Full wwPDB X-ray Structure Validation Report (i)

Nov 12, 2025 – 02:18 PM JST

PDB ID	:	9LKR / pdb_00009lkr
Title	:	Crystal Structure of the bromodomain of human BRD9 in complex with the inhibitor Y22076
Authors	:	Chen, Z.; Zhang, C.; Xu, H.; Wu, X.; Zhang, Y.; Xu, Y.
Deposited on	:	2025-01-16
Resolution	:	2.68 Å(reported)

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

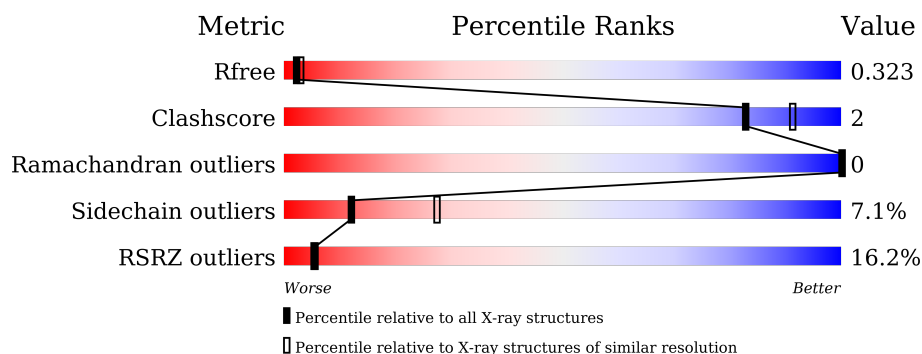|		
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	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 2.68 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		0.323
Clashscore		2
Ramachandran outliers		0
Sidechain outliers		7.1%
RSRZ outliers		16.2%

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}	164625	4708 (2.70-2.66)
Clashscore	180529	5138 (2.70-2.66)
Ramachandran outliers	177936	5071 (2.70-2.66)
Sidechain outliers	177891	5071 (2.70-2.66)
RSRZ outliers	164620	4708 (2.70-2.66)

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	149	7% / 63% / 7% / 30%
1	B	149	15% / 63% / 7% / 30%

2 Entry composition ⓘ

There are 3 unique types of molecules in this entry. The entry contains 1780 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 Bromodomain-containing protein 9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	105	Total 858	C 559	N 144	O 147	S 8	0	0	0
1	B	105	Total 858	C 559	N 144	O 147	S 8	0	0	0

There are 86 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	111	MET	-	initiating methionine	UNP Q9H8M2
A	112	LYS	-	expression tag	UNP Q9H8M2
A	113	LYS	-	expression tag	UNP Q9H8M2
A	114	GLY	-	expression tag	UNP Q9H8M2
A	115	HIS	-	expression tag	UNP Q9H8M2
A	116	HIS	-	expression tag	UNP Q9H8M2
A	117	HIS	-	expression tag	UNP Q9H8M2
A	118	HIS	-	expression tag	UNP Q9H8M2
A	119	HIS	-	expression tag	UNP Q9H8M2
A	120	HIS	-	expression tag	UNP Q9H8M2
A	121	GLU	-	expression tag	UNP Q9H8M2
A	122	ASN	-	expression tag	UNP Q9H8M2
A	123	LEU	-	expression tag	UNP Q9H8M2
A	124	TYR	-	expression tag	UNP Q9H8M2
A	125	PHE	-	expression tag	UNP Q9H8M2
A	126	GLN	-	expression tag	UNP Q9H8M2
A	127	GLY	-	expression tag	UNP Q9H8M2
A	128	GLY	-	expression tag	UNP Q9H8M2
A	129	SER	-	expression tag	UNP Q9H8M2
A	130	LEU	-	expression tag	UNP Q9H8M2
A	131	LYS	-	expression tag	UNP Q9H8M2
A	132	LEU	-	expression tag	UNP Q9H8M2
A	133	SER	-	expression tag	UNP Q9H8M2
A	240	GLU	-	expression tag	UNP Q9H8M2
A	241	ARG	-	expression tag	UNP Q9H8M2

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Chain	Residue	Modelled	Actual	Comment	Reference
A	242	LEU	-	expression tag	UNP Q9H8M2
A	243	LEU	-	expression tag	UNP Q9H8M2
A	244	ALA	-	expression tag	UNP Q9H8M2
A	245	LEU	-	expression tag	UNP Q9H8M2
A	246	LYS	-	expression tag	UNP Q9H8M2
A	247	ARG	-	expression tag	UNP Q9H8M2
A	248	SER	-	expression tag	UNP Q9H8M2
A	249	MET	-	expression tag	UNP Q9H8M2
A	250	SER	-	expression tag	UNP Q9H8M2
A	251	PHE	-	expression tag	UNP Q9H8M2
A	252	MET	-	expression tag	UNP Q9H8M2
A	253	GLN	-	expression tag	UNP Q9H8M2
A	254	ASP	-	expression tag	UNP Q9H8M2
A	255	MET	-	expression tag	UNP Q9H8M2
A	256	ASP	-	expression tag	UNP Q9H8M2
A	257	PHE	-	expression tag	UNP Q9H8M2
A	258	SER	-	expression tag	UNP Q9H8M2
A	259	GLN	-	expression tag	UNP Q9H8M2
B	111	MET	-	initiating methionine	UNP Q9H8M2
B	112	LYS	-	expression tag	UNP Q9H8M2
B	113	LYS	-	expression tag	UNP Q9H8M2
B	114	GLY	-	expression tag	UNP Q9H8M2
B	115	HIS	-	expression tag	UNP Q9H8M2
B	116	HIS	-	expression tag	UNP Q9H8M2
B	117	HIS	-	expression tag	UNP Q9H8M2
B	118	HIS	-	expression tag	UNP Q9H8M2
B	119	HIS	-	expression tag	UNP Q9H8M2
B	120	HIS	-	expression tag	UNP Q9H8M2
B	121	GLU	-	expression tag	UNP Q9H8M2
B	122	ASN	-	expression tag	UNP Q9H8M2
B	123	LEU	-	expression tag	UNP Q9H8M2
B	124	TYR	-	expression tag	UNP Q9H8M2
B	125	PHE	-	expression tag	UNP Q9H8M2
B	126	GLN	-	expression tag	UNP Q9H8M2
B	127	GLY	-	expression tag	UNP Q9H8M2
B	128	GLY	-	expression tag	UNP Q9H8M2
B	129	SER	-	expression tag	UNP Q9H8M2
B	130	LEU	-	expression tag	UNP Q9H8M2
B	131	LYS	-	expression tag	UNP Q9H8M2
B	132	LEU	-	expression tag	UNP Q9H8M2
B	133	SER	-	expression tag	UNP Q9H8M2
B	240	GLU	-	expression tag	UNP Q9H8M2

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Chain	Residue	Modelled	Actual	Comment	Reference
B	241	ARG	-	expression tag	UNP Q9H8M2
B	242	LEU	-	expression tag	UNP Q9H8M2
B	243	LEU	-	expression tag	UNP Q9H8M2
B	244	ALA	-	expression tag	UNP Q9H8M2
B	245	LEU	-	expression tag	UNP Q9H8M2
B	246	LYS	-	expression tag	UNP Q9H8M2
B	247	ARG	-	expression tag	UNP Q9H8M2
B	248	SER	-	expression tag	UNP Q9H8M2
B	249	MET	-	expression tag	UNP Q9H8M2
B	250	SER	-	expression tag	UNP Q9H8M2
B	251	PHE	-	expression tag	UNP Q9H8M2
B	252	MET	-	expression tag	UNP Q9H8M2
B	253	GLN	-	expression tag	UNP Q9H8M2
B	254	ASP	-	expression tag	UNP Q9H8M2
B	255	MET	-	expression tag	UNP Q9H8M2
B	256	ASP	-	expression tag	UNP Q9H8M2
B	257	PHE	-	expression tag	UNP Q9H8M2
B	258	SER	-	expression tag	UNP Q9H8M2
B	259	GLN	-	expression tag	UNP Q9H8M2

- Molecule 2 is 1-[1-[4-(imidazol-1-ylmethyl)-3,5-dimethoxy-phenyl]indolizin-3-yl]ethanone (CCD ID: A1EKN) (formula: $C_{22}H_{21}N_3O_3$) (labeled as "Ligand of Interest" by depositor).
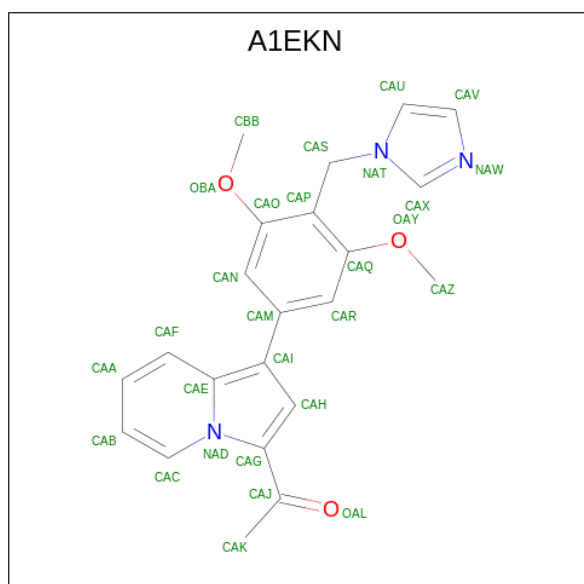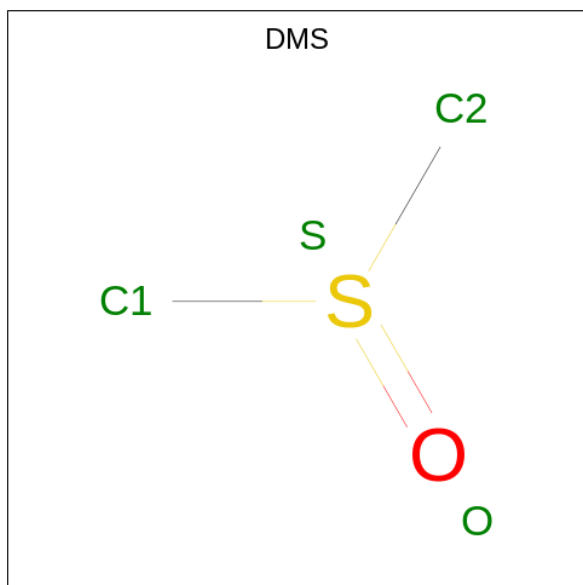

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
2	A	1	28	22	3	3	0	0

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	B	1	Total 28	C 22	N 3	O 3	0	0

- Molecule 3 is DIMETHYL SULFOXIDE (CCD ID: DMS) (formula: C_2H_6OS) (labeled as "Ligand of Interest" by depositor).

DMS

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total 4	C 2	O 1	S 1	0	0
3	A	1	Total 4	C 2	O 1	S 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: Bromodomain-containing protein 9

Chain A:

• Molecule 1: Bromodomain-containing protein 9

Chain B:
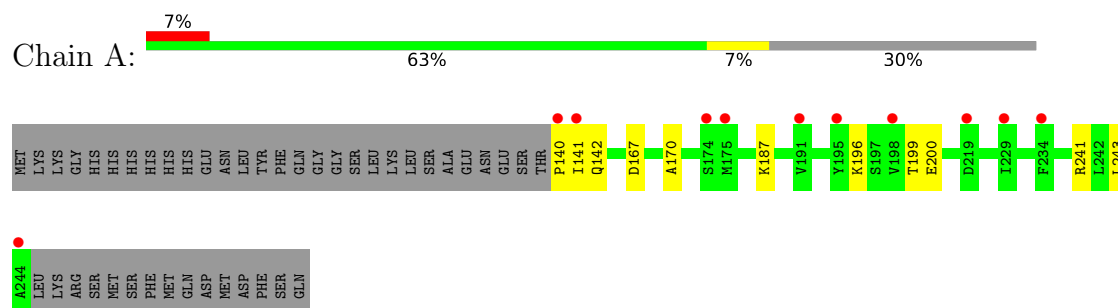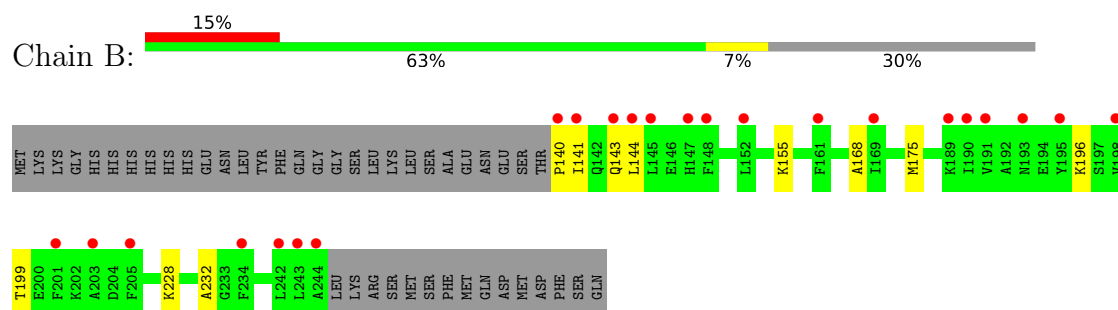
4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 2 21 21	Depositor
Cell constants a, b, c, α, β, γ	29.91Å 68.37Å 144.50Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	72.25 – 2.68 72.25 – 2.68	Depositor EDS
% Data completeness (in resolution range)	99.9 (72.25-2.68) 99.9 (72.25-2.68)	Depositor EDS
R_{merge}	0.06	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.01 (at 2.69Å)	Xtriage
Refinement program	REFMAC 5.8.0258	Depositor
R, R_{free}	0.253 , 0.328 0.258 , 0.323	Depositor DCC
R_{free} test set	457 reflections (5.11%)	wwPDB-VP
Wilson B-factor (Å^2)	71.6	Xtriage
Anisotropy	0.264	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.36 , 57.3	EDS
L-test for twinning[2]	$< |L| > = 0.47$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	1780	wwPDB-VP
Average B, all atoms (Å^2)	82.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.11% 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 $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: DMS, A1EKN

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	0.96	0/880	1.48	0/1180
1	B	0.97	0/880	1.48	2/1180 (0.2%)
All	All	0.96	0/1760	1.48	2/2360 (0.1%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	168	ALA	CA-C-N	5.23	129.28	120.29
1	B	168	ALA	C-N-CA	5.23	129.28	120.29

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	858	0	873	4	0
1	B	858	0	873	3	0
2	A	28	0	0	1	0
2	B	28	0	0	0	0
3	A	8	0	12	0	0
All	All	1780	0	1758	8	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 2.

All (8) 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:140:PRO:CG	1:A:142:GLN:HE21	2.09	0.66
1:B:140:PRO:CB	1:B:143:GLN:HE21	2.14	0.61
1:B:140:PRO:HB2	1:B:143:GLN:HE21	1.72	0.55
1:A:140:PRO:HG2	1:A:142:GLN:HE21	1.76	0.49
1:A:140:PRO:CD	1:A:142:GLN:HE21	2.31	0.43
2:A:301:A1EKN:OAL	2:A:301:A1EKN:CAC	2.68	0.42
1:A:167:ASP:HA	1:A:170:ALA:O	2.21	0.41
1:B:155:LYS:HE3	1:B:232:ALA:HB1	2.03	0.41

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	103/149 (69%)	101 (98%)	2 (2%)	0	100	100
1	B	103/149 (69%)	101 (98%)	2 (2%)	0	100	100
All	All	206/298 (69%)	202 (98%)	4 (2%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	92/132 (70%)	85 (92%)	7 (8%)	11	24
1	B	92/132 (70%)	86 (94%)	6 (6%)	14	31
All	All	184/264 (70%)	171 (93%)	13 (7%)	12	27

All (13) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	141	ILE
1	A	187	LYS
1	A	196	LYS
1	A	199	THR
1	A	200	GLU
1	A	241	ARG
1	A	243	LEU
1	B	141	ILE
1	B	144	LEU
1	B	175	MET
1	B	196	LYS
1	B	199	THR
1	B	228	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (6) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	142	GLN
1	A	151	GLN
1	A	153	GLN
1	A	193	ASN
1	B	143	GLN
1	B	153	GLN

5.3.3　RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

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	#$|Z| > 2$
2	A1EKN	B	301	-	27,31,31	2.43	9 (33%)	29,44,44	1.78	8 (27%)
3	DMS	A	303	-	3,3,3	0.42	0	3,3,3	0.16	0
3	DMS	A	302	-	3,3,3	0.55	0	3,3,3	0.35	0
2	A1EKN	A	301	-	27,31,31	2.32	9 (33%)	29,44,44	1.39	6 (20%)

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	A1EKN	B	301	-	-	3/12/16/16	0/4/4/4
2	A1EKN	A	301	-	-	0/12/16/16	0/4/4/4

All (18) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	301	A1EKN	CAI-CAM	-7.64	1.36	1.49
2	A	301	A1EKN	CAI-CAM	-6.86	1.37	1.49
2	B	301	A1EKN	CAS-CAP	-5.91	1.41	1.51
2	A	301	A1EKN	CAF-CAE	-4.97	1.31	1.41
2	A	301	A1EKN	CAS-CAP	-4.20	1.44	1.51
2	B	301	A1EKN	CAF-CAE	-3.38	1.34	1.41
2	A	301	A1EKN	CAI-CAE	-2.84	1.33	1.40
2	B	301	A1EKN	CAR-CAQ	2.71	1.43	1.38
2	A	301	A1EKN	CAR-CAQ	2.66	1.43	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	301	A1EKN	CAC-CAB	2.63	1.42	1.35
2	B	301	A1EKN	CAH-CAI	-2.61	1.34	1.40
2	A	301	A1EKN	CAK-CAJ	2.57	1.57	1.49
2	A	301	A1EKN	CAA-CAF	2.52	1.42	1.36
2	B	301	A1EKN	CAU-NAT	-2.36	1.33	1.37
2	A	301	A1EKN	CAU-NAT	-2.35	1.33	1.37
2	B	301	A1EKN	CAH-CAG	-2.34	1.35	1.39
2	A	301	A1EKN	CAH-CAG	-2.32	1.35	1.39
2	B	301	A1EKN	CAC-NAD	2.25	1.41	1.38

All (14) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	301	A1EKN	CAB-CAC-NAD	-4.74	114.71	120.78
2	B	301	A1EKN	CAS-NAT-CAU	4.11	131.80	126.25
2	A	301	A1EKN	CAS-NAT-CAU	3.51	130.99	126.25
2	B	301	A1EKN	OAY-CAQ-CAP	-3.40	111.76	115.35
2	B	301	A1EKN	CAS-NAT-CAX	-3.19	121.94	125.60
2	A	301	A1EKN	CAR-CAM-CAI	2.64	125.02	120.70
2	A	301	A1EKN	CAB-CAC-NAD	-2.42	117.67	120.78
2	A	301	A1EKN	CAS-NAT-CAX	-2.37	122.88	125.60
2	A	301	A1EKN	CAM-CAN-CAO	2.24	123.16	120.13
2	A	301	A1EKN	CAU-NAT-CAX	-2.13	106.11	108.21
2	B	301	A1EKN	CAR-CAM-CAI	2.13	124.19	120.70
2	B	301	A1EKN	CAN-CAO-CAP	-2.13	119.63	122.17
2	B	301	A1EKN	CAM-CAN-CAO	2.08	122.93	120.13
2	B	301	A1EKN	CAU-NAT-CAX	-2.03	106.21	108.21

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	B	301	A1EKN	CAP-CAS-NAT-CAU
2	B	301	A1EKN	CAP-CAS-NAT-CAX
2	B	301	A1EKN	CAN-CAO-OBA-CBB

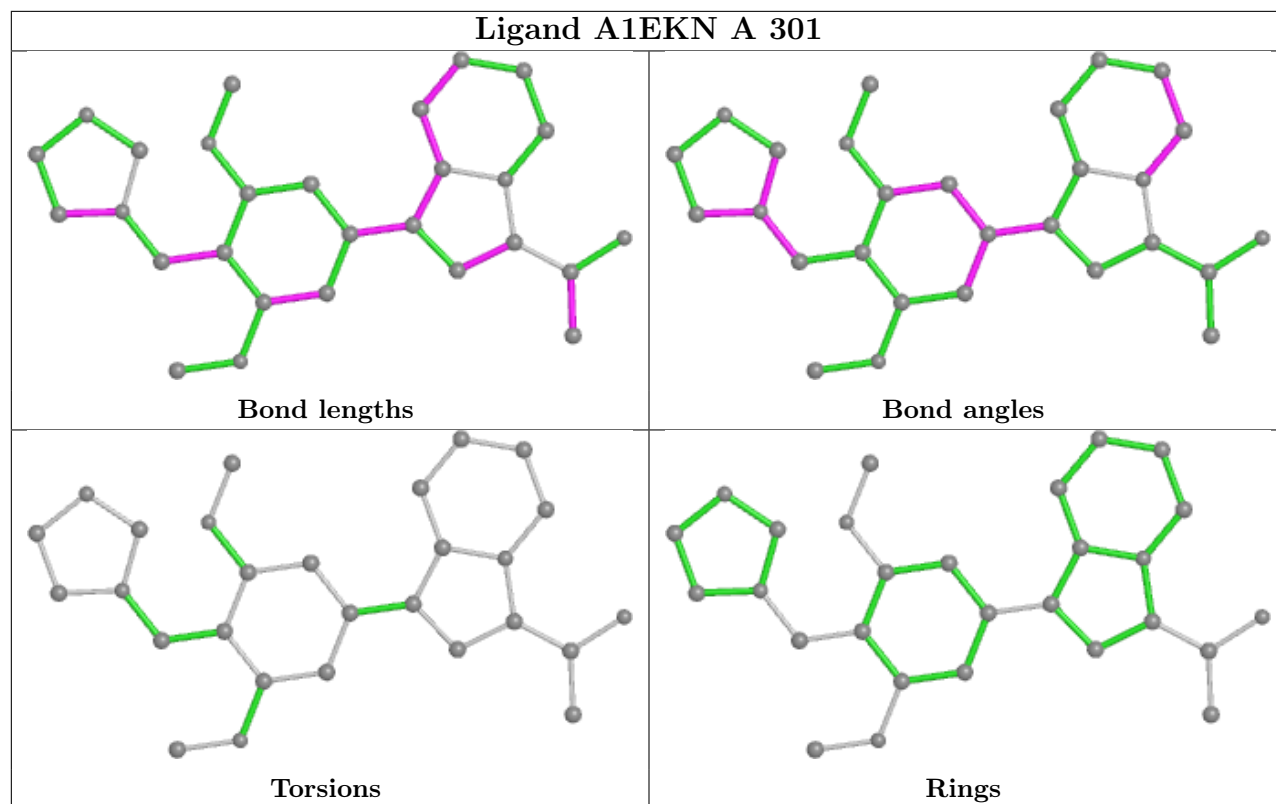There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	301	A1EKN	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 A1EKN B 301

Bond lengths　　　Bond angles

Torsions　　　Rings

Ligand DMS A 303

Bond lengths

Bond angles

Torsions

Rings

Ligand DMS A 302

Bond lengths

Bond angles

Torsions

Rings

Ligand A1EKN A 301

Bond lengths

Bond angles

Torsions

Rings
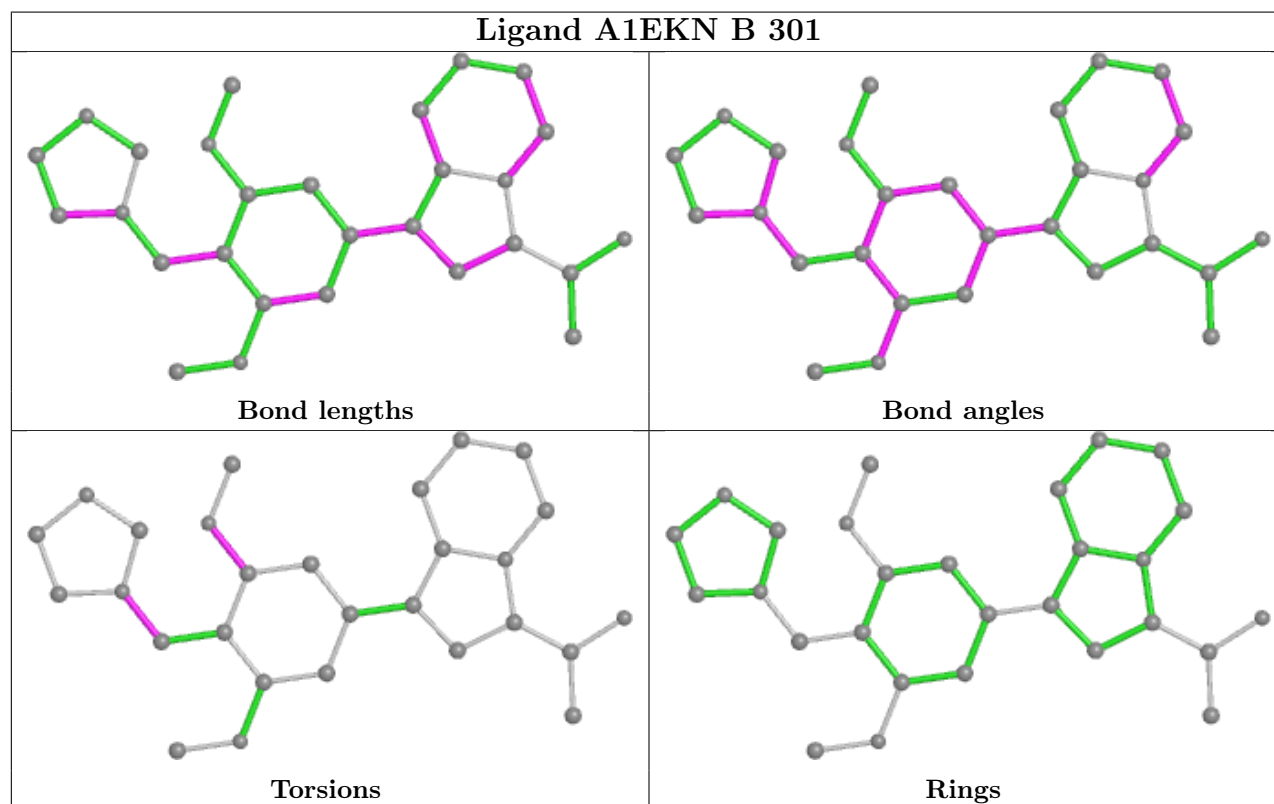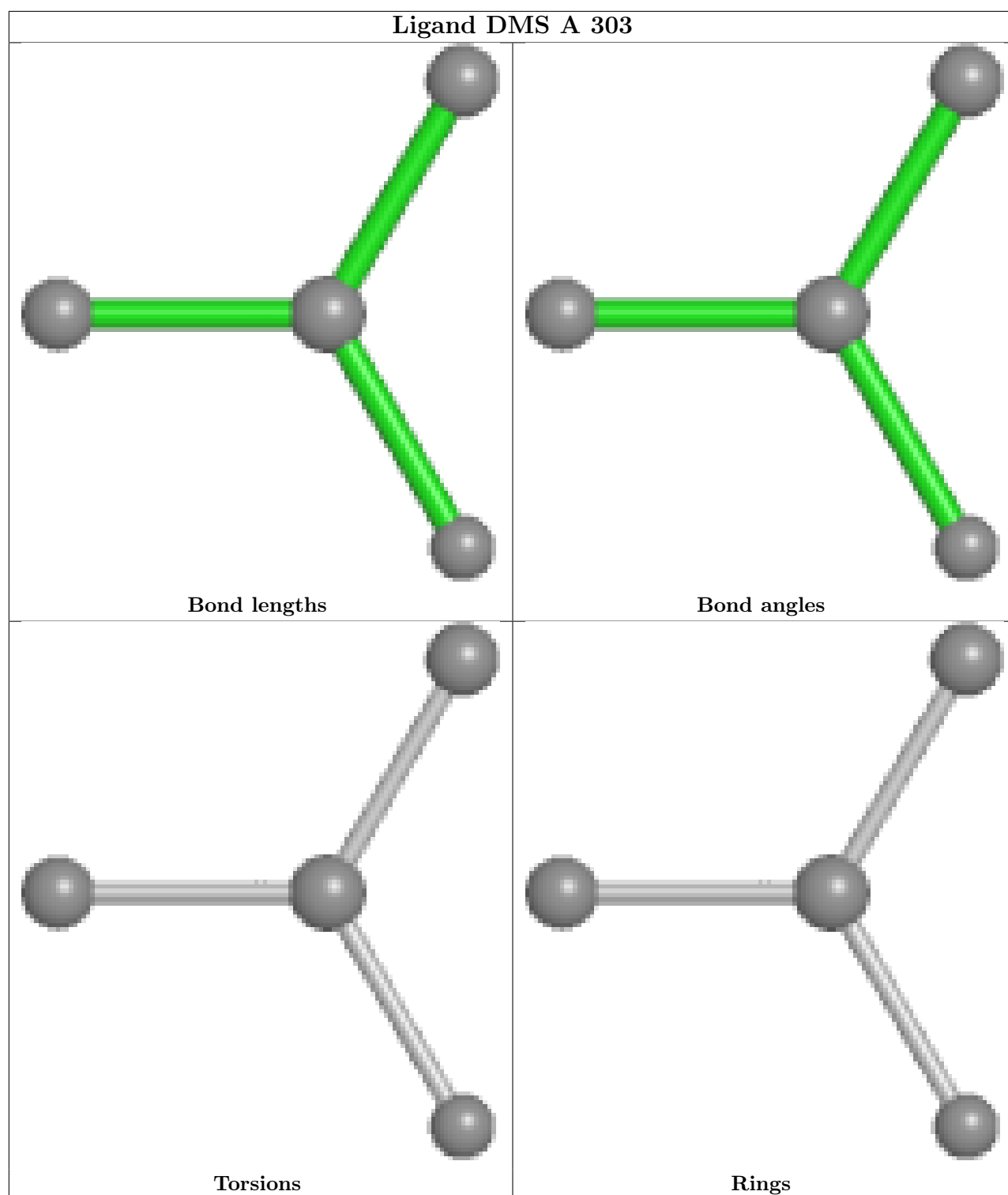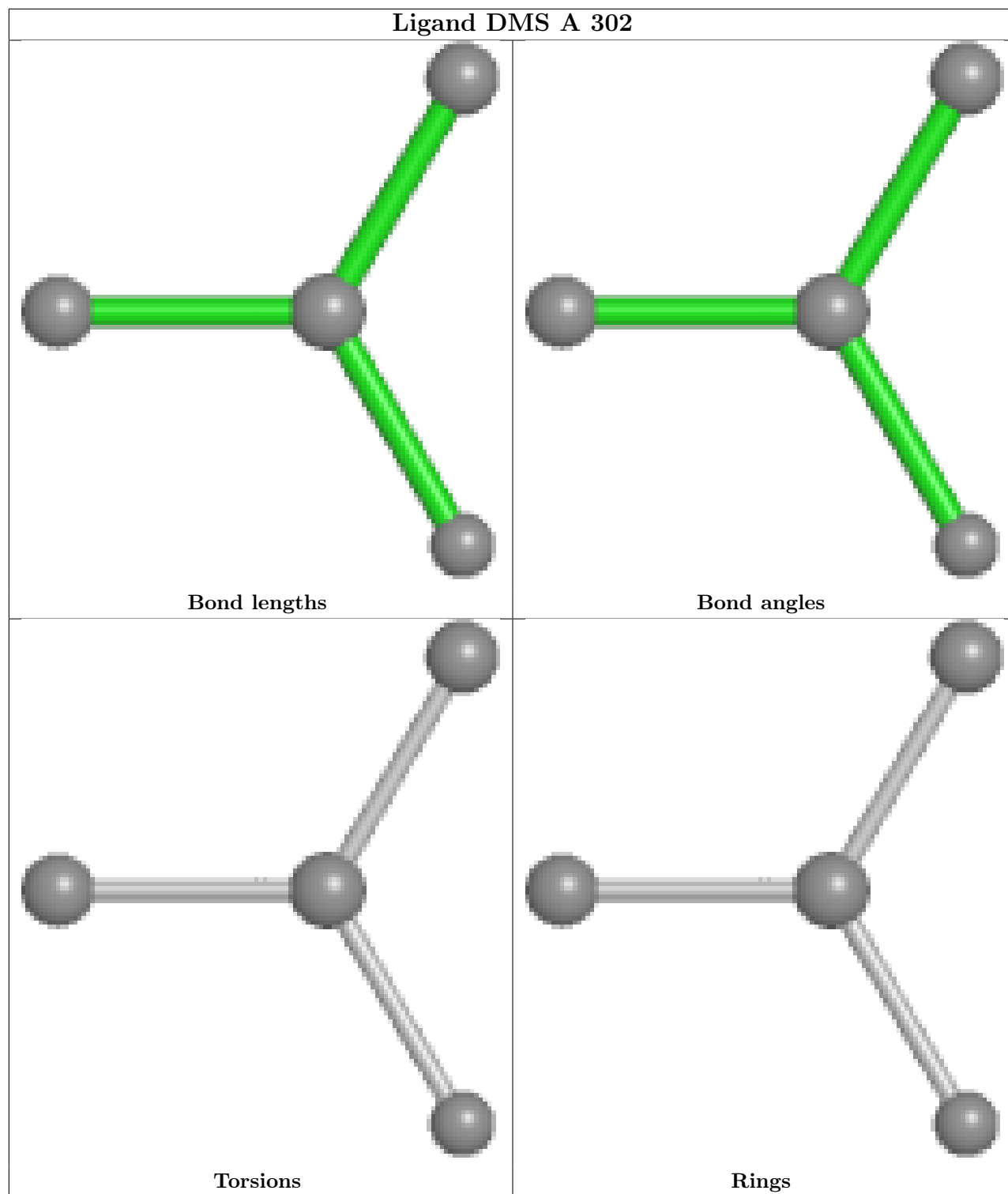
5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

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(Å²)	Q<0.9
1	A	105/149 (70%)	0.86	11 (10%)	13	12	50, 73, 118, 142	0
1	B	105/149 (70%)	1.11	23 (21%)	3	3	45, 79, 130, 160	0
All	All	210/298 (70%)	0.99	34 (16%)	5	5	45, 78, 124, 160	0

All (34) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	234	PHE	5.4
1	B	145	LEU	4.5
1	A	141	ILE	4.1
1	A	140	PRO	4.0
1	B	195	TYR	3.9
1	B	242	LEU	3.7
1	A	234	PHE	3.5
1	B	244	ALA	3.3
1	B	193	ASN	3.3
1	B	140	PRO	3.2
1	A	244	ALA	3.0
1	B	201	PHE	3.0
1	B	144	LEU	3.0
1	B	198	VAL	3.0
1	B	141	ILE	2.9
1	B	243	LEU	2.8
1	B	143	GLN	2.7
1	B	148	PHE	2.7
1	B	205	PHE	2.6
1	B	191	VAL	2.5
1	A	175	MET	2.5
1	A	198	VAL	2.4
1	B	147	HIS	2.4
1	A	229	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
1	A	195	TYR	2.4
1	A	219	ASP	2.3
1	B	169	ILE	2.2
1	B	152	LEU	2.2
1	B	189	LYS	2.2
1	B	190	ILE	2.2
1	B	203	ALA	2.1
1	A	191	VAL	2.1
1	A	174	SER	2.1
1	B	161	PHE	2.1

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 oligosaccharides 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	DMS	A	303	4/4	0.77	0.26	80,84,89,101	0
3	DMS	A	302	4/4	0.84	0.18	55,61,71,87	0
2	A1EKN	A	301	28/28	0.95	0.09	37,54,61,65	0
2	A1EKN	B	301	28/28	0.95	0.08	37,53,66,69	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.
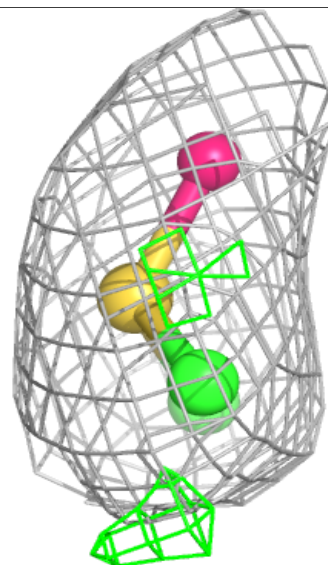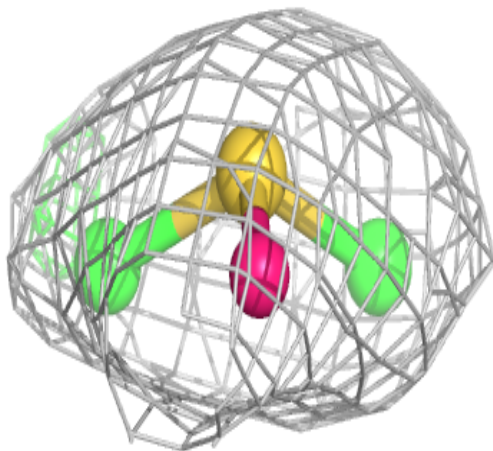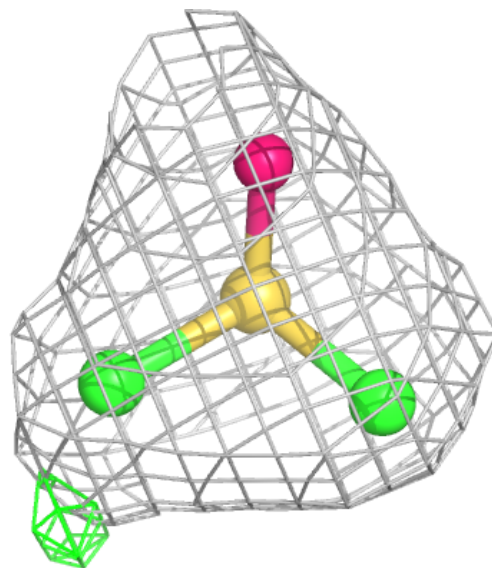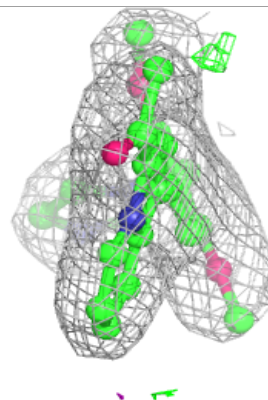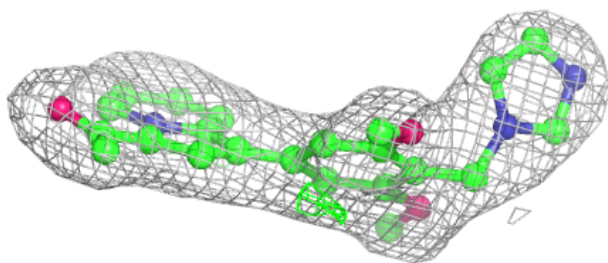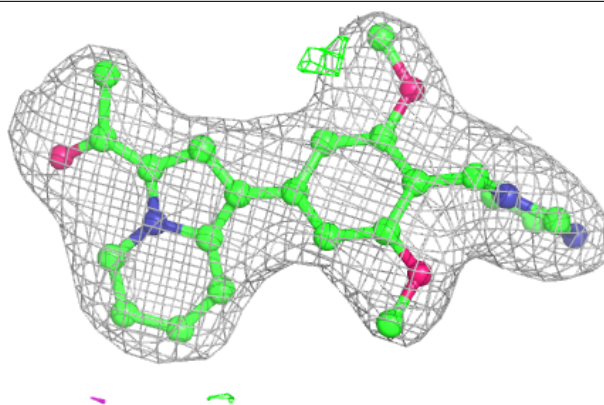
Electron density around DMS A 303:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)
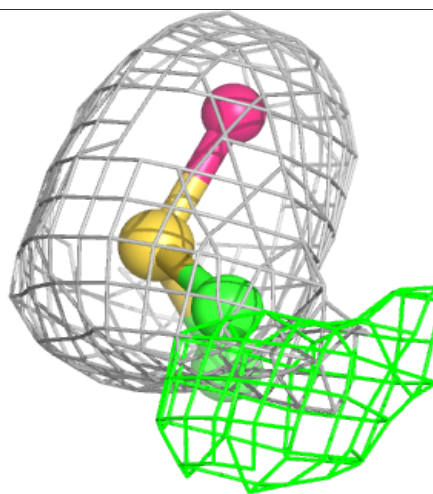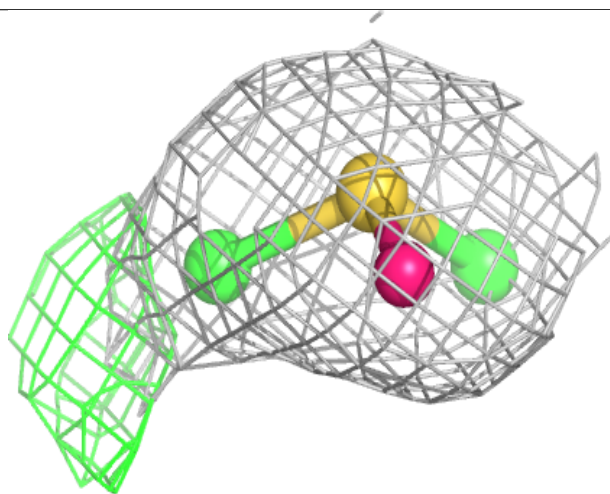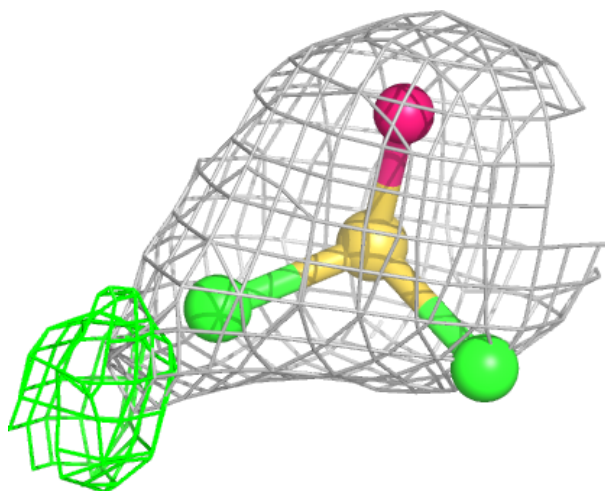
Electron density around DMS A 302:

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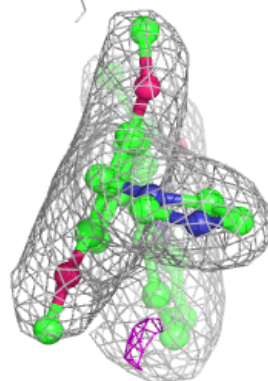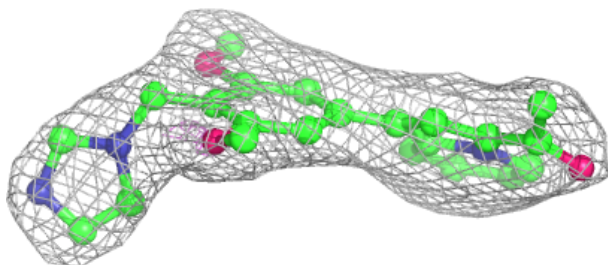$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
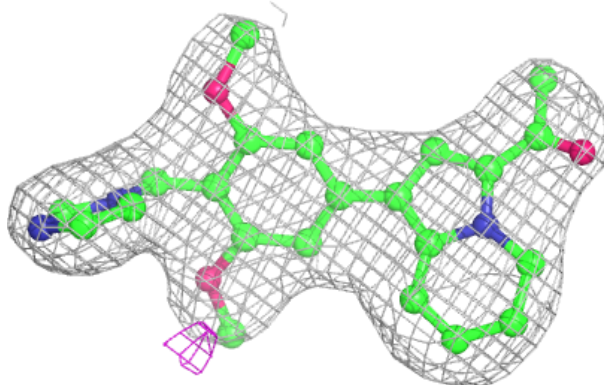and green (positive)

Electron density around A1EKN 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 A1EKN 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)

6.5 Other polymers ⓘ

There are no such residues in this entry.