wwPDB X-ray Structure Validation Summary Report (i)

Jun 16, 2024 – 10:39 PM EDT

PDB ID	:	3Q2W
Title	:	Crystal structure of mouse N-cadherin ectodomain
Authors	:	Jin, X.; Shapiro, L.
Deposited on	:	2010-12-20
Resolution	:	3.20 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 (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:

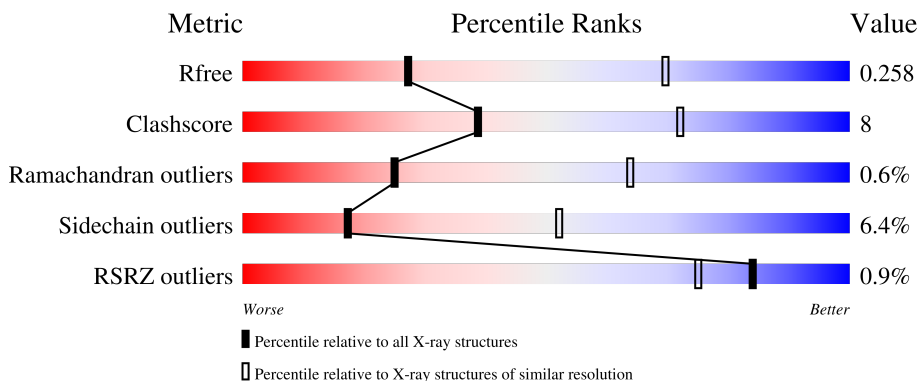|		
MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.20.1
EDS	:	2.37.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

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 3.20 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		0.258
Clashscore		8
Ramachandran outliers		0.6%
Sidechain outliers		6.4%
RSRZ outliers		0.9%

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}	130704	1133 (3.20-3.20)
Clashscore	141614	1253 (3.20-3.20)
Ramachandran outliers	138981	1234 (3.20-3.20)
Sidechain outliers	138945	1233 (3.20-3.20)
RSRZ outliers	127900	1095 (3.20-3.20)

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	559	77% 18% · ·
2	B	2	50% 50%
2	C	2	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
2	NAG	C	1	X	-	-	-
4	MAN	A	701	X	-	-	-
4	MAN	A	702	X	-	-	-
4	MAN	A	706	X	-	-	-
4	MAN	A	709	X	-	-	-
5	NAG	A	801	X	-	-	-
5	NAG	A	804	X	-	-	-
5	NAG	A	807	X	-	-	-

2 Entry composition ⓘ

There are 6 unique types of molecules in this entry. The entry contains 4451 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 Cadherin-2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	541	Total 4181	C 2630	N 715	O 824	S 12	0	1	0

There are 9 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	406	ASN	TYR	conflict	UNP P15116
A	408	LYS	GLN	conflict	UNP P15116
A	465	THR	ALA	conflict	UNP P15116
A	554	HIS	-	expression tag	UNP P15116
A	555	HIS	-	expression tag	UNP P15116
A	556	HIS	-	expression tag	UNP P15116
A	557	HIS	-	expression tag	UNP P15116
A	558	HIS	-	expression tag	UNP P15116
A	559	HIS	-	expression tag	UNP P15116

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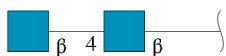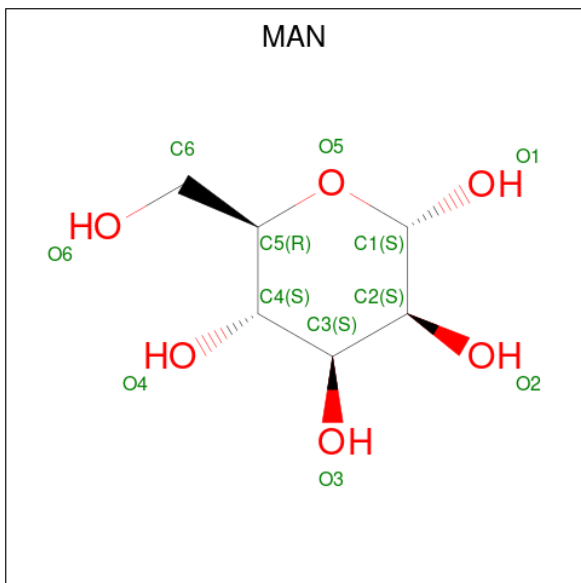

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
2	B	2	Total 28	C 16	N 2	O 10	0	0	0
2	C	2	Total 28	C 16	N 2	O 10	0	0	0

- Molecule 3 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	12	Total 12	Ca 12	0	0

- Molecule 4 is alpha-D-mannopyranose (three-letter code: MAN) (formula: $C_6H_{12}O_6$).

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	A	1	Total 11	C 6	O 5	0	0
4	A	1	Total 11	C 6	O 5	0	0
4	A	1	Total 11	C 6	O 5	0	0
4	A	1	Total 11	C 6	O 5	0	0
4	A	1	Total 11	C 6	O 5	0	0
4	A	1	Total 11	C 6	O 5	0	0
4	A	1	Total 11	C 6	O 5	0	0
4	A	1	Total 11	C 6	O 5	0	0
4	A	1	Total 11	C 6	O 5	0	0
4	A	1	Total 11	C 6	O 5	0	0

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

NAG

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

• Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	61	Total 61	O 61	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.
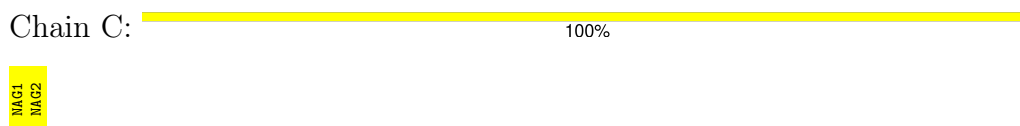
● Molecule 1: Cadherin-2
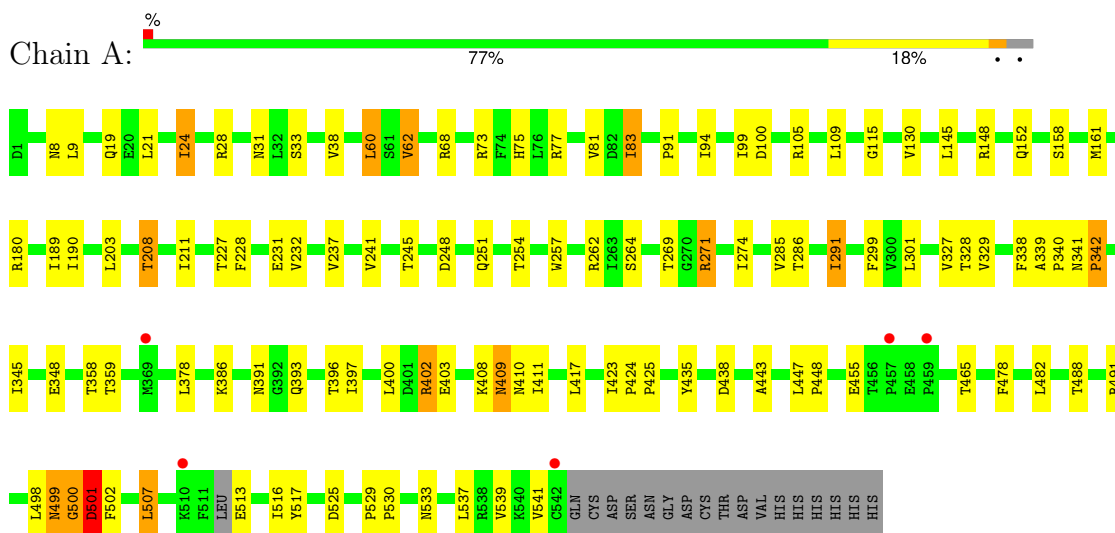
● Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

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

4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	91.37Å 111.65Å 262.11Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	19.95 – 3.20 29.31 – 3.11	Depositor EDS
% Data completeness (in resolution range)	89.9 (19.95-3.20) 88.0 (29.31-3.11)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	3.81 (at 3.11Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.6_289)	Depositor
R, R_{free}	0.230 , 0.267 0.226 , 0.258	Depositor DCC
R_{free} test set	1098 reflections (5.09%)	wwPDB-VP
Wilson B-factor (Å^2)	42.4	Xtriage
Anisotropy	0.678	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.25 , 26.6	EDS
L-test for twinning[2]	$< |L| > = 0.47, < L^2 > = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.89	EDS
Total number of atoms	4451	wwPDB-VP
Average B, all atoms (Å^2)	61.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.47% 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 ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: NAG, CA, MAN

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	0.34	0/4275	0.57	2/5866 (0.0%)

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	A	501	ASP	N-CA-CB	-11.10	90.62	110.60
1	A	501	ASP	N-CA-C	8.53	134.03	111.00

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	A	4181	0	4091	65	0
2	B	28	0	25	0	0
2	C	28	0	25	0	0
3	A	12	0	0	0	0
4	A	99	0	90	0	0
5	A	42	0	39	0	0
6	A	61	0	0	0	0
All	All	4451	0	4270	65	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.

The worst 5 of 65 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:251:GLN:O	1:A:254:THR:HG22	1.63	0.97
1:A:501:ASP:OD2	1:A:502:PHE:HD2	1.59	0.83
1:A:499:ASN:HD21	1:A:502:PHE:HB2	1.50	0.77
1:A:499:ASN:HD22	1:A:499:ASN:H	1.31	0.77
1:A:339:ALA:HB3	1:A:340:PRO:HD3	1.66	0.76

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	538/559 (96%)	491 (91%)	44 (8%)	3 (1%)	25	64

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	501	ASP
1	A	500	GLY
1	A	342	PRO

5.3.2 Protein sidechains ⓘ

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	472/491 (96%)	442 (94%)	30 (6%)	17	52

5 of 30 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	269	THR
1	A	499	ASN
1	A	291	ILE
1	A	516	ILE
1	A	409	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 14 such sidechains are listed below:

Mol	Chain	Res	Type
1	A	442	ASN
1	A	460	ASN
1	A	533	ASN
1	A	499	ASN
1	A	504	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 ⓘ

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	$\#\|Z\| > 2$
2	NAG	B	1	1,2	14,14,15	0.59	0	17,19,21	0.82	0
2	NAG	B	2	2	14,14,15	0.60	0	17,19,21	0.95	1 (5%)
2	NAG	C	1	1,2	14,14,15	0.47	0	17,19,21	1.49	3 (17%)
2	NAG	C	2	2	14,14,15	0.53	0	17,19,21	1.08	2 (11%)

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	B	1	1,2	-	2/6/23/26	0/1/1/1
2	NAG	B	2	2	-	4/6/23/26	0/1/1/1
2	NAG	C	1	1,2	1/1/5/7	6/6/23/26	0/1/1/1
2	NAG	C	2	2	-	4/6/23/26	0/1/1/1

There are no bond length outliers.

The worst 5 of 6 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	C	1	NAG	C1-O5-C5	4.95	118.82	112.19
2	B	2	NAG	C1-O5-C5	2.88	116.05	112.19
2	C	2	NAG	C1-O5-C5	2.87	116.03	112.19
2	C	1	NAG	C2-N2-C7	2.32	126.02	122.90
2	C	2	NAG	C4-C3-C2	2.14	114.15	111.02

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
2	C	1	NAG	C1

5 of 16 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	B	1	NAG	C8-C7-N2-C2
2	B	1	NAG	O7-C7-N2-C2
2	B	2	NAG	C8-C7-N2-C2
2	B	2	NAG	O7-C7-N2-C2
2	C	1	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.

Oligosaccharide Chain B

Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain C

Bond lengths

Bond angles

Torsions

Rings
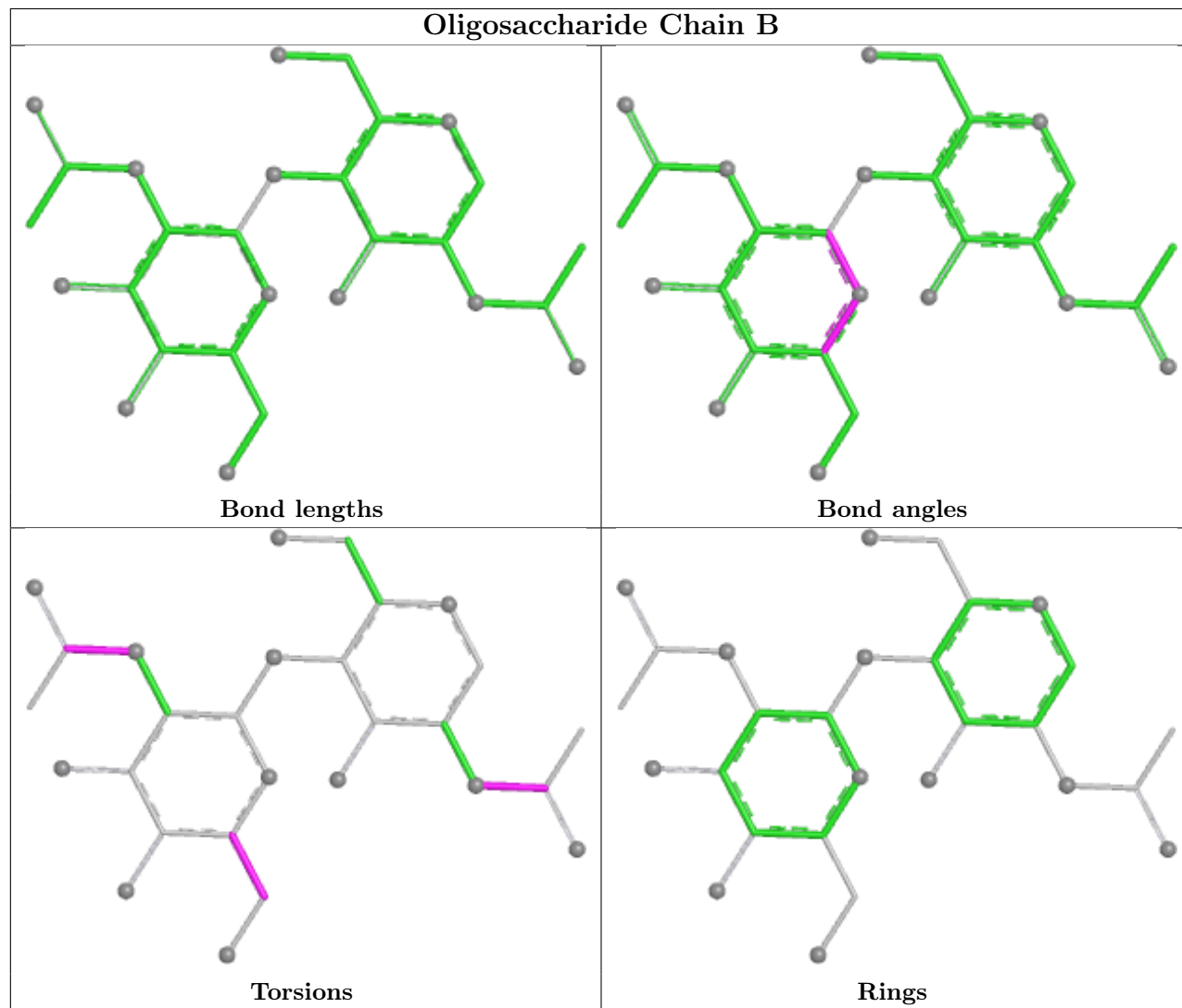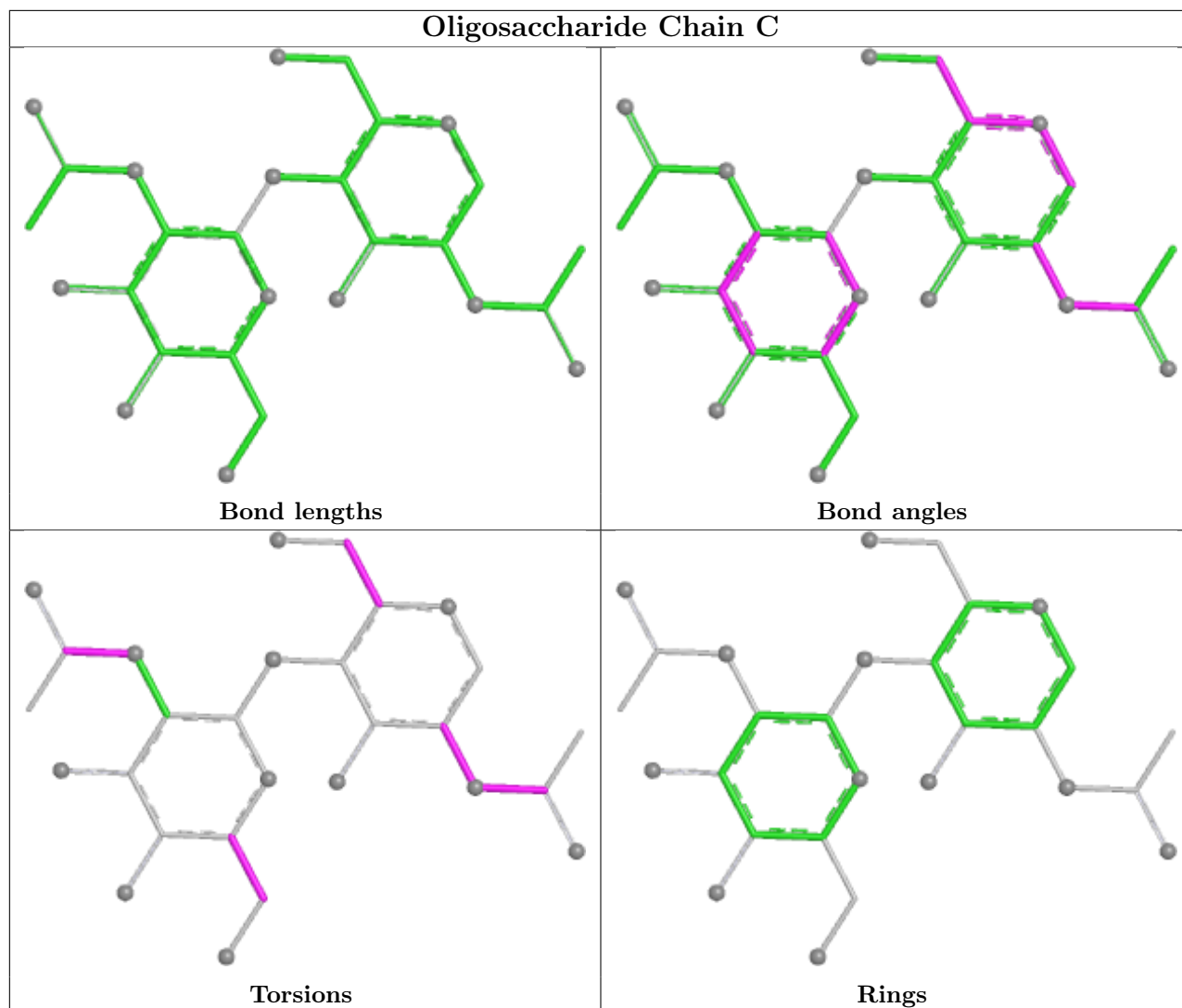
5.6 Ligand geometry ⓘ

Of 24 ligands modelled in this entry, 12 are monoatomic - leaving 12 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	#$|Z| > 2$
4	MAN	A	702	1	11,11,12	0.45	0	15,15,17	2.31	4 (26%)
5	NAG	A	801	1	14,14,15	0.60	0	17,19,21	1.41	2 (11%)
4	MAN	A	708	1	11,11,12	0.58	0	15,15,17	0.98	1 (6%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
5	NAG	A	807	1	14,14,15	0.43	0	17,19,21	1.13	1 (5%)
4	MAN	A	707	1	11,11,12	0.62	0	15,15,17	0.68	0
4	MAN	A	701	1	11,11,12	0.71	0	15,15,17	1.06	1 (6%)
4	MAN	A	709	1	11,11,12	0.61	0	15,15,17	0.64	0
4	MAN	A	703	1	11,11,12	0.68	0	15,15,17	1.44	3 (20%)
4	MAN	A	710	1	11,11,12	0.90	1 (9%)	15,15,17	1.30	1 (6%)
5	NAG	A	804	1	14,14,15	0.47	0	17,19,21	1.21	2 (11%)
4	MAN	A	706	1	11,11,12	0.59	0	15,15,17	0.57	0
4	MAN	A	705	1	11,11,12	0.72	0	15,15,17	1.57	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	MAN	A	702	1	1/1/4/5	2/2/19/22	0/1/1/1
5	NAG	A	801	1	1/1/5/7	4/6/23/26	0/1/1/1
5	NAG	A	807	1	1/1/5/7	4/6/23/26	0/1/1/1
4	MAN	A	708	1	-	0/2/19/22	0/1/1/1
4	MAN	A	707	1	-	2/2/19/22	0/1/1/1
4	MAN	A	701	1	1/1/4/5	0/2/19/22	0/1/1/1
4	MAN	A	709	1	1/1/4/5	2/2/19/22	0/1/1/1
4	MAN	A	703	1	-	1/2/19/22	0/1/1/1
4	MAN	A	710	1	-	0/2/19/22	0/1/1/1
5	NAG	A	804	1	1/1/5/7	4/6/23/26	0/1/1/1
4	MAN	A	706	1	1/1/4/5	2/2/19/22	0/1/1/1
4	MAN	A	705	1	-	2/2/19/22	0/1/1/1

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	710	MAN	O6-C6	2.36	1.52	1.42

The worst 5 of 17 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	A	702	MAN	C1-O5-C5	7.74	122.56	112.19
5	A	801	NAG	O5-C1-C2	-4.23	104.75	111.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	A	705	MAN	C3-C4-C5	3.98	117.45	110.23
4	A	710	MAN	C1-O5-C5	3.85	117.34	112.19
5	A	807	NAG	C1-O5-C5	3.71	117.15	112.19

5 of 7 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
4	A	701	MAN	C1
4	A	702	MAN	C1
4	A	706	MAN	C1
4	A	709	MAN	C1
5	A	801	NAG	C1

5 of 23 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	A	801	NAG	C8-C7-N2-C2
5	A	801	NAG	O7-C7-N2-C2
5	A	807	NAG	C8-C7-N2-C2
5	A	807	NAG	O7-C7-N2-C2
4	A	706	MAN	O5-C5-C6-O6

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	541/559 (96%)	-0.37	5 (0%)	84	75	10, 53, 120, 159	0

All (5) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	542	CYS	2.8
1	A	459	PRO	2.7
1	A	369	MET	2.1
1	A	510	LYS	2.1
1	A	457	PRO	2.0

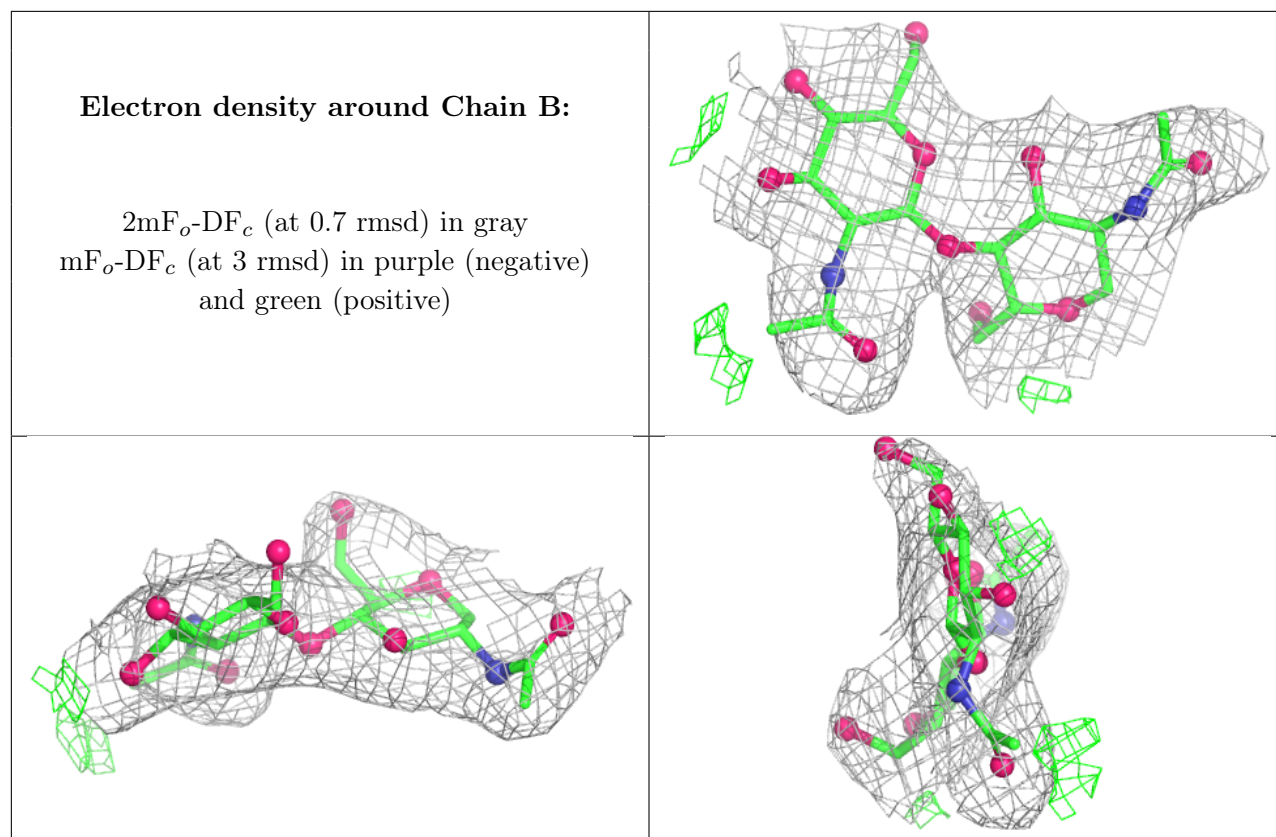## 6.2 Non-standard residues in protein, DNA, RNA chains ⓘ

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

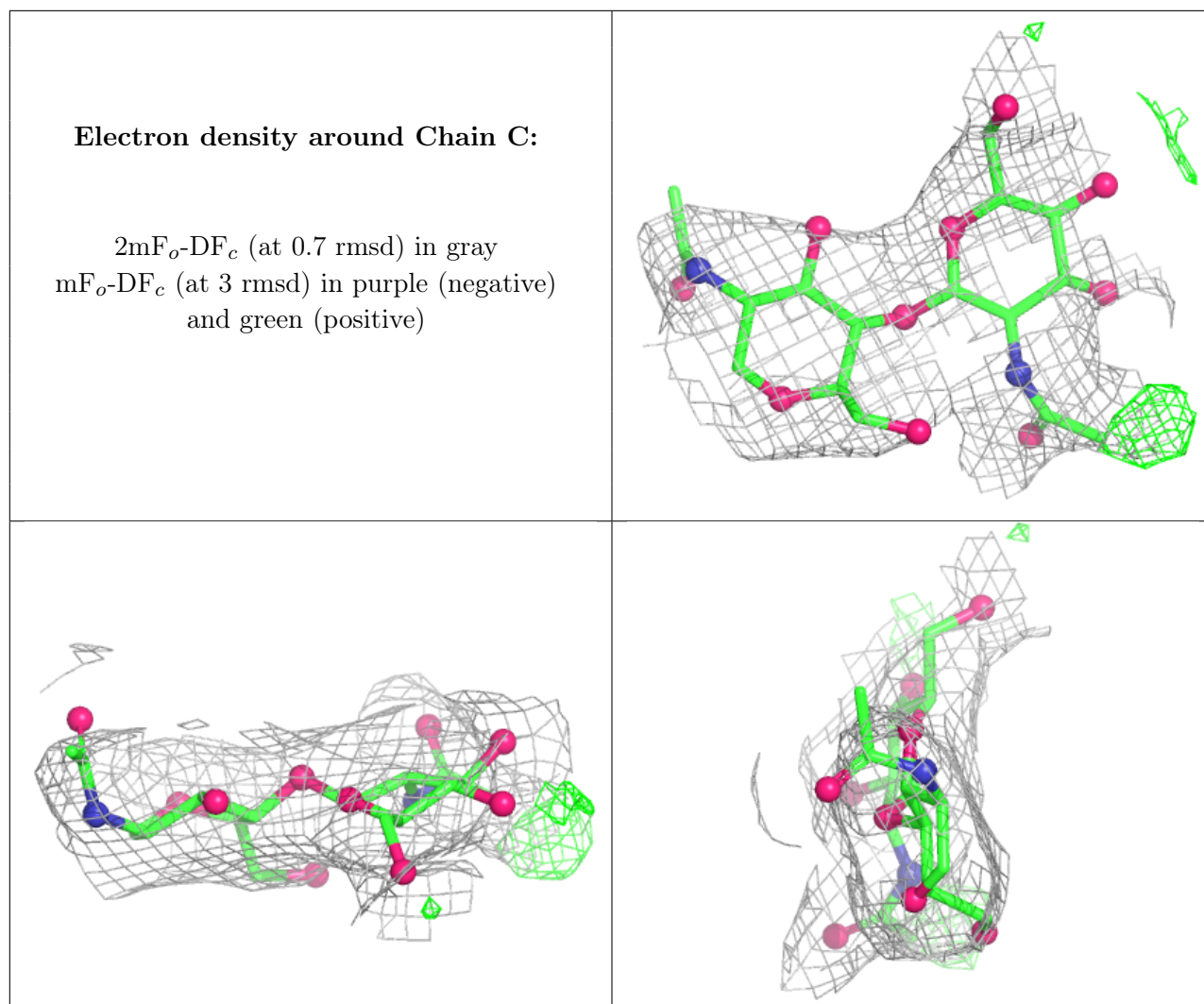## 6.3 Carbohydrates ⓘ

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
2	NAG	C	2	14/15	0.76	0.26	91,115,130,133	0
2	NAG	B	2	14/15	0.86	0.26	42,64,80,81	0
2	NAG	C	1	14/15	0.90	0.22	93,105,107,113	0
2	NAG	B	1	14/15	0.92	0.15	36,43,52,60	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 B:

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

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)

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
4	MAN	A	709	11/12	0.77	0.33	118,128,140,147	0
5	NAG	A	801	14/15	0.84	0.28	53,74,82,86	0
5	NAG	A	804	14/15	0.85	0.33	87,101,106,107	0
3	CA	A	609	1/1	0.87	0.07	90,90,90,90	0
4	MAN	A	710	11/12	0.87	0.34	100,108,125,125	0
4	MAN	A	706	11/12	0.87	0.17	56,83,95,98	0
4	MAN	A	707	11/12	0.87	0.27	71,78,87,88	0
4	MAN	A	703	11/12	0.88	0.28	54,64,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å²)	Q<0.9
4	MAN	A	708	11/12	0.90	0.17	100,103,107,113	0
5	NAG	A	807	14/15	0.91	0.23	77,81,88,89	0
4	MAN	A	705	11/12	0.92	0.10	56,73,80,81	0
3	CA	A	607	1/1	0.93	0.07	59,59,59,59	0
4	MAN	A	701	11/12	0.95	0.14	38,45,54,61	0
4	MAN	A	702	11/12	0.95	0.17	36,40,55,56	0
3	CA	A	612	1/1	0.95	0.04	62,62,62,62	0
3	CA	A	610	1/1	0.96	0.10	68,68,68,68	0
3	CA	A	608	1/1	0.97	0.11	49,49,49,49	0
3	CA	A	605	1/1	0.97	0.10	29,29,29,29	0
3	CA	A	606	1/1	0.98	0.12	34,34,34,34	0
3	CA	A	603	1/1	0.98	0.07	21,21,21,21	0
3	CA	A	611	1/1	0.98	0.05	65,65,65,65	0
3	CA	A	601	1/1	0.98	0.10	26,26,26,26	0
3	CA	A	602	1/1	0.99	0.08	14,14,14,14	0
3	CA	A	604	1/1	0.99	0.13	14,14,14,14	0

6.5 Other polymers ⓘ

There are no such residues in this entry.