



wwPDB EM Validation Summary Report ⓘ

Nov 19, 2022 – 06:39 pm GMT

PDB ID : 5OJS
EMDB ID : EMD-3824
Title : Cryo-EM structure of the SAGA and NuA4 coactivator subunit Tra1
Authors : Diaz-Santin, L.M.; Lukyanova, N.; Aciyan, E.; Cheung, A.C.M.
Deposited on : 2017-07-24
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

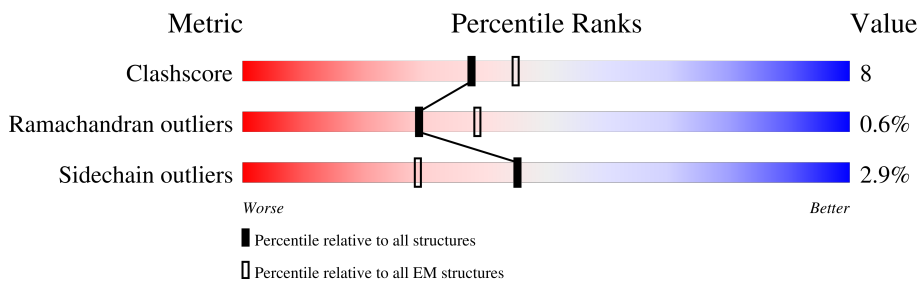
1 Overall quality at a glance i

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	T	3767	

2 Entry composition [i](#)

There is only 1 type of molecule in this entry. The entry contains 28407 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 Transcription-associated protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	T	3473	28407	18391	4718	5178	120	0	0

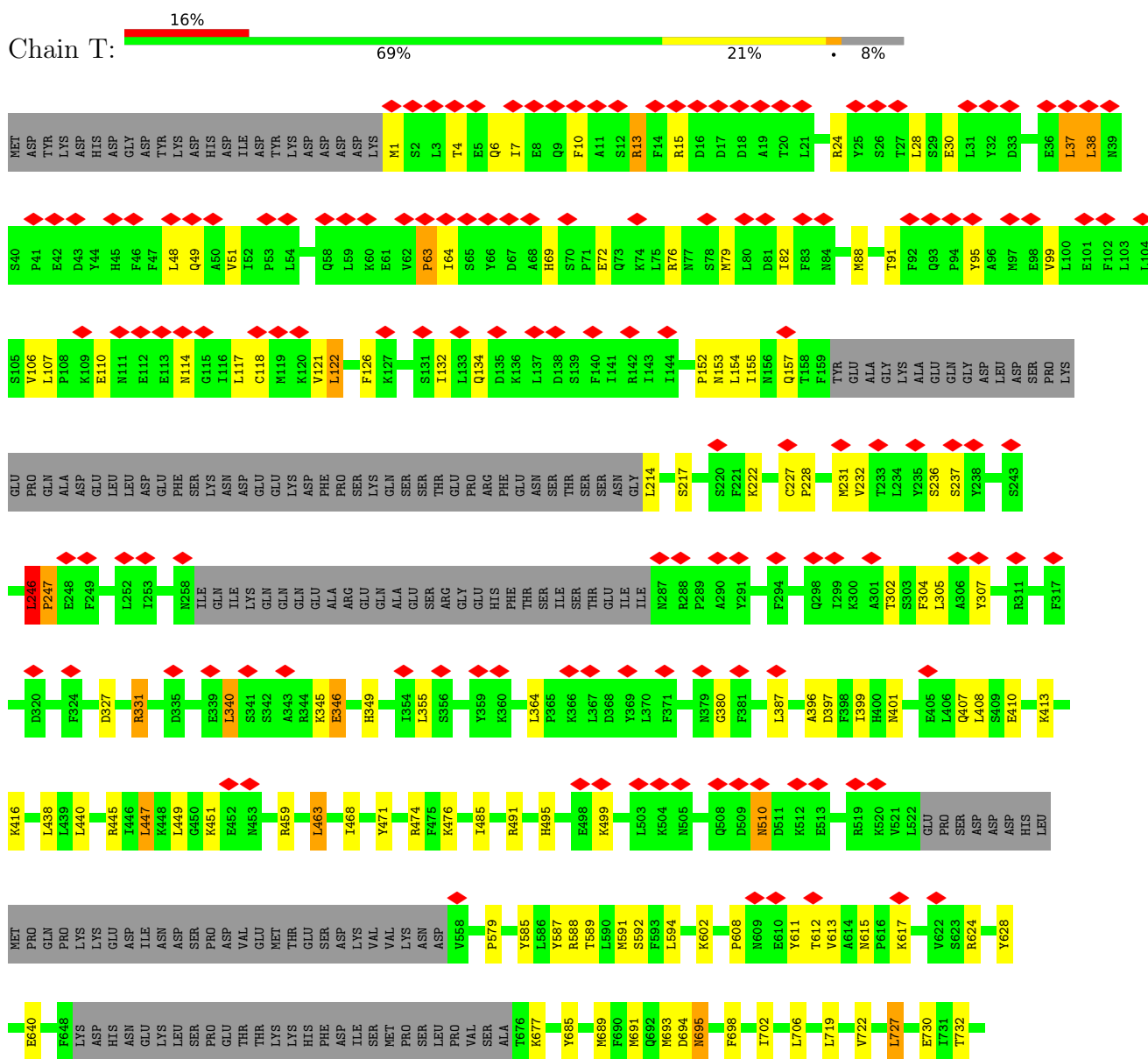
There are 23 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
T	-22	MET	-	initiating methionine	UNP P38811
T	-21	ASP	-	expression tag	UNP P38811
T	-20	TYR	-	expression tag	UNP P38811
T	-19	LYS	-	expression tag	UNP P38811
T	-18	ASP	-	expression tag	UNP P38811
T	-17	HIS	-	expression tag	UNP P38811
T	-16	ASP	-	expression tag	UNP P38811
T	-15	GLY	-	expression tag	UNP P38811
T	-14	ASP	-	expression tag	UNP P38811
T	-13	TYR	-	expression tag	UNP P38811
T	-12	LYS	-	expression tag	UNP P38811
T	-11	ASP	-	expression tag	UNP P38811
T	-10	HIS	-	expression tag	UNP P38811
T	-9	ASP	-	expression tag	UNP P38811
T	-8	ILE	-	expression tag	UNP P38811
T	-7	ASP	-	expression tag	UNP P38811
T	-6	TYR	-	expression tag	UNP P38811
T	-5	LYS	-	expression tag	UNP P38811
T	-4	ASP	-	expression tag	UNP P38811
T	-3	ASP	-	expression tag	UNP P38811
T	-2	ASP	-	expression tag	UNP P38811
T	-1	ASP	-	expression tag	UNP P38811
T	0	LYS	-	expression tag	UNP P38811

3 Residue-property plots

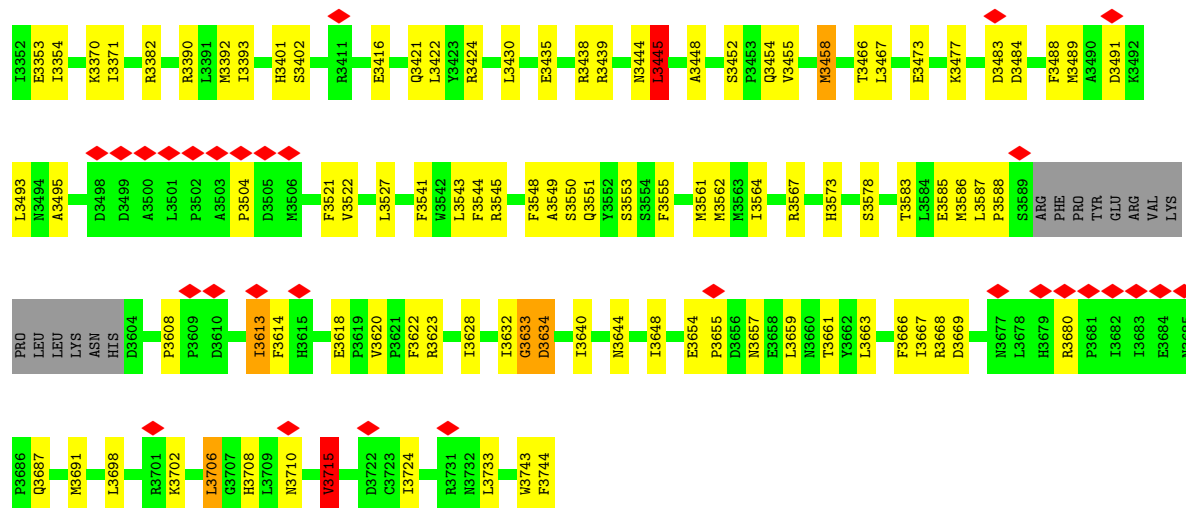
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: Transcription-associated protein 1



L2043	GLU	L1949	E1877	D1797	I1722	R1593	E1476	E1380	L267	G1127	S1006	M880	N735
ILE	ILE	V1952	I1878	A1798	Q1726	A1597	L1477	S1381	L1287	T1128	S1006	M880	F736
ASN	ASN	A1880	L1879	R1799	A1727	T1608	L1478	I382	D1274	F1129	R1014	C897	L740
ASN	ASN	E1881	A1880	F1801	L1730	R1618	G1481	L1384	V1275	I1131	K1015	T900	R741
ASN	ASN	L1882	L1802	L1803	R1731	Q1619	L1482	A1386	E1277	P1136	L1026	L901	L742
THR	THR	K1883	L1804	M1805	E1734	L1622	M1486	D1386	E1278	N1137	A1033	E902	F743
LYS	LYS	K1884	M1805	V1806	E1737	C1625	M1487	E1388	E1279	L1144	P1036	C904	L744
THR	THR	D1885	I1807	I1807	E1737	M1626	M1488	D1389	L1280	D1447	Y1039	ASP	K748
ASP	ASP	L1886	I1807	S1809	Q1740	E1635	L1489	E1390	E1286	F1151	K1044	LEU	K749
ASP	ASP	L1887	I1807	S1809	Q1740	E1635	L1489	E1390	E1286	A1152	K1044	LEU	D750
GLY	GLY	L1888	T1810	T1810	L1745	E1638	H1492	S1391	T1290	A1152	K1044	THR	S769
ASP	ASP	M1892	K1822	K1822	L1510	E1638	L1510	L1392	T1290	A1152	K1044	THR	F770
VAL	VAL	F1893	L1825	L1825	I1511	D1638	I1511	S1393	V1293	L1153	K1051	V920	F776
VAL	VAL	I1894	L1825	L1825	A1512	F1640	I1512	T1394	V1293	L1153	K1051	V920	F777
MET	MET	K1895	V1826	V1826	Y1513	E1641	Y1513	M1395	E1285	S1154	R1054	D923	N778
SER	SER	L1896	E1827	E1827	F1514	E1641	F1514	I1396	Y1155	Y1155	R1054	D923	I779
ASP	ASP	L1896	E1827	E1827	F1514	E1641	F1514	L1296	I1182	P1158	I1056	N930	N780
SER	SER	E1897	D1828	D1828	S1752	Y1648	K1515	Q1397	S1297	P1158	G1056	N930	V783
LYS	LYS	L1900	K1829	K1829	S1753	D1649	V1516	K1398	K1302	E1162	E1058	N932	L784
SER	SER	I1901	K1830	K1830	M1754	E1652	E1517	T1399	V1303	V1163	E1058	N932	L785
ASP	ASP	I1901	K1830	K1830	M1754	E1652	E1517	Y1402	A1306	E1173	D1062	P934	L788
ILE	ILE	K1902	M1833	M1833	I1756	G1519	G1519	S1403	A1306	E1173	D1062	P934	N789
ASN	ASN	Q1903	M1833	M1833	I1756	G1519	G1519	T1404	A1306	E1173	D1062	P934	D790
PRO	PRO	S1904	L1837	L1837	K1757	M1654	R1520	S1405	I1314	L1177	L1063	Q935	L791
GLU	GLU	A1905	H1837	H1837	A1758	V1660	L1523	L1408	T1318	L1177	L1063	Q935	L792
GLU	GLU	Y1906	H1838	H1838	L1762	S1664	D1524	L1408	T1318	L1177	L1063	Q935	L793
VAL	VAL	L1907	M1839	M1839	L1765	S1664	H1525	L1408	T1318	L1177	L1063	Q935	N794
ALA	ALA	V1908	K1840	K1840	L1766	M1668	C1530	R1412	M1326	Y1179	L1078	N944	Y798
ASP	ASP	I1913	M1842	M1842	L1766	M1668	C1530	R1412	M1326	Y1179	L1078	N944	R829
THR	THR	I1913	M1842	M1842	L1766	M1668	C1530	R1412	M1326	Y1179	L1078	N944	S830
THR	THR	S1914	M1842	M1842	L1766	M1668	C1530	R1412	M1326	Y1179	L1078	N944	I831
ALA	ALA	K1915	S1845	S1845	I1770	V1670	E1533	E1426	K1340	Y1206	E1094	K961	L847
ALA	ALA	R1915	M1846	M1846	I1771	V1534	V1534	C1415	P1341	Y1207	E1094	K961	T848
ILE	ILE	D1916	A1847	A1847	A1772	T1675	L1535	I1416	L1342	N1208	D1097	T964	A849
VAL	VAL	D1917	A1847	A1847	A1772	T1675	L1535	I1416	L1342	N1208	D1097	T964	R850
ASP	ASP	F1918	I1849	I1849	S1773	M1680	F1538	E1426	K1340	K1209	A1099	I977	L851
ALA	ALA	F1918	I1849	I1849	S1773	M1680	F1538	E1426	K1340	K1209	A1099	I977	P852
ASN	ASN	K1921	A1850	A1850	M1775	M1680	G1540	E1427	P1344	L1216	L1102	N983	H853
ASN	ASN	Q1925	Y1851	Y1851	M1775	M1680	G1540	E1427	P1344	L1216	L1102	N983	P866
ASN	ASN	V1926	D1852	D1852	K1776	W1684	L1544	Q1432	R1343	I1216	L1102	N983	VAL
PRO	PRO	F1927	V1853	V1853	K1778	L1685	A1544	Q1432	R1343	I1216	L1102	N983	ARG
ILE	ILE	V1928	L1854	L1854	Q1779	K1686	E1545	E1431	R1437	K1217	L1102	N983	LEU
ASN	ASN	L1931	D1855	D1855	M1780	K1686	A1566	A1431	R1437	K1217	L1102	N983	SER
SER	SER	R1932	H1856	H1856	M1781	K1686	D1567	Q1432	R1437	K1217	L1102	N983	VAL
ASN	ASN	S1933	R1861	R1861	I1783	M1690	F1569	E1440	I1438	L1224	Q1114	D988	LEU
ASN	ASN	S1933	R1861	R1861	I1783	M1690	F1569	E1440	I1438	L1224	Q1114	D988	ALA
ASN	ASN	H1935	F1862	F1862	T1702	T1702	L1574	P1453	M1365	S1225	V1115	N1116	PRO
ASN	ASN	V1936	F1862	F1862	T1702	T1702	L1574	P1453	M1365	S1225	V1115	N1116	L876
ASN	ASN	E1937	L1864	L1864	T1705	S1710	L1580	T1459	T1366	L1237	L1119	S992	VAL
ASN	ASN	A1938	L1865	L1865	S1710	S1710	L1580	T1459	T1366	L1237	L1119	S992	VAL
LYS	LYS	R1939	L1865	L1865	S1710	S1710	L1580	T1459	T1366	L1237	L1119	S992	VAL
LYS	LYS	Y1940	L1865	L1865	S1710	S1710	L1580	T1459	T1366	L1237	L1119	S992	VAL
LYS	LYS	L1941	S1868	S1868	Q1717	Q1717	L1584	E1461	L1368	L1241	K1122	I997	ALA
LYS	LYS	L1941	S1868	S1868	Q1717	Q1717	L1584	E1461	L1368	L1241	K1122	I997	ALA
LYS	LYS	V1942	F1871	F1871	D1793	L1718	Q1587	M1470	L1377	K1246	N1124	M1002	PRO
ASP	ASP	K1943	I1872	I1872	K1794	L1588	Q1587	M1470	L1377	K1246	N1124	M1002	PRO
ASP	ASP	Q1944	K1873	K1873	C1795	L1588	Q1587	M1470	L1377	K1246	N1124	M1002	PRO
ASP	ASP	S1945	A1874	A1874	L1796	L1588	Q1587	M1470	L1377	K1246	N1124	M1002	PRO
ASP	ASP	L1946	P1876	P1876	L1796	L1588	Q1587	M1470	L1377	K1246	N1124	M1002	PRO

T3241	D3242	E3243	D3244	L3245	F3246	R3247	L3248	L3254	L3258	N3259	Y3260	N3261	R3262	L3263	F3264	F3265	F3266	R3267	K3268	E3274	N3279	L3280	F3283	L3288	A3289	F3290	Y3291	L3292	R3293	F3294	N3297	A3298	D3299	F3300	N3303	K3304	T3309	R3313	L3314	R3315	R3320	L3321	E3322	K3348	F3349	E3350	D3351													
T3135	Q3139	L3144	K3147	M3151	I3155	L3156	F3163	Y3164	Q3165	F3178	A3179	Q3182	ARG	GLN	THR	MET	ALA	VAL	MET	GLY	ASP	PRO	LYS	ASP	THR	ASN	ARG	ASN	GLY	ASN	GLY	ARG	Q3202	Q3203	F3204	W3205	E3206	Y3207	L3208	Q3209	L3211	N3212	L3215	N3234	K3238	S3239	T3240	R3244	R3251	D3255										
R2986	E2987	Q2988	A2989	H2992	Y2993	Q2994	N2995	M2996	N2997	E2998	L2999	T3000	T3001	G3002	L3003	D3004	F3005	I3006	S3007	N3008	T3009	N3010	L3011	V3012	Y3013	F3014	G3015	T3016	Y3017	Q3018	K3019	A3020	E3021	F3022	F3023	T3024	L3025	K3026	G3027	M3028	F3029	L3030	S3031	K3032	L3033	A3034	A3035	Y3036	E3037	E3038	A3039	N3040	Q3041	A3044	T3045	Q3048				
R2916	L2917	I2920	P2921	A2922	L2923	Q2924	GLN	SER	ASN	SER	ASN	SER	SER	ASN	ILE	ASN	THR	HIS	A2936	Y2937	R2938	G2939	Y2940	L2943	Y2946	R2949	F2950	V2953	N2958	R2959	Q3018	F2960	D2961	V2962	Q2966	L2967	A2968	N2969	L2970	Y2971	T2972	L2973	F2974	N2975	I2976	E2977	L2978	Q2979	E2980	F2982	L2983	K2984	R2987	L2888	P2889	N2896	N2899	Q2906	V2911	A2915
C2817	D2818	E2819	G2820	L2821	Q2822	T2836	P2837	A2838	H2839	K2840	L2843	Q2847	E2851	F2852	A2855	I2858	Y2859	A2860	N2861	L2862	H2863	T2864	T2865	T2866	T2867	Q2868	N2869	L2870	D2871	S2872	I2877	K2878	R2879	L2880	L2881	Q2882	A2883	W2884	R2887	L2888	P2889	N2896	N2899	Q2906	V2911	A2915														
S2722	Y2726	A2727	L2728	E2729	W2730	W2733	Q2741	D2744	E2748	K2751	H2752	E2753	G2754	F2755	W2764	W2765	W2766	A2767	D2768	W2769	N2770	S2771	D2772	R2773	D2774	D2775	L2776	E2777	Q2778	V2780	K2781	S2782	V2783	M2784	D2785	V2786	R2791	K2795	F2803	A2804	E2805	K2808	G2809	D2810	K2815	L2816														
K2484	E2485	N2490	L2494	I2499	L2500	L2504	P2505	E2506	N2507	A2508	T2512	E2513	W2514	D2516	L2517	E2518	L2519	S2520	N2521	F2522	S2529	M2530	Q2531	G2532	L2533	C2534	R2535	S2538	L2556	K2573	N2574	Y2577	R2581	I2584	L2587	S2588	K2589	P2590	Y2591	H2592	L2593	R2594	Q2595	S2598																
P2367	K2372	A2373	A2374	L2375	L2376	T2377	K2378	M2379	L2384	L2389	L2397	L2398	L2399	K2400	L2401	Q2404	E2405	H2406	F2407	N2408	N2409	T2410	R2415	M2416	L2438	N2441	D2446	I2447	W2459	W2460	E2461	L2463	A2464	D2465	Y2466	L2469	L2473	L2476	G2477	G2478	S2479	F2480	M2481	R2482	E2483															
H2200	D2201	Q2207	K2215	A2216	I2217	G2221	V2222	S2223	V2224	K2296	D2297	A2298	E2227	E2298	E2299	P2231	G2232	K2235	T2234	F2235	I2236	Q2237	M2238	L2239	T2240	S2241	V2242	L2243	T2244	Q2245	D2246	L2247	Q2248	E2249	T2250	S2251	S2252	V2253	G2256	V2257	W2261	P2268	D2269	I2271	L2272	V2273	P2273	L2274	L2275	L2276	P2277	L2278	M2279							
K2280	T2281	K2284	K2287	L2290	S2291	S2292	S2293	Q2294	P2295	K2296	D2297	A2298	E2227	M2299	E2302	E2303	T2307	T2308	L2311	L2315	Y2316	J2317	L2318	S2319	L2320	L2324	D2327	R2330	L2333	S2334	L2338	L2339	S2343	M2347	F2348	L2349	R2350	K2351	T2352	M2355	T2363	F2364	I2365	F2366																
S2107	ASN	HIS	ARG	ALA	ILE	GLU	THR	E2115	N2122	L2123	L2124	D2130	LYS	HIS	TRP	THR	ASN	VAL	ASN	V2138	K2145	L2146	LEU	ILE	PHE	GLN	ASP	LEU	ASP	S2154	V2160	L2168	K2175	T2176	K2177	E2178	W2179	I2180	N2181	E2182	N2183	L2184	L2187	Q2188	N2189	L2190	L2191	E2192	K2193	C2194	H2199									



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	182285	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 ($e^-/\text{\AA}^2$)	1.4	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	3500	Depositor
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.208	Depositor
Minimum map value	-0.123	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.006	Depositor
Recommended contour level	0.04	Depositor
Map size (\AA)	307.4, 307.4, 307.4	wwPDB
Map dimensions	290, 290, 290	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.06, 1.06, 1.06	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	T	0.37	0/29026	0.74	49/39323 (0.1%)

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	T	0	50

There are no bond length outliers.

The worst 5 of 49 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
1	T	3053	LEU	CA-CB-CG	11.43	141.60	115.30
1	T	1825	LEU	CA-CB-CG	11.13	140.90	115.30
1	T	2278	LEU	CA-CB-CG	9.14	136.32	115.30
1	T	38	LEU	CA-CB-CG	8.63	135.14	115.30
1	T	876	LEU	CA-CB-CG	7.54	132.63	115.30

There are no chirality outliers.

5 of 50 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	T	227	CYS	Peptide
1	T	246	LEU	Peptide
1	T	346	GLU	Peptide
1	T	380	GLY	Peptide
1	T	72	GLU	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	T	28407	0	28803	463	0
All	All	28407	0	28803	463	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 8.

The worst 5 of 463 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:T:118:CYS:O	1:T:122:LEU:HB2	1.70	0.91
1:T:2188:GLN:O	1:T:2192:GLU:HB3	1.71	0.89
1:T:3293:ARG:O	1:T:3297:ASN:HB2	1.73	0.89
1:T:3258:LEU:O	1:T:3262:ARG:HB2	1.72	0.89
1:T:1902:LYS:O	1:T:1906:TYR:HB2	1.74	0.87

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	T	3443/3767 (91%)	2913 (85%)	508 (15%)	22 (1%)	25 62

5 of 22 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	T	1544	ALA
1	T	2889	PRO
1	T	1158	PRO
1	T	1157	ILE
1	T	3655	PRO

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	T	3200/3474 (92%)	3107 (97%)	93 (3%)	42 66

5 of 93 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	T	2177	LYS
1	T	2646	ASN
1	T	2278	LEU
1	T	2350	ARG
1	T	2815	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 55 such sidechains are listed below:

Mol	Chain	Res	Type
1	T	2122	ASN
1	T	2595	GLN
1	T	3537	GLN
1	T	3154	HIS
1	T	2183	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.

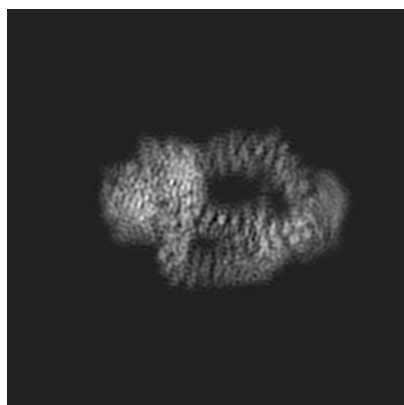
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-3824. These allow visual inspection of the internal detail of the map and identification of artifacts.

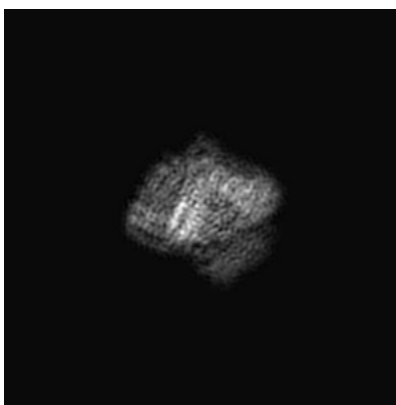
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

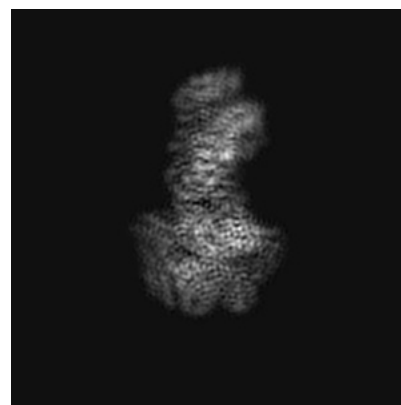
6.1.1 Primary map



X



Y

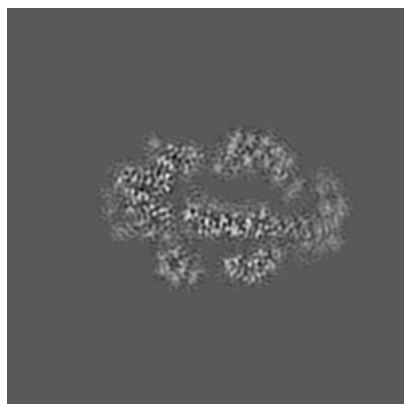


Z

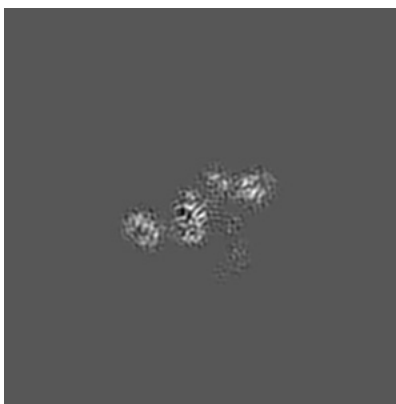
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

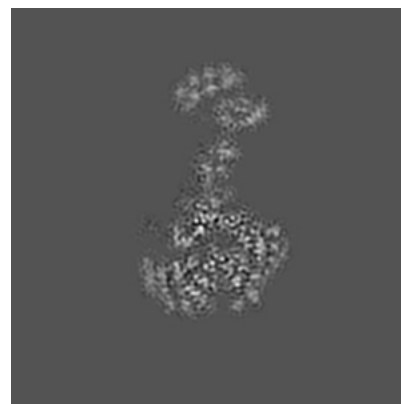
6.2.1 Primary map



X Index: 145



Y Index: 145

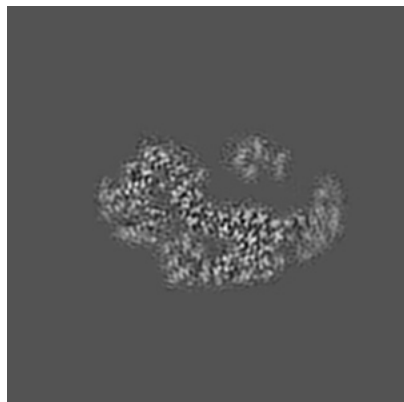


Z Index: 145

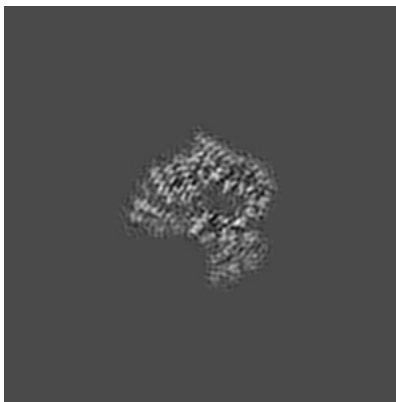
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

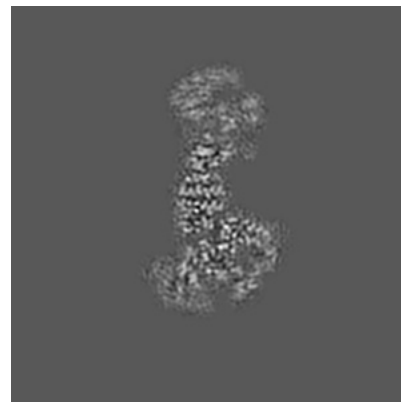
6.3.1 Primary map



X Index: 136



Y Index: 127

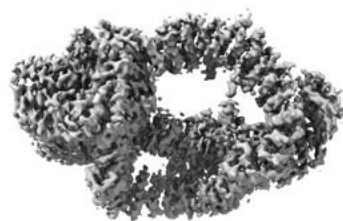


Z Index: 137

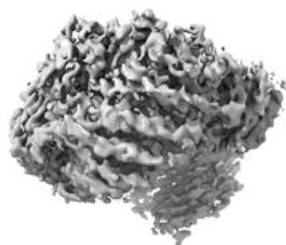
The images above show the largest variance slices of the map in three orthogonal directions.

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 0.04. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

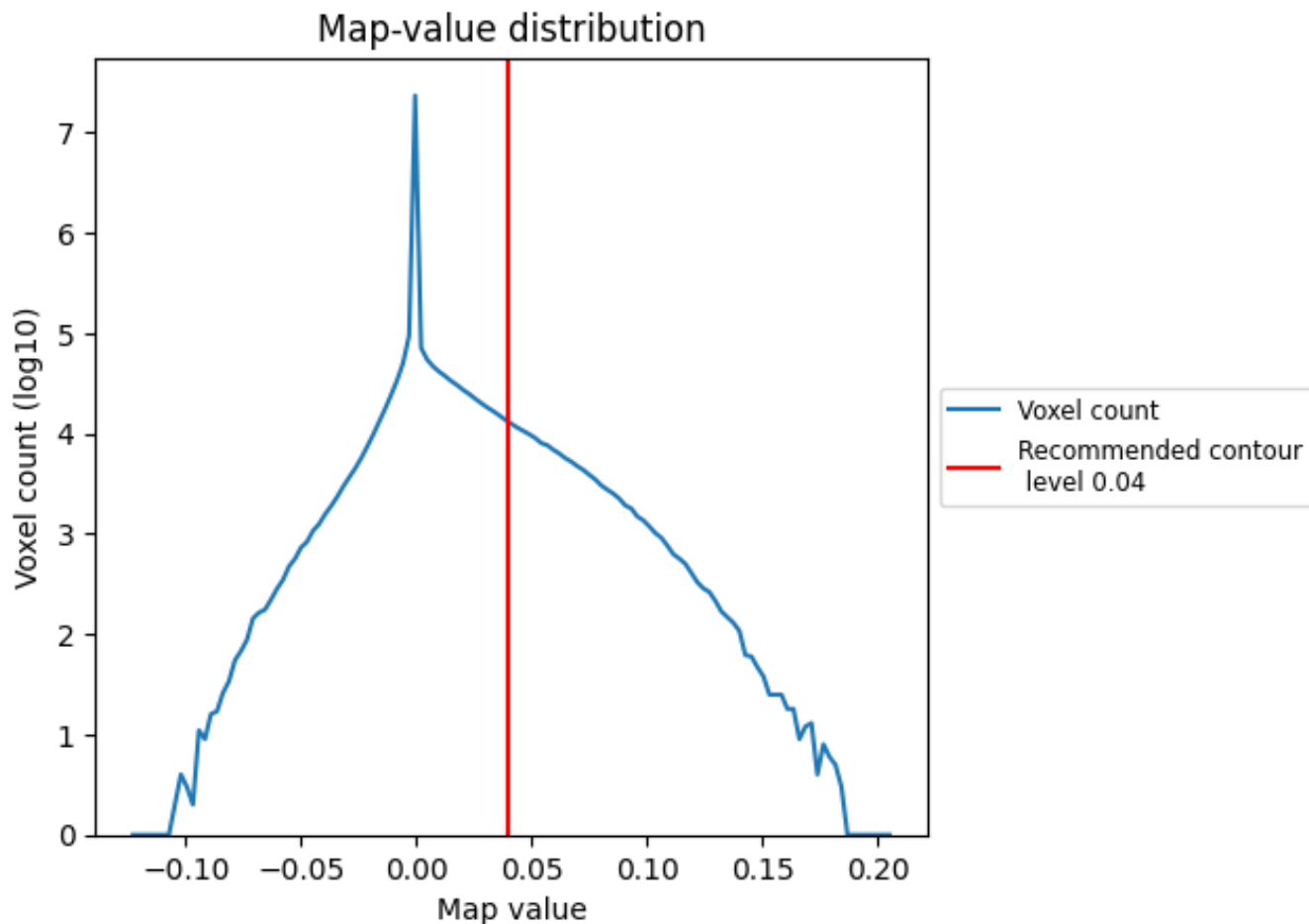
6.5 Mask visualisation

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

7 Map analysis [i](#)

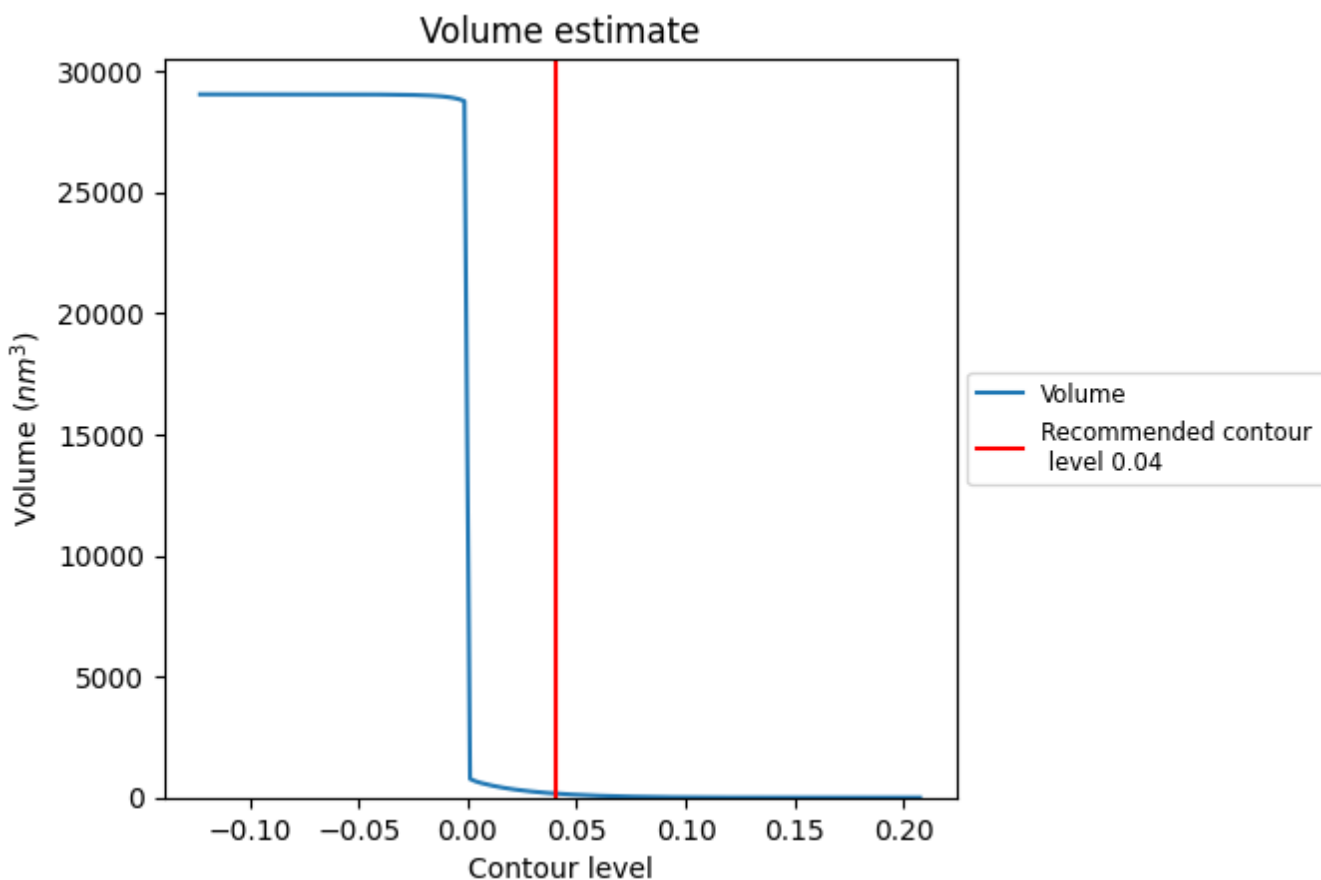
This section contains the results of statistical analysis of the map.

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.

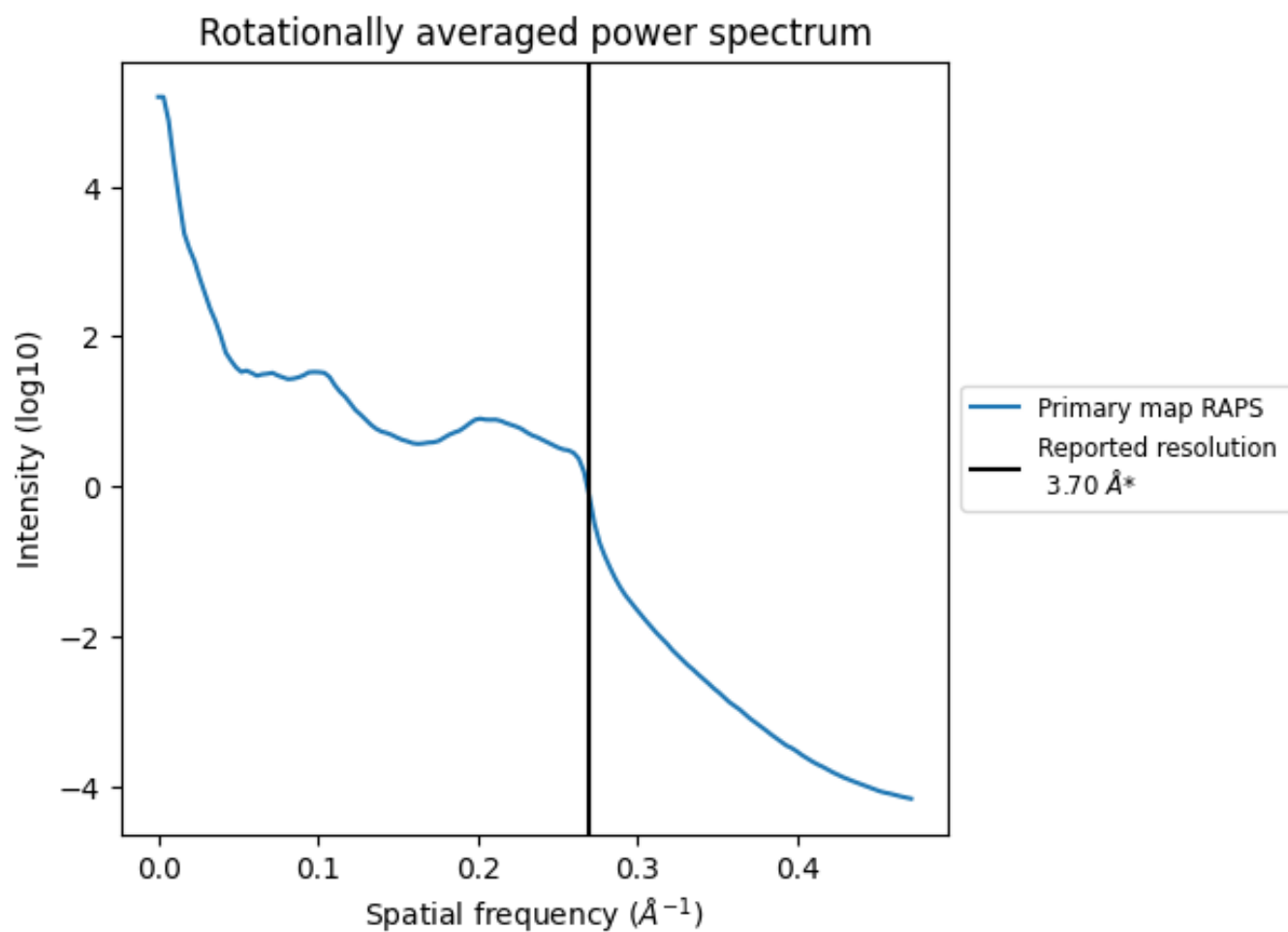
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 168 nm³; this corresponds to an approximate mass of 152 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](#)

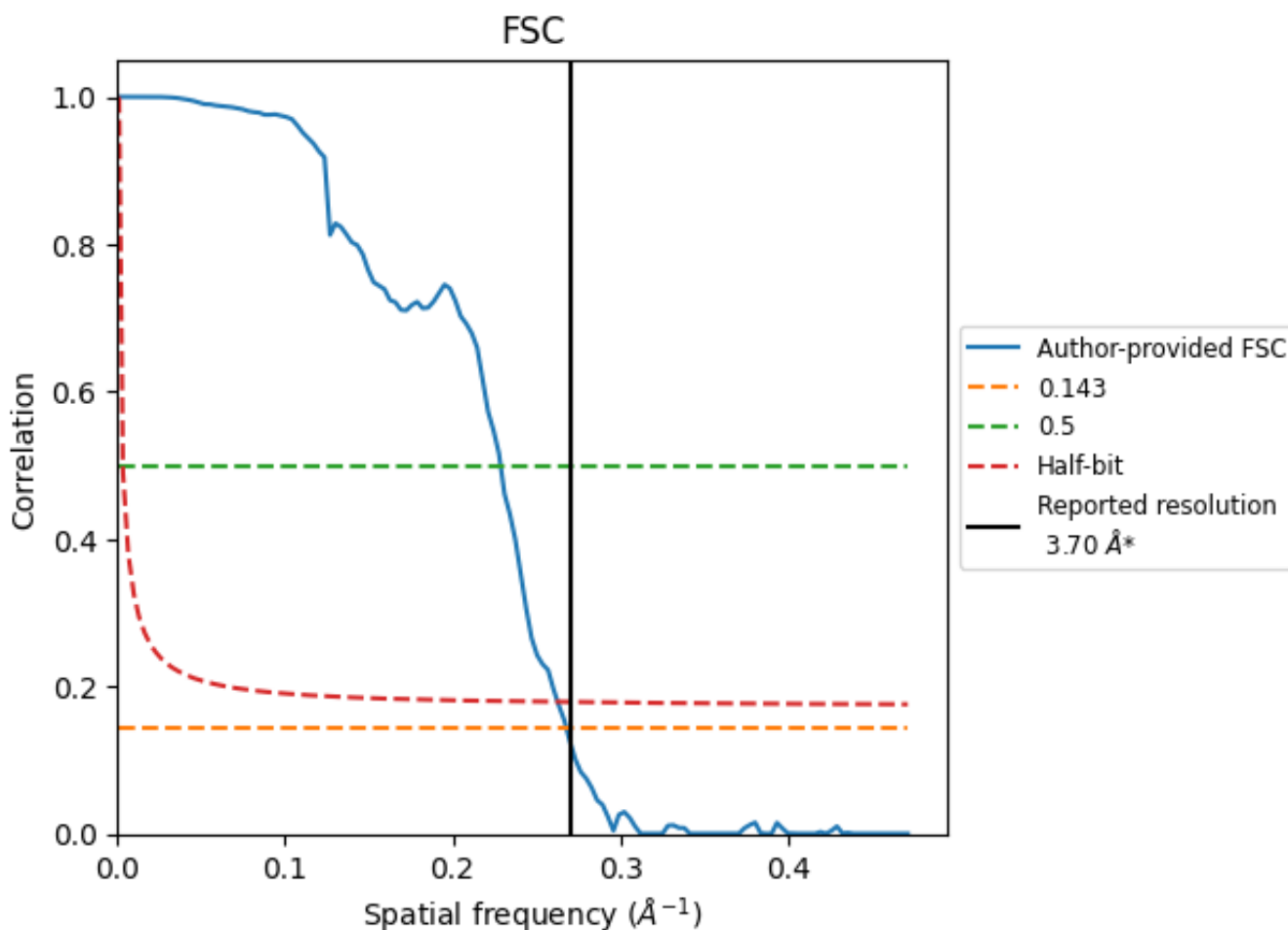


*Reported resolution corresponds to spatial frequency of 0.270\AA^{-1}

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](#)

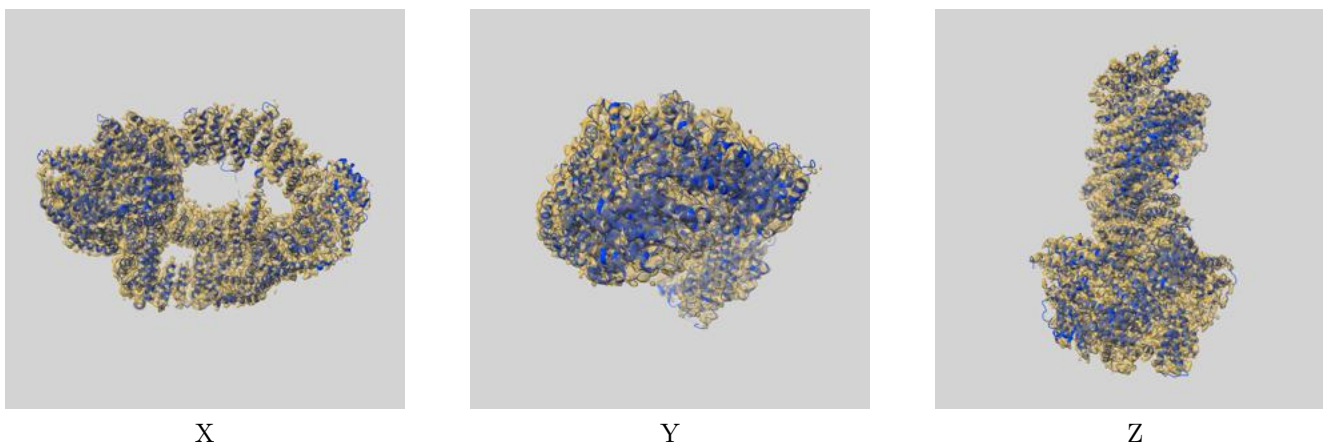
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.70	-	-
Author-provided FSC curve	3.73	4.37	3.81
Unmasked-calculated*	-	-	-

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

9 Map-model fit [i](#)

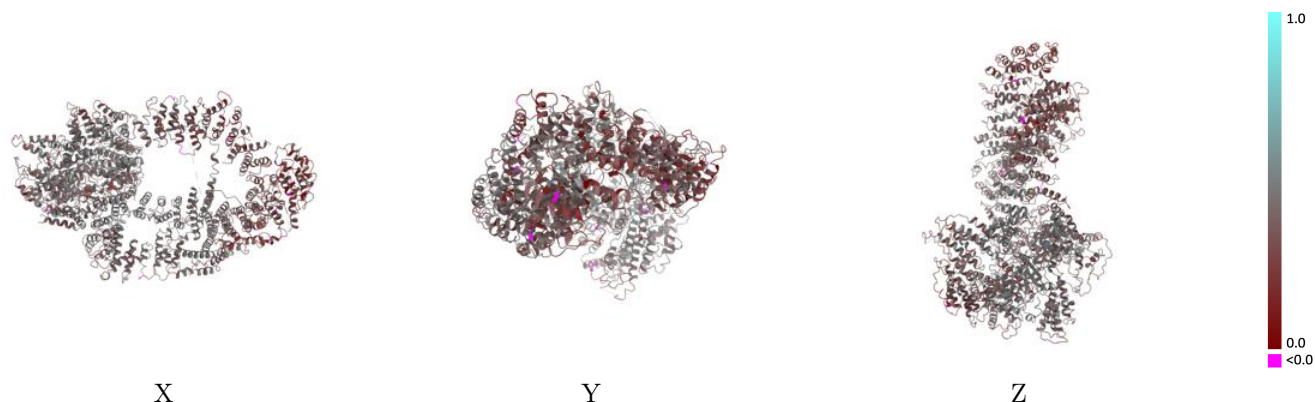
This section contains information regarding the fit between EMDB map EMD-3824 and PDB model 5OJS. Per-residue inclusion information can be found in section [3](#) on page [4](#).

9.1 Map-model overlay [i](#)



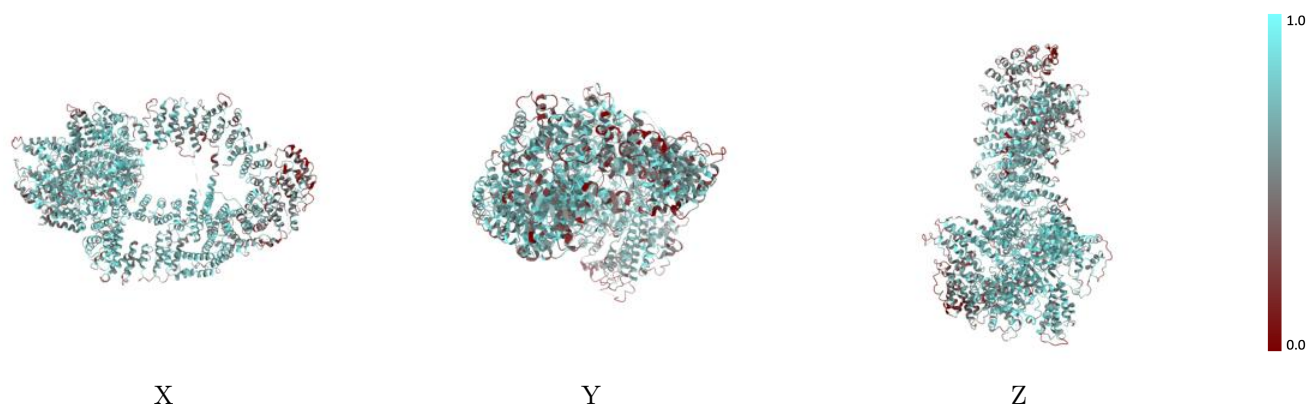
The images above show the 3D surface view of the map at the recommended contour level 0.04 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



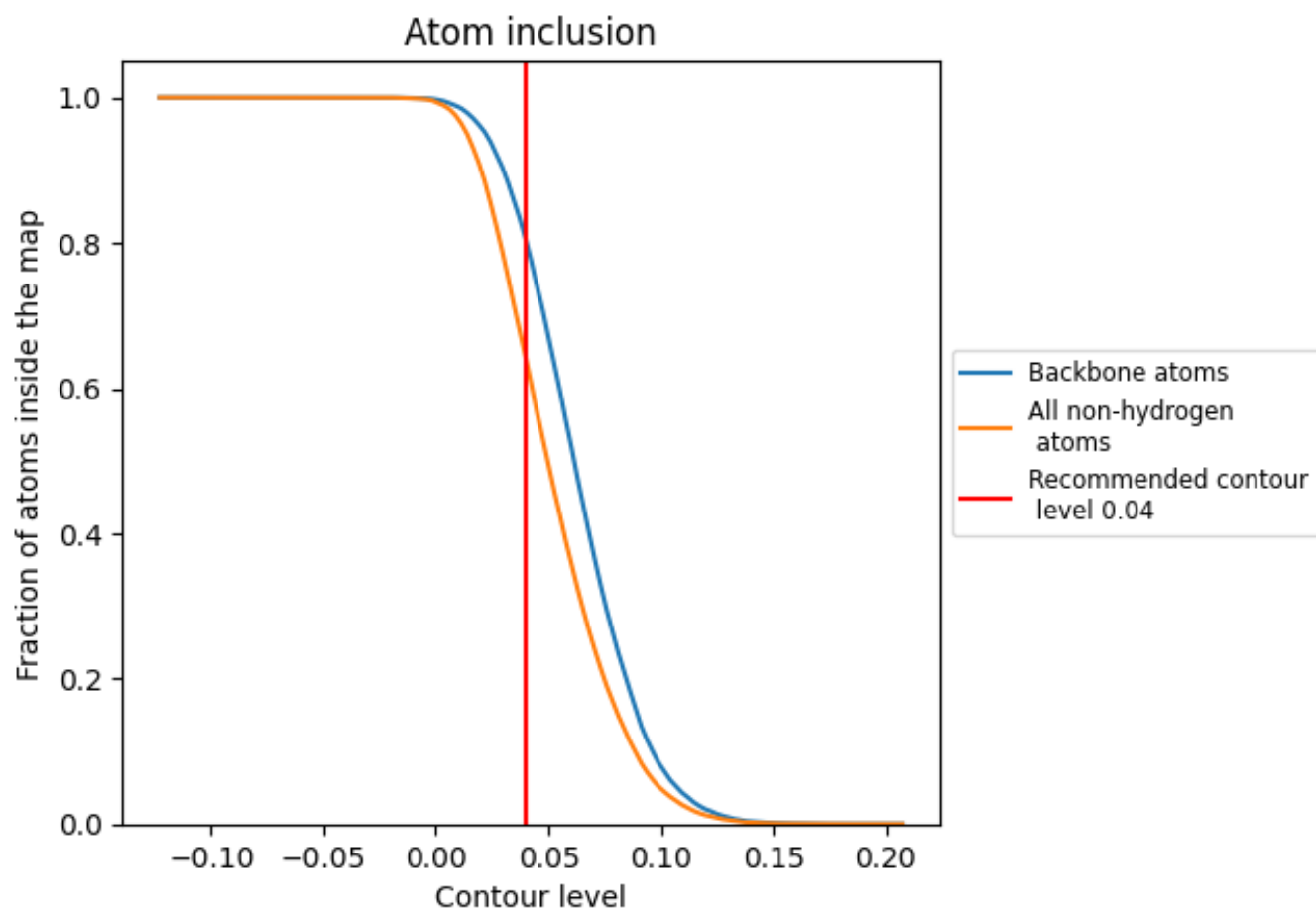
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.04).





9.4 Atom inclusion [i](#)



At the recommended contour level, 80% of all backbone atoms, 64% 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 (0.04) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6411	 0.3870
T	 0.6411	 0.3870

