



## Full wwPDB EM Validation Report ⓘ

Feb 27, 2024 – 01:17 AM EST

PDB ID : 6VKL  
EMDB ID : EMD-21226  
Title : Negative stain reconstruction of the yeast exocyst octameric complex.  
Authors : Frost, A.; Munson, M.  
Deposited on : 2020-01-21  
Resolution : 15.00 Å (reported)  
Based on initial model : 5YFP

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

We welcome your comments at [validation@mail.wwpdb.org](mailto: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>.

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

EMDB validation analysis : 0.0.1.dev70  
MolProbity : 4.02b-467  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
MapQ : 1.9.13  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.36

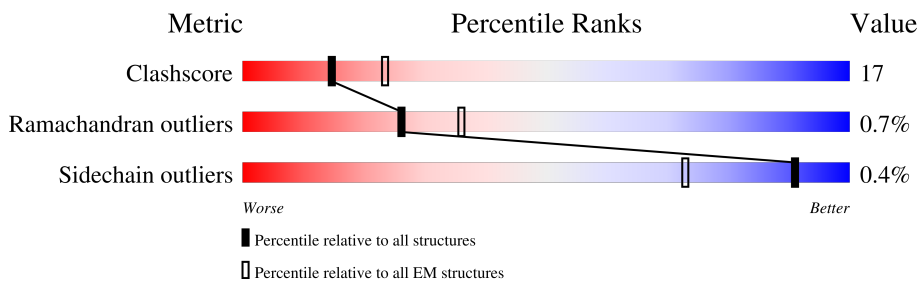
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 15.00 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	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion  $< 40\%$ ). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	1336	
2	B	971	
3	C	805	
4	D	1065	
5	E	871	
6	F	910	
7	G	623	
8	H	753	

## 2 Entry composition

There are 8 unique types of molecules in this entry. The entry contains 33096 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 Exocyst complex component SEC3.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
1	A	672	3345	2001	672	672	0	0

- Molecule 2 is a protein called Exocyst complex component SEC5.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
2	B	928	4610	2755	927	928	0	0

- Molecule 3 is a protein called Exocyst complex component SEC6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	794	4994	3097	892	989	16	0	0

- Molecule 4 is a protein called Exocyst complex component SEC8.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
4	D	954	4739	2831	954	954	0	0

- Molecule 5 is a protein called Exocyst complex component SEC10.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
5	E	776	3860	2308	776	776	0	0

- Molecule 6 is a protein called Exocyst complex component SEC15.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
6	F	725	3612	2162	725	725	0	0

- Molecule 7 is a protein called Exocyst complex component EXO70.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	G	615	4696	2968	809	902	17	0	0

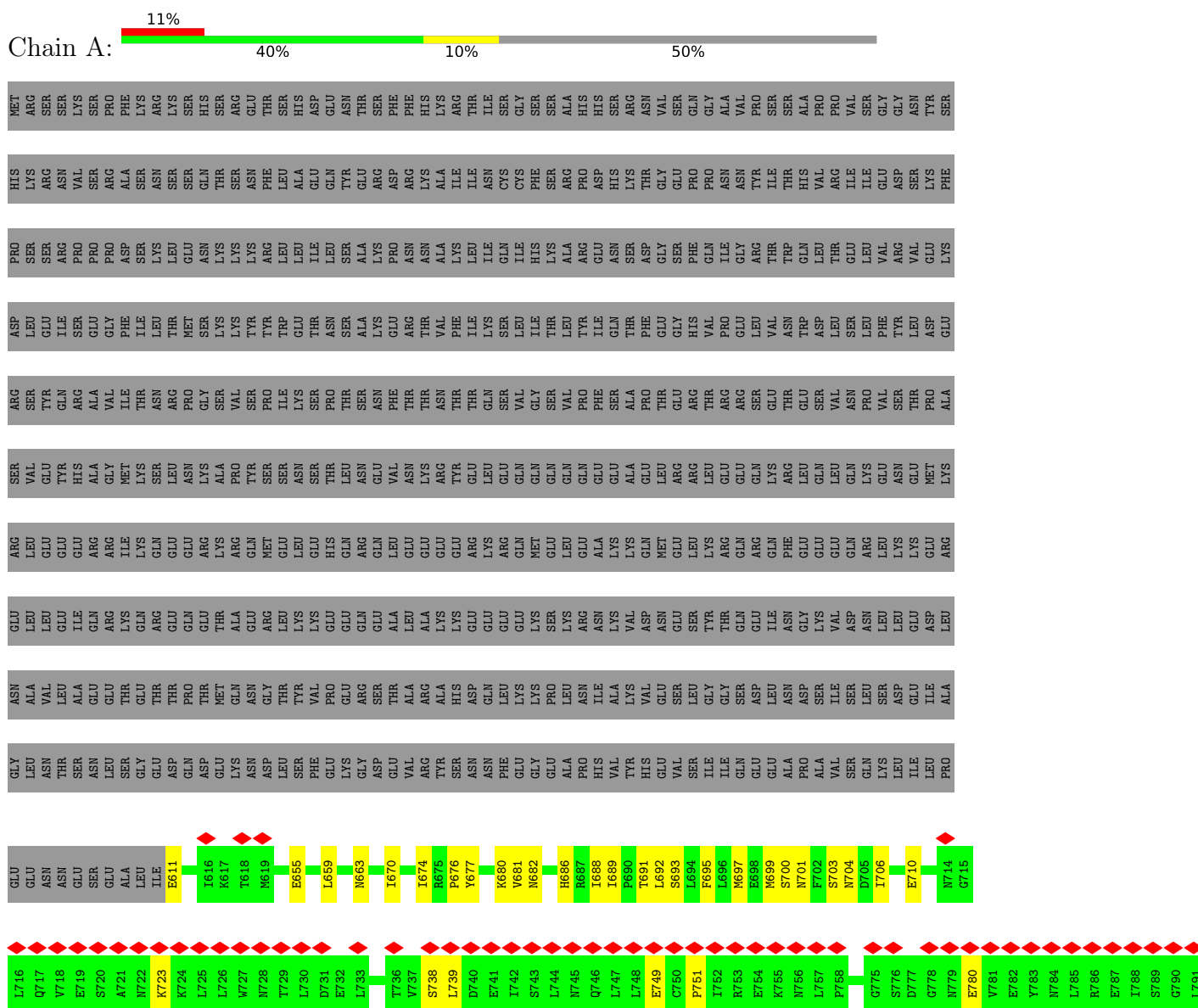
- Molecule 8 is a protein called Exocyst complex component EXO84.

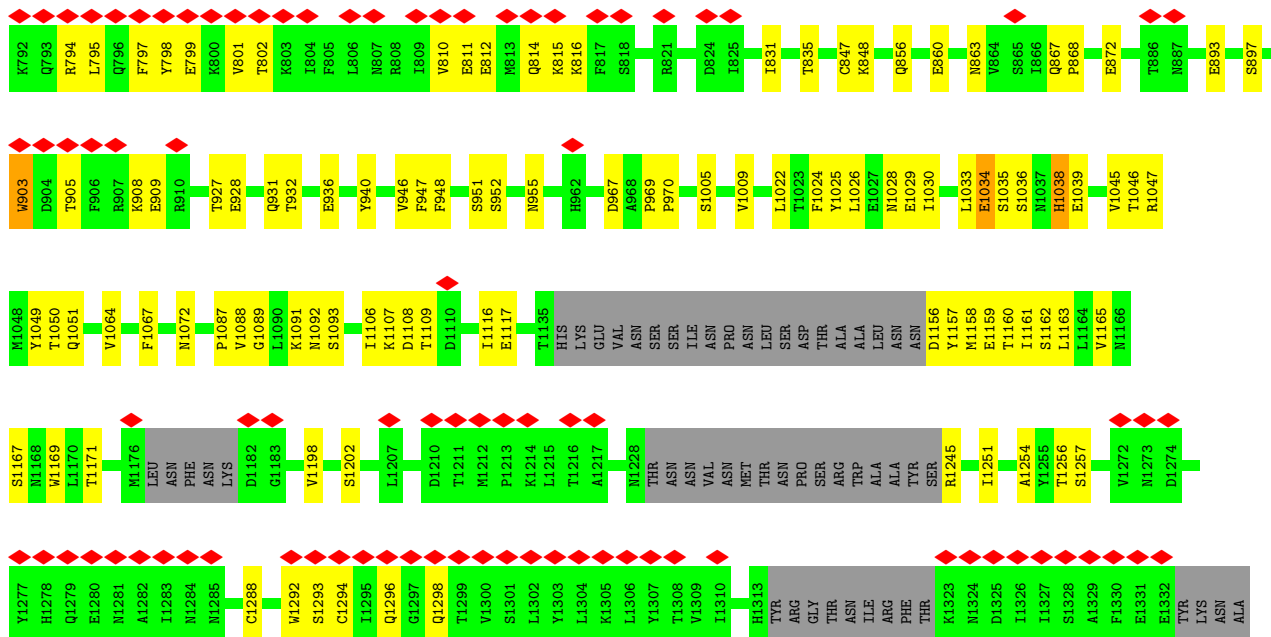
Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	H	518	3240	2002	591	643	4	0	0

### 3 Residue-property plots

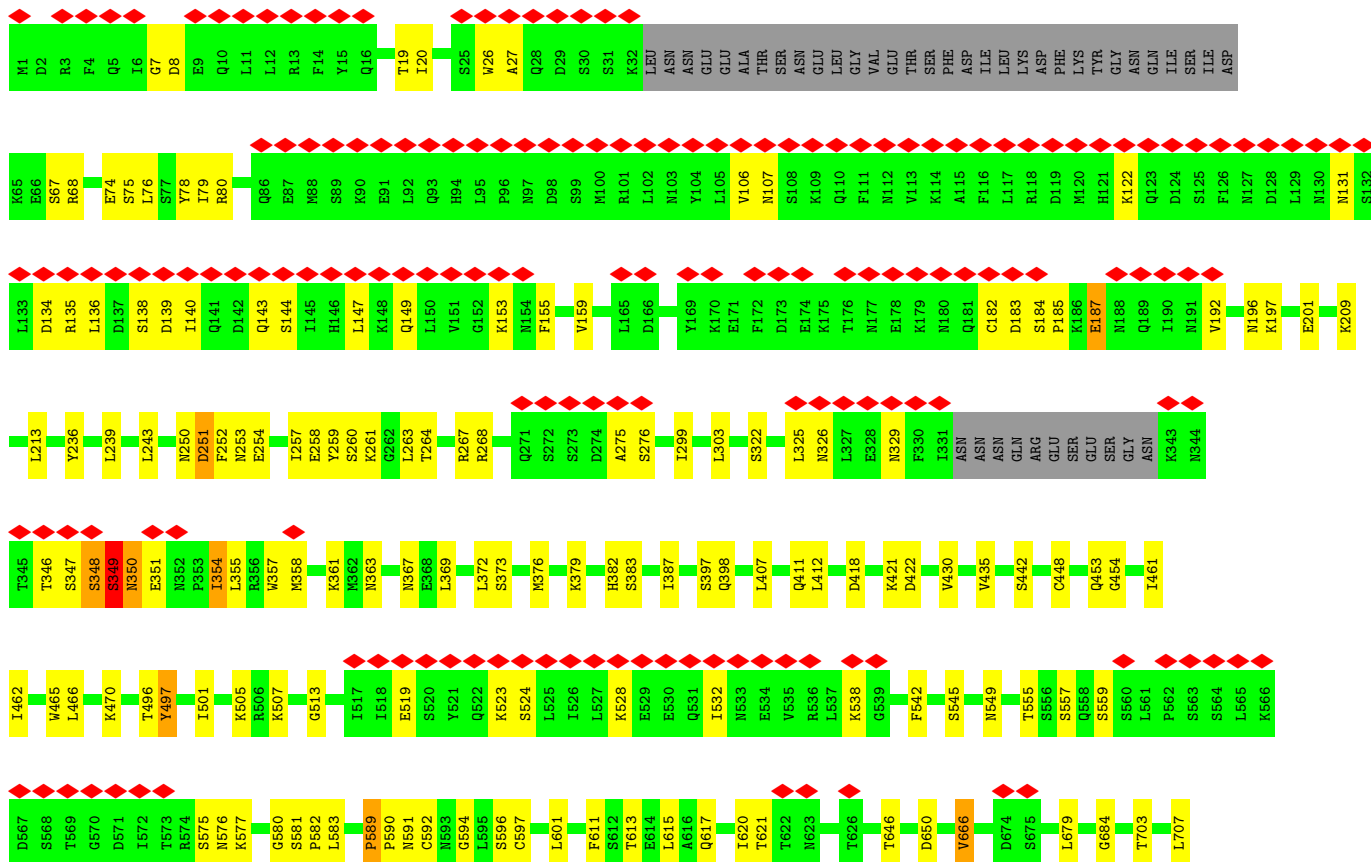
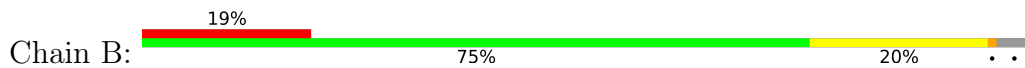
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

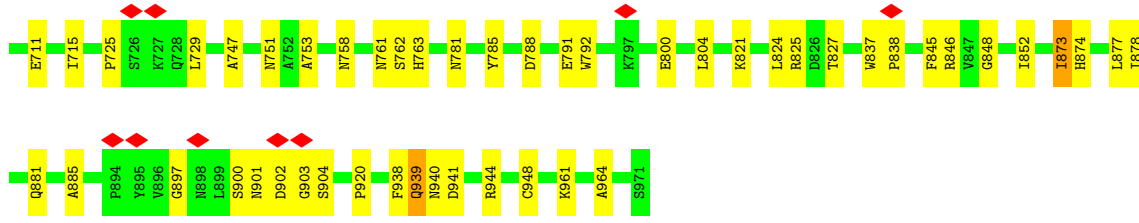
- Molecule 1: Exocyst complex component SEC3



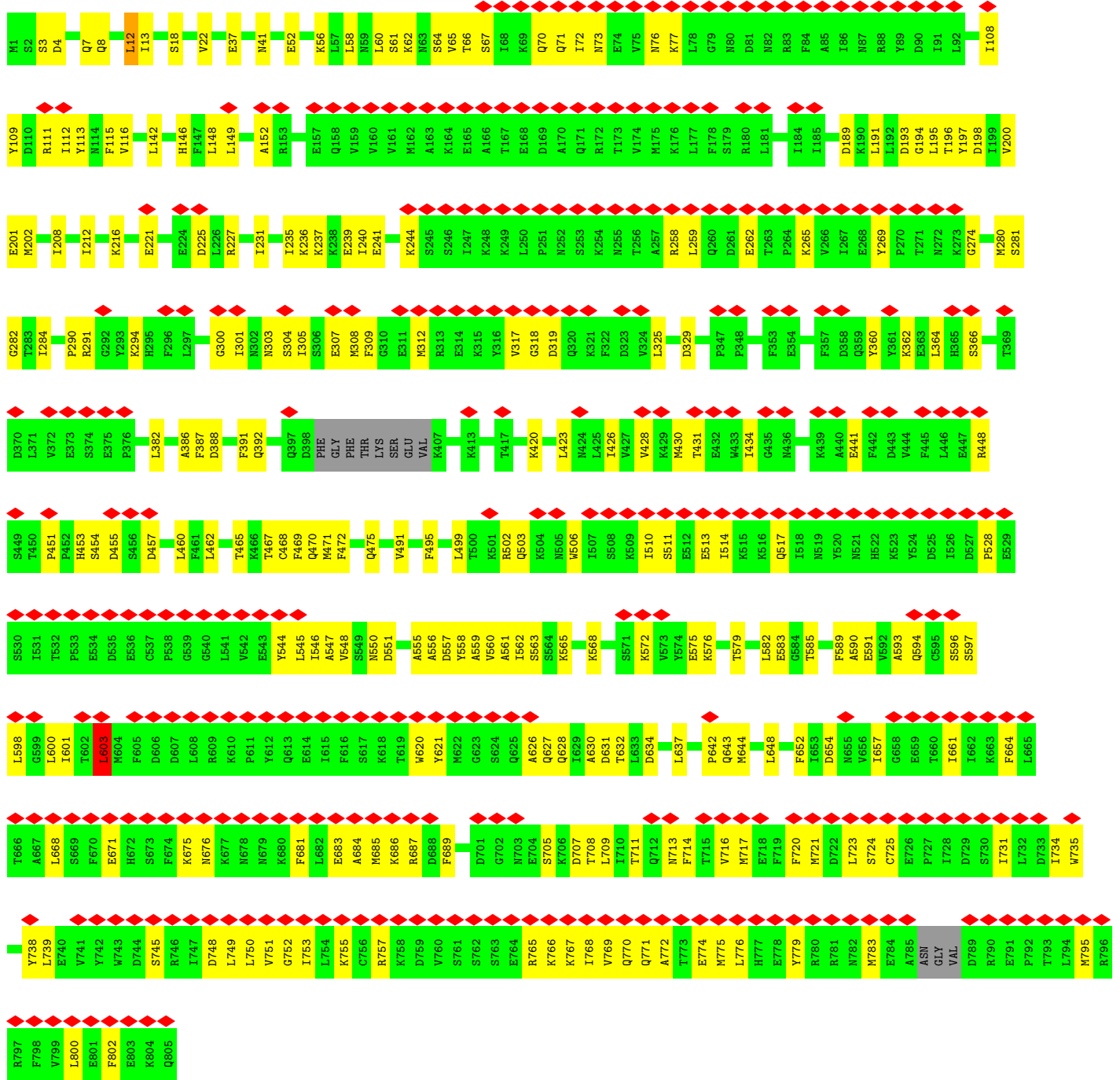


• Molecule 2: Exocyst complex component SEC5





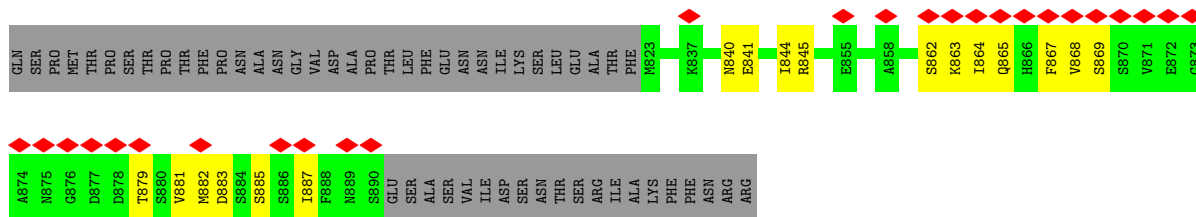
• Molecule 3: Exocyst complex component SEC6



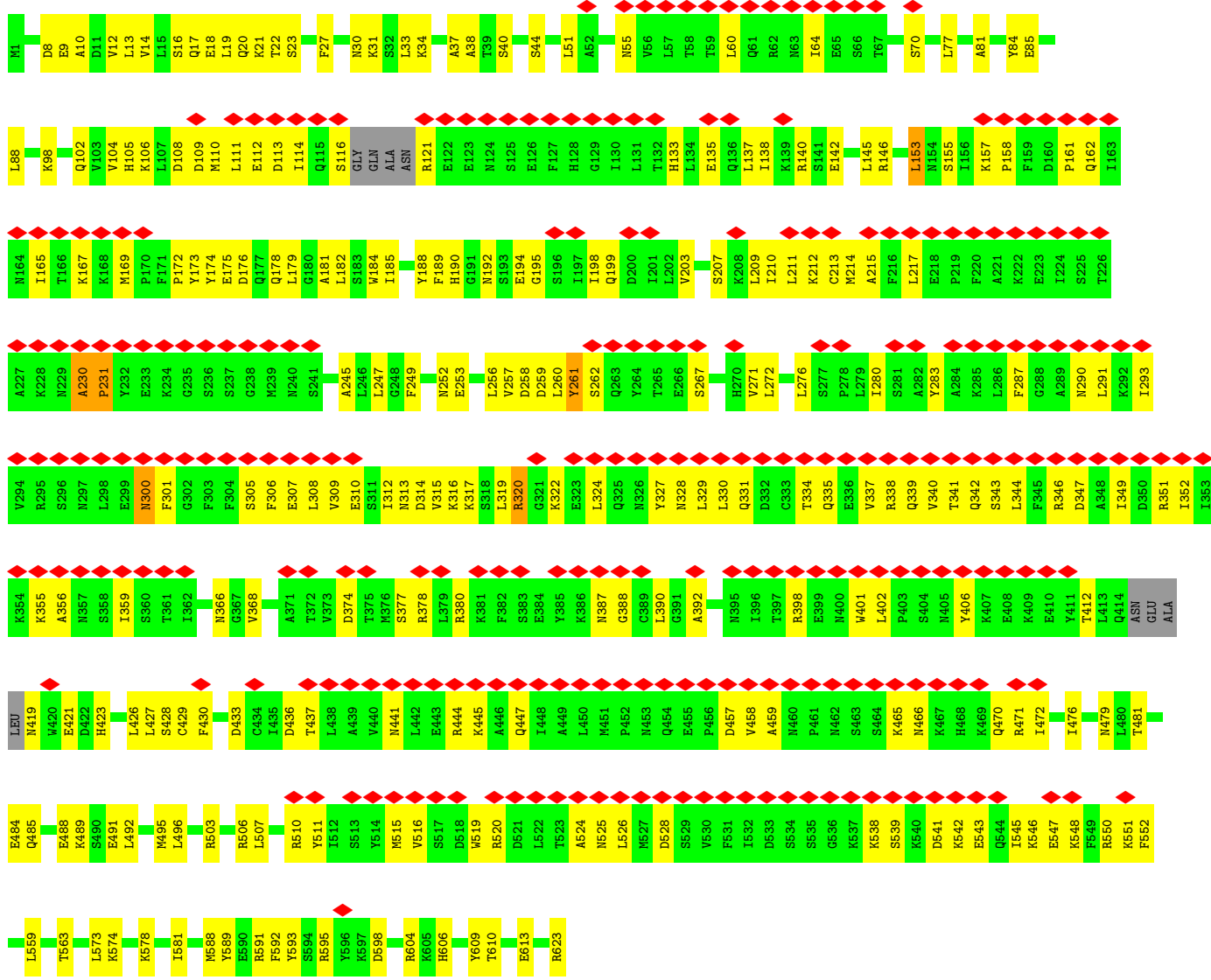
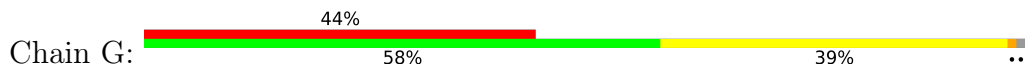




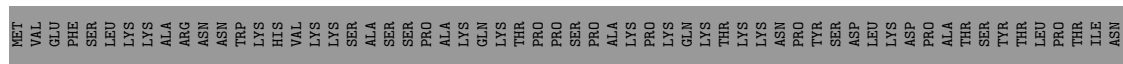




• Molecule 7: Exocyst complex component EXO70



• Molecule 8: Exocyst complex component EXO84





## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, POINT	Depositor
Number of particles used	67509, 67509	Depositor
Resolution determination method	FSC 0.5 CUT-OFF, FSC 0.5 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION, PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	50.00	Depositor
Minimum defocus (nm)	2000.00	Depositor
Maximum defocus (nm)	3000.00	Depositor
Magnification	22500	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	11.402	Depositor
Minimum map value	-2.171	Depositor
Average map value	0.028	Depositor
Map value standard deviation	0.405	Depositor
Recommended contour level	4.1	Depositor
Map size (Å)	734.976, 734.976, 734.976	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	2.871, 2.871, 2.871	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	A	0.28	0/3340	0.63	4/4659 (0.1%)
2	B	0.33	0/4607	0.71	13/6427 (0.2%)
3	C	0.32	0/5043	0.61	1/6885 (0.0%)
4	D	0.33	0/4734	0.75	7/6601 (0.1%)
5	E	0.27	0/3857	0.57	2/5383 (0.0%)
6	F	0.29	0/3607	0.61	5/5034 (0.1%)
7	G	0.37	0/4768	0.63	3/6443 (0.0%)
8	H	0.41	0/3253	0.65	2/4443 (0.0%)
All	All	0.33	0/33209	0.65	37/45875 (0.1%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	11
2	B	0	41
3	C	0	8
4	D	0	43
5	E	0	6
6	F	0	13
7	G	0	9
8	H	0	12
All	All	0	143

There are no bond length outliers.

All (37) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	758	ASN	C-N-CA	7.96	155.41	122.00
1	A	1116	ILE	C-N-CA	7.75	141.08	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	F	444	ILE	C-N-CA	7.21	139.72	121.70
7	G	153	LEU	CA-CB-CG	-6.69	99.91	115.30
4	D	649	ASN	C-N-CA	6.37	137.63	121.70
6	F	275	SER	C-N-CA	6.34	137.55	121.70
7	G	111	LEU	CA-CB-CG	6.26	129.71	115.30
2	B	715	ILE	N-CA-C	6.07	127.40	111.00
8	H	472	GLN	C-N-CA	5.96	136.60	121.70
5	E	243	TYR	C-N-CA	5.91	136.46	121.70
2	B	496	THR	C-N-CA	5.89	136.42	121.70
5	E	316	THR	C-N-CA	5.84	136.29	121.70
4	D	262	SER	N-CA-C	-5.80	95.34	111.00
7	G	300	ASN	C-N-CA	5.79	136.16	121.70
1	A	1038	HIS	C-N-CA	5.78	136.14	121.70
4	D	260	PHE	C-N-CA	5.71	135.97	121.70
4	D	382	ASP	C-N-CA	5.61	135.73	121.70
4	D	782	ASP	C-N-CA	5.60	135.70	121.70
2	B	940	ASN	N-CA-C	5.50	125.84	111.00
2	B	346	THR	N-CA-C	5.44	125.69	111.00
3	C	603	LEU	CA-CB-CG	-5.41	102.86	115.30
1	A	1109	THR	C-N-CA	5.36	135.10	121.70
2	B	513	GLY	C-N-CA	5.33	135.01	121.70
6	F	281	ASN	N-CA-C	5.33	125.38	111.00
2	B	497	TYR	C-N-CA	5.30	134.96	121.70
2	B	555	THR	C-N-CA	5.27	134.87	121.70
4	D	783	ALA	N-CA-C	5.24	125.14	111.00
2	B	187	GLU	C-N-CA	5.24	134.79	121.70
6	F	276	LYS	N-CA-C	5.15	124.91	111.00
1	A	903	TRP	C-N-CA	5.13	134.53	121.70
2	B	523	LYS	C-N-CA	5.11	134.48	121.70
8	H	715	LEU	CA-CB-CG	5.11	127.05	115.30
2	B	252	PHE	C-N-CA	5.09	134.42	121.70
4	D	271	VAL	C-N-CA	5.06	134.36	121.70
2	B	679	LEU	C-N-CA	5.04	134.29	121.70
2	B	122	LYS	C-N-CA	5.01	134.23	121.70
6	F	469	GLU	C-N-CA	5.00	134.21	121.70

There are no chirality outliers.

All (143) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1034	GLU	Peptide
1	A	1039	GLU	Peptide

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
1	A	1064	VAL	Peptide
1	A	1117	GLU	Peptide
1	A	749	GLU	Peptide
1	A	780	GLU	Peptide
1	A	946	VAL	Peptide
1	A	947	PHE	Peptide
1	A	948	PHE	Peptide
1	A	955	ASN	Peptide
1	A	967	ASP	Peptide
2	B	184	SER	Peptide
2	B	187	GLU	Peptide
2	B	236	TYR	Peptide
2	B	251	ASP	Peptide
2	B	268	ARG	Peptide
2	B	347	SER	Peptide
2	B	348	SER	Peptide
2	B	349	SER	Peptide
2	B	350	ASN	Peptide
2	B	354	ILE	Peptide
2	B	407	LEU	Peptide
2	B	411	GLN	Peptide
2	B	418	ASP	Peptide
2	B	430	VAL	Peptide
2	B	435	VAL	Peptide
2	B	442	SER	Peptide
2	B	448	CYS	Peptide
2	B	453	GLN	Peptide
2	B	454	GLY	Peptide
2	B	507	LYS	Peptide
2	B	519	GLU	Peptide
2	B	524	SER	Peptide
2	B	557	SER	Peptide
2	B	559	SER	Peptide
2	B	577	LYS	Peptide
2	B	580	GLY	Peptide
2	B	581	SER	Peptide
2	B	589	PRO	Peptide
2	B	591	ASN	Peptide
2	B	592	CYS	Peptide
2	B	666	VAL	Peptide
2	B	703	THR	Peptide
2	B	711	GLU	Peptide

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
2	B	753	ALA	Peptide
2	B	761	ASN	Peptide
2	B	763	HIS	Peptide
2	B	788	ASP	Peptide
2	B	791	GLU	Peptide
2	B	792	TRP	Peptide
2	B	873	ILE	Peptide
2	B	939	GLN	Peptide
3	C	12	LEU	Peptide
3	C	13	ILE	Peptide
3	C	284	ILE	Peptide
3	C	294	LYS	Peptide
3	C	319	ASP	Peptide
3	C	453	HIS	Peptide
3	C	454	SER	Peptide
3	C	603	LEU	Peptide
4	D	1057	ASN	Peptide
4	D	137	THR	Peptide
4	D	138	ASP	Peptide
4	D	140	GLY	Peptide
4	D	142	LEU	Peptide
4	D	202	THR	Peptide
4	D	235	LYS	Peptide
4	D	244	VAL	Peptide
4	D	248	ASP	Peptide
4	D	250	PHE	Peptide
4	D	261	THR	Peptide
4	D	262	SER	Peptide
4	D	271	VAL	Peptide
4	D	273	ILE	Peptide
4	D	373	LEU	Peptide
4	D	375	MET	Peptide
4	D	377	THR	Peptide
4	D	383	ASN	Peptide
4	D	389	VAL	Peptide
4	D	420	GLU	Peptide
4	D	438	ASN	Peptide
4	D	460	GLU	Peptide
4	D	549	SER	Peptide
4	D	551	PHE	Peptide
4	D	553	MET	Peptide
4	D	570	ILE	Peptide

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
4	D	571	VAL	Peptide
4	D	585	PHE	Peptide
4	D	624	ASN	Peptide
4	D	625	HIS	Peptide
4	D	651	PHE	Peptide
4	D	682	ASP	Peptide
4	D	707	LEU	Peptide
4	D	731	ALA	Peptide
4	D	781	LEU	Peptide
4	D	787	ARG	Peptide
4	D	792	PHE	Peptide
4	D	799	ASN	Peptide
4	D	802	ASN	Peptide
4	D	812	ASN	Peptide
4	D	817	LEU	Peptide
4	D	863	LYS	Peptide
4	D	96	HIS	Peptide
5	E	179	ILE	Peptide
5	E	24	LEU	Peptide
5	E	315	GLU	Peptide
5	E	36	ASP	Peptide
5	E	564	SER	Peptide
5	E	753	LEU	Peptide
6	F	280	THR	Peptide
6	F	295	GLU	Peptide
6	F	345	TYR	Peptide
6	F	410	ASN	Peptide
6	F	415	PHE	Peptide
6	F	444	ILE	Peptide
6	F	445	ASP	Peptide
6	F	53	VAL	Peptide
6	F	599	ASN	Peptide
6	F	600	ASP	Peptide
6	F	601	ILE	Peptide
6	F	643	ASN	Peptide
6	F	75	ASN	Peptide
7	G	153	LEU	Peptide
7	G	175	GLU	Peptide
7	G	190	HIS	Peptide
7	G	230	ALA	Peptide
7	G	259	ASP	Peptide
7	G	261	TYR	Peptide

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Mol	Chain	Res	Type	Group
7	G	262	SER	Peptide
7	G	300	ASN	Peptide
7	G	317	LYS	Peptide
8	H	314	VAL	Peptide
8	H	315	LEU	Peptide
8	H	336	GLN	Peptide
8	H	337	LYS	Peptide
8	H	338	PHE	Peptide
8	H	339	ILE	Peptide
8	H	348	LEU	Peptide
8	H	387	GLN	Peptide
8	H	454	GLU	Peptide
8	H	470	SER	Peptide
8	H	652	ASN	Peptide
8	H	708	GLN	Peptide

## 5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3345	0	1403	70	0
2	B	4610	0	1926	81	0
3	C	4994	0	3576	171	0
4	D	4739	0	2011	90	0
5	E	3860	0	1635	124	0
6	F	3612	0	1508	84	0
7	G	4696	0	4483	188	0
8	H	3240	0	2433	88	0
All	All	33096	0	18975	886	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 17.

All (886) 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)
3:C:506:TRP:O	3:C:510:ILE:HB	1.54	1.07
3:C:714:PHE:CD2	3:C:714:PHE:CZ	2.38	1.04
3:C:544:TYR:CG	3:C:544:TYR:CE2	2.40	1.02
3:C:558:TYR:O	3:C:562:ILE:HB	1.60	1.00
3:C:557:ASP:O	3:C:561:ALA:HB3	1.66	0.95
7:G:546:LYS:O	7:G:550:ARG:HB3	1.68	0.93
8:H:530:ALA:O	8:H:534:LYS:HB2	1.69	0.91
3:C:555:ALA:O	3:C:559:ALA:HB3	1.70	0.91
7:G:589:TYR:O	7:G:593:TYR:HB3	1.71	0.90
4:D:127:CYS:O	4:D:131:ALA:HB3	1.74	0.88
7:G:33:LEU:O	7:G:37:ALA:HB3	1.74	0.87
3:C:561:ALA:O	3:C:565:LYS:HB2	1.74	0.87
7:G:543:GLU:O	7:G:547:GLU:HB2	1.75	0.87
7:G:106:LYS:O	7:G:110:MET:HB2	1.73	0.87
7:G:210:ILE:O	7:G:214:MET:HB2	1.77	0.85
7:G:351:ARG:O	7:G:355:LYS:HB2	1.78	0.84
3:C:774:GLU:CG	3:C:774:GLU:CA	2.56	0.83
7:G:105:HIS:O	7:G:109:ASP:HB2	1.78	0.83
7:G:307:GLU:O	7:G:310:GLU:HB3	1.79	0.82
8:H:351:SER:HA	8:H:370:ILE:O	1.81	0.81
3:C:766:LYS:O	3:C:770:GLN:HB2	1.80	0.80
7:G:84:TYR:O	7:G:88:LEU:HB2	1.83	0.79
3:C:457:ASP:CA	3:C:457:ASP:CG	2.51	0.79
8:H:380:ALA:HA	8:H:392:VAL:O	1.81	0.78
7:G:588:MET:O	7:G:592:PHE:HB3	1.84	0.77
3:C:556:ALA:O	3:C:560:VAL:HB	1.84	0.76
3:C:765:ARG:O	3:C:769:VAL:HB	1.87	0.75
7:G:331:GLN:O	7:G:335:GLN:HB2	1.88	0.73
7:G:253:GLU:O	7:G:257:VAL:HB	1.89	0.73
7:G:287:PHE:O	7:G:291:LEU:HB2	1.89	0.73
7:G:211:LEU:O	7:G:215:ALA:HB2	1.89	0.72
3:C:546:ILE:HG21	3:C:644:MET:HA	1.73	0.70
7:G:520:ARG:O	7:G:524:ALA:HB2	1.92	0.70
7:G:591:ARG:O	7:G:595:ARG:HB2	1.92	0.69
3:C:630:ALA:O	3:C:634:ASP:HB2	1.92	0.69
3:C:471:MET:CB	3:C:471:MET:SD	2.81	0.69
7:G:347:ASP:O	7:G:351:ARG:HB2	1.92	0.69
7:G:340:VAL:O	7:G:344:LEU:HB2	1.93	0.69
3:C:559:ALA:O	3:C:563:SER:HB2	1.93	0.68
3:C:572:LYS:O	3:C:576:LYS:HB2	1.93	0.68
3:C:648:LEU:O	3:C:652:PHE:HB2	1.94	0.66
3:C:491:VAL:O	3:C:495:PHE:HB2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:98:LYS:O	7:G:102:GLN:HB3	1.97	0.65
3:C:671:GLU:HG2	3:C:755:LYS:HB3	1.78	0.65
3:C:661:ILE:HD12	3:C:713:ASN:HB3	1.80	0.64
7:G:158:PRO:HG3	7:G:212:LYS:HD3	1.78	0.64
8:H:403:VAL:HA	8:H:416:LYS:HA	1.80	0.64
3:C:561:ALA:O	3:C:565:LYS:CB	2.46	0.63
7:G:390:LEU:O	7:G:423:HIS:ND1	2.30	0.63
7:G:470:GLN:HA	7:G:515:MET:HG2	1.80	0.63
7:G:184:TRP:O	7:G:188:TYR:CB	2.47	0.63
7:G:324:LEU:HG	7:G:327:TYR:HB2	1.81	0.63
3:C:686:LYS:O	3:C:689:PHE:HB3	1.98	0.63
3:C:517:GLN:HB3	3:C:603:LEU:HD13	1.80	0.63
3:C:716:VAL:O	3:C:720:PHE:HB3	1.99	0.63
8:H:533:LEU:HA	8:H:536:LEU:HB2	1.81	0.63
3:C:317:VAL:H	3:C:318:GLY:HA2	1.64	0.63
7:G:98:LYS:O	7:G:102:GLN:CB	2.47	0.62
7:G:283:TYR:O	7:G:287:PHE:HB2	2.00	0.62
3:C:491:VAL:O	3:C:495:PHE:CB	2.48	0.62
7:G:359:ILE:O	7:G:445:LYS:NZ	2.32	0.62
6:F:711:GLU:HA	6:F:715:ALA:HB3	1.81	0.62
7:G:290:ASN:HA	7:G:293:ILE:HG22	1.82	0.62
4:D:140:GLY:O	4:D:144:GLU:N	2.29	0.61
7:G:305:SER:O	7:G:308:LEU:HB2	2.00	0.61
3:C:716:VAL:O	3:C:720:PHE:CB	2.48	0.61
7:G:142:GLU:HA	7:G:145:LEU:HD12	1.83	0.61
1:A:611:GLU:N	2:B:261:LYS:O	2.33	0.61
2:B:357:TRP:O	2:B:361:LYS:N	2.25	0.61
8:H:528:SER:O	8:H:532:ARG:HB2	2.01	0.61
6:F:315:SER:O	6:F:319:PHE:CB	2.49	0.60
7:G:283:TYR:O	7:G:287:PHE:CB	2.50	0.60
3:C:423:LEU:HD23	3:C:491:VAL:HG23	1.83	0.60
7:G:488:GLU:HG2	7:G:489:LYS:HG3	1.82	0.60
3:C:430:MET:O	3:C:434:ILE:HB	2.01	0.60
7:G:306:PHE:O	7:G:309:VAL:HB	2.01	0.60
7:G:352:ILE:HG22	7:G:441:ASN:HD22	1.67	0.60
3:C:72:ILE:O	3:C:76:ASN:CB	2.49	0.60
7:G:330:LEU:O	7:G:334:THR:CB	2.49	0.60
4:D:716:GLU:O	4:D:720:GLU:CB	2.50	0.60
4:D:947:ASN:O	8:H:707:LYS:NZ	2.34	0.60
1:A:1288:CYS:O	1:A:1292:TRP:N	2.35	0.59
8:H:543:ILE:HG23	8:H:555:ALA:HB1	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:287:PHE:O	7:G:291:LEU:CB	2.50	0.59
4:D:109:LYS:O	4:D:113:SER:N	2.35	0.59
6:F:90:ASP:O	6:F:94:GLY:HA3	2.00	0.59
8:H:321:TRP:O	8:H:325:LEU:CB	2.50	0.59
2:B:725:PRO:O	2:B:729:LEU:N	2.35	0.59
4:D:287:GLU:O	4:D:291:HIS:CB	2.51	0.59
7:G:252:ASN:O	7:G:256:LEU:HB3	2.02	0.59
5:E:108:ILE:O	5:E:112:ASN:CB	2.51	0.59
3:C:66:THR:O	3:C:70:GLN:CB	2.50	0.59
5:E:200:LYS:O	5:E:204:ILE:CB	2.51	0.59
3:C:468:CYS:SG	3:C:502:ARG:NH1	2.76	0.59
7:G:184:TRP:O	7:G:188:TYR:HB2	2.03	0.59
8:H:355:MET:HA	8:H:367:MET:HA	1.85	0.59
7:G:447:GLN:HE22	7:G:458:VAL:HA	1.67	0.59
3:C:734:ILE:O	3:C:738:TYR:HB3	2.03	0.58
3:C:73:ASN:O	3:C:77:LYS:CB	2.52	0.58
7:G:34:LYS:O	7:G:38:ALA:HB2	2.03	0.58
8:H:207:LEU:O	8:H:211:SER:CB	2.51	0.58
7:G:441:ASN:OD1	7:G:444:ARG:NH1	2.35	0.58
3:C:585:THR:O	3:C:589:PHE:N	2.35	0.58
4:D:349:ARG:O	4:D:353:GLU:CB	2.52	0.58
4:D:957:MET:O	4:D:961:MET:CB	2.51	0.58
7:G:419:ASN:HB3	7:G:421:GLU:HG2	1.86	0.58
6:F:700:ASP:N	6:F:760:ASN:O	2.37	0.58
6:F:624:ASN:O	6:F:628:PHE:CB	2.52	0.58
3:C:590:ALA:O	3:C:593:ALA:HB3	2.04	0.58
7:G:546:LYS:O	7:G:550:ARG:CB	2.47	0.58
3:C:676:ASN:ND2	3:C:725:CYS:O	2.36	0.57
4:D:916:LEU:O	4:D:920:ALA:HB2	2.05	0.57
5:E:99:SER:O	5:E:103:ALA:HB2	2.04	0.57
3:C:745:SER:HB2	3:C:795:MET:HB3	1.86	0.57
7:G:330:LEU:O	7:G:334:THR:HB	2.05	0.57
3:C:735:TRP:O	3:C:739:LEU:CB	2.52	0.57
3:C:565:LYS:O	3:C:568:LYS:NZ	2.33	0.57
4:D:565:GLN:O	4:D:569:THR:N	2.37	0.57
7:G:85:GLU:OE1	7:G:133:HIS:NE2	2.37	0.57
8:H:331:ASN:O	8:H:335:ALA:N	2.34	0.57
2:B:781:ASN:O	2:B:785:TYR:CB	2.52	0.57
3:C:559:ALA:O	3:C:563:SER:CB	2.52	0.57
7:G:589:TYR:O	7:G:593:TYR:CB	2.50	0.57
4:D:653:GLU:O	4:D:657:TYR:N	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:27:PHE:O	7:G:31:LYS:CB	2.53	0.57
8:H:443:ALA:O	8:H:447:LEU:CB	2.53	0.57
3:C:60:LEU:O	3:C:64:SER:CB	2.53	0.56
4:D:116:GLN:O	4:D:120:GLN:N	2.34	0.56
8:H:546:GLU:HB3	8:H:555:ALA:HB2	1.87	0.56
3:C:627:GLN:NE2	3:C:631:ASP:OD2	2.38	0.56
4:D:521:PHE:HA	5:E:756:LYS:HA	1.87	0.56
5:E:653:LEU:O	5:E:657:SER:CB	2.53	0.56
7:G:447:GLN:NE2	7:G:457:ASP:O	2.39	0.56
8:H:444:LYS:HA	8:H:448:CYS:H	1.70	0.56
2:B:646:THR:O	2:B:650:ASP:CB	2.54	0.56
6:F:275:SER:HA	6:F:277:MET:H	1.71	0.56
7:G:388:GLY:O	7:G:392:ALA:HB2	2.03	0.56
2:B:873:ILE:O	2:B:877:LEU:CB	2.54	0.56
5:E:433:SER:O	5:E:438:ILE:N	2.37	0.56
7:G:16:SER:O	7:G:20:GLN:N	2.38	0.56
5:E:73:TYR:O	5:E:77:PHE:CB	2.53	0.56
6:F:607:ARG:O	6:F:611:GLU:N	2.38	0.56
7:G:146:ARG:NH2	7:G:194:GLU:OE1	2.37	0.56
6:F:394:ASP:O	6:F:398:LYS:CB	2.53	0.56
8:H:215:GLN:O	8:H:219:LYS:CB	2.54	0.56
4:D:126:ASN:O	4:D:130:GLU:CB	2.53	0.56
8:H:219:LYS:O	8:H:223:ASN:CB	2.54	0.56
7:G:9:GLU:O	7:G:13:LEU:CB	2.53	0.56
3:C:280:MET:HA	3:C:282:GLY:HA3	1.88	0.56
7:G:610:THR:HG1	7:G:613:GLU:H	1.53	0.56
4:D:700:MET:O	4:D:704:GLN:N	2.38	0.56
5:E:112:ASN:O	5:E:116:LEU:CB	2.54	0.56
4:D:666:PHE:O	4:D:670:TYR:CB	2.54	0.55
7:G:114:ILE:O	7:G:121:ARG:N	2.39	0.55
7:G:516:VAL:HG13	7:G:581:ILE:HG12	1.87	0.55
3:C:752:GLY:HA3	3:C:800:LEU:HD23	1.86	0.55
3:C:468:CYS:O	3:C:472:PHE:HB3	2.05	0.55
1:A:1072:ASN:O	1:A:1245:ARG:N	2.39	0.55
2:B:149:GLN:HA	2:B:153:LYS:H	1.71	0.55
5:E:267:VAL:O	5:E:270:SER:C	2.45	0.55
6:F:864:ILE:O	6:F:868:VAL:CB	2.54	0.55
7:G:189:PHE:HA	7:G:192:ASN:HB2	1.87	0.55
7:G:377:SER:HA	7:G:380:ARG:HG2	1.88	0.55
2:B:192:VAL:O	2:B:196:ASN:N	2.40	0.55
4:D:706:ILE:N	4:D:708:ASN:O	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:217:LEU:O	6:F:221:TYR:CB	2.54	0.55
7:G:346:ARG:HG2	7:G:401:TRP:HA	1.87	0.55
8:H:533:LEU:O	8:H:537:ASP:N	2.39	0.55
1:A:1030:ILE:O	1:A:1035:SER:N	2.35	0.55
3:C:208:ILE:H	3:C:212:ILE:H	1.54	0.55
4:D:285:ASN:O	4:D:289:PHE:CB	2.55	0.55
5:E:599:ILE:O	5:E:603:LEU:CB	2.54	0.55
1:A:682:ASN:O	1:A:686:HIS:CB	2.54	0.55
3:C:4:ASP:O	3:C:8:GLN:N	2.36	0.55
5:E:163:GLU:O	5:E:167:ARG:CB	2.55	0.55
5:E:685:GLN:O	5:E:689:MET:CB	2.54	0.55
6:F:711:GLU:O	6:F:716:SER:N	2.40	0.55
7:G:352:ILE:O	7:G:356:ALA:HB3	2.07	0.55
8:H:434:SER:O	8:H:438:ASP:CB	2.55	0.55
3:C:300:GLY:O	3:C:304:SER:CB	2.55	0.55
3:C:388:ASP:O	3:C:392:GLN:CB	2.55	0.55
1:A:1046:THR:O	1:A:1050:THR:CB	2.55	0.55
3:C:240:ILE:O	3:C:244:LYS:N	2.39	0.55
4:D:389:VAL:HA	4:D:391:ASP:H	1.72	0.55
5:E:105:GLN:O	5:E:109:HIS:CB	2.55	0.55
7:G:347:ASP:O	7:G:351:ARG:CB	2.55	0.55
2:B:538:LYS:O	2:B:542:PHE:CB	2.54	0.54
3:C:8:GLN:O	3:C:12:LEU:CB	2.54	0.54
3:C:304:SER:O	3:C:308:MET:CB	2.55	0.54
3:C:685:MET:HB3	3:C:721:MET:HG2	1.89	0.54
4:D:1047:THR:O	4:D:1051:LYS:CB	2.55	0.54
1:A:1067:PHE:O	1:A:1245:ARG:N	2.40	0.54
2:B:939:GLN:HA	2:B:941:ASP:H	1.72	0.54
6:F:244:ASN:O	6:F:248:GLY:N	2.40	0.54
7:G:352:ILE:O	7:G:356:ALA:CB	2.55	0.54
8:H:269:GLN:O	8:H:273:GLN:CB	2.55	0.54
6:F:754:THR:H	6:F:758:ILE:H	1.54	0.54
7:G:195:GLY:O	7:G:199:GLN:CB	2.55	0.54
7:G:174:TYR:HD1	7:G:178:GLN:HE22	1.55	0.54
2:B:259:TYR:O	2:B:263:LEU:CB	2.56	0.54
3:C:62:LYS:O	3:C:66:THR:CB	2.55	0.54
3:C:705:SER:HA	3:C:708:THR:HB	1.88	0.54
4:D:124:LEU:O	4:D:128:LEU:CB	2.55	0.54
5:E:83:GLU:O	5:E:87:LEU:N	2.37	0.54
8:H:528:SER:HA	8:H:531:GLN:HB3	1.89	0.54
5:E:740:ASN:O	5:E:744:LEU:CB	2.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:507:LEU:HD23	7:G:510:ARG:HH12	1.72	0.54
2:B:131:ASN:O	2:B:135:ARG:N	2.40	0.54
4:D:123:ASN:O	4:D:127:CYS:CB	2.56	0.54
3:C:142:LEU:O	3:C:146:HIS:CB	2.56	0.54
3:C:598:LEU:HA	3:C:601:ILE:HD12	1.89	0.54
3:C:628:GLN:O	3:C:632:THR:HB	2.08	0.54
4:D:364:SER:O	4:D:368:LYS:CB	2.55	0.54
4:D:697:GLY:O	4:D:701:ASP:CB	2.55	0.54
5:E:576:MET:O	5:E:580:VAL:CB	2.55	0.54
5:E:608:LEU:O	5:E:613:SER:N	2.38	0.54
5:E:736:ILE:O	5:E:740:ASN:CB	2.55	0.54
6:F:389:LEU:O	6:F:393:GLN:N	2.41	0.54
6:F:461:LEU:O	6:F:465:VAL:N	2.40	0.54
2:B:747:ALA:O	2:B:751:ASN:CB	2.56	0.54
5:E:701:ILE:O	5:E:705:SER:CB	2.56	0.54
7:G:34:LYS:O	7:G:38:ALA:CB	2.56	0.54
8:H:608:GLU:OE1	8:H:610:VAL:N	2.40	0.54
5:E:79:SER:O	5:E:83:GLU:N	2.42	0.53
5:E:187:LYS:N	5:E:190:LYS:O	2.41	0.53
7:G:19:LEU:O	7:G:23:SER:N	2.41	0.53
7:G:184:TRP:O	7:G:188:TYR:HB3	2.08	0.53
4:D:912:ASN:O	4:D:916:LEU:CB	2.57	0.53
5:E:708:PHE:O	5:E:712:LEU:CB	2.56	0.53
6:F:737:LEU:O	6:F:741:PHE:CB	2.55	0.53
5:E:705:SER:O	5:E:709:SER:CB	2.56	0.53
4:D:763:LEU:O	4:D:767:LYS:CB	2.56	0.53
4:D:905:PHE:O	4:D:909:ASP:CB	2.57	0.53
5:E:412:ILE:O	5:E:416:THR:N	2.42	0.53
6:F:133:LYS:O	6:F:137:ARG:CB	2.56	0.53
8:H:171:THR:O	8:H:175:LYS:CB	2.57	0.53
1:A:1251:ILE:HA	1:A:1254:ALA:HB2	1.89	0.53
3:C:572:LYS:O	3:C:576:LYS:CB	2.57	0.53
6:F:308:GLN:O	6:F:312:PHE:N	2.40	0.53
2:B:134:ASP:O	2:B:138:SER:CB	2.57	0.53
2:B:139:ASP:O	2:B:143:GLN:CB	2.57	0.53
2:B:944:ARG:O	2:B:948:CYS:CB	2.57	0.53
4:D:144:GLU:O	4:D:148:ASN:N	2.34	0.53
5:E:78:GLU:O	5:E:82:LYS:N	2.39	0.53
5:E:769:LEU:O	5:E:773:LEU:N	2.40	0.53
8:H:456:GLU:O	8:H:460:ARG:CB	2.57	0.53
1:A:1159:GLU:O	1:A:1163:LEU:CB	2.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1288:CYS:O	1:A:1293:SER:N	2.42	0.53
3:C:194:GLY:O	3:C:198:ASP:CB	2.57	0.53
3:C:236:LYS:O	3:C:240:ILE:CB	2.57	0.53
3:C:668:LEU:HD13	3:C:749:LEU:HD11	1.90	0.53
3:C:735:TRP:O	3:C:739:LEU:HB3	2.09	0.53
8:H:744:PHE:O	8:H:748:ASN:HB2	2.08	0.53
2:B:136:LEU:O	2:B:140:ILE:CB	2.57	0.53
5:E:396:SER:O	5:E:400:TYR:CB	2.57	0.53
2:B:363:ASN:O	2:B:367:ASN:CB	2.57	0.53
3:C:648:LEU:O	3:C:652:PHE:CB	2.57	0.53
5:E:797:TYR:HA	5:E:800:ALA:HB3	1.90	0.53
6:F:257:GLU:O	6:F:261:ILE:CB	2.57	0.53
1:A:706:ILE:O	1:A:710:GLU:CB	2.56	0.53
4:D:279:SER:O	4:D:283:ASN:CB	2.57	0.53
4:D:352:GLU:O	4:D:356:ASN:CB	2.57	0.53
5:E:33:LEU:O	5:E:37:HIS:N	2.40	0.53
5:E:316:THR:HA	5:E:318:MET:H	1.74	0.53
6:F:141:SER:O	6:F:145:LEU:CB	2.57	0.53
6:F:738:THR:O	6:F:742:MET:CB	2.56	0.52
7:G:195:GLY:O	7:G:199:GLN:HB2	2.09	0.52
8:H:461:ILE:O	8:H:465:PHE:CB	2.57	0.52
2:B:349:SER:O	2:B:351:GLU:N	2.36	0.52
5:E:684:SER:O	5:E:688:LYS:CB	2.57	0.52
7:G:8:ASP:O	7:G:12:VAL:CB	2.58	0.52
7:G:276:LEU:O	7:G:280:ILE:N	2.35	0.52
7:G:543:GLU:O	7:G:547:GLU:CB	2.53	0.52
2:B:800:GLU:O	2:B:804:LEU:N	2.33	0.52
4:D:325:ARG:O	4:D:329:LEU:CB	2.57	0.52
6:F:194:VAL:O	6:F:198:LEU:CB	2.57	0.52
8:H:706:ASP:HA	8:H:709:LEU:HD13	1.90	0.52
1:A:688:ILE:O	1:A:692:LEU:N	2.39	0.52
1:A:1024:PHE:O	1:A:1028:ASN:N	2.43	0.52
3:C:768:ILE:O	3:C:772:ALA:CB	2.58	0.52
4:D:417:ALA:O	4:D:421:MET:CB	2.57	0.52
5:E:104:THR:O	5:E:108:ILE:CB	2.57	0.52
5:E:318:MET:O	5:E:322:ILE:N	2.41	0.52
7:G:427:LEU:HG	7:G:496:LEU:HD23	1.91	0.52
1:A:693:SER:O	1:A:697:MET:CB	2.58	0.52
3:C:751:VAL:O	3:C:755:LYS:N	2.41	0.52
5:E:199:MET:O	5:E:203:LEU:CB	2.57	0.52
6:F:840:ASN:O	6:F:844:ILE:CB	2.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:881:VAL:O	6:F:885:SER:CB	2.58	0.52
7:G:316:LYS:O	7:G:320:ARG:NH1	2.43	0.52
7:G:492:LEU:HA	7:G:495:MET:HB2	1.92	0.52
3:C:18:SER:O	3:C:22:VAL:N	2.36	0.52
4:D:362:THR:O	4:D:366:ARG:CB	2.57	0.52
5:E:86:ASN:O	5:E:90:GLU:N	2.42	0.52
5:E:749:SER:O	5:E:753:LEU:N	2.38	0.52
7:G:104:VAL:O	7:G:108:ASP:HB2	2.09	0.52
3:C:637:LEU:HD21	3:C:652:PHE:HE2	1.75	0.52
4:D:720:GLU:O	4:D:724:GLU:CB	2.58	0.52
5:E:75:ARG:O	5:E:79:SER:N	2.37	0.52
6:F:634:GLU:O	6:F:638:PHE:N	2.42	0.52
6:F:841:GLU:O	6:F:845:ARG:CB	2.58	0.52
8:H:187:PHE:O	8:H:191:LYS:N	2.38	0.52
8:H:226:TYR:O	8:H:230:MET:CB	2.58	0.52
3:C:191:LEU:O	3:C:195:LEU:CB	2.58	0.52
3:C:387:PHE:O	3:C:391:PHE:CB	2.58	0.52
3:C:448:ARG:HH22	3:C:513:GLU:HB3	1.75	0.52
5:E:379:TYR:O	5:E:383:LEU:CB	2.58	0.52
7:G:466:ASN:HD21	7:G:472:ILE:HD12	1.74	0.52
8:H:749:SER:HA	8:H:752:ILE:HD12	1.91	0.52
1:A:1025:TYR:O	1:A:1029:GLU:N	2.40	0.52
4:D:821:ALA:O	4:D:825:PHE:CB	2.58	0.52
5:E:586:ARG:O	5:E:590:LEU:CB	2.58	0.52
5:E:642:PHE:O	5:E:646:ILE:CB	2.58	0.52
5:E:660:ILE:O	5:E:664:PHE:CB	2.57	0.52
6:F:863:LYS:O	6:F:867:PHE:CB	2.58	0.52
8:H:318:GLU:O	8:H:322:ASP:CB	2.58	0.52
2:B:239:LEU:O	2:B:243:LEU:CB	2.58	0.52
5:E:620:GLU:O	5:E:624:TRP:N	2.43	0.52
5:E:650:THR:O	5:E:654:ASP:CB	2.59	0.52
7:G:161:PRO:HG3	7:G:213:CYS:HB3	1.91	0.52
8:H:432:GLU:O	8:H:436:LEU:CB	2.58	0.52
1:A:927:THR:O	1:A:931:GLN:N	2.38	0.51
3:C:67:SER:O	3:C:71:GLN:CB	2.58	0.51
3:C:499:LEU:HD23	3:C:502:ARG:HD3	1.92	0.51
6:F:865:GLN:O	6:F:869:SER:CB	2.58	0.51
8:H:527:SER:O	8:H:531:GLN:N	2.38	0.51
5:E:369:ARG:O	5:E:373:SER:CB	2.58	0.51
6:F:705:ASP:O	6:F:709:PHE:N	2.43	0.51
8:H:357:LEU:HA	8:H:364:PRO:HA	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:143:GLN:O	2:B:147:LEU:CB	2.59	0.51
7:G:374:ASP:O	7:G:378:ARG:HB2	2.10	0.51
1:A:1156:ASP:O	1:A:1160:THR:N	2.40	0.51
2:B:597:CYS:O	2:B:601:LEU:CB	2.58	0.51
3:C:661:ILE:HA	3:C:664:PHE:HB3	1.93	0.51
2:B:260:SER:O	2:B:264:THR:CB	2.59	0.51
3:C:61:SER:O	3:C:65:VAL:CB	2.58	0.51
4:D:927:ASN:O	4:D:931:ILE:N	2.42	0.51
4:D:996:ARG:O	4:D:1000:SER:CB	2.58	0.51
7:G:272:LEU:HD23	7:G:322:LYS:HG2	1.92	0.51
8:H:214:VAL:O	8:H:218:VAL:CB	2.59	0.51
4:D:128:LEU:O	4:D:132:ASN:CB	2.59	0.51
4:D:997:LEU:O	4:D:1001:GLU:CB	2.59	0.51
5:E:578:LYS:O	5:E:582:GLU:CB	2.59	0.51
5:E:655:LEU:O	5:E:659:SER:CB	2.59	0.51
5:E:739:VAL:O	5:E:743:ASN:CB	2.59	0.51
6:F:111:THR:O	6:F:115:GLU:CB	2.58	0.51
6:F:226:PHE:O	6:F:230:VAL:CB	2.58	0.51
6:F:333:ASN:O	6:F:337:GLU:CB	2.59	0.51
3:C:112:ILE:O	3:C:116:VAL:CB	2.58	0.51
6:F:725:VAL:O	6:F:729:LEU:N	2.39	0.51
7:G:203:VAL:O	7:G:207:SER:CB	2.58	0.51
8:H:703:LYS:O	8:H:707:LYS:HB2	2.10	0.51
3:C:462:LEU:N	3:C:551:ASP:OD2	2.41	0.51
3:C:627:GLN:O	3:C:631:ASP:HB2	2.11	0.51
5:E:773:LEU:O	5:E:778:SER:N	2.36	0.51
4:D:110:ALA:O	4:D:114:ILE:N	2.42	0.51
7:G:30:ASN:O	7:G:34:LYS:CB	2.59	0.51
7:G:339:GLN:O	7:G:343:SER:CB	2.59	0.51
8:H:348:LEU:HA	8:H:373:LEU:HA	1.92	0.51
8:H:446:ASP:O	8:H:450:ILE:CB	2.59	0.51
8:H:529:THR:HG22	8:H:569:LEU:HD13	1.93	0.51
2:B:354:ILE:HA	2:B:357:TRP:H	1.76	0.51
3:C:235:ILE:O	3:C:239:GLU:CB	2.59	0.51
3:C:360:TYR:O	3:C:364:LEU:CB	2.59	0.51
3:C:426:ILE:HG23	3:C:475:GLN:HE21	1.75	0.51
7:G:162:GLN:HB2	7:G:217:LEU:HD21	1.93	0.51
1:A:893:GLU:O	1:A:897:SER:CB	2.59	0.50
3:C:465:THR:HG23	3:C:502:ARG:HH22	1.74	0.50
6:F:603:ASN:O	6:F:607:ARG:N	2.44	0.50
7:G:33:LEU:O	7:G:37:ALA:CB	2.56	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:310:GLU:O	7:G:313:ASN:HB2	2.11	0.50
7:G:520:ARG:O	7:G:524:ALA:CB	2.59	0.50
1:A:697:MET:O	1:A:701:ASN:CB	2.59	0.50
4:D:322:GLY:O	4:D:326:ILE:CB	2.59	0.50
7:G:109:ASP:HA	7:G:112:GLU:HB2	1.94	0.50
7:G:334:THR:HA	7:G:337:VAL:HG12	1.94	0.50
7:G:589:TYR:OH	7:G:609:TYR:O	2.23	0.50
1:A:1087:PRO:O	1:A:1091:LYS:CB	2.59	0.50
2:B:140:ILE:O	2:B:144:SER:CB	2.59	0.50
6:F:269:GLN:O	6:F:273:THR:CB	2.59	0.50
8:H:225:SER:O	8:H:229:ILE:CB	2.59	0.50
2:B:611:PHE:O	2:B:615:LEU:CB	2.59	0.50
3:C:108:ILE:O	3:C:112:ILE:CB	2.59	0.50
1:A:794:ARG:O	1:A:798:TYR:CB	2.59	0.50
1:A:1158:MET:O	1:A:1162:SER:CB	2.60	0.50
2:B:897:GLY:O	2:B:938:PHE:N	2.44	0.50
7:G:161:PRO:HD2	7:G:217:LEU:HG	1.93	0.50
7:G:588:MET:O	7:G:592:PHE:CB	2.56	0.50
4:D:113:SER:O	4:D:117:ALA:N	2.40	0.50
8:H:208:THR:O	8:H:212:ILE:CB	2.59	0.50
1:A:1045:VAL:O	1:A:1049:TYR:CB	2.60	0.50
2:B:466:LEU:O	2:B:470:LYS:CB	2.60	0.50
2:B:613:THR:O	2:B:617:GLN:CB	2.59	0.50
5:E:77:PHE:O	5:E:81:LEU:N	2.42	0.50
5:E:567:ASN:H	5:E:570:LEU:H	1.60	0.50
3:C:559:ALA:HB1	3:C:582:LEU:HD22	1.93	0.50
5:E:156:GLN:O	5:E:160:GLN:CB	2.60	0.50
5:E:686:ILE:O	5:E:690:GLU:CB	2.59	0.50
5:E:696:ILE:O	5:E:700:THR:CB	2.60	0.50
8:H:170:SER:O	8:H:174:ARG:CB	2.59	0.50
7:G:258:ASP:HA	7:G:261:TYR:HE2	1.77	0.50
3:C:305:ILE:O	3:C:309:PHE:CB	2.60	0.49
5:E:397:LEU:O	5:E:401:PHE:CB	2.60	0.49
6:F:706:LEU:O	6:F:710:LEU:N	2.44	0.49
8:H:233:ASN:O	8:H:237:ASN:CB	2.59	0.49
8:H:612:LEU:O	8:H:616:THR:OG1	2.21	0.49
1:A:1165:VAL:O	1:A:1169:TRP:CB	2.60	0.49
3:C:262:GLU:H	3:C:265:LYS:H	1.58	0.49
5:E:84:LEU:O	5:E:88:ASN:N	2.45	0.49
5:E:384:HIS:O	5:E:388:THR:CB	2.60	0.49
1:A:812:GLU:O	1:A:816:LYS:CB	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:369:LEU:O	2:B:373:SER:CB	2.61	0.49
4:D:647:THR:O	4:D:649:ASN:N	2.42	0.49
5:E:61:ARG:O	5:E:65:TRP:N	2.46	0.49
6:F:115:GLU:O	6:F:119:ILE:CB	2.60	0.49
6:F:726:GLN:O	6:F:730:ILE:N	2.46	0.49
7:G:199:GLN:NE2	7:G:267:SER:OG	2.45	0.49
4:D:328:PHE:O	4:D:332:THR:CB	2.60	0.49
5:E:76:THR:O	5:E:80:THR:N	2.44	0.49
5:E:82:LYS:O	5:E:86:ASN:N	2.42	0.49
5:E:651:GLU:O	5:E:655:LEU:CB	2.61	0.49
5:E:697:LEU:O	5:E:701:ILE:CB	2.60	0.49
7:G:436:ASP:OD2	7:G:503:ARG:NH2	2.45	0.49
7:G:470:GLN:HE22	7:G:563:THR:HA	1.77	0.49
5:E:346:HIS:O	5:E:351:PHE:N	2.44	0.49
8:H:444:LYS:O	8:H:448:CYS:CB	2.61	0.49
8:H:460:ARG:O	8:H:464:SER:CB	2.60	0.49
8:H:547:LEU:HD21	8:H:595:ILE:HG12	1.95	0.49
4:D:719:ILE:O	4:D:723:LYS:CB	2.60	0.49
7:G:114:ILE:HA	7:G:121:ARG:HG2	1.93	0.49
5:E:333:SER:O	5:E:337:LYS:CB	2.61	0.49
6:F:144:GLU:O	6:F:148:LYS:CB	2.61	0.49
7:G:231:PRO:O	7:G:301:PHE:N	2.39	0.49
7:G:339:GLN:O	7:G:343:SER:HB2	2.12	0.49
7:G:388:GLY:O	7:G:392:ALA:CB	2.61	0.49
1:A:1161:ILE:O	1:A:1165:VAL:CB	2.61	0.49
2:B:848:GLY:O	2:B:852:ILE:N	2.45	0.49
3:C:734:ILE:O	3:C:738:TYR:CB	2.60	0.49
5:E:574:ASP:O	5:E:578:LYS:CB	2.60	0.49
1:A:700:SER:O	1:A:704:ASN:CB	2.61	0.49
2:B:8:ASP:HA	3:C:142:LEU:HA	1.95	0.49
3:C:362:LYS:O	3:C:366:SER:CB	2.60	0.49
3:C:503:GLN:HA	3:C:506:TRP:HD1	1.78	0.49
5:E:760:THR:O	5:E:764:LEU:CB	2.61	0.49
6:F:623:VAL:O	6:F:627:TYR:CB	2.60	0.49
6:F:879:THR:O	6:F:883:ASP:CB	2.61	0.49
7:G:481:THR:O	7:G:485:GLN:HB2	2.13	0.49
8:H:557:GLU:OE2	8:H:621:LYS:NZ	2.40	0.49
1:A:1198:VAL:O	1:A:1202:SER:CB	2.61	0.49
2:B:824:LEU:O	2:B:827:THR:CB	2.61	0.49
5:E:619:LEU:O	5:E:623:TYR:N	2.44	0.49
5:E:768:GLU:O	5:E:772:LEU:N	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:51:LEU:O	7:G:55:ASN:CB	2.61	0.49
7:G:525:ASN:HA	7:G:528:ASP:HB2	1.94	0.49
7:G:542:LYS:HG2	7:G:545:ILE:HD12	1.95	0.49
3:C:3:SER:O	3:C:7:GLN:N	2.41	0.48
3:C:547:ALA:HA	3:C:550:ASN:HD22	1.78	0.48
6:F:261:ILE:O	6:F:265:GLU:CB	2.61	0.48
8:H:253:LEU:O	8:H:257:LEU:N	2.43	0.48
1:A:1047:ARG:O	1:A:1051:GLN:CB	2.60	0.48
4:D:92:VAL:O	4:D:96:HIS:N	2.36	0.48
3:C:52:GLU:O	3:C:56:LYS:CB	2.61	0.48
3:C:723:LEU:HB3	3:C:753:ILE:HD13	1.95	0.48
4:D:825:PHE:O	4:D:829:ILE:CB	2.61	0.48
5:E:679:ILE:O	5:E:684:SER:N	2.44	0.48
7:G:142:GLU:HB3	7:G:146:ARG:HH12	1.77	0.48
1:A:797:PHE:O	1:A:801:VAL:CB	2.61	0.48
3:C:597:SER:O	3:C:600:LEU:HB2	2.12	0.48
5:E:87:LEU:O	5:E:91:THR:N	2.47	0.48
5:E:568:TYR:H	5:E:572:ASP:H	1.61	0.48
7:G:539:SER:OG	7:G:541:ASP:O	2.31	0.48
2:B:501:ILE:O	2:B:505:LYS:CB	2.61	0.48
8:H:404:THR:N	8:H:415:PHE:O	2.43	0.48
1:A:699:MET:O	1:A:703:SER:CB	2.61	0.48
3:C:575:GLU:O	3:C:579:THR:OG1	2.26	0.48
5:E:106:GLU:O	5:E:110:SER:CB	2.61	0.48
5:E:252:ASN:O	5:E:256:ILE:CB	2.62	0.48
5:E:759:GLN:O	5:E:763:THR:CB	2.62	0.48
6:F:424:SER:O	6:F:428:PHE:CB	2.62	0.48
7:G:40:SER:O	7:G:44:SER:CB	2.61	0.48
8:H:212:ILE:O	8:H:216:GLU:CB	2.61	0.48
8:H:223:ASN:O	8:H:227:ASN:CB	2.61	0.48
8:H:328:LEU:O	8:H:332:VAL:CB	2.61	0.48
8:H:739:TYR:OH	8:H:740:LYS:NZ	2.47	0.48
3:C:467:THR:O	3:C:471:MET:CB	2.62	0.48
8:H:218:VAL:O	8:H:222:ILE:CB	2.62	0.48
1:A:677:TYR:O	1:A:681:VAL:CB	2.62	0.48
1:A:798:TYR:O	1:A:802:THR:CB	2.61	0.48
4:D:327:GLY:O	4:D:331:LYS:CB	2.62	0.48
6:F:49:GLY:HA2	6:F:50:GLN:HA	1.59	0.48
7:G:249:PHE:O	7:G:253:GLU:CB	2.61	0.48
8:H:358:ASN:N	8:H:363:LYS:O	2.47	0.48
2:B:263:LEU:O	2:B:267:ARG:N	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:735:TRP:CD1	3:C:772:ALA:HB1	2.49	0.48
4:D:961:MET:O	4:D:965:SER:CB	2.62	0.48
7:G:10:ALA:O	7:G:14:VAL:CB	2.61	0.48
1:A:928:GLU:O	1:A:932:THR:CB	2.62	0.48
2:B:325:LEU:O	2:B:329:ASN:CB	2.62	0.48
3:C:109:TYR:O	3:C:113:TYR:CB	2.62	0.48
3:C:555:ALA:O	3:C:559:ALA:CB	2.52	0.48
4:D:420:GLU:O	4:D:424:ILE:N	2.39	0.48
5:E:325:VAL:O	5:E:329:ILE:CB	2.62	0.48
5:E:577:LEU:O	5:E:581:VAL:CB	2.62	0.48
5:E:652:ILE:O	5:E:656:LEU:CB	2.62	0.48
6:F:622:LEU:O	6:F:626:ASP:N	2.37	0.48
7:G:209:LEU:HA	7:G:212:LYS:HD2	1.94	0.48
8:H:213:GLN:O	8:H:217:GLU:CB	2.61	0.48
8:H:563:GLU:O	8:H:567:GLU:CB	2.62	0.48
1:A:868:PRO:O	1:A:872:GLU:CB	2.62	0.47
3:C:148:LEU:O	3:C:152:ALA:N	2.47	0.47
3:C:382:LEU:O	3:C:386:ALA:HB3	2.13	0.47
3:C:597:SER:HA	3:C:600:LEU:HD22	1.95	0.47
4:D:74:ARG:O	4:D:78:PHE:CB	2.62	0.47
5:E:29:PHE:O	5:E:34:SER:N	2.40	0.47
7:G:330:LEU:O	7:G:334:THR:OG1	2.29	0.47
7:G:340:VAL:O	7:G:344:LEU:CB	2.60	0.47
1:A:1089:GLY:O	1:A:1093:SER:CB	2.62	0.47
3:C:193:ASP:O	3:C:197:TYR:CB	2.62	0.47
4:D:288:GLN:O	4:D:292:ASP:CB	2.62	0.47
5:E:313:ILE:HA	5:E:314:ILE:HA	1.72	0.47
5:E:353:GLN:O	5:E:357:ALA:CB	2.62	0.47
6:F:735:ASP:O	6:F:739:ARG:N	2.43	0.47
7:G:426:LEU:HA	7:G:429:CYS:HB3	1.96	0.47
8:H:266:LYS:O	8:H:270:LEU:CB	2.62	0.47
2:B:19:THR:HA	2:B:20:ILE:HA	1.64	0.47
2:B:74:GLU:O	2:B:78:TYR:CB	2.62	0.47
2:B:155:PHE:O	2:B:159:VAL:N	2.44	0.47
2:B:351:GLU:O	2:B:355:LEU:N	2.47	0.47
3:C:111:ARG:O	3:C:115:PHE:CB	2.62	0.47
3:C:775:MET:O	3:C:779:TYR:CB	2.63	0.47
8:H:563:GLU:O	8:H:567:GLU:HB2	2.14	0.47
1:A:1036:SER:O	1:A:1038:HIS:N	2.47	0.47
2:B:821:LYS:O	2:B:825:ARG:N	2.47	0.47
3:C:290:PRO:HA	3:C:291:ARG:HA	1.57	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:741:ILE:O	5:E:745:ILE:CB	2.62	0.47
6:F:672:ILE:O	6:F:676:ASP:CB	2.62	0.47
8:H:745:ILE:O	8:H:749:SER:OG	2.27	0.47
2:B:372:LEU:O	2:B:376:MET:CB	2.63	0.47
3:C:269:TYR:O	3:C:274:GLY:N	2.47	0.47
4:D:252:ILE:HA	4:D:253:ILE:HA	1.61	0.47
4:D:902:ASN:O	4:D:906:ILE:CB	2.62	0.47
1:A:1106:ILE:HA	1:A:1107:LYS:HA	1.64	0.47
2:B:106:VAL:HA	2:B:107:ASN:HA	1.58	0.47
4:D:119:GLU:O	4:D:124:LEU:N	2.48	0.47
6:F:730:ILE:O	6:F:735:ASP:N	2.46	0.47
7:G:249:PHE:O	7:G:253:GLU:HB3	2.14	0.47
7:G:338:ARG:O	7:G:342:GLN:HB2	2.13	0.47
2:B:461:ILE:O	2:B:465:TRP:CB	2.63	0.47
3:C:308:MET:O	3:C:312:MET:CB	2.63	0.47
3:C:428:VAL:O	3:C:431:THR:OG1	2.24	0.47
3:C:731:ILE:HG13	3:C:768:ILE:HG21	1.96	0.47
5:E:445:ALA:O	5:E:449:ASP:CB	2.63	0.47
6:F:493:SER:HA	6:F:496:ALA:HB3	1.96	0.47
6:F:497:PHE:O	6:F:500:GLU:N	2.43	0.47
2:B:254:GLU:HA	2:B:258:GLU:H	1.80	0.47
2:B:545:SER:O	2:B:549:ASN:CB	2.63	0.47
2:B:707:LEU:HA	7:G:604:ARG:HH21	1.79	0.47
3:C:707:ASP:O	3:C:711:THR:N	2.48	0.47
4:D:942:GLN:O	4:D:946:ARG:CB	2.63	0.47
7:G:591:ARG:HD3	7:G:595:ARG:HH22	1.79	0.47
3:C:303:ASN:O	3:C:307:GLU:CB	2.63	0.47
7:G:104:VAL:O	7:G:108:ASP:CB	2.63	0.47
5:E:443:LEU:O	5:E:447:LEU:CB	2.63	0.47
8:H:227:ASN:O	8:H:231:THR:CB	2.63	0.47
3:C:506:TRP:HB3	3:C:510:ILE:HD12	1.97	0.46
4:D:218:HIS:O	4:D:222:ASN:CB	2.63	0.46
5:E:571:ASN:O	5:E:575:SER:N	2.48	0.46
5:E:584:THR:O	5:E:588:MET:CB	2.64	0.46
7:G:18:GLU:O	7:G:22:THR:N	2.43	0.46
7:G:312:ILE:HD12	7:G:315:VAL:HB	1.96	0.46
7:G:574:LYS:O	7:G:578:LYS:HB2	2.15	0.46
8:H:243:LEU:O	8:H:247:ARG:CB	2.63	0.46
1:A:795:LEU:O	1:A:799:GLU:CB	2.64	0.46
1:A:1294:CYS:O	1:A:1298:GLN:N	2.49	0.46
2:B:900:SER:O	2:B:904:SER:N	2.43	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:716:VAL:HG23	3:C:738:TYR:HE1	1.81	0.46
4:D:190:ARG:O	4:D:194:LEU:CB	2.63	0.46
7:G:412:THR:O	7:G:503:ARG:NE	2.48	0.46
2:B:354:ILE:O	2:B:358:MET:N	2.39	0.46
3:C:628:GLN:O	3:C:632:THR:CB	2.63	0.46
4:D:572:PRO:HA	4:D:573:SER:HA	1.50	0.46
4:D:916:LEU:O	4:D:920:ALA:CB	2.63	0.46
8:H:475:PRO:HA	8:H:476:GLY:HA3	1.56	0.46
3:C:227:ARG:O	3:C:231:ILE:CB	2.64	0.46
5:E:225:GLU:O	5:E:229:GLU:CB	2.63	0.46
5:E:447:LEU:O	5:E:451:THR:CB	2.63	0.46
5:E:746:PHE:O	5:E:751:LYS:N	2.48	0.46
7:G:247:LEU:HD11	7:G:314:ASP:HB3	1.98	0.46
7:G:374:ASP:O	7:G:378:ARG:CB	2.63	0.46
7:G:433:ASP:OD1	7:G:503:ARG:NH2	2.35	0.46
8:H:613:LYS:NZ	8:H:677:ASP:OD2	2.38	0.46
3:C:196:THR:O	3:C:200:VAL:CB	2.63	0.46
5:E:253:GLU:O	5:E:257:ILE:CB	2.64	0.46
6:F:112:SER:O	6:F:116:ILE:CB	2.63	0.46
7:G:341:THR:OG1	7:G:342:GLN:N	2.49	0.46
1:A:863:ASN:O	1:A:867:GLN:N	2.49	0.46
3:C:37:GLU:O	3:C:41:ASN:CB	2.63	0.46
5:E:16:LYS:O	5:E:20:PHE:N	2.44	0.46
5:E:354:ARG:O	5:E:358:GLN:CB	2.64	0.46
6:F:195:LEU:O	6:F:199:ASP:CB	2.64	0.46
6:F:560:THR:O	6:F:564:ALA:HB3	2.15	0.46
7:G:77:LEU:O	7:G:81:ALA:CB	2.64	0.46
7:G:113:ASP:O	7:G:116:SER:OG	2.27	0.46
1:A:676:PRO:O	1:A:680:LYS:CB	2.64	0.46
1:A:856:GLN:O	1:A:860:GLU:N	2.47	0.46
3:C:582:LEU:O	3:C:585:THR:OG1	2.32	0.46
5:E:25:THR:HA	5:E:26:VAL:HA	1.52	0.46
8:H:172:SER:O	8:H:176:MET:CB	2.63	0.46
1:A:670:ILE:O	1:A:674:ILE:N	2.46	0.46
1:A:831:ILE:O	1:A:835:THR:CB	2.63	0.46
2:B:76:LEU:O	2:B:80:ARG:CB	2.64	0.46
4:D:931:ILE:O	4:D:935:LEU:CB	2.64	0.46
5:E:649:SER:O	5:E:653:LEU:CB	2.64	0.46
2:B:182:CYS:H	2:B:183:ASP:HA	1.81	0.46
3:C:301:ILE:O	3:C:305:ILE:CB	2.64	0.46
6:F:601:ILE:O	6:F:603:ASN:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:259:GLN:O	8:H:263:ILE:N	2.49	0.46
1:A:1029:GLU:O	1:A:1033:LEU:N	2.46	0.46
2:B:462:ILE:O	2:B:466:LEU:CB	2.64	0.46
3:C:620:TRP:HE1	3:C:626:ALA:HB2	1.80	0.46
4:D:290:ILE:O	4:D:294:SER:CB	2.64	0.46
4:D:965:SER:O	4:D:969:SER:N	2.45	0.46
5:E:573:VAL:O	5:E:577:LEU:CB	2.64	0.46
7:G:17:GLN:O	7:G:21:LYS:N	2.41	0.46
7:G:195:GLY:HA2	7:G:198:ILE:HG22	1.98	0.46
8:H:536:LEU:O	8:H:540:VAL:N	2.44	0.46
1:A:1009:VAL:HA	1:A:1108:ASP:HA	1.98	0.45
2:B:961:LYS:HA	2:B:964:ALA:HB2	1.98	0.45
3:C:469:PHE:HB3	3:C:558:TYR:CD2	2.51	0.45
3:C:603:LEU:HD23	3:C:603:LEU:HA	1.82	0.45
4:D:718:SER:O	4:D:722:PHE:CB	2.64	0.45
5:E:648:MET:O	5:E:652:ILE:CB	2.64	0.45
7:G:319:LEU:HB3	7:G:322:LYS:HZ1	1.80	0.45
1:A:810:VAL:O	1:A:814:GLN:CB	2.64	0.45
2:B:881:GLN:O	2:B:885:ALA:CB	2.64	0.45
3:C:735:TRP:O	3:C:739:LEU:HB2	2.15	0.45
5:E:182:GLN:O	5:E:193:LEU:N	2.44	0.45
7:G:211:LEU:O	7:G:215:ALA:CB	2.62	0.45
3:C:470:GLN:HG2	3:C:558:TYR:HE2	1.80	0.45
3:C:751:VAL:HA	3:C:765:ARG:HD2	1.98	0.45
5:E:345:THR:HA	5:E:346:HIS:HA	1.60	0.45
7:G:387:ASN:HA	7:G:390:LEU:HD12	1.97	0.45
8:H:673:GLU:O	8:H:677:ASP:HB2	2.16	0.45
2:B:75:SER:O	2:B:79:ILE:CB	2.63	0.45
4:D:75:TYR:O	4:D:79:ASN:CB	2.65	0.45
4:D:210:ASN:O	4:D:214:GLU:CB	2.65	0.45
4:D:772:ILE:HA	4:D:773:ASP:HA	1.59	0.45
6:F:704:ILE:O	6:F:708:GLN:N	2.48	0.45
8:H:642:ASP:HA	8:H:645:LEU:HD13	1.98	0.45
1:A:689:ILE:O	1:A:693:SER:CB	2.64	0.45
2:B:421:LYS:HA	2:B:422:ASP:HA	1.70	0.45
8:H:614:SER:OG	8:H:615:GLY:N	2.50	0.45
2:B:7:GLY:HA3	3:C:146:HIS:HA	1.98	0.45
5:E:659:SER:O	5:E:663:ILE:CB	2.64	0.45
7:G:70:SER:O	7:G:121:ARG:NH2	2.36	0.45
7:G:135:GLU:HA	7:G:138:ILE:HD12	1.98	0.45
7:G:203:VAL:O	7:G:207:SER:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:67:SER:HA	2:B:68:ARG:HA	1.72	0.45
6:F:569:SER:O	6:F:573:ALA:CB	2.64	0.45
6:F:714:PHE:O	6:F:719:GLN:N	2.50	0.45
7:G:13:LEU:O	7:G:17:GLN:N	2.41	0.45
1:A:1022:LEU:O	1:A:1026:LEU:N	2.48	0.45
3:C:258:ARG:HA	3:C:259:LEU:HA	1.68	0.45
3:C:714:PHE:HA	3:C:717:MET:HB2	1.98	0.45
7:G:339:GLN:HA	7:G:342:GLN:HB3	1.98	0.45
8:H:585:SER:HA	8:H:588:ILE:HD12	1.98	0.45
5:E:353:GLN:O	5:E:357:ALA:HB3	2.16	0.45
6:F:230:VAL:O	6:F:234:GLU:CB	2.65	0.45
7:G:485:GLN:HA	7:G:488:GLU:HB2	1.98	0.45
1:A:936:GLU:O	1:A:940:TYR:N	2.50	0.45
2:B:881:GLN:O	2:B:885:ALA:HB2	2.17	0.45
4:D:1048:LYS:O	4:D:1052:LEU:CB	2.65	0.45
6:F:228:GLN:O	6:F:232:LYS:CB	2.65	0.45
7:G:459:ALA:HA	7:G:510:ARG:HD3	1.98	0.45
1:A:1167:SER:O	1:A:1171:THR:N	2.49	0.44
3:C:189:ASP:O	3:C:193:ASP:N	2.42	0.44
3:C:58:LEU:O	3:C:62:LYS:CB	2.64	0.44
3:C:511:SER:HA	3:C:514:ILE:HD12	1.98	0.44
4:D:517:ILE:HA	4:D:518:PHE:HA	1.80	0.44
5:E:89:GLU:O	5:E:93:ASN:CB	2.65	0.44
7:G:267:SER:O	7:G:271:VAL:N	2.40	0.44
8:H:417:PHE:HA	8:H:422:SER:HA	1.99	0.44
1:A:655:GLU:O	1:A:659:LEU:CB	2.65	0.44
6:F:883:ASP:O	6:F:887:ILE:CB	2.65	0.44
7:G:349:ILE:HG23	7:G:437:THR:HG21	1.99	0.44
3:C:325:LEU:O	3:C:329:ASP:CB	2.66	0.44
4:D:1042:LYS:O	4:D:1046:ARG:N	2.51	0.44
5:E:632:ASN:HA	5:E:707:LYS:HA	2.00	0.44
6:F:733:GLU:O	6:F:737:LEU:N	2.51	0.44
7:G:312:ILE:HG13	7:G:316:LYS:HE2	2.00	0.44
3:C:768:ILE:O	3:C:772:ALA:HB2	2.18	0.44
5:E:407:ASP:O	5:E:411:GLN:N	2.51	0.44
5:E:772:LEU:O	5:E:776:HIS:N	2.48	0.44
6:F:89:GLU:O	6:F:93:GLN:CB	2.66	0.44
6:F:412:ALA:HA	6:F:413:THR:HA	1.73	0.44
7:G:312:ILE:HD11	7:G:330:LEU:HB3	2.00	0.44
1:A:659:LEU:O	1:A:663:ASN:CB	2.66	0.44
2:B:322:SER:O	2:B:326:ASN:CB	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:197:TYR:O	3:C:201:GLU:CB	2.64	0.44
3:C:448:ARG:NH2	3:C:513:GLU:OE1	2.51	0.44
6:F:520:LEU:O	6:F:524:VAL:N	2.47	0.44
1:A:691:THR:O	1:A:695:PHE:CB	2.66	0.44
4:D:202:THR:O	4:D:204:GLU:N	2.51	0.44
5:E:213:SER:HA	6:F:73:ASP:H	1.83	0.44
6:F:724:SER:O	6:F:726:GLN:N	2.51	0.44
6:F:862:SER:HA	6:F:882:MET:HA	2.00	0.44
8:H:682:LEU:HD13	8:H:682:LEU:HA	1.85	0.44
3:C:546:ILE:O	3:C:550:ASN:ND2	2.51	0.44
4:D:76:GLU:O	4:D:80:GLN:CB	2.66	0.44
4:D:836:LYS:O	4:D:840:ILE:CB	2.66	0.44
5:E:693:ILE:O	5:E:697:LEU:N	2.51	0.44
8:H:440:ILE:HA	8:H:443:ALA:HB3	1.99	0.44
2:B:397:SER:HA	2:B:398:GLN:HA	1.82	0.44
3:C:510:ILE:HD11	3:C:548:VAL:HG21	2.00	0.44
4:D:1059:VAL:H	4:D:1063:ASN:HA	1.83	0.44
5:E:763:THR:O	5:E:767:GLU:CB	2.66	0.44
4:D:684:HIS:HA	5:E:866:VAL:HA	2.00	0.43
5:E:212:SER:H	6:F:67:PHE:HA	1.83	0.43
6:F:342:LYS:HA	6:F:343:LEU:HA	1.75	0.43
8:H:657:LEU:HD11	8:H:705:ILE:HG12	2.00	0.43
2:B:594:GLY:O	2:B:596:SER:N	2.51	0.43
3:C:748:ASP:HB3	3:C:802:PHE:HB3	2.00	0.43
4:D:398:ARG:O	4:D:402:TRP:CB	2.65	0.43
6:F:602:VAL:O	6:F:606:ILE:N	2.48	0.43
7:G:538:LYS:NZ	7:G:598:ASP:O	2.50	0.43
1:A:738:SER:HA	1:A:739:LEU:HA	1.74	0.43
1:A:969:PRO:HA	1:A:970:PRO:HA	1.70	0.43
1:A:1005:SER:O	1:A:1009:VAL:CB	2.66	0.43
3:C:681:PHE:O	3:C:684:ALA:HB3	2.17	0.43
3:C:716:VAL:O	3:C:720:PHE:HB2	2.18	0.43
5:E:197:LYS:O	5:E:201:ASN:N	2.51	0.43
7:G:179:LEU:HD23	7:G:182:LEU:HD12	2.00	0.43
7:G:77:LEU:HD22	7:G:110:MET:HG3	2.00	0.43
7:G:398:ARG:HG2	7:G:402:LEU:HD11	2.00	0.43
3:C:591:GLU:O	3:C:594:GLN:HB2	2.17	0.43
3:C:621:TYR:HE2	3:C:675:LYS:HD3	1.83	0.43
4:D:962:ASN:O	4:D:966:LEU:CB	2.66	0.43
7:G:559:LEU:O	7:G:563:THR:OG1	2.25	0.43
3:C:724:SER:O	3:C:757:ARG:NH2	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:67:GLN:O	5:E:71:LYS:CB	2.66	0.43
6:F:310:ASP:O	6:F:314:ASP:CB	2.66	0.43
7:G:542:LYS:HB3	7:G:546:LYS:HZ3	1.84	0.43
2:B:582:PRO:HA	2:B:583:LEU:HA	1.47	0.43
3:C:198:ASP:O	3:C:202:MET:N	2.47	0.43
3:C:750:LEU:HA	3:C:753:ILE:HB	2.01	0.43
5:E:734:PRO:O	5:E:738:ILE:CB	2.67	0.43
6:F:220:ILE:O	6:F:224:ILE:CB	2.66	0.43
1:A:1256:THR:HA	1:A:1257:SER:HA	1.79	0.43
2:B:253:ASN:O	2:B:257:ILE:N	2.36	0.43
2:B:575:SER:HA	2:B:576:ASN:HA	1.67	0.43
4:D:586:PHE:HA	4:D:587:ASP:HA	1.73	0.43
4:D:869:VAL:HA	4:D:870:GLY:HA2	1.70	0.43
1:A:1157:TYR:O	1:A:1161:ILE:CB	2.67	0.43
6:F:503:ILE:O	6:F:507:ASP:N	2.50	0.43
7:G:60:LEU:O	7:G:64:ILE:CB	2.67	0.43
7:G:173:TYR:HA	7:G:256:LEU:HD22	2.01	0.43
3:C:212:ILE:O	3:C:216:LYS:CB	2.66	0.43
1:A:1030:ILE:HA	1:A:1034:GLU:H	1.84	0.42
3:C:451:PRO:HA	3:C:544:TYR:HE1	1.84	0.42
3:C:562:ILE:HA	3:C:565:LYS:HB3	2.00	0.42
5:E:32:GLU:O	5:E:36:ASP:N	2.38	0.42
6:F:663:SER:O	6:F:667:ALA:HB2	2.19	0.42
7:G:366:ASN:HD21	7:G:471:ARG:HH21	1.67	0.42
3:C:560:VAL:HG22	3:C:583:GLU:HA	2.01	0.42
5:E:761:PHE:O	5:E:765:ILE:CB	2.66	0.42
6:F:431:GLY:O	6:F:435:ARG:CB	2.67	0.42
2:B:383:SER:O	2:B:387:ILE:N	2.51	0.42
3:C:642:PRO:HG2	3:C:643:GLN:HG3	2.00	0.42
3:C:735:TRP:HZ2	3:C:776:LEU:HD13	1.84	0.42
4:D:356:ASN:O	4:D:360:LYS:CB	2.67	0.42
5:E:180:VAL:HA	5:E:181:GLU:HA	1.66	0.42
7:G:327:TYR:HA	7:G:330:LEU:HD12	2.01	0.42
3:C:441:GLU:OE2	3:C:465:THR:N	2.53	0.42
6:F:227:LEU:O	6:F:231:THR:CB	2.67	0.42
7:G:465:LYS:HE2	7:G:465:LYS:HB2	1.90	0.42
7:G:547:GLU:O	7:G:551:LYS:HB2	2.19	0.42
8:H:685:LYS:O	8:H:688:SER:OG	2.29	0.42
2:B:528:LYS:O	2:B:532:ILE:N	2.52	0.42
3:C:382:LEU:O	3:C:386:ALA:CB	2.67	0.42
8:H:711:ASN:OD1	8:H:711:ASN:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:874:HIS:O	2:B:878:ILE:CB	2.67	0.42
2:B:939:GLN:HA	2:B:941:ASP:N	2.35	0.42
5:E:448:VAL:O	5:E:452:SER:CB	2.68	0.42
6:F:560:THR:O	6:F:564:ALA:CB	2.67	0.42
8:H:338:PHE:N	8:H:339:ILE:O	2.53	0.42
4:D:69:VAL:HA	4:D:70:GLY:HA2	1.77	0.42
7:G:155:SER:O	7:G:157:LYS:NZ	2.50	0.42
3:C:657:ILE:HG22	3:C:713:ASN:HD22	1.84	0.42
3:C:775:MET:O	3:C:779:TYR:HB3	2.19	0.42
3:C:779:TYR:O	3:C:783:MET:N	2.39	0.42
4:D:636:ARG:O	4:D:640:ASN:CB	2.67	0.42
6:F:155:ASN:O	6:F:159:SER:CB	2.67	0.42
7:G:368:VAL:HG13	7:G:479:ASN:HD22	1.84	0.42
7:G:428:SER:HA	7:G:496:LEU:HD22	2.02	0.42
2:B:26:TRP:HA	2:B:27:ALA:HA	1.79	0.42
2:B:901:ASN:HA	2:B:902:ASP:HA	1.60	0.42
3:C:545:LEU:HD13	3:C:596:SER:HB2	2.00	0.42
5:E:614:TYR:HA	5:E:618:ALA:HB3	2.01	0.42
7:G:176:ASP:HA	7:G:179:LEU:HB2	2.01	0.42
7:G:484:GLU:O	7:G:488:GLU:N	2.52	0.42
8:H:662:VAL:O	8:H:666:GLN:HB3	2.20	0.42
2:B:299:ILE:O	2:B:303:LEU:CB	2.68	0.42
7:G:162:GLN:HA	7:G:165:ILE:HB	2.01	0.42
7:G:181:ALA:O	7:G:185:ILE:HB	2.20	0.42
7:G:328:ASN:OD1	7:G:329:LEU:N	2.51	0.42
7:G:546:LYS:HD3	7:G:606:HIS:HD2	1.85	0.42
1:A:932:THR:O	1:A:936:GLU:N	2.53	0.41
4:D:858:PHE:HA	4:D:859:PHE:HA	1.80	0.41
5:E:436:PHE:O	5:E:440:LYS:N	2.47	0.41
1:A:903:TRP:HA	1:A:905:THR:H	1.85	0.41
2:B:620:ILE:HA	2:B:621:THR:HA	1.75	0.41
3:C:420:LYS:HA	3:C:423:LEU:HD12	2.02	0.41
3:C:683:GLU:O	3:C:687:ARG:N	2.53	0.41
4:D:597:LYS:O	4:D:601:THR:CB	2.68	0.41
7:G:137:LEU:HD13	7:G:140:ARG:HH21	1.84	0.41
7:G:203:VAL:O	7:G:207:SER:OG	2.27	0.41
7:G:338:ARG:O	7:G:342:GLN:CB	2.68	0.41
7:G:402:LEU:HD13	7:G:406:TYR:CZ	2.54	0.41
7:G:426:LEU:O	7:G:430:PHE:HB3	2.19	0.41
7:G:519:TRP:CZ2	7:G:559:LEU:HB3	2.55	0.41
7:G:548:LYS:O	7:G:552:PHE:CB	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:197:LYS:O	2:B:201:GLU:N	2.43	0.41
2:B:379:LYS:O	2:B:382:HIS:C	2.58	0.41
3:C:654:ASP:HB2	3:C:709:LEU:HD23	2.02	0.41
7:G:98:LYS:O	7:G:102:GLN:HB2	2.19	0.41
7:G:412:THR:HB	7:G:506:ARG:HE	1.86	0.41
1:A:1088:VAL:O	1:A:1092:ASN:CB	2.69	0.41
1:A:1292:TRP:O	1:A:1296:GLN:N	2.52	0.41
3:C:149:LEU:HA	3:C:152:ALA:HB3	2.02	0.41
5:E:766:GLY:HA3	5:E:808:SER:H	1.86	0.41
6:F:569:SER:O	6:F:573:ALA:HB2	2.19	0.41
7:G:165:ILE:HD11	7:G:245:ALA:HB2	2.02	0.41
7:G:344:LEU:HA	7:G:347:ASP:HB3	2.02	0.41
8:H:252:ASP:O	8:H:256:VAL:N	2.50	0.41
8:H:662:VAL:O	8:H:666:GLN:CB	2.68	0.41
3:C:221:GLU:O	3:C:225:ASP:CB	2.69	0.41
4:D:141:SER:O	4:D:145:LEU:N	2.50	0.41
4:D:794:GLU:O	4:D:798:LEU:N	2.53	0.41
5:E:157:ASN:O	5:E:161:SER:CB	2.68	0.41
5:E:299:LYS:HA	5:E:300:PHE:HA	1.88	0.41
7:G:573:LEU:HD23	7:G:573:LEU:HA	1.91	0.41
3:C:280:MET:HA	3:C:281:SER:HA	1.71	0.41
3:C:557:ASP:O	3:C:561:ALA:CB	2.54	0.41
6:F:736:SER:O	6:F:740:GLN:CB	2.68	0.41
2:B:275:ALA:HA	2:B:276:SER:HA	1.62	0.41
3:C:237:LYS:O	3:C:241:GLU:CB	2.68	0.41
3:C:455:ASP:H	3:C:460:LEU:HD23	1.84	0.41
4:D:1050:GLY:O	4:D:1054:SER:N	2.54	0.41
1:A:847:CYS:N	1:A:848:LYS:HA	2.36	0.41
1:A:951:SER:HA	1:A:952:SER:HA	1.92	0.41
2:B:838:PRO:HA	2:B:903:GLY:N	2.36	0.41
2:B:845:PHE:HA	2:B:846:ARG:HA	1.75	0.41
5:E:98:PHE:O	5:E:101:GLN:N	2.52	0.41
5:E:382:ILE:O	5:E:386:LEU:CB	2.68	0.41
7:G:105:HIS:HA	7:G:108:ASP:HB3	2.03	0.41
4:D:817:LEU:O	4:D:820:LYS:N	2.54	0.41
5:E:324:ASP:O	5:E:328:VAL:CB	2.69	0.41
7:G:172:PRO:HD2	7:G:249:PHE:HE1	1.86	0.41
7:G:476:ILE:HG21	7:G:511:TYR:CZ	2.56	0.41
7:G:574:LYS:O	7:G:578:LYS:CB	2.68	0.41
8:H:383:SER:HA	8:H:384:ARG:HA	1.75	0.41
1:A:811:GLU:O	1:A:815:LYS:CB	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:233:ASN:O	5:E:237:GLU:CB	2.69	0.41
7:G:195:GLY:O	7:G:199:GLN:HB3	2.20	0.41
8:H:557:GLU:HA	8:H:560:LEU:HD12	2.03	0.41
3:C:767:LYS:O	3:C:771:GLN:HB2	2.21	0.40
6:F:251:LEU:O	6:F:255:GLY:N	2.37	0.40
6:F:646:GLN:HA	6:F:647:ASN:HA	1.83	0.40
7:G:179:LEU:HD13	7:G:260:LEU:HD21	2.03	0.40
1:A:908:LYS:HA	1:A:909:GLU:HA	1.88	0.40
2:B:209:LYS:O	2:B:213:LEU:N	2.52	0.40
5:E:60:ILE:O	5:E:64:ILE:N	2.53	0.40
6:F:477:PRO:O	6:F:481:ILE:CB	2.70	0.40
7:G:343:SER:O	7:G:347:ASP:CB	2.69	0.40
7:G:491:GLU:O	7:G:495:MET:N	2.52	0.40
2:B:250:ASN:H	2:B:251:ASP:C	2.24	0.40
7:G:167:LYS:HB3	7:G:169:MET:HG3	2.03	0.40
8:H:702:PHE:HA	8:H:705:ILE:HD12	2.03	0.40
6:F:91:ASN:O	6:F:95:LEU:CB	2.69	0.40
8:H:715:LEU:N	8:H:751:LYS:HE2	2.36	0.40
1:A:723:LYS:N	4:D:94:ASN:O	2.53	0.40
4:D:96:HIS:O	4:D:98:GLN:N	2.54	0.40
7:G:309:VAL:HA	7:G:312:ILE:HG22	2.03	0.40
7:G:526:LEU:HD13	7:G:552:PHE:HB2	2.03	0.40
8:H:349:MET:N	8:H:372:ILE:O	2.55	0.40
8:H:604:LEU:HD21	8:H:631:LEU:HD22	2.03	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	662/1336 (50%)	517 (78%)	144 (22%)	1 (0%)	47 81

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	B	922/971 (95%)	708 (77%)	201 (22%)	13 (1%)	11	46
3	C	788/805 (98%)	674 (86%)	113 (14%)	1 (0%)	51	86
4	D	944/1065 (89%)	717 (76%)	214 (23%)	13 (1%)	11	46
5	E	770/871 (88%)	639 (83%)	129 (17%)	2 (0%)	41	77
6	F	715/910 (79%)	577 (81%)	131 (18%)	7 (1%)	15	55
7	G	609/623 (98%)	555 (91%)	52 (8%)	2 (0%)	41	77
8	H	506/753 (67%)	431 (85%)	73 (14%)	2 (0%)	34	72
All	All	5916/7334 (81%)	4818 (81%)	1057 (18%)	41 (1%)	26	63

All (41) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	349	SER
2	B	350	ASN
2	B	590	PRO
2	B	762	SER
4	D	97	SER
6	F	453	ASP
7	G	231	PRO
8	H	337	LYS
4	D	203	VAL
6	F	725	VAL
1	A	751	PRO
4	D	245	THR
4	D	553	MET
4	D	588	ASP
4	D	783	ALA
4	D	803	PRO
6	F	344	MET
6	F	452	GLU
6	F	589	ILE
2	B	348	SER
2	B	497	TYR
2	B	589	PRO
4	D	648	ALA
4	D	738	SER
4	D	796	MET
4	D	800	TYR
6	F	644	ILE
6	F	724	SER

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Mol	Chain	Res	Type
7	G	230	ALA
8	H	315	LEU
2	B	666	VAL
2	B	837	TRP
2	B	920	PRO
4	D	427	PRO
2	B	412	LEU
4	D	625	HIS
2	B	185	PRO
2	B	684	GLY
3	C	528	PRO
5	E	70	PRO
5	E	362	PRO

### 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	
3	C	297/740 (40%)	297 (100%)	0	100	100
7	G	480/570 (84%)	478 (100%)	2 (0%)	91	94
8	H	202/697 (29%)	200 (99%)	2 (1%)	76	86
All	All	979/2007 (49%)	975 (100%)	4 (0%)	91	94

All (4) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
7	G	320	ARG
7	G	623	ARG
8	H	579	MET
8	H	753	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (18) such sidechains are listed below:

Mol	Chain	Res	Type
3	C	475	GLN
3	C	505	ASN
3	C	550	ASN
3	C	594	GLN
3	C	625	GLN
3	C	627	GLN
3	C	655	ASN
3	C	694	GLN
3	C	713	ASN
7	G	105	HIS
7	G	190	HIS
7	G	199	GLN
7	G	313	ASN
7	G	395	ASN
7	G	424	ASN
7	G	470	GLN
7	G	606	HIS
8	H	638	ASN

### 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 monosaccharides 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

There are no chain breaks in this entry.

## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-21226. These allow visual inspection of the internal detail of the map and identification of artifacts.

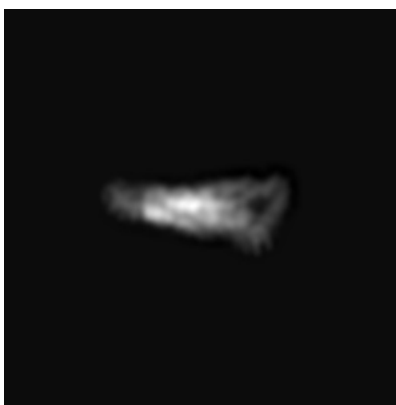
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

### 6.1 Orthogonal projections [i](#)

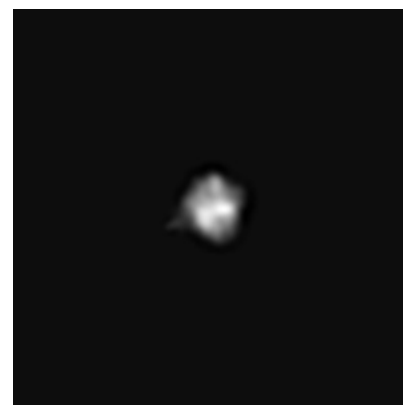
#### 6.1.1 Primary map



X



Y



Z

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

### 6.2 Central slices [i](#)

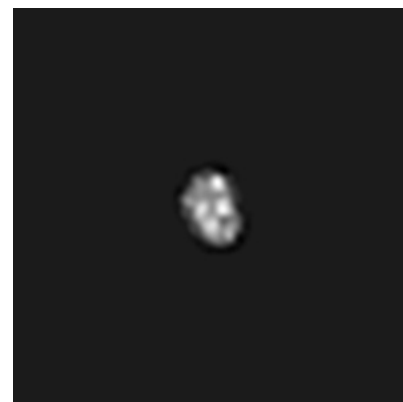
#### 6.2.1 Primary map



X Index: 128



Y Index: 128



Z Index: 128

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

## 6.3 Largest variance slices [i](#)

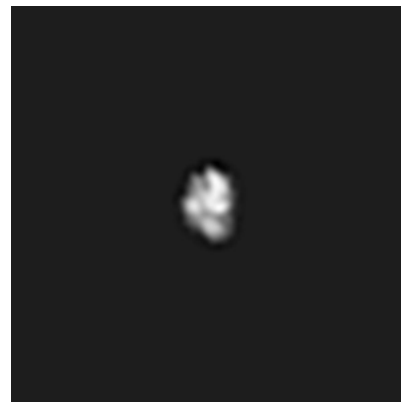
### 6.3.1 Primary map



X Index: 129



Y Index: 127

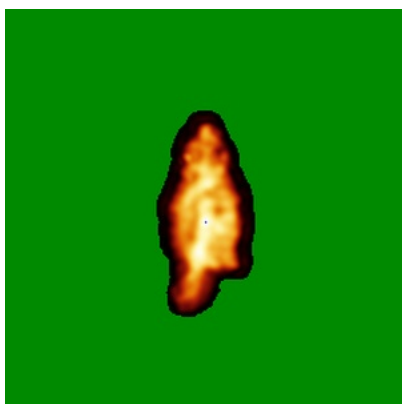


Z Index: 119

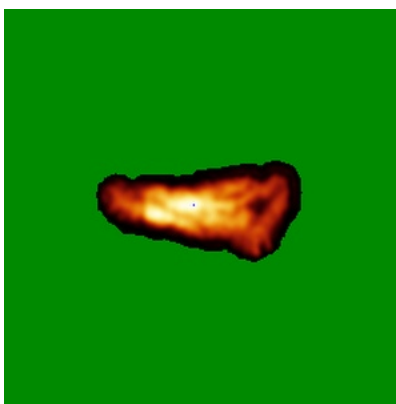
The images above show the largest variance slices of the map in three orthogonal directions.

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

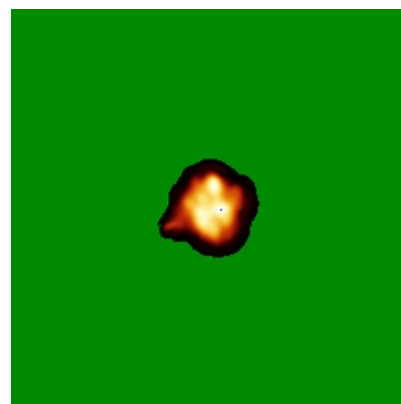
### 6.4.1 Primary map



X



Y



Z

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

## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 4.1. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

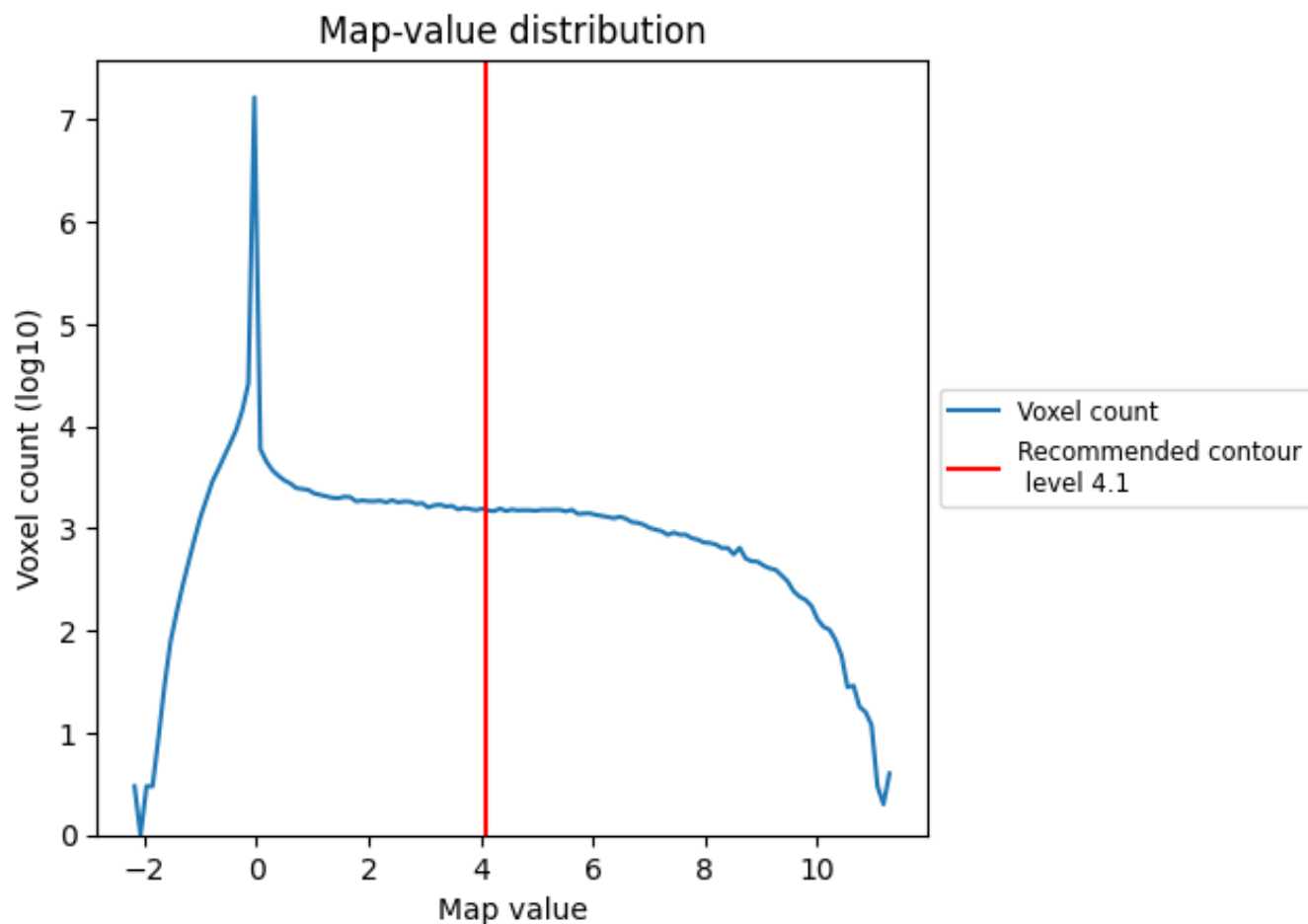
## 6.6 Mask visualisation [i](#)

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.

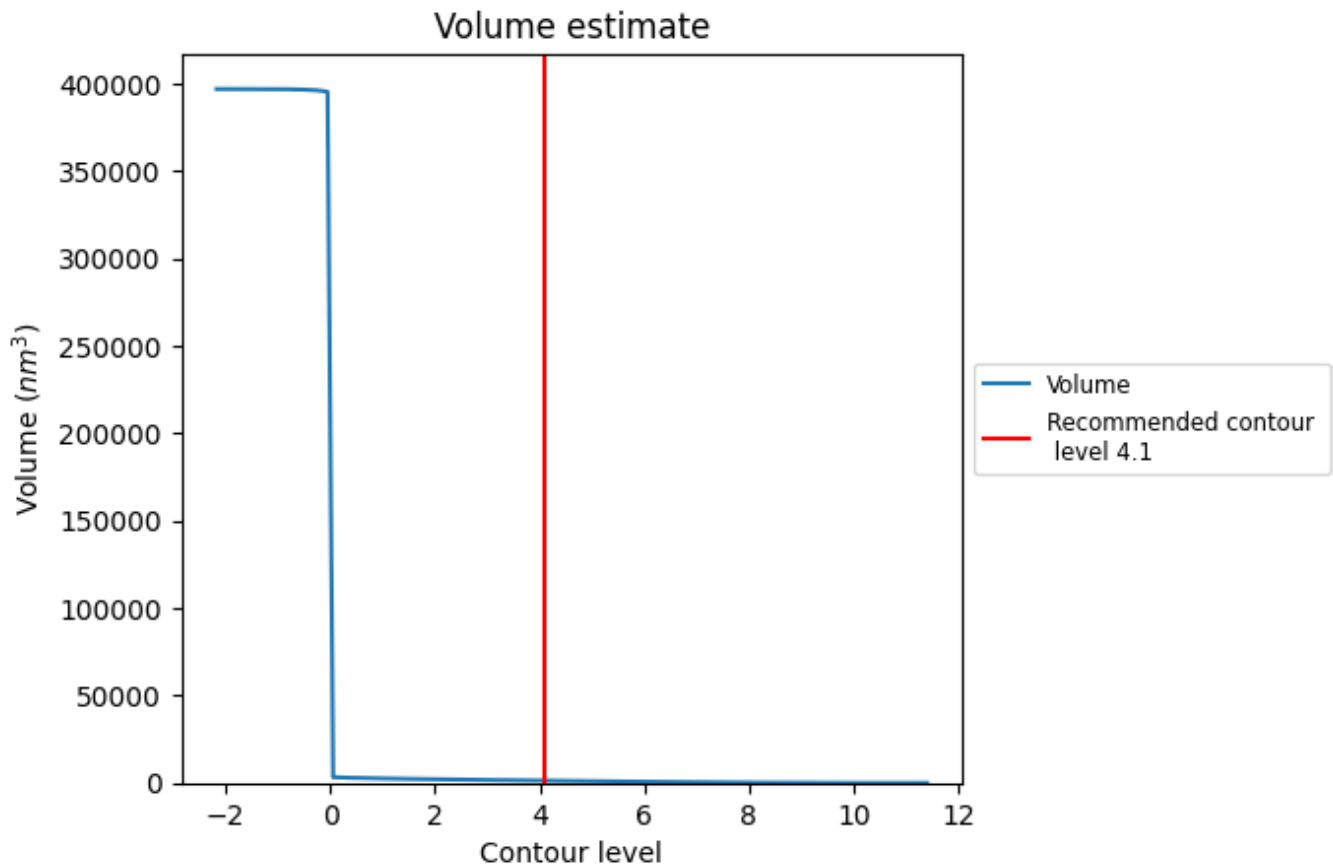
### 7.1 Map-value distribution [i](#)



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.



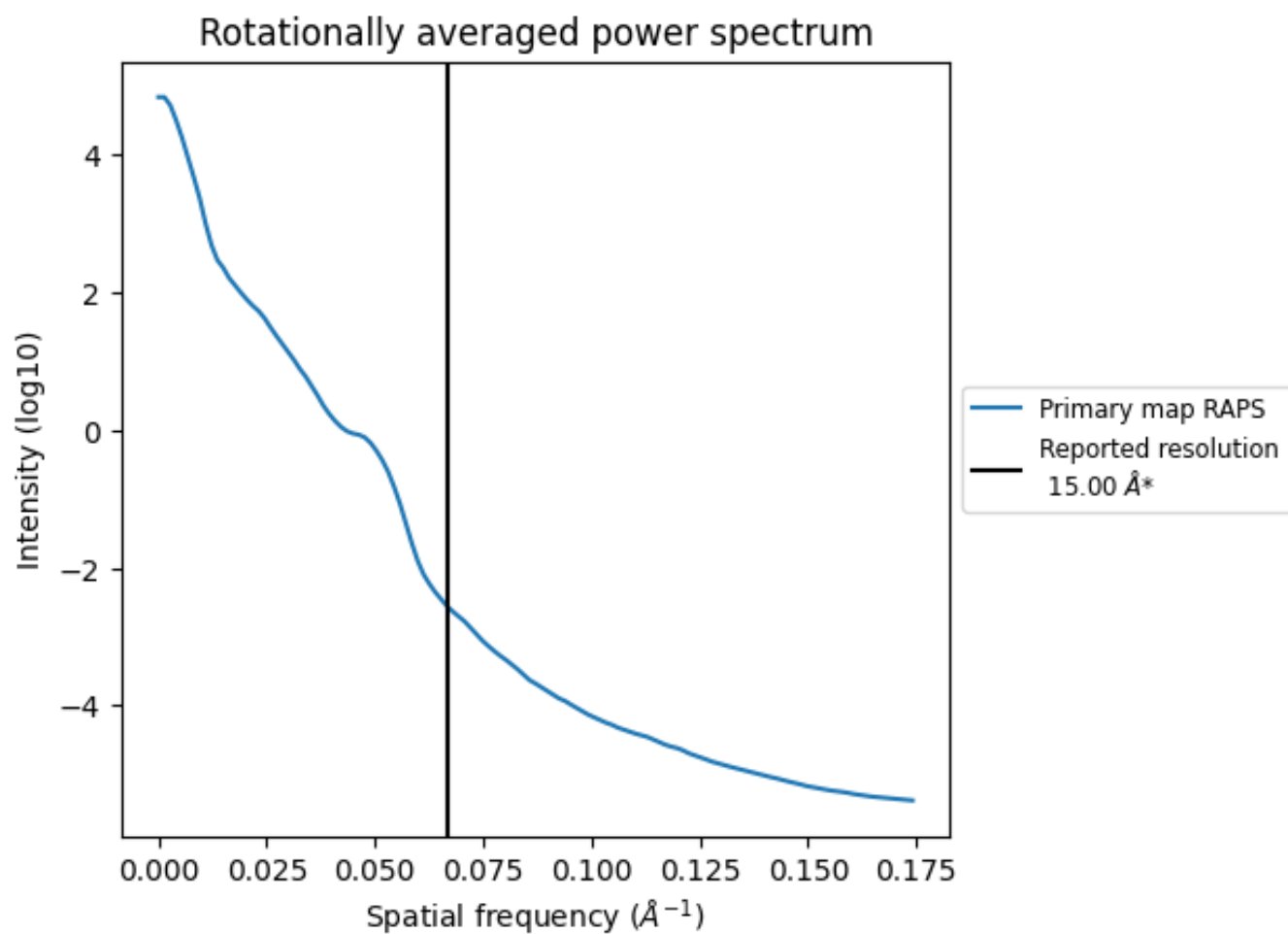
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1324 nm<sup>3</sup>; this corresponds to an approximate mass of 1196 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 0.067 Å<sup>-1</sup>

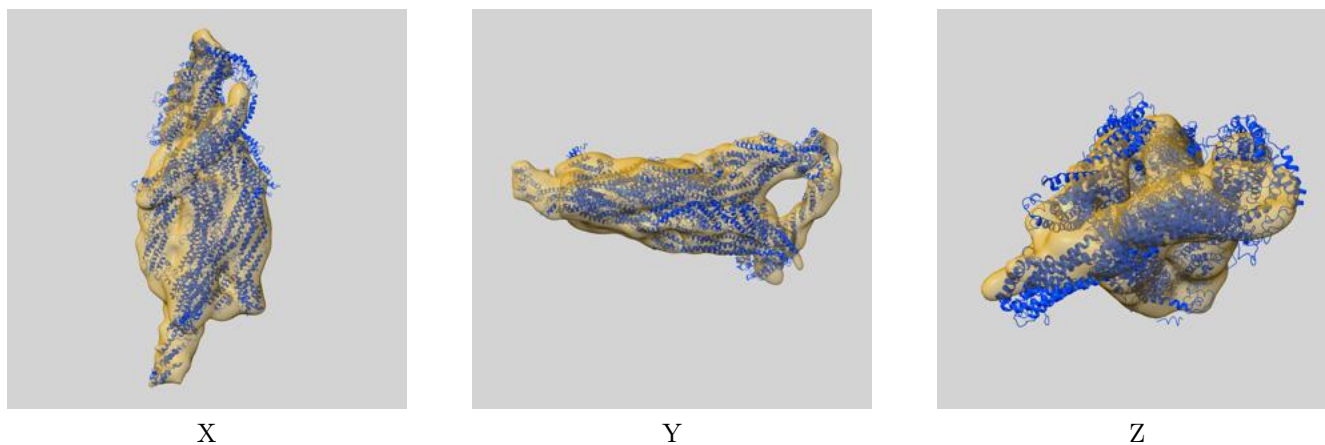
## 8 Fourier-Shell correlation

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

## 9 Map-model fit [i](#)

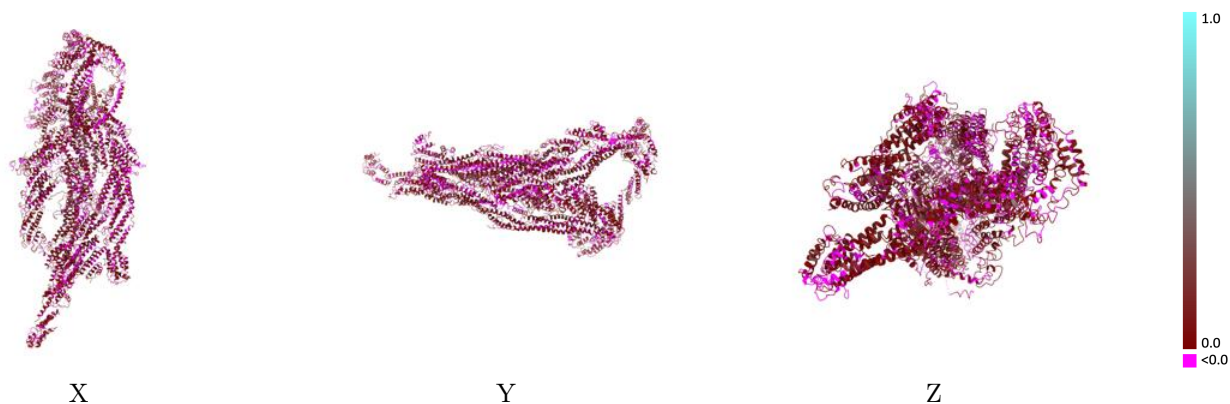
This section contains information regarding the fit between EMDB map EMD-21226 and PDB model 6VKL. Per-residue inclusion information can be found in section 3 on page 5.

### 9.1 Map-model overlay [i](#)



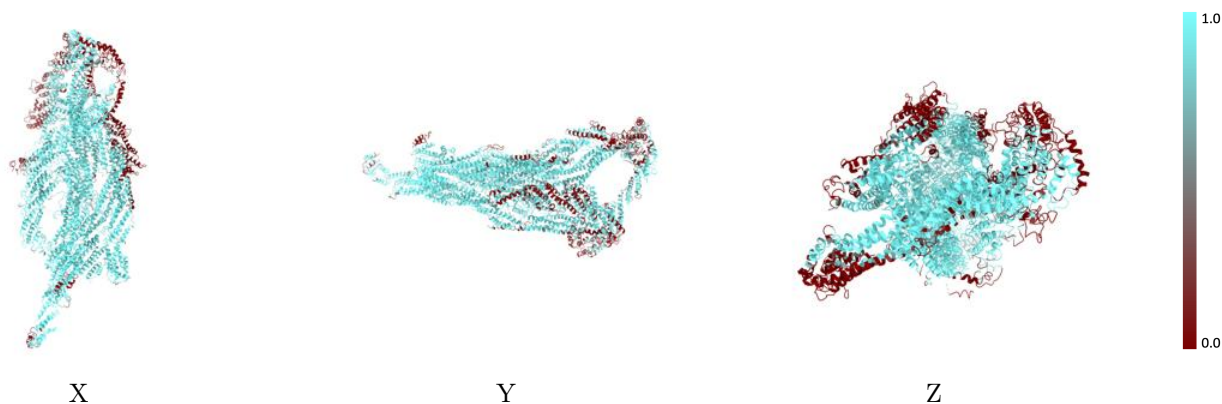
The images above show the 3D surface view of the map at the recommended contour level 4.1 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



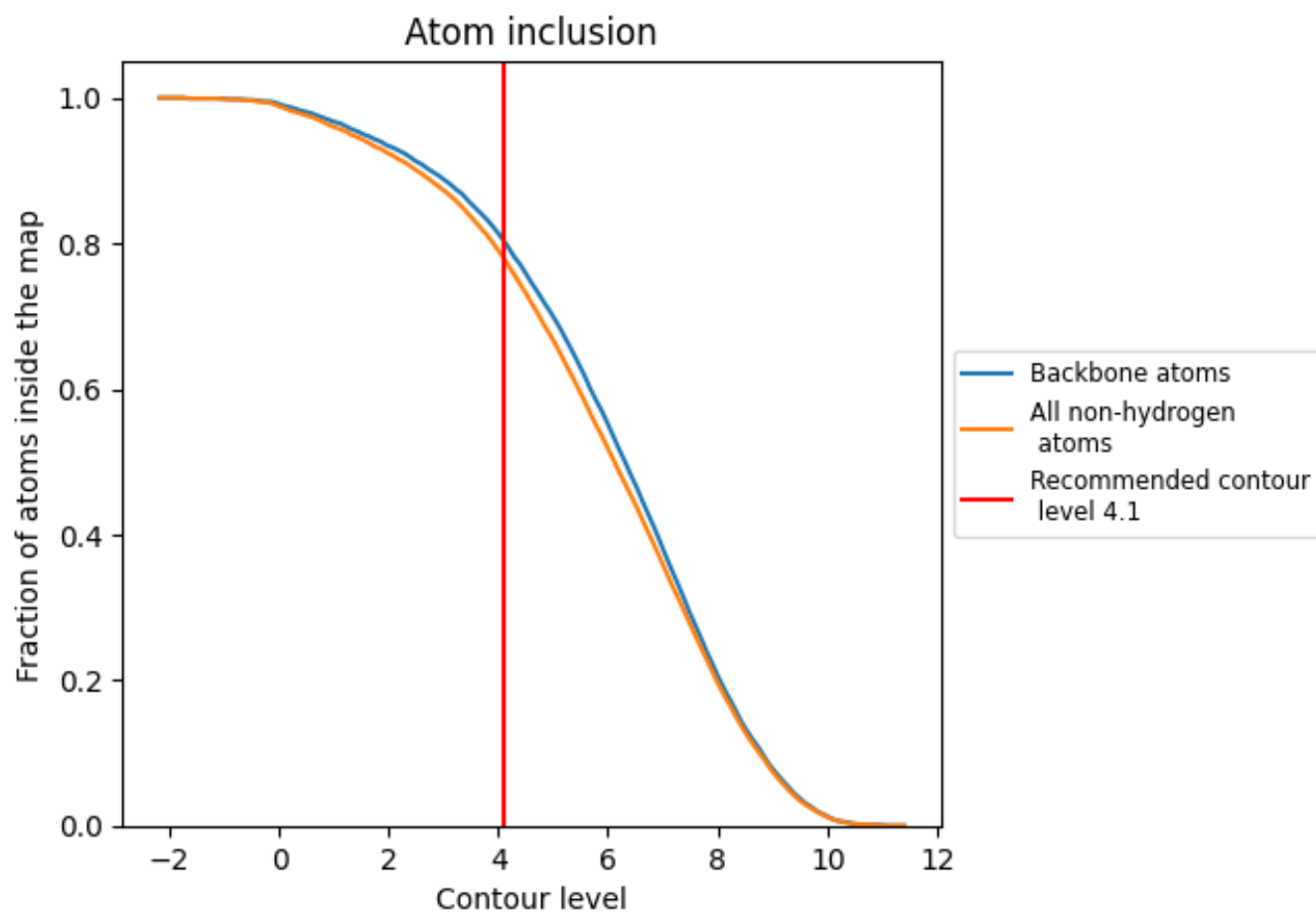
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

## 9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (4.1).



















## 9.4 Atom inclusion [i](#)



At the recommended contour level, 80% of all backbone atoms, 78% of all non-hydrogen atoms, are inside the map.

## 9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (4.1) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7800	 0.0530
A	 0.7820	 0.0630
B	 0.8010	 0.0490
C	 0.5240	 0.0400
D	 0.8920	 0.0530
E	 0.9520	 0.0710
F	 0.9310	 0.0620
G	 0.5410	 0.0330
H	 0.9480	 0.0670

