Full wwPDB X-ray Structure Validation Report (i)

Nov 8, 2022 – 04:09 pm GMT

PDB ID	:	7Q5C
Title	:	Crystal structure of OmpG in space group 96
Authors	:	Nguyen, T.T.M.; Khan, A.R.; Barringer, R.; McManus, J.J.; Race, P.R.
Deposited on	:	2021-11-03
Resolution	:	2.72 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:

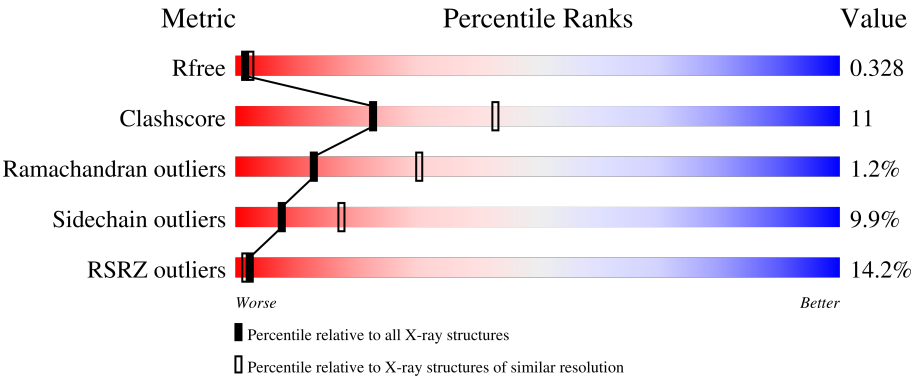
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.31.2
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0267
CCP4	:	7.1.010 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.2

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 2.72 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	3359 (2.74-2.70)
Clashscore	141614	3686 (2.74-2.70)
Ramachandran outliers	138981	3622 (2.74-2.70)
Sidechain outliers	138945	3623 (2.74-2.70)
RSRZ outliers	127900	3276 (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	XXX	281	13% 65% 21% • • 10%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	PG4	XXX	401	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	PG4	XXX	403	-	-	-	X

2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 4063 atoms, of which 1929 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.

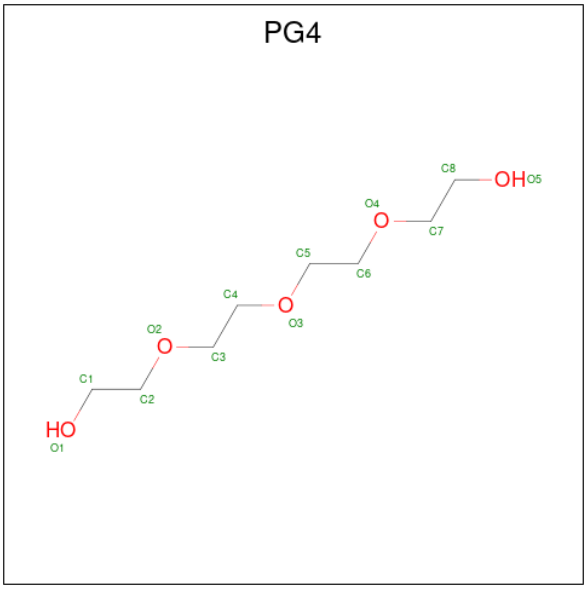
- Molecule 1 is a protein called Outer membrane porin G.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	C	H	N	O	S			
1	XXX	254	3902	1318	1846	340	394	4	110	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
XXX	0	MET	-	initiating methionine	UNP P76045

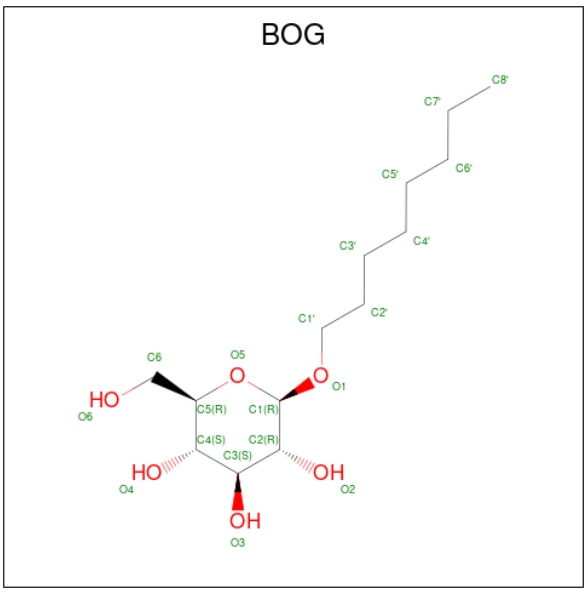
- Molecule 2 is TETRAETHYLENE GLYCOL (three-letter code: PG4) (formula: $C_8H_{18}O_5$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	H	O		
2	XXX	1	31	8	18	5	1	0
			Total	C	H	O		
2	XXX	1	16	4	9	3	1	0

- Molecule 3 is octyl beta-D-glucopyranoside (three-letter code: BOG) (formula: $C_{14}H_{28}O_6$)

(labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	XXX	1	Total	C	H	O	4	0
			48	14	28	6		
3	XXX	1	Total	C	H	O	4	0
			48	14	28	6		

- Molecule 4 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	XXX	1	Total	Na	0	0
			1	1		

- Molecule 5 is water.

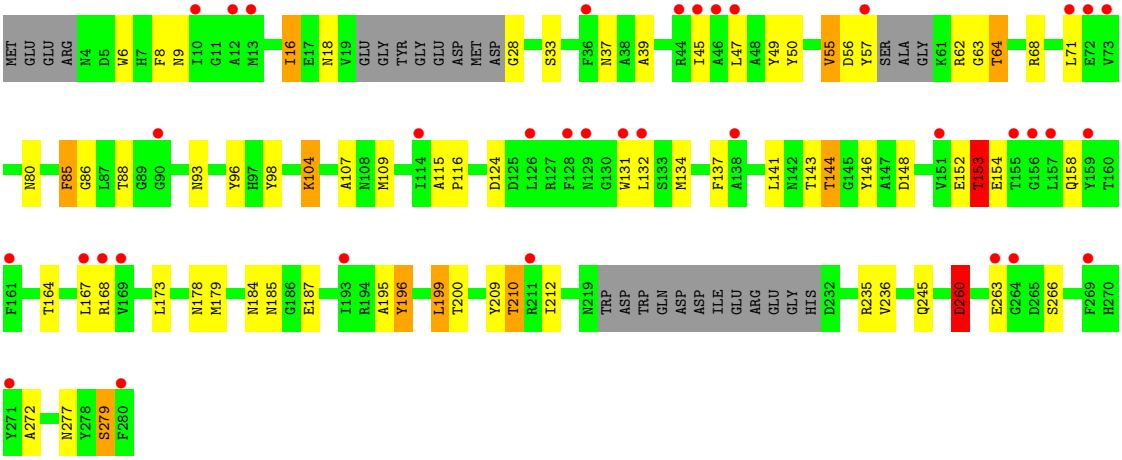
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	XXX	17	Total	O	0	0
			17	17		

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: Outer membrane porin G

Chain XXX:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 43 21 2	Depositor
Cell constants a, b, c, α, β, γ	71.34Å 71.34Å 200.46Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	67.30 – 2.72 67.21 – 2.72	Depositor EDS
% Data completeness (in resolution range)	99.6 (67.30-2.72) 99.7 (67.21-2.72)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.85 (at 2.73Å)	Xtriage
Refinement program	REFMAC 5.8.0258	Depositor
R, R_{free}	0.274 , 0.328 0.274 , 0.328	Depositor DCC
R_{free} test set	1453 reflections (9.90%)	wwPDB-VP
Wilson B-factor (Å^2)	75.9	Xtriage
Anisotropy	0.392	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	(Not available) , (Not available)	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.34$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.82	EDS
Total number of atoms	4063	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 5.72% 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: BOG, NA, PG4

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	XXX	0.76	0/2120	0.98	2/2887 (0.1%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	XXX	153	THR	CB-CA-C	-5.72	96.16	111.60
1	XXX	85	PHE	CB-CA-C	5.01	120.42	110.40

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	XXX	2056	1846	1808	46	0
2	XXX	20	27	27	1	0
3	XXX	40	56	56	1	0
4	XXX	1	0	0	0	0
5	XXX	17	0	0	0	0
All	All	2134	1929	1891	46	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 11.

All (46) 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:XXX:109:MET:SD	1:XXX:144:THR:HG21	2.21	0.80
1:XXX:109:MET:HE2	1:XXX:137:PHE:HB3	1.68	0.75
1:XXX:18:ASN:HB3	1:XXX:28:GLY:HA2	1.71	0.72
1:XXX:9:ASN:HD22	1:XXX:37:ASN:HD21	1.38	0.72
1:XXX:131:TRP:O	1:XXX:153:THR:HG22	1.90	0.72
1:XXX:195:ALA:O	1:XXX:209:TYR:HA	1.95	0.67
1:XXX:9:ASN:HD22	1:XXX:37:ASN:ND2	1.96	0.63
1:XXX:104:LYS:NZ	1:XXX:143:THR:O	2.30	0.63
1:XXX:132:LEU:C	1:XXX:132:LEU:HD13	2.19	0.63
1:XXX:148:ASP:OD1	1:XXX:178:ASN:HA	1.99	0.62
1:XXX:109:MET:CE	1:XXX:137:PHE:HB3	2.29	0.62
1:XXX:47:LEU:HD13	1:XXX:71:LEU:HD12	1.86	0.58
1:XXX:199:LEU:HD13	1:XXX:199:LEU:N	2.19	0.58
1:XXX:9:ASN:ND2	1:XXX:37:ASN:HD21	2.04	0.56
1:XXX:152:GLU:HA	1:XXX:173:LEU:O	2.06	0.55
1:XXX:50:TYR:CD1	1:XXX:68:ARG:NH1	2.75	0.55
1:XXX:115:ALA:HA	1:XXX:132:LEU:O	2.08	0.54
1:XXX:210:THR:HG23	1:XXX:236:VAL:HG12	1.89	0.54
1:XXX:184:ASN:HB2	1:XXX:187:GLU:OE1	2.07	0.53
1:XXX:37:ASN:HA	1:XXX:45:ILE:O	2.10	0.51
1:XXX:80:ASN:OD1	1:XXX:80:ASN:C	2.49	0.51
1:XXX:199:LEU:N	1:XXX:199:LEU:CD1	2.74	0.50
1:XXX:109:MET:HE3	1:XXX:146:TYR:HB2	1.94	0.49
1:XXX:55:VAL:HG12	3:XXX:402:BOG:H3	1.94	0.49
1:XXX:144:THR:HG23	1:XXX:146:TYR:CD1	2.50	0.47
1:XXX:109:MET:HE3	1:XXX:141:LEU:HD22	1.97	0.46
1:XXX:86:GLY:O	1:XXX:116:PRO:HA	2.16	0.46
1:XXX:88:THR:OG1	2:XXX:403:PG4:C4	2.64	0.45
1:XXX:64:THR:HB	1:XXX:98:TYR:HA	1.98	0.45
1:XXX:260:ASP:HA	1:XXX:266:SER:OG	2.17	0.44
1:XXX:158:GLN:HA	1:XXX:167:LEU:O	2.16	0.44
1:XXX:16:ILE:HG22	1:XXX:272:ALA:HB3	2.00	0.44
1:XXX:210:THR:HG22	1:XXX:235:ARG:O	2.17	0.44
1:XXX:154:GLU:OE2	1:XXX:196:TYR:OH	2.23	0.43
1:XXX:184:ASN:O	1:XXX:187:GLU:HG3	2.18	0.43
1:XXX:33:SER:HA	1:XXX:49:TYR:O	2.19	0.42
1:XXX:8:PHE:O	1:XXX:279:SER:HA	2.19	0.42
1:XXX:9:ASN:HB3	1:XXX:277:ASN:HD21	1.85	0.42
1:XXX:68:ARG:HA	1:XXX:93:ASN:O	2.19	0.42
1:XXX:168:ARG:O	1:XXX:195:ALA:HA	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XXX:132:LEU:C	1:XXX:132:LEU:CD1	2.88	0.41
1:XXX:50:TYR:CE1	1:XXX:68:ARG:NH1	2.89	0.41
1:XXX:62:ARG:HG2	1:XXX:63:GLY:N	2.36	0.41
1:XXX:6:TRP:HA	1:XXX:39:ALA:O	2.21	0.40
1:XXX:96:TYR:HB2	1:XXX:107:ALA:HB3	2.03	0.40
1:XXX:164:THR:O	1:XXX:199:LEU:HA	2.21	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	XXX	246/281 (88%)	225 (92%)	18 (7%)	3 (1%)	13 30

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	XXX	56	ASP
1	XXX	263	GLU
1	XXX	260	ASP

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	XXX	203/239 (85%)	183 (90%)	20 (10%)	8 17

All (20) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	XXX	16	ILE
1	XXX	55	VAL
1	XXX	57	TYR
1	XXX	64	THR
1	XXX	85	PHE
1	XXX	104	LYS
1	XXX	124	ASP
1	XXX	134	MET
1	XXX	144	THR
1	XXX	153	THR
1	XXX	179	MET
1	XXX	185	ASN
1	XXX	196	TYR
1	XXX	199	LEU
1	XXX	200	THR
1	XXX	210	THR
1	XXX	212	ILE
1	XXX	245	GLN
1	XXX	260	ASP
1	XXX	279	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

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 monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 5 ligands modelled in this entry, 1 is monoatomic - leaving 4 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	$\#\|Z\| > 2$
3	BOG	XXX	404	-	20,20,20	1.12	2 (10%)	25,25,25	1.67	3 (12%)
2	PG4	XXX	401	-	12,12,12	0.32	0	11,11,11	0.16	0
3	BOG	XXX	402	-	20,20,20	0.62	0	25,25,25	1.65	6 (24%)
2	PG4	XXX	403	-	6,6,12	0.33	0	5,5,11	0.25	0

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
3	BOG	XXX	404	-	-	2/11/31/31	0/1/1/1
2	PG4	XXX	401	-	-	7/10/10/10	-
3	BOG	XXX	402	-	-	4/11/31/31	0/1/1/1
2	PG4	XXX	403	-	-	3/4/4/10	-

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	XXX	404	BOG	C4-C3	2.50	1.58	1.52
3	XXX	404	BOG	O1-C1	2.04	1.43	1.40

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	XXX	404	BOG	C3-C4-C5	4.44	118.16	110.24
3	XXX	404	BOG	C4-C3-C2	3.96	117.74	110.82
3	XXX	404	BOG	O5-C5-C6	3.83	115.96	106.44
3	XXX	402	BOG	C4-C3-C2	3.58	117.08	110.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	XXX	402	BOG	C1-C2-C3	3.42	117.11	110.00
3	XXX	402	BOG	C1-O5-C5	-3.20	107.41	113.69
3	XXX	402	BOG	O4-C4-C5	2.32	115.05	109.30
3	XXX	402	BOG	O5-C5-C6	2.12	111.70	106.44
3	XXX	402	BOG	O1-C1-C2	-2.04	105.12	108.30

There are no chirality outliers.

All (16) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	XXX	401	PG4	O3-C5-C6-O4
2	XXX	401	PG4	O2-C3-C4-O3
2	XXX	403	PG4	O1-C1-C2-O2
3	XXX	402	BOG	C4-C5-C6-O6
2	XXX	401	PG4	O1-C1-C2-O2
3	XXX	404	BOG	C1'-C2'-C3'-C4'
2	XXX	403	PG4	O2-C3-C4-O3
3	XXX	402	BOG	C3'-C4'-C5'-C6'
3	XXX	402	BOG	O5-C5-C6-O6
3	XXX	404	BOG	O5-C5-C6-O6
2	XXX	403	PG4	C1-C2-O2-C3
2	XXX	401	PG4	C4-C3-O2-C2
2	XXX	401	PG4	C1-C2-O2-C3
2	XXX	401	PG4	C6-C5-O3-C4
2	XXX	401	PG4	C5-C6-O4-C7
3	XXX	402	BOG	O1-C1'-C2'-C3'

There are no ring outliers.

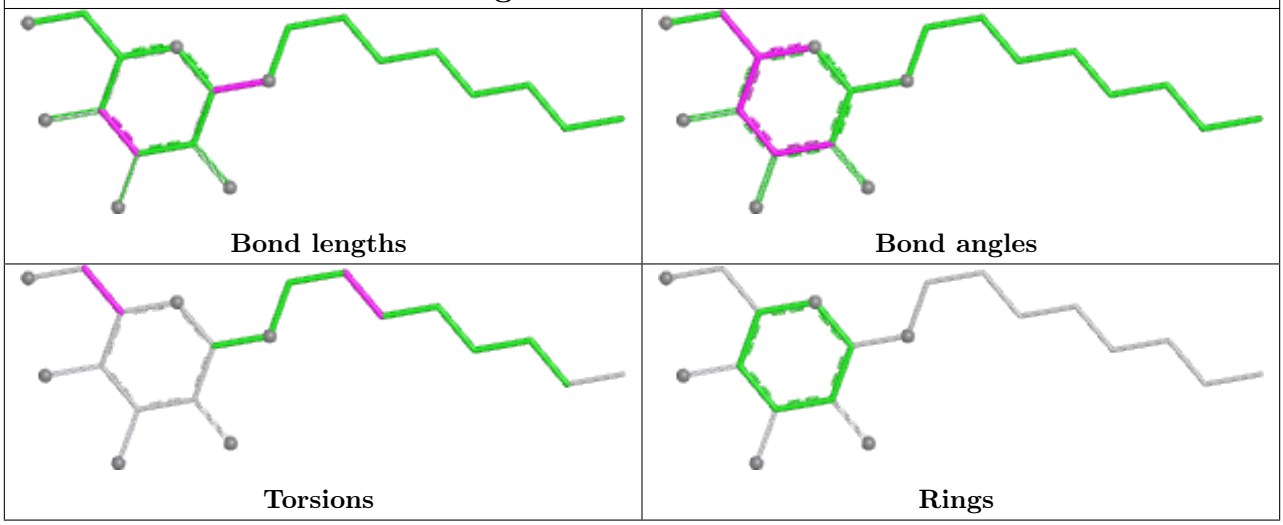
2 monomers are involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	XXX	402	BOG	1	0
2	XXX	403	PG4	1	0

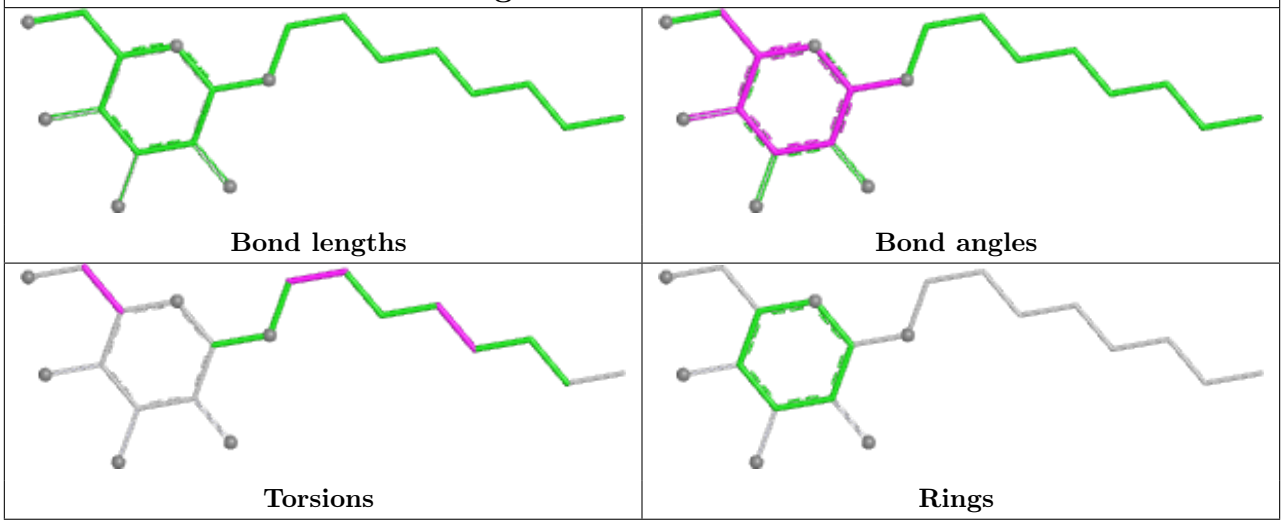
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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 BOG XXX 404



Ligand BOG XXX 402



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	XXX	254/281 (90%)	0.73	36 (14%) 2 1	53, 79, 127, 163	0

All (36) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	XXX	155	THR	6.5
1	XXX	45	ILE	5.5
1	XXX	71	LEU	5.2
1	XXX	73	VAL	4.9
1	XXX	169	VAL	4.8
1	XXX	36	PHE	4.6
1	XXX	128	PHE	3.9
1	XXX	156	GLY	3.6
1	XXX	167	LEU	3.6
1	XXX	47	LEU	3.5
1	XXX	57	TYR	3.4
1	XXX	193	ILE	3.1
1	XXX	72	GLU	3.1
1	XXX	126	LEU	3.0
1	XXX	13	MET	3.0
1	XXX	161	PHE	2.8
1	XXX	211	ARG	2.8
1	XXX	280	PHE	2.8
1	XXX	44	ARG	2.7
1	XXX	159	TYR	2.7
1	XXX	157	LEU	2.6
1	XXX	10	ILE	2.6
1	XXX	138	ALA	2.5
1	XXX	132	LEU	2.5
1	XXX	269	PHE	2.5
1	XXX	114	ILE	2.4
1	XXX	46	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
1	XXX	168	ARG	2.3
1	XXX	129	ASN	2.3
1	XXX	90	GLY	2.3
1	XXX	264	GLY	2.3
1	XXX	263	GLU	2.3
1	XXX	271	TYR	2.3
1	XXX	12	ALA	2.2
1	XXX	131	TRP	2.2
1	XXX	151	VAL	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 monosaccharides in this entry.

6.4 Ligands (i)

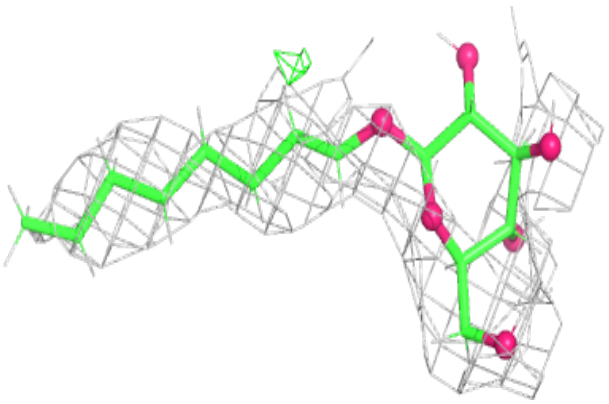
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9'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

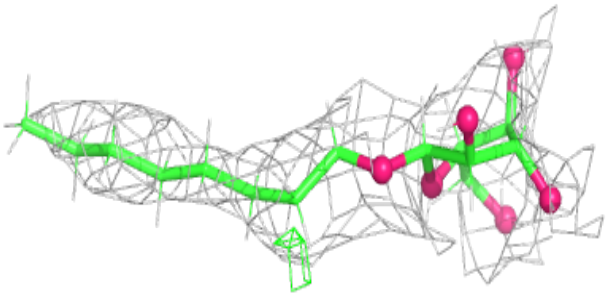
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	PG4	XXX	403	7/13	0.61	0.56	0,91,102,102	1
3	BOG	XXX	404	20/20	0.65	0.30	67,99,125,131	4
3	BOG	XXX	402	20/20	0.72	0.40	57,97,132,136	4
2	PG4	XXX	401	13/13	0.79	1.26	86,94,106,110	1
4	NA	XXX	405	1/1	0.84	0.28	77,77,77,77	0

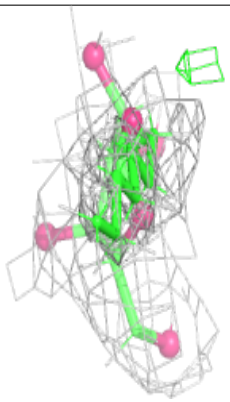
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around BOG XXX 404:

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

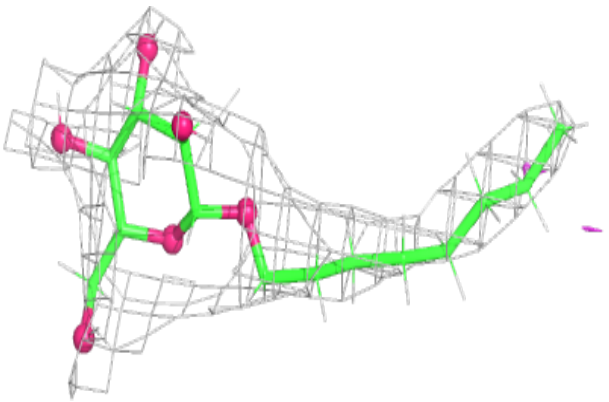


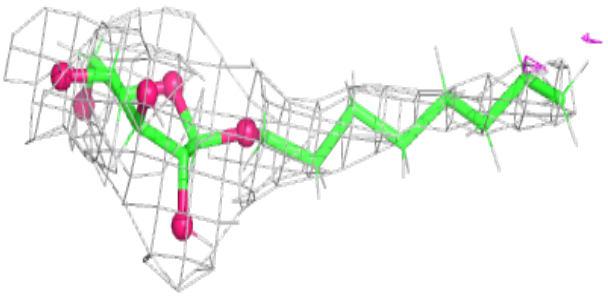


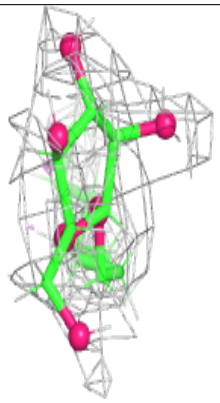


Electron density around BOG XXX 402:

$2mF_o$-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.