



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 9, 2026 – 03:47 AM UTC

PDB ID : 7KQG / pdb_00007kqg
Title : Antibodies that engage the hemagglutinin receptor-binding site of influenza B viruses
Authors : Bajic, G.; Harrison, S.C.
Deposited on : 2020-11-16
Resolution : 2.60 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 types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

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

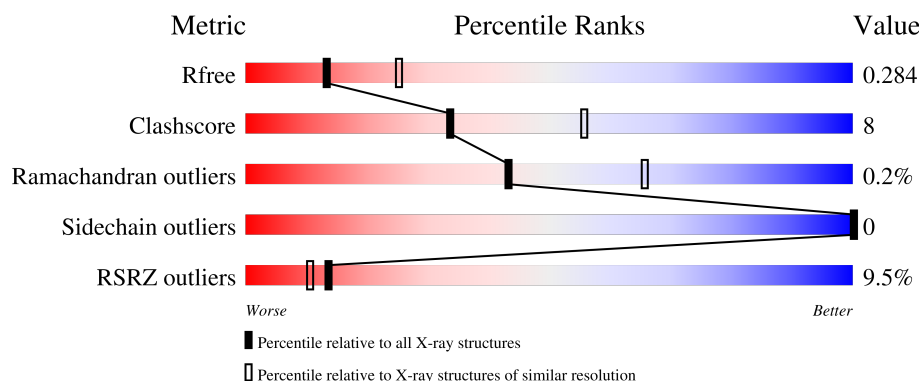
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.60 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	4008 (2.60-2.60)
Clashscore	190562	4347 (2.60-2.60)
Ramachandran outliers	187476	4277 (2.60-2.60)
Sidechain outliers	187428	4277 (2.60-2.60)
RSRZ outliers	180081	4008 (2.60-2.60)

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 $\leq 5\%$. 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	299	
2	B	240	
3	C	216	
4	D	4	

2 Entry composition [i](#)

There are 5 unique types of molecules in this entry. The entry contains 5258 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 Hemagglutinin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	234	Total	C	N	O	S	0	0	0
			1778	1109	313	342	14			

- Molecule 2 is a protein called 1272 Fab heavy chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	216	Total	C	N	O	S	0	0	0
			1643	1042	280	314	7			

- Molecule 3 is a protein called 1272 Fab light chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	213	Total	C	N	O	S	0	0	0
			1638	1027	274	332	5			

- Molecule 4 is an oligosaccharide called alpha-D-mannopyranose-(1-3)-beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	D	4	Total	C	N	O		0	0	0
			50	28	2	20				

- Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	68	Total	O	0	0
			68	68		

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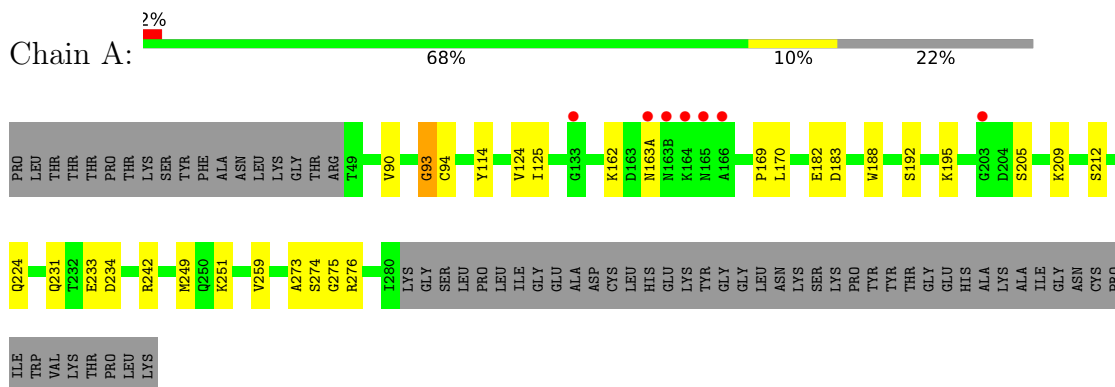
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	B	51	Total	O	0	0
			51	51		
5	C	30	Total	O	0	0
			30	30		

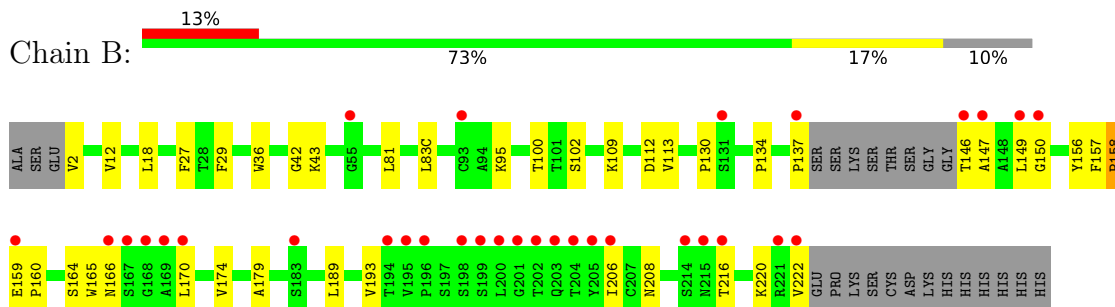
3 Residue-property plots [i](#)

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.

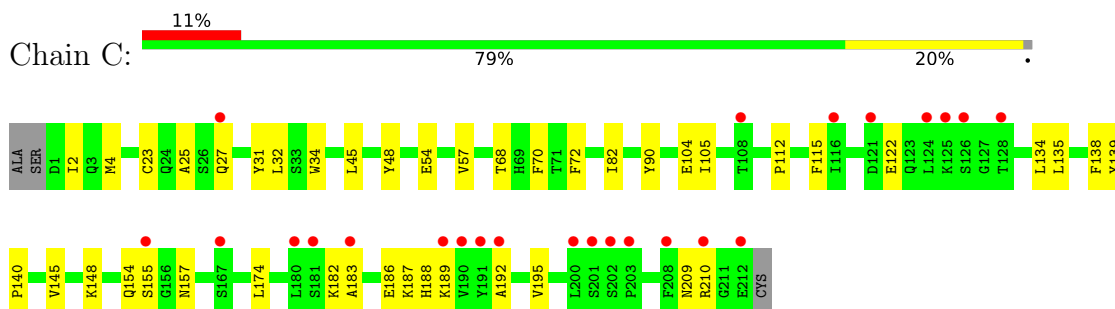
- Molecule 1: Hemagglutinin



- Molecule 2: 1272 Fab heavy chain



- Molecule 3: 1272 Fab light chain



- Molecule 4: alpha-D-mannopyranose-(1-3)-beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	40.13Å 77.44Å 225.65Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	45.60 – 2.60 45.60 – 2.60	Depositor EDS
% Data completeness (in resolution range)	99.9 (45.60-2.60) 99.9 (45.60-2.60)	Depositor EDS
R_{merge}	0.17	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.65 (at 2.61Å)	Xtriage
Refinement program	PHENIX 1.18.2_3874	Depositor
R, R_{free}	0.226 , 0.286 0.225 , 0.284	Depositor DCC
R_{free} test set	1079 reflections (4.78%)	wwPDB-VP
Wilson B-factor (Å ²)	31.2	Xtriage
Anisotropy	0.352	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.33 , 35.9	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.91	EDS
Total number of atoms	5258	wwPDB-VP
Average B, all atoms (Å ²)	35.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.74% of the height of the origin peak. No significant pseudotranslation is detected.*

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: NAG, MAN, BMA

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	0.29	0/1817	0.53	2/2468 (0.1%)
2	B	0.28	1/1686 (0.1%)	0.47	0/2299
3	C	0.24	0/1673	0.50	0/2273
All	All	0.27	1/5176 (0.0%)	0.50	2/7040 (0.0%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	158	PRO	C-N	5.46	1.41	1.33

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	93	GLY	CA-C-N	5.57	132.17	121.54
1	A	93	GLY	C-N-CA	5.57	132.17	121.54

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	1778	0	1754	18	0
2	B	1643	0	1600	32	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	C	1638	0	1592	30	0
4	D	50	0	43	0	0
5	A	68	0	0	2	0
5	B	51	0	0	1	0
5	C	30	0	0	0	0
All	All	5258	0	4989	78	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 8.

All (78) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:156:TYR:OH	2:B:159:GLU:OE2	1.91	0.87
3:C:82:ILE:HD11	3:C:105:ILE:HG12	1.61	0.83
3:C:188:HIS:O	3:C:210:ARG:NH1	2.12	0.82
3:C:154:GLN:HB3	3:C:157:ASN:ND2	2.02	0.74
3:C:2:ILE:HG12	3:C:27:GLN:HG2	1.72	0.72
3:C:135:LEU:HB2	3:C:174:LEU:HB3	1.72	0.71
2:B:42:GLY:C	2:B:43:LYS:HD2	2.19	0.67
3:C:155:SER:N	3:C:157:ASN:HD21	1.93	0.67
2:B:164:SER:HB3	2:B:208:ASN:HB2	1.77	0.67
3:C:148:LYS:HB2	3:C:192:ALA:HB3	1.79	0.62
1:A:276:ARG:NH2	5:A:402:HOH:O	2.31	0.62
2:B:12:VAL:HG21	2:B:83(C):LEU:HD13	1.81	0.62
1:A:249:MET:HE3	1:A:251:LYS:HD3	1.83	0.60
2:B:137:PRO:HG3	2:B:149:LEU:HB3	1.84	0.59
1:A:169:PRO:HG3	1:A:209:LYS:HE3	1.83	0.59
3:C:25:ALA:O	3:C:68:THR:OG1	2.21	0.58
2:B:130:PRO:HB3	2:B:156:TYR:HB3	1.85	0.58
2:B:149:LEU:HB2	2:B:222:VAL:HG11	1.86	0.57
1:A:275:GLY:O	5:A:401:HOH:O	2.17	0.57
2:B:166:ASN:HA	2:B:206:ILE:HG23	1.86	0.56
1:A:195:LYS:HG2	1:A:205:SER:HB2	1.87	0.56
1:A:93:GLY:HA2	1:A:234:ASP:C	2.31	0.56
3:C:54:GLU:O	3:C:57:VAL:HG22	2.07	0.55
1:A:195:LYS:HD3	1:A:195:LYS:C	2.33	0.54
1:A:124:VAL:HG13	1:A:125:ILE:HG23	1.89	0.54
3:C:34:TRP:CE2	3:C:72:PHE:HB2	2.43	0.53
3:C:82:ILE:HD12	3:C:104:GLU:HA	1.91	0.52
2:B:27:PHE:CE2	2:B:29:PHE:HA	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:43:LYS:HD2	2:B:43:LYS:N	2.24	0.51
3:C:139:TYR:CD1	3:C:140:PRO:HA	2.45	0.51
2:B:130:PRO:HD2	2:B:216:THR:HG21	1.92	0.51
2:B:100:THR:HG22	2:B:102:SER:H	1.75	0.51
2:B:206:ILE:HG12	2:B:208:ASN:HD21	1.76	0.51
3:C:154:GLN:HB3	3:C:157:ASN:HD22	1.75	0.51
3:C:4:MET:HE3	3:C:23:CYS:SG	2.52	0.49
2:B:109:LYS:HE3	3:C:31:TYR:CE2	2.47	0.49
3:C:32:LEU:HD13	3:C:70:PHE:CD1	2.48	0.48
2:B:146:THR:OG1	2:B:147:ALA:N	2.45	0.48
3:C:139:TYR:CG	3:C:140:PRO:HA	2.48	0.48
1:A:231:GLN:HG3	1:A:242:ARG:NH2	2.27	0.48
3:C:183:ALA:O	3:C:187:LYS:HG3	2.14	0.47
3:C:145:VAL:HG23	3:C:195:VAL:HG22	1.97	0.47
2:B:109:LYS:HA	3:C:90:TYR:CD1	2.50	0.47
1:A:182:GLU:HG2	1:A:274:SER:HB3	1.97	0.47
2:B:159:GLU:OE1	2:B:160:PRO:HA	2.16	0.46
1:A:192:SER:OG	1:A:224:GLN:O	2.22	0.46
2:B:166:ASN:HA	2:B:206:ILE:CG2	2.46	0.46
1:A:90:VAL:HG13	1:A:233:GLU:HG2	1.98	0.46
1:A:183:ASP:N	1:A:273:ALA:O	2.44	0.45
2:B:2:VAL:N	5:B:307:HOH:O	2.49	0.45
2:B:2:VAL:HG11	2:B:113:VAL:HG21	1.99	0.44
2:B:12:VAL:CG1	2:B:18:LEU:HD13	2.47	0.44
2:B:206:ILE:HG12	2:B:208:ASN:ND2	2.33	0.44
2:B:179:ALA:HA	2:B:189:LEU:HB3	1.99	0.44
3:C:135:LEU:HD11	3:C:195:VAL:HG21	1.99	0.43
1:A:188:TRP:CZ2	1:A:212:SER:HB3	2.53	0.43
3:C:122:GLU:OE2	3:C:122:GLU:N	2.47	0.43
3:C:115:PHE:HB2	3:C:134:LEU:HB3	2.01	0.43
1:A:114:TYR:CG	1:A:273:ALA:HB1	2.54	0.42
3:C:135:LEU:HD23	3:C:174:LEU:HD22	2.00	0.42
1:A:170:LEU:O	1:A:259:VAL:HA	2.19	0.42
1:A:162:LYS:HB3	1:A:162:LYS:HE2	1.79	0.42
2:B:166:ASN:HB2	2:B:170:LEU:H	1.85	0.42
2:B:27:PHE:CE2	2:B:95:LYS:HD2	2.55	0.41
3:C:182:LYS:O	3:C:186:GLU:HG2	2.20	0.41
2:B:95:LYS:HE3	2:B:112:ASP:OD1	2.20	0.41
3:C:45:LEU:HD21	3:C:48:TYR:HB3	2.02	0.41
1:A:162:LYS:C	1:A:163(A):ASN:H	2.27	0.41
3:C:189:LYS:HE2	3:C:209:ASN:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:36:TRP:NE1	2:B:81:LEU:HB2	2.36	0.41
2:B:174:VAL:HG22	2:B:193:VAL:HB	2.01	0.41
2:B:150:GLY:HA2	2:B:165:TRP:CZ2	2.56	0.41
3:C:45:LEU:HD12	3:C:45:LEU:HA	1.90	0.41
2:B:134:PRO:HG3	2:B:220:LYS:HD3	2.03	0.40
2:B:12:VAL:HG11	2:B:18:LEU:HD13	2.03	0.40
2:B:157:PHE:HA	2:B:158:PRO:HA	1.79	0.40
3:C:23:CYS:HB2	3:C:34:TRP:CH2	2.56	0.40
3:C:112:PRO:HB3	3:C:138:PHE:HB3	2.04	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	232/299 (78%)	221 (95%)	10 (4%)	1 (0%)	30	51
2	B	212/240 (88%)	208 (98%)	4 (2%)	0	100	100
3	C	211/216 (98%)	202 (96%)	9 (4%)	0	100	100
All	All	655/755 (87%)	631 (96%)	23 (4%)	1 (0%)	43	66

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	94	CYS

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	200/254 (79%)	200 (100%)	0	100	100
2	B	182/203 (90%)	182 (100%)	0	100	100
3	C	186/188 (99%)	186 (100%)	0	100	100
All	All	568/645 (88%)	568 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (6) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	116	ASN
2	B	116	GLN
2	B	166	ASN
3	C	123	GLN
3	C	157	ASN
3	C	209	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 ⓘ

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		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
4	NAG	D	1	1,4	14,14,15	0.32	0	17,19,21	0.60	0
4	NAG	D	2	4	14,14,15	0.54	0	17,19,21	0.57	0
4	BMA	D	3	4	11,11,12	0.62	0	15,15,17	0.73	0
4	MAN	D	4	4	11,11,12	0.63	0	15,15,17	1.14	2 (13%)

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	NAG	D	1	1,4	-	0/6/23/26	0/1/1/1
4	NAG	D	2	4	-	3/6/23/26	0/1/1/1
4	BMA	D	3	4	-	0/2/19/22	0/1/1/1
4	MAN	D	4	4	-	0/2/19/22	0/1/1/1

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	D	4	MAN	C1-O5-C5	3.37	116.70	112.19
4	D	4	MAN	O2-C2-C3	-2.14	105.72	110.15

There are no chirality outliers.

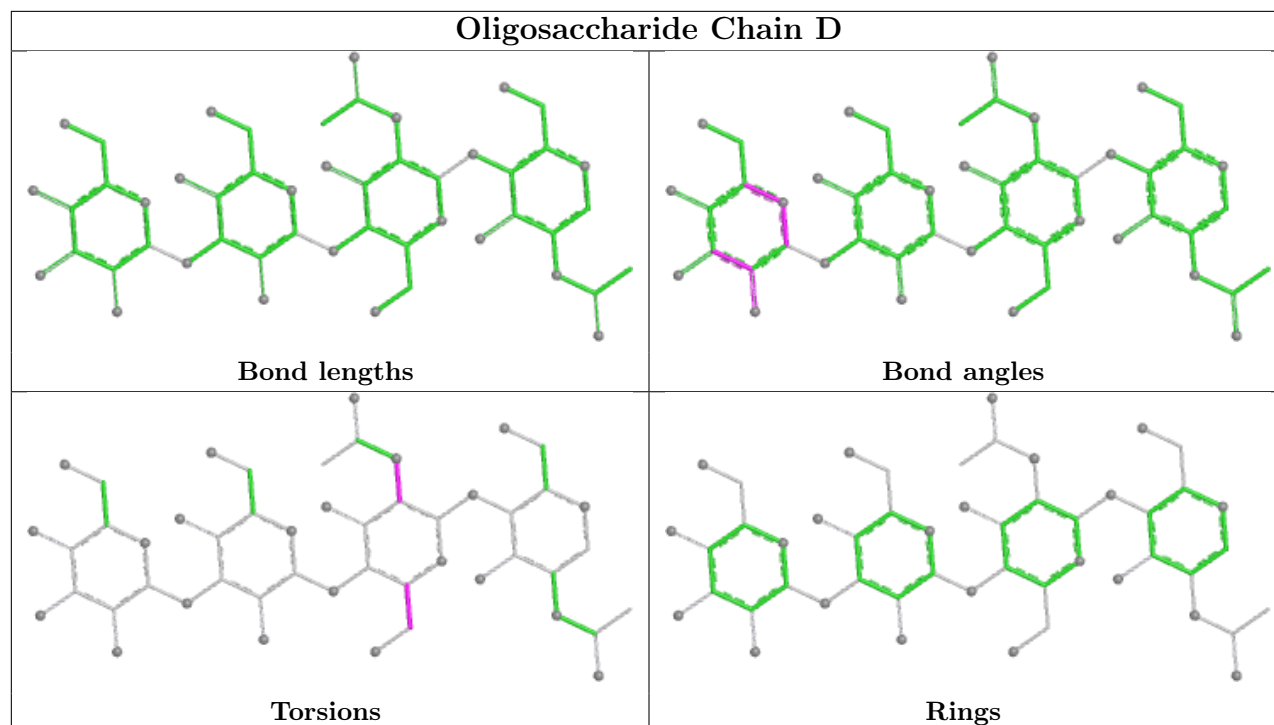
All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	D	2	NAG	C4-C5-C6-O6
4	D	2	NAG	O5-C5-C6-O6
4	D	2	NAG	C3-C2-N2-C7

There are no ring outliers.

No monomer is involved in short contacts.

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](#)

There are no ligands in this entry.

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	234/299 (78%)	0.11	7 (2%) 52 47	20, 29, 47, 67	0
2	B	216/240 (90%)	0.58	32 (14%) 5 4	18, 28, 76, 88	0
3	C	213/216 (98%)	0.65	24 (11%) 10 8	16, 38, 71, 79	0
All	All	663/755 (87%)	0.44	63 (9%) 14 10	16, 30, 69, 88	0

All (63) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	163(B)	ASN	4.1
2	B	170	LEU	4.0
2	B	215	ASN	3.9
2	B	206	ILE	3.9
2	B	146	THR	3.8
1	A	164	LYS	3.7
3	C	208	PHE	3.6
3	C	108	THR	3.6
2	B	199	SER	3.5
3	C	191	TYR	3.4
2	B	222	VAL	3.3
2	B	147	ALA	3.3
3	C	202	SER	3.3
2	B	169	ALA	3.1
2	B	183	SER	3.1
2	B	168	GLY	3.1
2	B	202	THR	3.1
2	B	221	ARG	3.1
3	C	189	LYS	3.0
3	C	180	LEU	3.0
3	C	192	ALA	2.9
3	C	167	SER	2.9
2	B	214	SER	2.8

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Mol	Chain	Res	Type	RSRZ
2	B	205	TYR	2.8
2	B	204	THR	2.7
2	B	198	SER	2.7
2	B	195	VAL	2.6
2	B	200	LEU	2.6
1	A	203	GLY	2.5
3	C	155	SER	2.5
3	C	116	ILE	2.5
2	B	201	GLY	2.5
2	B	166	ASN	2.5
3	C	210	ARG	2.5
3	C	190	VAL	2.5
2	B	159	GLU	2.4
2	B	196	PRO	2.4
2	B	216	THR	2.4
1	A	165	ASN	2.4
2	B	167	SER	2.4
3	C	128	THR	2.4
3	C	183	ALA	2.4
3	C	200	LEU	2.3
3	C	126	SER	2.3
1	A	163(A)	ASN	2.3
3	C	181	SER	2.3
3	C	201	SER	2.3
2	B	93	CYS	2.3
2	B	55	GLY	2.3
3	C	212	GLU	2.2
3	C	125	LYS	2.2
3	C	203	PRO	2.2
3	C	27	GLN	2.2
2	B	137	PRO	2.2
2	B	203	GLN	2.2
2	B	150	GLY	2.2
2	B	131	SER	2.2
1	A	166	ALA	2.1
3	C	124	LEU	2.1
2	B	194	THR	2.1
3	C	121	ASP	2.0
2	B	149	LEU	2.0
1	A	133	GLY	2.0

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

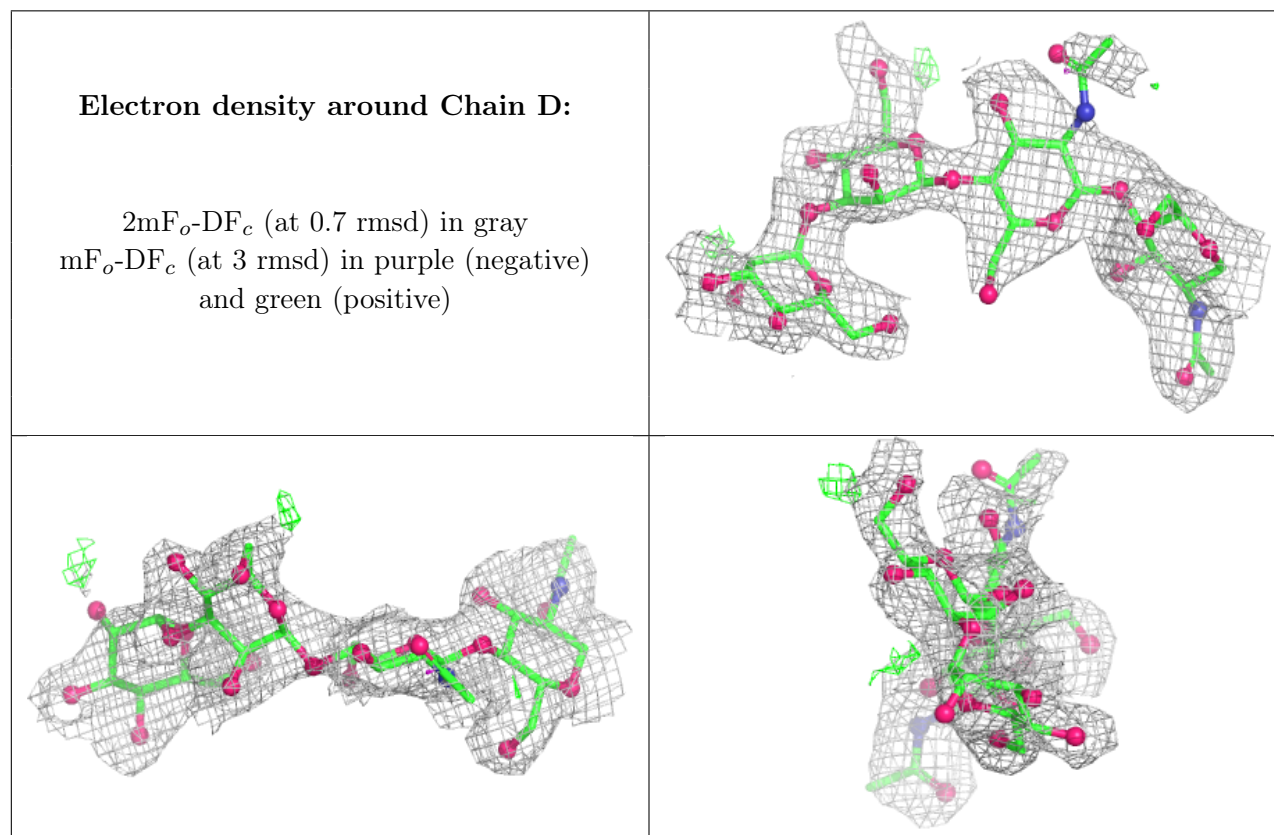
There are no non-standard protein/DNA/RNA residues in this entry.

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, 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($\text{\AA}^2$)	Q<0.9
4	BMA	D	3	11/12	0.70	0.15	45,56,59,64	0
4	NAG	D	2	14/15	0.75	0.15	44,58,66,69	0
4	MAN	D	4	11/12	0.81	0.14	38,49,58,62	0
4	NAG	D	1	14/15	0.87	0.11	35,45,49,51	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](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.