



## Full wwPDB EM Validation Report ⓘ

Mar 8, 2026 – 12:57 PM UTC

PDB ID : 8Y0E / pdb\_00008y0e  
EMDB ID : EMD-38802  
Title : ASFV RNAP M1249L C-tail occupied complex4 (MCOC4)  
Authors : Zhu, G.L.; Zhu, Y.; Zhu, Z.X.; Sun, F.; Zheng, H.X.  
Deposited on : 2024-01-22  
Resolution : 3.00 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](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:

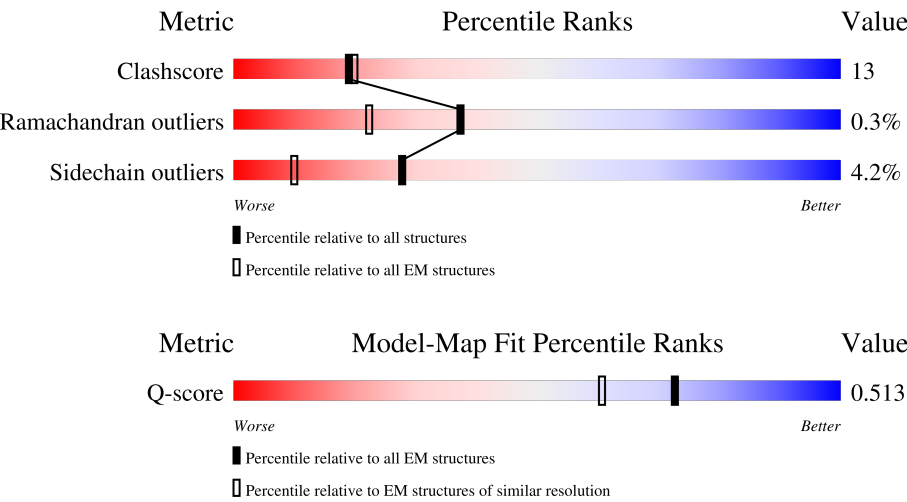
EMDB validation analysis : 0.0.1.dev132  
MolProbity : 4-5-2 with Phenix2.0  
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)  
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)  
MapQ : 1.9.13  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.49

# 1 Overall quality at a glance i

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

The reported resolution of this entry is 3.00 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)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	14081 ( 2.50 - 3.50 )

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	1450	<div><div>5%</div><div>68%</div><div>27%</div><div>• •</div></div>
2	B	1242	<div><div>10%</div><div>62%</div><div>33%</div><div>• •</div></div>
3	C	359	<div><div>•</div><div>74%</div><div>25%</div><div>•</div></div>
4	D	205	<div><div>8%</div><div>74%</div><div>25%</div><div>•</div></div>

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Mol	Chain	Length	Quality of chain
5	E	147	<div><div><div></div><div></div><div></div><div></div></div><div>7%49%22%27%</div></div>
6	F	339	<div><div><div></div><div></div><div></div><div></div></div><div>47%44%24%30%</div></div>
7	G	105	<div><div><div></div><div></div><div></div><div></div></div><div>11%59%39%</div></div>
8	H	80	<div><div><div></div><div></div><div></div><div></div></div><div>5%46%40%14%</div></div>
9	I	1249	<div><div><div></div><div></div><div></div><div></div></div><div>6%12%6%81%</div></div>

## 2 Entry composition

There are 11 unique types of molecules in this entry. The entry contains 31248 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called DNA-directed RNA polymerase subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	1400	Total	C	N	O	S	0	0
			11157	7085	1939	2071	62		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	1200	Total	C	N	O	S	0	0
			9493	5994	1666	1782	51		

- Molecule 3 is a protein called DNA-directed RNA polymerase RPB3-11 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	358	Total	C	N	O	S	0	0
			2907	1885	481	529	12		

- Molecule 4 is a protein called DNA-directed RNA polymerase RPB5 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	D	205	Total	C	N	O	S	0	0
			1669	1088	278	295	8		

- Molecule 5 is a protein called C147L.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	E	107	Total	C	N	O	S	0	0
			839	533	144	157	5		

- Molecule 6 is a protein called D339L.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	F	237	Total	C	N	O	S	0	0
			1906	1226	315	354	11		

- Molecule 7 is a protein called C122R.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	105	Total	C	N	O	S	0	0
			816	507	141	153	15		

- Molecule 8 is a protein called DNA-directed RNA polymerase RPB10 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	69	Total	C	N	O	S	0	0
			553	362	89	95	7		

- Molecule 9 is a protein called M1249L.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	I	239	Total	C	N	O	S	0	0
			1901	1221	301	371	8		

- Molecule 10 is ZINC ION (CCD ID: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
10	A	2	Total	Zn	0
			2	2	
10	B	1	Total	Zn	0
			1	1	
10	G	2	Total	Zn	0
			2	2	
10	H	1	Total	Zn	0
			1	1	

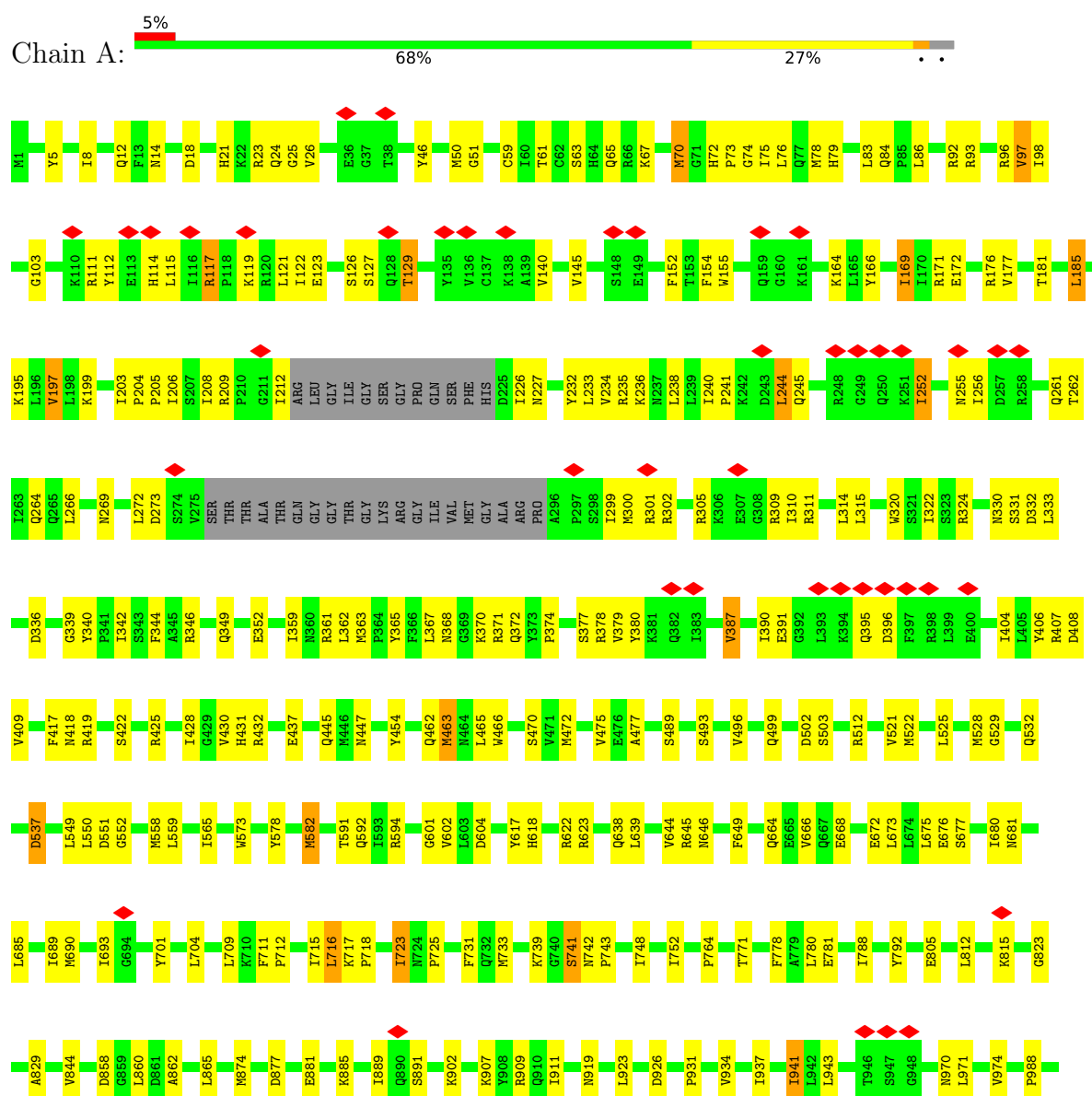
- Molecule 11 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

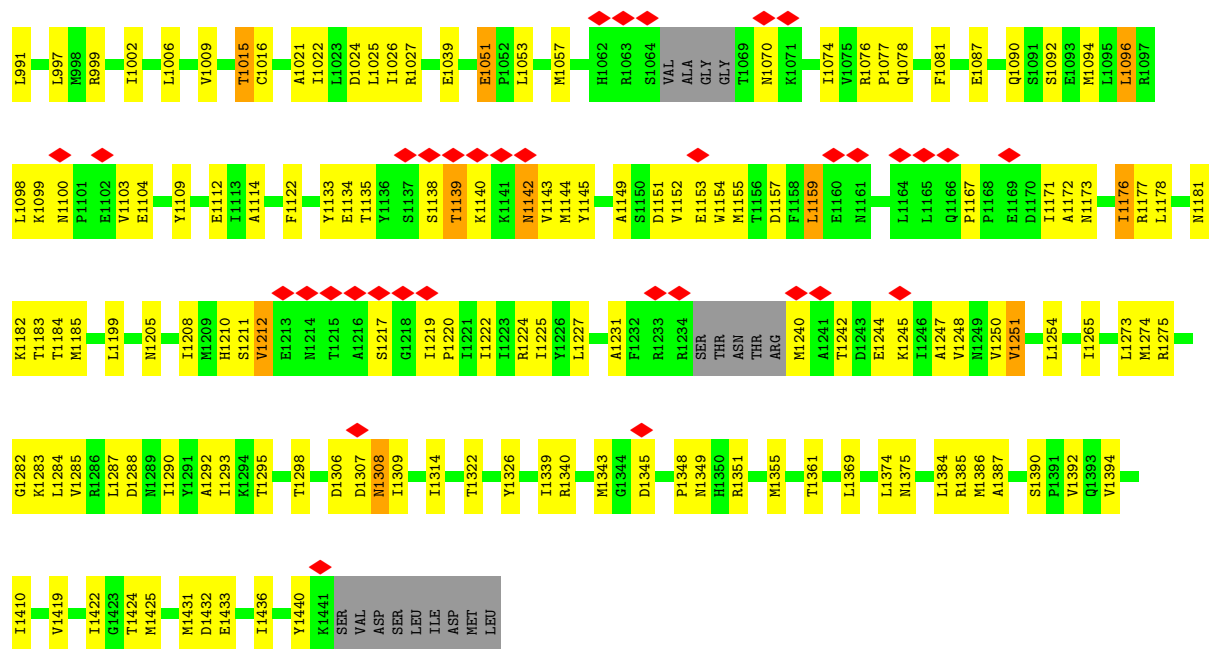
Mol	Chain	Residues	Atoms		AltConf
11	A	1	Total	Mg	0
			1	1	

### 3 Residue-property plots

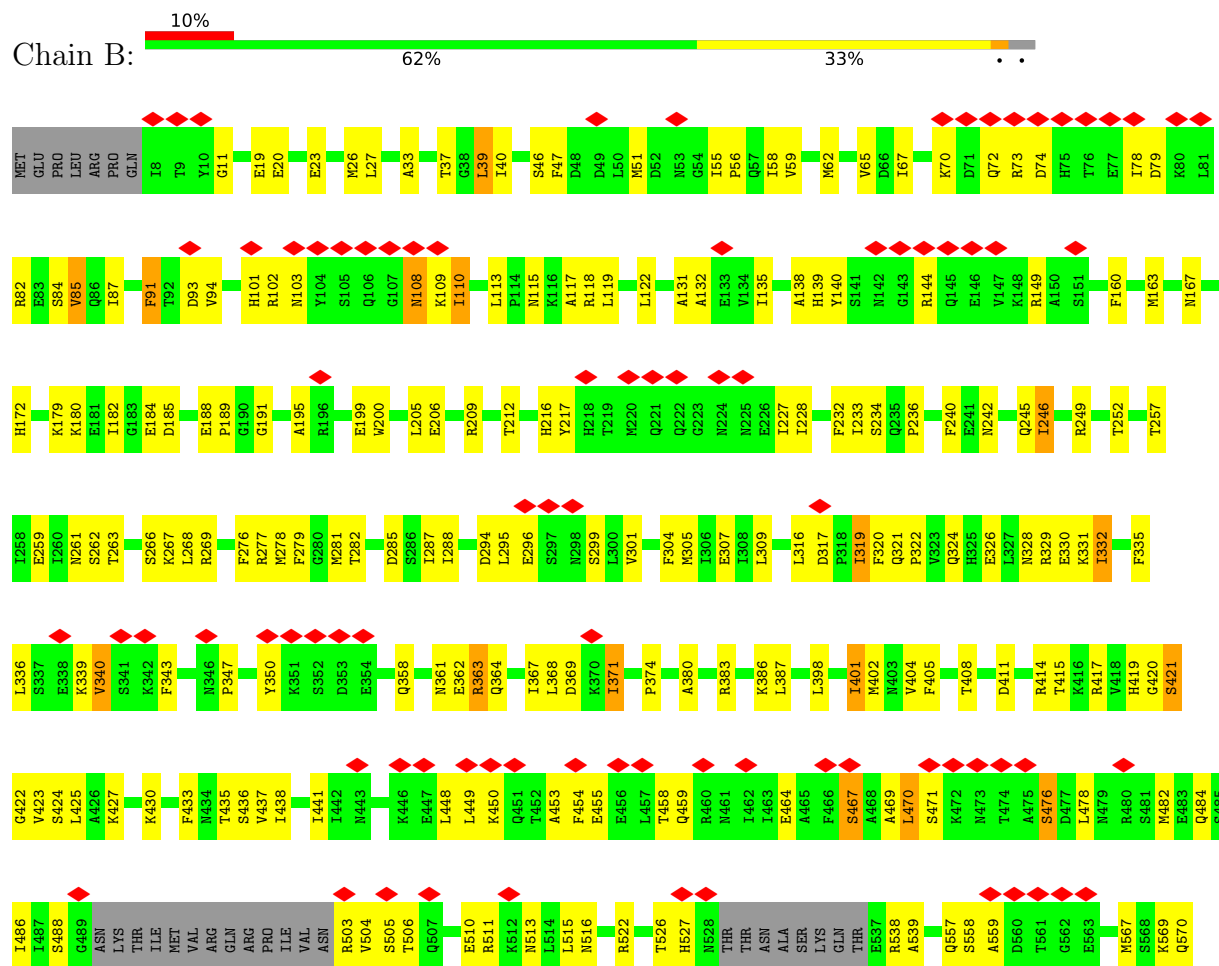
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: DNA-directed RNA polymerase subunit





• Molecule 2: DNA-directed RNA polymerase subunit beta





Response	Percentage
Yes	74%
No	25%



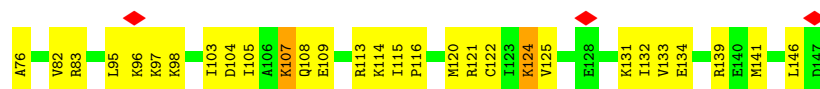
Response	Percentage
Yes	8%
No	74%
Don't know	25%



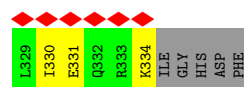
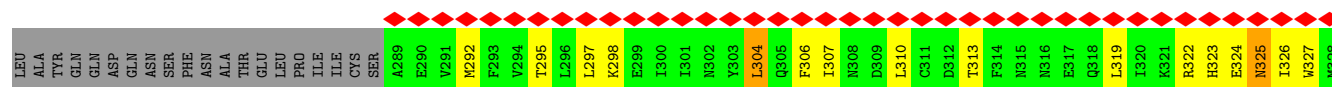
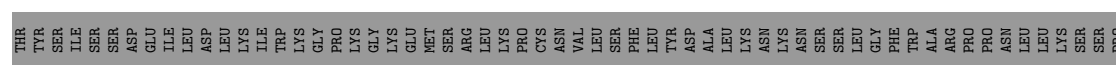
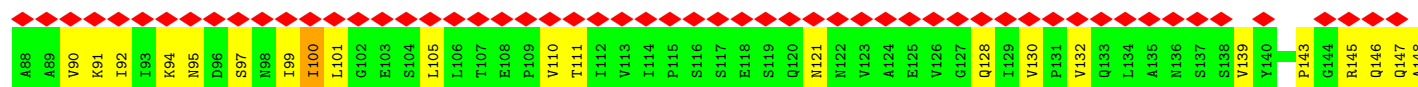
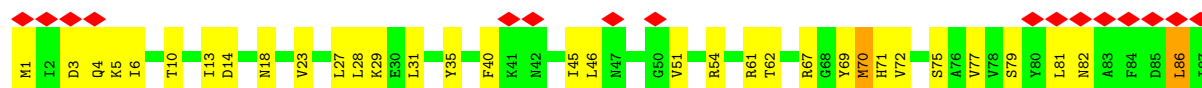




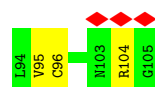
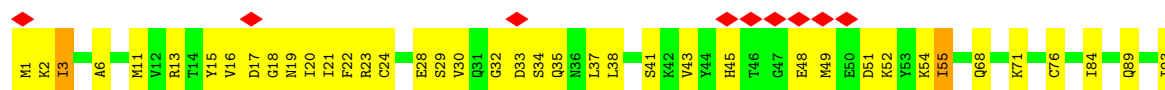
• Molecule 5: C147L



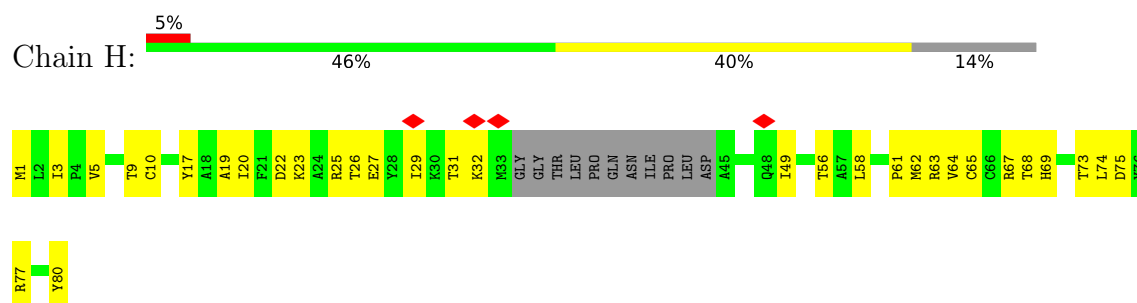
• Molecule 6: D339L



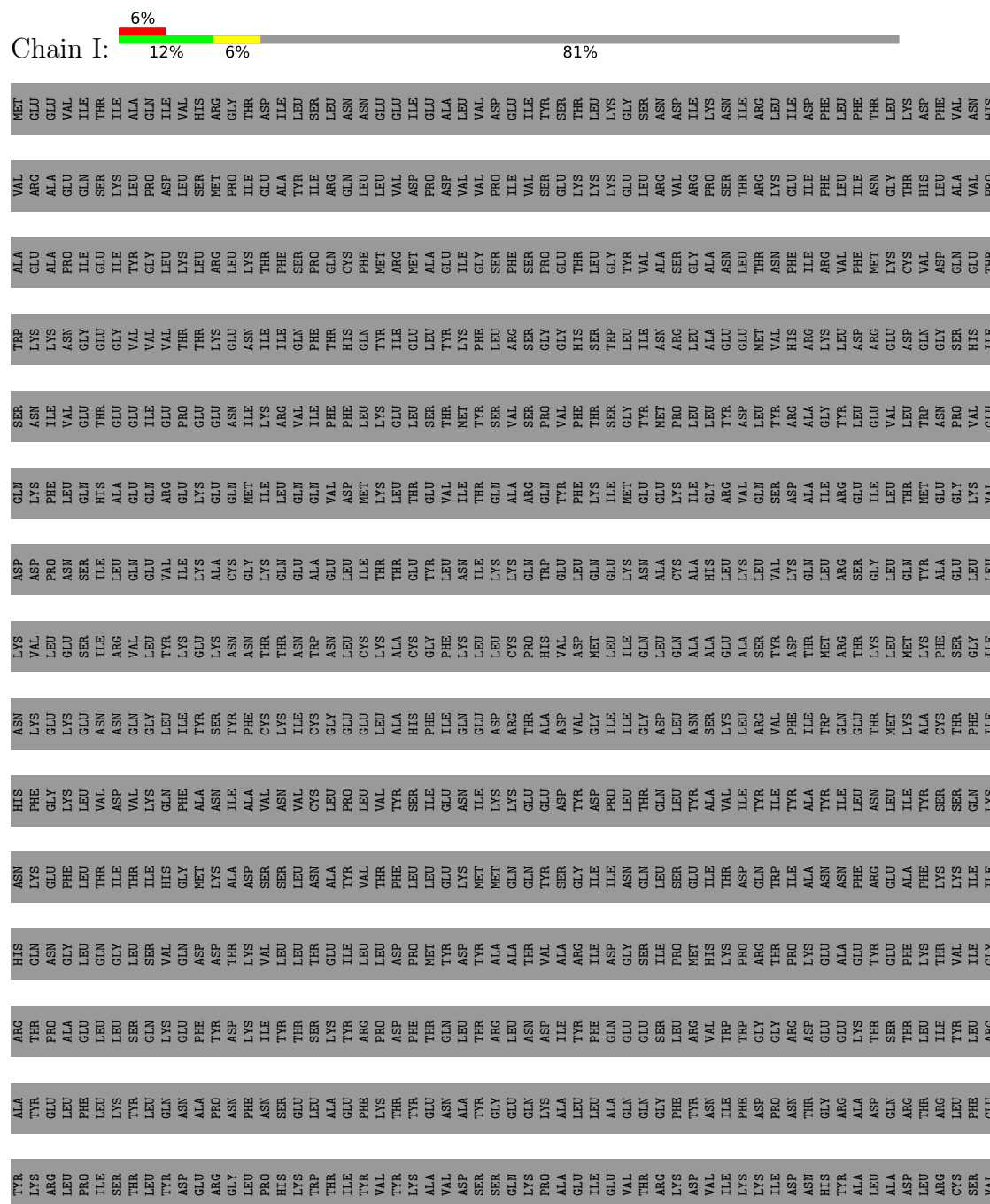
• Molecule 7: C122R



- Molecule 8: DNA-directed RNA polymerase RPB10 homolog



- Molecule 9: M1249L



CYS	HIS	HIS	VAL	LEU	SER	GLN	HIS	GLU	VAL	GLY	GLN	LEU	VAL	GLN	LEU	LYS	VAL	GLN	THR	ALA	LEU	LYS	ALA	SER	LYS	GLU	PHE	ASN	THR	THR	PHE	TYR	ALA	PHE	TYR	GLY	SER	ARG	CYS	PRO	LYS	PRO	GLY	GLY	LEU	THR	GLU	HIS	THR	ASP	PHE	GLN	PRO	GLN	ASP	LYS	LYS	CYS	VAL	LYS	LYS	GLY	LEU	PHE	THR	THR	ILE	ILE
TYR	ASP	HIS	HIS	SER	GLN	PRO	GLU	GLU	LEU	LEU	VAL	GLM	VAL	ASP	ASN	TYR	ASN	GLN	LYS	ASP	GLN	TYR	ASP	LYS	GLU	LEU	GLU	MET	SER	ILE	ARG	SER	ILE	GLN	ILE	LYS	ASP	MET	CYS	THR	THR	PRO	THR	THR	THR	THR	THR	THR	THR	GLN	PRO	LYS	PRO	GLN	CYS	VAL	LYS	LYS	GLY	LEU	PHE	THR	THR	ILE	ILE			
D1028	I1029	E1035	A1036	I1037	E1041	G1042	R1043	S1044	Y1045	A1046	D1047	I1048	R1049	E1050	G1051	Q1052	G1053	A1054	P1055	P1056	S1060	M1061	R1065	L1066	M1067	A1068	V1069	D1070	R1074	I1075	F1076	L1077	Y1080	N1081	C1082	V1086	S1087	T1088	F1089	N1090	K1091	P1092	P1093	I1094	H1095	V1096	E1097	R1098	L1099	V1100	K1101	H1102																
L1103	E1109	D1110	L1111	E1112	K1113	V1114	L1115	P1116	V1119	Y1122	H1123	V1131	Y1140	S1141	I1142	E1143	F1149	L1150	T1151	E1154	I1155	K1156	E1157	P1158	S1159	W1160	V1161	I1162	N1163	I1164	A1169	L1170	T1171	E1172	N1173	N1174	T1175	K1181	L1182	K1185	P1186	G1187	A1188	M1192	I1193	F1194	G1195	E1196																				
D1197	F1198	S1201	G1202	E1203	D1204	S1205	S1206	M1207	D1208	D1209	I1210	S1211	A1212	Y1213	S1214	S1215	P1216	G1217	L1218	F1219	G1220	E1221	D1222	I1223	I1224	D1225	R1226	L1227	D1228	D1229	P1230	F1231	S1232	I1233	E1234	D1235	V1236	D1237	I1238	S1239	L1240	D1241	V1242	L1243	D1244	N1245	L1246	A1247	P1248	Q1249																		

## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	65385	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 ( $e^-/\text{\AA}^2$ )	60	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	2.077	Depositor
Minimum map value	-0.969	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.062	Depositor
Recommended contour level	0.4	Depositor
Map size ( $\text{\AA}$ )	419.84, 419.84, 419.84	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles ( $^\circ$ )	90.0, 90.0, 90.0	wwPDB
Pixel spacing ( $\text{\AA}$ )	0.82, 0.82, 0.82	Depositor

## 5 Model quality

### 5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z  > 5$	RMSZ	# $ Z  > 5$
1	A	0.24	0/11373	0.33	0/15402
2	B	0.24	0/9684	0.39	2/13104 (0.0%)
3	C	0.25	0/2969	0.37	0/4012
4	D	0.21	0/1708	0.36	0/2311
5	E	0.24	0/851	0.37	0/1151
6	F	0.16	0/1936	0.38	1/2616 (0.0%)
7	G	0.22	0/828	0.46	0/1109
8	H	0.25	0/563	0.38	0/758
9	I	0.16	0/1947	0.34	0/2648
All	All	0.23	0/31859	0.36	3/43111 (0.0%)

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed( $^{\circ}$ )	Ideal( $^{\circ}$ )
2	B	899	PRO	CA-N-CD	-12.44	94.58	112.00
2	B	899	PRO	N-CD-CG	-6.37	93.64	103.20
6	F	143	PRO	CA-N-CD	-5.50	104.30	112.00

There are no chirality outliers.

There are no planarity outliers.

### 5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	11157	0	11278	275	0
2	B	9493	0	9426	313	0
3	C	2907	0	2982	67	0
4	D	1669	0	1713	26	0
5	E	839	0	883	25	0
6	F	1906	0	1943	57	0
7	G	816	0	813	33	0
8	H	553	0	580	27	0
9	I	1901	0	1860	67	0
10	A	2	0	0	0	0
10	B	1	0	0	0	0
10	G	2	0	0	0	0
10	H	1	0	0	0	0
11	A	1	0	0	0	0
All	All	31248	0	31478	800	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 13.

All (800) 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:353:ASN:O	3:C:357:LEU:HB2	1.79	0.82
8:H:17:TYR:HB3	8:H:58:LEU:HD22	1.61	0.81
1:A:1074:ILE:HG22	1:A:1078:GLN:HG3	1.63	0.81
2:B:205:LEU:HG	2:B:505:SER:HB2	1.65	0.79
4:D:49:ASN:O	4:D:49:ASN:ND2	2.17	0.77
2:B:281:MET:HB3	9:I:1067:MET:HG3	1.69	0.75
3:C:65:GLU:OE1	3:C:249:ARG:NH2	2.18	0.75
4:D:42:ARG:NH2	4:D:85:TYR:OH	2.19	0.74
2:B:294:ASP:OD2	2:B:609:ARG:NH1	2.20	0.74
2:B:1051:ASN:OD1	2:B:1074:ARG:NH2	2.20	0.73
2:B:227:ILE:HG22	2:B:228:ILE:H	1.50	0.73
1:A:92:ARG:HH11	1:A:96:ARG:HH21	1.37	0.72
2:B:115:ASN:ND2	2:B:182:ILE:O	2.22	0.72
6:F:91:LYS:HZ3	6:F:105:LEU:H	1.37	0.72
4:D:37:ASN:OD1	4:D:38:THR:N	2.23	0.72
1:A:301:ARG:HH22	1:A:305:ARG:HB2	1.55	0.71
2:B:411:ASP:OD1	2:B:538:ARG:NH2	2.23	0.71
2:B:967:ALA:HB3	2:B:983:ARG:H	1.54	0.71
7:G:11:MET:HE3	7:G:24:CYS:HB2	1.72	0.71
2:B:367:ILE:O	2:B:371:ILE:HB	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:637:MET:HE3	2:B:637:MET:HA	1.72	0.70
1:A:493:SER:OG	1:A:1349:ASN:ND2	2.23	0.70
1:A:311:ARG:HH22	9:I:1235:ASP:HA	1.56	0.70
1:A:301:ARG:O	1:A:301:ARG:NE	2.18	0.70
1:A:646:ASN:ND2	2:B:1095:GLU:OE1	2.20	0.69
7:G:49:MET:HE2	7:G:49:MET:HA	1.74	0.69
2:B:924:GLY:N	2:B:965:VAL:O	2.24	0.69
2:B:899:PRO:O	2:B:899:PRO:HD2	1.92	0.69
2:B:558:SER:O	2:B:802:ASN:ND2	2.25	0.68
2:B:329:ARG:HA	2:B:332:ILE:HD12	1.75	0.68
4:D:29:ASP:O	4:D:33:GLN:HG2	1.93	0.68
1:A:502:ASP:OD2	2:B:1029:ASN:ND2	2.22	0.68
2:B:70:LYS:HE3	9:I:1192:MET:HA	1.73	0.68
1:A:1114:ALA:HB2	1:A:1293:ILE:HG21	1.74	0.68
4:D:192:MET:O	4:D:193:HIS:ND1	2.26	0.68
4:D:22:LEU:HD23	4:D:44:ASN:HB3	1.75	0.68
1:A:395:GLN:NE2	1:A:396:ASP:OD1	2.26	0.68
2:B:19:GLU:OE2	2:B:19:GLU:N	2.24	0.68
2:B:163:MET:HE2	2:B:191:GLY:HA2	1.75	0.67
3:C:253:ILE:HA	3:C:256:ILE:HD12	1.75	0.67
1:A:1087:GLU:N	1:A:1087:GLU:OE2	2.27	0.67
1:A:1092:SER:HG	1:A:1298:THR:HG1	1.40	0.67
1:A:1205:ASN:HB2	1:A:1231:ALA:HB2	1.77	0.67
8:H:10:CYS:SG	8:H:63:ARG:NH1	2.68	0.67
2:B:567:MET:HE3	2:B:567:MET:HA	1.75	0.67
2:B:586:LEU:HD23	2:B:664:LEU:HD11	1.76	0.67
2:B:70:LYS:NZ	9:I:1194:PHE:O	2.28	0.67
2:B:916:LEU:HD22	2:B:935:GLY:H	1.59	0.67
1:A:1208:ILE:HD12	1:A:1225:ILE:HG22	1.77	0.66
9:I:1037:ILE:HG22	9:I:1069:VAL:HG22	1.77	0.66
2:B:1018:THR:HG22	2:B:1088:MET:HG2	1.77	0.66
1:A:93:ARG:HD2	1:A:121:LEU:HG	1.77	0.66
6:F:324:GLU:HG2	6:F:327:TRP:HD1	1.60	0.66
1:A:431:HIS:NE2	1:A:454:TYR:OH	2.23	0.66
1:A:1245:LYS:HE3	1:A:1245:LYS:HA	1.77	0.66
5:E:83:ARG:HD3	5:E:116:PRO:HD2	1.78	0.66
2:B:277:ARG:HB2	2:B:282:THR:HG22	1.78	0.66
1:A:1432:ASP:OD2	5:E:139:ARG:NH2	2.28	0.66
1:A:232:TYR:HB3	1:A:266:LEU:HD21	1.77	0.66
9:I:1170:LEU:O	9:I:1174:ASN:ND2	2.29	0.66
2:B:990:LEU:HD21	2:B:996:MET:HE1	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:2:LYS:HD3	7:G:30:VAL:HG21	1.79	0.65
1:A:1138:SER:O	1:A:1140:LYS:N	2.29	0.65
2:B:830:GLU:HG3	2:B:847:LEU:HA	1.78	0.65
2:B:228:ILE:HG21	2:B:401:ILE:HG12	1.78	0.65
3:C:257:TYR:HE1	3:C:336:LEU:HB2	1.61	0.65
4:D:42:ARG:NE	4:D:44:ASN:OD1	2.30	0.65
9:I:1114:VAL:HG11	9:I:1161:VAL:HG11	1.77	0.65
1:A:166:TYR:H	1:A:169:ILE:HD12	1.62	0.65
2:B:994:ASP:OD2	2:B:1110:ARG:NH2	2.30	0.65
2:B:321:GLN:OE1	2:B:324:GLN:NE2	2.30	0.64
9:I:1080:TYR:OH	9:I:1116:PRO:O	2.12	0.64
1:A:578:TYR:HE1	1:A:742:ASN:HD21	1.46	0.64
2:B:216:HIS:ND1	2:B:217:TYR:O	2.30	0.64
1:A:1419:VAL:HG13	1:A:1425:MET:HE1	1.80	0.64
2:B:206:GLU:OE1	2:B:569:LYS:NZ	2.30	0.64
4:D:71:MET:HE3	4:D:75:LEU:HG	1.80	0.64
1:A:889:ILE:HG22	1:A:891:SER:H	1.62	0.64
2:B:404:VAL:HG13	7:G:52:LYS:HG3	1.80	0.64
6:F:46:LEU:HD11	6:F:79:SER:HB3	1.79	0.64
9:I:1086:VAL:HG11	9:I:1100:VAL:HG11	1.79	0.63
1:A:1182:LYS:HA	1:A:1185:MET:HB2	1.79	0.63
2:B:728:THR:OG1	2:B:730:GLU:OE1	2.15	0.63
9:I:1047:ASP:HB3	9:I:1052:GLN:HE22	1.63	0.63
2:B:113:LEU:HD22	2:B:182:ILE:HD11	1.80	0.63
2:B:522:ARG:NH2	2:B:572:ALA:O	2.31	0.63
6:F:31:LEU:HD11	6:F:72:VAL:HG11	1.79	0.63
9:I:1056:PRO:O	9:I:1065:ARG:NH2	2.31	0.63
3:C:96:ARG:NH2	3:C:148:GLU:O	2.22	0.63
1:A:363:MET:HE3	1:A:363:MET:HA	1.81	0.63
2:B:877:PHE:O	2:B:1110:ARG:NH1	2.30	0.63
2:B:73:ARG:HH22	2:B:453:ALA:HA	1.64	0.62
2:B:722:ILE:HD11	2:B:732:LEU:HD11	1.81	0.62
2:B:510:GLU:O	2:B:516:ASN:ND2	2.32	0.62
1:A:690:MET:HE2	1:A:690:MET:HA	1.79	0.62
2:B:902:LEU:HD23	2:B:902:LEU:H	1.63	0.62
2:B:1212:SER:OG	2:B:1213:ARG:N	2.29	0.62
1:A:430:VAL:HG21	1:A:477:ALA:HB1	1.80	0.62
1:A:377:SER:HA	1:A:390:ILE:HB	1.81	0.62
1:A:1098:LEU:HB2	1:A:1104:GLU:HB3	1.82	0.62
3:C:276:LYS:HG2	3:C:326:LYS:HD2	1.80	0.62
2:B:650:THR:HB	2:B:663:TRP:HB2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:622:ILE:HD12	2:B:622:ILE:O	2.01	0.61
1:A:1386:MET:HG2	1:A:1394:VAL:HG23	1.81	0.61
1:A:1425:MET:HE3	6:F:61:ARG:HG2	1.81	0.61
1:A:1440:TYR:OH	5:E:83:ARG:NH2	2.33	0.61
2:B:467:SER:O	2:B:471:SER:OG	2.18	0.61
2:B:600:ALA:HB1	9:I:1060:SER:HB2	1.83	0.61
7:G:19:ASN:OD1	7:G:20:ILE:N	2.33	0.61
2:B:482:MET:HA	2:B:482:MET:HE3	1.83	0.61
1:A:23:ARG:HH11	5:E:43:PRO:HG3	1.65	0.61
1:A:74:GLY:O	1:A:203:ILE:N	2.33	0.61
2:B:437:VAL:HG22	2:B:470:LEU:HD11	1.83	0.61
3:C:230:HIS:HB3	3:C:233:GLN:HE21	1.66	0.61
9:I:1077:LEU:HD13	9:I:1119:VAL:HG13	1.83	0.60
1:A:1343:MET:HA	1:A:1343:MET:HE2	1.82	0.60
1:A:489:SER:HB2	1:A:496:VAL:HG13	1.83	0.60
1:A:84:GLN:NE2	1:A:195:LYS:O	2.34	0.60
1:A:98:ILE:HD13	1:A:177:VAL:HG22	1.83	0.60
3:C:326:LYS:HE2	3:C:326:LYS:HA	1.83	0.60
7:G:17:ASP:OD1	7:G:18:GLY:N	2.34	0.60
1:A:551:ASP:OD1	1:A:552:GLY:N	2.34	0.60
1:A:1159:LEU:HD11	1:A:1167:PRO:HD3	1.83	0.60
9:I:1193:ILE:HD12	9:I:1193:ILE:H	1.67	0.60
3:C:180:VAL:HG22	3:C:222:CYS:HB3	1.83	0.60
1:A:380:TYR:HB3	1:A:404:ILE:HB	1.83	0.60
2:B:140:TYR:HB2	2:B:144:ARG:HB2	1.84	0.60
1:A:1227:LEU:HD11	1:A:1250:VAL:HG11	1.84	0.60
2:B:85:VAL:HG11	2:B:449:LEU:HD11	1.84	0.60
3:C:96:ARG:NH1	8:H:3:ILE:O	2.28	0.60
1:A:693:ILE:HD12	1:A:693:ILE:H	1.67	0.59
1:A:367:LEU:O	1:A:371:ARG:NH2	2.35	0.59
2:B:792:THR:HG23	2:B:1038:THR:HA	1.84	0.59
2:B:797:VAL:O	2:B:801:THR:HG23	2.03	0.59
2:B:902:LEU:HG	2:B:903:ILE:HG12	1.85	0.59
2:B:904:THR:HG23	2:B:907:LEU:HD22	1.85	0.59
2:B:915:LYS:NZ	2:B:931:ASP:OD2	2.28	0.59
1:A:97:VAL:HG11	1:A:185:LEU:HD21	1.85	0.59
1:A:324:ARG:NH1	1:A:462:GLN:OE1	2.36	0.59
2:B:233:ILE:HD13	2:B:245:GLN:HB2	1.85	0.59
2:B:934:ILE:HD12	2:B:934:ILE:O	2.03	0.59
1:A:877:ASP:OD2	1:A:902:LYS:NZ	2.35	0.59
1:A:1096:LEU:HD22	1:A:1314:ILE:HD12	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:592:GLN:HE21	1:A:594:ARG:HG3	1.67	0.58
1:A:1275:ARG:HB2	1:A:1290:ILE:HD12	1.84	0.58
9:I:1204:ASP:OD1	9:I:1206:SER:OG	2.20	0.58
1:A:78:MET:HE1	1:A:233:LEU:HD11	1.85	0.58
1:A:322:ILE:HG13	1:A:466:TRP:HB3	1.85	0.58
2:B:881:PHE:HB3	2:B:986:TYR:HB2	1.86	0.58
8:H:69:HIS:O	8:H:73:THR:OG1	2.20	0.58
1:A:1176:ILE:HG23	1:A:1225:ILE:HG13	1.85	0.58
2:B:167:ASN:HA	2:B:172:HIS:CG	2.39	0.58
2:B:844:PRO:HD2	8:H:74:LEU:HD11	1.84	0.58
3:C:305:ILE:HD11	3:C:323:ILE:HG23	1.85	0.58
4:D:107:VAL:HG12	4:D:110:ARG:HH21	1.69	0.58
4:D:58:PHE:O	4:D:123:TYR:OH	2.22	0.58
2:B:278:MET:HE1	2:B:336:LEU:HD22	1.86	0.58
3:C:148:GLU:HG3	8:H:19:ALA:HB2	1.86	0.58
2:B:825:PHE:HE2	8:H:1:MET:HE2	1.69	0.58
2:B:1083:ASN:ND2	2:B:1085:CYS:SG	2.77	0.58
1:A:681:ASN:ND2	1:A:780:LEU:O	2.35	0.58
1:A:681:ASN:OD1	1:A:701:TYR:OH	2.16	0.58
5:E:113:ARG:NH1	5:E:139:ARG:O	2.36	0.58
1:A:209:ARG:NH1	1:A:227:ASN:OD1	2.35	0.57
1:A:1225:ILE:HD12	1:A:1254:LEU:HD13	1.85	0.57
2:B:72:GLN:HG2	2:B:82:ARG:HG2	1.86	0.57
2:B:866:ILE:HG23	2:B:1008:LEU:HB3	1.85	0.57
3:C:110:VAL:H	3:C:134:ALA:HB3	1.69	0.57
3:C:256:ILE:O	3:C:264:GLN:NE2	2.38	0.57
7:G:6:ALA:O	9:I:1123:HIS:NE2	2.33	0.57
1:A:352:GLU:OE1	1:A:361:ARG:NH2	2.29	0.57
1:A:1210:HIS:ND1	1:A:1211:SER:O	2.35	0.57
2:B:753:PHE:CE2	2:B:757:GLU:HG3	2.39	0.57
3:C:227:PRO:HG2	3:C:230:HIS:HB2	1.86	0.57
2:B:55:ILE:O	2:B:59:VAL:HG23	2.05	0.57
1:A:418:ASN:HB2	1:A:428:ILE:HG12	1.86	0.57
2:B:1059:ASP:OD1	2:B:1061:THR:OG1	2.22	0.57
2:B:11:GLY:O	2:B:713:ARG:NH1	2.38	0.57
2:B:276:PHE:HB3	2:B:287:ILE:HD12	1.87	0.57
1:A:241:PRO:HG2	1:A:244:LEU:HG	1.87	0.56
6:F:145:ARG:NH1	6:F:146:GLN:OE1	2.37	0.56
1:A:342:ILE:HD12	1:A:437:GLU:HG2	1.86	0.56
1:A:970:ASN:O	1:A:1027:ARG:NH2	2.37	0.56
2:B:135:ILE:HG13	2:B:149:ARG:HG2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:688:TYR:O	2:B:692:GLU:HG2	2.05	0.56
1:A:333:LEU:O	1:A:447:ASN:ND2	2.38	0.56
2:B:317:ASP:N	2:B:324:GLN:OE1	2.38	0.56
1:A:1144:MET:HG2	1:A:1149:ALA:HA	1.88	0.56
1:A:310:ILE:HA	1:A:314:LEU:HD12	1.85	0.56
2:B:268:LEU:HD23	2:B:340:VAL:HG12	1.88	0.56
2:B:363:ARG:NH2	9:I:1201:SER:O	2.39	0.56
1:A:1361:THR:O	4:D:198:ARG:NH2	2.37	0.56
1:A:1133:TYR:OH	7:G:17:ASP:O	2.11	0.56
2:B:199:GLU:OE2	2:B:818:ARG:NH1	2.37	0.56
2:B:1201:CYS:O	2:B:1203:VAL:N	2.39	0.56
3:C:70:MET:HE2	3:C:176:PHE:CZ	2.41	0.56
5:E:97:LYS:HD2	5:E:98:LYS:N	2.21	0.56
6:F:14:ASP:HA	6:F:67:ARG:HG2	1.87	0.56
6:F:139:VAL:HG13	6:F:150:ALA:HB2	1.88	0.56
9:I:1019:LYS:HG2	9:I:1150:LEU:HD21	1.88	0.56
2:B:424:SER:HB3	2:B:504:VAL:HA	1.86	0.55
2:B:648:HIS:O	2:B:668:ARG:NH1	2.34	0.55
9:I:1089:PHE:HB2	9:I:1092:PRO:HG3	1.88	0.55
2:B:827:PHE:O	8:H:1:MET:N	2.35	0.55
5:E:122:CYS:HB2	5:E:133:VAL:HG12	1.89	0.55
2:B:768:ARG:NH1	7:G:68:GLN:OE1	2.32	0.55
6:F:174:GLN:N	6:F:174:GLN:HE21	2.04	0.55
1:A:422:SER:HB3	2:B:1154:VAL:HG21	1.89	0.55
1:A:21:HIS:HB3	1:A:75:ILE:HD12	1.88	0.55
1:A:92:ARG:HH11	1:A:96:ARG:NH2	2.03	0.55
1:A:352:GLU:HG3	1:A:407:ARG:HE	1.71	0.55
2:B:47:PHE:CZ	2:B:51:MET:HE3	2.41	0.55
3:C:193:PRO:HG2	3:C:196:LYS:HD3	1.88	0.55
5:E:115:ILE:O	5:E:139:ARG:NH1	2.40	0.55
1:A:475:VAL:HG22	5:E:103:ILE:HG23	1.89	0.55
2:B:420:GLY:O	2:B:422:GLY:N	2.38	0.55
2:B:319:ILE:HD11	2:B:339:LYS:HD3	1.88	0.55
2:B:579:THR:HA	2:B:666:VAL:HG23	1.89	0.54
6:F:4:GLN:HA	6:F:77:VAL:HA	1.89	0.54
1:A:1142:ASN:HD21	1:A:1144:MET:HB2	1.72	0.54
2:B:866:ILE:HB	2:B:1027:ILE:HB	1.87	0.54
1:A:377:SER:O	1:A:378:ARG:NH1	2.41	0.54
1:A:805:GLU:HG2	2:B:794:PRO:HB3	1.88	0.54
2:B:227:ILE:HD11	2:B:252:THR:HA	1.90	0.54
6:F:192:ARG:HG3	6:F:200:ILE:HD13	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:419:ARG:HG3	1:A:463:MET:HG2	1.90	0.54
1:A:522:MET:HB3	3:C:210:MET:HB3	1.90	0.54
2:B:898:LYS:HG2	2:B:899:PRO:HD3	1.89	0.54
1:A:164:LYS:HD2	1:A:166:TYR:CE1	2.43	0.54
1:A:1422:ILE:HG13	2:B:1161:MET:HE2	1.90	0.54
2:B:84:SER:O	2:B:139:HIS:N	2.35	0.54
2:B:262:SER:O	2:B:266:SER:OG	2.25	0.54
3:C:101:PRO:HD2	3:C:147:PHE:CZ	2.43	0.54
3:C:138:LEU:HD13	3:C:141:PRO:HA	1.90	0.54
1:A:926:ASP:OD1	1:A:926:ASP:N	2.38	0.54
2:B:78:ILE:HG22	2:B:82:ARG:HH21	1.73	0.54
2:B:108:ASN:N	2:B:108:ASN:OD1	2.40	0.54
2:B:921:VAL:HG21	2:B:933:ILE:HG22	1.90	0.54
6:F:91:LYS:N	6:F:91:LYS:HD2	2.23	0.54
1:A:1134:GLU:HB3	7:G:37:LEU:HD23	1.90	0.53
1:A:1419:VAL:CG1	1:A:1425:MET:HE1	2.37	0.53
2:B:826:GLN:NE2	2:B:828:TYR:O	2.38	0.53
8:H:62:MET:HE2	8:H:62:MET:HA	1.90	0.53
2:B:786:SER:HB2	2:B:800:GLU:HG2	1.90	0.53
2:B:933:ILE:HB	2:B:982:MET:HE3	1.91	0.53
3:C:12:PRO:HA	3:C:41:VAL:HA	1.90	0.53
1:A:1145:TYR:CE2	7:G:38:LEU:HB2	2.43	0.53
2:B:993:GLY:HA2	2:B:1005:ILE:HG23	1.90	0.53
6:F:111:THR:OG1	6:F:147:GLN:NE2	2.37	0.53
2:B:926:VAL:HG22	2:B:964:VAL:HG22	1.90	0.53
2:B:288:ILE:HG22	2:B:295:LEU:HD21	1.91	0.53
3:C:20:LEU:HD22	3:C:20:LEU:H	1.73	0.53
1:A:18:ASP:OD2	1:A:199:LYS:N	2.33	0.53
1:A:346:ARG:NH2	1:A:372:GLN:O	2.42	0.53
1:A:499:GLN:HB3	1:A:503:SER:HB2	1.91	0.53
1:A:1273:LEU:HD11	1:A:1292:ALA:HB3	1.91	0.53
1:A:673:LEU:HD21	1:A:712:PRO:HD3	1.91	0.53
4:D:6:LEU:O	4:D:10:ILE:HG22	2.07	0.53
2:B:573:ILE:HG23	2:B:574:THR:HG23	1.90	0.53
2:B:216:HIS:HB3	9:I:1219:PHE:CE2	2.44	0.53
2:B:417:ARG:NH1	2:B:744:GLU:OE2	2.41	0.53
4:D:64:TYR:CZ	4:D:74:LEU:HD12	2.44	0.53
1:A:752:ILE:HB	1:A:788:ILE:HB	1.90	0.53
2:B:46:SER:OG	2:B:421:SER:OG	2.25	0.53
7:G:54:LYS:HA	7:G:54:LYS:HE2	1.91	0.53
1:A:332:ASP:OD2	2:B:859:TYR:OH	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:61:PRO:HG2	8:H:63:ARG:HD2	1.91	0.52
1:A:417:PHE:CZ	1:A:463:MET:HE2	2.45	0.52
3:C:236:ARG:NE	3:C:359:ALA:OXT	2.42	0.52
6:F:319:LEU:HA	6:F:322:ARG:HB3	1.90	0.52
1:A:823:GLY:HA3	9:I:1236:VAL:HG22	1.90	0.52
1:A:1154:TRP:HA	1:A:1157:ASP:HB2	1.91	0.52
2:B:82:ARG:HD3	2:B:138:ALA:HB1	1.91	0.52
5:E:122:CYS:SG	5:E:131:LYS:NZ	2.63	0.52
6:F:206:LEU:HD21	6:F:330:ILE:HG21	1.91	0.52
1:A:63:SER:O	2:B:1190:ASN:ND2	2.42	0.52
1:A:844:VAL:HG11	1:A:1355:MET:HE1	1.90	0.52
3:C:249:ARG:NH1	3:C:286:GLU:OE2	2.43	0.52
6:F:110:VAL:HG22	6:F:148:ALA:HB3	1.92	0.52
2:B:330:GLU:OE2	2:B:361:ASN:ND2	2.30	0.52
3:C:113:LEU:HD21	3:C:125:ILE:HG21	1.90	0.52
3:C:128:ARG:HB3	3:C:145:PRO:HB2	1.92	0.52
4:D:53:VAL:HG22	4:D:87:GLU:HB3	1.91	0.52
1:A:330:ASN:ND2	1:A:445:GLN:OE1	2.43	0.52
1:A:919:ASN:OD1	1:A:1340:ARG:NH2	2.42	0.52
2:B:688:TYR:HE1	7:G:76:CYS:HB2	1.75	0.52
1:A:59:CYS:O	1:A:61:THR:N	2.40	0.52
1:A:988:PRO:HD2	1:A:991:LEU:HD12	1.92	0.52
1:A:14:ASN:O	2:B:1229:ASN:N	2.41	0.51
2:B:117:ALA:HA	2:B:122:LEU:HB2	1.91	0.51
2:B:305:MET:HG2	2:B:398:LEU:HD23	1.92	0.51
2:B:1010:LEU:HB2	2:B:1015:MET:HE3	1.92	0.51
1:A:119:LYS:HD2	1:A:122:ILE:HD11	1.92	0.51
2:B:296:GLU:N	2:B:296:GLU:OE1	2.42	0.51
2:B:967:ALA:HB1	2:B:969:MET:HE3	1.92	0.51
9:I:1013:TRP:NE1	9:I:1143:GLU:OE1	2.35	0.51
1:A:252:ILE:HD13	1:A:256:ILE:HG22	1.92	0.51
1:A:512:ARG:HA	1:A:602:VAL:HG12	1.93	0.51
1:A:573:TRP:N	1:A:604:ASP:OD2	2.44	0.51
2:B:414:ARG:HE	2:B:747:GLU:CD	2.18	0.51
1:A:1220:PRO:HG2	1:A:1222:ILE:HD11	1.92	0.51
2:B:51:MET:HE1	2:B:160:PHE:CD1	2.46	0.51
2:B:582:GLU:O	2:B:582:GLU:HG2	2.09	0.51
2:B:526:THR:O	2:B:527:HIS:ND1	2.43	0.51
7:G:45:HIS:NE2	7:G:89:GLN:OE1	2.44	0.51
1:A:24:GLN:OE1	2:B:1200:ASN:ND2	2.37	0.51
1:A:1375:ASN:OD1	1:A:1385:ARG:NE	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:325:ASN:OD1	6:F:325:ASN:N	2.39	0.51
9:I:1158:PRO:HG2	9:I:1161:VAL:HG13	1.93	0.51
1:A:1275:ARG:O	1:A:1287:LEU:N	2.40	0.51
2:B:992:ILE:HG23	2:B:1007:ALA:HA	1.92	0.51
1:A:1070:ASN:ND2	1:A:1090:GLN:OE1	2.36	0.51
3:C:88:MET:HE2	3:C:88:MET:HA	1.93	0.51
1:A:70:MET:HB3	2:B:1217:ILE:HG21	1.91	0.51
1:A:909:ARG:NH1	1:A:1282:GLY:O	2.42	0.51
1:A:76:LEU:HD22	1:A:234:VAL:HG22	1.93	0.50
2:B:513:ASN:HA	2:B:811:TYR:HA	1.93	0.50
2:B:1177:SER:OG	2:B:1217:ILE:HD11	2.11	0.50
1:A:1247:ALA:O	1:A:1251:VAL:HG12	2.11	0.50
1:A:370:LYS:HE3	1:A:391:GLU:HG3	1.92	0.50
1:A:1138:SER:OG	1:A:1139:THR:N	2.37	0.50
2:B:285:ASP:HB2	7:G:3:ILE:HG21	1.92	0.50
6:F:35:TYR:HE2	6:F:40:PHE:CD1	2.28	0.50
2:B:414:ARG:HG2	2:B:415:THR:HG23	1.93	0.50
1:A:46:TYR:CZ	1:A:212:ILE:HG12	2.47	0.50
1:A:171:ARG:HA	1:A:197:VAL:HG21	1.94	0.50
1:A:1051:GLU:OE1	1:A:1051:GLU:N	2.44	0.50
2:B:206:GLU:HG2	2:B:526:THR:HA	1.93	0.50
3:C:272:MET:N	3:C:276:LYS:O	2.42	0.50
6:F:188:LEU:O	6:F:191:SER:OG	2.24	0.50
1:A:537:ASP:OD1	1:A:537:ASP:N	2.33	0.50
1:A:907:LYS:HE3	1:A:911:ILE:HD11	1.94	0.50
2:B:874:ARG:HG2	3:C:99:PHE:CE1	2.47	0.50
2:B:903:ILE:O	2:B:905:LYS:N	2.43	0.50
6:F:176:LEU:HD23	6:F:176:LEU:H	1.77	0.50
8:H:26:THR:O	8:H:29:ILE:HG12	2.11	0.50
3:C:5:PHE:CZ	3:C:45:MET:HG2	2.47	0.50
1:A:25:GLY:HA3	1:A:75:ILE:HG12	1.92	0.50
1:A:565:ILE:HG22	1:A:623:ARG:HD3	1.93	0.50
2:B:56:PRO:HA	2:B:94:VAL:HG11	1.94	0.50
2:B:236:PRO:HG3	2:B:374:PRO:HB2	1.94	0.49
2:B:263:THR:HG22	9:I:1212:ALA:HB3	1.94	0.49
2:B:304:PHE:O	2:B:307:GLU:HG3	2.12	0.49
2:B:316:LEU:HD21	2:B:321:GLN:HE22	1.77	0.49
1:A:1374:LEU:HD21	1:A:1384:LEU:HG	1.92	0.49
2:B:93:ASP:HB3	2:B:131:ALA:HB3	1.94	0.49
3:C:79:LYS:HE2	3:C:161:GLU:HB2	1.93	0.49
8:H:25:ARG:O	8:H:29:ILE:HG23	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1345:ASP:OD1	1:A:1345:ASP:N	2.45	0.49
2:B:404:VAL:O	7:G:52:LYS:NZ	2.46	0.49
2:B:1161:MET:SD	2:B:1161:MET:N	2.86	0.49
1:A:340:TYR:CE1	1:A:465:LEU:HD22	2.47	0.49
1:A:680:ILE:HD13	1:A:704:LEU:HB3	1.94	0.49
2:B:1032:SER:O	2:B:1036:ARG:HB2	2.11	0.49
1:A:1181:ASN:ND2	1:A:1184:THR:OG1	2.45	0.49
2:B:675:ILE:HD11	2:B:739:GLU:HB3	1.94	0.49
1:A:865:LEU:HD12	1:A:1349:ASN:HD21	1.78	0.49
6:F:94:LYS:O	6:F:97:SER:OG	2.22	0.49
1:A:172:GLU:OE2	1:A:172:GLU:HA	2.13	0.49
2:B:73:ARG:NH2	2:B:79:ASP:OD2	2.38	0.49
7:G:51:ASP:OD2	7:G:52:LYS:N	2.46	0.49
1:A:419:ARG:HB2	1:A:463:MET:SD	2.52	0.49
2:B:261:ASN:HA	2:B:266:SER:HA	1.95	0.49
2:B:877:PHE:HB3	2:B:1110:ARG:HD2	1.95	0.49
2:B:908:LYS:NZ	2:B:909:PRO:O	2.46	0.49
1:A:5:TYR:HB3	6:F:69:TYR:HB3	1.94	0.49
1:A:79:HIS:ND1	1:A:240:ILE:O	2.32	0.49
2:B:227:ILE:HG22	2:B:228:ILE:HG22	1.94	0.49
2:B:1206:ASP:OD2	2:B:1237:ARG:NH2	2.46	0.49
7:G:22:PHE:HE1	7:G:32:GLY:HA3	1.78	0.49
8:H:22:ASP:OD1	8:H:22:ASP:N	2.46	0.49
8:H:64:VAL:O	8:H:68:THR:OG1	2.27	0.49
1:A:550:LEU:HD23	1:A:558:MET:HE1	1.94	0.48
1:A:559:LEU:HD22	1:A:639:LEU:HD22	1.95	0.48
1:A:672:GLU:O	1:A:676:GLU:HG3	2.13	0.48
1:A:844:VAL:HG21	1:A:1355:MET:HE1	1.95	0.48
5:E:95:LEU:HD22	5:E:105:ILE:HG23	1.96	0.48
2:B:82:ARG:HB2	2:B:140:TYR:CD2	2.47	0.48
6:F:331:GLU:HA	6:F:334:LYS:HE3	1.95	0.48
1:A:1211:SER:OG	1:A:1212:VAL:N	2.46	0.48
2:B:101:HIS:N	2:B:110:ILE:O	2.39	0.48
3:C:178:LEU:O	3:C:224:PRO:HD3	2.13	0.48
3:C:332:LEU:O	3:C:336:LEU:HG	2.13	0.48
5:E:67:THR:OG1	5:E:134:GLU:OE2	2.30	0.48
1:A:934:VAL:HG13	1:A:1026:ILE:HD11	1.96	0.48
2:B:515:LEU:HD23	2:B:842:VAL:HG11	1.95	0.48
2:B:279:PHE:CE1	2:B:368:LEU:HD23	2.48	0.48
2:B:1179:ILE:HG21	2:B:1232:SER:HB2	1.94	0.48
2:B:1187:ALA:HB1	2:B:1207:ILE:HD12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:32:LYS:HD3	8:H:49:ILE:HG22	1.96	0.48
9:I:1070:ASP:OD2	9:I:1074:ARG:NH2	2.45	0.48
7:G:6:ALA:HA	9:I:1119:VAL:HG11	1.95	0.48
9:I:1238:ILE:HD13	9:I:1246:LEU:HD21	1.95	0.48
1:A:529:GLY:HA2	1:A:532:GLN:HG3	1.96	0.48
2:B:242:ASN:HD21	9:I:1213:TYR:HE1	1.62	0.48
2:B:657:VAL:HB	2:B:659:GLU:HG3	1.95	0.48
1:A:269:ASN:O	1:A:273:ASP:HB2	2.14	0.48
1:A:1173:ASN:ND2	7:G:18:GLY:HA2	2.28	0.48
2:B:484:GLN:O	2:B:488:SER:OG	2.31	0.48
2:B:557:GLN:CD	2:B:570:GLN:HG3	2.39	0.48
4:D:27:PRO:HD2	4:D:30:LYS:HB3	1.95	0.48
1:A:8:ILE:HD12	2:B:1232:SER:HB3	1.96	0.48
1:A:299:ILE:HG22	1:A:300:MET:HE2	1.95	0.48
1:A:428:ILE:O	2:B:1158:GLN:NE2	2.38	0.48
2:B:320:PHE:O	2:B:324:GLN:HG3	2.13	0.48
2:B:1179:ILE:HB	2:B:1234:LEU:HD11	1.95	0.48
2:B:328:ASN:HA	9:I:1075:ILE:HD11	1.95	0.47
7:G:11:MET:HB3	7:G:22:PHE:HB3	1.96	0.47
9:I:1240:LEU:C	9:I:1242:VAL:H	2.22	0.47
2:B:304:PHE:HD2	2:B:402:MET:HE2	1.79	0.47
6:F:304:LEU:O	6:F:307:ILE:HG12	2.13	0.47
1:A:378:ARG:HB3	1:A:406:TYR:HB2	1.97	0.47
2:B:180:LYS:NZ	8:H:80:TYR:OXT	2.37	0.47
1:A:235:ARG:HA	1:A:238:LEU:HD12	1.97	0.47
1:A:741:SER:HB3	1:A:743:PRO:HD2	1.97	0.47
2:B:47:PHE:CE1	2:B:51:MET:HE3	2.50	0.47
2:B:65:VAL:HG13	9:I:1206:SER:HB3	1.96	0.47
2:B:91:PHE:HA	2:B:132:ALA:HA	1.95	0.47
3:C:272:MET:HB2	3:C:276:LYS:HB2	1.95	0.47
1:A:83:LEU:HD23	1:A:197:VAL:HG12	1.95	0.47
1:A:103:GLY:HA3	1:A:176:ARG:HB3	1.96	0.47
1:A:664:GLN:O	1:A:668:GLU:HG2	2.14	0.47
1:A:1390:SER:O	1:A:1394:VAL:HG22	2.14	0.47
2:B:102:ARG:HG3	2:B:109:LYS:HA	1.96	0.47
2:B:404:VAL:C	2:B:405:PHE:HD2	2.23	0.47
2:B:1127:PRO:HB2	2:B:1136:LEU:HD23	1.95	0.47
1:A:349:GLN:NE2	1:A:408:ASP:OD1	2.38	0.47
1:A:1002:ILE:HG23	1:A:1006:LEU:HD12	1.96	0.47
2:B:20:GLU:HG2	2:B:716:PRO:HG2	1.96	0.47
2:B:85:VAL:HA	2:B:138:ALA:HA	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:421:SER:O	2:B:425:LEU:HB2	2.14	0.47
2:B:455:GLU:H	2:B:455:GLU:CD	2.23	0.47
3:C:257:TYR:CE1	3:C:336:LEU:HB2	2.44	0.47
4:D:151:LEU:HD21	4:D:161:LEU:HD11	1.95	0.47
6:F:292:MET:HA	6:F:295:THR:HG22	1.96	0.47
9:I:1061:MET:HE2	9:I:1131:VAL:HA	1.96	0.47
2:B:118:ARG:NH2	2:B:184:GLU:OE2	2.47	0.47
1:A:1244:GLU:OE2	7:G:15:TYR:OH	2.26	0.47
2:B:796:ARG:HG3	2:B:1038:THR:HG22	1.96	0.47
2:B:709:ILE:HD11	2:B:762:LYS:HE3	1.95	0.47
3:C:288:HIS:CE1	3:C:312:CYS:HB2	2.51	0.47
9:I:1045:TYR:CE1	9:I:1181:LYS:HE3	2.50	0.47
1:A:860:LEU:O	1:A:1351:ARG:NH1	2.48	0.46
2:B:79:ASP:CG	2:B:82:ARG:HH12	2.23	0.46
2:B:796:ARG:NH2	2:B:1001:GLY:O	2.47	0.46
6:F:92:ILE:HG23	6:F:101:LEU:O	2.16	0.46
1:A:422:SER:OG	2:B:1151:GLU:OE2	2.23	0.46
1:A:1171:ILE:HG22	1:A:1172:ALA:O	2.15	0.46
2:B:305:MET:O	2:B:309:LEU:HG	2.15	0.46
5:E:124:LYS:HD2	5:E:124:LYS:HA	1.62	0.46
1:A:1322:THR:HG23	1:A:1326:TYR:HD2	1.80	0.46
2:B:234:SER:OG	2:B:374:PRO:HD2	2.15	0.46
2:B:850:ILE:HG21	2:B:1022:LEU:HD11	1.97	0.46
1:A:320:TRP:CE2	2:B:1135:PRO:HG3	2.50	0.46
2:B:825:PHE:CE2	8:H:1:MET:HE2	2.49	0.46
7:G:33:ASP:O	7:G:35:GLN:N	2.49	0.46
1:A:145:VAL:HG23	1:A:155:TRP:HB2	1.97	0.46
1:A:330:ASN:HB2	1:A:445:GLN:HB3	1.97	0.46
2:B:39:LEU:HD11	2:B:781:LEU:HD22	1.97	0.46
2:B:956:MET:HG2	2:B:957:TYR:H	1.81	0.46
8:H:32:LYS:HE2	8:H:32:LYS:HB3	1.73	0.46
1:A:261:GLN:OE1	1:A:261:GLN:HA	2.15	0.46
1:A:1177:ARG:HD2	1:A:1224:ARG:NH1	2.31	0.46
2:B:591:LEU:HD22	2:B:598:GLN:HG2	1.98	0.46
2:B:1187:ALA:CB	2:B:1207:ILE:HD12	2.45	0.46
1:A:331:SER:O	1:A:638:GLN:NE2	2.47	0.46
1:A:1432:ASP:O	1:A:1436:ILE:HG12	2.16	0.46
2:B:796:ARG:HA	2:B:799:TYR:HD2	1.81	0.46
2:B:1088:MET:HG3	2:B:1101:ILE:HB	1.97	0.46
2:B:604:ASN:O	2:B:608:VAL:HG23	2.16	0.46
3:C:17:PHE:O	3:C:23:LYS:HE3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:881:GLU:O	1:A:885:LYS:HB3	2.15	0.46
1:A:974:VAL:HG12	1:A:1027:ARG:HE	1.81	0.45
2:B:296:GLU:HB2	2:B:609:ARG:HH22	1.81	0.45
4:D:203:SER:OG	4:D:204:LYS:N	2.49	0.45
7:G:21:ILE:HD12	7:G:21:ILE:O	2.16	0.45
9:I:1160:TRP:H	9:I:1160:TRP:CD1	2.34	0.45
1:A:1306:ASP:OD1	1:A:1308:ASN:N	2.47	0.45
2:B:343:PHE:HA	9:I:1196:GLU:HG3	1.97	0.45
2:B:358:GLN:HG2	9:I:1182:LEU:HA	1.98	0.45
2:B:486:ILE:O	2:B:506:THR:OG1	2.28	0.45
3:C:9:GLU:OE1	3:C:11:LYS:HG2	2.17	0.45
4:D:92:VAL:HG11	4:D:96:VAL:HG11	1.97	0.45
6:F:81:LEU:HB2	6:F:139:VAL:HG21	1.97	0.45
9:I:1049:ARG:HB3	9:I:1049:ARG:NH1	2.31	0.45
1:A:244:LEU:HD23	1:A:244:LEU:HA	1.70	0.45
3:C:3:LYS:HB3	3:C:3:LYS:HE3	1.63	0.45
3:C:30:PHE:HA	3:C:128:ARG:HH12	1.81	0.45
1:A:723:ILE:HD13	1:A:731:PHE:HB2	1.97	0.45
1:A:941:ILE:HG21	1:A:1022:ILE:HD11	1.99	0.45
2:B:1173:ASP:OD1	2:B:1173:ASP:N	2.49	0.45
6:F:298:LYS:HA	6:F:298:LYS:HD3	1.73	0.45
7:G:71:LYS:HE3	7:G:71:LYS:HB2	1.88	0.45
2:B:527:HIS:O	2:B:527:HIS:CG	2.69	0.45
1:A:72:HIS:N	1:A:205:PRO:HB3	2.32	0.45
1:A:521:VAL:HB	1:A:549:LEU:HB3	1.97	0.45
4:D:101:ASN:OD1	4:D:101:ASN:N	2.48	0.45
1:A:86:LEU:HD23	1:A:272:LEU:HD21	1.97	0.45
1:A:92:ARG:HB2	1:A:154:PHE:CE1	2.52	0.45
1:A:860:LEU:HD22	1:A:931:PRO:HB3	1.99	0.45
1:A:1181:ASN:OD1	1:A:1181:ASN:N	2.46	0.45
2:B:140:TYR:HD1	2:B:144:ARG:HE	1.64	0.45
2:B:216:HIS:HB3	9:I:1219:PHE:CZ	2.52	0.45
2:B:458:THR:HG22	2:B:459:GLN:H	1.82	0.45
2:B:1036:ARG:HB3	2:B:1038:THR:HG23	1.99	0.45
1:A:368:ASN:ND2	1:A:374:PRO:O	2.50	0.45
1:A:829:ALA:HA	1:A:1369:LEU:HD13	1.99	0.45
1:A:1135:THR:HB	1:A:1173:ASN:HA	1.98	0.45
2:B:884:GLU:HA	2:B:983:ARG:HA	1.99	0.45
1:A:26:VAL:HG22	1:A:73:PRO:O	2.17	0.45
2:B:58:ILE:HA	2:B:62:MET:HG3	1.98	0.45
2:B:301:VAL:HA	2:B:402:MET:HE1	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:887:VAL:O	2:B:979:PHE:HB2	2.17	0.45
1:A:115:LEU:HG	1:A:119:LYS:HB3	1.99	0.45
1:A:234:VAL:O	1:A:238:LEU:HG	2.17	0.45
1:A:717:LYS:HB3	1:A:718:PRO:HD3	1.99	0.45
9:I:1087:SER:OG	9:I:1112:GLU:OE2	2.26	0.45
1:A:472:MET:HE2	5:E:82:VAL:HA	1.98	0.44
1:A:937:ILE:HG23	1:A:1025:LEU:HD23	1.99	0.44
2:B:205:LEU:HD23	2:B:205:LEU:HA	1.80	0.44
6:F:100:ILE:HG13	6:F:121:ASN:OD1	2.17	0.44
9:I:1160:TRP:CE3	9:I:1161:VAL:HG12	2.52	0.44
9:I:1233:ILE:HG23	9:I:1236:VAL:HB	1.99	0.44
1:A:127:SER:OG	1:A:129:THR:OG1	2.33	0.44
1:A:344:PHE:HE1	2:B:1119:ARG:HE	1.65	0.44
1:A:1355:MET:HE2	1:A:1355:MET:HB2	1.83	0.44
2:B:380:ALA:HB1	2:B:383:ARG:NH1	2.31	0.44
2:B:670:THR:HG23	2:B:742:THR:HG23	2.00	0.44
6:F:13:ILE:HD11	6:F:70:MET:HE3	1.99	0.44
7:G:23:ARG:NH2	7:G:29:SER:OG	2.50	0.44
1:A:417:PHE:CD2	1:A:465:LEU:HD12	2.52	0.44
1:A:1053:LEU:HD11	1:A:1081:PHE:HE2	1.83	0.44
1:A:1122:PHE:CZ	1:A:1199:LEU:HD11	2.52	0.44
2:B:262:SER:OG	2:B:263:THR:N	2.50	0.44
2:B:404:VAL:HG12	2:B:405:PHE:CD2	2.51	0.44
2:B:1233:VAL:O	2:B:1234:LEU:HB2	2.16	0.44
4:D:2:ALA:O	4:D:6:LEU:HB2	2.17	0.44
1:A:117:ARG:H	1:A:117:ARG:HG2	1.35	0.44
1:A:778:PHE:CE2	7:G:84:ILE:HG23	2.52	0.44
2:B:23:GLU:HG3	2:B:1065:PRO:HD3	1.99	0.44
2:B:27:LEU:HD23	2:B:27:LEU:HA	1.87	0.44
2:B:680:ILE:HD12	2:B:680:ILE:HA	1.81	0.44
6:F:188:LEU:HB3	6:F:304:LEU:HD11	2.00	0.44
2:B:1082:PHE:HB3	3:C:200:MET:SD	2.58	0.44
2:B:1095:GLU:HG2	3:C:52:ARG:CZ	2.48	0.44
1:A:1274:MET:HE3	1:A:1288:ASP:OD1	2.18	0.44
2:B:209:ARG:NE	2:B:212:THR:OG1	2.47	0.44
2:B:329:ARG:NH2	9:I:1068:ALA:O	2.51	0.44
2:B:427:LYS:HD2	2:B:503:ARG:HB2	2.00	0.44
1:A:123:GLU:O	1:A:126:SER:OG	2.33	0.44
2:B:322:PRO:HD2	2:B:335:PHE:HE2	1.82	0.44
2:B:933:ILE:O	2:B:934:ILE:HG13	2.18	0.44
3:C:61:VAL:HA	3:C:65:GLU:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:27:LEU:HD23	6:F:51:VAL:HG11	1.99	0.44
1:A:525:LEU:HB2	3:C:299:TYR:CE2	2.53	0.44
2:B:419:HIS:HB3	2:B:423:VAL:HB	2.00	0.44
2:B:449:LEU:HG	2:B:454:PHE:CE1	2.53	0.44
2:B:913:TYR:O	2:B:916:LEU:HD12	2.18	0.44
6:F:46:LEU:N	6:F:77:VAL:O	2.50	0.44
1:A:666:VAL:HG23	1:A:718:PRO:HB2	1.99	0.44
2:B:438:ILE:HG21	9:I:1206:SER:HA	2.00	0.44
2:B:957:TYR:HE1	2:B:984:LEU:HD22	1.83	0.44
3:C:12:PRO:HB3	3:C:41:VAL:HG12	2.00	0.44
4:D:92:VAL:HG12	4:D:93:ASP:H	1.83	0.44
4:D:104:ASP:OD2	4:D:104:ASP:N	2.51	0.44
6:F:91:LYS:HE2	6:F:105:LEU:HB2	2.00	0.44
8:H:9:THR:HB	8:H:65:CYS:HB2	2.00	0.44
1:A:649:PHE:HB3	2:B:855:ILE:HD12	2.00	0.43
2:B:185:ASP:HB3	2:B:188:GLU:HG2	2.00	0.43
2:B:347:PRO:HA	2:B:350:TYR:CE1	2.53	0.43
2:B:1237:ARG:NH1	6:F:10:THR:OG1	2.45	0.43
9:I:1024:ALA:HB1	9:I:1029:ILE:O	2.18	0.43
2:B:109:LYS:HB2	2:B:109:LYS:HE2	1.68	0.43
2:B:369:ASP:O	2:B:386:LYS:NZ	2.51	0.43
2:B:371:ILE:HD12	2:B:371:ILE:HA	1.83	0.43
2:B:558:SER:OG	2:B:559:ALA:N	2.51	0.43
2:B:1067:ASN:HB3	2:B:1070:LEU:HB2	1.99	0.43
3:C:71:LEU:HG	3:C:102:ILE:HG21	2.00	0.43
5:E:104:ASP:O	5:E:108:GLN:HG2	2.18	0.43
1:A:1015:THR:OG1	1:A:1016:CYS:N	2.50	0.43
2:B:249:ARG:NH1	2:B:259:GLU:OE1	2.47	0.43
3:C:244:ARG:HD3	3:C:244:ARG:HA	1.77	0.43
3:C:301:MET:HE1	3:C:335:LEU:O	2.18	0.43
3:C:315:HIS:CD2	3:C:316:LYS:HG3	2.53	0.43
5:E:75:GLU:CD	5:E:121:ARG:HH21	2.24	0.43
5:E:124:LYS:HB2	5:E:132:ILE:HB	2.01	0.43
1:A:1386:MET:HG2	1:A:1394:VAL:CG2	2.47	0.43
3:C:188:ASP:OD1	3:C:188:ASP:N	2.39	0.43
3:C:255:LYS:O	3:C:258:GLU:HG3	2.18	0.43
1:A:65:GLN:O	1:A:67:LYS:N	2.51	0.43
2:B:816:PRO:CB	3:C:86:LEU:HB3	2.48	0.43
2:B:1008:LEU:HD12	2:B:1008:LEU:HA	1.86	0.43
3:C:81:GLU:HB2	3:C:84:THR:HG23	2.00	0.43
5:E:95:LEU:HD21	5:E:108:GLN:HB2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:152:PHE:CD1	1:A:264:GLN:HG2	2.53	0.43
1:A:1154:TRP:HH2	1:A:1224:ARG:HG3	1.82	0.43
2:B:886:LYS:HD2	2:B:979:PHE:HE1	1.84	0.43
4:D:4:GLN:O	4:D:8:THR:HG22	2.19	0.43
6:F:198:LYS:HD3	6:F:199:GLN:H	1.83	0.43
1:A:315:LEU:HD11	1:A:1387:ALA:HB1	2.00	0.43
1:A:1265:ILE:HG23	1:A:1295:THR:HB	2.00	0.43
2:B:279:PHE:HB2	2:B:387:LEU:HD11	2.01	0.43
3:C:70:MET:HG2	3:C:176:PHE:CE1	2.53	0.43
3:C:246:ILE:HG21	3:C:347:PHE:CZ	2.53	0.43
3:C:319:MET:HB3	3:C:319:MET:HE3	1.79	0.43
1:A:112:TYR:HE1	1:A:123:GLU:HG2	1.84	0.43
2:B:364:GLN:O	2:B:367:ILE:HG13	2.19	0.43
6:F:132:VAL:HG22	6:F:154:ILE:HD13	2.01	0.43
1:A:26:VAL:HG11	1:A:61:THR:HG21	2.01	0.43
1:A:499:GLN:NE2	1:A:617:TYR:OH	2.51	0.43
1:A:1151:ASP:C	1:A:1155:MET:HG3	2.44	0.43
5:E:120:MET:O	5:E:120:MET:HG3	2.18	0.43
6:F:6:ILE:HA	6:F:75:SER:HA	2.00	0.43
6:F:28:LEU:HD23	6:F:28:LEU:HA	1.76	0.43
6:F:82:ASN:OD1	6:F:82:ASN:N	2.51	0.43
1:A:419:ARG:NH1	9:I:1245:ASN:HB3	2.34	0.43
1:A:815:LYS:HE3	1:A:815:LYS:HB3	1.74	0.43
2:B:40:ILE:HG13	2:B:189:PRO:HG3	2.00	0.43
2:B:815:TRP:CG	2:B:816:PRO:HD3	2.54	0.43
9:I:1037:ILE:HB	9:I:1142:ILE:HD11	2.01	0.43
1:A:344:PHE:HZ	2:B:1119:ARG:HG3	1.83	0.42
1:A:1021:ALA:HA	1:A:1024:ASP:OD2	2.19	0.42
2:B:363:ARG:HG3	2:B:364:GLN:N	2.34	0.42
2:B:559:ALA:HA	2:B:802:ASN:HD21	1.83	0.42
2:B:796:ARG:HA	2:B:799:TYR:CD2	2.53	0.42
2:B:1238:VAL:H	6:F:71:HIS:CD2	2.37	0.42
5:E:114:LYS:HE2	5:E:114:LYS:HB2	1.79	0.42
9:I:1237:ASP:C	9:I:1238:ILE:HG13	2.43	0.42
9:I:1243:LEU:HA	9:I:1246:LEU:HD23	2.01	0.42
1:A:425:ARG:NH2	1:A:1039:GLU:OE1	2.52	0.42
1:A:997:LEU:HD13	4:D:192:MET:HB2	2.00	0.42
2:B:72:GLN:HE21	2:B:454:PHE:HE2	1.67	0.42
2:B:205:LEU:HD21	2:B:527:HIS:HB3	2.01	0.42
2:B:646:HIS:CG	2:B:647:PRO:HD2	2.54	0.42
2:B:807:THR:CG2	2:B:1109:GLN:HB3	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:883:ARG:HB2	2:B:986:TYR:HE1	1.85	0.42
2:B:911:ALA:HB1	2:B:932:ILE:HD11	2.00	0.42
4:D:14:ILE:HD12	4:D:45:ALA:HB2	2.01	0.42
1:A:502:ASP:OD2	2:B:861:GLN:HG2	2.19	0.42
1:A:1076:ARG:HB3	1:A:1077:PRO:HD3	2.00	0.42
1:A:1283:LYS:HE2	1:A:1285:VAL:HG12	2.01	0.42
1:A:1431:MET:HE3	1:A:1431:MET:HB3	1.86	0.42
2:B:694:ARG:HE	2:B:701:TRP:CD1	2.37	0.42
3:C:46:ASP:N	3:C:46:ASP:OD1	2.52	0.42
3:C:74:LYS:HB2	3:C:162:ASP:HB3	2.01	0.42
5:E:96:LYS:HA	5:E:96:LYS:HD3	1.82	0.42
6:F:86:LEU:HB3	6:F:306:PHE:HB2	2.01	0.42
9:I:1043:ARG:C	9:I:1185:LYS:HB3	2.45	0.42
9:I:1122:TYR:HA	9:I:1140:TYR:OH	2.18	0.42
1:A:51:GLY:C	1:A:206:ILE:HD11	2.44	0.42
1:A:244:LEU:HD11	1:A:256:ILE:HD12	2.01	0.42
1:A:362:LEU:HA	1:A:365:TYR:HD2	1.83	0.42
1:A:377:SER:O	1:A:378:ARG:HB2	2.19	0.42
2:B:995:LYS:HD2	2:B:1003:LYS:HD2	2.02	0.42
2:B:1087:LYS:HB3	2:B:1087:LYS:HE2	1.85	0.42
9:I:1223:ILE:H	9:I:1223:ILE:HG13	1.61	0.42
1:A:92:ARG:HB2	1:A:154:PHE:HE1	1.84	0.42
1:A:739:LYS:HA	1:A:739:LYS:HD3	1.88	0.42
1:A:858:ASP:CG	1:A:1351:ARG:HH22	2.27	0.42
2:B:102:ARG:HG2	2:B:109:LYS:HD3	2.01	0.42
2:B:427:LYS:O	2:B:430:LYS:HG2	2.20	0.42
2:B:435:THR:OG1	2:B:436:SER:N	2.52	0.42
2:B:733:VAL:HG11	2:B:740:PHE:CE2	2.54	0.42
6:F:5:LYS:HD3	6:F:5:LYS:HA	1.81	0.42
6:F:128:GLN:NE2	6:F:326:ILE:HD11	2.35	0.42
9:I:1019:LYS:O	9:I:1023:THR:OG1	2.38	0.42
1:A:204:PRO:HB3	1:A:208:ILE:HD11	2.02	0.42
1:A:1410:ILE:HG12	2:B:1156:THR:HG21	2.02	0.42
2:B:640:ARG:NH2	2:B:736:GLY:O	2.44	0.42
2:B:1198:CYS:SG	2:B:1199:MET:N	2.92	0.42
6:F:90:VAL:C	6:F:91:LYS:HD2	2.44	0.42
6:F:95:ASN:C	6:F:97:SER:H	2.27	0.42
8:H:23:LYS:O	8:H:27:GLU:HG2	2.19	0.42
9:I:1155:ILE:HD12	9:I:1155:ILE:HA	1.87	0.42
2:B:773:ASP:OD1	2:B:774:VAL:N	2.52	0.42
5:E:76:ALA:HB1	5:E:146:LEU:HD11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:1201:SER:OG	9:I:1202:GLY:N	2.53	0.42
1:A:50:MET:SD	1:A:74:GLY:HA3	2.60	0.42
1:A:185:LEU:HD12	1:A:185:LEU:HA	1.78	0.42
1:A:748:ILE:HA	1:A:792:TYR:HB2	2.02	0.42
5:E:71:LEU:HG	5:E:141:MET:HE3	2.01	0.42
6:F:310:LEU:HD23	6:F:310:LEU:HA	1.91	0.42
9:I:1192:MET:SD	9:I:1193:ILE:HG13	2.59	0.42
1:A:112:TYR:CE1	1:A:123:GLU:HG2	2.55	0.42
1:A:463:MET:HE3	1:A:463:MET:HB3	1.82	0.42
1:A:971:LEU:HD23	1:A:999:ARG:HG3	2.01	0.42
1:A:1176:ILE:HD11	1:A:1178:LEU:HD21	2.02	0.42
2:B:598:GLN:HA	2:B:623:GLY:HA2	2.01	0.42
3:C:301:MET:HE3	3:C:301:MET:HB3	1.78	0.42
1:A:70:MET:HE1	2:B:1175:CYS:HB2	2.02	0.42
1:A:336:ASP:OD1	1:A:432:ARG:NH2	2.49	0.42
1:A:1100:ASN:HB3	1:A:1103:VAL:HG22	2.02	0.42
2:B:33:ALA:O	2:B:37:THR:HG23	2.20	0.42
2:B:539:ALA:HB1	9:I:1231:PHE:HD2	1.85	0.42
9:I:1089:PHE:N	9:I:1089:PHE:CD1	2.87	0.42
9:I:1149:PHE:CD1	9:I:1169:ALA:HB1	2.54	0.42
1:A:370:LYS:HG2	1:A:377:SER:HB3	2.02	0.41
2:B:326:GLU:HG2	2:B:331:LYS:HB2	2.01	0.41
2:B:911:ALA:HA	2:B:930:GLY:O	2.20	0.41
3:C:5:PHE:HB3	3:C:353:ASN:HB3	2.03	0.41
6:F:201:CYS:O	6:F:204:GLU:HG2	2.19	0.41
6:F:319:LEU:HB3	6:F:323:HIS:CE1	2.54	0.41
1:A:226:ILE:HD12	1:A:226:ILE:HA	1.92	0.41
1:A:618:HIS:O	1:A:622:ARG:HG2	2.20	0.41
1:A:716:LEU:HD13	1:A:716:LEU:HA	1.88	0.41
6:F:1:MET:HE1	6:F:3:ASP:HB2	2.02	0.41
1:A:764:PRO:HA	1:A:771:THR:HA	2.02	0.41
1:A:1343:MET:HG3	1:A:1348:PRO:HD2	2.02	0.41
1:A:1433:GLU:OE2	6:F:54:ARG:NH2	2.53	0.41
2:B:708:PHE:O	2:B:763:HIS:HA	2.20	0.41
2:B:1180:CYS:C	2:B:1182:ASN:H	2.29	0.41
9:I:1082:CYS:HB3	9:I:1089:PHE:HE2	1.85	0.41
2:B:267:LYS:HE3	2:B:267:LYS:HB3	1.91	0.41
2:B:539:ALA:HB1	9:I:1231:PHE:CD2	2.56	0.41
2:B:1056:VAL:HG12	8:H:49:ILE:O	2.21	0.41
2:B:67:ILE:HD11	9:I:1198:PHE:HD1	1.86	0.41
2:B:179:LYS:O	2:B:182:ILE:HG22	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:790:ASN:OD1	2:B:790:ASN:N	2.53	0.41
3:C:111:PHE:CD2	3:C:132:GLN:HB2	2.55	0.41
6:F:97:SER:O	6:F:99:ILE:N	2.53	0.41
7:G:93:ILE:HG23	7:G:104:ARG:HB2	2.01	0.41
1:A:181:THR:O	1:A:185:LEU:HB2	2.21	0.41
1:A:302:ARG:O	1:A:309:ARG:N	2.45	0.41
1:A:733:MET:SD	2:B:1031:HIS:HA	2.61	0.41
2:B:646:HIS:CD2	2:B:647:PRO:HD2	2.55	0.41
2:B:872:ILE:HG12	2:B:990:LEU:HB3	2.03	0.41
6:F:86:LEU:HD13	6:F:86:LEU:HA	1.90	0.41
7:G:28:GLU:HB2	9:I:1081:ASN:HD21	1.85	0.41
8:H:29:ILE:HG22	8:H:49:ILE:CD1	2.51	0.41
9:I:1172:GLU:O	9:I:1175:THR:HG22	2.21	0.41
1:A:715:ILE:O	1:A:718:PRO:HD2	2.19	0.41
1:A:1094:MET:HE2	1:A:1298:THR:HA	2.03	0.41
1:A:1386:MET:HE3	1:A:1386:MET:HB3	1.81	0.41
2:B:441:ILE:HD13	2:B:469:ALA:HB3	2.02	0.41
2:B:464:GLU:HA	2:B:467:SER:OG	2.21	0.41
2:B:1115:VAL:O	2:B:1119:ARG:HB3	2.20	0.41
6:F:29:LYS:HB3	6:F:29:LYS:HE3	1.84	0.41
8:H:56:THR:HB	8:H:67:ARG:HH22	1.85	0.41
9:I:1100:VAL:HG23	9:I:1103:LEU:HD12	2.01	0.41
1:A:111:ARG:O	1:A:114:HIS:NE2	2.54	0.41
1:A:862:ALA:HB2	1:A:1351:ARG:HD2	2.02	0.41
2:B:268:LEU:HD12	2:B:268:LEU:HA	1.75	0.41
2:B:433:PHE:HA	2:B:478:LEU:HD11	2.01	0.41
2:B:450:LYS:HA	2:B:450:LYS:HD3	1.88	0.41
2:B:643:LYS:HB3	2:B:643:LYS:HE3	1.83	0.41
2:B:867:VAL:HG12	2:B:1026:LEU:HD22	2.02	0.41
3:C:110:VAL:HB	3:C:134:ALA:HB2	2.03	0.41
4:D:46:GLU:OE2	4:D:50:HIS:HA	2.20	0.41
7:G:13:ARG:HD3	7:G:15:TYR:OH	2.21	0.41
9:I:1122:TYR:HA	9:I:1140:TYR:HH	1.84	0.41
1:A:645:ARG:HH22	2:B:857:GLY:HA2	1.85	0.41
1:A:923:LEU:HD21	1:A:1274:MET:O	2.19	0.41
1:A:1339:ILE:O	1:A:1343:MET:HG2	2.21	0.41
2:B:26:MET:HB3	2:B:774:VAL:HG13	2.03	0.41
2:B:470:LEU:HD23	2:B:470:LEU:HA	1.80	0.41
2:B:511:ARG:HB3	2:B:811:TYR:HD2	1.86	0.41
3:C:30:PHE:HE2	8:H:20:ILE:HG13	1.86	0.41
5:E:107:LYS:HB2	5:E:107:LYS:HE3	1.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:16:VAL:HA	7:G:17:ASP:HA	1.67	0.41
7:G:55:ILE:HD12	7:G:55:ILE:H	1.85	0.41
1:A:320:TRP:HB3	2:B:1124:SER:HA	2.03	0.41
1:A:379:VAL:O	1:A:387:VAL:HA	2.20	0.41
1:A:528:MET:SD	3:C:307:PHE:HA	2.61	0.41
1:A:582:MET:HB2	1:A:725:PRO:HG2	2.03	0.41
1:A:591:THR:HA	1:A:601:GLY:HA3	2.02	0.41
1:A:781:GLU:CD	2:B:767:ARG:HH22	2.29	0.41
1:A:874:MET:SD	1:A:1284:LEU:HD23	2.61	0.41
1:A:1099:LYS:HE3	1:A:1307:ASP:O	2.21	0.41
2:B:195:ALA:HB3	2:B:200:TRP:CD1	2.56	0.41
2:B:832:PRO:HG2	2:B:839:HIS:CE1	2.56	0.41
5:E:95:LEU:CD1	5:E:109:GLU:HG3	2.51	0.41
8:H:75:ASP:CG	8:H:77:ARG:HH21	2.28	0.41
9:I:1102:HIS:CD2	9:I:1102:HIS:C	2.97	0.41
1:A:339:GLY:N	1:A:445:GLN:O	2.38	0.40
2:B:58:ILE:HD11	2:B:240:PHE:HB3	2.03	0.40
2:B:912:ASN:OD1	2:B:914:GLU:N	2.43	0.40
3:C:301:MET:CE	3:C:339:SER:HB3	2.51	0.40
9:I:1065:ARG:O	9:I:1069:VAL:HG23	2.21	0.40
1:A:236:LYS:HA	1:A:236:LYS:HD3	1.87	0.40
1:A:470:SER:OG	2:B:1166:GLU:OE2	2.34	0.40
1:A:1142:ASN:ND2	1:A:1144:MET:HB2	2.35	0.40
2:B:996:MET:HB2	2:B:996:MET:HE2	1.62	0.40
2:B:1181:ARG:HB2	2:B:1234:LEU:HD22	2.03	0.40
6:F:206:LEU:HD22	6:F:327:TRP:HZ3	1.86	0.40
6:F:206:LEU:HD22	6:F:327:TRP:CZ3	2.56	0.40
8:H:27:GLU:O	8:H:31:THR:HG23	2.21	0.40
2:B:78:ILE:HG22	2:B:82:ARG:NH2	2.36	0.40
7:G:95:VAL:HG12	7:G:96:CYS:H	1.87	0.40
1:A:1109:TYR:O	1:A:1112:GLU:HG2	2.22	0.40
2:B:257:THR:OG1	2:B:269:ARG:HB3	2.21	0.40
2:B:927:VAL:HG13	2:B:931:ASP:HB2	2.03	0.40
3:C:96:ARG:O	8:H:5:VAL:HG21	2.21	0.40
3:C:315:HIS:C	3:C:317:GLN:H	2.29	0.40
1:A:12:GLN:HB2	2:B:1231:THR:HG23	2.03	0.40
1:A:166:TYR:OH	1:A:252:ILE:HD11	2.22	0.40
1:A:677:SER:HB2	1:A:709:LEU:HD21	2.03	0.40
2:B:232:PHE:HB3	2:B:246:ILE:HG12	2.04	0.40
2:B:449:LEU:HG	2:B:454:PHE:CZ	2.57	0.40
2:B:476:SER:C	2:B:478:LEU:H	2.28	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:181:LEU:HB3	6:F:297:LEU:HD13	2.03	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	1390/1450 (96%)	1326 (95%)	60 (4%)	4 (0%)	36	70
2	B	1192/1242 (96%)	1107 (93%)	81 (7%)	4 (0%)	36	70
3	C	356/359 (99%)	341 (96%)	15 (4%)	0	100	100
4	D	203/205 (99%)	197 (97%)	6 (3%)	0	100	100
5	E	105/147 (71%)	91 (87%)	13 (12%)	1 (1%)	12	45
6	F	231/339 (68%)	211 (91%)	17 (7%)	3 (1%)	9	38
7	G	103/105 (98%)	94 (91%)	8 (8%)	1 (1%)	12	45
8	H	65/80 (81%)	64 (98%)	1 (2%)	0	100	100
9	I	237/1249 (19%)	222 (94%)	15 (6%)	0	100	100
All	All	3882/5176 (75%)	3653 (94%)	216 (6%)	13 (0%)	37	70

All (13) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	1139	THR
1	A	1142	ASN
2	B	1202	ASP
7	G	34	SER
6	F	70	MET
2	B	421	SER
1	A	1143	VAL

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Mol	Chain	Res	Type
6	F	100	ILE
1	A	582	MET
2	B	103	ASN
2	B	1234	LEU
5	E	42	SER
6	F	45	ILE

### 5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	1242/1279 (97%)	1192 (96%)	50 (4%)	28	62
2	B	1042/1081 (96%)	1001 (96%)	41 (4%)	28	62
3	C	327/328 (100%)	319 (98%)	8 (2%)	43	73
4	D	185/185 (100%)	172 (93%)	13 (7%)	14	44
5	E	97/136 (71%)	93 (96%)	4 (4%)	27	61
6	F	218/312 (70%)	208 (95%)	10 (5%)	24	58
7	G	96/96 (100%)	90 (94%)	6 (6%)	16	48
8	H	61/70 (87%)	61 (100%)	0	100	100
9	I	215/1130 (19%)	202 (94%)	13 (6%)	17	50
All	All	3483/4617 (75%)	3338 (96%)	145 (4%)	28	61

All (145) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	70	MET
1	A	97	VAL
1	A	117	ARG
1	A	129	THR
1	A	140	VAL
1	A	169	ILE
1	A	185	LEU
1	A	197	VAL

*Continued on next page...*

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Mol	Chain	Res	Type
1	A	244	LEU
1	A	245	GLN
1	A	252	ILE
1	A	255	ASN
1	A	262	THR
1	A	359	ILE
1	A	387	VAL
1	A	409	VAL
1	A	463	MET
1	A	537	ASP
1	A	644	VAL
1	A	675	LEU
1	A	685	LEU
1	A	689	ILE
1	A	711	PHE
1	A	716	LEU
1	A	723	ILE
1	A	741	SER
1	A	812	LEU
1	A	941	ILE
1	A	943	LEU
1	A	1009	VAL
1	A	1015	THR
1	A	1051	GLU
1	A	1057	MET
1	A	1096	LEU
1	A	1152	VAL
1	A	1153	GLU
1	A	1159	LEU
1	A	1176	ILE
1	A	1183	THR
1	A	1212	VAL
1	A	1217	SER
1	A	1219	ILE
1	A	1240	MET
1	A	1242	THR
1	A	1248	VAL
1	A	1251	VAL
1	A	1308	ASN
1	A	1309	ILE
1	A	1392	VAL
1	A	1424	THR

*Continued on next page...*

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Mol	Chain	Res	Type
2	B	39	LEU
2	B	74	ASP
2	B	85	VAL
2	B	87	ILE
2	B	91	PHE
2	B	108	ASN
2	B	110	ILE
2	B	119	LEU
2	B	246	ILE
2	B	299	SER
2	B	319	ILE
2	B	332	ILE
2	B	340	VAL
2	B	362	GLU
2	B	363	ARG
2	B	371	ILE
2	B	401	ILE
2	B	408	THR
2	B	448	LEU
2	B	467	SER
2	B	470	LEU
2	B	476	SER
2	B	578	CYS
2	B	656	MET
2	B	704	HIS
2	B	728	THR
2	B	731	ASP
2	B	742	THR
2	B	842	VAL
2	B	900	ASP
2	B	908	LYS
2	B	978	ILE
2	B	996	MET
2	B	1061	THR
2	B	1066	ILE
2	B	1142	HIS
2	B	1161	MET
2	B	1195	ILE
2	B	1203	VAL
2	B	1228	VAL
2	B	1231	THR
3	C	7	ASN

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Mol	Chain	Res	Type
3	C	133	VAL
3	C	180	VAL
3	C	237	THR
3	C	246	ILE
3	C	287	THR
3	C	313	VAL
3	C	357	LEU
4	D	20	VAL
4	D	26	VAL
4	D	70	ASP
4	D	92	VAL
4	D	101	ASN
4	D	113	ASN
4	D	115	THR
4	D	117	VAL
4	D	120	ILE
4	D	125	LEU
4	D	168	ASP
4	D	182	VAL
4	D	186	ARG
5	E	56	THR
5	E	107	LYS
5	E	124	LYS
5	E	125	VAL
6	F	18	ASN
6	F	23	VAL
6	F	62	THR
6	F	86	LEU
6	F	130	VAL
6	F	174	GLN
6	F	182	VAL
6	F	304	LEU
6	F	313	THR
6	F	325	ASN
7	G	1	MET
7	G	3	ILE
7	G	41	SER
7	G	43	VAL
7	G	48	GLU
7	G	55	ILE
9	I	1029	ILE
9	I	1037	ILE

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Mol	Chain	Res	Type
9	I	1142	ILE
9	I	1151	THR
9	I	1161	VAL
9	I	1162	VAL
9	I	1172	GLU
9	I	1173	LEU
9	I	1206	SER
9	I	1208	ASP
9	I	1209	ASP
9	I	1222	ASP
9	I	1228	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (32) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	158	GLN
1	A	255	ASN
1	A	330	ASN
1	A	388	HIS
1	A	445	GLN
1	A	514	ASN
1	A	562	GLN
1	A	592	GLN
1	A	914	ASN
1	A	929	GLN
1	A	980	GLN
1	A	984	GLN
1	A	1036	ASN
1	A	1100	ASN
1	A	1197	ASN
1	A	1349	ASN
2	B	355	ASN
2	B	588	GLN
2	B	627	ASN
2	B	861	GLN
2	B	1067	ASN
2	B	1083	ASN
2	B	1112	GLN
2	B	1204	GLN
2	B	1220	GLN
2	B	1227	ASN
3	C	153	GLN

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Mol	Chain	Res	Type
3	C	183	HIS
3	C	233	GLN
3	C	353	ASN
5	E	69	ASN
9	I	1249	GLN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

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

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.



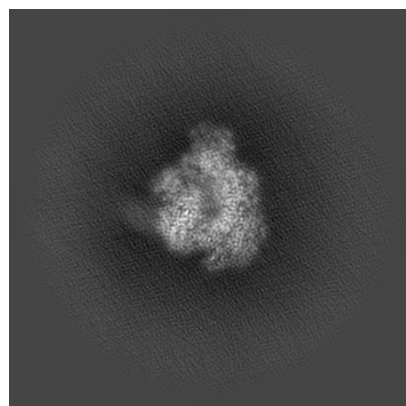
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-38802. These allow visual inspection of the internal detail of the map and identification of artifacts.

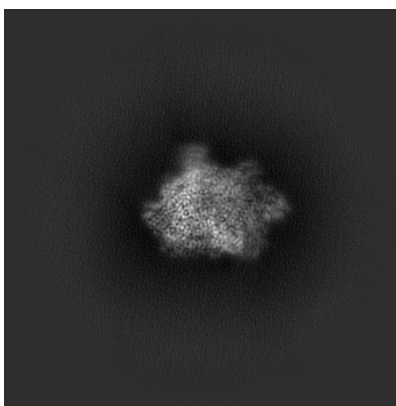
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

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

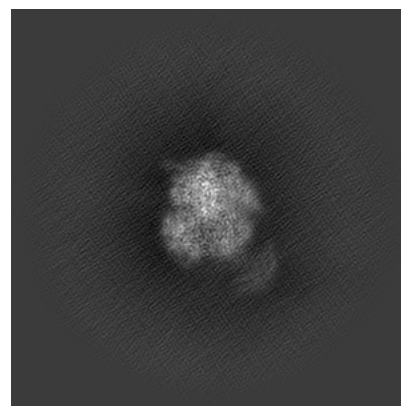
#### 6.1.1 Primary map



X

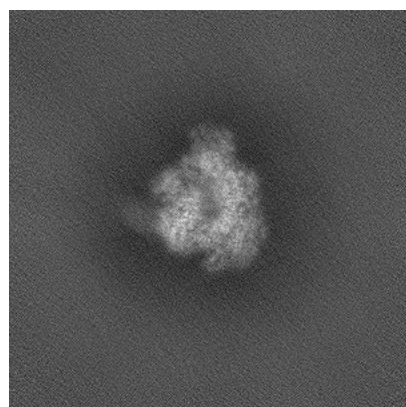


Y

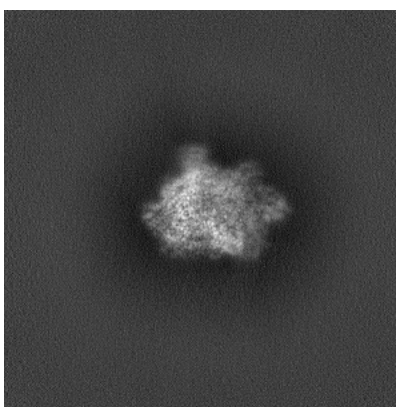


Z

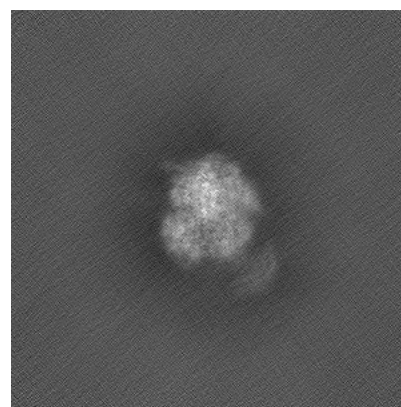
#### 6.1.2 Raw map



X



Y

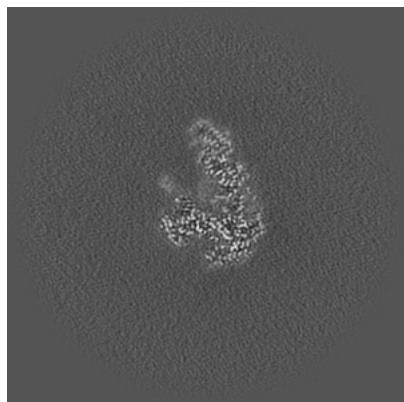


Z

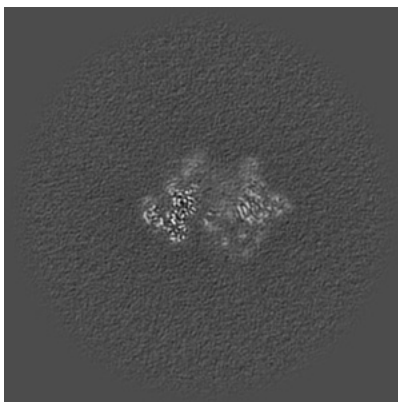
The images above show the map projected in three orthogonal directions.

## 6.2 Central slices [i](#)

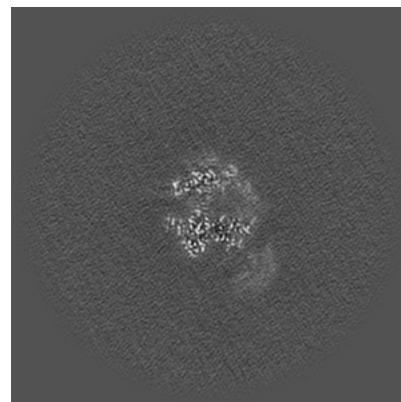
### 6.2.1 Primary map



X Index: 256

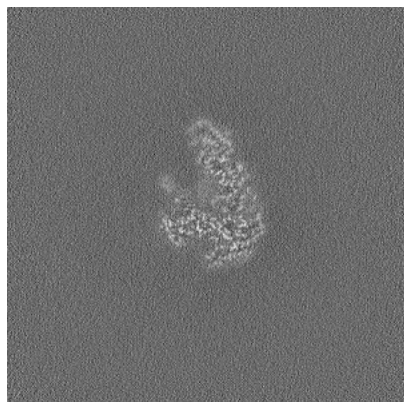


Y Index: 256

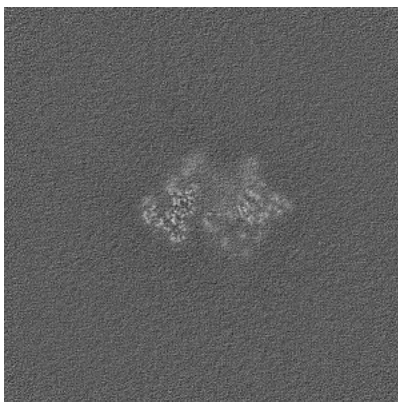


Z Index: 256

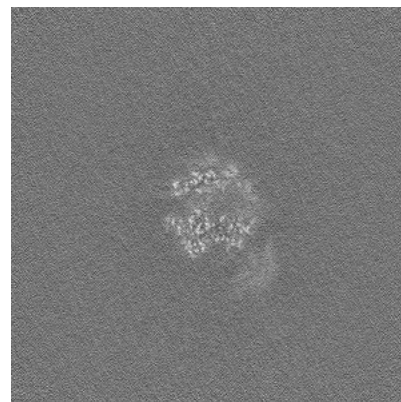
### 6.2.2 Raw map



X Index: 256



Y Index: 256

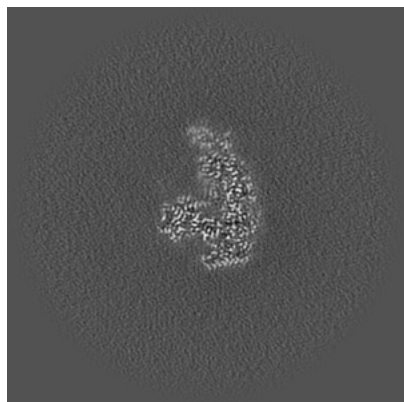


Z Index: 256

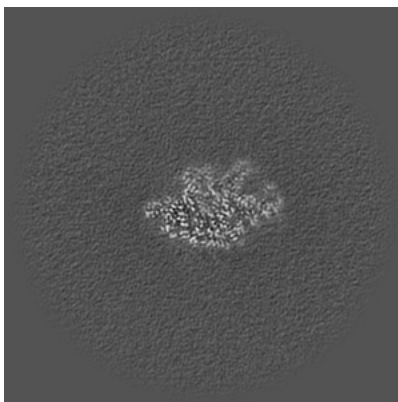
The images above show central slices of the map in three orthogonal directions.

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

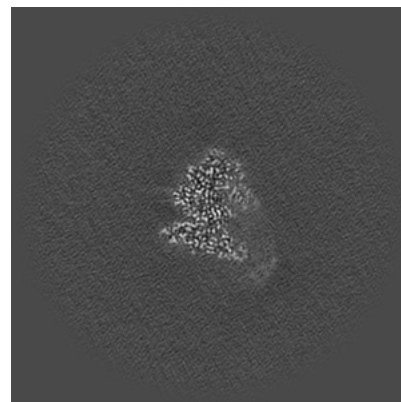
### 6.3.1 Primary map



X Index: 249

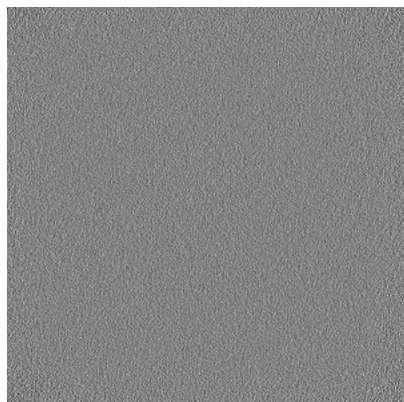


Y Index: 280

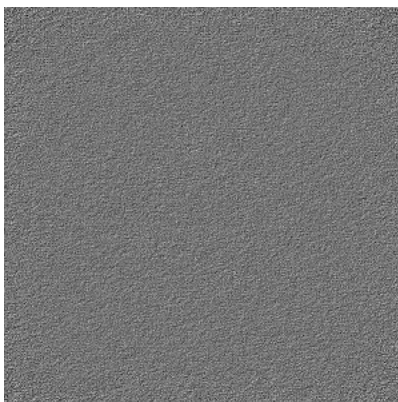


Z Index: 232

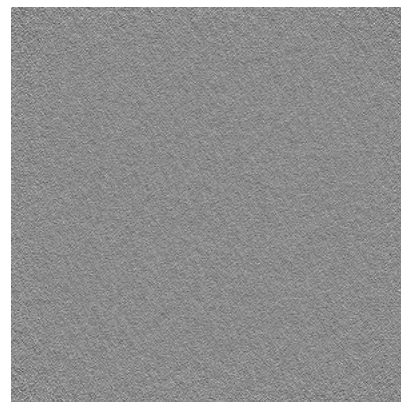
### 6.3.2 Raw map



X Index: 0



Y Index: 0



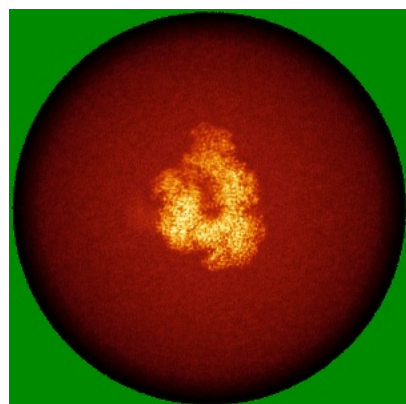
Z Index: 0

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

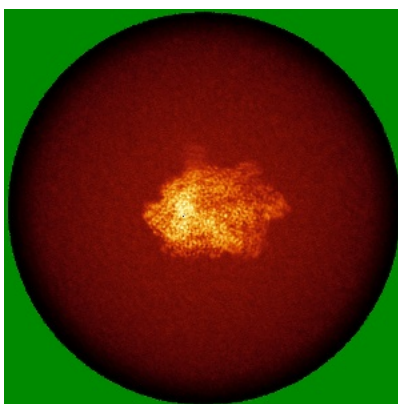


## 6.4 Orthogonal standard-deviation projections (False-color) [i](#)

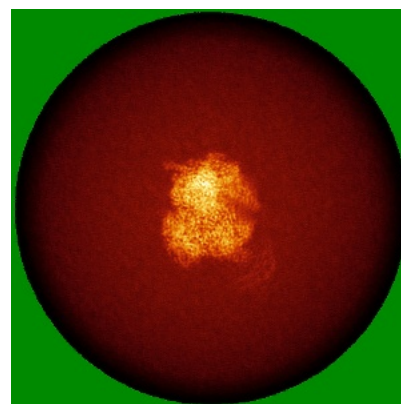
### 6.4.1 Primary map



X

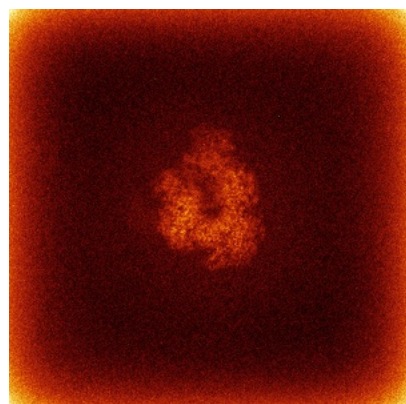


Y

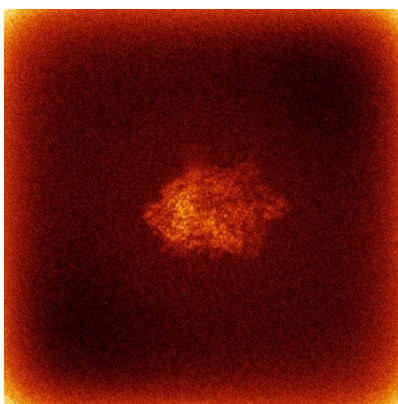


Z

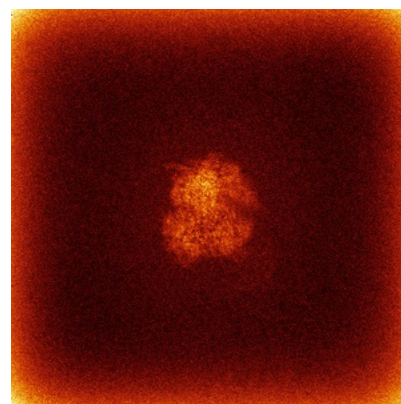
### 6.4.2 Raw map



X



Y



Z

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

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

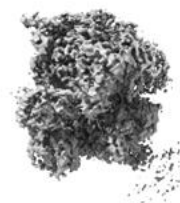
### 6.5.1 Primary map



X



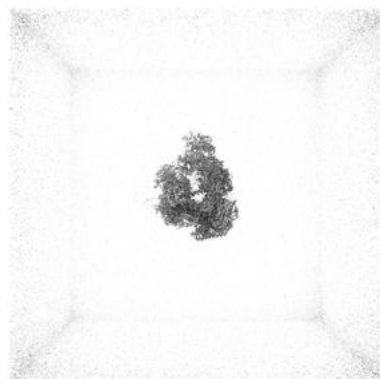
Y



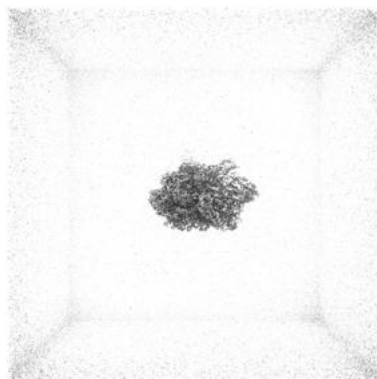
Z

The images above show the 3D surface view of the map at the recommended contour level 0.4. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

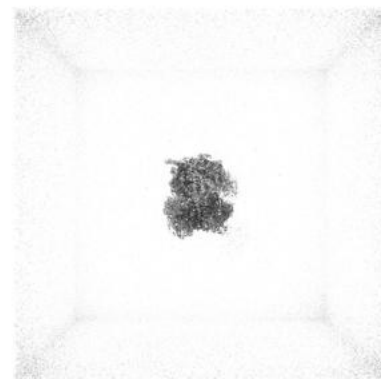
### 6.5.2 Raw map



X



Y



Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

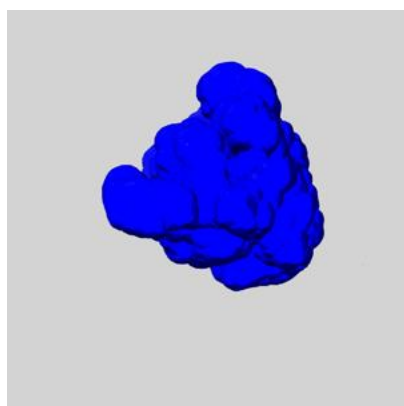
## 6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

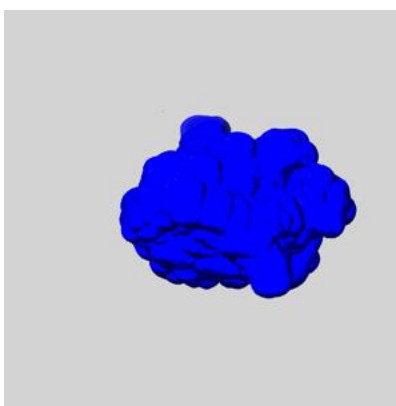
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

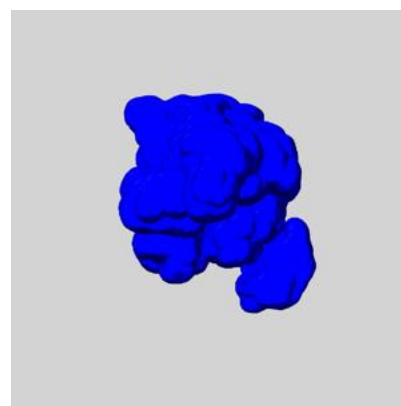
### 6.6.1 emd\_38802\_msk\_1.map [i](#)



X



Y

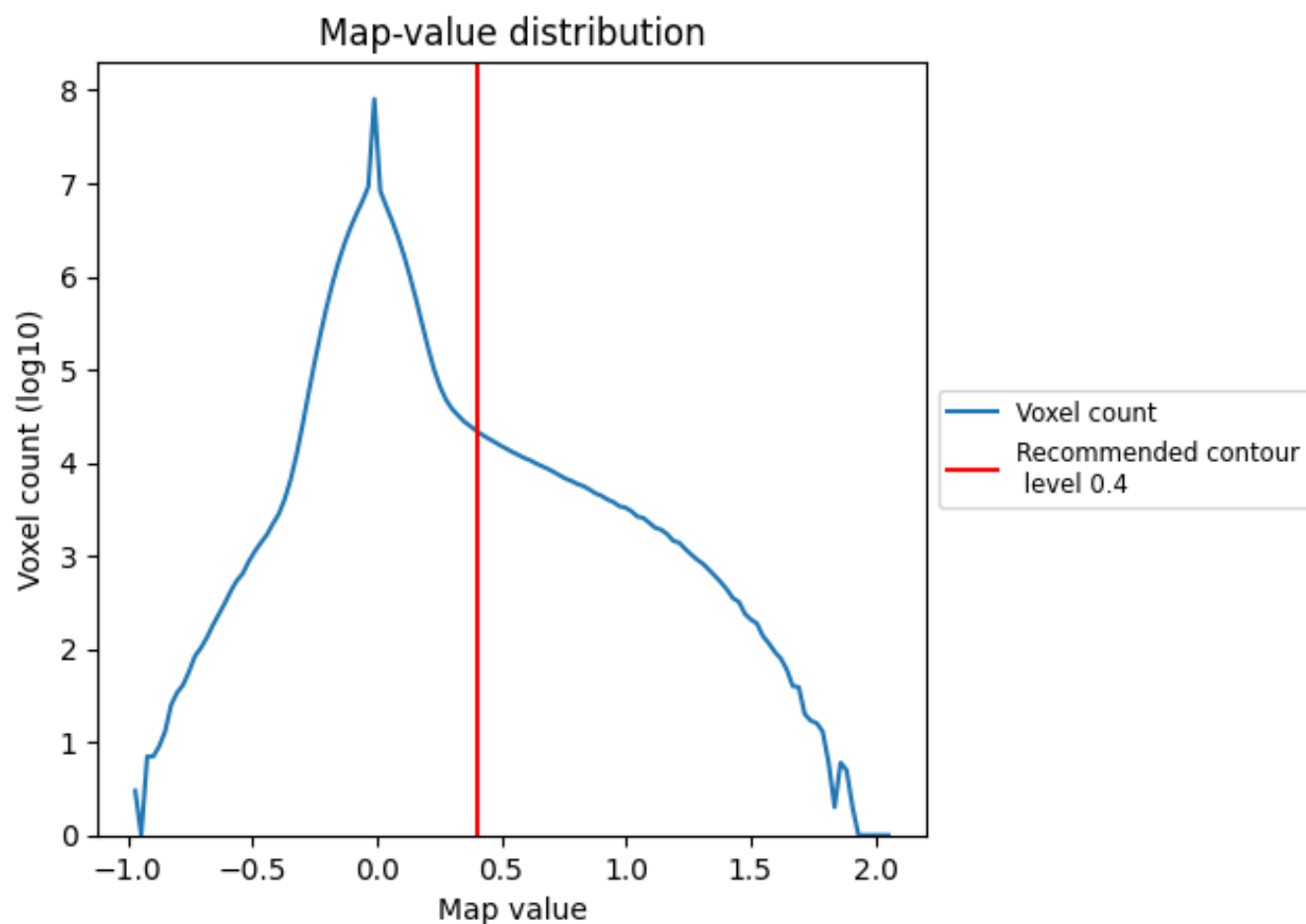


Z

## 7 Map analysis [i](#)

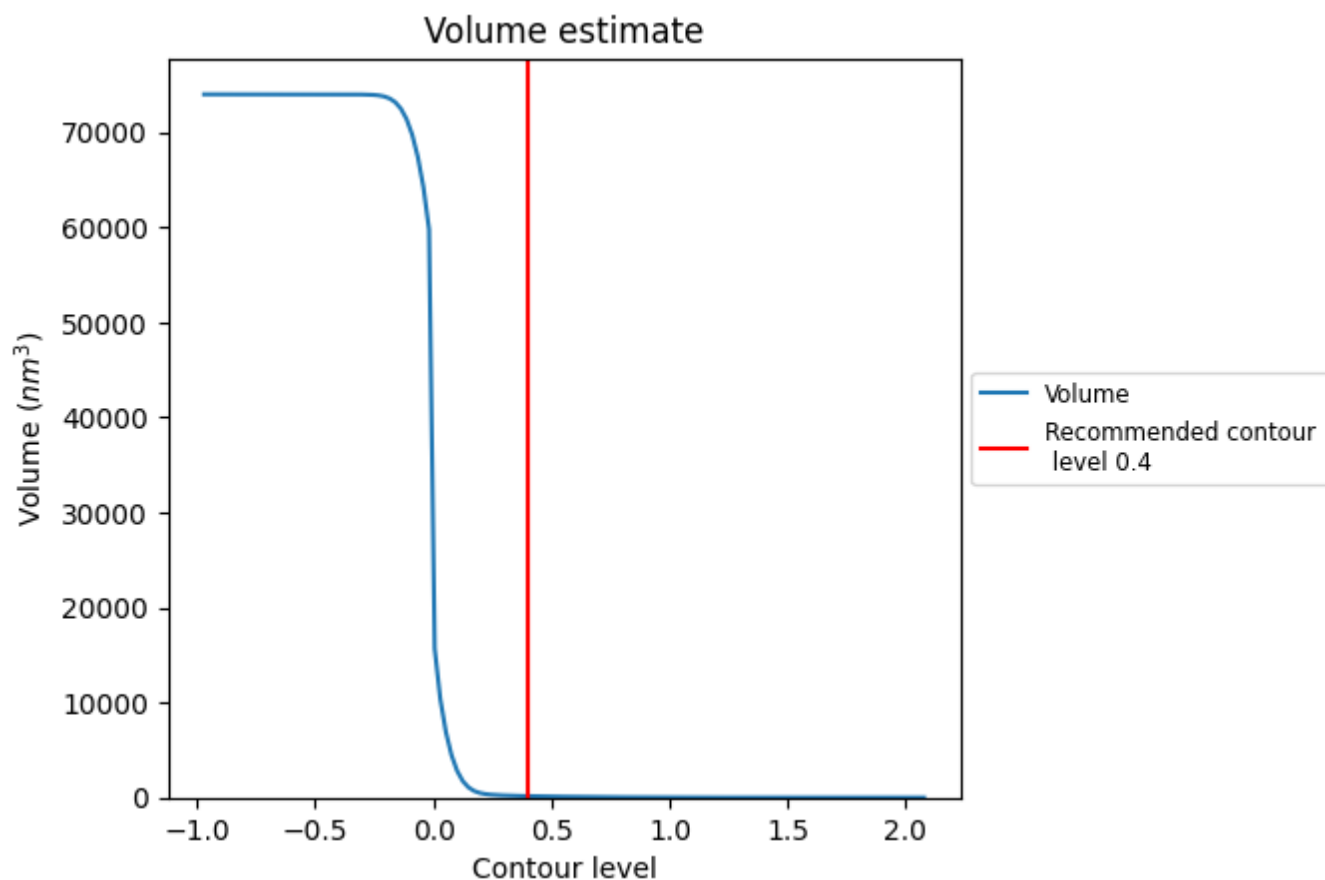
This section contains the results of statistical analysis of the map.

### 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](#)

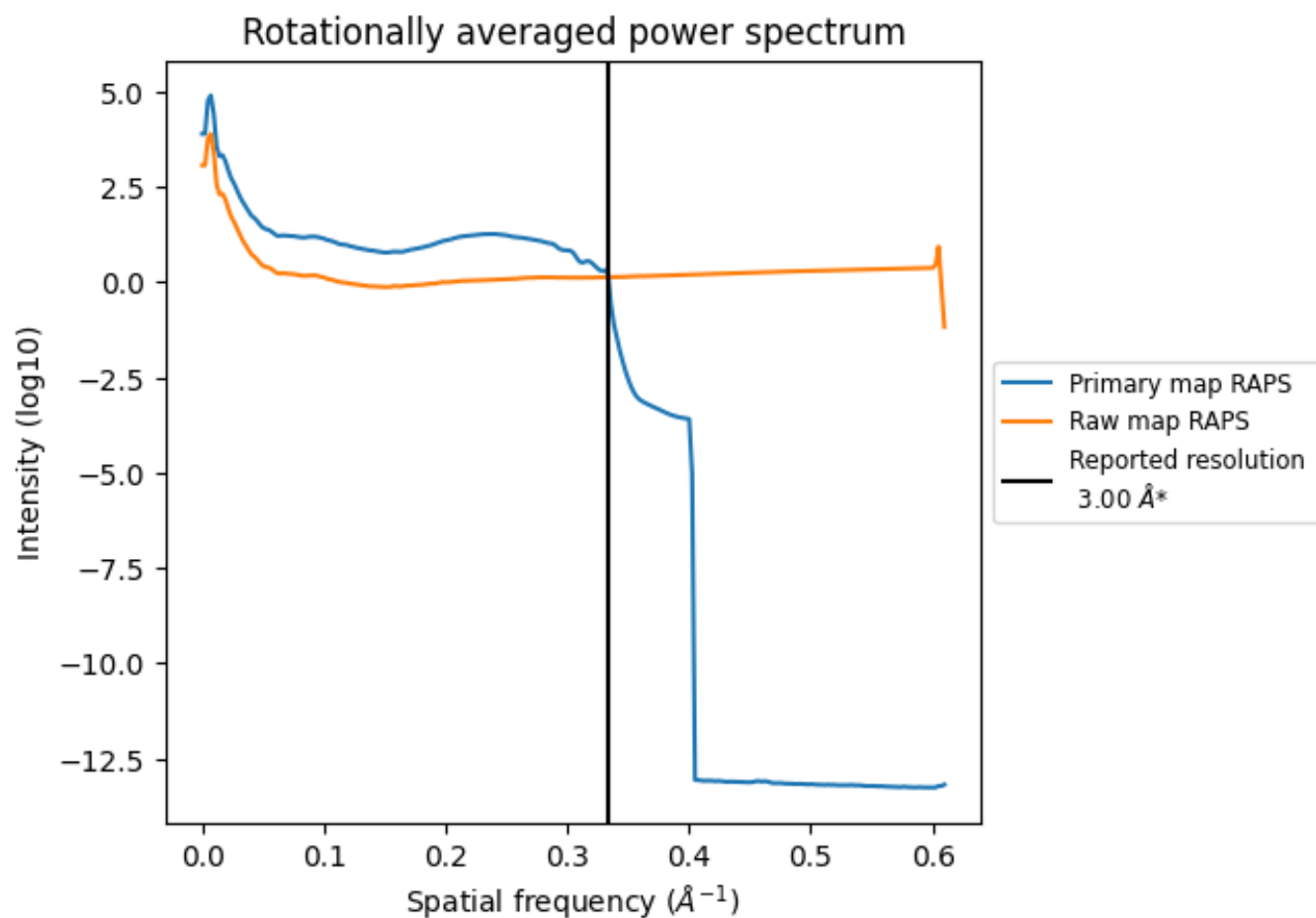


The volume at the recommended contour level is 152  $\text{nm}^3$ ; this corresponds to an approximate mass of 138 kDa.

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



### 7.3 Rotationally averaged power spectrum ⓘ

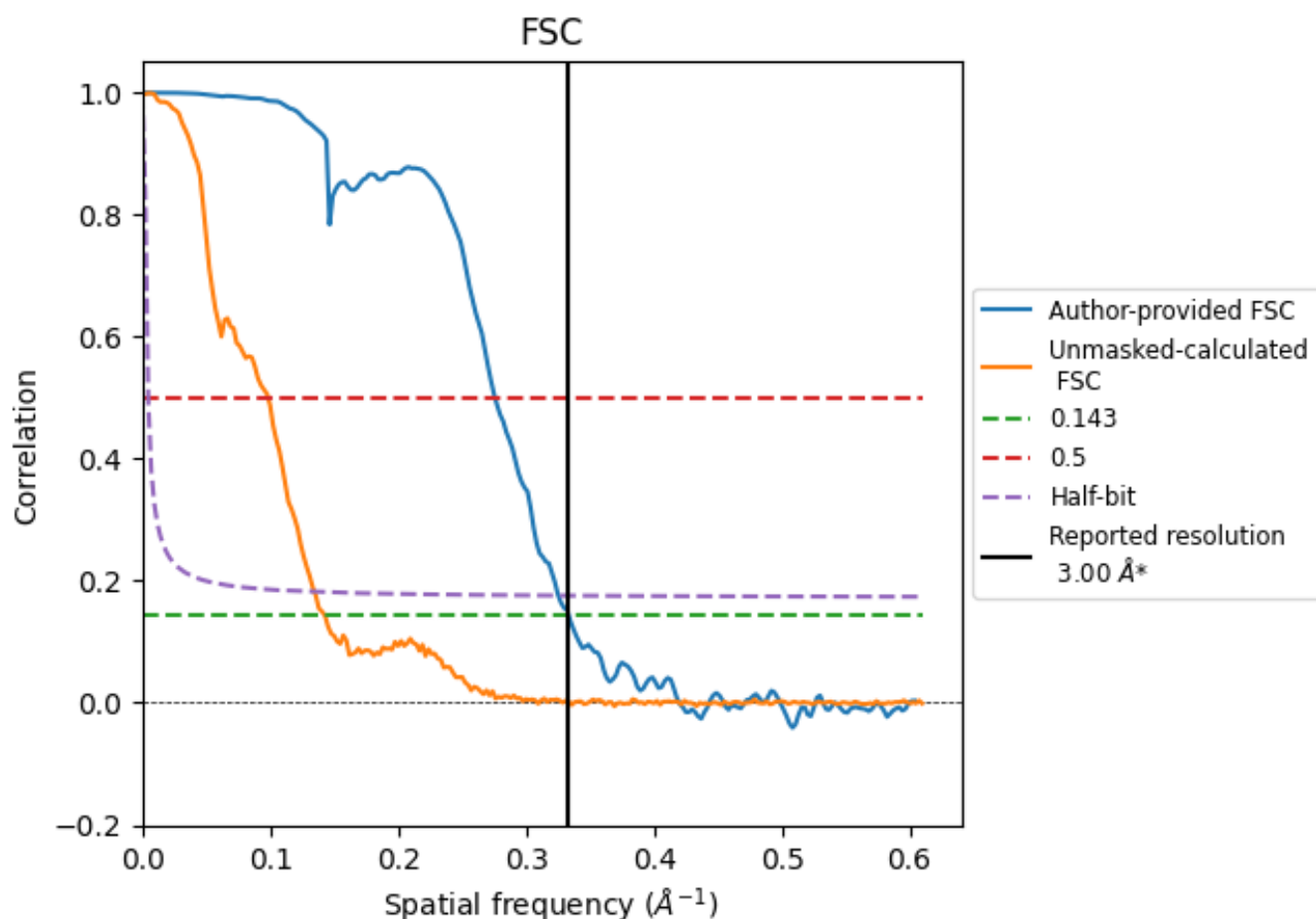


\*Reported resolution corresponds to spatial frequency of 0.333 Å<sup>-1</sup>

## 8 Fourier-Shell correlation [i](#)

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

### 8.1 FSC [i](#)



\*Reported resolution corresponds to spatial frequency of 0.333  $\text{\AA}^{-1}$

## 8.2 Resolution estimates [i](#)

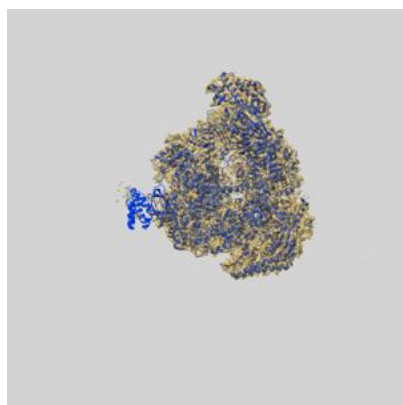
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.00	-	-
Author-provided FSC curve	3.00	3.62	3.07
Unmasked-calculated*	7.00	10.16	7.43

\*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 7.00 differs from the reported value 3.0 by more than 10 %

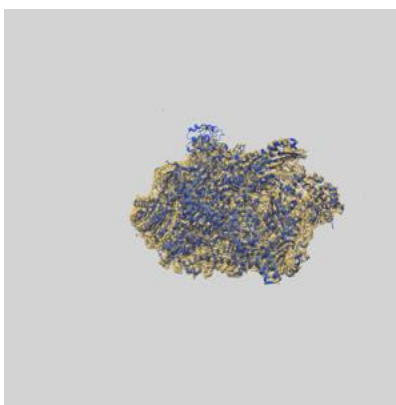
## 9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-38802 and PDB model 8Y0E. Per-residue inclusion information can be found in section [3](#) on page [6](#).

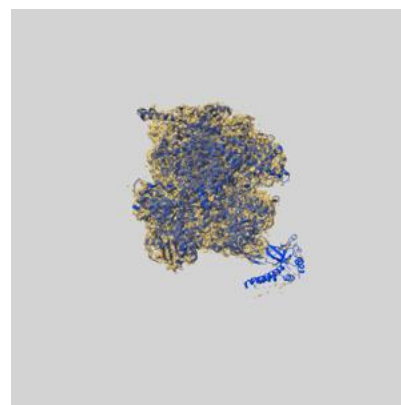
### 9.1 Map-model overlay [i](#)



X



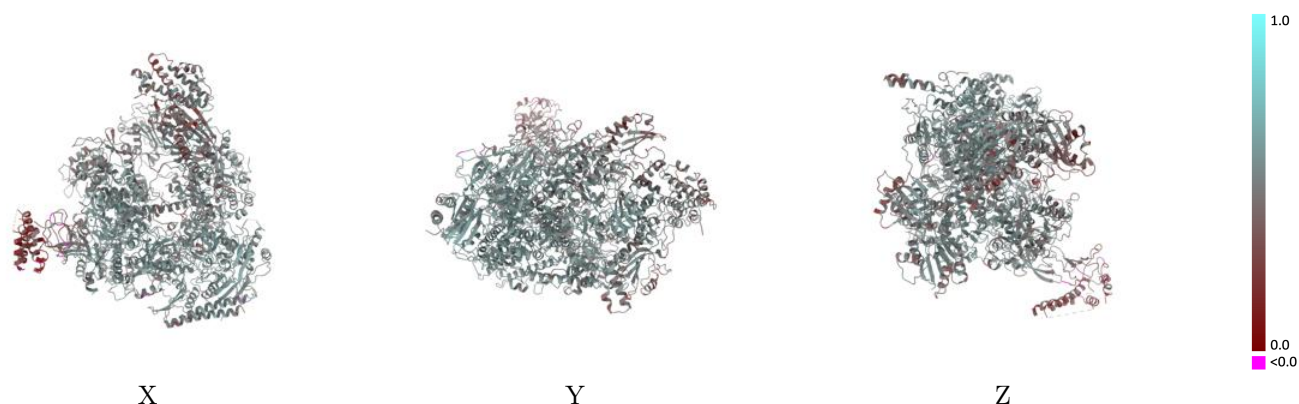
Y



Z

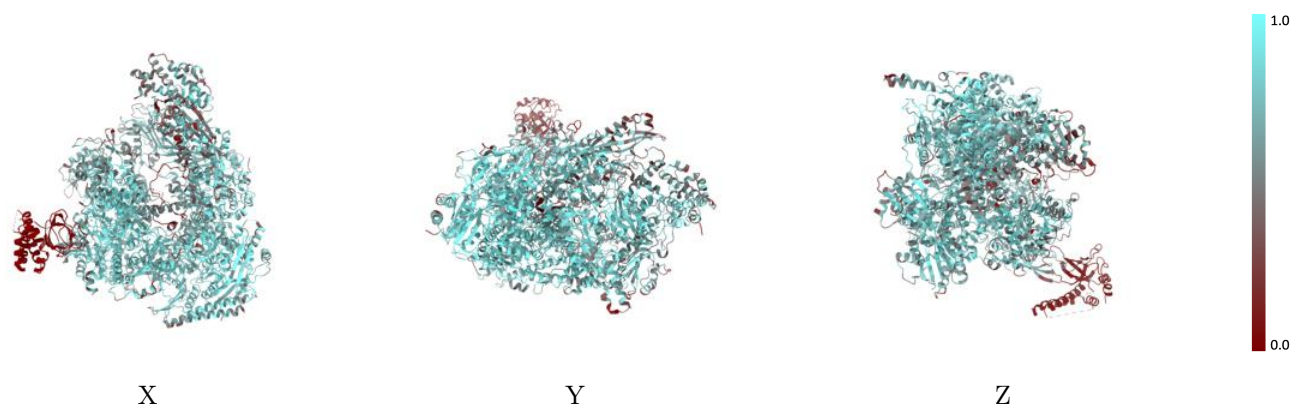
The images above show the 3D surface view of the map at the recommended contour level 0.4 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



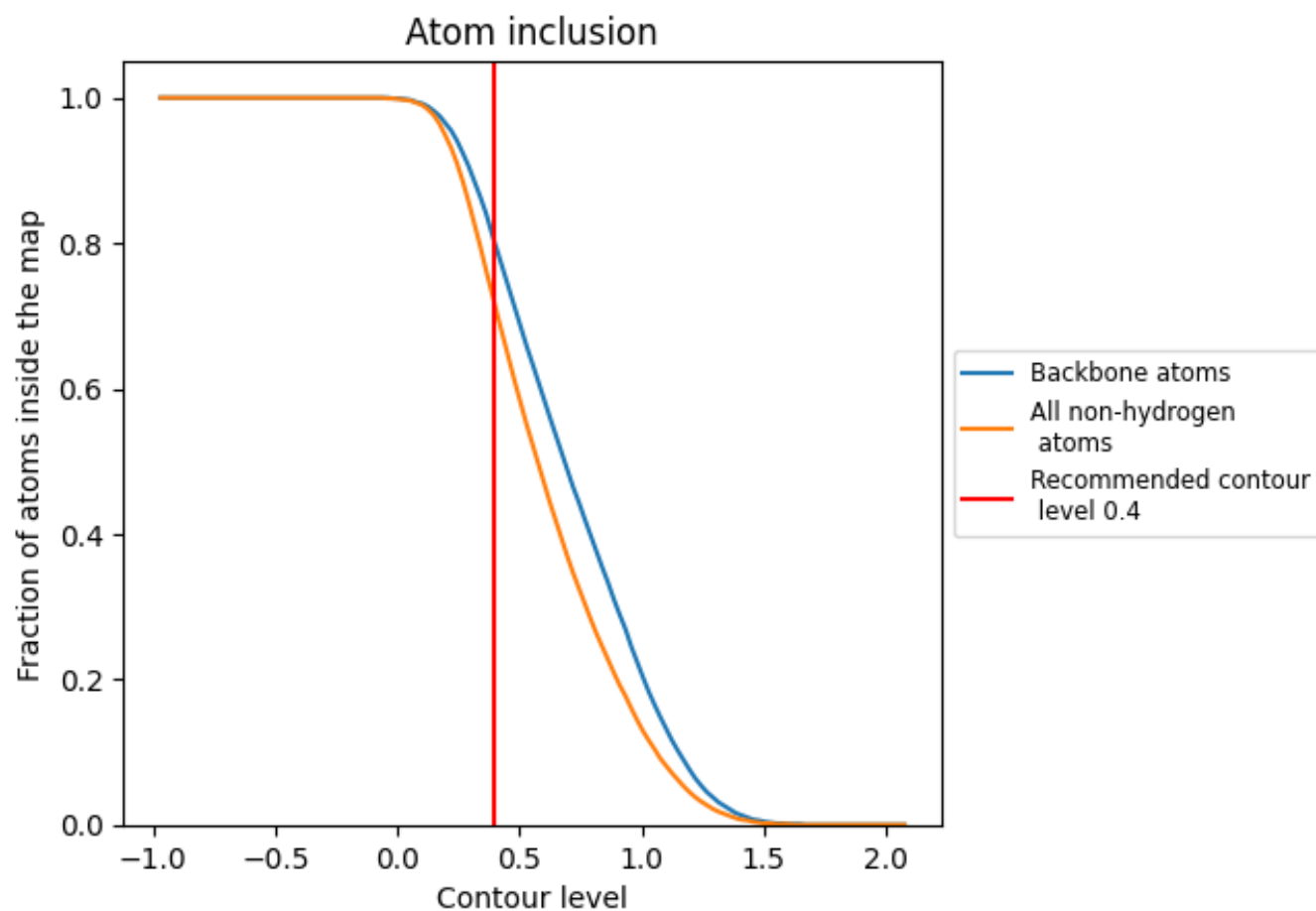
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.4).

## 9.4 Atom inclusion [i](#)



At the recommended contour level, 80% of all backbone atoms, 71% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.4) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	<div></div> 0.7140	<div></div> 0.5130
A	<div></div> 0.7760	<div></div> 0.5350
B	<div></div> 0.7350	<div></div> 0.5150
C	<div></div> 0.7880	<div></div> 0.5440
D	<div></div> 0.7360	<div></div> 0.5160
E	<div></div> 0.7470	<div></div> 0.5410
F	<div></div> 0.2690	<div></div> 0.3700
G	<div></div> 0.7110	<div></div> 0.5080
H	<div></div> 0.8150	<div></div> 0.5450
I	<div></div> 0.5170	<div></div> 0.4480

1.0

0.0

<0.0