W O R L D W I D E

wwPDB

PROTEIN DATA BANK

wwPDB EM Validation Summary Report (i)

Mar 11, 2024 – 08:39 AM EDT

PDB ID	:	6OIT
EMDB ID	:	EMD-20081
Title	:	CryoEM structure of Arabidopsis DDR' complex (DRD1 peptide-DMS3-RDM1)
Authors	:	Wongpalee, S.P.; Liu, S.; Zhou, Z.H.; Jacobsen, S.E.
Deposited on	:	2019-04-09
Resolution	:	3.50 Å(reported)

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 3.50 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		5
Ramachandran outliers		0
Sidechain outliers		1.1%

Worse   *Better*

▮ Percentile relative to all structures

▯ Percentile relative to all EM structures
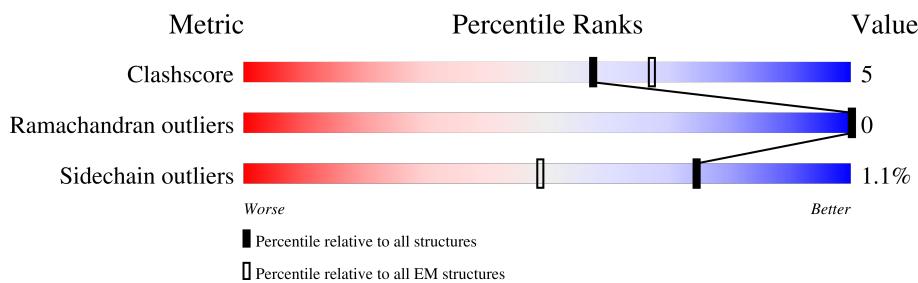
Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=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	A	175	7% / 64% / 6% / 30%
1	B	175	6% / 64% / 7% · / 29%
2	C	449	36% / 63% / 11% / 26%
2	D	449	26% / 45% / 6% / 49%
2	E	449	23% / 66% / 8% / 25%
2	F	449	24% / 65% / 11% / 24%
3	G	71	37% / 63% / 6% / 31%
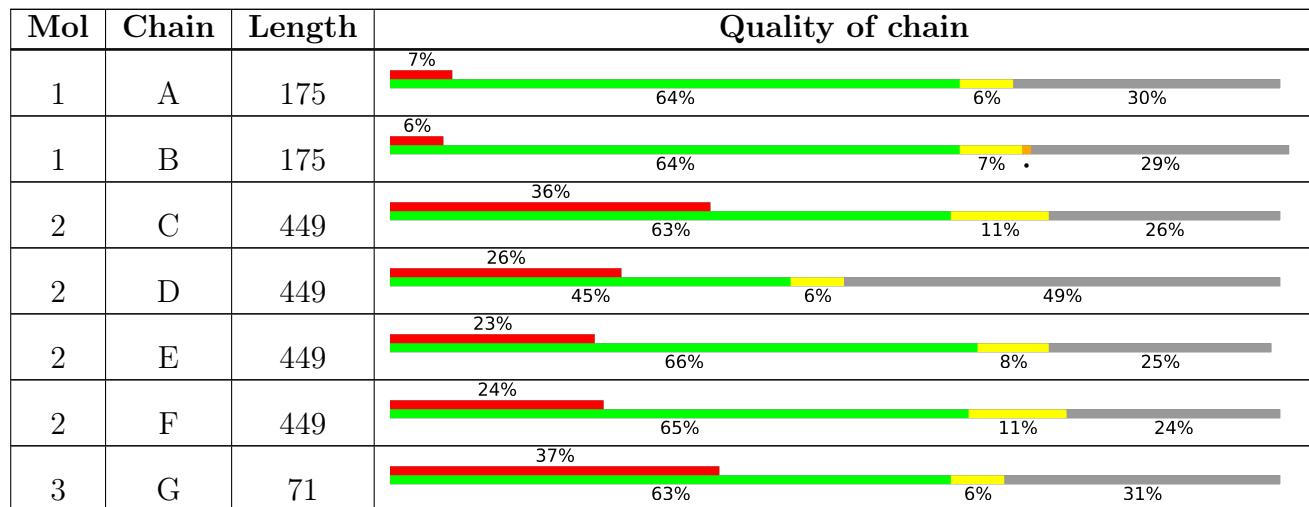
2   Entity composition ⓘ

There are 3 unique types of molecules in this entry. The entry contains 12085 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 Protein RDM1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	123	Total 1010	C 650	N 172	O 183	S 5	0	0
1	B	125	Total 1034	C 664	N 178	O 187	S 5	0	0

There are 28 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-11	MET	-	initiating methionine	UNP Q9LUJ3
A	-10	GLY	-	expression tag	UNP Q9LUJ3
A	-9	SER	-	expression tag	UNP Q9LUJ3
A	-8	SER	-	expression tag	UNP Q9LUJ3
A	-7	HIS	-	expression tag	UNP Q9LUJ3
A	-6	HIS	-	expression tag	UNP Q9LUJ3
A	-5	HIS	-	expression tag	UNP Q9LUJ3
A	-4	HIS	-	expression tag	UNP Q9LUJ3
A	-3	HIS	-	expression tag	UNP Q9LUJ3
A	-2	HIS	-	expression tag	UNP Q9LUJ3
A	-1	SER	-	expression tag	UNP Q9LUJ3
A	0	GLN	-	expression tag	UNP Q9LUJ3
A	1	ASP	-	expression tag	UNP Q9LUJ3
A	2	PRO	-	expression tag	UNP Q9LUJ3
B	-11	MET	-	initiating methionine	UNP Q9LUJ3
B	-10	GLY	-	expression tag	UNP Q9LUJ3
B	-9	SER	-	expression tag	UNP Q9LUJ3
B	-8	SER	-	expression tag	UNP Q9LUJ3
B	-7	HIS	-	expression tag	UNP Q9LUJ3
B	-6	HIS	-	expression tag	UNP Q9LUJ3
B	-5	HIS	-	expression tag	UNP Q9LUJ3
B	-4	HIS	-	expression tag	UNP Q9LUJ3
B	-3	HIS	-	expression tag	UNP Q9LUJ3
B	-2	HIS	-	expression tag	UNP Q9LUJ3
B	-1	SER	-	expression tag	UNP Q9LUJ3
B	0	GLN	-	expression tag	UNP Q9LUJ3

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Chain	Residue	Modelled	Actual	Comment	Reference
B	1	ASP	-	expression tag	UNP Q9LUJ3
B	2	PRO	-	expression tag	UNP Q9LUJ3

- Molecule 2 is a protein called Protein DEFECTIVE IN MERISTEM SILENCING 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	C	334	Total 2619	C 1646	N 461	O 496	S 16	0	0
2	D	227	Total 1722	C 1084	N 301	O 328	S 9	0	0
2	E	336	Total 2634	C 1660	N 461	O 497	S 16	0	0
2	F	342	Total 2678	C 1687	N 468	O 506	S 17	0	0

There are 120 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	-2	MET	-	initiating methionine	UNP Q94A79
C	-1	ALA	-	expression tag	UNP Q94A79
C	0	ASP	-	expression tag	UNP Q94A79
C	1	LEU	-	expression tag	UNP Q94A79
C	421	GLY	-	expression tag	UNP Q94A79
C	422	THR	-	expression tag	UNP Q94A79
C	423	LEU	-	expression tag	UNP Q94A79
C	424	GLU	-	expression tag	UNP Q94A79
C	425	SER	-	expression tag	UNP Q94A79
C	426	GLY	-	expression tag	UNP Q94A79
C	427	LYS	-	expression tag	UNP Q94A79
C	428	GLU	-	expression tag	UNP Q94A79
C	429	THR	-	expression tag	UNP Q94A79
C	430	ALA	-	expression tag	UNP Q94A79
C	431	ALA	-	expression tag	UNP Q94A79
C	432	ALA	-	expression tag	UNP Q94A79
C	433	LYS	-	expression tag	UNP Q94A79
C	434	PHE	-	expression tag	UNP Q94A79
C	435	GLU	-	expression tag	UNP Q94A79
C	436	ARG	-	expression tag	UNP Q94A79
C	437	GLN	-	expression tag	UNP Q94A79
C	438	HIS	-	expression tag	UNP Q94A79
C	439	MET	-	expression tag	UNP Q94A79
C	440	ASP	-	expression tag	UNP Q94A79

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Chain	Residue	Modelled	Actual	Comment	Reference
C	441	SER	-	expression tag	UNP Q94A79
C	442	SER	-	expression tag	UNP Q94A79
C	443	THR	-	expression tag	UNP Q94A79
C	444	SER	-	expression tag	UNP Q94A79
C	445	ALA	-	expression tag	UNP Q94A79
C	446	ALA	-	expression tag	UNP Q94A79
D	-2	MET	-	initiating methionine	UNP Q94A79
D	-1	ALA	-	expression tag	UNP Q94A79
D	0	ASP	-	expression tag	UNP Q94A79
D	1	LEU	-	expression tag	UNP Q94A79
D	421	GLY	-	expression tag	UNP Q94A79
D	422	THR	-	expression tag	UNP Q94A79
D	423	LEU	-	expression tag	UNP Q94A79
D	424	GLU	-	expression tag	UNP Q94A79
D	425	SER	-	expression tag	UNP Q94A79
D	426	GLY	-	expression tag	UNP Q94A79
D	427	LYS	-	expression tag	UNP Q94A79
D	428	GLU	-	expression tag	UNP Q94A79
D	429	THR	-	expression tag	UNP Q94A79
D	430	ALA	-	expression tag	UNP Q94A79
D	431	ALA	-	expression tag	UNP Q94A79
D	432	ALA	-	expression tag	UNP Q94A79
D	433	LYS	-	expression tag	UNP Q94A79
D	434	PHE	-	expression tag	UNP Q94A79
D	435	GLU	-	expression tag	UNP Q94A79
D	436	ARG	-	expression tag	UNP Q94A79
D	437	GLN	-	expression tag	UNP Q94A79
D	438	HIS	-	expression tag	UNP Q94A79
D	439	MET	-	expression tag	UNP Q94A79
D	440	ASP	-	expression tag	UNP Q94A79
D	441	SER	-	expression tag	UNP Q94A79
D	442	SER	-	expression tag	UNP Q94A79
D	443	THR	-	expression tag	UNP Q94A79
D	444	SER	-	expression tag	UNP Q94A79
D	445	ALA	-	expression tag	UNP Q94A79
D	446	ALA	-	expression tag	UNP Q94A79
E	-2	MET	-	initiating methionine	UNP Q94A79
E	-1	ALA	-	expression tag	UNP Q94A79
E	0	ASP	-	expression tag	UNP Q94A79
E	1	LEU	-	expression tag	UNP Q94A79
E	421	GLY	-	expression tag	UNP Q94A79
E	422	THR	-	expression tag	UNP Q94A79

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Chain	Residue	Modelled	Actual	Comment	Reference
E	423	LEU	-	expression tag	UNP Q94A79
E	424	GLU	-	expression tag	UNP Q94A79
E	425	SER	-	expression tag	UNP Q94A79
E	426	GLY	-	expression tag	UNP Q94A79
E	427	LYS	-	expression tag	UNP Q94A79
E	428	GLU	-	expression tag	UNP Q94A79
E	429	THR	-	expression tag	UNP Q94A79
E	430	ALA	-	expression tag	UNP Q94A79
E	431	ALA	-	expression tag	UNP Q94A79
E	432	ALA	-	expression tag	UNP Q94A79
E	433	LYS	-	expression tag	UNP Q94A79
E	434	PHE	-	expression tag	UNP Q94A79
E	435	GLU	-	expression tag	UNP Q94A79
E	436	ARG	-	expression tag	UNP Q94A79
E	437	GLN	-	expression tag	UNP Q94A79
E	438	HIS	-	expression tag	UNP Q94A79
E	439	MET	-	expression tag	UNP Q94A79
E	440	ASP	-	expression tag	UNP Q94A79
E	441	SER	-	expression tag	UNP Q94A79
E	442	SER	-	expression tag	UNP Q94A79
E	443	THR	-	expression tag	UNP Q94A79
E	444	SER	-	expression tag	UNP Q94A79
E	445	ALA	-	expression tag	UNP Q94A79
E	446	ALA	-	expression tag	UNP Q94A79
F	-2	MET	-	initiating methionine	UNP Q94A79
F	-1	ALA	-	expression tag	UNP Q94A79
F	0	ASP	-	expression tag	UNP Q94A79
F	1	LEU	-	expression tag	UNP Q94A79
F	421	GLY	-	expression tag	UNP Q94A79
F	422	THR	-	expression tag	UNP Q94A79
F	423	LEU	-	expression tag	UNP Q94A79
F	424	GLU	-	expression tag	UNP Q94A79
F	425	SER	-	expression tag	UNP Q94A79
F	426	GLY	-	expression tag	UNP Q94A79
F	427	LYS	-	expression tag	UNP Q94A79
F	428	GLU	-	expression tag	UNP Q94A79
F	429	THR	-	expression tag	UNP Q94A79
F	430	ALA	-	expression tag	UNP Q94A79
F	431	ALA	-	expression tag	UNP Q94A79
F	432	ALA	-	expression tag	UNP Q94A79
F	433	LYS	-	expression tag	UNP Q94A79
F	434	PHE	-	expression tag	UNP Q94A79

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Chain	Residue	Modelled	Actual	Comment	Reference
F	435	GLU	-	expression tag	UNP Q94A79
F	436	ARG	-	expression tag	UNP Q94A79
F	437	GLN	-	expression tag	UNP Q94A79
F	438	HIS	-	expression tag	UNP Q94A79
F	439	MET	-	expression tag	UNP Q94A79
F	440	ASP	-	expression tag	UNP Q94A79
F	441	SER	-	expression tag	UNP Q94A79
F	442	SER	-	expression tag	UNP Q94A79
F	443	THR	-	expression tag	UNP Q94A79
F	444	SER	-	expression tag	UNP Q94A79
F	445	ALA	-	expression tag	UNP Q94A79
F	446	ALA	-	expression tag	UNP Q94A79

- Molecule 3 is a protein called Protein CHROMATIN REMODELING 35.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O	S		
3	G	49	388	252	60	73	3	0	0

There are 16 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	42	GLY	-	expression tag	UNP Q9SIW2
G	43	GLU	-	expression tag	UNP Q9SIW2
G	44	PHE	-	expression tag	UNP Q9SIW2
G	100	GLY	-	expression tag	UNP Q9SIW2
G	101	GLY	-	expression tag	UNP Q9SIW2
G	102	GLY	-	expression tag	UNP Q9SIW2
G	103	GLY	-	expression tag	UNP Q9SIW2
G	104	SER	-	expression tag	UNP Q9SIW2
G	105	ASP	-	expression tag	UNP Q9SIW2
G	106	TYR	-	expression tag	UNP Q9SIW2
G	107	LYS	-	expression tag	UNP Q9SIW2
G	108	ASP	-	expression tag	UNP Q9SIW2
G	109	ASP	-	expression tag	UNP Q9SIW2
G	110	ASP	-	expression tag	UNP Q9SIW2
G	111	ASP	-	expression tag	UNP Q9SIW2
G	112	LYS	-	expression tag	UNP Q9SIW2

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: Protein RDM1

Chain A:

- Molecule 1: Protein RDM1

Chain B:

- Molecule 2: Protein DEFECTIVE IN MERISTEM SILENCING 3

Chain C:

D205 I206 N207 A208 G209 L210 H211 C212 L213 G214 S215 S216 I217 G218 R219 E220 I221 G222 D223 S224 F225 D226 E231 Q239 H240 I241 A242 D243 D244 L245 Q246 R247 R248 L249 D250 L251 K255 L256 P257 N258 G259 E260 C261 P262 P263 A269 V270 N271 D276 P277 A278 Y279 L280 L281 C282

G287 R291 E292 F299 S300 R301 L302 R308 A309 D310 M311 I312 S319 D320 G321 A322 D326 G327 G328 I329 I330 R331 K332 T333 G334 L338 G339 N340 R341 D342 E343 V344 N345 V346 R347 F348 A349 K350 P351 T352 A353 S354 R355 T356 M357 D358 N359 Y360 S361 E362 A363 E364 K365

K366 M367 K371 L378 E379 D380 I381 K382 R383 E384 R388 V392 F395 K398 K399 E400 E401 F402 V403 R404 C405 L406 A407 Q408 S409 SER CYS THR ASN GLN PRO MET ASN THR PRO ARG GLY THR LEU GLU SER GLY LYS GLU THR ALA ALA LYS PHE GLU ARG GLN HIS

MET ASP SER SER SER ALA ALA

• Molecule 2: Protein DEFECTIVE IN MERISTEM SILENCING 3

Chain D:

26%
45% 6% 49%

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

SER ASP LEU GLU ALA MET GLY ASN LYS ILE LYS GLN HIS GLU ASP ASN LEU LYS PHE LEU LYS SER GLN LYS ASN LYS MET ASP GLU ALA ILE VAL ASP LEU GLN VAL HIS MET SER LEU ASN SER SER PRO THR PRO ARG GLU ASN ASP SER LEU GLN GLY GLU D117

I118 N119 A120 Q121 I122 L123 R124 H125 E126 N127 S128 A129 A130 G131 V132 L133 S134 L135 V136 E137 T138 L139 HIS GLY ALA GLN ALA SER GLN LEU MET L149 T150 K151 G152 V153 V154 G155 K159 L160 G161 K162 D165 E166 N167 L168 S169 Q170 Y175 R179 S180 M181 L182 A183 V184 V185

C186 R187 N188 Y189 E190 S191 V192 T193 A194 L195 E196 A197 Y198 D199 N200 H201 G202 N203 I204 D205 I206 N207 A208 G209 L210 H211 C212 L213 G214 S215 S216 I217 G218 R219 E220 I221 G222 D223 S224 F225 D226 A227 I228 C229 L230 E231 N232 L233 R234 P235 Q239 H240 I241 A242 D243 D244 L245 Q246 R247

R248 L249 D250 E260 I273 Q274 I275 D276 P277 A278 Y279 L280 T284 S285 Y286 G287 R291 N297 L302 K306 T307 R308 S319 D320 S324 L325 D326 R331 N337 L338 G339 N340 R341 D342 E343 V344 N345 V346 R347 F348 A349 K350 P351 T352 ALA SER ARG THR MET

ASP ASN TYR SER GLU ALA GLU LYS LYS MET LYS GLU LEU LYS GLU THR LEU ALA ALA LYS PHE GLU GLN ARG GLN HIS MET ASP SER SER SER THR SER ALA ALA

THR PRO ARG GLY THR LEU GLU LEU GLU SER GLY LYS LYS GLU THR ALA ALA ALA LYS PHE GLU GLN ARG GLN HIS MET ASP SER SER SER THR SER ALA ALA

• Molecule 2: Protein DEFECTIVE IN MERISTEM SILENCING 3

Chain E:

23%
66% 8% 25%

MET ALA ASP LEU TYR PRO THR GLY GLN GLN ILE SER PHE GLN THR THR PRO LEU ASN VAL GLN ASP PRO THR ARG MET MET ASN LEU ASP SER GLN SER PRO VAL ALA ARG ASN GLU THR GLN ASN GLY GLY ILE ALA HIS A46 E47 F48 A49 M50 F51 N52 S53 K54 R55 L56 E57

S58 D59 L60 E61 A62 M63 G64 N65 K66 I67 K68 Q69 D72 K75 K78 N82 K83 M84 D85 E86 A87 I88 V89 D90 L91 Q92 V93 H94 M95 S96 K97 L98 ASN SER SER PRO THR PRO ARG GLU ASN ASP ASN SER LEU GLN GLY E116 D117 I118 H125 E126 N127

• Molecule 2: Protein DEFECTIVE IN MERISTEM SILENCING 3

Chain F:

• Molecule 3: Protein CHROMATIN REMODELING 35

Chain G:

4 Experimental information ⓘ

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	620248	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 $(e^-/\text{Å}^2)$	47.2	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.319	Depositor
Minimum map value	-0.200	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.007	Depositor
Recommended contour level	0.055	Depositor
Map size (Å)	256.80002, 256.80002, 256.80002	wwPDB
Map dimensions	240, 240, 240	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.07, 1.07, 1.07	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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	0.35	0/1041	0.61	0/1418
1	B	0.35	0/1065	0.60	0/1448
2	C	0.33	0/2654	0.55	0/3567
2	D	0.30	0/1747	0.61	0/2367
2	E	0.34	0/2671	0.57	0/3590
2	F	0.33	0/2715	0.57	0/3649
3	G	0.28	0/395	0.55	0/531
All	All	0.33	0/12288	0.58	0/16570

There are no bond length outliers.

There are no bond angle outliers.

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	1010	0	984	7	0
1	B	1034	0	1014	8	0
2	C	2619	0	2654	37	0
2	D	1722	0	1724	22	0
2	E	2634	0	2657	22	0
2	F	2678	0	2701	30	0
3	G	388	0	386	3	0
All	All	12085	0	12120	121	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 5.

The worst 5 of 121 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)
2:D:175:TYR:CZ	2:D:302:LEU:CD1	2.51	0.94
2:C:269:ALA:CB	2:C:302:LEU:HD11	2.03	0.88
2:C:239:GLN:O	2:C:250:ASP:HB2	1.75	0.86
2:C:239:GLN:O	2:C:250:ASP:CB	2.25	0.85
2:C:299:PHE:HB2	2:C:302:LEU:HD23	1.60	0.81

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	121/175 (69%)	115 (95%)	6 (5%)	0	100	100
1	B	123/175 (70%)	117 (95%)	6 (5%)	0	100	100
2	C	328/449 (73%)	322 (98%)	6 (2%)	0	100	100
2	D	223/449 (50%)	211 (95%)	12 (5%)	0	100	100
2	E	330/449 (74%)	318 (96%)	12 (4%)	0	100	100
2	F	334/449 (74%)	320 (96%)	14 (4%)	0	100	100
3	G	47/71 (66%)	45 (96%)	2 (4%)	0	100	100
All	All	1506/2217 (68%)	1448 (96%)	58 (4%)	0	100	100

There are no Ramachandran outliers to report.

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	112/160 (70%)	112 (100%)	0	100	100
1	B	115/160 (72%)	114 (99%)	1 (1%)	78	90
2	C	288/384 (75%)	285 (99%)	3 (1%)	76	88
2	D	187/384 (49%)	185 (99%)	2 (1%)	73	88
2	E	287/384 (75%)	282 (98%)	5 (2%)	60	82
2	F	293/384 (76%)	290 (99%)	3 (1%)	76	88
3	G	42/59 (71%)	42 (100%)	0	100	100
All	All	1324/1915 (69%)	1310 (99%)	14 (1%)	74	88

5 of 14 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	E	164	ASN
2	E	237	VAL
2	F	388	ARG
2	F	69	GLN
2	F	82	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 22 such sidechains are listed below:

Mol	Chain	Res	Type
2	E	297	ASN
2	F	52	ASN
2	E	337	ASN
2	F	167	ASN
2	C	359	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

5.6 Ligand geometry ⓘ

There are no ligands in this entry.

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-20081. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

6.1   Orthogonal projections ⓘ

6.1.1   Primary map

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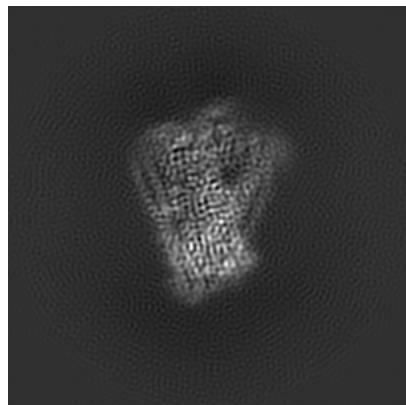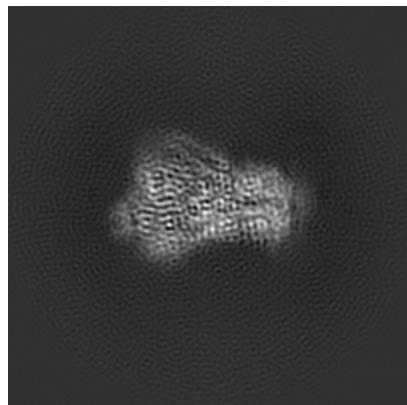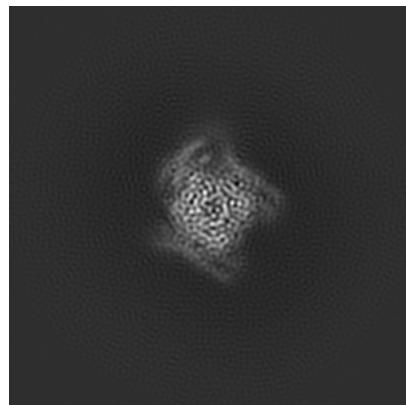
The images above show the map projected in three orthogonal directions.

6.2   Central slices ⓘ
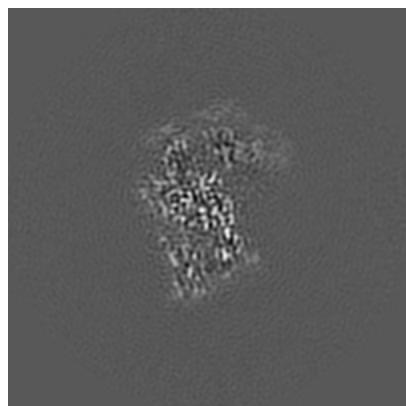
6.2.1   Primary map
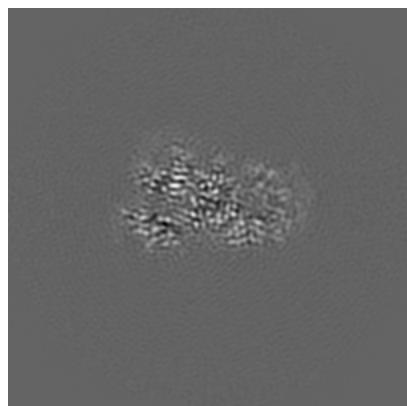
| X Index: 120 | Y Index: 120 | Z Index: 120 |
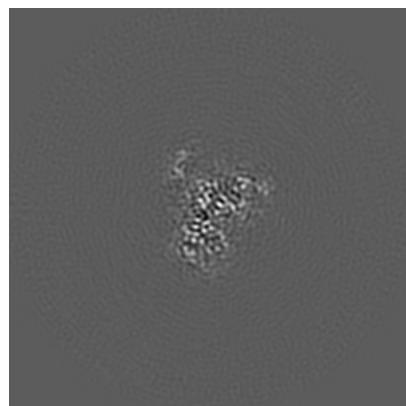
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices ⓘ
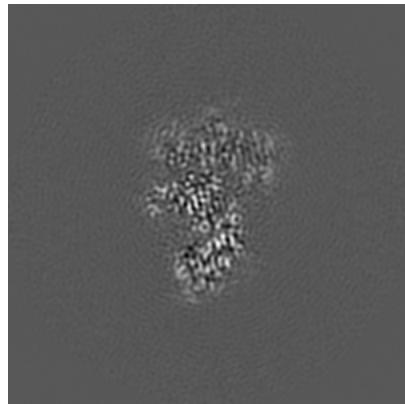
6.3.1 Primary map
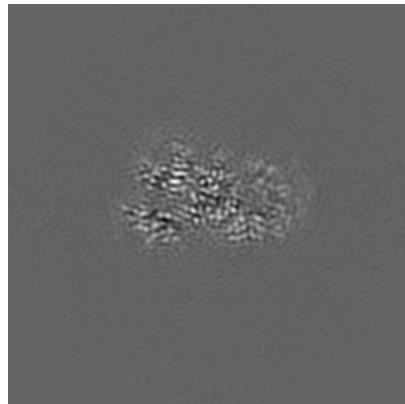
| X Index: 113 | Y Index: 120 | Z Index: 94 |
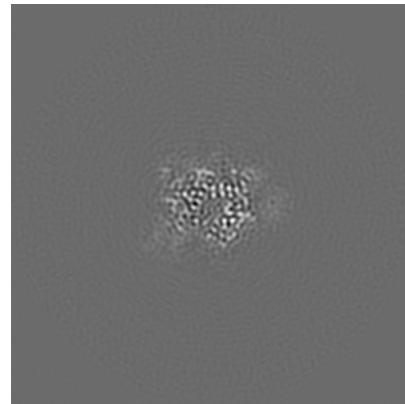
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1 Primary map

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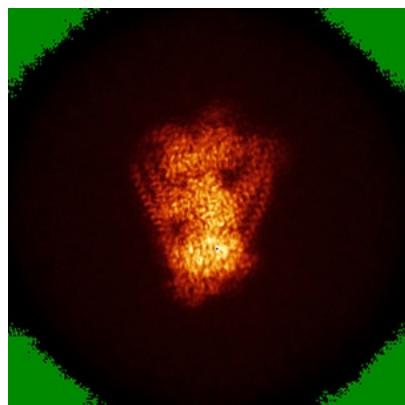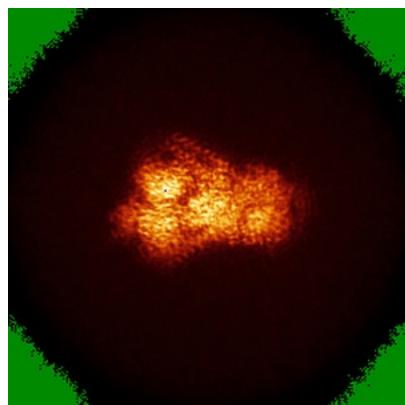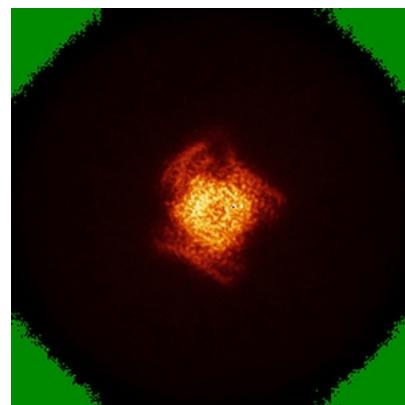
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

6.5.1 Primary map

X   Y   Z
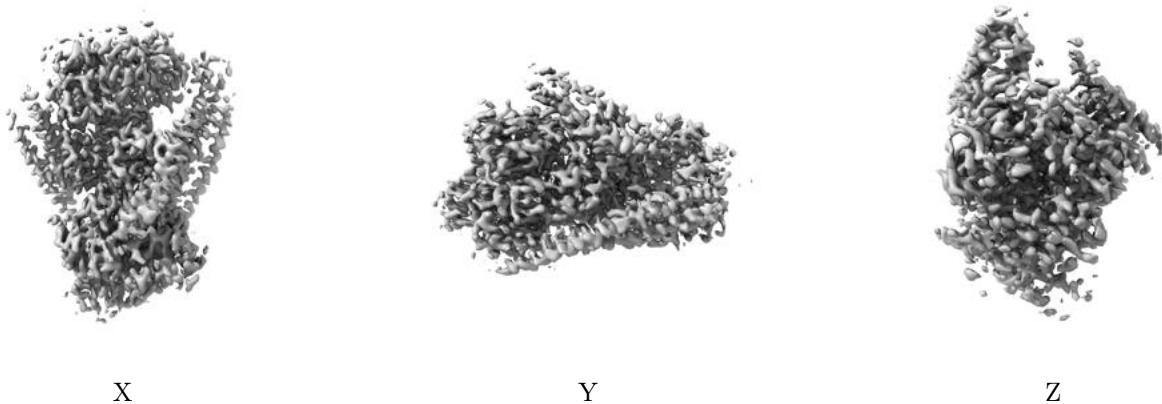
The images above show the 3D surface view of the map at the recommended contour level 0.055. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.6 Mask visualisation (i)

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

7   Map analysis (i)

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

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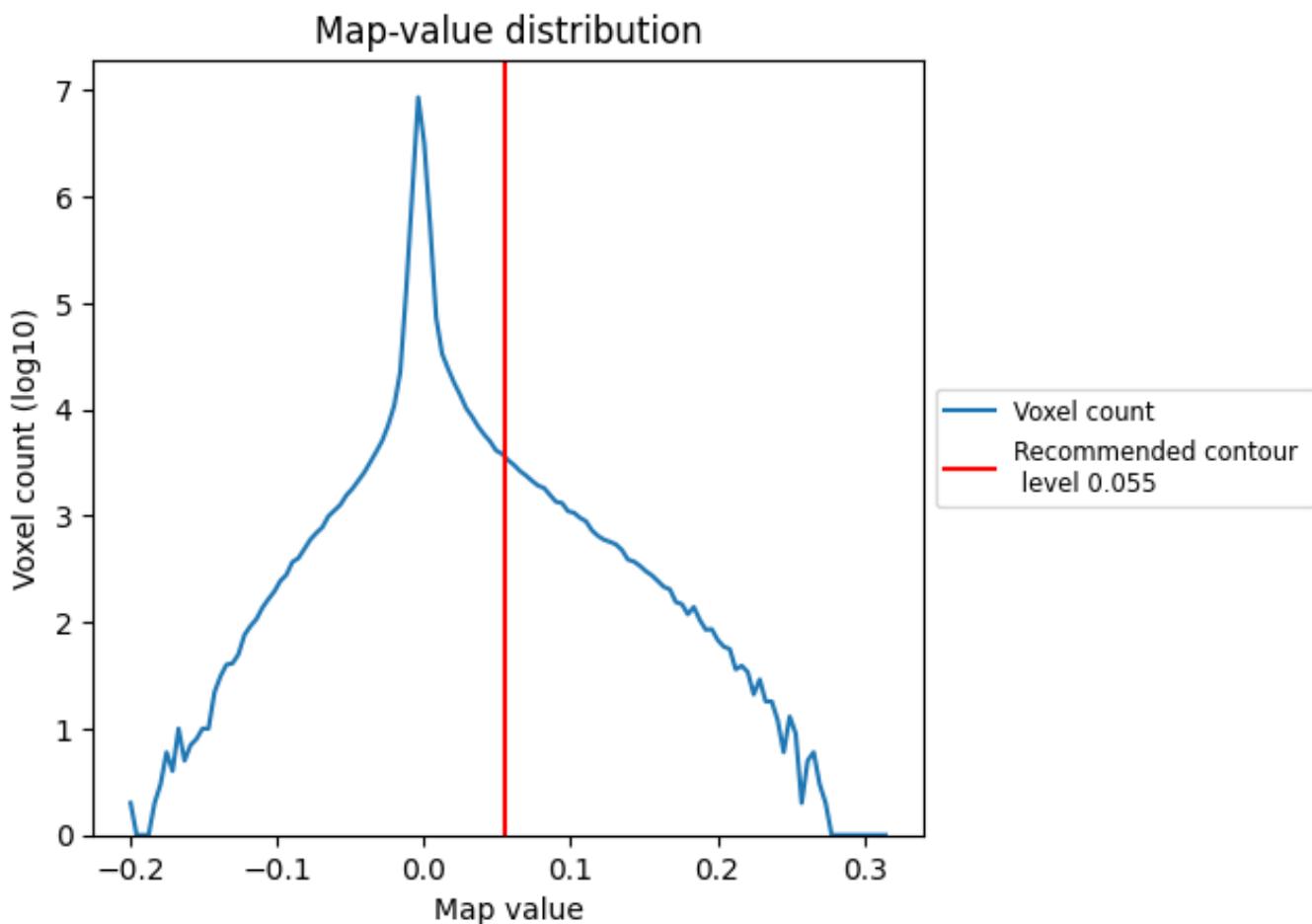
The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

7.2 Volume estimate ⓘ
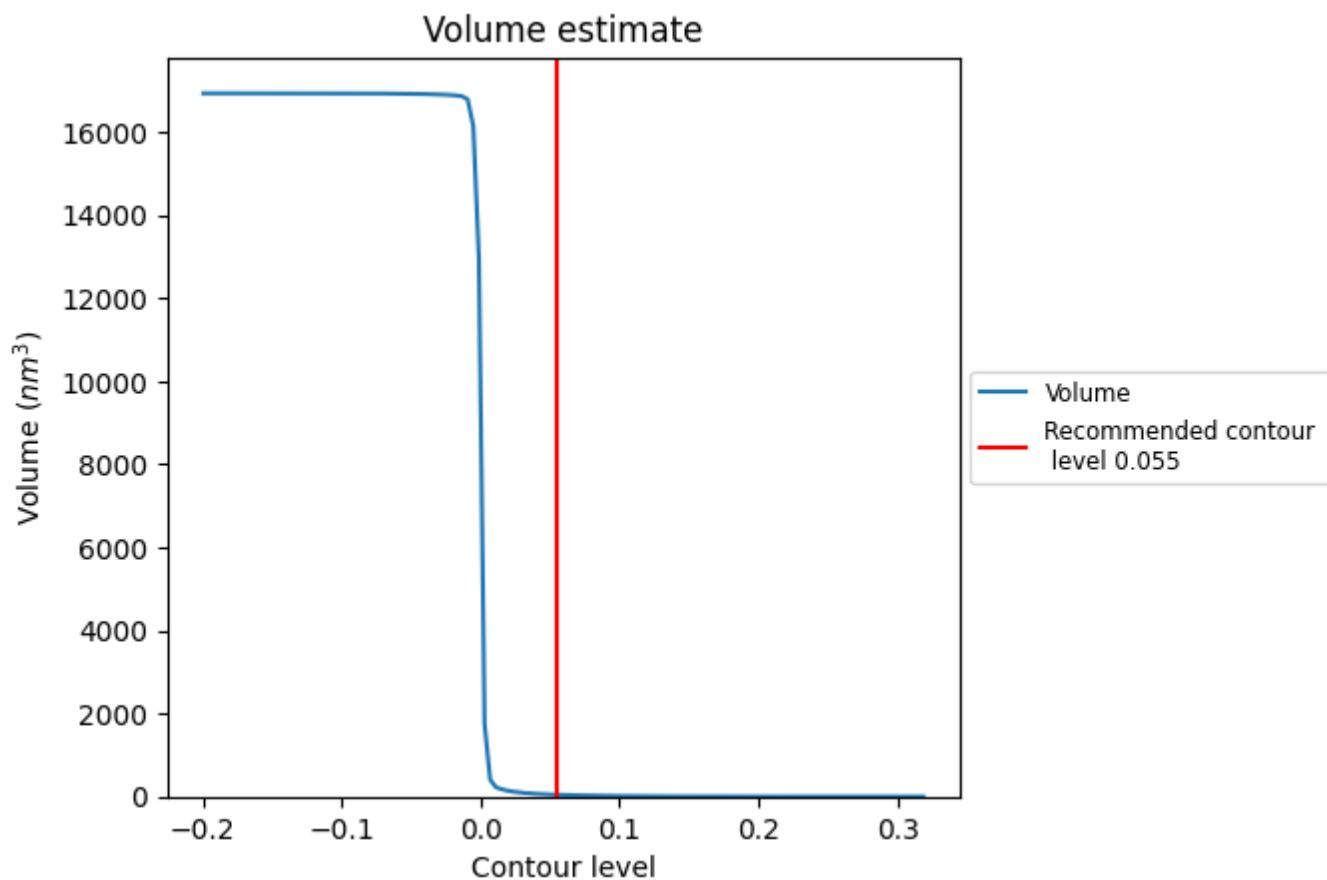
The volume at the recommended contour level is 43 nm^3; this corresponds to an approximate mass of 39 kDa.

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

7.3   Rotationally averaged power spectrum (i)
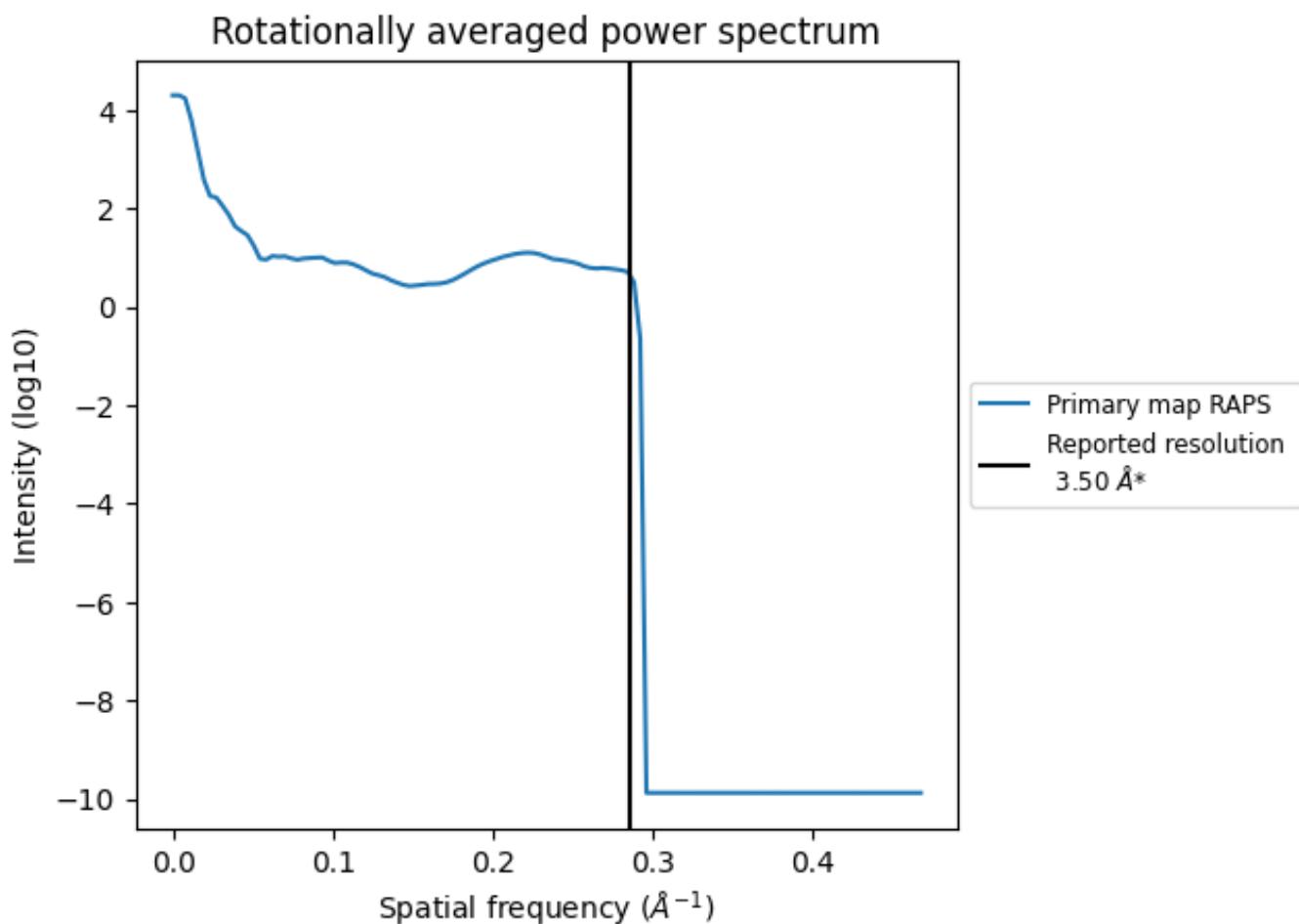
*Reported resolution corresponds to spatial frequency of 0.286 Å^{-1}

8 Fourier-Shell correlation (i)

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

9   Map-model fit (i)

This section contains information regarding the fit between EMDB map EMD-20081 and PDB model 6OIT. Per-residue inclusion information can be found in section 3 on page 8.

9.1   Map-model overlay (i)

| X | Y | Z |
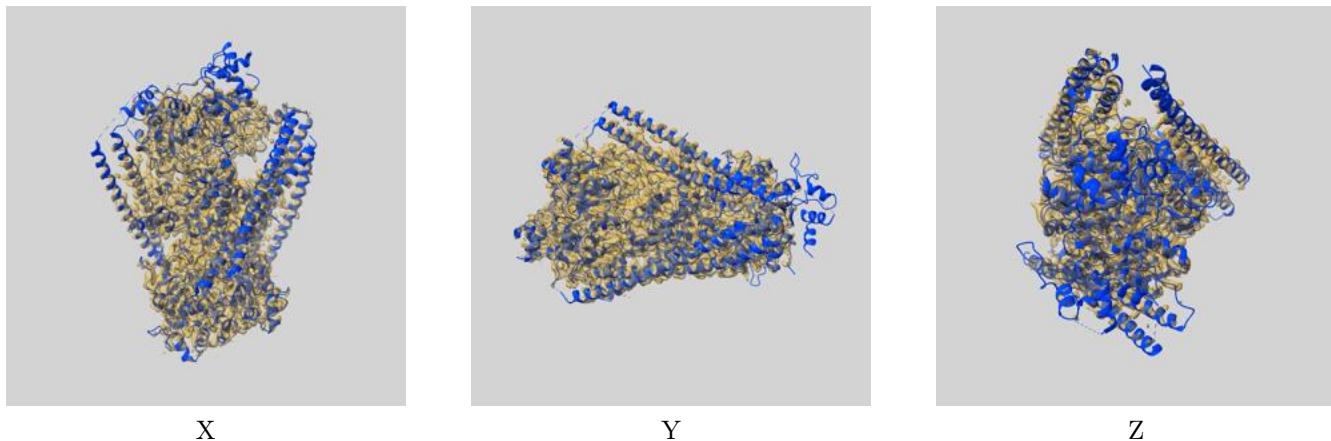
The images above show the 3D surface view of the map at the recommended contour level 0.055 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2   Q-score mapped to coordinate model ⓘ
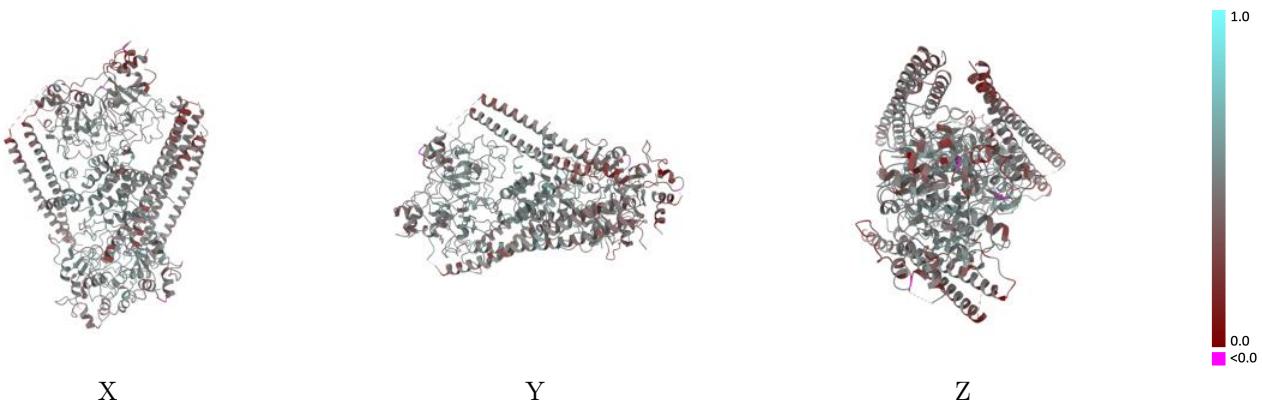
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 ⓘ
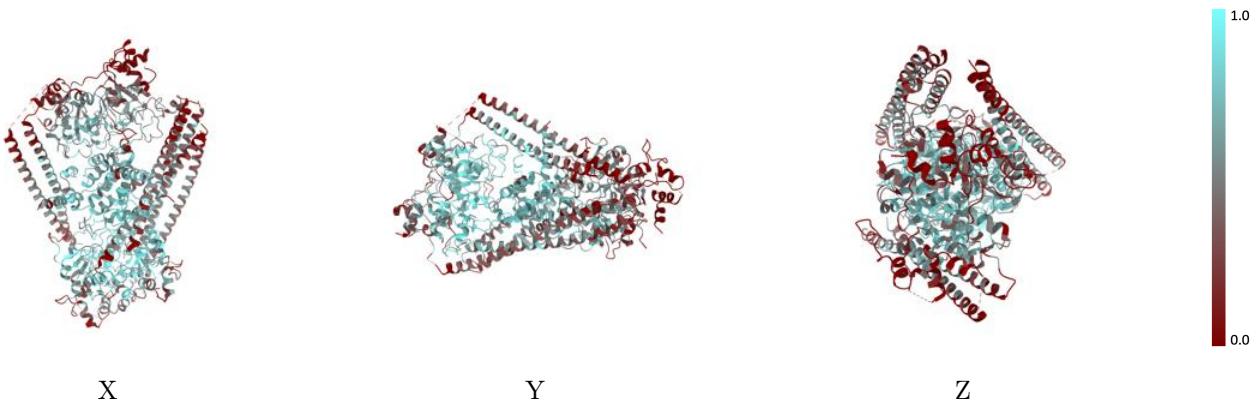
The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.055).

9.4   Atom inclusion ⓘ
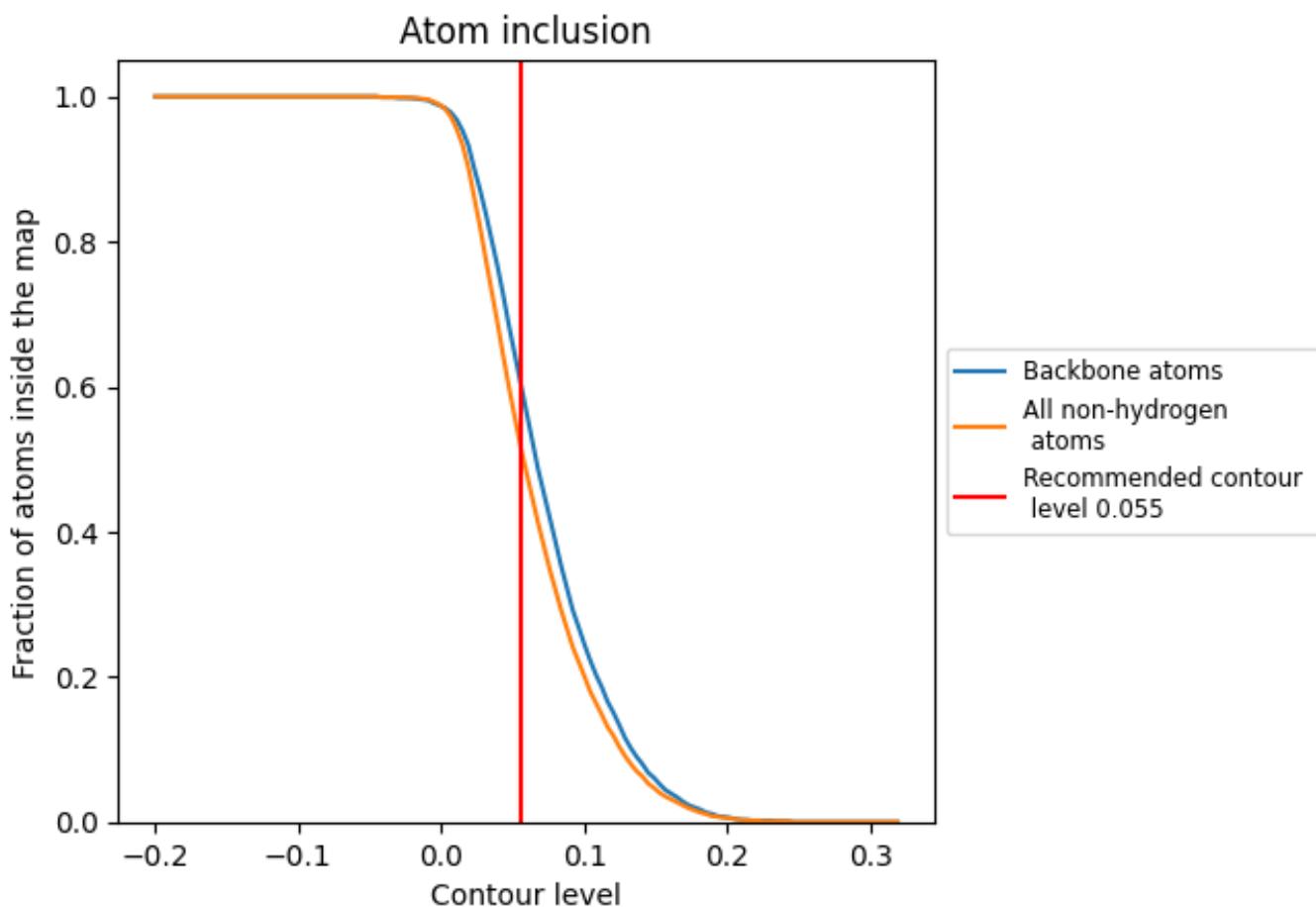
At the recommended contour level, 61% of all backbone atoms, 52% of all non-hydrogen atoms, are inside the map.

9.5   Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.055) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5210	0.4660
A	0.6990	0.5150
B	0.7400	0.5240
C	0.4010	0.4400
D	0.3940	0.4370
E	0.5640	0.4670
F	0.5520	0.4740
G	0.3570	0.4430

1.0

0.0
<0.0