



Full wwPDB EM Validation Report ⓘ

Nov 11, 2024 – 08:15 AM JST

PDB ID : 5Y81
EMDB ID : EMD-6816
Title : NuA4 TEEAA sub-complex
Authors : Wang, X.; Cai, G.
Deposited on : 2017-08-18
Resolution : 4.70 Å (reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ 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:

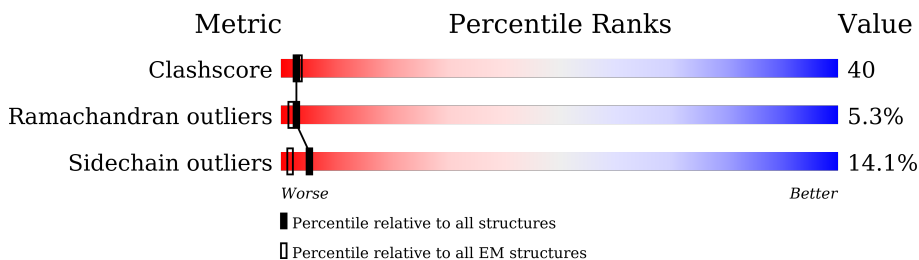
EMDB validation analysis : 0.0.1.dev113
MolProbity : 4.02b-467
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 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 4.70 Å.

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



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

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. 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	B	1115	
2	C	336	
3	D	500	
4	H	279	
5	A	2627	
6	F	490	
7	G	375	
8	E	41	

2 Entry composition

There are 8 unique types of molecules in this entry. The entry contains 25723 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 Transcription-associated protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	B	981	5937	3675	1116	1136	10	0	0

- Molecule 2 is a protein called Chromatin modification-related protein EAF1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	C	140	800	489	156	154	1	0	0

- Molecule 3 is a protein called Eaf1-disorder domain.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
3	D	360	1800	1080	360	360	0	0

- Molecule 4 is a protein called Chromatin modification-related protein EAF5.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
4	H	154	764	456	154	154	0	0

- Molecule 5 is a protein called Transcription-associated protein 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
5	A	2007	10017	5997	2008	2012	0	0

- Molecule 6 is a protein called Actin-related protein 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	F	421	3334	2121	553	648	12	1	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
F	0	PRO	-	expression tag	UNP P80428

- Molecule 7 is a protein called Actin.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	G	351	2729	1735	458	519	17	0	0

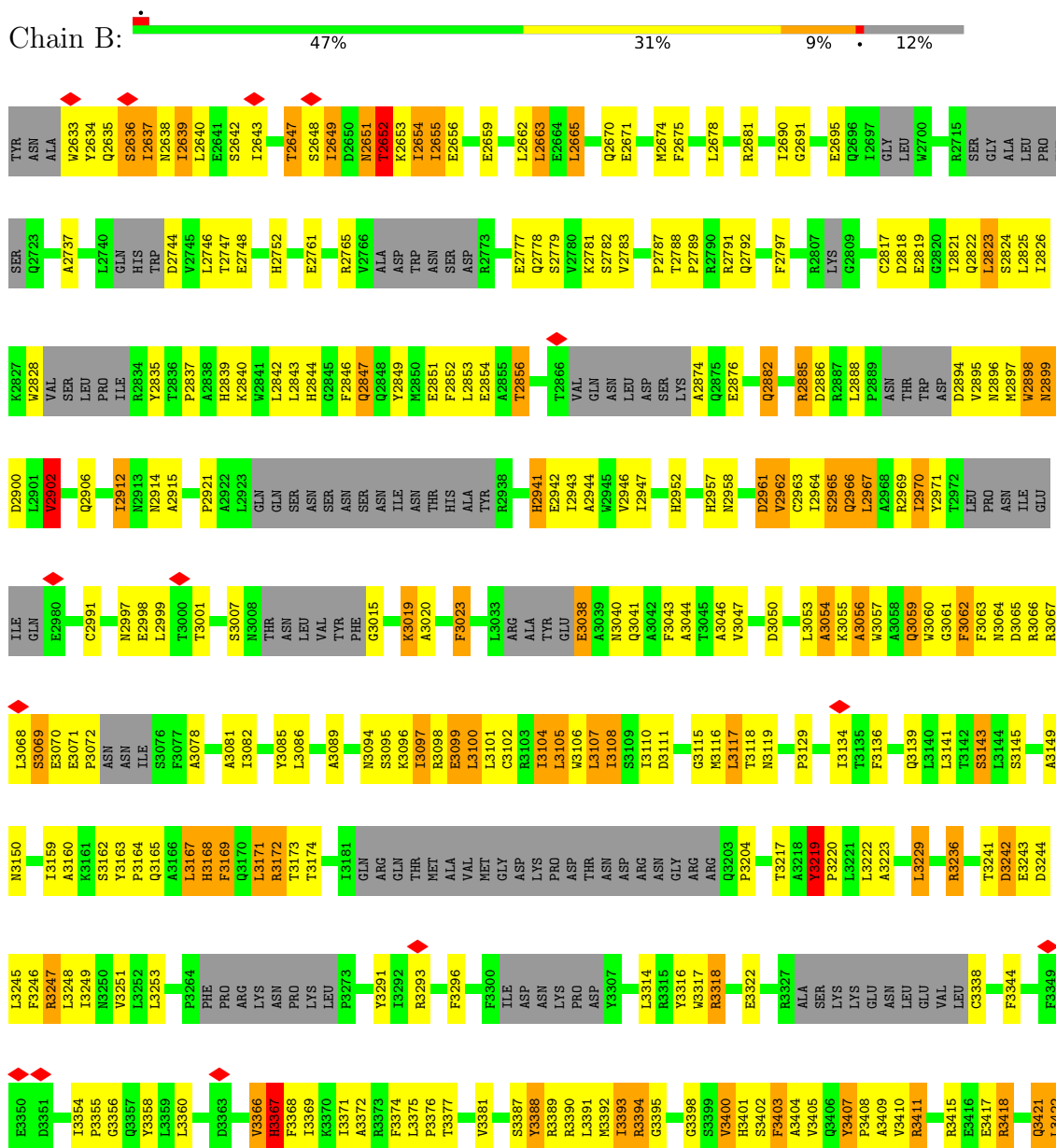
- Molecule 8 is a protein called Chromatin modification-related protein EAF1.

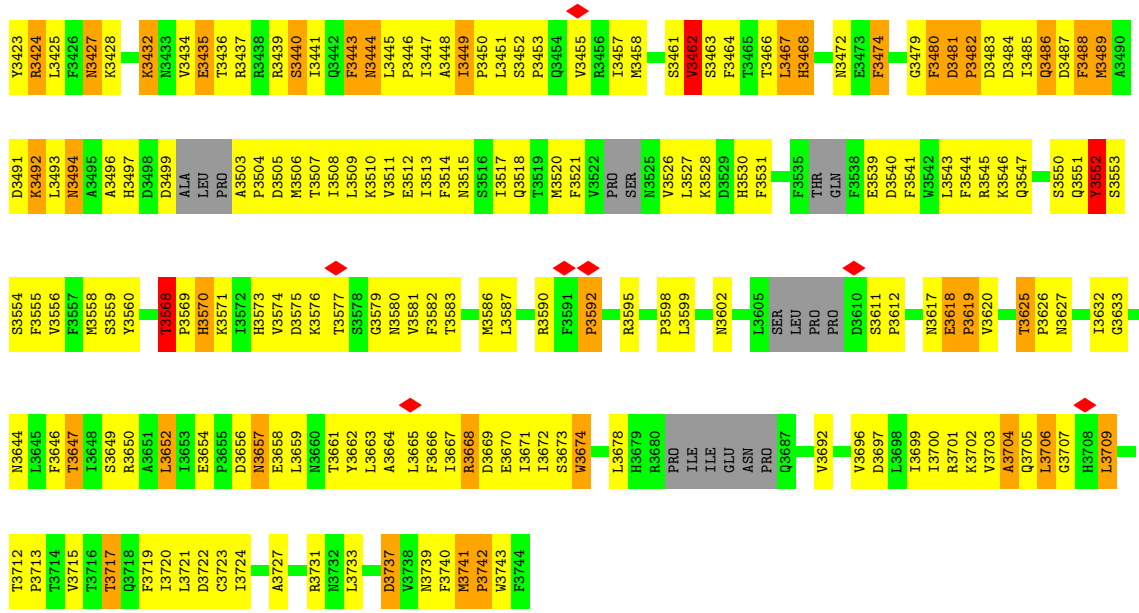
Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	E	41	342	222	56	61	3	0	0

3 Residue-property plots

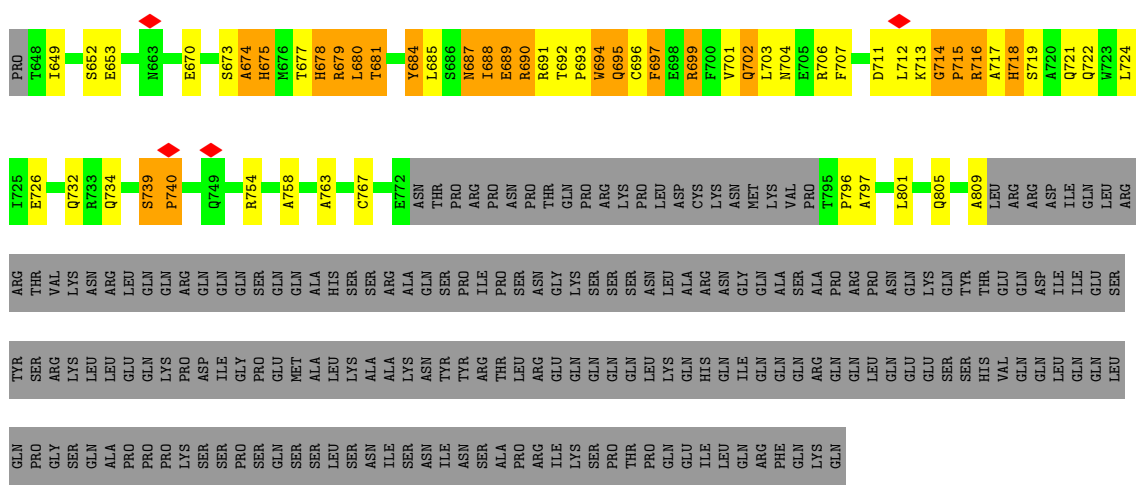
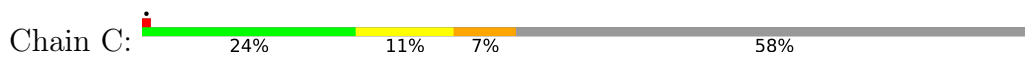
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: Transcription-associated protein 1

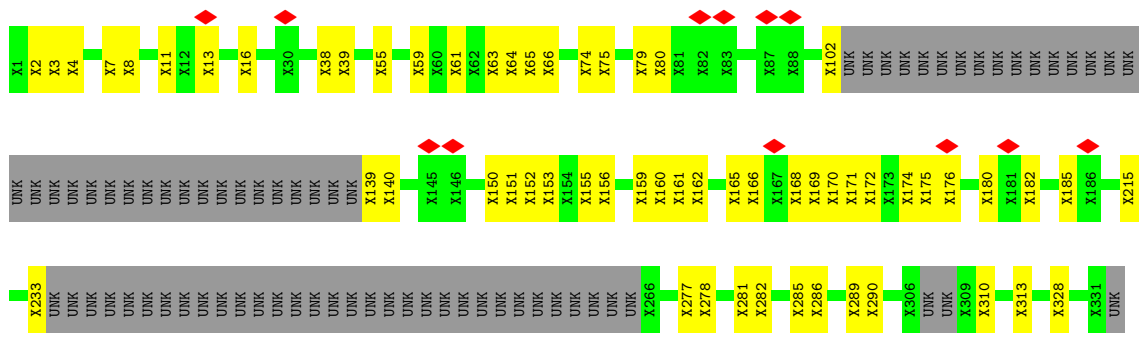


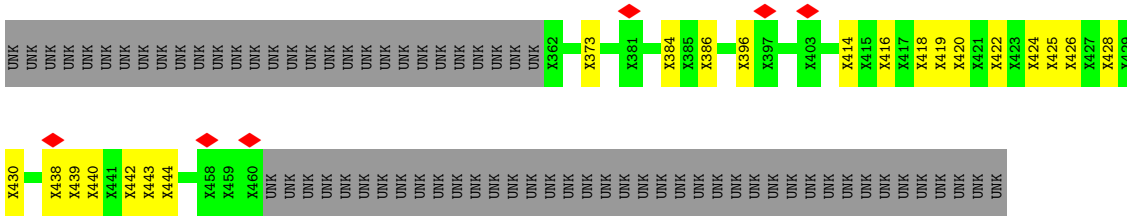


● Molecule 2: Chromatin modification-related protein EAF1

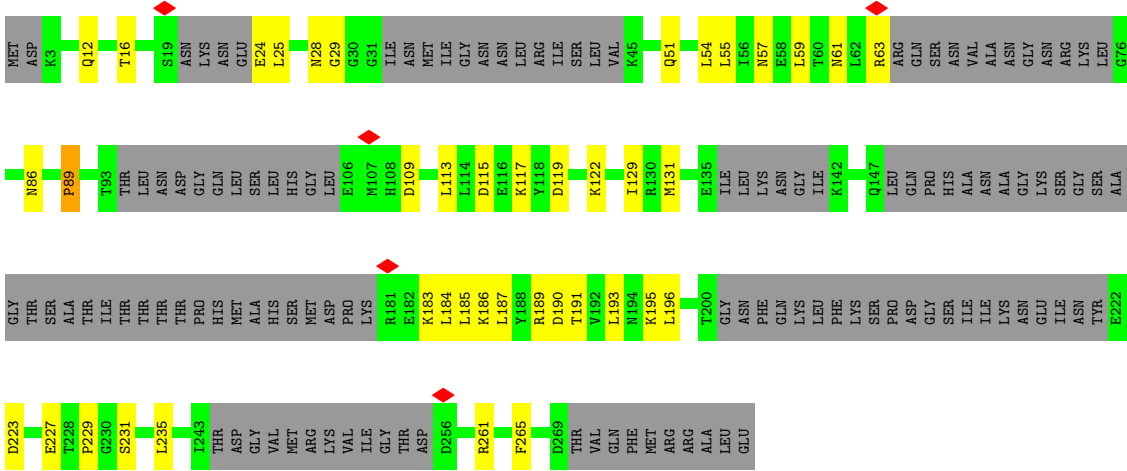


● Molecule 3: Eaf1-disorder domain

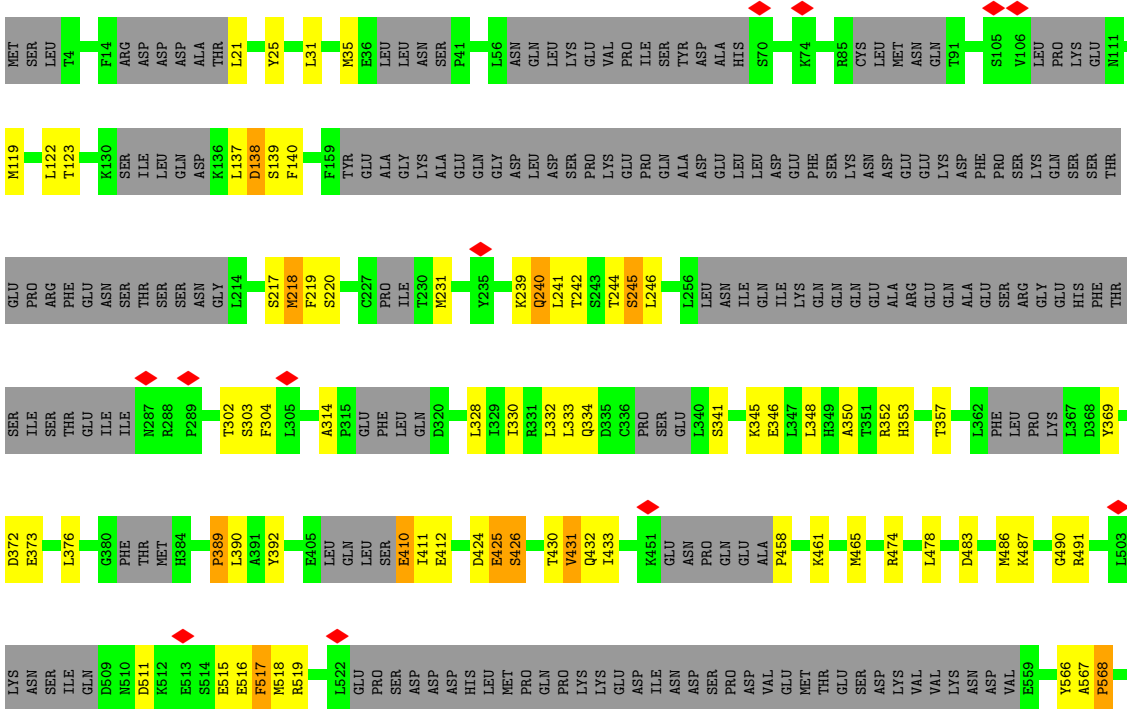


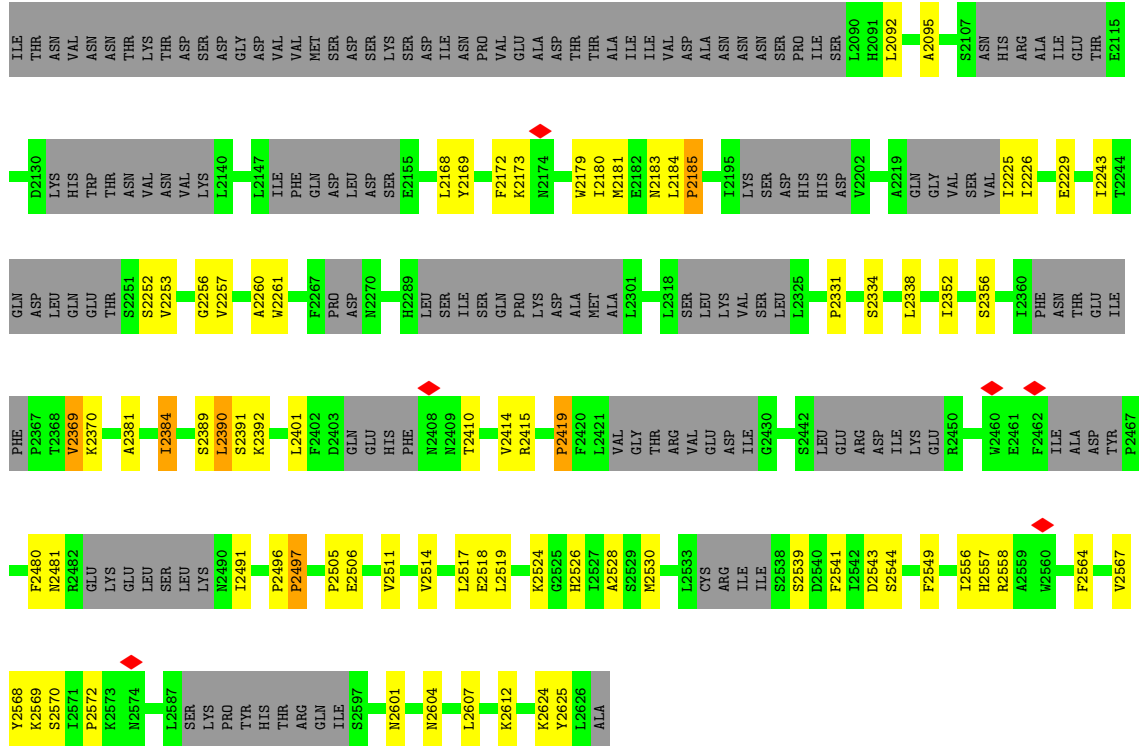


• Molecule 4: Chromatin modification-related protein EAF5

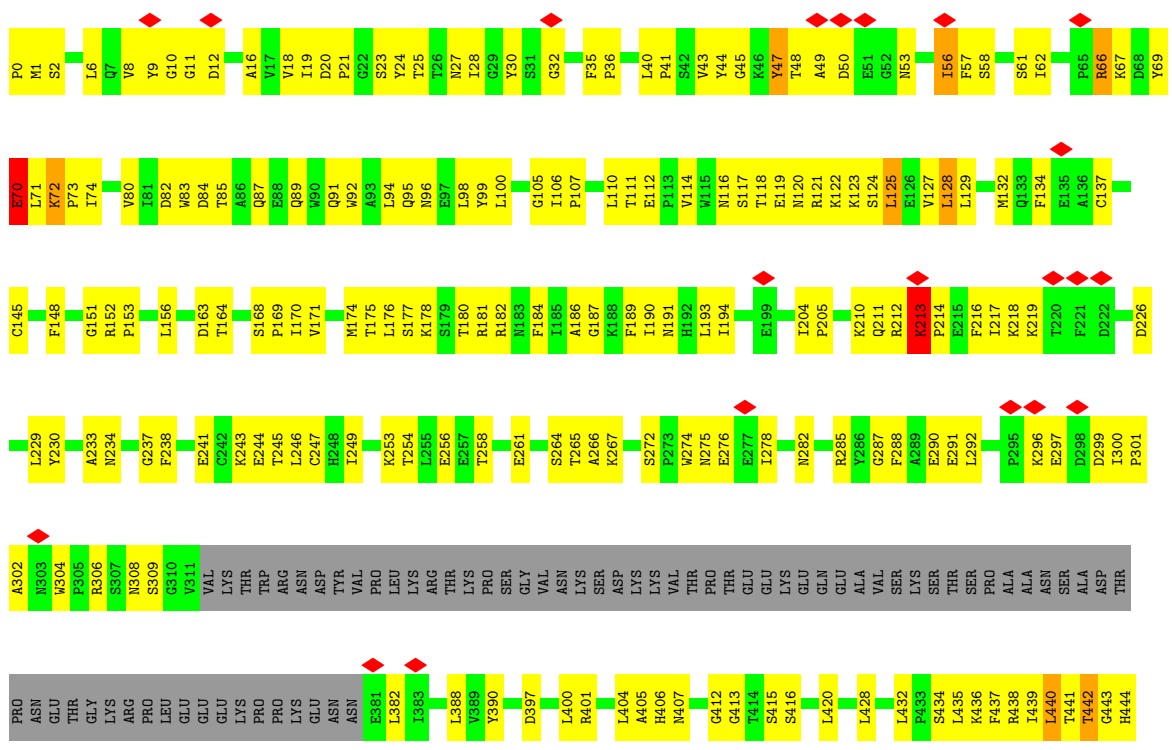


• Molecule 5: Transcription-associated protein 1



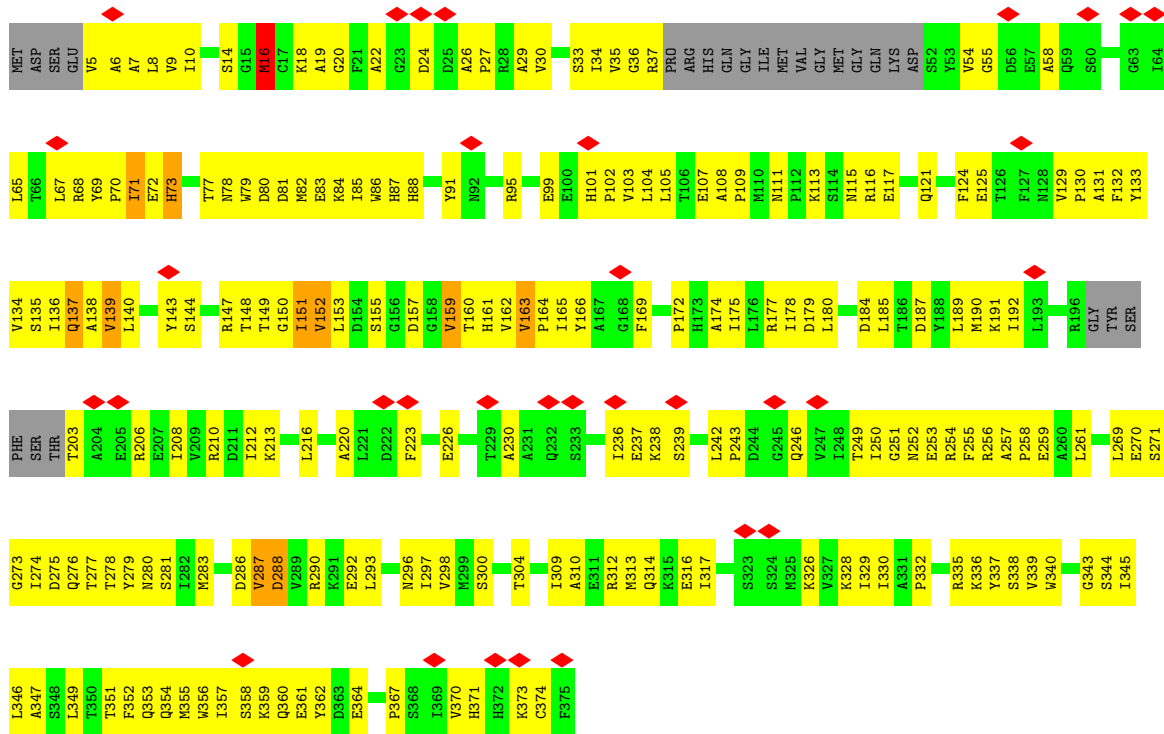


● Molecule 6: Actin-related protein 4

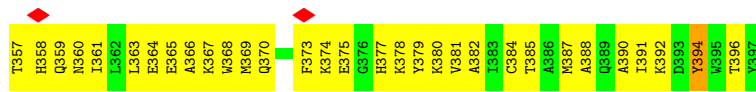




• Molecule 7: Actin



• Molecule 8: Chromatin modification-related protein EAF1



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	63197	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	30	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	0.132	Depositor
Minimum map value	-0.063	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.005	Depositor
Recommended contour level	0.0225	Depositor
Map size (\AA)	374.4, 374.4, 374.4	wwPDB
Map dimensions	288, 288, 288	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.3, 1.3, 1.3	Depositor

5 Model quality i

5.1 Standard geometry i

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	B	0.36	0/5992	0.58	2/8237 (0.0%)
2	C	0.29	0/805	0.57	2/1110 (0.2%)
4	H	0.31	0/755	0.48	2/1039 (0.2%)
5	A	0.28	1/9944 (0.0%)	0.51	32/13772 (0.2%)
6	F	0.39	0/3406	0.56	0/4618
7	G	0.40	0/2787	0.54	0/3776
8	E	0.43	0/351	0.60	0/473
All	All	0.34	1/24040 (0.0%)	0.54	38/33025 (0.1%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	A	410	GLU	C-N	9.50	1.55	1.34

All (38) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	A	777	PRO	N-CA-CB	6.52	111.12	103.30
1	B	3129	PRO	N-CA-CB	6.48	111.08	103.30
5	A	891	PRO	N-CA-CB	6.46	111.05	103.30
5	A	1919	PRO	N-CA-CB	6.36	110.93	103.30
4	H	89	PRO	N-CA-CB	6.30	110.86	103.30
5	A	707	PRO	N-CA-CB	6.24	110.78	103.30
5	A	2497	PRO	N-CA-CB	6.21	110.75	103.30
5	A	786	PRO	N-CA-CB	6.19	110.72	103.30
5	A	573	PRO	N-CA-CB	6.16	110.69	103.30
5	A	1474	PRO	N-CA-CB	6.13	110.66	103.30
5	A	575	PRO	N-CA-CB	6.00	110.49	103.30
5	A	579	PRO	N-CA-CB	5.94	110.43	103.30
5	A	2331	PRO	N-CA-CB	5.87	110.34	103.30
2	C	796	PRO	N-CA-CB	5.86	110.33	103.30
5	A	1336	PRO	N-CA-CB	5.85	110.32	103.30
5	A	1963	PRO	N-CA-CB	5.83	110.29	103.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	A	882	PRO	N-CA-CB	5.80	110.26	103.30
5	A	833	PRO	N-CA-CB	5.77	110.23	103.30
5	A	2496	PRO	N-CA-CB	5.77	110.22	103.30
2	C	740	PRO	N-CA-CB	5.74	110.19	103.30
5	A	1993	PRO	N-CA-CB	5.74	110.18	103.30
5	A	1951	PRO	N-CA-CB	5.73	110.18	103.30
5	A	1548	PRO	N-CA-CB	5.69	110.12	103.30
1	B	2921	PRO	N-CA-CB	5.68	110.11	103.30
5	A	877	PRO	N-CA-CB	5.67	110.10	103.30
5	A	2185	PRO	N-CA-CB	5.63	110.05	103.30
5	A	458	PRO	N-CA-CB	5.61	110.03	103.30
5	A	874	PRO	N-CA-CB	5.61	110.03	103.30
5	A	1563	PRO	N-CA-CB	5.60	110.02	103.30
5	A	1321	PRO	N-CA-CB	5.55	109.96	103.30
5	A	1453	PRO	N-CA-CB	5.52	109.92	103.30
5	A	852	PRO	N-CA-CB	5.50	109.90	103.30
5	A	805	PRO	N-CA-CB	5.49	109.88	103.30
5	A	1742	PRO	N-CA-CB	5.49	109.88	103.30
4	H	229	PRO	N-CA-CB	5.46	109.84	103.30
5	A	866	PRO	N-CA-CB	5.27	109.63	103.30
5	A	568	PRO	N-CA-CB	5.16	109.49	103.30
5	A	2505	PRO	N-CA-CB	5.15	109.48	103.30

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	B	5937	0	4061	713	0
2	C	800	0	481	63	0
3	D	1800	0	405	60	0
4	H	764	0	309	24	0
5	A	10017	0	4245	320	0
6	F	3334	0	3292	264	0
7	G	2729	0	2697	238	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
8	E	342	0	331	40	0
All	All	25723	0	15821	1656	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 40.

All (1656) 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)
1:B:3106:TRP:CZ3	1:B:3668:ARG:HD2	1.26	1.69
7:G:163:VAL:CG2	7:G:175:ILE:HG12	1.24	1.67
7:G:163:VAL:HG22	7:G:175:ILE:CG1	1.28	1.64
7:G:163:VAL:CG2	7:G:175:ILE:CG1	1.76	1.59
1:B:3139:GLN:CB	1:B:3418:ARG:HH21	1.07	1.58
7:G:163:VAL:CG2	7:G:175:ILE:CD1	1.81	1.57
1:B:3236:ARG:HG3	1:B:3338:CYS:CB	1.30	1.54
1:B:3474:PHE:CE2	1:B:3526:VAL:HG21	1.38	1.53
1:B:3427:ASN:CB	1:B:3443:PHE:HE1	1.17	1.53
1:B:3106:TRP:CH2	1:B:3668:ARG:HD2	1.39	1.52
1:B:3171:LEU:HD23	1:B:3172:ARG:N	1.22	1.52
1:B:3474:PHE:CE2	1:B:3526:VAL:CG2	1.90	1.51
5:A:2243:ILE:HA	5:A:2252:SER:CB	1.39	1.51
1:B:3427:ASN:HB2	1:B:3443:PHE:CE1	1.47	1.49
1:B:3625:THR:CB	1:B:3727:ALA:HB1	1.39	1.48
1:B:3403:PHE:CB	1:B:3457:ILE:HB	1.42	1.47
1:B:3043:PHE:CB	1:B:3060:TRP:NE1	1.77	1.47
1:B:3106:TRP:CH2	1:B:3668:ARG:CD	1.98	1.47
1:B:3106:TRP:HH2	1:B:3668:ARG:CG	1.24	1.46
1:B:3731:ARG:NH2	2:C:694:TRP:CD1	1.82	1.46
1:B:2828:TRP:CB	1:B:2842:LEU:HD21	1.45	1.45
1:B:2828:TRP:CB	1:B:2842:LEU:CD2	1.97	1.42
1:B:3427:ASN:CB	1:B:3443:PHE:CE1	2.01	1.41
1:B:3139:GLN:CB	1:B:3418:ARG:NH2	1.83	1.39
1:B:3043:PHE:CB	1:B:3060:TRP:HE1	1.33	1.38
1:B:2633:TRP:CB	5:A:2624:LYS:CB	1.99	1.38
1:B:3731:ARG:NH2	2:C:694:TRP:HD1	1.08	1.38
1:B:3253:LEU:CD2	1:B:3314:LEU:CB	2.00	1.37
1:B:3731:ARG:HD2	2:C:694:TRP:NE1	1.39	1.34
2:C:721:GLN:O	2:C:724:LEU:CB	1.75	1.34
1:B:3244:ASP:HA	1:B:3247:ARG:CD	1.57	1.33
1:B:3367:HIS:HE1	5:A:912:TYR:O	1.08	1.32

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3568:THR:HB	1:B:3569:PRO:CD	1.56	1.32
1:B:3705:GLN:CB	1:B:3709:LEU:HA	1.61	1.31
1:B:3106:TRP:CH2	1:B:3668:ARG:CG	2.09	1.30
1:B:3450:PRO:C	1:B:3451:LEU:HD12	1.49	1.30
1:B:3427:ASN:CA	1:B:3443:PHE:CE1	2.11	1.30
1:B:3667:ILE:CD1	1:B:3692:VAL:CB	2.12	1.28
6:F:442:THR:CG2	6:F:448:ARG:HE	1.45	1.27
1:B:3424:ARG:NH1	1:B:3447:ILE:HA	1.50	1.26
1:B:3719:PHE:HA	1:B:3722:ASP:OD2	1.34	1.25
5:A:333:LEU:CB	5:A:376:LEU:CB	2.14	1.25
3:D:418:UNK:CB	6:F:441:THR:H	1.50	1.23
5:A:1093:LYS:O	5:A:1095:LEU:N	1.71	1.22
5:A:430:THR:O	5:A:432:GLN:N	1.73	1.21
1:B:3427:ASN:CA	1:B:3443:PHE:HE1	1.45	1.21
1:B:3374:PHE:CB	1:B:3392:MET:CB	2.17	1.21
1:B:3100:LEU:HD13	1:B:3101:LEU:N	1.56	1.21
6:F:444:HIS:O	6:F:446:ILE:N	1.70	1.21
1:B:3474:PHE:CD2	1:B:3526:VAL:HG11	1.74	1.20
7:G:163:VAL:HG21	7:G:175:ILE:CD1	1.50	1.20
1:B:3163:TYR:CB	1:B:3167:LEU:CD2	2.21	1.19
5:A:1372:GLU:O	5:A:1375:PHE:N	1.76	1.18
5:A:1043:LEU:O	5:A:1046:ALA:HB3	1.43	1.18
1:B:3450:PRO:O	1:B:3451:LEU:CD1	1.91	1.17
6:F:213:LYS:HB3	6:F:214:PRO:CD	1.70	1.17
5:A:2243:ILE:CB	5:A:2252:SER:C	2.14	1.17
1:B:3568:THR:HB	1:B:3569:PRO:HD2	1.18	1.17
5:A:1363:LEU:O	5:A:1364:PRO:CB	1.85	1.16
1:B:3474:PHE:CE2	1:B:3526:VAL:HG22	1.76	1.16
6:F:62:ILE:O	6:F:71:LEU:HD21	1.45	1.16
1:B:3528:LYS:CB	1:B:3632:ILE:O	1.93	1.16
1:B:3236:ARG:CG	1:B:3338:CYS:CB	2.24	1.15
1:B:3427:ASN:HA	1:B:3443:PHE:CE1	1.78	1.15
5:A:1091:SER:CB	5:A:1099:ALA:HA	1.76	1.15
1:B:3360:LEU:CB	1:B:3424:ARG:HH21	1.57	1.14
1:B:3099:GLU:HB2	1:B:3425:LEU:HD11	1.16	1.14
1:B:3106:TRP:CH2	1:B:3668:ARG:CB	2.29	1.14
1:B:3496:ALA:HB1	2:C:684:TYR:CE1	1.83	1.14
1:B:3106:TRP:HH2	1:B:3668:ARG:CD	1.43	1.14
1:B:3367:HIS:CE1	5:A:912:TYR:O	1.99	1.14
5:A:1091:SER:CA	5:A:1099:ALA:HB2	1.77	1.13
1:B:3450:PRO:O	1:B:3451:LEU:HD12	0.95	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3068:LEU:HD23	1:B:3081:ALA:CB	1.76	1.13
1:B:3625:THR:CB	1:B:3727:ALA:CB	2.26	1.12
5:A:2243:ILE:CA	5:A:2252:SER:CB	2.26	1.12
5:A:137:LEU:O	5:A:139:SER:N	1.82	1.12
5:A:631:VAL:CB	5:A:1587:GLN:CB	2.26	1.12
1:B:2690:ILE:HA	1:B:3715:VAL:CB	1.80	1.11
6:F:213:LYS:HB3	6:F:214:PRO:HD2	1.24	1.11
1:B:3360:LEU:CB	1:B:3424:ARG:NH2	2.13	1.11
1:B:2647:THR:CB	1:B:2651:ASN:OD1	1.99	1.10
1:B:2659:GLU:HG3	1:B:2681:ARG:CB	1.80	1.10
1:B:3740:PHE:C	1:B:3742:PRO:HD3	1.68	1.10
1:B:3171:LEU:CD2	1:B:3172:ARG:N	2.12	1.10
1:B:3106:TRP:HB2	1:B:3665:LEU:HD13	1.16	1.10
1:B:3244:ASP:HA	1:B:3247:ARG:HD3	1.17	1.10
1:B:3253:LEU:HD21	1:B:3314:LEU:CB	1.76	1.09
5:A:239:LYS:O	5:A:241:LEU:N	1.83	1.09
1:B:3053:LEU:CB	1:B:3056:ALA:HB2	1.82	1.09
1:B:3496:ALA:HB1	2:C:684:TYR:HE1	0.98	1.09
1:B:3106:TRP:CZ3	1:B:3668:ARG:CD	2.21	1.09
6:F:87:GLN:O	6:F:132:MET:HE3	1.49	1.08
1:B:3116:MET:O	1:B:3119:ASN:N	1.86	1.08
1:B:3427:ASN:HA	1:B:3443:PHE:CZ	1.87	1.08
6:F:442:THR:HG21	6:F:448:ARG:HE	1.07	1.08
1:B:3568:THR:CB	1:B:3569:PRO:CD	2.28	1.08
5:A:1292:ILE:O	5:A:1294:CYS:N	1.86	1.08
7:G:138:ALA:CB	7:G:165:ILE:HD11	1.83	1.08
7:G:163:VAL:HG22	7:G:175:ILE:CD1	1.58	1.07
1:B:3407:TYR:H	1:B:3408:PRO:CD	1.69	1.06
5:A:1091:SER:CB	5:A:1099:ALA:CB	2.33	1.06
1:B:3068:LEU:HB2	1:B:3078:ALA:CB	1.86	1.06
1:B:3106:TRP:HH2	1:B:3668:ARG:HG3	1.17	1.06
1:B:3163:TYR:CB	1:B:3167:LEU:HD23	1.82	1.06
2:C:673:SER:HA	2:C:681:THR:HG21	1.36	1.06
7:G:163:VAL:HG21	7:G:175:ILE:HD13	1.08	1.06
1:B:2828:TRP:CB	1:B:2842:LEU:HD23	1.78	1.05
1:B:3068:LEU:HD23	1:B:3081:ALA:HB3	1.33	1.05
1:B:2638:ASN:O	1:B:2642:SER:N	1.89	1.05
1:B:3068:LEU:HB2	1:B:3078:ALA:HB1	1.33	1.05
1:B:3474:PHE:CD2	1:B:3526:VAL:HG21	1.91	1.05
1:B:3705:GLN:CB	1:B:3709:LEU:CA	2.33	1.05
1:B:2670:GLN:CA	1:B:2837:PRO:HG3	1.85	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3163:TYR:CB	1:B:3167:LEU:HD22	1.86	1.05
1:B:3450:PRO:C	1:B:3451:LEU:CD1	2.24	1.05
1:B:3068:LEU:CD2	1:B:3081:ALA:HB3	1.86	1.05
5:A:1859:LEU:O	5:A:1861:ARG:N	1.89	1.05
7:G:163:VAL:HG23	7:G:175:ILE:HG12	1.11	1.05
1:B:3377:THR:CB	1:B:3390:ARG:O	2.05	1.04
1:B:3407:TYR:H	1:B:3408:PRO:HD2	1.22	1.04
5:A:1091:SER:HA	5:A:1099:ALA:HB2	1.37	1.04
1:B:3043:PHE:CB	1:B:3060:TRP:CD1	2.40	1.03
5:A:1097:ASP:O	5:A:1099:ALA:N	1.91	1.03
1:B:3618:GLU:O	1:B:3620:VAL:N	1.90	1.03
1:B:3244:ASP:HA	1:B:3247:ARG:HD2	1.37	1.03
5:A:1152:ALA:O	5:A:1154:SER:N	1.91	1.03
5:A:2243:ILE:CB	5:A:2253:VAL:N	2.19	1.03
1:B:3403:PHE:CB	1:B:3457:ILE:CB	2.36	1.02
1:B:3719:PHE:O	1:B:3722:ASP:HB2	1.58	1.02
5:A:424:ASP:O	5:A:426:SER:N	1.91	1.02
1:B:3404:ALA:H	1:B:3457:ILE:HG22	1.22	1.02
5:A:1441:LEU:O	5:A:1445:PHE:N	1.93	1.01
1:B:3171:LEU:O	1:B:3174:THR:N	1.93	1.01
7:G:163:VAL:HG23	7:G:175:ILE:CG1	1.69	1.01
1:B:3427:ASN:HB2	1:B:3443:PHE:CD1	1.95	1.01
3:D:79:UNK:O	3:D:80:UNK:O	1.77	1.01
7:G:163:VAL:CG2	7:G:175:ILE:HD11	1.87	1.01
5:A:1091:SER:CB	5:A:1099:ALA:CA	2.39	1.00
1:B:2670:GLN:N	1:B:2837:PRO:HG3	1.76	1.00
1:B:2638:ASN:O	1:B:2642:SER:HB3	1.62	1.00
1:B:3618:GLU:O	1:B:3619:PRO:C	1.96	0.99
5:A:1043:LEU:O	5:A:1046:ALA:CB	2.10	0.99
2:C:715:PRO:O	2:C:717:ALA:N	1.96	0.99
1:B:3099:GLU:CB	1:B:3425:LEU:HD11	1.91	0.99
2:C:713:LYS:O	2:C:714:GLY:O	1.79	0.99
1:B:3703:VAL:O	1:B:3704:ALA:O	1.80	0.99
1:B:3427:ASN:CA	1:B:3443:PHE:CZ	2.45	0.99
6:F:87:GLN:O	6:F:132:MET:CE	2.11	0.98
1:B:3474:PHE:CD2	1:B:3526:VAL:CG1	2.46	0.98
1:B:3649:SER:OG	1:B:3705:GLN:HA	1.63	0.98
6:F:442:THR:HG21	6:F:448:ARG:NE	1.77	0.98
5:A:1292:ILE:C	5:A:1294:CYS:H	1.68	0.98
1:B:3244:ASP:CA	1:B:3247:ARG:HD3	1.93	0.97
1:B:3424:ARG:HH12	1:B:3447:ILE:HA	1.07	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3741:MET:N	1:B:3742:PRO:CD	2.26	0.97
1:B:3106:TRP:HB2	1:B:3665:LEU:CD1	1.93	0.97
6:F:71:LEU:HD11	6:F:229:LEU:HD13	1.45	0.97
6:F:66:ARG:HB3	6:F:66:ARG:NH1	1.79	0.97
5:A:1372:GLU:O	5:A:1374:LEU:N	1.97	0.97
5:A:1157:ILE:O	5:A:1159:GLU:N	1.95	0.97
1:B:2659:GLU:CG	1:B:2681:ARG:CB	2.42	0.97
1:B:3411:ARG:O	1:B:3415:ARG:N	1.97	0.96
5:A:1227:SER:O	5:A:1231:LYS:CB	2.12	0.96
6:F:91:GLN:HB2	6:F:132:MET:CE	1.95	0.96
5:A:1300:ASN:O	5:A:1302:LYS:N	1.98	0.96
6:F:211:GLN:OE1	6:F:217:ILE:HD12	1.65	0.96
1:B:3085:TYR:C	1:B:3104:ILE:CD1	2.34	0.96
1:B:3391:LEU:O	1:B:3402:SER:CB	2.14	0.95
3:D:418:UNK:CB	6:F:441:THR:N	2.28	0.95
1:B:3424:ARG:NE	1:B:3445:LEU:CB	2.29	0.95
1:B:3649:SER:CB	1:B:3705:GLN:HA	1.96	0.95
1:B:3492:LYS:HA	1:B:3492:LYS:HE3	1.48	0.95
5:A:516:GLU:O	5:A:518:MET:N	2.00	0.94
1:B:3422:LEU:HD22	1:B:3422:LEU:H	1.27	0.94
6:F:442:THR:CG2	6:F:448:ARG:NE	2.30	0.94
1:B:2822:GLN:O	1:B:2825:LEU:N	1.99	0.94
1:B:3106:TRP:CH2	1:B:3668:ARG:HB3	1.99	0.94
1:B:3253:LEU:HD23	1:B:3314:LEU:CB	1.97	0.94
1:B:3668:ARG:HE	1:B:3672:ILE:HD13	1.32	0.94
1:B:3171:LEU:HD23	1:B:3172:ARG:CA	1.98	0.94
1:B:3247:ARG:HG3	1:B:3247:ARG:HH21	1.33	0.94
1:B:3171:LEU:CD2	1:B:3172:ARG:H	1.76	0.94
1:B:3649:SER:HB2	1:B:3704:ALA:O	1.68	0.93
1:B:3053:LEU:CB	1:B:3056:ALA:CB	2.45	0.93
8:E:391:ILE:HA	8:E:394:TYR:HB2	1.48	0.93
2:C:722:GLN:C	2:C:724:LEU:H	1.72	0.92
7:G:138:ALA:HB1	7:G:165:ILE:HD11	1.47	0.92
1:B:3740:PHE:CB	1:B:3742:PRO:HD3	1.98	0.92
6:F:129:LEU:HD22	6:F:129:LEU:H	1.32	0.92
1:B:2817:CYS:CB	1:B:2852:PHE:CZ	2.52	0.92
1:B:3474:PHE:CG	1:B:3526:VAL:HG11	2.04	0.92
1:B:3667:ILE:HD12	1:B:3692:VAL:CB	1.98	0.92
1:B:3644:ASN:HA	1:B:3647:THR:OG1	1.69	0.92
6:F:213:LYS:CB	6:F:214:PRO:CD	2.47	0.92
1:B:3244:ASP:O	1:B:3247:ARG:HG2	1.69	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3424:ARG:HE	1:B:3445:LEU:CB	1.83	0.92
5:A:244:THR:O	5:A:245:SER:O	1.88	0.92
7:G:139:VAL:HG13	7:G:165:ILE:HG21	1.50	0.92
1:B:2690:ILE:CA	1:B:3715:VAL:CB	2.47	0.91
1:B:3244:ASP:CA	1:B:3247:ARG:CD	2.46	0.91
1:B:3667:ILE:HD13	1:B:3692:VAL:CB	1.99	0.91
7:G:286:ASP:HB3	7:G:288:ASP:OD1	1.71	0.91
1:B:3731:ARG:CD	2:C:694:TRP:HE1	1.82	0.91
4:H:51:GLN:O	4:H:55:LEU:N	2.04	0.91
7:G:163:VAL:HG22	7:G:175:ILE:HD11	1.49	0.91
5:A:1091:SER:CA	5:A:1099:ALA:CB	2.48	0.91
1:B:3055:LYS:O	1:B:3059:GLN:N	2.03	0.90
1:B:3740:PHE:C	1:B:3742:PRO:CD	2.39	0.90
1:B:2640:LEU:HD21	1:B:2662:LEU:CB	2.02	0.90
1:B:3085:TYR:C	1:B:3104:ILE:HD11	1.92	0.90
1:B:3219:TYR:N	1:B:3220:PRO:HD3	1.87	0.90
1:B:3731:ARG:CD	2:C:694:TRP:NE1	2.33	0.90
5:A:1506:LEU:O	5:A:1508:GLU:N	2.04	0.90
1:B:2638:ASN:O	1:B:2642:SER:CB	2.20	0.90
1:B:3253:LEU:HD22	1:B:3314:LEU:CB	2.00	0.90
1:B:3618:GLU:CB	1:B:3620:VAL:O	2.20	0.89
6:F:87:GLN:HG3	6:F:132:MET:HE2	1.54	0.89
1:B:3106:TRP:HZ3	1:B:3668:ARG:HD2	1.13	0.89
5:A:1069:LYS:O	5:A:1072:TYR:N	2.05	0.89
1:B:3568:THR:HG22	1:B:3569:PRO:HD3	1.55	0.89
5:A:511:ASP:O	5:A:515:GLU:CB	2.20	0.89
6:F:442:THR:OG1	6:F:443:GLY:N	2.06	0.89
1:B:3106:TRP:CH2	1:B:3668:ARG:NH2	2.39	0.88
1:B:3107:LEU:HA	1:B:3110:ILE:HD12	1.54	0.88
1:B:3731:ARG:CZ	2:C:694:TRP:HD1	1.85	0.88
1:B:3407:TYR:N	1:B:3408:PRO:CD	2.34	0.88
7:G:151:ILE:HG23	7:G:297:ILE:HA	1.54	0.88
1:B:3568:THR:CB	1:B:3569:PRO:HD3	2.03	0.88
7:G:151:ILE:HG21	7:G:297:ILE:HG12	1.55	0.88
1:B:2748:GLU:HB3	1:B:2752:HIS:CD2	2.07	0.87
5:A:239:LYS:C	5:A:241:LEU:H	1.78	0.87
6:F:428:LEU:HB3	6:F:437:PHE:HE2	1.37	0.87
1:B:2821:ILE:CB	1:B:2849:TYR:CE2	2.57	0.87
1:B:3474:PHE:CZ	1:B:3526:VAL:HG22	2.09	0.87
5:A:511:ASP:O	5:A:515:GLU:N	2.07	0.87
1:B:3354:ILE:HA	1:B:3371:ILE:H	1.39	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3219:TYR:H	1:B:3220:PRO:HD3	1.38	0.87
1:B:3418:ARG:O	1:B:3422:LEU:CD2	2.23	0.87
1:B:3106:TRP:CZ2	1:B:3668:ARG:CB	2.58	0.86
1:B:3388:TYR:CB	1:B:3404:ALA:HB1	2.04	0.86
1:B:2961:ASP:C	1:B:2963:CYS:H	1.78	0.86
1:B:3418:ARG:CB	1:B:3418:ARG:HH11	1.88	0.86
1:B:3551:GLN:O	1:B:3554:SER:N	2.08	0.86
6:F:428:LEU:HB3	6:F:437:PHE:CE2	2.09	0.86
1:B:3474:PHE:HE2	1:B:3526:VAL:CG2	1.52	0.86
7:G:16:MET:SD	7:G:16:MET:N	2.49	0.86
5:A:1650:PHE:O	5:A:1652:ILE:N	2.09	0.86
1:B:3055:LYS:CB	1:B:3059:GLN:HG3	2.06	0.86
1:B:3652:LEU:HD22	1:B:3652:LEU:O	1.76	0.85
1:B:3169:PHE:CE1	1:B:3451:LEU:HD21	2.09	0.85
7:G:138:ALA:HA	7:G:152:VAL:HG11	1.56	0.85
1:B:3526:VAL:O	1:B:3530:HIS:N	2.08	0.85
6:F:87:GLN:CG	6:F:132:MET:CE	2.54	0.85
1:B:3424:ARG:CD	1:B:3445:LEU:CB	2.53	0.85
6:F:87:GLN:HG2	6:F:132:MET:HE1	1.56	0.85
6:F:62:ILE:O	6:F:71:LEU:CD2	2.24	0.85
1:B:2651:ASN:O	1:B:2653:LYS:N	2.09	0.85
6:F:45:GLY:HA3	6:F:56:ILE:HG22	1.56	0.85
5:A:1993:PRO:O	5:A:1998:ASN:N	2.10	0.85
7:G:16:MET:H	7:G:16:MET:CE	1.88	0.85
1:B:3062:PHE:HZ	1:B:3657:ASN:C	1.79	0.85
7:G:138:ALA:HB3	7:G:165:ILE:HD11	1.58	0.84
1:B:2821:ILE:HA	1:B:2849:TYR:OH	1.76	0.84
1:B:3731:ARG:HD2	2:C:694:TRP:CD1	2.12	0.84
1:B:3068:LEU:CB	1:B:3078:ALA:CB	2.55	0.84
1:B:3703:VAL:O	1:B:3704:ALA:C	2.14	0.84
1:B:3427:ASN:N	1:B:3443:PHE:CZ	2.45	0.84
6:F:91:GLN:OE1	6:F:132:MET:SD	2.34	0.84
1:B:3576:LYS:H	1:B:3576:LYS:HD3	1.43	0.84
1:B:3618:GLU:O	1:B:3620:VAL:O	1.96	0.84
3:D:155:UNK:O	3:D:159:UNK:N	2.09	0.84
5:A:302:THR:O	5:A:304:PHE:N	2.10	0.84
1:B:3481:ASP:CB	1:B:3482:PRO:CD	2.55	0.84
1:B:3568:THR:CG2	1:B:3569:PRO:HD3	2.07	0.83
5:A:914:ASP:O	5:A:915:PRO:C	2.13	0.83
5:A:1859:LEU:O	5:A:1862:PHE:N	2.11	0.83
1:B:3418:ARG:HH11	1:B:3418:ARG:HB2	1.43	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3168:HIS:O	1:B:3172:ARG:HB3	1.78	0.83
6:F:213:LYS:C	6:F:213:LYS:HE3	1.99	0.83
1:B:3168:HIS:HA	1:B:3171:LEU:HD22	1.61	0.83
1:B:3411:ARG:HD2	1:B:3587:LEU:CB	2.08	0.83
6:F:91:GLN:HB2	6:F:132:MET:SD	2.19	0.83
1:B:3106:TRP:CB	1:B:3665:LEU:HD13	2.07	0.83
1:B:3731:ARG:HD2	2:C:694:TRP:HE1	1.05	0.83
5:A:1097:ASP:O	5:A:1100:MET:N	2.10	0.83
5:A:996:GLY:O	5:A:998:GLN:N	2.12	0.82
2:C:722:GLN:O	2:C:726:GLU:CB	2.27	0.82
7:G:140:LEU:CD1	7:G:343:GLY:N	2.42	0.82
1:B:2744:ASP:O	1:B:2747:THR:HG23	1.78	0.82
6:F:87:GLN:CG	6:F:132:MET:HE2	2.10	0.82
5:A:1006:SER:CB	5:A:1009:SER:CB	2.58	0.82
5:A:2567:VAL:C	5:A:2569:LYS:H	1.84	0.81
6:F:442:THR:HG21	6:F:448:ARG:CG	2.10	0.81
1:B:3404:ALA:N	1:B:3457:ILE:HG22	1.94	0.81
1:B:3173:THR:CB	1:B:3451:LEU:HA	2.10	0.81
5:A:1506:LEU:C	5:A:1508:GLU:H	1.84	0.81
1:B:3667:ILE:HD11	1:B:3692:VAL:CB	2.08	0.81
5:A:1629:GLN:O	5:A:1630:ARG:O	1.97	0.81
7:G:140:LEU:HD12	7:G:343:GLY:N	1.94	0.81
1:B:3171:LEU:O	1:B:3174:THR:OG1	1.97	0.81
5:A:976:ALA:O	5:A:977:ILE:CB	2.28	0.81
7:G:242:LEU:HD12	7:G:246:GLN:HB2	1.60	0.81
1:B:2633:TRP:CB	5:A:2624:LYS:C	2.50	0.80
1:B:3719:PHE:CA	1:B:3722:ASP:OD2	2.25	0.80
5:A:1361:LEU:O	5:A:1363:LEU:N	2.14	0.80
7:G:14:SER:HA	7:G:71:ILE:HB	1.62	0.80
7:G:18:LYS:HG2	7:G:30:VAL:HG13	1.63	0.80
1:B:3106:TRP:CE3	1:B:3665:LEU:HD12	2.17	0.80
1:B:3253:LEU:HD12	1:B:3318:ARG:HG3	1.64	0.80
5:A:976:ALA:HA	5:A:992:SER:CB	2.12	0.80
1:B:3466:THR:HG22	1:B:3573:HIS:HB2	1.63	0.80
1:B:3493:LEU:O	1:B:3510:LYS:NZ	2.14	0.80
7:G:298:VAL:HG22	7:G:330:ILE:HB	1.63	0.80
1:B:3169:PHE:HE1	1:B:3451:LEU:CD2	1.95	0.80
1:B:3656:ASP:O	1:B:3658:GLU:N	2.14	0.79
5:A:430:THR:O	5:A:431:VAL:C	2.21	0.79
1:B:3060:TRP:CE3	1:B:3064:ASN:ND2	2.49	0.79
1:B:3486:GLN:NE2	1:B:3486:GLN:O	2.16	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:1200:LEU:O	5:A:1203:ASP:CB	2.31	0.79
7:G:178:ILE:HD11	7:G:277:THR:HG21	1.65	0.79
1:B:3062:PHE:CZ	1:B:3657:ASN:C	2.57	0.79
1:B:3705:GLN:CB	1:B:3709:LEU:CB	2.61	0.78
6:F:87:GLN:C	6:F:132:MET:CE	2.51	0.78
1:B:3100:LEU:CD1	1:B:3101:LEU:N	2.44	0.78
5:A:217:SER:O	5:A:220:SER:N	2.14	0.78
5:A:1590:SER:O	5:A:1591:PRO:CB	2.31	0.78
1:B:2655:ILE:HG22	1:B:2656:GLU:N	1.97	0.78
1:B:3116:MET:O	1:B:3118:THR:N	2.16	0.78
1:B:3247:ARG:HG2	1:B:3248:LEU:H	1.49	0.78
1:B:3555:PHE:O	1:B:3559:SER:N	2.13	0.78
5:A:1650:PHE:O	5:A:1653:SER:N	2.17	0.78
7:G:286:ASP:CB	7:G:288:ASP:OD1	2.31	0.78
1:B:3068:LEU:CD2	1:B:3081:ALA:CB	2.53	0.78
1:B:3731:ARG:CZ	2:C:694:TRP:CD1	2.63	0.78
5:A:890:TYR:O	5:A:893:LEU:N	2.16	0.78
6:F:72:LYS:NZ	6:F:72:LYS:HB3	1.99	0.78
1:B:2853:LEU:O	1:B:2856:THR:OG1	2.02	0.78
1:B:3102:CYS:SG	1:B:3134:ILE:CB	2.72	0.77
8:E:390:ALA:O	8:E:394:TYR:N	2.16	0.77
1:B:2944:ALA:HA	1:B:2970:ILE:HD12	1.66	0.77
1:B:3068:LEU:HB3	1:B:3078:ALA:HA	1.66	0.77
5:A:1091:SER:CB	5:A:1099:ALA:HB1	2.15	0.77
1:B:3461:SER:CB	1:B:3464:PHE:CZ	2.67	0.77
7:G:140:LEU:HD12	7:G:343:GLY:H	1.49	0.77
3:D:140:UNK:O	6:F:178:LYS:NZ	2.15	0.77
5:A:2567:VAL:O	5:A:2569:LYS:N	2.18	0.77
6:F:71:LEU:HD12	6:F:229:LEU:HD22	1.66	0.77
1:B:2818:ASP:O	1:B:2821:ILE:CB	2.33	0.77
1:B:3496:ALA:CB	2:C:684:TYR:CE1	2.65	0.77
5:A:1032:SER:O	5:A:1033:ALA:CB	2.33	0.77
1:B:2967:LEU:HD12	1:B:2967:LEU:O	1.84	0.77
1:B:3047:VAL:O	1:B:3050:ASP:O	2.03	0.77
2:C:805:GLN:O	2:C:809:ALA:N	2.12	0.77
5:A:1097:ASP:O	5:A:1098:ASP:C	2.21	0.77
1:B:3106:TRP:CH2	1:B:3668:ARG:HG3	2.00	0.76
5:A:239:LYS:C	5:A:241:LEU:N	2.35	0.76
5:A:1091:SER:HA	5:A:1099:ALA:CB	2.14	0.76
5:A:736:PHE:N	5:A:1543:LEU:C	2.38	0.76
5:A:328:LEU:O	5:A:332:LEU:CB	2.33	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:91:GLN:HB2	6:F:132:MET:HE1	1.68	0.76
6:F:213:LYS:HB3	6:F:214:PRO:HD3	1.67	0.76
6:F:66:ARG:HB3	6:F:66:ARG:HH11	1.47	0.76
7:G:108:ALA:HB1	7:G:109:PRO:CD	2.15	0.76
5:A:1296:LEU:HA	5:A:1356:ALA:HB2	1.68	0.76
1:B:3219:TYR:N	1:B:3220:PRO:CD	2.49	0.75
5:A:1605:ASN:O	5:A:1608:THR:N	2.19	0.75
3:D:439:UNK:O	3:D:443:UNK:N	2.19	0.75
5:A:976:ALA:CA	5:A:992:SER:CB	2.65	0.75
7:G:9:VAL:O	7:G:340:TRP:NE1	2.17	0.75
7:G:19:ALA:HB3	7:G:29:ALA:HB3	1.67	0.75
7:G:150:GLY:O	7:G:293:LEU:CD2	2.33	0.75
6:F:87:GLN:HG3	6:F:132:MET:CE	2.16	0.75
7:G:102:PRO:HB3	7:G:131:ALA:HB3	1.68	0.75
7:G:237:GLU:HG2	7:G:251:GLY:HA2	1.68	0.75
6:F:213:LYS:HE3	6:F:213:LYS:CA	2.16	0.75
7:G:163:VAL:HG23	7:G:175:ILE:CG2	2.16	0.75
7:G:220:ALA:HB1	7:G:226:GLU:HG3	1.69	0.75
5:A:1300:ASN:C	5:A:1302:LYS:H	1.89	0.75
1:B:3457:ILE:HD12	1:B:3457:ILE:O	1.86	0.75
1:B:3247:ARG:HG3	1:B:3247:ARG:NH2	1.99	0.75
1:B:3435:GLU:OE1	1:B:3435:GLU:N	2.20	0.75
1:B:3100:LEU:HD13	1:B:3101:LEU:CA	2.16	0.75
1:B:3625:THR:N	1:B:3626:PRO:HD3	2.02	0.75
3:D:55:UNK:O	3:D:59:UNK:N	2.20	0.75
5:A:1255:ALA:O	5:A:1258:ASP:N	2.19	0.75
6:F:211:GLN:OE1	6:F:217:ILE:CD1	2.34	0.75
2:C:717:ALA:O	2:C:718:HIS:CB	2.35	0.74
5:A:900:THR:CB	5:A:948:ILE:CD1	2.64	0.74
1:B:2777:GLU:O	1:B:2781:LYS:N	2.16	0.74
1:B:3099:GLU:HB2	1:B:3425:LEU:CD1	2.08	0.74
1:B:3474:PHE:CD2	1:B:3526:VAL:CG2	2.58	0.74
1:B:3489:MET:CE	1:B:3511:VAL:HG23	2.16	0.74
1:B:2941:HIS:H	1:B:2941:HIS:CD2	2.04	0.74
1:B:3169:PHE:HE1	1:B:3451:LEU:CG	2.00	0.74
1:B:3404:ALA:H	1:B:3457:ILE:CG2	1.98	0.74
1:B:3740:PHE:CA	1:B:3742:PRO:HD3	2.17	0.74
1:B:3097:ILE:HD13	1:B:3097:ILE:N	2.03	0.74
3:D:419:UNK:CB	6:F:439:ILE:HD12	2.17	0.74
5:A:1068:ASN:O	5:A:1070:ARG:N	2.21	0.74
1:B:3171:LEU:HD23	1:B:3172:ARG:H	0.92	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3427:ASN:ND2	1:B:3428:LYS:N	2.36	0.74
1:B:3494:ASN:HA	1:B:3497:HIS:HB3	1.70	0.74
1:B:3062:PHE:HZ	1:B:3658:GLU:N	1.85	0.74
1:B:3244:ASP:CA	1:B:3247:ARG:HD2	2.15	0.73
1:B:3659:LEU:O	1:B:3662:TYR:CB	2.36	0.73
2:C:721:GLN:O	2:C:724:LEU:CA	2.36	0.73
1:B:3057:TRP:O	1:B:3061:GLY:N	2.17	0.73
5:A:2005:SER:O	5:A:2009:HIS:N	2.18	0.73
1:B:3462:VAL:O	1:B:3464:PHE:CD2	2.41	0.73
7:G:163:VAL:CG2	7:G:175:ILE:HD13	1.76	0.73
7:G:185:LEU:O	7:G:189:LEU:N	2.17	0.73
1:B:3492:LYS:HE3	1:B:3492:LYS:CA	2.18	0.73
6:F:129:LEU:HD22	6:F:129:LEU:N	2.03	0.73
5:A:516:GLU:O	5:A:519:ARG:N	2.20	0.73
5:A:578:ASP:O	5:A:582:ASP:N	2.21	0.73
5:A:1091:SER:C	5:A:1099:ALA:HB2	2.08	0.73
6:F:455:GLY:HA2	6:F:458:ILE:HD12	1.69	0.73
7:G:164:PRO:HG2	7:G:174:ALA:HB3	1.71	0.73
5:A:1650:PHE:O	5:A:1651:TYR:C	2.26	0.73
7:G:138:ALA:HB1	7:G:165:ILE:CD1	2.18	0.73
7:G:287:VAL:HG12	7:G:290:ARG:NH1	2.04	0.73
1:B:3741:MET:N	1:B:3742:PRO:HD2	2.03	0.73
7:G:236:ILE:O	7:G:254:ARG:NH1	2.21	0.73
1:B:2882:GLN:HA	1:B:2885:ARG:HG3	1.70	0.72
1:B:3625:THR:H	1:B:3626:PRO:HD3	1.52	0.72
1:B:3649:SER:HB2	1:B:3705:GLN:HA	1.70	0.72
5:A:239:LYS:O	5:A:242:THR:N	2.22	0.72
5:A:1069:LYS:CB	5:A:1072:TYR:CB	2.68	0.72
6:F:129:LEU:H	6:F:129:LEU:CD2	2.01	0.72
6:F:210:LYS:HB2	6:F:219:LYS:HA	1.72	0.72
6:F:415:SER:HA	6:F:420:LEU:HD23	1.71	0.72
1:B:3656:ASP:C	1:B:3658:GLU:H	1.92	0.72
5:A:972:LEU:O	5:A:973:ASP:O	2.07	0.72
5:A:1090:THR:C	5:A:1092:ILE:H	1.92	0.72
1:B:3062:PHE:HZ	1:B:3658:GLU:CA	2.03	0.72
2:C:722:GLN:C	2:C:724:LEU:N	2.38	0.72
5:A:856:GLU:O	5:A:860:GLU:N	2.21	0.72
4:H:57:ASN:O	4:H:61:ASN:N	2.16	0.72
6:F:8:VAL:HG22	8:E:368:TRP:HB3	1.70	0.72
5:A:1032:SER:O	5:A:1033:ALA:HB3	1.89	0.71
1:B:3247:ARG:HG2	1:B:3248:LEU:N	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3247:ARG:NH1	1:B:3407:TYR:CB	2.53	0.71
1:B:3388:TYR:HA	1:B:3405:VAL:CB	2.20	0.71
1:B:3424:ARG:HH12	1:B:3447:ILE:CA	1.96	0.71
6:F:92:TRP:O	6:F:96:ASN:ND2	2.23	0.71
5:A:410:GLU:C	5:A:412:GLU:H	1.94	0.71
1:B:3105:LEU:HD12	1:B:3105:LEU:O	1.91	0.71
1:B:3444:ASN:O	1:B:3446:PRO:HD3	1.91	0.71
1:B:3618:GLU:C	1:B:3620:VAL:N	2.44	0.71
3:D:426:UNK:O	3:D:430:UNK:N	2.22	0.71
3:D:440:UNK:O	3:D:444:UNK:N	2.23	0.71
5:A:897:GLY:O	5:A:901:LEU:N	2.18	0.71
5:A:1372:GLU:O	5:A:1373:GLU:C	2.29	0.71
1:B:3509:LEU:HD11	2:C:687:ASN:HD22	1.54	0.71
3:D:150:UNK:O	3:D:153:UNK:N	2.23	0.71
1:B:2899:ASN:OD1	1:B:2899:ASN:N	2.17	0.71
1:B:3169:PHE:CZ	1:B:3451:LEU:HD21	2.25	0.71
1:B:3424:ARG:HD3	1:B:3445:LEU:CB	2.21	0.71
1:B:3167:LEU:O	1:B:3167:LEU:HD12	1.90	0.71
3:D:151:UNK:O	3:D:155:UNK:N	2.24	0.71
1:B:2944:ALA:HA	1:B:2970:ILE:CD1	2.21	0.71
1:B:3644:ASN:CA	1:B:3647:THR:OG1	2.39	0.71
1:B:3106:TRP:CZ2	1:B:3668:ARG:HB2	2.24	0.71
1:B:3719:PHE:HA	1:B:3722:ASP:CG	2.09	0.71
6:F:444:HIS:O	6:F:445:THR:C	2.29	0.70
1:B:3375:LEU:CB	1:B:3376:PRO:CD	2.68	0.70
5:A:583:ALA:O	5:A:587:TYR:N	2.23	0.70
6:F:212:ARG:O	6:F:275:ASN:ND2	2.20	0.70
1:B:3169:PHE:HE1	1:B:3451:LEU:HG	1.56	0.70
1:B:3427:ASN:N	1:B:3443:PHE:CE1	2.58	0.70
6:F:442:THR:HG22	6:F:448:ARG:HE	1.49	0.70
7:G:151:ILE:CG2	7:G:297:ILE:HA	2.21	0.70
1:B:3086:LEU:N	1:B:3104:ILE:HD13	2.07	0.70
5:A:1093:LYS:C	5:A:1095:LEU:H	1.92	0.70
1:B:3418:ARG:O	1:B:3422:LEU:HD21	1.90	0.70
5:A:814:THR:O	5:A:818:SER:N	2.18	0.70
5:A:2415:ARG:O	5:A:2419:PRO:N	2.24	0.70
6:F:87:GLN:HG2	6:F:132:MET:CE	2.21	0.70
5:A:410:GLU:C	5:A:412:GLU:N	2.45	0.70
1:B:3618:GLU:O	1:B:3620:VAL:C	2.28	0.70
5:A:1090:THR:O	5:A:1092:ILE:N	2.25	0.70
5:A:1605:ASN:O	5:A:1607:VAL:N	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:2243:ILE:CB	5:A:2253:VAL:CA	2.69	0.70
7:G:132:PHE:N	7:G:357:ILE:O	2.25	0.70
5:A:2389:SER:O	5:A:2392:LYS:N	2.25	0.70
6:F:204:ILE:HB	6:F:274:TRP:CE3	2.26	0.70
1:B:3168:HIS:O	1:B:3172:ARG:N	2.25	0.70
2:C:754:ARG:O	2:C:758:ALA:N	2.24	0.70
5:A:1605:ASN:O	5:A:1606:PRO:C	2.27	0.70
1:B:3646:PHE:O	1:B:3649:SER:OG	2.08	0.70
1:B:3667:ILE:HD13	1:B:3692:VAL:CA	2.21	0.70
3:D:172:UNK:N	8:E:357:THR:OG1	2.25	0.69
6:F:87:GLN:CG	6:F:132:MET:HE1	2.22	0.69
7:G:124:PHE:CZ	7:G:132:PHE:HB3	2.27	0.69
1:B:3101:LEU:O	1:B:3101:LEU:HD22	1.92	0.69
1:B:3391:LEU:H	1:B:3402:SER:CB	2.03	0.69
5:A:1964:ASP:O	5:A:1968:ASN:N	2.21	0.69
5:A:1859:LEU:O	5:A:1860:PHE:C	2.29	0.69
1:B:3094:ASN:CB	1:B:3097:ILE:HG12	2.22	0.69
1:B:3253:LEU:CD1	1:B:3318:ARG:HG3	2.22	0.69
2:C:699:ARG:HD2	2:C:699:ARG:N	2.04	0.69
7:G:163:VAL:HG22	7:G:175:ILE:HG12	0.99	0.69
7:G:9:VAL:HG21	7:G:344:SER:HA	1.75	0.69
1:B:3173:THR:O	1:B:3452:SER:HB2	1.93	0.69
1:B:2914:ASN:OD1	1:B:2915:ALA:N	2.25	0.69
1:B:3737:ASP:OD2	1:B:3739:ASN:ND2	2.26	0.69
5:A:900:THR:CB	5:A:948:ILE:HD13	2.23	0.69
5:A:2181:MET:O	5:A:2185:PRO:N	2.26	0.69
6:F:428:LEU:CB	6:F:437:PHE:HE2	2.05	0.69
1:B:3422:LEU:H	1:B:3422:LEU:CD2	2.06	0.69
1:B:2638:ASN:C	1:B:2642:SER:HB3	2.13	0.69
1:B:2962:VAL:HA	1:B:2965:SER:HB3	1.74	0.69
7:G:297:ILE:HB	7:G:329:ILE:HG13	1.76	0.68
1:B:2670:GLN:N	1:B:2837:PRO:CG	2.56	0.68
7:G:212:ILE:HG23	7:G:216:LEU:HD12	1.74	0.68
1:B:2817:CYS:CB	1:B:2852:PHE:HZ	2.07	0.68
1:B:3068:LEU:HD23	1:B:3081:ALA:HB1	1.71	0.68
1:B:3670:GLU:O	1:B:3673:SER:OG	2.12	0.68
4:H:12:GLN:O	4:H:16:THR:N	2.27	0.68
5:A:369:TYR:O	5:A:373:GLU:N	2.26	0.68
6:F:1:MET:H	7:G:371:HIS:CG	2.12	0.68
5:A:1292:ILE:C	5:A:1294:CYS:N	2.36	0.68
7:G:121:GLN:O	7:G:362:TYR:OH	2.12	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3489:MET:HE1	1:B:3511:VAL:HG23	1.75	0.68
1:B:3568:THR:CB	1:B:3569:PRO:HD2	2.07	0.68
1:B:3644:ASN:O	1:B:3647:THR:OG1	2.09	0.68
5:A:516:GLU:O	5:A:517:PHE:C	2.30	0.68
1:B:3055:LYS:C	1:B:3059:GLN:HB2	2.13	0.68
1:B:3625:THR:N	1:B:3626:PRO:CD	2.56	0.68
1:B:3514:PHE:O	1:B:3518:GLN:N	2.22	0.67
5:A:967:THR:O	5:A:968:GLU:O	2.11	0.67
5:A:976:ALA:C	5:A:992:SER:CB	2.62	0.67
7:G:151:ILE:CG2	7:G:297:ILE:HG12	2.24	0.67
1:B:3468:HIS:HB2	1:B:3570:HIS:HA	1.77	0.67
4:H:261:ARG:O	4:H:265:PHE:N	2.28	0.67
5:A:2243:ILE:CB	5:A:2253:VAL:HA	2.24	0.67
7:G:24:ASP:HB2	7:G:340:TRP:HH2	1.60	0.67
8:E:382:ALA:O	8:E:385:THR:OG1	2.11	0.67
2:C:713:LYS:O	2:C:714:GLY:C	2.32	0.67
5:A:1249:GLN:O	5:A:1251:GLU:N	2.24	0.67
1:B:3481:ASP:CB	1:B:3482:PRO:HD2	2.24	0.67
1:B:3649:SER:CB	1:B:3704:ALA:O	2.43	0.67
5:A:2243:ILE:CB	5:A:2252:SER:CB	2.72	0.67
1:B:3105:LEU:HD12	1:B:3105:LEU:C	2.15	0.67
2:C:684:TYR:HA	2:C:687:ASN:HB3	1.76	0.67
1:B:2670:GLN:HA	1:B:2837:PRO:HG3	1.72	0.67
1:B:3407:TYR:N	1:B:3408:PRO:HD2	2.04	0.67
6:F:11:GLY:N	6:F:461:SER:O	2.26	0.67
6:F:233:ALA:O	6:F:237:GLY:N	2.27	0.67
7:G:137:GLN:OE1	7:G:137:GLN:N	2.27	0.67
5:A:1345:LEU:HA	5:A:1349:MET:CB	2.25	0.67
7:G:347:ALA:O	7:G:353:GLN:NE2	2.27	0.67
7:G:163:VAL:HG21	7:G:175:ILE:HD11	1.58	0.67
1:B:3448:ALA:HA	1:B:3458:MET:HA	1.77	0.67
1:B:3667:ILE:HD13	1:B:3692:VAL:C	2.14	0.67
1:B:3060:TRP:CZ3	1:B:3064:ASN:ND2	2.62	0.66
1:B:3169:PHE:CE1	1:B:3451:LEU:CD2	2.73	0.66
5:A:486:MET:O	5:A:490:GLY:N	2.28	0.66
7:G:312:ARG:NE	7:G:316:GLU:OE2	2.18	0.66
3:D:156:UNK:O	3:D:160:UNK:N	2.28	0.66
7:G:242:LEU:N	7:G:246:GLN:O	2.26	0.66
1:B:3019:LYS:CG	1:B:3020:ALA:N	2.58	0.66
1:B:3461:SER:CB	1:B:3464:PHE:HZ	2.06	0.66
7:G:275:ASP:OD1	7:G:276:GLN:N	2.24	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2633:TRP:CB	5:A:2624:LYS:CA	2.73	0.66
4:H:113:LEU:O	4:H:117:LYS:N	2.24	0.66
5:A:353:HIS:O	5:A:357:THR:N	2.25	0.66
5:A:1093:LYS:C	5:A:1095:LEU:N	2.48	0.66
6:F:47:TYR:O	6:F:53:ASN:OD1	2.13	0.66
6:F:174:MET:HA	6:F:489[B]:ARG:HB3	1.78	0.66
7:G:239:SER:HA	7:G:249:THR:HA	1.78	0.66
5:A:588:ARG:O	5:A:592:SER:N	2.17	0.66
1:B:3060:TRP:O	1:B:3063:PHE:N	2.28	0.66
1:B:3527:LEU:O	1:B:3531:PHE:N	2.25	0.66
1:B:3719:PHE:C	1:B:3722:ASP:HB2	2.15	0.66
7:G:99:GLU:HA	7:G:129:VAL:HA	1.78	0.66
1:B:3062:PHE:CZ	1:B:3657:ASN:O	2.49	0.66
1:B:3253:LEU:HD11	1:B:3318:ARG:HB2	1.78	0.66
2:C:695:GLN:O	2:C:699:ARG:HD3	1.96	0.65
3:D:64:UNK:O	6:F:434:SER:OG	2.06	0.65
3:D:396:UNK:HA	6:F:436:LYS:HE3	1.78	0.65
6:F:72:LYS:HD2	6:F:73:PRO:HD2	1.77	0.65
1:B:3101:LEU:C	1:B:3101:LEU:HD13	2.15	0.65
1:B:3086:LEU:N	1:B:3104:ILE:CD1	2.58	0.65
1:B:3423:TYR:CB	1:B:3558:MET:CE	2.74	0.65
5:A:1296:LEU:HA	5:A:1356:ALA:CB	2.26	0.65
6:F:169:PRO:HB2	6:F:176:LEU:HB2	1.79	0.65
7:G:163:VAL:HG23	7:G:175:ILE:HG23	1.78	0.65
1:B:3494:ASN:HD22	1:B:3497:HIS:HB3	1.61	0.65
5:A:1646:ASN:O	5:A:1649:ASP:N	2.30	0.65
5:A:1763:LYS:O	5:A:1767:PHE:N	2.30	0.65
1:B:3101:LEU:O	1:B:3101:LEU:HD13	1.96	0.65
5:A:1036:PRO:O	5:A:1038:ASN:N	2.29	0.65
1:B:3437:ARG:O	1:B:3440:SER:N	2.28	0.65
5:A:424:ASP:C	5:A:426:SER:N	2.50	0.65
5:A:1201:CYS:HA	5:A:1209:LYS:HA	1.79	0.65
5:A:1452:SER:O	5:A:1456:ILE:N	2.30	0.65
1:B:2748:GLU:HB3	1:B:2752:HIS:HD2	1.59	0.65
1:B:3241:THR:O	1:B:3242:ASP:CB	2.43	0.65
1:B:3541:PHE:O	1:B:3544:PHE:N	2.25	0.65
4:H:115:ASP:O	4:H:119:ASP:N	2.24	0.65
4:H:183:LYS:O	4:H:187:LEU:N	2.27	0.65
1:B:2998:GLU:O	1:B:3001:THR:N	2.30	0.64
1:B:2635:GLN:N	1:B:2635:GLN:OE1	2.28	0.64
6:F:191:ASN:HA	6:F:194:ILE:HD12	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:254:THR:O	6:F:258:THR:N	2.29	0.64
1:B:2821:ILE:CB	1:B:2849:TYR:HE2	2.06	0.64
1:B:3100:LEU:HD13	1:B:3100:LEU:C	2.17	0.64
1:B:3509:LEU:HA	1:B:3512:GLU:HB3	1.79	0.64
1:B:3253:LEU:HD21	1:B:3314:LEU:CA	2.27	0.64
1:B:2967:LEU:HD12	1:B:2967:LEU:C	2.17	0.64
1:B:3062:PHE:CZ	1:B:3658:GLU:CA	2.80	0.64
7:G:138:ALA:CB	7:G:165:ILE:CD1	2.69	0.64
5:A:1247:ASP:O	5:A:1248:THR:CB	2.44	0.64
1:B:3159:ILE:O	1:B:3163:TYR:N	2.31	0.64
5:A:2243:ILE:CB	5:A:2252:SER:O	2.46	0.64
1:B:3427:ASN:HD22	1:B:3428:LYS:N	1.94	0.64
1:B:2691:GLY:O	1:B:2695:GLU:N	2.31	0.64
1:B:3509:LEU:O	1:B:3513:ILE:N	2.27	0.64
1:B:3652:LEU:HD22	1:B:3652:LEU:C	2.17	0.64
5:A:217:SER:O	5:A:219:PHE:N	2.30	0.64
5:A:389:PRO:O	5:A:392:TYR:N	2.30	0.64
5:A:483:ASP:O	5:A:487:LYS:N	2.30	0.64
5:A:1152:ALA:C	5:A:1154:SER:H	1.97	0.64
4:H:189:ARG:O	4:H:193:LEU:N	2.20	0.63
5:A:122:LEU:CB	5:A:219:PHE:CB	2.75	0.63
5:A:579:PRO:O	5:A:583:ALA:N	2.31	0.63
7:G:138:ALA:HA	7:G:152:VAL:CG1	2.28	0.63
1:B:3100:LEU:C	1:B:3100:LEU:HD22	2.17	0.63
1:B:3171:LEU:C	1:B:3174:THR:HG1	2.00	0.63
1:B:3474:PHE:HE2	1:B:3526:VAL:HG21	0.93	0.63
5:A:976:ALA:O	5:A:992:SER:CB	2.46	0.63
5:A:1091:SER:O	5:A:1099:ALA:HB2	1.98	0.63
1:B:2651:ASN:O	1:B:2654:ILE:N	2.31	0.63
1:B:3646:PHE:CB	1:B:3720:ILE:HD11	2.28	0.63
5:A:1117:THR:O	5:A:1121:ASN:N	2.29	0.63
3:D:278:UNK:O	3:D:282:UNK:N	2.31	0.63
6:F:16:ALA:HB2	6:F:107:PRO:HG2	1.80	0.63
6:F:71:LEU:CD1	6:F:229:LEU:HD22	2.29	0.63
5:A:686:LEU:O	5:A:690:PHE:N	2.20	0.63
6:F:107:PRO:HB2	6:F:469:TRP:CZ3	2.34	0.63
5:A:1580:LEU:O	5:A:1583:LYS:CB	2.47	0.63
6:F:213:LYS:HE3	6:F:213:LYS:HA	1.80	0.63
6:F:266:ALA:C	6:F:282:ASN:HD21	2.01	0.63
1:B:2779:SER:O	1:B:2783:VAL:N	2.27	0.63
1:B:2651:ASN:O	1:B:2652:THR:C	2.37	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3040:ASN:OD1	1:B:3060:TRP:CZ2	2.52	0.62
1:B:3229:LEU:C	1:B:3229:LEU:HD12	2.18	0.62
1:B:3462:VAL:O	1:B:3464:PHE:N	2.32	0.62
1:B:3740:PHE:HB3	1:B:3742:PRO:HD3	1.80	0.62
3:D:277:UNK:O	3:D:281:UNK:N	2.31	0.62
2:C:673:SER:O	2:C:675:HIS:N	2.32	0.62
4:H:24:GLU:O	4:H:28:ASN:N	2.27	0.62
7:G:73:HIS:HA	7:G:159:VAL:HG13	1.82	0.62
1:B:2961:ASP:C	1:B:2963:CYS:N	2.48	0.62
1:B:3493:LEU:HD13	1:B:3493:LEU:C	2.19	0.62
1:B:3703:VAL:C	1:B:3704:ALA:O	2.36	0.62
5:A:430:THR:C	5:A:432:GLN:N	2.53	0.62
1:B:3244:ASP:O	1:B:3247:ARG:CG	2.45	0.62
1:B:3474:PHE:CG	1:B:3526:VAL:CG1	2.75	0.62
7:G:163:VAL:HG23	7:G:175:ILE:CB	2.28	0.62
7:G:273:GLY:O	7:G:277:THR:N	2.28	0.62
5:A:487:LYS:O	5:A:491:ARG:N	2.17	0.62
5:A:1069:LYS:O	5:A:1070:ARG:C	2.37	0.62
7:G:151:ILE:HG23	7:G:151:ILE:O	2.00	0.62
5:A:137:LEU:O	5:A:138:ASP:C	2.37	0.62
6:F:413:GLY:HA3	6:F:449:GLN:HE21	1.64	0.62
1:B:2912:ILE:N	1:B:2912:ILE:HD13	2.14	0.62
1:B:3492:LYS:N	1:B:3492:LYS:HD2	2.14	0.62
5:A:217:SER:O	5:A:218:MET:C	2.38	0.62
5:A:424:ASP:C	5:A:426:SER:H	2.03	0.62
5:A:2256:GLY:O	5:A:2260:ALA:N	2.28	0.62
6:F:112:GLU:OE1	6:F:116:ASN:ND2	2.24	0.62
6:F:301:PRO:HG2	6:F:304:TRP:HB2	1.81	0.62
1:B:3055:LYS:CB	1:B:3059:GLN:CG	2.78	0.62
1:B:3404:ALA:O	1:B:3457:ILE:CG2	2.48	0.62
4:H:51:GLN:O	4:H:54:LEU:N	2.32	0.62
4:H:191:THR:O	4:H:195:LYS:N	2.33	0.62
5:A:1506:LEU:C	5:A:1508:GLU:N	2.51	0.62
1:B:2822:GLN:O	1:B:2824:SER:N	2.32	0.62
5:A:1036:PRO:C	5:A:1038:ASN:H	2.02	0.62
3:D:161:UNK:O	3:D:166:UNK:N	2.33	0.61
5:A:346:GLU:O	5:A:350:ALA:N	2.25	0.61
5:A:1090:THR:C	5:A:1092:ILE:N	2.53	0.61
1:B:3116:MET:O	1:B:3117:LEU:C	2.38	0.61
5:A:897:GLY:HA2	5:A:948:ILE:HD11	1.81	0.61
7:G:131:ALA:HA	7:G:358:SER:HA	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3489:MET:HE1	1:B:3511:VAL:CG2	2.30	0.61
3:D:74:UNK:O	3:D:75:UNK:CB	2.48	0.61
6:F:32:GLY:HA2	8:E:373:PHE:HZ	1.65	0.61
8:E:360:ASN:O	8:E:364:GLU:HG3	1.99	0.61
1:B:3418:ARG:O	1:B:3422:LEU:HD22	1.99	0.61
1:B:3422:LEU:HD22	1:B:3422:LEU:N	2.09	0.61
2:C:739:SER:HA	3:D:328:UNK:O	2.01	0.61
1:B:2885:ARG:HD3	1:B:2885:ARG:C	2.20	0.61
1:B:3068:LEU:HD22	1:B:3081:ALA:HB3	1.79	0.61
1:B:3492:LYS:HA	1:B:3492:LYS:CE	2.28	0.61
2:C:721:GLN:O	2:C:724:LEU:N	2.32	0.61
3:D:168:UNK:O	3:D:171:UNK:N	2.34	0.61
4:H:119:ASP:O	4:H:122:LYS:N	2.30	0.61
5:A:1859:LEU:C	5:A:1861:ARG:N	2.53	0.61
6:F:80:VAL:HB	6:F:83:TRP:CZ2	2.36	0.61
7:G:150:GLY:HA3	7:G:296:ASN:HB2	1.81	0.61
1:B:3418:ARG:HH11	1:B:3418:ARG:CG	2.14	0.61
6:F:153:PRO:HB3	8:E:363:LEU:HD13	1.82	0.61
1:B:2651:ASN:H	1:B:2651:ASN:ND2	1.98	0.61
4:H:25:LEU:O	4:H:29:GLY:N	2.27	0.61
6:F:71:LEU:HD11	6:F:229:LEU:CD1	2.25	0.61
7:G:139:VAL:N	7:G:165:ILE:HD13	2.16	0.61
1:B:3062:PHE:HZ	1:B:3657:ASN:O	1.83	0.61
6:F:72:LYS:HB3	6:F:72:LYS:HZ3	1.63	0.61
1:B:3062:PHE:CZ	1:B:3658:GLU:N	2.69	0.61
1:B:3354:ILE:CB	1:B:3355:PRO:CD	2.79	0.61
1:B:3427:ASN:HA	1:B:3443:PHE:HZ	1.58	0.61
4:H:231:SER:O	4:H:235:LEU:N	2.33	0.61
7:G:19:ALA:N	7:G:29:ALA:O	2.34	0.61
7:G:149:THR:HG23	7:G:166:TYR:HA	1.83	0.61
6:F:8:VAL:HG21	8:E:368:TRP:O	2.01	0.61
6:F:87:GLN:CA	6:F:132:MET:HE2	2.31	0.61
6:F:272:SER:OG	6:F:276:GLU:N	2.33	0.61
6:F:446:ILE:HD12	6:F:446:ILE:H	1.64	0.61
1:B:3101:LEU:HD22	1:B:3104:ILE:HB	1.81	0.60
1:B:3106:TRP:CZ2	1:B:3668:ARG:HB3	2.32	0.60
7:G:9:VAL:N	7:G:20:GLY:O	2.25	0.60
1:B:2895:VAL:HG12	1:B:2895:VAL:O	2.02	0.60
1:B:3489:MET:HE2	1:B:3511:VAL:HG23	1.83	0.60
1:B:3556:VAL:O	1:B:3559:SER:OG	2.11	0.60
7:G:7:ALA:O	7:G:22:ALA:N	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:107:GLU:HB2	7:G:111:ASN:HD22	1.65	0.60
1:B:2636:SER:HA	1:B:2639:ILE:HG13	1.83	0.60
1:B:3394:ARG:HA	1:B:3398:GLY:HA2	1.83	0.60
8:E:366:ALA:C	8:E:368:TRP:H	2.05	0.60
1:B:3019:LYS:HG3	1:B:3020:ALA:N	2.17	0.60
1:B:3139:GLN:CB	1:B:3418:ARG:CZ	2.76	0.60
5:A:1938:ALA:O	5:A:1942:VAL:N	2.31	0.60
6:F:308:ASN:OD1	6:F:309:SER:N	2.34	0.60
7:G:33:SER:O	7:G:33:SER:OG	2.18	0.60
5:A:976:ALA:O	5:A:992:SER:CA	2.50	0.60
1:B:3068:LEU:HD12	1:B:3069:SER:N	2.17	0.60
1:B:3423:TYR:CB	1:B:3558:MET:HE2	2.32	0.60
5:A:634:PHE:O	5:A:638:PHE:N	2.33	0.60
5:A:872:LEU:O	5:A:876:LEU:N	2.28	0.60
1:B:3071:GLU:O	1:B:3072:PRO:O	2.19	0.60
2:C:739:SER:CB	3:D:328:UNK:O	2.49	0.60
7:G:147:ARG:NE	7:G:296:ASN:OD1	2.34	0.60
1:B:3169:PHE:CE1	1:B:3451:LEU:CG	2.85	0.60
1:B:3577:THR:O	5:A:965:ASP:N	2.35	0.60
5:A:878:PHE:O	5:A:881:LYS:N	2.34	0.60
5:A:995:PRO:CB	5:A:2558:ARG:CB	2.80	0.60
7:G:150:GLY:O	7:G:293:LEU:HD23	2.02	0.60
1:B:2638:ASN:O	1:B:2642:SER:CA	2.49	0.60
1:B:2690:ILE:CB	1:B:3715:VAL:CB	2.80	0.60
5:A:2389:SER:O	5:A:2390:LEU:C	2.39	0.60
1:B:3423:TYR:CB	1:B:3558:MET:HE1	2.32	0.59
1:B:3441:ILE:HG22	1:B:3441:ILE:O	2.01	0.59
5:A:682:LEU:O	5:A:686:LEU:N	2.25	0.59
8:E:370:GLN:O	8:E:374:LYS:N	2.25	0.59
6:F:66:ARG:HB3	6:F:66:ARG:CZ	2.32	0.59
7:G:34:ILE:HD12	7:G:55:GLY:O	2.02	0.59
1:B:3169:PHE:CE1	1:B:3451:LEU:HG	2.37	0.59
1:B:3544:PHE:HE1	1:B:3579:GLY:HA2	1.67	0.59
6:F:171:VAL:O	6:F:174:MET:N	2.26	0.59
1:B:2970:ILE:HG22	1:B:2970:ILE:O	2.00	0.59
5:A:976:ALA:O	5:A:992:SER:HA	2.02	0.59
7:G:353:GLN:HA	7:G:356:TRP:CD1	2.38	0.59
1:B:2643:ILE:HG23	1:B:2643:ILE:O	2.00	0.59
5:A:914:ASP:O	5:A:917:ILE:N	2.35	0.59
5:A:1646:ASN:O	5:A:1647:PHE:C	2.39	0.59
6:F:91:GLN:H	6:F:132:MET:HE3	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:99:TYR:OH	7:G:177:ARG:NH1	2.36	0.59
1:B:2670:GLN:C	1:B:2837:PRO:HG3	2.23	0.59
1:B:2835:TYR:O	1:B:2839:HIS:N	2.35	0.59
1:B:3085:TYR:CB	1:B:3104:ILE:CD1	2.81	0.59
5:A:430:THR:O	5:A:433:ILE:N	2.35	0.59
6:F:442:THR:HG21	6:F:448:ARG:CD	2.33	0.59
7:G:192:ILE:HD12	7:G:253:GLU:HG2	1.84	0.59
7:G:287:VAL:HG23	7:G:287:VAL:O	2.02	0.59
1:B:3366:VAL:O	1:B:3366:VAL:HG13	2.02	0.59
5:A:982:ILE:CB	5:A:2481:ASN:CA	2.80	0.59
5:A:1091:SER:O	5:A:1099:ALA:CB	2.51	0.59
6:F:171:VAL:HG11	6:F:400:LEU:HD13	1.84	0.59
1:B:3664:ALA:O	1:B:3667:ILE:HG13	2.03	0.58
5:A:894:VAL:O	5:A:897:GLY:N	2.33	0.58
5:A:474:ARG:O	5:A:478:LEU:N	2.35	0.58
5:A:594:LEU:O	5:A:597:ILE:N	2.36	0.58
5:A:1107:LEU:O	5:A:1111:CYS:N	2.36	0.58
6:F:211:GLN:HB2	6:F:217:ILE:HD12	1.84	0.58
7:G:172:PRO:HA	7:G:175:ILE:HD12	1.85	0.58
1:B:3097:ILE:HG22	1:B:3097:ILE:O	2.02	0.58
6:F:213:LYS:HA	6:F:213:LYS:CE	2.33	0.58
6:F:230:TYR:O	6:F:234:ASN:ND2	2.36	0.58
7:G:5:VAL:HB	7:G:101:HIS:CE1	2.37	0.58
7:G:159:VAL:HB	7:G:179:ASP:HA	1.83	0.58
1:B:3547:GLN:O	1:B:3551:GLN:N	2.31	0.58
7:G:357:ILE:HA	7:G:361:GLU:OE1	2.04	0.58
1:B:2817:CYS:CB	1:B:2852:PHE:CE2	2.86	0.58
1:B:2851:GLU:HA	1:B:2854:GLU:HB2	1.85	0.58
1:B:3106:TRP:HZ3	1:B:3668:ARG:CD	1.91	0.58
1:B:3483:ASP:OD1	1:B:3483:ASP:N	2.34	0.58
5:A:927:ALA:O	5:A:930:ASN:OD1	2.21	0.58
7:G:144:SER:OG	7:G:338:SER:HB3	2.04	0.58
1:B:3354:ILE:CB	1:B:3369:ILE:O	2.51	0.58
4:H:109:ASP:O	4:H:113:LEU:N	2.22	0.58
5:A:341:SER:O	5:A:345:LYS:N	2.33	0.58
6:F:116:ASN:OD1	6:F:117:SER:N	2.37	0.58
1:B:3644:ASN:C	1:B:3647:THR:OG1	2.42	0.58
5:A:1372:GLU:C	5:A:1374:LEU:N	2.57	0.58
6:F:94:LEU:O	6:F:100:LEU:N	2.35	0.58
1:B:2844:HIS:HA	1:B:2847:GLN:HB3	1.86	0.58
1:B:3404:ALA:C	1:B:3457:ILE:HG22	2.24	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3421:GLN:OE1	1:B:3421:GLN:N	2.37	0.58
3:D:286:UNK:O	3:D:290:UNK:N	2.37	0.58
5:A:2601:ASN:O	5:A:2604:ASN:N	2.37	0.58
6:F:87:GLN:HA	6:F:132:MET:HE2	1.86	0.58
7:G:335:ARG:HA	7:G:338:SER:OG	2.04	0.58
7:G:139:VAL:HG13	7:G:165:ILE:CG2	2.29	0.57
6:F:58:SER:HB2	6:F:92:TRP:HH2	1.69	0.57
7:G:79:TRP:HZ2	7:G:115:ASN:OD1	1.85	0.57
6:F:444:HIS:O	6:F:446:ILE:CA	2.52	0.57
6:F:483:LEU:HG	6:F:487:ARG:HH12	1.70	0.57
1:B:3168:HIS:O	1:B:3172:ARG:CB	2.49	0.57
1:B:3515:ASN:ND2	1:B:3733:LEU:HD22	2.20	0.57
5:A:1373:GLU:O	5:A:1377:LEU:N	2.34	0.57
6:F:70:GLU:HG2	6:F:70:GLU:O	2.04	0.57
6:F:261:GLU:O	6:F:265:THR:HB	2.05	0.57
1:B:3229:LEU:HD12	1:B:3229:LEU:O	2.02	0.57
5:A:1581:GLU:O	5:A:1585:ARG:CA	2.52	0.57
6:F:210:LYS:HB3	6:F:217:ILE:HG22	1.85	0.57
1:B:2941:HIS:CD2	1:B:2941:HIS:N	2.73	0.57
3:D:172:UNK:O	3:D:176:UNK:N	2.38	0.57
5:A:2179:TRP:O	5:A:2183:ASN:N	2.28	0.57
5:A:2369:VAL:O	5:A:2370:LYS:C	2.42	0.57
5:A:2410:THR:O	5:A:2414:VAL:N	2.35	0.57
5:A:1097:ASP:C	5:A:1099:ALA:N	2.58	0.57
1:B:3054:ALA:O	1:B:3055:LYS:C	2.43	0.57
1:B:3740:PHE:HB2	1:B:3742:PRO:HD3	1.85	0.57
3:D:185:UNK:O	6:F:9:TYR:N	2.38	0.57
6:F:25:THR:HG22	6:F:41:PRO:HA	1.87	0.57
6:F:83:TRP:HB3	6:F:127:VAL:HG21	1.87	0.57
7:G:137:GLN:HG3	7:G:339:VAL:HG11	1.87	0.57
7:G:279:TYR:CZ	7:G:283:MET:HG3	2.40	0.57
7:G:349:LEU:HB2	7:G:352:PHE:HB3	1.86	0.57
1:B:2637:ILE:HG13	1:B:2665:LEU:HD12	1.86	0.57
1:B:2943:ILE:C	1:B:2970:ILE:HD11	2.25	0.57
7:G:250:ILE:HG22	7:G:254:ARG:HG3	1.87	0.57
1:B:3576:LYS:H	1:B:3576:LYS:CD	2.13	0.57
1:B:3503:ALA:HB1	1:B:3506:MET:HB2	1.87	0.56
6:F:10:GLY:HA2	6:F:463:GLY:H	1.69	0.56
6:F:87:GLN:CA	6:F:132:MET:CE	2.82	0.56
6:F:148:PHE:HD2	6:F:459:LEU:HD11	1.70	0.56
7:G:34:ILE:HG12	7:G:69:TYR:CE1	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:238:LYS:O	7:G:250:ILE:N	2.38	0.56
1:B:3055:LYS:O	1:B:3056:ALA:C	2.43	0.56
1:B:3489:MET:CE	1:B:3511:VAL:CG2	2.83	0.56
1:B:3555:PHE:HB2	1:B:3558:MET:HB3	1.87	0.56
2:C:715:PRO:O	2:C:716:ARG:C	2.43	0.56
5:A:1295:GLU:O	5:A:1356:ALA:HB1	2.04	0.56
1:B:2964:ILE:HD13	1:B:2964:ILE:N	2.19	0.56
1:B:3171:LEU:CG	1:B:3172:ARG:N	2.69	0.56
6:F:120:ASN:HA	6:F:123:LYS:HB3	1.88	0.56
7:G:8:LEU:HD12	7:G:103:VAL:HG22	1.87	0.56
6:F:170:ILE:HD13	6:F:175:THR:HA	1.87	0.56
1:B:2847:GLN:OE1	1:B:2847:GLN:HA	2.04	0.56
6:F:462:LEU:HD21	8:E:369:MET:HB2	1.88	0.56
7:G:36:GLY:HA3	7:G:67:LEU:HD23	1.88	0.56
1:B:3068:LEU:HB3	1:B:3078:ALA:CA	2.36	0.56
3:D:79:UNK:O	3:D:80:UNK:C	2.50	0.56
5:A:2524:LYS:O	5:A:2528:ALA:N	2.38	0.56
7:G:287:VAL:HG12	7:G:290:ARG:CZ	2.35	0.56
1:B:2651:ASN:H	1:B:2651:ASN:HD22	1.54	0.56
1:B:3085:TYR:CA	1:B:3104:ILE:HD11	2.35	0.56
1:B:3568:THR:CG2	1:B:3569:PRO:CD	2.75	0.56
1:B:2991:CYS:CB	1:B:2999:LEU:CB	2.83	0.56
1:B:3089:ALA:HB1	1:B:3100:LEU:HD11	1.88	0.56
5:A:1152:ALA:C	5:A:1154:SER:N	2.57	0.56
7:G:300:SER:N	7:G:304:THR:HG21	2.20	0.56
1:B:2849:TYR:HA	1:B:2852:PHE:HB3	1.87	0.56
1:B:3068:LEU:CB	1:B:3078:ALA:HB2	2.33	0.56
1:B:3106:TRP:CZ3	1:B:3668:ARG:NH2	2.74	0.56
1:B:3354:ILE:HA	1:B:3371:ILE:N	2.15	0.56
1:B:3432:LYS:HB2	1:B:3432:LYS:NZ	2.21	0.56
1:B:3517:ILE:O	1:B:3521:PHE:N	2.36	0.56
5:A:1036:PRO:C	5:A:1038:ASN:N	2.59	0.56
6:F:213:LYS:HE3	6:F:213:LYS:O	2.05	0.56
1:B:3366:VAL:O	1:B:3367:HIS:O	2.24	0.55
1:B:3437:ARG:C	1:B:3440:SER:H	2.09	0.55
1:B:3573:HIS:HB3	1:B:3582:PHE:HB3	1.87	0.55
6:F:44:TYR:HB3	6:F:74:ILE:HD11	1.88	0.55
7:G:58:ALA:HB1	7:G:67:LEU:HD22	1.87	0.55
1:B:3055:LYS:O	1:B:3059:GLN:HB2	2.06	0.55
1:B:3085:TYR:CB	1:B:3104:ILE:HD11	2.36	0.55
1:B:3015:GLY:HA2	1:B:3019:LYS:HB3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:424:ASP:O	5:A:425:GLU:C	2.45	0.55
6:F:245:THR:OG1	6:F:246:LEU:HD12	2.05	0.55
7:G:187:ASP:O	7:G:191:LYS:HG3	2.07	0.55
2:C:797:ALA:O	2:C:801:LEU:N	2.39	0.55
6:F:87:GLN:C	6:F:132:MET:HE1	2.25	0.55
6:F:266:ALA:O	6:F:282:ASN:ND2	2.34	0.55
1:B:3462:VAL:C	1:B:3464:PHE:H	2.10	0.55
7:G:6:ALA:O	7:G:101:HIS:ND1	2.34	0.55
5:A:591:MET:O	5:A:595:LYS:N	2.23	0.55
7:G:27:PRO:HB3	7:G:340:TRP:CE2	2.42	0.55
5:A:1103:LEU:C	5:A:1105:ASN:H	2.09	0.55
5:A:1372:GLU:O	5:A:1374:LEU:CA	2.54	0.55
6:F:308:ASN:HA	6:F:382:LEU:H	1.71	0.55
7:G:16:MET:O	7:G:18:LYS:HG3	2.06	0.55
7:G:150:GLY:O	7:G:293:LEU:HD22	2.07	0.55
1:B:3085:TYR:O	1:B:3104:ILE:HD11	2.06	0.55
5:A:681:GLU:O	5:A:685:TYR:N	2.26	0.55
7:G:332:PRO:HD2	7:G:335:ARG:HB3	1.88	0.55
1:B:2822:GLN:O	1:B:2823:LEU:C	2.44	0.55
1:B:3023:PHE:HB3	1:B:3046:ALA:HB1	1.89	0.55
1:B:3375:LEU:CB	1:B:3376:PRO:HD2	2.37	0.55
1:B:3656:ASP:C	1:B:3658:GLU:N	2.59	0.55
5:A:2564:PHE:CB	5:A:2607:LEU:O	2.55	0.55
1:B:2797:PHE:HA	1:B:2852:PHE:HE1	1.71	0.54
1:B:3217:THR:HA	1:B:3220:PRO:HG3	1.89	0.54
1:B:3717:THR:O	1:B:3720:ILE:HB	2.06	0.54
1:B:3741:MET:N	1:B:3742:PRO:HD3	2.00	0.54
5:A:1372:GLU:O	5:A:1374:LEU:C	2.44	0.54
5:A:2567:VAL:C	5:A:2569:LYS:N	2.52	0.54
7:G:286:ASP:HB2	7:G:288:ASP:OD2	2.08	0.54
7:G:108:ALA:HB1	7:G:109:PRO:HD2	1.89	0.54
7:G:330:ILE:HG22	7:G:332:PRO:HD3	1.89	0.54
1:B:3062:PHE:CZ	1:B:3658:GLU:CB	2.91	0.54
7:G:10:ILE:HA	7:G:19:ALA:HA	1.88	0.54
7:G:54:VAL:HB	7:G:88:HIS:CG	2.42	0.54
7:G:84:LYS:HA	7:G:87:HIS:HB3	1.90	0.54
1:B:2634:TYR:N	1:B:2634:TYR:CD1	2.75	0.54
1:B:3731:ARG:CD	2:C:694:TRP:CD1	2.88	0.54
6:F:458:ILE:HG12	8:E:373:PHE:HD2	1.72	0.54
1:B:3479:GLY:O	1:B:3480:PHE:O	2.26	0.54
1:B:3712:THR:CB	1:B:3713:PRO:HD2	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:20:ASP:OD2	6:F:452:SER:OG	2.18	0.54
7:G:107:GLU:HB3	7:G:134:VAL:HG11	1.89	0.54
1:B:3586:MET:SD	1:B:3586:MET:N	2.81	0.54
5:A:580:ILE:HA	5:A:583:ALA:CB	2.38	0.54
5:A:873:ALA:O	5:A:877:PRO:N	2.41	0.54
5:A:1090:THR:O	5:A:1093:LYS:N	2.39	0.54
5:A:2225:ILE:HA	5:A:2229:GLU:CB	2.38	0.54
6:F:0:PRO:HB3	7:G:371:HIS:HB3	1.90	0.54
6:F:428:LEU:CB	6:F:437:PHE:CE2	2.85	0.54
8:E:365:GLU:O	8:E:368:TRP:HB2	2.08	0.54
1:B:2635:GLN:NE2	1:B:3539:GLU:CB	2.70	0.54
3:D:168:UNK:O	3:D:170:UNK:N	2.41	0.54
6:F:438:ARG:HG2	6:F:440:LEU:HD22	1.90	0.54
1:B:2635:GLN:HE21	1:B:3539:GLU:CB	2.20	0.54
1:B:3100:LEU:HD22	1:B:3100:LEU:O	2.06	0.54
1:B:3247:ARG:HH12	1:B:3407:TYR:CB	2.21	0.54
6:F:35:PHE:CD1	6:F:36:PRO:HD2	2.43	0.54
1:B:3044:ALA:HB2	1:B:3060:TRP:CH2	2.43	0.53
3:D:424:UNK:O	3:D:428:UNK:N	2.42	0.53
6:F:66:ARG:HG3	6:F:69:TYR:CG	2.43	0.53
7:G:349:LEU:HD13	8:E:394:TYR:CD2	2.44	0.53
5:A:601:LEU:O	5:A:604:PHE:N	2.41	0.53
7:G:91:TYR:HA	7:G:95:ARG:HA	1.90	0.53
1:B:3062:PHE:CE2	1:B:3658:GLU:CB	2.91	0.53
1:B:3171:LEU:O	1:B:3172:ARG:C	2.47	0.53
1:B:3644:ASN:C	1:B:3647:THR:HG1	2.09	0.53
3:D:65:UNK:O	3:D:66:UNK:O	2.27	0.53
5:A:1044:LYS:C	5:A:1046:ALA:N	2.62	0.53
6:F:302:ALA:HA	6:F:306:ARG:HH21	1.73	0.53
6:F:447:GLU:HG2	6:F:450:TYR:OH	2.08	0.53
3:D:285:UNK:O	3:D:289:UNK:N	2.42	0.53
1:B:2961:ASP:O	1:B:2963:CYS:N	2.41	0.53
7:G:83:GLU:O	7:G:87:HIS:N	2.38	0.53
1:B:3568:THR:HG21	1:B:3739:ASN:HB3	1.91	0.53
2:C:694:TRP:HA	2:C:697:PHE:HD2	1.74	0.53
3:D:171:UNK:O	3:D:175:UNK:N	2.42	0.53
6:F:465:PHE:CE1	6:F:468:LEU:HD22	2.43	0.53
6:F:466:HIS:HA	6:F:469:TRP:CD1	2.44	0.53
1:B:3099:GLU:O	1:B:3099:GLU:HG2	2.08	0.53
1:B:3493:LEU:HD13	1:B:3497:HIS:HB2	1.89	0.53
2:C:677:THR:O	2:C:678:HIS:O	2.26	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:1045:THR:CB	5:A:2511:VAL:CB	2.87	0.53
5:A:2036:LEU:O	5:A:2039:GLU:N	2.42	0.53
6:F:84:ASP:O	6:F:87:GLN:HB3	2.08	0.53
6:F:211:GLN:HB2	6:F:217:ILE:HB	1.90	0.53
6:F:444:HIS:C	6:F:446:ILE:N	2.52	0.53
1:B:3020:ALA:HB1	1:B:3050:ASP:CB	2.39	0.53
1:B:3354:ILE:CB	1:B:3355:PRO:HD2	2.38	0.53
3:D:170:UNK:O	3:D:174:UNK:N	2.42	0.53
5:A:1652:ILE:O	5:A:1654:ASN:N	2.41	0.53
5:A:410:GLU:O	5:A:412:GLU:N	2.42	0.53
1:B:2822:GLN:C	1:B:2824:SER:N	2.61	0.53
3:D:180:UNK:C	3:D:182:UNK:H	2.21	0.53
6:F:151:GLY:H	8:E:370:GLN:HE22	1.57	0.53
1:B:3107:LEU:HD12	1:B:3110:ILE:HD12	1.90	0.52
1:B:3389:ARG:O	1:B:3404:ALA:HA	2.10	0.52
5:A:982:ILE:CB	5:A:2480:PHE:C	2.78	0.52
1:B:3505:ASP:HA	1:B:3508:ILE:HB	1.91	0.52
6:F:249:ILE:HD12	6:F:420:LEU:HB2	1.91	0.52
1:B:3517:ILE:O	1:B:3520:MET:N	2.43	0.52
6:F:190:ILE:O	6:F:194:ILE:HG13	2.09	0.52
7:G:80:ASP:O	7:G:83:GLU:HB3	2.08	0.52
1:B:3246:PHE:HE2	1:B:3322:GLU:HA	1.75	0.52
2:C:689:GLU:C	2:C:691:ARG:H	2.12	0.52
1:B:2944:ALA:N	1:B:2970:ILE:CD1	2.73	0.52
1:B:3541:PHE:HE2	1:B:3545:ARG:NE	2.07	0.52
6:F:8:VAL:CG2	8:E:368:TRP:HB3	2.38	0.52
6:F:442:THR:HG1	6:F:443:GLY:H	1.52	0.52
1:B:3085:TYR:O	1:B:3104:ILE:CD1	2.56	0.52
1:B:3436:THR:O	1:B:3440:SER:N	2.43	0.52
6:F:19:ILE:HG22	6:F:21:PRO:HD3	1.91	0.52
6:F:80:VAL:HB	6:F:83:TRP:CH2	2.43	0.52
1:B:3576:LYS:CD	1:B:3576:LYS:N	2.73	0.52
5:A:516:GLU:C	5:A:518:MET:N	2.62	0.52
6:F:119:GLU:O	6:F:123:LYS:N	2.24	0.52
2:C:692:THR:N	2:C:693:PRO:CD	2.73	0.52
5:A:430:THR:O	5:A:432:GLN:CA	2.56	0.52
5:A:787:HIS:O	5:A:791:LEU:N	2.28	0.52
6:F:62:ILE:HG12	6:F:71:LEU:HD23	1.91	0.52
7:G:86:TRP:NE1	7:G:105:LEU:HD21	2.24	0.52
1:B:3160:ALA:HA	1:B:3167:LEU:CD2	2.39	0.52
1:B:3387:SER:O	1:B:3388:TYR:O	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3553:SER:O	1:B:3556:VAL:HG22	2.10	0.52
6:F:114:VAL:HG11	6:F:180:THR:HG21	1.92	0.52
6:F:442:THR:HG21	6:F:448:ARG:HG2	1.91	0.52
6:F:447:GLU:HG2	6:F:450:TYR:CZ	2.45	0.52
1:B:3432:LYS:HB2	1:B:3432:LYS:HZ2	1.74	0.52
1:B:3432:LYS:NZ	1:B:3432:LYS:CB	2.73	0.52
1:B:3721:LEU:HA	1:B:3724:ILE:HD12	1.91	0.52
2:C:722:GLN:O	2:C:724:LEU:N	2.42	0.52
6:F:151:GLY:H	8:E:370:GLN:NE2	2.07	0.52
7:G:169:PHE:CE1	8:E:381:VAL:HG22	2.45	0.52
1:B:3246:PHE:CE2	1:B:3322:GLU:HA	2.45	0.51
1:B:3706:LEU:CB	1:B:3720:ILE:HG13	2.40	0.51
5:A:1027:LEU:O	5:A:1030:LYS:N	2.37	0.51
6:F:291:GLU:HG3	6:F:296:LYS:H	1.75	0.51
7:G:208:ILE:HD12	7:G:208:ILE:H	1.75	0.51
3:D:438:UNK:O	6:F:266:ALA:N	2.42	0.51
1:B:2659:GLU:HG2	1:B:2681:ARG:CB	2.36	0.51
1:B:3020:ALA:CB	1:B:3050:ASP:CB	2.89	0.51
1:B:3418:ARG:CG	1:B:3418:ARG:NH1	2.73	0.51
1:B:3492:LYS:N	1:B:3492:LYS:CD	2.73	0.51
1:B:3492:LYS:HD2	1:B:3492:LYS:H	1.75	0.51
5:A:389:PRO:O	5:A:390:LEU:C	2.48	0.51
6:F:20:ASP:OD2	6:F:453:TRP:N	2.43	0.51
6:F:151:GLY:O	8:E:367:LYS:HE2	2.11	0.51
1:B:3551:GLN:O	1:B:3553:SER:N	2.43	0.51
2:C:739:SER:CA	3:D:328:UNK:O	2.58	0.51
3:D:414:UNK:C	3:D:416:UNK:H	2.22	0.51
5:A:958:GLN:O	5:A:960:LEU:N	2.43	0.51
1:B:2998:GLU:O	1:B:2999:LEU:C	2.48	0.51
5:A:348:LEU:O	5:A:352:ARG:N	2.36	0.51
5:A:1157:ILE:C	5:A:1159:GLU:N	2.60	0.51
5:A:2012:ASN:O	5:A:2016:PHE:N	2.43	0.51
6:F:48:THR:O	6:F:50:ASP:N	2.44	0.51
7:G:37:ARG:C	7:G:65:LEU:HB3	2.31	0.51
1:B:2898:TRP:HE3	1:B:2898:TRP:C	2.13	0.51
1:B:3171:LEU:O	1:B:3174:THR:CB	2.59	0.51
1:B:3464:PHE:HA	1:B:3576:LYS:NZ	2.26	0.51
1:B:3666:PHE:HA	1:B:3669:ASP:OD2	2.10	0.51
5:A:972:LEU:O	5:A:973:ASP:C	2.47	0.51
5:A:1103:LEU:O	5:A:1105:ASN:N	2.40	0.51
7:G:9:VAL:HG13	7:G:104:LEU:HD23	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3097:ILE:N	1:B:3097:ILE:CD1	2.73	0.51
1:B:3555:PHE:CD1	1:B:3581:VAL:HG11	2.45	0.51
5:A:957:ARG:O	5:A:959:PHE:N	2.44	0.51
5:A:2541:PHE:O	5:A:2544:SER:N	2.44	0.51
6:F:241:GLU:HA	6:F:244:GLU:HG3	1.92	0.51
1:B:3444:ASN:ND2	1:B:3580:ASN:HD22	2.08	0.51
1:B:3461:SER:CB	1:B:3464:PHE:CE2	2.94	0.51
1:B:3551:GLN:CD	1:B:3580:ASN:HA	2.31	0.51
5:A:978:ALA:O	5:A:990:PRO:HA	2.11	0.51
5:A:1867:LEU:O	5:A:1871:PHE:N	2.41	0.51
1:B:3071:GLU:O	1:B:3072:PRO:C	2.48	0.51
1:B:3242:ASP:O	1:B:3245:LEU:N	2.44	0.51
1:B:3504:PRO:O	1:B:3507:THR:OG1	2.24	0.51
1:B:3576:LYS:HD3	1:B:3576:LYS:N	2.20	0.51
6:F:24:TYR:CD2	6:F:25:THR:HG23	2.46	0.50
7:G:109:PRO:HD2	7:G:161:HIS:CD2	2.46	0.50
7:G:132:PHE:CG	7:G:133:TYR:N	2.78	0.50
7:G:313:MET:O	7:G:317:ILE:HG12	2.11	0.50
1:B:3247:ARG:CG	1:B:3248:LEU:N	2.74	0.50
1:B:3474:PHE:CD2	1:B:3526:VAL:CB	2.94	0.50
5:A:137:LEU:C	5:A:139:SER:N	2.63	0.50
5:A:328:LEU:O	5:A:332:LEU:N	2.39	0.50
6:F:48:THR:C	6:F:50:ASP:H	2.14	0.50
1:B:2639:ILE:O	1:B:2643:ILE:N	2.43	0.50
1:B:3462:VAL:C	1:B:3464:PHE:N	2.65	0.50
5:A:871:VAL:O	5:A:874:PRO:N	2.45	0.50
6:F:27:ASN:ND2	6:F:450:TYR:HA	2.26	0.50
7:G:78:ASN:ND2	7:G:81:ASP:OD2	2.44	0.50
7:G:109:PRO:HG2	7:G:161:HIS:CD2	2.46	0.50
1:B:2633:TRP:CB	5:A:2625:TYR:N	2.75	0.50
1:B:2651:ASN:C	1:B:2653:LYS:N	2.64	0.50
5:A:425:GLU:O	5:A:426:SER:CB	2.60	0.50
6:F:187:GLY:O	6:F:243:LYS:NZ	2.44	0.50
5:A:511:ASP:O	5:A:515:GLU:CA	2.60	0.50
5:A:1441:LEU:O	5:A:1445:PHE:CB	2.59	0.50
1:B:2888:LEU:HA	5:A:953:GLY:HA2	1.94	0.50
1:B:3668:ARG:HG2	1:B:3672:ILE:HG23	1.93	0.50
5:A:982:ILE:CB	5:A:2481:ASN:N	2.75	0.50
5:A:1038:ASN:O	5:A:1039:TYR:C	2.50	0.50
7:G:138:ALA:C	7:G:165:ILE:CD1	2.80	0.50
7:G:208:ILE:HG12	7:G:243:PRO:HG3	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3068:LEU:HB2	1:B:3078:ALA:HB2	1.83	0.50
1:B:3106:TRP:HE3	1:B:3665:LEU:HD12	1.73	0.50
1:B:3574:VAL:HA	1:B:3580:ASN:O	2.12	0.50
1:B:3618:GLU:O	1:B:3620:VAL:CA	2.60	0.50
2:C:695:GLN:O	2:C:699:ARG:HG2	2.11	0.50
3:D:11:UNK:O	3:D:13:UNK:N	2.44	0.50
5:A:2381:ALA:O	5:A:2384:ILE:CB	2.60	0.50
1:B:3171:LEU:O	1:B:3174:THR:CA	2.60	0.49
1:B:3474:PHE:CD1	1:B:3474:PHE:C	2.85	0.49
6:F:412:GLY:O	6:F:415:SER:OG	2.28	0.49
7:G:345:ILE:O	7:G:349:LEU:HG	2.12	0.49
5:A:2260:ALA:O	5:A:2261:TRP:C	2.50	0.49
7:G:139:VAL:N	7:G:165:ILE:CD1	2.75	0.49
7:G:155:SER:HA	7:G:160:THR:HG23	1.93	0.49
1:B:2737:ALA:CB	1:B:2746:LEU:HD11	2.42	0.49
1:B:2912:ILE:N	1:B:2912:ILE:CD1	2.74	0.49
6:F:128:LEU:HD13	6:F:134:PHE:CE2	2.48	0.49
6:F:182:ARG:N	6:F:388:LEU:HD11	2.26	0.49
7:G:275:ASP:OD2	7:G:316:GLU:HB3	2.12	0.49
7:G:360:GLN:O	7:G:364:GLU:N	2.45	0.49
2:C:690:ARG:HH12	2:C:763:ALA:HB1	1.78	0.49
4:H:185:LEU:O	4:H:189:ARG:N	2.32	0.49
7:G:125:GLU:HG3	7:G:362:TYR:OH	2.13	0.49
1:B:3040:ASN:OD1	1:B:3060:TRP:HZ2	1.93	0.49
1:B:3424:ARG:NH2	1:B:3424:ARG:HG2	2.27	0.49
6:F:148:PHE:CD2	6:F:459:LEU:HD11	2.47	0.49
7:G:10:ILE:HG12	7:G:19:ALA:HB1	1.94	0.49
7:G:312:ARG:O	7:G:316:GLU:HG2	2.12	0.49
1:B:2944:ALA:CA	1:B:2970:ILE:CD1	2.88	0.49
1:B:3570:HIS:C	1:B:3570:HIS:CD2	2.85	0.49
5:A:736:PHE:N	5:A:1543:LEU:O	2.46	0.49
5:A:1652:ILE:C	5:A:1654:ASN:H	2.15	0.49
6:F:58:SER:HB2	6:F:92:TRP:CH2	2.47	0.49
7:G:138:ALA:HB1	7:G:163:VAL:HG12	1.95	0.49
7:G:286:ASP:HB2	7:G:288:ASP:OD1	2.11	0.49
1:B:3393:ILE:CB	1:B:3400:VAL:HA	2.43	0.49
1:B:3407:TYR:N	1:B:3408:PRO:HD3	2.20	0.49
1:B:3450:PRO:C	1:B:3451:LEU:HD13	2.27	0.49
3:D:3:UNK:O	3:D:7:UNK:N	2.45	0.49
5:A:1745:LEU:O	5:A:1749:ASP:N	2.32	0.49
6:F:72:LYS:CD	6:F:73:PRO:HD2	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:122:LYS:HG2	6:F:484:LEU:HD11	1.94	0.49
1:B:2670:GLN:O	1:B:2837:PRO:HB3	2.11	0.49
5:A:741:LEU:O	5:A:744:LEU:N	2.46	0.49
1:B:3474:PHE:CE2	1:B:3526:VAL:CB	2.88	0.49
2:C:697:PHE:CD1	2:C:697:PHE:C	2.85	0.49
6:F:118:THR:HA	6:F:121:ARG:HD2	1.95	0.49
6:F:132:MET:HB2	6:F:134:PHE:CZ	2.47	0.49
6:F:193:LEU:HD21	6:F:299:ASP:HB3	1.95	0.49
5:A:806:LEU:O	5:A:809:PHE:N	2.46	0.49
5:A:2169:TYR:O	5:A:2173:LYS:N	2.46	0.49
5:A:2539:SER:O	5:A:2543:ASP:N	2.30	0.49
6:F:205:PRO:HG3	6:F:230:TYR:CD1	2.48	0.49
7:G:349:LEU:HD13	8:E:394:TYR:CE2	2.48	0.49
1:B:3086:LEU:HA	1:B:3104:ILE:HD12	1.94	0.48
1:B:3246:PHE:CD1	1:B:3246:PHE:C	2.85	0.48
1:B:3559:SER:HG	1:B:3560:TYR:N	2.11	0.48
6:F:70:GLU:HB2	6:F:226:ASP:OD2	2.11	0.48
6:F:466:HIS:HA	6:F:469:TRP:HD1	1.76	0.48
7:G:139:VAL:CA	7:G:165:ILE:HD13	2.43	0.48
1:B:3697:ASP:O	1:B:3701:ARG:HG3	2.13	0.48
3:D:215:UNK:O	3:D:216:UNK:CB	2.59	0.48
1:B:3143:SER:OG	1:B:3204:PRO:CB	2.61	0.48
2:C:763:ALA:O	2:C:767:CYS:N	2.42	0.48
6:F:297:GLU:O	6:F:300:ILE:N	2.44	0.48
1:B:3040:ASN:O	1:B:3060:TRP:HZ2	1.95	0.48
1:B:3098:ARG:O	1:B:3134:ILE:CB	2.61	0.48
1:B:3360:LEU:CB	1:B:3424:ARG:HH22	2.18	0.48
1:B:3372:ALA:HB3	1:B:3395:GLY:HA2	1.95	0.48
5:A:1012:HIS:C	5:A:1014:ARG:N	2.67	0.48
1:B:3503:ALA:O	1:B:3506:MET:HB3	2.13	0.48
1:B:3674:TRP:CZ3	1:B:3678:LEU:HB2	2.48	0.48
6:F:145:CYS:O	6:F:455:GLY:HA3	2.14	0.48
1:B:3068:LEU:CB	1:B:3078:ALA:HA	2.40	0.48
1:B:3649:SER:HB2	1:B:3704:ALA:C	2.33	0.48
5:A:1962:THR:O	5:A:1966:TRP:N	2.31	0.48
7:G:124:PHE:HB2	7:G:362:TYR:CD2	2.48	0.48
7:G:336:LYS:HG2	7:G:337:TYR:CE1	2.48	0.48
1:B:3468:HIS:ND1	1:B:3569:PRO:HB2	2.28	0.48
5:A:1012:HIS:C	5:A:1014:ARG:H	2.15	0.48
7:G:101:HIS:O	7:G:103:VAL:HG23	2.13	0.48
7:G:310:ALA:O	7:G:313:MET:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2791:ARG:O	1:B:2792:GLN:C	2.51	0.48
1:B:3236:ARG:NE	1:B:3338:CYS:CB	2.76	0.48
1:B:3646:PHE:CB	1:B:3720:ILE:CD1	2.92	0.48
7:G:312:ARG:O	7:G:316:GLU:N	2.28	0.48
8:E:357:THR:N	8:E:361:ILE:HD12	2.29	0.48
1:B:3062:PHE:HZ	1:B:3658:GLU:HA	1.77	0.48
1:B:3650:ARG:O	1:B:3654:GLU:N	2.45	0.48
7:G:190:MET:SD	7:G:203:THR:HG22	2.53	0.48
1:B:2663:LEU:HD13	1:B:2663:LEU:HA	1.72	0.48
1:B:3509:LEU:HD12	1:B:3510:LYS:N	2.28	0.48
3:D:2:UNK:CB	3:D:16:UNK:HA	2.44	0.48
3:D:162:UNK:O	3:D:165:UNK:N	2.47	0.48
6:F:118:THR:O	6:F:121:ARG:HB2	2.13	0.48
5:A:2257:VAL:O	5:A:2261:TRP:N	2.41	0.47
6:F:190:ILE:HD11	6:F:292:LEU:HD11	1.96	0.47
6:F:444:HIS:O	6:F:447:GLU:N	2.47	0.47
6:F:447:GLU:HA	6:F:450:TYR:CE1	2.49	0.47
7:G:355:MET:HA	7:G:373:LYS:HZ1	1.80	0.47
7:G:371:HIS:O	8:E:380:LYS:NZ	2.33	0.47
1:B:2748:GLU:HB3	1:B:2752:HIS:NE2	2.29	0.47
5:A:1560:HIS:CB	5:A:1598:ARG:CB	2.92	0.47
5:A:1646:ASN:O	5:A:1648:TYR:N	2.47	0.47
7:G:261:LEU:HB3	7:G:274:ILE:HD13	1.96	0.47
1:B:3085:TYR:C	1:B:3104:ILE:HD13	2.24	0.47
3:D:168:UNK:O	3:D:169:UNK:C	2.62	0.47
5:A:834:ILE:O	5:A:838:LEU:N	2.27	0.47
6:F:213:LYS:CB	6:F:214:PRO:HD3	2.35	0.47
6:F:241:GLU:O	6:F:244:GLU:HB2	2.14	0.47
6:F:244:GLU:HB3	7:G:287:VAL:CG1	2.44	0.47
1:B:3449:ILE:HG22	1:B:3451:LEU:HD11	1.97	0.47
2:C:695:GLN:O	2:C:699:ARG:CD	2.61	0.47
2:C:702:GLN:HA	2:C:702:GLN:OE1	2.14	0.47
5:A:982:ILE:CB	5:A:2481:ASN:HA	2.42	0.47
6:F:36:PRO:HB3	6:F:453:TRP:CE2	2.48	0.47
6:F:174:MET:HA	6:F:489[A]:ARG:HB3	1.95	0.47
6:F:432:LEU:HD21	6:F:435:LEU:HD22	1.96	0.47
7:G:72:GLU:HB2	7:G:77:THR:HG21	1.97	0.47
7:G:124:PHE:HB2	7:G:362:TYR:CE2	2.49	0.47
1:B:2898:TRP:C	1:B:2898:TRP:CE3	2.88	0.47
1:B:2941:HIS:C	1:B:2943:ILE:H	2.18	0.47
1:B:3427:ASN:CA	1:B:3443:PHE:HZ	2.17	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3427:ASN:HD22	1:B:3428:LYS:H	1.61	0.47
6:F:107:PRO:HB2	6:F:469:TRP:CH2	2.49	0.47
1:B:3491:ASP:HB3	1:B:3492:LYS:NZ	2.30	0.47
1:B:3545:ARG:NH1	1:B:3633:GLY:HA2	2.29	0.47
5:A:1091:SER:HA	5:A:1099:ALA:CA	2.44	0.47
5:A:1417:LYS:HA	5:A:1420:ALA:HB3	1.97	0.47
5:A:1581:GLU:O	5:A:1585:ARG:CB	2.63	0.47
7:G:351:THR:O	7:G:354:GLN:HG2	2.15	0.47
8:E:392:LYS:O	8:E:396:THR:HG23	2.15	0.47
1:B:2637:ILE:HA	1:B:2640:LEU:HB3	1.95	0.47
1:B:2839:HIS:O	1:B:2843:LEU:HG	2.15	0.47
1:B:3481:ASP:CB	1:B:3482:PRO:HD3	2.42	0.47
1:B:3658:GLU:O	1:B:3662:TYR:N	2.38	0.47
1:B:3699:ILE:O	1:B:3702:LYS:N	2.48	0.47
1:B:3721:LEU:HG	1:B:3724:ILE:HD12	1.96	0.47
5:A:461:LYS:O	5:A:465:MET:N	2.32	0.47
5:A:1086:VAL:O	5:A:1090:THR:N	2.38	0.47
5:A:2352:ILE:O	5:A:2356:SER:N	2.46	0.47
6:F:442:THR:HG21	6:F:448:ARG:HG3	1.92	0.47
7:G:9:VAL:O	7:G:20:GLY:N	2.48	0.47
1:B:3065:ASP:O	1:B:3068:LEU:HG	2.14	0.47
1:B:3493:LEU:O	1:B:3493:LEU:HD13	2.14	0.47
3:D:4:UNK:O	3:D:8:UNK:N	2.47	0.47
4:H:86:ASN:O	4:H:89:PRO:N	2.47	0.47
5:A:1201:CYS:C	5:A:1203:ASP:H	2.18	0.47
1:B:2969:ARG:O	1:B:2969:ARG:HD3	2.15	0.47
1:B:3100:LEU:HD13	1:B:3101:LEU:HA	1.97	0.47
1:B:3731:ARG:HB3	2:C:694:TRP:HE1	1.80	0.47
3:D:420:UNK:C	3:D:422:UNK:N	2.77	0.47
7:G:180:LEU:HD23	7:G:184:ASP:OD2	2.14	0.47
7:G:359:LYS:O	7:G:362:TYR:HB3	2.15	0.47
1:B:3163:TYR:CB	1:B:3167:LEU:HB3	2.45	0.47
5:A:31:LEU:O	5:A:35:MET:N	2.48	0.47
5:A:330:ILE:O	5:A:334:GLN:CB	2.63	0.47
8:E:391:ILE:CA	8:E:394:TYR:HB2	2.32	0.47
1:B:2837:PRO:O	1:B:2840:LYS:N	2.47	0.46
1:B:3366:VAL:O	1:B:3367:HIS:C	2.51	0.46
1:B:3649:SER:HB2	1:B:3705:GLN:CA	2.42	0.46
1:B:3668:ARG:NE	1:B:3672:ILE:HD13	2.15	0.46
5:A:1043:LEU:O	5:A:1046:ALA:N	2.46	0.46
6:F:264:SER:O	6:F:265:THR:OG1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:82:MET:HG3	7:G:86:TRP:CZ2	2.50	0.46
1:B:3244:ASP:O	1:B:3247:ARG:CD	2.63	0.46
1:B:3740:PHE:CB	1:B:3742:PRO:CD	2.84	0.46
3:D:61:UNK:C	3:D:63:UNK:N	2.78	0.46
5:A:1036:PRO:O	5:A:1039:TYR:N	2.33	0.46
5:A:1345:LEU:CA	5:A:1349:MET:CB	2.92	0.46
5:A:2092:LEU:O	5:A:2095:ALA:HB3	2.14	0.46
7:G:255:PHE:C	7:G:258:PRO:HD2	2.35	0.46
1:B:2651:ASN:ND2	1:B:2651:ASN:N	2.60	0.46
1:B:3496:ALA:CB	2:C:684:TYR:CD1	2.98	0.46
1:B:3668:ARG:NE	1:B:3672:ILE:HG21	2.29	0.46
6:F:152:ARG:HD3	6:F:407:ASN:OD1	2.15	0.46
4:H:183:LYS:O	4:H:186:LYS:N	2.49	0.46
5:A:981:LYS:CB	5:A:988:ASP:HA	2.44	0.46
5:A:1581:GLU:C	5:A:1583:LYS:H	2.17	0.46
1:B:3427:ASN:N	1:B:3443:PHE:HZ	2.09	0.46
1:B:3464:PHE:HA	1:B:3576:LYS:HZ1	1.81	0.46
5:A:1003:ILE:CB	5:A:1017:ALA:HB2	2.45	0.46
5:A:1948:VAL:O	5:A:1952:VAL:N	2.31	0.46
6:F:72:LYS:NZ	6:F:72:LYS:CB	2.73	0.46
6:F:110:LEU:HD23	6:F:111:THR:N	2.31	0.46
6:F:285:ARG:HA	6:F:288:PHE:CE2	2.50	0.46
7:G:14:SER:HB2	7:G:157:ASP:CB	2.45	0.46
7:G:286:ASP:HB2	7:G:288:ASP:CG	2.35	0.46
1:B:3107:LEU:HD12	1:B:3110:ILE:CD1	2.45	0.46
3:D:139:UNK:O	6:F:178:LYS:HE3	2.16	0.46
5:A:1102:LEU:O	5:A:1106:LEU:N	2.38	0.46
6:F:241:GLU:HG3	6:F:244:GLU:OE1	2.15	0.46
7:G:101:HIS:O	7:G:130:PRO:HD2	2.15	0.46
8:E:358:HIS:CG	8:E:359:GLN:H	2.34	0.46
3:D:102:UNK:C	3:D:233:UNK:HA	2.45	0.46
6:F:47:TYR:CD1	6:F:50:ASP:OD2	2.68	0.46
6:F:95:GLN:O	6:F:99:TYR:HA	2.16	0.46
7:G:277:THR:HA	7:G:280:ASN:HD22	1.81	0.46
7:G:286:ASP:O	7:G:290:ARG:NE	2.49	0.46
1:B:2737:ALA:HB3	1:B:2746:LEU:HD11	1.98	0.46
1:B:3082:ILE:CB	1:B:3108:ILE:HD11	2.46	0.46
5:A:1868:SER:O	5:A:1872:ILE:N	2.48	0.46
6:F:43:VAL:HG22	6:F:73:PRO:HA	1.97	0.46
1:B:3242:ASP:O	1:B:3243:GLU:C	2.52	0.46
5:A:914:ASP:O	5:A:916:ILE:N	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:1589:ASP:O	5:A:1590:SER:C	2.54	0.46
6:F:390:TYR:HD1	6:F:432:LEU:HD12	1.80	0.46
6:F:444:HIS:CE1	8:E:377:HIS:HE1	2.34	0.46
1:B:3505:ASP:HA	1:B:3508:ILE:HD12	1.97	0.46
5:A:709:VAL:O	5:A:713:MET:N	2.49	0.46
5:A:1041:GLU:HA	5:A:2514:VAL:CB	2.46	0.46
7:G:33:SER:CB	7:G:71:ILE:HG13	2.46	0.46
7:G:162:VAL:HG11	7:G:278:THR:HA	1.98	0.46
8:E:378:LYS:O	8:E:382:ALA:N	2.42	0.46
1:B:2639:ILE:HA	1:B:2642:SER:HB3	1.98	0.45
1:B:3404:ALA:CA	1:B:3457:ILE:HG22	2.46	0.45
1:B:3555:PHE:CE1	1:B:3581:VAL:HG11	2.51	0.45
2:C:699:ARG:N	2:C:699:ARG:CD	2.73	0.45
5:A:2334:SER:O	5:A:2338:LEU:N	2.42	0.45
7:G:140:LEU:HD11	7:G:343:GLY:CA	2.45	0.45
7:G:180:LEU:HD21	7:G:269:LEU:HD21	1.97	0.45
1:B:2957:HIS:HA	1:B:3434:VAL:CB	2.46	0.45
1:B:3068:LEU:CB	1:B:3078:ALA:CA	2.94	0.45
1:B:3496:ALA:HB3	1:B:3510:LYS:HZ2	1.81	0.45
7:G:99:GLU:C	7:G:130:PRO:HD3	2.37	0.45
7:G:108:ALA:HB1	7:G:109:PRO:HD3	1.96	0.45
7:G:309:ILE:O	7:G:313:MET:HG2	2.16	0.45
1:B:2675:PHE:O	1:B:2675:PHE:CG	2.69	0.45
6:F:10:GLY:C	6:F:12:ASP:H	2.19	0.45
6:F:443:GLY:O	6:F:444:HIS:HD2	1.99	0.45
7:G:273:GLY:N	7:G:276:GLN:HB3	2.31	0.45
6:F:122:LYS:HA	6:F:125:LEU:HD12	1.98	0.45
7:G:360:GLN:O	7:G:364:GLU:HG3	2.17	0.45
1:B:3060:TRP:O	1:B:3061:GLY:C	2.53	0.45
5:A:967:THR:O	5:A:968:GLU:C	2.55	0.45
5:A:1091:SER:CA	5:A:1099:ALA:CA	2.90	0.45
6:F:156:LEU:HD12	6:F:168:SER:O	2.17	0.45
7:G:24:ASP:HB2	7:G:340:TRP:CH2	2.46	0.45
1:B:3731:ARG:CB	2:C:694:TRP:HE1	2.29	0.45
1:B:3096:LYS:C	1:B:3097:ILE:HD13	2.35	0.45
1:B:3236:ARG:HD2	1:B:3236:ARG:HA	1.48	0.45
1:B:3296:PHE:O	1:B:3296:PHE:CD1	2.70	0.45
1:B:3437:ARG:O	1:B:3439:ARG:N	2.50	0.45
1:B:3555:PHE:CZ	1:B:3583:THR:HG21	2.52	0.45
3:D:310:UNK:O	3:D:313:UNK:N	2.49	0.45
5:A:1207:TYR:O	5:A:1208:ASN:C	2.55	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:272:SER:HB3	6:F:278:ILE:HG12	1.99	0.45
6:F:291:GLU:OE2	6:F:296:LYS:HB2	2.17	0.45
1:B:2874:ALA:C	1:B:2876:GLU:H	2.18	0.45
1:B:3467:LEU:C	1:B:3467:LEU:CD1	2.86	0.45
1:B:3699:ILE:O	1:B:3700:ILE:C	2.55	0.45
5:A:580:ILE:C	5:A:583:ALA:H	2.19	0.45
6:F:216:PHE:CE2	6:F:218:LYS:HG3	2.52	0.45
7:G:124:PHE:HD1	7:G:359:LYS:HG2	1.82	0.45
7:G:143:TYR:CG	8:E:391:ILE:HG21	2.51	0.45
8:E:366:ALA:C	8:E:368:TRP:N	2.70	0.45
1:B:3424:ARG:HH21	1:B:3424:ARG:CG	2.30	0.45
1:B:3474:PHE:CE2	1:B:3526:VAL:CG1	2.92	0.45
2:C:704:ASN:CB	2:C:711:ASP:HA	2.46	0.45
3:D:420:UNK:O	3:D:422:UNK:N	2.50	0.45
5:A:239:LYS:O	5:A:240:GLN:C	2.47	0.45
5:A:1650:PHE:C	5:A:1652:ILE:N	2.70	0.45
5:A:1673:PHE:O	5:A:1676:MET:N	2.50	0.45
6:F:175:THR:N	6:F:489[B]:ARG:HG2	2.31	0.45
6:F:406:HIS:CD2	6:F:406:HIS:O	2.70	0.45
7:G:138:ALA:CA	7:G:152:VAL:HG11	2.40	0.45
7:G:148:THR:HB	8:E:388:ALA:HB1	1.99	0.45
7:G:346:LEU:HG	7:G:352:PHE:CE2	2.52	0.45
1:B:2885:ARG:C	1:B:2885:ARG:CD	2.85	0.45
5:A:592:SER:O	5:A:596:THR:N	2.38	0.45
7:G:216:LEU:HD22	7:G:238:LYS:HD2	1.99	0.45
7:G:271:SER:OG	7:G:272:ALA:N	2.50	0.45
1:B:2821:ILE:HA	1:B:2849:TYR:CZ	2.52	0.44
1:B:3015:GLY:C	1:B:3019:LYS:HB3	2.38	0.44
1:B:3159:ILE:O	1:B:3163:TYR:CB	2.65	0.44
1:B:3358:TYR:CG	1:B:3358:TYR:O	2.70	0.44
1:B:3100:LEU:HD13	1:B:3101:LEU:H	1.67	0.44
1:B:3316:TYR:O	1:B:3316:TYR:CD1	2.70	0.44
1:B:3592:PRO:CB	1:B:3671:ILE:HB	2.47	0.44
1:B:3649:SER:CB	1:B:3705:GLN:CA	2.82	0.44
3:D:38:UNK:O	3:D:39:UNK:C	2.65	0.44
3:D:373:UNK:H	8:E:379:TYR:HE1	1.57	0.44
6:F:204:ILE:HD12	6:F:274:TRP:CD2	2.52	0.44
6:F:253:LYS:HB3	6:F:256:GLU:HG2	1.98	0.44
7:G:73:HIS:ND1	7:G:73:HIS:N	2.64	0.44
7:G:81:ASP:O	7:G:84:LYS:N	2.51	0.44
1:B:2874:ALA:C	1:B:2876:GLU:N	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2898:TRP:CE3	1:B:2898:TRP:O	2.70	0.44
3:D:384:UNK:O	3:D:386:UNK:N	2.50	0.44
5:A:119:MET:O	5:A:123:THR:N	2.46	0.44
5:A:302:THR:C	5:A:304:PHE:N	2.71	0.44
6:F:127:VAL:HG12	6:F:128:LEU:HD23	1.99	0.44
1:B:2844:HIS:C	1:B:2846:PHE:N	2.70	0.44
1:B:3504:PRO:O	1:B:3508:ILE:HG13	2.18	0.44
1:B:3617:ASN:O	1:B:3618:GLU:C	2.55	0.44
6:F:475:TYR:CD1	6:F:475:TYR:C	2.85	0.44
1:B:2651:ASN:HD22	1:B:2651:ASN:N	2.13	0.44
1:B:3424:ARG:HH11	1:B:3447:ILE:HA	1.65	0.44
1:B:3439:ARG:HG3	1:B:3441:ILE:HG12	2.00	0.44
1:B:3570:HIS:O	1:B:3570:HIS:CG	2.70	0.44
4:H:183:LYS:O	4:H:184:LEU:C	2.56	0.44
5:A:2549:PHE:HZ	5:A:2556:ILE:HA	1.82	0.44
6:F:258:THR:HA	6:F:261:GLU:HG2	1.99	0.44
7:G:187:ASP:OD1	7:G:206:ARG:NH1	2.51	0.44
7:G:210:ARG:O	7:G:213:LYS:HB3	2.17	0.44
1:B:3106:TRP:CB	1:B:3665:LEU:CD1	2.81	0.44
1:B:3172:ARG:NH2	1:B:3173:THR:HA	2.32	0.44
5:A:1207:TYR:O	5:A:1210:ARG:N	2.51	0.44
6:F:57:PHE:CE1	6:F:89:GLN:HB2	2.53	0.44
6:F:400:LEU:O	6:F:404:LEU:HG	2.18	0.44
7:G:117:GLU:HG2	7:G:367:PRO:O	2.17	0.44
7:G:230:ALA:CB	7:G:252:ASN:HB3	2.47	0.44
2:C:688:ILE:HA	2:C:691:ARG:HE	1.82	0.44
5:A:1605:ASN:C	5:A:1607:VAL:N	2.71	0.44
5:A:1859:LEU:C	5:A:1861:ARG:H	2.20	0.44
6:F:18:VAL:O	6:F:28:ILE:HG23	2.18	0.44
6:F:406:HIS:O	6:F:406:HIS:CG	2.70	0.44
7:G:16:MET:H	7:G:16:MET:HE1	1.74	0.44
7:G:24:ASP:HB3	7:G:26:ALA:H	1.83	0.44
1:B:2675:PHE:O	1:B:2675:PHE:CD1	2.71	0.44
1:B:2843:LEU:O	1:B:2846:PHE:N	2.39	0.44
2:C:732:GLN:O	2:C:734:GLN:N	2.50	0.44
1:B:3068:LEU:HD12	1:B:3068:LEU:C	2.39	0.44
1:B:3247:ARG:HH11	1:B:3407:TYR:CB	2.29	0.44
1:B:3358:TYR:O	1:B:3358:TYR:CD2	2.71	0.44
2:C:691:ARG:HG3	2:C:692:THR:N	2.33	0.44
5:A:2389:SER:O	5:A:2391:SER:N	2.50	0.44
6:F:186:ALA:O	6:F:189:PHE:N	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:484:LEU:HA	6:F:487:ARG:HH11	1.82	0.44
7:G:35:VAL:N	7:G:68:ARG:O	2.43	0.44
8:E:364:GLU:O	8:E:368:TRP:HD1	2.01	0.44
1:B:3015:GLY:CA	1:B:3019:LYS:HB3	2.48	0.43
1:B:3570:HIS:CD2	1:B:3570:HIS:O	2.70	0.43
5:A:1038:ASN:O	5:A:1041:GLU:N	2.52	0.43
5:A:1653:SER:O	5:A:1654:ASN:C	2.56	0.43
6:F:267:LYS:HA	6:F:282:ASN:HD21	1.83	0.43
8:E:375:GLU:O	8:E:378:LYS:N	2.51	0.43
4:H:193:LEU:O	4:H:196:LEU:N	2.46	0.43
5:A:2243:ILE:CB	5:A:2252:SER:CA	2.94	0.43
6:F:390:TYR:CD1	6:F:432:LEU:HD12	2.53	0.43
7:G:257:ALA:HB3	7:G:258:PRO:HD3	2.00	0.43
1:B:3552:TYR:O	1:B:3552:TYR:CD1	2.70	0.43
2:C:712:LEU:O	2:C:716:ARG:CB	2.66	0.43
5:A:838:LEU:O	5:A:842:LEU:N	2.49	0.43
7:G:253:GLU:HG2	7:G:256:ARG:HD3	2.00	0.43
7:G:326:LYS:HE3	7:G:328:LYS:HD2	2.01	0.43
1:B:3070:GLU:OE1	1:B:3070:GLU:HA	2.18	0.43
1:B:3451:LEU:CD1	1:B:3451:LEU:N	2.73	0.43
2:C:670:GLU:O	2:C:674:ALA:N	2.37	0.43
3:D:150:UNK:O	3:D:152:UNK:N	2.51	0.43
6:F:177:SER:HA	6:F:180:THR:HG23	2.00	0.43
6:F:244:GLU:HB3	7:G:287:VAL:HG11	1.99	0.43
7:G:18:LYS:HE3	7:G:337:TYR:CD1	2.53	0.43
7:G:130:PRO:HA	7:G:359:LYS:HZ3	1.83	0.43
7:G:140:LEU:CD1	7:G:343:GLY:CA	2.96	0.43
1:B:3085:TYR:CB	1:B:3104:ILE:HD13	2.48	0.43
1:B:3253:LEU:CD1	1:B:3318:ARG:HB2	2.45	0.43
1:B:3411:ARG:O	1:B:3415:ARG:CB	2.66	0.43
1:B:3546:LYS:NZ	1:B:3550:SER:HB2	2.34	0.43
2:C:649:ILE:O	2:C:652:SER:N	2.51	0.43
3:D:79:UNK:C	3:D:80:UNK:O	2.59	0.43
5:A:1044:LYS:C	5:A:1046:ALA:H	2.22	0.43
5:A:1044:LYS:O	5:A:1046:ALA:N	2.52	0.43
5:A:1255:ALA:O	5:A:1256:ILE:C	2.56	0.43
6:F:82:ASP:OD2	6:F:85:THR:OG1	2.34	0.43
7:G:137:GLN:HG3	7:G:339:VAL:CG1	2.48	0.43
7:G:223:PHE:HD1	7:G:259:GLU:HG3	1.84	0.43
3:D:11:UNK:C	3:D:13:UNK:N	2.82	0.43
5:A:2526:HIS:O	5:A:2530:MET:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:180:THR:O	6:F:181:ARG:NH1	2.42	0.43
8:E:377:HIS:O	8:E:381:VAL:HG23	2.19	0.43
1:B:2898:TRP:CZ3	1:B:2902:VAL:HG21	2.53	0.43
1:B:3108:ILE:HD12	1:B:3108:ILE:HA	1.74	0.43
1:B:3443:PHE:CD1	1:B:3443:PHE:N	2.73	0.43
1:B:3733:LEU:HD21	1:B:3742:PRO:HG2	2.00	0.43
6:F:94:LEU:O	6:F:99:TYR:N	2.52	0.43
7:G:253:GLU:HA	7:G:256:ARG:HB2	2.00	0.43
1:B:3488:PHE:CE1	1:B:3492:LYS:HG2	2.54	0.43
1:B:3493:LEU:C	1:B:3493:LEU:CD1	2.86	0.43
2:C:679:ARG:C	2:C:681:THR:H	2.22	0.43
6:F:48:THR:C	6:F:50:ASP:N	2.71	0.43
6:F:413:GLY:HA3	6:F:449:GLN:NE2	2.33	0.43
7:G:107:GLU:HB2	7:G:111:ASN:ND2	2.32	0.43
1:B:3668:ARG:O	1:B:3671:ILE:HG13	2.18	0.43
5:A:1988:PHE:O	5:A:1991:SER:N	2.42	0.43
5:A:2168:LEU:O	5:A:2172:PHE:N	2.49	0.43
6:F:128:LEU:HD13	6:F:134:PHE:CD2	2.53	0.43
6:F:302:ALA:C	6:F:304:TRP:H	2.22	0.43
6:F:416:SER:HA	6:F:448:ARG:NH1	2.34	0.43
6:F:462:LEU:HD23	6:F:462:LEU:HA	1.84	0.43
1:B:2898:TRP:HE3	1:B:2898:TRP:O	2.00	0.43
1:B:2947:ILE:CB	1:B:2970:ILE:HD12	2.49	0.43
1:B:3394:ARG:CA	1:B:3398:GLY:HA2	2.49	0.43
5:A:1417:LYS:O	5:A:1421:ILE:N	2.51	0.43
5:A:1986:TYR:HA	5:A:1989:LEU:CB	2.49	0.43
6:F:440:LEU:HD13	6:F:440:LEU:HA	1.75	0.43
7:G:116:ARG:HG2	7:G:370:VAL:HG21	2.01	0.43
1:B:3062:PHE:CZ	1:B:3658:GLU:HA	2.50	0.42
5:A:21:LEU:O	5:A:25:TYR:N	2.44	0.42
6:F:40:LEU:HB3	6:F:89:GLN:HE21	1.84	0.42
6:F:116:ASN:OD1	6:F:120:ASN:HB2	2.19	0.42
7:G:103:VAL:O	7:G:132:PHE:HD1	2.02	0.42
7:G:151:ILE:CG2	7:G:297:ILE:CG1	2.95	0.42
6:F:10:GLY:HA2	6:F:463:GLY:N	2.34	0.42
6:F:272:SER:HB3	6:F:278:ILE:CG1	2.49	0.42
1:B:2966:GLN:OE1	1:B:2966:GLN:HA	2.19	0.42
1:B:3493:LEU:CD1	1:B:3497:HIS:HB2	2.49	0.42
7:G:70:PRO:HG2	7:G:85:ILE:HD11	2.01	0.42
1:B:2844:HIS:HA	1:B:2847:GLN:CB	2.47	0.42
1:B:3168:HIS:ND1	1:B:3168:HIS:C	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3296:PHE:CD1	1:B:3296:PHE:C	2.92	0.42
1:B:3667:ILE:HG21	1:B:3696:VAL:CB	2.49	0.42
6:F:56:ILE:HD12	6:F:56:ILE:HA	1.68	0.42
6:F:87:GLN:O	6:F:132:MET:HE1	2.11	0.42
7:G:105:LEU:HD13	7:G:132:PHE:CE1	2.54	0.42
7:G:255:PHE:O	7:G:259:GLU:HG2	2.19	0.42
1:B:2648:SER:O	1:B:2649:ILE:CB	2.68	0.42
5:A:369:TYR:O	5:A:372:ASP:N	2.52	0.42
5:A:1249:GLN:C	5:A:1251:GLU:H	2.14	0.42
5:A:1581:GLU:O	5:A:1585:ARG:N	2.53	0.42
6:F:2:SER:HB2	7:G:371:HIS:O	2.19	0.42
6:F:238:PHE:HZ	6:F:278:ILE:HG21	1.85	0.42
7:G:102:PRO:HA	7:G:131:ALA:O	2.20	0.42
1:B:2761:GLU:O	1:B:2765:ARG:N	2.52	0.42
1:B:3163:TYR:CB	1:B:3167:LEU:CB	2.98	0.42
1:B:3247:ARG:O	1:B:3251:VAL:HG23	2.18	0.42
1:B:3418:ARG:HA	1:B:3418:ARG:HD3	1.26	0.42
1:B:3462:VAL:O	1:B:3464:PHE:CG	2.72	0.42
2:C:691:ARG:O	2:C:695:GLN:HG3	2.20	0.42
4:H:223:ASP:O	4:H:227:GLU:N	2.44	0.42
1:B:2635:GLN:N	1:B:2635:GLN:CD	2.72	0.42
1:B:2885:ARG:HD3	1:B:2886:ASP:N	2.34	0.42
1:B:3512:GLU:O	1:B:3515:ASN:HB3	2.19	0.42
1:B:3724:ILE:O	1:B:3727:ALA:N	2.50	0.42
2:C:649:ILE:O	2:C:653:GLU:N	2.49	0.42
3:D:424:UNK:O	3:D:425:UNK:C	2.67	0.42
5:A:1345:LEU:O	5:A:1349:MET:CB	2.67	0.42
6:F:175:THR:O	6:F:489[B]:ARG:NH2	2.48	0.42
6:F:243:LYS:HG2	6:F:247:CYS:SG	2.59	0.42
6:F:287:GLY:HA2	6:F:290:GLU:HB3	2.01	0.42
6:F:437:PHE:CD1	6:F:437:PHE:N	2.86	0.42
7:G:174:ALA:O	7:G:281:SER:OG	2.34	0.42
7:G:230:ALA:HB2	7:G:252:ASN:HB3	2.02	0.42
4:H:186:LYS:O	4:H:190:ASP:N	2.51	0.42
6:F:62:ILE:HG12	6:F:71:LEU:CD2	2.49	0.42
6:F:484:LEU:O	6:F:487:ARG:HG2	2.19	0.42
7:G:355:MET:HA	7:G:373:LYS:NZ	2.34	0.42
1:B:3101:LEU:C	1:B:3101:LEU:CD1	2.86	0.42
1:B:3360:LEU:CB	1:B:3424:ARG:HG2	2.50	0.42
6:F:19:ILE:HA	6:F:28:ILE:HG12	2.02	0.42
6:F:213:LYS:CA	6:F:213:LYS:CE	2.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3106:TRP:CH2	1:B:3668:ARG:CZ	3.00	0.42
1:B:3492:LYS:O	1:B:3510:LYS:HE2	2.20	0.42
3:D:396:UNK:CA	6:F:436:LYS:HE3	2.48	0.42
5:A:2180:ILE:O	5:A:2184:LEU:N	2.52	0.42
6:F:30:TYR:HB2	7:G:113:LYS:HE3	2.02	0.42
7:G:133:TYR:CZ	7:G:374:CYS:HA	2.54	0.42
1:B:2778:GLN:O	1:B:2782:SER:N	2.30	0.41
1:B:3719:PHE:HA	1:B:3722:ASP:CB	2.49	0.41
1:B:3720:ILE:O	1:B:3723:CYS:N	2.52	0.41
6:F:164:THR:HG22	6:F:184:PHE:CD1	2.54	0.41
7:G:109:PRO:CD	7:G:161:HIS:CD2	3.03	0.41
7:G:163:VAL:HA	7:G:164:PRO:HD3	1.65	0.41
1:B:3229:LEU:C	1:B:3229:LEU:CD1	2.85	0.41
1:B:3354:ILE:CA	1:B:3371:ILE:H	2.22	0.41
1:B:3540:ASP:HA	1:B:3543:LEU:HD13	2.02	0.41
5:A:1300:ASN:C	5:A:1302:LYS:N	2.56	0.41
6:F:151:GLY:N	8:E:370:GLN:OE1	2.53	0.41
6:F:213:LYS:CG	6:F:214:PRO:HD3	2.50	0.41
7:G:149:THR:HG21	7:G:292:GLU:OE1	2.19	0.41
7:G:151:ILE:HD12	7:G:152:VAL:N	2.36	0.41
7:G:180:LEU:HD21	7:G:269:LEU:HD11	2.01	0.41
2:C:694:TRP:HA	2:C:697:PHE:CD2	2.53	0.41
5:A:580:ILE:HA	5:A:583:ALA:HB3	2.01	0.41
5:A:1673:PHE:O	5:A:1674:ASN:C	2.58	0.41
6:F:122:LYS:HA	6:F:125:LEU:CD1	2.50	0.41
8:E:361:ILE:HA	8:E:364:GLU:CD	2.41	0.41
1:B:2690:ILE:C	1:B:3715:VAL:CB	2.89	0.41
1:B:3068:LEU:HB3	1:B:3078:ALA:CB	2.44	0.41
4:H:59:LEU:O	4:H:63:ARG:N	2.54	0.41
6:F:110:LEU:HD13	6:F:124:SER:HB3	2.01	0.41
7:G:190:MET:SD	7:G:206:ARG:NE	2.93	0.41
1:B:2663:LEU:HD21	1:B:2678:LEU:CB	2.50	0.41
1:B:3553:SER:O	1:B:3555:PHE:N	2.54	0.41
5:A:635:LYS:O	5:A:636:ASP:C	2.58	0.41
5:A:1222:ASN:O	5:A:1223:VAL:C	2.58	0.41
5:A:1581:GLU:C	5:A:1583:LYS:N	2.74	0.41
5:A:2036:LEU:O	5:A:2037:TYR:C	2.59	0.41
6:F:6:LEU:HA	6:F:6:LEU:HD23	1.84	0.41
6:F:71:LEU:CD1	6:F:229:LEU:HA	2.50	0.41
6:F:213:LYS:HG3	6:F:214:PRO:HD3	2.02	0.41
6:F:434:SER:O	6:F:435:LEU:HD12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:487:ARG:HA	6:F:487:ARG:NE	2.36	0.41
1:B:2634:TYR:HD1	1:B:2634:TYR:H	1.66	0.41
1:B:3316:TYR:CD1	1:B:3316:TYR:C	2.90	0.41
1:B:3418:ARG:HB2	1:B:3418:ARG:NH1	2.24	0.41
1:B:3663:LEU:O	1:B:3667:ILE:HG23	2.20	0.41
2:C:701:VAL:HG13	2:C:711:ASP:CB	2.51	0.41
6:F:61:SER:OG	7:G:270:GLU:O	2.25	0.41
7:G:8:LEU:HD13	7:G:10:ILE:HD11	2.03	0.41
7:G:18:LYS:HA	7:G:30:VAL:HA	2.02	0.41
7:G:351:THR:HG22	7:G:354:GLN:NE2	2.36	0.41
8:E:390:ALA:HB1	8:E:394:TYR:CE2	2.55	0.41
1:B:3249:ILE:O	1:B:3253:LEU:HG	2.21	0.41
1:B:3492:LYS:O	1:B:3510:LYS:CE	2.68	0.41
5:A:1286:GLU:O	5:A:1290:THR:N	2.34	0.41
6:F:105:GLY:O	6:F:106:ILE:HD13	2.21	0.41
7:G:18:LYS:HB3	7:G:30:VAL:HG22	2.02	0.41
1:B:2654:ILE:HD12	1:B:2654:ILE:HA	1.81	0.41
1:B:3220:PRO:C	1:B:3222:LEU:H	2.24	0.41
5:A:566:TYR:C	5:A:568:PRO:N	2.73	0.41
6:F:304:TRP:O	6:F:306:ARG:HG3	2.21	0.41
7:G:163:VAL:HG22	7:G:175:ILE:HG13	1.67	0.41
1:B:3068:LEU:HD22	1:B:3078:ALA:O	2.20	0.41
1:B:3464:PHE:CD2	1:B:3575:ASP:CB	3.04	0.41
1:B:3666:PHE:O	1:B:3669:ASP:N	2.54	0.41
3:D:442:UNK:O	3:D:443:UNK:C	2.69	0.41
5:A:137:LEU:O	5:A:140:PHE:N	2.51	0.41
5:A:1044:LYS:O	5:A:1045:THR:C	2.58	0.41
5:A:1262:LYS:O	5:A:1265:ILE:N	2.54	0.41
6:F:397:ASP:O	6:F:401:ARG:HG3	2.21	0.41
7:G:124:PHE:CD1	7:G:359:LYS:HG2	2.56	0.41
7:G:149:THR:HG22	7:G:150:GLY:N	2.36	0.41
8:E:361:ILE:HA	8:E:364:GLU:OE1	2.21	0.41
8:E:384:CYS:O	8:E:387:MET:HB2	2.20	0.41
1:B:2849:TYR:HA	1:B:2852:PHE:CB	2.50	0.41
1:B:3078:ALA:O	1:B:3081:ALA:HB3	2.21	0.41
1:B:3360:LEU:CB	1:B:3424:ARG:CG	2.99	0.41
1:B:3551:GLN:HA	1:B:3554:SER:HG	1.86	0.41
3:D:418:UNK:C	3:D:420:UNK:N	2.83	0.41
7:G:9:VAL:HG12	7:G:340:TRP:CD1	2.55	0.41
1:B:3038:GLU:N	1:B:3038:GLU:CD	2.73	0.40
1:B:3236:ARG:CD	1:B:3338:CYS:CB	2.95	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:996:GLY:C	5:A:998:GLN:N	2.73	0.40
1:B:3435:GLU:N	1:B:3435:GLU:CD	2.73	0.40
5:A:890:TYR:O	5:A:892:ASP:N	2.54	0.40
6:F:23:SER:HB3	6:F:163:ASP:H	1.85	0.40
6:F:94:LEU:HA	6:F:98:LEU:HB2	2.02	0.40
6:F:463:GLY:O	6:F:466:HIS:HD2	2.04	0.40
7:G:27:PRO:HA	7:G:340:TRP:CZ2	2.56	0.40
1:B:3136:PHE:O	1:B:3141:LEU:N	2.54	0.40
1:B:3733:LEU:HD23	1:B:3733:LEU:O	2.21	0.40
5:A:1295:GLU:O	5:A:1356:ALA:CB	2.68	0.40
1:B:2941:HIS:C	1:B:2943:ILE:N	2.74	0.40
1:B:3391:LEU:C	1:B:3402:SER:CB	2.87	0.40
1:B:3559:SER:HG	1:B:3560:TYR:H	1.67	0.40
5:A:2517:LEU:O	5:A:2519:LEU:N	2.54	0.40
6:F:466:HIS:CG	6:F:467:GLN:N	2.90	0.40
7:G:310:ALA:O	7:G:314:GLN:N	2.36	0.40
1:B:2819:GLU:C	1:B:2821:ILE:N	2.75	0.40
1:B:3071:GLU:O	1:B:3071:GLU:HG2	2.21	0.40
1:B:3486:GLN:NE2	1:B:3486:GLN:C	2.73	0.40
1:B:3544:PHE:CE1	1:B:3579:GLY:HA2	2.52	0.40
1:B:3661:THR:HA	1:B:3664:ALA:HB2	2.04	0.40
1:B:3668:ARG:O	1:B:3671:ILE:N	2.52	0.40
4:H:183:LYS:O	4:H:185:LEU:N	2.54	0.40
5:A:1103:LEU:C	5:A:1105:ASN:N	2.74	0.40
7:G:103:VAL:O	7:G:356:TRP:HZ3	2.05	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	B	935/1115 (84%)	658 (70%)	205 (22%)	72 (8%)	1 10

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	C	136/336 (40%)	99 (73%)	24 (18%)	13 (10%)	0	8
4	H	136/279 (49%)	120 (88%)	14 (10%)	2 (2%)	8	39
5	A	1857/2627 (71%)	1494 (80%)	251 (14%)	112 (6%)	1	14
6	F	417/490 (85%)	350 (84%)	62 (15%)	5 (1%)	11	44
7	G	345/375 (92%)	311 (90%)	32 (9%)	2 (1%)	22	60
8	E	39/41 (95%)	29 (74%)	10 (26%)	0	100	100
All	All	3865/5263 (73%)	3061 (79%)	598 (16%)	206 (5%)	3	15

All (206) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	2649	ILE
1	B	2652	THR
1	B	2787	PRO
1	B	2788	THR
1	B	3056	ALA
1	B	3117	LEU
1	B	3164	PRO
1	B	3223	ALA
1	B	3242	ASP
1	B	3293	ARG
1	B	3367	HIS
1	B	3401	HIS
1	B	3407	TYR
1	B	3453	PRO
1	B	3463	SER
1	B	3480	PHE
1	B	3481	ASP
1	B	3552	TYR
1	B	3592	PRO
1	B	3598	PRO
1	B	3657	ASN
1	B	3704	ALA
1	B	3742	PRO
2	C	674	ALA
2	C	678	HIS
2	C	714	GLY
2	C	715	PRO
2	C	716	ARG
2	C	739	SER

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Mol	Chain	Res	Type
2	C	740	PRO
5	A	138	ASP
5	A	218	MET
5	A	231	MET
5	A	240	GLN
5	A	245	SER
5	A	303	SER
5	A	411	ILE
5	A	425	GLU
5	A	431	VAL
5	A	517	PHE
5	A	567	ALA
5	A	777	PRO
5	A	866	PRO
5	A	924	VAL
5	A	958	GLN
5	A	962	PRO
5	A	963	PRO
5	A	968	GLU
5	A	970	THR
5	A	973	ASP
5	A	977	ILE
5	A	994	THR
5	A	997	ILE
5	A	1035	PHE
5	A	1069	LYS
5	A	1094	GLU
5	A	1098	ASP
5	A	1153	LEU
5	A	1158	PRO
5	A	1223	VAL
5	A	1250	SER
5	A	1293	VAL
5	A	1301	PRO
5	A	1346	PRO
5	A	1362	SER
5	A	1364	PRO
5	A	1373	GLU
5	A	1507	LEU
5	A	1591	PRO
5	A	1605	ASN
5	A	1630	ARG

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Mol	Chain	Res	Type
5	A	1651	TYR
5	A	1860	PHE
5	A	2369	VAL
5	A	2419	PRO
5	A	2497	PRO
5	A	2506	GLU
5	A	2568	TYR
5	A	2572	PRO
6	F	49	ALA
6	F	213	LYS
6	F	445	THR
7	G	16	MET
1	B	2997	ASN
1	B	3368	PHE
1	B	3388	TYR
1	B	3394	ARG
1	B	3403	PHE
1	B	3455	VAL
1	B	3568	THR
1	B	3595	ARG
5	A	572	LEU
5	A	959	PHE
5	A	976	ALA
5	A	980	PHE
5	A	1011	ILE
5	A	1033	ALA
5	A	1037	THR
5	A	1091	SER
5	A	1295	GLU
5	A	1653	SER
5	A	2384	ILE
5	A	2401	LEU
5	A	2491	ILE
1	B	2823	LEU
1	B	3115	GLY
1	B	3149	ALA
1	B	3150	ASN
1	B	3366	VAL
1	B	3482	PRO
1	B	3590	ARG
1	B	3599	LEU
1	B	3619	PRO

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Mol	Chain	Res	Type
1	B	3707	GLY
1	B	3709	LEU
1	B	3717	THR
1	B	3737	ASP
1	B	3743	TRP
2	C	680	LEU
2	C	718	HIS
2	C	719	SER
4	H	131	MET
5	A	389	PRO
5	A	426	SER
5	A	889	GLN
5	A	967	THR
5	A	995	PRO
5	A	1070	ARG
5	A	1104	ASN
5	A	1204	GLU
5	A	1225	SER
5	A	1229	PHE
5	A	1302	LYS
5	A	1335	SER
5	A	1606	PRO
5	A	1615	MET
5	A	1895	LYS
5	A	2226	ILE
5	A	2518	GLU
6	F	405	ALA
1	B	2647	THR
1	B	2958	ASN
1	B	2962	VAL
1	B	3291	TYR
1	B	3356	GLY
1	B	3409	ALA
1	B	3410	VAL
1	B	3462	VAL
1	B	3706	LEU
1	B	3741	MET
2	C	679	ARG
2	C	690	ARG
4	H	129	ILE
5	A	833	PRO
5	A	978	ALA

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Mol	Chain	Res	Type
5	A	983	ASN
5	A	986	PRO
5	A	1006	SER
5	A	1095	LEU
5	A	1105	ASN
5	A	1207	TYR
5	A	1898	ASP
5	A	2612	LYS
6	F	70	GLU
1	B	2671	GLU
1	B	2942	GLU
1	B	2961	ASP
1	B	3054	ALA
1	B	3165	GLN
1	B	3219	TYR
1	B	3618	GLU
5	A	637	LEU
5	A	1067	VAL
5	A	1203	ASP
5	A	1321	PRO
5	A	1650	PHE
5	A	1894	ILE
5	A	2390	LEU
5	A	2557	HIS
5	A	2570	SER
1	B	2789	PRO
1	B	3344	PHE
1	B	3602	ASN
1	B	3625	THR
1	B	3627	ASN
2	C	675	HIS
5	A	246	LEU
5	A	314	ALA
5	A	890	TYR
5	A	991	LEU
5	A	1051	LYS
5	A	1583	LYS
5	A	1596	LEU
5	A	1647	PHE
5	A	1897	GLU
1	B	2902	VAL
1	B	3400	VAL

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Mol	Chain	Res	Type
5	A	776	PHE
5	A	993	VAL
5	A	1036	PRO
1	B	3393	ILE
1	B	3612	PRO
1	B	3381	VAL
5	A	1256	ILE
7	G	287	VAL
5	A	982	ILE

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	B	300/1012 (30%)	198 (66%)	102 (34%)	0	1
2	C	26/309 (8%)	10 (38%)	16 (62%)	0	0
5	A	7/2438 (0%)	5 (71%)	2 (29%)	0	2
6	F	372/435 (86%)	360 (97%)	12 (3%)	34	54
7	G	297/320 (93%)	284 (96%)	13 (4%)	24	46
8	E	34/34 (100%)	33 (97%)	1 (3%)	37	58
All	All	1036/4548 (23%)	890 (86%)	146 (14%)	5	14

All (146) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	2636	SER
1	B	2637	ILE
1	B	2639	ILE
1	B	2651	ASN
1	B	2652	THR
1	B	2654	ILE
1	B	2655	ILE
1	B	2663	LEU
1	B	2665	LEU

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Mol	Chain	Res	Type
1	B	2674	MET
1	B	2826	ILE
1	B	2847	GLN
1	B	2856	THR
1	B	2882	GLN
1	B	2885	ARG
1	B	2894	ASP
1	B	2896	ASN
1	B	2897	MET
1	B	2898	TRP
1	B	2899	ASN
1	B	2900	ASP
1	B	2902	VAL
1	B	2906	GLN
1	B	2912	ILE
1	B	2941	HIS
1	B	2946	VAL
1	B	2952	HIS
1	B	2965	SER
1	B	2966	GLN
1	B	2967	LEU
1	B	2970	ILE
1	B	2971	TYR
1	B	3007	SER
1	B	3019	LYS
1	B	3023	PHE
1	B	3038	GLU
1	B	3041	GLN
1	B	3059	GLN
1	B	3062	PHE
1	B	3066	ARG
1	B	3067	ARG
1	B	3069	SER
1	B	3095	SER
1	B	3097	ILE
1	B	3099	GLU
1	B	3100	LEU
1	B	3104	ILE
1	B	3105	LEU
1	B	3107	LEU
1	B	3108	ILE
1	B	3111	ASP

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Mol	Chain	Res	Type
1	B	3143	SER
1	B	3145	SER
1	B	3162	SER
1	B	3167	LEU
1	B	3168	HIS
1	B	3169	PHE
1	B	3171	LEU
1	B	3172	ARG
1	B	3219	TYR
1	B	3229	LEU
1	B	3236	ARG
1	B	3247	ARG
1	B	3317	TRP
1	B	3318	ARG
1	B	3367	HIS
1	B	3411	ARG
1	B	3417	GLU
1	B	3418	ARG
1	B	3421	GLN
1	B	3422	LEU
1	B	3424	ARG
1	B	3427	ASN
1	B	3432	LYS
1	B	3435	GLU
1	B	3440	SER
1	B	3443	PHE
1	B	3444	ASN
1	B	3449	ILE
1	B	3462	VAL
1	B	3467	LEU
1	B	3468	HIS
1	B	3472	ASN
1	B	3474	PHE
1	B	3484	ASP
1	B	3485	ILE
1	B	3486	GLN
1	B	3487	ASP
1	B	3488	PHE
1	B	3489	MET
1	B	3492	LYS
1	B	3494	ASN
1	B	3499	ASP

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Mol	Chain	Res	Type
1	B	3552	TYR
1	B	3568	THR
1	B	3570	HIS
1	B	3571	LYS
1	B	3611	SER
1	B	3647	THR
1	B	3652	LEU
1	B	3668	ARG
1	B	3674	TRP
2	C	680	LEU
2	C	681	THR
2	C	684	TYR
2	C	685	LEU
2	C	687	ASN
2	C	688	ILE
2	C	689	GLU
2	C	694	TRP
2	C	695	GLN
2	C	696	CYS
2	C	697	PHE
2	C	699	ARG
2	C	702	GLN
2	C	703	LEU
2	C	706	ARG
2	C	707	PHE
5	A	948	ILE
5	A	1896	LEU
6	F	47	TYR
6	F	56	ILE
6	F	66	ARG
6	F	67	LYS
6	F	70	GLU
6	F	72	LYS
6	F	125	LEU
6	F	128	LEU
6	F	137	CYS
6	F	213	LYS
6	F	440	LEU
6	F	442	THR
7	G	16	MET
7	G	71	ILE
7	G	73	HIS

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Mol	Chain	Res	Type
7	G	135	SER
7	G	136	ILE
7	G	137	GLN
7	G	139	VAL
7	G	151	ILE
7	G	152	VAL
7	G	153	LEU
7	G	159	VAL
7	G	163	VAL
7	G	288	ASP
8	E	394	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (26) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	2752	HIS
1	B	2941	HIS
1	B	3041	GLN
1	B	3367	HIS
1	B	3427	ASN
1	B	3444	ASN
1	B	3486	GLN
1	B	3494	ASN
1	B	3497	HIS
1	B	3515	ASN
1	B	3570	HIS
1	B	3732	ASN
2	C	687	ASN
6	F	89	GLN
6	F	91	GLN
6	F	96	ASN
6	F	120	ASN
6	F	162	HIS
6	F	234	ASN
6	F	248	HIS
6	F	406	HIS
6	F	444	HIS
6	F	449	GLN
7	G	115	ASN
7	G	280	ASN
8	E	377	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

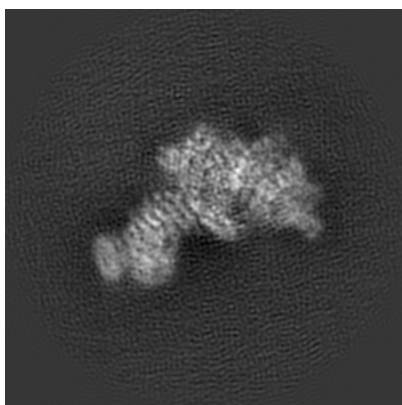
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-6816. These allow visual inspection of the internal detail of the map and identification of artifacts.

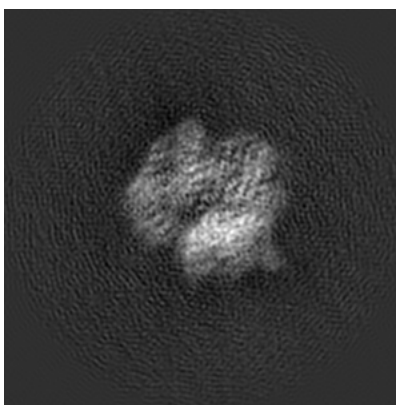
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

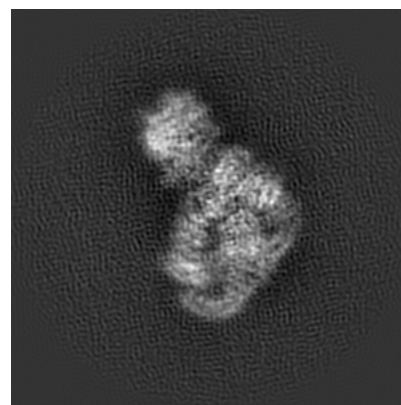
6.1.1 Primary map



X



Y

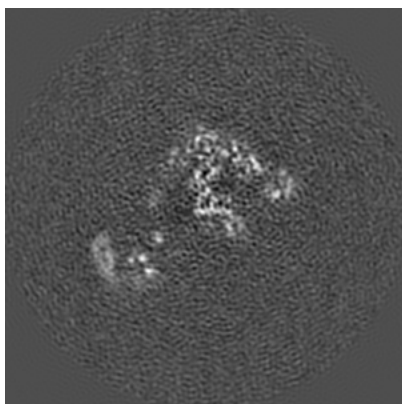


Z

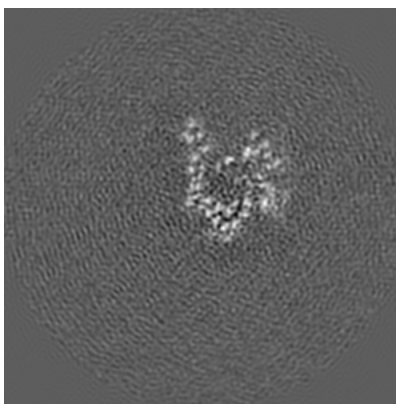
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

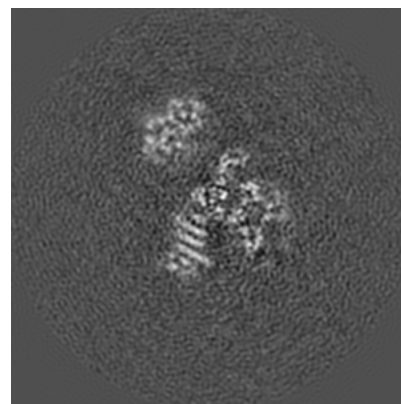
6.2.1 Primary map



X Index: 144



Y Index: 144

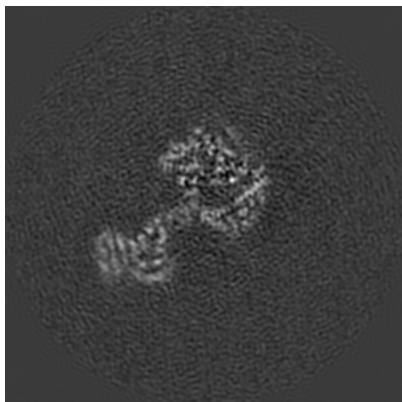


Z Index: 144

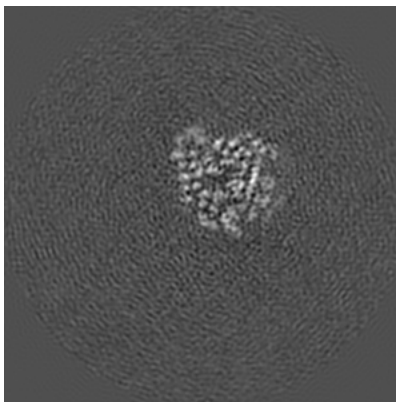
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

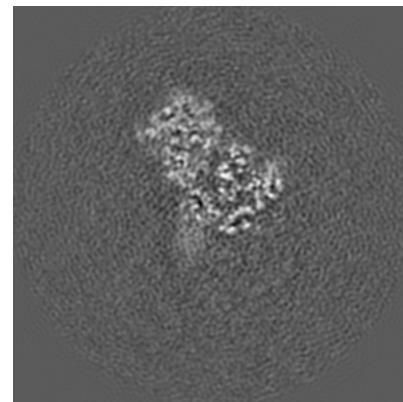
6.3.1 Primary map



X Index: 158



Y Index: 153

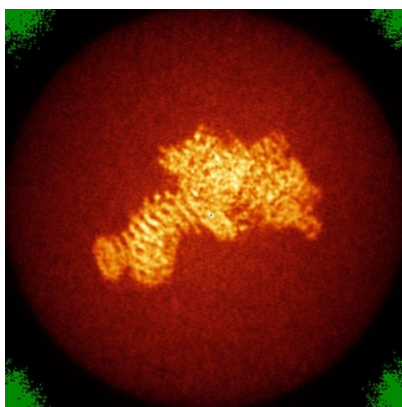


Z Index: 160

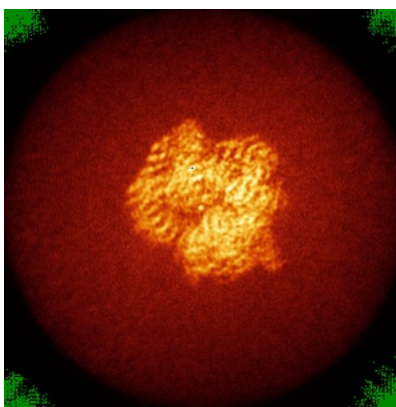
The images above show the largest variance slices of the map in three orthogonal directions.

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

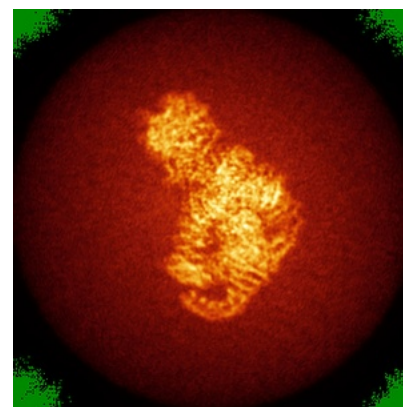
6.4.1 Primary map



X



Y

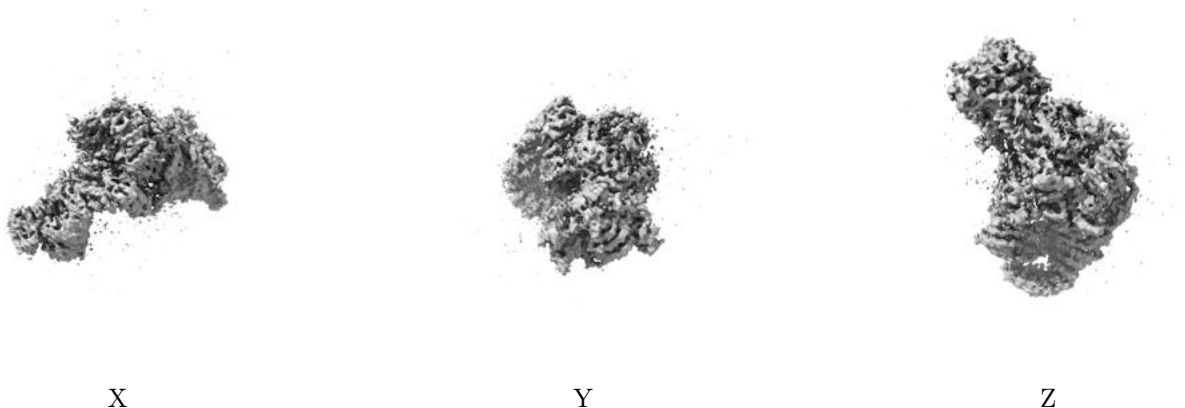


Z

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 0.0225. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

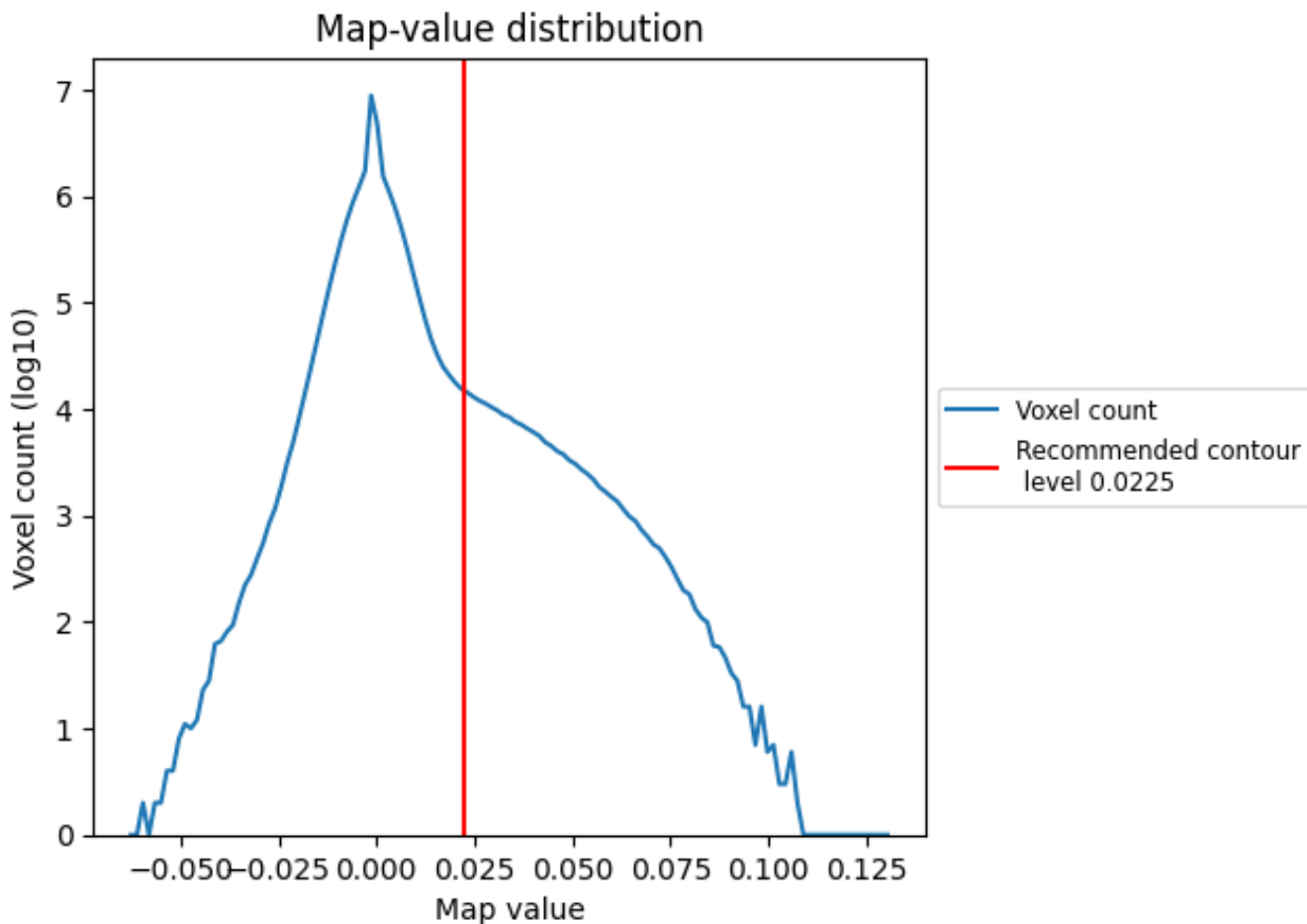
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

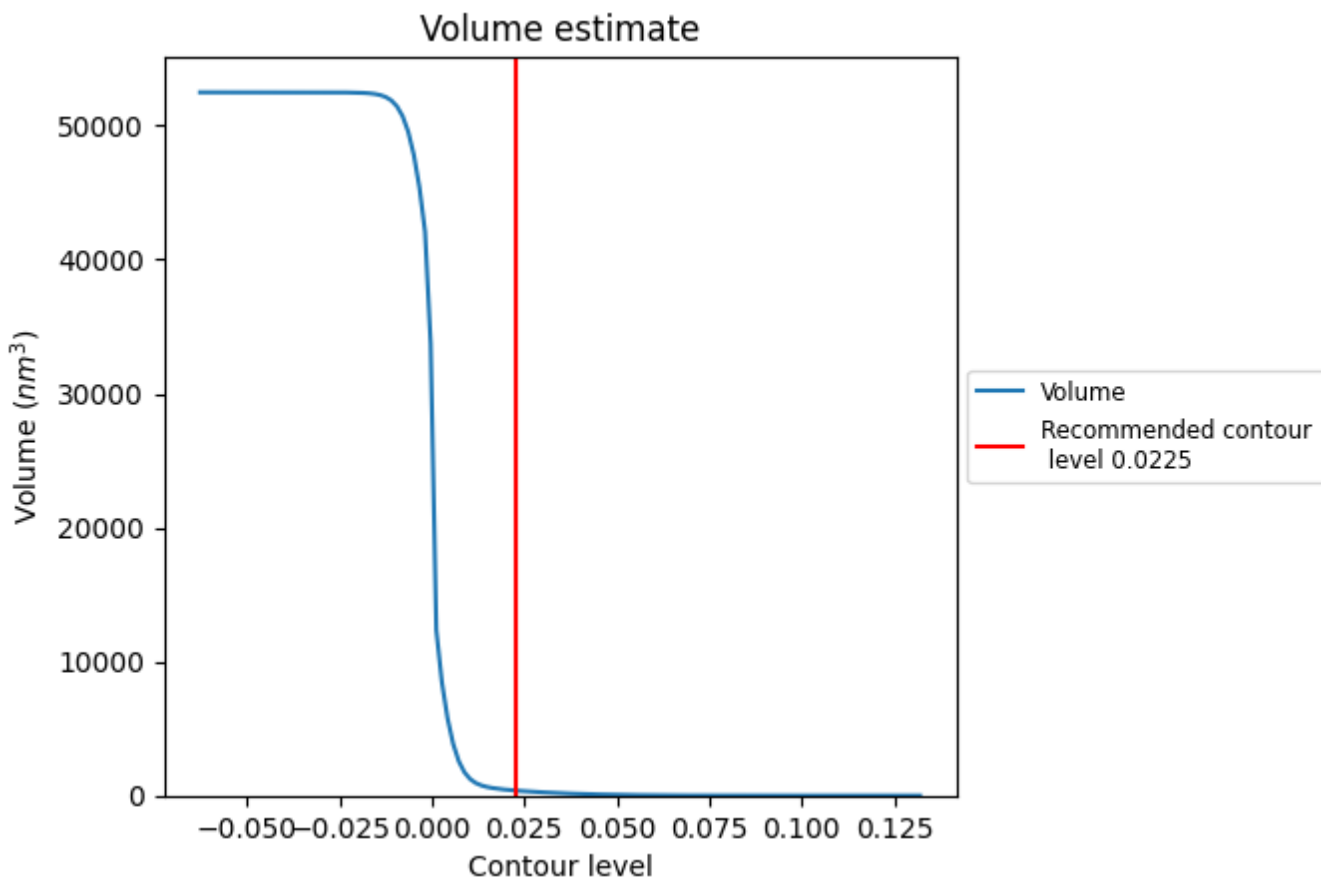
This section contains the results of statistical analysis of the map.

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.

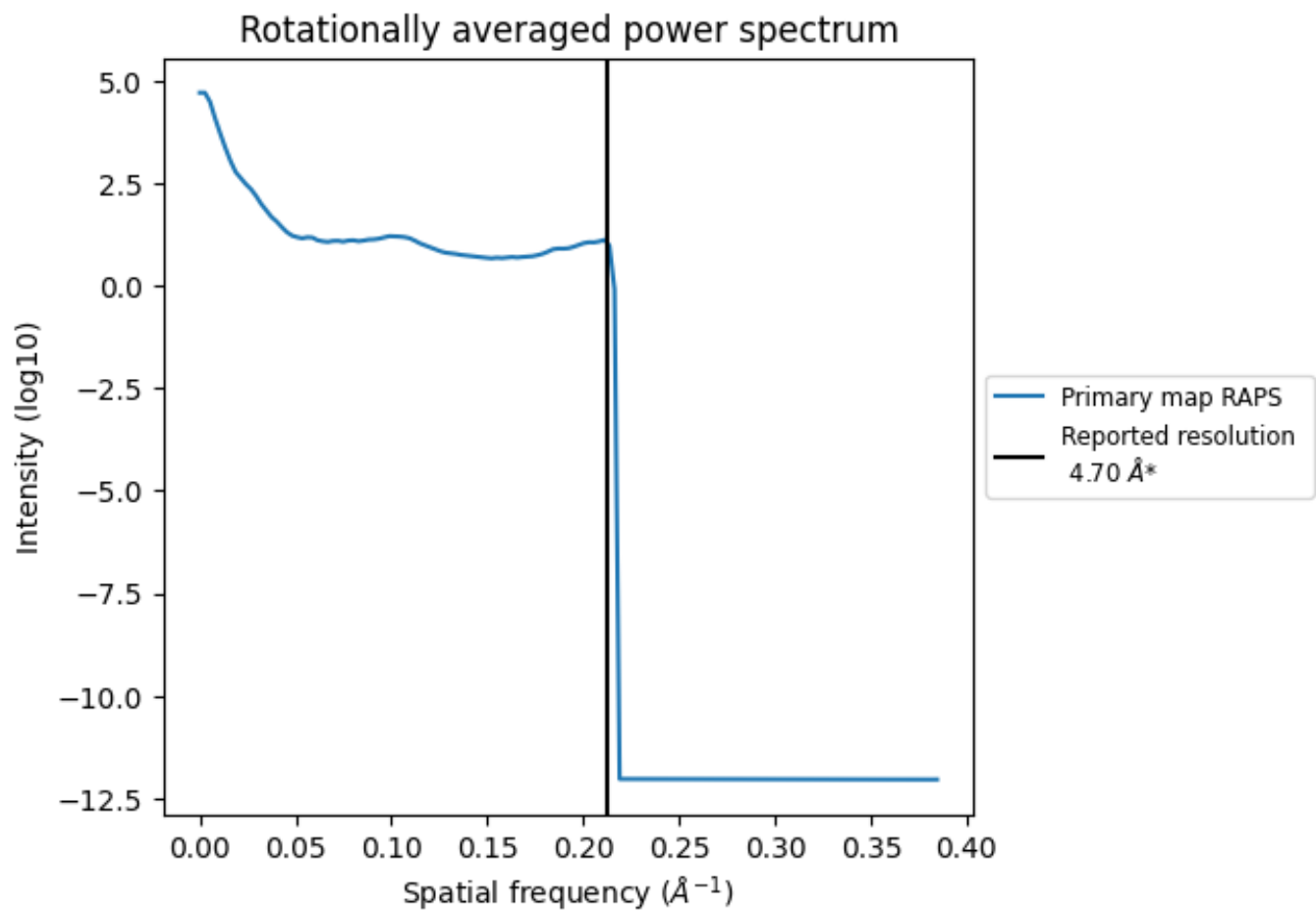
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 378 nm³; this corresponds to an approximate mass of 341 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)



*Reported resolution corresponds to spatial frequency of 0.213 Å⁻¹

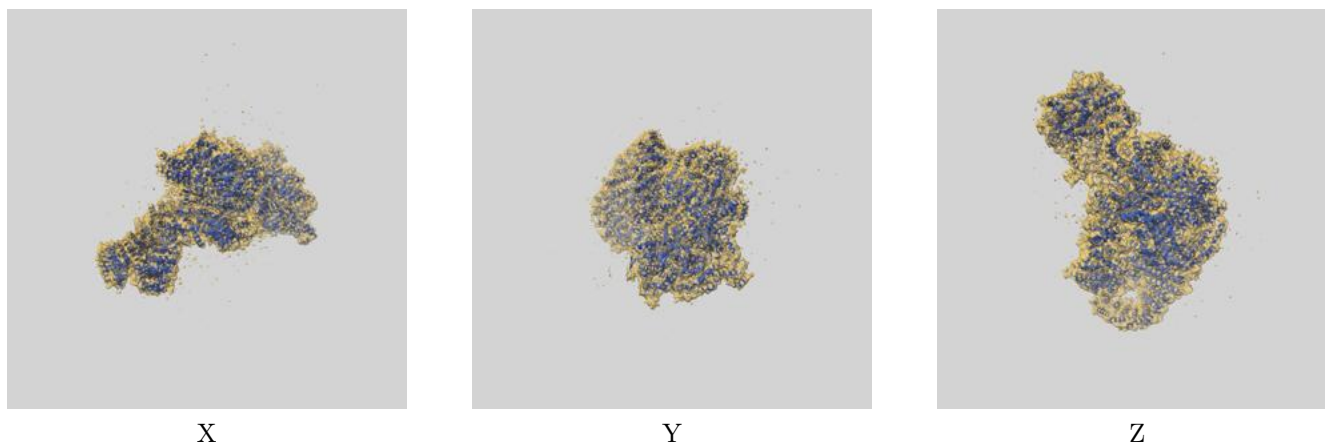
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

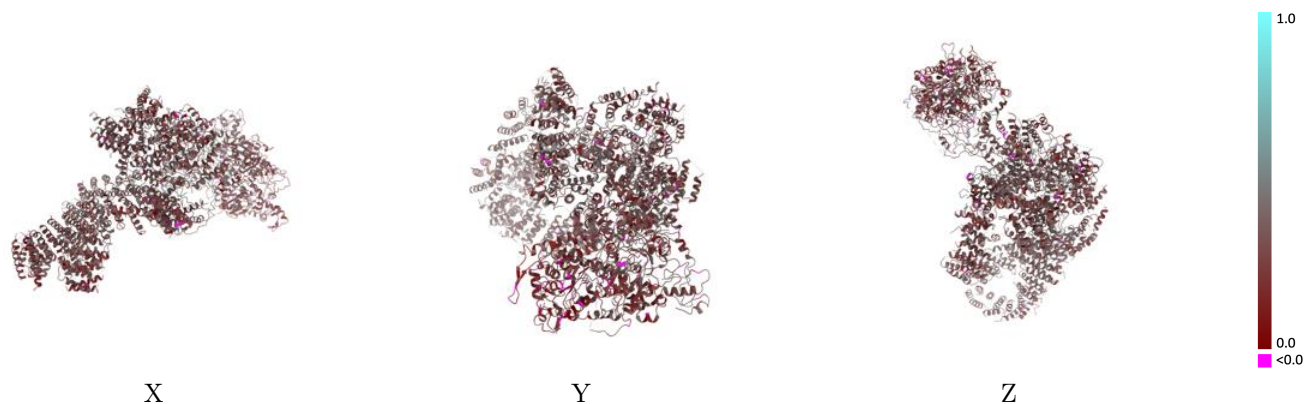
This section contains information regarding the fit between EMDB map EMD-6816 and PDB model 5Y81. Per-residue inclusion information can be found in section 3 on page 5.

9.1 Map-model overlay [i](#)



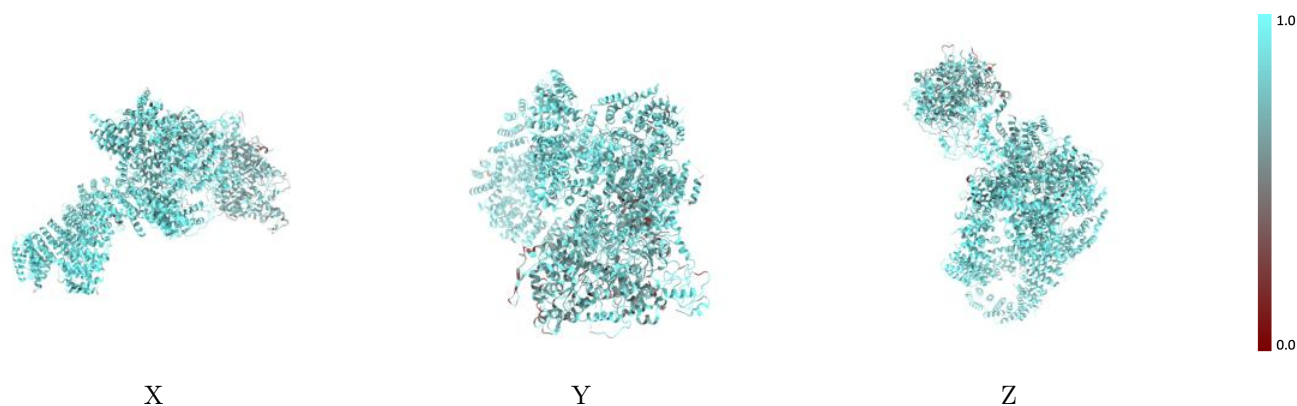
The images above show the 3D surface view of the map at the recommended contour level 0.0225 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



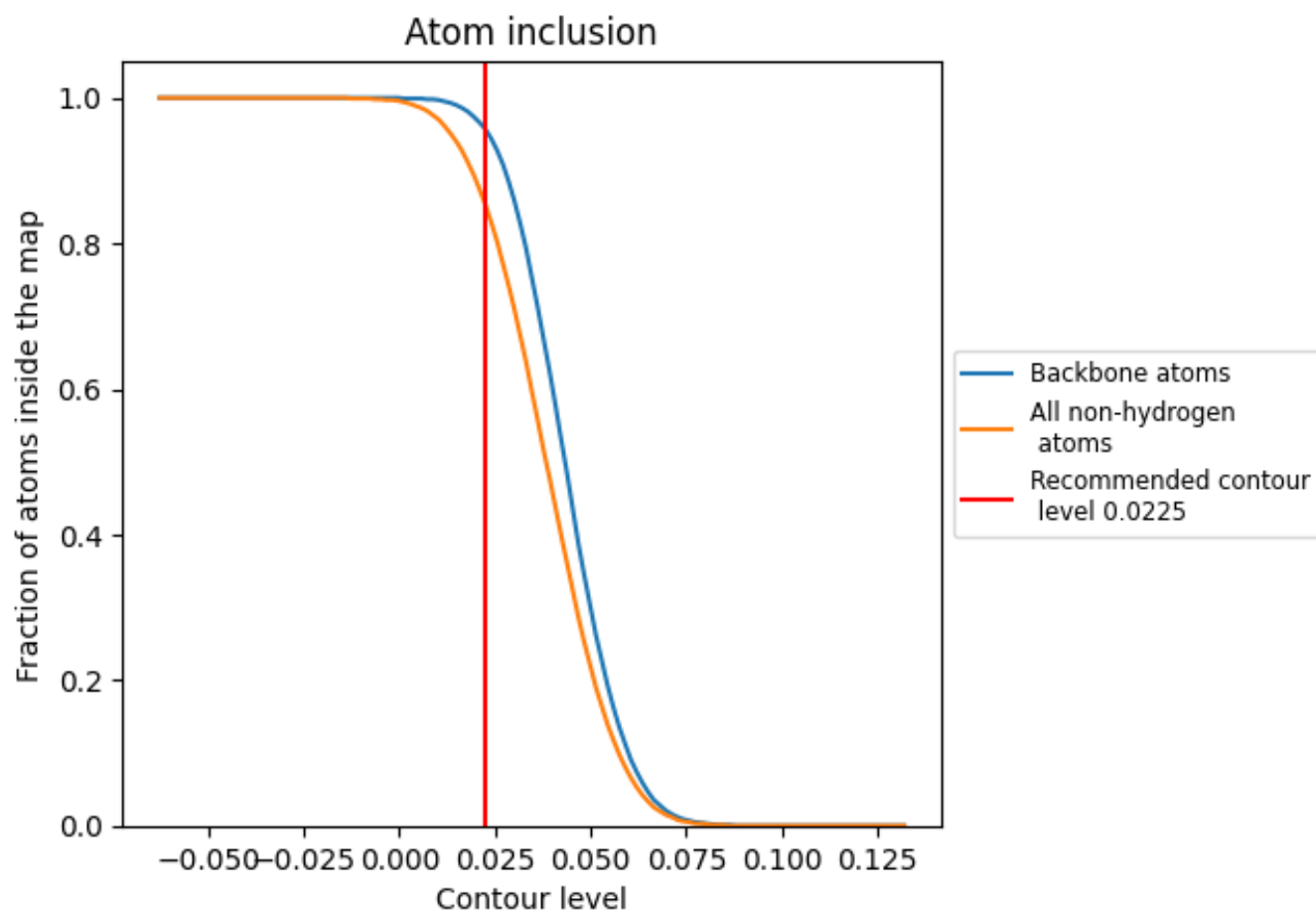
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.0225).



















9.4 Atom inclusion [i](#)



At the recommended contour level, 96% of all backbone atoms, 85% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary [i](#)

The table lists the average atom inclusion at the recommended contour level (0.0225) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8530	 0.3080
A	 0.9250	 0.3230
B	 0.8590	 0.3370
C	 0.8950	 0.3300
D	 0.8830	 0.3430
E	 0.7090	 0.2490
F	 0.7100	 0.2630
G	 0.7180	 0.2240
H	 0.9020	 0.3050

