W O R L D W I D E

wwPDB

P R O T E I N D A T A B A N K

wwPDB EM Validation Summary Report ⓘ

May 13, 2024 – 11:51 pm BST

PDB ID	:	6YAI
EMDB ID	:	EMD-10754
Title	:	Clathrin with bound beta2 appendage of AP2
Authors	:	Kovtun, O.; Kane Dickson, V.; Kelly, B.T.; Owen, D.; Briggs, J.A.G.
Deposited on	:	2020-03-12
Resolution	:	9.20 Å(reported)
Based on initial models	:	6SCT, 1XI4, 1E42

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 9.20 Å.

There are no overall percentile quality scores available for this entry.

MolProbity failed to run properly - the sequence quality summary graphics cannot be shown.

2 Entry composition ⓘ

There are 4 unique types of molecules in this entry. The entry contains 35282 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 Clathrin heavy chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	E	726	Total 5740	C 3660	N 981	O 1066	S 33	0	0
1	M	518	Total 4213	C 2681	N 725	O 787	S 20	0	0
1	A	379	Total 3168	C 2037	N 528	O 584	S 19	0	0
1	B	468	Total 3744	C 2357	N 652	O 717	S 18	0	0
1	J	165	Total 1379	C 875	N 227	O 269	S 8	0	0
1	K	257	Total 2150	C 1377	N 358	O 404	S 11	0	0
1	L	548	Total 4458	C 2843	N 757	O 838	S 20	0	0
1	H	236	Total 1928	C 1239	N 327	O 353	S 9	0	0

- Molecule 2 is a protein called AP-2 complex subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	F	233	Total 1844	C 1189	N 307	O 337	S 11	0	0

- Molecule 3 is a protein called Clathrin heavy chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	513	Total 4133	C 2645	N 706	O 762	S 20	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	871	THR	GLU	conflict	UNP C0MHR2

- Molecule 4 is a protein called Clathrin light chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	D	104	Total 875	C 539	N 165	O 168	S 3	0	0
4	O	59	Total 514	C 312	N 101	O 101		0	0
4	I	58	Total 468	C 291	N 86	O 88	S 3	0	0
4	N	80	Total 668	C 412	N 123	O 130	S 3	0	0

MolProbity failed to run properly - this section is therefore empty.

3 Experimental information ⓘ

Property	Value	Source
EM reconstruction method	SUBTOMOGRAM AVERAGING	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of subtomograms used	12076	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION; CTF correction in novaCTF with by multiplication	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose $(e^-/\text{Å}^2)$	3.2	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	6500	Depositor
Magnification	81000	Depositor
Image detector	GATAN K2 QUANTUM (4k x 4k)	Depositor

4 Model quality ⓘ

4.1 Standard geometry ⓘ

MolProbity failed to run properly - this section is therefore empty.

4.2 Too-close contacts ⓘ

MolProbity failed to run properly - this section is therefore empty.

4.3 Torsion angles ⓘ

4.3.1 Protein backbone ⓘ

MolProbity failed to run properly - this section is therefore empty.

4.3.2 Protein sidechains ⓘ

MolProbity failed to run properly - this section is therefore empty.

4.3.3 RNA ⓘ

MolProbity failed to run properly - this section is therefore empty.

4.4 Non-standard residues in protein, DNA, RNA chains ⓘ

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

4.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

4.6 Ligand geometry ⓘ

There are no ligands in this entry.

4.7 Other polymers ⓘ

There are no such residues in this entry.

4.8 Polymer linkage issues ⓘ

The following chains have linkage breaks:

Mol	Chain	Number of breaks
3	C	2

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	C	870:CYS	C	871:THR	N	7.18
1	C	659:SER	C	660:VAL	N	3.20

5   Map visualisation ⓘ

This section contains visualisations of the EMDB entry EMD-10754. 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.

5.1   Orthogonal projections ⓘ

This section was not generated.

5.2   Central slices ⓘ

This section was not generated.

5.3   Largest variance slices ⓘ

This section was not generated.

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

This section was not generated.

5.5   Orthogonal surface views ⓘ

This section was not generated.

5.6   Mask visualisation ⓘ

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

6 Map analysis ⓘ

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

6.1 Map-value distribution ⓘ

This section was not generated.

6.2 Volume estimate versus contour level ⓘ

This section was not generated.

6.3 Rotationally averaged power spectrum ⓘ

This section was not generated. The rotationally averaged power spectrum had issues being displayed.

7 Fourier-Shell correlation ⓘ

This section was not generated. No FSC curve or half-maps provided.

8 Map-model fit (i)

This section was not generated.