Full wwPDB X-ray Structure Validation Report (i)

Jun 9, 2025 – 12:17 PM EDT

PDB ID	:	9DIH / pdb_00009dih
Title	:	CBASS Pseudomonas syringae Cap5 tetramer with DNA duplex and 3'2'-c-diAMP cyclic dinucleotide ligand
Authors	:	Rechkoblit, O.; Aggarwal, A.K.
Deposited on	:	2024-09-05
Resolution	:	1.94 Å(reported)

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

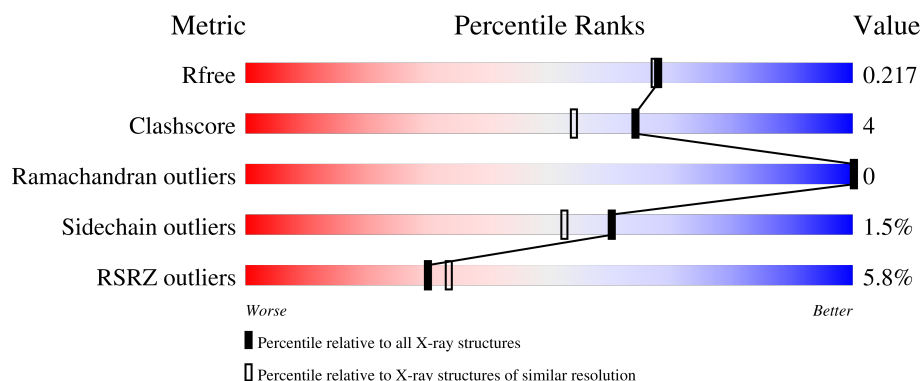|		
MolProbity	:	4-5-2 with Phenix2.0rc1
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0rc1
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.006 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.43.1

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 1.94 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		0.217
Clashscore		4
Ramachandran outliers		0
Sidechain outliers		1.5%
RSRZ outliers		5.8%

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	1306 (1.94-1.94)
Clashscore	180529	1400 (1.94-1.94)
Ramachandran outliers	177936	1387 (1.94-1.94)
Sidechain outliers	177891	1387 (1.94-1.94)
RSRZ outliers	164620	1306 (1.94-1.94)

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	388	5% / 89% / 6% / 5%
1	B	388	5% / 85% / 11% / · ·
2	D	19	26% / 53% / 47%

2 Entry composition ⓘ

There are 6 unique types of molecules in this entry. The entry contains 13132 atoms, of which 6108 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 HNH endonuclease.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	370	Total 5677	C 1801	H 2813	N 514	O 539	S 10	0	0	0
1	B	374	Total 5698	C 1819	H 2809	N 518	O 542	S 10	0	0	0

There are 2 discrepancies between the modelled and reference sequences:

| Chain	Residue	Modelled	Actual	Comment	Reference
A	56	ALA	HIS	engineered mutation	UNP A0A2P0QGK5
B	56	ALA	HIS	engineered mutation	UNP A0A2P0QGK5

- Molecule 2 is a DNA chain called DNA (5'-D(*TP*TP*GP*CP*TP*CP*TP*CP*TP*TP* AP*AP*GP*AP*GP*AP*GP*CP*A)-3').

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
2	D	19	Total 1206	C 372	H 434	N 138	O 226	P 36	0	19	0

- 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 Cyclic (adenosine-(2'-5')-monophosphate-adenosine-(3'-5')-monophosphate (CCD ID: Y4F) (formula: $C_{20}H_{24}N_{10}O_{12}P_2$) (labeled as "Ligand of Interest" by depositor).

Y4F
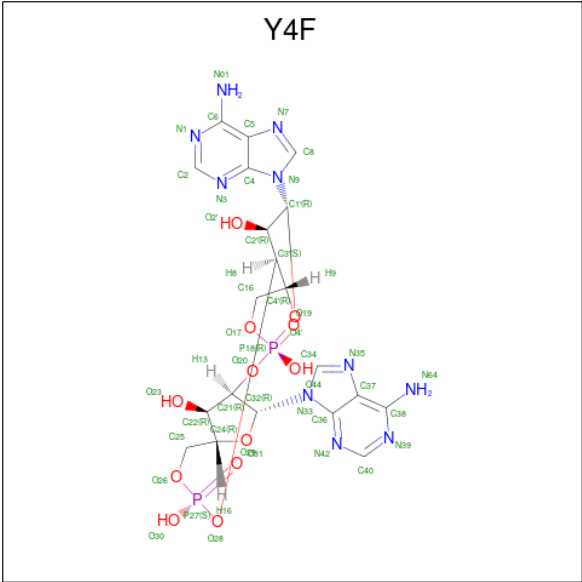
Mol	Chain	Residues	Atoms							ZeroOcc	AltConf
4	A	1	Total	C	H	N	O	P		0	0
			66	20	22	10	12	2			
4	B	1	Total	C	H	N	O	P		0	0
			66	20	22	10	12	2			

• Molecule 5 is GLYCEROL (CCD ID: GOL) (formula: $C_3H_8O_3$).

GOL

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
5	B	1	Total	C	H	O	0	0
			14	3	8	3		

• Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	201	Total 201	O 201	0	0
6	B	200	Total 200	O 200	0	0
6	D	2	Total 2	O 2	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: HNH endonuclease

Chain A:

• Molecule 1: HNH endonuclease

Chain B:
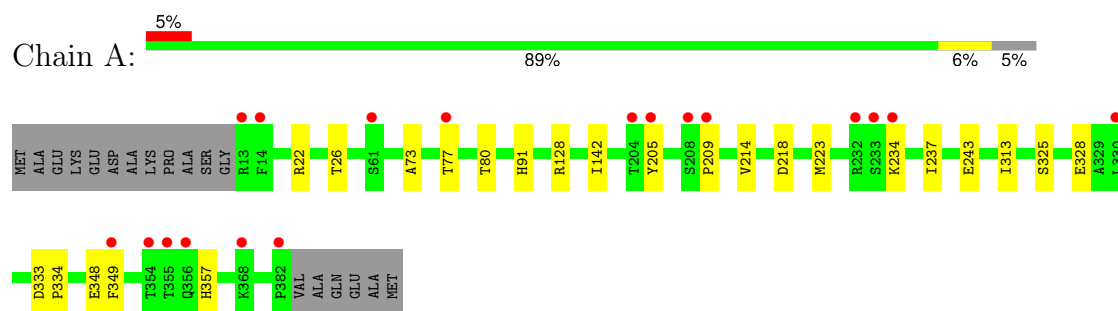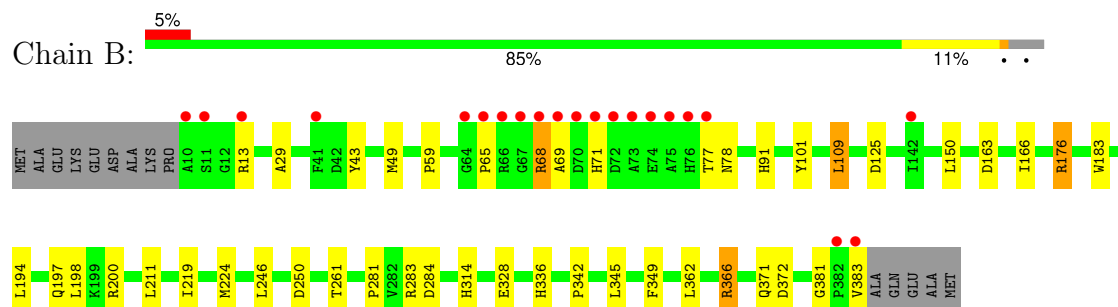
• Molecule 2: DNA (5'-D(*TP*TP*GP*CP*TP*CP*TP*CP*TP*TP*AP*AP*GP*AP*GP*AP*GP*CP*A)-3')

Chain D:

4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	103.70Å 191.53Å 118.44Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	47.88 – 1.94 47.88 – 1.95	Depositor EDS
% Data completeness (in resolution range)	66.7 (47.88-1.94) 66.7 (47.88-1.95)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.42 (at 1.95Å)	Xtriage
Refinement program	PHENIX (1.20.1_4487: ???)	Depositor
R, R_{free}	0.171 , 0.218 0.172 , 0.217	Depositor DCC
R_{free} test set	84546 reflections (3.40%)	wwPDB-VP
Wilson B-factor (Å^2)	37.0	Xtriage
Anisotropy	0.016	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.40 , 55.2	EDS
L-test for twinning[2]	$< |L| > = 0.50$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.96	EDS
Total number of atoms	13132	wwPDB-VP
Average B, all atoms (Å^2)	54.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.40% 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: GOL, Y4F, 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	0.86	0/2932	0.75	0/3995
1	B	0.94	1/2958 (0.0%)	0.79	0/4030
2	D	0.39	0/864	0.48	0/1330
All	All	0.85	1/6754 (0.0%)	0.74	0/9355

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
1	B	0	4
All	All	0	5

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	219	ILE	CA-CB	6.04	1.58	1.53

There are no bond angle outliers.

There are no chirality outliers.

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	128	ARG	Sidechain
1	B	13	ARG	Sidechain
1	B	176	ARG	Sidechain
1	B	283	ARG	Sidechain

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Mol	Chain	Res	Type	Group
1	B	366	ARG	Sidechain

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	2864	2813	2809	17	0
1	B	2889	2809	2836	28	0
2	D	772	434	434	9	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
4	A	44	22	0	0	0
4	B	44	22	0	1	0
5	B	6	8	7	1	0
6	A	201	0	0	3	0
6	B	200	0	0	2	0
6	D	2	0	0	0	0
All	All	7024	6108	6086	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 4.

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)
2:D:13[A]:DG:H2"	2:D:14[A]:DA:O5'	1.98	0.63
2:D:12[A]:DA:H2'	2:D:13[A]:DG:C8	2.33	0.63
1:B:342:PRO:HD2	1:B:345:LEU:HD22	1.83	0.61
1:A:142:ILE:HD13	1:B:198:LEU:HD12	1.83	0.60
1:A:142:ILE:HD13	1:B:198:LEU:CD1	2.32	0.59
1:B:366:ARG:HD2	4:B:402:Y4F:C8	2.32	0.59
1:B:166:ILE:HD11	1:B:197:GLN:HG3	1.85	0.58
2:D:8[B]:DC:H2'	2:D:9[B]:DT:H71	1.85	0.57
1:A:223:MET:HE2	1:A:349:PHE:HD2	1.70	0.57
1:B:381:GLY:O	1:B:383:VAL:HG23	2.06	0.55
1:A:328:GLU:OE2	1:A:357:HIS:HB3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:223:MET:HE2	1:A:349:PHE:CD2	2.42	0.54
2:D:15[B]:DG:H1'	2:D:16[B]:DA:H5'	1.90	0.53
1:B:59:PRO:HB3	1:B:77:THR:HG22	1.90	0.53
1:B:183:TRP:CE3	1:B:224:MET:HG3	2.44	0.52
1:A:142:ILE:CD1	1:B:198:LEU:HD12	2.40	0.51
2:D:15[A]:DG:H2"	2:D:16[A]:DA:H5'	1.91	0.51
1:A:333:ASP:HB3	1:A:334:PRO:HD2	1.91	0.51
1:B:43:TYR:HB2	1:B:49:MET:HG2	1.93	0.50
1:B:91:HIS:HE1	6:B:658:HOH:O	1.96	0.47
1:B:69:ALA:HB1	1:B:71:HIS:O	2.14	0.47
1:B:250:ASP:OD1	1:B:250:ASP:C	2.55	0.47
1:A:22:ARG:HG2	6:A:504:HOH:O	2.16	0.45
1:B:77:THR:HG21	1:B:101:TYR:CE2	2.51	0.45
1:B:328:GLU:OE1	5:B:403:GOL:H31	2.16	0.45
1:B:281:PRO:HG2	1:B:284:ASP:CG	2.41	0.45
1:A:91:HIS:HE1	2:D:12[B]:DA:H5'	1.81	0.45
1:A:80:THR:OG1	6:A:501:HOH:O	2.20	0.45
1:A:205:TYR:HB3	1:A:209:PRO:HB3	1.98	0.45
1:B:109:LEU:C	1:B:109:LEU:HD23	2.41	0.45
1:A:73:ALA:O	1:A:77:THR:HG23	2.17	0.44
1:B:150:LEU:HA	1:B:246:LEU:HD13	1.99	0.44
1:B:194:LEU:HD11	1:B:211:LEU:HD22	2.00	0.43
2:D:14[B]:DA:H2"	2:D:15[B]:DG:H5'	2.01	0.43
1:A:313:ILE:CG2	1:A:348:GLU:HG3	2.49	0.42
1:A:214:VAL:O	1:A:214:VAL:HG13	2.19	0.42
1:B:65:PRO:O	1:B:68:ARG:HB2	2.19	0.42
1:B:163:ASP:OD2	1:B:200:ARG:NH2	2.47	0.42
1:B:371:GLN:O	1:B:372:ASP:HB2	2.20	0.42
1:B:91:HIS:CE1	6:B:658:HOH:O	2.72	0.42
1:B:281:PRO:HG2	1:B:284:ASP:OD2	2.20	0.41
1:B:349:PHE:HD1	1:B:349:PHE:O	2.03	0.41
2:D:17[A]:DG:C2	2:D:18[A]:DC:C2	3.08	0.41
2:D:12[B]:DA:H2'	2:D:13[B]:DG:C8	2.55	0.41
1:A:26:THR:O	1:B:29:ALA:HA	2.21	0.41
1:A:237:ILE:HG22	6:A:632:HOH:O	2.21	0.40
1:A:243:GLU:HG3	1:B:314:HIS:CD2	2.56	0.40
1:B:336:HIS:CD2	1:B:362:LEU:HD12	2.56	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	368/388 (95%)	356 (97%)	12 (3%)	0	100	100
1	B	372/388 (96%)	358 (96%)	14 (4%)	0	100	100
All	All	740/776 (95%)	714 (96%)	26 (4%)	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	302/316 (96%)	299 (99%)	3 (1%)	73	68
1	B	304/316 (96%)	298 (98%)	6 (2%)	50	38
All	All	606/632 (96%)	597 (98%)	9 (2%)	60	52

All (9) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	218	ASP
1	A	234	LYS
1	A	325	SER
1	B	68	ARG
1	B	78	ASN
1	B	109	LEU
1	B	125	ASP
1	B	176	ARG

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Mol	Chain	Res	Type
1	B	261	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (13) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	137	GLN
1	A	184	GLN
1	A	358	GLN
1	A	376	GLN
1	B	71	HIS
1	B	76	HIS
1	B	78	ASN
1	B	91	HIS
1	B	111	GLN
1	B	140	GLN
1	B	184	GLN
1	B	241	HIS
1	B	244	HIS

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 ⓘ

Of 5 ligands modelled in this entry, 2 are monoatomic - leaving 3 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	#$|Z| > 2$
5	GOL	B	403	-	5,5,5	2.30	1 (20%)	5,5,5	0.70	0
4	Y4F	B	402	-	42,50,50	1.41	4 (9%)	51,78,78	1.19	3 (5%)
4	Y4F	A	402	-	42,50,50	1.23	4 (9%)	51,78,78	1.49	9 (17%)

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
5	GOL	B	403	-	-	3/4/4/4	-
4	Y4F	B	402	-	-	3/22/62/62	0/6/7/7
4	Y4F	A	402	-	-	1/22/62/62	0/6/7/7

All (9) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	B	403	GOL	O2-C2	-4.96	1.29	1.43
4	B	402	Y4F	C36-N42	4.90	1.42	1.35
4	A	402	Y4F	C40-N39	-3.84	1.27	1.33
4	B	402	Y4F	C40-N42	3.78	1.37	1.32
4	A	402	Y4F	C40-N42	3.34	1.37	1.32
4	B	402	Y4F	C40-N39	-3.31	1.28	1.33
4	B	402	Y4F	C38-N39	-3.15	1.24	1.36
4	A	402	Y4F	C38-N39	-2.83	1.25	1.36
4	A	402	Y4F	C36-N42	2.77	1.39	1.35

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	A	402	Y4F	N42-C40-N39	4.61	134.94	128.67
4	A	402	Y4F	C37-C38-N64	3.78	126.07	120.31
4	B	402	Y4F	C37-C38-N64	3.40	125.49	120.31
4	B	402	Y4F	N42-C40-N39	3.38	133.26	128.67
4	A	402	Y4F	O4'-C1'-N9	3.33	113.16	108.75
4	A	402	Y4F	O17-P18-O19	-2.43	99.32	108.94
4	A	402	Y4F	N64-C38-N39	-2.37	113.27	118.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	A	402	Y4F	O2'-C2'-C3'	2.37	117.82	111.19
4	A	402	Y4F	O44-P18-O19	2.26	122.97	112.44
4	A	402	Y4F	C5-C6-N01	2.26	123.76	120.31
4	A	402	Y4F	O28-P27-O29	-2.25	102.61	109.81
4	B	402	Y4F	O17-P18-O19	-2.10	100.63	108.94

There are no chirality outliers.

All (7) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	B	402	Y4F	C3'-O28-P27-O30
5	B	403	GOL	O1-C1-C2-O2
5	B	403	GOL	O1-C1-C2-C3
5	B	403	GOL	O2-C2-C3-O3
4	A	402	Y4F	C4'-C16-O17-P18
4	B	402	Y4F	C3'-O28-P27-O29
4	B	402	Y4F	C4'-C16-O17-P18

There are no ring outliers.

2 monomers are involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	B	403	GOL	1	0
4	B	402	Y4F	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 Y4F B 402

Bond lengths

Bond angles

Torsions

Rings

Ligand Y4F A 402
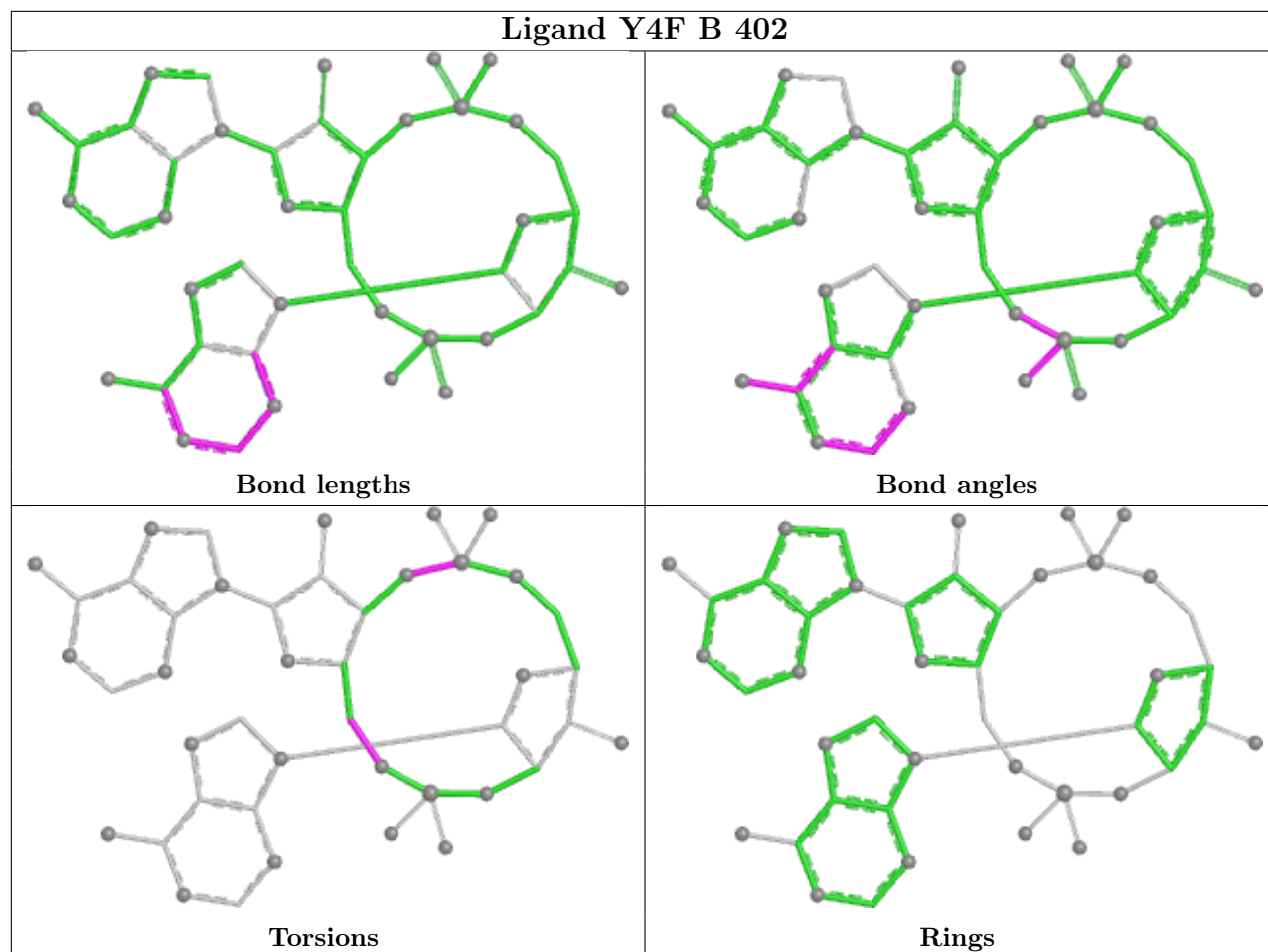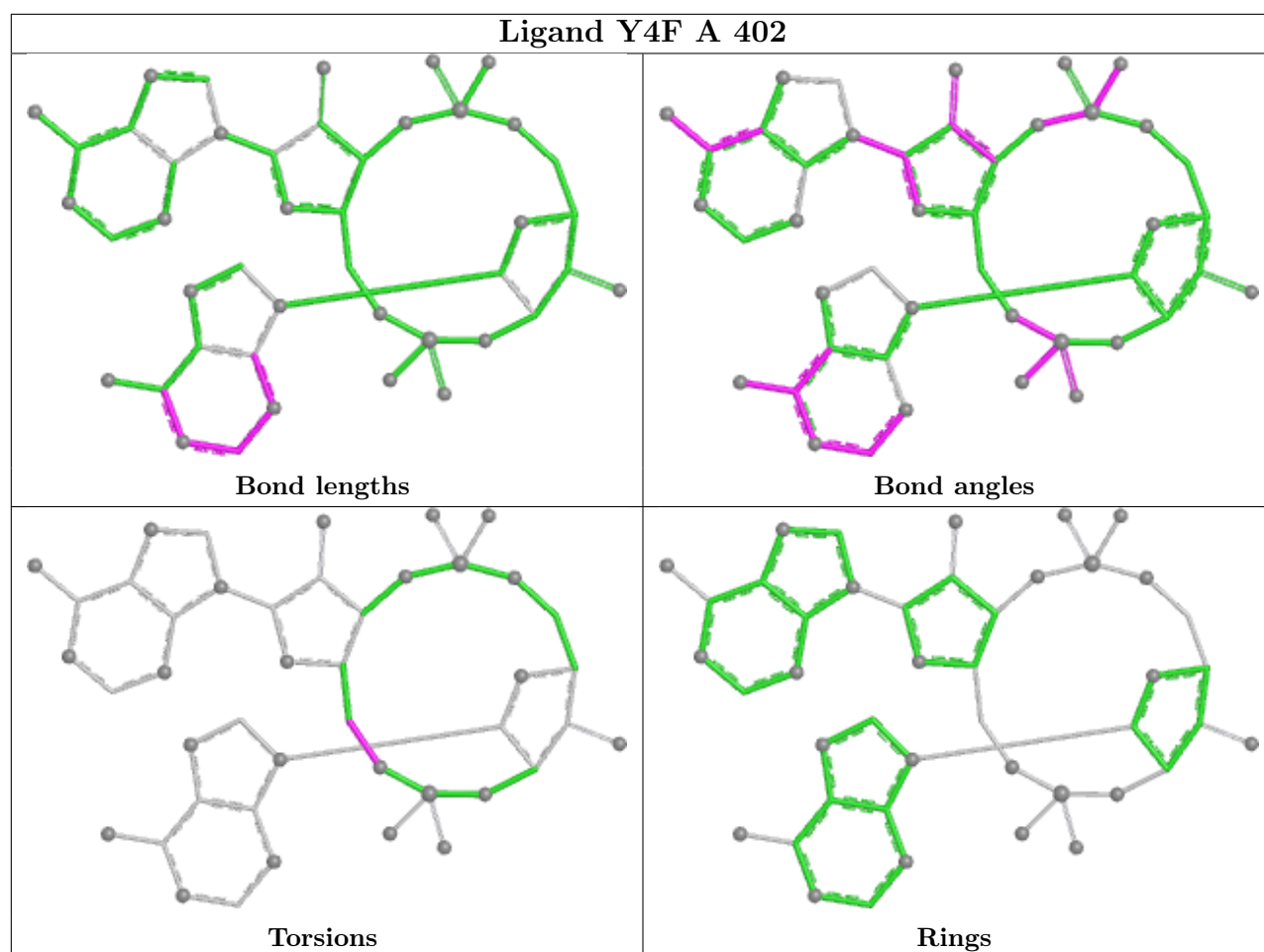
5.7 Other polymers ⓘ

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(Å^2)	Q<0.9
1	A	370/388 (95%)	-0.12	18 (4%)	36	40	28, 46, 88, 133	0
1	B	374/388 (96%)	-0.02	21 (5%)	31	35	29, 47, 95, 140	0
2	D	19/19 (100%)	1.77	5 (26%)	2	2	35, 50, 59, 62	19 (100%)
All	All	763/795 (95%)	-0.03	44 (5%)	30	33	28, 46, 92, 140	19 (2%)

All (44) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	383	VAL	8.8
1	B	73	ALA	6.6
1	A	14	PHE	5.9
1	B	69	ALA	5.9
1	B	66	ARG	5.8
1	B	10	ALA	5.1
1	B	72	ASP	4.9
1	A	13	ARG	4.9
1	B	71	HIS	4.7
1	B	75	ALA	4.6
1	B	65	PRO	4.2
1	A	233	SER	3.7
1	A	232	ARG	3.5
1	B	64	GLY	3.5
1	B	76	HIS	3.3
1	A	205	TYR	3.2
2	D	2[A]	DT	2.9
1	A	354	THR	2.9
1	B	67	GLY	2.9
2	D	15[A]	DG	2.8
1	B	68	ARG	2.7
1	A	355	THR	2.7
2	D	1[A]	DT	2.6

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Mol	Chain	Res	Type	RSRZ
1	A	77	THR	2.6
1	A	382	PRO	2.6
1	B	142	ILE	2.6
2	D	19[A]	DA	2.6
1	A	356	GLN	2.5
1	B	382	PRO	2.5
1	A	368	LYS	2.5
1	B	74	GLU	2.5
1	A	330	LEU	2.4
1	B	11	SER	2.3
1	B	77	THR	2.3
1	B	41	PHE	2.2
1	A	234	LYS	2.2
1	B	13	ARG	2.2
1	A	208	SER	2.2
1	A	209	PRO	2.1
1	B	70	ASP	2.1
1	A	61	SER	2.1
1	A	204	THR	2.1
2	D	7[A]	DT	2.0
1	A	349	PHE	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
5	GOL	B	403	6/6	0.94	0.10	38,49,69,69	0
4	Y4F	B	402	44/44	0.98	0.05	34,44,55,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
4	Y4F	A	402	44/44	0.99	0.04	22,29,39,45	0
3	ZN	A	401	1/1	0.99	0.02	33,33,33,33	0
3	ZN	B	401	1/1	0.99	0.03	44,44,44,44	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.
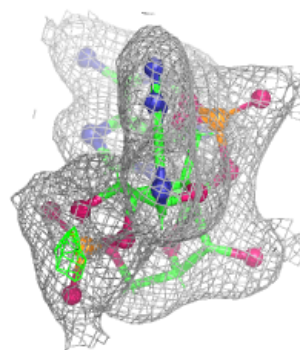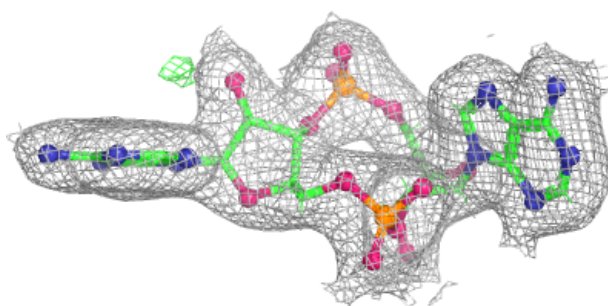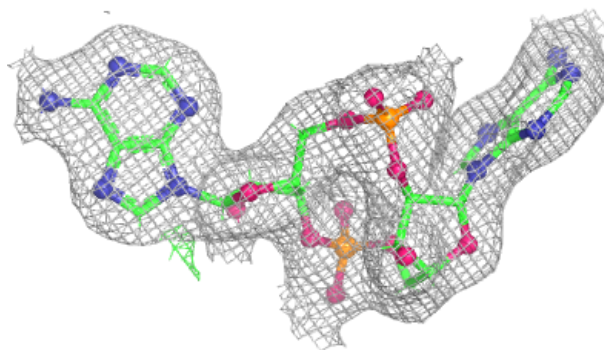
Electron density around Y4F B 402:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)
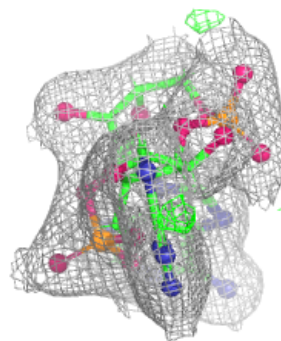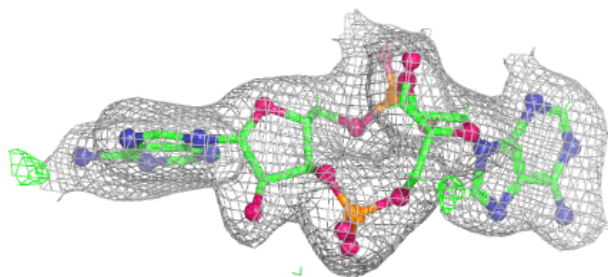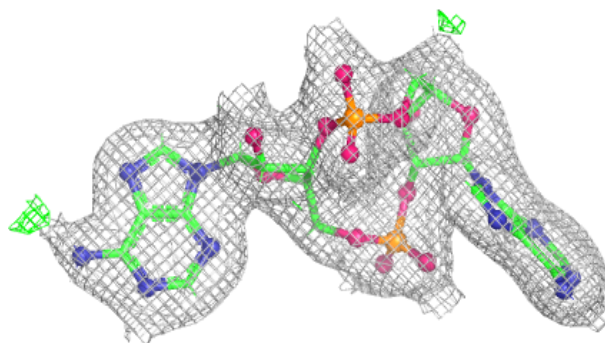
Electron density around Y4F A 402:

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

6.5 Other polymers ⓘ

There are no such residues in this entry.