



wwPDB EM Validation Summary Report ⓘ

Mar 12, 2024 – 12:39 pm GMT

PDB ID : 8QEO
EMDB ID : EMD-18374
Title : cryo-EM structure complex of Frizzled-7 and Clostridioides difficile toxin B
Authors : Kinsolving, J.; Bous, J.
Deposited on : 2023-09-01
Resolution : 3.26 Å(reported)
Based on initial model : .

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.dev70
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

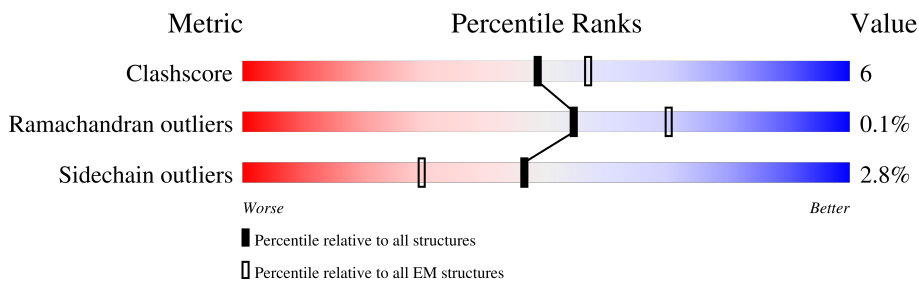
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.26 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
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 $\leq 5\%$. 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	2397	
2	B	603	

2 Entry composition i

There are 3 unique types of molecules in this entry. The entry contains 18126 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 Toxin B.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	2146	17176	10943	2710	3477	46	0	0

There are 31 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-13	MET	-	initiating methionine	UNP P18177
A	-12	ASP	-	expression tag	UNP P18177
A	-11	LYS	-	expression tag	UNP P18177
A	-10	LEU	-	expression tag	UNP P18177
A	-9	VAL	-	expression tag	UNP P18177
A	-8	HIS	-	expression tag	UNP P18177
A	-7	LEU	-	expression tag	UNP P18177
A	-6	ASN	-	expression tag	UNP P18177
A	-5	GLN	-	expression tag	UNP P18177
A	-4	ARG	-	expression tag	UNP P18177
A	-3	GLY	-	expression tag	UNP P18177
A	-2	LYS	-	expression tag	UNP P18177
A	-1	CYS	-	expression tag	UNP P18177
A	0	THR	-	expression tag	UNP P18177
A	2367	GLY	-	expression tag	UNP P18177
A	2368	TYR	-	expression tag	UNP P18177
A	2369	ARG	-	expression tag	UNP P18177
A	2370	PRO	-	expression tag	UNP P18177
A	2371	HIS	-	expression tag	UNP P18177
A	2372	ALA	-	expression tag	UNP P18177
A	2373	GLY	-	expression tag	UNP P18177
A	2374	LEU	-	expression tag	UNP P18177
A	2375	ARG	-	expression tag	UNP P18177
A	2376	GLY	-	expression tag	UNP P18177
A	2377	SER	-	expression tag	UNP P18177
A	2378	HIS	-	expression tag	UNP P18177
A	2379	HIS	-	expression tag	UNP P18177
A	2380	HIS	-	expression tag	UNP P18177

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Chain	Residue	Modelled	Actual	Comment	Reference
A	2381	HIS	-	expression tag	UNP P18177
A	2382	HIS	-	expression tag	UNP P18177
A	2383	HIS	-	expression tag	UNP P18177

- Molecule 2 is a protein called Frizzled-7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	121	949	600	165	172	12	0	0

There are 61 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	10	MET	-	initiating methionine	UNP O75084
B	11	LYS	-	expression tag	UNP O75084
B	12	THR	-	expression tag	UNP O75084
B	13	ILE	-	expression tag	UNP O75084
B	14	ILE	-	expression tag	UNP O75084
B	15	ALA	-	expression tag	UNP O75084
B	16	LEU	-	expression tag	UNP O75084
B	17	SER	-	expression tag	UNP O75084
B	18	TYR	-	expression tag	UNP O75084
B	19	ILE	-	expression tag	UNP O75084
B	20	PHE	-	expression tag	UNP O75084
B	21	CYS	-	expression tag	UNP O75084
B	22	LEU	-	expression tag	UNP O75084
B	23	VAL	-	expression tag	UNP O75084
B	24	PHE	-	expression tag	UNP O75084
B	25	ALA	-	expression tag	UNP O75084
B	26	ASP	-	expression tag	UNP O75084
B	27	TYR	-	expression tag	UNP O75084
B	28	LYS	-	expression tag	UNP O75084
B	29	ASP	-	expression tag	UNP O75084
B	30	ASP	-	expression tag	UNP O75084
B	31	ASP	-	expression tag	UNP O75084
B	32	ASP	-	expression tag	UNP O75084
B	575	SER	-	expression tag	UNP O75084
B	576	ARG	-	expression tag	UNP O75084
B	577	LEU	-	expression tag	UNP O75084
B	578	GLU	-	expression tag	UNP O75084
B	579	VAL	-	expression tag	UNP O75084
B	580	LEU	-	expression tag	UNP O75084

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Chain	Residue	Modelled	Actual	Comment	Reference
B	581	PHE	-	expression tag	UNP O75084
B	582	GLN	-	expression tag	UNP O75084
B	583	GLY	-	expression tag	UNP O75084
B	584	PRO	-	expression tag	UNP O75084
B	585	TRP	-	expression tag	UNP O75084
B	586	SER	-	expression tag	UNP O75084
B	587	HIS	-	expression tag	UNP O75084
B	588	PRO	-	expression tag	UNP O75084
B	589	GLN	-	expression tag	UNP O75084
B	590	PHE	-	expression tag	UNP O75084
B	591	GLU	-	expression tag	UNP O75084
B	592	LYS	-	expression tag	UNP O75084
B	593	GLY	-	expression tag	UNP O75084
B	594	GLY	-	expression tag	UNP O75084
B	595	GLY	-	expression tag	UNP O75084
B	596	SER	-	expression tag	UNP O75084
B	597	GLY	-	expression tag	UNP O75084
B	598	GLY	-	expression tag	UNP O75084
B	599	GLY	-	expression tag	UNP O75084
B	600	SER	-	expression tag	UNP O75084
B	601	GLY	-	expression tag	UNP O75084
B	602	GLY	-	expression tag	UNP O75084
B	603	GLY	-	expression tag	UNP O75084
B	604	SER	-	expression tag	UNP O75084
B	605	TRP	-	expression tag	UNP O75084
B	606	SER	-	expression tag	UNP O75084
B	607	HIS	-	expression tag	UNP O75084
B	608	PRO	-	expression tag	UNP O75084
B	609	GLN	-	expression tag	UNP O75084
B	610	PHE	-	expression tag	UNP O75084
B	611	GLU	-	expression tag	UNP O75084
B	612	LYS	-	expression tag	UNP O75084

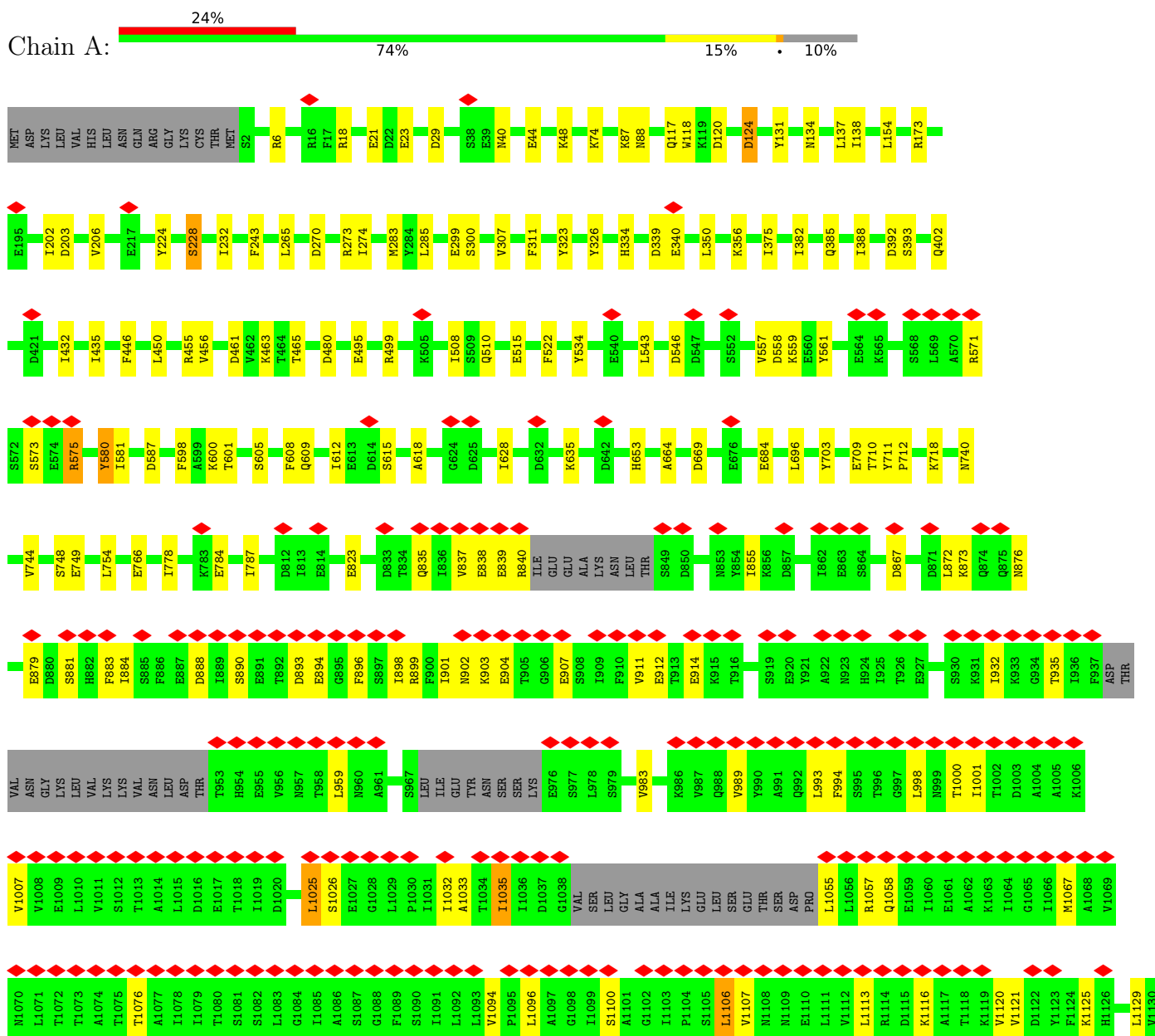
- Molecule 3 is ZINC ION (three-letter code: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms	AltConf
3	A	1	Total Zn 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: Toxin B



ASN	N2154	G2155	I2156	V2157	Q2158	I2159	G2160	V2161	F2162	D2163	T2164	S2165	C2166	L2167	K2168	K2169	Y2170	F2171	A2172	I2173	A2174	N2175	T2176	V2177	N2178	Y2182	A2185	V2186	E2187	V2188	S2189	C2190	L2191	V2192	R2193	ASN	GLY	GLU	TRP	PHE	ASP	VAL	TRP	TRP	GLY	GLU	GLN	PHE	GLY	TRP	TRP	ILE	ILE	
ASN	F1905	K1906	Y1907	F1908	A1909	N1912	T1913	L1914	D1915	E1916	N1917	D1918	G1919	A1922	I1923	D1924	F1925	T1926	I1930	I1931	D1932	E1933	N1934	I1935	D1939	D1940	R1943	G1944	A1945	D1952	G1953	E1954	F1958	T1962	G1963	K1964	A1965	L1969	N1970	I1971	I1972	G1973	D1974	I1975	K1976	S1981	D1982	G1983	V1984	N1985				
ASN	L1808	I1809	G1810	Y1811	S1817	L1818	Y1819	N1820	L1835	D1840	K1846	N1850	F1856	V1857	T1858	G1859	D1861	D1862	K1863	Y1864	Y1865	I1869	S1875	I1876	G1877	E1878	I1879	I1880	I1881	D1882	D1883	K1884	Y1887	F1888	N1889	Q1890	S1891	G1892	V1893	L1894	Q1895	T1896	G1897	V1898	F1899	S1900	T1901	E1902	D1903	G1904				
ASN	D1558	E1559	I1565	G1573	N1574	N1575	T1576	T1577	S1578	D1579	S1583	F1584	L1585	M1588	K1591	M1596	F1597	L1598	Q1599	I1602	K1603	F1604	A1608	I1612	F1621	E1622	F1623	I1624	C1625	D1626	E1627	M1628	I1631	Y1634	F1635	K1637	F1638	V1649	G1650	M1651	R1652	Q1653	P1659	N1660										
ASN	N1453	S1454	E1455	L1456	Q1457	K1458	N1459	I1460	Y1462	V1465	D1466	S1467	E1468	G1469	K1470	E1471	N1476	T1479	K1480	L1483	F1484	V1485	S1486	E1487	L1488	D1490	V1491	V1492	L1493	L1494	V1497	Y1498	M1499	D1500	D1501	F1506	V1516	K1517	D1522	M1523	L1527	D1534	G1546	E1547	K1548	L1552								
ASN	K1361	I1362	K1363	K1364	G1365	D1366	L1367	I1368	E1369	G1370	I1371	L1375	E1379	N1380	H1387	F1391	E1394	V1395	N1396	G1397	S1398	L1404	S1407	I1408	L1409	E1410	G1411	I1412	N1413	A1414	D1419	L1420	L1421	S1424	Y1425	L1428	I1429	S1430	G1431	E1432	L1433	K1434	M1437	I1443	I1444	K1446	I1447							
ASN	H1199	L1200	S1201	I1202	Y1203	K1210	E1211	E1212	L1213	D1214	L1215	S1216	K1217	D1218	L1219	L1222	N1227	R1228	W1232	E1233	T1234	G1235	W1236	T1237	P1238	G1239	L1240	R1241	E1244	N1245	G1247	T1248	K1249	L1250	L1251	D1252	R1253	I1254	R1255	D1256	N1257	Y1258	E1259	G1260	E1261	F1262	Y1263	W1264	R1265	Y1266	F1267	A1268	F1269	I1270
ASN	A1271	D1272	A1273	L1274	I1275	T1276	T1277	L1278	E1283	D1284	I1287	R1288	I1289	M1290	L1291	D1292	S1293	M1294	T1305	E1306	Y1307	E1310	S1319	G1320	Y1323	A1324	Q1329	Y1330	M1331	I1336	S1339	E1340	S1341	D1342	I1346	D1349	N1350	R1353	D1354	V1355	T1356	I1357	E1358	E1359	D1360									
ASN	E1131	T1132	E1133	G1134	V1135	T1137	L1138	L1139	D1140	D1141	K1142	I1143	M1144	M1145	D1148	D1149	L1150	V1151	E1154	N1158	N1159	N1160	V1163	L1164	E1168	R1171	M1172	E1173	G1174	G1175	S1176	G1177	H1178	T1179	V1180	T1181	D1182	D1183	I1184	D1185	H1186	F1187	F1188	S1189	A1190	P1191	S1192	I1193	T1194	Y1195	Y1196	E1197	F1198	

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	151385	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50.453	Depositor
Minimum defocus (nm)	600	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	105000	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	9.875	Depositor
Minimum map value	-0.121	Depositor
Average map value	0.014	Depositor
Map value standard deviation	0.031	Depositor
Recommended contour level	0.4	Depositor
Map size (\AA)	579.6, 579.6, 579.6	wwPDB
Map dimensions	500, 500, 500	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.1592, 1.1592, 1.1592	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:
ZN

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.29	0/17497	0.46	0/23686
2	B	0.26	0/974	0.48	0/1325
All	All	0.29	0/18471	0.46	0/25011

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 [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	17176	0	16623	207	0
2	B	949	0	910	15	0
3	A	1	0	0	0	0
All	All	18126	0	17533	221	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 6.

The worst 5 of 221 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:A:907:GLU:N	1:A:907:GLU:OE1	2.14	0.80
1:A:299:GLU:O	1:A:300:SER:OG	2.02	0.76
1:A:40:ASN:ND2	1:A:44:GLU:OE1	2.20	0.74
1:A:876:ASN:ND2	1:A:912:GLU:OE1	2.20	0.73
1:A:669:ASP:OD1	1:A:718:LYS:NZ	2.22	0.73

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	2136/2397 (89%)	1959 (92%)	174 (8%)	3 (0%)	51	82
2	B	119/603 (20%)	99 (83%)	20 (17%)	0	100	100
All	All	2255/3000 (75%)	2058 (91%)	194 (9%)	3 (0%)	54	82

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	1499	MET
1	A	1631	ILE
1	A	1193	ILE

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	A	1930/2163 (89%)	1876 (97%)	54 (3%)	43 69
2	B	106/505 (21%)	104 (98%)	2 (2%)	57 76
All	All	2036/2668 (76%)	1980 (97%)	56 (3%)	46 69

5 of 56 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1137	THR
2	B	160	CYS
1	A	1387	HIS
2	B	129	GLN
1	A	1864	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 11 such sidechains are listed below:

Mol	Chain	Res	Type
1	A	1070	ASN
1	A	1159	ASN
1	A	2147	ASN
1	A	1227	ASN
1	A	809	ASN

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](#)

Of 1 ligands modelled in this entry, 1 is 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 [i](#)

This section contains visualisations of the EMDB entry EMD-18374. These allow visual inspection of the internal detail of the map and identification of artifacts.

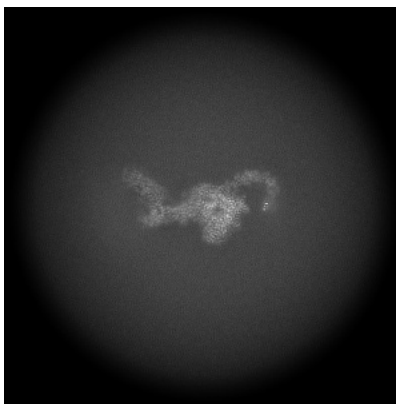
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

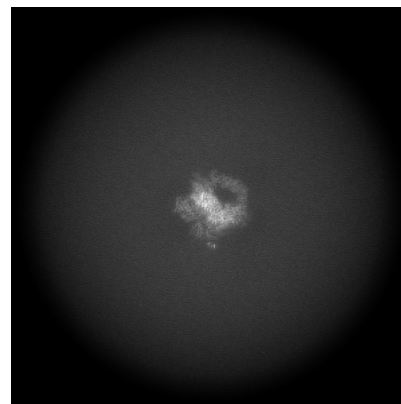
6.1.1 Primary map



X

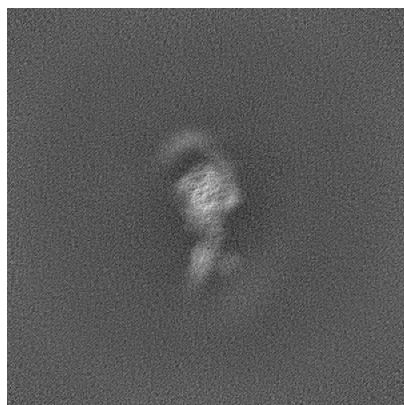


Y

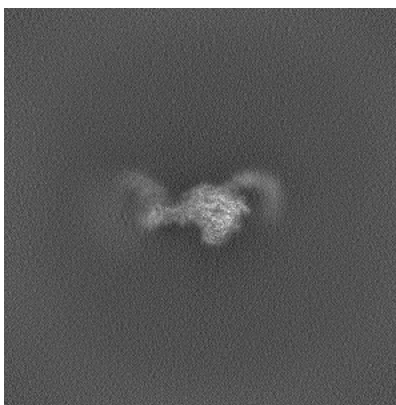


Z

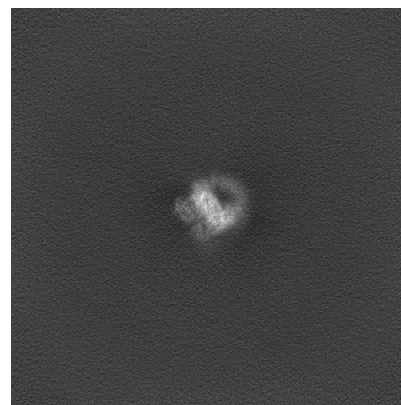
6.1.2 Raw map



X



Y



Z

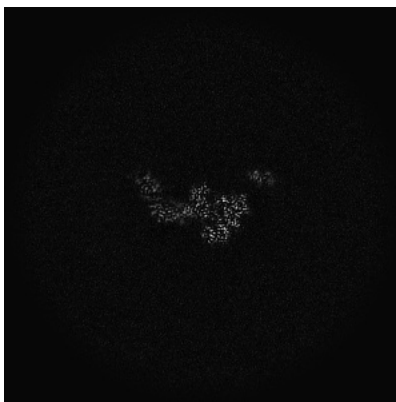
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

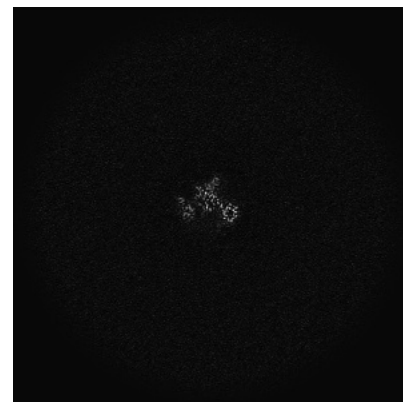
6.2.1 Primary map



X Index: 250



Y Index: 250

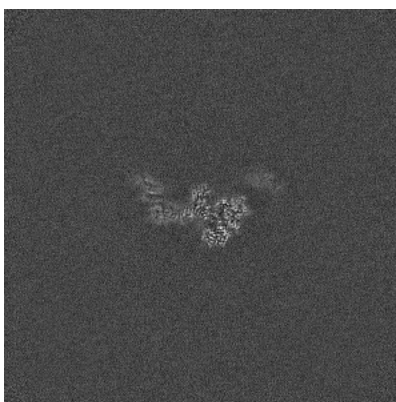


Z Index: 250

6.2.2 Raw map



X Index: 250



Y Index: 250

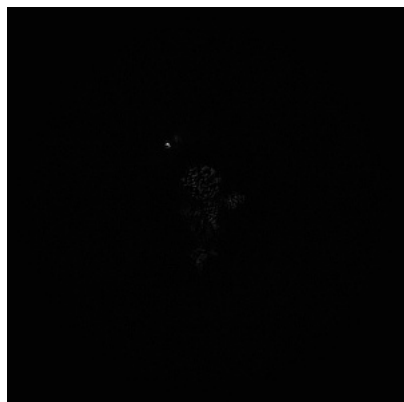


Z Index: 250

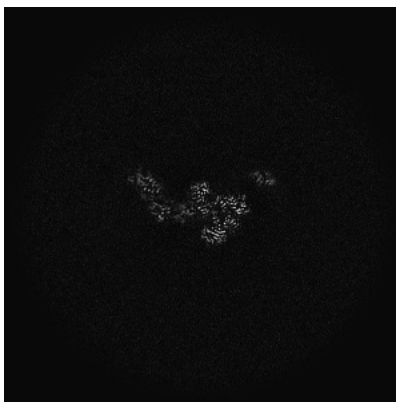
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

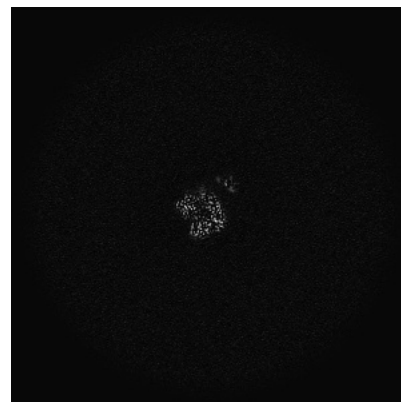
6.3.1 Primary map



X Index: 254

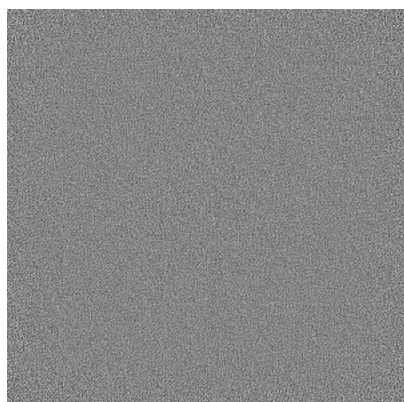


Y Index: 248

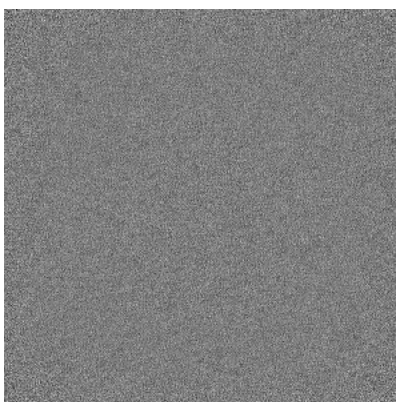


Z Index: 275

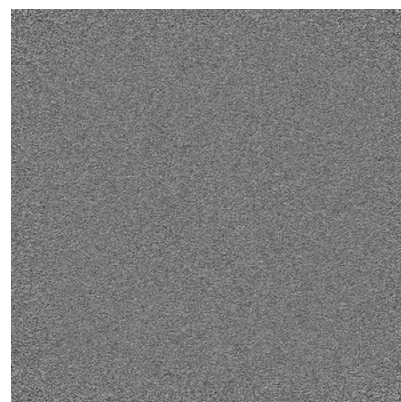
6.3.2 Raw map



X Index: 0



Y Index: 0

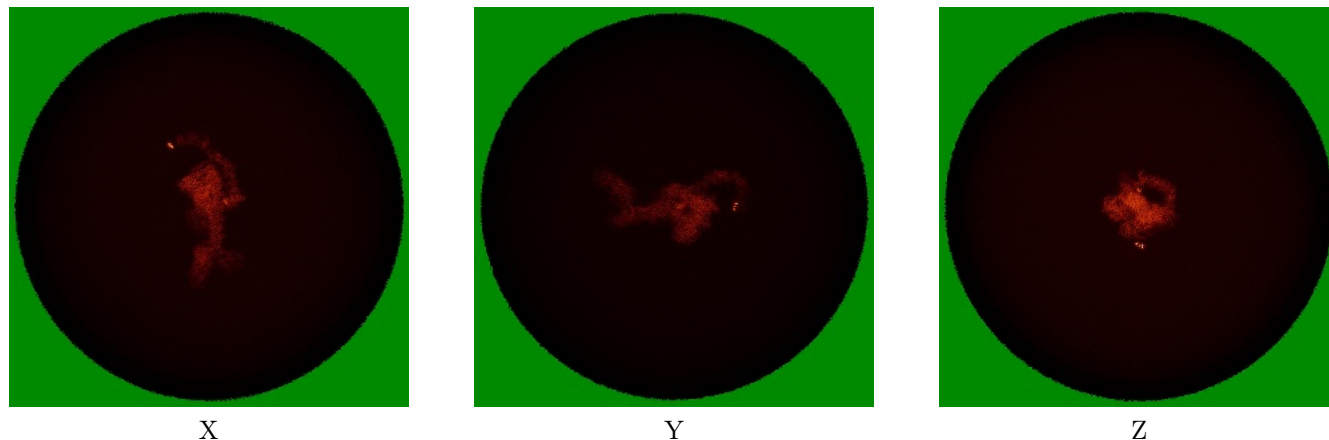


Z Index: 0

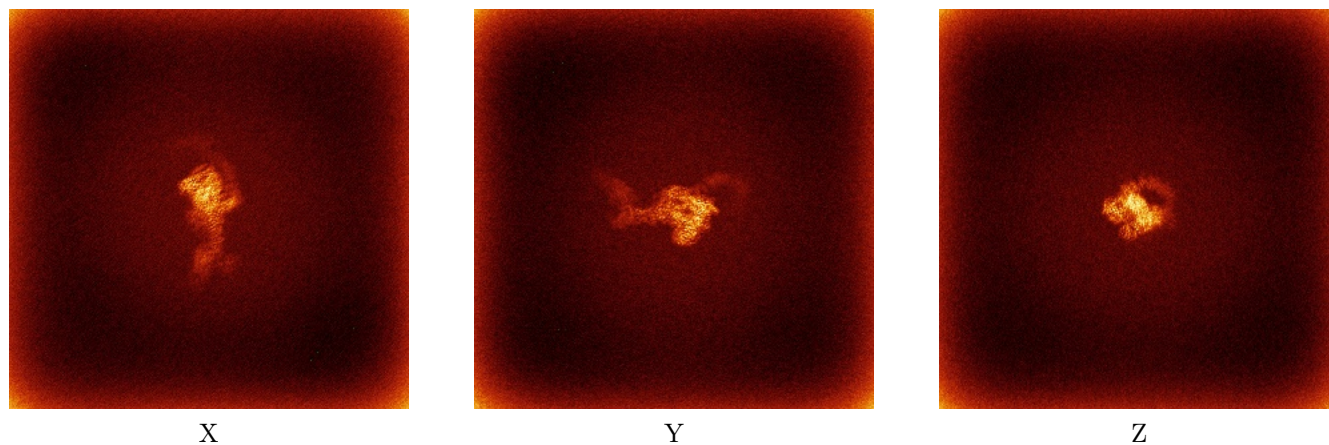
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1 Primary map



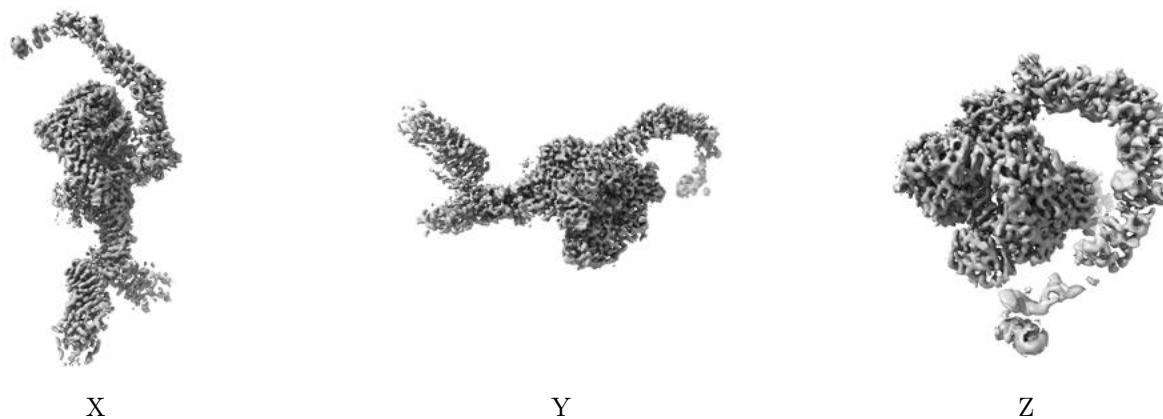
6.4.2 Raw map



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



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

6.5.2 Raw map



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

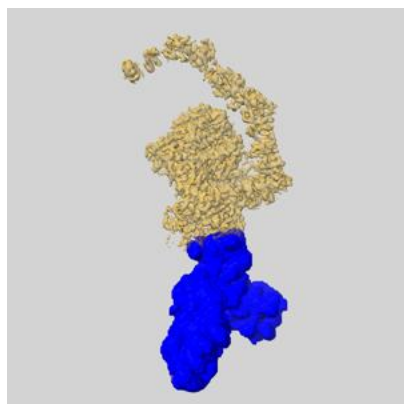
6.6 Mask visualisation [i](#)

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

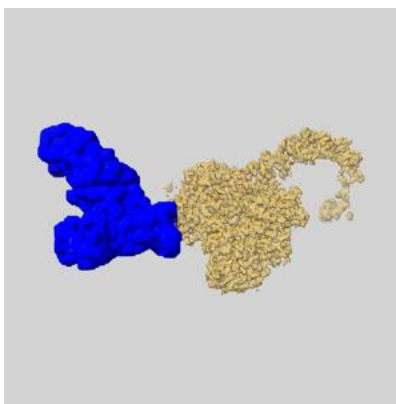
A mask typically either:

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

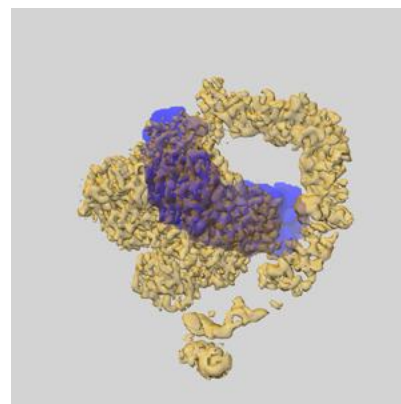
6.6.1 emd_18374_msk_1.map [i](#)



X

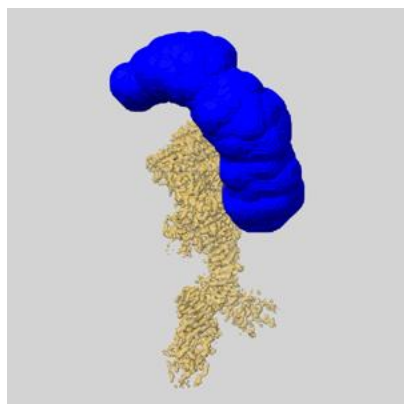


Y

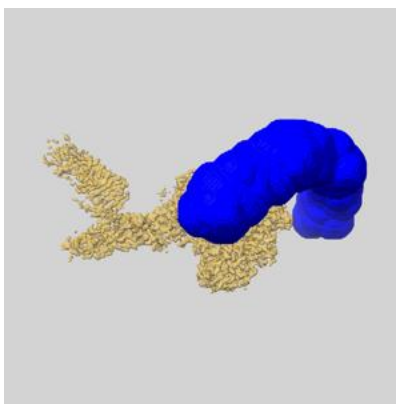


Z

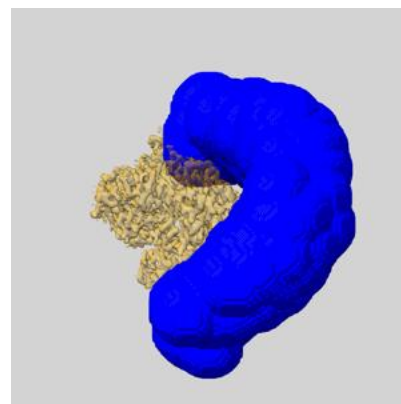
6.6.2 emd_18374_msk_2.map [i](#)



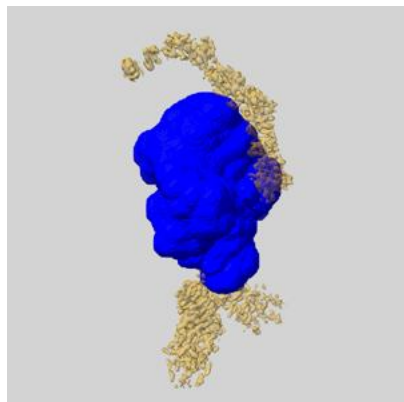
X



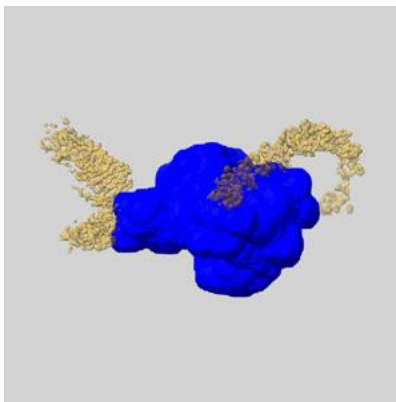
Y



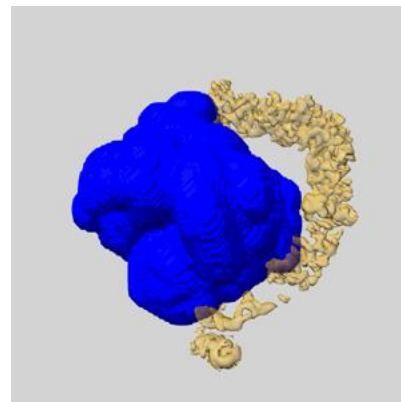
Z

6.6.3 emd_18374_msk_3.map [i](#)

X



Y

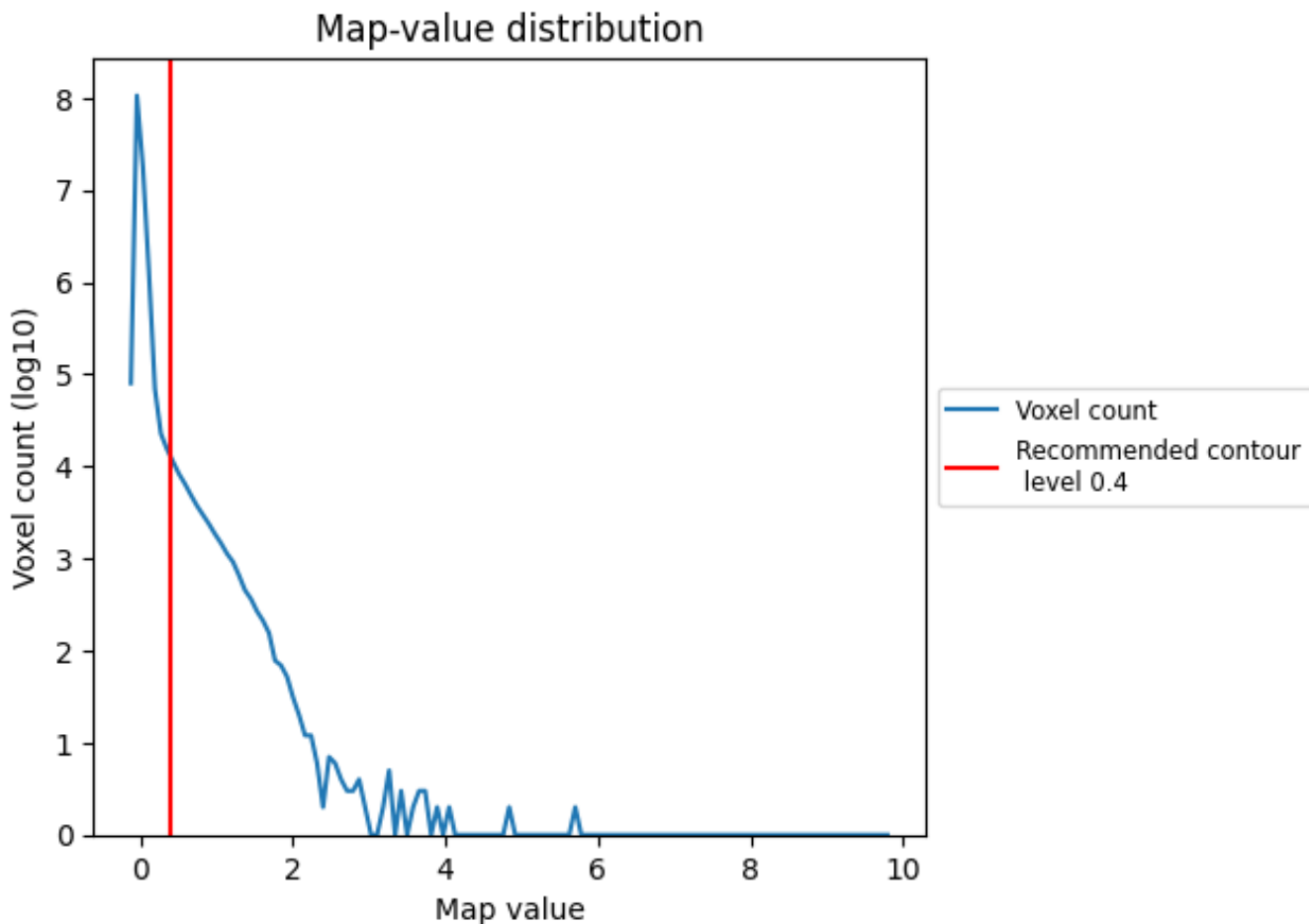


Z

7 Map analysis [i](#)

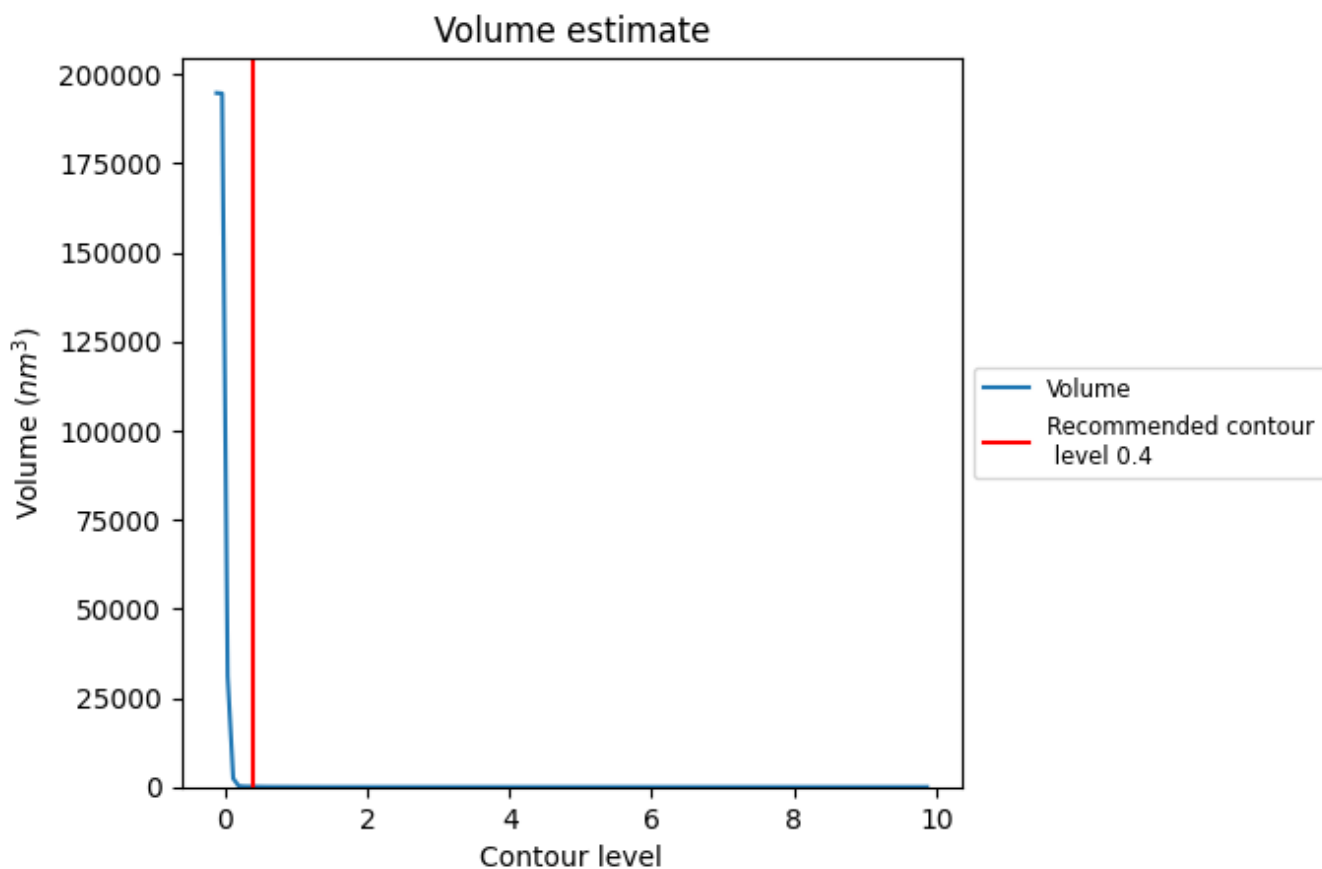
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

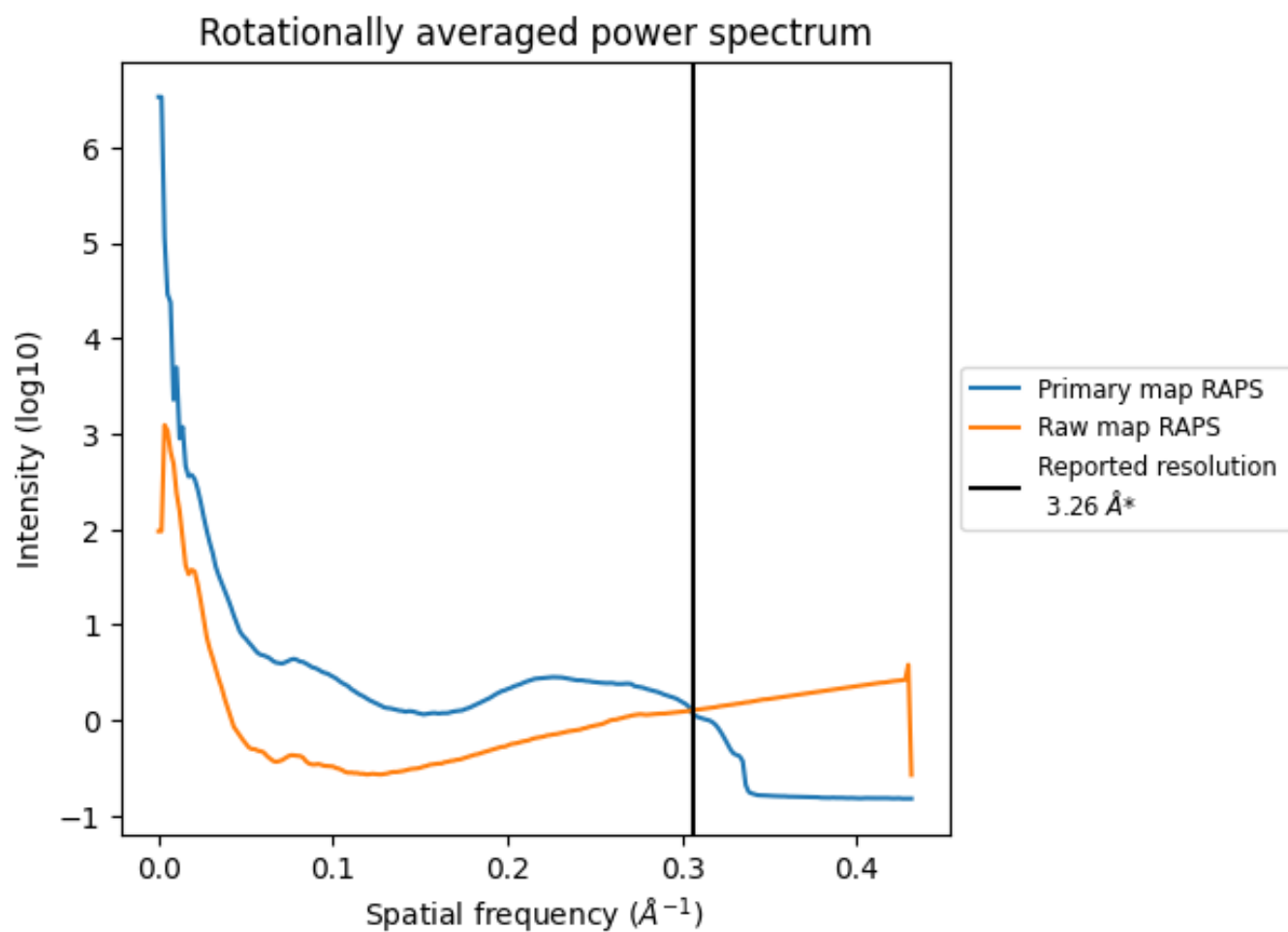
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 84 nm^3 ; this corresponds to an approximate mass of 75 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

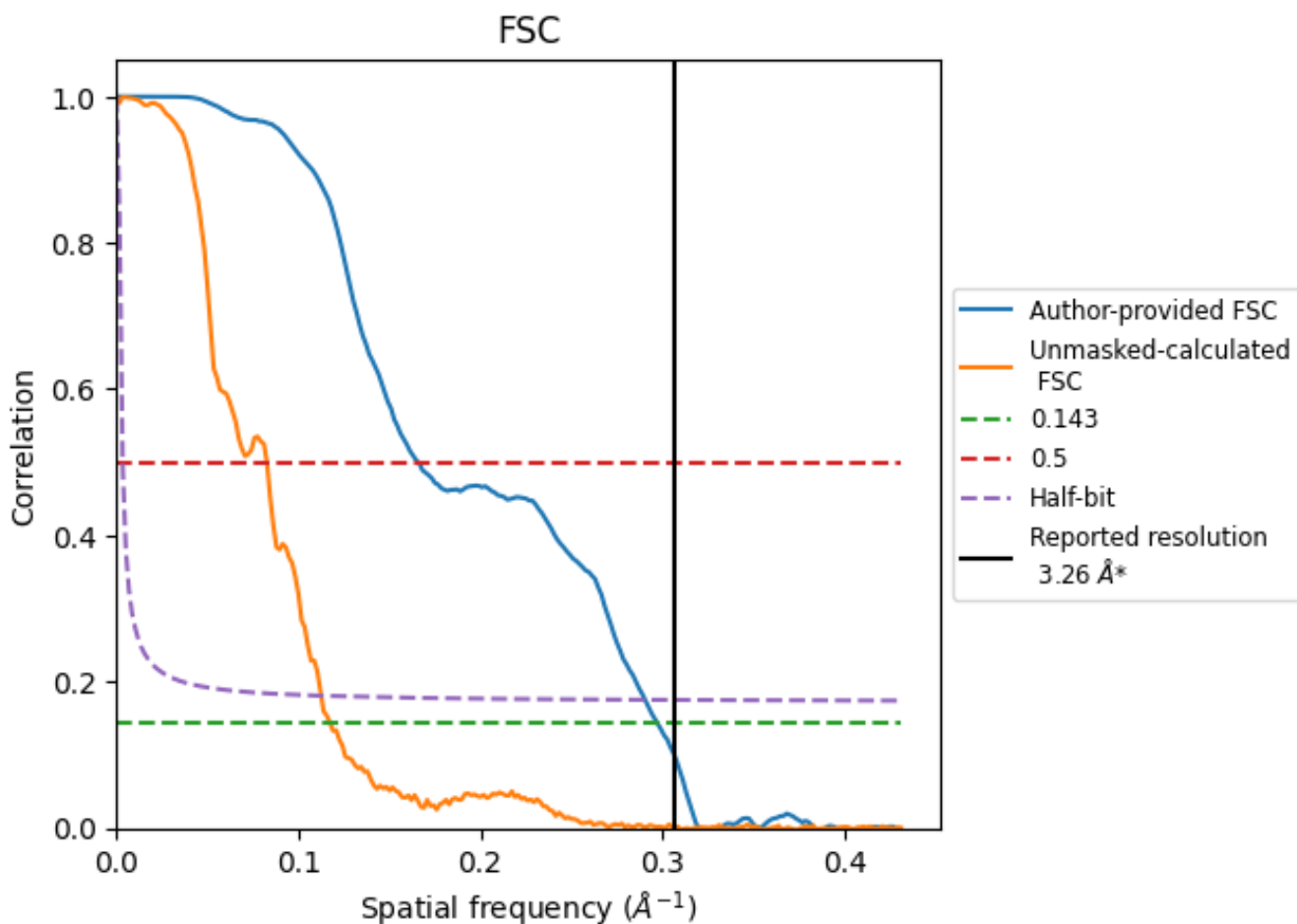


*Reported resolution corresponds to spatial frequency of 0.307 Å⁻¹

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 0.307 Å⁻¹

8.2 Resolution estimates [i](#)

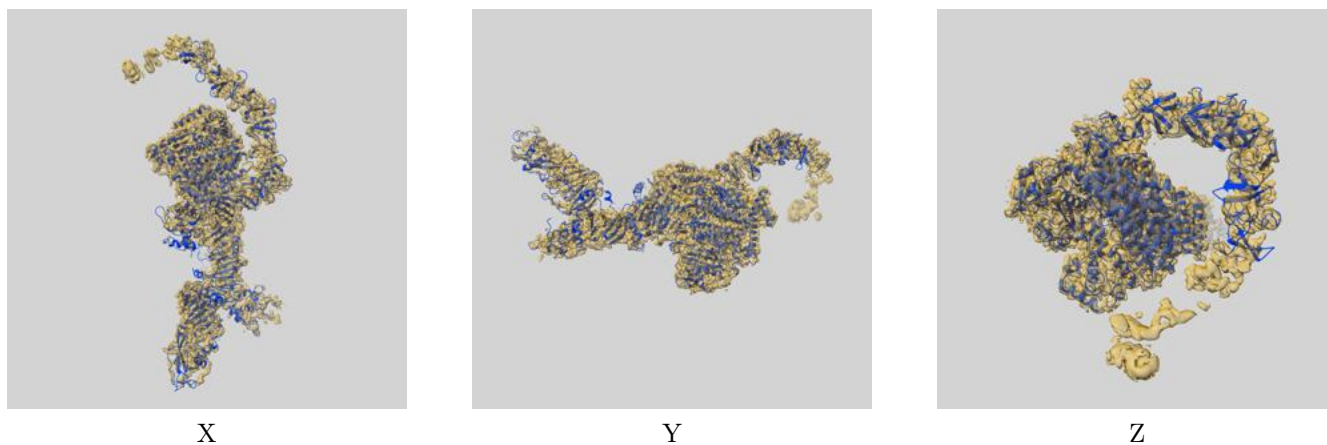
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.26	-	-
Author-provided FSC curve	3.36	6.03	3.44
Unmasked-calculated*	8.51	12.09	8.88

*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 8.51 differs from the reported value 3.26 by more than 10 %

9 Map-model fit [i](#)

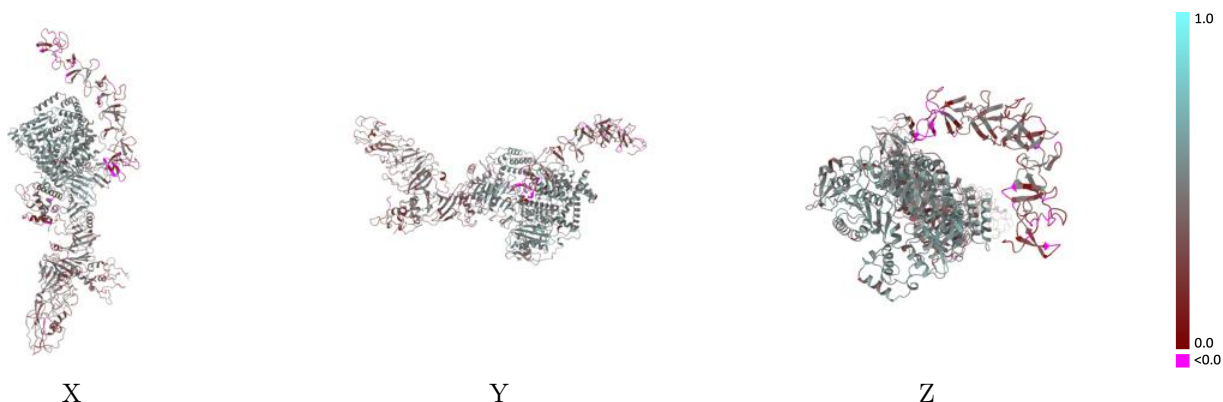
This section contains information regarding the fit between EMDB map EMD-18374 and PDB model 8QEO. Per-residue inclusion information can be found in section 3 on page 6.

9.1 Map-model overlay [i](#)



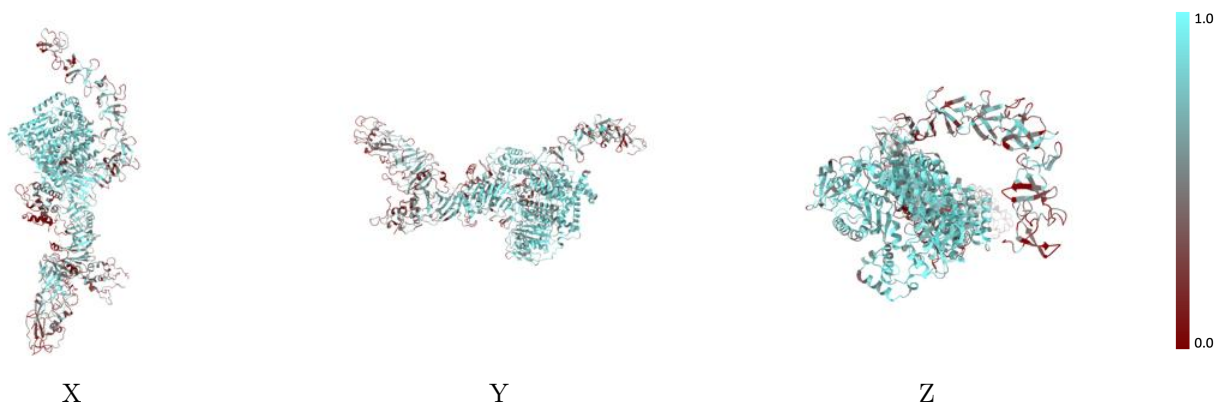
The images above show the 3D surface view of the map at the recommended contour level 0.4 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



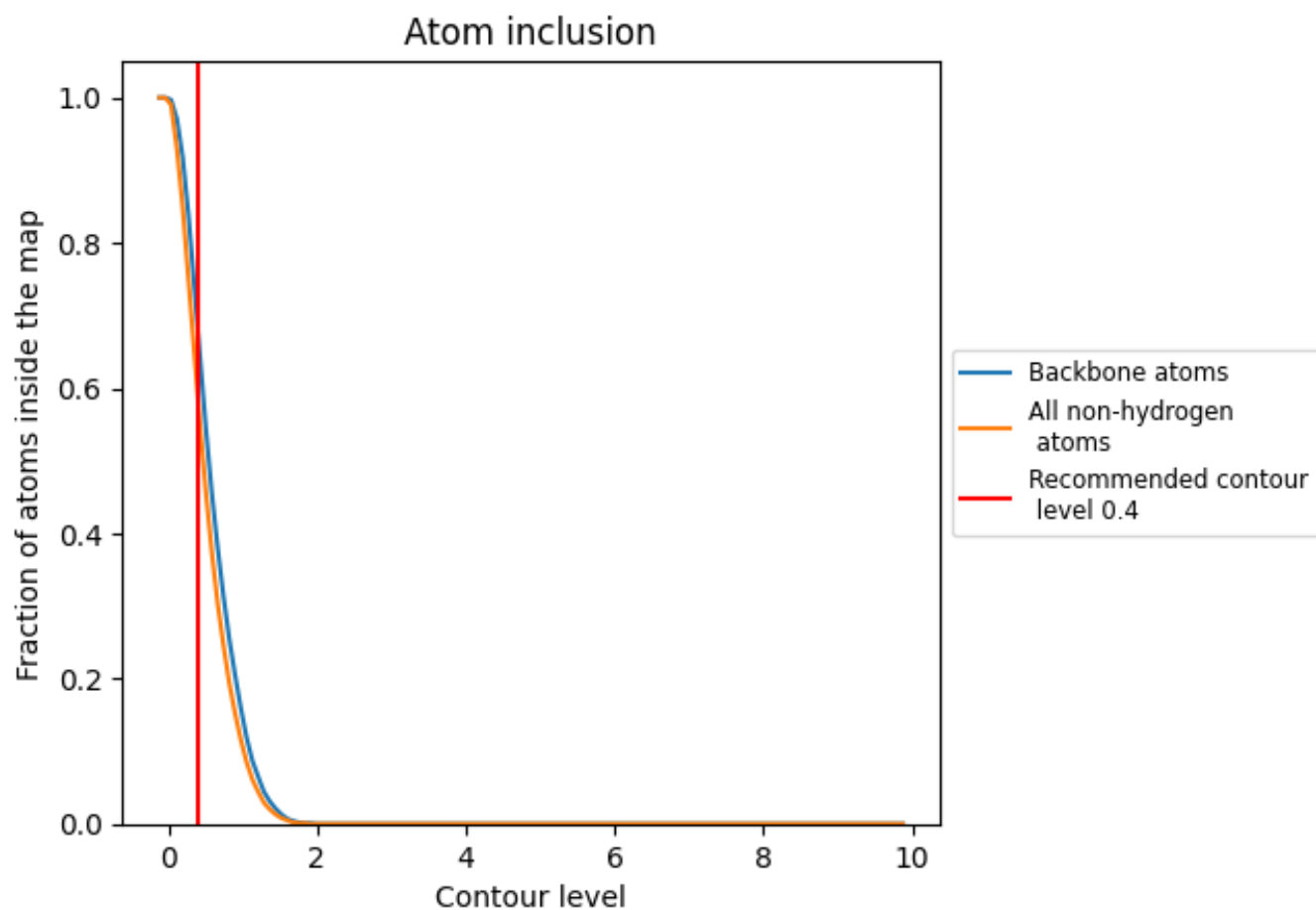
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



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







9.4 Atom inclusion [i](#)



At the recommended contour level, 68% of all backbone atoms, 58% 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 (0.4) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.5810	 0.4160
A	 0.5920	 0.4200
B	 0.3760	 0.3350

