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PROTEIN DATA BANK

Full wwPDB X-ray Structure Validation Report ⓘ

Oct 25, 2022 – 12:44 PM EDT

PDB ID	:	7FMI
Title	:	PanDDA analysis group deposition – Aar2/RNaseH in complex with fragment P06C11 from the F2X-Universal Library
Authors	:	Barthel, T.; Wollenhaupt, J.; Lima, G.M.A.; Wahl, M.C.; Weiss, M.S.
Deposited on	:	2022-08-26
Resolution	:	1.34 Å(reported)

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

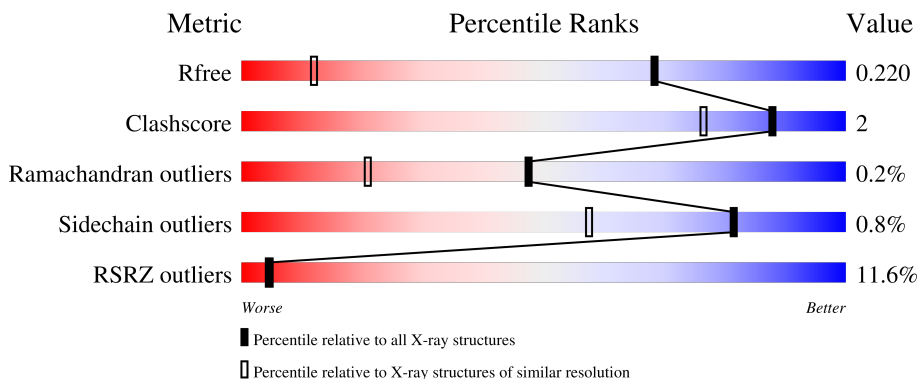|		
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.31.2
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.2

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 1.34 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
Rfree		0.220
Clashscore		2
Ramachandran outliers		0.2%
Sidechain outliers		0.8%
RSRZ outliers		11.6%

Worse — *Better*

▌ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R$_{free}$	130704	1385 (1.36-1.32)
Clashscore	141614	1417 (1.36-1.32)
Ramachandran outliers	138981	1397 (1.36-1.32)
Sidechain outliers	138945	1397 (1.36-1.32)
RSRZ outliers	127900	1369 (1.36-1.32)

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	258	12% / 93%
2	B	308	11% / 91% 6%

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
3	WBQ	B	402	-	-	-	X

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 9436 atoms, of which 4511 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 Pre-mRNA-splicing factor 8.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	252	Total	C	H	N	O	S	0	20	0
			4160	1355	2047	350	396	12			

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1833	GLY	-	expression tag	UNP P33334
A	1834	ALA	-	expression tag	UNP P33334
A	1835	MET	-	expression tag	UNP P33334

- Molecule 2 is a protein called A1 cistron-splicing factor AAR2.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
2	B	300	Total	C	H	N	O	S	0	17	0
			5044	1654	2464	421	485	20			

There are 20 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	-3	GLY	-	expression tag	UNP P32357
B	-2	ALA	-	expression tag	UNP P32357
B	-1	MET	-	expression tag	UNP P32357
B	0	ALA	-	expression tag	UNP P32357
B	166	SER	LEU	conflict	UNP P32357
B	167	SER	LYS	conflict	UNP P32357
B	?	-	LEU	deletion	UNP P32357
B	?	-	GLN	deletion	UNP P32357
B	?	-	LYS	deletion	UNP P32357
B	?	-	ALA	deletion	UNP P32357
B	?	-	GLY	deletion	UNP P32357
B	?	-	SER	deletion	UNP P32357
B	?	-	LYS	deletion	UNP P32357

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Chain	Residue	Modelled	Actual	Comment	Reference
B	?	-	MET	deletion	UNP P32357
B	?	-	GLU	deletion	UNP P32357
B	?	-	ALA	deletion	UNP P32357
B	?	-	LYS	deletion	UNP P32357
B	?	-	ASN	deletion	UNP P32357
B	?	-	GLU	deletion	UNP P32357
B	170	SER	ASP	conflict	UNP P32357

- Molecule 3 is 6-(2-methoxyanilino)-6-oxohexanoic acid (three-letter code: WBQ) (formula: $C_{13}H_{17}NO_4$).
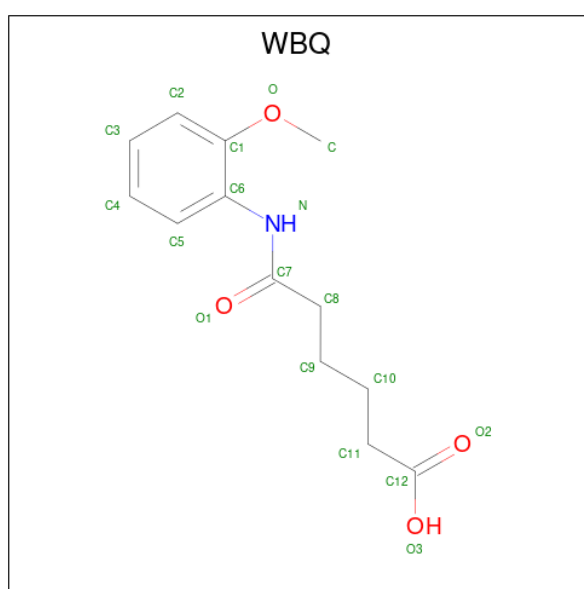
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total	C	N	O	0	0
			18	13	1	4		
3	A	1	Total	C	N	O	0	0
			18	13	1	4		
3	B	1	Total	C	N	O	0	0
			18	13	1	4		
3	B	1	Total	C	N	O	0	0
			18	13	1	4		

- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	82	Total	O	0	0
			82	82		

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| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	B	78	Total O 78 78		0	0

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 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: Pre-mRNA-splicing factor 8
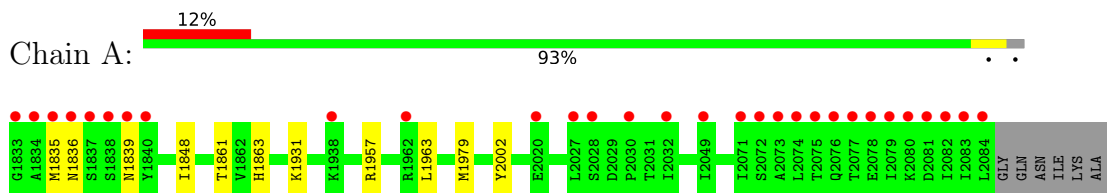
• Molecule 2: A1 cistron-splicing factor AAR2
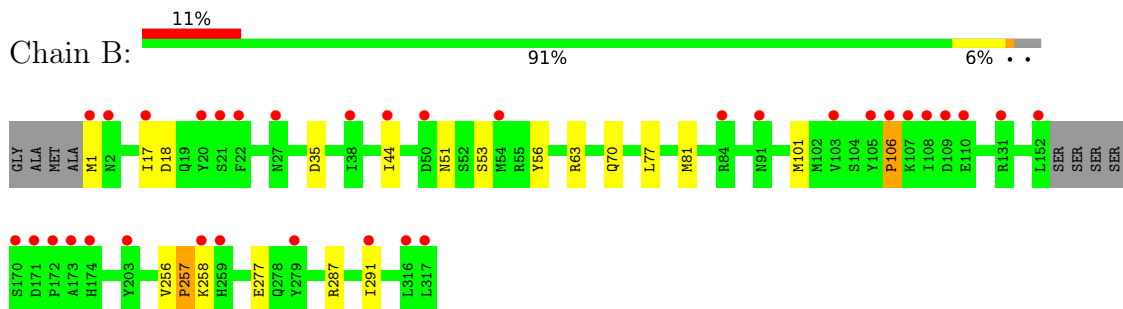
4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	88.85Å 82.28Å 94.39Å 90.00° 108.60° 90.00°	Depositor
Resolution (Å)	44.73 – 1.34 44.79 – 1.34	Depositor EDS
% Data completeness (in resolution range)	99.2 (44.73-1.34) 99.2 (44.79-1.34)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	0.97 (at 1.34Å)	Xtriage
Refinement program	PHENIX 1.17.1_3660	Depositor
R, R_{free}	0.194 , 0.213 0.212 , 0.220	Depositor DCC
R_{free} test set	2098 reflections (1.47%)	wwPDB-VP
Wilson B-factor (Å^2)	29.1	Xtriage
Anisotropy	0.197	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.43 , 52.3	EDS
L-test for twinning[2]	$< \lvert L \rvert > = 0.51$, $< L^2 > = 0.34$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.96	EDS
Total number of atoms	9436	wwPDB-VP
Average B, all atoms (Å^2)	42.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.69% of the height of the origin peak. No significant pseudotranslation is detected.*

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[1]Intensities estimated from amplitudes.
[2]Theoretical values of $< \lvert L \rvert >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	0.52	1/2254 (0.0%)	0.67	1/3055 (0.0%)
2	B	0.57	2/2739 (0.1%)	0.70	3/3699 (0.1%)
All	All	0.55	3/4993 (0.1%)	0.69	4/6754 (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	A	0	1

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	257	PRO	N-CA	13.64	1.70	1.47
1	A	1963	LEU	C-N	9.88	1.53	1.34
2	B	256	VAL	C-N	5.84	1.45	1.34

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	18	ASP	CB-CG-OD2	-7.02	111.98	118.30
2	B	257	PRO	CA-N-CD	-6.64	102.21	111.50
2	B	257	PRO	N-CA-C	-6.30	95.72	112.10
1	A	1836	ASN	CB-CA-C	5.27	120.95	110.40

There are no chirality outliers.

All (1) planarity outliers are listed below:

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Mol	Chain	Res	Type	Group
1	A	1835	MET	Mainchain

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5.2 Torsion angles (i)

5.2.1 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	272/258 (105%)	267 (98%)	5 (2%)	0	100	100
2	B	315/308 (102%)	305 (97%)	9 (3%)	1 (0%)	41	19
All	All	587/566 (104%)	572 (97%)	14 (2%)	1 (0%)	47	21

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	106	PRO

5.2.2 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	250/233 (107%)	246 (98%)	4 (2%)	62	29
2	B	294/284 (104%)	292 (99%)	2 (1%)	84	62
All	All	544/517 (105%)	538 (99%)	6 (1%)	81	44

All (6) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1839	ASN
1	A	1979[A]	MET
1	A	1979[B]	MET
1	A	1979[C]	MET
2	B	106	PRO
2	B	258	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1) such sidechains are listed below:

Mol	Chain	Res	Type
2	B	70	GLN

5.2.3 RNA (i)

There are no RNA molecules in this entry.

5.3 Non-standard residues in protein, DNA, RNA chains (i)

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

5.4 Carbohydrates (i)

There are no monosaccharides in this entry.

5.5 Ligand geometry (i)

4 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
3	WBQ	A	2102	-	18,18,18	2.04	5 (27%)	22,22,22	1.30	3 (13%)
3	WBQ	A	2101	-	18,18,18	1.19	2 (11%)	22,22,22	1.50	4 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
3	WBQ	B	402	-	18,18,18	1.49	5 (27%)	22,22,22	1.97	3 (13%)
3	WBQ	B	401	-	18,18,18	1.23	1 (5%)	22,22,22	1.56	5 (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. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	WBQ	A	2102	-	-	3/13/13/13	0/1/1/1
3	WBQ	A	2101	-	-	3/13/13/13	0/1/1/1
3	WBQ	B	402	-	-	5/13/13/13	0/1/1/1
3	WBQ	B	401	-	-	5/13/13/13	0/1/1/1

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	2102	WBQ	O1-C7	-3.99	1.15	1.23
3	A	2102	WBQ	O3-C12	-3.94	1.17	1.30
3	A	2102	WBQ	C8-C7	-3.31	1.45	1.51
3	A	2102	WBQ	O-C	-3.12	1.33	1.42
3	B	401	WBQ	C11-C12	3.05	1.57	1.50
3	A	2102	WBQ	O-C1	-2.92	1.32	1.37
3	B	402	WBQ	C2-C1	-2.47	1.34	1.39
3	A	2101	WBQ	C7-N	2.42	1.41	1.35
3	B	402	WBQ	O3-C12	-2.39	1.22	1.30
3	B	402	WBQ	C6-N	-2.27	1.37	1.41
3	A	2101	WBQ	O3-C12	-2.25	1.23	1.30
3	B	402	WBQ	C5-C6	-2.21	1.36	1.39
3	B	402	WBQ	C3-C2	-2.14	1.34	1.38

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	B	402	WBQ	O-C1-C6	5.80	121.91	114.80
3	B	402	WBQ	O-C1-C2	-5.01	115.79	124.37
3	B	401	WBQ	O-C1-C6	4.00	119.70	114.80
3	A	2101	WBQ	O-C1-C6	3.88	119.56	114.80
3	A	2101	WBQ	O-C1-C2	-3.15	118.97	124.37
3	B	401	WBQ	C1-C6-N	3.07	122.16	116.66
3	B	401	WBQ	C-O-C1	-2.89	113.17	117.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	B	402	WBQ	C10-C11-C12	-2.67	107.74	114.47
3	A	2102	WBQ	O2-C12-C11	-2.62	114.67	123.08
3	A	2102	WBQ	O-C1-C6	2.41	117.75	114.80
3	B	401	WBQ	O-C1-C2	-2.39	120.28	124.37
3	A	2101	WBQ	C-O-C1	-2.34	113.99	117.53
3	A	2102	WBQ	C10-C11-C12	-2.18	108.98	114.47
3	A	2101	WBQ	O2-C12-C11	-2.05	116.51	123.08
3	B	401	WBQ	C4-C5-C6	2.02	122.81	118.62

There are no chirality outliers.

All (16) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	B	402	WBQ	C6-C1-O-C
3	B	402	WBQ	C2-C1-O-C
3	B	402	WBQ	C11-C10-C9-C8
3	B	401	WBQ	C9-C10-C11-C12
3	B	401	WBQ	O1-C7-C8-C9
3	B	401	WBQ	N-C7-C8-C9
3	A	2102	WBQ	C11-C10-C9-C8
3	B	401	WBQ	C1-C6-N-C7
3	A	2101	WBQ	C9-C10-C11-C12
3	B	401	WBQ	C7-C8-C9-C10
3	B	402	WBQ	C10-C11-C12-O2
3	B	402	WBQ	C10-C11-C12-O3
3	A	2101	WBQ	C7-C8-C9-C10
3	A	2102	WBQ	C10-C11-C12-O3
3	A	2102	WBQ	C10-C11-C12-O2
3	A	2101	WBQ	C11-C10-C9-C8

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	402	WBQ	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 WBQ A 2102

Bond lengths

Bond angles

Torsions

Rings

Ligand WBQ A 2101

Bond lengths

Bond angles

Torsions

Rings

Ligand WBQ B 402

Bond lengths

Bond angles

Torsions

Rings

Ligand WBQ B 401

Bond lengths

Bond angles

Torsions

Rings
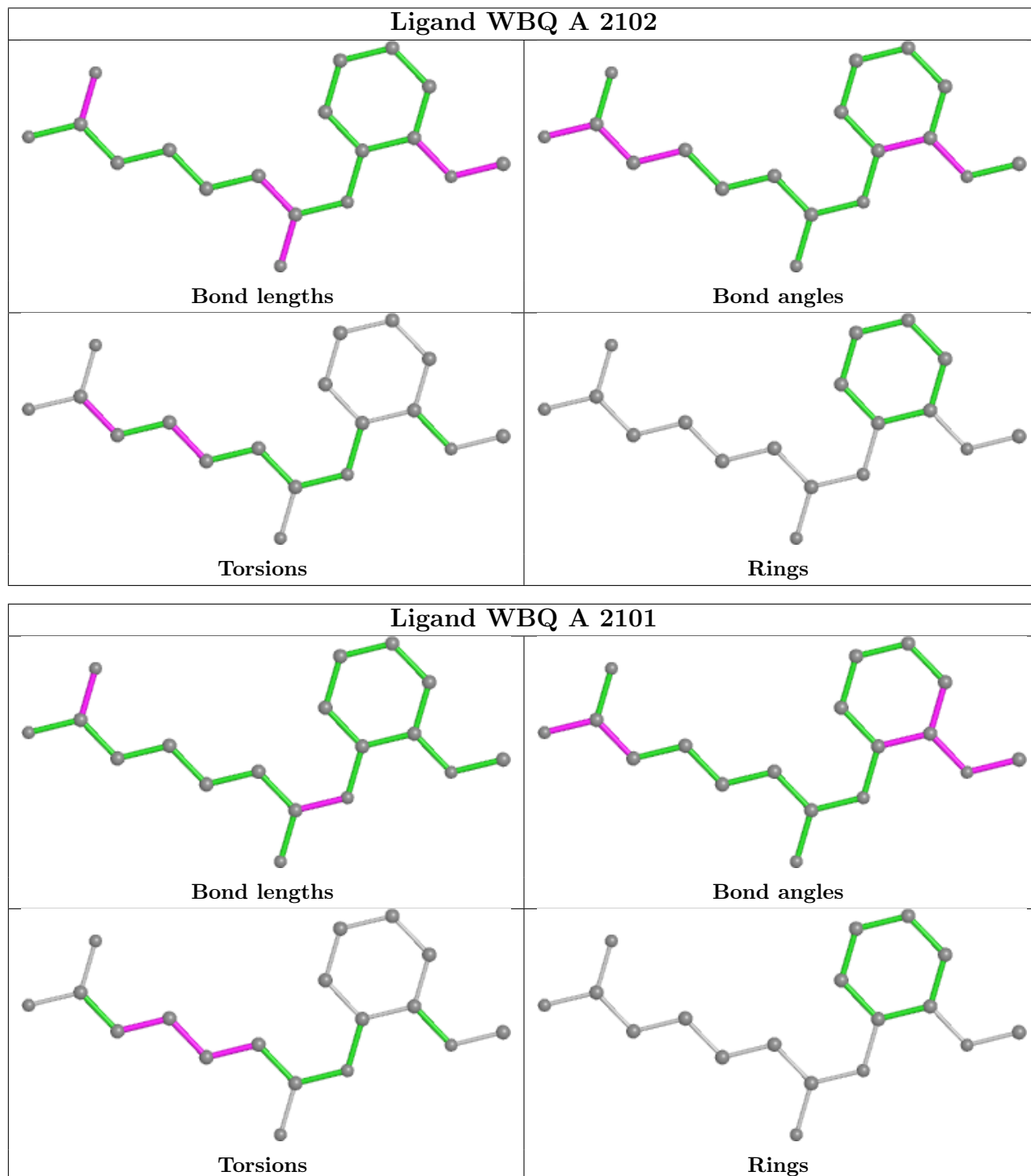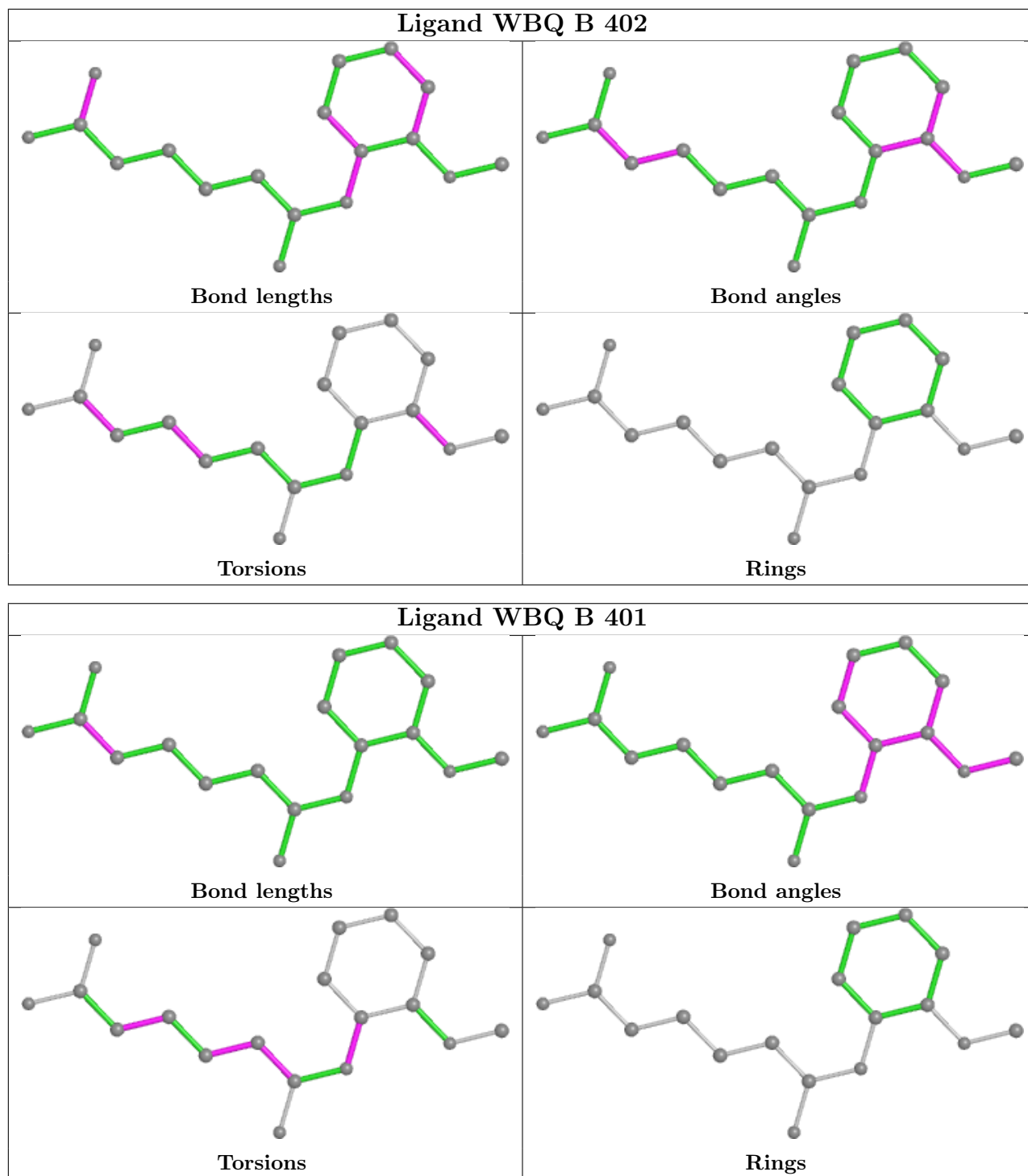
5.6 Other polymers ⓘ

There are no such residues in this entry.

5.7 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, 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	252/258 (97%)	1.13	30 (11%)	4	4	25, 33, 59, 99	0
2	B	300/308 (97%)	1.16	34 (11%)	5	5	26, 36, 65, 95	0
All	All	552/566 (97%)	1.15	64 (11%)	4	5	25, 35, 64, 99	0

All (64) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	1833	GLY	16.9
2	B	172	PRO	16.0
1	A	2084	LEU	14.6
2	B	1	MET	14.0
1	A	1840	TYR	10.4
1	A	1837	SER	10.0
2	B	173	ALA	9.1
2	B	108	ILE	7.4
2	B	54[A]	MET	7.3
1	A	2082	ILE	7.3
2	B	170	SER	7.2
1	A	2083	ILE	6.8
1	A	1839	ASN	6.2
2	B	152	LEU	6.1
1	A	2079	ILE	6.0
1	A	2080	LYS	6.0
1	A	2028	SER	5.9
2	B	171	ASP	5.9
2	B	258	LYS	5.2
1	A	2076	GLN	5.2
1	A	2081	ASP	5.2
2	B	110	GLU	5.1
1	A	1835	MET	5.1
1	A	2077	THR	4.9

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Mol	Chain	Res	Type	RSRZ
2	B	174	HIS	4.6
1	A	2074	LEU	4.3
2	B	109	ASP	4.2
1	A	1834	ALA	4.2
1	A	2030	PRO	4.1
2	B	107	LYS	4.0
1	A	1838	SER	3.8
1	A	2073	ALA	3.8
1	A	2027	LEU	3.7
2	B	106	PRO	3.6
2	B	131	ARG	3.4
1	A	2075	THR	3.3
2	B	316	LEU	3.3
1	A	2071	ILE	3.3
2	B	259	HIS	3.2
1	A	1836	ASN	3.0
2	B	38	ILE	3.0
2	B	2	ASN	2.9
2	B	21	SER	2.9
2	B	84	ARG	2.9
1	A	2072	SER	2.8
2	B	91	ASN	2.8
2	B	17	ILE	2.7
2	B	279	TYR	2.7
1	A	1962	ARG	2.7
2	B	105	TYR	2.6
1	A	2032	ILE	2.6
2	B	317	LEU	2.6
2	B	44[A]	ILE	2.5
2	B	22	PHE	2.5
1	A	2049	ILE	2.4
1	A	2078	GLU	2.4
2	B	103	VAL	2.4
2	B	203[A]	TYR	2.4
2	B	291	ILE	2.3
1	A	2020	GLU	2.2
2	B	50	ASP	2.2
1	A	1938	LYS	2.1
2	B	27	ASN	2.1
2	B	20	TYR	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 ⓘ

There are no monosaccharides in this entry.

6.4 Ligands ⓘ

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	WBQ	B	401	18/18	0.61	0.34	20,20,20,20	18
3	WBQ	B	402	18/18	0.61	0.47	20,20,20,20	18
3	WBQ	A	2101	18/18	0.64	0.28	20,20,20,20	18
3	WBQ	A	2102	18/18	0.69	0.34	20,20,20,20	18

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 WBQ B 401:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
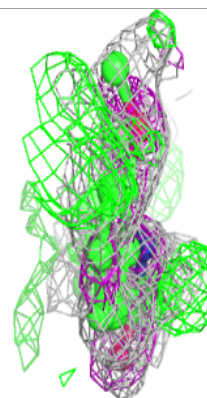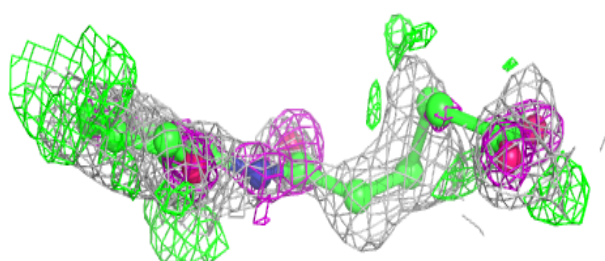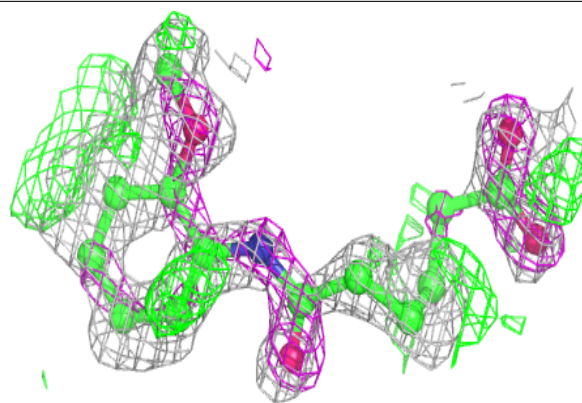and green (positive)
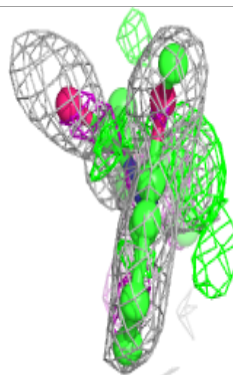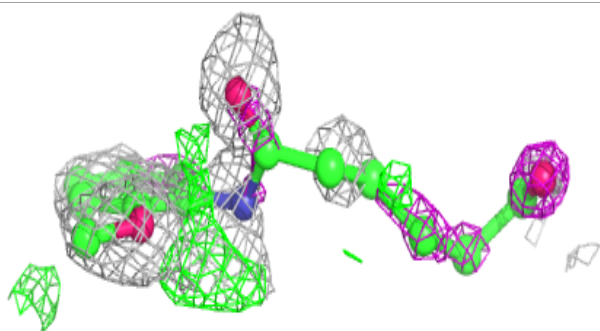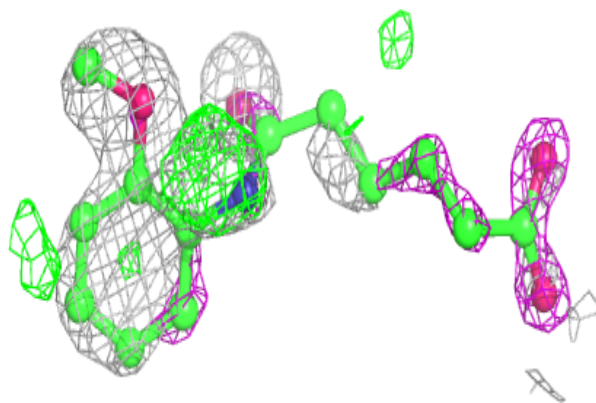
Electron density around WBQ B 402:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
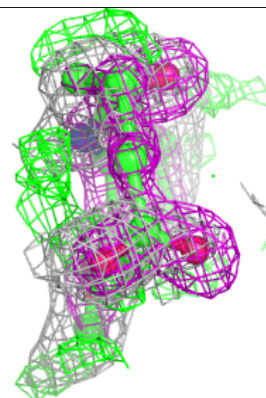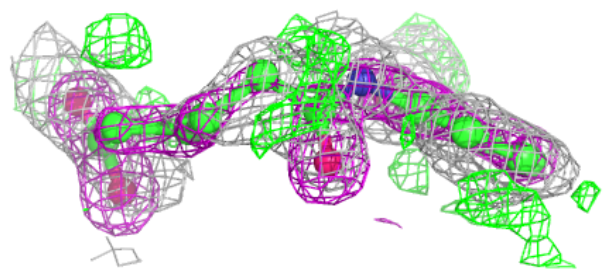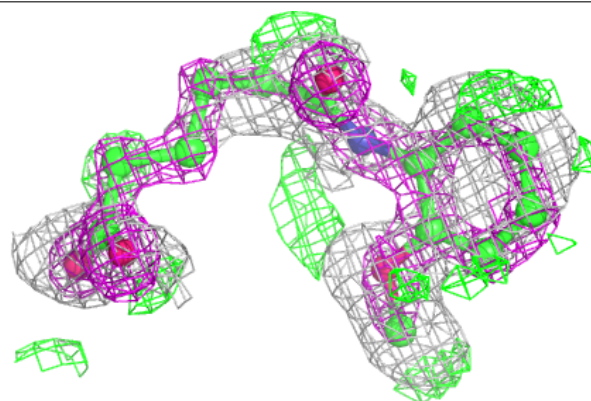and green (positive)
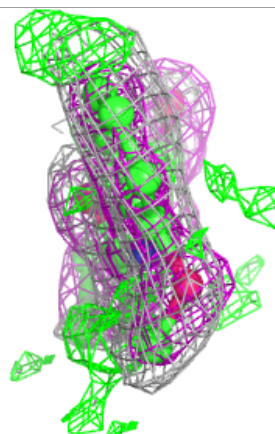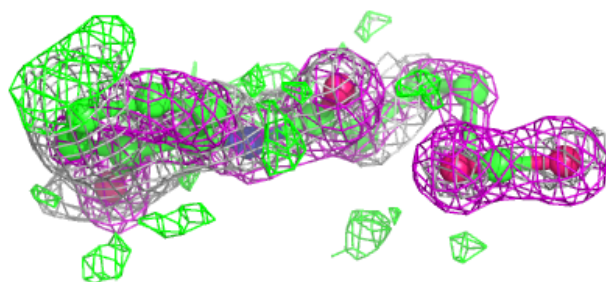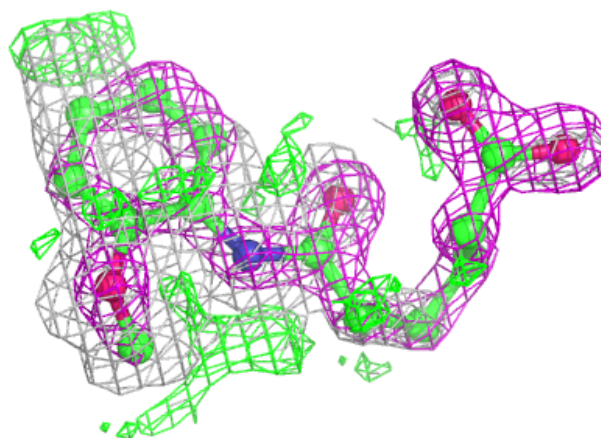
Electron density around WBQ A 2101:

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

Electron density around WBQ A 2102:

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

6.5 Other polymers (i)

There are no such residues in this entry.