Full wwPDB X-ray Structure Validation Report (i)

Mar 20, 2024 – 06:07 PM EDT

PDB ID	:	8TNN
Title	:	Crystal structure of Epstein-Barr virus gH/gL/gp42 in complex with gp42 antibody A10
Authors	:	Bu, W.; Kumar, A.; Board, N.; Kim, J.; Dowdell, K.; Zhang, S.; Lei, Y.; Hostal, A.; Krogmann, T.; Wang, Y.; Pittaluga, S.; Marcotrigiano, J.; Cohen, J.I.
Deposited on	:	2023-08-02
Resolution	:	3.36 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 (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 (1)) were used in the production of this report:

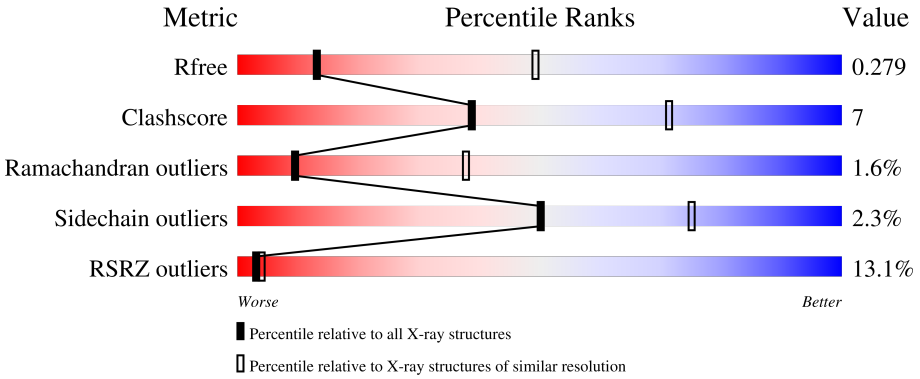
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

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 3.36 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.



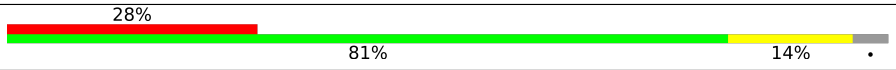
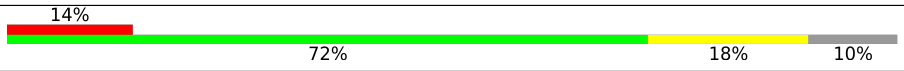
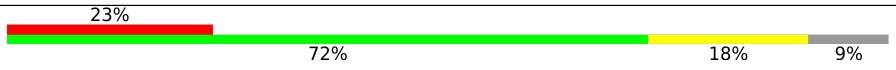
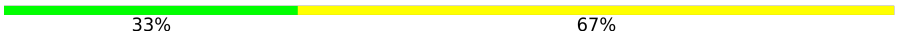
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1558 (3.42-3.30)
Clashscore	141614	1627 (3.42-3.30)
Ramachandran outliers	138981	1599 (3.42-3.30)
Sidechain outliers	138945	1598 (3.42-3.30)
RSRZ outliers	127900	1507 (3.42-3.30)

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	658	3% 82% 17%
1	D	658	12% 75% 23%
2	B	112	6% 73% 22%
2	E	112	16% 58% 22% 18%
3	C	191	11% 74% 19% 6%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
3	F	191	
4	G	213	
4	I	213	
5	H	234	
5	J	234	
6	L	3	
6	T	3	

2 Entry composition (i)

There are 7 unique types of molecules in this entry. The entry contains 20293 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 Envelope glycoprotein H.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	658	Total	C	N	O	S	0	0	0
			5036	3225	832	949	30			
1	D	654	Total	C	N	O	S	0	0	0
			4952	3164	818	940	30			

- Molecule 2 is a protein called Envelope glycoprotein L.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	107	Total	C	N	O	S	0	0	0
			786	494	135	153	4			
2	E	92	Total	C	N	O	S	0	0	0
			675	422	113	136	4			

- Molecule 3 is a protein called Glycoprotein 42.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	180	Total	C	N	O	S	0	0	0
			1408	913	228	256	11			
3	F	178	Total	C	N	O	S	0	0	0
			1383	899	220	253	11			

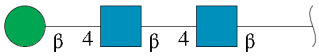
- Molecule 4 is a protein called A10 light chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	G	204	Total	C	N	O	S	0	0	0
			1400	865	241	290	4			
4	I	204	Total	C	N	O	S	0	0	0
			1385	850	240	292	3			

- Molecule 5 is a protein called A10 heavy chain.

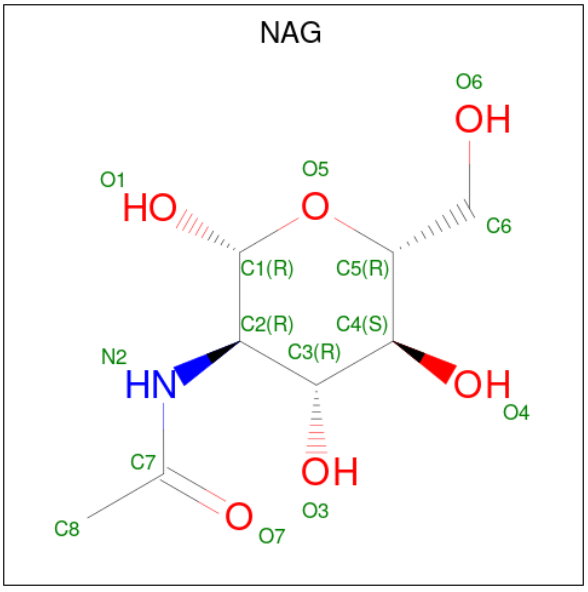
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	H	210	Total	C	N	O	S	0	0	0
			1535	971	257	302	5			
5	J	212	Total	C	N	O	S	0	0	0
			1543	966	265	308	4			

- Molecule 6 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
6	L	3	Total	C	N	O	0	0	0
			39	22	2	15			
6	T	3	Total	C	N	O	0	0	0
			39	22	2	15			

- Molecule 7 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$) (labeled as "Ligand of Interest" by depositor).



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

Continued on next page...

Continued from previous page...

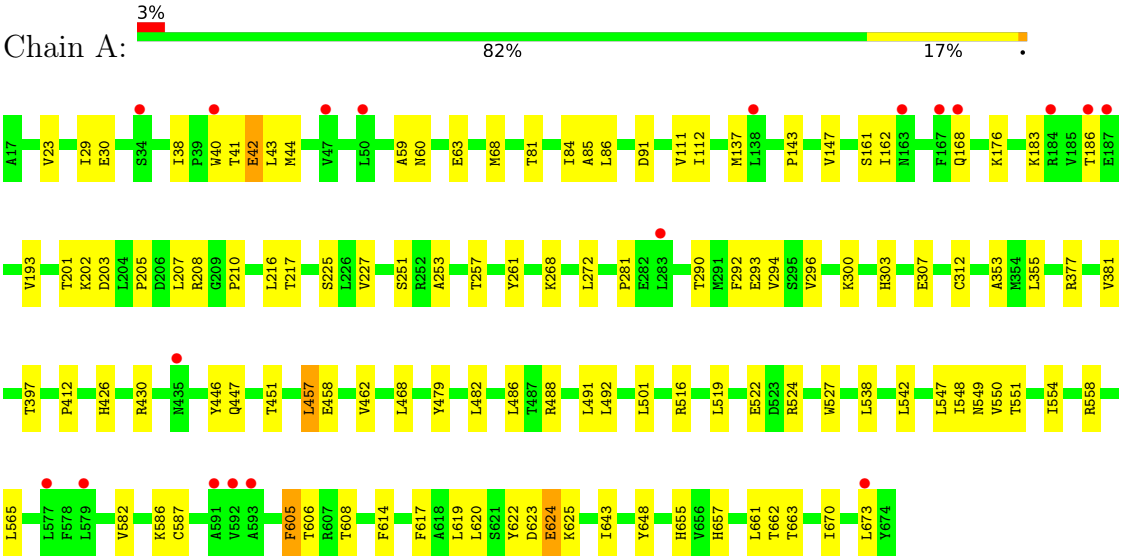
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
7	B	1	Total	C	N	O	0	0
			14	8	1	5		
7	C	1	Total	C	N	O	0	0
			14	8	1	5		
7	C	1	Total	C	N	O	0	0
			14	8	1	5		
7	D	1	Total	C	N	O	0	0
			14	8	1	5		
7	E	1	Total	C	N	O	0	0
			14	8	1	5		
7	E	1	Total	C	N	O	0	0
			14	8	1	5		

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.

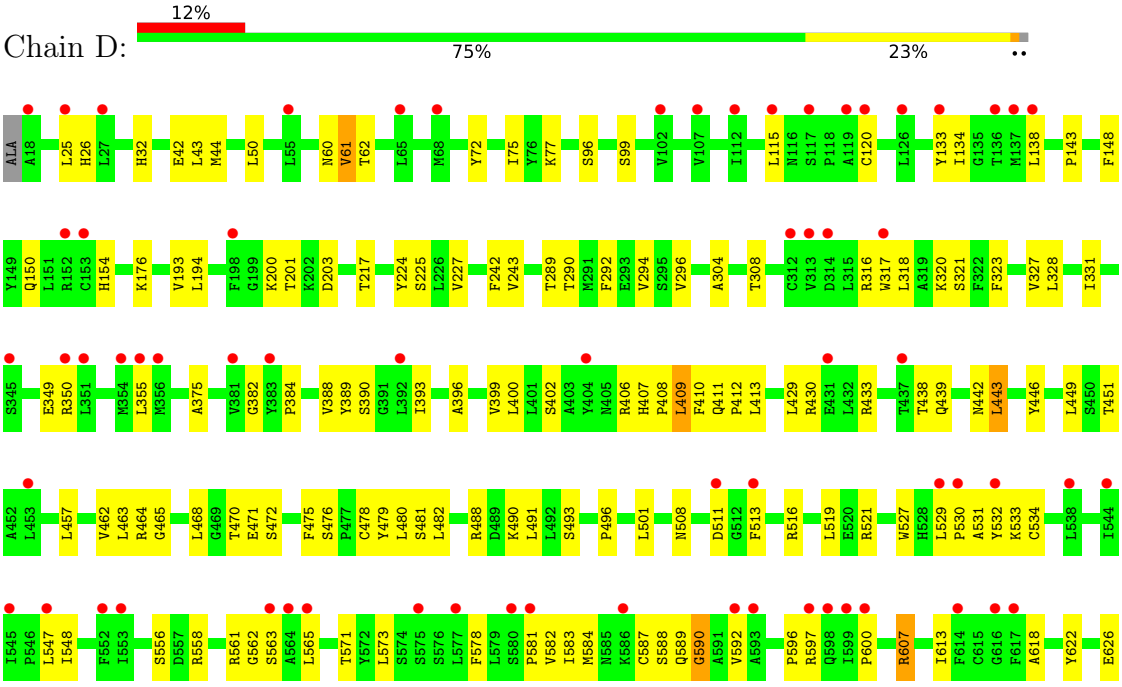
• Molecule 1: Envelope glycoprotein H

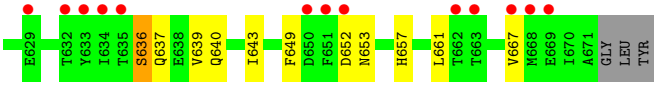
Chain A:



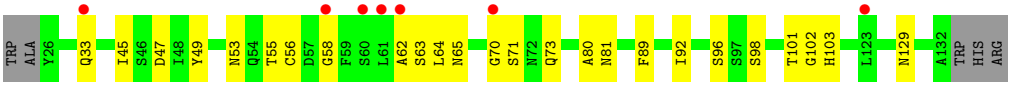
• Molecule 1: Envelope glycoprotein H

Chain D:

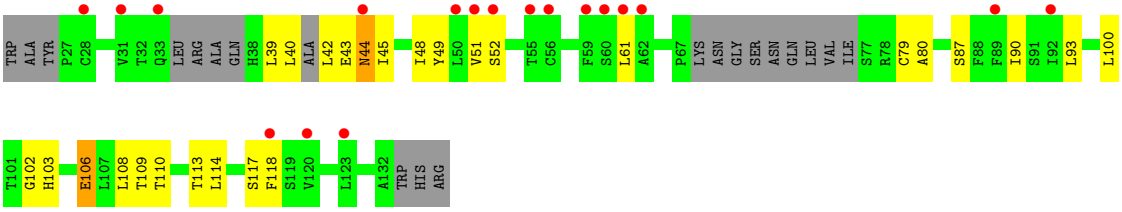




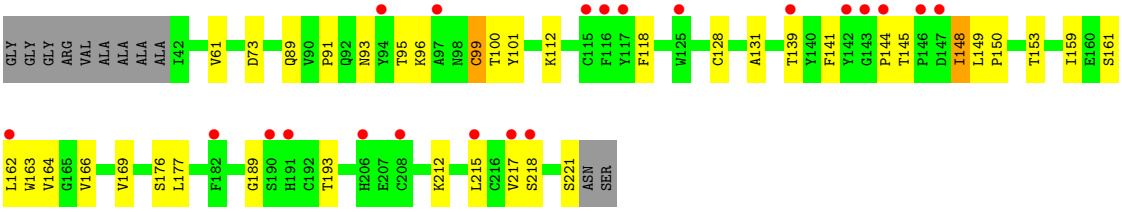
• Molecule 2: Envelope glycoprotein L



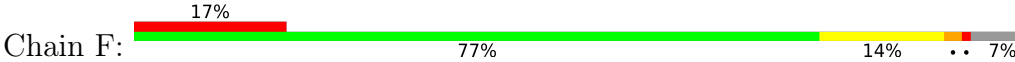
• Molecule 2: Envelope glycoprotein L

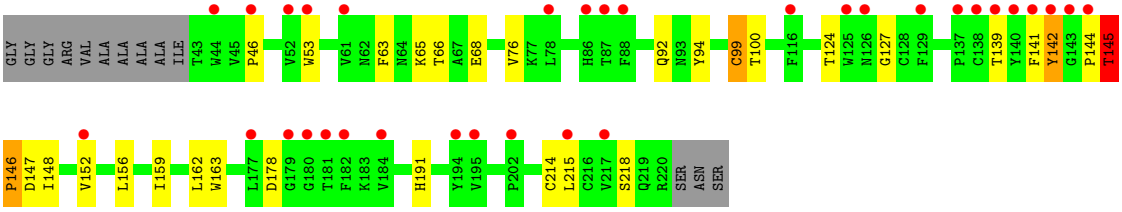


• Molecule 3: Glycoprotein 42

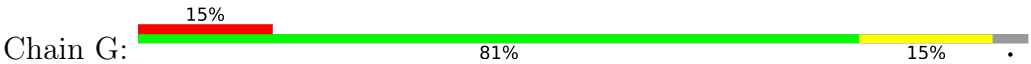


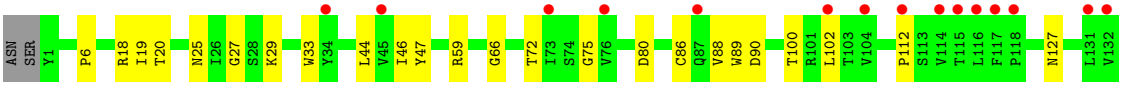
• Molecule 3: Glycoprotein 42

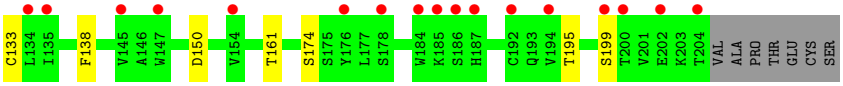




• Molecule 4: A10 light chain

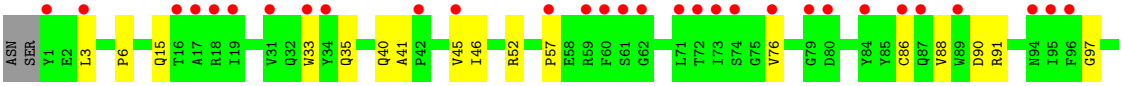






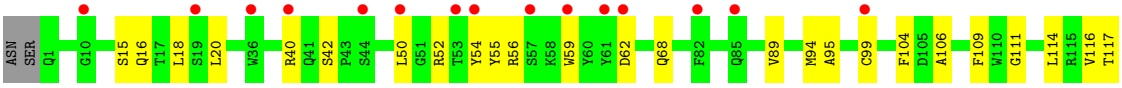
• Molecule 4: A10 light chain

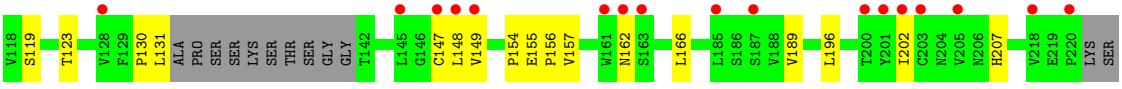
Chain I:



• Molecule 5: A10 heavy chain

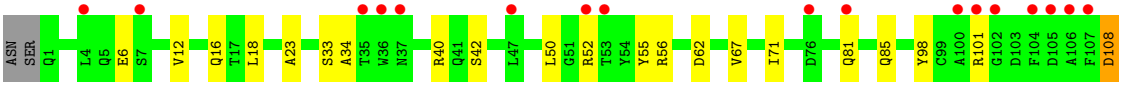
Chain H:

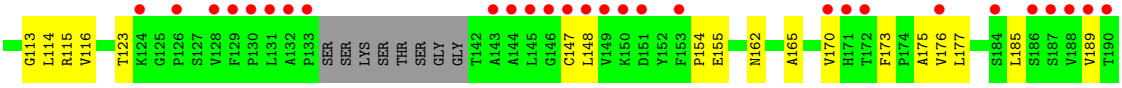


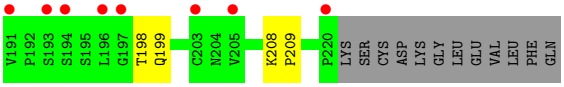


• Molecule 5: A10 heavy chain

Chain J:







• Molecule 6: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain L:

• Molecule 6: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain T:

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	88.75Å 138.96Å 316.26Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	45.83 – 3.36 54.71 – 3.36	Depositor EDS
% Data completeness (in resolution range)	99.9 (45.83-3.36) 99.9 (54.71-3.36)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.21	Depositor
$< I/\sigma(I) >$ [1]	1.51 (at 3.33Å)	Xtriage
Refinement program	PHENIX (1.19.2_4158: ???)	Depositor
R, R_{free}	0.234 , 0.281 0.233 , 0.279	Depositor DCC
R_{free} test set	2764 reflections (4.88%)	wwPDB-VP
Wilson B-factor (Å^2)	134.2	Xtriage
Anisotropy	0.177	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.26 , 89.7	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.90	EDS
Total number of atoms	20293	wwPDB-VP
Average B, all atoms (Å^2)	150.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.31% 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	0.31	0/5145	0.54	0/7001
1	D	0.28	0/5056	0.56	0/6884
2	B	0.27	0/799	0.53	0/1089
2	E	0.29	0/682	0.54	0/924
3	C	0.28	0/1463	0.51	0/2018
3	F	0.27	0/1439	0.48	0/1988
4	G	0.26	0/1433	0.51	0/1977
4	I	0.27	0/1417	0.51	0/1957
5	H	0.25	0/1576	0.56	0/2168
5	J	0.26	0/1582	0.54	0/2175
All	All	0.28	0/20592	0.54	0/28181

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
3	F	0	1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	F	145	THR	Peptide

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	5036	0	4960	74	0
1	D	4952	0	4838	86	0
2	B	786	0	740	13	0
2	E	675	0	638	15	0
3	C	1408	0	1265	27	0
3	F	1383	0	1219	18	0
4	G	1400	0	1232	15	0
4	I	1385	0	1193	17	0
5	H	1535	0	1406	21	0
5	J	1543	0	1410	23	0
6	L	39	0	34	0	0
6	T	39	0	34	0	0
7	A	14	0	13	0	0
7	B	28	0	26	0	0
7	C	28	0	26	1	0
7	D	14	0	13	0	0
7	E	28	0	26	1	0
All	All	20293	0	19073	295	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 7.

All (295) 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:468:LEU:HD21	1:A:501:LEU:HD22	1.33	1.03
1:A:617:PHE:HE1	1:A:663:THR:HG22	1.41	0.86
3:C:148:ILE:HG22	3:C:150:PRO:HD2	1.61	0.82
1:A:59:ALA:HA	1:A:208:ARG:HH12	1.44	0.81
1:D:468:LEU:HD21	1:D:501:LEU:HD22	1.63	0.78
1:D:384:PRO:O	1:D:430:ARG:NH2	2.19	0.76
1:A:451:THR:HG22	1:A:482:LEU:H	1.49	0.75
1:A:605:PHE:HB3	1:A:673:LEU:HD23	1.69	0.74
1:A:59:ALA:HA	1:A:208:ARG:NH1	2.03	0.73
1:D:613:ILE:HA	3:F:46:PRO:HA	1.71	0.73

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:605:PHE:HD1	1:A:606:THR:H	1.35	0.72
4:I:52:ARG:NH2	4:I:57:PRO:O	2.24	0.71
1:A:486:LEU:HB3	1:A:491:LEU:HD11	1.73	0.68
3:F:144:PRO:HB2	3:F:148:ILE:HG13	1.76	0.68
1:D:429:LEU:HD13	1:D:433:ARG:HH21	1.59	0.67
3:C:99:CYS:SG	3:C:100:THR:N	2.68	0.66
1:A:548:ILE:HG22	1:A:549:ASN:HD22	1.59	0.66
3:F:145:THR:O	3:F:147:ASP:N	2.29	0.66
1:D:316:ARG:O	1:D:320:LYS:N	2.28	0.65
1:D:463:LEU:HD11	1:D:496:PRO:HD2	1.78	0.65
1:D:400:LEU:HG	1:D:449:LEU:HD11	1.79	0.65
2:B:101:THR:O	2:B:103:HIS:N	2.29	0.64
1:D:529:LEU:O	1:D:531:ALA:N	2.30	0.64
1:D:516:ARG:O	1:D:516:ARG:NH1	2.31	0.63
1:A:412:PRO:HG3	1:A:457:LEU:HB3	1.81	0.63
1:A:605:PHE:HD1	1:A:606:THR:N	1.95	0.62
1:D:96:SER:O	1:D:99:SER:OG	2.17	0.62
1:A:303:HIS:O	1:A:307:GLU:HG2	1.99	0.62
3:F:99:CYS:SG	3:F:100:THR:N	2.73	0.62
5:H:155:GLU:HG2	5:H:156:PRO:HA	1.80	0.62
5:J:170:VAL:HG22	5:J:189:VAL:HG12	1.82	0.62
1:A:38:ILE:HD11	1:A:43:LEU:HD22	1.82	0.61
5:H:94:MET:HG3	5:H:117:THR:HA	1.82	0.61
2:B:49:TYR:HB2	2:B:63:SER:HB2	1.81	0.61
1:A:458:GLU:O	1:A:462:VAL:HG23	2.01	0.61
1:A:468:LEU:CD2	1:A:501:LEU:HD22	2.21	0.61
1:A:617:PHE:CE1	1:A:663:THR:HG22	2.31	0.61
1:D:565:LEU:HD11	1:D:578:PHE:HB3	1.81	0.60
4:I:90:ASP:CG	4:I:91:ARG:H	2.04	0.60
1:D:42:GLU:HG3	1:D:43:LEU:HD12	1.81	0.60
5:H:123:THR:HG23	5:H:154:PRO:HG3	1.84	0.60
2:E:43:GLU:C	2:E:45:ILE:H	2.04	0.60
1:A:186:THR:HG23	3:C:189:GLY:HA3	1.82	0.60
1:D:565:LEU:HD23	1:D:596:PRO:HB3	1.84	0.60
5:J:18:LEU:HD11	5:J:116:VAL:HG11	1.84	0.60
4:I:149:ALA:O	4:I:151:SER:N	2.35	0.59
1:D:26:HIS:HB2	2:E:49:TYR:HA	1.83	0.59
2:E:93:LEU:HB2	2:E:108:LEU:HD12	1.84	0.59
4:G:44:LEU:HD21	4:G:47:TYR:HB3	1.84	0.59
1:A:447:GLN:O	1:A:451:THR:HG23	2.03	0.59
4:G:161:THR:HG22	4:G:174:SER:H	1.67	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:124:THR:HG23	3:F:127:GLY:H	1.65	0.59
1:A:253:ALA:O	1:A:300:LYS:HE3	2.02	0.59
1:D:176:LYS:HB3	1:D:203:ASP:HB3	1.83	0.59
1:D:217:THR:HG22	1:D:227:VAL:HG22	1.83	0.58
1:D:400:LEU:HD22	1:D:446:TYR:CD2	2.38	0.58
5:J:6:GLU:HB2	5:J:114:LEU:HD13	1.86	0.58
1:D:25:LEU:HD23	2:E:48:ILE:HB	1.85	0.58
1:D:412:PRO:HG3	1:D:457:LEU:HB3	1.86	0.58
3:C:93:ASN:OD1	7:C:302:NAG:N2	2.37	0.57
2:E:87:SER:O	2:E:90:ILE:HG13	2.04	0.57
1:A:479:TYR:HB3	1:A:516:ARG:HH21	1.68	0.57
1:D:652:ASP:OD1	1:D:653:ASN:N	2.37	0.57
5:J:52:ARG:HG2	5:J:62:ASP:HB2	1.86	0.57
1:A:60:ASN:HB3	1:A:63:GLU:HB2	1.87	0.57
1:A:68:MET:CE	2:B:81:ASN:HD21	2.17	0.57
4:G:29:LYS:NZ	4:G:90:ASP:HA	2.20	0.57
4:G:33:TRP:HB2	4:G:46:ILE:HB	1.86	0.57
1:D:115:LEU:HD12	1:D:355:LEU:HD12	1.87	0.57
1:A:143:PRO:HD3	1:A:193:VAL:CG1	2.36	0.56
3:F:100:THR:HG22	5:J:33:SER:HA	1.87	0.56
3:C:144:PRO:HB2	3:C:149:LEU:HB3	1.88	0.56
1:A:162:ILE:HD12	1:A:281:PRO:HB2	1.88	0.56
2:B:33:GLN:H	2:B:33:GLN:NE2	2.03	0.56
1:D:475:PHE:HE1	1:D:480:LEU:HD13	1.71	0.55
4:G:59:ARG:HB2	4:G:75:GLY:H	1.72	0.55
1:A:606:THR:HG22	1:A:608:THR:H	1.72	0.55
1:D:409:LEU:HD11	1:D:643:ILE:HD12	1.89	0.55
3:F:162:LEU:HD21	3:F:215:LEU:HB2	1.89	0.54
5:J:12:VAL:HG13	5:J:16:GLN:HE21	1.70	0.54
3:F:139:THR:HG22	3:F:218:SER:HB2	1.89	0.54
1:A:538:LEU:HD12	1:A:538:LEU:H	1.73	0.54
3:C:91:PRO:O	3:C:93:ASN:N	2.37	0.54
1:D:407:HIS:NE2	1:D:411:GLN:O	2.40	0.54
2:E:42:LEU:HB3	7:E:202:NAG:H83	1.89	0.54
1:A:617:PHE:CD1	1:A:662:THR:HA	2.43	0.54
5:J:162:ASN:HB2	5:J:165:ALA:HB3	1.90	0.54
1:A:292:PHE:O	1:A:296:VAL:HG23	2.08	0.54
1:A:217:THR:HG22	1:A:227:VAL:HG22	1.89	0.53
1:D:490:LYS:HD2	1:D:626:GLU:OE2	2.07	0.53
1:D:468:LEU:HB2	1:D:470:THR:HG23	1.90	0.53
1:D:304:ALA:O	1:D:308:THR:HG23	2.09	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:607:ARG:HG3	1:D:649:PHE:CZ	2.44	0.53
5:H:157:VAL:HG22	5:H:207:HIS:HD2	1.72	0.53
1:D:407:HIS:CE1	1:D:413:LEU:HD12	2.43	0.53
1:D:439:GLN:O	1:D:443:LEU:HD12	2.09	0.53
1:A:111:VAL:HG23	1:A:112:ILE:H	1.73	0.53
1:A:201:THR:HG22	1:A:225:SER:HB2	1.91	0.53
5:J:123:THR:HG23	5:J:154:PRO:HD3	1.91	0.52
2:B:45:ILE:HD12	2:B:64:LEU:HB3	1.90	0.52
3:C:166:VAL:HG13	3:C:193:THR:HG21	1.90	0.52
3:C:221:SER:O	3:C:221:SER:OG	2.24	0.52
1:A:620:LEU:HD13	1:A:661:LEU:HD13	1.91	0.52
5:H:18:LEU:HD11	5:H:116:VAL:HG11	1.91	0.52
1:A:68:MET:HE2	2:B:81:ASN:HD21	1.75	0.52
4:G:18:ARG:HG3	4:G:72:THR:HG22	1.90	0.51
2:B:96:SER:O	2:B:96:SER:OG	2.27	0.51
3:F:142:TYR:CE2	3:F:144:PRO:HB3	2.46	0.51
4:G:112:PRO:HA	4:G:138:PHE:HB3	1.93	0.51
5:J:173:PHE:O	5:J:185:LEU:HD11	2.11	0.51
3:C:89:GLN:HA	3:C:169:VAL:HG23	1.93	0.51
1:D:396:ALA:O	1:D:399:VAL:HG22	2.10	0.51
1:D:462:VAL:HG11	1:D:476:SER:HB2	1.93	0.51
1:D:72:TYR:O	1:D:77:LYS:NZ	2.40	0.51
3:F:66:THR:O	3:F:68:GLU:N	2.40	0.51
1:A:353:ALA:HB3	3:C:61:VAL:HG11	1.93	0.51
1:D:200:LYS:HA	1:D:224:TYR:HA	1.91	0.51
5:H:20:LEU:HD22	5:H:114:LEU:HD21	1.93	0.50
3:C:73:ASP:N	3:C:73:ASP:OD1	2.45	0.50
1:D:558:ARG:HH21	1:D:592:VAL:HG12	1.76	0.50
1:A:614:PHE:HA	1:A:617:PHE:CD2	2.45	0.50
3:C:162:LEU:HD21	3:C:215:LEU:HB2	1.94	0.50
1:D:115:LEU:HD21	1:D:375:ALA:HB2	1.92	0.50
1:D:400:LEU:CG	1:D:449:LEU:HD11	2.42	0.50
1:A:547:LEU:HB2	1:A:550:VAL:HG23	1.93	0.50
1:A:91:ASP:OD1	1:A:257:THR:HB	2.12	0.50
3:C:164:VAL:HG23	3:C:193:THR:HG23	1.95	0.49
5:H:15:SER:O	5:H:89:VAL:HG22	2.11	0.49
5:J:40:ARG:HD3	5:J:50:LEU:HD21	1.93	0.49
1:D:138:LEU:HD13	1:D:148:PHE:HB3	1.94	0.49
1:A:605:PHE:CD1	1:A:606:THR:N	2.78	0.49
2:E:100:LEU:O	2:E:102:GLY:N	2.40	0.49
1:D:478:CYS:HA	1:D:481:SER:HB3	1.94	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:323:PHE:O	1:D:327:VAL:HG22	2.13	0.49
1:D:60:ASN:O	1:D:61:VAL:HG22	2.13	0.49
1:A:68:MET:SD	1:A:210:PRO:HB3	2.53	0.49
2:E:103:HIS:O	2:E:106:GLU:HG3	2.13	0.48
1:D:328:LEU:HA	1:D:331:ILE:HG22	1.95	0.48
1:D:402:SER:O	1:D:406:ARG:HG3	2.13	0.48
3:C:161:SER:HB2	3:C:212:LYS:HD3	1.95	0.48
3:C:118:PHE:HE1	3:C:215:LEU:HD13	1.78	0.48
1:D:290:THR:O	1:D:294:VAL:HG23	2.14	0.48
3:F:63:PHE:HD1	3:F:65:LYS:H	1.62	0.48
4:I:33:TRP:HB2	4:I:46:ILE:HB	1.95	0.48
5:J:34:ALA:H	5:J:56:ARG:NH2	2.12	0.48
1:A:558:ARG:HB2	1:A:565:LEU:HD21	1.96	0.47
2:E:114:LEU:O	2:E:117:SER:OG	2.26	0.47
1:A:619:LEU:HD21	1:A:670:ILE:HD12	1.96	0.47
1:A:176:LYS:HB3	1:A:203:ASP:HB3	1.95	0.47
4:I:129:ALA:HB3	4:I:179:LEU:O	2.14	0.47
2:B:89:PHE:CD1	2:B:92:ILE:HD11	2.50	0.47
4:G:80:ASP:O	4:G:102:LEU:HD23	2.14	0.47
1:A:147:VAL:HG12	1:A:207:LEU:HD21	1.96	0.47
1:D:60:ASN:O	1:D:62:THR:N	2.39	0.47
3:F:163:TRP:HB2	3:F:214:CYS:SG	2.54	0.47
5:J:23:ALA:HA	5:J:81:GLN:HG2	1.96	0.47
1:D:451:THR:HA	1:D:481:SER:HB2	1.97	0.47
1:D:588:SER:O	1:D:590:GLY:N	2.47	0.47
2:B:89:PHE:HA	2:B:92:ILE:HG12	1.97	0.47
1:D:471:GLU:OE1	1:D:471:GLU:N	2.44	0.47
1:A:40:TRP:O	1:A:44:MET:HG3	2.15	0.47
3:F:145:THR:HG22	3:F:146:PRO:N	2.30	0.47
1:A:551:THR:OG1	1:A:582:VAL:HB	2.15	0.46
3:C:128:CYS:HA	3:C:131:ALA:HB3	1.97	0.46
1:D:534:CYS:SG	1:D:561:ARG:HG3	2.55	0.46
5:H:52:ARG:HG2	5:H:62:ASP:HB2	1.97	0.46
2:B:56:CYS:O	2:B:58:GLY:N	2.43	0.46
1:A:207:LEU:HD23	1:A:207:LEU:HA	1.74	0.46
4:G:88:VAL:HG22	4:G:89:TRP:H	1.80	0.46
5:H:148:LEU:HD12	5:H:149:VAL:H	1.81	0.46
5:J:101:ARG:O	5:J:108:ASP:N	2.49	0.46
1:D:491:LEU:HD21	1:D:513:PHE:CD1	2.51	0.46
4:I:179:LEU:HB2	4:I:183:GLN:HE21	1.81	0.46
1:D:292:PHE:O	1:D:296:VAL:HG23	2.16	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:390:SER:HB3	1:D:439:GLN:OE1	2.16	0.46
4:G:6:PRO:HD2	4:G:20:THR:O	2.15	0.46
1:A:268:LYS:O	1:A:272:LEU:HD23	2.16	0.45
1:A:143:PRO:HD3	1:A:193:VAL:HG11	1.98	0.45
1:A:23:VAL:HG12	1:A:38:ILE:HG23	1.99	0.45
1:D:479:TYR:HB3	1:D:516:ARG:NH2	2.31	0.45
5:J:40:ARG:HB3	5:J:50:LEU:HD11	1.98	0.45
5:J:67:VAL:HB	5:J:71:ILE:HG13	1.99	0.45
4:G:127:ASN:OD1	4:G:127:ASN:N	2.42	0.45
1:A:622:TYR:CE1	1:A:657:HIS:HB2	2.51	0.45
1:D:508:ASN:HA	1:D:511:ASP:OD2	2.17	0.45
2:B:62:ALA:HB3	2:B:80:ALA:O	2.16	0.45
1:A:81:THR:HG22	1:A:217:THR:O	2.16	0.45
1:A:479:TYR:HB3	1:A:516:ARG:NH2	2.31	0.45
3:C:166:VAL:CG1	3:C:193:THR:HG21	2.47	0.45
2:E:42:LEU:C	2:E:44:ASN:H	2.20	0.45
3:C:150:PRO:HA	3:C:153:THR:HG22	1.99	0.44
1:A:542:LEU:HB2	1:A:554:ILE:HG22	1.99	0.44
1:D:349:GLU:HA	1:D:382:GLY:HA2	1.98	0.44
1:D:465:GLY:HA3	1:D:472:SER:HB3	1.99	0.44
1:D:482:LEU:HD22	1:D:529:LEU:HD11	1.99	0.44
3:F:152:VAL:O	3:F:156:LEU:HD13	2.17	0.44
4:I:45:VAL:HG23	4:I:46:ILE:HG12	1.98	0.44
5:H:40:ARG:HD3	5:H:50:LEU:HD21	2.00	0.44
1:A:261:TYR:OH	1:A:293:GLU:HG2	2.17	0.44
4:I:118:PRO:N	4:I:119:PRO:HD3	2.32	0.44
4:I:180:THR:O	4:I:183:GLN:HG2	2.18	0.44
1:A:377:ARG:O	1:A:381:VAL:HG13	2.18	0.44
1:A:519:LEU:HD12	1:A:519:LEU:H	1.83	0.44
3:C:145:THR:O	3:C:148:ILE:HD13	2.18	0.44
1:D:75:ILE:O	1:D:77:LYS:NZ	2.50	0.44
1:D:442:ASN:ND2	3:F:53:TRP:HB2	2.32	0.44
2:E:43:GLU:C	2:E:45:ILE:N	2.71	0.44
5:J:198:THR:OG1	5:J:199:GLN:N	2.51	0.44
1:D:400:LEU:CD2	1:D:449:LEU:HD11	2.48	0.43
1:D:409:LEU:HB3	1:D:410:PHE:H	1.58	0.43
1:D:519:LEU:O	1:D:521:ARG:N	2.43	0.43
1:A:623:ASP:C	1:A:625:LYS:H	2.21	0.43
1:D:607:ARG:HG3	1:D:649:PHE:HZ	1.83	0.43
1:A:617:PHE:HE1	1:A:663:THR:H	1.65	0.43
1:D:464:ARG:HG3	1:D:501:LEU:HD11	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:I:90:ASP:CG	4:I:91:ARG:N	2.72	0.43
1:A:488:ARG:O	1:A:492:LEU:HG	2.18	0.43
3:C:101:TYR:O	3:C:218:SER:OG	2.32	0.43
3:C:101:TYR:HA	5:H:104:PHE:CZ	2.54	0.43
1:D:243:VAL:O	1:D:243:VAL:HG23	2.18	0.43
2:E:110:THR:O	2:E:113:THR:OG1	2.30	0.43
5:J:115:ARG:HD2	5:J:155:GLU:HG2	2.01	0.43
1:D:201:THR:HG22	1:D:225:SER:OG	2.19	0.43
1:D:547:LEU:HD21	1:D:618:ALA:HB2	2.00	0.43
1:D:143:PRO:HD3	1:D:193:VAL:CG1	2.48	0.43
5:J:55:TYR:O	5:J:56:ARG:HD3	2.19	0.43
5:H:52:ARG:NH1	5:H:104:PHE:HA	2.34	0.43
1:A:86:LEU:HD13	1:A:251:SER:HA	2.01	0.43
1:D:388:VAL:HG12	1:D:389:TYR:N	2.33	0.43
1:D:622:TYR:CE1	1:D:657:HIS:HB2	2.53	0.43
1:D:390:SER:O	1:D:393:ILE:HG13	2.18	0.43
1:A:624:GLU:OE2	1:A:655:HIS:HA	2.19	0.42
5:J:34:ALA:H	5:J:56:ARG:HH22	1.65	0.42
3:C:112:LYS:NZ	4:G:27:GLY:O	2.52	0.42
3:F:92:GLN:C	3:F:94:TYR:H	2.22	0.42
5:H:42:SER:HB2	5:H:95:ALA:HB2	2.00	0.42
4:I:40:GLN:HG2	4:I:41:ALA:N	2.34	0.42
5:J:154:PRO:HG3	5:J:209:PRO:HB2	2.01	0.42
1:D:133:TYR:HB3	3:F:76:VAL:HG21	2.01	0.42
1:D:438:THR:HB	1:D:439:GLN:NE2	2.34	0.42
1:D:449:LEU:C	1:D:449:LEU:HD12	2.40	0.42
5:H:55:TYR:HB2	5:H:59:TRP:CE3	2.55	0.42
5:H:166:LEU:HD21	5:H:189:VAL:HG11	2.01	0.42
4:I:3:LEU:HD11	4:I:88:VAL:HG22	2.00	0.42
1:A:290:THR:O	1:A:294:VAL:HG23	2.19	0.42
1:D:350:ARG:CZ	3:F:63:PHE:HB3	2.50	0.42
4:G:19:ILE:HG23	4:G:100:THR:HG21	2.02	0.42
5:H:54:TYR:HB2	5:H:56:ARG:NH1	2.34	0.42
5:J:18:LEU:O	5:J:85:GLN:HA	2.19	0.42
2:E:79:CYS:SG	2:E:80:ALA:N	2.93	0.42
2:B:53:ASN:O	2:B:55:THR:N	2.49	0.42
1:D:242:PHE:HE1	1:D:289:THR:HG23	1.85	0.42
4:G:44:LEU:HD11	5:H:106:ALA:HB1	2.02	0.42
1:A:426:HIS:O	1:A:430:ARG:HG3	2.19	0.42
1:D:600:PRO:HD2	1:D:667:VAL:O	2.20	0.42
4:I:6:PRO:O	4:I:100:THR:HG22	2.20	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:150:PRO:O	3:C:153:THR:HG22	2.20	0.42
1:D:661:LEU:CD2	1:D:667:VAL:HG22	2.50	0.42
4:I:179:LEU:HB2	4:I:183:GLN:HG3	2.02	0.42
1:A:41:THR:O	1:A:43:LEU:N	2.41	0.41
3:C:176:SER:OG	3:C:177:LEU:N	2.53	0.41
1:D:318:LEU:O	1:D:321:SER:HB2	2.20	0.41
1:A:111:VAL:HG23	1:A:112:ILE:N	2.36	0.41
1:D:134:ILE:HD11	1:D:154:HIS:NE2	2.35	0.41
1:A:168:GLN:HG3	1:A:183:LYS:HB3	2.02	0.41
3:C:163:TRP:CD1	3:C:212:LYS:HB2	2.56	0.41
2:E:51:VAL:HG22	2:E:61:LEU:H	1.85	0.41
2:B:47:ASP:HB2	2:B:65:ASN:HB2	2.01	0.41
1:A:41:THR:O	1:A:42:GLU:HG2	2.20	0.41
4:G:195:THR:HA	4:G:199:SER:O	2.20	0.41
5:J:208:LYS:HE3	5:J:208:LYS:HB3	1.93	0.41
5:H:162:ASN:OD1	5:H:202:ILE:HG22	2.21	0.41
1:A:355:LEU:HD23	1:A:355:LEU:HA	1.87	0.41
4:I:86:CYS:O	4:I:97:GLY:N	2.53	0.41
1:A:84:ILE:HG22	1:A:85:ALA:N	2.36	0.41
1:A:619:LEU:HD23	1:A:619:LEU:HA	1.92	0.41
1:D:527:TRP:HB3	1:D:532:TYR:CE2	2.56	0.41
1:A:397:THR:HG22	1:A:446:TYR:HB2	2.02	0.41
3:C:139:THR:HA	3:C:217:VAL:O	2.20	0.41
1:D:44:MET:HE1	1:D:50:LEU:HB3	2.02	0.41
1:D:636:SER:H	1:D:639:VAL:HG22	1.86	0.41
1:D:649:PHE:O	1:D:649:PHE:CD1	2.74	0.41
4:I:15:GLN:O	4:I:76:VAL:HG12	2.19	0.41
5:H:99:CYS:O	5:H:111:GLY:N	2.53	0.41
5:H:196:LEU:HD23	5:H:196:LEU:H	1.85	0.41
1:D:583:ILE:HG22	1:D:584:MET:HG2	2.03	0.40
2:E:106:GLU:HA	2:E:109:THR:HG22	2.03	0.40
1:A:137:MET:HE3	1:A:137:MET:HB2	1.87	0.40
1:A:643:ILE:HG23	1:A:648:TYR:CD2	2.57	0.40
3:C:95:THR:OG1	3:C:96:LYS:N	2.54	0.40
4:I:148:LYS:HA	4:I:153:PRO:HA	2.04	0.40
1:A:202:LYS:H	1:A:202:LYS:HG2	1.71	0.40
1:D:640:GLN:O	1:D:643:ILE:HG22	2.21	0.40
5:H:40:ARG:HB3	5:H:50:LEU:HD11	2.03	0.40
5:J:98:TYR:CD2	5:J:113:GLY:HA3	2.57	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	656/658 (100%)	605 (92%)	44 (7%)	7 (1%)	14	46
1	D	652/658 (99%)	593 (91%)	44 (7%)	15 (2%)	6	31
2	B	105/112 (94%)	90 (86%)	13 (12%)	2 (2%)	8	34
2	E	84/112 (75%)	73 (87%)	10 (12%)	1 (1%)	13	44
3	C	178/191 (93%)	162 (91%)	14 (8%)	2 (1%)	14	46
3	F	176/191 (92%)	154 (88%)	19 (11%)	3 (2%)	9	36
4	G	202/213 (95%)	184 (91%)	16 (8%)	2 (1%)	15	49
4	I	202/213 (95%)	178 (88%)	21 (10%)	3 (2%)	10	39
5	H	206/234 (88%)	183 (89%)	19 (9%)	4 (2%)	8	34
5	J	208/234 (89%)	184 (88%)	20 (10%)	4 (2%)	8	34
All	All	2669/2816 (95%)	2406 (90%)	220 (8%)	43 (2%)	9	38

All (43) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	29	ILE
2	B	102	GLY
1	D	530	PRO
1	D	562	GLY
1	D	573	LEU
2	E	44	ASN
3	F	145	THR
5	H	130	PRO
4	I	118	PRO
5	J	108	ASP
5	J	175	ALA
1	A	30	GLU
1	A	527	TRP
1	D	61	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	548	ILE
1	D	571	THR
1	D	589	GLN
3	F	159	ILE
5	H	109	PHE
4	I	117	PHE
1	A	42	GLU
1	A	624	GLU
1	D	408	PRO
1	D	409	LEU
1	D	563	SER
1	D	581	PRO
4	G	150	ASP
5	H	119	SER
4	I	150	ASP
1	A	524	ARG
2	B	70	GLY
3	C	159	ILE
5	H	16	GLN
3	C	148	ILE
1	D	533	LYS
1	D	582	VAL
3	F	146	PRO
1	A	522	GLU
1	D	587	CYS
5	J	177	LEU
1	D	590	GLY
4	G	66	GLY
5	J	176	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	542/562 (96%)	534 (98%)	8 (2%)	65 82
1	D	528/562 (94%)	515 (98%)	13 (2%)	47 73

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	B	85/98 (87%)	81 (95%)	4 (5%)	26 58
2	E	76/98 (78%)	71 (93%)	5 (7%)	16 47
3	C	152/169 (90%)	150 (99%)	2 (1%)	69 84
3	F	147/169 (87%)	142 (97%)	5 (3%)	37 66
4	G	137/178 (77%)	134 (98%)	3 (2%)	52 76
4	I	133/178 (75%)	131 (98%)	2 (2%)	65 82
5	H	163/205 (80%)	160 (98%)	3 (2%)	59 80
5	J	162/205 (79%)	159 (98%)	3 (2%)	57 79
All	All	2125/2424 (88%)	2077 (98%)	48 (2%)	50 75

All (48) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	161	SER
1	A	205	PRO
1	A	216	LEU
1	A	312	CYS
1	A	457	LEU
1	A	586	LYS
1	A	587	CYS
1	A	605	PHE
2	B	71	SER
2	B	73	GLN
2	B	98	SER
2	B	129	ASN
3	C	99	CYS
3	C	141	PHE
1	D	32	HIS
1	D	120	CYS
1	D	150	GLN
1	D	194	LEU
1	D	317	TRP
1	D	443	LEU
1	D	488	ARG
1	D	493	SER
1	D	556	SER
1	D	597	ARG
1	D	607	ARG
1	D	636	SER

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	637	GLN
2	E	39	LEU
2	E	40	LEU
2	E	52	SER
2	E	106	GLU
2	E	118	PHE
3	F	99	CYS
3	F	141	PHE
3	F	142	TYR
3	F	178	ASP
3	F	191	HIS
4	G	25	ASN
4	G	86	CYS
4	G	133	CYS
5	H	68	GLN
5	H	131	LEU
5	H	147	CYS
4	I	35	GLN
4	I	169	ASN
5	J	42	SER
5	J	147	CYS
5	J	148	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (3) such sidechains are listed below:

Mol	Chain	Res	Type
2	B	81	ASN
1	D	234	HIS
1	D	344	GLN

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)

6 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	$\#\|Z\| > 2$
6	NAG	L	1	6,1	14,14,15	1.30	1 (7%)	17,19,21	1.62	1 (5%)
6	NAG	L	2	6	14,14,15	0.86	1 (7%)	17,19,21	0.99	1 (5%)
6	BMA	L	3	6	11,11,12	0.93	0	15,15,17	0.69	0
6	NAG	T	1	6,1	14,14,15	0.95	2 (14%)	17,19,21	0.75	0
6	NAG	T	2	6	14,14,15	0.78	1 (7%)	17,19,21	1.70	1 (5%)
6	BMA	T	3	6	11,11,12	0.88	0	15,15,17	0.66	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
6	NAG	L	1	6,1	-	2/6/23/26	0/1/1/1
6	NAG	L	2	6	-	2/6/23/26	0/1/1/1
6	BMA	L	3	6	-	2/2/19/22	0/1/1/1
6	NAG	T	1	6,1	-	0/6/23/26	0/1/1/1
6	NAG	T	2	6	-	1/6/23/26	0/1/1/1
6	BMA	T	3	6	-	1/2/19/22	0/1/1/1

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	L	1	NAG	O5-C1	4.65	1.51	1.43
6	T	2	NAG	O5-C1	2.70	1.48	1.43
6	T	1	NAG	O5-C1	2.70	1.48	1.43
6	L	2	NAG	C1-C2	2.55	1.56	1.52
6	T	1	NAG	C1-C2	2.04	1.55	1.52

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	T	2	NAG	C1-O5-C5	6.77	121.36	112.19
6	L	1	NAG	C1-O5-C5	6.52	121.02	112.19
6	L	2	NAG	C1-O5-C5	3.39	116.79	112.19

There are no chirality outliers.

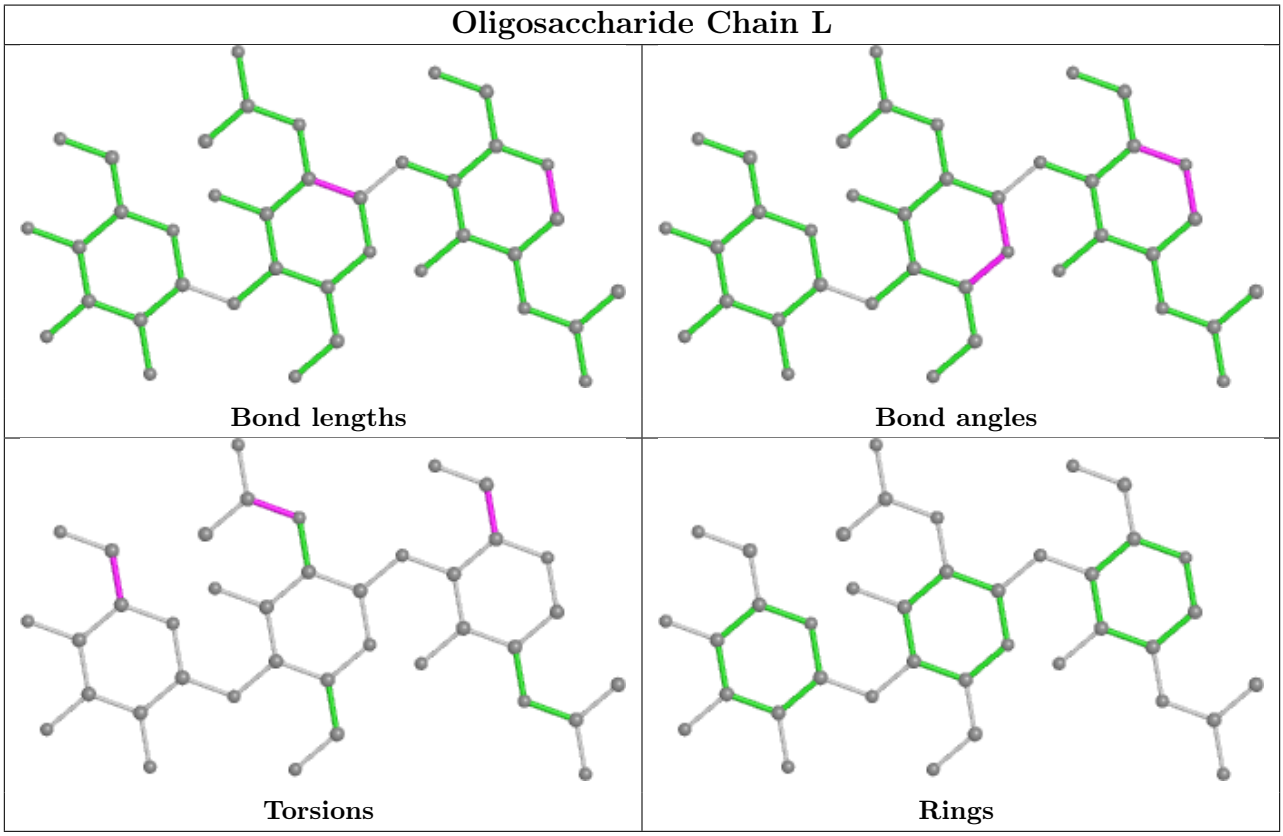
All (8) torsion outliers are listed below:

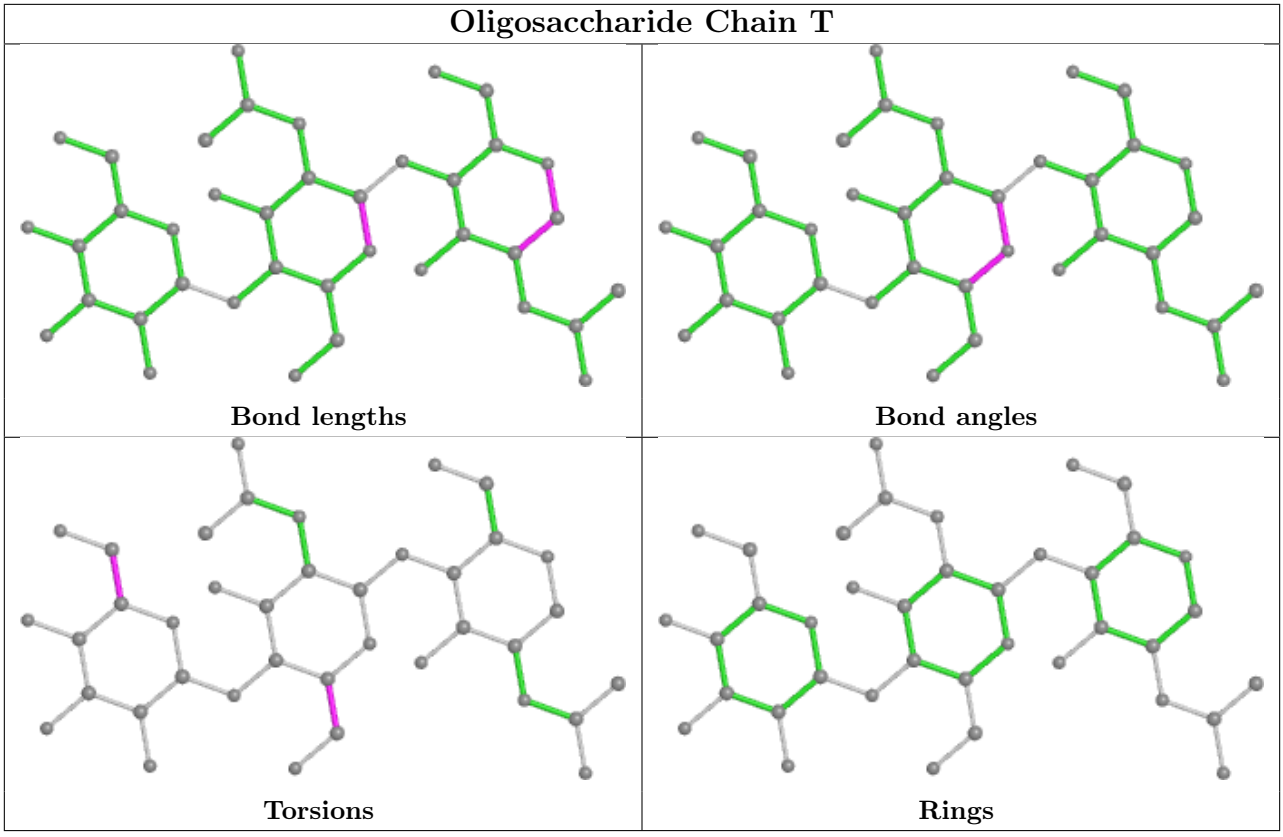
Mol	Chain	Res	Type	Atoms
6	L	1	NAG	C4-C5-C6-O6
6	L	3	BMA	O5-C5-C6-O6
6	L	2	NAG	C8-C7-N2-C2
6	L	2	NAG	O7-C7-N2-C2
6	L	1	NAG	O5-C5-C6-O6
6	L	3	BMA	C4-C5-C6-O6
6	T	2	NAG	C4-C5-C6-O6
6	T	3	BMA	C4-C5-C6-O6

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)

8 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	$\#\|Z\| > 2$
7	NAG	C	302	3	14,14,15	0.40	0	17,19,21	0.46	0
7	NAG	C	301	3	14,14,15	0.23	0	17,19,21	0.42	0
7	NAG	B	201	2	14,14,15	0.47	0	17,19,21	0.45	0
7	NAG	A	701	1	14,14,15	0.71	1 (7%)	17,19,21	0.61	0
7	NAG	E	202	2	14,14,15	0.36	0	17,19,21	0.61	0
7	NAG	B	202	2	14,14,15	0.33	0	17,19,21	0.50	0
7	NAG	D	701	1	14,14,15	0.48	0	17,19,21	0.46	0
7	NAG	E	201	2	14,14,15	0.72	1 (7%)	17,19,21	0.76	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
7	NAG	C	302	3	-	2/6/23/26	0/1/1/1
7	NAG	C	301	3	-	0/6/23/26	0/1/1/1
7	NAG	B	201	2	-	2/6/23/26	0/1/1/1
7	NAG	A	701	1	-	2/6/23/26	0/1/1/1
7	NAG	E	202	2	-	3/6/23/26	0/1/1/1
7	NAG	B	202	2	-	0/6/23/26	0/1/1/1
7	NAG	D	701	1	-	4/6/23/26	0/1/1/1
7	NAG	E	201	2	-	0/6/23/26	0/1/1/1

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	A	701	NAG	C1-C2	2.48	1.56	1.52
7	E	201	NAG	O5-C1	-2.32	1.40	1.43

There are no bond angle outliers.

There are no chirality outliers.

All (13) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
7	D	701	NAG	C4-C5-C6-O6
7	C	302	NAG	O5-C5-C6-O6
7	D	701	NAG	O5-C5-C6-O6
7	E	202	NAG	O5-C5-C6-O6
7	C	302	NAG	C4-C5-C6-O6
7	B	201	NAG	O5-C5-C6-O6
7	E	202	NAG	C4-C5-C6-O6
7	B	201	NAG	C4-C5-C6-O6
7	A	701	NAG	C4-C5-C6-O6
7	D	701	NAG	C3-C2-N2-C7
7	E	202	NAG	C3-C2-N2-C7
7	D	701	NAG	C1-C2-N2-C7
7	A	701	NAG	O5-C5-C6-O6

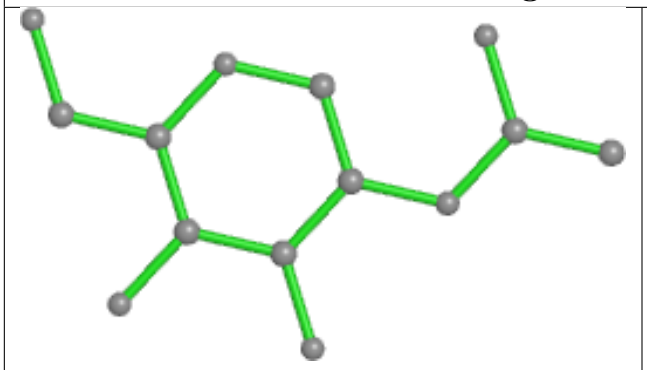
There are no ring outliers.

2 monomers are involved in 2 short contacts:

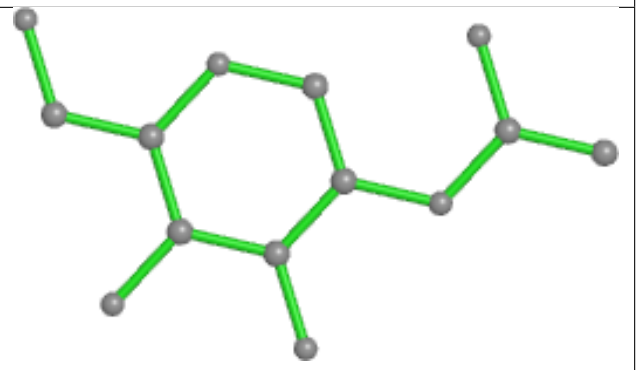
Mol	Chain	Res	Type	Clashes	Symm-Clashes
7	C	302	NAG	1	0
7	E	202	NAG	1	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

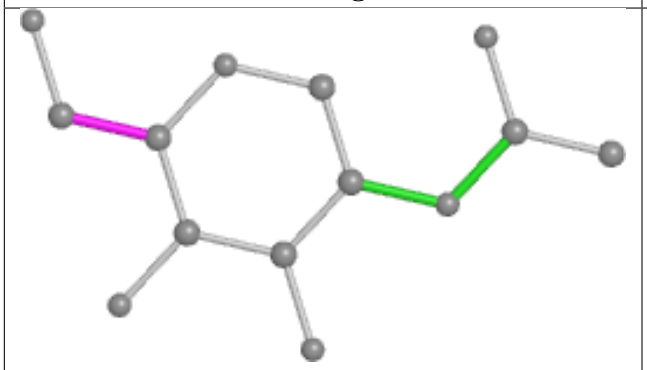
Ligand NAG C 302



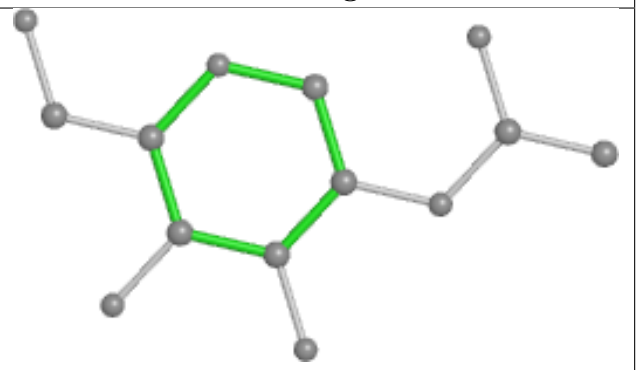
Bond lengths



Bond angles

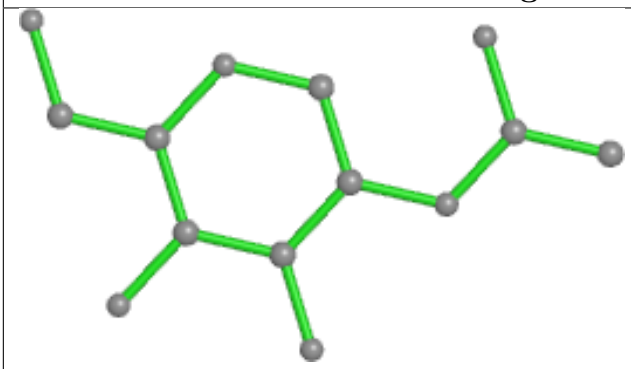


Torsions

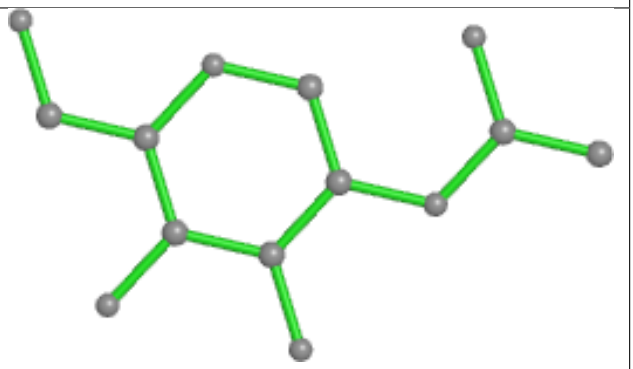


Rings

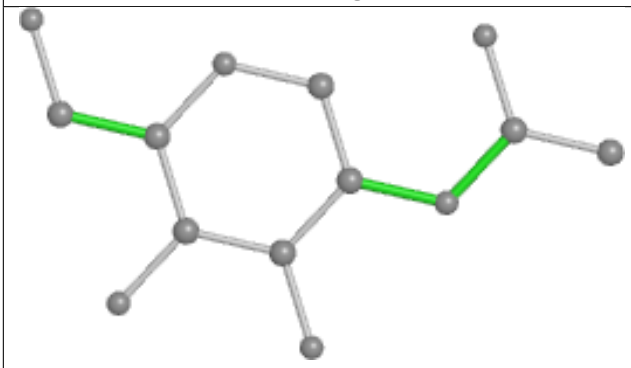
Ligand NAG C 301



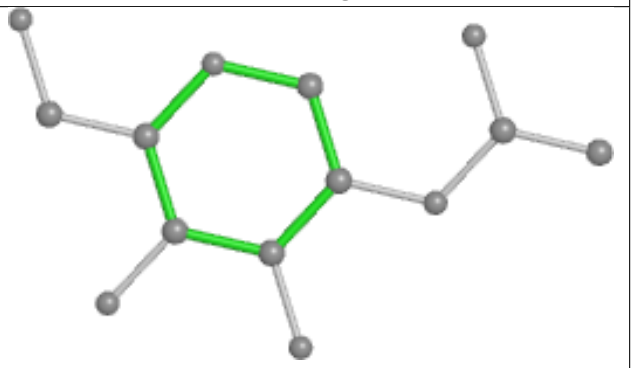
Bond lengths



Bond angles

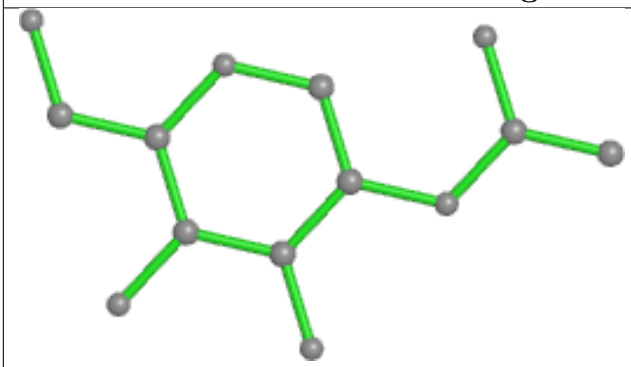


Torsions

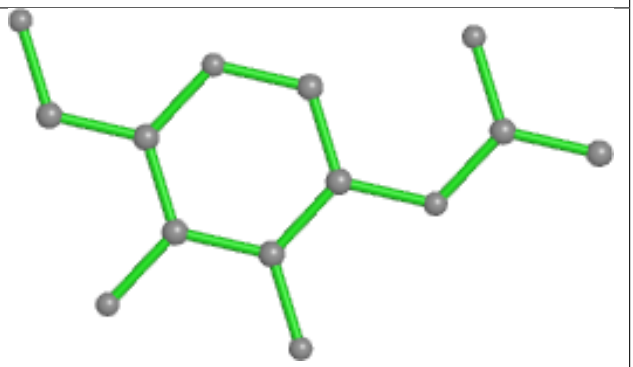


Rings

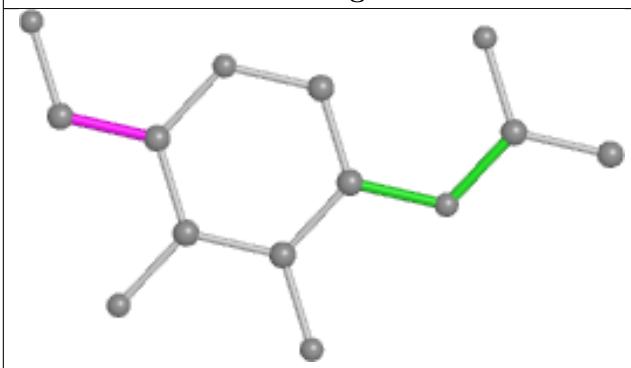
Ligand NAG B 201



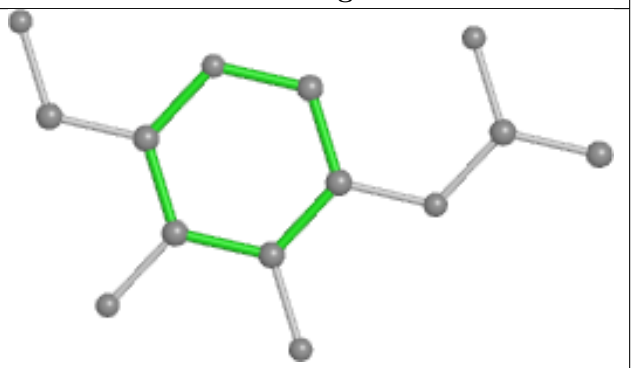
Bond lengths



Bond angles

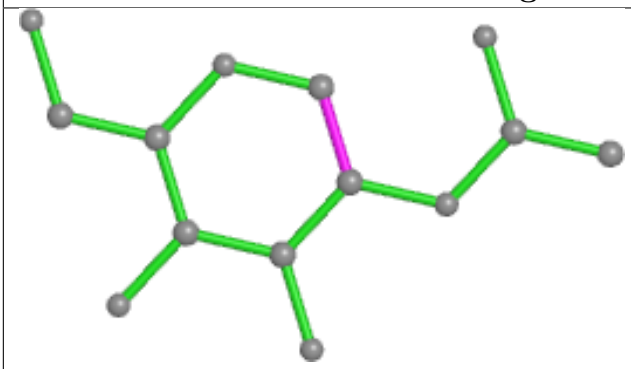


Torsions

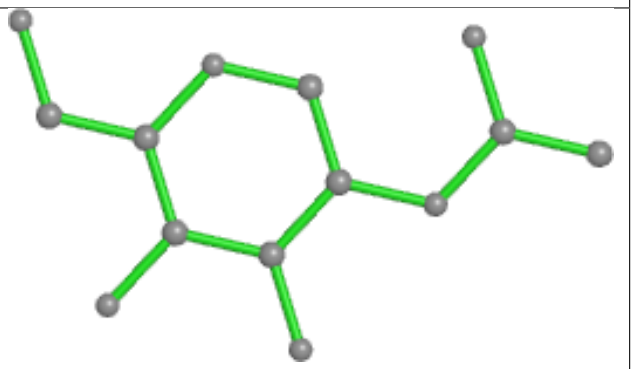


Rings

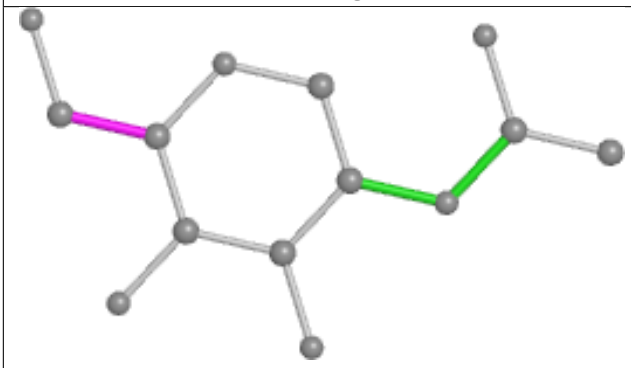
Ligand NAG A 701



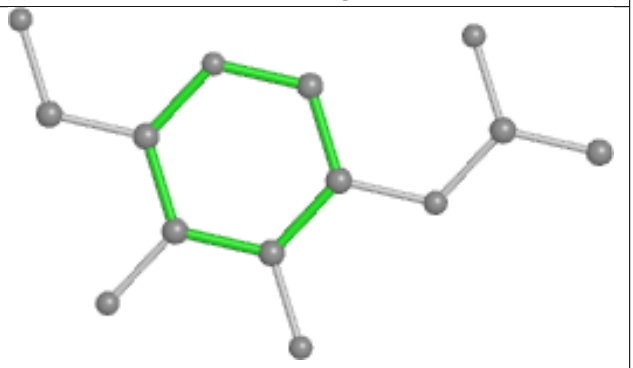
Bond lengths



Bond angles

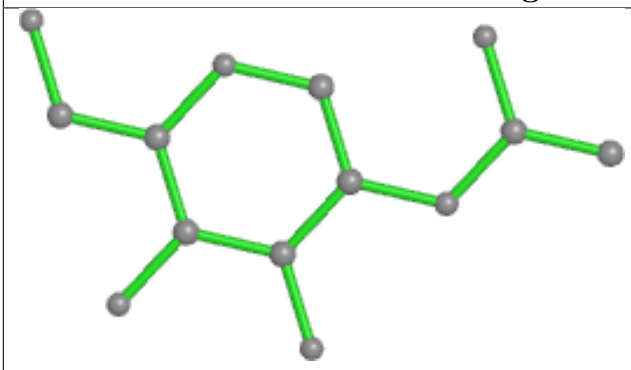


Torsions

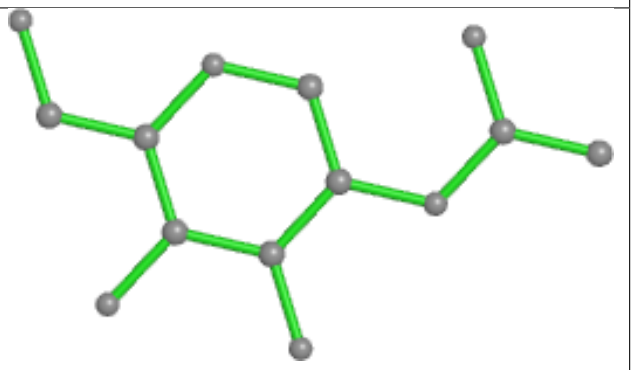


Rings

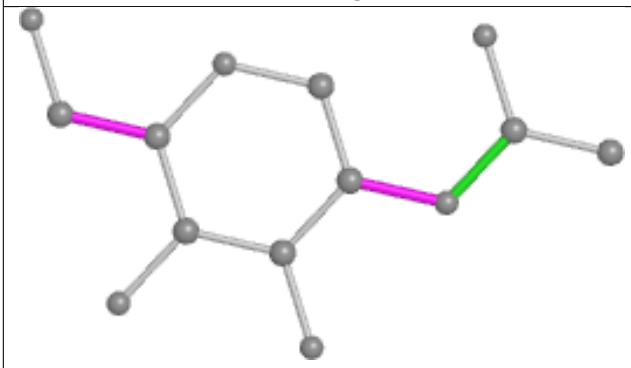
Ligand NAG E 202



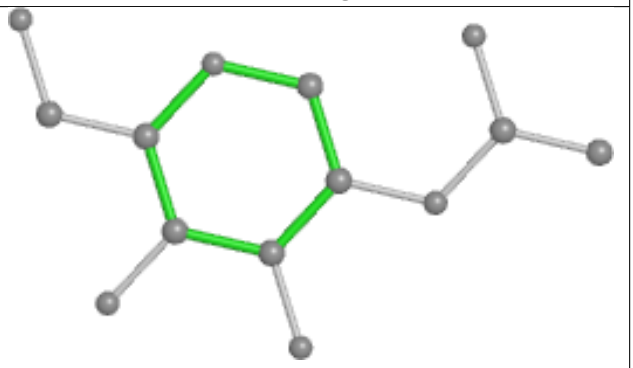
Bond lengths



Bond angles

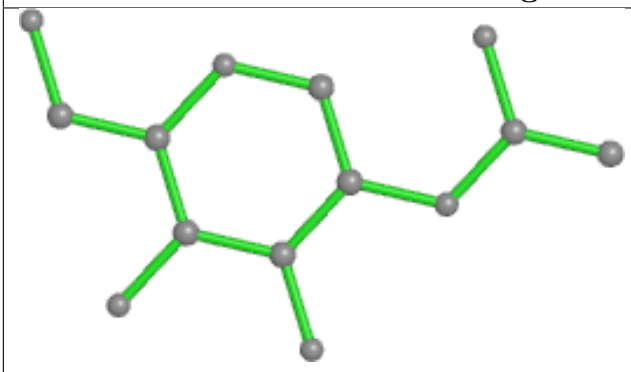


Torsions

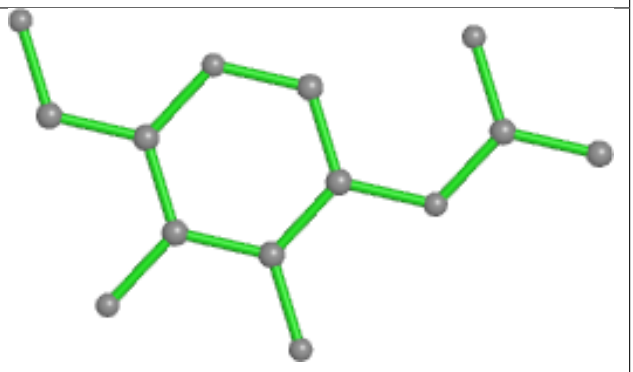


Rings

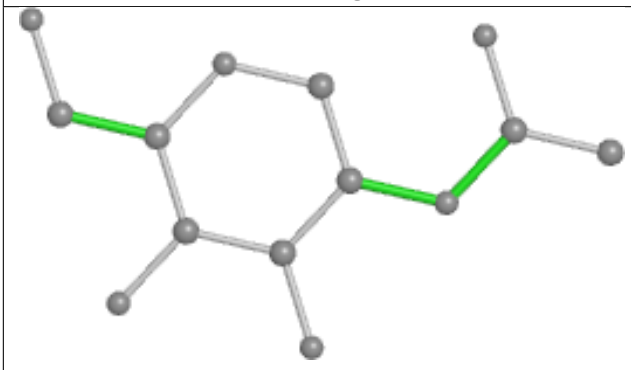
Ligand NAG B 202



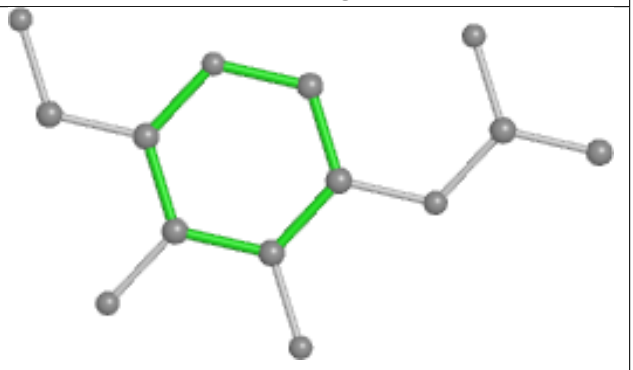
Bond lengths



Bond angles

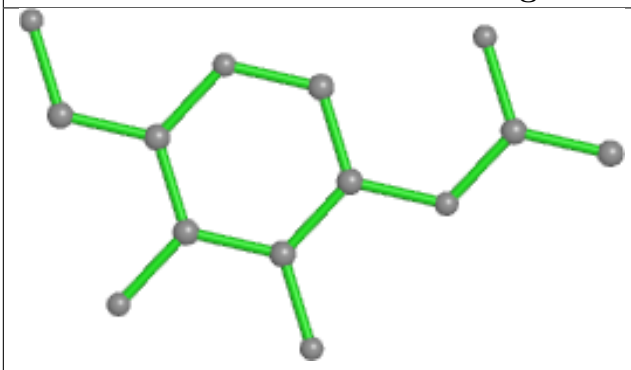


Torsions

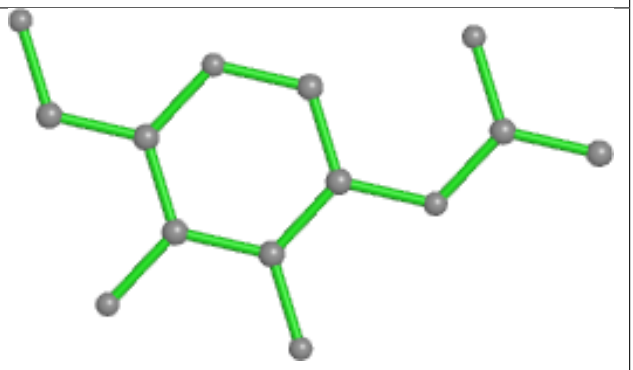


Rings

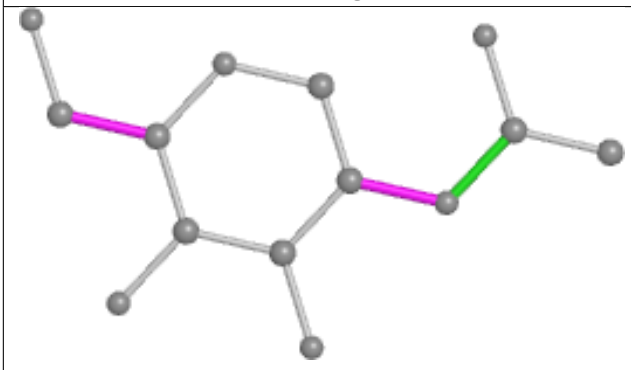
Ligand NAG D 701



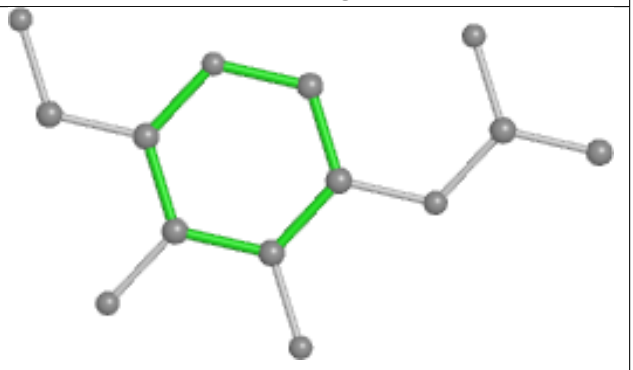
Bond lengths



Bond angles

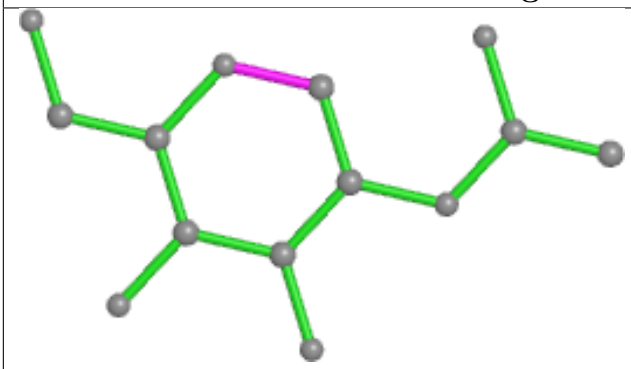


Torsions

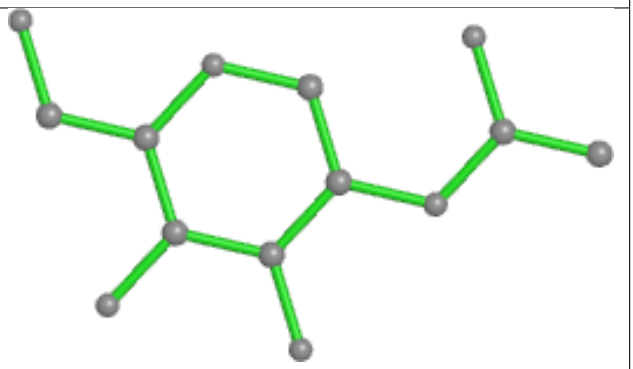


Rings

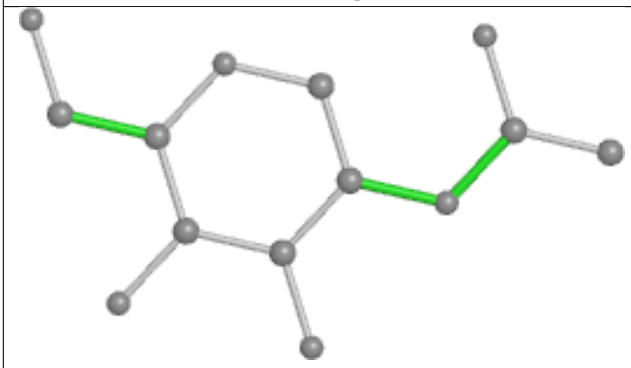
Ligand NAG E 201



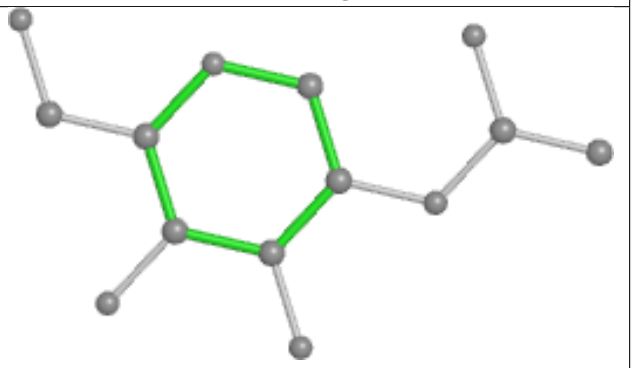
Bond lengths



Bond angles



Torsions



Rings

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	658/658 (100%)	0.44	19 (2%) 51 54	74, 108, 172, 256	0
1	D	654/658 (99%)	0.69	79 (12%) 4 4	87, 150, 228, 313	0
2	B	107/112 (95%)	0.47	7 (6%) 18 21	91, 136, 213, 247	0
2	E	92/112 (82%)	0.76	18 (19%) 1 1	111, 169, 216, 276	0
3	C	180/191 (94%)	0.52	21 (11%) 4 5	87, 128, 173, 231	0
3	F	178/191 (93%)	0.79	33 (18%) 1 1	105, 145, 196, 238	0
4	G	204/213 (95%)	0.71	32 (15%) 2 2	121, 165, 224, 284	0
4	I	204/213 (95%)	1.08	59 (28%) 0 0	134, 190, 273, 301	0
5	H	210/234 (89%)	0.61	32 (15%) 2 2	123, 167, 230, 290	0
5	J	212/234 (90%)	1.05	53 (25%) 0 0	122, 179, 247, 282	0
All	All	2699/2816 (95%)	0.67	353 (13%) 3 4	74, 148, 228, 313	0

All (353) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
4	I	17	ALA	9.0
4	I	174	SER	7.0
3	F	140	TYR	6.5
5	J	187	SER	5.9
4	G	186	SER	5.8
1	D	119	ALA	5.5
4	I	160	THR	5.3
4	I	142	ALA	5.3
5	J	186	SER	5.3
4	G	76	VAL	5.3
4	I	178	SER	5.3
1	D	564	ALA	5.2
4	I	73	ILE	5.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
4	I	33	TRP	5.1
2	E	51	VAL	5.1
5	J	189	VAL	5.0
5	J	171	HIS	5.0
5	J	145	LEU	4.9
1	D	580	SER	4.9
1	D	592	VAL	4.8
4	I	96	PHE	4.8
4	I	130	THR	4.8
5	J	100	ALA	4.8
4	I	175	SER	4.8
5	H	201	TYR	4.7
1	A	592	VAL	4.7
1	D	668	MET	4.7
5	H	147	CYS	4.7
2	E	61	LEU	4.6
5	J	81	GLN	4.6
3	F	202	PRO	4.6
4	I	118	PRO	4.6
4	I	3	LEU	4.6
5	J	147	CYS	4.5
1	D	532	TYR	4.5
2	E	50	LEU	4.4
4	I	1	TYR	4.4
5	H	36	TRP	4.4
3	F	141	PHE	4.4
1	A	50	LEU	4.3
1	D	552	PHE	4.3
3	F	88	PHE	4.3
4	I	161	THR	4.3
4	G	117	PHE	4.3
3	C	144	PRO	4.3
5	H	218	VAL	4.3
4	G	116	LEU	4.2
5	J	105	ASP	4.2
3	C	117	TYR	4.2
4	I	71	LEU	4.2
3	F	215	LEU	4.1
5	J	143	ALA	4.1
4	G	145	VAL	4.1
4	G	115	THR	4.0
4	I	74	SER	4.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
4	I	60	PHE	4.0
2	E	60	SER	4.0
5	J	133	PRO	4.0
5	J	144	ALA	4.0
1	D	18	ALA	4.0
4	I	57	PRO	3.9
4	G	187	HIS	3.9
5	H	203	CYS	3.9
1	D	634	ILE	3.9
5	J	188	VAL	3.8
1	D	383	TYR	3.8
5	J	197	GLY	3.8
5	J	106	ALA	3.8
1	D	553	ILE	3.8
3	F	177	LEU	3.8
4	I	19	ILE	3.8
3	F	195	VAL	3.7
3	F	182	PHE	3.7
4	G	118	PRO	3.7
5	H	187	SER	3.7
1	D	651	PHE	3.7
5	J	37	ASN	3.7
4	I	141	GLY	3.6
3	F	139	THR	3.6
3	F	61	VAL	3.6
4	I	94	ASN	3.6
3	F	142	TYR	3.6
4	I	89	TRP	3.6
5	J	126	PRO	3.6
1	D	112	ILE	3.6
2	B	58	GLY	3.6
4	I	133	CYS	3.6
4	G	135	ILE	3.6
4	I	173	ALA	3.6
1	D	137	MET	3.5
4	I	114	VAL	3.5
5	J	150	LYS	3.5
4	I	86	CYS	3.5
1	D	27	LEU	3.5
1	D	65	LEU	3.5
1	D	581	PRO	3.5
1	D	635	THR	3.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
5	J	130	PRO	3.4
5	J	191	VAL	3.4
5	J	7	SER	3.4
1	D	350	ARG	3.4
3	C	116	PHE	3.4
4	G	147	TRP	3.4
1	D	453	LEU	3.4
1	D	667	VAL	3.4
3	F	137	PRO	3.4
2	E	89	PHE	3.4
5	J	149	VAL	3.3
5	H	145	LEU	3.3
1	D	356	MET	3.3
4	G	114	VAL	3.3
1	D	652	ASP	3.3
3	F	52	VAL	3.3
2	E	59	PHE	3.3
3	C	146	PRO	3.3
2	B	70	GLY	3.3
1	D	351	LEU	3.3
5	J	104	PHE	3.3
1	D	120	CYS	3.3
1	D	313	VAL	3.2
4	G	194	VAL	3.2
5	J	132	ALA	3.2
5	J	129	PHE	3.2
4	I	117	PHE	3.2
4	G	87	GLN	3.2
3	F	125	TRP	3.2
2	E	44	ASN	3.2
5	H	148	LEU	3.1
5	J	194	SER	3.1
1	A	186	THR	3.1
5	J	193	SER	3.1
1	D	136	THR	3.1
4	I	59	ARG	3.1
4	I	132	VAL	3.1
5	J	52	ARG	3.1
4	I	127	ASN	3.1
5	J	146	GLY	3.1
3	F	86	HIS	3.1
3	C	97	ALA	3.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
5	J	107	PHE	3.1
2	B	62	ALA	3.0
3	C	142	TYR	3.0
3	F	194	TYR	3.0
3	C	147	ASP	3.0
4	G	132	VAL	3.0
4	I	76	VAL	3.0
5	H	128	VAL	3.0
1	D	600	PRO	3.0
3	C	208	CYS	3.0
4	G	112	PRO	3.0
2	E	33	GLN	3.0
4	I	34	TYR	2.9
5	H	40	ARG	2.9
5	J	101	ARG	2.9
5	H	202	ILE	2.9
4	I	95	ILE	2.9
4	I	16	THR	2.9
4	I	179	LEU	2.9
5	J	172	THR	2.9
3	F	144	PRO	2.9
4	I	31	VAL	2.9
1	D	198	PHE	2.9
1	A	187	GLU	2.9
1	D	102	VAL	2.9
1	D	529	LEU	2.9
1	D	547	LEU	2.9
4	I	62	GLY	2.9
5	H	50	LEU	2.9
3	F	143	GLY	2.9
2	B	61	LEU	2.9
4	I	61	SER	2.9
3	F	181	THR	2.9
5	H	161	TRP	2.8
5	J	153	PHE	2.8
2	E	123	LEU	2.8
5	H	163	SER	2.8
5	J	184	SER	2.8
4	G	34	TYR	2.8
3	C	191	HIS	2.8
4	I	119	PRO	2.8
1	D	632	THR	2.8

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
3	C	215	LEU	2.8
2	B	60	SER	2.8
5	J	76	ASP	2.8
1	D	312	CYS	2.8
3	F	44	TRP	2.8
2	B	33	GLN	2.8
3	F	184	VAL	2.8
4	I	176	TYR	2.8
4	I	131	LEU	2.7
1	D	530	PRO	2.7
5	J	220	PRO	2.7
1	A	40	TRP	2.7
4	G	134	LEU	2.7
1	A	167	PHE	2.7
4	I	138	PHE	2.7
4	I	45	VAL	2.7
3	C	190	SER	2.7
5	J	205	VAL	2.7
4	I	153	PRO	2.7
5	H	205	VAL	2.7
1	D	575	SER	2.7
1	D	126	LEU	2.7
1	D	545	ILE	2.7
1	D	617	PHE	2.6
5	J	131	LEU	2.6
1	D	355	LEU	2.6
4	I	42	PRO	2.6
1	D	565	LEU	2.6
1	D	599	ILE	2.6
3	F	53	TRP	2.6
3	F	180	GLY	2.6
5	J	124	LYS	2.6
2	E	31	VAL	2.6
1	D	633	TYR	2.6
3	C	206	HIS	2.6
5	H	149	VAL	2.6
5	J	190	THR	2.6
1	D	138	LEU	2.6
4	I	143	VAL	2.6
5	H	185	LEU	2.6
2	E	62	ALA	2.5
4	I	172	ALA	2.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
4	G	104	VAL	2.5
4	G	192	CYS	2.5
4	I	72	THR	2.5
1	D	107	VAL	2.5
3	F	126	ASN	2.5
1	D	614	PHE	2.5
1	A	34	SER	2.5
5	H	54	TYR	2.5
3	C	162	LEU	2.5
5	H	62	ASP	2.5
5	J	128	VAL	2.5
5	J	4	LEU	2.5
1	A	163	ASN	2.5
1	A	435	ASN	2.5
2	E	120	VAL	2.5
5	J	170	VAL	2.5
2	E	118	PHE	2.5
3	C	94	TYR	2.5
4	G	199	SER	2.5
4	I	152	SER	2.5
5	J	36	TRP	2.5
3	C	143	GLY	2.5
4	I	124	LEU	2.5
5	J	151	ASP	2.5
1	A	577	LEU	2.4
1	A	47	VAL	2.4
5	J	53	THR	2.4
1	D	577	LEU	2.4
4	I	80	ASP	2.4
4	I	180	THR	2.4
3	C	115	CYS	2.4
5	H	61	TYR	2.4
4	G	184	TRP	2.4
4	G	185	LYS	2.4
1	A	593	ALA	2.4
3	F	78	LEU	2.4
1	D	345	SER	2.4
5	J	196	LEU	2.4
4	G	176	TYR	2.4
3	F	87	THR	2.4
1	A	673	LEU	2.4
1	D	55	LEU	2.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	D	662	THR	2.4
1	A	168	GLN	2.3
1	D	538	LEU	2.3
1	D	317	TRP	2.3
4	I	87	GLN	2.3
2	E	52	SER	2.3
5	H	59	TRP	2.3
5	J	102	GLY	2.3
1	D	593	ALA	2.3
5	J	47	LEU	2.3
1	D	437	THR	2.3
4	G	202	GLU	2.3
2	E	28	CYS	2.3
5	H	99	CYS	2.3
1	D	314	ASP	2.3
1	D	650	ASP	2.3
5	H	44	SER	2.3
5	J	176	VAL	2.3
5	J	148	LEU	2.3
1	D	117	SER	2.2
1	D	597	ARG	2.2
3	C	218	SER	2.2
4	G	102	LEU	2.2
5	H	19	SER	2.2
3	F	217	VAL	2.2
1	D	598	GLN	2.2
1	D	629	GLU	2.2
5	J	203	CYS	2.2
4	G	178	SER	2.2
1	D	616	GLY	2.2
4	G	200	THR	2.2
3	C	182	PHE	2.2
2	E	55	THR	2.2
5	H	162	ASN	2.2
1	A	184	ARG	2.2
4	G	154	VAL	2.2
4	I	134	LEU	2.2
3	F	129	PHE	2.2
1	D	563	SER	2.2
4	I	79	GLY	2.2
1	A	283	LEU	2.2
1	D	511	ASP	2.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
5	H	53	THR	2.2
1	D	431	GLU	2.2
1	A	579	LEU	2.2
4	I	115	THR	2.2
2	B	123	LEU	2.1
1	D	25	LEU	2.1
4	G	204	THR	2.1
3	F	116	PHE	2.1
5	H	220	PRO	2.1
3	C	125	TRP	2.1
1	D	544	ILE	2.1
3	F	46	PRO	2.1
1	A	591	ALA	2.1
1	D	381	VAL	2.1
5	H	85	GLN	2.1
4	I	177	LEU	2.1
5	H	57	SER	2.1
5	H	82	PHE	2.1
3	C	139	THR	2.1
1	D	153	CYS	2.1
1	D	354	MET	2.1
1	D	152	ARG	2.1
4	G	73	ILE	2.1
5	H	10	GLY	2.1
2	E	56	CYS	2.1
3	F	152	VAL	2.1
1	D	404	TYR	2.1
4	G	45	VAL	2.1
4	G	131	LEU	2.1
4	I	84	TYR	2.1
2	E	92	ILE	2.1
3	C	217	VAL	2.0
5	H	200	THR	2.0
1	D	513	PHE	2.0
1	D	68	MET	2.0
1	D	669	GLU	2.0
3	F	179	GLY	2.0
1	D	663	THR	2.0
1	D	133	TYR	2.0
1	D	586	LYS	2.0
1	D	392	LEU	2.0
5	J	35	THR	2.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
3	F	138	CYS	2.0
1	A	138	LEU	2.0
1	D	115	LEU	2.0
4	I	18	ARG	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)

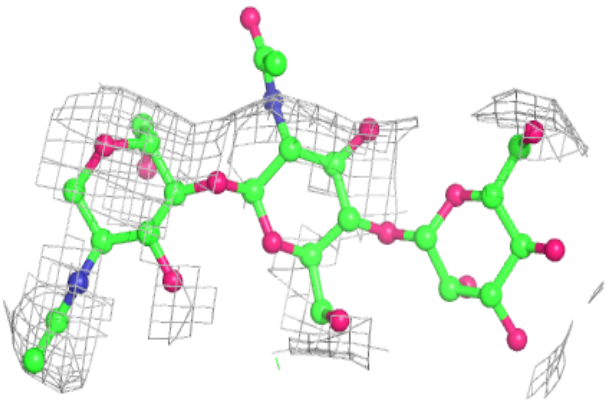
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

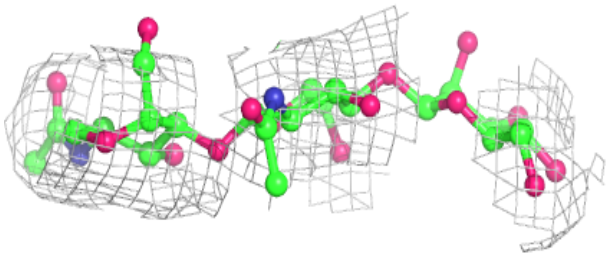
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
6	NAG	L	2	14/15	0.71	0.36	167,188,203,222	0
6	BMA	T	3	11/12	0.75	0.19	180,201,228,233	0
6	NAG	L	1	14/15	0.86	0.23	121,132,170,182	0
6	NAG	T	2	14/15	0.88	0.24	160,168,194,214	0
6	BMA	L	3	11/12	0.88	0.20	161,177,193,197	0
6	NAG	T	1	14/15	0.93	0.20	123,137,160,173	0

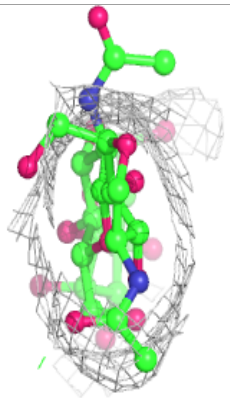
The following is a graphical depiction of the model fit to experimental electron density for oligosaccharide. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around Chain L:

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

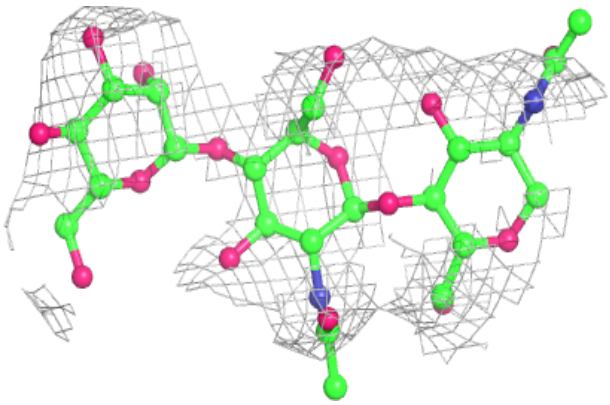


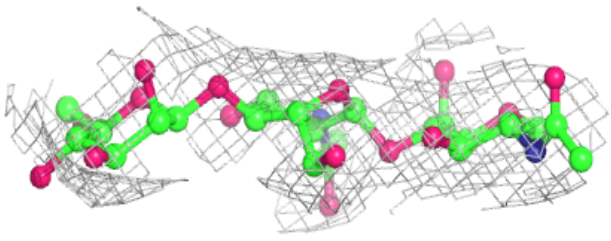


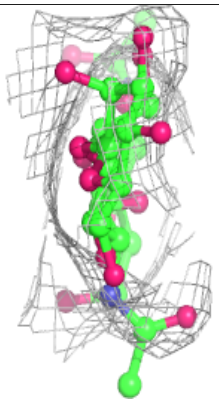


Electron density around Chain T:

$2mF_o$-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)

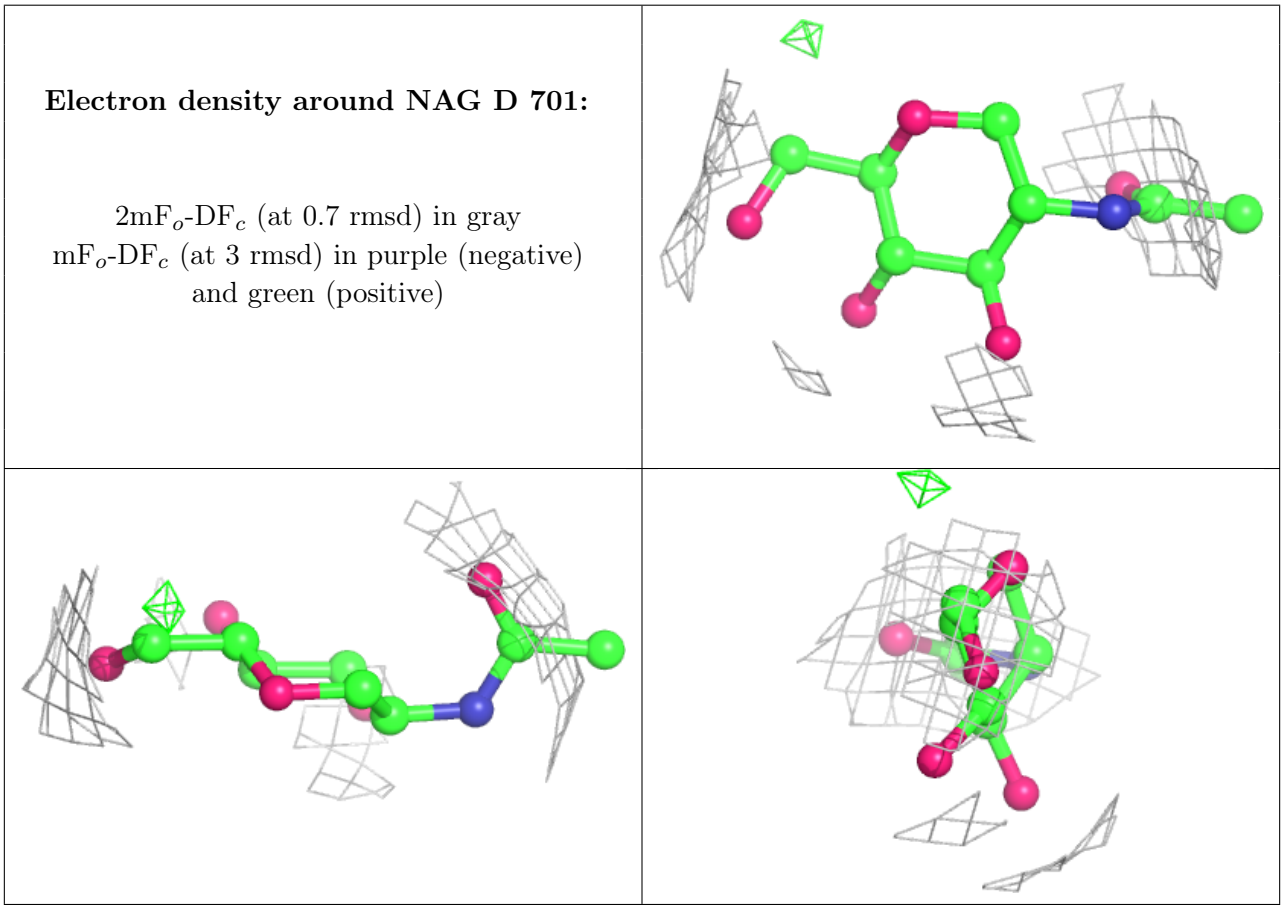
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' 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
7	NAG	D	701	14/15	0.75	0.20	184,200,209,211	0
7	NAG	C	301	14/15	0.78	0.27	208,222,229,232	0
7	NAG	E	202	14/15	0.78	0.26	179,198,221,225	0
7	NAG	C	302	14/15	0.82	0.21	189,243,247,249	0
7	NAG	E	201	14/15	0.84	0.58	201,211,225,227	0
7	NAG	B	202	14/15	0.86	0.19	150,168,181,202	0
7	NAG	A	701	14/15	0.89	0.16	154,167,185,199	0
7	NAG	B	201	14/15	0.91	0.30	100,104,128,139	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

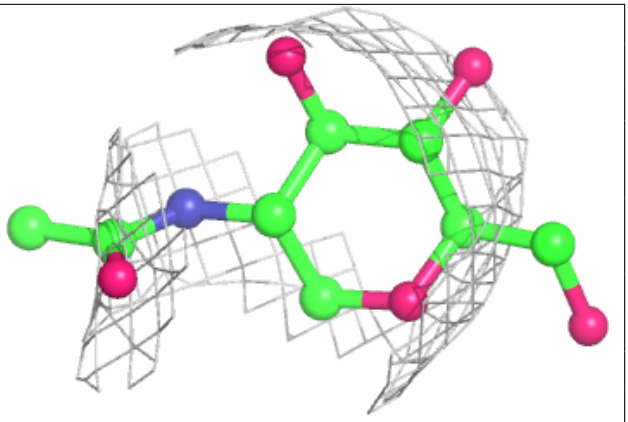
Electron density around NAG D 701:

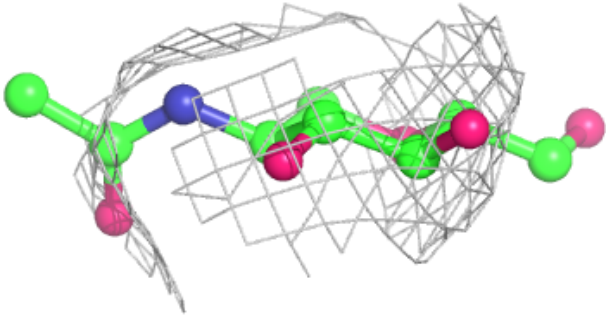
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

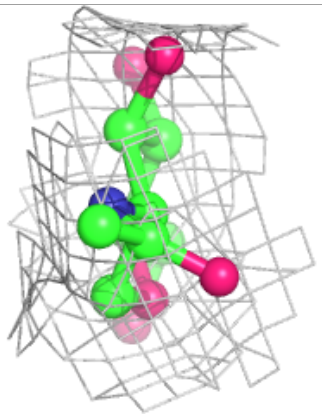


Electron density around NAG C 301:

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

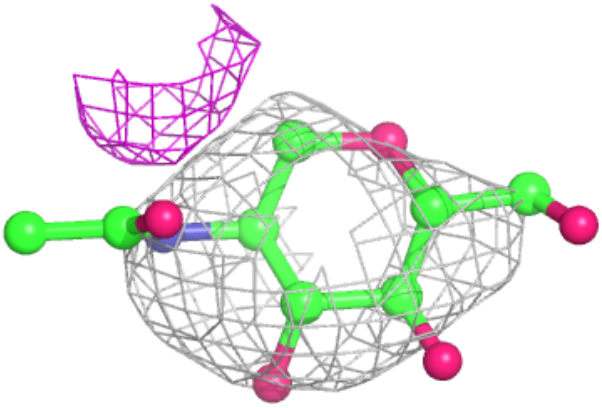


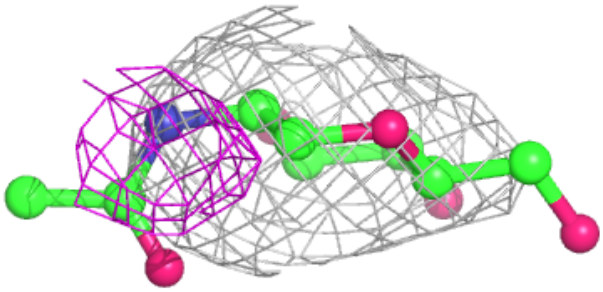


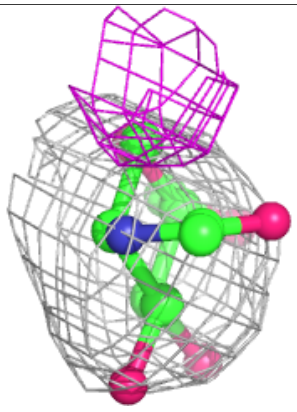


Electron density around NAG E 202:

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

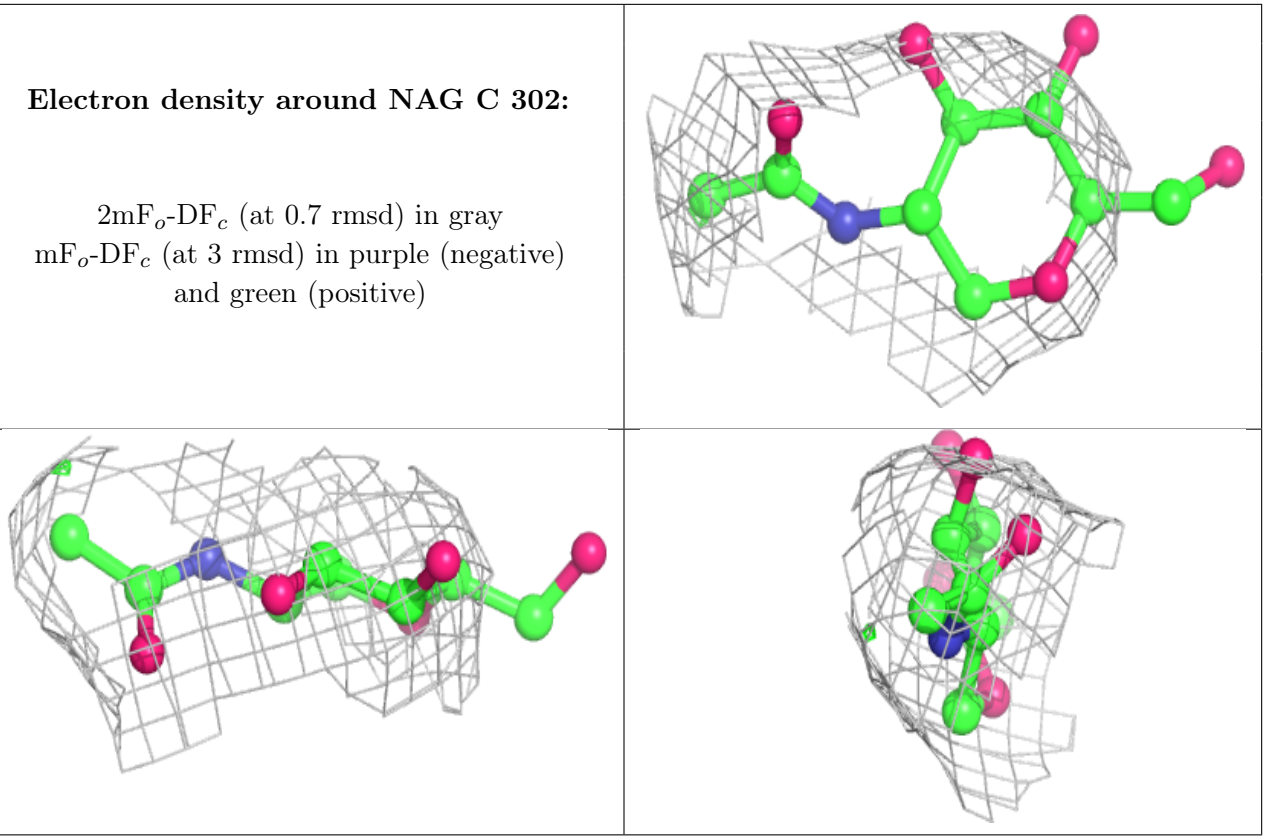






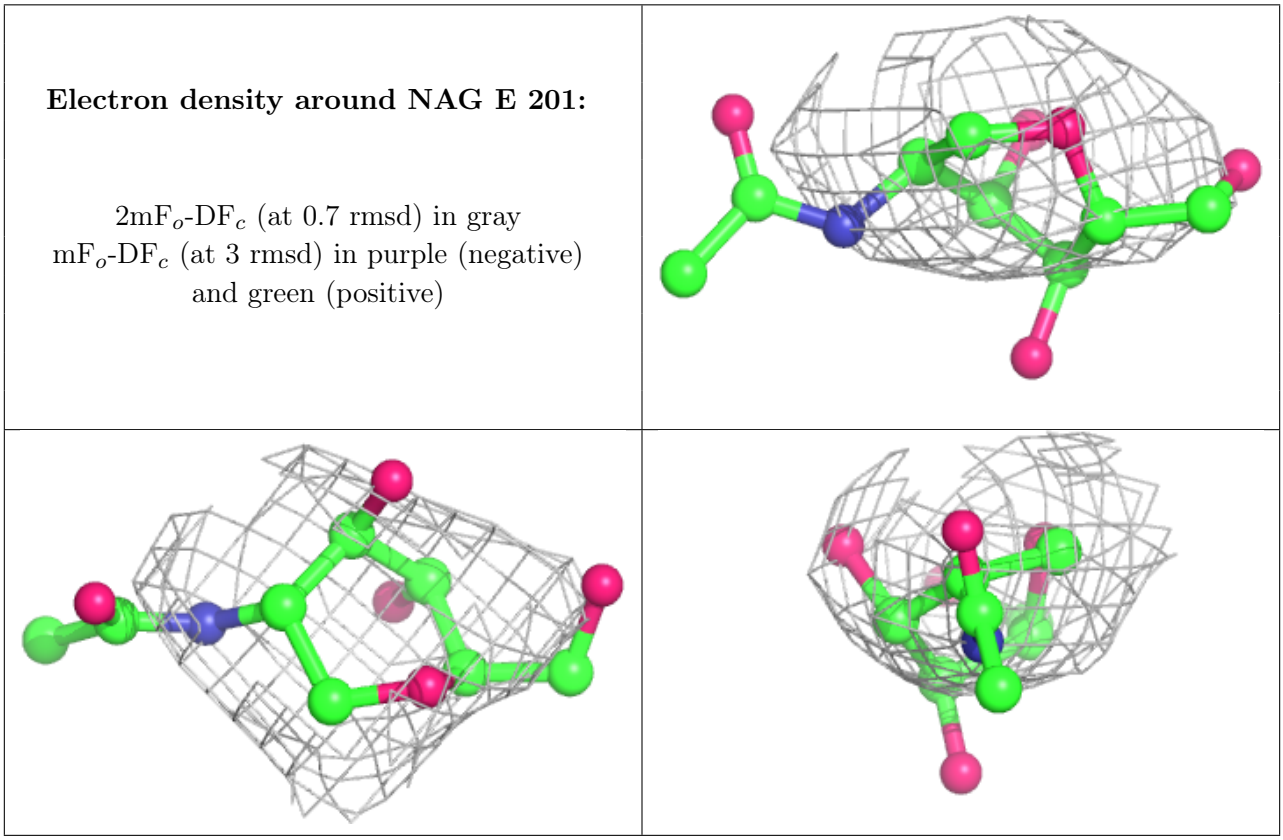
Electron density around NAG C 302:

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



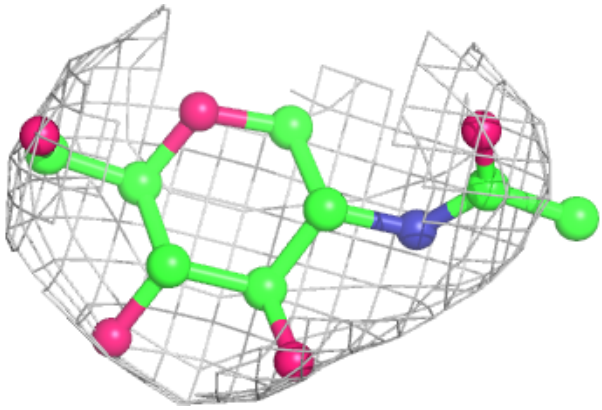
Electron density around NAG E 201:

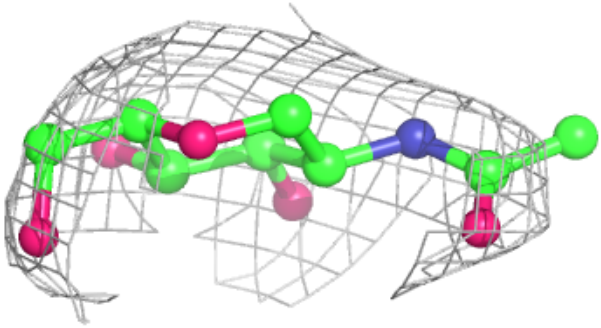
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

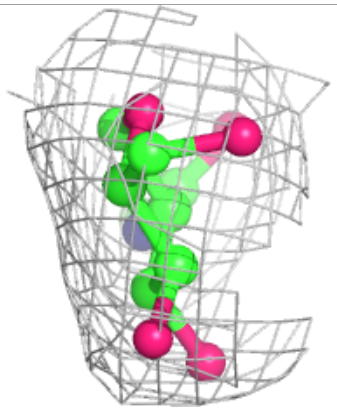


Electron density around NAG B 202:

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

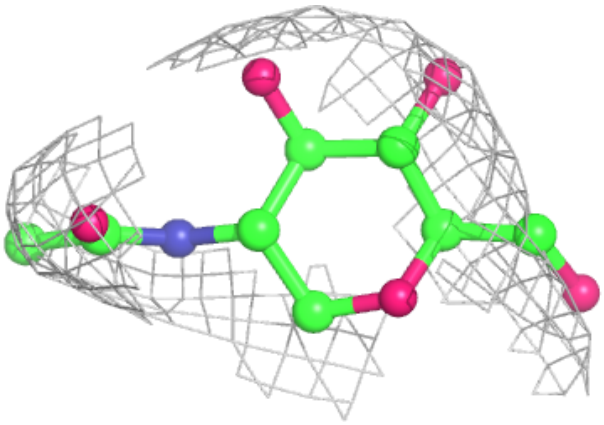


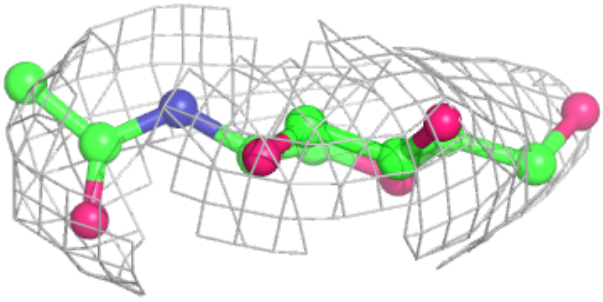


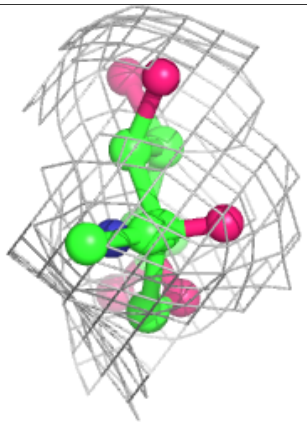


Electron density around NAG A 701:

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

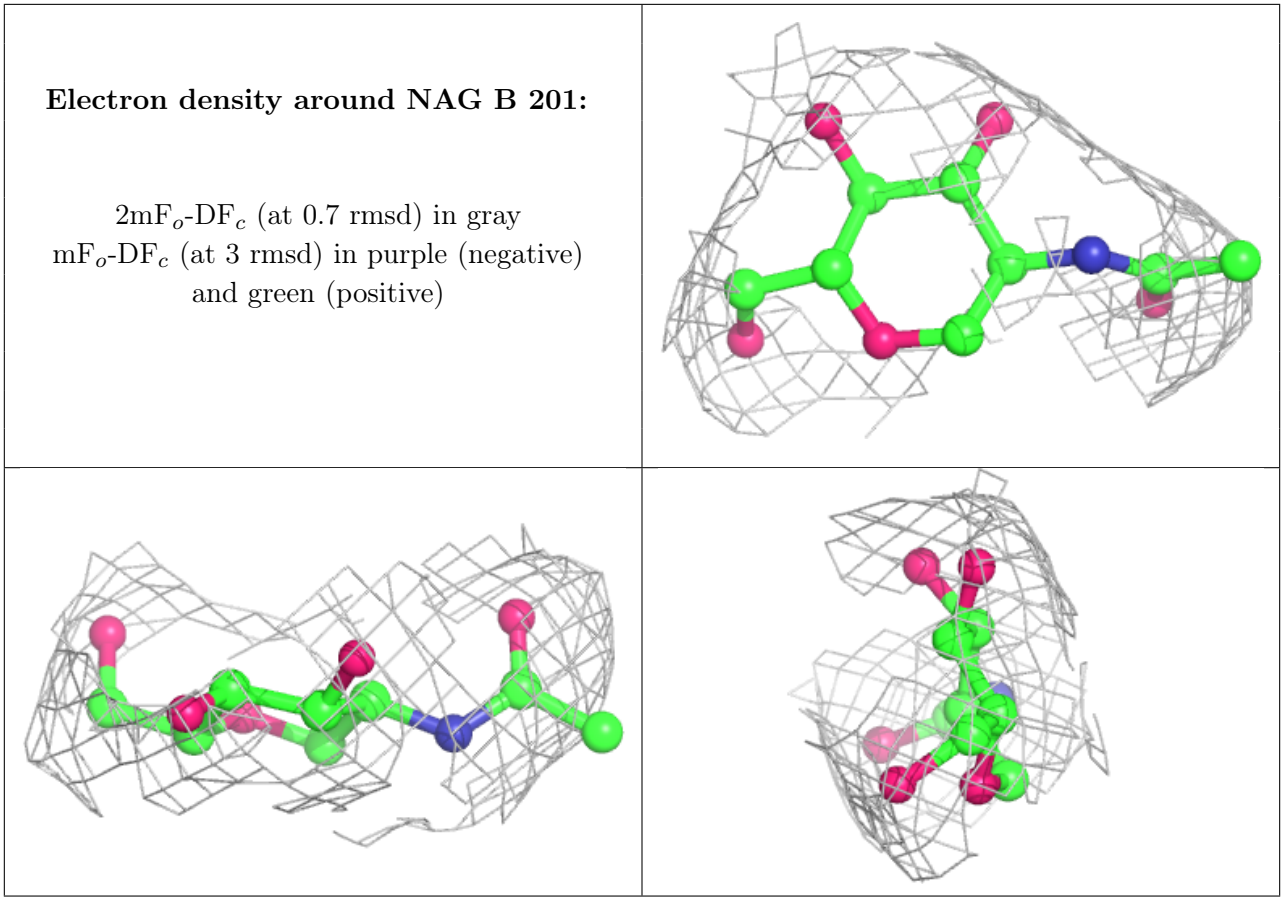






Electron density around NAG B 201:

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



6.5 Other polymers

There are no such residues in this entry.