



## wwPDB EM Validation Summary Report ⓘ

Apr 5, 2026 – 02:59 PM UTC

PDB ID : 9YNC / pdb\_00009ync  
EMDB ID : EMD-73173  
Title : Motor domains of phi-like human dynein-1 bound to dynactin-p150glued and LIS1  
Authors : Yang, J.; Rao, Q.; Chai, P.; Zhang, K.  
Deposited on : 2025-10-10  
Resolution : 3.93 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](mailto: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.dev132  
Mogul : 2022.3.0, CSD as543be (2022)  
MolProbity : 4-5-2 with Phenix2.0  
Buster-report : wwPDB partial adaption of 1.1.7 (2018)  
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)  
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)  
MapQ : 1.9.13  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.49

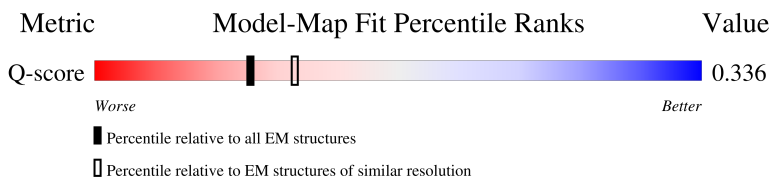
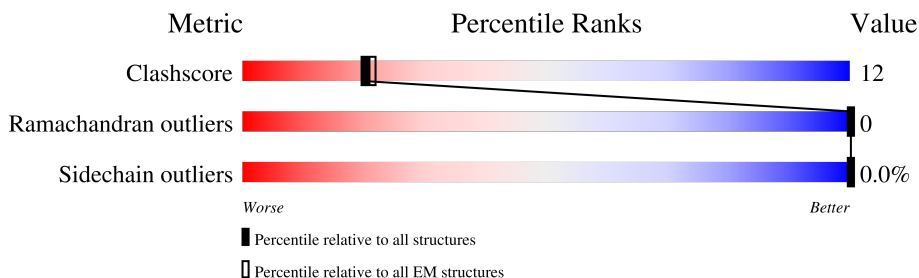
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*




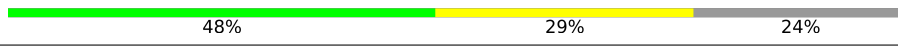
The reported resolution of this entry is 3.93 Å.

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.





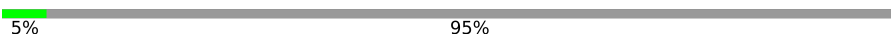
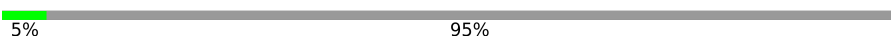


Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	7811 ( 3.43 - 4.43 )

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  $\geq 3$ , 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	4646	
1	B	4646	
2	C	410	
2	D	410	

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Length	Quality of chain
2	E	410	 13% 18% 82%
2	F	410	 8% 18% 82%
3	G	638	 5% 95%
3	H	638	 5% 95%
4	I	1281	 10% 90%
4	J	1281	 9% 91%

## 2 Entry composition

There are 7 unique types of molecules in this entry. The entry contains 56882 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 Cytoplasmic dynein 1 heavy chain 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	3064	Total	C	N	O	S	0	0
			24650	15707	4259	4563	121		
1	B	3065	Total	C	N	O	S	0	0
			24658	15711	4260	4566	121		

- Molecule 2 is a protein called Platelet-activating factor acetylhydrolase IB subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	C	322	Total	C	N	O	S	0	0
			2557	1608	452	477	20		
2	D	313	Total	C	N	O	S	0	0
			2494	1571	440	463	20		
2	E	75	Total	C	N	O		0	0
			373	223	75	75			
2	F	75	Total	C	N	O		0	0
			373	223	75	75			

- Molecule 3 is a protein called Cytoplasmic dynein 1 intermediate chain 2.

Mol	Chain	Residues	Atoms				AltConf	Trace
3	G	34	Total	C	N	O	0	0
			170	102	34	34		
3	H	34	Total	C	N	O	0	0
			170	102	34	34		

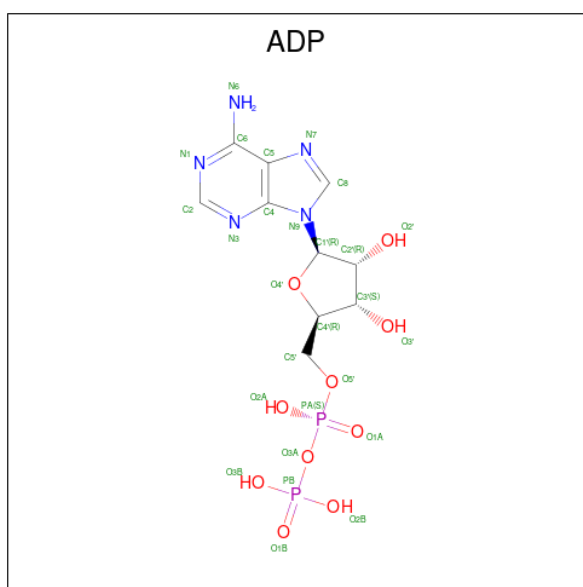
- Molecule 4 is a protein called Dynactin subunit 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
4	I	122	Total	C	N	O	0	0
			607	363	122	122		
4	J	120	Total	C	N	O	1	0
			602	360	121	121		

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
I	1279	LEU	-	expression tag	UNP A0A287B8J2
I	1280	ILE	-	expression tag	UNP A0A287B8J2
I	1281	SER	-	expression tag	UNP A0A287B8J2
J	1279	LEU	-	expression tag	UNP A0A287B8J2
J	1280	ILE	-	expression tag	UNP A0A287B8J2
J	1281	SER	-	expression tag	UNP A0A287B8J2

- Molecule 5 is ADENOSINE-5'-DIPHOSPHATE (CCD ID: ADP) (formula:  $C_{10}H_{15}N_5O_{10}P_2$ ) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
5	A	1	Total	C	N	O	P	0
			27	10	5	10	2	
5	A	1	Total	C	N	O	P	0
			27	10	5	10	2	
5	A	1	Total	C	N	O	P	0
			27	10	5	10	2	
5	B	1	Total	C	N	O	P	0
			27	10	5	10	2	
5	B	1	Total	C	N	O	P	0
			27	10	5	10	2	
5	B	1	Total	C	N	O	P	0
			27	10	5	10	2	

- Molecule 6 is ADENOSINE-5'-TRIPHOSPHATE (CCD ID: ATP) (formula:  $C_{10}H_{16}N_5O_{13}P_3$ ) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
6	A	1	Total 31	C 10	N 5	O 13	P 3	0
6	B	1	Total 31	C 10	N 5	O 13	P 3	0

- Molecule 7 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

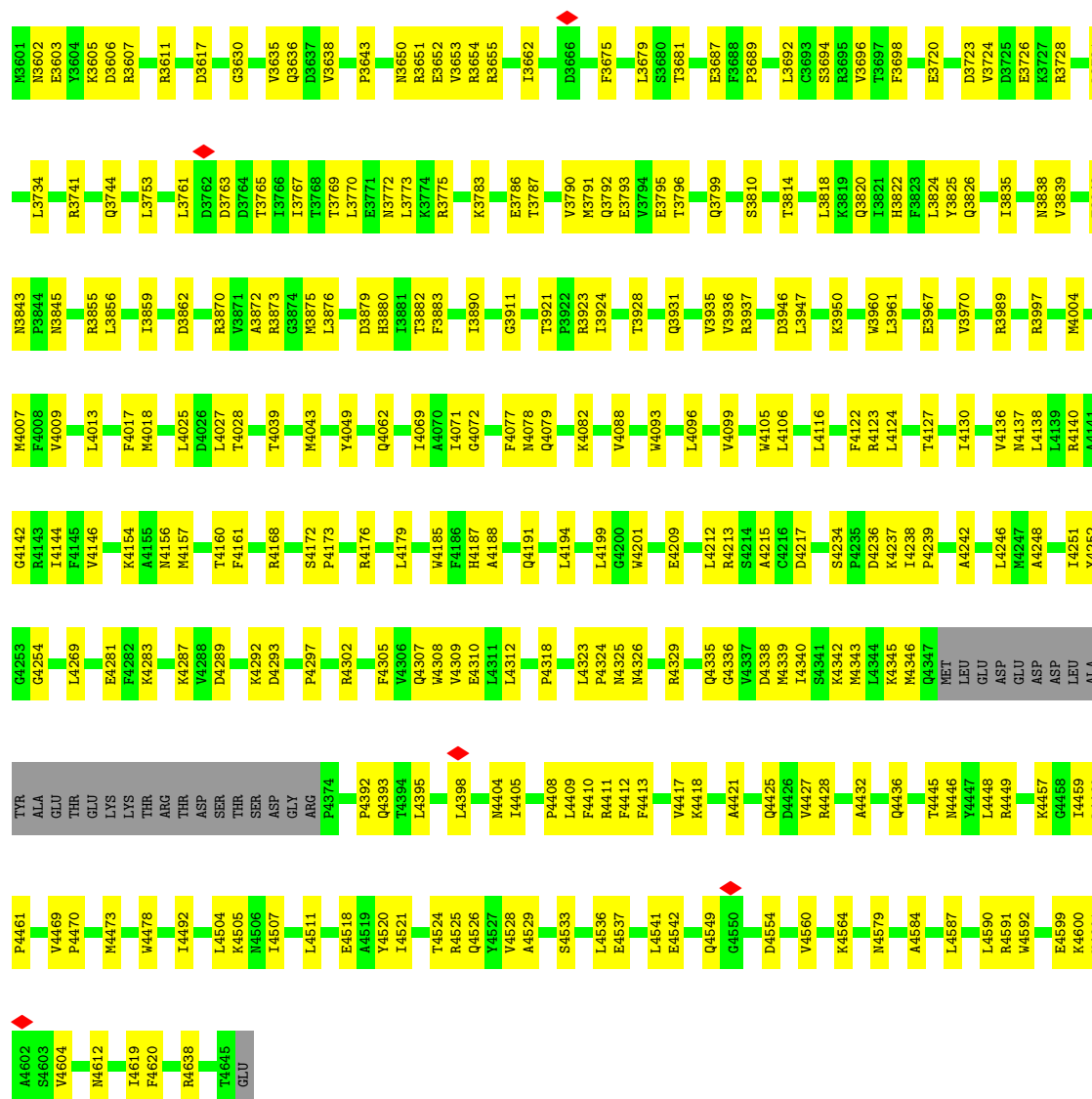
Mol	Chain	Residues	Atoms	AltConf
7	A	2	Total Mg 2 2	0
7	B	2	Total Mg 2 2	0



G1942	S1835	E1706	Y1618	K1526	M1457	VAL	TRP	ARG	GLU	ALA	ASN	GLU	ASN	PHE
R1943	F1836	K1707	Y1618	K1526	A1458	ALA	GLU	PHE	PHE	LEU	LEU	LEU	LEU	PHE
I1944	E1837	E1708	R1621	R1529	L1459	GLU	THR	PHE	THR	GLN	ASP	THR	ASP	GLN
L1948	L1839	T1712	E1622	I1530	E1460	LEU	LYS	GLN	GLN	MET	GLY	THR	GLY	LYS
C1949	S1840	Q1839	E1622	M1531	F1461	LEU	PRO	PRO	PRO	ILE	MET	ASN	VAL	VAL
Q1950	Q1841	K1729	S1694	A1532	F1462	GLN	VAL	TRP	TRP	ARG	PRO	GLN	ILE	GLY
V1951	M1842	P1735	S1625	F1534	L1463	ASP	THR	TRP	TRP	LYS	ASP	VAL	GLU	ASP
W1954	Q1850	Y1735	F1626	D1535	K1464	LEU	GLY	LYS	LYS	GLY	GLY	VAL	LEU	ASP
G1955	Q1856	I1739	P1627	I1538	Q1465	LYS	ASN	TYR	TYR	ILE	ILE	GLN	LEU	LEU
C1956	F1857	T1740	F1628	R1542	R1466	GLY	ARG	ASP	ASP	GLU	LEU	ASN	GLY	ILE
F1957	Y1630	W1741	Y1630	R1543	E1468	TRP	PRO	ASN	ASN	THR	LEU	VAL	VAL	ILE
D1958	T1859	W1741	F1631	R1543	W1469	SER	GLU	ILE	GLU	ASP	GLU	PRO	ARG	GLU
E1959	Q1860	Q1745	V1632	W1544	M1470	LEU	GLU	GLY	GLN	ASP	GLU	ILE	GLU	LYS
F1960	M1861	Q1746	V1632	W1544	M1471	LEU	ALA	GLY	GLN	GLY	GLU	ILE	GLN	GLY
M1961	Q1862	A1747	Y1646	Y1546	T1472	LEU	ALA	GLY	GLN	GLY	GLU	ILE	GLN	GLY
K1865	L1963	A1747	D1635	L1547	Y1473	LYS	GLN	TRP	TRP	THR	SER	CYS	ASP	ASP
L1963	Y1868	V1750	L1637	L1637	D1476	VAL	ALA	GLY	GLY	LYS	ALA	LEU	LEU	LEU
E1964	V1751	L1752	L1638	L1638	L1477	TRP	LEU	ALA	ALA	VAL	VAL	ARG	GLU	GLU
E1965	L1879	Q1755	L1639	L1639	V1478	GLU	THR	PHE	PHE	GLY	MET	LYS	ALA	VAL
R1966	V1880	I1756	I1641	K1558	N1482	ILE	TYR	ASN	ASN	THR	THR	THR	THR	ARG
Q1974	Q1881	I1756	I1641	K1558	N1482	ASP	GLY	ILE	ILE	SER	VAL	GLN	GLY	GLY
L1978	Y1889	E1760	V1647	L1561	R1485	GLN	LYS	ARG	ARG	ALA	GLU	VAL	LEU	LEU
Q1979	L1890	L1766	L1650	F1562	L1486	LYS	PHE	ARG	ARG	ILE	VAL	PHE	LEU	GLY
H1985	L1891	L1766	H1653	E1564	R1487	THR	THR	LYS	LYS	THR	THR	THR	GLY	ALA
A1992	M1892	M1769	F1654	T1565	Q1488	ARG	ARG	ASP	ASP	ASP	GLN	TRP	ALA	ALA
T1993	T1893	M1769	K1655	Q1566	W1490	LEU	LYS	SER	SER	GLY	LYS	TRP	ALA	ALA
S1994	Q1894	Q1773	K1656	R1567	D1491	W1351	LYS	ALA	ALA	THR	GLY	GLY	LYS	GLY
A1995	E1897	G1773	M1657	I1571	D1492	V1352	ASP	ILE	ILE	THR	VAL	VAL	VAL	VAL
P1996	R1898	P1777	S1662	M1579	F1494	S1353	ASP	GLN	GLN	VAL	VAL	VAL	VAL	VAL
I1997	G1902	L1778	S1663	K1579	L1430	V1354	GLU	GLN	GLN	VAL	VAL	VAL	VAL	VAL
L2001	F1905	V1781	I1664	V1582	K1495	Q1355	CYS	ALA	ALA	ASN	TYR	PRO	ASP	ILE
P2010	G1906	T1788	E1688	M1589	V1497	R1357	ALA	ASN	ASN	GLN	GLN	ARG	MET	LEU
D2011	P1907	L1792	V1673	D1590	K1498	L1358	LYS	LEU	LEU	LYS	ILE	ILE	ASP	ASN
M2012	K1912	L1792	V1673	V1591	E1499	R1359	LYS	MET	LYS	ASP	TRP	TRP	ASP	THR
F2015	T1913	M1798	T1676	L1593	I1501	Q1361	GLU	GLY	GLN	SER	GLN	ARG	ALA	GLN
I2016	E1914	Q1807	T1676	Q1594	V1504	M1362	ALA	ILE	ILE	TRP	MET	ARG	PRO	LYS
T2017	A1918	Q1800	R1679	Q1595	M1507	L1363	VAL	VAL	VAL	TRP	GLN	GLN	VAL	ALA
M2018	L1919	K1807	M1685	G1596	K1508	D1364	GLU	GLU	GLU	ALA	ALA	GLN	VAL	VAL
D2030	Q1922	L1811	T1692	V1597	S1510	A1365	LEU	LEU	LEU	LYS	LYS	GLN	VAL	VAL
K2034	V1929	E1814	H1695	Q1598	L1509	M1368	GLN	GLU	GLU	GLY	SER	GLY	SER	ASP
L2035	F1930	H1817	T1698	G1598	K1508	Q1368	VAL	VAL	VAL	GLY	HIS	GLY	HIS	ASP
L2039	C1932	S1828	N1699	V1597	P1511	Q1369	GLU	ARG	ARG	LEU	LYS	VAL	SER	ASP
D1933	D1933	L1702	E1700	P1512	Y1513	L1370	LEU	ALA	ALA	LEU	PRO	ILE	ILE	LEU
F1936	F1936	T1703	L1702	Y1512	Y1513	K1371	THR	THR	THR	SER	GLY	THR	GLY	GLY
T2042	T2042	I1830	L1607	R1599	K1514	S1372	GLY	GLU	GLU	ARG	ASN	THR	ARG	ARG
Q2047	Q2047	A1833	L1608	L1521	E1518	R1376	LEU	SER	SER	ASN	GLY	GLY	GLY	LEU
L2048	L2048	I1611	L1608	L1521	D1519	Q1379	LEU	THR	THR	THR	GLY	GLY	GLY	LEU
I2049	I2049	A1834	L1608	L1521	D1519	Q1379	LEU	THR	THR	THR	GLY	GLY	GLY	LEU

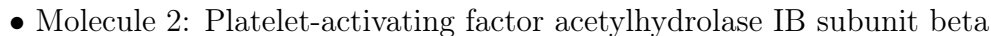






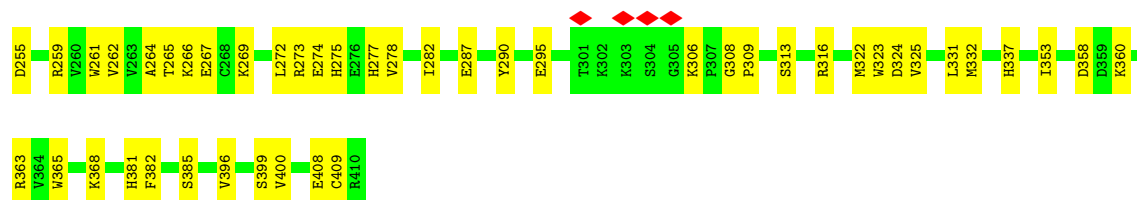
Y1393	VAL	TRP	ARG	GLU	ALA	GLU	ALA	ASN	PHE	LEU	PHE	LEU	ILE	GLU	LEU	THR	GLN	GLY	ASP	LEU
M1394	ALA	GLU	PHE	ALA	LEU	LEU	LEU	LYS	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU
K1395	GLU	THR	GLN	THR	THR	THR	THR	ASP	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN
L1399	GLU	PRO	PRO	ILE	ILE	ILE	ILE	ASN	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU
L1403	GLN	VAL	SER	ARG	ARG	ARG	ARG	PRO	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE
K1404	ASP	THR	TRP	LYS	LYS	LYS	LYS	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP
S1405	LEU	THR	GLY	THR	THR	THR	THR	PRO	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
L1408	VAL	PRO	ASP	ARG	ARG	ARG	ARG	ALA	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
K1409	TRP	ARG	ASN	LEU	LEU	LEU	LEU	LEU	PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE
D1410	SER	GLU	ILE	GLU	GLU	GLU	GLU	GLU	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP
R1411	GLU	GLU	GLU	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN
H1412	LEU	ALA	GLY	ALA	ALA	ALA	ALA	SER	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA
W1413	LEU	LEU	SER	GLU	GLU	GLU	GLU	GLU	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
R1419	LYS	GLN	TRP	VAL	VAL	VAL	VAL	SER	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
W1424	VAL	ALA	ALA	GLY	GLY	GLY	GLY	ALA	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
V1425	TRP	LEU	ALA	THR	THR	THR	THR	VAL	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS
V1426	GLU	THR	PHE	PHE	PHE	PHE	PHE	MET	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
V1427	ILE	ILE	ASN	ASN	ASN	ASN	ASN	GLY	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
S1427	ASP	THR	ASP	THR	THR	THR	THR	ILE	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP
E1428	GLY	GLY	GLY	GLY	GLY	GLY	GLY	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL
T1429	MET	LYS	LYS	ARG	ARG	ARG	ARG	SER	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
T1430	GLY	PHE	PHE	ARG	ARG	ARG	ARG	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
L1431	LYS	GLY	GLY	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS
Q1349	Q1349	ARG	ASP	ASP	ASP	ASP	ASP	GLY	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
P1350	P1350	LEU	LEU	LEU	LEU	LEU	LEU	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
W1351	W1351	LYS	ALA	ALA	ALA	ALA	ALA	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL
V1352	V1352	ASP	ILE	ILE	ILE	ILE	ILE	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS
S1353	S1353	ASP	GLN	GLN	GLN	GLN	GLN	TRP	TRP	TRP	TRP	TRP	TRP	TRP	TRP	TRP	TRP	TRP	TRP	TRP
V1354	V1354	GLU	GLN	GLN	GLN	GLN	GLN	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
Q1355	Q1355	LYS	VAL	VAL	VAL	VAL	VAL	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN
P1356	P1356	CYS	ALA	ALA	ALA	ALA	ALA	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO
H1357	H1357	ALA	ASN	ASN	ASN	ASN	ASN	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
K1358	K1358	ALA	LEU	LEU	LEU	LEU	LEU	CYS	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP
L1359	L1359	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS
M1362	M1362	ALA	ILE	ILE	ILE	ILE	ILE	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL
L1363	L1363	LEU	VAL	VAL	VAL	VAL	VAL	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN
D1364	D1364	GLU	GLU	GLU	GLU	GLU	GLU	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
A1365	A1365	LEU	VAL	VAL	VAL	VAL	VAL	ASN	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP
L1370	L1370	THR	ASP	ASP	ASP	ASP	ASP	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE
K1371	K1371	THR	ALA	ALA	ALA	ALA	ALA	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO
A1375	A1375	GLY	VAL	VAL	VAL	VAL	VAL	ASN	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
E1460	E1460	LEU	GLY	GLY	GLY	GLY	GLY	ARG	PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE
E1461	E1461	LEU	SER	SER	SER	SER	SER	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU
F1462	F1462	SER	ARG	ARG	ARG	ARG	ARG	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
L1463	L1463	THR	THR	THR	THR	THR	THR	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN
K1464	K1464	SER	THR	THR	THR	THR	THR	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE
W1470	W1470	GLU	ASP	ASP	ASP	ASP	ASP	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU
V1478	V1478	ARG	LEU	LEU	LEU	LEU	LEU	ASN	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER
C1484	C1484	VAL	THR	THR	THR	THR	THR	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL
	L1389	L1389	ASP	GLN	GLN	GLN	GLN	HIS	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL
	L1390	L1390	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR

LYS	Q3214	T3081	L2993	Q2834	E2688	W2545	W2545	ASP	V2307	E2188	S1903	V1724	L1485
VAL	V3216	R3088	M2994	E2839	R2694	W2548	W2548	GLY	D2308	M2189	S1903	E1725	R1488
PRO	E3216	C3089	E2996	E2842	D2697	W2562	W2562	GLY	E2310	L2190	T1910	F1727	R1603
ALA	E3217	F3094	V2999	R2843	K2702	W2563	W2563	ALA	W2311	L2191	G1911	K1728	L1604
VAL	R3219	G3095	G3003	L2885	K2707	W2564	W2564	ALA	W2312	L2192	E1914	K1729	A1605
ILE	R3220	D3096	F3004	L2886	V2708	W2565	W2565	ALA	E2313	E2197	S1915	S1753	H1500
GLU	R3223	W3097	L3006	L2887	V2709	W2566	W2566	ALA	M2322	W2203	S1916	S1756	V1504
ASN	Q3227	T3110	E3006	L2888	V2710	W2567	W2567	ALA	T2326	K2206	K1917	I1756	G1609
ALA	E3228	S3111	R3007	L2889	N2713	D2573	D2573	ALA	W2329	L2210	V1929	L1766	I1610
VAL	L3229	K3112	M3008	L2890	P2714	R2576	R2576	ALA	R2332	Y2211	F1930	M1769	K1508
LYS	E3230	K3113	L3012	L2891	R2720	T2583	T2583	ALA	L2333	I2213	D1933	M1769	Y1513
SER	V3231	D3114	A3013	L2892	R2726	W2584	W2584	ALA	W2338	T2214	F1936	G1773	E1517
ILE	N3233	D3124	V3017	L2893	R2729	L2585	L2585	ALA	R2341	Q2215	D1937	G1773	E1518
LYS	K3239	Y3125	L3020	L2894	R2733	P2590	P2590	ALA	W2343	Q2216	F1938	V1785	D1519
GLN	M3243	Y3129	D3024	L2895	V2738	L2591	L2591	ALA	R2344	I2216	Q1939	L1789	A1520
LEU	V3244	D3130	E2903	L2896	Y2748	V2592	V2592	ALA	F2345	L2220	M1941	A1793	L1521
VAL	K3245	K3131	E3025	L2897	M2755	W2596	W2596	ALA	W2346	M2221	V1946	A1793	S1522
VAL	D3246	L3133	L2905	L2898	P2760	P2596	P2596	ALA	W2347	M2222	C1949	L1797	I1538
ARG	Q3247	P3134	T3028	L2899	R2763	E2616	E2616	ALA	W2348	S2228	Q1950	L1797	I1530
SER	Q3248	Q3135	T3031	L2900	T2770	S2623	S2623	ALA	W2349	S2229	E1959	M1798	I1538
MET	E3249	P3136	Q3032	L2901	M2773	T2627	T2627	ALA	W2350	S2230	F1960	Q1800	D1535
ALA	K3252	F3137	C3033	L2902	F2784	P2628	P2628	ALA	W2351	S2231	E1961	E1799	I1640
LYS	LYS	R3140	K3034	L2903	Y2792	W2641	W2641	ALA	W2352	S2232	E1962	Q1800	I1641
PRO	LYS	E3141	C3035	L2904	Y2797	V2648	V2648	ALA	W2353	S2233	E1963	E1814	L1650
ALA	VAL	V3144	G3036	L2905	R2797	V2649	V2649	ALA	W2354	S2234	E1964	H1817	R1543
VAL	VAL	F3149	A3037	L2906	E2798	L2650	L2650	ALA	W2355	S2235	E1965	Q1818	Y1546
LYS	GLN	V3150	K3038	L2907	T2800	Q2654	Q2654	ALA	W2356	S2236	E1966	A1833	L1547
LEU	ILE	L3154	L3042	L2908	T2801	K2657	K2657	ALA	W2357	S2237	E1967	S1835	I1550
GLU	GLN	T3172	M3043	L2909	W2802	V2660	V2660	ALA	W2358	S2238	E1968	F1836	S1554
SER	GLN	P3173	S3046	L2910	R2804	W2667	W2667	ALA	W2359	S2239	E1969	W1837	E1668
ILE	LEU	R3174	H3047	L2911	L2810	N2687	N2687	ALA	W2360	S2240	E1970	W1838	K1588
LYS	GLN	H3175	E3048	L2912	L2811	V2679	V2679	ALA	W2361	S2241	E1971	S1840	V1672
LEU	GLN	V3176	E3049	L2913	L2812	W2682	W2682	ALA	W2362	S2242	E1972	Q1841	L1561
LEU	GLN	L3177	L3050	L2914	L2813	P2683	P2683	ALA	W2363	S2243	E1973	M1842	E1564
GLY	GLU	D3178	K3052	L2915	L2814	R2684	R2684	ALA	W2364	S2244	E1974	F1844	T1565
GLY	VAL	H3182	F3054	L2916	L2815	Q2685	Q2685	ALA	W2365	S2245	E1975	Q1850	Q1569
SER	ALA	Q3197	R3060	L2917	L2816	W2686	W2686	ALA	W2366	S2246	E1976	Q1856	T1573
THR	ASP	Q3198	R3061	L2918	L2817	V2687	V2687	ALA	W2367	S2247	E1977	Q1856	T1573
ASP	ASP	P3199	V3065	L2919	L2818	W2688	W2688	ALA	W2368	S2248	E1978	M1861	L1576
THR	THR	R3200	M3066	L2920	L2819	R2689	R2689	ALA	W2369	S2249	E1979	A1862	L1576
LYS	GLN	L3201	S3072	L2921	L2820	Q2689	Q2689	ALA	W2370	S2250	E1980	M1862	M1579
GLN	SER	E3073	E3073	L2922	C2820	W2690	W2690	ALA	W2371	S2251	E1981	Q1881	M1589
ILE	VAL	K3207	K3076	L2923	A2829	V2691	V2691	ALA	W2372	S2252	E1982	T1893	M1593
ARG	GLU	T3208	R3077	L2924		W2692	W2692	ALA	W2373	S2253	E1983	E1897	E1708
SER	GLU	T3211	R3078	L2925		W2693	W2693	ALA	W2374	S2254	E1984	A1897	E1708
ILE	ASP		D3077	L2926		W2694	W2694	ALA	W2375	S2255	E1985	E1898	E1708
ILE	LEU		R3079	L2927		W2695	W2695	ALA	W2376	S2256	E1986	E1899	E1708
MET	ASP		R3080	L2928		W2696	W2696	ALA	W2377	S2257	E1987	E1899	E1708
				L2929		W2697	W2697	ALA	W2378	S2258	E1988	E1899	E1708
				L2930		W2698	W2698	ALA	W2379	S2259	E1989	E1899	E1708
				L2931		W2699	W2699	ALA	W2380	S2260	E1990	E1899	E1708
				L2932		W2700	W2700	ALA	W2381	S2261	E1991	E1899	E1708
				L2933		W2701	W2701	ALA	W2382	S2262	E1992	E1899	E1708
				L2934		W2702	W2702	ALA	W2383	S2263	E1993	E1899	E1708
				L2935		W2703	W2703	ALA	W2384	S2264	E1994	E1899	E1708
				L2936		W2704	W2704	ALA	W2385	S2265	E1995	E1899	E1708
				L2937		W2705	W2705	ALA	W2386	S2266	E1996	E1899	E1708
				L2938		W2706	W2706	ALA	W2387	S2267	E1997	E1899	E1708
				L2939		W2707	W2707	ALA	W2388	S2268	E1998	E1899	E1708
				L2940		W2708	W2708	ALA	W2389	S2269	E1999	E1899	E1708
				L2941		W2709	W2709	ALA	W2390	S2270	E2000	E1899	E1708
				L2942		W2710	W2710	ALA	W2391	S2271	E2001	E1899	E1708
				L2943		W2711	W2711	ALA	W2392	S2272	E2002	E1899	E1708
				L2944		W2712	W2712	ALA	W2393	S2273	E2003	E1899	E1708
				L2945		W2713	W2713	ALA	W2394	S2274	E2004	E1899	E1708
				L2946		W2714	W2714	ALA	W2395	S2275	E2005	E1899	E1708
				L2947		W2715	W2715	ALA	W2396	S2276	E2006	E1899	E1708
				L2948		W2716	W2716	ALA	W2397	S2277	E2007	E1899	E1708
				L2949		W2717	W2717	ALA	W2398	S2278	E2008	E1899	E1708
				L2950		W2718	W2718	ALA	W2399	S2279	E2009	E1899	E1708
				L2951		W2719	W2719	ALA	W2400	S2280	E2010	E1899	E1708
				L2952		W2720	W2720	ALA	W2401	S2281	E2011	E1899	E1708
				L2953		W2721	W2721	ALA	W2402	S2282	E2012	E1899	E1708
				L2954		W2722	W2722	ALA	W2403	S2283	E2013	E1899	E1708
				L2955		W2723	W2723	ALA	W2404	S2284	E2014	E1899	E1708
				L2956		W2724	W2724	ALA	W2405	S2285	E2015	E1899	E1708
				L2957		W2725	W2725	ALA	W2406	S2286	E2016	E1899	E1708
				L2958		W2726	W2726	ALA	W2407	S2287	E2017	E1899	E1708
				L2959		W2727	W2727	ALA	W2408	S2288	E2018	E1899	E1708
				L2960		W2728	W2728	ALA	W2409	S2289	E2019	E1899	E1708
				L2961		W2729	W2729	ALA	W2410	S2290	E2020	E1899	E1708
				L2962		W2730	W2730	ALA	W2411	S2291	E2021	E1899	E1708
				L2963		W2731	W2731	ALA	W2412	S2292	E2022	E1899	E1708
				L2964		W2732	W2732	ALA	W2413	S2293	E2023	E1899	E1708
				L2965		W2733	W2733	ALA	W2414	S2294	E2024	E1899	E1708
				L2966		W2734	W2734	ALA	W2415	S2295	E2025	E1899	E1708
				L2967		W2735	W2735	ALA	W2416	S2296	E2026	E1899	E1708
				L2968		W2736	W2736	ALA	W2417	S2297	E2027	E1899	E1708
				L2969		W2737	W2737	ALA	W2418	S2298	E2028	E1899	E1708
				L2970		W2738	W2738	ALA	W2419	S2299	E2029	E1899	E1708
				L2971		W2739	W2739	ALA	W2420	S2300	E2030	E1899	E1708
				L2972		W2740	W2740	ALA	W2421	S2301	E2031	E1899	E1708
				L2973		W2741	W2741	ALA	W2422	S2302	E2032	E1899	E1708
				L2974		W2742	W2742	ALA	W2423	S2303	E2033	E1899	E1708
				L2975		W2743	W2743	ALA	W2424	S2304	E2034	E1899	E1708
				L2976		W2744	W2744	ALA	W2425	S2305	E2035	E1899	E1708
				L2977		W2745	W2745	ALA	W2426	S2306	E2036	E1899	E1708
				L2978		W2746	W2746	ALA	W2427	S2307	E2037	E1899	E1708
				L2979		W2747	W2747	ALA	W2428	S2308	E2038	E1899	E1708
				L2980		W2748	W2748	ALA	W2429	S2309	E2039	E1899	E1708
				L2981		W2749	W2749	ALA	W2430	S2310	E2040	E1899	E1708
				L2982		W2750	W2750	ALA	W2431	S2311	E2041	E1899	E1708
				L2983		W2751	W2751	ALA	W2432	S2312	E2042	E1899	E1708
				L2984		W2752	W2752	ALA	W2433	S2313	E2043	E1899	E1708
				L2985		W2753	W2753	ALA	W2434	S2314	E2044	E1899	E1708
				L2986		W2754	W2754	ALA	W24				

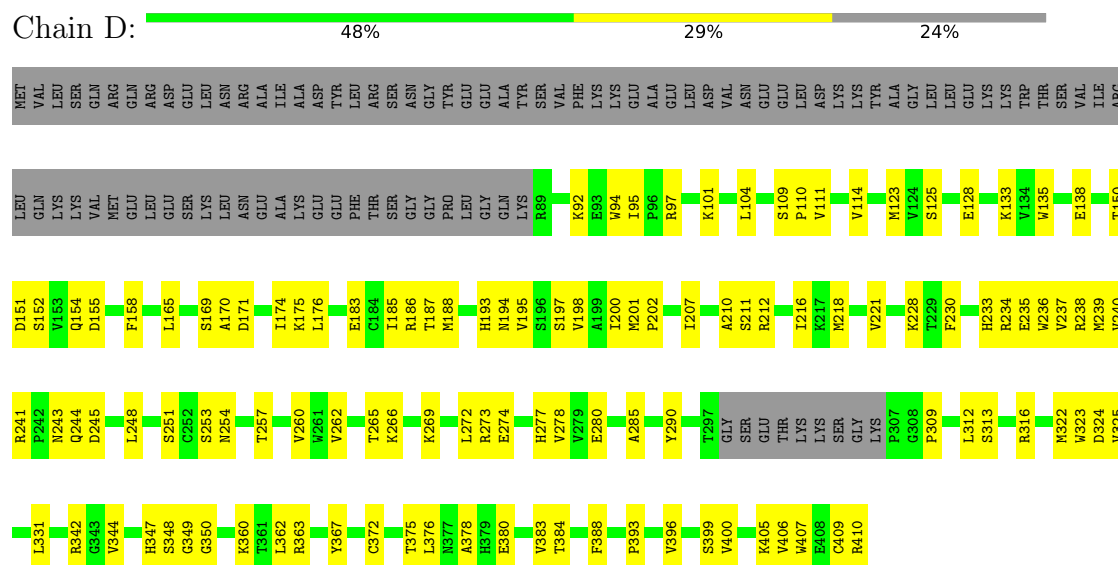


Frequency	Percentage
Daily	54%
Weekly	25%
Monthly	21%

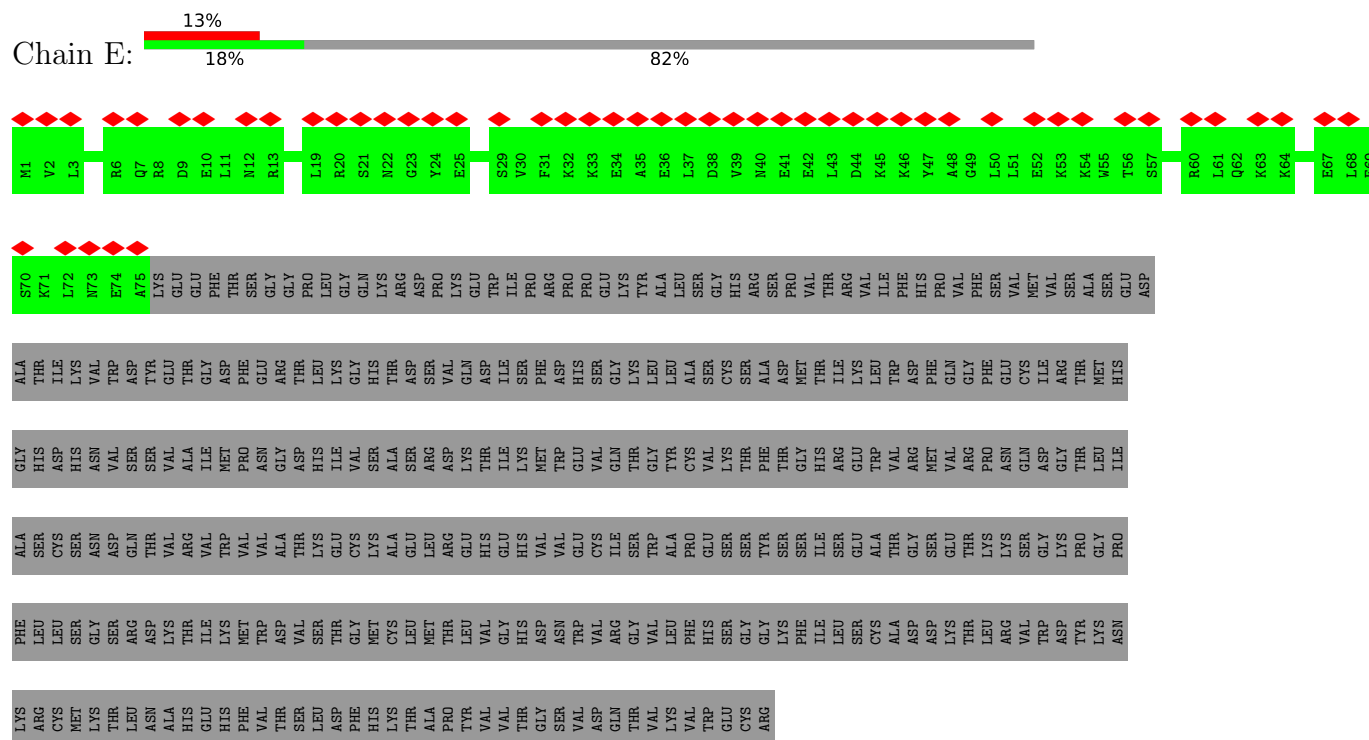




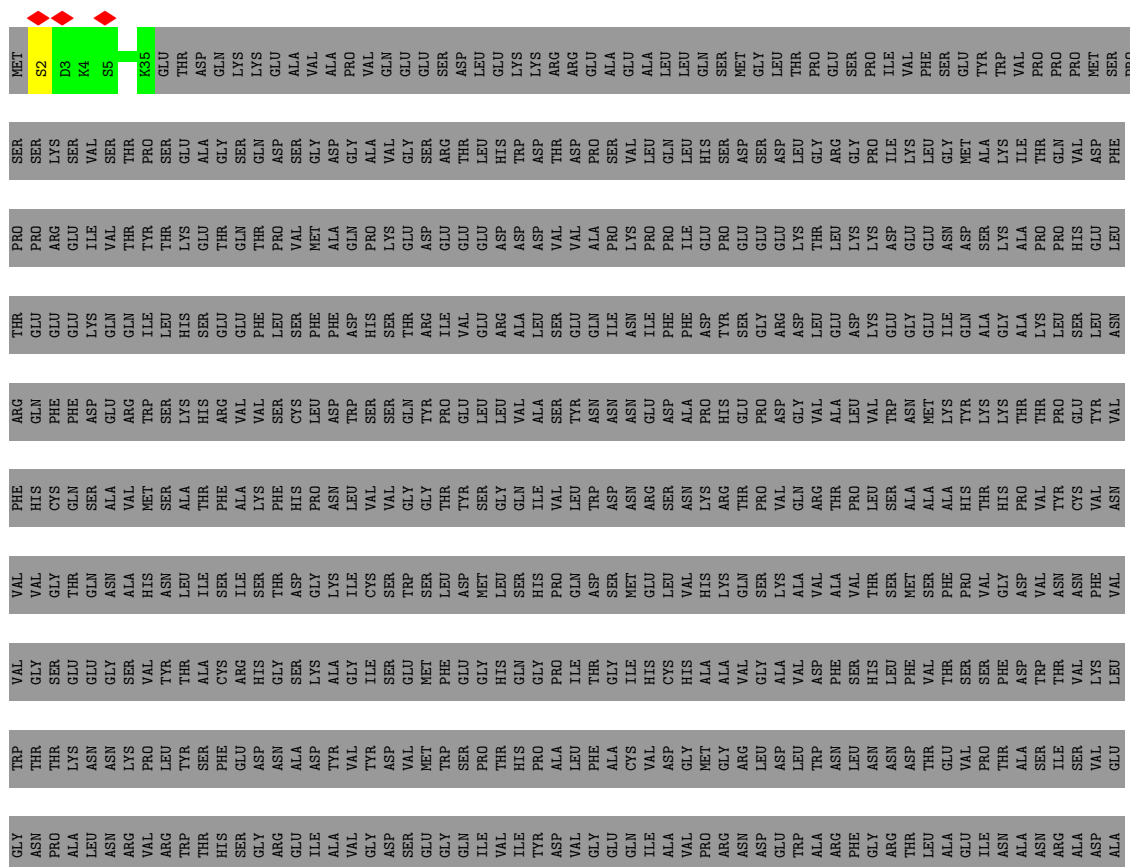
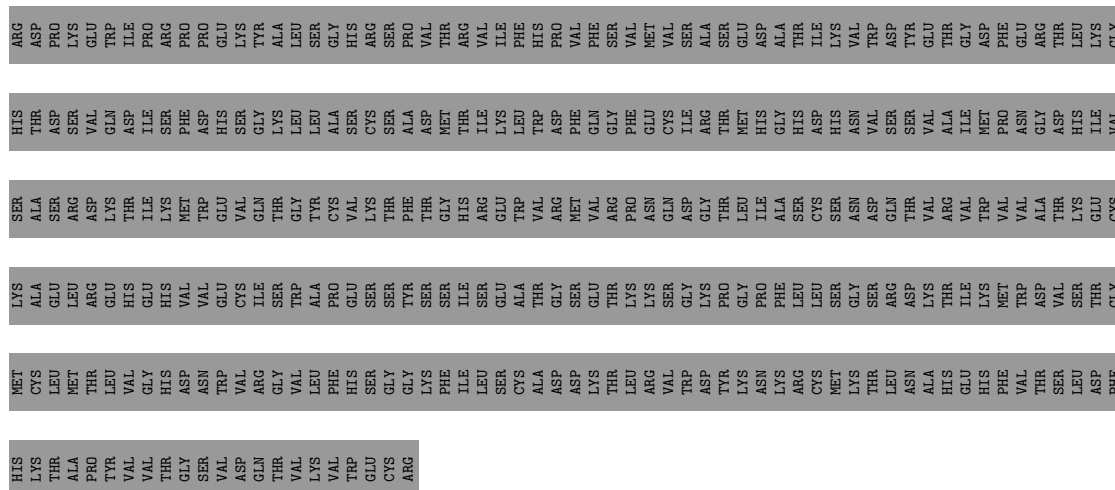
• Molecule 2: Platelet-activating factor acetylhydrolase IB subunit beta



• Molecule 2: Platelet-activating factor acetylhydrolase IB subunit beta



• Molecule 2: Platelet-activating factor acetylhydrolase IB subunit beta











## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	90591	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS GLACIOS	Depositor
Voltage (kV)	200	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	40	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	2600	Depositor
Magnification	45000	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.483	Depositor
Minimum map value	-0.187	Depositor
Average map value	-0.001	Depositor
Map value standard deviation	0.019	Depositor
Recommended contour level	0.08	Depositor
Map size (Å)	444.4032, 444.4032, 444.4032	wwPDB
Map dimensions	384, 384, 384	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.1573, 1.1573, 1.1573	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: MG, ADP, ATP

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	0.12	0/25169	0.32	0/34101
1	B	0.12	0/25177	0.30	0/34112
2	C	0.12	0/2624	0.39	0/3555
2	D	0.10	0/2560	0.31	0/3470
2	E	0.06	0/372	0.20	0/518
2	F	0.06	0/372	0.17	0/518
3	G	0.05	0/169	0.14	0/235
3	H	0.05	0/169	0.13	0/235
4	I	0.21	0/606	0.30	0/845
4	J	0.35	0/601	0.44	0/838
All	All	0.12	0/57819	0.32	0/78427

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	24650	0	24762	653	0
1	B	24658	0	24766	577	0
2	C	2557	0	2487	71	0

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	D	2494	0	2419	89	0
2	E	373	0	172	0	0
2	F	373	0	172	0	0
3	G	170	0	73	1	0
3	H	170	0	73	0	0
4	I	607	0	285	0	0
4	J	602	0	282	0	0
5	A	81	0	36	9	0
5	B	81	0	36	10	0
6	A	31	0	12	4	0
6	B	31	0	12	6	0
7	A	2	0	0	0	0
7	B	2	0	0	0	0
All	All	56882	0	55587	1380	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 12.

The worst 5 of 1380 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)
2:C:275:HIS:HE2	2:C:313:SER:HG	1.16	0.93
1:A:1892:MET:HE1	1:A:1902:GLY:HA3	1.53	0.90
1:A:2096:VAL:HG22	1:A:2144:THR:HG21	1.53	0.90
1:A:2633:LYS:HZ3	1:A:3019:GLY:H	1.20	0.88
1:A:4473:MET:HE1	1:A:4478:TRP:HB2	1.58	0.84

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	3056/4646 (66%)	2984 (98%)	72 (2%)	0	100	100
1	B	3057/4646 (66%)	2974 (97%)	83 (3%)	0	100	100
2	C	320/410 (78%)	301 (94%)	19 (6%)	0	100	100
2	D	309/410 (75%)	294 (95%)	15 (5%)	0	100	100
2	E	73/410 (18%)	73 (100%)	0	0	100	100
2	F	73/410 (18%)	73 (100%)	0	0	100	100
3	G	32/638 (5%)	32 (100%)	0	0	100	100
3	H	32/638 (5%)	32 (100%)	0	0	100	100
4	I	120/1281 (9%)	120 (100%)	0	0	100	100
4	J	119/1281 (9%)	119 (100%)	0	0	100	100
All	All	7191/14770 (49%)	7002 (97%)	189 (3%)	0	100	100

There are no Ramachandran outliers to report.

### 5.3.2 Protein sidechains ⓘ

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	2720/4125 (66%)	2720 (100%)	0	100	100
1	B	2721/4125 (66%)	2721 (100%)	0	100	100
2	C	287/364 (79%)	286 (100%)	1 (0%)	86	86
2	D	280/364 (77%)	280 (100%)	0	100	100
All	All	6008/8978 (67%)	6007 (100%)	1 (0%)	100	100

All (1) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	C	222	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 71 such sidechains are listed below:

Mol	Chain	Res	Type
1	B	2549	GLN
1	B	3061	ASN
1	B	3877	HIS
1	A	2707	GLN
1	A	2685	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 12 ligands modelled in this entry, 4 are monoatomic - leaving 8 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
5	ADP	A	4703	-	28,29,29	1.41	4 (14%)	43,45,45	1.87	8 (18%)
5	ADP	A	4701	7	28,29,29	1.44	4 (14%)	43,45,45	1.77	8 (18%)
5	ADP	B	4701	7	28,29,29	1.40	4 (14%)	43,45,45	1.83	8 (18%)
5	ADP	B	4703	-	28,29,29	1.41	4 (14%)	43,45,45	1.92	8 (18%)
6	ATP	B	4702	7	32,33,33	0.37	0	48,52,52	0.30	0
5	ADP	B	4704	-	28,29,29	1.41	4 (14%)	43,45,45	1.83	9 (20%)
5	ADP	A	4704	-	28,29,29	1.40	4 (14%)	43,45,45	1.82	9 (20%)
6	ATP	A	4702	7	32,33,33	0.29	0	48,52,52	0.29	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
5	ADP	A	4703	-	-	0/16/32/32	0/3/3/3
5	ADP	A	4701	7	-	0/16/32/32	0/3/3/3
5	ADP	B	4701	7	-	2/16/32/32	0/3/3/3
5	ADP	B	4703	-	-	2/16/32/32	0/3/3/3
6	ATP	B	4702	7	-	5/22/38/38	0/3/3/3
5	ADP	B	4704	-	-	2/16/32/32	0/3/3/3
5	ADP	A	4704	-	-	1/16/32/32	0/3/3/3
6	ATP	A	4702	7	-	7/22/38/38	0/3/3/3

The worst 5 of 24 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	A	4701	ADP	C5-C4	4.90	1.47	1.39
5	A	4703	ADP	C5-C4	4.75	1.47	1.39
5	B	4703	ADP	C5-C4	4.75	1.47	1.39
5	A	4704	ADP	C5-C4	4.73	1.47	1.39
5	B	4704	ADP	C5-C4	4.72	1.47	1.39

The worst 5 of 50 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	B	4703	ADP	C5-C4-N3	-6.52	117.74	126.72
5	A	4703	ADP	C5-C4-N3	-6.10	118.32	126.72
5	A	4704	ADP	C5-C4-N3	-5.92	118.56	126.72
5	B	4701	ADP	C5-C4-N3	-5.90	118.59	126.72
5	B	4704	ADP	C5-C4-N3	-5.87	118.64	126.72

There are no chirality outliers.

5 of 19 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	B	4701	ADP	C5'-O5'-PA-O2A
5	B	4701	ADP	C5'-O5'-PA-O3A
6	A	4702	ATP	C5'-O5'-PA-O1A
6	A	4702	ATP	C5'-O5'-PA-O2A
6	A	4702	ATP	C5'-O5'-PA-O3A

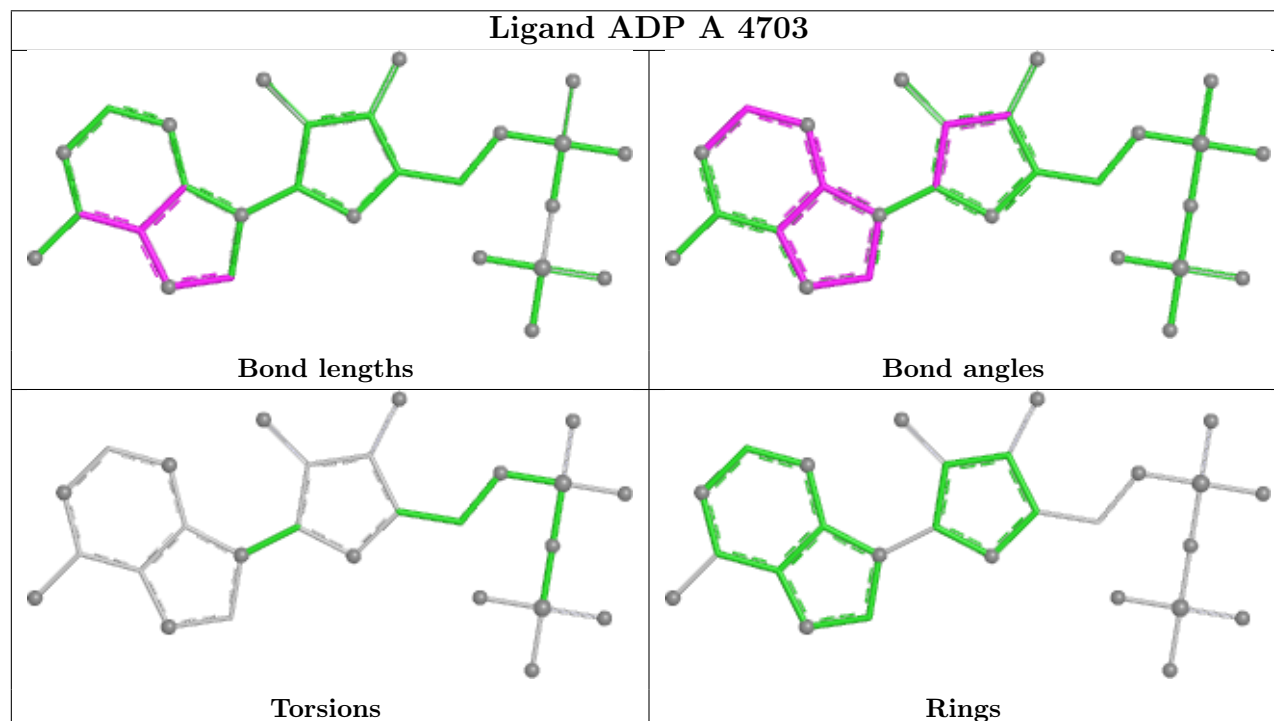


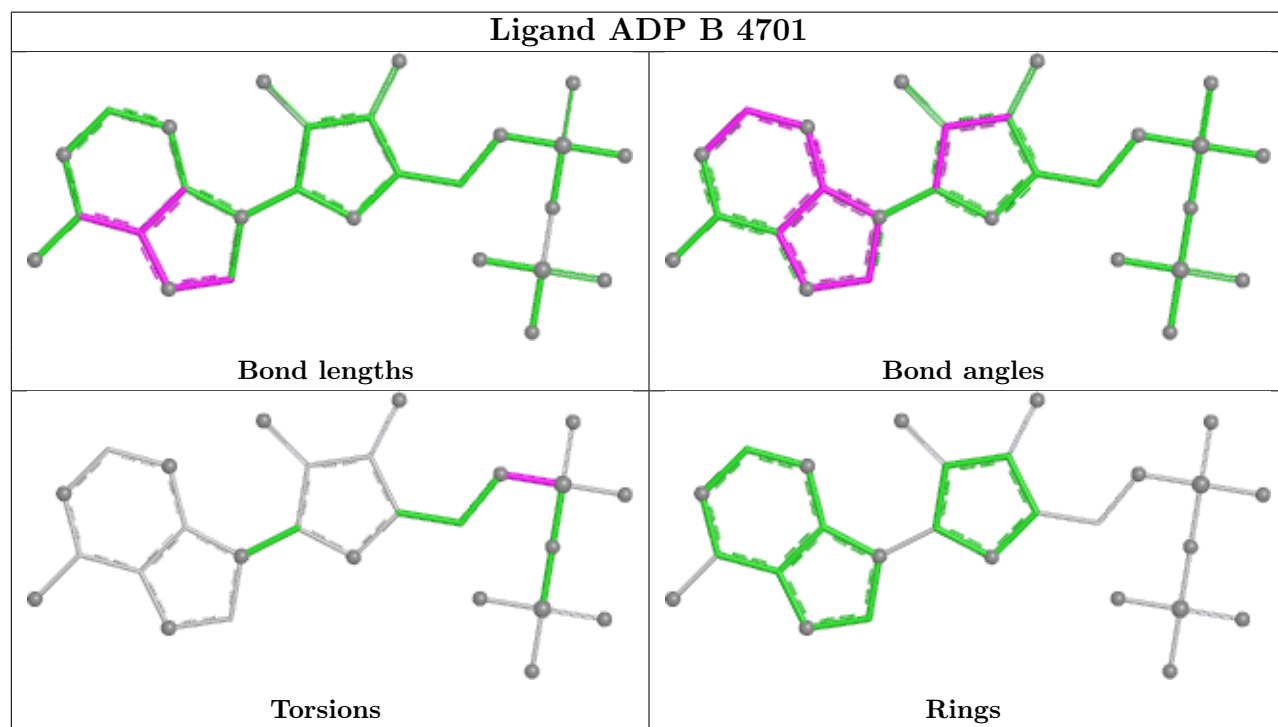
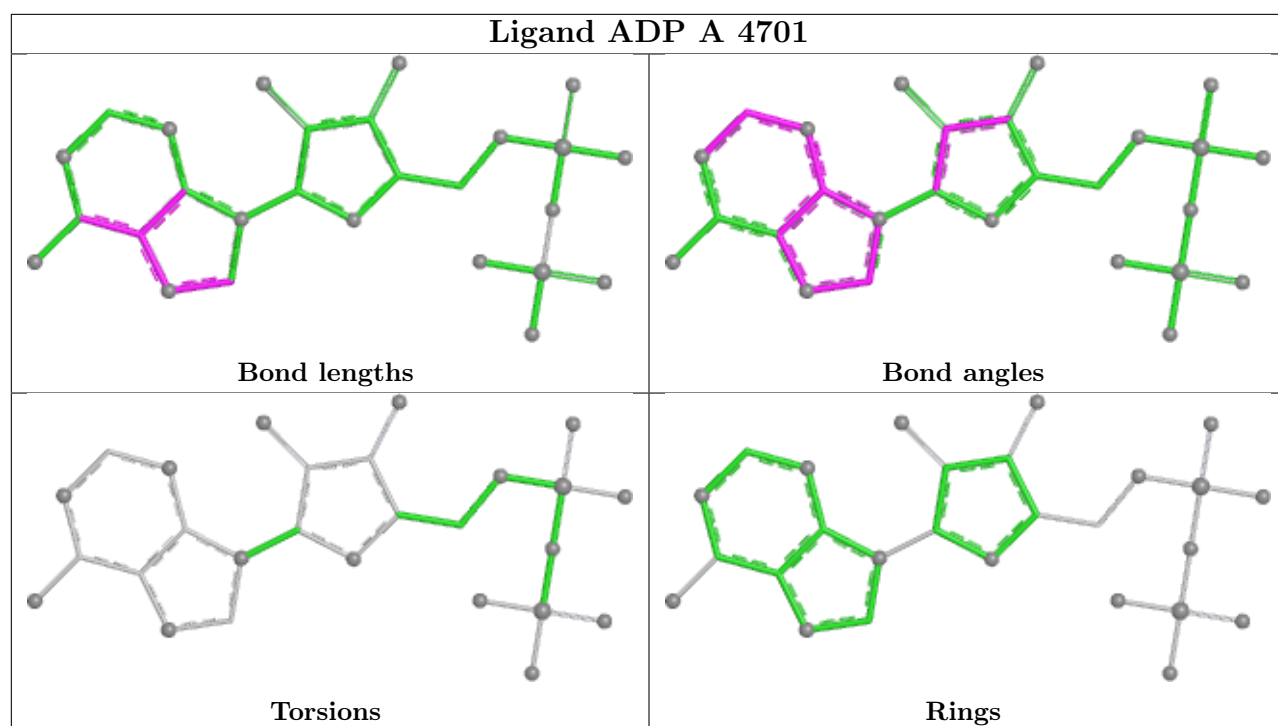
There are no ring outliers.

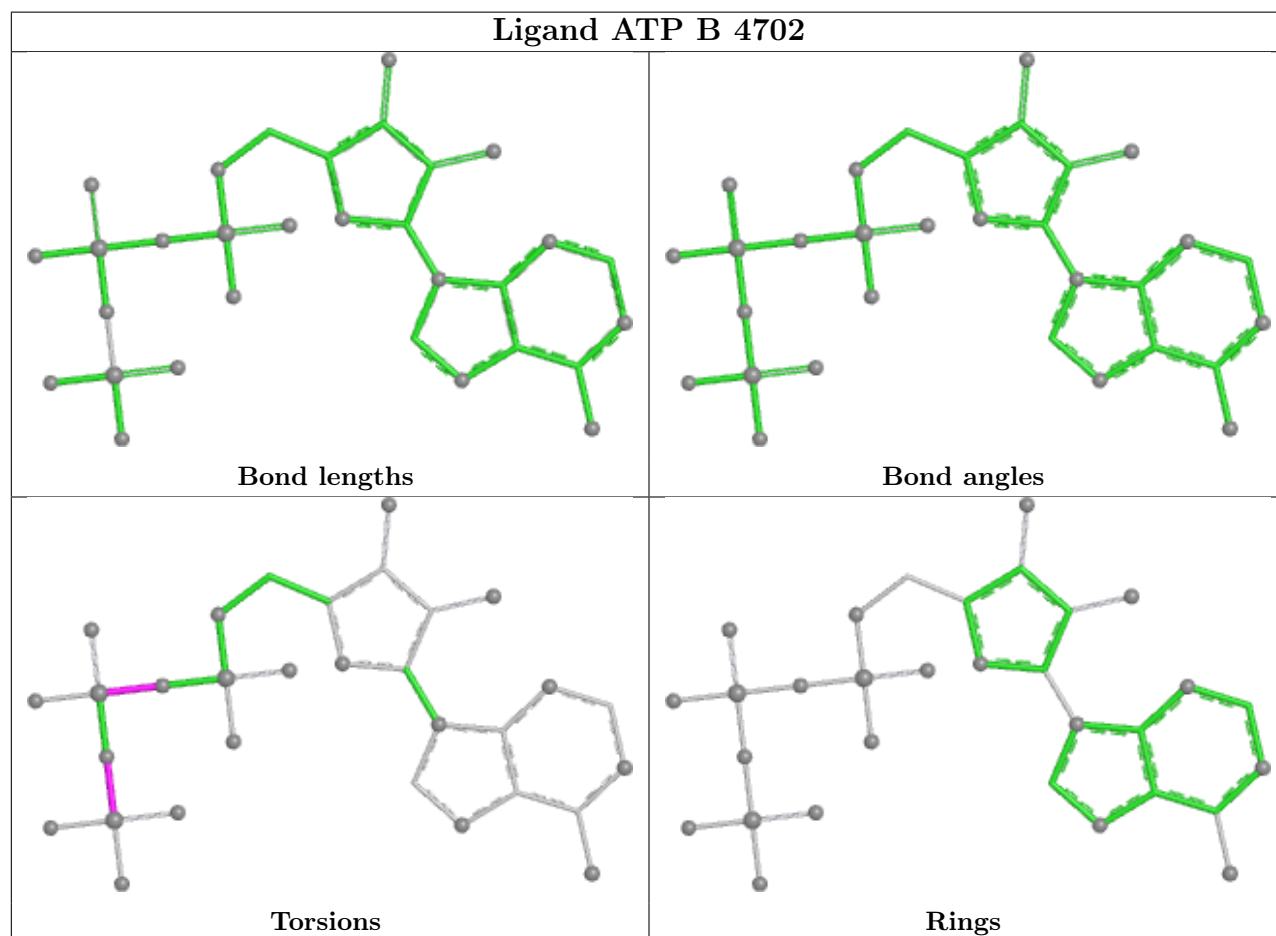
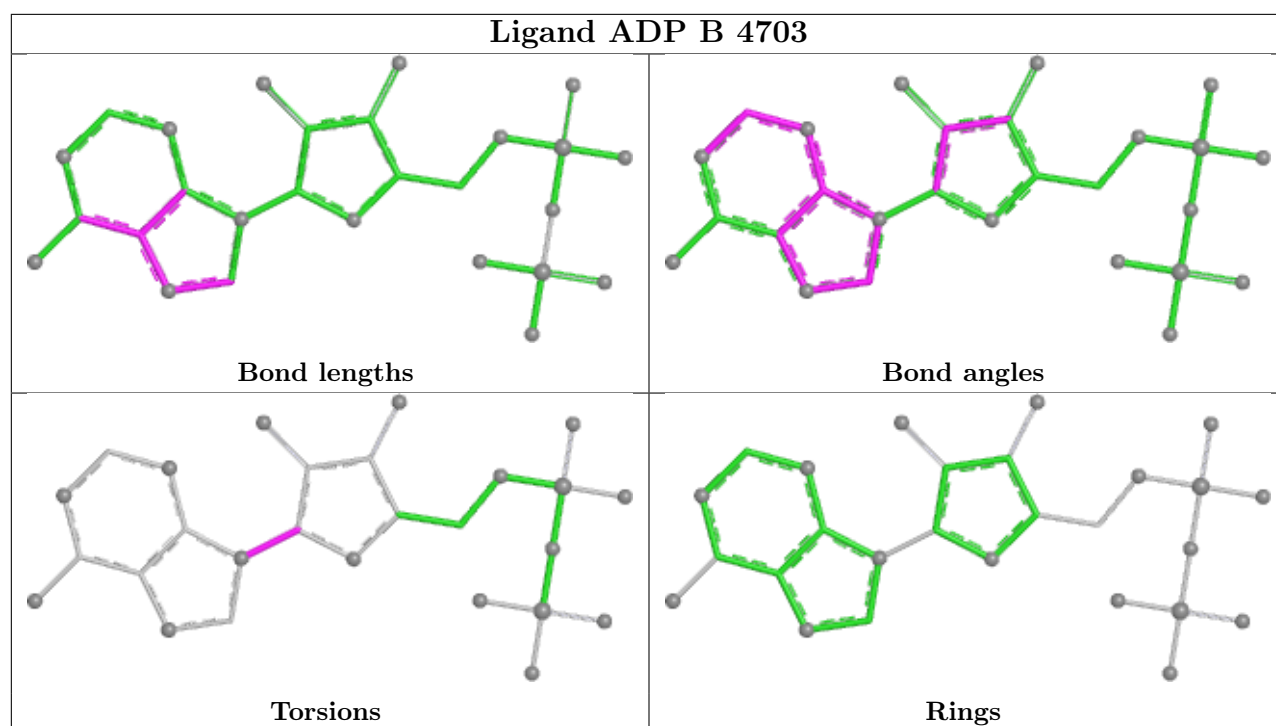
8 monomers are involved in 29 short contacts:

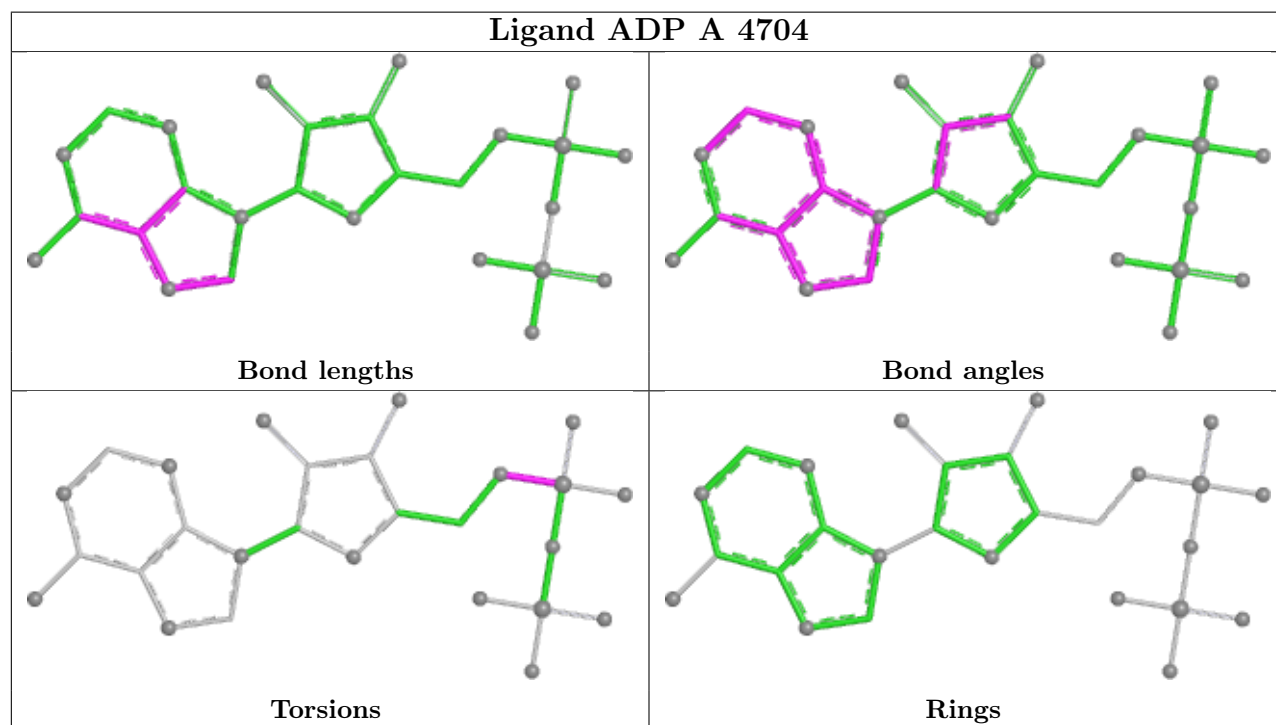
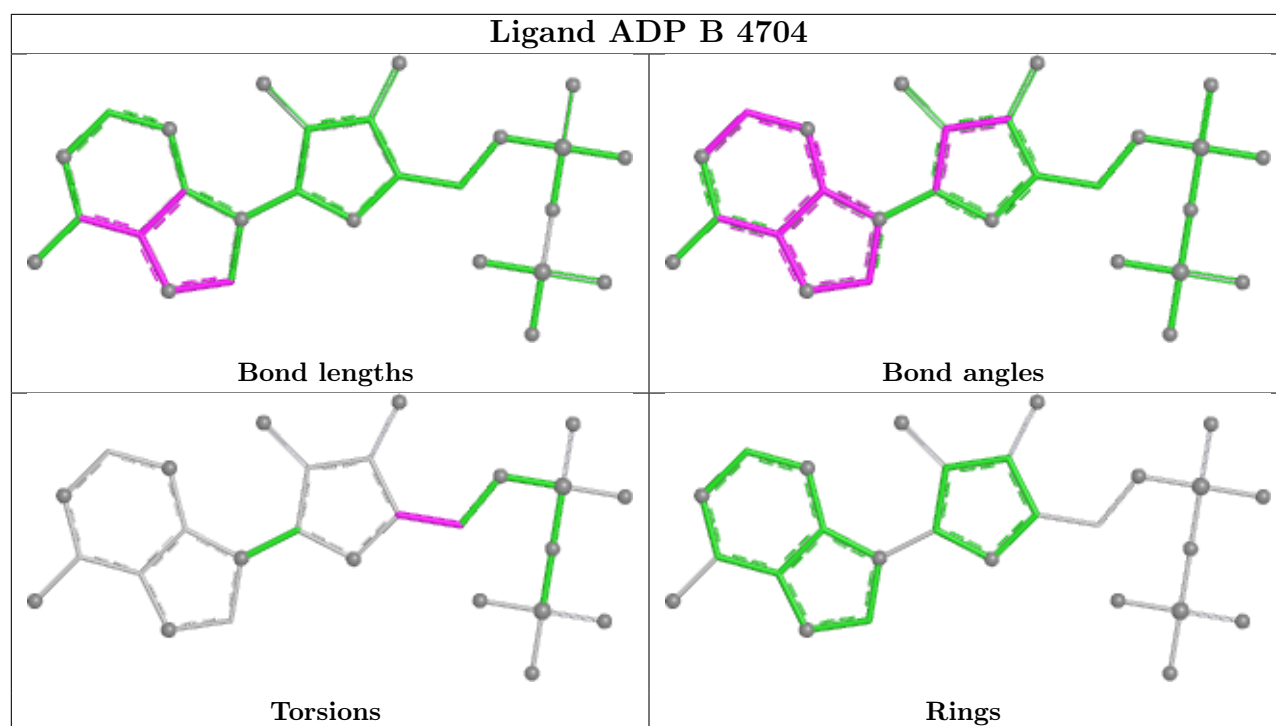
Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	A	4703	ADP	3	0
5	A	4701	ADP	3	0
5	B	4701	ADP	5	0
5	B	4703	ADP	3	0
6	B	4702	ATP	6	0
5	B	4704	ADP	2	0
5	A	4704	ADP	3	0
6	A	4702	ATP	4	0

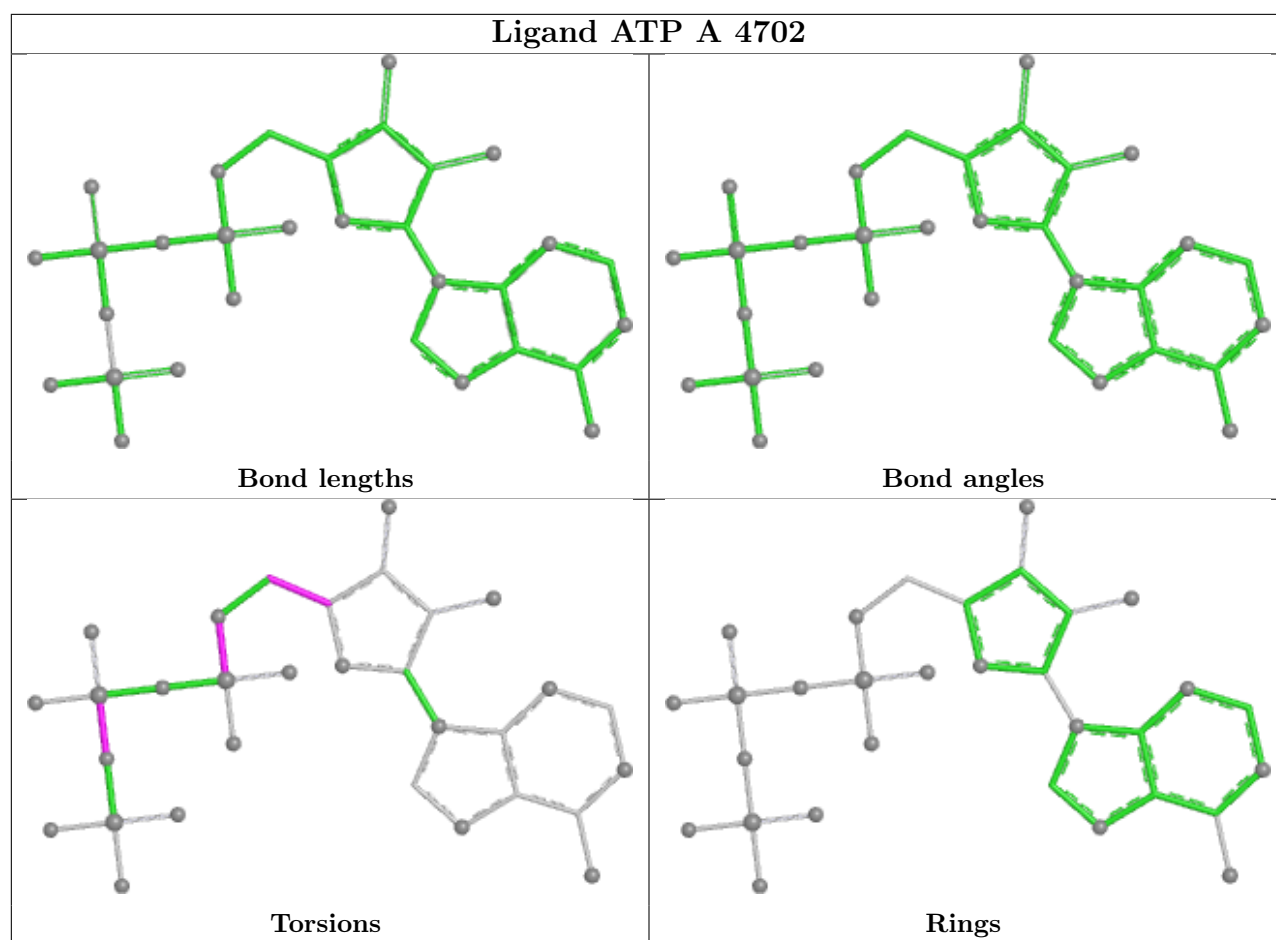
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.











## 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.

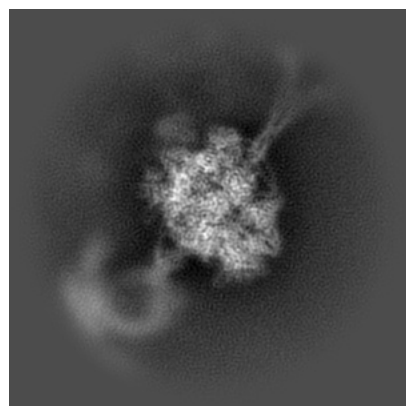
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-73173. These allow visual inspection of the internal detail of the map and identification of artifacts.

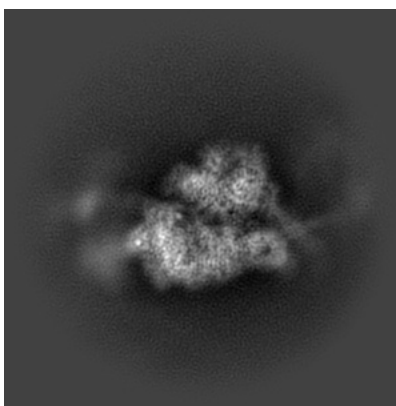
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

### 6.1 Orthogonal projections [i](#)

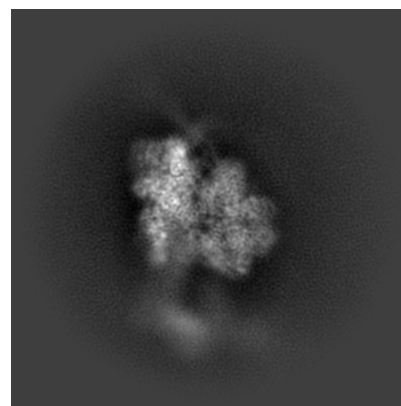
#### 6.1.1 Primary map



X

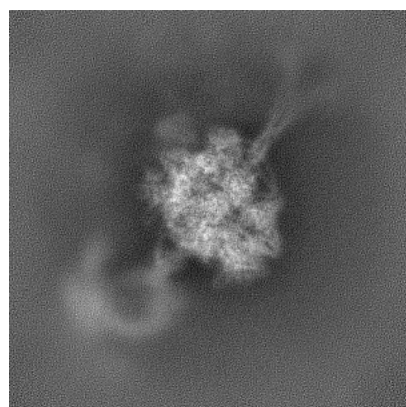


Y

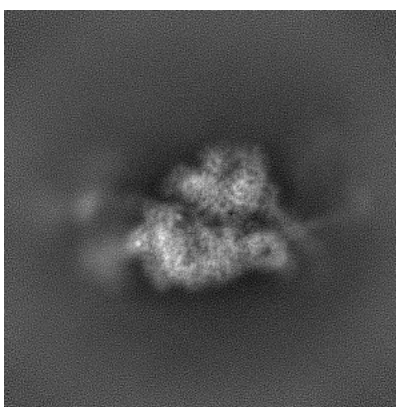


Z

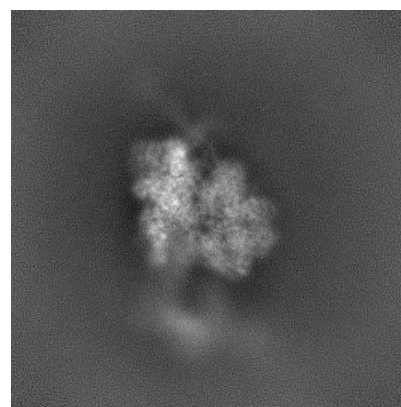
#### 6.1.2 Raw map



X



Y



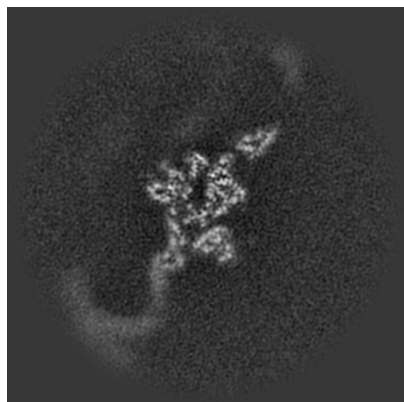
Z

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

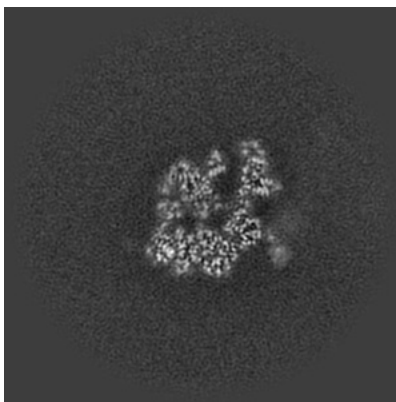


## 6.2 Central slices [i](#)

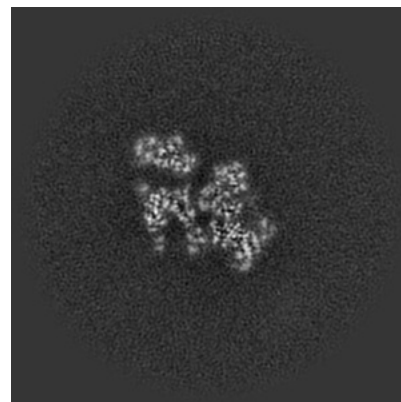
### 6.2.1 Primary map



X Index: 192

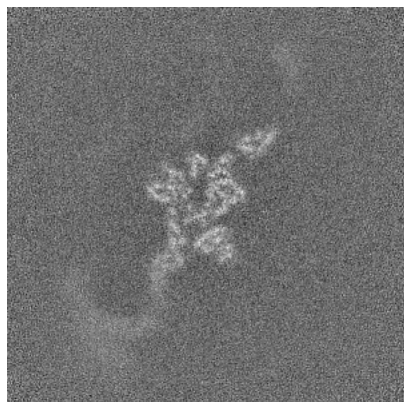


Y Index: 192

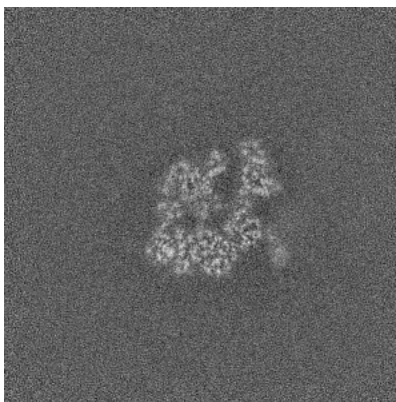


Z Index: 192

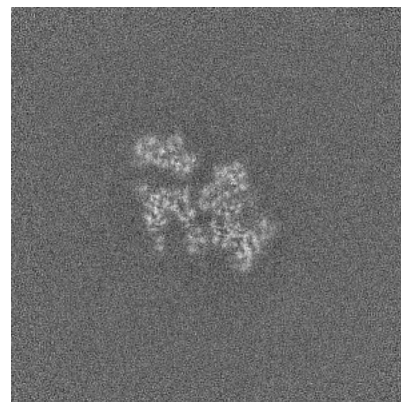
### 6.2.2 Raw map



X Index: 192



Y Index: 192

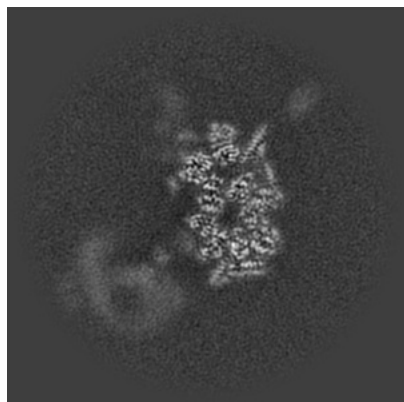


Z Index: 192

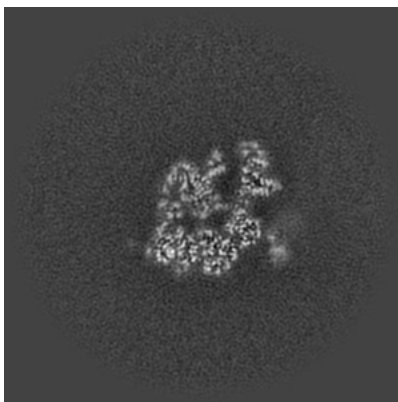
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

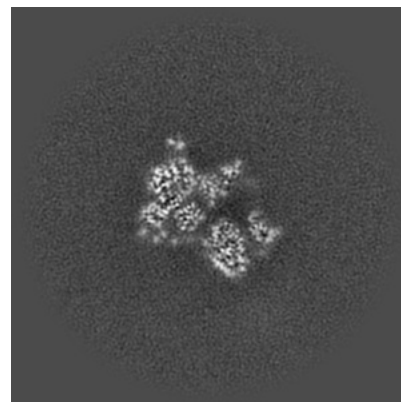
### 6.3.1 Primary map



X Index: 157

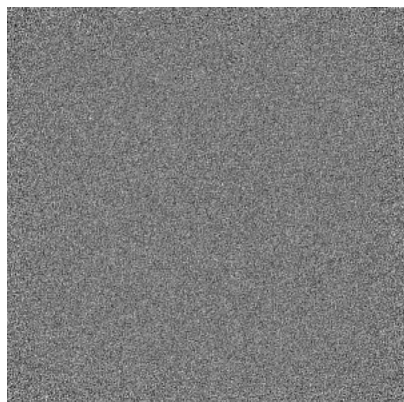


Y Index: 193

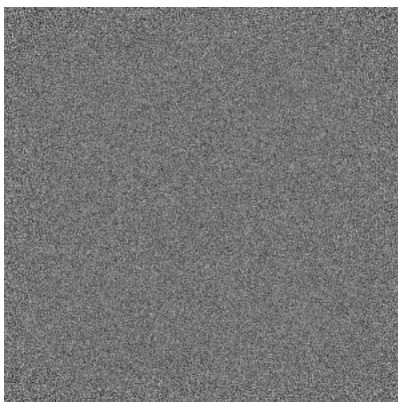


Z Index: 214

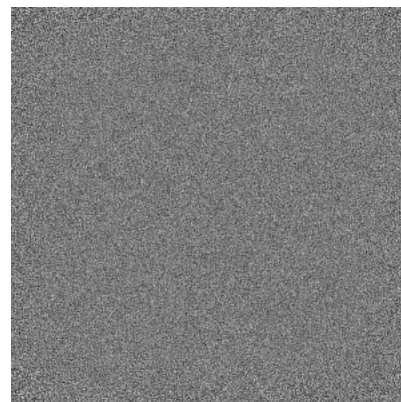
### 6.3.2 Raw map



X Index: 0



Y Index: 0



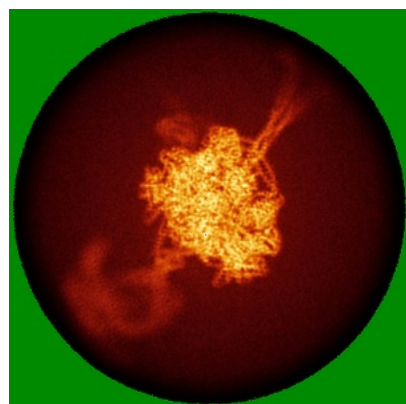
Z Index: 0

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

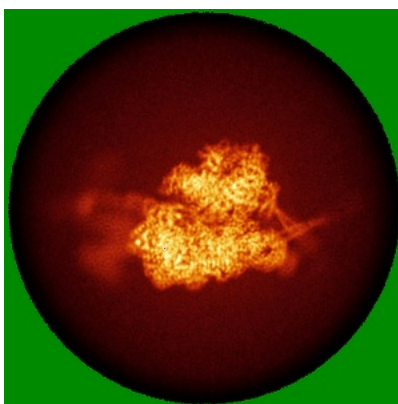


## 6.4 Orthogonal standard-deviation projections (False-color) [i](#)

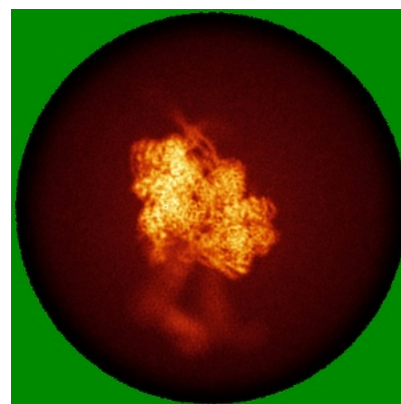
### 6.4.1 Primary map



X

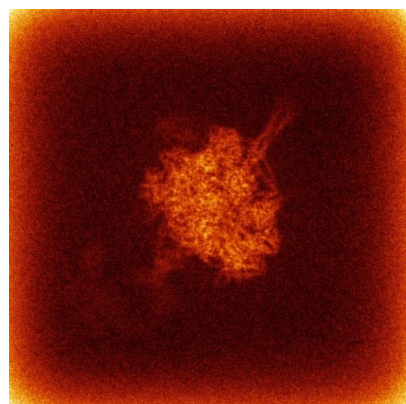


Y

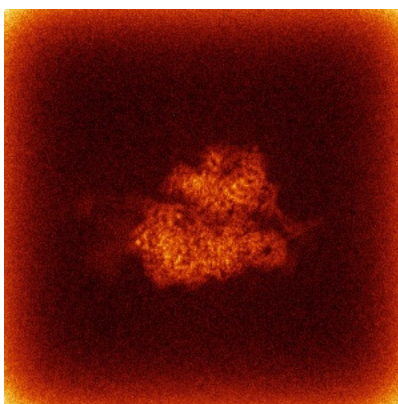


Z

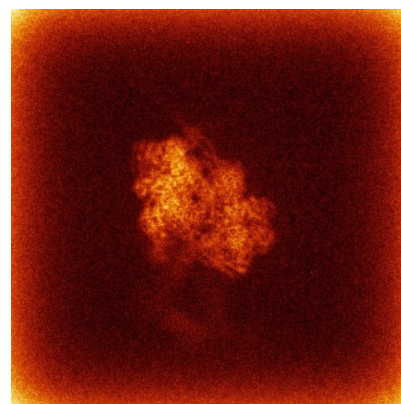
### 6.4.2 Raw map



X



Y

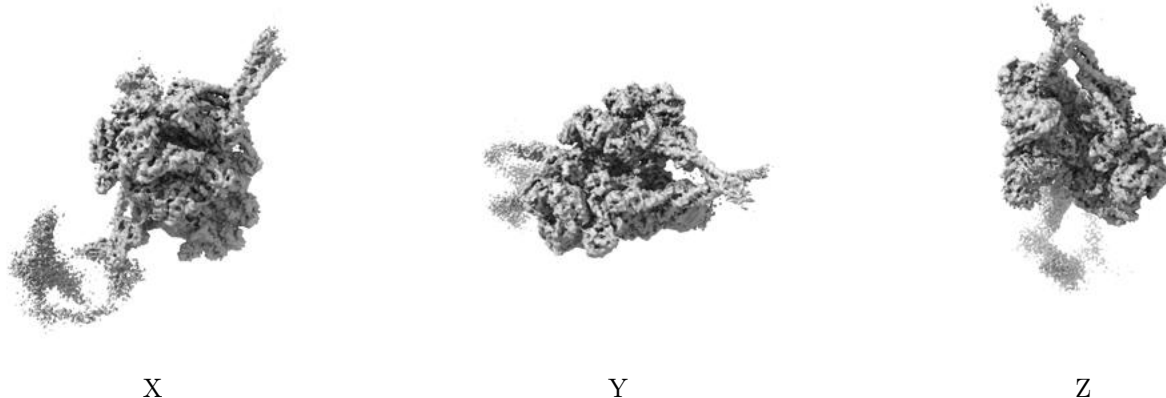


Z

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.

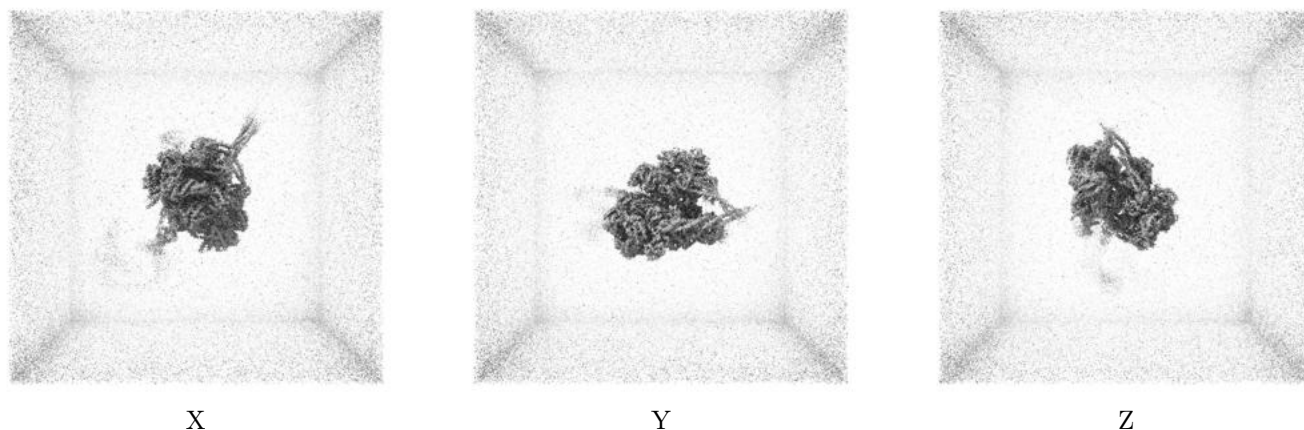
## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.08. 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.

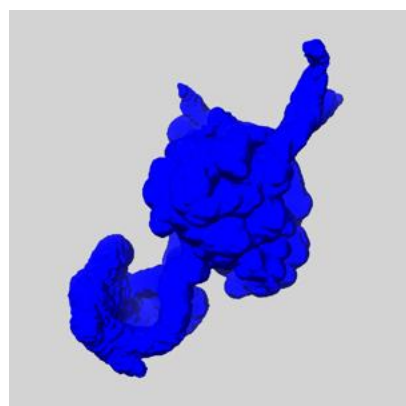
## 6.6 Mask visualisation [i](#)

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

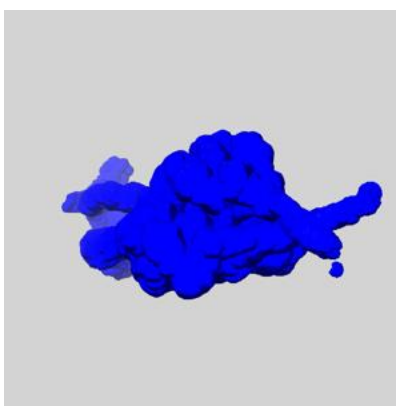
A mask typically either:

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

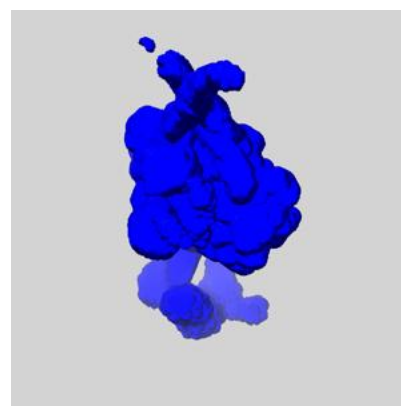
### 6.6.1 emd\_73173\_msk\_1.map [i](#)



X



Y

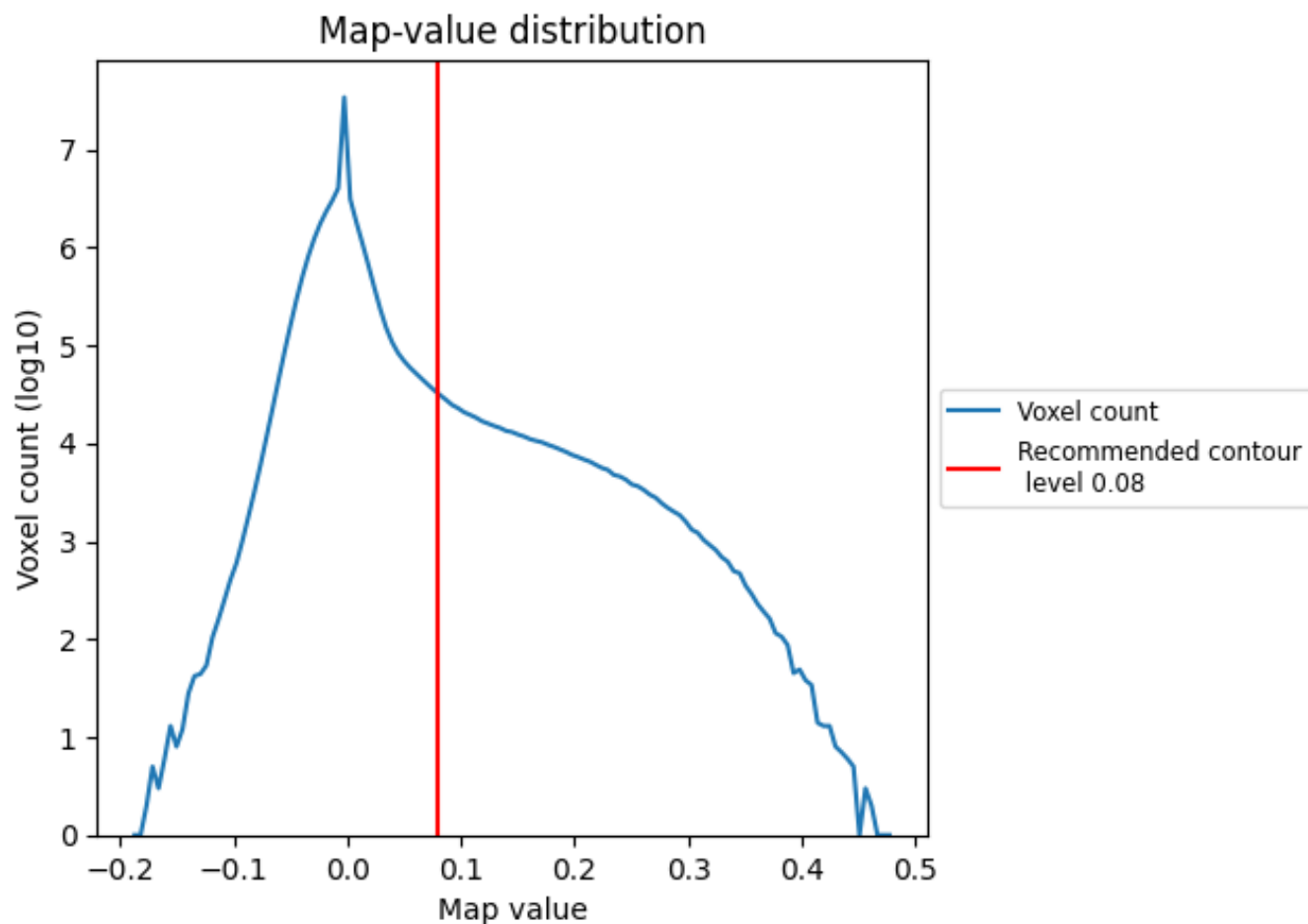


Z

## 7 Map analysis [i](#)

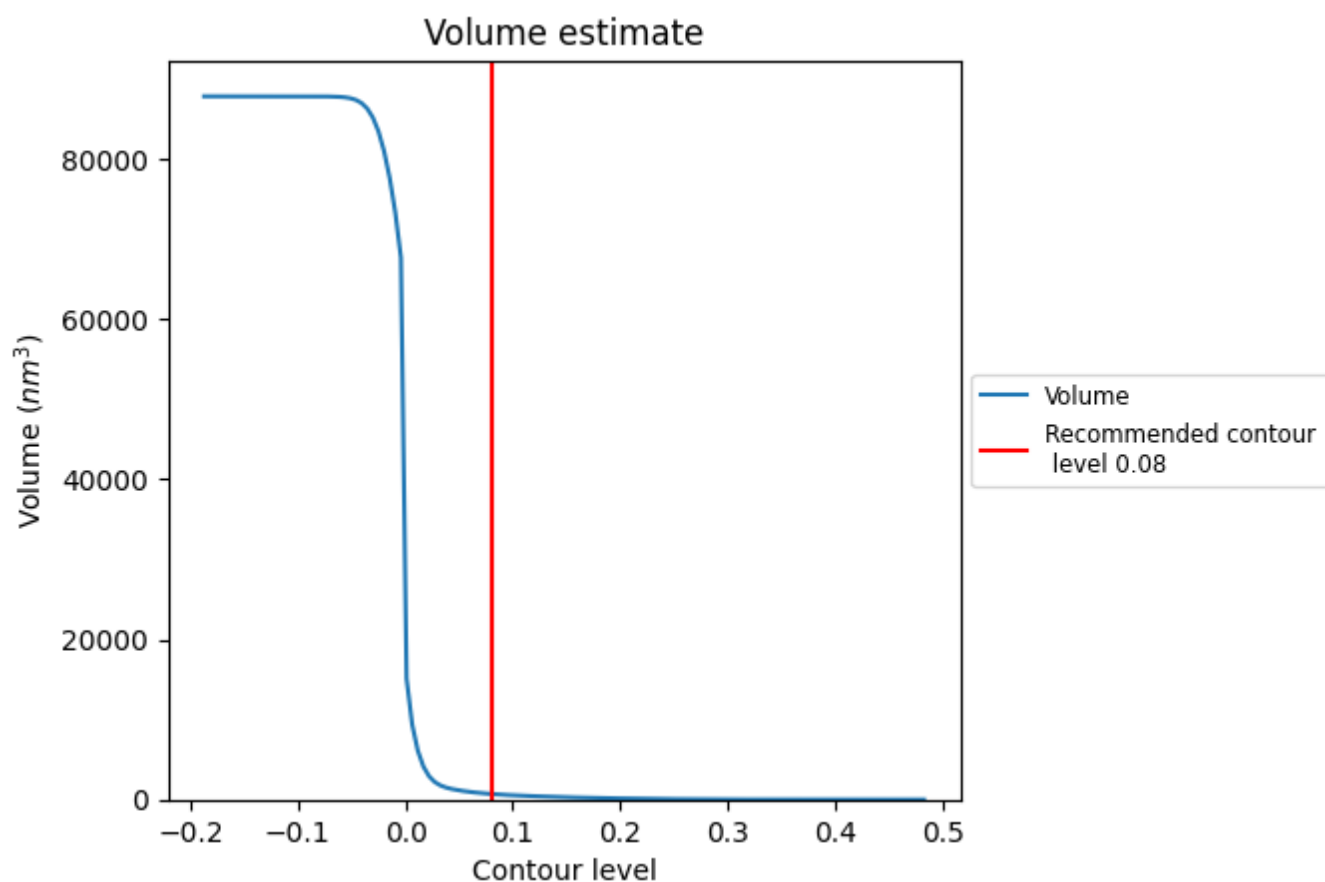
This section contains the results of statistical analysis of the map.

### 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.

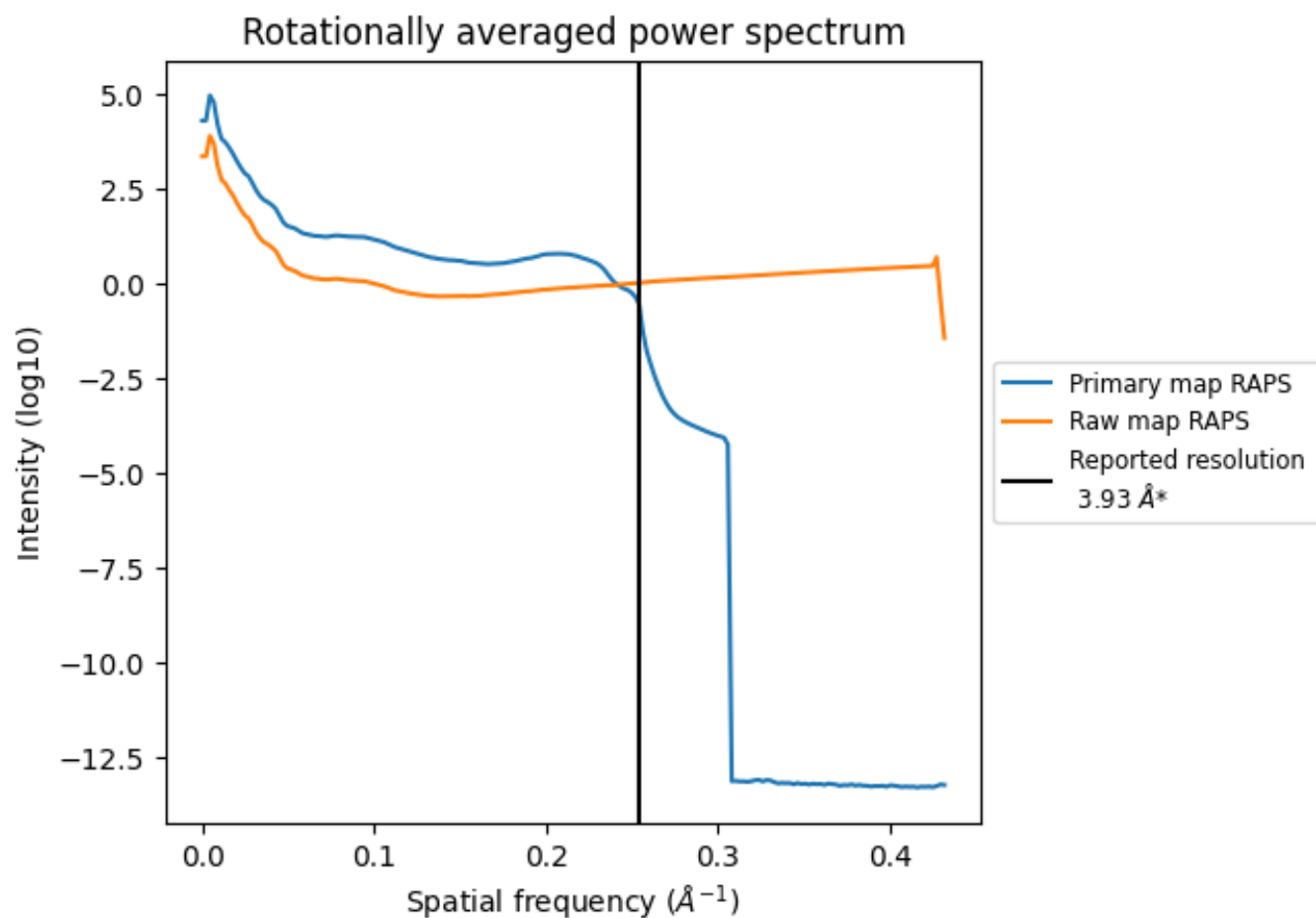
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 698 nm<sup>3</sup>; this corresponds to an approximate mass of 631 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 ⓘ

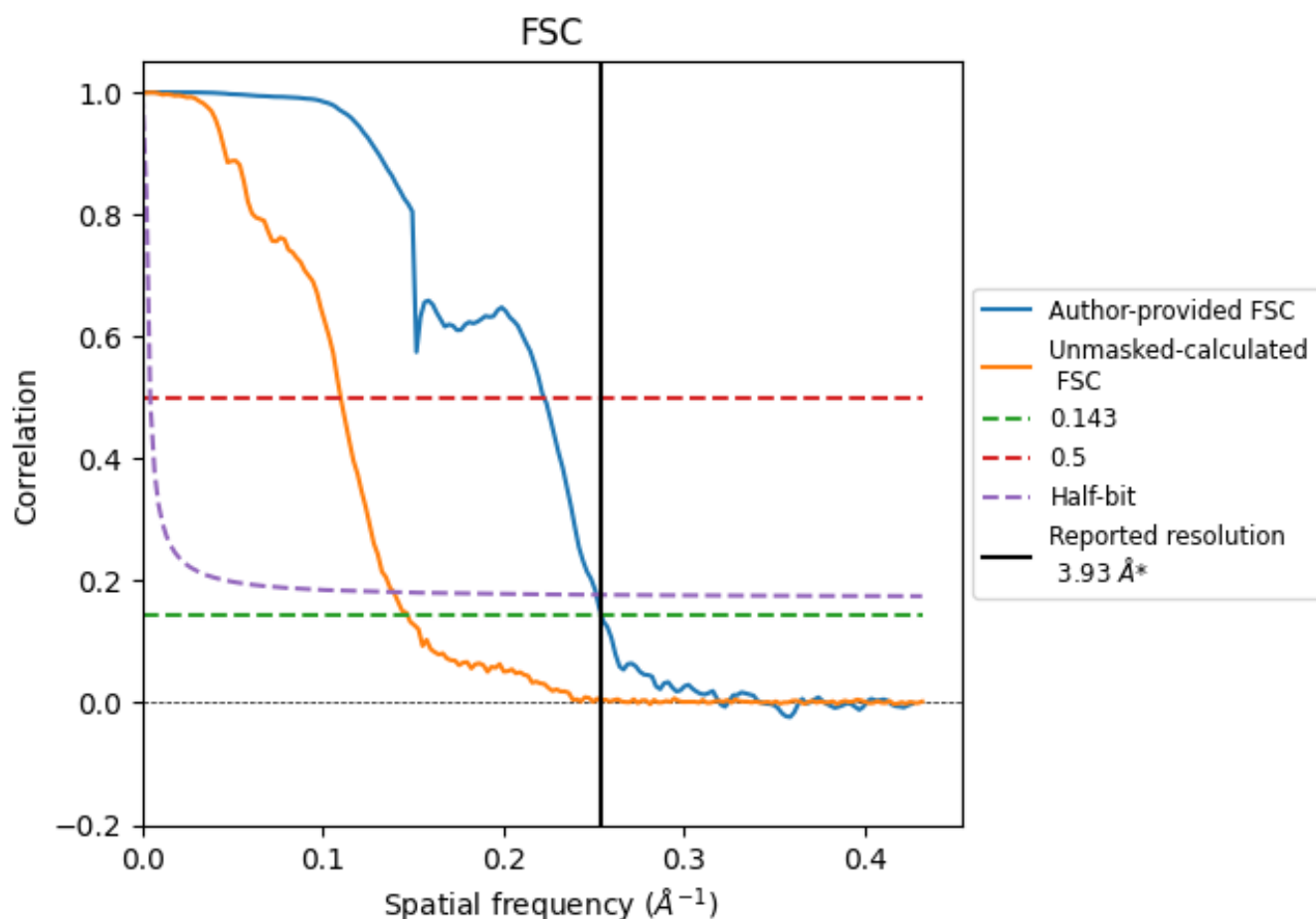


\*Reported resolution corresponds to spatial frequency of 0.254 Å<sup>-1</sup>

## 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  $0.254 \text{ \AA}^{-1}$

## 8.2 Resolution estimates [i](#)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.93	-	-
Author-provided FSC curve	3.93	4.49	3.98
Unmasked-calculated*	6.81	9.10	7.18

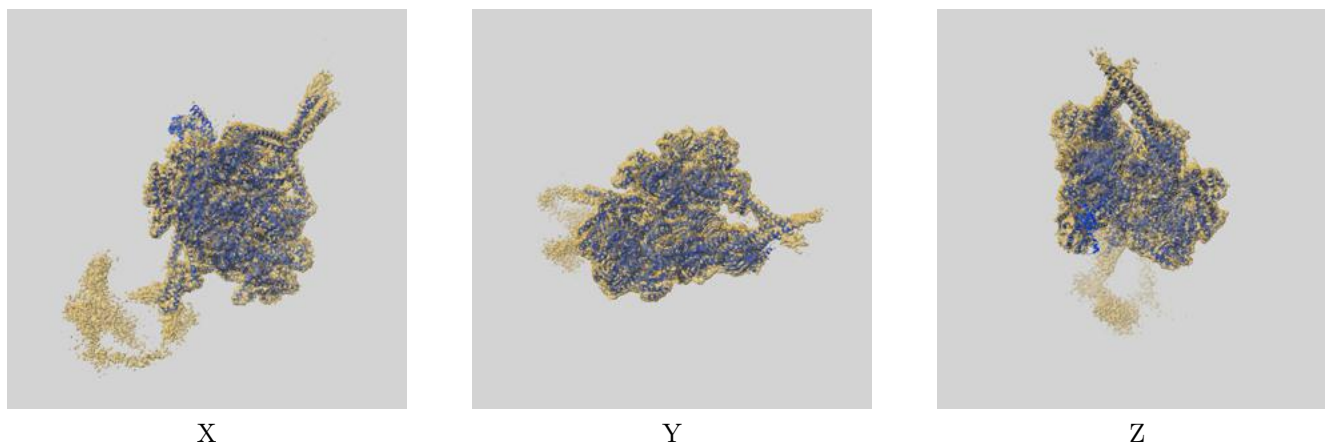
\*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 6.81 differs from the reported value 3.93 by more than 10 %



## 9 Map-model fit [i](#)

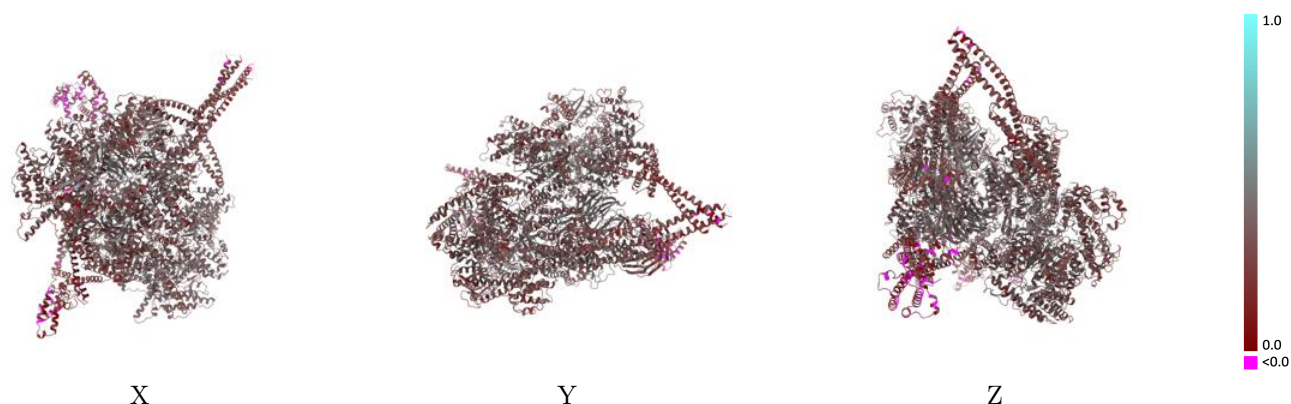
This section contains information regarding the fit between EMDB map EMD-73173 and PDB model 9YNC. Per-residue inclusion information can be found in section [3](#) on page [7](#).

### 9.1 Map-model overlay [i](#)



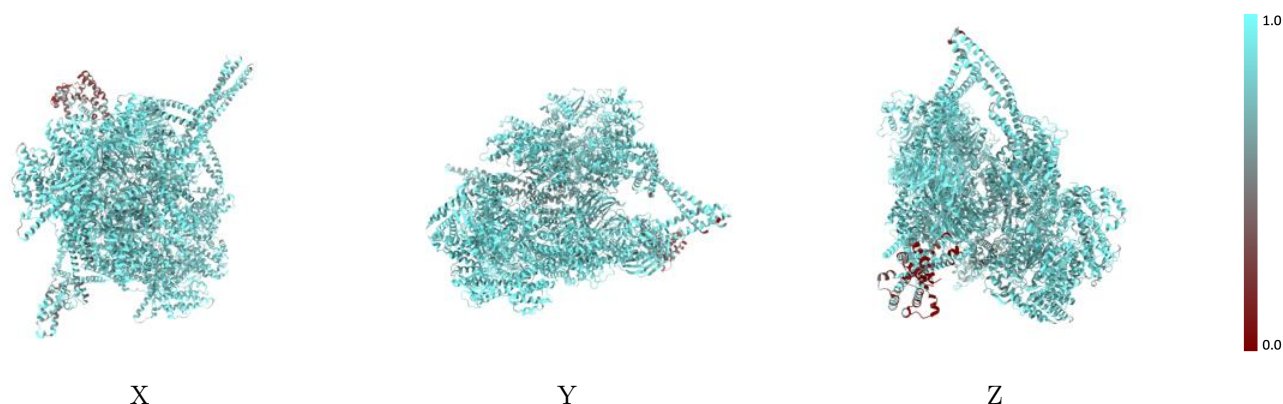
The images above show the 3D surface view of the map at the recommended contour level 0.08 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



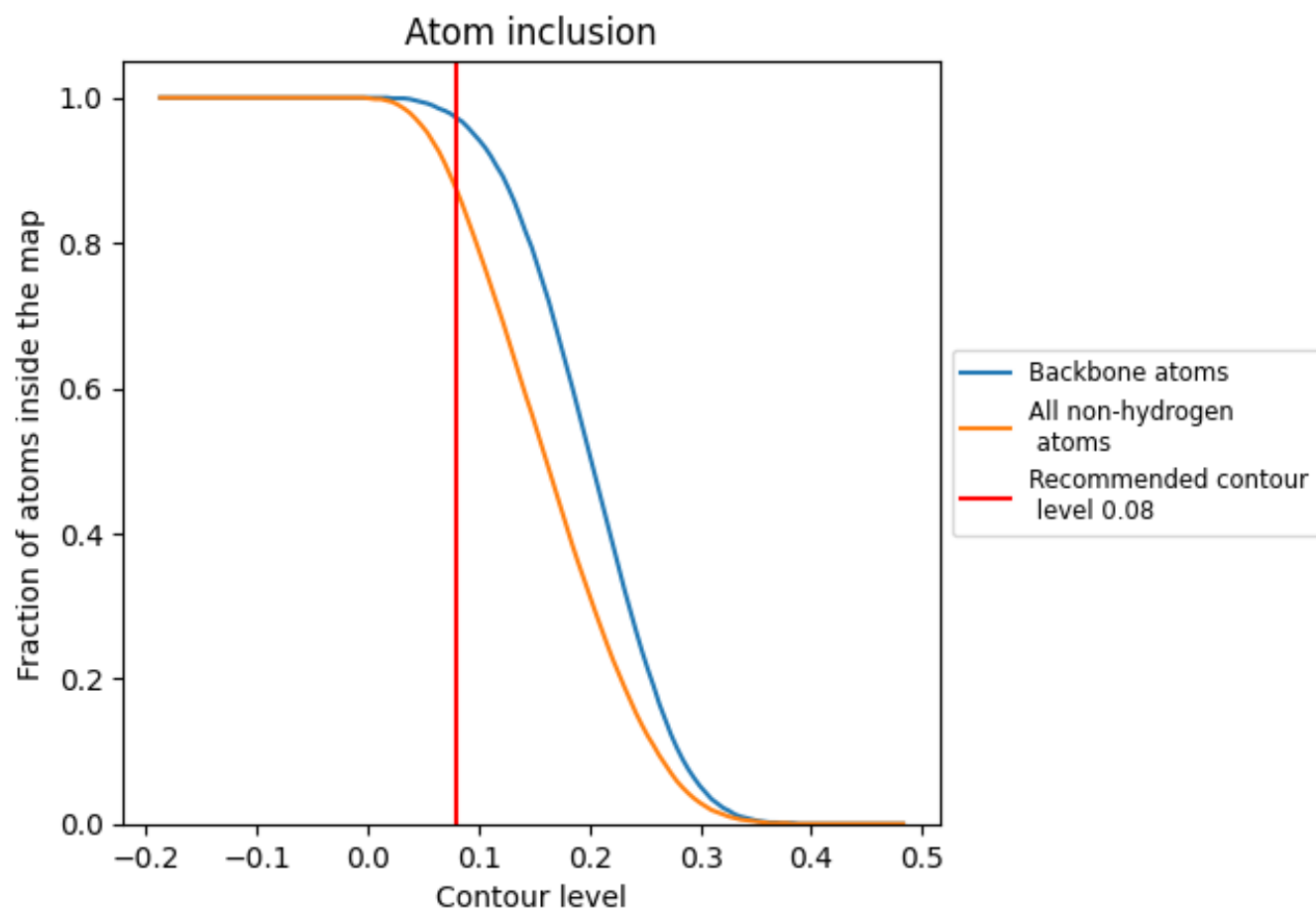
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.08).

## 9.4 Atom inclusion [i](#)



At the recommended contour level, 97% of all backbone atoms, 87% 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 (0.08) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	<div></div> 0.8730	<div></div> 0.3360
A	<div></div> 0.8620	<div></div> 0.3330
B	<div></div> 0.8990	<div></div> 0.3430
C	<div></div> 0.8750	<div></div> 0.3970
D	<div></div> 0.9010	<div></div> 0.3220
E	<div></div> 0.3240	<div></div> 0.1010
F	<div></div> 0.5500	<div></div> 0.1330
G	<div></div> 0.8760	<div></div> 0.2920
H	<div></div> 0.8470	<div></div> 0.3090
I	<div></div> 0.7760	<div></div> 0.2370
J	<div></div> 0.8280	<div></div> 0.2870

1.0

0.0

<0.0