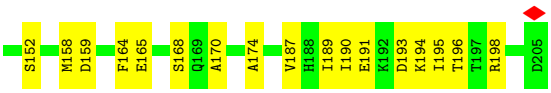
Chain o:



• Molecule 28: Proteasome subunit beta type-3

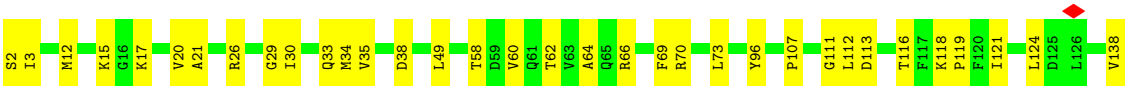
Chain P:

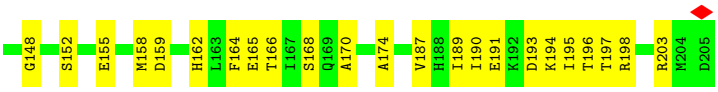




• Molecule 28: Proteasome subunit beta type-3

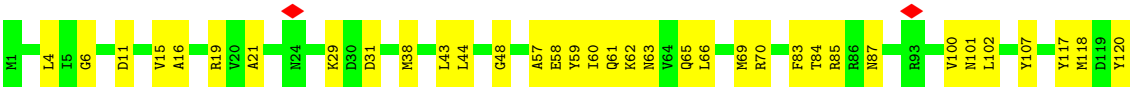
Chain p:





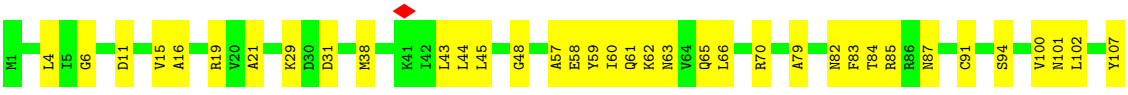
• Molecule 29: Proteasome subunit beta type-2

Chain Q:



• Molecule 29: Proteasome subunit beta type-2

Chain q:

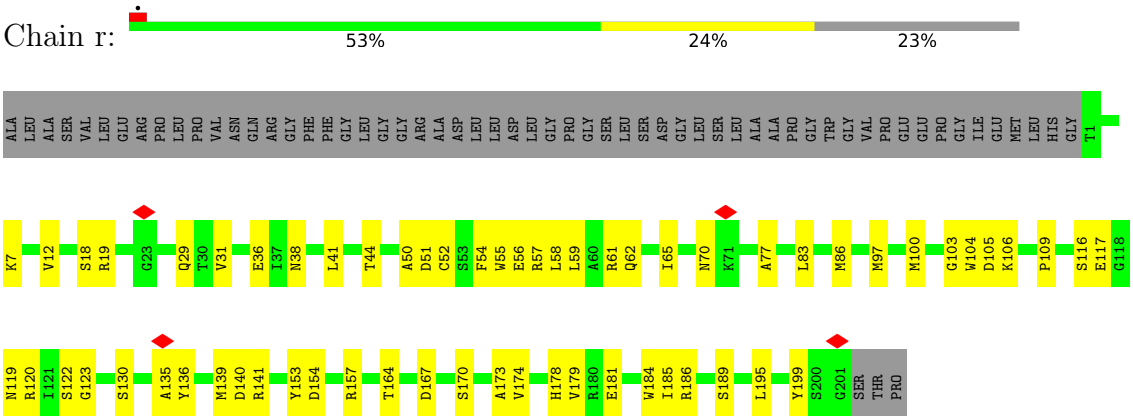


• Molecule 30: Proteasome subunit beta type-5

Chain R:

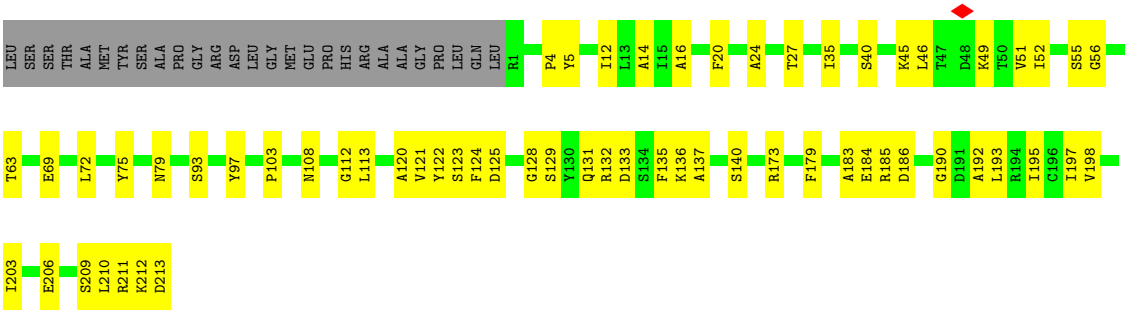
• Molecule 30: Proteasome subunit beta type-5

Chain r:



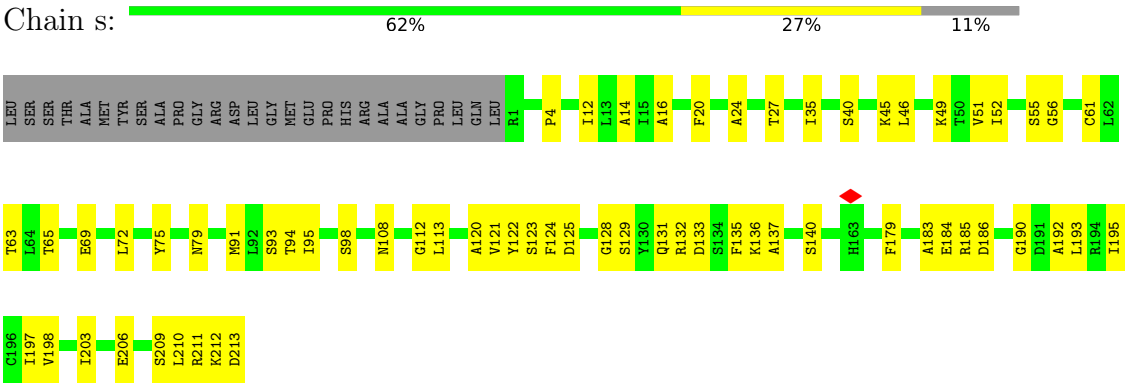
• Molecule 31: Proteasome subunit beta type-1

Chain S:



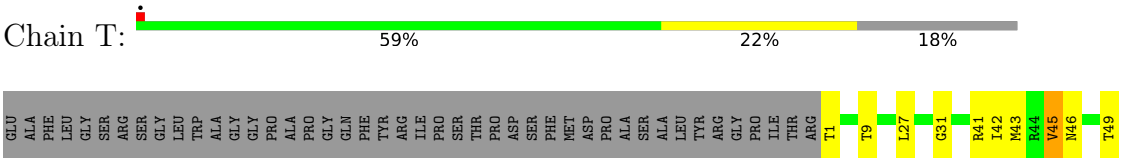
• Molecule 31: Proteasome subunit beta type-1

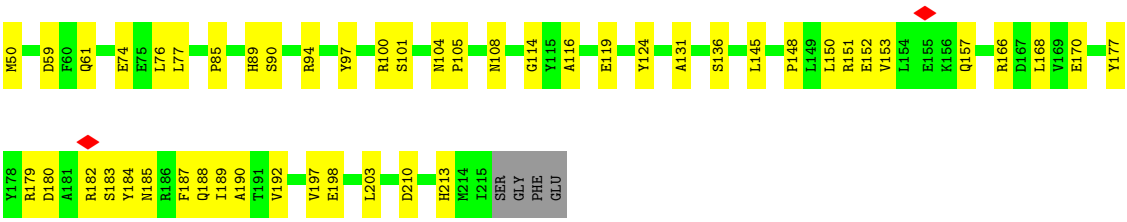
Chain s:



• Molecule 32: Proteasome subunit beta type-4

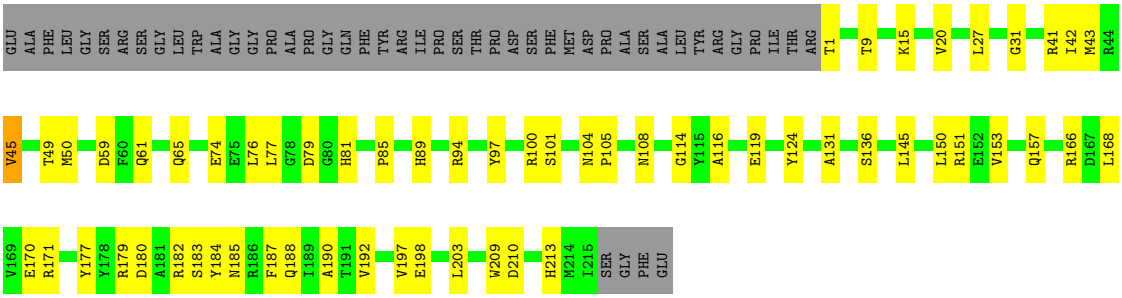
Chain T:





• Molecule 32: Proteasome subunit beta type-4

Chain t:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	34363	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	46.6	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K2 QUANTUM (4k x 4k)	Depositor
Maximum map value	0.100	Depositor
Minimum map value	-0.037	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.006	Depositor
Recommended contour level	0.0315	Depositor
Map size (Å)	438.4, 438.4, 438.4	wwPDB
Map dimensions	320, 320, 320	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.37, 1.37, 1.37	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
1	a	0.30	0/3053	0.72	3/4133 (0.1%)
2	b	0.29	0/1478	0.67	1/2001 (0.0%)
3	c	0.35	0/2226	0.84	6/3007 (0.2%)
4	d	0.34	0/2162	0.76	3/2919 (0.1%)
5	e	0.39	0/338	0.96	2/450 (0.4%)
6	f	0.28	0/5393	0.75	3/7271 (0.0%)
7	U	0.32	0/6396	0.72	10/8646 (0.1%)
8	V	0.36	0/3874	0.81	6/5234 (0.1%)
9	W	0.34	1/3751 (0.0%)	0.79	2/5042 (0.0%)
10	X	0.36	0/1936	0.80	3/2614 (0.1%)
11	Y	0.38	1/3173 (0.0%)	0.71	0/4273
12	Z	0.35	0/2324	0.82	5/3150 (0.2%)
13	A	0.32	0/2717	0.76	7/3665 (0.2%)
14	B	0.33	0/2745	0.68	2/3709 (0.1%)
15	C	0.37	0/2887	0.93	11/3883 (0.3%)
16	D	0.43	0/3070	1.01	15/4142 (0.4%)
17	E	0.32	0/2904	0.69	2/3924 (0.1%)
18	F	0.31	0/2897	0.71	1/3912 (0.0%)
19	G	0.33	0/1853	0.62	0/2515
19	g	0.34	0/1859	0.66	1/2523 (0.0%)
20	H	0.36	0/1723	0.69	4/2346 (0.2%)
20	h	0.34	0/1743	0.65	1/2372 (0.0%)
21	I	0.33	0/1925	0.67	2/2606 (0.1%)
21	i	0.33	0/1942	0.67	2/2628 (0.1%)
22	J	0.32	0/1728	0.60	0/2358
22	j	0.32	0/1728	0.62	0/2358
23	K	0.34	0/1755	0.69	2/2375 (0.1%)
23	k	0.34	0/1747	0.70	2/2364 (0.1%)
24	L	0.34	0/1885	0.62	0/2552
24	l	0.34	0/1885	0.62	0/2552
25	M	0.34	0/1891	0.67	2/2552 (0.1%)
25	m	0.34	0/1891	0.67	2/2552 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
26	N	0.35	0/1454	0.65	2/1967 (0.1%)
26	n	0.35	0/1454	0.66	2/1967 (0.1%)
27	O	0.33	0/1670	0.55	0/2265
27	o	0.33	0/1670	0.55	0/2265
28	P	0.34	0/1614	0.56	0/2177
28	p	0.34	0/1614	0.56	0/2177
29	Q	0.37	0/1603	0.62	0/2174
29	q	0.38	0/1603	0.62	0/2174
30	R	0.36	0/1579	0.56	0/2134
30	r	0.36	0/1579	0.56	0/2134
31	S	0.37	0/1671	0.61	2/2253 (0.1%)
31	s	0.37	0/1671	0.61	2/2253 (0.1%)
32	T	0.36	0/1700	0.61	1/2305 (0.0%)
32	t	0.36	0/1700	0.62	1/2305 (0.0%)
All	All	0.34	2/101461 (0.0%)	0.71	110/137178 (0.1%)

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	Y	32	ARG	CA-CB	5.83	1.61	1.52
9	W	253	THR	C-N	5.81	1.38	1.33

All (110) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	K	233	GLU	N-CA-C	-14.81	95.21	111.36
23	k	233	GLU	N-CA-C	-14.00	95.58	111.82
15	C	191	PRO	CA-C-N	10.12	132.49	119.84
15	C	191	PRO	C-N-CA	10.12	132.49	119.84
9	W	90	LEU	N-CA-C	-9.28	98.58	111.39
3	c	194	HIS	N-CA-C	-8.75	101.71	111.07
16	D	194	ILE	N-CA-C	-8.48	104.52	111.81
6	f	573	ILE	N-CA-C	-8.30	104.48	112.29
4	d	33	LEU	N-CA-C	8.07	123.18	112.13
10	X	313	LEU	N-CA-C	-7.97	101.89	111.69
1	a	374	ILE	N-CA-C	-7.84	103.57	111.88
16	D	354	LEU	N-CA-C	7.83	122.54	113.38
3	c	33	ILE	N-CA-C	7.63	119.56	108.58
20	h	36	VAL	N-CA-C	7.49	117.65	108.06
21	i	11	ILE	N-CA-C	7.33	120.14	108.85
15	C	401	ILE	N-CA-C	-7.31	102.08	110.05
20	H	8	PHE	N-CA-C	-7.21	95.43	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	H	36	VAL	N-CA-C	7.16	119.05	108.45
16	D	415	GLU	N-CA-C	7.08	121.43	111.52
5	e	55	GLN	N-CA-C	6.92	118.77	110.19
21	I	11	ILE	N-CA-C	6.80	119.94	108.86
16	D	319	PRO	N-CA-C	-6.53	104.65	113.40
9	W	40	LEU	N-CA-C	6.44	124.51	110.80
3	c	248	MET	N-CA-C	-6.42	104.36	111.36
8	V	195	ILE	N-CA-C	6.41	122.67	109.34
14	B	434	THR	CA-C-N	6.41	127.85	119.84
14	B	434	THR	C-N-CA	6.41	127.85	119.84
13	A	234	ASP	N-CA-C	-6.39	97.18	110.80
8	V	195	ILE	CA-C-N	6.33	133.64	121.54
8	V	195	ILE	C-N-CA	6.33	133.64	121.54
12	Z	101	LEU	N-CA-C	6.32	115.76	108.49
15	C	131	VAL	N-CA-C	6.31	122.47	109.34
15	C	286	THR	CA-C-N	6.31	133.59	121.54
15	C	286	THR	C-N-CA	6.31	133.59	121.54
12	Z	159	THR	N-CA-C	6.23	119.07	110.35
13	A	310	ASP	CA-C-N	6.20	127.59	119.84
13	A	310	ASP	C-N-CA	6.20	127.59	119.84
10	X	202	CYS	CA-C-N	6.18	126.75	120.38
10	X	202	CYS	C-N-CA	6.18	126.75	120.38
3	c	148	ILE	N-CA-C	-6.16	105.71	112.80
4	d	236	THR	N-CA-C	-6.15	104.37	113.72
6	f	324	VAL	CA-C-N	6.05	133.09	121.54
6	f	324	VAL	C-N-CA	6.05	133.09	121.54
2	b	102	GLY	N-CA-C	-6.00	98.95	113.18
15	C	290	LYS	CA-C-N	-5.96	112.87	120.98
15	C	290	LYS	C-N-CA	-5.96	112.87	120.98
16	D	267	ILE	CA-C-N	5.96	132.93	121.54
16	D	267	ILE	C-N-CA	5.96	132.93	121.54
21	i	125	GLY	N-CA-C	5.94	120.43	110.56
18	F	433	ALA	N-CA-C	5.88	120.03	112.86
16	D	299	PHE	N-CA-C	5.82	123.19	110.80
20	H	163	MET	N-CA-C	5.81	117.96	108.55
5	e	6	GLN	N-CA-C	5.80	122.63	109.81
8	V	192	MET	CA-C-N	5.75	131.02	122.74
8	V	192	MET	C-N-CA	5.75	131.02	122.74
16	D	81	ARG	N-CA-C	-5.73	105.31	112.93
13	A	308	GLY	N-CA-C	-5.73	105.55	112.48
15	C	134	LEU	CA-CB-CG	5.73	136.35	116.30
17	E	112	PRO	CA-C-N	5.63	132.29	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	E	112	PRO	C-N-CA	5.63	132.29	121.54
21	I	127	LYS	N-CA-C	5.63	115.98	108.38
7	U	25	HIS	N-CA-C	-5.54	105.24	111.28
1	a	17	GLY	CA-C-N	5.53	127.88	120.58
1	a	17	GLY	C-N-CA	5.53	127.88	120.58
23	k	9	ASP	N-CA-C	-5.53	103.78	111.52
19	g	20	GLY	N-CA-C	5.50	126.23	113.18
20	H	10	LEU	N-CA-C	-5.49	99.11	110.80
4	d	163	TYR	N-CA-C	-5.49	104.79	112.25
16	D	161	ASP	N-CA-C	5.46	122.43	110.80
32	t	45	VAL	N-CA-C	-5.45	104.11	110.05
16	D	310	ALA	N-CA-C	5.44	118.28	108.48
12	Z	242	LEU	CA-C-N	5.44	131.93	121.54
12	Z	242	LEU	C-N-CA	5.44	131.93	121.54
25	M	62	SER	CA-C-N	5.42	130.10	122.46
25	M	62	SER	C-N-CA	5.42	130.10	122.46
25	m	62	SER	CA-C-N	5.39	130.06	122.46
25	m	62	SER	C-N-CA	5.39	130.06	122.46
32	T	45	VAL	N-CA-C	-5.39	104.18	110.05
26	N	17	ASP	CA-C-N	-5.38	115.12	121.90
26	N	17	ASP	C-N-CA	-5.38	115.12	121.90
31	s	190	GLY	CA-C-N	5.38	131.81	121.54
31	s	190	GLY	C-N-CA	5.38	131.81	121.54
15	C	289	ILE	N-CA-C	-5.36	98.19	109.34
16	D	318	ASP	N-CA-CB	5.36	119.91	110.37
26	n	17	ASP	CA-C-N	-5.36	115.15	121.90
26	n	17	ASP	C-N-CA	-5.36	115.15	121.90
31	S	190	GLY	CA-C-N	5.34	131.75	121.54
31	S	190	GLY	C-N-CA	5.34	131.75	121.54
7	U	24	LEU	N-CA-C	-5.32	105.65	111.82
16	D	217	LYS	CA-C-N	-5.28	113.82	122.54
16	D	217	LYS	C-N-CA	-5.28	113.82	122.54
23	K	9	ASP	N-CA-C	-5.26	104.16	111.52
13	A	312	ARG	N-CA-C	5.25	121.98	110.80
3	c	250	GLU	N-CA-C	-5.22	105.28	110.97
16	D	283	ARG	N-CA-C	-5.16	105.55	111.07
13	A	235	ALA	CA-C-N	-5.16	115.45	122.93
13	A	235	ALA	C-N-CA	-5.16	115.45	122.93
7	U	223	LEU	CA-C-N	5.15	130.13	122.82
7	U	223	LEU	C-N-CA	5.15	130.13	122.82
3	c	280	PRO	CA-C-O	-5.08	111.36	120.60
12	Z	101	LEU	CB-CA-C	-5.07	107.21	114.87

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	U	470	ASN	CA-C-N	5.07	131.23	121.54
7	U	470	ASN	C-N-CA	5.07	131.23	121.54
7	U	36	ALA	CA-C-N	5.05	127.05	120.28
7	U	36	ALA	C-N-CA	5.05	127.05	120.28
7	U	595	ASN	CA-C-N	5.04	131.18	121.54
7	U	595	ASN	C-N-CA	5.04	131.18	121.54
16	D	365	ALA	N-CA-C	-5.04	105.22	113.19
15	C	296	ASN	N-CA-C	5.02	116.44	108.96
8	V	279	GLN	CA-CB-CG	5.01	124.12	114.10

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	a	2995	0	3012	106	0
2	b	1458	0	1505	36	0
3	c	2187	0	2212	156	0
4	d	2116	0	2146	108	0
5	e	334	0	294	81	0
6	f	5319	0	5329	195	0
7	U	6287	0	6338	278	0
8	V	3799	0	3850	180	0
9	W	3703	0	3819	232	0
10	X	1905	0	1948	100	0
11	Y	3115	0	3120	154	0
12	Z	2281	0	2311	165	0
13	A	2672	0	2700	113	0
14	B	2706	0	2731	118	0
15	C	2850	0	2964	354	0
16	D	3021	0	3052	306	0
17	E	2860	0	2826	273	0
18	F	2859	0	2853	207	0
19	G	1820	0	1791	108	0
19	g	1826	0	1796	69	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
20	H	1688	0	1575	109	0
20	h	1708	0	1593	74	0
21	I	1895	0	1833	118	0
21	i	1912	0	1851	116	0
22	J	1704	0	1516	68	0
22	j	1704	0	1516	55	0
23	K	1729	0	1678	101	0
23	k	1722	0	1673	83	0
24	L	1850	0	1822	48	0
24	l	1850	0	1822	49	0
25	M	1856	0	1814	75	0
25	m	1856	0	1814	66	0
26	N	1430	0	1398	61	0
26	n	1430	0	1397	55	0
27	O	1643	0	1644	42	0
27	o	1643	0	1644	44	0
28	P	1585	0	1598	32	0
28	p	1585	0	1598	43	0
29	Q	1570	0	1547	36	0
29	q	1570	0	1547	40	0
30	R	1548	0	1499	43	0
30	r	1548	0	1499	40	0
31	S	1641	0	1618	42	0
31	s	1641	0	1618	39	0
32	T	1667	0	1628	39	0
32	t	1667	0	1628	42	0
33	c	1	0	0	0	0
34	A	31	0	12	2	0
34	B	31	0	12	38	0
34	D	62	0	24	36	0
34	E	31	0	11	94	0
All	All	99911	0	99026	4405	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 22.

All (4405) 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)
25:M:7:TYR:CD1	25:M:16:PRO:HD3	1.32	1.65
7:U:596:ASN:HA	7:U:599:ILE:CG2	1.26	1.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:I:121:TYR:CD1	21:I:127:LYS:CE	1.75	1.64
16:D:163:MET:HE3	16:D:222:HIS:CG	1.27	1.61
10:X:258:LYS:HG3	10:X:261:LEU:CD2	1.32	1.59
19:G:7:ALA:HB2	19:G:18:PRO:CD	1.12	1.59
12:Z:174:HIS:CA	12:Z:177:ARG:HH21	1.14	1.58
17:E:135:ILE:CA	34:E:401:ATP:C2	1.74	1.58
17:E:182:LEU:HD21	34:E:401:ATP:C8	1.39	1.57
7:U:21:GLU:HA	7:U:24:LEU:CD2	1.20	1.56
19:G:7:ALA:CB	19:G:18:PRO:HD3	1.34	1.56
15:C:134:LEU:CA	15:C:138:MET:CG	1.76	1.56
11:Y:190:ALA:HA	11:Y:287:LEU:CD1	1.37	1.55
12:Z:96:HIS:CD2	12:Z:102:HIS:CD2	1.93	1.55
23:K:14:THR:H	23:K:21:LEU:CD2	1.12	1.55
16:D:163:MET:CE	16:D:222:HIS:CD2	1.84	1.54
21:I:121:TYR:CG	21:I:127:LYS:HE3	1.41	1.54
23:k:9:ASP:CB	23:k:22:PHE:CZ	1.89	1.53
17:E:248:SER:HB3	18:F:300:LYS:CG	1.09	1.53
16:D:297:ASP:CA	16:D:326:ARG:HH22	1.21	1.52
23:K:15:PHE:N	23:K:21:LEU:HD11	1.25	1.52
17:E:135:ILE:HA	34:E:401:ATP:C2	1.02	1.51
17:E:179:GLY:HA2	34:E:401:ATP:PA	1.50	1.51
17:E:135:ILE:CB	34:E:401:ATP:N1	1.71	1.51
23:K:14:THR:C	23:K:21:LEU:CD1	1.78	1.50
23:k:9:ASP:HB3	23:k:22:PHE:CE1	1.40	1.50
7:U:21:GLU:CA	7:U:24:LEU:HD21	1.38	1.49
16:D:163:MET:HE3	16:D:222:HIS:CD2	0.97	1.48
25:M:7:TYR:CE1	25:M:16:PRO:CG	1.94	1.48
23:K:14:THR:N	23:K:21:LEU:HD21	1.17	1.48
15:C:134:LEU:CA	15:C:138:MET:HG2	1.38	1.48
19:G:7:ALA:CB	19:G:18:PRO:CD	1.86	1.48
21:I:121:TYR:CE1	21:I:127:LYS:NZ	1.80	1.47
23:k:9:ASP:HB3	23:k:22:PHE:CZ	1.41	1.47
21:I:124:PHE:CE2	22:J:118:TYR:OH	1.65	1.47
9:W:39:ARG:NE	9:W:44:ILE:HD11	1.27	1.47
15:C:320:PRO:CG	34:D:501:ATP:N6	1.76	1.46
16:D:85:ILE:CG2	16:D:86:PRO:HD3	1.44	1.46
16:D:297:ASP:HA	16:D:326:ARG:NH2	1.19	1.45
23:K:14:THR:O	23:K:21:LEU:CG	1.64	1.45
23:k:9:ASP:CB	23:k:22:PHE:CE1	1.95	1.44
9:W:37:GLU:HB3	9:W:39:ARG:NH1	1.21	1.44
16:D:85:ILE:HG23	16:D:86:PRO:CD	1.46	1.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:B:434:THR:HB	14:B:435:PRO:CD	1.31	1.41
17:E:135:ILE:HB	34:E:401:ATP:N1	1.22	1.41
21:i:8:ARG:HB3	21:i:11:ILE:CD1	1.48	1.41
15:C:320:PRO:CG	34:D:501:ATP:HN61	1.32	1.41
17:E:182:LEU:HD22	34:E:401:ATP:C1'	1.49	1.41
23:k:9:ASP:CG	23:k:22:PHE:CE1	1.98	1.40
15:C:134:LEU:HA	15:C:138:MET:CG	0.94	1.40
25:M:7:TYR:CE1	25:M:16:PRO:CD	2.04	1.40
12:Z:94:TRP:CZ2	12:Z:105:ASP:OD1	1.74	1.39
17:E:179:GLY:C	34:E:401:ATP:O1A	1.66	1.39
15:C:144:PRO:HA	15:C:205:HIS:ND1	1.36	1.39
15:C:130:LYS:HB3	15:C:134:LEU:CD1	1.52	1.39
16:D:163:MET:CE	16:D:222:HIS:HB2	1.50	1.38
12:Z:174:HIS:O	12:Z:177:ARG:NE	1.56	1.38
15:C:144:PRO:HB3	15:C:205:HIS:CE1	1.59	1.37
12:Z:174:HIS:HA	12:Z:177:ARG:NH2	1.29	1.36
15:C:151:ILE:O	34:D:501:ATP:N3	1.58	1.36
25:M:7:TYR:CD1	25:M:16:PRO:CD	2.07	1.36
17:E:248:SER:CB	18:F:300:LYS:CG	2.03	1.36
17:E:248:SER:CB	18:F:300:LYS:HG3	1.54	1.36
12:Z:174:HIS:C	12:Z:177:ARG:HH21	1.30	1.35
15:C:132:ASP:OD2	15:C:233:GLU:CG	1.73	1.35
19:g:46:ASP:CB	19:g:222:VAL:CG2	2.05	1.35
9:W:39:ARG:NE	9:W:44:ILE:CD1	1.89	1.34
17:E:182:LEU:CD2	34:E:401:ATP:O5'	1.75	1.34
23:K:14:THR:C	23:K:21:LEU:HD11	0.94	1.34
7:U:21:GLU:O	7:U:25:HIS:ND1	1.61	1.34
10:X:258:LYS:CG	10:X:261:LEU:CD2	2.05	1.33
3:c:150:SER:CB	3:c:154:LYS:CD	2.07	1.33
11:Y:190:ALA:CA	11:Y:287:LEU:CD1	2.06	1.33
4:d:97:GLN:CG	4:d:161:GLU:OE2	1.76	1.33
15:C:151:ILE:O	34:D:501:ATP:C2	1.81	1.33
26:N:91:ARG:NH1	26:N:116:MET:HA	1.43	1.33
7:U:20:LYS:O	7:U:24:LEU:HD23	1.21	1.32
12:Z:174:HIS:CA	12:Z:177:ARG:NH2	1.86	1.32
17:E:247:THR:HB	18:F:299:GLU:CB	1.60	1.32
16:D:167:ILE:HD11	16:D:214:MET:SD	1.70	1.31
25:M:7:TYR:CE1	25:M:16:PRO:HD3	1.62	1.31
16:D:163:MET:CE	16:D:222:HIS:CB	2.08	1.31
23:K:14:THR:O	23:K:21:LEU:CD1	1.69	1.31
19:g:46:ASP:CB	19:g:222:VAL:HG21	1.57	1.31

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:F:166:THR:HA	18:F:168:TYR:CZ	1.64	1.31
15:C:142:LYS:HD3	15:C:201:ARG:NE	1.43	1.31
10:X:258:LYS:CG	10:X:261:LEU:HD21	1.59	1.30
21:I:121:TYR:CG	21:I:127:LYS:CE	2.06	1.30
14:B:189:GLY:HA2	34:B:501:ATP:N1	1.46	1.30
21:I:121:TYR:CD1	21:I:127:LYS:HE2	1.43	1.30
23:k:9:ASP:OD2	23:k:22:PHE:CE1	1.81	1.30
4:d:175:ARG:NH1	4:d:200:PHE:CE2	2.00	1.29
17:E:135:ILE:HG22	34:E:401:ATP:C2	1.66	1.29
3:c:150:SER:CB	3:c:154:LYS:HD3	1.58	1.29
6:f:88:SER:CB	6:f:92:VAL:HG23	1.60	1.29
15:C:134:LEU:CB	15:C:138:MET:HG3	1.63	1.29
15:C:144:PRO:CB	15:C:205:HIS:CE1	2.14	1.29
17:E:135:ILE:CB	34:E:401:ATP:C2	2.06	1.29
17:E:135:ILE:CG2	34:E:401:ATP:C2	2.16	1.28
9:W:40:LEU:CB	17:E:329:GLU:HG2	1.62	1.28
15:C:143:VAL:HB	15:C:144:PRO:CD	1.61	1.27
15:C:195:GLY:O	15:C:199:LEU:CD2	1.82	1.27
17:E:182:LEU:HD22	34:E:401:ATP:C2'	1.62	1.27
13:A:210:LYS:O	13:A:312:ARG:NH1	1.66	1.27
12:Z:96:HIS:HD2	12:Z:102:HIS:NE2	1.31	1.26
15:C:134:LEU:CA	15:C:138:MET:HG3	1.47	1.26
6:f:192:VAL:CG1	6:f:193:PRO:HD3	1.63	1.26
15:C:143:VAL:CG1	15:C:144:PRO:HD3	1.65	1.26
9:W:37:GLU:OE1	9:W:39:ARG:NH2	1.68	1.26
16:D:413:GLU:CG	16:D:415:GLU:CG	2.14	1.26
15:C:134:LEU:O	15:C:138:MET:HB2	1.10	1.25
20:H:8:PHE:C	21:I:126:GLY:O	1.78	1.25
17:E:182:LEU:CD2	34:E:401:ATP:C8	2.18	1.25
15:C:144:PRO:CA	15:C:205:HIS:CE1	2.19	1.24
9:W:37:GLU:CB	9:W:39:ARG:HH12	1.47	1.24
15:C:144:PRO:HA	15:C:205:HIS:CE1	1.71	1.24
15:C:234:LEU:O	15:C:237:MET:HG2	1.36	1.24
16:D:163:MET:HE2	16:D:218:ALA:O	1.31	1.24
21:i:8:ARG:C	21:i:11:ILE:HD11	1.63	1.23
17:E:182:LEU:HD23	34:E:401:ATP:C5'	1.66	1.22
15:C:130:LYS:CB	15:C:134:LEU:CD1	2.17	1.22
3:c:150:SER:OG	3:c:154:LYS:HD3	1.05	1.21
12:Z:96:HIS:CD2	12:Z:102:HIS:NE2	2.05	1.21
17:E:247:THR:CB	18:F:299:GLU:HB2	1.69	1.21
15:C:134:LEU:O	15:C:138:MET:CB	1.87	1.21

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:E:180:LYS:N	34:E:401:ATP:O1B	1.73	1.21
17:E:248:SER:HB2	18:F:300:LYS:CE	1.70	1.21
14:B:434:THR:CB	14:B:435:PRO:CD	2.14	1.20
16:D:163:MET:CE	16:D:222:HIS:CG	2.05	1.20
16:D:163:MET:HE1	16:D:222:HIS:CB	1.68	1.20
12:Z:94:TRP:CH2	12:Z:105:ASP:OD1	1.93	1.20
16:D:416:PHE:O	20:H:33:ALA:HB3	1.38	1.20
7:U:22:PHE:HA	7:U:25:HIS:ND1	1.54	1.20
15:C:132:ASP:OD2	15:C:233:GLU:HG2	1.30	1.19
15:C:142:LYS:CD	15:C:201:ARG:NE	2.06	1.19
23:K:15:PHE:HA	23:K:21:LEU:CD1	1.73	1.19
7:U:21:GLU:CA	7:U:24:LEU:CD2	2.07	1.19
14:B:364:ILE:HD11	34:B:501:ATP:N1	1.58	1.19
15:C:142:LYS:CD	15:C:201:ARG:HE	1.55	1.19
17:E:111:LEU:HB2	17:E:112:PRO:CD	1.65	1.18
16:D:132:LEU:HD22	16:D:137:ASN:OD1	1.42	1.18
18:F:437:TYR:HE2	23:K:20:ARG:NH1	1.41	1.18
15:C:132:ASP:CG	15:C:233:GLU:HG2	1.68	1.18
21:i:8:ARG:CB	21:i:11:ILE:HD13	1.73	1.18
13:A:286:ASP:CA	18:F:258:GLN:HG2	1.74	1.18
21:I:121:TYR:CD1	21:I:127:LYS:NZ	2.01	1.17
15:C:234:LEU:HD12	15:C:237:MET:SD	1.84	1.17
6:f:192:VAL:HG13	6:f:193:PRO:CD	1.73	1.17
15:C:132:ASP:OD1	15:C:133:PRO:HD3	1.41	1.17
19:G:7:ALA:N	19:G:10:ASP:OD2	1.76	1.17
20:H:8:PHE:O	21:I:126:GLY:O	1.63	1.16
9:W:40:LEU:HB3	17:E:329:GLU:HG2	1.26	1.16
15:C:140:VAL:CG1	15:C:214:VAL:HA	1.75	1.16
17:E:247:THR:CB	18:F:299:GLU:CB	2.22	1.16
7:U:596:ASN:CA	7:U:599:ILE:CG2	2.23	1.16
3:c:150:SER:OG	3:c:154:LYS:CD	1.92	1.16
5:e:43:TRP:HB2	8:V:343:PRO:HB2	1.24	1.16
16:D:167:ILE:CD1	16:D:214:MET:SD	2.34	1.16
12:Z:174:HIS:C	12:Z:177:ARG:NH2	1.98	1.15
15:C:143:VAL:CB	15:C:144:PRO:CD	2.24	1.15
15:C:143:VAL:HG12	15:C:144:PRO:HD3	1.16	1.15
18:F:166:THR:HG22	18:F:168:TYR:OH	1.44	1.15
16:D:413:GLU:CG	16:D:415:GLU:HG3	1.71	1.15
23:K:14:THR:O	23:K:21:LEU:HG	1.24	1.15
7:U:596:ASN:HA	7:U:599:ILE:HG23	1.22	1.15
25:M:7:TYR:HE1	25:M:16:PRO:HG3	1.11	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:e:43:TRP:HB2	8:V:343:PRO:CB	1.76	1.14
13:A:286:ASP:HA	18:F:258:GLN:CG	1.75	1.14
15:C:142:LYS:HD2	15:C:201:ARG:HD2	1.20	1.14
5:e:48:VAL:HG21	8:V:368:ARG:HH11	1.06	1.14
18:F:437:TYR:CE2	23:K:20:ARG:NH1	2.16	1.14
17:E:248:SER:HB2	18:F:300:LYS:HE3	1.23	1.14
16:D:163:MET:HG2	16:D:218:ALA:CB	1.77	1.14
15:C:142:LYS:HD2	15:C:201:ARG:CD	1.78	1.13
3:c:150:SER:HB3	3:c:154:LYS:HD2	1.30	1.13
17:E:177:GLY:HA2	34:E:401:ATP:O3B	1.41	1.12
17:E:179:GLY:CA	34:E:401:ATP:O1A	1.97	1.12
17:E:179:GLY:CA	17:E:182:LEU:HG	1.79	1.12
21:i:8:ARG:CB	21:i:11:ILE:CD1	2.25	1.12
17:E:179:GLY:CA	34:E:401:ATP:PA	2.37	1.12
23:K:14:THR:CA	23:K:21:LEU:HD21	1.77	1.12
14:B:364:ILE:CD1	34:B:501:ATP:N1	2.12	1.11
23:K:15:PHE:CA	23:K:21:LEU:CD1	2.27	1.11
15:C:320:PRO:HG3	34:D:501:ATP:N6	1.46	1.11
16:D:417:TYR:O	20:H:163:MET:O	1.68	1.11
17:E:182:LEU:HD23	34:E:401:ATP:O5'	0.94	1.11
3:c:152:LYS:HE2	16:D:77:GLU:OE2	1.51	1.11
20:h:10:LEU:HB3	20:h:125:GLY:HA3	1.12	1.11
17:E:248:SER:HB3	18:F:300:LYS:HG2	1.18	1.10
5:e:61:GLU:HG3	11:Y:276:ALA:HB2	1.26	1.10
16:D:163:MET:HG2	16:D:218:ALA:HB3	1.30	1.10
16:D:413:GLU:CD	16:D:415:GLU:HG3	1.77	1.10
4:d:33:LEU:CD2	4:d:48:LEU:HD11	1.82	1.10
7:U:21:GLU:O	7:U:24:LEU:HG	1.51	1.10
7:U:596:ASN:HA	7:U:599:ILE:HG22	1.24	1.09
3:c:150:SER:HB3	3:c:154:LYS:CD	1.78	1.09
4:d:154:ALA:C	4:d:158:ILE:HD11	1.78	1.09
5:e:48:VAL:CG2	8:V:368:ARG:HH11	1.64	1.09
12:Z:174:HIS:O	12:Z:177:ARG:CZ	2.00	1.09
20:h:8:PHE:C	21:i:126:GLY:O	1.96	1.09
17:E:135:ILE:CA	34:E:401:ATP:N1	2.04	1.09
19:G:21:ARG:CD	19:G:26:GLU:OE1	2.00	1.09
20:H:8:PHE:HB2	21:I:126:GLY:HA3	1.23	1.09
7:U:590:TYR:CD2	7:U:598:ALA:HB2	1.86	1.08
11:Y:190:ALA:CA	11:Y:287:LEU:HD12	1.73	1.08
20:H:148:GLN:OE1	20:H:161:THR:HG21	1.52	1.08
26:N:91:ARG:HH12	26:N:116:MET:CA	1.64	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:W:40:LEU:HB3	17:E:329:GLU:CG	1.82	1.08
15:C:192:PRO:HB2	16:D:323:ARG:HH22	1.17	1.08
16:D:323:ARG:HB2	16:D:326:ARG:HB3	1.36	1.08
21:i:8:ARG:CA	21:i:11:ILE:HD11	1.84	1.08
7:U:20:LYS:C	7:U:24:LEU:HD23	1.77	1.08
4:d:155:LYS:HA	4:d:158:ILE:HG13	1.08	1.07
6:f:88:SER:HB3	6:f:92:VAL:HG23	1.28	1.07
9:W:37:GLU:CB	9:W:39:ARG:NH1	2.09	1.07
15:C:90:HIS:HB3	15:C:91:PRO:CD	1.83	1.07
21:I:124:PHE:CZ	22:J:118:TYR:OH	2.07	1.07
15:C:140:VAL:HG13	15:C:214:VAL:HA	1.29	1.07
16:D:413:GLU:CG	16:D:415:GLU:HG2	1.79	1.07
16:D:413:GLU:HG3	16:D:415:GLU:CG	1.80	1.07
11:Y:190:ALA:CA	11:Y:287:LEU:HD13	1.79	1.07
12:Z:96:HIS:NE2	12:Z:102:HIS:CD2	2.23	1.07
17:E:182:LEU:CD2	34:E:401:ATP:O4'	2.03	1.07
9:W:39:ARG:CZ	9:W:44:ILE:HD11	1.85	1.06
20:h:8:PHE:CB	21:i:126:GLY:HA3	1.84	1.06
9:W:39:ARG:CZ	9:W:44:ILE:CD1	2.32	1.06
9:W:431:LYS:O	9:W:435:LEU:HB2	1.55	1.06
15:C:320:PRO:HG2	34:D:501:ATP:N6	1.49	1.06
16:D:417:TYR:HB2	20:H:77:SER:HA	1.38	1.06
20:H:8:PHE:HB2	21:I:126:GLY:CA	1.84	1.06
4:d:97:GLN:HG3	4:d:161:GLU:CD	1.79	1.06
6:f:88:SER:HB2	6:f:92:VAL:HG23	1.30	1.06
9:W:90:LEU:HD23	17:E:307:GLN:OE1	1.49	1.06
34:B:501:ATP:O2B	15:C:307:ARG:NH2	1.88	1.06
18:F:406:ILE:CG2	18:F:422:GLU:OE1	2.03	1.06
25:M:7:TYR:CE1	25:M:16:PRO:HG3	1.80	1.06
12:Z:66:SER:H	12:Z:103:LYS:NZ	1.39	1.06
4:d:155:LYS:HA	4:d:158:ILE:CG1	1.86	1.06
23:K:15:PHE:HA	23:K:21:LEU:HD12	1.08	1.06
15:C:134:LEU:HD22	15:C:138:MET:HE2	1.33	1.05
16:D:413:GLU:HG3	16:D:415:GLU:HG2	1.07	1.05
17:E:182:LEU:CD2	34:E:401:ATP:C1'	2.33	1.05
21:I:124:PHE:HD2	22:J:124:ARG:HA	1.15	1.05
16:D:169:GLY:HA2	16:D:340:GLN:HG2	1.37	1.05
16:D:323:ARG:CZ	34:D:501:ATP:O1G	2.04	1.05
17:E:179:GLY:HA2	34:E:401:ATP:O5'	1.54	1.05
23:k:9:ASP:HB2	23:k:22:PHE:CZ	1.81	1.05
5:e:52:PHE:CG	5:e:55:GLN:OE1	2.09	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:D:416:PHE:O	20:H:33:ALA:CB	2.03	1.05
5:e:48:VAL:CB	8:V:368:ARG:NH1	2.20	1.05
26:N:91:ARG:NH1	26:N:116:MET:CA	2.17	1.05
15:C:192:PRO:HG2	16:D:323:ARG:NH2	1.70	1.05
15:C:192:PRO:CB	16:D:323:ARG:HH22	1.68	1.05
3:c:33:ILE:HD11	3:c:207:TYR:CA	1.85	1.04
15:C:195:GLY:O	15:C:199:LEU:HD22	1.46	1.04
17:E:247:THR:OG1	18:F:299:GLU:HG3	1.53	1.04
11:Y:344:HIS:ND1	11:Y:358:ARG:HB2	1.71	1.04
14:B:434:THR:HB	14:B:435:PRO:HD3	1.36	1.04
15:C:132:ASP:OD2	15:C:233:GLU:HG3	1.52	1.04
4:d:101:LEU:HD23	4:d:163:TYR:CE1	1.92	1.03
23:K:15:PHE:CA	23:K:21:LEU:HD12	1.88	1.03
13:A:286:ASP:HA	18:F:258:GLN:HG2	1.04	1.03
16:D:416:PHE:CZ	20:H:76:TYR:CE1	2.46	1.03
18:F:406:ILE:HG21	18:F:422:GLU:OE1	1.58	1.03
3:c:33:ILE:CD1	3:c:207:TYR:HA	1.88	1.03
9:W:311:THR:OG1	9:W:313:GLU:OE2	1.77	1.03
17:E:177:GLY:CA	34:E:401:ATP:O3B	2.06	1.03
3:c:149:GLN:HG3	3:c:156:VAL:HG11	1.36	1.03
10:X:258:LYS:HG2	10:X:261:LEU:HD21	1.32	1.03
17:E:179:GLY:N	34:E:401:ATP:O1B	1.92	1.03
19:G:7:ALA:HB1	19:G:18:PRO:HD3	1.33	1.03
21:I:124:PHE:CD2	22:J:124:ARG:HA	1.94	1.02
4:d:33:LEU:HD21	4:d:48:LEU:HD11	1.32	1.02
16:D:167:ILE:HG21	16:D:174:LYS:HD2	1.35	1.02
15:C:184:LYS:HA	15:C:288:ASN:HD21	1.20	1.02
26:N:87:CYS:HB3	26:N:91:ARG:HH21	1.22	1.02
16:D:163:MET:CG	16:D:218:ALA:HB3	1.89	1.01
4:d:101:LEU:HD23	4:d:163:TYR:HE1	1.23	1.01
11:Y:332:GLN:HB2	11:Y:336:ARG:NH1	1.73	1.01
20:h:10:LEU:HB3	20:h:125:GLY:CA	1.89	1.01
15:C:150:MET:O	34:D:501:ATP:O2'	1.78	1.01
15:C:130:LYS:HB3	15:C:134:LEU:HD11	1.01	1.01
19:G:7:ALA:CB	19:G:18:PRO:HD2	1.67	1.01
21:I:8:ARG:O	21:I:11:ILE:HD11	1.59	1.01
9:W:40:LEU:HB2	17:E:329:GLU:HG2	1.42	1.01
19:G:21:ARG:HD3	19:G:26:GLU:OE1	1.57	1.01
16:D:297:ASP:HA	16:D:326:ARG:CZ	1.91	1.00
15:C:143:VAL:HB	15:C:144:PRO:HD2	1.06	1.00
17:E:182:LEU:HD22	34:E:401:ATP:N9	1.75	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Z:262:LEU:O	12:Z:266:ILE:HB	1.62	1.00
25:M:7:TYR:CZ	25:M:16:PRO:HG2	1.96	1.00
23:k:9:ASP:CB	23:k:22:PHE:HZ	1.50	1.00
12:Z:253:THR:O	12:Z:257:MET:HB2	1.60	1.00
5:e:61:GLU:HG3	11:Y:276:ALA:CB	1.91	1.00
17:E:182:LEU:CD2	34:E:401:ATP:N9	2.23	1.00
19:G:7:ALA:HB3	19:G:10:ASP:HB3	1.42	0.99
19:G:7:ALA:CA	19:G:18:PRO:CD	2.39	0.99
25:M:7:TYR:CE1	25:M:16:PRO:HG2	1.93	0.99
34:B:501:ATP:O3G	15:C:310:ARG:NH2	1.94	0.99
5:e:48:VAL:HB	8:V:368:ARG:NH1	1.77	0.99
5:e:56:LEU:HD12	5:e:56:LEU:H	1.24	0.99
22:J:38:ARG:CB	22:J:182:GLU:CB	2.40	0.99
20:H:158:TRP:CG	20:H:161:THR:HG1	1.80	0.99
19:G:7:ALA:HB2	19:G:18:PRO:HD2	1.01	0.99
14:B:434:THR:CB	14:B:435:PRO:HD2	1.82	0.99
15:C:90:HIS:ND1	16:D:110:ASN:N	2.11	0.98
3:c:150:SER:CB	3:c:154:LYS:HD2	1.85	0.98
5:e:61:GLU:CG	11:Y:276:ALA:HB2	1.92	0.98
7:U:21:GLU:O	7:U:25:HIS:CE1	2.16	0.98
14:B:434:THR:CB	14:B:435:PRO:HD3	1.91	0.98
16:D:78:GLU:OE2	16:D:81:ARG:HD3	1.63	0.98
20:h:8:PHE:HB2	21:i:126:GLY:CA	1.92	0.98
15:C:320:PRO:HG3	34:D:501:ATP:HN62	1.24	0.98
17:E:135:ILE:HB	34:E:401:ATP:C6	1.97	0.98
4:d:97:GLN:HG3	4:d:161:GLU:OE2	0.81	0.98
10:X:258:LYS:CG	10:X:261:LEU:HD23	1.82	0.98
15:C:183:PRO:O	15:C:288:ASN:ND2	1.97	0.98
3:c:217:LEU:O	3:c:221:HIS:HB2	1.63	0.98
15:C:229:ARG:H	15:C:229:ARG:HD2	1.24	0.98
17:E:135:ILE:HG22	34:E:401:ATP:N3	1.79	0.98
20:H:158:TRP:CG	20:H:161:THR:OG1	2.15	0.98
1:a:248:PHE:O	1:a:252:LYS:HB2	1.64	0.98
15:C:234:LEU:O	15:C:237:MET:CG	2.11	0.98
19:G:6:SER:O	19:G:18:PRO:CG	2.11	0.98
17:E:330:ALA:O	17:E:334:LEU:HB2	1.64	0.97
20:H:6:TYR:HE2	20:H:126:GLY:HA2	1.29	0.97
20:H:6:TYR:HE2	20:H:126:GLY:CA	1.77	0.97
21:i:8:ARG:O	21:i:11:ILE:HD11	1.65	0.97
11:Y:36:ALA:O	11:Y:40:GLU:HB3	1.64	0.97
9:W:90:LEU:O	17:E:307:GLN:N	1.98	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:Y:189:VAL:C	11:Y:287:LEU:HD11	1.88	0.97
15:C:141:GLU:OE2	15:C:212:ILE:HG23	1.63	0.97
16:D:416:PHE:HZ	20:H:76:TYR:CD1	1.81	0.97
15:C:320:PRO:HG2	34:D:501:ATP:HN61	0.81	0.97
9:W:40:LEU:HB3	17:E:329:GLU:CD	1.90	0.97
21:I:124:PHE:HE2	22:J:118:TYR:OH	1.11	0.97
26:N:91:ARG:HH12	26:N:116:MET:HA	0.87	0.97
13:A:210:LYS:C	13:A:312:ARG:NH1	2.22	0.96
20:h:8:PHE:CA	21:i:126:GLY:O	2.11	0.96
17:E:138:LEU:HD12	34:E:401:ATP:N6	1.80	0.96
4:d:155:LYS:CA	4:d:158:ILE:HG13	1.95	0.96
15:C:132:ASP:OD1	15:C:133:PRO:CD	2.14	0.96
15:C:195:GLY:O	15:C:199:LEU:HD23	1.62	0.96
20:H:8:PHE:CA	21:I:126:GLY:O	2.13	0.96
12:Z:96:HIS:NE2	12:Z:102:HIS:HD2	1.60	0.96
16:D:267:ILE:HG21	16:D:311:THR:HG23	1.45	0.96
23:K:14:THR:H	23:K:21:LEU:HD22	1.26	0.96
16:D:413:GLU:CD	16:D:415:GLU:CG	2.35	0.96
11:Y:332:GLN:HB2	11:Y:336:ARG:HH12	1.31	0.96
21:I:121:TYR:CB	21:I:127:LYS:HE3	1.95	0.96
21:I:194:ILE:O	21:I:198:ASN:HB2	1.66	0.96
18:F:261:ILE:HD11	18:F:305:GLU:HG2	1.46	0.96
18:F:270:ASP:O	18:F:274:LEU:HB2	1.66	0.96
12:Z:195:VAL:O	12:Z:199:LYS:HB2	1.65	0.96
17:E:248:SER:CB	18:F:300:LYS:CE	2.43	0.96
16:D:163:MET:CE	16:D:222:HIS:HD2	1.41	0.96
19:G:7:ALA:CB	19:G:17:SER:HA	1.95	0.96
22:J:38:ARG:HB3	22:J:182:GLU:CB	1.95	0.96
15:C:142:LYS:HD3	15:C:201:ARG:HE	0.90	0.95
23:k:11:GLY:O	23:k:21:LEU:HD11	1.66	0.95
12:Z:145:HIS:CD2	12:Z:224:HIS:HE1	1.85	0.95
13:A:426:THR:HG23	13:A:427:PRO:HD3	1.44	0.95
14:B:434:THR:CG2	14:B:435:PRO:HD3	1.96	0.95
21:i:194:ILE:O	21:i:198:ASN:HB2	1.66	0.95
5:e:43:TRP:CB	8:V:343:PRO:HB2	1.95	0.95
10:X:258:LYS:HG3	10:X:261:LEU:HD23	0.96	0.95
21:I:124:PHE:HE2	22:J:118:TYR:CZ	1.84	0.95
3:c:245:VAL:H	9:W:428:TRP:HH2	1.08	0.95
16:D:323:ARG:NH2	34:D:501:ATP:O1G	1.99	0.95
20:h:8:PHE:HB2	21:i:126:GLY:HA3	0.95	0.95
7:U:596:ASN:HA	7:U:599:ILE:HG21	1.47	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:c:149:GLN:HB2	3:c:154:LYS:HE3	1.46	0.95
15:C:134:LEU:CD2	15:C:138:MET:HE2	1.97	0.94
4:d:101:LEU:CD2	4:d:163:TYR:HE1	1.78	0.94
14:B:246:THR:OG1	14:B:280:SER:HB3	1.67	0.94
19:G:17:SER:HB2	19:G:23:TYR:HE2	1.29	0.94
11:Y:190:ALA:N	11:Y:287:LEU:CD1	2.28	0.94
16:D:417:TYR:OH	20:H:32:GLY:N	2.00	0.94
17:E:179:GLY:C	17:E:182:LEU:HG	1.91	0.94
18:F:166:THR:HA	18:F:168:TYR:CE1	2.01	0.94
20:h:10:LEU:CB	20:h:125:GLY:HA3	1.97	0.94
9:W:90:LEU:HD11	17:E:308:ALA:N	1.80	0.94
23:k:9:ASP:HB2	23:k:22:PHE:HZ	1.15	0.94
6:f:225:ALA:O	6:f:229:VAL:HB	1.68	0.94
7:U:20:LYS:O	7:U:24:LEU:CD2	2.15	0.94
25:m:7:TYR:OH	25:m:16:PRO:CA	2.03	0.94
12:Z:96:HIS:CD2	12:Z:102:HIS:HD2	1.54	0.94
17:E:182:LEU:HD22	34:E:401:ATP:O4'	1.66	0.94
19:G:16:PHE:CE1	20:H:128:ARG:HD2	2.02	0.94
21:I:124:PHE:CE2	22:J:118:TYR:CZ	2.54	0.94
15:C:193:GLY:HA2	15:C:196:LYS:HZ2	1.31	0.94
16:D:413:GLU:HG2	16:D:415:GLU:HG3	1.50	0.93
21:i:8:ARG:HB3	21:i:11:ILE:HD13	0.95	0.93
17:E:111:LEU:HB2	17:E:112:PRO:HD3	1.50	0.93
25:M:35:THR:HA	25:M:165:ILE:O	1.68	0.93
23:K:20:ARG:HH11	23:K:25:GLU:HB2	1.30	0.93
20:h:8:PHE:HA	21:i:126:GLY:O	1.68	0.93
15:C:90:HIS:CG	15:C:91:PRO:HD3	2.02	0.93
7:U:22:PHE:CA	7:U:25:HIS:ND1	2.32	0.93
17:E:179:GLY:HA2	34:E:401:ATP:O1A	1.62	0.93
17:E:247:THR:OG1	18:F:299:GLU:CG	2.16	0.93
18:F:166:THR:CA	18:F:168:TYR:CZ	2.52	0.93
17:E:179:GLY:HA3	17:E:182:LEU:CD2	1.99	0.93
16:D:318:ASP:OD2	16:D:322:LEU:HD12	1.69	0.93
16:D:163:MET:CE	16:D:218:ALA:O	2.17	0.93
6:f:301:HIS:O	6:f:305:LEU:HB2	1.69	0.92
15:C:135:VAL:O	15:C:139:MET:SD	2.17	0.92
17:E:135:ILE:HA	34:E:401:ATP:N1	1.73	0.92
15:C:139:MET:SD	15:C:139:MET:N	2.40	0.92
19:G:17:SER:HB2	19:G:23:TYR:CE2	2.03	0.92
3:c:244:VAL:N	3:c:248:MET:HG2	1.84	0.92
16:D:267:ILE:HG21	16:D:311:THR:CG2	1.98	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:B:189:GLY:CA	34:B:501:ATP:N1	2.33	0.92
17:E:111:LEU:CB	17:E:112:PRO:CD	2.46	0.92
17:E:179:GLY:CA	17:E:182:LEU:CG	2.47	0.92
25:m:35:THR:HA	25:m:165:ILE:O	1.68	0.92
12:Z:94:TRP:HZ2	12:Z:105:ASP:OD1	1.28	0.92
16:D:417:TYR:CE1	20:H:32:GLY:HA3	2.03	0.92
17:E:179:GLY:HA3	17:E:182:LEU:HD21	1.49	0.92
7:U:590:TYR:CE2	7:U:598:ALA:HB2	2.04	0.92
15:C:230:MET:N	15:C:230:MET:SD	2.41	0.92
16:D:74:HIS:O	16:D:78:GLU:HB2	1.68	0.92
19:G:6:SER:O	19:G:18:PRO:CD	2.18	0.91
19:G:7:ALA:CA	19:G:18:PRO:HD2	1.99	0.91
21:i:8:ARG:C	21:i:11:ILE:CD1	2.43	0.91
3:c:244:VAL:HB	9:W:428:TRP:CZ3	2.05	0.91
7:U:590:TYR:HD2	7:U:598:ALA:CB	1.82	0.91
23:k:9:ASP:OD2	23:k:22:PHE:CD1	2.24	0.91
30:R:174:VAL:O	30:R:189:SER:HA	1.71	0.91
6:f:88:SER:HB2	6:f:92:VAL:CG2	2.00	0.91
9:W:39:ARG:NE	9:W:44:ILE:HD12	1.84	0.91
23:k:9:ASP:OD1	23:k:14:THR:O	1.89	0.91
12:Z:174:HIS:O	12:Z:177:ARG:NH2	2.00	0.91
19:G:7:ALA:HB3	19:G:10:ASP:CB	2.00	0.91
23:K:15:PHE:N	23:K:21:LEU:CD1	2.09	0.91
30:r:174:VAL:O	30:r:189:SER:HA	1.71	0.91
10:X:261:LEU:H	10:X:261:LEU:HD12	1.36	0.91
16:D:78:GLU:OE2	16:D:81:ARG:NH1	2.03	0.91
19:G:6:SER:O	19:G:18:PRO:HD2	1.70	0.91
4:d:154:ALA:O	4:d:158:ILE:HG12	1.71	0.91
25:M:7:TYR:HD1	25:M:16:PRO:HD3	1.11	0.91
7:U:21:GLU:C	7:U:25:HIS:ND1	2.28	0.91
15:C:90:HIS:HB3	15:C:91:PRO:HD2	1.52	0.91
15:C:134:LEU:C	15:C:138:MET:CG	2.44	0.91
15:C:214:VAL:CG1	15:C:237:MET:HE1	2.01	0.91
17:E:111:LEU:HB2	17:E:112:PRO:HD2	1.51	0.90
20:H:8:PHE:CB	21:I:126:GLY:O	2.20	0.90
18:F:432:LYS:HA	18:F:432:LYS:CE	2.00	0.90
12:Z:278:ASN:O	12:Z:282:ASN:HB2	1.71	0.90
19:G:8:GLY:O	19:G:10:ASP:OD1	1.88	0.90
25:M:7:TYR:CZ	25:M:16:PRO:CG	2.53	0.90
15:C:144:PRO:HB3	15:C:205:HIS:HE1	1.08	0.90
3:c:272:ILE:H	3:c:272:ILE:HD12	1.33	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:E:182:LEU:HD21	34:E:401:ATP:H8	1.25	0.90
12:Z:66:SER:N	12:Z:103:LYS:NZ	2.14	0.90
15:C:194:THR:HG23	15:C:355:SER:HB2	1.52	0.90
17:E:182:LEU:HD23	34:E:401:ATP:C4'	2.01	0.90
5:e:44:ASP:OD2	8:V:368:ARG:HB2	1.72	0.90
6:f:318:THR:O	6:f:322:SER:HB3	1.73	0.89
12:Z:173:GLU:HA	12:Z:176:LEU:HG	1.53	0.89
15:C:234:LEU:CD1	15:C:237:MET:SD	2.60	0.89
17:E:182:LEU:CD2	34:E:401:ATP:C4'	2.49	0.89
15:C:130:LYS:CB	15:C:134:LEU:HD12	2.02	0.89
11:Y:139:ASP:O	11:Y:143:TYR:HB2	1.71	0.89
15:C:90:HIS:CB	15:C:91:PRO:CD	2.51	0.89
15:C:140:VAL:CG1	15:C:214:VAL:CA	2.51	0.89
17:E:182:LEU:HB3	34:E:401:ATP:H3'	1.55	0.89
31:s:121:VAL:O	31:s:132:ARG:HA	1.71	0.89
1:a:201:GLY:O	1:a:205:LEU:HB2	1.73	0.89
12:Z:66:SER:H	12:Z:103:LYS:HZ2	1.14	0.89
31:S:121:VAL:O	31:S:132:ARG:HA	1.71	0.89
9:W:39:ARG:N	9:W:39:ARG:HD3	1.85	0.89
17:E:135:ILE:CG2	34:E:401:ATP:N1	2.31	0.89
17:E:179:GLY:CA	17:E:182:LEU:CD2	2.50	0.89
15:C:164:VAL:HG22	15:C:290:LYS:NZ	1.87	0.89
21:I:121:TYR:HD1	21:I:127:LYS:HE2	1.07	0.89
6:f:88:SER:CB	6:f:92:VAL:CG2	2.50	0.89
11:Y:53:TYR:O	11:Y:57:LEU:HB2	1.71	0.89
14:B:189:GLY:HA2	34:B:501:ATP:C6	2.08	0.89
15:C:193:GLY:O	15:C:196:LYS:CB	2.21	0.89
3:c:155:VAL:HA	12:Z:170:VAL:HG13	1.54	0.89
4:d:154:ALA:O	4:d:158:ILE:CG1	2.21	0.89
20:H:8:PHE:HB2	21:I:126:GLY:O	1.72	0.89
6:f:223:GLU:O	6:f:227:ALA:HB3	1.73	0.88
15:C:143:VAL:CG1	15:C:144:PRO:CD	2.47	0.88
20:h:9:SER:HB3	21:i:128:ARG:H	1.38	0.88
20:H:158:TRP:CD1	20:H:161:THR:HG1	1.90	0.88
9:W:90:LEU:CD2	17:E:307:GLN:OE1	2.22	0.88
17:E:179:GLY:H	34:E:401:ATP:PB	1.97	0.88
6:f:127:SER:O	6:f:131:MET:HB2	1.71	0.88
16:D:78:GLU:CD	16:D:81:ARG:HH11	1.80	0.88
18:F:387:CYS:SG	18:F:424:ILE:CD1	2.62	0.88
7:U:21:GLU:HA	7:U:24:LEU:CG	2.03	0.88
7:U:596:ASN:CA	7:U:599:ILE:HG22	1.97	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:W:40:LEU:CB	17:E:329:GLU:CG	2.46	0.88
10:X:324:ALA:O	10:X:328:ASP:HB2	1.74	0.88
18:F:428:GLN:NE2	18:F:428:GLN:HA	1.88	0.88
15:C:130:LYS:HB2	15:C:134:LEU:HD12	1.54	0.88
19:G:7:ALA:HB2	19:G:17:SER:HA	1.54	0.88
3:c:245:VAL:O	3:c:249:LEU:HD12	1.74	0.88
23:K:15:PHE:CA	23:K:21:LEU:HD11	1.98	0.88
9:W:89:LEU:HD12	9:W:91:SER:HB2	1.56	0.87
14:B:364:ILE:HG12	34:B:501:ATP:N6	1.90	0.87
15:C:193:GLY:O	15:C:196:LYS:N	2.06	0.87
17:E:111:LEU:CB	17:E:112:PRO:HD3	2.04	0.87
15:C:134:LEU:HB3	15:C:138:MET:HG3	1.56	0.87
19:g:46:ASP:CB	19:g:222:VAL:HG23	2.02	0.87
6:f:675:PHE:O	6:f:679:LEU:HB2	1.75	0.87
14:B:404:LEU:O	14:B:408:ARG:HB2	1.74	0.87
20:H:8:PHE:HB2	21:I:126:GLY:C	1.98	0.87
16:D:417:TYR:CB	20:H:77:SER:HA	2.04	0.87
5:e:48:VAL:HG21	8:V:368:ARG:NH1	1.90	0.87
6:f:609:VAL:O	6:f:612:LEU:HB3	1.75	0.87
21:i:8:ARG:CA	21:i:11:ILE:CD1	2.49	0.87
14:B:434:THR:HB	14:B:435:PRO:HD2	0.87	0.87
17:E:182:LEU:H	34:E:401:ATP:PA	1.97	0.87
19:G:223:GLU:O	19:G:225:PRO:HD3	1.75	0.86
11:Y:355:GLU:CG	11:Y:357:ASN:ND2	2.38	0.86
18:F:91:SER:HB2	18:F:126:THR:HA	1.58	0.86
4:d:154:ALA:O	4:d:158:ILE:CD1	2.23	0.86
15:C:184:LYS:CA	15:C:288:ASN:HD21	1.87	0.86
16:D:297:ASP:CG	16:D:326:ARG:NH2	2.33	0.86
15:C:234:LEU:C	15:C:237:MET:HG2	2.00	0.86
16:D:321:LEU:O	16:D:326:ARG:HG2	1.75	0.86
16:D:297:ASP:CA	16:D:326:ARG:NH2	2.00	0.85
16:D:297:ASP:OD1	16:D:326:ARG:NH2	2.08	0.85
16:D:416:PHE:H	20:H:33:ALA:HB1	1.40	0.85
17:E:247:THR:HB	18:F:299:GLU:HB2	0.88	0.85
15:C:184:LYS:HA	15:C:288:ASN:ND2	1.90	0.85
16:D:318:ASP:OD1	16:D:322:LEU:CB	2.25	0.85
16:D:417:TYR:HE1	20:H:32:GLY:HA3	1.40	0.85
4:d:33:LEU:HD21	4:d:48:LEU:CD1	2.06	0.85
4:d:175:ARG:NH1	4:d:200:PHE:HE2	1.68	0.85
16:D:229:ARG:HA	16:D:263:PHE:O	1.76	0.85
19:G:6:SER:C	19:G:18:PRO:HD2	2.01	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:W:40:LEU:O	17:E:329:GLU:OE1	1.95	0.85
20:H:10:LEU:HB2	20:H:125:GLY:HA3	1.58	0.85
26:N:91:ARG:NH1	26:N:116:MET:C	2.34	0.85
16:D:87:LEU:HD13	16:D:132:LEU:O	1.77	0.85
8:V:394:LEU:O	8:V:398:LEU:HB2	1.75	0.85
14:B:233:THR:HB	34:B:501:ATP:O1A	1.77	0.85
16:D:85:ILE:CB	16:D:86:PRO:HD3	2.05	0.85
7:U:602:LEU:O	7:U:606:ALA:HB2	1.77	0.84
9:W:39:ARG:CD	9:W:44:ILE:HD12	2.07	0.84
19:G:197:THR:O	19:G:201:CYS:HB3	1.77	0.84
26:n:91:ARG:HH22	26:n:117:GLY:HA2	1.42	0.84
6:f:211:ILE:O	6:f:215:ASP:HB2	1.76	0.84
17:E:182:LEU:CG	34:E:401:ATP:O5'	2.24	0.84
15:C:144:PRO:CA	15:C:205:HIS:ND1	2.26	0.84
15:C:191:PRO:HB2	15:C:355:SER:HB2	1.58	0.84
17:E:138:LEU:CD1	34:E:401:ATP:N6	2.40	0.84
16:D:163:MET:HE1	16:D:222:HIS:HB2	0.84	0.84
17:E:247:THR:OG1	18:F:299:GLU:CB	2.23	0.84
4:d:154:ALA:O	4:d:158:ILE:HD11	1.75	0.84
12:Z:274:ASN:O	12:Z:278:ASN:HB2	1.77	0.84
15:C:90:HIS:CE1	16:D:110:ASN:HB2	2.13	0.84
20:H:6:TYR:CE2	20:H:126:GLY:HA3	2.12	0.84
4:d:33:LEU:HD12	4:d:33:LEU:O	1.77	0.84
15:C:130:LYS:CB	15:C:134:LEU:HD11	1.93	0.84
16:D:78:GLU:OE2	16:D:81:ARG:CD	2.25	0.84
20:H:8:PHE:CB	21:I:126:GLY:HA3	2.06	0.84
19:g:197:THR:O	19:g:201:CYS:HB3	1.77	0.84
15:C:142:LYS:CD	15:C:201:ARG:CD	2.50	0.84
16:D:380:GLN:O	16:D:384:MET:HB2	1.76	0.84
20:H:6:TYR:CE2	20:H:126:GLY:CA	2.61	0.84
21:i:123:GLN:CB	22:j:125:ARG:HB3	2.08	0.84
7:U:590:TYR:HD2	7:U:598:ALA:HB2	1.35	0.83
11:Y:355:GLU:HG3	11:Y:357:ASN:ND2	1.93	0.83
15:C:229:ARG:HD3	15:C:230:MET:HE1	1.61	0.83
17:E:182:LEU:HD22	34:E:401:ATP:H2'	1.59	0.83
6:f:224:ASN:O	6:f:228:LYS:HB3	1.78	0.83
10:X:192:SER:O	10:X:196:THR:HB	1.78	0.83
7:U:590:TYR:CD2	7:U:598:ALA:CB	2.57	0.83
15:C:39:SER:O	15:C:43:ARG:HB2	1.77	0.83
15:C:192:PRO:CG	16:D:323:ARG:NH2	2.40	0.83
16:D:416:PHE:HZ	20:H:76:TYR:CE1	1.92	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:E:248:SER:HB3	18:F:300:LYS:CD	2.09	0.83
19:G:6:SER:O	19:G:18:PRO:HG2	1.78	0.83
23:K:14:THR:N	23:K:21:LEU:CD2	1.94	0.83
26:n:2:THR:HA	26:n:128:GLY:O	1.79	0.83
5:e:48:VAL:CG2	8:V:368:ARG:NH1	2.38	0.83
12:Z:187:LEU:HD12	12:Z:190:ARG:HG3	1.60	0.83
17:E:182:LEU:CD2	34:E:401:ATP:C2'	2.55	0.83
23:K:14:THR:C	23:K:21:LEU:CG	2.35	0.83
21:i:124:PHE:HD1	22:j:124:ARG:NH1	1.76	0.83
20:H:10:LEU:HD23	20:H:10:LEU:O	1.79	0.83
22:J:3:TYR:CZ	23:K:10:ARG:NE	2.39	0.83
3:c:250:GLU:OE2	9:W:424:LEU:HD11	1.78	0.83
7:U:708:GLN:O	7:U:712:LEU:HB2	1.78	0.83
26:N:2:THR:HA	26:N:128:GLY:O	1.79	0.83
5:e:48:VAL:CG1	8:V:368:ARG:HH12	1.92	0.83
15:C:328:ILE:CD1	34:D:501:ATP:C4	2.62	0.83
18:F:194:GLN:O	18:F:198:LEU:HB2	1.79	0.83
9:W:90:LEU:HD13	17:E:307:GLN:H	1.44	0.82
16:D:287:ARG:O	16:D:291:GLU:HB2	1.78	0.82
17:E:253:ILE:O	17:E:257:LEU:HB2	1.79	0.82
19:G:21:ARG:NE	19:G:26:GLU:OE1	2.10	0.82
17:E:182:LEU:HG	34:E:401:ATP:O1A	1.77	0.82
18:F:168:TYR:O	18:F:173:LYS:HG3	1.80	0.82
15:C:134:LEU:C	15:C:138:MET:HB2	2.04	0.82
15:C:140:VAL:HG13	15:C:214:VAL:CA	2.07	0.82
23:K:20:ARG:NH1	23:K:25:GLU:HB2	1.93	0.82
23:k:9:ASP:CB	23:k:22:PHE:HE1	1.62	0.82
7:U:21:GLU:C	7:U:24:LEU:HG	2.04	0.82
7:U:762:GLY:O	7:U:766:PHE:HB2	1.79	0.82
16:D:318:ASP:OD1	16:D:322:LEU:HG	1.80	0.82
15:C:143:VAL:CB	15:C:144:PRO:HD3	1.99	0.82
16:D:163:MET:SD	16:D:222:HIS:HD2	2.02	0.82
9:W:39:ARG:HE	9:W:44:ILE:HD11	1.00	0.82
15:C:192:PRO:HG2	16:D:323:ARG:CZ	2.09	0.82
21:i:11:ILE:H	21:i:11:ILE:HD12	1.45	0.82
3:c:33:ILE:HD11	3:c:207:TYR:HA	0.93	0.82
3:c:155:VAL:HG12	12:Z:170:VAL:O	1.80	0.82
15:C:130:LYS:HB2	15:C:134:LEU:CD1	2.06	0.82
21:I:34:CYS:HA	21:I:46:ALA:O	1.80	0.82
8:V:373:ALA:O	8:V:377:GLN:HB2	1.78	0.81
20:H:10:LEU:CB	20:H:125:GLY:HA3	2.08	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:d:233:GLU:HG3	4:d:236:THR:CG2	2.10	0.81
5:e:48:VAL:HG11	8:V:368:ARG:HH12	1.43	0.81
7:U:21:GLU:C	7:U:25:HIS:CE1	2.57	0.81
10:X:316:ASP:HB2	10:X:317:PRO:HD3	1.60	0.81
12:Z:284:ASP:O	12:Z:288:LYS:HB2	1.80	0.81
15:C:140:VAL:HG12	15:C:214:VAL:HA	1.62	0.81
15:C:245:ILE:HG12	15:C:290:LYS:HB2	1.61	0.81
20:h:9:SER:CB	21:i:128:ARG:H	1.88	0.81
11:Y:360:ASP:O	11:Y:362:LYS:N	2.12	0.81
18:F:166:THR:CG2	18:F:168:TYR:OH	2.28	0.81
11:Y:196:GLN:O	11:Y:200:LEU:HB2	1.80	0.81
16:D:169:GLY:CA	16:D:340:GLN:HG2	2.10	0.81
16:D:411:GLU:HB3	16:D:414:HIS:CE1	2.16	0.81
21:I:17:ARG:HH11	21:I:17:ARG:HG3	1.46	0.81
1:a:272:ILE:O	1:a:276:CYS:HB2	1.81	0.81
21:i:34:CYS:HA	21:i:46:ALA:O	1.80	0.81
1:a:131:THR:O	1:a:135:ILE:HB	1.80	0.81
26:N:91:ARG:NH1	26:N:116:MET:O	2.13	0.81
5:e:44:ASP:CG	8:V:368:ARG:HB2	2.04	0.81
15:C:192:PRO:CG	16:D:323:ARG:HH22	1.94	0.81
21:I:124:PHE:HD2	22:J:124:ARG:CA	1.91	0.81
12:Z:173:GLU:HG2	12:Z:176:LEU:HD11	1.61	0.81
19:G:21:ARG:NH2	19:G:26:GLU:OE2	2.14	0.81
7:U:576:PRO:O	7:U:580:ARG:HB2	1.81	0.81
13:A:287:ASP:HB3	18:F:258:GLN:HB2	1.63	0.81
17:E:138:LEU:HD12	34:E:401:ATP:HN62	1.43	0.81
15:C:143:VAL:CB	15:C:144:PRO:HD2	1.96	0.80
17:E:308:ALA:O	17:E:312:ILE:HB	1.80	0.80
15:C:40:GLN:O	15:C:44:ARG:HB2	1.82	0.80
12:Z:173:GLU:O	12:Z:177:ARG:NH2	2.13	0.80
11:Y:190:ALA:HA	11:Y:287:LEU:HD12	0.81	0.80
13:A:119:ALA:HB1	18:F:89:LEU:HD13	1.63	0.80
17:E:179:GLY:O	17:E:182:LEU:HG	1.81	0.80
21:I:124:PHE:CD2	22:J:124:ARG:CA	2.65	0.80
17:E:182:LEU:HD22	34:E:401:ATP:C3'	2.11	0.80
10:X:258:LYS:CA	10:X:261:LEU:CD2	2.56	0.80
15:C:134:LEU:C	15:C:138:MET:HG2	2.05	0.80
22:J:38:ARG:HB2	22:J:182:GLU:CB	2.11	0.80
10:X:234:GLU:HG2	16:D:339:ARG:NE	1.96	0.80
16:D:416:PHE:CE2	20:H:76:TYR:CE2	2.70	0.80
23:k:9:ASP:CG	23:k:22:PHE:HE1	1.60	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:c:249:LEU:O	3:c:253:LYS:N	2.13	0.80
16:D:87:LEU:CD1	16:D:131:ALA:HB1	2.12	0.80
11:Y:296:VAL:O	11:Y:299:MET:HB2	1.82	0.80
14:B:436:GLU:OE1	21:I:22:GLU:OE1	1.99	0.80
19:G:21:ARG:CD	19:G:26:GLU:CD	2.55	0.80
15:C:328:ILE:CD1	34:D:501:ATP:C5	2.65	0.79
6:f:232:TYR:O	6:f:236:CYS:HB2	1.82	0.79
16:D:318:ASP:OD1	16:D:322:LEU:HB2	1.82	0.79
21:i:123:GLN:HB3	22:j:125:ARG:HB3	1.64	0.79
7:U:545:LEU:O	7:U:549:ALA:HB2	1.81	0.79
21:i:9:THR:HB	21:i:126:GLY:HA2	1.65	0.79
23:K:14:THR:H	23:K:21:LEU:HD21	0.66	0.79
7:U:25:HIS:O	7:U:28:ASN:OD1	1.99	0.79
16:D:417:TYR:HB2	20:H:77:SER:CA	2.11	0.79
16:D:417:TYR:C	20:H:163:MET:O	2.26	0.79
11:Y:304:TYR:O	11:Y:307:LEU:HB3	1.83	0.79
15:C:193:GLY:O	15:C:196:LYS:HB2	1.81	0.79
15:C:193:GLY:HA2	15:C:196:LYS:NZ	1.98	0.79
15:C:194:THR:CG2	15:C:355:SER:HB2	2.13	0.79
22:J:51:ALA:H	22:J:54:GLN:HE22	1.31	0.79
29:Q:198:LYS:H	29:q:198:LYS:H	1.31	0.79
19:g:223:GLU:O	19:g:225:PRO:HD3	1.82	0.79
30:R:191:ASN:HD21	28:p:203:ARG:HH12	1.30	0.78
7:U:353:LEU:O	7:U:357:LYS:HB2	1.82	0.78
15:C:328:ILE:HD11	34:D:501:ATP:C4	2.18	0.78
7:U:7:GLY:N	8:V:264:TYR:HH	1.81	0.78
16:D:161:ASP:HB2	16:D:221:HIS:ND1	1.99	0.78
16:D:412:GLN:HA	16:D:412:GLN:NE2	1.98	0.78
17:E:182:LEU:CB	34:E:401:ATP:H3'	2.12	0.78
13:A:293:ASN:ND2	18:F:171:ARG:HH12	1.80	0.78
15:C:90:HIS:CE1	16:D:110:ASN:N	2.52	0.78
7:U:178:ALA:O	7:U:181:LEU:HB2	1.84	0.78
11:Y:189:VAL:O	11:Y:287:LEU:HD11	1.83	0.78
16:D:416:PHE:CZ	20:H:76:TYR:CD1	2.67	0.78
4:d:154:ALA:C	4:d:158:ILE:CD1	2.56	0.78
11:Y:189:VAL:C	11:Y:287:LEU:CD1	2.55	0.78
7:U:599:ILE:HD12	7:U:599:ILE:O	1.83	0.78
16:D:297:ASP:CB	16:D:326:ARG:NH2	2.47	0.78
26:N:160:LEU:O	26:N:164:MET:HB2	1.84	0.78
11:Y:358:ARG:HD2	11:Y:358:ARG:C	2.07	0.78
12:Z:139:ILE:HG22	12:Z:158:VAL:HG21	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:g:50:ILE:O	19:g:217:VAL:HA	1.84	0.78
13:A:287:ASP:N	18:F:258:GLN:HB2	1.99	0.77
14:B:364:ILE:HD13	34:B:501:ATP:N1	1.96	0.77
26:n:160:LEU:O	26:n:164:MET:HB2	1.84	0.77
19:G:7:ALA:HB2	19:G:18:PRO:HD3	0.99	0.77
14:B:278:ALA:HB1	14:B:279:PRO:CD	2.14	0.77
3:c:246:LYS:O	3:c:250:GLU:HG3	1.82	0.77
5:e:57:ARG:HG3	11:Y:293:ARG:NH2	1.99	0.77
9:W:39:ARG:CD	9:W:44:ILE:CD1	2.63	0.77
9:W:349:LYS:O	9:W:353:ASP:HB2	1.84	0.77
12:Z:187:LEU:HD13	12:Z:190:ARG:HD2	1.67	0.77
13:A:188:ARG:O	13:A:192:GLU:HB3	1.84	0.77
15:C:214:VAL:HG11	15:C:237:MET:HE1	1.67	0.77
16:D:163:MET:CG	16:D:218:ALA:CB	2.52	0.77
17:E:247:THR:CB	18:F:299:GLU:HB3	2.15	0.77
19:G:17:SER:CB	19:G:23:TYR:CE2	2.68	0.77
22:J:186:LEU:O	22:J:190:LEU:HB2	1.85	0.77
16:D:171:ASP:OD2	16:D:340:GLN:OE1	2.03	0.77
9:W:37:GLU:HB3	9:W:39:ARG:HH11	1.45	0.77
14:B:231:GLY:HA2	34:B:501:ATP:H5'2	1.66	0.77
26:N:87:CYS:HB3	26:N:91:ARG:NH2	2.00	0.77
22:j:51:ALA:H	22:j:54:GLN:HE22	1.31	0.77
3:c:246:LYS:H	9:W:428:TRP:HZ2	1.32	0.77
9:W:417:ARG:HG3	9:W:419:LYS:H	1.49	0.77
5:e:44:ASP:HB2	8:V:342:ILE:O	1.85	0.77
7:U:745:THR:O	7:U:783:TYR:HA	1.85	0.77
15:C:289:ILE:HD13	15:C:289:ILE:N	2.00	0.77
15:C:320:PRO:CG	34:D:501:ATP:HN62	1.75	0.77
17:E:259:GLU:O	17:E:263:GLN:HB2	1.85	0.77
23:K:22:PHE:HB3	23:K:25:GLU:HB3	1.67	0.77
1:a:230:ARG:HE	1:a:233:LEU:HB2	1.50	0.77
13:A:426:THR:N	13:A:427:PRO:CD	2.48	0.77
15:C:90:HIS:CB	15:C:91:PRO:HD3	2.13	0.77
16:D:297:ASP:CG	16:D:326:ARG:HH21	1.92	0.77
30:R:136:TYR:O	30:R:140:ASP:HB2	1.85	0.77
30:r:136:TYR:O	30:r:140:ASP:HB2	1.85	0.77
3:c:245:VAL:N	9:W:428:TRP:HH2	1.83	0.76
17:E:248:SER:H	18:F:299:GLU:HB3	1.50	0.76
22:j:186:LEU:O	22:j:190:LEU:HB2	1.85	0.76
12:Z:94:TRP:HH2	12:Z:105:ASP:OD1	1.66	0.76
17:E:248:SER:HB2	18:F:300:LYS:HE2	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:F:431:LYS:C	18:F:431:LYS:HE2	2.10	0.76
15:C:144:PRO:HA	15:C:205:HIS:HD1	1.47	0.76
15:C:151:ILE:O	34:D:501:ATP:H2	1.67	0.76
17:E:179:GLY:HA2	17:E:182:LEU:HG	1.66	0.76
23:K:11:GLY:O	23:K:21:LEU:HD23	1.85	0.76
23:K:20:ARG:HD3	23:K:20:ARG:C	2.11	0.76
5:e:60:LEU:CD1	11:Y:272:PHE:CE1	2.68	0.76
15:C:184:LYS:CB	15:C:288:ASN:OD1	2.34	0.76
16:D:416:PHE:CZ	20:H:76:TYR:CZ	2.73	0.76
19:g:27:TYR:CE2	25:m:7:TYR:OH	2.38	0.76
19:G:50:ILE:O	19:G:217:VAL:HA	1.84	0.76
11:Y:37:VAL:O	11:Y:41:LEU:HB3	1.85	0.76
18:F:432:LYS:HA	18:F:432:LYS:HE2	1.67	0.76
12:Z:187:LEU:CD1	12:Z:190:ARG:HD2	2.16	0.76
15:C:191:PRO:HB2	15:C:355:SER:CB	2.16	0.76
30:R:135:ALA:O	30:R:139:MET:HB3	1.86	0.76
7:U:77:SER:O	7:U:81:ALA:HB2	1.86	0.76
8:V:194:LYS:HD3	15:C:27:LYS:HD3	1.65	0.76
9:W:90:LEU:HD11	17:E:307:GLN:C	2.10	0.76
14:B:436:GLU:O	21:I:25:MET:HE1	1.85	0.76
20:H:148:GLN:OE1	20:H:161:THR:CG2	2.33	0.76
9:W:41:GLN:HB2	17:E:329:GLU:HB2	1.69	0.75
1:a:93:ALA:O	1:a:97:LEU:HB2	1.86	0.75
11:Y:190:ALA:CB	11:Y:287:LEU:HD13	2.16	0.75
17:E:179:GLY:HA3	17:E:182:LEU:CG	2.13	0.75
3:c:149:GLN:HB2	3:c:154:LYS:CE	2.16	0.75
8:V:42:ALA:O	8:V:46:GLY:HA3	1.87	0.75
14:B:364:ILE:CD1	34:B:501:ATP:C6	2.69	0.75
16:D:171:ASP:CG	16:D:340:GLN:OE1	2.28	0.75
21:i:123:GLN:OE1	22:j:118:TYR:OH	2.03	0.75
16:D:409:LYS:HE2	16:D:409:LYS:HA	1.67	0.75
25:M:7:TYR:O	25:M:21:PHE:HD2	1.69	0.75
21:i:124:PHE:CD1	22:j:124:ARG:NH1	2.54	0.75
5:e:61:GLU:CG	11:Y:276:ALA:CB	2.58	0.75
12:Z:174:HIS:HA	12:Z:177:ARG:HH22	1.45	0.75
13:A:210:LYS:C	13:A:312:ARG:HH12	1.91	0.75
16:D:171:ASP:O	16:D:175:GLN:HB2	1.86	0.75
17:E:309:ARG:O	17:E:313:LEU:HB2	1.85	0.75
19:g:46:ASP:O	19:g:222:VAL:HG22	1.87	0.75
6:f:245:ASN:O	6:f:248:LEU:HB3	1.86	0.75
10:X:234:GLU:HG2	16:D:339:ARG:HE	1.50	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:D:163:MET:CG	16:D:222:HIS:HD2	1.99	0.75
21:i:8:ARG:HB3	21:i:11:ILE:HD12	1.66	0.75
31:S:122:TYR:HA	31:S:131:GLN:O	1.87	0.75
19:G:7:ALA:HA	19:G:18:PRO:CG	2.17	0.75
23:K:177:ALA:O	23:K:181:LEU:HB2	1.87	0.75
16:D:163:MET:HG2	16:D:218:ALA:C	2.12	0.74
3:c:40:LYS:O	3:c:44:HIS:HB2	1.87	0.74
9:W:40:LEU:HD13	17:E:306:GLU:OE2	1.88	0.74
23:K:15:PHE:HD1	23:K:20:ARG:HA	1.51	0.74
30:r:135:ALA:O	30:r:139:MET:HB3	1.86	0.74
3:c:181:LEU:O	3:c:185:ASN:HB2	1.88	0.74
19:G:16:PHE:CZ	20:H:128:ARG:HD2	2.22	0.74
3:c:152:LYS:CE	16:D:77:GLU:OE2	2.33	0.74
6:f:684:PRO:O	6:f:688:ARG:HB2	1.88	0.74
7:U:22:PHE:HD1	7:U:25:HIS:CE1	2.04	0.74
31:s:122:TYR:HA	31:s:131:GLN:O	1.87	0.74
34:B:501:ATP:O2B	15:C:310:ARG:NH2	2.21	0.74
25:M:7:TYR:CD1	25:M:16:PRO:HD2	2.21	0.74
29:q:21:ALA:HB3	29:q:29:LYS:HB3	1.69	0.74
10:X:225:TRP:NE1	10:X:262:ASN:OD1	2.21	0.74
17:E:248:SER:HB3	18:F:300:LYS:HG3	0.75	0.74
18:F:90:VAL:HB	18:F:164:LEU:HD11	1.70	0.74
8:V:470:ARG:HH22	12:Z:256:GLN:HB3	1.51	0.74
12:Z:145:HIS:CD2	12:Z:224:HIS:CE1	2.73	0.74
15:C:184:LYS:HB3	15:C:288:ASN:OD1	1.86	0.74
17:E:180:LYS:N	34:E:401:ATP:O1A	2.20	0.74
23:k:177:ALA:O	23:k:181:LEU:HB2	1.87	0.74
16:D:416:PHE:N	20:H:33:ALA:HB1	2.02	0.74
5:e:48:VAL:CG1	8:V:368:ARG:NH1	2.50	0.73
18:F:387:CYS:SG	18:F:424:ILE:HD13	2.26	0.73
23:K:22:PHE:HD1	23:K:22:PHE:H	1.36	0.73
20:h:9:SER:CB	21:i:128:ARG:N	2.51	0.73
25:m:7:TYR:OH	25:m:16:PRO:HA	1.86	0.73
3:c:155:VAL:HA	12:Z:170:VAL:CG1	2.19	0.73
29:Q:59:TYR:O	29:Q:63:ASN:HB2	1.88	0.73
31:S:12:ILE:O	31:S:137:ALA:HA	1.88	0.73
8:V:171:VAL:HG22	8:V:175:MET:HE3	1.71	0.73
17:E:180:LYS:H	34:E:401:ATP:PB	2.12	0.73
18:F:305:GLU:OE2	18:F:308:ARG:HD3	1.88	0.73
15:C:134:LEU:HA	15:C:138:MET:HG3	1.13	0.73
7:U:264:VAL:O	7:U:268:LEU:HB2	1.89	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:B:393:ALA:N	34:B:501:ATP:O2'	2.20	0.73
31:s:12:ILE:O	31:s:137:ALA:HA	1.88	0.73
15:C:193:GLY:C	15:C:196:LYS:HG3	2.14	0.73
15:C:229:ARG:H	15:C:229:ARG:CD	2.02	0.73
16:D:382:SER:HB2	16:D:398:ASP:HB3	1.70	0.73
30:R:195:LEU:O	30:R:199:TYR:HB2	1.89	0.73
31:S:75:TYR:O	31:S:79:ASN:HB2	1.88	0.73
31:s:75:TYR:O	31:s:79:ASN:HB2	1.88	0.73
16:D:84:SER:H	16:D:87:LEU:HD23	1.53	0.73
16:D:297:ASP:C	16:D:326:ARG:HH22	1.97	0.73
3:c:244:VAL:HB	9:W:428:TRP:CH2	2.24	0.73
4:d:158:ILE:N	4:d:159:PRO:HD2	2.04	0.73
6:f:250:ARG:O	6:f:253:LEU:HB3	1.87	0.73
6:f:475:ASN:O	6:f:478:ARG:HB3	1.88	0.73
10:X:315:ASP:CB	10:X:318:ILE:HB	2.19	0.73
15:C:90:HIS:HB3	15:C:91:PRO:HD3	1.67	0.73
29:q:59:TYR:O	29:q:63:ASN:HB2	1.88	0.73
10:X:261:LEU:HD12	10:X:261:LEU:N	2.03	0.73
15:C:229:ARG:HH21	15:C:229:ARG:HG3	1.54	0.72
4:d:97:GLN:O	4:d:163:TYR:OH	2.07	0.72
12:Z:271:ALA:O	12:Z:275:LEU:HB2	1.88	0.72
15:C:229:ARG:HD2	15:C:229:ARG:N	2.00	0.72
16:D:78:GLU:OE2	16:D:78:GLU:HA	1.88	0.72
16:D:409:LYS:NZ	16:D:409:LYS:HB3	2.04	0.72
30:r:195:LEU:O	30:r:199:TYR:HB2	1.89	0.72
9:W:429:SER:O	9:W:433:ASN:HB3	1.89	0.72
15:C:134:LEU:C	15:C:138:MET:CB	2.62	0.72
15:C:328:ILE:HD13	34:D:501:ATP:C4	2.24	0.72
19:G:16:PHE:HE1	20:H:128:ARG:HD2	1.54	0.72
29:Q:21:ALA:HB3	29:Q:29:LYS:HB3	1.69	0.72
15:C:192:PRO:HB2	16:D:323:ARG:NH2	2.00	0.72
17:E:179:GLY:HA2	17:E:182:LEU:CD2	2.17	0.72
17:E:248:SER:CA	18:F:300:LYS:HG3	2.18	0.72
3:c:272:ILE:HD12	3:c:272:ILE:N	2.05	0.72
3:c:244:VAL:HB	9:W:428:TRP:HZ3	1.51	0.72
5:e:48:VAL:HG11	8:V:368:ARG:NH1	2.04	0.72
6:f:170:TRP:NE1	6:f:193:PRO:HB2	2.04	0.72
11:Y:271:PHE:O	11:Y:275:LEU:HB3	1.89	0.72
3:c:31:VAL:HG12	3:c:33:ILE:HG23	1.72	0.72
6:f:476:THR:O	6:f:479:LEU:HB2	1.89	0.72
9:W:39:ARG:HD3	9:W:44:ILE:HD12	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:A:426:THR:N	13:A:427:PRO:HD2	2.05	0.72
14:B:364:ILE:CD1	34:B:501:ATP:C2	2.73	0.72
21:I:8:ARG:HB3	21:I:11:ILE:HG12	1.70	0.72
16:D:381:GLU:O	16:D:385:LEU:HB2	1.90	0.72
18:F:433:ALA:O	18:F:435:LEU:HD22	1.89	0.72
10:X:379:ASP:HB3	10:X:384:VAL:H	1.53	0.72
12:Z:34:ARG:NE	12:Z:102:HIS:CE1	2.58	0.72
22:J:180:ALA:HB3	22:J:186:LEU:HD23	1.71	0.72
15:C:225:GLY:HA2	15:C:228:ALA:O	1.90	0.71
16:D:234:GLU:HB2	17:E:216:ARG:HH22	1.53	0.71
17:E:247:THR:HB	18:F:299:GLU:HB3	1.71	0.71
29:Q:102:LEU:HB2	29:Q:118:MET:HB2	1.72	0.71
17:E:248:SER:CB	18:F:300:LYS:CD	2.67	0.71
18:F:418:GLU:O	18:F:422:GLU:HG3	1.90	0.71
29:q:102:LEU:HB2	29:q:118:MET:HB2	1.72	0.71
16:D:413:GLU:HG2	16:D:415:GLU:CG	2.11	0.71
26:N:87:CYS:CA	26:N:91:ARG:HD3	2.20	0.71
9:W:90:LEU:HD13	17:E:307:GLN:N	2.05	0.71
18:F:425:LEU:HD12	18:F:425:LEU:N	2.05	0.71
4:d:154:ALA:HB1	4:d:158:ILE:HD11	1.72	0.71
9:W:40:LEU:HD12	17:E:333:LYS:HE2	1.72	0.71
12:Z:94:TRP:CH2	12:Z:105:ASP:CG	2.67	0.71
14:B:392:GLY:N	34:B:501:ATP:O2'	2.23	0.71
15:C:69:GLN:HE21	15:C:118:ASN:HD21	1.35	0.71
16:D:267:ILE:CG2	16:D:311:THR:CG2	2.68	0.71
21:I:124:PHE:CE2	22:J:124:ARG:HB3	2.26	0.71
2:b:103:LYS:HZ3	2:b:103:LYS:HB2	1.54	0.71
5:e:60:LEU:HD12	11:Y:272:PHE:CE1	2.25	0.71
15:C:193:GLY:O	15:C:196:LYS:HG3	1.90	0.71
16:D:319:PRO:O	16:D:323:ARG:NH2	2.15	0.71
1:a:341:LEU:HD13	12:Z:223:ASN:ND2	2.06	0.71
3:c:91:PHE:O	3:c:95:MET:HB2	1.90	0.71
10:X:258:LYS:HA	10:X:261:LEU:CD2	2.16	0.71
16:D:85:ILE:C	16:D:85:ILE:HD12	2.16	0.71
16:D:409:LYS:HE2	16:D:409:LYS:CA	2.21	0.71
17:E:111:LEU:N	17:E:111:LEU:HD23	2.05	0.71
7:U:22:PHE:O	7:U:25:HIS:HB2	1.90	0.71
9:W:432:LEU:O	9:W:436:MET:HB2	1.90	0.71
16:D:416:PHE:CE2	20:H:76:TYR:CZ	2.78	0.71
14:B:278:ALA:HB1	14:B:279:PRO:HD2	1.73	0.70
16:D:411:GLU:HG2	16:D:414:HIS:NE2	2.05	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:E:142:ILE:O	17:E:146:ARG:HB2	1.91	0.70
7:U:20:LYS:C	7:U:24:LEU:CD2	2.62	0.70
7:U:22:PHE:CD1	7:U:25:HIS:CE1	2.79	0.70
7:U:596:ASN:CA	7:U:599:ILE:HG23	2.05	0.70
18:F:421:MET:O	18:F:425:LEU:CD1	2.39	0.70
16:D:326:ARG:HD2	16:D:330:LYS:NZ	2.06	0.70
19:G:7:ALA:HA	19:G:18:PRO:CD	2.20	0.70
7:U:334:ALA:O	7:U:338:HIS:HB3	1.90	0.70
9:W:129:ARG:O	9:W:133:GLU:HB3	1.92	0.70
10:X:315:ASP:HB2	10:X:318:ILE:HB	1.73	0.70
12:Z:100:LYS:HG3	12:Z:101:LEU:HG	1.72	0.70
8:V:247:GLN:O	8:V:251:LEU:HB2	1.90	0.70
9:W:314:LEU:HD21	9:W:366:MET:HE3	1.74	0.70
12:Z:143:GLU:OE1	12:Z:143:GLU:N	2.22	0.70
6:f:692:LEU:O	6:f:696:LEU:HB2	1.92	0.70
8:V:185:GLN:O	8:V:189:ASP:HB2	1.91	0.70
10:X:257:CYS:O	10:X:260:MET:C	2.35	0.70
11:Y:268:TYR:HB2	11:Y:322:ALA:HB1	1.73	0.70
16:D:161:ASP:HA	16:D:218:ALA:HB2	1.72	0.70
24:L:84:LEU:O	24:L:88:MET:HB2	1.92	0.70
24:l:84:LEU:O	24:l:88:MET:HB2	1.92	0.70
9:W:445:LEU:HD12	9:W:448:LYS:HZ1	1.55	0.70
28:P:26:ARG:HH21	28:P:38:ASP:HA	1.57	0.70
29:Q:57:ALA:O	29:Q:61:GLN:HB3	1.92	0.70
20:h:9:SER:N	21:i:126:GLY:O	2.24	0.70
29:q:57:ALA:O	29:q:61:GLN:HB3	1.92	0.70
8:V:170:LEU:O	8:V:170:LEU:HD23	1.91	0.70
10:X:314:ARG:HE	10:X:314:ARG:CA	2.05	0.70
15:C:328:ILE:HD11	34:D:501:ATP:C2	2.26	0.70
21:I:121:TYR:CZ	21:I:127:LYS:NZ	2.33	0.70
24:L:134:ILE:O	24:L:144:ILE:HA	1.92	0.70
16:D:163:MET:HA	16:D:167:ILE:HG12	1.74	0.70
17:E:247:THR:O	17:E:251:ARG:NH2	2.25	0.70
21:I:143:TYR:HB2	21:I:146:GLN:HE21	1.57	0.70
24:L:72:ILE:HA	24:L:133:LEU:O	1.92	0.70
27:O:26:VAL:O	31:s:185:ARG:NH1	2.25	0.70
23:k:9:ASP:OD2	23:k:22:PHE:HE1	1.39	0.70
24:l:72:ILE:HA	24:l:133:LEU:O	1.92	0.70
20:H:10:LEU:HD23	20:H:10:LEU:C	2.17	0.69
21:I:138:GLY:O	21:I:145:PHE:HA	1.92	0.69
13:A:426:THR:CG2	13:A:427:PRO:HD3	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:D:54:LEU:O	16:D:58:GLU:HB2	1.92	0.69
20:h:10:LEU:HD23	20:h:10:LEU:C	2.17	0.69
7:U:202:VAL:HG12	7:U:215:ASN:HB2	1.74	0.69
7:U:493:VAL:O	7:U:497:LEU:HB2	1.92	0.69
3:c:150:SER:O	3:c:154:LYS:NZ	2.20	0.69
5:e:44:ASP:CG	8:V:368:ARG:HD2	2.17	0.69
6:f:192:VAL:HG13	6:f:193:PRO:HD3	0.77	0.69
8:V:448:GLU:CD	8:V:461:LYS:HG3	2.17	0.69
13:A:210:LYS:HB3	13:A:312:ARG:HD2	1.74	0.69
14:B:436:GLU:HA	21:I:25:MET:HE2	1.75	0.69
19:g:141:ILE:HA	19:g:150:GLN:O	1.91	0.69
21:i:124:PHE:HA	22:j:124:ARG:HA	1.72	0.69
24:l:134:ILE:O	24:l:144:ILE:HA	1.92	0.69
26:n:91:ARG:HG2	26:n:91:ARG:HH11	1.58	0.69
3:c:257:LYS:HE2	10:X:395:LYS:HA	1.73	0.69
15:C:320:PRO:CB	34:D:501:ATP:N6	2.54	0.69
3:c:244:VAL:N	3:c:248:MET:CG	2.55	0.69
7:U:400:ALA:O	7:U:404:ALA:HB2	1.92	0.69
18:F:291:ILE:HB	18:F:306:VAL:HG11	1.73	0.69
21:i:138:GLY:O	21:i:145:PHE:HA	1.92	0.69
7:U:134:VAL:O	7:U:138:PHE:CB	2.40	0.69
10:X:264:PRO:HG2	10:X:295:LYS:HD3	1.74	0.69
10:X:338:VAL:HG23	10:X:339:ILE:HG13	1.74	0.69
15:C:142:LYS:CD	15:C:201:ARG:HD2	2.11	0.69
17:E:135:ILE:HG22	34:E:401:ATP:C4	2.28	0.69
17:E:179:GLY:HA2	17:E:182:LEU:CG	2.22	0.69
19:G:127:GLN:HE21	20:H:127:VAL:HB	1.57	0.69
22:J:38:ARG:CD	22:J:182:GLU:CB	2.70	0.69
21:i:143:TYR:HB2	21:i:146:GLN:HE21	1.57	0.69
26:n:15:GLY:HA2	26:n:175:ARG:O	1.93	0.69
13:A:156:LYS:H	13:A:255:ARG:HH21	1.39	0.69
14:B:392:GLY:CA	34:B:501:ATP:O2'	2.41	0.69
15:C:165:ILE:HA	15:C:290:LYS:HE3	1.75	0.69
15:C:183:PRO:C	15:C:288:ASN:HD21	2.00	0.69
16:D:87:LEU:HD12	16:D:131:ALA:HB1	1.72	0.69
16:D:318:ASP:OD1	16:D:322:LEU:CG	2.40	0.69
17:E:247:THR:OG1	18:F:299:GLU:HB3	1.92	0.69
19:G:141:ILE:HA	19:G:150:GLN:O	1.91	0.69
25:M:7:TYR:O	25:M:21:PHE:CD2	2.46	0.69
26:N:91:ARG:NH1	26:N:96:ALA:HB3	2.08	0.69
21:i:11:ILE:HD12	21:i:11:ILE:N	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:p:26:ARG:HH21	28:p:38:ASP:HA	1.57	0.69
4:d:159:PRO:O	4:d:163:TYR:HB2	1.92	0.69
5:e:57:ARG:HB3	5:e:57:ARG:NH2	2.07	0.69
14:B:362:LYS:HG2	14:B:384:ILE:HD13	1.74	0.69
16:D:163:MET:HG3	16:D:222:HIS:CD2	2.28	0.69
6:f:501:LEU:HD22	6:f:518:THR:HG23	1.75	0.69
6:f:502:LEU:HG	6:f:540:GLN:HE22	1.58	0.69
17:E:247:THR:CB	18:F:299:GLU:CG	2.71	0.69
18:F:311:LEU:O	18:F:315:ASN:HB2	1.92	0.69
8:V:211:TYR:O	8:V:214:HIS:HB2	1.94	0.68
8:V:490:SER:HB3	12:Z:275:LEU:HD23	1.75	0.68
9:W:90:LEU:CD1	17:E:308:ALA:N	2.56	0.68
10:X:189:ALA:O	10:X:193:ALA:HB2	1.93	0.68
18:F:172:VAL:O	18:F:175:MET:N	2.23	0.68
19:G:7:ALA:CB	19:G:10:ASP:HB3	2.20	0.68
19:G:7:ALA:HA	19:G:18:PRO:HG2	1.76	0.68
26:n:92:GLU:CD	26:n:92:GLU:H	1.95	0.68
2:b:93:ALA:O	2:b:97:LEU:HB2	1.92	0.68
15:C:115:ALA:HB3	15:C:125:LYS:HB3	1.74	0.68
21:I:8:ARG:O	21:I:11:ILE:CD1	2.40	0.68
21:I:121:TYR:CD2	21:I:127:LYS:HE3	2.21	0.68
20:h:35:SER:OG	20:h:48:THR:HA	1.93	0.68
8:V:202:ALA:O	8:V:205:LEU:HB2	1.93	0.68
15:C:328:ILE:HD11	34:D:501:ATP:C5	2.26	0.68
26:N:15:GLY:HA2	26:N:175:ARG:O	1.93	0.68
21:i:8:ARG:HD3	21:i:11:ILE:HD13	1.75	0.68
15:C:144:PRO:CB	15:C:205:HIS:HE1	1.80	0.68
27:O:163:ILE:HA	27:O:168:GLY:HA3	1.75	0.68
4:d:154:ALA:CB	4:d:158:ILE:HD11	2.23	0.68
6:f:166:VAL:O	6:f:170:TRP:HB2	1.94	0.68
3:c:290:VAL:O	3:c:294:SER:HB3	1.93	0.68
7:U:21:GLU:N	7:U:24:LEU:CD2	2.56	0.68
9:W:37:GLU:CG	9:W:39:ARG:HH12	2.07	0.68
16:D:297:ASP:HA	16:D:326:ARG:HH22	0.54	0.68
17:E:180:LYS:N	34:E:401:ATP:PB	2.67	0.68
20:h:167:TYR:O	20:h:171:LYS:HB2	1.93	0.68
6:f:313:GLU:O	6:f:317:LEU:HB2	1.94	0.68
11:Y:190:ALA:N	11:Y:287:LEU:HD13	2.01	0.68
12:Z:94:TRP:HH2	12:Z:105:ASP:CG	2.01	0.68
27:o:163:ILE:HA	27:o:168:GLY:HA3	1.75	0.68
22:j:177:THR:HB	22:j:179:GLU:HB2	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:f:129:LEU:O	6:f:133:MET:HB3	1.94	0.67
16:D:161:ASP:OD1	16:D:222:HIS:NE2	2.27	0.67
23:K:146:VAL:HA	23:K:150:GLY:O	1.94	0.67
3:c:58:LEU:HA	3:c:108:VAL:HA	1.76	0.67
3:c:282:ARG:HG3	3:c:284:LEU:HD13	1.76	0.67
5:e:43:TRP:HB3	8:V:344:ASP:H	1.60	0.67
7:U:21:GLU:O	7:U:24:LEU:CG	2.36	0.67
15:C:132:ASP:CB	15:C:133:PRO:CD	2.72	0.67
6:f:228:LYS:O	6:f:232:TYR:HB3	1.94	0.67
7:U:134:VAL:O	7:U:138:PHE:HB3	1.94	0.67
7:U:599:ILE:HG13	16:D:56:VAL:HG21	1.77	0.67
16:D:272:THR:HA	16:D:316:THR:HA	1.76	0.67
26:N:87:CYS:HA	26:N:91:ARG:HD3	1.76	0.67
15:C:134:LEU:O	15:C:138:MET:CG	2.43	0.67
17:E:182:LEU:HD22	34:E:401:ATP:C4'	2.17	0.67
14:B:248:LEU:HD12	14:B:282:VAL:HG22	1.76	0.67
16:D:413:GLU:OE2	16:D:415:GLU:HG3	1.93	0.67
20:H:167:TYR:O	20:H:171:LYS:HB2	1.93	0.67
19:g:127:GLN:NE2	20:h:128:ARG:O	2.28	0.67
23:k:99:HIS:O	23:k:103:TYR:HB2	1.95	0.67
1:a:196:ARG:O	1:a:200:LEU:HB2	1.95	0.67
7:U:612:ASP:HA	7:U:615:ARG:HD3	1.76	0.67
9:W:428:TRP:O	9:W:432:LEU:N	2.27	0.67
10:X:354:ILE:HG21	10:X:361:VAL:HG21	1.77	0.67
16:D:85:ILE:HD12	16:D:85:ILE:O	1.94	0.67
12:Z:192:THR:O	12:Z:196:HIS:ND1	2.28	0.67
16:D:267:ILE:CG2	16:D:311:THR:HG21	2.25	0.67
16:D:323:ARG:NH1	34:D:501:ATP:O1G	2.28	0.67
17:E:249:ALA:N	18:F:299:GLU:OE1	2.24	0.66
17:E:340:GLY:HA3	34:E:401:ATP:H1'	1.76	0.66
23:k:146:VAL:HA	23:k:150:GLY:O	1.94	0.66
26:n:18:SER:HB2	26:n:31:THR:H	1.59	0.66
13:A:119:ALA:HB1	18:F:89:LEU:CD1	2.25	0.66
15:C:132:ASP:CG	15:C:133:PRO:CD	2.68	0.66
16:D:212:LYS:HD2	16:D:310:ALA:HB1	1.76	0.66
20:H:35:SER:OG	20:H:48:THR:HA	1.94	0.66
23:K:99:HIS:O	23:K:103:TYR:HB2	1.95	0.66
3:c:46:ARG:NH2	12:Z:166:GLU:OE1	2.27	0.66
13:A:287:ASP:CB	18:F:258:GLN:HB2	2.25	0.66
21:i:123:GLN:HB2	22:j:125:ARG:HB3	1.77	0.66
3:c:122:LEU:H	3:c:193:ILE:HD11	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:f:193:PRO:O	6:f:208:LEU:HD12	1.94	0.66
15:C:137:LEU:HD12	15:C:223:PHE:HD1	1.61	0.66
16:D:204:MET:HA	16:D:333:PHE:HB2	1.76	0.66
30:r:12:VAL:HB	30:r:179:VAL:HB	1.77	0.66
1:a:357:CYS:HA	12:Z:201:LEU:HD22	1.77	0.66
7:U:599:ILE:HD12	7:U:599:ILE:C	2.19	0.66
9:W:37:GLU:OE1	9:W:39:ARG:CZ	2.43	0.66
13:A:426:THR:H	13:A:427:PRO:CD	2.08	0.66
19:G:8:GLY:C	19:G:10:ASP:H	2.04	0.66
22:j:98:VAL:HG11	22:j:100:ASP:OD2	1.96	0.66
7:U:182:LYS:O	7:U:185:MET:HB3	1.96	0.66
12:Z:187:LEU:HD12	12:Z:187:LEU:O	1.95	0.66
12:Z:263:ALA:O	12:Z:267:ARG:HB2	1.96	0.66
16:D:170:MET:HG2	16:D:173:GLN:HB2	1.75	0.66
17:E:248:SER:CB	18:F:300:LYS:HE2	2.24	0.66
6:f:541:THR:O	6:f:545:LYS:HB2	1.94	0.66
34:B:501:ATP:O2B	15:C:310:ARG:CZ	2.44	0.66
21:I:124:PHE:CZ	22:J:118:TYR:CE1	2.83	0.66
26:N:18:SER:HB2	26:N:31:THR:H	1.59	0.66
29:q:6:GLY:HA2	29:q:15:VAL:HG12	1.77	0.66
3:c:36:LEU:HB3	12:Z:17:LEU:HD22	1.78	0.66
6:f:130:ALA:O	6:f:134:SER:HB3	1.95	0.66
18:F:426:GLU:N	18:F:426:GLU:OE1	2.27	0.66
30:R:12:VAL:HB	30:R:179:VAL:HB	1.77	0.66
7:U:229:VAL:HG13	7:U:268:LEU:HD11	1.78	0.66
15:C:193:GLY:O	15:C:196:LYS:CG	2.43	0.66
16:D:173:GLN:NE2	16:D:334:PRO:O	2.29	0.66
17:E:182:LEU:CD2	34:E:401:ATP:C3'	2.71	0.66
21:i:149:GLN:NE2	21:i:150:SER:O	2.26	0.66
2:b:103:LYS:NZ	2:b:103:LYS:H	1.93	0.66
7:U:22:PHE:HA	7:U:25:HIS:CG	2.31	0.66
7:U:576:PRO:HG3	7:U:579:ARG:HH21	1.61	0.66
9:W:222:LEU:HD22	9:W:223:LYS:HZ2	1.61	0.66
23:K:20:ARG:H	23:K:20:ARG:HD2	1.59	0.66
15:C:140:VAL:HG11	15:C:214:VAL:O	1.96	0.65
8:V:448:GLU:OE2	8:V:461:LYS:CG	2.43	0.65
11:Y:155:ASP:O	11:Y:159:ARG:HB2	1.95	0.65
14:B:364:ILE:HD13	34:B:501:ATP:C2	2.31	0.65
17:E:175:PRO:O	17:E:180:LYS:NZ	2.29	0.65
21:I:121:TYR:CB	21:I:127:LYS:CE	2.66	0.65
21:I:124:PHE:CZ	22:J:118:TYR:CZ	2.82	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:J:38:ARG:HD3	22:J:182:GLU:CB	2.25	0.65
23:k:77:ALA:HB3	23:k:142:LEU:HB2	1.77	0.65
4:d:203:PRO:HD2	4:d:206:MET:HG2	1.77	0.65
5:e:61:GLU:CD	11:Y:276:ALA:HB2	2.22	0.65
6:f:625:LYS:O	6:f:629:LYS:HB2	1.95	0.65
15:C:137:LEU:HD22	15:C:137:LEU:H	1.61	0.65
19:G:21:ARG:HD2	19:G:26:GLU:CD	2.22	0.65
3:c:155:VAL:CG1	12:Z:170:VAL:O	2.45	0.65
11:Y:355:GLU:CG	11:Y:357:ASN:HD21	2.10	0.65
23:K:77:ALA:HB3	23:K:142:LEU:HB2	1.76	0.65
29:Q:6:GLY:HA2	29:Q:15:VAL:HG12	1.77	0.65
20:H:148:GLN:CD	20:H:161:THR:HG21	2.22	0.65
23:K:14:THR:C	23:K:21:LEU:CD2	2.69	0.65
15:C:99:VAL:HA	15:C:123:LEU:HB3	1.77	0.65
15:C:230:MET:O	15:C:232:ARG:N	2.29	0.65
17:E:182:LEU:HB3	34:E:401:ATP:O5'	1.97	0.65
19:G:46:ASP:O	19:G:222:VAL:HG23	1.96	0.65
7:U:598:ALA:O	7:U:602:LEU:HB2	1.95	0.65
15:C:195:GLY:O	15:C:199:LEU:CB	2.44	0.65
16:D:411:GLU:CB	16:D:414:HIS:CE1	2.79	0.65
31:S:4:PRO:O	32:T:100:ARG:NH2	2.29	0.65
7:U:173:VAL:HG22	7:U:175:GLY:H	1.61	0.65
9:W:356:ASN:O	9:W:360:GLU:HB2	1.96	0.65
12:Z:187:LEU:HD12	12:Z:190:ARG:CG	2.26	0.65
15:C:90:HIS:ND1	16:D:109:SER:HA	2.12	0.65
16:D:416:PHE:HE2	20:H:76:TYR:CE2	2.14	0.65
10:X:343:SER:HB2	10:X:387:ILE:HB	1.79	0.65
15:C:214:VAL:HG11	15:C:237:MET:CE	2.27	0.65
9:W:90:LEU:O	9:W:90:LEU:HD13	1.96	0.65
17:E:69:PHE:O	17:E:80:VAL:HA	1.97	0.65
26:n:144:ARG:NH2	26:n:151:GLU:OE1	2.30	0.65
7:U:789:ILE:HB	7:U:911:ILE:HA	1.79	0.64
12:Z:145:HIS:HD2	12:Z:224:HIS:HE1	1.45	0.64
14:B:421:LYS:O	14:B:425:ASN:HB2	1.97	0.64
19:G:42:VAL:O	19:G:48:ALA:HA	1.97	0.64
6:f:254:GLY:O	6:f:257:ARG:HB3	1.98	0.64
9:W:90:LEU:O	9:W:90:LEU:HD22	1.96	0.64
12:Z:156:GLU:O	12:Z:158:VAL:HG23	1.97	0.64
12:Z:248:ALA:O	12:Z:252:LYS:HB2	1.97	0.64
22:j:146:GLN:O	22:j:153:TYR:HA	1.97	0.64
23:k:76:CYS:SG	23:k:77:ALA:N	2.70	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:d:143:LEU:O	8:V:440:LYS:NZ	2.31	0.64
4:d:158:ILE:N	4:d:159:PRO:CD	2.61	0.64
15:C:137:LEU:HD22	15:C:137:LEU:N	2.12	0.64
16:D:85:ILE:HG23	16:D:86:PRO:HD2	1.70	0.64
19:G:54:LYS:NZ	19:G:213:SER:O	2.30	0.64
23:K:76:CYS:SG	23:K:77:ALA:N	2.70	0.64
26:N:144:ARG:NH2	26:N:151:GLU:OE1	2.30	0.64
19:g:39:SER:O	19:g:167:ALA:HA	1.98	0.64
6:f:536:SER:O	6:f:540:GLN:HB2	1.96	0.64
13:A:288:GLY:HA3	18:F:266:LYS:HB2	1.79	0.64
15:C:164:VAL:HG13	15:C:165:ILE:HG13	1.78	0.64
16:D:161:ASP:OD1	16:D:222:HIS:CE1	2.50	0.64
23:K:14:THR:C	23:K:21:LEU:HD21	2.21	0.64
27:O:140:ASP:OD1	32:t:171:ARG:NH2	2.30	0.64
1:a:360:VAL:O	1:a:364:GLU:HB2	1.98	0.64
3:c:33:ILE:HG13	3:c:206:ASN:O	1.96	0.64
7:U:364:VAL:O	7:U:368:ALA:HB3	1.98	0.64
7:U:598:ALA:O	7:U:602:LEU:CB	2.45	0.64
34:B:501:ATP:PG	15:C:310:ARG:HH22	2.19	0.64
15:C:144:PRO:HA	15:C:205:HIS:CG	2.29	0.64
16:D:201:GLY:HA2	16:D:306:LYS:HA	1.79	0.64
19:G:7:ALA:N	19:G:18:PRO:HD2	2.13	0.64
25:M:96:SER:O	25:M:100:SER:HB3	1.98	0.64
32:t:31:GLY:O	32:t:182:ARG:NH2	2.31	0.64
8:V:448:GLU:OE2	8:V:461:LYS:HG2	1.98	0.64
9:W:6:SER:O	9:W:10:ASP:HB3	1.97	0.64
17:E:141:GLN:O	17:E:145:LEU:HB3	1.96	0.64
21:I:119:GLN:HE21	21:I:123:GLN:HE22	1.45	0.64
22:J:146:GLN:O	22:J:153:TYR:HA	1.97	0.64
11:Y:375:LEU:O	11:Y:379:ARG:HB2	1.98	0.64
1:a:273:GLN:HG2	1:a:300:ALA:HB1	1.78	0.64
6:f:312:GLU:HG3	6:f:492:SER:HA	1.80	0.64
7:U:21:GLU:N	7:U:24:LEU:HD23	2.13	0.64
8:V:79:VAL:HG22	8:V:80:LYS:HG2	1.79	0.64
13:A:287:ASP:O	13:A:289:ALA:N	2.30	0.64
15:C:193:GLY:CA	15:C:196:LYS:HE3	2.28	0.64
16:D:163:MET:HE2	16:D:222:HIS:CD2	2.18	0.64
18:F:168:TYR:O	18:F:173:LYS:CG	2.45	0.64
18:F:267:LEU:O	18:F:271:ALA:HB2	1.98	0.64
20:H:158:TRP:CD2	20:H:161:THR:OG1	2.51	0.64
21:I:123:GLN:NE2	22:J:79:ASP:OD1	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:p:62:THR:OG1	29:q:85:ARG:NH2	2.31	0.64
30:r:19:ARG:HE	30:r:29:GLN:HE22	1.45	0.64
7:U:356:THR:HG22	7:U:717:ILE:HD13	1.79	0.64
11:Y:190:ALA:HB2	11:Y:287:LEU:HD13	1.80	0.64
24:L:206:THR:H	24:L:209:ASN:HD21	1.46	0.64
3:c:131:GLN:HA	3:c:134:GLU:HG2	1.79	0.64
6:f:281:ILE:O	6:f:285:CYS:HB2	1.98	0.64
17:E:334:LEU:HB3	17:E:371:VAL:HG11	1.78	0.64
19:G:39:SER:O	19:G:167:ALA:HA	1.98	0.64
19:g:27:TYR:HA	19:g:30:LYS:HZ3	1.63	0.64
9:W:39:ARG:HD3	9:W:39:ARG:H	1.60	0.63
16:D:75:ALA:O	16:D:79:VAL:HG23	1.98	0.63
16:D:318:ASP:OD1	16:D:322:LEU:N	2.30	0.63
24:l:107:ARG:NH2	32:t:79:ASP:OD2	2.26	0.63
27:o:30:ASN:OD1	27:o:187:ARG:NH2	2.31	0.63
1:a:244:ASN:ND2	1:a:276:CYS:SG	2.71	0.63
4:d:235:THR:C	4:d:237:ILE:H	2.05	0.63
8:V:100:MET:H	8:V:104:THR:HG21	1.63	0.63
16:D:163:MET:HG2	16:D:218:ALA:CA	2.27	0.63
30:R:19:ARG:HE	30:R:29:GLN:HE22	1.45	0.63
1:a:230:ARG:HH21	1:a:233:LEU:HD13	1.62	0.63
5:e:56:LEU:HD12	5:e:56:LEU:N	2.04	0.63
21:I:149:GLN:NE2	21:I:150:SER:O	2.26	0.63
27:O:30:ASN:OD1	27:O:187:ARG:NH2	2.31	0.63
6:f:654:VAL:HA	6:f:657:ILE:HD12	1.81	0.63
20:h:8:PHE:C	21:i:126:GLY:C	2.67	0.63
24:l:206:THR:H	24:l:209:ASN:HD21	1.46	0.63
25:m:168:ALA:HB1	25:m:171:ALA:HB3	1.80	0.63
1:a:25:LEU:HD13	1:a:40:GLN:HG2	1.80	0.63
6:f:79:ARG:HE	6:f:95:PRO:HG3	1.62	0.63
9:W:428:TRP:HA	9:W:432:LEU:HB2	1.80	0.63
12:Z:187:LEU:CD1	12:Z:190:ARG:CD	2.77	0.63
14:B:364:ILE:HD11	34:B:501:ATP:C2	2.34	0.63
16:D:180:ALA:O	16:D:306:LYS:NZ	2.31	0.63
20:H:139:TRP:HA	20:H:144:PRO:HA	1.81	0.63
19:g:42:VAL:O	19:g:48:ALA:HA	1.98	0.63
26:n:21:THR:HG22	26:n:26:ILE:HG13	1.81	0.63
6:f:136:GLU:O	6:f:140:LEU:HB2	1.98	0.63
8:V:42:ALA:O	8:V:46:GLY:CA	2.47	0.63
13:A:329:PRO:HA	13:A:332:MET:HB2	1.80	0.63
29:Q:48:GLY:HA3	29:Q:100:VAL:HA	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:Y:271:PHE:O	11:Y:275:LEU:CB	2.46	0.63
14:B:434:THR:HG22	14:B:435:PRO:HD3	1.76	0.63
22:J:40:ILE:HA	22:J:211:MET:O	1.99	0.63
29:q:48:GLY:HA3	29:q:100:VAL:HA	1.79	0.63
1:a:355:PHE:O	1:a:359:ASP:HB2	1.98	0.63
4:d:33:LEU:HD12	4:d:33:LEU:C	2.20	0.63
9:W:358:VAL:O	9:W:362:ASN:HB2	1.99	0.63
10:X:333:GLN:HB3	10:X:337:ARG:HH12	1.63	0.63
16:D:132:LEU:CD2	16:D:137:ASN:OD1	2.33	0.63
18:F:406:ILE:HG22	18:F:422:GLU:OE1	1.96	0.63
23:k:10:ARG:HG3	23:k:10:ARG:O	1.98	0.63
5:e:44:ASP:OD1	8:V:368:ARG:HB2	1.97	0.63
7:U:529:ILE:HG12	7:U:556:MET:HE3	1.81	0.63
19:G:19:GLU:OE2	19:G:19:GLU:HA	1.99	0.63
26:N:21:THR:HG22	26:N:26:ILE:HG13	1.81	0.63
19:g:54:LYS:NZ	19:g:213:SER:O	2.30	0.63
4:d:101:LEU:N	4:d:163:TYR:OH	2.32	0.62
5:e:43:TRP:CG	8:V:343:PRO:HB2	2.33	0.62
11:Y:194:PHE:HB3	11:Y:230:ALA:HB2	1.81	0.62
13:A:286:ASP:N	18:F:258:GLN:HG2	2.14	0.62
1:a:171:SER:O	1:a:175:ASP:HB2	1.98	0.62
5:e:57:ARG:HG3	5:e:57:ARG:HH21	1.64	0.62
5:e:60:LEU:HD13	11:Y:272:PHE:CE1	2.34	0.62
20:H:149:SER:HA	20:H:155:TYR:HA	1.81	0.62
24:L:186:GLU:HA	24:L:189:LYS:HG2	1.81	0.62
32:T:31:GLY:O	32:T:182:ARG:NH2	2.31	0.62
25:m:47:PHE:HB2	25:m:214:SER:HB3	1.81	0.62
13:A:426:THR:H	13:A:427:PRO:HD2	1.64	0.62
15:C:130:LYS:CB	15:C:134:LEU:HD13	2.25	0.62
15:C:142:LYS:HD3	15:C:201:ARG:CZ	2.25	0.62
16:D:68:LEU:O	16:D:72:PHE:HB2	1.99	0.62
3:c:152:LYS:HE2	16:D:77:GLU:CD	2.23	0.62
5:e:45:ASP:O	5:e:49:GLU:HB3	2.00	0.62
5:e:57:ARG:HB3	5:e:57:ARG:CZ	2.29	0.62
11:Y:189:VAL:O	11:Y:287:LEU:CD1	2.47	0.62
14:B:189:GLY:CA	34:B:501:ATP:C6	2.82	0.62
18:F:90:VAL:CB	18:F:164:LEU:HD11	2.29	0.62
4:d:78:LEU:HD13	4:d:98:LEU:HD22	1.81	0.62
10:X:314:ARG:HE	10:X:314:ARG:HA	1.63	0.62
21:I:17:ARG:HG3	21:I:17:ARG:NH1	2.15	0.62
22:j:40:ILE:HA	22:j:211:MET:O	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:B:403:GLY:O	14:B:407:LEU:HB2	1.99	0.62
15:C:113:ARG:NH2	15:C:130:LYS:O	2.33	0.62
16:D:163:MET:SD	16:D:222:HIS:CD2	2.83	0.62
18:F:166:THR:HA	18:F:168:TYR:OH	1.98	0.62
24:L:86:ASN:O	24:L:90:GLN:HB2	2.00	0.62
25:M:168:ALA:HB1	25:M:171:ALA:HB3	1.80	0.62
31:S:108:ASN:O	31:S:124:PHE:HB2	1.99	0.62
25:m:96:SER:O	25:m:100:SER:HB3	1.98	0.62
27:o:7:VAL:HG22	27:o:12:ILE:HG12	1.80	0.62
27:o:18:THR:HB	27:o:31:CYS:H	1.65	0.62
6:f:127:SER:O	6:f:131:MET:CB	2.46	0.62
8:V:96:ARG:H	8:V:141:THR:HG21	1.65	0.62
15:C:193:GLY:HA2	15:C:196:LYS:CE	2.30	0.62
17:E:248:SER:CB	18:F:300:LYS:HG2	1.94	0.62
23:K:95:GLU:HG2	23:K:107:MET:HE1	1.81	0.62
25:M:47:PHE:HB2	25:M:214:SER:HB3	1.82	0.62
31:s:108:ASN:O	31:s:124:PHE:HB2	2.00	0.62
31:s:210:LEU:O	31:s:212:LYS:NZ	2.32	0.62
1:a:252:LYS:HD2	1:a:255:TRP:HB2	1.81	0.62
6:f:628:ASP:HB2	6:f:657:ILE:HD13	1.80	0.62
9:W:456:GLN:HG3	12:Z:218:GLY:HA2	1.81	0.62
19:G:6:SER:O	19:G:18:PRO:CB	2.47	0.62
19:G:7:ALA:HB2	19:G:18:PRO:N	2.07	0.62
23:k:48:LEU:HB3	23:k:218:ALA:HB3	1.82	0.62
10:X:258:LYS:CB	10:X:261:LEU:CD2	2.77	0.62
17:E:317:ALA:HA	17:E:320:ILE:HD12	1.82	0.62
23:K:48:LEU:HB3	23:K:218:ALA:HB3	1.82	0.62
27:O:15:GLY:HA2	27:O:174:ASP:O	2.00	0.62
27:o:15:GLY:HA2	27:o:174:ASP:O	2.00	0.62
4:d:103:LEU:O	4:d:106:LEU:HB3	1.99	0.62
7:U:740:GLY:O	7:U:743:ASN:ND2	2.33	0.62
8:V:486:ILE:HG21	11:Y:377:LEU:HD11	1.82	0.62
10:X:258:LYS:HA	10:X:261:LEU:HD23	1.80	0.62
10:X:314:ARG:HE	10:X:314:ARG:H	1.48	0.62
15:C:193:GLY:C	15:C:196:LYS:HE3	2.24	0.62
16:D:326:ARG:HD2	16:D:330:LYS:HZ2	1.62	0.62
31:S:35:ILE:O	32:T:151:ARG:NH2	2.32	0.62
23:k:95:GLU:HG2	23:k:107:MET:HE1	1.81	0.62
25:m:48:GLY:HA2	25:m:212:GLU:O	2.00	0.62
1:a:365:MET:O	1:a:369:HIS:HB2	2.00	0.61
6:f:478:ARG:HD3	6:f:504:VAL:HG13	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:V:148:ARG:NH2	8:V:197:THR:O	2.31	0.61
13:A:347:ASP:O	13:A:351:ARG:NH2	2.33	0.61
16:D:78:GLU:OE2	16:D:81:ARG:CG	2.48	0.61
21:I:124:PHE:CD2	22:J:124:ARG:CB	2.83	0.61
27:O:7:VAL:HG22	27:O:12:ILE:HG12	1.80	0.61
20:h:139:TRP:HA	20:h:144:PRO:HA	1.81	0.61
25:m:68:ASN:ND2	25:m:224:HIS:O	2.33	0.61
5:e:52:PHE:CB	5:e:57:ARG:HD3	2.29	0.61
7:U:155:LEU:O	7:U:158:ARG:NH1	2.34	0.61
7:U:710:ARG:HG2	7:U:737:LEU:HD21	1.81	0.61
12:Z:70:LEU:HD11	12:Z:108:ILE:HG23	1.83	0.61
20:h:166:ASN:HB3	20:h:169:ASN:HB2	1.83	0.61
10:X:314:ARG:HE	10:X:314:ARG:N	1.98	0.61
12:Z:183:THR:O	12:Z:186:THR:HG22	2.01	0.61
15:C:27:LYS:HG3	16:D:40:LEU:HD11	1.82	0.61
20:h:149:SER:HA	20:h:155:TYR:HA	1.81	0.61
23:k:9:ASP:HB3	23:k:22:PHE:HE1	1.25	0.61
2:b:15:TYR:O	2:b:25:ARG:NH1	2.33	0.61
13:A:240:VAL:HG21	13:A:260:LEU:HD21	1.81	0.61
14:B:245:ALA:HB1	14:B:279:PRO:O	2.00	0.61
15:C:355:SER:H	16:D:324:PRO:HG2	1.65	0.61
16:D:92:PHE:HA	16:D:103:VAL:HG12	1.81	0.61
18:F:427:VAL:HG23	18:F:427:VAL:O	2.00	0.61
27:O:20:ALA:HB3	27:O:28:ASP:HB3	1.82	0.61
21:i:239:LYS:NZ	21:i:243:GLU:OE2	2.33	0.61
3:c:272:ILE:H	3:c:272:ILE:CD1	2.06	0.61
6:f:586:PRO:O	6:f:590:PHE:HB2	2.01	0.61
7:U:522:GLY:O	7:U:559:ARG:NH2	2.33	0.61
16:D:338:ARG:HD2	16:D:341:LYS:HD2	1.82	0.61
19:G:7:ALA:CA	19:G:10:ASP:OD2	2.48	0.61
24:L:35:THR:O	24:L:160:SER:HA	2.01	0.61
24:L:135:ALA:HA	24:L:143:HIS:O	2.00	0.61
26:N:19:ARG:NH2	26:N:168:GLY:O	2.32	0.61
21:i:8:ARG:HA	21:i:11:ILE:HD11	1.82	0.61
27:o:20:ALA:HB3	27:o:28:ASP:HB3	1.82	0.61
4:d:175:ARG:CZ	4:d:200:PHE:HE2	2.14	0.61
6:f:190:GLU:C	6:f:193:PRO:HD2	2.25	0.61
7:U:321:GLN:HA	7:U:324:LYS:HB3	1.81	0.61
14:B:120:HIS:HA	14:B:134:SER:HA	1.83	0.61
25:M:68:ASN:ND2	25:M:224:HIS:O	2.33	0.61
3:c:273:LYS:H	3:c:273:LYS:HZ3	1.47	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:U:609:ASP:O	7:U:615:ARG:NH1	2.33	0.61
9:W:91:SER:HA	17:E:306:GLU:HB3	1.83	0.61
13:A:233:THR:HB	13:A:269:ALA:HB1	1.83	0.61
24:l:86:ASN:O	24:l:90:GLN:HB2	2.00	0.61
26:n:19:ARG:NH2	26:n:168:GLY:O	2.32	0.61
3:c:249:LEU:HA	3:c:252:ALA:HB3	1.82	0.61
11:Y:377:LEU:O	11:Y:381:GLN:HB2	2.01	0.61
13:A:140:VAL:HG12	13:A:152:PRO:HB3	1.82	0.61
14:B:364:ILE:HD13	34:B:501:ATP:C6	2.36	0.61
15:C:89:VAL:HB	15:C:92:GLU:HB2	1.81	0.61
15:C:133:PRO:O	15:C:136:SER:N	2.31	0.61
15:C:143:VAL:HG12	15:C:144:PRO:CD	2.09	0.61
16:D:167:ILE:CG2	16:D:174:LYS:HD2	2.23	0.61
20:H:166:ASN:HB3	20:H:169:ASN:HB2	1.83	0.61
22:j:133:ILE:O	22:j:144:LEU:HA	2.01	0.61
26:n:91:ARG:HH11	26:n:91:ARG:CG	2.14	0.61
3:c:155:VAL:HG23	3:c:155:VAL:O	2.00	0.61
4:d:154:ALA:C	4:d:158:ILE:CG1	2.74	0.61
6:f:93:PRO:HB2	6:f:137:ARG:HE	1.66	0.61
8:V:62:HIS:HA	8:V:65:ARG:HB3	1.82	0.61
9:W:428:TRP:CZ3	9:W:432:LEU:HD22	2.36	0.61
31:S:35:ILE:HB	32:T:151:ARG:HH12	1.66	0.61
3:c:219:ASN:O	3:c:223:LYS:CB	2.49	0.60
5:e:44:ASP:O	8:V:368:ARG:HD3	2.01	0.60
6:f:412:ALA:HA	6:f:447:ALA:HB2	1.82	0.60
7:U:717:ILE:HG13	7:U:727:LYS:HD3	1.83	0.60
9:W:90:LEU:HD22	9:W:90:LEU:C	2.26	0.60
11:Y:173:ASP:HB3	11:Y:176:ARG:HG2	1.82	0.60
13:A:188:ARG:O	13:A:192:GLU:CB	2.48	0.60
15:C:134:LEU:O	15:C:139:MET:CE	2.47	0.60
18:F:89:LEU:C	18:F:89:LEU:HD12	2.25	0.60
3:c:152:LYS:CE	16:D:77:GLU:CD	2.74	0.60
4:d:2:TYR:HB3	4:d:25:ARG:HH22	1.64	0.60
7:U:368:ALA:HA	7:U:371:ILE:HB	1.83	0.60
9:W:94:ARG:NH2	9:W:135:LYS:O	2.33	0.60
9:W:356:ASN:O	9:W:360:GLU:CB	2.48	0.60
10:X:380:GLN:HE22	11:Y:318:TYR:HB2	1.65	0.60
18:F:291:ILE:HB	18:F:306:VAL:CG1	2.30	0.60
23:K:20:ARG:H	23:K:20:ARG:CD	2.13	0.60
29:Q:38:MET:O	29:Q:65:GLN:NE2	2.34	0.60
24:l:186:GLU:HA	24:l:189:LYS:HG2	1.81	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:c:144:VAL:HB	3:c:158:ASP:HB3	1.82	0.60
4:d:158:ILE:O	4:d:158:ILE:HG22	2.01	0.60
5:e:52:PHE:CD1	5:e:55:GLN:OE1	2.53	0.60
12:Z:225:GLN:OE1	12:Z:225:GLN:N	2.34	0.60
17:E:182:LEU:N	34:E:401:ATP:O1A	2.23	0.60
23:k:15:PHE:HD1	23:k:20:ARG:HA	1.66	0.60
6:f:691:PRO:HG2	6:f:745:LEU:HB2	1.82	0.60
7:U:353:LEU:HD13	7:U:385:PHE:HZ	1.66	0.60
17:E:56:ILE:HB	17:E:100:LEU:HB2	1.84	0.60
18:F:150:LEU:HB3	18:F:164:LEU:HD12	1.82	0.60
21:I:239:LYS:NZ	21:I:243:GLU:OE2	2.33	0.60
25:M:48:GLY:HA2	25:M:212:GLU:O	2.00	0.60
30:R:141:ARG:HH21	29:q:142:ILE:HG21	1.66	0.60
32:T:1:THR:N	32:T:104:ASN:OD1	2.34	0.60
24:l:135:ALA:HA	24:l:143:HIS:O	2.00	0.60
5:e:52:PHE:CB	5:e:55:GLN:OE1	2.49	0.60
6:f:586:PRO:HA	6:f:589:SER:HB2	1.84	0.60
10:X:414:LEU:HD22	11:Y:380:VAL:HG11	1.83	0.60
22:J:68:ASN:HA	22:J:211:MET:HE1	1.83	0.60
27:O:177:VAL:HB	27:O:184:ASP:HB2	1.84	0.60
17:E:129:ASN:HB3	17:E:189:SER:HB3	1.82	0.60
22:J:133:ILE:O	22:J:144:LEU:HA	2.01	0.60
25:M:192:GLU:HA	25:M:195:LYS:HE3	1.84	0.60
24:l:34:ALA:HA	24:l:161:ILE:O	2.01	0.60
7:U:60:ALA:O	7:U:64:ALA:HB2	2.01	0.60
8:V:259:LEU:HD11	8:V:294:ARG:HD2	1.82	0.60
14:B:230:THR:O	34:B:501:ATP:O4'	2.20	0.60
15:C:140:VAL:HG13	15:C:140:VAL:O	2.01	0.60
16:D:417:TYR:HB2	20:H:77:SER:CB	2.31	0.60
17:E:181:THR:HB	34:E:401:ATP:O2A	2.01	0.60
20:H:50:LYS:N	20:H:207:ASN:O	2.33	0.60
23:K:209:LYS:O	23:K:214:ASN:ND2	2.34	0.60
19:g:46:ASP:O	19:g:222:VAL:CG2	2.49	0.60
23:k:209:LYS:O	23:k:214:ASN:ND2	2.34	0.60
25:m:192:GLU:HA	25:m:195:LYS:HE3	1.84	0.60
26:n:120:MET:H	32:t:61:GLN:HE22	1.50	0.60
4:d:154:ALA:CA	4:d:158:ILE:HD11	2.30	0.60
7:U:682:TYR:HA	7:U:685:GLN:HG2	1.83	0.60
11:Y:37:VAL:O	11:Y:41:LEU:CB	2.50	0.60
11:Y:53:TYR:O	11:Y:57:LEU:CB	2.46	0.60
16:D:416:PHE:HE2	20:H:76:TYR:CD2	2.20	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:G:103:TYR:O	27:O:81:ARG:NH1	2.33	0.60
24:L:34:ALA:HA	24:L:161:ILE:O	2.01	0.60
32:t:1:THR:N	32:t:104:ASN:OD1	2.34	0.60
5:e:57:ARG:HH21	5:e:57:ARG:CG	2.14	0.60
7:U:252:LEU:HD11	7:U:264:VAL:HG11	1.82	0.60
14:B:222:VAL:HG22	14:B:349:ARG:HB2	1.84	0.60
15:C:72:TYR:HA	16:D:112:TYR:H	1.66	0.60
18:F:432:LYS:HA	18:F:432:LYS:NZ	2.16	0.60
1:a:172:TYR:HE2	1:a:200:LEU:HA	1.64	0.60
7:U:500:ASN:HA	7:U:503:GLN:HG2	1.84	0.60
11:Y:13:LYS:HZ2	11:Y:146:ARG:HB3	1.65	0.60
27:O:18:THR:HB	27:O:31:CYS:H	1.65	0.60
29:q:38:MET:O	29:q:65:GLN:NE2	2.34	0.60
1:a:51:ALA:O	1:a:86:GLN:NE2	2.33	0.59
11:Y:228:MET:SD	11:Y:295:TYR:OH	2.60	0.59
14:B:436:GLU:O	21:I:25:MET:CE	2.49	0.59
16:D:318:ASP:CG	16:D:322:LEU:HB2	2.27	0.59
23:k:203:LYS:HA	23:k:206:MET:HG2	1.84	0.59
24:l:35:THR:O	24:l:160:SER:HA	2.01	0.59
4:d:34:ASN:ND2	7:U:22:PHE:HB3	2.18	0.59
4:d:161:GLU:O	4:d:161:GLU:HG2	2.00	0.59
6:f:129:LEU:O	6:f:133:MET:CB	2.50	0.59
7:U:27:LEU:HD13	7:U:63:VAL:HG21	1.83	0.59
9:W:186:ILE:HD11	9:W:208:LYS:HG3	1.84	0.59
34:B:501:ATP:O2A	34:B:501:ATP:H4'	2.03	0.59
15:C:328:ILE:HD11	34:D:501:ATP:C6	2.37	0.59
20:H:39:LYS:HE2	20:H:144:PRO:HG2	1.84	0.59
23:K:32:LYS:HZ3	23:K:173:ALA:H	1.50	0.59
27:O:136:ALA:O	27:O:140:ASP:HB2	2.02	0.59
32:t:180:ASP:HB3	32:t:183:SER:HB3	1.84	0.59
8:V:204:ASP:HA	8:V:207:ALA:HB3	1.84	0.59
27:o:136:ALA:O	27:o:140:ASP:HB2	2.02	0.59
3:c:179:SER:HG	7:U:770:TRP:CG	2.20	0.59
5:e:45:ASP:O	5:e:49:GLU:CB	2.50	0.59
11:Y:331:ASP:O	11:Y:335:SER:HB3	2.03	0.59
11:Y:355:GLU:HG2	11:Y:357:ASN:ND2	2.17	0.59
15:C:134:LEU:HA	15:C:138:MET:SD	2.33	0.59
16:D:85:ILE:HG23	16:D:86:PRO:HD3	0.66	0.59
20:h:39:LYS:HE2	20:h:144:PRO:HG2	1.84	0.59
1:a:54:ASP:HA	1:a:57:ILE:HG22	1.85	0.59
3:c:76:PRO:HB3	12:Z:84:LYS:HG2	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:f:265:ALA:O	6:f:268:LEU:HB2	2.03	0.59
7:U:160:LEU:HA	7:U:163:PHE:HB3	1.82	0.59
9:W:251:TYR:HE1	9:W:267:LEU:HD12	1.67	0.59
15:C:286:THR:HG23	15:C:289:ILE:HD12	1.82	0.59
16:D:79:VAL:O	16:D:83:GLN:NE2	2.35	0.59
3:c:245:VAL:HG12	3:c:246:LYS:HG3	1.83	0.59
8:V:480:ILE:HG13	12:Z:264:SER:HA	1.83	0.59
11:Y:287:LEU:HD12	11:Y:287:LEU:O	2.03	0.59
11:Y:359:PRO:O	11:Y:362:LYS:HB2	2.02	0.59
14:B:313:LEU:O	14:B:346:ARG:NH1	2.35	0.59
15:C:151:ILE:C	34:D:501:ATP:C2	2.77	0.59
15:C:219:LEU:O	15:C:222:LYS:N	2.31	0.59
18:F:68:ALA:O	18:F:72:LYS:HB2	2.03	0.59
19:G:27:TYR:HA	19:G:30:LYS:HZ3	1.67	0.59
21:I:47:ALA:HB3	21:I:212:GLU:HB3	1.84	0.59
24:L:41:LYS:NZ	24:L:180:MET:O	2.35	0.59
28:P:194:LYS:NZ	28:P:196:THR:OG1	2.36	0.59
29:q:164:LEU:O	29:q:168:GLN:NE2	2.36	0.59
6:f:313:GLU:O	6:f:317:LEU:CB	2.51	0.59
15:C:337:ASN:ND2	15:C:376:VAL:O	2.35	0.59
17:E:248:SER:CB	18:F:300:LYS:HE3	2.13	0.59
19:G:7:ALA:HB3	19:G:17:SER:HA	1.83	0.59
20:H:71:HIS:HA	20:H:218:PHE:H	1.67	0.59
29:Q:164:LEU:O	29:Q:168:GLN:NE2	2.36	0.59
27:o:98:LEU:HB2	27:o:113:ILE:HB	1.85	0.59
9:W:76:GLU:HA	9:W:79:GLU:HB2	1.84	0.59
15:C:132:ASP:CG	15:C:133:PRO:HD2	2.27	0.59
15:C:191:PRO:HB2	15:C:194:THR:HG23	1.85	0.59
19:G:71:LYS:O	19:G:95:ARG:NH2	2.36	0.59
32:T:180:ASP:HB3	32:T:183:SER:HB3	1.84	0.59
19:g:128:ASN:OD1	20:h:6:TYR:OH	2.18	0.59
20:h:6:TYR:HE2	20:h:126:GLY:CA	2.15	0.59
21:i:15:GLU:CD	21:i:15:GLU:H	2.11	0.59
21:i:123:GLN:HB3	22:j:125:ARG:NE	2.17	0.59
28:p:194:LYS:NZ	28:p:196:THR:OG1	2.36	0.59
6:f:556:ARG:NH1	6:f:786:GLN:OE1	2.36	0.59
8:V:104:THR:HA	8:V:107:ARG:HD3	1.83	0.59
13:A:98:CYS:HB3	14:B:130:GLU:HB2	1.85	0.59
15:C:320:PRO:O	15:C:325:ARG:NH1	2.35	0.59
19:G:21:ARG:HD2	19:G:26:GLU:OE2	2.02	0.59
20:H:10:LEU:HB3	20:H:125:GLY:HA3	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:O:98:LEU:HB2	27:O:113:ILE:HB	1.85	0.59
4:d:102:ASN:O	4:d:106:LEU:N	2.31	0.59
18:F:404:GLY:O	18:F:408:LEU:HB2	2.03	0.59
31:S:210:LEU:O	31:S:212:LYS:NZ	2.32	0.59
1:a:18:GLN:NE2	1:a:47:ASP:OD2	2.36	0.58
2:b:26:LEU:HD11	2:b:80:PRO:HG3	1.84	0.58
7:U:602:LEU:O	7:U:606:ALA:CB	2.49	0.58
11:Y:355:GLU:HG2	11:Y:357:ASN:HD21	1.67	0.58
17:E:312:ILE:O	17:E:316:HIS:ND1	2.34	0.58
19:G:17:SER:O	19:G:19:GLU:N	2.35	0.58
25:M:108:LEU:HD11	25:M:137:LEU:HB3	1.85	0.58
4:d:11:ARG:HH12	4:d:14:PRO:HB3	1.67	0.58
6:f:487:LEU:HD23	6:f:524:MET:HE1	1.85	0.58
9:W:40:LEU:CD1	17:E:333:LYS:HE2	2.32	0.58
10:X:316:ASP:CB	10:X:317:PRO:HD3	2.33	0.58
11:Y:320:ALA:HA	11:Y:323:PHE:HB2	1.85	0.58
17:E:265:ASP:OD2	17:E:291:ARG:NH1	2.36	0.58
18:F:90:VAL:CG1	18:F:164:LEU:HD11	2.32	0.58
22:j:98:VAL:CG1	22:j:100:ASP:OD2	2.51	0.58
26:n:41:ILE:HG12	26:n:76:VAL:HG22	1.85	0.58
27:o:177:VAL:HB	27:o:184:ASP:HB2	1.84	0.58
9:W:39:ARG:CB	9:W:43:VAL:HB	2.33	0.58
13:A:355:PHE:O	13:A:359:ALA:HB2	2.04	0.58
16:D:162:VAL:O	16:D:162:VAL:HG12	2.03	0.58
17:E:56:ILE:O	17:E:99:ALA:HA	2.04	0.58
21:I:8:ARG:HD3	21:I:11:ILE:HG13	1.85	0.58
20:h:71:HIS:HA	20:h:218:PHE:H	1.67	0.58
23:k:100:TRP:O	30:r:57:ARG:NH2	2.37	0.58
5:e:44:ASP:OD1	8:V:368:ARG:CB	2.52	0.58
6:f:618:GLU:HG2	6:f:623:LYS:HD2	1.84	0.58
13:A:113:ILE:O	13:A:121:PHE:HB2	2.03	0.58
19:G:7:ALA:HB2	19:G:17:SER:CA	2.29	0.58
22:J:177:THR:O	22:J:177:THR:OG1	2.20	0.58
22:J:180:ALA:HB3	22:J:186:LEU:CD2	2.32	0.58
21:i:218:ARG:NH1	21:i:223:THR:OG1	2.35	0.58
22:j:68:ASN:HA	22:j:211:MET:HE1	1.83	0.58
3:c:156:VAL:HG23	3:c:156:VAL:O	2.03	0.58
3:c:295:ASN:HD22	12:Z:267:ARG:HH22	1.52	0.58
4:d:160:ALA:HB3	4:d:163:TYR:HB2	1.86	0.58
6:f:226:TYR:O	6:f:230:CYS:CB	2.52	0.58
7:U:43:ASP:O	7:U:46:GLU:HB2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:U:220:LEU:HD11	7:U:252:LEU:HD13	1.85	0.58
8:V:448:GLU:OE2	8:V:461:LYS:HG3	2.04	0.58
10:X:315:ASP:HB3	10:X:318:ILE:HB	1.86	0.58
4:d:35:PHE:HB2	4:d:48:LEU:HD22	1.84	0.58
6:f:80:ARG:O	6:f:84:SER:HB3	2.03	0.58
10:X:393:VAL:HG12	10:X:396:THR:H	1.68	0.58
11:Y:232:GLU:O	11:Y:236:LEU:N	2.37	0.58
11:Y:377:LEU:O	11:Y:381:GLN:CB	2.51	0.58
15:C:134:LEU:HA	15:C:138:MET:HG2	0.58	0.58
15:C:191:PRO:CB	15:C:355:SER:CB	2.82	0.58
17:E:97:ARG:HH21	17:E:111:LEU:HB2	1.69	0.58
1:a:320:VAL:HB	1:a:336:VAL:HG23	1.85	0.58
6:f:536:SER:HA	6:f:539:LEU:HB3	1.84	0.58
7:U:648:VAL:O	7:U:652:ALA:HB2	2.04	0.58
13:A:101:ILE:HA	13:A:113:ILE:HG12	1.85	0.58
13:A:184:ILE:O	13:A:188:ARG:HB2	2.04	0.58
14:B:294:ARG:O	15:C:267:SER:OG	2.22	0.58
16:D:355:SER:HB3	16:D:394:VAL:H	1.67	0.58
17:E:179:GLY:HA2	34:E:401:ATP:O3A	2.01	0.58
18:F:382:GLU:O	18:F:386:ARG:CB	2.51	0.58
24:l:26:MET:HE1	24:l:148:CYS:HB2	1.86	0.58
30:r:50:ALA:O	30:r:54:PHE:HB3	2.04	0.58
7:U:12:LEU:HD22	7:U:20:LYS:HD3	1.86	0.58
8:V:470:ARG:HH21	12:Z:253:THR:HA	1.69	0.58
9:W:362:ASN:HA	9:W:365:ILE:HG12	1.85	0.58
9:W:401:THR:HG23	9:W:402:ILE:HD12	1.85	0.58
9:W:428:TRP:CE3	9:W:432:LEU:HD22	2.39	0.58
9:W:455:LEU:HD12	9:W:456:GLN:HG2	1.85	0.58
10:X:258:LYS:HD2	10:X:270:LEU:HD22	1.84	0.58
11:Y:210:SER:HB3	11:Y:212:GLU:HG2	1.85	0.58
17:E:182:LEU:CB	34:E:401:ATP:O5'	2.51	0.58
17:E:247:THR:CB	18:F:299:GLU:HG3	2.31	0.58
18:F:73:ILE:O	18:F:77:SER:CB	2.51	0.58
23:K:203:LYS:HA	23:K:206:MET:HG2	1.84	0.58
24:l:41:LYS:NZ	24:l:180:MET:O	2.35	0.58
28:p:2:SER:OG	28:p:3:ILE:N	2.37	0.58
3:c:146:ASP:HB3	3:c:156:VAL:HG21	1.86	0.58
4:d:245:GLN:O	4:d:249:TYR:HB3	2.03	0.58
6:f:138:GLU:O	6:f:142:TYR:HB2	2.03	0.58
7:U:519:VAL:HG23	7:U:520:MET:HG2	1.85	0.58
7:U:648:VAL:O	7:U:652:ALA:CB	2.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:Y:104:MET:O	11:Y:108:ALA:HB3	2.04	0.58
17:E:320:ILE:HG23	17:E:362:VAL:HG21	1.86	0.58
19:G:41:ALA:HB3	19:G:166:THR:HB	1.85	0.58
26:n:167:ASP:HB3	26:n:170:SER:HB2	1.86	0.58
28:p:29:GLY:HA3	28:p:34:MET:HA	1.85	0.58
3:c:150:SER:OG	3:c:154:LYS:CE	2.52	0.58
4:d:216:VAL:HB	4:d:223:TYR:HB2	1.86	0.58
7:U:229:VAL:O	7:U:233:LEU:HB2	2.04	0.58
13:A:286:ASP:OD1	18:F:267:LEU:HD22	2.04	0.58
18:F:240:CYS:O	18:F:244:THR:OG1	2.21	0.58
21:I:106:PRO:HD2	21:I:109:GLN:HE21	1.69	0.58
28:P:29:GLY:HA3	28:P:34:MET:HA	1.85	0.58
19:g:103:TYR:O	27:o:81:ARG:NH1	2.37	0.58
30:r:154:ASP:OD1	30:r:157:ARG:NH1	2.37	0.58
7:U:565:ALA:O	7:U:569:SER:HB2	2.04	0.57
8:V:338:LEU:HD13	8:V:397:ARG:HD2	1.86	0.57
9:W:407:ASP:HB2	10:X:344:ARG:HG3	1.86	0.57
9:W:452:ILE:HD11	12:Z:210:SER:HB2	1.86	0.57
17:E:275:MET:HB3	17:E:277:MET:HE2	1.86	0.57
21:I:121:TYR:HB3	21:I:127:LYS:HE3	1.82	0.57
30:R:154:ASP:OD1	30:R:157:ARG:NH1	2.37	0.57
32:t:166:ARG:NH1	32:t:170:GLU:OE2	2.37	0.57
4:d:175:ARG:CZ	4:d:200:PHE:CE2	2.80	0.57
5:e:56:LEU:H	5:e:56:LEU:CD1	2.07	0.57
6:f:209:MET:SD	6:f:213:GLN:NE2	2.78	0.57
7:U:644:TYR:HA	15:C:58:LEU:HD21	1.87	0.57
11:Y:40:GLU:HG3	11:Y:52:PRO:HB3	1.86	0.57
15:C:90:HIS:CE1	16:D:109:SER:C	2.82	0.57
15:C:229:ARG:HG3	15:C:229:ARG:NH2	2.19	0.57
16:D:86:PRO:HB2	16:D:134:LYS:HE3	1.86	0.57
28:P:2:SER:OG	28:P:3:ILE:N	2.37	0.57
28:P:60:VAL:O	28:P:64:ALA:HB2	2.05	0.57
31:s:4:PRO:O	32:t:100:ARG:NH2	2.37	0.57
2:b:99:HIS:NE2	12:Z:59:ASP:OD2	2.29	0.57
4:d:159:PRO:O	4:d:163:TYR:N	2.31	0.57
12:Z:165:GLU:HG2	12:Z:166:GLU:HG2	1.85	0.57
15:C:245:ILE:HG23	15:C:290:LYS:HB3	1.85	0.57
17:E:179:GLY:HA2	17:E:182:LEU:HD23	1.85	0.57
24:L:204:ASP:HA	24:L:239:ARG:HH22	1.68	0.57
30:R:50:ALA:O	30:R:54:PHE:HB3	2.04	0.57
20:h:50:LYS:N	20:h:207:ASN:O	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:m:61:GLY:O	25:m:64:LYS:NZ	2.38	0.57
25:m:108:LEU:HD11	25:m:137:LEU:HB3	1.85	0.57
6:f:170:TRP:CE2	6:f:193:PRO:HB2	2.38	0.57
7:U:568:GLU:O	7:U:572:ARG:HB2	2.05	0.57
9:W:37:GLU:HB3	9:W:39:ARG:HH12	0.75	0.57
9:W:429:SER:O	9:W:433:ASN:CB	2.53	0.57
9:W:430:GLN:O	9:W:434:SER:OG	2.22	0.57
10:X:252:LYS:O	10:X:256:LEU:HB3	2.04	0.57
15:C:140:VAL:CG1	15:C:214:VAL:O	2.52	0.57
16:D:416:PHE:O	20:H:33:ALA:C	2.47	0.57
20:H:10:LEU:CD1	20:H:125:GLY:O	2.52	0.57
26:N:41:ILE:HG12	26:N:76:VAL:HG22	1.85	0.57
26:N:178:ALA:HB3	26:N:185:GLU:HB2	1.86	0.57
32:T:89:HIS:NE2	32:T:124:TYR:O	2.37	0.57
32:T:166:ARG:NH1	32:T:170:GLU:OE2	2.37	0.57
19:g:41:ALA:HB3	19:g:166:THR:HB	1.85	0.57
21:i:47:ALA:HB3	21:i:212:GLU:HB3	1.84	0.57
24:l:204:ASP:HA	24:l:239:ARG:HH22	1.69	0.57
3:c:217:LEU:O	3:c:221:HIS:CB	2.46	0.57
10:X:299:LEU:O	10:X:301:ASP:N	2.37	0.57
15:C:132:ASP:CB	15:C:133:PRO:HD2	2.34	0.57
21:i:35:LEU:O	21:i:45:LEU:HA	2.04	0.57
26:n:178:ALA:HB3	26:n:185:GLU:HB2	1.86	0.57
4:d:61:TRP:HB3	4:d:65:ARG:HH11	1.69	0.57
7:U:367:THR:HG22	7:U:403:THR:HG21	1.87	0.57
9:W:427:ASP:O	9:W:431:LYS:N	2.35	0.57
13:A:286:ASP:HA	18:F:258:GLN:HG3	1.79	0.57
17:E:182:LEU:HD12	17:E:183:LEU:N	2.19	0.57
22:J:96:LEU:HA	29:Q:62:LYS:HE3	1.86	0.57
24:L:26:MET:HE1	24:L:148:CYS:HB2	1.86	0.57
19:g:71:LYS:O	19:g:95:ARG:NH2	2.36	0.57
3:c:56:LEU:HA	3:c:111:TRP:HA	1.86	0.57
5:e:55:GLN:HG2	5:e:56:LEU:HD12	1.87	0.57
7:U:247:GLN:O	7:U:251:ASP:HB3	2.05	0.57
10:X:315:ASP:HB3	10:X:318:ILE:CG1	2.34	0.57
13:A:360:ARG:HA	13:A:366:ARG:HH22	1.70	0.57
16:D:83:GLN:HG2	16:D:140:VAL:HG11	1.87	0.57
16:D:167:ILE:HD12	16:D:214:MET:SD	2.37	0.57
21:I:35:LEU:O	21:I:45:LEU:HA	2.04	0.57
25:M:7:TYR:HE1	25:M:16:PRO:CG	1.63	0.57
1:a:132:LYS:O	1:a:136:GLU:CB	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:Y:326:GLY:HA2	11:Y:329:PHE:HB2	1.85	0.57
14:B:125:THR:OG1	14:B:126:SER:N	2.35	0.57
15:C:133:PRO:HB2	15:C:137:LEU:HD21	1.86	0.57
16:D:416:PHE:HE1	20:H:64:LYS:HB3	1.69	0.57
21:I:13:SER:C	21:I:15:GLU:H	2.12	0.57
26:N:167:ASP:HB3	26:N:170:SER:HB2	1.86	0.57
22:j:96:LEU:HA	29:q:62:LYS:HE3	1.85	0.57
8:V:88:GLY:HA3	8:V:118:GLN:HE21	1.69	0.57
9:W:426:ASN:O	9:W:430:GLN:HB3	2.05	0.57
11:Y:101:ARG:NH2	11:Y:126:LYS:O	2.37	0.57
18:F:439:ALA:HB1	24:L:60:GLN:HG2	1.86	0.57
20:h:74:LEU:HD21	20:h:134:LEU:HD22	1.87	0.57
24:l:37:GLY:O	24:l:158:ALA:HA	2.05	0.57
6:f:631:LYS:HA	6:f:634:LYS:HZ2	1.70	0.57
17:E:138:LEU:CD1	34:E:401:ATP:HN61	2.18	0.57
26:N:7:GLN:HA	26:N:12:VAL:HA	1.86	0.57
7:U:77:SER:O	7:U:81:ALA:CB	2.53	0.56
9:W:178:GLU:OE2	9:W:181:GLU:N	2.38	0.56
12:Z:7:GLN:HA	12:Z:159:THR:HG23	1.87	0.56
13:A:101:ILE:HD12	13:A:138:MET:HB3	1.87	0.56
14:B:284:ILE:HB	14:B:329:MET:HG2	1.87	0.56
15:C:193:GLY:O	15:C:196:LYS:CA	2.52	0.56
15:C:235:PHE:HZ	15:C:276:LEU:HD23	1.70	0.56
19:G:8:GLY:O	19:G:10:ASP:N	2.38	0.56
21:I:34:CYS:H	21:I:164:ILE:HG13	1.70	0.56
24:L:92:CYS:O	24:L:96:ARG:CB	2.53	0.56
30:R:55:TRP:NE1	31:S:97:TYR:OH	2.38	0.56
21:i:8:ARG:CD	21:i:11:ILE:HD13	2.35	0.56
7:U:21:GLU:CB	7:U:24:LEU:HD21	2.29	0.56
11:Y:13:LYS:HZ3	11:Y:143:TYR:HD1	1.53	0.56
20:H:6:TYR:CE2	20:H:126:GLY:HA2	2.22	0.56
23:K:41:GLN:NE2	23:K:151:PRO:O	2.38	0.56
1:a:132:LYS:O	1:a:136:GLU:HB2	2.05	0.56
3:c:298:GLN:HG3	12:Z:259:VAL:HG13	1.87	0.56
6:f:226:TYR:O	6:f:230:CYS:HB2	2.06	0.56
7:U:400:ALA:O	7:U:404:ALA:CB	2.52	0.56
8:V:50:GLU:HA	8:V:54:LYS:HG3	1.87	0.56
8:V:106:ARG:O	8:V:110:HIS:ND1	2.38	0.56
9:W:374:THR:HA	9:W:412:ILE:HA	1.86	0.56
9:W:397:VAL:HG23	9:W:404:ALA:HB3	1.86	0.56
13:A:423:PHE:N	13:A:423:PHE:CD1	2.73	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:C:78:ARG:HH12	15:C:80:MET:HE3	1.70	0.56
15:C:86:LEU:HD21	15:C:94:LYS:HB3	1.87	0.56
15:C:165:ILE:HG12	15:C:290:LYS:HG3	1.86	0.56
15:C:230:MET:C	15:C:232:ARG:H	2.13	0.56
18:F:73:ILE:O	18:F:77:SER:HB3	2.05	0.56
18:F:134:LEU:HD21	18:F:160:ILE:HG13	1.86	0.56
19:G:144:ASP:HB3	19:G:147:GLN:HB2	1.87	0.56
32:T:1:THR:N	32:T:105:PRO:O	2.37	0.56
19:g:65:THR:HB	25:m:158:TYR:HB2	1.86	0.56
26:n:7:GLN:HA	26:n:12:VAL:HA	1.86	0.56
31:s:45:LYS:HA	31:s:51:VAL:HG22	1.86	0.56
3:c:33:ILE:CG1	3:c:206:ASN:O	2.54	0.56
5:e:52:PHE:CD2	5:e:55:GLN:OE1	2.59	0.56
7:U:471:ASP:O	7:U:475:HIS:NE2	2.38	0.56
9:W:140:ILE:HA	9:W:143:ALA:HB3	1.87	0.56
15:C:328:ILE:HD11	34:D:501:ATP:N3	2.19	0.56
17:E:179:GLY:CA	34:E:401:ATP:O1B	2.53	0.56
23:K:15:PHE:HD1	23:K:20:ARG:CA	2.18	0.56
28:p:60:VAL:O	28:p:64:ALA:HB2	2.04	0.56
1:a:312:MET:HE1	9:W:314:LEU:CD1	2.35	0.56
7:U:105:ILE:HG13	7:U:133:ILE:HD11	1.87	0.56
15:C:83:LYS:HG2	15:C:105:ILE:HD11	1.86	0.56
15:C:328:ILE:HD13	34:D:501:ATP:C5	2.40	0.56
31:S:49:LYS:HD2	31:S:113:LEU:HB2	1.88	0.56
19:g:144:ASP:HB3	19:g:147:GLN:HB2	1.87	0.56
3:c:245:VAL:N	9:W:428:TRP:CH2	2.66	0.56
3:c:290:VAL:O	3:c:294:SER:CB	2.53	0.56
6:f:232:TYR:O	6:f:236:CYS:CB	2.53	0.56
16:D:297:ASP:HA	16:D:326:ARG:NH1	2.19	0.56
23:K:13:ASN:N	23:K:21:LEU:HD22	2.20	0.56
25:M:235:ALA:O	25:M:239:ALA:N	2.36	0.56
28:P:187:VAL:HB	28:P:198:ARG:O	2.05	0.56
21:i:91:ARG:O	21:i:95:GLN:HB3	2.06	0.56
21:i:106:PRO:HD2	21:i:109:GLN:HE21	1.69	0.56
1:a:72:ASN:ND2	1:a:108:ASP:OD2	2.39	0.56
4:d:233:GLU:HG3	4:d:236:THR:HG22	1.87	0.56
7:U:21:GLU:C	7:U:24:LEU:CG	2.77	0.56
12:Z:274:ASN:O	12:Z:278:ASN:CB	2.52	0.56
17:E:270:LEU:HB3	17:E:273:VAL:HB	1.88	0.56
20:H:74:LEU:HD21	20:H:134:LEU:HD22	1.86	0.56
20:h:222:THR:OG1	20:h:225:GLU:OE1	2.23	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:e:52:PHE:HB3	5:e:55:GLN:OE1	2.06	0.56
7:U:68:PHE:HB3	7:U:73:ALA:HB3	1.88	0.56
7:U:368:ALA:O	7:U:372:ALA:HB2	2.06	0.56
10:X:183:LEU:O	10:X:187:ARG:HB2	2.05	0.56
15:C:395:SER:OG	15:C:396:GLU:N	2.39	0.56
16:D:205:TYR:HE1	16:D:332:GLU:HB2	1.70	0.56
17:E:309:ARG:O	17:E:313:LEU:CB	2.52	0.56
21:I:218:ARG:NH1	21:I:223:THR:OG1	2.35	0.56
22:J:101:PRO:HB2	22:J:137:ASP:OD2	2.05	0.56
24:L:50:LYS:HB3	24:L:59:HIS:HB3	1.88	0.56
26:N:91:ARG:HH11	26:N:116:MET:HA	1.61	0.56
24:l:92:CYS:O	24:l:96:ARG:CB	2.53	0.56
26:n:103:TRP:HA	26:n:109:GLY:HA2	1.88	0.56
32:t:89:HIS:NE2	32:t:124:TYR:O	2.36	0.56
5:e:43:TRP:HB3	8:V:344:ASP:N	2.20	0.56
7:U:65:SER:O	7:U:69:TYR:HB2	2.05	0.56
9:W:223:LYS:HA	9:W:226:TYR:HB3	1.88	0.56
13:A:102:ILE:HB	13:A:112:ILE:HG22	1.88	0.56
15:C:356:GLY:O	34:D:501:ATP:C8	2.50	0.56
17:E:313:LEU:HD13	17:E:343:LEU:HD22	1.88	0.56
25:M:49:VAL:HB	25:M:212:GLU:HB2	1.87	0.56
27:O:41:ILE:HG12	27:O:102:GLY:HA3	1.87	0.56
31:S:45:LYS:HA	31:S:51:VAL:HG22	1.86	0.56
21:i:73:ALA:HB3	21:i:137:ILE:HD11	1.87	0.56
26:n:127:ILE:HB	26:n:132:SER:HB2	1.88	0.56
28:p:187:VAL:HB	28:p:198:ARG:O	2.05	0.56
32:t:192:VAL:HG12	32:t:197:VAL:HG22	1.88	0.56
7:U:157:THR:OG1	7:U:159:ARG:NH2	2.39	0.56
8:V:255:LEU:HD22	8:V:291:TYR:HB3	1.87	0.56
8:V:419:LEU:O	8:V:423:ALA:HB2	2.07	0.56
11:Y:190:ALA:N	11:Y:287:LEU:HD11	2.07	0.56
11:Y:195:LYS:O	11:Y:199:GLU:CB	2.54	0.56
11:Y:330:ILE:HA	11:Y:333:GLU:HB3	1.88	0.56
15:C:184:LYS:HB2	15:C:288:ASN:OD1	2.05	0.56
17:E:179:GLY:C	34:E:401:ATP:O1B	2.47	0.56
21:I:91:ARG:O	21:I:95:GLN:HB3	2.06	0.56
30:R:179:VAL:HA	30:R:184:TRP:HA	1.88	0.56
1:a:158:LEU:O	1:a:162:TYR:HB2	2.06	0.55
1:a:358:THR:O	1:a:362:SER:CB	2.54	0.55
1:a:358:THR:O	1:a:362:SER:HB3	2.05	0.55
5:e:43:TRP:HB2	8:V:343:PRO:CA	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:U:134:VAL:O	7:U:138:PHE:HB2	2.06	0.55
7:U:242:LEU:HD13	7:U:324:LYS:HD3	1.88	0.55
8:V:326:GLN:HB3	8:V:353:LEU:HD22	1.88	0.55
12:Z:194:GLN:O	12:Z:198:LEU:HB3	2.06	0.55
15:C:193:GLY:CA	15:C:196:LYS:CE	2.84	0.55
17:E:138:LEU:HD11	34:E:401:ATP:HN61	1.71	0.55
20:H:222:THR:OG1	20:H:225:GLU:OE1	2.23	0.55
26:N:127:ILE:HB	26:N:132:SER:HB2	1.88	0.55
25:m:49:VAL:HB	25:m:212:GLU:HB2	1.87	0.55
27:o:46:ALA:HB3	27:o:97:ALA:O	2.06	0.55
30:r:179:VAL:HA	30:r:184:TRP:HA	1.88	0.55
3:c:77:GLN:NE2	12:Z:85:VAL:O	2.39	0.55
3:c:273:LYS:C	10:X:419:LYS:HZ2	2.12	0.55
4:d:56:GLU:OE2	4:d:92:SER:OG	2.24	0.55
4:d:245:GLN:O	4:d:249:TYR:CB	2.54	0.55
7:U:177:LEU:HD23	7:U:201:LEU:HD22	1.89	0.55
9:W:39:ARG:HB2	9:W:43:VAL:HB	1.88	0.55
12:Z:225:GLN:O	12:Z:229:GLN:OE1	2.24	0.55
14:B:246:THR:O	14:B:280:SER:CB	2.55	0.55
15:C:140:VAL:HG13	15:C:214:VAL:C	2.31	0.55
15:C:164:VAL:HA	15:C:183:PRO:HG2	1.88	0.55
17:E:249:ALA:HB1	18:F:304:ARG:HH12	1.70	0.55
21:I:73:ALA:HB3	21:I:137:ILE:HD11	1.87	0.55
22:J:92:GLN:HG2	29:Q:66:LEU:HB2	1.88	0.55
23:K:22:PHE:HB3	23:K:25:GLU:CB	2.36	0.55
31:S:197:ILE:O	31:S:203:ILE:HA	2.07	0.55
25:m:40:ARG:NH1	25:m:146:ALA:O	2.39	0.55
31:s:49:LYS:HD2	31:s:113:LEU:HB2	1.88	0.55
31:s:197:ILE:O	31:s:203:ILE:HA	2.07	0.55
7:U:719:ASP:O	7:U:727:LYS:NZ	2.37	0.55
8:V:163:VAL:HA	8:V:175:MET:HG2	1.89	0.55
14:B:364:ILE:HG12	34:B:501:ATP:C6	2.41	0.55
16:D:78:GLU:OE2	16:D:81:ARG:HG3	2.06	0.55
22:J:36:ARG:HB2	22:J:142:PRO:HB2	1.88	0.55
24:L:37:GLY:O	24:L:158:ALA:HA	2.05	0.55
25:m:235:ALA:O	25:m:239:ALA:N	2.36	0.55
26:n:144:ARG:H	26:n:147:MET:HE3	1.71	0.55
14:B:121:ALA:N	14:B:133:VAL:O	2.35	0.55
17:E:135:ILE:N	34:E:401:ATP:C2	2.67	0.55
17:E:306:GLU:HG3	17:E:332:VAL:HG11	1.88	0.55
25:M:40:ARG:NH1	25:M:146:ALA:O	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:O:46:ALA:HB3	27:O:97:ALA:O	2.06	0.55
32:T:192:VAL:HG12	32:T:197:VAL:HG22	1.88	0.55
19:g:7:ALA:HB2	19:g:18:PRO:HD3	1.89	0.55
23:k:41:GLN:NE2	23:k:151:PRO:O	2.38	0.55
24:l:125:ARG:NH2	24:l:128:TYR:OH	2.39	0.55
27:o:17:ASP:HB2	27:o:169:SER:HB3	1.89	0.55
27:o:41:ILE:HG12	27:o:102:GLY:HA3	1.87	0.55
6:f:347:ASP:O	6:f:351:THR:OG1	2.24	0.55
7:U:248:ILE:O	7:U:252:LEU:HB2	2.06	0.55
7:U:456:ASP:O	7:U:460:TYR:N	2.38	0.55
9:W:4:GLY:O	9:W:8:ARG:NH2	2.40	0.55
11:Y:105:MET:O	11:Y:109:GLU:HB2	2.06	0.55
15:C:286:THR:HG23	15:C:289:ILE:CD1	2.37	0.55
16:D:267:ILE:HG23	16:D:311:THR:HG21	1.88	0.55
17:E:307:GLN:O	17:E:311:ASP:HB2	2.07	0.55
26:N:20:THR:HB	26:N:28:ASN:HB3	1.89	0.55
1:a:311:VAL:O	1:a:315:LEU:N	2.39	0.55
6:f:88:SER:HB3	6:f:92:VAL:CG2	2.18	0.55
7:U:377:HIS:HB3	7:U:380:THR:HB	1.88	0.55
9:W:131:VAL:HB	9:W:144:ARG:HH21	1.71	0.55
15:C:132:ASP:HB3	15:C:133:PRO:HD2	1.89	0.55
24:L:125:ARG:NH2	24:L:128:TYR:OH	2.39	0.55
25:M:189:ILE:HA	25:M:192:GLU:HB2	1.89	0.55
21:i:34:CYS:H	21:i:164:ILE:HG13	1.70	0.55
22:j:101:PRO:HB2	22:j:137:ASP:OD2	2.06	0.55
1:a:201:GLY:O	1:a:205:LEU:CB	2.52	0.55
4:d:97:GLN:NE2	4:d:161:GLU:OE1	2.40	0.55
6:f:229:VAL:O	6:f:233:LEU:CB	2.55	0.55
6:f:484:GLY:O	6:f:487:LEU:HB2	2.07	0.55
7:U:428:PRO:HB3	7:U:443:LEU:HD11	1.88	0.55
7:U:576:PRO:O	7:U:580:ARG:CB	2.53	0.55
9:W:206:SER:HB2	9:W:233:LEU:HD11	1.87	0.55
14:B:228:PRO:HB2	15:C:310:ARG:HH21	1.71	0.55
15:C:193:GLY:CA	15:C:196:LYS:NZ	2.69	0.55
22:J:186:LEU:O	22:J:190:LEU:CB	2.55	0.55
31:S:123:SER:HB3	31:S:136:LYS:HG3	1.89	0.55
22:j:37:GLY:H	22:j:41:VAL:HA	1.71	0.55
25:m:8:ASP:O	25:m:22:GLN:NE2	2.30	0.55
1:a:146:PRO:O	1:a:149:THR:OG1	2.24	0.55
7:U:250:PHE:O	7:U:254:GLU:HB2	2.07	0.55
7:U:334:ALA:O	7:U:338:HIS:CB	2.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:X:203:PRO:O	10:X:207:GLN:HB2	2.06	0.55
12:Z:106:ILE:HD11	12:Z:153:LYS:HB3	1.88	0.55
15:C:132:ASP:C	15:C:134:LEU:H	2.13	0.55
7:U:512:ALA:O	7:U:516:LEU:HB2	2.06	0.55
9:W:70:VAL:HA	9:W:73:MET:HG2	1.89	0.55
10:X:284:THR:HA	10:X:287:LEU:HD12	1.88	0.55
12:Z:34:ARG:HE	12:Z:102:HIS:HE1	1.54	0.55
12:Z:101:LEU:O	12:Z:102:HIS:CG	2.60	0.55
13:A:156:LYS:NZ	13:A:252:GLU:OE2	2.38	0.55
15:C:137:LEU:HD12	15:C:223:PHE:CD1	2.41	0.55
15:C:225:GLY:CA	15:C:228:ALA:O	2.55	0.55
16:D:126:PRO:HG2	16:D:128:ALA:HB2	1.89	0.55
18:F:92:ASN:HA	18:F:149:ASP:O	2.06	0.55
23:K:15:PHE:CD1	23:K:20:ARG:HA	2.38	0.55
27:O:18:THR:HG21	27:O:187:ARG:HH22	1.72	0.55
19:g:161:CYS:SG	19:g:162:GLY:N	2.80	0.55
21:i:148:TYR:HE1	22:j:58:THR:HG21	1.72	0.55
6:f:234:THR:O	6:f:238:ASN:HB2	2.07	0.55
11:Y:174:TRP:O	11:Y:178:ASN:ND2	2.40	0.55
13:A:87:LEU:HD11	14:B:137:SER:H	1.72	0.55
14:B:286:GLU:HG2	15:C:274:LEU:HD22	1.89	0.55
15:C:197:THR:O	15:C:201:ARG:HB2	2.06	0.55
16:D:342:ARG:HD3	16:D:361:GLU:HG3	1.90	0.55
21:I:10:THR:O	21:I:10:THR:OG1	2.18	0.55
23:K:14:THR:CA	23:K:21:LEU:CD2	2.66	0.55
25:M:17:ASP:OD2	25:M:19:ARG:NH2	2.40	0.55
29:Q:19:ARG:HE	29:Q:31:ASP:HA	1.72	0.55
21:i:123:GLN:HB3	22:j:125:ARG:CB	2.36	0.55
22:j:120:GLN:NE2	23:k:84:ASP:OD1	2.40	0.55
26:n:32:ASP:O	26:n:45:ARG:NH1	2.35	0.55
32:t:1:THR:N	32:t:105:PRO:O	2.37	0.55
2:b:31:ASP:HA	2:b:34:ASN:HD22	1.72	0.54
10:X:346:GLN:HA	10:X:384:VAL:HA	1.88	0.54
10:X:401:LEU:HD23	10:X:404:ILE:HD12	1.89	0.54
13:A:306:LEU:HD11	13:A:312:ARG:HH21	1.71	0.54
15:C:195:GLY:O	15:C:199:LEU:HB3	2.06	0.54
15:C:237:MET:HG3	15:C:238:ALA:N	2.22	0.54
17:E:179:GLY:N	34:E:401:ATP:O3A	2.40	0.54
17:E:182:LEU:CG	34:E:401:ATP:PA	2.94	0.54
18:F:368:ILE:HG23	18:F:371:ARG:HH12	1.71	0.54
19:G:200:THR:HA	19:G:203:SER:HB2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:H:167:TYR:O	20:H:171:LYS:CB	2.55	0.54
26:N:144:ARG:H	26:N:147:MET:HE3	1.71	0.54
22:j:36:ARG:HB2	22:j:142:PRO:HB2	1.88	0.54
25:m:189:ILE:HA	25:m:192:GLU:HB2	1.89	0.54
32:t:27:LEU:HD22	32:t:184:TYR:HB2	1.88	0.54
32:t:153:VAL:HG21	32:t:168:LEU:HD11	1.89	0.54
6:f:438:ASP:N	6:f:438:ASP:OD1	2.40	0.54
6:f:440:ILE:O	6:f:444:ALA:HB2	2.08	0.54
6:f:531:ASN:HA	6:f:569:LYS:HA	1.88	0.54
6:f:790:GLN:HG3	6:f:792:ALA:H	1.72	0.54
9:W:35:ALA:O	9:W:86:ASN:ND2	2.39	0.54
9:W:337:ALA:O	9:W:342:GLY:N	2.40	0.54
9:W:371:THR:H	9:W:414:ASN:HD22	1.55	0.54
14:B:248:LEU:HB2	14:B:282:VAL:HA	1.88	0.54
15:C:220:VAL:HG23	15:C:224:ILE:HD12	1.89	0.54
16:D:204:MET:HG2	16:D:333:PHE:HD2	1.72	0.54
16:D:409:LYS:CA	16:D:409:LYS:CE	2.85	0.54
17:E:179:GLY:HA3	34:E:401:ATP:C8	2.41	0.54
20:H:10:LEU:HD12	20:H:125:GLY:O	2.07	0.54
26:N:32:ASP:O	26:N:45:ARG:NH1	2.35	0.54
31:S:24:ALA:HB1	31:S:193:LEU:HD11	1.90	0.54
23:k:22:PHE:HA	23:k:25:GLU:HB3	1.88	0.54
27:o:206:LYS:HA	28:p:165:GLU:HG3	1.89	0.54
1:a:188:LEU:HD11	1:a:193:GLN:HG3	1.89	0.54
1:a:291:LEU:O	1:a:331:VAL:N	2.41	0.54
8:V:32:PRO:O	8:V:36:GLU:HB2	2.08	0.54
8:V:117:VAL:HA	8:V:121:PHE:HB2	1.89	0.54
14:B:312:LEU:O	14:B:316:LEU:HB3	2.07	0.54
16:D:230:VAL:HG22	16:D:264:ILE:HG12	1.90	0.54
17:E:179:GLY:CA	34:E:401:ATP:O5'	2.43	0.54
17:E:182:LEU:HG	34:E:401:ATP:PA	2.46	0.54
22:J:37:GLY:H	22:J:41:VAL:HA	1.71	0.54
27:O:87:LEU:HD13	27:O:115:PRO:HA	1.90	0.54
28:P:49:LEU:HG	28:P:111:GLY:HA3	1.89	0.54
19:g:200:THR:HA	19:g:203:SER:HB2	1.89	0.54
20:h:66:GLU:OE2	20:h:91:ARG:NH2	2.40	0.54
21:i:8:ARG:O	21:i:11:ILE:CD1	2.49	0.54
27:o:87:LEU:HD13	27:o:115:PRO:HA	1.90	0.54
2:b:39:SER:O	2:b:43:SER:HB2	2.08	0.54
3:c:98:MET:HA	3:c:101:GLN:HG2	1.89	0.54
7:U:350:LEU:HA	7:U:353:LEU:HD12	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:Y:275:LEU:HD21	11:Y:296:VAL:HG13	1.89	0.54
12:Z:248:ALA:HA	12:Z:251:LEU:HB3	1.89	0.54
14:B:229:GLY:O	34:B:501:ATP:H4'	2.08	0.54
16:D:175:GLN:NE2	16:D:179:GLU:OE2	2.39	0.54
16:D:417:TYR:C	16:D:417:TYR:CD2	2.85	0.54
20:H:66:GLU:OE2	20:H:91:ARG:NH2	2.40	0.54
26:N:103:TRP:HA	26:N:109:GLY:HA2	1.88	0.54
27:O:17:ASP:HB2	27:O:169:SER:HB3	1.89	0.54
32:T:153:VAL:HG21	32:T:168:LEU:HD11	1.89	0.54
31:s:27:THR:HB	31:s:40:SER:H	1.72	0.54
4:d:33:LEU:CD2	4:d:48:LEU:CD1	2.70	0.54
6:f:468:ASP:OD2	6:f:475:ASN:N	2.40	0.54
6:f:470:VAL:HG22	6:f:471:LEU:HB2	1.88	0.54
6:f:632:LYS:HD2	6:f:661:ALA:HA	1.89	0.54
7:U:511:ALA:O	7:U:515:ALA:HB3	2.08	0.54
10:X:394:ASP:O	10:X:398:GLU:HB3	2.07	0.54
16:D:60:TYR:OH	16:D:64:GLU:OE2	2.24	0.54
16:D:326:ARG:HG3	16:D:330:LYS:HG3	1.89	0.54
18:F:439:ALA:OXT	24:L:51:ARG:NH2	2.41	0.54
23:K:22:PHE:HD2	23:K:25:GLU:HG2	1.72	0.54
26:N:46:SER:HB2	26:N:97:GLY:HA3	1.90	0.54
27:O:66:HIS:O	27:O:70:THR:OG1	2.26	0.54
31:S:27:THR:HB	31:S:40:SER:H	1.72	0.54
25:m:149:TYR:HA	25:m:159:GLY:HA2	1.90	0.54
28:p:49:LEU:HG	28:p:111:GLY:HA3	1.88	0.54
11:Y:120:ALA:O	11:Y:124:PHE:N	2.33	0.54
11:Y:360:ASP:C	11:Y:362:LYS:H	2.12	0.54
14:B:246:THR:O	14:B:280:SER:HB3	2.08	0.54
32:T:27:LEU:HD22	32:T:184:TYR:HB2	1.88	0.54
24:l:50:LYS:HB3	24:l:59:HIS:HB3	1.88	0.54
2:b:140:ILE:HG22	2:b:170:LEU:HD13	1.89	0.54
6:f:281:ILE:O	6:f:285:CYS:CB	2.55	0.54
12:Z:173:GLU:C	12:Z:177:ARG:NH2	2.66	0.54
17:E:55:GLN:N	18:F:133:PHE:O	2.40	0.54
19:G:7:ALA:C	19:G:10:ASP:CG	2.75	0.54
31:S:131:GLN:NE2	31:S:133:ASP:OD2	2.40	0.54
19:g:67:THR:HG23	19:g:216:GLU:HG2	1.90	0.54
20:h:119:GLN:NE2	21:i:82:ASP:OD1	2.41	0.54
20:h:167:TYR:O	20:h:171:LYS:CB	2.55	0.54
21:i:124:PHE:HD1	22:j:124:ARG:HH11	1.54	0.54
23:k:12:VAL:HA	23:k:21:LEU:HG	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:n:29:ARG:NH1	27:o:139:GLU:OE1	2.40	0.54
29:q:19:ARG:HE	29:q:31:ASP:HA	1.72	0.54
29:q:66:LEU:O	29:q:70:ARG:HB2	2.08	0.54
3:c:39:LEU:HD13	12:Z:14:LEU:HA	1.90	0.54
6:f:229:VAL:O	6:f:233:LEU:HB2	2.08	0.54
10:X:252:LYS:O	10:X:256:LEU:CB	2.56	0.54
10:X:380:GLN:OE1	11:Y:311:TYR:OH	2.26	0.54
16:D:416:PHE:CE2	20:H:76:TYR:CD2	2.96	0.54
17:E:179:GLY:CA	34:E:401:ATP:O3A	2.54	0.54
22:J:180:ALA:CB	22:J:186:LEU:CD2	2.86	0.54
22:j:73:PHE:HA	22:j:131:ALA:HA	1.89	0.54
31:s:35:ILE:HB	32:t:151:ARG:HH12	1.73	0.54
31:s:123:SER:HB3	31:s:136:LYS:HG3	1.89	0.54
6:f:269:ALA:HB2	6:f:277:LEU:HD22	1.90	0.54
7:U:21:GLU:CA	7:U:24:LEU:CG	2.76	0.54
7:U:749:GLN:NE2	7:U:753:GLY:O	2.40	0.54
9:W:137:TYR:HD2	9:W:140:ILE:H	1.56	0.54
11:Y:119:GLY:O	11:Y:123:ALA:CB	2.56	0.54
13:A:112:ILE:HA	13:A:121:PHE:O	2.08	0.54
15:C:90:HIS:CE1	16:D:110:ASN:CB	2.89	0.54
16:D:85:ILE:CG2	16:D:86:PRO:CD	2.34	0.54
18:F:90:VAL:HG23	18:F:90:VAL:O	2.08	0.54
19:G:161:CYS:SG	19:G:162:GLY:N	2.80	0.54
25:M:61:GLY:O	25:M:64:LYS:NZ	2.38	0.54
25:M:149:TYR:HA	25:M:159:GLY:HA2	1.90	0.54
25:M:202:ASP:N	25:M:202:ASP:OD1	2.41	0.54
29:Q:66:LEU:O	29:Q:70:ARG:HB2	2.08	0.54
31:S:185:ARG:NH1	27:o:26:VAL:O	2.41	0.54
26:n:40:ARG:NH1	26:n:180:ALA:O	2.41	0.54
30:r:44:THR:HG21	30:r:100:MET:HE3	1.90	0.54
1:a:196:ARG:O	1:a:200:LEU:CB	2.57	0.54
9:W:39:ARG:NH2	9:W:44:ILE:HD11	2.22	0.54
16:D:199:PRO:O	16:D:200:ARG:NE	2.41	0.54
23:K:37:ALA:HB2	23:K:50:VAL:HG23	1.90	0.54
26:N:40:ARG:NH1	26:N:180:ALA:O	2.41	0.54
26:N:91:ARG:CZ	26:N:116:MET:O	2.56	0.54
30:R:44:THR:HG21	30:R:100:MET:HE3	1.90	0.54
20:h:6:TYR:HE2	20:h:126:GLY:HA3	1.73	0.54
22:j:186:LEU:O	22:j:190:LEU:CB	2.55	0.54
25:m:17:ASP:OD2	25:m:19:ARG:NH2	2.40	0.54
27:o:18:THR:HG21	27:o:187:ARG:HH22	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:q:57:ALA:O	29:q:61:GLN:CB	2.55	0.54
1:a:135:ILE:HG12	1:a:158:LEU:HD13	1.89	0.53
1:a:226:ARG:HD2	1:a:234:ILE:HG13	1.89	0.53
5:e:57:ARG:HG3	11:Y:293:ARG:CZ	2.39	0.53
6:f:389:LYS:HG3	6:f:417:ILE:HG22	1.89	0.53
6:f:647:GLY:HA2	6:f:655:LEU:HG	1.90	0.53
8:V:478:GLN:O	8:V:482:PHE:CB	2.55	0.53
10:X:243:ASP:O	10:X:247:ALA:N	2.41	0.53
11:Y:197:ALA:HB3	11:Y:226:VAL:HG21	1.88	0.53
14:B:140:ASP:HB3	14:B:143:LEU:HG	1.90	0.53
15:C:329:LEU:O	15:C:333:SER:OG	2.27	0.53
18:F:339:ASP:HB2	18:F:342:LEU:HG	1.89	0.53
7:U:133:ILE:HA	7:U:136:LYS:HB3	1.90	0.53
7:U:672:LEU:HD22	7:U:687:ALA:HA	1.89	0.53
8:V:228:ARG:O	8:V:232:HIS:ND1	2.41	0.53
34:A:501:ATP:O3G	34:A:501:ATP:O1B	2.26	0.53
15:C:142:LYS:HG3	15:C:213:ARG:HD2	1.89	0.53
18:F:303:ASP:OD2	18:F:306:VAL:HG23	2.08	0.53
23:K:167:ALA:HB3	23:K:181:LEU:HD21	1.89	0.53
23:k:37:ALA:HB2	23:k:50:VAL:HG23	1.90	0.53
5:e:48:VAL:CB	8:V:368:ARG:HH12	2.07	0.53
5:e:58:ALA:HB1	11:Y:300:ARG:HH21	1.72	0.53
7:U:166:THR:HA	7:U:169:GLU:HB3	1.89	0.53
7:U:248:ILE:O	7:U:252:LEU:CB	2.56	0.53
7:U:457:ILE:HA	7:U:460:TYR:HB3	1.90	0.53
8:V:391:THR:HG23	8:V:394:LEU:HD23	1.90	0.53
8:V:407:VAL:O	8:V:411:SER:OG	2.26	0.53
12:Z:145:HIS:NE2	12:Z:224:HIS:HE1	2.05	0.53
15:C:289:ILE:HD13	15:C:289:ILE:H	1.72	0.53
17:E:113:ARG:HG2	17:E:114:GLU:HG2	1.89	0.53
18:F:269:ARG:O	18:F:273:ALA:HB3	2.07	0.53
22:J:73:PHE:HA	22:J:131:ALA:HA	1.89	0.53
23:K:14:THR:O	23:K:21:LEU:CD2	2.47	0.53
24:L:77:LEU:HD12	24:L:129:GLY:H	1.72	0.53
21:i:174:MET:O	21:i:178:ASP:N	2.40	0.53
23:k:219:THR:HB	23:k:221:GLN:HE22	1.73	0.53
26:n:20:THR:HB	26:n:28:ASN:HB3	1.89	0.53
3:c:42:LEU:O	3:c:46:ARG:CB	2.56	0.53
3:c:146:ASP:O	3:c:156:VAL:HG21	2.07	0.53
6:f:193:PRO:O	6:f:208:LEU:CD1	2.56	0.53
6:f:403:LYS:O	6:f:407:MET:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:f:684:PRO:O	6:f:688:ARG:CB	2.54	0.53
6:f:692:LEU:O	6:f:696:LEU:CB	2.54	0.53
7:U:399:TRP:O	7:U:403:THR:CB	2.57	0.53
11:Y:195:LYS:O	11:Y:199:GLU:HB3	2.09	0.53
12:Z:10:VAL:N	12:Z:48:LEU:O	2.39	0.53
14:B:186:ASP:OD1	14:B:186:ASP:N	2.39	0.53
14:B:230:THR:C	34:B:501:ATP:O4'	2.51	0.53
18:F:437:TYR:HE2	23:K:20:ARG:HH11	1.45	0.53
23:K:219:THR:HB	23:K:221:GLN:HE22	1.73	0.53
25:M:8:ASP:O	25:M:22:GLN:NE2	2.30	0.53
27:O:163:ILE:HG12	27:O:169:SER:H	1.73	0.53
23:k:20:ARG:NE	23:k:20:ARG:H	2.06	0.53
24:l:77:LEU:HD12	24:l:129:GLY:H	1.72	0.53
25:m:202:ASP:N	25:m:202:ASP:OD1	2.41	0.53
27:o:163:ILE:HG12	27:o:169:SER:H	1.73	0.53
30:r:52:CYS:O	30:r:56:GLU:HB2	2.09	0.53
31:s:24:ALA:HB1	31:s:193:LEU:HD11	1.90	0.53
31:s:131:GLN:NE2	31:s:133:ASP:OD2	2.40	0.53
1:a:270:ARG:HH11	1:a:313:LYS:HB3	1.72	0.53
6:f:178:LYS:NZ	6:f:215:ASP:O	2.37	0.53
7:U:399:TRP:O	7:U:403:THR:OG1	2.24	0.53
9:W:438:LEU:HA	9:W:441:LYS:HG2	1.91	0.53
11:Y:145:LEU:HD23	11:Y:157:ILE:HG22	1.90	0.53
13:A:397:ILE:O	13:A:400:ARG:NH1	2.41	0.53
15:C:138:MET:O	15:C:237:MET:CE	2.56	0.53
15:C:184:LYS:O	15:C:290:LYS:HD2	2.08	0.53
16:D:404:LYS:HA	16:D:408:LYS:HD3	1.91	0.53
21:I:136:TYR:HB2	21:I:148:TYR:HB2	1.89	0.53
30:R:166:ARG:NH2	28:p:34:MET:O	2.42	0.53
31:S:112:GLY:O	31:S:120:ALA:HB3	2.08	0.53
31:S:209:SER:OG	31:S:212:LYS:NZ	2.33	0.53
32:t:49:THR:HA	32:t:114:GLY:HA2	1.91	0.53
3:c:63:ASP:OD1	3:c:66:THR:OG1	2.22	0.53
3:c:267:PRO:HG2	10:X:409:LYS:HD3	1.91	0.53
5:e:57:ARG:NE	5:e:57:ARG:HA	2.24	0.53
8:V:252:ASN:ND2	8:V:284:GLU:OE2	2.42	0.53
11:Y:107:LYS:HA	11:Y:110:TYR:HB3	1.89	0.53
11:Y:331:ASP:O	11:Y:335:SER:CB	2.56	0.53
12:Z:180:LYS:HB2	16:D:70:LYS:HE3	1.89	0.53
13:A:111:TYR:O	13:A:123:VAL:N	2.40	0.53
14:B:222:VAL:HA	14:B:349:ARG:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B:501:ATP:O2B	15:C:310:ARG:NH1	2.42	0.53
16:D:352:MET:HB3	17:E:164:ILE:HD11	1.90	0.53
17:E:182:LEU:HD11	34:E:401:ATP:C5	2.43	0.53
19:G:8:GLY:C	19:G:10:ASP:N	2.64	0.53
21:I:121:TYR:HA	21:I:127:LYS:HE2	1.90	0.53
25:M:99:ARG:NH2	25:M:105:ASN:OD1	2.42	0.53
21:i:136:TYR:HB2	21:i:148:TYR:HB2	1.89	0.53
31:s:112:GLY:O	31:s:120:ALA:HB3	2.08	0.53
1:a:84:VAL:HA	1:a:87:MET:HB2	1.89	0.53
4:d:215:TRP:HZ2	4:d:222:TYR:HB3	1.74	0.53
5:e:44:ASP:H	8:V:343:PRO:HA	1.72	0.53
6:f:537:THR:OG1	6:f:538:ILE:N	2.40	0.53
8:V:478:GLN:O	8:V:482:PHE:HB2	2.09	0.53
9:W:125:ILE:HD12	9:W:128:LEU:HD12	1.90	0.53
10:X:258:LYS:CB	10:X:261:LEU:HD23	2.38	0.53
16:D:375:ILE:HA	16:D:378:ILE:HD12	1.90	0.53
17:E:179:GLY:CA	17:E:182:LEU:HD21	2.25	0.53
17:E:248:SER:N	18:F:300:LYS:HG3	2.24	0.53
18:F:267:LEU:O	18:F:271:ALA:CB	2.56	0.53
23:k:20:ARG:N	23:k:20:ARG:CD	2.72	0.53
7:U:370:VAL:O	7:U:374:SER:CB	2.57	0.53
9:W:115:ILE:HD13	9:W:120:ILE:HB	1.91	0.53
9:W:407:ASP:HB3	9:W:413:ILE:HG12	1.89	0.53
13:A:251:GLY:O	13:A:255:ARG:N	2.41	0.53
15:C:192:PRO:HD3	15:C:296:ASN:HD22	1.74	0.53
16:D:202:VAL:HG12	16:D:308:ILE:HG12	1.91	0.53
26:N:95:MET:HA	26:N:116:MET:HE3	1.91	0.53
29:Q:57:ALA:O	29:Q:61:GLN:CB	2.55	0.53
21:i:118:LYS:O	21:i:122:THR:HG23	2.08	0.53
23:k:167:ALA:HB3	23:k:181:LEU:HD21	1.89	0.53
26:n:46:SER:HB2	26:n:97:GLY:HA3	1.90	0.53
30:r:36:GLU:OE2	30:r:186:ARG:NH2	2.42	0.53
1:a:248:PHE:O	1:a:252:LYS:CB	2.49	0.53
4:d:175:ARG:HD3	4:d:178:ILE:HD12	1.91	0.53
4:d:183:GLU:OE1	4:d:224:SER:N	2.42	0.53
4:d:225:PHE:HB2	4:d:228:GLN:H	1.73	0.53
6:f:236:CYS:HA	6:f:240:VAL:HB	1.90	0.53
6:f:623:LYS:O	6:f:627:GLU:HB2	2.08	0.53
8:V:196:SER:O	8:V:198:GLN:NE2	2.42	0.53
8:V:383:GLY:O	8:V:392:TYR:OH	2.27	0.53
11:Y:227:SER:HB2	11:Y:231:LEU:HD22	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Z:80:GLY:O	12:Z:84:LYS:HB2	2.09	0.53
13:A:134:ILE:HG23	13:A:140:VAL:HG11	1.90	0.53
15:C:234:LEU:CA	15:C:237:MET:HG2	2.39	0.53
19:G:67:THR:HG23	19:G:216:GLU:HG2	1.90	0.53
20:H:65:VAL:HG11	20:H:211:GLY:HA3	1.91	0.53
21:I:8:ARG:HB3	21:I:11:ILE:CG1	2.38	0.53
30:R:36:GLU:OE2	30:R:186:ARG:NH2	2.42	0.53
22:j:109:ARG:NH2	30:r:70:ASN:OD1	2.41	0.53
5:e:60:LEU:HD13	11:Y:272:PHE:CZ	2.44	0.53
13:A:348:LEU:HD23	13:A:351:ARG:HH21	1.74	0.53
14:B:341:LEU:HD23	14:B:346:ARG:HD3	1.91	0.53
15:C:246:ILE:HB	15:C:291:VAL:HG12	1.91	0.53
17:E:182:LEU:HD23	34:E:401:ATP:O4'	1.93	0.53
20:H:43:GLY:CA	20:H:213:CYS:O	2.57	0.53
21:I:174:MET:O	21:I:178:ASP:N	2.40	0.53
25:M:163:CYS:SG	25:M:164:ALA:N	2.82	0.53
6:f:397:LYS:HA	6:f:400:TYR:HB3	1.91	0.52
12:Z:193:ASN:HA	12:Z:196:HIS:CE1	2.45	0.52
15:C:134:LEU:O	15:C:139:MET:SD	2.67	0.52
15:C:329:LEU:O	15:C:333:SER:CB	2.57	0.52
16:D:317:LEU:HD23	16:D:320:ALA:HB3	1.89	0.52
21:I:91:ARG:O	21:I:95:GLN:CB	2.58	0.52
22:J:109:ARG:NH2	30:R:70:ASN:OD1	2.42	0.52
30:R:135:ALA:O	30:R:139:MET:CB	2.57	0.52
26:n:95:MET:HA	26:n:116:MET:HE3	1.91	0.52
30:r:130:SER:OG	30:r:167:ASP:OD2	2.26	0.52
7:U:112:CYS:O	7:U:116:ALA:HB2	2.08	0.52
8:V:167:LEU:HG	8:V:171:VAL:HG11	1.91	0.52
8:V:448:GLU:CD	8:V:461:LYS:CG	2.82	0.52
14:B:125:THR:H	14:B:128:GLY:HA2	1.75	0.52
16:D:116:LEU:HD12	16:D:140:VAL:HA	1.91	0.52
16:D:358:VAL:HG21	16:D:395:LEU:HA	1.92	0.52
18:F:382:GLU:O	18:F:386:ARG:HB2	2.10	0.52
30:R:130:SER:OG	30:R:167:ASP:OD2	2.26	0.52
23:k:22:PHE:CD1	23:k:22:PHE:N	2.73	0.52
30:r:38:ASN:O	30:r:184:TRP:NE1	2.39	0.52
31:s:192:ALA:HA	31:s:209:SER:HA	1.92	0.52
3:c:220:LEU:O	3:c:224:SER:HB3	2.09	0.52
6:f:89:MET:HG2	6:f:90:THR:HG23	1.91	0.52
6:f:355:ASN:HA	6:f:358:PHE:HD2	1.74	0.52
8:V:30:PRO:HA	8:V:33:GLN:HB2	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:V:407:VAL:O	8:V:411:SER:CB	2.57	0.52
10:X:328:ASP:HA	10:X:331:LEU:HD13	1.91	0.52
11:Y:82:LYS:HA	11:Y:85:ASP:HB2	1.92	0.52
11:Y:192:ARG:HH12	11:Y:295:TYR:HB2	1.74	0.52
12:Z:34:ARG:HE	12:Z:102:HIS:CE1	2.28	0.52
13:A:264:ALA:HB1	13:A:315:ILE:HG12	1.90	0.52
14:B:312:LEU:O	14:B:316:LEU:CB	2.57	0.52
17:E:135:ILE:CG2	34:E:401:ATP:C6	2.93	0.52
17:E:141:GLN:O	17:E:145:LEU:CB	2.57	0.52
18:F:90:VAL:O	18:F:127:SER:OG	2.28	0.52
23:K:14:THR:CB	23:K:21:LEU:HD21	2.39	0.52
26:n:151:GLU:O	26:n:155:PHE:HB2	2.09	0.52
27:o:6:VAL:HG23	27:o:124:TYR:HB3	1.91	0.52
31:s:211:ARG:NH2	31:s:213:ASP:OD2	2.41	0.52
32:t:116:ALA:O	32:t:119:GLU:HB2	2.09	0.52
32:t:153:VAL:O	32:t:157:GLN:N	2.41	0.52
1:a:122:LYS:HE3	1:a:130:VAL:HG13	1.90	0.52
2:b:103:LYS:HZ3	2:b:103:LYS:CB	2.23	0.52
3:c:91:PHE:O	3:c:95:MET:CB	2.57	0.52
6:f:80:ARG:O	6:f:84:SER:CB	2.57	0.52
8:V:64:GLN:HE21	11:Y:389:MET:HE2	1.75	0.52
10:X:343:SER:OG	10:X:344:ARG:N	2.42	0.52
11:Y:316:LEU:O	11:Y:320:ALA:N	2.37	0.52
12:Z:213:GLU:OE2	12:Z:217:THR:OG1	2.28	0.52
15:C:31:LEU:HD23	15:C:34:ILE:HD12	1.91	0.52
15:C:161:ILE:HG23	15:C:165:ILE:HD12	1.90	0.52
15:C:219:LEU:H	15:C:223:PHE:HD2	1.56	0.52
16:D:204:MET:HB2	16:D:310:ALA:CB	2.40	0.52
17:E:245:GLU:HB3	17:E:251:ARG:HH11	1.74	0.52
17:E:327:ASP:H	17:E:364:GLN:HG3	1.75	0.52
18:F:249:LEU:HD23	18:F:283:ILE:HG12	1.92	0.52
26:N:151:GLU:O	26:N:155:PHE:HB2	2.09	0.52
32:T:116:ALA:O	32:T:119:GLU:HB2	2.09	0.52
21:i:123:GLN:CB	22:j:125:ARG:CB	2.85	0.52
3:c:234:TYR:HA	3:c:304:LEU:HD13	1.91	0.52
8:V:47:SER:HA	8:V:50:GLU:HB2	1.92	0.52
9:W:145:LEU:O	9:W:149:LEU:HB2	2.10	0.52
9:W:451:MET:O	9:W:454:ASN:ND2	2.42	0.52
10:X:376:GLY:HA3	10:X:387:ILE:HG13	1.91	0.52
16:D:163:MET:CG	16:D:222:HIS:CD2	2.83	0.52
17:E:157:GLU:O	17:E:161:ARG:N	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:F:91:SER:O	18:F:150:LEU:HA	2.10	0.52
19:G:17:SER:CB	19:G:23:TYR:HE2	2.08	0.52
22:J:3:TYR:OH	23:K:10:ARG:NE	2.43	0.52
26:N:144:ARG:HH22	26:N:147:MET:HA	1.74	0.52
30:R:52:CYS:O	30:R:56:GLU:HB2	2.09	0.52
19:g:179:LEU:O	19:g:183:VAL:N	2.40	0.52
21:i:62:SER:OG	21:i:65:ILE:O	2.26	0.52
21:i:91:ARG:O	21:i:95:GLN:CB	2.57	0.52
25:m:163:CYS:SG	25:m:164:ALA:N	2.82	0.52
6:f:30:GLY:O	6:f:34:ARG:HB2	2.09	0.52
7:U:598:ALA:O	7:U:602:LEU:HD13	2.09	0.52
8:V:334:VAL:HA	8:V:337:LEU:HD12	1.91	0.52
9:W:6:SER:O	9:W:10:ASP:CB	2.57	0.52
24:L:148:CYS:SG	24:L:152:ASN:N	2.82	0.52
26:N:59:VAL:O	26:N:63:LEU:HB3	2.10	0.52
27:O:214:GLU:HA	28:P:198:ARG:HG2	1.91	0.52
19:g:127:GLN:HE21	20:h:127:VAL:HB	1.74	0.52
20:h:65:VAL:HG11	20:h:211:GLY:HA3	1.91	0.52
21:i:12:PHE:HE2	22:j:126:PRO:HD2	1.74	0.52
26:n:91:ARG:CG	26:n:91:ARG:NH1	2.73	0.52
27:o:1:THR:O	27:o:129:SER:N	2.43	0.52
8:V:354:LYS:HA	8:V:357:LEU:HG	1.91	0.52
9:W:67:LEU:HD13	9:W:115:ILE:HG13	1.91	0.52
12:Z:8:LYS:HA	12:Z:160:SER:HA	1.90	0.52
15:C:134:LEU:O	15:C:139:MET:HE3	2.09	0.52
16:D:417:TYR:OH	20:H:32:GLY:CA	2.57	0.52
17:E:258:MET:HG2	17:E:261:LEU:HD12	1.91	0.52
18:F:209:LYS:NZ	18:F:324:THR:O	2.43	0.52
26:N:91:ARG:CZ	26:N:96:ALA:HB3	2.39	0.52
28:P:15:LYS:HE3	28:P:121:ILE:HG12	1.92	0.52
1:a:285:PRO:HG3	1:a:352:ARG:HH22	1.75	0.52
2:b:52:ILE:HD11	2:b:58:CYS:HB3	1.91	0.52
5:e:52:PHE:HB3	5:e:55:GLN:CB	2.39	0.52
9:W:93:ARG:NH1	9:W:96:GLN:OE1	2.42	0.52
15:C:328:ILE:HA	15:C:331:ILE:HD12	1.91	0.52
20:H:14:SER:OG	20:H:18:LYS:N	2.42	0.52
21:I:10:THR:HG23	21:I:11:ILE:HD13	1.90	0.52
23:K:206:MET:HE1	23:K:210:LEU:HD13	1.90	0.52
26:N:59:VAL:O	26:N:63:LEU:CB	2.58	0.52
31:S:195:ILE:HB	31:S:206:GLU:O	2.10	0.52
23:k:206:MET:HE1	23:k:210:LEU:HD13	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:m:7:TYR:O	25:m:21:PHE:HD2	1.93	0.52
7:U:655:ALA:O	7:U:659:CYS:CB	2.58	0.52
14:B:133:VAL:HB	14:B:158:ALA:HA	1.90	0.52
14:B:153:ASN:HD22	14:B:156:VAL:HG22	1.75	0.52
16:D:161:ASP:HA	16:D:218:ALA:CB	2.40	0.52
17:E:179:GLY:N	34:E:401:ATP:PB	2.72	0.52
27:O:14:LEU:O	27:O:175:LEU:HA	2.09	0.52
28:P:66:ARG:HH11	28:P:70:ARG:HH21	1.58	0.52
32:T:49:THR:HA	32:T:114:GLY:HA2	1.91	0.52
19:g:223:GLU:C	19:g:225:PRO:HD3	2.35	0.52
21:i:188:SER:O	21:i:192:LEU:HB2	2.10	0.52
28:p:190:ILE:HG22	28:p:195:ILE:HG23	1.92	0.52
3:c:181:LEU:HA	3:c:184:LEU:HB3	1.92	0.52
6:f:22:GLY:O	6:f:26:GLU:HB2	2.09	0.52
6:f:424:GLY:HA2	6:f:427:THR:HG22	1.92	0.52
7:U:180:SER:HA	7:U:183:LEU:HB2	1.92	0.52
7:U:370:VAL:O	7:U:374:SER:HB3	2.10	0.52
9:W:215:GLN:O	9:W:218:ASN:ND2	2.42	0.52
9:W:259:GLU:HG2	9:W:261:GLU:H	1.74	0.52
12:Z:208:ILE:O	12:Z:212:LEU:HB3	2.09	0.52
15:C:137:LEU:N	15:C:137:LEU:CD2	2.73	0.52
15:C:191:PRO:CB	15:C:355:SER:HB3	2.40	0.52
16:D:417:TYR:CZ	20:H:32:GLY:HA3	2.44	0.52
18:F:65:GLU:O	18:F:69:MET:CB	2.58	0.52
21:I:188:SER:O	21:I:192:LEU:HB2	2.10	0.52
23:k:22:PHE:CA	23:k:25:GLU:HB3	2.40	0.52
24:l:92:CYS:O	24:l:96:ARG:HB2	2.10	0.52
25:m:99:ARG:NH2	25:m:105:ASN:OD1	2.42	0.52
25:m:152:ASP:OD2	25:m:154:SER:OG	2.25	0.52
27:o:14:LEU:O	27:o:175:LEU:HA	2.09	0.52
1:a:6:GLY:HA2	1:a:9:GLN:HB2	1.92	0.51
1:a:162:TYR:O	1:a:165:THR:OG1	2.25	0.51
1:a:312:MET:O	1:a:315:LEU:HB2	2.09	0.51
10:X:396:THR:O	10:X:400:ALA:CB	2.58	0.51
12:Z:139:ILE:CG2	12:Z:158:VAL:HG21	2.37	0.51
16:D:171:ASP:OD1	16:D:340:GLN:OE1	2.28	0.51
23:K:95:GLU:HA	23:K:98:ASN:HD22	1.74	0.51
19:g:139:ILE:HD11	19:g:168:ALA:HB3	1.92	0.51
27:o:66:HIS:O	27:o:70:THR:OG1	2.26	0.51
28:p:58:THR:O	29:q:85:ARG:NH2	2.42	0.51
28:p:66:ARG:HH11	28:p:70:ARG:HH21	1.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:171:SER:O	1:a:175:ASP:CB	2.58	0.51
1:a:312:MET:HE1	9:W:314:LEU:HD12	1.91	0.51
2:b:34:ASN:O	2:b:38:HIS:ND1	2.33	0.51
3:c:30:GLN:HB3	3:c:66:THR:HG22	1.92	0.51
3:c:219:ASN:O	3:c:223:LYS:HB3	2.10	0.51
5:e:44:ASP:O	8:V:368:ARG:CD	2.59	0.51
7:U:22:PHE:N	7:U:25:HIS:ND1	2.59	0.51
9:W:169:LEU:O	9:W:182:ARG:NH1	2.43	0.51
11:Y:360:ASP:C	11:Y:362:LYS:N	2.66	0.51
13:A:355:PHE:O	13:A:359:ALA:CB	2.59	0.51
14:B:152:LEU:HD23	14:B:159:VAL:HA	1.92	0.51
15:C:355:SER:O	34:D:501:ATP:O1B	2.28	0.51
23:K:39:GLY:O	23:K:167:ALA:HA	2.10	0.51
20:h:43:GLY:CA	20:h:213:CYS:O	2.57	0.51
23:k:95:GLU:HA	23:k:98:ASN:HD22	1.74	0.51
3:c:297:VAL:O	3:c:301:ALA:CB	2.58	0.51
5:e:57:ARG:CZ	5:e:57:ARG:CB	2.86	0.51
6:f:476:THR:HA	6:f:479:LEU:HD13	1.92	0.51
7:U:687:ALA:O	7:U:691:SER:HB3	2.11	0.51
9:W:27:ARG:HA	9:W:30:GLU:HB2	1.92	0.51
9:W:39:ARG:H	9:W:44:ILE:HD12	1.75	0.51
11:Y:102:ASP:HA	11:Y:105:MET:HG2	1.92	0.51
15:C:85:VAL:HG21	15:C:123:LEU:HG	1.93	0.51
15:C:307:ARG:HG2	15:C:309:GLY:H	1.75	0.51
16:D:87:LEU:CD1	16:D:132:LEU:N	2.74	0.51
16:D:207:PRO:HD2	16:D:335:LEU:HD21	1.92	0.51
17:E:142:ILE:O	17:E:146:ARG:CB	2.57	0.51
18:F:292:GLY:HA3	18:F:338:LEU:HD23	1.92	0.51
18:F:433:ALA:O	18:F:435:LEU:CD2	2.58	0.51
25:M:25:TYR:HA	25:M:28:LYS:HE3	1.93	0.51
25:M:160:TYR:HD2	25:M:163:CYS:HB2	1.76	0.51
29:Q:118:MET:HE1	29:Q:124:LEU:HD23	1.93	0.51
31:s:195:ILE:HB	31:s:206:GLU:O	2.10	0.51
6:f:265:ALA:HA	6:f:268:LEU:HD12	1.91	0.51
6:f:559:PRO:HA	6:f:562:LEU:HB2	1.91	0.51
7:U:194:ARG:O	7:U:198:LEU:HB2	2.10	0.51
9:W:143:ALA:HA	9:W:146:THR:HG22	1.91	0.51
15:C:193:GLY:CA	15:C:196:LYS:HZ2	2.13	0.51
15:C:198:LEU:O	15:C:202:ALA:CB	2.58	0.51
17:E:262:ASN:O	17:E:266:GLY:N	2.34	0.51
18:F:90:VAL:HA	18:F:151:VAL:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:G:6:SER:O	19:G:18:PRO:HB2	2.09	0.51
27:O:6:VAL:HG23	27:O:124:TYR:HB3	1.91	0.51
30:R:38:ASN:O	30:R:184:TRP:NE1	2.39	0.51
2:b:51:LEU:HD11	2:b:61:LEU:HB2	1.91	0.51
3:c:38:LEU:HD23	3:c:42:LEU:HD23	1.93	0.51
3:c:297:VAL:O	3:c:301:ALA:HB2	2.10	0.51
7:U:216:VAL:HG13	7:U:248:ILE:HD13	1.93	0.51
8:V:42:ALA:O	8:V:47:SER:N	2.43	0.51
9:W:90:LEU:O	17:E:307:GLN:CB	2.59	0.51
9:W:425:LEU:O	9:W:429:SER:OG	2.25	0.51
11:Y:104:MET:O	11:Y:108:ALA:CB	2.59	0.51
12:Z:9:VAL:HG12	12:Z:48:LEU:HB3	1.92	0.51
16:D:413:GLU:CD	16:D:415:GLU:CD	2.79	0.51
17:E:309:ARG:HE	17:E:332:VAL:HG13	1.76	0.51
19:G:7:ALA:HB3	19:G:10:ASP:CG	2.35	0.51
21:I:124:PHE:CZ	22:J:118:TYR:HE1	2.28	0.51
24:L:92:CYS:O	24:L:96:ARG:HB2	2.10	0.51
26:N:19:ARG:NH1	26:N:170:SER:O	2.44	0.51
31:S:192:ALA:HA	31:S:209:SER:HA	1.92	0.51
20:h:14:SER:OG	20:h:18:LYS:N	2.42	0.51
28:p:15:LYS:HE3	28:p:121:ILE:HG12	1.92	0.51
6:f:166:VAL:O	6:f:170:TRP:CB	2.58	0.51
6:f:303:VAL:HG22	6:f:339:ILE:HG13	1.93	0.51
6:f:688:ARG:HH22	6:f:788:MET:HA	1.75	0.51
9:W:414:ASN:ND2	9:W:416:GLN:OE1	2.43	0.51
10:X:189:ALA:O	10:X:193:ALA:CB	2.58	0.51
15:C:140:VAL:CG1	15:C:214:VAL:C	2.82	0.51
15:C:325:ARG:HD3	15:C:353:GLY:HA2	1.93	0.51
17:E:83:CYS:HA	17:E:107:ILE:HB	1.91	0.51
18:F:173:LYS:HD3	18:F:274:LEU:HD21	1.93	0.51
19:G:223:GLU:C	19:G:225:PRO:HD3	2.34	0.51
23:K:70:ILE:HD11	23:K:89:ILE:HD12	1.93	0.51
25:M:67:PHE:HB2	25:M:75:MET:HB2	1.93	0.51
19:g:38:THR:HG23	19:g:172:GLN:HE21	1.76	0.51
21:i:118:LYS:NZ	21:i:132:VAL:O	2.44	0.51
25:m:160:TYR:HD2	25:m:163:CYS:HB2	1.76	0.51
31:s:125:ASP:OD1	31:s:129:SER:N	2.42	0.51
2:b:138:VAL:HB	2:b:160:LEU:HD11	1.93	0.51
3:c:219:ASN:O	3:c:223:LYS:HB2	2.10	0.51
7:U:378:CYS:HB3	7:U:413:LYS:HB3	1.93	0.51
10:X:184:PRO:HG3	11:Y:248:GLU:HG2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:Y:375:LEU:O	11:Y:379:ARG:CB	2.59	0.51
15:C:322:GLU:O	15:C:326:LEU:HB2	2.11	0.51
17:E:156:PRO:HA	17:E:159:PHE:HD2	1.76	0.51
18:F:360:GLU:O	18:F:364:ARG:HB2	2.11	0.51
18:F:437:TYR:CE2	23:K:20:ARG:CZ	2.90	0.51
26:N:4:MET:HA	26:N:126:ALA:O	2.11	0.51
28:P:148:GLY:O	28:P:152:SER:OG	2.25	0.51
21:i:134:LEU:N	21:i:150:SER:OG	2.41	0.51
23:k:70:ILE:HD11	23:k:89:ILE:HD12	1.93	0.51
26:n:19:ARG:NH1	26:n:170:SER:O	2.44	0.51
29:q:117:TYR:HB3	29:q:125:ALA:HB3	1.93	0.51
4:d:71:PHE:O	4:d:75:MET:HB2	2.11	0.51
6:f:455:VAL:HG12	6:f:457:ASN:H	1.76	0.51
7:U:512:ALA:O	7:U:516:LEU:CB	2.58	0.51
7:U:733:ALA:O	7:U:737:LEU:HB2	2.11	0.51
9:W:430:GLN:O	9:W:434:SER:CB	2.59	0.51
14:B:284:ILE:O	14:B:329:MET:HA	2.11	0.51
15:C:90:HIS:ND1	16:D:109:SER:C	2.69	0.51
15:C:146:SER:OG	15:C:147:THR:N	2.39	0.51
18:F:94:ILE:HD11	18:F:125:LYS:HB2	1.93	0.51
23:K:60:GLU:OE1	23:K:63:SER:N	2.44	0.51
23:K:97:GLN:O	23:K:101:PHE:HB2	2.11	0.51
29:Q:117:TYR:HB3	29:Q:125:ALA:HB3	1.93	0.51
26:n:59:VAL:O	26:n:63:LEU:HB3	2.10	0.51
7:U:751:ARG:HH21	7:U:907:SER:HB3	1.75	0.51
8:V:454:GLU:HG3	8:V:455:LYS:HG2	1.92	0.51
15:C:219:LEU:HB3	15:C:222:LYS:HB3	1.93	0.51
20:H:183:GLU:H	20:H:186:ASP:HB2	1.76	0.51
32:T:9:THR:O	32:T:41:ARG:NH2	2.44	0.51
26:n:144:ARG:HH22	26:n:147:MET:HA	1.74	0.51
3:c:149:GLN:C	3:c:154:LYS:HD2	2.32	0.51
3:c:261:GLU:HA	3:c:264:LYS:HE3	1.93	0.51
7:U:596:ASN:OD1	7:U:599:ILE:HG21	2.10	0.51
13:A:330:ALA:O	13:A:336:ARG:NH2	2.43	0.51
15:C:171:HIS:HB3	15:C:174:LEU:HB2	1.91	0.51
15:C:192:PRO:CB	16:D:323:ARG:NH2	2.51	0.51
16:D:409:LYS:NZ	16:D:409:LYS:CB	2.73	0.51
22:J:131:ALA:H	22:J:147:THR:HG1	1.58	0.51
31:S:125:ASP:OD1	31:S:129:SER:N	2.42	0.51
22:j:131:ALA:N	22:j:147:THR:OG1	2.38	0.51
29:q:118:MET:HE1	29:q:124:LEU:HD23	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:r:104:TRP:CD2	30:r:181:GLU:HA	2.46	0.51
7:U:257:SER:O	7:U:261:LEU:N	2.38	0.50
8:V:284:GLU:O	8:V:288:TYR:CB	2.59	0.50
9:W:268:LYS:HA	9:W:271:VAL:HG12	1.93	0.50
11:Y:330:ILE:O	11:Y:334:LEU:HB2	2.11	0.50
13:A:293:ASN:ND2	18:F:171:ARG:NH1	2.54	0.50
15:C:138:MET:O	15:C:237:MET:HE3	2.10	0.50
15:C:234:LEU:HA	15:C:237:MET:HG2	1.93	0.50
17:E:84:ARG:O	17:E:85:ARG:NE	2.43	0.50
28:P:190:ILE:HG22	28:P:195:ILE:HG23	1.92	0.50
32:T:187:PHE:O	32:T:203:LEU:N	2.44	0.50
20:h:150:ASP:OD1	20:h:154:ALA:N	2.44	0.50
23:k:39:GLY:O	23:k:167:ALA:HA	2.10	0.50
23:k:97:GLN:O	23:k:101:PHE:HB2	2.11	0.50
26:n:59:VAL:O	26:n:63:LEU:CB	2.58	0.50
31:s:14:ALA:O	31:s:135:PHE:HA	2.11	0.50
32:t:187:PHE:O	32:t:203:LEU:N	2.44	0.50
6:f:314:TYR:HA	6:f:317:LEU:HB3	1.92	0.50
7:U:545:LEU:O	7:U:549:ALA:CB	2.57	0.50
9:W:436:MET:HA	9:W:439:VAL:HG22	1.92	0.50
10:X:192:SER:O	10:X:196:THR:CB	2.55	0.50
16:D:340:GLN:HA	16:D:343:LEU:HD12	1.93	0.50
18:F:330:ALA:HB3	18:F:348:LEU:HD21	1.93	0.50
19:G:139:ILE:HD11	19:G:168:ALA:HB3	1.92	0.50
19:g:131:MET:HG2	25:m:125:TYR:HE1	1.75	0.50
23:k:32:LYS:HZ1	23:k:173:ALA:H	1.59	0.50
25:m:25:TYR:HA	25:m:28:LYS:HE3	1.93	0.50
25:m:67:PHE:HB2	25:m:75:MET:HB2	1.93	0.50
27:o:96:ALA:H	27:o:115:PRO:HB3	1.76	0.50
32:t:9:THR:O	32:t:41:ARG:NH2	2.44	0.50
1:a:365:MET:O	1:a:369:HIS:CB	2.59	0.50
3:c:211:GLU:HA	3:c:214:GLN:HB3	1.92	0.50
6:f:625:LYS:HA	6:f:657:ILE:HD11	1.92	0.50
8:V:294:ARG:HH21	8:V:331:LEU:HD23	1.74	0.50
8:V:408:ARG:O	8:V:412:LEU:HB2	2.11	0.50
8:V:486:ILE:HG22	12:Z:275:LEU:HD21	1.93	0.50
9:W:40:LEU:HD12	17:E:333:LYS:CE	2.40	0.50
15:C:43:ARG:HD2	16:D:58:GLU:HB2	1.93	0.50
18:F:437:TYR:CD2	23:K:20:ARG:CZ	2.95	0.50
19:G:38:THR:HG23	19:G:172:GLN:HE21	1.76	0.50
20:H:111:VAL:O	20:H:115:ALA:CB	2.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:K:109:VAL:HG21	23:K:145:GLY:HA3	1.94	0.50
32:T:49:THR:OG1	32:T:50:MET:N	2.43	0.50
20:h:148:GLN:O	20:h:156:PHE:N	2.44	0.50
30:r:135:ALA:O	30:r:139:MET:CB	2.57	0.50
7:U:546:ARG:HG3	7:U:580:ARG:HH12	1.77	0.50
7:U:709:PHE:HA	7:U:712:LEU:HB3	1.94	0.50
12:Z:214:LYS:HA	12:Z:218:GLY:HA3	1.93	0.50
34:B:501:ATP:O2B	15:C:307:ARG:CZ	2.58	0.50
15:C:134:LEU:CD2	15:C:138:MET:CE	2.81	0.50
17:E:205:ASP:OD1	18:F:308:ARG:NH1	2.45	0.50
17:E:206:LYS:HG2	18:F:261:ILE:HG21	1.92	0.50
21:I:124:PHE:CD2	22:J:124:ARG:HB3	2.46	0.50
25:M:180:GLN:HB3	25:M:184:MET:HE3	1.93	0.50
19:g:212:PRO:HB3	19:g:235:ILE:HG22	1.93	0.50
31:s:140:SER:OG	31:s:186:ASP:OD2	2.30	0.50
31:s:209:SER:OG	31:s:212:LYS:NZ	2.33	0.50
1:a:217:LEU:HD22	1:a:241:ASN:HD22	1.76	0.50
6:f:352:HIS:HA	6:f:387:GLN:HG2	1.94	0.50
6:f:536:SER:O	6:f:540:GLN:CB	2.59	0.50
6:f:541:THR:O	6:f:545:LYS:CB	2.58	0.50
7:U:237:VAL:HA	7:U:321:GLN:HG3	1.93	0.50
7:U:559:ARG:HB3	7:U:562:GLU:HB2	1.93	0.50
7:U:599:ILE:CG1	16:D:56:VAL:HG21	2.40	0.50
7:U:655:ALA:O	7:U:659:CYS:HB3	2.12	0.50
13:A:293:ASN:CG	18:F:171:ARG:HH12	2.19	0.50
14:B:196:GLU:O	14:B:200:SER:CB	2.59	0.50
14:B:436:GLU:CA	21:I:25:MET:HE2	2.40	0.50
15:C:245:ILE:HG23	15:C:290:LYS:CB	2.41	0.50
17:E:111:LEU:HB3	17:E:112:PRO:HD3	1.90	0.50
19:G:179:LEU:HA	19:G:182:LYS:HB3	1.93	0.50
21:I:118:LYS:NZ	21:I:132:VAL:O	2.44	0.50
21:I:134:LEU:N	21:I:150:SER:OG	2.41	0.50
27:O:1:THR:O	27:O:129:SER:N	2.43	0.50
32:T:97:TYR:O	32:T:101:SER:OG	2.23	0.50
25:m:214:SER:OG	25:m:224:HIS:NE2	2.43	0.50
26:n:4:MET:HA	26:n:126:ALA:O	2.11	0.50
31:s:184:GLU:OE1	31:s:211:ARG:NH1	2.45	0.50
8:V:43:THR:O	8:V:47:SER:OG	2.20	0.50
8:V:196:SER:HA	8:V:242:HIS:HE1	1.75	0.50
9:W:44:ILE:HA	9:W:47:LEU:HB2	1.93	0.50
11:Y:157:ILE:HD12	11:Y:158:THR:HG23	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:Y:358:ARG:HD2	11:Y:358:ARG:O	2.11	0.50
14:B:418:ASP:O	14:B:422:SER:HB2	2.11	0.50
16:D:248:ARG:NH1	16:D:291:GLU:OE1	2.45	0.50
18:F:368:ILE:HG12	18:F:371:ARG:HH22	1.75	0.50
19:g:27:TYR:CZ	25:m:7:TYR:OH	2.63	0.50
19:g:84:THR:HB	25:m:156:VAL:HG22	1.93	0.50
19:g:179:LEU:HA	19:g:182:LYS:HB3	1.92	0.50
25:m:180:GLN:HB3	25:m:184:MET:HE3	1.93	0.50
6:f:370:MET:O	6:f:374:SER:HB2	2.12	0.50
6:f:515:ALA:HB1	6:f:558:LEU:HD21	1.94	0.50
7:U:699:THR:O	7:U:702:THR:OG1	2.29	0.50
9:W:215:GLN:HB2	9:W:223:LYS:HE2	1.94	0.50
11:Y:380:VAL:HA	11:Y:383:LEU:HB2	1.93	0.50
14:B:293:LYS:HD3	15:C:267:SER:HB2	1.93	0.50
15:C:229:ARG:HA	15:C:271:ARG:NH2	2.27	0.50
19:G:212:PRO:HB3	19:G:235:ILE:HG22	1.93	0.50
30:R:104:TRP:CD2	30:R:181:GLU:HA	2.46	0.50
19:g:6:SER:OG	19:g:11:ARG:NH2	2.45	0.50
20:h:111:VAL:O	20:h:115:ALA:CB	2.60	0.50
1:a:194:GLN:OE1	1:a:228:THR:OG1	2.29	0.50
6:f:696:LEU:HD13	6:f:752:HIS:HD2	1.77	0.50
9:W:90:LEU:C	17:E:307:GLN:HG3	2.36	0.50
13:A:177:VAL:HG22	13:A:228:ALA:HB1	1.93	0.50
15:C:132:ASP:OD1	15:C:133:PRO:HD2	2.10	0.50
15:C:142:LYS:HB3	15:C:201:ARG:HE	1.77	0.50
16:D:395:LEU:HD12	16:D:397:LYS:H	1.77	0.50
18:F:293:THR:HA	18:F:337:ILE:HG22	1.92	0.50
20:H:46:LEU:HD13	20:H:75:VAL:HG22	1.94	0.50
24:L:98:VAL:O	32:T:90:SER:OG	2.23	0.50
31:S:14:ALA:O	31:S:135:PHE:HA	2.11	0.50
32:t:145:LEU:HB3	32:t:179:ARG:HH21	1.77	0.50
3:c:112:TYR:HA	3:c:143:VAL:HB	1.92	0.50
3:c:210:ASN:O	3:c:214:GLN:N	2.30	0.50
4:d:34:ASN:O	4:d:37:PRO:HD2	2.12	0.50
6:f:81:GLN:O	6:f:85:SER:HB2	2.12	0.50
8:V:282:ASN:HD21	11:Y:382:LYS:HA	1.76	0.50
9:W:219:THR:HG23	9:W:222:LEU:HD12	1.93	0.50
9:W:312:MET:HE1	9:W:358:VAL:HA	1.92	0.50
9:W:424:LEU:HD23	12:Z:258:VAL:HG21	1.93	0.50
15:C:193:GLY:C	15:C:196:LYS:CG	2.83	0.50
16:D:412:GLN:NE2	16:D:412:GLN:CA	2.73	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:H:150:ASP:OD1	20:H:154:ALA:N	2.44	0.50
20:H:158:TRP:CB	20:H:161:THR:OG1	2.60	0.50
31:S:211:ARG:NH2	31:S:213:ASP:OD2	2.41	0.50
19:g:128:ASN:HA	20:h:127:VAL:HG12	1.94	0.50
19:g:163:PHE:HB3	20:h:57:TYR:HA	1.93	0.50
21:i:119:GLN:HA	21:i:122:THR:HG23	1.93	0.50
23:k:157:ASP:OD2	23:k:159:SER:OG	2.30	0.50
29:q:44:LEU:HD11	29:q:102:LEU:HD22	1.94	0.50
4:d:98:LEU:HA	4:d:101:LEU:HD12	1.94	0.49
7:U:571:CYS:HA	7:U:579:ARG:HG2	1.92	0.49
13:A:269:ALA:H	13:A:314:ASN:HB3	1.77	0.49
16:D:147:ALA:HA	17:E:62:LYS:HD2	1.94	0.49
34:D:502:ATP:O1B	34:D:502:ATP:O2G	2.30	0.49
17:E:60:VAL:HA	17:E:71:VAL:HG12	1.93	0.49
18:F:363:ALA:HB1	18:F:381:TYR:HB3	1.93	0.49
21:I:62:SER:OG	21:I:65:ILE:O	2.26	0.49
25:M:152:ASP:OD2	25:M:154:SER:OG	2.25	0.49
28:P:113:ASP:OD2	28:P:116:THR:N	2.41	0.49
31:S:184:GLU:OE1	31:S:211:ARG:NH1	2.45	0.49
22:j:11:SER:H	22:j:15:HIS:H	1.58	0.49
23:k:15:PHE:HD1	23:k:20:ARG:CA	2.24	0.49
27:o:215:LYS:HB2	28:p:197:THR:HB	1.94	0.49
28:p:191:GLU:HG3	28:p:193:ASP:H	1.77	0.49
3:c:273:LYS:H	3:c:273:LYS:NZ	2.10	0.49
6:f:138:GLU:O	6:f:142:TYR:CB	2.59	0.49
8:V:147:PHE:HB3	8:V:149:PRO:HD2	1.94	0.49
9:W:165:ILE:HD13	9:W:189:GLN:HB3	1.94	0.49
15:C:89:VAL:HG12	15:C:92:GLU:OE1	2.12	0.49
16:D:416:PHE:CE1	20:H:64:LYS:HB3	2.47	0.49
17:E:197:LYS:HG2	17:E:231:PHE:HB3	1.92	0.49
19:G:65:THR:HB	25:M:158:TYR:HB2	1.94	0.49
20:H:10:LEU:C	20:H:10:LEU:CD2	2.86	0.49
21:I:42:GLY:HA2	21:I:216:LEU:O	2.13	0.49
21:I:161:ALA:HB1	21:I:175:LEU:HD13	1.94	0.49
1:a:325:ASP:HB3	1:a:330:ARG:HB2	1.93	0.49
4:d:204:LYS:O	4:d:208:ASP:HB2	2.12	0.49
6:f:370:MET:O	6:f:374:SER:CB	2.61	0.49
12:Z:187:LEU:HD12	12:Z:190:ARG:CD	2.41	0.49
14:B:229:GLY:C	34:B:501:ATP:H4'	2.37	0.49
15:C:134:LEU:HD23	15:C:138:MET:SD	2.53	0.49
16:D:102:ILE:HG13	16:D:112:TYR:HD1	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:F:222:GLY:O	18:F:349:ASP:N	2.44	0.49
18:F:401:VAL:HG12	18:F:405:MET:HE2	1.94	0.49
27:O:43:CYS:SG	27:O:44:CYS:N	2.85	0.49
20:h:8:PHE:HA	21:i:127:LYS:NZ	2.27	0.49
20:h:46:LEU:HD13	20:h:75:VAL:HG22	1.94	0.49
23:k:109:VAL:HG21	23:k:145:GLY:HA3	1.94	0.49
23:k:228:MET:N	23:k:228:MET:SD	2.86	0.49
27:o:43:CYS:SG	27:o:44:CYS:N	2.85	0.49
31:s:179:PHE:O	31:s:183:ALA:HB2	2.13	0.49
4:d:185:ALA:HB3	8:V:442:ILE:HD13	1.95	0.49
6:f:80:ARG:HD2	6:f:133:MET:HE1	1.94	0.49
6:f:170:TRP:NE1	6:f:193:PRO:CB	2.75	0.49
7:U:183:LEU:O	7:U:186:SER:HB3	2.13	0.49
7:U:634:PRO:O	7:U:638:SER:CB	2.60	0.49
8:V:128:ARG:HE	8:V:162:GLU:HG2	1.77	0.49
9:W:53:GLN:O	9:W:56:THR:OG1	2.27	0.49
12:Z:70:LEU:HD12	12:Z:111:LEU:HD13	1.94	0.49
13:A:187:LEU:HD21	13:A:229:VAL:HG22	1.94	0.49
15:C:273:MET:HA	15:C:276:LEU:HD12	1.94	0.49
15:C:320:PRO:CB	34:D:501:ATP:HN62	2.20	0.49
16:D:96:VAL:HG23	16:D:102:ILE:HD11	1.93	0.49
16:D:296:MET:C	16:D:326:ARG:HH12	2.19	0.49
16:D:323:ARG:CZ	34:D:501:ATP:PG	2.99	0.49
17:E:97:ARG:HH21	17:E:111:LEU:CB	2.24	0.49
24:L:189:LYS:HA	24:L:192:LEU:HG	1.93	0.49
25:M:37:ILE:HD11	25:M:193:VAL:HG13	1.94	0.49
19:g:43:ARG:HE	19:g:164:LYS:HG2	1.77	0.49
21:i:161:ALA:HB1	21:i:175:LEU:HD13	1.94	0.49
29:q:148:THR:HB	29:q:151:ILE:HB	1.94	0.49
3:c:219:ASN:ND2	12:Z:128:PRO:O	2.44	0.49
5:e:48:VAL:CG2	8:V:368:ARG:HD3	2.42	0.49
6:f:780:PRO:HB2	6:f:800:LEU:HG	1.95	0.49
8:V:55:THR:HA	8:V:59:ALA:H	1.78	0.49
8:V:224:LEU:HD13	8:V:227:VAL:HB	1.93	0.49
8:V:309:MET:O	8:V:313:LEU:HB2	2.13	0.49
12:Z:187:LEU:O	12:Z:190:ARG:HG3	2.13	0.49
12:Z:188:SER:HA	12:Z:191:ILE:HD12	1.93	0.49
15:C:219:LEU:HD13	15:C:222:LYS:HD3	1.93	0.49
15:C:234:LEU:HD12	15:C:237:MET:CG	2.43	0.49
18:F:387:CYS:SG	18:F:424:ILE:HD12	2.49	0.49
19:G:58:ASP:HB3	19:G:61:LEU:HB2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:I:114:LEU:HA	21:I:117:ILE:HD12	1.93	0.49
22:J:131:ALA:N	22:J:147:THR:OG1	2.38	0.49
25:M:66:LEU:HD13	25:M:214:SER:HB2	1.95	0.49
29:Q:44:LEU:HD11	29:Q:102:LEU:HD22	1.94	0.49
31:S:179:PHE:O	31:S:183:ALA:HB2	2.13	0.49
21:i:114:LEU:HA	21:i:117:ILE:HD12	1.93	0.49
23:k:117:SER:HB3	24:l:82:ARG:HH12	1.76	0.49
24:l:189:LYS:HA	24:l:192:LEU:HG	1.93	0.49
3:c:34:SER:HB3	3:c:70:ILE:HA	1.94	0.49
3:c:113:HIS:CE1	3:c:144:VAL:HG22	2.46	0.49
3:c:220:LEU:O	3:c:224:SER:CB	2.61	0.49
3:c:247:GLU:HA	3:c:250:GLU:HG3	1.95	0.49
6:f:512:MET:HE2	6:f:557:TRP:HB2	1.93	0.49
8:V:95:LEU:HD13	8:V:137:GLU:HB3	1.95	0.49
10:X:201:TYR:C	10:X:203:PRO:HD3	2.37	0.49
10:X:314:ARG:HA	10:X:314:ARG:NE	2.27	0.49
10:X:396:THR:O	10:X:400:ALA:HB3	2.11	0.49
13:A:241:ILE:HB	13:A:244:GLU:HG3	1.95	0.49
14:B:227:PRO:O	14:B:232:LYS:NZ	2.45	0.49
14:B:392:GLY:C	34:B:501:ATP:O2'	2.54	0.49
15:C:50:ASN:O	15:C:54:ALA:CB	2.61	0.49
16:D:416:PHE:HA	20:H:35:SER:HB2	1.94	0.49
17:E:198:VAL:HG12	17:E:200:SER:H	1.76	0.49
17:E:344:ARG:NH2	34:E:401:ATP:O3'	2.46	0.49
18:F:64:HIS:O	18:F:68:ALA:CB	2.60	0.49
19:G:43:ARG:HE	19:G:164:LYS:HG2	1.78	0.49
20:H:68:ILE:HA	20:H:91:ARG:HE	1.78	0.49
20:H:148:GLN:O	20:H:156:PHE:N	2.44	0.49
21:I:124:PHE:HZ	22:J:118:TYR:CE1	2.30	0.49
22:J:11:SER:H	22:J:15:HIS:H	1.58	0.49
27:O:96:ALA:H	27:O:115:PRO:HB3	1.76	0.49
27:O:206:LYS:HA	28:P:165:GLU:HG3	1.94	0.49
31:S:5:TYR:OH	31:S:103:PRO:O	2.24	0.49
32:T:153:VAL:O	32:T:157:GLN:N	2.41	0.49
24:l:229:VAL:O	24:l:233:LEU:N	2.42	0.49
6:f:675:PHE:CG	6:f:694:LEU:HD23	2.48	0.49
7:U:51:ASP:OD2	7:U:54:PHE:N	2.46	0.49
8:V:373:ALA:O	8:V:377:GLN:CB	2.55	0.49
15:C:216:GLY:HA3	15:C:248:MET:HG2	1.95	0.49
17:E:101:ASP:OD2	17:E:104:THR:N	2.46	0.49
23:K:157:ASP:OD2	23:K:159:SER:OG	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:K:169:ALA:N	23:K:178:GLN:OE1	2.44	0.49
26:N:87:CYS:CB	26:N:91:ARG:HD3	2.42	0.49
28:P:113:ASP:HB2	28:P:118:LYS:HB3	1.95	0.49
28:P:191:GLU:HG3	28:P:193:ASP:H	1.77	0.49
20:h:111:VAL:O	20:h:115:ALA:HB3	2.12	0.49
21:i:118:LYS:HE3	21:i:130:PHE:HB2	1.95	0.49
21:i:154:GLY:O	22:j:81:ARG:NH1	2.42	0.49
28:p:159:ASP:N	28:p:159:ASP:OD1	2.44	0.49
31:s:95:ILE:O	31:s:98:SER:OG	2.28	0.49
1:a:70:ARG:HH21	2:b:80:PRO:HG2	1.78	0.49
1:a:280:MET:HE1	1:a:296:ILE:HG13	1.93	0.49
3:c:39:LEU:HD23	3:c:42:LEU:HD21	1.94	0.49
4:d:154:ALA:HB1	4:d:158:ILE:CD1	2.40	0.49
5:e:52:PHE:HB3	5:e:55:GLN:HB2	1.94	0.49
6:f:645:ASP:O	6:f:649:HIS:ND1	2.45	0.49
7:U:60:ALA:O	7:U:64:ALA:CB	2.61	0.49
7:U:172:ASP:CG	7:U:176:MET:SD	2.96	0.49
7:U:903:PHE:HB2	7:U:915:LYS:HB2	1.94	0.49
12:Z:22:HIS:HA	12:Z:25:ARG:HG2	1.94	0.49
12:Z:195:VAL:O	12:Z:199:LYS:CB	2.51	0.49
13:A:123:VAL:HG12	18:F:87:PRO:HG3	1.94	0.49
13:A:190:VAL:HG13	13:A:209:PRO:HB2	1.95	0.49
14:B:333:ARG:NH2	15:C:302:ASP:OD1	2.45	0.49
15:C:90:HIS:ND1	16:D:109:SER:CA	2.76	0.49
15:C:144:PRO:CB	15:C:205:HIS:NE2	2.71	0.49
15:C:198:LEU:O	15:C:202:ALA:HB3	2.12	0.49
17:E:331:ILE:O	17:E:335:SER:N	2.46	0.49
18:F:73:ILE:O	18:F:77:SER:OG	2.28	0.49
19:G:7:ALA:H	19:G:10:ASP:CG	2.14	0.49
25:M:214:SER:OG	25:M:224:HIS:NE2	2.43	0.49
20:h:183:GLU:H	20:h:186:ASP:HB2	1.76	0.49
28:p:113:ASP:N	28:p:118:LYS:O	2.46	0.49
30:r:7:LYS:HD2	30:r:109:PRO:HB2	1.95	0.49
2:b:103:LYS:NZ	2:b:103:LYS:N	2.60	0.49
5:e:57:ARG:NH2	5:e:57:ARG:CG	2.73	0.49
7:U:418:GLU:HA	7:U:421:GLN:HE21	1.77	0.49
9:W:40:LEU:O	17:E:329:GLU:CD	2.55	0.49
9:W:167:GLN:HG3	9:W:168:GLU:HG3	1.94	0.49
13:A:114:ASN:HB3	13:A:120:LYS:HG2	1.94	0.49
13:A:328:ASP:O	13:A:332:MET:N	2.37	0.49
25:M:15:SER:OG	25:M:17:ASP:OD1	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:P:159:ASP:N	28:P:159:ASP:OD1	2.45	0.49
25:m:99:ARG:HH21	25:m:105:ASN:HA	1.78	0.49
28:p:60:VAL:O	28:p:64:ALA:CB	2.60	0.49
28:p:113:ASP:HB2	28:p:118:LYS:HB3	1.95	0.49
5:e:63:HIS:CG	5:e:63:HIS:O	2.65	0.49
9:W:308:LEU:HG	9:W:312:MET:HG3	1.95	0.49
11:Y:42:MET:HG3	11:Y:46:ARG:HH12	1.76	0.49
11:Y:336:ARG:O	11:Y:340:ALA:N	2.46	0.49
14:B:196:GLU:O	14:B:200:SER:OG	2.31	0.49
14:B:230:THR:HG21	14:B:353:PHE:HB3	1.94	0.49
23:K:22:PHE:CD1	23:K:22:PHE:N	2.73	0.49
23:K:228:MET:N	23:K:228:MET:SD	2.86	0.49
28:P:60:VAL:O	28:P:64:ALA:CB	2.60	0.49
19:g:126:THR:HG22	20:h:128:ARG:HH12	1.77	0.49
23:k:169:ALA:N	23:k:178:GLN:OE1	2.44	0.49
24:l:45:VAL:HG11	24:l:188:VAL:HG22	1.95	0.49
25:m:134:SER:HB2	25:m:153:PRO:HD3	1.95	0.49
6:f:586:PRO:O	6:f:590:PHE:CB	2.60	0.48
15:C:70:GLY:HA3	16:D:113:VAL:HA	1.95	0.48
17:E:57:VAL:HG12	17:E:74:THR:HG21	1.95	0.48
17:E:340:GLY:HA3	34:E:401:ATP:C1'	2.41	0.48
21:I:118:LYS:HE3	21:I:130:PHE:HB2	1.95	0.48
22:J:179:GLU:C	22:J:181:ILE:H	2.20	0.48
27:O:211:VAL:HG11	28:P:198:ARG:HD3	1.94	0.48
31:S:140:SER:OG	31:S:186:ASP:OD2	2.30	0.48
1:a:155:PHE:O	1:a:159:SER:OG	2.28	0.48
3:c:146:ASP:H	3:c:156:VAL:HG23	1.79	0.48
6:f:422:VAL:HA	6:f:452:ASN:HD21	1.77	0.48
6:f:610:GLN:O	6:f:613:LEU:HB2	2.12	0.48
8:V:43:THR:OG1	8:V:66:GLU:OE1	2.28	0.48
9:W:442:THR:HA	9:W:445:LEU:HB2	1.94	0.48
9:W:445:LEU:O	9:W:449:GLU:HB2	2.14	0.48
17:E:159:PHE:O	17:E:163:GLY:N	2.46	0.48
18:F:172:VAL:HG11	18:F:274:LEU:HG	1.95	0.48
18:F:350:ARG:HE	18:F:352:ILE:HD11	1.78	0.48
18:F:402:GLU:OE1	18:F:426:GLU:HB3	2.13	0.48
19:G:7:ALA:N	19:G:10:ASP:CG	2.66	0.48
23:K:93:ARG:HD3	30:R:68:LEU:HD13	1.95	0.48
23:K:210:LEU:HD11	23:K:215:ILE:HG12	1.96	0.48
24:L:45:VAL:HG11	24:L:188:VAL:HG22	1.95	0.48
24:L:45:VAL:HG13	24:L:214:ILE:HG13	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:L:229:VAL:O	24:L:233:LEU:N	2.42	0.48
28:P:189:ILE:HG23	28:P:196:THR:HB	1.96	0.48
32:T:145:LEU:HB3	32:T:179:ARG:HH21	1.77	0.48
20:h:8:PHE:HA	21:i:127:LYS:HZ2	1.78	0.48
20:h:77:SER:HB2	20:h:133:SER:H	1.77	0.48
21:i:245:ALA:HA	21:i:248:GLU:HG2	1.95	0.48
7:U:241:ASN:HD22	7:U:244:MET:HE3	1.78	0.48
7:U:338:HIS:CE1	7:U:785:PRO:HB3	2.48	0.48
11:Y:79:ASP:HA	11:Y:82:LYS:HE2	1.96	0.48
14:B:291:GLY:HA3	14:B:336:THR:HB	1.94	0.48
15:C:147:THR:OG1	15:C:148:TYR:N	2.45	0.48
15:C:194:THR:HA	34:D:501:ATP:O1A	2.12	0.48
17:E:322:LYS:HA	17:E:362:VAL:HB	1.95	0.48
18:F:358:ASN:O	18:F:362:ARG:NH1	2.46	0.48
24:L:52:ALA:HB2	24:L:59:HIS:CD2	2.49	0.48
26:N:120:MET:H	32:T:61:GLN:HE22	1.60	0.48
30:R:62:GLN:HA	30:R:65:ILE:HD12	1.95	0.48
21:i:42:GLY:HA2	21:i:216:LEU:O	2.13	0.48
22:j:211:MET:HG2	22:j:213:ARG:H	1.78	0.48
25:m:66:LEU:HD13	25:m:214:SER:HB2	1.95	0.48
5:e:57:ARG:HG3	11:Y:293:ARG:HH21	1.76	0.48
7:U:560:MET:HE1	7:U:591:CYS:H	1.78	0.48
8:V:467:TYR:HE2	8:V:470:ARG:HB3	1.77	0.48
8:V:477:HIS:O	8:V:481:SER:OG	2.30	0.48
9:W:203:GLN:HA	9:W:206:SER:HB3	1.95	0.48
34:B:501:ATP:PB	15:C:307:ARG:NH2	2.85	0.48
15:C:200:ALA:HB3	15:C:213:ARG:HH22	1.78	0.48
17:E:182:LEU:CB	34:E:401:ATP:C3'	2.88	0.48
20:H:77:SER:HB2	20:H:133:SER:H	1.77	0.48
20:H:111:VAL:O	20:H:115:ALA:HB3	2.12	0.48
21:I:29:GLY:HA2	21:I:165:GLY:HA3	1.96	0.48
21:I:68:LEU:HA	21:I:91:ARG:HE	1.79	0.48
22:J:211:MET:HG2	22:J:213:ARG:H	1.78	0.48
26:N:48:SER:H	26:N:95:MET:HB2	1.78	0.48
26:N:127:ILE:HD13	26:N:136:TYR:HB2	1.95	0.48
27:O:106:THR:OG1	27:O:109:HIS:NE2	2.37	0.48
23:k:192:LYS:HA	23:k:195:ILE:HD12	1.95	0.48
26:n:48:SER:H	26:n:95:MET:HB2	1.78	0.48
1:a:370:GLN:HG2	4:d:247:ILE:HG22	1.95	0.48
2:b:48:ASN:OD1	2:b:48:ASN:N	2.44	0.48
6:f:509:LYS:HG2	6:f:511:SER:H	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:W:90:LEU:CD1	17:E:308:ALA:H	2.24	0.48
13:A:208:PRO:HG2	13:A:210:LYS:HE2	1.96	0.48
15:C:193:GLY:C	15:C:196:LYS:HB2	2.38	0.48
15:C:193:GLY:CA	15:C:196:LYS:HB2	2.43	0.48
15:C:214:VAL:HG11	15:C:237:MET:SD	2.53	0.48
18:F:194:GLN:O	18:F:198:LEU:CB	2.57	0.48
25:M:134:SER:HB2	25:M:153:PRO:HD3	1.95	0.48
28:P:113:ASP:N	28:P:118:LYS:O	2.46	0.48
29:Q:148:THR:HB	29:Q:151:ILE:HB	1.94	0.48
23:k:60:GLU:OE1	23:k:63:SER:N	2.44	0.48
8:V:204:ASP:O	8:V:208:ALA:N	2.39	0.48
10:X:267:VAL:HG11	10:X:292:GLN:HE21	1.78	0.48
13:A:364:VAL:HA	13:A:404:ALA:H	1.79	0.48
16:D:171:ASP:OD2	16:D:340:GLN:CD	2.57	0.48
18:F:305:GLU:O	18:F:308:ARG:HD2	2.14	0.48
21:i:158:GLY:O	22:j:55:ASP:N	2.39	0.48
29:q:43:LEU:HD21	29:q:188:ILE:HG12	1.96	0.48
32:t:97:TYR:O	32:t:101:SER:OG	2.23	0.48
1:a:357:CYS:O	1:a:361:LYS:CB	2.62	0.48
10:X:229:TYR:O	10:X:233:TYR:HB2	2.13	0.48
11:Y:134:LEU:O	11:Y:138:LEU:N	2.44	0.48
11:Y:221:THR:HA	11:Y:224:VAL:HG12	1.95	0.48
12:Z:26:ILE:HG12	12:Z:35:VAL:HG22	1.94	0.48
13:A:103:ASN:HD21	18:F:168:TYR:HE2	1.61	0.48
17:E:203:ILE:HD12	17:E:238:ILE:HG12	1.96	0.48
21:I:105:ILE:HG12	21:I:110:LEU:HB2	1.96	0.48
23:K:91:LYS:HZ3	23:K:116:VAL:HA	1.79	0.48
23:K:100:TRP:O	30:R:57:ARG:NH2	2.46	0.48
21:i:68:LEU:HA	21:i:91:ARG:HE	1.79	0.48
28:p:189:ILE:HG23	28:p:196:THR:HB	1.96	0.48
30:r:62:GLN:HA	30:r:65:ILE:HD12	1.95	0.48
1:a:289:ARG:HB3	1:a:333:MET:HB2	1.96	0.48
7:U:101:ILE:HA	7:U:104:CYS:HB3	1.96	0.48
7:U:324:LYS:HA	7:U:327:LYS:HB2	1.96	0.48
14:B:362:LYS:O	14:B:366:GLN:HB2	2.13	0.48
16:D:163:MET:CB	16:D:218:ALA:HB3	2.43	0.48
18:F:437:TYR:CD2	23:K:20:ARG:NH1	2.76	0.48
19:G:41:ALA:HA	19:G:49:VAL:O	2.14	0.48
21:i:219:GLU:OE2	21:i:220:ASN:ND2	2.46	0.48
24:l:45:VAL:HG13	24:l:214:ILE:HG13	1.95	0.48
25:m:37:ILE:HD11	25:m:193:VAL:HG13	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:n:127:ILE:HD13	26:n:136:TYR:HB2	1.95	0.48
3:c:247:GLU:HA	3:c:250:GLU:CG	2.44	0.48
6:f:471:LEU:HG	6:f:509:LYS:HE3	1.96	0.48
6:f:538:ILE:HA	6:f:541:THR:HG22	1.96	0.48
7:U:791:LEU:HD22	7:U:911:ILE:HD11	1.94	0.48
9:W:321:VAL:O	9:W:325:GLY:HA3	2.14	0.48
14:B:229:GLY:HA2	34:B:501:ATP:O2A	2.14	0.48
16:D:318:ASP:OD2	16:D:322:LEU:CD1	2.51	0.48
16:D:396:ALA:HA	16:D:399:PHE:HD2	1.78	0.48
23:K:20:ARG:CD	23:K:20:ARG:N	2.73	0.48
23:K:231:LYS:C	23:K:233:GLU:H	2.22	0.48
31:S:63:THR:HG23	32:T:94:ARG:HH12	1.78	0.48
19:g:41:ALA:HA	19:g:49:VAL:O	2.14	0.48
32:t:190:ALA:HA	32:t:198:GLU:O	2.14	0.48
2:b:103:LYS:HZ3	2:b:103:LYS:H	1.58	0.48
4:d:101:LEU:CD2	4:d:163:TYR:CE1	2.66	0.48
4:d:131:VAL:O	4:d:135:HIS:HB3	2.13	0.48
6:f:527:VAL:HB	6:f:567:LEU:HD22	1.95	0.48
11:Y:60:SER:OG	11:Y:61:LEU:N	2.43	0.48
16:D:68:LEU:O	16:D:72:PHE:CB	2.61	0.48
16:D:267:ILE:HG13	16:D:268:ASP:H	1.79	0.48
18:F:251:LEU:HD23	18:F:285:ILE:HG12	1.96	0.48
19:G:140:LEU:O	19:G:151:VAL:HA	2.14	0.48
23:K:42:THR:HG22	23:K:44:GLU:H	1.78	0.48
23:K:192:LYS:HA	23:K:195:ILE:HD12	1.95	0.48
29:Q:181:ARG:NH1	29:Q:190:ASP:OD1	2.47	0.48
20:h:6:TYR:HE2	20:h:126:GLY:HA2	1.78	0.48
3:c:149:GLN:CG	3:c:156:VAL:HG11	2.26	0.47
6:f:645:ASP:HB3	6:f:648:ALA:HB3	1.96	0.47
7:U:35:TRP:O	7:U:39:SER:OG	2.26	0.47
7:U:364:VAL:O	7:U:368:ALA:CB	2.62	0.47
7:U:889:LEU:HA	7:U:892:LEU:HD23	1.96	0.47
8:V:203:LEU:O	8:V:207:ALA:N	2.35	0.47
8:V:375:PHE:HE1	8:V:398:LEU:HD22	1.78	0.47
9:W:152:ILE:HG12	9:W:161:GLU:HB3	1.96	0.47
9:W:152:ILE:HA	9:W:161:GLU:HG3	1.95	0.47
10:X:294:SER:O	10:X:297:ARG:NH2	2.47	0.47
10:X:411:VAL:HA	10:X:414:LEU:HG	1.96	0.47
11:Y:336:ARG:HA	11:Y:339:ALA:HB3	1.95	0.47
12:Z:12:HIS:HB3	12:Z:14:LEU:HD13	1.96	0.47
14:B:306:GLN:O	14:B:310:LEU:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:B:364:ILE:HG12	34:B:501:ATP:HN62	1.72	0.47
15:C:132:ASP:HB3	15:C:133:PRO:CD	2.43	0.47
16:D:417:TYR:CE1	20:H:33:ALA:N	2.81	0.47
17:E:135:ILE:HG22	34:E:401:ATP:N1	2.08	0.47
18:F:417:HIS:HA	18:F:420:TYR:HD2	1.79	0.47
21:I:218:ARG:HA	21:I:223:THR:HA	1.96	0.47
23:K:13:ASN:N	23:K:21:LEU:CD2	2.76	0.47
27:O:103:VAL:HA	27:O:108:PRO:HA	1.96	0.47
23:k:9:ASP:CG	23:k:22:PHE:CZ	2.54	0.47
30:r:153:TYR:HB3	30:r:157:ARG:HH22	1.79	0.47
1:a:279:GLU:HG2	1:a:339:ARG:HH12	1.78	0.47
7:U:904:LYS:HB3	7:U:913:ILE:HG12	1.95	0.47
16:D:259:PRO:HB3	16:D:303:VAL:HA	1.97	0.47
18:F:382:GLU:O	18:F:386:ARG:HB3	2.14	0.47
21:I:44:LEU:HD23	21:I:186:LEU:HD12	1.96	0.47
24:L:136:GLY:O	24:L:142:PRO:HA	2.14	0.47
24:L:225:ASP:OD1	24:L:225:ASP:N	2.46	0.47
21:i:218:ARG:HA	21:i:223:THR:HA	1.96	0.47
23:k:42:THR:HG22	23:k:44:GLU:H	1.78	0.47
24:l:69:HIS:HB2	24:l:137:TYR:HB2	1.96	0.47
1:a:152:HIS:HA	1:a:155:PHE:HB3	1.96	0.47
1:a:270:ARG:NH1	1:a:310:LEU:O	2.47	0.47
4:d:43:LEU:HA	4:d:46:GLN:HG2	1.97	0.47
6:f:234:THR:HG23	6:f:637:LYS:HE2	1.95	0.47
6:f:369:ARG:NH2	6:f:744:MET:SD	2.87	0.47
6:f:445:LEU:HG	6:f:462:ALA:HB2	1.96	0.47
7:U:583:MET:HA	7:U:586:VAL:HG12	1.96	0.47
7:U:751:ARG:HD3	7:U:908:ILE:HG13	1.95	0.47
8:V:419:LEU:O	8:V:423:ALA:CB	2.62	0.47
9:W:16:MET:HE1	9:W:24:VAL:HG22	1.95	0.47
15:C:69:GLN:HE21	15:C:118:ASN:ND2	2.09	0.47
16:D:281:ALA:HA	16:D:283:ARG:NE	2.29	0.47
16:D:409:LYS:HA	16:D:409:LYS:CE	2.42	0.47
16:D:409:LYS:HB3	16:D:409:LYS:HZ2	1.78	0.47
17:E:97:ARG:HH21	17:E:112:PRO:HD2	1.79	0.47
17:E:372:ARG:O	17:E:376:ASP:HB2	2.14	0.47
18:F:141:ASP:OD2	18:F:144:LYS:NZ	2.40	0.47
18:F:166:THR:CA	18:F:168:TYR:CE2	2.96	0.47
18:F:235:LEU:O	18:F:239:ALA:CB	2.62	0.47
19:G:32:ILE:HA	19:G:82:GLY:HA2	1.96	0.47
20:H:125:GLY:C	20:H:127:VAL:H	2.20	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:I:13:SER:C	21:I:15:GLU:N	2.72	0.47
21:I:245:ALA:HA	21:I:248:GLU:HG2	1.95	0.47
20:h:68:ILE:HA	20:h:91:ARG:HE	1.78	0.47
24:l:52:ALA:HB2	24:l:59:HIS:CD2	2.49	0.47
1:a:172:TYR:O	1:a:176:ALA:CB	2.62	0.47
1:a:196:ARG:HA	1:a:199:THR:HG22	1.96	0.47
3:c:68:ARG:HH12	7:U:540:GLN:HB2	1.80	0.47
7:U:399:TRP:HA	7:U:402:PHE:HB3	1.96	0.47
7:U:772:TRP:HB3	7:U:775:LEU:HG	1.95	0.47
8:V:149:PRO:HA	8:V:203:LEU:HD21	1.97	0.47
8:V:159:LEU:HD13	8:V:178:SER:HB2	1.95	0.47
9:W:145:LEU:HD13	9:W:185:PHE:HB2	1.96	0.47
9:W:221:LYS:HG3	9:W:224:LEU:HD12	1.95	0.47
9:W:231:ILE:O	9:W:246:HIS:NE2	2.45	0.47
9:W:361:HIS:CD2	9:W:364:ARG:HH11	2.33	0.47
11:Y:119:GLY:O	11:Y:123:ALA:HB3	2.14	0.47
11:Y:131:THR:O	11:Y:137:ARG:NH1	2.47	0.47
13:A:287:ASP:N	18:F:258:GLN:CB	2.75	0.47
14:B:149:SER:HB3	14:B:163:LEU:HD13	1.96	0.47
15:C:329:LEU:O	15:C:333:SER:HB3	2.14	0.47
16:D:290:LEU:O	16:D:294:ASN:HB2	2.14	0.47
17:E:344:ARG:O	17:E:348:THR:CB	2.62	0.47
25:M:99:ARG:HH21	25:M:105:ASN:HA	1.78	0.47
32:T:190:ALA:HA	32:T:198:GLU:O	2.14	0.47
19:g:58:ASP:HB3	19:g:61:LEU:HB2	1.94	0.47
21:i:105:ILE:HG12	21:i:110:LEU:HB2	1.96	0.47
23:k:231:LYS:C	23:k:233:GLU:H	2.22	0.47
2:b:40:LYS:HA	2:b:43:SER:HB3	1.97	0.47
5:e:52:PHE:O	5:e:55:GLN:HB2	2.13	0.47
7:U:16:GLU:HB3	7:U:18:GLN:HG2	1.96	0.47
7:U:204:ILE:HD12	7:U:207:ASN:HD22	1.78	0.47
8:V:349:ARG:HG3	8:V:357:LEU:HD21	1.96	0.47
9:W:29:PRO:HA	9:W:32:ALA:HB3	1.95	0.47
9:W:414:ASN:N	9:W:414:ASN:OD1	2.46	0.47
9:W:423:ASN:O	9:W:425:LEU:N	2.47	0.47
10:X:356:LEU:HD13	10:X:359:ALA:HB3	1.96	0.47
13:A:286:ASP:CA	18:F:258:GLN:CG	2.58	0.47
13:A:346:PRO:O	13:A:351:ARG:NH1	2.47	0.47
15:C:358:GLU:HG3	16:D:324:PRO:HG3	1.95	0.47
16:D:116:LEU:HB3	16:D:118:THR:H	1.79	0.47
16:D:287:ARG:O	16:D:291:GLU:CB	2.58	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:K:221:GLN:HB2	23:K:224:GLN:HB3	1.96	0.47
24:L:69:HIS:HB2	24:L:137:TYR:HB2	1.96	0.47
29:Q:173:LEU:HA	29:q:173:LEU:HA	1.96	0.47
29:Q:173:LEU:HD23	29:q:173:LEU:HD23	1.97	0.47
19:g:32:ILE:HA	19:g:82:GLY:HA2	1.96	0.47
21:i:101:TYR:HB3	29:q:79:ALA:HB1	1.96	0.47
22:j:131:ALA:H	22:j:147:THR:HG1	1.58	0.47
23:k:210:LEU:HD11	23:k:215:ILE:HG12	1.96	0.47
24:l:136:GLY:O	24:l:142:PRO:HA	2.14	0.47
24:l:225:ASP:OD1	24:l:225:ASP:N	2.46	0.47
26:n:91:ARG:H	26:n:91:ARG:HG3	1.36	0.47
2:b:140:ILE:HD13	2:b:157:VAL:HG22	1.97	0.47
3:c:146:ASP:O	3:c:156:VAL:CG2	2.62	0.47
7:U:90:VAL:HA	7:U:136:LYS:HE2	1.97	0.47
8:V:44:GLY:O	8:V:48:THR:CB	2.63	0.47
9:W:437:SER:HA	9:W:440:ASN:HD22	1.80	0.47
13:A:97:ARG:NH2	13:A:144:ARG:HG3	2.29	0.47
13:A:125:LEU:HA	13:A:149:ILE:H	1.79	0.47
15:C:30:GLU:HG3	16:D:43:ARG:HG3	1.95	0.47
18:F:311:LEU:HD23	18:F:314:LEU:HD12	1.97	0.47
28:P:58:THR:O	29:Q:85:ARG:NH2	2.47	0.47
30:R:153:TYR:HB3	30:R:157:ARG:HH22	1.79	0.47
25:m:40:ARG:HE	25:m:161:TRP:CD1	2.33	0.47
3:c:55:GLY:HA3	3:c:112:TYR:CZ	2.50	0.47
3:c:154:LYS:HE2	3:c:154:LYS:O	2.15	0.47
3:c:248:MET:O	3:c:252:ALA:N	2.45	0.47
3:c:250:GLU:O	3:c:253:LYS:HG2	2.14	0.47
3:c:262:GLU:HA	3:c:265:MET:HG2	1.95	0.47
4:d:33:LEU:HD23	4:d:48:LEU:HD11	1.85	0.47
5:e:43:TRP:CZ3	8:V:346:LEU:HG	2.50	0.47
5:e:58:ALA:HB1	11:Y:300:ARG:NH2	2.30	0.47
6:f:192:VAL:CG1	6:f:193:PRO:CD	2.57	0.47
6:f:306:GLU:HB3	6:f:339:ILE:HD12	1.96	0.47
6:f:575:ALA:O	6:f:579:ALA:HB2	2.15	0.47
8:V:29:PRO:HG3	8:V:83:GLU:HG3	1.96	0.47
9:W:312:MET:HB2	9:W:361:HIS:CE1	2.50	0.47
10:X:287:LEU:O	10:X:291:ALA:HB3	2.14	0.47
10:X:330:LEU:HA	10:X:333:GLN:HB2	1.96	0.47
12:Z:101:LEU:HB2	12:Z:102:HIS:H	1.51	0.47
14:B:278:ALA:CB	14:B:279:PRO:CD	2.87	0.47
15:C:142:LYS:CB	15:C:201:ARG:HE	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:C:230:MET:C	15:C:232:ARG:N	2.72	0.47
16:D:171:ASP:O	16:D:175:GLN:CB	2.58	0.47
17:E:34:LYS:O	17:E:38:LYS:CB	2.62	0.47
17:E:150:GLU:OE2	17:E:190:GLN:NE2	2.47	0.47
17:E:182:LEU:N	34:E:401:ATP:PA	2.77	0.47
18:F:90:VAL:HG11	18:F:164:LEU:HD11	1.95	0.47
18:F:137:ILE:HG23	18:F:160:ILE:HD12	1.94	0.47
18:F:399:VAL:HG22	18:F:423:GLY:O	2.14	0.47
18:F:431:LYS:HD2	18:F:431:LYS:HA	1.61	0.47
20:H:123:GLN:NE2	20:H:123:GLN:C	2.73	0.47
21:I:38:LEU:HG	21:I:160:LYS:HB3	1.97	0.47
21:I:92:LEU:O	21:I:96:ARG:HB2	2.15	0.47
21:I:213:ILE:HB	21:I:228:LEU:HD11	1.97	0.47
25:M:47:PHE:O	25:M:213:LEU:HA	2.14	0.47
25:M:170:GLN:HA	25:M:173:LYS:HE2	1.97	0.47
19:g:120:ASP:OD1	20:h:84:ARG:NH1	2.48	0.47
19:g:140:LEU:O	19:g:151:VAL:HA	2.14	0.47
20:h:43:GLY:HA3	20:h:213:CYS:O	2.13	0.47
23:k:221:GLN:HB2	23:k:224:GLN:HB3	1.95	0.47
24:l:148:CYS:SG	24:l:152:ASN:N	2.82	0.47
25:m:170:GLN:HA	25:m:173:LYS:HE2	1.97	0.47
31:s:35:ILE:O	32:t:151:ARG:NH2	2.44	0.47
6:f:523:GLY:O	6:f:527:VAL:N	2.48	0.47
7:U:24:LEU:HA	7:U:27:LEU:HD12	1.97	0.47
7:U:408:LEU:HD23	7:U:423:MET:HG2	1.97	0.47
8:V:42:ALA:O	8:V:62:HIS:ND1	2.48	0.47
8:V:419:LEU:HD23	8:V:458:VAL:HG23	1.97	0.47
9:W:108:CYS:HA	9:W:111:TYR:HB2	1.97	0.47
9:W:348:GLU:HA	9:W:351:TRP:HD1	1.80	0.47
11:Y:358:ARG:CZ	11:Y:360:ASP:HA	2.45	0.47
16:D:57:GLN:HA	16:D:60:TYR:HB3	1.96	0.47
16:D:255:LYS:HG2	16:D:303:VAL:HG11	1.96	0.47
16:D:417:TYR:CE1	20:H:32:GLY:CA	2.89	0.47
17:E:344:ARG:O	17:E:348:THR:HB	2.15	0.47
18:F:166:THR:HB	18:F:168:TYR:CE2	2.50	0.47
18:F:362:ARG:NE	18:F:388:THR:OG1	2.44	0.47
23:K:157:ASP:OD1	23:K:157:ASP:N	2.47	0.47
28:P:15:LYS:HA	28:P:20:VAL:HG23	1.96	0.47
29:Q:101:ASN:HD21	29:Q:120:TYR:HD1	1.63	0.47
32:T:74:GLU:HG3	32:T:77:LEU:HD12	1.97	0.47
20:h:9:SER:HB3	21:i:128:ARG:N	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:p:58:THR:OG1	29:q:121:LEU:O	2.26	0.47
28:p:164:PHE:O	28:p:168:SER:OG	2.32	0.47
1:a:215:GLU:HA	1:a:340:VAL:HG11	1.97	0.47
3:c:227:GLU:HB3	3:c:232:GLN:HB2	1.96	0.47
3:c:295:ASN:HB2	12:Z:267:ARG:NH1	2.30	0.47
5:e:60:LEU:C	5:e:62:LYS:H	2.22	0.47
9:W:428:TRP:O	9:W:432:LEU:HB2	2.15	0.47
13:A:363:SER:HB2	14:B:214:MET:HA	1.97	0.47
15:C:347:ILE:HD11	15:C:380:GLN:HG3	1.97	0.47
18:F:426:GLU:N	18:F:426:GLU:CD	2.73	0.47
29:Q:43:LEU:HD21	29:Q:188:ILE:HG12	1.96	0.47
30:R:7:LYS:HD2	30:R:109:PRO:HB2	1.95	0.47
21:i:29:GLY:HA2	21:i:165:GLY:HA3	1.96	0.47
25:m:47:PHE:O	25:m:213:LEU:HA	2.14	0.47
26:n:18:SER:HB2	26:n:31:THR:N	2.29	0.47
32:t:74:GLU:HG3	32:t:77:LEU:HD12	1.97	0.47
1:a:125:ILE:O	1:a:129:GLN:NE2	2.48	0.47
1:a:371:ALA:O	12:Z:190:ARG:NH2	2.48	0.47
7:U:725:MET:HA	7:U:728:PHE:HB2	1.97	0.47
7:U:800:VAL:HB	7:U:842:LYS:HE2	1.96	0.47
10:X:233:TYR:HE2	16:D:342:ARG:HB2	1.78	0.47
10:X:299:LEU:HD21	10:X:327:TYR:HE1	1.80	0.47
13:A:103:ASN:ND2	18:F:168:TYR:HE2	2.13	0.47
15:C:152:GLY:O	34:D:501:ATP:C2	2.68	0.47
15:C:186:VAL:HB	15:C:315:ILE:HD12	1.95	0.47
20:H:43:GLY:HA3	20:H:213:CYS:O	2.13	0.47
19:g:8:GLY:O	19:g:10:ASP:OD1	2.33	0.47
27:o:201:ARG:NH2	28:p:155:GLU:OE2	2.47	0.47
28:p:15:LYS:HA	28:p:20:VAL:HG23	1.96	0.47
3:c:149:GLN:HB3	3:c:154:LYS:HG3	1.96	0.46
3:c:231:LEU:HG	12:Z:196:HIS:HB2	1.96	0.46
3:c:295:ASN:HB2	12:Z:267:ARG:HH12	1.80	0.46
6:f:24:THR:HG22	6:f:71:TYR:HB2	1.97	0.46
7:U:93:ASN:HB3	7:U:97:VAL:HG12	1.97	0.46
9:W:124:LEU:HA	9:W:127:THR:HG22	1.96	0.46
9:W:313:GLU:CD	9:W:313:GLU:N	2.73	0.46
11:Y:355:GLU:CG	11:Y:357:ASN:HD22	2.26	0.46
14:B:402:ALA:HB1	14:B:414:VAL:HG11	1.97	0.46
15:C:155:ASP:HA	15:C:158:ILE:HD12	1.97	0.46
16:D:328:ASP:O	16:D:329:ARG:NE	2.47	0.46
17:E:138:LEU:CD1	34:E:401:ATP:HN62	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:E:205:ASP:HA	18:F:308:ARG:HH12	1.79	0.46
17:E:282:PRO:HB2	17:E:388:PRO:HB3	1.96	0.46
18:F:365:ILE:HA	18:F:368:ILE:HD12	1.96	0.46
19:G:179:LEU:O	19:G:183:VAL:N	2.40	0.46
23:K:101:PHE:HA	30:R:57:ARG:HH21	1.80	0.46
27:O:100:LEU:HB3	27:O:111:TYR:HB2	1.97	0.46
30:R:58:LEU:HD12	30:R:61:ARG:HD3	1.97	0.46
21:i:124:PHE:O	22:j:123:GLY:O	2.33	0.46
22:j:32:ALA:HB2	22:j:45:VAL:HG23	1.97	0.46
28:p:148:GLY:O	28:p:152:SER:OG	2.25	0.46
29:q:181:ARG:NH1	29:q:190:ASP:OD1	2.47	0.46
2:b:103:LYS:N	2:b:103:LYS:HZ2	2.13	0.46
3:c:96:LEU:HD23	3:c:99:LEU:HD12	1.97	0.46
4:d:49:ILE:HD12	4:d:52:ARG:HH11	1.79	0.46
6:f:80:ARG:HB3	6:f:95:PRO:HB2	1.98	0.46
6:f:483:PHE:O	6:f:487:LEU:N	2.47	0.46
9:W:144:ARG:HA	9:W:147:LYS:HG2	1.97	0.46
9:W:251:TYR:HA	9:W:266:ALA:HB1	1.97	0.46
9:W:312:MET:SD	9:W:362:ASN:ND2	2.89	0.46
11:Y:86:GLU:O	11:Y:90:ASP:HB2	2.15	0.46
11:Y:172:GLY:HA3	11:Y:177:ARG:HD2	1.97	0.46
11:Y:272:PHE:HE2	11:Y:323:PHE:HA	1.80	0.46
13:A:287:ASP:HB3	18:F:258:GLN:H	1.80	0.46
14:B:109:VAL:HG11	15:C:94:LYS:HE2	1.97	0.46
16:D:381:GLU:O	16:D:385:LEU:CB	2.63	0.46
18:F:198:LEU:HD22	18:F:202:ILE:HD12	1.97	0.46
20:H:187:ALA:O	20:H:191:ALA:HB2	2.16	0.46
20:h:187:ALA:O	20:h:191:ALA:HB2	2.16	0.46
21:i:8:ARG:CG	21:i:11:ILE:HD13	2.43	0.46
27:o:211:VAL:HG11	28:p:198:ARG:HD3	1.96	0.46
3:c:40:LYS:O	3:c:44:HIS:CB	2.61	0.46
3:c:42:LEU:O	3:c:46:ARG:HB2	2.15	0.46
7:U:247:GLN:O	7:U:251:ASP:CB	2.63	0.46
7:U:256:ALA:HB1	7:U:260:PHE:HD2	1.79	0.46
8:V:477:HIS:O	8:V:481:SER:CB	2.63	0.46
9:W:146:THR:HA	9:W:149:LEU:HB3	1.96	0.46
14:B:287:ILE:HG12	14:B:329:MET:HE2	1.97	0.46
18:F:199:VAL:HG13	18:F:203:VAL:HB	1.97	0.46
18:F:269:ARG:O	18:F:273:ALA:CB	2.63	0.46
25:M:202:ASP:HA	25:M:209:PHE:HE1	1.80	0.46
31:S:16:ALA:HB2	31:S:121:VAL:HG23	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:g:51:VAL:HA	19:g:216:GLU:O	2.16	0.46
24:l:79:ALA:O	24:l:83:LEU:HB2	2.16	0.46
25:m:202:ASP:HA	25:m:209:PHE:HE1	1.81	0.46
29:q:58:GLU:O	29:q:62:LYS:HB2	2.15	0.46
30:r:58:LEU:HD12	30:r:61:ARG:HD3	1.97	0.46
30:r:77:ALA:O	30:r:120:ARG:NH2	2.48	0.46
30:r:97:MET:O	30:r:116:SER:N	2.48	0.46
32:t:49:THR:HB	32:t:85:PRO:HG3	1.97	0.46
1:a:116:THR:HG22	1:a:158:LEU:HD21	1.98	0.46
2:b:54:LEU:HD13	2:b:84:ILE:HG13	1.96	0.46
4:d:114:GLU:HA	4:d:117:THR:HG22	1.98	0.46
7:U:403:THR:HG23	7:U:777:HIS:HE2	1.80	0.46
7:U:681:ASN:OD1	7:U:681:ASN:N	2.46	0.46
9:W:142:ARG:HA	9:W:145:LEU:HG	1.96	0.46
9:W:405:LYS:HD2	9:W:419:LYS:HE3	1.98	0.46
12:Z:245:PHE:HB3	12:Z:248:ALA:HB3	1.97	0.46
17:E:61:LEU:HD11	17:E:72:LYS:HB2	1.98	0.46
23:K:232:GLU:CD	23:K:232:GLU:N	2.73	0.46
32:T:42:ILE:HD12	32:T:188:GLN:HG3	1.97	0.46
32:T:49:THR:HB	32:T:85:PRO:HG3	1.97	0.46
21:i:38:LEU:HG	21:i:160:LYS:HB3	1.97	0.46
21:i:44:LEU:HD23	21:i:186:LEU:HD12	1.96	0.46
24:l:153:TYR:OH	25:m:85:ARG:NH1	2.49	0.46
2:b:25:ARG:NH2	2:b:145:GLU:OE1	2.48	0.46
3:c:154:LYS:HG2	3:c:156:VAL:HG13	1.97	0.46
5:e:57:ARG:NH2	5:e:57:ARG:CB	2.77	0.46
6:f:15:GLN:NE2	6:f:47:GLU:OE1	2.49	0.46
6:f:584:SER:O	6:f:589:SER:OG	2.30	0.46
7:U:354:LYS:HD3	7:U:357:LYS:HD3	1.97	0.46
7:U:885:MET:HG2	7:U:887:ALA:H	1.80	0.46
8:V:487:HIS:CE1	12:Z:274:ASN:HD22	2.33	0.46
9:W:169:LEU:HB3	9:W:208:LYS:HZ2	1.81	0.46
9:W:273:TYR:HA	9:W:276:LEU:HD13	1.97	0.46
10:X:257:CYS:O	10:X:260:MET:O	2.32	0.46
14:B:135:ILE:HA	14:B:159:VAL:HB	1.97	0.46
16:D:249:ASP:O	16:D:253:LEU:CB	2.63	0.46
17:E:182:LEU:HB2	34:E:401:ATP:H2'	1.96	0.46
19:G:7:ALA:CA	19:G:10:ASP:CG	2.88	0.46
21:I:15:GLU:O	22:J:24:GLU:HG3	2.16	0.46
25:M:40:ARG:HE	25:M:161:TRP:CD1	2.33	0.46
29:Q:142:ILE:HG21	30:r:141:ARG:HH21	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:R:77:ALA:O	30:R:120:ARG:NH2	2.48	0.46
31:S:20:PHE:HA	31:S:198:VAL:O	2.16	0.46
22:j:72:ALA:HB3	22:j:132:LEU:HB2	1.98	0.46
7:U:181:LEU:HD11	7:U:205:TYR:HE2	1.80	0.46
7:U:194:ARG:O	7:U:198:LEU:CB	2.63	0.46
7:U:686:GLY:O	7:U:690:ALA:HB3	2.15	0.46
9:W:427:ASP:HB2	12:Z:255:ASP:OD1	2.16	0.46
11:Y:50:MET:SD	11:Y:53:TYR:OH	2.61	0.46
16:D:354:LEU:O	16:D:354:LEU:HD23	2.15	0.46
18:F:261:ILE:HD11	18:F:305:GLU:CG	2.32	0.46
24:L:109:VAL:HG21	24:L:145:PHE:HD2	1.81	0.46
26:N:151:GLU:O	26:N:155:PHE:CB	2.64	0.46
30:R:97:MET:O	30:R:116:SER:N	2.48	0.46
19:g:88:ARG:HH12	25:m:157:SER:H	1.64	0.46
23:k:232:GLU:CD	23:k:232:GLU:N	2.73	0.46
27:o:103:VAL:HA	27:o:108:PRO:HA	1.96	0.46
31:s:20:PHE:HA	31:s:198:VAL:O	2.16	0.46
32:t:42:ILE:HD12	32:t:188:GLN:HG3	1.97	0.46
1:a:131:THR:HB	1:a:135:ILE:HD12	1.97	0.46
5:e:61:GLU:CD	5:e:61:GLU:N	2.73	0.46
7:U:74:PHE:HA	7:U:77:SER:HB2	1.98	0.46
9:W:220:GLU:HG3	9:W:221:LYS:HD3	1.96	0.46
11:Y:285:ASP:HB3	11:Y:288:PHE:CE2	2.50	0.46
12:Z:231:GLN:HA	12:Z:234:PHE:HB3	1.98	0.46
13:A:376:LEU:HB3	13:A:413:VAL:HG11	1.98	0.46
15:C:137:LEU:H	15:C:137:LEU:CD2	2.28	0.46
20:H:77:SER:H	20:H:132:VAL:HG13	1.81	0.46
22:J:32:ALA:HB2	22:J:45:VAL:HG23	1.97	0.46
24:L:137:TYR:HE2	24:L:215:VAL:HG13	1.80	0.46
25:M:58:TYR:OH	25:M:62:SER:O	2.23	0.46
29:Q:58:GLU:O	29:Q:62:LYS:HB2	2.15	0.46
20:h:123:GLN:NE2	20:h:123:GLN:C	2.73	0.46
1:a:252:LYS:HA	1:a:255:TRP:HD1	1.81	0.46
6:f:512:MET:HE1	6:f:554:TYR:HA	1.97	0.46
7:U:575:ASP:HB3	7:U:578:LEU:HB3	1.97	0.46
12:Z:34:ARG:NE	12:Z:102:HIS:HE1	2.08	0.46
12:Z:145:HIS:NE2	12:Z:224:HIS:CE1	2.81	0.46
16:D:80:LYS:HA	16:D:83:GLN:HE21	1.80	0.46
17:E:59:GLU:HG2	17:E:97:ARG:HA	1.97	0.46
17:E:179:GLY:O	34:E:401:ATP:O1A	2.22	0.46
21:I:124:PHE:CE2	22:J:118:TYR:CE1	3.00	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:J:66:ASP:H	22:J:69:VAL:HG12	1.81	0.46
26:N:144:ARG:NH2	26:N:147:MET:HA	2.31	0.46
21:i:90:LEU:HD12	21:i:114:LEU:HD22	1.97	0.46
21:i:92:LEU:O	21:i:96:ARG:HB2	2.15	0.46
2:b:92:VAL:O	2:b:96:ALA:CB	2.64	0.46
2:b:180:ALA:HA	2:b:183:LEU:HB2	1.98	0.46
4:d:170:LEU:HA	4:d:173:THR:HG22	1.98	0.46
6:f:359:GLY:O	6:f:363:SER:N	2.49	0.46
6:f:484:GLY:HA2	6:f:487:LEU:HD12	1.98	0.46
6:f:523:GLY:HA2	6:f:526:ALA:HB3	1.97	0.46
8:V:145:LEU:HG	8:V:150:ARG:HE	1.80	0.46
8:V:212:TYR:HA	8:V:253:LEU:HD21	1.97	0.46
11:Y:44:ALA:HB2	11:Y:52:PRO:HB2	1.97	0.46
15:C:90:HIS:CG	15:C:91:PRO:CD	2.84	0.46
15:C:141:GLU:CD	15:C:141:GLU:H	2.24	0.46
15:C:158:ILE:HA	15:C:161:ILE:HD12	1.98	0.46
21:I:90:LEU:HD12	21:I:114:LEU:HD22	1.97	0.46
23:K:195:ILE:O	23:K:198:SER:OG	2.30	0.46
26:N:138:TYR:CD1	26:n:138:TYR:HB3	2.51	0.46
26:N:140:ASP:OD1	26:N:140:ASP:N	2.46	0.46
24:l:137:TYR:HE2	24:l:215:VAL:HG13	1.80	0.46
25:m:214:SER:HA	25:m:226:ILE:HA	1.98	0.46
7:U:423:MET:HB3	7:U:426:TYR:HB2	1.98	0.46
7:U:612:ASP:HB3	7:U:647:HIS:HB2	1.97	0.46
8:V:44:GLY:O	8:V:48:THR:OG1	2.34	0.46
8:V:404:LYS:HA	8:V:407:VAL:HG12	1.96	0.46
9:W:45:GLU:HG2	9:W:95:SER:HB2	1.97	0.46
9:W:448:LYS:HZ2	12:Z:230:LEU:HD13	1.81	0.46
10:X:315:ASP:HB3	10:X:318:ILE:CB	2.46	0.46
12:Z:40:LEU:HA	12:Z:91:ILE:HA	1.97	0.46
12:Z:225:GLN:O	12:Z:225:GLN:HG2	2.16	0.46
16:D:87:LEU:HD12	16:D:131:ALA:CB	2.45	0.46
18:F:166:THR:O	18:F:168:TYR:CD2	2.69	0.46
18:F:365:ILE:O	18:F:369:HIS:ND1	2.49	0.46
18:F:410:ARG:NH2	18:F:416:THR:OG1	2.48	0.46
23:K:134:SER:OG	23:K:135:ARG:N	2.46	0.46
20:h:123:GLN:NE2	20:h:123:GLN:O	2.49	0.46
22:j:66:ASP:H	22:j:69:VAL:HG12	1.81	0.46
27:o:100:LEU:HB3	27:o:111:TYR:HB2	1.97	0.46
31:s:16:ALA:HB2	31:s:121:VAL:HG23	1.96	0.46
3:c:26:ASP:HB3	3:c:174:PRO:HG3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:f:249:LEU:HD21	6:f:271:MET:HG3	1.98	0.45
7:U:506:ALA:HB1	7:U:510:GLU:HG3	1.98	0.45
12:Z:34:ARG:CD	12:Z:102:HIS:CE1	2.99	0.45
15:C:33:LEU:HD22	16:D:47:LEU:HB3	1.98	0.45
15:C:76:VAL:HG22	15:C:87:VAL:HG22	1.98	0.45
15:C:134:LEU:HD23	15:C:138:MET:HE2	1.95	0.45
20:H:150:ASP:OD2	20:H:152:SER:OG	2.27	0.45
21:I:178:ASP:OD2	21:I:195:LYS:NZ	2.36	0.45
25:M:214:SER:HA	25:M:226:ILE:HA	1.98	0.45
26:N:190:LEU:HD22	32:t:209:TRP:HB2	1.98	0.45
27:O:63:LEU:O	27:O:67:SER:HB3	2.16	0.45
19:g:215:ILE:H	19:g:215:ILE:HG13	1.57	0.45
21:i:213:ILE:HB	21:i:228:LEU:HD11	1.97	0.45
22:j:109:ARG:O	22:j:113:SER:OG	2.33	0.45
23:k:104:ASN:OD1	30:r:57:ARG:NH2	2.49	0.45
26:n:96:ALA:H	26:n:116:MET:HG2	1.81	0.45
27:o:63:LEU:O	27:o:67:SER:HB3	2.16	0.45
30:r:55:TRP:HZ3	30:r:86:MET:HB3	1.81	0.45
3:c:59:GLY:HA2	3:c:70:ILE:H	1.81	0.45
5:e:43:TRP:C	5:e:45:ASP:N	2.74	0.45
7:U:600:ARG:HE	16:D:56:VAL:HG22	1.81	0.45
9:W:8:ARG:HD2	9:W:34:LEU:HD11	1.99	0.45
9:W:40:LEU:HB2	17:E:329:GLU:CG	2.29	0.45
9:W:254:PRO:HG2	9:W:266:ALA:HB2	1.98	0.45
12:Z:139:ILE:H	12:Z:158:VAL:CG2	2.29	0.45
12:Z:145:HIS:HB3	12:Z:147:ASP:HB2	1.98	0.45
17:E:182:LEU:HD13	34:E:401:ATP:C4	2.51	0.45
18:F:343:LEU:HD22	18:F:351:LYS:HE2	1.99	0.45
24:L:79:ALA:O	24:L:83:LEU:HB2	2.16	0.45
26:N:96:ALA:H	26:N:116:MET:HG2	1.81	0.45
28:P:12:MET:HG3	28:P:138:VAL:HG12	1.98	0.45
30:R:55:TRP:HZ3	30:R:86:MET:HB3	1.81	0.45
20:h:93:LEU:HD11	20:h:113:ARG:HB3	1.98	0.45
21:i:11:ILE:CD1	21:i:11:ILE:N	2.73	0.45
2:b:103:LYS:NZ	2:b:103:LYS:CB	2.79	0.45
3:c:149:GLN:CB	3:c:154:LYS:CE	2.91	0.45
4:d:73:ARG:HD3	7:U:13:ASP:HB2	1.98	0.45
7:U:251:ASP:HA	7:U:254:GLU:HB3	1.98	0.45
7:U:554:LEU:HG	7:U:588:MET:HE1	1.97	0.45
7:U:646:PRO:O	7:U:650:TYR:HB3	2.17	0.45
19:G:51:VAL:HA	19:G:216:GLU:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:I:42:GLY:CA	21:I:216:LEU:O	2.65	0.45
26:N:18:SER:HB2	26:N:31:THR:N	2.29	0.45
20:h:8:PHE:CD1	20:h:8:PHE:N	2.73	0.45
24:l:39:LYS:HD3	24:l:144:ILE:HG12	1.99	0.45
32:t:9:THR:H	32:t:41:ARG:NH2	2.15	0.45
1:a:122:LYS:HD3	1:a:131:THR:HG22	1.98	0.45
1:a:214:GLY:HA3	1:a:241:ASN:HA	1.98	0.45
4:d:151:VAL:HG11	4:d:174:ILE:HD11	1.99	0.45
4:d:164:THR:HA	4:d:167:ILE:HG12	1.98	0.45
4:d:171:LEU:HD23	4:d:174:ILE:HD12	1.99	0.45
5:e:55:GLN:HB3	5:e:57:ARG:HD2	1.99	0.45
7:U:204:ILE:HA	7:U:207:ASN:HB2	1.99	0.45
7:U:465:LEU:HD21	7:U:478:SER:HA	1.98	0.45
7:U:793:LYS:HE3	7:U:796:LYS:HB2	1.97	0.45
9:W:118:LEU:HA	9:W:121:LYS:HE3	1.97	0.45
9:W:286:LEU:HD12	9:W:289:ARG:HB2	1.99	0.45
10:X:261:LEU:N	10:X:261:LEU:CD1	2.73	0.45
10:X:415:TYR:O	10:X:419:LYS:HB2	2.15	0.45
11:Y:128:TYR:OH	11:Y:163:LYS:NZ	2.50	0.45
13:A:413:VAL:HG13	13:A:417:ILE:HD12	1.99	0.45
34:A:501:ATP:O2A	34:A:501:ATP:O2B	2.33	0.45
14:B:364:ILE:CG1	34:B:501:ATP:C6	2.99	0.45
15:C:69:GLN:HA	16:D:136:SER:O	2.16	0.45
17:E:372:ARG:O	17:E:376:ASP:CB	2.65	0.45
18:F:425:LEU:HD12	18:F:425:LEU:H	1.77	0.45
21:I:17:ARG:NH1	21:I:17:ARG:CG	2.78	0.45
22:J:72:ALA:HB3	22:J:132:LEU:HB2	1.98	0.45
24:L:39:LYS:HD3	24:L:144:ILE:HG12	1.99	0.45
26:N:31:THR:O	26:N:175:ARG:NE	2.50	0.45
27:o:106:THR:OG1	27:o:109:HIS:NE2	2.37	0.45
3:c:57:MET:HE3	3:c:109:VAL:HG23	1.99	0.45
3:c:134:GLU:HB3	3:c:140:ALA:HB3	1.99	0.45
3:c:261:GLU:HA	3:c:264:LYS:HG2	1.99	0.45
4:d:192:THR:OG1	4:d:196:ARG:NH1	2.50	0.45
4:d:246:VAL:O	4:d:250:ALA:CB	2.65	0.45
6:f:426:LEU:O	6:f:430:ASP:HB3	2.16	0.45
6:f:505:MET:HE2	6:f:518:THR:HG21	1.97	0.45
10:X:324:ALA:O	10:X:328:ASP:CB	2.56	0.45
15:C:201:ARG:HG3	15:C:213:ARG:NH2	2.32	0.45
16:D:167:ILE:HG21	16:D:174:LYS:CD	2.26	0.45
16:D:249:ASP:O	16:D:253:LEU:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:E:251:ARG:O	17:E:255:ARG:NE	2.45	0.45
23:K:15:PHE:HE2	24:L:127:PRO:HD2	1.82	0.45
30:R:51:ASP:O	30:R:55:TRP:HB2	2.17	0.45
31:S:184:GLU:HG3	27:o:195:LYS:HE3	1.99	0.45
28:p:113:ASP:OD2	28:p:116:THR:N	2.41	0.45
4:d:97:GLN:CB	4:d:161:GLU:OE2	2.57	0.45
4:d:104:LEU:O	4:d:108:SER:N	2.49	0.45
5:e:52:PHE:CD2	5:e:57:ARG:HD3	2.51	0.45
5:e:52:PHE:HB2	5:e:57:ARG:HD3	1.99	0.45
6:f:657:ILE:HA	6:f:660:ILE:HD12	1.99	0.45
8:V:67:LEU:HD11	8:V:205:LEU:HB3	1.99	0.45
8:V:359:PRO:HG2	8:V:385:LYS:HG2	1.97	0.45
14:B:294:ARG:NH1	15:C:267:SER:OG	2.49	0.45
16:D:161:ASP:CB	16:D:221:HIS:ND1	2.74	0.45
21:I:213:ILE:HG22	21:I:228:LEU:HD21	1.99	0.45
23:K:91:LYS:HD2	23:K:119:LEU:HD21	1.98	0.45
32:T:9:THR:H	32:T:41:ARG:NH2	2.15	0.45
26:n:31:THR:O	26:n:175:ARG:NE	2.50	0.45
6:f:682:GLY:O	6:f:687:ARG:NH1	2.49	0.45
7:U:592:GLY:H	7:U:625:ILE:HA	1.82	0.45
7:U:745:THR:OG1	7:U:746:ILE:N	2.49	0.45
9:W:428:TRP:O	9:W:432:LEU:CA	2.65	0.45
11:Y:22:LEU:HD23	11:Y:40:GLU:HB2	1.99	0.45
11:Y:36:ALA:O	11:Y:40:GLU:CB	2.52	0.45
11:Y:145:LEU:HG	11:Y:160:ASN:HD21	1.81	0.45
14:B:198:LYS:O	14:B:202:GLU:HB3	2.17	0.45
14:B:303:ARG:O	14:B:307:ARG:NH2	2.49	0.45
15:C:218:GLU:O	16:D:248:ARG:NH2	2.50	0.45
16:D:159:LYS:HA	16:D:160:PRO:HD3	1.75	0.45
17:E:250:ASP:OD1	18:F:304:ARG:NH2	2.50	0.45
19:G:148:GLY:O	19:G:150:GLN:NE2	2.49	0.45
23:K:99:HIS:HB2	23:K:107:MET:HE3	1.99	0.45
24:L:86:ASN:O	24:L:90:GLN:CB	2.64	0.45
24:L:92:CYS:O	24:L:96:ARG:HB3	2.17	0.45
22:j:180:ALA:HB3	22:j:183:THR:CB	2.47	0.45
23:k:134:SER:OG	23:k:135:ARG:N	2.46	0.45
30:r:51:ASP:O	30:r:55:TRP:HB2	2.17	0.45
31:s:63:THR:HG23	32:t:94:ARG:HH12	1.81	0.45
3:c:211:GLU:O	3:c:215:LYS:CB	2.65	0.45
4:d:246:VAL:O	4:d:250:ALA:HB3	2.16	0.45
5:e:43:TRP:CB	8:V:344:ASP:H	2.28	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:f:623:LYS:O	6:f:627:GLU:CB	2.65	0.45
6:f:659:LEU:HD11	6:f:690:VAL:HG23	1.99	0.45
7:U:445:ALA:HA	7:U:448:LEU:HD12	1.99	0.45
8:V:487:HIS:CE1	12:Z:271:ALA:HA	2.51	0.45
9:W:187:LEU:HB2	9:W:229:LEU:HD13	1.97	0.45
11:Y:344:HIS:CE1	11:Y:358:ARG:HB2	2.45	0.45
15:C:193:GLY:HA2	15:C:196:LYS:HB2	1.99	0.45
19:G:192:GLU:O	19:G:196:GLU:CB	2.65	0.45
25:M:92:ARG:HH12	32:T:76:LEU:HB3	1.81	0.45
23:k:91:LYS:HZ3	23:k:116:VAL:HA	1.82	0.45
24:l:92:CYS:O	24:l:96:ARG:HB3	2.16	0.45
26:n:151:GLU:O	26:n:155:PHE:CB	2.64	0.45
2:b:53:THR:HG22	2:b:59:GLU:H	1.82	0.45
7:U:107:HIS:O	7:U:111:GLN:HB2	2.17	0.45
7:U:904:LYS:H	7:U:913:ILE:HD13	1.82	0.45
8:V:94:VAL:HG11	8:V:134:PHE:HB3	1.99	0.45
8:V:210:CYS:HA	8:V:213:TYR:HD2	1.82	0.45
8:V:451:ILE:O	8:V:453:HIS:ND1	2.49	0.45
8:V:480:ILE:HA	8:V:483:CYS:HB2	1.99	0.45
9:W:5:GLY:O	9:W:9:ALA:HB3	2.17	0.45
9:W:52:LYS:HA	9:W:55:ARG:HB3	1.97	0.45
10:X:314:ARG:CA	10:X:314:ARG:NE	2.73	0.45
10:X:406:ASN:HB3	12:Z:272:LEU:HD13	1.98	0.45
13:A:112:ILE:HG12	13:A:122:VAL:HG22	1.99	0.45
17:E:49:ALA:O	17:E:52:SER:OG	2.31	0.45
18:F:421:MET:O	18:F:425:LEU:HD12	2.14	0.45
18:F:428:GLN:O	18:F:430:LYS:N	2.49	0.45
21:i:42:GLY:CA	21:i:216:LEU:O	2.65	0.45
21:i:123:GLN:HB2	22:j:125:ARG:CB	2.46	0.45
23:k:91:LYS:HD2	23:k:119:LEU:HD21	1.99	0.45
26:n:91:ARG:CZ	26:n:91:ARG:CB	2.94	0.45
4:d:215:TRP:HE1	4:d:222:TYR:HD1	1.65	0.45
7:U:147:TYR:HB2	7:U:176:MET:HE1	1.98	0.45
7:U:208:LEU:HD23	7:U:210:LYS:H	1.81	0.45
7:U:345:ASN:HD21	7:U:883:ARG:HD2	1.81	0.45
9:W:73:MET:O	9:W:77:ALA:HB2	2.17	0.45
9:W:317:TRP:CD1	9:W:320:LEU:HD22	2.52	0.45
10:X:309:TYR:O	10:X:313:LEU:N	2.48	0.45
11:Y:372:LYS:O	11:Y:376:LEU:CB	2.65	0.45
13:A:224:LEU:O	13:A:228:ALA:HB2	2.16	0.45
15:C:90:HIS:CE1	16:D:109:SER:HA	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:C:132:ASP:CG	15:C:233:GLU:CG	2.49	0.45
15:C:141:GLU:HA	15:C:213:ARG:O	2.17	0.45
15:C:188:LEU:HB2	15:C:196:LYS:HD3	1.82	0.45
17:E:249:ALA:HB3	18:F:299:GLU:HA	1.99	0.45
20:H:8:PHE:O	20:H:8:PHE:CD2	2.70	0.45
25:m:7:TYR:OH	25:m:15:SER:C	2.36	0.45
28:p:112:LEU:HA	28:p:119:PRO:HA	1.98	0.45
7:U:21:GLU:HA	7:U:24:LEU:HD21	0.48	0.44
7:U:353:LEU:O	7:U:357:LYS:CB	2.61	0.44
10:X:319:ILE:HG13	10:X:320:SER:H	1.82	0.44
13:A:126:SER:OG	13:A:149:ILE:O	2.27	0.44
13:A:239:ARG:NE	14:B:319:PHE:CZ	2.85	0.44
14:B:408:ARG:NH1	15:C:163:GLU:OE2	2.44	0.44
17:E:179:GLY:O	17:E:182:LEU:CG	2.58	0.44
21:I:180:LYS:HE3	21:I:189:ALA:HB2	1.98	0.44
21:I:219:GLU:OE2	21:I:220:ASN:ND2	2.46	0.44
23:K:22:PHE:CB	23:K:25:GLU:HB3	2.42	0.44
28:P:107:PRO:HG2	28:P:124:LEU:HB2	2.00	0.44
19:g:33:ASN:HA	19:g:170:VAL:HG22	1.99	0.44
23:k:99:HIS:HB2	23:k:107:MET:HE3	1.99	0.44
7:U:112:CYS:O	7:U:116:ALA:CB	2.65	0.44
7:U:567:ILE:HG22	7:U:601:ARG:HH12	1.82	0.44
7:U:616:ARG:HH21	7:U:647:HIS:HA	1.81	0.44
10:X:258:LYS:CA	10:X:261:LEU:HD23	2.35	0.44
12:Z:169:GLU:HA	12:Z:172:VAL:HB	1.99	0.44
14:B:416:ASN:HA	14:B:419:PHE:HD2	1.82	0.44
15:C:49:ARG:HA	15:C:52:LEU:HD12	1.98	0.44
15:C:380:GLN:HA	15:C:383:PHE:HD2	1.82	0.44
16:D:318:ASP:CG	16:D:322:LEU:HG	2.42	0.44
17:E:184:ALA:O	17:E:197:LYS:NZ	2.50	0.44
17:E:314:LYS:HA	17:E:317:ALA:HB3	1.99	0.44
18:F:166:THR:CB	18:F:168:TYR:CZ	3.00	0.44
18:F:261:ILE:CD1	18:F:305:GLU:HG2	2.32	0.44
20:h:77:SER:H	20:h:132:VAL:HG13	1.81	0.44
20:h:123:GLN:C	20:h:123:GLN:CD	2.85	0.44
26:n:144:ARG:NH2	26:n:147:MET:HA	2.31	0.44
29:q:101:ASN:HD21	29:q:120:TYR:HD1	1.63	0.44
4:d:120:GLU:HG2	8:V:263:LEU:HB2	1.98	0.44
6:f:99:LEU:HD22	6:f:101:PRO:HA	1.98	0.44
6:f:520:LEU:HD21	6:f:560:LEU:HD12	1.99	0.44
8:V:80:LYS:HD3	8:V:89:LYS:HZ3	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:V:89:LYS:HG3	8:V:93:PHE:HE2	1.82	0.44
8:V:471:GLU:HA	8:V:474:LEU:HD12	1.99	0.44
9:W:129:ARG:O	9:W:133:GLU:CB	2.61	0.44
9:W:311:THR:C	9:W:313:GLU:H	2.25	0.44
12:Z:8:LYS:HB2	12:Z:161:GLU:HG2	1.97	0.44
13:A:284:ARG:HD3	18:F:171:ARG:HG2	2.00	0.44
16:D:344:ILE:HG21	16:D:375:ILE:HD13	1.99	0.44
17:E:288:ALA:O	17:E:294:ARG:NH1	2.50	0.44
18:F:226:TYR:O	18:F:354:PHE:N	2.50	0.44
27:O:37:ILE:HD13	27:O:60:SER:HB2	1.99	0.44
28:P:164:PHE:O	28:P:168:SER:OG	2.32	0.44
32:T:43:MET:HE3	32:T:45:VAL:HG22	2.00	0.44
21:i:133:SER:HB3	21:i:149:GLN:NE2	2.33	0.44
24:l:109:VAL:HG21	24:l:145:PHE:HD2	1.81	0.44
25:m:92:ARG:HH12	32:t:76:LEU:HB3	1.82	0.44
3:c:33:ILE:HD12	3:c:33:ILE:O	2.17	0.44
6:f:315:GLU:HA	6:f:318:THR:HG22	1.99	0.44
7:U:676:THR:HA	7:U:684:ARG:HA	2.00	0.44
8:V:359:PRO:O	8:V:363:LEU:N	2.51	0.44
10:X:413:SER:OG	10:X:417:LYS:NZ	2.50	0.44
12:Z:6:VAL:HA	12:Z:46:LYS:HG3	1.98	0.44
13:A:212:VAL:HB	13:A:318:LEU:HD22	2.00	0.44
13:A:287:ASP:H	18:F:258:GLN:CG	2.31	0.44
13:A:302:LEU:O	13:A:306:LEU:CB	2.65	0.44
13:A:333:ARG:HH11	13:A:334:PRO:HD2	1.82	0.44
14:B:196:GLU:O	14:B:200:SER:HB3	2.18	0.44
15:C:134:LEU:O	15:C:138:MET:CA	2.61	0.44
15:C:290:LYS:HD3	15:C:290:LYS:HA	1.55	0.44
17:E:116:ASP:HB2	17:E:217:GLU:HG2	1.99	0.44
18:F:90:VAL:HG12	18:F:164:LEU:HD21	2.00	0.44
18:F:251:LEU:N	18:F:284:PHE:O	2.49	0.44
20:H:8:PHE:O	20:H:8:PHE:CG	2.70	0.44
21:I:140:ASP:OD1	21:I:144:GLY:N	2.51	0.44
22:J:100:ASP:HB2	22:J:101:PRO:HD2	1.99	0.44
23:K:15:PHE:HD1	23:K:20:ARG:CB	2.31	0.44
19:g:17:SER:N	19:g:21:ARG:O	2.43	0.44
23:k:232:GLU:N	23:k:232:GLU:OE1	2.50	0.44
28:p:12:MET:HG3	28:p:138:VAL:HG12	1.98	0.44
29:q:91:CYS:O	29:q:94:SER:OG	2.27	0.44
2:b:142:ASN:HD22	2:b:172:THR:HA	1.82	0.44
8:V:145:LEU:HD21	8:V:150:ARG:HG3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:V:338:LEU:HD22	8:V:397:ARG:HG3	1.99	0.44
11:Y:22:LEU:HA	11:Y:25:LEU:HB3	1.99	0.44
11:Y:204:THR:HG22	11:Y:219:PHE:HE2	1.82	0.44
16:D:283:ARG:HB2	16:D:287:ARG:HH11	1.83	0.44
16:D:340:GLN:O	16:D:344:ILE:HG13	2.18	0.44
17:E:159:PHE:CG	17:E:166:PRO:HG3	2.52	0.44
18:F:274:LEU:HD13	18:F:278:LYS:HD3	1.98	0.44
19:G:49:VAL:HG22	19:G:219:VAL:HG23	2.00	0.44
20:H:113:ARG:O	20:H:116:SER:OG	2.33	0.44
24:L:16:GLN:OE1	24:L:18:ARG:NH2	2.42	0.44
25:M:7:TYR:HD1	25:M:15:SER:HA	1.82	0.44
19:g:49:VAL:HG22	19:g:219:VAL:HG23	2.00	0.44
19:g:192:GLU:O	19:g:196:GLU:CB	2.65	0.44
21:i:245:ALA:O	21:i:249:ARG:NH2	2.50	0.44
22:j:120:GLN:O	23:k:134:SER:OG	2.28	0.44
23:k:195:ILE:O	23:k:198:SER:OG	2.30	0.44
24:l:86:ASN:O	24:l:90:GLN:CB	2.64	0.44
26:n:91:ARG:CZ	26:n:91:ARG:HB2	2.46	0.44
30:r:59:LEU:HD22	30:r:83:LEU:HB2	1.99	0.44
1:a:269:LEU:HD22	1:a:301:LYS:HD3	1.99	0.44
3:c:254:ASN:O	3:c:258:ALA:CB	2.66	0.44
3:c:266:THR:HA	3:c:269:GLN:HB2	2.00	0.44
6:f:517:VAL:O	6:f:521:ALA:CB	2.65	0.44
8:V:32:PRO:HA	8:V:35:VAL:HG22	2.00	0.44
9:W:39:ARG:NH2	9:W:44:ILE:CD1	2.79	0.44
9:W:180:LYS:HG2	9:W:218:ASN:HB3	2.00	0.44
28:P:112:LEU:HA	28:P:119:PRO:HA	1.98	0.44
30:R:18:SER:OG	30:R:173:ALA:N	2.38	0.44
32:T:59:ASP:HB2	32:T:108:ASN:HD21	1.82	0.44
21:i:123:GLN:HB2	21:i:124:PHE:H	1.65	0.44
6:f:522:CYS:O	6:f:526:ALA:CB	2.66	0.44
6:f:545:LYS:HE2	6:f:555:ALA:HA	2.00	0.44
7:U:97:VAL:HA	7:U:100:ILE:HG12	1.99	0.44
7:U:634:PRO:O	7:U:638:SER:HB3	2.18	0.44
9:W:90:LEU:O	17:E:307:GLN:HB2	2.16	0.44
9:W:265:GLN:O	9:W:269:SER:OG	2.24	0.44
9:W:338:THR:HA	9:W:342:GLY:HA3	1.99	0.44
9:W:426:ASN:O	9:W:430:GLN:CB	2.66	0.44
11:Y:247:LEU:O	11:Y:251:HIS:N	2.51	0.44
13:A:186:LYS:HD3	13:A:339:ARG:HD2	1.99	0.44
14:B:186:ASP:HB3	14:B:367:ILE:HG21	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:B:231:GLY:O	14:B:235:LEU:N	2.47	0.44
15:C:232:ARG:HG2	15:C:235:PHE:HD2	1.81	0.44
16:D:77:GLU:CD	16:D:77:GLU:C	2.85	0.44
17:E:142:ILE:HG23	17:E:146:ARG:HH21	1.82	0.44
20:H:125:GLY:C	20:H:127:VAL:N	2.73	0.44
21:i:180:LYS:HE3	21:i:189:ALA:HB2	1.99	0.44
23:k:11:GLY:O	23:k:21:LEU:HD21	2.18	0.44
25:m:141:SER:HB3	25:m:144:ASP:HB2	2.00	0.44
26:n:140:ASP:N	26:n:140:ASP:OD1	2.46	0.44
28:p:107:PRO:HG2	28:p:124:LEU:HB2	2.00	0.44
31:s:91:MET:O	31:s:94:THR:OG1	2.32	0.44
31:s:93:SER:OG	31:s:128:GLY:O	2.31	0.44
32:t:43:MET:HE3	32:t:45:VAL:HG22	2.00	0.44
32:t:49:THR:OG1	32:t:50:MET:N	2.43	0.44
4:d:135:HIS:O	4:d:139:LEU:CB	2.65	0.44
6:f:119:LYS:O	6:f:123:ALA:N	2.49	0.44
6:f:192:VAL:N	6:f:193:PRO:CD	2.80	0.44
9:W:262:LYS:HA	9:W:265:GLN:HG2	1.98	0.44
10:X:287:LEU:O	10:X:291:ALA:CB	2.65	0.44
14:B:229:GLY:N	34:B:501:ATP:O3G	2.50	0.44
15:C:24:TYR:HA	15:C:27:LYS:HD2	1.99	0.44
15:C:69:GLN:NE2	15:C:118:ASN:HD21	2.11	0.44
16:D:85:ILE:HD11	17:E:106:THR:CG2	2.47	0.44
20:H:10:LEU:HD13	20:H:125:GLY:O	2.18	0.44
21:I:245:ALA:O	21:I:249:ARG:NH2	2.50	0.44
24:L:39:LYS:HA	24:L:44:ALA:HA	1.99	0.44
20:h:9:SER:C	20:h:11:THR:N	2.73	0.44
20:h:75:VAL:HG23	20:h:135:LEU:HB2	2.00	0.44
21:i:86:LEU:O	21:i:90:LEU:HB2	2.18	0.44
23:k:60:GLU:O	23:k:63:SER:OG	2.30	0.44
27:o:104:ASP:N	27:o:107:GLY:O	2.50	0.44
2:b:84:ILE:HD13	2:b:115:SER:HB2	1.99	0.44
3:c:49:VAL:HA	3:c:50:PRO:HD3	1.91	0.44
4:d:131:VAL:HA	4:d:134:LYS:HB3	1.99	0.44
7:U:242:LEU:HD21	7:U:321:GLN:HB3	1.99	0.44
7:U:546:ARG:CZ	7:U:771:PHE:HB3	2.48	0.44
7:U:749:GLN:HA	7:U:755:THR:HA	2.00	0.44
8:V:345:ARG:HB2	8:V:348:PHE:HB2	1.99	0.44
8:V:407:VAL:O	8:V:411:SER:HB3	2.18	0.44
11:Y:138:LEU:HD13	11:Y:176:ARG:HD3	2.00	0.44
12:Z:225:GLN:CD	12:Z:225:GLN:C	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Z:265:LEU:O	12:Z:268:SER:OG	2.27	0.44
14:B:401:GLU:HA	14:B:404:LEU:HD12	2.00	0.44
15:C:144:PRO:HB3	15:C:205:HIS:NE2	2.18	0.44
15:C:183:PRO:C	15:C:288:ASN:ND2	2.65	0.44
16:D:163:MET:CG	16:D:218:ALA:HB1	2.44	0.44
17:E:235:ILE:O	17:E:239:GLY:N	2.34	0.44
17:E:241:ARG:NH1	17:E:242:ARG:O	2.51	0.44
19:G:33:ASN:HA	19:G:170:VAL:HG22	1.99	0.44
20:H:93:LEU:HD11	20:H:113:ARG:HB3	1.98	0.44
21:I:133:SER:HB3	21:I:149:GLN:NE2	2.33	0.44
24:L:65:HIS:O	24:L:89:ARG:NH2	2.51	0.44
25:M:63:ASN:HB2	25:M:81:LEU:HD21	2.00	0.44
27:O:100:LEU:HB2	27:O:113:ILE:HD11	1.99	0.44
21:i:86:LEU:HD22	21:i:114:LEU:HD11	2.00	0.44
22:j:17:PHE:HB3	22:j:21:TYR:CZ	2.53	0.44
3:c:150:SER:CA	3:c:154:LYS:CD	2.63	0.43
6:f:671:ALA:O	6:f:674:THR:OG1	2.29	0.43
7:U:370:VAL:O	7:U:374:SER:OG	2.35	0.43
7:U:565:ALA:O	7:U:569:SER:CB	2.66	0.43
8:V:153:LYS:O	8:V:157:THR:OG1	2.30	0.43
8:V:277:PRO:HD2	8:V:285:TRP:HZ3	1.82	0.43
9:W:127:THR:HA	9:W:130:MET:HB2	2.00	0.43
9:W:145:LEU:O	9:W:149:LEU:CB	2.66	0.43
9:W:170:GLN:OE1	16:D:390:ASN:ND2	2.43	0.43
9:W:385:SER:O	9:W:389:SER:OG	2.28	0.43
10:X:415:TYR:O	10:X:419:LYS:CB	2.66	0.43
13:A:213:LEU:HB3	13:A:340:LYS:HG2	1.99	0.43
14:B:293:LYS:HA	15:C:267:SER:HB2	1.99	0.43
15:C:132:ASP:C	15:C:134:LEU:N	2.76	0.43
15:C:135:VAL:HG13	15:C:139:MET:HE2	1.96	0.43
15:C:307:ARG:HE	15:C:310:ARG:CZ	2.31	0.43
16:D:163:MET:HE2	16:D:222:HIS:H	1.82	0.43
17:E:312:ILE:HD11	34:E:401:ATP:C2	2.52	0.43
18:F:192:ASP:HA	18:F:195:ILE:HD12	2.00	0.43
19:G:101:TRP:O	19:G:105:TYR:HB2	2.18	0.43
23:K:232:GLU:C	23:K:234:LEU:N	2.73	0.43
27:O:38:SER:OG	27:O:40:ASN:OD1	2.22	0.43
19:g:101:TRP:O	19:g:105:TYR:HB2	2.18	0.43
19:g:148:GLY:O	19:g:150:GLN:NE2	2.49	0.43
21:i:140:ASP:OD1	21:i:144:GLY:N	2.51	0.43
21:i:160:LYS:NZ	22:j:54:GLN:O	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:k:200:ILE:HA	23:k:203:LYS:HZ3	1.82	0.43
24:l:157:ARG:NH1	25:m:59:GLU:HA	2.33	0.43
25:m:100:SER:O	32:t:65:GLN:NE2	2.52	0.43
1:a:90:PRO:HB3	1:a:121:LEU:HD23	2.00	0.43
7:U:722:ASP:HB2	7:U:727:LYS:HE3	2.00	0.43
8:V:338:LEU:HD13	8:V:397:ARG:HH21	1.82	0.43
9:W:99:GLN:HA	9:W:102:ALA:HB3	1.99	0.43
11:Y:240:VAL:HG23	11:Y:241:ILE:HG13	2.00	0.43
12:Z:56:VAL:HG13	12:Z:58:PHE:HB2	2.00	0.43
13:A:287:ASP:OD1	18:F:260:PHE:O	2.36	0.43
14:B:288:ASP:OD1	14:B:288:ASP:N	2.51	0.43
16:D:54:LEU:HD23	16:D:54:LEU:H	1.82	0.43
16:D:78:GLU:CD	16:D:81:ARG:NH1	2.61	0.43
19:G:47:CYS:HB3	19:G:221:THR:HG23	2.00	0.43
20:H:8:PHE:CD1	20:H:8:PHE:N	2.86	0.43
22:J:175:ASN:O	22:J:177:THR:HG23	2.17	0.43
26:N:91:ARG:HH12	26:N:116:MET:C	2.12	0.43
32:T:177:TYR:CZ	32:T:185:ASN:HB2	2.53	0.43
19:g:46:ASP:CB	19:g:222:VAL:HG22	2.31	0.43
21:i:213:ILE:HG22	21:i:228:LEU:HD21	1.99	0.43
24:l:95:SER:HB3	24:l:103:LEU:HD21	2.00	0.43
25:m:58:TYR:OH	25:m:62:SER:O	2.23	0.43
32:t:59:ASP:HB2	32:t:108:ASN:HD21	1.82	0.43
32:t:177:TYR:CZ	32:t:185:ASN:HB2	2.53	0.43
1:a:115:LYS:HD3	1:a:118:ILE:HD12	1.99	0.43
3:c:26:ASP:O	3:c:176:GLN:NE2	2.51	0.43
3:c:42:LEU:O	3:c:46:ARG:HB3	2.19	0.43
4:d:106:LEU:HG	4:d:111:ARG:HB2	2.00	0.43
5:e:52:PHE:HB3	5:e:57:ARG:HD3	2.00	0.43
7:U:399:TRP:O	7:U:403:THR:HB	2.17	0.43
8:V:284:GLU:O	8:V:288:TYR:HB3	2.18	0.43
8:V:416:ARG:HG3	8:V:459:GLN:HA	2.00	0.43
8:V:440:LYS:HA	8:V:443:ARG:HB3	2.01	0.43
9:W:187:LEU:HA	9:W:190:MET:HE3	2.00	0.43
15:C:274:LEU:HD23	15:C:274:LEU:HA	1.82	0.43
21:I:86:LEU:O	21:I:90:LEU:HB2	2.18	0.43
21:I:135:LEU:HD23	21:I:135:LEU:HA	1.83	0.43
23:K:14:THR:O	23:K:21:LEU:HD12	1.98	0.43
25:M:141:SER:HB3	25:M:144:ASP:HB2	2.00	0.43
30:R:178:HIS:O	30:R:185:ILE:N	2.50	0.43
20:h:150:ASP:OD2	20:h:152:SER:OG	2.27	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:l:39:LYS:HA	24:l:44:ALA:HA	2.00	0.43
30:r:18:SER:OG	30:r:173:ALA:N	2.38	0.43
31:s:179:PHE:O	31:s:183:ALA:CB	2.66	0.43
2:b:95:LEU:HD21	12:Z:59:ASP:HB3	1.99	0.43
4:d:104:LEU:HD12	4:d:107:LEU:HB3	2.00	0.43
7:U:406:ALA:HA	7:U:445:ALA:HB2	1.99	0.43
8:V:442:ILE:HD11	8:V:449:ALA:O	2.19	0.43
9:W:40:LEU:CD1	17:E:333:LYS:CE	2.95	0.43
9:W:111:TYR:O	9:W:115:ILE:N	2.40	0.43
11:Y:359:PRO:O	11:Y:362:LYS:CB	2.66	0.43
12:Z:83:LYS:HD3	12:Z:87:ALA:HA	2.00	0.43
15:C:113:ARG:HH21	15:C:129:ASN:HB3	1.83	0.43
16:D:255:LYS:HA	16:D:303:VAL:HG21	2.00	0.43
17:E:135:ILE:HG22	34:E:401:ATP:C6	2.53	0.43
17:E:290:LEU:HD13	17:E:389:VAL:HG22	2.00	0.43
19:G:17:SER:HB3	19:G:23:TYR:CE2	2.52	0.43
25:M:23:VAL:HG12	25:M:27:MET:HE3	2.00	0.43
30:R:18:SER:OG	30:R:29:GLN:O	2.27	0.43
19:g:170:VAL:H	19:g:172:GLN:HE22	1.66	0.43
22:j:9:VAL:HA	23:k:23:GLN:NE2	2.34	0.43
24:l:65:HIS:O	24:l:89:ARG:NH2	2.51	0.43
27:o:100:LEU:HB2	27:o:113:ILE:HD11	2.00	0.43
28:p:21:ALA:HB2	28:p:189:ILE:HD13	2.01	0.43
32:t:182:ARG:HD3	32:t:182:ARG:HA	1.88	0.43
7:U:898:CYS:SG	7:U:899:ARG:N	2.91	0.43
10:X:225:TRP:CE2	10:X:262:ASN:OD1	2.71	0.43
12:Z:26:ILE:HA	12:Z:29:VAL:HG22	1.99	0.43
16:D:203:LEU:HA	16:D:309:MET:O	2.18	0.43
16:D:214:MET:HA	16:D:217:LYS:HD2	2.00	0.43
22:J:88:ARG:NH1	29:Q:69:MET:O	2.51	0.43
31:S:69:GLU:HA	31:S:72:LEU:HD12	2.01	0.43
20:h:10:LEU:C	20:h:10:LEU:CD2	2.86	0.43
20:h:50:LYS:NZ	20:h:62:VAL:O	2.51	0.43
2:b:84:ILE:HG12	2:b:117:VAL:HG23	2.00	0.43
3:c:104:ARG:H	12:Z:25:ARG:NH1	2.17	0.43
3:c:213:GLU:HG3	12:Z:17:LEU:HG	2.01	0.43
3:c:249:LEU:HD22	3:c:298:GLN:OE1	2.19	0.43
6:f:460:ASP:OD1	6:f:460:ASP:N	2.51	0.43
8:V:216:ARG:O	8:V:220:PHE:N	2.52	0.43
9:W:149:LEU:HA	9:W:152:ILE:HD12	1.99	0.43
9:W:299:ILE:HG22	9:W:301:LYS:H	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:X:294:SER:N	10:X:301:ASP:OD2	2.52	0.43
13:A:211:GLY:CA	13:A:312:ARG:HH12	2.32	0.43
13:A:362:MET:HG3	13:A:364:VAL:HG13	2.01	0.43
13:A:396:ALA:HA	13:A:401:ARG:HB2	2.01	0.43
14:B:427:LEU:HD23	14:B:430:LYS:HE2	2.01	0.43
15:C:166:GLU:HA	15:C:169:VAL:HB	2.00	0.43
26:N:11:GLY:HA3	26:N:179:ILE:O	2.19	0.43
31:S:179:PHE:O	31:S:183:ALA:CB	2.66	0.43
21:i:102:GLN:HG2	29:q:82:ASN:HD21	1.84	0.43
21:i:159:TRP:HA	22:j:54:GLN:HA	2.00	0.43
25:m:38:GLY:O	25:m:162:GLY:HA2	2.18	0.43
27:o:205:GLU:HB3	27:o:208:THR:HB	2.00	0.43
28:p:162:HIS:O	28:p:166:THR:OG1	2.34	0.43
1:a:132:LYS:O	1:a:136:GLU:HB3	2.19	0.43
1:a:158:LEU:O	1:a:162:TYR:CB	2.65	0.43
1:a:290:GLN:HA	1:a:332:HIS:HA	1.99	0.43
1:a:358:THR:O	1:a:362:SER:OG	2.36	0.43
5:e:43:TRP:HZ3	8:V:346:LEU:HG	1.83	0.43
6:f:138:GLU:HB3	6:f:193:PRO:HG3	2.00	0.43
7:U:360:VAL:HG11	7:U:392:TRP:CD1	2.54	0.43
7:U:622:LEU:HD23	7:U:625:ILE:HD11	2.01	0.43
7:U:796:LYS:HE3	7:U:798:PRO:HB3	2.01	0.43
8:V:448:GLU:CD	8:V:448:GLU:C	2.86	0.43
9:W:23:THR:HA	9:W:26:GLN:HB2	2.00	0.43
9:W:274:VAL:HG13	9:W:283:GLN:HG3	2.00	0.43
10:X:299:LEU:C	10:X:301:ASP:N	2.77	0.43
11:Y:307:LEU:O	11:Y:310:SER:HB2	2.19	0.43
12:Z:186:THR:O	12:Z:186:THR:OG1	2.34	0.43
13:A:140:VAL:HG23	13:A:142:VAL:HG23	2.00	0.43
13:A:237:PHE:HA	13:A:271:LEU:HB2	2.01	0.43
14:B:117:ASP:OD1	14:B:117:ASP:N	2.48	0.43
15:C:289:ILE:HB	15:C:290:LYS:H	1.61	0.43
16:D:358:VAL:HG11	16:D:395:LEU:HA	2.00	0.43
17:E:182:LEU:HB2	34:E:401:ATP:H3'	1.96	0.43
17:E:322:LYS:NZ	17:E:328:TYR:OH	2.49	0.43
20:H:50:LYS:NZ	20:H:62:VAL:O	2.51	0.43
21:I:145:PHE:HZ	21:I:218:ARG:HB2	1.83	0.43
23:K:236:GLU:HA	23:K:239:LYS:HE3	2.01	0.43
27:O:104:ASP:N	27:O:107:GLY:O	2.50	0.43
27:O:205:GLU:HB3	27:O:208:THR:HB	2.00	0.43
28:P:21:ALA:HB2	28:P:189:ILE:HD13	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:R:59:LEU:HD22	30:R:83:LEU:HB2	1.99	0.43
19:g:103:TYR:HB2	26:n:61:TYR:CD1	2.54	0.43
21:i:49:ARG:HB2	21:i:210:LYS:HA	2.01	0.43
23:k:157:ASP:OD1	23:k:157:ASP:N	2.47	0.43
27:o:37:ILE:HD13	27:o:60:SER:HB2	1.99	0.43
1:a:220:PRO:HA	1:a:223:GLU:HG2	2.00	0.43
5:e:48:VAL:HG23	8:V:368:ARG:HD3	1.99	0.43
7:U:98:GLU:HA	7:U:101:ILE:HG12	2.01	0.43
7:U:107:HIS:HA	7:U:110:LYS:HE3	2.00	0.43
16:D:52:GLU:O	16:D:56:VAL:HG23	2.19	0.43
18:F:428:GLN:HA	18:F:428:GLN:HE21	1.78	0.43
20:H:75:VAL:HG23	20:H:135:LEU:HB2	2.00	0.43
22:J:105:GLU:HA	22:J:145:TYR:HE2	1.84	0.43
24:L:95:SER:HB3	24:L:103:LEU:HD21	2.00	0.43
25:M:38:GLY:O	25:M:162:GLY:HA2	2.18	0.43
27:O:137:VAL:HG21	27:O:158:ALA:HA	2.01	0.43
27:o:137:VAL:HG21	27:o:158:ALA:HA	2.01	0.43
30:r:178:HIS:O	30:r:185:ILE:N	2.50	0.43
1:a:313:LYS:O	1:a:316:SER:OG	2.27	0.43
4:d:48:LEU:HD23	4:d:48:LEU:HA	1.89	0.43
7:U:102:ALA:O	7:U:106:ASP:HB2	2.19	0.43
8:V:379:LEU:HA	8:V:386:PHE:HE2	1.84	0.43
9:W:428:TRP:O	9:W:433:ASN:N	2.52	0.43
13:A:287:ASP:HB3	18:F:258:GLN:N	2.33	0.43
16:D:163:MET:HE2	16:D:222:HIS:CB	2.31	0.43
16:D:317:LEU:HB3	16:D:318:ASP:H	1.48	0.43
19:G:21:ARG:CZ	19:G:26:GLU:OE2	2.65	0.43
22:J:17:PHE:HB3	22:J:21:TYR:CZ	2.53	0.43
23:K:20:ARG:HE	23:K:22:PHE:HA	1.84	0.43
30:R:105:ASP:OD1	30:R:106:LYS:N	2.52	0.43
21:i:101:TYR:CE1	29:q:83:PHE:HB2	2.54	0.43
24:l:167:SER:O	24:l:170:THR:OG1	2.32	0.43
4:d:235:THR:HB	4:d:237:ILE:H	1.84	0.43
4:d:244:LYS:HG3	4:d:247:ILE:HD12	2.01	0.43
6:f:130:ALA:O	6:f:134:SER:CB	2.64	0.43
7:U:540:GLN:HG3	7:U:541:HIS:CD2	2.54	0.43
8:V:50:GLU:HB3	8:V:60:ALA:HA	2.01	0.43
8:V:323:GLY:HA2	8:V:326:GLN:HB2	2.01	0.43
9:W:385:SER:OG	9:W:386:VAL:N	2.50	0.43
15:C:307:ARG:HH21	15:C:310:ARG:NH1	2.17	0.43
17:E:181:THR:N	34:E:401:ATP:O1A	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:F:274:LEU:O	18:F:278:LYS:NZ	2.47	0.43
19:G:222:VAL:O	19:G:222:VAL:HG12	2.18	0.43
21:I:86:LEU:HD22	21:I:114:LEU:HD11	2.00	0.43
26:N:162:LEU:HD11	26:n:141:ALA:HB2	2.00	0.43
29:q:164:LEU:HD23	29:q:196:PHE:HE2	1.84	0.43
3:c:88:ASP:HB3	3:c:91:PHE:HB3	2.00	0.42
6:f:92:VAL:HG12	6:f:133:MET:HG3	2.00	0.42
6:f:94:LYS:HA	6:f:97:LYS:HE3	2.01	0.42
6:f:125:ILE:HD12	6:f:126:ILE:HG13	2.00	0.42
7:U:107:HIS:HA	7:U:110:LYS:HG2	2.00	0.42
7:U:518:LEU:HA	7:U:554:LEU:HD22	2.01	0.42
8:V:44:GLY:O	8:V:48:THR:HB	2.18	0.42
8:V:333:ILE:HD13	8:V:342:ILE:HD11	2.00	0.42
9:W:378:MET:HE1	9:W:414:ASN:HA	2.01	0.42
9:W:406:VAL:HB	9:W:413:ILE:HD13	2.01	0.42
13:A:287:ASP:N	18:F:258:GLN:CG	2.82	0.42
14:B:229:GLY:O	34:B:501:ATP:C4'	2.67	0.42
15:C:100:ASP:N	15:C:123:LEU:O	2.51	0.42
16:D:156:SER:OG	16:D:157:ASP:N	2.52	0.42
29:Q:11:ASP:OD1	29:Q:11:ASP:N	2.48	0.42
20:h:113:ARG:O	20:h:116:SER:OG	2.33	0.42
21:i:232:GLU:HA	21:i:235:GLN:HG2	2.01	0.42
23:k:12:VAL:HA	23:k:21:LEU:CG	2.49	0.42
23:k:22:PHE:HA	23:k:25:GLU:CB	2.48	0.42
30:r:105:ASP:OD1	30:r:106:LYS:N	2.52	0.42
4:d:71:PHE:HZ	4:d:101:LEU:HB3	1.83	0.42
4:d:175:ARG:NH1	4:d:200:PHE:CD2	2.55	0.42
7:U:21:GLU:C	7:U:24:LEU:CD2	2.85	0.42
16:D:57:GLN:O	16:D:61:ILE:HG12	2.19	0.42
16:D:133:HIS:HB3	16:D:137:ASN:H	1.84	0.42
17:E:188:ALA:HB2	17:E:197:LYS:NZ	2.33	0.42
18:F:317:LEU:HA	18:F:317:LEU:HD12	1.83	0.42
19:G:16:PHE:HE1	20:H:128:ARG:CD	2.28	0.42
31:S:55:SER:OG	31:S:56:GLY:N	2.52	0.42
31:S:93:SER:OG	31:S:128:GLY:O	2.31	0.42
19:g:143:ILE:HG13	19:g:225:PRO:HB3	2.01	0.42
21:i:99:LEU:HD13	28:p:69:PHE:HB2	1.99	0.42
26:n:88:TYR:O	26:n:91:ARG:HG3	2.19	0.42
29:q:11:ASP:OD1	29:q:11:ASP:N	2.48	0.42
1:a:360:VAL:O	1:a:364:GLU:CB	2.66	0.42
7:U:266:GLN:HA	7:U:269:ARG:NH1	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:U:583:MET:HE1	7:U:602:LEU:HG	2.01	0.42
7:U:750:SER:OG	7:U:754:HIS:O	2.31	0.42
8:V:55:THR:HG22	8:V:59:ALA:H	1.83	0.42
8:V:267:ALA:HA	8:V:270:LEU:HD12	2.02	0.42
10:X:394:ASP:HA	10:X:397:TYR:HB2	2.01	0.42
11:Y:348:ASP:OD1	11:Y:349:LYS:N	2.52	0.42
12:Z:139:ILE:H	12:Z:158:VAL:HG21	1.83	0.42
12:Z:160:SER:OG	12:Z:161:GLU:N	2.52	0.42
12:Z:173:GLU:HA	12:Z:176:LEU:CG	2.36	0.42
12:Z:278:ASN:O	12:Z:282:ASN:CB	2.54	0.42
17:E:313:LEU:O	17:E:317:ALA:N	2.53	0.42
20:H:33:ALA:O	20:H:164:GLY:HA3	2.20	0.42
25:M:6:GLY:O	25:M:7:TYR:CG	2.72	0.42
26:N:38:HIS:HB3	26:N:41:ILE:HB	2.01	0.42
19:g:47:CYS:HB3	19:g:221:THR:HG23	2.00	0.42
22:j:105:GLU:HA	22:j:145:TYR:HE2	1.84	0.42
25:m:63:ASN:HB2	25:m:81:LEU:HD21	2.00	0.42
30:r:18:SER:HB2	30:r:31:VAL:H	1.84	0.42
1:a:197:ALA:HA	1:a:200:LEU:HB3	2.00	0.42
1:a:307:VAL:O	1:a:310:LEU:HB3	2.19	0.42
3:c:211:GLU:O	3:c:215:LYS:HB2	2.20	0.42
6:f:211:ILE:HA	6:f:214:VAL:HG22	2.01	0.42
6:f:266:LEU:HD12	6:f:269:ALA:HB3	2.01	0.42
6:f:278:VAL:HA	6:f:281:ILE:HG22	2.01	0.42
6:f:688:ARG:HD3	6:f:741:LEU:HD12	2.00	0.42
9:W:314:LEU:HD21	9:W:366:MET:CE	2.45	0.42
12:Z:247:LYS:O	12:Z:251:LEU:CB	2.67	0.42
16:D:87:LEU:CD1	16:D:132:LEU:O	2.60	0.42
16:D:391:ARG:HG2	16:D:393:ILE:H	1.85	0.42
16:D:411:GLU:HG2	16:D:414:HIS:CE1	2.54	0.42
19:G:16:PHE:CE1	20:H:128:ARG:CD	2.88	0.42
19:G:88:ARG:HH12	25:M:157:SER:H	1.67	0.42
30:R:164:THR:HG22	30:R:170:SER:HB3	2.01	0.42
19:g:97:GLU:HA	19:g:100:ASN:HD22	1.84	0.42
21:i:127:LYS:HA	21:i:127:LYS:HD3	1.82	0.42
23:k:20:ARG:N	23:k:20:ARG:HD3	2.34	0.42
24:l:73:SER:O	24:l:132:LEU:HA	2.20	0.42
25:m:236:GLU:HB3	25:m:240:LYS:NZ	2.35	0.42
29:q:45:LEU:HD23	29:q:45:LEU:HA	1.88	0.42
31:s:55:SER:OG	31:s:56:GLY:N	2.53	0.42
1:a:34:TRP:CD2	1:a:68:GLU:HG3	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:180:LEU:HD21	1:a:219:HIS:CE1	2.54	0.42
3:c:146:ASP:H	3:c:156:VAL:CG2	2.32	0.42
6:f:517:VAL:O	6:f:521:ALA:HB3	2.20	0.42
8:V:184:ALA:HA	8:V:187:ILE:HB	2.01	0.42
8:V:487:HIS:O	8:V:490:SER:OG	2.31	0.42
9:W:395:ASN:HA	9:W:398:VAL:HG22	2.02	0.42
10:X:378:LEU:HG	10:X:385:LEU:HD13	2.01	0.42
11:Y:358:ARG:NH2	11:Y:360:ASP:HA	2.34	0.42
19:G:97:GLU:HA	19:G:100:ASN:HD22	1.84	0.42
21:I:49:ARG:HB2	21:I:210:LYS:HA	2.00	0.42
24:L:73:SER:O	24:L:132:LEU:HA	2.20	0.42
25:M:137:LEU:O	25:M:148:LEU:HA	2.19	0.42
26:N:40:ARG:HD2	26:N:103:TRP:HE3	1.84	0.42
30:R:153:TYR:O	30:R:157:ARG:HB2	2.19	0.42
20:h:11:THR:O	21:i:128:ARG:HB2	2.20	0.42
21:i:185:THR:O	21:i:188:SER:OG	2.30	0.42
26:n:11:GLY:HA3	26:n:179:ILE:O	2.19	0.42
26:n:40:ARG:HD2	26:n:103:TRP:HE3	1.84	0.42
1:a:19:PRO:HA	1:a:22:TRP:HB2	2.01	0.42
1:a:247:ARG:HA	1:a:250:THR:HG22	2.02	0.42
2:b:122:LYS:HA	2:b:125:VAL:HG12	2.02	0.42
6:f:226:TYR:O	6:f:230:CYS:HB3	2.18	0.42
7:U:495:ASP:HA	7:U:498:LYS:HE2	2.01	0.42
7:U:645:ASN:OD1	7:U:645:ASN:N	2.46	0.42
8:V:291:TYR:HD1	8:V:294:ARG:HH12	1.68	0.42
12:Z:100:LYS:HG3	12:Z:101:LEU:CG	2.44	0.42
13:A:248:LYS:HE2	14:B:260:LEU:HD22	2.01	0.42
13:A:419:SER:HA	13:A:424:SER:HA	2.02	0.42
14:B:264:PRO:HG3	14:B:308:THR:HA	2.00	0.42
19:G:46:ASP:CB	19:G:222:VAL:CG2	2.97	0.42
19:G:143:ILE:HG13	19:G:225:PRO:HB3	2.01	0.42
25:M:77:VAL:HA	25:M:135:PHE:HB3	2.02	0.42
21:i:145:PHE:HZ	21:i:218:ARG:HB2	1.83	0.42
23:k:69:GLU:HG3	23:k:228:MET:HE1	2.02	0.42
27:o:215:LYS:N	28:p:197:THR:O	2.52	0.42
30:r:153:TYR:O	30:r:157:ARG:HB2	2.19	0.42
3:c:193:ILE:HA	3:c:196:LEU:HB2	2.02	0.42
3:c:216:MET:HE2	12:Z:16:LEU:HD21	2.01	0.42
6:f:185:LEU:O	6:f:188:VAL:HG12	2.19	0.42
7:U:170:SER:OG	7:U:171:ASN:N	2.51	0.42
7:U:482:GLY:HA3	7:U:515:ALA:HB1	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:U:803:LYS:HA	7:U:839:ALA:H	1.85	0.42
9:W:293:ASP:HB3	9:W:296:LEU:HB2	2.02	0.42
11:Y:344:HIS:CE1	11:Y:357:ASN:OD1	2.73	0.42
15:C:164:VAL:CG2	15:C:290:LYS:NZ	2.72	0.42
15:C:219:LEU:HD23	16:D:248:ARG:HH11	1.83	0.42
16:D:204:MET:HB2	16:D:310:ALA:HB1	2.01	0.42
18:F:270:ASP:O	18:F:274:LEU:CB	2.52	0.42
22:J:31:THR:HA	22:J:162:GLY:HA3	2.02	0.42
23:K:212:ALA:HB2	23:K:235:GLU:HG2	2.01	0.42
25:M:236:GLU:HB3	25:M:240:LYS:NZ	2.35	0.42
27:O:83:LEU:HD23	27:O:83:LEU:HA	1.91	0.42
20:h:77:SER:O	20:h:132:VAL:HA	2.20	0.42
23:k:212:ALA:HB2	23:k:235:GLU:HG2	2.01	0.42
27:o:12:ILE:HD11	27:o:109:HIS:H	1.84	0.42
32:t:136:SER:HB2	32:t:150:LEU:HD13	2.02	0.42
4:d:158:ILE:H	4:d:159:PRO:CD	2.32	0.42
6:f:582:VAL:HG12	6:f:588:ARG:HB3	2.00	0.42
7:U:570:LEU:HD22	7:U:578:LEU:HD11	2.01	0.42
7:U:663:THR:C	7:U:698:GLN:HE22	2.28	0.42
8:V:470:ARG:NH2	12:Z:253:THR:HA	2.34	0.42
9:W:243:ILE:HB	9:W:247:TYR:HD2	1.84	0.42
10:X:378:LEU:HB2	11:Y:311:TYR:HB3	2.02	0.42
11:Y:71:ASN:HA	11:Y:74:LYS:HB3	2.01	0.42
11:Y:285:ASP:HB3	11:Y:288:PHE:CD2	2.55	0.42
12:Z:189:GLN:O	12:Z:192:THR:OG1	2.28	0.42
13:A:139:ARG:NH2	14:B:130:GLU:OE1	2.29	0.42
13:A:347:ASP:N	13:A:347:ASP:OD1	2.48	0.42
13:A:415:LYS:HA	13:A:419:SER:HB3	2.02	0.42
14:B:107:MET:HE3	14:B:107:MET:HB2	1.97	0.42
15:C:184:LYS:N	15:C:288:ASN:HD21	2.17	0.42
16:D:283:ARG:H	16:D:283:ARG:HG3	1.35	0.42
16:D:409:LYS:HB3	16:D:409:LYS:HZ3	1.84	0.42
19:G:170:VAL:H	19:G:172:GLN:HE22	1.66	0.42
23:K:69:GLU:HG3	23:K:228:MET:HE1	2.02	0.42
23:K:216:GLU:HA	23:K:234:LEU:HD11	2.02	0.42
29:Q:16:ALA:HA	29:Q:179:SER:O	2.20	0.42
31:S:209:SER:HG	31:S:212:LYS:HZ1	1.61	0.42
25:m:77:VAL:HA	25:m:135:PHE:HB3	2.02	0.42
26:n:88:TYR:O	26:n:91:ARG:CG	2.68	0.42
28:p:62:THR:N	29:q:85:ARG:HH22	2.17	0.42
32:t:210:ASP:HA	32:t:213:HIS:HD2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:63:PHE:HB3	1:a:67:PHE:HE1	1.85	0.42
1:a:289:ARG:O	1:a:333:MET:N	2.46	0.42
1:a:311:VAL:HA	1:a:314:ALA:HB3	2.02	0.42
1:a:371:ALA:HB1	1:a:374:ILE:HD11	2.01	0.42
3:c:39:LEU:HD22	12:Z:14:LEU:HG	2.02	0.42
3:c:146:ASP:OD2	3:c:149:GLN:NE2	2.38	0.42
3:c:159:ALA:HB3	3:c:205:ILE:HD11	2.02	0.42
6:f:775:THR:HA	6:f:778:LEU:HD12	2.02	0.42
7:U:229:VAL:O	7:U:233:LEU:CB	2.67	0.42
7:U:497:LEU:HA	7:U:500:ASN:HB3	2.01	0.42
8:V:54:LYS:HB3	8:V:59:ALA:HB3	2.02	0.42
12:Z:33:LYS:HE2	12:Z:33:LYS:HB3	1.92	0.42
12:Z:210:SER:OG	12:Z:211:TYR:N	2.53	0.42
14:B:373:THR:OG1	14:B:412:MET:O	2.31	0.42
15:C:40:GLN:O	15:C:44:ARG:CB	2.62	0.42
17:E:182:LEU:HD13	34:E:401:ATP:H2'	2.02	0.42
17:E:182:LEU:CD1	34:E:401:ATP:C4	3.02	0.42
19:G:54:LYS:HG2	19:G:214:GLU:HA	2.02	0.42
26:N:144:ARG:NH1	26:N:145:GLU:O	2.53	0.42
29:Q:31:ASP:N	29:Q:31:ASP:OD1	2.53	0.42
30:R:18:SER:HB2	30:R:31:VAL:H	1.84	0.42
30:R:117:GLU:HB2	30:R:119:ASN:ND2	2.35	0.42
23:k:236:GLU:HA	23:k:239:LYS:HE3	2.01	0.42
25:m:23:VAL:HG12	25:m:27:MET:HE3	2.00	0.42
29:q:16:ALA:HA	29:q:179:SER:O	2.20	0.42
29:q:19:ARG:HH21	29:q:31:ASP:HB2	1.85	0.42
30:r:41:LEU:HD23	30:r:103:GLY:HA3	2.02	0.42
30:r:117:GLU:HB2	30:r:119:ASN:ND2	2.35	0.42
31:s:122:TYR:CE1	31:s:132:ARG:HB2	2.55	0.42
1:a:112:ILE:HB	1:a:151:VAL:HG21	2.02	0.42
1:a:341:LEU:HD13	12:Z:223:ASN:HD22	1.78	0.42
3:c:279:ASP:O	3:c:281:LYS:N	2.53	0.42
4:d:244:LYS:HA	4:d:247:ILE:HD12	2.01	0.42
9:W:363:ILE:HD13	9:W:363:ILE:HA	1.95	0.42
9:W:435:LEU:HA	9:W:438:LEU:HB2	2.01	0.42
11:Y:203:ASP:OD1	11:Y:203:ASP:N	2.50	0.42
12:Z:66:SER:N	12:Z:103:LYS:HZ2	1.95	0.42
12:Z:93:GLY:HA3	12:Z:120:VAL:O	2.20	0.42
15:C:145:ASP:HB3	15:C:146:SER:H	1.65	0.42
16:D:99:ASN:C	16:D:115:ILE:HG13	2.45	0.42
16:D:162:VAL:O	16:D:162:VAL:CG1	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:D:371:SER:O	16:D:371:SER:OG	2.33	0.42
17:E:136:GLY:N	34:E:401:ATP:N1	2.68	0.42
17:E:182:LEU:CB	34:E:401:ATP:PA	3.07	0.42
17:E:188:ALA:HB2	17:E:197:LYS:HZ2	1.85	0.42
18:F:91:SER:N	18:F:151:VAL:O	2.41	0.42
18:F:95:GLU:HA	18:F:147:PRO:HB3	2.01	0.42
20:H:110:LEU:O	20:H:114:VAL:HB	2.19	0.42
22:J:74:ALA:HB2	22:J:161:ILE:HD13	2.02	0.42
27:O:179:SER:HG	27:O:182:LYS:H	1.68	0.42
19:g:201:CYS:SG	19:g:202:LEU:N	2.93	0.42
20:h:33:ALA:O	20:h:164:GLY:HA3	2.20	0.42
22:j:31:THR:HA	22:j:162:GLY:HA3	2.02	0.42
2:b:11:ASP:OD2	2:b:114:GLY:N	2.52	0.41
3:c:160:PHE:HA	3:c:202:SER:HA	2.02	0.41
3:c:254:ASN:O	3:c:258:ALA:HB2	2.20	0.41
4:d:55:LEU:HA	4:d:55:LEU:HD23	1.81	0.41
7:U:471:ASP:H	7:U:474:ARG:HD3	1.85	0.41
9:W:37:GLU:CD	9:W:39:ARG:HH12	2.27	0.41
9:W:344:THR:OG1	9:W:345:GLU:OE1	2.37	0.41
11:Y:372:LYS:O	11:Y:376:LEU:HB2	2.20	0.41
12:Z:247:LYS:O	12:Z:251:LEU:HB2	2.20	0.41
21:I:232:GLU:HA	21:I:235:GLN:HG2	2.01	0.41
25:M:38:GLY:O	25:M:162:GLY:CA	2.68	0.41
26:N:129:GLY:O	26:N:132:SER:OG	2.37	0.41
29:Q:19:ARG:HH21	29:Q:31:ASP:HB2	1.85	0.41
29:Q:60:ILE:HD12	29:Q:84:THR:HG22	2.02	0.41
29:Q:164:LEU:HD23	29:Q:196:PHE:HE2	1.84	0.41
22:j:40:ILE:HA	22:j:212:ARG:HA	2.02	0.41
25:m:38:GLY:O	25:m:162:GLY:CA	2.68	0.41
25:m:137:LEU:O	25:m:148:LEU:HA	2.19	0.41
29:q:60:ILE:HD12	29:q:84:THR:HG22	2.02	0.41
6:f:95:PRO:O	6:f:99:LEU:N	2.53	0.41
7:U:472:ILE:HD12	7:U:473:VAL:HG23	2.01	0.41
7:U:553:ALA:HA	7:U:585:THR:HG23	2.02	0.41
8:V:357:LEU:HB2	8:V:360:TYR:HB3	2.01	0.41
9:W:90:LEU:CD1	17:E:307:GLN:CA	2.97	0.41
11:Y:111:LEU:HA	11:Y:114:ILE:HB	2.03	0.41
11:Y:192:ARG:HA	11:Y:192:ARG:HD3	1.84	0.41
11:Y:346:LYS:H	11:Y:355:GLU:HB3	1.84	0.41
12:Z:177:ARG:HD3	12:Z:177:ARG:HA	1.60	0.41
12:Z:187:LEU:CD1	12:Z:190:ARG:CG	2.97	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:A:277:ILE:HG22	13:A:280:ILE:HD12	2.02	0.41
16:D:167:ILE:HD11	16:D:214:MET:CG	2.45	0.41
16:D:345:PHE:O	16:D:349:THR:OG1	2.35	0.41
19:G:141:ILE:HG22	19:G:151:VAL:HG22	2.02	0.41
28:P:17:LYS:HB2	28:P:158:MET:H	1.85	0.41
20:h:110:LEU:O	20:h:114:VAL:HB	2.19	0.41
4:d:69:PRO:HA	4:d:72:GLU:HG2	2.02	0.41
4:d:155:LYS:CA	4:d:158:ILE:CG1	2.71	0.41
6:f:190:GLU:HA	6:f:193:PRO:HD2	2.02	0.41
6:f:796:LEU:HD12	6:f:799:VAL:HG11	2.01	0.41
9:W:37:GLU:OE1	9:W:39:ARG:NH1	2.53	0.41
9:W:90:LEU:CD1	17:E:307:GLN:C	2.87	0.41
15:C:186:VAL:HA	15:C:313:ARG:HB2	2.01	0.41
15:C:298:ILE:HD13	15:C:298:ILE:HG21	1.92	0.41
17:E:253:ILE:O	17:E:257:LEU:CB	2.59	0.41
19:G:201:CYS:SG	19:G:202:LEU:N	2.93	0.41
22:J:179:GLU:H	22:J:179:GLU:CD	2.28	0.41
23:K:114:GLN:HA	23:K:117:SER:HB2	2.03	0.41
21:i:71:ASP:OD1	21:i:71:ASP:N	2.52	0.41
22:j:74:ALA:HB2	22:j:161:ILE:HD13	2.02	0.41
24:l:174:ARG:HG3	24:l:175:HIS:ND1	2.35	0.41
24:l:189:LYS:HD2	24:l:193:ARG:HH12	1.86	0.41
25:m:51:LYS:HZ2	25:m:64:LYS:HA	1.85	0.41
27:o:167:LEU:HD13	27:o:167:LEU:HA	1.91	0.41
31:s:46:LEU:HD11	31:s:52:ILE:HB	2.02	0.41
31:s:69:GLU:HA	31:s:72:LEU:HD12	2.01	0.41
4:d:106:LEU:HD21	4:d:115:PHE:HB2	2.02	0.41
4:d:158:ILE:HG21	4:d:167:ILE:HG21	2.03	0.41
7:U:590:TYR:HE2	7:U:598:ALA:HB2	1.75	0.41
8:V:304:GLU:HA	8:V:307:ARG:HG2	2.02	0.41
9:W:78:LYS:O	9:W:82:LEU:HB2	2.20	0.41
11:Y:41:LEU:HD11	11:Y:70:LEU:HD11	2.02	0.41
13:A:261:PHE:CG	13:A:305:GLN:HB3	2.56	0.41
13:A:277:ILE:HA	13:A:280:ILE:HD12	2.03	0.41
13:A:302:LEU:O	13:A:306:LEU:HB2	2.20	0.41
14:B:205:LEU:HB2	14:B:326:LYS:HE3	2.02	0.41
15:C:228:ALA:HB1	15:C:233:GLU:OE1	2.20	0.41
16:D:167:ILE:HD13	16:D:167:ILE:HA	1.70	0.41
16:D:248:ARG:HE	16:D:295:GLN:HE21	1.67	0.41
17:E:182:LEU:CD2	34:E:401:ATP:H2'	2.36	0.41
18:F:170:SER:HB3	18:F:171:ARG:HH21	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:J:109:ARG:O	22:J:113:SER:CB	2.69	0.41
25:m:173:LYS:HA	25:m:176:ILE:HB	2.02	0.41
26:n:38:HIS:HB3	26:n:41:ILE:HB	2.01	0.41
28:p:70:ARG:HA	28:p:73:LEU:HD12	2.02	0.41
32:t:145:LEU:HD13	32:t:179:ARG:HE	1.85	0.41
1:a:172:TYR:O	1:a:176:ALA:HB2	2.21	0.41
4:d:62:SER:HA	4:d:65:ARG:HG2	2.02	0.41
6:f:80:ARG:HE	6:f:99:LEU:HD13	1.85	0.41
6:f:675:PHE:O	6:f:679:LEU:CB	2.57	0.41
7:U:813:TYR:OH	7:U:841:LYS:NZ	2.53	0.41
8:V:468:SER:HB2	11:Y:362:LYS:HD2	2.02	0.41
9:W:236:HIS:HE1	9:W:345:GLU:HG2	1.86	0.41
9:W:359:VAL:HG21	9:W:392:PHE:HB3	2.01	0.41
11:Y:359:PRO:HG2	11:Y:362:LYS:CE	2.50	0.41
13:A:333:ARG:HA	13:A:334:PRO:HD3	1.84	0.41
14:B:358:GLU:HA	14:B:361:LYS:HD2	2.02	0.41
15:C:151:ILE:C	34:D:501:ATP:H2	2.22	0.41
15:C:190:GLY:HA3	15:C:317:PHE:HB2	2.02	0.41
18:F:66:LEU:O	18:F:70:LYS:CB	2.68	0.41
18:F:269:ARG:HG3	18:F:316:GLN:HG2	2.02	0.41
18:F:362:ARG:O	18:F:366:MET:HB2	2.21	0.41
24:L:140:MET:HE2	24:L:143:HIS:HE1	1.86	0.41
24:L:174:ARG:HG3	24:L:175:HIS:ND1	2.35	0.41
25:M:140:TYR:CG	25:M:217:GLY:HA2	2.56	0.41
27:O:112:SER:HB3	27:O:125:VAL:HG11	2.02	0.41
29:Q:107:TYR:CZ	29:Q:185:LYS:HA	2.55	0.41
22:j:98:VAL:HG12	22:j:100:ASP:CG	2.45	0.41
22:j:221:ASN:HA	22:j:222:PRO:HD3	1.90	0.41
25:m:108:LEU:HD22	25:m:139:SER:HB3	2.03	0.41
25:m:140:TYR:CG	25:m:217:GLY:HA2	2.56	0.41
1:a:335:TRP:NE1	12:Z:232:ASP:OD1	2.54	0.41
3:c:137:SER:OG	3:c:138:GLU:N	2.53	0.41
3:c:155:VAL:HG12	12:Z:170:VAL:HG13	2.03	0.41
4:d:218:GLY:HA3	4:d:221:ASN:HB3	2.01	0.41
6:f:509:LYS:HB3	6:f:514:VAL:HG21	2.02	0.41
6:f:655:LEU:O	6:f:659:LEU:HB2	2.21	0.41
7:U:65:SER:O	7:U:69:TYR:CB	2.68	0.41
7:U:708:GLN:O	7:U:712:LEU:CB	2.60	0.41
8:V:194:LYS:HE2	8:V:194:LYS:HB3	1.33	0.41
8:V:451:ILE:HB	8:V:453:HIS:CE1	2.56	0.41
9:W:428:TRP:CA	9:W:432:LEU:HB2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:Y:101:ARG:HA	11:Y:104:MET:HG2	2.02	0.41
13:A:160:THR:HG21	13:A:263:MET:HE1	2.03	0.41
13:A:184:ILE:HA	13:A:187:LEU:HB3	2.02	0.41
13:A:355:PHE:CD2	13:A:370:PHE:HB3	2.55	0.41
15:C:134:LEU:O	15:C:138:MET:N	2.54	0.41
16:D:282:ASP:HA	16:D:285:VAL:HB	2.03	0.41
21:I:123:GLN:HB3	21:I:124:PHE:CE2	2.56	0.41
21:I:228:LEU:H	21:I:228:LEU:HG	1.66	0.41
24:L:121:GLN:HE22	25:M:131:PHE:HE1	1.67	0.41
25:M:173:LYS:HA	25:M:176:ILE:HB	2.02	0.41
25:M:230:ASP:N	25:M:230:ASP:OD1	2.52	0.41
27:O:12:ILE:HD11	27:O:109:HIS:H	1.85	0.41
19:g:54:LYS:HG2	19:g:214:GLU:HA	2.02	0.41
23:k:235:GLU:HA	23:k:238:ILE:HD12	2.02	0.41
26:n:144:ARG:NH1	26:n:145:GLU:O	2.53	0.41
26:n:179:ILE:HG12	26:n:184:VAL:HG22	2.03	0.41
1:a:151:VAL:O	1:a:155:PHE:HB2	2.19	0.41
1:a:291:LEU:HD23	1:a:291:LEU:HA	1.94	0.41
4:d:235:THR:C	4:d:237:ILE:N	2.70	0.41
6:f:76:GLU:HG3	6:f:98:PHE:HD2	1.85	0.41
6:f:538:ILE:HD13	6:f:565:ASN:HB3	2.03	0.41
7:U:261:LEU:HA	7:U:264:VAL:HG12	2.02	0.41
8:V:193:GLN:C	8:V:195:ILE:N	2.76	0.41
9:W:440:ASN:O	9:W:443:THR:OG1	2.29	0.41
15:C:140:VAL:O	15:C:213:ARG:O	2.39	0.41
15:C:230:MET:SD	15:C:230:MET:O	2.79	0.41
17:E:255:ARG:HA	17:E:258:MET:HE3	2.03	0.41
23:K:235:GLU:HA	23:K:238:ILE:HD12	2.02	0.41
32:T:46:ASN:OD1	32:T:46:ASN:N	2.52	0.41
19:g:217:VAL:HG12	19:g:230:LEU:HD13	2.03	0.41
23:k:216:GLU:HA	23:k:234:LEU:HD11	2.02	0.41
24:l:140:MET:HE2	24:l:143:HIS:HE1	1.86	0.41
29:q:107:TYR:CZ	29:q:185:LYS:HA	2.56	0.41
1:a:229:ASP:HB3	1:a:234:ILE:HD11	2.03	0.41
3:c:30:GLN:O	3:c:67:VAL:N	2.49	0.41
6:f:140:LEU:O	6:f:144:LEU:HB2	2.21	0.41
6:f:691:PRO:HA	6:f:694:LEU:HB3	2.02	0.41
8:V:247:GLN:O	8:V:251:LEU:CB	2.65	0.41
8:V:484:LEU:HA	8:V:487:HIS:HB2	2.02	0.41
11:Y:157:ILE:H	11:Y:157:ILE:HG13	1.64	0.41
11:Y:305:SER:O	11:Y:309:GLU:N	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:Y:316:LEU:HD13	11:Y:327:VAL:HG22	2.02	0.41
12:Z:190:ARG:HA	12:Z:193:ASN:HB2	2.03	0.41
16:D:160:PRO:HD2	16:D:217:LYS:HB3	2.03	0.41
23:K:15:PHE:CE2	24:L:126:ARG:HB2	2.56	0.41
28:P:70:ARG:HA	28:P:73:LEU:HD12	2.02	0.41
20:h:181:ASP:OD1	20:h:181:ASP:N	2.45	0.41
21:i:135:LEU:HD23	21:i:135:LEU:HA	1.83	0.41
24:l:16:GLN:OE1	24:l:18:ARG:NH2	2.42	0.41
27:o:38:SER:OG	27:o:40:ASN:OD1	2.22	0.41
1:a:123:LEU:HG	1:a:161:LYS:HE2	2.03	0.41
1:a:175:ASP:HA	1:a:178:ARG:HH11	1.86	0.41
1:a:217:LEU:HD21	1:a:237:LEU:HB3	2.02	0.41
2:b:92:VAL:HG23	12:Z:67:VAL:HG13	2.02	0.41
3:c:178:THR:HG22	3:c:179:SER:H	1.85	0.41
4:d:129:THR:OG1	4:d:130:ASN:N	2.54	0.41
5:e:43:TRP:CD1	8:V:343:PRO:HB2	2.56	0.41
5:e:47:ASN:ND2	8:V:344:ASP:OD2	2.54	0.41
5:e:59:GLU:N	11:Y:300:ARG:HH22	2.19	0.41
6:f:229:VAL:O	6:f:233:LEU:HB3	2.20	0.41
6:f:533:ASP:OD1	6:f:533:ASP:N	2.53	0.41
7:U:201:LEU:HA	7:U:204:ILE:HG22	2.03	0.41
7:U:341:PHE:HD1	7:U:880:ASN:HB2	1.86	0.41
7:U:454:GLY:HA3	7:U:458:ILE:HG13	2.03	0.41
8:V:277:PRO:HD2	8:V:285:TRP:CZ3	2.56	0.41
8:V:329:HIS:HA	8:V:332:LEU:HB2	2.03	0.41
9:W:1:MET:HA	9:W:39:ARG:NE	2.36	0.41
9:W:207:LYS:HD3	17:E:161:ARG:NH1	2.36	0.41
9:W:356:ASN:O	9:W:360:GLU:HB3	2.21	0.41
9:W:393:LEU:HA	9:W:415:PHE:HZ	1.86	0.41
9:W:393:LEU:HD23	9:W:406:VAL:HG21	2.03	0.41
10:X:212:MET:HE1	10:X:250:SER:HA	2.02	0.41
10:X:267:VAL:HG21	10:X:292:GLN:HB2	2.01	0.41
10:X:325:LYS:O	10:X:329:ASN:HB2	2.21	0.41
11:Y:182:VAL:HG21	11:Y:207:THR:HG21	2.02	0.41
13:A:212:VAL:HG22	13:A:339:ARG:HB3	2.03	0.41
15:C:87:VAL:HG11	15:C:116:LEU:HD22	2.02	0.41
15:C:140:VAL:HG12	15:C:214:VAL:CA	2.34	0.41
15:C:328:ILE:CD1	34:D:501:ATP:C6	3.02	0.41
16:D:115:ILE:HB	16:D:139:LEU:HB2	2.03	0.41
17:E:29:LEU:O	17:E:33:LEU:CB	2.69	0.41
18:F:78:GLU:HA	18:F:81:LYS:HD2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:F:171:ARG:O	18:F:175:MET:N	2.54	0.41
18:F:365:ILE:HG22	18:F:369:HIS:CE1	2.56	0.41
20:H:77:SER:O	20:H:132:VAL:HA	2.20	0.41
21:I:18:LEU:HD23	21:I:18:LEU:HA	1.91	0.41
21:I:124:PHE:HB3	22:J:123:GLY:O	2.20	0.41
22:J:11:SER:OG	22:J:15:HIS:N	2.54	0.41
25:M:160:TYR:CD2	25:M:163:CYS:HB2	2.55	0.41
27:O:167:LEU:HD13	27:O:167:LEU:HA	1.91	0.41
28:P:122:CYS:HB3	28:P:132:VAL:HG12	2.03	0.41
30:R:41:LEU:HD23	30:R:103:GLY:HA3	2.02	0.41
30:R:50:ALA:O	30:R:54:PHE:CB	2.68	0.41
31:S:122:TYR:CE1	31:S:132:ARG:HB2	2.55	0.41
31:S:173:ARG:HD3	27:o:200:GLY:HA3	2.03	0.41
32:T:89:HIS:CE1	32:T:131:ALA:HB1	2.56	0.41
32:T:145:LEU:HD13	32:T:179:ARG:HE	1.86	0.41
32:T:148:PRO:O	32:T:152:GLU:HB2	2.21	0.41
19:g:189:TRP:HB3	19:g:194:THR:HG22	2.03	0.41
20:h:6:TYR:CE2	20:h:126:GLY:HA3	2.54	0.41
21:i:162:THR:OG1	21:i:163:CYS:N	2.54	0.41
24:l:139:ASP:HB2	32:t:81:HIS:HE1	1.86	0.41
26:n:110:GLN:HG2	26:n:122:ARG:CZ	2.51	0.41
30:r:164:THR:HG22	30:r:170:SER:HB3	2.01	0.41
1:a:78:GLU:O	1:a:82:HIS:ND1	2.39	0.41
3:c:56:LEU:HB2	3:c:73:PHE:CZ	2.56	0.41
3:c:155:VAL:HG12	12:Z:170:VAL:CG1	2.51	0.41
3:c:273:LYS:H	3:c:273:LYS:CE	2.34	0.41
7:U:249:CYS:HB3	7:U:328:ILE:HG21	2.03	0.41
7:U:415:HIS:NE2	7:U:418:GLU:HB3	2.36	0.41
7:U:619:VAL:HA	7:U:622:LEU:HD12	2.02	0.41
7:U:758:PRO:HB2	7:U:781:LEU:HD13	2.03	0.41
8:V:87:SER:HB2	8:V:125:ASN:HA	2.02	0.41
9:W:128:LEU:O	9:W:132:THR:OG1	2.22	0.41
9:W:131:VAL:HB	9:W:144:ARG:NH2	2.35	0.41
11:Y:359:PRO:HG2	11:Y:362:LYS:HE2	2.02	0.41
14:B:235:LEU:HD22	14:B:238:ALA:HB3	2.03	0.41
14:B:283:PHE:CE2	14:B:285:ASP:HB2	2.57	0.41
15:C:184:LYS:HD3	15:C:311:ILE:HA	2.03	0.41
16:D:89:ILE:HB	17:E:78:ARG:HB2	2.03	0.41
17:E:248:SER:O	17:E:248:SER:OG	2.36	0.41
21:I:185:THR:O	21:I:188:SER:OG	2.30	0.41
22:J:48:LYS:H	22:J:205:ASN:HB3	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:J:221:ASN:HA	22:J:222:PRO:HD3	1.90	0.41
29:Q:59:TYR:O	29:Q:63:ASN:CB	2.63	0.41
31:S:46:LEU:HD11	31:S:52:ILE:HB	2.02	0.41
32:T:210:ASP:HA	32:T:213:HIS:HD2	1.85	0.41
19:g:32:ILE:HD11	19:g:156:PRO:HG2	2.03	0.41
20:h:133:SER:HB3	20:h:151:PRO:HD3	2.03	0.41
23:k:114:GLN:HA	23:k:117:SER:HB2	2.03	0.41
24:l:134:ILE:HB	24:l:145:PHE:HB2	2.03	0.41
28:p:17:LYS:HB2	28:p:158:MET:H	1.85	0.41
28:p:170:ALA:O	28:p:174:ALA:CB	2.69	0.41
30:r:50:ALA:O	30:r:54:PHE:CB	2.68	0.41
32:t:15:LYS:HG2	32:t:20:VAL:HG22	2.04	0.41
2:b:1:MET:HE3	2:b:43:SER:HA	2.02	0.40
2:b:70:ARG:O	2:b:73:SER:OG	2.33	0.40
4:d:106:LEU:HA	4:d:109:GLN:HG2	2.02	0.40
7:U:59:PHE:HA	7:U:62:LEU:HB2	2.03	0.40
7:U:197:VAL:HA	7:U:200:VAL:HG12	2.02	0.40
7:U:725:MET:HE3	7:U:725:MET:HB2	1.88	0.40
11:Y:42:MET:HG3	11:Y:46:ARG:NH1	2.36	0.40
13:A:113:ILE:HD12	13:A:123:VAL:HG21	2.03	0.40
13:A:287:ASP:H	18:F:258:GLN:HG3	1.86	0.40
14:B:334:ILE:HA	14:B:337:LEU:HD23	2.01	0.40
15:C:50:ASN:O	15:C:54:ALA:HB2	2.21	0.40
15:C:191:PRO:HD2	15:C:194:THR:HG21	2.02	0.40
15:C:195:GLY:O	15:C:199:LEU:CG	2.62	0.40
15:C:357:ALA:O	16:D:325:GLY:N	2.54	0.40
16:D:312:ASN:N	16:D:312:ASN:OD1	2.52	0.40
17:E:58:GLY:HA2	17:E:74:THR:HG23	2.03	0.40
17:E:180:LYS:HE2	17:E:180:LYS:HB2	1.82	0.40
18:F:233:LYS:HB3	18:F:331:ALA:HB1	2.03	0.40
18:F:305:GLU:HB3	18:F:306:VAL:H	1.52	0.40
18:F:341:ALA:O	18:F:347:ARG:NH1	2.54	0.40
19:G:101:TRP:CD2	19:G:105:TYR:HD2	2.39	0.40
22:J:40:ILE:HA	22:J:212:ARG:HA	2.02	0.40
24:L:189:LYS:HD2	24:L:193:ARG:HH12	1.86	0.40
26:N:110:GLN:HG2	26:N:122:ARG:CZ	2.51	0.40
28:P:170:ALA:O	28:P:174:ALA:CB	2.69	0.40
29:Q:83:PHE:O	29:Q:87:ASN:ND2	2.54	0.40
19:g:89:SER:OG	25:m:117:MET:SD	2.71	0.40
20:h:119:GLN:O	20:h:122:THR:OG1	2.34	0.40
25:m:50:GLU:HB2	25:m:197:ILE:HG23	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:p:29:GLY:HA2	28:p:35:VAL:HG23	2.03	0.40
29:q:83:PHE:O	29:q:87:ASN:ND2	2.54	0.40
30:r:122:SER:OG	30:r:123:GLY:N	2.54	0.40
31:s:61:CYS:O	31:s:65:THR:OG1	2.25	0.40
1:a:356:TRP:CD1	12:Z:204:LYS:HE3	2.56	0.40
4:d:71:PHE:O	4:d:75:MET:CB	2.68	0.40
6:f:190:GLU:HA	6:f:193:PRO:HG2	2.03	0.40
7:U:229:VAL:HA	7:U:232:ILE:HG12	2.03	0.40
7:U:604:HIS:O	7:U:608:SER:OG	2.25	0.40
9:W:144:ARG:HG3	9:W:147:LYS:HE2	2.03	0.40
12:Z:209:ARG:O	12:Z:213:GLU:CB	2.69	0.40
15:C:151:ILE:HA	34:D:501:ATP:O2'	2.22	0.40
15:C:161:ILE:HA	15:C:164:VAL:HG12	2.03	0.40
16:D:124:LEU:HD13	16:D:124:LEU:HA	1.96	0.40
16:D:355:SER:HB3	16:D:394:VAL:N	2.34	0.40
17:E:245:GLU:HB3	17:E:251:ARG:NH1	2.35	0.40
18:F:385:ALA:O	18:F:388:THR:OG1	2.37	0.40
21:I:118:LYS:HE2	21:I:152:PRO:HA	2.03	0.40
21:I:124:PHE:CE1	22:J:124:ARG:NH2	2.90	0.40
25:M:51:LYS:HZ2	25:M:64:LYS:HA	1.85	0.40
25:M:73:VAL:HG22	25:M:139:SER:HB2	2.03	0.40
26:N:5:ALA:O	26:N:125:PHE:HA	2.21	0.40
31:S:209:SER:HG	31:S:210:LEU:N	2.19	0.40
23:k:9:ASP:OD2	23:k:21:LEU:HD13	2.21	0.40
30:r:38:ASN:HD22	30:r:41:LEU:HD12	1.87	0.40
1:a:152:HIS:CE1	1:a:178:ARG:HB3	2.56	0.40
3:c:190:GLN:HB2	3:c:193:ILE:HB	2.03	0.40
8:V:227:VAL:HA	8:V:230:PHE:HB3	2.03	0.40
8:V:259:LEU:HD11	8:V:294:ARG:HH11	1.85	0.40
9:W:90:LEU:CD1	17:E:307:GLN:N	2.82	0.40
9:W:406:VAL:H	10:X:342:PHE:HB2	1.86	0.40
10:X:202:CYS:N	10:X:203:PRO:HD3	2.36	0.40
10:X:293:ALA:HA	10:X:296:ASN:ND2	2.36	0.40
10:X:389:ASP:OD1	10:X:389:ASP:N	2.54	0.40
15:C:328:ILE:HD11	34:D:501:ATP:N1	2.35	0.40
16:D:148:ASP:HB2	16:D:152:MET:HB2	2.03	0.40
16:D:163:MET:SD	16:D:218:ALA:O	2.79	0.40
16:D:167:ILE:HG22	16:D:174:LYS:HZ2	1.85	0.40
17:E:210:GLU:OE2	17:E:213:ARG:NH2	2.52	0.40
18:F:306:VAL:O	18:F:309:THR:N	2.49	0.40
19:G:113:MET:HA	19:G:116:LYS:HD3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:M:201:HIS:HE1	25:M:206:ASP:HB2	1.87	0.40
19:g:28:ALA:HB2	25:m:14:PHE:HE2	1.85	0.40
22:j:114:LEU:O	22:j:118:TYR:HB2	2.21	0.40
23:k:56:SER:HB3	23:k:59:MET:HB2	2.03	0.40
25:m:230:ASP:N	25:m:230:ASP:OD1	2.52	0.40
1:a:190:VAL:HG13	1:a:225:LEU:HD23	2.04	0.40
1:a:357:CYS:O	1:a:361:LYS:HB2	2.22	0.40
3:c:58:LEU:HD21	3:c:99:LEU:HD11	2.02	0.40
4:d:12:LYS:HE2	4:d:12:LYS:HB3	1.87	0.40
6:f:636:ASP:N	6:f:636:ASP:OD1	2.54	0.40
7:U:111:GLN:NE2	7:U:115:ASN:OD1	2.41	0.40
9:W:189:GLN:HA	9:W:192:LEU:HB2	2.03	0.40
11:Y:195:LYS:O	11:Y:199:GLU:HB2	2.22	0.40
12:Z:204:LYS:HA	12:Z:204:LYS:HD3	1.94	0.40
12:Z:262:LEU:HA	12:Z:266:ILE:HD13	2.04	0.40
13:A:121:PHE:HB3	18:F:87:PRO:HB2	2.02	0.40
13:A:215:PHE:HE1	13:A:340:LYS:HB3	1.86	0.40
14:B:266:LEU:O	14:B:270:LEU:HB2	2.22	0.40
17:E:216:ARG:NE	17:E:259:GLU:OE1	2.55	0.40
17:E:335:SER:HB3	17:E:338:PHE:HD2	1.87	0.40
18:F:283:ILE:HD12	18:F:326:VAL:HG23	2.04	0.40
19:G:189:TRP:HB3	19:G:194:THR:HG22	2.03	0.40
21:I:41:ASP:OD1	21:I:41:ASP:N	2.46	0.40
21:I:216:LEU:HG	21:I:225:ILE:HG12	2.03	0.40
22:J:114:LEU:O	22:J:118:TYR:HB2	2.21	0.40
24:L:167:SER:O	24:L:170:THR:OG1	2.32	0.40
25:M:50:GLU:HB2	25:M:197:ILE:HG23	2.02	0.40
25:M:69:VAL:H	25:M:74:GLY:HA2	1.87	0.40
26:N:179:ILE:HG12	26:N:184:VAL:HG22	2.03	0.40
19:g:46:ASP:CA	19:g:222:VAL:CG2	2.91	0.40
21:i:118:LYS:HE2	21:i:152:PRO:HA	2.03	0.40
26:n:5:ALA:O	26:n:125:PHE:HA	2.21	0.40
27:o:54:MET:HG3	28:p:96:TYR:CD1	2.57	0.40
28:p:30:ILE:N	28:p:33:GLN:O	2.54	0.40
3:c:278:GLN:HB3	3:c:279:ASP:H	1.57	0.40
5:e:60:LEU:C	5:e:62:LYS:N	2.79	0.40
6:f:87:THR:HG23	6:f:87:THR:O	2.20	0.40
6:f:223:GLU:O	6:f:227:ALA:CB	2.57	0.40
6:f:672:LEU:HA	6:f:675:PHE:HB2	2.03	0.40
7:U:34:PHE:HB3	7:U:37:GLU:HB3	2.03	0.40
7:U:255:SER:HB2	7:U:752:THR:HG21	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:U:474:ARG:O	7:U:478:SER:OG	2.24	0.40
8:V:353:LEU:O	8:V:357:LEU:N	2.55	0.40
8:V:467:TYR:CE2	8:V:470:ARG:HB3	2.55	0.40
9:W:332:SER:OG	9:W:333:LEU:N	2.54	0.40
17:E:50:LEU:HD23	18:F:159:LEU:HD13	2.04	0.40
18:F:64:HIS:O	18:F:68:ALA:HB2	2.22	0.40
19:G:128:ASN:OD1	20:H:6:TYR:OH	2.35	0.40
21:I:63:GLU:OE1	21:I:64:LYS:NZ	2.42	0.40
21:I:93:ILE:HD13	21:I:93:ILE:HA	1.95	0.40
25:M:108:LEU:HD22	25:M:139:SER:HB3	2.03	0.40
32:T:136:SER:HB2	32:T:150:LEU:HD13	2.02	0.40
32:T:187:PHE:HE2	32:T:189:ILE:HD11	1.86	0.40
21:i:92:LEU:O	21:i:96:ARG:CB	2.70	0.40
21:i:216:LEU:HG	21:i:225:ILE:HG12	2.04	0.40
24:l:12:VAL:HG13	25:m:22:GLN:HE22	1.86	0.40
32:t:89:HIS:CE1	32:t:131:ALA:HB1	2.56	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	a	371/376 (99%)	331 (89%)	38 (10%)	2 (0%)	25 64
2	b	189/377 (50%)	160 (85%)	28 (15%)	1 (0%)	25 64
3	c	274/309 (89%)	228 (83%)	40 (15%)	6 (2%)	5 29
4	d	255/349 (73%)	216 (85%)	36 (14%)	3 (1%)	11 44
5	e	36/70 (51%)	21 (58%)	14 (39%)	1 (3%)	4 24
6	f	669/908 (74%)	591 (88%)	75 (11%)	3 (0%)	30 68
7	U	798/953 (84%)	729 (91%)	68 (8%)	1 (0%)	48 83

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	V	470/533 (88%)	396 (84%)	70 (15%)	4 (1%)	14	51
9	W	454/456 (100%)	393 (87%)	56 (12%)	5 (1%)	12	46
10	X	239/422 (57%)	211 (88%)	25 (10%)	3 (1%)	10	42
11	Y	376/389 (97%)	331 (88%)	43 (11%)	2 (0%)	25	64
12	Z	284/324 (88%)	237 (84%)	42 (15%)	5 (2%)	7	34
13	A	338/433 (78%)	269 (80%)	63 (19%)	6 (2%)	7	34
14	B	348/440 (79%)	307 (88%)	37 (11%)	4 (1%)	12	46
15	C	358/394 (91%)	285 (80%)	58 (16%)	15 (4%)	2	18
16	D	374/418 (90%)	287 (77%)	72 (19%)	15 (4%)	2	18
17	E	373/403 (93%)	330 (88%)	40 (11%)	3 (1%)	16	54
18	F	372/439 (85%)	326 (88%)	38 (10%)	8 (2%)	5	29
19	G	237/245 (97%)	210 (89%)	23 (10%)	4 (2%)	7	36
19	g	238/245 (97%)	212 (89%)	24 (10%)	2 (1%)	16	54
20	H	228/233 (98%)	207 (91%)	19 (8%)	2 (1%)	14	51
20	h	230/233 (99%)	207 (90%)	21 (9%)	2 (1%)	14	51
21	I	246/260 (95%)	222 (90%)	23 (9%)	1 (0%)	30	68
21	i	248/260 (95%)	224 (90%)	23 (9%)	1 (0%)	30	68
22	J	237/247 (96%)	215 (91%)	20 (8%)	2 (1%)	16	54
22	j	237/247 (96%)	217 (92%)	18 (8%)	2 (1%)	16	54
23	K	224/240 (93%)	201 (90%)	21 (9%)	2 (1%)	14	51
23	k	224/240 (93%)	202 (90%)	21 (9%)	1 (0%)	30	68
24	L	236/268 (88%)	221 (94%)	15 (6%)	0	100	100
24	l	236/268 (88%)	221 (94%)	15 (6%)	0	100	100
25	M	238/254 (94%)	213 (90%)	25 (10%)	0	100	100
25	m	238/254 (94%)	214 (90%)	24 (10%)	0	100	100
26	N	189/238 (79%)	178 (94%)	11 (6%)	0	100	100
26	n	189/238 (79%)	178 (94%)	10 (5%)	1 (0%)	25	64
27	O	218/276 (79%)	202 (93%)	16 (7%)	0	100	100
27	o	218/276 (79%)	202 (93%)	16 (7%)	0	100	100
28	P	202/204 (99%)	194 (96%)	8 (4%)	0	100	100
28	p	202/204 (99%)	194 (96%)	8 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
29	Q	197/201 (98%)	178 (90%)	19 (10%)	0	100	100
29	q	197/201 (98%)	178 (90%)	19 (10%)	0	100	100
30	R	199/262 (76%)	187 (94%)	12 (6%)	0	100	100
30	r	199/262 (76%)	187 (94%)	12 (6%)	0	100	100
31	S	211/240 (88%)	202 (96%)	9 (4%)	0	100	100
31	s	211/240 (88%)	202 (96%)	9 (4%)	0	100	100
32	T	213/263 (81%)	201 (94%)	12 (6%)	0	100	100
32	t	213/263 (81%)	201 (94%)	12 (6%)	0	100	100
All	All	12733/14855 (86%)	11318 (89%)	1308 (10%)	107 (1%)	19	54

All (107) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	b	103	LYS
4	d	201	ASN
9	W	314	LEU
9	W	424	LEU
10	X	203	PRO
10	X	300	ALA
11	Y	361	SER
13	A	427	PRO
14	B	434	THR
15	C	90	HIS
15	C	134	LEU
15	C	143	VAL
15	C	192	PRO
15	C	231	VAL
16	D	86	PRO
16	D	161	ASP
16	D	162	VAL
16	D	318	ASP
16	D	338	ARG
16	D	372	GLY
17	E	111	LEU
18	F	306	VAL
19	G	9	PHE
19	G	18	PRO
23	K	22	PHE
22	j	179	GLU

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Mol	Chain	Res	Type
26	n	92	GLU
3	c	280	PRO
8	V	171	VAL
9	W	40	LEU
12	Z	144	VAL
13	A	235	ALA
13	A	288	GLY
14	B	321	SER
15	C	194	THR
15	C	290	LYS
16	D	371	SER
17	E	113	ARG
18	F	89	LEU
18	F	429	ALA
19	G	19	GLU
22	j	181	ILE
3	c	273	LYS
5	e	61	GLU
6	f	185	LEU
8	V	196	SER
10	X	262	ASN
11	Y	357	ASN
15	C	145	ASP
15	C	288	ASN
16	D	299	PHE
16	D	340	GLN
16	D	407	ILE
18	F	305	GLU
18	F	432	LYS
20	H	10	LEU
23	K	232	GLU
19	g	19	GLU
19	g	20	GLY
1	a	187	ASP
3	c	187	PRO
6	f	326	LEU
8	V	195	ILE
9	W	423	ASN
12	Z	103	LYS
13	A	234	ASP
15	C	216	GLY
15	C	289	ILE

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Mol	Chain	Res	Type
16	D	268	ASP
16	D	410	ASP
18	F	426	GLU
22	J	181	ILE
20	h	7	SER
23	k	232	GLU
3	c	156	VAL
3	c	278	GLN
8	V	299	GLN
9	W	38	GLY
12	Z	177	ARG
14	B	435	PRO
15	C	232	ARG
16	D	163	MET
16	D	409	LYS
17	E	112	PRO
18	F	169	ASP
21	I	7	SER
21	i	7	SER
4	d	35	PHE
4	d	158	ILE
12	Z	168	GLU
18	F	307	GLN
19	G	20	GLY
22	J	183	THR
3	c	174	PRO
20	H	34	PRO
7	U	433	PRO
13	A	109	PRO
13	A	310	ASP
15	C	91	PRO
15	C	133	PRO
20	h	34	PRO
12	Z	134	PRO
14	B	180	PRO
16	D	267	ILE
1	a	338	PRO
6	f	652	VAL
15	C	220	VAL

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	a	333/336 (99%)	332 (100%)	1 (0%)	91	92
2	b	167/312 (54%)	163 (98%)	4 (2%)	44	63
3	c	243/267 (91%)	236 (97%)	7 (3%)	37	58
4	d	231/293 (79%)	226 (98%)	5 (2%)	47	66
5	e	38/63 (60%)	33 (87%)	5 (13%)	3	15
6	f	580/763 (76%)	576 (99%)	4 (1%)	81	87
7	U	685/816 (84%)	677 (99%)	8 (1%)	67	79
8	V	409/459 (89%)	402 (98%)	7 (2%)	56	73
9	W	416/416 (100%)	405 (97%)	11 (3%)	41	61
10	X	208/362 (58%)	201 (97%)	7 (3%)	32	53
11	Y	334/344 (97%)	328 (98%)	6 (2%)	54	71
12	Z	257/295 (87%)	246 (96%)	11 (4%)	25	47
13	A	286/372 (77%)	282 (99%)	4 (1%)	62	76
14	B	300/385 (78%)	295 (98%)	5 (2%)	56	73
15	C	314/342 (92%)	302 (96%)	12 (4%)	28	50
16	D	331/366 (90%)	315 (95%)	16 (5%)	21	44
17	E	298/353 (84%)	294 (99%)	4 (1%)	65	77
18	F	296/379 (78%)	282 (95%)	14 (5%)	22	45
19	G	192/209 (92%)	189 (98%)	3 (2%)	58	75
19	g	193/209 (92%)	191 (99%)	2 (1%)	73	82
20	H	162/190 (85%)	156 (96%)	6 (4%)	29	51
20	h	164/190 (86%)	158 (96%)	6 (4%)	29	51
21	I	191/220 (87%)	185 (97%)	6 (3%)	35	55
21	i	193/220 (88%)	187 (97%)	6 (3%)	35	55
22	J	152/210 (72%)	150 (99%)	2 (1%)	65	77
22	j	152/210 (72%)	152 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
23	K	187/202 (93%)	182 (97%)	5 (3%)	40	60
23	k	186/202 (92%)	181 (97%)	5 (3%)	40	60
24	L	198/229 (86%)	198 (100%)	0	100	100
24	l	198/229 (86%)	198 (100%)	0	100	100
25	M	192/211 (91%)	192 (100%)	0	100	100
25	m	192/211 (91%)	191 (100%)	1 (0%)	86	90
26	N	148/180 (82%)	147 (99%)	1 (1%)	81	87
26	n	148/180 (82%)	146 (99%)	2 (1%)	62	76
27	O	177/227 (78%)	177 (100%)	0	100	100
27	o	177/227 (78%)	177 (100%)	0	100	100
28	P	172/173 (99%)	172 (100%)	0	100	100
28	p	172/173 (99%)	172 (100%)	0	100	100
29	Q	164/171 (96%)	162 (99%)	2 (1%)	67	79
29	q	164/171 (96%)	162 (99%)	2 (1%)	67	79
30	R	153/201 (76%)	153 (100%)	0	100	100
30	r	153/201 (76%)	153 (100%)	0	100	100
31	S	174/198 (88%)	174 (100%)	0	100	100
31	s	174/198 (88%)	174 (100%)	0	100	100
32	T	175/214 (82%)	175 (100%)	0	100	100
32	t	175/214 (82%)	175 (100%)	0	100	100
All	All	10604/12593 (84%)	10424 (98%)	180 (2%)	56	73

All (180) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	a	112	ILE
2	b	54	LEU
2	b	90	ILE
2	b	101	GLN
2	b	103	LYS
3	c	33	ILE
3	c	62	VAL
3	c	154	LYS
3	c	249	LEU
3	c	272	ILE

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Mol	Chain	Res	Type
3	c	273	LYS
3	c	278	GLN
4	d	57	ILE
4	d	158	ILE
4	d	161	GLU
4	d	162	SER
4	d	235	THR
5	e	55	GLN
5	e	56	LEU
5	e	57	ARG
5	e	59	GLU
5	e	61	GLU
6	f	88	SER
6	f	184	LEU
6	f	192	VAL
6	f	801	VAL
7	U	24	LEU
7	U	171	ASN
7	U	529	ILE
7	U	599	ILE
7	U	629	THR
7	U	844	LYS
7	U	912	ILE
7	U	913	ILE
8	V	169	LEU
8	V	194	LYS
8	V	195	ILE
8	V	221	LEU
8	V	328	VAL
8	V	398	LEU
8	V	448	GLU
9	W	39	ARG
9	W	40	LEU
9	W	85	GLU
9	W	89	LEU
9	W	90	LEU
9	W	250	ILE
9	W	310	THR
9	W	313	GLU
9	W	333	LEU
9	W	413	ILE
9	W	429	SER

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Mol	Chain	Res	Type
10	X	258	LYS
10	X	261	LEU
10	X	263	THR
10	X	298	SER
10	X	299	LEU
10	X	313	LEU
10	X	314	ARG
11	Y	32	ARG
11	Y	157	ILE
11	Y	287	LEU
11	Y	325	VAL
11	Y	357	ASN
11	Y	358	ARG
12	Z	91	ILE
12	Z	101	LEU
12	Z	144	VAL
12	Z	177	ARG
12	Z	186	THR
12	Z	187	LEU
12	Z	225	GLN
12	Z	230	LEU
12	Z	237	LEU
12	Z	240	VAL
12	Z	266	ILE
13	A	287	ASP
13	A	403	ILE
13	A	423	PHE
13	A	426	THR
14	B	125	THR
14	B	280	SER
14	B	321	SER
14	B	434	THR
14	B	436	GLU
15	C	123	LEU
15	C	132	ASP
15	C	137	LEU
15	C	139	MET
15	C	143	VAL
15	C	184	LYS
15	C	194	THR
15	C	196	LYS
15	C	229	ARG

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Mol	Chain	Res	Type
15	C	230	MET
15	C	289	ILE
15	C	290	LYS
16	D	78	GLU
16	D	85	ILE
16	D	87	LEU
16	D	162	VAL
16	D	167	ILE
16	D	283	ARG
16	D	311	THR
16	D	318	ASP
16	D	326	ARG
16	D	340	GLN
16	D	354	LEU
16	D	406	VAL
16	D	409	LYS
16	D	412	GLN
16	D	413	GLU
16	D	417	TYR
17	E	105	LEU
17	E	111	LEU
17	E	204	VAL
17	E	247	THR
18	F	134	LEU
18	F	170	SER
18	F	171	ARG
18	F	258	GLN
18	F	278	LYS
18	F	305	GLU
18	F	416	THR
18	F	424	ILE
18	F	425	LEU
18	F	426	GLU
18	F	427	VAL
18	F	428	GLN
18	F	431	LYS
18	F	432	LYS
19	G	19	GLU
19	G	21	ARG
19	G	215	ILE
20	H	7	SER
20	H	10	LEU

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Mol	Chain	Res	Type
20	H	35	SER
20	H	123	GLN
20	H	124	SER
20	H	161	THR
21	I	10	THR
21	I	11	ILE
21	I	15	GLU
21	I	124	PHE
21	I	127	LYS
21	I	228	LEU
22	J	177	THR
22	J	179	GLU
23	K	9	ASP
23	K	20	ARG
23	K	22	PHE
23	K	232	GLU
23	K	233	GLU
26	N	92	GLU
29	Q	4	LEU
29	Q	140	LEU
19	g	215	ILE
19	g	222	VAL
20	h	7	SER
20	h	8	PHE
20	h	9	SER
20	h	10	LEU
20	h	35	SER
20	h	123	GLN
21	i	11	ILE
21	i	15	GLU
21	i	123	GLN
21	i	124	PHE
21	i	127	LYS
21	i	228	LEU
23	k	20	ARG
23	k	21	LEU
23	k	22	PHE
23	k	232	GLU
23	k	233	GLU
25	m	7	TYR
26	n	91	ARG
26	n	92	GLU

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Mol	Chain	Res	Type
29	q	4	LEU
29	q	140	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (185) such sidechains are listed below:

Mol	Chain	Res	Type
1	a	9	GLN
1	a	40	GLN
1	a	152	HIS
1	a	241	ASN
1	a	244	ASN
1	a	249	GLN
1	a	370	GLN
2	b	142	ASN
3	c	101	GLN
3	c	176	GLN
3	c	190	GLN
3	c	199	HIS
3	c	232	GLN
3	c	256	ASN
3	c	295	ASN
4	d	228	GLN
5	e	47	ASN
6	f	43	GLN
6	f	102	HIS
6	f	180	GLN
6	f	329	ASN
6	f	405	HIS
6	f	452	ASN
6	f	457	ASN
6	f	473	ASN
6	f	493	ASN
6	f	540	GLN
6	f	565	ASN
6	f	650	GLN
6	f	747	GLN
6	f	750	GLN
7	U	70	HIS
7	U	79	ASN
7	U	89	ASN
7	U	189	GLN
7	U	192	GLN

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Mol	Chain	Res	Type
7	U	207	ASN
7	U	247	GLN
7	U	267	ASN
7	U	338	HIS
7	U	421	GLN
7	U	453	HIS
7	U	491	GLN
7	U	540	GLN
7	U	756	HIS
7	U	880	ASN
8	V	185	GLN
8	V	247	GLN
8	V	281	ASN
8	V	487	HIS
9	W	99	GLN
9	W	106	GLN
9	W	218	ASN
9	W	235	GLN
9	W	236	HIS
9	W	361	HIS
9	W	362	ASN
9	W	414	ASN
9	W	440	ASN
10	X	292	GLN
10	X	296	ASN
11	Y	367	GLN
12	Z	32	GLN
12	Z	96	HIS
12	Z	104	ASN
12	Z	174	HIS
12	Z	224	HIS
12	Z	231	GLN
12	Z	274	ASN
13	A	293	ASN
13	A	322	ASN
13	A	358	HIS
13	A	379	ASN
13	A	414	ASN
14	B	195	GLN
15	C	69	GLN
15	C	129	ASN
15	C	171	HIS

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Mol	Chain	Res	Type
15	C	182	GLN
15	C	205	HIS
15	C	270	GLN
15	C	332	HIS
15	C	398	ASN
16	D	187	HIS
16	D	222	HIS
16	D	237	GLN
16	D	257	ASN
16	D	412	GLN
16	D	414	HIS
17	E	254	GLN
17	E	263	GLN
17	E	339	ASN
17	E	364	GLN
18	F	214	ASN
18	F	258	GLN
18	F	417	HIS
18	F	436	GLN
19	G	100	ASN
19	G	127	GLN
19	G	224	ASN
20	H	71	HIS
20	H	112	GLN
20	H	123	GLN
20	H	166	ASN
21	I	119	GLN
21	I	146	GLN
21	I	149	GLN
21	I	198	ASN
21	I	240	HIS
22	J	18	GLN
22	J	85	ASN
22	J	116	GLN
22	J	146	GLN
22	J	175	ASN
23	K	13	ASN
23	K	41	GLN
23	K	114	GLN
23	K	164	GLN
23	K	214	ASN
23	K	221	GLN

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Mol	Chain	Res	Type
23	K	225	ASN
24	L	53	GLN
24	L	86	ASN
24	L	90	GLN
24	L	152	ASN
25	M	101	ASN
25	M	110	HIS
25	M	180	GLN
26	N	28	ASN
26	N	154	GLN
27	O	62	ASN
28	P	72	ASN
28	P	93	ASN
29	Q	27	GLN
29	Q	87	ASN
29	Q	101	ASN
29	Q	168	GLN
29	Q	186	ASN
30	R	38	ASN
30	R	119	ASN
31	S	58	HIS
31	S	131	GLN
32	T	213	HIS
19	g	127	GLN
19	g	224	ASN
20	h	71	HIS
20	h	109	GLN
20	h	112	GLN
21	i	142	HIS
21	i	146	GLN
21	i	149	GLN
21	i	198	ASN
21	i	240	HIS
22	j	116	GLN
22	j	175	ASN
23	k	23	GLN
23	k	41	GLN
23	k	164	GLN
23	k	214	ASN
23	k	221	GLN
23	k	225	ASN
24	l	86	ASN

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Mol	Chain	Res	Type
24	l	90	GLN
24	l	117	GLN
24	l	121	GLN
24	l	152	ASN
25	m	101	ASN
25	m	110	HIS
25	m	180	GLN
26	n	154	GLN
27	o	62	ASN
28	p	65	GLN
28	p	72	ASN
29	q	82	ASN
29	q	87	ASN
29	q	101	ASN
29	q	168	GLN
29	q	186	ASN
30	r	38	ASN
30	r	119	ASN
31	s	58	HIS
32	t	61	GLN
32	t	69	GLN
32	t	81	HIS
32	t	213	HIS

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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 6 ligands modelled in this entry, 1 is monoatomic - leaving 5 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
34	ATP	D	501	16	26,33,33	0.88	1 (3%)	31,52,52	1.78	7 (22%)
34	ATP	A	501	-	26,33,33	2.77	1 (3%)	31,52,52	1.46	3 (9%)
34	ATP	D	502	-	26,33,33	2.77	1 (3%)	31,52,52	1.57	3 (9%)
34	ATP	E	401	17	26,33,33	0.88	1 (3%)	31,52,52	1.78	7 (22%)
34	ATP	B	501	-	26,33,33	0.94	1 (3%)	31,52,52	1.61	5 (16%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
34	ATP	D	501	16	-	0/18/38/38	0/3/3/3
34	ATP	A	501	-	-	8/18/38/38	0/3/3/3
34	ATP	D	502	-	-	6/18/38/38	0/3/3/3
34	ATP	E	401	17	-	0/18/38/38	0/3/3/3
34	ATP	B	501	-	-	4/18/38/38	0/3/3/3

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	A	501	ATP	PG-O1G	13.80	1.95	1.50
34	D	502	ATP	PG-O1G	13.79	1.95	1.50
34	B	501	ATP	C5-C4	2.49	1.47	1.40
34	D	501	ATP	C5-C4	2.15	1.46	1.40
34	E	401	ATP	C5-C4	2.13	1.46	1.40

All (25) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	D	502	ATP	PB-O3B-PG	-5.64	113.47	132.83
34	D	501	ATP	PA-O3A-PB	-5.58	113.68	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	E	401	ATP	PA-O3A-PB	-5.57	113.70	132.83
34	D	502	ATP	PA-O3A-PB	-5.53	113.86	132.83
34	A	501	ATP	PB-O3B-PG	-5.42	114.22	132.83
34	A	501	ATP	PA-O3A-PB	-4.41	117.69	132.83
34	E	401	ATP	C3'-C2'-C1'	3.98	106.97	100.98
34	D	501	ATP	C3'-C2'-C1'	3.97	106.96	100.98
34	B	501	ATP	PB-O3B-PG	-3.58	120.53	132.83
34	B	501	ATP	PA-O3A-PB	-3.57	120.56	132.83
34	E	401	ATP	N3-C2-N1	-3.50	123.20	128.68
34	D	501	ATP	N3-C2-N1	-3.49	123.22	128.68
34	B	501	ATP	C3'-C2'-C1'	3.41	106.12	100.98
34	B	501	ATP	N3-C2-N1	-3.17	123.72	128.68
34	B	501	ATP	C4-C5-N7	-2.73	106.56	109.40
34	E	401	ATP	PB-O3B-PG	-2.26	125.07	132.83
34	D	502	ATP	C5-C6-N6	2.25	123.77	120.35
34	D	501	ATP	PB-O3B-PG	-2.25	125.11	132.83
34	A	501	ATP	C5-C6-N6	2.24	123.76	120.35
34	E	401	ATP	C4-C5-N7	-2.09	107.22	109.40
34	E	401	ATP	O2B-PB-O1B	2.08	122.55	112.24
34	D	501	ATP	O2B-PB-O1B	2.08	122.53	112.24
34	D	501	ATP	C4-C5-N7	-2.06	107.25	109.40
34	E	401	ATP	C2-N1-C6	2.06	122.27	118.75
34	D	501	ATP	C2-N1-C6	2.03	122.22	118.75

There are no chirality outliers.

All (18) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
34	A	501	ATP	C5'-O5'-PA-O1A
34	A	501	ATP	C5'-O5'-PA-O2A
34	B	501	ATP	C5'-O5'-PA-O3A
34	B	501	ATP	C4'-C5'-O5'-PA
34	D	502	ATP	C5'-O5'-PA-O1A
34	D	502	ATP	O4'-C4'-C5'-O5'
34	D	502	ATP	C3'-C4'-C5'-O5'
34	A	501	ATP	C4'-C5'-O5'-PA
34	A	501	ATP	PA-O3A-PB-O2B
34	B	501	ATP	C5'-O5'-PA-O1A
34	A	501	ATP	PB-O3B-PG-O1G
34	B	501	ATP	O4'-C4'-C5'-O5'
34	A	501	ATP	C5'-O5'-PA-O3A
34	D	502	ATP	C5'-O5'-PA-O3A

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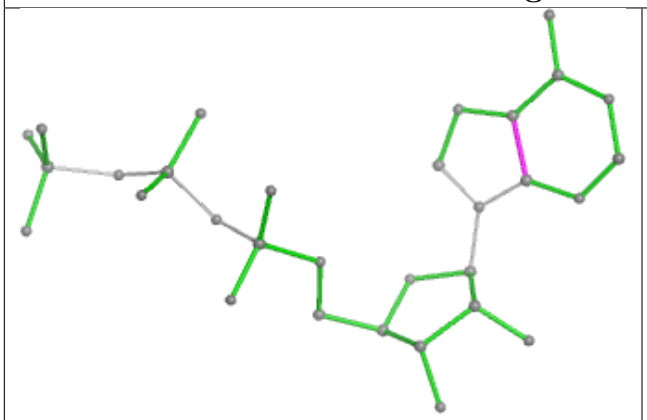
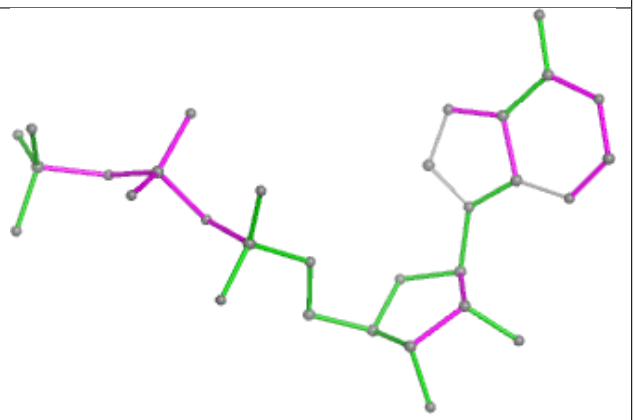
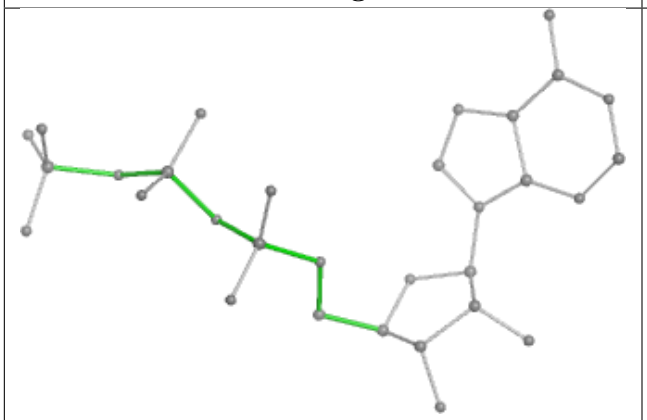
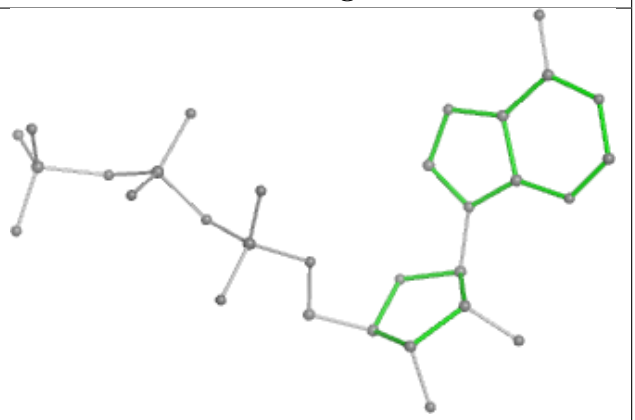
Mol	Chain	Res	Type	Atoms
34	A	501	ATP	PA-O3A-PB-O1B
34	D	502	ATP	PB-O3A-PA-O1A
34	D	502	ATP	PB-O3A-PA-O2A
34	A	501	ATP	O4'-C4'-C5'-O5'

There are no ring outliers.

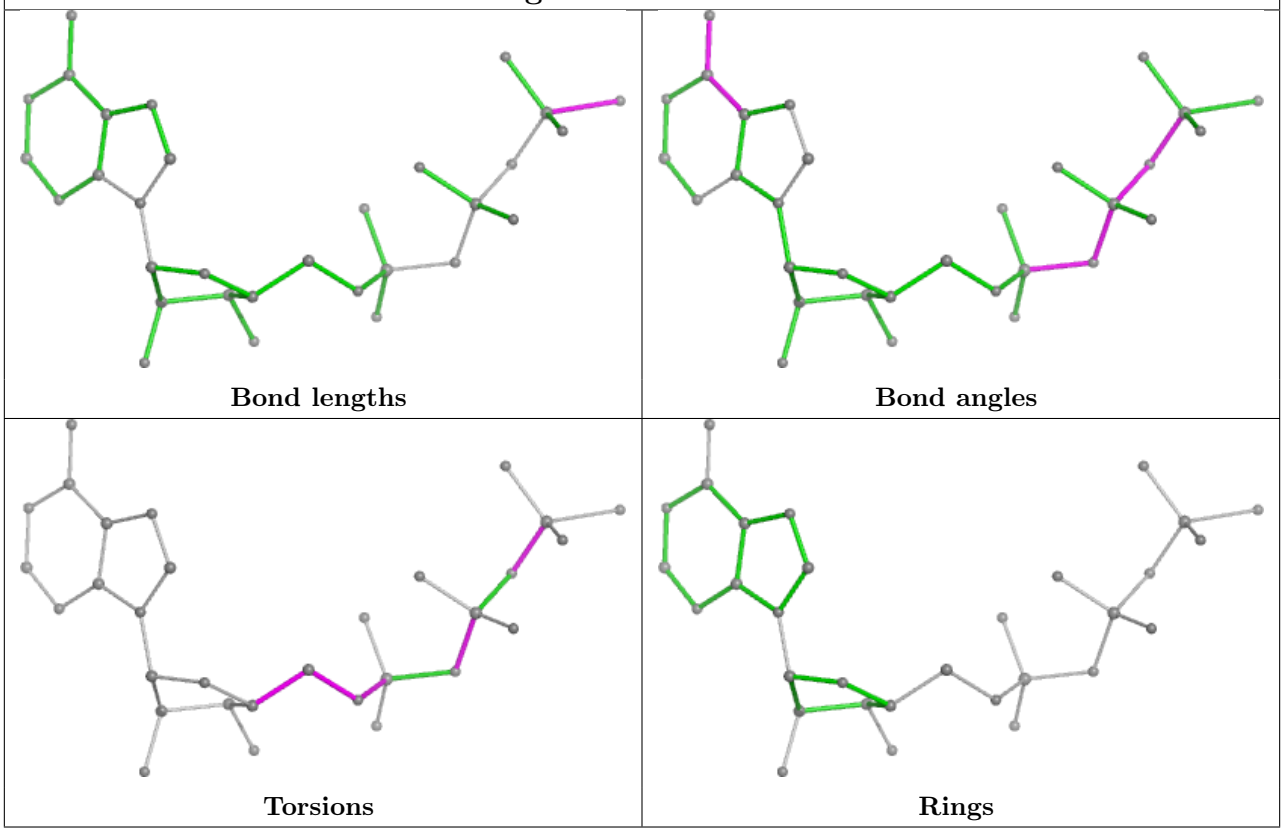
5 monomers are involved in 170 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
34	D	501	ATP	35	0
34	A	501	ATP	2	0
34	D	502	ATP	1	0
34	E	401	ATP	94	0
34	B	501	ATP	38	0

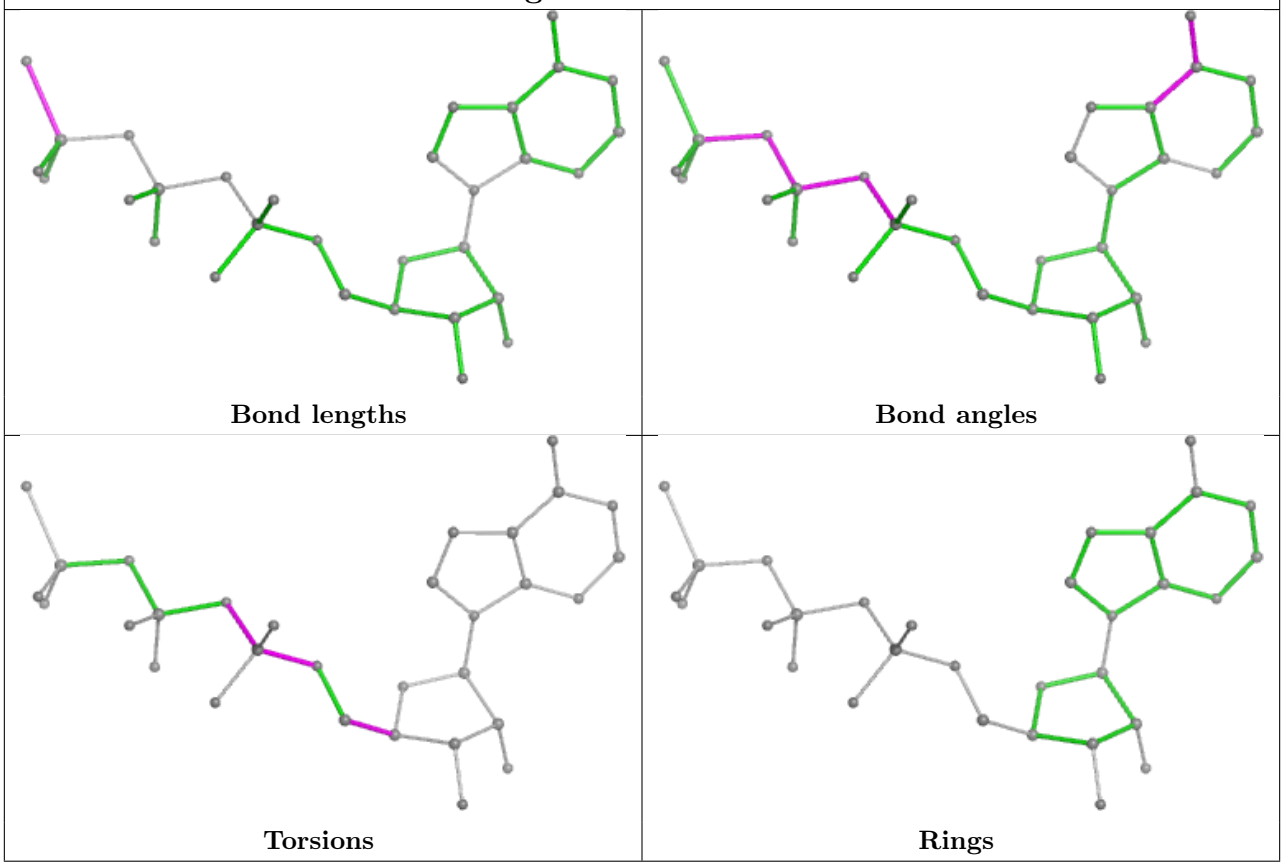
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

Ligand ATP D 501	
 Bond lengths	 Bond angles
 Torsions	 Rings

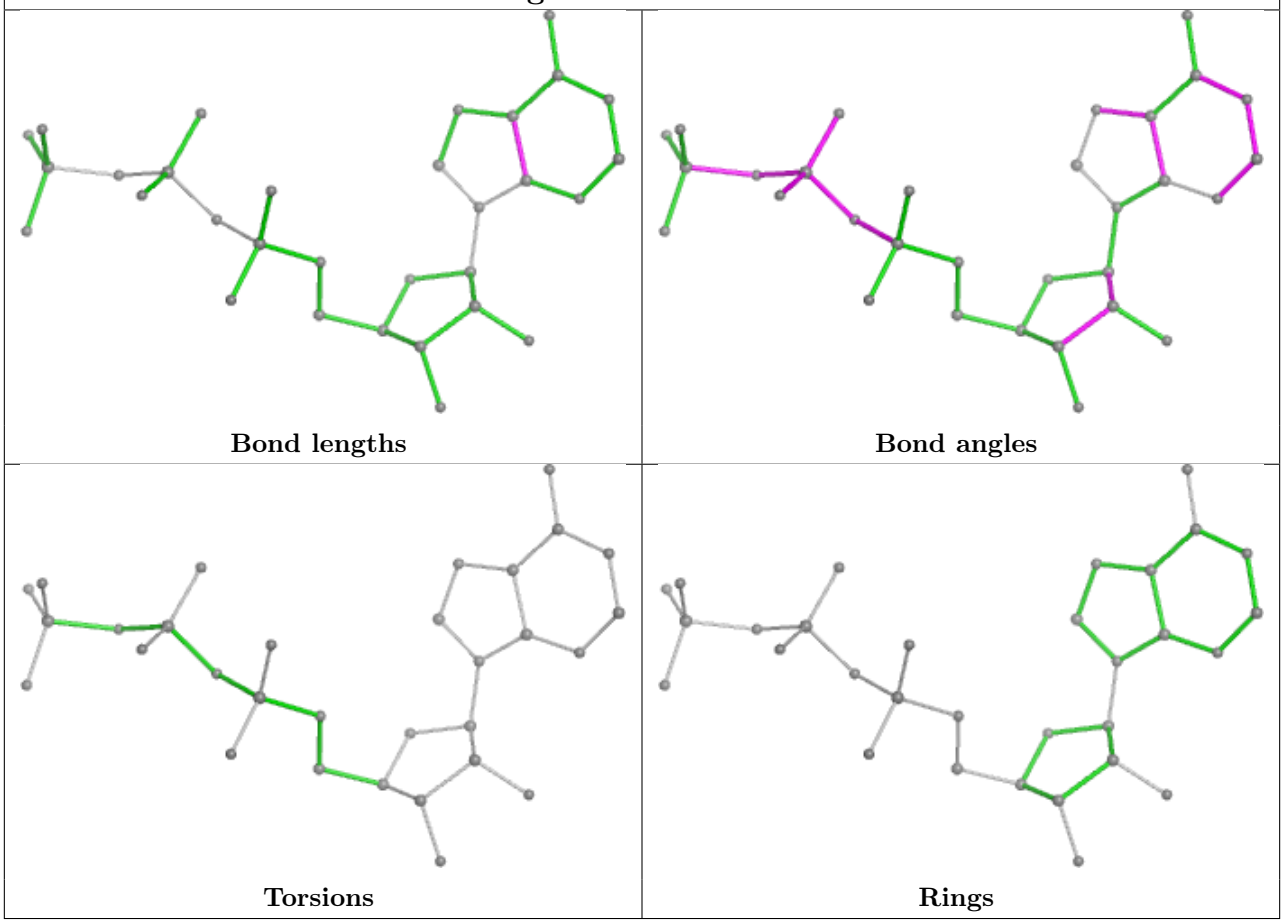
Ligand ATP A 501



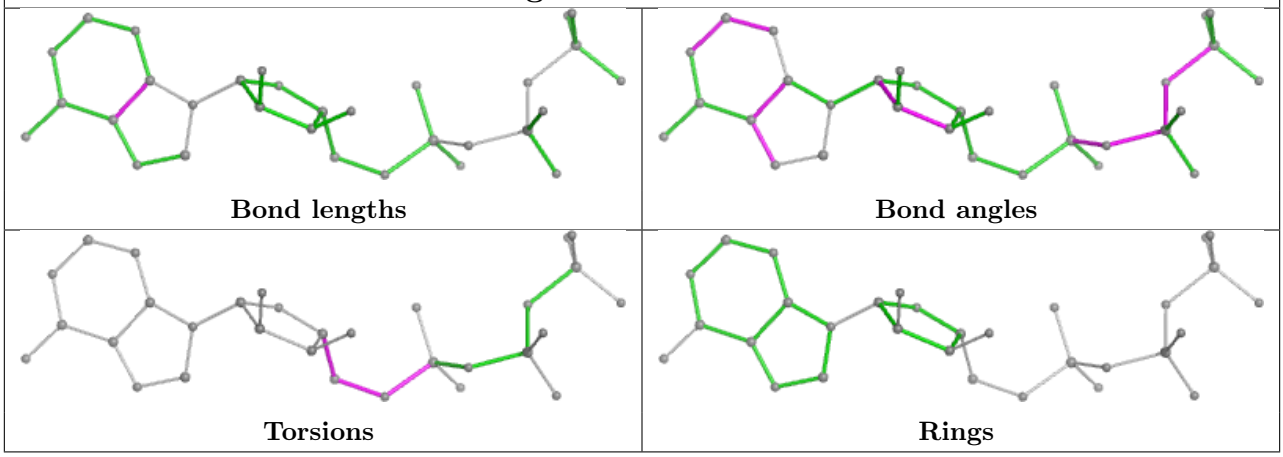
Ligand ATP D 502



Ligand ATP E 401



Ligand ATP B 501



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.

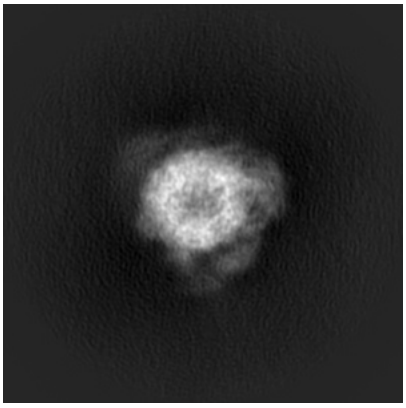
6 Map visualisation (i)

This section contains visualisations of the EMDB entry EMD-14209. These allow visual inspection of the internal detail of the map and identification of artifacts.

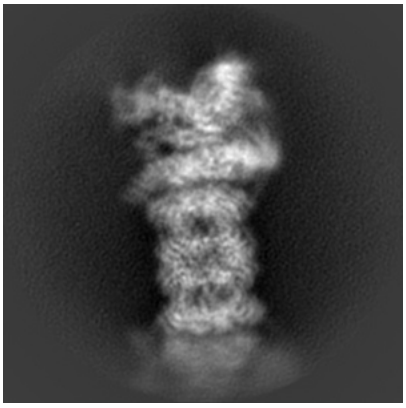
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections (i)

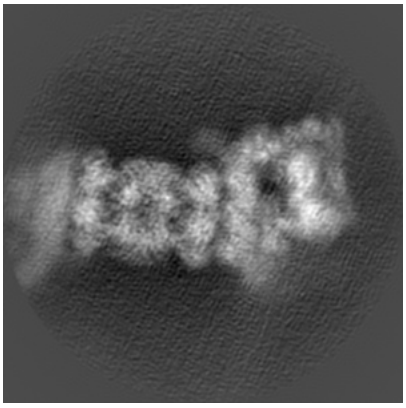
6.1.1 Primary map



X



Y

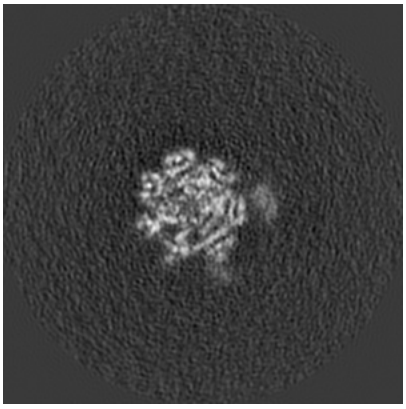


Z

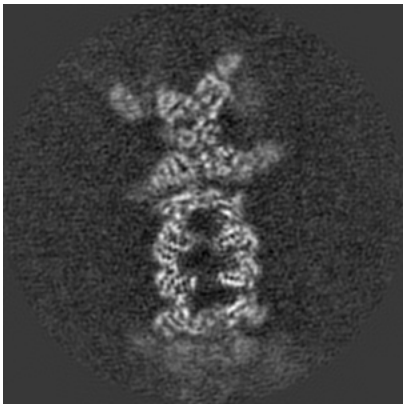
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

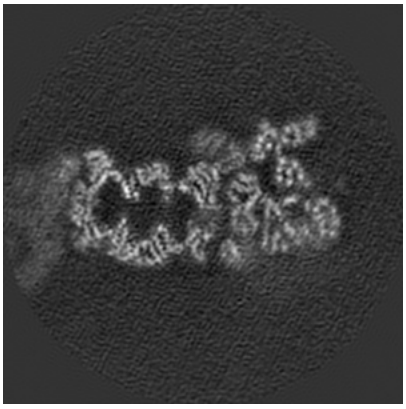
6.2.1 Primary map



X Index: 160



Y Index: 160

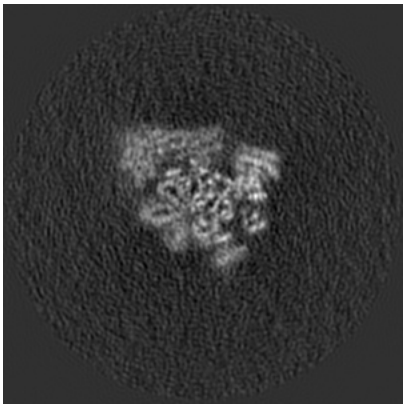


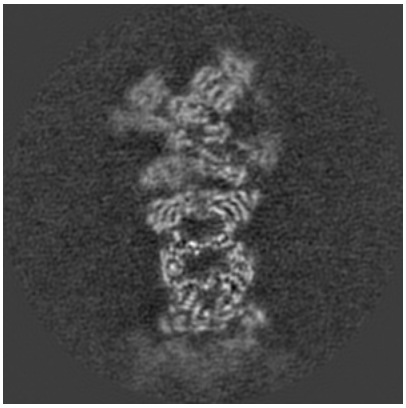
Z Index: 160

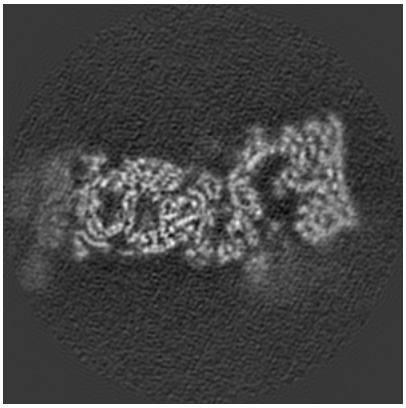
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

6.3.1 Primary map


X Index: 195

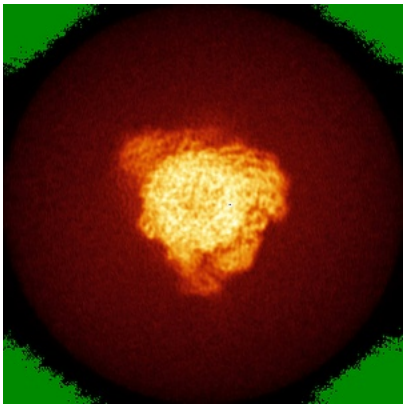

Y Index: 143

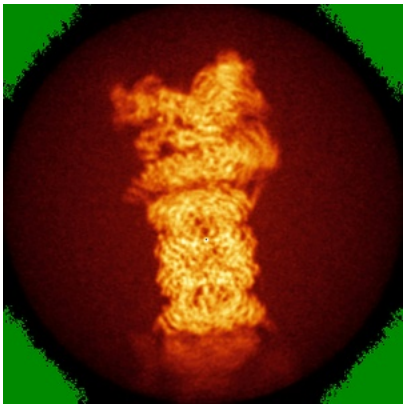

Z Index: 179

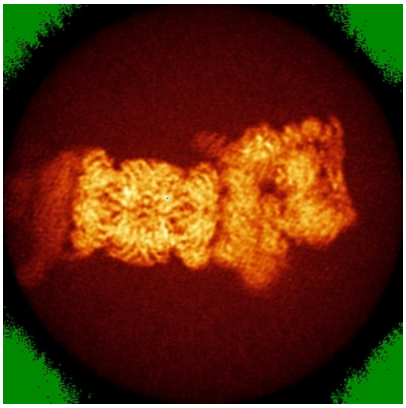
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

6.4.1 Primary map


X

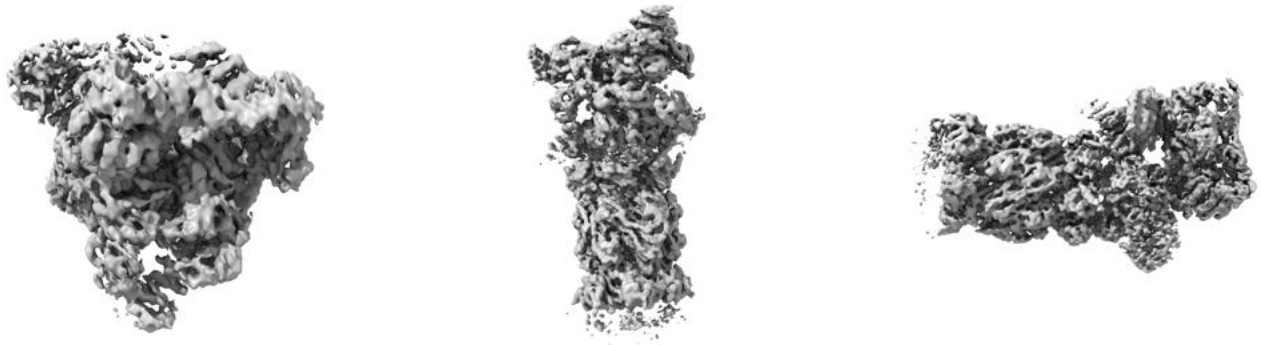

Y


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.0315. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

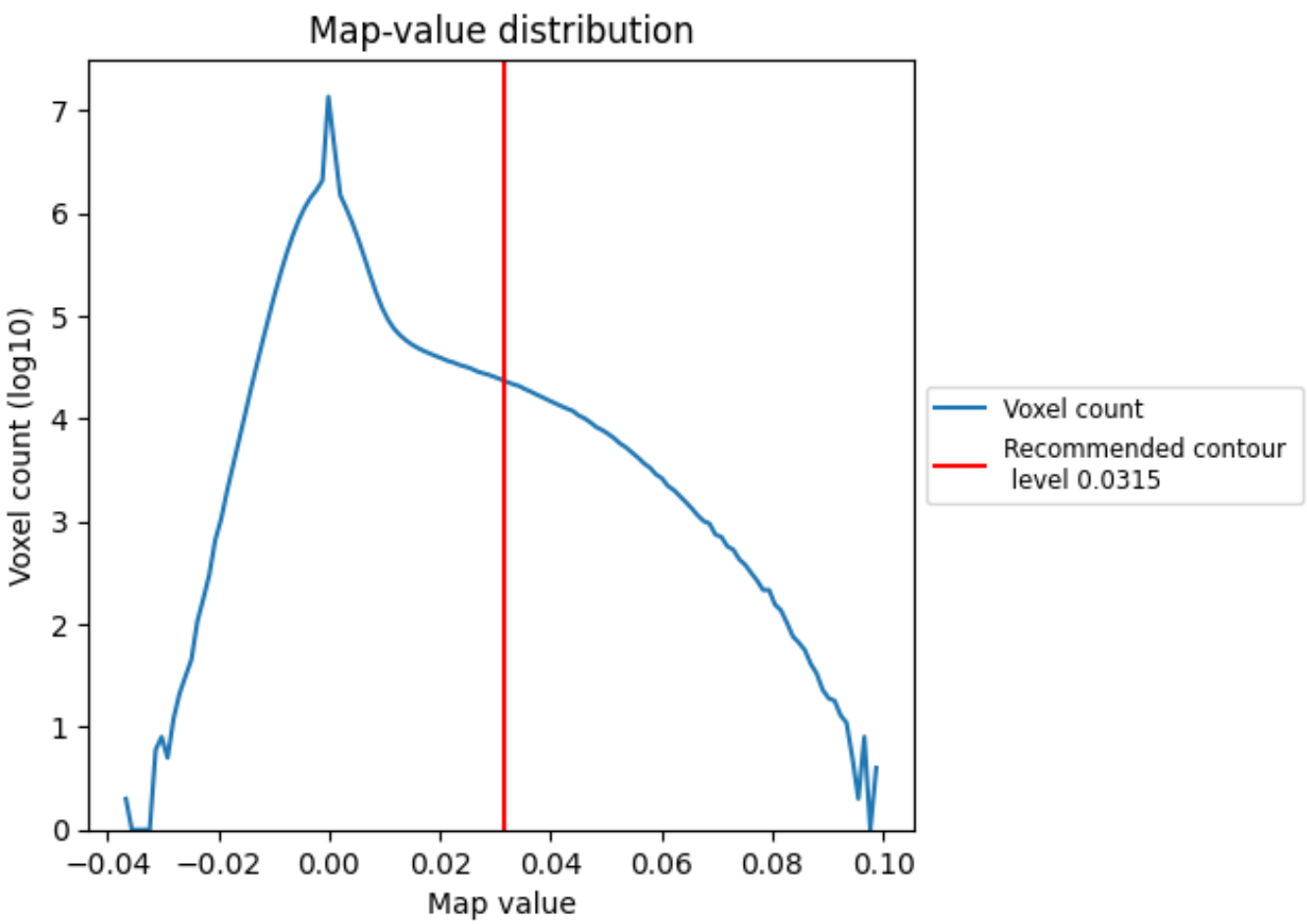
6.6 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis (i)

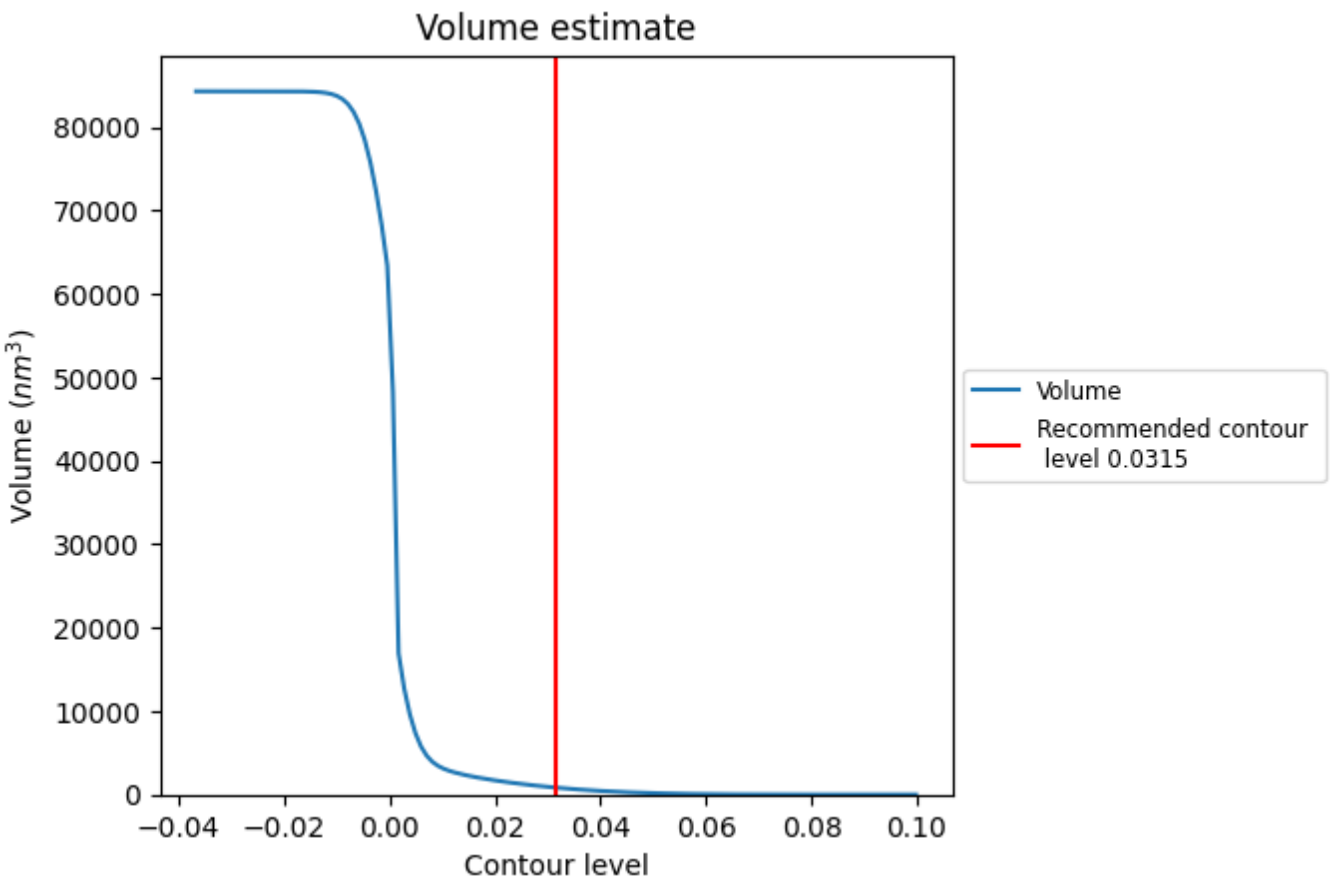
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution (i)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

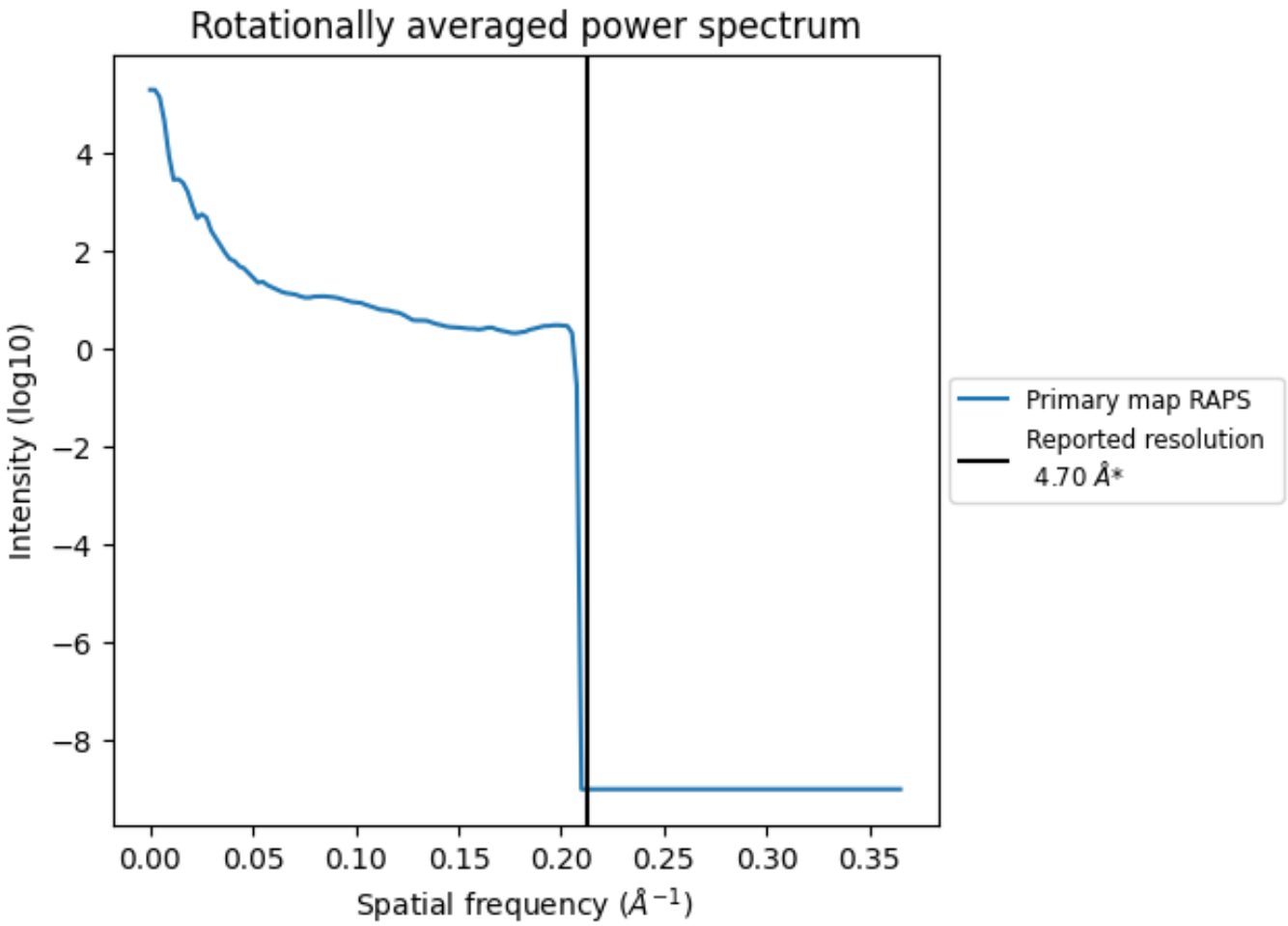
7.2 Volume estimate (i)



The volume at the recommended contour level is 836 nm^3; this corresponds to an approximate mass of 755 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.213 Å^{-1}

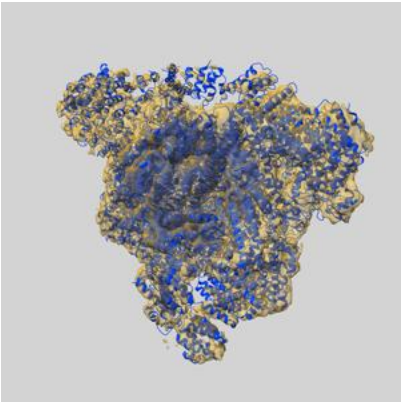
8 Fourier-Shell correlation (i)

This section was not generated. No FSC curve or half-maps provided.

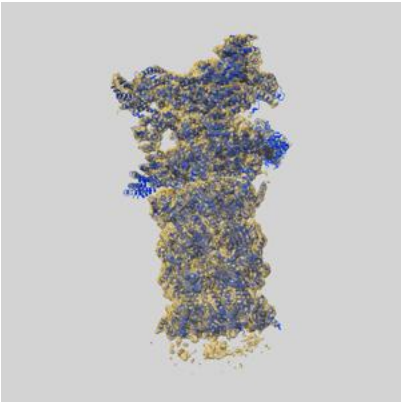
9 Map-model fit (i)

This section contains information regarding the fit between EMDB map EMD-14209 and PDB model 7QY7. Per-residue inclusion information can be found in section 3 on page 12.

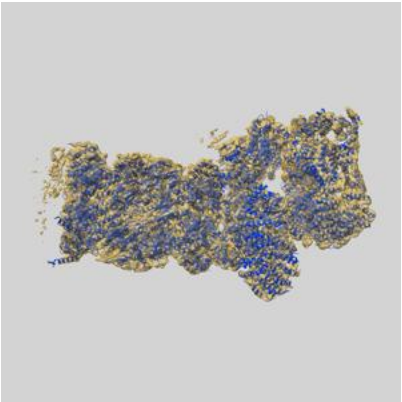
9.1 Map-model overlay (i)



X



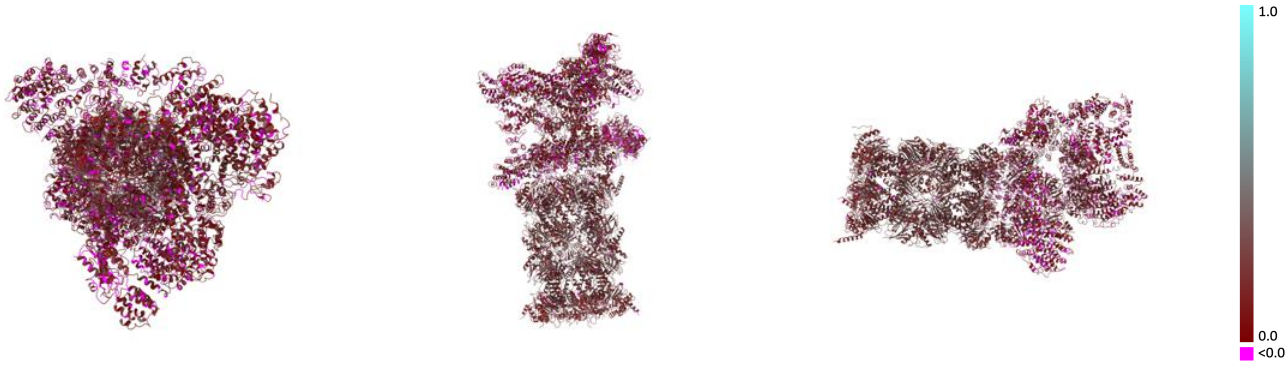
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0315 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

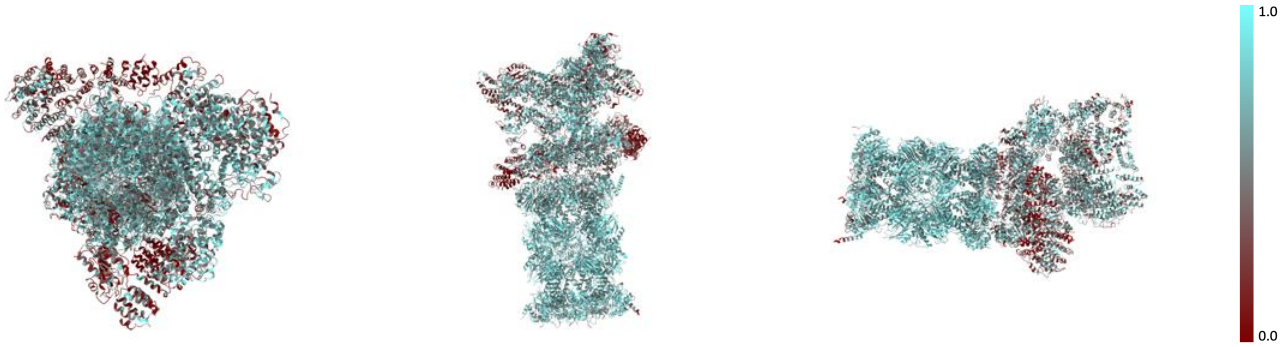
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

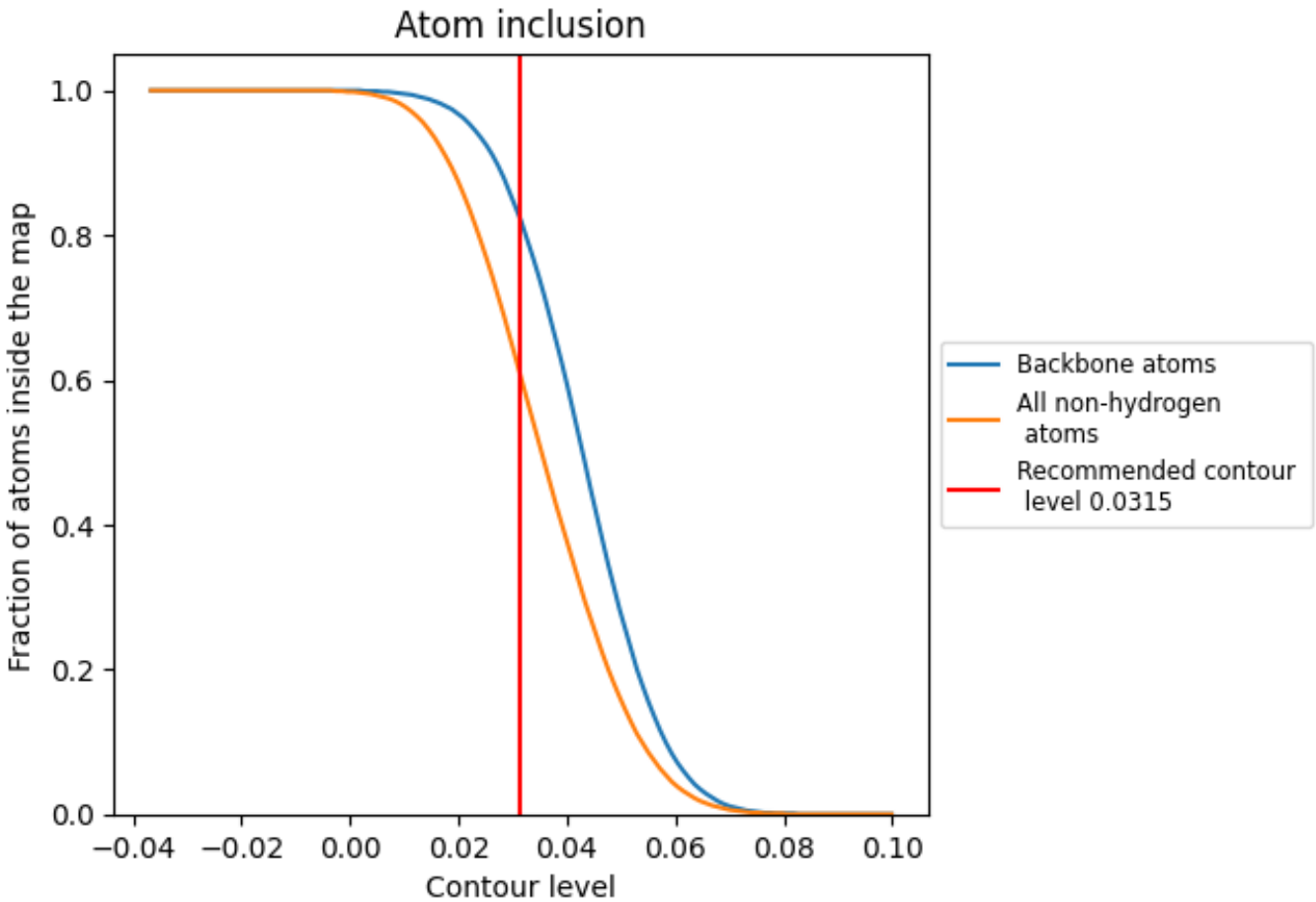
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.0315).

9.4 Atom inclusion (i)



At the recommended contour level, 82% of all backbone atoms, 60% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary (i)

The table lists the average atom inclusion at the recommended contour level (0.0315) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6050	0.1930
A	0.5000	0.1350
B	0.5440	0.1790
C	0.5910	0.1820
D	0.5840	0.1730
E	0.5050	0.1660
F	0.3830	0.1110
G	0.6800	0.2080
H	0.7010	0.2230
I	0.6480	0.2160
J	0.7250	0.2430
K	0.7030	0.2340
L	0.7270	0.2330
M	0.6920	0.2100
N	0.7770	0.2590
O	0.7650	0.2670
P	0.7330	0.2540
Q	0.7820	0.2680
R	0.8130	0.2830
S	0.7710	0.2790
T	0.7900	0.2730
U	0.6140	0.1540
V	0.4960	0.1370
W	0.3670	0.1230
X	0.5550	0.1560
Y	0.6660	0.1610
Z	0.5620	0.1470
a	0.4960	0.1340
b	0.3020	0.1100
c	0.5870	0.1650
d	0.4570	0.1350
e	0.3300	0.0690
f	0.2640	0.1140
g	0.6730	0.2300
h	0.6530	0.2190

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Chain	Atom inclusion	Q-score
i	0.6310	0.2150
j	0.6730	0.2230
k	0.6740	0.2290
l	0.7260	0.2420
m	0.7070	0.2320
n	0.7800	0.2620
o	0.7710	0.2720
p	0.7530	0.2720
q	0.7620	0.2770
r	0.7820	0.2610
s	0.7810	0.2770
t	0.7820	0.2750