



Full wwPDB X-ray Structure Validation Report ⓘ

May 13, 2020 – 07:44 am BST

PDB ID : 6I35
Title : Crystal structure of human glycine decarboxylase (P-protein) bound with pyridoxyl-glycine-5'-monophosphate
Authors : Van Laer, B.; Kapp, U.; Leonard, G.; Mueller-Dieckmann, C.
Deposited on : 2018-11-05
Resolution : 2.00 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 ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.11
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.11

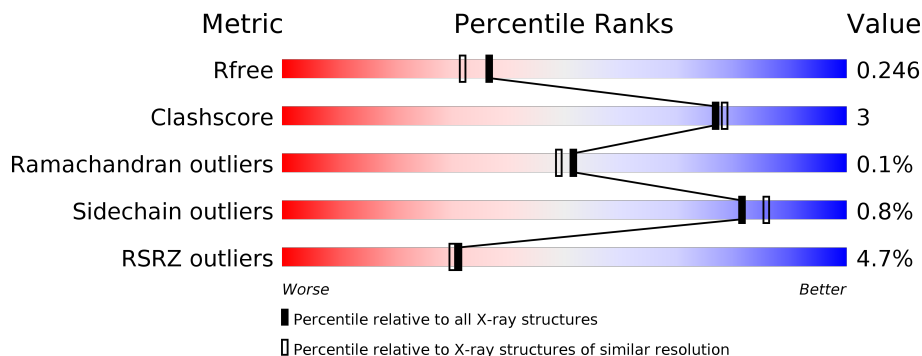
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.00 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}	130704	8085 (2.00-2.00)
Clashscore	141614	9178 (2.00-2.00)
Ramachandran outliers	138981	9054 (2.00-2.00)
Sidechain outliers	138945	9053 (2.00-2.00)
RSRZ outliers	127900	7900 (2.00-2.00)

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 on 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 $\leq 5\%$. 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	984	 3% 89% 7%
1	B	984	 6% 90% 7%
1	C	984	 3% 89% 7%
1	D	984	 6% 89% 7%

2 Entry composition i

There are 7 unique types of molecules in this entry. The entry contains 30932 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 Glycine dehydrogenase (decarboxylating), mitochondrial.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	953	Total 7433	C 4684	N 1317	O 1378	S 54	0	0	0
1	B	954	Total 7442	C 4688	N 1318	O 1382	S 54	0	0	0
1	C	953	Total 7433	C 4684	N 1317	O 1378	S 54	0	0	0
1	D	954	Total 7442	C 4688	N 1318	O 1382	S 54	0	0	0

There are 32 discrepancies between the modelled and reference sequences:

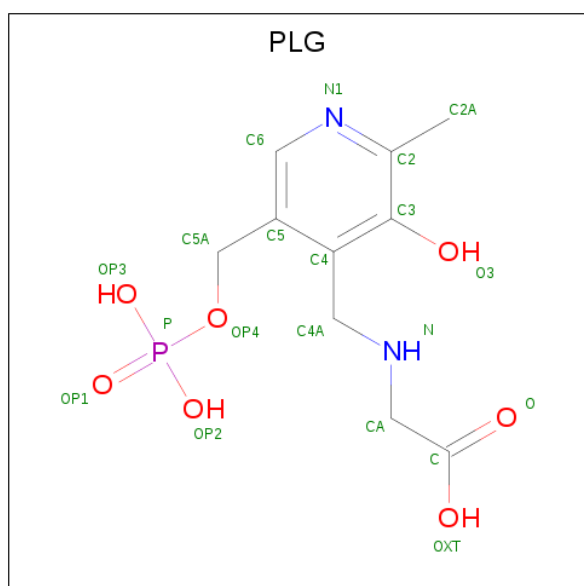
Chain	Residue	Modelled	Actual	Comment	Reference
A	44	MET	-	initiating methionine	UNP P23378
A	1021	GLY	-	expression tag	UNP P23378
A	1022	HIS	-	expression tag	UNP P23378
A	1023	HIS	-	expression tag	UNP P23378
A	1024	HIS	-	expression tag	UNP P23378
A	1025	HIS	-	expression tag	UNP P23378
A	1026	HIS	-	expression tag	UNP P23378
A	1027	HIS	-	expression tag	UNP P23378
B	44	MET	-	initiating methionine	UNP P23378
B	1021	GLY	-	expression tag	UNP P23378
B	1022	HIS	-	expression tag	UNP P23378
B	1023	HIS	-	expression tag	UNP P23378
B	1024	HIS	-	expression tag	UNP P23378
B	1025	HIS	-	expression tag	UNP P23378
B	1026	HIS	-	expression tag	UNP P23378
B	1027	HIS	-	expression tag	UNP P23378
C	44	MET	-	initiating methionine	UNP P23378
C	1021	GLY	-	expression tag	UNP P23378
C	1022	HIS	-	expression tag	UNP P23378
C	1023	HIS	-	expression tag	UNP P23378
C	1024	HIS	-	expression tag	UNP P23378

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Chain	Residue	Modelled	Actual	Comment	Reference
C	1025	HIS	-	expression tag	UNP P23378
C	1026	HIS	-	expression tag	UNP P23378
C	1027	HIS	-	expression tag	UNP P23378
D	44	MET	-	initiating methionine	UNP P23378
D	1021	GLY	-	expression tag	UNP P23378
D	1022	HIS	-	expression tag	UNP P23378
D	1023	HIS	-	expression tag	UNP P23378
D	1024	HIS	-	expression tag	UNP P23378
D	1025	HIS	-	expression tag	UNP P23378
D	1026	HIS	-	expression tag	UNP P23378
D	1027	HIS	-	expression tag	UNP P23378

- Molecule 2 is N-GLYCINE-[3-HYDROXY-2-METHYL-5-PHOSPHONOXYMETHYL-PYRIDIN-4-YL-METHANE] (three-letter code: PLG) (formula: C₁₀H₁₅N₂O₇P) (labeled as "Ligand of Interest" by author).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	P		
2	A	1	Total	C	N	O	P	0	0
			20	10	2	7	1		
2	B	1	Total	C	N	O	P	0	0
			20	10	2	7	1		
2	C	1	Total	C	N	O	P	0	0
			20	10	2	7	1		
2	D	1	Total	C	N	O	P	0	0
			20	10	2	7	1		

- Molecule 3 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: C₂H₆O₂).



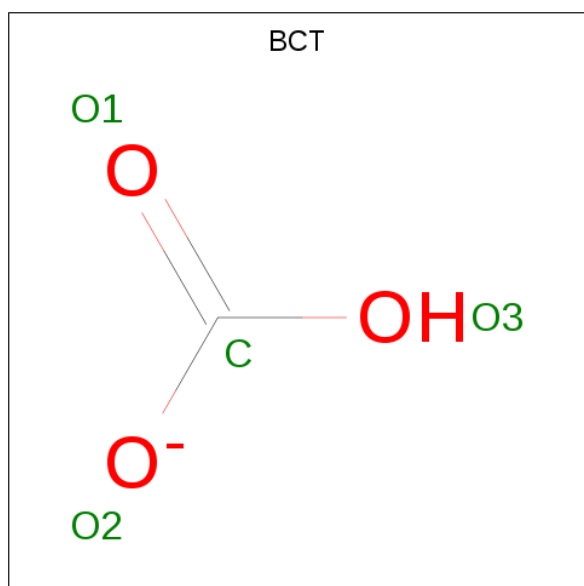
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	1	Total	C O	0	0
			4	2 2		
3	B	1	Total	C O	0	0
			4	2 2		
3	C	1	Total	C O	0	0
			4	2 2		
3	D	1	Total	C O	0	0
			4	2 2		

- Molecule 4 is GLYCEROL (three-letter code: GOL) (formula: C₃H₈O₃).



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

- Molecule 5 is BICARBONATE ION (three-letter code: BCT) (formula: CHO_3).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	A	1	Total	C	O	0	0
			4	1	3		

- Molecule 6 is DI(HYDROXYETHYL)ETHER (three-letter code: PEG) (formula: $\text{C}_4\text{H}_{10}\text{O}_3$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	B	1	Total C O 7 4 3	0	0
6	C	1	Total C O 7 4 3	0	0
6	C	1	Total C O 7 4 3	0	0
6	D	1	Total C O 7 4 3	0	0

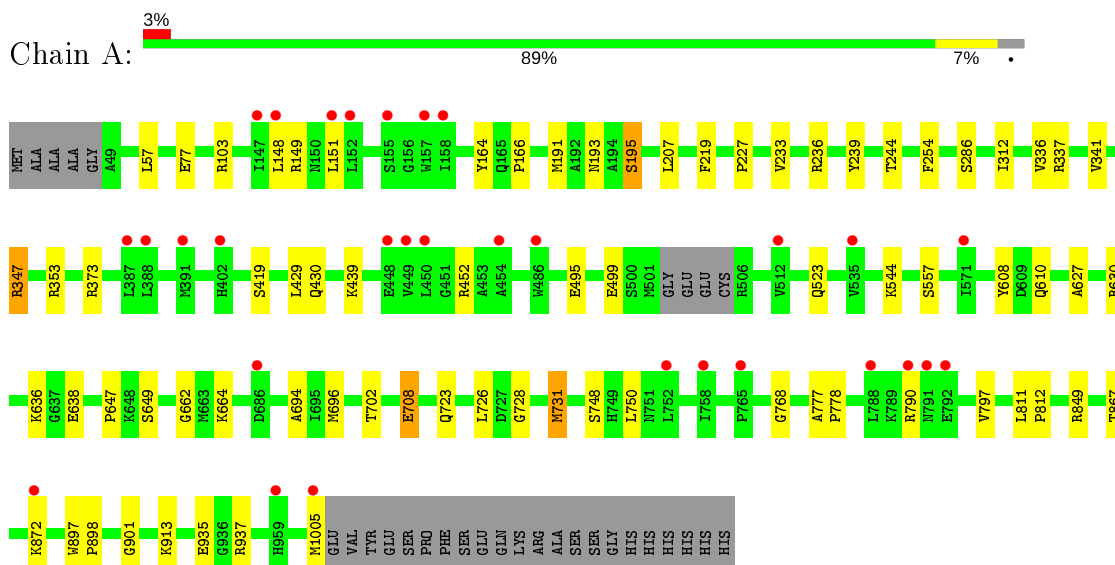
- Molecule 7 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	A	318	Total O 318 318	0	0
7	B	192	Total O 192 192	0	0
7	C	314	Total O 314 314	0	0
7	D	200	Total O 200 200	0	0

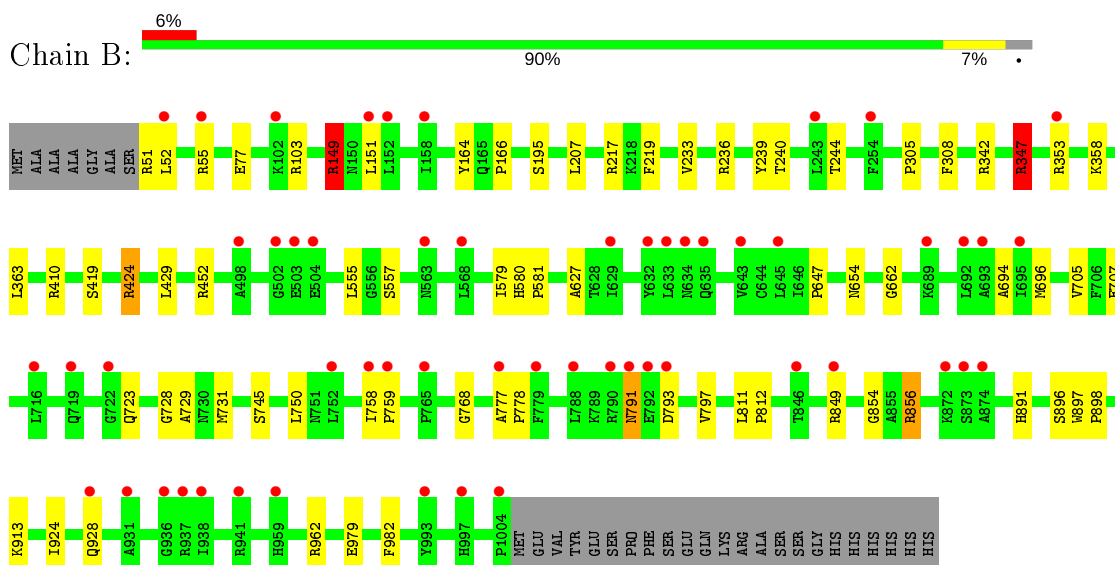
3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA and DNA 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.

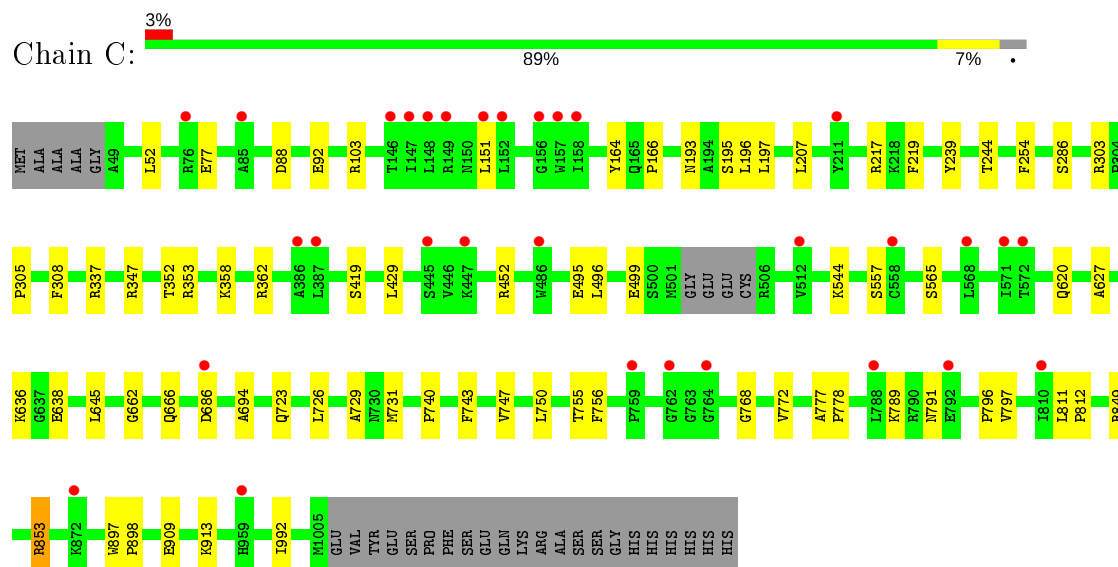
- Molecule 1: Glycine dehydrogenase (decarboxylating), mitochondrial



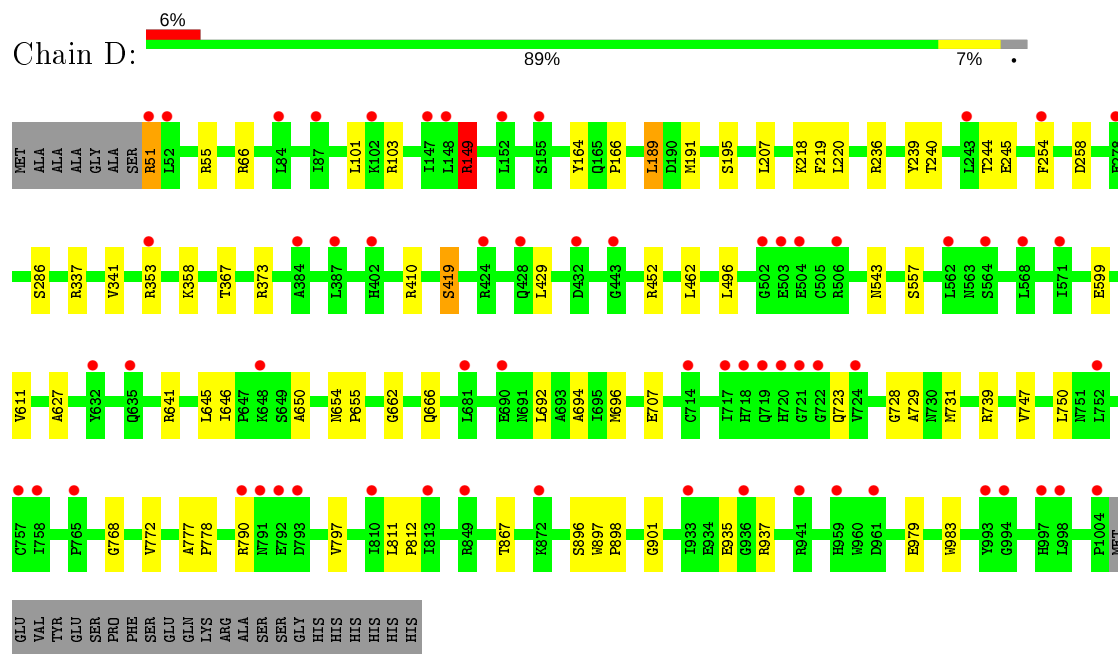
- Molecule 1: Glycine dehydrogenase (decarboxylating), mitochondrial



- Molecule 1: Glycine dehydrogenase (decarboxylating), mitochondrial



- Molecule 1: Glycine dehydrogenase (decarboxylating), mitochondrial



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	85.66Å 123.44Å 197.67Å 90.00° 97.93° 90.00°	Depositor
Resolution (Å)	49.33 – 2.00 49.33 – 2.00	Depositor EDS
% Data completeness (in resolution range)	99.0 (49.33-2.00) 99.0 (49.33-2.00)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.33 (at 2.00Å)	Xtrriage
Refinement program	REFMAC 5.8.0230	Depositor
R, R_{free}	0.215 , 0.240 0.222 , 0.246	Depositor DCC
R_{free} test set	13576 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å ²)	35.1	Xtrriage
Anisotropy	0.358	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.36 , 39.3	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.33$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.97	EDS
Total number of atoms	30932	wwPDB-VP
Average B, all atoms (Å ²)	48.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 52.09 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 5.1082e-05. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ 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: PLG, GOL, PEG, EDO, BCT

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	0.61	0/7599	0.69	3/10291 (0.0%)
1	B	0.57	0/7609	0.66	2/10306 (0.0%)
1	C	0.62	1/7599 (0.0%)	0.69	2/10291 (0.0%)
1	D	0.58	0/7609	0.66	2/10306 (0.0%)
All	All	0.59	1/30416 (0.0%)	0.67	9/41194 (0.0%)

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	8
1	B	0	8
1	C	0	5
1	D	0	6
All	All	0	27

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	909	GLU	CD-OE2	-5.41	1.19	1.25

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	347	ARG	NE-CZ-NH1	-6.86	116.87	120.30
1	B	149	ARG	NE-CZ-NH2	-6.76	116.92	120.30
1	A	731	MET	CG-SD-CE	5.77	109.43	100.20
1	A	347	ARG	NE-CZ-NH1	-5.66	117.47	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	149	ARG	NE-CZ-NH2	-5.64	117.48	120.30
1	C	303	ARG	NE-CZ-NH2	-5.61	117.50	120.30
1	C	731	MET	CG-SD-CE	5.14	108.42	100.20
1	A	195	SER	N-CA-CB	5.09	118.13	110.50
1	D	66	ARG	NE-CZ-NH2	-5.05	117.78	120.30

There are no chirality outliers.

All (27) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	103	ARG	Sidechain
1	A	149	ARG	Sidechain
1	A	236	ARG	Sidechain
1	A	337	ARG	Sidechain
1	A	373	ARG	Sidechain
1	A	452	ARG	Sidechain
1	A	630	ARG	Sidechain
1	A	849	ARG	Sidechain
1	B	236	ARG	Sidechain
1	B	342	ARG	Sidechain
1	B	347	ARG	Sidechain
1	B	424	ARG	Sidechain
1	B	452	ARG	Sidechain
1	B	55	ARG	Sidechain
1	B	849	ARG	Sidechain
1	B	962	ARG	Sidechain
1	C	103	ARG	Sidechain
1	C	337	ARG	Sidechain
1	C	452	ARG	Sidechain
1	C	849	ARG	Sidechain
1	C	853	ARG	Sidechain
1	D	236	ARG	Sidechain
1	D	337	ARG	Sidechain
1	D	410	ARG	Sidechain
1	D	452	ARG	Sidechain
1	D	51	ARG	Sidechain
1	D	55	ARG	Sidechain

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	7433	0	7371	42	0
1	B	7442	0	7373	47	0
1	C	7433	0	7371	38	1
1	D	7442	0	7373	58	0
2	A	20	0	11	0	0
2	B	20	0	11	2	0
2	C	20	0	11	1	0
2	D	20	0	11	1	0
3	A	4	0	6	0	0
3	B	4	0	6	0	0
3	C	4	0	6	0	0
3	D	4	0	6	0	0
4	A	12	0	16	0	0
4	B	6	0	8	0	0
4	C	12	0	16	0	0
5	A	4	0	0	0	0
6	B	7	0	10	1	0
6	C	14	0	20	3	0
6	D	7	0	10	2	0
7	A	318	0	0	2	0
7	B	192	0	0	1	0
7	C	314	0	0	0	0
7	D	200	0	0	2	0
All	All	30932	0	29636	178	1

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 3.

All (178) 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:856:ARG:HH11	1:B:856:ARG:HG3	1.13	1.06
1:B:580:HIS:ND1	1:B:581:PRO:HD2	1.94	0.82
1:A:191:MET:SD	1:A:341:VAL:HG21	2.20	0.81
1:C:495:GLU:OE2	1:D:51:ARG:HD2	1.81	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:191:MET:SD	1:D:341:VAL:HG21	2.23	0.78
1:D:654:ASN:HB2	1:D:655:PRO:CD	2.14	0.77
1:D:419:SER:HB2	1:D:429:LEU:HD11	1.68	0.76
1:B:555:LEU:HD21	1:B:891:HIS:HE1	1.54	0.70
1:B:856:ARG:NH1	1:B:856:ARG:HG3	1.91	0.70
1:D:654:ASN:HB2	1:D:655:PRO:HD3	1.75	0.69
1:A:610:GLN:HE22	1:A:790:ARG:HG3	1.58	0.68
1:B:419:SER:HB2	1:B:429:LEU:HD11	1.76	0.68
1:C:495:GLU:OE2	1:D:51:ARG:CD	2.42	0.68
1:A:495:GLU:OE2	1:B:51:ARG:HD2	1.95	0.65
1:D:650:ALA:HB1	1:D:654:ASN:ND2	2.12	0.65
1:B:580:HIS:CG	1:B:581:PRO:HD2	2.32	0.64
1:D:646:ILE:HD11	1:D:696:MET:HE2	1.81	0.62
1:A:608:TYR:CE2	1:A:748:SER:HB2	2.34	0.62
1:D:207:LEU:HD13	1:D:219:PHE:CG	2.35	0.62
1:D:646:ILE:CD1	1:D:696:MET:CE	2.78	0.61
1:B:729:ALA:HB3	2:B:3003:PLG:H2A2	1.81	0.61
1:C:88:ASP:O	1:C:92:GLU:HG3	2.01	0.60
1:C:207:LEU:HD23	1:C:207:LEU:C	2.22	0.59
1:D:646:ILE:HD11	1:D:696:MET:CE	2.33	0.59
1:D:983:TRP:H	6:D:1103:PEG:H31	1.68	0.58
1:B:555:LEU:HD21	1:B:891:HIS:CE1	2.38	0.58
1:B:149:ARG:NH2	7:B:3102:HOH:O	2.34	0.58
1:A:627:ALA:HB1	1:A:797:VAL:HG21	1.86	0.58
1:D:627:ALA:HB1	1:D:797:VAL:HG21	1.86	0.57
1:D:654:ASN:CB	1:D:655:PRO:CD	2.81	0.57
1:D:218:LYS:HE2	1:D:220:LEU:HD21	1.87	0.57
1:D:207:LEU:O	1:D:207:LEU:HD12	2.05	0.57
1:A:193:ASN:HB2	1:A:347:ARG:O	2.04	0.56
1:D:419:SER:HB2	1:D:429:LEU:CD1	2.35	0.56
1:A:608:TYR:HE2	1:A:748:SER:HB2	1.72	0.55
1:B:419:SER:HB2	1:B:429:LEU:CD1	2.37	0.55
1:D:240:THR:HG22	1:D:240:THR:O	2.05	0.55
1:C:627:ALA:HB1	1:C:797:VAL:HG21	1.88	0.55
1:A:430:GLN:HG3	1:A:439:LYS:HG2	1.89	0.55
1:A:499:GLU:HA	1:B:52:LEU:HD23	1.89	0.54
1:A:191:MET:SD	1:A:341:VAL:CG2	2.93	0.54
1:D:462:LEU:HD12	1:D:462:LEU:O	2.06	0.54
1:D:207:LEU:HD13	1:D:219:PHE:CD1	2.43	0.53
1:B:627:ALA:HB1	1:B:797:VAL:HG21	1.90	0.53
1:A:636:LYS:HE2	1:A:638:GLU:HG3	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:240:THR:O	1:B:240:THR:HG22	2.07	0.53
1:D:641:ARG:HD3	1:D:692:LEU:O	2.08	0.53
1:A:148:LEU:HD23	1:A:148:LEU:C	2.30	0.52
1:C:193:ASN:HB2	1:C:347:ARG:O	2.09	0.52
1:B:305:PRO:HA	1:B:308:PHE:CZ	2.45	0.52
1:C:729:ALA:HB3	2:C:1101:PLG:H2A2	1.90	0.52
1:D:207:LEU:C	1:D:207:LEU:HD12	2.31	0.51
1:D:419:SER:CB	1:D:429:LEU:HD11	2.39	0.51
1:A:523:GLN:HB3	1:A:1005:MET:HG3	1.93	0.51
1:B:207:LEU:HD13	1:B:233:VAL:HG13	1.93	0.51
1:B:580:HIS:CE1	1:B:581:PRO:HD2	2.46	0.50
1:D:218:LYS:HE3	1:D:245:GLU:OE1	2.12	0.50
1:C:305:PRO:HA	1:C:308:PHE:CZ	2.47	0.50
6:C:1106:PEG:O1	6:D:1103:PEG:H22	2.13	0.49
1:B:207:LEU:CD1	1:B:233:VAL:HG13	2.42	0.49
1:A:239:TYR:O	1:A:662:GLY:HA3	2.13	0.49
1:C:254:PHE:HB3	1:C:286:SER:OG	2.14	0.48
1:A:544:LYS:HE2	1:B:979:GLU:HB2	1.95	0.48
1:C:789:LYS:HE2	1:C:796:PRO:HG2	1.94	0.48
1:A:708:GLU:HA	1:A:708:GLU:OE2	2.14	0.48
1:B:705:VAL:CG1	1:B:854:GLY:HA2	2.43	0.48
1:A:610:GLN:NE2	1:A:790:ARG:HG3	2.27	0.47
1:B:897:TRP:CG	1:B:898:PRO:HA	2.49	0.47
1:C:164:TYR:O	1:C:166:PRO:HD3	2.14	0.47
1:C:726:LEU:HD23	1:C:726:LEU:C	2.35	0.47
1:D:599:GLU:OE2	1:D:790:ARG:NH2	2.48	0.47
1:C:992:ILE:HD12	1:C:992:ILE:N	2.29	0.47
1:D:254:PHE:HB3	1:D:286:SER:OG	2.15	0.47
1:D:897:TRP:CG	1:D:898:PRO:HA	2.50	0.47
1:A:664:LYS:NZ	7:A:1211:HOH:O	2.48	0.47
1:D:191:MET:SD	1:D:341:VAL:CG2	2.99	0.47
1:D:646:ILE:CD1	1:D:696:MET:HE3	2.45	0.47
1:C:239:TYR:O	1:C:662:GLY:HA3	2.15	0.47
1:A:897:TRP:CG	1:A:898:PRO:HA	2.51	0.46
1:A:649:SER:O	1:A:702:THR:OG1	2.23	0.46
1:A:694:ALA:HA	1:A:723:GLN:O	2.16	0.46
1:A:77:GLU:HB3	1:A:913:LYS:HE3	1.98	0.46
1:A:254:PHE:HB3	1:A:286:SER:OG	2.15	0.46
1:D:646:ILE:HD13	1:D:696:MET:HE3	1.98	0.46
1:B:219:PHE:O	1:B:244:THR:HA	2.16	0.45
1:C:694:ALA:HA	1:C:723:GLN:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:627:ALA:CB	1:D:797:VAL:HG21	2.46	0.45
1:D:694:ALA:HA	1:D:723:GLN:O	2.17	0.45
1:A:627:ALA:CB	1:A:797:VAL:HG21	2.46	0.45
1:C:636:LYS:HE2	1:C:638:GLU:HG3	1.98	0.45
1:B:353:ARG:HA	1:B:358:LYS:O	2.16	0.45
1:A:811:LEU:N	1:A:812:PRO:CD	2.80	0.45
1:C:207:LEU:HD23	1:C:207:LEU:O	2.17	0.45
1:B:750:LEU:O	1:B:768:GLY:HA2	2.17	0.45
1:D:750:LEU:O	1:D:768:GLY:HA2	2.17	0.45
1:D:218:LYS:HB3	1:D:258:ASP:O	2.17	0.45
1:B:728:GLY:O	1:B:731:MET:HG2	2.16	0.44
1:D:239:TYR:O	1:D:662:GLY:HA3	2.17	0.44
1:A:57:LEU:HD12	1:B:410:ARG:HG3	1.99	0.44
1:A:726:LEU:C	1:A:726:LEU:HD23	2.38	0.44
1:C:897:TRP:CG	1:C:898:PRO:HA	2.52	0.44
1:C:627:ALA:CB	1:C:797:VAL:HG21	2.48	0.44
1:D:219:PHE:O	1:D:244:THR:HA	2.17	0.44
1:D:189:LEU:HD12	1:D:189:LEU:HA	1.75	0.44
1:A:164:TYR:O	1:A:166:PRO:HD3	2.18	0.44
1:D:646:ILE:CD1	1:D:696:MET:HE2	2.45	0.44
1:B:164:TYR:O	1:B:166:PRO:HD3	2.17	0.43
1:A:728:GLY:O	1:A:731:MET:HG2	2.19	0.43
1:A:219:PHE:O	1:A:244:THR:HA	2.18	0.43
1:D:935:GLU:OE1	1:D:937:ARG:NH2	2.52	0.43
1:B:705:VAL:HG11	1:B:854:GLY:HA2	1.99	0.43
1:C:353:ARG:HA	1:C:358:LYS:O	2.18	0.43
1:D:353:ARG:HA	1:D:358:LYS:O	2.19	0.43
1:B:239:TYR:O	1:B:662:GLY:HA3	2.18	0.43
1:B:347:ARG:HG2	1:B:363:LEU:HD22	2.01	0.43
1:B:694:ALA:HA	1:B:723:GLN:O	2.18	0.43
6:C:1106:PEG:H41	7:D:1330:HOH:O	2.18	0.43
1:C:219:PHE:O	1:C:244:THR:HA	2.18	0.43
1:D:240:THR:O	1:D:240:THR:CG2	2.66	0.43
1:D:164:TYR:O	1:D:166:PRO:HD3	2.18	0.43
1:A:353:ARG:HD2	7:A:1469:HOH:O	2.17	0.43
1:C:196:LEU:HA	1:C:196:LEU:HD23	1.85	0.43
1:D:777:ALA:N	1:D:778:PRO:CD	2.81	0.43
1:D:811:LEU:N	1:D:812:PRO:CD	2.82	0.43
1:B:217:ARG:HH11	1:B:217:ARG:HG2	1.83	0.42
1:C:750:LEU:O	1:C:768:GLY:HA2	2.19	0.42
1:B:777:ALA:N	1:B:778:PRO:CD	2.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:419:SER:HB2	1:C:429:LEU:HD11	2.02	0.42
1:C:777:ALA:N	1:C:778:PRO:CD	2.82	0.42
1:A:777:ALA:N	1:A:778:PRO:CD	2.82	0.42
1:B:982:PHE:CD2	6:B:3002:PEG:H21	2.55	0.42
1:A:207:LEU:HD12	1:A:219:PHE:CD1	2.54	0.42
1:A:935:GLU:OE1	1:A:937:ARG:NH1	2.51	0.42
6:C:1106:PEG:H42	1:D:543:ASN:HD22	1.85	0.42
1:C:217:ARG:HG2	1:C:217:ARG:HH11	1.84	0.42
1:A:207:LEU:HD13	1:A:233:VAL:HG13	2.02	0.42
1:C:565:SER:OG	1:D:149:ARG:HD2	2.19	0.42
1:C:811:LEU:N	1:C:812:PRO:CD	2.82	0.42
1:B:729:ALA:HB3	2:B:3003:PLG:C2A	2.49	0.42
1:B:924:ILE:O	1:B:928:GLN:HG3	2.19	0.42
1:A:312:ILE:HG12	1:A:336:VAL:HG12	2.01	0.42
1:A:750:LEU:O	1:A:768:GLY:HA2	2.19	0.42
1:B:207:LEU:HD12	1:B:219:PHE:CD1	2.54	0.42
1:B:627:ALA:CB	1:B:797:VAL:HG21	2.49	0.41
1:C:544:LYS:HE2	1:D:979:GLU:HB3	2.02	0.41
1:B:424:ARG:HH11	1:B:424:ARG:HG3	1.85	0.41
1:D:867:THR:OG1	1:D:901:GLY:O	2.35	0.41
1:A:419:SER:OG	1:A:429:LEU:HD11	2.20	0.41
1:B:647:PRO:HD2	1:B:696:MET:O	2.20	0.41
1:C:77:GLU:HB3	1:C:913:LYS:HE3	2.02	0.41
1:D:728:GLY:O	1:D:731:MET:HG2	2.20	0.41
1:A:151:LEU:C	1:A:151:LEU:HD23	2.40	0.41
1:A:867:THR:OG1	1:A:901:GLY:O	2.35	0.41
1:D:149:ARG:NH2	7:D:1202:HOH:O	2.35	0.41
1:D:101:LEU:HD21	1:D:739:ARG:HG3	2.02	0.41
1:B:151:LEU:HD23	1:B:151:LEU:C	2.40	0.41
1:C:645:LEU:HD23	1:C:666:GLN:HB3	2.02	0.41
1:B:811:LEU:N	1:B:812:PRO:CD	2.83	0.41
1:C:151:LEU:C	1:C:151:LEU:HD23	2.41	0.41
1:B:240:THR:O	1:B:240:THR:CG2	2.69	0.41
1:D:729:ALA:HB3	2:D:1101:PLG:H2A2	2.02	0.41
1:C:495:GLU:CD	1:D:51:ARG:HD2	2.38	0.41
1:C:352:THR:HG21	1:C:362:ARG:CD	2.51	0.41
1:D:496:LEU:HD23	1:D:496:LEU:HA	1.91	0.41
1:D:645:LEU:HD23	1:D:666:GLN:HB3	2.03	0.41
1:B:758:ILE:HG23	1:B:759:PRO:HD2	2.03	0.40
1:C:197:LEU:HD13	1:C:620:GLN:HG3	2.03	0.40
1:D:747:VAL:HG23	1:D:772:VAL:HG12	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:654:ASN:HA	1:B:696:MET:HE1	2.03	0.40
1:B:77:GLU:HB3	1:B:913:LYS:HE3	2.03	0.40
1:A:647:PRO:HD2	1:A:696:MET:O	2.22	0.40
1:C:740:PRO:HA	1:C:743:PHE:CZ	2.56	0.40
1:C:755:THR:HB	1:C:756:PHE:CD2	2.57	0.40
1:D:367:THR:O	1:D:373:ARG:HG3	2.22	0.40
1:D:599:GLU:HG3	1:D:611:VAL:HB	2.02	0.40
1:A:207:LEU:CD1	1:A:233:VAL:HG13	2.52	0.40
1:B:791:ASN:OD1	1:B:793:ASP:HB3	2.22	0.40
1:C:747:VAL:HG23	1:C:772:VAL:HG12	2.03	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:499:GLU:OE2	1:C:853:ARG:NH1[1_455]	1.99	0.21

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	949/984 (96%)	922 (97%)	26 (3%)	1 (0%)	51	49
1	B	952/984 (97%)	922 (97%)	29 (3%)	1 (0%)	51	49
1	C	949/984 (96%)	923 (97%)	25 (3%)	1 (0%)	51	49
1	D	952/984 (97%)	920 (97%)	31 (3%)	1 (0%)	51	49
All	All	3802/3936 (97%)	3687 (97%)	111 (3%)	4 (0%)	51	49

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	195	SER
1	C	195	SER
1	D	195	SER
1	B	195	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	805/829 (97%)	801 (100%)	4 (0%)	88	92
1	B	806/829 (97%)	796 (99%)	10 (1%)	71	76
1	C	805/829 (97%)	800 (99%)	5 (1%)	86	90
1	D	806/829 (97%)	799 (99%)	7 (1%)	78	83
All	All	3222/3316 (97%)	3196 (99%)	26 (1%)	81	86

All (26) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	227	PRO
1	A	557	SER
1	A	708	GLU
1	A	872	LYS
1	B	103	ARG
1	B	149	ARG
1	B	347	ARG
1	B	557	SER
1	B	579	ILE
1	B	707	GLU
1	B	745	SER
1	B	791	ASN
1	B	856	ARG
1	B	896	SER
1	C	52	LEU
1	C	496	LEU
1	C	557	SER
1	C	686	ASP

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Mol	Chain	Res	Type
1	C	791	ASN
1	D	103	ARG
1	D	149	ARG
1	D	189	LEU
1	D	419	SER
1	D	557	SER
1	D	707	GLU
1	D	896	SER

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

Mol	Chain	Res	Type
1	A	610	GLN

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 carbohydrates in this entry.

5.6 Ligand geometry [i](#)

18 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
6	PEG	B	3002	-	6,6,6	0.59	0	5,5,5	0.68	0
2	PLG	A	1101	-	17,20,20	2.20	3 (17%)	23,28,28	2.52	12 (52%)
3	EDO	C	1102	-	3,3,3	0.48	0	2,2,2	0.26	0
2	PLG	C	1101	-	17,20,20	2.21	7 (41%)	23,28,28	2.01	9 (39%)
3	EDO	A	1102	-	3,3,3	0.73	0	2,2,2	0.33	0
4	GOL	C	1103	-	5,5,5	0.62	0	5,5,5	0.69	0
4	GOL	A	1104	-	5,5,5	0.53	0	5,5,5	1.12	0
4	GOL	A	1103	-	5,5,5	0.44	0	5,5,5	0.56	0
5	BCT	A	1105	-	0,3,3	0.00	-	0,3,3	0.00	-
6	PEG	C	1106	-	6,6,6	0.70	0	5,5,5	0.38	0
6	PEG	D	1103	-	6,6,6	0.54	0	5,5,5	0.69	0
4	GOL	B	3004	-	5,5,5	0.26	0	5,5,5	0.28	0
3	EDO	D	1102	-	3,3,3	0.45	0	2,2,2	1.12	0
3	EDO	B	3001	-	3,3,3	0.43	0	2,2,2	0.41	0
4	GOL	C	1105	-	5,5,5	0.55	0	5,5,5	0.18	0
6	PEG	C	1104	-	6,6,6	0.63	0	5,5,5	0.63	0
2	PLG	B	3003	-	17,20,20	2.97	3 (17%)	23,28,28	1.99	8 (34%)
2	PLG	D	1101	-	17,20,20	2.66	6 (35%)	23,28,28	2.07	10 (43%)

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. '2' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	PEG	B	3002	-	-	3/4/4/4	-
2	PLG	A	1101	-	-	4/10/12/12	0/1/1/1
3	EDO	C	1102	-	-	0/1/1/1	-
2	PLG	C	1101	-	-	3/10/12/12	0/1/1/1
3	EDO	A	1102	-	-	1/1/1/1	-
4	GOL	C	1103	-	-	3/4/4/4	-
4	GOL	A	1104	-	-	3/4/4/4	-
4	GOL	A	1103	-	-	2/4/4/4	-
6	PEG	C	1106	-	-	2/4/4/4	-
6	PEG	D	1103	-	-	3/4/4/4	-
4	GOL	B	3004	-	-	3/4/4/4	-
3	EDO	D	1102	-	-	1/1/1/1	-
3	EDO	B	3001	-	-	1/1/1/1	-
4	GOL	C	1105	-	-	2/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	PEG	C	1104	-	-	3/4/4/4	-
2	PLG	B	3003	-	-	3/10/12/12	0/1/1/1
2	PLG	D	1101	-	-	3/10/12/12	0/1/1/1

All (19) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	3003	PLG	C3-C2	8.01	1.48	1.40
2	B	3003	PLG	C5-C4	6.81	1.50	1.40
2	A	1101	PLG	C3-C2	6.67	1.47	1.40
2	D	1101	PLG	C3-C2	6.32	1.47	1.40
2	B	3003	PLG	C3-C4	5.76	1.48	1.40
2	D	1101	PLG	C5-C4	5.74	1.48	1.40
2	D	1101	PLG	C3-C4	4.56	1.47	1.40
2	A	1101	PLG	C5-C4	4.32	1.46	1.40
2	C	1101	PLG	C3-C2	4.07	1.45	1.40
2	A	1101	PLG	C3-C4	3.72	1.45	1.40
2	C	1101	PLG	C5-C4	3.37	1.45	1.40
2	C	1101	PLG	P-OP3	-3.08	1.43	1.54
2	C	1101	PLG	P-OP1	-3.04	1.40	1.50
2	C	1101	PLG	P-OP2	-2.82	1.44	1.54
2	C	1101	PLG	C3-C4	2.72	1.44	1.40
2	D	1101	PLG	P-OP3	-2.62	1.44	1.54
2	C	1101	PLG	O3-C3	-2.50	1.31	1.37
2	D	1101	PLG	P-OP2	-2.46	1.45	1.54
2	D	1101	PLG	C4A-C4	-2.22	1.49	1.51

All (39) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1101	PLG	C4A-C4-C3	5.00	125.40	120.04
2	A	1101	PLG	OP3-P-OP4	-4.50	94.75	106.73
2	D	1101	PLG	C4A-C4-C5	4.41	124.61	119.71
2	A	1101	PLG	OP4-P-OP1	4.30	118.52	106.47
2	B	3003	PLG	OP3-P-OP4	-3.79	96.65	106.73
2	C	1101	PLG	C2A-C2-C3	-3.69	116.33	120.89
2	D	1101	PLG	CA-N-C4A	3.66	121.76	112.54
2	C	1101	PLG	OP2-P-OP4	-3.50	97.43	106.73
2	D	1101	PLG	OP4-P-OP1	-3.44	96.82	106.47
2	C	1101	PLG	C2A-C2-N1	3.26	124.03	117.67
2	B	3003	PLG	CA-N-C4A	3.19	120.58	112.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	3003	PLG	C3-C4-C5	-3.13	115.72	118.72
2	B	3003	PLG	C4A-C4-C3	3.03	123.28	120.04
2	A	1101	PLG	OP2-P-OP4	-2.97	98.84	106.73
2	B	3003	PLG	OP3-P-OP2	2.92	118.81	107.64
2	A	1101	PLG	O3-C3-C4	2.91	126.67	118.13
2	C	1101	PLG	C4A-C4-C3	2.91	123.16	120.04
2	A	1101	PLG	OP3-P-OP1	2.87	121.91	110.68
2	C	1101	PLG	OP2-P-OP1	2.79	121.61	110.68
2	B	3003	PLG	C6-C5-C4	2.77	120.08	118.12
2	A	1101	PLG	C6-C5-C4	2.76	120.07	118.12
2	D	1101	PLG	C6-N1-C2	2.71	124.18	119.17
2	A	1101	PLG	OP4-C5A-C5	2.56	114.24	109.35
2	D	1101	PLG	OP3-P-OP1	2.56	120.70	110.68
2	D	1101	PLG	OP4-C5A-C5	2.53	114.17	109.35
2	C	1101	PLG	OP4-C5A-C5	2.52	114.16	109.35
2	D	1101	PLG	C4-C4A-N	-2.48	106.95	111.58
2	A	1101	PLG	C3-C4-C5	-2.45	116.36	118.72
2	A	1101	PLG	C4-C4A-N	2.42	116.11	111.58
2	C	1101	PLG	C6-N1-C2	2.37	123.56	119.17
2	D	1101	PLG	C4A-C4-C3	-2.37	117.51	120.04
2	C	1101	PLG	C3-C4-C5	-2.36	116.45	118.72
2	A	1101	PLG	C2A-C2-C3	-2.28	118.07	120.89
2	B	3003	PLG	C4-C4A-N	2.27	115.82	111.58
2	B	3003	PLG	C6-N1-C2	2.22	123.28	119.17
2	C	1101	PLG	C-CA-N	2.17	115.87	111.43
2	D	1101	PLG	C2A-C2-C3	-2.08	118.32	120.89
2	D	1101	PLG	C2A-C2-N1	2.07	121.70	117.67
2	A	1101	PLG	C6-N1-C2	2.06	122.97	119.17

There are no chirality outliers.

All (40) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	1101	PLG	C3-C4-C4A-N
2	A	1101	PLG	C5-C4-C4A-N
2	C	1101	PLG	C3-C4-C4A-N
2	C	1101	PLG	C5-C4-C4A-N
4	C	1103	GOL	C1-C2-C3-O3
4	A	1104	GOL	O1-C1-C2-C3
4	A	1103	GOL	C1-C2-C3-O3
4	B	3004	GOL	O1-C1-C2-O2
4	B	3004	GOL	O1-C1-C2-C3

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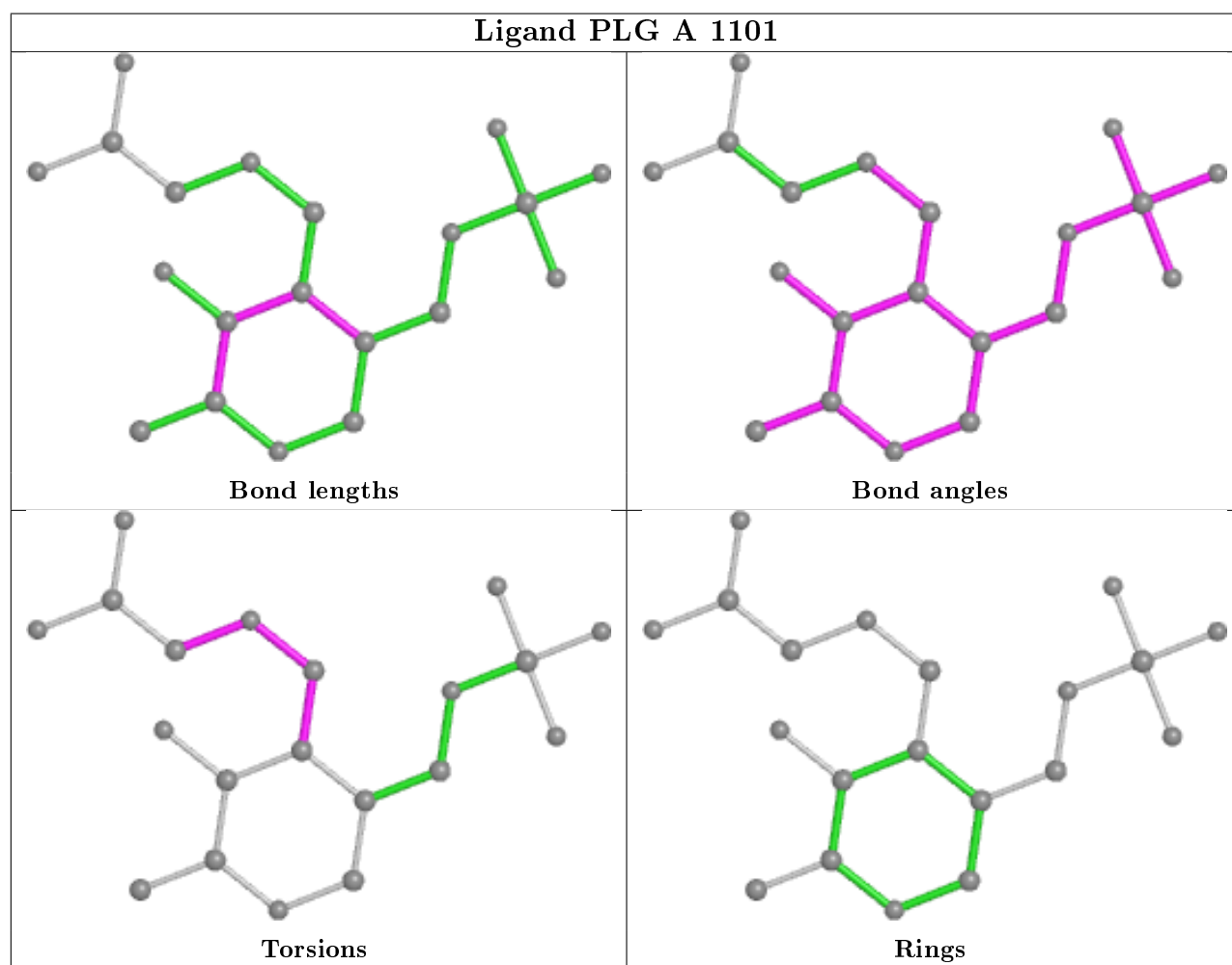
Mol	Chain	Res	Type	Atoms
4	C	1105	GOL	C1-C2-C3-O3
2	B	3003	PLG	C5-C4-C4A-N
6	C	1106	PEG	O1-C1-C2-O2
6	D	1103	PEG	O1-C1-C2-O2
2	D	1101	PLG	C5-C4-C4A-N
6	B	3002	PEG	O1-C1-C2-O2
4	C	1103	GOL	O1-C1-C2-C3
6	C	1106	PEG	O2-C3-C4-O4
4	C	1103	GOL	O2-C2-C3-O3
4	A	1104	GOL	O1-C1-C2-O2
4	A	1103	GOL	O2-C2-C3-O3
4	C	1105	GOL	O2-C2-C3-O3
6	C	1104	PEG	O2-C3-C4-O4
3	D	1102	EDO	O1-C1-C2-O2
6	C	1104	PEG	O1-C1-C2-O2
2	A	1101	PLG	C-CA-N-C4A
2	C	1101	PLG	C-CA-N-C4A
4	B	3004	GOL	O2-C2-C3-O3
2	B	3003	PLG	C4-C4A-N-CA
6	C	1104	PEG	C4-C3-O2-C2
6	D	1103	PEG	C1-C2-O2-C3
3	B	3001	EDO	O1-C1-C2-O2
6	B	3002	PEG	C4-C3-O2-C2
2	A	1101	PLG	C4-C4A-N-CA
3	A	1102	EDO	O1-C1-C2-O2
2	D	1101	PLG	C4-C4A-N-CA
2	B	3003	PLG	C3-C4-C4A-N
6	D	1103	PEG	C4-C3-O2-C2
4	A	1104	GOL	O2-C2-C3-O3
2	D	1101	PLG	C-CA-N-C4A
6	B	3002	PEG	C1-C2-O2-C3

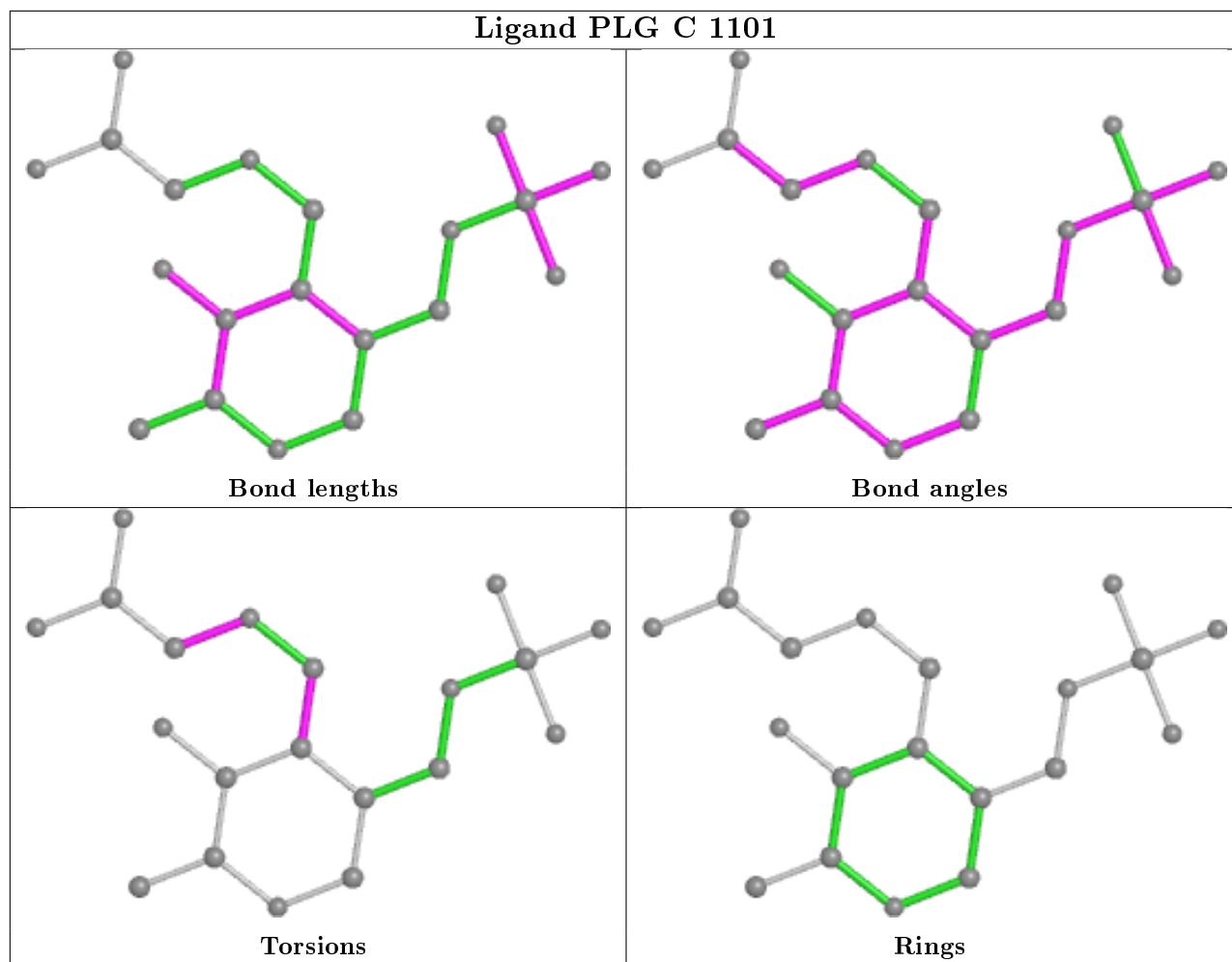
There are no ring outliers.

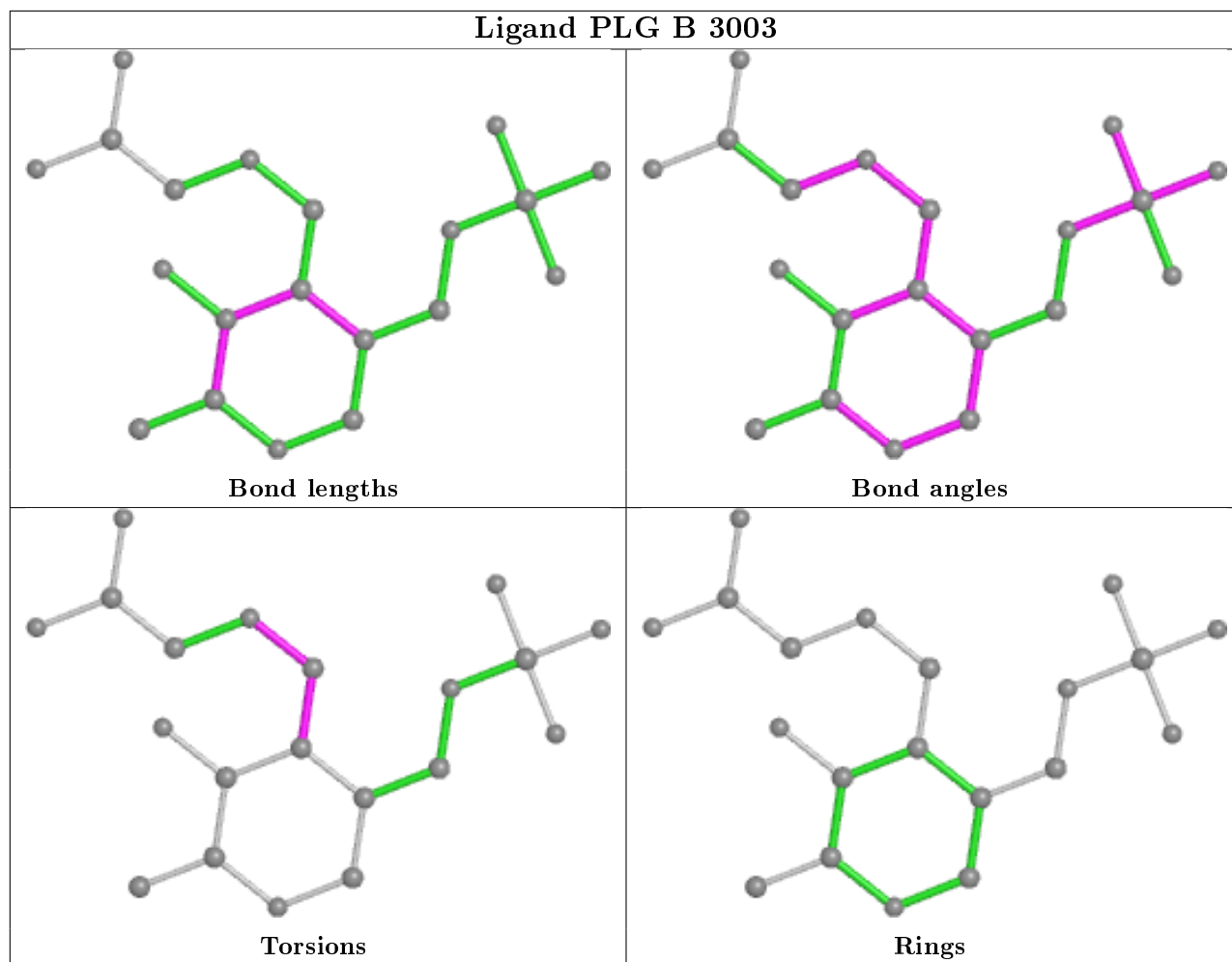
6 monomers are involved in 9 short contacts:

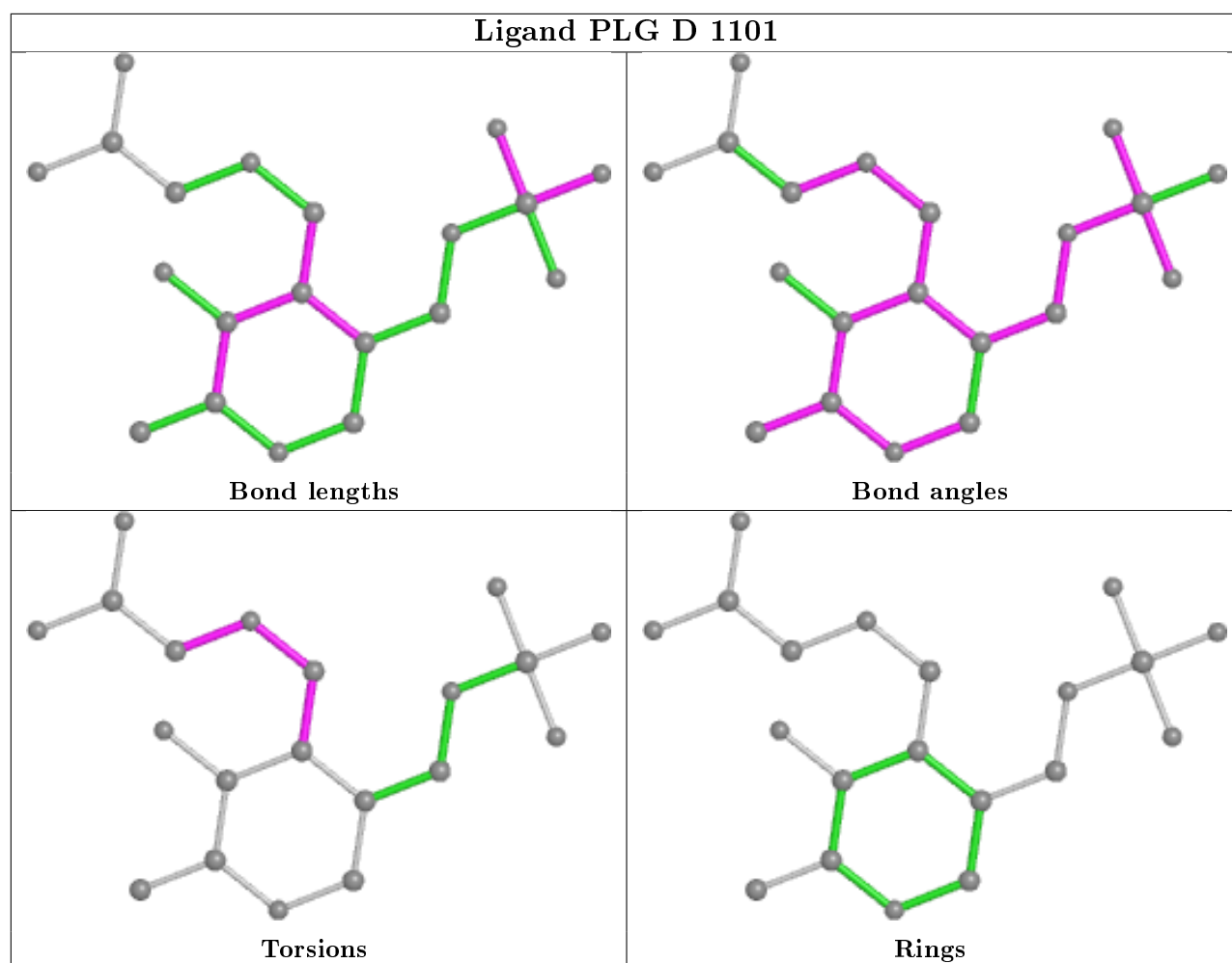
Mol	Chain	Res	Type	Clashes	Symm-Clashes
6	B	3002	PEG	1	0
2	C	1101	PLG	1	0
6	C	1106	PEG	3	0
6	D	1103	PEG	2	0
2	B	3003	PLG	2	0
2	D	1101	PLG	1	0

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 than 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.









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, 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	953/984 (96%)	0.09	30 (3%) 49 48	28, 41, 62, 99	0
1	B	954/984 (96%)	0.33	55 (5%) 23 22	32, 54, 80, 99	0
1	C	953/984 (96%)	0.10	31 (3%) 46 45	26, 40, 61, 92	0
1	D	954/984 (96%)	0.28	63 (6%) 18 17	31, 52, 80, 99	0
All	All	3814/3936 (96%)	0.20	179 (4%) 31 30	26, 46, 76, 99	0

All (179) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	792	GLU	6.5
1	C	959	HIS	4.9
1	B	629	ILE	4.9
1	D	722	GLY	4.8
1	B	52	LEU	4.7
1	A	791	ASN	4.7
1	B	632	TYR	4.7
1	B	1004	PRO	4.6
1	B	55	ARG	4.4
1	B	793	ASP	4.2
1	B	722	GLY	3.9
1	C	151	LEU	3.9
1	A	872	LYS	3.9
1	A	152	LEU	3.8
1	B	643	VAL	3.8
1	D	721	GLY	3.8
1	B	353	ARG	3.8
1	D	792	GLU	3.7
1	A	387	LEU	3.6
1	D	998	LEU	3.6
1	B	936	GLY	3.6

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Mol	Chain	Res	Type	RSRZ
1	D	254	PHE	3.6
1	B	102	LYS	3.5
1	C	147	ILE	3.5
1	B	152	LEU	3.5
1	B	633	LEU	3.4
1	B	634	ASN	3.4
1	A	158	ILE	3.4
1	A	792	GLU	3.4
1	D	353	ARG	3.3
1	B	158	ILE	3.3
1	D	681	LEU	3.3
1	C	512	VAL	3.3
1	D	1004	PRO	3.3
1	B	503	GLU	3.2
1	D	719	GLN	3.2
1	B	938	ILE	3.2
1	D	503	GLU	3.2
1	D	504	GLU	3.2
1	A	790	ARG	3.2
1	B	788	LEU	3.2
1	D	568	LEU	3.2
1	A	959	HIS	3.1
1	B	779	PHE	3.1
1	D	872	LYS	3.1
1	A	788	LEU	3.1
1	B	695	ILE	3.1
1	C	152	LEU	3.1
1	B	765	PRO	3.1
1	A	388	LEU	3.1
1	B	568	LEU	3.0
1	B	504	GLU	3.0
1	D	791	ASN	3.0
1	D	758	ILE	3.0
1	D	52	LEU	3.0
1	D	562	LEU	3.0
1	B	792	GLU	2.9
1	B	719	GLN	2.9
1	D	961	ASP	2.9
1	B	790	ARG	2.9
1	B	874	ALA	2.9
1	D	278	GLU	2.8
1	C	85	ALA	2.8

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Mol	Chain	Res	Type	RSRZ
1	C	148	LEU	2.8
1	A	147	ILE	2.8
1	D	717	ILE	2.8
1	D	810	ILE	2.8
1	D	997	HIS	2.8
1	D	102	LYS	2.8
1	D	993	TYR	2.8
1	B	692	LEU	2.8
1	C	788	LEU	2.8
1	D	994	GLY	2.7
1	B	928	GLN	2.7
1	D	714	CYS	2.7
1	B	993	TYR	2.7
1	A	148	LEU	2.7
1	D	720	HIS	2.7
1	A	450	LEU	2.7
1	A	391	MET	2.7
1	B	959	HIS	2.6
1	C	156	GLY	2.6
1	B	931	ALA	2.6
1	B	873	SER	2.6
1	D	790	ARG	2.6
1	B	151	LEU	2.6
1	A	157	TRP	2.6
1	B	752	LEU	2.6
1	D	571	ILE	2.6
1	A	486	TRP	2.6
1	C	571	ILE	2.5
1	A	449	VAL	2.5
1	D	387	LEU	2.5
1	B	937	ARG	2.5
1	B	777	ALA	2.5
1	D	424	ARG	2.5
1	A	151	LEU	2.5
1	A	752	LEU	2.5
1	C	568	LEU	2.5
1	D	87	ILE	2.5
1	D	933	ILE	2.5
1	D	506	ARG	2.4
1	D	849	ARG	2.4
1	A	1005	MET	2.4
1	B	254	PHE	2.4

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Mol	Chain	Res	Type	RSRZ
1	D	793	ASP	2.4
1	B	758	ILE	2.4
1	D	813	ILE	2.4
1	B	243	LEU	2.4
1	D	648	LYS	2.4
1	D	428	GLN	2.4
1	D	757	CYS	2.4
1	D	502	GLY	2.4
1	A	571	ILE	2.4
1	D	152	LEU	2.3
1	A	512	VAL	2.3
1	C	872	LYS	2.3
1	B	635	GLN	2.3
1	B	941	ARG	2.3
1	C	572	THR	2.3
1	C	76	ARG	2.3
1	D	147	ILE	2.3
1	C	211	TYR	2.3
1	D	718	HIS	2.3
1	A	765	PRO	2.3
1	D	765	PRO	2.3
1	A	758	ILE	2.3
1	B	759	PRO	2.3
1	D	564	SER	2.3
1	D	752	LEU	2.3
1	D	959	HIS	2.3
1	C	810	ILE	2.3
1	B	791	ASN	2.3
1	B	689	LYS	2.2
1	B	872	LYS	2.2
1	D	632	TYR	2.2
1	D	690	GLU	2.2
1	C	486	TRP	2.2
1	B	849	ARG	2.2
1	C	146	THR	2.2
1	C	149	ARG	2.2
1	B	645	LEU	2.2
1	D	941	ARG	2.2
1	C	157	TRP	2.2
1	D	384	ALA	2.2
1	B	502	GLY	2.2
1	C	686	ASP	2.2

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Mol	Chain	Res	Type	RSRZ
1	D	635	GLN	2.2
1	A	448	GLU	2.2
1	A	686	ASP	2.2
1	B	563	ASN	2.2
1	D	432	ASP	2.1
1	A	155	SER	2.1
1	A	402	HIS	2.1
1	B	997	HIS	2.1
1	D	936	GLY	2.1
1	C	387	LEU	2.1
1	D	243	LEU	2.1
1	A	535	VAL	2.1
1	C	762	GLY	2.1
1	B	498	ALA	2.1
1	D	402	HIS	2.1
1	D	148	LEU	2.1
1	A	454	ALA	2.1
1	C	386	ALA	2.1
1	C	759	PRO	2.1
1	C	445	SER	2.1
1	D	155	SER	2.1
1	D	724	VAL	2.1
1	B	693	ALA	2.1
1	D	84	LEU	2.0
1	C	764	GLY	2.0
1	D	443	GLY	2.0
1	B	846	THR	2.0
1	D	51	ARG	2.0
1	C	447	LYS	2.0
1	B	716	LEU	2.0
1	C	158	ILE	2.0
1	C	558	CYS	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 carbohydrates in this entry.

6.4 Ligands

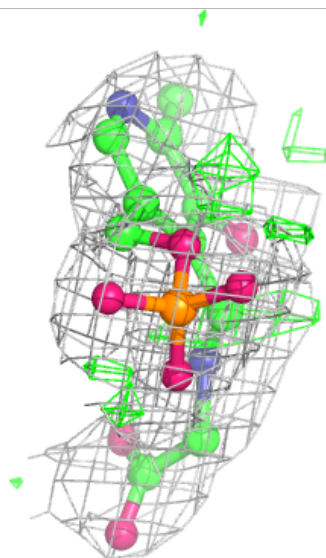
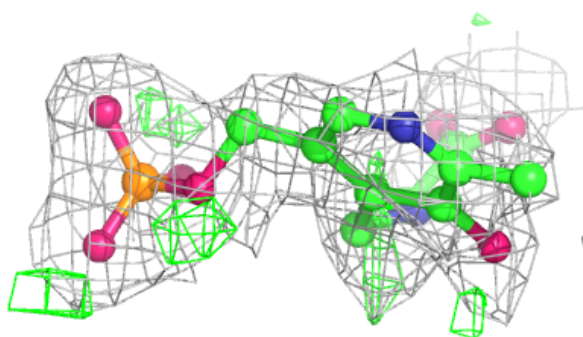
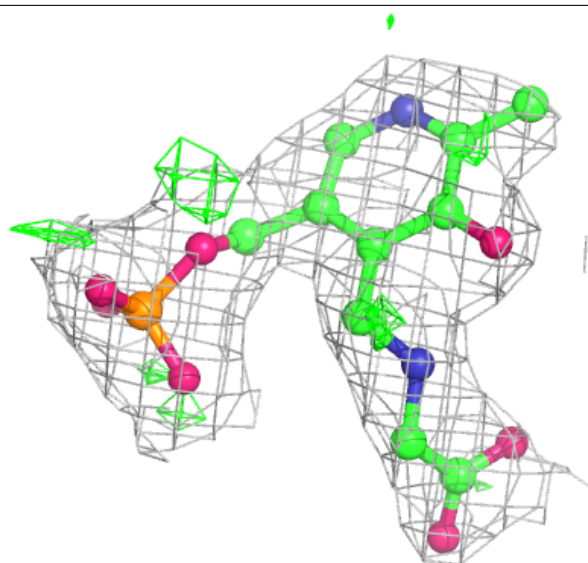
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
6	PEG	C	1106	7/7	0.53	0.30	63,65,68,69	0
3	EDO	A	1102	4/4	0.57	0.34	59,59,61,62	0
6	PEG	B	3002	7/7	0.76	0.28	54,57,67,70	0
3	EDO	B	3001	4/4	0.78	0.16	63,63,63,64	0
6	PEG	C	1104	7/7	0.80	0.14	46,58,68,70	0
5	BCT	A	1105	4/4	0.81	0.14	53,56,62,64	0
6	PEG	D	1103	7/7	0.81	0.22	52,64,65,71	0
4	GOL	C	1103	6/6	0.82	0.24	45,58,58,62	0
4	GOL	C	1105	6/6	0.84	0.22	39,44,45,50	0
3	EDO	D	1102	4/4	0.85	0.36	40,41,45,47	0
3	EDO	C	1102	4/4	0.85	0.12	57,60,60,61	0
4	GOL	A	1103	6/6	0.87	0.22	55,62,65,67	0
4	GOL	A	1104	6/6	0.90	0.16	49,53,56,63	0
4	GOL	B	3004	6/6	0.94	0.22	48,50,53,59	0
2	PLG	D	1101	20/20	0.94	0.17	42,60,71,73	0
2	PLG	C	1101	20/20	0.97	0.18	25,32,49,52	0
2	PLG	B	3003	20/20	0.97	0.16	44,58,65,66	0
2	PLG	A	1101	20/20	0.97	0.20	26,33,49,54	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.

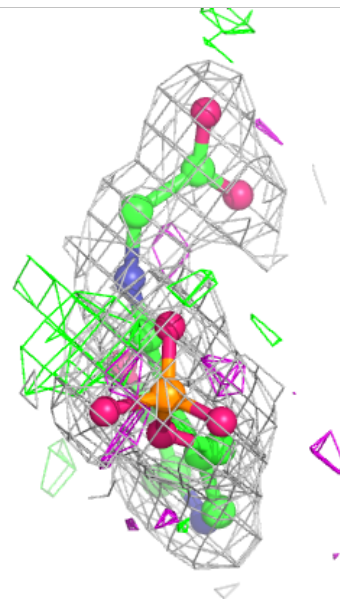
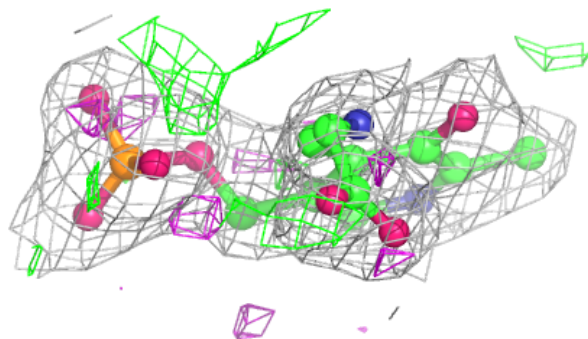
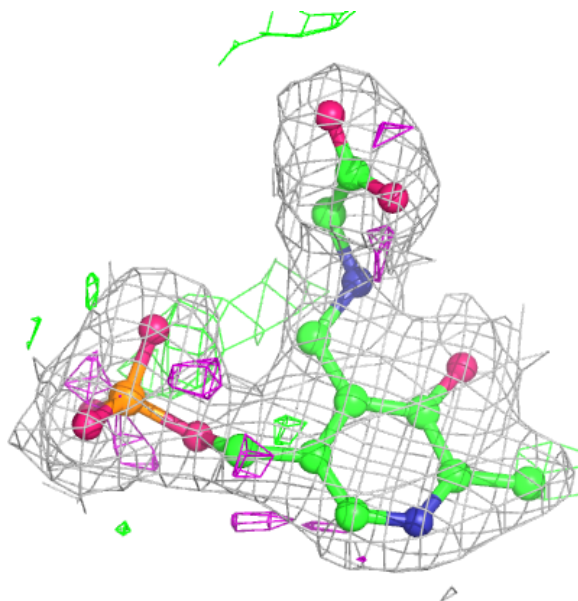
Electron density around PLG D 1101:

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



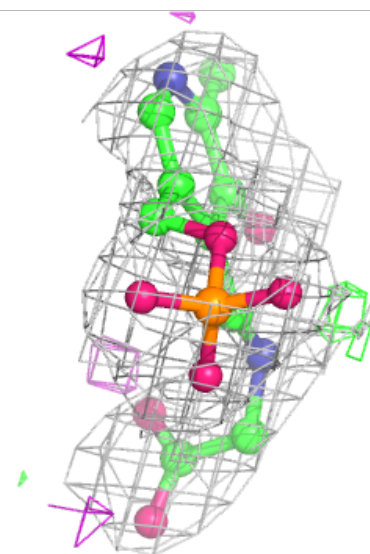
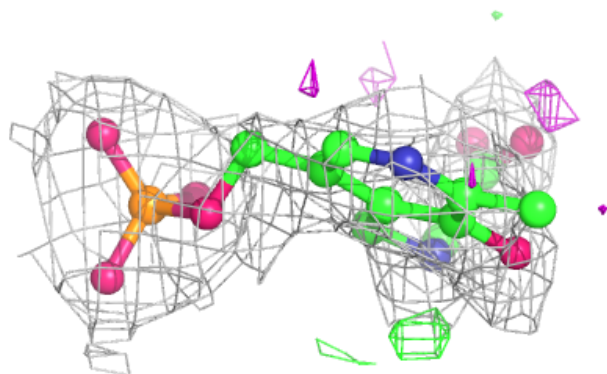
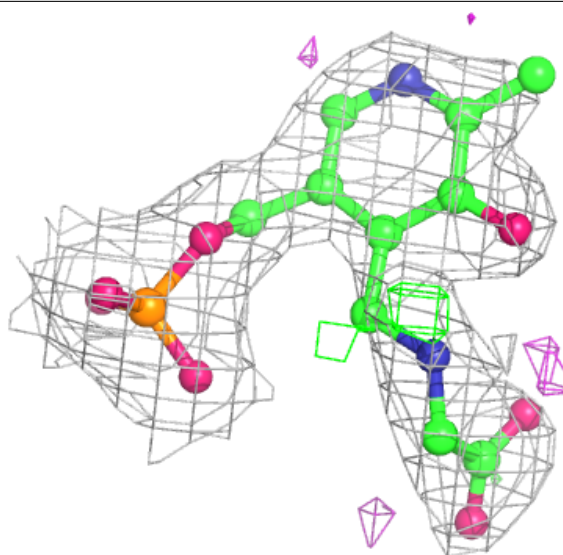
Electron density around PLG C 1101:

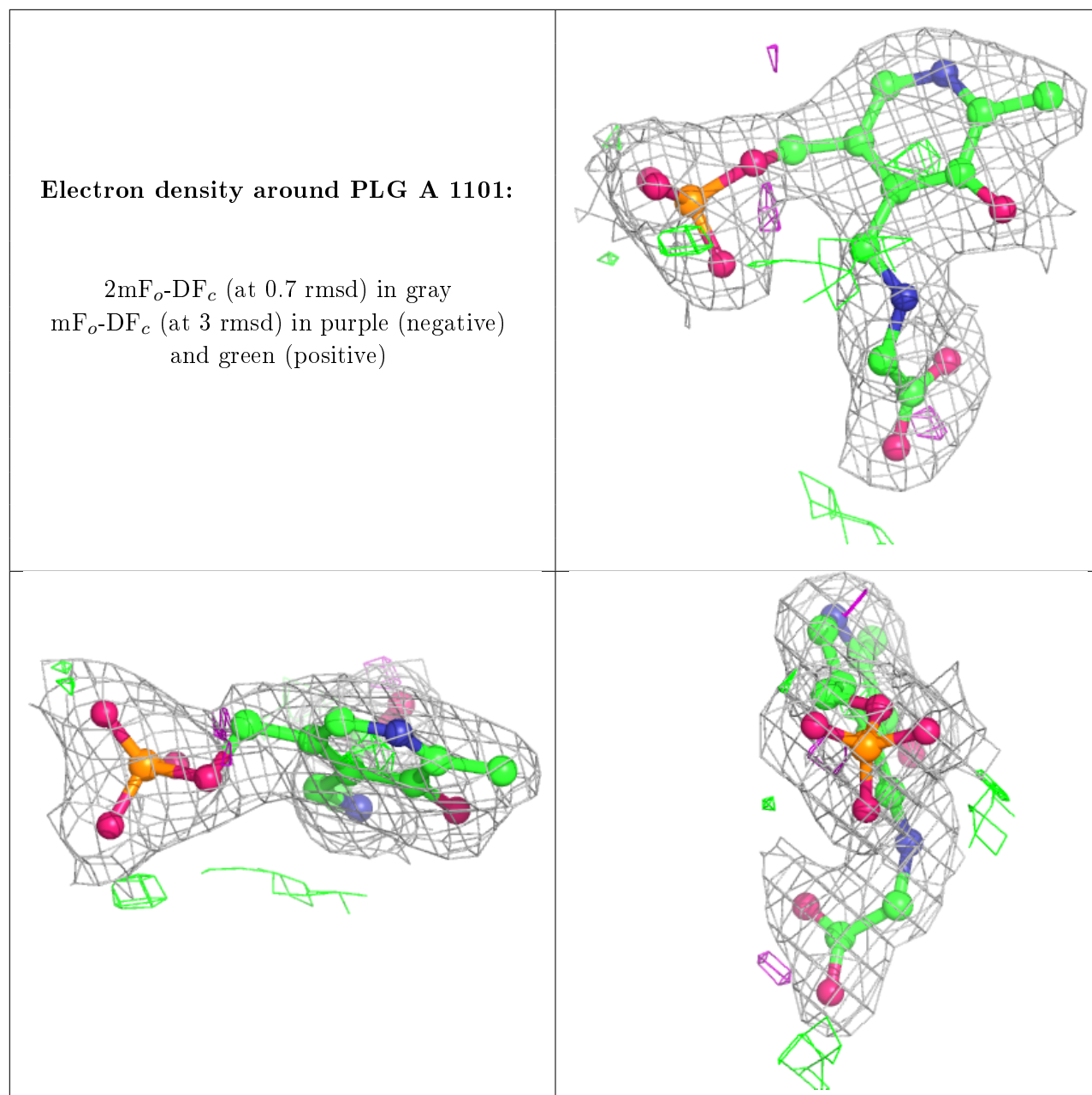
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around PLG B 3003:

$2mF_o-DF_c$ (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.