WORLDWIDE wwPDB PROTEIN DATA BANK

Full wwPDB EM Validation Report (i)

Jun 29, 2025 – 04:11 am BST

PDB ID	:	8PIB / pdb_00008pib
EMDB ID	:	EMD-17679
Title	:	autoinhibited RfaH bound to E. coli transcription complex paused at ops site (encounter complex)
Authors	:	Zuber, P.K.; Said, N.; Hilal, T.; Loll, B.; Wahl, M.C.; Knauer, S.H.
Deposited on	:	2023-06-21
Resolution	:	2.60 Å(reported)

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

|		
EMDB validation analysis	:	0.0.1.dev118
MolProbity	:	4-5-2 with Phenix2.0rc1
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.44

1   Overall quality at a glance ⓘ

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

The reported resolution of this entry is 2.60 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	Percentile Ranks	Value
Clashscore		10
Ramachandran outliers		0.1%
Sidechain outliers		2.6%
RNA backbone		0.68

Worse   *Better*

▮ Percentile relative to all structures

▯ Percentile relative to all EM structures
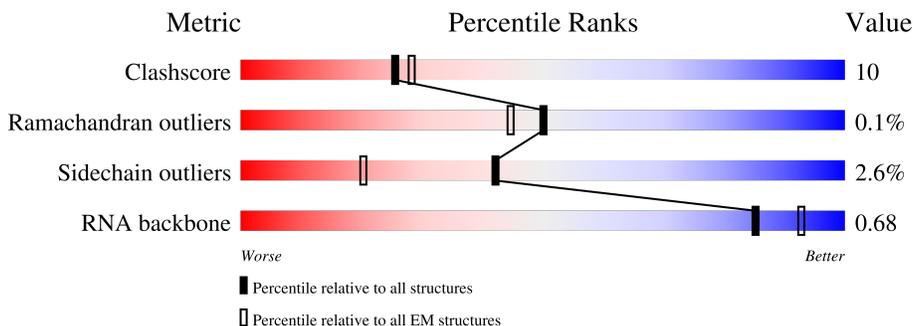
Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415
RNA backbone	6643	2191

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=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	P	164	17% — 49% / 31% / •• / 18%
2	I	1342	78% / 20% / •
3	J	1416	• — 68% / 25% / • / 7%
4	K	91	18% — 62% / 29% / • / 9%
5	G	329	• — 55% / 15% / • / 29%
5	H	329	• — 50% / 18% / 31%
6	R	17	35% / 29% / 6% / 29%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
7	B	40	30% 70%
8	A	40	10% 40% 60%

2 Entry composition ⓘ

There are 10 unique types of molecules in this entry. The entry contains 27848 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Transcription antitermination protein RfaH.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	P	135	Total 1073	C 687	N 188	O 191	S 7	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
P	-1	GLY	-	expression tag	UNP P0AFW0
P	0	HIS	-	expression tag	UNP P0AFW0
P	51	CYS	PHE	engineered mutation	UNP P0AFW0
P	139	CYS	SER	engineered mutation	UNP P0AFW0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
2	I	1321	Total 10423	C 6539	N 1816	O 2024	S 44	0	0

- Molecule 3 is a protein called DNA-directed RNA polymerase subunit beta'.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	J	1318	Total 10249	C 6439	N 1825	O 1939	S 46	0	0

There are 10 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
J	1	VAL	-	expression tag	UNP P0A8T7
J	1408	LEU	-	expression tag	UNP P0A8T7
J	1409	GLU	-	expression tag	UNP P0A8T7
J	1410	VAL	-	expression tag	UNP P0A8T7
J	1411	HIS	-	expression tag	UNP P0A8T7
J	1412	HIS	-	expression tag	UNP P0A8T7
J	1413	HIS	-	expression tag	UNP P0A8T7

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
J	1414	HIS	-	expression tag	UNP P0A8T7
J	1415	HIS	-	expression tag	UNP P0A8T7
J	1416	HIS	-	expression tag	UNP P0A8T7

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

Mol	Chain	Residues	Atoms					AltConf	Trace
4	K	83	Total 655	C 399	N 123	O 132	S 1	0	0

- Molecule 5 is a protein called DNA-directed RNA polymerase subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	G	233	Total 1811	C 1127	N 323	O 355	S 6	1	0
5	H	226	Total 1741	C 1088	N 308	O 339	S 6	0	0

- Molecule 6 is a RNA chain called RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	R	12	Total 260	C 115	N 47	O 86	P 12	0	0

- Molecule 7 is a DNA chain called template DNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	B	40	Total 826	C 390	N 165	O 232	P 39	0	0

- Molecule 8 is a DNA chain called non-template DNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	A	40	Total 808	C 386	N 139	O 244	P 39	0	0

- Molecule 9 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
9	J	1	Total 1	Zn 1	0

- Molecule 10 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

| Mol	Chain	Residues	Atoms		AltConf
10	J	1	Total 1	Mg 1	0

3 Residue-property plots ⓘ

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

• Molecule 1: Transcription antitermination protein RfaH

• Molecule 2: DNA-directed RNA polymerase subunit beta

• Molecule 3: DNA-directed RNA polymerase subunit beta'

Chain J:

LYS ASP I1134 T1135 V1141 P1153 E1158 I1159 S1160 S1164 K1170 G1171 K1172 R1173 R1174 L1175 S1183 D1184 M1189 I1190 P1191 R1194 Q1195 L1196 N1197 R1203 V1204 E1205 D1212 R1222 V1226 H1227 Q1238 D1239 V1240 Y1241 R1242 L1243 I1248 N1249 D1250 I1253 E1254 V1255 I1256

V1257 R1258 Q1259 M1260 L1261 D1273 R1284 I1309 E1317 Q1326 E1327 R1341 D1342 E1343 L1344 R1345 G1346 L1347 K1348 E1349 N1350 I1357 D1368 R1371 A1375 GLY GLU ALA PRO ALA ALA PRO GLN VAL THR ALA GLU ASP ALA SER ALA LEU ALA SER LEU LEU GLU LEU ASN ALA GLY

LEU GLY GLY SER ASP ASN GLU LEU GLU VAL HIS HIS HIS HIS HIS HIS

• Molecule 4: DNA-directed RNA polymerase subunit omega

Chain K:

18%

62% 29% 9%

MET A2 D8 A9 V10 E11 N15 R16 F17 V20 L21 R25 R26 M30 T47 A50 I54 E55 E56 G57 L58 N61 Q62 V66 R67 E68 R69 Q70 E71 Q72 Q73 E74 Q75 E76 A77 A78 E79 L80 Q81 A82 V83 T84 ALA ILE ALA GLU GLY ARG ARG

• Molecule 5: DNA-directed RNA polymerase subunit alpha

Chain G:

55% 15% 29%

MET GLN G3 S4 V5 T6 E7 L13 I16 E17 H23 A24 K25 R33 L39 R45 E60 K86 R91 D96 E97 V98 L102 N103 K104 I107 V110 I115 V121 E122 I123 V124 L133 R143 V146 R150 S156 T157 R158 I159

H160 S161 E162 E163 D164 E165 R166 C176 Y185 A190 R191 V192 E193 Q194 R195 T196 D197 L198 D199 K200 L201 E204 G209 T210 E214 R218 R235 ASP VAL ARG GLN PRO GLU VAL LYS GLU GLU LYS PRO GLU PHE ASP PRO ILE LEU LEU ARG PRO VAL ASP ASP LEU

GLU LEU THR VAL ARG SER ALA ASN CYS LEU LYS ALA GLU ALA ILE HIS TYR ILE GLY ASP LEU VAL GLN ARG THR GLU VAL LEU LEU LYS THR PRO ASN LEU GLY LYS LYS SER LEU THR GLU ILE LYS ASP ARG GLY LEU SER ARG GLY LEU SER MET ARG LEU GLU ASN

TRP PRO PRO ALA SER ILE ALA ASP GLU

• Molecule 5: DNA-directed RNA polymerase subunit alpha

Chain H:

50% 18% 31%

MET GLN G3 S4 V5 T6 E7 F8 L9 R12 L13 V14 D15 I16 K25 V26 T27 L28 E29 P30 V59 E60 I61 V64 S69 E76 E80 V92 L100 T101 L102 N103 G108 P109 A112 I115 D120 P126 Q127 H132 L133 T134 D135 A138

M142 R143 I144 K145 V146 Q147 G149 R150 V153 P154 A155 S156 T157 R158 I159 HIS SER GLU GLU ASP GLU ARG P167 I168 C176 R182 V187 E188 A189 A190 R191 V192 E193 T196 D197 L198 D199 K200 L228 F231 V232 D233 L234 R235 ASP VAL ARG GLN PRO GLU VAL

LYS GLU GLU LYS PRO GLU PHE ASP PRO ILE LEU LEU ARG PRO VAL ASP ASP LEU GLU LEU THR VAL ARG SER ALA ASN CYS LEU LYS ALA GLU ALA ILE HIS TYR ILE GLY ASP LEU VAL GLN ARG THR GLU VAL LEU LEU LYS THR PRO ASN LEU GLY LYS LYS SER LEU THR GLU

ILE LYS ASP VAL LEU ALA SER ARG GLY LEU SER MET ARG LEU GLU ASN TRP PRO PRO ALA SER ILE ALA ASP GLU

• Molecule 6: RNA

Chain R:

35%　　　　29%　　　6%　　　29%

U U C U U U6 G7 G8 C9 G10 G11 G16 U17

• Molecule 7: template DNA

Chain B:

30%　　　　　　70%

G1 G2 A3 A4 G9 A10 A11 A12 A13 A14 A15 G16 C17 A18 C19 G20 C21 T22 A23 C24 C25 G26 C29 G30 C31 G32 T33 T36 G37 G38 T39 G40

• Molecule 8: non-template DNA

10%

Chain A:

40%　　　　　　60%

C1 A2 C3 C4 A5 C6 C7 A8 C9 G10 C11 G12 G13 G14 C15 A19 G20 C21 G22 T29 T30 T31 C32 C36 T37 T38 C39 C40

4　Experimental information　ⓘ

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	848008	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 $(e^-/\text{Å}^2)$	42	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	96000	Depositor
Image detector	FEI FALCON III (4k x 4k)	Depositor
Maximum map value	2.524	Depositor
Minimum map value	-0.000	Depositor
Average map value	0.007	Depositor
Map value standard deviation	0.057	Depositor
Recommended contour level	0.24	Depositor
Map size (Å)	319.488, 319.488, 319.488	wwPDB
Map dimensions	384, 384, 384	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.832, 0.832, 0.832	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: 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	P	0.19	0/1097	0.53	1/1485 (0.1%)
2	I	0.10	0/10589	0.27	1/14286 (0.0%)
3	J	0.10	0/10403	0.28	0/14049
4	K	0.16	0/657	0.45	0/886
5	G	0.11	0/1836	0.29	0/2487
5	H	0.11	0/1761	0.31	0/2385
6	R	0.09	0/290	0.22	0/451
7	B	0.16	0/930	0.33	0/1435
8	A	0.18	0/902	0.38	0/1389
All	All	0.11	0/28465	0.30	2/38853 (0.0%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	P	133	PRO	CA-N-CD	-6.50	102.89	112.00
2	I	488	MET	CB-CG-SD	5.25	128.44	112.70

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	P	1073	0	1080	43	0
2	I	10423	0	10436	182	0
3	J	10249	0	10459	239	0
4	K	655	0	663	17	0
5	G	1811	0	1843	28	0
5	H	1741	0	1783	39	0
6	R	260	0	130	3	0
7	B	826	0	447	30	0
8	A	808	0	453	17	0
9	J	1	0	0	0	0
10	J	1	0	0	0	0
All	All	27848	0	27294	555	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 10.

All (555) 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)
5:H:29:GLU:HA	5:H:200:LYS:HG3	1.56	0.88
2:I:618:GLN:HE22	3:J:770:LEU:HB2	1.48	0.78
5:G:193:GLU:CD	5:G:194:GLN:H	1.93	0.77
1:P:132:GLU:OE1	1:P:138:ARG:HG2	1.87	0.74
2:I:940:GLU:OE2	2:I:940:GLU:N	2.20	0.73
3:J:65:VAL:HG13	3:J:66:LYS:HG2	1.72	0.71
2:I:444:ASP:HB3	2:I:447:HIS:HB2	1.73	0.71
4:K:56:GLU:OE1	4:K:56:GLU:N	2.22	0.71
1:P:32:MET:HE2	1:P:32:MET:HA	1.73	0.70
3:J:702:GLN:HG3	3:J:703:THR:HG23	1.72	0.70
1:P:49:PRO:O	1:P:138:ARG:NH2	2.24	0.70
2:I:441:GLU:OE2	2:I:441:GLU:N	2.24	0.70
1:P:136:GLU:OE2	1:P:136:GLU:N	2.22	0.70
1:P:11:ARG:HH12	7:B:33:DT:H4'	1.58	0.68
2:I:230:PHE:HB2	2:I:333:ILE:HG12	1.74	0.67
5:H:188:GLU:OE1	5:H:188:GLU:N	2.27	0.67
5:H:127:GLN:OE1	5:H:127:GLN:N	2.22	0.67
2:I:841:ARG:HA	2:I:1046:VAL:HA	1.76	0.67
2:I:808:ASN:H	3:J:633:ALA:HB2	1.60	0.67
3:J:53:ARG:NH1	3:J:58:CYS:SG	2.68	0.66
2:I:633:LEU:HD12	2:I:644:LEU:HB3	1.76	0.66
2:I:867:GLU:OE2	2:I:867:GLU:N	2.29	0.65
1:P:131:THR:C	1:P:133:PRO:HD2	2.21	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:964:LYS:HD3	3:J:977:SER:HB2	1.77	0.65
2:I:239:MET:HE3	2:I:287:VAL:HG21	1.77	0.65
3:J:584:PRO:HG2	3:J:587:LEU:HD13	1.78	0.64
3:J:615:LYS:HE2	3:J:619:ILE:HD11	1.79	0.64
5:H:191:ARG:HB2	5:H:196:THR:HG23	1.77	0.64
3:J:50:LYS:HD3	3:J:51:PRO:HD2	1.80	0.64
2:I:1340:GLU:OE2	3:J:1341:ARG:NH1	2.28	0.64
3:J:1045:THR:HG23	3:J:1046:ILE:HG23	1.79	0.64
3:J:960:LEU:HB3	3:J:963:VAL:HG11	1.77	0.64
2:I:22:LEU:HD13	2:I:603:ILE:HG13	1.79	0.64
3:J:953:LYS:HZ3	3:J:993:GLU:HG3	1.62	0.64
1:P:139:CYS:O	1:P:143:LEU:HD22	1.96	0.64
3:J:514:THR:HG21	3:J:596:LEU:HD12	1.79	0.64
2:I:102:LEU:HB2	2:I:489:PRO:HG3	1.79	0.63
5:H:190:ALA:HB2	5:H:200:LYS:HB2	1.79	0.63
3:J:321:LYS:HE2	3:J:321:LYS:H	1.65	0.62
1:P:132:GLU:HG2	1:P:134:ASP:H	1.65	0.61
2:I:598:VAL:HG23	2:I:627:GLY:HA3	1.82	0.61
2:I:207:THR:HG21	2:I:351:LEU:HG	1.82	0.61
3:J:926:PRO:HG2	3:J:1248:ILE:HD11	1.82	0.61
5:H:100:LEU:HD12	5:H:144:ILE:HD11	1.81	0.61
5:H:108:GLY:HA3	5:H:133:LEU:H	1.65	0.61
2:I:122:VAL:HG21	2:I:493:ILE:HD11	1.83	0.61
2:I:302:ILE:HA	2:I:309:LEU:HA	1.81	0.61
3:J:129:ASP:OD2	3:J:220:ARG:NH1	2.34	0.61
2:I:1109:ILE:HD11	3:J:740:LEU:HD22	1.82	0.61
3:J:475:GLU:O	3:J:479:GLU:HG3	2.01	0.61
2:I:23:ASP:OD1	2:I:23:ASP:N	2.34	0.60
5:G:104:LYS:HG2	5:G:110:VAL:HG22	1.83	0.60
3:J:1368:ASP:HA	3:J:1371:ARG:HH11	1.66	0.60
3:J:210:SER:HB2	3:J:213:LYS:HB2	1.82	0.60
3:J:502:PRO:HB3	3:J:506:VAL:HB	1.84	0.60
3:J:133:ARG:NH1	8:A:32:DC:OP1	2.35	0.60
3:J:208:THR:O	3:J:214:ARG:NH2	2.35	0.60
2:I:320:ASP:OD1	2:I:320:ASP:N	2.35	0.60
2:I:839:VAL:O	2:I:886:LYS:NZ	2.31	0.59
3:J:697:MET:HE1	3:J:738:ARG:HA	1.82	0.59
3:J:287:ALA:HB3	3:J:292:VAL:HG13	1.83	0.59
2:I:633:LEU:HB3	2:I:644:LEU:HD12	1.85	0.59
3:J:975:ILE:HG22	3:J:977:SER:H	1.68	0.59
3:J:127:LEU:O	3:J:220:ARG:NH2	2.36	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:68:LEU:HD11	2:I:100:LEU:HB3	1.84	0.58
3:J:1045:THR:OG1	3:J:1067:ARG:NH1	2.37	0.58
1:P:129:ILE:HG23	1:P:138:ARG:HB3	1.84	0.58
3:J:418:GLU:OE2	4:K:2:ALA:N	2.37	0.58
8:A:4:DC:H2"	8:A:5:DA:C8	2.39	0.58
3:J:816:THR:HG22	3:J:818:GLU:H	1.68	0.58
2:I:189:ASP:OD1	2:I:193:ASN:N	2.28	0.58
3:J:198:CYS:SG	3:J:202:ARG:NH2	2.76	0.58
5:H:60:GLU:HB3	5:H:143:ARG:HB2	1.86	0.58
1:P:15:GLN:O	1:P:19:GLU:HG2	2.03	0.58
2:I:528:ARG:NH2	2:I:576:SER:O	2.36	0.58
3:J:388:ARG:NH1	3:J:414:GLU:OE1	2.37	0.57
3:J:554:GLU:OE2	3:J:570:LYS:NZ	2.36	0.57
2:I:591:TYR:OH	2:I:637:ARG:NH2	2.37	0.57
3:J:205:LEU:HD12	3:J:217:LEU:HB3	1.86	0.57
3:J:953:LYS:NZ	3:J:993:GLU:HG3	2.20	0.57
1:P:125:GLY:O	1:P:129:ILE:HG12	2.04	0.57
2:I:275:ARG:HH12	2:I:279:LYS:HB3	1.69	0.57
3:J:1347:LEU:HD22	3:J:1357:ILE:HB	1.87	0.57
2:I:815:SER:HB3	2:I:1077:SER:HB3	1.87	0.57
2:I:533:LEU:HD21	2:I:571:LEU:HD13	1.86	0.57
5:G:86:LYS:NZ	5:G:176:CYS:SG	2.70	0.56
1:P:48:GLU:OE2	1:P:48:GLU:N	2.30	0.56
3:J:1172:LYS:HB2	3:J:1189:MET:HE1	1.87	0.56
3:J:644:MET:O	3:J:764:ARG:NH1	2.36	0.56
1:P:123:PHE:O	1:P:127:GLN:NE2	2.38	0.56
3:J:156:ARG:NH2	3:J:191:SER:OG	2.39	0.56
5:G:5:VAL:O	5:H:150:ARG:NH1	2.38	0.56
5:H:108:GLY:O	5:H:132:HIS:ND1	2.39	0.56
2:I:1269:ARG:NH1	7:B:20:DG:OP1	2.36	0.56
3:J:1341:ARG:NH2	3:J:1343:GLU:OE2	2.38	0.56
5:G:190:ALA:HB2	5:G:200:LYS:HB3	1.86	0.56
1:P:135:GLY:HA2	1:P:138:ARG:HG3	1.86	0.56
3:J:381:ILE:HD11	3:J:412:LEU:HD13	1.87	0.56
3:J:836:ARG:NH1	3:J:870:ASP:OD1	2.38	0.56
3:J:108:ALA:HB2	3:J:280:LYS:HG3	1.88	0.56
5:G:185:TYR:HB2	5:G:201:LEU:HD11	1.87	0.56
2:I:995:ASP:OD1	2:I:995:ASP:N	2.37	0.56
3:J:952:VAL:O	3:J:1014:GLY:N	2.31	0.56
2:I:201:ARG:NH2	8:A:22:DG:O6	2.38	0.56
2:I:400:VAL:HG21	2:I:452:ARG:HD2	1.87	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:B:25:DC:H2"	7:B:26:DG:H5'	1.89	0.55
2:I:359:ARG:NH1	2:I:382:GLU:OE2	2.37	0.55
2:I:1289:GLU:HB2	2:I:1315:MET:HE1	1.89	0.55
3:J:399:LYS:HA	3:J:399:LYS:HE2	1.89	0.55
3:J:1346:GLY:O	3:J:1350:ASN:ND2	2.35	0.55
2:I:12:ARG:HG3	2:I:1181:PRO:HB2	1.88	0.55
2:I:406:ASN:ND2	2:I:413:GLU:O	2.37	0.55
3:J:321:LYS:HE2	3:J:321:LYS:N	2.21	0.55
3:J:367:GLY:HA3	3:J:448:GLN:HB2	1.89	0.55
2:I:28:LEU:HD21	2:I:524:ILE:HD13	1.88	0.55
3:J:1062:LEU:O	3:J:1067:ARG:NH2	2.40	0.55
2:I:515:MET:SD	2:I:523:GLU:HG2	2.47	0.55
3:J:510:LEU:HD11	3:J:624:ILE:HG23	1.89	0.55
1:P:1:MET:HE3	1:P:1:MET:N	2.22	0.54
2:I:463:GLN:HG3	2:I:505:PHE:HB2	1.88	0.54
3:J:1256:ILE:O	3:J:1260:MET:HG3	2.07	0.54
3:J:982:LEU:HG	3:J:995:TYR:HB2	1.89	0.54
2:I:677:ASN:O	2:I:681:MET:HG3	2.07	0.54
3:J:986:ASP:OD2	3:J:992:LYS:NZ	2.40	0.54
8:A:19:DA:H2"	8:A:20:DG:H5"	1.88	0.54
2:I:204:LEU:HB3	2:I:208:ILE:HD12	1.89	0.54
2:I:488:MET:HE3	2:I:488:MET:HA	1.88	0.54
3:J:710:ASP:N	3:J:710:ASP:OD1	2.41	0.54
3:J:202:ARG:NH2	3:J:225:GLU:OE2	2.40	0.54
4:K:25:ARG:NH2	4:K:61:ASN:OD1	2.41	0.54
4:K:26:ARG:O	4:K:30:MET:HG3	2.08	0.54
7:B:19:DC:H2'	7:B:20:DG:H8	1.72	0.54
3:J:1368:ASP:OD1	3:J:1371:ARG:NH1	2.41	0.54
3:J:396:ALA:O	3:J:400:MET:HG3	2.08	0.54
1:P:140:MET:HE1	3:J:288:PRO:HD2	1.90	0.53
2:I:342:ASP:OD1	2:I:439:LYS:NZ	2.41	0.53
2:I:618:GLN:NE2	3:J:770:LEU:HB2	2.19	0.53
3:J:802:ASP:OD2	3:J:1348:LYS:NZ	2.40	0.53
4:K:62:GLN:O	4:K:66:VAL:HG13	2.08	0.53
7:B:18:DA:H2'	7:B:19:DC:H6	1.72	0.53
3:J:1084:GLN:NE2	3:J:1086:ASN:OD1	2.42	0.53
5:G:98:VAL:HG11	5:G:121:VAL:HG21	1.89	0.53
2:I:275:ARG:NH2	2:I:278:GLU:HB3	2.24	0.53
3:J:773:PHE:O	3:J:776:THR:OG1	2.26	0.53
5:G:157:THR:O	5:G:160:HIS:ND1	2.42	0.53
2:I:985:GLU:HB3	2:I:988:LYS:HE2	1.90	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:520:ALA:HB1	3:J:543:SER:HB3	1.90	0.53
2:I:515:MET:HE3	2:I:517:GLN:HE21	1.74	0.52
2:I:517:GLN:HB3	2:I:759:SER:HB2	1.91	0.52
2:I:1107:MET:SD	3:J:739:GLN:NE2	2.82	0.52
2:I:18:ARG:O	2:I:1156:ARG:NH1	2.42	0.52
3:J:268:LEU:HD13	3:J:306:LEU:HA	1.91	0.52
3:J:587:LEU:HD11	3:J:608:CYS:HA	1.90	0.52
3:J:826:ILE:HG21	3:J:993:GLU:HA	1.91	0.52
3:J:1078:LEU:HG	3:J:1101:LEU:HD11	1.91	0.52
3:J:1090:ILE:HG13	3:J:1097:ALA:HB2	1.91	0.52
2:I:213:LEU:HD22	2:I:422:LYS:HG2	1.92	0.52
3:J:216:LYS:HD2	3:J:216:LYS:O	2.09	0.52
2:I:339:ASN:HB2	2:I:343:HIS:H	1.75	0.52
3:J:1102:PRO:HG2	3:J:1124:ILE:HD11	1.92	0.52
3:J:479:GLU:HB3	3:J:483:LEU:HD12	1.91	0.52
3:J:950:ILE:HG12	3:J:1020:TRP:HZ3	1.75	0.52
3:J:479:GLU:HG2	4:K:20:VAL:HG11	1.92	0.52
5:H:13:LEU:HD23	5:H:13:LEU:O	2.09	0.52
5:H:13:LEU:HD22	5:H:29:GLU:HB2	1.91	0.52
2:I:1073:LYS:HG3	3:J:462:ASP:HB2	1.92	0.52
4:K:56:GLU:HG2	4:K:58:LEU:HG	1.92	0.52
2:I:101:ARG:HG2	2:I:119:GLU:HG2	1.92	0.51
2:I:319:LEU:HD13	2:I:322:LEU:HD21	1.91	0.51
7:B:19:DC:H2'	7:B:20:DG:C8	2.45	0.51
5:H:76:GLU:HG2	5:H:80:GLU:HG2	1.92	0.51
8:A:8:DA:H1'	8:A:9:DC:H5'	1.92	0.51
2:I:275:ARG:HH21	2:I:278:GLU:HB3	1.75	0.51
3:J:308:ASP:OD2	3:J:311:ARG:NH1	2.43	0.51
3:J:998:PRO:HG2	3:J:1020:TRP:CD1	2.45	0.51
3:J:65:VAL:HA	3:J:98:ARG:HD2	1.92	0.51
1:P:38:ILE:HA	1:P:43:ARG:HA	1.93	0.51
4:K:8:ASP:HA	4:K:11:GLU:HG3	1.91	0.51
1:P:4:TRP:CE2	1:P:58:GLU:HB2	2.46	0.51
2:I:724:VAL:HA	2:I:734:ILE:HD13	1.92	0.51
3:J:322:ARG:HB3	3:J:322:ARG:NH1	2.26	0.51
5:G:4:SER:OG	5:G:5:VAL:N	2.42	0.51
5:G:214:GLU:OE2	5:G:218:ARG:NE	2.44	0.51
7:B:22:DT:H2'	7:B:23:DA:H8	1.76	0.51
2:I:198:ILE:HD12	2:I:369:MET:HE1	1.93	0.50
3:J:452:LEU:HB3	3:J:500:ILE:HG23	1.93	0.50
8:A:38:DT:H2''	8:A:39:DC:C5	2.47	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1186:VAL:HG13	2:I:1187:PHE:HD2	1.75	0.50
2:I:1334:GLY:H	3:J:113:HIS:HE2	1.59	0.50
3:J:225:GLU:O	3:J:229:GLN:HG3	2.10	0.50
3:J:968:ASN:OD1	3:J:972:LYS:N	2.45	0.50
2:I:632:ASP:OD1	2:I:632:ASP:N	2.44	0.50
3:J:1195:GLN:NE2	3:J:1197:ASN:OD1	2.39	0.50
5:G:23:HIS:CE1	5:G:204:GLU:HG3	2.47	0.50
1:P:31:PRO:HB2	1:P:50:LEU:HD23	1.94	0.50
2:I:843:THR:OG1	2:I:846:GLY:O	2.23	0.50
2:I:1313:HIS:HB2	3:J:474:LEU:HG	1.94	0.50
3:J:490:ILE:HG13	3:J:614:LEU:HD11	1.92	0.50
3:J:533:ALA:HB1	3:J:574:VAL:HG13	1.93	0.50
1:P:34:THR:HG23	1:P:36:GLU:H	1.76	0.50
2:I:951:MET:HE3	2:I:951:MET:HA	1.93	0.50
3:J:425:ARG:HD2	3:J:459:ALA:HB2	1.92	0.50
5:G:124:VAL:HG21	5:G:210:THR:HG22	1.94	0.50
5:G:107:ILE:HA	5:G:133:LEU:O	2.12	0.50
2:I:1027:LYS:HD3	2:I:1027:LYS:C	2.37	0.49
3:J:1069:ALA:HA	3:J:1072:LYS:HG2	1.93	0.49
7:B:18:DA:H2'	7:B:19:DC:C6	2.47	0.49
5:H:12:ARG:H	5:H:30:PRO:HD2	1.77	0.49
2:I:59:ILE:HD13	2:I:475:VAL:HG11	1.93	0.49
2:I:738:GLU:HA	2:I:741:MET:HG2	1.94	0.49
2:I:1115:THR:HG22	2:I:1228:GLY:HA3	1.93	0.49
2:I:1142:ARG:NH1	2:I:1161:LEU:O	2.46	0.49
3:J:147:ILE:HG13	3:J:188:LEU:HD13	1.93	0.49
2:I:370:MET:HE3	2:I:370:MET:HA	1.94	0.49
2:I:485:ASP:N	2:I:485:ASP:OD1	2.42	0.49
5:G:150:ARG:HG3	5:H:5:VAL:HG12	1.93	0.49
7:B:24:DC:H2'	7:B:25:DC:C6	2.48	0.49
2:I:17:LYS:NZ	2:I:1194:GLU:OE2	2.45	0.49
2:I:302:ILE:O	2:I:330:HIS:NE2	2.36	0.49
2:I:802:VAL:HG12	2:I:1096:ILE:HB	1.94	0.49
3:J:714:GLU:OE1	3:J:715:LYS:N	2.46	0.49
5:G:91:ARG:NH2	5:G:209:GLY:O	2.45	0.49
3:J:430:HIS:HB3	3:J:925:GLU:HG3	1.95	0.49
7:B:3:DA:H2"	7:B:4:DA:N7	2.28	0.49
3:J:808:VAL:HG12	3:J:914:ALA:HA	1.95	0.48
5:H:3:GLY:N	5:H:7:GLU:OE1	2.46	0.48
3:J:205:LEU:HB2	3:J:217:LEU:HD23	1.95	0.48
3:J:1046:ILE:HG22	3:J:1061:VAL:HA	1.93	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:613:GLY:O	3:J:617:THR:OG1	2.29	0.48
3:J:1111:ASP:N	3:J:1111:ASP:OD1	2.46	0.48
3:J:654:ILE:O	3:J:658:GLU:HG2	2.12	0.48
3:J:1029:THR:HB	3:J:1121:LEU:HD11	1.96	0.48
5:G:156:SER:HA	5:G:159:ILE:HG22	1.96	0.48
2:I:60:GLN:HA	2:I:60:GLN:OE1	2.12	0.48
2:I:522:SER:OG	2:I:687:ARG:O	2.31	0.48
3:J:134:ASP:HB3	3:J:159:ILE:HG13	1.95	0.48
4:K:8:ASP:OD2	4:K:9:ALA:N	2.46	0.48
7:B:10:DA:H2"	7:B:11:DA:H8	1.78	0.48
2:I:842:ASP:N	2:I:1045:GLY:O	2.44	0.48
2:I:243:PRO:HA	2:I:246:LEU:HD23	1.95	0.48
2:I:967:LEU:HD13	2:I:1021:LEU:HD11	1.95	0.48
2:I:1329:GLU:HB3	3:J:331:ILE:HD11	1.95	0.48
3:J:216:LYS:HD2	3:J:216:LYS:C	2.39	0.48
3:J:821:MET:HE2	3:J:821:MET:HB2	1.76	0.48
3:J:846:GLU:HA	3:J:860:ARG:HG3	1.95	0.48
3:J:1172:LYS:HB3	3:J:1191:PRO:HA	1.94	0.48
2:I:1283:ALA:HA	3:J:479:GLU:OE1	2.14	0.48
2:I:1308:ILE:HD11	3:J:472:LEU:HB2	1.96	0.48
3:J:1089:LEU:HA	3:J:1096:PRO:HA	1.95	0.48
5:G:91:ARG:NH1	5:G:122:GLU:OE2	2.46	0.48
2:I:263:VAL:HG22	2:I:267:ARG:HH21	1.79	0.48
2:I:542:ARG:NH2	7:B:17:DC:N3	2.47	0.48
3:J:338:PHE:HA	3:J:342:LEU:HD12	1.96	0.47
3:J:842:ARG:HH22	3:J:1254:GLU:CD	2.22	0.47
2:I:548:ARG:NH1	2:I:567:PRO:O	2.37	0.47
2:I:704:MET:HE3	2:I:704:MET:HB3	1.78	0.47
3:J:395:LYS:HE3	3:J:395:LYS:HA	1.94	0.47
3:J:1095:MET:HE3	3:J:1095:MET:O	2.15	0.47
1:P:90:SER:HB3	1:P:94:HIS:CE1	2.50	0.47
2:I:225:PHE:HZ	2:I:345:PRO:HA	1.80	0.47
2:I:864:LYS:NZ	2:I:876:GLU:O	2.46	0.47
2:I:1100:PRO:HB3	3:J:639:VAL:HG12	1.96	0.47
2:I:1185:PRO:HD2	2:I:1189:GLY:HA2	1.96	0.47
2:I:1292:THR:HG22	2:I:1320:PRO:HG3	1.96	0.47
3:J:288:PRO:O	3:J:292:VAL:HG22	2.14	0.47
3:J:876:SER:HA	3:J:990:ARG:HE	1.78	0.47
2:I:14:ASP:HA	2:I:1183:ALA:HB3	1.95	0.47
2:I:81:ASP:HB3	2:I:84:GLU:HG3	1.95	0.47
2:I:301:TYR:HB2	2:I:311:CYS:SG	2.55	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1223:ARG:NH2	3:J:721:SER:OG	2.47	0.47
3:J:502:PRO:HG2	3:J:601:ILE:HG21	1.96	0.47
3:J:818:GLU:OE2	3:J:1227:HIS:NE2	2.46	0.47
3:J:964:LYS:HG2	3:J:976:THR:HG23	1.96	0.47
3:J:1326:GLN:HG3	3:J:1327:GLU:HG3	1.96	0.47
5:G:102:LEU:HB2	5:G:115:ILE:HD13	1.96	0.47
2:I:997:TRP:N	2:I:997:TRP:CD1	2.82	0.47
7:B:22:DT:H2'	7:B:23:DA:C8	2.50	0.47
1:P:124:GLU:HA	1:P:127:GLN:HG2	1.96	0.47
2:I:61:SER:HB2	2:I:479:LEU:HD23	1.96	0.47
3:J:386:GLU:HA	3:J:386:GLU:OE1	2.14	0.47
3:J:553:THR:HG22	3:J:567:THR:HG23	1.95	0.47
3:J:1038:THR:HB	3:J:1077:ALA:HB3	1.96	0.47
4:K:67:ARG:HG2	4:K:71:GLU:OE2	2.14	0.47
5:H:64:VAL:HG13	5:H:69:SER:HB2	1.97	0.47
1:P:92:VAL:HG13	1:P:149:GLU:OE2	2.15	0.47
2:I:275:ARG:NH1	2:I:279:LYS:HB3	2.30	0.47
2:I:997:TRP:CD1	2:I:997:TRP:H	2.33	0.46
3:J:675:ALA:HA	3:J:678:ARG:HG2	1.97	0.46
3:J:1170:LYS:HG2	8:A:36:DC:H4'	1.96	0.46
2:I:45:GLY:HA3	2:I:54:ARG:HD2	1.98	0.46
3:J:264:ASP:N	3:J:264:ASP:OD1	2.46	0.46
3:J:845:ALA:HB3	3:J:881:LYS:HG2	1.96	0.46
8:A:1:DC:H2''	8:A:2:DA:N7	2.31	0.46
2:I:232:ILE:HG12	2:I:237:LEU:HD12	1.97	0.46
2:I:678:ARG:NH2	2:I:1071:GLY:O	2.49	0.46
3:J:219:LYS:HE2	3:J:219:LYS:HB3	1.62	0.46
3:J:697:MET:HE3	3:J:697:MET:HB3	1.66	0.46
7:B:23:DA:H2'	7:B:24:DC:H6	1.80	0.46
2:I:657:THR:HB	2:I:1187:PHE:HB2	1.96	0.46
2:I:947:GLU:O	2:I:950:GLU:HG2	2.16	0.46
3:J:1082:ASP:OD1	3:J:1082:ASP:N	2.38	0.46
7:B:23:DA:H2'	7:B:24:DC:C6	2.51	0.46
1:P:1:MET:HE3	1:P:1:MET:H3	1.79	0.46
2:I:538:LEU:HD11	2:I:547:VAL:HG21	1.98	0.46
3:J:402:GLU:N	3:J:402:GLU:OE2	2.49	0.46
3:J:426:ALA:HB3	3:J:427:PRO:HD3	1.98	0.46
3:J:923:ILE:O	3:J:1241:TYR:OH	2.31	0.46
2:I:957:LYS:O	2:I:961:SER:HB3	2.16	0.46
2:I:1072:ASN:OD1	2:I:1072:ASN:N	2.43	0.46
3:J:865:HIS:CE1	3:J:867:GLN:HB3	2.51	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:340:ASP:N	2:I:340:ASP:OD1	2.49	0.46
3:J:157:GLN:HG2	3:J:188:LEU:HD21	1.98	0.46
3:J:518:VAL:HG12	3:J:547:ARG:HH22	1.81	0.46
3:J:967:VAL:HG13	3:J:971:GLY:HA2	1.98	0.46
2:I:976:ARG:HB2	2:I:997:TRP:HZ3	1.80	0.46
3:J:959:LYS:HG2	3:J:983:LYS:HB2	1.98	0.46
2:I:661:VAL:HB	2:I:665:ALA:HB3	1.98	0.45
3:J:502:PRO:HB2	3:J:507:VAL:HG23	1.97	0.45
5:H:120:ASP:OD1	5:H:120:ASP:N	2.49	0.45
2:I:1066:MET:HE3	2:I:1066:MET:HB3	1.78	0.45
2:I:1171:ARG:O	2:I:1174:GLU:HG2	2.17	0.45
2:I:1329:GLU:O	2:I:1332:SER:OG	2.31	0.45
3:J:370:LYS:HB3	3:J:409:TRP:CH2	2.51	0.45
2:I:963:GLU:HB3	2:I:1025:PHE:CE2	2.51	0.45
3:J:422:LEU:HD23	3:J:434:ILE:HD11	1.99	0.45
3:J:848:VAL:HB	3:J:858:VAL:HG22	1.98	0.45
3:J:1029:THR:HG21	3:J:1115:ILE:HD12	1.98	0.45
2:I:213:LEU:O	2:I:422:LYS:NZ	2.50	0.45
2:I:347:ILE:HD13	2:I:347:ILE:HA	1.78	0.45
2:I:1017:GLN:O	2:I:1020:GLU:HG3	2.15	0.45
3:J:516:ASP:OD1	3:J:516:ASP:N	2.48	0.45
2:I:161:LYS:H	2:I:161:LYS:HG2	1.58	0.45
3:J:791:ALA:HA	7:B:18:DA:C8	2.52	0.45
1:P:14:LEU:HD21	1:P:55:LEU:HD13	1.99	0.45
2:I:993:PRO:HD2	2:I:996:ARG:HG3	1.98	0.45
2:I:1085:MET:HE3	2:I:1085:MET:HB3	1.79	0.45
2:I:1289:GLU:HG2	2:I:1294:LYS:HD2	1.97	0.45
3:J:886:VAL:HA	3:J:1258:ARG:HB2	1.99	0.45
5:G:161:SER:O	5:G:162:GLU:HG3	2.17	0.45
3:J:26:SER:HB2	3:J:236:TRP:CE2	2.52	0.45
3:J:1153:PRO:O	3:J:1194:ARG:NH2	2.35	0.45
7:B:9:DG:H2"	7:B:10:DA:C8	2.52	0.45
3:J:525:MET:HG3	3:J:527:LEU:HD21	1.99	0.45
6:R:7:G:H2'	6:R:8:G:C8	2.51	0.45
8:A:29:DT:H2'	8:A:30:DT:H71	1.98	0.45
3:J:505:ASP:HB2	3:J:629:PHE:HE1	1.82	0.45
8:A:12:DG:H2"	8:A:13:DG:C8	2.52	0.45
3:J:225:GLU:HA	3:J:228:VAL:HG12	1.99	0.44
5:H:193:GLU:N	5:H:193:GLU:OE1	2.51	0.44
2:I:1274:GLU:OE2	3:J:428:THR:OG1	2.33	0.44
3:J:650:LYS:HB2	3:J:693:VAL:HG13	1.99	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:743:MET:HG3	3:J:745:GLY:H	1.83	0.44
3:J:1212:ASP:OD1	3:J:1212:ASP:N	2.50	0.44
5:H:15:ASP:HB3	5:H:27:THR:HB	1.99	0.44
2:I:1276:TRP:CE2	3:J:801:VAL:HG11	2.51	0.44
3:J:1046:ILE:HD12	3:J:1059:LEU:HB2	1.99	0.44
5:G:39:LEU:HD11	5:H:228:LEU:HD21	1.98	0.44
5:H:101:THR:HG22	5:H:143:ARG:HG2	1.97	0.44
3:J:789:LYS:NZ	3:J:928:THR:O	2.44	0.44
5:H:29:GLU:HB3	5:H:30:PRO:HD3	1.99	0.44
2:I:1298:VAL:HG12	2:I:1301:ARG:NH2	2.33	0.44
3:J:1273:ASP:OD1	3:J:1273:ASP:N	2.43	0.44
5:H:112:ALA:HB3	5:H:126:PRO:HA	2.00	0.44
7:B:12:DA:H2"	7:B:13:DA:H8	1.83	0.44
7:B:37:DG:H2"	7:B:38:DG:C8	2.52	0.44
2:I:578:TYR:HB3	2:I:590:PRO:HG2	1.98	0.44
7:B:30:DG:H2"	7:B:31:DC:C5	2.53	0.44
1:P:42:LYS:HG3	1:P:43:ARG:HD3	2.00	0.44
2:I:242:VAL:HB	2:I:245:ARG:HG3	1.99	0.44
3:J:226:ALA:O	3:J:229:GLN:NE2	2.45	0.44
3:J:1160:SER:OG	3:J:1203:ARG:NH1	2.36	0.44
5:G:192:VAL:HB	5:G:198:LEU:HD12	1.98	0.44
5:G:193:GLU:OE2	5:G:195:ARG:HG2	2.16	0.44
8:A:9:DC:H2"	8:A:10:DG:N7	2.33	0.44
2:I:43:PRO:O	2:I:54:ARG:NH2	2.49	0.44
2:I:963:GLU:HB3	2:I:1025:PHE:HE2	1.83	0.44
5:G:13:LEU:HD21	5:G:16:ILE:HG13	1.98	0.44
2:I:964:LEU:HD23	2:I:1025:PHE:CG	2.52	0.44
3:J:330:MET:HE3	3:J:330:MET:HB2	1.87	0.44
3:J:581:MET:HE1	5:H:182:ARG:HD3	1.99	0.44
3:J:1095:MET:HA	3:J:1096:PRO:HD3	1.84	0.44
3:J:1164:SER:O	3:J:1175:LEU:HD22	2.17	0.44
5:H:92:VAL:O	5:H:148:ARG:NH2	2.47	0.44
8:A:6:DC:H2"	8:A:7:DC:C6	2.53	0.44
1:P:88:VAL:HG22	1:P:150:ILE:HD11	2.00	0.43
3:J:811:GLU:OE1	3:J:890:THR:OG1	2.32	0.43
7:B:29:DC:H2"	7:B:30:DG:H5'	1.99	0.43
8:A:14:DG:H5'	8:A:14:DG:C8	2.53	0.43
2:I:226:GLU:HG2	2:I:245:ARG:HH12	1.83	0.43
2:I:964:LEU:HD23	2:I:1025:PHE:CD2	2.53	0.43
2:I:1331:ARG:HB3	3:J:102:MET:HE1	2.00	0.43
3:J:279:LEU:HD13	3:J:295:GLU:HB3	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:650:LYS:HA	3:J:693:VAL:HG22	2.01	0.43
3:J:678:ARG:HG3	3:J:679:TYR:N	2.33	0.43
3:J:807:LEU:HD23	3:J:1255:VAL:HG13	2.00	0.43
5:H:59:VAL:HG23	5:H:144:ILE:HG22	1.99	0.43
1:P:96:LEU:HD22	1:P:126:PHE:HZ	1.83	0.43
2:I:642:SER:HB3	3:J:770:LEU:HD21	1.99	0.43
2:I:961:SER:O	2:I:965:GLN:HG2	2.18	0.43
2:I:1331:ARG:HG2	3:J:33:TRP:CH2	2.54	0.43
4:K:72:GLN:O	4:K:75:GLN:HG3	2.19	0.43
5:H:16:ILE:HG12	5:H:26:VAL:HG13	2.00	0.43
5:H:30:PRO:HA	5:H:198:LEU:HD23	2.00	0.43
7:B:16:DG:H2'	7:B:17:DC:C6	2.53	0.43
3:J:121:PRO:HD2	3:J:123:ARG:HH22	1.83	0.43
3:J:587:LEU:HD23	3:J:591:ILE:HD13	2.00	0.43
3:J:653:ILE:HD13	3:J:692:ARG:HB3	2.00	0.43
3:J:830:ASP:OD1	3:J:830:ASP:N	2.52	0.43
3:J:1284:ARG:NH2	3:J:1317:GLU:OE2	2.52	0.43
8:A:11:DC:H4'	8:A:12:DG:OP1	2.18	0.43
2:I:616:ILE:HG13	2:I:652:TYR:HB2	2.00	0.43
5:H:153:VAL:O	5:H:158:ARG:NH2	2.52	0.43
2:I:1151:LEU:HD11	2:I:1197:GLU:HG3	2.00	0.43
3:J:502:PRO:O	3:J:598:LYS:NZ	2.50	0.43
3:J:770:LEU:HD12	3:J:770:LEU:HA	1.85	0.43
3:J:805:GLN:H	3:J:805:GLN:HG3	1.71	0.43
3:J:859:PRO:HD2	3:J:862:THR:HG21	2.00	0.43
2:I:741:MET:HE1	2:I:747:GLY:HA3	2.00	0.43
5:H:9:LEU:HD13	5:H:198:LEU:HD21	2.00	0.43
1:P:92:VAL:HG13	1:P:149:GLU:CD	2.44	0.43
2:I:256:GLU:HG2	2:I:261:VAL:HG22	2.01	0.43
3:J:865:HIS:HE1	3:J:867:GLN:HB3	1.83	0.43
3:J:1203:ARG:NH1	3:J:1205:GLU:OE2	2.51	0.43
2:I:488:MET:HE3	2:I:489:PRO:HD3	2.00	0.42
2:I:995:ASP:O	2:I:999:GLU:HG2	2.19	0.42
3:J:301:GLU:OE2	3:J:301:GLU:HA	2.19	0.42
3:J:1158:GLU:OE1	3:J:1222:ARG:NH1	2.48	0.42
2:I:18:ARG:NH1	2:I:621:SER:O	2.49	0.42
3:J:118:LYS:HD3	3:J:118:LYS:HA	1.70	0.42
2:I:1086:PRO:HB2	2:I:1212:LEU:HD13	2.01	0.42
3:J:550:VAL:HG23	3:J:552:ILE:HG23	2.01	0.42
3:J:934:THR:HG23	3:J:1135:THR:HB	2.02	0.42
3:J:1073:ASP:OD1	3:J:1073:ASP:N	2.52	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:1238:GLN:NE2	3:J:1250:ASP:OD1	2.53	0.42
3:J:1344:LEU:HD12	3:J:1349:GLU:HB3	2.02	0.42
4:K:21:LEU:HD13	4:K:21:LEU:HA	1.90	0.42
2:I:727:VAL:HG12	2:I:773:LEU:HG	2.01	0.42
3:J:265:LEU:HD23	3:J:265:LEU:HA	1.91	0.42
1:P:120:GLU:N	1:P:123:PHE:HB2	2.34	0.42
1:P:135:GLY:CA	1:P:138:ARG:HG3	2.49	0.42
2:I:81:ASP:OD1	2:I:82:VAL:N	2.47	0.42
3:J:174:ASP:OD1	3:J:175:GLU:N	2.46	0.42
1:P:11:ARG:HA	1:P:53:ASN:OD1	2.19	0.42
3:J:355:ILE:HD11	3:J:464:ASP:HB2	2.01	0.42
7:B:37:DG:H2"	7:B:38:DG:H8	1.84	0.42
2:I:1073:LYS:NZ	6:R:16:G:OP1	2.36	0.42
2:I:1117:LEU:HD13	2:I:1195:ILE:HG12	2.01	0.42
2:I:1142:ARG:HG3	2:I:1169:VAL:HG11	2.00	0.42
3:J:395:LYS:HD3	3:J:399:LYS:HG2	2.00	0.42
5:H:76:GLU:OE1	5:H:132:HIS:N	2.53	0.42
5:H:135:ASP:HB3	5:H:138:ALA:HB2	2.01	0.42
2:I:276:GLN:O	2:I:279:LYS:HG2	2.19	0.42
2:I:520:PRO:HG3	2:I:714:VAL:HG21	2.01	0.42
3:J:201:LEU:HG	3:J:217:LEU:HD11	2.02	0.42
1:P:93:ILE:HD12	1:P:94:HIS:N	2.34	0.42
3:J:320:ASN:HB3	3:J:322:ARG:HE	1.83	0.42
3:J:478:LEU:HB3	4:K:20:VAL:HG13	2.02	0.42
3:J:596:LEU:HD23	3:J:596:LEU:HA	1.84	0.42
3:J:641:ILE:HD12	3:J:641:ILE:HA	1.88	0.42
5:G:60:GLU:HG2	5:G:143:ARG:NH2	2.35	0.42
2:I:262:TYR:O	2:I:267:ARG:NH2	2.53	0.42
2:I:560:PRO:HB2	3:J:776:THR:HG21	2.02	0.42
3:J:649:LYS:HD3	3:J:649:LYS:HA	1.87	0.42
3:J:1007:ASP:OD1	3:J:1008:GLY:N	2.53	0.42
5:H:25:LYS:NZ	5:H:25:LYS:HB3	2.35	0.42
5:H:108:GLY:N	5:H:109:PRO:HD3	2.35	0.42
7:B:10:DA:H2"	7:B:11:DA:C8	2.55	0.42
7:B:39:DT:H2"	7:B:40:DG:N7	2.35	0.42
2:I:1002:LEU:HD12	2:I:1002:LEU:HA	1.84	0.41
2:I:1146:GLN:NE2	2:I:1150:ASP:OD1	2.53	0.41
3:J:535:ARG:NH1	5:H:176:CYS:SG	2.93	0.41
5:G:33:ARG:HA	5:G:33:ARG:NE	2.34	0.41
6:R:10:G:H2'	6:R:11:G:C8	2.56	0.41
1:P:4:TRP:NE1	1:P:58:GLU:OE1	2.53	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:P:100:LYS:HA	1:P:100:LYS:HD3	1.77	0.41
2:I:935:THR:HG22	2:I:939:VAL:HB	2.03	0.41
3:J:1226:VAL:HG13	3:J:1261:LEU:HD13	2.03	0.41
7:B:14:DA:H2"	7:B:15:DA:H8	1.85	0.41
2:I:89:GLY:HA2	2:I:140:GLY:HA3	2.01	0.41
2:I:1041:ASP:OD1	2:I:1041:ASP:C	2.64	0.41
3:J:384:LYS:HD2	3:J:384:LYS:HA	1.88	0.41
3:J:393:THR:HG23	3:J:396:ALA:H	1.85	0.41
5:H:154:PRO:HG2	5:H:157:THR:HG23	2.01	0.41
7:B:13:DA:H2"	7:B:14:DA:H8	1.85	0.41
8:A:15:DC:H5'	8:A:15:DC:C6	2.55	0.41
1:P:127:GLN:O	1:P:131:THR:HG23	2.21	0.41
2:I:246:LEU:O	2:I:274:ILE:HD11	2.20	0.41
2:I:1036:ILE:HD13	2:I:1036:ILE:HA	1.92	0.41
2:I:1269:ARG:HA	3:J:346:ARG:HA	2.01	0.41
5:H:102:LEU:HB2	5:H:115:ILE:HD13	2.02	0.41
1:P:42:LYS:HD2	1:P:42:LYS:HA	1.79	0.41
2:I:420:LEU:HD23	2:I:420:LEU:HA	1.87	0.41
2:I:991:LYS:HB2	2:I:991:LYS:HE2	1.95	0.41
2:I:1084:ASP:OD1	5:G:45:ARG:NH1	2.39	0.41
2:I:1123:GLY:HA3	2:I:1204:LEU:HD11	2.01	0.41
3:J:515:ARG:NH2	3:J:718:SER:O	2.52	0.41
3:J:749:LYS:HG3	3:J:751:ASP:OD1	2.21	0.41
3:J:820:ILE:HD12	3:J:822:MET:HE3	2.03	0.41
1:P:18:GLN:HG3	1:P:28:CYS:SG	2.61	0.41
2:I:849:GLU:OE2	2:I:849:GLU:N	2.54	0.41
3:J:45:ASN:HB2	3:J:52:GLU:OE2	2.21	0.41
3:J:572:THR:OG1	3:J:573:THR:N	2.52	0.41
3:J:832:LYS:H	3:J:832:LYS:HG2	1.65	0.41
3:J:1032:SER:OG	3:J:1117:SER:N	2.54	0.41
3:J:1173:ARG:HH21	3:J:1196:LEU:HD23	1.85	0.41
4:K:68:GLU:HA	4:K:71:GLU:OE1	2.20	0.41
1:P:129:ILE:CG2	1:P:138:ARG:HB3	2.49	0.41
1:P:132:GLU:N	1:P:133:PRO:HD2	2.36	0.41
3:J:196:GLN:O	3:J:199:GLU:HG3	2.21	0.41
3:J:1141:VAL:HG23	3:J:1240:VAL:HG11	2.02	0.41
3:J:1183:SER:OG	3:J:1184:ASP:N	2.54	0.41
3:J:1327:GLU:HG2	7:B:15:DA:H4'	2.02	0.41
4:K:50:ALA:O	4:K:54:ILE:HG13	2.20	0.41
7:B:36:DT:H2"	7:B:37:DG:C8	2.56	0.41
1:P:1:MET:SD	1:P:2:GLN:N	2.93	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:P:143:LEU:HA	1:P:146:ILE:HG13	2.02	0.41
2:I:221:LEU:HD13	2:I:221:LEU:HA	1.92	0.41
2:I:236:LYS:HA	2:I:236:LYS:HD3	1.92	0.41
2:I:315:MET:SD	2:I:315:MET:N	2.94	0.41
2:I:1120:ALA:HB2	2:I:1199:LEU:HG	2.02	0.41
3:J:829:GLY:N	3:J:993:GLU:OE1	2.37	0.41
4:K:72:GLN:HG3	4:K:73:GLN:OE1	2.21	0.41
5:G:195:ARG:NH1	5:G:197:ASP:OD1	2.54	0.41
2:I:967:LEU:HB3	2:I:1021:LEU:HD21	2.02	0.41
2:I:1132:LEU:HD23	2:I:1132:LEU:HA	1.91	0.41
3:J:1124:ILE:HD13	3:J:1124:ILE:HA	1.86	0.41
4:K:15:ASN:ND2	4:K:17:PHE:HB2	2.36	0.41
5:G:17:GLU:HB3	5:G:25:LYS:HB2	2.03	0.41
5:H:61:ILE:HD13	5:H:142:MET:HG2	2.02	0.41
8:A:39:DC:H2"	8:A:40:DC:C5	2.56	0.41
2:I:118:LYS:HB3	2:I:488:MET:HE1	2.03	0.41
2:I:194:LEU:HD12	2:I:194:LEU:HA	1.89	0.41
3:J:108:ALA:HB3	3:J:279:LEU:HD23	2.02	0.41
3:J:222:LYS:HD2	3:J:222:LYS:HA	1.91	0.41
1:P:91:ALA:HB3	1:P:149:GLU:OE2	2.21	0.40
2:I:290:GLU:H	2:I:290:GLU:HG3	1.73	0.40
3:J:113:HIS:CE1	3:J:115:TRP:HB2	2.55	0.40
3:J:426:ALA:HB1	7:B:20:DG:H1'	2.03	0.40
2:I:817:LEU:HB3	2:I:1097:VAL:HB	2.03	0.40
2:I:971:LEU:HD12	2:I:971:LEU:HA	1.87	0.40
2:I:1272:GLU:HG3	3:J:343:LEU:HB3	2.03	0.40
3:J:803:VAL:HG11	3:J:1309:ILE:HG22	2.02	0.40
3:J:963:VAL:HB	3:J:980:THR:HG23	2.03	0.40
3:J:1040:MET:HB3	3:J:1076:PRO:HA	2.02	0.40
3:J:1084:GLN:H	3:J:1084:GLN:HG3	1.72	0.40
3:J:1253:ILE:H	3:J:1253:ILE:HG13	1.72	0.40
2:I:562:GLU:OE1	2:I:662:SER:OG	2.35	0.40
2:I:992:LEU:HD12	2:I:992:LEU:HA	1.88	0.40
2:I:1273:MET:HE2	3:J:428:THR:O	2.20	0.40
3:J:301:GLU:OE1	3:J:312:ARG:NH1	2.54	0.40
3:J:962:ASN:HD21	3:J:979:ASN:HB2	1.87	0.40
2:I:74:ARG:HH22	2:I:97:ARG:HD2	1.85	0.40
3:J:155:GLU:HG2	3:J:158:GLN:HG3	2.03	0.40
3:J:357:VAL:HG22	3:J:461:PHE:CE1	2.56	0.40
8:A:13:DG:H2"	8:A:14:DG:H3'	2.04	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	P	131/164 (80%)	123 (94%)	7 (5%)	1 (1%)	16	34
2	I	1317/1342 (98%)	1284 (98%)	33 (2%)	0	100	100
3	J	1310/1416 (92%)	1278 (98%)	32 (2%)	0	100	100
4	K	81/91 (89%)	80 (99%)	1 (1%)	0	100	100
5	G	232/329 (70%)	226 (97%)	5 (2%)	1 (0%)	30	52
5	H	222/329 (68%)	213 (96%)	9 (4%)	0	100	100
All	All	3293/3671 (90%)	3204 (97%)	87 (3%)	2 (0%)	50	71

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	P	133	PRO
5	G	193	GLU

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	P	117/143 (82%)	111 (95%)	6 (5%)	20	42
2	I	1140/1157 (98%)	1122 (98%)	18 (2%)	58	79
3	J	1104/1177 (94%)	1074 (97%)	30 (3%)	40	66
4	K	70/75 (93%)	66 (94%)	4 (6%)	17	37
5	G	201/286 (70%)	193 (96%)	8 (4%)	27	52

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	H	193/286 (68%)	185 (96%)	8 (4%)	26	51
All	All	2825/3124 (90%)	2751 (97%)	74 (3%)	42	67

All (74) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	P	9	CYS
1	P	53	ASN
1	P	63	VAL
1	P	66	THR
1	P	75	VAL
1	P	92	VAL
2	I	70	TYR
2	I	155	VAL
2	I	170	VAL
2	I	185	ASP
2	I	234	ASP
2	I	237	LEU
2	I	333	ILE
2	I	347	ILE
2	I	453	ILE
2	I	502	VAL
2	I	515	MET
2	I	561	ILE
2	I	635	THR
2	I	862	LEU
2	I	995	ASP
2	I	1155	VAL
2	I	1225	VAL
2	I	1293	VAL
3	J	26	SER
3	J	94	GLN
3	J	96	LYS
3	J	97	VAL
3	J	154	LEU
3	J	198	CYS
3	J	264	ASP
3	J	478	LEU
3	J	503	SER
3	J	661	VAL
3	J	666	GLU
3	J	670	SER

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	J	674	THR
3	J	706	VAL
3	J	707	ILE
3	J	710	ASP
3	J	762	ASN
3	J	818	GLU
3	J	823	THR
3	J	825	VAL
3	J	871	LEU
3	J	891	ASP
3	J	930	LEU
3	J	974	VAL
3	J	1054	THR
3	J	1088	VAL
3	J	1093	THR
3	J	1135	THR
3	J	1243	LEU
3	J	1309	ILE
4	K	21	LEU
4	K	47	THR
4	K	55	GLU
4	K	79	GLU
5	G	4	SER
5	G	6	THR
5	G	7	GLU
5	G	96	ASP
5	G	146	VAL
5	G	156	SER
5	G	159	ILE
5	G	166	ARG
5	H	5	VAL
5	H	6	THR
5	H	103	ASN
5	H	146	VAL
5	H	156	SER
5	H	168	ILE
5	H	187	VAL
5	H	231	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (25) such sidechains are listed below:

Mol	Chain	Res	Type
2	I	173	ASN
2	I	517	GLN
2	I	582	ASN
2	I	618	GLN
2	I	622	ASN
2	I	649	GLN
2	I	832	HIS
2	I	834	GLN
2	I	1038	GLN
2	I	1146	GLN
2	I	1237	HIS
2	I	1256	GLN
2	I	1288	GLN
3	J	94	GLN
3	J	206	ASN
3	J	365	GLN
3	J	424	ASN
3	J	465	GLN
3	J	477	GLN
3	J	488	ASN
3	J	979	ASN
3	J	1114	GLN
4	K	7	GLN
5	G	37	HIS
5	H	103	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
6	R	11/17 (64%)	2 (18%)	0

All (2) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
6	R	7	G
6	R	17	U

There are no RNA pucker outliers to report.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

Of 2 ligands modelled in this entry, 2 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 ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Map visualisation ⓘ

This section contains visualisations of the EMDB entry EMD-17679. 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 ⓘ
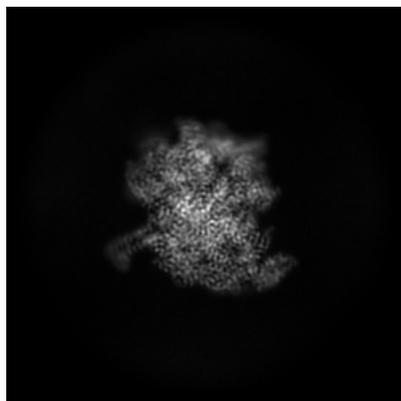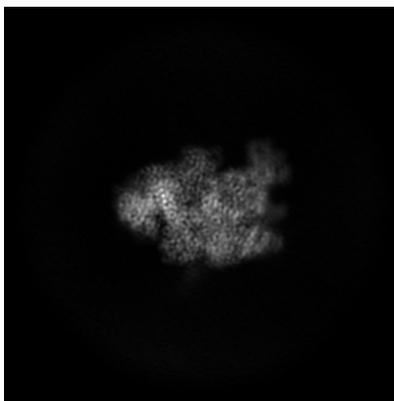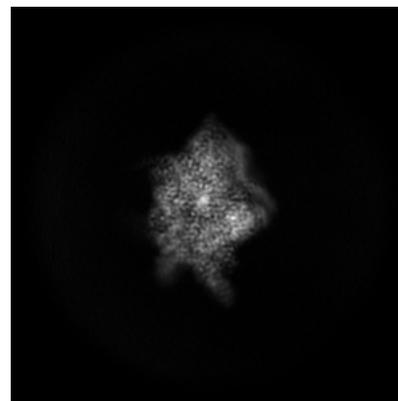
6.1.1 Primary map

X Y Z

6.1.2 Raw map

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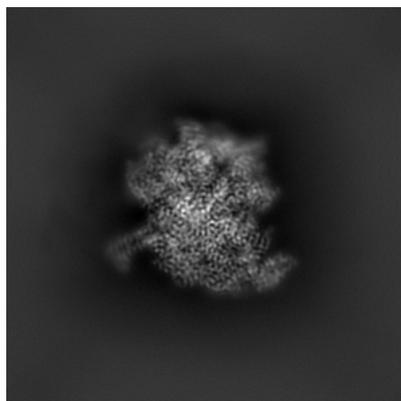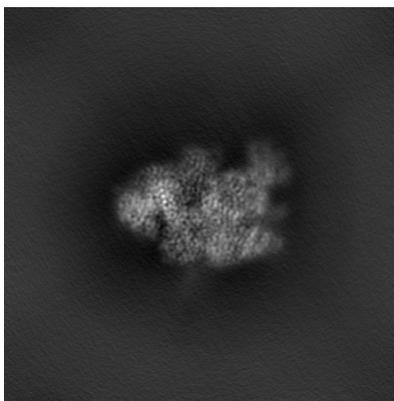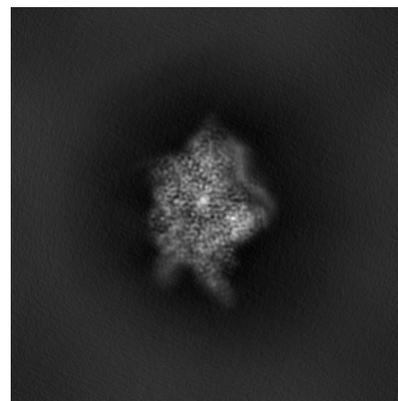
The images above show the map projected in three orthogonal directions.

6.2 Central slices ⓘ
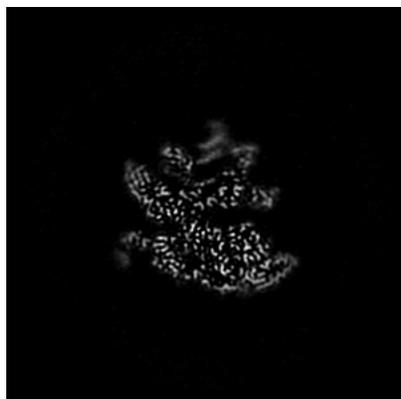
6.2.1 Primary map
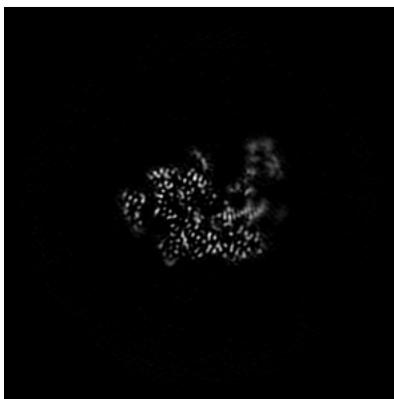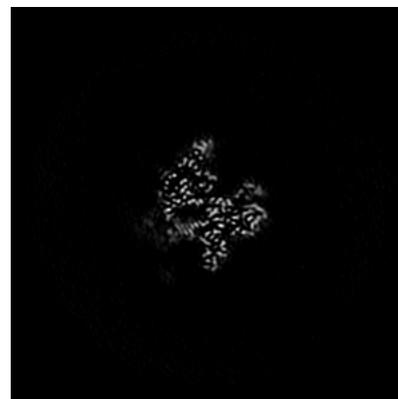
| X Index: 192 | Y Index: 192 | Z Index: 192 |

6.2.2 Raw map
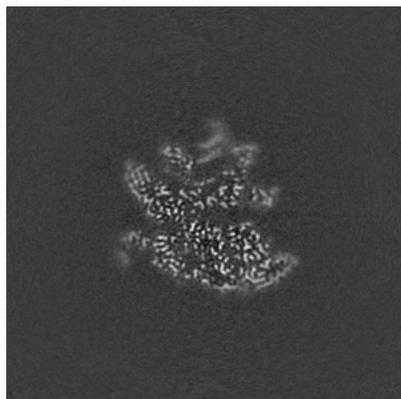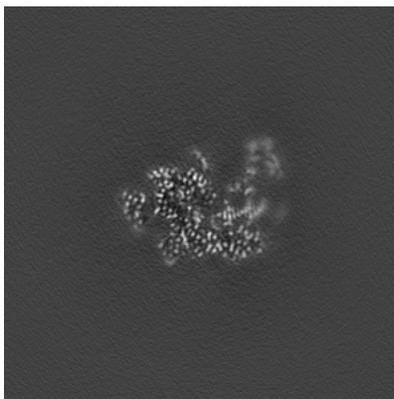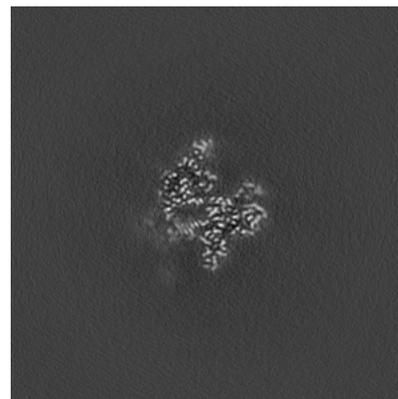
| X Index: 192 | Y Index: 192 | Z Index: 192 |

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

6.3 Largest variance slices ⓘ

6.3.1 Primary map
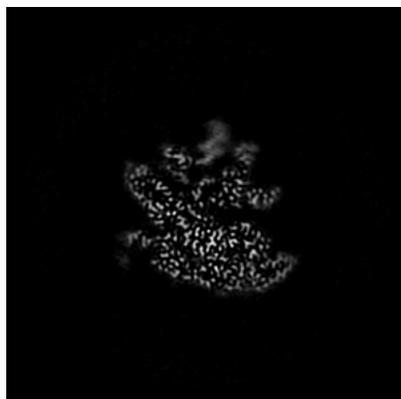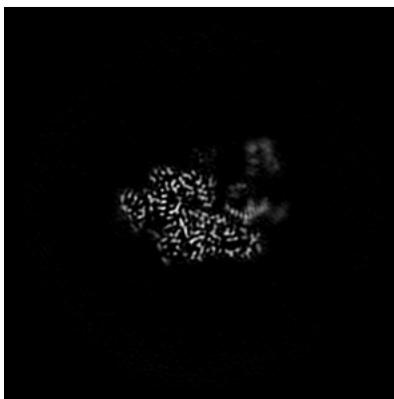
X Index: 190	Y Index: 195	Z Index: 160

6.3.2 Raw map
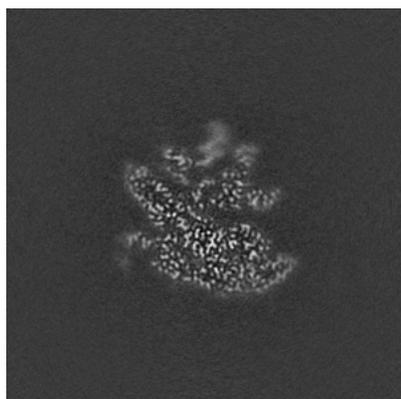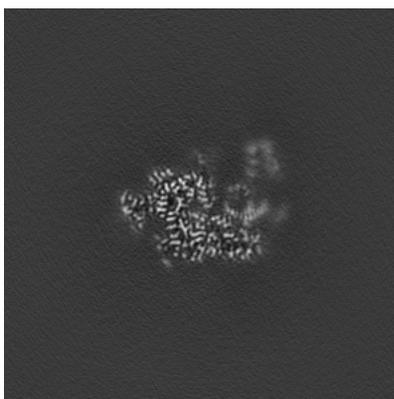
X Index: 190	Y Index: 194	Z Index: 160
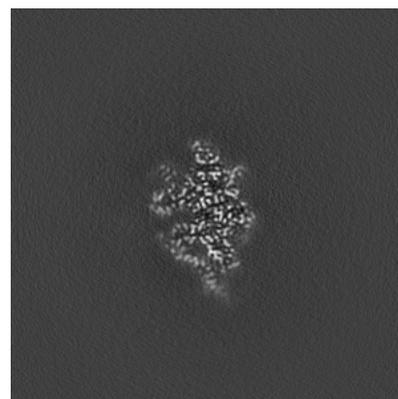
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) ⓘ

6.4.1 Primary map
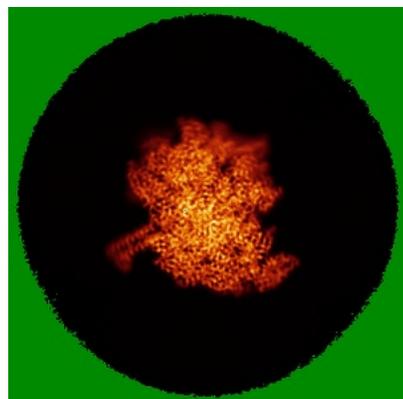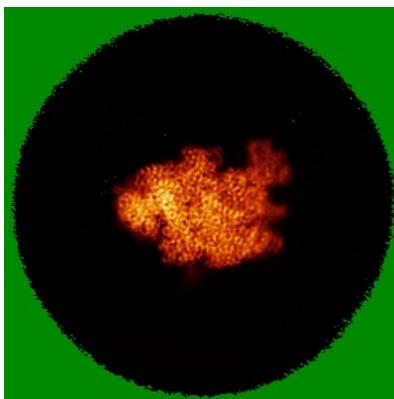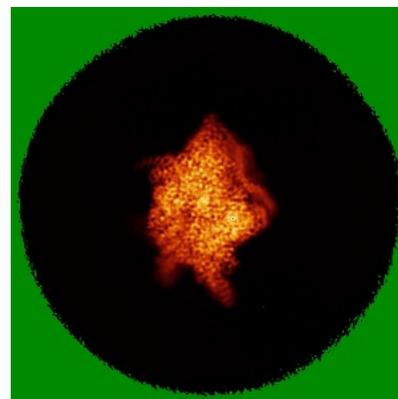
X	Y	Z

6.4.2 Raw map

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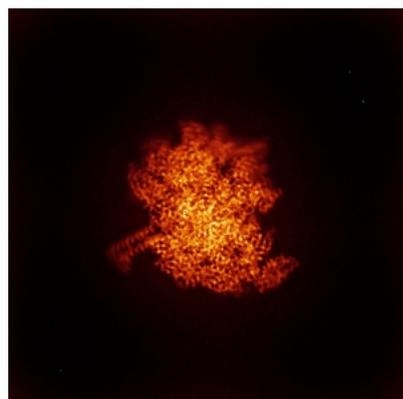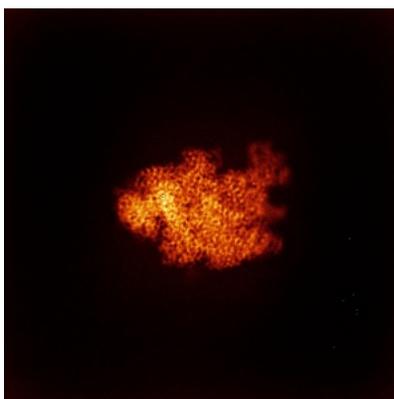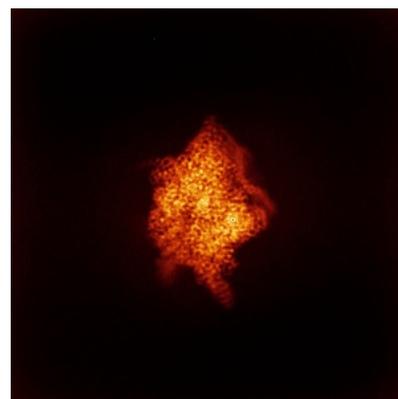
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5　Orthogonal surface views ⓘ

6.5.1　Primary map

| X | Y | Z |
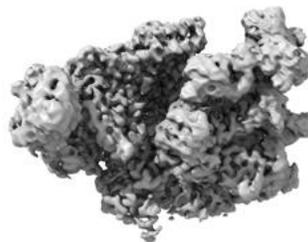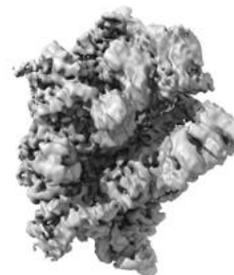
The images above show the 3D surface view of the map at the recommended contour level 0.24. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

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 ⓘ

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

7 Map analysis ⓘ

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

7.1 Map-value distribution ⓘ
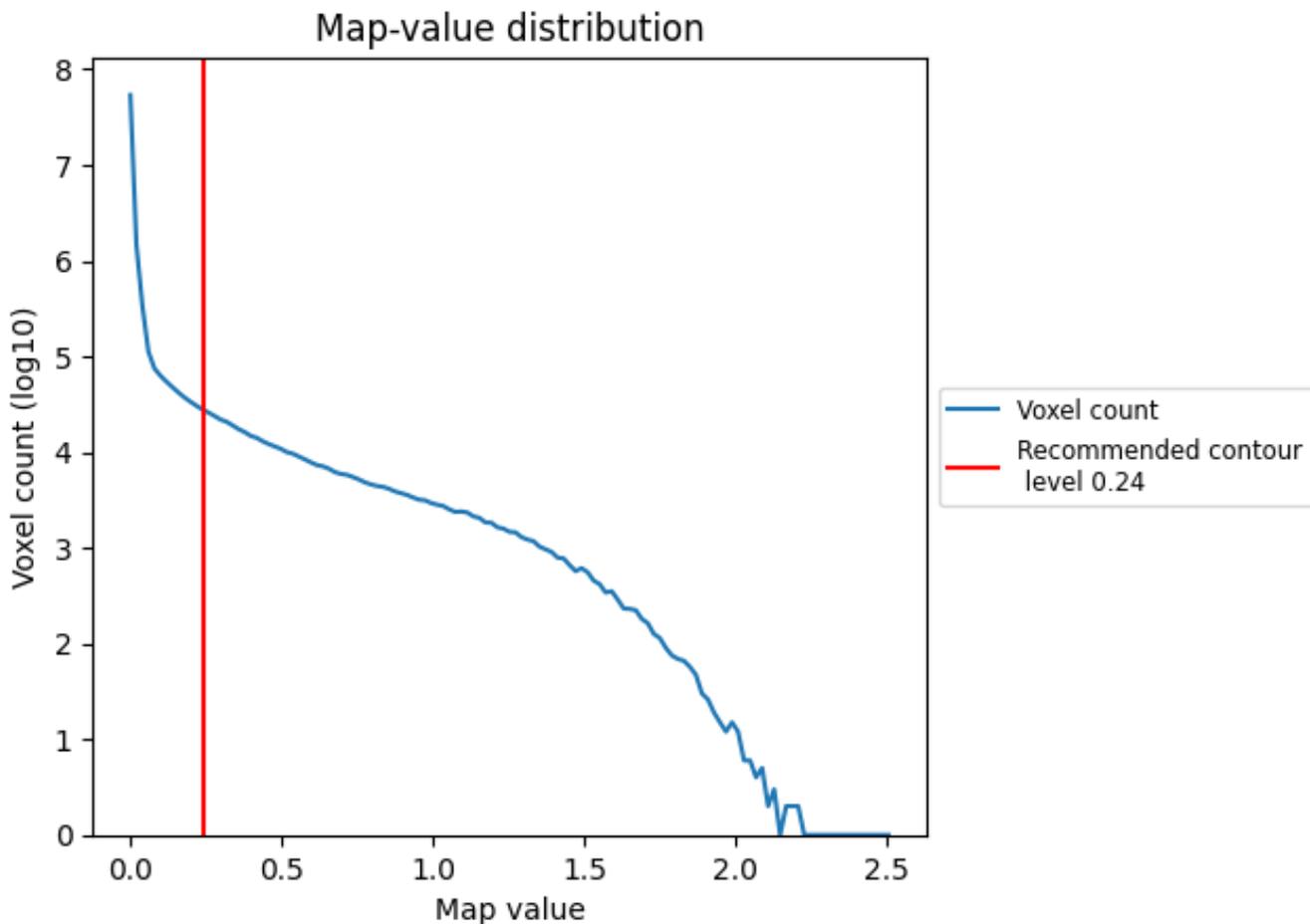
The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

7.2 Volume estimate ⓘ
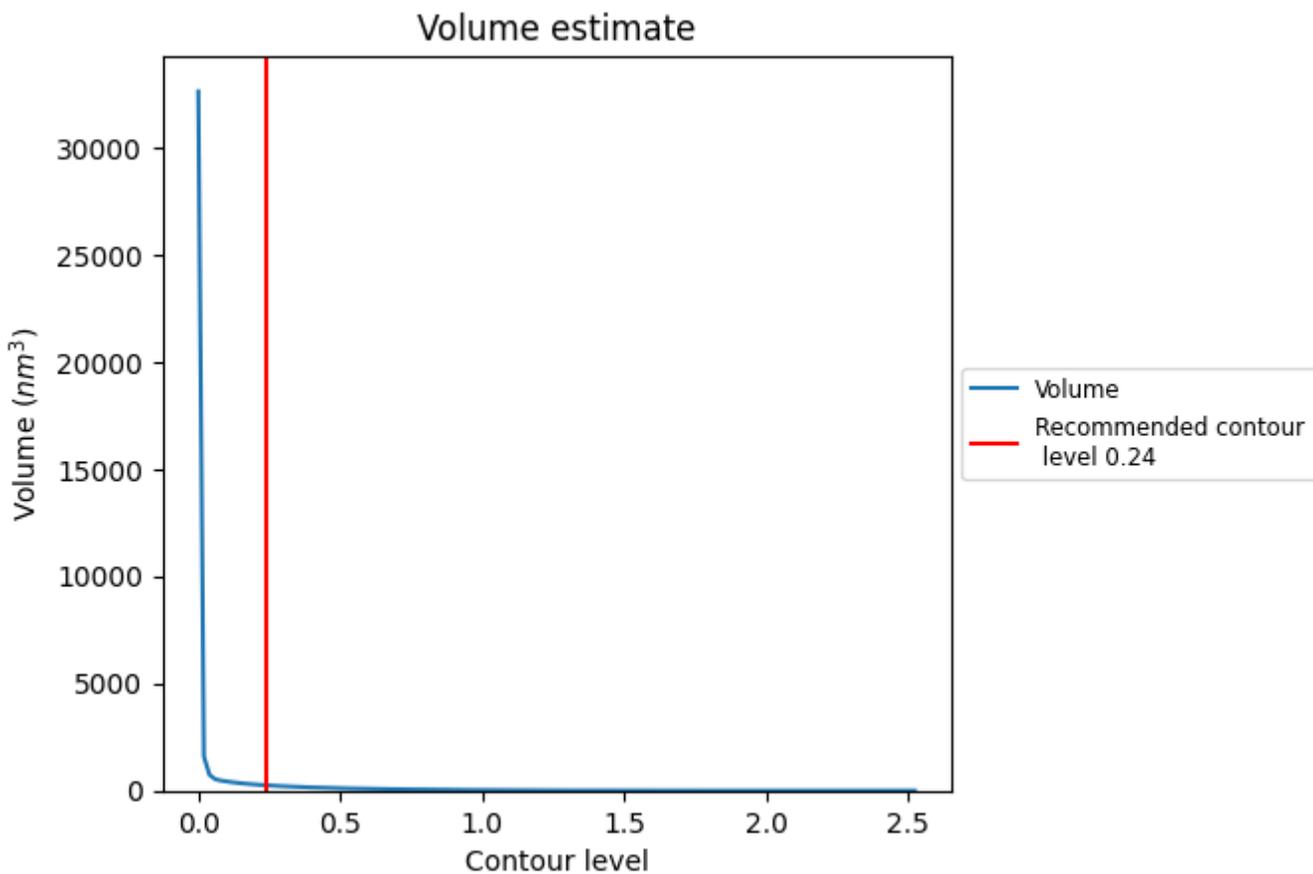
Volume estimate

The volume at the recommended contour level is 248 nm^3; this corresponds to an approximate mass of 224 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 ⓘ
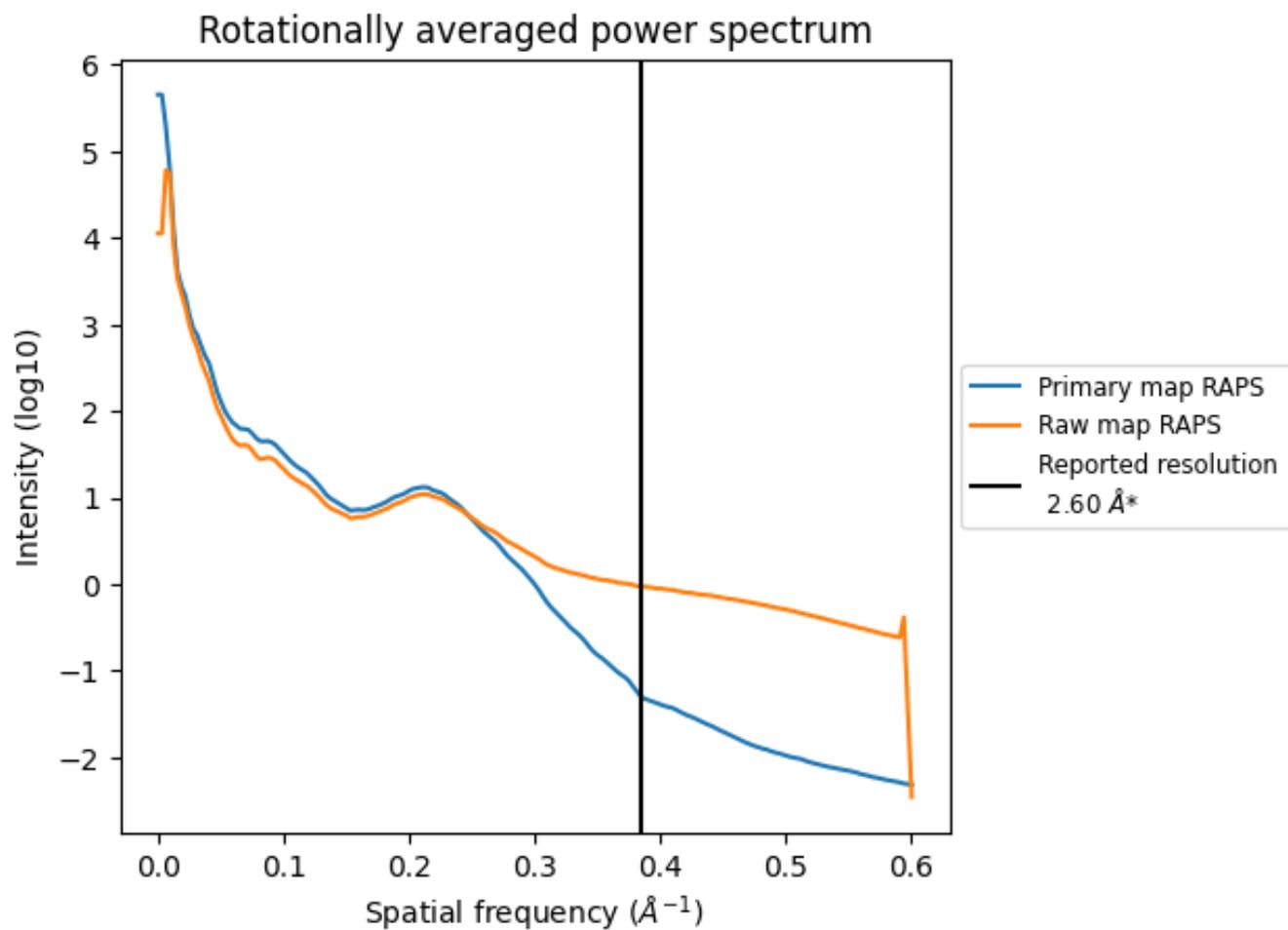
*Reported resolution corresponds to spatial frequency of 0.385 Å^{-1}

8 Fourier-Shell correlation (i)

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

8.1 FSC (i)
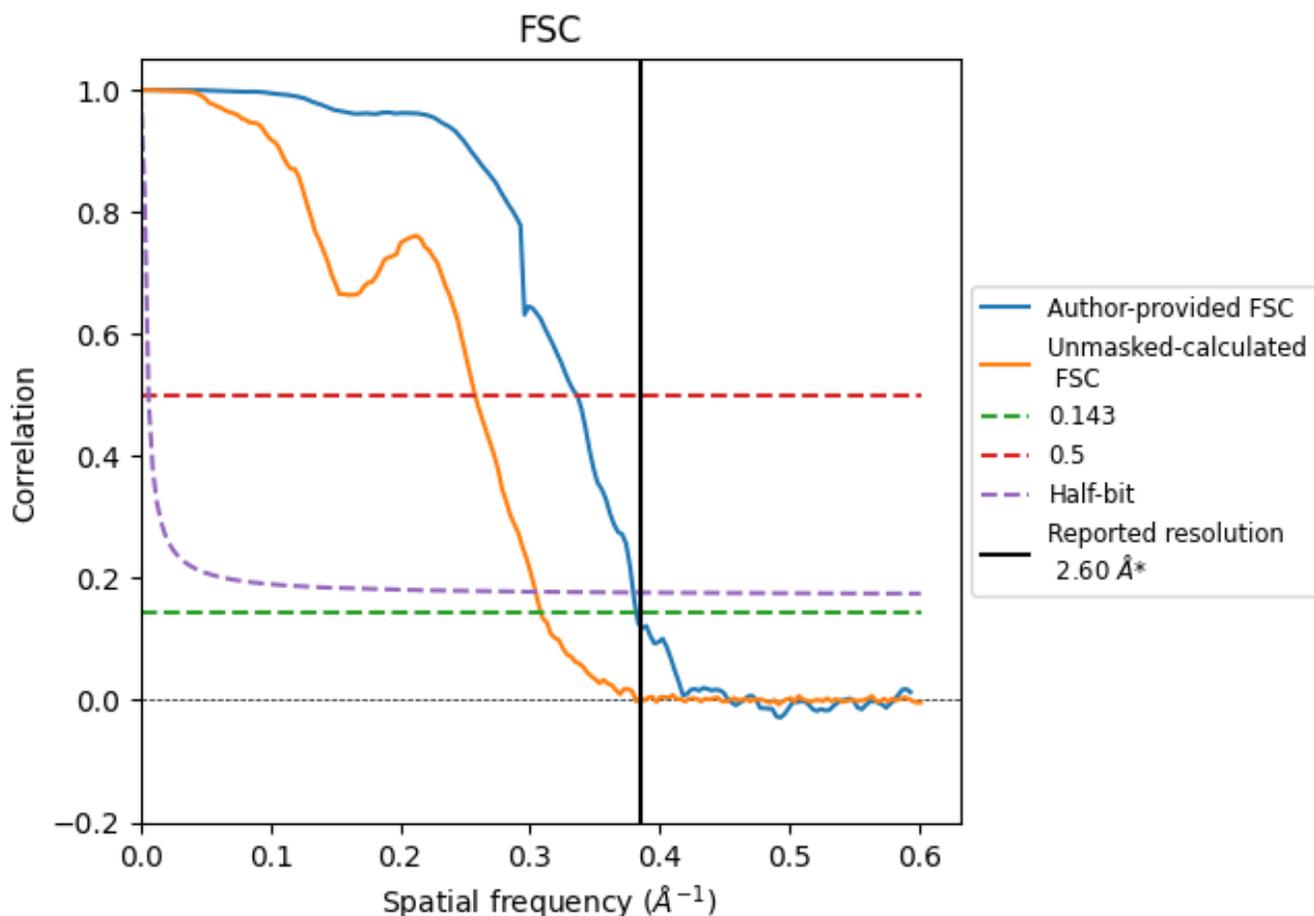
*Reported resolution corresponds to spatial frequency of 0.385 Å^{-1}

8.2 Resolution estimates ⓘ

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.60	-	-
Author-provided FSC curve	2.62	2.98	2.63
Unmasked-calculated*	3.24	3.88	3.29

*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 3.24 differs from the reported value 2.6 by more than 10 %

9　Map-model fit ⓘ

This section contains information regarding the fit between EMDB map EMD-17679 and PDB model 8PIB. Per-residue inclusion information can be found in section 3 on page 7.

9.1　Map-model overlay ⓘ

| X | Y | Z |
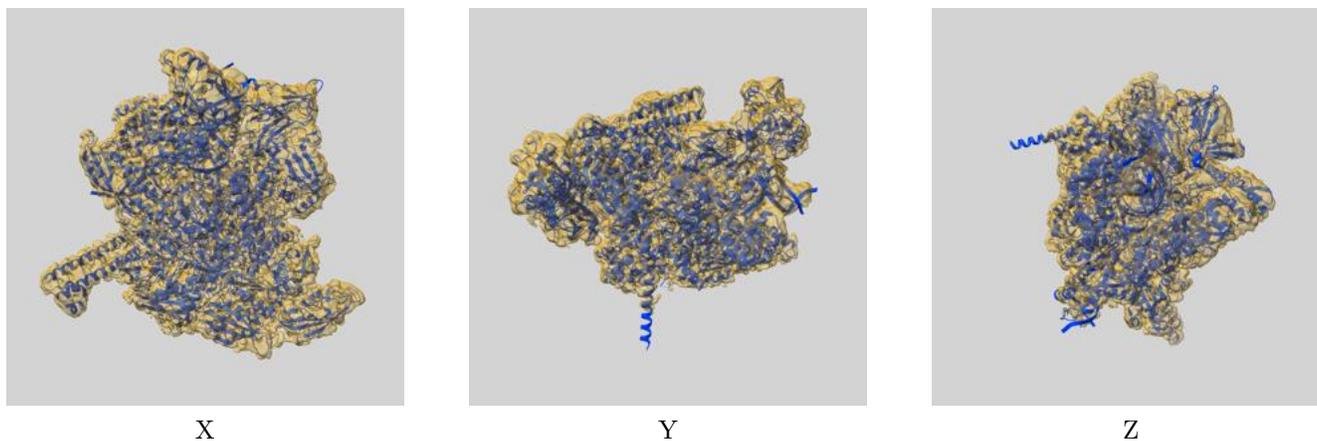
The images above show the 3D surface view of the map at the recommended contour level 0.24 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2   Q-score mapped to coordinate model ⓘ

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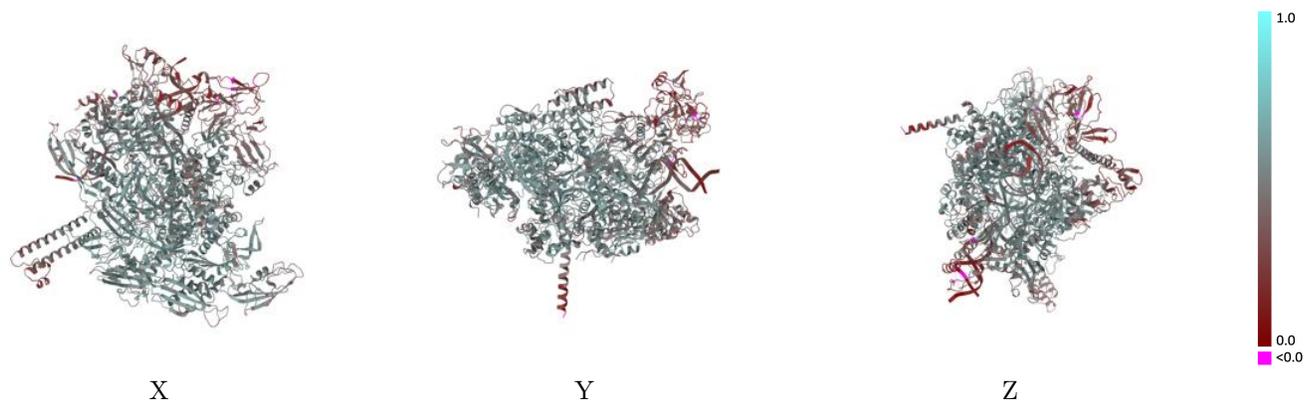
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3   Atom inclusion mapped to coordinate model ⓘ

X   Y   Z
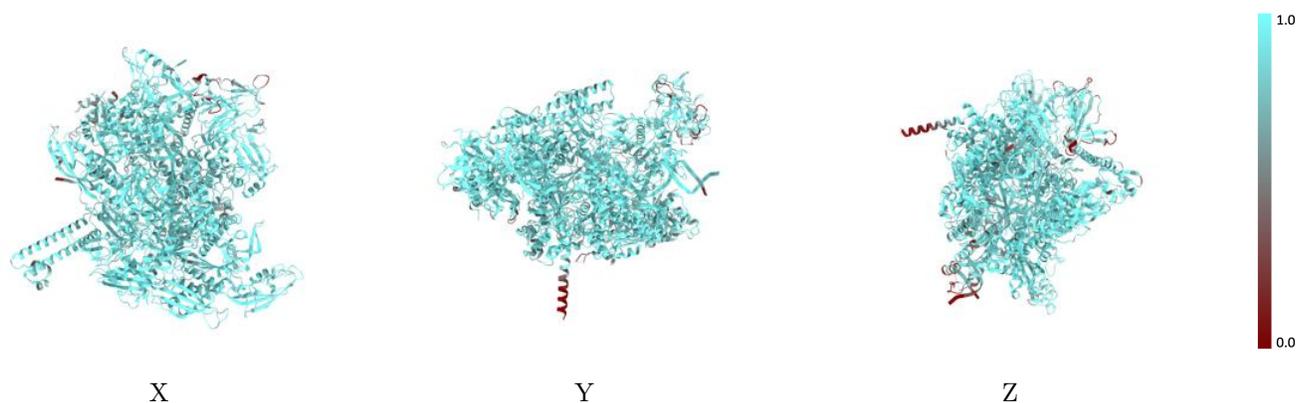
The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.24).

9.4 Atom inclusion ⓘ
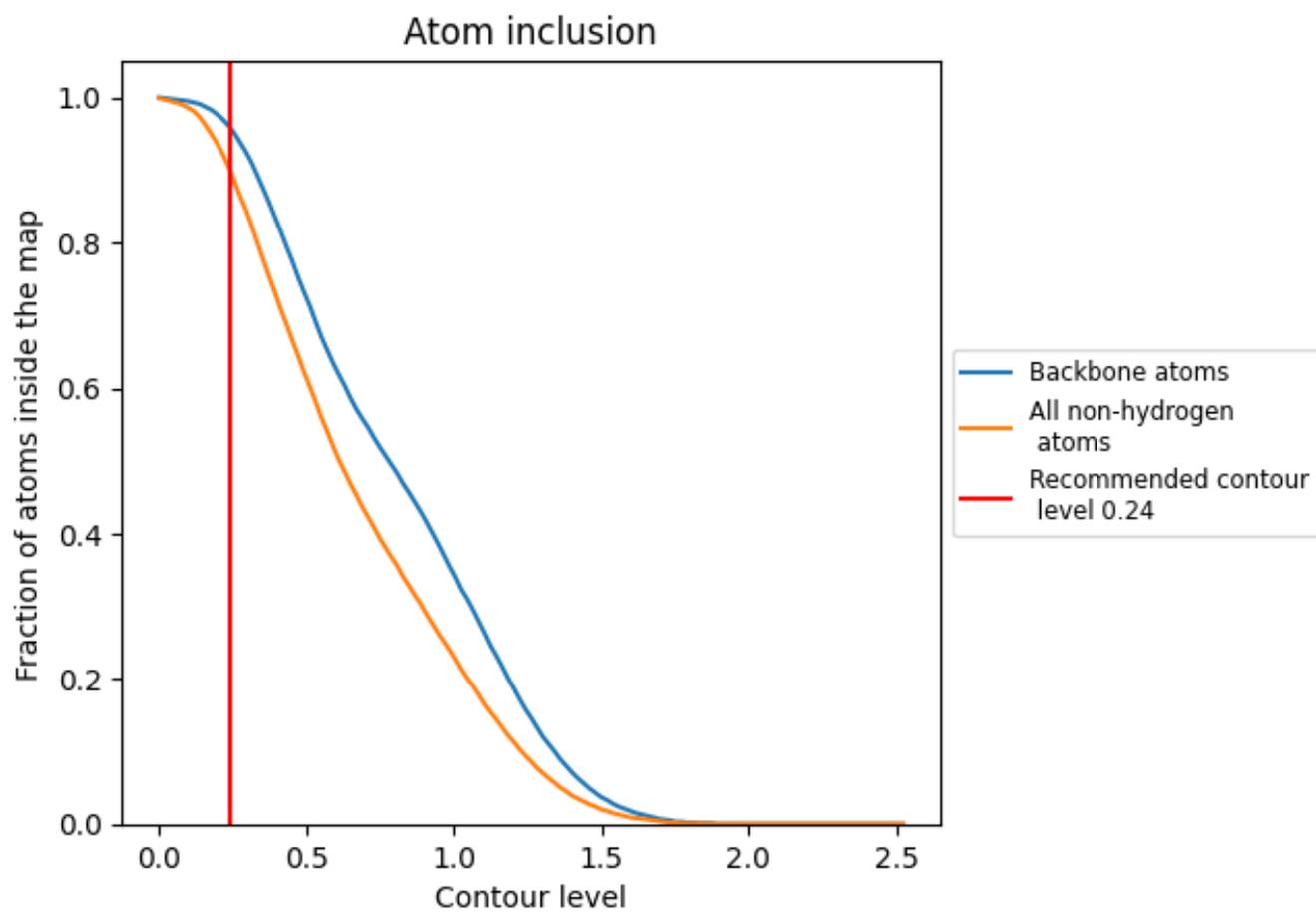
At the recommended contour level, 96% of all backbone atoms, 90% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.24) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9020	0.4940
A	0.8540	0.3690
B	0.8980	0.3840
G	0.9220	0.5320
H	0.9100	0.4960
I	0.9290	0.5210
J	0.9040	0.4930
K	0.7310	0.4640
P	0.7110	0.3730
R	0.9390	0.5200

1.0

0.0
<0.0