Full wwPDB X-ray Structure Validation Report (i)

May 11, 2026 – 08:26 PM EDT

PDB ID	:	9YSH / pdb_00009ysh
Title	:	Allosteric inhibitor of human DNA polymerase theta
Authors	:	Mader, P.; Sicheri, F.
Deposited on	:	2025-10-18
Resolution	:	2.71 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

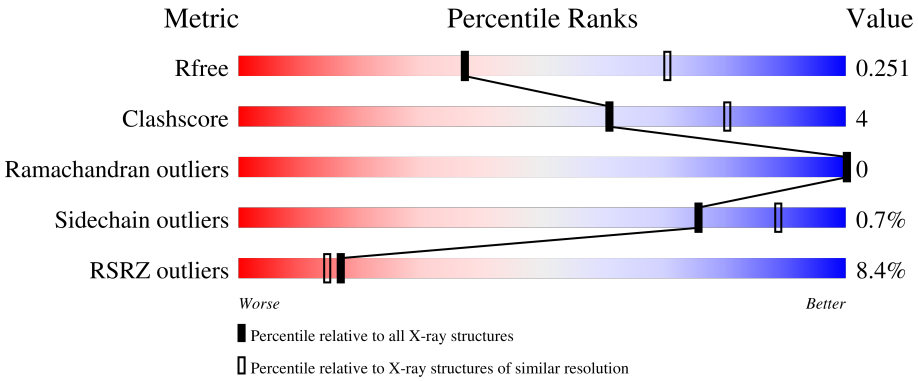
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.71 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}	180053	4348 (2.74-2.70)
Clashscore	190562	4665 (2.74-2.70)
Ramachandran outliers	187476	4584 (2.74-2.70)
Sidechain outliers	187428	4585 (2.74-2.70)
RSRZ outliers	180081	4348 (2.74-2.70)

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	668	3% 86% 10% .
1	D	668	14% 88% 9% .
2	B	17	59% 29% 12%
2	E	17	65% 12% 24%
3	C	13	46% 38% 15%

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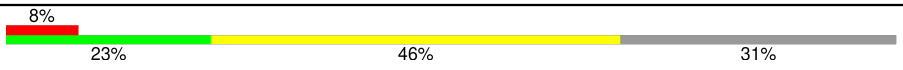
Mol	Chain	Length	Quality of chain
3	F	13	

2 Entry composition (i)

There are 8 unique types of molecules in this entry. The entry contains 10952 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 DNA polymerase theta.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	644	Total	C	N	O	S	0	0	0
			5008	3191	856	933	28			
1	D	646	Total	C	N	O	S	0	0	0
			4652	2952	796	876	28			

There are 214 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1	GLY	-	expression tag	UNP O75417
A	?	-	ALA	deletion	UNP O75417
A	?	-	THR	deletion	UNP O75417
A	?	-	ILE	deletion	UNP O75417
A	?	-	GLY	deletion	UNP O75417
A	?	-	SER	deletion	UNP O75417
A	?	-	ARG	deletion	UNP O75417
A	?	-	PHE	deletion	UNP O75417
A	?	-	LYS	deletion	UNP O75417
A	?	-	GLN	deletion	UNP O75417
A	?	-	ALA	deletion	UNP O75417
A	?	-	SER	deletion	UNP O75417
A	?	-	SER	deletion	UNP O75417
A	?	-	PRO	deletion	UNP O75417
A	?	-	GLN	deletion	UNP O75417
A	?	-	GLU	deletion	UNP O75417
A	?	-	ILE	deletion	UNP O75417
A	?	-	PRO	deletion	UNP O75417
A	?	-	ILE	deletion	UNP O75417
A	?	-	ARG	deletion	UNP O75417
A	?	-	ASP	deletion	UNP O75417
A	?	-	ASP	deletion	UNP O75417
A	?	-	GLN	deletion	UNP O75417
A	?	-	LYS	deletion	UNP O75417
A	?	-	HIS	deletion	UNP O75417

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Chain	Residue	Modelled	Actual	Comment	Reference
A	?	-	SER	deletion	UNP O75417
A	?	-	GLU	deletion	UNP O75417
A	?	-	ILE	deletion	UNP O75417
A	?	-	SER	deletion	UNP O75417
A	?	-	ALA	deletion	UNP O75417
A	?	-	SER	deletion	UNP O75417
A	?	-	LEU	deletion	UNP O75417
A	?	-	VAL	deletion	UNP O75417
A	?	-	PRO	deletion	UNP O75417
A	?	-	PRO	deletion	UNP O75417
A	?	-	MET	deletion	UNP O75417
A	?	-	LYS	deletion	UNP O75417
A	?	-	ASN	deletion	UNP O75417
A	?	-	GLN	deletion	UNP O75417
A	?	-	GLY	deletion	UNP O75417
A	?	-	SER	deletion	UNP O75417
A	?	-	LYS	deletion	UNP O75417
A	?	-	LYS	deletion	UNP O75417
A	?	-	THR	deletion	UNP O75417
A	?	-	LEU	deletion	UNP O75417
A	?	-	GLY	deletion	UNP O75417
A	?	-	SER	deletion	UNP O75417
A	?	-	THR	deletion	UNP O75417
A	?	-	ARG	deletion	UNP O75417
A	?	-	ARG	deletion	UNP O75417
A	?	-	GLY	deletion	UNP O75417
A	?	-	ILE	deletion	UNP O75417
A	?	-	ASP	deletion	UNP O75417
A	?	-	ASN	deletion	UNP O75417
A	?	-	GLY	deletion	UNP O75417
A	?	-	ARG	deletion	UNP O75417
A	?	-	LYS	deletion	UNP O75417
A	?	-	LEU	deletion	UNP O75417
A	?	-	ARG	deletion	UNP O75417
A	?	-	VAL	deletion	UNP O75417
A	?	-	GLY	deletion	UNP O75417
A	?	-	GLU	deletion	UNP O75417
A	?	-	SER	deletion	UNP O75417
A	?	-	PRO	deletion	UNP O75417
A	?	-	PRO	deletion	UNP O75417
A	?	-	SER	deletion	UNP O75417
A	?	-	GLN	deletion	UNP O75417

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Chain	Residue	Modelled	Actual	Comment	Reference
A	?	-	ALA	deletion	UNP O75417
A	?	-	VAL	deletion	UNP O75417
A	?	-	GLY	deletion	UNP O75417
A	?	-	LYS	deletion	UNP O75417
A	?	-	GLY	deletion	UNP O75417
A	?	-	LEU	deletion	UNP O75417
A	?	-	LEU	deletion	UNP O75417
A	?	-	PRO	deletion	UNP O75417
A	?	-	MET	deletion	UNP O75417
A	?	-	GLY	deletion	UNP O75417
A	?	-	ARG	deletion	UNP O75417
A	?	-	GLY	deletion	UNP O75417
A	?	-	LYS	deletion	UNP O75417
A	?	-	TYR	deletion	UNP O75417
A	?	-	LYS	deletion	UNP O75417
A	?	-	LYS	deletion	UNP O75417
A	?	-	GLY	deletion	UNP O75417
A	?	-	PHE	deletion	UNP O75417
A	?	-	SER	deletion	UNP O75417
A	?	-	VAL	deletion	UNP O75417
A	?	-	ASN	deletion	UNP O75417
A	?	-	PRO	deletion	UNP O75417
A	?	-	ARG	deletion	UNP O75417
A	?	-	CYS	deletion	UNP O75417
A	?	-	GLN	deletion	UNP O75417
A	?	-	ALA	deletion	UNP O75417
A	?	-	GLN	deletion	UNP O75417
A	?	-	MET	deletion	UNP O75417
A	?	-	GLU	deletion	UNP O75417
A	?	-	GLU	deletion	UNP O75417
A	?	-	ARG	deletion	UNP O75417
A	?	-	ALA	deletion	UNP O75417
A	?	-	LEU	deletion	UNP O75417
A	?	-	SER	deletion	UNP O75417
A	?	-	ARG	deletion	UNP O75417
A	?	-	LYS	deletion	UNP O75417
A	?	-	ARG	deletion	UNP O75417
A	?	-	LYS	deletion	UNP O75417
A	?	-	LEU	deletion	UNP O75417
A	?	-	GLN	deletion	UNP O75417
D	1	GLY	-	expression tag	UNP O75417
D	?	-	ALA	deletion	UNP O75417

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Chain	Residue	Modelled	Actual	Comment	Reference
D	?	-	THR	deletion	UNP O75417
D	?	-	ILE	deletion	UNP O75417
D	?	-	GLY	deletion	UNP O75417
D	?	-	SER	deletion	UNP O75417
D	?	-	ARG	deletion	UNP O75417
D	?	-	PHE	deletion	UNP O75417
D	?	-	LYS	deletion	UNP O75417
D	?	-	GLN	deletion	UNP O75417
D	?	-	ALA	deletion	UNP O75417
D	?	-	SER	deletion	UNP O75417
D	?	-	SER	deletion	UNP O75417
D	?	-	PRO	deletion	UNP O75417
D	?	-	GLN	deletion	UNP O75417
D	?	-	GLU	deletion	UNP O75417
D	?	-	ILE	deletion	UNP O75417
D	?	-	PRO	deletion	UNP O75417
D	?	-	ILE	deletion	UNP O75417
D	?	-	ARG	deletion	UNP O75417
D	?	-	ASP	deletion	UNP O75417
D	?	-	ASP	deletion	UNP O75417
D	?	-	GLN	deletion	UNP O75417
D	?	-	LYS	deletion	UNP O75417
D	?	-	HIS	deletion	UNP O75417
D	?	-	SER	deletion	UNP O75417
D	?	-	GLU	deletion	UNP O75417
D	?	-	ILE	deletion	UNP O75417
D	?	-	SER	deletion	UNP O75417
D	?	-	ALA	deletion	UNP O75417
D	?	-	SER	deletion	UNP O75417
D	?	-	LEU	deletion	UNP O75417
D	?	-	VAL	deletion	UNP O75417
D	?	-	PRO	deletion	UNP O75417
D	?	-	PRO	deletion	UNP O75417
D	?	-	MET	deletion	UNP O75417
D	?	-	LYS	deletion	UNP O75417
D	?	-	ASN	deletion	UNP O75417
D	?	-	GLN	deletion	UNP O75417
D	?	-	GLY	deletion	UNP O75417
D	?	-	SER	deletion	UNP O75417
D	?	-	LYS	deletion	UNP O75417
D	?	-	LYS	deletion	UNP O75417
D	?	-	THR	deletion	UNP O75417

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Chain	Residue	Modelled	Actual	Comment	Reference
D	?	-	LEU	deletion	UNP O75417
D	?	-	GLY	deletion	UNP O75417
D	?	-	SER	deletion	UNP O75417
D	?	-	THR	deletion	UNP O75417
D	?	-	ARG	deletion	UNP O75417
D	?	-	ARG	deletion	UNP O75417
D	?	-	GLY	deletion	UNP O75417
D	?	-	ILE	deletion	UNP O75417
D	?	-	ASP	deletion	UNP O75417
D	?	-	ASN	deletion	UNP O75417
D	?	-	GLY	deletion	UNP O75417
D	?	-	ARG	deletion	UNP O75417
D	?	-	LYS	deletion	UNP O75417
D	?	-	LEU	deletion	UNP O75417
D	?	-	ARG	deletion	UNP O75417
D	?	-	VAL	deletion	UNP O75417
D	?	-	GLY	deletion	UNP O75417
D	?	-	GLU	deletion	UNP O75417
D	?	-	SER	deletion	UNP O75417
D	?	-	PRO	deletion	UNP O75417
D	?	-	PRO	deletion	UNP O75417
D	?	-	SER	deletion	UNP O75417
D	?	-	GLN	deletion	UNP O75417
D	?	-	ALA	deletion	UNP O75417
D	?	-	VAL	deletion	UNP O75417
D	?	-	GLY	deletion	UNP O75417
D	?	-	LYS	deletion	UNP O75417
D	?	-	GLY	deletion	UNP O75417
D	?	-	LEU	deletion	UNP O75417
D	?	-	LEU	deletion	UNP O75417
D	?	-	PRO	deletion	UNP O75417
D	?	-	MET	deletion	UNP O75417
D	?	-	GLY	deletion	UNP O75417
D	?	-	ARG	deletion	UNP O75417
D	?	-	GLY	deletion	UNP O75417
D	?	-	LYS	deletion	UNP O75417
D	?	-	TYR	deletion	UNP O75417
D	?	-	LYS	deletion	UNP O75417
D	?	-	LYS	deletion	UNP O75417
D	?	-	GLY	deletion	UNP O75417
D	?	-	PHE	deletion	UNP O75417
D	?	-	SER	deletion	UNP O75417

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Chain	Residue	Modelled	Actual	Comment	Reference
D	?	-	VAL	deletion	UNP O75417
D	?	-	ASN	deletion	UNP O75417
D	?	-	PRO	deletion	UNP O75417
D	?	-	ARG	deletion	UNP O75417
D	?	-	CYS	deletion	UNP O75417
D	?	-	GLN	deletion	UNP O75417
D	?	-	ALA	deletion	UNP O75417
D	?	-	GLN	deletion	UNP O75417
D	?	-	MET	deletion	UNP O75417
D	?	-	GLU	deletion	UNP O75417
D	?	-	GLU	deletion	UNP O75417
D	?	-	ARG	deletion	UNP O75417
D	?	-	ALA	deletion	UNP O75417
D	?	-	LEU	deletion	UNP O75417
D	?	-	SER	deletion	UNP O75417
D	?	-	ARG	deletion	UNP O75417
D	?	-	LYS	deletion	UNP O75417
D	?	-	ARG	deletion	UNP O75417
D	?	-	LYS	deletion	UNP O75417
D	?	-	LEU	deletion	UNP O75417
D	?	-	GLN	deletion	UNP O75417

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	15	Total	C	N	O	P	0	0	0
			301	144	57	86	14			
2	E	13	Total	C	N	O	P	0	0	0
			263	126	51	74	12			

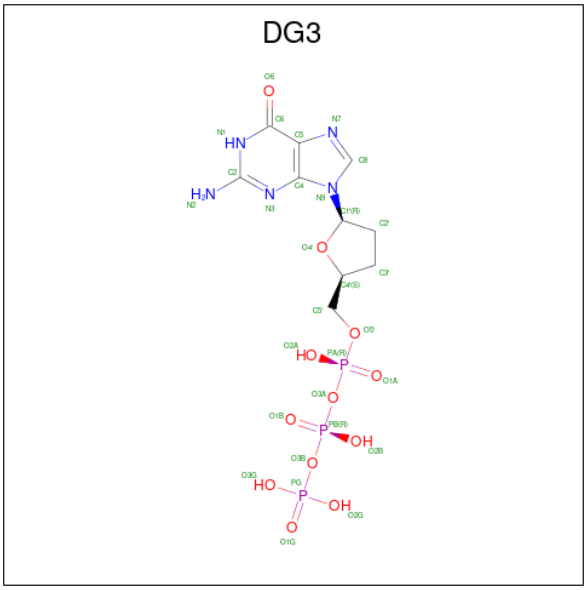
- Molecule 3 is a DNA chain called DNA (5'-D(*GP*GP*CP*TP*GP*TP*CP*AP*TP*TP*G)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	11	Total	C	N	O	P	0	0	0
			223	108	39	66	10			
3	F	9	Total	C	N	O	P	0	0	0
			182	88	29	56	9			

- Molecule 4 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

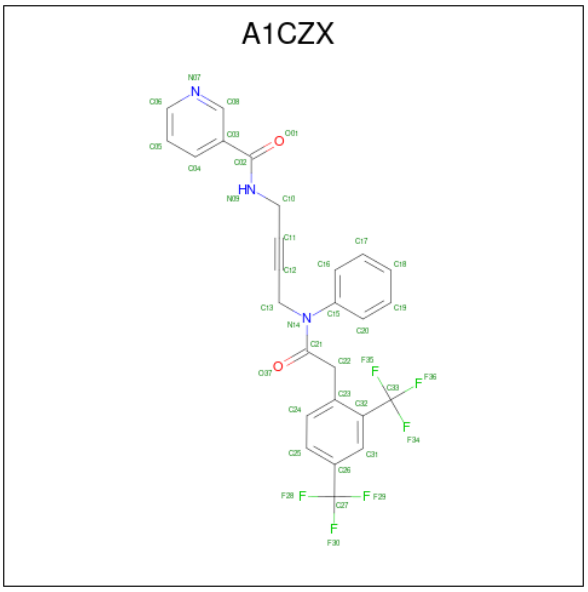
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total Mg 1 1	0	0
4	D	1	Total Mg 1 1	0	0

- Molecule 5 is 2'-3'-DIDEOXYGUANOSINE-5'-TRIPHOSPHATE (CCD ID: DG3) (formula: $C_{10}H_{16}N_5O_{12}P_3$).



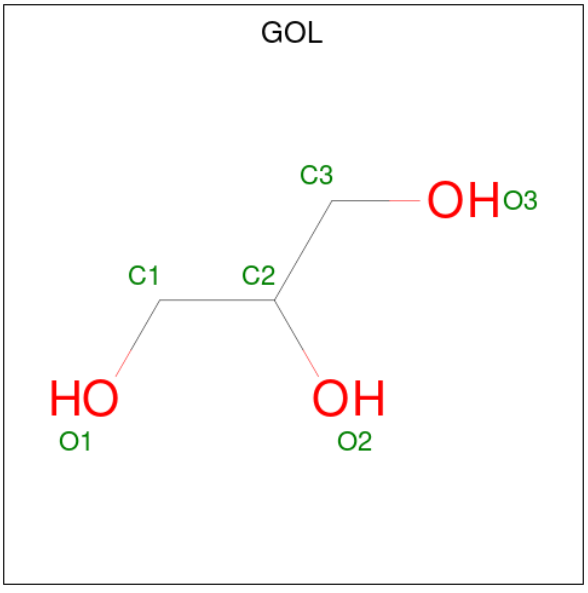
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	1	Total C N O P 30 10 5 12 3	0	0
5	F	1	Total C N O P 30 10 5 12 3	0	0

- Molecule 6 is N-(4-{2-[2,4-bis(trifluoromethyl)phenyl]-N-phenylacetamido}but-2-yn-1-yl)pyridine-3-carboxamide (CCD ID: A1CZX) (formula: $C_{26}H_{19}F_6N_3O_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
6	A	1	Total	C	F	N	O	0	0
			37	26	6	3	2		
6	A	1	Total	C	F	N	O	0	0
			37	26	6	3	2		
6	D	1	Total	C	F	N	O	0	0
			37	26	6	3	2		

- Molecule 7 is GLYCEROL (CCD ID: GOL) (formula: $C_3H_8O_3$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
7	A	1	Total	C	O	0	0
			6	3	3		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	C	1	Total C O 6 3 3	0	0
7	D	1	Total C O 6 3 3	0	0

- Molecule 8 is water.

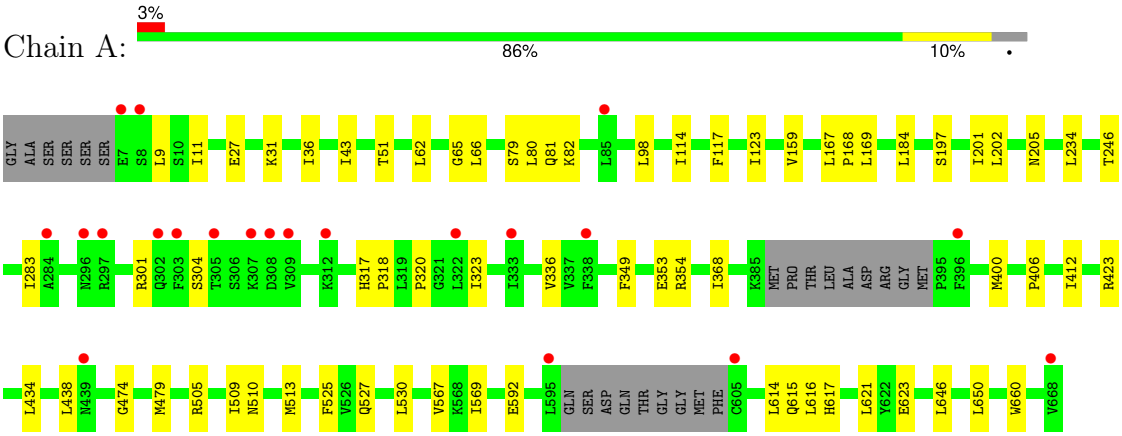
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
8	A	93	Total O 93 93	0	0
8	B	1	Total O 1 1	0	0
8	C	6	Total O 6 6	0	0
8	D	25	Total O 25 25	0	0
8	E	4	Total O 4 4	0	0
8	F	3	Total O 3 3	0	0

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.

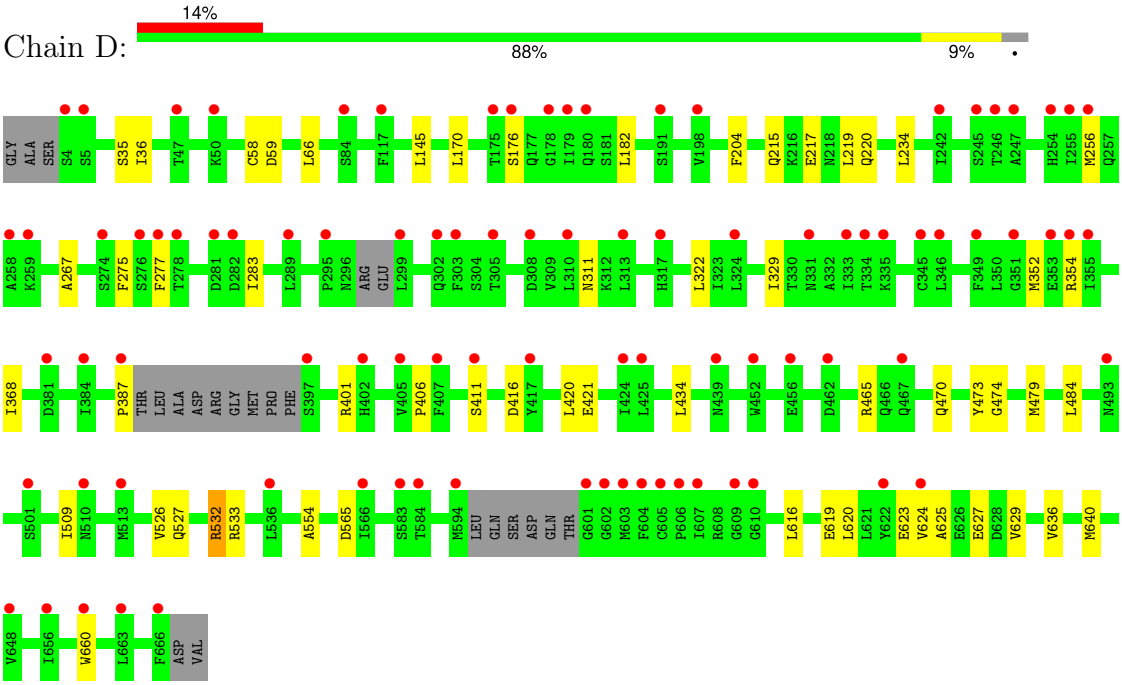
• Molecule 1: DNA polymerase theta

Chain A:



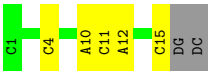
• Molecule 1: DNA polymerase theta

Chain D:



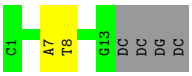
• Molecule 2: DNA (5'-D(*CP*GP*TP*CP*CP*AP*AP*TP*GP*AP*CP*AP*GP*CP*C)-3')

Chain B:



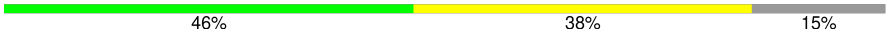
• Molecule 2: DNA (5'-D(*CP*GP*TP*CP*CP*AP*AP*TP*GP*AP*CP*AP*GP*CP*C)-3')

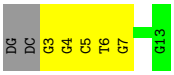
Chain E:



• Molecule 3: DNA (5'-D(*GP*GP*CP*TP*GP*TP*CP*AP*TP*TP*G)-3')

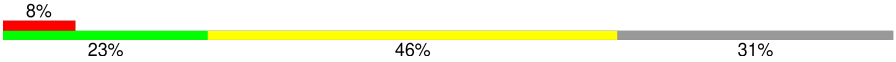
Chain C:





• Molecule 3: DNA (5'-D(*GP*GP*CP*TP*GP*TP*CP*AP*TP*TP*G)-3')

Chain F:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	249.13Å 66.63Å 151.94Å 90.00° 122.73° 90.00°	Depositor
Resolution (Å)	65.51 – 2.71 65.51 – 2.71	Depositor EDS
% Data completeness (in resolution range)	99.1 (65.51-2.71) 99.4 (65.51-2.71)	Depositor EDS
R_{merge}	0.12	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.35 (at 2.69Å)	Xtriage
Refinement program	PHENIX 1.21.2_5419+SVN	Depositor
R, R_{free}	0.220 , 0.251 0.222 , 0.251	Depositor DCC
R_{free} test set	2777 reflections (4.85%)	wwPDB-VP
Wilson B-factor (Å^2)	69.3	Xtriage
Anisotropy	0.118	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.32 , 66.4	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	10952	wwPDB-VP
Average B, all atoms (Å^2)	84.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.52% of the height of the origin peak. No significant pseudotranslation is detected.*

[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: A1CZX, DG3, MG, GOL

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	0.11	0/5106	0.26	0/6907
1	D	0.09	0/4742	0.24	0/6461
2	B	0.17	0/337	0.31	0/517
2	E	0.16	0/295	0.35	0/453
3	C	0.19	0/249	0.40	0/383
3	F	0.18	0/202	0.41	0/309
All	All	0.11	0/10931	0.26	0/15030

There are no bond length outliers.

There are no bond angle outliers.

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	5008	0	4927	39	0
1	D	4652	0	4184	33	0
2	B	301	0	169	5	0
2	E	263	0	147	1	0
3	C	223	0	125	3	0
3	F	182	0	102	5	0
4	A	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	D	1	0	0	0	0
5	A	30	0	12	1	0
5	F	30	0	12	3	0
6	A	74	0	0	0	0
6	D	37	0	0	0	0
7	A	6	0	8	0	0
7	C	6	0	8	0	0
7	D	6	0	8	0	0
8	A	93	0	0	2	0
8	B	1	0	0	0	0
8	C	6	0	0	0	0
8	D	25	0	0	1	0
8	E	4	0	0	0	0
8	F	3	0	0	0	0
All	All	10952	0	9702	86	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 (86) 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:B:10:DA:H2"	2:B:11:DC:H5"	1.73	0.70
1:D:277:PHE:HA	1:D:283:ILE:HD11	1.74	0.69
3:F:9:DC:H2'	3:F:10:DA:H8	1.59	0.68
1:D:527:GLN:HG2	1:D:533:ARG:HG2	1.77	0.67
1:A:51:THR:HB	1:A:82:LYS:HG2	1.77	0.66
1:D:620:LEU:HD12	1:D:640:MET:HE2	1.78	0.65
3:F:9:DC:H2'	3:F:10:DA:C8	2.31	0.65
1:D:256:MET:HE2	1:D:329:ILE:HG23	1.82	0.62
1:D:58:CYS:SG	1:D:59:ASP:N	2.74	0.60
1:A:616:LEU:HD11	1:A:660:TRP:HZ2	1.66	0.60
1:D:215:GLN:NE2	1:D:220:GLN:OE1	2.37	0.58
1:D:416:ASP:HB3	1:D:619:GLU:HB3	1.87	0.57
2:B:11:DC:H2"	2:B:12:DA:N7	2.20	0.56
1:D:267:ALA:HB1	1:D:275:PHE:HZ	1.72	0.55
1:A:283:ILE:HG23	1:A:323:ILE:HD13	1.88	0.54
1:A:474:GLY:HA3	1:A:479:MET:HE3	1.88	0.54
1:A:201:ILE:O	1:A:205:ASN:ND2	2.37	0.54
1:A:65:GLY:HA2	1:A:80:LEU:HG	1.90	0.53
1:A:301:ARG:HB3	1:A:304:SER:HB2	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:322:LEU:HD23	1:D:387:PRO:HD2	1.89	0.53
1:A:615:GLN:NE2	8:A:803:HOH:O	2.41	0.52
1:A:434:LEU:HD22	1:A:509:ILE:HD11	1.92	0.52
1:D:627:GLU:OE1	1:D:627:GLU:N	2.39	0.51
1:A:66:LEU:HD21	1:A:98:LEU:HD11	1.92	0.51
1:A:11:ILE:HD12	1:A:197:SER:HB3	1.92	0.51
2:B:11:DC:H2"	2:B:12:DA:C5	2.46	0.51
1:D:170:LEU:HD22	1:D:176:SER:HB3	1.93	0.51
1:D:616:LEU:HB3	1:D:619:GLU:HG2	1.94	0.50
1:D:532:ARG:NH1	1:D:565:ASP:OD1	2.45	0.49
1:A:354:ARG:HH22	1:A:623:GLU:CD	2.20	0.49
1:D:473:TYR:OH	5:F:101:DG3:O1B	2.28	0.49
1:A:159:VAL:HG21	1:A:202:LEU:HD13	1.95	0.48
3:C:3:DG:H2"	3:C:4:DG:C8	2.48	0.48
1:D:234:LEU:HD11	1:D:368:ILE:HD13	1.95	0.48
1:A:79:SER:OG	1:A:81:GLN:OE1	2.30	0.48
3:C:4:DG:H2"	3:C:5:DC:O5'	2.14	0.47
1:A:510:ASN:HA	1:A:513:MET:HE2	1.96	0.47
1:D:217:GLU:OE1	1:D:533:ARG:NH1	2.48	0.46
1:D:311:ASN:ND2	8:D:805:HOH:O	2.48	0.46
1:D:434:LEU:HD22	1:D:509:ILE:HD11	1.97	0.46
1:D:354:ARG:HH22	1:D:623:GLU:CD	2.24	0.46
1:D:636:VAL:HG13	1:D:640:MET:HE3	1.97	0.46
1:A:9:LEU:HD21	1:A:11:ILE:HD11	1.97	0.45
3:F:10:DA:H2'	3:F:11:DT:C6	2.52	0.45
1:A:614:LEU:HD23	1:A:621:LEU:HD22	1.99	0.45
1:D:416:ASP:OD1	1:D:416:ASP:N	2.46	0.45
1:D:465:ARG:NH2	5:F:101:DG3:O2G	2.44	0.45
1:D:35:SER:HB3	1:D:204:PHE:HB2	1.99	0.45
1:D:36:ILE:HG23	1:D:66:LEU:HD12	1.98	0.44
1:D:145:LEU:HG	1:D:219:LEU:HD13	1.97	0.44
1:D:421:GLU:CD	5:F:101:DG3:H2'1	2.41	0.44
1:A:27:GLU:O	1:A:31:LYS:HG2	2.18	0.44
1:D:474:GLY:HA3	1:D:479:MET:HE2	1.98	0.44
1:A:234:LEU:HD11	1:A:368:ILE:HD13	2.00	0.44
1:D:406:PRO:HG3	1:D:411:SER:HA	2.00	0.43
3:F:5:DC:H2"	3:F:6:DT:H5'	2.00	0.43
1:A:317:HIS:O	1:A:320:PRO:HD2	2.19	0.43
2:B:15:DC:H6	2:B:15:DC:H2'	1.67	0.43
1:A:283:ILE:HD12	1:A:323:ILE:HD13	2.01	0.43
1:A:114:ILE:HD12	1:A:117:PHE:HD1	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:123:ILE:HD12	1:A:184:LEU:HD22	2.02	0.42
1:A:567:VAL:HG21	1:A:617:HIS:O	2.19	0.42
3:C:6:DT:H2"	3:C:7:DG:N7	2.34	0.42
1:A:336:VAL:HG11	1:A:400:MET:HG2	2.01	0.42
1:A:423:ARG:HG2	1:A:438:LEU:HD13	2.01	0.42
1:D:526:VAL:HG11	1:D:554:ALA:HB1	2.02	0.42
1:D:624:VAL:HG13	1:D:629:VAL:HG22	2.01	0.42
1:D:625:ALA:O	1:D:629:VAL:HG23	2.20	0.42
1:A:246:THR:OG1	1:A:353:GLU:OE1	2.29	0.42
1:A:525:PHE:HE1	1:A:527:GLN:HE21	1.67	0.42
1:A:406:PRO:HA	1:A:623:GLU:OE1	2.20	0.42
1:A:474:GLY:HA2	2:B:4:DC:C2	2.55	0.42
3:F:8:DT:H2"	3:F:9:DC:C6	2.55	0.41
1:A:317:HIS:CG	1:A:318:PRO:HD2	2.56	0.41
1:A:167:LEU:N	1:A:168:PRO:HD2	2.35	0.41
1:A:406:PRO:HD3	1:A:412:ILE:HG12	2.03	0.41
1:D:401:ARG:O	1:D:660:TRP:HB3	2.20	0.41
1:A:530:LEU:HD21	1:A:569:ILE:HD11	2.03	0.41
5:A:702:DG3:H8	5:A:702:DG3:O5'	2.21	0.41
1:A:43:ILE:HD11	1:A:62:LEU:HD22	2.03	0.41
1:A:169:LEU:HD12	1:A:202:LEU:HD21	2.03	0.41
1:A:646:LEU:HD12	1:A:650:LEU:HD21	2.03	0.41
1:A:349:PHE:CE1	1:A:592:GLU:HG3	2.56	0.40
2:E:7:DA:H2'	2:E:8:DT:C6	2.56	0.40
1:A:617:HIS:HD2	8:A:803:HOH:O	2.04	0.40
1:D:479:MET:HE3	1:D:484:LEU:HD13	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	638/668 (96%)	628 (98%)	10 (2%)	0	100	100
1	D	638/668 (96%)	621 (97%)	17 (3%)	0	100	100
All	All	1276/1336 (96%)	1249 (98%)	27 (2%)	0	100	100

There are no Ramachandran outliers to report.

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	534/586 (91%)	532 (100%)	2 (0%)	84	92
1	D	430/586 (73%)	425 (99%)	5 (1%)	63	82
All	All	964/1172 (82%)	957 (99%)	7 (1%)	76	89

All (7) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	36	ILE
1	A	505	ARG
1	D	182	LEU
1	D	352	MET
1	D	420	LEU
1	D	470	GLN
1	D	532	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (8) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	18	GLN
1	A	156	HIS
1	A	419	GLN
1	A	510	ASN
1	A	638	ASN
1	D	22	GLN

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Mol	Chain	Res	Type
1	D	211	ASN
1	D	215	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

Of 10 ligands modelled in this entry, 2 are monoatomic - leaving 8 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	$\#\|Z\| > 2$
7	GOL	C	101	-	5,5,5	0.26	0	5,5,5	0.56	0
7	GOL	D	703	-	5,5,5	0.34	0	5,5,5	0.38	0
6	A1CZX	D	702	-	39,39,39	1.90	5 (12%)	50,55,55	1.93	11 (22%)
5	DG3	F	101	4	31,32,32	1.80	2 (6%)	44,50,50	0.84	0
7	GOL	A	705	-	5,5,5	0.32	0	5,5,5	0.28	0
6	A1CZX	A	703	-	39,39,39	1.76	5 (12%)	50,55,55	1.82	11 (22%)
5	DG3	A	702	4	31,32,32	1.70	2 (6%)	44,50,50	0.91	3 (6%)
6	A1CZX	A	704	-	39,39,39	2.05	5 (12%)	50,55,55	1.91	9 (18%)

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
7	GOL	C	101	-	-	0/4/4/4	-
7	GOL	D	703	-	-	0/4/4/4	-
6	A1CZX	D	702	-	-	0/34/36/36	0/3/3/3
5	DG3	F	101	4	-	4/22/31/31	0/3/3/3
7	GOL	A	705	-	-	0/4/4/4	-
6	A1CZX	A	703	-	-	1/34/36/36	0/3/3/3
5	DG3	A	702	4	-	10/22/31/31	0/3/3/3
6	A1CZX	A	704	-	-	2/34/36/36	0/3/3/3

All (19) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	A	704	A1CZX	C10-C11	8.86	1.61	1.47
5	F	101	DG3	PB-O3A	8.51	1.68	1.59
6	D	702	A1CZX	C10-C11	8.28	1.60	1.47
5	A	702	DG3	PB-O3A	8.13	1.68	1.59
6	A	703	A1CZX	C10-C11	7.36	1.59	1.47
6	A	704	A1CZX	C02-N09	5.49	1.45	1.33
6	D	702	A1CZX	C02-N09	4.98	1.44	1.33
6	A	703	A1CZX	C02-N09	4.94	1.44	1.33
6	A	704	A1CZX	C10-N09	4.57	1.51	1.45
5	F	101	DG3	PA-O3A	3.49	1.63	1.59
6	D	702	A1CZX	C10-N09	3.42	1.49	1.45
6	A	703	A1CZX	C10-N09	3.03	1.49	1.45
5	A	702	DG3	PA-O3A	3.02	1.62	1.59
6	D	702	A1CZX	C21-N14	2.81	1.40	1.36
6	A	703	A1CZX	C21-N14	2.76	1.40	1.36
6	A	704	A1CZX	C21-N14	2.59	1.40	1.36
6	A	703	A1CZX	C22-C23	-2.47	1.48	1.51
6	D	702	A1CZX	C22-C23	-2.45	1.48	1.51
6	A	704	A1CZX	C22-C23	-2.41	1.48	1.51

All (34) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	A	704	A1CZX	C10-N09-C02	7.37	131.57	120.50
6	D	702	A1CZX	C10-N09-C02	7.08	131.12	120.50
6	A	703	A1CZX	C10-N09-C02	6.98	130.99	120.50
6	D	702	A1CZX	C11-C10-N09	4.63	118.33	112.63

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	A	704	A1CZX	F34-C33-C32	4.55	120.72	112.65
6	D	702	A1CZX	F34-C33-C32	4.43	120.49	112.65
6	A	703	A1CZX	C11-C10-N09	4.39	118.03	112.63
6	A	704	A1CZX	C11-C10-N09	4.13	117.71	112.63
6	A	704	A1CZX	F36-C33-C32	-3.73	106.04	112.65
6	D	702	A1CZX	F36-C33-C32	-3.42	106.59	112.65
6	A	703	A1CZX	F34-C33-C32	3.39	118.65	112.65
6	D	702	A1CZX	C04-C03-C08	-3.28	113.95	117.61
6	A	704	A1CZX	C04-C03-C08	-3.19	114.06	117.61
6	A	703	A1CZX	C26-C31-C32	-3.15	118.61	123.70
6	A	703	A1CZX	C04-C03-C08	-3.13	114.13	117.61
6	A	704	A1CZX	C03-C02-N09	3.11	123.57	117.12
6	A	704	A1CZX	C26-C31-C32	-3.10	118.69	123.70
6	D	702	A1CZX	C03-C02-N09	3.02	123.40	117.12
6	D	702	A1CZX	C26-C31-C32	-3.00	118.86	123.70
6	D	702	A1CZX	C20-C15-N14	-2.99	115.88	120.18
6	A	703	A1CZX	C20-C15-N14	-2.86	116.06	120.18
6	A	703	A1CZX	C03-C02-N09	2.85	123.04	117.12
6	D	702	A1CZX	O01-C02-N09	-2.72	117.30	122.59
6	A	703	A1CZX	F36-C33-C32	-2.66	107.94	112.65
6	A	703	A1CZX	O01-C02-N09	-2.62	117.48	122.59
6	D	702	A1CZX	C16-C15-N14	2.56	123.86	120.18
6	A	704	A1CZX	C20-C15-N14	-2.49	116.59	120.18
6	A	704	A1CZX	O01-C02-N09	-2.38	117.96	122.59
5	A	702	DG3	O3G-PG-O2G	2.22	116.12	107.80
6	D	702	A1CZX	C31-C32-C23	2.19	121.81	119.15
6	A	703	A1CZX	C16-C15-N14	2.19	123.33	120.18
5	A	702	DG3	C4'-O4'-C1'	2.15	111.83	109.81
6	A	703	A1CZX	C31-C32-C23	2.08	121.68	119.15
5	A	702	DG3	O3A-PB-O1B	-2.07	104.47	110.70

There are no chirality outliers.

All (17) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	A	702	DG3	PB-O3B-PG-O3G
5	F	101	DG3	O4'-C4'-C5'-O5'
6	A	703	A1CZX	C11-C12-C13-N14
6	A	704	A1CZX	C11-C10-N09-C02
6	A	704	A1CZX	C11-C12-C13-N14
5	A	702	DG3	O4'-C4'-C5'-O5'
5	F	101	DG3	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
5	A	702	DG3	PG-O3B-PB-O1B
5	F	101	DG3	PB-O3A-PA-O1A
5	A	702	DG3	PB-O3B-PG-O2G
5	A	702	DG3	PG-O3B-PB-O2B
5	A	702	DG3	PB-O3A-PA-O1A
5	A	702	DG3	PB-O3A-PA-O2A
5	F	101	DG3	PB-O3A-PA-O2A
5	A	702	DG3	PA-O3A-PB-O2B
5	A	702	DG3	C3'-C4'-C5'-O5'
5	A	702	DG3	PA-O3A-PB-O1B

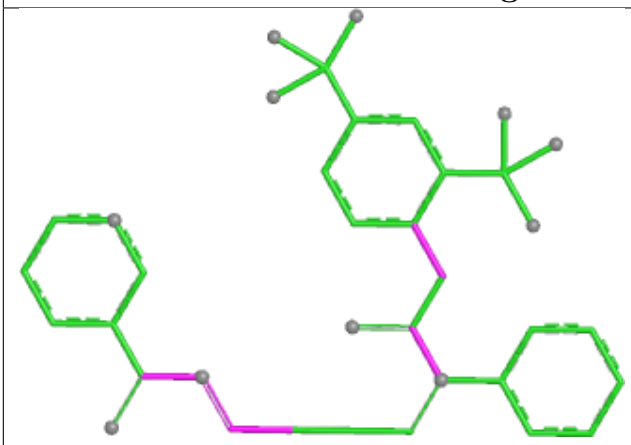
There are no ring outliers.

2 monomers are involved in 4 short contacts:

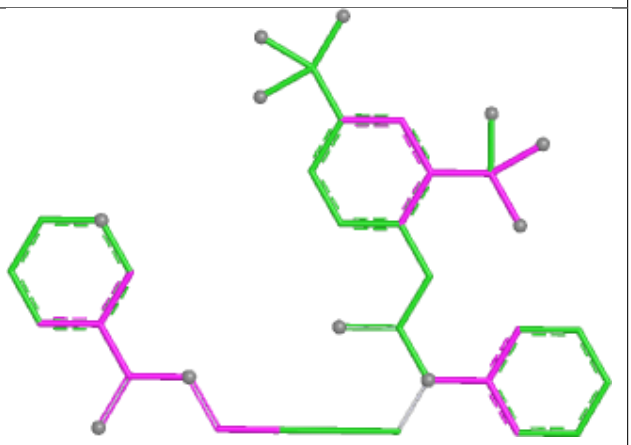
Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	F	101	DG3	3	0
5	A	702	DG3	1	0

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.

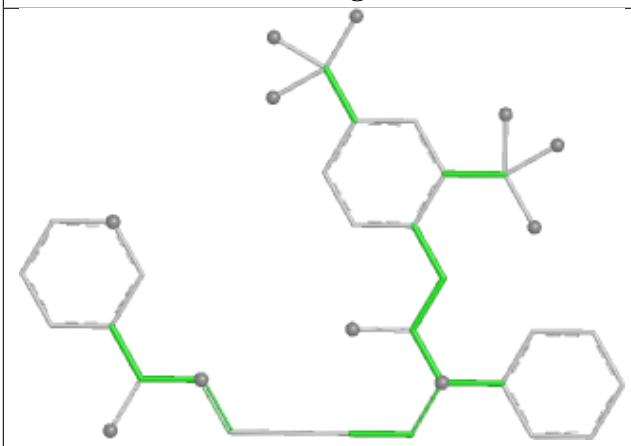
Ligand A1CZX D 702



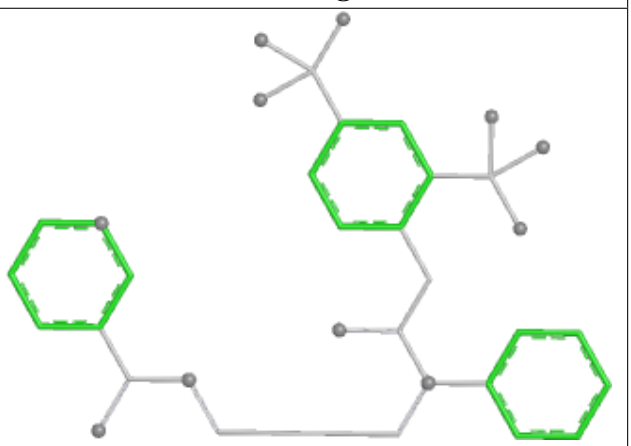
Bond lengths



Bond angles

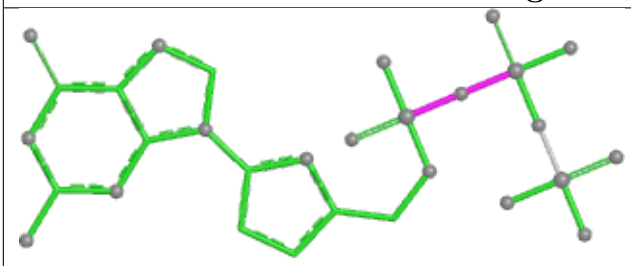


Torsions

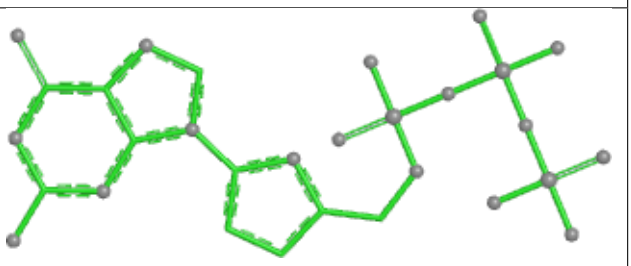


Rings

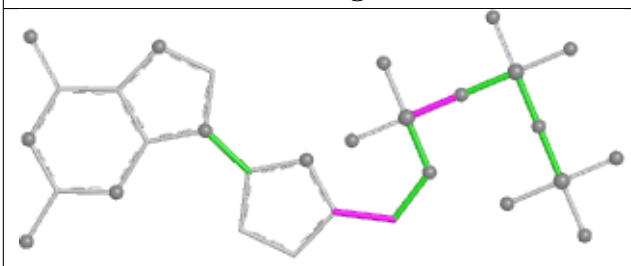
Ligand DG3 F 101



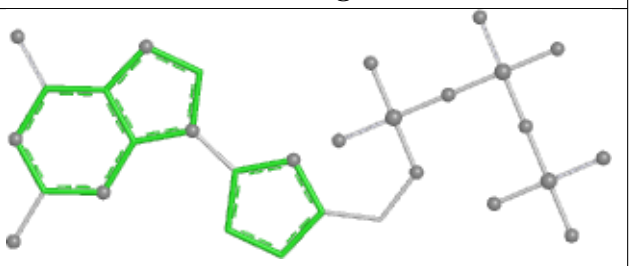
Bond lengths



Bond angles

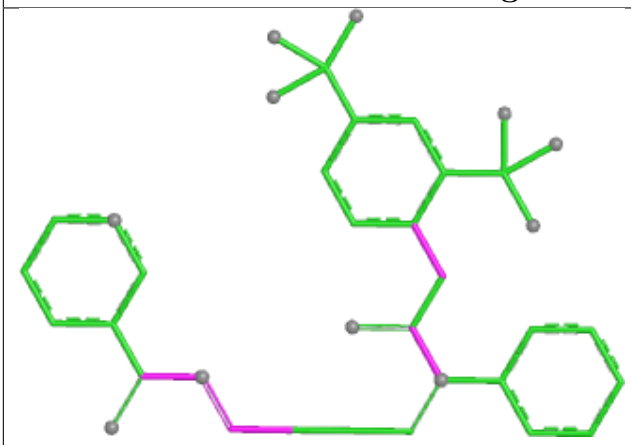


Torsions

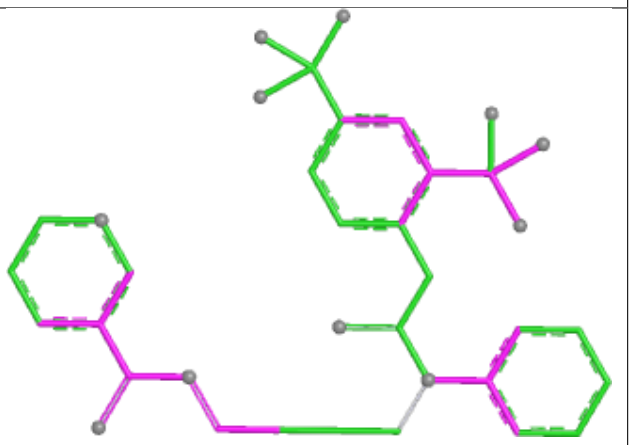


Rings

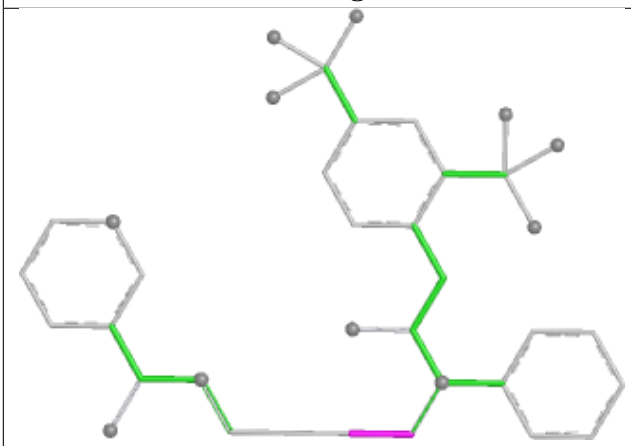
Ligand A1CZX A 703



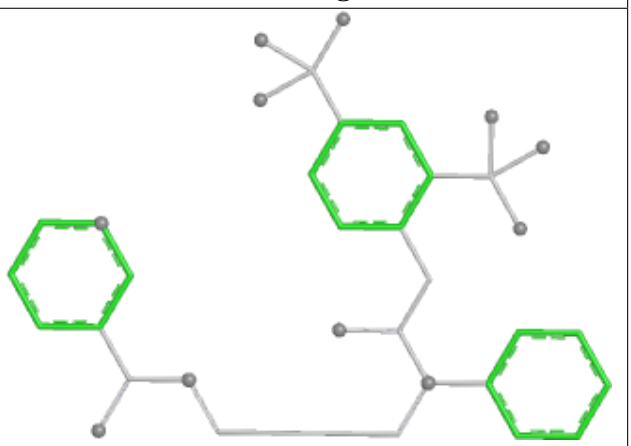
Bond lengths



Bond angles

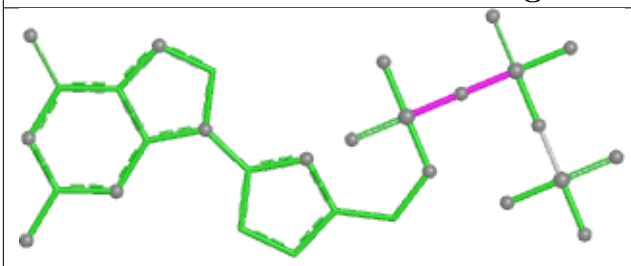


Torsions

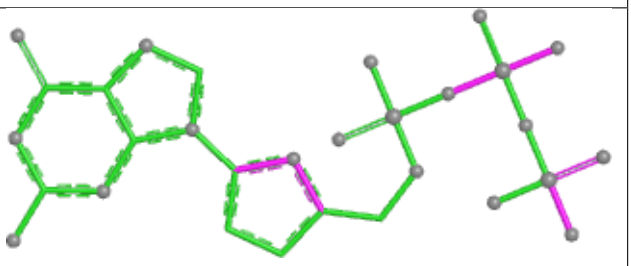


Rings

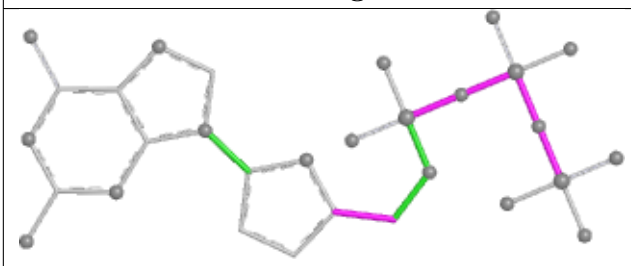
Ligand DG3 A 702



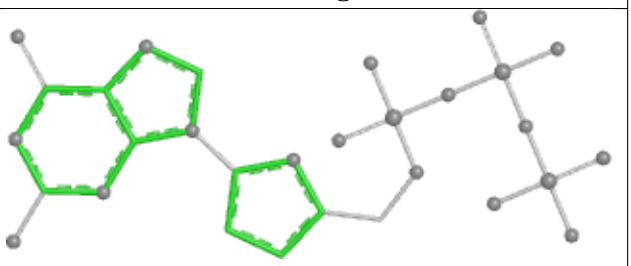
Bond lengths



Bond angles

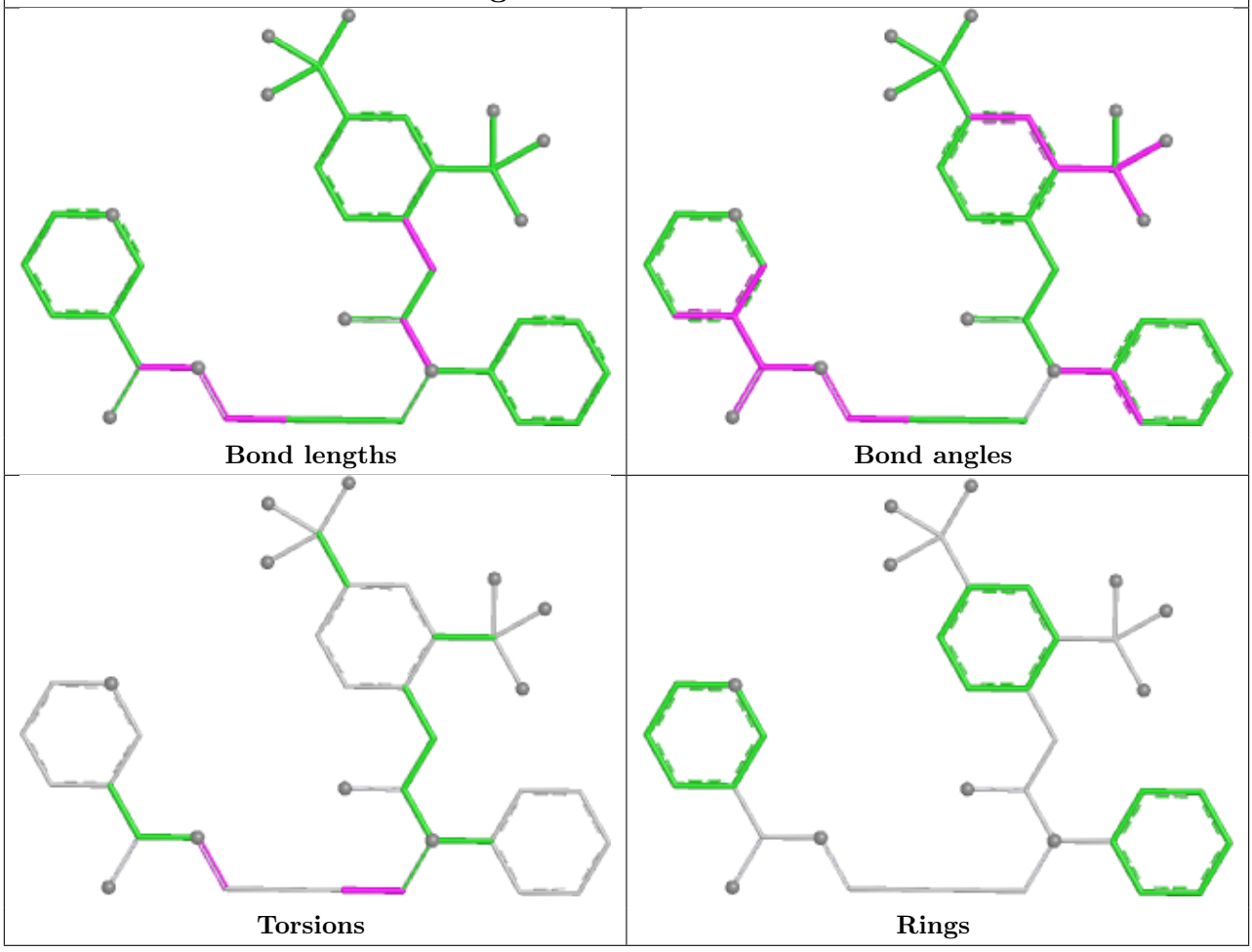


Torsions



Rings

Ligand A1CZX A 704



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

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, 95^{th} 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	644/668 (96%)	0.01	21 (3%) 49 45	36, 62, 99, 174	0
1	D	646/668 (96%)	0.86	91 (14%) 6 5	54, 103, 148, 188	0
2	B	15/17 (88%)	-0.15	0 100 100	52, 72, 144, 167	0
2	E	13/17 (76%)	0.15	0 100 100	80, 90, 162, 174	0
3	C	11/13 (84%)	-0.17	0 100 100	49, 86, 139, 142	0
3	F	9/13 (69%)	0.48	1 (11%) 10 9	98, 110, 185, 185	0
All	All	1338/1396 (95%)	0.42	113 (8%) 17 14	36, 77, 139, 188	0

All (113) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	604	PHE	5.2
1	D	566	ILE	4.8
1	D	255	ILE	4.4
1	D	384	ILE	4.4
1	D	601	GLY	4.3
1	D	179	ILE	4.3
1	D	411	SER	4.2
1	D	349	PHE	4.1
1	D	256	MET	4.0
1	D	602	GLY	3.9
1	D	310	LEU	3.7
1	D	5	SER	3.7
1	D	299	LEU	3.6
1	D	282	ASP	3.6
1	D	258	ALA	3.5
1	D	610	GLY	3.5
1	D	387	PRO	3.4
1	D	397	SER	3.3
1	D	176	SER	3.2

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Mol	Chain	Res	Type	RSRZ
1	D	624	VAL	3.2
1	D	603	MET	3.2
1	D	583	SER	3.2
1	D	180	GLN	3.1
1	D	245	SER	3.1
1	D	417	TYR	3.0
1	D	584	THR	3.0
1	A	668	VAL	3.0
1	A	8	SER	3.0
1	D	609	GLY	3.0
1	D	4	SER	2.9
1	D	660	TRP	2.9
1	D	439	ASN	2.9
1	D	594	MET	2.9
1	A	7	GLU	2.9
1	D	353	GLU	2.9
1	A	284	ALA	2.9
1	D	50	LYS	2.9
1	D	175	THR	2.9
1	D	335	LYS	2.9
1	D	493	ASN	2.8
1	A	595	LEU	2.8
1	D	289	LEU	2.8
1	D	605	CYS	2.7
1	D	656	ILE	2.7
1	A	85	LEU	2.7
1	D	84	SER	2.7
1	A	308	ASP	2.7
1	A	309	VAL	2.7
1	D	274	SER	2.7
1	D	346	LEU	2.7
1	D	303	PHE	2.6
1	D	247	ALA	2.6
1	A	303	PHE	2.6
1	D	254	HIS	2.6
1	D	308	ASP	2.5
1	A	439	ASN	2.5
1	A	296	ASN	2.5
1	D	355	ILE	2.5
1	D	313	LEU	2.5
1	D	178	GLY	2.5
1	D	334	THR	2.5

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Mol	Chain	Res	Type	RSRZ
1	A	338	PHE	2.5
1	D	331	ASN	2.4
1	D	302	GLN	2.4
1	D	405	VAL	2.4
1	A	305	THR	2.4
1	D	622	TYR	2.4
1	D	242	ILE	2.4
1	D	607	ILE	2.4
1	A	605	CYS	2.4
1	D	648	VAL	2.4
1	D	407	PHE	2.4
1	D	259	LYS	2.3
1	D	462	ASP	2.3
1	D	324	LEU	2.3
1	D	513	MET	2.3
1	D	354	ARG	2.3
1	D	424	ILE	2.2
1	A	307	LYS	2.2
1	D	305	THR	2.2
1	A	302	GLN	2.2
1	D	191	SER	2.2
1	D	666	PHE	2.2
1	D	246	THR	2.2
1	D	510	ASN	2.2
1	D	281	ASP	2.2
1	D	198	VAL	2.2
1	D	47	THR	2.2
1	D	345	CYS	2.2
1	D	276	SER	2.2
1	A	333	ILE	2.2
1	D	606	PRO	2.1
1	A	396	PHE	2.1
1	D	117	PHE	2.1
1	D	277	PHE	2.1
1	D	278	THR	2.1
1	D	536	LEU	2.1
1	D	295	PRO	2.1
1	D	467	GLN	2.1
1	D	317	HIS	2.1
1	D	333	ILE	2.1
1	A	297	ARG	2.0
1	D	456	GLU	2.0

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Mol	Chain	Res	Type	RSRZ
1	D	501	SER	2.0
1	A	312	LYS	2.0
1	D	452	TRP	2.0
1	D	425	LEU	2.0
1	D	663	LEU	2.0
1	D	402	HIS	2.0
1	D	381	ASP	2.0
1	A	322	LEU	2.0
1	D	351	GLY	2.0
3	F	5	DC	2.0

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

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

6.3 Carbohydrates (i)

There are no oligosaccharides 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, 95^{th} 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.

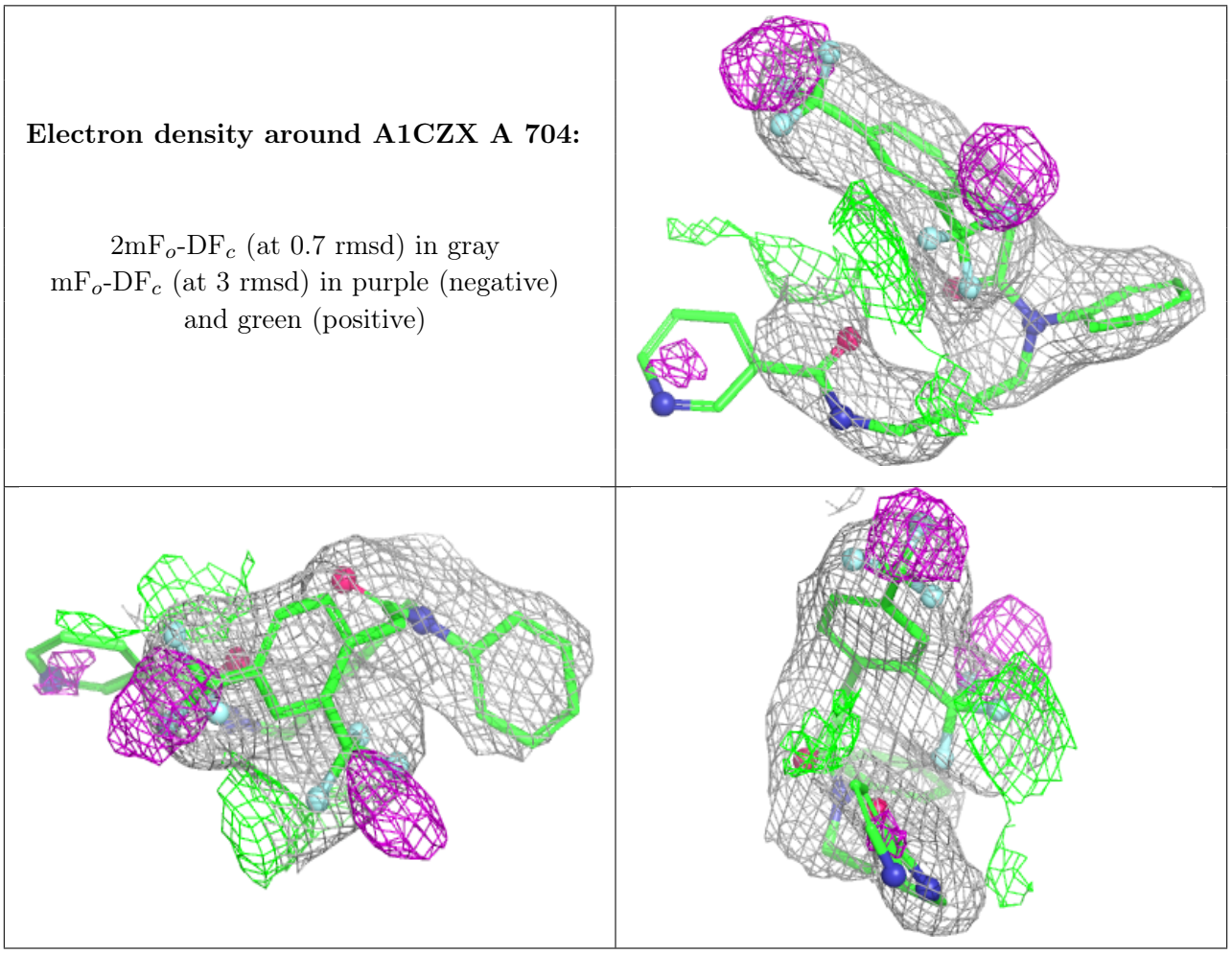
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
7	GOL	A	705	6/6	0.75	0.15	63,89,100,100	0
7	GOL	C	101	6/6	0.75	0.14	53,69,74,76	0
7	GOL	D	703	6/6	0.76	0.15	90,105,110,115	0
6	A1CZX	A	704	37/37	0.78	0.17	57,75,112,119	0
6	A1CZX	D	702	37/37	0.83	0.15	97,116,128,131	0
5	DG3	F	101	30/30	0.88	0.08	77,88,112,116	0
4	MG	D	701	1/1	0.88	0.12	106,106,106,106	0
6	A1CZX	A	703	37/37	0.93	0.10	35,54,68,69	0
5	DG3	A	702	30/30	0.97	0.06	37,44,54,60	0
4	MG	A	701	1/1	0.99	0.03	54,54,54,54	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.

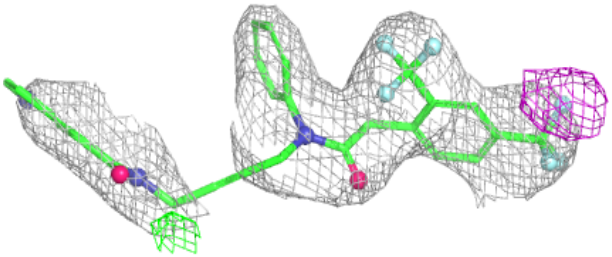
Electron density around A1CZX A 704:

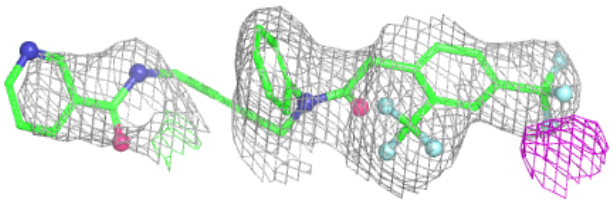
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

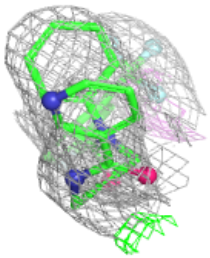


Electron density around A1CZX D 702:

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

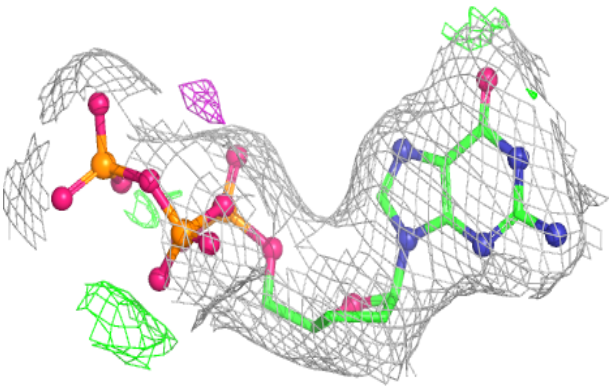


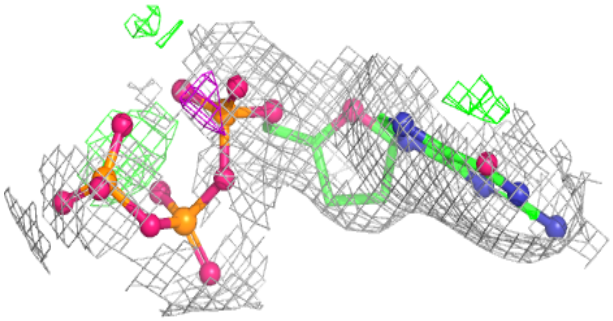


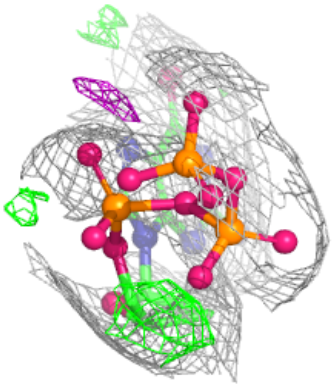


Electron density around DG3 F 101:

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

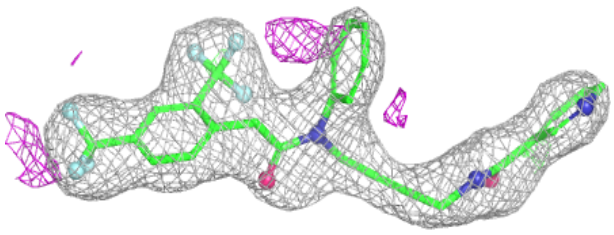


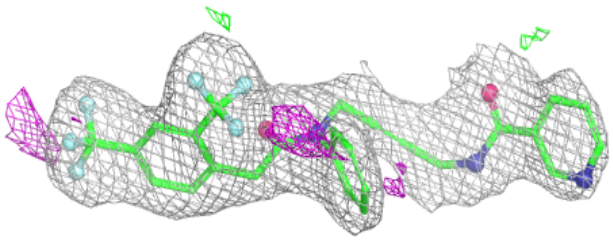


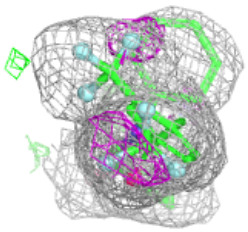


Electron density around A1CZX A 703:

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

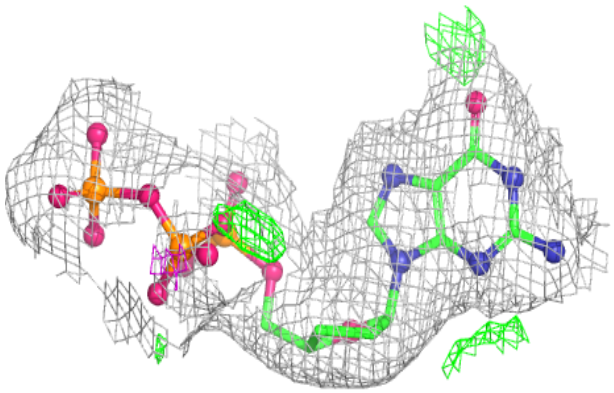


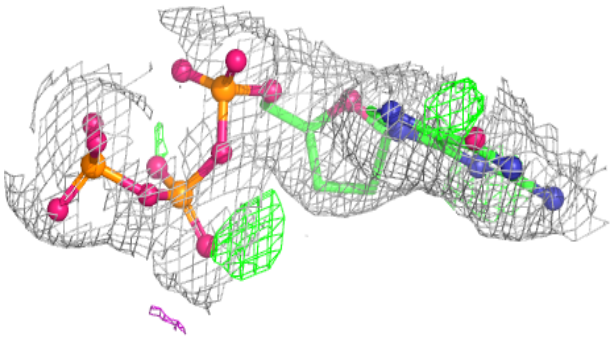


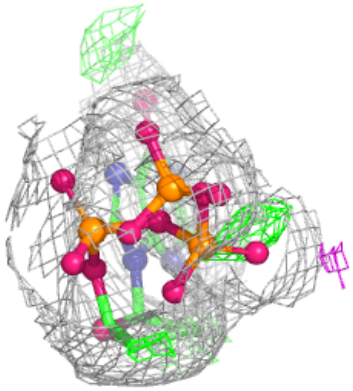


Electron density around DG3 A 702:

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







6.5 Other polymers (i)

There are no such residues in this entry.