



wwPDB X-ray Structure Validation Summary Report ⓘ

Jun 5, 2024 – 02:09 PM JST

PDB ID : 8WSN
Title : Crystal structure of SFTSV Gn and antibody SF1
Authors : Chang, Z.; Gao, F.; Wu, Y.
Deposited on : 2023-10-17
Resolution : 2.80 Å(reported)

This is a wwPDB X-ray Structure Validation Summary 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 : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36.2
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) : 2.36.2

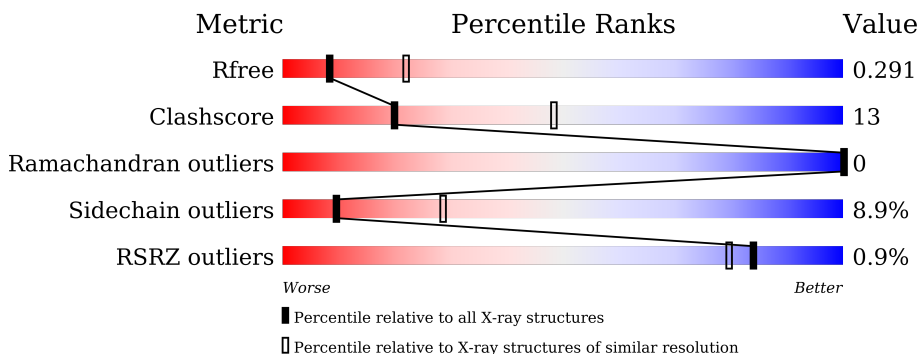
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.80 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.




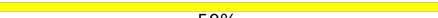


Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	3140 (2.80-2.80)
Clashscore	141614	3569 (2.80-2.80)
Ramachandran outliers	138981	3498 (2.80-2.80)
Sidechain outliers	138945	3500 (2.80-2.80)
RSRZ outliers	127900	3078 (2.80-2.80)

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	327	
1	D	327	
2	B	227	
2	E	227	
3	C	215	
3	F	215	

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Mol	Chain	Length	Quality of chain	
4	G	2	 50%	 50%
4	H	2	 50%	 50%

2 Entry composition [i](#)

There are 6 unique types of molecules in this entry. The entry contains 11643 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 Gn.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	312	2403	1508	415	454	26	0	0	0
1	D	312	2399	1504	414	455	26	0	0	0

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	341	HIS	-	expression tag	UNP F1BWV6
A	342	HIS	-	expression tag	UNP F1BWV6
A	343	HIS	-	expression tag	UNP F1BWV6
A	344	HIS	-	expression tag	UNP F1BWV6
A	345	HIS	-	expression tag	UNP F1BWV6
A	346	HIS	-	expression tag	UNP F1BWV6
D	341	HIS	-	expression tag	UNP F1BWV6
D	342	HIS	-	expression tag	UNP F1BWV6
D	343	HIS	-	expression tag	UNP F1BWV6
D	344	HIS	-	expression tag	UNP F1BWV6
D	345	HIS	-	expression tag	UNP F1BWV6
D	346	HIS	-	expression tag	UNP F1BWV6

- Molecule 2 is a protein called Ab1-H.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	215	1658	1062	275	315	6	0	0	0
2	E	214	1658	1062	275	315	6	0	0	0

- Molecule 3 is a protein called Ab1-L.

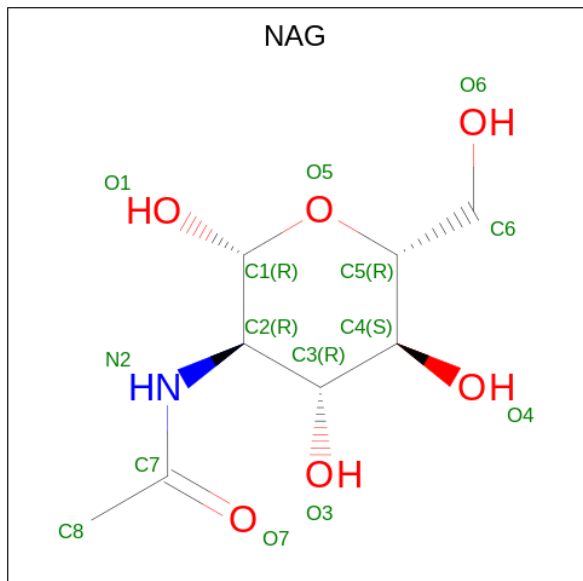
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	C	213	Total 1638	C 1029	N 282	O 323	S 4	0	0	0
3	F	211	Total 1628	C 1023	N 281	O 320	S 4	0	0	0

- Molecule 4 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
			Total	C	N	O			
4	G	2	Total 28	C 16	N 2	O 10	0	0	0
4	H	2	Total 28	C 16	N 2	O 10	0	0	0

- Molecule 5 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
5	A	1	Total 14	C 8	N 1	O 5	0	0
5	A	1	Total 14	C 8	N 1	O 5	0	0

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
5	D	1	Total	C	N	O	0	0
			14	8	1	5		
5	D	1	Total	C	N	O	0	0
			14	8	1	5		

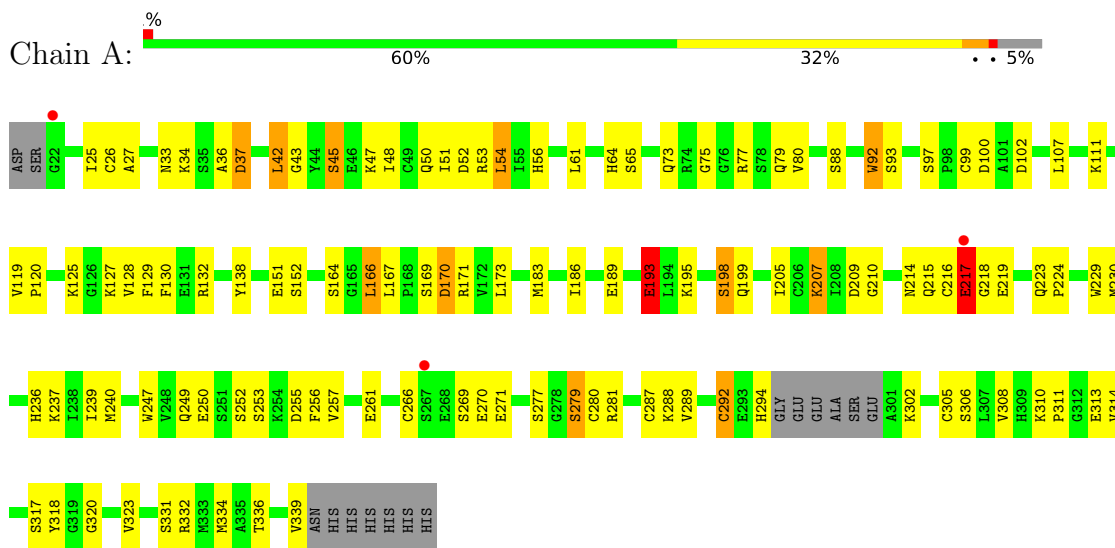
- Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	31	Total	O	0	0
			31	31		
6	B	18	Total	O	0	0
			18	18		
6	C	30	Total	O	0	0
			30	30		
6	D	19	Total	O	0	0
			19	19		
6	E	16	Total	O	0	0
			16	16		
6	F	33	Total	O	0	0
			33	33		

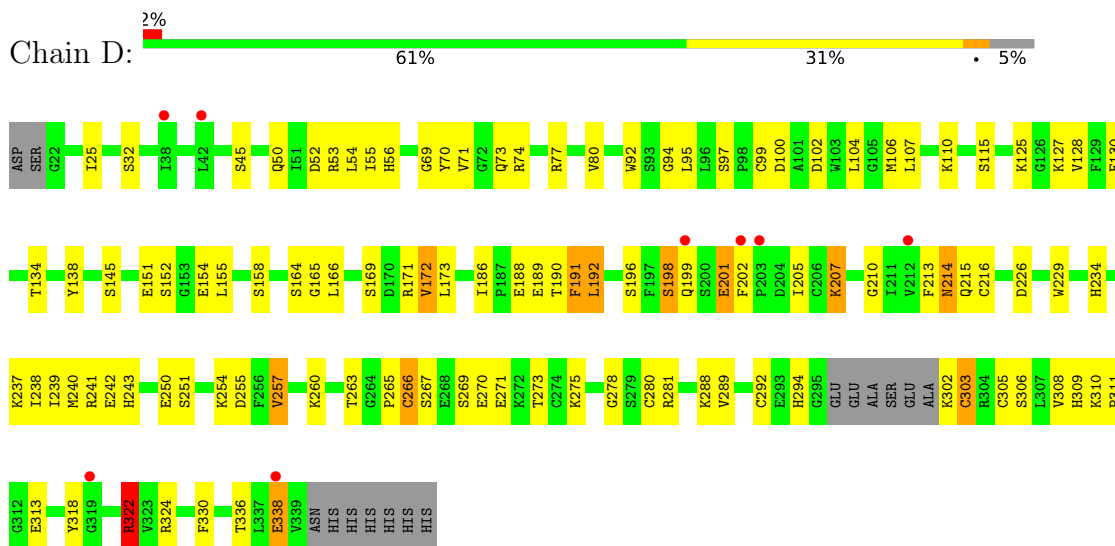
3 Residue-property plots

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: Gn

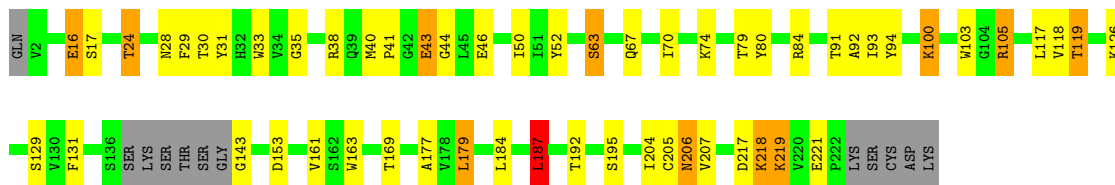


- Molecule 1: Gn



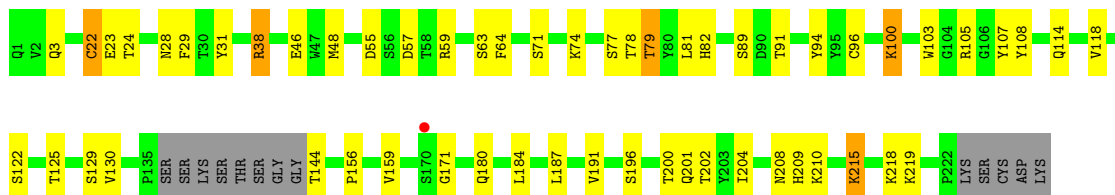
- Molecule 2: Ab1-H





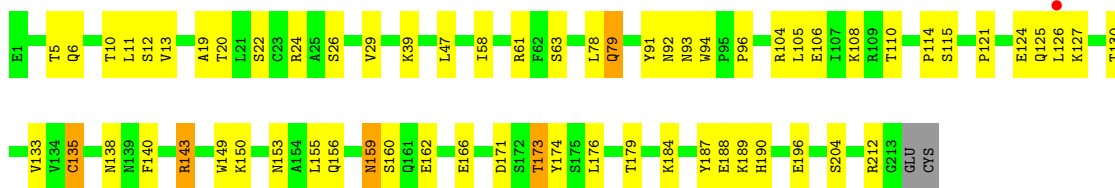
- Molecule 2: Ab1-H

Chain E: 70% 22% 6%



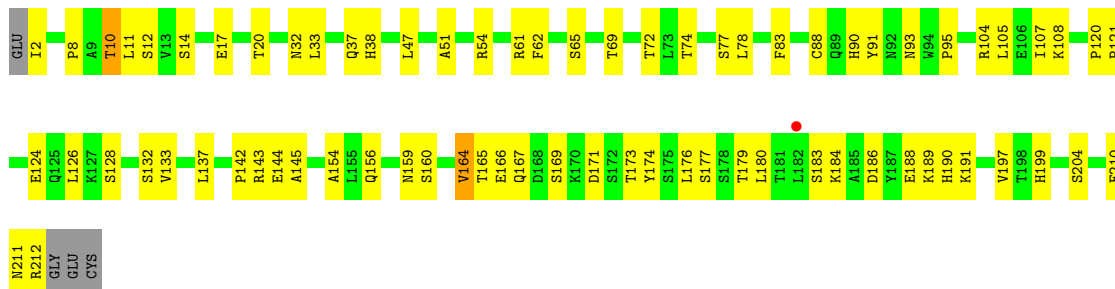
- Molecule 3: Ab1-L

Chain C: 69% 27% 2%



- Molecule 3: Ab1-L

Chain F: 64% 33% 2%



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

Chain G: 50% 50%



- Molecule 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	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	227.06Å 97.25Å 133.09Å 90.00° 124.62° 90.00°	Depositor
Resolution (Å)	46.71 – 2.80 46.71 – 2.80	Depositor EDS
% Data completeness (in resolution range)	99.4 (46.71-2.80) 99.4 (46.71-2.80)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.56 (at 2.81Å)	Xtrriage
Refinement program	PHENIX 1.19.2_4158, PHENIX 1.19.2_4158	Depositor
R, R_{free}	0.240 , 0.291 0.240 , 0.291	Depositor DCC
R_{free} test set	2942 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å ²)	60.8	Xtrriage
Anisotropy	0.240	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.33 , 43.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtrriage
Estimated twinning fraction	0.000 for -h-2*1,-k,l	Xtrriage
F_o, F_c correlation	0.90	EDS
Total number of atoms	11643	wwPDB-VP
Average B, all atoms (Å ²)	58.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 28.64 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 1.7800e-03. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

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

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	0.57	2/2464 (0.1%)	0.80	7/3322 (0.2%)
1	D	0.53	1/2460 (0.0%)	0.70	2/3317 (0.1%)
2	B	0.56	0/1707	0.69	1/2331 (0.0%)
2	E	0.58	1/1707 (0.1%)	0.70	2/2331 (0.1%)
3	C	0.55	1/1677 (0.1%)	0.73	2/2281 (0.1%)
3	F	0.51	0/1667	0.68	0/2268
All	All	0.55	5/11682 (0.0%)	0.72	14/15850 (0.1%)

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	2
1	D	0	1
All	All	0	3

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	193	GLU	CB-CG	7.65	1.66	1.52
1	A	217	GLU	CB-CG	5.75	1.63	1.52
3	C	135	CYS	CB-SG	-5.66	1.72	1.81
1	D	322	ARG	CG-CD	5.24	1.65	1.51
2	E	22	CYS	CB-SG	-5.11	1.73	1.81

The worst 5 of 14 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	217	GLU	OE1-CD-OE2	-12.78	107.97	123.30
1	A	217	GLU	CG-CD-OE1	10.25	138.80	118.30
1	A	217	GLU	CG-CD-OE2	-9.91	98.49	118.30
1	A	193	GLU	N-CA-CB	-8.77	94.81	110.60
1	D	322	ARG	CB-CG-CD	-7.08	93.19	111.60

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	216	CYS	Peptide
1	A	217	GLU	Sidechain
1	D	322	ARG	Sidechain

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	2403	0	2306	77	0
1	D	2399	0	2296	78	0
2	B	1658	0	1607	35	1
2	E	1658	0	1613	28	1
3	C	1638	0	1585	40	1
3	F	1628	0	1577	40	1
4	G	28	0	25	0	0
4	H	28	0	25	0	0
5	A	28	0	26	1	0
5	D	28	0	26	0	0
6	A	31	0	0	2	0
6	B	18	0	0	1	0
6	C	30	0	0	6	0
6	D	19	0	0	3	0
6	E	16	0	0	0	0
6	F	33	0	0	10	0
All	All	11643	0	11086	285	2

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 13.

The worst 5 of 285 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:E:130:VAL:O	2:E:218:LYS:NZ	1.91	1.02
1:D:196:SER:HA	1:D:199:GLN:HE21	1.21	0.99
3:F:20:THR:HG22	3:F:74:THR:HG22	1.48	0.96
1:A:127:LYS:HD2	1:A:173:LEU:HB2	1.49	0.93
1:A:27:ALA:O	1:A:53:ARG:NH1	2.06	0.89

All (2) 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)
3:C:110:THR:OG1	3:F:77:SER:OG[1_545]	2.08	0.12
2:B:16:GLU:OE2	2:E:215:LYS:NZ[4_546]	2.16	0.04

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	308/327 (94%)	294 (96%)	14 (4%)	0	100	100
1	D	308/327 (94%)	294 (96%)	14 (4%)	0	100	100
2	B	211/227 (93%)	202 (96%)	9 (4%)	0	100	100
2	E	210/227 (92%)	198 (94%)	12 (6%)	0	100	100
3	C	211/215 (98%)	201 (95%)	10 (5%)	0	100	100
3	F	209/215 (97%)	199 (95%)	10 (5%)	0	100	100
All	All	1457/1538 (95%)	1388 (95%)	69 (5%)	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	268/282 (95%)	240 (90%)	28 (10%)	7	21
1	D	268/282 (95%)	243 (91%)	25 (9%)	9	26
2	B	183/195 (94%)	166 (91%)	17 (9%)	9	26
2	E	184/195 (94%)	169 (92%)	15 (8%)	11	33
3	C	182/186 (98%)	168 (92%)	14 (8%)	13	35
3	F	182/186 (98%)	168 (92%)	14 (8%)	13	35
All	All	1267/1326 (96%)	1154 (91%)	113 (9%)	9	28

5 of 113 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	C	189	LYS
3	F	177	SER
1	D	207	LYS
3	F	176	LEU
3	F	10	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 7 such sidechains are listed below:

Mol	Chain	Res	Type
2	E	208	ASN
3	F	42	GLN
3	F	101	GLN
3	F	90	HIS
1	D	294	HIS

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		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
4	NAG	G	1	2,4	14,14,15	0.74	1 (7%)	17,19,21	0.75	0
4	NAG	G	2	4	14,14,15	0.58	0	17,19,21	0.56	0
4	NAG	H	1	2,4	14,14,15	1.19	1 (7%)	17,19,21	0.80	0
4	NAG	H	2	4	14,14,15	0.45	0	17,19,21	0.52	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	NAG	G	1	2,4	-	2/6/23/26	0/1/1/1
4	NAG	G	2	4	-	2/6/23/26	0/1/1/1
4	NAG	H	1	2,4	-	2/6/23/26	0/1/1/1
4	NAG	H	2	4	-	2/6/23/26	0/1/1/1

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	H	1	NAG	O5-C1	4.28	1.50	1.43
4	G	1	NAG	O5-C1	2.52	1.47	1.43

There are no bond angle outliers.

There are no chirality outliers.

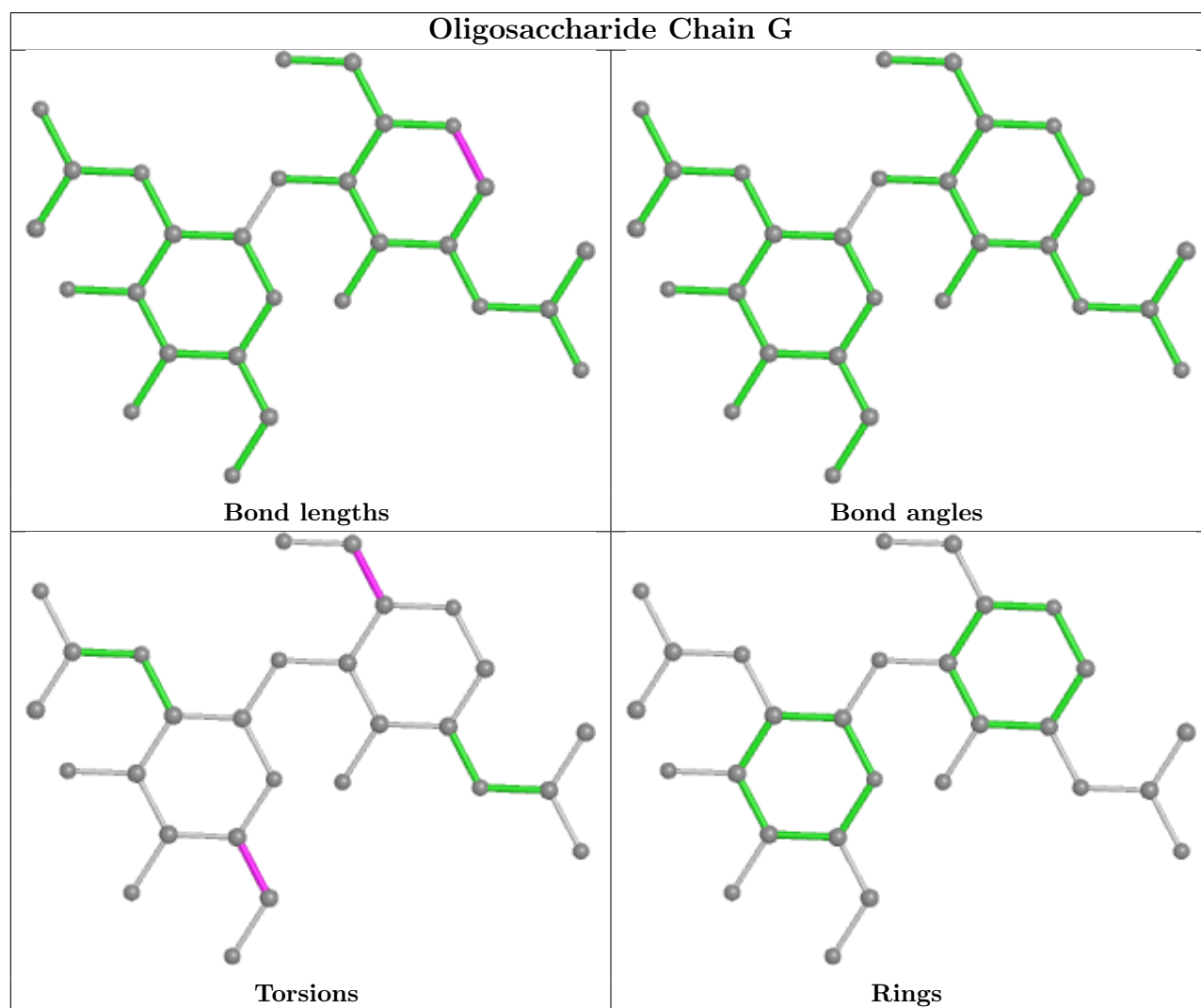
5 of 8 torsion outliers are listed below:

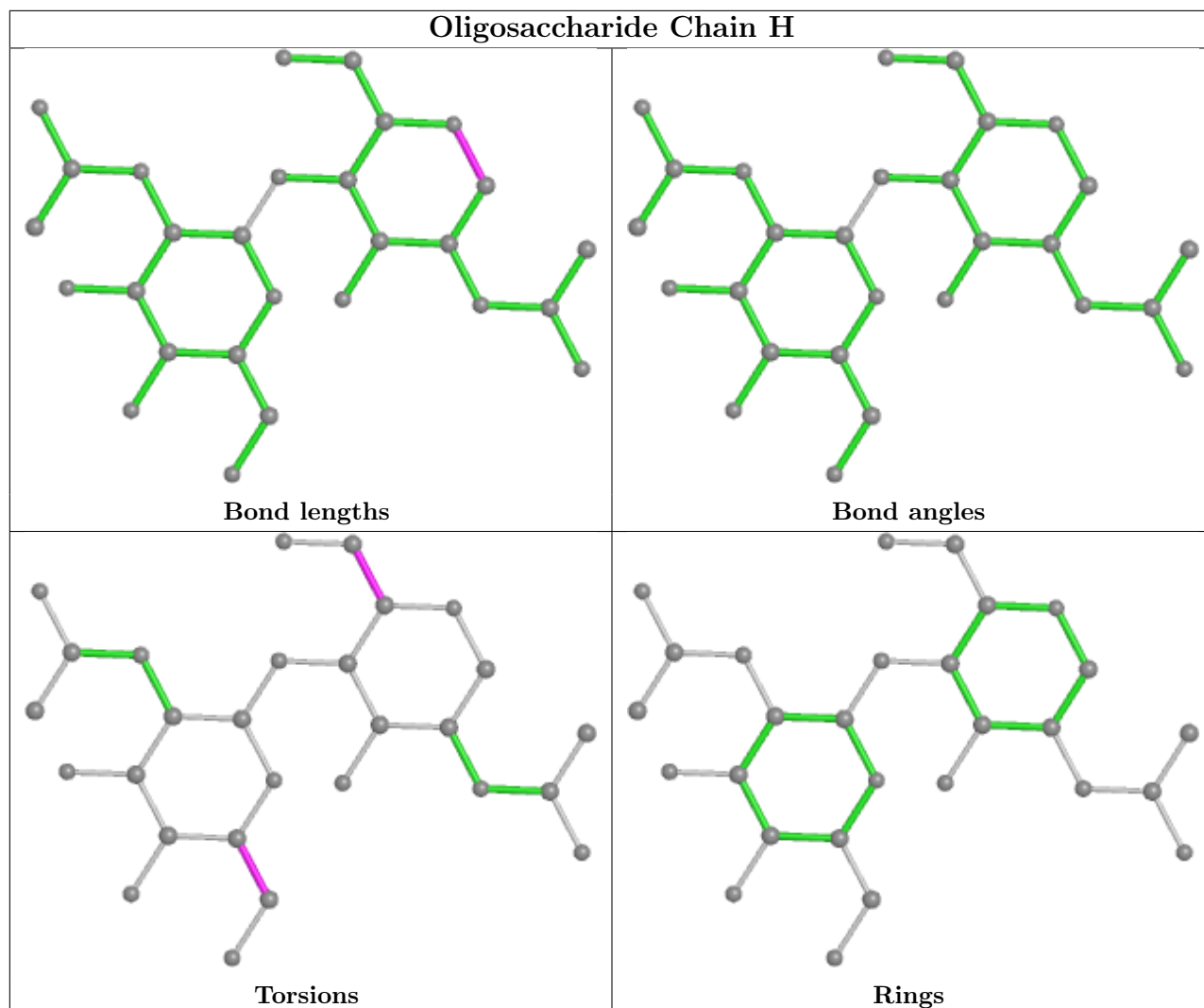
Mol	Chain	Res	Type	Atoms
4	H	1	NAG	O5-C5-C6-O6
4	G	2	NAG	O5-C5-C6-O6
4	G	1	NAG	O5-C5-C6-O6
4	G	2	NAG	C4-C5-C6-O6
4	H	1	NAG	C4-C5-C6-O6

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](#)

4 ligands 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
5	NAG	A	400	1	14,14,15	0.61	0	17,19,21	1.02	2 (11%)
5	NAG	D	401	1	14,14,15	0.58	0	17,19,21	0.86	1 (5%)
5	NAG	D	400	1	14,14,15	0.36	0	17,19,21	0.64	1 (5%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
5	NAG	A	401	1	14,14,15	0.63	1 (7%)	17,19,21	0.72	1 (5%)

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
5	NAG	A	400	1	-	4/6/23/26	0/1/1/1
5	NAG	D	401	1	-	2/6/23/26	0/1/1/1
5	NAG	D	400	1	-	2/6/23/26	0/1/1/1
5	NAG	A	401	1	-	2/6/23/26	0/1/1/1

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	A	401	NAG	C1-C2	2.23	1.55	1.52

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	A	400	NAG	C2-N2-C7	3.01	127.19	122.90
5	D	401	NAG	C1-O5-C5	2.74	115.91	112.19
5	A	401	NAG	C1-O5-C5	2.55	115.64	112.19
5	D	400	NAG	C1-O5-C5	2.25	115.25	112.19
5	A	400	NAG	C1-O5-C5	2.18	115.14	112.19

There are no chirality outliers.

5 of 10 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	A	400	NAG	C3-C2-N2-C7
5	D	401	NAG	C4-C5-C6-O6
5	A	401	NAG	C4-C5-C6-O6
5	D	401	NAG	O5-C5-C6-O6
5	A	401	NAG	O5-C5-C6-O6

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	A	400	NAG	1	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, 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	312/327 (95%)	0.02	3 (0%) 82 77	43, 61, 87, 141	0
1	D	312/327 (95%)	0.14	8 (2%) 56 46	44, 64, 93, 119	0
2	B	215/227 (94%)	-0.19	0 100 100	36, 49, 77, 106	0
2	E	214/227 (94%)	-0.14	1 (0%) 91 88	38, 50, 81, 109	0
3	C	213/215 (99%)	-0.23	1 (0%) 91 88	42, 53, 75, 112	0
3	F	211/215 (98%)	-0.16	1 (0%) 91 88	41, 54, 72, 84	0
All	All	1477/1538 (96%)	-0.07	14 (0%) 84 80	36, 56, 84, 141	0

The worst 5 of 14 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	319	GLY	3.5
1	A	217	GLU	3.1
1	D	199	GLN	3.1
1	D	212	VAL	2.5
1	D	42	LEU	2.5

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

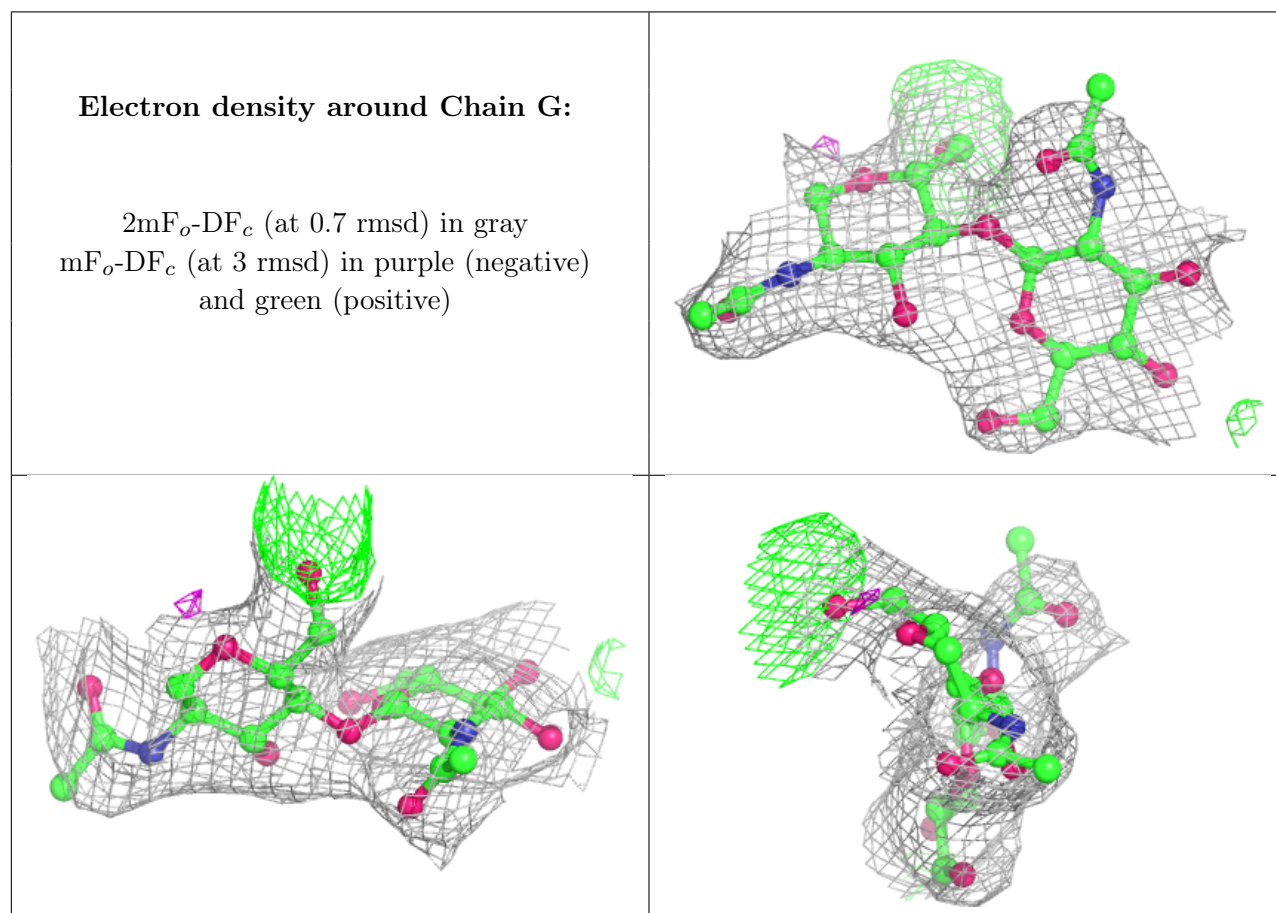
There are no non-standard protein/DNA/RNA residues in this entry.

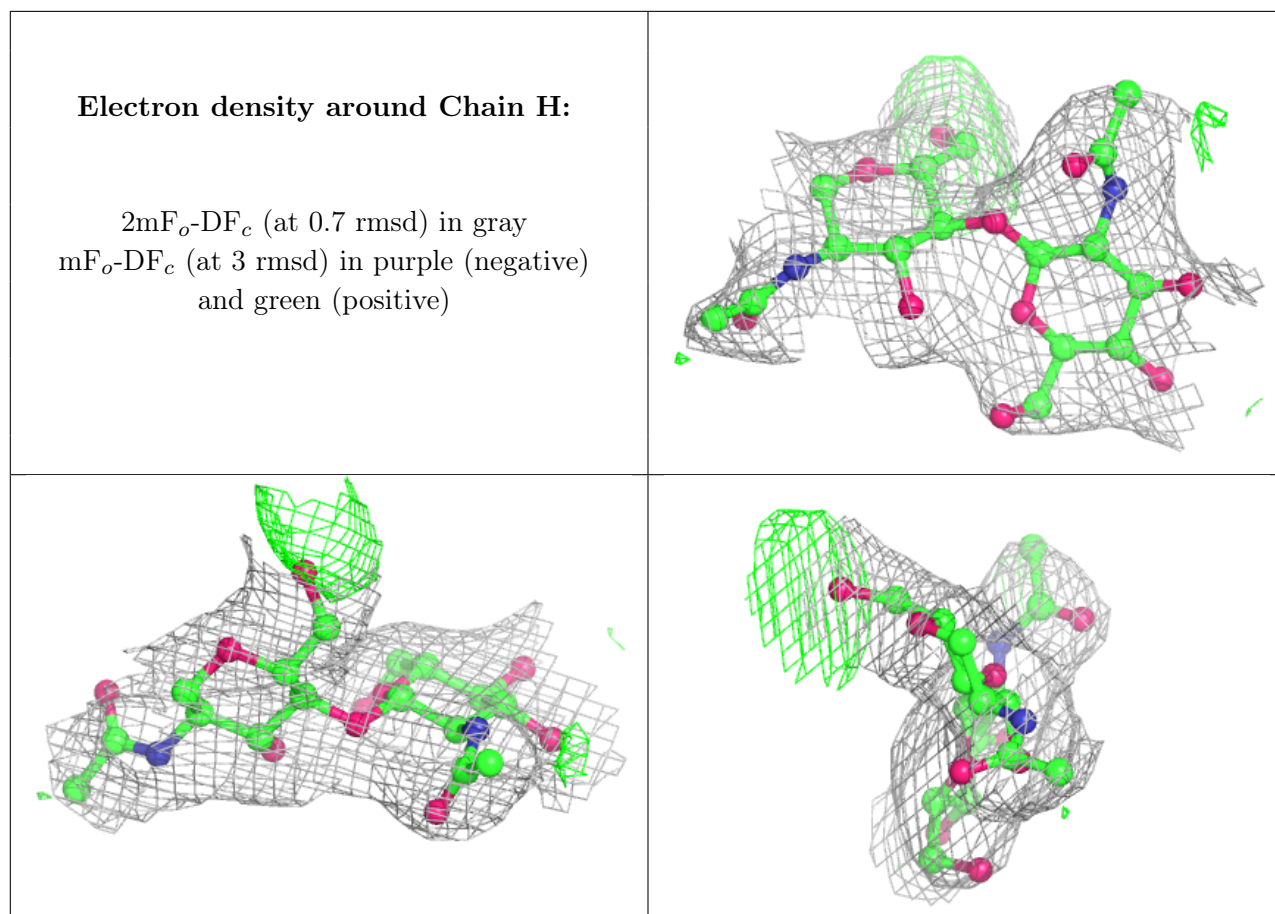
6.3 Carbohydrates [i](#)

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(\AA^2)	Q<0.9
4	NAG	G	1	14/15	0.68	0.20	58,68,72,74	0
4	NAG	H	1	14/15	0.73	0.20	63,80,86,90	0
4	NAG	H	2	14/15	0.88	0.14	85,89,92,93	0
4	NAG	G	2	14/15	0.90	0.18	69,76,80,81	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, 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
5	NAG	A	400	14/15	0.68	0.19	91,99,109,117	0
5	NAG	D	400	14/15	0.81	0.27	104,106,116,118	0
5	NAG	A	401	14/15	0.83	0.36	53,67,76,90	0
5	NAG	D	401	14/15	0.89	0.29	67,79,89,97	0

6.5 Other polymers [i](#)

There are no such residues in this entry.