wwPDB X-ray Structure Validation Summary Report (i)

Jun 18, 2024 – 10:52 AM EDT

PDB ID	:	4GL2
Title	:	Structural Basis for dsRNA duplex backbone recognition by MDA5
Authors	:	Wu, B.; Hur, S.
Deposited on	:	2012-08-13
Resolution	:	3.56 Å(reported)

This is a wwPDB X-ray Structure Validation Summary 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 (i) 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 (i)) were used in the production of this report:

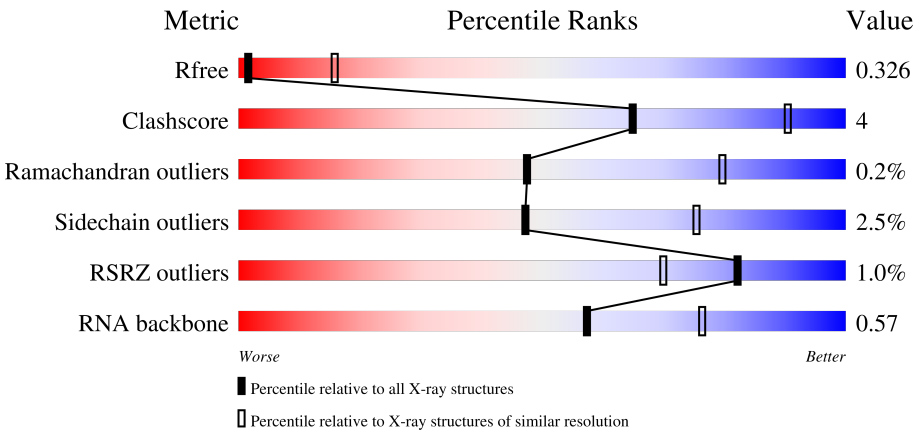
MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.20.1
EDS	:	2.37.1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.56 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	1020 (3.62-3.50)
Clashscore	141614	1100 (3.62-3.50)
Ramachandran outliers	138981	1065 (3.62-3.50)
Sidechain outliers	138945	1066 (3.62-3.50)
RSRZ outliers	127900	1009 (3.64-3.48)
RNA backbone	3102	1008 (4.10-3.00)

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 <=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	699	% 78% 10% • 12%
1	B	699	% 78% 10% • 12%
2	C	12	8% 75% 17% 8%
2	E	12	83% 17%

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Mol	Chain	Length	Quality of chain
3	D	12	67% 17% 17%
3	F	12	50% 17% 33%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
4	ANP	A	1101	-	-	-	X

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 20895 atoms, of which 10160 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 Interferon-induced helicase C domain-containing protein 1.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	C	H	N	O	S			
1	A	617	9807	3113	4927	839	892	36	7	0	0
1	B	615	9476	3042	4705	811	885	33	49	0	0

There are 52 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	301	GLY	-	EXPRESSION TAG	UNP Q9BYX4
A	302	PRO	-	EXPRESSION TAG	UNP Q9BYX4
A	303	GLY	-	EXPRESSION TAG	UNP Q9BYX4
A	304	ALA	-	EXPRESSION TAG	UNP Q9BYX4
A	305	MET	-	EXPRESSION TAG	UNP Q9BYX4
A	333	CYS	SER	SEE REMARK 999	UNP Q9BYX4
A	?	-	GLU	DELETION	UNP Q9BYX4
A	?	-	ASP	DELETION	UNP Q9BYX4
A	?	-	ASP	DELETION	UNP Q9BYX4
A	?	-	SER	DELETION	UNP Q9BYX4
A	?	-	ASP	DELETION	UNP Q9BYX4
A	?	-	GLU	DELETION	UNP Q9BYX4
A	?	-	GLY	DELETION	UNP Q9BYX4
A	?	-	GLY	DELETION	UNP Q9BYX4
A	?	-	ASP	DELETION	UNP Q9BYX4
A	?	-	ASP	DELETION	UNP Q9BYX4
A	?	-	GLU	DELETION	UNP Q9BYX4
A	?	-	TYR	DELETION	UNP Q9BYX4
A	?	-	CYS	DELETION	UNP Q9BYX4
A	?	-	ASP	DELETION	UNP Q9BYX4
A	?	-	GLY	DELETION	UNP Q9BYX4
A	?	-	ASP	DELETION	UNP Q9BYX4
A	?	-	GLU	DELETION	UNP Q9BYX4
A	?	-	ASP	DELETION	UNP Q9BYX4
A	843	ARG	HIS	SEE REMARK 999	UNP Q9BYX4

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Chain	Residue	Modelled	Actual	Comment	Reference
A	946	THR	ALA	SEE REMARK 999	UNP Q9BYX4
B	301	GLY	-	EXPRESSION TAG	UNP Q9BYX4
B	302	PRO	-	EXPRESSION TAG	UNP Q9BYX4
B	303	GLY	-	EXPRESSION TAG	UNP Q9BYX4
B	304	ALA	-	EXPRESSION TAG	UNP Q9BYX4
B	305	MET	-	EXPRESSION TAG	UNP Q9BYX4
B	333	CYS	SER	SEE REMARK 999	UNP Q9BYX4
B	?	-	GLU	DELETION	UNP Q9BYX4
B	?	-	ASP	DELETION	UNP Q9BYX4
B	?	-	ASP	DELETION	UNP Q9BYX4
B	?	-	SER	DELETION	UNP Q9BYX4
B	?	-	ASP	DELETION	UNP Q9BYX4
B	?	-	GLU	DELETION	UNP Q9BYX4
B	?	-	GLY	DELETION	UNP Q9BYX4
B	?	-	GLY	DELETION	UNP Q9BYX4
B	?	-	ASP	DELETION	UNP Q9BYX4
B	?	-	ASP	DELETION	UNP Q9BYX4
B	?	-	GLU	DELETION	UNP Q9BYX4
B	?	-	TYR	DELETION	UNP Q9BYX4
B	?	-	CYS	DELETION	UNP Q9BYX4
B	?	-	ASP	DELETION	UNP Q9BYX4
B	?	-	GLY	DELETION	UNP Q9BYX4
B	?	-	ASP	DELETION	UNP Q9BYX4
B	?	-	GLU	DELETION	UNP Q9BYX4
B	?	-	ASP	DELETION	UNP Q9BYX4
B	843	ARG	HIS	SEE REMARK 999	UNP Q9BYX4
B	946	THR	ALA	SEE REMARK 999	UNP Q9BYX4

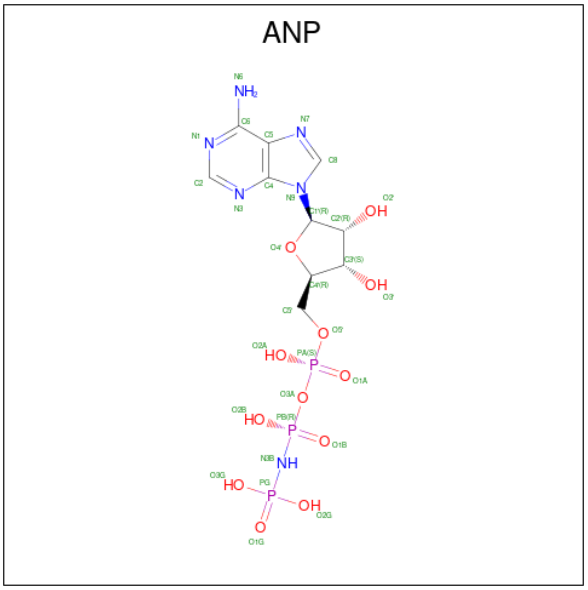
- Molecule 2 is a RNA chain called RNA (5'-R(*AP*UP*CP*CP*GP*CP*GP*GP*CP*CP*CP*U)-3').

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	C	H	N	O	P			
2	C	12	380	112	132	42	83	11	0	0	0
2	E	12	380	112	132	42	83	11	0	0	0

- Molecule 3 is a RNA chain called RNA (5'-R(P*AP*GP*GP*GP*CP*CP*GP*CP*GP*GP*AP*U)-3').

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	C	H	N	O	P			
3	F	12	394	116	132	51	83	12	0	0	0
3	D	12	394	116	132	51	83	12	0	0	0

- Molecule 4 is PHOSPHOAMINOPHOSPHONIC ACID-ADENYLATE ESTER (three-letter code: ANP) (formula: $C_{10}H_{17}N_6O_{12}P_3$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	P		
4	A	1	31	10	6	12	3	0	0
4	B	1	31	10	6	12	3	0	0

- Molecule 5 is ZINC ION (three-letter code: ZN) (formula: Zn).

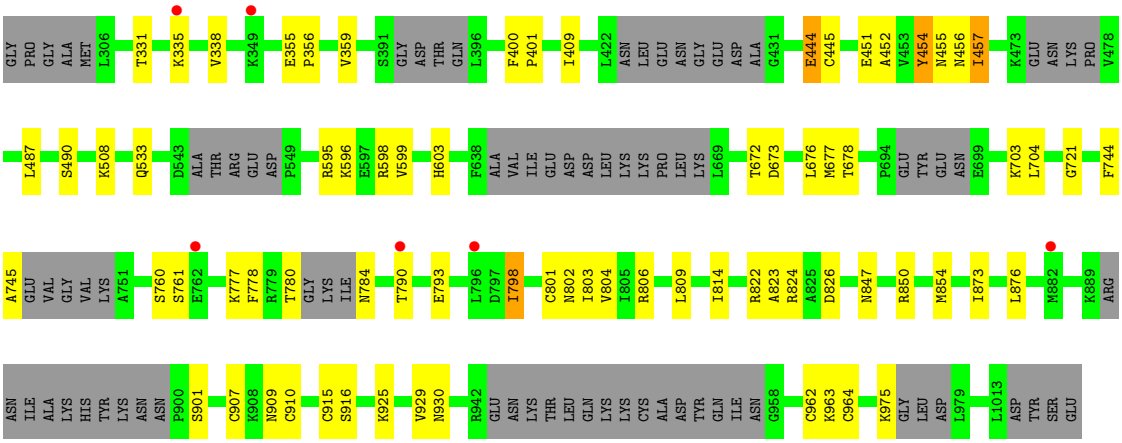
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Zn		
5	A	1	1	1	0	0
5	B	1	1	1	0	0

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.

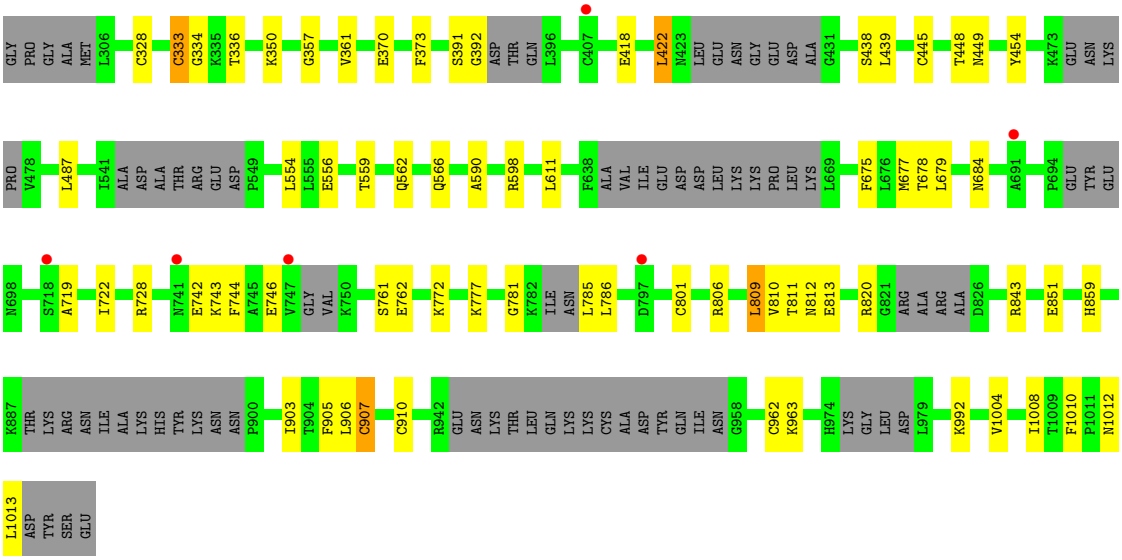
• Molecule 1: Interferon-induced helicase C domain-containing protein 1

Chain A:



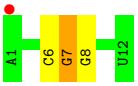
• Molecule 1: Interferon-induced helicase C domain-containing protein 1

Chain B:



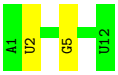
• Molecule 2: RNA (5'-R(*AP*UP*CP*CP*GP*CP*GP*GP*CP*CP*CP*U)-3')

Chain C:



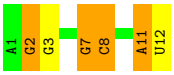
• Molecule 2: RNA (5'-R(*AP*UP*CP*CP*GP*CP*GP*GP*CP*CP*CP*U)-3')

Chain E:



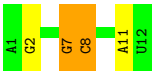
• Molecule 3: RNA (5'-R(P*AP*GP*GP*GP*CP*CP*GP*CP*GP*GP*AP*U)-3')

Chain F:



• Molecule 3: RNA (5'-R(P*AP*GP*GP*GP*CP*CP*GP*CP*GP*GP*AP*U)-3')

Chain D:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	71.11Å 154.75Å 185.01Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	118.70 – 3.56 118.70 – 3.56	Depositor EDS
% Data completeness (in resolution range)	95.1 (118.70-3.56) 82.8 (118.70-3.56)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.60 (at 3.58Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8_1069)	Depositor
R, R_{free}	0.276 , 0.320 0.282 , 0.326	Depositor DCC
R_{free} test set	1207 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å^2)	67.5	Xtriage
Anisotropy	0.440	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.35 , 65.9	EDS
L-test for twinning[2]	$< \|L\| > = 0.46$, $< L^2 > = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.84	EDS
Total number of atoms	20895	wwPDB-VP
Average B, all atoms (Å^2)	71.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 37.67 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 4.1412e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

[1]Intensities estimated from amplitudes.

[2]Theoretical values of $< |L| >$, $< L^2 >$ 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: ANP, ZN

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	0.38	0/4957	0.64	0/6670
1	B	0.37	0/4845	0.63	0/6540
2	C	0.44	0/275	1.15	3/426 (0.7%)
2	E	0.38	0/275	0.94	0/426
3	D	0.40	0/293	0.98	0/456
3	F	0.42	0/293	0.96	0/456
All	All	0.38	0/10938	0.69	3/14974 (0.0%)

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	C	7	G	C4-N9-C1'	-5.74	119.04	126.50
2	C	6	C	C6-N1-C2	-5.58	118.07	120.30
2	C	7	G	C8-N9-C1'	5.43	134.06	127.00

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	4880	4927	4911	44	0
1	B	4771	4705	4690	37	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	C	248	132	132	2	0
2	E	248	132	132	1	0
3	D	262	132	132	1	0
3	F	262	132	132	4	0
4	A	31	0	13	0	0
4	B	31	0	13	1	0
5	A	1	0	0	0	0
5	B	1	0	0	0	0
All	All	10735	10160	10155	85	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 4.

The worst 5 of 85 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:A:780:THR:HG1	1:A:784:ASN:N	1.73	0.84
1:A:777:LYS:O	1:A:784:ASN:N	2.16	0.79
1:A:793:GLU:O	1:A:822:ARG:NH2	2.21	0.74
1:B:962:CYS:SG	1:B:963:LYS:N	2.64	0.70
1:A:444:GLU:N	1:A:444:GLU:OE1	2.24	0.70

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	593/699 (85%)	572 (96%)	20 (3%)	1 (0%)	47 80
1	B	589/699 (84%)	561 (95%)	27 (5%)	1 (0%)	47 80
All	All	1182/1398 (84%)	1133 (96%)	47 (4%)	2 (0%)	47 80

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	361	VAL
1	A	804	VAL

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	527/623 (85%)	512 (97%)	15 (3%)	43	73
1	B	505/623 (81%)	494 (98%)	11 (2%)	52	78
All	All	1032/1246 (83%)	1006 (98%)	26 (2%)	47	75

5 of 26 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	975	LYS
1	B	422	LEU
1	B	910	CYS
1	B	333	CYS
1	B	439	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (3) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	460	HIS
1	B	927	HIS
1	B	974	HIS

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	C	11/12 (91%)	0	0
2	E	11/12 (91%)	1 (9%)	0

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
3	D	11/12 (91%)	3 (27%)	1 (9%)
3	F	11/12 (91%)	3 (27%)	1 (9%)
All	All	44/48 (91%)	7 (15%)	2 (4%)

5 of 7 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
2	E	2	U
3	F	2	G
3	F	8	C
3	F	11	A
3	D	2	G

All (2) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
3	F	7	G
3	D	7	G

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)

Of 4 ligands modelled in this entry, 2 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
4	ANP	A	1101	-	29,33,33	1.67	7 (24%)	31,52,52	1.91	3 (9%)
4	ANP	B	1101	-	29,33,33	1.60	8 (27%)	31,52,52	1.94	6 (19%)

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	ANP	A	1101	-	-	11/14/38/38	0/3/3/3
4	ANP	B	1101	-	-	9/14/38/38	0/3/3/3

The worst 5 of 15 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	B	1101	ANP	C2-N3	2.99	1.36	1.32
4	A	1101	ANP	C2'-C3'	-2.98	1.45	1.53
4	A	1101	ANP	C2-N3	2.96	1.36	1.32
4	B	1101	ANP	C6-N6	2.86	1.44	1.34
4	A	1101	ANP	PA-O3A	-2.83	1.56	1.59

The worst 5 of 9 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	A	1101	ANP	N3-C2-N1	-6.36	120.04	128.67
4	B	1101	ANP	N3-C2-N1	-6.18	120.28	128.67
4	B	1101	ANP	C4'-O4'-C1'	-5.29	105.08	109.92
4	A	1101	ANP	O2B-PB-O3A	4.69	120.28	104.64
4	B	1101	ANP	O1B-PB-N3B	-3.22	107.02	111.77

There are no chirality outliers.

5 of 20 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	1101	ANP	PB-N3B-PG-O1G
4	A	1101	ANP	PA-O3A-PB-O2B
4	A	1101	ANP	C5'-O5'-PA-O1A
4	A	1101	ANP	C5'-O5'-PA-O3A
4	A	1101	ANP	O4'-C4'-C5'-O5'

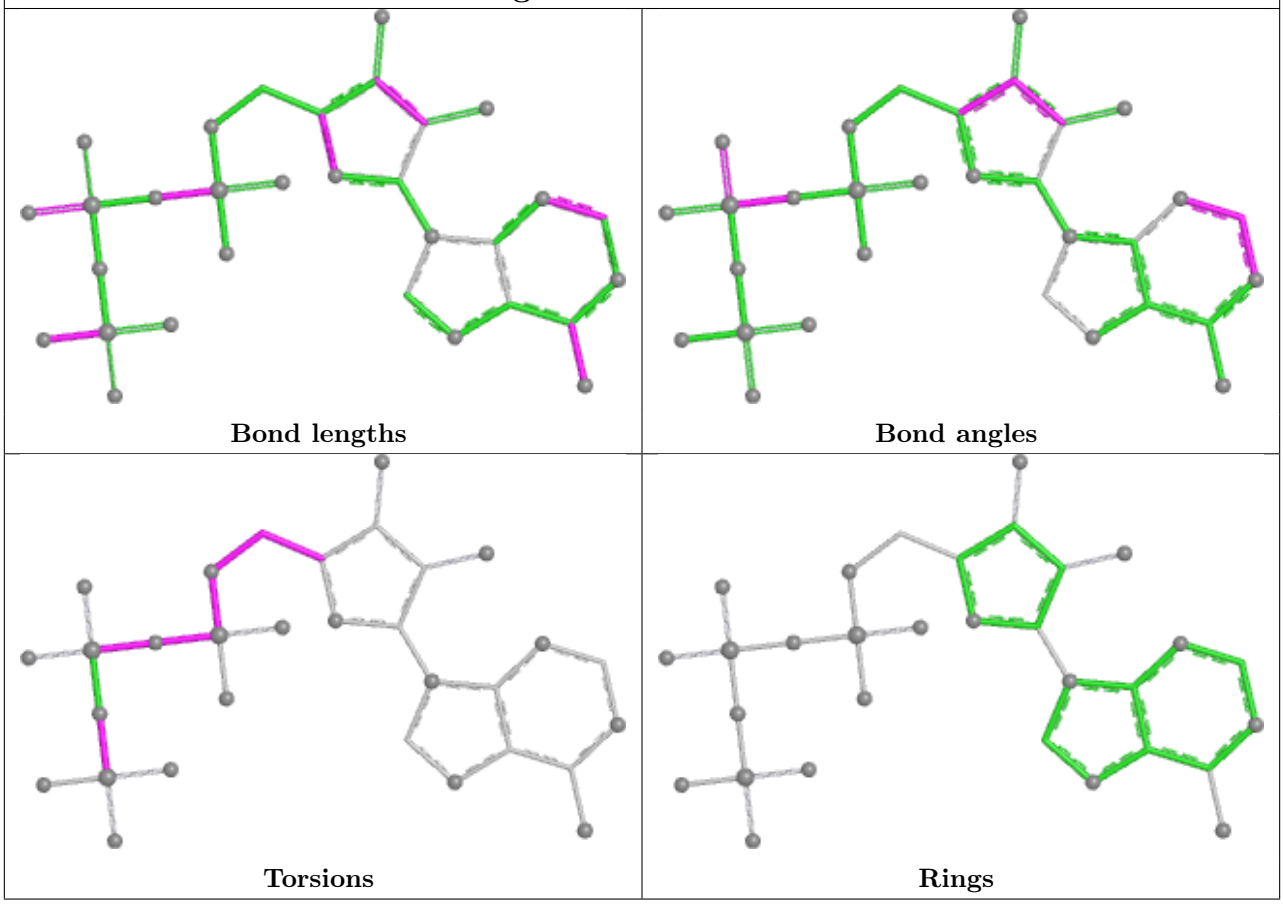
There are no ring outliers.

1 monomer is involved in 1 short contact:

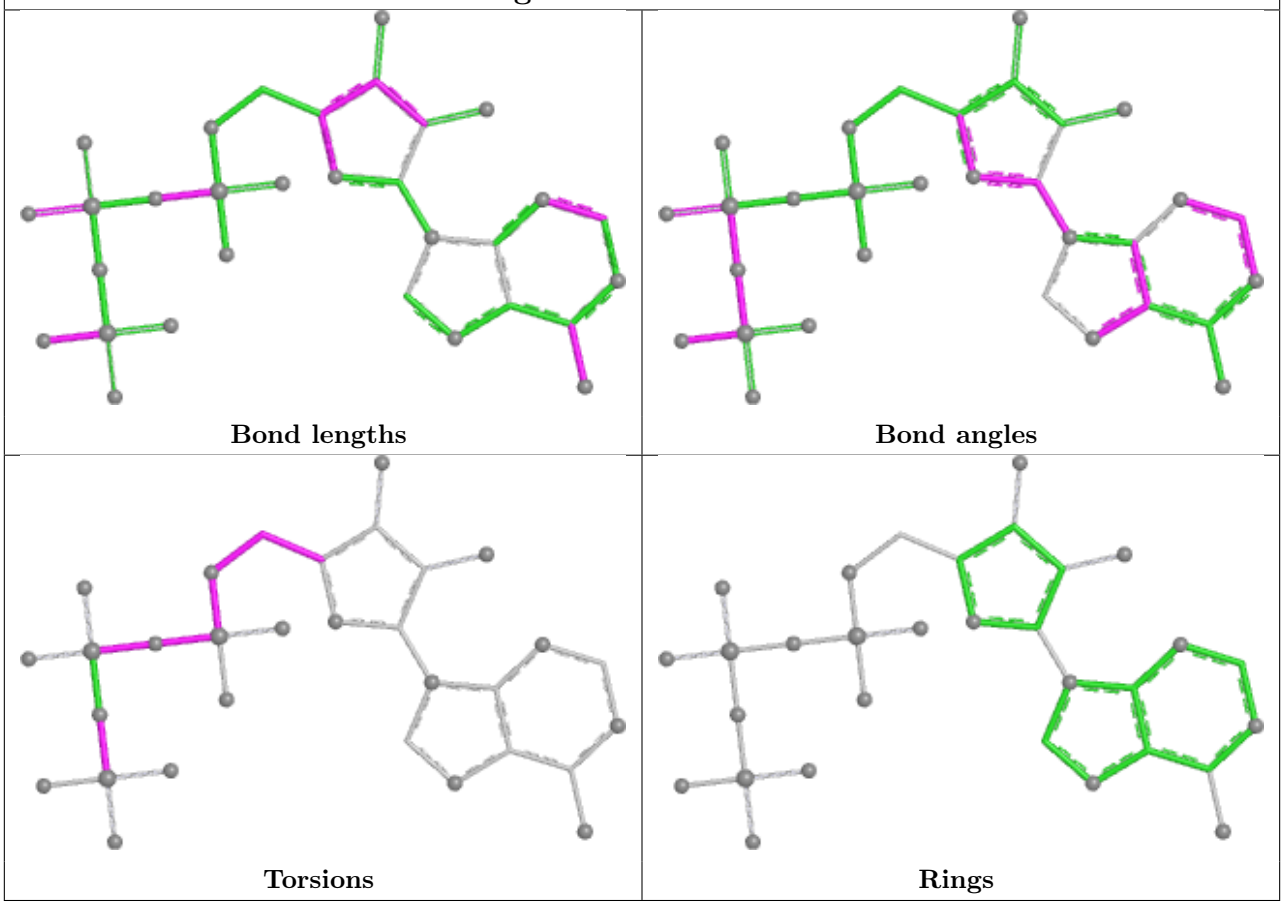
Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	B	1101	ANP	1	0

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 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 ANP A 1101



Ligand ANP B 1101



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	617/699 (88%)	0.26	6 (0%)	82	70	29, 64, 105, 142	1 (0%)
1	B	611/699 (87%)	0.20	6 (0%)	82	70	28, 62, 100, 139	1 (0%)
2	C	12/12 (100%)	0.36	1 (8%)	11	8	37, 56, 112, 172	0
2	E	12/12 (100%)	0.31	0	100	100	34, 62, 105, 171	0
3	D	12/12 (100%)	0.26	0	100	100	31, 52, 114, 132	0
3	F	12/12 (100%)	0.49	0	100	100	29, 70, 105, 133	0
All	All	1276/1446 (88%)	0.24	13 (1%)	82	70	28, 63, 104, 172	2 (0%)

The worst 5 of 13 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	882	MET	4.1
1	B	718	SER	3.8
1	B	407	CYS	3.1
2	C	1	A	2.4
1	A	796	LEU	2.3

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 monosaccharides in this entry.

6.4 Ligands (i)

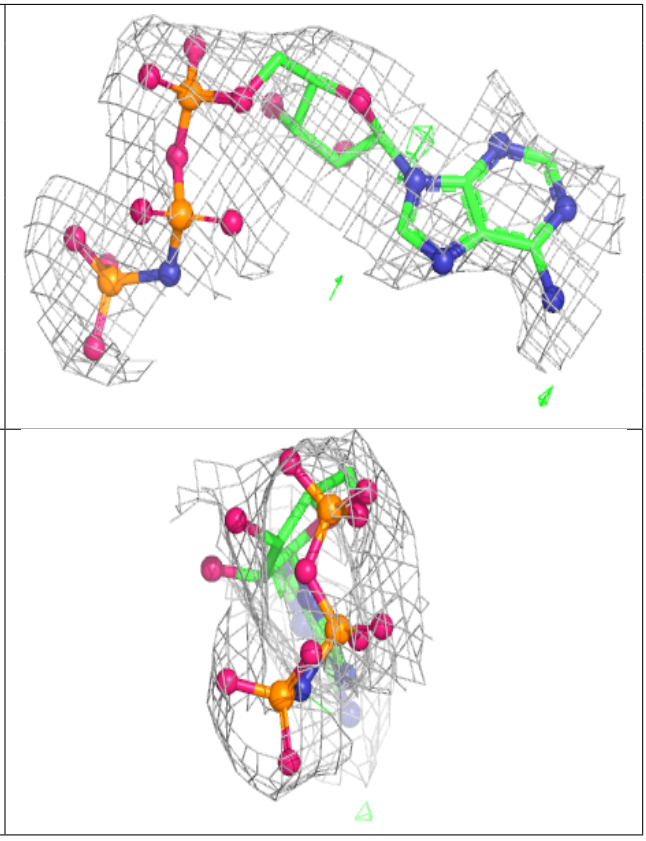
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
4	ANP	B	1101	31/31	0.75	0.29	141,146,149,152	0
4	ANP	A	1101	31/31	0.76	0.42	135,147,159,161	0
5	ZN	B	1102	1/1	0.96	0.13	41,41,41,41	0
5	ZN	A	1102	1/1	0.99	0.14	53,53,53,53	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.

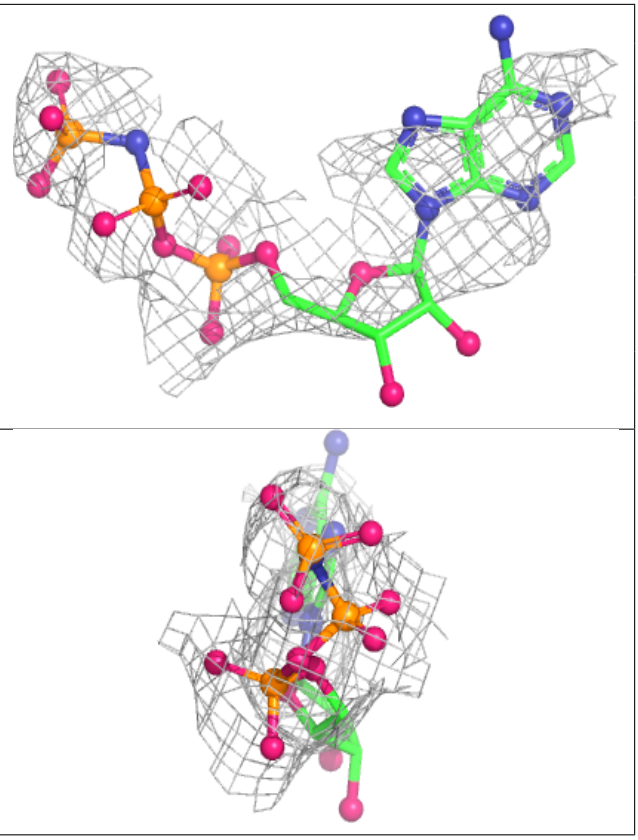
Electron density around ANP B 1101:

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 ANP A 1101:

$2mF_o$-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.