Full wwPDB X-ray Structure Validation Report ⓘ

Aug 30, 2023 – 12:15 AM EDT

PDB ID	:	3MME
Title	:	Structure and functional dissection of PG16, an antibody with broad and potent neutralization of HIV-1
Authors	:	Pancera, M.; McLellan, J.; Zhou, T.; Zhu, J.; Kwong, P.
Deposited on	:	2010-04-19
Resolution	:	3.97 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:

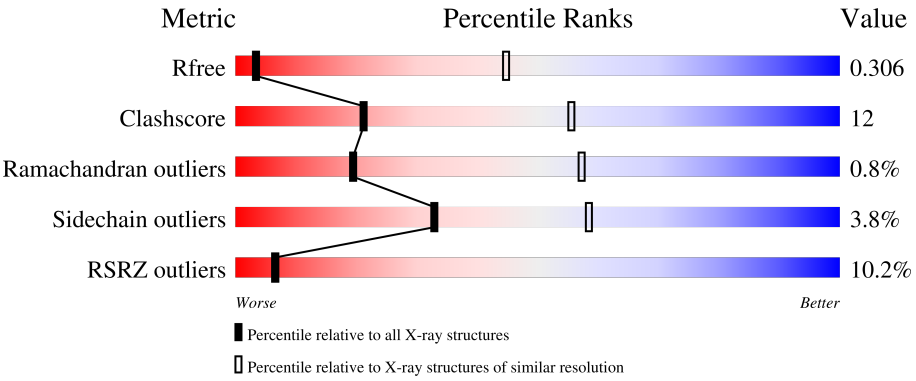
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.35
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35

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 3.97 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	1039 (4.26-3.70)
Clashscore	141614	1099 (4.26-3.70)
Ramachandran outliers	138981	1061 (4.26-3.70)
Sidechain outliers	138945	1053 (4.26-3.70)
RSRZ outliers	127900	1021 (4.30-3.66)

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	238	5% 77% 19%
1	C	238	16% 68% 25% 7%
1	H	238	8% 71% 25%
2	B	216	4% 70% 25%
2	D	216	26% 76% 20%

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Mol	Chain	Length	Quality of chain
2	L	216	69% 28%
3	E	3	33% 67%
4	F	2	50% 50%

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	NAG	F	1	-	-	X	-

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 10040 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.

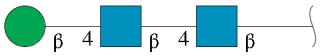
- Molecule 1 is a protein called PG16 HEAVY CHAIN FAB.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	H	235	Total	C	N	O	S	0	0	0
			1802	1143	304	346	9			
1	A	235	Total	C	N	O	S	0	0	0
			1802	1143	304	346	9			
1	C	222	Total	C	N	O	S	0	0	0
			1684	1066	287	322	9			

- Molecule 2 is a protein called PG16 LIGHT CHAIN FAB.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	L	211	Total	C	N	O	S	0	0	0
			1557	969	264	319	5			
2	B	211	Total	C	N	O	S	0	0	0
			1557	969	264	319	5			
2	D	211	Total	C	N	O	S	0	0	0
			1557	969	264	319	5			

- 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.

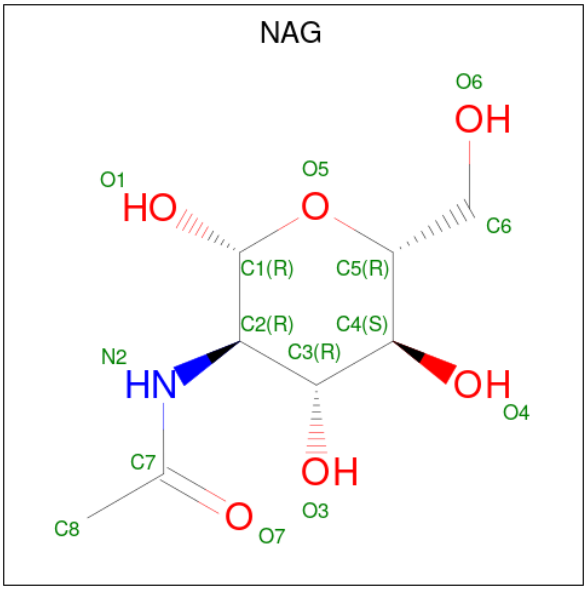


Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
3	E	3	Total	C	N	O	0	0	0
			39	22	2	15			

- 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
4	F	2	Total C N O 28 16 2 10	0	0	0

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

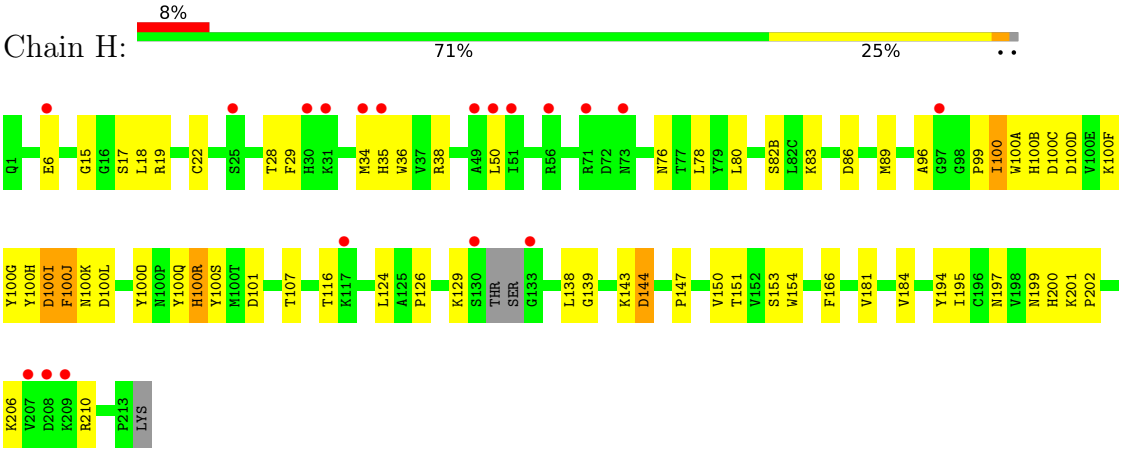


Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	B	1	Total C N O 14 8 1 5	0	0

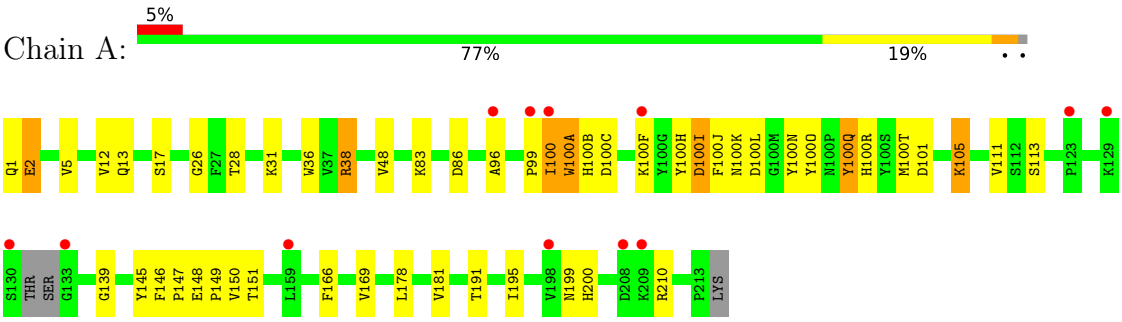
3 Residue-property plots (i)

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.

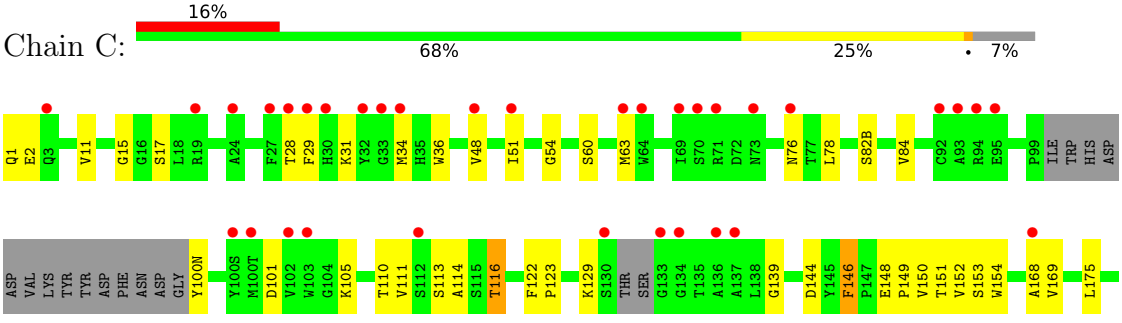
• Molecule 1: PG16 HEAVY CHAIN FAB

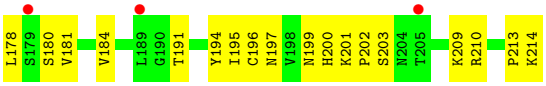


• Molecule 1: PG16 HEAVY CHAIN FAB



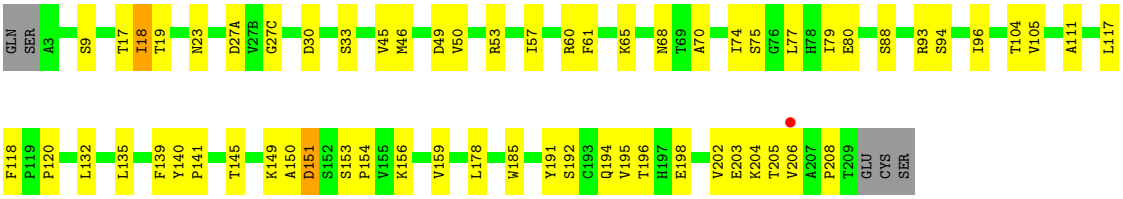
• Molecule 1: PG16 HEAVY CHAIN FAB





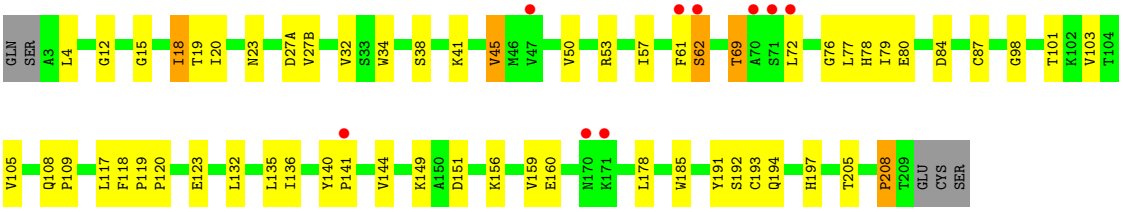
• Molecule 2: PG16 LIGHT CHAIN FAB

Chain L:



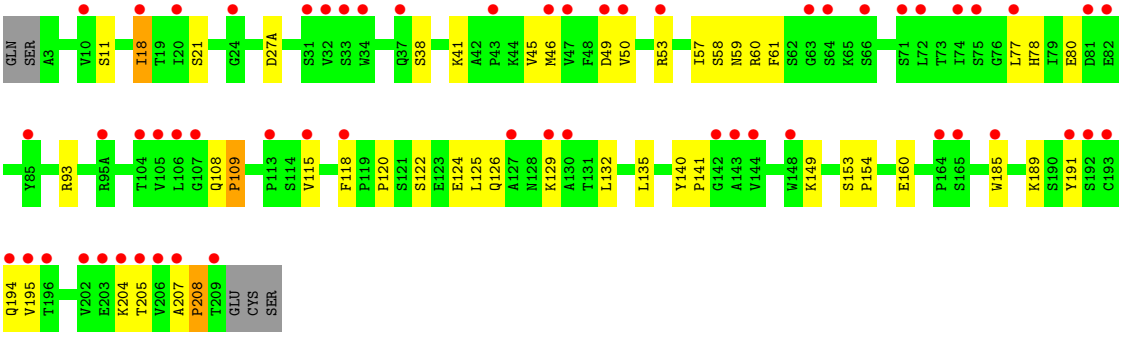
• Molecule 2: PG16 LIGHT CHAIN FAB

Chain B:



• Molecule 2: PG16 LIGHT CHAIN FAB

Chain D:



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

Chain E:

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

Chain F:

4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 2 2 2	Depositor
Cell constants a, b, c, α, β, γ	191.96Å 230.80Å 82.10Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.45 – 3.97 49.45 – 3.97	Depositor EDS
% Data completeness (in resolution range)	91.1 (49.45-3.97) 91.2 (49.45-3.97)	Depositor EDS
R_{merge}	0.24	Depositor
R_{sym}	0.20	Depositor
$< I/\sigma(I) >$ [1]	1.73 (at 4.00Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.5_2)	Depositor
R, R_{free}	0.256 , 0.317 0.242 , 0.306	Depositor DCC
R_{free} test set	739 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å^2)	112.9	Xtriage
Anisotropy	0.270	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.32 , 138.4	EDS
L-test for twinning[2]	$< \|L\| > = 0.46$, $< L^2 > = 0.28$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.86	EDS
Total number of atoms	10040	wwPDB-VP
Average B, all atoms (Å^2)	176.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.75% of the height of the origin peak. No significant pseudotranslation is detected.*

[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: BMA, 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	0.28	0/1852	0.44	0/2517
1	C	0.25	0/1727	0.43	0/2343
1	H	0.28	0/1852	0.44	0/2517
2	B	0.27	0/1594	0.44	0/2171
2	D	0.27	0/1594	0.43	0/2171
2	L	0.26	0/1594	0.45	0/2171
All	All	0.27	0/10213	0.44	0/13890

There are no bond length outliers.

There are no bond angle outliers.

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	1802	0	1730	46	0
1	C	1684	0	1640	41	0
1	H	1802	0	1730	48	0
2	B	1557	0	1507	38	0
2	D	1557	0	1507	40	0
2	L	1557	0	1507	42	0
3	E	39	0	34	8	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	F	28	0	25	8	0
5	B	14	0	13	1	0
All	All	10040	0	9693	238	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 (238) 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:L:104:THR:HG21	2:L:141:PRO:HB3	1.46	0.97
1:H:181:VAL:HG11	2:L:135:LEU:HD13	1.53	0.90
2:D:38:SER:HB2	2:D:41:LYS:HD2	1.53	0.88
1:A:1:GLN:HG3	1:A:2:GLU:H	1.39	0.88
1:H:116:THR:HG22	1:H:147:PRO:HD3	1.58	0.83
1:A:1:GLN:HG3	1:A:2:GLU:HG2	1.61	0.81
1:H:195:ILE:HG12	1:H:210:ARG:HG2	1.63	0.80
1:C:181:VAL:HG11	2:D:135:LEU:HD13	1.63	0.80
2:D:21:SER:CB	4:F:1:NAG:HN2	1.96	0.78
1:H:150:VAL:HG22	1:H:200:HIS:HD2	1.50	0.77
2:L:18:ILE:HD12	2:L:77:LEU:HD11	1.69	0.75
1:A:100(I):ASP:HA	1:A:100(O):TYR:CZ	2.22	0.74
3:E:2:NAG:H3	3:E:3:BMA:H2	1.71	0.72
1:H:101:ASP:HA	2:L:45:VAL:HG21	1.74	0.69
1:A:101:ASP:HA	2:B:45:VAL:HG21	1.72	0.69
1:C:213:PRO:CB	1:C:214:LYS:HG3	2.22	0.69
2:D:21:SER:OG	4:F:1:NAG:N2	2.27	0.68
2:D:21:SER:CB	4:F:1:NAG:N2	2.57	0.67
1:A:100(A):TRP:HB3	1:A:100(F):LYS:HG2	1.77	0.66
2:L:156:LYS:NZ	2:D:189:LYS:HG3	2.10	0.66
1:A:169:VAL:HG21	2:B:160:GLU:HB3	1.78	0.66
2:D:21:SER:HB2	4:F:1:NAG:HN2	1.62	0.65
2:B:38:SER:HB2	2:B:41:LYS:HD2	1.77	0.65
2:D:21:SER:CB	4:F:1:NAG:C7	2.75	0.64
1:H:100(J):PHE:O	1:H:100(K):ASN:HB2	1.96	0.64
1:C:116:THR:HG22	1:C:203:SER:HB3	1.79	0.64
1:C:15:GLY:HA2	1:C:82(B):SER:HA	1.80	0.64
1:H:150:VAL:HG22	1:H:200:HIS:CD2	2.31	0.63
1:A:139:GLY:HA3	1:A:181:VAL:HG12	1.80	0.63
1:C:101:ASP:HA	2:D:45:VAL:HG21	1.81	0.62
1:A:195:ILE:HG12	1:A:210:ARG:HG2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1:GLN:HG2	1:C:2:GLU:H	1.64	0.61
2:L:77:LEU:HD13	2:L:105:VAL:HG22	1.81	0.61
1:H:6:GLU:HG3	1:H:107:THR:HB	1.83	0.61
1:H:153:SER:OG	1:H:197:ASN:HB2	2.00	0.61
2:D:53:ARG:HD3	2:D:61:PHE:O	2.02	0.60
1:H:184:VAL:HG11	1:H:194:TYR:CE1	2.36	0.60
2:B:144:VAL:HG12	2:B:197:HIS:HB2	1.83	0.60
2:L:117:LEU:HG	2:L:206:VAL:HG13	1.83	0.59
1:C:36:TRP:O	1:C:48:VAL:HB	2.03	0.59
1:C:144:ASP:HA	1:C:175:LEU:HB3	1.84	0.59
1:C:181:VAL:HG11	2:D:135:LEU:CD1	2.31	0.59
2:B:53:ARG:HD3	2:B:61:PHE:O	2.03	0.58
2:D:21:SER:HB3	4:F:1:NAG:C7	2.33	0.58
2:L:159:VAL:HG22	2:L:178:LEU:HD13	1.85	0.58
1:H:151:THR:OG1	1:H:199:ASN:HB3	2.04	0.57
1:A:96:ALA:O	1:A:100(Q):TYR:HB2	2.03	0.57
1:A:151:THR:OG1	1:A:199:ASN:HB3	2.04	0.57
1:A:100(A):TRP:HD1	1:A:100(A):TRP:H	1.53	0.57
2:D:21:SER:OG	4:F:1:NAG:C7	2.53	0.56
1:H:36:TRP:CE2	1:H:80:LEU:HB2	2.40	0.56
1:H:100(K):ASN:O	1:H:100(L):ASP:HB2	2.05	0.56
1:H:126:PRO:HG3	1:H:138:LEU:HD23	1.87	0.56
1:C:34:MET:HB3	1:C:78:LEU:HD22	1.86	0.56
1:C:213:PRO:HB2	1:C:214:LYS:HG3	1.87	0.56
2:L:53:ARG:HD3	2:L:61:PHE:O	2.06	0.55
1:C:84:VAL:HA	1:C:111:VAL:HG13	1.87	0.55
1:C:123:PRO:HG3	1:C:209:LYS:HD2	1.89	0.55
1:A:150:VAL:HG22	1:A:200:HIS:HD2	1.72	0.55
2:L:145:THR:HB	2:L:196:THR:HB	1.88	0.55
1:H:38:ARG:HA	1:H:89:MET:O	2.06	0.54
1:C:184:VAL:HG11	1:C:194:TYR:CE1	2.42	0.54
1:H:6:GLU:HG2	1:H:107:THR:H	1.72	0.54
1:A:12:VAL:HG23	1:A:111:VAL:HG22	1.89	0.54
1:A:150:VAL:HG22	1:A:200:HIS:CD2	2.44	0.53
1:C:213:PRO:HB3	1:C:214:LYS:HG3	1.90	0.53
1:A:99:PRO:HG3	1:A:100(H):TYR:CE1	2.43	0.53
2:B:18:ILE:HD12	2:B:77:LEU:HD11	1.91	0.53
2:B:120:PRO:HD3	2:B:132:LEU:CD2	2.39	0.53
2:B:156:LYS:H	2:D:93:ARG:HH12	1.57	0.53
1:A:36:TRP:O	1:A:48:VAL:HB	2.09	0.53
2:B:4:LEU:HB2	2:B:98:GLY:HA2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:200:HIS:CE1	1:C:202:PRO:HB2	2.44	0.53
1:H:18:LEU:HD12	1:H:19:ARG:H	1.74	0.53
2:L:140:TYR:HA	2:L:141:PRO:C	2.29	0.53
1:A:166:PHE:CE1	2:B:135:LEU:HD22	2.44	0.52
2:B:149:LYS:HB2	2:B:192:SER:HB2	1.92	0.52
1:H:15:GLY:HA2	1:H:82(B):SER:HA	1.92	0.52
1:C:150:VAL:HG22	1:C:200:HIS:HD2	1.74	0.52
2:L:120:PRO:HD3	2:L:132:LEU:CD2	2.39	0.52
1:C:150:VAL:HG22	1:C:200:HIS:CD2	2.44	0.52
2:L:17:THR:HG23	2:L:75:SER:HA	1.90	0.52
1:A:100(A):TRP:CB	1:A:100(F):LYS:HG2	2.39	0.52
1:C:195:ILE:HG12	1:C:210:ARG:HG2	1.91	0.52
1:H:166:PHE:CE1	2:L:135:LEU:HD22	2.45	0.52
1:H:34:MET:HB3	1:H:78:LEU:HD22	1.90	0.52
1:H:100:ILE:HD13	1:H:100(A):TRP:N	2.25	0.51
1:H:100(I):ASP:HB3	1:H:100(O):TYR:HE1	1.75	0.51
2:B:18:ILE:HG23	2:B:19:THR:N	2.26	0.51
1:C:169:VAL:HG21	2:D:160:GLU:HB3	1.93	0.51
2:L:104:THR:HG21	2:L:141:PRO:CB	2.29	0.51
2:L:149:LYS:HB2	2:L:192:SER:HB2	1.93	0.51
2:D:118:PHE:HE2	2:D:135:LEU:HD12	1.74	0.51
1:C:148:GLU:HB3	1:C:149:PRO:HA	1.92	0.51
1:H:199:ASN:ND2	1:H:206:LYS:HE2	2.25	0.50
1:H:143:LYS:O	1:H:144:ASP:HB2	2.11	0.50
2:L:46:MET:HA	2:L:57:ILE:HD13	1.93	0.50
1:A:100(I):ASP:HA	1:A:100(O):TYR:CE1	2.45	0.50
1:A:38:ARG:HH12	1:A:86:ASP:HA	1.77	0.50
2:B:159:VAL:HG22	2:B:178:LEU:HD13	1.92	0.50
2:D:58:SER:OG	2:D:60:ARG:HG3	2.12	0.49
1:A:5:VAL:HG23	1:A:5:VAL:O	2.12	0.49
1:C:153:SER:OG	1:C:197:ASN:HB2	2.12	0.49
1:A:100(J):PHE:O	1:A:100(K):ASN:HB2	2.13	0.49
2:D:78:HIS:HB3	2:D:80:GLU:OE2	2.13	0.49
1:H:100(S):TYR:CD1	2:L:45:VAL:HG11	2.48	0.49
2:L:185:TRP:CZ2	2:L:208:PRO:HA	2.47	0.49
1:A:178:LEU:HD12	1:A:178:LEU:C	2.33	0.49
3:E:2:NAG:C3	3:E:3:BMA:H2	2.39	0.49
2:B:120:PRO:HD3	2:B:132:LEU:HD23	1.93	0.49
1:H:22:CYS:HB3	1:H:78:LEU:HB3	1.95	0.49
1:A:1:GLN:HG3	1:A:2:GLU:N	2.17	0.49
2:B:4:LEU:HB2	2:B:98:GLY:CA	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:117:LEU:HG	2:L:206:VAL:CG1	2.43	0.49
1:C:152:VAL:HG11	1:C:180:SER:CB	2.43	0.49
1:C:29:PHE:CD2	1:C:76:ASN:HA	2.48	0.48
2:D:78:HIS:HB2	2:D:80:GLU:HG2	1.95	0.48
1:H:29:PHE:CD2	1:H:76:ASN:HA	2.48	0.48
1:A:100(A):TRP:HB3	1:A:100(F):LYS:HA	1.94	0.48
1:C:168:ALA:HB2	1:C:178:LEU:HD23	1.95	0.48
2:L:18:ILE:HG23	2:L:19:THR:N	2.28	0.48
2:D:149:LYS:NZ	3:E:2:NAG:H81	2.28	0.48
1:H:100(B):HIS:HB2	1:H:100(G):TYR:HE2	1.79	0.48
1:A:38:ARG:NH1	1:A:86:ASP:HA	2.28	0.48
1:A:148:GLU:HB3	1:A:149:PRO:HA	1.96	0.48
2:D:18:ILE:HD12	2:D:77:LEU:HD11	1.95	0.48
2:L:65:LYS:HA	2:L:70:ALA:HA	1.96	0.47
1:A:100(A):TRP:N	1:A:100(A):TRP:CD1	2.82	0.47
2:D:149:LYS:NZ	3:E:2:NAG:O7	2.41	0.47
2:D:125:LEU:HD23	2:D:129:LYS:O	2.14	0.47
1:H:126:PRO:HG3	1:H:138:LEU:CD2	2.45	0.47
1:H:96:ALA:O	1:H:100(Q):TYR:HB2	2.14	0.47
1:C:1:GLN:HG2	1:C:2:GLU:HG3	1.97	0.47
2:L:60:ARG:HB3	2:L:75:SER:O	2.15	0.47
1:A:100:ILE:HG22	1:A:100(O):TYR:CE2	2.49	0.47
1:C:129:LYS:NZ	2:D:204:LYS:HE2	2.30	0.47
2:D:46:MET:HA	2:D:57:ILE:HD13	1.97	0.47
2:B:34:TRP:CZ3	2:B:87:CYS:HB3	2.50	0.46
2:L:23:ASN:OD1	3:E:1:NAG:N2	2.48	0.46
1:A:31:LYS:HD3	1:A:100(N):TYR:CE2	2.50	0.46
2:D:122:SER:O	2:D:126:GLN:HG2	2.16	0.46
2:B:62:SER:O	2:B:72:LEU:HD12	2.15	0.46
1:H:100(Q):TYR:O	1:H:100(R):HIS:HB2	2.16	0.46
2:B:185:TRP:CZ2	2:B:208:PRO:HA	2.51	0.46
2:L:45:VAL:O	2:L:57:ILE:HD11	2.16	0.46
2:D:153:SER:HA	2:D:154:PRO:HD3	1.80	0.46
2:L:150:ALA:O	2:L:151:ASP:HB2	2.16	0.45
2:D:132:LEU:HD21	2:D:185:TRP:CZ3	2.51	0.45
1:H:35:HIS:CE1	1:H:50:LEU:HD13	2.52	0.45
1:C:51:ILE:HG12	1:C:54:GLY:HA2	1.98	0.45
1:H:96:ALA:C	1:H:100(Q):TYR:HB2	2.37	0.45
2:L:93:ARG:O	2:L:94:SER:HB2	2.17	0.45
2:L:120:PRO:HD3	2:L:132:LEU:HD23	1.99	0.45
2:L:153:SER:HA	2:L:154:PRO:HD3	1.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:201:LYS:N	1:C:202:PRO:CD	2.79	0.45
2:D:120:PRO:HD3	2:D:132:LEU:CD2	2.47	0.45
2:B:78:HIS:HB2	2:B:80:GLU:HG2	1.99	0.45
2:D:140:TYR:HA	2:D:141:PRO:C	2.36	0.45
1:H:6:GLU:CG	1:H:107:THR:H	2.30	0.44
1:H:153:SER:HG	1:H:197:ASN:HB2	1.80	0.44
1:H:100(A):TRP:HB3	1:H:100(F):LYS:HG2	2.00	0.44
1:H:150:VAL:CG2	1:H:200:HIS:HD2	2.26	0.44
1:A:100(Q):TYR:HD2	1:A:100(Q):TYR:HA	1.68	0.44
1:C:122:PHE:CE1	2:D:124:GLU:HA	2.52	0.44
2:B:18:ILE:CG2	2:B:19:THR:N	2.80	0.44
2:L:191:TYR:O	2:L:205:THR:HG23	2.17	0.44
1:A:146:PHE:HA	1:A:147:PRO:HA	1.83	0.44
2:B:118:PHE:HA	2:B:119:PRO:HD3	1.78	0.44
1:C:105:LYS:HE2	1:C:105:LYS:HB3	1.85	0.44
1:C:113:SER:HA	1:C:114:ALA:HA	1.54	0.44
1:A:105:LYS:HB3	1:A:105:LYS:HE2	1.79	0.43
1:A:100:ILE:C	1:A:100:ILE:HD13	2.38	0.43
1:A:100(A):TRP:CG	1:A:100(F):LYS:HG2	2.54	0.43
2:L:104:THR:CG2	2:L:141:PRO:HB3	2.32	0.43
1:H:129:LYS:NZ	2:L:204:LYS:HE2	2.33	0.43
1:A:101:ASP:HA	2:B:45:VAL:CG2	2.42	0.43
2:B:84:ASP:HA	2:B:101:THR:O	2.18	0.43
4:F:1:NAG:H83	4:F:1:NAG:H3	1.99	0.43
1:H:129:LYS:HZ3	2:L:204:LYS:HE2	1.83	0.43
2:B:23:ASN:HA	2:B:69:THR:HG23	2.01	0.43
1:H:100(J):PHE:O	1:H:100(K):ASN:CB	2.66	0.43
2:B:15:GLY:C	2:B:76:GLY:HA2	2.38	0.43
2:B:191:TYR:O	2:B:205:THR:HG23	2.19	0.43
2:B:23:ASN:OD1	5:B:570:NAG:O5	2.35	0.42
1:C:146:PHE:CD2	1:C:146:PHE:C	2.93	0.42
1:H:99:PRO:HG3	1:H:100(H):TYR:CZ	2.54	0.42
2:L:141:PRO:HG2	2:L:198:GLU:OE2	2.19	0.42
1:A:145:TYR:CE1	1:A:150:VAL:HG23	2.54	0.42
1:C:60:SER:HB3	1:C:63:MET:HG2	2.01	0.42
2:D:11:SER:C	2:D:18:ILE:HD11	2.40	0.42
3:E:2:NAG:H83	3:E:2:NAG:H2	1.77	0.42
1:A:1:GLN:C	1:A:26:GLY:HA3	2.39	0.42
1:A:181:VAL:HG11	2:B:135:LEU:CD1	2.50	0.42
2:B:20:ILE:HD11	2:B:103:VAL:CG2	2.50	0.42
2:D:108:GLN:HA	2:D:109:PRO:HD3	1.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:27(C):GLY:HA3	2:L:68:ASN:OD1	2.19	0.42
1:A:1:GLN:CG	1:A:2:GLU:N	2.81	0.42
1:C:151:THR:OG1	1:C:199:ASN:HB3	2.19	0.42
2:D:149:LYS:HD3	2:D:194:GLN:NE2	2.34	0.42
1:C:11:VAL:HA	1:C:110:THR:O	2.19	0.42
1:C:122:PHE:HA	1:C:123:PRO:HD3	1.83	0.42
2:D:191:TYR:O	2:D:205:THR:HG23	2.19	0.42
1:H:201:LYS:HB2	1:H:202:PRO:HD3	2.02	0.42
1:A:13:GLN:OE1	1:A:113:SER:HA	2.19	0.42
1:C:101:ASP:HA	2:D:45:VAL:CG2	2.50	0.42
1:C:139:GLY:HA2	1:C:154:TRP:CH2	2.54	0.42
1:H:35:HIS:CE1	1:H:50:LEU:HB2	2.56	0.41
2:L:194:GLN:HG2	2:L:203:GLU:HG3	2.02	0.41
2:B:27(B):VAL:HG13	2:B:32:VAL:HG21	2.03	0.41
2:B:45:VAL:O	2:B:57:ILE:HD11	2.20	0.41
2:D:207:ALA:HA	2:D:208:PRO:HD3	1.90	0.41
2:L:74:ILE:HG21	2:L:77:LEU:HD23	2.02	0.41
2:L:202:VAL:HG12	2:L:203:GLU:N	2.36	0.41
1:H:100(H):TYR:N	1:H:100(H):TYR:CD1	2.88	0.41
1:A:100(H):TYR:HD2	1:A:100(L):ASP:O	2.04	0.41
2:B:12:GLY:O	2:B:105:VAL:HA	2.21	0.41
1:C:1:GLN:HG2	1:C:2:GLU:N	2.33	0.41
2:D:49:ASP:O	2:D:50:VAL:HB	2.20	0.41
2:L:88:SER:HA	2:L:96:ILE:O	2.20	0.41
2:B:108:GLN:HB3	2:B:109:PRO:HD2	2.03	0.41
2:B:149:LYS:HD3	2:B:194:GLN:NE2	2.35	0.41
1:H:100(Q):TYR:O	1:H:100(R):HIS:CB	2.68	0.41
1:H:139:GLY:HA2	1:H:154:TRP:CH2	2.55	0.41
1:A:83:LYS:O	1:A:86:ASP:HB2	2.21	0.41
3:E:1:NAG:O7	3:E:1:NAG:C3	2.69	0.41
2:B:78:HIS:HB3	2:B:80:GLU:OE2	2.20	0.41
1:C:31:LYS:HD3	1:C:100(N):TYR:CZ	2.56	0.41
1:H:83:LYS:O	1:H:86:ASP:HB2	2.20	0.41
2:B:117:LEU:HD22	2:B:193:CYS:HB2	2.03	0.40
2:B:140:TYR:HA	2:B:141:PRO:C	2.41	0.40
1:A:100(B):HIS:O	1:A:100(C):ASP:HB2	2.21	0.40
1:A:100(T):MET:O	2:B:45:VAL:HG22	2.21	0.40
1:H:124:LEU:HB3	2:L:118:PHE:CD1	2.56	0.40
2:D:149:LYS:NZ	3:E:2:NAG:C8	2.85	0.40
2:L:49:ASP:O	2:L:50:VAL:HB	2.21	0.40
2:L:111:ALA:O	2:L:139:PHE:HA	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:100:ILE:HD13	1:A:100(A):TRP:N	2.37	0.40
2:D:60:ARG:CZ	2:D:78:HIS:CD2	3.05	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	231/238 (97%)	214 (93%)	16 (7%)	1 (0%)	34	70
1	C	216/238 (91%)	202 (94%)	13 (6%)	1 (0%)	29	66
1	H	231/238 (97%)	209 (90%)	19 (8%)	3 (1%)	12	47
2	B	209/216 (97%)	196 (94%)	10 (5%)	3 (1%)	11	45
2	D	209/216 (97%)	196 (94%)	11 (5%)	2 (1%)	15	52
2	L	209/216 (97%)	197 (94%)	11 (5%)	1 (0%)	29	66
All	All	1305/1362 (96%)	1214 (93%)	80 (6%)	11 (1%)	19	57

All (11) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	H	100(R)	HIS
1	A	100(R)	HIS
1	H	100(C)	ASP
1	H	144	ASP
2	D	208	PRO
2	B	151	ASP
2	D	109	PRO
2	L	151	ASP
1	C	146	PHE
2	B	208	PRO
2	B	50	VAL

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	199/202 (98%)	189 (95%)	10 (5%)	24	52
1	C	187/202 (93%)	182 (97%)	5 (3%)	44	66
1	H	199/202 (98%)	193 (97%)	6 (3%)	41	64
2	B	178/183 (97%)	170 (96%)	8 (4%)	27	54
2	D	178/183 (97%)	173 (97%)	5 (3%)	43	65
2	L	178/183 (97%)	170 (96%)	8 (4%)	27	54
All	All	1119/1155 (97%)	1077 (96%)	42 (4%)	33	58

All (42) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	H	17	SER
1	H	28	THR
1	H	100	ILE
1	H	100(D)	ASP
1	H	100(I)	ASP
1	H	100(J)	PHE
2	L	9	SER
2	L	18	ILE
2	L	27(A)	ASP
2	L	30	ASP
2	L	33	SER
2	L	79	ILE
2	L	80	GLU
2	L	195	VAL
1	A	2	GLU
1	A	17	SER
1	A	28	THR
1	A	38	ARG
1	A	100	ILE
1	A	100(A)	TRP
1	A	100(I)	ASP
1	A	100(Q)	TYR

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Mol	Chain	Res	Type
1	A	105	LYS
1	A	191	THR
2	B	18	ILE
2	B	27(A)	ASP
2	B	45	VAL
2	B	62	SER
2	B	69	THR
2	B	79	ILE
2	B	123	GLU
2	B	136	ILE
1	C	17	SER
1	C	28	THR
1	C	116	THR
1	C	191	THR
1	C	196	CYS
2	D	18	ILE
2	D	27(A)	ASP
2	D	59	ASN
2	D	115	VAL
2	D	195	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

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)

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	$\#\|Z\| > 2$
3	NAG	E	1	2,3	14,14,15	0.94	1 (7%)	17,19,21	1.44	2 (11%)
3	NAG	E	2	3	14,14,15	0.43	0	17,19,21	1.41	3 (17%)
3	BMA	E	3	3	11,11,12	0.63	0	15,15,17	0.73	0
4	NAG	F	1	4,2	14,14,15	0.68	0	17,19,21	1.26	2 (11%)
4	NAG	F	2	4	14,14,15	0.53	0	17,19,21	0.67	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
3	NAG	E	1	2,3	-	1/6/23/26	0/1/1/1
3	NAG	E	2	3	-	2/6/23/26	0/1/1/1
3	BMA	E	3	3	-	0/2/19/22	0/1/1/1
4	NAG	F	1	4,2	-	4/6/23/26	0/1/1/1
4	NAG	F	2	4	-	3/6/23/26	0/1/1/1

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	E	1	NAG	C1-C2	2.59	1.56	1.52

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	E	1	NAG	C4-C3-C2	3.46	116.08	111.02
4	F	1	NAG	C1-O5-C5	3.41	116.81	112.19
3	E	2	NAG	C1-O5-C5	3.34	116.72	112.19
4	F	1	NAG	C4-C3-C2	2.86	115.21	111.02
3	E	2	NAG	C2-N2-C7	-2.77	118.96	122.90
3	E	2	NAG	C4-C3-C2	-2.73	107.02	111.02
3	E	1	NAG	C2-N2-C7	2.02	125.78	122.90

There are no chirality outliers.

All (10) torsion outliers are listed below:

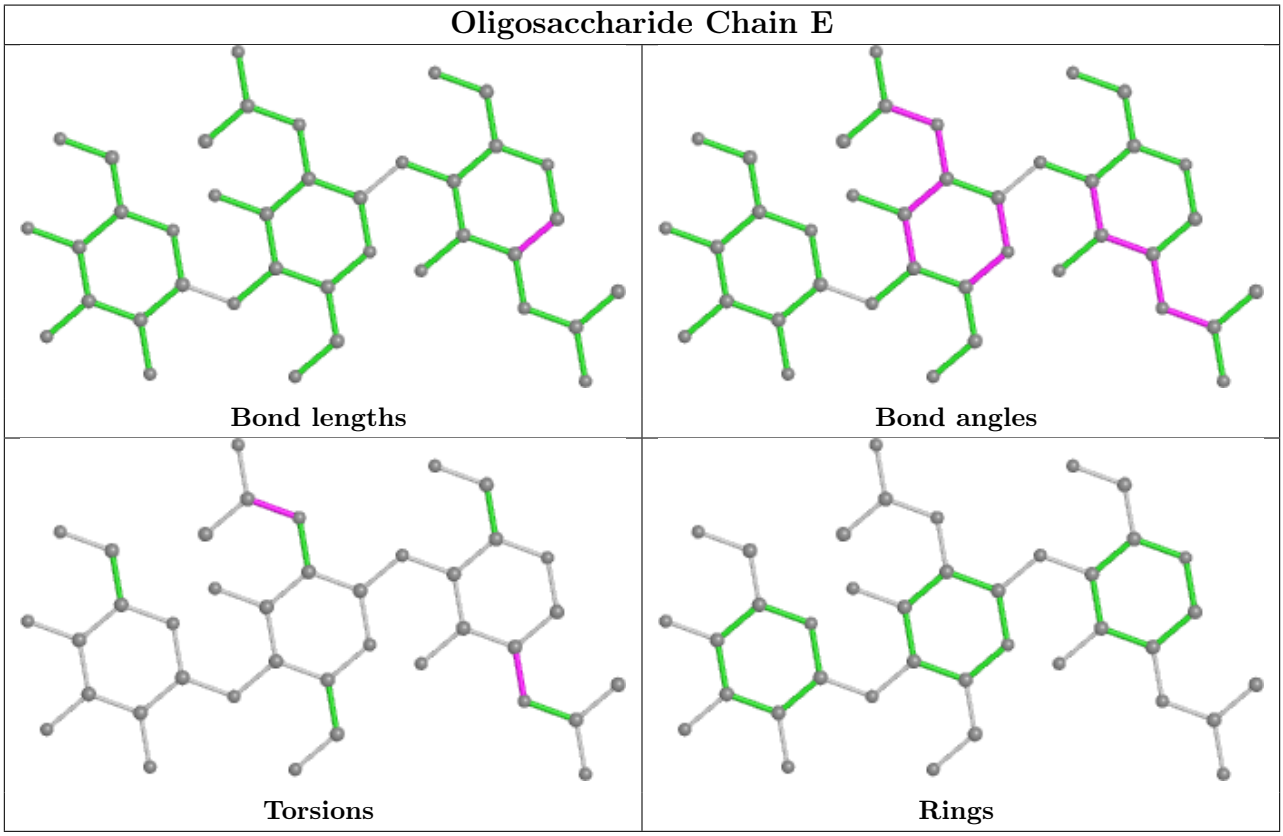
Mol	Chain	Res	Type	Atoms
3	E	1	NAG	C3-C2-N2-C7
3	E	2	NAG	C8-C7-N2-C2
3	E	2	NAG	O7-C7-N2-C2
4	F	1	NAG	C8-C7-N2-C2
4	F	1	NAG	O7-C7-N2-C2
4	F	2	NAG	C8-C7-N2-C2
4	F	2	NAG	O7-C7-N2-C2
4	F	1	NAG	C1-C2-N2-C7
4	F	1	NAG	C3-C2-N2-C7
4	F	2	NAG	O5-C5-C6-O6

There are no ring outliers.

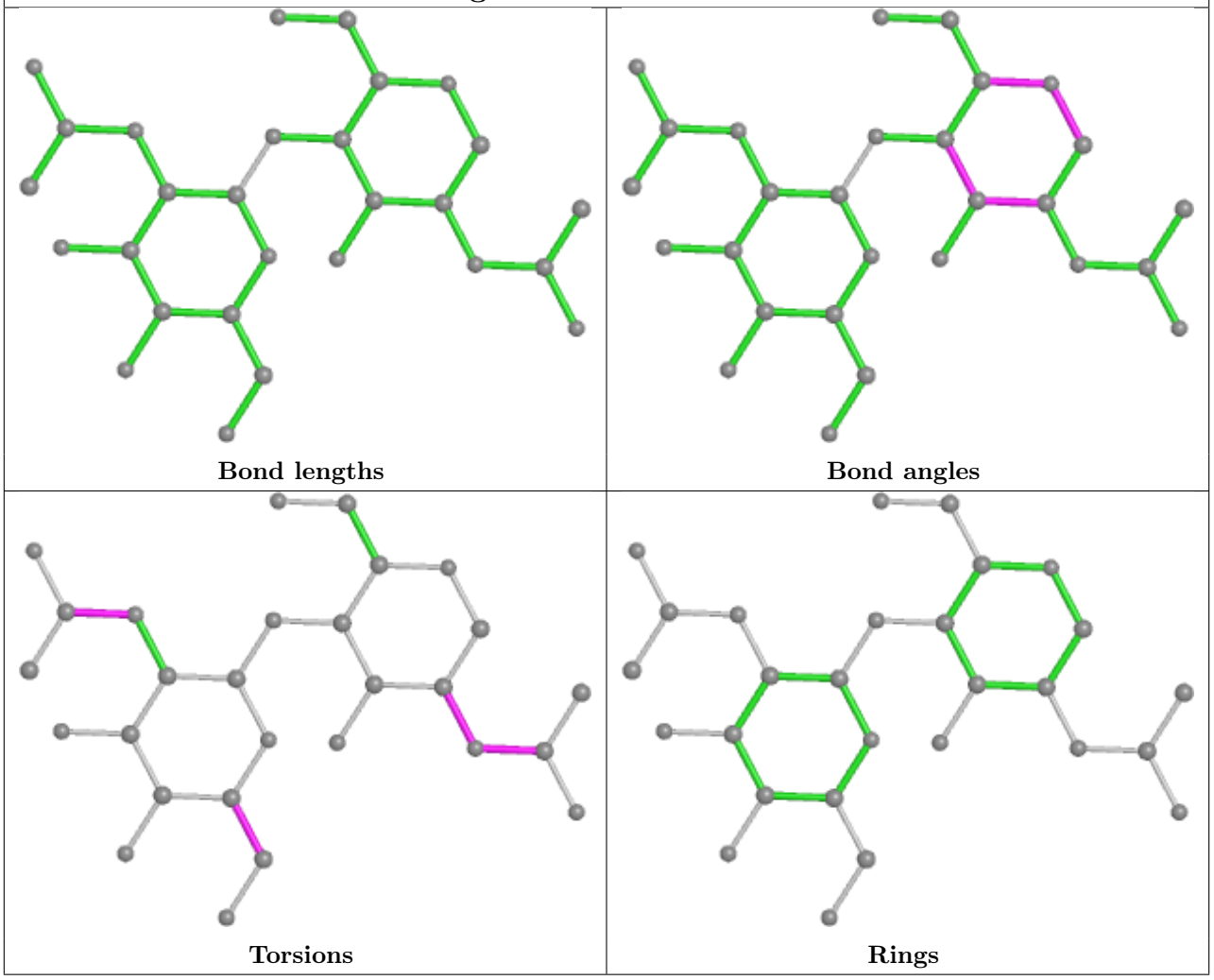
4 monomers are involved in 16 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	E	1	NAG	2	0
3	E	3	BMA	2	0
3	E	2	NAG	6	0
4	F	1	NAG	8	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 F



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	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
5	NAG	B	570	2	14,14,15	0.46	0	17,19,21	1.37	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
5	NAG	B	570	2	-	4/6/23/26	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(^{o})	Ideal(^{o})
5	B	570	NAG	C1-O5-C5	3.98	117.59	112.19
5	B	570	NAG	C4-C3-C2	-2.23	107.75	111.02

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	B	570	NAG	C8-C7-N2-C2
5	B	570	NAG	O7-C7-N2-C2
5	B	570	NAG	O5-C5-C6-O6
5	B	570	NAG	C4-C5-C6-O6

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	B	570	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

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, 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(Å^2)	Q<0.9
1	A	235/238 (98%)	0.41	12 (5%) 28 24	98, 149, 242, 366	0
1	C	222/238 (93%)	0.96	37 (16%) 1 2	133, 209, 279, 350	0
1	H	235/238 (98%)	0.64	19 (8%) 12 10	98, 154, 238, 327	0
2	B	211/216 (97%)	0.42	9 (4%) 35 29	90, 138, 188, 222	0
2	D	211/216 (97%)	1.45	57 (27%) 0 0	149, 231, 314, 375	0
2	L	211/216 (97%)	0.19	1 (0%) 91 85	94, 140, 190, 235	0
All	All	1325/1362 (97%)	0.68	135 (10%) 6 6	90, 164, 271, 375	0

All (135) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	133	GLY	7.8
2	D	142	GLY	7.5
2	D	206	VAL	5.8
1	C	29	PHE	5.6
1	C	93	ALA	5.5
1	C	100(T)	MET	5.3
1	C	27	PHE	5.3
1	C	34	MET	4.9
2	D	203	GLU	4.7
2	D	72	LEU	4.6
2	D	74	ILE	4.6
2	D	104	THR	4.6
2	D	113	PRO	4.5
2	D	107	GLY	4.3
1	A	130	SER	4.3
2	D	20	ILE	4.3
2	D	47	VAL	4.3
1	H	130	SER	4.2
2	D	105	VAL	4.2

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Mol	Chain	Res	Type	RSRZ
1	H	6	GLU	4.1
1	C	102	VAL	4.1
2	D	143	ALA	4.1
1	C	136	ALA	4.0
2	D	207	ALA	4.0
2	D	195	VAL	3.9
2	D	95(A)	ARG	3.9
1	H	51	ILE	3.9
2	D	71	SER	3.9
1	C	28	THR	3.8
2	D	18	ILE	3.8
2	D	129	LYS	3.8
2	D	191	TYR	3.7
2	D	148	TRP	3.5
2	D	164	PRO	3.5
1	H	73	ASN	3.5
2	D	34	TRP	3.5
2	D	209	THR	3.4
1	A	133	GLY	3.4
2	D	144	VAL	3.3
2	D	33	SER	3.3
1	A	159	LEU	3.3
1	C	130	SER	3.3
2	D	85	TYR	3.3
1	A	208	ASP	3.2
1	A	100	ILE	3.2
2	D	185	TRP	3.1
1	C	95	GLU	3.1
2	B	61	PHE	3.0
2	D	46	MET	3.0
2	D	75	SER	3.0
2	D	82	GLU	3.0
1	C	73	ASN	3.0
2	D	24	GLY	3.0
1	C	71	ARG	2.9
1	C	33	GLY	2.9
1	C	64	TRP	2.9
1	C	94	ARG	2.9
1	C	69	ILE	2.9
2	D	64	SER	2.9
1	H	35	HIS	2.9
2	B	47	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
2	B	62	SER	2.8
1	H	34	MET	2.8
1	A	129	LYS	2.8
2	D	204	LYS	2.8
1	C	32	TYR	2.8
1	A	99	PRO	2.7
1	C	137	ALA	2.7
1	C	30	HIS	2.7
2	D	193	CYS	2.7
2	D	50	VAL	2.7
1	H	209	LYS	2.7
1	A	198	VAL	2.7
2	D	77	LEU	2.6
1	C	179	SER	2.6
1	H	133	GLY	2.6
1	C	19	ARG	2.6
2	L	206	VAL	2.6
2	D	63	GLY	2.6
2	D	106	LEU	2.6
1	C	3	GLN	2.5
1	C	205	THR	2.5
1	C	134	GLY	2.5
2	D	194	GLN	2.5
1	A	209	LYS	2.5
1	A	123	PRO	2.4
2	D	49	ASP	2.4
1	C	48	VAL	2.4
2	B	170	ASN	2.4
1	C	24	ALA	2.4
1	H	71	ARG	2.4
2	D	205	THR	2.4
1	C	76	ASN	2.4
2	D	192	SER	2.4
1	H	30	HIS	2.4
1	H	207	VAL	2.4
1	H	31	LYS	2.4
1	C	168	ALA	2.3
1	C	70	SER	2.3
2	B	70	ALA	2.3
2	D	127	ALA	2.3
2	D	53	ARG	2.3
1	H	50	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
1	H	49	ALA	2.3
2	D	165	SER	2.2
2	B	71	SER	2.2
2	D	202	VAL	2.2
2	B	141	PRO	2.2
1	H	117	LYS	2.2
1	A	100(F)	LYS	2.2
2	D	32	VAL	2.2
2	D	37	GLN	2.2
2	D	43	PRO	2.2
1	C	112	SER	2.2
1	A	96	ALA	2.2
2	D	10	VAL	2.2
2	D	115	VAL	2.2
1	C	100(S)	TYR	2.2
2	D	118	PHE	2.1
1	H	56	ARG	2.1
1	H	25	SER	2.1
2	D	66	SER	2.1
2	D	196	THR	2.1
1	C	92	CYS	2.1
2	B	171	LYS	2.1
1	C	189	LEU	2.1
1	C	63	MET	2.1
2	B	72	LEU	2.1
2	D	31	SER	2.1
2	D	81	ASP	2.1
1	H	97	GLY	2.1
2	D	130	ALA	2.0
1	C	51	ILE	2.0
1	H	208	ASP	2.0
1	C	103	TRP	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,

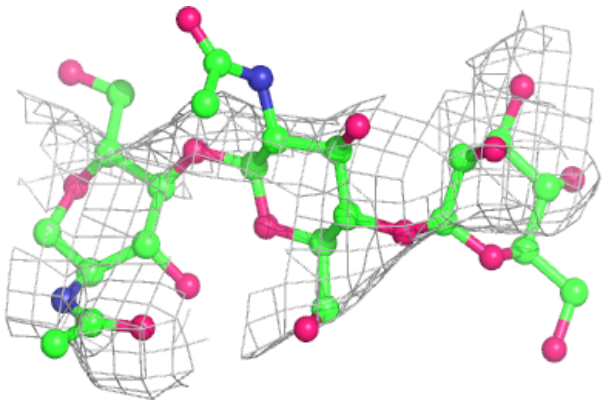
median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

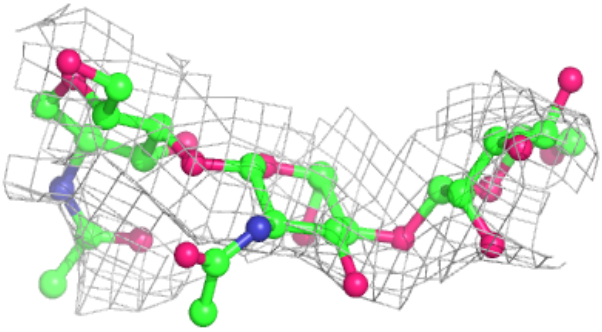
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	BMA	E	3	11/12	0.59	0.38	271,315,341,345	0
4	NAG	F	1	14/15	0.67	0.22	312,354,392,414	0
3	NAG	E	2	14/15	0.74	0.35	173,280,307,318	0
4	NAG	F	2	14/15	0.78	0.20	262,355,376,399	0
3	NAG	E	1	14/15	0.82	0.28	207,252,286,298	0

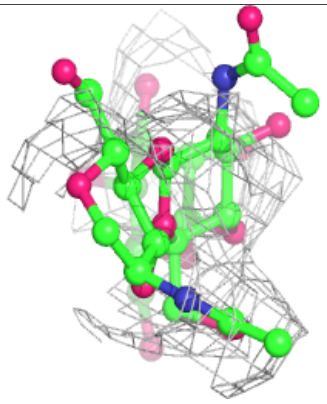
The following is a graphical depiction of the model fit to experimental electron density for oligosaccharide. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around Chain E:

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

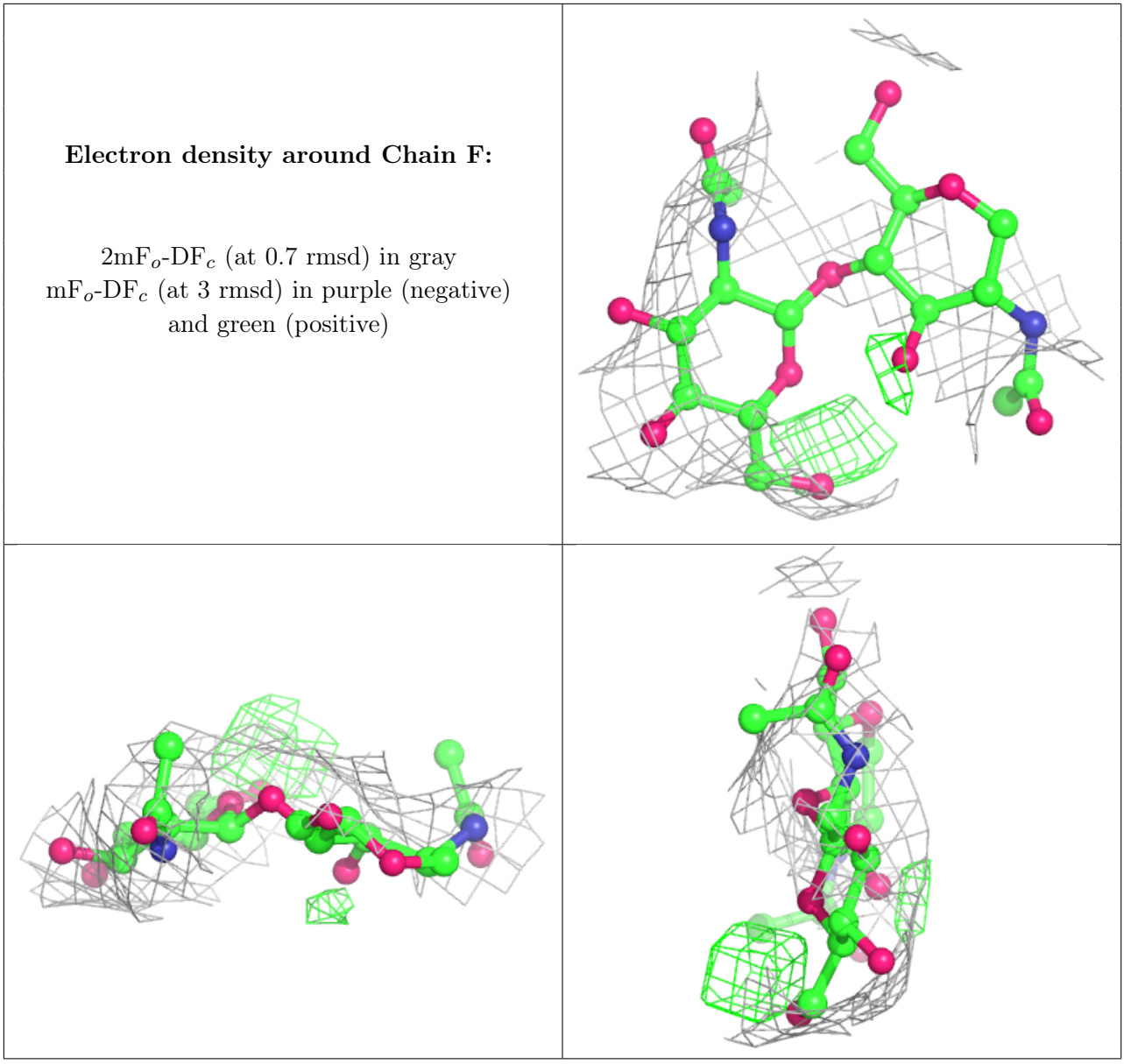






Electron density around Chain F:

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



6.4 Ligands

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	B-factors(Å^2)	Q<0.9
5	NAG	B	570	14/15	0.60	0.37	310,347,360,360	0

6.5 Other polymers (i)

There are no such residues in this entry.