W O R L D W I D E
wwPDB
P R O T E I N D A T A B A N K

Full wwPDB X-ray Structure Validation Report ⓘ

Feb 16, 2026 – 12:08 pm GMT

PDB ID	:	9IGP / pdb_00009igp
Title	:	CD177 extracellular domain
Authors	:	Zheng-Gerard, C.; El Omari, K.; Seiradake, E.
Deposited on	:	2025-02-19
Resolution	:	2.70 Å(reported)

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

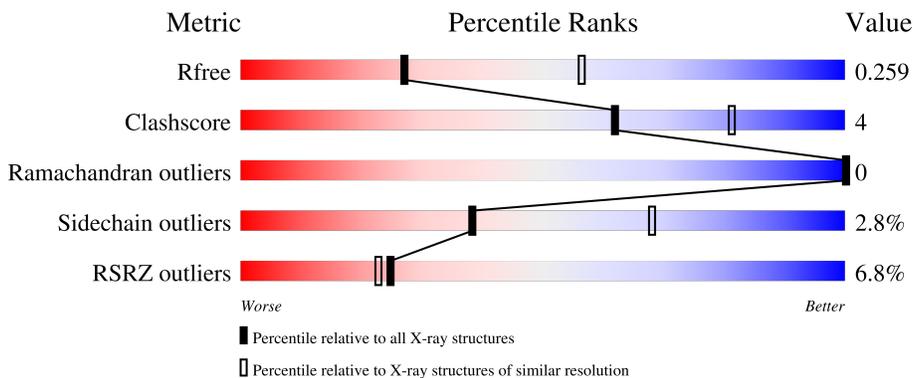|		
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.48

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 2.70 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		0.259
Clashscore		4
Ramachandran outliers		0
Sidechain outliers		2.8%
RSRZ outliers		6.8%

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	3333 (2.70-2.70)
Clashscore	180529	3684 (2.70-2.70)
Ramachandran outliers	177936	3633 (2.70-2.70)
Sidechain outliers	177891	3633 (2.70-2.70)
RSRZ outliers	164620	3333 (2.70-2.70)

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	A	376	5% / 83% / 15% / •
1	B	376	9% / 86% / 12% / •
2	C	2	50% / 50%
3	D	3	100%

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
4	CL	A	401	-	-	X	-

2 Entry composition ⓘ

There are 4 unique types of molecules in this entry. The entry contains 5660 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 CD177 antigen.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	376	Total	C	N	O	S	0	0	0
			2797	1718	495	549	35			
1	B	376	Total	C	N	O	S	0	0	0
			2795	1717	495	548	35			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	348	THR	ALA	variant	UNP Q8N6Q3
B	348	THR	ALA	variant	UNP Q8N6Q3

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

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

- Molecule 3 is an oligosaccharide called beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.
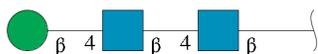
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
3	D	3	Total 39	C 22	N 2	O 15	0	0	0

- 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

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: CD177 antigen

Chain A:

• Molecule 1: CD177 antigen
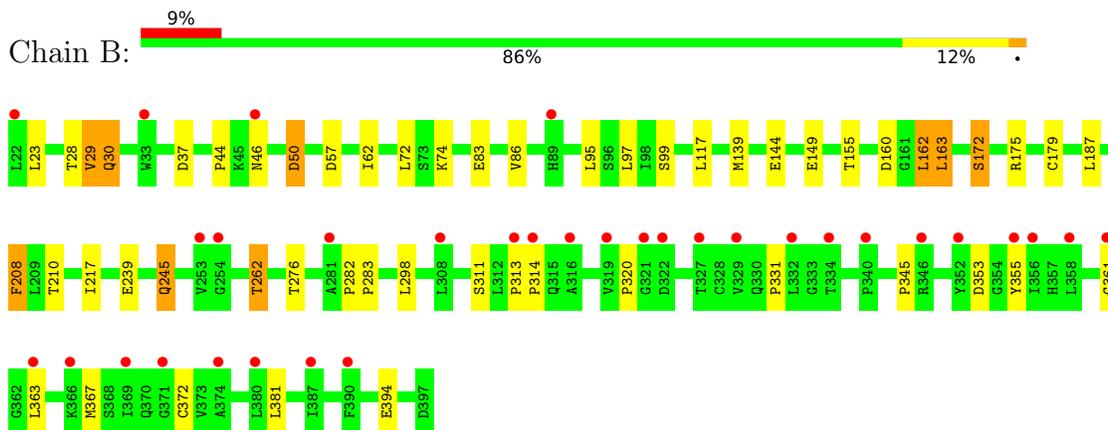
Chain B:

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

Chain C:

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

Chain D:

100%

NAG1 NAG2 BMA3

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	H 3	Depositor
Cell constants a, b, c, α, β, γ	192.99Å 192.99Å 71.81Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	66.06 – 2.70 66.06 – 2.70	Depositor EDS
% Data completeness (in resolution range)	99.9 (66.06-2.70) 99.9 (66.06-2.70)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.32 (at 2.69Å)	Xtriage
Refinement program	REFMAC 5.8.0430 (refmacat 0.4.100)	Depositor
R, R_{free}	0.224 , 0.259 0.224 , 0.259	Depositor DCC
R_{free} test set	1296 reflections (4.73%)	wwPDB-VP
Wilson B-factor (Å^2)	62.4	Xtriage
Anisotropy	0.738	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.31 , 69.9	EDS
L-test for twinning[2]	$< |L| > = 0.51, < L^2 > = 0.34$	Xtriage
Estimated twinning fraction	0.008 for h,-h-k,-l	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	5660	wwPDB-VP
Average B, all atoms (Å^2)	101.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.28% 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 $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: CL, NAG, 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	0.65	0/2854	1.46	26/3883 (0.7%)
1	B	0.62	0/2852	1.37	17/3880 (0.4%)
All	All	0.64	0/5706	1.42	43/7763 (0.6%)

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	1

There are no bond length outliers.

All (43) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	367	MET	CG-SD-CE	-12.77	72.80	100.90
1	A	320	PRO	CB-CA-C	10.30	120.78	111.40
1	A	216	THR	CA-CB-OG1	-8.64	96.64	109.60
1	A	291	THR	CA-CB-OG1	-8.43	96.96	109.60
1	B	262	THR	CA-CB-OG1	-7.38	98.54	109.60
1	B	355	TYR	N-CA-CB	7.19	120.92	110.06
1	B	50	ASP	CA-CB-CG	7.18	119.78	112.60
1	B	83	GLU	CB-CG-CD	7.17	124.78	112.60
1	A	83	GLU	CB-CG-CD	7.15	124.75	112.60
1	A	282	PRO	CB-CA-C	7.14	118.11	111.39
1	B	208	PHE	CA-CB-CG	6.99	120.79	113.80
1	A	40	ARG	CG-CD-NE	-6.93	96.75	112.00
1	A	332	LEU	N-CA-CB	6.79	120.77	110.11
1	B	149	GLU	CB-CG-CD	6.73	124.05	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	163	LEU	N-CA-CB	-6.64	99.56	110.52
1	A	365	THR	OG1-CB-CG2	6.62	122.54	109.30
1	A	57	ASP	CA-CB-CG	6.62	119.22	112.60
1	A	397	ASP	CA-CB-CG	6.50	119.10	112.60
1	A	393	ARG	CA-CB-CG	6.32	126.73	114.10
1	B	139	MET	CG-SD-CE	-6.10	87.49	100.90
1	A	80	LYS	CB-CA-C	6.06	122.09	109.68
1	B	57	ASP	CA-CB-CG	5.98	118.58	112.60
1	B	144	GLU	N-CA-CB	5.91	118.66	109.85
1	B	29	VAL	N-CA-CB	5.81	120.99	111.58
1	A	245	GLN	N-CA-CB	-5.79	100.65	111.13
1	A	208	PHE	CA-CB-CG	5.78	119.58	113.80
1	B	245	GLN	N-CA-CB	-5.75	100.83	111.13
1	A	365	THR	CA-CB-OG1	-5.73	101.01	109.60
1	A	127	ASP	CA-CB-CG	5.67	118.27	112.60
1	B	46	ASN	CB-CA-C	5.64	119.84	109.46
1	A	117	LEU	N-CA-CB	5.52	116.93	110.42
1	A	30	GLN	CB-CA-C	5.51	118.92	111.70
1	A	390	PHE	CA-CB-CG	5.45	119.25	113.80
1	A	353	ASP	CA-CB-CG	5.42	118.02	112.60
1	B	30	GLN	CB-CA-C	5.37	118.26	110.79
1	B	353	ASP	CA-CB-CG	5.34	117.94	112.60
1	A	108	ASP	CA-CB-CG	5.34	117.94	112.60
1	A	38	LEU	CB-CA-C	5.32	116.52	108.86
1	A	231	THR	CA-CB-OG1	-5.30	101.65	109.60
1	A	323	ARG	N-CA-CB	-5.26	101.67	110.83
1	B	239	GLU	CB-CG-CD	5.11	121.29	112.60
1	A	78	GLU	CB-CG-CD	5.10	121.27	112.60
1	B	37	ASP	CA-CB-CG	5.10	117.70	112.60

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	164	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	2797	0	2715	24	0
1	B	2795	0	2710	21	0
2	C	28	0	25	2	0
3	D	39	0	34	0	0
4	A	1	0	0	2	0
All	All	5660	0	5484	45	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 4.

All (45) 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:A:260:VAL:HG21	1:A:367:MET:HE1	1.28	1.16
1:A:91:MET:H	2:C:1:NAG:H81	1.24	1.01
1:A:253:VAL:HG12	1:A:327:THR:HG23	1.44	0.99
1:B:320:PRO:HA	1:B:345:PRO:HA	1.57	0.84
1:A:260:VAL:CG2	1:A:367:MET:HE1	2.14	0.77
1:A:262:THR:HG21	1:A:361:GLY:HA3	1.67	0.77
1:A:393:ARG:NH1	4:A:401:CL:CL	2.57	0.74
1:A:155:THR:HG21	1:A:179:CYS:HB3	1.69	0.74
1:B:155:THR:HG21	1:B:179:CYS:HB3	1.70	0.74
1:A:357:HIS:CG	1:A:393:ARG:HH11	2.10	0.69
1:B:262:THR:HG21	1:B:361:GLY:HA3	1.76	0.67
1:A:381:LEU:HD22	1:A:387:ILE:HD11	1.81	0.63
1:A:91:MET:N	2:C:1:NAG:H81	2.07	0.59
1:A:155:THR:CG2	1:A:179:CYS:HB3	2.34	0.56
1:B:155:THR:CG2	1:B:179:CYS:HB3	2.36	0.55
1:B:276:THR:HG21	1:B:311:SER:HB2	1.89	0.54
1:B:162:LEU:HD22	1:B:208:PHE:HB2	1.89	0.53
1:B:29:VAL:HG23	1:B:72:LEU:HD23	1.92	0.52
1:A:349:THR:HG22	1:A:374:ALA:O	2.09	0.52
1:B:160:ASP:OD1	1:B:175:ARG:NH2	2.40	0.52
1:B:95:LEU:HB3	1:B:187:LEU:HD11	1.92	0.51
1:A:29:VAL:HG23	1:A:72:LEU:HD23	1.93	0.50
1:B:217:ILE:HD11	1:B:363:LEU:HD11	1.93	0.50
1:A:28:THR:HA	1:A:72:LEU:O	2.15	0.47
1:A:357:HIS:ND1	4:A:401:CL:CL	2.84	0.47
1:A:276:THR:HG21	1:A:311:SER:HB2	1.98	0.46
1:A:253:VAL:HG11	1:A:370:GLN:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:381:LEU:HD12	1:B:394:GLU:HB2	1.99	0.45
1:B:28:THR:HA	1:B:72:LEU:O	2.17	0.44
1:B:30:GLN:OE1	1:B:172:SER:HB2	2.16	0.44
1:B:62:ILE:HG13	1:B:97:LEU:HD13	2.00	0.44
1:A:95:LEU:HD13	1:A:187:LEU:HD13	2.00	0.44
1:B:345:PRO:HD2	1:B:372:CYS:HB2	1.99	0.43
1:A:86:VAL:HA	1:A:99:SER:O	2.18	0.43
1:B:44:PRO:HB3	1:B:74:LYS:HE2	1.99	0.43
1:A:352:TYR:O	1:A:370:GLN:HA	2.19	0.42
1:B:162:LEU:HD22	1:B:208:PHE:CB	2.49	0.42
1:A:282:PRO:HA	1:A:283:PRO:C	2.44	0.42
1:B:86:VAL:HA	1:B:99:SER:O	2.19	0.42
1:B:313:PRO:HA	1:B:314:PRO:HD3	1.87	0.41
1:B:331:PRO:HA	1:B:367:MET:HG2	2.02	0.41
1:A:165:LEU:HD22	1:A:199:MET:HG2	2.03	0.41
1:B:282:PRO:HA	1:B:283:PRO:C	2.47	0.40
1:A:62:ILE:HG13	1:A:97:LEU:HD13	2.04	0.40
1:A:44:PRO:HB3	1:A:74:LYS:HE2	2.03	0.40

There are no symmetry-related clashes.

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	374/376 (100%)	363 (97%)	11 (3%)	0	100	100
1	B	374/376 (100%)	359 (96%)	15 (4%)	0	100	100
All	All	748/752 (100%)	722 (96%)	26 (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	326/326 (100%)	317 (97%)	9 (3%)	38	68
1	B	325/326 (100%)	316 (97%)	9 (3%)	38	68
All	All	651/652 (100%)	633 (97%)	18 (3%)	38	68

All (18) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	131	LEU
1	A	216	THR
1	A	226	GLU
1	A	245	GLN
1	A	258	THR
1	A	319	VAL
1	A	332	LEU
1	A	342	MET
1	A	389	ILE
1	B	23	LEU
1	B	50	ASP
1	B	117	LEU
1	B	162	LEU
1	B	163	LEU
1	B	172	SER
1	B	210	THR
1	B	245	GLN
1	B	298	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (13) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	46	ASN
1	A	157	HIS
1	A	204	ASN
1	A	383	HIS

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Mol	Chain	Res	Type
1	A	386	GLN
1	B	46	ASN
1	B	67	GLN
1	B	157	HIS
1	B	310	ASN
1	B	330	GLN
1	B	350	HIS
1	B	357	HIS
1	B	370	GLN

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 ⓘ

5 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	$\#|Z| > 2$
2	NAG	C	1	1,2	14,14,15	0.44	0	17,19,21	1.27	2 (11%)
2	NAG	C	2	2	14,14,15	0.41	0	17,19,21	1.73	3 (17%)
3	NAG	D	1	1,3	14,14,15	0.39	0	17,19,21	1.12	1 (5%)
3	NAG	D	2	3	14,14,15	0.53	0	17,19,21	1.24	3 (17%)
3	BMA	D	3	3	11,11,12	1.05	2 (18%)	15,15,17	0.96	1 (6%)

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	C	1	1,2	-	2/6/23/26	0/1/1/1
2	NAG	C	2	2	-	5/6/23/26	0/1/1/1
3	NAG	D	1	1,3	-	2/6/23/26	0/1/1/1
3	NAG	D	2	3	-	4/6/23/26	0/1/1/1
3	BMA	D	3	3	-	0/2/19/22	0/1/1/1

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	D	3	BMA	C4-C5	2.18	1.57	1.53
3	D	3	BMA	O5-C5	2.14	1.47	1.43

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	C	2	NAG	C2-N2-C7	5.15	130.24	122.90
3	D	2	NAG	C2-N2-C7	3.05	127.24	122.90
2	C	1	NAG	O4-C4-C3	-3.03	103.35	110.35
2	C	2	NAG	C4-C3-C2	2.97	115.37	111.02
3	D	2	NAG	C1-O5-C5	2.90	116.12	112.19
3	D	1	NAG	C1-C2-N2	2.65	115.02	110.49
2	C	2	NAG	C1-O5-C5	2.35	115.38	112.19
3	D	3	BMA	O2-C2-C3	2.26	114.66	110.14
2	C	1	NAG	C4-C3-C2	2.15	114.16	111.02
3	D	2	NAG	O4-C4-C3	2.05	115.09	110.35

There are no chirality outliers.

All (13) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	C	1	NAG	C8-C7-N2-C2
2	C	2	NAG	C8-C7-N2-C2
2	C	2	NAG	O7-C7-N2-C2
3	D	2	NAG	C8-C7-N2-C2
3	D	2	NAG	O7-C7-N2-C2
2	C	1	NAG	O7-C7-N2-C2
3	D	2	NAG	C4-C5-C6-O6
3	D	2	NAG	O5-C5-C6-O6
2	C	2	NAG	O5-C5-C6-O6

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Mol	Chain	Res	Type	Atoms
2	C	2	NAG	C4-C5-C6-O6
3	D	1	NAG	C4-C5-C6-O6
3	D	1	NAG	O5-C5-C6-O6
2	C	2	NAG	C3-C2-N2-C7

There are no ring outliers.

1 monomer is involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	C	1	NAG	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.

Oligosaccharide Chain C

Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain D

Bond lengths | Bond angles
Torsions | Rings
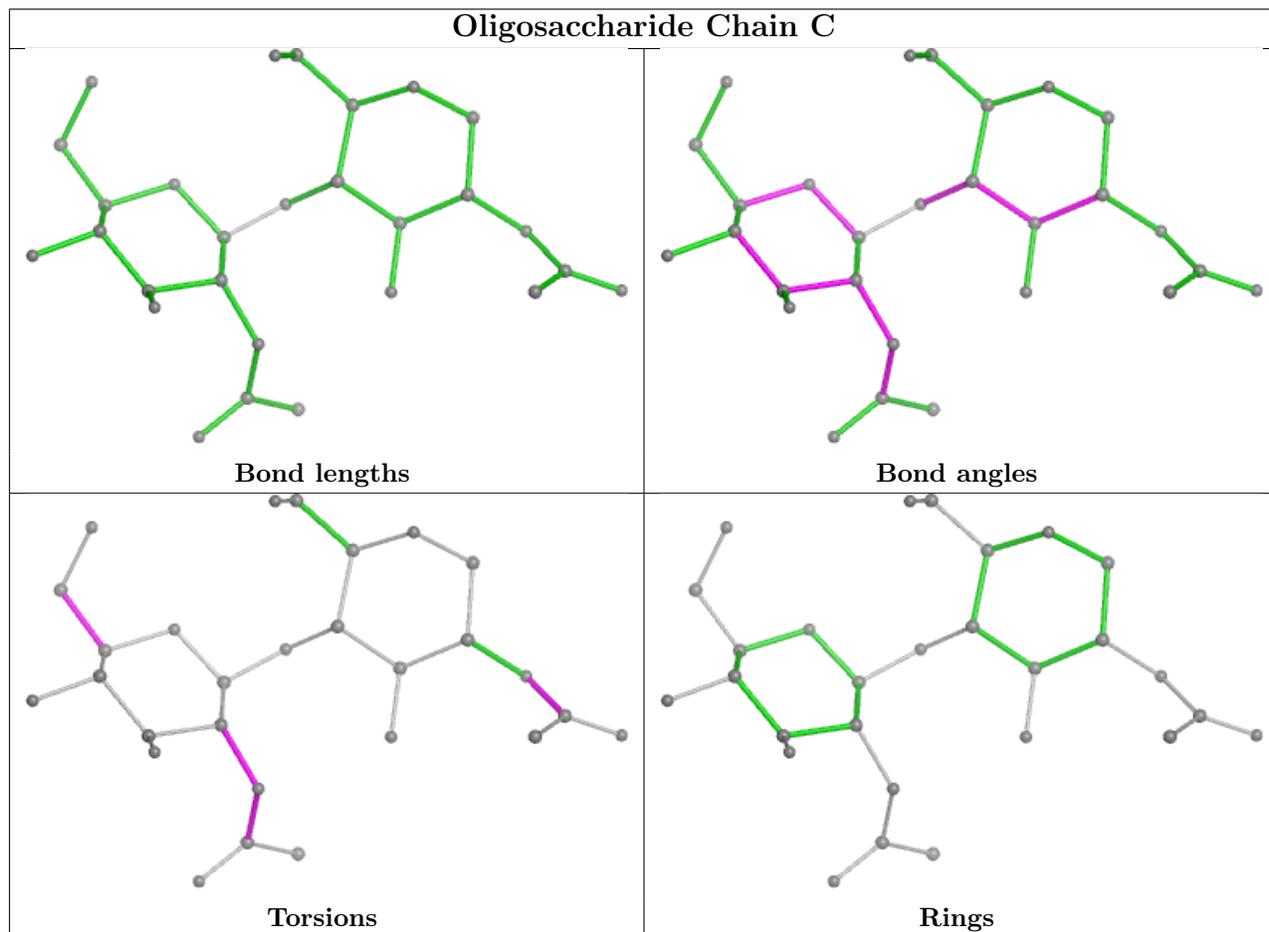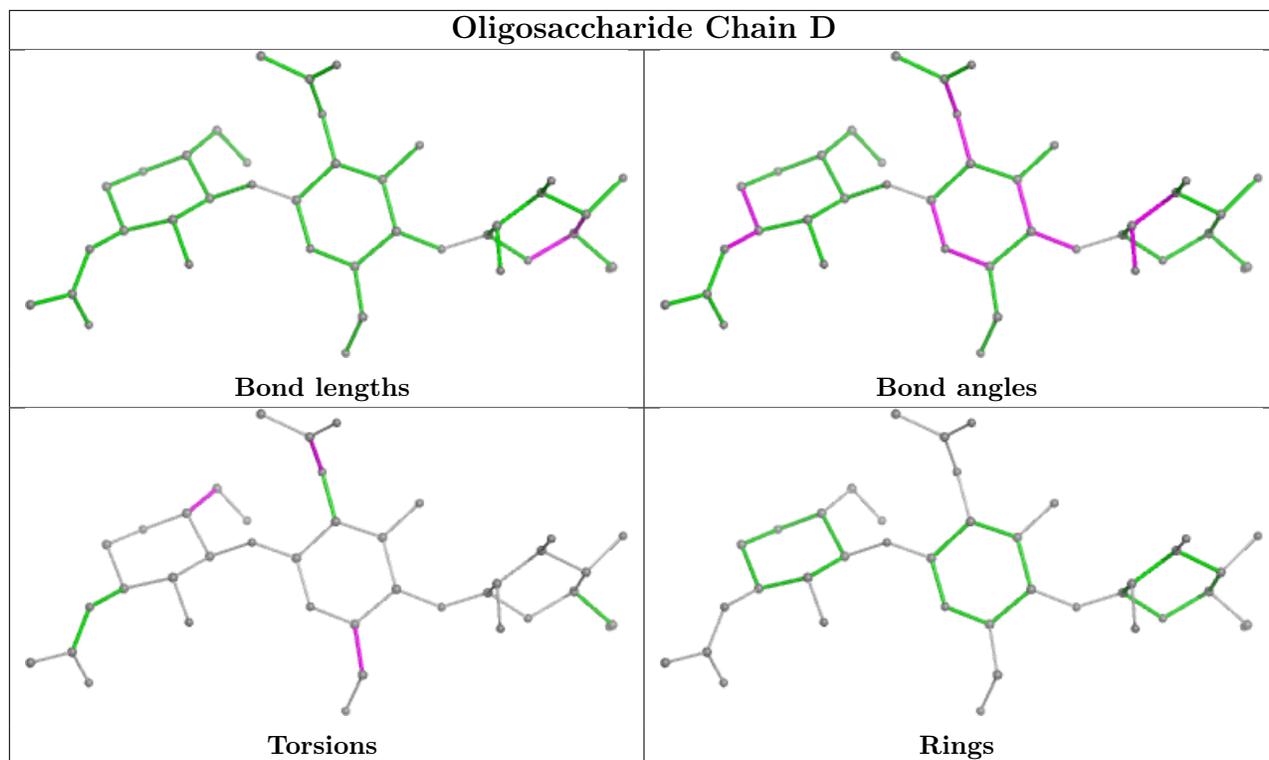
5.6 Ligand geometry ⓘ

Of 1 ligands modelled in this entry, 1 is monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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(Å^2)	Q<0.9
1	A	376/376 (100%)	0.07	18 (4%)	36	35	44, 73, 147, 195	0
1	B	376/376 (100%)	0.59	33 (8%)	17	16	52, 101, 244, 282	0
All	All	752/752 (100%)	0.33	51 (6%)	25	23	44, 84, 210, 282	0

All (51) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	318	PRO	4.0
1	B	390	PHE	3.9
1	B	332	LEU	3.8
1	A	221	GLY	3.8
1	A	143	LEU	3.7
1	A	220	HIS	3.7
1	B	369	ILE	3.7
1	B	319	VAL	3.4
1	A	332	LEU	3.4
1	B	355	TYR	3.4
1	B	322	ASP	3.4
1	B	380	LEU	3.4
1	A	319	VAL	3.3
1	B	329	VAL	3.2
1	A	22	LEU	3.1
1	B	371	GLY	3.0
1	B	253	VAL	2.9
1	B	352	TYR	2.9
1	B	33	TRP	2.8
1	A	147	THR	2.7
1	B	281	ALA	2.7
1	B	358	LEU	2.6
1	B	356	ILE	2.6
1	A	23	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
1	B	340	PRO	2.6
1	A	284	GLY	2.5
1	B	361	GLY	2.4
1	A	316	ALA	2.4
1	B	374	ALA	2.4
1	B	46	ASN	2.4
1	B	363	LEU	2.4
1	B	313	PRO	2.4
1	A	317	ALA	2.4
1	B	22	LEU	2.3
1	A	146	THR	2.3
1	B	314	PRO	2.3
1	B	321	GLY	2.3
1	B	308	LEU	2.3
1	A	178	GLY	2.3
1	B	346	ARG	2.2
1	B	334	THR	2.2
1	B	327	THR	2.2
1	A	312	LEU	2.2
1	A	346	ARG	2.2
1	B	366	LYS	2.2
1	B	254	GLY	2.2
1	A	313	PRO	2.1
1	B	89	HIS	2.1
1	B	387	ILE	2.1
1	B	316	ALA	2.1
1	A	145	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.
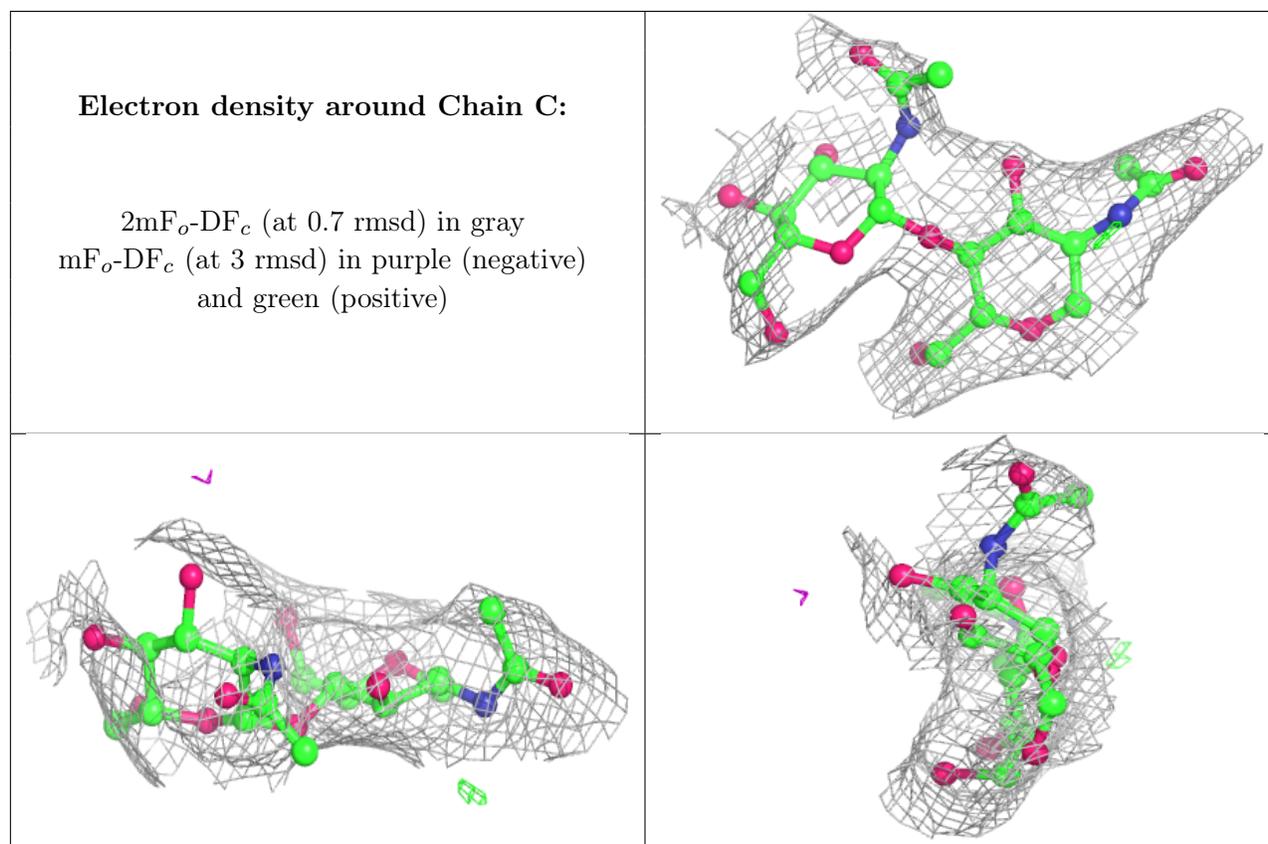
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	BMA	D	3	11/12	0.34	0.13	175,183,193,198	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å²)	Q<0.9
3	NAG	D	2	14/15	0.61	0.12	122,136,151,161	0
2	NAG	C	2	14/15	0.65	0.13	131,144,152,168	0
3	NAG	D	1	14/15	0.88	0.12	88,94,105,119	0
2	NAG	C	1	14/15	0.91	0.10	85,95,110,129	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.
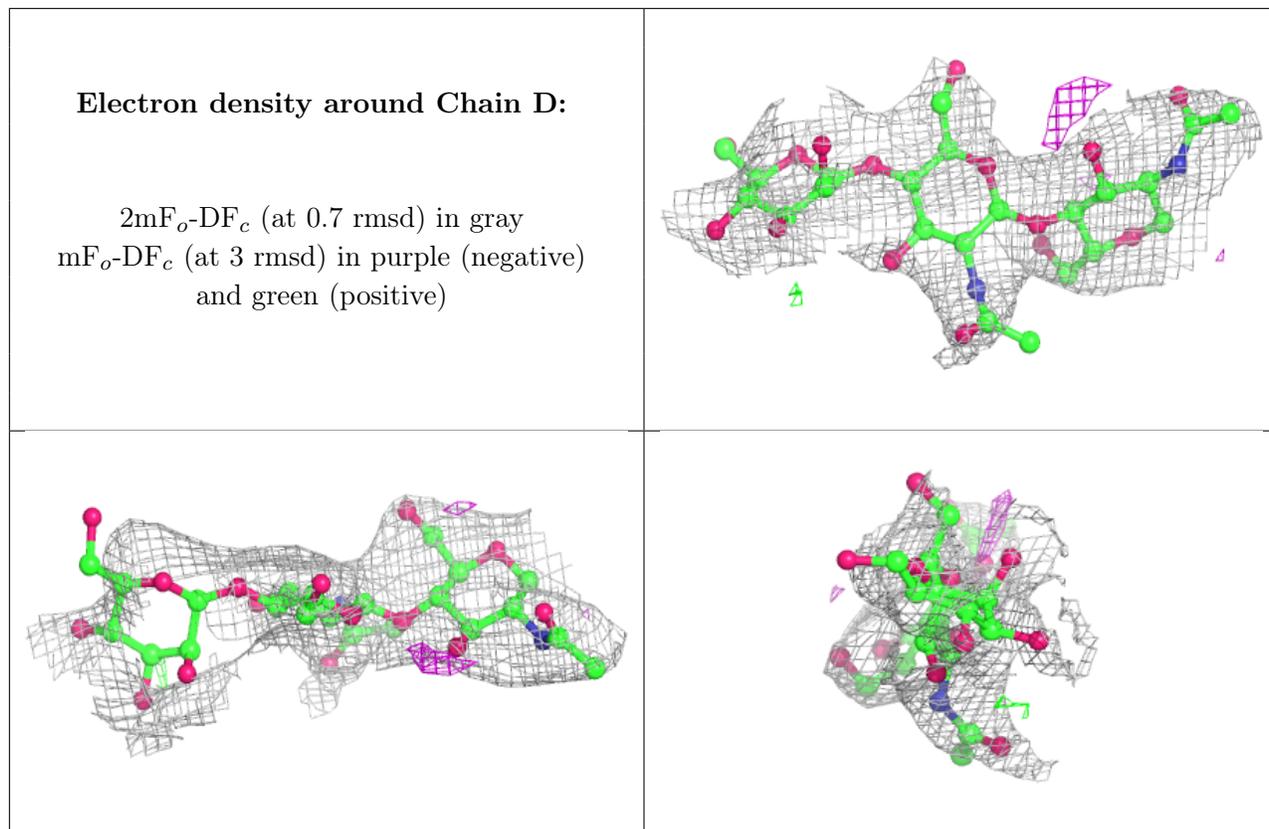
Electron density around Chain C:

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

Electron density around Chain D:

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

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
4	CL	A	401	1/1	0.97	0.08	62,62,62,62	0

6.5 Other polymers ⓘ

There are no such residues in this entry.