



Full wwPDB EM Validation Report ⓘ

Nov 2, 2024 – 04:45 PM EDT

PDB ID : 6CNC
EMDB ID : EMD-7531
Title : Yeast RNA polymerase III open complex
Authors : Han, Y.; He, Y.
Deposited on : 2018-03-08
Resolution : 4.10 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.dev113
MolProbity : 4.02b-467
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) : 2.39

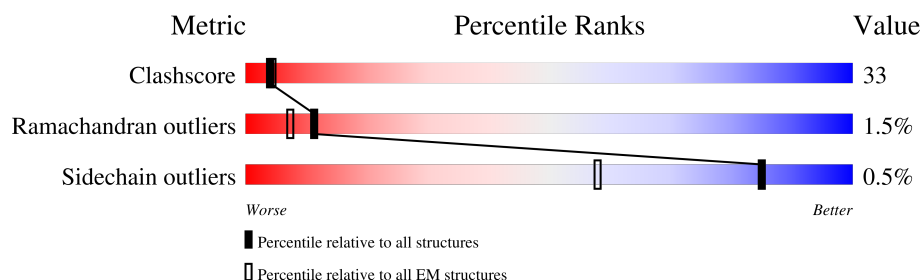
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 4.10 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.





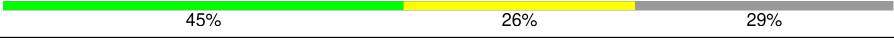
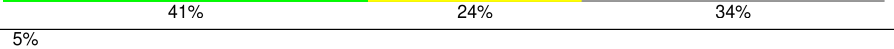
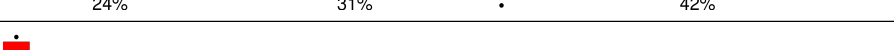
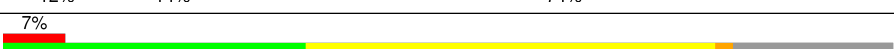
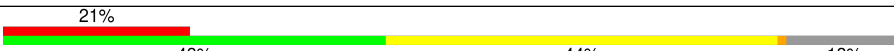

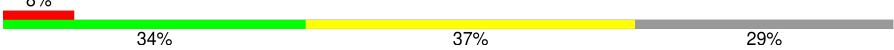

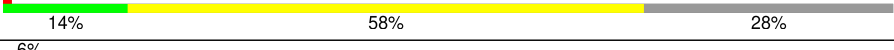
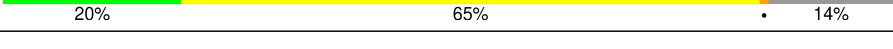

Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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	A	1460	<div> <div>5%</div> <div>47%</div> <div>50%</div> <div>..</div> </div>
2	B	1149	<div> <div>47%</div> <div>49%</div> <div>..</div> </div>
3	C	335	<div> <div>59%</div> <div>40%</div> <div>.</div> </div>
4	D	161	<div> <div>12%</div> <div>40%</div> <div>34%</div> <div>.</div> <div>26%</div> </div>
5	E	215	<div> <div>38%</div> <div>60%</div> <div>.</div> </div>
6	F	155	<div> <div>34%</div> <div>19%</div> <div>.</div> <div>46%</div> </div>
7	G	212	<div> <div>9%</div> <div>34%</div> <div>50%</div> <div>.</div> <div>13%</div> </div>
8	H	146	<div> <div>5%</div> <div>49%</div> <div>47%</div> <div>.</div> </div>

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Mol	Chain	Length	Quality of chain
9	I	110	
10	J	70	
11	K	142	
12	L	70	
13	M	282	
14	N	422	
15	O	654	
16	P	317	
17	Q	251	
18	R	736	
19	S	594	
20	X	71	
21	Y	71	

2 Entry composition

There are 22 unique types of molecules in this entry. The entry contains 47836 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 DNA-directed RNA polymerase III subunit RPC1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	1428	Total	C	N	O	S	0	0
			11159	7029	1972	2099	59		

- Molecule 2 is a protein called DNA-directed RNA polymerase III subunit RPC2.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	1114	Total	C	N	O	S	0	0
			8788	5558	1516	1654	60		

- Molecule 3 is a protein called DNA-directed RNA polymerases I and III subunit RPAC1.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	335	Total	C	N	O	S	0	0
			2655	1681	454	511	9		

- Molecule 4 is a protein called DNA-directed RNA polymerase III subunit RPC9.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	D	119	Total	C	N	O	S	0	0
			977	628	156	187	6		

- Molecule 5 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC1.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	E	215	Total	C	N	O	S	0	0
			1759	1116	310	321	12		

- Molecule 6 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC2.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	F	83	Total	C	N	O	S	0	0
			671	429	114	125	3		

- Molecule 7 is a protein called DNA-directed RNA polymerase III subunit RPC8.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	184	Total	C	N	O	S	0	0
			1484	972	239	267	6		

- Molecule 8 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC3.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	140	Total	C	N	O	S	0	0
			1120	703	188	224	5		

- Molecule 9 is a protein called DNA-directed RNA polymerase III subunit RPC10.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	I	42	Total	C	N	O	S	0	0
			321	204	47	64	6		

- Molecule 10 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC5.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	J	67	Total	C	N	O	S	0	0
			549	350	95	98	6		

- Molecule 11 is a protein called DNA-directed RNA polymerases I and III subunit RPAC2.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	K	101	Total	C	N	O	S	0	0
			792	496	130	161	5		

- Molecule 12 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC4.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	L	46	Total	C	N	O	S	0	0
			363	224	72	63	4		

- Molecule 13 is a protein called DNA-directed RNA polymerase III subunit RPC5.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	M	164	Total	C	N	O	S	0	0
			1338	857	227	253	1		

- Molecule 14 is a protein called DNA-directed RNA polymerase III subunit RPC4.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	N	110	Total	C	N	O	S	0	0
			845	536	152	154	3		

- Molecule 15 is a protein called DNA-directed RNA polymerase III subunit RPC3.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	O	539	Total	C	N	O	S	0	0
			4329	2756	741	813	19		

- Molecule 16 is a protein called DNA-directed RNA polymerase III subunit RPC6.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	P	277	Total	C	N	O	S	0	0
			2242	1438	368	425	11		

- Molecule 17 is a protein called DNA-directed RNA polymerase III subunit RPC7,DNA-directed RNA polymerase III subunit RPC7,DNA-directed RNA polymerase III subunit RPC7,DNA-directed RNA polymerase III subunit RPC7.

Mol	Chain	Residues	Atoms				AltConf	Trace
17	Q	54	Total	C	N	O	0	0
			368	238	64	66		

- Molecule 18 is a protein called Transcription factor IIIB 70 kDa subunit,TATA-box-binding protein,Transcription factor IIIB 70 kDa subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	R	522	Total	C	N	O	S	0	0
			4131	2621	733	757	20		

There are 16 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
R	383	ALA	-	linker	UNP P29056
R	384	MET	-	linker	UNP P29056
R	385	PRO	-	linker	UNP P29056
R	386	TRP	-	linker	UNP P29056
R	567	GLY	-	linker	UNP P13393
R	568	SER	-	linker	UNP P13393
R	569	GLY	-	linker	UNP P13393
R	570	SER	-	linker	UNP P13393
R	571	GLY	-	linker	UNP P13393

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Chain	Residue	Modelled	Actual	Comment	Reference
R	572	SER	-	linker	UNP P13393
R	573	GLY	-	linker	UNP P13393
R	574	SER	-	linker	UNP P13393
R	575	GLY	-	linker	UNP P13393
R	576	SER	-	linker	UNP P13393
R	577	GLY	-	linker	UNP P13393
R	578	SER	CYS	engineered mutation	UNP P29056

- Molecule 19 is a protein called Transcription factor TFIIB component B",Transcription factor TFIIB component B",Transcription factor TFIIB component B",Transcription factor TFIIB component B",Transcription factor TFIIB component B".

Mol	Chain	Residues	Atoms					AltConf	Trace
19	S	217	Total	C	N	O	S	0	0
			1649	1035	286	321	7		

- Molecule 20 is a DNA chain called DNA (71-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
20	X	51	Total	C	N	O	P	0	0
			1040	503	181	306	50		

- Molecule 21 is a DNA chain called DNA (71-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
21	Y	61	Total	C	N	O	P	0	0
			1249	602	223	364	60		

- Molecule 22 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
22	A	2	Total	Zn	0
			2	2	
22	B	1	Total	Zn	0
			1	1	
22	I	1	Total	Zn	0
			1	1	
22	J	1	Total	Zn	0
			1	1	
22	L	1	Total	Zn	0
			1	1	

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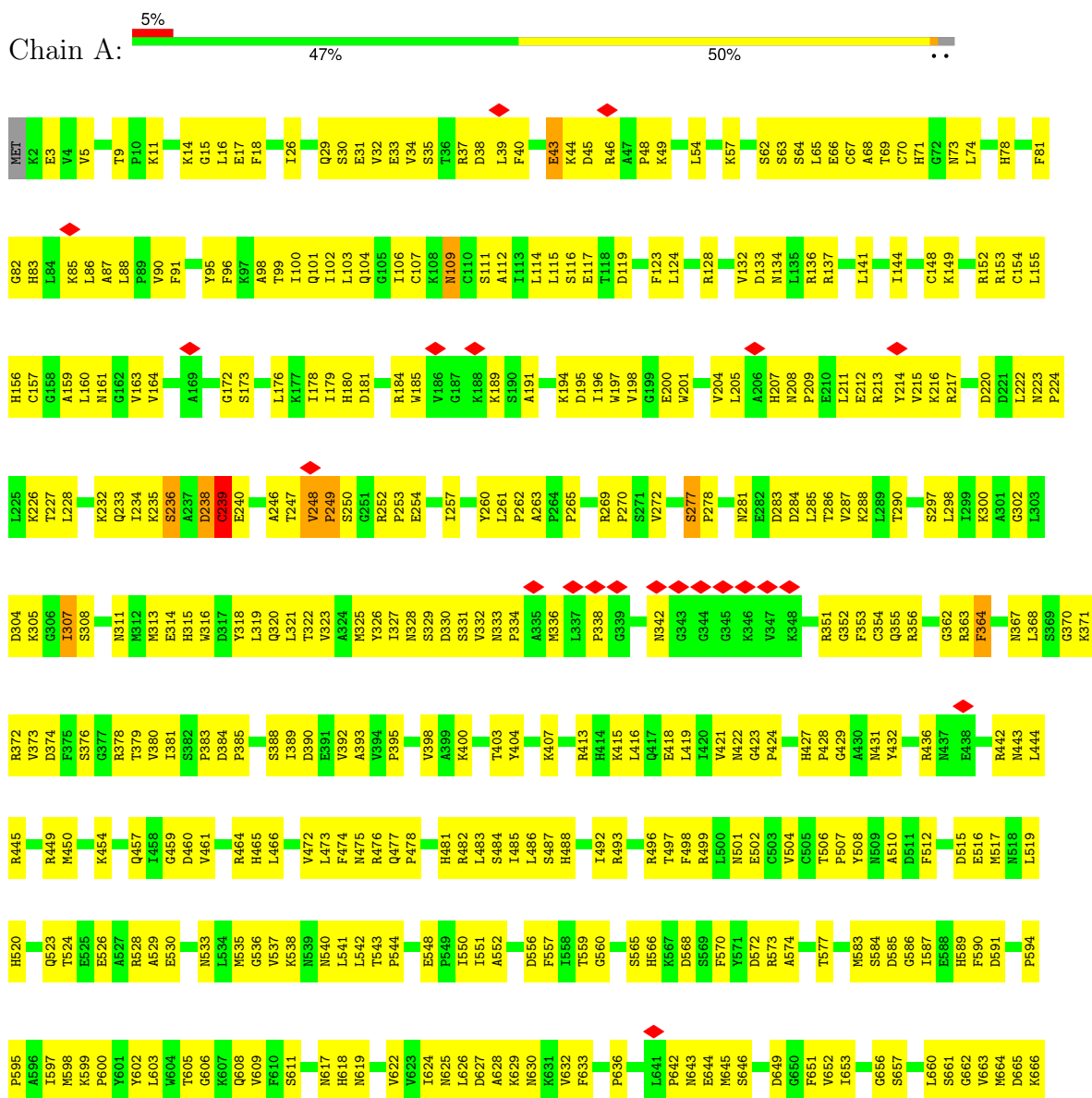
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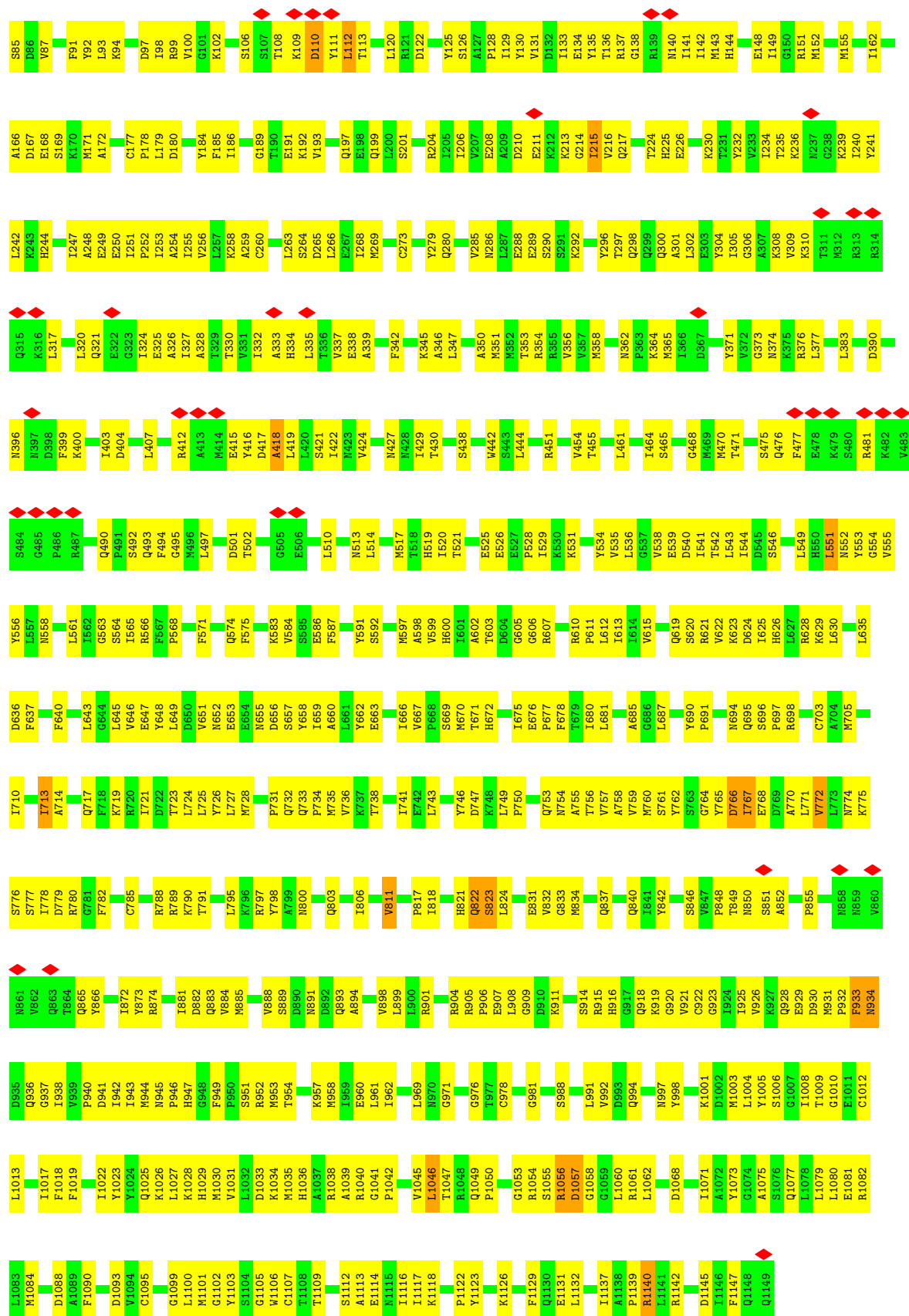
Mol	Chain	Residues	Atoms		AltConf
			Total	Zn	
22	R	1	1	1	0

3 Residue-property plots

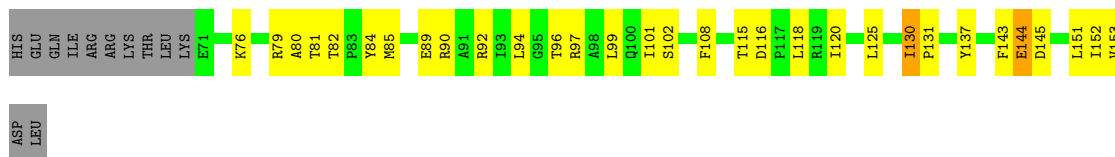
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: DNA-directed RNA polymerase III subunit RPC1

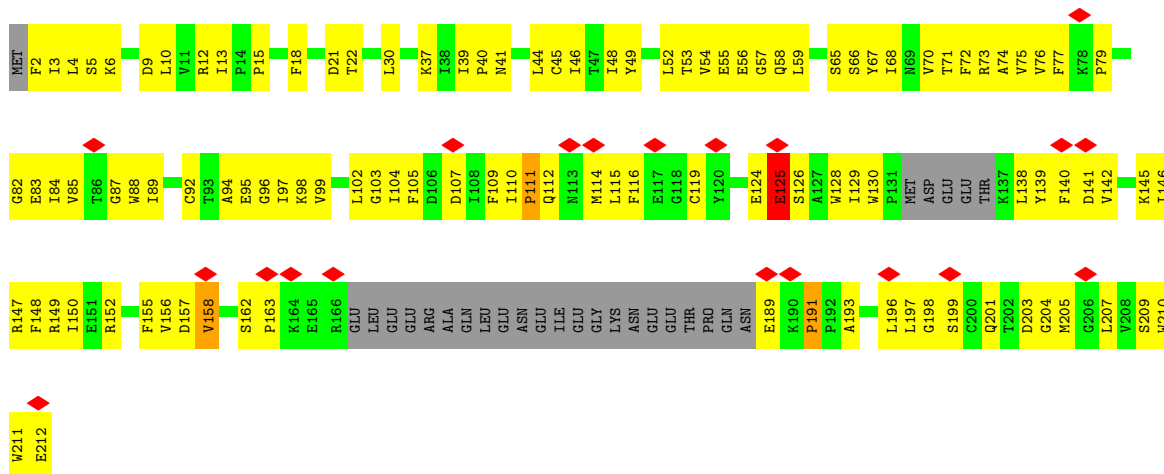
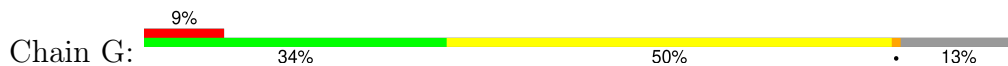




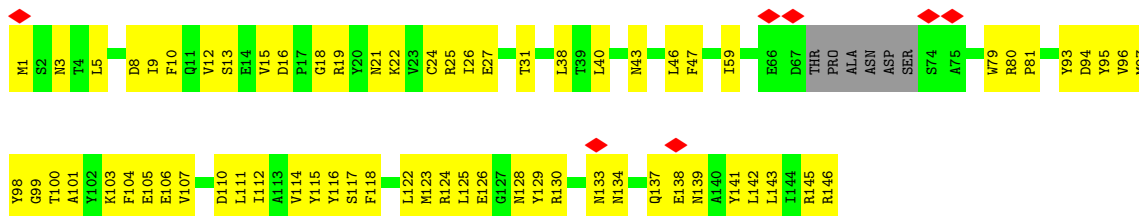
- Molecule 3: DNA-directed RNA polymerases I and III subunit RPAC1



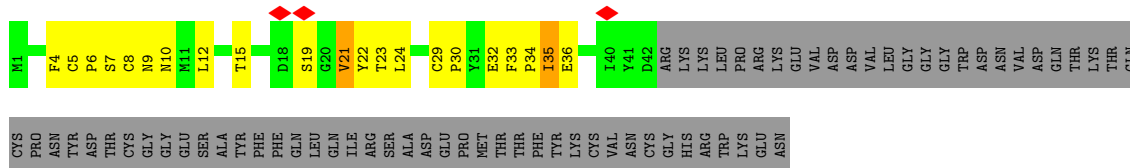
- Molecule 7: DNA-directed RNA polymerase III subunit RPC8



- Molecule 8: DNA-directed RNA polymerases I, II, and III subunit RPABC3

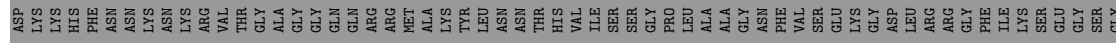


- Molecule 9: DNA-directed RNA polymerase III subunit RPC10

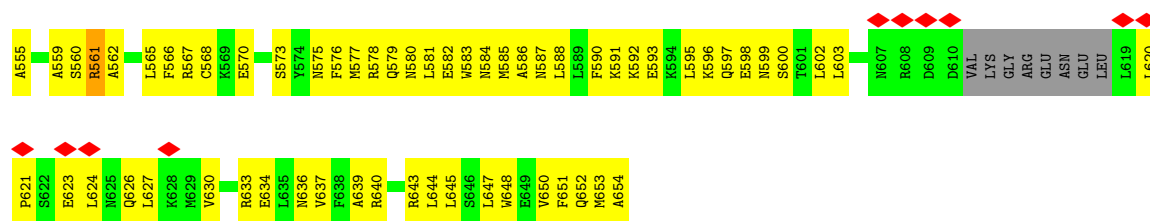


- Molecule 10: DNA-directed RNA polymerases I, II, and III subunit RPABC5

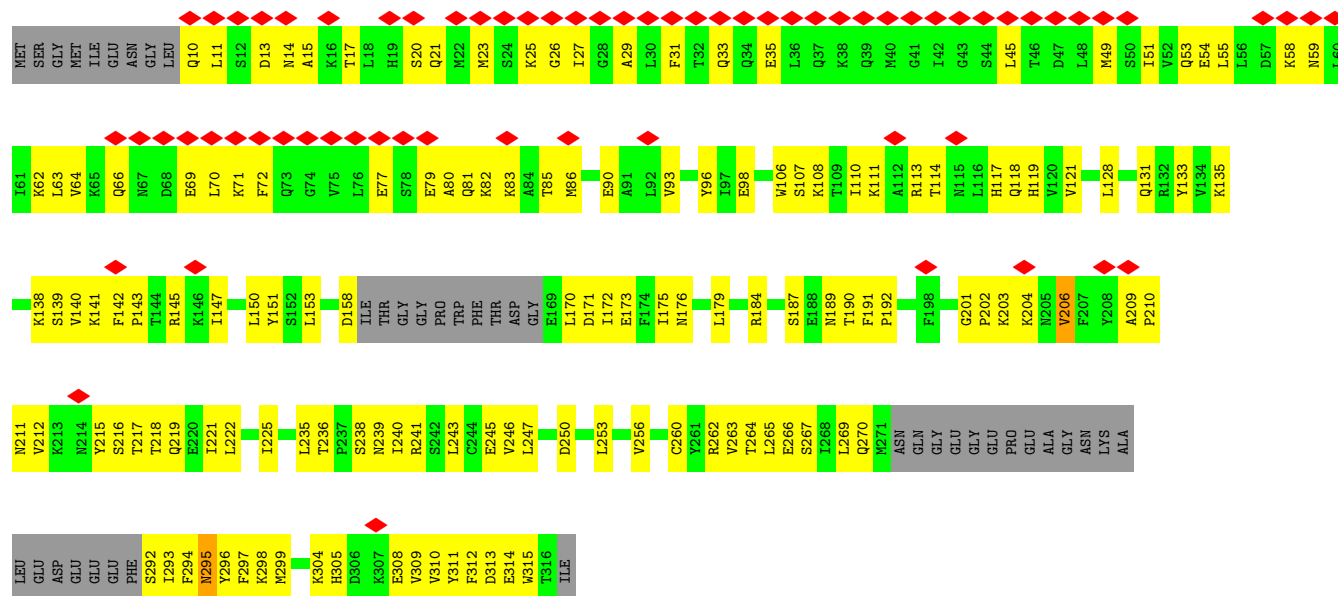
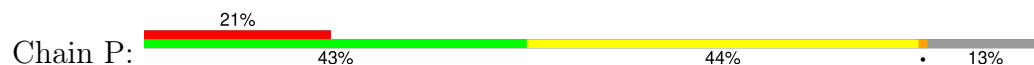




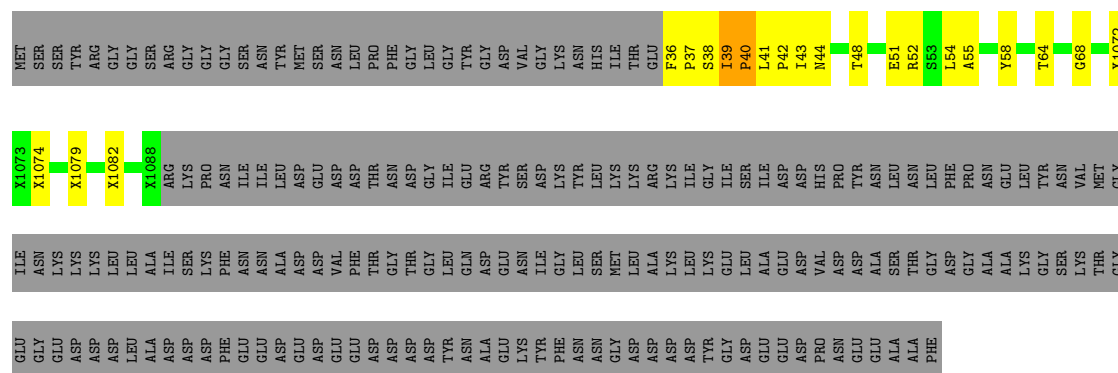




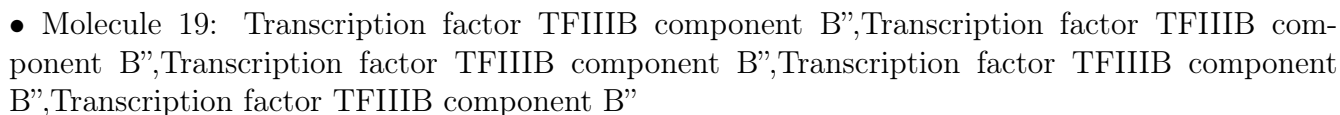
• Molecule 16: DNA-directed RNA polymerase III subunit RPC6



• Molecule 17: DNA-directed RNA polymerase III subunit RPC7, DNA-directed RNA polymerase III subunit RPC7, DNA-directed RNA polymerase III subunit RPC7, DNA-directed RNA polymerase III subunit RPC7



• Molecule 18: Transcription factor IIIB 70 kDa subunit, TATA-box-binding protein, Transcription factor IIIB 70 kDa subunit



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	74281	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY; CTF amplitude correction was performed following 3D auto refinement in relion.	Depositor
Microscope	JEOL 3200FS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	68.9	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.279	Depositor
Minimum map value	-0.190	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.009	Depositor
Recommended contour level	0.04	Depositor
Map size (\AA)	339.84, 339.84, 339.84	wwPDB
Map dimensions	288, 288, 288	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.18, 1.18, 1.18	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.43	0/11358	0.63	0/15345
2	B	0.43	0/8943	0.63	0/12068
3	C	0.45	0/2711	0.57	0/3676
4	D	0.27	0/991	0.51	0/1328
5	E	0.35	0/1795	0.55	0/2416
6	F	0.50	1/683 (0.1%)	0.64	0/923
7	G	0.32	0/1523	0.56	0/2066
8	H	0.43	0/1138	0.61	0/1540
9	I	0.36	0/328	0.63	0/445
10	J	0.51	0/558	0.73	0/750
11	K	0.47	0/803	0.63	0/1083
12	L	0.40	0/365	0.60	0/485
13	M	0.30	0/1369	0.56	0/1851
14	N	0.28	0/855	0.60	0/1149
15	O	0.34	0/4394	0.63	0/5928
16	P	0.30	0/2282	0.52	0/3075
17	Q	0.30	0/281	0.45	0/381
18	R	0.30	0/4200	0.51	0/5659
19	S	0.29	0/1464	0.48	0/1971
20	X	0.65	0/1164	1.05	0/1792
21	Y	0.63	0/1400	1.03	1/2157 (0.0%)
All	All	0.41	1/48605 (0.0%)	0.63	1/66088 (0.0%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	F	130	ILE	C-N	-6.92	1.21	1.34

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	Y	59	DG	O4'-C1'-N9	6.44	112.50	108.00

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	11159	0	11285	860	0
2	B	8788	0	8902	703	0
3	C	2655	0	2628	155	0
4	D	977	0	983	55	0
5	E	1759	0	1788	124	0
6	F	671	0	692	27	0
7	G	1484	0	1485	115	0
8	H	1120	0	1089	67	0
9	I	321	0	303	27	0
10	J	549	0	560	63	0
11	K	792	0	790	45	0
12	L	363	0	386	20	0
13	M	1338	0	1307	158	0
14	N	845	0	891	104	0
15	O	4329	0	4497	345	0
16	P	2242	0	2265	140	0
17	Q	368	0	308	21	0
18	R	4131	0	4230	255	0
19	S	1649	0	1457	88	0
20	X	1040	0	584	66	0
21	Y	1249	0	696	69	0
22	A	2	0	0	0	0
22	B	1	0	0	0	0
22	I	1	0	0	0	0
22	J	1	0	0	0	0
22	L	1	0	0	0	0
22	R	1	0	0	0	0
All	All	47836	0	47126	3059	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 33.

All (3059) 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)
13:M:84:SER:O	13:M:85:LEU:HD12	1.26	1.31
2:B:546:SER:HB2	14:N:391:LEU:CD2	1.63	1.29
1:A:249:PRO:CD	1:A:250:SER:H	1.43	1.29
16:P:264:THR:O	16:P:265:LEU:HG	1.23	1.29
1:A:1145:LEU:HD11	1:A:1157:VAL:CG2	1.61	1.28
15:O:516:LEU:HD12	15:O:516:LEU:O	1.17	1.24
1:A:1369:LEU:CD2	1:A:1374:PHE:HE2	1.49	1.23
13:M:183:PHE:CE1	13:M:185:TYR:CD2	2.27	1.23
1:A:327:ILE:HA	1:A:353:PHE:CD2	1.74	1.20
10:J:42:LYS:HE3	10:J:43:ARG:NH1	1.55	1.20
8:H:104:PHE:O	8:H:105:GLU:HG3	1.42	1.18
13:M:104:HIS:CG	13:M:105:PRO:HD2	1.77	1.18
18:R:7:CYS:SG	18:R:28:CYS:HB3	1.82	1.18
2:B:933:PHE:CE2	3:C:226:SER:HB2	1.79	1.17
1:A:1145:LEU:CD1	1:A:1157:VAL:HG21	1.74	1.17
1:A:1169:VAL:HG23	1:A:1170:ALA:H	1.10	1.15
13:M:183:PHE:CD1	13:M:185:TYR:CD2	2.34	1.14
15:O:303:ARG:HA	16:P:265:LEU:HD21	1.22	1.14
2:B:934:ASN:HB3	2:B:1004:LEU:HD23	1.26	1.12
1:A:1369:LEU:CD2	1:A:1374:PHE:CE2	2.33	1.11
1:A:372:ARG:HD2	2:B:1050:PRO:O	1.49	1.11
15:O:353:GLU:HA	15:O:357:PRO:HD2	1.29	1.10
15:O:515:LYS:O	15:O:516:LEU:HG	1.48	1.10
16:P:311:TYR:HA	17:Q:40:PRO:HA	1.30	1.09
1:A:371:LYS:NZ	2:B:1122:PRO:HB3	1.67	1.08
2:B:780:ARG:HH12	10:J:6:ARG:CD	1.65	1.08
7:G:87:GLY:O	7:G:146:ILE:HB	1.54	1.08
12:L:31:CYS:HB2	12:L:34:CYS:SG	1.94	1.08
2:B:546:SER:CB	14:N:391:LEU:CD2	2.30	1.08
1:A:1369:LEU:HD21	1:A:1374:PHE:HE2	1.19	1.08
15:O:352:VAL:HG13	15:O:353:GLU:OE1	1.53	1.08
1:A:249:PRO:HD2	1:A:250:SER:N	1.54	1.07
13:M:183:PHE:CE1	13:M:185:TYR:HD2	1.66	1.06
2:B:546:SER:CB	14:N:391:LEU:HD23	1.84	1.06
1:A:18:PHE:HE1	2:B:1139:PRO:HB3	1.22	1.05
1:A:235:LYS:HB3	1:A:252:ARG:HE	1.16	1.05
2:B:671:THR:HG22	2:B:672:HIS:CE1	1.92	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:183:PHE:CD1	13:M:185:TYR:HD2	1.73	1.05
1:A:974:LEU:HD21	1:A:998:TYR:HB3	1.40	1.04
2:B:780:ARG:HH12	10:J:6:ARG:HD3	1.21	1.04
15:O:498:SER:HB2	16:P:296:TYR:HB2	1.39	1.04
2:B:780:ARG:NH2	3:C:217:ALA:HB1	1.72	1.04
2:B:1045:VAL:HG23	2:B:1046:LEU:HD12	1.40	1.04
2:B:780:ARG:NH1	10:J:6:ARG:CD	2.20	1.03
15:O:516:LEU:O	15:O:516:LEU:CD1	2.06	1.03
10:J:42:LYS:HE3	10:J:43:ARG:HH12	0.86	1.02
13:M:183:PHE:CE1	13:M:185:TYR:CE2	2.47	1.01
19:S:483:GLU:O	19:S:487:GLU:HB2	1.61	1.01
15:O:110:THR:HG22	15:O:116:LYS:HA	1.41	1.00
1:A:371:LYS:HZ3	2:B:1122:PRO:HB3	1.21	0.99
2:B:546:SER:HB2	14:N:391:LEU:HD23	1.38	0.99
11:K:88:PHE:HB3	11:K:106:GLN:HG2	1.41	0.99
1:A:239:CYS:SG	1:A:246:ALA:HB2	2.03	0.99
7:G:83:GLU:O	7:G:149:ARG:HA	1.63	0.99
2:B:551:LEU:HD11	14:N:388:THR:H	1.25	0.98
2:B:671:THR:CG2	2:B:672:HIS:CE1	2.47	0.98
15:O:498:SER:CB	16:P:296:TYR:HB2	1.94	0.98
13:M:104:HIS:CG	13:M:105:PRO:CD	2.47	0.98
2:B:671:THR:HG22	2:B:672:HIS:ND1	1.78	0.98
1:A:975:VAL:HG22	1:A:976:ARG:H	1.30	0.97
2:B:933:PHE:CE2	3:C:226:SER:CB	2.47	0.97
15:O:498:SER:HB2	16:P:296:TYR:CB	1.94	0.97
2:B:415:GLU:HG2	2:B:416:TYR:H	1.30	0.96
1:A:285:LEU:HD21	1:A:353:PHE:HD1	1.28	0.96
2:B:933:PHE:HE2	3:C:226:SER:CB	1.76	0.95
2:B:780:ARG:NH1	10:J:6:ARG:HD3	1.79	0.95
3:C:222:VAL:HG11	3:C:225:ALA:HB2	1.48	0.95
2:B:780:ARG:NH1	10:J:6:ARG:HD2	1.81	0.95
1:A:617:ASN:OD1	1:A:618:HIS:N	2.00	0.94
1:A:18:PHE:CE1	2:B:1139:PRO:HB3	2.02	0.94
13:M:94:PRO:HA	14:N:391:LEU:O	1.67	0.94
1:A:18:PHE:HD1	2:B:1139:PRO:HA	1.30	0.94
4:D:126:GLN:O	4:D:127:LEU:HG	1.68	0.93
1:A:373:VAL:O	2:B:1050:PRO:HG2	1.67	0.93
2:B:772:VAL:HG13	2:B:943:ILE:HG23	1.49	0.93
3:C:33:VAL:O	3:C:34:GLU:HB2	1.68	0.93
13:M:104:HIS:HE1	14:N:395:ILE:HD13	1.31	0.93
1:A:1266:ALA:O	1:A:1269:ASP:HB3	1.67	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:110:LEU:HB3	4:D:120:LYS:HE3	1.50	0.92
13:M:84:SER:C	13:M:85:LEU:HD12	1.89	0.92
18:R:22:ASP:OD1	18:R:23:LEU:N	2.02	0.92
1:A:664:MET:HB3	1:A:669:LEU:CD2	2.00	0.92
1:A:15:GLY:H	1:A:1408:VAL:HG12	1.31	0.92
3:C:119:ASN:C	3:C:120:LEU:HG	1.90	0.91
1:A:285:LEU:HD21	1:A:353:PHE:CD1	2.05	0.91
1:A:196:ILE:O	1:A:200:GLU:HG3	1.67	0.91
16:P:33:GLN:NE2	16:P:49:MET:SD	2.44	0.91
11:K:88:PHE:HB3	11:K:106:GLN:CG	2.02	0.90
15:O:303:ARG:HA	16:P:265:LEU:CD2	2.01	0.90
15:O:105:LYS:HB2	15:O:121:TYR:HB2	1.53	0.90
19:S:458:PHE:O	19:S:462:GLU:HB2	1.71	0.90
2:B:1139:PRO:O	2:B:1140:ARG:O	1.87	0.90
18:R:213:TRP:HH2	18:R:497:ARG:HA	1.36	0.90
1:A:444:LEU:HD11	1:A:445:ARG:HH11	1.37	0.89
1:A:393:ALA:HB3	1:A:499:ARG:HB2	1.52	0.89
1:A:1369:LEU:HD22	1:A:1374:PHE:HE2	1.38	0.89
1:A:314:GLU:HB2	15:O:559:ALA:HB1	1.54	0.89
2:B:734:PRO:HB2	2:B:915:ARG:HH12	1.37	0.89
5:E:181:ALA:O	5:E:182:ASP:O	1.91	0.89
3:C:172:GLN:H	3:C:175:GLN:HB3	1.38	0.89
1:A:154:CYS:CB	1:A:157:CYS:SG	2.60	0.88
2:B:933:PHE:HE1	2:B:1005:TYR:HD2	1.17	0.88
15:O:554:THR:HG23	15:O:561:ARG:HE	1.36	0.88
13:M:183:PHE:HE1	13:M:185:TYR:CE2	1.90	0.88
18:R:397:VAL:HA	18:R:449:VAL:O	1.74	0.88
1:A:235:LYS:HB3	1:A:252:ARG:NE	1.88	0.88
1:A:109:ASN:HD22	1:A:159:ALA:CB	1.85	0.88
1:A:1369:LEU:HD21	1:A:1374:PHE:CE2	2.03	0.88
1:A:1145:LEU:CD2	1:A:1308:GLY:O	2.21	0.88
18:R:232:CYS:HB3	18:R:237:LEU:HD11	1.54	0.88
20:X:6:DA:H4'	20:X:7:DA:OP1	1.73	0.88
1:A:100:ILE:O	1:A:104:GLN:HB2	1.73	0.88
1:A:1169:VAL:HG23	1:A:1170:ALA:N	1.88	0.87
1:A:154:CYS:HB3	1:A:157:CYS:SG	2.14	0.87
1:A:1369:LEU:HD22	1:A:1374:PHE:CE2	2.09	0.87
16:P:11:LEU:O	16:P:15:ALA:HB2	1.73	0.87
16:P:264:THR:O	16:P:265:LEU:CG	2.18	0.87
1:A:249:PRO:HD2	1:A:250:SER:H	0.71	0.87
15:O:193:GLN:O	15:O:195:CYS:N	2.08	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:735:MET:HB2	2:B:754:ASN:HD21	1.39	0.87
7:G:53:THR:HG21	7:G:71:THR:HG22	1.57	0.86
1:A:327:ILE:HG22	1:A:353:PHE:CE2	2.11	0.86
5:E:181:ALA:O	5:E:182:ASP:C	2.12	0.86
7:G:125:GLU:HG2	7:G:126:SER:N	1.88	0.86
13:M:94:PRO:CA	14:N:391:LEU:O	2.22	0.86
1:A:172:GLY:HA3	1:A:331:SER:HB3	1.58	0.86
1:A:238:ASP:OD1	1:A:239:CYS:N	2.09	0.86
1:A:664:MET:CB	1:A:669:LEU:HD21	2.06	0.86
3:C:119:ASN:O	3:C:120:LEU:HG	1.76	0.86
16:P:138:LYS:HD2	16:P:143:PRO:HB3	1.57	0.86
13:M:90:TYR:O	14:N:392:GLN:HG3	1.76	0.86
15:O:156:VAL:HG12	15:O:189:SER:HB3	1.56	0.85
12:L:31:CYS:SG	12:L:48:CYS:HB3	2.16	0.85
1:A:946:THR:HG21	1:A:1066:SER:HA	1.58	0.85
4:D:145:PHE:HB2	4:D:149:THR:HG21	1.56	0.85
1:A:49:LYS:HD2	1:A:54:LEU:HB3	1.59	0.85
13:M:158:GLN:HE21	14:N:308:GLN:HE21	1.25	0.85
10:J:42:LYS:CE	10:J:43:ARG:HH12	1.82	0.85
15:O:143:GLN:HE21	15:O:196:GLU:HG2	1.41	0.85
15:O:263:LEU:HB3	15:O:272:ARG:HH21	1.41	0.85
1:A:327:ILE:HA	1:A:353:PHE:CE2	2.12	0.85
15:O:190:LEU:HD13	15:O:194:LEU:HD23	1.57	0.85
1:A:1166:LEU:HA	1:A:1169:VAL:HG22	1.56	0.84
12:L:31:CYS:SG	12:L:48:CYS:CB	2.64	0.84
1:A:356:ARG:HG3	2:B:1131:GLU:OE2	1.76	0.84
13:M:90:TYR:O	14:N:392:GLN:CG	2.26	0.84
15:O:190:LEU:HA	15:O:193:GLN:HB3	1.60	0.84
15:O:547:GLU:HG2	15:O:548:ILE:H	1.43	0.84
15:O:640:ARG:HH12	16:P:309:VAL:HA	1.43	0.84
2:B:780:ARG:CZ	3:C:217:ALA:HB1	2.07	0.84
13:M:89:GLN:HE21	13:M:178:GLN:HE22	1.20	0.84
1:A:235:LYS:HD2	1:A:252:ARG:HB2	1.58	0.84
2:B:933:PHE:CD2	2:B:937:GLY:HA2	2.11	0.84
14:N:302:GLU:HB3	14:N:410:GLY:HA2	1.59	0.83
15:O:597:GLN:HA	15:O:600:SER:HB2	1.61	0.83
7:G:84:ILE:HA	7:G:148:PHE:O	1.78	0.83
1:A:235:LYS:CB	1:A:252:ARG:HE	1.91	0.83
2:B:931:MET:CG	2:B:932:PRO:HD2	2.09	0.83
1:A:556:ASP:HB3	2:B:767:ILE:CD1	2.09	0.83
1:A:1305:CYS:SG	5:E:11:ARG:NH1	2.49	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:321:GLN:H	2:B:324:ILE:HB	1.41	0.83
9:I:8:CYS:HB3	9:I:29:CYS:SG	2.17	0.83
15:O:288:MET:SD	15:O:291:ARG:NH2	2.51	0.83
1:A:664:MET:HB3	1:A:669:LEU:HD21	1.60	0.83
15:O:292:ARG:HH12	15:O:650:VAL:HA	1.44	0.82
1:A:235:LYS:CE	1:A:254:GLU:HG3	2.09	0.82
1:A:239:CYS:SG	1:A:240:GLU:N	2.51	0.82
2:B:109:LYS:HG3	2:B:111:TYR:H	1.42	0.82
2:B:373:GLY:HA2	2:B:651:VAL:HG21	1.61	0.82
13:M:104:HIS:CD2	13:M:105:PRO:HD2	2.14	0.82
8:H:104:PHE:O	8:H:105:GLU:CG	2.27	0.82
17:Q:38:SER:O	17:Q:39:ILE:O	1.98	0.82
2:B:936:GLN:HB3	10:J:43:ARG:HD3	1.62	0.82
1:A:642:PRO:HB2	1:A:644:GLU:HG2	1.62	0.81
2:B:538:VAL:HG12	2:B:565:ILE:HB	1.62	0.81
5:E:109:ILE:HG22	5:E:133:GLU:HB3	1.59	0.81
1:A:644:GLU:OE2	1:A:651:PHE:HD2	1.63	0.81
2:B:933:PHE:CE2	2:B:937:GLY:HA2	2.15	0.81
13:M:112:TYR:HD1	13:M:119:TRP:HE1	1.28	0.81
1:A:373:VAL:O	2:B:1050:PRO:CG	2.28	0.81
2:B:934:ASN:HB3	2:B:1004:LEU:CD2	2.07	0.81
1:A:1330:ALA:HB2	5:E:150:VAL:HG22	1.63	0.81
2:B:933:PHE:CG	2:B:934:ASN:N	2.48	0.81
5:E:179:GLN:O	5:E:180:ARG:O	1.98	0.80
15:O:124:GLU:HG3	15:O:126:GLY:H	1.44	0.80
1:A:1038:GLU:HB3	1:A:1042:ILE:HD11	1.62	0.80
2:B:933:PHE:CZ	3:C:226:SER:HB2	2.15	0.80
2:B:1047:THR:HG22	2:B:1049:GLN:H	1.45	0.80
13:M:94:PRO:HB3	14:N:391:LEU:O	1.81	0.80
15:O:183:MET:O	15:O:187:ILE:HG12	1.81	0.80
15:O:105:LYS:HG2	15:O:123:ASN:HA	1.62	0.80
13:M:112:TYR:H	13:M:243:ILE:HG21	1.45	0.80
1:A:18:PHE:CD1	2:B:1139:PRO:HA	2.16	0.80
18:R:213:TRP:HD1	18:R:287:PRO:HD3	1.46	0.80
15:O:48:LEU:HD22	15:O:581:LEU:HD11	1.63	0.80
15:O:324:PRO:HB2	15:O:328:ASP:HB3	1.64	0.80
2:B:364:LYS:HG3	2:B:365:MET:H	1.46	0.79
2:B:1026:LYS:NZ	2:B:1030:MET:SD	2.54	0.79
16:P:176:ASN:HA	16:P:179:LEU:HB2	1.64	0.79
4:D:126:GLN:C	4:D:127:LEU:HG	2.01	0.79
5:E:88:VAL:HG23	5:E:117:THR:HG22	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:117:THR:HG23	5:E:120:ALA:H	1.45	0.79
1:A:400:LYS:HA	1:A:465:HIS:HD2	1.45	0.79
2:B:915:ARG:HD3	2:B:960:GLU:OE2	1.82	0.79
15:O:200:LEU:HB3	15:O:280:LEU:HB3	1.64	0.79
2:B:546:SER:CB	14:N:391:LEU:HD21	2.12	0.79
13:M:104:HIS:ND1	13:M:105:PRO:HD3	1.98	0.79
1:A:371:LYS:NZ	2:B:1122:PRO:CB	2.45	0.79
2:B:932:PRO:O	2:B:940:PRO:HD2	1.82	0.79
9:I:29:CYS:HA	13:M:183:PHE:HE2	1.47	0.79
1:A:235:LYS:NZ	1:A:254:GLU:HG3	1.96	0.79
1:A:353:PHE:O	1:A:356:ARG:HG2	1.82	0.79
2:B:1112:SER:HB2	2:B:1114:GLU:HG2	1.63	0.79
1:A:675:HIS:HA	1:A:937:ARG:HH22	1.46	0.79
13:M:94:PRO:HA	14:N:392:GLN:HA	1.63	0.79
15:O:110:THR:HG21	15:O:115:LYS:O	1.83	0.79
1:A:197:TRP:CZ3	15:O:567:ARG:NH1	2.51	0.78
15:O:80:VAL:HG11	15:O:87:ASP:HB2	1.64	0.78
12:L:31:CYS:CB	12:L:34:CYS:SG	2.63	0.78
1:A:124:LEU:HB3	1:A:128:ARG:HH12	1.48	0.78
16:P:235:LEU:HD21	16:P:239:ASN:HB3	1.65	0.78
19:S:494:THR:HB	19:S:497:ASP:HB2	1.65	0.78
3:C:134:LEU:HD23	3:C:167:LEU:HD23	1.65	0.78
2:B:741:ILE:HG23	2:B:746:TYR:HB3	1.66	0.78
2:B:915:ARG:HD2	2:B:1023:TYR:HB3	1.66	0.78
3:C:103:LEU:HD22	10:J:5:VAL:HG23	1.66	0.78
2:B:931:MET:HG2	2:B:932:PRO:HD2	1.66	0.78
2:B:108:THR:HG22	2:B:109:LYS:H	1.49	0.77
2:B:757:VAL:O	2:B:1019:PHE:HB2	1.83	0.77
13:M:183:PHE:HE1	13:M:185:TYR:HE2	1.30	0.77
7:G:5:SER:O	7:G:73:ARG:HA	1.83	0.77
1:A:269:ARG:NH2	1:A:286:THR:H	1.83	0.77
1:A:1145:LEU:HD23	1:A:1308:GLY:O	1.84	0.77
1:A:1163:LYS:HG3	1:A:1164:THR:H	1.47	0.77
15:O:156:VAL:HG12	15:O:189:SER:CB	2.15	0.77
19:S:458:PHE:O	19:S:462:GLU:CB	2.33	0.77
19:S:470:GLU:O	19:S:474:ARG:HB3	1.84	0.77
1:A:1048:VAL:HG11	1:A:1053:LYS:HG3	1.65	0.77
16:P:69:GLU:HG3	16:P:70:LEU:H	1.50	0.77
1:A:235:LYS:CD	1:A:252:ARG:HB2	2.14	0.77
3:C:224:THR:HB	10:J:10:CYS:SG	2.25	0.77
2:B:266:LEU:HD21	9:I:4:PHE:HA	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:705:LEU:CD2	2:B:761:SER:HB2	2.15	0.77
3:C:152:ASP:HB2	3:C:155:GLU:HG2	1.67	0.77
15:O:172:GLU:HG3	15:O:276:PRO:HB2	1.66	0.77
5:E:29:PHE:HB2	5:E:65:THR:HB	1.65	0.77
18:R:632:ALA:O	18:R:636:LEU:HB2	1.85	0.77
1:A:200:GLU:HB3	15:O:516:LEU:CD2	2.15	0.76
2:B:971:GLY:HA2	10:J:51:LEU:HD11	1.66	0.76
3:C:231:PRO:HB3	3:C:275:VAL:HG22	1.67	0.76
11:K:60:SER:HA	11:K:106:GLN:HA	1.65	0.76
15:O:515:LYS:O	15:O:516:LEU:CG	2.33	0.76
13:M:105:PRO:O	13:M:106:PHE:HB2	1.85	0.76
2:B:671:THR:CG2	2:B:672:HIS:ND1	2.47	0.76
15:O:98:LEU:HB3	15:O:103:CYS:HB2	1.65	0.76
3:C:275:VAL:HG21	3:C:293:ARG:HD3	1.66	0.76
3:C:70:ILE:HG13	3:C:74:GLU:HB2	1.68	0.76
15:O:91:VAL:O	15:O:95:LEU:HB2	1.85	0.76
15:O:196:GLU:HG3	15:O:197:MET:H	1.49	0.76
1:A:645:MET:HE1	8:H:124:ARG:HB2	1.66	0.76
1:A:1396:LEU:HD13	2:B:1132:LEU:HD21	1.68	0.76
2:B:551:LEU:CD1	14:N:388:THR:H	1.99	0.75
1:A:329:SER:O	1:A:351:ARG:NH2	2.20	0.75
1:A:1184:ILE:HB	1:A:1232:ILE:HB	1.66	0.75
1:A:373:VAL:HG12	1:A:374:ASP:H	1.51	0.75
15:O:353:GLU:CA	15:O:357:PRO:HD2	2.12	0.75
18:R:200:LYS:HG2	18:R:276:ARG:HH22	1.50	0.75
1:A:197:TRP:HZ3	15:O:567:ARG:NH1	1.85	0.75
2:B:901:ARG:NH2	3:C:94:ASP:OD1	2.20	0.75
1:A:332:VAL:HG13	1:A:333:ASN:H	1.51	0.75
1:A:541:LEU:HG	1:A:551:ILE:HD11	1.69	0.75
15:O:292:ARG:HD2	15:O:488:LYS:HZ2	1.51	0.75
2:B:930:ASP:OD1	3:C:69:ARG:NH1	2.20	0.75
18:R:419:GLU:HB3	18:R:429:ILE:HD13	1.68	0.75
15:O:353:GLU:HB2	15:O:481:SER:OG	1.85	0.75
1:A:114:LEU:HD11	1:A:148:CYS:HA	1.68	0.75
3:C:119:ASN:O	3:C:120:LEU:O	2.05	0.75
1:A:1170:ALA:HA	1:A:1188:ILE:HG12	1.67	0.74
2:B:671:THR:HG21	2:B:672:HIS:CE1	2.22	0.74
8:H:96:VAL:HG12	8:H:143:LEU:HD13	1.69	0.74
15:O:124:GLU:HG3	15:O:126:GLY:N	2.02	0.74
1:A:1166:LEU:O	1:A:1166:LEU:HD23	1.86	0.74
16:P:172:ILE:HG22	16:P:173:GLU:H	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:321:LEU:O	1:A:325:MET:HB2	1.88	0.74
1:A:1169:VAL:CG2	1:A:1170:ALA:H	1.94	0.74
2:B:546:SER:OG	14:N:391:LEU:HD23	1.87	0.74
18:R:467:ARG:HB2	18:R:602:LEU:HD11	1.68	0.74
2:B:551:LEU:HD11	14:N:388:THR:N	2.02	0.74
15:O:54:LYS:HA	15:O:58:GLY:HA2	1.68	0.74
7:G:96:GLY:N	7:G:112:GLN:HG2	2.02	0.74
7:G:104:ILE:HG23	7:G:105:PHE:H	1.52	0.74
1:A:1095:GLN:NE2	2:B:1068:ASP:OD2	2.20	0.74
18:R:266:LYS:HG2	18:R:283:GLY:HA3	1.69	0.74
1:A:181:ASP:HB2	1:A:220:ASP:OD1	1.88	0.74
1:A:200:GLU:HB3	15:O:516:LEU:HD23	1.68	0.74
5:E:87:SER:HA	5:E:115:ASN:HB3	1.70	0.74
20:X:56:DC:O2	21:Y:8:DG:N2	2.20	0.74
15:O:110:THR:CG2	15:O:115:LYS:O	2.35	0.74
2:B:933:PHE:O	2:B:1004:LEU:HD22	1.88	0.74
3:C:121:PRO:O	3:C:122:ASP:OD1	2.06	0.74
10:J:43:ARG:HH11	10:J:43:ARG:HG2	1.53	0.74
1:A:163:VAL:C	1:A:180:HIS:HD2	1.91	0.73
1:A:395:PRO:HB3	1:A:496:ARG:HA	1.69	0.73
3:C:256:ILE:HA	3:C:268:LYS:H	1.53	0.73
5:E:180:ARG:O	5:E:182:ASP:N	2.21	0.73
21:Y:55:DT:H2"	21:Y:56:DG:C8	2.22	0.73
7:G:39:ILE:HD12	7:G:40:PRO:HD2	1.69	0.73
14:N:389:THR:HG23	14:N:390:PHE:H	1.50	0.73
13:M:104:HIS:ND1	13:M:105:PRO:CD	2.52	0.73
15:O:467:PHE:HD1	15:O:468:LEU:HD13	1.54	0.73
2:B:767:ILE:O	2:B:945:ASN:ND2	2.21	0.73
3:C:116:VAL:HB	3:C:209:ILE:HD11	1.71	0.73
5:E:21:GLU:HB3	5:E:35:VAL:HG21	1.71	0.73
15:O:292:ARG:NH2	15:O:653:MET:O	2.22	0.73
13:M:90:TYR:HB3	13:M:179:LEU:HB3	1.69	0.73
13:M:158:GLN:HG2	14:N:308:GLN:HG2	1.69	0.73
1:A:572:ASP:OD1	1:A:573:ARG:N	2.22	0.73
13:M:94:PRO:CB	14:N:391:LEU:O	2.35	0.73
2:B:167:ASP:O	2:B:169:SER:N	2.21	0.72
2:B:475:SER:HB3	2:B:510:LEU:O	1.89	0.72
2:B:929:GLU:HG2	3:C:72:ILE:HG23	1.69	0.72
1:A:665:ASP:OD1	1:A:798:GLY:N	2.23	0.72
14:N:290:ILE:O	14:N:294:LEU:HB2	1.89	0.72
18:R:467:ARG:HA	18:R:602:LEU:HD21	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:476:ARG:NH2	1:A:515:ASP:OD2	2.23	0.72
1:A:249:PRO:CD	1:A:250:SER:N	2.13	0.72
2:B:476:GLN:HG2	2:B:477:PHE:H	1.53	0.72
2:B:933:PHE:O	2:B:1004:LEU:CD2	2.37	0.72
2:B:1106:TRP:HE1	7:G:162:SER:HA	1.55	0.72
3:C:197:ARG:HB3	3:C:198:PRO:HD2	1.72	0.72
15:O:584:ASN:O	15:O:588:LEU:N	2.22	0.72
19:S:483:GLU:O	19:S:487:GLU:CB	2.37	0.72
2:B:1019:PHE:HE1	10:J:44:TYR:HH	1.38	0.72
6:F:76:LYS:HD2	6:F:79:ARG:HE	1.53	0.72
2:B:1139:PRO:O	2:B:1140:ARG:C	2.27	0.72
1:A:388:SER:OG	1:A:695:ASN:ND2	2.23	0.72
15:O:46:LEU:HD13	15:O:69:VAL:HB	1.71	0.72
1:A:327:ILE:HG22	1:A:353:PHE:CZ	2.24	0.72
5:E:86:PRO:HA	5:E:113:GLN:HB3	1.72	0.72
7:G:57:GLY:HA3	7:G:68:ILE:HG12	1.70	0.72
7:G:204:GLY:HA2	7:G:210:TRP:HB2	1.70	0.72
16:P:264:THR:C	16:P:265:LEU:HG	2.09	0.72
7:G:150:ILE:HG21	7:G:196:LEU:HD23	1.71	0.71
1:A:154:CYS:SG	1:A:155:LEU:N	2.62	0.71
1:A:869:ARG:HH22	2:B:502:THR:HB	1.53	0.71
16:P:135:LYS:NZ	16:P:150:LEU:O	2.23	0.71
1:A:164:VAL:HB	1:A:180:HIS:HB2	1.71	0.71
1:A:671:ASP:OD1	1:A:671:ASP:O	2.08	0.71
1:A:330:ASP:OD1	1:A:331:SER:N	2.23	0.71
1:A:597:ILE:HD11	1:A:603:LEU:HD12	1.73	0.71
2:B:197:GLN:NE2	2:B:476:GLN:OE1	2.21	0.71
15:O:156:VAL:CG1	15:O:189:SER:HB3	2.20	0.71
19:S:506:GLN:O	19:S:510:LYS:HB2	1.91	0.71
1:A:1121:LEU:O	1:A:1346:HIS:NE2	2.24	0.71
2:B:248:ALA:HB3	2:B:308:LYS:HG2	1.71	0.71
14:N:371:LEU:HD22	14:N:384:LYS:HD3	1.73	0.71
8:H:130:ARG:O	8:H:134:ASN:ND2	2.24	0.71
1:A:249:PRO:CG	1:A:250:SER:N	2.54	0.71
2:B:795:LEU:HB2	2:B:894:ALA:HB3	1.73	0.71
2:B:1057:ASP:CG	2:B:1058:GLY:H	1.93	0.71
1:A:556:ASP:HB3	2:B:767:ILE:HD12	1.72	0.71
1:A:666:LYS:HA	1:A:670:GLY:HA3	1.72	0.71
15:O:499:THR:HG23	16:P:312:PHE:CB	2.21	0.70
2:B:481:ARG:HH21	21:Y:21:DG:H2'	1.54	0.70
16:P:54:GLU:O	16:P:58:LYS:N	2.22	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1266:ALA:O	1:A:1269:ASP:CB	2.37	0.70
8:H:21:ASN:OD1	8:H:22:LYS:N	2.25	0.70
18:R:152:VAL:HG22	18:R:153:SER:H	1.57	0.70
1:A:400:LYS:HA	1:A:465:HIS:CD2	2.26	0.70
1:A:827:PHE:HE2	1:A:833:PRO:HG3	1.55	0.70
7:G:45:CYS:HA	7:G:76:VAL:HA	1.74	0.70
2:B:658:TYR:CE2	2:B:670:MET:HG2	2.27	0.70
2:B:944:MET:HG2	2:B:945:ASN:H	1.57	0.70
3:C:229:LEU:HB2	3:C:293:ARG:HH11	1.57	0.70
13:M:104:HIS:HE1	14:N:395:ILE:CD1	2.05	0.70
1:A:552:ALA:CB	1:A:671:ASP:HB3	2.20	0.70
2:B:1055:SER:O	2:B:1056:ARG:C	2.27	0.70
1:A:664:MET:HB3	1:A:669:LEU:HD23	1.71	0.70
1:A:1145:LEU:HD11	1:A:1157:VAL:HG21	0.79	0.70
19:S:444:GLN:HE22	19:S:490:LYS:NZ	1.90	0.70
1:A:373:VAL:C	2:B:1050:PRO:HG2	2.12	0.70
4:D:7:ARG:HE	4:D:10:PHE:HZ	1.37	0.70
15:O:620:LEU:HD12	15:O:621:PRO:HD2	1.73	0.70
1:A:356:ARG:CG	2:B:1131:GLU:OE2	2.40	0.69
1:A:705:LEU:HD21	2:B:761:SER:HB2	1.74	0.69
1:A:1429:LYS:HD3	6:F:137:TYR:HE2	1.57	0.69
2:B:774:ASN:ND2	2:B:777:SER:OG	2.25	0.69
10:J:36:LEU:HD23	10:J:47:ARG:HG3	1.72	0.69
1:A:82:GLY:O	1:A:263:ALA:N	2.20	0.69
1:A:109:ASN:HD22	1:A:159:ALA:HB2	1.55	0.69
1:A:141:LEU:HA	1:A:144:ILE:HG22	1.73	0.69
2:B:811:VAL:HA	2:B:817:PRO:HA	1.74	0.69
3:C:92:ILE:HD13	3:C:194:ALA:HB1	1.74	0.69
15:O:515:LYS:C	15:O:516:LEU:HG	2.13	0.69
2:B:186:ILE:HA	2:B:191:GLU:HA	1.74	0.69
1:A:1202:ILE:HD13	1:A:1224:ILE:HD12	1.75	0.69
2:B:612:LEU:HD13	2:B:672:HIS:HB3	1.75	0.69
1:A:325:MET:SD	1:A:351:ARG:NH2	2.66	0.69
18:R:144:ILE:HD12	18:R:154:VAL:HG21	1.75	0.69
4:D:24:GLU:HG3	4:D:29:TRP:HA	1.73	0.69
11:K:136:THR:HA	11:K:139:ILE:HG22	1.74	0.69
1:A:205:LEU:HG	1:A:212:GLU:HA	1.74	0.69
2:B:705:MET:SD	2:B:919:LYS:NZ	2.65	0.69
14:N:363:ILE:HG12	14:N:373:VAL:HG22	1.75	0.69
1:A:164:VAL:CB	1:A:180:HIS:HB2	2.23	0.69
2:B:77:ILE:HD13	2:B:98:ILE:HG12	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:325:GLU:HG3	2:B:328:ALA:HB3	1.75	0.69
3:C:42:VAL:O	11:K:138:LYS:NZ	2.26	0.69
16:P:131:GLN:HB3	16:P:133:TYR:CD2	2.28	0.69
18:R:213:TRP:CH2	18:R:497:ARG:HA	2.25	0.69
1:A:107:CYS:HA	1:A:161:ASN:HD22	1.57	0.69
1:A:643:ASN:HB2	1:A:651:PHE:CZ	2.27	0.69
2:B:933:PHE:CE1	2:B:1005:TYR:HD2	2.05	0.69
7:G:96:GLY:H	7:G:112:GLN:HG2	1.58	0.69
1:A:238:ASP:CG	1:A:239:CYS:H	1.94	0.69
1:A:1164:THR:HB	1:A:1271:VAL:HA	1.74	0.69
2:B:914:SER:OG	2:B:957:LYS:NZ	2.23	0.69
5:E:172:GLU:HG2	5:E:173:SER:H	1.58	0.68
1:A:600:PRO:HG2	8:H:95:TYR:HD1	1.56	0.68
2:B:613:ILE:HA	2:B:646:VAL:HG12	1.75	0.68
1:A:444:LEU:HD11	1:A:445:ARG:NH1	2.08	0.68
15:O:554:THR:HG23	15:O:561:ARG:NE	2.07	0.68
2:B:138:GLY:H	2:B:141:ILE:HG21	1.57	0.68
2:B:1101:MET:SD	2:B:1126:LYS:HG3	2.34	0.68
1:A:552:ALA:HB2	1:A:671:ASP:HB3	1.74	0.68
1:A:664:MET:CB	1:A:669:LEU:CD2	2.70	0.68
1:A:1166:LEU:HA	1:A:1169:VAL:CG2	2.22	0.68
21:Y:41:DG:H2'	21:Y:42:DT:H71	1.74	0.68
1:A:736:HIS:HA	1:A:739:ASP:HB3	1.74	0.68
11:K:89:CYS:HA	11:K:104:ARG:O	1.94	0.68
15:O:339:LEU:O	15:O:343:LYS:NZ	2.26	0.68
18:R:636:LEU:HD13	19:S:502:LEU:HD21	1.75	0.68
5:E:79:TRP:O	5:E:108:GLY:HA2	1.94	0.68
7:G:126:SER:HB3	7:G:139:TYR:CB	2.23	0.68
18:R:135:ARG:NH2	18:R:174:PRO:O	2.27	0.68
20:X:25:DT:H2'	20:X:26:DT:C6	2.29	0.68
13:M:171:VAL:HG13	13:M:172:PRO:HD2	1.76	0.68
18:R:402:LEU:HD22	18:R:476:ALA:HB1	1.76	0.68
18:R:467:ARG:HG3	18:R:610:LEU:HD22	1.75	0.68
1:A:327:ILE:CA	1:A:353:PHE:CD2	2.66	0.68
2:B:122:ASP:HA	2:B:189:GLY:HA3	1.74	0.68
2:B:938:ILE:HD13	10:J:44:TYR:CE2	2.30	0.68
13:M:104:HIS:CE1	14:N:395:ILE:HD13	2.21	0.68
20:X:6:DA:C6	20:X:7:DA:N6	2.62	0.68
3:C:209:ILE:HG13	3:C:210:LEU:H	1.59	0.67
15:O:46:LEU:HD22	15:O:70:ALA:HB2	1.74	0.67
2:B:129:ILE:HD11	2:B:152:MET:HB2	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:24:LYS:HB2	5:E:30:ILE:HD11	1.76	0.67
5:E:56:LYS:HE2	5:E:84:ASP:HB2	1.75	0.67
10:J:52:THR:HG22	10:J:53:HIS:H	1.57	0.67
2:B:102:LYS:NZ	2:B:106:SER:O	2.26	0.67
4:D:17:LEU:HD22	4:D:66:LEU:HB3	1.75	0.67
5:E:12:LEU:HD22	5:E:42:PHE:HZ	1.60	0.67
11:K:80:ILE:HG22	11:K:86:VAL:HG11	1.77	0.67
2:B:622:VAL:HG12	2:B:624:ASP:H	1.59	0.67
14:N:290:ILE:O	14:N:294:LEU:CB	2.42	0.67
15:O:43:ASN:HB3	15:O:47:PHE:HB2	1.75	0.67
1:A:1371:ILE:O	1:A:1372:THR:OG1	2.11	0.67
7:G:129:ILE:HG12	7:G:139:TYR:HB3	1.75	0.67
15:O:499:THR:HG23	16:P:312:PHE:HB2	1.76	0.67
1:A:248:VAL:N	1:A:249:PRO:HD3	2.09	0.67
1:A:976:ARG:HG3	1:A:1002:ARG:NH2	2.10	0.67
2:B:1103:TYR:HE2	7:G:163:PRO:HG2	1.59	0.67
3:C:190:ASP:O	10:J:16:ASP:HB3	1.95	0.67
15:O:303:ARG:CA	16:P:265:LEU:HD21	2.13	0.67
18:R:215:PHE:HD1	18:R:223:ILE:HD13	1.59	0.67
20:X:6:DA:C4	20:X:7:DA:N7	2.62	0.67
1:A:431:ASN:OD1	1:A:432:TYR:N	2.24	0.67
7:G:92:CYS:SG	7:G:98:LYS:N	2.61	0.67
15:O:292:ARG:NH1	15:O:650:VAL:HA	2.08	0.67
1:A:338:PRO:HG2	1:A:342:ASN:HD22	1.60	0.67
1:A:1145:LEU:HG	1:A:1308:GLY:O	1.94	0.67
2:B:717:GLN:HE21	2:B:727:LEU:HD22	1.60	0.67
2:B:1006:SER:HB2	2:B:1013:LEU:HD21	1.74	0.67
10:J:42:LYS:CE	10:J:43:ARG:NH1	2.47	0.67
13:M:122:ASP:HB3	13:M:145:VAL:HG21	1.77	0.67
14:N:395:ILE:HA	14:N:411:ARG:HA	1.76	0.67
18:R:455:GLU:OE1	18:R:546:ARG:NH2	2.27	0.67
2:B:141:ILE:HG23	2:B:142:ILE:H	1.60	0.67
1:A:390:ASP:OD2	1:A:538:LYS:NZ	2.24	0.66
1:A:1186:VAL:H	1:A:1230:ILE:HG12	1.60	0.66
6:F:96:THR:HG21	7:G:59:LEU:HD21	1.77	0.66
13:M:253:GLU:HB2	13:M:257:ASP:HB2	1.78	0.66
16:P:66:GLN:OE1	16:P:71:LYS:NZ	2.25	0.66
16:P:131:GLN:HB3	16:P:133:TYR:HD2	1.59	0.66
19:S:428:PHE:HE1	19:S:454:VAL:HG13	1.58	0.66
19:S:460:ASN:ND2	20:X:9:DA:OP2	2.28	0.66
1:A:372:ARG:O	2:B:1050:PRO:HD2	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1145:LEU:O	1:A:1310:ILE:HG22	1.94	0.66
2:B:882:ASP:OD1	2:B:883:GLN:N	2.29	0.66
7:G:6:LYS:HA	7:G:72:PHE:O	1.94	0.66
15:O:599:ASN:O	15:O:603:LEU:N	2.25	0.66
18:R:517:PRO:HG3	21:Y:52:DA:H1'	1.78	0.66
1:A:239:CYS:SG	1:A:246:ALA:CB	2.81	0.66
1:A:952:LYS:O	1:A:1061:ARG:HD2	1.96	0.66
2:B:698:ARG:HH21	2:B:952:ARG:HG2	1.58	0.66
16:P:191:PHE:HB2	16:P:192:PRO:HD2	1.76	0.66
18:R:628:ILE:HG21	19:S:499:ASN:HD21	1.61	0.66
2:B:734:PRO:HB2	2:B:915:ARG:NH1	2.08	0.66
5:E:31:THR:HG22	5:E:34:GLU:HG2	1.77	0.66
18:R:123:GLN:HG2	18:R:150:LEU:HD21	1.77	0.66
15:O:353:GLU:O	15:O:358:GLY:N	2.29	0.66
1:A:363:ARG:HA	1:A:367:ASN:HB2	1.78	0.66
1:A:664:MET:HB2	1:A:669:LEU:HD21	1.76	0.66
2:B:337:VAL:HG23	2:B:345:LYS:HZ3	1.61	0.66
7:G:87:GLY:HA3	7:G:148:PHE:HE2	1.59	0.66
15:O:102:ARG:NH2	15:O:282:ILE:O	2.28	0.66
16:P:313:ASP:O	16:P:314:GLU:HG2	1.96	0.66
2:B:734:PRO:CB	2:B:915:ARG:HH12	2.09	0.66
7:G:12:ARG:NH2	7:G:65:SER:OG	2.27	0.66
12:L:29:TYR:HB3	12:L:58:LYS:HA	1.78	0.66
15:O:495:VAL:HG21	15:O:577:MET:HG3	1.76	0.66
1:A:865:ALA:HA	2:B:696:SER:HB3	1.78	0.66
2:B:760:MET:HB3	2:B:943:ILE:HD11	1.77	0.66
16:P:11:LEU:O	16:P:15:ALA:CB	2.42	0.66
16:P:62:LYS:HD3	16:P:83:LYS:HE2	1.76	0.66
18:R:650:ALA:O	19:S:520:LYS:NZ	2.29	0.66
2:B:933:PHE:CD1	2:B:934:ASN:N	2.64	0.66
19:S:426:ILE:HA	19:S:429:TYR:HD2	1.61	0.66
1:A:766:ILE:HA	1:A:769:LEU:HB2	1.76	0.66
5:E:101:GLN:O	5:E:104:ASN:ND2	2.29	0.66
2:B:269:MET:O	2:B:273:CYS:HB3	1.95	0.65
2:B:613:ILE:HG13	2:B:675:ILE:HG22	1.77	0.65
2:B:1147:PHE:HD2	7:G:10:LEU:HD11	1.61	0.65
15:O:201:ILE:HD12	15:O:283:ASN:HD22	1.59	0.65
15:O:297:ILE:O	15:O:300:ALA:N	2.29	0.65
1:A:1225:ILE:H	1:A:1229:ARG:HE	1.44	0.65
5:E:179:GLN:C	5:E:180:ARG:O	2.34	0.65
1:A:269:ARG:CZ	1:A:285:LEU:HB2	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:305:ILE:HG22	2:B:325:GLU:HG2	1.79	0.65
2:B:396:ASN:O	2:B:399:PHE:N	2.28	0.65
13:M:182:PHE:CD1	13:M:183:PHE:N	2.64	0.65
15:O:110:THR:CG2	15:O:116:LYS:HA	2.24	0.65
1:A:632:VAL:HG21	1:A:796:THR:HG23	1.76	0.65
1:A:1171:PHE:CD2	1:A:1172:TYR:HD2	2.14	0.65
1:A:1378:LYS:HG3	1:A:1379:MET:H	1.61	0.65
11:K:69:ASP:OD1	11:K:70:HIS:N	2.26	0.65
1:A:955:LEU:HD12	1:A:959:ILE:HG13	1.78	0.65
2:B:192:LYS:NZ	2:B:438:SER:O	2.22	0.65
10:J:17:LYS:HB3	10:J:39:LEU:HD21	1.77	0.65
1:A:368:LEU:HD21	1:A:1416:ILE:HG23	1.79	0.65
3:C:121:PRO:O	3:C:122:ASP:CG	2.35	0.65
5:E:32:GLN:HA	5:E:35:VAL:HG12	1.78	0.65
14:N:364:ARG:HH11	14:N:365:VAL:H	1.44	0.65
1:A:18:PHE:HE1	2:B:1139:PRO:CB	2.06	0.65
1:A:429:GLY:O	1:A:465:HIS:ND1	2.24	0.65
1:A:1059:LEU:HD11	8:H:106:GLU:HB3	1.76	0.65
18:R:239:ARG:NH1	19:S:291:UNK:O	2.30	0.65
1:A:674:LYS:HD2	1:A:927:GLU:O	1.97	0.65
1:A:716:ASP:OD2	1:A:790:ALA:N	2.27	0.65
1:A:898:CYS:HA	1:A:904:VAL:HA	1.77	0.65
1:A:1370:GLY:O	1:A:1371:ILE:C	2.34	0.65
8:H:38:LEU:HD21	8:H:40:LEU:HB2	1.77	0.65
16:P:189:ASN:ND2	16:P:217:THR:OG1	2.26	0.65
1:A:204:VAL:O	1:A:208:ASN:N	2.27	0.65
1:A:308:SER:HA	15:O:534:ARG:HD2	1.79	0.65
1:A:644:GLU:OE2	1:A:651:PHE:CD2	2.49	0.65
1:A:1170:ALA:CA	1:A:1188:ILE:HG12	2.27	0.65
2:B:914:SER:O	2:B:915:ARG:HG2	1.97	0.65
7:G:2:PHE:N	7:G:76:VAL:O	2.30	0.65
15:O:370:LEU:HD22	15:O:453:ILE:HD11	1.77	0.65
17:Q:40:PRO:HB2	17:Q:44:ASN:ND2	2.11	0.65
18:R:581:ASN:ND2	18:R:583:HIS:O	2.30	0.65
19:S:480:ASN:OD1	19:S:481:PHE:N	2.26	0.65
2:B:137:ARG:HG3	2:B:138:GLY:H	1.62	0.65
2:B:553:TYR:HB3	2:B:598:ALA:N	2.11	0.65
3:C:231:PRO:HA	3:C:293:ARG:HG2	1.79	0.65
1:A:429:GLY:C	1:A:465:HIS:HD1	1.99	0.64
1:A:911:ILE:HG23	5:E:176:PRO:HD3	1.79	0.64
1:A:1222:VAL:HG23	1:A:1231:ALA:H	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:619:ALA:O	18:R:623:LYS:CB	2.44	0.64
15:O:163:VAL:HG22	15:O:169:LEU:HD22	1.78	0.64
16:P:107:SER:O	16:P:110:ILE:HG22	1.97	0.64
2:B:797:ARG:HG2	2:B:803:GLN:HG2	1.78	0.64
6:F:115:THR:HG22	6:F:116:ASP:H	1.63	0.64
16:P:77:GLU:HA	16:P:80:ALA:HB3	1.79	0.64
1:A:649:ASP:OD2	1:A:663:VAL:N	2.30	0.64
2:B:764:GLY:O	2:B:767:ILE:HG12	1.97	0.64
3:C:88:ASN:HB3	12:L:60:ARG:NH1	2.11	0.64
5:E:18:THR:HG23	5:E:143:ASN:HB3	1.78	0.64
18:R:93:ALA:O	18:R:149:ARG:NH2	2.31	0.64
1:A:99:THR:HA	1:A:102:ILE:HG22	1.79	0.64
18:R:469:ILE:O	18:R:473:GLY:N	2.31	0.64
1:A:577:THR:HG23	11:K:88:PHE:CD1	2.32	0.64
1:A:1145:LEU:CG	1:A:1308:GLY:O	2.46	0.64
1:A:1284:ASN:OD1	1:A:1285:ILE:N	2.30	0.64
2:B:214:GLY:HA3	2:B:234:ILE:HG21	1.79	0.64
15:O:47:PHE:HE2	15:O:586:ALA:HA	1.62	0.64
15:O:102:ARG:O	15:O:123:ASN:ND2	2.28	0.64
18:R:237:LEU:HD13	18:R:239:ARG:HG2	1.79	0.64
19:S:490:LYS:HG3	19:S:490:LYS:O	1.98	0.64
1:A:1384:LEU:O	1:A:1388:SER:N	2.30	0.64
2:B:213:LYS:HD3	2:B:216:VAL:HG23	1.80	0.64
13:M:72:GLU:HB2	14:N:364:ARG:HE	1.62	0.64
18:R:131:TYR:OH	18:R:135:ARG:NH1	2.31	0.64
18:R:391:PRO:HA	18:R:490:CYS:HB3	1.80	0.64
1:A:997:GLN:O	1:A:999:ASP:N	2.31	0.64
1:A:328:ASN:OD1	1:A:329:SER:N	2.24	0.63
1:A:1333:TYR:CE2	1:A:1337:ARG:HD2	2.33	0.63
2:B:404:ASP:O	2:B:407:LEU:N	2.30	0.63
2:B:1040:ARG:HD3	18:R:35:ASN:HD21	1.63	0.63
15:O:233:SER:O	15:O:236:LYS:HG2	1.97	0.63
19:S:469:ILE:O	19:S:473:LEU:HB3	1.98	0.63
15:O:599:ASN:OD1	15:O:626:GLN:NE2	2.30	0.63
18:R:463:ARG:NH1	18:R:601:ASN:O	2.30	0.63
19:S:306:UNK:O	19:S:310:UNK:CB	2.46	0.63
1:A:109:ASN:ND2	1:A:159:ALA:HB2	2.12	0.63
1:A:1333:TYR:CZ	1:A:1337:ARG:HD2	2.34	0.63
4:D:125:ASN:OD1	4:D:126:GLN:N	2.27	0.63
1:A:493:ARG:HB2	1:A:499:ARG:HH21	1.63	0.63
1:A:1272:VAL:HG13	1:A:1273:LYS:H	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:190:ASP:O	3:C:191:ILE:HG13	1.98	0.63
1:A:869:ARG:HH12	2:B:502:THR:HB	1.64	0.63
2:B:1028:LYS:HG2	2:B:1029:HIS:H	1.64	0.63
13:M:91:ALA:HA	14:N:392:GLN:CD	2.19	0.63
15:O:47:PHE:HZ	15:O:590:PHE:CE2	2.15	0.63
16:P:10:GLN:HB3	16:P:13:ASP:HB3	1.80	0.63
18:R:245:VAL:HA	18:R:248:SER:HB3	1.79	0.63
19:S:418:ASP:O	19:S:449:ARG:NH1	2.31	0.63
6:F:80:ALA:O	6:F:81:THR:OG1	2.14	0.63
1:A:533:ASN:HD21	6:F:90:ARG:HG2	1.62	0.63
3:C:133:VAL:HG11	3:C:172:GLN:HE22	1.64	0.63
13:M:117:HIS:HB2	13:M:119:TRP:NE1	2.14	0.63
1:A:148:CYS:SG	1:A:149:LYS:N	2.72	0.63
2:B:258:LYS:HE2	2:B:265:ASP:HB2	1.81	0.63
2:B:587:PHE:CZ	2:B:607:ARG:HD3	2.34	0.63
3:C:31:TRP:CZ2	11:K:123:ASP:HB3	2.34	0.63
17:Q:40:PRO:HB2	17:Q:44:ASN:HD21	1.64	0.63
18:R:392:THR:O	18:R:488:GLY:HA2	1.98	0.63
20:X:30:DT:O4	21:Y:33:DC:N4	2.32	0.63
20:X:63:DG:N2	21:Y:2:DC:O2	2.31	0.63
15:O:151:GLU:O	15:O:155:LEU:N	2.25	0.62
15:O:183:MET:HB2	15:O:186:THR:HB	1.80	0.62
15:O:233:SER:HA	20:X:59:DC:OP2	1.98	0.62
18:R:485:ASN:OD1	18:R:486:ILE:N	2.32	0.62
18:R:619:ALA:O	18:R:623:LYS:HB3	1.98	0.62
1:A:556:ASP:CB	2:B:767:ILE:CD1	2.77	0.62
1:A:573:ARG:NH2	11:K:87:GLU:OE1	2.32	0.62
1:A:1315:THR:HG22	1:A:1316:THR:H	1.65	0.62
1:A:1408:VAL:HG23	1:A:1413:GLU:HG3	1.81	0.62
9:I:32:GLU:HB2	13:M:130:PHE:HB3	1.80	0.62
13:M:160:ALA:N	13:M:173:ILE:HD11	2.14	0.62
15:O:222:HIS:CE1	15:O:244:ASN:HB3	2.35	0.62
15:O:499:THR:CG2	16:P:312:PHE:CG	2.82	0.62
15:O:644:LEU:HD11	16:P:310:VAL:HG21	1.81	0.62
2:B:756:THR:O	2:B:941:ASP:N	2.27	0.62
2:B:757:VAL:HG11	2:B:1022:ILE:HD12	1.82	0.62
5:E:64:PRO:HD3	5:E:77:SER:HA	1.81	0.62
7:G:126:SER:HB3	7:G:139:TYR:HB2	1.80	0.62
13:M:111:ARG:NH1	13:M:120:GLU:OE1	2.33	0.62
1:A:566:HIS:CD2	1:A:568:ASP:HB3	2.35	0.62
2:B:726:TYR:HE2	2:B:1028:LYS:HG3	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:133:HIS:CE1	7:G:211:TRP:HB3	2.34	0.62
18:R:434:GLU:HA	18:R:436:LYS:H	1.64	0.62
20:X:26:DT:H2'	20:X:27:DT:C6	2.34	0.62
2:B:48:LEU:HD22	2:B:743:LEU:HD21	1.80	0.62
18:R:202:ALA:O	18:R:205:LEU:HB3	1.98	0.62
1:A:432:TYR:OH	18:R:20:ASN:ND2	2.32	0.62
1:A:628:ALA:CB	1:A:675:HIS:HD2	2.12	0.62
1:A:666:LYS:HG2	1:A:667:SER:H	1.65	0.62
1:A:1145:LEU:CD1	1:A:1157:VAL:CG2	2.54	0.62
2:B:713:ILE:HG13	2:B:725:LEU:HD11	1.82	0.62
2:B:997:ASN:OD1	2:B:998:TYR:N	2.33	0.62
18:R:196:ILE:O	18:R:199:VAL:HB	1.99	0.62
1:A:33:GLU:HG3	1:A:83:HIS:NE2	2.14	0.62
1:A:974:LEU:HD21	1:A:998:TYR:CB	2.23	0.62
7:G:9:ASP:OD1	7:G:10:LEU:N	2.33	0.62
7:G:207:LEU:HD22	7:G:210:TRP:CD1	2.35	0.62
18:R:121:ARG:HB2	18:R:124:ASN:HD22	1.63	0.62
2:B:140:ASN:HD22	19:S:394:LYS:HG2	1.65	0.62
2:B:546:SER:HB2	14:N:391:LEU:HD22	1.71	0.62
2:B:833:GLY:N	2:B:881:ILE:O	2.29	0.62
18:R:195:LYS:O	18:R:199:VAL:N	2.27	0.62
18:R:439:ALA:HA	18:R:450:THR:H	1.63	0.62
15:O:316:LEU:O	15:O:320:GLU:N	2.32	0.62
1:A:133:ASP:OD1	1:A:134:ASN:N	2.32	0.61
1:A:201:TRP:HB3	1:A:205:LEU:HD13	1.82	0.61
13:M:160:ALA:HA	14:N:306:VAL:HG12	1.81	0.61
15:O:455:SER:HA	15:O:458:LYS:HD3	1.81	0.61
1:A:1384:LEU:HB2	1:A:1413:GLU:OE1	1.99	0.61
1:A:1438:GLU:HA	1:A:1441:LEU:HD13	1.82	0.61
7:G:89:ILE:HG13	7:G:92:CYS:SG	2.39	0.61
15:O:356:THR:HB	15:O:357:PRO:HD3	1.81	0.61
15:O:567:ARG:HG2	15:O:568:CYS:H	1.65	0.61
18:R:516:PHE:HB2	20:X:13:DA:H5'	1.82	0.61
10:J:7:CYS:HB2	10:J:11:GLY:H	1.65	0.61
1:A:252:ARG:O	1:A:254:GLU:N	2.29	0.61
2:B:109:LYS:CG	2:B:111:TYR:O	2.49	0.61
16:P:106:TRP:HE1	16:P:145:ARG:HA	1.65	0.61
19:S:387:ALA:O	19:S:391:ASN:N	2.28	0.61
1:A:286:THR:O	1:A:290:THR:HB	1.99	0.61
1:A:642:PRO:HB3	8:H:103:LYS:NZ	2.16	0.61
13:M:80:GLY:HA3	13:M:261:LYS:HE2	1.80	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:395:PRO:HG2	1:A:398:VAL:HG22	1.83	0.61
1:A:502:GLU:OE1	2:B:767:ILE:HG13	2.01	0.61
2:B:521:THR:O	2:B:606:GLY:N	2.32	0.61
2:B:555:VAL:HG12	2:B:564:SER:H	1.65	0.61
10:J:16:ASP:OD1	10:J:17:LYS:N	2.33	0.61
18:R:28:CYS:SG	18:R:29:GLY:N	2.74	0.61
18:R:518:GLY:HA3	18:R:532:ILE:O	2.00	0.61
2:B:201:SER:OG	2:B:376:ARG:NH1	2.33	0.61
8:H:101:ALA:HB2	8:H:116:TYR:HE1	1.65	0.61
15:O:285:ASP:OD1	15:O:286:ARG:N	2.33	0.61
1:A:1203:GLU:HA	1:A:1206:ALA:HB3	1.83	0.61
2:B:125:TYR:HB3	2:B:186:ILE:HG23	1.83	0.61
2:B:1003:MET:SD	3:C:293:ARG:NH2	2.73	0.61
2:B:1042:PRO:HD2	2:B:1057:ASP:CB	2.31	0.61
5:E:115:ASN:OD1	5:E:116:ILE:N	2.34	0.61
5:E:141:VAL:HG23	5:E:142:VAL:H	1.66	0.61
8:H:10:PHE:HE2	8:H:38:LEU:HD13	1.65	0.61
11:K:63:PHE:CD2	11:K:117:LEU:HD13	2.36	0.61
19:S:381:VAL:HG22	19:S:383:ARG:H	1.65	0.61
1:A:1378:LYS:HG3	1:A:1379:MET:N	2.15	0.61
2:B:234:ILE:HA	2:B:240:ILE:HA	1.82	0.61
2:B:612:LEU:HA	2:B:675:ILE:HG23	1.83	0.61
13:M:182:PHE:HD1	13:M:183:PHE:H	1.47	0.61
16:P:33:GLN:NE2	19:S:372:MET:SD	2.74	0.61
19:S:488:ILE:O	19:S:488:ILE:HG22	2.01	0.61
1:A:200:GLU:CB	15:O:516:LEU:CD2	2.78	0.61
1:A:373:VAL:HG21	2:B:1062:LEU:HG	1.82	0.61
1:A:1160:ARG:NH1	1:A:1307:ASP:OD2	2.31	0.61
2:B:126:SER:OG	2:B:151:ARG:HB3	2.00	0.61
2:B:1080:LEU:O	2:B:1084:MET:HB3	2.01	0.61
5:E:161:LYS:HE2	5:E:195:VAL:HG23	1.82	0.61
5:E:181:ALA:C	5:E:182:ASP:O	2.38	0.61
15:O:292:ARG:HD2	15:O:488:LYS:NZ	2.16	0.61
1:A:117:GLU:HG2	1:A:119:ASP:H	1.64	0.60
2:B:916:HIS:CD2	2:B:957:LYS:HB2	2.35	0.60
5:E:112:TYR:CG	5:E:116:ILE:HG12	2.36	0.60
1:A:1171:PHE:HD2	1:A:1172:TYR:HD2	1.50	0.60
2:B:326:ALA:HB3	13:M:231:LEU:HD11	1.83	0.60
4:D:17:LEU:HD11	4:D:63:VAL:HG23	1.81	0.60
15:O:188:SER:O	15:O:190:LEU:N	2.34	0.60
18:R:87:LEU:CD2	18:R:105:PHE:HB2	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:X:6:DA:C6	20:X:7:DA:C6	2.90	0.60
1:A:269:ARG:HH22	1:A:283:ASP:C	2.05	0.60
1:A:716:ASP:OD1	1:A:789:ASN:HB2	2.01	0.60
2:B:776:SER:HB2	2:B:928:GLN:HE21	1.66	0.60
7:G:94:ALA:O	7:G:128:TRP:NE1	2.34	0.60
18:R:464:LYS:NZ	18:R:605:VAL:O	2.29	0.60
1:A:714:ILE:O	1:A:717:VAL:N	2.34	0.60
1:A:1224:ILE:HG13	1:A:1229:ARG:H	1.67	0.60
2:B:1054:ARG:HG2	2:B:1055:SER:H	1.67	0.60
15:O:338:ASP:H	15:O:342:ALA:HB2	1.66	0.60
18:R:417:ASN:HA	19:S:437:THR:HG22	1.83	0.60
21:Y:47:DC:H2'	21:Y:48:DT:C4	2.37	0.60
1:A:1145:LEU:N	1:A:1292:GLU:OE1	2.30	0.60
2:B:502:THR:HG22	2:B:510:LEU:HD11	1.83	0.60
5:E:185:ALA:O	5:E:189:GLY:N	2.34	0.60
16:P:20:SER:HA	16:P:23:MET:HG2	1.84	0.60
19:S:427:LYS:HB2	19:S:446:TYR:OH	2.00	0.60
1:A:1136:ILE:HG21	1:A:1318:HIS:HB3	1.84	0.60
2:B:534:TYR:HA	2:B:538:VAL:HG22	1.84	0.60
3:C:248:GLN:HB3	3:C:256:ILE:HD11	1.84	0.60
5:E:20:LYS:HB3	5:E:35:VAL:HG23	1.83	0.60
15:O:506:ARG:HH21	16:P:246:VAL:HG13	1.67	0.60
1:A:331:SER:O	1:A:351:ARG:NH2	2.35	0.60
2:B:643:LEU:HB3	2:B:645:LEU:HD13	1.84	0.60
13:M:84:SER:HB3	13:M:174:GLU:HG2	1.84	0.60
1:A:1130:ILE:CG2	1:A:1371:ILE:HG13	2.30	0.60
3:C:113:LEU:HD11	3:C:132:ILE:HD11	1.81	0.60
5:E:180:ARG:NH1	5:E:190:LEU:O	2.30	0.60
21:Y:17:DT:H2''	21:Y:18:DC:C5	2.36	0.60
1:A:18:PHE:CE1	2:B:1139:PRO:CB	2.83	0.60
1:A:373:VAL:HG12	1:A:374:ASP:N	2.16	0.60
1:A:1285:ILE:HA	1:A:1291:ARG:HG2	1.82	0.60
2:B:415:GLU:HG2	2:B:416:TYR:N	2.11	0.60
2:B:501:ASP:HB3	2:B:703:CYS:HB2	1.83	0.60
7:G:119:CYS:HB2	7:G:128:TRP:HB3	1.84	0.60
14:N:364:ARG:N	14:N:372:SER:O	2.34	0.60
16:P:31:PHE:CE2	16:P:72:PHE:HB2	2.37	0.60
16:P:190:THR:HA	16:P:215:TYR:CE1	2.37	0.60
16:P:253:LEU:HB2	16:P:262:ARG:O	2.02	0.60
16:P:308:GLU:HG2	16:P:308:GLU:O	2.01	0.60
19:S:432:LEU:O	19:S:476:LYS:NZ	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1125:ARG:HH22	1:A:1317:ASN:HB3	1.66	0.59
1:A:980:SER:HA	5:E:163:GLU:HG2	1.84	0.59
2:B:354:ARG:NH1	2:B:549:LEU:HD13	2.17	0.59
2:B:728:MET:SD	2:B:753:GLN:NE2	2.74	0.59
2:B:961:LEU:HD11	2:B:1019:PHE:HA	1.84	0.59
2:B:417:ASP:C	2:B:419:LEU:H	2.05	0.59
2:B:1045:VAL:HG23	2:B:1046:LEU:N	2.18	0.59
3:C:218:LYS:HE2	12:L:70:ARG:HB3	1.85	0.59
5:E:47:CYS:HA	5:E:53:PRO:HA	1.83	0.59
13:M:251:THR:OG1	13:M:254:GLN:NE2	2.35	0.59
15:O:105:LYS:HB3	15:O:210:PRO:HG3	1.85	0.59
15:O:220:GLU:HG2	15:O:221:LYS:H	1.66	0.59
15:O:634:GLU:O	15:O:637:VAL:HG12	2.01	0.59
18:R:478:PHE:HB3	18:R:599:PRO:HA	1.84	0.59
18:R:583:HIS:NE2	18:R:585:LEU:O	2.35	0.59
2:B:253:ILE:HG22	2:B:286:ASN:ND2	2.17	0.59
3:C:238:PRO:O	3:C:239:ILE:HG13	2.01	0.59
15:O:496:ILE:O	15:O:496:ILE:HG22	2.02	0.59
18:R:166:LYS:HG2	18:R:522:ARG:HH12	1.68	0.59
1:A:248:VAL:HG23	1:A:248:VAL:O	2.02	0.59
1:A:786:ASP:OD1	1:A:787:ASN:N	2.35	0.59
2:B:831:GLU:N	2:B:831:GLU:OE1	2.31	0.59
15:O:52:LEU:HD11	15:O:131:LEU:HD12	1.82	0.59
15:O:506:ARG:HB3	16:P:250:ASP:OD1	2.03	0.59
2:B:1045:VAL:HG23	2:B:1046:LEU:CD1	2.25	0.59
15:O:215:TRP:O	15:O:219:TYR:HB2	2.03	0.59
16:P:184:ARG:O	16:P:187:SER:OG	2.20	0.59
18:R:213:TRP:CD1	18:R:287:PRO:HD3	2.32	0.59
1:A:132:VAL:HG13	1:A:136:ARG:HB2	1.84	0.59
13:M:159:TYR:C	13:M:173:ILE:HD11	2.22	0.59
20:X:7:DA:H4'	20:X:8:DC:OP1	2.03	0.59
1:A:830:ARG:NH1	2:B:657:SER:O	2.36	0.59
2:B:260:CYS:O	2:B:342:PHE:HB3	2.01	0.59
2:B:542:THR:O	13:M:178:GLN:NE2	2.36	0.59
2:B:1042:PRO:HD2	2:B:1057:ASP:CG	2.23	0.59
3:C:255:VAL:HG22	3:C:256:ILE:H	1.68	0.59
4:D:119:GLU:HA	4:D:122:GLN:HB3	1.84	0.59
14:N:394:VAL:HB	14:N:412:VAL:HB	1.83	0.59
1:A:164:VAL:HA	1:A:180:HIS:HB2	1.84	0.59
1:A:370:GLY:O	2:B:1061:ARG:NH1	2.36	0.59
1:A:904:VAL:HG13	1:A:912:VAL:HG23	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1224:ILE:HG12	1:A:1226:GLY:N	2.18	0.59
2:B:481:ARG:NH2	21:Y:21:DG:H2'	2.17	0.59
2:B:992:VAL:HG23	3:C:278:GLU:HG2	1.83	0.59
5:E:83:CYS:SG	5:E:84:ASP:N	2.75	0.59
19:S:421:THR:HG23	19:S:424:GLU:H	1.67	0.59
1:A:813:VAL:HB	1:A:848:VAL:HG13	1.85	0.59
1:A:1022:LEU:HD22	1:A:1060:TYR:HE2	1.67	0.59
3:C:77:SER:OG	3:C:221:PRO:HB3	2.03	0.59
7:G:112:GLN:HE22	7:G:115:LEU:HD22	1.68	0.59
8:H:24:CYS:SG	8:H:25:ARG:N	2.76	0.59
8:H:107:VAL:N	8:H:111:LEU:O	2.32	0.59
16:P:14:ASN:HB3	16:P:51:ILE:HD13	1.85	0.59
1:A:327:ILE:CA	1:A:353:PHE:CE2	2.86	0.58
1:A:1380:ARG:HH11	1:A:1385:GLN:HE22	1.51	0.58
2:B:612:LEU:HD11	2:B:649:LEU:HD11	1.84	0.58
2:B:822:GLN:HG2	2:B:823:SER:H	1.68	0.58
8:H:5:LEU:HB2	8:H:59:ILE:O	2.03	0.58
11:K:85:ASP:OD2	11:K:111:THR:OG1	2.21	0.58
13:M:149:LYS:HB3	13:M:182:PHE:HE2	1.67	0.58
14:N:282:LEU:O	14:N:286:ASP:HB2	2.02	0.58
15:O:128:HIS:NE2	15:O:132:TYR:HE2	2.00	0.58
16:P:236:THR:HG23	16:P:239:ASN:H	1.68	0.58
19:S:418:ASP:HB3	19:S:449:ARG:HH12	1.68	0.58
1:A:235:LYS:CD	1:A:252:ARG:CB	2.81	0.58
2:B:1038:ARG:HE	2:B:1041:GLY:H	1.49	0.58
15:O:584:ASN:HD22	15:O:587:ASN:HB2	1.68	0.58
15:O:592:LYS:O	15:O:596:LYS:HG2	2.03	0.58
16:P:142:PHE:CZ	20:X:30:DT:H4'	2.38	0.58
20:X:60:DA:H2'	20:X:61:DT:C6	2.38	0.58
5:E:155:ARG:NH2	5:E:194:GLU:OE2	2.36	0.58
1:A:622:VAL:HB	1:A:624:ILE:HD11	1.85	0.58
1:A:1161:VAL:HG22	1:A:1275:LEU:HD13	1.84	0.58
5:E:55:ARG:HD2	5:E:82:PHE:CE2	2.38	0.58
14:N:306:VAL:HG23	14:N:415:LYS:HD3	1.85	0.58
15:O:195:CYS:SG	15:O:196:GLU:N	2.76	0.58
19:S:444:GLN:NE2	19:S:490:LYS:NZ	2.51	0.58
1:A:45:ASP:OD1	1:A:46:ARG:N	2.36	0.58
1:A:212:GLU:HG2	1:A:213:ARG:H	1.68	0.58
1:A:975:VAL:HG22	1:A:976:ARG:N	2.10	0.58
2:B:766:ASP:OD1	2:B:945:ASN:HB2	2.03	0.58
2:B:929:GLU:HG2	3:C:72:ILE:CG2	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:933:PHE:O	2:B:934:ASN:HB3	2.03	0.58
15:O:570:GLU:HA	15:O:573:SER:HB3	1.85	0.58
16:P:206:VAL:HB	16:P:210:PRO:HG3	1.85	0.58
18:R:623:LYS:HE2	19:S:435:TRP:HD1	1.67	0.58
1:A:31:GLU:HG3	1:A:69:THR:HG21	1.86	0.58
2:B:235:THR:HG22	2:B:236:LYS:HG3	1.86	0.58
3:C:227:TYR:HB3	3:C:300:PHE:CD1	2.38	0.58
3:C:255:VAL:HG13	3:C:256:ILE:N	2.18	0.58
10:J:14:VAL:O	10:J:17:LYS:N	2.37	0.58
13:M:94:PRO:HB3	14:N:391:LEU:C	2.23	0.58
14:N:364:ARG:NH1	14:N:365:VAL:O	2.37	0.58
16:P:247:LEU:HB3	16:P:253:LEU:HG	1.85	0.58
18:R:431:ARG:NH1	18:R:438:THR:OG1	2.35	0.58
2:B:494:PHE:CE1	2:B:680:ILE:HD12	2.38	0.58
2:B:780:ARG:HH11	10:J:6:ARG:HD2	1.63	0.58
5:E:181:ALA:HA	5:E:186:LEU:HG	1.84	0.58
1:A:197:TRP:CH2	15:O:567:ARG:NH1	2.71	0.58
1:A:974:LEU:O	1:A:975:VAL:HG12	2.02	0.58
2:B:49:PRO:O	2:B:53:LYS:N	2.35	0.58
3:C:240:LYS:HB3	3:C:264:GLU:HB3	1.85	0.58
7:G:89:ILE:HG23	7:G:142:VAL:HG12	1.86	0.58
15:O:478:VAL:HG12	15:O:479:PRO:O	2.03	0.58
15:O:620:LEU:HD23	15:O:623:GLU:HB2	1.86	0.58
21:Y:44:DT:H2''	21:Y:45:DT:H2'	1.85	0.58
1:A:106:ILE:HD13	1:A:234:ILE:HG12	1.85	0.58
1:A:178:ILE:HD11	1:A:222:LEU:HB2	1.86	0.58
1:A:354:CYS:SG	1:A:1393:THR:OG1	2.58	0.58
1:A:1221:ASP:OD1	1:A:1222:VAL:N	2.36	0.58
2:B:265:ASP:HA	2:B:268:ILE:HD12	1.86	0.58
4:D:72:PHE:O	7:G:145:LYS:NZ	2.36	0.58
13:M:226:ARG:HG3	13:M:227:LEU:H	1.69	0.58
15:O:193:GLN:C	15:O:195:CYS:N	2.57	0.58
18:R:173:LEU:O	18:R:175:LEU:N	2.37	0.58
1:A:116:SER:HB3	1:A:155:LEU:HD22	1.85	0.58
1:A:501:ASN:O	1:A:504:VAL:HG22	2.04	0.58
1:A:795:ALA:HB1	1:A:802:SER:HA	1.86	0.58
2:B:1012:CYS:SG	3:C:293:ARG:NH2	2.75	0.58
3:C:222:VAL:HG11	3:C:225:ALA:CB	2.28	0.58
15:O:132:TYR:O	15:O:134:GLY:N	2.31	0.58
15:O:449:SER:HA	15:O:456:HIS:CD2	2.39	0.58
15:O:495:VAL:HG13	15:O:496:ILE:HG13	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:568:ASP:OD1	8:H:22:LYS:HG2	2.03	0.57
1:A:1126:ILE:HG22	1:A:1130:ILE:HD12	1.86	0.57
13:M:134:ASP:O	13:M:138:SER:N	2.36	0.57
16:P:53:GLN:NE2	19:S:363:GLN:HA	2.19	0.57
18:R:521:TYR:CE2	18:R:523:MET:HB2	2.39	0.57
1:A:200:GLU:CB	15:O:516:LEU:HD23	2.34	0.57
1:A:752:THR:HA	1:A:761:THR:HG21	1.87	0.57
1:A:1323:PHE:HD1	1:A:1328:ILE:H	1.51	0.57
5:E:46:TYR:CZ	5:E:58:MET:HA	2.39	0.57
7:G:126:SER:HG	7:G:139:TYR:CB	2.17	0.57
13:M:102:ALA:O	13:M:103:GLU:HB2	2.04	0.57
15:O:104:VAL:N	15:O:123:ASN:HB2	2.18	0.57
18:R:25:CYS:SG	18:R:28:CYS:CB	2.92	0.57
18:R:463:ARG:HG3	18:R:602:LEU:HD13	1.86	0.57
19:S:364:LEU:HB3	19:S:374:ILE:HD12	1.87	0.57
2:B:1045:VAL:CG2	2:B:1046:LEU:HD12	2.27	0.57
15:O:110:THR:HG22	15:O:116:LYS:CA	2.26	0.57
15:O:581:LEU:O	15:O:585:MET:HB2	2.04	0.57
19:S:413:ARG:NE	20:X:12:DT:OP1	2.36	0.57
21:Y:55:DT:C4	21:Y:56:DG:O6	2.57	0.57
1:A:38:ASP:O	1:A:40:PHE:N	2.31	0.57
1:A:385:PRO:HG3	2:B:764:GLY:HA3	1.86	0.57
2:B:914:SER:C	2:B:916:HIS:H	2.06	0.57
4:D:127:LEU:HD12	4:D:127:LEU:O	2.04	0.57
9:I:8:CYS:SG	9:I:29:CYS:HB2	2.43	0.57
16:P:31:PHE:HE2	16:P:72:PHE:HB2	1.69	0.57
1:A:235:LYS:HD2	1:A:252:ARG:CB	2.33	0.57
1:A:1329:GLU:OE2	5:E:200:ARG:NH2	2.37	0.57
10:J:41:LEU:HD23	10:J:47:ARG:HA	1.87	0.57
15:O:471:THR:OG1	15:O:477:TYR:HB3	2.04	0.57
21:Y:7:DA:H2"	21:Y:8:DG:C8	2.39	0.57
1:A:485:ILE:O	1:A:486:LEU:HD12	2.05	0.57
1:A:668:VAL:O	1:A:677:VAL:N	2.35	0.57
7:G:45:CYS:SG	7:G:46:ILE:N	2.77	0.57
1:A:34:VAL:HG13	1:A:35:SER:H	1.70	0.57
1:A:67:CYS:HB3	1:A:70:CYS:O	2.04	0.57
1:A:189:LYS:HE3	1:A:191:ALA:HB2	1.86	0.57
1:A:1370:GLY:HA2	1:A:1375:GLY:CA	2.35	0.57
2:B:1022:ILE:HG22	2:B:1023:TYR:H	1.69	0.57
6:F:108:PHE:CE2	6:F:131:PRO:HG3	2.40	0.57
16:P:45:LEU:HD22	19:S:366:LEU:HB3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:314:GLU:HB3	17:Q:37:PRO:HB3	1.85	0.57
18:R:7:CYS:SG	18:R:28:CYS:CB	2.76	0.57
1:A:327:ILE:CG2	1:A:353:PHE:CE2	2.87	0.57
3:C:165:ARG:NH2	3:C:190:ASP:OD1	2.37	0.57
13:M:90:TYR:O	14:N:392:GLN:CB	2.53	0.57
1:A:30:SER:OG	1:A:82:GLY:HA2	2.04	0.57
1:A:649:ASP:OD2	1:A:663:VAL:HG13	2.04	0.57
2:B:651:VAL:HG23	2:B:652:ASN:H	1.70	0.57
3:C:30:GLU:HG3	11:K:84:PRO:HG3	1.87	0.57
5:E:28:TYR:CZ	5:E:78:LEU:HD23	2.40	0.57
7:G:13:ILE:HG13	7:G:66:SER:HB3	1.87	0.57
15:O:467:PHE:CD1	15:O:468:LEU:HD13	2.39	0.57
15:O:494:TYR:HB2	16:P:294:PHE:HZ	1.69	0.57
18:R:617:GLU:HG2	18:R:621:LYS:HE2	1.87	0.57
1:A:980:SER:OG	5:E:160:GLU:HA	2.05	0.57
6:F:108:PHE:HE2	6:F:131:PRO:HG3	1.70	0.57
15:O:158:GLU:OE1	15:O:161:GLN:NE2	2.37	0.57
15:O:159:ILE:O	15:O:163:VAL:HG23	2.05	0.57
15:O:166:LEU:HB3	15:O:169:LEU:HD11	1.87	0.57
1:A:91:PHE:HE1	1:A:227:THR:HG21	1.70	0.56
1:A:584:SER:O	1:A:586:GLY:N	2.38	0.56
1:A:940:ASP:O	1:A:943:TYR:N	2.38	0.56
2:B:554:GLY:O	2:B:599:VAL:HG12	2.05	0.56
2:B:615:VAL:HA	2:B:620:SER:HA	1.87	0.56
2:B:818:ILE:O	2:B:822:GLN:N	2.37	0.56
7:G:104:ILE:HG12	7:G:105:PHE:CD1	2.39	0.56
13:M:183:PHE:C	13:M:185:TYR:H	2.07	0.56
15:O:498:SER:HB2	16:P:296:TYR:HB3	1.85	0.56
15:O:554:THR:CG2	15:O:561:ARG:HE	2.14	0.56
18:R:521:TYR:HE2	18:R:523:MET:HB2	1.69	0.56
1:A:1144:VAL:HG12	1:A:1292:GLU:HG3	1.88	0.56
2:B:546:SER:HB3	14:N:391:LEU:HD21	1.86	0.56
1:A:478:PRO:HG3	21:Y:23:DG:N3	2.19	0.56
1:A:595:PRO:HG2	1:A:598:MET:HG2	1.87	0.56
1:A:943:TYR:O	1:A:947:PHE:N	2.38	0.56
2:B:59:LYS:HE2	2:B:519:HIS:CD2	2.41	0.56
2:B:539:GLU:HA	14:N:308:GLN:HE22	1.70	0.56
2:B:932:PRO:HB2	2:B:1004:LEU:HD13	1.85	0.56
3:C:132:ILE:O	3:C:208:CYS:HB3	2.04	0.56
4:D:65:TYR:HA	4:D:68:ILE:HG22	1.87	0.56
8:H:106:GLU:OE1	8:H:106:GLU:N	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:99:ASN:O	11:K:100:LEU:HD12	2.06	0.56
13:M:123:ILE:O	13:M:146:GLN:N	2.35	0.56
18:R:401:THR:O	18:R:479:THR:OG1	2.20	0.56
18:R:510:SER:N	18:R:520:ILE:O	2.34	0.56
1:A:1319:VAL:HG21	1:A:1335:ILE:HB	1.87	0.56
2:B:855:PRO:O	18:R:106:GLN:NE2	2.38	0.56
2:B:905:ARG:O	2:B:907:GLU:N	2.38	0.56
3:C:69:ARG:HE	11:K:71:THR:HG22	1.71	0.56
15:O:251:LYS:HA	15:O:254:ASN:HB2	1.88	0.56
16:P:216:SER:OG	16:P:260:CYS:HA	2.05	0.56
18:R:397:VAL:O	18:R:484:GLN:N	2.37	0.56
1:A:176:LEU:HB3	1:A:320:GLN:NE2	2.19	0.56
2:B:332:ILE:HG13	2:B:333:ALA:H	1.68	0.56
8:H:93:TYR:HD2	8:H:143:LEU:HG	1.71	0.56
15:O:91:VAL:O	15:O:95:LEU:CB	2.52	0.56
15:O:583:TRP:CZ3	16:P:315:TRP:HB3	2.40	0.56
1:A:496:ARG:HB2	2:B:1035:MET:SD	2.45	0.56
2:B:297:THR:OG1	2:B:302:LEU:HG	2.06	0.56
2:B:961:LEU:HD13	2:B:1018:PHE:CE2	2.41	0.56
7:G:126:SER:HB3	7:G:139:TYR:HB3	1.87	0.56
15:O:498:SER:OG	16:P:296:TYR:HB2	2.04	0.56
1:A:11:LYS:HD2	2:B:1145:ASP:HA	1.88	0.56
1:A:830:ARG:NH2	1:A:833:PRO:O	2.37	0.56
1:A:835:PHE:CE2	1:A:844:SER:HA	2.40	0.56
2:B:915:ARG:CD	2:B:1023:TYR:HB3	2.35	0.56
3:C:66:ALA:O	3:C:70:ILE:HG22	2.06	0.56
3:C:86:PHE:O	3:C:87:ASN:O	2.23	0.56
3:C:89:THR:CG2	3:C:201:GLU:H	2.18	0.56
15:O:193:GLN:C	15:O:195:CYS:H	2.09	0.56
1:A:777:VAL:HG12	1:A:811:ALA:HB1	1.86	0.56
1:A:816:GLN:HB3	1:A:867:SER:HB2	1.87	0.56
2:B:461:LEU:HD21	2:B:1028:LYS:HD3	1.87	0.56
2:B:695:GLN:HG3	2:B:697:PRO:HD2	1.88	0.56
4:D:110:LEU:HD21	4:D:123:ILE:HD11	1.88	0.56
5:E:17:ARG:HG3	5:E:35:VAL:HG22	1.87	0.56
5:E:63:ASN:HA	5:E:77:SER:HA	1.88	0.56
7:G:96:GLY:HA2	7:G:112:GLN:OE1	2.05	0.56
11:K:63:PHE:HD2	11:K:117:LEU:HD13	1.70	0.56
13:M:107:ILE:HD12	13:M:124:PRO:HG3	1.87	0.56
13:M:159:TYR:HD1	13:M:172:PRO:HA	1.69	0.56
15:O:46:LEU:HD11	15:O:66:GLY:HA2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:234:ASP:O	15:O:238:ARG:N	2.39	0.56
18:R:6:ASN:HD22	18:R:30:VAL:HG21	1.70	0.56
1:A:842:PRO:C	1:A:844:SER:H	2.09	0.56
2:B:177:CYS:SG	2:B:714:ALA:HB1	2.46	0.56
2:B:541:ILE:HA	2:B:544:ILE:HD12	1.88	0.56
4:D:135:TYR:HA	4:D:141:CYS:SG	2.46	0.56
9:I:15:THR:HG22	9:I:24:LEU:HA	1.87	0.56
15:O:555:ALA:HB2	15:O:561:ARG:HG3	1.88	0.56
15:O:595:LEU:HD12	15:O:598:GLU:CG	2.35	0.56
1:A:329:SER:HA	1:A:351:ARG:NE	2.21	0.56
1:A:486:LEU:HD23	1:A:537:VAL:HG22	1.87	0.56
1:A:628:ALA:CB	1:A:675:HIS:CD2	2.89	0.56
1:A:955:LEU:HB2	1:A:958:ALA:HB3	1.87	0.56
2:B:109:LYS:HG2	2:B:111:TYR:O	2.05	0.56
2:B:734:PRO:CB	2:B:915:ARG:NH1	2.69	0.56
2:B:1038:ARG:NE	2:B:1041:GLY:H	2.03	0.56
18:R:639:GLU:HG3	18:R:642:ARG:HE	1.69	0.56
20:X:56:DC:N3	21:Y:8:DG:N1	2.53	0.56
1:A:364:PHE:HE2	1:A:1387:ALA:C	2.10	0.55
1:A:890:MET:SD	2:B:1068:ASP:HB2	2.46	0.55
1:A:893:LEU:HD13	1:A:1361:VAL:HG21	1.86	0.55
1:A:1189:ASP:OD2	1:A:1192:THR:N	2.39	0.55
1:A:1202:ILE:O	1:A:1205:ILE:HG13	2.06	0.55
1:A:1385:GLN:HA	1:A:1388:SER:HB3	1.87	0.55
1:A:321:LEU:O	1:A:325:MET:CB	2.54	0.55
1:A:598:MET:HB2	8:H:96:VAL:HG21	1.87	0.55
1:A:1429:LYS:HD3	6:F:137:TYR:CE2	2.40	0.55
2:B:658:TYR:CD2	2:B:670:MET:HG2	2.41	0.55
2:B:754:ASN:O	10:J:48:ARG:NH1	2.40	0.55
2:B:932:PRO:HG2	2:B:940:PRO:CG	2.36	0.55
2:B:933:PHE:HE1	2:B:1005:TYR:CD2	2.09	0.55
2:B:936:GLN:HB2	2:B:938:ILE:HD12	1.86	0.55
3:C:31:TRP:CG	3:C:32:ASN:N	2.74	0.55
3:C:96:VAL:O	3:C:99:HIS:HB3	2.06	0.55
8:H:8:ASP:OD1	8:H:9:ILE:N	2.38	0.55
18:R:219:ARG:N	21:Y:54:DA:OP1	2.26	0.55
21:Y:39:DA:H1'	21:Y:40:DA:H5'	1.88	0.55
2:B:471:THR:HG23	2:B:514:LEU:HB2	1.88	0.55
13:M:84:SER:C	13:M:85:LEU:CD1	2.71	0.55
13:M:90:TYR:CB	13:M:179:LEU:HB3	2.35	0.55
13:M:183:PHE:C	13:M:185:TYR:N	2.57	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:307:VAL:HG13	15:O:308:THR:H	1.70	0.55
16:P:14:ASN:HA	16:P:17:THR:HG22	1.88	0.55
1:A:207:HIS:CE1	15:O:521:ILE:HG21	2.42	0.55
3:C:240:LYS:HB2	3:C:261:GLY:O	2.06	0.55
15:O:193:GLN:O	15:O:194:LEU:C	2.42	0.55
15:O:338:ASP:OD1	15:O:339:LEU:N	2.40	0.55
21:Y:10:DC:N3	21:Y:11:DA:N6	2.54	0.55
1:A:552:ALA:HB3	1:A:671:ASP:H	1.72	0.55
1:A:633:PHE:HZ	1:A:643:ASN:HB3	1.72	0.55
2:B:81:GLN:O	2:B:94:LYS:HA	2.07	0.55
2:B:1036:HIS:NE2	2:B:1058:GLY:HA2	2.20	0.55
15:O:78:GLU:HG2	15:O:82:LYS:HZ1	1.70	0.55
15:O:135:LEU:HD12	15:O:138:ASP:HB3	1.87	0.55
15:O:190:LEU:CA	15:O:193:GLN:HB3	2.36	0.55
18:R:219:ARG:NH1	18:R:514:GLU:O	2.39	0.55
19:S:417:THR:HG22	19:S:453:GLN:HE21	1.72	0.55
19:S:439:PHE:HD1	19:S:454:VAL:HG12	1.72	0.55
19:S:507:ASN:HA	19:S:510:LYS:HB3	1.87	0.55
1:A:371:LYS:HZ3	2:B:1122:PRO:CB	2.06	0.55
1:A:418:GLU:O	1:A:421:VAL:HG12	2.07	0.55
1:A:523:GLN:HB2	2:B:1081:GLU:OE2	2.06	0.55
1:A:790:ALA:HB1	1:A:794:MET:HE2	1.88	0.55
1:A:974:LEU:HD11	1:A:998:TYR:CD2	2.41	0.55
2:B:521:THR:HG22	2:B:605:GLY:HA2	1.89	0.55
2:B:931:MET:HG3	2:B:932:PRO:HD2	1.89	0.55
13:M:164:LYS:HE3	13:M:259:ILE:HG13	1.88	0.55
15:O:296:LEU:HD22	15:O:487:LEU:HD21	1.87	0.55
16:P:221:ILE:O	16:P:225:ILE:HG12	2.07	0.55
18:R:96:ILE:HG22	18:R:141:HIS:NE2	2.21	0.55
18:R:100:ILE:O	18:R:103:ALA:HB3	2.07	0.55
19:S:414:GLY:HA3	20:X:11:DA:P	2.47	0.55
1:A:134:ASN:OD1	1:A:1404:LYS:NZ	2.39	0.55
1:A:484:SER:O	1:A:508:TYR:HE1	1.90	0.55
1:A:1411:VAL:HG13	1:A:1412:SER:H	1.72	0.55
2:B:733:GLN:HG3	10:J:54:VAL:HG13	1.89	0.55
15:O:647:LEU:O	15:O:650:VAL:HG12	2.07	0.55
1:A:11:LYS:HG3	2:B:1117:ILE:HD13	1.87	0.55
1:A:520:HIS:HE1	2:B:1062:LEU:HD21	1.72	0.55
2:B:383:LEU:HB3	2:B:442:TRP:CH2	2.41	0.55
2:B:611:PRO:HG3	2:B:648:TYR:CE1	2.41	0.55
2:B:976:GLY:HA2	2:B:981:GLY:HA3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:89:GLU:OE1	6:F:90:ARG:N	2.40	0.55
7:G:126:SER:CB	7:G:139:TYR:CB	2.85	0.55
1:A:372:ARG:HG2	2:B:1050:PRO:HB2	1.89	0.55
1:A:715:ASN:HD21	2:B:1001:LYS:HD3	1.70	0.55
5:E:77:SER:O	5:E:105:PHE:HB3	2.06	0.55
13:M:112:TYR:HD1	13:M:119:TRP:NE1	2.00	0.55
14:N:287:HIS:NE2	14:N:384:LYS:HG3	2.22	0.55
15:O:171:VAL:HB	15:O:276:PRO:HB3	1.87	0.55
1:A:164:VAL:HB	1:A:180:HIS:CB	2.37	0.55
1:A:308:SER:HA	15:O:534:ARG:CD	2.37	0.55
1:A:404:TYR:CZ	1:A:528:ARG:HD2	2.42	0.55
1:A:636:PRO:HG2	1:A:643:ASN:HA	1.89	0.55
1:A:1125:ARG:NH2	1:A:1317:ASN:HB3	2.22	0.55
2:B:906:PRO:HB3	2:B:1026:LYS:HE3	1.89	0.55
18:R:11:GLU:N	18:R:11:GLU:OE1	2.40	0.55
18:R:270:LEU:O	18:R:273:GLN:NE2	2.36	0.55
2:B:817:PRO:HB2	2:B:822:GLN:HA	1.89	0.54
5:E:182:ASP:OD1	5:E:183:PRO:HD2	2.07	0.54
7:G:82:GLY:HA2	7:G:150:ILE:O	2.08	0.54
8:H:93:TYR:CD2	8:H:143:LEU:HG	2.42	0.54
18:R:436:LYS:NZ	19:S:462:GLU:OE2	2.25	0.54
18:R:483:ILE:HG21	18:R:486:ILE:HG13	1.89	0.54
18:R:627:TRP:O	18:R:631:ASN:ND2	2.32	0.54
1:A:628:ALA:HB2	1:A:675:HIS:HD2	1.69	0.54
2:B:400:LYS:O	2:B:403:ILE:HG22	2.07	0.54
2:B:566:ARG:NH2	14:N:282:LEU:HD23	2.22	0.54
2:B:583:LYS:HG2	2:B:584:VAL:HG13	1.88	0.54
2:B:778:ILE:HG13	2:B:906:PRO:HG2	1.88	0.54
2:B:904:ARG:NH2	2:B:1033:ASP:OD1	2.40	0.54
7:G:114:MET:HB3	7:G:201:GLN:HB3	1.89	0.54
15:O:128:HIS:CE1	15:O:652:GLN:HE22	2.25	0.54
15:O:132:TYR:C	15:O:134:GLY:H	2.10	0.54
15:O:230:SER:O	15:O:237:LYS:NZ	2.36	0.54
18:R:165:VAL:HA	18:R:170:ILE:HD13	1.90	0.54
1:A:625:ASN:HD21	1:A:941:HIS:HA	1.72	0.54
1:A:661:SER:HB2	8:H:122:LEU:HD11	1.89	0.54
2:B:260:CYS:O	2:B:346:ALA:HB2	2.07	0.54
8:H:43:ASN:ND2	8:H:46:LEU:HD13	2.22	0.54
19:S:429:TYR:HA	19:S:432:LEU:HD12	1.88	0.54
2:B:334:HIS:O	2:B:337:VAL:N	2.40	0.54
7:G:126:SER:OG	7:G:139:TYR:CG	2.58	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:114:VAL:HG21	8:H:130:ARG:NH1	2.22	0.54
13:M:163:VAL:HG22	13:M:168:VAL:HG22	1.89	0.54
1:A:164:VAL:CA	1:A:180:HIS:HB2	2.38	0.54
1:A:675:HIS:CA	1:A:937:ARG:HH22	2.20	0.54
2:B:932:PRO:HG2	2:B:940:PRO:HG3	1.89	0.54
4:D:61:ASN:ND2	7:G:103:GLY:O	2.41	0.54
15:O:59:GLU:HG3	15:O:61:ALA:H	1.73	0.54
18:R:213:TRP:NE1	18:R:287:PRO:HG3	2.22	0.54
1:A:66:GLU:HB3	1:A:71:HIS:HB2	1.90	0.54
1:A:921:LEU:CD2	1:A:932:PRO:HG3	2.38	0.54
1:A:1193:ILE:HG12	1:A:1200:LEU:HD11	1.90	0.54
3:C:119:ASN:O	3:C:120:LEU:CG	2.51	0.54
3:C:123:ASP:OD1	3:C:124:GLU:N	2.40	0.54
5:E:153:HIS:CE1	5:E:184:VAL:HG11	2.43	0.54
15:O:623:GLU:O	15:O:627:LEU:HG	2.07	0.54
16:P:269:LEU:HD11	16:P:296:TYR:OH	2.07	0.54
2:B:1031:VAL:O	2:B:1034:LYS:N	2.41	0.54
3:C:230:LEU:HD13	3:C:297:HIS:CE1	2.42	0.54
1:A:226:LYS:NZ	15:O:547:GLU:OE2	2.31	0.54
2:B:239:LYS:HG2	2:B:241:TYR:CE2	2.41	0.54
5:E:2:ASP:O	5:E:6:GLU:N	2.41	0.54
7:G:203:ASP:HB3	7:G:211:TRP:HE1	1.73	0.54
8:H:93:TYR:HD1	8:H:145:ARG:HD3	1.72	0.54
13:M:122:ASP:HB3	13:M:145:VAL:CG2	2.37	0.54
13:M:182:PHE:HD1	13:M:183:PHE:N	2.04	0.54
15:O:366:LEU:HD22	15:O:368:ARG:HH11	1.72	0.54
18:R:610:LEU:HA	18:R:613:HIS:CD2	2.41	0.54
19:S:434:MET:HE3	19:S:479:PRO:HB3	1.89	0.54
20:X:16:DA:H2'	20:X:17:DG:C8	2.43	0.54
1:A:200:GLU:CB	15:O:516:LEU:HD21	2.38	0.54
1:A:211:LEU:HD22	1:A:215:VAL:HG21	1.90	0.54
1:A:830:ARG:HD2	1:A:837:LYS:HG2	1.90	0.54
1:A:869:ARG:NH2	2:B:502:THR:HB	2.22	0.54
1:A:1278:ILE:HG12	1:A:1297:GLY:HA3	1.88	0.54
2:B:254:ALA:O	2:B:258:LYS:HG2	2.08	0.54
2:B:647:GLU:OE1	2:B:647:GLU:N	2.41	0.54
5:E:112:TYR:CZ	5:E:116:ILE:HG23	2.43	0.54
16:P:295:ASN:HB2	16:P:297:PHE:CE1	2.43	0.54
18:R:632:ALA:O	18:R:636:LEU:CB	2.55	0.54
1:A:516:GLU:OE2	2:B:1034:LYS:HD3	2.07	0.54
2:B:135:TYR:O	2:B:142:ILE:HA	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:138:GLY:N	2:B:141:ILE:HG21	2.21	0.54
2:B:330:THR:HA	2:B:345:LYS:HE3	1.90	0.54
2:B:936:GLN:NE2	10:J:43:ARG:NH1	2.56	0.54
3:C:223:SER:HB2	3:C:303:GLU:HB2	1.89	0.54
6:F:79:ARG:NH1	6:F:145:ASP:H	2.06	0.54
11:K:123:ASP:O	11:K:126:ASP:N	2.40	0.54
13:M:106:PHE:O	13:M:107:ILE:HG22	2.07	0.54
13:M:242:ASN:O	13:M:243:ILE:HB	2.08	0.54
18:R:399:THR:HB	18:R:484:GLN:NE2	2.23	0.54
20:X:25:DT:O4	21:Y:38:DA:N6	2.41	0.54
1:A:379:THR:HG21	1:A:497:THR:HA	1.90	0.53
1:A:891:LYS:HG3	1:A:1389:PHE:HD1	1.73	0.53
2:B:723:THR:HG23	2:B:724:LEU:H	1.74	0.53
15:O:187:ILE:O	15:O:189:SER:N	2.41	0.53
15:O:190:LEU:CD1	15:O:194:LEU:HD23	2.32	0.53
15:O:190:LEU:CB	15:O:194:LEU:HG	2.38	0.53
18:R:437:THR:O	18:R:465:TYR:OH	2.26	0.53
1:A:371:LYS:HZ1	2:B:1122:PRO:CB	2.21	0.53
1:A:378:ARG:O	1:A:379:THR:OG1	2.24	0.53
1:A:1024:LYS:HE2	1:A:1030:GLY:HA3	1.89	0.53
1:A:1028:MET:SD	1:A:1048:VAL:HG22	2.49	0.53
2:B:347:LEU:HB3	2:B:541:ILE:HD11	1.90	0.53
4:D:14:TYR:CE2	4:D:103:PHE:HB2	2.44	0.53
18:R:398:ALA:HB3	18:R:449:VAL:HB	1.89	0.53
20:X:3:DT:O4	21:Y:60:DA:N6	2.41	0.53
1:A:252:ARG:HB3	1:A:253:PRO:HD2	1.89	0.53
2:B:244:HIS:HB3	2:B:247:ILE:HG22	1.90	0.53
2:B:552:ASN:OD1	2:B:553:TYR:CD2	2.61	0.53
5:E:32:GLN:O	5:E:36:GLU:N	2.41	0.53
14:N:282:LEU:O	14:N:286:ASP:CB	2.57	0.53
16:P:209:ALA:O	16:P:212:VAL:HG12	2.08	0.53
16:P:311:TYR:HA	17:Q:40:PRO:CA	2.21	0.53
18:R:395:ASN:H	18:R:487:VAL:HB	1.72	0.53
21:Y:7:DA:H2''	21:Y:8:DG:H8	1.73	0.53
21:Y:46:DA:H2''	21:Y:47:DC:O4'	2.08	0.53
1:A:287:VAL:O	1:A:290:THR:HG22	2.07	0.53
1:A:302:GLY:C	1:A:304:ASP:H	2.12	0.53
1:A:389:ILE:N	1:A:695:ASN:OD1	2.37	0.53
1:A:542:LEU:HD21	1:A:679:TYR:HE1	1.73	0.53
1:A:624:ILE:HG22	1:A:625:ASN:N	2.24	0.53
3:C:105:PRO:HG3	10:J:6:ARG:NH2	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:2:PHE:N	7:G:77:PHE:HA	2.22	0.53
13:M:255:PHE:O	13:M:258:THR:OG1	2.25	0.53
18:R:97:PRO:HD2	18:R:100:ILE:HD12	1.89	0.53
20:X:6:DA:C4	20:X:7:DA:C5	2.96	0.53
20:X:11:DA:H2"	20:X:12:DT:C6	2.44	0.53
1:A:197:TRP:HZ3	15:O:567:ARG:HH11	1.51	0.53
1:A:308:SER:N	1:A:311:ASN:OD1	2.41	0.53
1:A:373:VAL:N	2:B:1050:PRO:HG2	2.22	0.53
1:A:628:ALA:O	1:A:651:PHE:HA	2.07	0.53
2:B:1022:ILE:HG22	2:B:1023:TYR:N	2.23	0.53
10:J:56:LEU:O	10:J:59:LYS:N	2.41	0.53
15:O:267:PRO:HD3	15:O:273:ILE:HG22	1.91	0.53
1:A:214:TYR:HD2	1:A:215:VAL:HG13	1.73	0.53
1:A:269:ARG:HH21	1:A:286:THR:H	1.55	0.53
2:B:626:HIS:HA	2:B:629:LYS:HB3	1.89	0.53
3:C:211:GLY:HA3	3:C:219:PHE:CE2	2.44	0.53
6:F:85:MET:SD	6:F:153:VAL:HA	2.49	0.53
15:O:44:PRO:HA	15:O:582:GLU:HG3	1.91	0.53
15:O:496:ILE:HD11	15:O:576:PHE:CZ	2.44	0.53
15:O:584:ASN:OD1	16:P:310:VAL:HA	2.09	0.53
16:P:128:LEU:HA	16:P:131:GLN:HB2	1.91	0.53
18:R:397:VAL:HG12	18:R:484:GLN:HB2	1.90	0.53
1:A:224:PRO:O	1:A:227:THR:HG22	2.07	0.53
1:A:269:ARG:NH1	1:A:285:LEU:HB2	2.22	0.53
1:A:482:ARG:HB3	1:A:544:PRO:HG3	1.91	0.53
1:A:993:GLU:O	5:E:197:LYS:NZ	2.42	0.53
1:A:1305:CYS:SG	5:E:141:VAL:HG11	2.49	0.53
9:I:22:TYR:O	9:I:23:THR:HG22	2.07	0.53
9:I:29:CYS:HA	13:M:183:PHE:CE2	2.35	0.53
10:J:43:ARG:NH1	10:J:43:ARG:HG2	2.24	0.53
15:O:538:ALA:O	15:O:541:ILE:HG22	2.08	0.53
16:P:241:ARG:O	16:P:245:GLU:HG2	2.08	0.53
18:R:521:TYR:HB3	18:R:530:LEU:HB2	1.89	0.53
1:A:44:LYS:HG3	1:A:45:ASP:H	1.72	0.53
1:A:476:ARG:HG3	1:A:477:GLN:HB3	1.91	0.53
1:A:678:PHE:CE2	1:A:694:MET:HG2	2.43	0.53
1:A:968:GLY:O	1:A:972:GLU:HG2	2.09	0.53
5:E:94:LYS:O	5:E:98:ILE:HG12	2.09	0.53
7:G:141:ASP:OD1	7:G:142:VAL:N	2.42	0.53
8:H:97:MET:HB2	8:H:142:LEU:HB3	1.90	0.53
13:M:125:LEU:HD11	13:M:146:GLN:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:389:THR:C	14:N:391:LEU:H	2.13	0.53
16:P:106:TRP:CZ3	16:P:108:LYS:HB3	2.44	0.53
16:P:256:VAL:O	16:P:260:CYS:HB3	2.08	0.53
18:R:516:PHE:CD1	18:R:517:PRO:HD2	2.43	0.53
1:A:472:VAL:HG11	1:A:519:LEU:HG	1.90	0.53
1:A:896:LEU:HB3	1:A:1090:GLY:HA3	1.91	0.53
1:A:912:VAL:HG23	1:A:913:GLN:H	1.74	0.53
1:A:995:VAL:HG23	1:A:996:ASP:H	1.74	0.53
2:B:247:ILE:HG13	2:B:248:ALA:H	1.74	0.53
2:B:464:ILE:HD11	2:B:746:TYR:CE1	2.44	0.53
2:B:529:ILE:HD11	2:B:575:PHE:CE1	2.42	0.53
2:B:551:LEU:CD1	14:N:388:THR:N	2.68	0.53
3:C:115:TRP:HH2	3:C:212:ILE:HB	1.73	0.53
8:H:13:SER:HB3	8:H:27:GLU:O	2.08	0.53
9:I:30:PRO:CD	13:M:183:PHE:HZ	2.21	0.53
14:N:287:HIS:CD2	14:N:384:LYS:HG3	2.43	0.53
15:O:507:LEU:O	15:O:511:ILE:HG12	2.08	0.53
16:P:98:GLU:HB3	16:P:150:LEU:HD21	1.89	0.53
18:R:287:PRO:HD2	18:R:290:PHE:CE1	2.44	0.53
18:R:463:ARG:NH1	18:R:598:ASP:O	2.39	0.53
1:A:45:ASP:O	1:A:48:PRO:HD3	2.10	0.53
1:A:1130:ILE:HA	1:A:1362:MET:HE1	1.91	0.53
2:B:758:ALA:O	2:B:943:ILE:HD12	2.09	0.53
2:B:934:ASN:ND2	2:B:1019:PHE:HZ	2.07	0.53
3:C:7:ILE:HG12	3:C:292:GLY:HA2	1.90	0.53
3:C:108:VAL:HB	3:C:184:VAL:HG12	1.91	0.53
6:F:101:ILE:HG21	6:F:120:ILE:HD11	1.91	0.53
13:M:109:ALA:HB3	13:M:122:ASP:HB2	1.90	0.53
18:R:405:ARG:HG3	18:R:443:ALA:O	2.09	0.53
1:A:1171:PHE:HD2	1:A:1172:TYR:CD2	2.26	0.52
2:B:167:ASP:C	2:B:169:SER:H	2.12	0.52
2:B:337:VAL:HG23	2:B:338:GLU:H	1.73	0.52
2:B:914:SER:OG	2:B:914:SER:O	2.19	0.52
5:E:66:GLU:HG3	5:E:67:GLU:H	1.74	0.52
5:E:82:PHE:HZ	5:E:113:GLN:HB2	1.74	0.52
9:I:35:ILE:HD12	9:I:36:GLU:HG2	1.91	0.52
13:M:90:TYR:C	14:N:392:GLN:NE2	2.62	0.52
13:M:122:ASP:HA	13:M:146:GLN:O	2.09	0.52
15:O:332:GLN:HE22	15:O:337:GLN:NE2	2.07	0.52
1:A:32:VAL:HG11	1:A:57:LYS:HD2	1.90	0.52
1:A:109:ASN:ND2	1:A:159:ALA:CB	2.64	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1391:LYS:HB2	1:A:1395:HIS:CE1	2.45	0.52
2:B:289:GLU:O	2:B:292:LYS:HG2	2.09	0.52
2:B:317:LEU:O	2:B:320:LEU:HG	2.09	0.52
3:C:172:GLN:N	3:C:175:GLN:HB3	2.16	0.52
3:C:255:VAL:O	3:C:268:LYS:HB2	2.09	0.52
5:E:153:HIS:ND1	5:E:184:VAL:HG11	2.24	0.52
7:G:115:LEU:H	7:G:199:SER:HB3	1.75	0.52
13:M:171:VAL:CG1	13:M:172:PRO:HD2	2.39	0.52
18:R:140:HIS:ND1	18:R:140:HIS:O	2.42	0.52
19:S:409:GLY:HA3	21:Y:55:DT:H4'	1.91	0.52
20:X:59:DC:C2	20:X:60:DA:N7	2.76	0.52
1:A:381:ILE:HD11	1:A:517:MET:HG2	1.90	0.52
1:A:703:ARG:NH2	11:K:93:ILE:O	2.42	0.52
1:A:1316:THR:OG1	1:A:1317:ASN:N	2.42	0.52
2:B:155:MET:HB2	2:B:185:PHE:CE1	2.44	0.52
2:B:714:ALA:O	2:B:717:GLN:HB2	2.10	0.52
3:C:100:ARG:HH12	10:J:2:ILE:HB	1.73	0.52
14:N:395:ILE:HD12	14:N:411:ARG:HA	1.92	0.52
15:O:132:TYR:OH	15:O:291:ARG:NH1	2.43	0.52
16:P:106:TRP:HB2	16:P:147:ILE:HG22	1.90	0.52
18:R:195:LYS:HA	18:R:198:VAL:HB	1.92	0.52
1:A:5:VAL:HG22	7:G:37:LYS:HB3	1.90	0.52
1:A:161:ASN:HB2	1:A:180:HIS:CE1	2.43	0.52
1:A:606:GLY:HA2	1:A:609:VAL:HG12	1.90	0.52
2:B:553:TYR:HA	2:B:597:MET:HB3	1.89	0.52
2:B:726:TYR:CE2	2:B:1028:LYS:HG3	2.44	0.52
2:B:926:VAL:CG1	2:B:930:ASP:HB2	2.40	0.52
2:B:933:PHE:CE2	3:C:226:SER:HB3	2.39	0.52
2:B:1038:ARG:NH1	2:B:1058:GLY:O	2.36	0.52
3:C:211:GLY:HA3	3:C:219:PHE:CD2	2.44	0.52
15:O:110:THR:HG22	15:O:115:LYS:O	2.09	0.52
15:O:163:VAL:HG12	15:O:282:ILE:HD11	1.91	0.52
15:O:352:VAL:HG13	15:O:353:GLU:CD	2.28	0.52
16:P:135:LYS:HB3	16:P:151:TYR:HD1	1.74	0.52
18:R:4:CYS:HB3	18:R:9:GLY:H	1.73	0.52
18:R:12:PHE:CD1	18:R:25:CYS:HB3	2.44	0.52
21:Y:45:DT:H73	21:Y:46:DA:N7	2.25	0.52
1:A:598:MET:HA	1:A:602:TYR:HD1	1.75	0.52
1:A:1173:VAL:HA	1:A:1186:VAL:HG12	1.91	0.52
2:B:774:ASN:O	2:B:777:SER:HB2	2.10	0.52
2:B:914:SER:HB3	2:B:918:GLN:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:933:PHE:O	2:B:1004:LEU:HD23	2.09	0.52
2:B:1057:ASP:CG	2:B:1058:GLY:N	2.62	0.52
15:O:36:SER:O	15:O:40:ARG:HB2	2.10	0.52
21:Y:15:DT:H2'	21:Y:16:DA:C8	2.44	0.52
1:A:1431:VAL:HG13	7:G:57:GLY:O	2.10	0.52
2:B:244:HIS:CE1	2:B:332:ILE:HD12	2.45	0.52
2:B:556:TYR:HE1	2:B:561:LEU:HD12	1.74	0.52
2:B:911:LYS:HD3	2:B:1029:HIS:HB2	1.92	0.52
5:E:200:ARG:HD2	5:E:208:TYR:CZ	2.44	0.52
7:G:98:LYS:HA	7:G:109:PHE:HA	1.92	0.52
14:N:389:THR:O	14:N:391:LEU:N	2.42	0.52
16:P:27:ILE:HB	16:P:31:PHE:HB2	1.91	0.52
18:R:467:ARG:O	18:R:471:LYS:CB	2.58	0.52
18:R:502:ALA:HB2	18:R:519:LEU:HD11	1.90	0.52
19:S:431:ALA:HA	19:S:434:MET:HB2	1.91	0.52
1:A:473:LEU:HD13	1:A:485:ILE:HG23	1.92	0.52
2:B:296:TYR:HD2	13:M:186:ILE:HG13	1.73	0.52
2:B:727:LEU:HD21	2:B:788:ARG:HE	1.73	0.52
2:B:884:VAL:HG12	2:B:898:VAL:HB	1.91	0.52
2:B:958:MET:HG3	2:B:1018:PHE:CE2	2.44	0.52
4:D:1:MET:HG3	4:D:2:LYS:H	1.73	0.52
11:K:68:GLU:HG3	11:K:69:ASP:H	1.74	0.52
18:R:91:SER:HB3	18:R:101:THR:HG21	1.91	0.52
18:R:418:ALA:HA	18:R:429:ILE:O	2.09	0.52
18:R:422:PRO:HB2	18:R:634:PHE:CZ	2.45	0.52
1:A:224:PRO:HA	1:A:227:THR:HG22	1.91	0.52
1:A:624:ILE:H	1:A:657:SER:HG	1.55	0.52
5:E:26:ARG:HH22	5:E:189:GLY:N	2.08	0.52
6:F:85:MET:HA	6:F:151:LEU:HD21	1.91	0.52
8:H:101:ALA:HB2	8:H:116:TYR:CE1	2.44	0.52
15:O:499:THR:HG21	16:P:312:PHE:CG	2.45	0.52
16:P:310:VAL:HB	17:Q:43:ILE:HD11	1.91	0.52
21:Y:18:DC:H2''	21:Y:19:DT:C5	2.45	0.52
1:A:628:ALA:HB1	1:A:675:HIS:CD2	2.45	0.52
1:A:643:ASN:HB2	1:A:651:PHE:CE2	2.45	0.52
1:A:1318:HIS:CD2	1:A:1321:GLU:HB3	2.45	0.52
2:B:736:VAL:HG21	2:B:960:GLU:HG3	1.91	0.52
2:B:779:ASP:OD2	3:C:216:HIS:HB3	2.10	0.52
10:J:7:CYS:SG	10:J:46:CYS:HA	2.49	0.52
18:R:273:GLN:HB2	19:S:277:UNK:N	2.25	0.52
1:A:235:LYS:HZ3	1:A:254:GLU:HG3	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:975:VAL:CG2	1:A:976:ARG:H	2.08	0.52
2:B:285:VAL:O	2:B:288:GLU:HB3	2.10	0.52
2:B:621:ARG:HG3	2:B:645:LEU:HG	1.92	0.52
15:O:519:GLU:OE1	15:O:519:GLU:N	2.40	0.52
16:P:63:LEU:HA	16:P:71:LYS:O	2.08	0.52
18:R:289:SER:HB2	18:R:535:SER:HB3	1.92	0.52
18:R:506:GLY:HA2	18:R:509:SER:HB2	1.92	0.52
1:A:106:ILE:HD11	1:A:111:SER:C	2.29	0.51
1:A:457:GLN:N	1:A:460:ASP:OD2	2.43	0.51
2:B:197:GLN:HE22	2:B:451:ARG:HD2	1.75	0.51
2:B:464:ILE:HG12	2:B:687:LEU:HD11	1.93	0.51
5:E:190:LEU:HD23	5:E:214:CYS:HB2	1.92	0.51
13:M:95:ARG:NH2	14:N:413:ASP:O	2.43	0.51
18:R:467:ARG:HD3	18:R:602:LEU:HG	1.92	0.51
18:R:509:SER:HB3	18:R:519:LEU:HD21	1.92	0.51
1:A:277:SER:HB3	1:A:278:PRO:HD2	1.91	0.51
1:A:656:GLY:H	1:A:944:ASN:HD22	1.58	0.51
1:A:1157:VAL:HG11	1:A:1308:GLY:HA3	1.92	0.51
2:B:529:ILE:HD11	2:B:575:PHE:HE1	1.74	0.51
5:E:100:ILE:HG21	5:E:127:ILE:HG13	1.92	0.51
15:O:53:VAL:O	15:O:58:GLY:N	2.43	0.51
1:A:413:ARG:O	1:A:416:LEU:N	2.43	0.51
1:A:502:GLU:CD	2:B:767:ILE:HG13	2.30	0.51
1:A:925:GLU:CD	1:A:1081:ALA:HA	2.30	0.51
1:A:1347:GLY:O	1:A:1348:MET:HG2	2.10	0.51
2:B:666:ILE:HA	2:B:670:MET:SD	2.50	0.51
2:B:800:ASN:HA	2:B:855:PRO:HG3	1.92	0.51
2:B:971:GLY:HA2	10:J:51:LEU:CD1	2.39	0.51
4:D:102:SER:O	4:D:106:LEU:N	2.43	0.51
5:E:118:PRO:O	5:E:122:LYS:N	2.44	0.51
15:O:190:LEU:HB3	15:O:194:LEU:HG	1.91	0.51
15:O:255:LYS:HB3	15:O:256:PRO:HD3	1.92	0.51
16:P:106:TRP:NE1	16:P:145:ARG:HA	2.24	0.51
17:Q:38:SER:O	17:Q:39:ILE:C	2.49	0.51
18:R:401:THR:HG22	18:R:403:GLY:H	1.76	0.51
18:R:468:ILE:HG13	18:R:610:LEU:HD11	1.92	0.51
18:R:510:SER:OG	18:R:512:GLU:OE2	2.28	0.51
19:S:425:MET:HG2	19:S:429:TYR:CE2	2.45	0.51
19:S:444:GLN:HE22	19:S:490:LYS:HZ2	1.58	0.51
1:A:1145:LEU:HA	1:A:1309:VAL:HA	1.93	0.51
3:C:85:PHE:CZ	3:C:98:ALA:HB2	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:251:PHE:CD2	3:C:255:VAL:HG21	2.45	0.51
18:R:478:PHE:O	18:R:599:PRO:HB3	2.10	0.51
19:S:506:GLN:O	19:S:510:LYS:CB	2.57	0.51
1:A:11:LYS:HG3	2:B:1117:ILE:HG21	1.93	0.51
1:A:17:GLU:O	2:B:1139:PRO:C	2.49	0.51
1:A:329:SER:HA	1:A:351:ARG:CZ	2.39	0.51
2:B:383:LEU:HB3	2:B:442:TRP:HH2	1.75	0.51
2:B:536:LEU:HD22	2:B:571:PHE:CD1	2.45	0.51
5:E:22:MET:CE	5:E:26:ARG:HH21	2.23	0.51
12:L:53:HIS:CD2	12:L:54:ARG:H	2.28	0.51
13:M:159:TYR:CD1	13:M:172:PRO:HA	2.45	0.51
15:O:188:SER:HG	15:O:191:PHE:HD1	1.55	0.51
1:A:528:ARG:HH12	6:F:118:LEU:HB2	1.76	0.51
1:A:589:HIS:HA	11:K:104:ARG:HH21	1.74	0.51
1:A:594:PRO:HB3	8:H:79:TRP:CD1	2.45	0.51
1:A:734:ALA:HB2	1:A:773:VAL:HG21	1.92	0.51
2:B:832:VAL:HB	12:L:60:ARG:HA	1.93	0.51
3:C:33:VAL:HG21	11:K:126:ASP:OD2	2.11	0.51
3:C:270:ALA:O	3:C:271:ARG:HG2	2.10	0.51
4:D:126:GLN:O	4:D:127:LEU:CG	2.49	0.51
7:G:88:TRP:HA	7:G:146:ILE:HD12	1.93	0.51
10:J:53:HIS:ND1	10:J:53:HIS:O	2.44	0.51
18:R:190:ASP:O	18:R:195:LYS:NZ	2.43	0.51
21:Y:55:DT:H2"	21:Y:56:DG:H8	1.70	0.51
2:B:279:TYR:OH	2:B:358:MET:HG2	2.11	0.51
2:B:755:ALA:HA	10:J:48:ARG:HH12	1.75	0.51
2:B:758:ALA:HA	2:B:1019:PHE:HB3	1.93	0.51
5:E:41:ASP:HA	5:E:44:ALA:HB3	1.92	0.51
10:J:1:MET:O	10:J:53:HIS:NE2	2.43	0.51
13:M:88:PHE:HB2	14:N:395:ILE:HG23	1.92	0.51
15:O:590:PHE:O	15:O:593:GLU:N	2.44	0.51
16:P:82:LYS:O	16:P:86:MET:HG2	2.10	0.51
18:R:554:GLU:HG2	18:R:582:LEU:HD22	1.92	0.51
1:A:38:ASP:HB3	1:A:290:THR:OG1	2.10	0.51
1:A:38:ASP:N	1:A:38:ASP:OD1	2.38	0.51
1:A:327:ILE:CB	1:A:353:PHE:CE2	2.94	0.51
1:A:330:ASP:CG	1:A:331:SER:H	2.12	0.51
1:A:1164:THR:OG1	1:A:1272:VAL:HG12	2.09	0.51
1:A:1382:SER:HA	1:A:1406:ASP:OD1	2.11	0.51
2:B:45:TRP:HA	2:B:676:GLU:OE2	2.11	0.51
2:B:214:GLY:HA3	2:B:234:ILE:CG2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:230:LYS:HD3	2:B:334:HIS:HE1	1.76	0.51
2:B:767:ILE:HG22	2:B:768:GLU:N	2.26	0.51
5:E:153:HIS:CD2	5:E:198:ILE:HG12	2.46	0.51
7:G:95:GLU:HG3	7:G:96:GLY:H	1.75	0.51
14:N:290:ILE:HG21	14:N:384:LYS:HZ1	1.76	0.51
15:O:480:TYR:HA	15:O:483:LEU:HB3	1.92	0.51
15:O:507:LEU:HD21	15:O:536:THR:HG23	1.91	0.51
15:O:602:LEU:HD11	15:O:623:GLU:HG2	1.91	0.51
16:P:266:GLU:O	16:P:269:LEU:HB3	2.10	0.51
18:R:104:ALA:HA	18:R:107:TRP:HD1	1.76	0.51
18:R:186:ALA:HA	18:R:189:LEU:HD12	1.93	0.51
1:A:504:VAL:O	1:A:507:PRO:HD2	2.11	0.51
2:B:204:ARG:HH22	2:B:602:ALA:HB1	1.76	0.51
2:B:558:ASN:HD21	2:B:603:THR:HG22	1.76	0.51
3:C:32:ASN:O	3:C:33:VAL:HG23	2.10	0.51
4:D:11:LEU:HB3	7:G:2:PHE:O	2.11	0.51
5:E:179:GLN:O	5:E:180:ARG:C	2.49	0.51
15:O:267:PRO:HD3	15:O:273:ILE:CG2	2.40	0.51
15:O:519:GLU:HA	15:O:522:ILE:HB	1.93	0.51
18:R:498:LEU:HD13	18:R:519:LEU:HB2	1.92	0.51
1:A:753:GLN:O	1:A:755:GLY:N	2.43	0.51
1:A:1411:VAL:HG21	2:B:1071:ILE:HD12	1.92	0.51
2:B:780:ARG:CZ	3:C:217:ALA:CB	2.85	0.51
2:B:908:LEU:HA	2:B:922:CYS:SG	2.51	0.51
7:G:147:ARG:NH2	7:G:204:GLY:O	2.44	0.51
15:O:190:LEU:HD21	15:O:199:TYR:CE1	2.46	0.51
15:O:353:GLU:HA	15:O:357:PRO:CD	2.21	0.51
16:P:81:GLN:O	16:P:85:THR:OG1	2.25	0.51
18:R:191:LEU:HB2	18:R:195:LYS:HD3	1.92	0.51
1:A:714:ILE:HG13	2:B:962:ILE:HD12	1.93	0.50
1:A:723:LEU:O	1:A:727:LYS:HB2	2.11	0.50
1:A:934:ASN:ND2	1:A:937:ARG:HE	2.09	0.50
1:A:1146:VAL:HG23	1:A:1308:GLY:O	2.11	0.50
2:B:109:LYS:HG3	2:B:111:TYR:O	2.11	0.50
2:B:771:LEU:O	2:B:923:GLY:N	2.35	0.50
8:H:115:TYR:HE1	8:H:124:ARG:HG3	1.76	0.50
15:O:578:ARG:HA	15:O:648:TRP:HZ3	1.77	0.50
18:R:213:TRP:CD1	18:R:287:PRO:HG3	2.46	0.50
1:A:98:ALA:O	1:A:101:GLN:N	2.45	0.50
1:A:270:PRO:HG3	2:B:1046:LEU:CD1	2.41	0.50
1:A:407:LYS:HG2	1:A:461:VAL:HG22	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:552:ALA:HB3	1:A:671:ASP:CB	2.41	0.50
1:A:773:VAL:O	1:A:777:VAL:HG23	2.11	0.50
1:A:1180:ASN:HB3	9:I:21:VAL:H	1.75	0.50
1:A:1386:LEU:HB3	1:A:1395:HIS:CD2	2.47	0.50
2:B:97:ASP:OD2	2:B:99:ARG:NH1	2.45	0.50
2:B:371:TYR:HB2	2:B:492:SER:OG	2.10	0.50
2:B:454:VAL:HG13	2:B:455:THR:HG23	1.93	0.50
2:B:629:LYS:O	2:B:635:LEU:HB2	2.11	0.50
2:B:849:THR:HG22	2:B:865:GLN:O	2.11	0.50
5:E:152:LYS:HE2	5:E:154:ILE:HD11	1.94	0.50
15:O:595:LEU:HD12	15:O:598:GLU:HG3	1.93	0.50
16:P:64:VAL:HB	16:P:71:LYS:HB2	1.92	0.50
1:A:37:ARG:HG2	1:A:38:ASP:OD1	2.11	0.50
1:A:235:LYS:HE3	1:A:254:GLU:HG3	1.91	0.50
1:A:548:GLU:OE2	1:A:672:GLY:O	2.28	0.50
1:A:1445:ARG:HG3	1:A:1447:LEU:HD12	1.93	0.50
2:B:263:LEU:HD11	2:B:296:TYR:HA	1.93	0.50
2:B:279:TYR:HE1	2:B:358:MET:HA	1.75	0.50
2:B:415:GLU:OE1	2:B:415:GLU:N	2.45	0.50
2:B:662:TYR:HE1	2:B:677:PRO:HG3	1.75	0.50
2:B:731:PRO:HB2	2:B:750:PRO:HG2	1.92	0.50
2:B:1036:HIS:CE1	2:B:1054:ARG:HA	2.46	0.50
4:D:126:GLN:O	4:D:127:LEU:O	2.30	0.50
7:G:53:THR:CG2	7:G:71:THR:HG22	2.37	0.50
7:G:112:GLN:NE2	7:G:115:LEU:HD22	2.26	0.50
13:M:135:LYS:O	13:M:138:SER:OG	2.20	0.50
15:O:69:VAL:HG22	15:O:122:TYR:CG	2.46	0.50
15:O:251:LYS:O	15:O:255:LYS:N	2.38	0.50
18:R:168:LEU:HB2	18:R:170:ILE:HD11	1.94	0.50
18:R:281:GLU:OE1	18:R:281:GLU:N	2.40	0.50
1:A:200:GLU:HG2	15:O:515:LYS:HD3	1.93	0.50
1:A:476:ARG:NH1	1:A:477:GLN:HB3	2.26	0.50
1:A:949:ASN:OD1	1:A:950:GLN:N	2.45	0.50
1:A:1022:LEU:HA	1:A:1025:SER:HB3	1.93	0.50
2:B:1004:LEU:HD21	2:B:1019:PHE:HE2	1.76	0.50
2:B:1107:CYS:SG	2:B:1109:THR:HG22	2.52	0.50
8:H:81:PRO:HD2	11:K:108:TYR:OH	2.12	0.50
14:N:395:ILE:HD11	14:N:408:LEU:HD21	1.92	0.50
15:O:483:LEU:O	15:O:487:LEU:N	2.44	0.50
15:O:643:ARG:NH2	17:Q:51:GLU:OE1	2.45	0.50
18:R:523:MET:O	18:R:527:LYS:HA	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:153:ARG:HG3	1:A:160:LEU:HB3	1.94	0.50
1:A:224:PRO:HD2	1:A:316:TRP:HH2	1.76	0.50
1:A:427:HIS:NE2	1:A:492:ILE:HG21	2.26	0.50
1:A:642:PRO:HB2	1:A:644:GLU:H	1.77	0.50
1:A:705:LEU:HD22	2:B:761:SER:HB2	1.91	0.50
1:A:733:ILE:HD12	1:A:736:HIS:CE1	2.47	0.50
1:A:1452:SER:HA	4:D:120:LYS:NZ	2.27	0.50
2:B:58:VAL:HA	2:B:60:GLN:OE1	2.12	0.50
2:B:109:LYS:HG3	2:B:111:TYR:N	2.21	0.50
2:B:884:VAL:HG23	12:L:58:LYS:HB3	1.94	0.50
4:D:65:TYR:OH	4:D:69:ASN:ND2	2.36	0.50
5:E:59:SER:HA	5:E:81:GLU:HA	1.94	0.50
14:N:380:MET:SD	14:N:421:GLN:NE2	2.84	0.50
15:O:73:ARG:HD3	15:O:121:TYR:OH	2.11	0.50
16:P:106:TRP:CG	16:P:107:SER:N	2.79	0.50
16:P:292:SER:OG	16:P:293:ILE:N	2.43	0.50
18:R:287:PRO:HD2	18:R:290:PHE:HE1	1.76	0.50
1:A:236:SER:H	1:A:252:ARG:HD2	1.76	0.50
1:A:272:VAL:HB	1:A:281:ASN:HB3	1.92	0.50
1:A:354:CYS:HG	1:A:1393:THR:HG1	1.58	0.50
2:B:354:ARG:CZ	2:B:549:LEU:HD13	2.40	0.50
2:B:778:ILE:CD1	2:B:906:PRO:HG2	2.41	0.50
3:C:14:ASN:ND2	3:C:295:ARG:HH12	2.08	0.50
4:D:146:ASP:O	4:D:150:ILE:HG12	2.12	0.50
5:E:2:ASP:HA	5:E:5:ASN:HB2	1.94	0.50
7:G:203:ASP:O	7:G:205:MET:HG2	2.11	0.50
18:R:256:GLN:HA	18:R:259:LEU:HB3	1.93	0.50
1:A:746:ASN:OD1	1:A:747:LYS:N	2.45	0.50
2:B:143:MET:CG	19:S:399:GLU:HB2	2.42	0.50
2:B:775:LYS:HG3	2:B:925:ILE:HG22	1.93	0.50
7:G:54:VAL:HA	7:G:70:VAL:HG12	1.93	0.50
7:G:88:TRP:O	7:G:99:VAL:HA	2.12	0.50
13:M:121:ILE:N	13:M:148:LEU:O	2.29	0.50
13:M:255:PHE:O	13:M:259:ILE:HG12	2.11	0.50
15:O:282:ILE:H	15:O:282:ILE:HD12	1.77	0.50
16:P:218:THR:HG23	16:P:219:GLN:H	1.77	0.50
1:A:100:ILE:HD11	1:A:178:ILE:HG21	1.94	0.50
1:A:520:HIS:CE1	2:B:1062:LEU:HD21	2.47	0.50
1:A:1286:ARG:N	1:A:1290:LYS:O	2.44	0.50
2:B:362:ASN:ND2	2:B:365:MET:SD	2.76	0.50
2:B:553:TYR:HD1	2:B:597:MET:HA	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:933:PHE:CZ	2:B:934:ASN:O	2.64	0.50
10:J:12:LYS:O	10:J:14:VAL:HG23	2.12	0.50
11:K:138:LYS:O	11:K:142:MET:N	2.41	0.50
18:R:194:LYS:O	18:R:197:LYS:HB3	2.11	0.50
18:R:468:ILE:O	18:R:472:ILE:N	2.43	0.50
18:R:502:ALA:O	18:R:506:GLY:N	2.36	0.50
20:X:6:DA:N1	20:X:7:DA:C6	2.80	0.50
1:A:552:ALA:HB3	1:A:671:ASP:HB3	1.92	0.50
1:A:1078:TYR:O	1:A:1081:ALA:N	2.45	0.50
1:A:1224:ILE:HG12	1:A:1226:GLY:H	1.77	0.50
2:B:760:MET:HE3	2:B:762:TYR:HB2	1.94	0.50
3:C:61:THR:HA	3:C:298:PHE:HZ	1.77	0.50
3:C:209:ILE:HG13	3:C:210:LEU:N	2.26	0.50
7:G:203:ASP:OD1	7:G:204:GLY:N	2.41	0.50
15:O:125:GLU:HB3	15:O:128:HIS:HB2	1.94	0.50
17:Q:36:PHE:N	17:Q:37:PRO:HD2	2.26	0.50
18:R:172:GLU:HG3	18:R:506:GLY:HA3	1.94	0.50
18:R:424:ARG:HG2	21:Y:46:DA:OP1	2.12	0.50
21:Y:59:DG:H1'	21:Y:60:DA:C8	2.46	0.50
1:A:278:PRO:HD3	2:B:852:ALA:HB1	1.94	0.49
1:A:376:SER:HB2	2:B:1060:LEU:HD12	1.93	0.49
1:A:424:PRO:HG2	1:A:444:LEU:CD2	2.41	0.49
2:B:100:VAL:HG12	2:B:129:ILE:HD13	1.94	0.49
2:B:543:LEU:HD22	13:M:158:GLN:NE2	2.27	0.49
3:C:70:ILE:HG23	3:C:317:SER:OG	2.12	0.49
3:C:197:ARG:HB3	3:C:198:PRO:CD	2.41	0.49
13:M:117:HIS:HB2	13:M:119:TRP:HE1	1.76	0.49
13:M:247:TRP:CH2	13:M:249:GLU:HB2	2.47	0.49
15:O:273:ILE:HG23	15:O:274:VAL:O	2.11	0.49
16:P:298:LYS:HG2	16:P:298:LYS:O	2.11	0.49
18:R:128:SER:OG	18:R:164:MET:SD	2.62	0.49
1:A:37:ARG:HG2	1:A:38:ASP:H	1.76	0.49
1:A:73:ASN:OD1	1:A:74:LEU:N	2.45	0.49
1:A:903:THR:HA	1:A:914:PHE:O	2.12	0.49
2:B:337:VAL:HG23	2:B:345:LYS:NZ	2.24	0.49
2:B:1019:PHE:HE1	10:J:44:TYR:OH	1.94	0.49
5:E:31:THR:HG23	5:E:34:GLU:H	1.76	0.49
13:M:159:TYR:CD2	13:M:170:LEU:HD21	2.47	0.49
15:O:95:LEU:HD21	15:O:120:TYR:CZ	2.47	0.49
18:R:398:ALA:HA	18:R:484:GLN:H	1.77	0.49
1:A:351:ARG:HD2	1:A:355:GLN:HE22	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:733:ILE:O	1:A:737:LYS:HG3	2.11	0.49
1:A:1163:LYS:HG3	1:A:1164:THR:N	2.21	0.49
1:A:1165:LEU:HD22	1:A:1198:LEU:HD21	1.93	0.49
2:B:141:ILE:HG23	2:B:142:ILE:N	2.26	0.49
2:B:538:VAL:HB	2:B:563:GLY:HA3	1.94	0.49
2:B:724:LEU:HD21	2:B:726:TYR:CZ	2.48	0.49
5:E:96:PHE:O	5:E:100:ILE:HG12	2.12	0.49
5:E:112:TYR:CD2	5:E:116:ILE:HG12	2.48	0.49
6:F:97:ARG:O	6:F:101:ILE:HG12	2.12	0.49
7:G:21:ASP:OD1	7:G:22:THR:N	2.42	0.49
14:N:276:ALA:HB1	14:N:280:LEU:HD23	1.94	0.49
19:S:430:LYS:O	19:S:434:MET:HG2	2.13	0.49
19:S:470:GLU:O	19:S:474:ARG:CB	2.58	0.49
21:Y:52:DA:H2'	21:Y:53:DT:O5'	2.11	0.49
1:A:937:ARG:HG3	1:A:938:SER:N	2.27	0.49
2:B:490:GLN:OE1	2:B:490:GLN:N	2.45	0.49
3:C:33:VAL:C	3:C:35:LYS:H	2.16	0.49
9:I:34:PRO:O	9:I:35:ILE:HG13	2.13	0.49
14:N:384:LYS:HA	14:N:416:ILE:HD11	1.93	0.49
15:O:140:ILE:O	15:O:144:MET:N	2.42	0.49
16:P:15:ALA:HA	16:P:55:LEU:HD11	1.93	0.49
16:P:211:ASN:OD1	16:P:212:VAL:N	2.46	0.49
18:R:440:LEU:O	18:R:447:MET:HB2	2.12	0.49
1:A:298:LEU:HD21	1:A:315:HIS:CE1	2.48	0.49
1:A:373:VAL:N	2:B:1060:LEU:O	2.38	0.49
1:A:1370:GLY:C	1:A:1375:GLY:HA3	2.33	0.49
1:A:1434:THR:HG23	7:G:56:GLU:HA	1.95	0.49
2:B:454:VAL:HG13	2:B:455:THR:H	1.77	0.49
2:B:529:ILE:HD13	2:B:584:VAL:HG11	1.94	0.49
2:B:540:ASP:OD1	2:B:541:ILE:N	2.45	0.49
2:B:1004:LEU:HD21	2:B:1019:PHE:CE2	2.47	0.49
2:B:1126:LYS:O	2:B:1129:PHE:N	2.45	0.49
8:H:10:PHE:CE2	8:H:38:LEU:HD13	2.45	0.49
15:O:288:MET:O	15:O:291:ARG:HG2	2.13	0.49
15:O:554:THR:CG2	15:O:561:ARG:NE	2.74	0.49
18:R:268:ALA:O	18:R:272:VAL:HB	2.12	0.49
18:R:290:PHE:CE1	18:R:495:PRO:HG3	2.47	0.49
1:A:997:GLN:C	1:A:999:ASP:H	2.15	0.49
1:A:1217:ILE:HG22	1:A:1218:GLN:N	2.27	0.49
2:B:59:LYS:O	2:B:63:ASP:N	2.42	0.49
2:B:615:VAL:HG12	2:B:620:SER:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:961:LEU:HD22	2:B:1018:PHE:CZ	2.47	0.49
3:C:75:VAL:HG12	3:C:320:ILE:HD12	1.95	0.49
3:C:224:THR:CB	10:J:10:CYS:SG	2.98	0.49
14:N:364:ARG:HB3	14:N:372:SER:HB3	1.93	0.49
15:O:260:SER:HB3	15:O:264:THR:OG1	2.12	0.49
1:A:403:THR:HG21	1:A:431:ASN:HD21	1.78	0.49
1:A:498:PHE:CE2	1:A:519:LEU:HD13	2.47	0.49
1:A:1123:VAL:N	1:A:1124:PRO:HD2	2.28	0.49
2:B:251:ILE:HG21	2:B:256:VAL:HG23	1.94	0.49
3:C:80:ALA:HA	3:C:208:CYS:HA	1.94	0.49
5:E:188:LEU:HD23	5:E:190:LEU:HD11	1.94	0.49
14:N:402:ASP:O	14:N:405:SER:HB2	2.13	0.49
15:O:516:LEU:HA	15:O:566:PHE:O	2.13	0.49
17:Q:1072:UNK:O	17:Q:1074:UNK:N	2.46	0.49
19:S:451:ARG:HG3	19:S:452:LYS:H	1.78	0.49
21:Y:13:DT:H2"	21:Y:14:DT:C6	2.47	0.49
1:A:214:TYR:CD2	1:A:215:VAL:HG13	2.48	0.49
1:A:285:LEU:O	1:A:288:LYS:N	2.46	0.49
1:A:487:SER:OG	1:A:536:GLY:HA2	2.13	0.49
4:D:14:TYR:HD2	4:D:15:GLU:HG2	1.77	0.49
13:M:149:LYS:CB	13:M:182:PHE:HE2	2.25	0.49
15:O:595:LEU:HD21	15:O:630:VAL:HG23	1.94	0.49
18:R:6:ASN:ND2	18:R:30:VAL:HG21	2.27	0.49
18:R:394:GLN:HB3	21:Y:49:DA:H4'	1.94	0.49
1:A:213:ARG:HA	1:A:216:LYS:HB2	1.95	0.49
1:A:481:HIS:HA	1:A:1095:GLN:OE1	2.13	0.49
1:A:497:THR:HG23	1:A:499:ARG:HG3	1.95	0.49
1:A:557:PHE:HA	1:A:701:CYS:SG	2.53	0.49
1:A:633:PHE:CZ	1:A:643:ASN:HB3	2.48	0.49
2:B:539:GLU:O	2:B:563:GLY:HA2	2.13	0.49
2:B:652:ASN:O	2:B:655:ASN:HB3	2.12	0.49
2:B:936:GLN:HB2	2:B:938:ILE:CD1	2.42	0.49
2:B:957:LYS:HZ2	2:B:1022:ILE:HD13	1.77	0.49
2:B:1106:TRP:HE1	7:G:162:SER:CA	2.26	0.49
5:E:64:PRO:HD3	5:E:77:SER:CA	2.42	0.49
7:G:124:GLU:O	7:G:126:SER:N	2.44	0.49
18:R:158:GLY:HA3	18:R:515:LEU:HD11	1.95	0.49
1:A:618:HIS:CE1	1:A:619:ASN:OD1	2.66	0.49
2:B:546:SER:HB2	14:N:391:LEU:HD21	1.68	0.49
2:B:671:THR:HG21	2:B:672:HIS:HE1	1.76	0.49
2:B:1004:LEU:HD12	2:B:1017:ILE:HB	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:228:ARG:HH21	3:C:299:ILE:HG21	1.78	0.49
11:K:85:ASP:OD1	11:K:108:TYR:HB2	2.12	0.49
13:M:142:GLY:HA2	13:M:185:TYR:CZ	2.48	0.49
18:R:216:GLU:OE2	18:R:498:LEU:HB2	2.13	0.49
18:R:218:ARG:CZ	21:Y:53:DT:H5'	2.43	0.49
20:X:48:DT:C4	20:X:49:DA:N6	2.81	0.49
2:B:417:ASP:OD1	2:B:418:ALA:N	2.46	0.48
2:B:721:ILE:HG12	2:B:899:LEU:HD22	1.95	0.48
2:B:821:HIS:CE1	2:B:824:LEU:HD22	2.48	0.48
3:C:227:TYR:HB3	3:C:300:PHE:HD1	1.78	0.48
8:H:12:VAL:HG22	8:H:26:ILE:HD11	1.94	0.48
15:O:285:ASP:O	15:O:288:MET:HB2	2.13	0.48
16:P:173:GLU:HA	16:P:175:ILE:HD12	1.95	0.48
16:P:267:SER:O	16:P:270:GLN:HB3	2.13	0.48
18:R:191:LEU:HD21	18:R:239:ARG:HE	1.77	0.48
1:A:1154:ALA:HB1	1:A:1283:ILE:HD12	1.95	0.48
2:B:97:ASP:OD1	2:B:98:ILE:N	2.46	0.48
2:B:377:LEU:HD11	2:B:520:ILE:HD13	1.94	0.48
2:B:501:ASP:OD2	2:B:513:ASN:ND2	2.46	0.48
2:B:822:GLN:O	2:B:824:LEU:N	2.46	0.48
3:C:229:LEU:HB2	3:C:293:ARG:NH1	2.24	0.48
4:D:132:VAL:HA	4:D:135:TYR:HB3	1.95	0.48
6:F:79:ARG:HH22	6:F:145:ASP:HB2	1.78	0.48
6:F:125:LEU:HD12	6:F:130:ILE:HD12	1.94	0.48
7:G:115:LEU:HD21	7:G:130:TRP:CZ2	2.49	0.48
7:G:157:ASP:OD1	7:G:158:VAL:N	2.40	0.48
15:O:172:GLU:O	15:O:176:SER:HB2	2.12	0.48
15:O:214:LEU:HD11	15:O:249:PHE:HE1	1.79	0.48
15:O:579:GLN:O	15:O:583:TRP:N	2.46	0.48
16:P:240:ILE:HD13	16:P:243:LEU:HD22	1.95	0.48
18:R:274:LYS:O	18:R:275:PHE:CG	2.65	0.48
19:S:381:VAL:HG22	19:S:383:ARG:N	2.27	0.48
20:X:62:DG:N1	21:Y:2:DC:N3	2.61	0.48
21:Y:9:DT:H2''	21:Y:10:DC:C6	2.47	0.48
1:A:892:SER:O	1:A:1380:ARG:NH2	2.46	0.48
1:A:1384:LEU:HD12	1:A:1413:GLU:OE2	2.13	0.48
2:B:204:ARG:NH2	2:B:558:ASN:HA	2.28	0.48
7:G:55:GLU:N	7:G:55:GLU:OE1	2.47	0.48
8:H:96:VAL:HG12	8:H:143:LEU:CD1	2.40	0.48
14:N:400:ALA:HB3	14:N:405:SER:HA	1.94	0.48
16:P:201:GLY:N	16:P:202:PRO:CD	2.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:191:LEU:HD23	18:R:239:ARG:HH21	1.78	0.48
18:R:195:LYS:O	18:R:198:VAL:HB	2.13	0.48
1:A:96:PHE:O	1:A:99:THR:N	2.46	0.48
1:A:362:GLY:O	1:A:367:ASN:ND2	2.47	0.48
1:A:626:LEU:HD23	1:A:627:ASP:N	2.29	0.48
2:B:252:PRO:HD2	2:B:255:ILE:HD12	1.95	0.48
2:B:554:GLY:HA2	2:B:564:SER:HA	1.94	0.48
2:B:555:VAL:HG12	2:B:564:SER:N	2.27	0.48
2:B:762:TYR:HE2	2:B:926:VAL:HG21	1.78	0.48
3:C:260:GLU:HB2	3:C:263:ASP:HB2	1.95	0.48
5:E:41:ASP:O	5:E:45:LYS:N	2.46	0.48
7:G:110:ILE:O	7:G:110:ILE:HG13	2.13	0.48
10:J:57:ILE:O	10:J:61:LEU:HG	2.13	0.48
13:M:72:GLU:HB2	14:N:364:ARG:NE	2.27	0.48
13:M:113:LYS:HE2	13:M:118:LEU:HB2	1.95	0.48
14:N:308:GLN:HB2	14:N:417:VAL:HG12	1.96	0.48
15:O:189:SER:O	15:O:190:LEU:C	2.51	0.48
15:O:318:LEU:HD11	15:O:368:ARG:HD3	1.95	0.48
18:R:214:MET:SD	18:R:265:THR:HG22	2.53	0.48
1:A:368:LEU:O	1:A:371:LYS:HG3	2.13	0.48
1:A:373:VAL:CG1	1:A:374:ASP:H	2.23	0.48
1:A:415:LYS:O	1:A:419:LEU:N	2.45	0.48
1:A:543:THR:HB	1:A:550:ILE:HB	1.96	0.48
1:A:608:GLN:O	1:A:611:SER:N	2.47	0.48
1:A:704:PHE:CZ	1:A:708:ARG:HD2	2.49	0.48
1:A:1064:GLU:O	1:A:1067:VAL:N	2.44	0.48
2:B:525:GLU:HG3	2:B:526:GLU:H	1.78	0.48
2:B:848:PRO:HB2	2:B:851:SER:HB3	1.94	0.48
3:C:218:LYS:HE2	12:L:69:ALA:O	2.14	0.48
4:D:103:PHE:O	4:D:106:LEU:HB3	2.13	0.48
7:G:30:LEU:HB3	7:G:48:ILE:HG13	1.96	0.48
13:M:90:TYR:O	14:N:392:GLN:HB2	2.13	0.48
18:R:213:TRP:HB3	18:R:285:ALA:HB1	1.95	0.48
18:R:392:THR:O	18:R:488:GLY:CA	2.61	0.48
1:A:636:PRO:HG3	1:A:646:SER:N	2.27	0.48
1:A:714:ILE:HG12	2:B:958:MET:HG2	1.95	0.48
2:B:415:GLU:CG	2:B:416:TYR:H	2.13	0.48
2:B:424:VAL:O	18:R:92:TYR:OH	2.25	0.48
2:B:591:TYR:HB2	2:B:656:ASP:HB2	1.95	0.48
2:B:611:PRO:HG3	2:B:648:TYR:HE1	1.78	0.48
2:B:914:SER:O	2:B:915:ARG:CG	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:35:LYS:HD2	3:C:35:LYS:HA	1.45	0.48
5:E:182:ASP:CG	5:E:183:PRO:HD2	2.34	0.48
13:M:113:LYS:HG2	13:M:117:HIS:O	2.14	0.48
13:M:253:GLU:O	13:M:257:ASP:N	2.40	0.48
14:N:288:GLN:HE21	14:N:292:ARG:HG3	1.79	0.48
15:O:352:VAL:O	15:O:355:LYS:HB3	2.14	0.48
15:O:495:VAL:O	15:O:495:VAL:HG22	2.13	0.48
21:Y:43:DA:C4	21:Y:44:DT:N3	2.81	0.48
21:Y:59:DG:H4'	21:Y:60:DA:H5'	1.96	0.48
1:A:18:PHE:CD1	2:B:1139:PRO:CA	2.94	0.48
1:A:493:ARG:HB2	1:A:499:ARG:NH2	2.28	0.48
2:B:788:ARG:HH22	3:C:93:GLN:NE2	2.10	0.48
2:B:1053:GLY:O	2:B:1057:ASP:O	2.31	0.48
5:E:82:PHE:HD1	5:E:111:VAL:HB	1.77	0.48
7:G:138:LEU:HD12	7:G:139:TYR:O	2.13	0.48
9:I:33:PHE:CD1	9:I:34:PRO:HD2	2.48	0.48
13:M:83:GLU:O	13:M:84:SER:O	2.32	0.48
13:M:148:LEU:HA	13:M:181:PRO:HA	1.96	0.48
15:O:599:ASN:O	15:O:602:LEU:N	2.46	0.48
18:R:12:PHE:HD1	18:R:25:CYS:HB3	1.79	0.48
18:R:434:GLU:HA	18:R:436:LYS:N	2.28	0.48
18:R:619:ALA:O	18:R:623:LYS:HB2	2.13	0.48
20:X:6:DA:C2	20:X:7:DA:C5	3.02	0.48
1:A:69:THR:O	7:G:163:PRO:HB2	2.13	0.48
1:A:236:SER:H	1:A:252:ARG:CD	2.27	0.48
1:A:284:ASP:OD2	1:A:352:GLY:HA3	2.14	0.48
1:A:364:PHE:CE2	1:A:1387:ALA:C	2.87	0.48
1:A:1261:GLN:HG3	1:A:1265:ARG:HH12	1.79	0.48
1:A:1391:LYS:O	1:A:1395:HIS:ND1	2.46	0.48
2:B:112:LEU:HD23	2:B:113:THR:H	1.79	0.48
2:B:517:MET:SD	2:B:675:ILE:HD11	2.54	0.48
3:C:224:THR:HG23	3:C:224:THR:O	2.14	0.48
5:E:1:MET:HG3	5:E:4:GLU:H	1.79	0.48
5:E:19:VAL:O	5:E:22:MET:HB3	2.14	0.48
15:O:650:VAL:HG13	15:O:651:PHE:N	2.29	0.48
16:P:90:GLU:HA	16:P:93:VAL:HB	1.96	0.48
18:R:198:VAL:O	18:R:202:ALA:N	2.39	0.48
1:A:1187:ARG:HA	1:A:1228:ASP:O	2.14	0.48
1:A:1299:GLY:C	1:A:1301:ARG:H	2.18	0.48
2:B:236:LYS:O	2:B:239:LYS:HB3	2.13	0.48
2:B:244:HIS:HE1	2:B:332:ILE:HB	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:849:THR:HG23	2:B:850:ASN:H	1.78	0.48
2:B:874:ARG:HG2	18:R:16:LEU:HD13	1.95	0.48
5:E:40:GLU:HG3	5:E:41:ASP:H	1.79	0.48
5:E:82:PHE:HE1	5:E:112:TYR:O	1.96	0.48
13:M:88:PHE:HB2	14:N:395:ILE:CG2	2.44	0.48
14:N:286:ASP:OD2	14:N:385:GLY:N	2.47	0.48
16:P:308:GLU:OE1	16:P:308:GLU:N	2.46	0.48
20:X:6:DA:C4	20:X:7:DA:C8	3.02	0.48
1:A:101:GLN:OE1	1:A:1402:TYR:OH	2.30	0.48
1:A:422:ASN:ND2	1:A:428:PRO:O	2.44	0.48
2:B:264:SER:O	9:I:10:ASN:HA	2.14	0.48
9:I:7:SER:OG	9:I:8:CYS:N	2.45	0.48
13:M:123:ILE:N	13:M:145:VAL:HG22	2.28	0.48
15:O:191:PHE:HD2	15:O:192:VAL:HG13	1.79	0.48
18:R:492:VAL:HG11	18:R:560:LEU:HD13	1.94	0.48
19:S:513:MET:HA	19:S:516:ILE:HD12	1.96	0.48
1:A:307:ILE:HB	1:A:311:ASN:OD1	2.14	0.47
1:A:559:THR:HG21	2:B:947:HIS:CE1	2.49	0.47
1:A:722:ASP:O	1:A:726:LYS:N	2.27	0.47
2:B:552:ASN:HD21	2:B:568:PRO:N	2.12	0.47
2:B:635:LEU:HD21	2:B:640:PHE:HE1	1.79	0.47
2:B:678:PHE:HB3	2:B:978:CYS:O	2.14	0.47
3:C:5:VAL:HG22	3:C:293:ARG:O	2.14	0.47
5:E:89:GLY:HA2	5:E:117:THR:HG21	1.95	0.47
5:E:185:ALA:HA	5:E:190:LEU:HD13	1.95	0.47
8:H:137:GLN:HB3	8:H:139:ASN:OD1	2.13	0.47
12:L:29:TYR:CB	12:L:58:LYS:HA	2.44	0.47
13:M:87:VAL:HA	14:N:396:ALA:HA	1.95	0.47
15:O:478:VAL:HB	15:O:480:TYR:CZ	2.49	0.47
18:R:439:ALA:HA	18:R:450:THR:N	2.28	0.47
20:X:24:DT:H2''	20:X:25:DT:O4'	2.14	0.47
1:A:235:LYS:HD2	1:A:252:ARG:NE	2.29	0.47
1:A:444:LEU:HD21	1:A:445:ARG:NH1	2.29	0.47
1:A:830:ARG:NH2	1:A:835:PHE:O	2.47	0.47
1:A:1088:ALA:HB2	1:A:1423:ILE:HD13	1.96	0.47
1:A:1202:ILE:O	1:A:1205:ILE:N	2.48	0.47
2:B:1147:PHE:CD2	7:G:10:LEU:HD11	2.45	0.47
4:D:148:LYS:O	4:D:152:GLU:HB2	2.13	0.47
7:G:126:SER:CB	7:G:139:TYR:HB2	2.42	0.47
13:M:113:LYS:HG3	13:M:116:SER:O	2.14	0.47
17:Q:41:LEU:HB3	17:Q:42:PRO:HD2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:24:VAL:HG23	18:R:30:VAL:O	2.13	0.47
19:S:453:GLN:O	19:S:457:LYS:CB	2.62	0.47
1:A:106:ILE:CD1	1:A:234:ILE:HG12	2.44	0.47
1:A:1267:LEU:C	1:A:1269:ASP:H	2.17	0.47
1:A:1425:THR:HG23	6:F:92:ARG:HB2	1.97	0.47
2:B:301:ALA:O	2:B:305:ILE:HG12	2.14	0.47
2:B:659:ILE:HG12	2:B:672:HIS:HB2	1.95	0.47
2:B:776:SER:HB3	3:C:217:ALA:HB2	1.95	0.47
3:C:32:ASN:OD1	3:C:33:VAL:N	2.48	0.47
14:N:287:HIS:CD2	14:N:384:LYS:HE2	2.49	0.47
15:O:499:THR:HG23	16:P:312:PHE:CG	2.49	0.47
18:R:511:TYR:CE2	18:R:513:PRO:HG3	2.49	0.47
21:Y:42:DT:H2''	21:Y:43:DA:C8	2.50	0.47
1:A:226:LYS:HD3	15:O:547:GLU:HG3	1.96	0.47
1:A:974:LEU:O	1:A:975:VAL:CG1	2.63	0.47
1:A:1166:LEU:HD21	1:A:1268:PRO:HA	1.96	0.47
2:B:120:LEU:HD23	2:B:885:MET:SD	2.53	0.47
2:B:201:SER:HB2	2:B:374:ASN:O	2.14	0.47
2:B:306:GLY:HA3	2:B:324:ILE:HG23	1.96	0.47
3:C:122:ASP:OD1	3:C:123:ASP:N	2.47	0.47
3:C:152:ASP:HB2	3:C:155:GLU:CG	2.42	0.47
5:E:1:MET:HB3	5:E:4:GLU:HG2	1.96	0.47
15:O:121:TYR:CE1	15:O:210:PRO:HG2	2.49	0.47
18:R:387:SER:HA	18:R:579:PRO:HA	1.97	0.47
18:R:496:ILE:HD12	18:R:536:GLY:HA2	1.97	0.47
1:A:15:GLY:HA2	1:A:1407:ALA:HA	1.96	0.47
1:A:106:ILE:HG13	1:A:112:ALA:O	2.15	0.47
1:A:327:ILE:O	1:A:354:CYS:HB2	2.14	0.47
1:A:483:LEU:HD13	1:A:550:ILE:HG21	1.95	0.47
1:A:649:ASP:HB3	1:A:662:GLY:HA2	1.96	0.47
1:A:919:ASP:OD1	1:A:921:LEU:HD13	2.14	0.47
2:B:140:ASN:ND2	19:S:394:LYS:HG2	2.28	0.47
2:B:192:LYS:O	2:B:193:VAL:HG23	2.15	0.47
2:B:424:VAL:HA	18:R:93:ALA:HB2	1.95	0.47
2:B:543:LEU:HD22	13:M:158:GLN:HE22	1.79	0.47
2:B:776:SER:CB	2:B:928:GLN:HE21	2.27	0.47
13:M:160:ALA:H	13:M:173:ILE:HG13	1.79	0.47
15:O:125:GLU:HB3	15:O:128:HIS:CB	2.45	0.47
15:O:362:ASN:O	15:O:477:TYR:HD1	1.97	0.47
16:P:33:GLN:HB2	16:P:72:PHE:HE2	1.78	0.47
16:P:142:PHE:HZ	20:X:30:DT:H4'	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:498:LEU:HD22	18:R:519:LEU:HD13	1.96	0.47
19:S:418:ASP:HB3	19:S:449:ARG:NH1	2.29	0.47
21:Y:2:DC:H2''	21:Y:3:DA:N7	2.30	0.47
1:A:1155:ARG:HA	1:A:1158:LYS:HB3	1.96	0.47
2:B:77:ILE:CD1	2:B:98:ILE:HG12	2.44	0.47
2:B:217:GLN:HE21	2:B:232:TYR:HB3	1.79	0.47
2:B:694:ASN:HD21	2:B:916:HIS:CE1	2.31	0.47
4:D:130:ASN:OD1	4:D:133:HIS:ND1	2.47	0.47
5:E:81:GLU:O	5:E:110:PHE:HA	2.14	0.47
15:O:78:GLU:O	15:O:82:LYS:NZ	2.45	0.47
15:O:171:VAL:O	15:O:175:LEU:HB3	2.14	0.47
16:P:27:ILE:HG21	16:P:35:GLU:HG3	1.97	0.47
17:Q:64:THR:O	17:Q:68:GLY:N	2.47	0.47
18:R:25:CYS:SG	18:R:28:CYS:HB3	2.55	0.47
18:R:91:SER:O	18:R:96:ILE:HG12	2.15	0.47
18:R:247:VAL:O	18:R:249:HIS:ND1	2.42	0.47
18:R:555:ALA:O	18:R:558:PRO:HD2	2.15	0.47
1:A:29:GLN:HE21	2:B:1100:LEU:HD13	1.80	0.47
1:A:114:LEU:HD12	1:A:115:LEU:N	2.29	0.47
1:A:372:ARG:C	2:B:1050:PRO:HD2	2.35	0.47
1:A:476:ARG:HD3	1:A:510:ALA:HB2	1.95	0.47
1:A:591:ASP:OD1	1:A:591:ASP:N	2.47	0.47
1:A:1026:ARG:HH12	8:H:110:ASP:HB3	1.79	0.47
1:A:1150:ASP:OD1	1:A:1291:ARG:HD2	2.14	0.47
2:B:235:THR:HB	2:B:239:LYS:HZ2	1.79	0.47
2:B:263:LEU:HD21	2:B:296:TYR:CD1	2.49	0.47
2:B:490:GLN:H	2:B:490:GLN:CD	2.18	0.47
3:C:94:ASP:OD1	3:C:94:ASP:N	2.46	0.47
3:C:173:GLY:C	3:C:175:GLN:H	2.16	0.47
5:E:96:PHE:CZ	5:E:100:ILE:HD11	2.50	0.47
9:I:5:CYS:SG	9:I:9:ASN:N	2.88	0.47
13:M:112:TYR:HA	13:M:119:TRP:CD1	2.49	0.47
13:M:136:ALA:HA	13:M:140:TRP:O	2.15	0.47
15:O:92:LYS:NZ	17:Q:1082:UNK:HA	2.29	0.47
15:O:484:MET:HB2	15:O:485:PRO:HD3	1.95	0.47
16:P:219:GLN:NE2	16:P:222:LEU:HD12	2.29	0.47
18:R:122:SER:N	20:X:25:DT:OP1	2.47	0.47
18:R:155:TYR:CE1	20:X:12:DT:H3'	2.50	0.47
18:R:200:LYS:HG2	18:R:276:ARG:NH2	2.25	0.47
18:R:501:LEU:HA	18:R:563:PHE:CE2	2.49	0.47
19:S:444:GLN:HE22	19:S:490:LYS:HZ1	1.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:33:GLU:HB3	1:A:35:SER:OG	2.15	0.47
1:A:197:TRP:HH2	15:O:549:GLN:NE2	2.13	0.47
1:A:565:SER:HB2	1:A:664:MET:HE2	1.96	0.47
2:B:698:ARG:NH2	2:B:952:ARG:HG2	2.28	0.47
3:C:225:ALA:HB2	3:C:302:VAL:HG23	1.96	0.47
9:I:6:PRO:C	9:I:7:SER:HG	2.18	0.47
15:O:132:TYR:CD1	15:O:645:LEU:HD11	2.50	0.47
15:O:338:ASP:HB3	15:O:342:ALA:H	1.79	0.47
16:P:304:LYS:HG3	16:P:305:HIS:CD2	2.50	0.47
20:X:26:DT:H2'	20:X:27:DT:H71	1.97	0.47
21:Y:25:DC:H2''	21:Y:26:DA:C8	2.49	0.47
1:A:566:HIS:HD2	1:A:568:ASP:HB3	1.80	0.47
1:A:919:ASP:OD2	1:A:1353:ARG:NH2	2.48	0.47
1:A:1202:ILE:CD1	1:A:1224:ILE:HD12	2.43	0.47
1:A:1369:LEU:CD2	1:A:1374:PHE:CD2	2.92	0.47
2:B:351:MET:HE1	2:B:549:LEU:HD21	1.97	0.47
2:B:1105:GLY:O	2:B:1116:ILE:HD12	2.14	0.47
9:I:30:PRO:HD2	13:M:183:PHE:HZ	1.79	0.47
15:O:480:TYR:O	15:O:483:LEU:HB3	2.15	0.47
16:P:118:GLN:HA	16:P:121:VAL:HG22	1.96	0.47
18:R:587:THR:O	18:R:590:THR:OG1	2.28	0.47
1:A:1118:ASN:O	1:A:1138:THR:OG1	2.28	0.47
1:A:1275:LEU:O	1:A:1277:ASP:N	2.39	0.47
2:B:232:TYR:CE1	2:B:253:ILE:HD13	2.50	0.47
2:B:454:VAL:HG13	2:B:455:THR:N	2.30	0.47
2:B:531:LYS:O	2:B:535:VAL:HG23	2.15	0.47
2:B:675:ILE:HG13	2:B:676:GLU:N	2.29	0.47
2:B:929:GLU:HB3	3:C:69:ARG:HG2	1.97	0.47
3:C:78:VAL:HG23	3:C:209:ILE:O	2.15	0.47
4:D:126:GLN:HE21	7:G:85:VAL:HA	1.81	0.47
13:M:134:ASP:HA	13:M:137:GLU:HB2	1.97	0.47
15:O:80:VAL:HG21	15:O:87:ASP:OD1	2.14	0.47
19:S:425:MET:O	19:S:428:PHE:HB3	2.14	0.47
1:A:62:SER:OG	1:A:63:SER:N	2.48	0.46
1:A:424:PRO:HG3	1:A:431:ASN:HA	1.97	0.46
1:A:560:GLY:HA2	1:A:705:LEU:HD12	1.95	0.46
1:A:653:ILE:O	1:A:660:LEU:HB2	2.16	0.46
1:A:667:SER:OG	1:A:668:VAL:N	2.41	0.46
1:A:976:ARG:CG	1:A:1002:ARG:NH2	2.76	0.46
1:A:1166:LEU:HD23	1:A:1166:LEU:C	2.35	0.46
2:B:296:TYR:CE2	13:M:183:PHE:HD2	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:936:GLN:NE2	10:J:43:ARG:HH11	2.12	0.46
5:E:82:PHE:CD1	5:E:111:VAL:HB	2.50	0.46
8:H:100:THR:OG1	8:H:138:GLU:HA	2.15	0.46
15:O:468:LEU:HG	15:O:478:VAL:CG1	2.44	0.46
15:O:553:ARG:NH1	15:O:554:THR:HB	2.30	0.46
18:R:147:SER:O	18:R:150:LEU:N	2.33	0.46
18:R:610:LEU:HA	18:R:613:HIS:HB2	1.97	0.46
1:A:48:PRO:C	1:A:49:LYS:HG2	2.35	0.46
1:A:1317:ASN:O	1:A:1318:HIS:ND1	2.48	0.46
2:B:399:PHE:CE1	2:B:422:ILE:HG22	2.49	0.46
5:E:106:GLN:O	5:E:131:THR:N	2.43	0.46
7:G:58:GLN:N	7:G:67:TYR:O	2.48	0.46
8:H:130:ARG:NH2	8:H:134:ASN:OD1	2.48	0.46
13:M:227:LEU:HG	13:M:232:LEU:HA	1.98	0.46
15:O:190:LEU:HB3	15:O:194:LEU:N	2.31	0.46
15:O:350:GLU:OE1	15:O:482:LYS:HG3	2.14	0.46
16:P:59:ASN:CG	16:P:80:ALA:HB1	2.35	0.46
20:X:7:DA:H2''	20:X:8:DC:C6	2.50	0.46
1:A:239:CYS:SG	1:A:240:GLU:OE1	2.61	0.46
1:A:704:PHE:HZ	1:A:708:ARG:HD2	1.80	0.46
1:A:800:LYS:HB3	2:B:951:SER:OG	2.15	0.46
1:A:1130:ILE:HG22	1:A:1371:ILE:HG21	1.96	0.46
2:B:140:ASN:HD22	19:S:394:LYS:HA	1.81	0.46
2:B:191:GLU:OE1	2:B:191:GLU:N	2.48	0.46
2:B:757:VAL:HA	2:B:942:ILE:O	2.16	0.46
2:B:775:LYS:HA	2:B:778:ILE:HG22	1.97	0.46
5:E:181:ALA:HA	5:E:186:LEU:CG	2.45	0.46
7:G:114:MET:HG3	7:G:149:ARG:NH2	2.30	0.46
7:G:156:VAL:O	7:G:193:ALA:HA	2.16	0.46
13:M:125:LEU:HD23	13:M:131:TYR:HE1	1.79	0.46
15:O:45:ASP:N	15:O:582:GLU:OE2	2.48	0.46
18:R:122:SER:OG	20:X:25:DT:H5'	2.15	0.46
18:R:623:LYS:HE2	19:S:435:TRP:CD1	2.50	0.46
1:A:356:ARG:HE	1:A:363:ARG:HH12	1.62	0.46
1:A:598:MET:HB2	8:H:96:VAL:CG2	2.46	0.46
1:A:974:LEU:HD11	1:A:998:TYR:CG	2.50	0.46
1:A:1217:ILE:HG22	1:A:1218:GLN:H	1.80	0.46
2:B:778:ILE:HA	2:B:782:PHE:HB3	1.97	0.46
2:B:944:MET:HG2	2:B:945:ASN:N	2.27	0.46
3:C:33:VAL:HG12	3:C:34:GLU:N	2.29	0.46
3:C:334:THR:HG23	11:K:48:LYS:HG3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:20:LYS:O	5:E:23:VAL:HG12	2.15	0.46
8:H:1:MET:HG3	8:H:3:ASN:H	1.81	0.46
13:M:77:LYS:HA	14:N:360:VAL:HG22	1.96	0.46
16:P:79:GLU:HA	16:P:82:LYS:HE3	1.97	0.46
18:R:198:VAL:HA	18:R:201:ASP:HB2	1.98	0.46
18:R:249:HIS:HD2	19:S:406:TYR:CE2	2.33	0.46
19:S:465:ARG:HB3	19:S:468:LEU:HD13	1.97	0.46
1:A:577:THR:HG21	11:K:89:CYS:H	1.80	0.46
1:A:642:PRO:HB3	8:H:103:LYS:HZ2	1.80	0.46
1:A:652:VAL:HB	1:A:668:VAL:HG11	1.97	0.46
1:A:818:ILE:HG22	1:A:867:SER:HA	1.96	0.46
1:A:892:SER:HB2	1:A:1376:LEU:HD11	1.97	0.46
1:A:985:LYS:O	1:A:987:GLU:HG3	2.15	0.46
2:B:800:ASN:HD22	2:B:851:SER:HA	1.79	0.46
13:M:85:LEU:HG	14:N:398:SER:HB2	1.98	0.46
15:O:576:PHE:O	15:O:579:GLN:HG2	2.16	0.46
18:R:467:ARG:O	18:R:471:LYS:HB2	2.16	0.46
18:R:500:GLY:HA2	18:R:503:PHE:HB3	1.96	0.46
19:S:451:ARG:HG3	19:S:452:LYS:N	2.31	0.46
21:Y:43:DA:C8	21:Y:43:DA:H5'	2.50	0.46
1:A:666:LYS:C	1:A:667:SER:HG	2.18	0.46
1:A:1325:VAL:HG23	1:A:1326:LEU:H	1.81	0.46
2:B:122:ASP:HA	2:B:189:GLY:CA	2.44	0.46
2:B:166:ALA:HB3	2:B:171:MET:HE3	1.96	0.46
2:B:325:GLU:O	2:B:328:ALA:N	2.49	0.46
2:B:1093:ASP:HB2	2:B:1102:GLY:O	2.16	0.46
3:C:85:PHE:CE2	3:C:94:ASP:HB2	2.50	0.46
5:E:2:ASP:O	5:E:6:GLU:HG2	2.16	0.46
13:M:125:LEU:HD13	13:M:144:ASN:O	2.16	0.46
13:M:230:SER:C	13:M:234:HIS:HD1	2.18	0.46
19:S:461:GLU:OE1	19:S:465:ARG:NH2	2.46	0.46
21:Y:55:DT:C2'	21:Y:56:DG:C8	2.98	0.46
1:A:481:HIS:CD2	1:A:483:LEU:H	2.34	0.46
1:A:642:PRO:HB3	8:H:103:LYS:HZ3	1.80	0.46
1:A:827:PHE:HB3	2:B:655:ASN:OD1	2.16	0.46
1:A:827:PHE:CE2	1:A:833:PRO:HG3	2.44	0.46
1:A:974:LEU:C	1:A:975:VAL:HG12	2.36	0.46
1:A:1131:ASN:OD1	1:A:1372:THR:OG1	2.30	0.46
2:B:232:TYR:HD1	2:B:242:LEU:HD23	1.79	0.46
2:B:327:ILE:HG12	13:M:231:LEU:HD22	1.98	0.46
2:B:421:SER:O	2:B:424:VAL:HB	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:501:ASP:HB3	2:B:703:CYS:CB	2.46	0.46
2:B:721:ILE:HG12	2:B:899:LEU:CD2	2.45	0.46
2:B:1013:LEU:HD13	2:B:1017:ILE:HD11	1.98	0.46
5:E:26:ARG:HH12	5:E:189:GLY:HA3	1.81	0.46
8:H:3:ASN:O	8:H:5:LEU:HD12	2.16	0.46
12:L:32:ALA:HB3	12:L:53:HIS:CE1	2.51	0.46
12:L:38:LEU:HD22	12:L:48:CYS:HA	1.98	0.46
15:O:134:GLY:O	15:O:137:ILE:HB	2.15	0.46
15:O:136:ILE:HG21	15:O:164:ILE:HD11	1.97	0.46
18:R:288:PRO:HA	18:R:291:VAL:HB	1.98	0.46
18:R:467:ARG:HB3	18:R:610:LEU:HD13	1.98	0.46
19:S:422:VAL:O	19:S:426:ILE:N	2.48	0.46
1:A:233:GLN:HG2	15:O:575:ASN:HD21	1.80	0.46
1:A:392:VAL:HG23	1:A:488:HIS:CG	2.51	0.46
1:A:476:ARG:HG3	1:A:477:GLN:OE1	2.16	0.46
1:A:550:ILE:HG23	1:A:551:ILE:HG23	1.98	0.46
1:A:600:PRO:HB2	8:H:46:LEU:HD23	1.97	0.46
1:A:921:LEU:HA	1:A:1082:ARG:HA	1.98	0.46
1:A:1177:TYR:OH	1:A:1260:MET:HG2	2.16	0.46
2:B:112:LEU:HD22	2:B:162:ILE:HG12	1.97	0.46
2:B:636:ASP:OD1	2:B:637:PHE:N	2.49	0.46
2:B:785:CYS:SG	2:B:1026:LYS:NZ	2.64	0.46
2:B:849:THR:HG23	2:B:850:ASN:N	2.31	0.46
5:E:200:ARG:HD2	5:E:208:TYR:OH	2.16	0.46
15:O:144:MET:HE2	15:O:153:LYS:HD2	1.98	0.46
16:P:53:GLN:NE2	19:S:362:ILE:O	2.38	0.46
16:P:82:LYS:HE2	16:P:133:TYR:CE1	2.50	0.46
18:R:155:TYR:HE1	20:X:13:DA:P	2.38	0.46
1:A:423:GLY:HA3	1:A:449:ARG:NH1	2.30	0.46
1:A:506:THR:OG1	1:A:507:PRO:HD3	2.16	0.46
2:B:177:CYS:SG	2:B:179:LEU:N	2.84	0.46
2:B:493:GLN:HG3	2:B:497:LEU:HB2	1.98	0.46
2:B:691:PRO:HD2	2:B:978:CYS:HA	1.98	0.46
2:B:840:GLN:O	2:B:872:ILE:HG23	2.15	0.46
7:G:111:PRO:HD2	7:G:198:GLY:H	1.81	0.46
8:H:110:ASP:O	8:H:128:ASN:HA	2.16	0.46
13:M:159:TYR:O	14:N:307:PHE:N	2.35	0.46
15:O:47:PHE:HZ	15:O:590:PHE:HE2	1.62	0.46
16:P:108:LYS:HA	16:P:111:LYS:HD3	1.98	0.46
1:A:646:SER:OG	1:A:649:ASP:O	2.26	0.46
1:A:1119:VAL:HA	1:A:1138:THR:HG21	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1186:VAL:HG22	1:A:1230:ILE:HD13	1.98	0.46
1:A:1202:ILE:HD12	1:A:1228:ASP:HA	1.97	0.46
1:A:1363:THR:OG1	1:A:1368:VAL:HG22	2.16	0.46
2:B:140:ASN:HA	19:S:394:LYS:HB3	1.98	0.46
2:B:210:ASP:OD1	2:B:211:GLU:N	2.49	0.46
2:B:574:GLN:HE22	14:N:422:ILE:HG12	1.81	0.46
3:C:85:PHE:HE1	3:C:204:LEU:HD22	1.80	0.46
5:E:200:ARG:NH2	5:E:210:SER:OG	2.49	0.46
7:G:4:LEU:HD21	7:G:73:ARG:HE	1.80	0.46
21:Y:11:DA:H2'	21:Y:12:DT:H71	1.98	0.46
1:A:622:VAL:HA	1:A:685:TYR:CE2	2.51	0.45
1:A:813:VAL:HG12	1:A:814:GLY:N	2.31	0.45
2:B:1112:SER:OG	2:B:1113:ALA:N	2.49	0.45
3:C:80:ALA:HB3	3:C:102:GLY:HA2	1.97	0.45
3:C:278:GLU:N	3:C:278:GLU:OE1	2.50	0.45
13:M:91:ALA:CA	14:N:392:GLN:CD	2.83	0.45
15:O:516:LEU:HD13	15:O:565:LEU:HD23	1.97	0.45
15:O:580:ASN:HA	15:O:583:TRP:HB2	1.97	0.45
16:P:96:TYR:OH	16:P:113:ARG:HG3	2.16	0.45
16:P:216:SER:OG	16:P:217:THR:N	2.49	0.45
16:P:309:VAL:HG21	16:P:311:TYR:CZ	2.51	0.45
1:A:26:ILE:HD13	1:A:262:PRO:HD3	1.99	0.45
1:A:123:PHE:CG	1:A:144:ILE:HD13	2.51	0.45
1:A:216:LYS:HG3	1:A:217:ARG:H	1.81	0.45
1:A:574:ALA:HA	11:K:81:MET:HE3	1.96	0.45
1:A:805:ASN:HD21	2:B:951:SER:HA	1.81	0.45
1:A:1127:LYS:O	1:A:1131:ASN:CB	2.65	0.45
1:A:1225:ILE:N	1:A:1229:ARG:HE	2.11	0.45
2:B:92:TYR:N	2:B:136:THR:OG1	2.40	0.45
2:B:230:LYS:HD3	2:B:334:HIS:CE1	2.50	0.45
2:B:254:ALA:HB3	2:B:290:SER:HB2	1.98	0.45
2:B:1039:ALA:HB3	18:R:20:ASN:OD1	2.14	0.45
15:O:470:GLU:HB2	15:O:479:PRO:HD3	1.98	0.45
16:P:263:VAL:HG12	16:P:265:LEU:H	1.81	0.45
18:R:121:ARG:NH2	20:X:23:DC:O3'	2.49	0.45
19:S:413:ARG:NH1	20:X:11:DA:H3'	2.31	0.45
20:X:6:DA:N6	20:X:7:DA:N6	2.64	0.45
20:X:47:DA:H2''	20:X:48:DT:H5'	1.98	0.45
1:A:38:ASP:C	1:A:40:PHE:H	2.18	0.45
1:A:232:LYS:HD3	16:P:315:TRP:CH2	2.51	0.45
1:A:328:ASN:O	1:A:351:ARG:NE	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1203:GLU:O	1:A:1207:VAL:HG12	2.16	0.45
1:A:1272:VAL:HG13	1:A:1273:LYS:N	2.28	0.45
2:B:109:LYS:HD2	2:B:110:ASP:H	1.82	0.45
2:B:134:GLU:HA	2:B:144:HIS:HB3	1.98	0.45
2:B:412:ARG:HH22	18:R:151:GLN:HB2	1.81	0.45
2:B:958:MET:HG3	2:B:1018:PHE:CZ	2.51	0.45
2:B:1088:ASP:OD1	2:B:1088:ASP:N	2.49	0.45
3:C:255:VAL:HG13	3:C:256:ILE:H	1.80	0.45
4:D:17:LEU:HB2	4:D:66:LEU:HD23	1.97	0.45
4:D:149:THR:O	4:D:153:MET:HG3	2.16	0.45
5:E:171:LYS:H	5:E:174:GLN:NE2	2.13	0.45
6:F:84:TYR:HD1	6:F:152:ILE:HG23	1.82	0.45
7:G:112:GLN:OE1	7:G:115:LEU:HD13	2.15	0.45
10:J:1:MET:HB3	10:J:2:ILE:HD12	1.98	0.45
13:M:254:GLN:OE1	14:N:409:LEU:HG	2.15	0.45
15:O:551:VAL:O	15:O:562:ALA:HB1	2.15	0.45
15:O:634:GLU:O	15:O:637:VAL:N	2.50	0.45
16:P:190:THR:HA	16:P:215:TYR:HE1	1.81	0.45
1:A:49:LYS:HD2	1:A:54:LEU:CB	2.40	0.45
1:A:195:ASP:O	1:A:198:VAL:HG12	2.17	0.45
1:A:777:VAL:O	1:A:781:CYS:HB2	2.16	0.45
2:B:649:LEU:HD22	2:B:653:GLU:OE1	2.17	0.45
2:B:723:THR:HG23	2:B:724:LEU:N	2.31	0.45
2:B:755:ALA:HB2	2:B:782:PHE:HE1	1.82	0.45
2:B:791:THR:HG22	2:B:842:TYR:HE2	1.81	0.45
3:C:278:GLU:O	3:C:281:ARG:HG2	2.16	0.45
14:N:373:VAL:HB	14:N:381:ASP:O	2.16	0.45
15:O:205:LYS:HG3	15:O:206:LEU:N	2.32	0.45
15:O:353:GLU:HB2	15:O:481:SER:HG	1.80	0.45
15:O:369:HIS:CG	15:O:370:LEU:H	2.35	0.45
15:O:454:ASN:O	15:O:457:LEU:HB3	2.15	0.45
16:P:118:GLN:OE1	21:Y:35:DG:H5"	2.16	0.45
18:R:213:TRP:CD1	18:R:287:PRO:CD	2.99	0.45
18:R:434:GLU:CA	18:R:436:LYS:H	2.30	0.45
1:A:3:GLU:O	7:G:37:LYS:HG3	2.15	0.45
1:A:34:VAL:HG13	1:A:35:SER:N	2.31	0.45
1:A:90:VAL:HG21	1:A:320:GLN:HA	1.97	0.45
1:A:114:LEU:HD21	1:A:148:CYS:HB2	1.97	0.45
1:A:781:CYS:O	1:A:785:LEU:HB2	2.16	0.45
1:A:903:THR:O	1:A:905:ARG:HG3	2.16	0.45
1:A:1170:ALA:HA	1:A:1188:ILE:CG1	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1411:VAL:HG13	1:A:1412:SER:N	2.30	0.45
2:B:112:LEU:HD23	2:B:113:THR:N	2.30	0.45
2:B:178:PRO:HD3	10:J:63:TYR:OH	2.16	0.45
2:B:242:LEU:HD12	2:B:256:VAL:HG21	1.99	0.45
2:B:298:GLN:HA	2:B:302:LEU:HD12	1.98	0.45
2:B:552:ASN:OD1	2:B:553:TYR:N	2.50	0.45
2:B:698:ARG:HE	2:B:952:ARG:HB3	1.82	0.45
3:C:229:LEU:HD23	3:C:295:ARG:HA	1.98	0.45
4:D:157:ILE:O	4:D:161:ALA:N	2.49	0.45
9:I:5:CYS:HB3	9:I:10:ASN:H	1.82	0.45
15:O:623:GLU:OE1	15:O:624:LEU:HD12	2.16	0.45
16:P:151:TYR:OH	18:R:647:ALA:HB1	2.17	0.45
18:R:431:ARG:HH12	21:Y:48:DT:P	2.40	0.45
1:A:134:ASN:HD21	1:A:1404:LYS:HD3	1.82	0.45
1:A:179:ILE:HG23	1:A:220:ASP:O	2.17	0.45
1:A:200:GLU:HG2	15:O:515:LYS:CD	2.47	0.45
1:A:436:ARG:N	1:A:460:ASP:OD1	2.49	0.45
2:B:44:LYS:NZ	2:B:663:GLU:HB2	2.32	0.45
2:B:273:CYS:O	2:B:354:ARG:NH1	2.50	0.45
2:B:832:VAL:HG13	2:B:882:ASP:O	2.17	0.45
2:B:932:PRO:O	2:B:940:PRO:CD	2.60	0.45
2:B:944:MET:CG	2:B:945:ASN:H	2.26	0.45
2:B:991:LEU:O	2:B:994:GLN:N	2.47	0.45
3:C:112:MET:C	3:C:113:LEU:HD12	2.37	0.45
3:C:231:PRO:HB3	3:C:275:VAL:CG2	2.41	0.45
15:O:310:GLN:NE2	15:O:313:LYS:HD3	2.31	0.45
18:R:267:ALA:O	18:R:271:SER:OG	2.24	0.45
1:A:152:ARG:HH12	21:Y:9:DT:P	2.39	0.45
1:A:269:ARG:CZ	1:A:286:THR:H	2.30	0.45
1:A:315:HIS:O	1:A:318:TYR:N	2.49	0.45
1:A:1373:ARG:HB2	1:A:1390:GLU:HG2	1.97	0.45
2:B:884:VAL:CG2	12:L:58:LYS:HB3	2.47	0.45
2:B:1004:LEU:HD12	2:B:1017:ILE:HD12	1.99	0.45
3:C:31:TRP:HE3	11:K:82:LYS:HD2	1.81	0.45
5:E:112:TYR:O	5:E:137:GLU:HB2	2.17	0.45
7:G:15:PRO:HA	7:G:18:PHE:CZ	2.51	0.45
14:N:284:ASN:O	14:N:287:HIS:N	2.49	0.45
15:O:259:LEU:HD23	15:O:261:GLN:H	1.81	0.45
15:O:366:LEU:HD22	15:O:368:ARG:NH1	2.31	0.45
20:X:50:DA:H2	21:Y:15:DT:O2	2.00	0.45
21:Y:42:DT:N3	21:Y:43:DA:N6	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:283:ASP:OD1	1:A:284:ASP:N	2.43	0.45
1:A:760:GLN:HA	1:A:763:GLU:HB3	1.99	0.45
1:A:1364:TYR:HE2	1:A:1379:MET:SD	2.40	0.45
2:B:239:LYS:HZ3	2:B:241:TYR:HE2	1.64	0.45
5:E:112:TYR:CD1	5:E:116:ILE:HG12	2.51	0.45
5:E:123:LEU:HD21	5:E:126:SER:HB2	1.99	0.45
11:K:132:GLU:O	11:K:136:THR:HG22	2.17	0.45
12:L:29:TYR:HB3	12:L:59:ALA:H	1.82	0.45
18:R:425:PHE:HB2	21:Y:46:DA:OP1	2.17	0.45
18:R:492:VAL:HB	18:R:494:PHE:CE2	2.52	0.45
18:R:602:LEU:O	18:R:606:ASP:N	2.50	0.45
20:X:47:DA:C8	20:X:48:DT:H72	2.52	0.45
21:Y:1:DC:H1'	21:Y:2:DC:C2	2.51	0.45
1:A:891:LYS:HG3	1:A:1389:PHE:CD1	2.52	0.45
1:A:1286:ARG:H	1:A:1291:ARG:HA	1.81	0.45
1:A:1315:THR:HG22	1:A:1316:THR:N	2.29	0.45
1:A:1339:ILE:HD13	1:A:1339:ILE:HA	1.84	0.45
2:B:536:LEU:HD23	2:B:536:LEU:O	2.17	0.45
2:B:766:ASP:O	2:B:770:ALA:HB3	2.16	0.45
4:D:109:LYS:HB2	4:D:156:ILE:HD11	1.99	0.45
5:E:9:ILE:HG22	5:E:53:PRO:CG	2.47	0.45
7:G:126:SER:OG	7:G:139:TYR:CB	2.65	0.45
12:L:25:ALA:N	12:L:37:LYS:HE2	2.32	0.45
15:O:69:VAL:HG22	15:O:122:TYR:CD1	2.51	0.45
15:O:197:MET:HG3	15:O:286:ARG:HB3	1.97	0.45
15:O:221:LYS:N	15:O:224:LYS:HB3	2.32	0.45
21:Y:58:DT:H4'	21:Y:59:DG:H5'	1.99	0.45
2:B:62:LEU:HA	2:B:155:MET:HE3	1.98	0.45
2:B:130:TYR:CE1	2:B:148:GLU:HG3	2.52	0.45
3:C:31:TRP:HB2	11:K:82:LYS:HG3	1.99	0.45
3:C:71:MET:HE1	3:C:314:PHE:HD1	1.82	0.45
5:E:46:TYR:O	5:E:54:GLN:N	2.49	0.45
9:I:29:CYS:CA	13:M:183:PHE:HE2	2.25	0.45
14:N:304:PHE:HB2	14:N:411:ARG:O	2.17	0.45
14:N:365:VAL:HG13	14:N:370:LYS:O	2.16	0.45
15:O:484:MET:O	15:O:488:LYS:N	2.39	0.45
15:O:590:PHE:O	15:O:591:LYS:C	2.54	0.45
18:R:408:LEU:HD13	18:R:427:ALA:HA	1.99	0.45
18:R:425:PHE:HE2	18:R:427:ALA:HB3	1.82	0.45
20:X:25:DT:H2'	20:X:26:DT:H6	1.78	0.45
1:A:103:LEU:HD21	1:A:222:LEU:HD22	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:442:ARG:HA	18:R:29:GLY:O	2.17	0.44
1:A:645:MET:CE	8:H:124:ARG:HB2	2.42	0.44
1:A:716:ASP:CG	1:A:789:ASN:HB2	2.38	0.44
1:A:1206:ALA:O	1:A:1209:ILE:HB	2.17	0.44
1:A:1332:ARG:HA	1:A:1335:ILE:HG22	1.99	0.44
1:A:1447:LEU:HB3	1:A:1450:SER:HB3	1.98	0.44
2:B:660:ALA:HB2	2:B:670:MET:SD	2.57	0.44
3:C:195:LYS:HD2	10:J:57:ILE:HG21	1.98	0.44
3:C:255:VAL:HG22	3:C:256:ILE:N	2.32	0.44
6:F:143:PHE:O	6:F:144:GLU:HB2	2.17	0.44
13:M:94:PRO:HA	14:N:392:GLN:CA	2.42	0.44
13:M:123:ILE:HB	13:M:146:GLN:HB3	2.00	0.44
15:O:364:ILE:HA	15:O:476:TYR:OH	2.17	0.44
16:P:311:TYR:CD1	17:Q:40:PRO:HB3	2.52	0.44
19:S:523:ALA:HA	19:S:526:GLU:HB3	1.99	0.44
21:Y:15:DT:O4	21:Y:16:DA:N6	2.50	0.44
1:A:173:SER:HB2	1:A:334:PRO:HB2	1.99	0.44
1:A:326:TYR:CD2	1:A:327:ILE:HG23	2.53	0.44
1:A:378:ARG:NE	1:A:516:GLU:OE1	2.49	0.44
1:A:802:SER:OG	1:A:803:THR:N	2.49	0.44
1:A:919:ASP:OD2	1:A:921:LEU:HB2	2.17	0.44
1:A:1329:GLU:OE2	5:E:200:ARG:NE	2.46	0.44
2:B:84:LEU:HG	2:B:85:SER:O	2.18	0.44
2:B:259:ALA:HB1	2:B:302:LEU:HD23	1.99	0.44
2:B:971:GLY:CA	10:J:51:LEU:HD11	2.43	0.44
4:D:102:SER:HA	4:D:105:GLU:HB2	1.99	0.44
7:G:4:LEU:HD12	7:G:74:ALA:O	2.17	0.44
13:M:104:HIS:CB	13:M:105:PRO:HD2	2.43	0.44
15:O:267:PRO:HG2	15:O:270:SER:HB2	1.99	0.44
18:R:414:HIS:HD2	18:R:615:LEU:O	2.01	0.44
1:A:16:LEU:HD11	1:A:1417:LEU:HD11	2.00	0.44
1:A:373:VAL:CA	2:B:1050:PRO:HG2	2.48	0.44
1:A:726:LYS:O	1:A:730:LEU:HG	2.17	0.44
1:A:1023:ARG:O	1:A:1028:MET:HB2	2.17	0.44
2:B:93:LEU:HD12	2:B:135:TYR:HB3	1.99	0.44
2:B:493:GLN:CG	2:B:497:LEU:HB2	2.48	0.44
2:B:842:TYR:CE1	2:B:873:TYR:HB2	2.52	0.44
3:C:32:ASN:CG	3:C:33:VAL:H	2.21	0.44
3:C:59:ILE:HD11	3:C:64:ALA:HB2	1.99	0.44
3:C:239:ILE:HG22	3:C:288:LYS:HD2	2.00	0.44
4:D:14:TYR:CD2	4:D:15:GLU:HG2	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:126:GLN:NE2	7:G:85:VAL:HA	2.32	0.44
5:E:9:ILE:HG22	5:E:53:PRO:HG3	1.99	0.44
7:G:189:GLU:HG3	7:G:191:PRO:HD3	2.00	0.44
8:H:9:ILE:O	8:H:31:THR:HG22	2.18	0.44
11:K:63:PHE:CZ	11:K:114:VAL:HG12	2.52	0.44
13:M:253:GLU:HA	13:M:256:LYS:HB2	1.99	0.44
14:N:371:LEU:HD22	14:N:384:LYS:CD	2.46	0.44
20:X:58:DC:C4	20:X:59:DC:C4	3.05	0.44
1:A:483:LEU:HD21	1:A:540:ASN:HB3	1.99	0.44
1:A:1188:ILE:HB	1:A:1228:ASP:HB3	1.99	0.44
1:A:1302:ASP:N	1:A:1302:ASP:OD1	2.48	0.44
2:B:128:PRO:HA	2:B:151:ARG:HG2	1.99	0.44
2:B:263:LEU:HD21	2:B:296:TYR:CE1	2.52	0.44
2:B:427:ASN:HA	2:B:430:THR:H	1.82	0.44
2:B:591:TYR:CZ	2:B:600:HIS:HB2	2.51	0.44
2:B:696:SER:OG	2:B:697:PRO:HD3	2.17	0.44
2:B:747:ASP:O	10:J:54:VAL:HG11	2.18	0.44
2:B:791:THR:O	2:B:791:THR:HG23	2.17	0.44
8:H:104:PHE:HE1	8:H:114:VAL:HG13	1.81	0.44
13:M:257:ASP:O	13:M:261:LYS:HG3	2.17	0.44
14:N:388:THR:HG23	14:N:390:PHE:CD2	2.53	0.44
15:O:288:MET:SD	15:O:326:ILE:HG21	2.57	0.44
16:P:202:PRO:O	16:P:203:LYS:HG2	2.17	0.44
18:R:229:LEU:HB2	18:R:244:ILE:HD13	1.98	0.44
21:Y:14:DT:H2'	21:Y:14:DT:OP2	2.17	0.44
21:Y:53:DT:H2''	21:Y:54:DA:H5''	2.00	0.44
1:A:235:LYS:HZ3	1:A:254:GLU:CG	2.30	0.44
1:A:372:ARG:O	2:B:1050:PRO:CD	2.64	0.44
1:A:379:THR:HG22	1:A:380:VAL:N	2.32	0.44
1:A:474:PHE:CZ	1:A:517:MET:HG3	2.52	0.44
1:A:524:THR:N	2:B:1081:GLU:OE2	2.40	0.44
1:A:598:MET:O	1:A:600:PRO:HD2	2.18	0.44
1:A:704:PHE:O	1:A:707:ASN:N	2.51	0.44
1:A:733:ILE:HA	1:A:736:HIS:NE2	2.32	0.44
1:A:815:GLN:HA	1:A:846:GLY:O	2.18	0.44
1:A:869:ARG:NH1	2:B:502:THR:HB	2.29	0.44
2:B:240:ILE:CG1	2:B:286:ASN:HD22	2.31	0.44
2:B:969:LEU:HB3	2:B:994:GLN:OE1	2.17	0.44
3:C:21:PRO:HD3	3:C:30:GLU:HA	1.98	0.44
3:C:260:GLU:O	3:C:264:GLU:N	2.50	0.44
4:D:27:HIS:NE2	4:D:53:PRO:HG3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:159:TYR:CG	13:M:170:LEU:HD21	2.53	0.44
15:O:307:VAL:HG13	15:O:308:THR:N	2.32	0.44
18:R:120:ARG:HE	21:Y:42:DT:H4'	1.81	0.44
18:R:633:ASP:O	18:R:636:LEU:HB3	2.18	0.44
1:A:625:ASN:N	1:A:625:ASN:OD1	2.51	0.44
1:A:785:LEU:HD21	1:A:789:ASN:HD21	1.82	0.44
2:B:77:ILE:HG21	2:B:98:ILE:HD11	2.00	0.44
2:B:320:LEU:HA	2:B:324:ILE:HG13	1.98	0.44
2:B:592:SER:N	2:B:656:ASP:OD2	2.29	0.44
2:B:658:TYR:HE2	2:B:670:MET:HG2	1.81	0.44
9:I:32:GLU:HG3	13:M:132:ASN:HB2	2.00	0.44
13:M:125:LEU:HD22	13:M:142:GLY:O	2.18	0.44
15:O:241:ALA:O	15:O:245:ALA:N	2.34	0.44
18:R:116:PHE:CE2	18:R:164:MET:HB3	2.52	0.44
18:R:399:THR:O	18:R:481:PHE:HA	2.18	0.44
18:R:522:ARG:HD3	18:R:529:VAL:HG22	2.00	0.44
20:X:61:DT:H3	21:Y:4:DT:H3	1.64	0.44
1:A:477:GLN:HG2	1:A:478:PRO:N	2.32	0.44
1:A:1157:VAL:HG12	1:A:1160:ARG:HD2	1.98	0.44
3:C:89:THR:HG23	3:C:200:GLN:HA	1.98	0.44
7:G:116:PHE:HZ	7:G:203:ASP:HA	1.83	0.44
8:H:80:ARG:HG3	11:K:108:TYR:CZ	2.52	0.44
14:N:384:LYS:HD2	14:N:416:ILE:HD11	1.99	0.44
15:O:164:ILE:HG12	15:O:282:ILE:HD13	1.99	0.44
15:O:203:ILE:HG13	15:O:203:ILE:O	2.18	0.44
15:O:248:ASP:O	15:O:252:ILE:HG12	2.18	0.44
15:O:471:THR:HA	15:O:477:TYR:HD2	1.81	0.44
18:R:96:ILE:HD11	18:R:101:THR:HG22	2.00	0.44
18:R:630:LEU:HD11	19:S:444:GLN:HG3	1.99	0.44
20:X:51:DA:H2''	20:X:52:DA:C8	2.52	0.44
21:Y:55:DT:C2	21:Y:56:DG:C5	3.05	0.44
1:A:476:ARG:HA	1:A:517:MET:SD	2.58	0.44
1:A:890:MET:O	1:A:893:LEU:N	2.50	0.44
1:A:1399:ALA:HA	1:A:1404:LYS:HD2	1.99	0.44
2:B:208:GLU:O	2:B:215:ILE:HA	2.17	0.44
2:B:552:ASN:HD21	2:B:568:PRO:CA	2.31	0.44
8:H:112:ILE:O	8:H:126:GLU:HA	2.18	0.44
10:J:2:ILE:HD12	10:J:2:ILE:H	1.82	0.44
15:O:56:HIS:CG	15:O:130:LEU:HD23	2.53	0.44
15:O:488:LYS:HD3	15:O:488:LYS:HA	1.64	0.44
17:Q:54:LEU:O	17:Q:58:TYR:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:453:GLN:O	19:S:457:LYS:HB3	2.17	0.44
20:X:10:DT:C4	20:X:11:DA:N6	2.86	0.44
1:A:57:LYS:HA	1:A:68:ALA:HB3	2.00	0.44
1:A:323:VAL:O	1:A:326:TYR:HB3	2.18	0.44
1:A:427:HIS:HB3	1:A:428:PRO:HD3	2.00	0.44
1:A:727:LYS:HA	1:A:730:LEU:HD12	1.98	0.44
1:A:1213:SER:OG	1:A:1217:ILE:HB	2.18	0.44
2:B:778:ILE:CG1	2:B:906:PRO:HG2	2.47	0.44
3:C:75:VAL:HG23	3:C:221:PRO:HG3	2.00	0.44
4:D:106:LEU:HG	4:D:110:LEU:HD22	2.00	0.44
8:H:98:TYR:HD1	8:H:141:TYR:CE2	2.34	0.44
14:N:386:ALA:HB2	14:N:416:ILE:HA	1.99	0.44
15:O:221:LYS:H	15:O:224:LYS:HB3	1.83	0.44
19:S:509:HIS:HA	19:S:512:HIS:HB3	2.00	0.44
20:X:3:DT:H2''	20:X:4:DT:H71	1.99	0.44
21:Y:55:DT:C4	21:Y:56:DG:C6	3.06	0.44
1:A:445:ARG:NH2	18:R:17:SER:OG	2.51	0.43
1:A:501:ASN:OD1	1:A:502:GLU:N	2.52	0.43
1:A:976:ARG:HH21	1:A:994:TYR:HB2	1.83	0.43
2:B:191:GLU:HG2	2:B:192:LYS:N	2.32	0.43
2:B:626:HIS:CD2	2:B:645:LEU:HD21	2.53	0.43
3:C:100:ARG:NH1	10:J:2:ILE:HB	2.33	0.43
7:G:87:GLY:HA3	7:G:148:PHE:CE2	2.45	0.43
10:J:43:ARG:HH11	10:J:43:ARG:CG	2.25	0.43
13:M:72:GLU:OE1	14:N:364:ARG:NH2	2.50	0.43
13:M:174:GLU:HB3	13:M:175:ARG:H	1.65	0.43
15:O:132:TYR:CE1	15:O:645:LEU:HD21	2.53	0.43
15:O:352:VAL:HG13	15:O:353:GLU:H	1.83	0.43
18:R:195:LYS:O	18:R:199:VAL:HG23	2.18	0.43
18:R:213:TRP:CD1	18:R:213:TRP:O	2.70	0.43
18:R:420:TYR:HB2	18:R:428:VAL:HG22	2.00	0.43
20:X:45:DA:H2''	20:X:46:DG:C8	2.53	0.43
20:X:60:DA:N6	21:Y:4:DT:C4	2.86	0.43
21:Y:8:DG:H2'	21:Y:9:DT:H71	1.99	0.43
1:A:78:HIS:ND1	2:B:1090:PHE:HZ	2.16	0.43
1:A:232:LYS:HG2	1:A:254:GLU:OE2	2.19	0.43
1:A:332:VAL:HG13	1:A:333:ASN:N	2.27	0.43
1:A:432:TYR:CD1	1:A:443:ASN:HB3	2.53	0.43
1:A:436:ARG:HH11	1:A:459:GLY:HA3	1.83	0.43
1:A:666:LYS:HA	1:A:670:GLY:CA	2.46	0.43
1:A:715:ASN:OD1	1:A:716:ASP:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:792:LEU:O	1:A:796:THR:N	2.50	0.43
1:A:818:ILE:HD11	1:A:823:VAL:HA	2.00	0.43
1:A:916:TYR:O	1:A:920:GLY:N	2.48	0.43
1:A:921:LEU:HD23	1:A:932:PRO:HG3	1.99	0.43
1:A:1079:ARG:HG2	6:F:84:TYR:HE2	1.83	0.43
1:A:1083:LEU:HA	1:A:1083:LEU:HD23	1.60	0.43
1:A:1222:VAL:HA	1:A:1231:ALA:O	2.17	0.43
1:A:1370:GLY:O	1:A:1371:ILE:O	2.36	0.43
2:B:719:LYS:NZ	10:J:65:PRO:HG3	2.33	0.43
2:B:759:VAL:HG12	2:B:946:PRO:HG3	2.00	0.43
2:B:911:LYS:HA	2:B:920:GLY:O	2.18	0.43
5:E:147:HIS:ND1	5:E:148:GLU:N	2.66	0.43
8:H:123:MET:HE2	8:H:125:LEU:HD23	1.99	0.43
13:M:94:PRO:CA	14:N:392:GLN:HA	2.40	0.43
15:O:32:MET:C	15:O:34:ILE:H	2.21	0.43
16:P:253:LEU:HA	16:P:263:VAL:HA	2.00	0.43
1:A:161:ASN:HB2	1:A:180:HIS:HE1	1.82	0.43
1:A:733:ILE:HD12	1:A:736:HIS:NE2	2.33	0.43
1:A:1415:ILE:HG22	2:B:1079:LEU:HD21	2.00	0.43
2:B:269:MET:HE1	2:B:280:GLN:HG2	2.00	0.43
2:B:619:GLN:OE1	2:B:619:GLN:N	2.52	0.43
2:B:855:PRO:N	18:R:106:GLN:HE22	2.17	0.43
4:D:68:ILE:O	4:D:72:PHE:N	2.41	0.43
4:D:127:LEU:HB2	4:D:133:HIS:HB3	1.99	0.43
7:G:49:TYR:HB2	7:G:75:VAL:HG23	2.00	0.43
8:H:116:TYR:HB2	8:H:123:MET:HB3	2.00	0.43
13:M:159:TYR:C	13:M:173:ILE:CD1	2.86	0.43
14:N:361:GLY:HA3	14:N:374:LYS:O	2.19	0.43
15:O:53:VAL:O	15:O:57:LEU:N	2.50	0.43
15:O:347:ASP:HA	15:O:350:GLU:CG	2.48	0.43
18:R:519:LEU:HB3	18:R:532:ILE:HB	2.00	0.43
18:R:528:ILE:HG12	18:R:543:ALA:HB2	2.00	0.43
1:A:216:LYS:HG3	1:A:217:ARG:N	2.33	0.43
1:A:538:LYS:HB3	1:A:687:PRO:HB2	2.01	0.43
1:A:590:PHE:O	11:K:106:GLN:NE2	2.51	0.43
1:A:694:MET:O	1:A:697:MET:HB3	2.18	0.43
1:A:1235:PHE:HB2	1:A:1236:PRO:HD2	1.99	0.43
1:A:1265:ARG:NH2	2:B:285:VAL:HG22	2.34	0.43
1:A:1378:LYS:CG	1:A:1379:MET:N	2.82	0.43
2:B:108:THR:HG22	2:B:109:LYS:N	2.26	0.43
2:B:525:GLU:HG3	2:B:528:PRO:HD2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:726:TYR:O	2:B:727:LEU:HB3	2.18	0.43
5:E:156:LEU:HD11	5:E:195:VAL:HB	2.00	0.43
7:G:15:PRO:HA	7:G:18:PHE:CE2	2.53	0.43
11:K:110:GLU:OE2	11:K:111:THR:HG23	2.18	0.43
11:K:120:GLY:O	11:K:123:ASP:HB2	2.19	0.43
14:N:366:HIS:H	14:N:370:LYS:HB2	1.84	0.43
14:N:366:HIS:CG	14:N:367:LYS:H	2.36	0.43
15:O:170:THR:HG22	15:O:279:SER:HA	2.00	0.43
15:O:364:ILE:HA	15:O:476:TYR:CZ	2.54	0.43
18:R:99:TYR:HD2	18:R:100:ILE:HG13	1.82	0.43
18:R:413:LEU:HB3	18:R:620:SER:OG	2.19	0.43
1:A:172:GLY:HA3	1:A:331:SER:CB	2.38	0.43
1:A:313:MET:SD	15:O:548:ILE:HD13	2.59	0.43
1:A:713:GLY:HA2	2:B:1018:PHE:CG	2.54	0.43
1:A:753:GLN:HE22	1:A:765:LYS:HE2	1.83	0.43
1:A:943:TYR:HA	1:A:946:THR:HG22	2.01	0.43
2:B:136:THR:HG22	2:B:142:ILE:HG22	2.01	0.43
2:B:269:MET:CE	2:B:280:GLN:HG2	2.49	0.43
2:B:417:ASP:C	2:B:419:LEU:N	2.70	0.43
2:B:556:TYR:HD1	2:B:561:LEU:HA	1.84	0.43
2:B:933:PHE:CD1	2:B:933:PHE:C	2.91	0.43
2:B:938:ILE:HG23	10:J:45:CYS:HB3	2.00	0.43
7:G:41:ASN:HA	7:G:155:PHE:CD2	2.54	0.43
7:G:114:MET:HB2	7:G:199:SER:HB2	1.98	0.43
8:H:99:GLY:HA3	8:H:118:PHE:HD1	1.83	0.43
10:J:48:ARG:O	10:J:52:THR:N	2.22	0.43
13:M:75:PRO:HA	14:N:362:SER:OG	2.19	0.43
18:R:143:LEU:HD11	18:R:157:ILE:HG22	1.99	0.43
18:R:607:ASP:C	18:R:609:GLU:H	2.22	0.43
1:A:14:LYS:O	2:B:1142:ARG:HB2	2.19	0.43
1:A:153:ARG:NH2	15:O:338:ASP:HA	2.33	0.43
1:A:270:PRO:HG3	2:B:1046:LEU:HD12	1.99	0.43
1:A:388:SER:OG	1:A:389:ILE:N	2.51	0.43
1:A:629:LYS:HE3	1:A:633:PHE:CD2	2.53	0.43
1:A:642:PRO:HB2	1:A:644:GLU:CG	2.42	0.43
1:A:777:VAL:CG1	1:A:811:ALA:HB1	2.49	0.43
1:A:813:VAL:HG12	1:A:814:GLY:H	1.84	0.43
1:A:1166:LEU:CA	1:A:1169:VAL:HG22	2.37	0.43
1:A:1335:ILE:HG23	1:A:1336:ILE:H	1.84	0.43
2:B:630:LEU:HD12	2:B:635:LEU:HB3	2.00	0.43
2:B:888:VAL:CG1	12:L:54:ARG:HD3	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:954:THR:HG23	2:B:954:THR:O	2.19	0.43
5:E:121:MET:HA	5:E:124:VAL:HB	2.00	0.43
16:P:235:LEU:HD23	16:P:236:THR:O	2.19	0.43
18:R:75:SER:OG	20:X:27:DT:H2'	2.18	0.43
18:R:604:ASP:OD1	18:R:605:VAL:N	2.50	0.43
21:Y:6:DG:C6	21:Y:7:DA:C6	3.07	0.43
21:Y:26:DA:H2''	21:Y:27:DC:H5''	2.00	0.43
1:A:302:GLY:O	1:A:304:ASP:N	2.50	0.43
1:A:541:LEU:HD22	1:A:682:LEU:HD22	1.99	0.43
1:A:573:ARG:O	1:A:577:THR:CB	2.67	0.43
1:A:738:CYS:SG	1:A:842:PRO:HD3	2.59	0.43
1:A:975:VAL:O	1:A:976:ARG:HG3	2.19	0.43
1:A:1335:ILE:HG23	1:A:1336:ILE:N	2.34	0.43
2:B:137:ARG:HB3	2:B:417:ASP:HA	2.01	0.43
2:B:300:GLN:HE22	13:M:186:ILE:HG22	1.83	0.43
3:C:97:LEU:HD12	3:C:194:ALA:HB2	2.00	0.43
3:C:324:LYS:HD3	11:K:68:GLU:OE2	2.19	0.43
8:H:5:LEU:HG	8:H:133:ASN:HB3	2.01	0.43
8:H:93:TYR:HB2	8:H:143:LEU:HD11	2.00	0.43
8:H:107:VAL:O	8:H:111:LEU:HB2	2.18	0.43
10:J:37:SER:OG	10:J:47:ARG:NH2	2.52	0.43
15:O:183:MET:CB	15:O:186:THR:HB	2.48	0.43
15:O:499:THR:O	17:Q:39:ILE:HD13	2.18	0.43
15:O:555:ALA:HB2	15:O:561:ARG:CG	2.48	0.43
18:R:238:ARG:HB3	19:S:289:UNK:O	2.18	0.43
1:A:209:PRO:O	1:A:212:GLU:HB2	2.18	0.43
1:A:450:MET:O	1:A:454:LYS:HG2	2.18	0.43
1:A:1343:MET:HE1	1:A:1355:ILE:HD11	2.01	0.43
1:A:1378:LYS:CG	1:A:1379:MET:H	2.29	0.43
1:A:1380:ARG:NH1	1:A:1385:GLN:HE22	2.14	0.43
2:B:169:SER:O	2:B:172:ALA:N	2.51	0.43
2:B:586:GLU:HG2	2:B:587:PHE:N	2.34	0.43
5:E:23:VAL:HG22	5:E:28:TYR:HB2	2.00	0.43
5:E:146:HIS:O	5:E:146:HIS:ND1	2.51	0.43
5:E:194:GLU:O	5:E:213:ILE:HG13	2.19	0.43
7:G:95:GLU:HG3	7:G:96:GLY:N	2.33	0.43
11:K:106:GLN:HG3	11:K:106:GLN:O	2.18	0.43
13:M:112:TYR:OH	13:M:114:PRO:HA	2.18	0.43
16:P:135:LYS:NZ	16:P:153:LEU:O	2.42	0.43
17:Q:55:ALA:O	17:Q:58:TYR:HB3	2.19	0.43
18:R:99:TYR:CD2	18:R:100:ILE:HG13	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:X:59:DC:N3	20:X:60:DA:N6	2.67	0.43
1:A:869:ARG:HH12	2:B:502:THR:CB	2.29	0.43
1:A:1408:VAL:HG23	1:A:1413:GLU:CG	2.48	0.43
2:B:296:TYR:CD2	13:M:186:ILE:HG13	2.52	0.43
2:B:909:GLY:HA2	2:B:921:VAL:HG13	2.01	0.43
7:G:105:PHE:HD2	7:G:107:ASP:H	1.66	0.43
13:M:91:ALA:HA	14:N:392:GLN:OE1	2.19	0.43
15:O:125:GLU:HB3	15:O:128:HIS:CG	2.54	0.43
15:O:547:GLU:O	15:O:548:ILE:HG13	2.18	0.43
16:P:238:SER:HA	16:P:241:ARG:CZ	2.49	0.43
18:R:22:ASP:CG	18:R:23:LEU:N	2.71	0.43
18:R:274:LYS:HB3	18:R:275:PHE:H	1.74	0.43
19:S:277:UNK:O	19:S:279:UNK:N	2.52	0.43
19:S:367:ASN:HB3	19:S:370:GLY:O	2.19	0.43
20:X:29:DC:C6	20:X:30:DT:H72	2.53	0.43
1:A:373:VAL:HG11	2:B:1082:ARG:HD2	2.01	0.43
1:A:585:ASP:N	1:A:585:ASP:OD1	2.51	0.43
2:B:137:ARG:C	2:B:415:GLU:HB2	2.39	0.43
2:B:217:GLN:HB3	2:B:356:VAL:CG1	2.49	0.43
2:B:1008:ILE:HD11	11:K:70:HIS:NE2	2.34	0.43
3:C:73:SER:HA	3:C:213:GLY:HA3	2.01	0.43
4:D:10:PHE:HA	7:G:3:ILE:HG22	2.01	0.43
9:I:5:CYS:O	9:I:9:ASN:HA	2.19	0.43
11:K:88:PHE:HB3	11:K:106:GLN:HG3	1.95	0.43
13:M:104:HIS:CB	13:M:105:PRO:CD	2.89	0.43
18:R:286:ARG:HA	18:R:290:PHE:CZ	2.54	0.43
18:R:610:LEU:HA	18:R:613:HIS:HD2	1.81	0.43
1:A:16:LEU:HD23	2:B:1139:PRO:HB2	2.01	0.42
2:B:338:GLU:H	2:B:345:LYS:HZ3	1.67	0.42
2:B:732:GLN:O	2:B:750:PRO:HB2	2.19	0.42
2:B:834:MET:CE	12:L:63:ARG:HD2	2.48	0.42
5:E:26:ARG:HH22	5:E:189:GLY:CA	2.32	0.42
13:M:76:LEU:HB3	13:M:168:VAL:HB	2.01	0.42
13:M:155:ASN:OD1	13:M:155:ASN:N	2.51	0.42
16:P:141:LYS:HG2	16:P:142:PHE:H	1.84	0.42
16:P:216:SER:CB	16:P:260:CYS:HA	2.49	0.42
18:R:73:LEU:HD22	21:Y:32:DA:N7	2.34	0.42
19:S:527:ASP:O	19:S:531:GLN:HG3	2.19	0.42
20:X:55:DA:H1'	20:X:56:DC:H5'	2.01	0.42
21:Y:60:DA:H2''	21:Y:61:DA:H8	1.84	0.42
1:A:9:THR:O	1:A:11:LYS:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:185:TRP:O	1:A:189:LYS:HE2	2.19	0.42
1:A:321:LEU:HD22	1:A:336:MET:HG2	2.02	0.42
1:A:383:PRO:HG3	1:A:512:PHE:CE2	2.54	0.42
1:A:583:MET:HG3	1:A:700:LEU:HB2	2.01	0.42
1:A:705:LEU:HD22	2:B:761:SER:CB	2.48	0.42
1:A:869:ARG:NH2	2:B:502:THR:O	2.52	0.42
2:B:417:ASP:O	2:B:419:LEU:N	2.52	0.42
2:B:552:ASN:ND2	2:B:565:ILE:O	2.50	0.42
2:B:556:TYR:HD2	2:B:600:HIS:CE1	2.37	0.42
2:B:778:ILE:HD11	2:B:906:PRO:HG2	2.00	0.42
5:E:180:ARG:C	5:E:182:ASP:H	2.19	0.42
7:G:97:ILE:HG21	7:G:140:PHE:HZ	1.85	0.42
11:K:107:THR:HG23	11:K:108:TYR:O	2.20	0.42
13:M:72:GLU:OE1	14:N:364:ARG:NE	2.50	0.42
13:M:113:LYS:O	13:M:117:HIS:HA	2.19	0.42
13:M:160:ALA:N	13:M:173:ILE:CD1	2.81	0.42
15:O:205:LYS:HG3	15:O:206:LEU:H	1.84	0.42
15:O:325:LYS:HE3	15:O:484:MET:SD	2.59	0.42
15:O:499:THR:HG21	16:P:312:PHE:CD1	2.54	0.42
1:A:67:CYS:H	1:A:71:HIS:HA	1.84	0.42
1:A:152:ARG:HE	1:A:184:ARG:NE	2.17	0.42
1:A:916:TYR:HB3	1:A:920:GLY:HA2	2.02	0.42
2:B:140:ASN:HB3	19:S:395:GLU:H	1.82	0.42
2:B:199:GLN:HG3	2:B:477:PHE:CE2	2.54	0.42
2:B:364:LYS:HG3	2:B:365:MET:N	2.25	0.42
2:B:475:SER:CB	2:B:510:LEU:O	2.64	0.42
3:C:8:GLU:HG3	3:C:11:ARG:CZ	2.48	0.42
3:C:52:ALA:HB2	3:C:310:PRO:HG2	2.01	0.42
3:C:256:ILE:HG22	3:C:267:VAL:HA	2.01	0.42
7:G:207:LEU:HD23	7:G:209:SER:H	1.84	0.42
15:O:262:ILE:O	15:O:274:VAL:HA	2.19	0.42
15:O:484:MET:HA	15:O:487:LEU:HB3	2.01	0.42
15:O:517:VAL:HG11	15:O:522:ILE:HD11	2.01	0.42
15:O:573:SER:O	15:O:576:PHE:CD2	2.72	0.42
18:R:142:MET:HG3	18:R:144:ILE:HG22	2.01	0.42
18:R:144:ILE:HB	19:S:408:TYR:CE1	2.54	0.42
1:A:155:LEU:HD11	1:A:156:HIS:HD2	1.83	0.42
1:A:1373:ARG:CG	1:A:1374:PHE:N	2.83	0.42
1:A:1449:GLU:OE2	4:D:10:PHE:N	2.52	0.42
2:B:149:ILE:HD12	2:B:429:ILE:HG21	2.01	0.42
2:B:338:GLU:OE1	2:B:339:ALA:N	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:350:ALA:O	2:B:353:THR:N	2.52	0.42
2:B:837:GLN:OE1	2:B:837:GLN:N	2.52	0.42
2:B:1088:ASP:OD2	2:B:1123:TYR:N	2.53	0.42
9:I:35:ILE:HB	9:I:36:GLU:H	1.59	0.42
15:O:106:TYR:OH	17:Q:1079:UNK:N	2.52	0.42
15:O:242:LYS:O	15:O:246:LYS:N	2.40	0.42
16:P:202:PRO:O	16:P:204:LYS:N	2.48	0.42
18:R:491:ASP:HB2	18:R:537:LYS:HG2	2.02	0.42
20:X:19:DA:H4'	20:X:20:DA:OP1	2.19	0.42
20:X:62:DG:O6	21:Y:2:DC:N4	2.53	0.42
1:A:269:ARG:HH22	1:A:284:ASP:N	2.17	0.42
1:A:768:GLY:O	1:A:772:LYS:HB2	2.20	0.42
1:A:862:LEU:HD22	2:B:494:PHE:HB2	2.01	0.42
2:B:539:GLU:OE1	2:B:539:GLU:N	2.53	0.42
5:E:62:ALA:O	5:E:78:LEU:N	2.49	0.42
7:G:52:LEU:O	7:G:53:THR:HG22	2.20	0.42
15:O:507:LEU:HD12	15:O:508:SER:N	2.35	0.42
18:R:2:PRO:HG2	18:R:12:PHE:HE2	1.83	0.42
18:R:188:LYS:HB2	18:R:247:VAL:HG11	2.01	0.42
18:R:199:VAL:O	18:R:203:VAL:HG23	2.19	0.42
18:R:213:TRP:O	18:R:213:TRP:CG	2.72	0.42
21:Y:38:DA:C6	21:Y:39:DA:C6	3.07	0.42
1:A:223:ASN:O	1:A:226:LYS:HB3	2.20	0.42
1:A:541:LEU:HD13	1:A:682:LEU:HD22	2.02	0.42
1:A:842:PRO:C	1:A:844:SER:N	2.73	0.42
1:A:916:TYR:CZ	1:A:1089:ILE:HG21	2.55	0.42
1:A:1141:ILE:HB	1:A:1295:VAL:HB	1.99	0.42
1:A:1338:GLU:O	1:A:1342:THR:HG22	2.19	0.42
1:A:1370:GLY:HA2	1:A:1375:GLY:HA2	2.01	0.42
1:A:1395:HIS:O	1:A:1399:ALA:HB2	2.20	0.42
2:B:38:ILE:HG13	2:B:43:ASP:HB3	2.00	0.42
2:B:230:LYS:HD2	2:B:242:LEU:HD22	2.01	0.42
2:B:354:ARG:O	2:B:358:MET:HG3	2.20	0.42
2:B:846:SER:OG	2:B:866:TYR:HB3	2.19	0.42
2:B:1025:GLN:O	2:B:1027:LEU:HD12	2.19	0.42
8:H:104:PHE:CE1	8:H:114:VAL:HG13	2.55	0.42
9:I:33:PHE:CE2	9:I:35:ILE:HA	2.55	0.42
13:M:131:TYR:HE2	13:M:133:LYS:HA	1.84	0.42
15:O:132:TYR:CZ	15:O:291:ARG:NH1	2.88	0.42
15:O:189:SER:O	15:O:190:LEU:O	2.38	0.42
16:P:135:LYS:HB3	16:P:151:TYR:CD1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:218:THR:HG23	16:P:219:GLN:N	2.34	0.42
1:A:957:TYR:CD2	1:A:1035:PRO:HD3	2.54	0.42
1:A:1382:SER:HB2	1:A:1385:GLN:HG2	2.01	0.42
2:B:732:GLN:HB3	10:J:52:THR:CG2	2.50	0.42
2:B:790:LYS:HA	2:B:898:VAL:O	2.19	0.42
2:B:988:SER:HB2	2:B:998:TYR:HB2	2.00	0.42
3:C:100:ARG:HH21	10:J:5:VAL:HG13	1.84	0.42
4:D:1:MET:HG3	4:D:2:LYS:N	2.33	0.42
8:H:47:PHE:CZ	8:H:146:ARG:HG3	2.55	0.42
13:M:140:TRP:CD1	13:M:185:TYR:HB3	2.55	0.42
15:O:126:GLY:C	15:O:128:HIS:N	2.72	0.42
15:O:190:LEU:HB2	15:O:194:LEU:HG	2.01	0.42
15:O:471:THR:OG1	15:O:472:LYS:N	2.53	0.42
15:O:561:ARG:HD2	15:O:561:ARG:HA	1.41	0.42
15:O:599:ASN:ND2	15:O:630:VAL:HG11	2.34	0.42
16:P:21:GLN:O	16:P:26:GLY:N	2.50	0.42
18:R:241:HIS:HD2	18:R:255:LEU:HD23	1.85	0.42
18:R:509:SER:OG	18:R:521:TYR:HD1	2.03	0.42
19:S:291:UNK:O	19:S:293:UNK:N	2.53	0.42
1:A:81:PHE:CD1	1:A:265:PRO:HD3	2.55	0.42
1:A:297:SER:HA	1:A:300:LYS:HB3	2.02	0.42
1:A:475:ASN:OD1	1:A:476:ARG:N	2.48	0.42
1:A:730:LEU:O	1:A:733:ILE:HG22	2.19	0.42
1:A:739:ASP:O	1:A:743:THR:HG22	2.19	0.42
1:A:991:LYS:HG3	1:A:993:GLU:HG2	2.01	0.42
2:B:306:GLY:HA2	2:B:325:GLU:HB2	2.01	0.42
2:B:681:LEU:HD23	2:B:685:ALA:HB1	2.00	0.42
2:B:1036:HIS:CE1	2:B:1057:ASP:O	2.73	0.42
3:C:260:GLU:HB2	3:C:263:ASP:H	1.84	0.42
8:H:16:ASP:O	8:H:18:GLY:N	2.51	0.42
9:I:4:PHE:O	9:I:12:LEU:HD11	2.20	0.42
15:O:135:LEU:HB3	15:O:287:PHE:HZ	1.85	0.42
15:O:156:VAL:CG1	15:O:189:SER:CB	2.87	0.42
15:O:160:VAL:O	15:O:163:VAL:N	2.53	0.42
15:O:271:LEU:HD23	15:O:272:ARG:N	2.34	0.42
19:S:363:GLN:HB2	19:S:378:THR:HG21	2.02	0.42
21:Y:40:DA:H1'	21:Y:41:DG:O4'	2.19	0.42
1:A:95:TYR:O	1:A:98:ALA:HB3	2.20	0.42
1:A:134:ASN:O	1:A:137:ARG:HB2	2.19	0.42
1:A:235:LYS:HB3	1:A:252:ARG:CZ	2.49	0.42
1:A:912:VAL:HG23	1:A:913:GLN:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1095:CYS:O	2:B:1099:GLY:HA2	2.20	0.42
4:D:11:LEU:H	7:G:3:ILE:HA	1.85	0.42
4:D:64:ASN:HD22	7:G:102:LEU:HD22	1.85	0.42
15:O:76:VAL:HG23	15:O:120:TYR:HE1	1.85	0.42
15:O:190:LEU:HD13	15:O:194:LEU:CD2	2.40	0.42
15:O:347:ASP:OD1	15:O:348:GLU:N	2.53	0.42
16:P:170:LEU:HD23	16:P:171:ASP:N	2.34	0.42
18:R:470:GLN:HG2	18:R:475:ALA:O	2.20	0.42
18:R:486:ILE:N	18:R:543:ALA:O	2.52	0.42
19:S:458:PHE:O	19:S:462:GLU:HB3	2.17	0.42
19:S:484:TYR:CE1	19:S:488:ILE:HD13	2.55	0.42
1:A:176:LEU:HB3	1:A:320:GLN:HE21	1.85	0.42
1:A:235:LYS:HD3	1:A:252:ARG:HB3	2.02	0.42
2:B:300:GLN:O	2:B:304:TYR:N	2.37	0.42
2:B:465:SER:C	2:B:468:GLY:H	2.23	0.42
2:B:552:ASN:OD1	2:B:553:TYR:HD2	2.02	0.42
2:B:690:TYR:N	2:B:691:PRO:HD3	2.35	0.42
2:B:713:ILE:O	2:B:749:LEU:HD13	2.19	0.42
2:B:842:TYR:HB2	2:B:881:ILE:HD11	2.02	0.42
2:B:909:GLY:HA2	2:B:921:VAL:CG1	2.49	0.42
3:C:78:VAL:HG11	3:C:108:VAL:HG13	2.01	0.42
3:C:195:LYS:HD2	10:J:57:ILE:CG2	2.50	0.42
10:J:48:ARG:HG3	10:J:49:MET:N	2.35	0.42
13:M:164:LYS:HG3	14:N:300:LYS:HD3	2.01	0.42
15:O:488:LYS:HD2	15:O:654:ALA:HB1	2.02	0.42
1:A:15:GLY:N	1:A:1408:VAL:HG12	2.14	0.41
1:A:163:VAL:C	1:A:180:HIS:CD2	2.83	0.41
1:A:805:ASN:ND2	2:B:951:SER:HA	2.35	0.41
1:A:882:THR:O	1:A:885:MET:HB3	2.20	0.41
1:A:1165:LEU:C	1:A:1167:SER:N	2.73	0.41
2:B:206:ILE:HD13	2:B:374:ASN:ND2	2.35	0.41
2:B:495:GLY:HA3	2:B:610:ARG:NH1	2.35	0.41
2:B:949:PHE:O	2:B:953:MET:N	2.52	0.41
2:B:1038:ARG:HD2	2:B:1057:ASP:OD2	2.20	0.41
3:C:110:PRO:O	3:C:111:ASP:HB2	2.19	0.41
3:C:256:ILE:HG22	3:C:267:VAL:HG22	2.01	0.41
6:F:99:LEU:O	6:F:102:SER:OG	2.26	0.41
13:M:84:SER:O	13:M:85:LEU:CD1	2.23	0.41
13:M:113:LYS:HD3	13:M:241:ALA:HA	2.01	0.41
15:O:74:LEU:HG	15:O:79:LEU:HD12	2.02	0.41
15:O:488:LYS:HA	15:O:491:VAL:HG23	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:597:GLN:OE1	15:O:597:GLN:N	2.53	0.41
16:P:297:PHE:C	16:P:299:MET:H	2.23	0.41
18:R:467:ARG:CG	18:R:610:LEU:HD22	2.49	0.41
1:A:86:LEU:HD21	1:A:319:LEU:HD21	2.01	0.41
1:A:533:ASN:ND2	6:F:94:LEU:HD22	2.35	0.41
2:B:93:LEU:CD1	2:B:133:ILE:HG21	2.49	0.41
2:B:217:GLN:CG	2:B:232:TYR:HB3	2.50	0.41
2:B:767:ILE:HD12	2:B:767:ILE:HG23	1.80	0.41
2:B:1009:THR:O	11:K:74:ASN:ND2	2.53	0.41
14:N:385:GLY:O	14:N:416:ILE:HA	2.21	0.41
15:O:47:PHE:HB3	15:O:582:GLU:OE1	2.21	0.41
15:O:67:MET:HG2	15:O:83:ILE:HD11	2.01	0.41
15:O:472:LYS:CG	15:O:473:PRO:HD2	2.50	0.41
15:O:560:SER:O	15:O:560:SER:OG	2.31	0.41
16:P:69:GLU:HG3	16:P:70:LEU:N	2.28	0.41
18:R:455:GLU:HB3	18:R:592:LEU:HD23	2.02	0.41
20:X:57:DT:H2"	20:X:58:DC:C5	2.55	0.41
1:A:43:GLU:OE1	1:A:44:LYS:HG2	2.19	0.41
1:A:194:LYS:O	1:A:197:TRP:HB3	2.20	0.41
1:A:261:LEU:HD12	1:A:262:PRO:HD2	2.02	0.41
1:A:602:TYR:N	3:C:23:PHE:O	2.54	0.41
1:A:712:ILE:HG13	2:B:946:PRO:HB3	2.02	0.41
1:A:896:LEU:HD11	1:A:912:VAL:HG21	2.02	0.41
1:A:1328:ILE:O	1:A:1331:ALA:N	2.53	0.41
2:B:1006:SER:O	2:B:1010:GLY:N	2.53	0.41
3:C:91:VAL:HG21	10:J:61:LEU:HD23	2.01	0.41
9:I:6:PRO:O	9:I:8:CYS:N	2.53	0.41
16:P:202:PRO:C	16:P:203:LYS:HG2	2.41	0.41
19:S:420:TRP:CD1	19:S:457:LYS:HD2	2.55	0.41
1:A:200:GLU:HB3	15:O:516:LEU:HD21	1.96	0.41
1:A:235:LYS:HD3	1:A:252:ARG:CB	2.50	0.41
1:A:705:LEU:HD23	1:A:705:LEU:C	2.40	0.41
1:A:918:GLY:HA3	5:E:208:TYR:CD1	2.56	0.41
1:A:1053:LYS:O	1:A:1056:VAL:N	2.52	0.41
2:B:224:THR:HG1	2:B:225:HIS:N	2.18	0.41
2:B:390:ASP:OD2	2:B:444:LEU:HG	2.20	0.41
2:B:883:GLN:HB3	2:B:899:LEU:HD21	2.03	0.41
2:B:961:LEU:HD22	2:B:1018:PHE:CE1	2.55	0.41
5:E:128:PRO:N	5:E:129:PRO:HD2	2.35	0.41
5:E:143:ASN:OD1	5:E:143:ASN:N	2.52	0.41
7:G:129:ILE:HG23	7:G:138:LEU:HA	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:104:HIS:CE1	14:N:395:ILE:CD1	2.91	0.41
15:O:581:LEU:HB2	15:O:648:TRP:CH2	2.55	0.41
15:O:630:VAL:O	15:O:633:ARG:HB3	2.21	0.41
18:R:425:PHE:CE2	18:R:427:ALA:HB3	2.55	0.41
1:A:152:ARG:HH21	1:A:184:ARG:HE	1.69	0.41
1:A:308:SER:HB3	1:A:311:ASN:ND2	2.36	0.41
1:A:833:PRO:CB	2:B:659:ILE:HD12	2.50	0.41
1:A:925:GLU:OE2	1:A:1081:ALA:HA	2.20	0.41
1:A:1026:ARG:NH2	8:H:129:TYR:OH	2.53	0.41
1:A:1451:LEU:O	4:D:111:ASN:ND2	2.52	0.41
2:B:232:TYR:CD1	2:B:242:LEU:HD23	2.55	0.41
2:B:306:GLY:CA	2:B:325:GLU:HB2	2.50	0.41
2:B:351:MET:HE3	2:B:351:MET:HB3	1.89	0.41
2:B:806:ILE:H	2:B:806:ILE:HG13	1.64	0.41
2:B:1028:LYS:HG2	2:B:1029:HIS:N	2.33	0.41
3:C:33:VAL:C	3:C:35:LYS:N	2.72	0.41
4:D:28:LEU:HD13	4:D:56:GLN:HG3	2.02	0.41
4:D:131:MET:H	4:D:154:LEU:HD11	1.85	0.41
5:E:55:ARG:HB3	5:E:82:PHE:HD2	1.85	0.41
7:G:105:PHE:HD2	7:G:107:ASP:N	2.19	0.41
13:M:131:TYR:CE2	13:M:133:LYS:HA	2.55	0.41
13:M:251:THR:HG21	13:M:255:PHE:CD2	2.56	0.41
15:O:472:LYS:O	15:O:474:GLY:N	2.53	0.41
16:P:29:ALA:O	16:P:71:LYS:HD3	2.21	0.41
18:R:537:LYS:HD3	21:Y:52:DA:P	2.61	0.41
20:X:6:DA:H2''	20:X:7:DA:H8	1.84	0.41
1:A:191:ALA:HB3	1:A:194:LYS:HB3	2.02	0.41
1:A:385:PRO:HG3	2:B:764:GLY:CA	2.51	0.41
1:A:624:ILE:N	1:A:657:SER:OG	2.42	0.41
1:A:738:CYS:O	1:A:742:ILE:HG22	2.21	0.41
2:B:84:LEU:HD22	2:B:91:PHE:O	2.20	0.41
2:B:587:PHE:CE1	2:B:607:ARG:HD3	2.56	0.41
2:B:623:LYS:O	2:B:625:ILE:N	2.53	0.41
2:B:667:VAL:HG12	2:B:669:SER:H	1.85	0.41
2:B:710:ILE:HG12	2:B:1026:LYS:O	2.19	0.41
2:B:916:HIS:NE2	2:B:957:LYS:N	2.68	0.41
2:B:933:PHE:CE2	2:B:937:GLY:CA	2.94	0.41
2:B:936:GLN:CB	2:B:938:ILE:HD12	2.51	0.41
4:D:8:ASN:HB3	7:G:4:LEU:O	2.20	0.41
5:E:60:PHE:CZ	5:E:80:VAL:HG11	2.56	0.41
7:G:203:ASP:HB3	7:G:211:TRP:NE1	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:573:SER:HA	15:O:576:PHE:CD2	2.56	0.41
18:R:213:TRP:HD1	18:R:287:PRO:CD	2.22	0.41
1:A:64:SER:OG	1:A:65:LEU:N	2.53	0.41
1:A:305:LYS:HA	15:O:535:SER:OG	2.20	0.41
1:A:466:LEU:HD12	1:A:466:LEU:HA	1.91	0.41
1:A:1205:ILE:HA	1:A:1208:ALA:HB3	2.02	0.41
1:A:1299:GLY:O	1:A:1301:ARG:N	2.52	0.41
2:B:531:LYS:HA	2:B:534:TYR:HD2	1.86	0.41
2:B:756:THR:H	10:J:48:ARG:HH12	1.68	0.41
3:C:106:LEU:HD12	3:C:208:CYS:SG	2.60	0.41
3:C:140:CYS:HB2	3:C:196:LEU:HD13	2.01	0.41
5:E:90:VAL:HG23	5:E:119:SER:OG	2.21	0.41
6:F:144:GLU:HG3	6:F:145:ASP:N	2.36	0.41
14:N:290:ILE:O	14:N:294:LEU:HB3	2.19	0.41
15:O:132:TYR:C	15:O:134:GLY:N	2.73	0.41
16:P:139:SER:OG	16:P:140:VAL:N	2.53	0.41
18:R:467:ARG:O	18:R:471:LYS:HB3	2.21	0.41
1:A:543:THR:OG1	1:A:544:PRO:HD2	2.21	0.41
1:A:719:PRO:HD3	1:A:810:VAL:HG13	2.02	0.41
1:A:896:LEU:HD23	1:A:1357:LEU:HD21	2.02	0.41
1:A:975:VAL:O	1:A:1002:ARG:NH2	2.47	0.41
2:B:180:ASP:OD2	2:B:184:TYR:OH	2.29	0.41
2:B:464:ILE:HD11	2:B:746:TYR:HE1	1.84	0.41
2:B:797:ARG:NH1	18:R:137:GLU:OE1	2.54	0.41
2:B:1045:VAL:CG2	2:B:1046:LEU:N	2.83	0.41
5:E:27:GLY:O	5:E:65:THR:HG22	2.20	0.41
5:E:82:PHE:CG	5:E:83:CYS:N	2.89	0.41
8:H:15:VAL:HG13	8:H:24:CYS:SG	2.61	0.41
13:M:77:LYS:HG2	14:N:360:VAL:N	2.36	0.41
13:M:227:LEU:O	13:M:232:LEU:HB2	2.20	0.41
15:O:94:THR:HA	15:O:97:SER:HB2	2.02	0.41
15:O:570:GLU:OE1	15:O:570:GLU:N	2.40	0.41
1:A:33:GLU:HG3	1:A:83:HIS:HE2	1.84	0.41
1:A:228:LEU:HD12	1:A:257:ILE:HD11	2.03	0.41
1:A:322:THR:O	1:A:326:TYR:N	2.47	0.41
1:A:404:TYR:HD2	1:A:464:ARG:HH21	1.68	0.41
1:A:541:LEU:HG	1:A:551:ILE:CD1	2.47	0.41
1:A:665:ASP:OD2	1:A:797:CYS:HA	2.21	0.41
1:A:792:LEU:O	1:A:796:THR:HB	2.20	0.41
1:A:975:VAL:HG13	1:A:976:ARG:N	2.35	0.41
1:A:1448:PHE:CZ	4:D:16:VAL:HG23	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:98:ILE:CD1	2:B:131:VAL:HG12	2.51	0.41
2:B:112:LEU:HD22	2:B:162:ILE:CG1	2.51	0.41
2:B:239:LYS:NZ	2:B:241:TYR:HE2	2.19	0.41
2:B:622:VAL:O	2:B:626:HIS:HD2	2.04	0.41
2:B:625:ILE:HD11	2:B:628:ARG:HH21	1.86	0.41
2:B:738:THR:HA	2:B:976:GLY:O	2.21	0.41
2:B:738:THR:H	2:B:741:ILE:HD13	1.86	0.41
2:B:800:ASN:OD1	2:B:855:PRO:HB3	2.21	0.41
2:B:889:SER:OG	2:B:891:ASN:OD1	2.36	0.41
2:B:1077:GLN:O	2:B:1081:GLU:HB2	2.20	0.41
3:C:33:VAL:O	3:C:34:GLU:CB	2.47	0.41
4:D:157:ILE:HG13	4:D:161:ALA:HB3	2.03	0.41
5:E:181:ALA:O	5:E:186:LEU:HG	2.21	0.41
7:G:44:LEU:HD21	7:G:105:PHE:CE1	2.56	0.41
7:G:46:ILE:N	7:G:75:VAL:O	2.51	0.41
7:G:126:SER:CB	7:G:139:TYR:HB3	2.49	0.41
7:G:152:ARG:HB3	7:G:197:LEU:HD11	2.03	0.41
13:M:236:VAL:O	13:M:240:GLU:N	2.51	0.41
15:O:172:GLU:O	15:O:176:SER:CB	2.69	0.41
15:O:547:GLU:HG2	15:O:548:ILE:N	2.22	0.41
15:O:595:LEU:HD22	15:O:633:ARG:CZ	2.51	0.41
15:O:639:ALA:O	15:O:643:ARG:HG3	2.21	0.41
16:P:25:LYS:HG3	16:P:26:GLY:N	2.36	0.41
16:P:96:TYR:OH	16:P:113:ARG:NH1	2.54	0.41
17:Q:48:THR:HG23	17:Q:51:GLU:H	1.86	0.41
18:R:172:GLU:HG2	18:R:502:ALA:O	2.21	0.41
18:R:249:HIS:CD2	19:S:406:TYR:CE2	3.09	0.41
18:R:471:LYS:HD3	18:R:614:LEU:HD23	2.02	0.41
18:R:508:PHE:O	18:R:522:ARG:N	2.28	0.41
19:S:491:ASN:OD1	19:S:492:ILE:N	2.53	0.41
20:X:60:DA:C6	21:Y:4:DT:C4	3.09	0.41
1:A:87:ALA:O	1:A:88:LEU:HB2	2.21	0.41
1:A:565:SER:OG	1:A:663:VAL:HA	2.21	0.41
1:A:570:PHE:CE1	1:A:605:THR:HG22	2.56	0.41
1:A:660:LEU:HG	8:H:117:SER:OG	2.21	0.41
1:A:773:VAL:O	1:A:776:GLU:HB3	2.21	0.41
1:A:792:LEU:HG	1:A:796:THR:OG1	2.21	0.41
1:A:1072:GLU:O	1:A:1076:PHE:HB2	2.21	0.41
2:B:184:TYR:HB3	2:B:470:MET:HE1	2.02	0.41
2:B:225:HIS:CD2	2:B:226:GLU:HG2	2.56	0.41
2:B:521:THR:HG21	2:B:587:PHE:CD2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:930:ASP:O	2:B:931:MET:HB3	2.20	0.41
2:B:938:ILE:CG1	10:J:45:CYS:SG	3.09	0.41
2:B:1093:ASP:OD1	2:B:1118:LYS:HG2	2.21	0.41
4:D:133:HIS:HE1	7:G:212:GLU:H	1.68	0.41
5:E:3:GLN:O	5:E:6:GLU:HB2	2.21	0.41
5:E:93:MET:HE1	5:E:124:VAL:HA	2.03	0.41
6:F:81:THR:HG22	6:F:82:THR:N	2.35	0.41
13:M:184:LYS:HD2	13:M:184:LYS:HA	1.70	0.41
15:O:174:TYR:O	15:O:178:VAL:HG23	2.21	0.41
15:O:340:GLU:O	15:O:343:LYS:N	2.51	0.41
17:Q:52:ARG:O	17:Q:55:ALA:N	2.54	0.41
18:R:231:ALA:HA	18:R:234:MET:HB3	2.03	0.41
18:R:420:TYR:CZ	18:R:422:PRO:HG3	2.56	0.41
18:R:528:ILE:HG23	18:R:541:THR:O	2.21	0.41
1:A:201:TRP:CD1	1:A:216:LYS:NZ	2.90	0.40
1:A:424:PRO:HG2	1:A:444:LEU:HD23	2.03	0.40
1:A:502:GLU:OE2	2:B:767:ILE:HG13	2.20	0.40
1:A:535:MET:HG3	2:B:1073:TYR:CD1	2.57	0.40
1:A:630:ASN:ND2	1:A:663:VAL:O	2.55	0.40
1:A:717:VAL:O	1:A:810:VAL:HG22	2.20	0.40
1:A:794:MET:SD	2:B:947:HIS:ND1	2.93	0.40
1:A:913:GLN:HG2	1:A:915:THR:O	2.21	0.40
1:A:921:LEU:HG	1:A:1081:ALA:O	2.21	0.40
2:B:251:ILE:CG2	2:B:256:VAL:HG23	2.51	0.40
2:B:526:GLU:O	2:B:529:ILE:HG22	2.21	0.40
6:F:76:LYS:HD3	6:F:79:ARG:HH21	1.86	0.40
8:H:128:ASN:CG	8:H:129:TYR:H	2.24	0.40
10:J:52:THR:HG22	10:J:53:HIS:N	2.32	0.40
13:M:91:ALA:N	14:N:392:GLN:NE2	2.69	0.40
15:O:516:LEU:O	15:O:516:LEU:CG	2.66	0.40
16:P:110:ILE:O	16:P:114:THR:HG22	2.22	0.40
18:R:505:HIS:O	18:R:508:PHE:N	2.50	0.40
20:X:7:DA:H2"	20:X:8:DC:C5	2.56	0.40
20:X:52:DA:H8	20:X:52:DA:OP2	2.03	0.40
1:A:526:GLU:O	1:A:529:ALA:N	2.54	0.40
1:A:530:GLU:OE2	2:B:1075:ALA:HA	2.21	0.40
1:A:1329:GLU:CD	5:E:200:ARG:HH21	2.25	0.40
1:A:1350:VAL:O	1:A:1351:ASP:HB2	2.22	0.40
2:B:249:GLU:HB3	2:B:250:GLU:HG2	2.03	0.40
2:B:789:ARG:O	2:B:899:LEU:HA	2.21	0.40
2:B:929:GLU:OE2	3:C:73:SER:OG	2.28	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:944:MET:HE1	2:B:957:LYS:HE2	2.03	0.40
2:B:1005:TYR:OH	3:C:293:ARG:NH1	2.54	0.40
2:B:1042:PRO:HB3	18:R:38:VAL:HG22	2.04	0.40
9:I:19:SER:O	9:I:21:VAL:HG23	2.21	0.40
12:L:29:TYR:HB2	12:L:30:ILE:H	1.75	0.40
13:M:158:GLN:NE2	14:N:308:GLN:HE21	2.05	0.40
14:N:279:GLU:O	14:N:282:LEU:HB2	2.22	0.40
14:N:287:HIS:ND1	14:N:369:GLY:O	2.50	0.40
15:O:127:ILE:O	15:O:130:LEU:HB2	2.21	0.40
15:O:133:SER:O	15:O:137:ILE:HG13	2.22	0.40
15:O:190:LEU:CD1	15:O:194:LEU:CD2	2.97	0.40
15:O:509:ARG:O	15:O:512:ARG:HB3	2.20	0.40
15:O:636:ASN:O	15:O:640:ARG:HG2	2.20	0.40
16:P:140:VAL:CG2	16:P:158:ASP:HB3	2.51	0.40
18:R:509:SER:HA	18:R:521:TYR:HA	2.02	0.40
19:S:415:SER:OG	19:S:416:TYR:N	2.53	0.40
20:X:11:DA:C5	20:X:12:DT:C4	3.09	0.40
20:X:18:DT:H73	20:X:19:DA:N7	2.36	0.40
1:A:496:ARG:O	1:A:497:THR:HB	2.21	0.40
1:A:498:PHE:CZ	1:A:519:LEU:HD13	2.57	0.40
1:A:552:ALA:CB	1:A:671:ASP:H	2.33	0.40
1:A:792:LEU:HD11	8:H:19:ARG:NH2	2.37	0.40
1:A:1127:LYS:O	1:A:1131:ASN:HB3	2.21	0.40
1:A:1145:LEU:HB3	1:A:1146:VAL:H	1.48	0.40
1:A:1217:ILE:H	1:A:1217:ILE:HD12	1.87	0.40
1:A:1318:HIS:NE2	1:A:1321:GLU:HB3	2.36	0.40
2:B:798:TYR:C	18:R:99:TYR:HE1	2.25	0.40
3:C:259:ASP:HB2	3:C:266:TYR:CE1	2.57	0.40
7:G:2:PHE:CD2	7:G:79:PRO:HB3	2.56	0.40
7:G:52:LEU:HD12	7:G:53:THR:HG22	2.04	0.40
11:K:61:ALA:O	11:K:104:ARG:HD2	2.21	0.40
11:K:110:GLU:CD	11:K:111:THR:HG23	2.40	0.40
15:O:226:ILE:O	15:O:228:ARG:N	2.46	0.40
15:O:253:ILE:O	15:O:256:PRO:HD2	2.21	0.40
15:O:465:PHE:HA	15:O:466:PRO:HA	1.86	0.40
15:O:482:LYS:C	15:O:485:PRO:HD2	2.42	0.40
15:O:519:GLU:HG3	15:O:534:ARG:NH2	2.36	0.40
16:P:117:HIS:HB3	16:P:119:HIS:ND1	2.36	0.40
18:R:609:GLU:HG2	18:R:613:HIS:NE2	2.36	0.40
20:X:5:DC:H2"	20:X:6:DA:H8	1.85	0.40
1:A:395:PRO:CB	1:A:496:ARG:HA	2.43	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:400:LYS:CA	1:A:465:HIS:HD2	2.26	0.40
1:A:1164:THR:CB	1:A:1271:VAL:HA	2.49	0.40
2:B:721:ILE:HG22	2:B:790:LYS:HD3	2.04	0.40
2:B:1041:GLY:HA3	2:B:1057:ASP:OD2	2.22	0.40
3:C:31:TRP:CE3	11:K:82:LYS:HD2	2.56	0.40
8:H:110:ASP:O	8:H:111:LEU:HD12	2.21	0.40
13:M:140:TRP:CG	13:M:185:TYR:HB3	2.57	0.40
14:N:286:ASP:O	14:N:290:ILE:HG22	2.22	0.40
15:O:358:GLY:HA2	15:O:361:PHE:CD2	2.56	0.40
16:P:218:THR:OG1	16:P:219:GLN:N	2.54	0.40
18:R:269:LYS:O	18:R:272:VAL:HG12	2.21	0.40
20:X:54:DG:H2"	20:X:55:DA:C8	2.57	0.40
1:A:85:LYS:HD2	1:A:260:TYR:HE1	1.87	0.40
1:A:228:LEU:HD21	1:A:232:LYS:HE3	2.03	0.40
1:A:384:ASP:HA	2:B:765:TYR:CE2	2.57	0.40
1:A:889:LEU:HD12	1:A:889:LEU:HA	1.88	0.40
1:A:995:VAL:HG21	5:E:209:ALA:HB2	2.02	0.40
1:A:1122:GLY:C	1:A:1124:PRO:HD2	2.42	0.40
2:B:244:HIS:ND1	2:B:332:ILE:HD12	2.37	0.40
2:B:309:VAL:HG22	2:B:310:LYS:N	2.35	0.40
2:B:756:THR:N	10:J:48:ARG:HH12	2.19	0.40
2:B:775:LYS:C	2:B:777:SER:N	2.74	0.40
2:B:888:VAL:HG23	2:B:893:GLN:O	2.21	0.40
7:G:207:LEU:HB3	7:G:210:TRP:CE2	2.56	0.40
8:H:94:ASP:HB3	8:H:145:ARG:HA	2.04	0.40
14:N:364:ARG:HG3	14:N:365:VAL:N	2.36	0.40
15:O:528:MET:HG3	15:O:529:LYS:N	2.37	0.40
15:O:537:LEU:O	15:O:540:LEU:HB3	2.21	0.40
16:P:203:LYS:HD2	16:P:206:VAL:CG2	2.52	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	1422/1460 (97%)	1135 (80%)	265 (19%)	22 (2%)	8	40
2	B	1112/1149 (97%)	912 (82%)	183 (16%)	17 (2%)	8	40
3	C	333/335 (99%)	278 (84%)	50 (15%)	5 (2%)	8	40
4	D	113/161 (70%)	85 (75%)	27 (24%)	1 (1%)	14	50
5	E	213/215 (99%)	177 (83%)	32 (15%)	4 (2%)	6	35
6	F	81/155 (52%)	69 (85%)	11 (14%)	1 (1%)	11	44
7	G	178/212 (84%)	147 (83%)	27 (15%)	4 (2%)	5	32
8	H	136/146 (93%)	111 (82%)	25 (18%)	0	100	100
9	I	40/110 (36%)	30 (75%)	8 (20%)	2 (5%)	1	19
10	J	65/70 (93%)	54 (83%)	11 (17%)	0	100	100
11	K	99/142 (70%)	82 (83%)	17 (17%)	0	100	100
12	L	44/70 (63%)	37 (84%)	7 (16%)	0	100	100
13	M	160/282 (57%)	126 (79%)	29 (18%)	5 (3%)	3	26
14	N	106/422 (25%)	84 (79%)	21 (20%)	1 (1%)	14	50
15	O	533/654 (82%)	411 (77%)	108 (20%)	14 (3%)	4	29
16	P	271/317 (86%)	225 (83%)	44 (16%)	2 (1%)	19	56
17	Q	33/251 (13%)	26 (79%)	5 (15%)	2 (6%)	1	16
18	R	514/736 (70%)	453 (88%)	59 (12%)	2 (0%)	30	67
19	S	172/594 (29%)	156 (91%)	16 (9%)	0	100	100
All	All	5625/7481 (75%)	4598 (82%)	945 (17%)	82 (2%)	11	40

All (82) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	249	PRO
1	A	587	ILE
1	A	599	LYS
1	A	1371	ILE
2	B	1046	LEU
2	B	1140	ARG
3	C	87	ASN
5	E	180	ARG
5	E	181	ALA
9	I	21	VAL
13	M	84	SER
13	M	103	GLU

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Mol	Chain	Res	Type
13	M	107	ILE
14	N	391	LEU
15	O	146	VAL
15	O	188	SER
15	O	189	SER
15	O	194	LEU
17	Q	39	ILE
1	A	975	VAL
1	A	995	VAL
1	A	1372	THR
2	B	87	VAL
2	B	168	GLU
3	C	120	LEU
7	G	125	GLU
9	I	35	ILE
13	M	105	PRO
15	O	352	VAL
16	P	295	ASN
1	A	39	LEU
1	A	236	SER
1	A	238	ASP
1	A	239	CYS
1	A	307	ILE
1	A	675	HIS
1	A	998	TYR
2	B	335	LEU
2	B	418	ALA
2	B	1056	ARG
3	C	122	ASP
3	C	255	VAL
13	M	243	ILE
15	O	133	SER
15	O	190	LEU
18	R	274	LYS
1	A	109	ASN
1	A	1328	ILE
2	B	713	ILE
2	B	766	ASP
2	B	767	ILE
2	B	823	SER
2	B	934	ASN
2	B	1057	ASP

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Mol	Chain	Res	Type
5	E	147	HIS
5	E	182	ASP
6	F	144	GLU
7	G	111	PRO
15	O	191	PHE
1	A	43	GLU
1	A	829	ASP
1	A	1145	LEU
3	C	223	SER
7	G	191	PRO
15	O	499	THR
1	A	277	SER
1	A	1300	LEU
2	B	822	GLN
2	B	215	ILE
15	O	274	VAL
1	A	672	GLY
4	D	127	LEU
15	O	187	ILE
15	O	297	ILE
2	B	811	VAL
2	B	1137	ILE
15	O	88	VAL
15	O	473	PRO
16	P	206	VAL
17	Q	40	PRO
18	R	516	PHE
7	G	158	VAL

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	1232/1257 (98%)	1223 (99%)	9 (1%)	81	86
2	B	975/1006 (97%)	970 (100%)	5 (0%)	86	90
3	C	296/296 (100%)	295 (100%)	1 (0%)	91	92

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	D	110/145 (76%)	109 (99%)	1 (1%)	75	83
5	E	197/197 (100%)	196 (100%)	1 (0%)	86	90
6	F	73/137 (53%)	73 (100%)	0	100	100
7	G	164/190 (86%)	163 (99%)	1 (1%)	84	88
8	H	123/128 (96%)	123 (100%)	0	100	100
9	I	38/98 (39%)	38 (100%)	0	100	100
10	J	62/65 (95%)	61 (98%)	1 (2%)	58	74
11	K	91/130 (70%)	91 (100%)	0	100	100
12	L	40/57 (70%)	40 (100%)	0	100	100
13	M	142/249 (57%)	140 (99%)	2 (1%)	62	76
14	N	92/360 (26%)	91 (99%)	1 (1%)	70	80
15	O	495/593 (84%)	493 (100%)	2 (0%)	89	91
16	P	255/285 (90%)	255 (100%)	0	100	100
17	Q	31/195 (16%)	31 (100%)	0	100	100
18	R	450/623 (72%)	450 (100%)	0	100	100
19	S	157/494 (32%)	157 (100%)	0	100	100
All	All	5023/6505 (77%)	4999 (100%)	24 (0%)	85	90

All (24) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	239	CYS
1	A	247	THR
1	A	248	VAL
1	A	364	PHE
1	A	669	LEU
1	A	950	GLN
1	A	1145	LEU
1	A	1369	LEU
1	A	1373	ARG
2	B	110	ASP
2	B	112	LEU
2	B	551	LEU
2	B	772	VAL
2	B	933	PHE
3	C	120	LEU

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Mol	Chain	Res	Type
4	D	127	LEU
5	E	180	ARG
7	G	125	GLU
10	J	43	ARG
13	M	104	HIS
13	M	183	PHE
14	N	391	LEU
15	O	498	SER
15	O	561	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (83) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	109	ASN
1	A	161	ASN
1	A	207	HIS
1	A	315	HIS
1	A	386	ASN
1	A	520	HIS
1	A	523	GLN
1	A	533	ASN
1	A	566	HIS
1	A	589	HIS
1	A	618	HIS
1	A	619	ASN
1	A	675	HIS
1	A	808	GLN
1	A	828	GLN
1	A	1385	GLN
2	B	140	ASN
2	B	217	GLN
2	B	225	HIS
2	B	270	GLN
2	B	275	ASN
2	B	286	ASN
2	B	396	ASN
2	B	425	HIS
2	B	519	HIS
2	B	574	GLN
2	B	600	HIS
2	B	626	HIS
2	B	693	HIS

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Mol	Chain	Res	Type
2	B	717	GLN
2	B	754	ASN
2	B	774	ASN
2	B	800	ASN
2	B	902	GLN
2	B	928	GLN
2	B	936	GLN
2	B	1029	HIS
3	C	93	GLN
3	C	99	HIS
3	C	130	ASN
3	C	161	HIS
3	C	175	GLN
4	D	31	GLN
4	D	64	ASN
4	D	69	ASN
4	D	126	GLN
5	E	54	GLN
5	E	104	ASN
5	E	114	ASN
5	E	174	GLN
7	G	32	ASN
13	M	86	HIS
13	M	178	GLN
13	M	190	ASN
13	M	254	GLN
14	N	288	GLN
14	N	308	GLN
14	N	377	ASN
15	O	43	ASN
15	O	56	HIS
15	O	128	HIS
15	O	147	ASN
15	O	222	HIS
15	O	310	GLN
15	O	332	GLN
15	O	337	GLN
15	O	549	GLN
15	O	580	ASN
15	O	587	ASN
15	O	626	GLN
16	P	117	HIS

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Mol	Chain	Res	Type
16	P	189	ASN
16	P	219	GLN
16	P	239	ASN
16	P	305	HIS
18	R	6	ASN
18	R	20	ASN
18	R	35	ASN
18	R	184	HIS
18	R	236	ASN
18	R	414	HIS
19	S	444	GLN
19	S	499	ASN

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 ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

Of 7 ligands modelled in this entry, 7 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
19	S	1
17	Q	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	S	319:UNK	C	360:THR	N	37.73
1	Q	70:PHE	C	1070:UNK	N	12.87

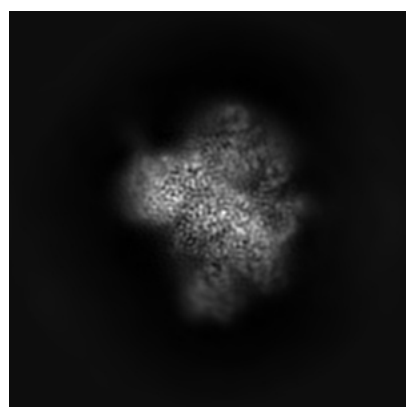
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-7531. These allow visual inspection of the internal detail of the map and identification of artifacts.

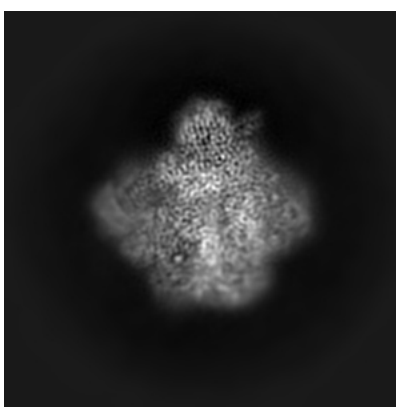
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

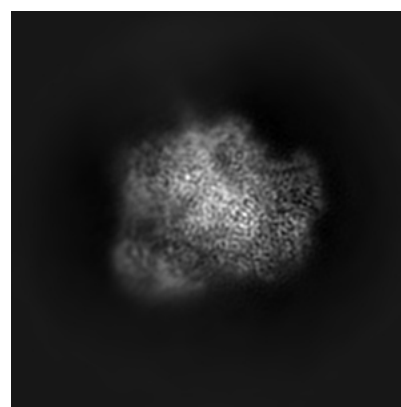
6.1.1 Primary map



X



Y

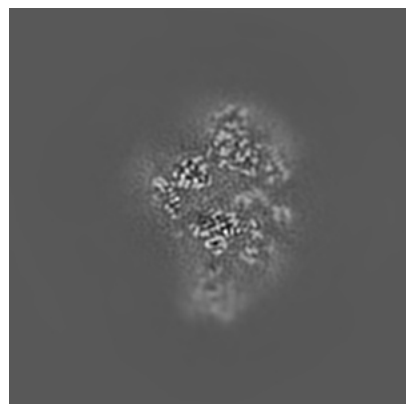


Z

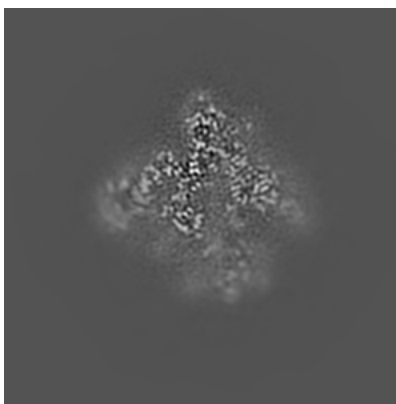
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

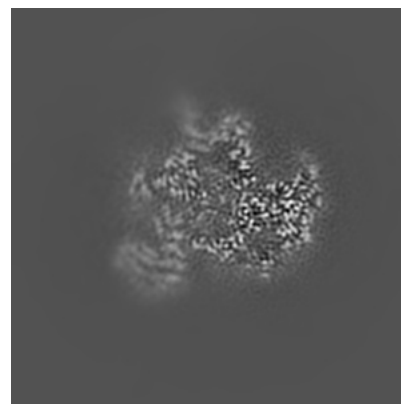
6.2.1 Primary map



X Index: 144



Y Index: 144

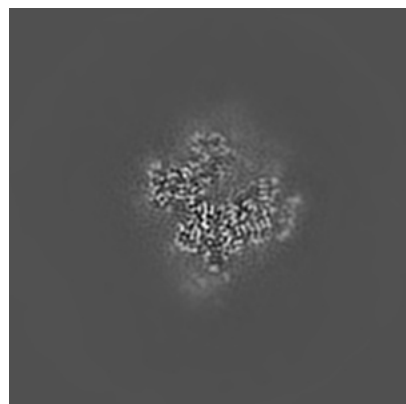


Z Index: 144

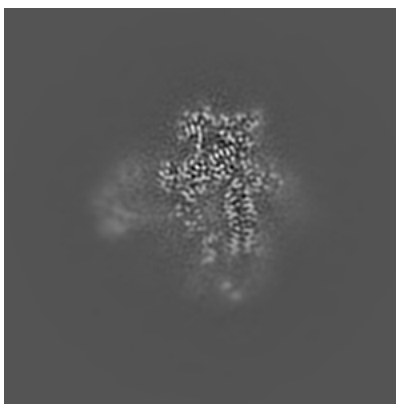
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

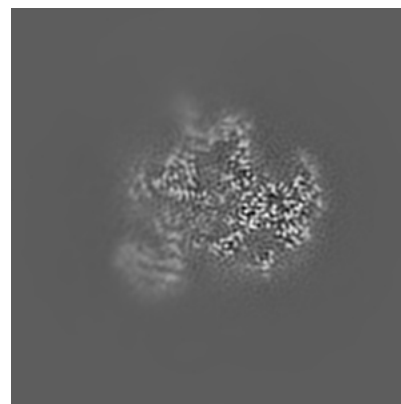
6.3.1 Primary map



X Index: 168



Y Index: 133

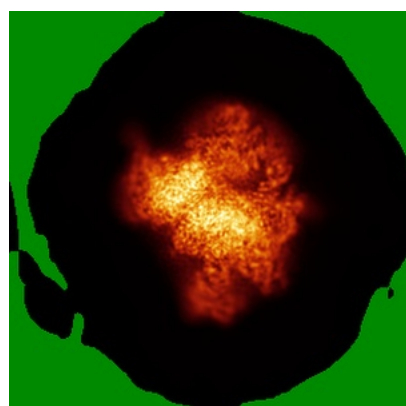


Z Index: 143

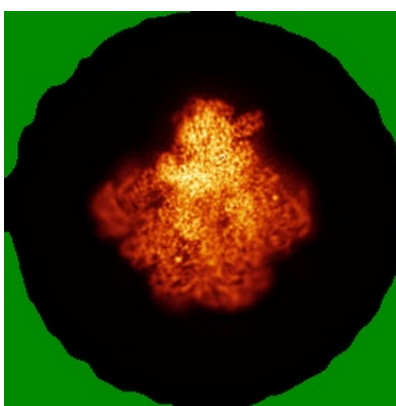
The images above show the largest variance slices of the map in three orthogonal directions.

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

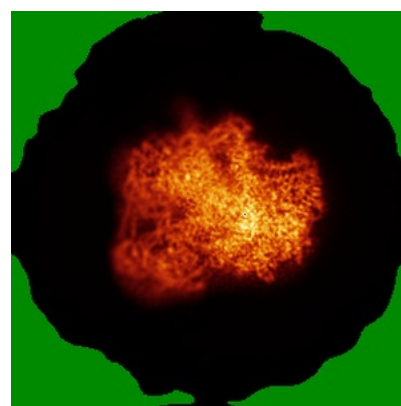
6.4.1 Primary map



X



Y

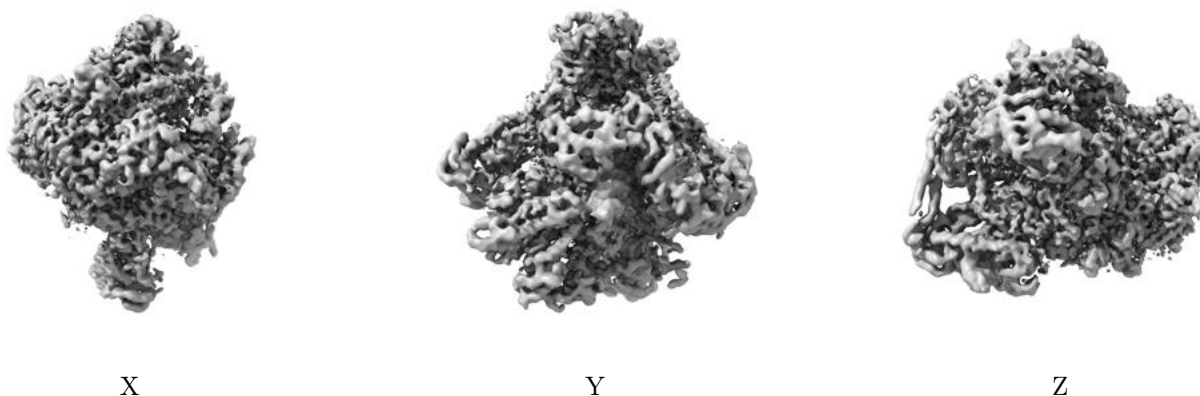


Z

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 0.04. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

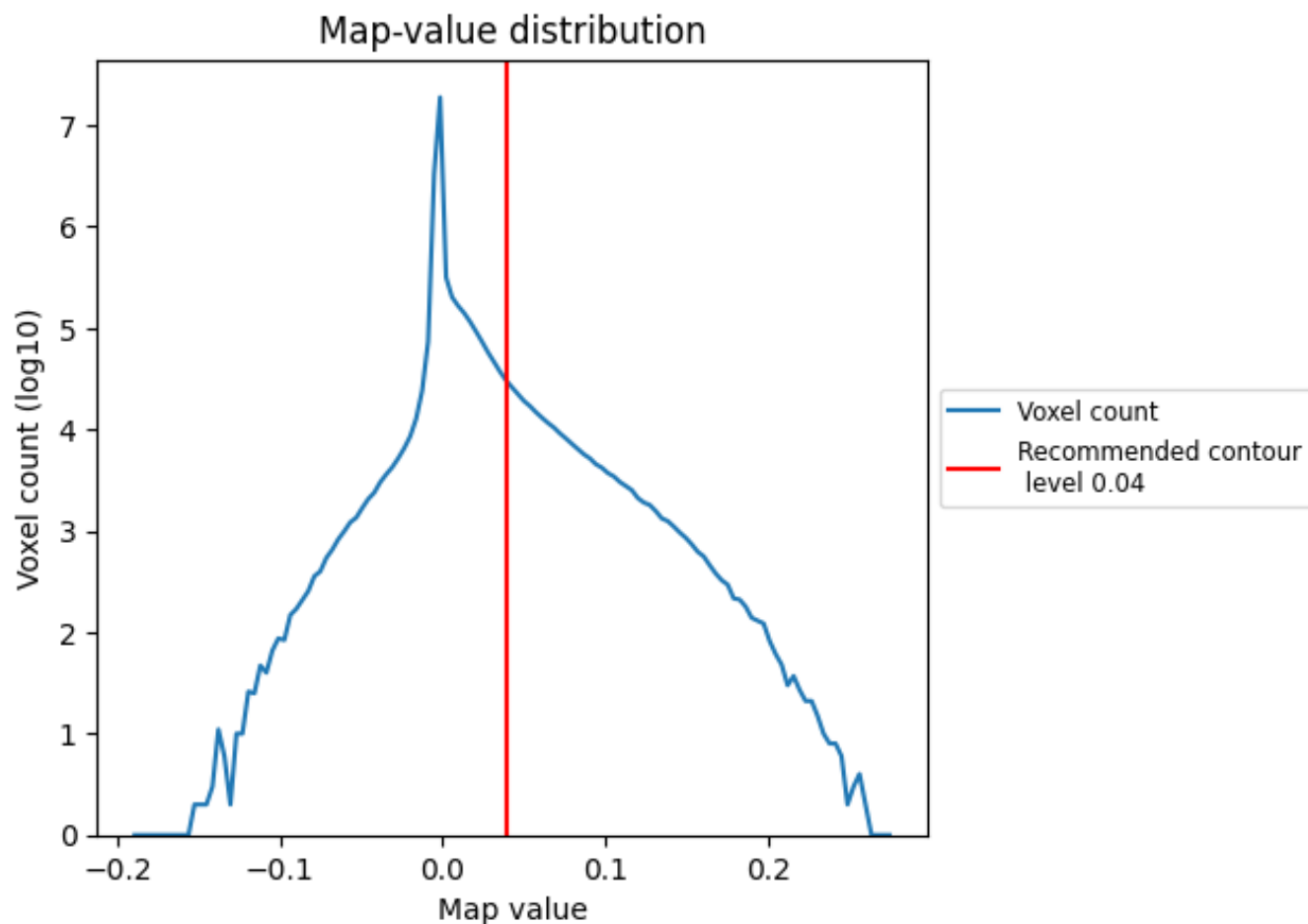
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

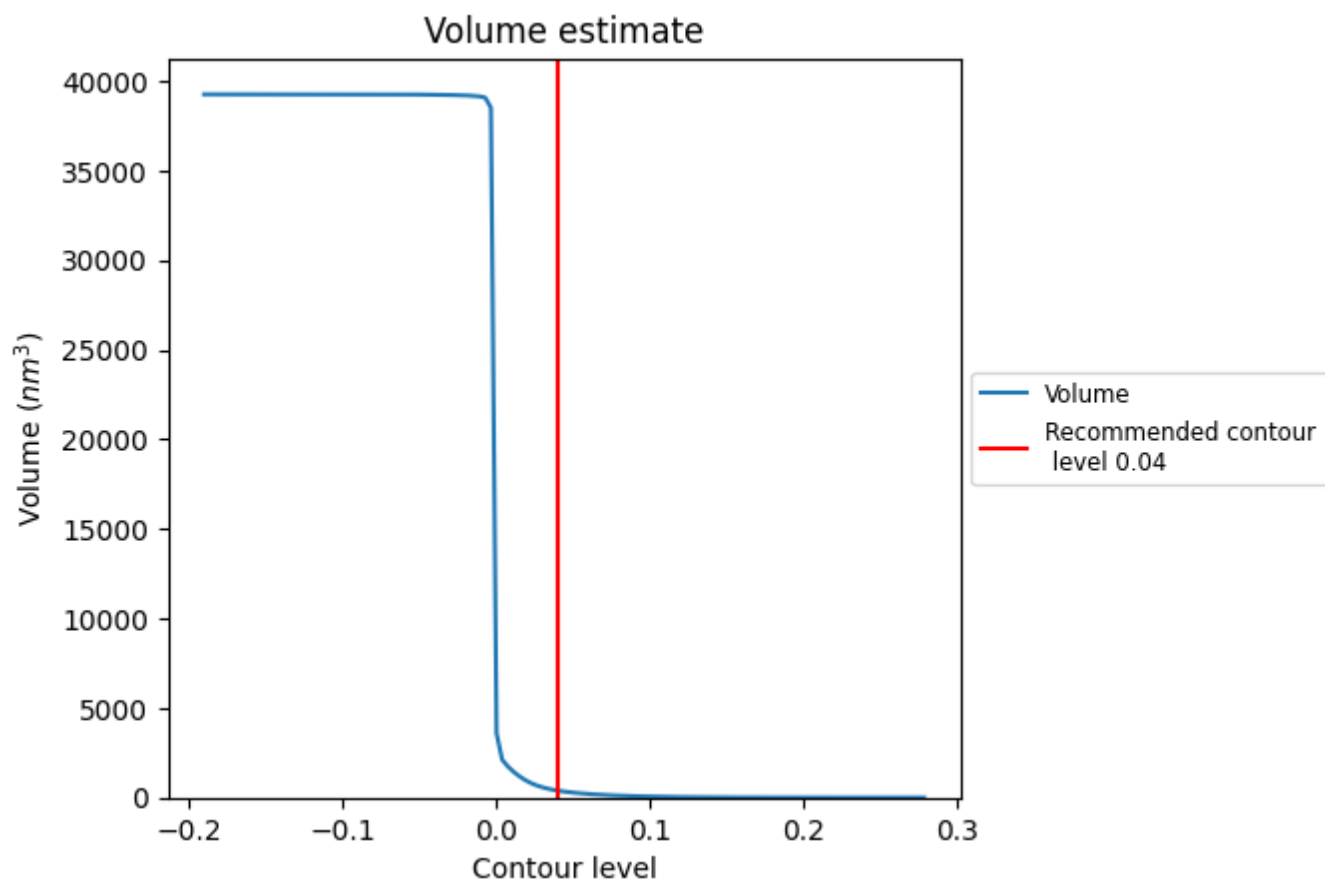
This section contains the results of statistical analysis of the map.

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.

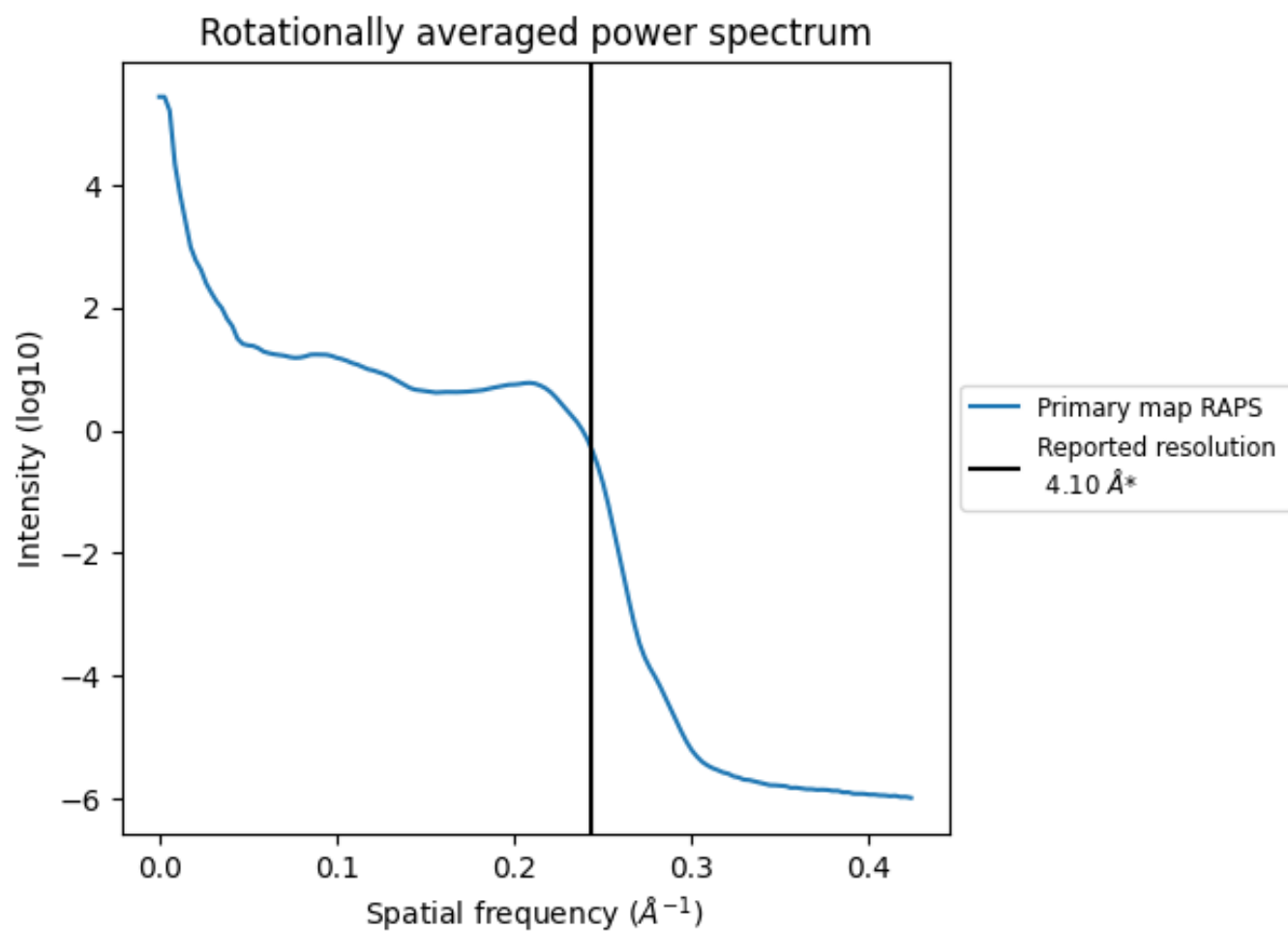
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 395 nm³; this corresponds to an approximate mass of 357 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 ⓘ

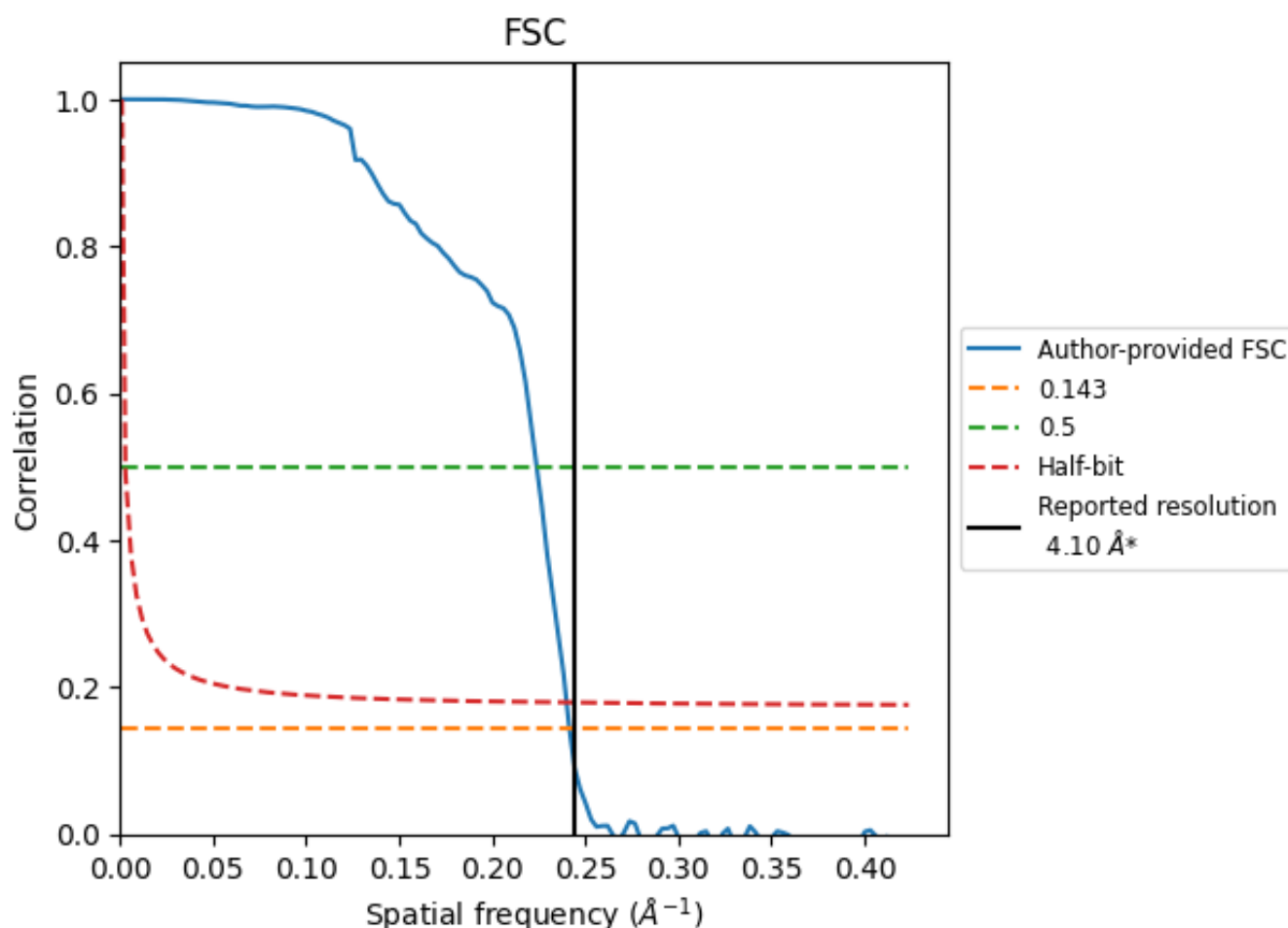


*Reported resolution corresponds to spatial frequency of 0.244 Å⁻¹

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.244 Å⁻¹

8.2 Resolution estimates [i](#)

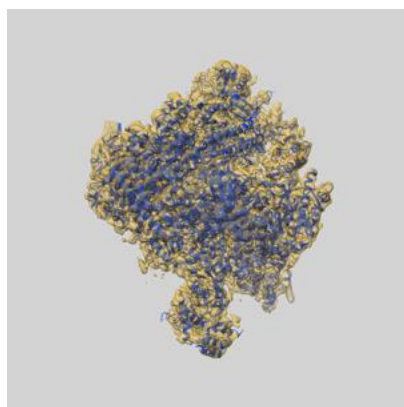
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.10	-	-
Author-provided FSC curve	4.14	4.47	4.17
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

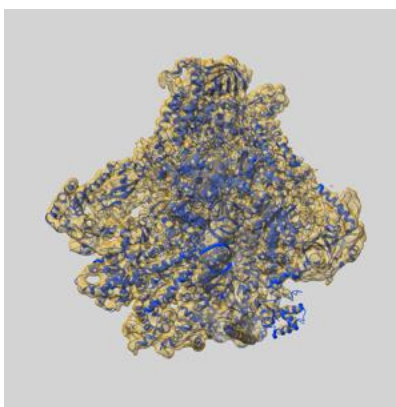
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-7531 and PDB model 6CNC. Per-residue inclusion information can be found in section [3](#) on page [9](#).

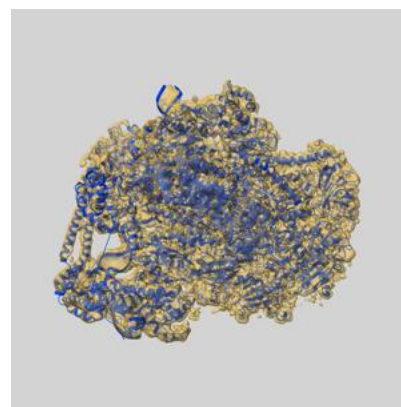
9.1 Map-model overlay [i](#)



X



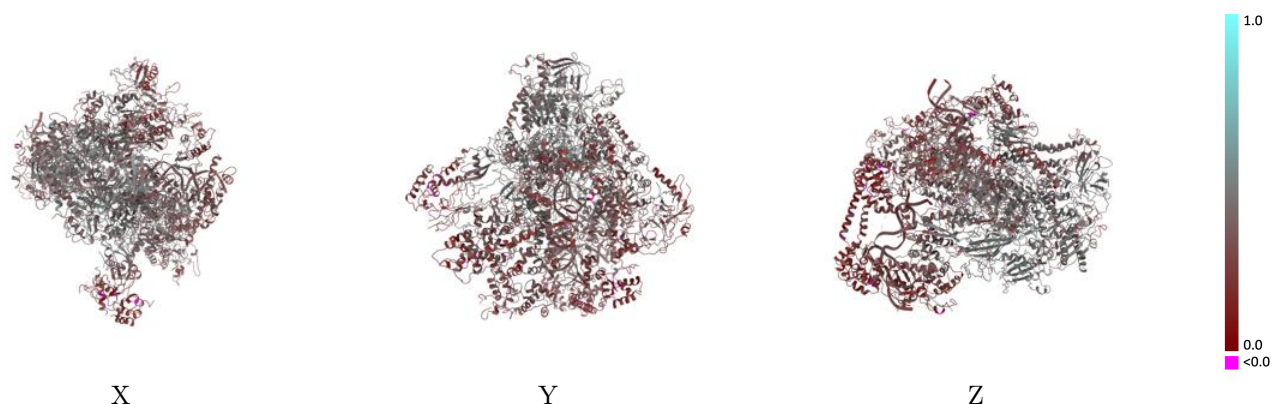
Y



Z

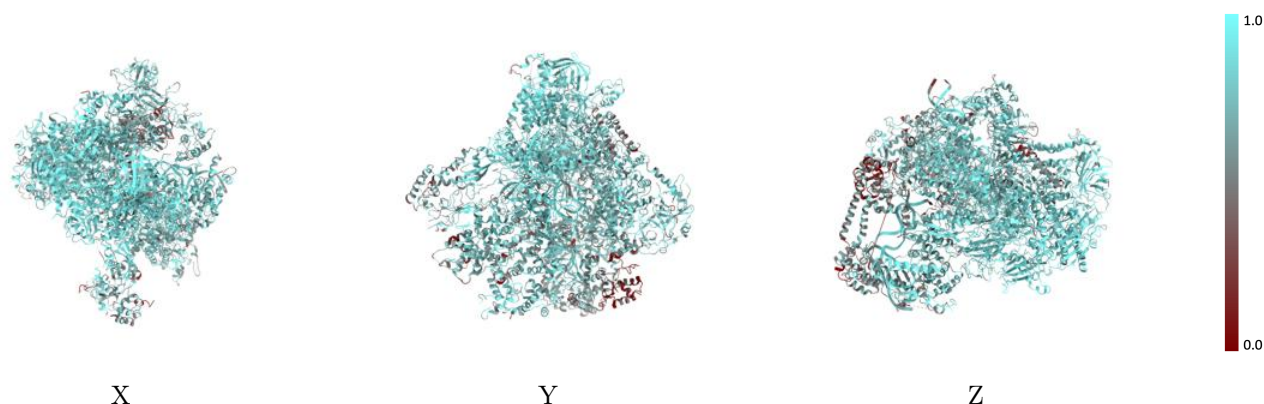
The images above show the 3D surface view of the map at the recommended contour level 0.04 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



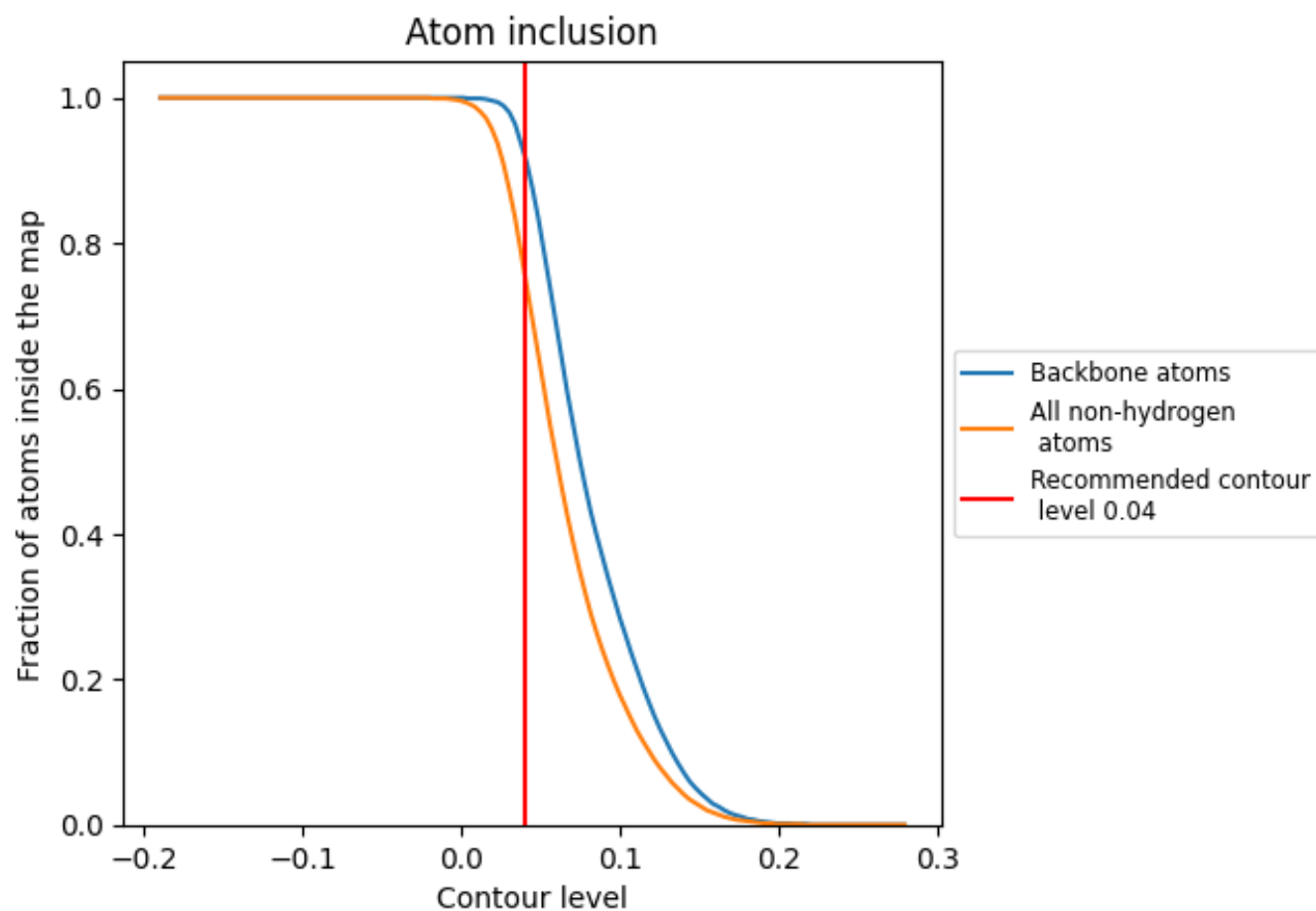
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.04).













































9.4 Atom inclusion [i](#)



At the recommended contour level, 92% of all backbone atoms, 75% 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 (0.04) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7530	 0.3610
A	 0.7810	 0.3990
B	 0.8030	 0.4160
C	 0.8750	 0.4350
D	 0.6050	 0.2130
E	 0.7830	 0.3590
F	 0.8820	 0.4480
G	 0.7220	 0.3000
H	 0.8320	 0.4340
I	 0.7450	 0.3340
J	 0.8800	 0.4440
K	 0.8630	 0.4420
L	 0.8260	 0.4250
M	 0.6800	 0.2940
N	 0.6980	 0.3070
O	 0.6900	 0.3110
P	 0.5810	 0.2640
Q	 0.8600	 0.3920
R	 0.6510	 0.2820
S	 0.5480	 0.2580
X	 0.8850	 0.3190
Y	 0.8430	 0.3360

