



# Full wwPDB X-ray Structure Validation Report ⓘ

Sep 24, 2025 – 06:08 am BST

PDB ID : 6GU5 / pdb\_00006gu5  
Title : Mosto containing the core POM clusters  
Authors : Ermler, U.; Poppe, J.; Bruenle, S.  
Deposited on : 2018-06-19  
Resolution : 1.90 Å(reported)

This is a Full wwPDB X-ray Structure Validation 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/XrayValidationReportHelp>

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>.

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

MolProbity : 4-5-2 with Phenix2.0  
Mogul : 1.8.4, CSD as541be (2020)  
Xtriage (Phenix) : 2.0  
EDS : 3.0  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)  
CCP4 : 9.0.010 (Gargrove)  
Density-Fitness : 1.0.12  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.46

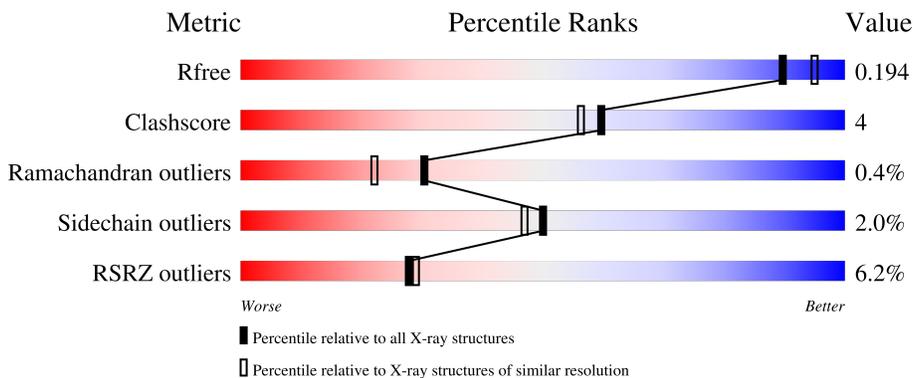
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 1.90 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)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	164625	7293 (1.90-1.90)
Clashscore	180529	8090 (1.90-1.90)
Ramachandran outliers	177936	8022 (1.90-1.90)
Sidechain outliers	177891	8022 (1.90-1.90)
RSRZ outliers	164620	7292 (1.90-1.90)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower 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 electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	B	269	
2	A	275	

## 2 Entry composition [i](#)

There are 7 unique types of molecules in this entry. The entry contains 4383 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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.

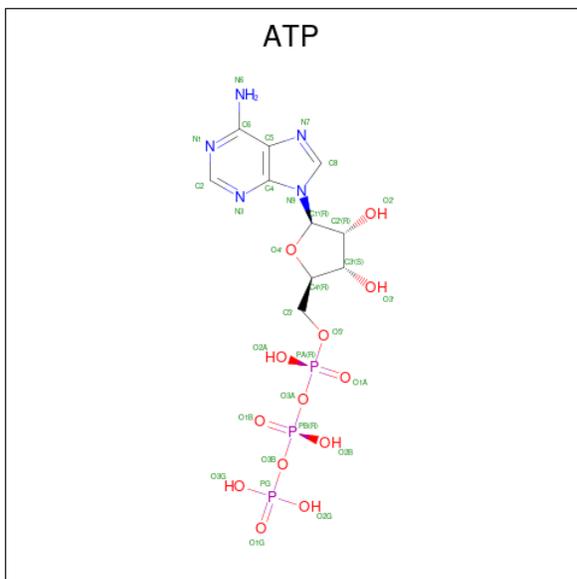
- Molecule 1 is a protein called Molybdenum storage protein subunit beta.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	B	268	Total	C	N	O	S	0	3	0
			2004	1269	357	370	8			

- Molecule 2 is a protein called Molybdenum storage protein subunit alpha.

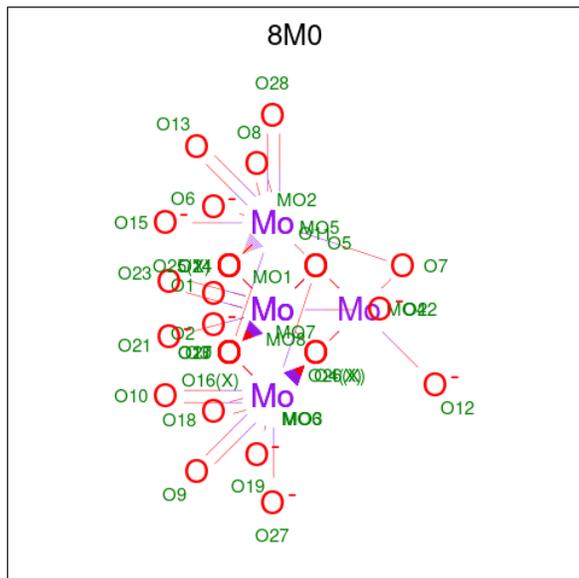
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	A	245	Total	C	N	O	S	0	6	0
			1861	1178	348	332	3			

- Molecule 3 is ADENOSINE-5'-TRIPHOSPHATE (CCD ID: ATP) (formula:  $C_{10}H_{16}N_5O_{13}P_3$ ).



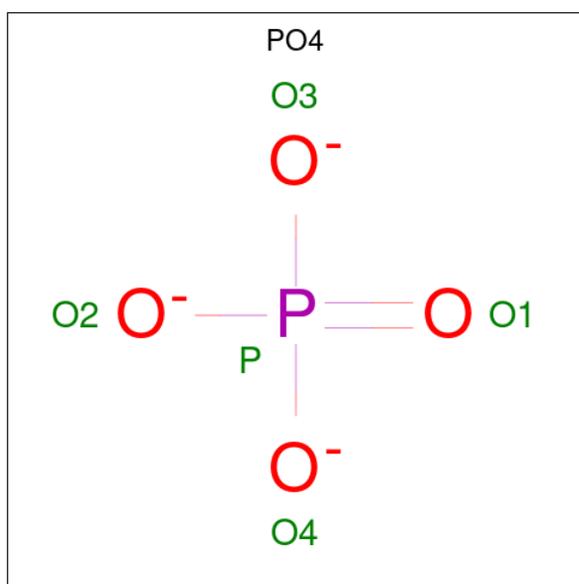
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	P		
3	B	1	Total	C	N	O	P	0	0
			31	10	5	13	3		
3	A	1	Total	C	N	O	P	0	0
			31	10	5	13	3		

- Molecule 4 is bis(mu4-oxo)-tetrakis(mu3-oxo)-hexakis(mu2-oxo)-hexadeca-oxo-octamolybdenum (VI) (CCD ID: 8M0) (formula: Mo<sub>8</sub>O<sub>28</sub>).



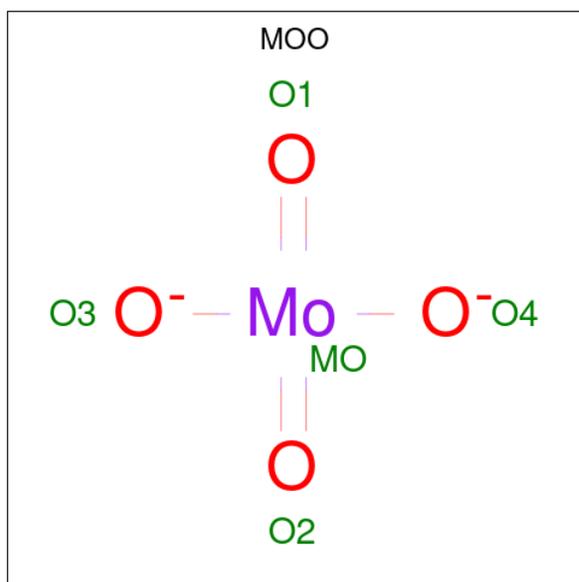
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	A	1	Total	Mo	O	0	0
			36	8	28		
4	A	1	Total	Mo	O	0	0
			34	8	26		

- Molecule 5 is PHOSPHATE ION (CCD ID: PO4) (formula: O<sub>4</sub>P).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	A	1	Total	O	P	0	0
			5	4	1		

- Molecule 6 is MOLYBDATE ION (CCD ID: MOO) (formula:  $\text{MoO}_4$ ).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
6	A	1	Total	Mo	O	0	0
			5	1	4		

- Molecule 7 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
7	B	183	Total	O	0	0
			183	183		
7	A	193	Total	O	0	0
			193	193		



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 63 2 2	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	115.15Å 115.15Å 234.50Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	41.08 – 1.90 41.08 – 1.90	Depositor EDS
% Data completeness (in resolution range)	98.8 (41.08-1.90) 98.8 (41.08-1.90)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	0.09	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.06 (at 1.89Å)	Xtrriage
Refinement program	PHENIX (1.12_2829: ???)	Depositor
R, $R_{free}$	0.171 , 0.192 0.172 , 0.194	Depositor DCC
$R_{free}$ test set	3629 reflections (4.97%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	23.6	Xtrriage
Anisotropy	0.120	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.38 , 46.5	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.48$ , $\langle L^2 \rangle = 0.31$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.96	EDS
Total number of atoms	4383	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	29.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.13% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

## 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: MOO, 8M0, PO4, 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	B	0.69	0/2046	0.79	1/2778 (0.0%)
2	A	0.73	0/1919	0.81	3/2613 (0.1%)
All	All	0.71	0/3965	0.80	4/5391 (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	B	0	2
2	A	0	1
All	All	0	3

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed( $^{\circ}$ )	Ideal( $^{\circ}$ )
2	A	129	GLU	CA-C-N	-7.62	110.52	120.58
2	A	129	GLU	C-N-CA	-7.62	110.52	120.58
2	A	156	HIS	CB-CA-C	-6.03	109.64	116.63
1	B	141	VAL	N-CA-CB	-5.34	105.97	112.33

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	A	272	GLY	Peptide
1	B	126	VAL	Peptide

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Mol	Chain	Res	Type	Group
1	B	131	LEU	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	B	2004	0	2067	24	0
2	A	1861	0	1920	10	0
3	A	31	0	12	0	0
3	B	31	0	12	1	0
4	A	70	0	0	6	0
5	A	5	0	0	1	0
6	A	5	0	0	0	1
7	A	193	0	0	2	0
7	B	183	0	0	0	0
All	All	4383	0	4011	34	1

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 4.

All (34) 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:A:130:HIS:HB2	4:A:304:8M0:O21	1.80	0.81
1:B:151:PRO:HB3	4:A:301:8M0:O4	1.95	0.66
1:B:200:LYS:NZ	3:B:301:ATP:O3'	2.31	0.64
1:B:130:GLY:O	1:B:131:LEU:C	2.40	0.62
1:B:131:LEU:O	1:B:134:VAL:N	2.19	0.62
2:A:156:HIS:HE1	4:A:304:8M0:O23	1.82	0.62
1:B:131:LEU:HD12	1:B:134:VAL:HB	1.83	0.59
1:B:132:SER:HA	1:B:135:PRO:HD2	1.85	0.56
1:B:131:LEU:HD13	1:B:180:PHE:HZ	1.74	0.53
1:B:130:GLY:HA3	4:A:301:8M0:O22	2.07	0.53
1:B:228:PHE:CD2	1:B:229:PRO:HD3	2.44	0.52
1:B:192:ASP:O	1:B:264:GLY:HA2	2.11	0.51
5:A:302:PO4:O4	7:A:401:HOH:O	2.19	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:67:ARG:HE	1:B:68:LYS:NZ	2.09	0.50
1:B:131:LEU:HD13	1:B:180:PHE:CZ	2.47	0.49
1:B:228:PHE:CG	1:B:229:PRO:HD3	2.48	0.48
1:B:222:HIS:ND1	1:B:228:PHE:HB2	2.29	0.48
1:B:65:ALA:O	1:B:68:LYS:HG2	2.16	0.46
1:B:192:ASP:HA	1:B:247:ASN:HB2	1.98	0.46
1:B:72:LEU:O	1:B:143:ALA:HA	2.15	0.45
1:B:83:ARG:HA	1:B:83:ARG:HD2	1.63	0.45
2:A:212:PRO:HD2	7:A:489:HOH:O	2.16	0.45
2:A:188:ILE:HG22	2:A:190:GLU:HG2	1.98	0.45
1:B:155:TRP:NE1	2:A:177:LEU:HG	2.32	0.44
1:B:41:ILE:HD11	1:B:72:LEU:HD22	1.98	0.44
2:A:129:GLU:CD	4:A:304:8M0:O27	2.60	0.43
1:B:170:ASP:HB2	1:B:227:GLU:CD	2.43	0.42
1:B:151:PRO:O	1:B:153:LYS:HG2	2.20	0.41
1:B:134:VAL:HB	1:B:135:PRO:HD3	2.02	0.41
2:A:156:HIS:CE1	4:A:304:8M0:O23	2.69	0.41
2:A:214:THR:HG21	2:A:219:LEU:HD11	2.03	0.41
1:B:132:SER:HA	1:B:135:PRO:CD	2.48	0.41
2:A:171:ASP:OD2	2:A:228:VAL:HA	2.20	0.40
2:A:193:ASP:HA	2:A:249:ASN:HB2	2.02	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A:305:MOO:MO	6:A:305:MOO:O4[3_665]	1.72	0.48

## 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 X-ray entries followed by that with respect to entries of similar resolution.

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	B	269/269 (100%)	261 (97%)	6 (2%)	2 (1%)	19	11
2	A	249/275 (90%)	244 (98%)	5 (2%)	0	100	100
All	All	518/544 (95%)	505 (98%)	11 (2%)	2 (0%)	30	22

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	131	LEU
1	B	128	GLY

### 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 X-ray entries followed by that with respect to entries of similar resolution.

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	B	208/205 (102%)	200 (96%)	8 (4%)	28	21
2	A	194/215 (90%)	193 (100%)	1 (0%)	86	88
All	All	402/420 (96%)	393 (98%)	9 (2%)	50	43

All (9) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	4	SER
1	B	53[A]	ARG
1	B	53[B]	ARG
1	B	83	ARG
1	B	132	SER
1	B	136	LEU
1	B	141	VAL
1	B	161	GLU
2	A	207	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

### 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](#)

6 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
6	MOO	A	305	-	2,4,4	12.27	2 (100%)	-		
3	ATP	A	303	-	26,33,33	1.17	3 (11%)	31,52,52	1.33	4 (12%)
4	8M0	A	301	-	22,48,48	8.12	11 (50%)	-		
5	PO4	A	302	-	4,4,4	0.68	0	6,6,6	0.31	0
4	8M0	A	304	-	14,46,48	8.72	9 (64%)	-		
3	ATP	B	301	-	26,33,33	1.27	4 (15%)	31,52,52	1.57	7 (22%)

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. <sup>1,2</sup> means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	ATP	A	303	-	-	1/18/38/38	0/3/3/3
3	ATP	B	301	-	-	2/18/38/38	0/3/3/3

All (29) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	301	8M0	O7-MO4	18.08	1.91	1.74
4	A	304	8M0	O20-MO8	17.07	1.90	1.74
6	A	305	MOO	O2-MO	17.05	2.09	1.73
4	A	304	8M0	O7-MO4	16.25	1.90	1.74
4	A	301	8M0	O9-MO3	16.15	1.91	1.71
4	A	301	8M0	O20-MO8	15.14	1.89	1.74
4	A	301	8M0	O10-MO3	13.04	1.87	1.71
4	A	304	8M0	O23-MO7	12.66	1.90	1.68
4	A	301	8M0	O23-MO7	11.67	1.88	1.68
4	A	304	8M0	O9-MO3	10.99	1.91	1.67
4	A	301	8M0	O1-MO1	10.86	1.87	1.68
4	A	304	8M0	O1-MO1	10.11	1.86	1.68
4	A	301	8M0	O28-MO5	8.32	1.81	1.71
4	A	301	8M0	O18-MO6	7.07	1.80	1.68
4	A	304	8M0	O18-MO6	6.57	1.79	1.68
4	A	304	8M0	O13-MO5	6.24	1.81	1.67
4	A	301	8M0	O26-MO4	6.06	2.19	1.88
4	A	304	8M0	O8-MO2	5.73	1.78	1.68
4	A	301	8M0	O25-MO8	5.24	2.15	1.88
4	A	301	8M0	O13-MO5	4.77	1.77	1.71
6	A	305	MOO	O1-MO	3.20	1.80	1.73
3	B	301	ATP	C2-N3	3.01	1.36	1.32
3	B	301	ATP	C5-C4	2.94	1.48	1.40
4	A	304	8M0	O3-MO3	2.79	1.99	1.89
3	A	303	ATP	C2-N3	2.64	1.36	1.32
3	A	303	ATP	C5-C4	2.47	1.47	1.40
3	B	301	ATP	C2-N1	2.17	1.37	1.33
3	B	301	ATP	C4-N3	2.03	1.38	1.35
3	A	303	ATP	C4-N3	2.02	1.38	1.35

All (11) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	303	ATP	N3-C2-N1	-3.69	122.91	128.68
3	B	301	ATP	N3-C2-N1	-3.55	123.13	128.68
3	B	301	ATP	PB-O3B-PG	-3.34	121.36	132.83
3	B	301	ATP	C3'-C2'-C1'	3.00	105.49	100.98
3	A	303	ATP	N6-C6-N1	2.67	124.11	118.57
3	B	301	ATP	O3G-PG-O2G	2.43	116.91	107.64
3	A	303	ATP	C2-N1-C6	2.39	122.84	118.75
3	B	301	ATP	C4-C5-N7	-2.36	106.94	109.40
3	B	301	ATP	O3G-PG-O3B	-2.28	96.98	104.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	B	301	ATP	O2B-PB-O1B	2.24	123.30	112.24
3	A	303	ATP	PB-O3B-PG	-2.07	125.71	132.83

There are no chirality outliers.

All (3) torsion outliers are listed below:

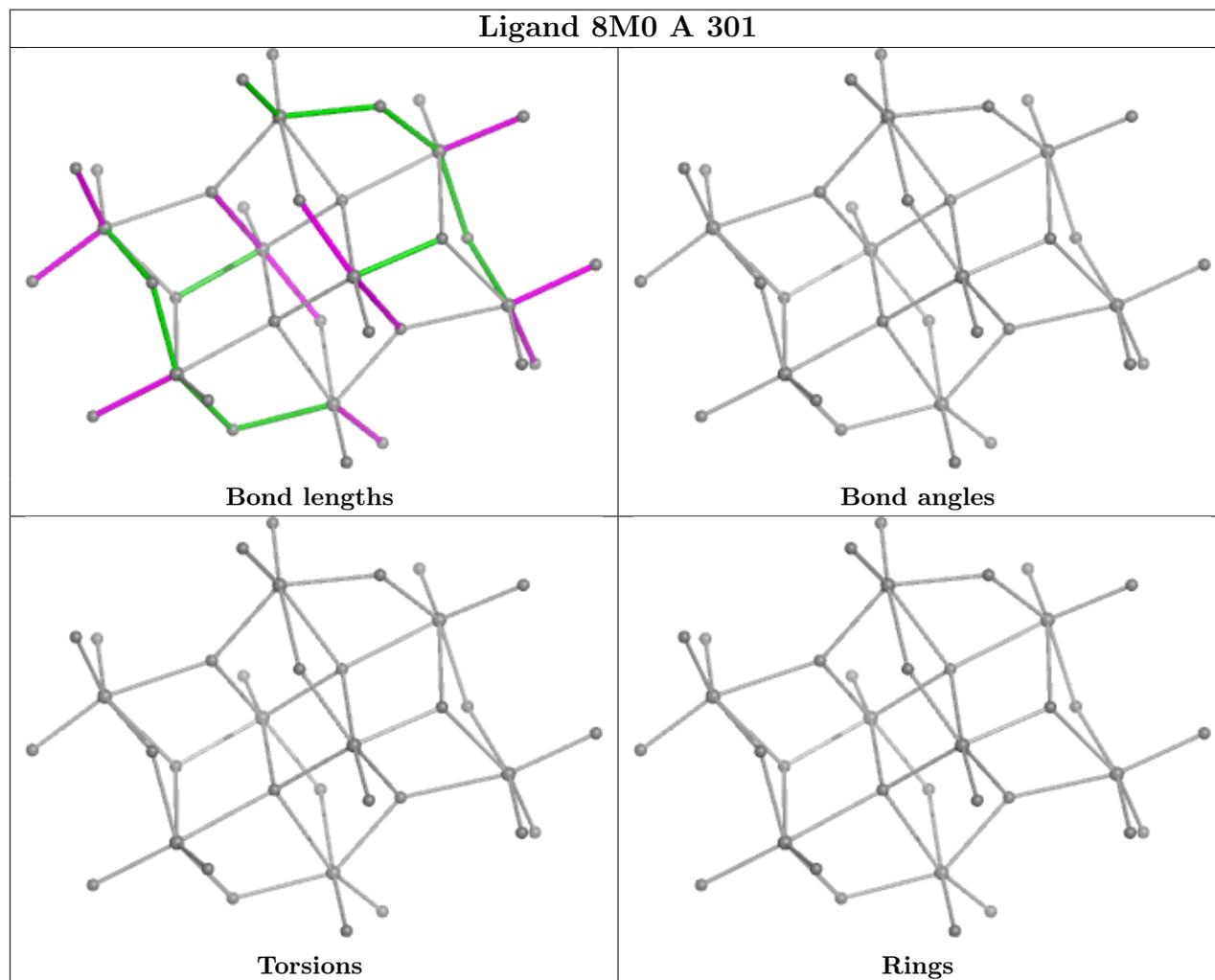
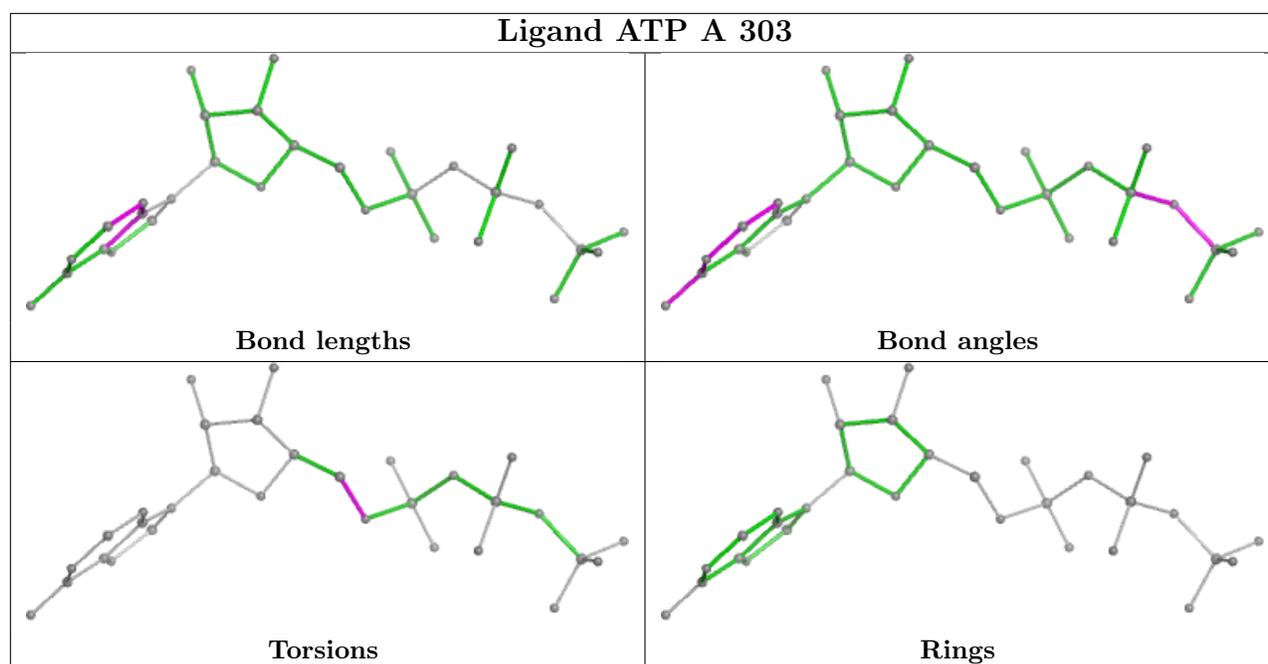
Mol	Chain	Res	Type	Atoms
3	B	301	ATP	C4'-C5'-O5'-PA
3	A	303	ATP	C4'-C5'-O5'-PA
3	B	301	ATP	PA-O3A-PB-O3B

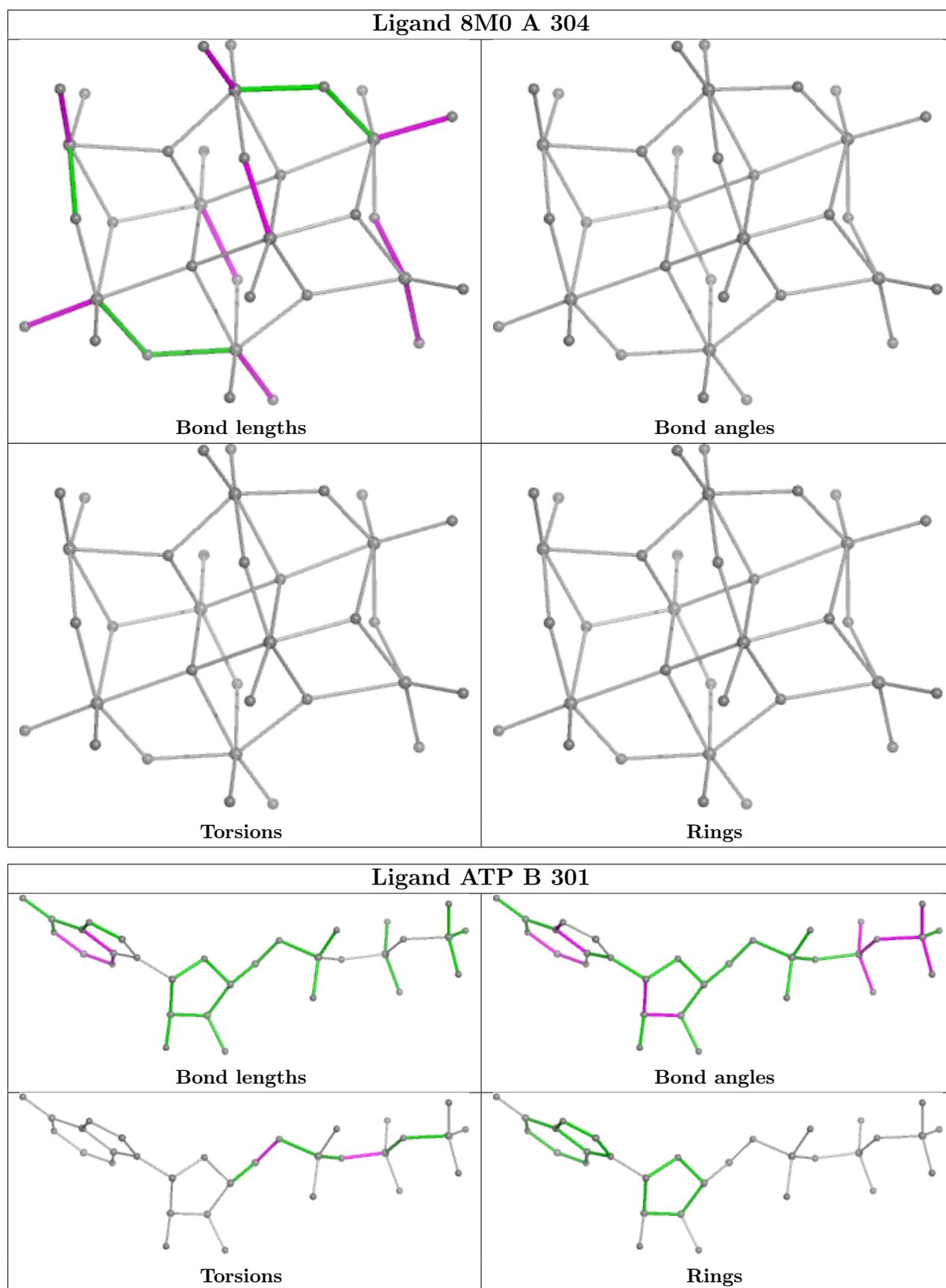
There are no ring outliers.

5 monomers are involved in 9 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
6	A	305	MOO	0	1
4	A	301	8M0	2	0
5	A	302	PO4	1	0
4	A	304	8M0	4	0
3	B	301	ATP	1	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 Fit of model and data

### 6.1 Protein, DNA and RNA chains

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	B	268/269 (99%)	0.05	24 (8%) 17 17	12, 25, 60, 88	3 (1%)
2	A	245/275 (89%)	-0.43	8 (3%) 49 51	10, 20, 53, 80	6 (2%)
All	All	513/544 (94%)	-0.18	32 (6%) 28 29	10, 23, 59, 88	9 (1%)

All (32) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	127	GLY	8.3
1	B	129	ALA	6.9
1	B	131	LEU	6.6
2	A	276	ALA	5.7
1	B	132	SER	5.3
1	B	222	HIS	5.1
1	B	3	ASN	4.5
1	B	128	GLY	4.5
1	B	201	THR	4.5
1	B	228	PHE	4.2
2	A	275	PRO	3.7
2	A	274	ARG	3.6
1	B	203	LYS	3.4
2	A	32	LYS	3.3
1	B	4	SER	3.2
1	B	223	ASP	3.2
1	B	130	GLY	3.1
1	B	220	GLY	3.0
1	B	221	LEU	3.0
1	B	133	ALA	2.9
1	B	202	SER	2.9
1	B	218	ALA	2.8
1	B	14	GLN	2.7
1	B	204	ASP	2.6

*Continued on next page...*

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Mol	Chain	Res	Type	RSRZ
1	B	157[A]	ARG	2.5
2	A	156	HIS	2.5
1	B	5	THR	2.4
1	B	68	LYS	2.4
2	A	203	PRO	2.3
2	A	207	GLN	2.3
2	A	221	LYS	2.1
1	B	206	THR	2.0

## 6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

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

## 6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 6.4 Ligands [i](#)

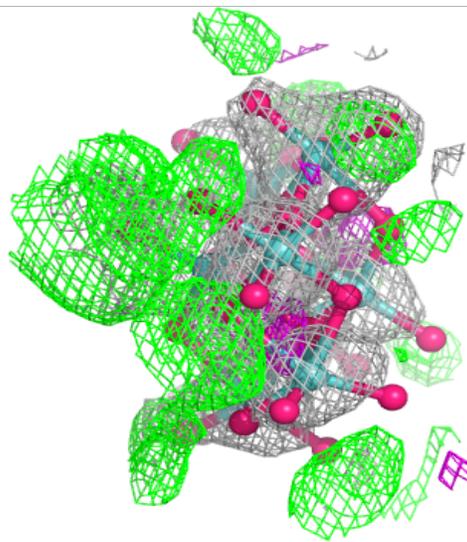
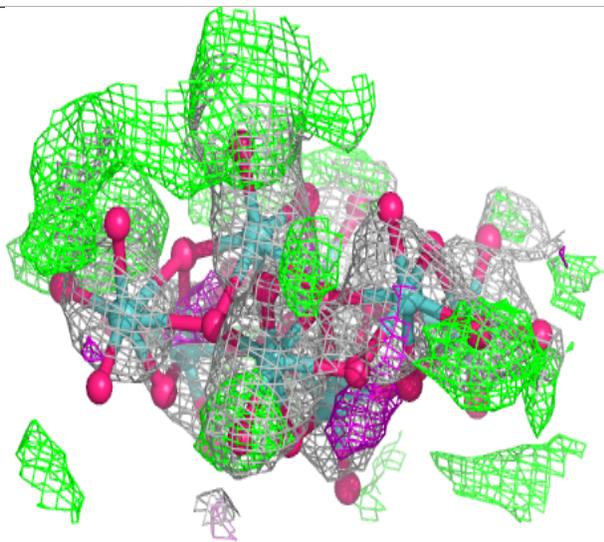
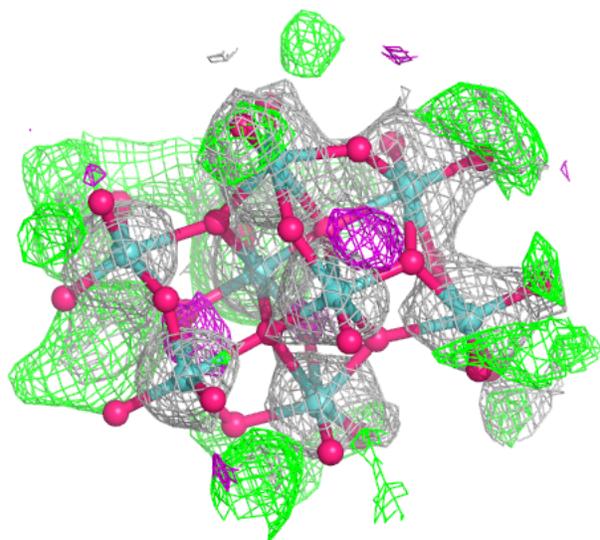
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
5	PO4	A	302	5/5	0.77	0.17	69,81,87,88	0
4	8M0	A	301	36/36	0.81	0.31	11,45,50,50	36
3	ATP	B	301	31/31	0.95	0.13	16,42,53,56	31
6	MOO	A	305	5/5	0.96	0.25	37,38,39,40	1
4	8M0	A	304	34/36	0.98	0.09	19,32,38,48	34
3	ATP	A	303	31/31	0.99	0.04	18,26,29,34	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

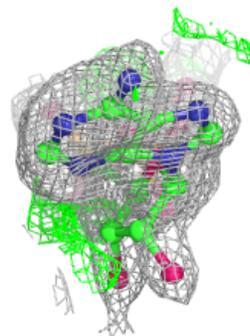
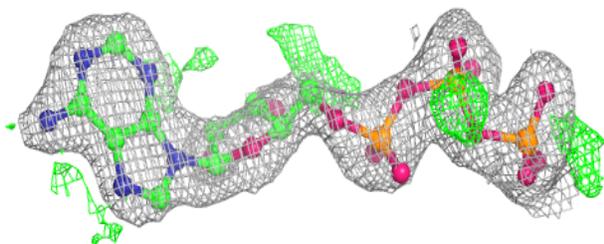
**Electron density around 8M0 A 301:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



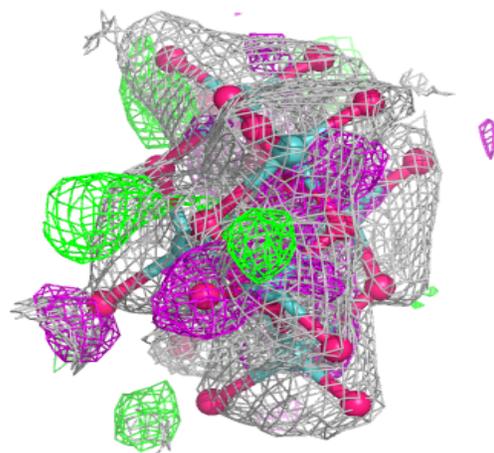
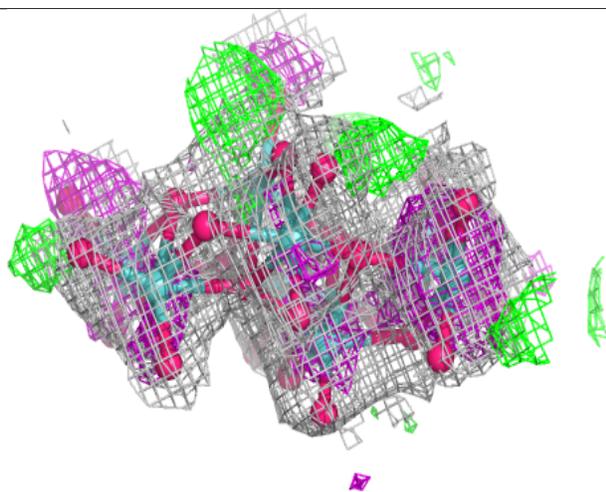
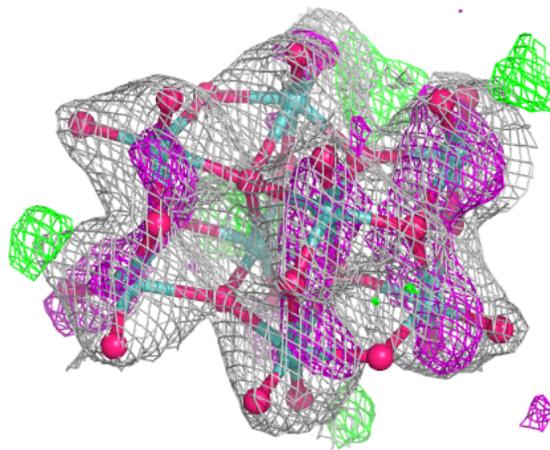
**Electron density around ATP B 301:**

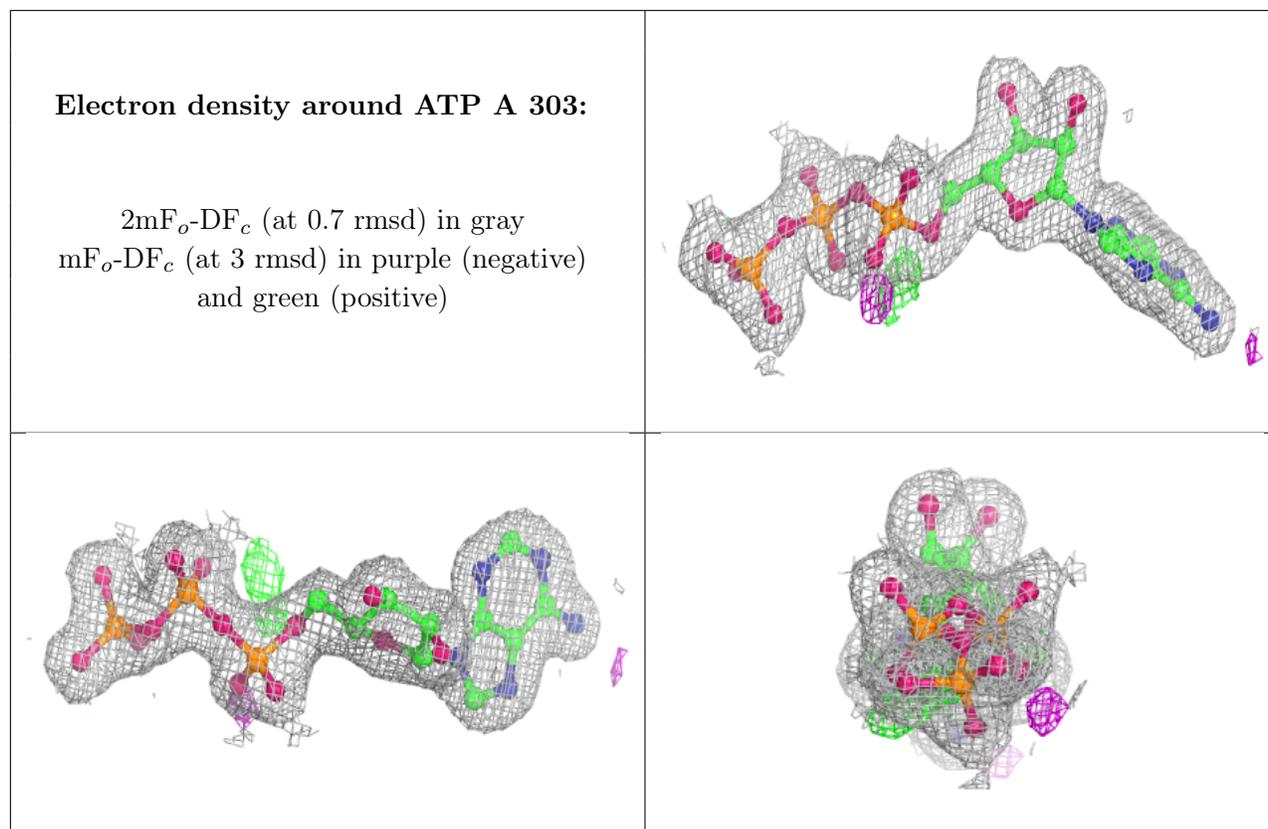
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around 8M0 A 304:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





## 6.5 Other polymers [i](#)

There are no such residues in this entry.