wwPDB EM Validation Summary Report

May 13, 2025 – 12:08 PM EDT

PDB ID	:	8TQC / pdb_00008tqc
EMDB ID	:	EMD-41502
Title	:	Structure of the human CDK8 kinase module
Authors	:	Chen, S.F.; Chao, T.C.; Kim, H.J.; Tang, H.C.; Khadka, S.; Li, T.; Murakami, K.; Boyer, T.G.; Tsai, K.L.
Deposited on	:	2023-08-06
Resolution	:	3.80 Å(reported)

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:

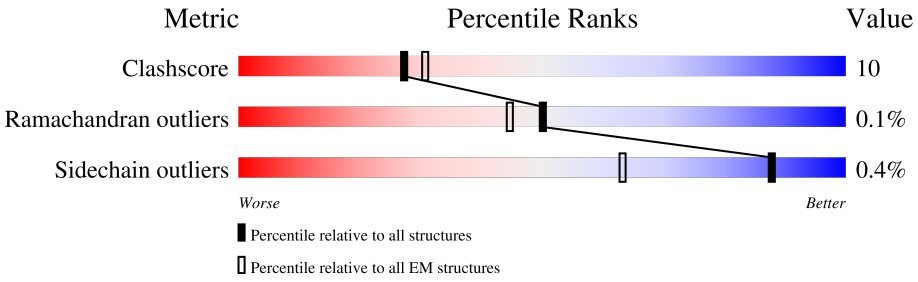
EMDB validation analysis	:	0.0.1.dev118
MolProbity	:	4-5-2 with Phenix2.0rc1
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.43.1

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.80 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	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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	C	2177	37% 52% 12% 36%
2	D	2174	37% 8% 55%
3	A	464	57% 10% 33%
4	B	283	72% 21% 7%

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 23620 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 Mediator of RNA polymerase II transcription subunit 12.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	C	1400	11147	7063	1947	2065	72	0	0

- Molecule 2 is a protein called Mediator of RNA polymerase II transcription subunit 13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	D	969	7714	4945	1310	1393	66	0	0

- Molecule 3 is a protein called Cyclin-dependent kinase 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	A	313	2561	1663	439	442	17	0	0

- Molecule 4 is a protein called Cyclin-C.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	B	262	2196	1442	358	379	17	1	0

- Molecule 5 is ZINC ION (CCD ID: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

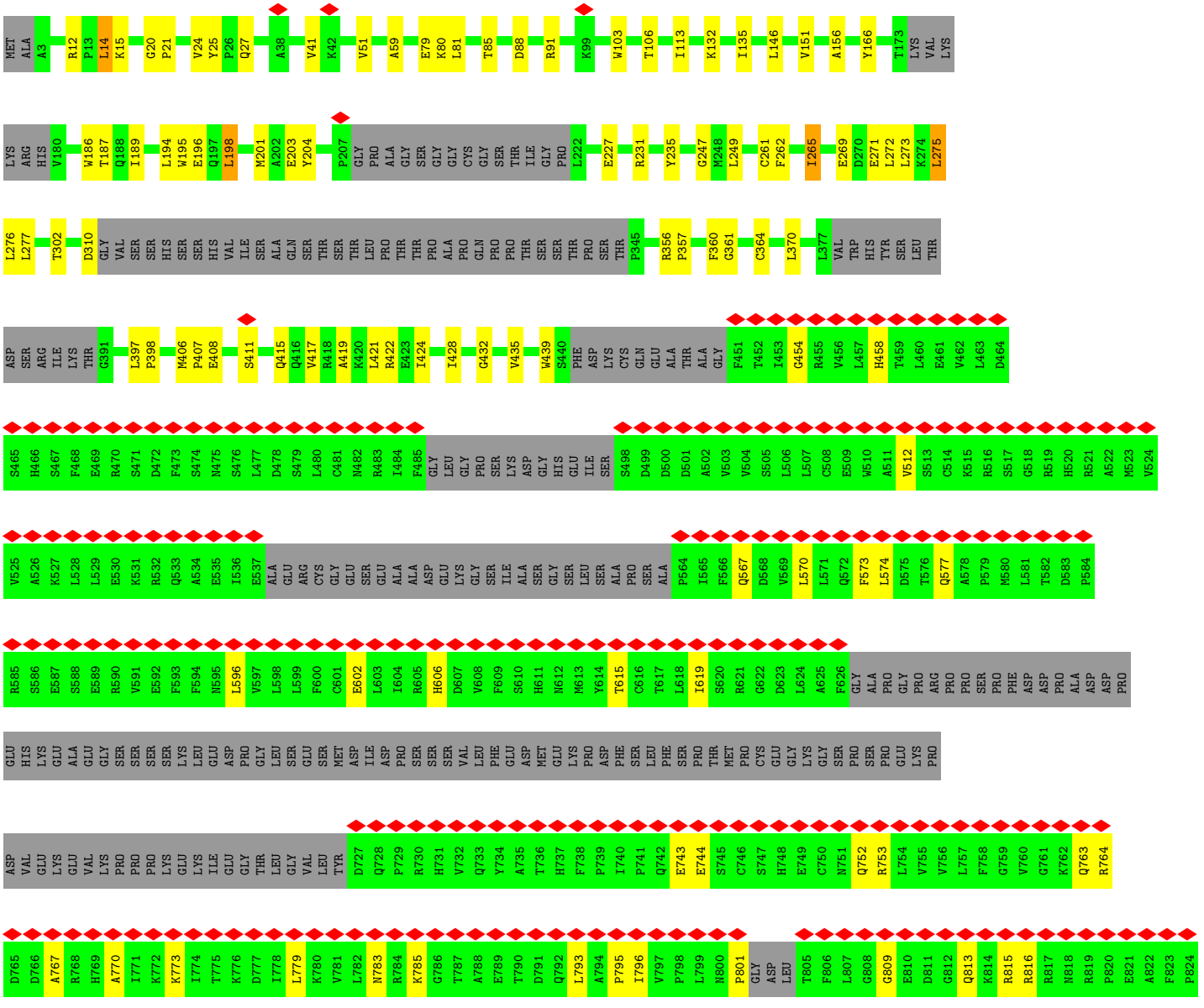
Mol	Chain	Residues	Atoms		AltConf
			Total	Zn	
5	C	1	1	1	0
5	D	1	1	1	0

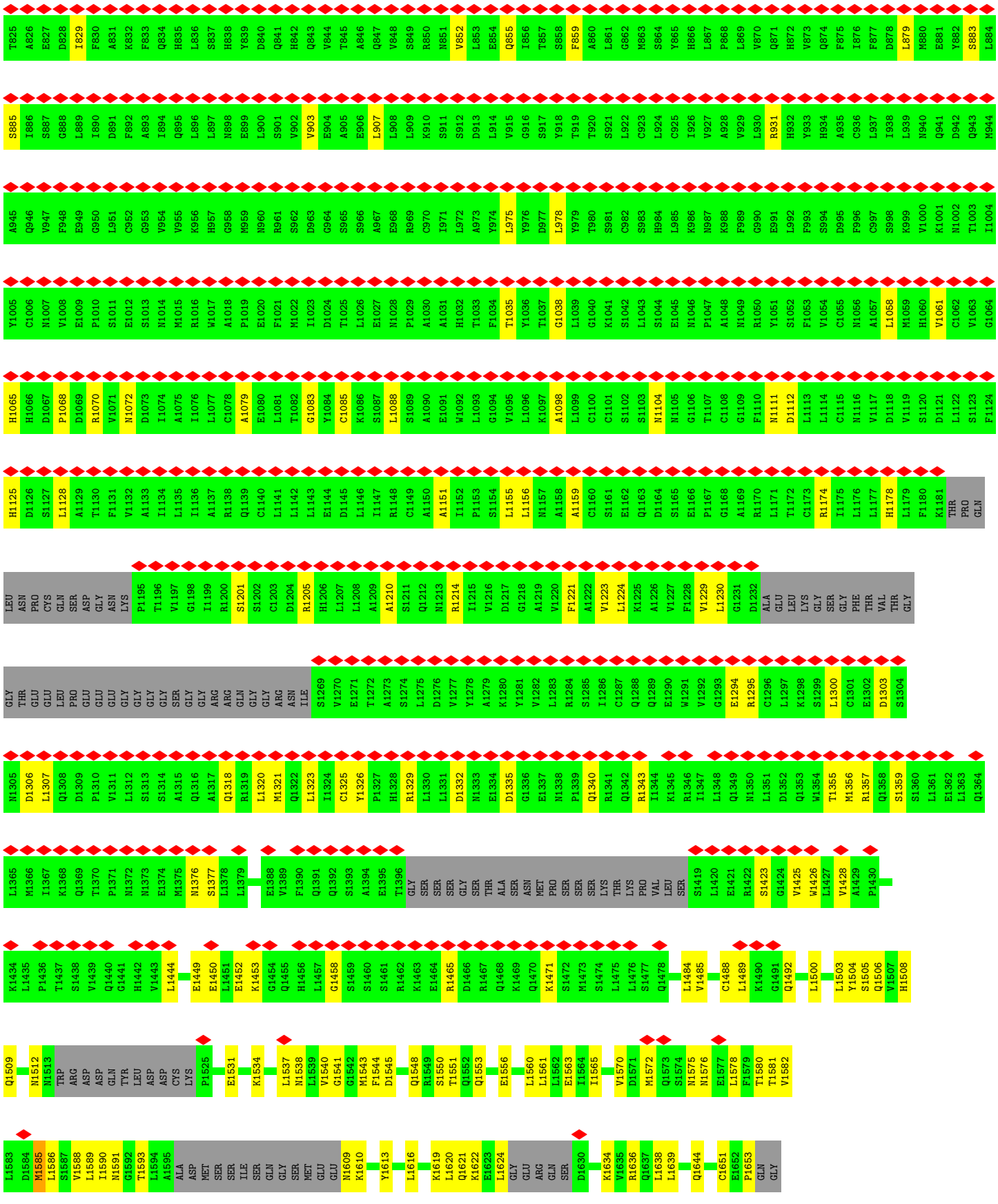
3 Residue-property plots (i)

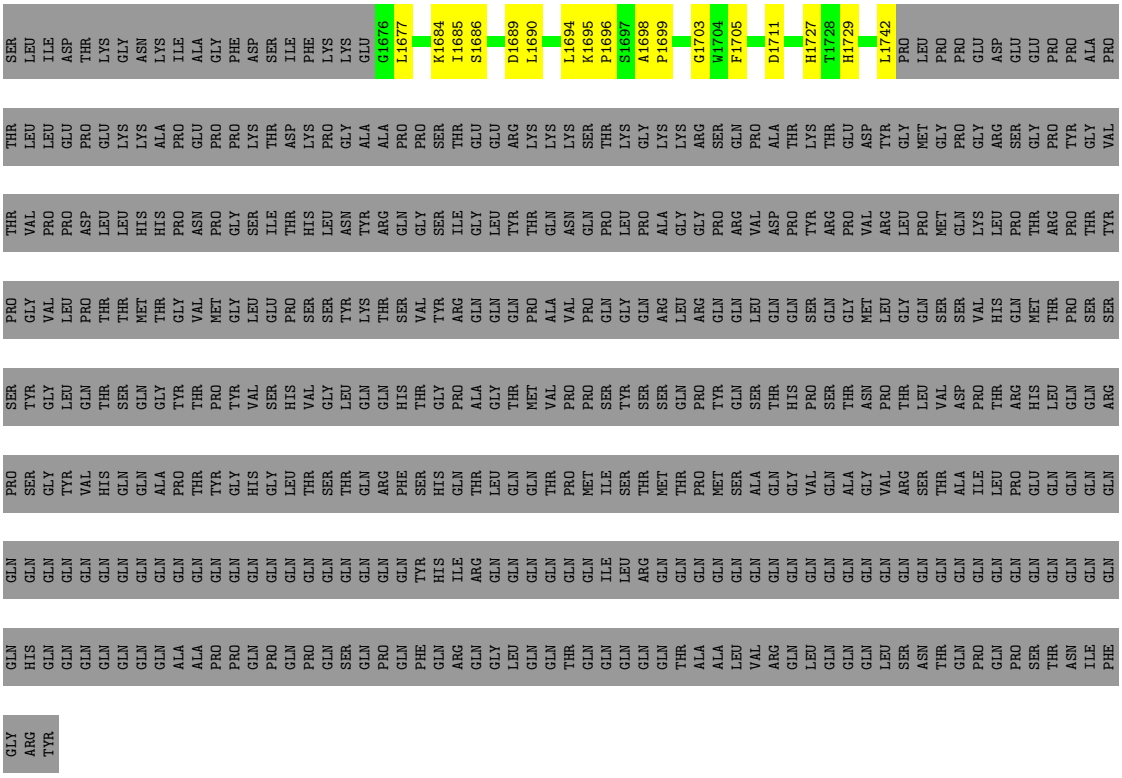
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: Mediator of RNA polymerase II transcription subunit 12

Chain C:

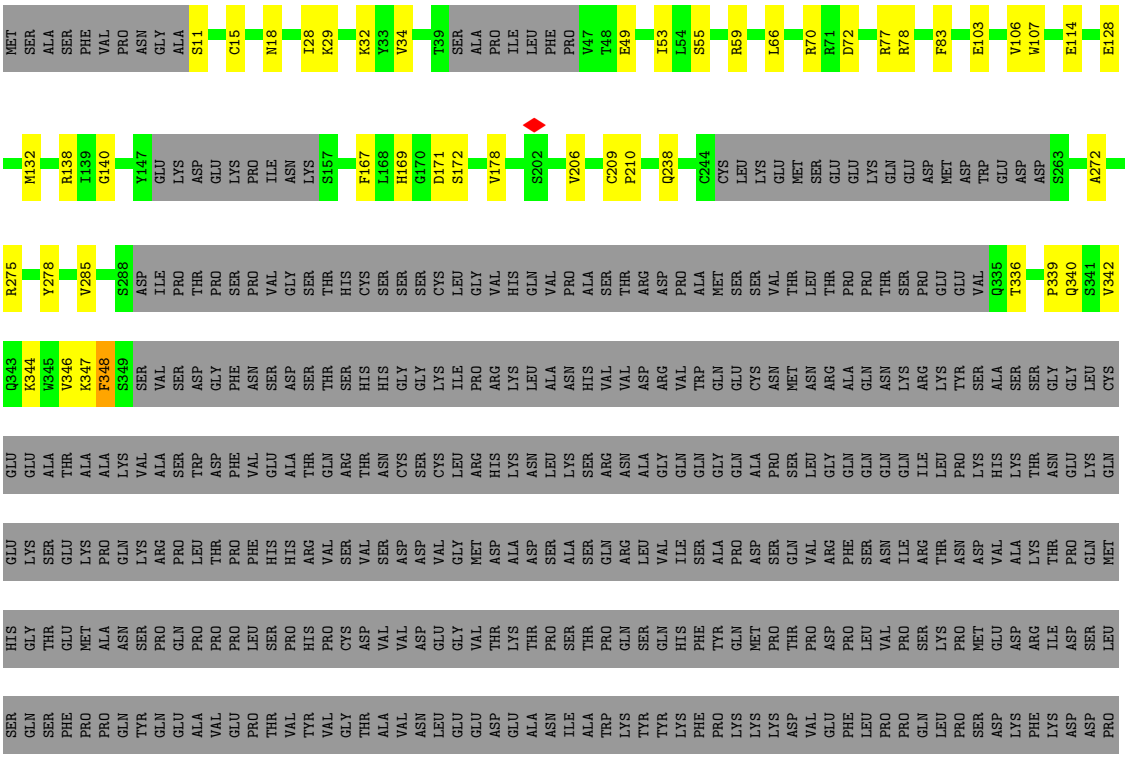


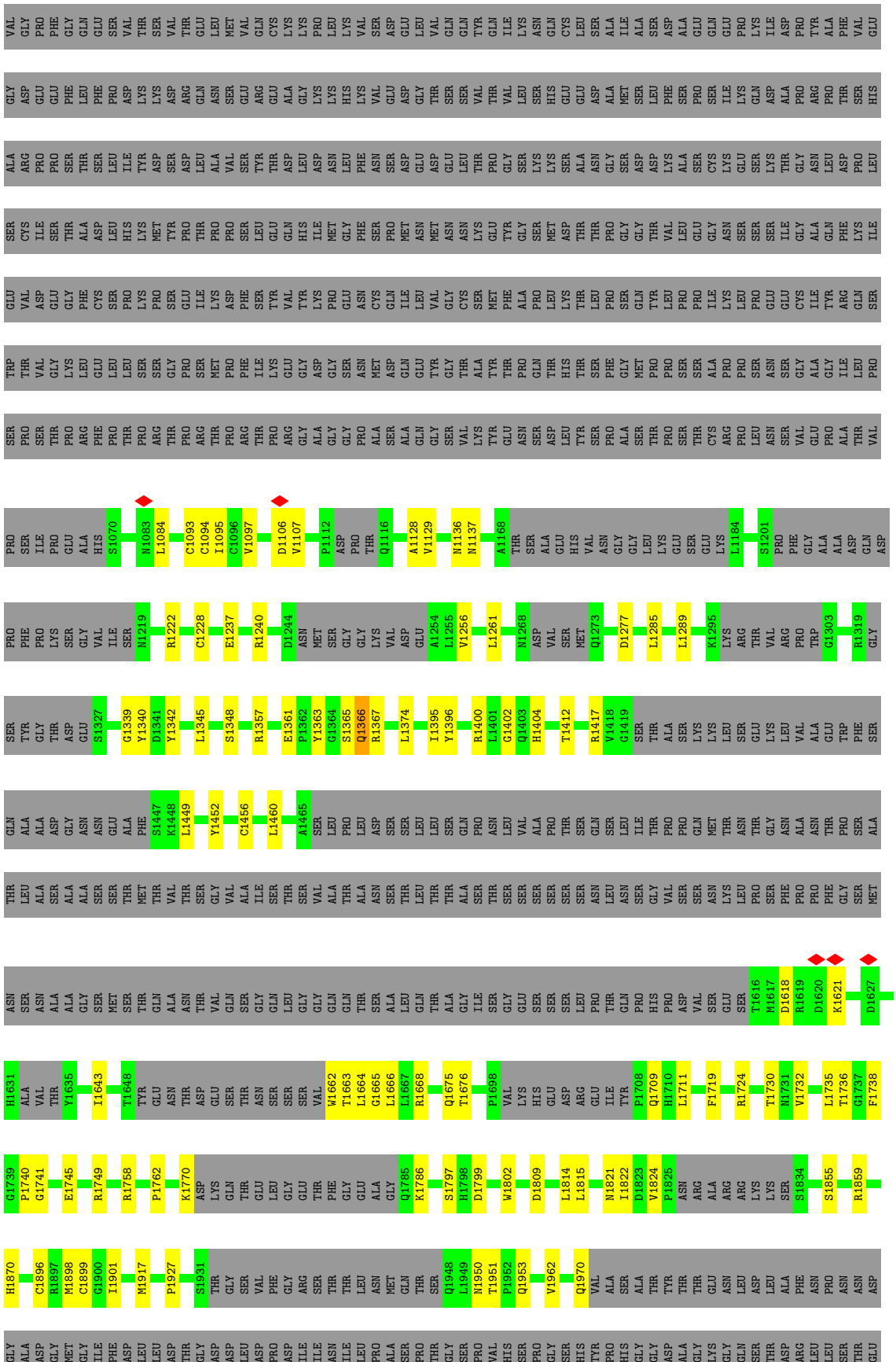

T825 A826 E827 D828 I829 F830 A831 K832 F833 Q834 H835 L836 S837 H838 Y839 D840 Q841 H842 Q843 V844 T845 A846 Q847 V848 S849 R850 N851 V852 L853 E854 Q855 I856 T857 S858 F859 A860 L861 G862 M863 S864 Y865 H866 L867 P868 L869 V870 Q871 H872 V873 Q874 F875 I876 F877 D878 L879 M880 E881 Y882 S883 L884
S885 I886 S887 G888 L889 I890 D891 F892 A893 I894 Q895 L896 L897 N898 E899 L900 S901 V902 V903 E904 A905 E906 L907 L908 L909 K910 S911 S912 D913 L914 V915 G916 S917 Y918 T919 T920 S921 L922 C923 L924 C925 I926 V927 A928 V929 L930 R931 H932 Y933 H934 A935 C936 L937 I938 L939 N940 Q941 D942 Q943 M944
A945 Q946 V947 F948 E949 G950 L951 C952 G953 V954 V955 K956 H957 G958 M959 N960 R961 S962 D963 G964 S965 S966 A967 E968 R969 C970 I971 L972 A973 Y974 L975 Y976 D977 L978 Y979 T980 S981 C982 S983 H984 L985 K986 N987 K988 F989 G990 E991 L992 F993 S994 D995 F996 C997 S998 K999 V1000 K1001 N1002 T1003 I1004
Y1005 C1006 N1007 V1008 E1009 P1010 S1011 E1012 S1013 N1014 M1015 R1016 W1017 A1018 P1019 E1020 F1021 M1022 I1023 D1024 T1025 L1026 E1027 N1028 P1029 A1030 A1031 H1032 T1033 F1034 T1035 Y1036 T1037 G1038 L1039 G1040 K1041 S1042 L1043 S1044 E1045 N1046 P1047 A1048 N1049 R1050 Y1051 S1052 F1053 V1054 C1055 N1056 A1057 L1058 M1059 H1060 V1061 C1062 V1063 G1064
H1065 H1066 D1067 P1068 D1069 R1070 V1071 N1072 D1073 I1074 A1075 I1076 L1077 C1078 A1079 E1080 L1081 T1082 G1083 Y1084 C1085 K1086 S1087 L1088 S1089 A1090 E1091 W1092 L1093 G1094 V1095 L1096 K1097 A1098 L1099 C1100 C1101 S1102 S1103 N1104 N1105 G1106 T1107 C1108 G1109 F1110 N1111 D1112 L1113 L1114 C1115 N1116 V1117 D1118 V1119 S1120 D1121 L1122 S1123 F1124
H1125 D1126 S1127 L1128 A1129 T1130 F1131 V1132 A1133 I1134 L1135 I1136 A1137 R1138 Q1139 C1140 L1141 L1142 L1143 E1144 D1145 L1146 I1147 R1148 C1149 A1150 A1151 I1152 P1153 S1154 L1155 L1156 N1157 A1158 A1159 C1160 S1161 E1162 Q1163 D1164 S1165 E1166 P1167 G1168 A1169 R1170 L1171 T1172 C1173 R1174 I1175 L1176 L1177 H1178 L1179 F1180 K1181 THR PRO GLN
LEU ASN PRO CYS GLN SER ASP GLY ASN LYS P1195 T1196 V1197 G1198 I1199 R1200 S1201 S1202 C1203 D1204 R1205 H1206 L1207 L1208 A1209 A1210 S1211 Q1212 N1213 R1214 I1215 V1216 D1217 G1218 A1219 V1220 F1221 A1222 V1223 L1224 K1225 A1226 V1227 F1228 V1229 L1230 G1231 D1232 ALA GLU LEU LYS GLY SER GLY PHE THR VAL THR GLY
GLY THR GLU GLU LEU PRO GLU GLU GLU GLY GLY GLY GLY SER GLY GLY ARG ARG GLN GLY GLY ARG ASN ILE S1269 V1270 E1271 T1272 A1273 S1274 L1275 D1276 V1277 Y1278 A1279 K1280 Y1281 V1282 L1283 R1284 S1285 I1286 C1287 Q1288 Q1289 E1290 W1291 V1292 G1293 E1294 R1295 C1296 L1297 K1298 S1299 L1300 C1301 E1302 D1303 S1304
N1305 D1306 L1307 Q1308 D1309 P1310 V1311 L1312 S1313 S1314 A1315 Q1316 A1317 Q1318 R1319 L1320 M1321 Q1322 L1323 I1324 C1325 Y1326 P1327 H1328 R1329 L1330 L1331 D1332 N1333 E1334 D1335 G1336 E1337 N1338 P1339 Q1340 R1341 Q1342 R1343 T1344 K1345 R1346 I1347 L1348 Q1349 N1350 L1351 D1352 Q1353 W1354 T1355 M1356 R1357 Q1358 S1359 S1360 L1361 E1362 L1363 Q1364
L1365 M1366 I1367 K1368 Q1369 T1370 P1371 N1372 N1373 E1374 M1375 N1376 S1377 L1378 L1379 E1388 V1389 F1390 Q1391 Q1392 S1393 A1394 E1395 T1396 GLY SER SER SER GLY SER THR ALA SER ASN MET PRO SER SER SER LYS THR LYS PRO VAL LEU SER S1419 L1420 E1421 R1422 S1423 G1424 V1425 W1426 L1427 V1428 A1429 P1430
K1434 L1435 P1436 T1437 S1438 V1439 Q1440 G1441 H1442 V1443 L1444 E1449 E1450 L1451 E1452 K1453 G1454 Q1455 H1456 L1457 G1458 S1459 S1460 S1461 R1462 K1463 E1464 R1465 D1466 R1467 Q1468 K1469 Q1470 K1471 S1472 M1473 S1474 L1475 L1476 S1477 Q1478 L1484 V1485 C1488 L1489 K1490 G1491 Q1492 L1500 L1503 Y1504 S1505 Q1506 V1507 H1508
Q1509 N1512 N1513 TRP ARG ASP ASP GLN TYR LEU ASP ASP CYS LYS P1525 E1531 K1534 L1537 N1538 L1539 V1540 G1541 G1542 M1543 F1544 D1545 Q1548 R1549 S1550 T1551 Q1552 Q1553 E1556 L1560 L1561 L1562 E1563 I1564 I1565 V1570 D1571 M1572 Q1573 S1574 N1575 N1576 E1577 L1578 F1579 T1580 T1581 V1582
L1583 D1584 M1586 L1586 S1587 V1588 L1589 I1590 N1591 G1592 T1593 L1594 A1595 ALA ASP MET SER SER ILE SER GLN GLY SER MET GLU GLU N1609 K1610 Y1613 L1616 K1619 L1620 Q1621 K1622 E1623 L1624 GLY GLU ARG GLN SER D1630 K1634 V1635 R1636 Q1637 L1638 L1639 Q1644 C1651 E1652 P1653 GLN GLY

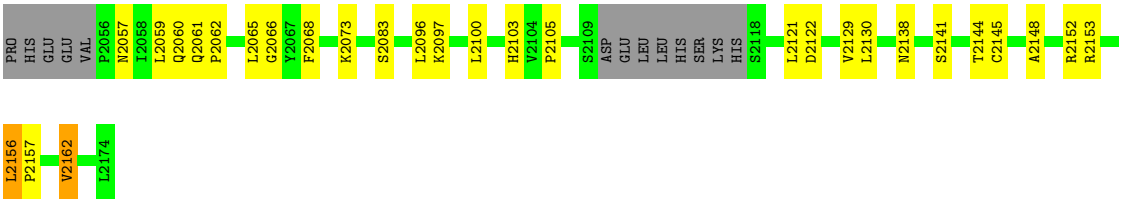


• Molecule 2: Mediator of RNA polymerase II transcription subunit 13

Chain D:

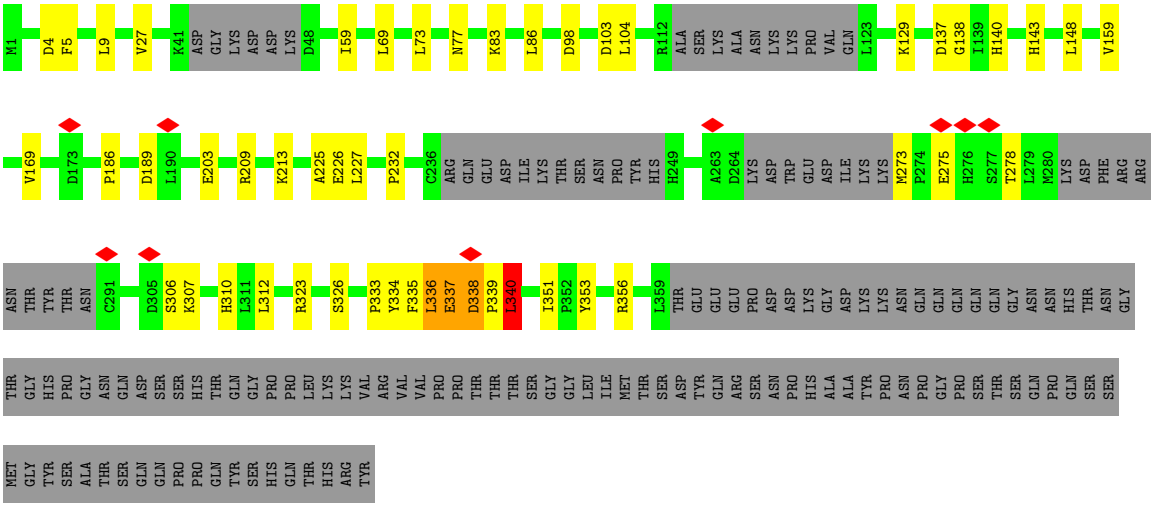






• Molecule 3: Cyclin-dependent kinase 8

Chain A:



• Molecule 4: Cyclin-C

Chain B:

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	122015	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	64	Depositor
Minimum defocus (nm)	600	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	Not provided	
Image detector	GATAN K2 QUANTUM (4k x 4k)	Depositor
Maximum map value	0.098	Depositor
Minimum map value	-0.047	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.002	Depositor
Recommended contour level	0.0115	Depositor
Map size (Å)	376.67517, 376.67517, 376.67517	wwPDB
Map dimensions	352, 352, 352	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.0701, 1.0701, 1.0701	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 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	C	0.16	0/11361	0.42	2/15364 (0.0%)
2	D	0.13	0/7895	0.34	2/10703 (0.0%)
3	A	0.11	0/2627	0.34	2/3542 (0.1%)
4	B	0.11	0/2253	0.30	0/3051
All	All	0.14	0/24136	0.37	6/32660 (0.0%)

There are no bond length outliers.

The worst 5 of 6 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	C	20	GLY	CA-C-N	8.33	125.74	119.66
1	C	20	GLY	C-N-CA	8.33	125.74	119.66
3	A	340	LEU	CA-C-N	7.05	127.08	119.89
3	A	340	LEU	C-N-CA	7.05	127.08	119.89
2	D	1365	SER	N-CA-C	6.00	119.84	111.74

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	C	11147	0	11175	252	0
2	D	7714	0	7627	144	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	A	2561	0	2578	51	0
4	B	2196	0	2233	52	0
5	C	1	0	0	0	0
5	D	1	0	0	0	0
All	All	23620	0	23613	453	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.

The worst 5 of 453 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:338:ASP:HB3	3:A:339:PRO:CD	1.56	1.34
3:A:333:PRO:HA	3:A:336:LEU:HD23	1.26	1.15
3:A:338:ASP:CB	3:A:339:PRO:HD2	1.74	1.14
3:A:338:ASP:CB	3:A:339:PRO:CD	2.28	1.09
1:C:1616:LEU:O	1:C:1620:LEU:HG	1.55	1.07

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	C	1366/2177 (63%)	1320 (97%)	46 (3%)	0	100 100
2	D	923/2174 (42%)	884 (96%)	38 (4%)	1 (0%)	48 79
3	A	301/464 (65%)	294 (98%)	6 (2%)	1 (0%)	37 69
4	B	261/283 (92%)	258 (99%)	3 (1%)	0	100 100
All	All	2851/5098 (56%)	2756 (97%)	93 (3%)	2 (0%)	50 79

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	A	338	ASP
2	D	2156	LEU

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	C	1247/1916 (65%)	1242 (100%)	5 (0%)	89 91
2	D	869/1918 (45%)	867 (100%)	2 (0%)	92 94
3	A	277/412 (67%)	274 (99%)	3 (1%)	70 79
4	B	241/258 (93%)	241 (100%)	0	100 100
All	All	2634/4504 (58%)	2624 (100%)	10 (0%)	88 91

5 of 10 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	A	336	LEU
3	A	337	GLU
3	A	340	LEU
1	C	275	LEU
1	C	1585	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 29 such sidechains are listed below:

Mol	Chain	Res	Type
1	C	1575	ASN
4	B	49	GLN
1	C	1729	HIS
2	D	2138	ASN
1	C	1644	GLN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 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 (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

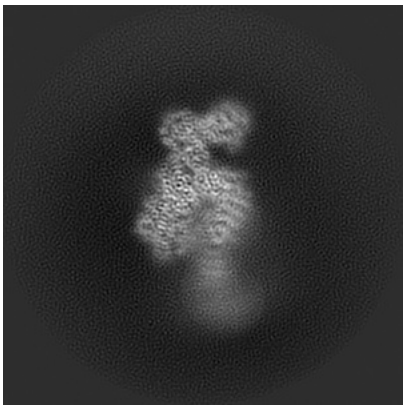
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-41502. These allow visual inspection of the internal detail of the map and identification of artifacts.

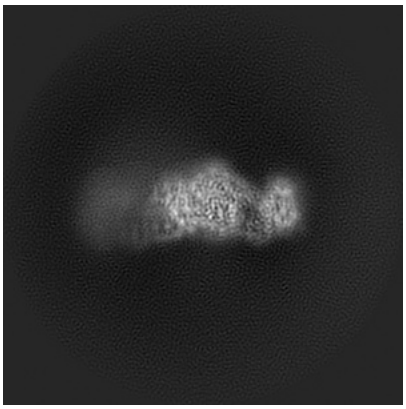
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

6.1.1 Primary map



X



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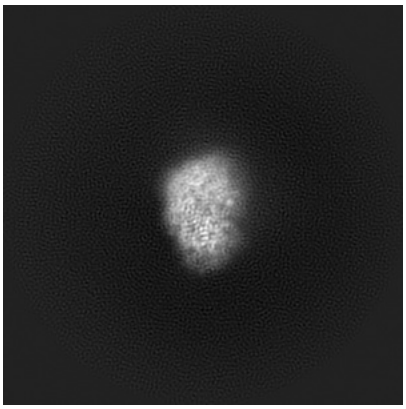
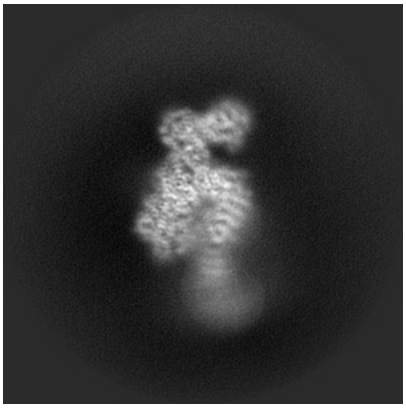


Z

6.1.2 Raw map



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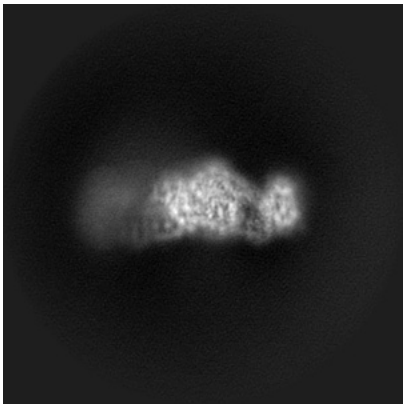
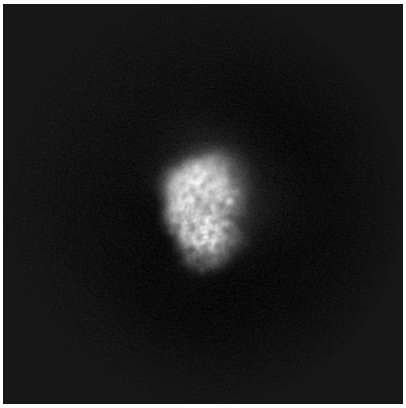


Y

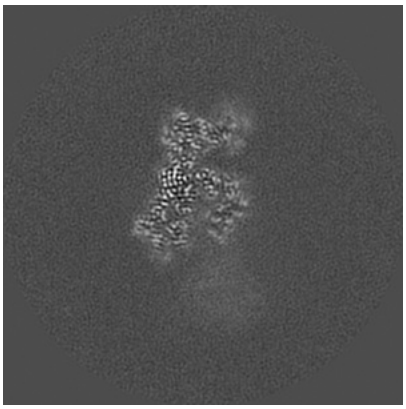


Z

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

6.2 Central slices (i)

6.2.1 Primary map



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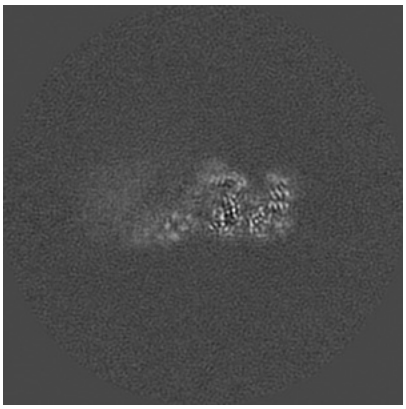
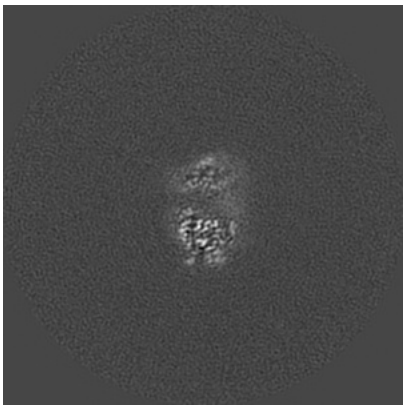
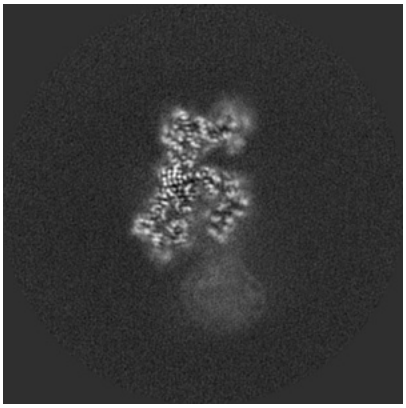


Y Index: 176

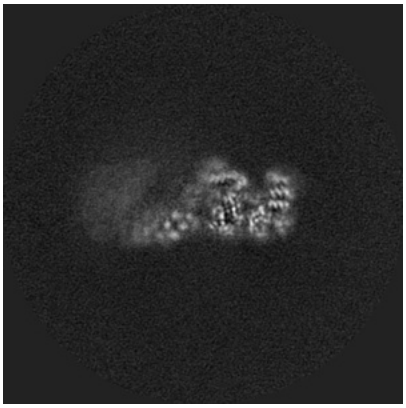


Z Index: 176

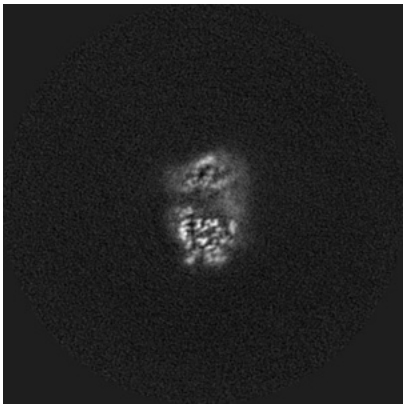
6.2.2 Raw map



X Index: 176



Y Index: 176

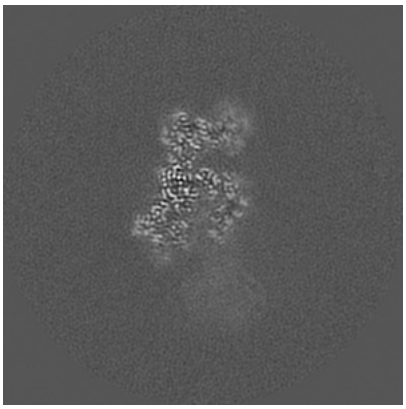


Z Index: 176

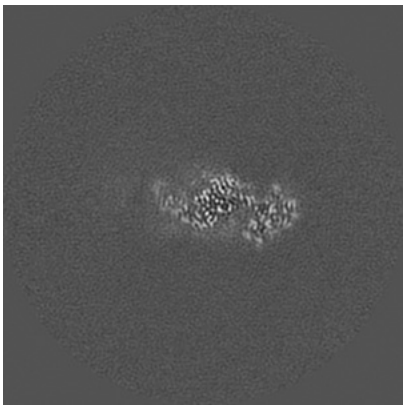
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

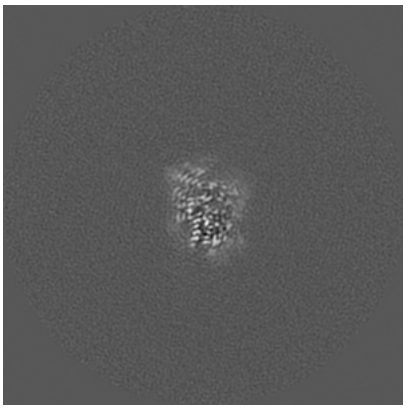
6.3.1 Primary map



X Index: 175

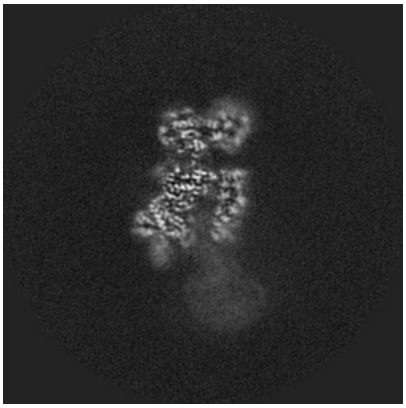


Y Index: 158

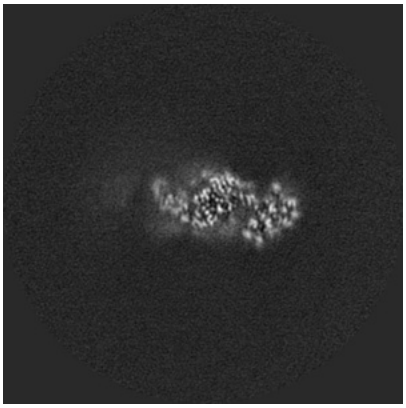


Z Index: 192

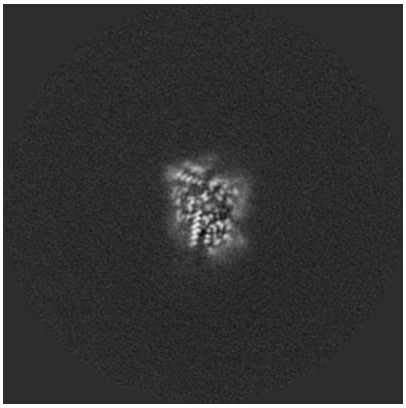
6.3.2 Raw map



X Index: 171



Y Index: 158

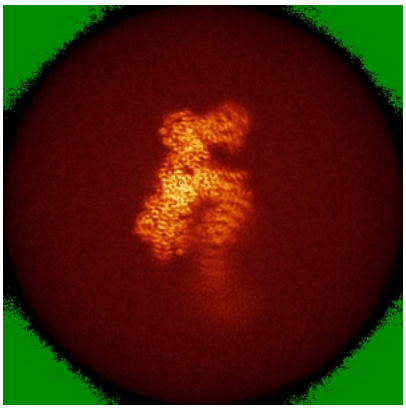


Z Index: 191

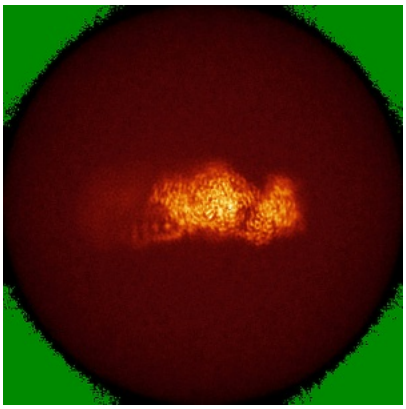
The images above show the largest variance slices of the map in three orthogonal directions.

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

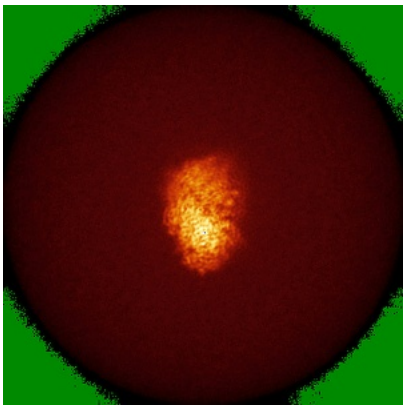
6.4.1 Primary map



X

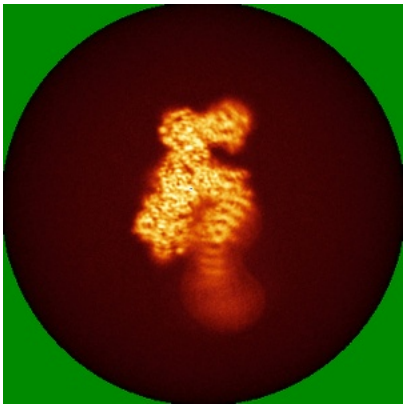


Y

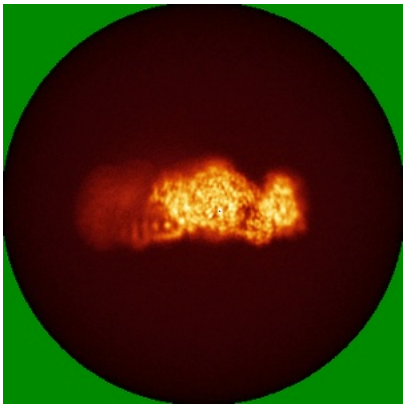


Z

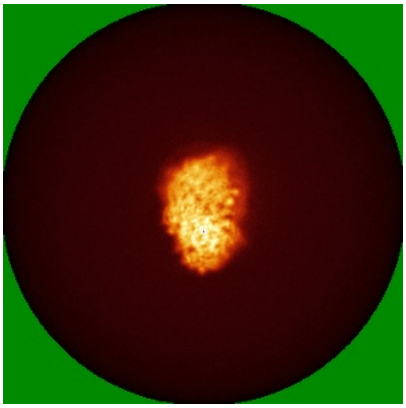
6.4.2 Raw map



X



Y



Z

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

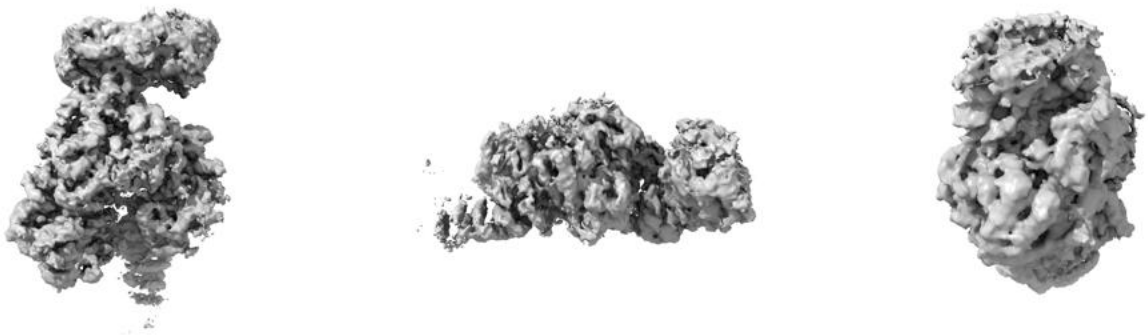
6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.0115. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

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

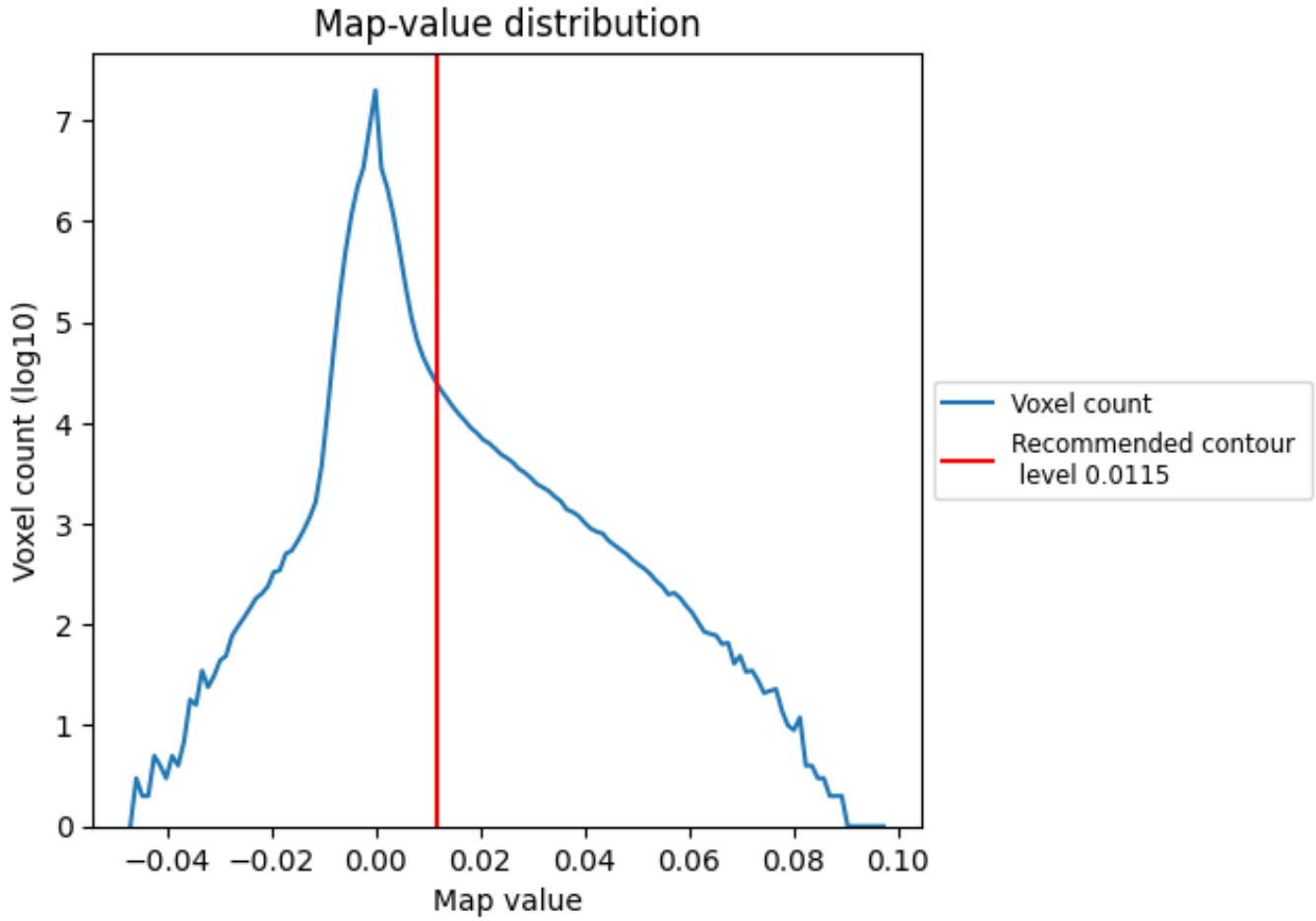
6.6 Mask visualisation (i)

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

7 Map analysis

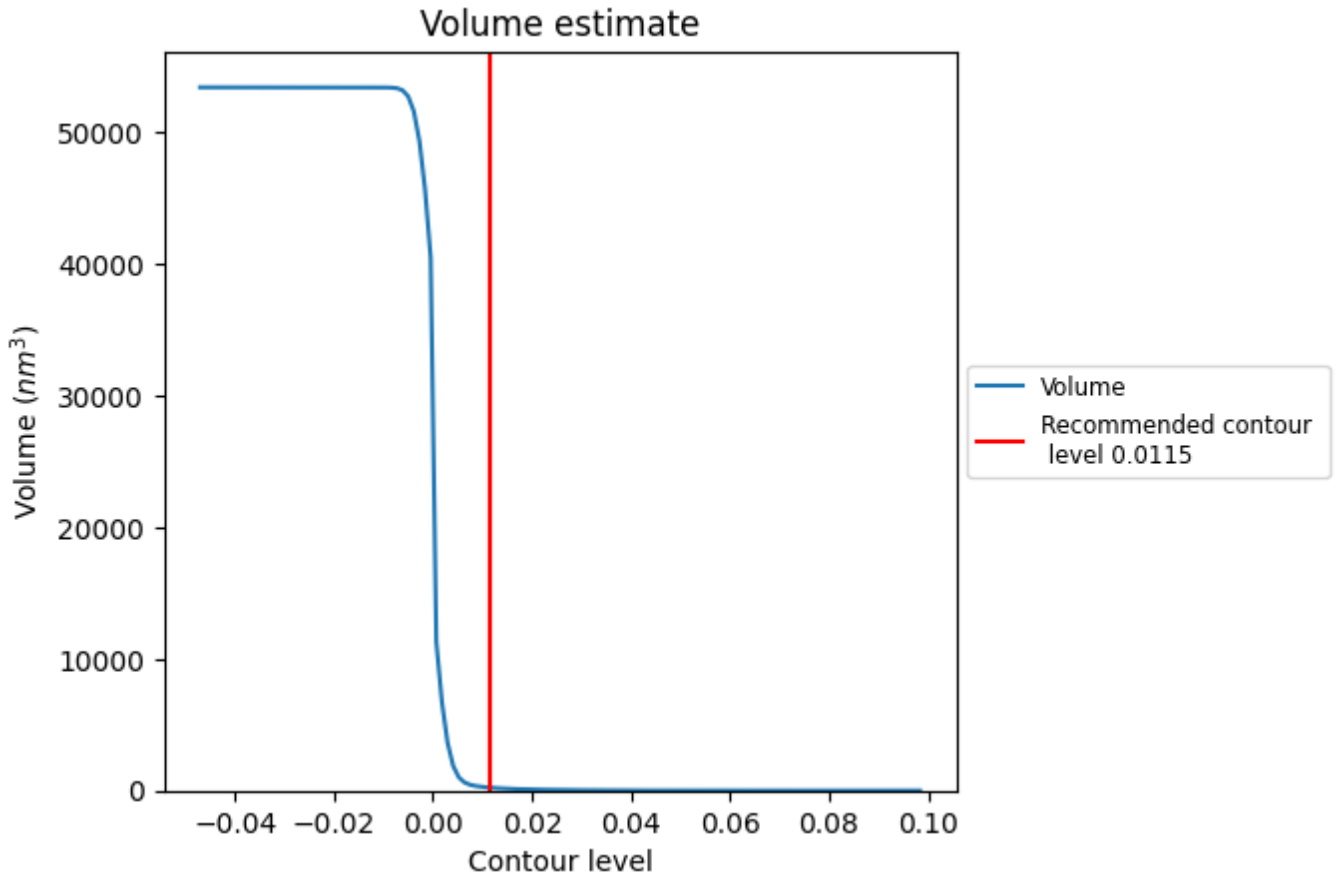
This section contains the results of statistical analysis of the map.

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.

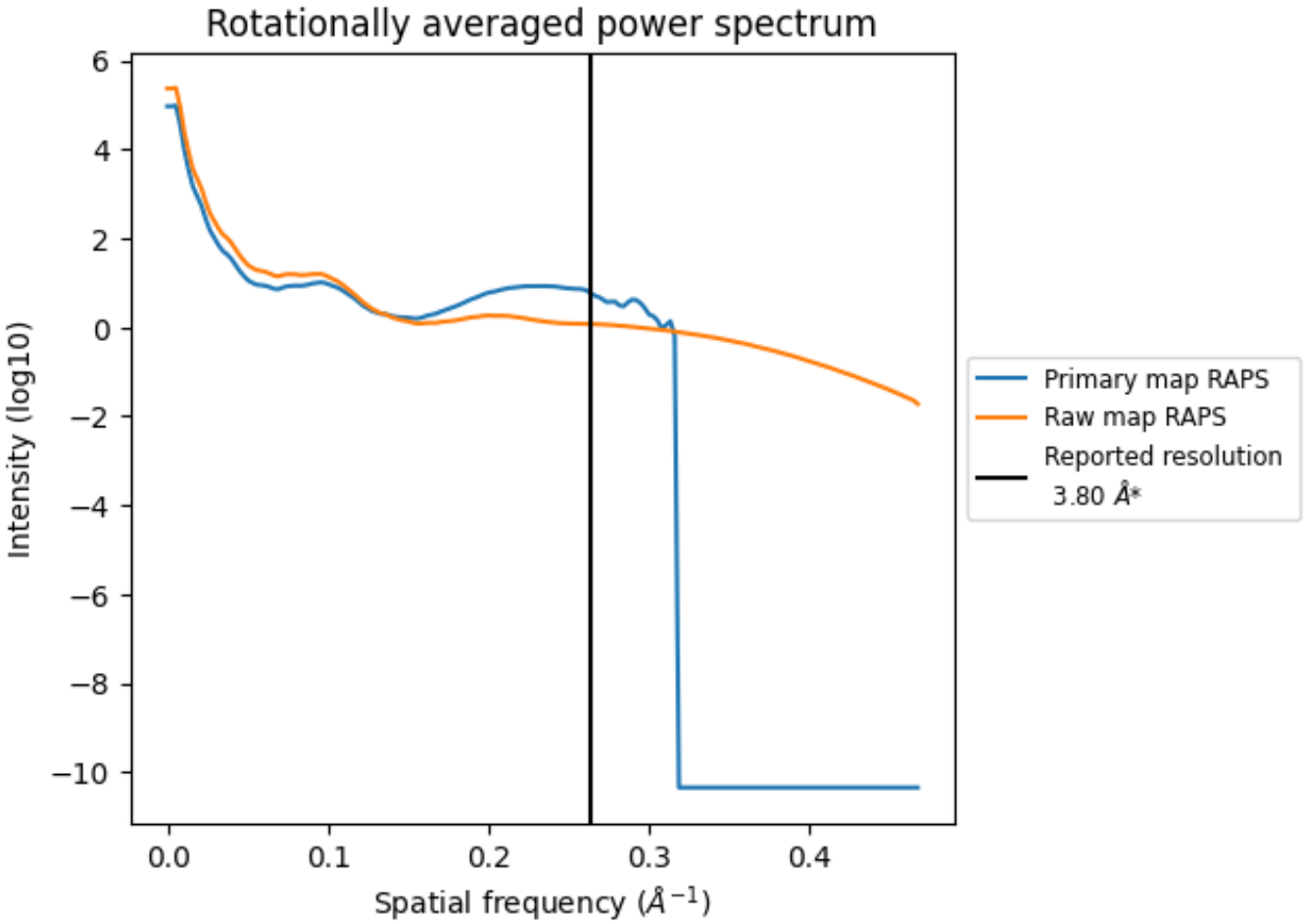
7.2 Volume estimate (i)



The volume at the recommended contour level is 222 nm^3; this corresponds to an approximate mass of 201 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)

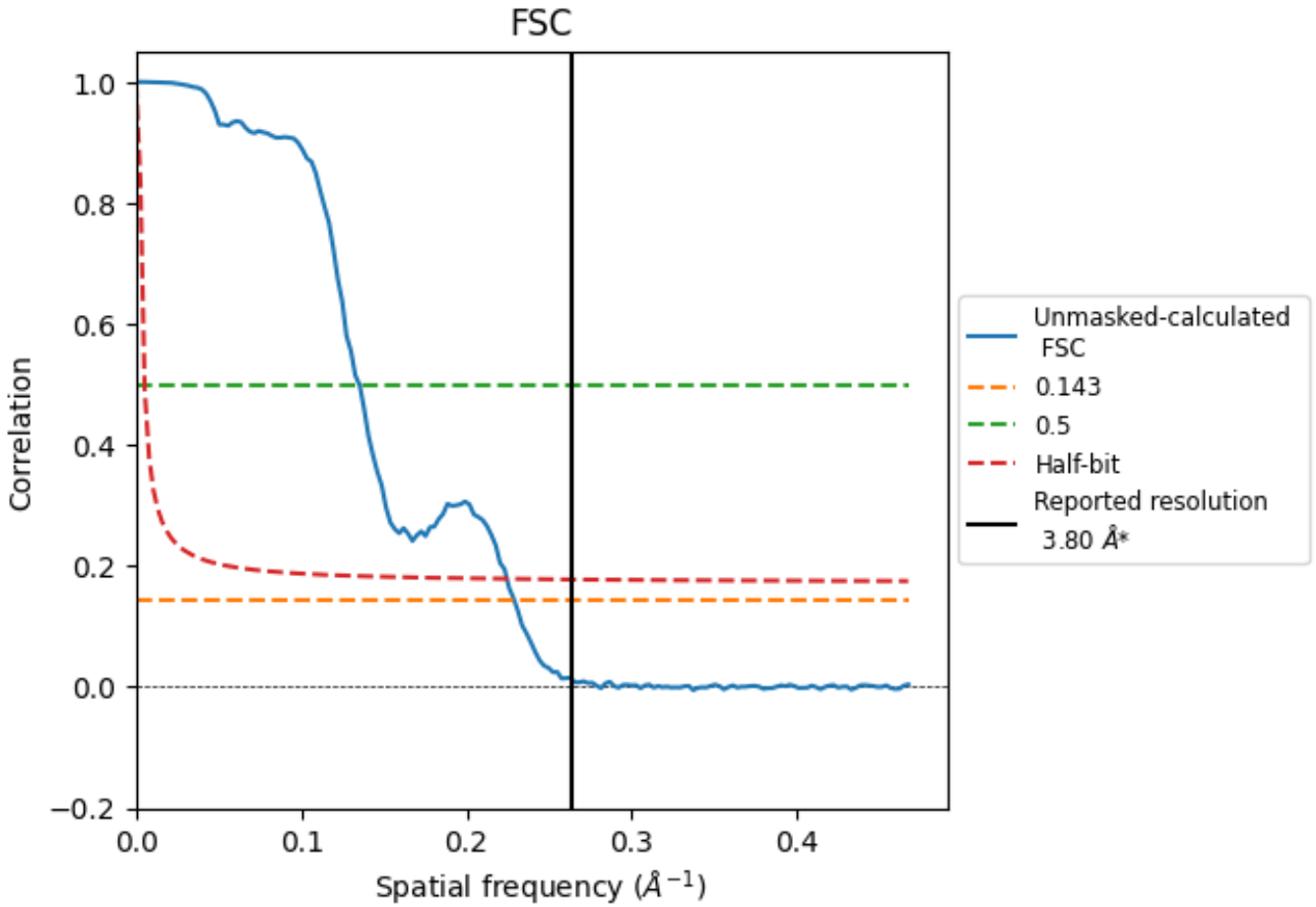


*Reported resolution corresponds to spatial frequency of 0.263 Å^{-1}

8 Fourier-Shell correlation

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



*Reported resolution corresponds to spatial frequency of 0.263 Å^{-1}

8.2 Resolution estimates (i)

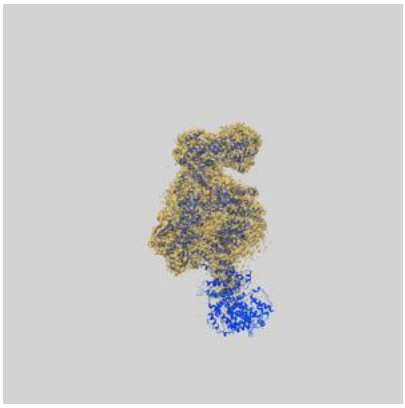
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.80	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.37	7.40	4.46

*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 4.37 differs from the reported value 3.8 by more than 10 %

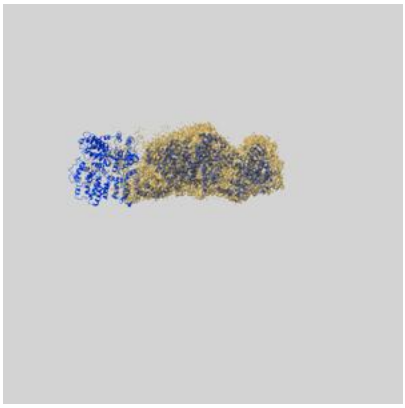
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-41502 and PDB model 8TQC. Per-residue inclusion information can be found in section 3 on page 4.

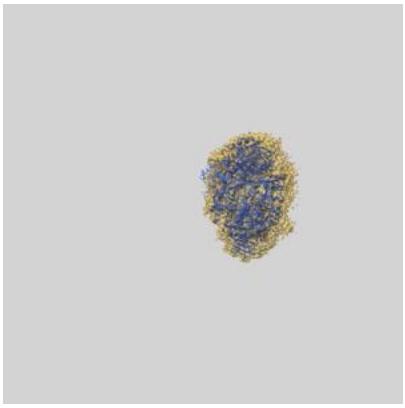
9.1 Map-model overlay



X



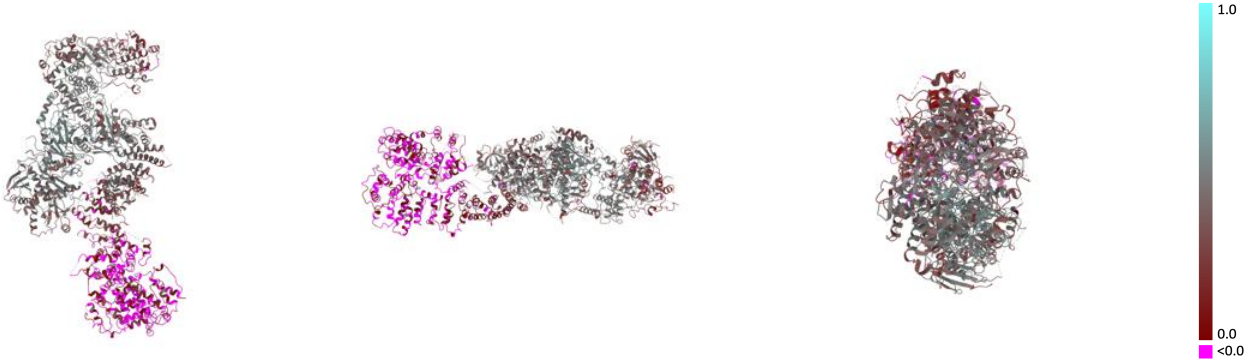
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0115 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.

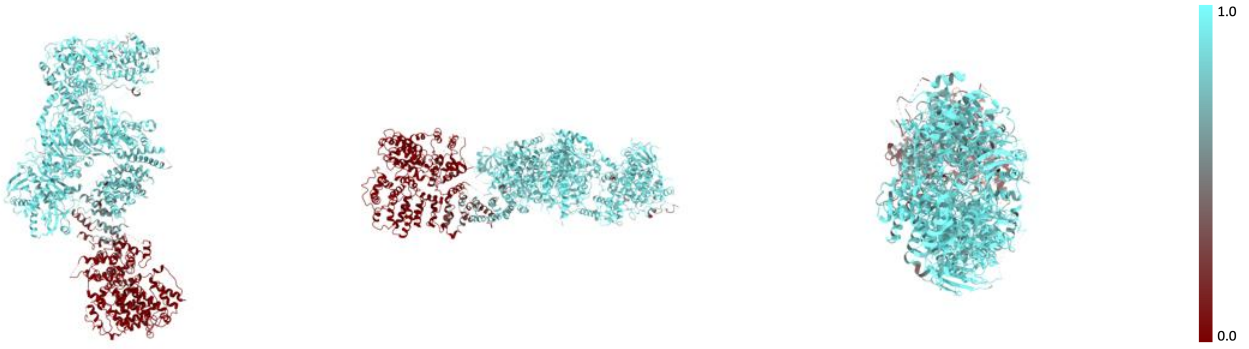
9.2 Q-score mapped to coordinate model



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.

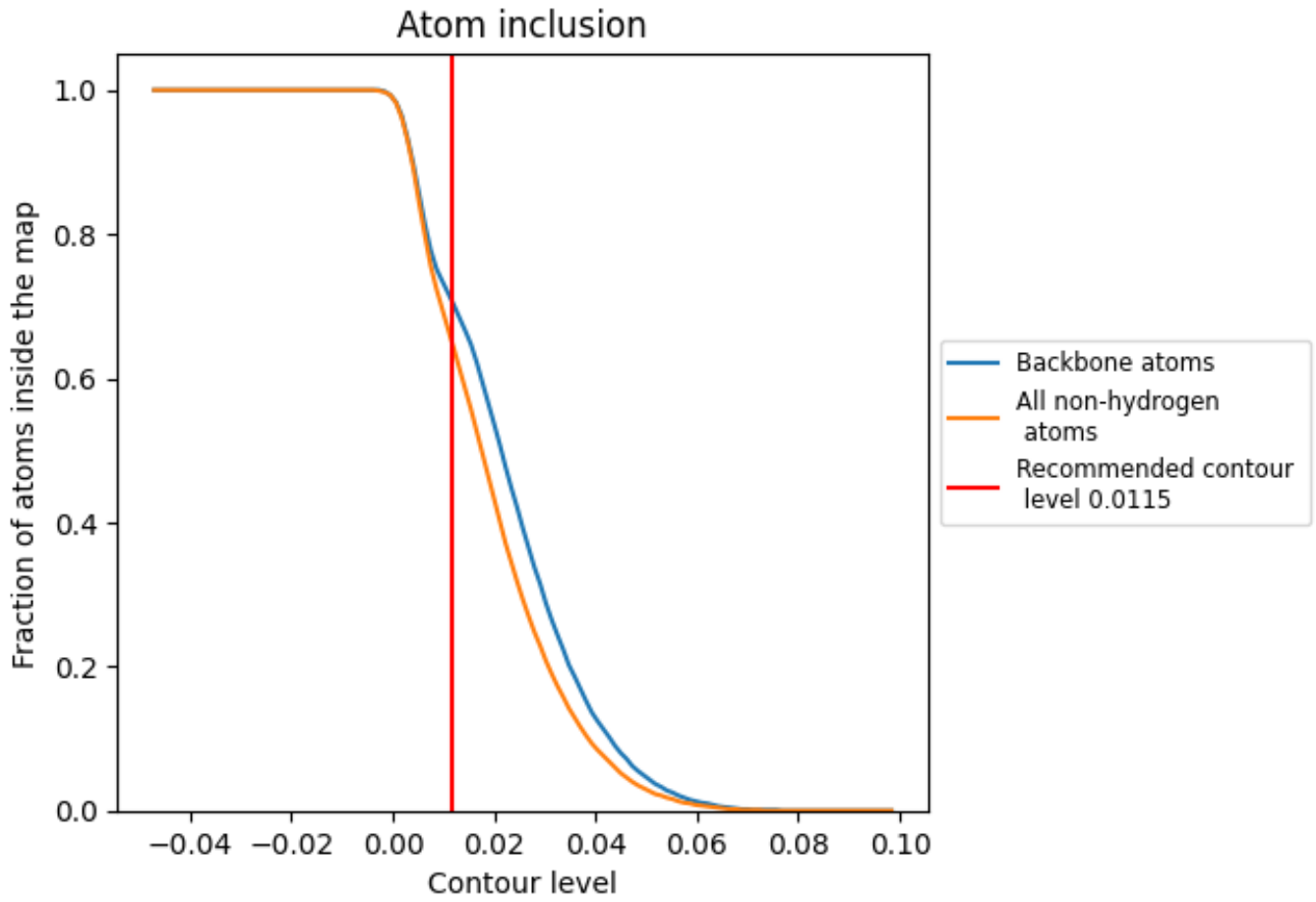
9.3 Atom inclusion mapped to coordinate model



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 (0.0115).

9.4 Atom inclusion (i)



At the recommended contour level, 71% of all backbone atoms, 65% 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 (0.0115) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6540	0.3020
A	0.8470	0.3370
B	0.8980	0.4320
C	0.3800	0.1570
D	0.9170	0.4620