



Full wwPDB EM Validation Report ⓘ

Jun 29, 2025 – 08:17 am BST

PDB ID : 7QXX / pdb_00007qxx
EMDB ID : EMD-14205
Title : Proteasome-ZFAND5 Complex Z+E state
Authors : Zhu, Y.; Lu, Y.
Deposited on : 2022-01-27
Resolution : 4.40 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 ⓘ symbol.

The types of validation reports are described at

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

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

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

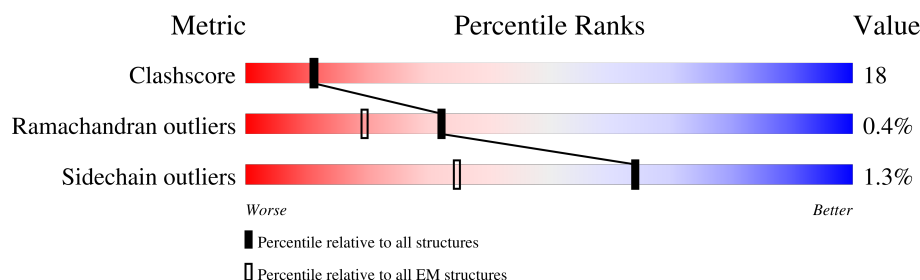
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 4.40 Å.

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



Metric	Whole archive (#Entries)	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 $\leq 5\%$. 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	U	953	18% 57% 27% • 15%
2	V	533	32% 58% 35% • 5%
3	W	456	36% 42% 19% 39%
4	X	422	6% 18% 5% 77%
5	Y	389	11% 61% 35% • •
6	Z	324	29% 52% 32% • • 12%
7	a	376	68% 69% 30% •
8	b	377	47% 34% 17% 49%

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Mol	Chain	Length	Quality of chain
9	c	309	
10	d	349	
11	e	70	
12	f	908	
13	A	433	
14	B	429	
15	C	389	
16	D	418	
17	E	403	
18	F	439	
19	G	245	
19	g	245	
20	H	233	
20	h	233	
21	I	260	
21	i	260	
22	J	247	
22	j	247	
23	K	240	
23	k	240	
24	L	268	
24	l	268	
25	M	254	
25	m	254	
26	N	238	

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Mol	Chain	Length	Quality of chain
26	n	238	
27	O	276	
27	o	276	
28	P	204	
28	p	204	
29	Q	201	
29	q	201	
30	R	262	
30	r	262	
31	S	240	
31	s	240	
32	T	263	
32	t	263	

2 Entry composition

There are 36 unique types of molecules in this entry. The entry contains 100121 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 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	U	812	Total	C	N	O	S	0	0
			6328	4020	1075	1189	44		

- Molecule 2 is a protein called 26S proteasome non-ATPase regulatory subunit 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	V	508	Total	C	N	O	S	0	0
			3994	2530	712	738	14		

- Molecule 3 is a protein called 26S proteasome non-ATPase regulatory subunit 12.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	W	279	Total	C	N	O	S	0	0
			2310	1473	394	430	13		

- Molecule 4 is a protein called 26S proteasome non-ATPase regulatory subunit 11.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	X	99	Total	C	N	O	S	0	0
			797	511	132	152	2		

- Molecule 5 is a protein called 26S proteasome non-ATPase regulatory subunit 6.

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

- Molecule 6 is a protein called 26S proteasome non-ATPase regulatory subunit 7.

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

- Molecule 7 is a protein called 26S proteasome non-ATPase regulatory subunit 13.

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

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

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

- Molecule 9 is a protein called 26S proteasome non-ATPase regulatory subunit 14.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	c	287	Total	C	N	O	S	0	0
			2260	1430	389	422	19		

- Molecule 10 is a protein called 26S proteasome non-ATPase regulatory subunit 8.

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

- Molecule 11 is a protein called 26S proteasome complex subunit SEM1.

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

- Molecule 12 is a protein called 26S proteasome non-ATPase regulatory subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	f	889	Total	C	N	O	S	0	0
			6866	4315	1174	1331	46		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
13	A	394	Total	C	N	O	S	0	0
			3096	1951	543	584	18		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
14	B	384	Total	C	N	O	S	0	0
			3018	1901	515	587	15		

- Molecule 15 is a protein called 26S proteasome regulatory subunit 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	C	363	Total	C	N	O	S	0	0
			2864	1808	515	525	16		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
16	D	380	Total	C	N	O	S	0	0
			3039	1923	524	579	13		

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
18	F	376	Total	C	N	O	S	0	0
			2858	1802	496	545	15		

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
22	J	239	Total	C	N	O	S	0	0
			1713	1062	311	335	5		
22	j	239	Total	C	N	O	S	0	0
			1704	1056	308	335	5		

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

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

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

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

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

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

- 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
			1591	1013	265	294	19		
28	p	204	Total	C	N	O	S	0	0
			1591	1013	265	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
31	s	213	Total	C	N	O	S	0	0
			1644	1039	282	313	10		

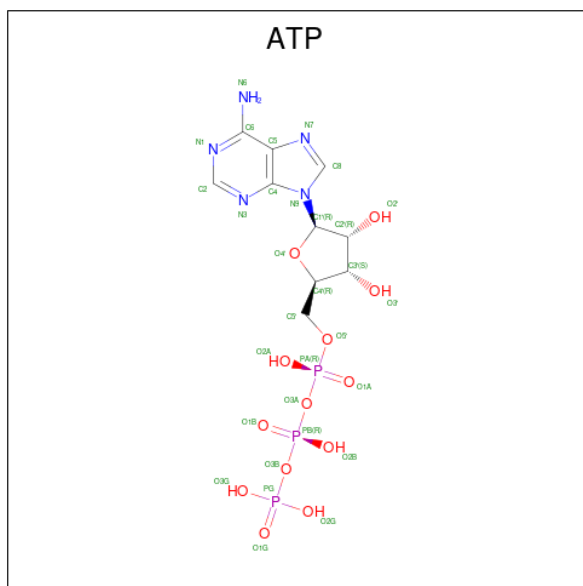
- Molecule 32 is a protein called Proteasome subunit beta type-4.

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

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

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

- 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
34	A	1	Total	C	N	O	P	0
			31	10	5	13	3	
34	B	1	Total	C	N	O	P	0
			31	10	5	13	3	

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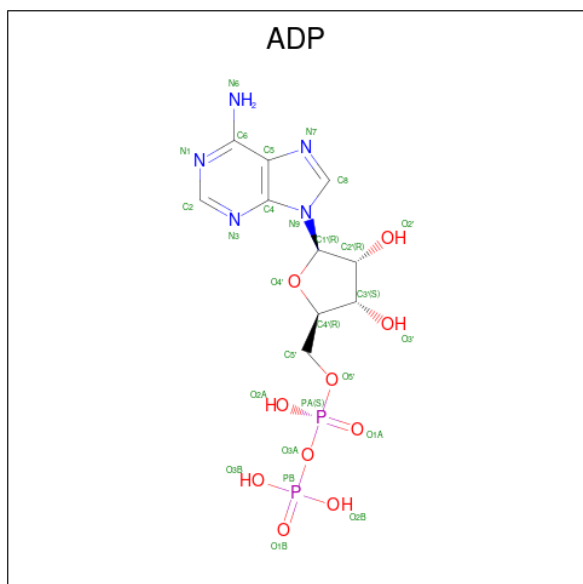
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Mol	Chain	Residues	Atoms					AltConf
34	D	1	Total	C	N	O	P	0
			31	10	5	13	3	
34	E	1	Total	C	N	O	P	0
			31	10	5	13	3	

- Molecule 35 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
35	A	1	Total	Mg	0
			1	1	
35	B	1	Total	Mg	0
			1	1	
35	D	1	Total	Mg	0
			1	1	
35	E	1	Total	Mg	0
			1	1	
35	F	1	Total	Mg	0
			1	1	

- Molecule 36 is ADENOSINE-5'-DIPHOSPHATE (CCD ID: ADP) (formula: C₁₀H₁₅N₅O₁₀P₂) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
36	C	1	Total	C	N	O	P	0
			27	10	5	10	2	

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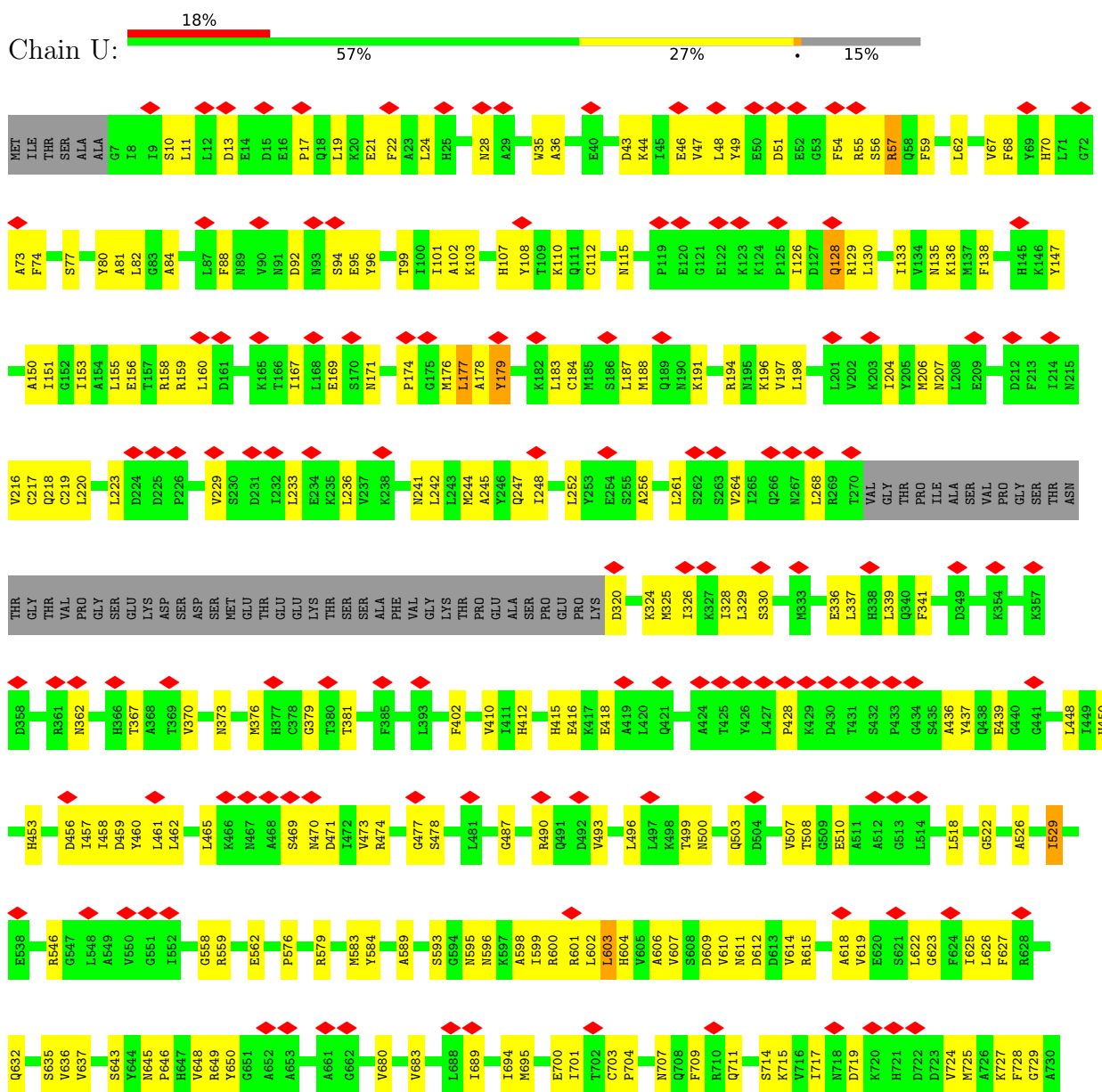
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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
36	F	1	27	10	5	10	2	0

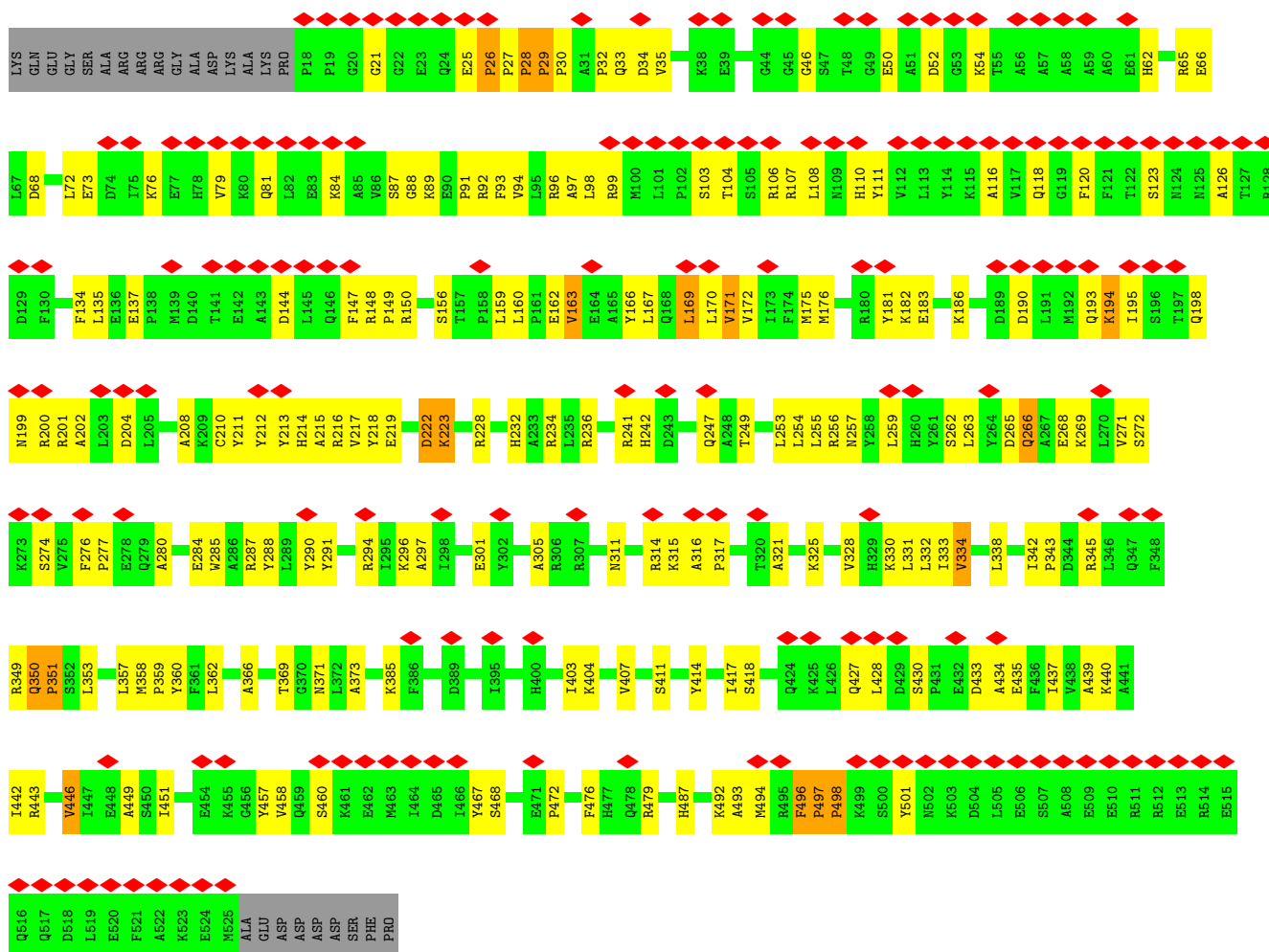
3 Residue-property plots [i](#)

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.

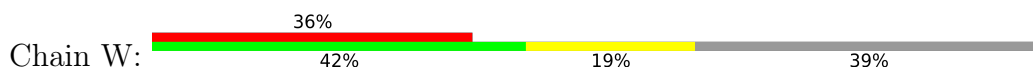
- Molecule 1: 26S proteasome non-ATPase regulatory subunit 1

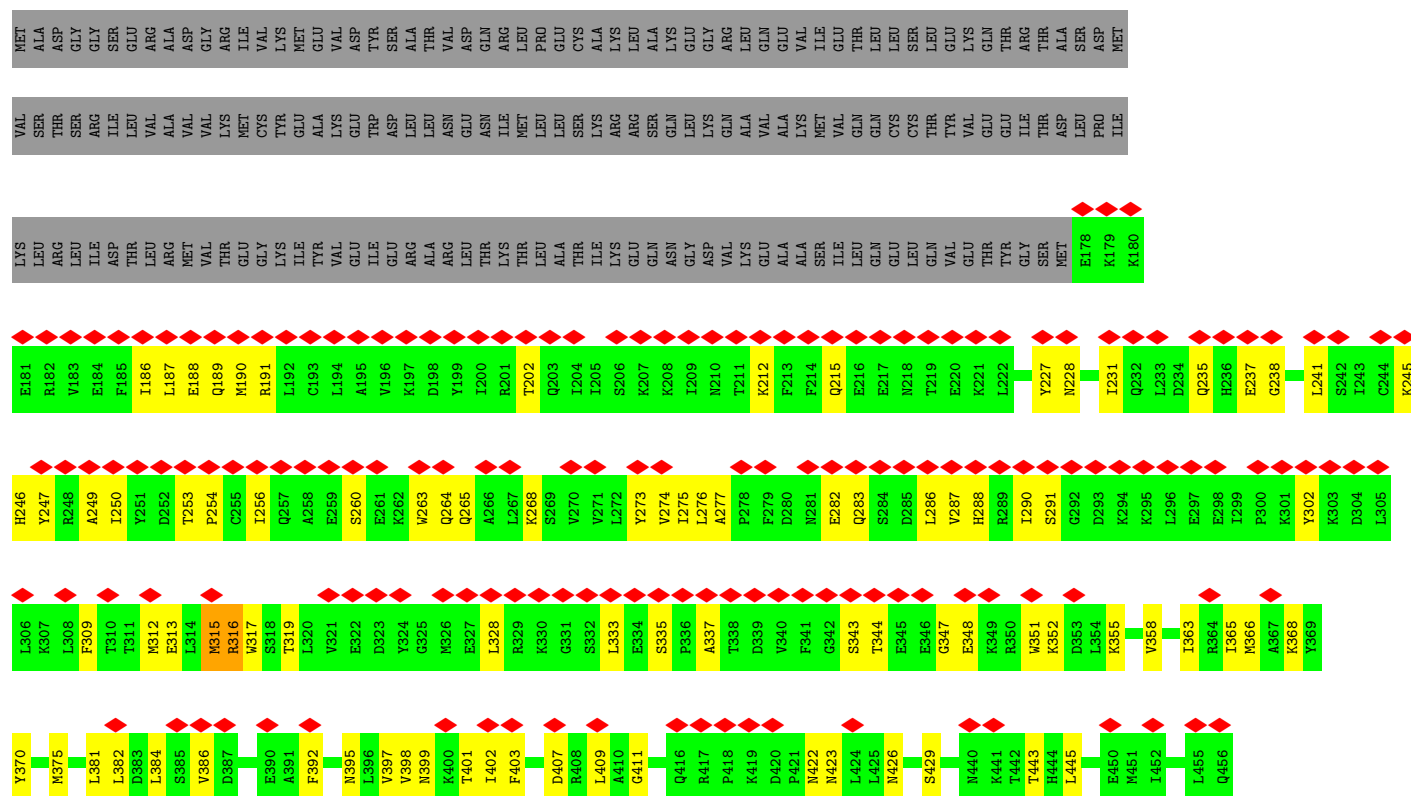


- Molecule 2: 26S proteasome non-ATPase regulatory subunit 3

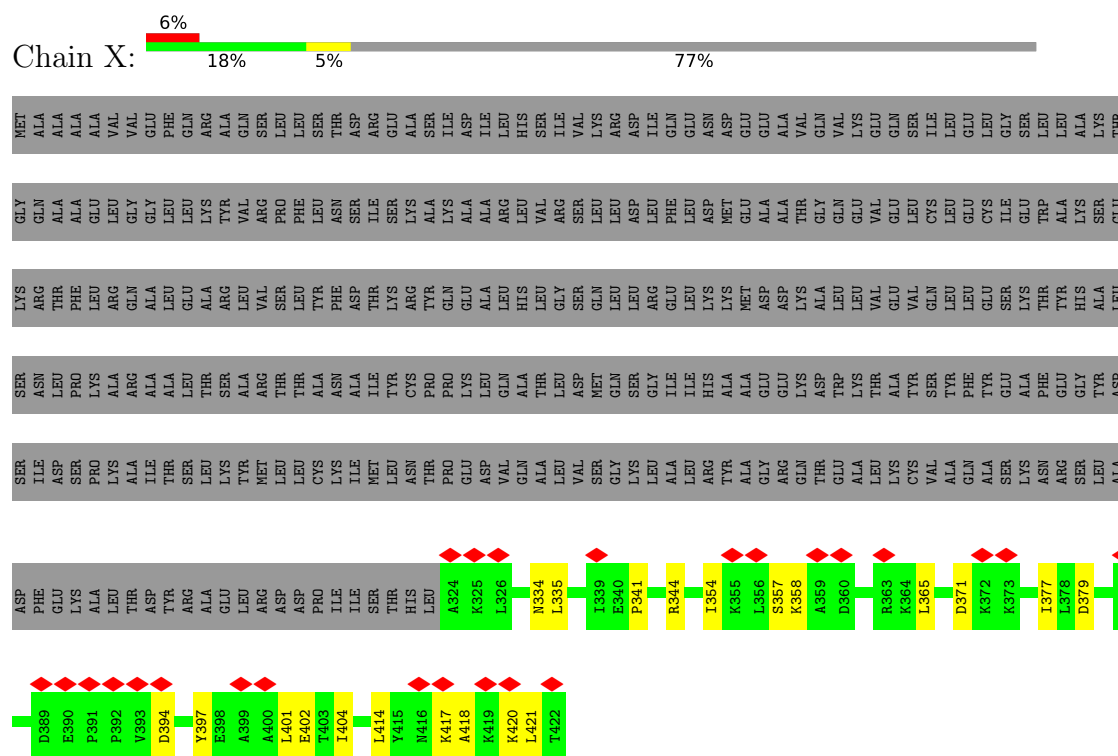


- Molecule 3: 26S proteasome non-ATPase regulatory subunit 12



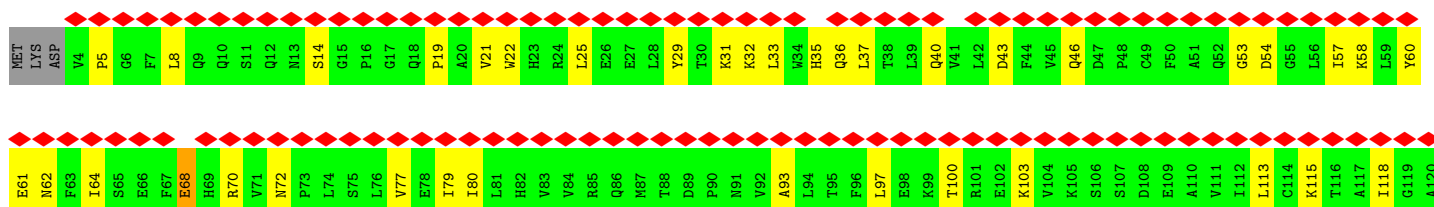


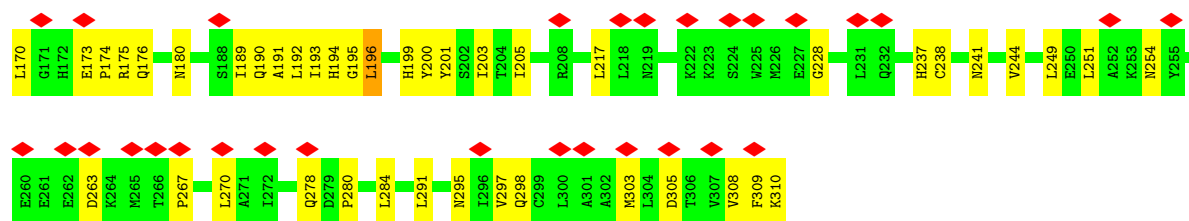
• Molecule 4: 26S proteasome non-ATPase regulatory subunit 11



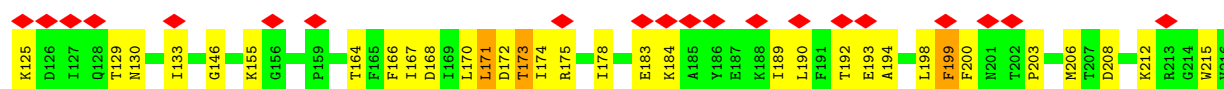
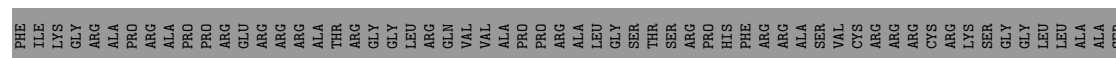
• Molecule 5: 26S proteasome non-ATPase regulatory subunit 6



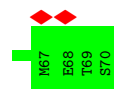
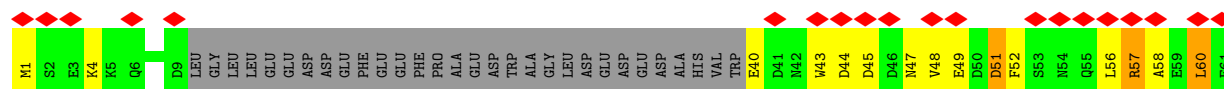
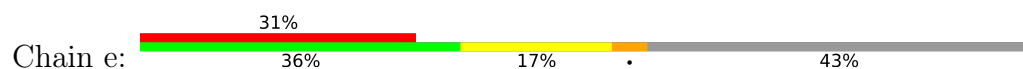




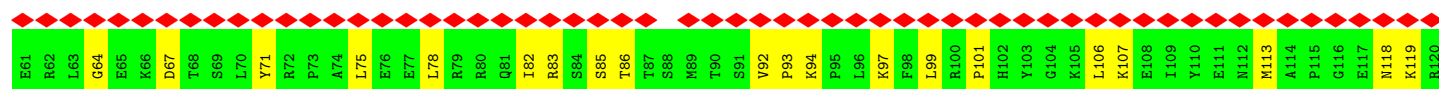
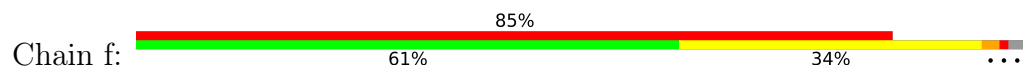
• Molecule 10: 26S proteasome non-ATPase regulatory subunit 8

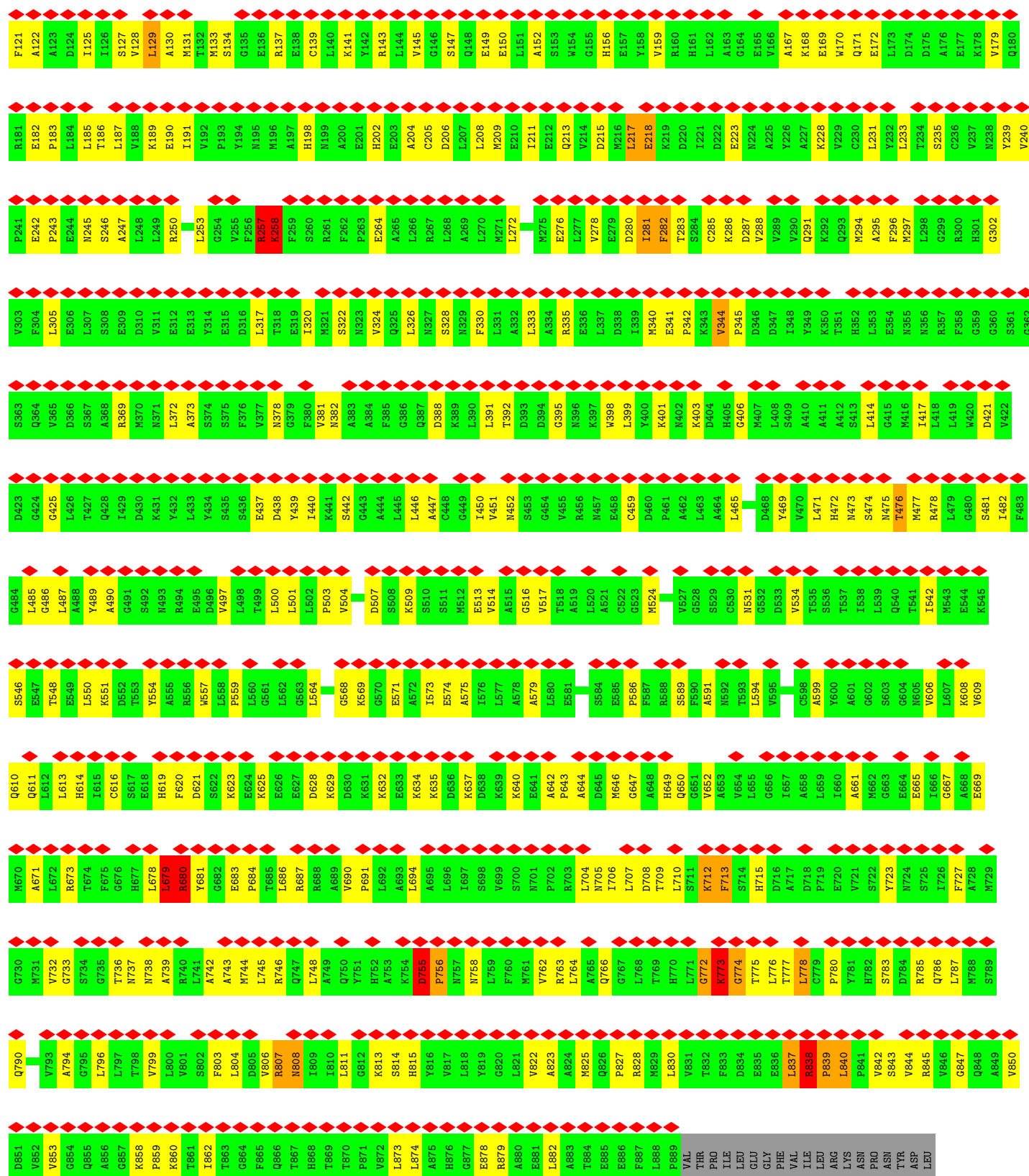


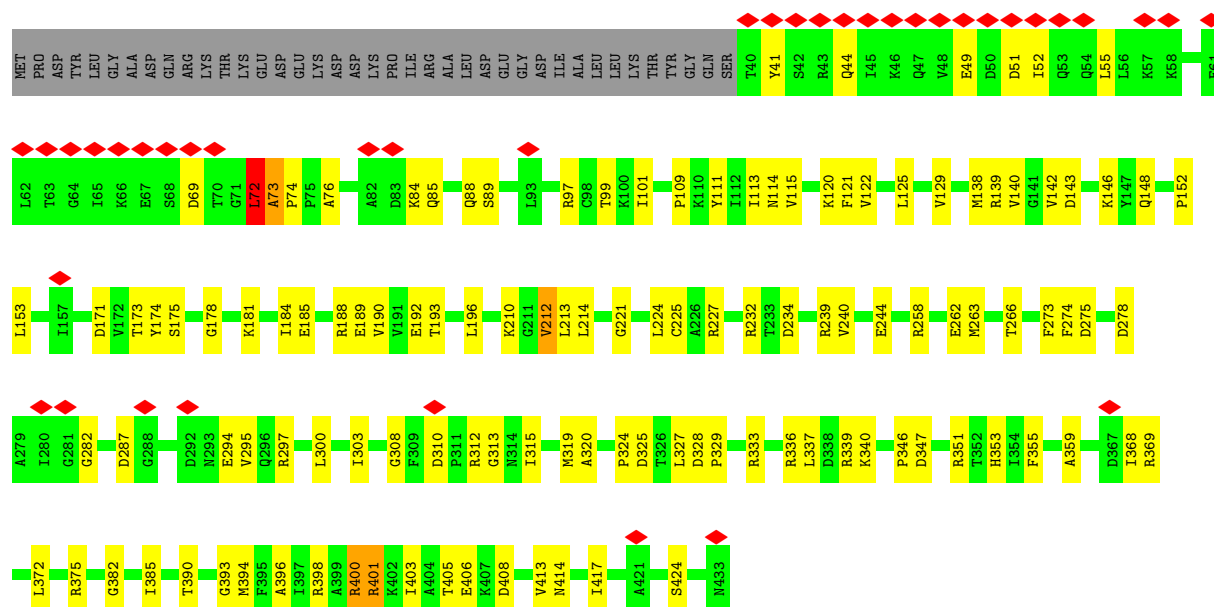
• Molecule 11: 26S proteasome complex subunit SEM1



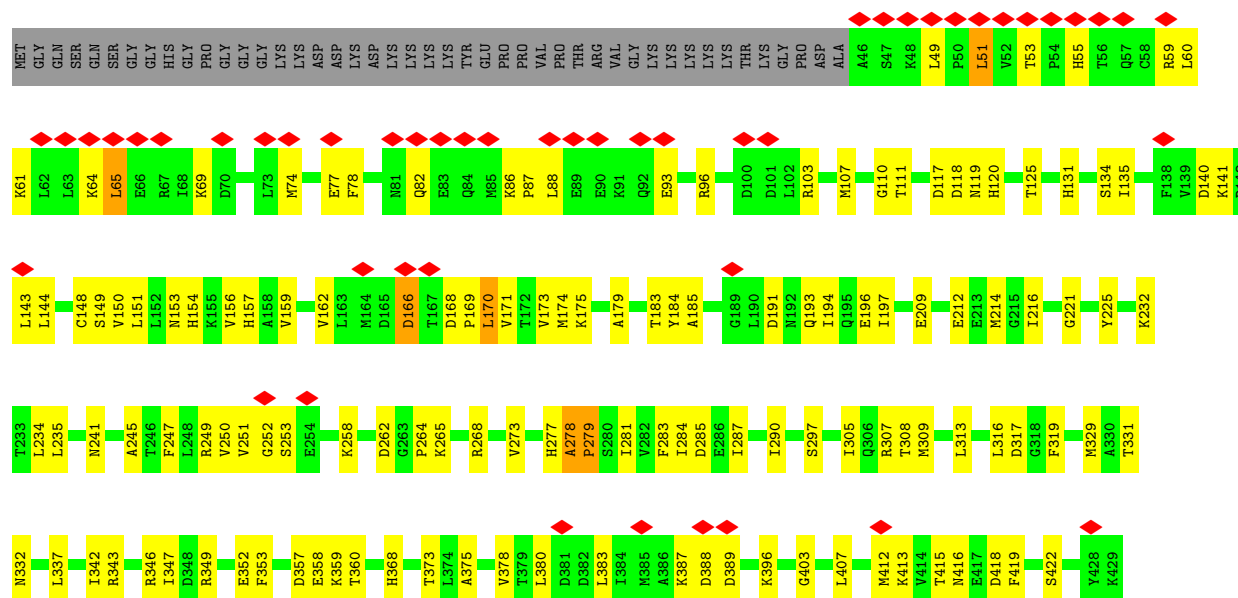
• Molecule 12: 26S proteasome non-ATPase regulatory subunit 2



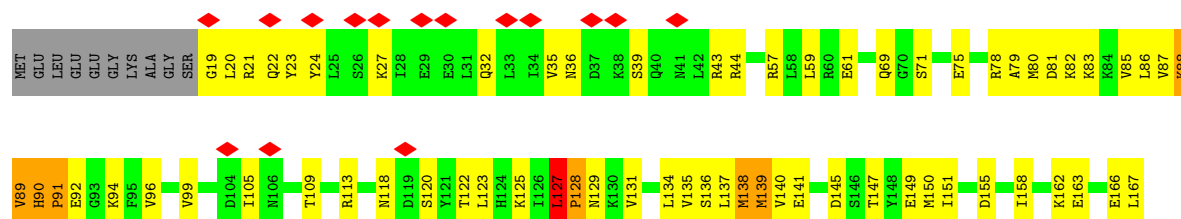


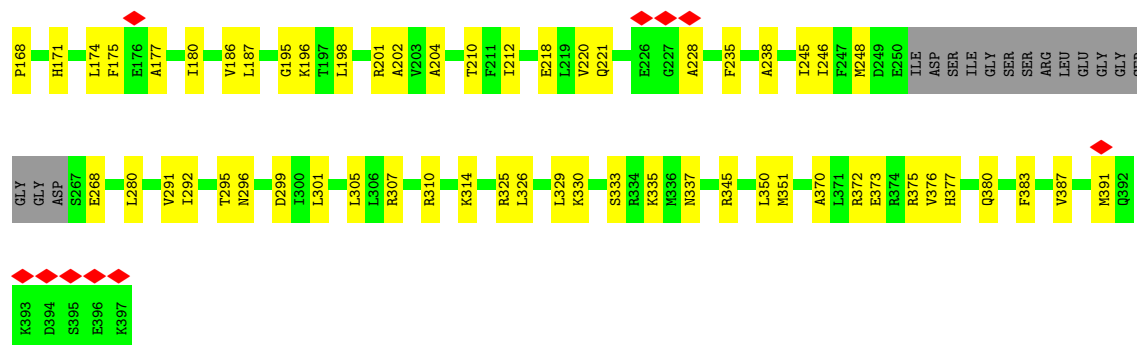


• Molecule 14: 26S proteasome regulatory subunit 4

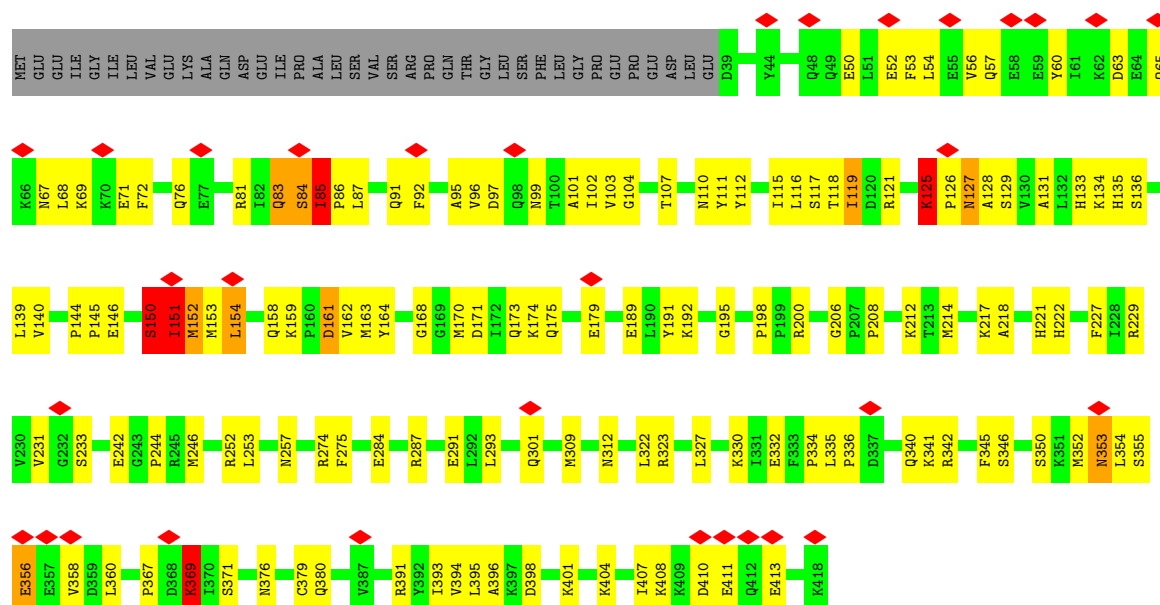


• Molecule 15: 26S proteasome regulatory subunit 8

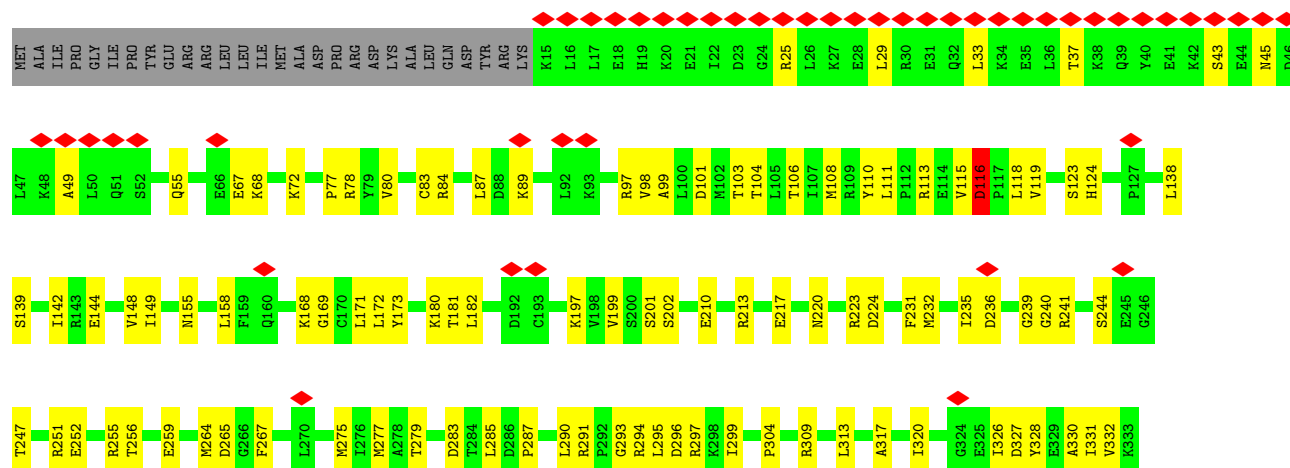


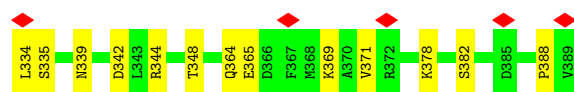


• Molecule 16: 26S protease regulatory subunit 6B

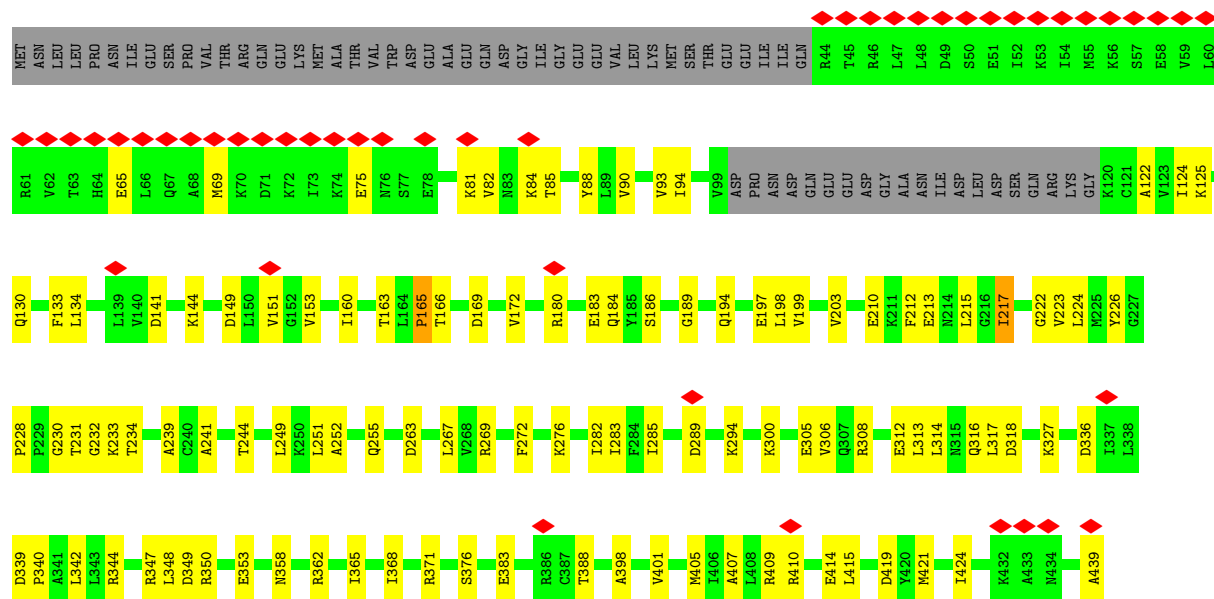


• Molecule 17: 26S proteasome regulatory subunit 10B

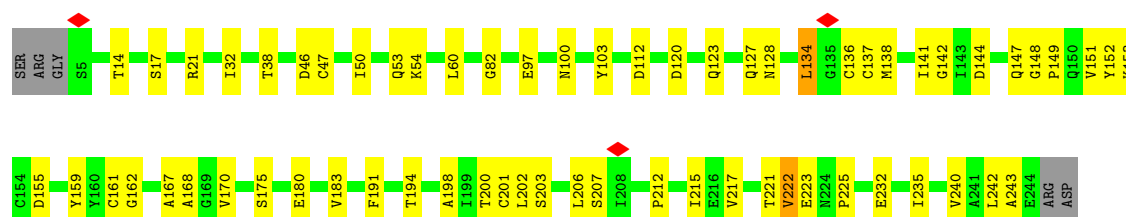




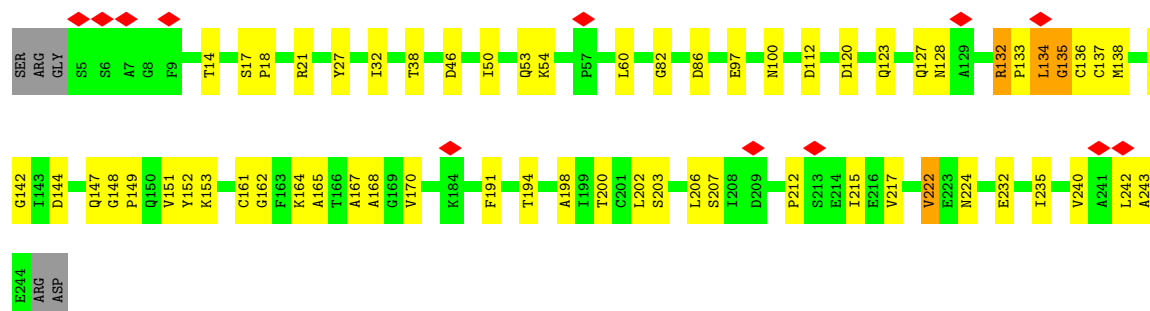
• Molecule 18: 26S protease regulatory subunit 6A



• Molecule 19: Proteasome subunit alpha type-6

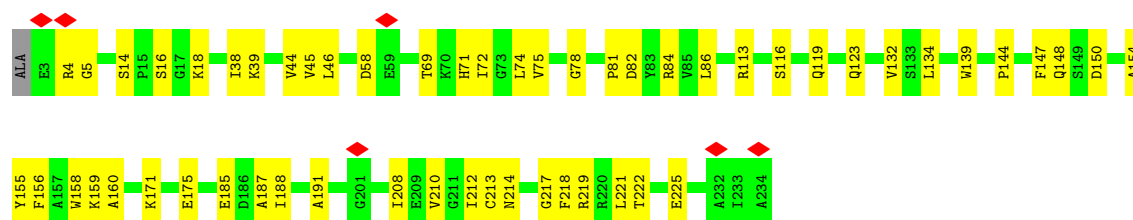


• Molecule 19: Proteasome subunit alpha type-6



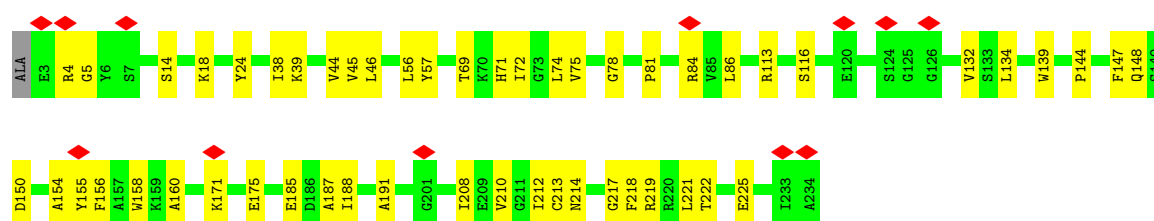
- Molecule 20: Proteasome subunit alpha type-2

Chain H:  76% 24%



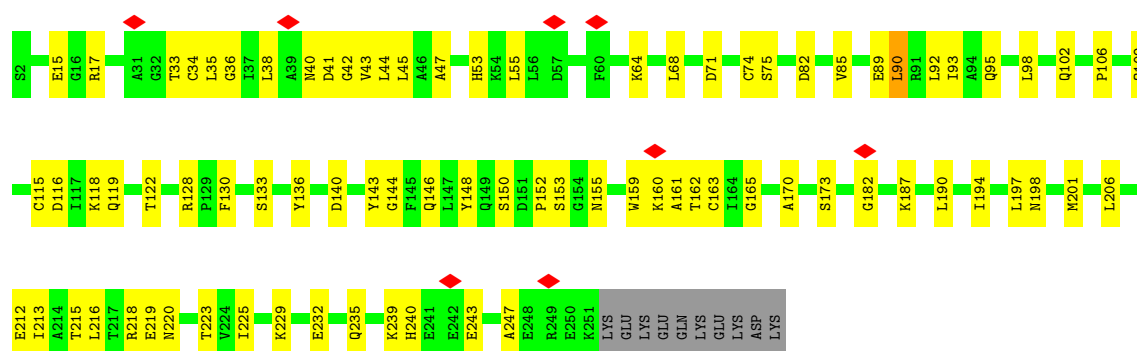
- Molecule 20: Proteasome subunit alpha type-2

Chain h:  5% 77% 22%



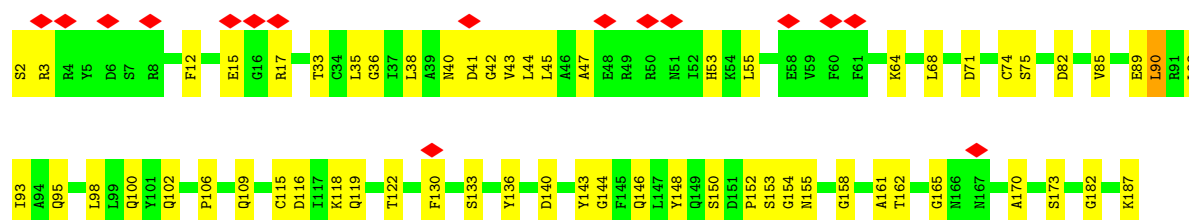
- Molecule 21: Proteasome subunit alpha type-4

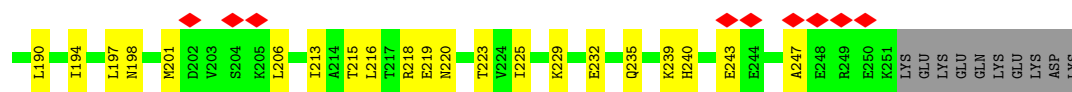
Chain I:  65% 31%



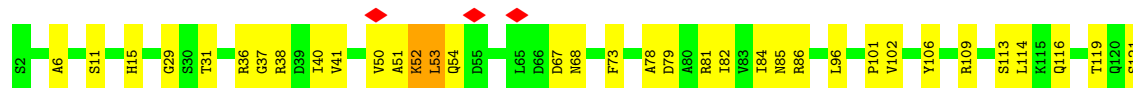
- Molecule 21: Proteasome subunit alpha type-4

Chain i:  10% 65% 31%

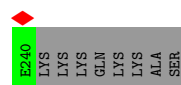
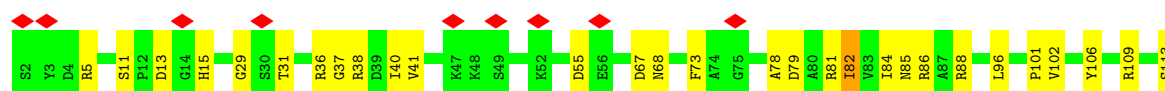




- Molecule 22: Proteasome subunit alpha type-7



- Molecule 22: Proteasome subunit alpha type-7

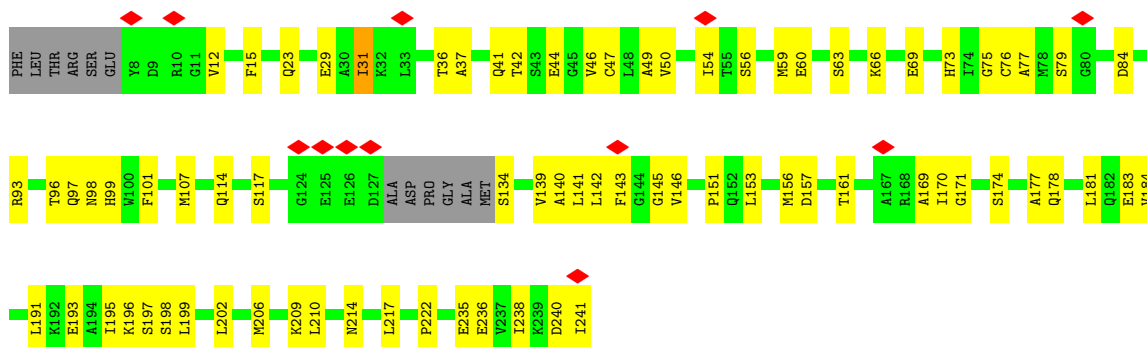


- Molecule 23: Proteasome subunit alpha type-5



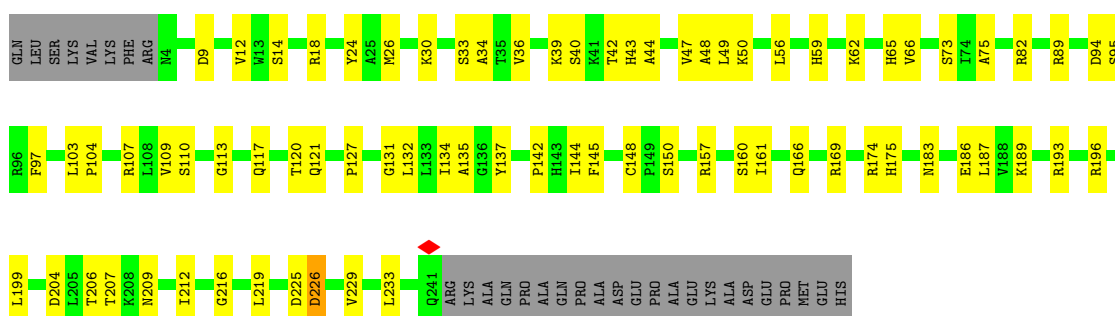
- Molecule 23: Proteasome subunit alpha type-5





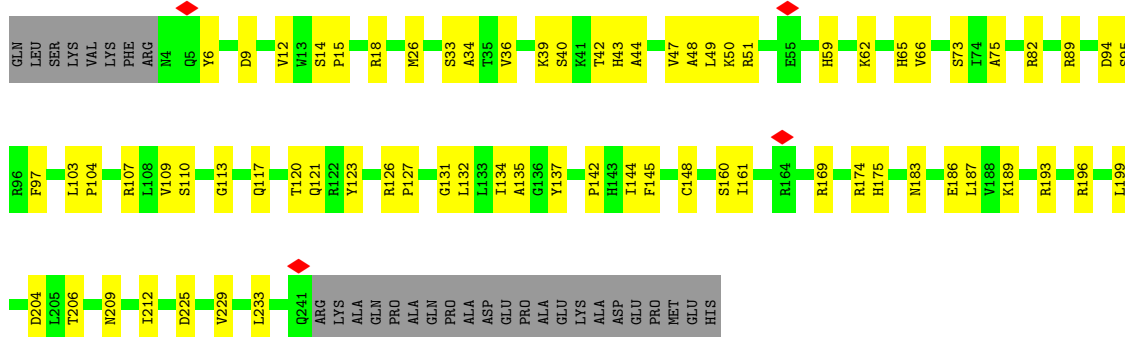
- Molecule 24: Isoform Long of Proteasome subunit alpha type-1

Chain L: 60% 28% 11%



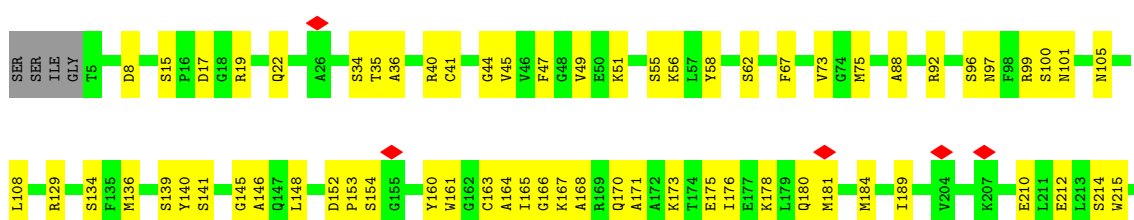
- Molecule 24: Isoform Long of Proteasome subunit alpha type-1

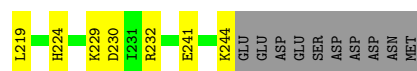
Chain L: 62% 26% 11%



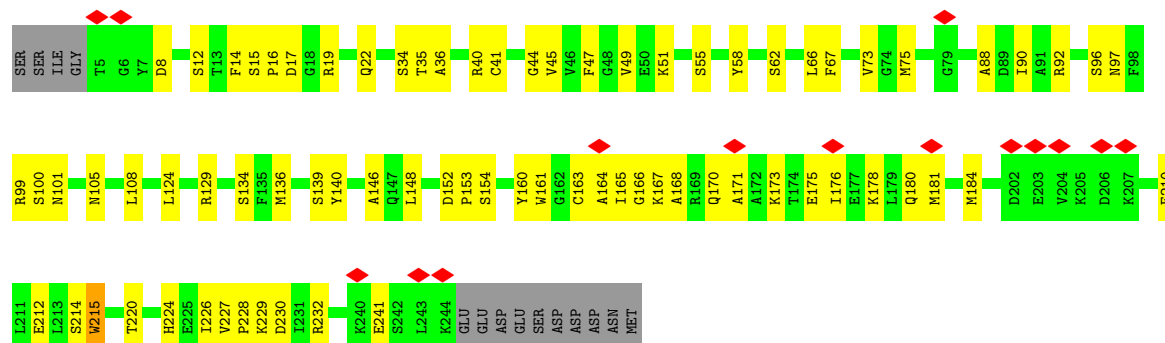
- Molecule 25: Proteasome subunit alpha type-3

Chain M: 66% 28% 6%

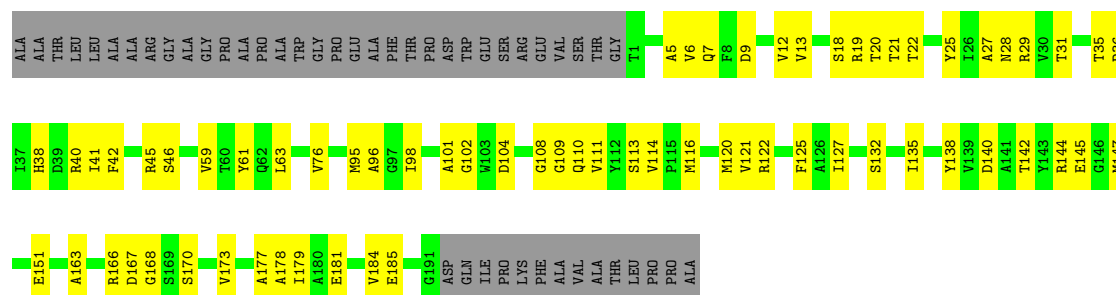




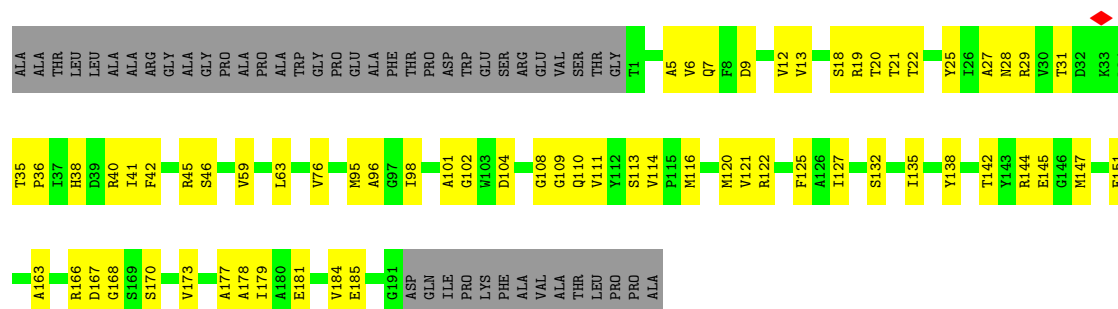
• Molecule 25: Proteasome subunit alpha type-3



• Molecule 26: Proteasome subunit beta type-6

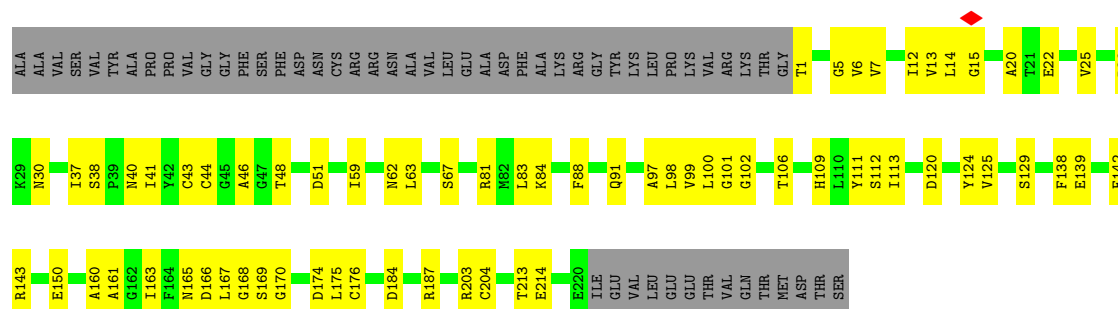


• Molecule 26: Proteasome subunit beta type-6



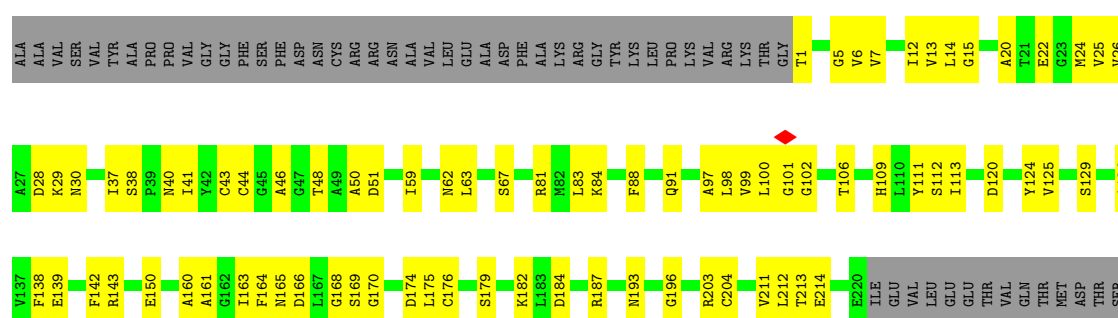
• Molecule 27: Proteasome subunit beta type-7





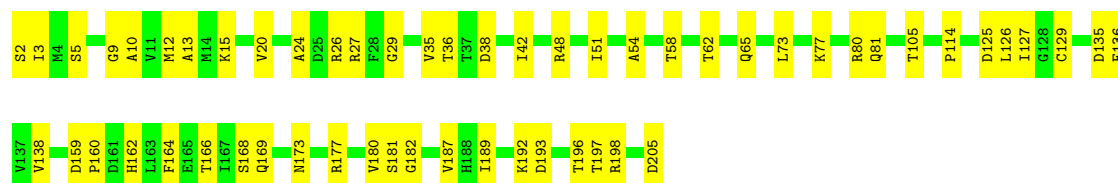
• Molecule 27: Proteasome subunit beta type-7

Chain o: 51% 29% 20%



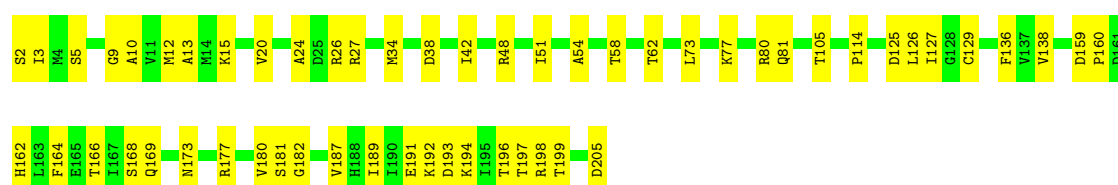
• Molecule 28: Proteasome subunit beta type-3

Chain P: 73% 27%



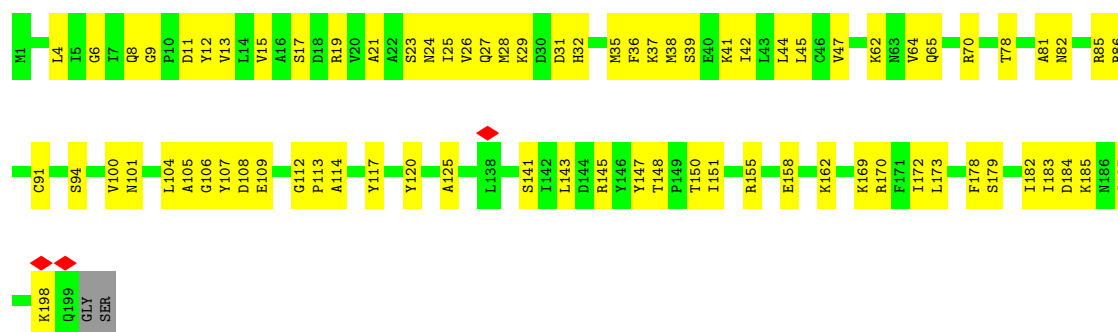
• Molecule 28: Proteasome subunit beta type-3

Chain p: 73% 27%

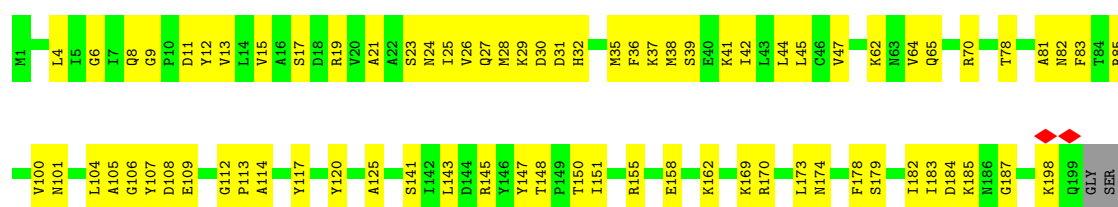


• Molecule 29: Proteasome subunit beta type-2

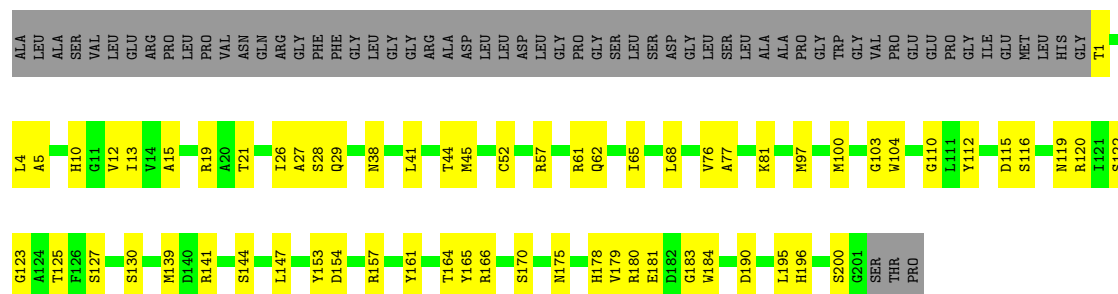
Chain Q: 61% 38%



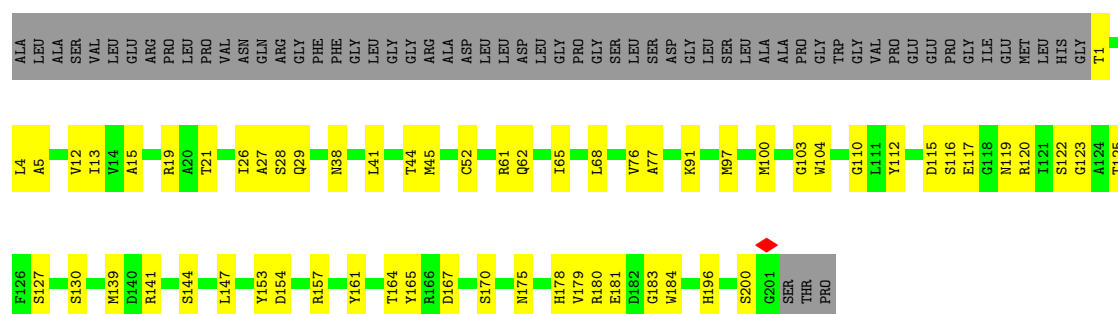
- Molecule 29: Proteasome subunit beta type-2



- Molecule 30: Proteasome subunit beta type-5

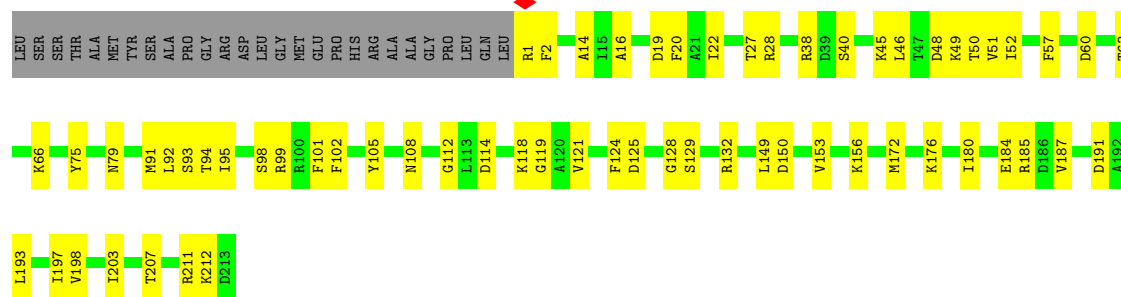


- Molecule 30: Proteasome subunit beta type-5



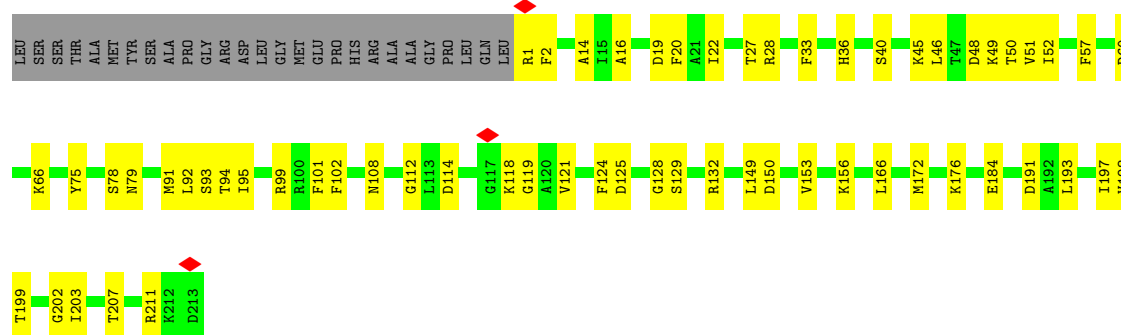
- Molecule 31: Proteasome subunit beta type-1

Chain S: 



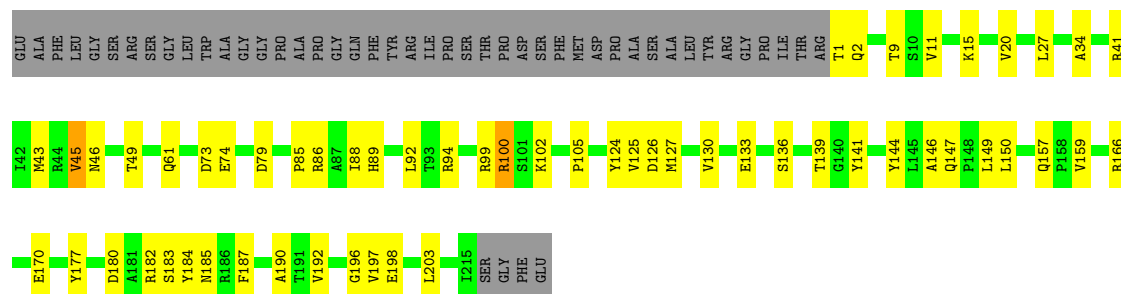
• Molecule 31: Proteasome subunit beta type-1

Chain s: 



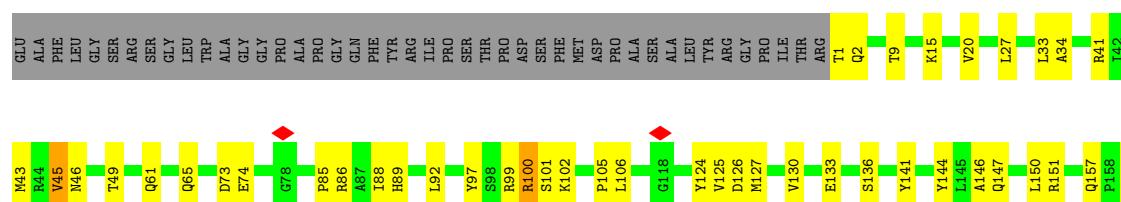
• Molecule 32: Proteasome subunit beta type-4

Chain T: 



• Molecule 32: Proteasome subunit beta type-4

Chain t: 





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	28928	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 ($e^-/\text{\AA}^2$)	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	0.114	Depositor
Minimum map value	-0.040	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.007	Depositor
Recommended contour level	0.0324	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 ⓘ

5.1 Standard geometry ⓘ

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	U	0.37	0/6443	0.69	2/8722 (0.0%)
2	V	0.43	0/4072	0.85	10/5510 (0.2%)
3	W	0.34	0/2349	0.70	0/3157
4	X	0.39	0/807	0.69	0/1084
5	Y	0.42	0/3173	0.74	2/4273 (0.0%)
6	Z	0.35	0/2324	0.77	4/3150 (0.1%)
7	a	0.30	0/3053	0.65	3/4133 (0.1%)
8	b	0.28	0/1478	0.69	2/2001 (0.1%)
9	c	0.41	0/2302	0.79	2/3110 (0.1%)
10	d	0.38	0/2162	0.76	2/2919 (0.1%)
11	e	0.41	0/338	1.03	1/450 (0.2%)
12	f	0.32	0/6980	0.86	20/9433 (0.2%)
13	A	0.46	0/3148	0.78	4/4250 (0.1%)
14	B	0.45	0/3061	0.75	3/4129 (0.1%)
15	C	0.43	0/2902	0.75	2/3904 (0.1%)
16	D	0.46	0/3089	0.84	6/4168 (0.1%)
17	E	0.44	0/2904	0.75	4/3924 (0.1%)
18	F	0.46	0/2896	0.71	0/3912
19	G	0.45	0/1859	0.63	0/2523
19	g	0.45	0/1859	0.63	0/2523
20	H	0.45	0/1743	0.62	0/2372
20	h	0.45	0/1743	0.62	0/2372
21	I	0.45	0/1942	0.67	2/2628 (0.1%)
21	i	0.46	0/1942	0.67	2/2628 (0.1%)
22	J	0.42	0/1737	0.64	0/2369
22	j	0.42	0/1728	0.65	0/2358
23	K	0.46	0/1747	0.63	0/2364
23	k	0.46	0/1747	0.63	0/2364
24	L	0.47	0/1885	0.70	1/2552 (0.0%)
24	l	0.47	0/1885	0.71	2/2552 (0.1%)
25	M	0.45	0/1891	0.66	0/2552
25	m	0.45	0/1891	0.66	0/2552

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
26	N	0.44	0/1454	0.64	0/1967
26	n	0.44	0/1454	0.64	0/1967
27	O	0.46	0/1670	0.63	0/2265
27	o	0.46	0/1670	0.64	0/2265
28	P	0.46	0/1620	0.61	0/2184
28	p	0.47	0/1620	0.61	0/2184
29	Q	0.52	0/1603	0.67	0/2174
29	q	0.52	0/1603	0.67	0/2174
30	R	0.51	0/1579	0.64	0/2134
30	r	0.51	0/1579	0.64	0/2134
31	S	0.49	0/1671	0.68	2/2253 (0.1%)
31	s	0.49	0/1674	0.68	2/2257 (0.1%)
32	T	0.48	0/1700	0.66	1/2305 (0.0%)
32	t	0.48	0/1700	0.67	1/2305 (0.0%)
All	All	0.43	0/101677	0.71	80/137506 (0.1%)

There are no bond length outliers.

All (80) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	f	755	ASP	CA-C-N	14.57	138.06	119.84
12	f	755	ASP	C-N-CA	14.57	138.06	119.84
12	f	258	LYS	N-CA-C	-10.96	99.34	111.28
6	Z	243	GLN	N-CA-C	10.63	117.50	108.78
16	D	126	PRO	CA-C-N	10.13	140.89	121.54
16	D	126	PRO	C-N-CA	10.13	140.89	121.54
6	Z	145	HIS	N-CA-C	10.10	121.57	108.34
16	D	125	LYS	N-CA-C	9.75	131.37	109.81
12	f	755	ASP	N-CA-C	-9.57	99.15	112.17
12	f	680	ARG	N-CA-C	-9.33	90.93	110.80
15	C	127	LEU	CA-C-N	9.32	131.48	119.84
15	C	127	LEU	C-N-CA	9.32	131.48	119.84
16	D	150	SER	N-CA-C	-9.13	96.00	109.15
13	A	310	ASP	CA-C-N	9.08	131.19	119.84
13	A	310	ASP	C-N-CA	9.08	131.19	119.84
1	U	473	VAL	N-CA-C	-8.88	104.08	112.96
12	f	838	ARG	CA-C-N	8.36	130.29	119.84
12	f	838	ARG	C-N-CA	8.36	130.29	119.84
14	B	279	PRO	N-CA-C	-8.12	95.75	112.47
11	e	60	LEU	N-CA-C	-7.93	104.76	114.75
12	f	808	ASN	N-CA-C	7.69	119.38	108.00
16	D	126	PRO	N-CA-C	-7.52	96.98	112.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	V	266	GLN	N-CA-C	-7.43	104.06	113.43
13	A	73	ALA	CA-C-N	7.21	127.80	120.38
13	A	73	ALA	C-N-CA	7.21	127.80	120.38
12	f	774	GLY	N-CA-C	-7.07	106.25	115.59
12	f	713	PHE	N-CA-C	-6.77	103.90	111.28
32	T	45	VAL	N-CA-C	-6.63	102.82	110.05
32	t	45	VAL	N-CA-C	-6.61	102.84	110.05
17	E	116	ASP	CA-C-N	-6.54	113.07	119.87
17	E	116	ASP	C-N-CA	-6.54	113.07	119.87
14	B	209	GLU	N-CA-C	-6.50	105.97	114.04
16	D	369	LYS	N-CA-C	6.50	124.66	110.80
9	c	48	GLY	CA-C-N	6.49	124.33	120.24
9	c	48	GLY	C-N-CA	6.49	124.33	120.24
1	U	179	TYR	N-CA-C	-6.46	105.22	113.23
6	Z	108	ILE	N-CA-C	-6.37	104.12	110.62
12	f	257	ARG	N-CA-C	-6.16	105.92	113.50
31	s	101	PHE	CA-C-N	-6.02	116.36	122.74
31	s	101	PHE	C-N-CA	-6.02	116.36	122.74
31	S	101	PHE	CA-C-N	-5.99	116.39	122.74
31	S	101	PHE	C-N-CA	-5.99	116.39	122.74
2	V	29	PRO	N-CA-C	5.94	117.95	110.70
2	V	497	PRO	CA-C-N	5.93	127.25	119.84
2	V	497	PRO	C-N-CA	5.93	127.25	119.84
2	V	28	PRO	CA-C-N	5.92	126.48	120.38
2	V	28	PRO	C-N-CA	5.92	126.48	120.38
21	I	219	GLU	CA-C-N	5.66	129.31	120.82
21	I	219	GLU	C-N-CA	5.66	129.31	120.82
21	i	219	GLU	CA-C-N	5.64	129.28	120.82
21	i	219	GLU	C-N-CA	5.64	129.28	120.82
24	L	225	ASP	N-CA-C	5.61	117.56	108.41
5	Y	362	LYS	N-CA-C	-5.59	107.70	114.75
12	f	679	LEU	N-CA-C	5.59	116.75	108.86
24	l	225	ASP	CA-C-N	5.52	132.09	121.54
24	l	225	ASP	C-N-CA	5.52	132.09	121.54
12	f	778	LEU	CA-C-N	5.51	127.85	120.58
12	f	778	LEU	C-N-CA	5.51	127.85	120.58
10	d	231	LYS	N-CA-C	5.51	121.17	113.57
6	Z	243	GLN	CA-C-O	5.49	121.12	117.94
7	a	31	LYS	N-CA-C	-5.43	106.25	112.92
12	f	619	HIS	CA-C-N	5.34	131.74	121.54
12	f	619	HIS	C-N-CA	5.34	131.74	121.54
8	b	22	LEU	CA-C-N	5.31	126.48	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	b	22	LEU	C-N-CA	5.31	126.48	119.84
5	Y	293	ARG	N-CA-C	-5.31	105.41	111.14
2	V	446	VAL	N-CA-C	5.22	120.19	109.34
12	f	755	ASP	O-C-N	5.21	123.86	120.27
12	f	282	PHE	N-CA-C	5.18	116.82	108.32
2	V	501	TYR	CA-C-N	5.14	128.53	120.82
2	V	501	TYR	C-N-CA	5.14	128.53	120.82
17	E	240	GLY	CA-C-N	-5.14	114.57	121.71
17	E	240	GLY	C-N-CA	-5.14	114.57	121.71
12	f	50	LYS	N-CA-C	-5.14	106.96	113.43
10	d	174	ILE	N-CA-C	-5.08	107.48	113.42
2	V	26	PRO	N-CA-C	5.07	116.88	110.70
14	B	53	THR	N-CA-C	5.04	120.95	109.81
12	f	772	GLY	O-C-N	5.04	129.25	122.70
7	a	68	GLU	CA-C-N	5.03	131.15	121.54
7	a	68	GLU	C-N-CA	5.03	131.15	121.54

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	U	6328	0	6355	212	0
2	V	3994	0	3959	292	0
3	W	2310	0	2364	71	0
4	X	797	0	834	24	0
5	Y	3115	0	3120	142	0
6	Z	2281	0	2312	148	0
7	a	2995	0	3012	99	0
8	b	1458	0	1505	92	0
9	c	2260	0	2276	82	0
10	d	2116	0	2146	81	0
11	e	334	0	294	35	0
12	f	6866	0	6866	401	0
13	A	3096	0	3138	130	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
14	B	3018	0	3082	129	0
15	C	2864	0	2971	137	0
16	D	3039	0	3074	245	0
17	E	2860	0	2827	92	0
18	F	2858	0	2852	80	0
19	G	1826	0	1796	49	0
19	g	1826	0	1796	70	0
20	H	1708	0	1594	35	0
20	h	1708	0	1594	31	0
21	I	1912	0	1850	66	0
21	i	1912	0	1851	55	0
22	J	1713	0	1535	65	0
22	j	1704	0	1517	49	0
23	K	1722	0	1673	52	0
23	k	1722	0	1673	49	0
24	L	1850	0	1822	56	0
24	l	1850	0	1822	48	0
25	M	1856	0	1814	53	0
25	m	1856	0	1814	90	0
26	N	1430	0	1398	46	0
26	n	1430	0	1398	42	0
27	O	1643	0	1644	45	0
27	o	1643	0	1644	54	0
28	P	1591	0	1609	39	0
28	p	1591	0	1609	41	0
29	Q	1570	0	1547	61	0
29	q	1570	0	1547	62	0
30	R	1548	0	1499	45	0
30	r	1548	0	1499	41	0
31	S	1641	0	1616	45	0
31	s	1644	0	1625	39	0
32	T	1667	0	1628	42	0
32	t	1667	0	1628	41	0
33	c	1	0	0	0	0
34	A	31	0	12	2	0
34	B	31	0	12	3	0
34	D	31	0	12	5	0
34	E	31	0	12	4	0
35	A	1	0	0	0	0
35	B	1	0	0	0	0
35	D	1	0	0	0	0
35	E	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
35	F	1	0	0	0	0
36	C	27	0	12	1	0
36	F	27	0	12	2	0
All	All	100121	0	99101	3536	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 18.

All (3536) 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)
15:C:137:LEU:CD1	15:C:220:VAL:HG13	1.29	1.60
15:C:113:ARG:CZ	15:C:127:LEU:HD11	1.19	1.58
15:C:113:ARG:CB	15:C:127:LEU:HD12	1.21	1.58
19:g:133:PRO:HG2	25:m:14:PHE:CE2	1.37	1.58
25:m:215:TRP:CZ3	25:m:228:PRO:HD3	1.11	1.57
8:b:22:LEU:CD1	8:b:179:LEU:HD21	1.15	1.57
15:C:137:LEU:HD11	15:C:220:VAL:CG1	1.30	1.55
15:C:113:ARG:HB2	15:C:127:LEU:CD1	1.28	1.55
16:D:115:ILE:CG2	16:D:139:LEU:HD12	1.11	1.54
16:D:354:LEU:CA	16:D:394:VAL:HB	1.13	1.54
5:Y:297:ARG:CD	11:e:52:PHE:CZ	1.90	1.53
8:b:22:LEU:HD11	8:b:179:LEU:CD2	1.34	1.52
16:D:354:LEU:HA	16:D:394:VAL:CB	1.39	1.52
5:Y:297:ARG:HD2	11:e:52:PHE:CZ	1.01	1.52
16:D:85:ILE:HD13	17:E:68:LYS:NZ	1.27	1.49
7:a:35:HIS:CE1	8:b:14:GLU:O	1.67	1.47
2:V:331:LEU:HA	2:V:334:VAL:CG2	1.41	1.47
12:f:785:ARG:HH22	12:f:790:GLN:CB	1.28	1.45
8:b:22:LEU:CD1	8:b:179:LEU:CD2	1.87	1.44
16:D:115:ILE:HG22	16:D:139:LEU:CD1	1.46	1.43
8:b:22:LEU:CD2	8:b:179:LEU:HD23	1.48	1.42
16:D:115:ILE:CG2	16:D:139:LEU:CD1	1.96	1.42
25:m:215:TRP:NE1	25:m:220:THR:CG2	1.80	1.42
8:b:22:LEU:CG	8:b:179:LEU:CD2	1.97	1.42
8:b:22:LEU:CB	8:b:23:PRO:HD3	1.49	1.40
19:g:133:PRO:CG	25:m:14:PHE:HE2	1.34	1.39
16:D:354:LEU:N	16:D:394:VAL:HB	1.33	1.39
12:f:472:HIS:ND1	12:f:478:ARG:HD3	1.34	1.39
15:C:113:ARG:NE	15:C:127:LEU:CD1	1.85	1.39
25:m:215:TRP:CZ3	25:m:228:PRO:CD	2.07	1.37

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:472:HIS:CE1	12:f:478:ARG:HD3	1.59	1.37
15:C:113:ARG:NE	15:C:127:LEU:HD11	1.35	1.36
12:f:838:ARG:HD3	12:f:839:PRO:CD	1.55	1.34
25:m:215:TRP:NE1	25:m:220:THR:HG22	1.07	1.34
12:f:755:ASP:CB	12:f:756:PRO:HD3	1.36	1.33
16:D:85:ILE:CD1	17:E:68:LYS:NZ	1.89	1.33
5:Y:297:ARG:CD	11:e:52:PHE:HZ	1.27	1.32
25:m:215:TRP:HE1	25:m:220:THR:CG2	1.38	1.32
12:f:785:ARG:NH2	12:f:790:GLN:HB2	1.45	1.31
16:D:150:SER:CB	16:D:153:MET:HE1	1.62	1.30
8:b:22:LEU:CG	8:b:179:LEU:HD23	1.55	1.29
2:V:28:PRO:O	2:V:32:PRO:HD2	1.26	1.28
3:W:316:ARG:NH1	3:W:381:LEU:HG	1.47	1.28
7:a:33:LEU:CD2	7:a:36:GLN:OE1	1.80	1.28
2:V:218:TYR:CZ	2:V:223:LYS:NZ	2.01	1.27
11:e:48:VAL:HG13	11:e:52:PHE:CD2	1.69	1.27
15:C:113:ARG:CZ	15:C:127:LEU:CD1	2.12	1.27
2:V:166:TYR:O	2:V:175:MET:HE1	1.09	1.26
12:f:766:GLN:NE2	12:f:807:ARG:HH12	1.32	1.26
16:D:354:LEU:CA	16:D:394:VAL:CB	1.99	1.26
13:A:396:ALA:HA	13:A:401:ARG:CD	1.65	1.26
3:W:316:ARG:HH11	3:W:381:LEU:CG	1.47	1.26
25:m:215:TRP:CE3	25:m:227:VAL:HA	1.70	1.25
12:f:785:ARG:NH2	12:f:790:GLN:CB	1.96	1.25
2:V:167:LEU:CD1	2:V:171:VAL:HG21	1.66	1.25
2:V:167:LEU:CG	2:V:171:VAL:HG21	1.67	1.24
25:m:215:TRP:CD1	25:m:220:THR:CG2	2.19	1.24
2:V:468:SER:HB3	6:Z:247:LYS:CE	1.67	1.24
14:B:278:ALA:HB1	14:B:279:PRO:CD	1.65	1.23
15:C:90:HIS:CD2	15:C:91:PRO:CD	2.19	1.23
13:A:73:ALA:CB	14:B:140:ASP:HB3	1.68	1.23
19:g:132:ARG:CG	25:m:124:LEU:HD23	1.66	1.23
12:f:296:PHE:HA	12:f:807:ARG:NE	1.54	1.22
2:V:493:ALA:HA	2:V:496:PHE:CZ	1.65	1.22
12:f:838:ARG:CD	12:f:839:PRO:HD2	1.68	1.22
1:U:600:ARG:NE	16:D:56:VAL:CG1	2.03	1.21
12:f:295:ALA:O	12:f:807:ARG:HD3	1.07	1.21
21:I:159:TRP:HA	22:J:54:GLN:HG2	1.23	1.20
2:V:331:LEU:CA	2:V:334:VAL:CG2	2.18	1.20
2:V:28:PRO:O	2:V:32:PRO:CD	1.88	1.20
25:m:215:TRP:HZ3	25:m:228:PRO:CD	1.49	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Y:233:ARG:NH1	5:Y:264:TYR:CD1	2.07	1.19
6:Z:223:ASN:OD1	6:Z:227:ILE:CG2	1.90	1.19
15:C:90:HIS:CD2	15:C:91:PRO:HD3	1.77	1.19
25:m:215:TRP:CD1	25:m:220:THR:HG21	1.77	1.19
12:f:766:GLN:HE21	12:f:807:ARG:NH1	1.40	1.19
16:D:92:PHE:CD2	16:D:125:LYS:HD3	1.78	1.19
8:b:22:LEU:CB	8:b:23:PRO:CD	2.18	1.18
12:f:708:ASP:O	12:f:712:LYS:CG	1.90	1.18
15:C:90:HIS:CG	15:C:91:PRO:HD3	1.79	1.18
2:V:350:GLN:CB	2:V:351:PRO:HD3	1.73	1.17
16:D:354:LEU:HB2	16:D:394:VAL:HG11	1.25	1.17
6:Z:223:ASN:OD1	6:Z:227:ILE:HG23	1.01	1.17
6:Z:246:VAL:CG1	10:d:235:THR:OG1	1.91	1.17
2:V:350:GLN:HB2	2:V:351:PRO:HD3	1.27	1.17
12:f:755:ASP:CB	12:f:756:PRO:CD	2.23	1.17
5:Y:120:ALA:O	5:Y:124:PHE:CD2	1.98	1.16
7:a:33:LEU:HD22	7:a:36:GLN:OE1	0.99	1.16
17:E:116:ASP:OD1	17:E:119:VAL:HG23	1.43	1.16
2:V:331:LEU:O	2:V:334:VAL:HG23	1.44	1.16
17:E:116:ASP:OD1	17:E:119:VAL:CG2	1.93	1.16
6:Z:223:ASN:CG	6:Z:226:ILE:HG22	1.71	1.15
21:I:159:TRP:CA	22:J:54:GLN:HG2	1.68	1.15
21:I:161:ALA:H	22:J:54:GLN:NE2	1.44	1.15
2:V:493:ALA:CA	2:V:496:PHE:HZ	1.45	1.15
1:U:21:GLU:CD	1:U:56:SER:OG	1.88	1.14
12:f:785:ARG:NH2	12:f:790:GLN:OE1	1.78	1.14
2:V:167:LEU:CD1	2:V:171:VAL:CG2	2.25	1.14
16:D:85:ILE:CD1	17:E:68:LYS:HZ2	1.54	1.14
8:b:22:LEU:HG	8:b:179:LEU:CD2	1.74	1.14
19:g:132:ARG:HG3	25:m:124:LEU:CD2	1.77	1.14
6:Z:224:HIS:NE2	7:a:215:GLU:OE2	1.79	1.13
6:Z:245:PHE:O	6:Z:249:PHE:HB2	1.47	1.13
1:U:600:ARG:HE	16:D:56:VAL:HG11	1.14	1.13
12:f:673:ARG:NH2	12:f:712:LYS:HB2	1.61	1.13
12:f:766:GLN:NE2	12:f:807:ARG:NH1	1.96	1.12
22:j:201:SER:HA	22:j:205:ASN:HB2	1.17	1.12
8:b:21:PHE:CE2	8:b:177:PRO:HA	1.84	1.11
21:I:159:TRP:HA	22:J:54:GLN:CG	1.76	1.11
1:U:600:ARG:NE	16:D:56:VAL:HG12	1.62	1.11
7:a:36:GLN:NE2	8:b:145:GLU:HG3	1.63	1.11
12:f:707:LEU:HD21	12:f:737:ASN:OD1	1.48	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:Z:247:LYS:HA	6:Z:247:LYS:HE3	1.28	1.11
12:f:708:ASP:O	12:f:712:LYS:HG3	1.48	1.11
15:C:137:LEU:HD12	15:C:220:VAL:HA	1.18	1.10
16:D:115:ILE:HG23	16:D:139:LEU:HD12	1.24	1.10
19:g:132:ARG:HG3	25:m:124:LEU:HD23	1.30	1.10
5:Y:297:ARG:NH2	11:e:52:PHE:CE2	2.17	1.09
16:D:92:PHE:HE2	16:D:125:LYS:HG2	1.12	1.09
12:f:828:ARG:HD2	12:f:843:SER:OG	1.50	1.09
5:Y:118:GLU:O	5:Y:122:THR:HG22	1.53	1.09
6:Z:245:PHE:O	6:Z:249:PHE:CB	2.00	1.09
2:V:163:VAL:O	2:V:166:TYR:CD2	2.05	1.08
2:V:167:LEU:HG	2:V:171:VAL:HG21	1.31	1.08
14:B:278:ALA:HB1	14:B:279:PRO:HD2	1.22	1.08
13:A:396:ALA:HA	13:A:401:ARG:HD2	1.15	1.08
2:V:350:GLN:HB2	2:V:351:PRO:CD	1.84	1.07
8:b:22:LEU:HD21	8:b:179:LEU:HD23	1.10	1.07
15:C:90:HIS:CD2	15:C:91:PRO:HD2	1.82	1.07
12:f:472:HIS:CE1	12:f:478:ARG:CD	2.38	1.07
12:f:737:ASN:HD22	12:f:746:ARG:NH1	1.50	1.07
7:a:36:GLN:HE22	8:b:145:GLU:HG3	1.02	1.07
16:D:92:PHE:HD2	16:D:125:LYS:CD	1.66	1.07
16:D:116:LEU:HD13	16:D:118:THR:H	1.20	1.07
15:C:90:HIS:HD2	15:C:91:PRO:HD2	0.97	1.07
16:D:85:ILE:CD1	17:E:68:LYS:HZ3	1.59	1.06
16:D:92:PHE:CD2	16:D:125:LYS:CD	2.37	1.06
2:V:166:TYR:O	2:V:175:MET:CE	2.03	1.06
8:b:22:LEU:HB2	8:b:23:PRO:CD	1.78	1.06
10:d:4:GLN:NE2	10:d:21:GLU:OE2	1.86	1.06
2:V:218:TYR:OH	2:V:223:LYS:NZ	1.88	1.06
12:f:680:ARG:NH2	12:f:778:LEU:HD21	1.70	1.06
16:D:150:SER:HB3	16:D:153:MET:HE1	1.08	1.06
7:a:64:ILE:O	7:a:68:GLU:HB2	1.56	1.05
12:f:281:ILE:HG22	12:f:282:PHE:CE2	1.89	1.05
15:C:90:HIS:HD2	15:C:91:PRO:CD	1.63	1.05
2:V:167:LEU:O	2:V:171:VAL:CG1	2.05	1.05
12:f:755:ASP:CG	12:f:756:PRO:HD3	1.81	1.05
12:f:295:ALA:O	12:f:807:ARG:CD	2.03	1.04
12:f:680:ARG:NH2	12:f:778:LEU:CD2	2.18	1.04
12:f:680:ARG:HB2	12:f:763:ARG:HE	1.17	1.04
13:A:72:LEU:O	14:B:140:ASP:OD1	1.76	1.04
13:A:396:ALA:O	13:A:401:ARG:HG2	1.58	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:167:LEU:HD11	2:V:171:VAL:CG2	1.85	1.04
5:Y:293:ARG:HH22	11:e:57:ARG:NH1	1.55	1.04
16:D:354:LEU:HB2	16:D:394:VAL:CG1	1.88	1.04
1:U:600:ARG:HE	16:D:56:VAL:CG1	1.69	1.03
15:C:137:LEU:HD11	15:C:220:VAL:CB	1.87	1.03
6:Z:245:PHE:CZ	10:d:235:THR:HG21	1.93	1.03
1:U:21:GLU:OE2	1:U:56:SER:OG	1.73	1.03
2:V:331:LEU:HA	2:V:334:VAL:HG22	1.36	1.02
25:M:215:TRP:CH2	25:M:219:LEU:HD22	1.94	1.02
5:Y:297:ARG:HD2	11:e:52:PHE:CE2	1.94	1.02
12:f:296:PHE:HA	12:f:807:ARG:HE	1.08	1.02
13:A:72:LEU:O	14:B:140:ASP:CG	2.01	1.02
16:D:151:ILE:HD12	16:D:151:ILE:H	1.18	1.02
8:b:22:LEU:HB3	8:b:23:PRO:HD3	1.04	1.02
8:b:21:PHE:CZ	8:b:177:PRO:HA	1.93	1.02
8:b:22:LEU:HB2	8:b:23:PRO:HD3	1.37	1.02
5:Y:293:ARG:HB3	11:e:52:PHE:CD1	1.95	1.01
16:D:355:SER:N	16:D:394:VAL:O	1.90	1.01
2:V:468:SER:HB3	6:Z:247:LYS:HE2	1.39	1.01
14:B:170:LEU:HG	14:B:174:MET:HE2	1.42	1.01
16:D:354:LEU:CB	16:D:394:VAL:CG1	2.38	1.01
21:I:159:TRP:CA	22:J:54:GLN:CG	2.28	1.01
3:W:316:ARG:HH11	3:W:381:LEU:HG	0.85	1.01
16:D:92:PHE:CE2	16:D:125:LYS:HG2	1.93	1.01
2:V:331:LEU:HD12	2:V:334:VAL:HG21	1.43	1.01
11:e:48:VAL:O	11:e:52:PHE:HB2	1.59	1.01
13:A:73:ALA:HB2	14:B:140:ASP:CB	1.90	1.01
14:B:170:LEU:CD1	14:B:174:MET:HE2	1.91	1.01
2:V:331:LEU:HA	2:V:334:VAL:HG21	1.02	1.01
2:V:25:GLU:O	2:V:28:PRO:HD2	1.61	1.00
13:A:396:ALA:HB1	13:A:401:ARG:HG3	1.40	1.00
2:V:166:TYR:OH	2:V:216:ARG:HB2	1.60	1.00
19:G:46:ASP:O	19:G:222:VAL:HG23	1.60	1.00
2:V:166:TYR:OH	2:V:213:TYR:HA	1.62	1.00
12:f:680:ARG:HH11	12:f:762:VAL:CG2	1.74	1.00
13:A:73:ALA:HB1	14:B:140:ASP:HB3	1.43	1.00
12:f:785:ARG:HH22	12:f:790:GLN:HB2	0.85	1.00
6:Z:250:TYR:O	6:Z:254:ASN:HB2	1.60	1.00
1:U:167:ILE:HA	1:U:177:LEU:HD13	1.40	0.99
6:Z:223:ASN:CG	6:Z:227:ILE:HG23	1.86	0.99
10:d:238:PRO:O	10:d:242:LEU:HB2	1.62	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:A:73:ALA:HB2	14:B:140:ASP:HB3	1.40	0.99
13:A:396:ALA:HA	13:A:401:ARG:CG	1.91	0.99
16:D:354:LEU:HA	16:D:394:VAL:CA	1.92	0.99
6:Z:246:VAL:HG12	10:d:235:THR:OG1	1.62	0.99
15:C:113:ARG:CG	15:C:127:LEU:HD12	1.93	0.99
12:f:472:HIS:ND1	12:f:478:ARG:CD	2.26	0.99
12:f:755:ASP:CG	12:f:756:PRO:CD	2.35	0.99
16:D:354:LEU:N	16:D:394:VAL:CB	2.19	0.98
16:D:115:ILE:HG21	16:D:139:LEU:HD12	1.42	0.98
1:U:167:ILE:HA	1:U:177:LEU:CD1	1.93	0.97
5:Y:101:ARG:O	5:Y:105:MET:HB3	1.64	0.97
14:B:170:LEU:CG	14:B:174:MET:HE2	1.94	0.97
6:Z:246:VAL:HG13	10:d:235:THR:OG1	1.63	0.97
11:e:48:VAL:CG1	11:e:52:PHE:CD2	2.46	0.97
8:b:22:LEU:HG	8:b:179:LEU:HD22	1.45	0.97
16:D:116:LEU:HD11	16:D:118:THR:OG1	1.62	0.97
25:m:215:TRP:CH2	25:m:228:PRO:HD3	1.99	0.97
12:f:395:GLY:O	12:f:399:LEU:HB2	1.65	0.97
16:D:353:ASN:ND2	16:D:393:ILE:HA	1.80	0.96
12:f:694:LEU:HG	12:f:713:PHE:HD2	1.29	0.96
12:f:828:ARG:HD2	12:f:843:SER:HG	1.15	0.96
2:V:468:SER:CB	6:Z:247:LYS:HE2	1.95	0.96
2:V:331:LEU:C	2:V:334:VAL:CG2	2.39	0.96
5:Y:297:ARG:CD	11:e:52:PHE:CE2	2.47	0.95
12:f:785:ARG:CZ	12:f:790:GLN:HB2	1.94	0.95
6:Z:223:ASN:ND2	6:Z:226:ILE:HG22	1.81	0.95
2:V:468:SER:CB	6:Z:247:LYS:CE	2.44	0.95
12:f:680:ARG:HH22	12:f:778:LEU:CD2	1.77	0.95
15:C:90:HIS:CB	15:C:91:PRO:HD3	1.95	0.95
16:D:150:SER:HB3	16:D:153:MET:CE	1.96	0.94
12:f:281:ILE:HB	12:f:282:PHE:HD2	1.32	0.94
1:U:48:LEU:HD13	1:U:56:SER:O	1.67	0.94
8:b:21:PHE:CE1	8:b:178:SER:N	2.35	0.94
15:C:137:LEU:CD1	15:C:220:VAL:HA	1.95	0.94
12:f:755:ASP:HB2	12:f:756:PRO:CD	1.89	0.93
16:D:353:ASN:HD22	16:D:393:ILE:HA	1.32	0.93
2:V:493:ALA:HA	2:V:496:PHE:HZ	0.77	0.93
7:a:33:LEU:HD22	7:a:36:GLN:CD	1.93	0.93
10:d:155:LYS:HZ2	10:d:171:LEU:HG	1.32	0.93
10:d:67:ASP:O	10:d:71:PHE:HB2	1.69	0.93
16:D:354:LEU:H	16:D:394:VAL:CB	1.80	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:D:116:LEU:HD13	16:D:118:THR:N	1.84	0.93
12:f:690:VAL:C	12:f:713:PHE:CE2	2.46	0.92
5:Y:297:ARG:HH22	11:e:51:ASP:HB2	1.33	0.92
2:V:167:LEU:HD11	2:V:171:VAL:HG21	1.42	0.92
12:f:707:LEU:CD2	12:f:737:ASN:OD1	2.16	0.92
2:V:166:TYR:HE1	2:V:216:ARG:O	1.49	0.92
2:V:331:LEU:CA	2:V:334:VAL:HG21	1.92	0.92
9:c:196:LEU:O	9:c:200:TYR:O	1.88	0.92
19:g:202:LEU:O	19:g:206:LEU:HB2	1.70	0.92
7:a:35:HIS:ND1	8:b:14:GLU:O	2.01	0.92
12:f:755:ASP:HB2	12:f:756:PRO:HD3	0.95	0.92
12:f:257:ARG:HA	12:f:257:ARG:HE	1.32	0.91
16:D:354:LEU:H	16:D:394:VAL:HB	1.27	0.91
19:G:202:LEU:O	19:G:206:LEU:HB2	1.70	0.91
14:B:278:ALA:CB	14:B:279:PRO:CD	2.46	0.91
16:D:354:LEU:HA	16:D:394:VAL:CG1	2.00	0.91
2:V:166:TYR:HE1	2:V:216:ARG:C	1.79	0.91
2:V:171:VAL:HG13	2:V:175:MET:SD	2.11	0.91
2:V:468:SER:CB	6:Z:247:LYS:NZ	2.34	0.91
11:e:48:VAL:HG13	11:e:52:PHE:CE2	2.05	0.91
12:f:680:ARG:HH21	12:f:778:LEU:HD21	1.29	0.91
25:M:215:TRP:CZ2	25:M:219:LEU:HD22	2.06	0.91
3:W:316:ARG:NH1	3:W:381:LEU:CD2	2.33	0.90
3:W:316:ARG:NH1	3:W:381:LEU:CG	2.18	0.90
7:a:35:HIS:HE1	8:b:14:GLU:O	1.17	0.90
8:b:21:PHE:CZ	8:b:176:GLY:O	2.24	0.90
16:D:115:ILE:HG21	16:D:139:LEU:CD1	1.98	0.90
28:p:2:SER:N	28:p:5:SER:HG	1.69	0.90
10:d:171:LEU:O	10:d:175:ARG:HG2	1.69	0.90
12:f:281:ILE:HB	12:f:282:PHE:CD2	2.05	0.90
25:m:215:TRP:CZ3	25:m:227:VAL:HA	2.07	0.90
7:a:36:GLN:HE22	8:b:145:GLU:CG	1.84	0.90
12:f:680:ARG:HH11	12:f:762:VAL:HG23	1.36	0.90
1:U:600:ARG:NE	16:D:56:VAL:HG11	1.76	0.89
2:V:468:SER:C	6:Z:247:LYS:HZ1	1.78	0.89
15:C:113:ARG:NH2	15:C:127:LEU:HD11	1.87	0.89
15:C:137:LEU:HD12	15:C:220:VAL:CA	2.02	0.89
16:D:85:ILE:HD13	17:E:68:LYS:HZ3	0.77	0.89
2:V:331:LEU:CA	2:V:334:VAL:HG22	1.92	0.89
13:A:396:ALA:CA	13:A:401:ARG:CG	2.50	0.89
13:A:396:ALA:CB	13:A:401:ARG:HG3	2.03	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:d:208:ASP:O	10:d:212:LYS:HB2	1.73	0.89
13:A:400:ARG:HG2	13:A:400:ARG:HH11	1.37	0.89
16:D:354:LEU:HA	16:D:394:VAL:C	1.97	0.89
12:f:785:ARG:HH22	12:f:790:GLN:CG	1.86	0.89
8:b:22:LEU:HB3	8:b:23:PRO:CD	1.90	0.88
7:a:35:HIS:NE2	8:b:17:ARG:HB2	1.87	0.88
9:c:280:PRO:O	9:c:284:LEU:HB2	1.73	0.88
12:f:785:ARG:NH2	12:f:790:GLN:HB3	1.86	0.88
2:V:166:TYR:CE1	2:V:216:ARG:O	2.26	0.88
2:V:218:TYR:CE1	2:V:223:LYS:NZ	2.41	0.88
15:C:137:LEU:CD1	15:C:220:VAL:CG1	2.12	0.88
2:V:331:LEU:O	2:V:334:VAL:CG2	2.21	0.88
6:Z:223:ASN:CG	6:Z:226:ILE:CG2	2.47	0.88
14:B:170:LEU:HD11	14:B:174:MET:CE	2.03	0.88
2:V:171:VAL:HG13	2:V:175:MET:CE	2.03	0.88
5:Y:118:GLU:HA	5:Y:121:LEU:HD21	1.53	0.88
2:V:46:GLY:O	2:V:50:GLU:HB2	1.71	0.88
29:q:183:ILE:HA	29:q:187:GLY:O	1.74	0.88
1:U:21:GLU:CD	1:U:56:SER:HG	1.72	0.88
21:I:161:ALA:H	22:J:54:GLN:HE22	0.93	0.88
29:Q:183:ILE:HA	29:Q:187:GLY:O	1.74	0.87
19:g:132:ARG:HG2	25:m:124:LEU:HD23	1.56	0.87
8:b:22:LEU:HD21	8:b:179:LEU:CD2	2.02	0.87
21:I:161:ALA:N	22:J:54:GLN:NE2	2.20	0.87
16:D:115:ILE:HG22	16:D:139:LEU:HD12	0.96	0.87
16:D:116:LEU:CD1	16:D:118:THR:OG1	2.22	0.87
2:V:214:HIS:O	2:V:218:TYR:HB3	1.75	0.87
16:D:354:LEU:CA	16:D:394:VAL:CG1	2.53	0.86
16:D:116:LEU:HB3	16:D:119:ILE:CD1	2.05	0.86
6:Z:223:ASN:OD1	6:Z:226:ILE:CG2	2.24	0.86
3:W:231:ILE:O	3:W:235:GLN:HB2	1.76	0.86
19:g:132:ARG:CG	25:m:124:LEU:CD2	2.44	0.86
6:Z:223:ASN:ND2	6:Z:227:ILE:HG13	1.90	0.86
12:f:764:LEU:HD21	12:f:774:GLY:O	1.76	0.86
30:r:196:HIS:O	30:r:200:SER:HB3	1.75	0.86
16:D:354:LEU:H	16:D:394:VAL:CG2	1.88	0.86
2:V:72:LEU:O	2:V:76:LYS:HB2	1.74	0.86
3:W:316:ARG:HH11	3:W:381:LEU:CD2	1.87	0.86
15:C:137:LEU:HD13	15:C:220:VAL:HG13	1.53	0.86
12:f:690:VAL:C	12:f:713:PHE:HE2	1.82	0.85
15:C:113:ARG:HE	15:C:127:LEU:CD1	1.89	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:673:ARG:NH2	12:f:712:LYS:CB	2.40	0.85
27:O:37:ILE:HB	27:O:41:ILE:O	1.76	0.85
2:V:350:GLN:HB3	2:V:351:PRO:HD3	1.57	0.85
12:f:680:ARG:HB2	12:f:763:ARG:NE	1.91	0.85
12:f:122:ALA:HB2	12:f:129:LEU:HD13	1.57	0.85
12:f:240:VAL:HG22	12:f:257:ARG:CZ	2.07	0.85
12:f:828:ARG:CD	12:f:843:SER:OG	2.25	0.85
16:D:125:LYS:C	16:D:125:LYS:HZ3	1.84	0.85
22:J:50:VAL:CB	22:J:52:LYS:HE3	2.05	0.85
30:R:196:HIS:O	30:R:200:SER:HB3	1.75	0.85
16:D:92:PHE:HD2	16:D:125:LYS:HD2	1.41	0.85
1:U:600:ARG:CZ	16:D:56:VAL:HG12	2.05	0.85
16:D:354:LEU:HA	16:D:394:VAL:HB	0.94	0.85
21:i:42:GLY:HA2	21:i:216:LEU:O	1.77	0.85
12:f:679:LEU:HD11	12:f:686:LEU:HD11	1.57	0.84
16:D:116:LEU:HD12	16:D:119:ILE:HD12	1.58	0.84
16:D:355:SER:OG	16:D:358:VAL:HG23	1.76	0.84
21:I:160:LYS:HG3	22:J:54:GLN:HG3	1.59	0.84
25:m:215:TRP:HE3	25:m:227:VAL:HA	1.12	0.84
27:o:37:ILE:HB	27:o:41:ILE:O	1.76	0.84
12:f:673:ARG:NH1	12:f:712:LYS:HD2	1.92	0.84
21:I:36:GLY:O	21:I:161:ALA:HA	1.78	0.84
25:M:47:PHE:HB2	25:M:214:SER:HB3	1.58	0.84
21:i:36:GLY:O	21:i:161:ALA:HA	1.77	0.84
21:I:42:GLY:HA2	21:I:216:LEU:O	1.77	0.84
13:A:401:ARG:CZ	13:A:401:ARG:HB3	2.08	0.84
2:V:171:VAL:CG1	2:V:175:MET:CE	2.55	0.84
16:D:115:ILE:HG22	16:D:139:LEU:CB	2.07	0.84
16:D:354:LEU:HD12	16:D:394:VAL:CG1	2.08	0.84
16:D:376:ASN:O	16:D:380:GLN:HB2	1.77	0.83
16:D:115:ILE:HG22	16:D:139:LEU:CG	2.08	0.83
3:W:316:ARG:N	3:W:316:ARG:HD2	1.94	0.83
2:V:497:PRO:CG	6:Z:278:ASN:HB3	2.08	0.83
13:A:73:ALA:CB	14:B:140:ASP:CB	2.49	0.83
19:g:132:ARG:HB2	19:g:132:ARG:CZ	2.06	0.83
12:f:507:ASP:OD1	12:f:509:LYS:HE2	1.79	0.83
12:f:673:ARG:HH21	12:f:712:LYS:HB2	1.37	0.83
10:d:5:LEU:HD11	10:d:22:GLU:OE1	1.79	0.83
12:f:121:PHE:O	12:f:129:LEU:HD11	1.77	0.83
16:D:354:LEU:CB	16:D:394:VAL:HG11	2.03	0.83
29:Q:41:LYS:O	29:Q:106:GLY:HA2	1.79	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:g:132:ARG:HG3	25:m:124:LEU:HD22	1.59	0.83
12:f:755:ASP:OD1	12:f:755:ASP:N	2.12	0.82
25:M:214:SER:OG	25:M:224:HIS:NE2	2.11	0.82
29:q:41:LYS:O	29:q:106:GLY:HA2	1.79	0.82
7:a:35:HIS:ND1	8:b:15:TYR:HA	1.94	0.82
6:Z:223:ASN:HD21	6:Z:227:ILE:N	1.77	0.82
12:f:708:ASP:O	12:f:712:LYS:CD	2.27	0.82
2:V:167:LEU:HG	2:V:171:VAL:CG2	2.09	0.81
12:f:737:ASN:ND2	12:f:746:ARG:NH1	2.26	0.81
5:Y:112:CYS:HA	5:Y:120:ALA:HB2	1.59	0.81
5:Y:293:ARG:NH2	11:e:57:ARG:NH1	2.28	0.81
7:a:35:HIS:CE1	8:b:17:ARG:HB2	2.14	0.81
10:d:155:LYS:NZ	10:d:171:LEU:HG	1.95	0.81
12:f:673:ARG:CZ	12:f:712:LYS:CD	2.58	0.81
12:f:844:VAL:CG2	14:B:212:GLU:HB3	2.10	0.81
16:D:353:ASN:ND2	16:D:394:VAL:H	1.78	0.81
7:a:132:LYS:O	7:a:136:GLU:HB2	1.80	0.81
12:f:213:GLN:O	12:f:217:LEU:HB2	1.79	0.81
12:f:486:GLY:O	12:f:490:ALA:HB2	1.80	0.81
14:B:278:ALA:HB1	14:B:279:PRO:HD3	1.62	0.81
16:D:116:LEU:CD1	16:D:118:THR:H	1.93	0.81
2:V:167:LEU:O	2:V:171:VAL:HG11	1.80	0.81
12:f:709:THR:O	12:f:713:PHE:HB2	1.81	0.81
2:V:166:TYR:O	2:V:171:VAL:HG11	1.81	0.81
12:f:296:PHE:CA	12:f:807:ARG:HE	1.91	0.81
14:B:170:LEU:CD1	14:B:174:MET:CE	2.59	0.81
2:V:171:VAL:CG1	2:V:175:MET:HE3	2.11	0.81
5:Y:293:ARG:HB3	11:e:52:PHE:CE1	2.16	0.81
5:Y:297:ARG:HD3	11:e:52:PHE:CZ	2.13	0.81
16:D:354:LEU:CB	16:D:394:VAL:HB	2.09	0.81
9:c:192:LEU:HD13	9:c:196:LEU:HD13	1.63	0.81
12:f:281:ILE:CG2	12:f:282:PHE:CE2	2.63	0.81
2:V:28:PRO:HB2	2:V:29:PRO:HD3	1.63	0.80
2:V:166:TYR:HH	2:V:216:ARG:HB2	1.45	0.80
2:V:167:LEU:HD11	2:V:171:VAL:HG23	1.61	0.80
7:a:367:VAL:O	7:a:371:ALA:HB3	1.80	0.80
16:D:353:ASN:ND2	16:D:394:VAL:N	2.29	0.80
15:C:88:LYS:HB3	15:C:94:LYS:HG2	1.63	0.80
2:V:328:VAL:O	2:V:332:LEU:HB2	1.82	0.80
18:F:312:GLU:O	18:F:316:GLN:HB3	1.80	0.80
8:b:22:LEU:HB2	8:b:23:PRO:HD2	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:507:ASP:CG	12:f:509:LYS:HG2	2.06	0.80
16:D:354:LEU:C	16:D:394:VAL:O	2.25	0.80
28:P:2:SER:N	28:P:5:SER:HG	1.79	0.80
12:f:764:LEU:HD11	12:f:773:LYS:O	1.82	0.80
12:f:737:ASN:ND2	12:f:746:ARG:HD2	1.97	0.80
12:f:838:ARG:HD3	12:f:839:PRO:HD2	0.82	0.80
2:V:468:SER:HB3	6:Z:247:LYS:NZ	1.93	0.79
6:Z:245:PHE:O	6:Z:249:PHE:HB3	1.81	0.79
16:D:253:LEU:O	16:D:257:ASN:HB2	1.82	0.79
22:j:40:ILE:HA	22:j:211:MET:O	1.82	0.79
1:U:48:LEU:CD1	1:U:56:SER:O	2.30	0.79
16:D:99:ASN:HB2	16:D:115:ILE:HD11	1.62	0.79
22:j:201:SER:CA	22:j:205:ASN:HB2	2.06	0.79
1:U:151:ILE:HD13	1:U:177:LEU:HD23	1.63	0.79
16:D:125:LYS:HE2	16:D:127:ASN:HA	1.65	0.79
16:D:50:GLU:O	16:D:54:LEU:HB2	1.83	0.79
12:f:755:ASP:CG	12:f:756:PRO:HD2	2.06	0.78
13:A:73:ALA:HB1	13:A:74:PRO:HD2	1.65	0.78
19:g:46:ASP:O	19:g:222:VAL:HG23	1.83	0.78
22:J:40:ILE:HA	22:J:211:MET:O	1.82	0.78
2:V:496:PHE:N	2:V:497:PRO:HD2	1.98	0.78
8:b:21:PHE:HZ	8:b:176:GLY:O	1.65	0.78
16:D:353:ASN:HD22	16:D:394:VAL:H	1.31	0.78
24:L:14:SER:HB3	24:L:18:ARG:H	1.49	0.78
2:V:468:SER:HB2	6:Z:247:LYS:HZ3	1.47	0.78
16:D:115:ILE:HG22	16:D:139:LEU:HB2	1.64	0.78
5:Y:297:ARG:HD2	11:e:52:PHE:CE1	2.06	0.78
9:c:32:TYR:O	9:c:68:ARG:HA	1.83	0.78
12:f:704:LEU:O	12:f:708:ASP:HB2	1.84	0.78
32:T:190:ALA:HA	32:T:198:GLU:O	1.84	0.78
5:Y:118:GLU:HA	5:Y:121:LEU:CD2	2.13	0.78
1:U:325:MET:O	1:U:329:LEU:HB2	1.84	0.78
12:f:785:ARG:NH1	12:f:790:GLN:HB2	1.98	0.78
32:t:190:ALA:HA	32:t:198:GLU:O	1.84	0.78
10:d:5:LEU:HD13	10:d:25:ARG:HG2	1.67	0.77
24:L:207:THR:O	24:L:226:ASP:HB2	1.83	0.77
2:V:493:ALA:CA	2:V:496:PHE:CZ	2.23	0.77
7:a:33:LEU:CG	7:a:36:GLN:OE1	2.31	0.77
12:f:680:ARG:HE	12:f:715:HIS:HE1	1.32	0.77
2:V:331:LEU:C	2:V:334:VAL:HG23	2.07	0.77
2:V:468:SER:C	6:Z:247:LYS:NZ	2.43	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:m:108:LEU:HD21	25:m:139:SER:HB3	1.67	0.77
15:C:137:LEU:CD1	15:C:220:VAL:CA	2.58	0.77
3:W:366:MET:O	3:W:370:TYR:HB2	1.84	0.77
21:I:161:ALA:N	22:J:54:GLN:HE22	1.77	0.77
24:l:14:SER:HB3	24:l:18:ARG:H	1.49	0.77
1:U:179:TYR:HE2	1:U:183:LEU:HD11	1.50	0.77
3:W:344:THR:O	3:W:348:GLU:HB2	1.85	0.77
1:U:457:ILE:O	1:U:461:LEU:HB2	1.85	0.76
2:V:25:GLU:O	2:V:28:PRO:CD	2.32	0.76
2:V:331:LEU:HD12	2:V:334:VAL:CG2	2.14	0.76
5:Y:233:ARG:N	5:Y:234:PRO:HD2	2.00	0.76
5:Y:297:ARG:CG	11:e:52:PHE:HZ	1.97	0.76
2:V:497:PRO:HB2	2:V:498:PRO:HD3	1.65	0.76
5:Y:118:GLU:HA	5:Y:121:LEU:CG	2.15	0.76
13:A:396:ALA:CA	13:A:401:ARG:CD	2.58	0.76
14:B:278:ALA:CB	14:B:279:PRO:HD2	2.07	0.76
23:K:73:HIS:O	23:K:145:GLY:HA2	1.85	0.76
16:D:85:ILE:HD12	17:E:68:LYS:HZ2	1.50	0.76
6:Z:224:HIS:HE2	7:a:215:GLU:CD	1.92	0.76
8:b:21:PHE:CD1	8:b:178:SER:O	2.38	0.76
2:V:166:TYR:CE1	2:V:217:VAL:HG23	2.21	0.76
26:N:98:ILE:O	26:N:114:VAL:HB	1.86	0.76
2:V:163:VAL:O	2:V:166:TYR:HD2	1.66	0.76
12:f:694:LEU:HG	12:f:713:PHE:CD2	2.18	0.76
22:J:50:VAL:CA	22:J:52:LYS:HE3	2.14	0.76
7:a:36:GLN:NE2	8:b:145:GLU:CG	2.46	0.76
10:d:1:MET:N	10:d:3:GLU:OE2	2.18	0.76
14:B:170:LEU:HD11	14:B:174:MET:HE1	1.68	0.76
16:D:133:HIS:HD2	16:D:136:SER:H	1.33	0.76
25:M:108:LEU:HD21	25:M:139:SER:HB3	1.67	0.76
7:a:188:LEU:HD11	7:a:193:GLN:HE21	1.51	0.75
12:f:680:ARG:NH1	12:f:762:VAL:CG2	2.49	0.75
19:G:223:GLU:O	19:G:225:PRO:HD3	1.85	0.75
25:m:215:TRP:HE3	25:m:227:VAL:CA	1.96	0.75
16:D:150:SER:OG	16:D:153:MET:HE1	1.86	0.75
17:E:97:ARG:O	17:E:111:LEU:HB2	1.85	0.75
8:b:22:LEU:HD12	8:b:179:LEU:HD21	1.56	0.75
23:k:73:HIS:O	23:k:145:GLY:HA2	1.85	0.75
13:A:72:LEU:O	14:B:140:ASP:OD2	2.05	0.75
15:C:127:LEU:HD13	15:C:127:LEU:O	1.87	0.75
16:D:85:ILE:H	16:D:86:PRO:CD	2.00	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:M:96:SER:O	25:M:100:SER:HB3	1.87	0.75
25:M:215:TRP:HH2	25:M:219:LEU:HD22	1.47	0.75
6:Z:223:ASN:HD21	6:Z:227:ILE:H	1.34	0.75
12:f:121:PHE:O	12:f:129:LEU:CD1	2.34	0.75
12:f:122:ALA:HA	12:f:129:LEU:HD12	1.68	0.75
12:f:737:ASN:ND2	12:f:737:ASN:O	2.19	0.75
14:B:418:ASP:O	14:B:422:SER:HB2	1.86	0.75
19:g:132:ARG:HG2	25:m:124:LEU:HA	1.66	0.75
13:A:400:ARG:HG2	13:A:400:ARG:NH1	1.98	0.75
7:a:93:ALA:O	7:a:97:LEU:HB2	1.87	0.74
15:C:135:VAL:HA	15:C:138:MET:HE2	1.69	0.74
9:c:92:GLN:O	9:c:96:LEU:HB2	1.86	0.74
19:G:134:LEU:H	19:G:134:LEU:HD12	1.51	0.74
22:j:201:SER:HA	22:j:205:ASN:CB	2.09	0.74
2:V:440:LYS:HD3	10:d:146:GLY:HA2	1.69	0.74
2:V:167:LEU:O	2:V:171:VAL:CB	2.36	0.74
4:X:371:ASP:OD1	5:Y:233:ARG:HG2	1.87	0.74
14:B:82:GLN:O	14:B:86:LYS:HB2	1.87	0.74
17:E:116:ASP:OD1	17:E:119:VAL:HG21	1.86	0.74
12:f:680:ARG:HH22	12:f:778:LEU:HD23	1.50	0.74
24:L:207:THR:O	24:L:226:ASP:CB	2.36	0.74
25:m:96:SER:O	25:m:100:SER:HB3	1.87	0.74
31:s:193:LEU:O	31:s:207:THR:HA	1.87	0.74
13:A:121:PHE:HA	18:F:88:TYR:O	1.87	0.74
26:n:98:ILE:O	26:n:114:VAL:HB	1.86	0.74
5:Y:112:CYS:HB2	5:Y:120:ALA:HB1	1.70	0.74
31:S:193:LEU:O	31:S:207:THR:HA	1.87	0.74
7:a:5:PRO:O	7:a:8:LEU:HG	1.88	0.74
1:U:601:ARG:HA	1:U:604:HIS:HB3	1.70	0.73
2:V:167:LEU:O	2:V:171:VAL:HB	1.87	0.73
1:U:21:GLU:CG	1:U:56:SER:OG	2.36	0.73
22:j:201:SER:O	22:j:203:GLY:N	2.20	0.73
1:U:724:VAL:O	1:U:728:PHE:HB2	1.88	0.73
13:A:49:GLU:HA	14:B:65:LEU:HD12	1.70	0.73
16:D:355:SER:HB3	16:D:395:LEU:HD13	1.70	0.73
1:U:151:ILE:CD1	1:U:177:LEU:CD2	2.67	0.73
2:V:262:SER:HB3	10:d:120:GLU:HB3	1.69	0.73
12:f:679:LEU:HD11	12:f:686:LEU:CD1	2.19	0.73
12:f:828:ARG:O	12:f:860:LYS:HA	1.87	0.73
16:D:92:PHE:CE2	16:D:125:LYS:CG	2.69	0.73
5:Y:233:ARG:HH11	5:Y:264:TYR:HD1	1.27	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:680:ARG:HE	12:f:715:HIS:CE1	2.07	0.73
2:V:163:VAL:O	2:V:166:TYR:CE2	2.42	0.73
7:a:36:GLN:O	7:a:40:GLN:OE1	2.07	0.73
12:f:673:ARG:CZ	12:f:712:LYS:HD3	2.18	0.73
13:A:355:PHE:O	13:A:359:ALA:HB3	1.88	0.73
16:D:353:ASN:ND2	16:D:393:ILE:CA	2.52	0.73
12:f:122:ALA:HB2	12:f:129:LEU:CD1	2.19	0.72
1:U:219:CYS:O	1:U:223:LEU:HB2	1.89	0.72
12:f:217:LEU:HD13	12:f:217:LEU:C	2.14	0.72
19:G:134:LEU:HD12	19:G:134:LEU:N	2.04	0.72
2:V:167:LEU:CD1	2:V:171:VAL:HG23	2.15	0.72
16:D:115:ILE:HD12	16:D:115:ILE:O	1.90	0.72
16:D:116:LEU:HB3	16:D:119:ILE:HD13	1.71	0.72
2:V:28:PRO:CB	2:V:29:PRO:HD3	2.20	0.72
8:b:22:LEU:CD2	8:b:178:SER:O	2.37	0.72
21:i:143:TYR:HB2	21:i:146:GLN:HE21	1.53	0.72
2:V:494:MET:O	2:V:497:PRO:HD2	1.89	0.72
2:V:496:PHE:N	2:V:497:PRO:CD	2.52	0.72
5:Y:120:ALA:O	5:Y:124:PHE:CG	2.42	0.72
12:f:785:ARG:NH2	12:f:790:GLN:CD	2.48	0.72
20:H:148:GLN:O	20:H:155:TYR:HA	1.90	0.72
26:N:120:MET:H	32:T:61:GLN:HE22	1.35	0.72
2:V:223:LYS:O	2:V:223:LYS:HE3	1.89	0.72
16:D:353:ASN:HD22	16:D:393:ILE:CA	2.02	0.72
29:Q:198:LYS:HA	29:q:198:LYS:HA	1.70	0.72
7:a:35:HIS:CE1	8:b:17:ARG:HE	2.07	0.72
12:f:709:THR:HA	12:f:712:LYS:HG3	1.72	0.72
22:j:200:GLN:HA	22:j:200:GLN:NE2	2.04	0.72
25:m:215:TRP:CE3	25:m:227:VAL:CA	2.64	0.72
1:U:151:ILE:HD13	1:U:177:LEU:CD2	2.18	0.71
1:U:151:ILE:CD1	1:U:177:LEU:HD23	2.18	0.71
6:Z:193:ASN:O	6:Z:197:GLY:HA3	1.90	0.71
6:Z:247:LYS:HE3	6:Z:247:LYS:CA	2.04	0.71
12:f:679:LEU:CD1	12:f:686:LEU:HD11	2.20	0.71
15:C:90:HIS:HB2	15:C:91:PRO:HD3	1.70	0.71
7:a:153:SER:O	7:a:157:ASP:HB2	1.91	0.71
14:B:153:ASN:HD22	14:B:156:VAL:HG22	1.53	0.71
2:V:162:GLU:O	2:V:167:LEU:CD2	2.39	0.71
21:I:143:TYR:HB2	21:I:146:GLN:HE21	1.53	0.71
22:J:200:GLN:HA	22:J:200:GLN:NE2	2.05	0.71
26:n:120:MET:H	32:t:61:GLN:HE22	1.36	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:471:ASP:HA	1:U:474:ARG:HB2	1.73	0.71
15:C:113:ARG:CB	15:C:127:LEU:CD1	2.15	0.71
17:E:116:ASP:CG	17:E:119:VAL:HG23	2.16	0.71
21:i:154:GLY:O	22:j:81:ARG:NH2	2.23	0.71
6:Z:25:ARG:HH11	9:c:104:ARG:H	1.38	0.71
12:f:257:ARG:HA	12:f:257:ARG:NE	1.99	0.71
10:d:171:LEU:H	10:d:171:LEU:HD12	1.55	0.71
16:D:83:GLN:C	16:D:83:GLN:HE21	1.99	0.71
27:O:138:PHE:O	27:O:142:PHE:HB2	1.91	0.71
12:f:281:ILE:CB	12:f:282:PHE:CD2	2.74	0.70
15:C:134:LEU:HD22	15:C:138:MET:HG2	1.73	0.70
16:D:353:ASN:HD22	16:D:394:VAL:N	1.85	0.70
22:J:201:SER:HA	22:J:205:ASN:HB2	1.73	0.70
23:K:100:TRP:O	30:R:57:ARG:NH2	2.24	0.70
10:d:1:MET:HB2	10:d:3:GLU:OE2	1.91	0.70
12:f:764:LEU:HD11	12:f:774:GLY:HA3	1.73	0.70
16:D:83:GLN:H	16:D:83:GLN:CD	1.98	0.70
16:D:150:SER:CB	16:D:153:MET:CE	2.56	0.70
19:g:132:ARG:HB3	25:m:12:SER:HA	1.73	0.70
12:f:215:ASP:HA	12:f:218:GLU:CG	2.21	0.70
27:o:138:PHE:O	27:o:142:PHE:HB2	1.91	0.70
5:Y:118:GLU:O	5:Y:122:THR:CG2	2.35	0.70
3:W:282:GLU:O	3:W:286:LEU:HB2	1.90	0.70
20:h:148:GLN:O	20:h:155:TYR:HA	1.90	0.70
12:f:691:PRO:HA	12:f:694:LEU:HB2	1.74	0.70
9:c:192:LEU:CD1	9:c:196:LEU:HD13	2.22	0.70
4:X:371:ASP:OD1	5:Y:233:ARG:HD3	1.92	0.70
16:D:115:ILE:CG2	16:D:139:LEU:HD13	2.17	0.70
1:U:169:GLU:HG3	1:U:171:ASN:H	1.57	0.70
2:V:167:LEU:HD12	2:V:171:VAL:CG2	2.22	0.70
6:Z:223:ASN:ND2	6:Z:227:ILE:CG1	2.53	0.70
19:g:46:ASP:O	19:g:222:VAL:CG2	2.40	0.70
31:s:1:ARG:NH1	31:s:2:PHE:O	2.25	0.70
6:Z:10:VAL:HG13	6:Z:163:GLY:HA3	1.73	0.69
10:d:1:MET:CA	10:d:3:GLU:OE2	2.40	0.69
14:B:74:MET:O	14:B:78:PHE:HB2	1.92	0.69
19:G:46:ASP:O	19:G:222:VAL:CG2	2.37	0.69
1:U:376:MET:HA	1:U:739:ALA:HA	1.74	0.69
1:U:603:LEU:HD21	16:D:60:TYR:CD1	2.28	0.69
13:A:41:TYR:HB2	13:A:44:GLN:HB3	1.74	0.69
16:D:115:ILE:HG22	16:D:139:LEU:HD13	1.68	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:D:115:ILE:HD13	16:D:121:ARG:NH2	2.07	0.69
8:b:21:PHE:HD1	8:b:178:SER:O	1.74	0.69
14:B:171:VAL:O	14:B:175:LYS:HB2	1.90	0.69
3:W:315:MET:O	3:W:319:THR:OG1	2.09	0.69
5:Y:118:GLU:CA	5:Y:121:LEU:HD21	2.18	0.69
6:Z:243:GLN:OE1	6:Z:243:GLN:HA	1.92	0.69
10:d:5:LEU:HD21	10:d:22:GLU:OE1	1.92	0.69
12:f:296:PHE:CA	12:f:807:ARG:NE	2.46	0.69
13:A:73:ALA:HA	14:B:140:ASP:OD2	1.91	0.69
29:Q:78:THR:O	29:Q:82:ASN:HB2	1.93	0.69
7:a:54:ASP:HA	7:a:57:ILE:HG22	1.74	0.69
10:d:3:GLU:O	10:d:25:ARG:NE	2.25	0.69
2:V:27:PRO:N	2:V:28:PRO:CD	2.56	0.69
4:X:414:LEU:O	4:X:418:ALA:HB3	1.93	0.69
11:e:47:ASN:O	11:e:51:ASP:OD1	2.10	0.69
12:f:296:PHE:HA	12:f:807:ARG:CD	2.22	0.69
15:C:113:ARG:CD	15:C:127:LEU:CD1	2.70	0.69
19:g:133:PRO:CG	25:m:14:PHE:CE2	2.26	0.69
28:p:62:THR:OG1	29:q:85:ARG:NH2	2.26	0.69
2:V:358:MET:O	2:V:362:LEU:HB2	1.93	0.69
8:b:26:LEU:O	8:b:30:GLN:HB2	1.92	0.69
16:D:85:ILE:HD11	17:E:68:LYS:NZ	2.05	0.69
17:E:116:ASP:OD2	17:E:118:LEU:HB2	1.91	0.69
31:S:1:ARG:NH1	31:S:2:PHE:O	2.25	0.69
16:D:151:ILE:HD12	16:D:151:ILE:N	2.02	0.69
12:f:838:ARG:HH11	12:f:839:PRO:HD3	1.57	0.69
15:C:90:HIS:CG	15:C:91:PRO:CD	2.61	0.68
22:J:160:ALA:O	22:J:169:ARG:NH2	2.25	0.68
11:e:48:VAL:HG13	11:e:52:PHE:HD2	1.50	0.68
9:c:154:LYS:HA	9:c:154:LYS:CE	2.23	0.68
15:C:113:ARG:HB2	15:C:127:LEU:CG	2.18	0.68
17:E:83:CYS:HB2	17:E:89:LYS:HE2	1.74	0.68
2:V:162:GLU:O	2:V:167:LEU:HD21	1.93	0.68
29:q:21:ALA:HB3	29:q:29:LYS:HB3	1.75	0.68
5:Y:29:PRO:HB2	5:Y:32:ARG:HB3	1.74	0.68
6:Z:146:ASP:O	7:a:178:ARG:NH1	2.27	0.68
10:d:155:LYS:HZ2	10:d:171:LEU:CG	2.05	0.68
1:U:229:VAL:O	1:U:233:LEU:HB2	1.94	0.68
23:K:167:ALA:H	24:L:56:LEU:HD13	1.59	0.68
8:b:21:PHE:CD2	8:b:177:PRO:HA	2.29	0.68
6:Z:223:ASN:OD1	6:Z:226:ILE:HG23	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:T:126:ASP:HB2	32:T:130:VAL:O	1.94	0.68
5:Y:118:GLU:O	5:Y:121:LEU:HG	1.94	0.68
17:E:113:ARG:HH22	17:E:220:ASN:HB3	1.59	0.68
18:F:252:ALA:HB3	18:F:255:GLN:HB2	1.76	0.68
29:q:78:THR:O	29:q:82:ASN:HB2	1.93	0.68
32:t:126:ASP:HB2	32:t:130:VAL:O	1.94	0.68
12:f:807:ARG:NH2	12:f:878:GLU:OE2	2.27	0.67
17:E:101:ASP:HB3	17:E:106:THR:H	1.59	0.67
1:U:17:PRO:O	1:U:55:ARG:NH1	2.27	0.67
1:U:458:ILE:O	1:U:462:LEU:HB2	1.94	0.67
12:f:764:LEU:CD1	12:f:774:GLY:HA3	2.24	0.67
14:B:251:VAL:HG12	14:B:253:SER:H	1.58	0.67
29:q:37:LYS:NZ	29:q:39:SER:O	2.27	0.67
22:j:200:GLN:HA	22:j:200:GLN:HE21	1.59	0.67
1:U:102:ALA:HA	15:C:23:TYR:HD1	1.59	0.67
2:V:219:GLU:HG3	2:V:256:ARG:HH12	1.58	0.67
5:Y:120:ALA:O	5:Y:124:PHE:CE2	2.47	0.67
21:I:160:LYS:NZ	22:J:54:GLN:O	2.27	0.67
12:f:559:PRO:HB2	12:f:594:LEU:HG	1.76	0.67
17:E:199:VAL:HG23	17:E:201:SER:H	1.59	0.67
2:V:198:GLN:O	2:V:202:ALA:HB3	1.94	0.67
3:W:316:ARG:HD2	3:W:316:ARG:H	1.59	0.67
12:f:764:LEU:HD11	12:f:774:GLY:CA	2.25	0.67
5:Y:101:ARG:NH2	5:Y:126:LYS:O	2.27	0.67
12:f:673:ARG:NH1	12:f:712:LYS:CD	2.57	0.67
14:B:317:ASP:OD2	14:B:343:ARG:NH2	2.28	0.67
7:a:35:HIS:HE1	8:b:17:ARG:HE	1.43	0.67
8:b:9:CYS:HA	8:b:52:ILE:O	1.94	0.67
25:m:214:SER:OG	25:m:224:HIS:NE2	2.24	0.67
31:s:1:ARG:HH21	32:t:2:GLN:HE22	1.42	0.67
8:b:22:LEU:HD21	8:b:179:LEU:HA	1.75	0.67
1:U:602:LEU:HD23	1:U:602:LEU:C	2.19	0.67
16:D:87:LEU:HB3	17:E:80:VAL:HB	1.76	0.67
16:D:345:PHE:HB3	16:D:360:LEU:HD23	1.77	0.67
2:V:167:LEU:O	2:V:171:VAL:HG12	1.93	0.66
12:f:673:ARG:NE	12:f:712:LYS:HD3	2.10	0.66
2:V:167:LEU:HG	2:V:171:VAL:HG11	1.77	0.66
5:Y:297:ARG:HD3	11:e:52:PHE:CE2	2.27	0.66
12:f:838:ARG:HD3	12:f:839:PRO:HD3	1.67	0.66
16:D:119:ILE:O	16:D:121:ARG:NH1	2.29	0.66
17:E:244:SER:H	18:F:300:LYS:HA	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:213:GLN:O	12:f:217:LEU:CB	2.43	0.66
12:f:712:LYS:O	12:f:715:HIS:CB	2.43	0.66
15:C:78:ARG:HH12	15:C:80:MET:HE3	1.58	0.66
30:r:153:TYR:O	30:r:157:ARG:HB2	1.96	0.66
2:V:331:LEU:C	2:V:334:VAL:HG22	2.10	0.66
15:C:113:ARG:CD	15:C:127:LEU:HD12	2.24	0.66
15:C:127:LEU:HD22	15:C:128:PRO:CD	2.25	0.66
29:Q:21:ALA:HB3	29:Q:29:LYS:HB3	1.75	0.66
29:Q:27:GLN:NE2	29:q:169:LYS:O	2.28	0.66
29:Q:37:LYS:NZ	29:Q:39:SER:O	2.27	0.66
5:Y:297:ARG:NH2	11:e:52:PHE:CD2	2.55	0.66
12:f:240:VAL:HG22	12:f:257:ARG:NH2	2.11	0.66
3:W:343:SER:O	3:W:347:GLY:HA3	1.96	0.66
16:D:352:MET:HE1	16:D:379:CYS:HB3	1.76	0.66
18:F:232:GLY:HA2	36:F:501:ADP:H5'2	1.78	0.66
30:R:153:TYR:O	30:R:157:ARG:HB2	1.96	0.66
25:m:51:LYS:HB3	25:m:210:GLU:HB3	1.78	0.66
1:U:643:SER:O	1:U:649:ARG:NH1	2.29	0.66
12:f:342:PRO:HG2	12:f:345:PRO:HG3	1.78	0.66
13:A:396:ALA:C	13:A:401:ARG:HG2	2.20	0.66
22:j:144:LEU:HD11	22:j:156:TRP:HB2	1.78	0.66
25:m:215:TRP:CE3	25:m:228:PRO:HD3	2.13	0.66
9:c:154:LYS:HA	9:c:154:LYS:HE2	1.77	0.66
16:D:206:GLY:O	16:D:312:ASN:ND2	2.29	0.66
2:V:84:LYS:HG2	2:V:123:SER:HB2	1.77	0.65
2:V:210:CYS:O	2:V:214:HIS:HB2	1.96	0.65
15:C:137:LEU:CD1	15:C:220:VAL:CB	2.62	0.65
15:C:163:GLU:HA	15:C:167:LEU:HD13	1.78	0.65
12:f:575:ALA:O	12:f:579:ALA:HB3	1.97	0.65
12:f:814:SER:HA	12:f:882:LEU:HD12	1.77	0.65
15:C:90:HIS:CB	15:C:91:PRO:CD	2.72	0.65
16:D:242:GLU:O	16:D:246:MET:HB2	1.96	0.65
23:K:36:THR:HA	23:K:171:GLY:HA3	1.78	0.65
29:q:143:LEU:O	29:q:147:TYR:HB2	1.96	0.65
18:F:228:PRO:O	18:F:233:LYS:NZ	2.29	0.65
26:N:177:ALA:HA	26:N:185:GLU:O	1.96	0.65
2:V:371:ASN:OD1	2:V:427:GLN:NE2	2.30	0.65
13:A:297:ARG:HH22	18:F:306:VAL:HG21	1.62	0.65
20:H:71:HIS:HA	20:H:218:PHE:H	1.61	0.65
29:Q:143:LEU:O	29:Q:147:TYR:HB2	1.96	0.65
23:k:36:THR:HA	23:k:171:GLY:HA3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:144:ASP:H	2:V:150:ARG:HH22	1.44	0.65
20:h:71:HIS:HA	20:h:218:PHE:H	1.61	0.65
26:n:177:ALA:HA	26:n:185:GLU:O	1.96	0.65
2:V:79:VAL:HG13	2:V:81:GLN:H	1.62	0.65
2:V:443:ARG:HG2	10:d:184:LYS:HE3	1.79	0.65
8:b:34:ASN:O	8:b:38:HIS:ND1	2.27	0.65
16:D:354:LEU:HD12	16:D:394:VAL:HG12	1.77	0.65
5:Y:168:ILE:HG23	5:Y:173:ASP:HB2	1.78	0.65
6:Z:151:THR:HA	7:a:146:PRO:HB2	1.78	0.65
10:d:122:LEU:HB2	10:d:125:LYS:HB2	1.79	0.65
15:C:69:GLN:HG3	15:C:118:ASN:HD21	1.60	0.65
4:X:421:LEU:HD11	6:Z:280:ILE:HD13	1.79	0.65
5:Y:235:ASP:O	5:Y:239:LYS:HB3	1.97	0.65
12:f:257:ARG:HG3	12:f:272:LEU:HD13	1.78	0.65
27:O:163:ILE:HG12	27:O:170:GLY:HA2	1.79	0.65
7:a:32:LYS:O	8:b:18:ASN:ND2	2.30	0.65
7:a:35:HIS:CE1	8:b:15:TYR:HA	2.32	0.65
13:A:221:GLY:O	13:A:225:CYS:HB2	1.97	0.65
3:W:401:THR:HG23	3:W:402:ILE:HD12	1.79	0.65
6:Z:172:VAL:HG13	9:c:217:LEU:HD21	1.79	0.65
12:f:844:VAL:HG23	14:B:212:GLU:HB3	1.77	0.65
13:A:111:TYR:O	13:A:122:VAL:HA	1.96	0.65
13:A:239:ARG:HA	13:A:273:PHE:HB3	1.79	0.65
25:M:175:GLU:HA	25:M:178:LYS:HD3	1.79	0.65
1:U:456:ASP:O	1:U:460:TYR:HB3	1.96	0.64
2:V:28:PRO:O	2:V:32:PRO:HD3	1.95	0.64
14:B:245:ALA:HB1	14:B:279:PRO:O	1.98	0.64
16:D:354:LEU:H	16:D:394:VAL:HG23	1.62	0.64
1:U:77:SER:O	1:U:81:ALA:HB2	1.98	0.64
2:V:89:LYS:HD2	2:V:93:PHE:HE2	1.62	0.64
2:V:296:LYS:HE2	2:V:305:ALA:HB2	1.79	0.64
2:V:330:LYS:O	2:V:334:VAL:HG22	1.98	0.64
17:E:247:THR:O	17:E:251:ARG:NH2	2.30	0.64
7:a:19:PRO:HA	7:a:22:TRP:HD1	1.61	0.64
12:f:785:ARG:HH12	12:f:790:GLN:HB2	1.59	0.64
19:g:133:PRO:HG2	25:m:14:PHE:HE2	0.51	0.64
2:V:163:VAL:HG22	2:V:175:MET:HG2	1.77	0.64
9:c:149:GLN:HB3	16:D:81:ARG:HH11	1.63	0.64
19:g:142:GLY:O	19:g:149:PRO:HA	1.98	0.64
21:i:232:GLU:O	21:i:235:GLN:NE2	2.29	0.64
2:V:496:PHE:H	2:V:497:PRO:HD2	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:c:89:PRO:O	9:c:93:ALA:HB2	1.98	0.64
22:J:96:LEU:HD12	29:Q:62:LYS:HG3	1.80	0.64
22:J:144:LEU:HD11	22:J:156:TRP:HB2	1.78	0.64
25:M:51:LYS:HB3	25:M:210:GLU:HB3	1.78	0.64
5:Y:69:LEU:HA	5:Y:72:LYS:HE3	1.80	0.64
13:A:192:GLU:HB2	13:A:196:LEU:HD13	1.79	0.64
24:L:206:THR:H	24:L:209:ASN:HD21	1.46	0.64
26:n:178:ALA:O	26:n:184:VAL:HA	1.98	0.64
2:V:468:SER:CB	6:Z:247:LYS:HZ3	2.00	0.64
10:d:172:ASP:O	10:d:175:ARG:N	2.30	0.64
12:f:766:GLN:NE2	12:f:807:ARG:CZ	2.60	0.64
1:U:402:PHE:HB2	1:U:437:TYR:HB3	1.78	0.64
5:Y:160:ASN:HA	5:Y:163:LYS:HB2	1.79	0.64
6:Z:25:ARG:HB2	9:c:104:ARG:HG2	1.78	0.64
10:d:38:THR:HG21	10:d:47:GLN:HE21	1.63	0.64
10:d:168:ASP:OD1	10:d:171:LEU:CD2	2.46	0.64
12:f:145:VAL:O	12:f:149:GLU:HB3	1.97	0.64
12:f:785:ARG:HH22	12:f:790:GLN:CD	2.06	0.64
16:D:150:SER:OG	16:D:153:MET:CE	2.46	0.64
26:N:108:GLY:O	26:N:110:GLN:NE2	2.29	0.64
5:Y:304:TYR:O	5:Y:308:LEU:HB2	1.98	0.64
14:B:103:ARG:HH22	14:B:151:LEU:HD13	1.63	0.64
16:D:354:LEU:CG	16:D:394:VAL:HG12	2.27	0.64
9:c:59:GLY:HA3	9:c:69:VAL:HA	1.79	0.64
26:N:178:ALA:O	26:N:184:VAL:HA	1.98	0.64
27:o:163:ILE:HG12	27:o:170:GLY:HA2	1.79	0.64
26:n:109:GLY:O	26:n:122:ARG:NH2	2.31	0.63
1:U:603:LEU:HD21	16:D:60:TYR:CE1	2.33	0.63
10:d:4:GLN:O	10:d:4:GLN:HG2	1.99	0.63
12:f:813:LYS:HD3	12:f:815:HIS:HE1	1.62	0.63
2:V:21:GLY:O	2:V:25:GLU:HB2	1.98	0.63
6:Z:223:ASN:ND2	6:Z:226:ILE:H	1.96	0.63
20:H:123:GLN:NE2	21:I:128:ARG:O	2.31	0.63
27:O:214:GLU:HA	28:P:198:ARG:HG2	1.80	0.63
21:i:85:VAL:O	21:i:89:GLU:HB2	1.99	0.63
5:Y:336:ARG:O	5:Y:340:ALA:HB2	1.99	0.63
6:Z:123:ILE:HB	6:Z:136:GLU:HB3	1.79	0.63
28:P:48:ARG:HH12	28:P:114:PRO:HA	1.64	0.63
7:a:341:LEU:HB2	7:a:345:GLN:HE21	1.62	0.63
12:f:209:MET:HG3	12:f:211:ILE:H	1.63	0.63
30:R:19:ARG:NH2	28:p:205:ASP:OD2	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:m:175:GLU:HA	25:m:178:LYS:HD3	1.79	0.63
15:C:19:GLY:O	15:C:23:TYR:HB3	1.98	0.63
15:C:212:ILE:O	15:C:246:ILE:HA	1.97	0.63
25:m:47:PHE:HB2	25:m:214:SER:HB3	1.80	0.63
12:f:240:VAL:HA	12:f:257:ARG:NH1	2.14	0.63
13:A:339:ARG:NH2	18:F:405:MET:SD	2.72	0.63
22:J:200:GLN:OE1	22:J:202:GLY:N	2.31	0.63
1:U:596:ASN:OD1	16:D:56:VAL:HG11	1.99	0.63
3:W:268:LYS:NZ	3:W:302:TYR:OH	2.32	0.63
7:a:227:ASN:O	7:a:231:GLN:NE2	2.32	0.63
18:F:93:VAL:HA	18:F:124:ILE:HG22	1.80	0.63
19:g:132:ARG:CG	25:m:124:LEU:HA	2.28	0.63
2:V:171:VAL:HG13	2:V:175:MET:HE3	1.73	0.63
34:A:501:ATP:O1G	14:B:343:ARG:NH2	2.31	0.63
19:G:142:GLY:O	19:G:149:PRO:HA	1.98	0.63
26:N:109:GLY:O	26:N:122:ARG:NH2	2.31	0.63
1:U:101:ILE:HD11	15:C:22:GLN:HG3	1.80	0.62
16:D:92:PHE:CE2	16:D:125:LYS:HD3	2.33	0.62
16:D:355:SER:OG	16:D:358:VAL:CG2	2.46	0.62
26:n:101:ALA:HA	26:n:110:GLN:O	1.99	0.62
1:U:21:GLU:HG3	1:U:56:SER:OG	1.99	0.62
2:V:171:VAL:CG2	2:V:175:MET:HE3	2.29	0.62
2:V:171:VAL:O	2:V:175:MET:HG3	1.99	0.62
14:B:65:LEU:O	14:B:69:LYS:N	2.26	0.62
16:D:354:LEU:CB	16:D:394:VAL:HG12	2.27	0.62
21:I:85:VAL:O	21:I:89:GLU:HB2	1.98	0.62
26:N:41:ILE:HG12	26:N:76:VAL:HG22	1.82	0.62
19:g:134:LEU:O	19:g:136:CYS:N	2.31	0.62
28:p:48:ARG:HH12	28:p:114:PRO:HA	1.64	0.62
1:U:46:GLU:HA	1:U:49:TYR:HB3	1.81	0.62
7:a:8:LEU:HD23	7:a:29:TYR:OH	1.98	0.62
12:f:785:ARG:CZ	12:f:790:GLN:CB	2.66	0.62
21:I:232:GLU:O	21:I:235:GLN:NE2	2.29	0.62
22:J:50:VAL:CA	22:J:52:LYS:CE	2.76	0.62
28:P:58:THR:O	29:Q:85:ARG:NH2	2.32	0.62
19:g:86:ASP:OD1	19:g:134:LEU:HD22	1.99	0.62
26:n:108:GLY:O	26:n:110:GLN:NE2	2.29	0.62
3:W:273:TYR:HA	3:W:276:LEU:HB2	1.82	0.62
16:D:354:LEU:CD1	16:D:394:VAL:CG1	2.77	0.62
31:S:75:TYR:O	31:S:79:ASN:HB2	1.99	0.62
1:U:607:VAL:O	1:U:615:ARG:NH1	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:28:PRO:HD2	2:V:29:PRO:HD2	1.82	0.62
2:V:331:LEU:CD1	2:V:334:VAL:HG21	2.25	0.62
15:C:387:VAL:O	15:C:391:MET:HB2	2.00	0.62
27:O:7:VAL:HG22	27:O:12:ILE:HG12	1.82	0.62
12:f:328:SER:OG	12:f:808:ASN:ND2	2.23	0.62
12:f:680:ARG:NH2	12:f:778:LEU:CG	2.63	0.62
5:Y:192:ARG:NH2	5:Y:290:PRO:O	2.32	0.62
6:Z:66:SER:OG	6:Z:103:LYS:NZ	2.33	0.62
6:Z:109:ASN:ND2	6:Z:140:SER:OG	2.32	0.62
12:f:215:ASP:O	12:f:218:GLU:CD	2.42	0.62
25:M:73:VAL:HA	25:M:139:SER:HB2	1.82	0.62
31:S:1:ARG:HH21	32:T:2:GLN:HE22	1.47	0.62
22:j:86:ARG:HE	22:j:114:LEU:HD11	1.65	0.62
31:s:75:TYR:O	31:s:79:ASN:HB2	1.99	0.62
13:A:294:GLU:HA	13:A:297:ARG:HH11	1.65	0.62
16:D:401:LYS:HA	16:D:404:LYS:HE2	1.80	0.62
22:J:86:ARG:HE	22:J:114:LEU:HD11	1.65	0.62
12:f:99:LEU:HG	12:f:101:PRO:HD2	1.82	0.62
16:D:284:GLU:OE1	16:D:287:ARG:NH1	2.32	0.62
27:O:40:ASN:O	27:O:102:GLY:HA2	2.00	0.62
7:a:290:GLN:O	7:a:330:ARG:NH2	2.33	0.62
12:f:150:GLU:O	12:f:156:HIS:ND1	2.33	0.62
12:f:183:PRO:O	12:f:187:LEU:HB3	1.99	0.62
12:f:707:LEU:CG	12:f:737:ASN:OD1	2.47	0.62
13:A:101:ILE:HD12	13:A:138:MET:HB3	1.80	0.62
15:C:113:ARG:NH2	15:C:127:LEU:CD1	2.54	0.62
20:H:119:GLN:NE2	21:I:82:ASP:OD1	2.32	0.62
2:V:357:LEU:O	2:V:360:TYR:N	2.33	0.61
12:f:755:ASP:OD1	12:f:756:PRO:HD2	1.99	0.61
26:N:101:ALA:HA	26:N:110:GLN:O	1.99	0.61
30:r:21:THR:HA	30:r:27:ALA:H	1.65	0.61
13:A:401:ARG:CG	13:A:401:ARG:HH11	2.13	0.61
24:l:206:THR:H	24:l:209:ASN:HD21	1.46	0.61
1:U:600:ARG:CZ	16:D:56:VAL:CG1	2.71	0.61
9:c:155:VAL:HG23	9:c:157:ILE:HG22	1.81	0.61
12:f:281:ILE:HG22	12:f:282:PHE:HE2	1.55	0.61
13:A:401:ARG:HG2	13:A:401:ARG:HH11	1.65	0.61
15:C:88:LYS:CB	15:C:94:LYS:HG2	2.29	0.61
7:a:43:ASP:HA	7:a:46:GLN:HG2	1.82	0.61
16:D:354:LEU:CB	16:D:394:VAL:CB	2.64	0.61
30:R:21:THR:HA	30:R:27:ALA:H	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:62:LEU:HD12	1:U:84:ALA:HB1	1.82	0.61
2:V:171:VAL:HG11	2:V:175:MET:CE	2.29	0.61
4:X:371:ASP:OD1	5:Y:233:ARG:CD	2.48	0.61
5:Y:104:MET:O	5:Y:108:ALA:HB2	2.00	0.61
9:c:51:MET:HA	9:c:82:VAL:HG22	1.82	0.61
9:c:267:PRO:HA	9:c:270:LEU:HB2	1.83	0.61
12:f:276:GLU:O	12:f:286:LYS:NZ	2.33	0.61
12:f:586:PRO:HA	12:f:589:SER:HB2	1.81	0.61
12:f:723:TYR:O	12:f:727:PHE:HB3	2.00	0.61
28:P:205:ASP:OD2	30:r:19:ARG:NH2	2.33	0.61
27:o:40:ASN:O	27:o:102:GLY:HA2	2.00	0.61
1:U:600:ARG:O	1:U:604:HIS:HB2	2.01	0.61
2:V:222:ASP:HB3	2:V:223:LYS:HE2	1.82	0.61
14:B:49:LEU:HD13	14:B:51:LEU:H	1.66	0.61
15:C:113:ARG:NE	15:C:127:LEU:HD13	2.07	0.61
15:C:127:LEU:HD22	15:C:128:PRO:HD2	1.82	0.61
26:n:41:ILE:HG12	26:n:76:VAL:HG22	1.82	0.61
2:V:166:TYR:CE1	2:V:216:ARG:C	2.70	0.61
3:W:375:MET:HE2	3:W:386:VAL:HB	1.81	0.61
5:Y:110:TYR:O	5:Y:114:ILE:HB	2.00	0.61
5:Y:112:CYS:CA	5:Y:120:ALA:HB2	2.30	0.61
10:d:2:TYR:O	10:d:25:ARG:NH2	2.33	0.61
12:f:243:PRO:HA	12:f:247:ALA:HB3	1.83	0.61
12:f:281:ILE:CG2	12:f:282:PHE:CD2	2.83	0.61
13:A:396:ALA:O	13:A:401:ARG:CG	2.43	0.61
15:C:90:HIS:HE1	16:D:110:ASN:H	1.48	0.61
16:D:63:ASP:O	16:D:67:ASN:HB2	2.00	0.61
19:g:144:ASP:HB3	19:g:147:GLN:HB2	1.82	0.61
21:i:35:LEU:HA	21:i:162:THR:O	2.01	0.61
25:m:73:VAL:HA	25:m:139:SER:HB2	1.82	0.61
6:Z:107:ALA:O	6:Z:111:LEU:N	2.29	0.61
6:Z:238:PRO:HG2	9:c:309:PHE:HB3	1.82	0.61
12:f:472:HIS:CG	12:f:478:ARG:HD3	2.28	0.61
19:G:144:ASP:HB3	19:G:147:GLN:HB2	1.83	0.61
21:i:218:ARG:NH1	21:i:223:THR:OG1	2.34	0.61
7:a:321:LYS:HB2	7:a:335:TRP:HB3	1.83	0.61
9:c:146:ASP:OD2	9:c:149:GLN:NE2	2.34	0.61
1:U:82:LEU:O	1:U:129:ARG:NH2	2.31	0.60
2:V:497:PRO:HB2	2:V:498:PRO:CD	2.30	0.60
5:Y:141:VAL:HG13	5:Y:160:ASN:HB2	1.83	0.60
12:f:344:VAL:HG11	12:f:391:LEU:HG	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:C:113:ARG:NH1	15:C:127:LEU:HD11	2.03	0.60
19:g:120:ASP:OD1	20:h:84:ARG:NH1	2.34	0.60
10:d:95:MET:O	10:d:99:LEU:HB2	2.01	0.60
12:f:93:PRO:HB2	12:f:97:LYS:HG3	1.81	0.60
12:f:167:ALA:HA	12:f:170:TRP:HD1	1.67	0.60
20:H:219:ARG:HH12	20:H:221:LEU:HD23	1.66	0.60
27:O:81:ARG:HA	27:O:84:LYS:HE3	1.83	0.60
20:h:219:ARG:HH12	20:h:221:LEU:HD23	1.66	0.60
2:V:350:GLN:CB	2:V:351:PRO:CD	2.45	0.60
12:f:369:ARG:HA	12:f:372:LEU:HD13	1.84	0.60
15:C:196:LYS:NZ	15:C:295:THR:O	2.33	0.60
16:D:92:PHE:CE2	16:D:125:LYS:CD	2.83	0.60
23:K:76:CYS:SG	23:K:77:ALA:N	2.74	0.60
28:p:2:SER:OG	28:p:3:ILE:N	2.34	0.60
2:V:68:ASP:OD1	11:e:1:MET:N	2.35	0.60
3:W:190:MET:HB2	3:W:202:THR:HG23	1.83	0.60
4:X:371:ASP:OD1	5:Y:233:ARG:CG	2.49	0.60
9:c:115:HIS:HB3	9:c:118:PHE:HB2	1.83	0.60
15:C:326:LEU:HD22	15:C:345:ARG:HE	1.67	0.60
21:I:35:LEU:HA	21:I:162:THR:O	2.00	0.60
2:V:349:ARG:HA	2:V:353:LEU:HB2	1.83	0.60
12:f:613:LEU:HB2	14:B:74:MET:HE3	1.82	0.60
27:O:6:VAL:HG23	27:O:124:TYR:HB3	1.84	0.60
6:Z:94:TRP:CZ3	6:Z:108:ILE:HG21	2.36	0.60
13:A:401:ARG:HB3	13:A:401:ARG:NH1	2.17	0.60
15:C:299:ASP:OD1	15:C:299:ASP:N	2.35	0.60
2:V:223:LYS:O	2:V:223:LYS:HG2	2.00	0.60
5:Y:173:ASP:H	15:C:335:LYS:HA	1.65	0.60
7:a:255:TRP:O	7:a:258:GLN:NE2	2.34	0.60
9:c:141:VAL:HG22	9:c:161:ARG:HH11	1.67	0.60
12:f:291:GLN:HE22	12:f:324:VAL:HG11	1.66	0.60
12:f:828:ARG:HH22	12:f:842:VAL:HG23	1.66	0.60
13:A:85:GLN:HA	13:A:88:GLN:HB3	1.83	0.60
25:m:215:TRP:HZ3	25:m:228:PRO:HD3	0.79	0.60
32:t:126:ASP:CB	32:t:130:VAL:O	2.50	0.60
2:V:468:SER:HB3	6:Z:247:LYS:HE3	1.77	0.60
6:Z:246:VAL:HG13	10:d:235:THR:HG1	1.67	0.60
12:f:503:PRO:O	12:f:507:ASP:HB2	2.02	0.60
14:B:168:ASP:HB3	14:B:171:VAL:HG23	1.83	0.60
30:R:115:ASP:HB2	30:R:119:ASN:HB2	1.84	0.60
21:i:2:SER:N	24:l:123:TYR:HH	1.99	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:X:402:GLU:HB2	9:c:249:LEU:HD11	1.83	0.60
6:Z:135:THR:HG21	6:Z:162:ILE:HD11	1.84	0.60
15:C:337:ASN:ND2	15:C:376:VAL:O	2.34	0.60
27:o:7:VAL:HG22	27:o:12:ILE:HG12	1.82	0.60
2:V:167:LEU:C	2:V:171:VAL:HG11	2.26	0.60
7:a:129:GLN:HG3	7:a:130:VAL:HG23	1.83	0.60
16:D:83:GLN:H	16:D:83:GLN:NE2	1.99	0.60
16:D:354:LEU:O	16:D:354:LEU:HD23	2.01	0.60
1:U:646:PRO:HA	1:U:649:ARG:HB2	1.83	0.59
2:V:418:SER:HA	2:V:457:TYR:HA	1.84	0.59
12:f:737:ASN:HD22	12:f:746:ARG:CZ	2.13	0.59
22:J:73:PHE:HA	22:J:131:ALA:HA	1.84	0.59
23:k:209:LYS:O	23:k:214:ASN:ND2	2.34	0.59
2:V:27:PRO:N	2:V:28:PRO:HD3	2.17	0.59
12:f:168:LYS:O	12:f:172:GLU:HB2	2.02	0.59
12:f:564:LEU:HD22	12:f:776:LEU:HG	1.83	0.59
16:D:115:ILE:HD12	16:D:115:ILE:C	2.27	0.59
23:K:183:GLU:HG3	23:K:184:VAL:HG13	1.83	0.59
23:K:209:LYS:O	23:K:214:ASN:ND2	2.35	0.59
24:L:26:MET:HE1	24:L:148:CYS:HB2	1.84	0.59
24:L:48:ALA:HB1	24:L:62:LYS:HE3	1.84	0.59
27:O:100:LEU:HB3	27:O:111:TYR:HB2	1.84	0.59
23:k:76:CYS:SG	23:k:77:ALA:N	2.74	0.59
24:l:42:THR:O	24:l:137:TYR:OH	2.21	0.59
2:V:497:PRO:N	2:V:498:PRO:HD2	2.17	0.59
10:d:5:LEU:HD21	10:d:22:GLU:CD	2.26	0.59
12:f:708:ASP:O	12:f:712:LYS:HG2	1.95	0.59
16:D:173:GLN:HE22	16:D:334:PRO:HD2	1.67	0.59
26:N:29:ARG:NH1	27:O:139:GLU:OE2	2.36	0.59
32:T:126:ASP:CB	32:T:130:VAL:O	2.50	0.59
23:k:183:GLU:HG3	23:k:184:VAL:HG13	1.83	0.59
1:U:499:THR:O	1:U:503:GLN:NE2	2.33	0.59
1:U:598:ALA:O	1:U:602:LEU:HB2	2.02	0.59
3:W:422:ASN:O	3:W:426:ASN:HB2	2.03	0.59
8:b:180:ALA:HA	8:b:183:LEU:HD13	1.83	0.59
9:c:52:GLU:H	9:c:82:VAL:HG13	1.67	0.59
12:f:335:ARG:HB3	12:f:853:VAL:HG21	1.84	0.59
15:C:113:ARG:CG	15:C:127:LEU:CD1	2.69	0.59
16:D:56:VAL:HG23	16:D:56:VAL:O	2.03	0.59
16:D:336:PRO:O	16:D:341:LYS:NZ	2.34	0.59
19:g:132:ARG:CD	25:m:124:LEU:HD23	2.31	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:242:LEU:HA	1:U:245:ALA:HB3	1.83	0.59
12:f:223:GLU:HA	14:B:60:LEU:HD21	1.84	0.59
25:M:134:SER:HB2	25:M:153:PRO:HD3	1.85	0.59
29:Q:6:GLY:HA2	29:Q:15:VAL:HG12	1.84	0.59
27:o:100:LEU:HB3	27:o:111:TYR:HB2	1.84	0.59
29:q:6:GLY:HA2	29:q:15:VAL:HG12	1.84	0.59
5:Y:293:ARG:HD3	11:e:52:PHE:HB3	1.85	0.59
12:f:764:LEU:CD1	12:f:773:LYS:O	2.50	0.59
16:D:92:PHE:HA	16:D:103:VAL:HG12	1.83	0.59
26:N:40:ARG:NH2	26:N:181:GLU:O	2.34	0.59
26:N:144:ARG:NH2	26:N:151:GLU:OE1	2.36	0.59
28:P:169:GLN:O	28:P:173:ASN:ND2	2.36	0.59
26:n:38:HIS:HB3	26:n:41:ILE:HB	1.85	0.59
29:Q:117:TYR:HB3	29:Q:125:ALA:HB3	1.85	0.59
24:l:26:MET:HE1	24:l:148:CYS:HB2	1.85	0.59
24:l:48:ALA:HB1	24:l:62:LYS:HE3	1.84	0.59
25:m:215:TRP:HZ3	25:m:228:PRO:N	2.00	0.59
1:U:218:GLN:NE2	1:U:752:THR:O	2.36	0.59
26:N:38:HIS:HB3	26:N:41:ILE:HB	1.85	0.59
3:W:443:THR:HG21	6:Z:204:LYS:HG3	1.85	0.59
9:c:25:VAL:O	9:c:176:GLN:NE2	2.35	0.59
16:D:354:LEU:HA	16:D:394:VAL:O	2.02	0.59
22:j:38:ARG:NH1	22:j:181:ILE:O	2.35	0.59
28:p:169:GLN:O	28:p:173:ASN:ND2	2.36	0.59
10:d:1:MET:C	10:d:3:GLU:OE2	2.45	0.59
13:A:258:ARG:HH12	18:F:255:GLN:HA	1.67	0.59
15:C:147:THR:HG22	15:C:150:MET:HE3	1.85	0.59
16:D:354:LEU:HD12	16:D:394:VAL:HG11	1.85	0.59
1:U:59:PHE:HA	1:U:62:LEU:HD13	1.85	0.58
5:Y:319:MET:O	5:Y:323:PHE:HB3	2.03	0.58
7:a:264:ASN:HB3	7:a:267:GLN:HE21	1.67	0.58
14:B:412:MET:HE1	15:C:177:ALA:HB1	1.85	0.58
16:D:164:TYR:O	16:D:174:LYS:NZ	2.36	0.58
17:E:180:LYS:NZ	34:E:401:ATP:O2G	2.35	0.58
18:F:272:PHE:HD2	18:F:316:GLN:HG3	1.68	0.58
19:G:120:ASP:OD1	20:H:84:ARG:NH1	2.36	0.58
22:J:38:ARG:NH1	22:J:181:ILE:O	2.35	0.58
23:K:157:ASP:HB2	23:K:161:THR:O	2.03	0.58
31:S:187:VAL:HG21	27:o:24:MET:HE3	1.85	0.58
26:n:18:SER:HB2	26:n:31:THR:H	1.68	0.58
2:V:28:PRO:CD	2:V:29:PRO:CD	2.81	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:W:274:VAL:O	3:W:283:GLN:NE2	2.35	0.58
5:Y:57:LEU:HD11	5:Y:63:TRP:HB2	1.86	0.58
15:C:75:GLU:H	15:C:87:VAL:HG13	1.67	0.58
17:E:251:ARG:HB3	17:E:255:ARG:HH12	1.68	0.58
32:T:141:TYR:HA	32:T:144:TYR:HD2	1.68	0.58
27:o:6:VAL:HG23	27:o:124:TYR:HB3	1.84	0.58
32:t:27:LEU:HD22	32:t:184:TYR:HB2	1.85	0.58
1:U:643:SER:O	15:C:57:ARG:NH1	2.36	0.58
1:U:780:SER:HA	1:U:783:TYR:HD2	1.67	0.58
2:V:28:PRO:HD2	2:V:29:PRO:CD	2.32	0.58
8:b:142:ASN:HD22	8:b:172:THR:HA	1.68	0.58
15:C:127:LEU:HD22	15:C:127:LEU:C	2.28	0.58
29:Q:25:ILE:HG13	29:Q:26:VAL:HG13	1.85	0.58
30:R:77:ALA:O	30:R:120:ARG:NH2	2.36	0.58
23:k:157:ASP:HB2	23:k:161:THR:O	2.03	0.58
27:o:81:ARG:HA	27:o:84:LYS:HE3	1.84	0.58
30:r:115:ASP:HB2	30:r:119:ASN:HB2	1.84	0.58
31:s:57:PHE:HD2	31:s:60:ASP:H	1.51	0.58
32:t:141:TYR:HA	32:t:144:TYR:HD2	1.68	0.58
5:Y:173:ASP:HB3	5:Y:176:ARG:HB2	1.84	0.58
10:d:27:LYS:HD3	10:d:30:LEU:HD12	1.86	0.58
12:f:130:ALA:HB1	12:f:133:MET:HE3	1.86	0.58
12:f:680:ARG:NH1	12:f:762:VAL:HB	2.18	0.58
15:C:113:ARG:C	15:C:127:LEU:HB3	2.28	0.58
21:I:33:THR:HA	21:I:165:GLY:HA2	1.86	0.58
22:j:73:PHE:HA	22:j:131:ALA:HA	1.84	0.58
27:o:15:GLY:HA2	27:o:174:ASP:O	2.04	0.58
29:q:117:TYR:HB3	29:q:125:ALA:HB3	1.84	0.58
30:r:77:ALA:O	30:r:120:ARG:NH2	2.36	0.58
2:V:97:ALA:H	2:V:107:ARG:HE	1.52	0.58
7:a:170:ALA:HA	7:a:173:TYR:HB3	1.86	0.58
14:B:111:THR:HA	14:B:148:CYS:O	2.02	0.58
16:D:353:ASN:ND2	16:D:394:VAL:HG23	2.18	0.58
29:Q:8:GLN:NE2	29:Q:9:GLY:O	2.36	0.58
26:n:144:ARG:NH2	26:n:151:GLU:OE1	2.36	0.58
5:Y:118:GLU:HA	5:Y:121:LEU:HD11	1.85	0.58
6:Z:256:GLN:NE2	9:c:295:ASN:O	2.37	0.58
12:f:198:HIS:O	12:f:202:HIS:HB2	2.03	0.58
26:N:18:SER:HB2	26:N:31:THR:H	1.68	0.58
8:b:21:PHE:CZ	8:b:177:PRO:CA	2.77	0.58
12:f:737:ASN:ND2	12:f:746:ARG:HH11	1.96	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:C:221:GLN:HE22	15:C:228:ALA:HB3	1.69	0.58
27:O:15:GLY:HA2	27:O:174:ASP:O	2.04	0.58
23:k:77:ALA:HB3	23:k:142:LEU:HB2	1.86	0.58
29:q:11:ASP:N	29:q:11:ASP:OD1	2.35	0.58
8:b:8:VAL:O	8:b:51:LEU:HA	2.03	0.58
18:F:184:GLN:HE22	18:F:186:SER:HB3	1.67	0.58
19:G:137:CYS:SG	19:G:138:MET:N	2.74	0.58
21:I:218:ARG:NH1	21:I:223:THR:OG1	2.34	0.58
29:Q:11:ASP:N	29:Q:11:ASP:OD1	2.35	0.58
21:i:3:ARG:HB2	22:j:5:ARG:HH12	1.69	0.58
26:n:29:ARG:NH1	27:o:139:GLU:OE2	2.36	0.58
26:n:40:ARG:NH2	26:n:181:GLU:O	2.34	0.58
2:V:350:GLN:OE1	2:V:350:GLN:HA	2.04	0.58
12:f:844:VAL:O	12:f:844:VAL:HG22	2.03	0.58
25:m:134:SER:HB2	25:m:153:PRO:HD3	1.85	0.58
2:V:172:VAL:O	2:V:176:MET:HB2	2.03	0.58
7:a:267:GLN:O	7:a:271:LYS:HB2	2.03	0.58
8:b:26:LEU:O	8:b:30:GLN:CB	2.51	0.58
10:d:155:LYS:NZ	10:d:167:ILE:O	2.37	0.58
12:f:438:ASP:HA	12:f:477:MET:HE2	1.86	0.58
13:A:189:GLU:OE2	18:F:409:ARG:NH2	2.37	0.58
16:D:115:ILE:CD1	16:D:121:ARG:NH2	2.67	0.58
28:P:2:SER:OG	28:P:3:ILE:N	2.34	0.58
27:o:98:LEU:HB2	27:o:113:ILE:HB	1.86	0.58
29:q:8:GLN:NE2	29:q:9:GLY:O	2.36	0.58
31:s:49:LYS:O	31:s:112:GLY:HA2	2.04	0.58
7:a:72:ASN:HB2	8:b:17:ARG:HH12	1.68	0.57
8:b:22:LEU:HD22	8:b:22:LEU:N	2.18	0.57
23:K:77:ALA:HB3	23:K:142:LEU:HB2	1.86	0.57
25:M:51:LYS:NZ	25:M:62:SER:O	2.30	0.57
23:k:50:VAL:HG11	23:k:66:LYS:HB2	1.86	0.57
1:U:772:TRP:HB3	1:U:775:LEU:HB2	1.86	0.57
5:Y:262:SER:OG	5:Y:267:ARG:O	2.22	0.57
12:f:302:GLY:HA2	12:f:317:LEU:HD11	1.86	0.57
15:C:113:ARG:NH2	15:C:129:ASN:O	2.36	0.57
15:C:137:LEU:HD11	15:C:220:VAL:HG13	0.60	0.57
15:C:151:ILE:HG21	15:C:158:ILE:HD11	1.85	0.57
31:S:57:PHE:HD2	31:S:60:ASP:H	1.51	0.57
29:q:25:ILE:HG13	29:q:26:VAL:HG13	1.85	0.57
13:A:396:ALA:CA	13:A:401:ARG:HD2	2.10	0.57
31:S:49:LYS:O	31:S:112:GLY:HA2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:n:35:THR:OG1	26:n:45:ARG:NH2	2.38	0.57
2:V:62:HIS:HA	2:V:65:ARG:HB3	1.87	0.57
5:Y:104:MET:O	5:Y:108:ALA:CB	2.52	0.57
12:f:240:VAL:HA	12:f:257:ARG:HH12	1.70	0.57
16:D:115:ILE:HA	16:D:139:LEU:HB2	1.87	0.57
18:F:282:ILE:HG22	18:F:327:LYS:HB2	1.85	0.57
2:V:297:ALA:HA	2:V:301:GLU:HG2	1.84	0.57
15:C:137:LEU:C	15:C:137:LEU:HD23	2.29	0.57
16:D:163:MET:HA	16:D:222:HIS:HE1	1.69	0.57
18:F:210:GLU:HA	18:F:213:GLU:HB2	1.86	0.57
29:q:141:SER:O	29:q:145:ARG:HB2	2.05	0.57
1:U:155:LEU:O	1:U:158:ARG:NH1	2.36	0.57
1:U:198:LEU:HD23	1:U:223:LEU:HD13	1.86	0.57
1:U:600:ARG:CD	16:D:56:VAL:CG1	2.81	0.57
2:V:321:ALA:HA	2:V:325:LYS:HB3	1.87	0.57
8:b:22:LEU:HD11	8:b:179:LEU:CG	2.29	0.57
12:f:94:LYS:HA	12:f:97:LYS:HB2	1.86	0.57
13:A:333:ARG:HE	13:A:336:ARG:HH22	1.52	0.57
16:D:115:ILE:HD13	16:D:121:ARG:HH22	1.68	0.57
18:F:318:ASP:OD2	18:F:344:ARG:NH2	2.38	0.57
19:G:54:LYS:NZ	19:G:215:ILE:O	2.38	0.57
1:U:694:ILE:HG23	1:U:695:MET:HG3	1.85	0.57
2:V:497:PRO:CB	6:Z:278:ASN:HB3	2.34	0.57
5:Y:50:MET:HE2	5:Y:74:LYS:HB3	1.86	0.57
12:f:183:PRO:O	12:f:187:LEU:CB	2.52	0.57
12:f:425:GLY:HA3	12:f:451:VAL:HG11	1.87	0.57
12:f:625:LYS:HB2	12:f:628:ASP:HB3	1.87	0.57
12:f:712:LYS:O	12:f:715:HIS:HB3	2.04	0.57
24:L:42:THR:O	24:L:137:TYR:OH	2.20	0.57
29:Q:36:PHE:HB2	29:Q:44:LEU:HB3	1.87	0.57
29:q:108:ASP:N	29:q:112:GLY:O	2.36	0.57
32:t:9:THR:O	32:t:41:ARG:NH2	2.38	0.57
10:d:67:ASP:O	10:d:71:PHE:CB	2.49	0.57
12:f:281:ILE:HG22	12:f:282:PHE:CD2	2.38	0.57
13:A:73:ALA:HB2	14:B:140:ASP:CG	2.28	0.57
24:L:50:LYS:HB3	24:L:59:HIS:HB3	1.87	0.57
30:R:141:ARG:NH2	29:q:162:LYS:O	2.38	0.57
32:T:27:LEU:HD22	32:T:184:TYR:HB2	1.85	0.57
25:m:229:LYS:HG2	25:m:232:ARG:HH11	1.70	0.57
1:U:465:LEU:HD11	1:U:477:GLY:HA3	1.86	0.57
8:b:2:VAL:O	8:b:44:ASN:ND2	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:215:ASP:O	12:f:218:GLU:HG3	2.04	0.57
15:C:145:ASP:HA	15:C:201:ARG:HG2	1.86	0.57
32:T:9:THR:O	32:T:41:ARG:NH2	2.38	0.57
2:V:223:LYS:H	2:V:223:LYS:CE	2.16	0.57
9:c:254:ASN:OD1	9:c:278:GLN:NE2	2.38	0.57
16:D:353:ASN:CG	16:D:394:VAL:HG23	2.29	0.57
19:g:133:PRO:HG2	25:m:14:PHE:CZ	2.24	0.57
25:m:168:ALA:HB1	25:m:171:ALA:HB3	1.86	0.57
31:s:99:ARG:HH21	31:s:102:PHE:HD2	1.52	0.57
1:U:600:ARG:CD	16:D:56:VAL:HG12	2.35	0.56
10:d:47:GLN:HG2	10:d:48:LEU:HG	1.87	0.56
12:f:217:LEU:HD22	12:f:239:TYR:CE1	2.40	0.56
15:C:90:HIS:CE1	16:D:110:ASN:H	2.21	0.56
16:D:163:MET:SD	16:D:163:MET:N	2.78	0.56
25:M:229:LYS:HG2	25:M:232:ARG:HH11	1.70	0.56
29:Q:173:LEU:HD23	29:q:173:LEU:HD23	1.87	0.56
32:T:86:ARG:NH1	32:T:133:GLU:OE2	2.38	0.56
19:g:132:ARG:HB2	19:g:132:ARG:NH1	2.20	0.56
21:i:33:THR:HA	21:i:165:GLY:HA2	1.86	0.56
2:V:87:SER:HB3	2:V:126:ALA:H	1.69	0.56
2:V:290:TYR:OH	2:V:294:ARG:NH2	2.38	0.56
2:V:359:PRO:HG2	2:V:385:LYS:HG2	1.87	0.56
6:Z:61:ASP:OD2	8:b:91:ARG:NH1	2.38	0.56
6:Z:223:ASN:ND2	6:Z:226:ILE:CG2	2.63	0.56
12:f:679:LEU:HB3	12:f:681:TYR:HD2	1.69	0.56
17:E:197:LYS:HA	17:E:231:PHE:HB3	1.87	0.56
29:Q:23:SER:HB2	29:Q:28:MET:HG2	1.87	0.56
1:U:108:TYR:OH	1:U:159:ARG:NH1	2.37	0.56
2:V:201:ARG:HH21	2:V:242:HIS:HB3	1.71	0.56
2:V:330:LYS:O	2:V:333:ILE:HG13	2.05	0.56
3:W:274:VAL:HG21	3:W:290:ILE:HD13	1.87	0.56
7:a:324:ILE:HA	7:a:331:VAL:HG12	1.87	0.56
7:a:342:ASP:OD1	7:a:345:GLN:NE2	2.39	0.56
10:d:1:MET:CB	10:d:3:GLU:OE2	2.52	0.56
10:d:167:ILE:HA	10:d:170:LEU:HB3	1.87	0.56
10:d:200:PHE:HE2	10:d:206:MET:HB3	1.69	0.56
12:f:707:LEU:HD21	12:f:737:ASN:CG	2.25	0.56
15:C:141:GLU:O	16:D:323:ARG:NH1	2.39	0.56
16:D:68:LEU:O	16:D:72:PHE:CB	2.53	0.56
18:F:231:THR:HG1	18:F:233:LYS:HZ2	1.49	0.56
23:K:50:VAL:HG11	23:K:66:LYS:HB2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Q:141:SER:O	29:Q:145:ARG:HB2	2.05	0.56
30:R:15:ALA:HA	30:R:175:ASN:O	2.06	0.56
31:S:45:LYS:HA	31:S:51:VAL:HG22	1.87	0.56
19:g:132:ARG:HD3	19:g:132:ARG:O	2.05	0.56
29:q:23:SER:HB2	29:q:28:MET:HG2	1.87	0.56
31:s:45:LYS:HA	31:s:51:VAL:HG22	1.87	0.56
5:Y:112:CYS:CB	5:Y:120:ALA:HB1	2.36	0.56
16:D:68:LEU:O	16:D:72:PHE:HB2	2.04	0.56
26:N:35:THR:OG1	26:N:45:ARG:NH2	2.37	0.56
2:V:194:LYS:HA	2:V:199:ASN:HB2	1.87	0.56
6:Z:180:LYS:HG2	6:Z:182:THR:HG23	1.86	0.56
12:f:469:TYR:OH	12:f:478:ARG:NH1	2.39	0.56
15:C:113:ARG:HE	15:C:127:LEU:HD13	1.69	0.56
17:E:72:LYS:HB2	17:E:78:ARG:HG2	1.86	0.56
17:E:101:ASP:OD2	17:E:104:THR:N	2.39	0.56
18:F:358:ASN:O	18:F:362:ARG:NH1	2.38	0.56
23:K:79:SER:HB2	23:K:140:ALA:HB3	1.88	0.56
25:M:215:TRP:CH2	25:M:219:LEU:CD2	2.81	0.56
27:O:98:LEU:HB2	27:O:113:ILE:HB	1.86	0.56
30:R:62:GLN:HA	30:R:65:ILE:HD12	1.87	0.56
19:g:54:LYS:NZ	19:g:215:ILE:O	2.38	0.56
1:U:410:VAL:HG23	1:U:448:LEU:HD13	1.86	0.56
2:V:325:LYS:HA	2:V:328:VAL:HG12	1.88	0.56
6:Z:121:LEU:HD11	6:Z:138:TYR:HD2	1.70	0.56
12:f:691:PRO:HD3	12:f:713:PHE:CZ	2.41	0.56
12:f:737:ASN:HD22	12:f:746:ARG:HH11	1.40	0.56
12:f:764:LEU:HD21	12:f:774:GLY:C	2.29	0.56
16:D:354:LEU:CG	16:D:394:VAL:CG1	2.83	0.56
17:E:210:GLU:OE1	17:E:213:ARG:NE	2.34	0.56
17:E:326:ILE:HA	17:E:364:GLN:HG3	1.87	0.56
9:c:195:GLY:O	9:c:199:HIS:N	2.37	0.56
12:f:171:GLN:HG3	12:f:179:VAL:HG22	1.88	0.56
12:f:213:GLN:NE2	12:f:246:SER:OG	2.39	0.56
12:f:278:VAL:O	12:f:280:ASP:OD1	2.23	0.56
13:A:324:PRO:HA	13:A:327:LEU:HD13	1.88	0.56
16:D:104:GLY:HA2	16:D:110:ASN:HD22	1.71	0.56
32:T:192:VAL:HA	32:T:196:GLY:O	2.05	0.56
20:h:81:PRO:HB3	20:h:84:ARG:HH21	1.71	0.56
29:q:38:MET:HE1	29:q:44:LEU:HB2	1.87	0.56
30:r:15:ALA:HA	30:r:175:ASN:O	2.06	0.56
1:U:373:ASN:HA	1:U:376:MET:HG2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:614:VAL:O	1:U:618:ALA:HB2	2.06	0.56
1:U:791:LEU:HD22	1:U:911:ILE:HD11	1.88	0.56
12:f:122:ALA:CA	12:f:129:LEU:HD12	2.36	0.56
12:f:571:GLU:HG3	12:f:573:ILE:H	1.70	0.56
14:B:337:LEU:HD11	14:B:342:ILE:HD11	1.88	0.56
15:C:113:ARG:CB	15:C:127:LEU:CG	2.81	0.56
29:Q:38:MET:HE1	29:Q:44:LEU:HB2	1.87	0.56
27:o:44:CYS:HB2	27:o:99:VAL:HB	1.88	0.56
29:q:36:PHE:HB2	29:q:44:LEU:HB3	1.87	0.56
32:t:86:ARG:NH1	32:t:133:GLU:OE2	2.38	0.56
32:t:192:VAL:HA	32:t:196:GLY:O	2.05	0.56
2:V:277:PRO:HD2	2:V:285:TRP:HZ3	1.70	0.56
12:f:342:PRO:HD2	12:f:345:PRO:HG3	1.87	0.56
12:f:507:ASP:OD2	12:f:509:LYS:CG	2.54	0.56
27:O:1:THR:N	27:O:168:GLY:O	2.39	0.56
24:l:50:LYS:HB3	24:l:59:HIS:HB3	1.87	0.56
29:q:12:TYR:HA	29:q:183:ILE:O	2.06	0.56
2:V:223:LYS:HE3	2:V:223:LYS:N	2.20	0.56
8:b:157:VAL:HG21	8:b:170:LEU:HB2	1.87	0.56
12:f:838:ARG:NH1	12:f:839:PRO:HD3	2.20	0.56
14:B:262:ASP:OD1	14:B:265:LYS:NZ	2.39	0.56
14:B:358:GLU:OE2	22:J:200:GLN:HG2	2.06	0.56
21:I:160:LYS:CG	22:J:54:GLN:HG3	2.33	0.56
21:I:197:LEU:O	21:I:201:MET:CB	2.54	0.56
27:o:1:THR:N	27:o:168:GLY:O	2.39	0.56
28:p:192:LYS:NZ	28:p:193:ASP:OD1	2.39	0.56
26:N:138:TYR:O	26:N:142:THR:OG1	2.22	0.55
31:S:185:ARG:NH1	27:o:26:VAL:O	2.39	0.55
32:T:89:HIS:NE2	32:T:124:TYR:O	2.39	0.55
21:i:194:ILE:O	21:i:198:ASN:HB2	2.06	0.55
27:o:14:LEU:O	27:o:175:LEU:HA	2.06	0.55
30:r:62:GLN:HA	30:r:65:ILE:HD12	1.87	0.55
1:U:623:GLY:O	1:U:627:PHE:HB3	2.07	0.55
2:V:28:PRO:N	2:V:29:PRO:CD	2.69	0.55
2:V:171:VAL:O	2:V:175:MET:CG	2.55	0.55
6:Z:84:LYS:HE3	9:c:76:PRO:HG3	1.87	0.55
9:c:190:GLN:O	9:c:194:HIS:ND1	2.36	0.55
13:A:224:LEU:HG	34:A:501:ATP:H2'	1.89	0.55
16:D:68:LEU:HA	16:D:71:GLU:HB3	1.88	0.55
16:D:354:LEU:HA	16:D:394:VAL:HG12	1.87	0.55
25:M:168:ALA:HB1	25:M:171:ALA:HB3	1.86	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:210:CYS:O	2:V:214:HIS:CB	2.53	0.55
3:W:241:LEU:HD12	3:W:277:ALA:HB1	1.88	0.55
3:W:273:TYR:O	3:W:277:ALA:N	2.37	0.55
5:Y:155:ASP:O	5:Y:158:THR:OG1	2.23	0.55
9:c:50:PRO:HG3	17:E:84:ARG:HG2	1.88	0.55
13:A:400:ARG:HH11	13:A:400:ARG:CG	2.12	0.55
16:D:117:SER:HA	16:D:121:ARG:HH22	1.70	0.55
28:P:15:LYS:HA	28:P:20:VAL:HG23	1.89	0.55
25:m:51:LYS:NZ	25:m:62:SER:O	2.30	0.55
25:m:215:TRP:CZ3	25:m:226:ILE:O	2.60	0.55
30:r:161:TYR:OH	30:r:196:HIS:ND1	2.37	0.55
2:V:25:GLU:C	2:V:28:PRO:HD2	2.29	0.55
3:W:344:THR:O	3:W:348:GLU:CB	2.54	0.55
6:Z:15:VAL:HA	6:Z:18:SER:HB3	1.87	0.55
12:f:171:GLN:HE21	12:f:179:VAL:HG13	1.71	0.55
12:f:189:LYS:HG2	12:f:190:GLU:HG2	1.88	0.55
12:f:485:LEU:O	12:f:489:TYR:HB2	2.07	0.55
12:f:665:GLU:O	12:f:669:GLU:HB2	2.06	0.55
20:H:81:PRO:HB3	20:H:84:ARG:HH21	1.71	0.55
23:K:166:ASP:HB2	24:L:56:LEU:HB2	1.87	0.55
32:T:136:SER:HB2	32:T:150:LEU:HD13	1.89	0.55
19:g:153:LYS:NZ	19:g:167:ALA:O	2.38	0.55
20:h:4:ARG:NH1	20:h:5:GLY:O	2.40	0.55
1:U:337:LEU:HD21	1:U:789:ILE:HG21	1.89	0.55
5:Y:367:GLN:HE21	5:Y:371:LYS:HE2	1.70	0.55
7:a:21:VAL:O	7:a:25:LEU:HB2	2.07	0.55
12:f:733:GLY:O	12:f:746:ARG:NH1	2.38	0.55
18:F:362:ARG:NE	18:F:388:THR:O	2.40	0.55
22:J:50:VAL:N	22:J:52:LYS:CE	2.70	0.55
29:Q:12:TYR:HA	29:Q:183:ILE:O	2.06	0.55
29:Q:108:ASP:N	29:Q:112:GLY:O	2.36	0.55
21:i:197:LEU:O	21:i:201:MET:CB	2.54	0.55
2:V:126:ALA:HB2	2:V:134:PHE:HE2	1.71	0.55
6:Z:223:ASN:CG	6:Z:227:ILE:CG2	2.62	0.55
12:f:414:LEU:HD23	12:f:417:ILE:HD12	1.89	0.55
17:E:55:GLN:HB2	18:F:133:PHE:HB3	1.88	0.55
18:F:222:GLY:O	18:F:349:ASP:N	2.39	0.55
19:G:103:TYR:O	27:O:81:ARG:NH1	2.35	0.55
30:r:154:ASP:OD1	30:r:157:ARG:NH1	2.40	0.55
12:f:680:ARG:HH12	12:f:762:VAL:HB	1.71	0.55
24:L:97:PHE:O	31:S:66:LYS:NZ	2.29	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:m:181:MET:N	25:m:181:MET:SD	2.80	0.55
1:U:219:CYS:O	1:U:223:LEU:CB	2.54	0.55
2:V:404:LYS:HA	2:V:407:VAL:HG12	1.89	0.55
5:Y:335:SER:O	5:Y:339:ALA:HB3	2.07	0.55
6:Z:9:VAL:HA	6:Z:48:LEU:HB3	1.89	0.55
12:f:296:PHE:HD1	12:f:807:ARG:CZ	2.20	0.55
12:f:708:ASP:OD1	12:f:712:LYS:HE2	2.07	0.55
16:D:129:SER:OG	16:D:252:ARG:NH1	2.40	0.55
21:I:194:ILE:O	21:I:198:ASN:HB2	2.06	0.55
24:L:207:THR:O	24:L:226:ASP:HB3	2.07	0.55
26:N:140:ASP:OD2	26:n:166:ARG:NH2	2.40	0.55
27:O:14:LEU:O	27:O:175:LEU:HA	2.06	0.55
27:O:112:SER:OG	27:O:120:ASP:OD1	2.24	0.55
23:k:141:LEU:HB2	23:k:156:MET:HG2	1.88	0.55
30:r:12:VAL:HB	30:r:179:VAL:HB	1.89	0.55
1:U:44:LYS:HD3	1:U:47:VAL:HG21	1.87	0.55
2:V:106:ARG:O	2:V:110:HIS:ND1	2.40	0.55
7:a:322:GLY:HA3	7:a:333:MET:HA	1.89	0.55
10:d:101:LEU:HG	10:d:166:PHE:HE2	1.72	0.55
12:f:92:VAL:HG22	12:f:129:LEU:HD21	1.89	0.55
12:f:378:ASN:O	12:f:382:ASN:ND2	2.39	0.55
12:f:712:LYS:O	12:f:715:HIS:HB2	2.07	0.55
26:N:104:ASP:N	26:N:108:GLY:O	2.40	0.55
32:T:192:VAL:HG12	32:T:197:VAL:HG22	1.89	0.55
27:o:176:CYS:HA	27:o:184:ASP:O	2.06	0.55
1:U:167:ILE:HA	1:U:177:LEU:HD12	1.88	0.55
1:U:252:LEU:O	1:U:256:ALA:HB3	2.06	0.55
2:V:476:PHE:O	2:V:479:ARG:N	2.37	0.55
12:f:78:LEU:HA	12:f:82:ILE:HD11	1.87	0.55
12:f:215:ASP:C	12:f:218:GLU:HG3	2.31	0.55
12:f:281:ILE:CG2	12:f:282:PHE:HE2	2.15	0.55
12:f:773:LYS:C	12:f:775:THR:H	2.15	0.55
13:A:393:GLY:HA2	14:B:214:MET:HE2	1.87	0.55
20:H:4:ARG:NH1	20:H:5:GLY:O	2.40	0.55
28:P:192:LYS:NZ	28:P:193:ASP:OD1	2.39	0.55
30:R:154:ASP:OD1	30:R:157:ARG:NH1	2.40	0.55
23:k:79:SER:HB2	23:k:140:ALA:HB3	1.88	0.55
24:l:66:VAL:HA	24:l:89:ARG:HE	1.72	0.55
28:p:15:LYS:HA	28:p:20:VAL:HG23	1.89	0.55
8:b:22:LEU:HD21	8:b:178:SER:O	2.07	0.54
9:c:280:PRO:O	9:c:284:LEU:CB	2.52	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:282:PHE:O	12:f:286:LYS:HB3	2.06	0.54
13:A:52:ILE:HG12	14:B:69:LYS:HA	1.89	0.54
14:B:61:LYS:HA	14:B:64:LYS:HD2	1.89	0.54
27:O:176:CYS:HA	27:O:184:ASP:O	2.06	0.54
21:i:118:LYS:HD3	21:i:152:PRO:HA	1.89	0.54
24:l:40:SER:OG	24:l:43:HIS:N	2.40	0.54
25:m:49:VAL:O	25:m:212:GLU:HB3	2.07	0.54
5:Y:112:CYS:HB2	5:Y:120:ALA:CB	2.37	0.54
5:Y:293:ARG:HH22	11:e:57:ARG:CZ	2.19	0.54
9:c:130:GLN:HE22	9:c:162:LEU:HD22	1.72	0.54
11:e:48:VAL:O	11:e:52:PHE:CB	2.45	0.54
11:e:48:VAL:CG1	11:e:52:PHE:HD2	2.11	0.54
12:f:139:CYS:O	12:f:143:ARG:NH1	2.40	0.54
12:f:642:ALA:C	12:f:644:ALA:H	2.14	0.54
14:B:264:PRO:HG3	14:B:308:THR:HA	1.88	0.54
15:C:373:GLU:HG3	15:C:375:ARG:HG3	1.88	0.54
16:D:354:LEU:N	16:D:394:VAL:CG2	2.60	0.54
19:G:153:LYS:NZ	19:G:167:ALA:O	2.38	0.54
21:I:116:ASP:OD1	22:J:81:ARG:NH1	2.32	0.54
21:I:118:LYS:HD3	21:I:152:PRO:HA	1.90	0.54
23:K:141:LEU:HB2	23:K:156:MET:HG2	1.88	0.54
26:N:21:THR:HA	26:N:27:ALA:H	1.72	0.54
28:P:65:GLN:OE1	29:Q:86:ARG:NH2	2.38	0.54
30:r:1:THR:O	30:r:130:SER:N	2.38	0.54
7:a:190:VAL:HB	7:a:225:LEU:HD11	1.89	0.54
7:a:212:ASN:HD21	7:a:215:GLU:HB3	1.71	0.54
9:c:191:ALA:O	9:c:196:LEU:HB2	2.07	0.54
12:f:643:PRO:HB2	12:f:646:MET:HB3	1.88	0.54
12:f:737:ASN:ND2	12:f:746:ARG:CD	2.69	0.54
16:D:354:LEU:CD1	16:D:394:VAL:HG11	2.37	0.54
16:D:354:LEU:CD1	16:D:394:VAL:HG12	2.37	0.54
18:F:199:VAL:O	18:F:203:VAL:HB	2.08	0.54
24:L:66:VAL:HA	24:L:89:ARG:HE	1.72	0.54
32:t:136:SER:HB2	32:t:150:LEU:HD13	1.89	0.54
2:V:496:PHE:N	2:V:496:PHE:CD2	2.73	0.54
3:W:397:VAL:HG11	4:X:341:PRO:HB3	1.90	0.54
12:f:330:PHE:HA	12:f:333:LEU:HB2	1.89	0.54
13:A:319:MET:SD	13:A:319:MET:N	2.80	0.54
14:B:252:GLY:N	14:B:285:ASP:O	2.37	0.54
14:B:373:THR:OG1	14:B:412:MET:O	2.26	0.54
34:D:501:ATP:O2G	17:E:291:ARG:NH1	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:J:50:VAL:N	22:J:52:LYS:NZ	2.54	0.54
25:M:49:VAL:O	25:M:212:GLU:HB3	2.07	0.54
31:S:99:ARG:HH21	31:S:102:PHE:HD2	1.52	0.54
25:m:170:GLN:HA	25:m:173:LYS:HG2	1.89	0.54
32:t:89:HIS:NE2	32:t:124:TYR:O	2.39	0.54
32:t:166:ARG:NH1	32:t:170:GLU:OE2	2.40	0.54
7:a:35:HIS:C	7:a:37:LEU:H	2.15	0.54
12:f:548:THR:HG21	12:f:554:TYR:HE2	1.73	0.54
25:M:181:MET:N	25:M:181:MET:SD	2.80	0.54
25:M:215:TRP:HH2	25:M:219:LEU:CD2	2.18	0.54
27:O:44:CYS:HB2	27:O:99:VAL:HB	1.88	0.54
25:m:66:LEU:HD11	25:m:214:SER:HB2	1.90	0.54
2:V:33:GLN:HG3	2:V:89:LYS:HE3	1.90	0.54
3:W:426:ASN:O	3:W:429:SER:OG	2.22	0.54
6:Z:109:ASN:HD22	6:Z:155:PHE:HE1	1.55	0.54
12:f:127:SER:HA	12:f:131:MET:HB2	1.89	0.54
14:B:110:GLY:O	14:B:149:SER:HA	2.08	0.54
18:F:421:MET:HA	18:F:424:ILE:HD12	1.88	0.54
20:H:222:THR:OG1	20:H:225:GLU:OE1	2.26	0.54
21:I:160:LYS:NZ	22:J:54:GLN:C	2.66	0.54
23:K:206:MET:HE1	23:K:210:LEU:HD13	1.89	0.54
32:T:1:THR:N	32:T:105:PRO:O	2.31	0.54
32:T:15:LYS:HG2	32:T:20:VAL:HG22	1.90	0.54
1:U:219:CYS:SG	1:U:220:LEU:N	2.81	0.54
6:Z:245:PHE:CD1	6:Z:245:PHE:C	2.86	0.54
10:d:234:ASP:OD1	10:d:234:ASP:N	2.37	0.54
16:D:65:GLN:OE1	16:D:69:LYS:NZ	2.41	0.54
16:D:85:ILE:H	16:D:86:PRO:HD3	1.71	0.54
16:D:354:LEU:CA	16:D:394:VAL:O	2.56	0.54
34:D:501:ATP:O3G	17:E:294:ARG:NH1	2.32	0.54
23:K:69:GLU:HA	23:K:75:GLY:HA2	1.90	0.54
24:L:33:SER:OG	24:L:62:LYS:NZ	2.39	0.54
31:S:28:ARG:NH2	31:S:191:ASP:OD1	2.41	0.54
21:i:218:ARG:NH2	21:i:220:ASN:O	2.41	0.54
32:t:192:VAL:HG12	32:t:197:VAL:HG22	1.89	0.54
7:a:8:LEU:CD2	7:a:29:TYR:OH	2.55	0.54
12:f:253:LEU:O	12:f:257:ARG:HB2	2.08	0.54
16:D:116:LEU:CD1	16:D:118:THR:N	2.62	0.54
19:g:203:SER:O	19:g:207:SER:HA	2.08	0.54
2:V:28:PRO:CD	2:V:29:PRO:HD2	2.38	0.54
2:V:497:PRO:CG	6:Z:278:ASN:CB	2.85	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Y:118:GLU:HA	5:Y:121:LEU:CD1	2.37	0.54
12:f:482:ILE:HD11	12:f:517:VAL:HG23	1.90	0.54
12:f:634:LYS:HD2	12:f:637:LYS:HD2	1.89	0.54
12:f:737:ASN:ND2	12:f:746:ARG:CZ	2.70	0.54
13:A:113:ILE:HG22	13:A:121:PHE:H	1.72	0.54
14:B:290:ILE:HG12	14:B:305:ILE:HG23	1.89	0.54
19:g:86:ASP:HB3	19:g:134:LEU:HB3	1.89	0.54
29:q:107:TYR:HA	29:q:113:PRO:HA	1.90	0.54
1:U:62:LEU:HG	1:U:88:PHE:HD1	1.73	0.54
1:U:490:ARG:HB2	1:U:493:VAL:HG12	1.89	0.54
9:c:167:MET:HA	9:c:170:LEU:HB2	1.90	0.54
9:c:305:ASP:O	9:c:309:PHE:HB2	2.08	0.54
16:D:95:ALA:HA	16:D:101:ALA:HA	1.88	0.54
24:L:40:SER:OG	24:L:43:HIS:N	2.41	0.54
25:M:170:GLN:HA	25:M:173:LYS:HG2	1.89	0.54
32:T:45:VAL:HB	32:T:49:THR:O	2.08	0.54
21:i:198:ASN:HA	21:i:206:LEU:HD21	1.89	0.54
22:j:96:LEU:HD12	29:q:62:LYS:HG3	1.90	0.54
23:k:206:MET:HE1	23:k:210:LEU:HD13	1.89	0.54
27:o:112:SER:OG	27:o:120:ASP:OD1	2.24	0.54
2:V:259:LEU:HD11	2:V:294:ARG:HD2	1.90	0.53
14:B:232:LYS:NZ	34:B:501:ATP:O3G	2.35	0.53
23:K:15:PHE:HE2	24:L:127:PRO:HD2	1.72	0.53
27:O:112:SER:HB3	27:O:125:VAL:HG11	1.90	0.53
32:T:166:ARG:NH1	32:T:170:GLU:OE2	2.40	0.53
24:l:39:LYS:HD3	24:l:144:ILE:HG12	1.90	0.53
27:o:214:GLU:HA	28:p:198:ARG:HG2	1.90	0.53
1:U:593:SER:OG	1:U:595:ASN:ND2	2.41	0.53
3:W:227:TYR:O	3:W:246:HIS:NE2	2.38	0.53
12:f:838:ARG:CD	12:f:839:PRO:CD	2.49	0.53
17:E:320:ILE:HG23	18:F:215:LEU:HD21	1.91	0.53
18:F:231:THR:HG1	18:F:233:LYS:NZ	2.06	0.53
19:G:203:SER:O	19:G:207:SER:HA	2.08	0.53
27:o:63:LEU:O	27:o:67:SER:OG	2.25	0.53
31:s:28:ARG:NH2	31:s:191:ASP:OD1	2.41	0.53
5:Y:210:SER:OG	5:Y:211:TYR:N	2.41	0.53
5:Y:233:ARG:NH1	5:Y:264:TYR:CG	2.71	0.53
12:f:125:ILE:HD11	12:f:128:VAL:HB	1.90	0.53
18:F:226:TYR:O	18:F:353:GLU:HA	2.09	0.53
2:V:166:TYR:HH	2:V:213:TYR:HA	1.71	0.53
2:V:497:PRO:HG3	6:Z:278:ASN:HB3	1.87	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Y:60:SER:OG	5:Y:61:LEU:N	2.38	0.53
13:A:189:GLU:O	13:A:193:THR:OG1	2.26	0.53
13:A:414:ASN:N	13:A:414:ASN:OD1	2.42	0.53
24:L:183:ASN:O	24:L:187:LEU:HB2	2.08	0.53
29:Q:8:GLN:HE21	29:Q:113:PRO:HG2	1.73	0.53
29:q:8:GLN:HE21	29:q:113:PRO:HG2	1.73	0.53
31:s:114:ASP:OD1	31:s:118:LYS:N	2.37	0.53
1:U:147:TYR:HA	1:U:150:ALA:HB3	1.90	0.53
1:U:160:LEU:HD21	1:U:196:LYS:HB3	1.91	0.53
13:A:287:ASP:N	13:A:287:ASP:OD1	2.39	0.53
21:I:98:LEU:O	21:I:102:GLN:HA	2.08	0.53
29:Q:169:LYS:O	29:q:27:GLN:NE2	2.42	0.53
27:o:106:THR:OG1	27:o:109:HIS:NE2	2.42	0.53
2:V:162:GLU:O	2:V:167:LEU:HD23	2.09	0.53
2:V:212:TYR:OH	2:V:287:ARG:NH2	2.41	0.53
10:d:5:LEU:HD21	10:d:22:GLU:OE2	2.08	0.53
12:f:673:ARG:HH22	12:f:709:THR:HA	1.72	0.53
13:A:73:ALA:HB2	14:B:140:ASP:N	2.23	0.53
16:D:125:LYS:HZ3	16:D:125:LYS:CA	2.22	0.53
21:I:198:ASN:HA	21:I:206:LEU:HD21	1.89	0.53
21:I:218:ARG:NH2	21:I:220:ASN:O	2.41	0.53
26:N:19:ARG:NH1	26:N:168:GLY:O	2.42	0.53
27:O:106:THR:OG1	27:O:109:HIS:NE2	2.42	0.53
29:Q:107:TYR:HA	29:Q:113:PRO:HA	1.90	0.53
26:n:21:THR:HA	26:n:27:ALA:H	1.72	0.53
5:Y:118:GLU:CA	5:Y:121:LEU:CD2	2.82	0.53
5:Y:301:ILE:HG13	5:Y:343:LEU:HD12	1.89	0.53
6:Z:224:HIS:CD2	7:a:215:GLU:OE2	2.60	0.53
27:O:63:LEU:O	27:O:67:SER:OG	2.25	0.53
30:R:12:VAL:HB	30:R:179:VAL:HB	1.89	0.53
21:i:98:LEU:O	21:i:102:GLN:HA	2.08	0.53
27:o:203:ARG:NH2	27:o:204:CYS:SG	2.81	0.53
5:Y:275:LEU:O	5:Y:279:GLU:HB3	2.09	0.53
7:a:33:LEU:CD1	7:a:36:GLN:OE1	2.57	0.53
12:f:202:HIS:ND1	12:f:242:GLU:OE2	2.38	0.53
12:f:673:ARG:CZ	12:f:712:LYS:CB	2.87	0.53
15:C:246:ILE:HB	15:C:291:VAL:HG12	1.90	0.53
23:K:60:GLU:OE1	23:K:63:SER:N	2.41	0.53
27:o:213:THR:O	28:p:198:ARG:HA	2.07	0.53
32:t:15:LYS:HG2	32:t:20:VAL:HG22	1.90	0.53
1:U:745:THR:N	1:U:784:THR:O	2.37	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:373:ALA:H	2:V:427:GLN:HE21	1.57	0.53
8:b:151:GLU:OE1	8:b:152:LYS:NZ	2.40	0.53
13:A:390:THR:HA	14:B:216:ILE:HD11	1.90	0.53
14:B:74:MET:O	14:B:78:PHE:CB	2.56	0.53
14:B:234:LEU:HG	34:B:501:ATP:H2'	1.91	0.53
15:C:186:VAL:HB	15:C:292:ILE:HG12	1.91	0.53
15:C:329:LEU:O	15:C:333:SER:HB3	2.08	0.53
20:H:150:ASP:OD1	20:H:154:ALA:N	2.42	0.53
23:K:41:GLN:HA	23:K:46:VAL:HG22	1.91	0.53
31:S:14:ALA:HA	31:S:22:ILE:O	2.09	0.53
23:k:146:VAL:HG11	23:k:222:PRO:HA	1.91	0.53
24:l:183:ASN:O	24:l:187:LEU:HB2	2.08	0.53
1:U:603:LEU:HD11	16:D:60:TYR:CZ	2.44	0.53
2:V:147:PHE:O	2:V:150:ARG:N	2.38	0.53
2:V:437:ILE:HA	10:d:146:GLY:HA3	1.91	0.53
3:W:423:ASN:HA	3:W:426:ASN:HB3	1.91	0.53
6:Z:223:ASN:HD21	6:Z:227:ILE:HG13	1.70	0.53
10:d:44:THR:O	10:d:47:GLN:NE2	2.42	0.53
13:A:400:ARG:H	13:A:401:ARG:HH12	1.57	0.53
15:C:370:ALA:HB1	15:C:375:ARG:HB2	1.90	0.53
17:E:252:GLU:O	17:E:256:THR:OG1	2.19	0.53
28:P:26:ARG:HE	28:P:38:ASP:HA	1.74	0.53
23:k:60:GLU:OE1	23:k:63:SER:N	2.41	0.53
28:p:26:ARG:HE	28:p:38:ASP:HA	1.74	0.53
1:U:456:ASP:O	1:U:460:TYR:CB	2.57	0.52
2:V:472:PRO:HG2	6:Z:254:ASN:HD21	1.72	0.52
22:J:31:THR:OG1	22:J:163:ARG:O	2.27	0.52
22:J:53:LEU:C	22:J:53:LEU:HD12	2.34	0.52
27:O:43:CYS:HA	27:O:99:VAL:O	2.10	0.52
28:P:2:SER:N	28:P:5:SER:OG	2.40	0.52
21:i:119:GLN:NE2	22:j:79:ASP:OD1	2.43	0.52
30:r:41:LEU:HD23	30:r:103:GLY:HA3	1.91	0.52
32:t:1:THR:N	32:t:105:PRO:O	2.31	0.52
32:t:27:LEU:HD11	32:t:34:ALA:HB1	1.91	0.52
1:U:496:LEU:O	1:U:500:ASN:HB2	2.08	0.52
1:U:798:PRO:O	1:U:880:ASN:ND2	2.35	0.52
2:V:166:TYR:CE2	2:V:213:TYR:HD1	2.27	0.52
6:Z:34:ARG:HH12	6:Z:60:GLU:HG3	1.73	0.52
8:b:22:LEU:HD11	8:b:179:LEU:HD21	0.53	0.52
12:f:119:LYS:HA	12:f:122:ALA:HB3	1.90	0.52
15:C:155:ASP:HA	15:C:158:ILE:HD12	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:E:287:PRO:HA	17:E:290:LEU:HB2	1.91	0.52
18:F:90:VAL:HA	18:F:151:VAL:O	2.09	0.52
18:F:294:LYS:HG3	18:F:339:ASP:HA	1.91	0.52
21:I:45:LEU:O	21:I:213:ILE:HA	2.10	0.52
22:J:200:GLN:HA	22:J:200:GLN:HE21	1.74	0.52
24:L:39:LYS:HD3	24:L:144:ILE:HG12	1.90	0.52
25:m:215:TRP:CZ3	25:m:227:VAL:CA	2.87	0.52
25:m:215:TRP:HE1	25:m:220:THR:HG22	0.50	0.52
26:n:104:ASP:N	26:n:108:GLY:O	2.40	0.52
1:U:126:ILE:HG23	1:U:130:LEU:HB3	1.91	0.52
1:U:135:ASN:HA	1:U:138:PHE:HB3	1.92	0.52
1:U:247:GLN:HG3	1:U:904:LYS:HD2	1.91	0.52
1:U:320:ASP:O	1:U:324:LYS:HB2	2.09	0.52
1:U:598:ALA:O	1:U:602:LEU:CB	2.57	0.52
1:U:898:CYS:SG	1:U:899:ARG:N	2.82	0.52
4:X:377:ILE:HG22	4:X:386:ILE:HB	1.92	0.52
4:X:420:LYS:NZ	9:c:263:ASP:OD1	2.42	0.52
12:f:250:ARG:NH1	12:f:285:CYS:SG	2.82	0.52
12:f:373:ALA:HB2	12:f:744:MET:HA	1.91	0.52
17:E:244:SER:HB2	18:F:300:LYS:HG3	1.91	0.52
21:I:133:SER:OG	21:I:150:SER:O	2.26	0.52
23:k:69:GLU:HA	23:k:75:GLY:HA2	1.90	0.52
27:o:112:SER:HB3	27:o:125:VAL:HG11	1.90	0.52
30:r:26:ILE:HG21	30:r:29:GLN:HE21	1.75	0.52
32:t:45:VAL:HB	32:t:49:THR:O	2.08	0.52
1:U:35:TRP:HE1	1:U:67:VAL:HA	1.75	0.52
12:f:67:ASP:O	12:f:71:TYR:HB2	2.10	0.52
12:f:487:LEU:HD11	12:f:804:LEU:HD12	1.91	0.52
20:h:150:ASP:OD1	20:h:154:ALA:N	2.42	0.52
21:i:106:PRO:HB2	21:i:109:GLN:HG2	1.92	0.52
22:j:31:THR:OG1	22:j:163:ARG:O	2.27	0.52
23:k:195:ILE:O	23:k:198:SER:OG	2.27	0.52
24:l:183:ASN:O	24:l:187:LEU:CB	2.58	0.52
5:Y:255:ALA:O	5:Y:259:TYR:N	2.39	0.52
17:E:264:MET:HG2	17:E:275:MET:HE1	1.92	0.52
23:K:41:GLN:NE2	23:K:151:PRO:O	2.43	0.52
24:L:183:ASN:O	24:L:187:LEU:CB	2.58	0.52
21:i:85:VAL:O	21:i:89:GLU:CB	2.58	0.52
5:Y:215:ASP:O	5:Y:218:THR:OG1	2.27	0.52
7:a:153:SER:O	7:a:157:ASP:CB	2.57	0.52
12:f:215:ASP:HA	12:f:218:GLU:HG2	1.89	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:594:LEU:O	12:f:635:LYS:NZ	2.43	0.52
13:A:347:ASP:OD1	13:A:347:ASP:N	2.42	0.52
16:D:354:LEU:HD21	16:D:358:VAL:HB	1.92	0.52
17:E:182:LEU:HD22	34:E:401:ATP:H2'	1.91	0.52
18:F:125:LYS:HA	18:F:130:GLN:O	2.09	0.52
23:K:84:ASP:OD1	23:K:84:ASP:N	2.42	0.52
21:i:133:SER:HB2	21:i:152:PRO:HD3	1.91	0.52
26:n:19:ARG:NH1	26:n:168:GLY:O	2.42	0.52
27:o:38:SER:OG	27:o:40:ASN:OD1	2.21	0.52
1:U:160:LEU:HG	1:U:197:VAL:HG22	1.92	0.52
1:U:268:LEU:HD22	1:U:329:LEU:HD11	1.92	0.52
1:U:584:TYR:OH	1:U:768:GLN:NE2	2.42	0.52
4:X:397:TYR:OH	6:Z:255:ASP:OD1	2.24	0.52
7:a:132:LYS:O	7:a:136:GLU:CB	2.55	0.52
7:a:221:VAL:HG23	7:a:222:LEU:HG	1.90	0.52
9:c:189:ILE:HD12	9:c:192:LEU:HB3	1.91	0.52
13:A:401:ARG:NH1	13:A:401:ARG:CB	2.73	0.52
14:B:65:LEU:CD2	14:B:65:LEU:N	2.73	0.52
14:B:141:LYS:HG3	14:B:144:LEU:HD12	1.92	0.52
16:D:376:ASN:O	16:D:380:GLN:CB	2.54	0.52
21:I:85:VAL:O	21:I:89:GLU:CB	2.58	0.52
21:i:133:SER:OG	21:i:150:SER:O	2.26	0.52
2:V:451:ILE:HG13	2:V:458:VAL:HG13	1.92	0.52
19:g:137:CYS:SG	19:g:138:MET:N	2.74	0.52
25:m:215:TRP:CE3	25:m:226:ILE:O	2.62	0.52
26:n:138:TYR:O	26:n:142:THR:OG1	2.22	0.52
29:q:38:MET:O	29:q:65:GLN:NE2	2.43	0.52
1:U:625:ILE:HG13	1:U:626:LEU:HG	1.91	0.52
14:B:120:HIS:HA	14:B:134:SER:HA	1.91	0.52
14:B:196:GLU:OE2	14:B:349:ARG:NH1	2.33	0.52
18:F:94:ILE:HD11	18:F:125:LYS:HB2	1.92	0.52
22:J:85:ASN:HB3	29:Q:70:ARG:HH12	1.75	0.52
27:O:203:ARG:NH2	27:O:204:CYS:SG	2.81	0.52
28:P:10:ALA:O	28:P:24:ALA:HA	2.10	0.52
30:R:41:LEU:HD23	30:R:103:GLY:HA3	1.91	0.52
32:T:146:ALA:O	32:T:150:LEU:N	2.40	0.52
24:l:75:ALA:HB3	24:l:131:GLY:HA3	1.92	0.52
28:p:10:ALA:O	28:p:24:ALA:HA	2.10	0.52
1:U:367:THR:HA	1:U:370:VAL:HG22	1.91	0.52
2:V:166:TYR:CZ	2:V:216:ARG:HB2	2.44	0.52
2:V:496:PHE:HD2	2:V:497:PRO:HD3	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Y:197:ALA:HB3	5:Y:226:VAL:HG21	1.90	0.52
5:Y:297:ARG:NH2	11:e:51:ASP:HB2	2.14	0.52
5:Y:335:SER:O	5:Y:339:ALA:CB	2.58	0.52
7:a:269:LEU:HD12	7:a:272:ILE:HD11	1.92	0.52
9:c:31:VAL:HG23	9:c:203:ILE:HG21	1.92	0.52
12:f:465:LEU:O	12:f:481:SER:OG	2.27	0.52
12:f:680:ARG:NH1	12:f:762:VAL:CB	2.73	0.52
15:C:295:THR:OG1	15:C:296:ASN:N	2.43	0.52
19:G:38:THR:OG1	19:G:170:VAL:N	2.43	0.52
32:T:27:LEU:HD11	32:T:34:ALA:HB1	1.91	0.52
25:m:8:ASP:O	25:m:22:GLN:NE2	2.38	0.52
1:U:619:VAL:HG11	1:U:648:VAL:HG13	1.91	0.51
1:U:791:LEU:O	1:U:914:LEU:N	2.39	0.51
7:a:70:ARG:HH22	8:b:80:PRO:HG2	1.75	0.51
8:b:22:LEU:CD2	8:b:22:LEU:N	2.73	0.51
8:b:124:LEU:HD21	8:b:152:LYS:HB3	1.92	0.51
12:f:737:ASN:HD21	12:f:746:ARG:HD2	1.73	0.51
16:D:354:LEU:HB2	16:D:394:VAL:CB	2.34	0.51
18:F:183:GLU:HB2	18:F:239:ALA:HA	1.90	0.51
18:F:223:VAL:HG12	18:F:350:ARG:HB2	1.93	0.51
30:R:161:TYR:OH	30:R:196:HIS:ND1	2.37	0.51
19:g:164:LYS:NZ	20:h:57:TYR:O	2.43	0.51
22:j:29:GLY:O	22:j:163:ARG:N	2.35	0.51
23:k:41:GLN:HA	23:k:46:VAL:HG22	1.91	0.51
1:U:469:SER:OG	1:U:470:ASN:N	2.43	0.51
3:W:288:HIS:HA	3:W:291:SER:HB3	1.92	0.51
5:Y:118:GLU:C	5:Y:121:LEU:HG	2.34	0.51
12:f:591:ALA:HA	12:f:594:LEU:HD23	1.92	0.51
12:f:680:ARG:NH2	12:f:778:LEU:HG	2.25	0.51
14:B:171:VAL:O	14:B:175:LYS:CB	2.57	0.51
21:I:106:PRO:HB2	21:I:109:GLN:HG2	1.91	0.51
21:I:133:SER:HB2	21:I:152:PRO:HD3	1.91	0.51
21:I:235:GLN:O	21:I:239:LYS:HB2	2.10	0.51
22:J:96:LEU:O	30:R:81:LYS:NZ	2.32	0.51
30:R:26:ILE:HG21	30:R:29:GLN:HE21	1.75	0.51
19:g:132:ARG:CG	19:g:132:ARG:HH11	2.23	0.51
30:r:178:HIS:O	30:r:184:TRP:HA	2.10	0.51
1:U:415:HIS:CD2	1:U:418:GLU:H	2.29	0.51
1:U:632:GLN:O	1:U:635:SER:OG	2.27	0.51
2:V:249:THR:O	2:V:253:LEU:HB2	2.10	0.51
9:c:89:PRO:O	9:c:93:ALA:CB	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:d:116:HIS:HA	10:d:119:LEU:HD23	1.92	0.51
10:d:168:ASP:OD1	10:d:171:LEU:HD21	2.09	0.51
12:f:305:LEU:HB2	12:f:317:LEU:HD22	1.91	0.51
12:f:342:PRO:CG	12:f:345:PRO:HG3	2.40	0.51
12:f:388:ASP:HB3	12:f:391:LEU:HB2	1.92	0.51
15:C:168:PRO:HG3	15:C:175:PHE:HE2	1.75	0.51
16:D:411:GLU:HG2	16:D:413:GLU:H	1.76	0.51
18:F:251:LEU:HD12	18:F:285:ILE:HG12	1.92	0.51
1:U:74:PHE:HB3	1:U:103:LYS:HD3	1.92	0.51
2:V:156:SER:HA	2:V:159:LEU:HB2	1.91	0.51
2:V:193:GLN:O	2:V:199:ASN:ND2	2.40	0.51
5:Y:387:ILE:HD11	6:Z:272:LEU:HD11	1.92	0.51
9:c:196:LEU:HD23	9:c:196:LEU:C	2.34	0.51
12:f:616:CYS:SG	12:f:632:LYS:NZ	2.70	0.51
12:f:828:ARG:CZ	12:f:843:SER:OG	2.58	0.51
17:E:144:GLU:OE2	17:E:297:ARG:NH1	2.44	0.51
22:J:119:THR:HG22	22:J:126:PRO:HB3	1.93	0.51
25:M:17:ASP:OD2	25:M:19:ARG:NH2	2.43	0.51
20:h:222:THR:OG1	20:h:225:GLU:OE1	2.26	0.51
25:m:17:ASP:OD2	25:m:19:ARG:NH2	2.43	0.51
5:Y:160:ASN:O	5:Y:164:ALA:HB2	2.10	0.51
7:a:294:GLU:OE2	7:a:298:LYS:NZ	2.43	0.51
17:E:382:SER:HB3	18:F:340:PRO:HG3	1.92	0.51
18:F:312:GLU:O	18:F:316:GLN:CB	2.55	0.51
19:G:60:LEU:O	25:M:161:TRP:N	2.41	0.51
22:J:200:GLN:NE2	22:J:200:GLN:CA	2.73	0.51
23:K:146:VAL:HG11	23:K:222:PRO:HA	1.91	0.51
32:T:100:ARG:HB3	32:T:105:PRO:HB3	1.93	0.51
1:U:603:LEU:O	1:U:606:ALA:HB3	2.10	0.51
3:W:187:LEU:HA	3:W:190:MET:HE3	1.93	0.51
13:A:375:ARG:HD3	23:K:173:ALA:HB2	1.93	0.51
15:C:137:LEU:HD11	15:C:220:VAL:CG2	2.38	0.51
17:E:97:ARG:NH2	17:E:113:ARG:O	2.44	0.51
30:R:178:HIS:O	30:R:184:TRP:HA	2.10	0.51
19:g:194:THR:O	19:g:198:ALA:HB2	2.11	0.51
20:h:139:TRP:HA	20:h:144:PRO:HA	1.92	0.51
21:i:41:ASP:OD1	21:i:41:ASP:N	2.43	0.51
25:m:136:MET:HE3	25:m:163:CYS:HB3	1.92	0.51
25:m:215:TRP:CD1	25:m:215:TRP:C	2.89	0.51
27:o:143:ARG:NH2	27:o:150:GLU:OE1	2.44	0.51
31:s:14:ALA:HA	31:s:22:ILE:O	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:711:GLN:O	1:U:715:LYS:HB2	2.11	0.51
6:Z:271:ALA:HA	6:Z:274:ASN:HD22	1.76	0.51
9:c:254:ASN:HB3	9:c:280:PRO:HB3	1.93	0.51
12:f:756:PRO:HG2	12:f:758:ASN:O	2.11	0.51
24:L:75:ALA:HB3	24:L:131:GLY:HA3	1.92	0.51
24:L:107:ARG:O	24:L:110:SER:OG	2.27	0.51
22:j:200:GLN:NE2	22:j:200:GLN:CA	2.73	0.51
2:V:159:LEU:HG	2:V:182:LYS:HD3	1.93	0.51
2:V:265:ASP:O	2:V:269:LYS:NZ	2.34	0.51
2:V:497:PRO:HG2	6:Z:278:ASN:HB3	1.93	0.51
5:Y:233:ARG:C	5:Y:235:ASP:H	2.19	0.51
5:Y:235:ASP:O	5:Y:239:LYS:CB	2.58	0.51
6:Z:244:GLU:HA	6:Z:247:LYS:HB2	1.92	0.51
12:f:206:ASP:OD2	12:f:245:ASN:ND2	2.43	0.51
12:f:507:ASP:OD2	12:f:509:LYS:HG2	2.11	0.51
13:A:210:LYS:NZ	13:A:313:GLY:O	2.33	0.51
25:M:8:ASP:O	25:M:22:GLN:NE2	2.38	0.51
27:O:143:ARG:NH2	27:O:150:GLU:OE1	2.44	0.51
23:k:41:GLN:NE2	23:k:151:PRO:O	2.43	0.51
27:o:43:CYS:HA	27:o:99:VAL:O	2.10	0.51
9:c:51:MET:HG3	9:c:82:VAL:HA	1.92	0.51
9:c:237:HIS:CE1	9:c:298:GLN:HE21	2.28	0.51
15:C:83:LYS:HD2	15:C:105:ILE:HD11	1.92	0.51
16:D:96:VAL:HG23	16:D:102:ILE:HD11	1.92	0.51
16:D:170:MET:HG2	16:D:173:GLN:HB2	1.92	0.51
17:E:168:LYS:N	17:E:296:ASP:OD2	2.44	0.51
17:E:334:LEU:HB3	17:E:371:VAL:HG11	1.92	0.51
18:F:141:ASP:OD1	18:F:144:LYS:NZ	2.36	0.51
18:F:189:GLY:H	36:F:501:ADP:HN62	1.59	0.51
19:G:194:THR:O	19:G:198:ALA:HB2	2.11	0.51
20:H:74:LEU:HD21	20:H:134:LEU:HD22	1.93	0.51
24:l:107:ARG:O	24:l:110:SER:OG	2.28	0.51
1:U:191:LYS:HD2	1:U:194:ARG:HH11	1.76	0.51
2:V:25:GLU:C	2:V:28:PRO:CD	2.84	0.51
2:V:99:ARG:NH2	2:V:103:SER:OG	2.43	0.51
2:V:407:VAL:O	2:V:411:SER:OG	2.29	0.51
2:V:494:MET:SD	6:Z:278:ASN:ND2	2.84	0.51
7:a:19:PRO:HA	7:a:22:TRP:CD1	2.44	0.51
22:J:36:ARG:HE	22:J:157:LYS:HA	1.75	0.51
27:O:41:ILE:HG12	27:O:102:GLY:HA3	1.93	0.51
29:Q:38:MET:O	29:Q:65:GLN:NE2	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:i:235:GLN:O	21:i:239:LYS:HB2	2.10	0.51
2:V:171:VAL:HG11	2:V:175:MET:HE1	1.93	0.50
6:Z:108:ILE:O	6:Z:112:MET:HG2	2.11	0.50
8:b:72:LEU:O	8:b:76:HIS:ND1	2.32	0.50
12:f:143:ARG:O	12:f:147:SER:OG	2.25	0.50
17:E:25:ARG:O	17:E:29:LEU:CB	2.58	0.50
19:G:144:ASP:O	19:G:148:GLY:N	2.43	0.50
22:j:36:ARG:HE	22:j:157:LYS:HA	1.75	0.50
25:m:152:ASP:OD2	25:m:154:SER:OG	2.25	0.50
1:U:719:ASP:O	1:U:727:LYS:NZ	2.34	0.50
2:V:28:PRO:O	2:V:32:PRO:CG	2.58	0.50
2:V:28:PRO:CB	2:V:29:PRO:CD	2.89	0.50
5:Y:118:GLU:HA	5:Y:121:LEU:HG	1.93	0.50
6:Z:144:VAL:HG22	7:a:146:PRO:HB3	1.94	0.50
12:f:744:MET:O	12:f:748:LEU:HB2	2.11	0.50
15:C:127:LEU:CD2	15:C:128:PRO:HD2	2.41	0.50
17:E:155:ASN:HD21	17:E:158:LEU:HD13	1.76	0.50
26:N:138:TYR:O	26:N:142:THR:CB	2.60	0.50
30:R:38:ASN:HD22	30:R:41:LEU:HD12	1.76	0.50
19:g:144:ASP:O	19:g:148:GLY:N	2.43	0.50
23:k:79:SER:O	23:k:139:VAL:HA	2.11	0.50
23:k:84:ASP:N	23:k:84:ASP:OD1	2.42	0.50
24:l:117:GLN:O	24:l:120:THR:OG1	2.30	0.50
27:o:160:ALA:HA	27:o:163:ILE:HD12	1.93	0.50
1:U:729:GLY:O	1:U:733:ALA:HB2	2.11	0.50
2:V:30:PRO:O	2:V:34:ASP:N	2.43	0.50
6:Z:56:VAL:HG11	6:Z:70:LEU:HD22	1.93	0.50
8:b:21:PHE:CE1	8:b:177:PRO:HA	2.43	0.50
8:b:121:GLU:HB3	8:b:152:LYS:HG2	1.93	0.50
12:f:679:LEU:HB3	12:f:681:TYR:CD2	2.46	0.50
12:f:680:ARG:HH11	12:f:762:VAL:HG21	1.69	0.50
13:A:84:LYS:O	13:A:88:GLN:CB	2.59	0.50
16:D:91:GLN:HE21	16:D:127:ASN:HB3	1.77	0.50
16:D:335:LEU:CD2	16:D:369:LYS:HD3	2.41	0.50
21:i:45:LEU:O	21:i:213:ILE:HA	2.10	0.50
30:r:38:ASN:HD22	30:r:41:LEU:HD12	1.76	0.50
32:t:100:ARG:HB3	32:t:105:PRO:HB3	1.93	0.50
1:U:714:SER:HA	1:U:717:ILE:HG22	1.92	0.50
3:W:287:VAL:O	3:W:291:SER:HB2	2.11	0.50
3:W:316:ARG:NH1	3:W:381:LEU:HD21	2.24	0.50
5:Y:118:GLU:CA	5:Y:121:LEU:HG	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Y:203:ASP:OD1	5:Y:203:ASP:N	2.45	0.50
6:Z:143:GLU:HB2	6:Z:145:HIS:ND1	2.26	0.50
12:f:403:LYS:O	12:f:406:GLY:N	2.41	0.50
13:A:140:VAL:HG12	13:A:152:PRO:HA	1.93	0.50
14:B:183:THR:OG1	14:B:184:TYR:N	2.44	0.50
16:D:152:MET:HE3	16:D:154:LEU:HD13	1.93	0.50
17:E:342:ASP:OD2	17:E:378:LYS:NZ	2.42	0.50
20:h:46:LEU:HD13	20:h:75:VAL:HG22	1.93	0.50
23:k:117:SER:HB2	24:l:82:ARG:HH12	1.75	0.50
31:s:27:THR:HB	31:s:40:SER:H	1.76	0.50
5:Y:95:LEU:HD11	5:Y:98:SER:HA	1.92	0.50
6:Z:190:ARG:HH12	9:c:297:VAL:HA	1.75	0.50
10:d:21:GLU:O	10:d:25:ARG:HB2	2.12	0.50
12:f:340:MET:SD	12:f:340:MET:C	2.95	0.50
12:f:678:LEU:HG	12:f:679:LEU:HG	1.94	0.50
12:f:684:PRO:HA	12:f:687:ARG:HB3	1.94	0.50
13:A:396:ALA:CA	13:A:401:ARG:HG3	2.25	0.50
13:A:396:ALA:C	13:A:401:ARG:CG	2.83	0.50
14:B:234:LEU:N	34:B:501:ATP:O1A	2.41	0.50
16:D:92:PHE:HB3	16:D:128:ALA:HB3	1.94	0.50
18:F:368:ILE:HG23	18:F:371:ARG:HH22	1.75	0.50
28:P:160:PRO:O	28:P:164:PHE:HB2	2.11	0.50
20:h:147:PHE:HA	20:h:156:PHE:O	2.12	0.50
20:h:185:GLU:HA	20:h:188:ILE:HD12	1.93	0.50
27:o:120:ASP:OD1	27:o:120:ASP:N	2.45	0.50
29:q:184:ASP:OD1	29:q:187:GLY:N	2.45	0.50
31:s:91:MET:O	31:s:94:THR:OG1	2.24	0.50
1:U:176:MET:SD	1:U:177:LEU:N	2.85	0.50
1:U:600:ARG:O	1:U:604:HIS:CB	2.60	0.50
2:V:223:LYS:CE	2:V:223:LYS:N	2.75	0.50
2:V:247:GLN:NE2	2:V:276:PHE:O	2.44	0.50
2:V:284:GLU:O	2:V:288:TYR:HB2	2.11	0.50
6:Z:106:ILE:HA	6:Z:155:PHE:HE2	1.75	0.50
6:Z:283:ARG:NH1	6:Z:284:ASP:OD1	2.44	0.50
12:f:122:ALA:CB	12:f:129:LEU:CD1	2.89	0.50
16:D:233:SER:OG	17:E:259:GLU:OE1	2.30	0.50
20:H:46:LEU:HD13	20:H:75:VAL:HG22	1.93	0.50
24:L:73:SER:O	24:L:132:LEU:HA	2.11	0.50
29:Q:19:ARG:HE	29:Q:31:ASP:HA	1.75	0.50
30:R:76:VAL:HG21	30:R:110:GLY:HA3	1.94	0.50
22:j:119:THR:HG22	22:j:126:PRO:HB3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:k:97:GLN:O	23:k:101:PHE:HB2	2.12	0.50
1:U:179:TYR:CD2	1:U:179:TYR:C	2.89	0.50
1:U:179:TYR:CE2	1:U:183:LEU:HD11	2.38	0.50
1:U:733:ALA:O	1:U:737:LEU:HB2	2.12	0.50
2:V:496:PHE:H	2:V:497:PRO:CD	2.23	0.50
6:Z:11:VAL:O	6:Z:163:GLY:N	2.45	0.50
6:Z:246:VAL:O	6:Z:250:TYR:CG	2.65	0.50
8:b:22:LEU:HD21	8:b:179:LEU:CA	2.40	0.50
12:f:647:GLY:HA2	12:f:650:GLN:HB2	1.94	0.50
12:f:777:THR:HG22	12:f:803:PHE:HA	1.94	0.50
12:f:823:ALA:HB1	12:f:825:MET:HG3	1.93	0.50
16:D:242:GLU:O	16:D:246:MET:CB	2.59	0.50
17:E:45:ASN:O	17:E:49:ALA:HB2	2.11	0.50
19:G:141:ILE:HG22	19:G:151:VAL:HG22	1.94	0.50
20:H:139:TRP:HA	20:H:144:PRO:HA	1.92	0.50
20:H:147:PHE:HA	20:H:156:PHE:O	2.12	0.50
21:I:41:ASP:OD1	21:I:41:ASP:N	2.43	0.50
21:I:229:LYS:N	21:I:232:GLU:OE2	2.45	0.50
30:R:122:SER:OG	30:R:123:GLY:N	2.45	0.50
31:S:150:ASP:HB3	31:S:156:LYS:HD2	1.93	0.50
21:i:153:SER:OG	21:i:155:ASN:OD1	2.30	0.50
26:n:9:ASP:OD1	26:n:9:ASP:N	2.44	0.50
29:q:19:ARG:HE	29:q:31:ASP:HA	1.75	0.50
3:W:399:ASN:HB3	3:W:401:THR:HG22	1.94	0.50
7:a:33:LEU:HD13	7:a:36:GLN:OE1	2.12	0.50
10:d:198:LEU:HB2	10:d:200:PHE:CE1	2.47	0.50
12:f:497:VAL:HA	12:f:500:LEU:HB2	1.93	0.50
12:f:742:ALA:O	12:f:746:ARG:NE	2.38	0.50
13:A:214:LEU:O	13:A:320:ALA:HA	2.11	0.50
14:B:169:PRO:O	14:B:173:VAL:HG23	2.12	0.50
14:B:418:ASP:O	14:B:422:SER:CB	2.58	0.50
16:D:332:GLU:HG3	16:D:334:PRO:HD3	1.94	0.50
16:D:355:SER:HG	16:D:358:VAL:HG23	1.76	0.50
17:E:313:LEU:O	17:E:317:ALA:HB2	2.12	0.50
29:Q:172:ILE:O	29:q:174:ASN:N	2.43	0.50
31:S:16:ALA:HB2	31:S:121:VAL:HG23	1.94	0.50
19:g:38:THR:OG1	19:g:170:VAL:N	2.43	0.50
28:p:2:SER:N	28:p:5:SER:OG	2.40	0.50
30:r:76:VAL:HG21	30:r:110:GLY:HA3	1.94	0.50
8:b:22:LEU:CD2	8:b:179:LEU:HA	2.40	0.50
16:D:92:PHE:CD2	16:D:125:LYS:CG	2.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:H:185:GLU:HA	20:H:188:ILE:HD12	1.94	0.50
22:J:51:ALA:HB1	22:J:53:LEU:HG	1.92	0.50
23:K:97:GLN:HB3	30:R:61:ARG:HG3	1.93	0.50
19:g:141:ILE:HG22	19:g:151:VAL:HG22	1.94	0.50
28:p:160:PRO:O	28:p:164:PHE:HB2	2.11	0.50
2:V:328:VAL:O	2:V:332:LEU:CB	2.58	0.49
12:f:106:LEU:HB2	12:f:141:LYS:HD2	1.93	0.49
12:f:766:GLN:CD	12:f:807:ARG:NH1	2.67	0.49
12:f:785:ARG:NH1	12:f:790:GLN:CB	2.74	0.49
13:A:173:THR:HG22	13:A:175:SER:H	1.77	0.49
14:B:183:THR:HG23	14:B:185:ALA:H	1.77	0.49
14:B:193:GLN:HG3	14:B:353:PHE:HE1	1.76	0.49
14:B:388:ASP:OD1	14:B:388:ASP:N	2.45	0.49
15:C:195:GLY:N	36:C:501:ADP:O1A	2.45	0.49
15:C:350:LEU:HB3	15:C:387:VAL:HG11	1.93	0.49
16:D:83:GLN:NE2	16:D:83:GLN:N	2.60	0.49
22:J:29:GLY:O	22:J:163:ARG:N	2.35	0.49
24:L:189:LYS:HG3	24:L:193:ARG:HH12	1.77	0.49
29:Q:141:SER:O	29:Q:145:ARG:CB	2.60	0.49
32:T:187:PHE:O	32:T:203:LEU:N	2.45	0.49
31:s:150:ASP:HB3	31:s:156:LYS:HD2	1.93	0.49
5:Y:233:ARG:NH1	5:Y:264:TYR:CE1	2.61	0.49
7:a:100:THR:HA	7:a:103:LYS:HG2	1.95	0.49
12:f:471:LEU:HD22	12:f:477:MET:HG3	1.94	0.49
12:f:708:ASP:CG	12:f:712:LYS:HE2	2.36	0.49
12:f:796:LEU:HA	12:f:799:VAL:HG12	1.94	0.49
13:A:73:ALA:HB2	14:B:140:ASP:CA	2.41	0.49
14:B:212:GLU:OE1	14:B:212:GLU:N	2.45	0.49
18:F:376:SER:HB3	18:F:414:GLU:HG3	1.94	0.49
21:I:115:CYS:O	21:I:119:GLN:HB2	2.11	0.49
22:J:109:ARG:O	22:J:113:SER:CB	2.60	0.49
23:K:79:SER:O	23:K:139:VAL:HA	2.11	0.49
30:R:44:THR:HG21	30:R:100:MET:HE3	1.95	0.49
31:S:27:THR:HB	31:S:40:SER:H	1.76	0.49
21:i:115:CYS:O	21:i:119:GLN:HB2	2.12	0.49
24:l:189:LYS:HG3	24:l:193:ARG:HH12	1.77	0.49
1:U:336:GLU:HA	1:U:339:LEU:HB3	1.94	0.49
2:V:166:TYR:HE2	2:V:213:TYR:CD1	2.30	0.49
3:W:282:GLU:O	3:W:286:LEU:CB	2.60	0.49
9:c:303:MET:HE2	10:d:239:SER:HA	1.95	0.49
12:f:708:ASP:O	12:f:712:LYS:HD2	2.09	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:A:413:VAL:O	13:A:417:ILE:HB	2.11	0.49
25:M:136:MET:HE3	25:M:163:CYS:HB3	1.92	0.49
26:N:144:ARG:HH22	26:N:147:MET:HA	1.78	0.49
27:O:160:ALA:HA	27:O:163:ILE:HD12	1.93	0.49
19:g:240:VAL:HA	19:g:243:ALA:HB3	1.95	0.49
21:i:15:GLU:OE2	21:i:17:ARG:NE	2.45	0.49
32:t:146:ALA:O	32:t:150:LEU:N	2.40	0.49
1:U:188:MET:HE3	1:U:194:ARG:HG3	1.95	0.49
2:V:28:PRO:HB2	2:V:29:PRO:CD	2.40	0.49
2:V:28:PRO:CD	2:V:29:PRO:HD3	2.42	0.49
2:V:96:ARG:HB3	2:V:98:LEU:HG	1.94	0.49
5:Y:172:GLY:H	15:C:335:LYS:HB2	1.76	0.49
9:c:64:ASP:OD1	9:c:139:ARG:NH2	2.45	0.49
11:e:40:GLU:OE2	11:e:44:ASP:N	2.40	0.49
12:f:57:GLU:HG2	12:f:93:PRO:HB3	1.94	0.49
12:f:773:LYS:C	12:f:775:THR:N	2.70	0.49
16:D:133:HIS:CD2	16:D:135:HIS:H	2.30	0.49
22:J:53:LEU:C	22:J:53:LEU:CD1	2.85	0.49
24:L:65:HIS:O	24:L:89:ARG:NH2	2.38	0.49
24:L:117:GLN:O	24:L:120:THR:OG1	2.30	0.49
26:N:20:THR:HB	26:N:28:ASN:HB3	1.94	0.49
29:Q:184:ASP:OD1	29:Q:187:GLY:N	2.45	0.49
30:R:1:THR:O	30:R:130:SER:N	2.38	0.49
32:T:149:LEU:HD11	27:o:136:ALA:HB1	1.93	0.49
20:h:74:LEU:HD21	20:h:134:LEU:HD22	1.93	0.49
24:l:65:HIS:O	24:l:89:ARG:NH2	2.37	0.49
26:n:20:THR:HB	26:n:28:ASN:HB3	1.94	0.49
26:n:127:ILE:HG12	26:n:132:SER:HB2	1.93	0.49
1:U:133:ILE:HA	1:U:136:LYS:HB3	1.94	0.49
5:Y:366:TYR:O	5:Y:369:THR:OG1	2.25	0.49
6:Z:43:TRP:HB3	6:Z:48:LEU:HD22	1.94	0.49
8:b:124:LEU:O	8:b:128:ALA:HB2	2.12	0.49
10:d:129:THR:OG1	10:d:130:ASN:N	2.44	0.49
12:f:680:ARG:HH22	12:f:778:LEU:CG	2.25	0.49
12:f:681:TYR:HD1	12:f:858:LYS:HG3	1.77	0.49
21:I:15:GLU:OE2	21:I:17:ARG:NE	2.45	0.49
26:N:127:ILE:HG12	26:N:132:SER:HB2	1.93	0.49
27:O:59:ILE:HG13	27:O:83:LEU:HD21	1.95	0.49
27:O:88:PHE:O	27:O:91:GLN:NE2	2.46	0.49
29:Q:101:ASN:OD1	29:Q:120:TYR:N	2.46	0.49
26:n:138:TYR:O	26:n:142:THR:CB	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:487:HIS:CE1	6:Z:267:ARG:HG2	2.48	0.49
7:a:35:HIS:C	7:a:37:LEU:N	2.69	0.49
7:a:53:GLY:O	7:a:57:ILE:N	2.38	0.49
15:C:20:LEU:HD12	15:C:21:ARG:HE	1.77	0.49
15:C:99:VAL:HA	15:C:123:LEU:HB3	1.94	0.49
18:F:180:ARG:NH1	18:F:241:ALA:O	2.45	0.49
19:G:240:VAL:HA	19:G:243:ALA:HB3	1.94	0.49
28:P:164:PHE:O	28:P:168:SER:OG	2.29	0.49
19:g:165:ALA:HB3	20:h:56:LEU:HD22	1.94	0.49
31:s:153:VAL:HG13	31:s:166:LEU:HD11	1.95	0.49
1:U:459:ASP:HA	1:U:462:LEU:HB3	1.94	0.49
1:U:602:LEU:C	1:U:602:LEU:CD2	2.86	0.49
2:V:497:PRO:HG2	6:Z:278:ASN:CB	2.42	0.49
6:Z:245:PHE:CE2	10:d:235:THR:HG21	2.45	0.49
7:a:115:LYS:HD3	7:a:118:ILE:HD12	1.94	0.49
12:f:442:SER:O	12:f:446:LEU:HB2	2.13	0.49
12:f:478:ARG:HG3	12:f:514:VAL:HG11	1.94	0.49
12:f:680:ARG:NE	12:f:715:HIS:CE1	2.80	0.49
12:f:828:ARG:NE	12:f:843:SER:OG	2.45	0.49
13:A:143:ASP:N	13:A:143:ASP:OD1	2.39	0.49
16:D:212:LYS:NZ	34:D:501:ATP:O1G	2.45	0.49
20:H:14:SER:HG	20:H:18:LYS:H	1.60	0.49
29:Q:13:VAL:HG11	29:Q:105:ALA:HB1	1.94	0.49
19:g:132:ARG:HG2	19:g:132:ARG:HH11	1.77	0.49
22:j:11:SER:OG	22:j:15:HIS:N	2.46	0.49
29:q:29:LYS:HE3	29:q:32:HIS:HA	1.95	0.49
31:s:184:GLU:OE1	31:s:211:ARG:NH1	2.46	0.49
2:V:167:LEU:HG	2:V:171:VAL:CB	2.42	0.49
2:V:479:ARG:HB3	6:Z:261:TYR:HE1	1.77	0.49
6:Z:97:THR:HG23	6:Z:99:PRO:HD3	1.95	0.49
7:a:14:SER:H	7:a:19:PRO:HG3	1.78	0.49
9:c:140:ALA:O	9:c:161:ARG:NE	2.45	0.49
9:c:161:ARG:HB3	9:c:201:TYR:CZ	2.48	0.49
9:c:196:LEU:C	9:c:196:LEU:CD2	2.86	0.49
12:f:24:THR:HG23	12:f:31:LYS:HG3	1.93	0.49
12:f:507:ASP:CG	12:f:509:LYS:CG	2.84	0.49
12:f:737:ASN:HD21	12:f:746:ARG:CD	2.25	0.49
13:A:300:LEU:HD23	13:A:303:ILE:HD12	1.93	0.49
16:D:358:VAL:HG22	16:D:396:ALA:HB2	1.95	0.49
20:H:78:GLY:HA3	20:H:132:VAL:HG12	1.95	0.49
25:M:140:TYR:HA	25:M:146:ALA:HA	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:l:73:SER:O	24:l:132:LEU:HA	2.11	0.49
25:m:36:ALA:HB3	25:m:165:ILE:HG13	1.95	0.49
29:q:141:SER:O	29:q:145:ARG:CB	2.60	0.49
1:U:428:PRO:HA	1:U:439:GLU:HB2	1.94	0.49
1:U:900:TYR:HB3	1:U:914:LEU:HG	1.95	0.49
3:W:245:LYS:O	3:W:249:ALA:HB2	2.13	0.49
13:A:213:LEU:HD22	13:A:337:LEU:HD23	1.94	0.49
13:A:221:GLY:O	13:A:225:CYS:CB	2.61	0.49
15:C:125:LYS:NZ	16:D:112:TYR:OH	2.40	0.49
23:K:97:GLN:O	23:K:101:PHE:HB2	2.12	0.49
22:j:109:ARG:O	22:j:113:SER:CB	2.61	0.49
22:j:109:ARG:O	22:j:113:SER:OG	2.28	0.49
29:q:106:GLY:O	29:q:114:ALA:N	2.46	0.49
1:U:416:GLU:OE1	1:U:450:HIS:NE2	2.45	0.49
2:V:167:LEU:HG	2:V:171:VAL:CG1	2.41	0.49
6:Z:73:ASP:H	8:b:63:THR:HG21	1.78	0.49
12:f:82:ILE:O	12:f:86:THR:OG1	2.22	0.49
12:f:130:ALA:O	12:f:134:SER:N	2.42	0.49
12:f:282:PHE:O	12:f:286:LYS:CB	2.61	0.49
13:A:190:VAL:HG21	13:A:339:ARG:HG3	1.95	0.49
16:D:162:VAL:HG12	16:D:218:ALA:HB2	1.94	0.49
19:G:112:ASP:N	19:G:112:ASP:OD1	2.45	0.49
22:J:11:SER:OG	22:J:15:HIS:N	2.46	0.49
2:V:211:TYR:HD2	2:V:253:LEU:HD13	1.78	0.48
12:f:524:MET:HA	12:f:776:LEU:HD23	1.95	0.48
17:E:123:SER:HB2	17:E:124:HIS:HD2	1.77	0.48
17:E:328:TYR:HA	17:E:331:ILE:HD12	1.95	0.48
18:F:410:ARG:NH2	18:F:419:ASP:OD2	2.45	0.48
26:N:179:ILE:HG12	26:N:184:VAL:HG22	1.95	0.48
31:S:150:ASP:OD2	28:p:177:ARG:NH2	2.44	0.48
23:k:169:ALA:O	23:k:174:SER:OG	2.24	0.48
24:l:44:ALA:HB1	24:l:135:ALA:HB1	1.95	0.48
29:q:13:VAL:HG11	29:q:105:ALA:HB1	1.94	0.48
31:s:16:ALA:HB2	31:s:121:VAL:HG23	1.94	0.48
1:U:645:ASN:HD21	1:U:648:VAL:HG23	1.78	0.48
1:U:789:ILE:N	1:U:910:GLY:O	2.46	0.48
2:V:96:ARG:HD3	2:V:107:ARG:HD2	1.94	0.48
2:V:163:VAL:HA	2:V:175:MET:HE2	1.95	0.48
7:a:172:TYR:O	7:a:176:ALA:CB	2.61	0.48
9:c:192:LEU:N	9:c:196:LEU:HD12	2.27	0.48
12:f:640:LYS:HG2	12:f:678:LEU:HD13	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:C:204:ALA:HB2	15:C:245:ILE:HD12	1.94	0.48
15:C:329:LEU:O	15:C:333:SER:CB	2.61	0.48
17:E:235:ILE:O	17:E:239:GLY:N	2.46	0.48
21:I:90:LEU:HA	21:I:93:ILE:HD12	1.96	0.48
27:O:38:SER:OG	27:O:40:ASN:OD1	2.21	0.48
27:o:41:ILE:HG12	27:o:102:GLY:HA3	1.93	0.48
27:o:88:PHE:O	27:o:91:GLN:NE2	2.46	0.48
32:t:85:PRO:HA	32:t:88:ILE:HD12	1.95	0.48
2:V:96:ARG:HA	2:V:107:ARG:HE	1.78	0.48
2:V:211:TYR:O	2:V:215:ALA:HB2	2.13	0.48
2:V:494:MET:HA	6:Z:275:LEU:HD23	1.95	0.48
5:Y:315:THR:HA	5:Y:353:ILE:HA	1.94	0.48
12:f:437:GLU:HG3	12:f:440:ILE:HD12	1.94	0.48
13:A:312:ARG:HB2	13:A:315:ILE:HB	1.94	0.48
14:B:265:LYS:HA	14:B:268:ARG:HE	1.78	0.48
17:E:148:VAL:HG13	17:E:149:ILE:HG23	1.96	0.48
18:F:336:ASP:OD1	18:F:336:ASP:N	2.46	0.48
21:I:153:SER:OG	21:I:155:ASN:OD1	2.30	0.48
29:Q:106:GLY:O	29:Q:114:ALA:N	2.46	0.48
32:T:177:TYR:CZ	32:T:185:ASN:HB2	2.48	0.48
25:m:35:THR:HA	25:m:166:GLY:HA3	1.95	0.48
26:n:144:ARG:HH22	26:n:147:MET:HA	1.78	0.48
2:V:198:GLN:O	2:V:202:ALA:CB	2.62	0.48
5:Y:16:ASP:HA	5:Y:19:ILE:HD12	1.95	0.48
5:Y:233:ARG:N	5:Y:234:PRO:CD	2.74	0.48
9:c:192:LEU:CA	9:c:196:LEU:HD12	2.43	0.48
12:f:828:ARG:NH2	12:f:843:SER:OG	2.47	0.48
13:A:85:GLN:O	13:A:89:SER:OG	2.27	0.48
15:C:59:LEU:HD11	16:D:76:GLN:HA	1.96	0.48
18:F:305:GLU:OE1	18:F:308:ARG:NH1	2.46	0.48
20:H:14:SER:HG	20:H:16:SER:HG	1.57	0.48
23:K:12:VAL:HG12	23:K:23:GLN:HE22	1.79	0.48
23:K:42:THR:HG22	23:K:44:GLU:H	1.79	0.48
23:K:169:ALA:O	23:K:174:SER:OG	2.24	0.48
29:Q:17:SER:O	29:Q:178:PHE:HA	2.14	0.48
31:S:184:GLU:OE1	31:S:211:ARG:NH1	2.46	0.48
22:j:136:PHE:HA	22:j:142:PRO:HA	1.95	0.48
28:p:187:VAL:O	28:p:197:THR:HA	2.13	0.48
1:U:241:ASN:HD22	1:U:244:MET:HE3	1.78	0.48
12:f:198:HIS:O	12:f:202:HIS:CB	2.62	0.48
15:C:57:ARG:O	15:C:61:GLU:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:C:69:GLN:HA	16:D:136:SER:HA	1.95	0.48
23:K:195:ILE:O	23:K:198:SER:OG	2.27	0.48
21:i:68:LEU:HD11	21:i:74:CYS:HB3	1.96	0.48
28:p:125:ASP:OD1	28:p:129:CYS:N	2.39	0.48
29:q:101:ASN:OD1	29:q:120:TYR:N	2.46	0.48
31:s:46:LEU:HD12	31:s:50:THR:HG22	1.94	0.48
1:U:576:PRO:HA	1:U:579:ARG:HE	1.79	0.48
2:V:94:VAL:HG22	2:V:137:GLU:HB2	1.95	0.48
3:W:256:ILE:HG22	3:W:263:TRP:HD1	1.78	0.48
6:Z:68:TRP:CH2	6:Z:107:ALA:HB3	2.49	0.48
7:a:360:VAL:HG22	9:c:308:VAL:HG13	1.94	0.48
8:b:62:THR:HG22	8:b:70:ARG:HG2	1.95	0.48
12:f:447:ALA:HA	12:f:450:ILE:HD12	1.94	0.48
12:f:785:ARG:NE	12:f:785:ARG:HA	2.28	0.48
13:A:244:GLU:HG2	14:B:268:ARG:HD3	1.96	0.48
16:D:336:PRO:HB3	16:D:340:GLN:HB2	1.95	0.48
21:I:68:LEU:HD11	21:I:74:CYS:HB3	1.96	0.48
23:K:169:ALA:N	23:K:178:GLN:OE1	2.44	0.48
19:g:46:ASP:CB	19:g:222:VAL:CG2	2.91	0.48
23:k:143:PHE:O	23:k:153:LEU:HA	2.13	0.48
30:r:44:THR:HG21	30:r:100:MET:HE3	1.95	0.48
1:U:19:LEU:HD12	1:U:22:PHE:HB2	1.96	0.48
1:U:229:VAL:O	1:U:233:LEU:CB	2.61	0.48
1:U:261:LEU:HA	1:U:264:VAL:HG12	1.96	0.48
2:V:62:HIS:O	2:V:66:GLU:HB2	2.14	0.48
2:V:116:ALA:O	2:V:120:PHE:HB2	2.13	0.48
2:V:263:LEU:O	2:V:266:GLN:NE2	2.46	0.48
6:Z:116:CYS:O	6:Z:119:SER:OG	2.30	0.48
9:c:31:VAL:HB	9:c:205:ILE:HG22	1.95	0.48
9:c:238:CYS:HA	9:c:241:ASN:HD22	1.78	0.48
15:C:187:LEU:HB3	15:C:314:LYS:HG2	1.96	0.48
21:i:229:LYS:N	21:i:232:GLU:OE2	2.45	0.48
23:k:42:THR:HG22	23:k:44:GLU:H	1.79	0.48
25:m:140:TYR:HA	25:m:146:ALA:HA	1.95	0.48
26:n:46:SER:O	26:n:96:ALA:HA	2.14	0.48
27:o:59:ILE:HG13	27:o:83:LEU:HD21	1.95	0.48
29:q:31:ASP:N	29:q:31:ASP:OD1	2.46	0.48
30:r:122:SER:OG	30:r:123:GLY:N	2.45	0.48
6:Z:9:VAL:HG22	6:Z:160:SER:HA	1.95	0.48
12:f:291:GLN:HE21	12:f:879:ARG:NH2	2.12	0.48
12:f:342:PRO:CD	12:f:345:PRO:HG3	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:372:LEU:HD11	12:f:403:LYS:HE3	1.96	0.48
12:f:744:MET:O	12:f:748:LEU:CB	2.62	0.48
13:A:72:LEU:HD23	13:A:73:ALA:H	1.79	0.48
16:D:208:PRO:HB2	17:E:291:ARG:HD3	1.95	0.48
19:G:97:GLU:HA	19:G:100:ASN:HD22	1.79	0.48
21:I:82:ASP:HB3	21:I:130:PHE:HD1	1.79	0.48
23:K:196:LYS:HG3	23:K:241:ILE:HD12	1.96	0.48
26:N:46:SER:O	26:N:96:ALA:HA	2.14	0.48
29:Q:29:LYS:HE3	29:Q:32:HIS:HA	1.95	0.48
23:k:15:PHE:HE2	24:l:127:PRO:HD2	1.79	0.48
32:t:177:TYR:CZ	32:t:185:ASN:HB2	2.48	0.48
32:t:187:PHE:O	32:t:203:LEU:N	2.45	0.48
1:U:126:ILE:HG22	1:U:128:GLN:H	1.78	0.48
1:U:596:ASN:ND2	16:D:52:GLU:O	2.47	0.48
3:W:397:VAL:HG23	3:W:403:PHE:HA	1.96	0.48
5:Y:233:ARG:C	5:Y:235:ASP:N	2.70	0.48
7:a:321:LYS:O	7:a:334:THR:OG1	2.30	0.48
9:c:30:GLN:HB3	9:c:66:THR:HG22	1.95	0.48
12:f:228:LYS:H	14:B:59:ARG:HH22	1.62	0.48
17:E:55:GLN:HB3	17:E:99:ALA:HB1	1.96	0.48
17:E:116:ASP:OD2	17:E:119:VAL:N	2.45	0.48
17:E:304:PRO:O	17:E:309:ARG:NH1	2.47	0.48
18:F:165:PRO:HB2	18:F:166:THR:HG23	1.96	0.48
25:M:241:GLU:O	25:M:244:LYS:NZ	2.38	0.48
31:S:149:LEU:O	31:S:153:VAL:HB	2.13	0.48
28:p:13:ALA:O	28:p:136:PHE:HA	2.14	0.48
28:p:189:ILE:HG23	28:p:196:THR:HB	1.95	0.48
31:s:19:ASP:OD1	31:s:19:ASP:N	2.44	0.48
32:t:73:ASP:OD1	32:t:74:GLU:N	2.47	0.48
1:U:179:TYR:HE2	1:U:183:LEU:CD1	2.23	0.48
1:U:522:GLY:O	1:U:559:ARG:NH2	2.47	0.48
2:V:317:PRO:HG2	11:e:4:LYS:HZ2	1.79	0.48
12:f:739:ALA:HB1	12:f:743:ALA:HB2	1.94	0.48
14:B:249:ARG:HG3	14:B:283:PHE:HD2	1.78	0.48
17:E:169:GLY:HA3	17:E:275:MET:HB2	1.96	0.48
18:F:272:PHE:CD2	18:F:316:GLN:HG3	2.49	0.48
31:S:46:LEU:HD12	31:S:50:THR:HG22	1.94	0.48
32:T:73:ASP:OD1	32:T:74:GLU:N	2.47	0.48
25:m:215:TRP:CE2	25:m:220:THR:HG22	2.21	0.48
12:f:790:GLN:HG2	12:f:794:ALA:HB3	1.94	0.47
15:C:35:VAL:O	15:C:39:SER:CB	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:D:151:ILE:H	16:D:151:ILE:CD1	1.96	0.47
24:L:44:ALA:HB1	24:L:135:ALA:HB1	1.95	0.47
26:N:9:ASP:OD1	26:N:9:ASP:N	2.44	0.47
28:P:187:VAL:O	28:P:197:THR:HA	2.13	0.47
31:S:19:ASP:N	31:S:19:ASP:OD1	2.44	0.47
21:i:158:GLY:C	22:j:55:ASP:HB3	2.39	0.47
24:l:34:ALA:O	24:l:49:LEU:HB3	2.14	0.47
25:m:163:CYS:SG	25:m:164:ALA:N	2.87	0.47
1:U:770:TRP:HA	9:c:180:ASN:HB3	1.95	0.47
3:W:352:LYS:HA	3:W:355:LYS:HB3	1.96	0.47
6:Z:12:HIS:ND1	6:Z:50:VAL:O	2.39	0.47
9:c:51:MET:HE2	9:c:81:GLY:H	1.78	0.47
12:f:41:LYS:O	12:f:45:LEU:HB2	2.14	0.47
12:f:673:ARG:CZ	12:f:712:LYS:CG	2.91	0.47
15:C:129:ASN:OD1	15:C:129:ASN:N	2.47	0.47
16:D:309:MET:HE1	16:D:327:LEU:HD21	1.95	0.47
25:M:36:ALA:HB3	25:M:165:ILE:HG13	1.95	0.47
26:N:95:MET:HA	26:N:116:MET:HE3	1.97	0.47
20:h:78:GLY:HA3	20:h:132:VAL:HG12	1.95	0.47
21:i:90:LEU:HA	21:i:93:ILE:HD12	1.95	0.47
23:k:169:ALA:N	23:k:178:GLN:OE1	2.44	0.47
25:m:99:ARG:NH2	25:m:105:ASN:OD1	2.37	0.47
9:c:50:PRO:HB2	17:E:108:MET:HE1	1.97	0.47
23:K:143:PHE:O	23:K:153:LEU:HA	2.13	0.47
25:M:163:CYS:SG	25:M:164:ALA:N	2.86	0.47
27:O:46:ALA:HB3	27:O:97:ALA:HB3	1.97	0.47
30:r:97:MET:HB3	30:r:116:SER:HB3	1.96	0.47
30:r:125:THR:HB	30:r:139:MET:HE3	1.96	0.47
2:V:28:PRO:N	2:V:29:PRO:HD2	2.29	0.47
2:V:84:LYS:O	2:V:118:GLN:NE2	2.47	0.47
2:V:166:TYR:CD1	2:V:217:VAL:HG23	2.49	0.47
3:W:265:GLN:OE1	3:W:335:SER:OG	2.27	0.47
6:Z:138:TYR:HB3	6:Z:155:PHE:HB3	1.96	0.47
7:a:57:ILE:HD12	7:a:60:TYR:HB3	1.96	0.47
10:d:94:TYR:O	10:d:98:LEU:HB2	2.15	0.47
12:f:215:ASP:O	12:f:218:GLU:CG	2.62	0.47
12:f:709:THR:CA	12:f:712:LYS:HG3	2.43	0.47
16:D:214:MET:HE1	34:D:501:ATP:C8	2.49	0.47
18:F:407:ALA:HA	18:F:410:ARG:HG2	1.96	0.47
21:I:170:ALA:O	21:I:173:SER:OG	2.32	0.47
22:J:136:PHE:HA	22:J:142:PRO:HA	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:M:35:THR:HA	25:M:166:GLY:HA3	1.95	0.47
27:O:1:THR:O	27:O:129:SER:N	2.42	0.47
29:Q:38:MET:HB3	29:Q:64:VAL:HG11	1.95	0.47
30:R:125:THR:HB	30:R:139:MET:HE3	1.96	0.47
19:g:133:PRO:O	25:m:14:PHE:HZ	1.98	0.47
23:k:98:ASN:N	30:r:61:ARG:HH21	2.13	0.47
2:V:358:MET:O	2:V:362:LEU:CB	2.60	0.47
3:W:363:ILE:HD11	3:W:382:LEU:HD11	1.97	0.47
6:Z:223:ASN:HD21	6:Z:226:ILE:H	1.61	0.47
7:a:127:ASP:HB2	7:a:162:TYR:HE1	1.79	0.47
7:a:194:GLN:HB3	7:a:225:LEU:HG	1.95	0.47
9:c:44:HIS:CE1	9:c:53:VAL:HB	2.50	0.47
12:f:149:GLU:HG3	12:f:152:ALA:HB2	1.96	0.47
12:f:683:GLU:O	12:f:687:ARG:CB	2.62	0.47
15:C:71:SER:HB3	16:D:112:TYR:HB3	1.95	0.47
17:E:113:ARG:NH1	17:E:224:ASP:OD1	2.47	0.47
27:O:167:LEU:HD12	31:s:33:PHE:HA	1.97	0.47
24:l:33:SER:OG	24:l:62:LYS:NZ	2.39	0.47
31:s:149:LEU:O	31:s:153:VAL:HB	2.13	0.47
1:U:153:ILE:HA	1:U:156:GLU:HB2	1.96	0.47
2:V:467:TYR:OH	6:Z:255:ASP:OD1	2.31	0.47
3:W:237:GLU:HG2	3:W:238:GLY:H	1.78	0.47
4:X:414:LEU:O	4:X:418:ALA:CB	2.62	0.47
9:c:244:VAL:HB	9:c:291:LEU:HD21	1.97	0.47
10:d:36:LEU:HD23	10:d:38:THR:H	1.78	0.47
10:d:183:GLU:HA	10:d:215:TRP:HE1	1.80	0.47
12:f:472:HIS:CE1	12:f:478:ARG:CG	2.95	0.47
13:A:114:ASN:HA	13:A:120:LYS:HG3	1.96	0.47
13:A:369:ARG:NH2	23:K:206:MET:O	2.48	0.47
18:F:224:LEU:HB2	18:F:348:LEU:HD23	1.97	0.47
18:F:231:THR:OG1	18:F:233:LYS:NZ	2.37	0.47
19:G:100:ASN:OD1	26:N:61:TYR:OH	2.28	0.47
21:I:64:LYS:O	21:I:75:SER:HA	2.14	0.47
21:I:240:HIS:ND1	21:I:243:GLU:OE2	2.48	0.47
25:M:215:TRP:HZ2	25:M:219:LEU:HD22	1.75	0.47
31:S:38:ARG:NH2	27:o:164:PHE:O	2.47	0.47
32:T:46:ASN:OD1	32:T:46:ASN:N	2.48	0.47
29:q:17:SER:O	29:q:178:PHE:HA	2.14	0.47
1:U:474:ARG:O	1:U:478:SER:CB	2.63	0.47
1:U:559:ARG:HB3	1:U:562:GLU:HB2	1.96	0.47
2:V:171:VAL:HG22	2:V:175:MET:HE3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:W:348:GLU:HA	3:W:351:TRP:HD1	1.80	0.47
5:Y:23:ARG:HH22	5:Y:52:PRO:HB2	1.79	0.47
5:Y:112:CYS:CB	5:Y:120:ALA:CB	2.93	0.47
5:Y:168:ILE:HG21	5:Y:177:ARG:HB2	1.97	0.47
7:a:58:LYS:O	7:a:62:ASN:HB2	2.15	0.47
7:a:360:VAL:O	7:a:364:GLU:HB2	2.14	0.47
8:b:93:ALA:HB1	8:b:109:ILE:HD13	1.96	0.47
12:f:473:ASN:OD1	12:f:473:ASN:N	2.46	0.47
12:f:610:GLN:HB2	12:f:614:HIS:HD2	1.79	0.47
12:f:661:ALA:HB1	13:A:76:ALA:HB1	1.97	0.47
13:A:73:ALA:HA	14:B:140:ASP:CG	2.40	0.47
13:A:295:VAL:HG21	14:B:307:ARG:HH12	1.80	0.47
14:B:258:LYS:HD3	16:D:274:ARG:HH22	1.78	0.47
15:C:113:ARG:CB	15:C:127:LEU:HB3	2.45	0.47
15:C:301:LEU:HD13	15:C:305:LEU:HD23	1.97	0.47
16:D:107:THR:HG22	17:E:77:PRO:HG3	1.95	0.47
34:E:401:ATP:O3G	18:F:347:ARG:NH2	2.46	0.47
22:J:109:ARG:O	22:J:113:SER:OG	2.28	0.47
25:M:40:ARG:HA	25:M:45:VAL:HA	1.97	0.47
26:N:144:ARG:NH1	26:N:145:GLU:O	2.48	0.47
29:Q:173:LEU:HA	29:q:173:LEU:HA	1.97	0.47
31:S:114:ASP:OD1	31:S:118:LYS:N	2.37	0.47
32:T:85:PRO:HA	32:T:88:ILE:HD12	1.95	0.47
19:g:97:GLU:HA	19:g:100:ASN:HD22	1.78	0.47
25:m:67:PHE:HB2	25:m:75:MET:HB3	1.97	0.47
27:o:41:ILE:HA	27:o:101:GLY:O	2.15	0.47
29:q:38:MET:HB3	29:q:64:VAL:HG11	1.95	0.47
31:s:92:LEU:HA	31:s:95:ILE:HD12	1.96	0.47
32:t:157:GLN:NE2	32:t:159:VAL:O	2.48	0.47
5:Y:92:GLU:HB3	5:Y:100:ILE:HD11	1.97	0.47
5:Y:347:ILE:HG13	5:Y:354:VAL:HG22	1.96	0.47
10:d:170:LEU:HA	10:d:173:THR:HG22	1.96	0.47
21:i:64:LYS:O	21:i:75:SER:HA	2.14	0.47
26:n:179:ILE:HG12	26:n:184:VAL:HG22	1.95	0.47
32:t:49:THR:HB	32:t:85:PRO:HG3	1.97	0.47
1:U:107:HIS:HA	1:U:110:LYS:HG2	1.97	0.47
2:V:366:ALA:O	2:V:369:THR:OG1	2.30	0.47
3:W:316:ARG:NH1	3:W:381:LEU:HD23	2.28	0.47
7:a:292:THR:HG23	7:a:295:GLU:H	1.79	0.47
7:a:370:GLN:HE21	10:d:244:LYS:HD2	1.78	0.47
8:b:121:GLU:HA	8:b:124:LEU:HG	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:c:113:HIS:HE1	9:c:115:HIS:CD2	2.32	0.47
12:f:608:LYS:HA	12:f:611:GLN:HG2	1.96	0.47
14:B:225:TYR:O	14:B:352:GLU:HA	2.14	0.47
15:C:372:ARG:NH2	16:D:179:GLU:OE2	2.48	0.47
18:F:93:VAL:HB	18:F:149:ASP:H	1.79	0.47
18:F:313:LEU:O	18:F:317:LEU:CB	2.63	0.47
21:I:119:GLN:O	21:I:122:THR:OG1	2.26	0.47
24:L:34:ALA:O	24:L:49:LEU:HB3	2.14	0.47
28:P:13:ALA:O	28:P:136:PHE:HA	2.14	0.47
28:P:189:ILE:HG23	28:P:196:THR:HB	1.95	0.47
31:S:125:ASP:OD1	31:S:129:SER:N	2.44	0.47
21:i:119:GLN:O	21:i:122:THR:OG1	2.26	0.47
21:i:140:ASP:OD1	21:i:144:GLY:N	2.48	0.47
21:i:170:ALA:O	21:i:173:SER:OG	2.32	0.47
25:m:215:TRP:CH2	25:m:228:PRO:CG	2.98	0.47
1:U:695:MET:HE1	1:U:709:PHE:HD2	1.79	0.47
2:V:166:TYR:C	2:V:175:MET:HE1	2.17	0.47
6:Z:237:LEU:HD21	9:c:310:LYS:HD3	1.97	0.47
9:c:118:PHE:N	9:c:146:ASP:OD1	2.47	0.47
13:A:178:GLY:HA3	13:A:353:HIS:CE1	2.50	0.47
14:B:135:ILE:HA	14:B:159:VAL:HB	1.96	0.47
15:C:86:LEU:HD11	15:C:94:LYS:HD3	1.97	0.47
17:E:241:ARG:NH2	17:E:283:ASP:O	2.48	0.47
18:F:383:GLU:HG3	24:L:166:GLN:HG3	1.97	0.47
20:H:39:LYS:HE2	20:H:144:PRO:HG2	1.97	0.47
27:O:41:ILE:HA	27:O:101:GLY:O	2.15	0.47
27:O:63:LEU:O	27:O:67:SER:CB	2.62	0.47
26:n:144:ARG:NH1	26:n:145:GLU:O	2.48	0.47
27:o:63:LEU:O	27:o:67:SER:CB	2.62	0.47
30:r:38:ASN:HB2	30:r:41:LEU:HB2	1.97	0.47
32:t:97:TYR:O	32:t:101:SER:OG	2.26	0.47
2:V:201:ARG:HE	2:V:242:HIS:HB3	1.80	0.46
6:Z:94:TRP:CE2	6:Z:108:ILE:HG22	2.50	0.46
22:J:159:ASN:ND2	22:J:169:ARG:HE	2.13	0.46
25:M:15:SER:N	25:M:19:ARG:O	2.48	0.46
25:M:41:CYS:N	25:M:44:GLY:O	2.42	0.46
30:R:153:TYR:O	30:R:157:ARG:CB	2.63	0.46
19:g:38:THR:HA	19:g:168:ALA:O	2.15	0.46
19:g:132:ARG:CD	19:g:132:ARG:C	2.88	0.46
23:k:196:LYS:HG3	23:k:241:ILE:HD12	1.96	0.46
28:p:191:GLU:OE2	28:p:194:LYS:NZ	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:r:130:SER:OG	30:r:167:ASP:OD2	2.31	0.46
2:V:211:TYR:O	2:V:215:ALA:CB	2.63	0.46
3:W:315:MET:H	3:W:315:MET:HG2	1.44	0.46
3:W:355:LYS:HA	3:W:358:VAL:HG22	1.97	0.46
6:Z:94:TRP:CE3	6:Z:108:ILE:HG21	2.50	0.46
7:a:8:LEU:C	7:a:8:LEU:HD12	2.41	0.46
8:b:16:MET:HA	8:b:25:ARG:HH11	1.81	0.46
10:d:168:ASP:OD1	10:d:171:LEU:HD22	2.13	0.46
12:f:620:PHE:HB2	14:B:86:LYS:HD2	1.96	0.46
12:f:844:VAL:O	12:f:844:VAL:HG13	2.15	0.46
13:A:113:ILE:HD11	13:A:142:VAL:HG21	1.97	0.46
15:C:168:PRO:HG3	15:C:175:PHE:CE2	2.50	0.46
16:D:83:GLN:HE21	16:D:83:GLN:CA	2.24	0.46
16:D:133:HIS:CD2	16:D:136:SER:H	2.23	0.46
18:F:180:ARG:NH1	18:F:244:THR:O	2.48	0.46
18:F:365:ILE:HA	18:F:368:ILE:HD12	1.97	0.46
21:I:140:ASP:OD1	21:I:144:GLY:N	2.48	0.46
27:O:161:ALA:O	27:O:165:ASN:HB2	2.15	0.46
30:R:97:MET:HB3	30:R:116:SER:HB3	1.97	0.46
31:S:92:LEU:HA	31:S:95:ILE:HD12	1.96	0.46
32:T:157:GLN:NE2	32:T:159:VAL:O	2.48	0.46
19:g:112:ASP:HB3	19:g:152:TYR:CZ	2.50	0.46
21:i:12:PHE:CZ	22:j:125:ARG:HD3	2.51	0.46
23:k:12:VAL:HG12	23:k:23:GLN:HE22	1.79	0.46
1:U:28:ASN:HB3	1:U:59:PHE:HZ	1.81	0.46
2:V:334:VAL:O	2:V:338:LEU:HG	2.15	0.46
6:Z:85:VAL:HA	9:c:76:PRO:HB3	1.96	0.46
12:f:616:CYS:HB2	12:f:629:LYS:HD3	1.97	0.46
12:f:732:VAL:O	12:f:736:THR:OG1	2.25	0.46
16:D:352:MET:HB3	16:D:352:MET:HE2	1.77	0.46
25:M:67:PHE:HB2	25:M:75:MET:HB3	1.97	0.46
26:N:6:VAL:HG22	26:N:125:PHE:HB2	1.97	0.46
28:P:73:LEU:O	28:P:77:LYS:HB2	2.15	0.46
21:i:240:HIS:ND1	21:i:243:GLU:OE2	2.48	0.46
26:n:95:MET:HA	26:n:116:MET:HE3	1.97	0.46
31:s:125:ASP:OD1	31:s:129:SER:N	2.44	0.46
1:U:614:VAL:O	1:U:618:ALA:CB	2.64	0.46
1:U:701:ILE:HG21	1:U:810:THR:HA	1.97	0.46
2:V:430:SER:OG	2:V:433:ASP:OD1	2.30	0.46
2:V:497:PRO:CB	2:V:498:PRO:CD	2.91	0.46
5:Y:17:LEU:HD22	5:Y:212:GLU:HB2	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:A:372:LEU:HD23	13:A:375:ARG:HH21	1.81	0.46
14:B:65:LEU:N	14:B:65:LEU:HD23	2.30	0.46
15:C:380:GLN:HA	15:C:383:PHE:HD2	1.80	0.46
16:D:353:ASN:ND2	16:D:393:ILE:C	2.73	0.46
19:G:38:THR:HA	19:G:168:ALA:O	2.15	0.46
30:R:196:HIS:O	30:R:200:SER:CB	2.58	0.46
27:o:46:ALA:HB3	27:o:97:ALA:HB3	1.97	0.46
1:U:184:CYS:O	1:U:188:MET:HB2	2.15	0.46
8:b:21:PHE:CE2	8:b:177:PRO:CA	2.77	0.46
12:f:288:VAL:HA	12:f:291:GLN:HG2	1.97	0.46
12:f:291:GLN:HB3	12:f:879:ARG:HH21	1.80	0.46
12:f:378:ASN:OD1	12:f:382:ASN:ND2	2.48	0.46
12:f:575:ALA:O	12:f:579:ALA:CB	2.63	0.46
13:A:400:ARG:HD3	13:A:400:ARG:HA	1.27	0.46
14:B:150:VAL:HA	14:B:162:VAL:HA	1.98	0.46
14:B:170:LEU:HG	14:B:174:MET:CE	2.30	0.46
18:F:197:GLU:HB2	18:F:350:ARG:HH21	1.81	0.46
19:G:112:ASP:HB3	19:G:152:TYR:CZ	2.50	0.46
24:L:157:ARG:NH2	25:M:56:LYS:O	2.48	0.46
27:O:120:ASP:OD1	27:O:120:ASP:N	2.45	0.46
27:o:161:ALA:O	27:o:165:ASN:HB2	2.15	0.46
30:r:153:TYR:O	30:r:157:ARG:CB	2.63	0.46
5:Y:134:LEU:HA	5:Y:137:ARG:HB2	1.97	0.46
12:f:121:PHE:O	12:f:129:LEU:HD12	2.13	0.46
12:f:838:ARG:CB	12:f:839:PRO:HD2	2.37	0.46
14:B:103:ARG:NH2	14:B:107:MET:SD	2.84	0.46
15:C:89:VAL:HB	15:C:92:GLU:HB3	1.97	0.46
22:J:67:ASP:OD1	22:J:67:ASP:N	2.48	0.46
24:L:50:LYS:HB2	24:L:209:ASN:HA	1.98	0.46
24:L:121:GLN:HG3	25:M:129:ARG:HE	1.80	0.46
27:O:213:THR:O	28:P:198:ARG:HA	2.15	0.46
29:Q:31:ASP:N	29:Q:31:ASP:OD1	2.46	0.46
30:R:38:ASN:HB2	30:R:41:LEU:HB2	1.97	0.46
32:T:49:THR:HB	32:T:85:PRO:HG3	1.97	0.46
19:g:17:SER:OG	19:g:21:ARG:N	2.47	0.46
19:g:112:ASP:OD1	19:g:112:ASP:N	2.45	0.46
20:h:39:LYS:HE2	20:h:144:PRO:HG2	1.97	0.46
22:j:38:ARG:HH12	22:j:182:GLU:HA	1.81	0.46
2:V:26:PRO:C	2:V:28:PRO:HD2	2.40	0.46
8:b:178:SER:OG	8:b:179:LEU:N	2.48	0.46
9:c:237:HIS:CE1	9:c:241:ASN:HD21	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:253:LEU:O	12:f:257:ARG:HD2	2.16	0.46
12:f:621:ASP:O	12:f:623:LYS:N	2.49	0.46
14:B:168:ASP:HB3	14:B:171:VAL:CG2	2.46	0.46
16:D:322:LEU:HD22	16:D:330:LYS:HE3	1.97	0.46
16:D:335:LEU:HD11	16:D:371:SER:HA	1.98	0.46
17:E:98:VAL:HG12	17:E:110:TYR:HA	1.97	0.46
19:G:175:SER:OG	19:G:201:CYS:SG	2.69	0.46
21:I:40:ASN:ND2	21:I:182:GLY:O	2.48	0.46
22:J:38:ARG:HH12	22:J:182:GLU:HA	1.81	0.46
30:R:166:ARG:HH11	28:p:34:MET:HG3	1.80	0.46
19:g:27:TYR:CZ	25:m:16:PRO:HA	2.51	0.46
21:i:82:ASP:HB3	21:i:130:PHE:HD1	1.79	0.46
21:i:116:ASP:OD1	22:j:81:ARG:NH1	2.48	0.46
24:l:36:VAL:HG22	24:l:160:SER:HB2	1.98	0.46
24:l:50:LYS:HB2	24:l:209:ASN:HA	1.98	0.46
28:p:73:LEU:O	28:p:77:LYS:HB2	2.16	0.46
29:q:155:ARG:HA	29:q:158:GLU:HG2	1.97	0.46
31:s:36:HIS:O	32:t:151:ARG:NH2	2.48	0.46
1:U:503:GLN:HB2	1:U:508:THR:HG21	1.98	0.46
8:b:4:GLU:OE2	8:b:47:ASN:ND2	2.46	0.46
13:A:181:LYS:HA	13:A:184:ILE:HD12	1.96	0.46
16:D:407:ILE:HG13	16:D:408:LYS:H	1.81	0.46
17:E:45:ASN:O	17:E:49:ALA:CB	2.64	0.46
24:L:36:VAL:HG22	24:L:160:SER:HB2	1.98	0.46
28:P:125:ASP:OD1	28:P:129:CYS:N	2.39	0.46
1:U:176:MET:HG3	1:U:177:LEU:HG	1.97	0.46
2:V:200:ARG:HD2	2:V:242:HIS:HB2	1.97	0.46
2:V:214:HIS:O	2:V:218:TYR:CB	2.58	0.46
3:W:268:LYS:HD3	3:W:333:LEU:HB2	1.96	0.46
7:a:77:VAL:HA	7:a:80:ILE:HG22	1.98	0.46
9:c:174:PRO:HB2	9:c:175:ARG:HG3	1.98	0.46
12:f:472:HIS:ND1	12:f:478:ARG:HB2	2.31	0.46
12:f:667:GLY:HA2	12:f:671:ALA:HB3	1.97	0.46
13:A:263:MET:O	13:A:266:THR:OG1	2.30	0.46
13:A:294:GLU:OE1	13:A:297:ARG:NH1	2.49	0.46
13:A:346:PRO:O	13:A:351:ARG:NH1	2.49	0.46
14:B:378:VAL:HG12	14:B:416:ASN:HA	1.97	0.46
22:J:121:SER:OG	22:J:122:ASN:N	2.49	0.46
24:L:113:GLY:O	24:L:117:GLN:HB2	2.16	0.46
21:i:40:ASN:ND2	21:i:182:GLY:O	2.48	0.46
31:s:27:THR:O	31:s:40:SER:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:788:VAL:HG12	1:U:909:GLY:HA2	1.97	0.46
2:V:228:ARG:HH21	2:V:257:ASN:HB3	1.81	0.46
4:X:335:LEU:HD21	4:X:365:LEU:HD21	1.98	0.46
5:Y:112:CYS:HA	5:Y:120:ALA:CB	2.39	0.46
16:D:163:MET:HA	16:D:222:HIS:CE1	2.49	0.46
17:E:43:SER:OG	18:F:75:GLU:OE1	2.26	0.46
18:F:305:GLU:HA	18:F:308:ARG:HD3	1.98	0.46
25:M:148:LEU:HG	25:M:160:TYR:HB2	1.98	0.46
25:M:173:LYS:HA	25:M:176:ILE:HD12	1.97	0.46
22:j:13:ASP:HA	23:k:29:GLU:HG2	1.98	0.46
25:m:215:TRP:CH2	25:m:228:PRO:CD	2.77	0.46
26:n:144:ARG:NH2	26:n:147:MET:HA	2.31	0.46
2:V:166:TYR:CE2	2:V:213:TYR:CD1	3.04	0.45
2:V:449:ALA:HB3	2:V:460:SER:HA	1.97	0.45
12:f:291:GLN:HA	12:f:320:ILE:HD12	1.97	0.45
14:B:166:ASP:N	14:B:166:ASP:OD1	2.49	0.45
16:D:171:ASP:OD1	16:D:171:ASP:N	2.48	0.45
28:P:162:HIS:O	28:P:166:THR:OG1	2.26	0.45
23:k:199:LEU:HA	23:k:202:LEU:HD12	1.98	0.45
25:m:173:LYS:HA	25:m:176:ILE:HD12	1.97	0.45
1:U:94:SER:OG	1:U:95:GLU:N	2.50	0.45
1:U:603:LEU:HD11	16:D:60:TYR:CE2	2.51	0.45
2:V:166:TYR:OH	2:V:216:ARG:CB	2.49	0.45
2:V:167:LEU:C	2:V:171:VAL:CG1	2.84	0.45
2:V:280:ALA:HB3	2:V:285:TRP:HB2	1.98	0.45
9:c:42:LEU:O	9:c:46:ARG:HB2	2.16	0.45
12:f:283:THR:O	12:f:287:ASP:HB2	2.16	0.45
12:f:294:MET:HB2	12:f:320:ILE:HG22	1.98	0.45
12:f:764:LEU:HD11	12:f:774:GLY:C	2.40	0.45
23:K:199:LEU:HA	23:K:202:LEU:HD12	1.98	0.45
24:L:229:VAL:O	24:L:233:LEU:N	2.47	0.45
31:S:108:ASN:HB2	31:S:124:PHE:HB2	1.99	0.45
23:k:15:PHE:CE2	24:l:126:ARG:HB2	2.51	0.45
25:m:41:CYS:N	25:m:44:GLY:O	2.42	0.45
28:p:162:HIS:O	28:p:166:THR:OG1	2.26	0.45
32:t:46:ASN:OD1	32:t:46:ASN:N	2.48	0.45
1:U:362:ASN:HB2	9:c:173:GLU:HB2	1.98	0.45
1:U:471:ASP:HB2	1:U:507:VAL:HG13	1.98	0.45
2:V:255:LEU:HD13	2:V:291:TYR:HB3	1.98	0.45
5:Y:42:MET:O	5:Y:46:ARG:NH2	2.50	0.45
5:Y:72:LYS:HG3	5:Y:73:MET:HG3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:a:156:TYR:HB3	7:a:179:PHE:HB2	1.99	0.45
8:b:12:ASN:HD21	8:b:53:THR:HG21	1.82	0.45
10:d:189:ILE:HG23	10:d:193:GLU:HB3	1.98	0.45
16:D:91:GLN:N	16:D:104:GLY:O	2.48	0.45
19:g:32:ILE:HA	19:g:82:GLY:HA2	1.99	0.45
21:i:53:HIS:CD2	21:i:55:LEU:H	2.34	0.45
25:m:40:ARG:HA	25:m:45:VAL:HA	1.97	0.45
25:m:230:ASP:OD1	25:m:230:ASP:N	2.50	0.45
30:r:196:HIS:O	30:r:200:SER:CB	2.58	0.45
31:s:93:SER:OG	31:s:128:GLY:O	2.31	0.45
1:U:770:TRP:O	9:c:180:ASN:N	2.49	0.45
2:V:52:ASP:HB2	2:V:149:PRO:HG2	1.98	0.45
2:V:247:GLN:HE21	2:V:274:SER:HA	1.81	0.45
5:Y:23:ARG:NH1	5:Y:52:PRO:O	2.45	0.45
7:a:197:ALA:HB2	7:a:222:LEU:HD22	1.97	0.45
12:f:614:HIS:CE1	14:B:77:GLU:HB2	2.51	0.45
14:B:387:LYS:HG3	14:B:389:ASP:H	1.80	0.45
16:D:189:GLU:HA	16:D:192:LYS:HB3	1.98	0.45
17:E:291:ARG:HG2	17:E:293:GLY:H	1.81	0.45
19:G:32:ILE:HA	19:G:82:GLY:HA2	1.98	0.45
21:I:53:HIS:CD2	21:I:55:LEU:H	2.34	0.45
30:R:97:MET:O	30:R:116:SER:N	2.49	0.45
19:g:161:CYS:SG	19:g:162:GLY:N	2.89	0.45
23:k:31:ILE:H	23:k:31:ILE:HG13	1.59	0.45
24:l:121:GLN:HG3	25:m:129:ARG:HE	1.82	0.45
1:U:43:ASP:OD1	1:U:43:ASP:N	2.50	0.45
6:Z:109:ASN:O	6:Z:113:LYS:HB2	2.16	0.45
6:Z:274:ASN:HA	6:Z:277:ASN:HD22	1.81	0.45
16:D:85:ILE:HD11	17:E:68:LYS:HZ2	1.66	0.45
16:D:85:ILE:N	16:D:86:PRO:CD	2.75	0.45
20:H:39:LYS:HA	20:H:44:VAL:HA	1.98	0.45
27:O:5:GLY:HA2	27:O:13:VAL:O	2.17	0.45
29:Q:155:ARG:HA	29:Q:158:GLU:HG2	1.97	0.45
31:S:27:THR:O	31:S:40:SER:N	2.49	0.45
31:S:212:LYS:H	27:o:193:ASN:ND2	2.15	0.45
19:g:14:THR:OG1	19:g:128:ASN:O	2.34	0.45
22:j:116:GLN:O	22:j:119:THR:OG1	2.24	0.45
24:l:160:SER:O	24:l:169:ARG:NH2	2.50	0.45
3:W:312:MET:HG3	3:W:313:GLU:H	1.81	0.45
5:Y:117:LYS:HG3	5:Y:121:LEU:CD2	2.46	0.45
12:f:185:LEU:O	12:f:189:LYS:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:827:PRO:HD3	12:f:850:VAL:HG22	1.98	0.45
16:D:191:TYR:HB3	16:D:198:PRO:HD3	1.97	0.45
18:F:194:GLN:O	18:F:198:LEU:HB2	2.16	0.45
24:L:107:ARG:NH2	32:T:79:ASP:OD2	2.38	0.45
24:L:199:LEU:HD13	24:L:204:ASP:HA	1.98	0.45
29:Q:170:ARG:NH2	30:r:125:THR:OG1	2.49	0.45
21:i:218:ARG:HA	21:i:223:THR:HA	1.99	0.45
24:l:47:VAL:HG13	24:l:212:ILE:HG13	1.98	0.45
25:m:15:SER:N	25:m:19:ARG:O	2.48	0.45
1:U:184:CYS:HA	1:U:187:LEU:HG	1.99	0.45
2:V:50:GLU:HA	2:V:54:LYS:HB2	1.99	0.45
2:V:451:ILE:HG23	2:V:458:VAL:HG22	1.99	0.45
6:Z:170:VAL:O	6:Z:174:HIS:HB2	2.16	0.45
8:b:22:LEU:HD22	8:b:22:LEU:H	1.82	0.45
14:B:93:GLU:HA	14:B:96:ARG:HB2	1.98	0.45
14:B:232:LYS:HA	14:B:353:PHE:HE2	1.82	0.45
15:C:35:VAL:O	15:C:39:SER:HB3	2.15	0.45
17:E:220:ASN:OD1	17:E:223:ARG:NH2	2.50	0.45
18:F:439:ALA:HB1	24:L:62:LYS:HD3	1.99	0.45
26:N:135:ILE:HD13	26:N:163:ALA:HB2	1.99	0.45
29:Q:148:THR:HB	29:Q:151:ILE:HB	1.99	0.45
21:i:71:ASP:OD1	21:i:71:ASP:N	2.48	0.45
26:n:6:VAL:HG22	26:n:125:PHE:HB2	1.97	0.45
27:o:5:GLY:HA2	27:o:13:VAL:O	2.17	0.45
27:o:203:ARG:NH1	28:p:162:HIS:HB3	2.32	0.45
1:U:112:CYS:HA	1:U:115:ASN:HB2	1.99	0.45
5:Y:148:GLY:O	5:Y:153:ASP:N	2.50	0.45
5:Y:204:THR:O	5:Y:216:TYR:OH	2.33	0.45
8:b:22:LEU:CD1	8:b:179:LEU:HD23	1.98	0.45
9:c:192:LEU:HA	9:c:196:LEU:CD1	2.47	0.45
12:f:168:LYS:HD3	12:f:204:ALA:HB1	1.99	0.45
14:B:297:SER:OG	15:C:268:GLU:OE2	2.28	0.45
14:B:331:THR:OG1	14:B:332:ASN:N	2.48	0.45
17:E:365:GLU:HG3	17:E:369:LYS:HE3	1.99	0.45
19:g:212:PRO:HB3	19:g:235:ILE:HG22	1.99	0.45
20:h:14:SER:OG	20:h:18:LYS:N	2.40	0.45
22:j:121:SER:OG	22:j:122:ASN:N	2.49	0.45
32:t:126:ASP:OD1	32:t:127:MET:N	2.50	0.45
3:W:228:ASN:HA	3:W:231:ILE:HG23	1.99	0.45
10:d:91:GLU:OE1	10:d:96:HIS:NE2	2.50	0.45
12:f:217:LEU:HD13	12:f:217:LEU:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:478:ARG:NH2	12:f:507:ASP:OD2	2.50	0.45
12:f:569:LYS:HD3	12:f:574:GLU:HG3	1.98	0.45
13:A:99:THR:HG22	13:A:115:VAL:HG12	1.99	0.45
16:D:115:ILE:C	16:D:115:ILE:CD1	2.90	0.45
19:G:161:CYS:SG	19:G:162:GLY:N	2.89	0.45
30:R:77:ALA:HA	30:R:112:TYR:HE2	1.82	0.45
21:i:44:LEU:HD22	21:i:190:LEU:HD23	1.99	0.45
26:n:7:GLN:HA	26:n:12:VAL:HA	1.99	0.45
30:r:28:SER:OG	30:r:29:GLN:N	2.50	0.45
1:U:650:TYR:HA	1:U:683:VAL:HG23	1.99	0.45
4:X:357:SER:OG	4:X:358:LYS:N	2.50	0.45
12:f:766:GLN:HG3	12:f:807:ARG:NH1	2.32	0.45
13:A:278:ASP:N	13:A:278:ASP:OD1	2.46	0.45
16:D:154:LEU:N	16:D:158:GLN:HG3	2.32	0.45
19:G:191:PHE:O	19:G:194:THR:OG1	2.29	0.45
29:Q:38:MET:HE2	29:Q:42:ILE:HG22	1.99	0.45
19:g:82:GLY:HA3	19:g:136:CYS:HA	1.99	0.45
29:q:19:ARG:HH11	29:q:179:SER:HB3	1.82	0.45
1:U:611:ASN:HB3	1:U:614:VAL:HG12	1.98	0.44
1:U:804:SER:HA	1:U:892:LEU:HA	1.97	0.44
2:V:156:SER:O	2:V:160:LEU:N	2.43	0.44
5:Y:40:GLU:O	5:Y:44:ALA:HB2	2.18	0.44
6:Z:14:LEU:HG	9:c:39:LEU:HB3	1.98	0.44
6:Z:60:GLU:HA	8:b:95:LEU:HD21	1.99	0.44
8:b:24:THR:HG22	8:b:26:LEU:H	1.82	0.44
8:b:100:ARG:HH12	8:b:105:HIS:HB2	1.81	0.44
9:c:91:PHE:O	9:c:95:MET:HB2	2.17	0.44
9:c:94:LYS:O	9:c:98:MET:HB2	2.17	0.44
10:d:3:GLU:CD	10:d:3:GLU:N	2.73	0.44
12:f:610:GLN:HB2	12:f:614:HIS:CD2	2.52	0.44
12:f:680:ARG:NH1	12:f:762:VAL:HG23	2.18	0.44
13:A:273:PHE:CE2	13:A:275:ASP:HB2	2.51	0.44
19:G:194:THR:O	19:G:198:ALA:CB	2.65	0.44
20:H:69:THR:HG22	20:H:72:ILE:HB	1.99	0.44
20:h:39:LYS:HA	20:h:44:VAL:HA	1.98	0.44
20:h:69:THR:HG22	20:h:72:ILE:HB	1.99	0.44
22:j:131:ALA:H	22:j:147:THR:HB	1.82	0.44
24:l:174:ARG:HG3	24:l:175:HIS:ND1	2.32	0.44
25:m:55:SER:H	25:m:58:TYR:HD2	1.65	0.44
27:o:59:ILE:HA	27:o:62:ASN:HD22	1.82	0.44
1:U:725:MET:HB2	1:U:725:MET:HE3	1.73	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:171:VAL:HG11	2:V:175:MET:HE3	1.95	0.44
6:Z:69:PHE:HB2	8:b:99:HIS:CE1	2.51	0.44
8:b:62:THR:HG21	8:b:71:ILE:HA	2.00	0.44
11:e:45:ASP:O	11:e:49:GLU:HB2	2.17	0.44
12:f:414:LEU:HA	12:f:417:ILE:HD12	1.98	0.44
12:f:472:HIS:CE1	12:f:478:ARG:NE	2.86	0.44
13:A:405:THR:N	13:A:408:ASP:OD2	2.43	0.44
16:D:116:LEU:HB3	16:D:119:ILE:HD12	1.92	0.44
18:F:376:SER:OG	18:F:415:LEU:O	2.27	0.44
20:H:81:PRO:HA	20:H:84:ARG:HE	1.82	0.44
24:L:47:VAL:HG13	24:L:212:ILE:HG13	1.98	0.44
24:L:160:SER:O	24:L:169:ARG:NH2	2.50	0.44
26:N:7:GLN:HA	26:N:12:VAL:HA	1.99	0.44
26:N:36:PRO:HA	26:N:42:PHE:CD1	2.52	0.44
26:N:144:ARG:NH2	26:N:147:MET:HA	2.31	0.44
27:O:30:ASN:OD1	27:O:187:ARG:NH2	2.51	0.44
30:R:28:SER:OG	30:R:29:GLN:N	2.50	0.44
19:g:86:ASP:OD1	19:g:134:LEU:CD2	2.65	0.44
21:i:119:GLN:HG3	22:j:78:ALA:HB1	1.99	0.44
25:m:148:LEU:HG	25:m:160:TYR:HB2	1.98	0.44
26:n:59:VAL:O	26:n:63:LEU:HB2	2.18	0.44
30:r:97:MET:O	30:r:116:SER:N	2.49	0.44
1:U:756:HIS:HD2	1:U:759:SER:HB2	1.83	0.44
2:V:190:ASP:OD1	2:V:234:ARG:NH1	2.49	0.44
3:W:316:ARG:N	3:W:316:ARG:CD	2.75	0.44
5:Y:208:PHE:CE2	5:Y:210:SER:HA	2.52	0.44
9:c:291:LEU:O	9:c:295:ASN:ND2	2.50	0.44
13:A:274:PHE:HB2	13:A:319:MET:HA	1.98	0.44
13:A:355:PHE:O	13:A:359:ALA:CB	2.61	0.44
17:E:232:MET:HB3	17:E:277:MET:HG2	1.99	0.44
18:F:81:LYS:HA	18:F:84:LYS:HE2	1.98	0.44
18:F:263:ASP:O	18:F:267:LEU:HB2	2.16	0.44
21:I:38:LEU:HB3	21:I:43:VAL:HG23	1.99	0.44
22:J:228:TYR:HA	22:J:231:GLU:HG2	1.99	0.44
24:L:148:CYS:SG	24:L:150:SER:OG	2.66	0.44
19:g:194:THR:O	19:g:198:ALA:CB	2.65	0.44
23:k:93:ARG:NH1	30:r:68:LEU:O	2.50	0.44
24:l:196:ARG:HA	24:l:199:LEU:HD12	2.00	0.44
25:m:215:TRP:HD1	25:m:220:THR:CG2	2.15	0.44
1:U:54:PHE:C	1:U:56:SER:H	2.26	0.44
1:U:204:ILE:HA	1:U:207:ASN:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:558:GLY:H	1:U:589:ALA:HA	1.82	0.44
5:Y:280:GLN:HG3	11:e:60:LEU:HB2	2.00	0.44
12:f:507:ASP:OD2	12:f:509:LYS:HG3	2.16	0.44
16:D:153:MET:SD	16:D:153:MET:N	2.90	0.44
18:F:153:VAL:HG22	18:F:160:ILE:HG22	1.97	0.44
27:O:59:ILE:HA	27:O:62:ASN:HD22	1.82	0.44
30:R:161:TYR:O	30:R:165:TYR:HB2	2.18	0.44
31:S:93:SER:OG	31:S:128:GLY:O	2.31	0.44
32:T:45:VAL:HB	32:T:49:THR:HG23	1.99	0.44
22:j:228:TYR:HA	22:j:231:GLU:HG2	1.99	0.44
25:m:40:ARG:HD2	25:m:161:TRP:CE3	2.53	0.44
29:q:148:THR:HB	29:q:151:ILE:HB	1.99	0.44
2:V:166:TYR:HH	2:V:216:ARG:CB	2.24	0.44
4:X:417:LYS:NZ	6:Z:277:ASN:OD1	2.36	0.44
6:Z:91:ILE:H	6:Z:91:ILE:HG13	1.53	0.44
7:a:33:LEU:HA	8:b:18:ASN:HD22	1.83	0.44
10:d:184:LYS:HD3	10:d:184:LYS:HA	1.84	0.44
12:f:838:ARG:CG	12:f:839:PRO:HD2	2.43	0.44
13:A:396:ALA:HA	13:A:401:ARG:HG2	1.91	0.44
15:C:79:ALA:HA	15:C:85:VAL:HA	1.99	0.44
16:D:87:LEU:HD11	16:D:131:ALA:HB1	2.00	0.44
16:D:356:GLU:CD	16:D:356:GLU:C	2.85	0.44
19:G:17:SER:OG	19:G:21:ARG:N	2.47	0.44
20:H:113:ARG:O	20:H:116:SER:OG	2.31	0.44
21:I:71:ASP:OD1	21:I:71:ASP:N	2.48	0.44
25:M:55:SER:H	25:M:58:TYR:HD2	1.65	0.44
26:N:167:ASP:HB3	26:N:170:SER:HB2	1.99	0.44
28:P:135:ASP:OD1	28:P:135:ASP:N	2.44	0.44
32:T:92:LEU:HD23	32:T:125:VAL:HG21	1.99	0.44
31:s:199:THR:HG1	31:s:202:GLY:H	1.65	0.44
32:t:92:LEU:HD23	32:t:125:VAL:HG21	1.99	0.44
4:X:344:ARG:HH21	4:X:384:VAL:HG21	1.81	0.44
5:Y:180:LEU:HA	5:Y:183:TYR:HD2	1.82	0.44
12:f:83:ARG:NH1	12:f:113:MET:HG2	2.33	0.44
12:f:281:ILE:C	12:f:282:PHE:CD2	2.96	0.44
12:f:482:ILE:HG22	12:f:501:LEU:HD22	1.99	0.44
16:D:335:LEU:HD22	16:D:369:LYS:HD3	2.00	0.44
17:E:173:TYR:CZ	17:E:388:PRO:HG3	2.53	0.44
18:F:398:ALA:HA	18:F:401:VAL:HG12	1.99	0.44
24:L:174:ARG:HG3	24:L:175:HIS:ND1	2.32	0.44
26:N:59:VAL:O	26:N:63:LEU:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:P:9:GLY:N	28:P:181:SER:OG	2.48	0.44
20:h:187:ALA:O	20:h:191:ALA:HB2	2.18	0.44
25:m:90:ILE:H	25:m:90:ILE:HG13	1.63	0.44
30:r:45:MET:HG3	30:r:52:CYS:HB2	2.00	0.44
30:r:91:LYS:NZ	30:r:117:GLU:O	2.41	0.44
30:r:161:TYR:O	30:r:165:TYR:HB2	2.18	0.44
5:Y:336:ARG:O	5:Y:340:ALA:CB	2.66	0.44
5:Y:348:ASP:HB2	5:Y:353:ILE:O	2.18	0.44
6:Z:22:HIS:CD2	6:Z:25:ARG:HD3	2.53	0.44
6:Z:193:ASN:OD1	9:c:228:GLY:N	2.44	0.44
12:f:295:ALA:C	12:f:807:ARG:HD3	2.15	0.44
12:f:766:GLN:NE2	12:f:807:ARG:NH2	2.65	0.44
13:A:368:ILE:HG22	13:A:406:GLU:HB2	1.99	0.44
16:D:353:ASN:HD22	16:D:393:ILE:C	2.24	0.44
19:G:14:THR:OG1	19:G:128:ASN:O	2.34	0.44
20:h:81:PRO:HA	20:h:84:ARG:HE	1.82	0.44
24:l:113:GLY:O	24:l:117:GLN:HB2	2.16	0.44
26:n:36:PRO:HA	26:n:42:PHE:CD1	2.52	0.44
27:o:30:ASN:OD1	27:o:187:ARG:NH2	2.51	0.44
27:o:50:ALA:HB2	28:p:129:CYS:HB2	2.00	0.44
27:o:166:ASP:HB3	27:o:169:SER:HB2	2.00	0.44
1:U:10:SER:HB2	10:d:73:ARG:HA	1.99	0.44
1:U:36:ALA:HB1	2:V:268:GLU:HG3	2.00	0.44
2:V:108:LEU:HA	2:V:111:TYR:HD2	1.82	0.44
2:V:148:ARG:HE	2:V:199:ASN:HB3	1.82	0.44
4:X:401:LEU:HA	4:X:404:ILE:HD12	1.99	0.44
6:Z:36:VAL:HA	6:Z:96:HIS:HA	2.00	0.44
6:Z:223:ASN:C	6:Z:223:ASN:HD22	2.25	0.44
12:f:231:LEU:O	12:f:235:SER:OG	2.36	0.44
12:f:398:TRP:HD1	12:f:401:LYS:HE3	1.83	0.44
12:f:830:LEU:N	12:f:859:PRO:O	2.51	0.44
15:C:20:LEU:O	15:C:24:TYR:HB3	2.18	0.44
15:C:134:LEU:HD22	15:C:138:MET:CG	2.43	0.44
17:E:139:SER:HA	17:E:142:ILE:HD12	2.00	0.44
19:G:223:GLU:C	19:G:225:PRO:HD3	2.41	0.44
22:J:116:GLN:O	22:J:119:THR:OG1	2.24	0.44
23:K:17:PRO:HA	24:L:24:TYR:CZ	2.53	0.44
32:T:126:ASP:OD1	32:T:127:MET:N	2.50	0.44
24:l:109:VAL:HG21	24:l:145:PHE:HD2	1.83	0.44
24:l:199:LEU:HD13	24:l:204:ASP:HA	1.98	0.44
25:m:34:SER:HA	25:m:167:LYS:HE3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:98:LEU:HA	2:V:104:THR:HG22	2.00	0.44
2:V:296:LYS:O	2:V:301:GLU:N	2.51	0.44
3:W:245:LYS:O	3:W:249:ALA:CB	2.66	0.44
12:f:205:CYS:HA	12:f:208:LEU:HB2	2.00	0.44
12:f:253:LEU:O	12:f:257:ARG:CG	2.65	0.44
12:f:258:LYS:CE	12:f:297:MET:O	2.65	0.44
14:B:287:ILE:HD13	14:B:329:MET:HE3	1.99	0.44
16:D:116:LEU:CD1	16:D:119:ILE:HD12	2.39	0.44
16:D:391:ARG:NH2	16:D:398:ASP:OD2	2.50	0.44
17:E:33:LEU:O	17:E:37:THR:CB	2.66	0.44
19:G:212:PRO:HB3	19:G:235:ILE:HG22	1.99	0.44
20:H:208:ILE:HD13	20:H:210:VAL:HG23	2.00	0.44
30:R:125:THR:OG1	29:q:170:ARG:NH2	2.51	0.44
19:g:132:ARG:CD	25:m:124:LEU:CD2	2.94	0.44
21:i:38:LEU:HB3	21:i:43:VAL:HG23	1.99	0.44
22:j:67:ASP:OD1	22:j:67:ASP:N	2.48	0.44
23:k:54:ILE:HA	23:k:59:MET:HE1	2.00	0.44
25:m:215:TRP:CZ3	25:m:228:PRO:CG	2.93	0.44
26:n:167:ASP:HB3	26:n:170:SER:HB2	1.99	0.44
27:o:20:ALA:HB3	27:o:28:ASP:HB3	2.00	0.44
29:q:23:SER:OG	29:q:24:ASN:N	2.51	0.44
31:s:108:ASN:HB2	31:s:124:PHE:HB2	1.99	0.44
1:U:204:ILE:HD12	1:U:207:ASN:HB2	2.00	0.43
1:U:341:PHE:HZ	1:U:883:ARG:HB3	1.82	0.43
2:V:182:LYS:HB3	2:V:182:LYS:HE3	1.77	0.43
3:W:445:LEU:HD21	6:Z:225:GLN:HE22	1.83	0.43
10:d:104:LEU:HD12	10:d:107:LEU:HD13	1.99	0.43
12:f:637:LYS:HE2	12:f:673:ARG:HB2	1.99	0.43
12:f:766:GLN:HE21	12:f:807:ARG:HH12	0.57	0.43
12:f:873:LEU:HD23	12:f:874:LEU:H	1.82	0.43
13:A:51:ASP:O	13:A:55:LEU:HB2	2.17	0.43
14:B:118:ASP:OD1	14:B:118:ASP:N	2.51	0.43
14:B:357:ASP:O	14:B:360:THR:OG1	2.24	0.43
22:j:200:GLN:HB3	22:j:201:SER:H	1.57	0.43
28:p:9:GLY:N	28:p:181:SER:OG	2.48	0.43
28:p:54:ALA:O	28:p:105:THR:HA	2.18	0.43
32:t:99:ARG:HA	32:t:102:LYS:HZ2	1.83	0.43
1:U:602:LEU:HD23	1:U:602:LEU:O	2.17	0.43
2:V:353:LEU:HD13	2:V:353:LEU:HA	1.80	0.43
6:Z:72:HIS:CD2	6:Z:114:ARG:HH21	2.36	0.43
9:c:119:GLY:HA2	9:c:156:VAL:HG11	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:d:215:TRP:HB3	10:d:222:TYR:HB3	2.00	0.43
29:Q:19:ARG:HH11	29:Q:179:SER:HB3	1.82	0.43
29:Q:81:ALA:HB2	29:Q:104:LEU:HD13	2.00	0.43
21:i:100:GLN:HE21	29:q:83:PHE:HE1	1.66	0.43
22:j:96:LEU:HA	29:q:62:LYS:HE2	2.00	0.43
27:o:211:VAL:HG11	28:p:198:ARG:HD3	1.99	0.43
2:V:219:GLU:O	2:V:222:ASP:O	2.36	0.43
4:X:379:ASP:HB3	4:X:384:VAL:H	1.82	0.43
5:Y:311:TYR:HD2	5:Y:314:LEU:HD22	1.83	0.43
7:a:77:VAL:HG21	7:a:113:LEU:HD13	2.01	0.43
9:c:190:GLN:HA	9:c:193:ILE:HD12	1.99	0.43
13:A:84:LYS:O	13:A:88:GLN:HB3	2.18	0.43
13:A:97:ARG:HE	14:B:131:HIS:CD2	2.35	0.43
13:A:174:TYR:HE2	13:A:232:ARG:HB2	1.83	0.43
16:D:102:ILE:HG13	16:D:112:TYR:HD1	1.83	0.43
19:G:46:ASP:CB	19:G:222:VAL:CG2	2.96	0.43
19:G:82:GLY:HA3	19:G:136:CYS:HA	2.00	0.43
21:I:44:LEU:HD22	21:I:190:LEU:HD23	1.99	0.43
21:I:218:ARG:HA	21:I:223:THR:HA	1.99	0.43
22:J:68:ASN:HD21	22:J:101:PRO:HB2	1.83	0.43
28:P:164:PHE:CZ	28:P:198:ARG:HD2	2.53	0.43
29:Q:108:ASP:OD1	29:Q:109:GLU:N	2.51	0.43
32:T:180:ASP:CG	32:T:182:ARG:H	2.27	0.43
30:r:77:ALA:HA	30:r:112:TYR:HE2	1.82	0.43
31:s:49:LYS:O	31:s:112:GLY:CA	2.66	0.43
32:t:180:ASP:CG	32:t:182:ARG:H	2.27	0.43
5:Y:314:LEU:HD11	5:Y:318:TYR:CG	2.53	0.43
6:Z:81:MET:HA	6:Z:84:LYS:HE2	2.00	0.43
10:d:100:GLY:HA3	10:d:133:ILE:HD12	1.99	0.43
10:d:190:LEU:HG	10:d:192:THR:H	1.83	0.43
15:C:140:VAL:HG13	16:D:293:LEU:HD11	2.00	0.43
17:E:295:LEU:HD23	17:E:295:LEU:HA	1.77	0.43
17:E:327:ASP:OD2	17:E:330:ALA:N	2.40	0.43
19:G:103:TYR:HB2	26:N:61:TYR:CD1	2.53	0.43
22:J:131:ALA:H	22:J:147:THR:HB	1.82	0.43
27:O:83:LEU:HD23	27:O:83:LEU:HA	1.85	0.43
27:O:166:ASP:HB3	27:O:169:SER:HB2	2.00	0.43
30:R:45:MET:HG3	30:R:52:CYS:HB2	2.00	0.43
32:T:43:MET:HE3	32:T:45:VAL:HG22	2.00	0.43
19:g:50:ILE:O	19:g:217:VAL:HA	2.19	0.43
28:p:164:PHE:CZ	28:p:198:ARG:HD2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:q:38:MET:HE2	29:q:42:ILE:HG22	1.99	0.43
30:r:180:ARG:HB2	30:r:183:GLY:O	2.18	0.43
2:V:316:ALA:HA	2:V:317:PRO:HD3	1.79	0.43
3:W:260:SER:HA	3:W:263:TRP:HB3	1.99	0.43
4:X:394:ASP:OD1	4:X:394:ASP:N	2.51	0.43
7:a:35:HIS:CD2	7:a:35:HIS:N	2.86	0.43
12:f:215:ASP:HA	12:f:218:GLU:HG3	1.95	0.43
22:J:146:GLN:HG2	22:J:154:HIS:HB3	2.01	0.43
22:J:200:GLN:C	22:J:200:GLN:CD	2.86	0.43
23:K:99:HIS:HB2	23:K:107:MET:HE3	2.00	0.43
25:M:40:ARG:HD2	25:M:161:TRP:CE3	2.53	0.43
28:P:12:MET:HG3	28:P:138:VAL:HG12	2.01	0.43
19:g:18:PRO:HA	20:h:24:TYR:CE1	2.53	0.43
19:g:86:ASP:CG	19:g:134:LEU:HD22	2.43	0.43
1:U:241:ASN:HB3	1:U:244:MET:HG2	1.99	0.43
2:V:268:GLU:O	2:V:272:SER:OG	2.27	0.43
5:Y:118:GLU:CA	5:Y:121:LEU:CG	2.91	0.43
6:Z:37:GLY:HA3	6:Z:55:ALA:HA	2.00	0.43
12:f:281:ILE:C	12:f:282:PHE:CG	2.96	0.43
13:A:382:GLY:HA2	13:A:385:ILE:HD12	1.99	0.43
14:B:197:ILE:HG13	14:B:235:LEU:HD21	2.00	0.43
14:B:247:PHE:HD1	14:B:281:ILE:HB	1.83	0.43
14:B:250:VAL:O	14:B:284:ILE:HA	2.19	0.43
16:D:146:GLU:O	16:D:252:ARG:NH2	2.47	0.43
17:E:265:ASP:OD2	17:E:291:ARG:NH1	2.52	0.43
25:M:34:SER:HA	25:M:167:LYS:HE3	1.99	0.43
22:j:68:ASN:HD21	22:j:101:PRO:HB2	1.82	0.43
22:j:81:ARG:HA	22:j:84:ILE:HD12	2.01	0.43
22:j:120:GLN:O	23:k:134:SER:OG	2.36	0.43
26:n:135:ILE:HD13	26:n:163:ALA:HB2	1.99	0.43
29:q:108:ASP:OD1	29:q:109:GLU:N	2.51	0.43
31:s:48:ASP:OD1	31:s:48:ASP:N	2.51	0.43
32:t:45:VAL:HB	32:t:49:THR:HG23	1.99	0.43
1:U:96:TYR:O	1:U:99:THR:OG1	2.28	0.43
2:V:228:ARG:O	2:V:232:HIS:ND1	2.48	0.43
2:V:497:PRO:HB3	6:Z:278:ASN:HB3	1.98	0.43
3:W:231:ILE:O	3:W:235:GLN:CB	2.56	0.43
3:W:328:LEU:HB3	3:W:337:ALA:HB1	2.01	0.43
12:f:217:LEU:C	12:f:217:LEU:CD1	2.86	0.43
12:f:673:ARG:NH2	12:f:712:LYS:CG	2.82	0.43
13:A:125:LEU:HD23	13:A:129:VAL:HG23	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:C:39:SER:O	15:C:43:ARG:HG2	2.19	0.43
15:C:127:LEU:HD22	15:C:128:PRO:N	2.33	0.43
15:C:127:LEU:HA	15:C:128:PRO:HD2	1.67	0.43
16:D:200:ARG:HH22	16:D:301:GLN:H	1.65	0.43
19:G:134:LEU:H	19:G:134:LEU:CD1	2.13	0.43
20:H:187:ALA:O	20:H:191:ALA:HB2	2.18	0.43
26:N:40:ARG:O	26:N:102:GLY:CA	2.67	0.43
28:P:27:ARG:NH1	28:P:180:VAL:O	2.52	0.43
28:P:54:ALA:O	28:P:105:THR:HA	2.18	0.43
28:P:126:LEU:HD12	28:P:127:ILE:HG23	2.00	0.43
21:i:92:LEU:HA	21:i:95:GLN:HB2	2.01	0.43
23:k:99:HIS:HB2	23:k:107:MET:HE3	1.99	0.43
24:l:229:VAL:O	24:l:233:LEU:N	2.47	0.43
32:t:180:ASP:HB3	32:t:183:SER:HB3	2.01	0.43
1:U:474:ARG:O	1:U:478:SER:OG	2.30	0.43
2:V:32:PRO:HA	2:V:35:VAL:HG22	2.01	0.43
2:V:169:LEU:HD23	2:V:169:LEU:HA	1.71	0.43
3:W:407:ASP:OD1	3:W:409:LEU:N	2.48	0.43
5:Y:99:GLU:HA	5:Y:102:ASP:HB3	2.01	0.43
5:Y:315:THR:OG1	5:Y:352:GLU:O	2.31	0.43
6:Z:10:VAL:HB	6:Z:49:ASP:HA	2.01	0.43
6:Z:34:ARG:HE	6:Z:102:HIS:CD2	2.36	0.43
6:Z:82:PHE:HA	6:Z:85:VAL:HG12	2.01	0.43
10:d:102:ASN:O	10:d:106:LEU:HB2	2.19	0.43
12:f:185:LEU:O	12:f:189:LYS:CB	2.67	0.43
13:A:171:ASP:OD1	13:A:171:ASP:N	2.41	0.43
14:B:273:VAL:O	14:B:277:HIS:ND1	2.29	0.43
15:C:235:PHE:HA	15:C:238:ALA:HB3	2.01	0.43
16:D:116:LEU:HD22	16:D:117:SER:H	1.83	0.43
18:F:122:ALA:HB3	18:F:134:LEU:HD11	2.00	0.43
18:F:313:LEU:O	18:F:317:LEU:HB2	2.19	0.43
19:G:50:ILE:O	19:G:217:VAL:HA	2.19	0.43
21:I:92:LEU:HA	21:I:95:GLN:HB2	2.01	0.43
22:J:6:ALA:N	23:K:125:GLU:OE2	2.52	0.43
22:J:102:VAL:HG13	22:J:106:TYR:HD2	1.84	0.43
23:K:54:ILE:HA	23:K:59:MET:HE1	2.00	0.43
25:M:141:SER:N	25:M:145:GLY:O	2.43	0.43
26:N:7:GLN:HB3	26:N:111:VAL:HG23	2.01	0.43
29:Q:19:ARG:HH21	29:Q:31:ASP:HB2	1.84	0.43
31:S:48:ASP:OD1	31:S:48:ASP:N	2.51	0.43
31:S:49:LYS:O	31:S:112:GLY:CA	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:T:147:GLN:HA	32:T:150:LEU:HD12	2.01	0.43
24:l:9:ASP:HB3	24:l:12:VAL:HG23	2.01	0.43
24:l:94:ASP:OD1	24:l:95:SER:N	2.52	0.43
28:p:164:PHE:O	28:p:168:SER:OG	2.28	0.43
1:U:599:ILE:HD13	1:U:625:ILE:HD11	2.01	0.43
3:W:253:THR:HA	3:W:254:PRO:HD3	1.90	0.43
6:Z:13:PRO:HA	6:Z:16:LEU:HB3	2.01	0.43
8:b:125:VAL:HA	8:b:128:ALA:HB3	2.00	0.43
10:d:46:GLN:HA	10:d:50:LEU:HD13	2.01	0.43
11:e:56:LEU:O	11:e:58:ALA:N	2.52	0.43
13:A:49:GLU:HA	14:B:65:LEU:CD1	2.44	0.43
14:B:415:THR:N	14:B:418:ASP:OD2	2.43	0.43
16:D:227:PHE:CE2	16:D:229:ARG:HB2	2.54	0.43
20:H:38:ILE:HG12	20:H:160:ALA:HB1	2.01	0.43
25:M:99:ARG:NH2	25:M:105:ASN:OD1	2.37	0.43
32:T:9:THR:H	32:T:41:ARG:NH2	2.17	0.43
20:h:213:CYS:HA	20:h:218:PHE:HA	2.01	0.43
23:k:199:LEU:HD11	23:k:217:LEU:HD11	2.01	0.43
29:q:13:VAL:O	29:q:182:ILE:HA	2.18	0.43
1:U:487:GLY:N	1:U:518:LEU:O	2.39	0.43
1:U:510:GLU:OE2	1:U:546:ARG:NH2	2.51	0.43
1:U:622:LEU:O	1:U:626:LEU:HB2	2.19	0.43
1:U:636:VAL:HG23	1:U:637:VAL:HG23	2.01	0.43
1:U:680:VAL:HB	1:U:683:VAL:HG12	2.01	0.43
1:U:808:PRO:HB3	1:U:874:ASN:HA	2.00	0.43
2:V:28:PRO:HD2	2:V:29:PRO:HD3	2.01	0.43
2:V:84:LYS:HB3	2:V:88:GLY:HA3	2.00	0.43
2:V:198:GLN:HG2	2:V:201:ARG:HB2	2.01	0.43
2:V:204:ASP:O	2:V:208:ALA:HB2	2.19	0.43
8:b:97:LEU:HA	8:b:100:ARG:HG3	2.01	0.43
12:f:107:LYS:HB3	12:f:141:LYS:HZ3	1.83	0.43
12:f:182:GLU:OE2	12:f:186:THR:OG1	2.32	0.43
15:C:131:VAL:HG21	15:C:136:SER:HB3	2.00	0.43
17:E:339:ASN:H	17:E:342:ASP:CG	2.27	0.43
17:E:344:ARG:O	17:E:348:THR:OG1	2.32	0.43
30:R:5:ALA:HA	30:R:13:ILE:O	2.18	0.43
21:i:187:LYS:HA	21:i:190:LEU:HD12	2.01	0.43
22:j:102:VAL:HG13	22:j:106:TYR:HD2	1.84	0.43
23:k:37:ALA:N	23:k:170:ILE:O	2.52	0.43
24:l:40:SER:HG	24:l:42:THR:H	1.66	0.43
28:p:27:ARG:NH1	28:p:180:VAL:O	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:s:119:GLY:O	31:s:132:ARG:NH2	2.33	0.43
32:t:9:THR:H	32:t:41:ARG:NH2	2.17	0.43
2:V:91:PRO:HD3	2:V:134:PHE:CZ	2.54	0.42
2:V:223:LYS:HE3	2:V:223:LYS:C	2.43	0.42
5:Y:288:PHE:HA	5:Y:291:HIS:NE2	2.34	0.42
10:d:194:ALA:HB3	10:d:222:TYR:HE2	1.84	0.42
12:f:169:GLU:HA	12:f:172:GLU:HB3	2.00	0.42
12:f:253:LEU:O	12:f:257:ARG:CB	2.66	0.42
12:f:542:ILE:O	12:f:546:SER:OG	2.35	0.42
13:A:73:ALA:CB	13:A:74:PRO:HD2	2.35	0.42
15:C:32:GLN:HG3	15:C:36:ASN:HD21	1.82	0.42
15:C:198:LEU:O	15:C:202:ALA:HB2	2.19	0.42
15:C:248:MET:HE3	15:C:248:MET:HB2	1.80	0.42
15:C:307:ARG:HH21	15:C:310:ARG:CZ	2.32	0.42
16:D:191:TYR:O	16:D:195:GLY:HA2	2.19	0.42
20:H:14:SER:OG	20:H:18:LYS:N	2.40	0.42
21:I:159:TRP:HA	22:J:54:GLN:CB	2.44	0.42
22:J:109:ARG:O	22:J:113:SER:HB3	2.19	0.42
24:L:196:ARG:HA	24:L:199:LEU:HD12	2.00	0.42
25:M:152:ASP:OD2	25:M:154:SER:OG	2.25	0.42
19:g:132:ARG:NH1	19:g:132:ARG:CB	2.81	0.42
22:j:146:GLN:HG2	22:j:154:HIS:HB3	2.00	0.42
25:m:15:SER:OG	25:m:19:ARG:N	2.50	0.42
29:q:19:ARG:HH21	29:q:31:ASP:HB2	1.84	0.42
32:t:147:GLN:HA	32:t:150:LEU:HD12	2.01	0.42
1:U:328:ILE:HG13	1:U:329:LEU:HG	2.01	0.42
2:V:222:ASP:HB3	2:V:223:LYS:CE	2.49	0.42
5:Y:83:ARG:HA	5:Y:86:GLU:HB2	2.01	0.42
5:Y:88:LEU:HA	5:Y:100:ILE:HG12	2.00	0.42
5:Y:111:LEU:O	5:Y:115:GLY:CA	2.67	0.42
5:Y:262:SER:HA	5:Y:267:ARG:HB2	2.01	0.42
6:Z:184:VAL:HA	6:Z:188:SER:HB2	2.01	0.42
7:a:57:ILE:HG13	7:a:61:GLU:HG2	2.01	0.42
7:a:61:GLU:HG3	7:a:79:ILE:HD13	2.00	0.42
10:d:3:GLU:O	10:d:25:ARG:NH2	2.51	0.42
12:f:233:LEU:HD12	12:f:264:GLU:HG3	2.01	0.42
12:f:516:GLY:HA3	12:f:557:TRP:HE3	1.83	0.42
12:f:643:PRO:HG2	12:f:647:GLY:H	1.84	0.42
12:f:811:LEU:HD21	12:f:862:ILE:HD13	2.02	0.42
13:A:396:ALA:CB	13:A:401:ARG:CG	2.79	0.42
23:K:37:ALA:N	23:K:170:ILE:O	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:L:109:VAL:HG21	24:L:145:PHE:HD2	1.83	0.42
29:Q:19:ARG:O	29:Q:32:HIS:N	2.39	0.42
30:R:180:ARG:HB2	30:R:183:GLY:O	2.18	0.42
19:g:46:ASP:CB	19:g:222:VAL:HG21	2.49	0.42
19:g:132:ARG:CG	19:g:132:ARG:NH1	2.80	0.42
20:h:208:ILE:HD13	20:h:210:VAL:HG23	2.00	0.42
23:k:114:GLN:NE2	31:s:78:SER:O	2.52	0.42
30:r:5:ALA:HA	30:r:13:ILE:O	2.18	0.42
1:U:11:LEU:HD13	1:U:19:LEU:HG	2.01	0.42
2:V:194:LYS:HG3	2:V:200:ARG:HE	1.84	0.42
2:V:414:TYR:OH	5:Y:331:ASP:OD1	2.35	0.42
3:W:275:ILE:HG23	3:W:309:PHE:HE2	1.84	0.42
5:Y:50:MET:HE1	5:Y:70:LEU:HB3	2.01	0.42
7:a:180:LEU:HD11	7:a:196:ARG:HD3	2.01	0.42
8:b:89:GLY:HA2	8:b:92:VAL:HG12	2.01	0.42
10:d:200:PHE:HB2	10:d:203:PRO:CD	2.49	0.42
12:f:723:TYR:O	12:f:727:PHE:CB	2.66	0.42
12:f:845:ARG:HH21	12:f:847:GLY:HA3	1.84	0.42
15:C:162:LYS:O	15:C:166:GLU:HB3	2.19	0.42
16:D:91:GLN:NE2	16:D:127:ASN:HB3	2.34	0.42
17:E:84:ARG:HB2	17:E:87:LEU:HD23	2.01	0.42
17:E:172:LEU:HD23	17:E:299:ILE:HB	2.01	0.42
21:I:47:ALA:O	21:I:212:GLU:N	2.47	0.42
23:K:157:ASP:HB3	23:K:161:THR:H	1.84	0.42
26:N:18:SER:OG	26:N:173:VAL:N	2.50	0.42
27:O:20:ALA:HB3	27:O:28:ASP:HB3	2.00	0.42
27:O:48:THR:HG22	27:O:51:ASP:H	1.84	0.42
29:Q:13:VAL:O	29:Q:182:ILE:HA	2.18	0.42
29:Q:47:VAL:HB	29:Q:101:ASN:O	2.19	0.42
31:S:46:LEU:HD11	31:S:52:ILE:HB	2.00	0.42
31:S:63:THR:HG23	32:T:94:ARG:HH12	1.83	0.42
21:i:136:TYR:HB2	21:i:148:TYR:HB2	2.01	0.42
26:n:18:SER:OG	26:n:173:VAL:N	2.50	0.42
27:o:22:GLU:N	27:o:25:VAL:O	2.52	0.42
30:r:164:THR:HG22	30:r:170:SER:HB3	2.01	0.42
1:U:68:PHE:HB3	1:U:73:ALA:HB3	2.01	0.42
3:W:351:TRP:O	3:W:355:LYS:HB2	2.19	0.42
5:Y:314:LEU:HD12	5:Y:314:LEU:HA	1.88	0.42
6:Z:250:TYR:O	6:Z:254:ASN:CB	2.47	0.42
9:c:118:PHE:HB3	9:c:121:TRP:CH2	2.53	0.42
10:d:6:LYS:HD3	10:d:6:LYS:HA	1.65	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:381:VAL:HA	12:f:755:ASP:O	2.19	0.42
12:f:382:ASN:HB3	12:f:417:ILE:HG23	2.01	0.42
16:D:410:ASP:OD1	16:D:410:ASP:N	2.51	0.42
18:F:82:VAL:O	18:F:85:THR:OG1	2.34	0.42
22:J:81:ARG:HA	22:J:84:ILE:HD12	2.01	0.42
25:M:88:ALA:O	25:M:92:ARG:HB2	2.19	0.42
25:M:230:ASP:OD1	25:M:230:ASP:N	2.50	0.42
31:S:91:MET:O	31:S:94:THR:OG1	2.24	0.42
19:g:191:PHE:O	19:g:194:THR:OG1	2.29	0.42
21:i:215:THR:O	21:i:225:ILE:HA	2.19	0.42
24:l:39:LYS:HB2	24:l:142:PRO:HB2	2.02	0.42
26:n:59:VAL:O	26:n:63:LEU:CB	2.68	0.42
28:p:48:ARG:HD3	28:p:192:LYS:HA	2.02	0.42
1:U:80:TYR:O	1:U:84:ALA:HB2	2.20	0.42
1:U:583:MET:HE1	1:U:602:LEU:HG	2.02	0.42
2:V:73:GLU:HA	2:V:76:LYS:HB3	2.02	0.42
6:Z:14:LEU:O	6:Z:18:SER:HB2	2.19	0.42
6:Z:189:GLN:HA	6:Z:192:THR:HG22	2.01	0.42
6:Z:231:GLN:O	6:Z:235:ASN:HB2	2.19	0.42
10:d:164:THR:HA	10:d:167:ILE:HG12	2.01	0.42
12:f:439:TYR:OH	12:f:475:ASN:ND2	2.51	0.42
12:f:550:LEU:HB3	12:f:551:LYS:H	1.71	0.42
12:f:673:ARG:HH12	12:f:709:THR:HG22	1.84	0.42
13:A:282:GLY:O	13:A:328:ASP:N	2.52	0.42
14:B:153:ASN:OD1	14:B:154:HIS:N	2.52	0.42
14:B:273:VAL:HG13	14:B:277:HIS:CE1	2.55	0.42
15:C:218:GLU:HB2	16:D:275:PHE:HD2	1.84	0.42
15:C:325:ARG:NE	15:C:351:MET:O	2.52	0.42
15:C:330:LYS:HB3	15:C:330:LYS:HE2	1.85	0.42
16:D:125:LYS:NZ	16:D:125:LYS:CB	2.82	0.42
16:D:159:LYS:HB3	16:D:221:HIS:HD2	1.85	0.42
21:I:119:GLN:HG3	22:J:78:ALA:HB1	1.99	0.42
22:J:185:ASP:HA	22:J:188:ILE:HB	2.01	0.42
23:K:199:LEU:HD11	23:K:217:LEU:HD11	2.01	0.42
25:M:97:ASN:O	25:M:101:ASN:ND2	2.52	0.42
29:Q:23:SER:OG	29:Q:24:ASN:N	2.51	0.42
31:S:172:MET:HE3	31:S:176:LYS:HE3	2.01	0.42
23:k:157:ASP:HB3	23:k:161:THR:H	1.84	0.42
24:l:97:PHE:O	31:s:66:LYS:NZ	2.44	0.42
25:m:180:GLN:HB3	25:m:184:MET:HE3	2.02	0.42
28:p:12:MET:HG3	28:p:138:VAL:HG12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:13:ASP:OD1	1:U:13:ASP:N	2.52	0.42
2:V:212:TYR:HB3	2:V:216:ARG:NH1	2.34	0.42
2:V:228:ARG:HA	2:V:228:ARG:HD3	1.76	0.42
5:Y:27:SER:HB3	5:Y:28:LEU:HD12	2.01	0.42
5:Y:345:CYS:HB2	5:Y:356:THR:HA	2.00	0.42
8:b:94:HIS:CD2	8:b:136:VAL:HG21	2.55	0.42
12:f:378:ASN:HD21	12:f:392:THR:HG22	1.83	0.42
12:f:452:ASN:ND2	12:f:459:CYS:SG	2.91	0.42
13:A:333:ARG:HD2	18:F:230:GLY:HA2	2.02	0.42
18:F:169:ASP:HB2	18:F:172:VAL:HG23	2.00	0.42
20:H:45:VAL:HG22	20:H:212:ILE:HG22	2.01	0.42
23:K:177:ALA:O	23:K:181:LEU:HB2	2.20	0.42
30:R:4:LEU:HA	30:R:127:SER:HA	2.02	0.42
28:p:126:LEU:HD12	28:p:127:ILE:HG23	2.00	0.42
7:a:270:ARG:NH1	7:a:310:LEU:HA	2.35	0.42
8:b:6:THR:HB	8:b:49:VAL:HG22	2.01	0.42
10:d:200:PHE:CD1	10:d:200:PHE:N	2.87	0.42
15:C:139:MET:HB2	15:C:139:MET:HE2	1.84	0.42
16:D:125:LYS:H	16:D:128:ALA:HB2	1.84	0.42
21:I:215:THR:O	21:I:225:ILE:HA	2.19	0.42
21:I:243:GLU:O	21:I:247:ALA:CB	2.68	0.42
25:M:8:ASP:OD1	25:M:8:ASP:N	2.53	0.42
19:g:123:GLN:O	19:g:127:GLN:HB2	2.20	0.42
21:i:15:GLU:HG3	21:i:17:ARG:HG2	2.02	0.42
25:m:97:ASN:O	25:m:101:ASN:ND2	2.52	0.42
2:V:228:ARG:HH12	2:V:254:LEU:HA	1.84	0.42
2:V:468:SER:HB2	6:Z:247:LYS:CE	2.41	0.42
3:W:384:LEU:HD21	3:W:392:PHE:HE2	1.85	0.42
5:Y:22:LEU:HA	5:Y:25:LEU:HB3	2.01	0.42
6:Z:215:VAL:HG22	7:a:346:ILE:HD12	2.02	0.42
6:Z:275:LEU:HA	6:Z:278:ASN:HD22	1.84	0.42
13:A:74:PRO:HD2	14:B:140:ASP:HB3	2.01	0.42
14:B:419:PHE:HA	14:B:422:SER:HB3	2.01	0.42
16:D:144:PRO:HA	16:D:145:PRO:HD3	1.90	0.42
16:D:346:SER:O	16:D:350:SER:HB3	2.19	0.42
27:O:22:GLU:N	27:O:25:VAL:O	2.52	0.42
30:R:104:TRP:NE1	30:R:181:GLU:OE2	2.53	0.42
31:S:1:ARG:NH2	32:T:2:GLN:HE22	2.17	0.42
31:S:95:ILE:O	31:S:98:SER:OG	2.27	0.42
20:h:38:ILE:HG12	20:h:160:ALA:HB1	2.01	0.42
22:j:109:ARG:O	22:j:113:SER:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:m:88:ALA:O	25:m:92:ARG:HB2	2.19	0.42
29:q:81:ALA:HB2	29:q:104:LEU:HD13	2.00	0.42
31:s:1:ARG:NH2	31:s:2:PHE:HB3	2.35	0.42
1:U:24:LEU:HB2	1:U:59:PHE:HD2	1.85	0.42
1:U:28:ASN:OD1	1:U:28:ASN:N	2.52	0.42
1:U:49:TYR:HA	1:U:57:ARG:CB	2.50	0.42
2:V:468:SER:HB2	6:Z:247:LYS:HE2	1.93	0.42
4:X:404:ILE:HG21	5:Y:372:LYS:HB3	2.02	0.42
10:d:104:LEU:HD23	10:d:166:PHE:HD2	1.85	0.42
10:d:125:LYS:HB3	10:d:130:ASN:HD22	1.85	0.42
10:d:200:PHE:HB2	10:d:203:PRO:HD2	2.01	0.42
12:f:690:VAL:O	12:f:713:PHE:HE2	1.98	0.42
14:B:65:LEU:HD23	14:B:65:LEU:H	1.85	0.42
16:D:125:LYS:HD2	16:D:125:LYS:HA	1.70	0.42
29:Q:4:LEU:HD22	29:Q:45:LEU:HB3	2.01	0.42
32:T:180:ASP:HB3	32:T:183:SER:HB3	2.01	0.42
26:n:113:SER:N	26:n:121:VAL:O	2.49	0.42
27:o:1:THR:O	27:o:129:SER:N	2.42	0.42
29:q:30:ASP:OD1	29:q:30:ASP:N	2.45	0.42
32:t:43:MET:HE3	32:t:45:VAL:HG22	2.00	0.42
1:U:179:TYR:CE2	1:U:183:LEU:CD1	3.01	0.42
2:V:72:LEU:O	2:V:76:LYS:CB	2.58	0.42
2:V:403:ILE:HD12	2:V:403:ILE:HA	1.95	0.42
2:V:440:LYS:HA	2:V:443:ARG:HB2	2.02	0.42
3:W:375:MET:N	3:W:411:GLY:O	2.50	0.42
7:a:245:VAL:HG11	7:a:301:LYS:HG2	2.02	0.42
12:f:253:LEU:HD22	12:f:257:ARG:HD3	2.01	0.42
12:f:606:VAL:HA	12:f:609:VAL:HG23	2.02	0.42
13:A:139:ARG:O	13:A:153:LEU:N	2.49	0.42
13:A:213:LEU:HD21	13:A:340:LYS:HG2	2.02	0.42
13:A:258:ARG:O	13:A:262:GLU:HG2	2.19	0.42
18:F:212:PHE:HD1	18:F:217:ILE:HD11	1.85	0.42
18:F:249:LEU:HD23	18:F:283:ILE:HD13	2.02	0.42
20:H:213:CYS:HA	20:H:218:PHE:HA	2.01	0.42
21:I:187:LYS:HA	21:I:190:LEU:HD12	2.01	0.42
25:M:88:ALA:O	25:M:92:ARG:CB	2.68	0.42
26:n:7:GLN:HB3	26:n:111:VAL:HG23	2.01	0.42
29:q:107:TYR:CE2	29:q:185:LYS:HA	2.55	0.42
31:s:20:PHE:HA	31:s:198:VAL:O	2.20	0.42
1:U:147:TYR:O	1:U:151:ILE:HB	2.20	0.41
1:U:609:ASP:OD1	1:U:610:VAL:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:25:GLU:O	2:V:28:PRO:CG	2.67	0.41
2:V:334:VAL:HG13	2:V:360:TYR:CE1	2.54	0.41
2:V:497:PRO:N	2:V:498:PRO:CD	2.83	0.41
5:Y:57:LEU:HA	5:Y:60:SER:HB3	2.02	0.41
5:Y:108:ALA:HA	5:Y:111:LEU:HD12	2.00	0.41
5:Y:117:LYS:HB3	5:Y:151:TYR:HE2	1.85	0.41
12:f:322:SER:O	12:f:326:LEU:N	2.53	0.41
14:B:179:ALA:HB1	14:B:241:ASN:HA	2.02	0.41
15:C:113:ARG:NH2	15:C:129:ASN:C	2.78	0.41
16:D:175:GLN:NE2	16:D:179:GLU:OE2	2.46	0.41
22:J:31:THR:HA	22:J:162:GLY:HA3	2.02	0.41
25:M:40:ARG:NH2	25:M:146:ALA:O	2.53	0.41
26:N:113:SER:N	26:N:121:VAL:O	2.49	0.41
28:P:48:ARG:HD3	28:P:192:LYS:HA	2.02	0.41
21:i:243:GLU:O	21:i:247:ALA:CB	2.68	0.41
25:m:40:ARG:NH2	25:m:146:ALA:O	2.53	0.41
29:q:148:THR:HG22	29:q:150:THR:H	1.85	0.41
30:r:104:TRP:NE1	30:r:181:GLU:OE2	2.53	0.41
31:s:46:LEU:HD11	31:s:52:ILE:HB	2.01	0.41
1:U:379:GLY:N	1:U:410:VAL:O	2.43	0.41
1:U:381:THR:HG22	1:U:412:HIS:HA	2.02	0.41
1:U:450:HIS:HB3	1:U:453:HIS:HB2	2.01	0.41
3:W:365:ILE:HA	3:W:368:LYS:HB2	2.02	0.41
4:X:377:ILE:HG12	5:Y:312:ARG:HB3	2.02	0.41
5:Y:186:LEU:HA	5:Y:189:VAL:HG12	2.01	0.41
6:Z:262:LEU:O	6:Z:266:ILE:HG12	2.20	0.41
12:f:39:LYS:HD3	12:f:85:SER:HA	2.01	0.41
12:f:827:PRO:HA	12:f:862:ILE:HG13	2.02	0.41
13:A:185:GLU:OE1	13:A:188:ARG:NH2	2.52	0.41
14:B:191:ASP:H	14:B:194:ILE:HD12	1.84	0.41
14:B:357:ASP:OD2	14:B:359:LYS:NZ	2.46	0.41
16:D:116:LEU:HD12	16:D:118:THR:OG1	2.16	0.41
16:D:244:PRO:HB3	16:D:291:GLU:HG3	2.01	0.41
16:D:354:LEU:CA	16:D:394:VAL:HG12	2.42	0.41
17:E:103:THR:OG1	17:E:104:THR:N	2.53	0.41
18:F:314:LEU:HD21	18:F:342:LEU:HB3	2.02	0.41
19:G:127:GLN:NE2	20:H:82:ASP:OD1	2.53	0.41
24:L:103:LEU:HD22	24:L:104:PRO:HD2	2.02	0.41
24:L:226:ASP:O	24:L:229:VAL:HB	2.20	0.41
28:P:159:ASP:OD1	28:P:159:ASP:N	2.53	0.41
29:Q:91:CYS:O	29:Q:94:SER:OG	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:S:1:ARG:HE	32:T:2:GLN:HE22	1.68	0.41
31:S:119:GLY:O	31:S:132:ARG:NH2	2.33	0.41
23:k:193:GLU:O	23:k:197:SER:OG	2.27	0.41
24:l:103:LEU:HD22	24:l:104:PRO:HD2	2.02	0.41
27:o:48:THR:HG22	27:o:51:ASP:H	1.84	0.41
28:p:159:ASP:OD1	28:p:159:ASP:N	2.53	0.41
2:V:29:PRO:HB2	2:V:30:PRO:HD3	2.02	0.41
5:Y:344:HIS:CG	5:Y:359:PRO:HG3	2.55	0.41
6:Z:22:HIS:HA	6:Z:25:ARG:HG2	2.02	0.41
6:Z:179:ILE:HD12	6:Z:179:ILE:HA	1.92	0.41
6:Z:249:PHE:HZ	9:c:303:MET:HG2	1.84	0.41
9:c:42:LEU:O	9:c:46:ARG:CB	2.69	0.41
12:f:513:GLU:HA	12:f:557:TRP:HZ3	1.84	0.41
12:f:683:GLU:O	12:f:687:ARG:HB3	2.19	0.41
14:B:316:LEU:HD23	14:B:346:ARG:HB3	2.01	0.41
16:D:102:ILE:HA	16:D:111:TYR:O	2.20	0.41
20:H:171:LYS:O	20:H:175:GLU:HB2	2.20	0.41
23:K:47:CYS:HB3	23:K:191:LEU:HD11	2.02	0.41
28:P:42:ILE:HA	28:P:51:ILE:O	2.20	0.41
29:Q:12:TYR:HB2	29:Q:182:ILE:HD11	2.02	0.41
29:Q:107:TYR:CE2	29:Q:185:LYS:HA	2.55	0.41
20:h:214:ASN:HB2	20:h:217:GLY:H	1.85	0.41
22:j:185:ASP:HA	22:j:188:ILE:HB	2.02	0.41
23:k:236:GLU:O	23:k:240:ASP:HB2	2.21	0.41
29:q:12:TYR:HB2	29:q:182:ILE:HD11	2.02	0.41
1:U:612:ASP:HA	1:U:615:ARG:HD3	2.03	0.41
10:d:49:ILE:HG23	10:d:50:LEU:HD12	2.03	0.41
12:f:23:GLY:HA3	12:f:34:ARG:HH22	1.85	0.41
12:f:253:LEU:HD13	12:f:257:ARG:HG2	2.01	0.41
12:f:704:LEU:O	12:f:708:ASP:CB	2.62	0.41
12:f:806:VAL:C	12:f:808:ASN:H	2.27	0.41
13:A:212:VAL:HA	13:A:339:ARG:O	2.21	0.41
15:C:147:THR:HG23	15:C:149:GLU:H	1.85	0.41
18:F:151:VAL:HG12	18:F:163:THR:HA	2.03	0.41
24:L:26:MET:O	24:L:30:LYS:NZ	2.47	0.41
24:L:39:LYS:HB2	24:L:142:PRO:HB2	2.02	0.41
24:L:40:SER:HG	24:L:42:THR:H	1.68	0.41
25:M:15:SER:OG	25:M:19:ARG:N	2.49	0.41
26:N:59:VAL:O	26:N:63:LEU:CB	2.68	0.41
32:T:11:VAL:N	32:T:139:THR:OG1	2.44	0.41
32:T:99:ARG:HA	32:T:102:LYS:HZ2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:j:217:LEU:H	22:j:217:LEU:HG	1.66	0.41
23:k:177:ALA:O	23:k:181:LEU:HB2	2.20	0.41
24:l:132:LEU:HA	24:l:132:LEU:HD23	1.90	0.41
24:l:134:ILE:HB	24:l:145:PHE:HB2	2.01	0.41
25:m:88:ALA:O	25:m:92:ARG:CB	2.68	0.41
28:p:42:ILE:HA	28:p:51:ILE:O	2.20	0.41
29:q:19:ARG:HB3	29:q:31:ASP:HA	2.03	0.41
29:q:47:VAL:HB	29:q:101:ASN:O	2.19	0.41
1:U:217:CYS:HB2	1:U:248:ILE:HD12	2.01	0.41
1:U:252:LEU:HG	1:U:261:LEU:HD21	2.03	0.41
2:V:428:LEU:HD23	2:V:434:ALA:HB2	2.03	0.41
5:Y:32:ARG:NH2	5:Y:35:ALA:HB3	2.36	0.41
7:a:159:SER:O	7:a:163:TYR:HB2	2.20	0.41
12:f:137:ARG:HH21	12:f:159:VAL:HG22	1.84	0.41
12:f:421:ASP:HB2	12:f:451:VAL:HG13	2.01	0.41
13:A:325:ASP:OD1	13:A:325:ASP:N	2.50	0.41
14:B:193:GLN:O	14:B:197:ILE:HG12	2.20	0.41
14:B:407:LEU:HD23	14:B:407:LEU:HA	1.83	0.41
19:G:123:GLN:O	19:G:127:GLN:HB2	2.20	0.41
23:K:49:ALA:HB2	23:K:217:LEU:HG	2.03	0.41
23:K:69:GLU:O	23:K:93:ARG:NH2	2.47	0.41
24:L:9:ASP:HB3	24:L:12:VAL:HG23	2.01	0.41
24:L:134:ILE:HB	24:L:145:PHE:HB2	2.01	0.41
29:Q:162:LYS:O	30:r:141:ARG:NH2	2.54	0.41
19:g:212:PRO:HB2	19:g:232:GLU:HG3	2.03	0.41
26:n:40:ARG:O	26:n:102:GLY:CA	2.67	0.41
31:s:197:ILE:O	31:s:203:ILE:HA	2.21	0.41
1:U:700:GLU:OE1	1:U:707:ASN:ND2	2.53	0.41
2:V:135:LEU:HB3	2:V:181:TYR:HE2	1.86	0.41
3:W:188:GLU:O	3:W:191:ARG:HG2	2.20	0.41
4:X:397:TYR:HB2	5:Y:365:GLN:NE2	2.35	0.41
6:Z:42:SER:OG	6:Z:90:ARG:NH2	2.54	0.41
12:f:31:LYS:HE2	12:f:31:LYS:HB3	1.89	0.41
12:f:191:ILE:HG22	12:f:231:LEU:HD11	2.03	0.41
12:f:531:ASN:HD22	12:f:534:VAL:HB	1.85	0.41
13:A:146:LYS:HD2	13:A:148:GLN:HG2	2.02	0.41
16:D:103:VAL:HG11	16:D:139:LEU:HD21	2.01	0.41
16:D:342:ARG:HA	16:D:345:PHE:HD2	1.85	0.41
19:G:46:ASP:CB	19:G:222:VAL:HG21	2.51	0.41
23:K:117:SER:HB2	24:L:82:ARG:HH12	1.85	0.41
24:L:132:LEU:HA	24:L:132:LEU:HD23	1.90	0.41

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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	0.41
20:h:45:VAL:HG22	20:h:212:ILE:HG22	2.01	0.41
24:l:199:LEU:HD23	24:l:199:LEU:HA	1.90	0.41
27:o:212:LEU:N	28:p:199:THR:O	2.47	0.41
28:p:27:ARG:N	28:p:182:GLY:O	2.53	0.41
1:U:47:VAL:O	1:U:51:ASP:HB2	2.20	0.41
1:U:92:ASP:OD1	1:U:92:ASP:N	2.53	0.41
2:V:195:ILE:HD11	2:V:241:ARG:HE	1.85	0.41
2:V:311:ASN:HA	2:V:314:ARG:HG2	2.02	0.41
2:V:467:TYR:HH	4:X:397:TYR:HH	1.64	0.41
7:a:159:SER:OG	7:a:175:ASP:OD2	2.24	0.41
11:e:40:GLU:OE2	11:e:43:TRP:N	2.52	0.41
12:f:568:GLY:H	12:f:599:ALA:HA	1.85	0.41
13:A:390:THR:O	13:A:394:MET:HG2	2.21	0.41
14:B:170:LEU:CG	14:B:174:MET:CE	2.81	0.41
14:B:380:LEU:HD23	14:B:383:LEU:HD12	2.01	0.41
17:E:99:ALA:HB2	17:E:111:LEU:HD11	2.03	0.41
17:E:202:SER:HB3	18:F:269:ARG:HH22	1.85	0.41
19:G:200:THR:HG23	19:G:242:LEU:HD11	2.03	0.41
21:I:34:CYS:O	21:I:163:CYS:HA	2.21	0.41
21:I:136:TYR:HB2	21:I:148:TYR:HB2	2.01	0.41
25:M:180:GLN:HB3	25:M:184:MET:HE3	2.02	0.41
26:N:6:VAL:HG13	26:N:125:PHE:HB3	2.03	0.41
28:P:38:ASP:N	28:P:38:ASP:OD1	2.53	0.41
30:R:10:HIS:O	30:R:178:HIS:NE2	2.40	0.41
19:g:133:PRO:O	19:g:135:GLY:N	2.53	0.41
24:l:33:SER:HB3	24:l:51:ARG:NE	2.36	0.41
26:n:22:THR:HG23	26:n:25:TYR:HB3	2.03	0.41
29:q:4:LEU:HD22	29:q:45:LEU:HB3	2.01	0.41
29:q:42:ILE:HG23	29:q:104:LEU:HD21	2.03	0.41
31:s:172:MET:HE3	31:s:176:LYS:HE3	2.01	0.41
2:V:373:ALA:H	2:V:427:GLN:NE2	2.16	0.41
3:W:260:SER:O	3:W:264:GLN:N	2.54	0.41
6:Z:237:LEU:HA	6:Z:238:PRO:HD3	1.92	0.41
7:a:172:TYR:O	7:a:176:ALA:HB3	2.20	0.41
12:f:297:MET:HA	12:f:772:GLY:HA2	2.02	0.41
13:A:333:ARG:HH21	13:A:336:ARG:NH1	2.19	0.41
14:B:117:ASP:OD1	14:B:117:ASP:N	2.53	0.41
16:D:369:LYS:HE2	16:D:369:LYS:HB2	1.55	0.41
18:F:65:GLU:O	18:F:69:MET:CB	2.69	0.41
18:F:272:PHE:O	18:F:276:LYS:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:G:47:CYS:HB3	19:G:221:THR:HG23	2.02	0.41
22:J:200:GLN:OE1	22:J:202:GLY:CA	2.69	0.41
23:K:56:SER:HB3	23:K:59:MET:HB2	2.03	0.41
23:K:193:GLU:O	23:K:197:SER:OG	2.27	0.41
28:P:27:ARG:N	28:P:182:GLY:O	2.53	0.41
29:Q:42:ILE:HG23	29:Q:104:LEU:HD21	2.03	0.41
30:R:164:THR:HG22	30:R:170:SER:HB3	2.01	0.41
31:S:197:ILE:O	31:S:203:ILE:HA	2.21	0.41
27:o:179:SER:OG	27:o:182:LYS:N	2.52	0.41
29:q:35:MET:HG2	29:q:45:LEU:HD21	2.03	0.41
30:r:144:SER:H	30:r:147:LEU:HD11	1.86	0.41
1:U:70:HIS:HB2	2:V:236:ARG:NH1	2.35	0.41
1:U:236:LEU:HB3	1:U:245:ALA:HB2	2.02	0.41
1:U:436:ALA:HA	1:U:439:GLU:HG2	2.02	0.41
1:U:703:CYS:HA	1:U:704:PRO:HD3	1.90	0.41
1:U:885:MET:HG2	1:U:887:ALA:H	1.85	0.41
2:V:89:LYS:HD3	2:V:92:ARG:NH1	2.36	0.41
2:V:342:ILE:HD12	2:V:343:PRO:HD2	2.02	0.41
2:V:417:ILE:HD13	5:Y:349:LYS:HG3	2.02	0.41
3:W:212:LYS:NZ	3:W:215:GLN:OE1	2.47	0.41
3:W:268:LYS:HD3	3:W:333:LEU:HD13	2.03	0.41
3:W:395:ASN:HA	3:W:398:VAL:HG22	2.02	0.41
4:X:334:ASN:ND2	4:X:354:ILE:HG23	2.36	0.41
5:Y:48:ASN:ND2	5:Y:110:TYR:OH	2.34	0.41
5:Y:272:PHE:HA	5:Y:275:LEU:HB3	2.03	0.41
5:Y:370:ILE:HD12	5:Y:370:ILE:HA	1.97	0.41
7:a:128:LEU:HD12	7:a:129:GLN:HB3	2.02	0.41
7:a:133:GLU:HA	7:a:136:GLU:HB3	2.02	0.41
7:a:149:THR:HA	7:a:152:HIS:HB3	2.03	0.41
7:a:252:LYS:HG2	7:a:255:TRP:HE1	1.85	0.41
7:a:273:GLN:HB3	7:a:310:LEU:HD11	2.02	0.41
8:b:13:SER:OG	8:b:115:SER:OG	2.24	0.41
10:d:114:GLU:HA	10:d:117:THR:HG22	2.03	0.41
12:f:64:GLY:HA2	12:f:67:ASP:HB3	2.03	0.41
12:f:250:ARG:HD2	12:f:281:ILE:HD11	1.68	0.41
12:f:340:MET:SD	12:f:340:MET:O	2.79	0.41
12:f:705:ASN:OD1	12:f:706:ILE:N	2.53	0.41
12:f:710:LEU:HD22	12:f:745:LEU:HD23	2.03	0.41
12:f:778:LEU:HA	12:f:803:PHE:HB3	2.03	0.41
12:f:780:PRO:HA	12:f:783:SER:HB3	2.01	0.41
13:A:69:ASP:OD1	13:A:69:ASP:N	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:A:73:ALA:CB	14:B:140:ASP:CG	2.91	0.41
13:A:328:ASP:HA	13:A:329:PRO:HD3	1.95	0.41
14:B:153:ASN:HB3	14:B:157:HIS:N	2.36	0.41
14:B:375:ALA:HB2	14:B:413:LYS:HB3	2.01	0.41
15:C:81:ASP:OD1	15:C:82:LYS:N	2.54	0.41
15:C:120:SER:HB2	15:C:122:THR:HG23	2.02	0.41
15:C:171:HIS:HB3	15:C:174:LEU:HB2	2.02	0.41
16:D:50:GLU:HA	16:D:53:PHE:HB3	2.03	0.41
16:D:53:PHE:O	16:D:56:VAL:HG22	2.20	0.41
16:D:159:LYS:C	16:D:161:ASP:H	2.29	0.41
16:D:217:LYS:HE2	17:E:267:PHE:HA	2.03	0.41
17:E:217:GLU:HA	17:E:220:ASN:HD22	1.86	0.41
20:H:148:GLN:OE1	20:H:158:TRP:NE1	2.54	0.41
23:K:31:ILE:H	23:K:31:ILE:HG13	1.59	0.41
24:L:94:ASP:OD1	24:L:95:SER:N	2.52	0.41
26:N:5:ALA:HA	26:N:13:VAL:O	2.21	0.41
29:Q:148:THR:HG22	29:Q:150:THR:H	1.86	0.41
30:R:68:LEU:HD23	30:R:68:LEU:HA	1.92	0.41
30:R:190:ASP:HB2	30:R:195:LEU:HD11	2.03	0.41
31:S:1:ARG:NH2	31:S:2:PHE:HB3	2.35	0.41
31:S:184:GLU:HB3	27:o:29:LYS:NZ	2.36	0.41
19:g:200:THR:HG23	19:g:242:LEU:HD11	2.03	0.41
20:h:171:LYS:O	20:h:175:GLU:HB2	2.20	0.41
22:j:82:ILE:HA	22:j:85:ASN:HD22	1.86	0.41
22:j:88:ARG:NH1	29:q:70:ARG:HA	2.36	0.41
24:l:186:GLU:HA	24:l:189:LYS:HG2	2.03	0.41
28:p:38:ASP:N	28:p:38:ASP:OD1	2.53	0.41
28:p:58:THR:O	29:q:85:ARG:NH2	2.53	0.41
2:V:25:GLU:O	2:V:28:PRO:HG2	2.20	0.41
2:V:92:ARG:HH12	2:V:118:GLN:NE2	2.19	0.41
6:Z:17:LEU:HD22	9:c:36:LEU:HB3	2.02	0.41
12:f:438:ASP:O	12:f:476:THR:OG1	2.39	0.41
12:f:469:TYR:CZ	12:f:504:VAL:HG22	2.56	0.41
13:A:234:ASP:OD1	13:A:234:ASP:N	2.54	0.41
13:A:401:ARG:CG	13:A:401:ARG:NH1	2.73	0.41
14:B:368:HIS:CE1	14:B:396:LYS:HD3	2.56	0.41
16:D:86:PRO:HB2	16:D:134:LYS:HD2	2.03	0.41
16:D:97:ASP:OD1	16:D:97:ASP:N	2.54	0.41
17:E:251:ARG:HB3	17:E:255:ARG:NH1	2.32	0.41
19:G:180:GLU:HA	19:G:183:VAL:HG12	2.03	0.41
19:G:212:PRO:HB2	19:G:232:GLU:HG3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:H:214:ASN:HB2	20:H:217:GLY:H	1.85	0.41
28:P:177:ARG:NH2	31:s:150:ASP:OD2	2.45	0.41
31:S:20:PHE:HA	31:S:198:VAL:O	2.20	0.41
31:S:57:PHE:N	31:S:105:TYR:O	2.43	0.41
20:h:113:ARG:O	20:h:116:SER:OG	2.31	0.41
1:U:151:ILE:CD1	1:U:177:LEU:HD22	2.48	0.40
1:U:206:MET:HE3	1:U:216:VAL:HG21	2.02	0.40
1:U:599:ILE:HD12	1:U:599:ILE:HA	1.96	0.40
1:U:600:ARG:CD	16:D:56:VAL:HG11	2.48	0.40
6:Z:170:VAL:O	6:Z:174:HIS:CB	2.69	0.40
6:Z:226:ILE:HD12	6:Z:226:ILE:HA	1.96	0.40
10:d:53:ASP:HA	10:d:56:GLU:HG3	2.01	0.40
12:f:23:GLY:HA2	12:f:27:LYS:HD3	2.04	0.40
14:B:55:HIS:H	14:B:61:LYS:HD2	1.86	0.40
17:E:171:LEU:HD22	17:E:295:LEU:HD13	2.03	0.40
18:F:305:GLU:HA	18:F:308:ARG:HH11	1.85	0.40
29:Q:35:MET:HG2	29:Q:45:LEU:HD21	2.03	0.40
19:g:53:GLN:HA	19:g:215:ILE:HG22	2.03	0.40
22:j:37:GLY:H	22:j:41:VAL:HA	1.86	0.40
23:k:47:CYS:HB3	23:k:191:LEU:HD11	2.02	0.40
23:k:235:GLU:HA	23:k:238:ILE:HD12	2.03	0.40
25:m:100:SER:HA	32:t:65:GLN:HE21	1.86	0.40
25:m:241:GLU:OE1	25:m:241:GLU:N	2.54	0.40
28:p:80:ARG:NH1	28:p:81:GLN:O	2.54	0.40
30:r:4:LEU:HA	30:r:127:SER:HA	2.02	0.40
1:U:252:LEU:O	1:U:256:ALA:CB	2.67	0.40
1:U:526:ALA:HA	1:U:529:ILE:HB	2.02	0.40
2:V:92:ARG:O	2:V:96:ARG:NH1	2.54	0.40
3:W:247:TYR:HA	3:W:250:ILE:HG13	2.03	0.40
6:Z:11:VAL:HB	6:Z:162:ILE:HD13	2.03	0.40
12:f:215:ASP:CA	12:f:218:GLU:HG3	2.50	0.40
12:f:773:LYS:O	12:f:775:THR:N	2.55	0.40
13:A:240:VAL:HB	13:A:273:PHE:O	2.21	0.40
13:A:308:GLY:HA2	18:F:234:THR:HG21	2.03	0.40
14:B:107:MET:HB2	15:C:96:VAL:HB	2.03	0.40
14:B:119:ASN:O	14:B:135:ILE:N	2.45	0.40
14:B:221:GLY:HA3	14:B:347:ILE:HA	2.04	0.40
16:D:83:GLN:HB3	16:D:140:VAL:HG13	2.03	0.40
18:F:289:ASP:OD1	18:F:289:ASP:N	2.51	0.40
19:G:155:ASP:OD1	19:G:159:TYR:N	2.41	0.40
19:G:162:GLY:O	20:H:58:ASP:N	2.34	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:H:159:LYS:HD2	21:I:55:LEU:HA	2.03	0.40
21:I:15:GLU:HG3	21:I:17:ARG:HG2	2.02	0.40
21:I:119:GLN:NE2	22:J:79:ASP:OD1	2.54	0.40
24:L:186:GLU:HA	24:L:189:LYS:HG2	2.03	0.40
25:M:189:ILE:HD13	25:M:189:ILE:HA	1.94	0.40
26:N:166:ARG:HD2	32:t:33:LEU:HD11	2.02	0.40
28:P:58:THR:O	28:P:62:THR:OG1	2.32	0.40
29:Q:19:ARG:HB3	29:Q:31:ASP:HA	2.03	0.40
26:n:5:ALA:HA	26:n:13:VAL:O	2.21	0.40
1:U:102:ALA:O	15:C:27:LYS:NZ	2.54	0.40
1:U:695:MET:HB2	1:U:695:MET:HE3	1.80	0.40
2:V:435:GLU:O	2:V:439:ALA:HB2	2.21	0.40
2:V:492:LYS:O	15:C:44:ARG:NH1	2.54	0.40
12:f:649:HIS:HA	12:f:652:VAL:HG22	2.02	0.40
15:C:376:VAL:HG23	15:C:377:HIS:ND1	2.36	0.40
17:E:181:THR:N	34:E:401:ATP:O1B	2.41	0.40
17:E:285:LEU:HD23	17:E:285:LEU:HA	1.91	0.40
19:G:53:GLN:HA	19:G:215:ILE:HG22	2.03	0.40
22:J:37:GLY:H	22:J:41:VAL:HA	1.86	0.40
23:K:235:GLU:HA	23:K:238:ILE:HD12	2.03	0.40
26:N:22:THR:HG23	26:N:25:TYR:HB3	2.03	0.40
28:P:36:THR:OG1	28:P:38:ASP:OD1	2.30	0.40
20:h:148:GLN:OE1	20:h:158:TRP:NE1	2.54	0.40
21:i:47:ALA:HB1	21:i:64:LYS:HE3	2.03	0.40
23:k:56:SER:HB3	23:k:59:MET:HB2	2.03	0.40
1:U:326:ILE:O	1:U:330:SER:OG	2.29	0.40
1:U:650:TYR:HD1	1:U:683:VAL:HA	1.85	0.40
2:V:183:GLU:HA	2:V:186:LYS:HB3	2.04	0.40
2:V:268:GLU:HA	2:V:271:VAL:HG22	2.03	0.40
2:V:285:TRP:HE1	2:V:315:LYS:NZ	2.19	0.40
3:W:317:TRP:CD1	3:W:358:VAL:HG21	2.57	0.40
5:Y:337:PHE:HA	5:Y:340:ALA:HB3	2.02	0.40
11:e:48:VAL:HG12	11:e:52:PHE:CD2	2.49	0.40
12:f:342:PRO:HG2	12:f:345:PRO:CG	2.49	0.40
12:f:707:LEU:HG	12:f:737:ASN:OD1	2.22	0.40
13:A:227:ARG:HG2	14:B:319:PHE:HB2	2.02	0.40
13:A:394:MET:HE3	13:A:398:ARG:HH21	1.86	0.40
14:B:403:GLY:HA3	15:C:180:ILE:HD13	2.03	0.40
16:D:168:GLY:H	34:D:501:ATP:N6	2.19	0.40
17:E:67:GLU:OE1	17:E:67:GLU:N	2.54	0.40
23:K:101:PHE:O	30:R:57:ARG:NE	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:L:216:GLY:HA3	24:L:219:LEU:HB3	2.04	0.40
31:S:180:ILE:HD13	27:o:196:GLY:HA3	2.03	0.40
23:k:49:ALA:HB2	23:k:217:LEU:HG	2.03	0.40
24:l:204:ASP:OD1	24:l:204:ASP:N	2.53	0.40
3:W:186:ILE:HG13	3:W:189:GLN:HE22	1.87	0.40
6:Z:190:ARG:O	6:Z:195:VAL:N	2.54	0.40
8:b:14:GLU:O	8:b:17:ARG:NE	2.43	0.40
9:c:36:LEU:HD11	9:c:71:ASP:HA	2.04	0.40
14:B:309:MET:O	14:B:313:LEU:HB2	2.21	0.40
17:E:87:LEU:HA	17:E:87:LEU:HD13	1.90	0.40
17:E:236:ASP:OD2	17:E:279:THR:OG1	2.37	0.40
17:E:332:VAL:HA	17:E:335:SER:HB2	2.03	0.40
23:K:236:GLU:O	23:K:240:ASP:HB2	2.21	0.40
25:M:241:GLU:N	25:M:241:GLU:OE1	2.54	0.40
28:P:80:ARG:NH1	28:P:81:GLN:O	2.54	0.40
30:R:144:SER:H	30:R:147:LEU:HD11	1.86	0.40
19:g:60:LEU:O	25:m:161:TRP:N	2.55	0.40
22:j:31:THR:HA	22:j:162:GLY:HA3	2.02	0.40
23:k:93:ARG:O	23:k:96:THR:OG1	2.33	0.40
24:l:6:TYR:CD1	24:l:15:PRO:HD3	2.57	0.40
32:t:106:LEU:HD23	32:t:106:LEU:HA	1.91	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	U	806/953 (85%)	725 (90%)	77 (10%)	4 (0%)	25	63
2	V	506/533 (95%)	435 (86%)	67 (13%)	4 (1%)	16	53
3	W	277/456 (61%)	247 (89%)	30 (11%)	0	100	100
4	X	97/422 (23%)	93 (96%)	4 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	Y	376/389 (97%)	345 (92%)	31 (8%)	0	100	100
6	Z	284/324 (88%)	239 (84%)	42 (15%)	3 (1%)	12	46
7	a	371/376 (99%)	325 (88%)	45 (12%)	1 (0%)	37	72
8	b	189/377 (50%)	167 (88%)	21 (11%)	1 (0%)	25	63
9	c	285/309 (92%)	241 (85%)	41 (14%)	3 (1%)	12	46
10	d	255/349 (73%)	206 (81%)	45 (18%)	4 (2%)	8	37
11	e	36/70 (51%)	25 (69%)	10 (28%)	1 (3%)	4	25
12	f	887/908 (98%)	713 (80%)	164 (18%)	10 (1%)	12	46
13	A	392/433 (90%)	333 (85%)	56 (14%)	3 (1%)	16	53
14	B	382/429 (89%)	338 (88%)	40 (10%)	4 (1%)	13	48
15	C	359/389 (92%)	328 (91%)	29 (8%)	2 (1%)	22	59
16	D	378/418 (90%)	322 (85%)	47 (12%)	9 (2%)	5	28
17	E	373/403 (93%)	330 (88%)	43 (12%)	0	100	100
18	F	372/439 (85%)	332 (89%)	39 (10%)	1 (0%)	37	72
19	G	238/245 (97%)	227 (95%)	11 (5%)	0	100	100
19	g	238/245 (97%)	228 (96%)	8 (3%)	2 (1%)	16	53
20	H	230/233 (99%)	217 (94%)	13 (6%)	0	100	100
20	h	230/233 (99%)	217 (94%)	13 (6%)	0	100	100
21	I	248/260 (95%)	219 (88%)	29 (12%)	0	100	100
21	i	248/260 (95%)	219 (88%)	29 (12%)	0	100	100
22	J	237/247 (96%)	216 (91%)	19 (8%)	2 (1%)	16	53
22	j	237/247 (96%)	214 (90%)	21 (9%)	2 (1%)	16	53
23	K	224/240 (93%)	211 (94%)	13 (6%)	0	100	100
23	k	224/240 (93%)	211 (94%)	13 (6%)	0	100	100
24	L	236/268 (88%)	212 (90%)	23 (10%)	1 (0%)	30	67
24	l	236/268 (88%)	212 (90%)	24 (10%)	0	100	100
25	M	238/254 (94%)	221 (93%)	17 (7%)	0	100	100
25	m	238/254 (94%)	221 (93%)	17 (7%)	0	100	100
26	N	189/238 (79%)	179 (95%)	10 (5%)	0	100	100
26	n	189/238 (79%)	179 (95%)	10 (5%)	0	100	100
27	O	218/276 (79%)	206 (94%)	12 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
27	o	218/276 (79%)	207 (95%)	11 (5%)	0	100	100
28	P	202/204 (99%)	192 (95%)	10 (5%)	0	100	100
28	p	202/204 (99%)	192 (95%)	10 (5%)	0	100	100
29	Q	197/201 (98%)	180 (91%)	17 (9%)	0	100	100
29	q	197/201 (98%)	181 (92%)	16 (8%)	0	100	100
30	R	199/262 (76%)	184 (92%)	15 (8%)	0	100	100
30	r	199/262 (76%)	183 (92%)	16 (8%)	0	100	100
31	S	211/240 (88%)	203 (96%)	8 (4%)	0	100	100
31	s	211/240 (88%)	203 (96%)	8 (4%)	0	100	100
32	T	213/263 (81%)	199 (93%)	14 (7%)	0	100	100
32	t	213/263 (81%)	199 (93%)	14 (7%)	0	100	100
All	All	12785/14839 (86%)	11476 (90%)	1252 (10%)	57 (0%)	32	67

All (57) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	V	351	PRO
2	V	446	VAL
6	Z	146	ASP
7	a	187	ASP
8	b	22	LEU
12	f	756	PRO
12	f	839	PRO
15	C	91	PRO
15	C	128	PRO
16	D	85	ILE
16	D	369	LYS
24	L	226	ASP
19	g	135	GLY
22	j	202	GLY
6	Z	224	HIS
2	V	350	GLN
2	V	498	PRO
9	c	196	LEU
10	d	7	GLY
12	f	118	ASN
12	f	680	ARG
13	A	424	SER

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Mol	Chain	Res	Type
14	B	87	PRO
16	D	127	ASN
16	D	152	MET
16	D	154	LEU
16	D	161	ASP
1	U	57	ARG
10	d	5	LEU
10	d	173	THR
10	d	199	PHE
12	f	474	SER
12	f	476	THR
12	f	738	ASN
12	f	773	LYS
12	f	837	LEU
14	B	88	LEU
16	D	84	SER
16	D	367	PRO
19	g	134	LEU
1	U	128	GLN
1	U	174	PRO
1	U	178	ALA
9	c	63	ASP
11	e	57	ARG
12	f	840	LEU
13	A	109	PRO
14	B	166	ASP
14	B	278	ALA
22	J	198	VAL
13	A	72	LEU
22	J	200	GLN
22	j	198	VAL
6	Z	99	PRO
9	c	116	PRO
16	D	151	ILE
18	F	165	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	U	691/816 (85%)	685 (99%)	6 (1%)	75	83
2	V	415/459 (90%)	404 (97%)	11 (3%)	40	60
3	W	260/416 (62%)	258 (99%)	2 (1%)	79	85
4	X	91/362 (25%)	91 (100%)	0	100	100
5	Y	334/344 (97%)	329 (98%)	5 (2%)	60	75
6	Z	257/295 (87%)	246 (96%)	11 (4%)	25	47
7	a	333/336 (99%)	330 (99%)	3 (1%)	75	83
8	b	167/312 (54%)	166 (99%)	1 (1%)	84	88
9	c	252/267 (94%)	250 (99%)	2 (1%)	79	85
10	d	231/293 (79%)	224 (97%)	7 (3%)	36	57
11	e	38/63 (60%)	37 (97%)	1 (3%)	41	61
12	f	745/763 (98%)	725 (97%)	20 (3%)	40	60
13	A	337/372 (91%)	332 (98%)	5 (2%)	60	75
14	B	339/376 (90%)	334 (98%)	5 (2%)	60	75
15	C	314/337 (93%)	305 (97%)	9 (3%)	37	58
16	D	333/366 (91%)	321 (96%)	12 (4%)	30	52
17	E	298/353 (84%)	295 (99%)	3 (1%)	73	81
18	F	296/379 (78%)	295 (100%)	1 (0%)	91	92
19	G	193/209 (92%)	191 (99%)	2 (1%)	73	81
19	g	193/209 (92%)	190 (98%)	3 (2%)	58	74
20	H	164/190 (86%)	163 (99%)	1 (1%)	84	88
20	h	164/190 (86%)	163 (99%)	1 (1%)	84	88
21	I	193/220 (88%)	192 (100%)	1 (0%)	86	90
21	i	193/220 (88%)	192 (100%)	1 (0%)	86	90
22	J	154/210 (73%)	148 (96%)	6 (4%)	27	49
22	j	152/210 (72%)	147 (97%)	5 (3%)	33	54
23	K	186/202 (92%)	185 (100%)	1 (0%)	86	90
23	k	186/202 (92%)	185 (100%)	1 (0%)	86	90
24	L	198/229 (86%)	197 (100%)	1 (0%)	86	90
24	l	198/229 (86%)	197 (100%)	1 (0%)	86	90
25	M	192/211 (91%)	192 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
25	m	192/211 (91%)	191 (100%)	1 (0%)	86	90
26	N	148/180 (82%)	148 (100%)	0	100	100
26	n	148/180 (82%)	148 (100%)	0	100	100
27	O	177/227 (78%)	177 (100%)	0	100	100
27	o	177/227 (78%)	177 (100%)	0	100	100
28	P	173/173 (100%)	173 (100%)	0	100	100
28	p	173/173 (100%)	173 (100%)	0	100	100
29	Q	164/171 (96%)	163 (99%)	1 (1%)	84	88
29	q	164/171 (96%)	163 (99%)	1 (1%)	84	88
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	175/198 (88%)	175 (100%)	0	100	100
32	T	175/214 (82%)	174 (99%)	1 (1%)	84	88
32	t	175/214 (82%)	174 (99%)	1 (1%)	84	88
All	All	10618/12579 (84%)	10485 (99%)	133 (1%)	64	77

All (133) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	U	177	LEU
1	U	529	ILE
1	U	603	LEU
1	U	689	ILE
1	U	775	LEU
1	U	913	ILE
2	V	163	VAL
2	V	169	LEU
2	V	170	LEU
2	V	171	VAL
2	V	194	LYS
2	V	222	ASP
2	V	223	LYS
2	V	334	VAL
2	V	345	ARG
2	V	442	ILE
2	V	496	PHE

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Mol	Chain	Res	Type
3	W	315	MET
3	W	316	ARG
5	Y	121	LEU
5	Y	122	THR
5	Y	233	ARG
5	Y	283	LYS
5	Y	296	VAL
6	Z	91	ILE
6	Z	108	ILE
6	Z	147	ASP
6	Z	223	ASN
6	Z	224	HIS
6	Z	227	ILE
6	Z	236	LEU
6	Z	243	GLN
6	Z	244	GLU
6	Z	245	PHE
6	Z	247	LYS
7	a	125	ILE
7	a	145	LEU
7	a	165	THR
8	b	22	LEU
9	c	154	LYS
9	c	251	LEU
10	d	3	GLU
10	d	5	LEU
10	d	6	LYS
10	d	122	LEU
10	d	171	LEU
10	d	178	ILE
10	d	199	PHE
11	e	51	ASP
12	f	75	LEU
12	f	129	LEU
12	f	217	LEU
12	f	218	GLU
12	f	257	ARG
12	f	258	LYS
12	f	281	ILE
12	f	341	GLU
12	f	344	VAL
12	f	679	LEU

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Mol	Chain	Res	Type
12	f	712	LYS
12	f	755	ASP
12	f	773	LYS
12	f	786	GLN
12	f	787	LEU
12	f	807	ARG
12	f	822	VAL
12	f	837	LEU
12	f	838	ARG
12	f	840	LEU
13	A	72	LEU
13	A	212	VAL
13	A	400	ARG
13	A	401	ARG
13	A	403	ILE
14	B	51	LEU
14	B	65	LEU
14	B	125	THR
14	B	143	LEU
14	B	170	LEU
15	C	88	LYS
15	C	89	VAL
15	C	90	HIS
15	C	109	THR
15	C	127	LEU
15	C	138	MET
15	C	139	MET
15	C	210	THR
15	C	280	LEU
16	D	57	GLN
16	D	83	GLN
16	D	84	SER
16	D	85	ILE
16	D	119	ILE
16	D	125	LYS
16	D	150	SER
16	D	151	ILE
16	D	231	VAL
16	D	353	ASN
16	D	356	GLU
16	D	369	LYS
17	E	115	VAL

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Mol	Chain	Res	Type
17	E	116	ASP
17	E	138	LEU
18	F	217	ILE
19	G	134	LEU
19	G	222	VAL
20	H	86	LEU
21	I	90	LEU
22	J	52	LYS
22	J	53	LEU
22	J	82	ILE
22	J	159	ASN
22	J	200	GLN
22	J	217	LEU
23	K	31	ILE
24	L	161	ILE
29	Q	100	VAL
32	T	100	ARG
19	g	132	ARG
19	g	222	VAL
19	g	224	ASN
20	h	86	LEU
21	i	90	LEU
22	j	82	ILE
22	j	159	ASN
22	j	200	GLN
22	j	201	SER
22	j	217	LEU
23	k	31	ILE
24	l	161	ILE
25	m	215	TRP
29	q	100	VAL
32	t	100	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (208) such sidechains are listed below:

Mol	Chain	Res	Type
1	U	139	GLN
1	U	345	ASN
1	U	355	ASN
1	U	377	HIS
1	U	389	ASN
1	U	415	HIS

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Mol	Chain	Res	Type
1	U	463	ASN
1	U	595	ASN
1	U	647	HIS
1	U	685	GLN
1	U	707	ASN
1	U	768	GLN
1	U	876	GLN
2	V	62	HIS
2	V	118	GLN
2	V	242	HIS
2	V	247	GLN
2	V	387	GLN
2	V	427	GLN
2	V	452	ASN
2	V	459	GLN
2	V	488	ASN
3	W	203	GLN
3	W	236	HIS
3	W	362	ASN
3	W	399	ASN
3	W	422	ASN
3	W	430	GLN
4	X	329	ASN
4	X	416	ASN
5	Y	367	GLN
5	Y	381	GLN
6	Z	72	HIS
6	Z	109	ASN
6	Z	223	ASN
6	Z	225	GLN
6	Z	254	ASN
7	a	9	GLN
7	a	12	GLN
7	a	18	GLN
7	a	23	HIS
7	a	35	HIS
7	a	164	GLN
7	a	193	GLN
7	a	212	ASN
7	a	231	GLN
7	a	249	GLN
7	a	258	GLN

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Mol	Chain	Res	Type
7	a	267	GLN
7	a	273	GLN
7	a	290	GLN
7	a	337	GLN
7	a	345	GLN
7	a	370	GLN
8	b	142	ASN
9	c	44	HIS
9	c	113	HIS
9	c	128	ASN
9	c	130	GLN
9	c	149	GLN
9	c	164	ASN
9	c	166	ASN
9	c	180	ASN
9	c	197	ASN
9	c	232	GLN
9	c	241	ASN
9	c	254	ASN
9	c	278	GLN
9	c	298	GLN
10	d	15	ASN
10	d	116	HIS
10	d	135	HIS
10	d	229	GLN
12	f	43	GLN
12	f	112	ASN
12	f	213	GLN
12	f	238	ASN
12	f	291	GLN
12	f	378	ASN
12	f	382	ASN
12	f	452	ASN
12	f	457	ASN
12	f	531	ASN
12	f	565	ASN
12	f	614	HIS
12	f	619	HIS
12	f	715	HIS
12	f	737	ASN
12	f	738	ASN
12	f	747	GLN

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Mol	Chain	Res	Type
12	f	766	GLN
12	f	782	HIS
12	f	786	GLN
12	f	808	ASN
12	f	848	GLN
12	f	855	GLN
12	f	866	GLN
13	A	54	GLN
13	A	60	ASN
13	A	94	GLN
13	A	247	GLN
13	A	293	ASN
13	A	304	ASN
13	A	353	HIS
14	B	81	ASN
14	B	82	GLN
14	B	241	ASN
15	C	36	ASN
15	C	48	GLN
15	C	53	ASN
15	C	64	GLN
15	C	67	GLN
15	C	90	HIS
15	C	171	HIS
15	C	221	GLN
16	D	49	GLN
16	D	67	ASN
16	D	98	GLN
16	D	133	HIS
16	D	173	GLN
16	D	257	ASN
16	D	340	GLN
16	D	353	ASN
16	D	380	GLN
16	D	412	GLN
17	E	155	ASN
17	E	160	GLN
18	F	83	ASN
18	F	184	GLN
18	F	316	GLN
19	G	12	HIS
19	G	33	ASN

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Mol	Chain	Res	Type
19	G	128	ASN
21	I	53	HIS
21	I	146	GLN
21	I	167	ASN
22	J	54	GLN
22	J	85	ASN
22	J	116	GLN
22	J	159	ASN
23	K	23	GLN
23	K	97	GLN
23	K	98	ASN
23	K	99	HIS
23	K	214	ASN
23	K	224	GLN
24	L	90	GLN
24	L	146	GLN
25	M	101	ASN
25	M	221	ASN
26	N	28	ASN
26	N	154	GLN
26	N	158	ASN
27	O	62	ASN
27	O	66	HIS
29	Q	8	GLN
29	Q	32	HIS
29	Q	61	GLN
29	Q	63	ASN
29	Q	71	ASN
29	Q	82	ASN
30	R	29	GLN
30	R	38	ASN
30	R	70	ASN
31	S	131	GLN
31	S	151	ASN
32	T	2	GLN
32	T	61	GLN
32	T	69	GLN
32	T	157	GLN
19	g	12	HIS
19	g	33	ASN
20	h	88	HIS
21	i	53	HIS

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Mol	Chain	Res	Type
21	i	146	GLN
21	i	167	ASN
22	j	85	ASN
22	j	159	ASN
22	j	205	ASN
23	k	23	GLN
23	k	98	ASN
23	k	99	HIS
23	k	118	ASN
23	k	214	ASN
23	k	224	GLN
24	l	90	GLN
24	l	146	GLN
25	m	101	ASN
25	m	221	ASN
26	n	28	ASN
26	n	154	GLN
27	o	62	ASN
27	o	66	HIS
27	o	91	GLN
27	o	193	ASN
29	q	8	GLN
29	q	27	GLN
29	q	32	HIS
29	q	61	GLN
29	q	63	ASN
29	q	71	ASN
30	r	29	GLN
30	r	38	ASN
32	t	2	GLN
32	t	61	GLN
32	t	65	GLN
32	t	69	GLN
32	t	81	HIS

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

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 12 ligands modelled in this entry, 6 are monoatomic - leaving 6 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	E	401	35	26,33,33	0.95	1 (3%)	31,52,52	1.81	6 (19%)
34	ATP	A	501	35	26,33,33	1.00	1 (3%)	31,52,52	1.75	5 (16%)
36	ADP	C	501	-	24,29,29	0.95	1 (4%)	29,45,45	1.61	6 (20%)
34	ATP	B	501	35	26,33,33	0.95	1 (3%)	31,52,52	1.88	7 (22%)
34	ATP	D	501	35	26,33,33	0.92	1 (3%)	31,52,52	1.82	7 (22%)
36	ADP	F	501	35	24,29,29	0.94	1 (4%)	29,45,45	1.64	5 (17%)

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	E	401	35	-	5/18/38/38	0/3/3/3
34	ATP	A	501	35	-	0/18/38/38	0/3/3/3
36	ADP	C	501	-	-	3/12/32/32	0/3/3/3
34	ATP	B	501	35	-	2/18/38/38	0/3/3/3
34	ATP	D	501	35	-	3/18/38/38	0/3/3/3
36	ADP	F	501	35	-	4/12/32/32	0/3/3/3

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	E	401	ATP	C5-C4	2.34	1.47	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	C	501	ADP	C5-C4	2.30	1.47	1.40
34	A	501	ATP	C5-C4	2.18	1.46	1.40
34	D	501	ATP	C5-C4	2.15	1.46	1.40
34	B	501	ATP	C5-C4	2.12	1.46	1.40
36	F	501	ADP	C5-C4	2.09	1.46	1.40

All (36) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	B	501	ATP	PA-O3A-PB	-5.58	113.67	132.83
34	D	501	ATP	PA-O3A-PB	-4.92	115.93	132.83
34	A	501	ATP	PB-O3B-PG	-4.73	116.58	132.83
34	E	401	ATP	PA-O3A-PB	-4.72	116.64	132.83
34	D	501	ATP	PB-O3B-PG	-4.70	116.71	132.83
34	E	401	ATP	PB-O3B-PG	-4.46	117.51	132.83
36	F	501	ADP	PA-O3A-PB	-4.46	117.54	132.83
34	A	501	ATP	PA-O3A-PB	-4.40	117.73	132.83
36	C	501	ADP	PA-O3A-PB	-4.16	118.56	132.83
34	B	501	ATP	C3'-C2'-C1'	3.94	106.92	100.98
34	B	501	ATP	PB-O3B-PG	-3.92	119.39	132.83
36	C	501	ADP	C3'-C2'-C1'	3.83	106.75	100.98
34	E	401	ATP	C3'-C2'-C1'	3.73	106.60	100.98
34	B	501	ATP	N3-C2-N1	-3.63	123.00	128.68
34	D	501	ATP	N3-C2-N1	-3.30	123.52	128.68
36	F	501	ADP	N3-C2-N1	-3.19	123.69	128.68
34	E	401	ATP	N3-C2-N1	-3.15	123.75	128.68
34	A	501	ATP	C4-C5-N7	-3.14	106.13	109.40
34	A	501	ATP	C3'-C2'-C1'	3.06	105.59	100.98
36	C	501	ADP	N3-C2-N1	-2.93	124.11	128.68
34	A	501	ATP	N3-C2-N1	-2.85	124.23	128.68
34	E	401	ATP	C4-C5-N7	-2.73	106.56	109.40
36	C	501	ADP	C4-C5-N7	-2.67	106.61	109.40
36	F	501	ADP	C3'-C2'-C1'	2.64	104.96	100.98
34	D	501	ATP	C3'-C2'-C1'	2.64	104.95	100.98
34	D	501	ATP	O2B-PB-O1B	2.29	123.55	112.24
36	C	501	ADP	C5'-C4'-C3'	-2.26	106.71	115.18
34	B	501	ATP	C2-N1-C6	2.24	122.59	118.75
34	B	501	ATP	C4-C5-N7	-2.22	107.08	109.40
34	B	501	ATP	O2B-PB-O1B	2.21	123.15	112.24
36	C	501	ADP	O3B-PB-O2B	2.17	115.94	107.64
34	D	501	ATP	O2A-PA-O1A	2.15	122.86	112.24
36	F	501	ADP	C4-C5-N7	-2.14	107.17	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	D	501	ATP	C2'-C3'-C4'	2.06	106.64	102.64
34	E	401	ATP	O2B-PB-O1B	2.04	122.34	112.24
36	F	501	ADP	O2A-PA-O1A	2.02	122.20	112.24

There are no chirality outliers.

All (17) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
34	D	501	ATP	C5'-O5'-PA-O3A
34	E	401	ATP	C5'-O5'-PA-O2A
34	E	401	ATP	C5'-O5'-PA-O3A
34	E	401	ATP	O4'-C4'-C5'-O5'
36	C	501	ADP	C5'-O5'-PA-O1A
36	C	501	ADP	C5'-O5'-PA-O2A
36	F	501	ADP	PA-O3A-PB-O2B
34	D	501	ATP	O4'-C4'-C5'-O5'
34	E	401	ATP	C3'-C4'-C5'-O5'
36	F	501	ADP	O4'-C4'-C5'-O5'
36	F	501	ADP	C3'-C4'-C5'-O5'
34	D	501	ATP	C5'-O5'-PA-O1A
34	B	501	ATP	O4'-C4'-C5'-O5'
34	B	501	ATP	C3'-C4'-C5'-O5'
34	E	401	ATP	PB-O3B-PG-O1G
36	F	501	ADP	C4'-C5'-O5'-PA
36	C	501	ADP	C5'-O5'-PA-O3A

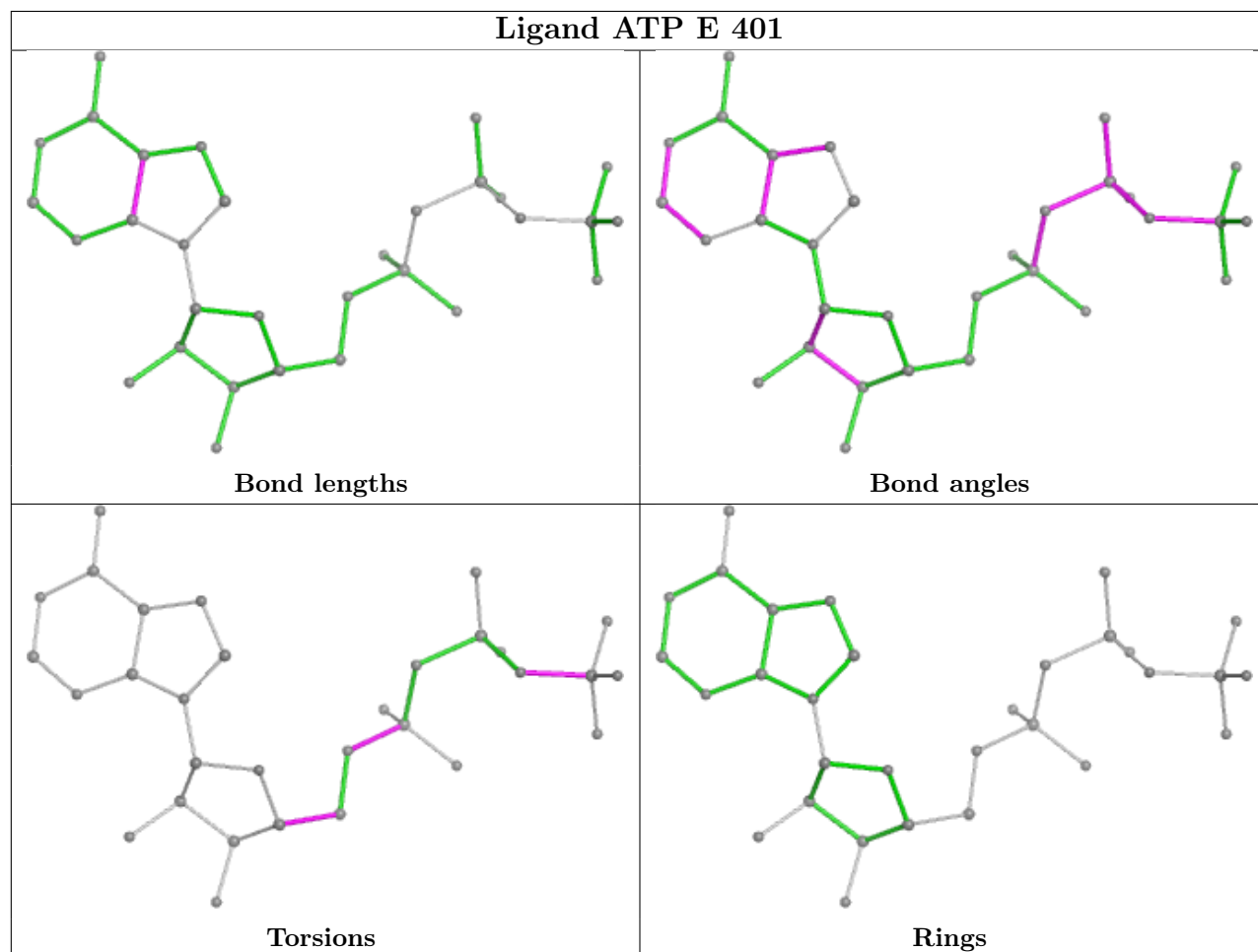
There are no ring outliers.

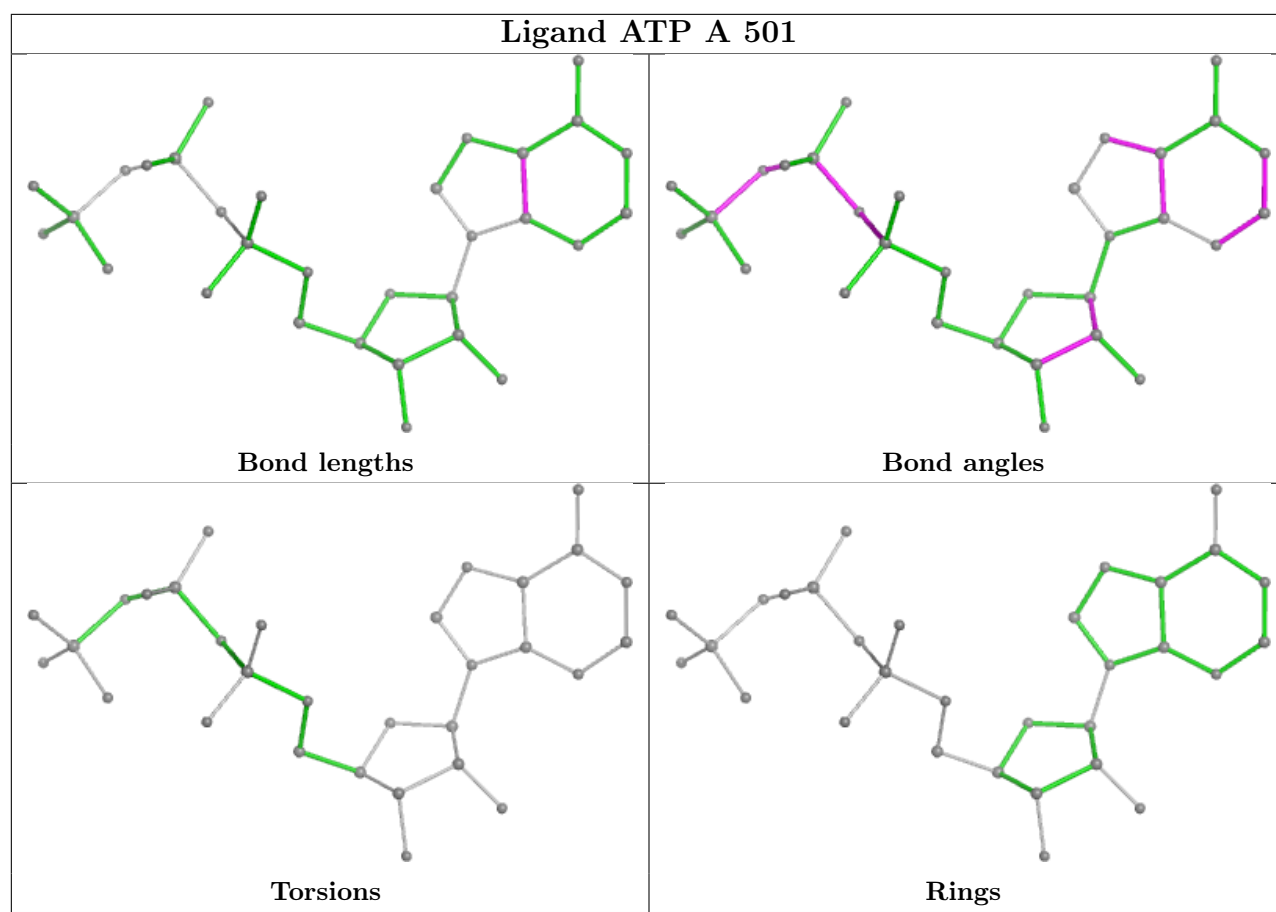
6 monomers are involved in 17 short contacts:

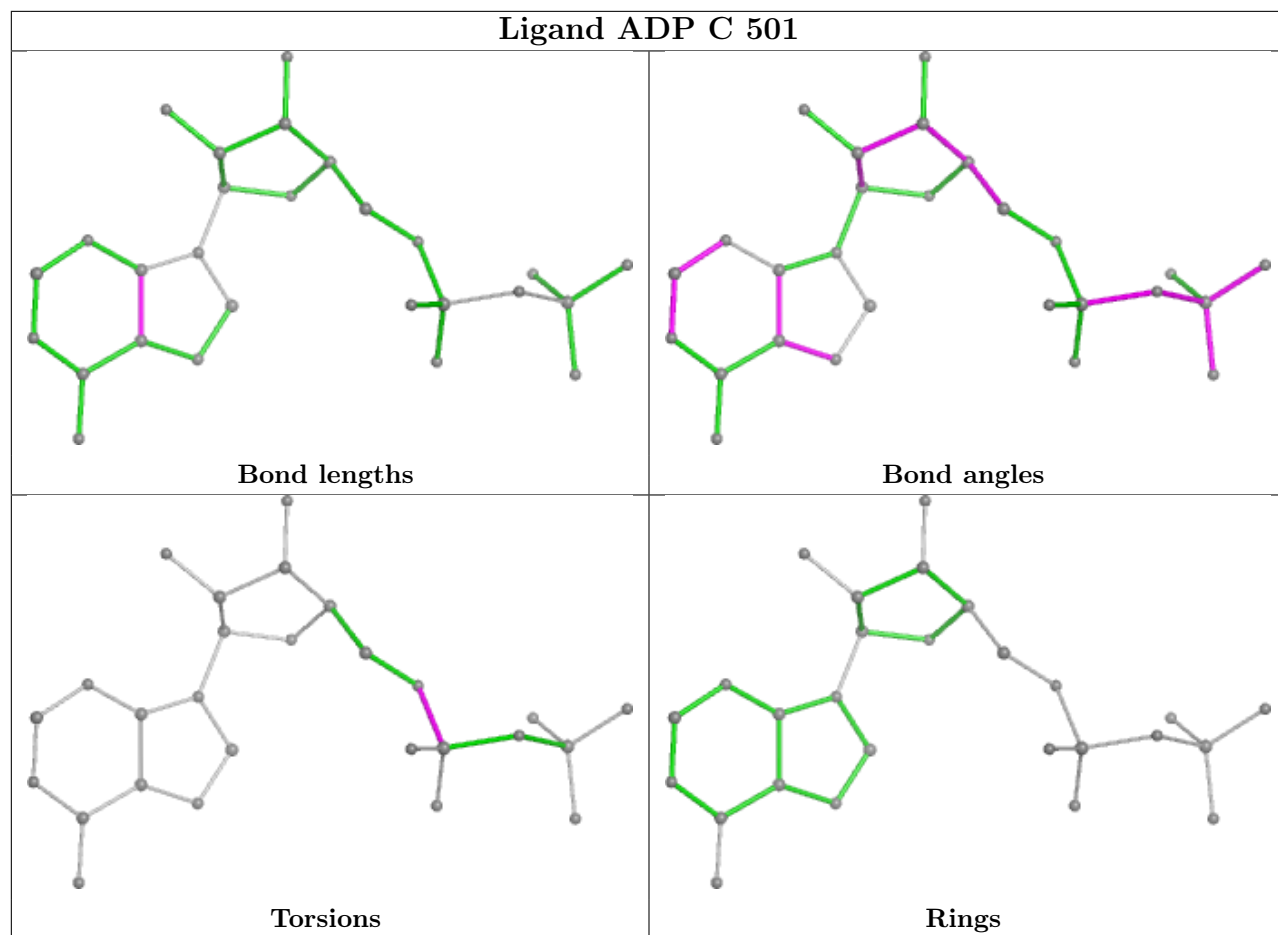
Mol	Chain	Res	Type	Clashes	Symm-Clashes
34	E	401	ATP	4	0
34	A	501	ATP	2	0
36	C	501	ADP	1	0
34	B	501	ATP	3	0
34	D	501	ATP	5	0
36	F	501	ADP	2	0

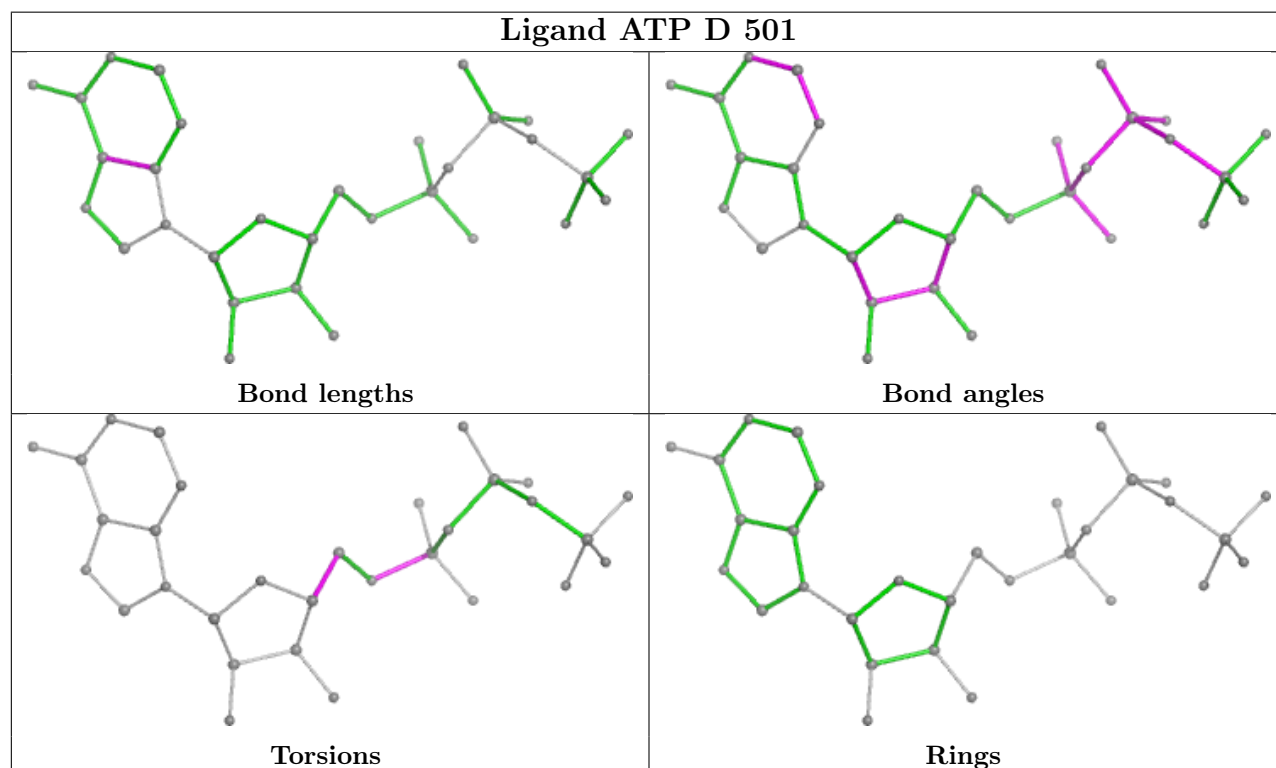
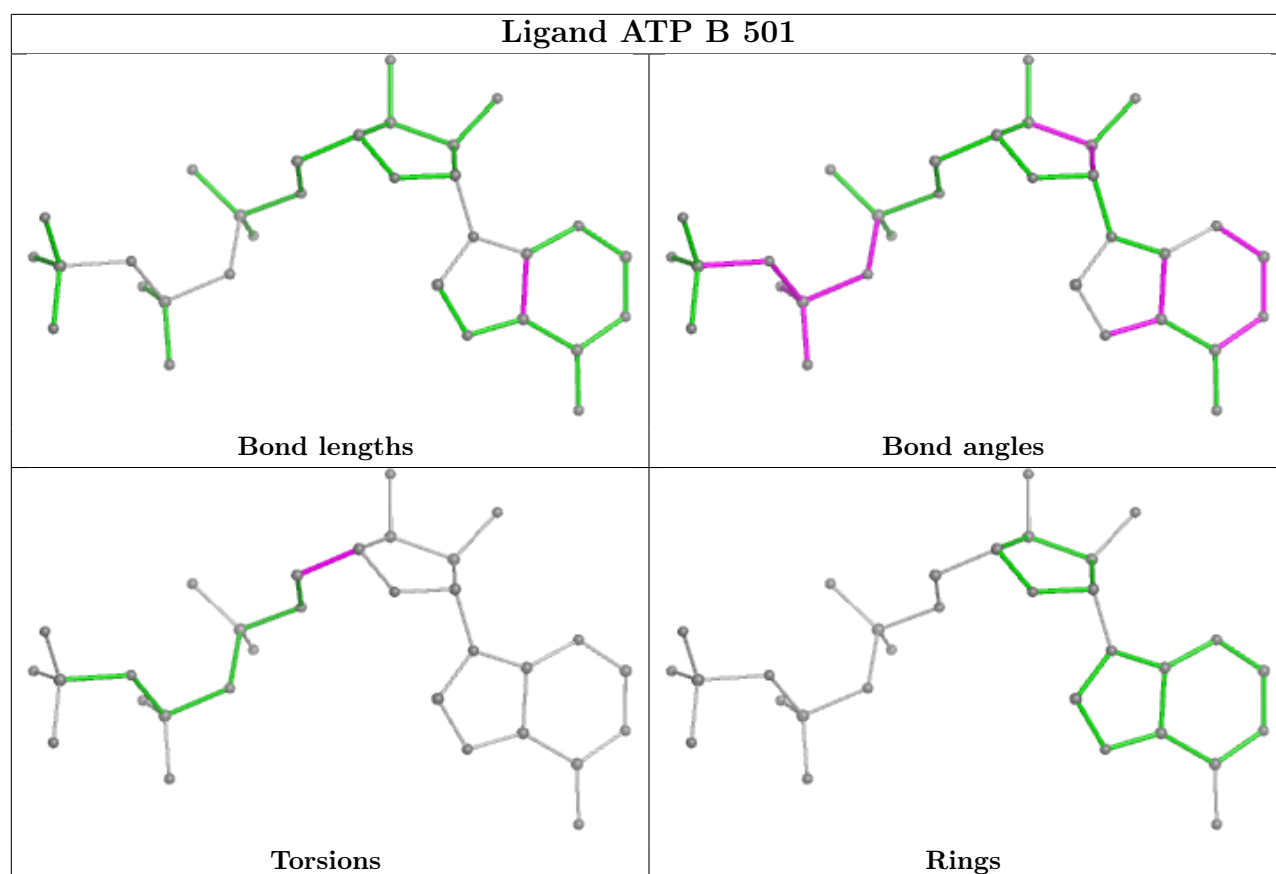
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 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.

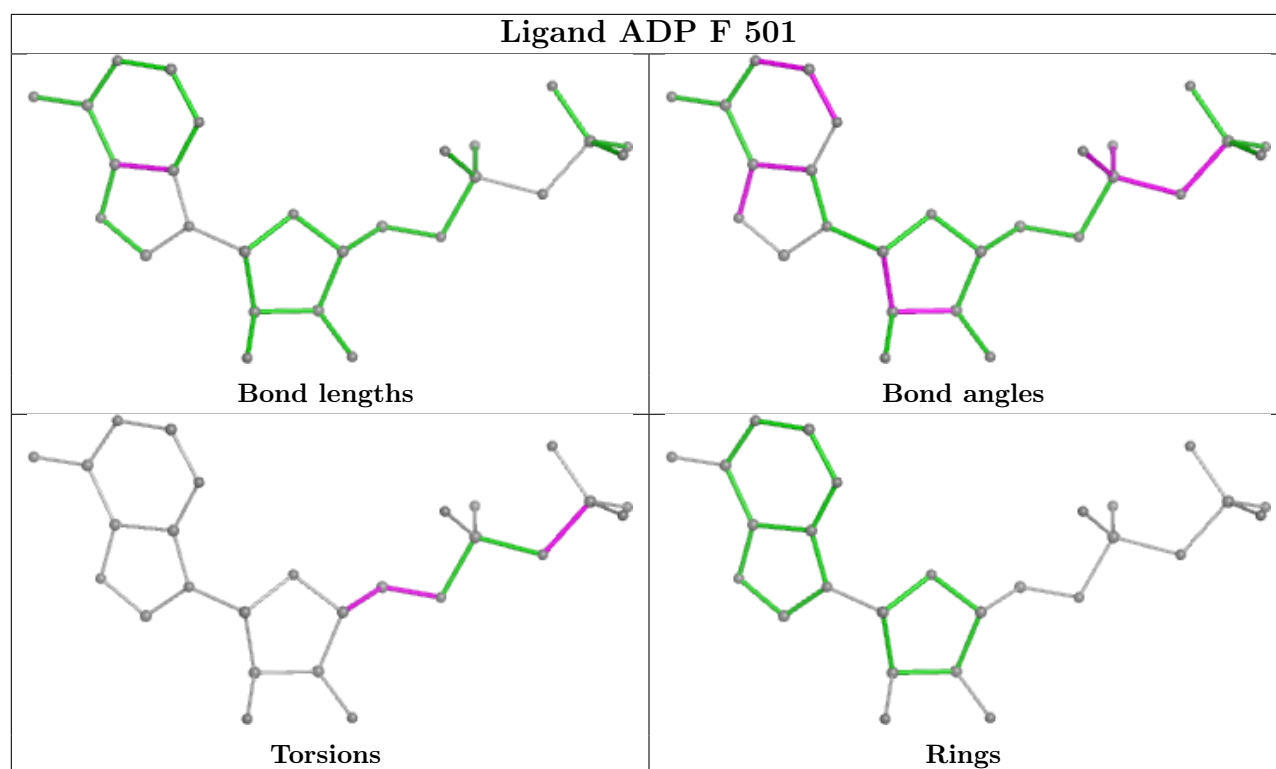
Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD 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.











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.

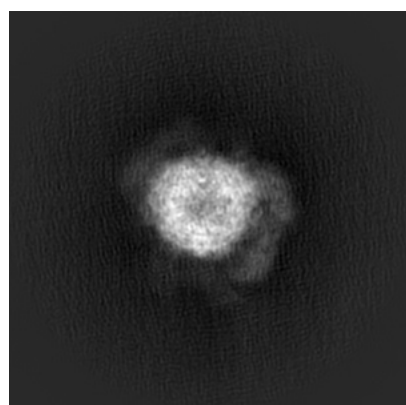
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-14205. These allow visual inspection of the internal detail of the map and identification of artifacts.

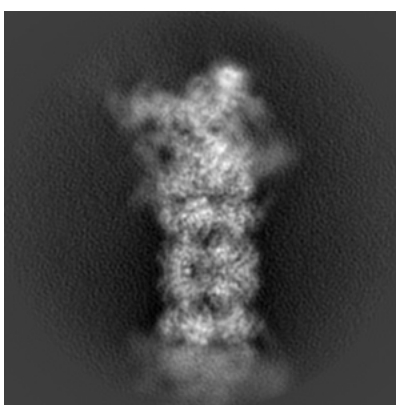
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

6.1.1 Primary map



X



Y

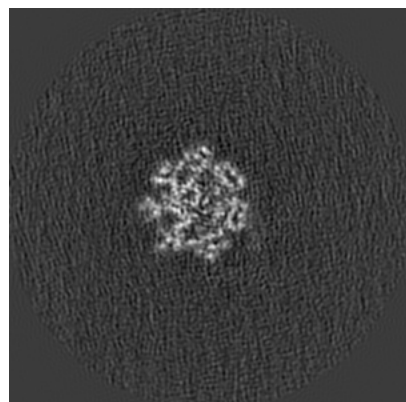


Z

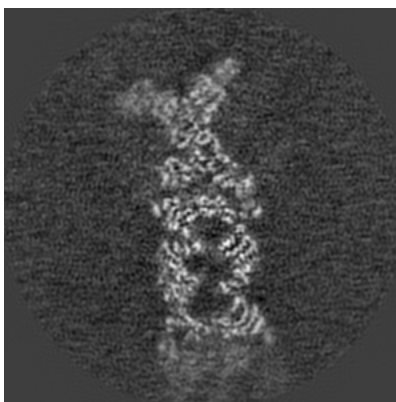
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

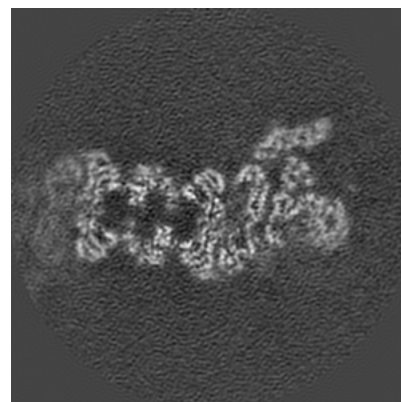
6.2.1 Primary map



X Index: 160



Y Index: 160

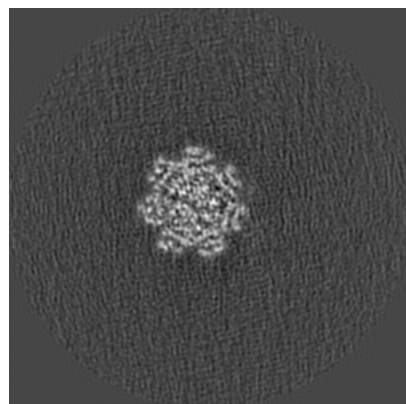


Z Index: 160

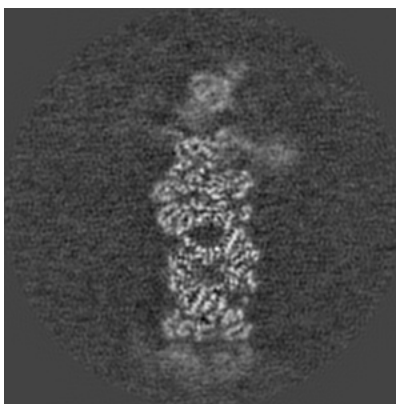
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

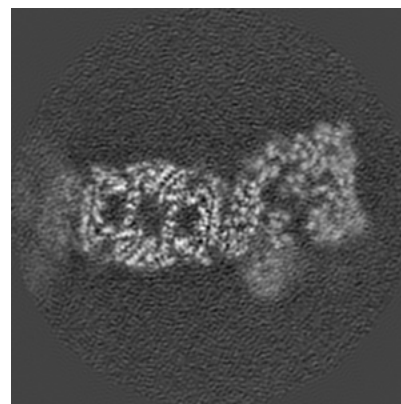
6.3.1 Primary map



X Index: 154



Y Index: 136

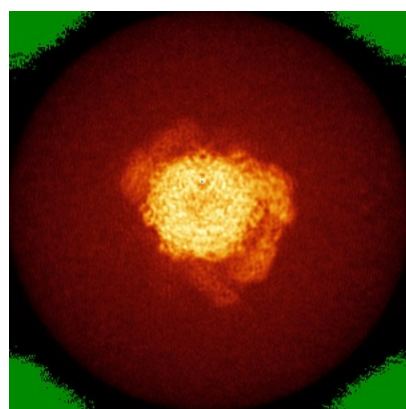


Z Index: 176

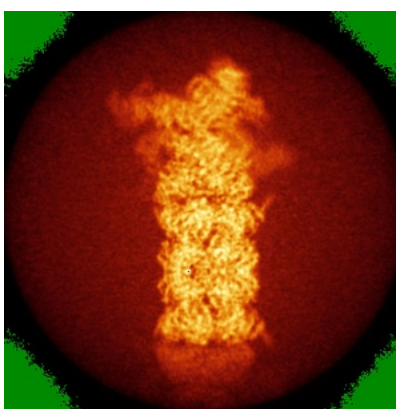
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

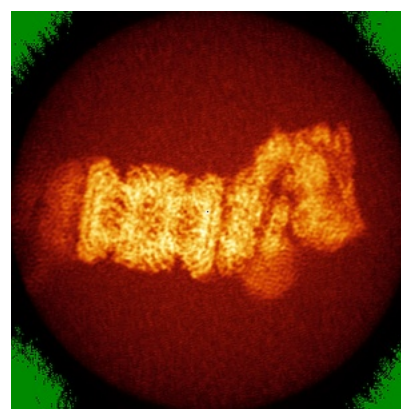
6.4.1 Primary map



X



Y

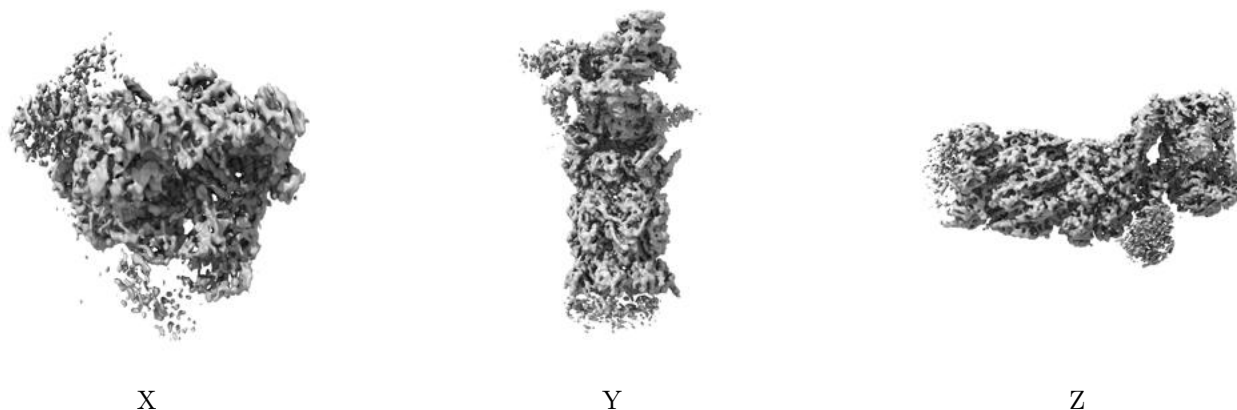


Z

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



The images above show the 3D surface view of the map at the recommended contour level 0.0324. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

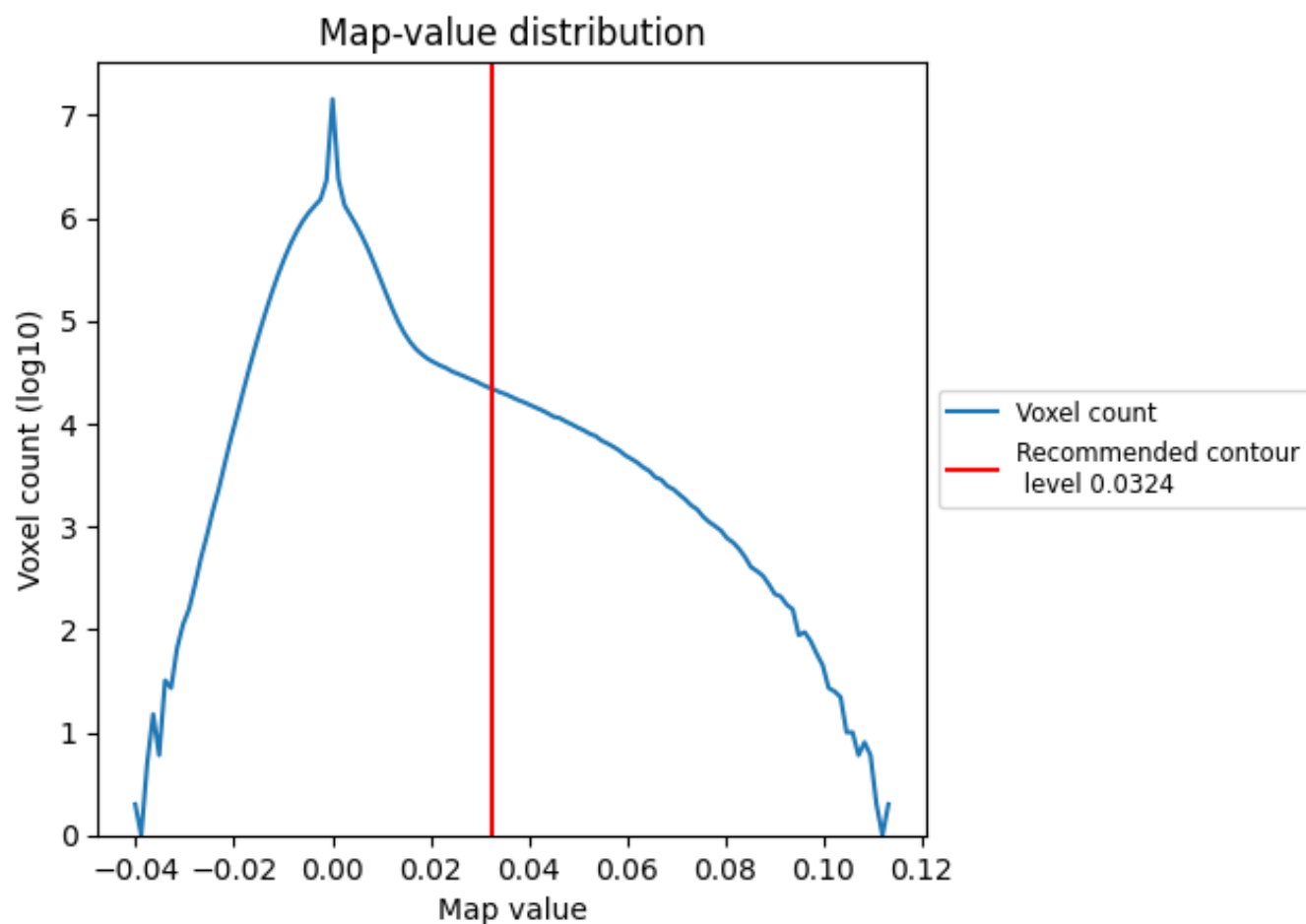
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

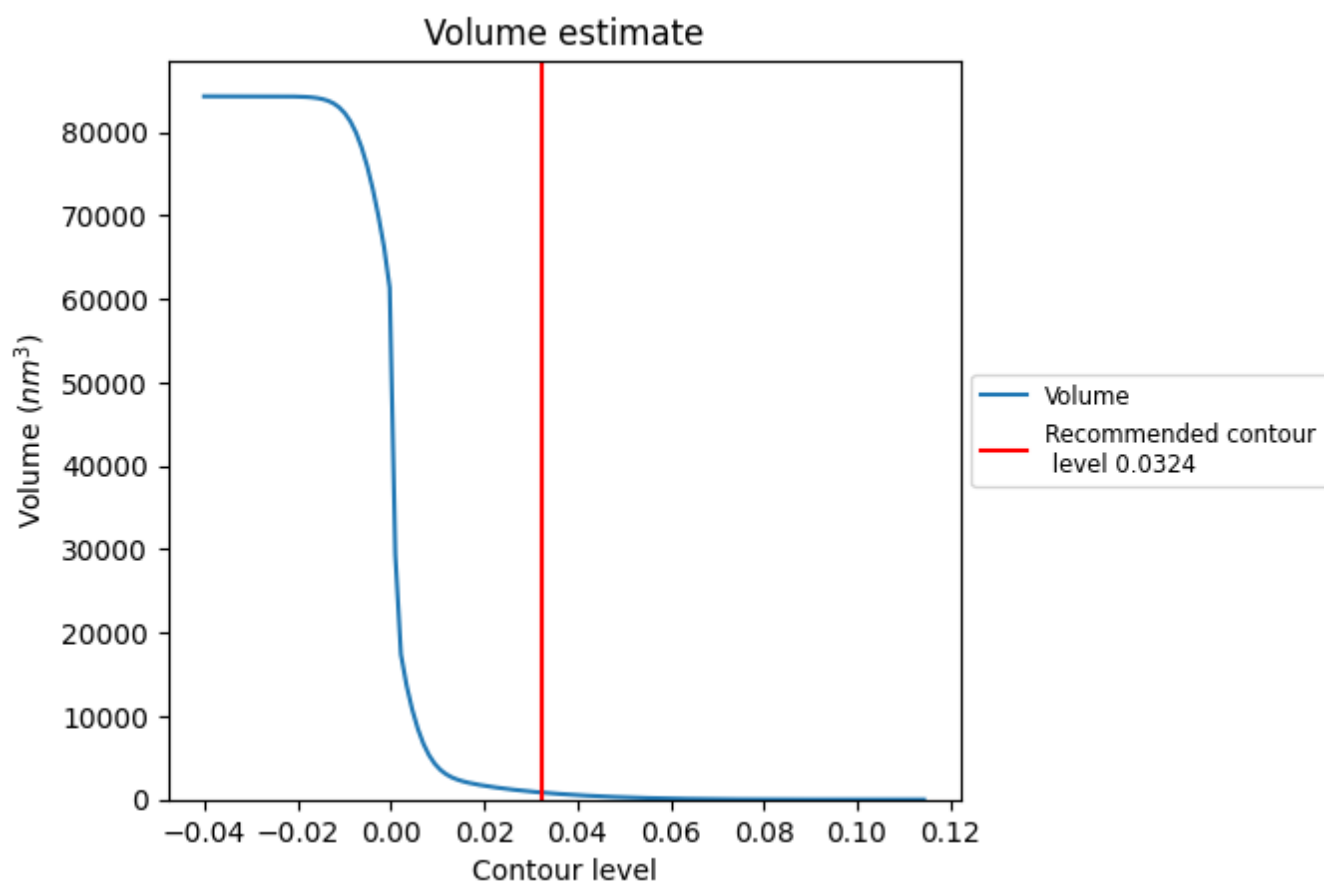
This section contains the results of statistical analysis of the map.

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.

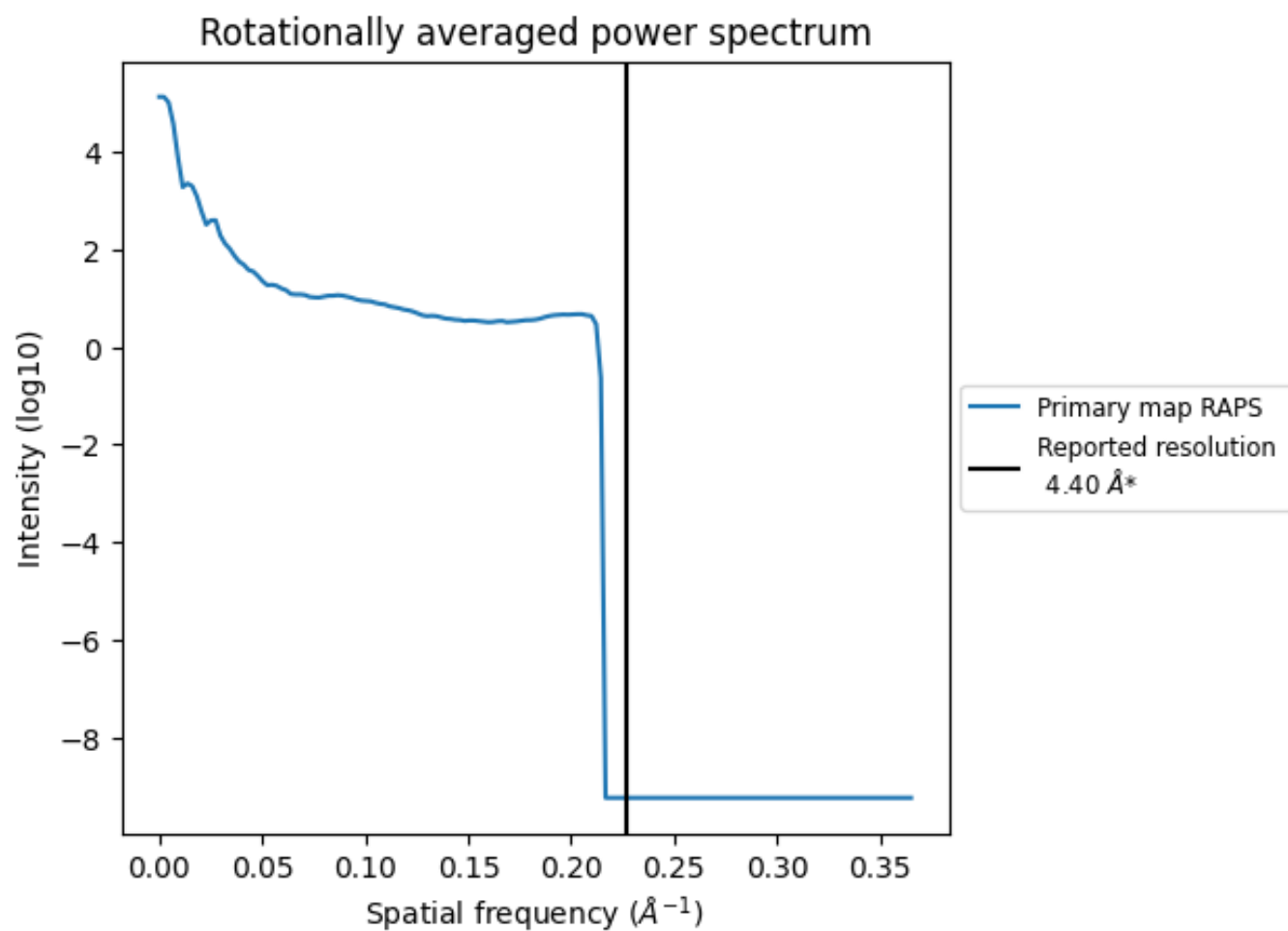
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 841 nm³; this corresponds to an approximate mass of 760 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 ⓘ



*Reported resolution corresponds to spatial frequency of 0.227 Å⁻¹

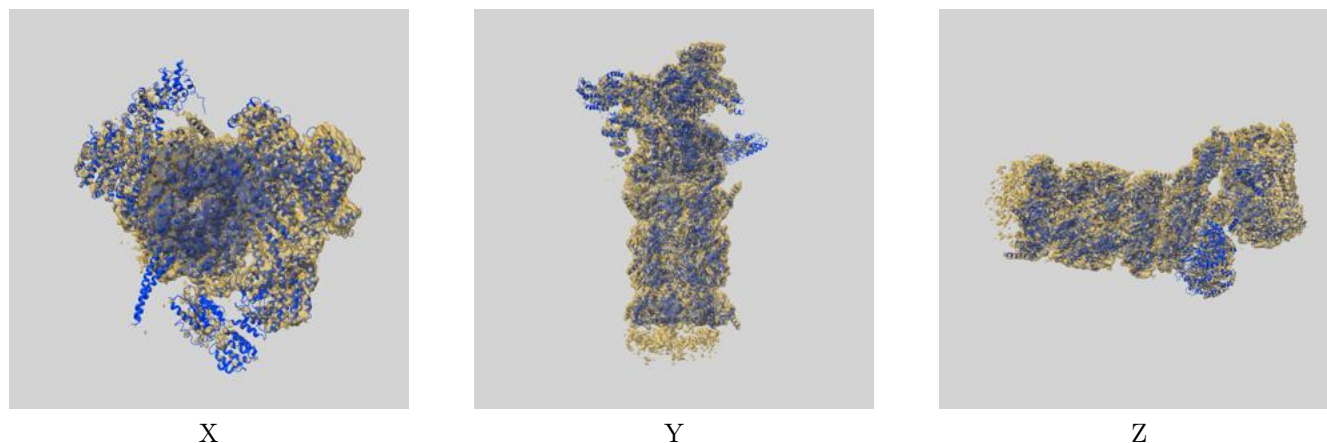
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

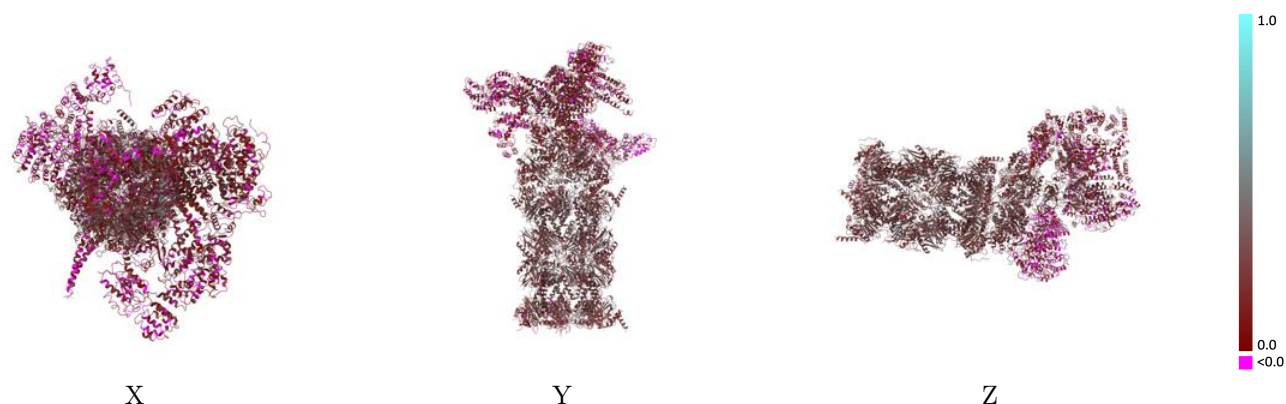
This section contains information regarding the fit between EMDB map EMD-14205 and PDB model 7QXX. Per-residue inclusion information can be found in section [3](#) on page [13](#).

9.1 Map-model overlay [i](#)



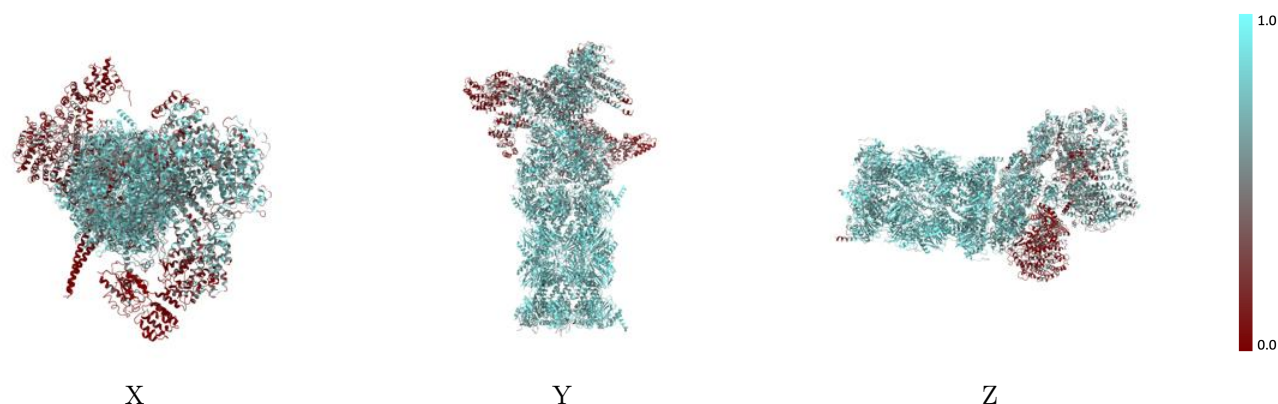
The images above show the 3D surface view of the map at the recommended contour level 0.0324 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



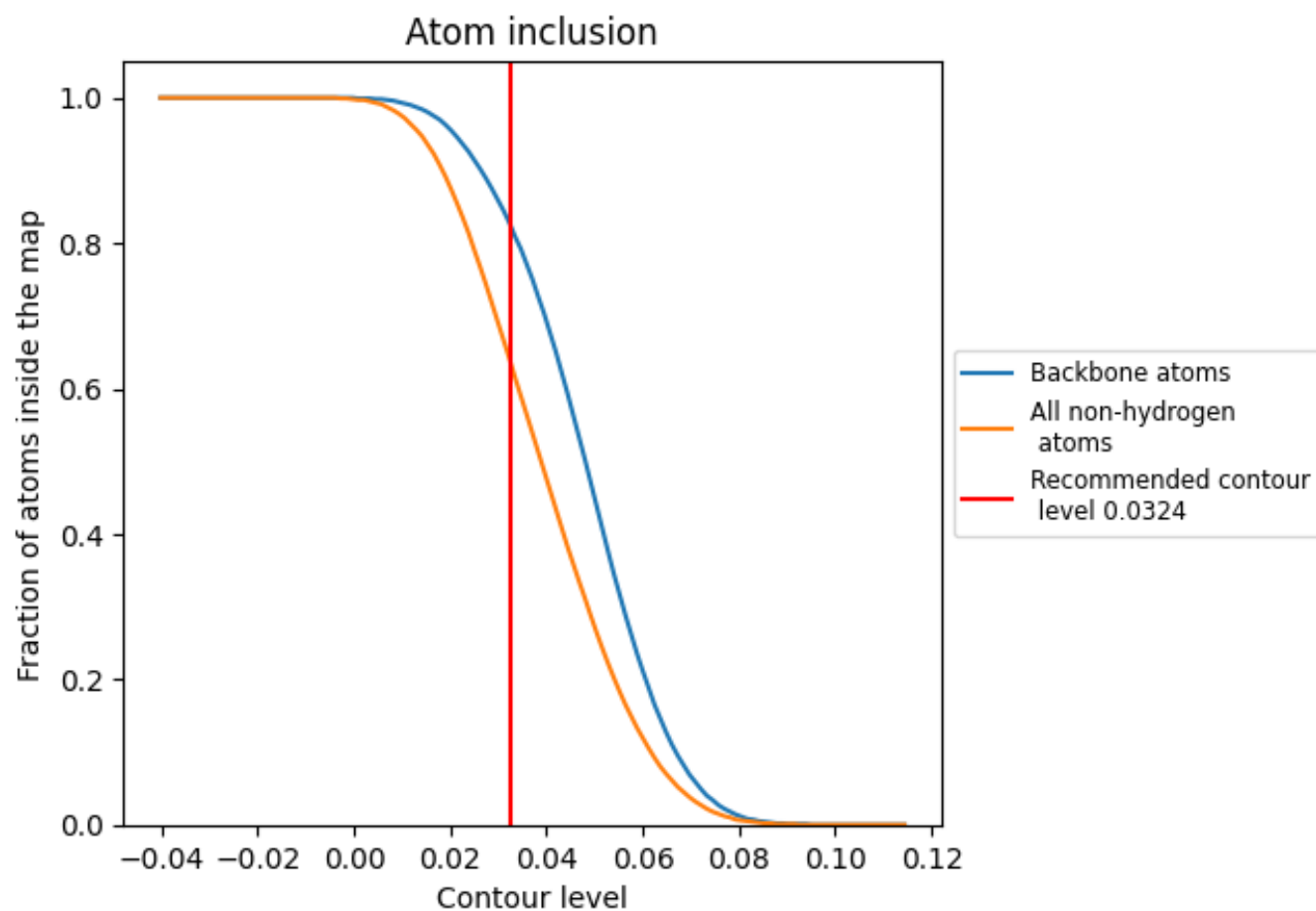
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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](#)



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 (0.0324).

9.4 Atom inclusion [i](#)



At the recommended contour level, 83% of all backbone atoms, 64% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.0324) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6400	 0.2330
A	 0.6820	 0.2560
B	 0.6580	 0.2460
C	 0.7190	 0.2610
D	 0.7020	 0.2520
E	 0.6690	 0.2520
F	 0.6680	 0.2560
G	 0.7730	 0.2900
H	 0.7890	 0.2980
I	 0.7660	 0.2880
J	 0.8040	 0.2900
K	 0.7810	 0.2900
L	 0.8000	 0.2970
M	 0.7640	 0.2770
N	 0.8240	 0.3070
O	 0.8020	 0.2970
P	 0.8070	 0.3120
Q	 0.8140	 0.3010
R	 0.8330	 0.3090
S	 0.8370	 0.3190
T	 0.8100	 0.3080
U	 0.6060	 0.1620
V	 0.5090	 0.1520
W	 0.3510	 0.1300
X	 0.5550	 0.1530
Y	 0.6720	 0.1850
Z	 0.5070	 0.1850
a	 0.2550	 0.1150
b	 0.1030	 0.1040
c	 0.6170	 0.2160
d	 0.5590	 0.1510
e	 0.4000	 0.1080
f	 0.1440	 0.0970
g	 0.7160	 0.2660
h	 0.7300	 0.2880



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Chain	Atom inclusion	Q-score
i	 0.6950	 0.2660
j	 0.7500	 0.2710
k	 0.7160	 0.2690
l	 0.7410	 0.2690
m	 0.6990	 0.2560
n	 0.7910	 0.2810
o	 0.7970	 0.3020
p	 0.7960	 0.3010
q	 0.7990	 0.3020
r	 0.8430	 0.3070
s	 0.7940	 0.3020
t	 0.7970	 0.2880