WORLDWIDE wwPDB PROTEIN DATA BANK

Full wwPDB X-ray Structure Validation Report ⓘ

May 27, 2025 – 04:30 PM JST

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PDB ID	:	9J2W / pdb_00009j2w
Title	:	Human cGAS catalytic domain bound with XL-3156
Authors	:	Zhao, W.F.; Li, M.J.; Xu, Y.C.
Deposited on	:	2024-08-07
Resolution	:	2.20 Å(reported)

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 2.20 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.
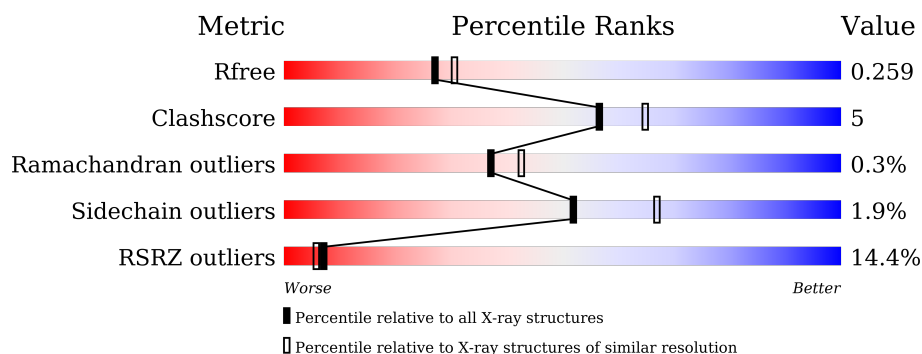
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	5791 (2.20-2.20)
Clashscore	180529	6634 (2.20-2.20)
Ramachandran outliers	177936	6560 (2.20-2.20)
Sidechain outliers	177891	6561 (2.20-2.20)
RSRZ outliers	164620	5791 (2.20-2.20)

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	366	15% / 77% 11% 11%
1	B	366	11% / 80% 10% · 8%

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 5428 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 Cyclic GMP-AMP synthase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	324	Total	C	N	O	S	0	0	0
			2588	1661	441	471	15			
1	B	335	Total	C	N	O	S	0	0	0
			2690	1730	461	485	14			

- Molecule 2 is 2-(1 {H}-benzimidazol-2-yl)-4-[[1-(1 {H}-benzimidazol-2-yl)-3-methyl-5-oxidanyl-pyrazol-4-yl]-pyridin-2-yl-methyl]-5-methyl-pyrazol-3-ol (CCD ID: A1EAH) (formula: $C_{28}H_{23}N_9O_2$) (labeled as "Ligand of Interest" by depositor).
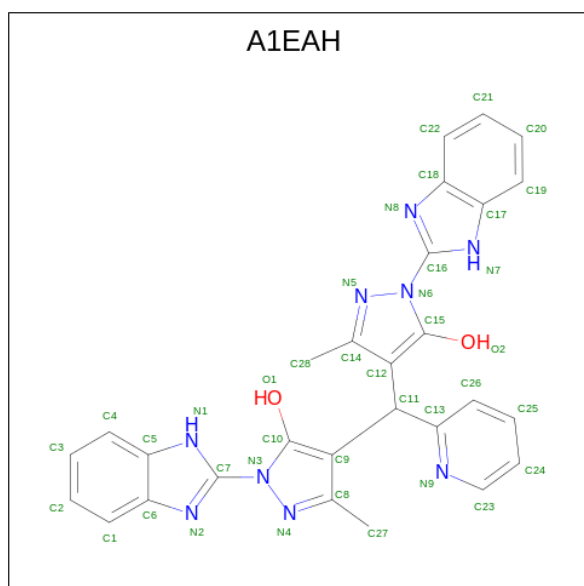
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	N	O	0	0
			39	28	9	2		
2	B	1	Total	C	N	O	0	0
			39	28	9	2		

- Molecule 3 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	34	Total 34	O 34	0	0
4	B	36	Total 36	O 36	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: Cyclic GMP-AMP synthase
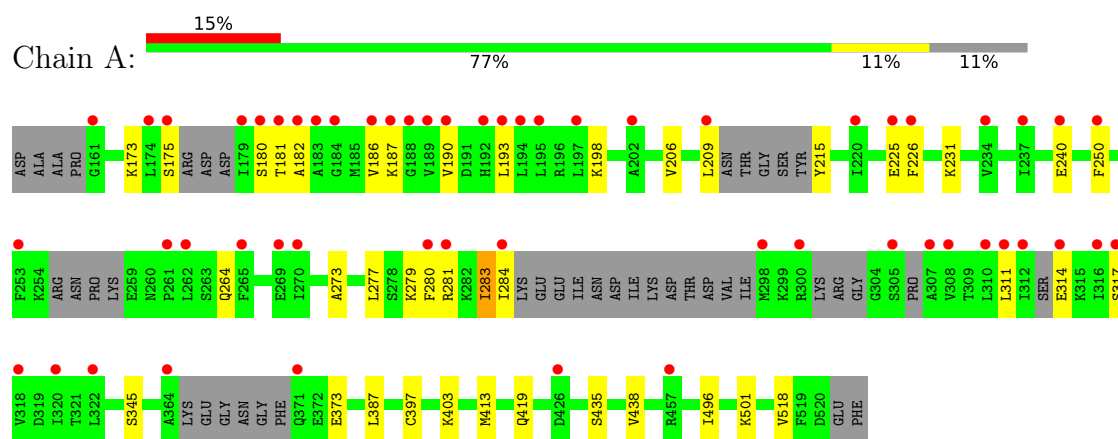
• Molecule 1: Cyclic GMP-AMP synthase
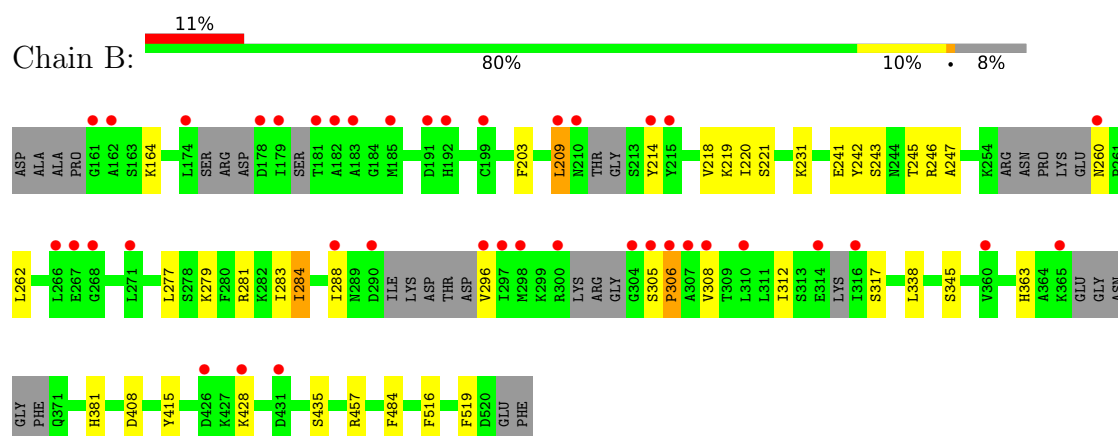
4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	216.29Å 47.50Å 87.58Å 90.00° 113.53° 90.00°	Depositor
Resolution (Å)	32.92 – 2.20 32.92 – 2.20	Depositor EDS
% Data completeness (in resolution range)	88.6 (32.92-2.20) 88.9 (32.92-2.20)	Depositor EDS
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	4.18 (at 2.20Å)	Xtriage
Refinement program	PHENIX (1.20.1_4487: ???)	Depositor
R, R_{free}	0.231 , 0.259 0.231 , 0.259	Depositor DCC
R_{free} test set	2033 reflections (4.83%)	wwPDB-VP
Wilson B-factor (Å^2)	29.3	Xtriage
Anisotropy	0.118	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 44.5	EDS
L-test for twinning[2]	$< |L| > = 0.47, < L^2 > = 0.30$	Xtriage
Estimated twinning fraction	0.028 for -h-2*l,-k,l	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	5428	wwPDB-VP
Average B, all atoms (Å^2)	44.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 12.64% 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 (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: A1EAH, 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	0.27	0/2634	0.50	0/3536
1	B	0.28	0/2738	0.51	2/3674 (0.1%)
All	All	0.28	0/5372	0.50	2/7210 (0.0%)

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	306	PRO	N-CA-CB	6.36	106.97	102.65
1	B	214	TYR	CB-CA-C	-5.31	100.97	110.70

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	2588	0	2537	24	0
1	B	2690	0	2669	24	0
2	A	39	0	0	1	0
2	B	39	0	0	1	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
4	A	34	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	B	36	0	0	0	0
All	All	5428	0	5206	48	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 5.

All (48) 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:B:277:LEU:O	1:B:281:ARG:HG3	1.95	0.67
1:B:305:SER:HB3	1:B:306:PRO:HD3	1.80	0.62
1:A:181:THR:OG1	1:A:182:ALA:N	2.33	0.60
1:B:296:VAL:HG12	1:B:312:ILE:HG13	1.84	0.59
1:B:203:PHE:HE2	1:B:279:LYS:HG2	1.68	0.58
1:A:280:PHE:O	1:A:284:ILE:HG12	2.04	0.57
1:B:279:LYS:O	1:B:283:ILE:HG13	2.06	0.56
1:A:283:ILE:O	1:A:284:ILE:C	2.50	0.54
1:A:277:LEU:HB3	1:A:281:ARG:HH22	1.74	0.53
1:A:182:ALA:O	1:A:186:VAL:HG23	2.09	0.52
1:A:187:LYS:HA	1:A:190:VAL:HG22	1.92	0.52
1:A:311:LEU:HD21	1:A:314:GLU:HA	1.92	0.51
1:B:408:ASP:OD2	1:B:457:ARG:NH2	2.43	0.50
1:B:209:LEU:HD21	1:B:381:HIS:HB3	1.94	0.49
1:B:260:ASN:ND2	1:B:262:LEU:H	2.10	0.49
1:A:193:LEU:HD22	1:A:284:ILE:HD12	1.94	0.49
1:A:198:LYS:HG3	1:A:206:VAL:HG12	1.94	0.49
1:B:220:ILE:HD11	1:B:415:TYR:CD1	2.47	0.48
1:B:260:ASN:C	1:B:260:ASN:HD22	2.20	0.48
1:A:496:ILE:O	1:A:501:LYS:NZ	2.47	0.48
1:B:288:ILE:HG23	1:B:296:VAL:HG23	1.95	0.48
1:A:279:LYS:O	1:A:283:ILE:HG12	2.15	0.46
1:B:241:GLU:OE2	1:B:246:ARG:N	2.47	0.46
1:B:338:LEU:HD13	1:B:484:PHE:CE2	2.51	0.45
1:B:218:VAL:HG23	1:B:219:LYS:HG3	1.99	0.45
1:B:164:LYS:NZ	1:B:519:PHE:HB2	2.32	0.45
1:B:245:THR:C	1:B:247:ALA:H	2.25	0.44
1:A:225:GLU:HG2	1:A:317:SER:HB2	1.99	0.44
1:A:209:LEU:HD12	1:A:231:LYS:HB3	2.00	0.44
1:B:220:ILE:HD12	1:B:221:SER:N	2.32	0.44
1:B:363:HIS:H	1:B:363:HIS:CD2	2.35	0.44
1:A:397:CYS:HA	1:A:403:LYS:HD3	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:260:ASN:HD22	1:B:262:LEU:H	1.66	0.43
1:A:187:LYS:HA	1:A:187:LYS:HD2	1.85	0.43
1:B:242:TYR:O	1:B:243:SER:C	2.61	0.43
1:A:215:TYR:HB2	1:A:226:PHE:HD2	1.83	0.42
1:B:435:SER:OG	2:B:601:A1EAH:N4	2.51	0.42
1:B:164:LYS:NZ	1:B:516:PHE:O	2.48	0.42
1:B:284:ILE:O	1:B:288:ILE:HG12	2.19	0.42
1:A:435:SER:OG	2:A:601:A1EAH:N5	2.53	0.42
1:A:413:MET:HB3	1:A:438:VAL:HG13	2.02	0.41
1:A:419:GLN:HB3	1:A:518:VAL:HG22	2.01	0.41
1:A:215:TYR:HB2	1:A:226:PHE:CD2	2.54	0.41
1:A:273:ALA:N	1:A:373:GLU:OE1	2.53	0.41
1:B:428:LYS:H	1:B:428:LYS:HG2	1.70	0.41
1:A:209:LEU:HA	1:A:231:LYS:HD3	2.03	0.41
1:A:240:GLU:HB3	1:A:250:PHE:HB2	2.04	0.40
1:A:277:LEU:HB3	1:A:281:ARG:NH2	2.36	0.40

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	306/366 (84%)	301 (98%)	4 (1%)	1 (0%)	37	42
1	B	317/366 (87%)	311 (98%)	5 (2%)	1 (0%)	37	42
All	All	623/732 (85%)	612 (98%)	9 (1%)	2 (0%)	37	42

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	345	SER
1	B	345	SER

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	279/336 (83%)	273 (98%)	6 (2%)	47	61
1	B	292/336 (87%)	287 (98%)	5 (2%)	56	71
All	All	571/672 (85%)	560 (98%)	11 (2%)	52	67

All (11) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	173	LYS
1	A	175	SER
1	A	180	SER
1	A	264	GLN
1	A	283	ILE
1	A	387	LEU
1	B	209	LEU
1	B	231	LYS
1	B	284	ILE
1	B	308	VAL
1	B	317	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (5) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	224	ASN
1	A	238	GLN
1	B	238	GLN
1	B	260	ASN
1	B	363	HIS

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

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	$\#|Z| > 2$
2	A1EAH	B	601	-	37,45,45	0.70	0	33,67,67	0.91	2 (6%)
2	A1EAH	A	601	-	37,45,45	0.69	0	33,67,67	0.99	3 (9%)

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	A1EAH	B	601	-	-	3/12/20/20	0/7/7/7
2	A1EAH	A	601	-	-	5/12/20/20	0/7/7/7

There are no bond length outliers.

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	601	A1EAH	C20-C19-C17	-2.24	116.85	120.08
2	B	601	A1EAH	C3-C4-C5	-2.23	116.87	120.08
2	B	601	A1EAH	C20-C19-C17	-2.23	116.88	120.08
2	A	601	A1EAH	C12-C11-C13	2.18	118.02	113.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	601	A1EAH	C3-C4-C5	-2.08	117.09	120.08

There are no chirality outliers.

All (8) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	601	A1EAH	C13-C11-C9-C10
2	A	601	A1EAH	C9-C11-C12-C14
2	A	601	A1EAH	C9-C11-C12-C15
2	B	601	A1EAH	C13-C11-C9-C10
2	B	601	A1EAH	C9-C11-C12-C14
2	A	601	A1EAH	C9-C11-C13-C26
2	A	601	A1EAH	C12-C11-C9-C10
2	B	601	A1EAH	C13-C11-C9-C8

There are no ring outliers.

2 monomers are involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	601	A1EAH	1	0
2	A	601	A1EAH	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 A1EAH B 601

Bond lengths

Bond angles

Torsions

Rings

Ligand A1EAH A 601

Bond lengths

Bond angles

Torsions

Rings
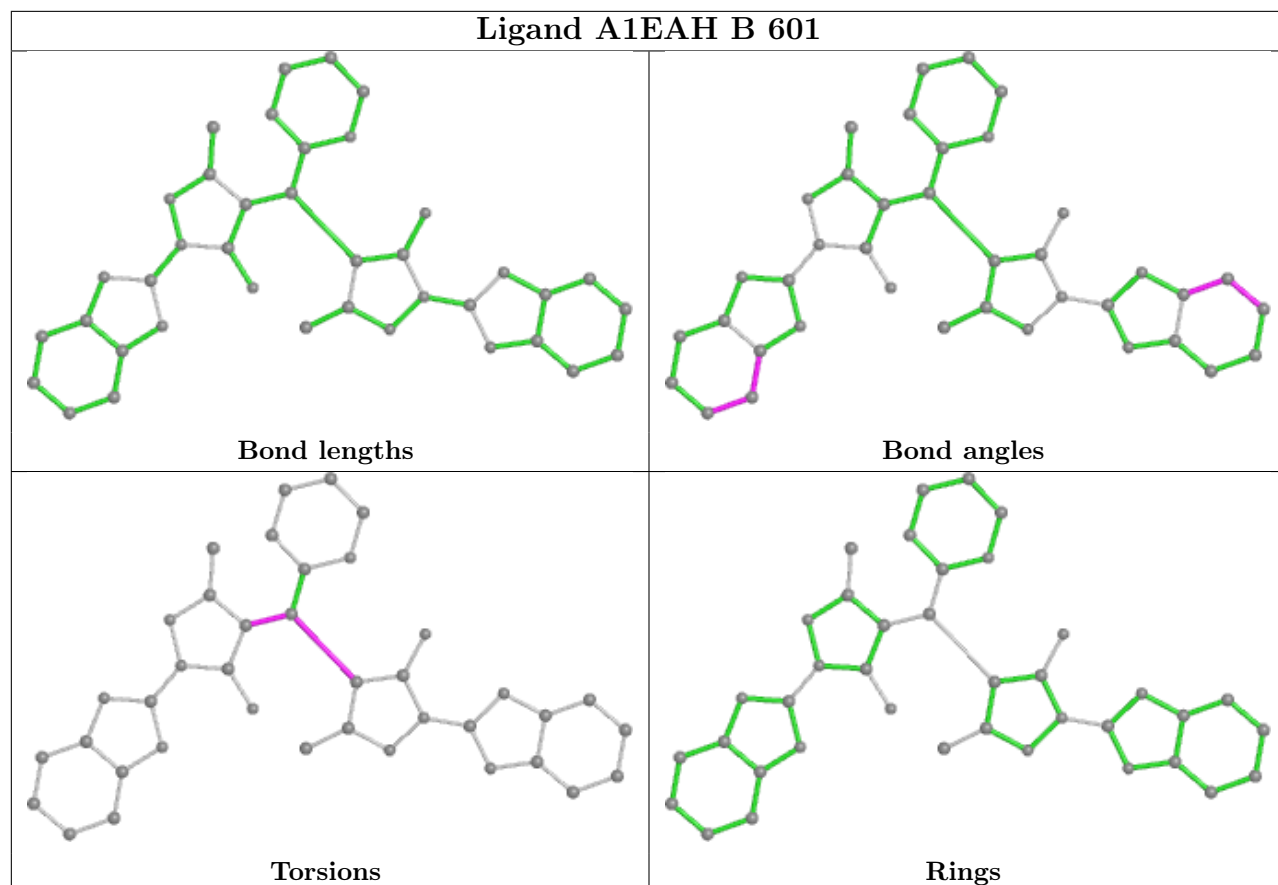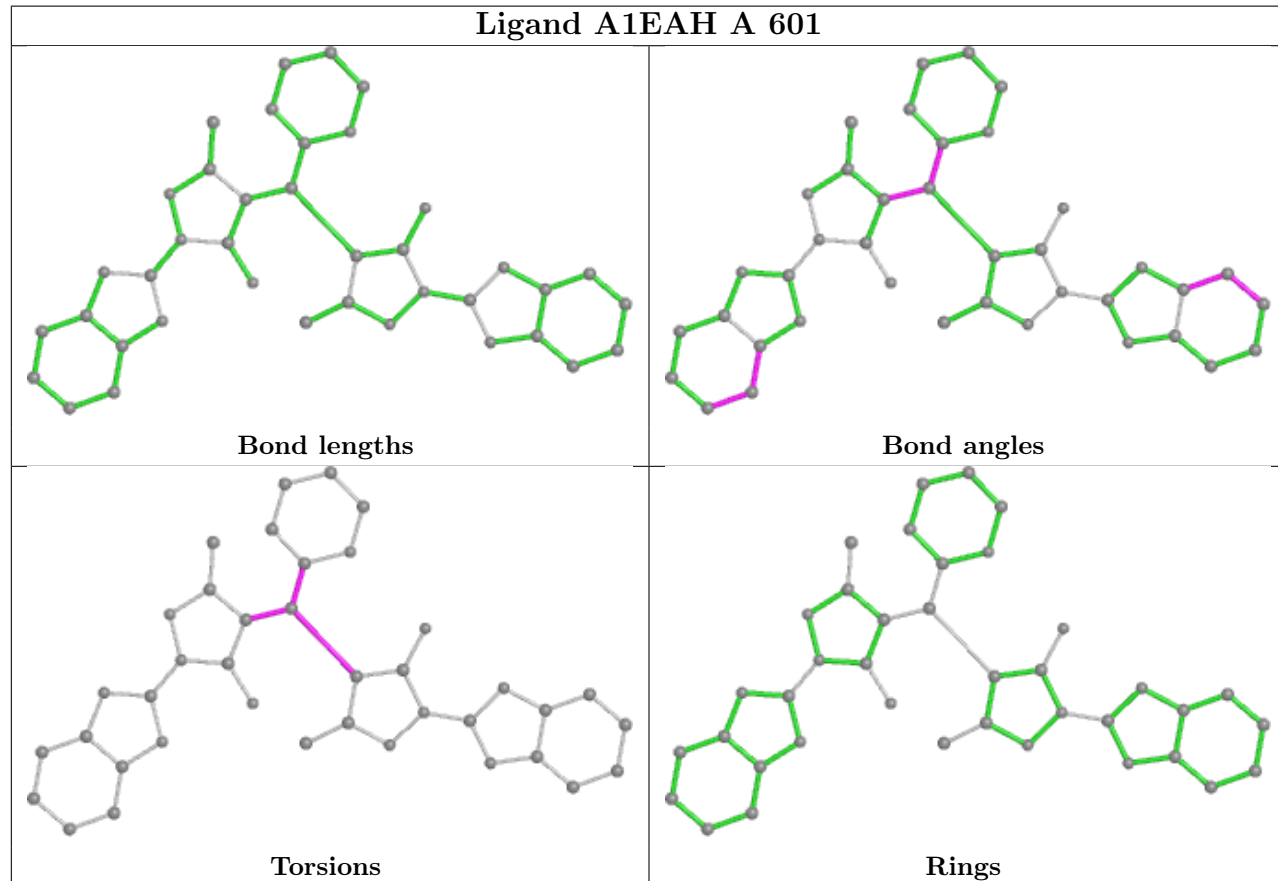
5.7 Other polymers ⓘ

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	324/366 (88%)	0.76	55 (16%)	5	4	19, 44, 75, 89	0
1	B	335/366 (91%)	0.66	40 (11%)	10	8	18, 42, 73, 95	0
All	All	659/732 (90%)	0.71	95 (14%)	7	6	18, 43, 74, 95	0

All (95) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	181	THR	6.9
1	B	305	SER	5.7
1	B	179	ILE	5.3
1	A	174	LEU	5.0
1	B	161	GLY	4.9
1	B	297	ILE	4.8
1	A	179	ILE	4.6
1	A	175	SER	4.2
1	B	210	ASN	4.0
1	A	184	GLY	3.8
1	A	320	ILE	3.7
1	A	300	ARG	3.7
1	B	290	ASP	3.7
1	B	365	LYS	3.6
1	B	300	ARG	3.6
1	B	306	PRO	3.6
1	A	237	ILE	3.5
1	A	189	VAL	3.5
1	A	284	ILE	3.5
1	A	234	VAL	3.4
1	A	307	ALA	3.4
1	A	253	PHE	3.3
1	A	188	GLY	3.3
1	B	288	ILE	3.2

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Mol	Chain	Res	Type	RSRZ
1	A	262	LEU	3.2
1	B	214	TYR	3.2
1	B	178	ASP	3.2
1	A	314	GLU	3.2
1	A	312	ILE	3.1
1	A	240	GLU	3.1
1	B	316	ILE	3.1
1	B	267	GLU	3.0
1	A	426	ASP	3.0
1	A	308	VAL	3.0
1	A	182	ALA	3.0
1	B	209	LEU	2.9
1	B	185	MET	2.9
1	A	225	GLU	2.9
1	B	192	HIS	2.9
1	B	183	ALA	2.8
1	A	364	ALA	2.7
1	A	220	ILE	2.7
1	B	431	ASP	2.7
1	B	307	ALA	2.7
1	A	209	LEU	2.6
1	B	308	VAL	2.6
1	A	202	ALA	2.6
1	B	314	GLU	2.6
1	A	305	SER	2.6
1	B	215	TYR	2.5
1	B	271	LEU	2.5
1	A	195	LEU	2.5
1	A	190	VAL	2.5
1	B	182	ALA	2.5
1	A	311	LEU	2.5
1	A	193	LEU	2.4
1	A	280	PHE	2.4
1	A	322	LEU	2.4
1	B	174	LEU	2.4
1	A	270	ILE	2.4
1	A	186	VAL	2.4
1	B	310	LEU	2.4
1	A	183	ALA	2.4
1	B	162	ALA	2.4
1	A	226	PHE	2.4
1	B	426	ASP	2.4

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Mol	Chain	Res	Type	RSRZ
1	A	371	GLN	2.4
1	A	310	LEU	2.4
1	A	250	PHE	2.3
1	A	316	ILE	2.3
1	A	192	HIS	2.3
1	A	181	THR	2.3
1	A	265	PHE	2.3
1	B	191	ASP	2.3
1	A	161	GLY	2.3
1	B	266	LEU	2.3
1	B	268	GLY	2.3
1	A	197	LEU	2.3
1	A	457	ARG	2.3
1	A	194	LEU	2.2
1	B	199	CYS	2.2
1	A	180	SER	2.2
1	A	318	VAL	2.2
1	B	296	VAL	2.2
1	B	428	LYS	2.2
1	A	317	SER	2.2
1	A	298	MET	2.2
1	B	298	MET	2.1
1	A	269	GLU	2.1
1	A	281	ARG	2.1
1	A	261	PRO	2.1
1	B	304	GLY	2.0
1	A	187	LYS	2.0
1	B	260	ASN	2.0
1	B	360	VAL	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 (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
2	A1EAH	B	601	39/39	0.89	0.12	24,37,60,69	0
2	A1EAH	A	601	39/39	0.90	0.11	28,42,63,68	0
3	ZN	B	602	1/1	0.93	0.04	24,24,24,24	0
3	ZN	A	602	1/1	0.97	0.03	25,25,25,25	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.
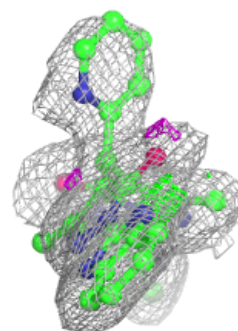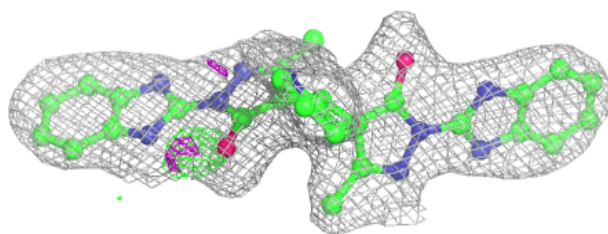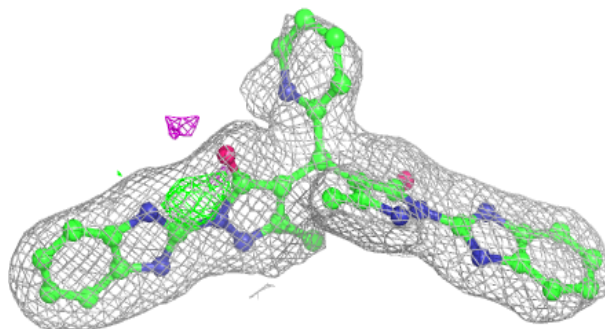
Electron density around A1EAH B 601:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative) and green (positive)
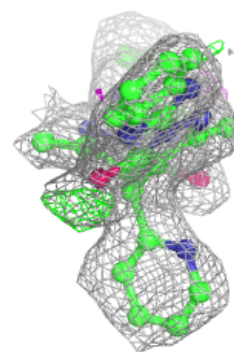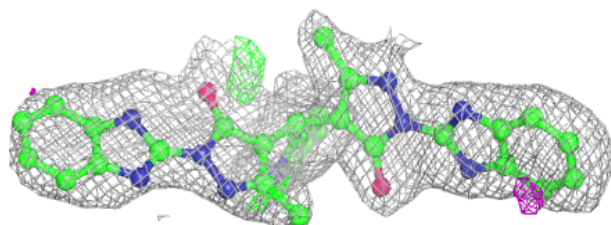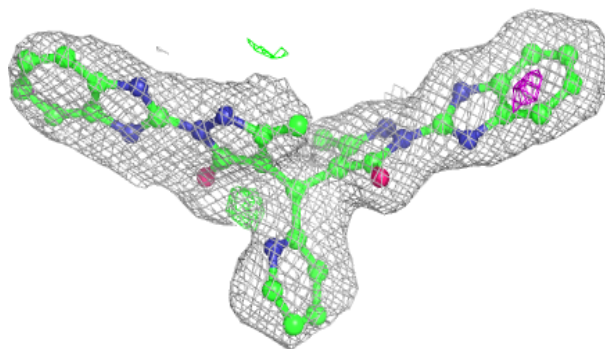
Electron density around A1EAH A 601:

$2mF_o-DF_c$ (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.