



wwPDB EM Validation Summary Report ⓘ

Nov 19, 2022 – 03:47 pm GMT

PDB ID : 5NP0
EMDB ID : EMD-3669
Title : Closed dimer of human ATM (Ataxia telangiectasia mutated)
Authors : Baretic, D.; Pollard, H.K.; Fisher, D.I.; Johnson, C.M.; Santhanam, B.; Truman, C.M.; Kouba, T.; Fersht, A.R.; Phillips, C.; Williams, R.L.
Deposited on : 2017-04-13
Resolution : 5.70 Å (reported)
Based on initial model : 4JSP

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

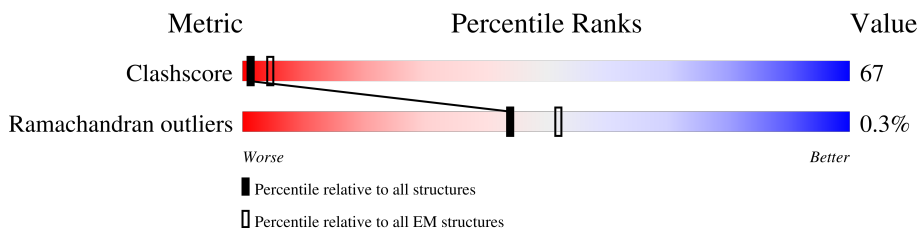
EMDB validation analysis : 0.0.1.dev43
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.2

1 Overall quality at a glance

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


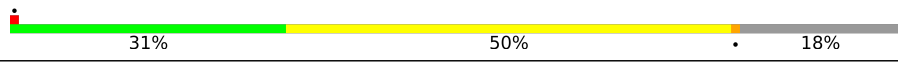
The reported resolution of this entry is 5.70 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	3066	 31% 50% 18%
1	B	3066	 31% 50% 18%

2 Entry composition [i](#)

There is only 1 type of molecule in this entry. The entry contains 25074 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 Serine-protein kinase ATM.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
1	A	2528	Total	C	N	O	0	0
			12537	7481	2528	2528		
1	B	2528	Total	C	N	O	0	0
			12537	7481	2528	2528		

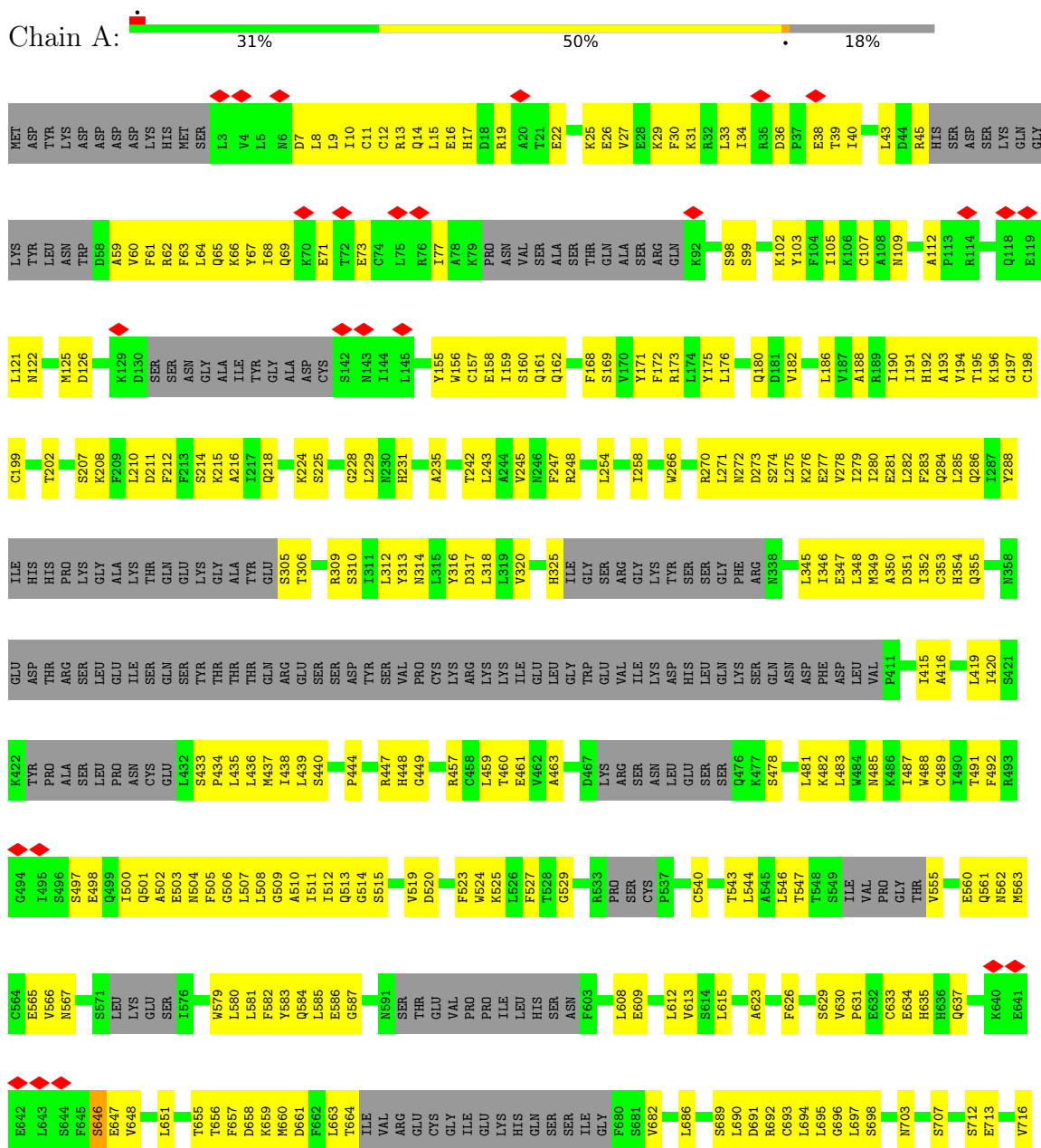
There are 20 discrepancies between the modelled and reference sequences:

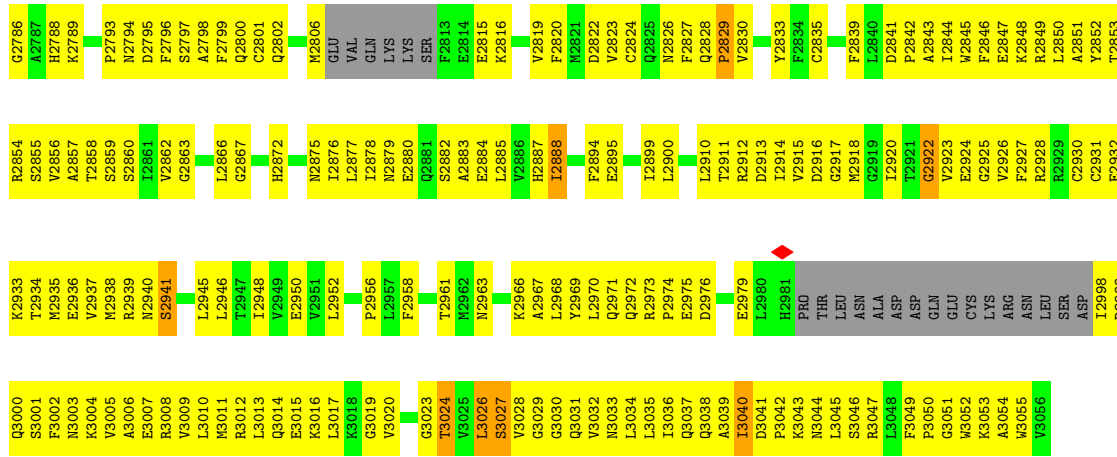
Chain	Residue	Modelled	Actual	Comment	Reference
A	-9	MET	-	initiating methionine	UNP Q13315
A	-8	ASP	-	expression tag	UNP Q13315
A	-7	TYR	-	expression tag	UNP Q13315
A	-6	LYS	-	expression tag	UNP Q13315
A	-5	ASP	-	expression tag	UNP Q13315
A	-4	ASP	-	expression tag	UNP Q13315
A	-3	ASP	-	expression tag	UNP Q13315
A	-2	ASP	-	expression tag	UNP Q13315
A	-1	LYS	-	expression tag	UNP Q13315
A	0	HIS	-	expression tag	UNP Q13315
B	-9	MET	-	initiating methionine	UNP Q13315
B	-8	ASP	-	expression tag	UNP Q13315
B	-7	TYR	-	expression tag	UNP Q13315
B	-6	LYS	-	expression tag	UNP Q13315
B	-5	ASP	-	expression tag	UNP Q13315
B	-4	ASP	-	expression tag	UNP Q13315
B	-3	ASP	-	expression tag	UNP Q13315
B	-2	ASP	-	expression tag	UNP Q13315
B	-1	LYS	-	expression tag	UNP Q13315
B	0	HIS	-	expression tag	UNP Q13315

3 Residue-property plots

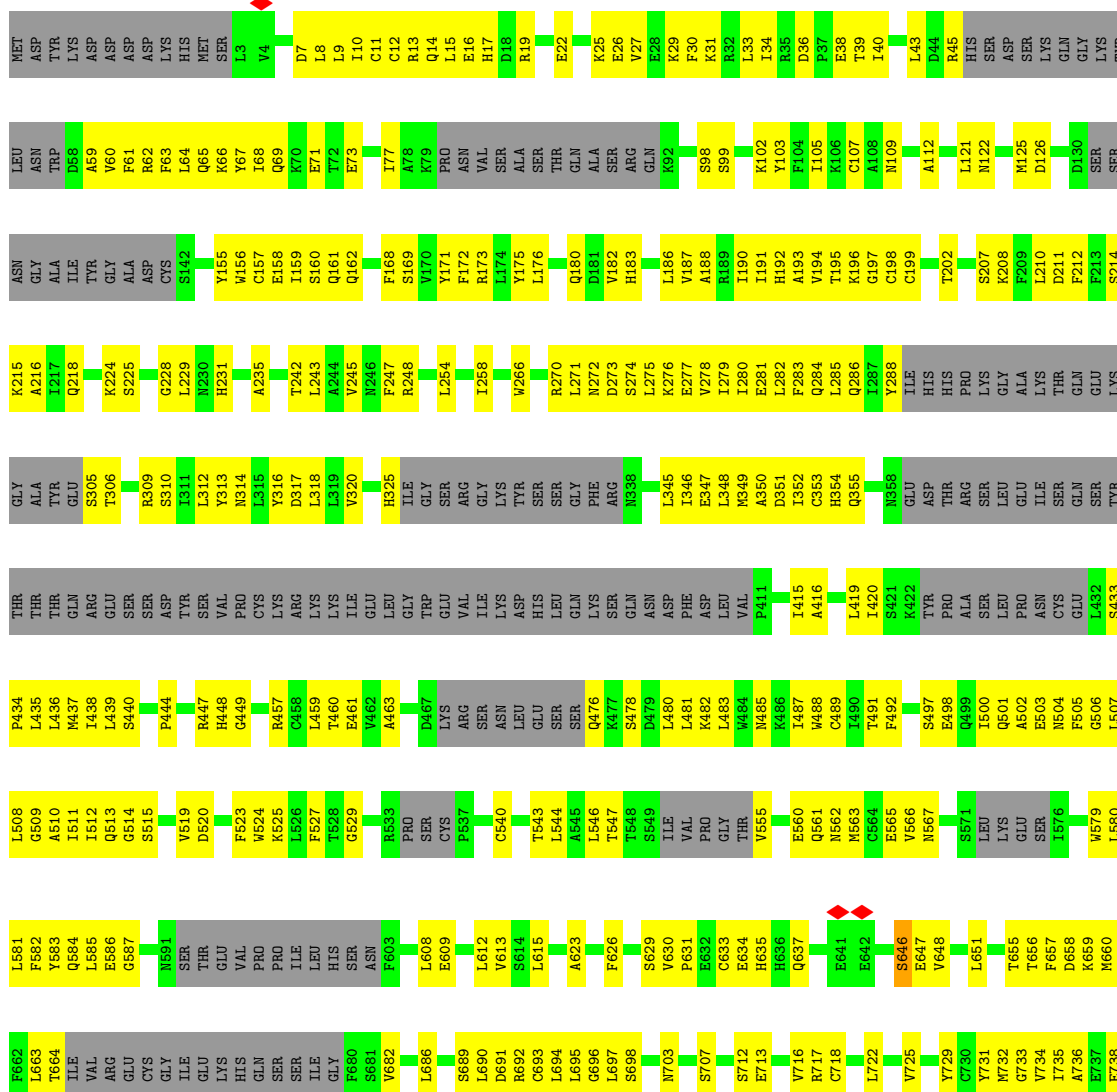
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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





● Molecule 1: Serine-protein kinase ATM



T1735	M1657	K1582	P1374	L1312	F1286	L1173	LYS	L1173	LEU	SER	PRO	F739
C1736	I1658	Y1583	A1375	E1313	I1237	F1174	GLY	F1174	LEU	LEU	GLY	A740
K1737	L1659	S1584	P1376	T1314	T1314	A1175	ASP	A1175	THR	THR	GLU	Q747
M1738	I1660	H1443	ASN	T1315	M1240	L1176	S1104	S1104	SER	SER	S875	K748
N1739	I1661	H1444	P1377	T1316	T1242	C1177	R1106	R1106	LYS	LYS	T878	A749
I1740	H1662	F1445	P1378	K1317	T1243	G1177	L1107	L1107	LEU	MET	Y947	K750
L1741	T1663	V1446	H1380	VAL	N1243	SER	L1108	L1108	ASN	ASN	A881	S751
A1742	G1663	S1447	F1381	TYR	I1244	GLY	L1109	L1109	ASP	ASP	I882	L752
T1743	E1664	K1451	P1382	ASP	F1247	C1178	L1110	L1110	LEU	LEU	Y950	Q754
K1744	E1665	D1452	S1383	MET	F1248	G1179	A1111	A1111	LEU	LEU	L951	M755
L1745	I1666	D1453	H1384	LEU	V1249	GLY	L1112	L1112	ALA	ALA	K952	M756
G1746	V1667	L1454	V1385	LYS	S1249	GLY	P1113	P1113	ASP	ASP	E953	C755
F1749	E1668	S1455	K1387	GLY	S1250	LEU	L1114	L1114	LYS	LYS	Y859	S759
M1750	G1676	G1456	A1388	ASN	K1253	PRO	K1114	K1114	LEU	LEU	L890	
E1751	E1677	L1457	V1254	LEU	V1254	HIS	L1115	L1115	LEU	LEU	SER	
I1752	V1678	G1458	T1389	LEU	L1255	HIS	Q1116	Q1116	LEU	LEU	GLN	I760
Y1753	V1679	G1459	PHE	GLY	L1256	LEU	T1118	T1118	LEU	LEU	L1049	T761
K1754	G1679	A1460	A1391	LYS	P1257	V1190	A1119	A1119	ASP	ASP	L1050	A823
M1755	F1680	W1461	Y1382	GLN	H1258	K1192	F1120	F1120	LEU	LEU	LEU	
M1756	I1681	A1462	I1383	ILE	L1259	V1193	E1121	E1121	PHE	PHE	LEU	K827
T1757	D1682	F1463	S1394	ASP	L1260	E1194	M1122	M1122	LEU	LEU	PHE	K828
D1758	F1683	V1464	I1281	HIS	V1260	E1195	A1123	A1123	ASP	ASP	LEU	P829
L1764	I1686	L1465	M1395	LEU	R1262	K1196	Y1124	Y1124	MET	MET	GLU	F830
Q1765	A1687	R1466	H1397	PHE	S1263	V1197	L1125	L1125	LEU	LEU	LEU	D831
R1768	I1688	V1467	K1398	ILE	H1264	S1198	K1126	K1126	LYS	LYS	LEU	R832
T1769	Y1696	V1468	T1399	SER	F1265	F1201	A1127	A1127	PHE	PHE	LEU	G833
S1770	L1702	Y1470	K1400	ASN	D1266	F1202	E1133	E1133	ASP	ASP	LEU	E834
ARG	F1703	L1471	LEU	LEU	E1267	TYR	E1136	E1136	GLN	GLN	LEU	S837
LYS	F1704	L1472	LYS	LEU	V1268	ARG	H1137	H1137	ASP	ASP	LEU	M838
PHE	D1705	M1473	ILE	ARG	S1270	ARG	A1138	A1138	VAL	VAL	VAL	N843
LEU	I1706	M1474	LEU	LEU	S1271	LEU	S1137	S1137	ARG	ARG	VAL	G844
GLU	E1707	R1475	GLU	ALA	I1271	LEU	A1139	A1139	THR	THR	THR	G844
VAL	L1708	R1476	ILE	E1346	ALA	ASP	M1140	M1140	ALA	ALA	ALA	N845
PRO	F1712	P1480	SER	L1347	GLN	PHE	P1141	P1141	ASN	ASN	GLN	M847
ARG	I1713	S1482	K1410	L1351	I1E	M1210	E1142	E1142	THR	THR	THR	E848
PHE	M1714	C1483	S1411	H1352	Q1276	A1211	T1143	T1143	ASN	ASN	ASN	V849
ASP	L1715	I1483	P1412	E1353	V1279	S1212	L1144	L1144	THR	THR	THR	E850
GLY	T1716	M1484	D1413	P1354	K1280	H1213	D1145	D1145	VAL	VAL	VAL	D851
ASN	Y1717	D1485	S1414	A1355	S1281	D1214	R1150	R1150	SER	SER	SER	Q852
PRO	L1718	V1486	Y1415	M1356	L1282	D1215	K1151	K1151	PHE	PHE	PHE	S853
PHE	M1719	L1488	Q1416	S1357	L1283	Y1216	L1154	L1154	ARG	ARG	ARG	S854
GLU	N1720	R1489	K1417	S1358	T1284	V1216	L1155	L1155	ASN	ASN	ASN	M855
LEU	D1721	S1490	I1418	A1359	C1286	L1222	L1156	L1156	THR	THR	THR	M856
ASP	L1722	F1491	L1419	GLN	C1286	ASN	M1086	M1086	THR	THR	THR	D857
ASP	E1724	S1492	A1421	SER	D1286	LEU	Q1002	Q1002	VAL	VAL	VAL	F858
ILE	D1725	L1493	E1424	THR	L1289	GLN	L1157	L1157	LEU	LEU	LEU	N859
ASN	C1726	C1494	Q1425	ASP	I1289	THR	T1158	T1158	ASP	ASP	ASP	D860
LEU	V1727	D1496	M1430	C1366	F1296	GLU	S1165	S1165	SER	SER	SER	Y861
TRP	K1728	L1497	M1430	D1367	F1298	TYR	P1166	P1166	VAL	VAL	VAL	PRO
ILE	S1731	L1498	K1434	F1368	F1298	LEU	E1169	E1169	GLY	GLY	GLY	ASN
P1737	A1732	Q1500	K1435	S1369	T1303	SER	Q1170	Q1170	ASP	ASP	ASP	ASN
A1812	A1733	V1501	H1436	G1370	A1309	SER	K1171	K1171	ALA	ALA	ALA	ASN
F1813	V1734	CYS	R1437	D1371	Q1311	PHE	Q1172	Q1172	LEU	LEU	LEU	GLU
		GLN	I1438	D1372	Q1311	PRO	A1172	A1172	THR	THR	THR	ARG
			L1439	D1373	Q1311							

S3027	V3028	G3029	G3030	Q3031	V3032	N3033	L3034	L3035	I3036	Q3037	Q3038	A3039	I3040	D3041	P3042	K3043	N3044	L3045	S3046	R3047	L3048	F3049	P3050	G3051	W3052	K3053	A3054	W3055	V3056																																	
K2966	A2967	L2968	Y2969	L2970	Q2971	Q2972	R2973	P2974	E2975	D2976	E2979	L2980	H2981	PRO	THR	LEU	ASN	ALA	ASP	ASP	GLN	GLU	CYS	LYS	ARG	ASN	LEU	SER	ASP	I2998	D2999	Q3000	S3001	F3002	N3003	K3004	V3005	A3006	E3007	R3008	V3009	L3010	N3011	R3012	L3013	Q3014	E3015	K3016	L3017	K3018	G3019	V3020	G3023	T3024	V3025	L3026						
L2885	V2886	H2887	I2888	F2889	E2895	I2899	L2900	L2910	T2911	R2912	D2913	I2914	V2915	D2916	G2917	M2918	G2919	I2920	T2921	G2922	A2843	V2923	E2924	G2925	V2926	F2927	K2848	R2928	R2929	C2930	I2931	E2932	T2853	R2854	K2933	T2934	S2855	M2935	E2936	V2937	M2938	R2939	S2860	N2940	S2941	L2945	L2946	T2947	I2948	V2949	E2950	V2951	L2952	L2876	L2877	L2878	N2879	E2880	K2881	S2882	A2883	E2884
K2816	V2819	F2820	N2821	D2822	V2823	C2824	Q2825	N2826	F2827	Q2828	P2829	V2830	Y2833	F2834	C2835	F2839	L2840	D2841	P2842	A2843	I2844	N2845	F2846	E2847	K2848	R2849	L2850	A2851	Y2852	T2853	R2854	S2855	V2856	A2857	T2858	S2859	S2860	L2861	V2862	G2863	L2866	G2867	H2872	N2875	L2876	L2877	N2878	E2880	K2881	S2882	A2883	E2884										

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	25315	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	2.1	Depositor
Minimum defocus (nm)	2500	Depositor
Maximum defocus (nm)	4000	Depositor
Magnification	35714	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.099	Depositor
Minimum map value	-0.029	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.004	Depositor
Recommended contour level	0.03	Depositor
Map size (\AA)	428.99997, 428.99997, 428.99997	wwPDB
Map dimensions	300, 300, 300	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.43, 1.43, 1.43	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.48	0/12490	0.62	6/17349 (0.0%)
1	B	0.48	0/12490	0.62	6/17349 (0.0%)
All	All	0.48	0/24980	0.62	12/34698 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	53
1	B	0	53
All	All	0	106

There are no bond length outliers.

The worst 5 of 12 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	2765	GLY	N-CA-C	9.33	136.44	113.10
1	B	2765	GLY	N-CA-C	9.31	136.38	113.10
1	A	1925	GLY	N-CA-C	-7.59	94.13	113.10
1	B	1925	GLY	N-CA-C	-7.58	94.15	113.10
1	B	2307	LEU	N-CA-C	-6.09	94.56	111.00

There are no chirality outliers.

5 of 106 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1001	LEU	Peptide
1	A	1053	ASP	Peptide
1	A	39	THR	Peptide
1	A	497	SER	Peptide

Continued on next page...

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Mol	Chain	Res	Type	Group
1	A	646	SER	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	12537	0	5446	1207	0
1	B	12537	0	5446	1207	0
All	All	25074	0	10892	2413	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 67.

The worst 5 of 2413 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2095:LEU:O	1:B:2099:HIS:N	1.93	1.02
1:B:3013:LEU:O	1:B:3017:LEU:N	1.92	1.02
1:A:2068:LEU:O	1:A:2072:GLY:N	1.93	1.01
1:A:3013:LEU:O	1:A:3017:LEU:N	1.92	1.01
1:A:1955:LEU:O	1:A:1959:GLU:N	1.94	1.01

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	2435/3066 (79%)	2231 (92%)	197 (8%)	7 (0%)	41 76
1	B	2435/3066 (79%)	2232 (92%)	196 (8%)	7 (0%)	41 76
All	All	4870/6132 (79%)	4463 (92%)	393 (8%)	14 (0%)	44 76

5 of 14 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	1367	ASP
1	A	1376	PRO
1	A	1378	PRO
1	B	1367	ASP
1	B	1376	PRO

5.3.2 Protein sidechains [i](#)

There are no protein residues with a non-rotameric sidechain to report in this entry.

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	A	3
1	B	3

The worst 5 of 6 chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	305:SER	C	306:THR	N	6.20
1	B	305:SER	C	306:THR	N	6.20
1	A	163:GLN	C	164:TRP	N	3.12
1	B	163:GLN	C	164:TRP	N	3.12
1	A	1394:SER	C	1395:ASN	N	2.99

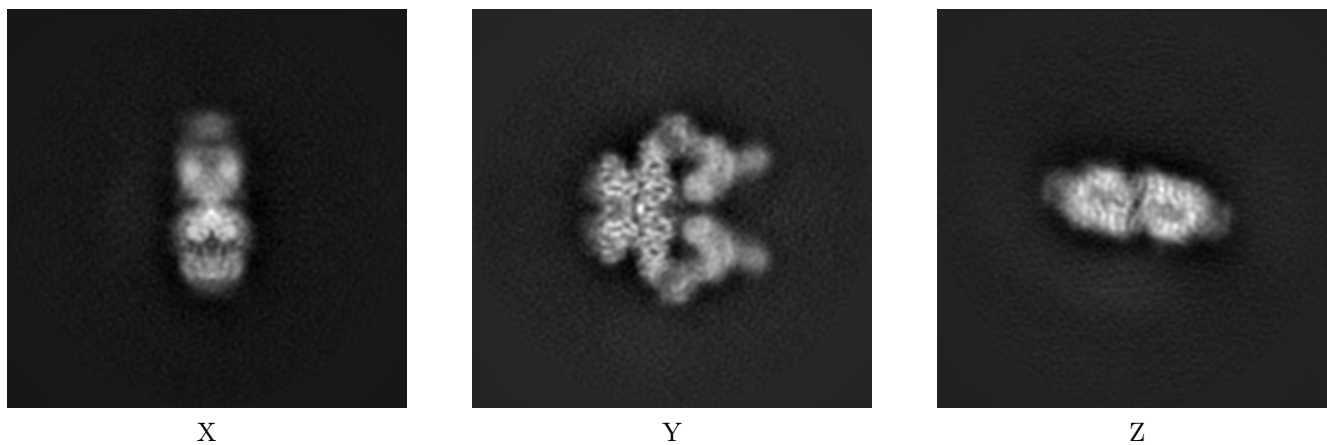
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-3669. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

6.1 Orthogonal projections [i](#)

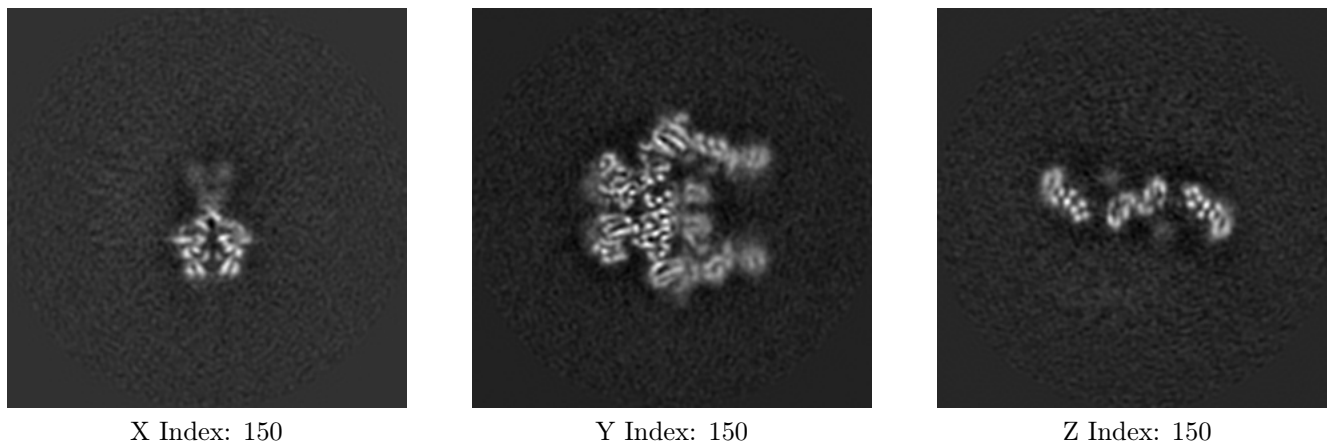
6.1.1 Primary map



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

6.2 Central slices [i](#)

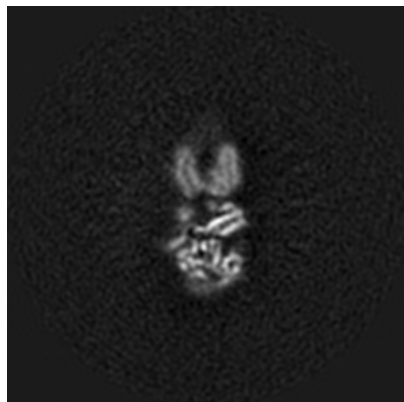
6.2.1 Primary map



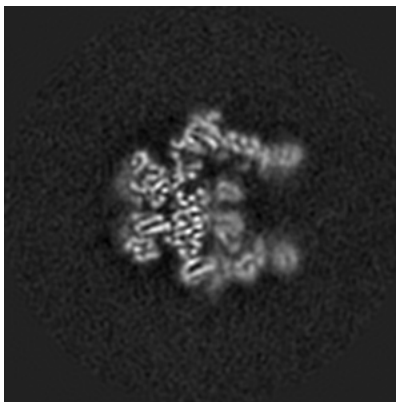
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

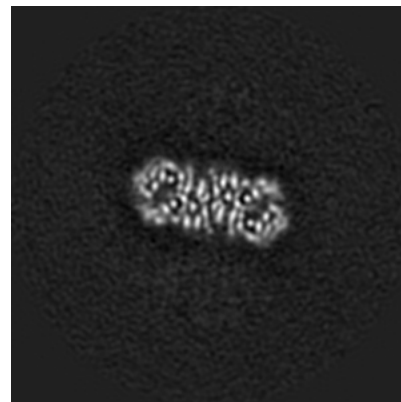
6.3.1 Primary map



X Index: 168



Y Index: 149



Z Index: 133

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

6.4 Orthogonal surface views [i](#)

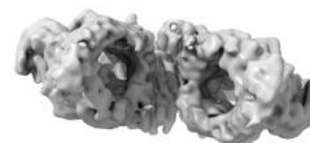
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.03. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

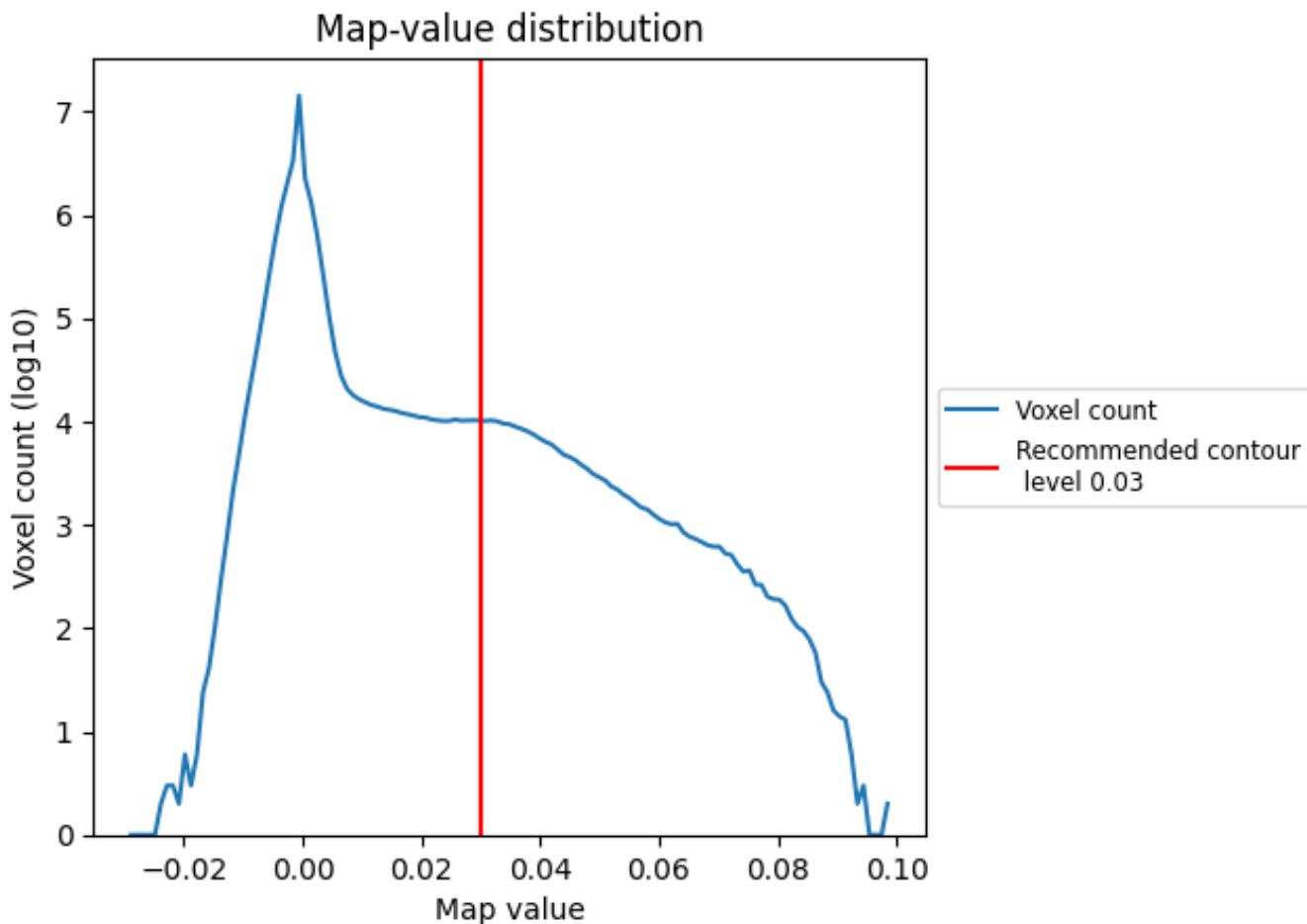
6.5 Mask visualisation

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

7 Map analysis [i](#)

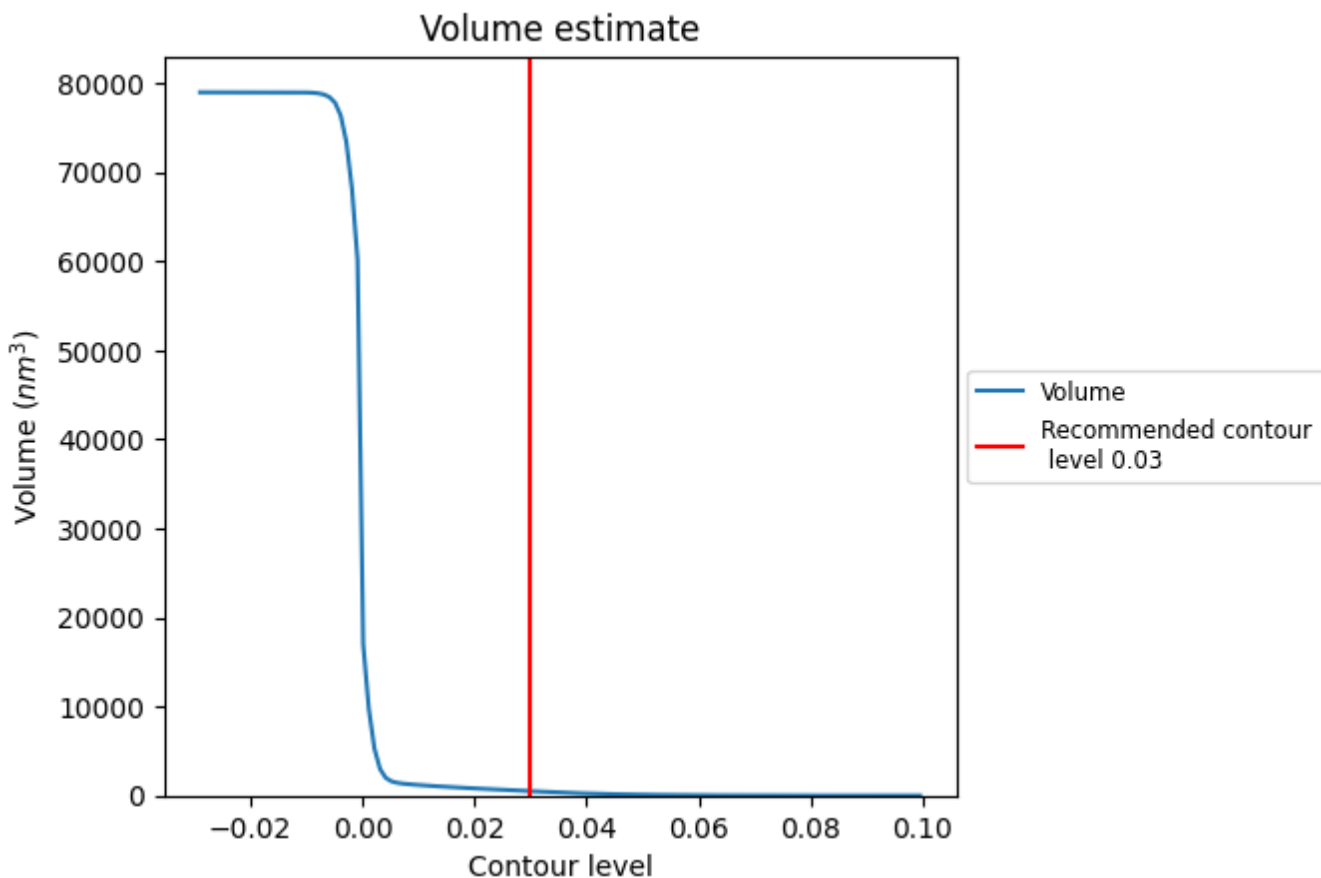
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

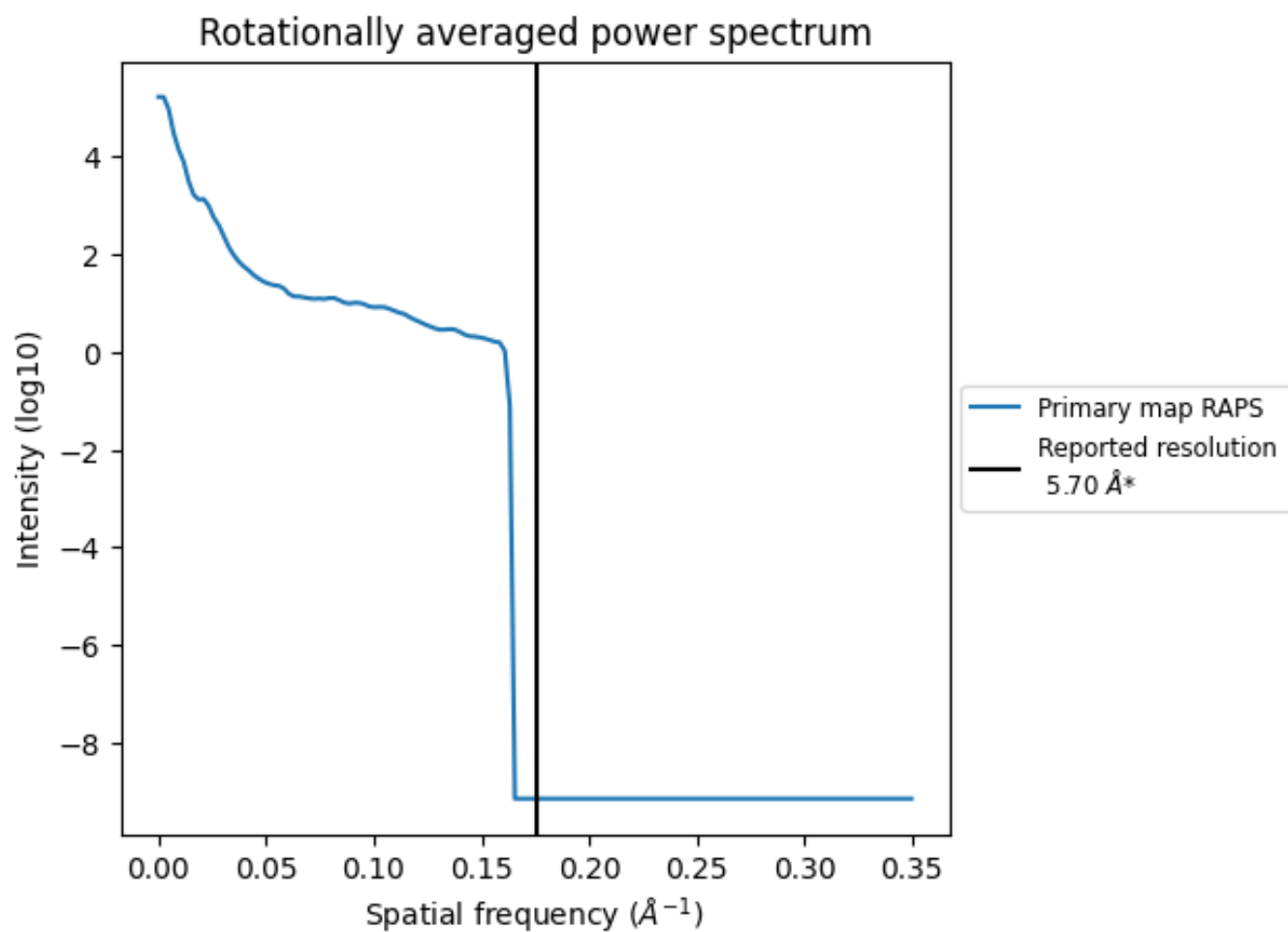
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 502 nm³; this corresponds to an approximate mass of 454 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](#)

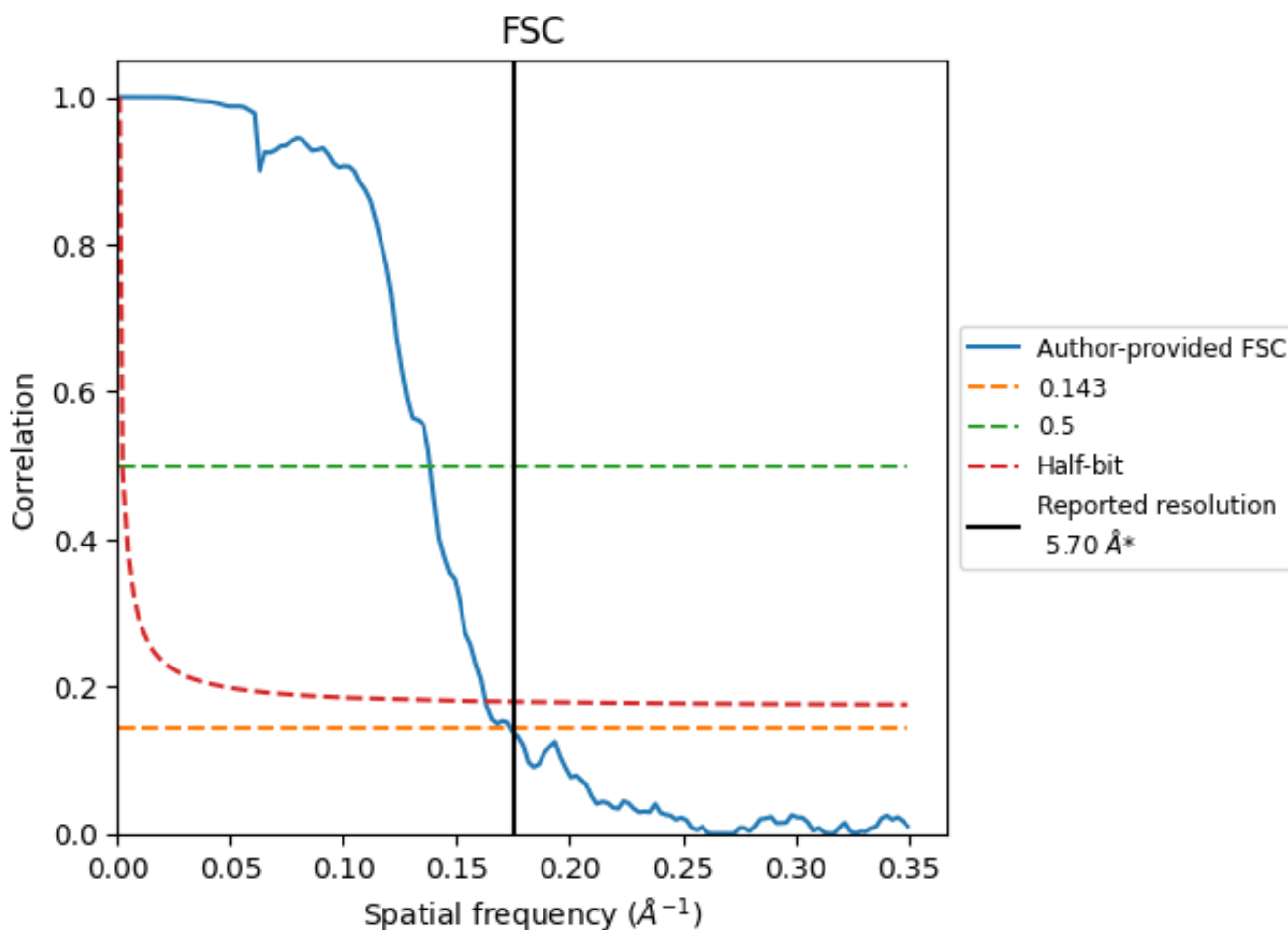


*Reported resolution corresponds to spatial frequency of 0.175 Å⁻¹

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 0.175 Å⁻¹

8.2 Resolution estimates [i](#)

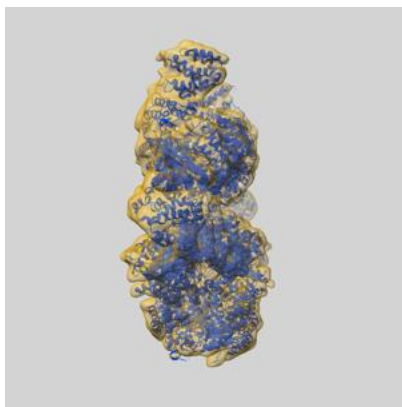
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	5.70	-	-
Author-provided FSC curve	5.75	7.23	6.14
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

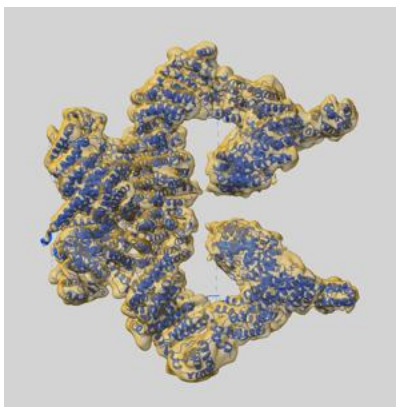
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-3669 and PDB model 5NP0. Per-residue inclusion information can be found in section 3 on page 4.

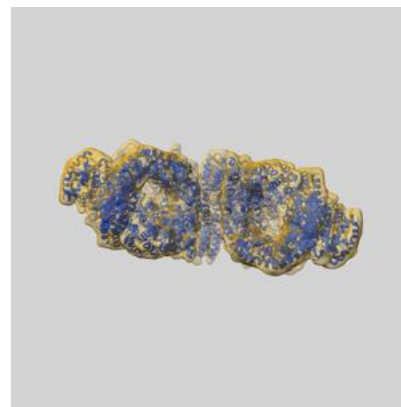
9.1 Map-model overlay [i](#)



X



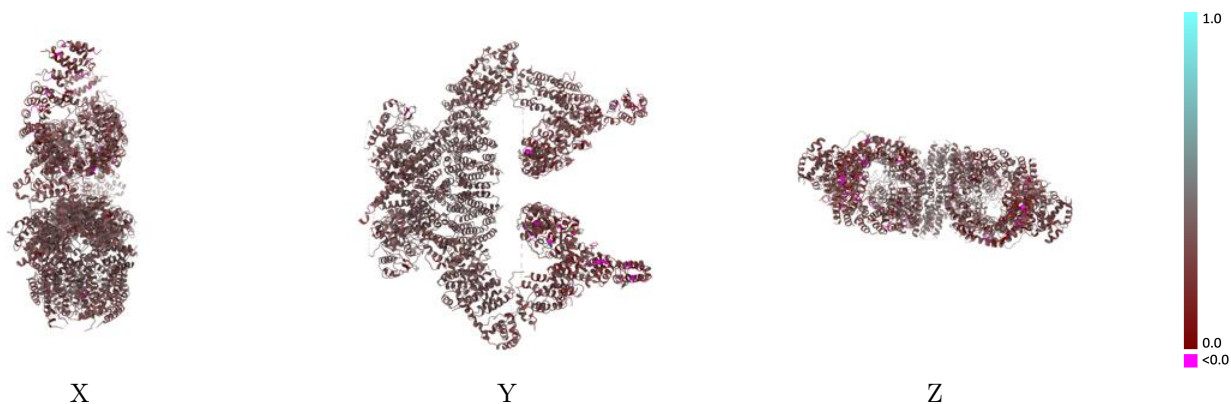
Y



Z

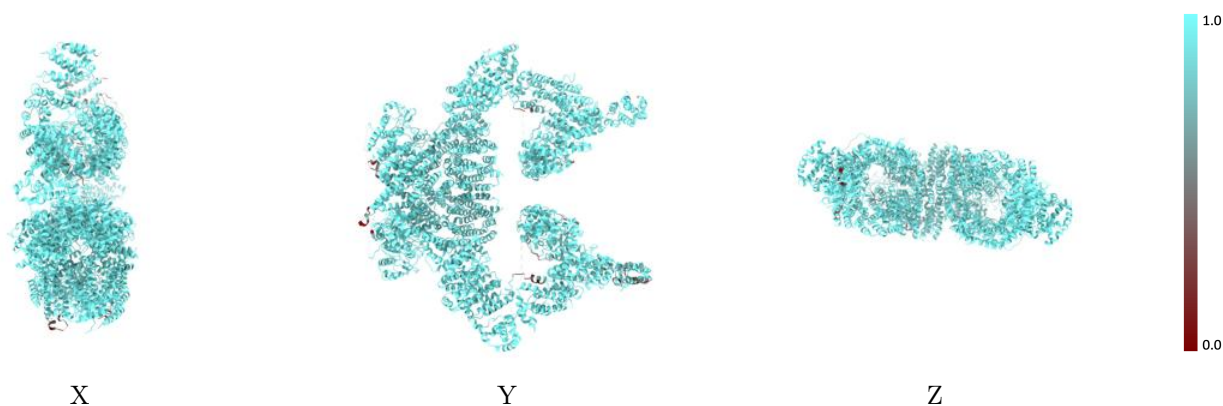
The images above show the 3D surface view of the map at the recommended contour level 0.03 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



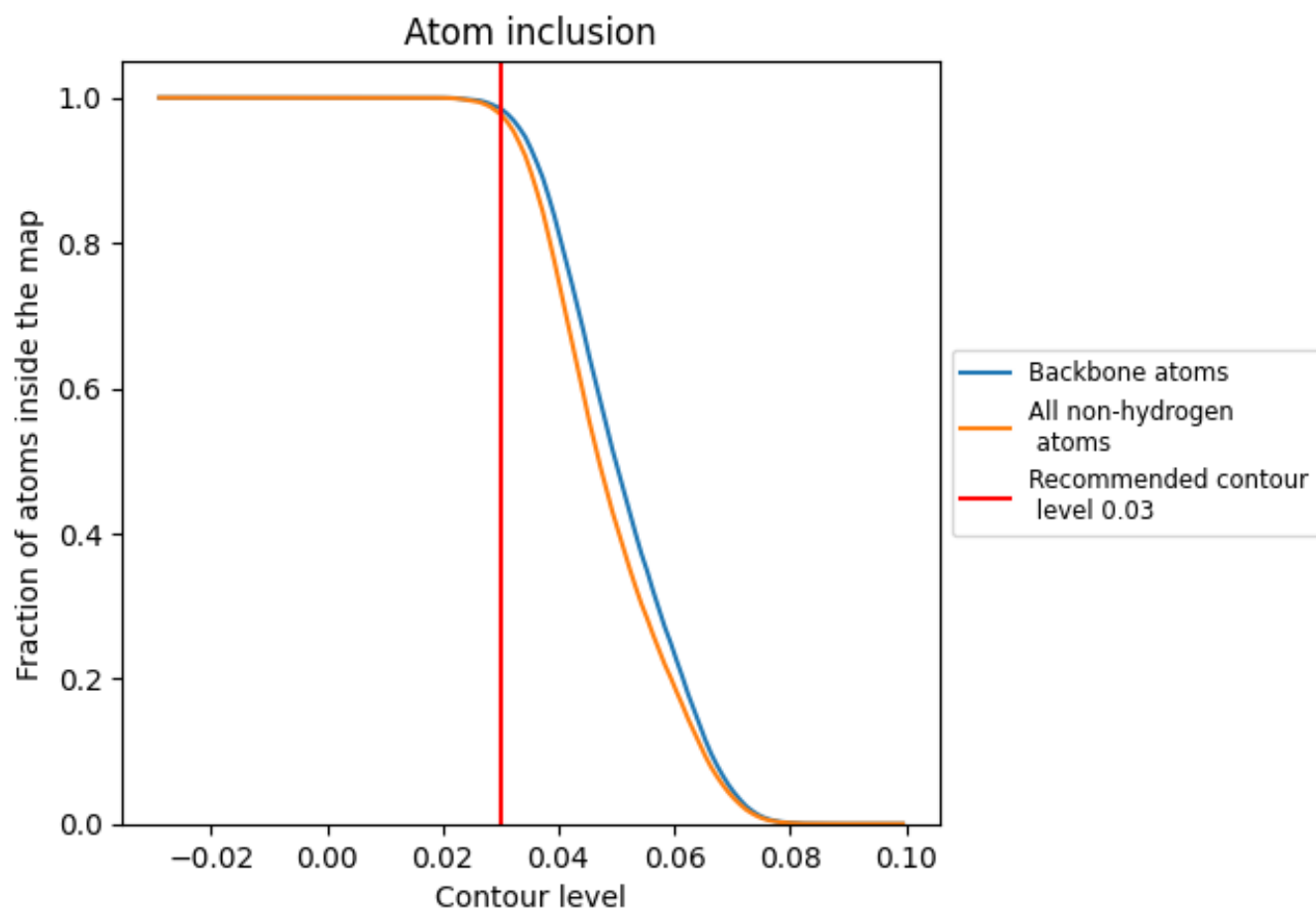
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.03).




9.4 Atom inclusion [i](#)



At the recommended contour level, 98% of all backbone atoms, 98% of all non-hydrogen atoms, are inside the map.

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

The table lists the average atom inclusion at the recommended contour level (0.03) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9772	 0.3140
A	 0.9691	 0.3110
B	 0.9854	 0.3160

