WORLDWIDE PDB

PROTEIN DATA BANK

wwPDB EM Validation Summary Report (i)

Mar 31, 2025 – 04:13 PM JST

PDB ID	:	5H53 / pdb_00005h53
EMDB ID	:	EMD-6664
Title	:	The structure of rabbit skeletal muscle actomyosin rigor complex at 5.2 angstrom.
Authors	:	Fujii, T.; Namba, K.
Deposited on	:	2016-11-04
Resolution	:	5.20 Å(reported)

The following versions of software and data (see references (i)) were used in the production of this report:

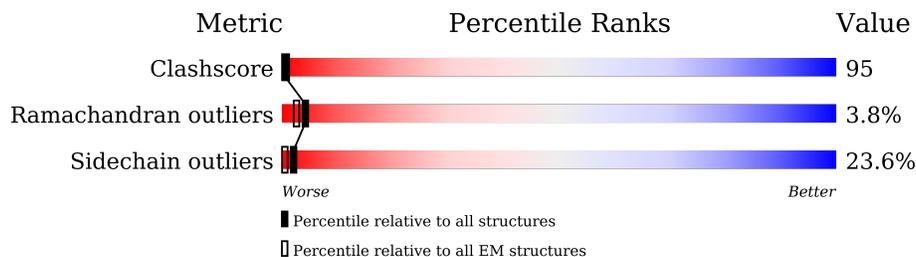|		
EMDB validation analysis	:	0.0.1.dev117
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.42

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 5.20 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	Percentile Ranks	Value
Clashscore		95
Ramachandran outliers		3.8%
Sidechain outliers		23.6%

Worse ← → *Better*

▮ Percentile relative to all structures
❒ Percentile relative to all EM structures

Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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 <=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	845	41% / 19% 58% 20% •
2	B	146	100% / 18% 49% 25% 8%
3	C	153	90% / 7% 49% 32% 12%
4	D	375	16% / 29% 55% 15% •
4	E	375	14% / 35% 51% 13% •

2 Entry composition ⓘ

There are 5 unique types of molecules in this entry. The entry contains 15077 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 Skeletal muscle myosin heavy chain MyHC-EO/IIL.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	845	Total 6795	C 4340	N 1155	O 1256	S 44	0	0

- Molecule 2 is a protein called Myosin regulatory light chain 2, skeletal muscle isoform type 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	146	Total 1157	C 729	N 189	O 232	S 7	0	0

- Molecule 3 is a protein called Myosin light chain 1/3, skeletal muscle isoform.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	153	Total 1203	C 751	N 199	O 246	S 7	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	193	ASP	-	expression tag	UNP P02602

- Molecule 4 is a protein called Actin, alpha skeletal muscle.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	D	375	Total 2934	C 1855	N 493	O 565	S 21	0	0
4	E	375	Total 2934	C 1855	N 493	O 565	S 21	0	0

- Molecule 5 is ADENOSINE-5'-DIPHOSPHATE (CCD ID: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$).

ADP

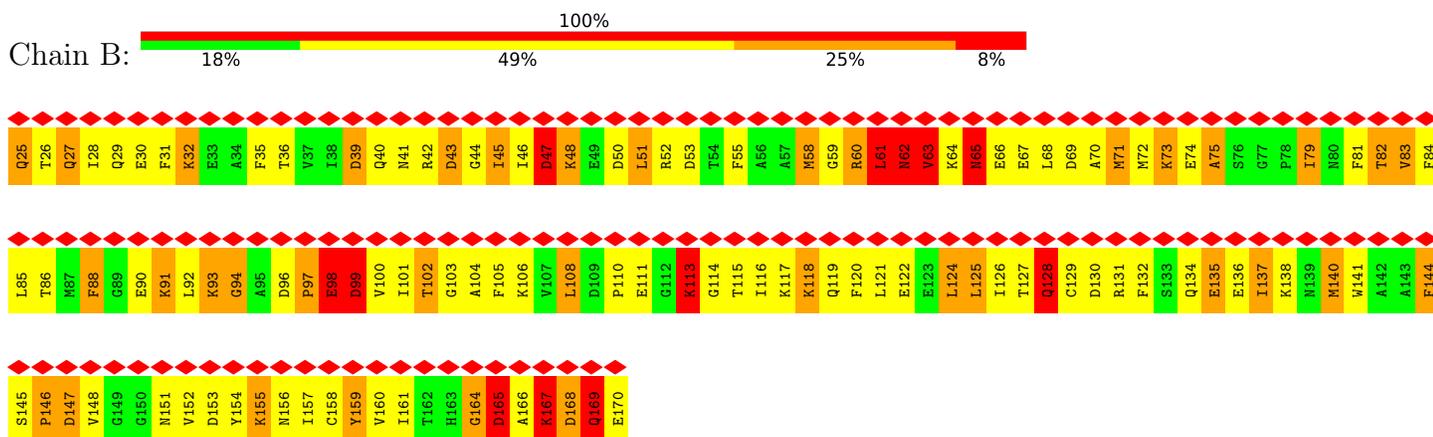| Mol	Chain	Residues	Atoms					AltConf
5	D	1	Total	C	N	O	P	0
			27	10	5	10	2	
5	E	1	Total	C	N	O	P	0
			27	10	5	10	2	

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.

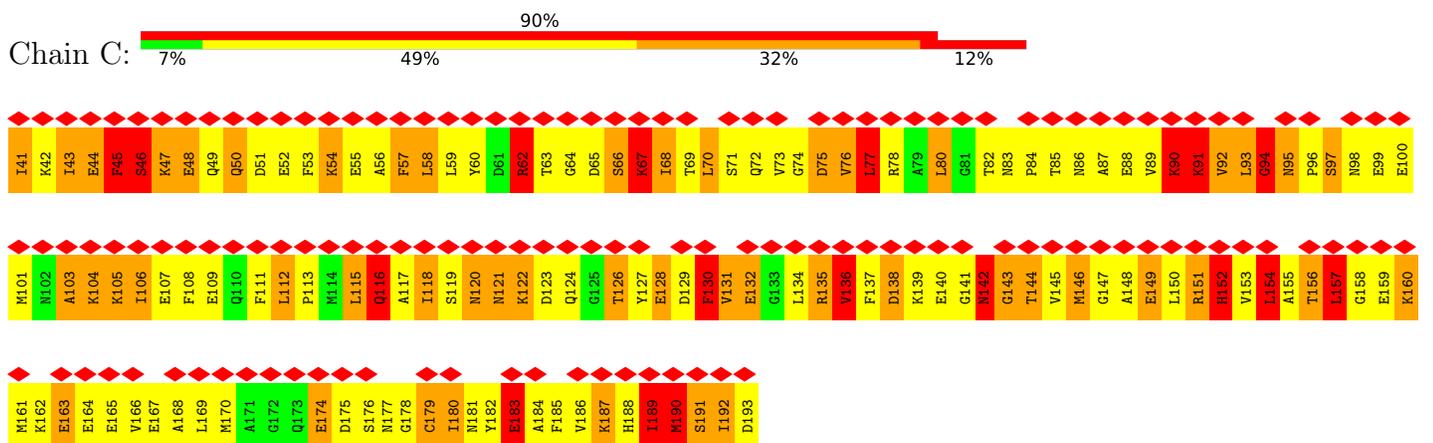• Molecule 1: Skeletal muscle myosin heavy chain MyHC-EO/IIL

T546 D547 T548 S549 F550 K551 N552 K553 L554 Y555 D556 Q557 H558 L559 G560 K561 N564 F565 Q566 K567 P568 K569 P570 A571 K572 G573 K574 A577 H578 F579 V582 H583 Y584 A585 T587 V588 D589 Y590 N591 I592 A593 G594 W595 L596 N599 K600 D601 P602 L603 N604 E605 T606 V607 V608 G609

L610 Y611 Q612 K613 S614 A615 L616 K617 L618 L619 S620 F621 L622 F623 S624 N625 Y626 A627 G628 A629 E630 A631 G632 D633 S634 G635 G636 S637 K638 K639 G640 G641 K642 K643 K644 G645 S646 S647 F648 Q649 T650 V651 S652 A653 V654 F655 R656 E657 N658 L659 N660 M663 T664 N665 L666 R667 S668 T669 H670

P671 H672 F673 V674 R675 C676 L677 I678 P679 N680 E681 T682 K683 T684 P685 G686 V687 M688 D689 H690 Y691 L692 V693 M694 H695 Q696 L697 R698 C699 N700 G701 V702 L703 E704 G705 I706 R707 I708 C709 R710 K711 G712 F713 P714 S715 R716 I717 L718 Y719 A720 D721 F722 K723 Q724 R725 Y726 R727 I728 L729 N730

A731 S732 A733 I734 P735 E736 G737 Q738 F739 I740 D741 S742 A745 S746 E747 K748 L749 L750 N751 S752 I753 D754 V755 D756 R757 E758 Q759 Y760 R761 F762 G763 H764 T765 K766 V767 F768 F769 K770 A771 G772 L773 L774 G775 L776 L777 E778 E779 M780 R781 D782 E783 K784 L785 V786 T787 L788 M789 T790 R791

T792 Q793 A794 L795 C796 R797 G798 Y799 L800 M801 R802 V803 E804 F805 K806 K807 M808 M809 E810 R811 R812 D813 S814 I815 F816 C817 I818 Q819 Y820 N821 I822 R823 A824 F825 M826 N827 V828 K829 H830 W831 P832 W833 M834 N835 L836 F837 F838 K839 I840 K841 P842 L843 L844 K845

• Molecule 2: Myosin regulatory light chain 2, skeletal muscle isoform type 1

Chain B:

100%

18%   49%   25%   8%

Q25 T26 Q27 I28 Q29 E30 F31 K32 E33 A34 F35 T36 V37 I38 D39 Q40 N41 R42 D43 G44 I45 I46 D47 K48 E49 D50 L51 R52 D53 T54 F55 A56 A57 M58 G59 R60 L61 N62 V63 K64 N65 E66 E67 L68 D69 A70 M71 M72 K73 E74 A75 S76 G77 P78 I79 N80 F81 T82 V83 F84

L85 T86 M87 F88 G89 E90 K91 L92 K93 G94 A95 D96 P97 E98 D99 V100 I101 T102 G103 A104 F105 K106 V107 L108 D109 P110 E111 G112 K113 G114 T115 I116 K117 K118 Q119 F120 L121 E122 E123 L124 L125 I126 T127 Q128 C129 D130 R131 F132 S133 Q134 E135 E136 I137 K138 N139 M140 W141 A142 A143 F144

S145 P146 D147 V148 G149 G150 N151 V152 D153 Y154 K155 N156 I157 C158 Y159 V160 I161 T162 H163 G164 D165 A166 K167 D168 Q169 E170

• Molecule 3: Myosin light chain 1/3, skeletal muscle isoform

Chain C:

90%

7%   49%   32%   12%

I41 K42 I43 E44 F45 S46 K47 E48 Q49 Q50 D51 E52 F53 K54 E55 A56 F57 L58 L59 Y60 D61 R62 T63 G64 D65 S66 K67 I68 T69 L70 S71 Q72 V73 G74 D75 V76 L77 R78 A79 L80 G81 T82 N83 P84 T85 N86 A87 E88 V89 K90 K91 V92 L93 G94 N95 P96 S97 N98 E99 E100

M101 N102 A103 K104 K105 I106 E107 F108 E109 Q110 F111 L112 P113 M114 L115 Q116 A117 I118 S119 N120 N121 K122 D123 Q124 G125 T126 Y127 E128 D129 F130 V131 E132 G133 L134 R135 V136 F137 D138 K139 E140 G141 N142 G143 T144 V145 M146 G147 A148 E149 L150 R151 H152 V153 L154 A155 T156 L157 G158 E159 K160

M161 K162 E163 E164 E165 V166 E167 A168 L169 M170 A171 G172 Q173 E174 D175 S176 N177 G178 C179 I180 N181 Y182 E183 A184 F185 V186 K187 H188 I189 M190 S191 I192 D193

• Molecule 4: Actin, alpha skeletal muscle

Chain D:

16%

29%   55%   15%

• Molecule 4: Actin, alpha skeletal muscle

Chain E:

14%

35%   51%   13%

4   Experimental information ⓘ

Property	Value	Source
EM reconstruction method	HELICAL	Depositor
Imposed symmetry	HELICAL, twist=166.7°, rise=27.6 Å, axial sym=C1	Depositor
Number of segments used	31535	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	JEOL 3200FSC	Depositor
Voltage (kV)	200	Depositor
Electron dose $(e^-/\text{Å}^2)$	20	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	TVIPS TEMCAM-F415 (4k x 4k)	Depositor
Maximum map value	9.438	Depositor
Minimum map value	-6.853	Depositor
Average map value	0.004	Depositor
Map value standard deviation	0.746	Depositor
Recommended contour level	1.52	Depositor
Map size (Å)	337.5, 337.5, 337.5	wwPDB
Map dimensions	250, 250, 250	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.35, 1.35, 1.35	Depositor

5   Model quality ⓘ

5.1   Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: ADP, HIC

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	1.03	3/6941 (0.0%)	1.45	52/9343 (0.6%)
2	B	0.96	1/1175 (0.1%)	1.78	8/1578 (0.5%)
3	C	1.02	1/1218 (0.1%)	1.33	4/1632 (0.2%)
4	D	1.02	5/2984 (0.2%)	1.15	4/4040 (0.1%)
4	E	0.97	0/2984	1.14	6/4040 (0.1%)
All	All	1.01	10/15302 (0.1%)	1.36	74/20633 (0.4%)

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	31
2	B	0	18
3	C	0	22
4	D	0	2
4	E	0	2
All	All	0	75

The worst 5 of 10 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	538	GLU	CD-OE2	11.79	1.38	1.25
1	A	538	GLU	CG-CD	-10.73	1.35	1.51
4	D	212	ILE	C-N	8.81	1.54	1.34
1	A	538	GLU	CB-CG	7.55	1.66	1.52
3	C	183	GLU	CB-CG	6.51	1.64	1.52

The worst 5 of 74 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	99	ASP	CB-CG-OD1	-40.40	81.94	118.30
2	B	99	ASP	CB-CG-OD2	-25.09	95.72	118.30
1	A	180	GLU	CG-CD-OE1	-23.88	70.54	118.30
1	A	747	GLU	CG-CD-OE1	-23.65	71.00	118.30
1	A	747	GLU	CG-CD-OE2	-23.28	71.74	118.30

There are no chirality outliers.

5 of 75 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	143	TYR	Peptide
1	A	18	ARG	Peptide
1	A	203	GLY	Peptide
1	A	217	THR	Peptide
1	A	239	ARG	Peptide

5.2 Too-close contacts ⓘ

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	6795	0	6785	1589	0
2	B	1157	0	1127	222	0
3	C	1203	0	1176	410	0
4	D	2934	0	2894	381	0
4	E	2934	0	2895	382	0
5	D	27	0	12	7	0
5	E	27	0	12	4	0
All	All	15077	0	14901	2860	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 95.

The worst 5 of 2860 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:B:79:ILE:HG13	2:B:83:VAL:HG13	1.20	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:361:GLU:HB3	4:E:369:ILE:HD13	1.25	1.19
1:A:390:MET:HB3	1:A:392:LEU:HD23	1.19	1.18
1:A:800:LEU:HG	3:C:162:LYS:HE2	1.19	1.17
4:D:142:LEU:HD21	4:D:165:ILE:HD13	1.17	1.17

There are no symmetry-related clashes.

5.3   Torsion angles   ⓘ

5.3.1   Protein backbone   ⓘ

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	843/845 (100%)	776 (92%)	42 (5%)	25 (3%)	3	22
2	B	144/146 (99%)	116 (81%)	17 (12%)	11 (8%)	1	10
3	C	151/153 (99%)	121 (80%)	15 (10%)	15 (10%)	0	7
4	D	372/375 (99%)	338 (91%)	24 (6%)	10 (3%)	4	25
4	E	372/375 (99%)	343 (92%)	18 (5%)	11 (3%)	3	22
All	All	1882/1894 (99%)	1694 (90%)	116 (6%)	72 (4%)	4	19

5 of 72 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	2	SER
1	A	3	SER
1	A	46	MET
1	A	215	GLN
1	A	269	LEU

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	738/738 (100%)	566 (77%)	172 (23%)	0	4
2	B	125/125 (100%)	86 (69%)	39 (31%)	0	2
3	C	131/131 (100%)	76 (58%)	55 (42%)	0	0
4	D	317/317 (100%)	255 (80%)	62 (20%)	1	7
4	E	317/317 (100%)	261 (82%)	56 (18%)	1	8
All	All	1628/1628 (100%)	1244 (76%)	384 (24%)	2	4

5 of 384 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	C	92	VAL
4	D	107	GLU
3	C	120	ASN
3	C	179	CYS
4	D	171	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 58 such sidechains are listed below:

Mol	Chain	Res	Type
1	A	793	GLN
4	E	162	ASN
2	B	29	GLN
4	E	92	ASN
4	D	246	GLN

5.3.3   RNA ⓘ

There are no RNA molecules in this entry.

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

2 non-standard protein/DNA/RNA residues are modelled in this entry.

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	#$\|Z\| > 2$
4	HIC	E	73	4	8,11,12	1.07	0	6,14,16	1.17	1 (16%)
4	HIC	D	73	4	8,11,12	1.06	0	6,14,16	1.12	1 (16%)

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
4	HIC	E	73	4	-	2/5/6/8	0/1/1/1
4	HIC	D	73	4	-	2/5/6/8	0/1/1/1

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	E	73	HIC	CG-CD2-NE2	2.18	110.14	107.78
4	D	73	HIC	CG-CD2-NE2	2.07	110.02	107.78

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	D	73	HIC	O-C-CA-CB
4	D	73	HIC	CA-CB-CG-ND1
4	E	73	HIC	O-C-CA-CB
4	E	73	HIC	CA-CB-CG-ND1

There are no ring outliers.

1 monomer is involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	E	73	HIC	2	0

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

2 ligands are modelled in this entry.

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	E	401	-	24,29,29	1.25	3 (12%)	29,45,45	1.38	4 (13%)
5	ADP	D	401	-	24,29,29	1.24	3 (12%)	29,45,45	1.38	4 (13%)

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	E	401	-	-	0/12/32/32	0/3/3/3
5	ADP	D	401	-	-	0/12/32/32	0/3/3/3

The worst 5 of 6 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	E	401	ADP	C2-N1	3.02	1.39	1.33
5	D	401	ADP	C2-N1	2.93	1.39	1.33
5	D	401	ADP	C2'-C1'	-2.10	1.50	1.53
5	E	401	ADP	C2'-C1'	-2.05	1.50	1.53
5	D	401	ADP	C8-N7	-2.05	1.31	1.34

The worst 5 of 8 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	E	401	ADP	C4-C5-N7	3.92	113.48	109.40
5	D	401	ADP	C4-C5-N7	3.88	113.44	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	D	401	ADP	C2-N1-C6	2.28	122.65	118.75
5	E	401	ADP	C2-N1-C6	2.25	122.61	118.75
5	D	401	ADP	N3-C2-N1	-2.23	125.19	128.68

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	E	401	ADP	4	0
5	D	401	ADP	7	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 then 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.

Ligand ADP E 401

Bond lengths

Bond angles

Torsions

Rings

Ligand ADP D 401

Bond lengths

Bond angles

Torsions

Rings
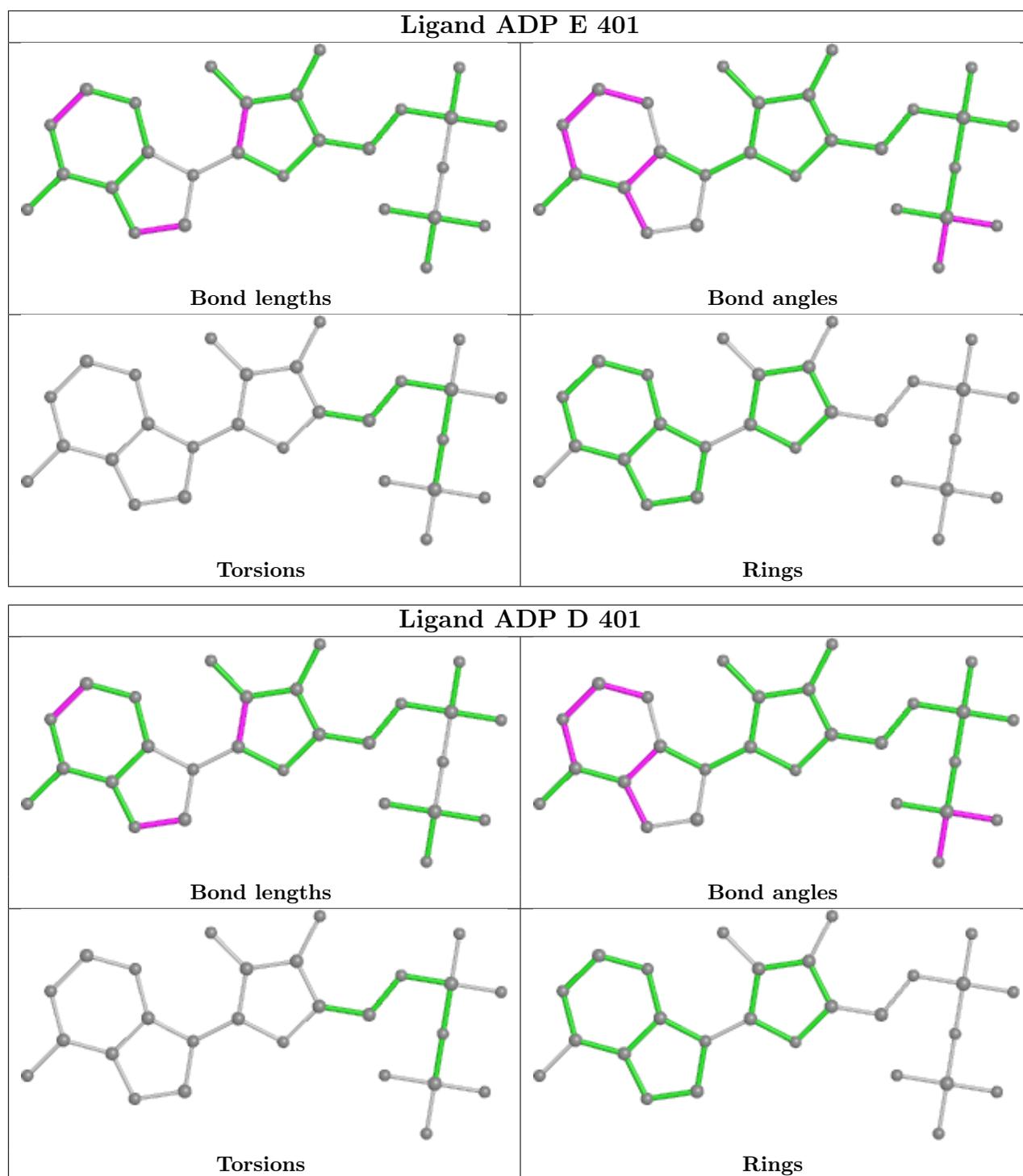
5.7   Other polymers ⓘ

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 ⓘ

This section contains visualisations of the EMDB entry EMD-6664. 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 ⓘ

6.1.1   Primary map

| X | Y | Z |
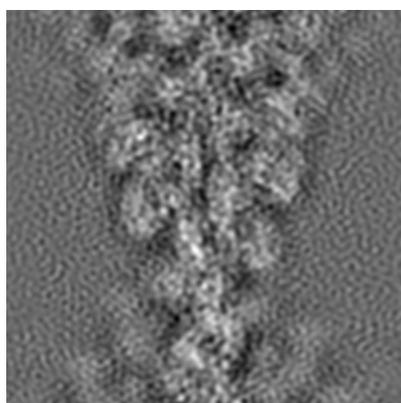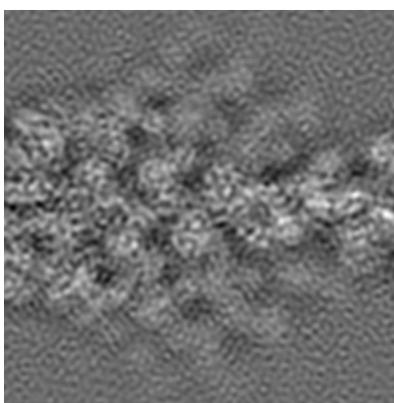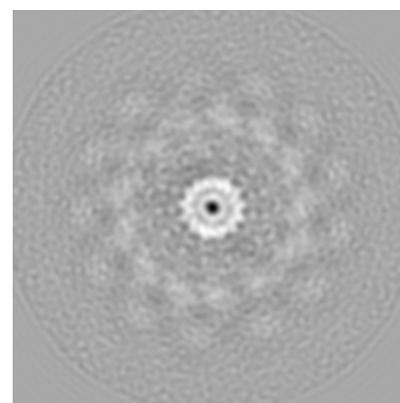
The images above show the map projected in three orthogonal directions.

6.2   Central slices ⓘ
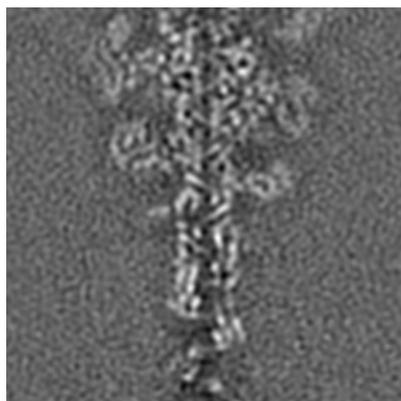
6.2.1   Primary map
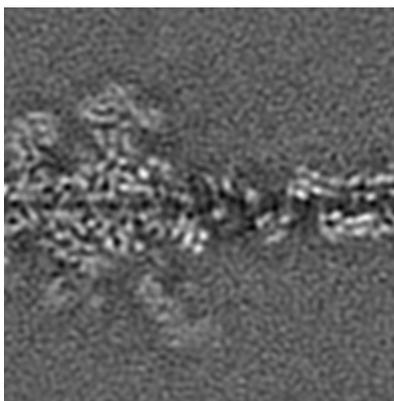
| X Index: 125 | Y Index: 125 | Z Index: 125 |
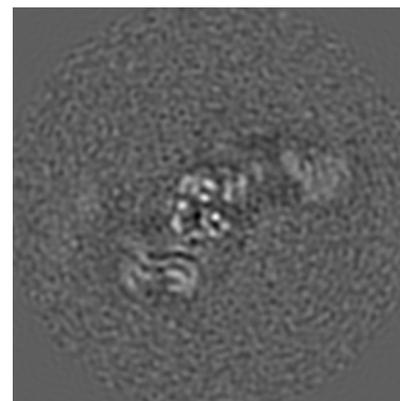
The images above show central slices of the map in three orthogonal directions.

6.3   Largest variance slices ⓘ

6.3.1   Primary map
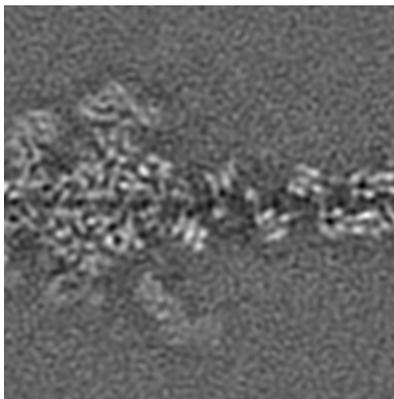
| X Index: 125 | Y Index: 126 | Z Index: 33 |
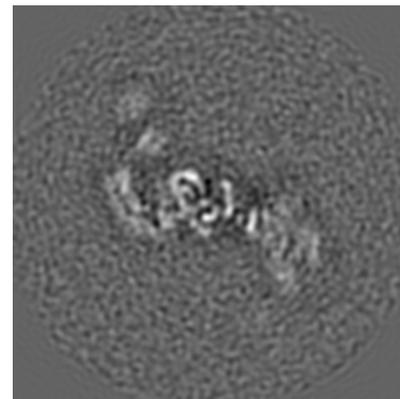
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1   Primary map

| X | Y | Z |
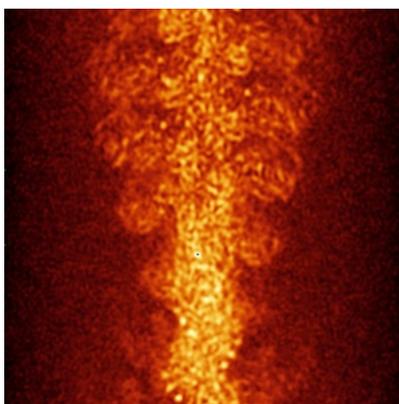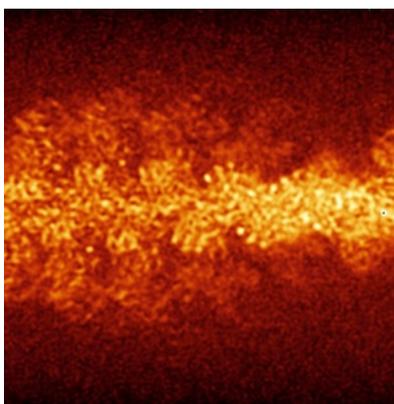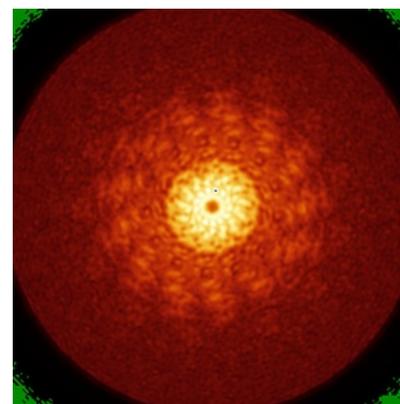
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5   Orthogonal surface views   ⓘ

6.5.1   Primary map

X   Y   Z
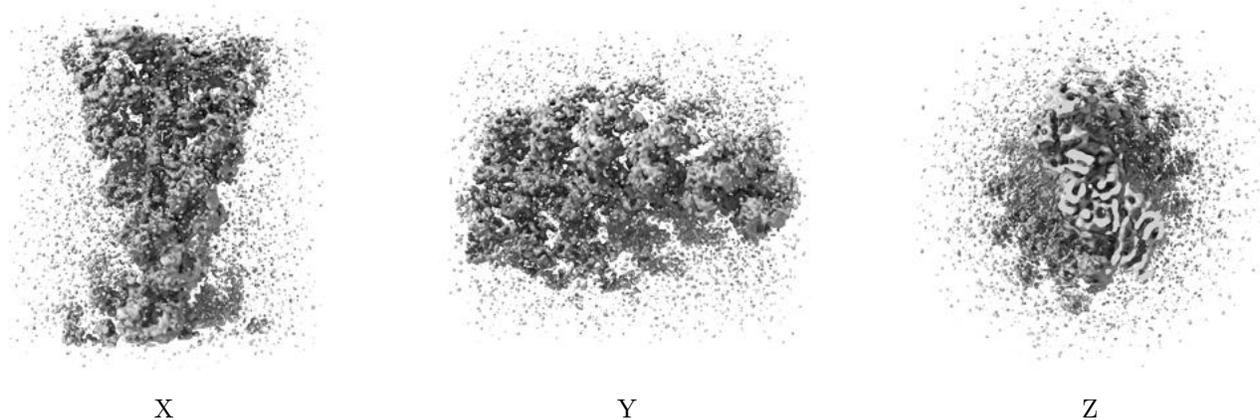
The images above show the 3D surface view of the map at the recommended contour level 1.52. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.6   Mask visualisation   ⓘ

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

7   Map analysis ⓘ

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

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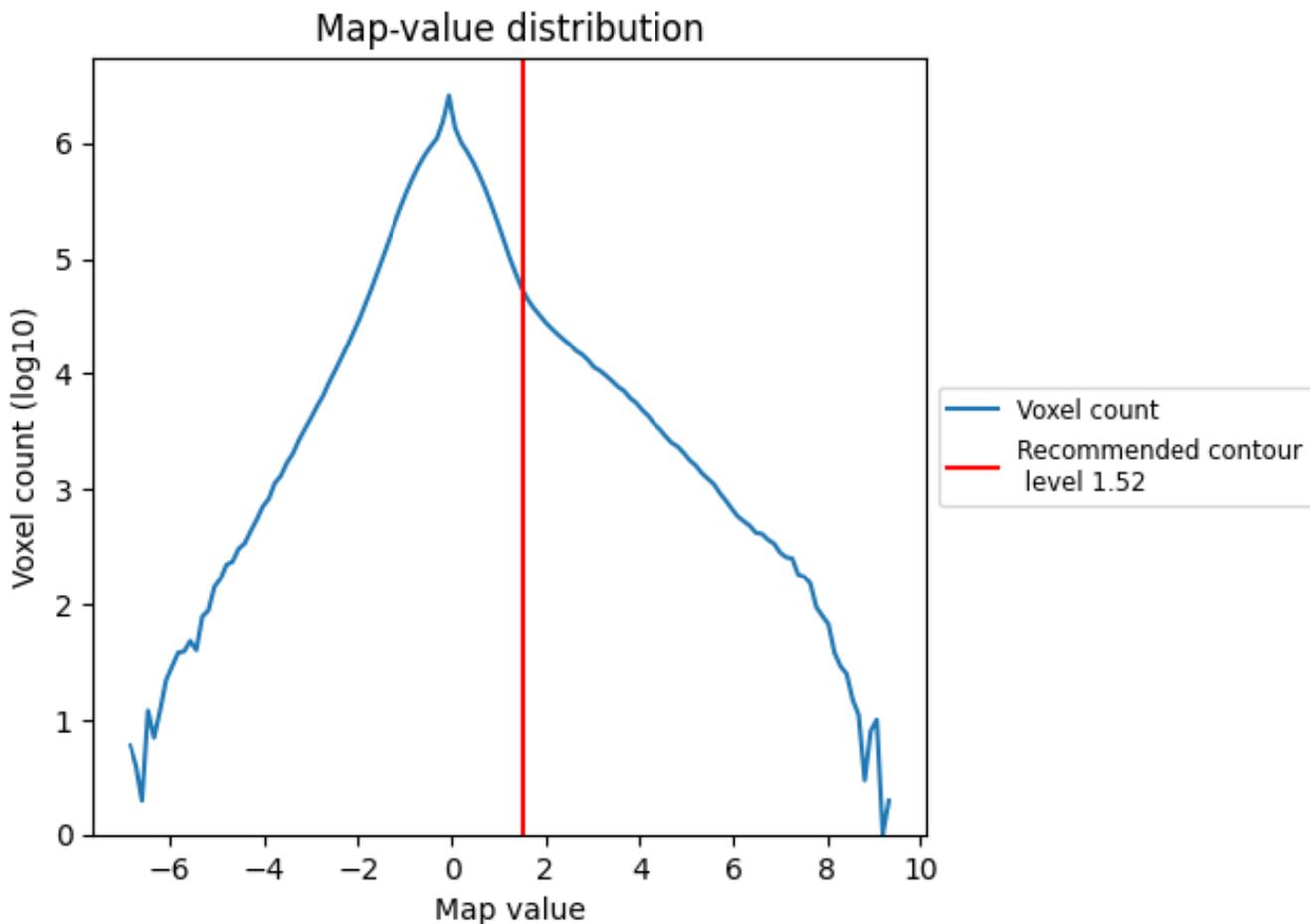
The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

7.2　Volume estimate (i)
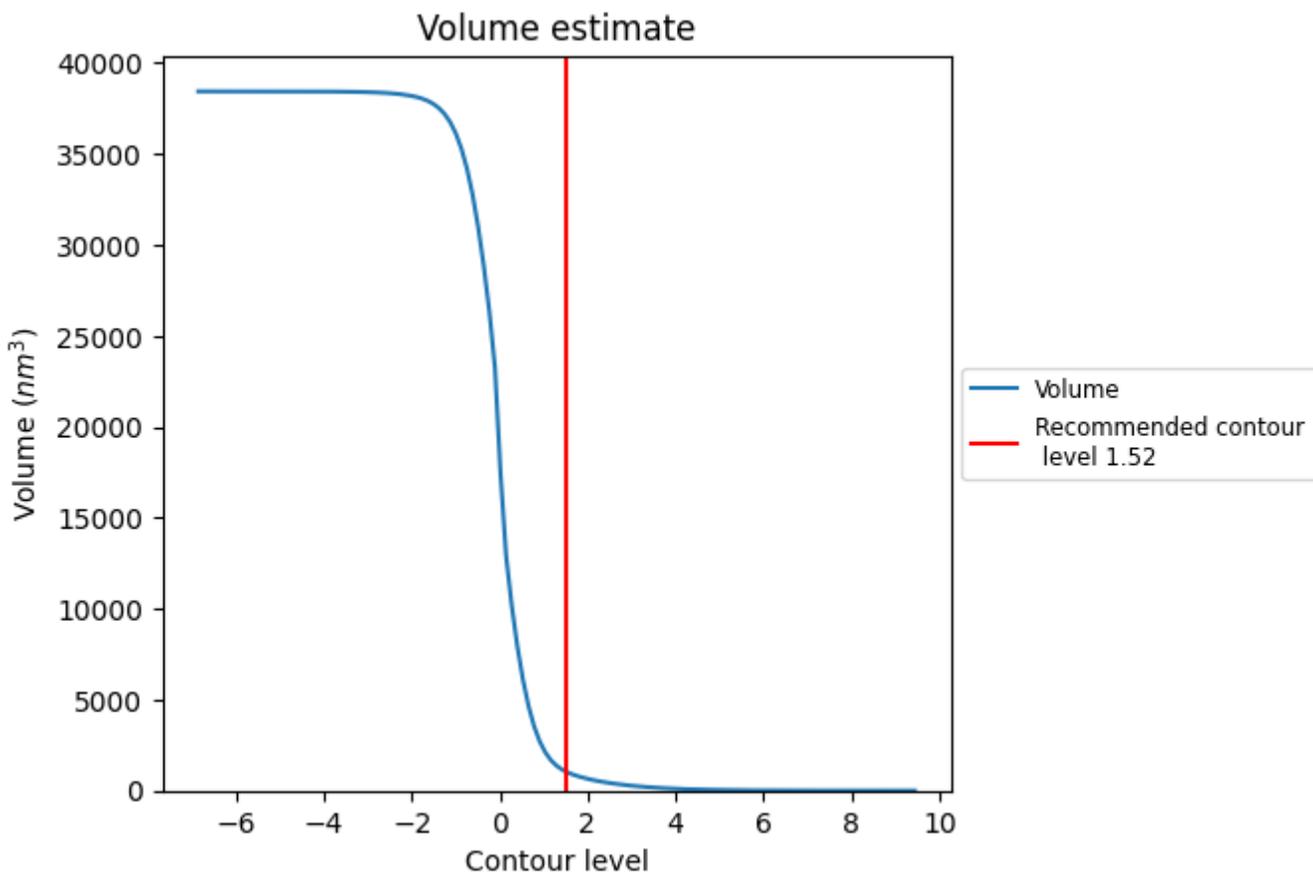
The volume at the recommended contour level is 1033 nm^3; this corresponds to an approximate mass of 933 kDa.

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)
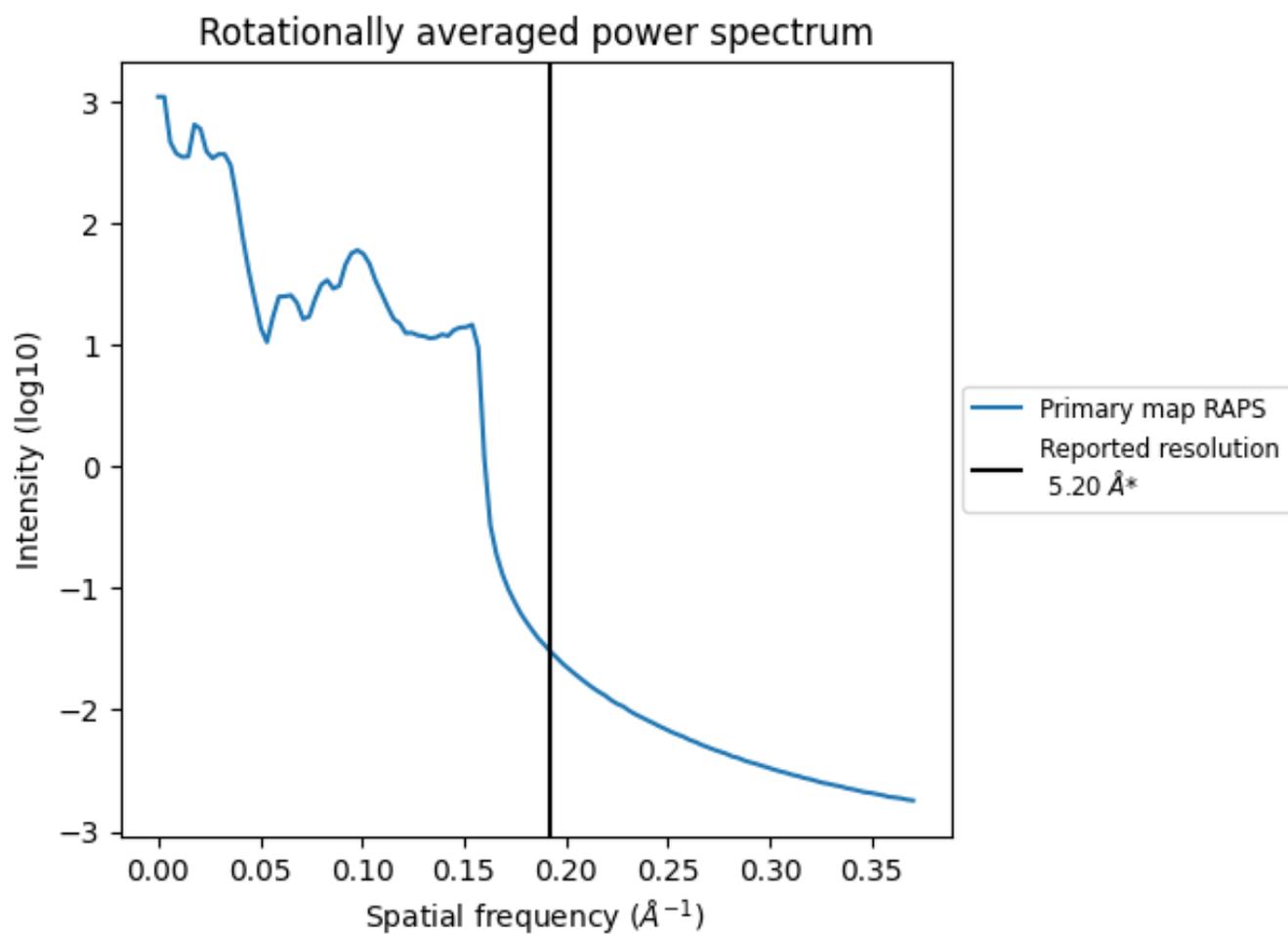
*Reported resolution corresponds to spatial frequency of 0.192 Å^{-1}

8   Fourier-Shell correlation (i)

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

9   Map-model fit ⓘ

This section contains information regarding the fit between EMDB map EMD-6664 and PDB model 5H53. Per-residue inclusion information can be found in section 3 on page 5.

9.1   Map-model overlay ⓘ

X   Y   Z
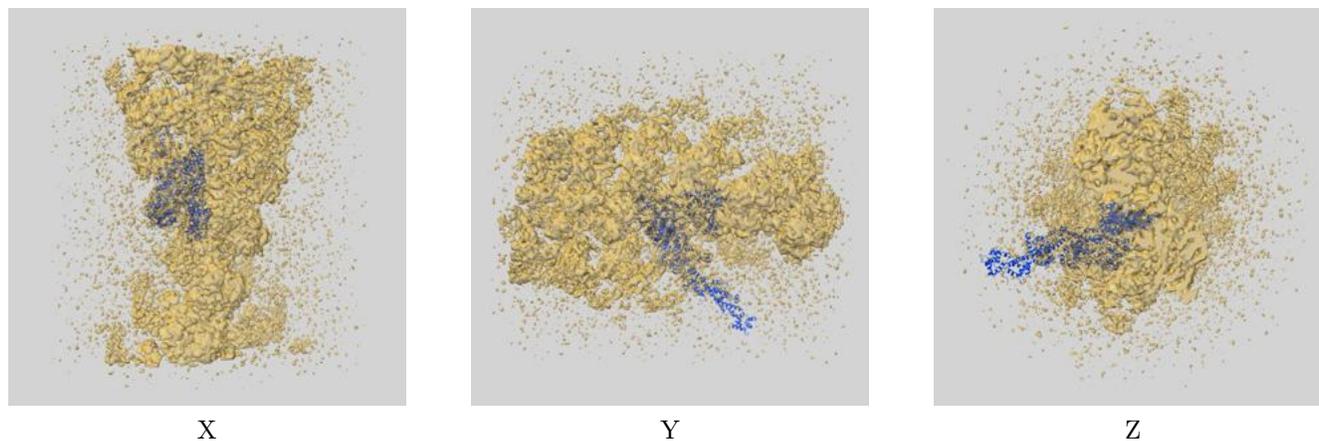
The images above show the 3D surface view of the map at the recommended contour level 1.52 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model ⓘ

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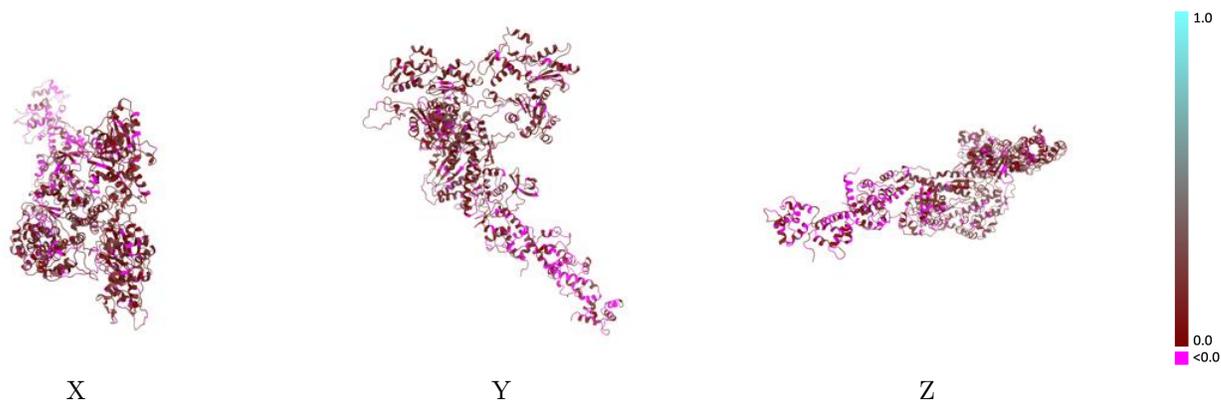
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

X   Y   Z
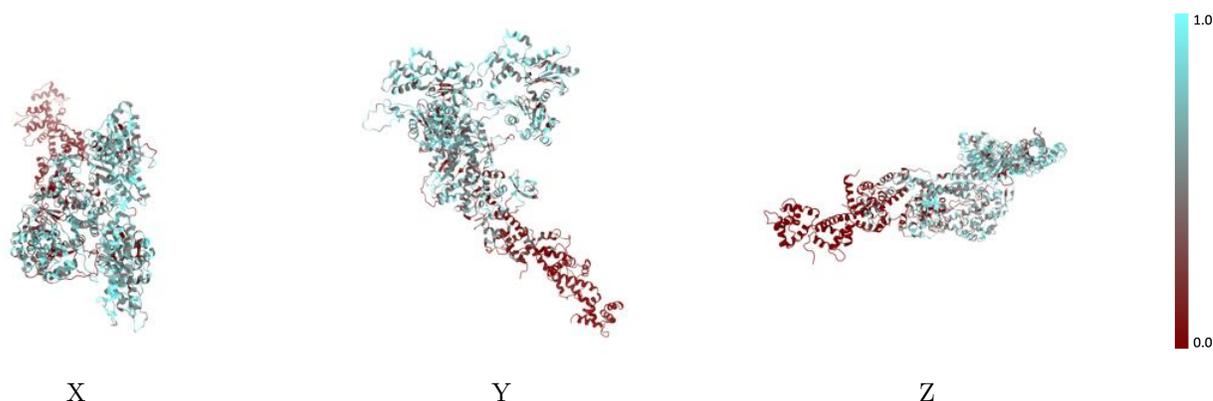
The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (1.52).

9.4　Atom inclusion ⓘ
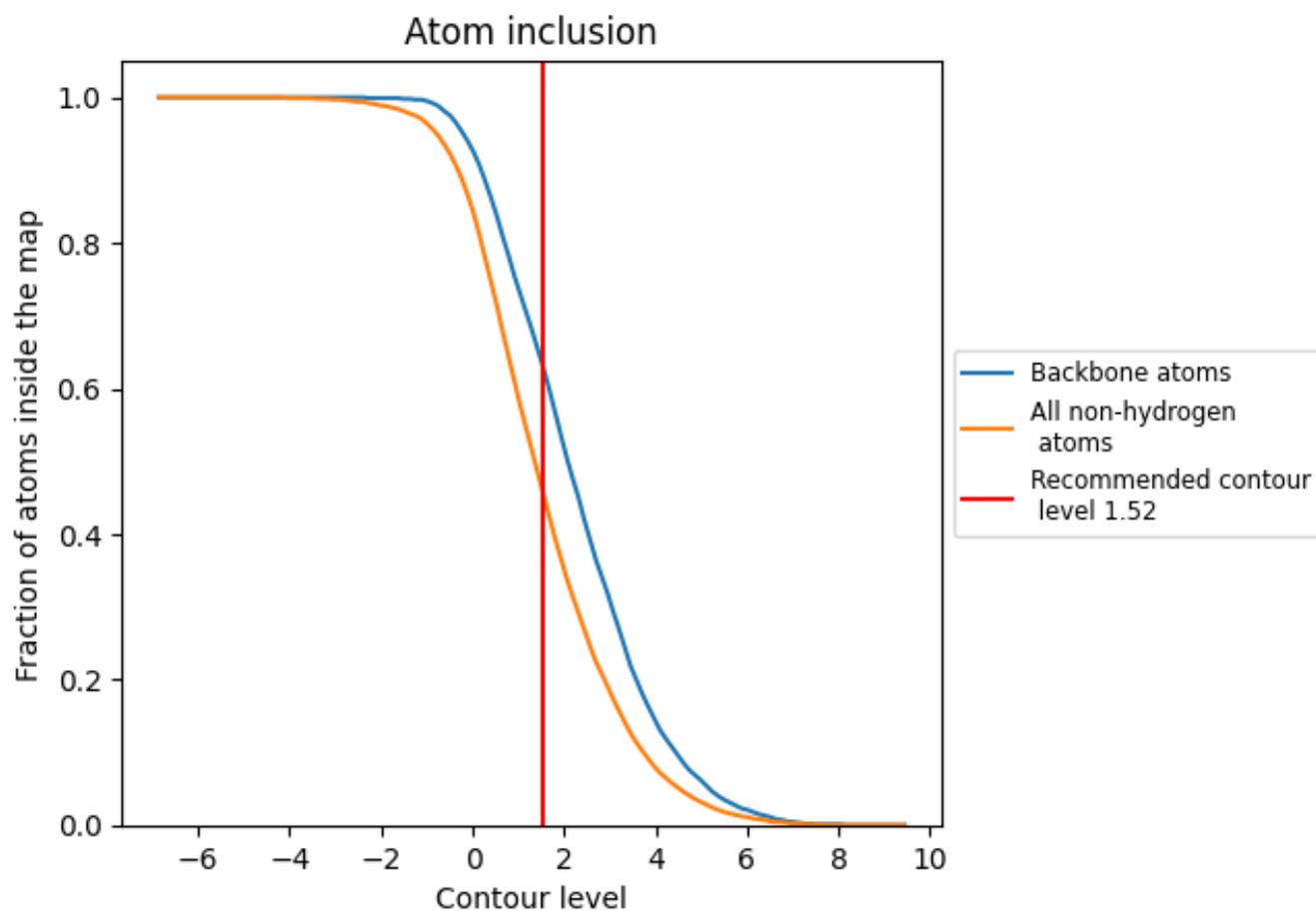
At the recommended contour level, 63% of all backbone atoms, 46% of all non-hydrogen atoms, are inside the map.

9.5   Map-model fit summary (i)

The table lists the average atom inclusion at the recommended contour level (1.52) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.4590	0.1140
A	0.4600	0.1190
B	0.0000	0.0200
C	0.1040	0.0340
D	0.6210	0.1430
E	0.6220	0.1450

1.0

0.0
<0.0