W O R L D W I D E
wwPDB
PROTEIN DATA BANK

wwPDB X-ray Structure Validation Summary Report (i)

Jan 27, 2026 – 12:13 pm GMT

PDB ID	:	9I55 / pdb_00009i55
Title	:	Mouse phosphomannomutase 2 in complex with the activator glucose-1,6-bis phosphate
Authors	:	Del Cano-Ochoa, F.; Vilar, M.; Vilas, A.; Company, R.; Perez, B.; Ramon-Maiques, S.
Deposited on	:	2025-01-27
Resolution	:	2.75 Å(reported)

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

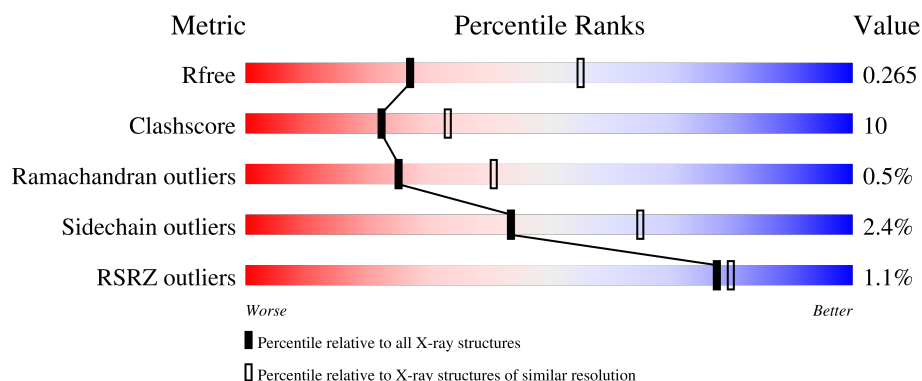|		
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.47

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 2.75 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		0.265
Clashscore		10
Ramachandran outliers		0.5%
Sidechain outliers		2.4%
RSRZ outliers		1.1%

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	1606 (2.78-2.74)
Clashscore	180529	1689 (2.78-2.74)
Ramachandran outliers	177936	1665 (2.78-2.74)
Sidechain outliers	177891	1665 (2.78-2.74)
RSRZ outliers	164620	1606 (2.78-2.74)

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	244	88% 11% •
1	B	244	85% 15%
1	C	244	82% 18%
1	D	244	73% 27% •

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Mol	Chain	Length	Quality of chain
1	E	244	2% 70% 28%
1	F	244	4% 68% 28%

2 Entry composition ⓘ

There are 7 unique types of molecules in this entry. The entry contains 23185 atoms, of which 11285 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 Phosphomannomutase 2.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	242	Total 3839	C 1232	H 1904	N 330	O 363	S 10	0	0	0
1	B	243	Total 3878	C 1242	H 1929	N 332	O 364	S 11	0	0	0
1	D	242	Total 3799	C 1224	H 1880	N 324	O 361	S 10	0	0	0
1	F	241	Total 3631	C 1187	H 1770	N 315	O 349	S 10	0	0	0
1	C	243	Total 3863	C 1239	H 1918	N 331	O 364	S 11	0	0	0
1	E	242	Total 3730	C 1209	H 1836	N 325	O 350	S 10	0	0	0

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-1	GLY	-	expression tag	UNP Q9Z2M7
A	0	PRO	-	expression tag	UNP Q9Z2M7
B	-1	GLY	-	expression tag	UNP Q9Z2M7
B	0	PRO	-	expression tag	UNP Q9Z2M7
D	-1	GLY	-	expression tag	UNP Q9Z2M7
D	0	PRO	-	expression tag	UNP Q9Z2M7
F	-1	GLY	-	expression tag	UNP Q9Z2M7
F	0	PRO	-	expression tag	UNP Q9Z2M7
C	-1	GLY	-	expression tag	UNP Q9Z2M7
C	0	PRO	-	expression tag	UNP Q9Z2M7
E	-1	GLY	-	expression tag	UNP Q9Z2M7
E	0	PRO	-	expression tag	UNP Q9Z2M7

- Molecule 2 is GLYCEROL (CCD ID: GOL) (formula: $C_3H_8O_3$).

GOL

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total 14	C 3	H 8	O 3	0	0

- Molecule 3 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	3	Total 3	Mg 3	0	0
3	B	1	Total 1	Mg 1	0	0
3	D	2	Total 2	Mg 2	0	0
3	F	2	Total 2	Mg 2	0	0
3	C	2	Total 2	Mg 2	0	0
3	E	2	Total 2	Mg 2	0	0

- Molecule 4 is CHLORIDE ION (CCD ID: CL) (formula: Cl).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	1	Total 1	Cl 1	0	0
4	B	1	Total 1	Cl 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	E	2	Total Cl 2 2		0	0

- Molecule 5 is SODIUM ION (CCD ID: NA) (formula: Na).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	1	Total Na 1 1		0	0

- Molecule 6 is 1,6-di-O-phosphono-alpha-D-glucopyranose (CCD ID: G16) (formula: $C_6H_{13}O_{12}P_2$) (labeled as "Ligand of Interest" by depositor).
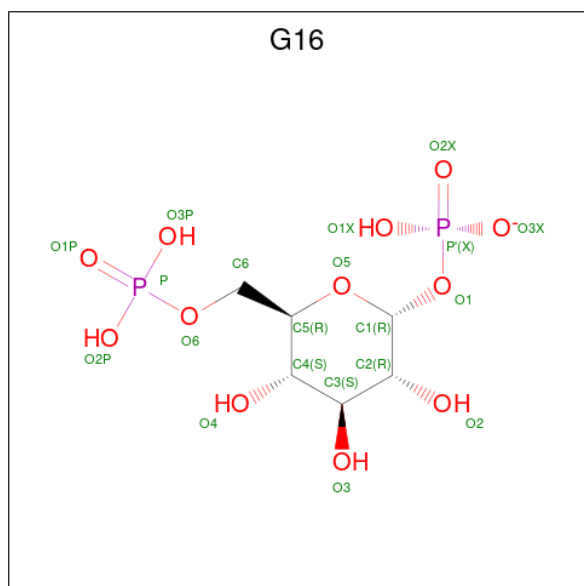
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
6	B	1	Total 30	C 6	H 10	O 12	P 2	0	0
6	D	1	Total 30	C 6	H 10	O 12	P 2	0	0
6	F	1	Total 30	C 6	H 10	O 12	P 2	0	0
6	C	1	Total 30	C 6	H 10	O 12	P 2	0	0

- Molecule 7 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
7	A	73	Total 73	O 73	0	0
7	B	59	Total 59	O 59	0	0
7	D	52	Total 52	O 52	0	0
7	F	20	Total 20	O 20	0	0
7	C	60	Total 60	O 60	0	0
7	E	30	Total 30	O 30	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.

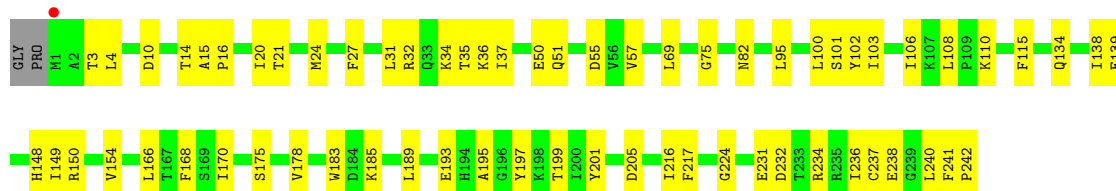• Molecule 1: Phosphomannomutase 2

Chain A:

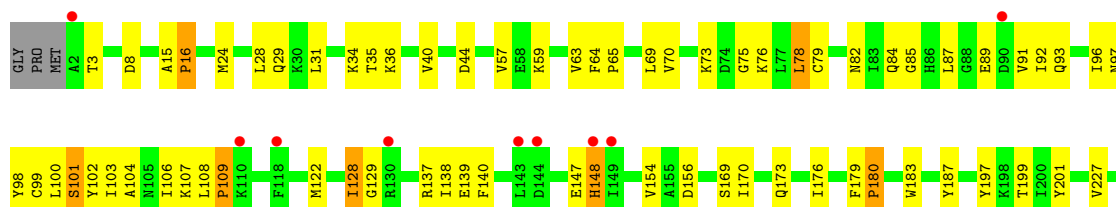• Molecule 1: Phosphomannomutase 2

Chain B:
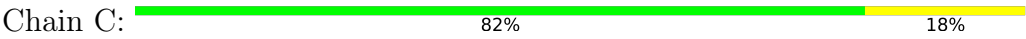

• Molecule 1: Phosphomannomutase 2

Chain D:

• Molecule 1: Phosphomannomutase 2

Chain F:

P230 E231 D232 R235 I236 L240 F241 P242

• Molecule 1: Phosphomannomutase 2

Chain C:

82% 18%

GLY P0 T3 D8 T12 L13 L28 R32 T35 V57 V63 K73 L78 C79 N82 I83 I92 Q93 D94 L95 L100 R119 N124 R130 S131 F140 Y141 R150 V154 L166 T167 F168 S175 V178 F179 P180 R186

Y187 R190 E193 T199 H214 E215 T218 R221 E231 D232 R235 P242

• Molecule 1: Phosphomannomutase 2

Chain E:

2% 70% 28%

GLY PRO M1 T12 L13 R17 Q18 L28 L31 K34 G38 F45 Q51 V56 V57 E66 L69 V70 A71 Y72 K73 D74 L77 L78 C79 K80 I83 Q84 G85 H86 L87 D90 V91 I92 I96 N97 Y98 C99 L100 S101 Y102 I103 I106 K107

L108 P109 K110 K111 R112 G113 T114 F115 I116 E117 F118 R119 N120 L123 N124 R130 S131 C132 S133 Q134 R137 I138 L143 D144 R150 F153 V154 A155 D156 L157 E160 T167 I170 Q173 I174 P180 E181 G182 W183 Y187 R190 V227 T228 A229 P230

T233 P242

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	81.28Å 99.14Å 213.47Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	64.67 – 2.75 64.67 – 2.75	Depositor EDS
% Data completeness (in resolution range)	98.8 (64.67-2.75) 98.8 (64.67-2.75)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.19 (at 2.73Å)	Xtriage
Refinement program	PHENIX 1.20.1_4487	Depositor
R, R_{free}	0.205 , 0.265 0.206 , 0.265	Depositor DCC
R_{free} test set	2289 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å^2)	61.4	Xtriage
Anisotropy	0.377	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 36.6	EDS
L-test for twinning [2]	$< \lvert L \rvert > = 0.48$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	23185	wwPDB-VP
Average B, all atoms (Å^2)	71.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.49% 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 $< \lvert L \rvert >$, $< L^2 >$ 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: G16, CL, GOL, NA, MG

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	0.20	0/1975	0.39	0/2656
1	B	0.19	0/1990	0.37	0/2674
1	C	0.20	0/1986	0.36	0/2670
1	D	0.19	0/1959	0.39	0/2637
1	E	0.25	0/1934	0.42	0/2608
1	F	0.20	0/1900	0.34	0/2568
All	All	0.21	0/11744	0.38	0/15813

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	B	0	1
1	E	0	3
All	All	0	4

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	32	ARG	Sidechain
1	E	130	ARG	Sidechain
1	E	137	ARG	Sidechain
1	E	17	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	1935	1904	1906	17	0
1	B	1949	1929	1931	21	0
1	C	1945	1918	1920	23	0
1	D	1919	1880	1880	55	1
1	E	1894	1836	1838	64	0
1	F	1861	1770	1768	60	0
2	A	6	8	8	0	0
3	A	3	0	0	0	0
3	B	1	0	0	0	0
3	C	2	0	0	0	0
3	D	2	0	0	0	0
3	E	2	0	0	0	0
3	F	2	0	0	0	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	E	2	0	0	2	0
5	A	1	0	0	0	1
6	B	20	10	10	0	0
6	C	20	10	10	1	0
6	D	20	10	10	0	0
6	F	20	10	10	1	0
7	A	73	0	0	1	0
7	B	59	0	0	0	0
7	C	60	0	0	0	0
7	D	52	0	0	2	0
7	E	30	0	0	1	0
7	F	20	0	0	1	0
All	All	11900	11285	11291	238	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 10.

The worst 5 of 238 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:D:236:ILE:HG22	1:D:240:LEU:HD11	1.55	0.85
1:D:150:ARG:O	1:D:154:VAL:HG23	1.85	0.77
1:C:231:GLU:OE1	1:C:231:GLU:N	2.18	0.76
1:E:153:PHE:CE1	1:E:157:LEU:HD11	2.21	0.75
1:B:48:LEU:HD12	1:B:65:PRO:HB3	1.71	0.73

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:D:148:HIS:HE2	5:A:306:NA:NA[4_545]	1.53	0.07

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	240/244 (98%)	230 (96%)	10 (4%)	0	100	100
1	B	241/244 (99%)	225 (93%)	16 (7%)	0	100	100
1	C	241/244 (99%)	227 (94%)	14 (6%)	0	100	100
1	D	240/244 (98%)	227 (95%)	11 (5%)	2 (1%)	16	29
1	E	240/244 (98%)	217 (90%)	23 (10%)	0	100	100
1	F	239/244 (98%)	207 (87%)	27 (11%)	5 (2%)	5	10
All	All	1441/1464 (98%)	1333 (92%)	101 (7%)	7 (0%)	25	41

5 of 7 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	F	180	PRO
1	D	193	GLU
1	F	109	PRO
1	F	148	HIS

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Mol	Chain	Res	Type
1	D	10	ASP

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	207/211 (98%)	204 (99%)	3 (1%)	62	78
1	B	210/211 (100%)	205 (98%)	5 (2%)	44	65
1	C	209/211 (99%)	204 (98%)	5 (2%)	44	65
1	D	204/211 (97%)	198 (97%)	6 (3%)	37	59
1	E	196/211 (93%)	193 (98%)	3 (2%)	60	76
1	F	189/211 (90%)	182 (96%)	7 (4%)	29	50
All	All	1215/1266 (96%)	1186 (98%)	29 (2%)	44	65

5 of 29 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	F	28	LEU
1	E	130	ARG
1	F	101	SER
1	C	131	SER
1	F	79	CYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 8 such sidechains are listed below:

Mol	Chain	Res	Type
1	E	191	HIS
1	C	82	ASN
1	F	84	GLN
1	B	191	HIS
1	F	105	ASN

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 22 ligands modelled in this entry, 17 are monoatomic - leaving 5 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	$\#|Z| > 2$
6	G16	C	301	-	19,20,20	1.70	4 (21%)	30,31,31	0.93	1 (3%)
6	G16	D	301	-	19,20,20	1.56	2 (10%)	30,31,31	0.93	1 (3%)
6	G16	B	301	-	19,20,20	1.59	2 (10%)	30,31,31	1.07	2 (6%)
2	GOL	A	301	-	5,5,5	0.68	0	5,5,5	0.93	0
6	G16	F	301	-	19,20,20	1.55	2 (10%)	30,31,31	0.88	1 (3%)

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
6	G16	C	301	-	-	3/11/31/31	0/1/1/1
6	G16	D	301	-	-	3/11/31/31	0/1/1/1
6	G16	B	301	-	-	2/11/31/31	0/1/1/1
2	GOL	A	301	-	-	0/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	G16	F	301	-	-	0/11/31/31	0/1/1/1

The worst 5 of 10 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	C	301	G16	P'-O1	4.59	1.68	1.59
6	C	301	G16	O5-C1	4.15	1.52	1.41
6	F	301	G16	P'-O1	4.13	1.67	1.59
6	D	301	G16	P'-O1	4.08	1.67	1.59
6	B	301	G16	P'-O1	4.07	1.67	1.59

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	C	301	G16	O5-C1-O1	-2.86	107.62	111.36
6	B	301	G16	O5-C5-C6	2.82	112.36	106.67
6	B	301	G16	C1-C2-C3	2.58	115.36	110.00
6	D	301	G16	O5-C5-C6	2.43	111.58	106.67
6	F	301	G16	C4-C3-C2	2.19	114.65	110.82

There are no chirality outliers.

5 of 8 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
6	B	301	G16	C4-C5-C6-O6
6	B	301	G16	O5-C5-C6-O6
6	D	301	G16	C4-C5-C6-O6
6	D	301	G16	O5-C5-C6-O6
6	C	301	G16	C4-C5-C6-O6

There are no ring outliers.

2 monomers are involved in 2 short contacts:

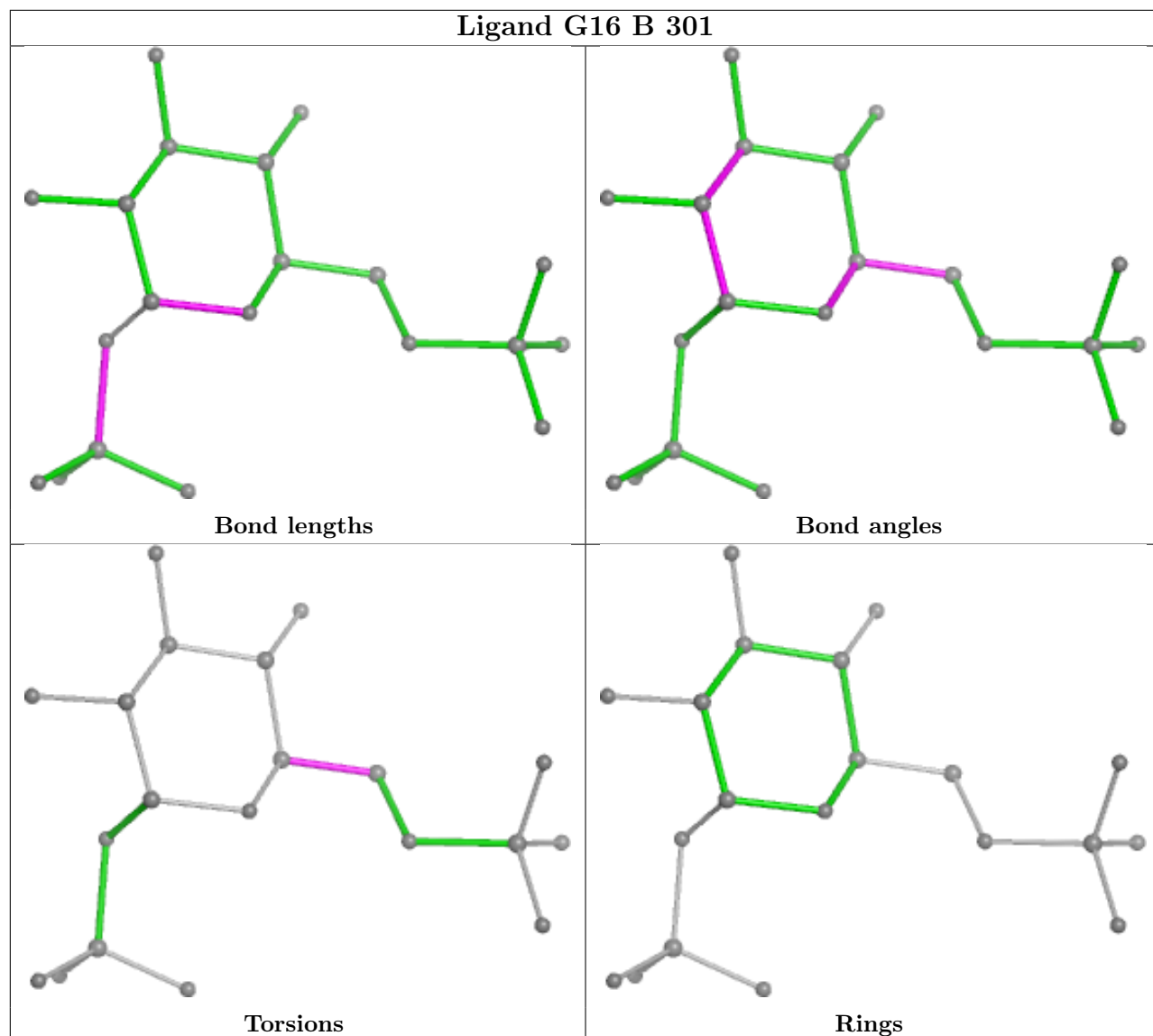| Mol	Chain	Res	Type	Clashes	Symm-Clashes
6	C	301	G16	1	0
6	F	301	G16	1	0

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
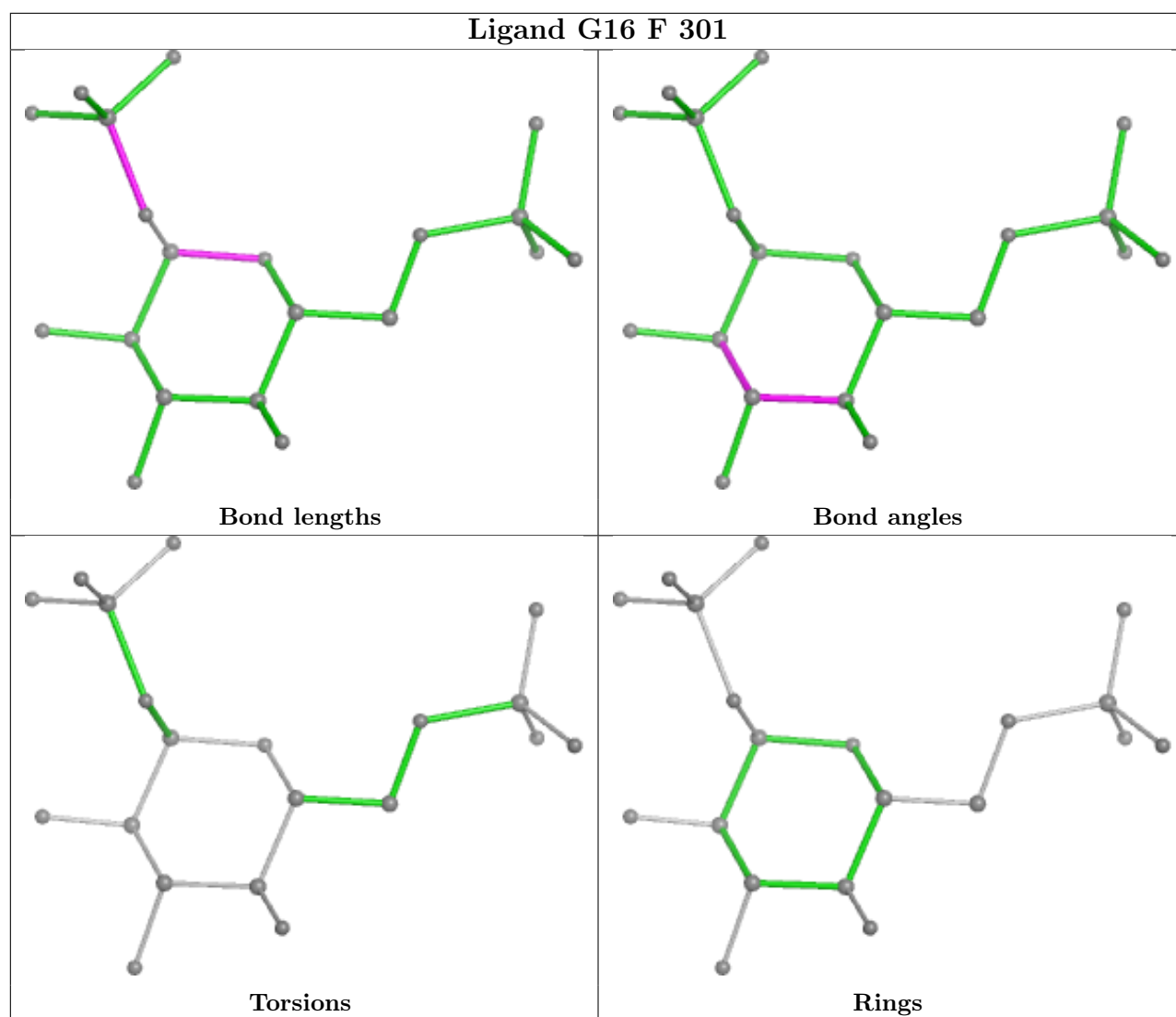
within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question 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 G16 C 301

Bond lengths

Bond angles

Torsions

Rings

Ligand G16 D 301

Bond lengths

Bond angles

Torsions

Rings

Ligand G16 B 301

Bond lengths

Bond angles

Torsions

Rings

Ligand G16 F 301

Bond lengths

Bond angles

Torsions

Rings
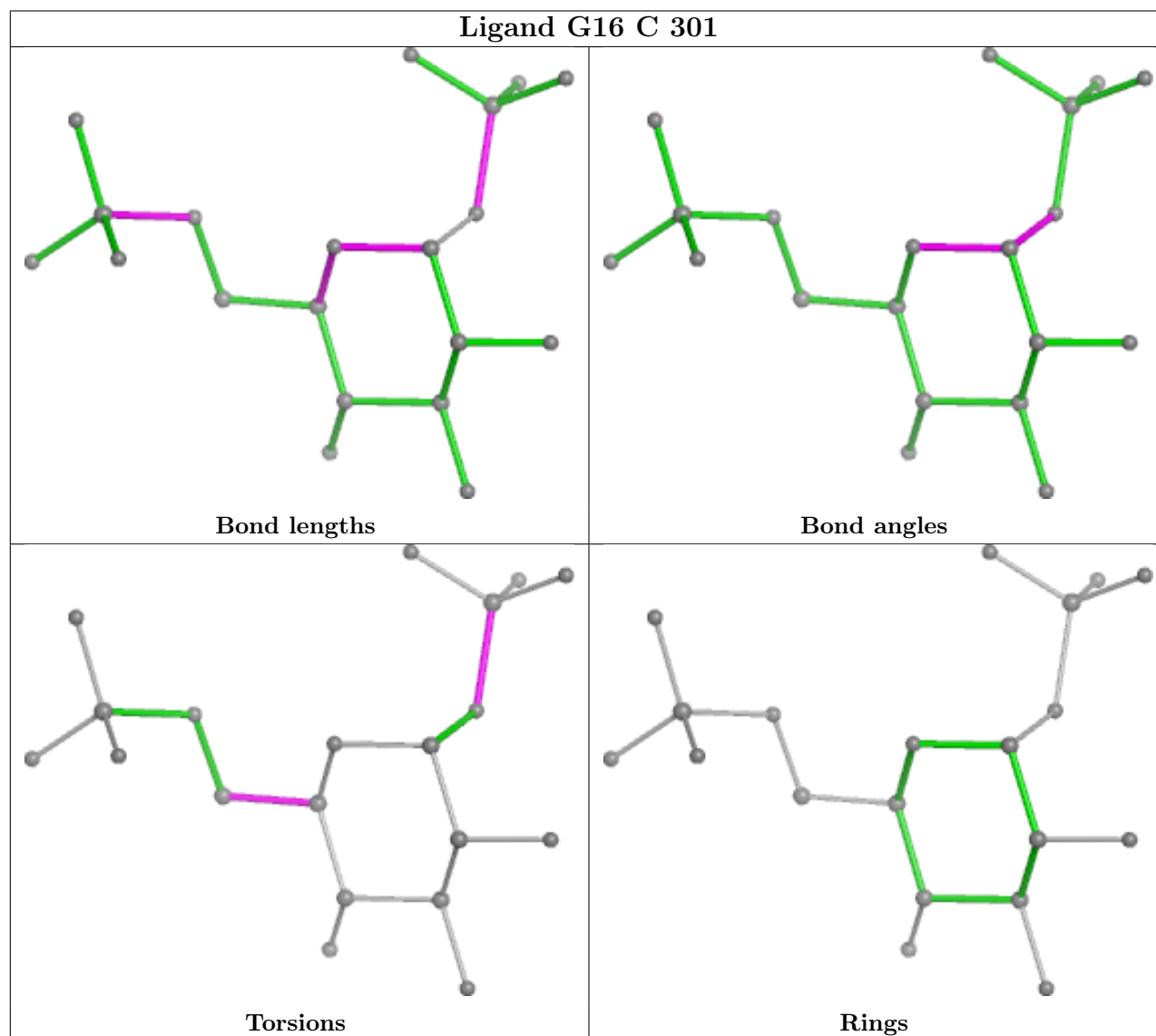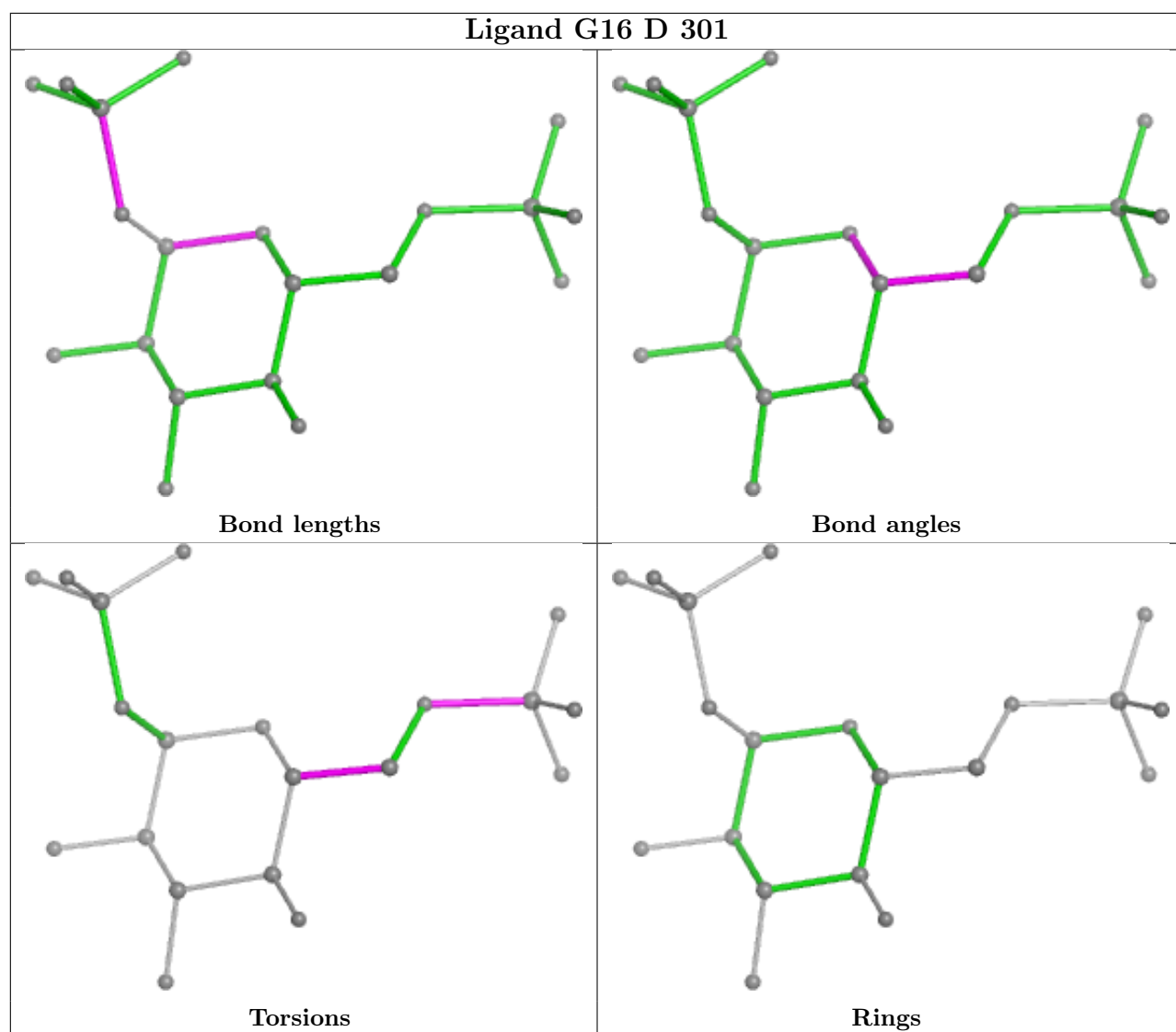
5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å²)	Q<0.9
1	A	242/244 (99%)	-0.56	0	100	100	38, 54, 69, 87	0
1	B	243/244 (99%)	-0.27	0	100	100	44, 64, 88, 103	0
1	C	243/244 (99%)	-0.32	0	100	100	46, 61, 83, 95	0
1	D	242/244 (99%)	-0.10	1 (0%)	89	90	45, 69, 100, 117	0
1	E	242/244 (99%)	0.13	6 (2%)	58	59	52, 86, 110, 121	0
1	F	241/244 (98%)	0.27	9 (3%)	45	47	62, 90, 112, 133	0
All	All	1453/1464 (99%)	-0.14	16 (1%)	77	80	38, 68, 105, 133	0

The worst 5 of 16 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	1	MET	3.4
1	F	148	HIS	3.2
1	E	38	GLY	3.1
1	F	2	ALA	3.1
1	F	144	ASP	2.9

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

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

6.3 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

6.4 Ligands ⓘ

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
6	G16	C	301	20/20	0.61	0.13	75,100,119,120	30
6	G16	F	301	20/20	0.68	0.14	94,108,125,126	30
2	GOL	A	301	6/6	0.68	0.15	71,86,101,102	0
6	G16	B	301	20/20	0.74	0.12	63,85,99,108	30
3	MG	E	302	1/1	0.78	0.15	66,66,66,66	0
6	G16	D	301	20/20	0.79	0.10	57,80,96,97	30
4	CL	E	304	1/1	0.89	0.07	74,74,74,74	0
3	MG	A	304	1/1	0.91	0.11	56,56,56,56	0
4	CL	E	303	1/1	0.92	0.11	62,62,62,62	0
3	MG	F	303	1/1	0.93	0.06	65,65,65,65	0
3	MG	D	303	1/1	0.94	0.11	65,65,65,65	0
5	NA	A	306	1/1	0.96	0.08	57,57,57,57	0
4	CL	A	305	1/1	0.97	0.07	44,44,44,44	0
3	MG	C	303	1/1	0.97	0.04	35,35,35,35	0
3	MG	F	302	1/1	0.98	0.03	62,62,62,62	0
4	CL	B	303	1/1	0.98	0.08	60,60,60,60	0
3	MG	A	303	1/1	0.98	0.04	29,29,29,29	0
3	MG	A	302	1/1	0.99	0.04	48,48,48,48	0
3	MG	E	301	1/1	0.99	0.02	59,59,59,59	0
3	MG	B	302	1/1	0.99	0.02	52,52,52,52	0
3	MG	D	302	1/1	0.99	0.05	64,64,64,64	0
3	MG	C	302	1/1	1.00	0.03	49,49,49,49	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.
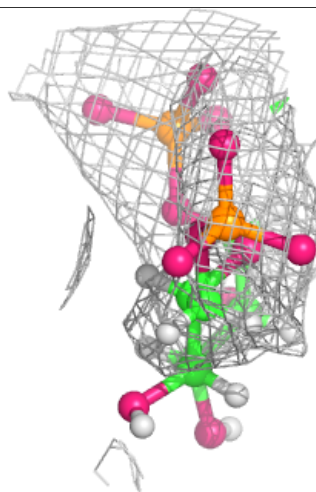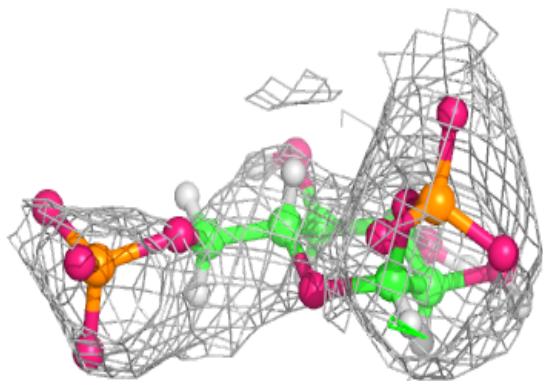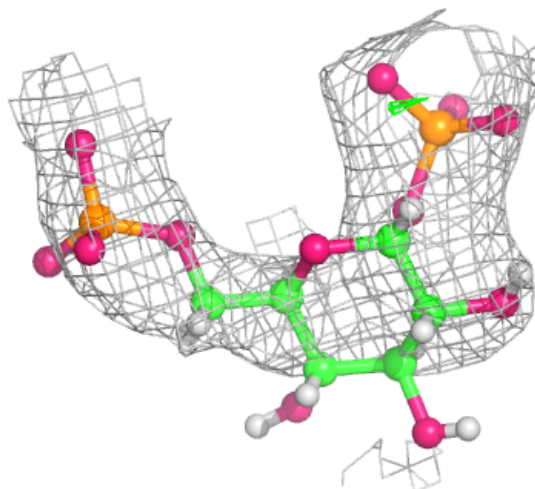
Electron density around G16 C 301:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
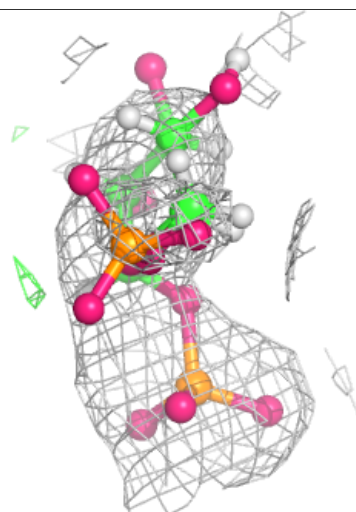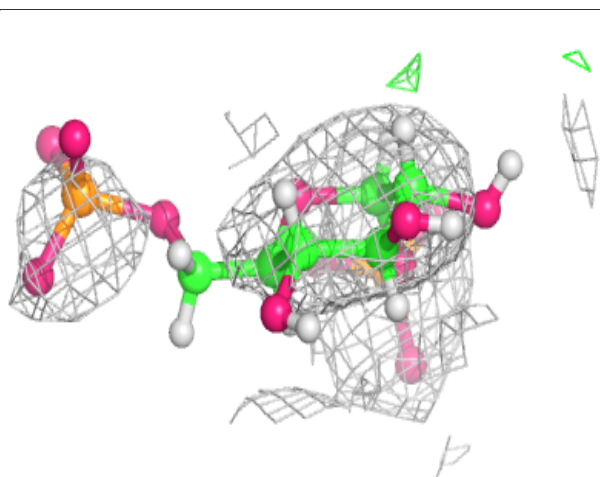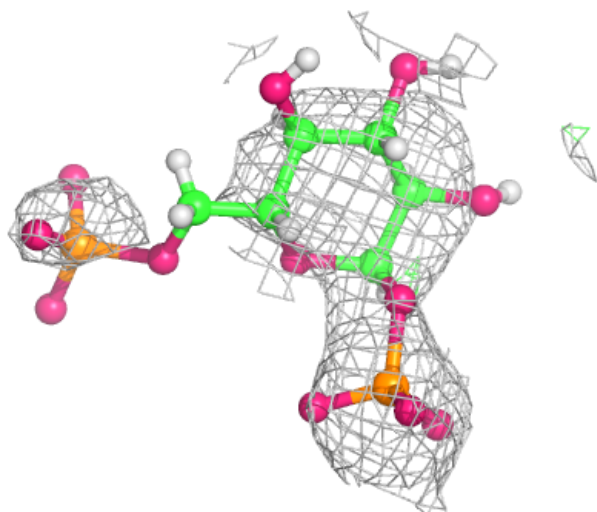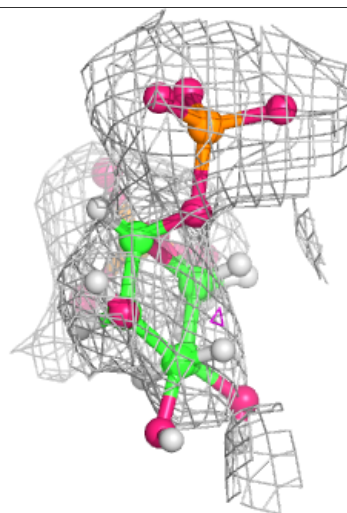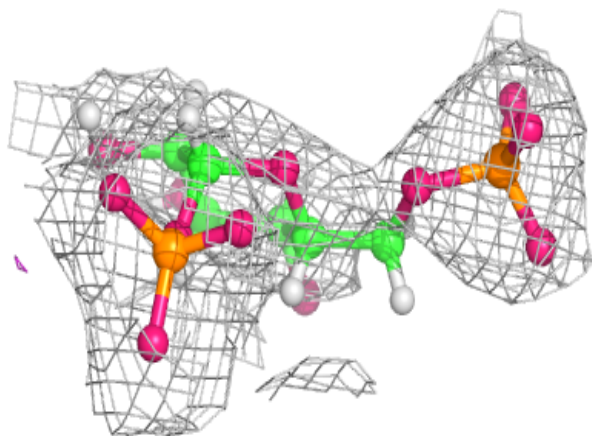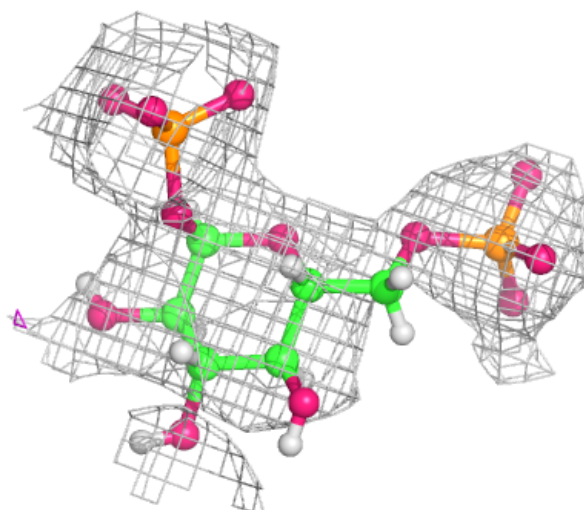and green (positive)
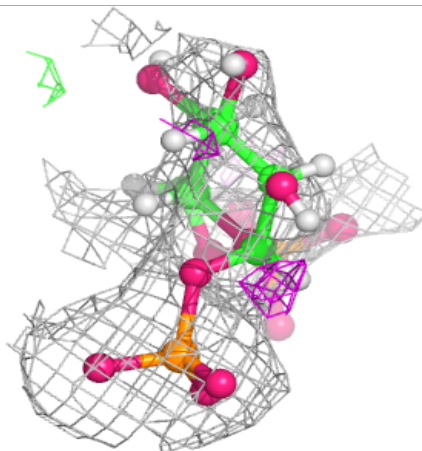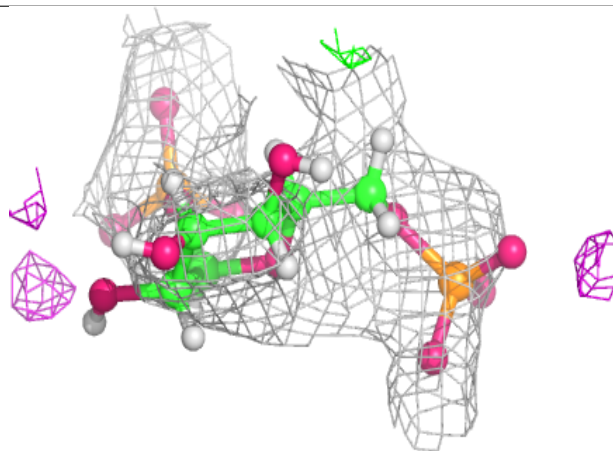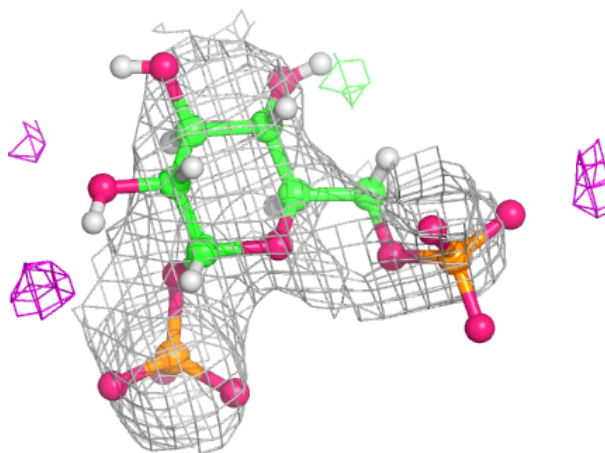
Electron density around G16 F 301:

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

Electron density around G16 B 301:

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

Electron density around G16 D 301:

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

6.5 Other polymers ⓘ

There are no such residues in this entry.