



wwPDB EM Validation Summary Report ⓘ

Nov 20, 2022 – 05:05 am GMT

PDB ID : 6H3J
EMDB ID : EMD-0134
Title : Structural snapshots of the Type 9 protein translocon Plug-complex
Authors : Deme, J.C.; Lea, S.M.
Deposited on : 2018-07-18
Resolution : 3.70 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.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

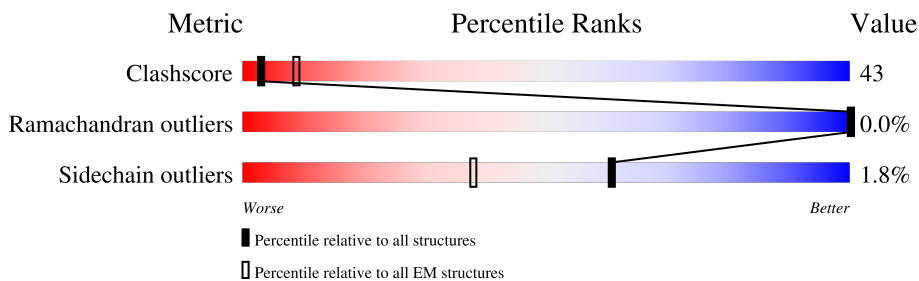
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.70 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
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	2403	
2	B	176	
3	C	419	

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 20301 atoms, of which 212 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 involved in gliding motility SprA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	1988	15853	10006	2690	3116	41	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1114	THR	ALA	conflict	UNP A0A1M5G5I4

- Molecule 2 is a protein called Peptidyl-prolyl cis-trans isomerase.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	H	N	O		
2	B	126	1185	624	212	158	191	0	0

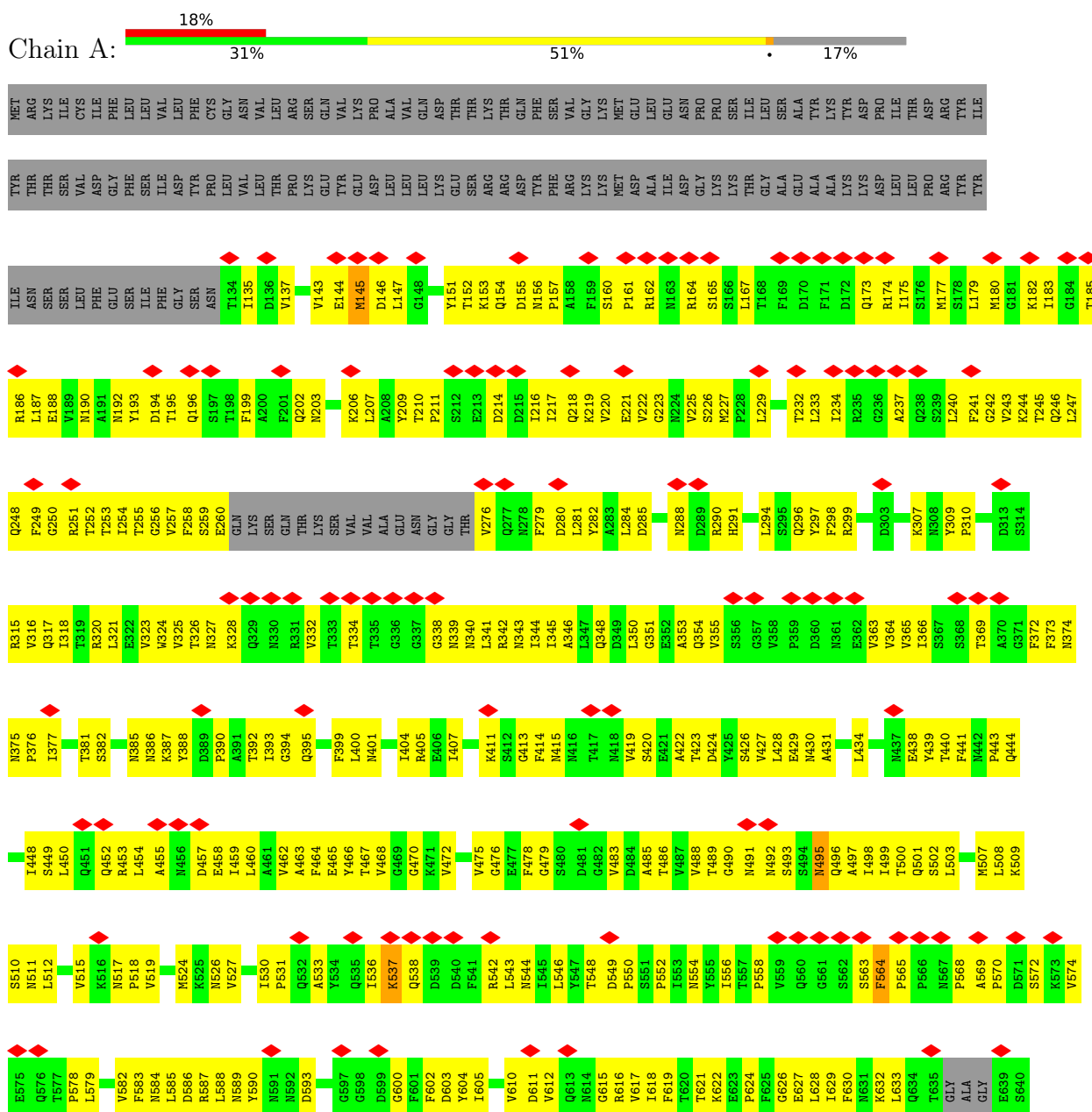
- Molecule 3 is a protein called Plug.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	397	3263	2085	541	631	6	0	0

3 Residue-property plots

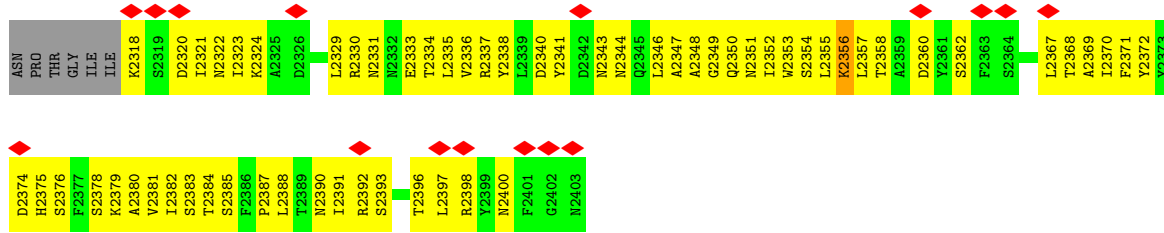
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

- Molecule 1: Protein involved in gliding motility SprA

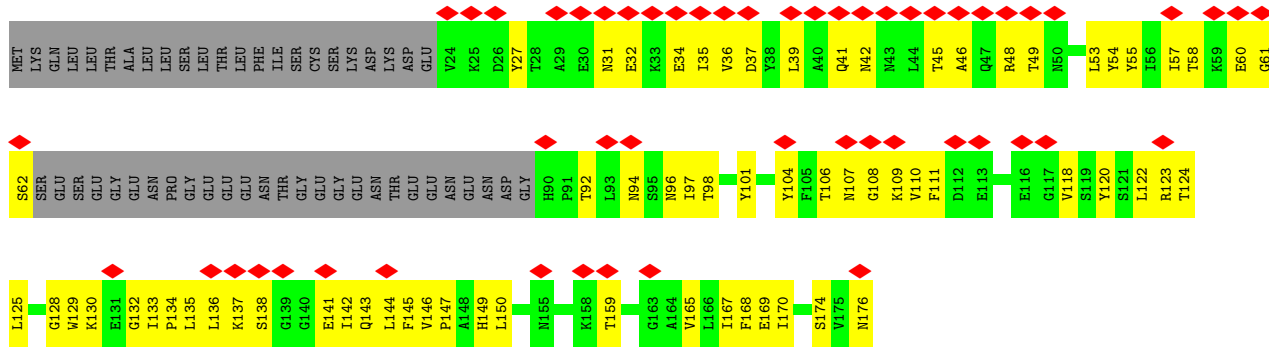


Y641	T645	M648	A649	M650	Q651	Y654	Y655	F656	R657	M658	M659	Y660	R661	M662	Q664	Q665	G666	A667	L668	Q669	D670	S671	D672	K673	M674	L677	L678	R679	G680	K681	Y682	K683	SER	SER	GLY	SER	SER	ASN	GLY	ILE	PRO	ILE	ILE	GLY	ALA	PHE	ALA	ASN	ASN	VAL	VAL	PRO	GLN	GLY	SER	VAL	VAL	VAL	THR		
ALA	ALA	GLY	ARG	VAL	LEU	VAL	GLU	GLY	ILE	ASP	TYR	SER	VAL	ASP	TYR	PRO	GLN	LYS	THR	GLY	ARG	VAL	VAL	ILE	ILE	GLN	THR	PRO	GLY	GLU	VAL	SER	LEU	GLN	ALA	ALA	SER	ASN	SER	SER	ILE	PHE	GLY	GLN	GLN	ILE	ILE	VAL	VAL	VAL	VAL	VAL	THR								
D768	K769	F770	V771	G773	G774	G775	T776	L777	M779	T780	F781	R782	PRO	PHE	THR	GLN	THR	LYS	THR	GLN	ARG	VAL	ILE	ILE	GLN	THR	PRO	GLY	GLU	ALA	THR	SER	LEU	GLN	ALA	ALA	SER	ASN	SER	SER	ILE	PHE	GLY	GLN	GLN	ILE	ILE	VAL	VAL	VAL	VAL	VAL	THR								
N830	L831	S832	I833	R834	G835	E836	V837	A838	F839	L840	R841	ASP	ALA	PRO	LYS	ALA	SER	ASP	PHE	PHE	GLN	GLN	GLY	GLU	ALA	THR	I855	Y857	Y858	V859	F860	G861	F862	G863	S864	Q865	Q866	T867	S868	T868	E809	V810	P811	F812	L813	T814	R815	L816	A817	N818	R819	L820	P821	F822	M823	N824	T825	D826	V827	P828	S829
T891	F892	N893	A894	N895	S896	N897	T898	L899	E900	Y901	F903	K904	R905	A906	K907	L908	S909	W910	Y911	T912	Y913	D914	P915	V916	F917	Y918	S919	S920	K921	N922	P923	G924	G925	I925	S926	N927	D928	D929	L930	S931	L932	N933	R937	I938	Y939	S940	R941	E942	L943	N946	THR	ASP	ILE	ALA	GLN	GLY	GLN	N890			
ILE	Q955	T959	L960	D961	L962	T963	Y964	Y965	Y966	G967	R969	G970	P971	Y972	N973	N974	S977	F978	G979	A980	S981	N982	P983	N986	P987	G988	G989	I990	N991	R992	A993	L994	N995	F999	E1000	Q1001	G1002	M1003	V1004	E1005	Y1006	I1007	Q1008	F1009	W1010	Y1011	L1012	L1013	P1014	Y1015	V1016	G1017	M1018	G1019							
E1020	A1023	T1024	M1025	A1026	G1027	K1028	H1029	Y1030	F1031	M1032	L1033	G1034	E1035	M1036	S1037	D1039	V1040	L1041	K1042	M1043	G1044	R1045	Q1047	Y1048	E1049	H1050	G1051	L1052	G1053	P1054	D1055	Q1056	V1057	M1058	V1059	M1060	P1061	Q1062	P1063	L1064	W1065	D1067	V1068	P1069	S1073	L1074	I1075	A1077	F1078	D1079	T1080	M1081	P1082								
D1083	N1084	K1085	K1086	N1087	V1090	G1091	L1092	D1093	G1094	L1095	P1096	S1097	E1100	I1103	N1106	Y1107	A1108	G1109	E1110	A1111	ASP	PRO	I1114	G1115	D1116	D1117	T1119	Y1120	Y1121	L1122	N1123	A1124	D1125	V1128	E1129	E1130	R1131	M1134	Y1135	N1136	G1137	T1138	E1139	G1140	N1141	S1144	S1145	I1146	N1147	P1149											
M1150	R1151	G1152	S1153	L1156	P1157	D1158	V1159	E1160	D1161	I1162	M1163	R1164	D1165	M1166	T1167	M1168	S1169	T1170	I1171	M1172	A1173	Y1174	E1175	Y1177	S1178	I1179	D1180	V1181	K1182	P1183	G1184	M1185	Q1186	Y1187	G1188	E1189	M1190	Y1191	I1192	T1193	D1194	I1195	R1196	E1197	V1198	T1199	M1200	V1201	D1202	L1203	P1204	M1205	G1206	G1207	T1208	T1209	M1210				
A1211	R1212	W1213	I1214	Q1215	F1216	K1217	I1218	P1219	V1220	S1221	F1222	P1223	Q1224	M1225	T1226	I1227	G1228	M1229	I1230	T1231	D1232	F1233	R1234	S1235	L1236	R1237	F1238	M1239	R1240	M1241	F1242	M1243	T1244	G1245	F1246	Q1249	M1250	T1251	V1252	R1253	F1254	G1255	A1256	L1257	D1258	L1259	V1260	R1261	W1264	Y1267	THR	GLY	THR	THR	ASP	ALA					
ASN	ASP	GLN	ASN	PRO	ASP	ASP	ASP	GLY	V1283	E1284	F1285	D1286	V1287	A1288	L1289	V1290	M1291	I1292	Q1293	E1294	M1295	K1298	Q1299	P1300	Y1303	P1306	P1307	F1308	V1309	Q1310	ARG	GLU	GLN	LEU	TYR	ASN	ASN	ASN	THR	VAL	ILE	ASN	GLN	ASN	E1325	Q1326	A1327	L1328	V1330	R1331	I1332	G1333	A1334	I1335	G1336						
L1337	Q1338	Y1339	Q1340	D1341	S1342	R1343	A1344	V1345	F1346	K1347	N1348	V1349	S1350	L1351	V1352	M1353	Y1356	K1357	K1358	L1359	K1360	M1361	F1362	L1363	H1364	A1365	E1366	S1367	L1368	P1369	M1370	Q1371	P1372	T1373	L1374	E1375	D1376	D1377	E1378	M1379	V1380	I1383	R1384	F1385	F1389	T1390	Q1391	M1392	F1393	A1394	Q1395	I1398	P1399	L1400	K1401						
V1402	T1403	K1404	T1405	G1406	G1407	S1408	C1409	S1410	I1411	S1412	P1413	D1414	L1415	V1416	W1417	M1418	D1419	D1420	M1421	D1424	L1425	A1426	L1427	D1428	L1429	L1430	T1431	R1432	M1433	K1434	I1435	K1436	A1437	M1438	S1439	I1440	D1441	I1442	M1443	S1444	S1445	K1446	R1447	D1448	V1449	M1450	G1451	I1452	Y1453	M1457	D1458	P1459	ASP	LEU	GLU	GLY	GLY				

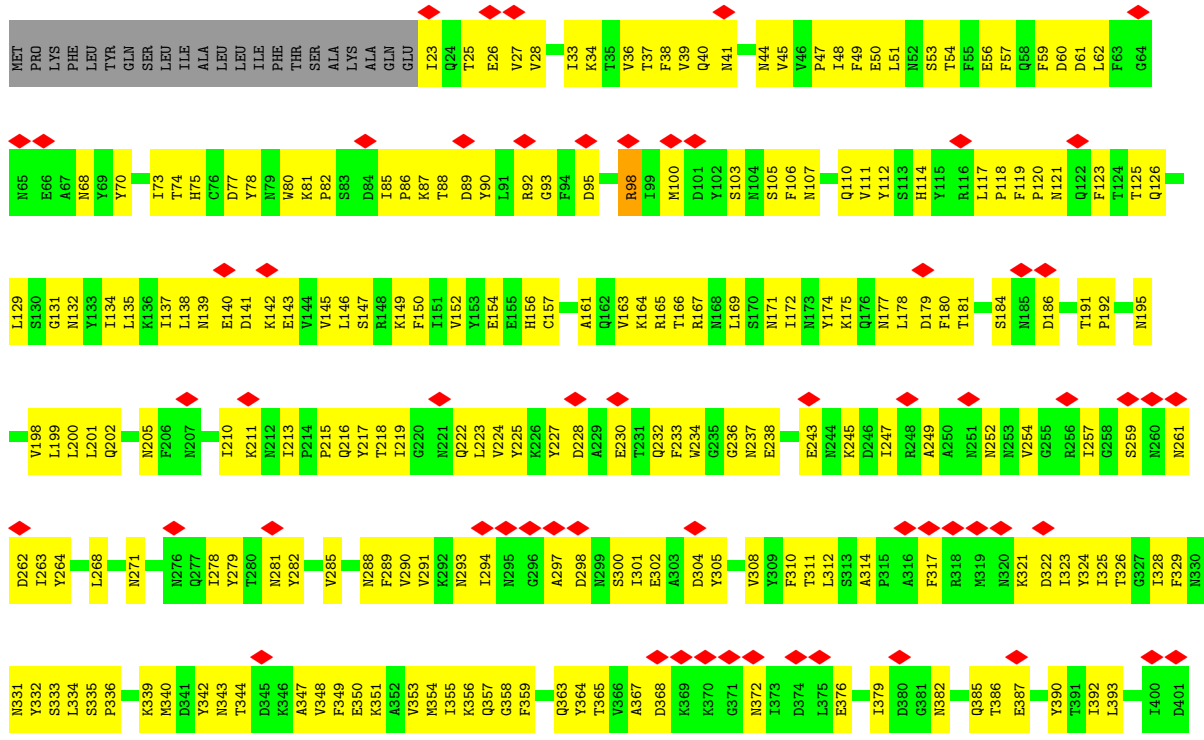
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T2122	P2123	A2124	E2125	T2126	D2127	P2128	N2129	Y2130	A2131	V2132	T2133	T2134	A2135	N2136	Q2137	G2138	Y2139	P2140	I2141	G2142	Y2143	T2144	K2145	S2146	N2147	Q2148	K2149	V2150	L2151	L2152	P2153	A2154	F2155	L2156	A2157	A2158	S2167	S2168	T2169	N2170	F2171	R2172	R2173	P2176	T2177	P2178	M2179	S2241	N2242	V2243	N2244	L2245	V2246	E2247	Q2248	F2249	S2250	
R2040	T2041	S2042	E2043	Q2044	Y2045	S2046	V2047	D2048	P2049	S2050	L2051	N2052	E2053	P2056	L2057	Y2060	T2061	Y2062	G2063	M2064	F2065	S2066	L2067	S2068	T2069	M2071	P2078	S2079	D2080	E2081	T2082	Q2083	S2084	F2087	F2090	R2091	R2094	L2095	R2100	A2111	I2112	R2113	R2114	Y2115	G2116	D2117	A2118	N2119	N2120	P2121								
G1988	F1989	G1970	G1971	T1972	S1973	P1974	T1975	S1976	L1977	G1978	F1979	V1980	F1981	G1982	S1983	Q1984	D1985	D1986	V1987	M1996	L1997	T1998	T1999	Y2000	Q2001	D2002	F2003	F2007	T2008	Q2009	Y2010	S2011	K2016	V2017	N2020	T2021	D2022	L2023	L2024	P2025	D2026	L2027	K2028	V2029	D2030	L2031	S2032	M2033	D2034	R2035	S2036	Y2037	S2038	E2039				
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L1836	S1777	L1778	K1779	L1780	M1781	Y1782	S1783	A1784	T1785	Y1786	M1787	M1788	M1789	V1790	L1791	M1792	F1793	LEU	ASN	ASP	ASP	ASN	PRO	LYS	GLY	ASP	M1804	M1805	L1806	Y1807	D1808	D1809	Y1810	L1811	D1812	I1813	G1814	P1815	M1816	M1817	Q1818	H1819	L1820	Q1821	Q1822	L1823	V1824	L1825	M1826	Y1827	D1828	L1829	P1830	I1831	M1832	K1833	L1834	P1835
I1528	M1529	A1530	D1531	F1532	A1533	T1534	V1535	G1539	R1540	K1541	G1542	T1543	F1546	G1547	S1548	L1549	E1550	Q1551	G1552	M1554	E1555	D1557	E1559	D1560	Y1561	Q1562	Q1563	Y1564	M1565	I1566	T1567	M1568	N1569	L1570	M1571	L1572	K1574	L1575	L1576	P1577	K1578	K1579	E1514	W1580	N1515	K1516	G1517	A1520	P1585	F1586	Y1588	Y1589	I1590					
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VAL	Y1655	D1656	I1657	E1658	M1659	F1660	T1661	S1663	G1664	S1665	Y1666	M1667	Q1668	Y1669	E1670	H1671	D1673	Y1674	E1675	V1676	A1677	D1678	Y1679	E1680	D1681	E1682	Q1683	S1684	M1685	S1686	A1687	V1688	M1689	Y1690	A1691	Y1692	F1693	F1694	GLN	PRO	LYS	GLU	VAL	PRO	PHE	LYS	SER	THR	PHE	MET	LYS	LYS	SER	GLU	TYR			
TRP	LYS	LEU	LEU	SER	ASP	ASN	ASN	ASN	Y1724	L1725	P1726	S1727	M1728	L1729	S1730	F1731	N1732	T1733	M1734	L1735	L1736	Q1738	S1739	M1740	R1741	Q1742	R1745	E1746	Y1747	GLU	VAL	GLU	GLY	ILE	G1753	L1754	D1755	P1756	L1757	Y1758	R1759	R1760	M1761	F1762	A1763	F1764	M1765	Y1766	Q1767	Y1768	G1769	F1772	M1773	L1774	T1775			
K1776	S1777	L1778	K1779	L1780	M1781	Y1782	S1783	A1784	T1785	Y1786	M1787	M1788	M1789	V1790	L1791	M1792	F1793	LEU	ASN	ASP	ASN	PRO	LYS	GLY	ASP	M1804	M1805	L1806	Y1807	D1808	D1809	Y1810	L1811	D1812	I1813	G1814	P1815	M1816	M1817	Q1818	H1819	L1820	Q1821	Q1822	L1823	V1824	L1825	M1826	Y1827	D1828	L1829	P1830	I1831	M1832	K1833	L1834	P1835	
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L1836	THR	ALA	LYS	PRO	THR	ALA	ALA	PRO	PRO	LYS	PRO	GLY	GLU	ILE	VAL	ASN	THR	ALA	ALA	PRO	VAL	VAL	SER	SER	PRO	PHE	TYR	ASP	GLY	LEU	ILE	VAL	LEU	T1943	S1944	I1945	K1946	N1947	I1950	M1951	Y1952	T1953	K1954	M1955	S1956	G1957	T1958	V1959	L1960	P1961	G1962	Y1963	T1964	P1965				
G1988	F1989	G1970	G1971	T1972	S1973	P1974	T1975	S1976	L1977	G1978	F1979	V1980	F1981	G1982	S1983	Q1984	D1985	D1986	V1987	M1996	L1997	T1998	T1999	Y2000	Q2001	D2002	F2003	F2007	T2008	Q2009	Y2010	S2011	K2016	V2017	N2020	T2021	D2022	L2023	L2024	P2025	D2026	L2027	K2028	V2029	D2030	L2031	S2032	M2033	D2034	R2035	S2036	Y2037	S2038	E2039				
R2040	T2041	S2042	E2043	Q2044	Y2045	S2046	V2047	D2048	P2049	S2050	L2051	N2052	E2053	P2056	L2057	Y2060	T2061	Y2062	G2063	M2064	F2065	S2066	L2067	S2068	T2069	M2071	P2078	S2079	D2080	E2081	T2082	Q2083	S2084	F2087	F2090	R2091	R2094	L2095	R2100	A2111	I2112	R2113	R2114	Y2115	G2116	D2117	A2118	N2119	N2120	P2121								
L2122	P2123	A2124	E2125	T2126	D2127	P2128	N2129	Y2130	A2131	V2132	T2133	T2134	A2135	N2136	Q2137	G2138	Y2139	P2140	I2141	G2142	Y2143	T2144	K2145	S2146	N2147	Q2148	K2149	V2150	L2151	L2152	P2153	A2154	F2155	L2156	A2157	A2158	S2167	S2168	T2169	N2170	F2171	R2172	R2173	P2176	T2177	P2178	M2179	S2241	N2242	V2243	N2244	L2245	V2246	E2247	Q2248	F2249	S2250	



• Molecule 2: Peptidyl-prolyl cis-trans isomerase



• Molecule 3: Plug





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	150000	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 ($e^-/\text{\AA}^2$)	52	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 QUANTUM (4k x 4k)	Depositor
Maximum map value	0.251	Depositor
Minimum map value	-0.101	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.013	Depositor
Recommended contour level	0.0874	Depositor
Map size (Å)	246.0, 246.0, 246.0	wwPDB
Map dimensions	300, 300, 300	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.82, 0.82, 0.82	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	0.40	0/16188	0.55	0/21960
2	B	0.36	0/992	0.52	0/1347
3	C	0.44	0/3341	0.51	0/4542
All	All	0.40	0/20521	0.54	0/27849

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	6

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

5 of 6 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1675	GLU	Peptide
1	A	394	GLY	Peptide
1	A	563	SER	Peptide
1	A	564	PHE	Peptide
1	A	821	PRO	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	15853	0	15281	1411	0
2	B	973	212	966	65	0
3	C	3263	0	3109	258	0
All	All	20089	212	19356	1695	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 43.

The worst 5 of 1695 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:251:ARG:HB3	1:A:765:LYS:HB3	1.33	1.06
1:A:527:VAL:HG22	1:A:618:ILE:HG12	1.43	0.99
1:A:225:VAL:HG11	1:A:257:VAL:HG13	1.45	0.98
1:A:216:ILE:HG23	1:A:217:ILE:HD12	1.44	0.97
1:A:1049:GLU:HA	1:A:1159:VAL:HG12	1.42	0.97

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	1952/2403 (81%)	1453 (74%)	498 (26%)	1 (0%)	51	83
2	B	122/176 (69%)	102 (84%)	20 (16%)	0	100	100
3	C	395/419 (94%)	326 (82%)	69 (18%)	0	100	100
All	All	2469/2998 (82%)	1881 (76%)	587 (24%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	374	ASN

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	1757/2115 (83%)	1722 (98%)	35 (2%)	55	74
2	B	107/151 (71%)	106 (99%)	1 (1%)	78	88
3	C	356/375 (95%)	353 (99%)	3 (1%)	81	89
All	All	2220/2641 (84%)	2181 (98%)	39 (2%)	61	77

5 of 39 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	2185	ASN
2	B	42	ASN
1	A	2189	ARG
1	A	2218	ASN
3	C	98	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 78 such sidechains are listed below:

Mol	Chain	Res	Type
1	A	2213	ASN
3	C	195	ASN
1	A	2218	ASN
2	B	90	HIS
3	C	271	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](#)

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 [i](#)

There are no chain breaks in this entry.

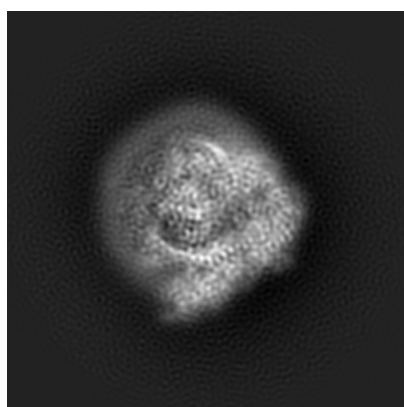
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-0134. These allow visual inspection of the internal detail of the map and identification of artifacts.

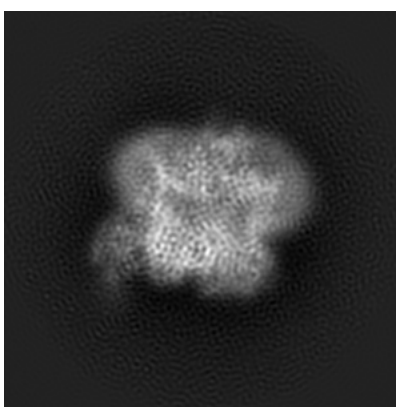
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

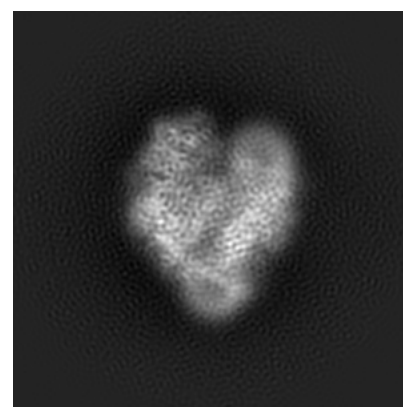
6.1.1 Primary map



X



Y

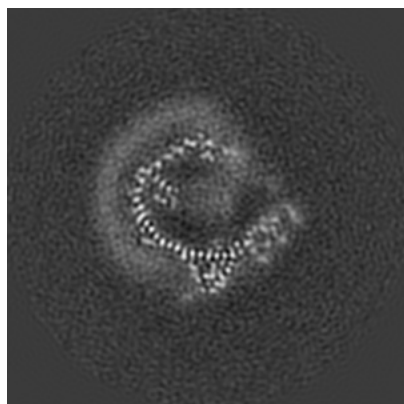


Z

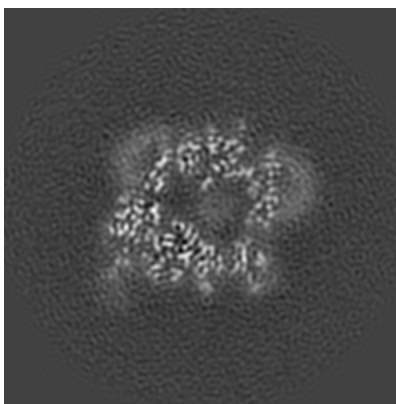
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

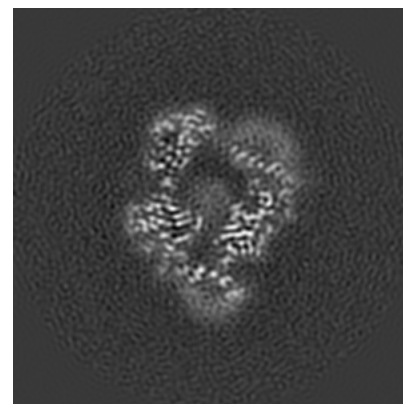
6.2.1 Primary map



X Index: 150



Y Index: 150

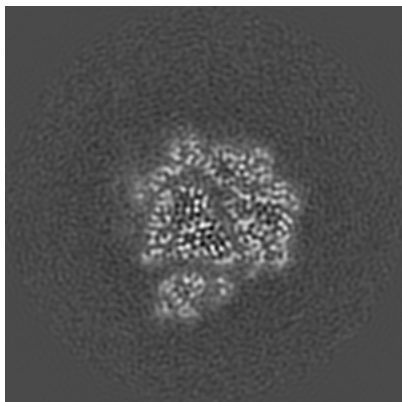


Z Index: 150

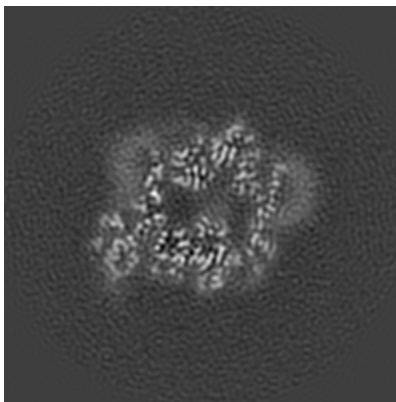
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

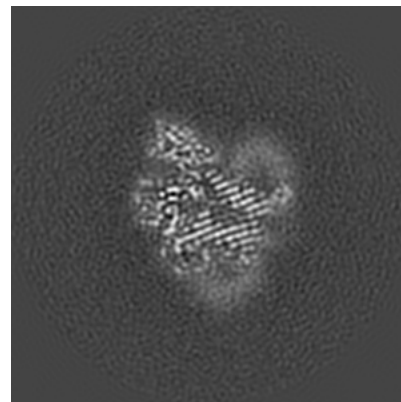
6.3.1 Primary map



X Index: 120



Y Index: 141

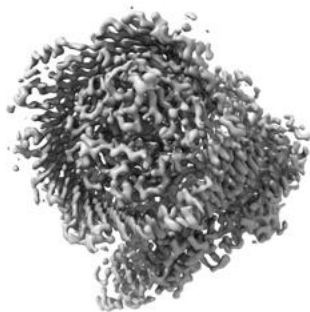


Z Index: 118

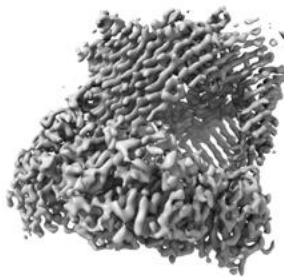
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views [i](#)

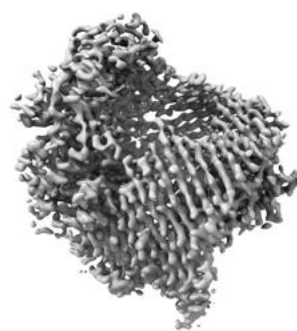
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0874. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

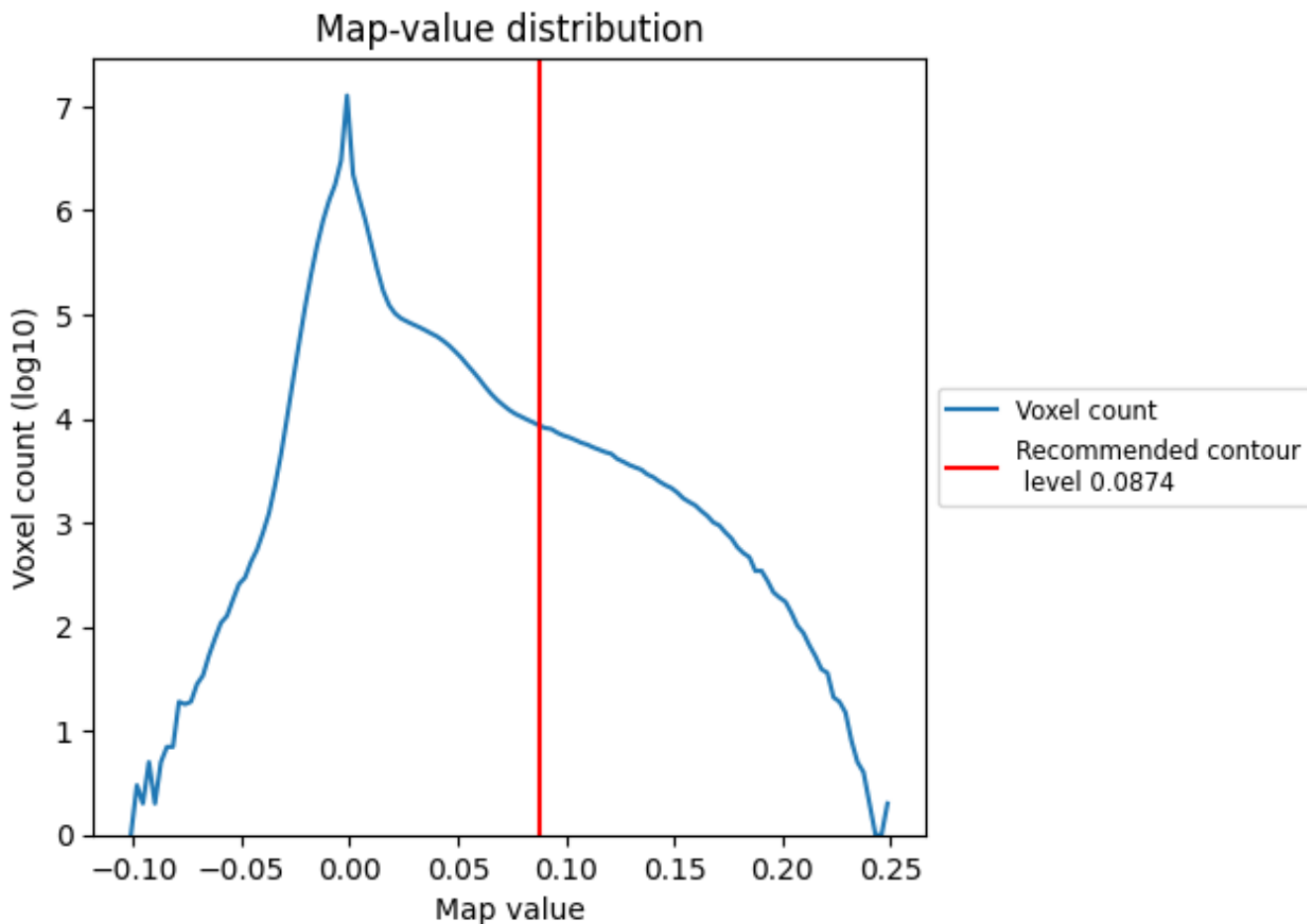
6.5 Mask visualisation

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

7 Map analysis [i](#)

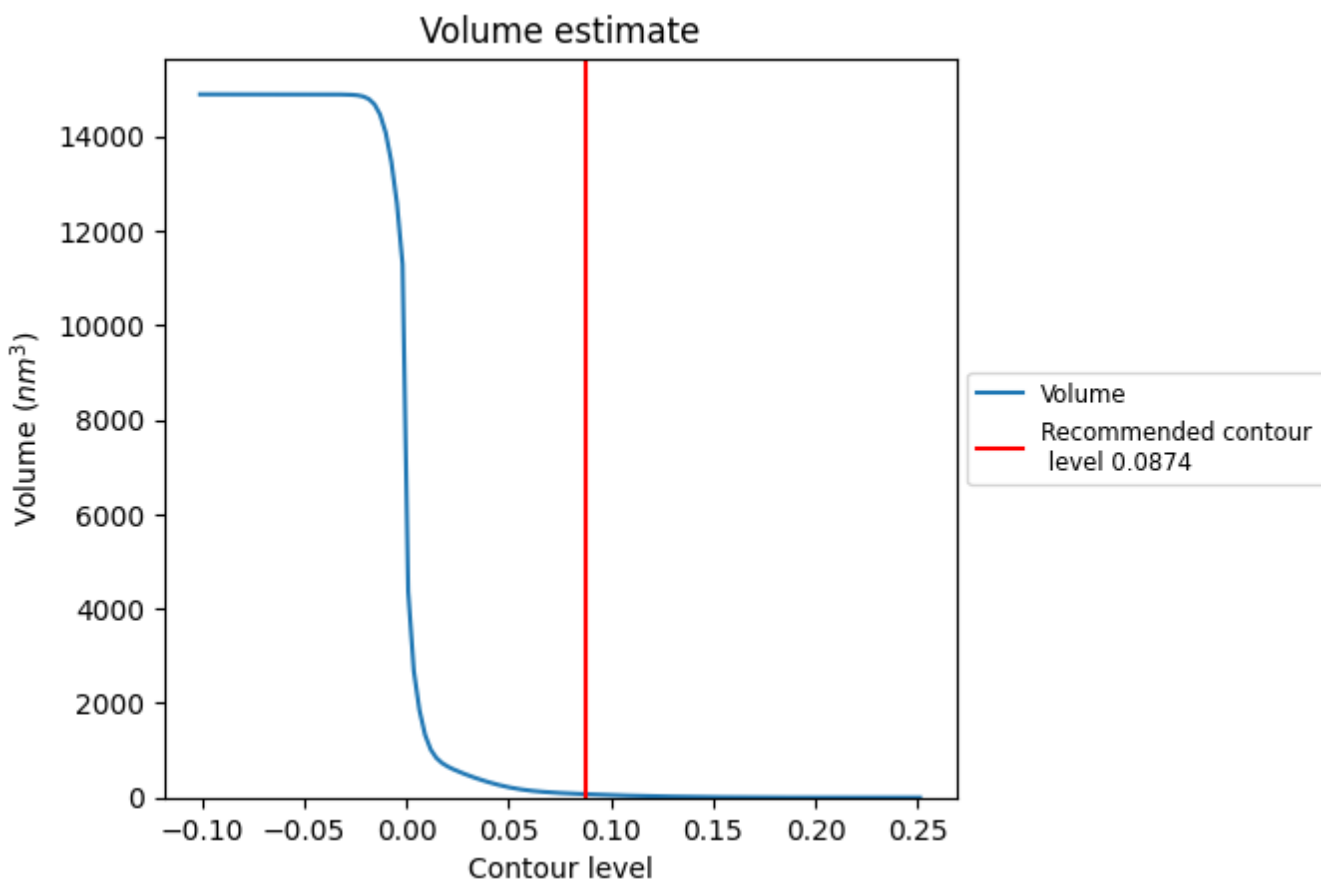
This section contains the results of statistical analysis of the map.

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.

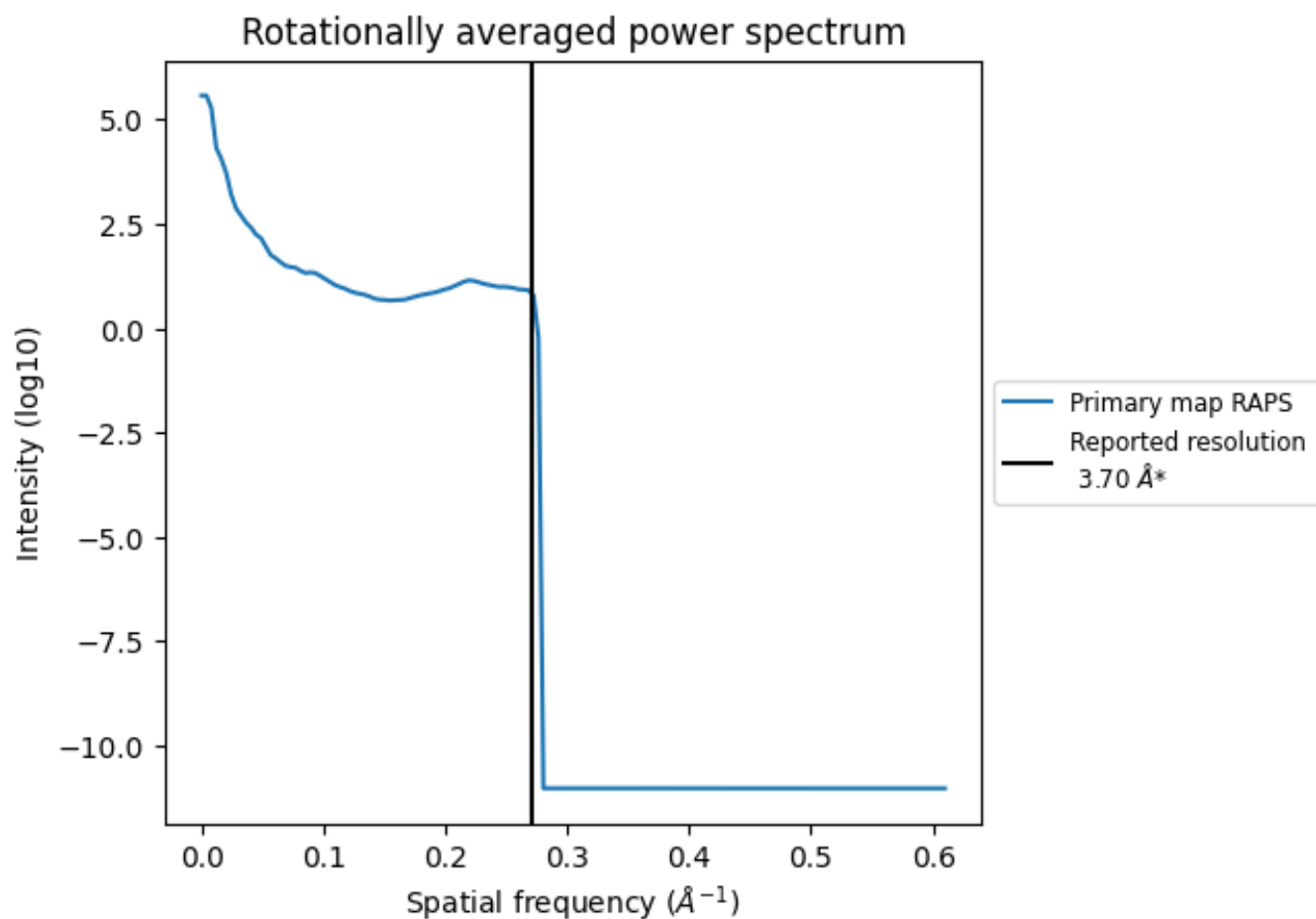
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 72 nm³; this corresponds to an approximate mass of 65 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](#)

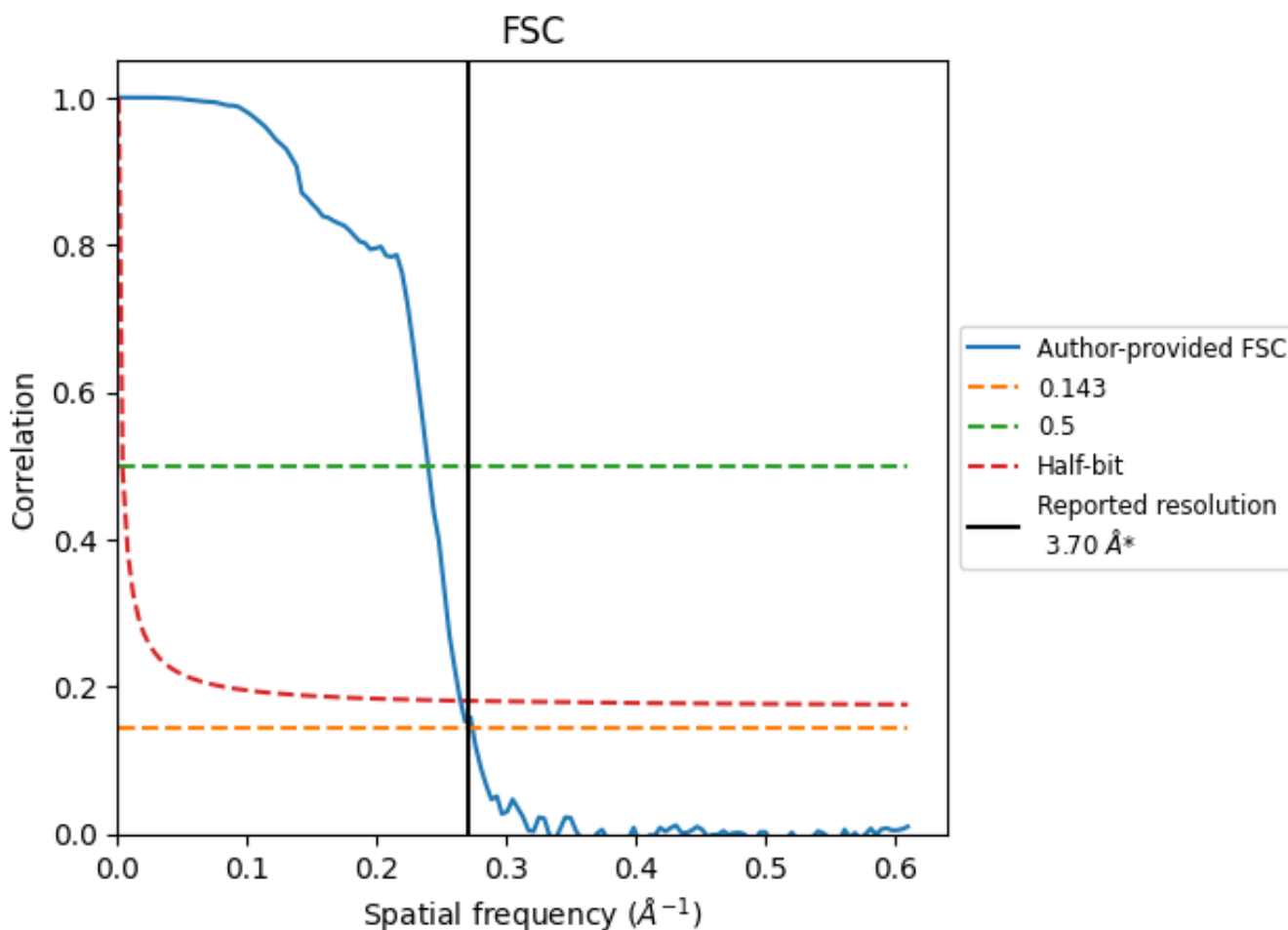


*Reported resolution corresponds to spatial frequency of 0.270 \AA^{-1}

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 0.270 Å⁻¹

8.2 Resolution estimates [i](#)

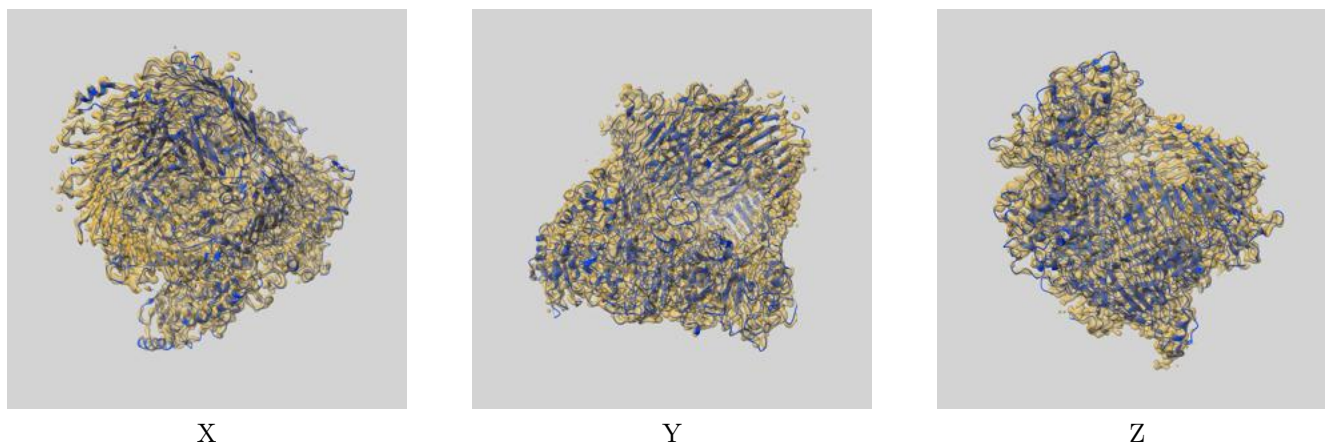
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.70	-	-
Author-provided FSC curve	3.65	4.17	3.78
Unmasked-calculated*	-	-	-

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

9 Map-model fit [i](#)

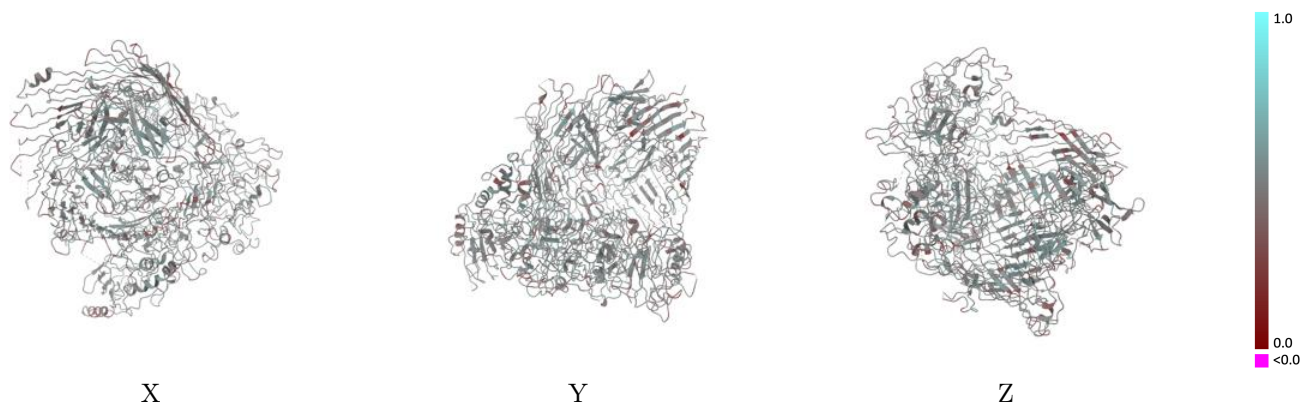
This section contains information regarding the fit between EMDB map EMD-0134 and PDB model 6H3J. Per-residue inclusion information can be found in section 3 on page 4.

9.1 Map-model overlay [i](#)



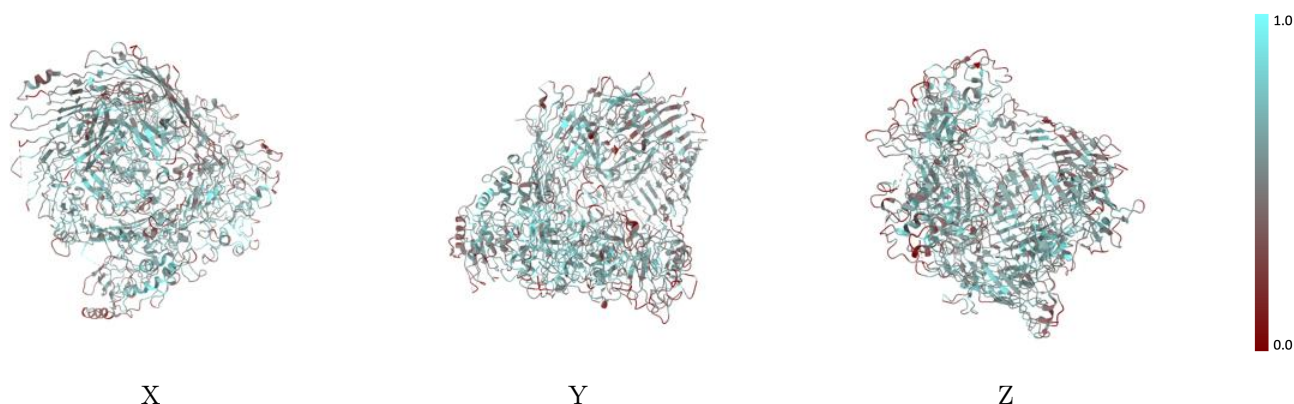
The images above show the 3D surface view of the map at the recommended contour level 0.0874 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



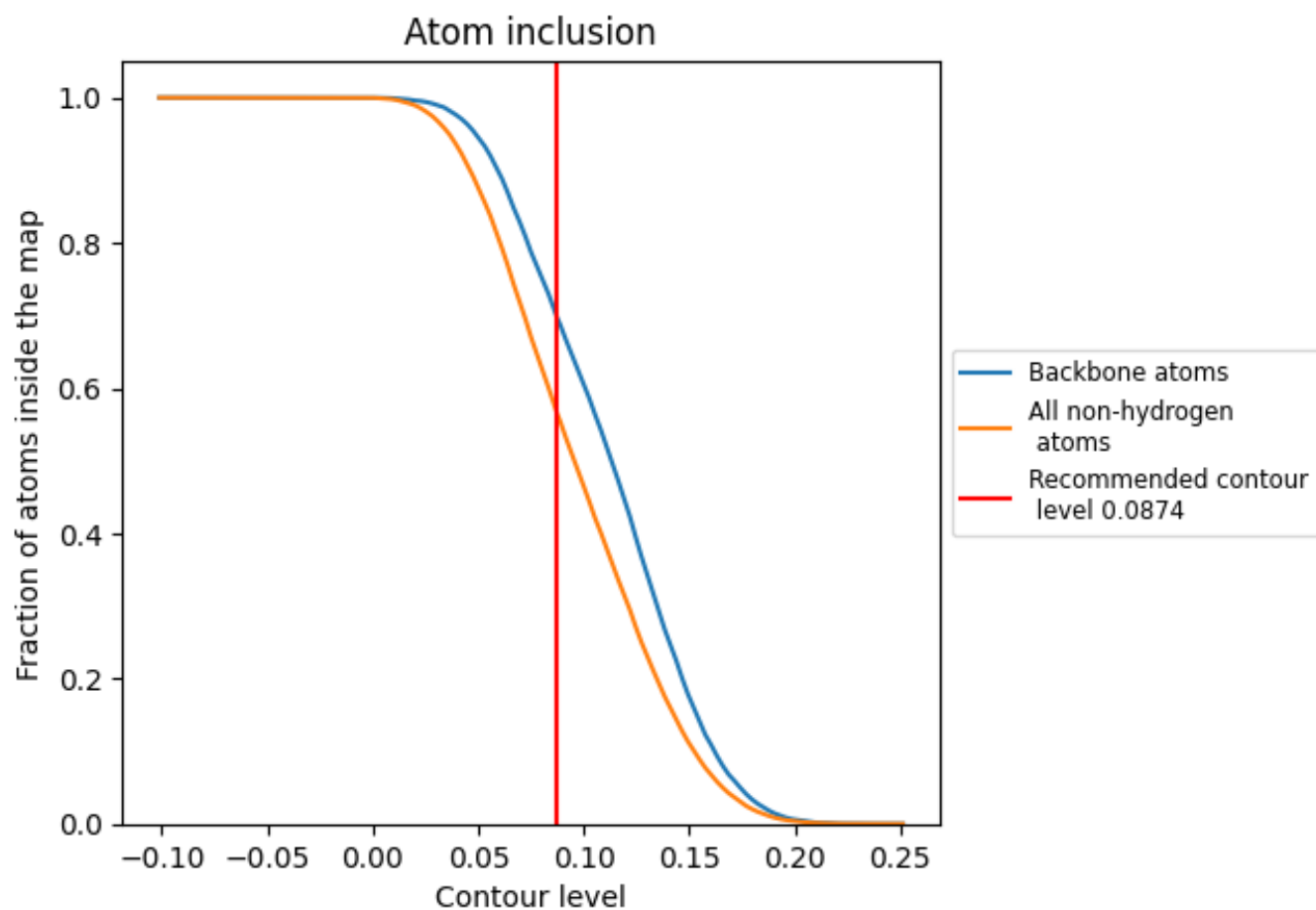
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.0874).









9.4 Atom inclusion [i](#)



At the recommended contour level, 70% of all backbone atoms, 57% 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 (0.0874) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.5651	 0.4810
A	 0.5660	 0.4790
B	 0.4260	 0.4630
C	 0.6017	 0.4970

