



Full wwPDB X-ray Structure Validation Report ⓘ

Apr 28, 2024 – 02:02 pm BST

PDB ID : 4BIZ
Title : Crystal structure of CpxAHDC (orthorhombic form 2)
Authors : Mechaly, A.E.; Sassoon, N.; Betton, J.M.; Alzari, P.M.
Deposited on : 2013-04-13
Resolution : 2.65 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

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>.

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

MolProbity : 4.02b-467
Mogul : 1.8.4, CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36.2
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36.2

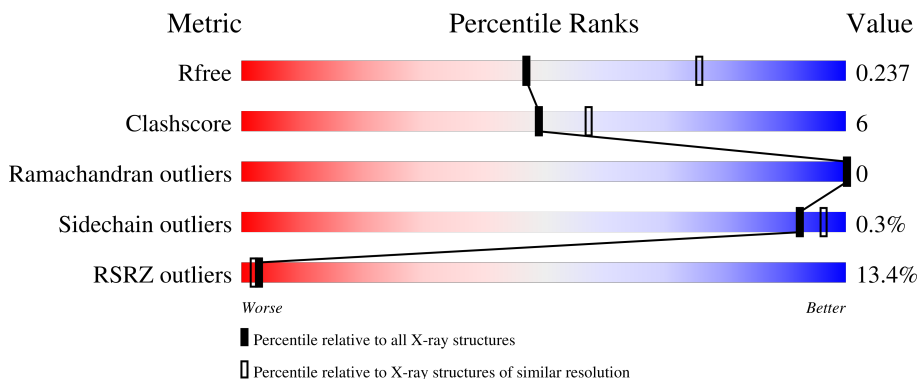
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION


The reported resolution of this entry is 2.65 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}	130704	1332 (2.68-2.64)
Clashscore	141614	1374 (2.68-2.64)
Ramachandran outliers	138981	1349 (2.68-2.64)
Sidechain outliers	138945	1349 (2.68-2.64)
RSRZ outliers	127900	1318 (2.68-2.64)

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 ≥ 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	A	298	
1	B	298	
1	C	298	
1	D	298	
1	E	298	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
1	F	298	 <p>A horizontal bar chart representing the quality of chain. The bar is divided into four segments: a red segment on the left labeled '10%', a large green segment labeled '69%', a small yellow segment labeled '6%', and a grey segment on the right labeled '24%'. The total length of the bar represents 100%.</p>

2 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 11128 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 SENSOR PROTEIN CPXA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	233	Total 1838	C 1146	N 329	O 357	S 6	0	0	0
1	B	227	Total 1787	C 1120	N 317	O 344	S 6	0	0	0
1	C	239	Total 1881	C 1174	N 335	O 366	S 6	0	0	0
1	D	214	Total 1674	C 1049	N 297	O 322	S 6	0	0	0
1	E	229	Total 1809	C 1130	N 322	O 351	S 6	0	0	0
1	F	225	Total 1783	C 1116	N 318	O 343	S 6	0	0	0

There are 174 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	160	MET	-	expression tag	UNP P0AE82
A	161	GLY	-	expression tag	UNP P0AE82
A	162	SER	-	expression tag	UNP P0AE82
A	163	SER	-	expression tag	UNP P0AE82
A	164	HIS	-	expression tag	UNP P0AE82
A	165	HIS	-	expression tag	UNP P0AE82
A	166	HIS	-	expression tag	UNP P0AE82
A	167	HIS	-	expression tag	UNP P0AE82
A	168	HIS	-	expression tag	UNP P0AE82
A	169	HIS	-	expression tag	UNP P0AE82
A	170	SER	-	expression tag	UNP P0AE82
A	171	SER	-	expression tag	UNP P0AE82
A	172	GLY	-	expression tag	UNP P0AE82
A	173	LEU	-	expression tag	UNP P0AE82
A	174	VAL	-	expression tag	UNP P0AE82
A	175	PRO	-	expression tag	UNP P0AE82
A	176	ARG	-	expression tag	UNP P0AE82

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
A	177	GLY	-	expression tag	UNP P0AE82
A	178	SER	-	expression tag	UNP P0AE82
A	179	HIS	-	expression tag	UNP P0AE82
A	180	MET	-	expression tag	UNP P0AE82
A	181	GLU	-	expression tag	UNP P0AE82
A	182	ASN	-	expression tag	UNP P0AE82
A	183	LEU	-	expression tag	UNP P0AE82
A	184	TYR	-	expression tag	UNP P0AE82
A	185	PHE	-	expression tag	UNP P0AE82
A	186	GLN	-	expression tag	UNP P0AE82
A	187	GLY	-	expression tag	UNP P0AE82
A	248	GLU	HIS	engineered mutation	UNP P0AE82
B	160	MET	-	expression tag	UNP P0AE82
B	161	GLY	-	expression tag	UNP P0AE82
B	162	SER	-	expression tag	UNP P0AE82
B	163	SER	-	expression tag	UNP P0AE82
B	164	HIS	-	expression tag	UNP P0AE82
B	165	HIS	-	expression tag	UNP P0AE82
B	166	HIS	-	expression tag	UNP P0AE82
B	167	HIS	-	expression tag	UNP P0AE82
B	168	HIS	-	expression tag	UNP P0AE82
B	169	HIS	-	expression tag	UNP P0AE82
B	170	SER	-	expression tag	UNP P0AE82
B	171	SER	-	expression tag	UNP P0AE82
B	172	GLY	-	expression tag	UNP P0AE82
B	173	LEU	-	expression tag	UNP P0AE82
B	174	VAL	-	expression tag	UNP P0AE82
B	175	PRO	-	expression tag	UNP P0AE82
B	176	ARG	-	expression tag	UNP P0AE82
B	177	GLY	-	expression tag	UNP P0AE82
B	178	SER	-	expression tag	UNP P0AE82
B	179	HIS	-	expression tag	UNP P0AE82
B	180	MET	-	expression tag	UNP P0AE82
B	181	GLU	-	expression tag	UNP P0AE82
B	182	ASN	-	expression tag	UNP P0AE82
B	183	LEU	-	expression tag	UNP P0AE82
B	184	TYR	-	expression tag	UNP P0AE82
B	185	PHE	-	expression tag	UNP P0AE82
B	186	GLN	-	expression tag	UNP P0AE82
B	187	GLY	-	expression tag	UNP P0AE82
B	248	GLU	HIS	engineered mutation	UNP P0AE82
C	160	MET	-	expression tag	UNP P0AE82

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
C	161	GLY	-	expression tag	UNP P0AE82
C	162	SER	-	expression tag	UNP P0AE82
C	163	SER	-	expression tag	UNP P0AE82
C	164	HIS	-	expression tag	UNP P0AE82
C	165	HIS	-	expression tag	UNP P0AE82
C	166	HIS	-	expression tag	UNP P0AE82
C	167	HIS	-	expression tag	UNP P0AE82
C	168	HIS	-	expression tag	UNP P0AE82
C	169	HIS	-	expression tag	UNP P0AE82
C	170	SER	-	expression tag	UNP P0AE82
C	171	SER	-	expression tag	UNP P0AE82
C	172	GLY	-	expression tag	UNP P0AE82
C	173	LEU	-	expression tag	UNP P0AE82
C	174	VAL	-	expression tag	UNP P0AE82
C	175	PRO	-	expression tag	UNP P0AE82
C	176	ARG	-	expression tag	UNP P0AE82
C	177	GLY	-	expression tag	UNP P0AE82
C	178	SER	-	expression tag	UNP P0AE82
C	179	HIS	-	expression tag	UNP P0AE82
C	180	MET	-	expression tag	UNP P0AE82
C	181	GLU	-	expression tag	UNP P0AE82
C	182	ASN	-	expression tag	UNP P0AE82
C	183	LEU	-	expression tag	UNP P0AE82
C	184	TYR	-	expression tag	UNP P0AE82
C	185	PHE	-	expression tag	UNP P0AE82
C	186	GLN	-	expression tag	UNP P0AE82
C	187	GLY	-	expression tag	UNP P0AE82
C	248	GLU	HIS	engineered mutation	UNP P0AE82
D	160	MET	-	expression tag	UNP P0AE82
D	161	GLY	-	expression tag	UNP P0AE82
D	162	SER	-	expression tag	UNP P0AE82
D	163	SER	-	expression tag	UNP P0AE82
D	164	HIS	-	expression tag	UNP P0AE82
D	165	HIS	-	expression tag	UNP P0AE82
D	166	HIS	-	expression tag	UNP P0AE82
D	167	HIS	-	expression tag	UNP P0AE82
D	168	HIS	-	expression tag	UNP P0AE82
D	169	HIS	-	expression tag	UNP P0AE82
D	170	SER	-	expression tag	UNP P0AE82
D	171	SER	-	expression tag	UNP P0AE82
D	172	GLY	-	expression tag	UNP P0AE82
D	173	LEU	-	expression tag	UNP P0AE82

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
D	174	VAL	-	expression tag	UNP P0AE82
D	175	PRO	-	expression tag	UNP P0AE82
D	176	ARG	-	expression tag	UNP P0AE82
D	177	GLY	-	expression tag	UNP P0AE82
D	178	SER	-	expression tag	UNP P0AE82
D	179	HIS	-	expression tag	UNP P0AE82
D	180	MET	-	expression tag	UNP P0AE82
D	181	GLU	-	expression tag	UNP P0AE82
D	182	ASN	-	expression tag	UNP P0AE82
D	183	LEU	-	expression tag	UNP P0AE82
D	184	TYR	-	expression tag	UNP P0AE82
D	185	PHE	-	expression tag	UNP P0AE82
D	186	GLN	-	expression tag	UNP P0AE82
D	187	GLY	-	expression tag	UNP P0AE82
D	248	GLU	HIS	engineered mutation	UNP P0AE82
E	160	MET	-	expression tag	UNP P0AE82
E	161	GLY	-	expression tag	UNP P0AE82
E	162	SER	-	expression tag	UNP P0AE82
E	163	SER	-	expression tag	UNP P0AE82
E	164	HIS	-	expression tag	UNP P0AE82
E	165	HIS	-	expression tag	UNP P0AE82
E	166	HIS	-	expression tag	UNP P0AE82
E	167	HIS	-	expression tag	UNP P0AE82
E	168	HIS	-	expression tag	UNP P0AE82
E	169	HIS	-	expression tag	UNP P0AE82
E	170	SER	-	expression tag	UNP P0AE82
E	171	SER	-	expression tag	UNP P0AE82
E	172	GLY	-	expression tag	UNP P0AE82
E	173	LEU	-	expression tag	UNP P0AE82
E	174	VAL	-	expression tag	UNP P0AE82
E	175	PRO	-	expression tag	UNP P0AE82
E	176	ARG	-	expression tag	UNP P0AE82
E	177	GLY	-	expression tag	UNP P0AE82
E	178	SER	-	expression tag	UNP P0AE82
E	179	HIS	-	expression tag	UNP P0AE82
E	180	MET	-	expression tag	UNP P0AE82
E	181	GLU	-	expression tag	UNP P0AE82
E	182	ASN	-	expression tag	UNP P0AE82
E	183	LEU	-	expression tag	UNP P0AE82
E	184	TYR	-	expression tag	UNP P0AE82
E	185	PHE	-	expression tag	UNP P0AE82
E	186	GLN	-	expression tag	UNP P0AE82

Continued on next page...

Continued from previous page...

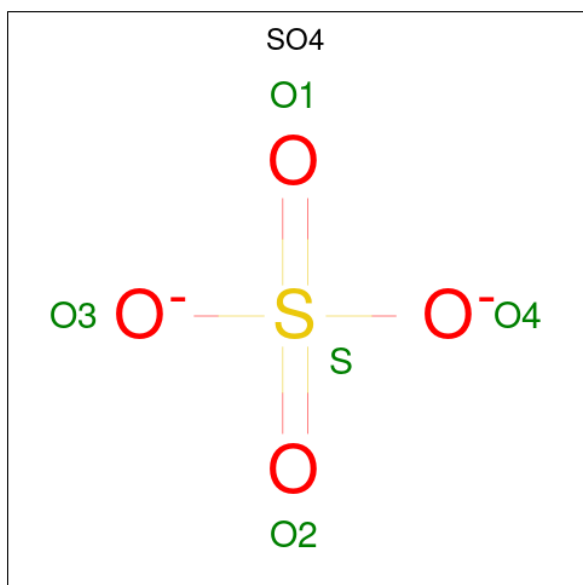
Chain	Residue	Modelled	Actual	Comment	Reference
E	187	GLY	-	expression tag	UNP P0AE82
E	248	GLU	HIS	engineered mutation	UNP P0AE82
F	160	MET	-	expression tag	UNP P0AE82
F	161	GLY	-	expression tag	UNP P0AE82
F	162	SER	-	expression tag	UNP P0AE82
F	163	SER	-	expression tag	UNP P0AE82
F	164	HIS	-	expression tag	UNP P0AE82
F	165	HIS	-	expression tag	UNP P0AE82
F	166	HIS	-	expression tag	UNP P0AE82
F	167	HIS	-	expression tag	UNP P0AE82
F	168	HIS	-	expression tag	UNP P0AE82
F	169	HIS	-	expression tag	UNP P0AE82
F	170	SER	-	expression tag	UNP P0AE82
F	171	SER	-	expression tag	UNP P0AE82
F	172	GLY	-	expression tag	UNP P0AE82
F	173	LEU	-	expression tag	UNP P0AE82
F	174	VAL	-	expression tag	UNP P0AE82
F	175	PRO	-	expression tag	UNP P0AE82
F	176	ARG	-	expression tag	UNP P0AE82
F	177	GLY	-	expression tag	UNP P0AE82
F	178	SER	-	expression tag	UNP P0AE82
F	179	HIS	-	expression tag	UNP P0AE82
F	180	MET	-	expression tag	UNP P0AE82
F	181	GLU	-	expression tag	UNP P0AE82
F	182	ASN	-	expression tag	UNP P0AE82
F	183	LEU	-	expression tag	UNP P0AE82
F	184	TYR	-	expression tag	UNP P0AE82
F	185	PHE	-	expression tag	UNP P0AE82
F	186	GLN	-	expression tag	UNP P0AE82
F	187	GLY	-	expression tag	UNP P0AE82
F	248	GLU	HIS	engineered mutation	UNP P0AE82

- Molecule 2 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$).



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

- Molecule 3 is SULFATE ION (three-letter code: SO4) (formula: O₄S).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	A	1	Total	O	S	0	0
			5	4	1		
3	B	1	Total	O	S	0	0
			5	4	1		
3	C	1	Total	O	S	0	0
			5	4	1		
3	D	1	Total	O	S	0	0
			5	4	1		
3	E	1	Total	O	S	0	0
			5	4	1		
3	F	1	Total	O	S	0	0
			5	4	1		

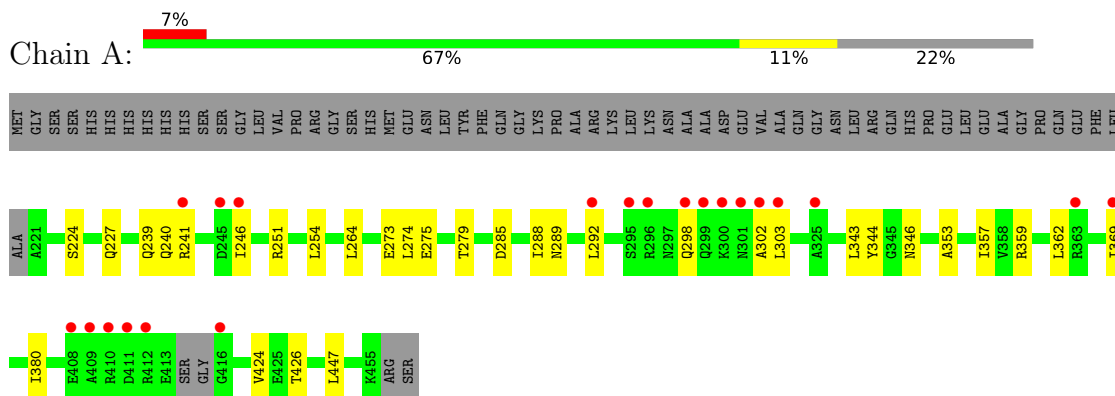
- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	46	Total	O	0	0
			46	46		
4	B	36	Total	O	0	0
			36	36		
4	C	57	Total	O	0	0
			57	57		
4	D	23	Total	O	0	0
			23	23		
4	E	28	Total	O	0	0
			28	28		
4	F	28	Total	O	0	0
			28	28		

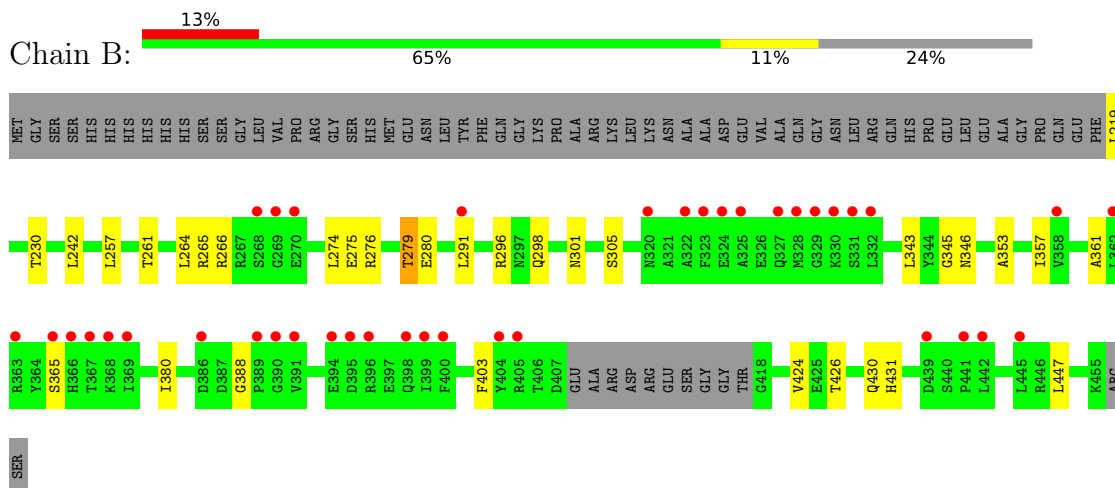
3 Residue-property plots [i](#)

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 electron 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 dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). 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.

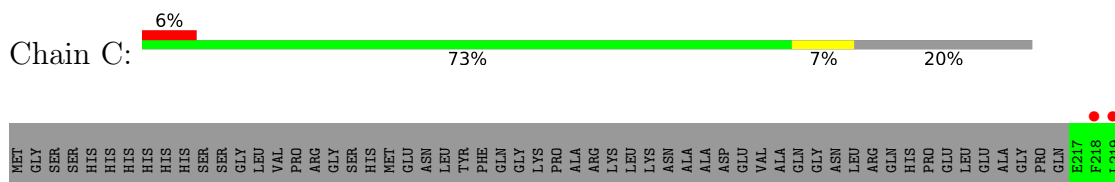
- Molecule 1: SENSOR PROTEIN CPXA

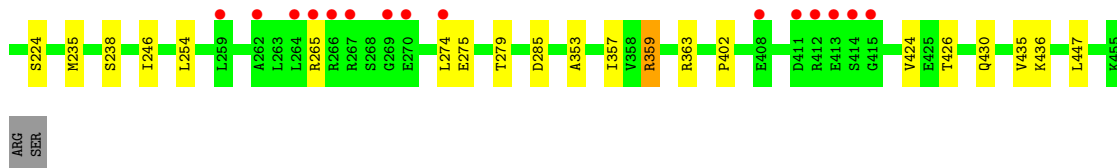


- Molecule 1: SENSOR PROTEIN CPXA

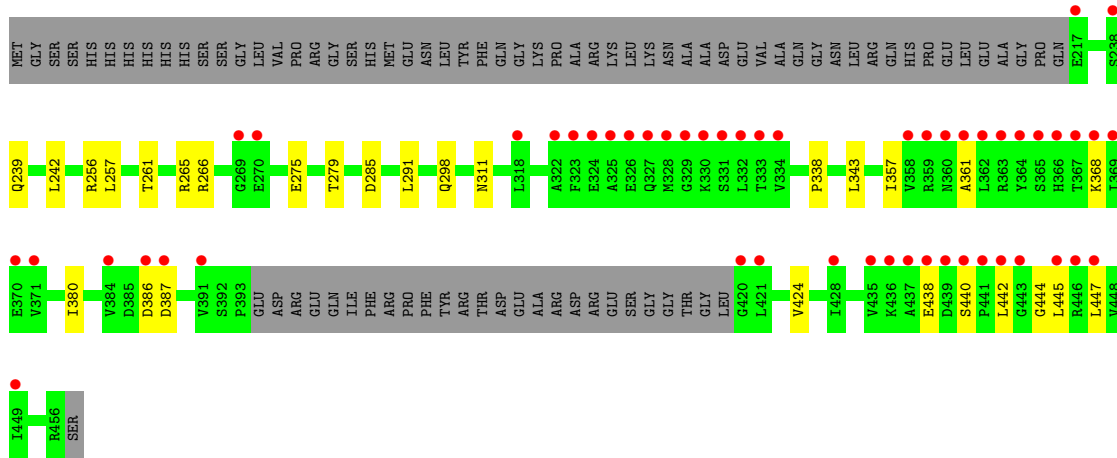


- Molecule 1: SENSOR PROTEIN CPXA

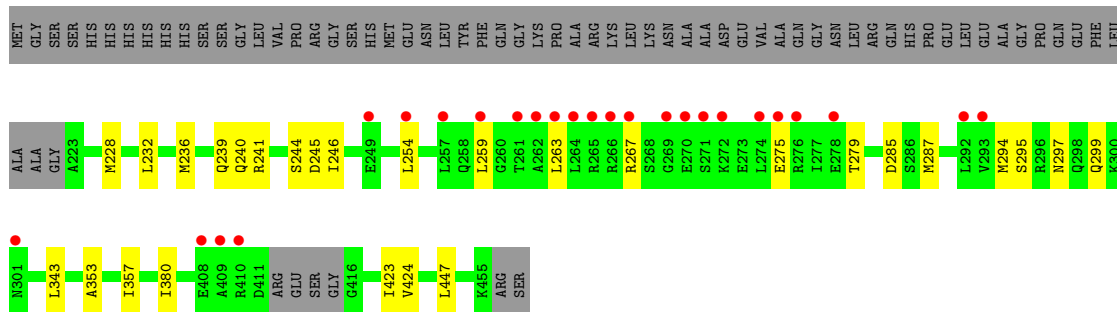




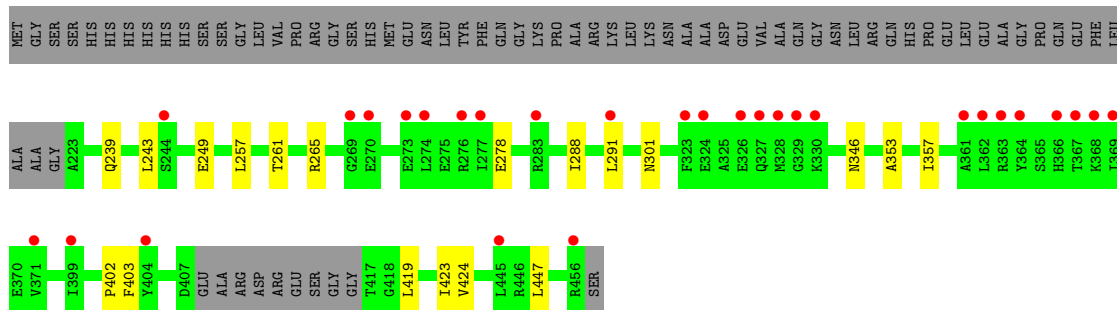
• Molecule 1: SENSOR PROTEIN CPXA



• Molecule 1: SENSOR PROTEIN CPXA



• Molecule 1: SENSOR PROTEIN CPXA



4 Data and refinement statistics i

Property	Value	Source
Space group	P 21 21 2	Depositor
Cell constants a, b, c, α , β , γ	120.45Å 125.11Å 159.79Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.01 – 2.65 49.01 – 2.65	Depositor EDS
% Data completeness (in resolution range)	100.0 (49.01-2.65) 100.0 (49.01-2.65)	Depositor EDS
R_{merge}	0.05	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.28 (at 2.65Å)	Xtrriage
Refinement program	BUSTER 2.10.0	Depositor
R, R_{free}	0.206 , 0.235 0.212 , 0.237	Depositor DCC
R_{free} test set	3571 reflections (5.05%)	wwPDB-VP
Wilson B-factor (Å ²)	71.2	Xtrriage
Anisotropy	0.185	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.35 , 69.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	0.014 for k,h,-l	Xtrriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	11128	wwPDB-VP
Average B, all atoms (Å ²)	91.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.04% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical 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: ADP, SO4

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	0.50	0/1867	0.67	0/2526
1	B	0.48	0/1816	0.66	0/2459
1	C	0.49	0/1912	0.66	0/2588
1	D	0.49	0/1700	0.67	0/2302
1	E	0.47	0/1838	0.65	0/2488
1	F	0.45	0/1812	0.64	0/2453
All	All	0.48	0/10945	0.66	0/14816

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	1838	0	1832	38	0
1	B	1787	0	1791	36	0
1	C	1881	0	1872	25	0
1	D	1674	0	1686	25	0
1	E	1809	0	1805	25	0
1	F	1783	0	1787	20	0
2	A	27	0	12	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	C	27	0	12	0	0
2	E	27	0	12	0	0
2	F	27	0	12	0	0
3	A	5	0	0	0	0
3	B	5	0	0	0	0
3	C	5	0	0	0	0
3	D	5	0	0	0	0
3	E	5	0	0	0	0
3	F	5	0	0	0	0
4	A	46	0	0	0	0
4	B	36	0	0	0	0
4	C	57	0	0	1	0
4	D	23	0	0	0	0
4	E	28	0	0	0	0
4	F	28	0	0	0	0
All	All	11128	0	10821	128	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 6.

All (128) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:357:ILE:HD12	1:C:447:LEU:CD2	1.52	1.37
1:C:357:ILE:HD12	1:C:447:LEU:HD23	1.28	1.14
1:A:251:ARG:NH2	1:A:289:ASN:OD1	1.83	1.10
1:A:246:ILE:HB	1:B:291:LEU:HD21	1.39	1.02
1:D:368:LYS:HG2	1:D:387:ASP:OD2	1.61	1.00
1:C:357:ILE:CD1	1:C:447:LEU:CD2	2.41	0.98
1:E:246:ILE:HD13	1:F:291:LEU:HB3	1.48	0.95
1:C:357:ILE:CD1	1:C:447:LEU:HD23	2.07	0.84
1:A:302:ALA:HB1	1:A:303:LEU:HA	1.57	0.83
1:A:246:ILE:CG2	1:B:403:PHE:HE2	1.90	0.83
1:C:426:THR:HG22	4:C:2049:HOH:O	1.79	0.83
1:C:357:ILE:HD12	1:C:447:LEU:HD21	1.59	0.81
1:A:426:THR:HG21	1:B:242:LEU:HB2	1.65	0.79
1:E:245:ASP:HB3	1:F:402:PRO:HD2	1.63	0.79
1:C:357:ILE:HD12	1:C:447:LEU:HD22	1.65	0.78
1:E:246:ILE:HG21	1:F:291:LEU:HD23	1.63	0.78
1:A:302:ALA:HB1	1:A:303:LEU:CA	2.14	0.77
1:E:357:ILE:HD11	1:E:424:VAL:HG11	1.67	0.76

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:251:ARG:NH1	1:A:285:ASP:OD1	2.17	0.75
1:C:357:ILE:HD11	1:C:424:VAL:HG11	1.72	0.72
1:D:361:ALA:HA	1:D:386:ASP:OD2	1.90	0.72
1:A:357:ILE:HD11	1:A:424:VAL:HG11	1.73	0.71
1:A:246:ILE:HG21	1:B:403:PHE:HE2	1.55	0.71
1:A:343:LEU:HD11	1:A:380:ILE:HD12	1.72	0.71
1:A:246:ILE:CB	1:B:291:LEU:HD21	2.17	0.70
1:E:343:LEU:HD11	1:E:380:ILE:HD12	1.74	0.70
1:F:357:ILE:HD11	1:F:424:VAL:HG11	1.74	0.69
1:A:241:ARG:NH1	1:B:426:THR:HG22	2.07	0.69
1:E:246:ILE:HG12	1:F:403:PHE:HE2	1.57	0.68
1:F:243:LEU:HD22	1:F:291:LEU:HD13	1.75	0.68
1:D:440:SER:HB3	1:D:444:GLY:O	1.94	0.67
1:B:343:LEU:HD11	1:B:380:ILE:HD12	1.78	0.66
1:C:265:ARG:HA	1:C:274:LEU:HD21	1.79	0.64
1:E:263:LEU:HD22	1:E:267:ARG:CZ	2.27	0.64
1:A:302:ALA:HA	1:A:346:ASN:HD21	1.62	0.63
1:E:259:LEU:O	1:E:263:LEU:HG	1.99	0.63
1:C:357:ILE:CD1	1:C:447:LEU:HD21	2.22	0.61
1:D:343:LEU:HD11	1:D:380:ILE:HD12	1.83	0.61
1:C:426:THR:HG21	1:D:242:LEU:HB2	1.84	0.60
1:A:288:ILE:O	1:A:292:LEU:HG	2.01	0.60
1:A:246:ILE:HG23	1:B:403:PHE:HE2	1.64	0.59
1:B:357:ILE:HD11	1:B:424:VAL:HG11	1.82	0.59
1:A:227:GLN:HB3	1:D:266:ARG:NH1	2.19	0.58
1:B:265:ARG:HD3	1:B:274:LEU:HB3	1.87	0.57
1:C:254:LEU:HD21	1:C:285:ASP:HA	1.86	0.57
1:B:230:THR:HG22	1:D:256:ARG:HH12	1.70	0.56
1:C:436:LYS:O	1:C:447:LEU:HD12	2.05	0.55
1:B:365:SER:HA	1:B:388:GLY:HA3	1.88	0.55
1:E:246:ILE:HG12	1:F:403:PHE:CE2	2.38	0.55
1:E:287:MET:HE3	1:F:249:GLU:HB3	1.89	0.55
1:A:302:ALA:HB1	1:A:303:LEU:CB	2.37	0.54
1:A:362:LEU:HD23	1:A:369:ILE:HD13	1.89	0.54
1:A:254:LEU:HD21	1:A:285:ASP:HA	1.90	0.54
1:C:402:PRO:HG3	1:D:242:LEU:HD12	1.89	0.54
1:D:311:ASN:HA	1:D:338:PRO:HB2	1.88	0.54
1:A:264:LEU:HD23	1:A:274:LEU:HD13	1.89	0.53
1:C:246:ILE:HD13	1:D:291:LEU:HB2	1.90	0.53
1:A:273:GLU:HG2	1:B:264:LEU:HD21	1.90	0.53
1:B:266:ARG:HB2	1:C:224:SER:HB2	1.89	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:240:GLN:HE21	1:A:298:GLN:HB3	1.73	0.53
1:B:357:ILE:HD12	1:B:447:LEU:HD13	1.91	0.53
1:E:275:GLU:O	1:E:279:THR:HG23	2.09	0.53
1:F:243:LEU:CD2	1:F:291:LEU:HD13	2.39	0.53
1:D:357:ILE:HD12	1:D:447:LEU:HD13	1.90	0.52
1:A:357:ILE:HD12	1:A:447:LEU:HD13	1.91	0.52
1:B:305:SER:O	1:D:265:ARG:NH2	2.41	0.52
1:E:254:LEU:HD21	1:E:285:ASP:HA	1.89	0.52
1:E:241:ARG:HD2	1:E:299:GLN:HE22	1.74	0.52
1:B:275:GLU:O	1:B:279:THR:HG23	2.10	0.51
1:A:246:ILE:CG2	1:B:403:PHE:CE2	2.82	0.51
1:C:353:ALA:O	1:C:357:ILE:HG12	2.12	0.50
1:C:430:GLN:OE1	1:D:239:GLN:HG2	2.12	0.50
1:B:257:LEU:O	1:B:261:THR:HG23	2.12	0.50
1:E:240:GLN:HG3	1:F:239:GLN:HE21	1.76	0.49
1:E:357:ILE:HG23	1:E:447:LEU:HD12	1.93	0.49
1:E:244:SER:HA	1:E:295:SER:HB2	1.94	0.49
1:C:357:ILE:CG1	1:C:447:LEU:HD23	2.42	0.49
1:C:275:GLU:O	1:C:279:THR:HG23	2.12	0.49
1:A:302:ALA:HA	1:A:346:ASN:ND2	2.27	0.49
1:B:261:THR:O	1:B:265:ARG:HG2	2.13	0.48
1:B:276:ARG:O	1:B:280:GLU:HG2	2.14	0.48
1:A:275:GLU:O	1:A:279:THR:HG23	2.14	0.48
1:A:246:ILE:HG21	1:B:403:PHE:CE2	2.43	0.48
1:D:357:ILE:HD11	1:D:424:VAL:HG11	1.96	0.47
1:C:357:ILE:CG2	1:C:447:LEU:HD23	2.44	0.47
1:F:265:ARG:NH1	1:F:278:GLU:OE1	2.47	0.47
1:A:246:ILE:HD12	1:B:291:LEU:HD23	1.97	0.47
1:A:273:GLU:HB3	1:B:264:LEU:HD11	1.95	0.47
1:E:245:ASP:CB	1:F:402:PRO:HD2	2.40	0.47
1:B:353:ALA:O	1:B:357:ILE:HG12	2.15	0.47
1:D:275:GLU:O	1:D:279:THR:HG23	2.15	0.47
1:E:232:LEU:O	1:E:236:MET:HG3	2.15	0.47
1:B:361:ALA:O	1:B:365:SER:HB3	2.15	0.47
1:C:359:ARG:HH21	1:C:363:ARG:NH2	2.13	0.47
1:E:357:ILE:HD12	1:E:447:LEU:HD13	1.95	0.47
1:B:345:GLY:HA3	1:B:431:HIS:CD2	2.50	0.46
1:A:239:GLN:HG3	1:B:298:GLN:OE1	2.15	0.46
1:A:246:ILE:HG23	1:B:403:PHE:CE2	2.46	0.45
1:A:353:ALA:O	1:A:357:ILE:HG12	2.17	0.45
1:B:230:THR:CG2	1:D:256:ARG:HH12	2.28	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:344:TYR:CE2	1:B:219:LEU:HD21	2.51	0.45
1:F:288:ILE:O	1:F:291:LEU:HG	2.17	0.45
1:E:294:MET:HG3	1:E:423:ILE:HD11	1.99	0.44
1:B:296:ARG:NH1	1:D:285:ASP:OD2	2.50	0.44
1:F:353:ALA:O	1:F:357:ILE:HG12	2.17	0.44
1:A:224:SER:HB2	1:D:266:ARG:HB2	1.99	0.44
1:A:227:GLN:HB3	1:D:266:ARG:HH11	1.82	0.44
1:D:438:GLU:O	1:D:445:LEU:HD12	2.17	0.44
1:B:301:ASN:HA	1:B:346:ASN:HD22	1.83	0.44
1:E:357:ILE:HG23	1:E:447:LEU:CD1	2.47	0.44
1:C:238:SER:HB2	1:D:298:GLN:HG2	2.00	0.43
1:E:246:ILE:CD1	1:F:291:LEU:HB3	2.34	0.43
1:E:353:ALA:O	1:E:357:ILE:HG12	2.19	0.43
1:A:241:ARG:HH11	1:B:426:THR:HG22	1.82	0.42
1:A:246:ILE:HD12	1:B:291:LEU:CD2	2.49	0.42
1:C:435:VAL:HG12	1:C:447:LEU:HD11	2.01	0.42
1:E:236:MET:HB3	1:F:239:GLN:HE22	1.84	0.42
1:D:257:LEU:O	1:D:261:THR:HG23	2.19	0.42
1:D:368:LYS:CG	1:D:387:ASP:OD2	2.49	0.41
1:F:301:ASN:HA	1:F:346:ASN:HD22	1.85	0.41
1:A:359:ARG:CZ	1:A:359:ARG:HB3	2.51	0.41
1:F:257:LEU:O	1:F:261:THR:HG23	2.21	0.41
1:C:235:MET:HG3	1:D:298:GLN:HB3	2.03	0.40
1:F:357:ILE:HD12	1:F:447:LEU:HD13	2.02	0.40
1:F:419:LEU:O	1:F:423:ILE:HG12	2.21	0.40
1:B:301:ASN:HD22	1:B:430:GLN:NE2	2.19	0.40
1:E:228:MET:CE	1:E:228:MET:HA	2.51	0.40
1:D:387:ASP:OD1	1:D:442:LEU:HB3	2.21	0.40

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 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	A	229/298 (77%)	222 (97%)	7 (3%)	0	100	100
1	B	223/298 (75%)	215 (96%)	8 (4%)	0	100	100
1	C	237/298 (80%)	234 (99%)	3 (1%)	0	100	100
1	D	210/298 (70%)	203 (97%)	7 (3%)	0	100	100
1	E	225/298 (76%)	220 (98%)	5 (2%)	0	100	100
1	F	221/298 (74%)	215 (97%)	6 (3%)	0	100	100
All	All	1345/1788 (75%)	1309 (97%)	36 (3%)	0	100	100

There are no Ramachandran outliers to report.

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	A	199/251 (79%)	199 (100%)	0	100	100
1	B	194/251 (77%)	193 (100%)	1 (0%)	88	94
1	C	203/251 (81%)	202 (100%)	1 (0%)	88	94
1	D	182/251 (72%)	182 (100%)	0	100	100
1	E	197/251 (78%)	195 (99%)	2 (1%)	76	86
1	F	195/251 (78%)	195 (100%)	0	100	100
All	All	1170/1506 (78%)	1166 (100%)	4 (0%)	92	96

All (4) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	279	THR
1	C	359	ARG
1	E	239	GLN
1	E	297	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (9) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	240	GLN
1	A	346	ASN
1	B	346	ASN
1	B	430	GLN
1	D	356	ASN
1	E	299	GLN
1	F	239	GLN
1	F	301	ASN
1	F	346	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

10 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	$\# Z > 2$
2	ADP	F	501	-	24,29,29	0.65	0	29,45,45	0.79	1 (3%)
3	SO4	C	1456	-	4,4,4	0.22	0	6,6,6	0.13	0
2	ADP	C	501	-	24,29,29	0.79	1 (4%)	29,45,45	0.70	1 (3%)
3	SO4	E	1456	-	4,4,4	0.07	0	6,6,6	0.18	0
3	SO4	F	1457	-	4,4,4	0.20	0	6,6,6	0.27	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	SO4	D	1457	-	4,4,4	0.19	0	6,6,6	0.15	0
3	SO4	B	1456	-	4,4,4	0.18	0	6,6,6	0.11	0
2	ADP	E	501	-	24,29,29	0.76	0	29,45,45	0.70	1 (3%)
3	SO4	A	1456	-	4,4,4	0.20	0	6,6,6	0.16	0
2	ADP	A	501	-	24,29,29	0.63	0	29,45,45	0.81	1 (3%)

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
2	ADP	C	501	-	-	0/12/32/32	0/3/3/3
2	ADP	E	501	-	-	0/12/32/32	0/3/3/3
2	ADP	A	501	-	-	0/12/32/32	0/3/3/3
2	ADP	F	501	-	-	3/12/32/32	0/3/3/3

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	501	ADP	C8-N7	-2.06	1.31	1.34

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	C	501	ADP	C5-C6-N6	2.35	123.92	120.35
2	F	501	ADP	C5-C6-N6	2.19	123.68	120.35
2	A	501	ADP	C5-C6-N6	2.19	123.67	120.35
2	E	501	ADP	C5-C6-N6	2.18	123.66	120.35

There are no chirality outliers.

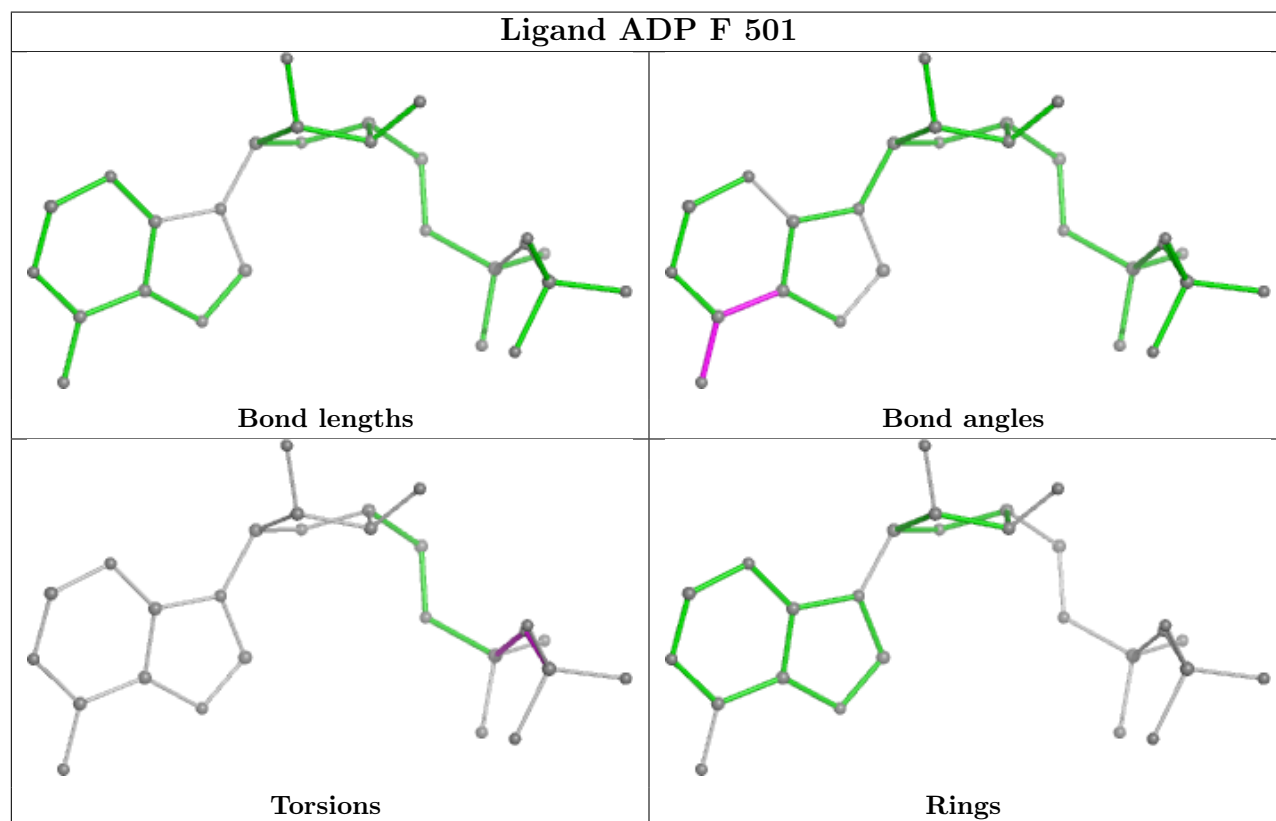
All (3) torsion outliers are listed below:

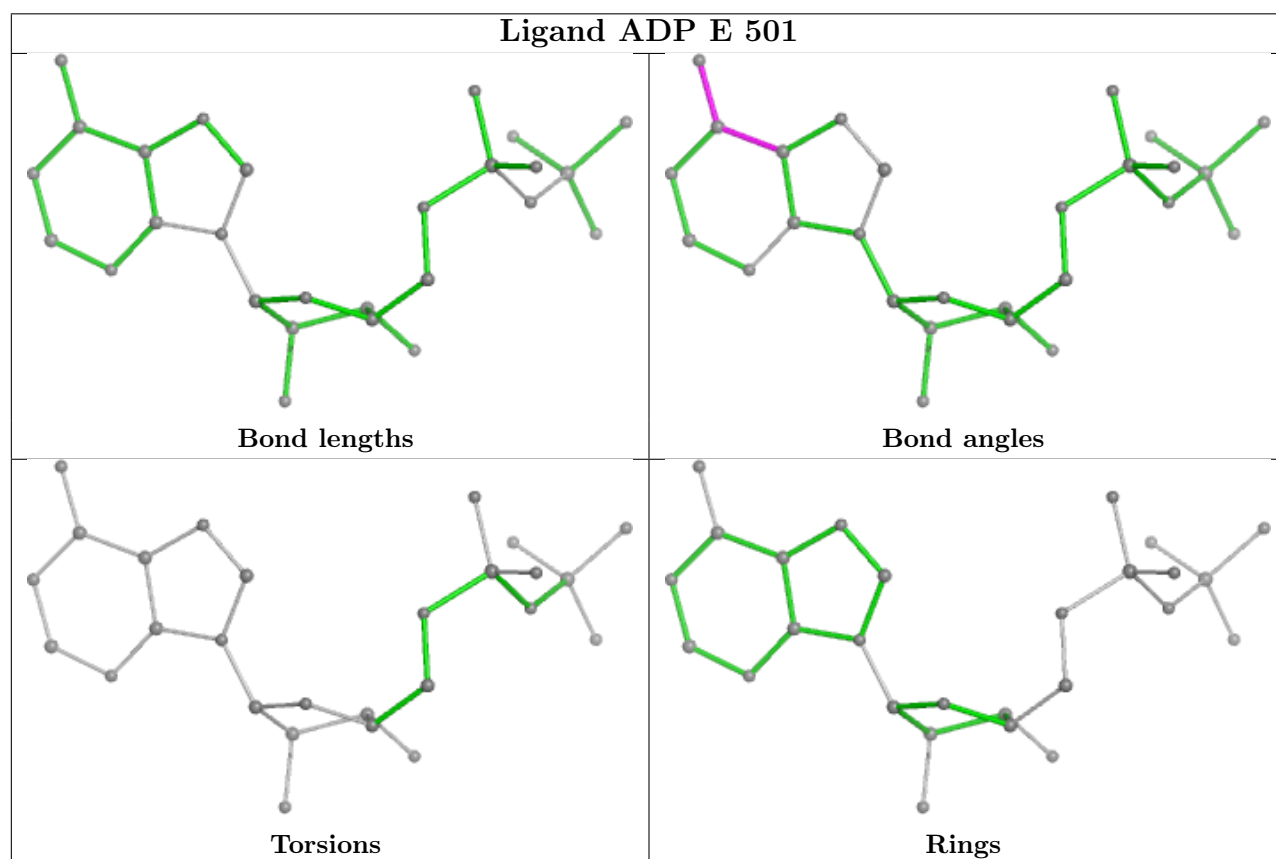
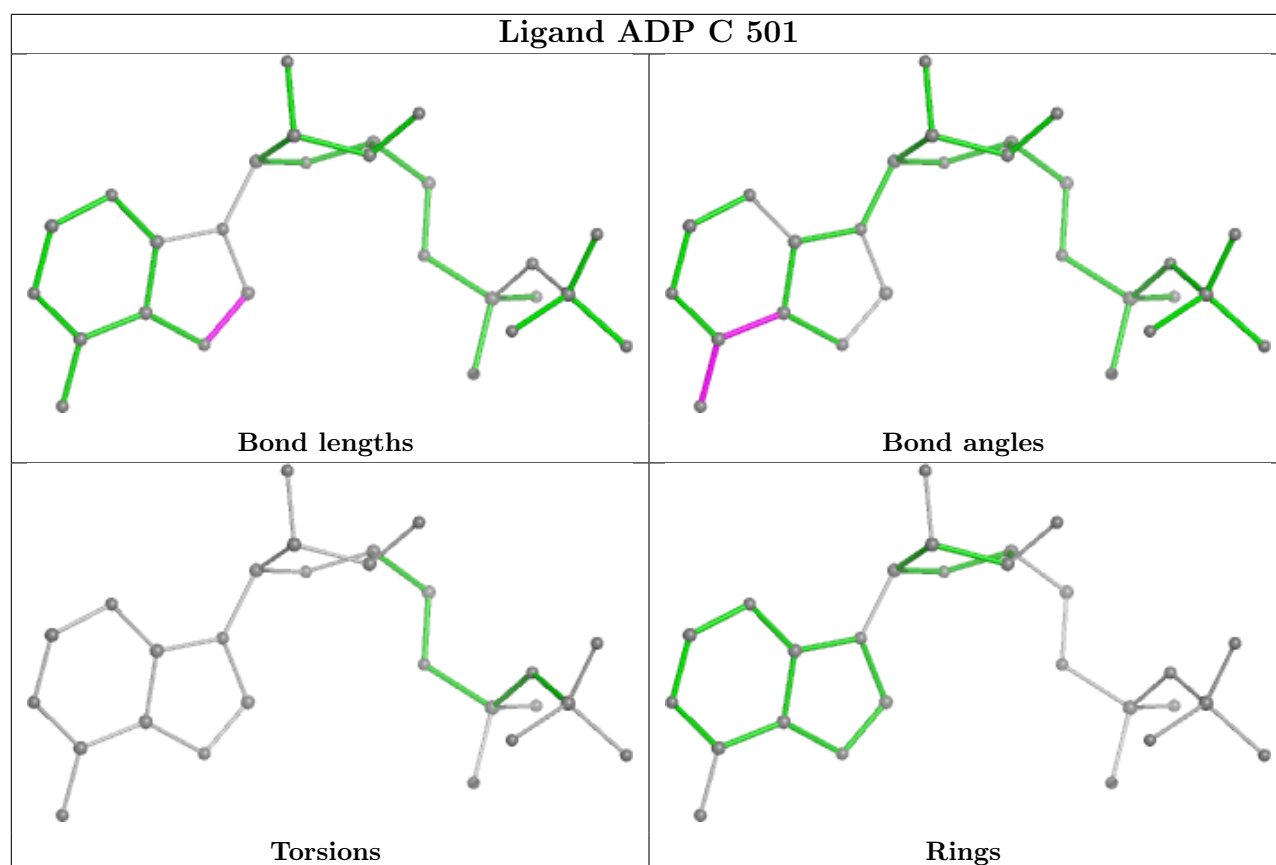
Mol	Chain	Res	Type	Atoms
2	F	501	ADP	PA-O3A-PB-O2B
2	F	501	ADP	PB-O3A-PA-O1A
2	F	501	ADP	PB-O3A-PA-O2A

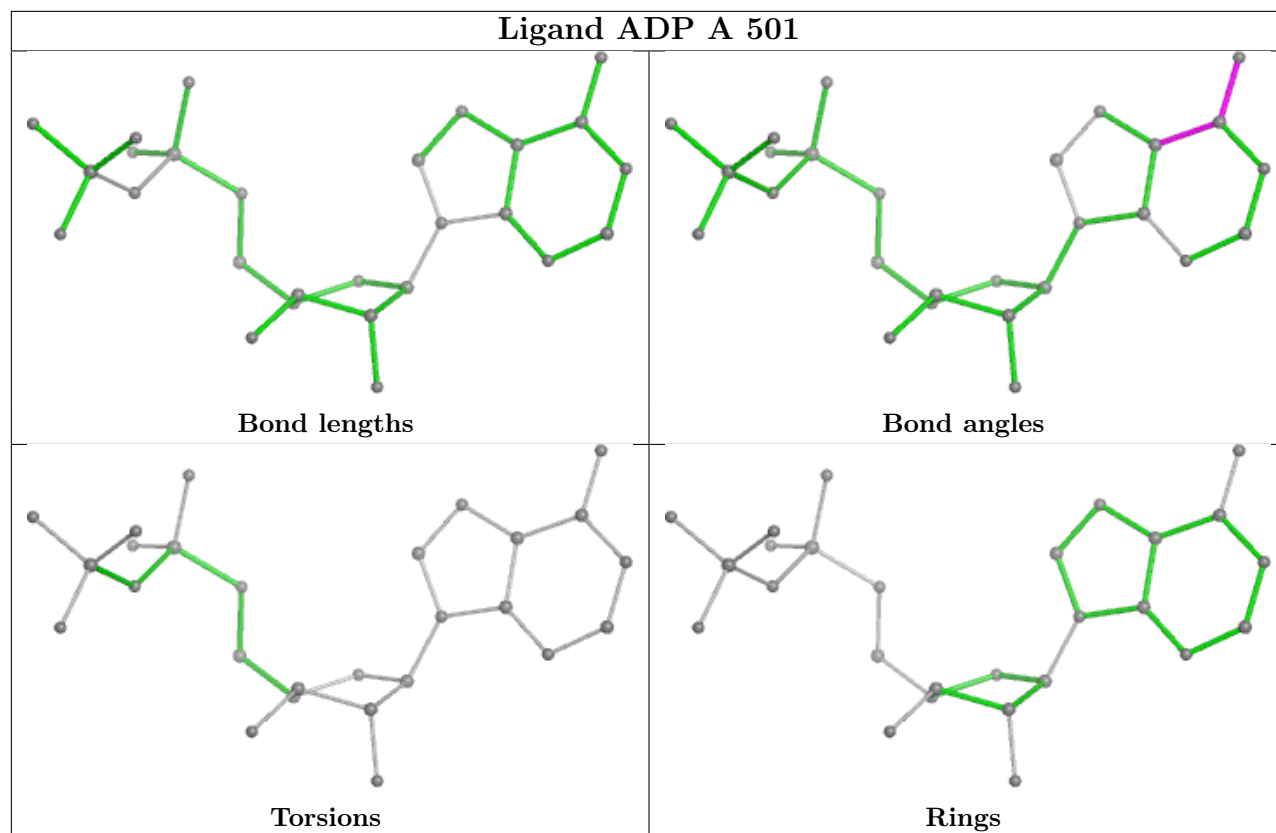
There are no ring outliers.

No monomer is involved in short contacts.

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 [i](#)

6.1 Protein, DNA and RNA chains [i](#)

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, 95th 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 ²)	Q<0.9
1	A	233/298 (78%)	0.67	21 (9%) 9 7	51, 76, 127, 158	0
1	B	227/298 (76%)	1.13	39 (17%) 1 1	48, 91, 161, 193	0
1	C	239/298 (80%)	0.59	17 (7%) 16 12	52, 71, 126, 173	0
1	D	214/298 (71%)	1.54	52 (24%) 0 0	51, 96, 163, 173	0
1	E	229/298 (76%)	0.76	25 (10%) 5 4	56, 81, 137, 172	0
1	F	225/298 (75%)	0.92	29 (12%) 3 2	58, 88, 150, 186	0
All	All	1367/1788 (76%)	0.92	183 (13%) 3 2	48, 82, 151, 193	0

All (183) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	301	ASN	9.9
1	D	441	PRO	9.5
1	D	332	LEU	8.5
1	B	329	GLY	8.3
1	C	266	ARG	7.4
1	B	396	ARG	7.3
1	D	366	HIS	7.0
1	F	270	GLU	7.0
1	D	322	ALA	7.0
1	D	439	ASP	6.7
1	D	329	GLY	6.4
1	D	437	ALA	6.3
1	D	323	PHE	5.9
1	D	442	LEU	5.8
1	D	369	ILE	5.8
1	E	259	LEU	5.7
1	B	328	MET	5.6
1	E	266	ARG	5.6
1	D	327	GLN	5.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	D	361	ALA	5.5
1	D	325	ALA	5.4
1	D	328	MET	5.3
1	D	447	LEU	5.2
1	E	267	ARG	5.2
1	D	358	VAL	5.1
1	B	368	LYS	5.1
1	E	274	LEU	5.1
1	D	363	ARG	5.0
1	A	298	GLN	5.0
1	C	218	PHE	5.0
1	C	259	LEU	5.0
1	D	384	VAL	4.9
1	C	412	ARG	4.8
1	B	332	LEU	4.8
1	E	265	ARG	4.8
1	B	358	VAL	4.7
1	D	269	GLY	4.7
1	D	270	GLU	4.7
1	F	369	ILE	4.6
1	B	367	THR	4.6
1	D	367	THR	4.6
1	D	334	VAL	4.6
1	B	441	PRO	4.6
1	D	359	ARG	4.5
1	A	299	GLN	4.5
1	A	302	ALA	4.4
1	D	330	LYS	4.4
1	C	413	GLU	4.3
1	E	270	GLU	4.3
1	D	371	VAL	4.3
1	B	363	ARG	4.3
1	B	324	GLU	4.2
1	B	325	ALA	4.2
1	D	326	GLU	4.1
1	D	387	ASP	4.1
1	D	440	SER	4.1
1	B	442	LEU	4.1
1	D	364	TYR	4.1
1	D	365	SER	4.1
1	B	331	SER	4.0
1	E	264	LEU	4.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	D	362	LEU	4.0
1	C	415	GLY	4.0
1	A	408	GLU	4.0
1	F	323	PHE	4.0
1	D	421	LEU	3.9
1	B	400	PHE	3.9
1	C	219	LEU	3.9
1	E	271	SER	3.9
1	B	327	GLN	3.8
1	E	263	LEU	3.7
1	F	276	ARG	3.7
1	D	368	LYS	3.6
1	D	435	VAL	3.6
1	E	272	LYS	3.5
1	A	296	ARG	3.5
1	E	261	THR	3.5
1	B	270	GLU	3.5
1	B	362	LEU	3.5
1	D	436	LYS	3.5
1	F	362	LEU	3.5
1	D	360	ASN	3.4
1	B	365	SER	3.4
1	B	404	TYR	3.4
1	C	274	LEU	3.4
1	A	246	ILE	3.4
1	F	366	HIS	3.4
1	A	245	ASP	3.4
1	E	262	ALA	3.3
1	F	367	THR	3.3
1	D	386	ASP	3.3
1	E	408	GLU	3.3
1	A	300	LYS	3.2
1	A	409	ALA	3.2
1	D	445	LEU	3.2
1	F	277	ILE	3.2
1	A	325	ALA	3.2
1	B	366	HIS	3.1
1	B	369	ILE	3.1
1	E	276	ARG	3.1
1	D	331	SER	3.0
1	A	411	ASP	3.0
1	C	414	SER	3.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	B	445	LEU	3.0
1	E	293	VAL	3.0
1	F	274	LEU	3.0
1	B	269	GLY	2.9
1	A	416	GLY	2.9
1	B	390	GLY	2.9
1	A	412	ARG	2.9
1	A	292	LEU	2.9
1	B	391	VAL	2.9
1	F	328	MET	2.9
1	D	318	LEU	2.9
1	B	322	ALA	2.9
1	D	443	GLY	2.9
1	A	295	SER	2.9
1	B	399	ILE	2.9
1	F	327	GLN	2.8
1	B	330	LYS	2.8
1	B	386	ASP	2.8
1	C	267	ARG	2.8
1	D	438	GLU	2.8
1	E	292	LEU	2.8
1	D	324	GLU	2.7
1	B	394	GLU	2.7
1	E	410	ARG	2.7
1	B	395	ASP	2.7
1	D	333	THR	2.7
1	B	439	ASP	2.7
1	D	446	ARG	2.7
1	B	323	PHE	2.6
1	A	410	ARG	2.6
1	F	329	GLY	2.6
1	B	405	ARG	2.6
1	F	399	ILE	2.6
1	B	291	LEU	2.6
1	C	264	LEU	2.6
1	D	217	GLU	2.6
1	F	456	ARG	2.6
1	B	398	GLN	2.5
1	F	445	LEU	2.5
1	B	268	SER	2.5
1	E	301	ASN	2.5
1	D	370	GLU	2.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	D	391	VAL	2.5
1	F	361	ALA	2.4
1	E	257	LEU	2.4
1	C	411	ASP	2.4
1	B	389	PRO	2.4
1	A	363	ARG	2.4
1	C	270	GLU	2.4
1	E	269	GLY	2.4
1	E	278	GLU	2.4
1	B	320	ASN	2.4
1	A	241	ARG	2.3
1	C	265	ARG	2.3
1	E	409	ALA	2.3
1	D	238	SER	2.3
1	F	244	SER	2.3
1	A	369	ILE	2.3
1	F	330	LYS	2.3
1	F	291	LEU	2.2
1	A	303	LEU	2.2
1	F	269	GLY	2.2
1	F	326	GLU	2.2
1	C	262	ALA	2.2
1	E	254	LEU	2.2
1	F	283	ARG	2.1
1	F	324	GLU	2.1
1	F	364	TYR	2.1
1	F	404	TYR	2.1
1	D	428	ILE	2.1
1	F	368	LYS	2.1
1	E	249	GLU	2.1
1	C	408	GLU	2.1
1	E	275	GLU	2.1
1	F	371	VAL	2.1
1	F	363	ARG	2.1
1	F	273	GLU	2.1
1	D	420	GLY	2.1
1	D	449	ILE	2.0
1	C	269	GLY	2.0

6.2 Non-standard residues in protein, DNA, RNA chains

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

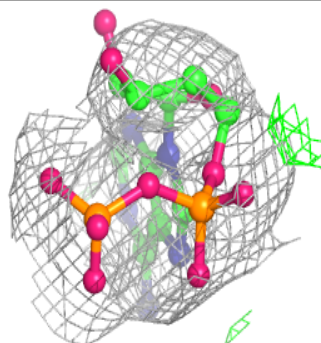
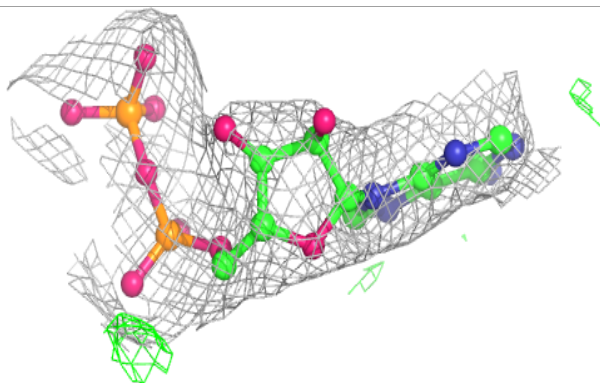
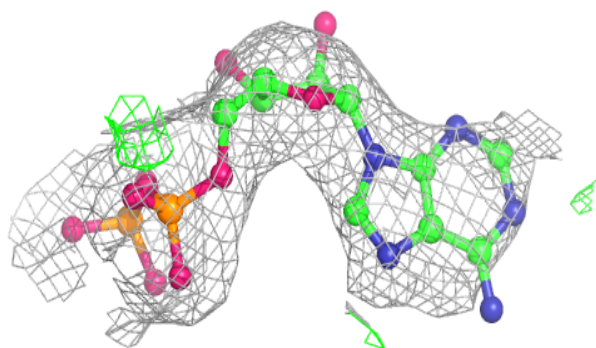
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
3	SO4	D	1457	5/5	0.81	0.20	147,148,149,150	0
3	SO4	B	1456	5/5	0.83	0.20	157,159,159,159	0
2	ADP	F	501	27/27	0.85	0.26	118,131,137,139	0
3	SO4	C	1456	5/5	0.89	0.19	119,120,121,121	0
3	SO4	E	1456	5/5	0.92	0.18	114,114,115,117	0
2	ADP	A	501	27/27	0.97	0.19	60,75,87,91	0
3	SO4	A	1456	5/5	0.97	0.15	98,101,101,103	0
2	ADP	C	501	27/27	0.97	0.18	54,66,80,82	0
3	SO4	F	1457	5/5	0.97	0.13	91,94,95,96	0
2	ADP	E	501	27/27	0.98	0.19	62,76,89,92	0

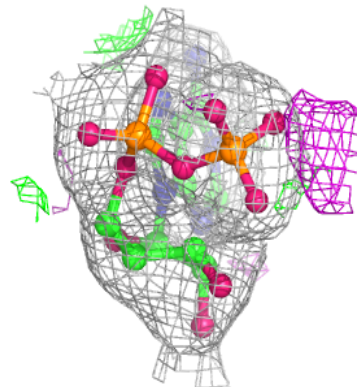
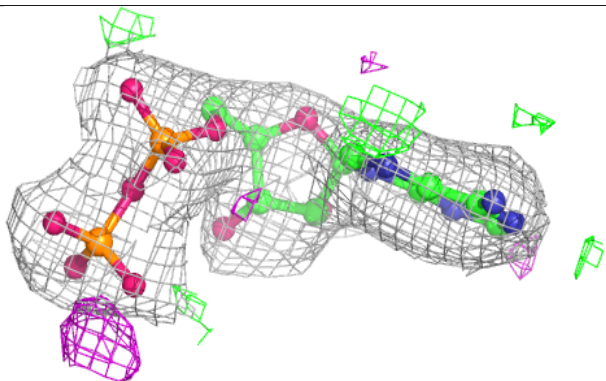
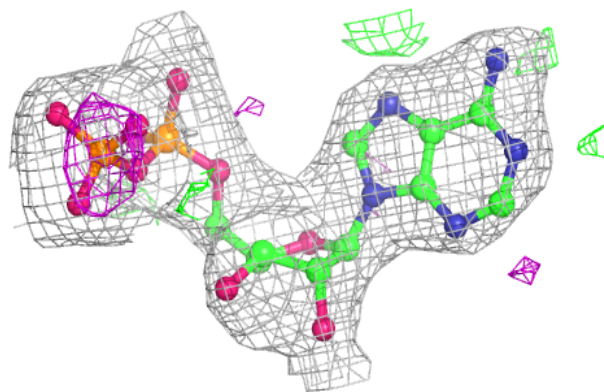
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around ADP F 501:

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

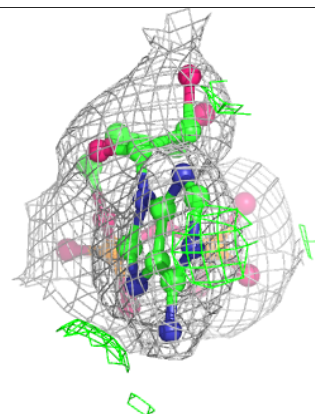
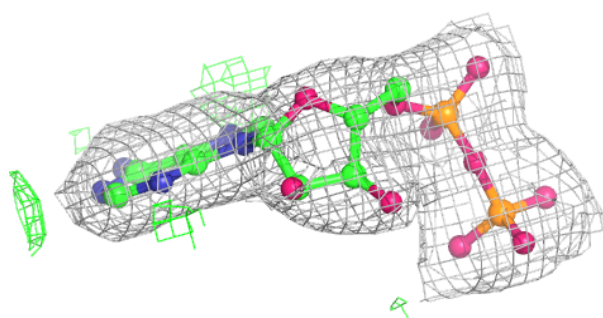
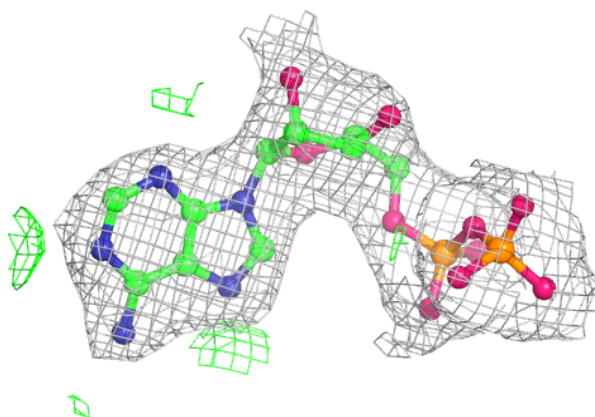
**Electron density around ADP A 501:**

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

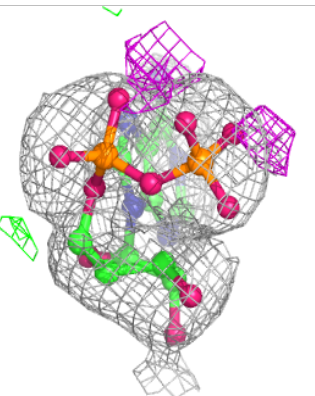
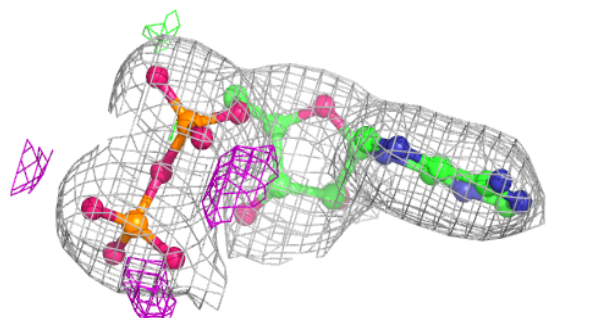
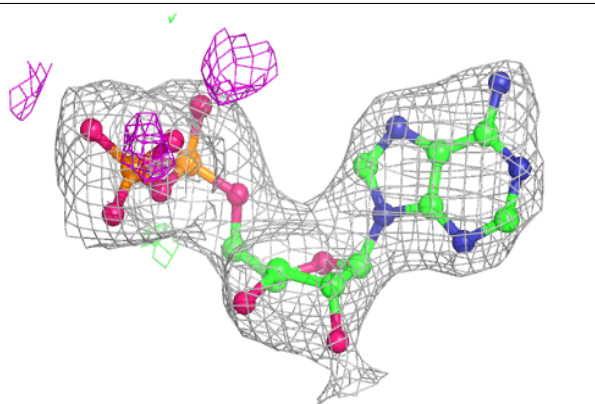


Electron density around ADP C 501:

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

**Electron density around ADP E 501:**

$2mF_o-DF_c$ (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.