

Full wwPDB X-ray Structure Validation Report (i)

Nov 1, 2023 – 03:32 AM EDT

PDB ID : 3NJS

Title: Crystal structure of the complex formed between type I ribosome inactivating

protein and lactose at 2.1A resolution

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Deposited on : 2010-06-18

Resolution : 2.10 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 (1)) 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 : 2.36

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)

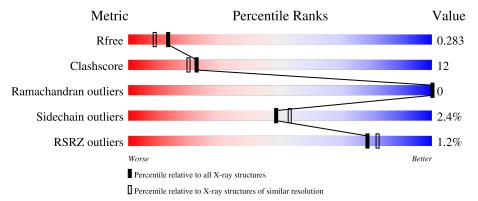
Validation Pipeline (wwPDB-VP) : 2.36

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 2.10 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 $(\# \mathrm{Entries})$	Similar resolution $(\# \text{Entries, resolution range}(\text{\AA}))$
R_{free}	130704	5197 (2.10-2.10)
Clashscore	141614	5710 (2.10-2.10)
Ramachandran outliers	138981	5647 (2.10-2.10)
Sidechain outliers	138945	5648 (2.10-2.10)
RSRZ outliers	127900	5083 (2.10-2.10)

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	246	79%		20% •			
2	В	2	50%	50%				
3	С	2	10	0%				

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	NAG	В	2	X	-	-	-
3	BGC	С	1	-	-	-	X
3	GAL	С	2	-	-	-	X
4	GOL	A	3968	-	-	X	X



2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 2125 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 Ribosome inactivating protein.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace	
1	Λ	246	Total	С	N	О	S	0	0	0
1	Λ	240	1911	1215	328	365	3		0	

• Molecule 2 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-a cetamido-2-deoxy-beta-D-glucopyranose.



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
2	В	2	Total 28	C 16	N 2	O 10	0	0	0

• Molecule 3 is an oligosaccharide called beta-D-galactopyranose-(1-4)-beta-D-glucopyranose.



Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace	
3	С	2	Total 23	C 12	O 11	0	0	0

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





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

• Molecule 5 is water.

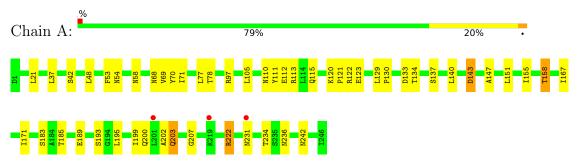
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	157	Total O 157 157	0	0



3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

• Molecule 1: Ribosome inactivating protein



• Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain B: 50% 50%



• Molecule 3: beta-D-galactopyranose-(1-4)-beta-D-glucopyranose

Chain C: 100%





4 Data and refinement statistics (i)

Property	Value	Source
Space group	H 3	Depositor
Cell constants	130.44Å 130.44Å 38.47Å	Domositon
a, b, c, α , β , γ	90.00° 90.00° 120.00°	Depositor
Resolution (Å)	37.65 - 2.10	Depositor
Resolution (A)	37.65 - 2.10	EDS
% Data completeness	99.1 (37.65-2.10)	Depositor
(in resolution range)	99.1 (37.65-2.10)	EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.07	Depositor
$< I/\sigma(I) > 1$	2.26 (at 2.10Å)	Xtriage
Refinement program	REFMAC 5.5.0109	Depositor
D D	0.224 , 0.261	Depositor
R, R_{free}	0.246 , 0.283	DCC
R_{free} test set	706 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å ²)	36.4	Xtriage
Anisotropy	0.750	Xtriage
Bulk solvent $k_{sol}(e/Å^3)$, $B_{sol}(Å^2)$	0.33 , 39.1	EDS
L-test for twinning ²	$< L >=0.52, < L^2>=0.35$	Xtriage
Estimated twinning fraction	0.020 for h,-h-k,-l	Xtriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	2125	wwPDB-VP
Average B, all atoms (Å ²)	53.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: The largest off-origin peak in the Patterson function is 5.84% of the height of the origin peak. No significant pseudotranslation is detected.

²Theoretical 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.



¹Intensities estimated from amplitudes.

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: GAL, NAG, GOL, BGC

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		
IVIOI		RMSZ	# Z > 5	RMSZ	# Z > 5	
1	A	0.43	0/1947	0.76	6/2650 (0.2%)	

There are no bond length outliers.

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	\mathbf{Z}	$Observed(^o)$	$Ideal(^{o})$
1	A	105	LEU	CB-CA-C	7.31	124.09	110.20
1	A	236	ASN	N-CA-C	7.28	130.65	111.00
1	A	158	THR	N-CA-C	5.76	126.55	111.00
1	A	158	THR	CB-CA-C	-5.66	96.31	111.60
1	A	143	ASP	N-CA-C	-5.57	95.97	111.00
1	A	236	ASN	CB-CA-C	-5.02	100.37	110.40

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1911	0	1932	45	0
2	В	28	0	25	0	0
3	С	23	0	21	3	0
4	A	6	0	8	4	0
5	A	157	0	0	4	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	2125	0	1986	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 12.

All (46) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic	Clash	
		distance (Å)	overlap (Å)	
1:A:129:LEU:CB	4:A:3968:GOL:H12	1.93	0.99	
1:A:222:ARG:HG2	1:A:222:ARG:HH21	1.28	0.96	
1:A:110:ASN:HD21	1:A:112:GLU:HB2	1.30	0.95	
1:A:129:LEU:HB3	4:A:3968:GOL:H12	1.54	0.89	
1:A:222:ARG:HH21	1:A:222:ARG:CG	1.90	0.84	
1:A:195:LEU:O	1:A:199:ILE:HG12	1.79	0.82	
1:A:48:LEU:HD12	5:A:269:HOH:O	1.82	0.78	
1:A:129:LEU:HB2	4:A:3968:GOL:H12	1.66	0.77	
1:A:222:ARG:HG2	1:A:222:ARG:NH2	1.91	0.72	
1:A:97:ARG:HH21	1:A:97:ARG:HG3	1.56	0.71	
1:A:71:ILE:HG13	1:A:155:ILE:HD13	1.72	0.71	
1:A:37:LEU:O	1:A:242:ASN:HB2	1.97	0.65	
1:A:110:ASN:ND2	1:A:112:GLU:HB2	2.10	0.64	
1:A:167:ILE:O	1:A:171:ILE:HD12	1.98	0.63	
1:A:121:PRO:HB2	1:A:123:GLU:OE1	1.99	0.62	
1:A:231:ASN:HA	1:A:234:THR:OG1	1.99	0.62	
5:A:405:HOH:O	3:C:1:BGC:H6C2	2.03	0.59	
1:A:77:LEU:HG	1:A:78:THR:HG23	1.86	0.57	
1:A:110:ASN:HD22	1:A:113:ARG:H	1.54	0.55	
1:A:71:ILE:CG1	1:A:155:ILE:HD13	2.37	0.54	
1:A:54:ASN:HB2	1:A:133:ASP:OD1	2.08	0.53	
1:A:21:LEU:CD2	1:A:158:THR:O	2.59	0.51	
1:A:68:ASN:C	1:A:69:VAL:HG23	2.31	0.51	
1:A:110:ASN:HD21	1:A:112:GLU:CB	2.14	0.50	
1:A:77:LEU:HG	1:A:78:THR:N	2.26	0.50	
1:A:185:THR:O	1:A:189:GLU:HG3	2.13	0.49	
1:A:111:TYR:O	1:A:115:GLN:HG3	2.13	0.48	
1:A:134:THR:HG22	5:A:283:HOH:O	2.14	0.47	
1:A:21:LEU:HD21	1:A:158:THR:O	2.15	0.47	
1:A:97:ARG:HG3	1:A:97:ARG:NH2	2.26	0.46	
1:A:151:LEU:O	1:A:155:ILE:HG12	2.14	0.46	
1:A:70:TYR:CG	3:C:2:GAL:H2	2.51	0.46	
1:A:111:TYR:CD2	3:C:2:GAL:H62	2.52	0.45	
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Atom-1	Atom-2	Interatomic distance (Å)	$egin{aligned} ext{Clash} \ ext{overlap } (ext{Å}) \end{aligned}$	
1:A:222:ARG:HH21	1:A:222:ARG:CB	2.27	0.44	
1:A:77:LEU:HG	1:A:78:THR:H	1.81	0.44	
1:A:120:LYS:HB3	1:A:120:LYS:HE2	1.86	0.44	
1:A:202:ALA:HB1	1:A:207:GLY:HA2	1.98	0.44	
1:A:53:PHE:HA	1:A:58:ASN:O	2.17	0.43	
1:A:200:GLN:O	1:A:203:GLN:HB2	2.18	0.43	
1:A:137:SER:HA	1:A:140:LEU:HD12	2.01	0.42	
1:A:130:PRO:HA	4:A:3968:GOL:O1	2.20	0.42	
1:A:151:LEU:HD23	1:A:151:LEU:HA	1.94	0.41	
1:A:129:LEU:N	1:A:130:PRO:CD	2.84	0.40	
1:A:122:ARG:NH2	5:A:289:HOH:O	2.49	0.40	
1:A:129:LEU:HD23	1:A:129:LEU:HA	1.87	0.40	
1:A:143:ASP:O	1:A:147:ALA:HB2	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		
1	A	244/246 (99%)	234 (96%)	10 (4%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains (i)

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

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



Mol	Chain Analysed		Rotameric	Outliers	Percentiles	
1	A	209/209 (100%)	204 (98%)	5 (2%)	49 53	

All (5) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	42	SER
1	A	183	SER
1	A	193	SER
1	A	203	GLN
1	A	222	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (5) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	23	ASN
1	A	84	ASN
1	A	110	ASN
1	A	203	GLN
1	A	205	ASN

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)

4 monosaccharides 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		
MIOI	Type		rtes		Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	NAG	В	1	1,2	14,14,15	0.54	0	17,19,21	0.81	0
2	NAG	В	2	2	14,14,15	0.57	0	17,19,21	1.04	1 (5%)
3	BGC	С	1	3	12,12,12	1.52	2 (16%)	17,17,17	1.99	5 (29%)
3	GAL	С	2	3	11,11,12	3.07	5 (45%)	15,15,17	2.96	11 (73%)

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
2	NAG	В	1	1,2	-	2/6/23/26	0/1/1/1
2	NAG	В	2	2	1/1/5/7	2/6/23/26	0/1/1/1
3	BGC	С	1	3	-	2/2/22/22	0/1/1/1
3	GAL	С	2	3	-	0/2/19/22	0/1/1/1

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	\mathbf{Z}	$\operatorname{Observed}(\operatorname{\mathring{A}})$	Ideal(A)
3	С	2	GAL	C2-C3	5.76	1.61	1.52
3	С	2	GAL	O3-C3	5.10	1.55	1.43
3	С	2	GAL	C4-C3	3.82	1.62	1.52
3	С	2	GAL	O2-C2	3.81	1.51	1.43
3	С	2	GAL	C1-C2	3.22	1.59	1.52
3	С	1	BGC	C4-C3	2.55	1.58	1.52
3	С	1	BGC	C1-C2	2.28	1.57	1.52

All (17) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	$Observed(^{o})$	$\operatorname{Ideal}({}^{o})$
3	С	2	GAL	C6-C5-C4	4.92	124.52	113.00
3	С	2	GAL	O4-C4-C3	4.74	121.32	110.35
3	С	1	BGC	C1-O5-C5	-4.41	105.33	113.66
3	С	2	GAL	O2-C2-C3	4.19	118.54	110.14
3	С	2	GAL	O3-C3-C4	3.69	118.87	110.35
3	С	2	GAL	C2-C3-C4	3.39	116.75	110.89
3	С	1	BGC	O4-C4-C3	3.23	117.83	110.35
3	С	2	GAL	O2-C2-C1	3.20	115.69	109.15
3	С	1	BGC	O5-C5-C6	3.06	114.04	106.44
3	С	1	BGC	C1-C2-C3	2.67	115.85	110.31
3	С	2	GAL	O5-C5-C6	-2.61	103.12	107.20

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Mol	Chain	Res	Type	Atoms	Z	$\mathbf{Observed}(^o)$	$\operatorname{Ideal}({}^{o})$
3	С	1	BGC	C4-C3-C2	2.46	115.12	110.82
3	С	2	GAL	O5-C5-C4	-2.45	104.86	110.83
2	В	2	NAG	C2-N2-C7	-2.32	119.60	122.90
3	С	2	GAL	C1-O5-C5	-2.29	109.09	112.19
3	С	2	GAL	O5-C1-C2	-2.17	107.43	110.77
3	С	2	GAL	O4-C4-C5	-2.13	104.01	109.30

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom	
2	В	2	NAG	C1	

All (6) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	С	1	BGC	O5-C5-C6-O6
2	В	2	NAG	C4-C5-C6-O6
2	В	1	NAG	O5-C5-C6-O6
3	С	1	BGC	C4-C5-C6-O6
2	В	2	NAG	O5-C5-C6-O6
2	В	1	NAG	C4-C5-C6-O6

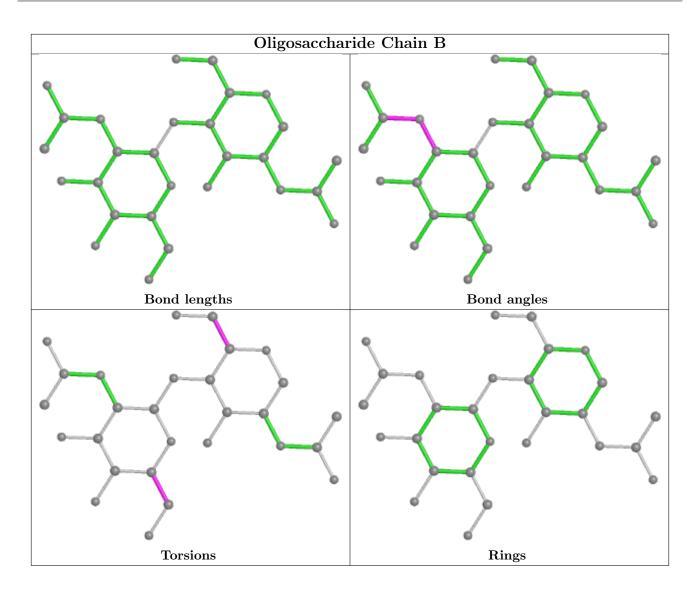
There are no ring outliers.

2 monomers are involved in 3 short contacts:

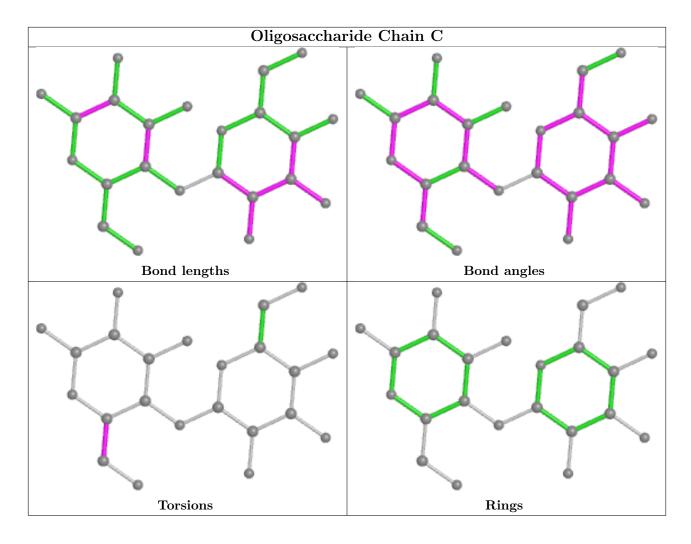
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	С	1	BGC	1	0
3	С	2	GAL	2	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.









5.6 Ligand geometry (i)

1 ligand is 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	\mathbf{B}	Bond lengths			ond ang	gles
IVIOI	туре		nes	LIIIK	Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
4	GOL	A	3968	-	5,5,5	0.37	0	5, 5, 5	0.28	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
4	GOL	A	3968	-	-	2/4/4/4	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	3968	GOL	O1-C1-C2-C3
4	A	3968	GOL	O1-C1-C2-O2

There are no ring outliers.

1 monomer is involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	A	3968	GOL	4	0

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 (i)

6.1 Protein, DNA and RNA chains (i)

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		$OWAB(A^2)$	Q < 0.9	
1	A	246/246 (100%)	0.21	3 (1%)	79	82	39, 52, 65, 77	0

All (3) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	219	LYS	2.6
1	A	201	LEU	2.1
1	A	231	ASN	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.

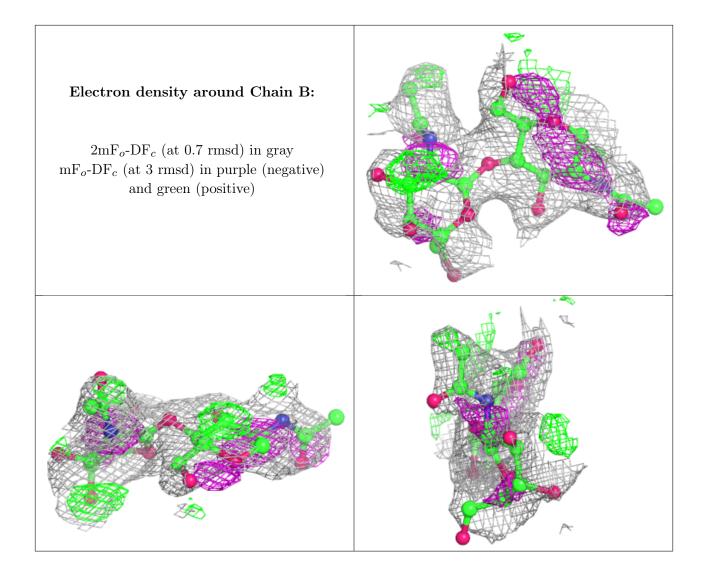
6.3 Carbohydrates (i)

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.

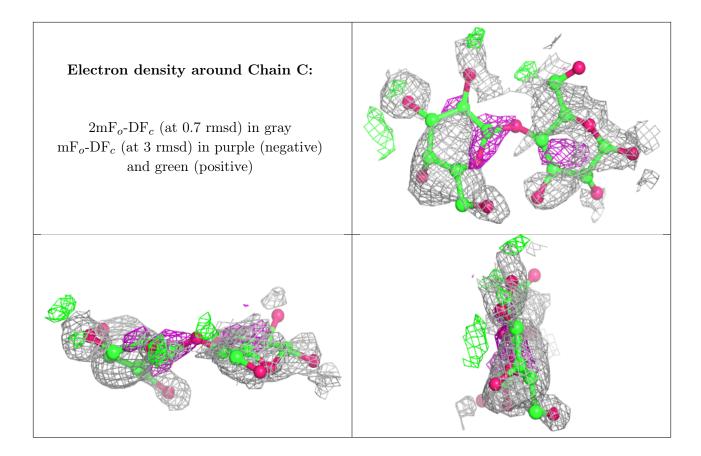
Mol	Type	Chain	Res	Atoms	RSCC	RSR	$\mathbf{B} ext{-}\mathbf{factors}(\mathbf{\mathring{A}}^2)$	Q<0.9
3	BGC	С	1	12/12	0.24	0.43	100,105,109,110	0
3	GAL	С	2	11/12	0.29	0.43	70,82,90,94	0
2	NAG	В	2	14/15	0.55	0.39	71,74,76,79	0
2	NAG	В	1	14/15	0.69	0.30	55,58,61,66	0

The following is a graphical depiction of the model fit to experimental electron density for oligosaccharide. Each fit is shown from different orientation to approximate a three-dimensional view.









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	$\mathbf{B} ext{-}\mathbf{factors}(\mathbf{\mathring{A}}^2)$	Q<0.9
4	GOL	A	3968	6/6	0.74	0.75	19,23,25,25	0

6.5 Other polymers (i)

There are no such residues in this entry.

