Full wwPDB X-ray Structure Validation Report

Mar 5, 2026 – 09:38 AM UTC

PDB ID	:	6VZI / pdb_00006vzi
Title	:	Crystal Structure of HIV-1 CAP256 RnS-3mut-2G-SOSIP.664 Prefusion Env Trimer in Complex with Human Antibodies 3H109L and 35O22 at 3.5 Angstrom
Authors	:	Lai, Y.-T.; Kwong, P.D.
Deposited on	:	2020-02-28
Resolution	:	2.72 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:

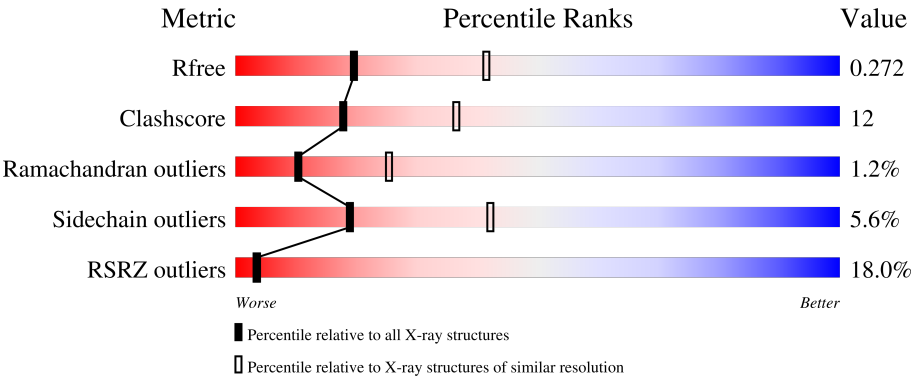
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

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 2.72 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}	180053	4348 (2.74-2.70)
Clashscore	190562	4665 (2.74-2.70)
Ramachandran outliers	187476	4584 (2.74-2.70)
Sidechain outliers	187428	4585 (2.74-2.70)
RSRZ outliers	180081	4348 (2.74-2.70)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	B	154	14% 61% 16% • 22%
2	D	134	34% 60% 34% • •
3	E	114	41% 68% 25% • 6%
4	G	471	13% 61% 27% • 10%
5	H	244	15% 65% 24% • 7%

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Mol	Chain	Length	Quality of chain
6	L	217	4% 70% 24%
7	A	6	33% 17% 50%
8	C	3	100%
8	F	3	100%
9	I	2	50% 50%
9	K	2	100%
9	M	2	50% 50%
10	J	10	10% 80% 10%

2 Entry composition (i)

There are 11 unique types of molecules in this entry. The entry contains 9915 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 gp41.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	B	120	Total	C	N	O	S	0	0	0
			964	620	158	178	8			

There are 11 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	535	ASN	ILE	engineered mutation	UNP W6ICH7
B	559	PRO	ILE	engineered mutation	UNP W6ICH7
B	569	GLY	THR	engineered mutation	UNP W6ICH7
B	573	PHE	ILE	engineered mutation	UNP W6ICH7
B	588	GLU	LYS	engineered mutation	UNP W6ICH7
B	589	VAL	ASP	engineered mutation	UNP W6ICH7
B	605	CYS	THR	engineered mutation	UNP W6ICH7
B	609	PRO	TYR	engineered mutation	UNP W6ICH7
B	636	GLY	ASP	engineered mutation	UNP W6ICH7
B	651	PHE	LYS	engineered mutation	UNP W6ICH7
B	655	ILE	SER	engineered mutation	UNP W6ICH7

- Molecule 2 is a protein called 35O22 scFv heavy chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	D	128	Total	C	N	O	S	0	0	0
			994	628	169	192	5			

- Molecule 3 is a protein called 35O22 scFv light chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	E	107	Total	C	N	O	S	0	0	0
			818	514	135	163	6			

- Molecule 4 is a protein called Envelope glycoprotein gp160.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	G	423	Total	C	N	O	S	0	0	0
			3358	2116	586	630	26			

There are 13 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	204	ILE	ALA	engineered mutation	UNP A0A0N9FF17
G	302	MET	ASN	engineered mutation	UNP A0A0N9FF17
G	320	LEU	THR	engineered mutation	UNP A0A0N9FF17
G	329	PRO	ALA	engineered mutation	UNP A0A0N9FF17
G	437	PRO	SER	engineered mutation	UNP A0A0N9FF17
G	442	ASN	GLU	engineered mutation	UNP A0A0N9FF17
G	501	CYS	ALA	engineered mutation	UNP A0A0N9FF17
G	508	ARG	-	expression tag	UNP A0A0N9FF17
G	509	ARG	-	expression tag	UNP A0A0N9FF17
G	510	ARG	-	expression tag	UNP A0A0N9FF17
G	511	ARG	-	expression tag	UNP A0A0N9FF17
G	512	ARG	-	expression tag	UNP A0A0N9FF17
G	513	ARG	-	expression tag	UNP A0A0N9FF17

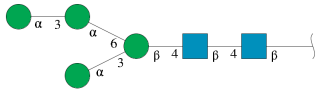
- Molecule 5 is a protein called 3H109L Fab heavy chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	H	226	Total	C	N	O	S	0	0	0
			1715	1093	278	338	6			

- Molecule 6 is a protein called 3H109L Fab light chain.

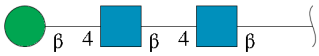
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	L	211	Total	C	N	O	S	0	0	0
			1604	1009	276	312	7			

- Molecule 7 is an oligosaccharide called alpha-D-mannopyranose-(1-3)-alpha-D-mannopyranose-(1-6)-[alpha-D-mannopyranose-(1-3)]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
7	A	6	Total	C	N	O	0	0	0
			72	40	2	30			

- Molecule 8 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.

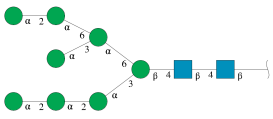


Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
8	C	3	Total	C	N	O	0	0	0
			39	22	2	15			
8	F	3	Total	C	N	O	0	0	0
			39	22	2	15			

- Molecule 9 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.

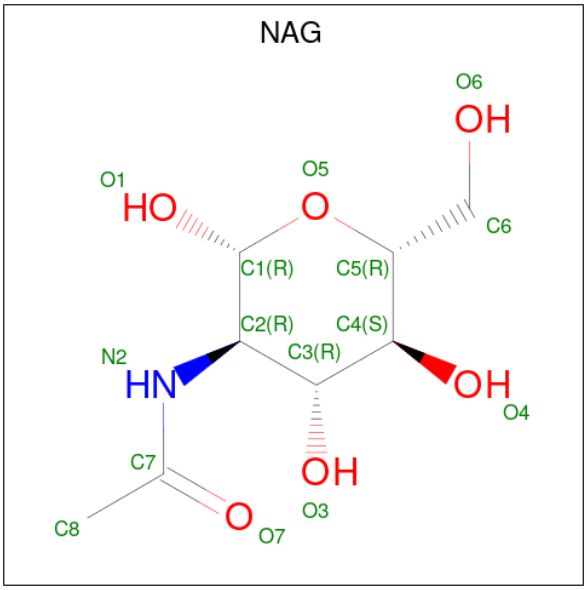
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	I	2	Total	C	N	O	0	0	0
			28	16	2	10			
9	K	2	Total	C	N	O	0	0	0
			28	16	2	10			
9	M	2	Total	C	N	O	0	0	0
			28	16	2	10			

- Molecule 10 is an oligosaccharide called alpha-D-mannopyranose-(1-2)-alpha-D-mannopyranose-(1-2)-alpha-D-mannopyranose-(1-3)-[alpha-D-mannopyranose-(1-2)-alpha-D-mannopyranose-(1-6)-[alpha-D-mannopyranose-(1-3)]alpha-D-mannopyranose-(1-6)]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
10	J	10	Total C N O 116 64 2 50	0	0	0

- Molecule 11 is 2-acetamido-2-deoxy-beta-D-glucopyranose (CCD ID: NAG) (formula: $C_8H_{15}NO_6$).



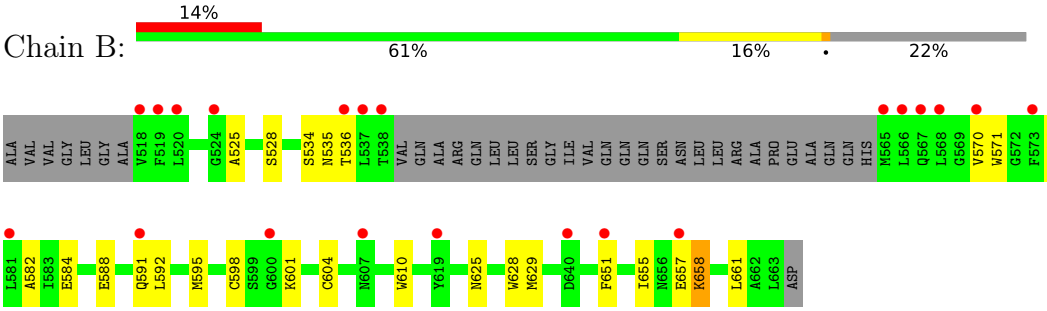
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
11	G	1	Total C N O 14 8 1 5	0	0
11	G	1	Total C N O 14 8 1 5	0	0
11	G	1	Total C N O 14 8 1 5	0	0
11	G	1	Total C N O 14 8 1 5	0	0
11	G	1	Total C N O 14 8 1 5	0	0
11	G	1	Total C N O 14 8 1 5	0	0
11	G	1	Total C N O 14 8 1 5	0	0
11	G	1	Total C N O 14 8 1 5	0	0

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.

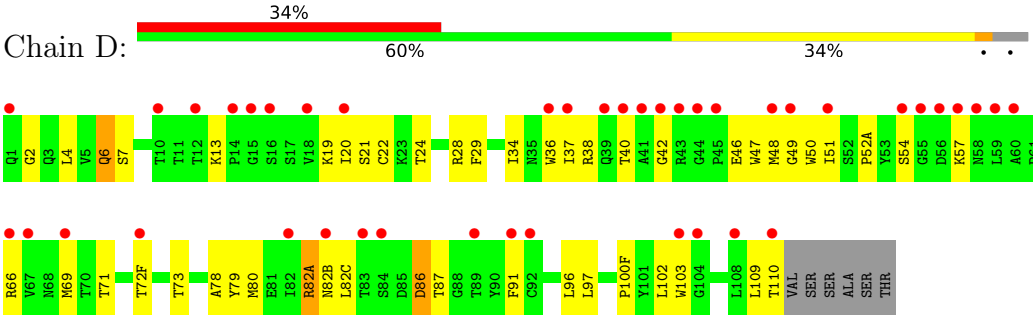
• Molecule 1: Envelope glycoprotein gp41

Chain B:



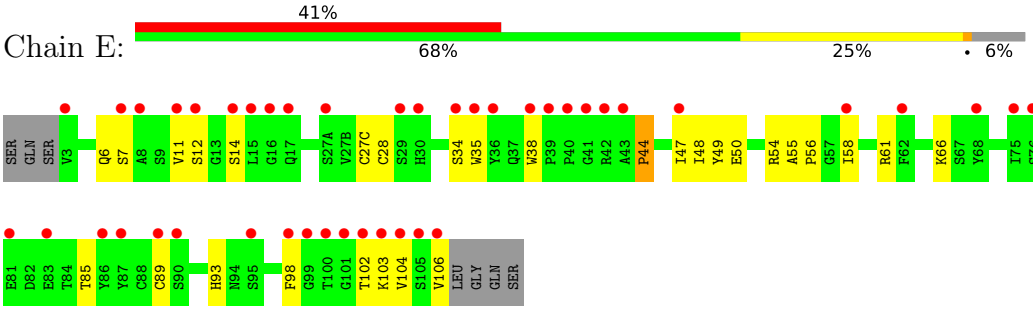
• Molecule 2: 35O22 scFv heavy chain

Chain D:



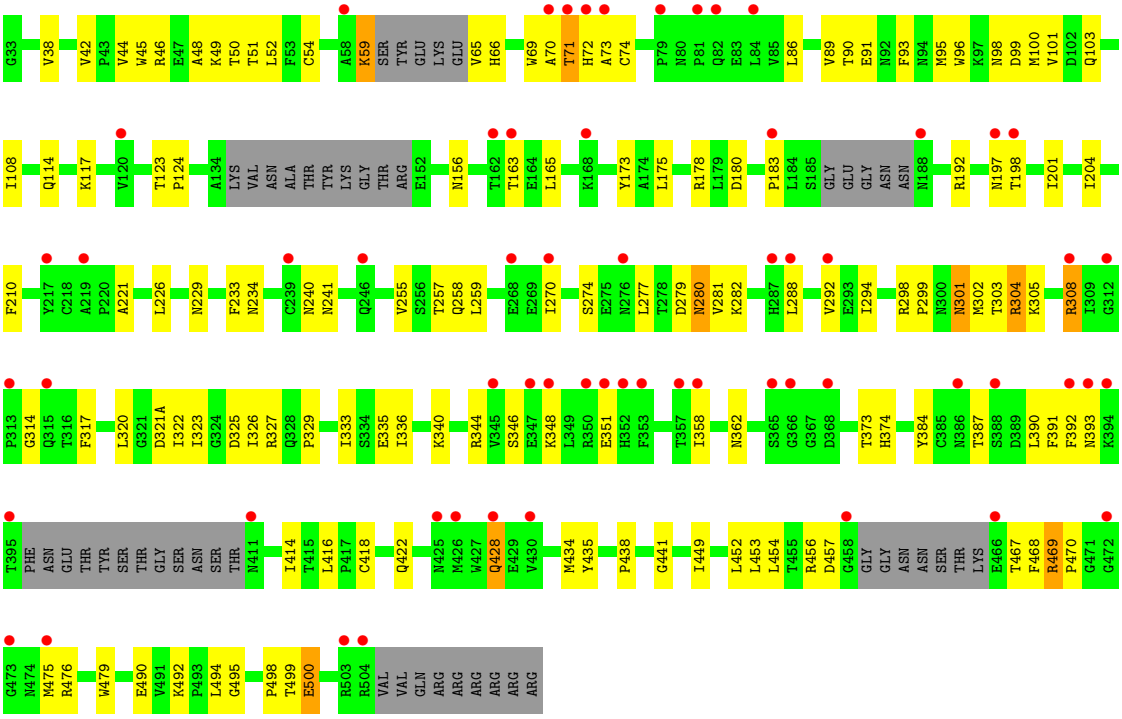
• Molecule 3: 35O22 scFv light chain

Chain E:

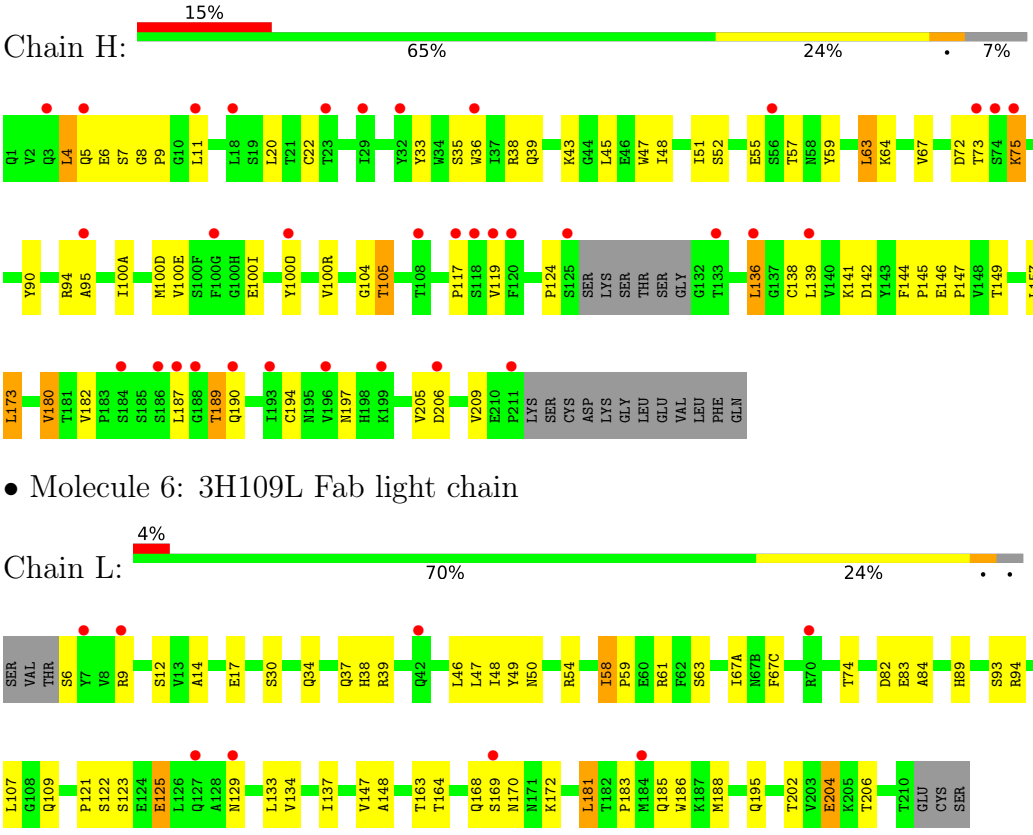


• Molecule 4: Envelope glycoprotein gp160

Chain G:



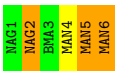
• Molecule 5: 3H109L Fab heavy chain



• Molecule 6: 3H109L Fab light chain

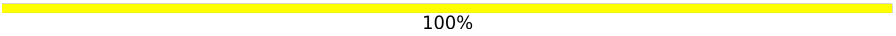
• Molecule 7: alpha-D-mannopyranose-(1-3)-alpha-D-mannopyranose-(1-6)-[alpha-D-mannopyranose-(1-3)]beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain A:



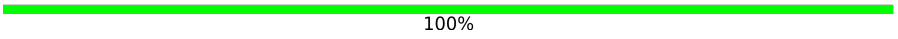
• Molecule 8: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain C:



• Molecule 8: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain F:

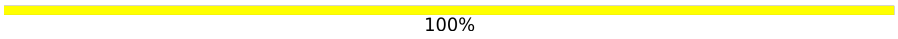


• Molecule 9: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain I:

• Molecule 9: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain K:

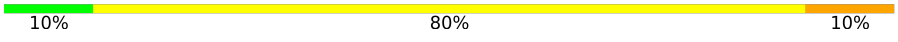


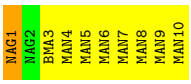
• Molecule 9: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain M:

• Molecule 10: alpha-D-mannopyranose-(1-2)-alpha-D-mannopyranose-(1-2)-alpha-D-mannopyranose-(1-3)-[alpha-D-mannopyranose-(1-2)-alpha-D-mannopyranose-(1-6)-[alpha-D-mannopyranose-(1-3)]alpha-D-mannopyranose-(1-6)]beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain J:




NAG1
NAG2
BMA3
MAN4
MAN5
MAN6
MAN7
MAN8
MAN9
MAN10

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 63	Depositor
Cell constants a, b, c, α, β, γ	133.92Å 133.92Å 315.11Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	43.84 – 2.72 43.84 – 2.72	Depositor EDS
% Data completeness (in resolution range)	36.3 (43.84-2.72) 36.3 (43.84-2.72)	Depositor EDS
R_{merge}	0.13	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	3.16 (at 2.73Å)	Xtriage
Refinement program	PHENIX 1.14_3260	Depositor
R, R_{free}	0.229 , 0.276 0.229 , 0.272	Depositor DCC
R_{free} test set	1576 reflections (1.83%)	wwPDB-VP
Wilson B-factor (Å^2)	28.8	Xtriage
Anisotropy	0.100	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.27 , 35.2	EDS
L-test for twinning[2]	$< \|L\| > = 0.47$, $< L^2 > = 0.29$	Xtriage
Estimated twinning fraction	0.075 for h,-h-k,-l	Xtriage
F_o,F_c correlation	0.83	EDS
Total number of atoms	9915	wwPDB-VP
Average B, all atoms (Å^2)	49.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.64% 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: NAG, MAN, BMA

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
1	B	0.15	0/985	0.33	0/1335
2	D	0.12	0/1021	0.32	0/1390
3	E	0.13	0/842	0.37	0/1151
4	G	0.18	0/3426	0.37	0/4649
5	H	0.12	0/1758	0.35	0/2397
6	L	0.11	0/1647	0.31	0/2247
All	All	0.15	0/9679	0.35	0/13169

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	B	964	0	938	20	0
2	D	994	0	953	32	0
3	E	818	0	766	19	0
4	G	3358	0	3298	111	0
5	H	1715	0	1687	34	0
6	L	1604	0	1553	33	0
7	A	72	0	61	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
8	C	39	0	34	1	0
8	F	39	0	34	0	0
9	I	28	0	25	1	0
9	K	28	0	25	0	0
9	M	28	0	25	0	0
10	J	116	0	97	1	0
11	G	112	0	104	5	0
All	All	9915	0	9600	240	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 (240) 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)
4:G:255:VAL:HG13	4:G:475:MET:CE	1.56	1.35
4:G:59:LYS:HD3	4:G:65:VAL:CG2	1.71	1.19
4:G:255:VAL:HG13	4:G:475:MET:HE1	1.32	1.11
4:G:59:LYS:CE	4:G:65:VAL:HG23	1.83	1.08
4:G:255:VAL:CG1	4:G:475:MET:CE	2.36	1.04
4:G:59:LYS:CD	4:G:65:VAL:CG2	2.35	1.03
4:G:59:LYS:HD3	4:G:65:VAL:HG21	1.41	0.96
4:G:59:LYS:CE	4:G:65:VAL:CG2	2.44	0.95
4:G:255:VAL:CG1	4:G:475:MET:HE1	1.97	0.95
4:G:255:VAL:HG13	4:G:475:MET:HE2	1.42	0.95
4:G:255:VAL:CG1	4:G:475:MET:HE2	2.01	0.86
4:G:59:LYS:HE3	4:G:65:VAL:HG23	1.56	0.84
4:G:59:LYS:CD	4:G:65:VAL:HG22	2.09	0.81
4:G:499:THR:HG22	4:G:500:GLU:N	2.01	0.76
4:G:344:ARG:HD3	11:G:631:NAG:H5	1.66	0.74
1:B:571:TRP:HB2	4:G:73:ALA:HB1	1.72	0.72
4:G:302:MET:HG2	4:G:320:LEU:HD11	1.72	0.72
4:G:59:LYS:HE2	4:G:65:VAL:CG2	2.18	0.71
6:L:61:ARG:NH1	6:L:82:ASP:OD2	2.21	0.71
4:G:270:ILE:HG22	4:G:288:LEU:HA	1.72	0.70
4:G:163:THR:HG23	4:G:165:LEU:H	1.58	0.69
4:G:59:LYS:HE2	4:G:65:VAL:HG23	1.72	0.68
5:H:157:LEU:HD21	5:H:180:VAL:HG21	1.77	0.67
6:L:67(C):PHE:HB3	9:I:1:NAG:H81	1.79	0.64
4:G:499:THR:HG22	4:G:500:GLU:H	1.61	0.64
4:G:229:ASN:HB2	4:G:241:ASN:OD1	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:37:GLN:HB2	6:L:47:LEU:HD11	1.80	0.63
1:B:651:PHE:O	1:B:655:ILE:HD12	1.98	0.63
4:G:270:ILE:HG13	4:G:348:LYS:HG3	1.81	0.62
2:D:22:CYS:HB3	2:D:78:ALA:HB3	1.80	0.62
1:B:534:SER:OG	1:B:628:TRP:NE1	2.32	0.62
1:B:591:GLN:HG2	1:B:595:MET:HE2	1.82	0.61
4:G:175:LEU:HB2	4:G:320:LEU:HB3	1.82	0.61
11:G:632:NAG:H3	11:G:632:NAG:H83	1.82	0.61
5:H:149:THR:HB	5:H:197:ASN:HB2	1.81	0.61
2:D:7:SER:HB3	2:D:21:SER:H	1.67	0.60
5:H:139:LEU:HG	5:H:141:LYS:HG3	1.85	0.59
6:L:129:ASN:HA	6:L:183:PRO:HG3	1.84	0.59
4:G:71:THR:OG1	4:G:72:HIS:N	2.36	0.59
2:D:34:ILE:HG22	2:D:51:ILE:HG12	1.84	0.59
1:B:657:GLU:HG2	1:B:661:LEU:HD13	1.85	0.59
2:D:51:ILE:HD11	2:D:71:THR:HG23	1.83	0.58
4:G:304:ARG:HH21	4:G:304:ARG:CG	2.16	0.58
5:H:63:LEU:HD13	5:H:67:VAL:HG21	1.86	0.58
6:L:34:GLN:HG3	6:L:49:TYR:HA	1.86	0.58
4:G:373:THR:HG21	4:G:384:TYR:HD1	1.69	0.58
2:D:4:LEU:HG	2:D:24:THR:HG22	1.86	0.57
1:B:604:CYS:SG	4:G:38:VAL:HB	2.45	0.57
4:G:173:TYR:O	4:G:305:LYS:NZ	2.38	0.57
4:G:476:ARG:HA	4:G:479:TRP:CD1	2.40	0.57
4:G:499:THR:CG2	4:G:500:GLU:N	2.67	0.57
2:D:57:LYS:HE3	2:D:69:MET:HG3	1.86	0.56
3:E:85:THR:HG22	3:E:103:LYS:HG2	1.86	0.56
4:G:277:LEU:O	4:G:456:ARG:NH2	2.38	0.56
4:G:390:LEU:HG	4:G:416:LEU:HD21	1.87	0.56
5:H:36:TRP:HE1	5:H:78:LEU:HD11	1.71	0.56
4:G:59:LYS:CE	4:G:65:VAL:HG22	2.32	0.55
4:G:93:PHE:HB2	4:G:233:PHE:HZ	1.71	0.55
4:G:499:THR:CG2	4:G:500:GLU:H	2.18	0.55
4:G:326:ILE:HG13	6:L:94:ARG:HD3	1.87	0.55
4:G:362:ASN:HD22	4:G:469:ARG:HH22	1.53	0.55
5:H:35:SER:HB3	5:H:47:TRP:HE1	1.72	0.55
4:G:156:ASN:ND2	8:C:1:NAG:O7	2.40	0.54
5:H:39:GLN:OE1	6:L:38:HIS:NE2	2.38	0.54
7:A:2:NAG:H3	7:A:2:NAG:H83	1.89	0.54
2:D:109:LEU:O	2:D:110:THR:OG1	2.23	0.54
2:D:96:LEU:HG	2:D:97:LEU:HG	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:655:ILE:HA	1:B:658:LYS:HB3	1.90	0.54
6:L:168:GLN:N	6:L:172:LYS:O	2.37	0.54
4:G:96:TRP:CZ2	4:G:274:SER:HA	2.43	0.53
6:L:34:GLN:NE2	6:L:49:TYR:O	2.41	0.53
2:D:71:THR:HG22	2:D:78:ALA:HA	1.90	0.53
4:G:294:ILE:HG13	4:G:333:ILE:HG13	1.89	0.53
1:B:535:ASN:C	1:B:536:THR:HG23	2.34	0.53
4:G:91:GLU:HG3	4:G:226:LEU:HD13	1.89	0.53
4:G:93:PHE:HB2	4:G:233:PHE:CZ	2.44	0.53
4:G:204:ILE:HD11	4:G:434:MET:HE3	1.91	0.53
4:G:234:ASN:HD21	11:G:612:NAG:C7	2.21	0.53
4:G:303:THR:OG1	4:G:321(A):ASP:N	2.42	0.53
4:G:346:SER:HB2	4:G:358:ILE:HD11	1.91	0.53
2:D:36:TRP:HB3	2:D:48:MET:HE3	1.90	0.52
5:H:4:LEU:HD12	5:H:5:GLN:H	1.74	0.52
5:H:100(O):TYR:HB2	6:L:46:LEU:HD11	1.90	0.52
6:L:54:ARG:HD2	6:L:58:ILE:HG22	1.91	0.52
6:L:106:VAL:HG13	6:L:109:GLN:HE21	1.75	0.52
2:D:72(F):THR:HG22	2:D:73:THR:HB	1.92	0.52
4:G:59:LYS:HE2	4:G:65:VAL:HG22	1.90	0.52
1:B:625:ASN:HB2	2:D:97:LEU:HD22	1.91	0.52
3:E:11:VAL:O	3:E:104:VAL:HA	2.10	0.52
4:G:304:ARG:HH21	4:G:304:ARG:HB3	1.75	0.52
2:D:82(A):ARG:O	2:D:82(C):LEU:N	2.43	0.52
4:G:304:ARG:HG2	4:G:304:ARG:NH2	2.25	0.52
6:L:46:LEU:HD21	6:L:49:TYR:HB3	1.92	0.52
3:E:7:SER:O	3:E:102:THR:OG1	2.28	0.51
4:G:42:VAL:HG23	4:G:44:VAL:HG12	1.91	0.51
2:D:66:ARG:O	2:D:82(A):ARG:N	2.36	0.51
2:D:47:TRP:HB2	3:E:98:PHE:HE1	1.75	0.51
4:G:69:TRP:HZ3	4:G:108:ILE:HG23	1.75	0.51
4:G:71:THR:C	4:G:73:ALA:H	2.19	0.51
6:L:148:ALA:HB3	6:L:195:GLN:HB2	1.93	0.51
4:G:98:ASN:OD1	4:G:99:ASP:N	2.44	0.51
5:H:36:TRP:HB3	5:H:48:ILE:HD12	1.93	0.51
1:B:535:ASN:O	1:B:536:THR:HG23	2.11	0.51
4:G:178:ARG:NH2	4:G:183:PRO:HD3	2.26	0.51
3:E:93:HIS:CD2	7:A:6:MAN:H2	2.46	0.50
5:H:124:PRO:HB3	5:H:136:LEU:HB3	1.93	0.50
5:H:59:TYR:HD2	5:H:64:LYS:HD2	1.75	0.49
1:B:535:ASN:O	1:B:536:THR:CG2	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:195:GLN:HG2	6:L:204:GLU:HB2	1.94	0.49
5:H:8:GLY:HA3	5:H:105:THR:HG21	1.94	0.49
4:G:391:PHE:CD2	4:G:470:PRO:HG3	2.48	0.49
5:H:142:ASP:HB3	5:H:173:LEU:HD12	1.93	0.49
4:G:299:PRO:HG2	4:G:327:ARG:HB2	1.94	0.49
4:G:281:VAL:HG12	4:G:281:VAL:O	2.12	0.49
4:G:86:LEU:HB3	4:G:89:VAL:HG21	1.95	0.49
4:G:298:ARG:NH2	4:G:441:GLY:O	2.46	0.49
6:L:185:GLN:HA	6:L:188:MET:HG2	1.94	0.49
6:L:83:GLU:HG3	6:L:105:THR:HA	1.93	0.49
1:B:657:GLU:CG	1:B:661:LEU:HD13	2.42	0.48
2:D:38:ARG:NH2	2:D:46:GLU:OE2	2.38	0.48
4:G:270:ILE:H	4:G:348:LYS:HZ3	1.60	0.48
5:H:6:GLU:HG3	5:H:22:CYS:SG	2.53	0.48
2:D:20:ILE:HD12	2:D:80:MET:HE1	1.94	0.48
3:E:47:ILE:HD12	3:E:58:ILE:HD12	1.94	0.48
4:G:304:ARG:HD2	4:G:438:PRO:O	2.14	0.48
1:B:598:CYS:HA	1:B:601:LYS:HD3	1.94	0.48
1:B:592:LEU:HD23	1:B:595:MET:HE3	1.94	0.48
5:H:51:ILE:HD11	5:H:57:THR:HG22	1.95	0.48
6:L:59:PRO:HB2	6:L:61:ARG:HG2	1.95	0.48
10:J:1:NAG:H3	10:J:1:NAG:H83	1.95	0.48
4:G:46:ARG:HB2	4:G:492:LYS:HD3	1.96	0.48
4:G:358:ILE:HG22	4:G:468:PHE:HE2	1.78	0.48
3:E:54:ARG:NH1	3:E:58:ILE:O	2.47	0.47
4:G:257:THR:O	4:G:259:LEU:N	2.44	0.47
1:B:629:MET:HA	4:G:44:VAL:HG23	1.96	0.47
4:G:259:LEU:HD12	4:G:374:HIS:CD2	2.49	0.47
4:G:101:VAL:HG13	4:G:479:TRP:HB2	1.95	0.47
4:G:180:ASP:CG	4:G:422:GLN:H	2.22	0.47
4:G:336:ILE:O	4:G:340:LYS:HB2	2.14	0.47
5:H:146:GLU:HG3	5:H:147:PRO:HA	1.96	0.47
1:B:570:VAL:O	1:B:574:LYS:HB2	2.15	0.47
4:G:304:ARG:HH21	4:G:304:ARG:CB	2.27	0.47
5:H:194:CYS:O	5:H:206:ASP:HB2	2.14	0.47
4:G:294:ILE:HD12	4:G:449:ILE:HD11	1.96	0.47
4:G:257:THR:HG22	4:G:258:GLN:HG3	1.95	0.47
2:D:66:ARG:NH2	2:D:86:ASP:OD2	2.47	0.47
4:G:333:ILE:HD13	4:G:390:LEU:HD21	1.97	0.47
4:G:387:THR:HG22	4:G:390:LEU:HD12	1.97	0.47
3:E:14:SER:HA	3:E:106:VAL:HG13	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:G:335:GLU:HG2	4:G:414:ILE:HG23	1.97	0.46
4:G:45:TRP:HB2	4:G:490:GLU:O	2.15	0.46
2:D:13:LYS:HD2	2:D:13:LYS:HA	1.54	0.46
4:G:325:ASP:OD1	6:L:30:SER:N	2.47	0.46
4:G:90:THR:HG22	4:G:240:ASN:HB3	1.97	0.46
6:L:63:SER:HB2	6:L:74:THR:HB	1.98	0.46
5:H:43:LYS:HD2	6:L:6:SER:N	2.31	0.46
4:G:259:LEU:HD13	4:G:449:ILE:HD13	1.98	0.46
4:G:282:LYS:HA	4:G:282:LYS:HD3	1.61	0.46
6:L:39:ARG:HG2	6:L:84:ALA:HB2	1.98	0.45
6:L:48:ILE:HG12	6:L:54:ARG:HB3	1.97	0.45
4:G:48:ALA:HB3	4:G:490:GLU:HG3	1.97	0.45
5:H:38:ARG:NH1	5:H:90:TYR:OH	2.49	0.45
6:L:12:SER:HB3	6:L:107:LEU:HD11	1.99	0.45
5:H:94:ARG:HB3	5:H:100(R):VAL:HG23	1.99	0.45
2:D:40:THR:HG22	2:D:42:GLY:H	1.82	0.45
3:E:27(C):CYS:HA	3:E:28:CYS:HA	1.68	0.45
4:G:70:ALA:HB1	4:G:74:CYS:SG	2.57	0.45
4:G:304:ARG:CG	4:G:304:ARG:NH2	2.73	0.45
5:H:33:TYR:CD2	5:H:52:SER:HA	2.51	0.45
4:G:201:ILE:HD11	4:G:435:TYR:HB2	1.99	0.45
1:B:525:ALA:HB1	1:B:528:SER:OG	2.16	0.44
2:D:37:ILE:HD12	2:D:103:TRP:CH2	2.52	0.44
5:H:100(A):ILE:HD13	5:H:100(E):VAL:HG22	1.98	0.44
5:H:100(D):MET:H	5:H:100(I):GLU:HG3	1.83	0.44
4:G:95:MET:HG3	4:G:96:TRP:CD1	2.52	0.44
6:L:121:PRO:HD3	6:L:133:LEU:HG	1.99	0.44
5:H:33:TYR:HB2	5:H:95:ALA:O	2.18	0.44
6:L:34:GLN:HB2	6:L:89:HIS:HB3	1.99	0.44
2:D:29:PHE:CE2	2:D:52(A):PRO:HB3	2.52	0.44
2:D:47:TRP:HZ2	2:D:50:TRP:CD1	2.35	0.44
3:E:49:TYR:CD2	3:E:50:GLU:HG2	2.53	0.44
3:E:103:LYS:HB3	3:E:103:LYS:HE2	1.75	0.44
5:H:59:TYR:CD2	5:H:64:LYS:HD2	2.51	0.44
4:G:42:VAL:HG11	4:G:495:GLY:HA3	2.00	0.44
2:D:54:SER:OG	7:A:5:MAN:H62	2.18	0.44
4:G:301:ASN:HB3	4:G:323:ILE:O	2.18	0.44
4:G:494:LEU:HD23	4:G:494:LEU:HA	1.86	0.44
4:G:52:LEU:N	4:G:103:GLN:OE1	2.37	0.43
5:H:39:GLN:HB2	5:H:45:LEU:HD23	1.99	0.43
2:D:36:TRP:CZ2	2:D:78:ALA:HB1	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:47:TRP:CZ2	2:D:49:GLY:HA2	2.53	0.43
4:G:292:VAL:HG23	4:G:449:ILE:HB	1.99	0.43
2:D:80:MET:HE3	2:D:80:MET:HB3	1.90	0.43
3:E:11:VAL:HG12	3:E:12:SER:N	2.34	0.43
2:D:87:THR:HG23	2:D:110:THR:HA	2.00	0.43
1:B:584:GLU:O	1:B:588:GLU:HG3	2.19	0.43
3:E:35:TRP:HB2	3:E:48:ILE:HB	2.00	0.43
6:L:14:ALA:HB3	6:L:17:GLU:HG3	2.01	0.43
6:L:102:THR:O	6:L:102:THR:OG1	2.35	0.43
1:B:610:TRP:CE3	4:G:498:PRO:HB3	2.53	0.42
2:D:2:GLY:O	2:D:102:LEU:HD21	2.20	0.42
4:G:50:THR:OG1	4:G:51:THR:N	2.52	0.42
5:H:36:TRP:NE1	5:H:78:LEU:HD11	2.33	0.42
3:E:61:ARG:NH1	3:E:79:ARG:HG3	2.34	0.42
4:G:457:ASP:OD2	4:G:467:THR:OG1	2.34	0.42
4:G:321(A):ASP:OD1	4:G:322:ILE:N	2.52	0.42
5:H:6:GLU:CD	5:H:104:GLY:H	2.28	0.42
3:E:28:CYS:HB3	3:E:66:LYS:HE2	2.01	0.42
3:E:34:SER:HB2	3:E:89:CYS:HB2	2.01	0.42
5:H:9:PRO:HD3	5:H:20:LEU:HD23	2.02	0.42
4:G:49:LYS:HD2	4:G:99:ASP:HB2	2.02	0.42
5:H:4:LEU:HD13	5:H:4:LEU:HA	1.90	0.42
3:E:38:TRP:CE2	3:E:44:PRO:HG3	2.55	0.41
2:D:6:GLN:HE22	2:D:91:PHE:HA	1.84	0.41
2:D:37:ILE:HG12	2:D:47:TRP:HA	2.02	0.41
6:L:106:VAL:HG13	6:L:109:GLN:NE2	2.35	0.41
6:L:121:PRO:HD2	6:L:186:TRP:CZ2	2.55	0.41
4:G:123:THR:N	4:G:124:PRO:HD2	2.36	0.41
3:E:55:ALA:HB1	3:E:56:PRO:HD2	2.02	0.41
6:L:67(A):ILE:H	6:L:67(A):ILE:HG13	1.61	0.41
4:G:390:LEU:HD11	4:G:416:LEU:HD11	2.02	0.41
4:G:117:LYS:HA	4:G:117:LYS:HD2	1.81	0.41
4:G:197:ASN:ND2	11:G:611:NAG:O7	2.54	0.41
6:L:181:LEU:HD13	6:L:186:TRP:HB2	2.02	0.41
1:B:582:ALA:HB1	4:G:221:ALA:HB3	2.02	0.41
4:G:255:VAL:HG12	4:G:475:MET:HE1	1.92	0.41
4:G:270:ILE:HG12	11:G:631:NAG:H61	2.02	0.41
6:L:122:SER:HB3	6:L:125:GLU:HB2	2.02	0.41
4:G:308:ARG:HH11	4:G:314:GLY:H	1.68	0.41
4:G:390:LEU:HD23	4:G:414:ILE:CD1	2.51	0.41
5:H:144:PHE:HA	5:H:145:PRO:HA	1.77	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:H:72:ASP:OD2	5:H:75:LYS:NZ	2.37	0.41
3:E:47:ILE:HG23	3:E:48:ILE:HG12	2.03	0.40
4:G:71:THR:C	4:G:73:ALA:N	2.80	0.40
5:H:51:ILE:HG23	5:H:55:GLU:HA	2.03	0.40
4:G:192:ARG:NH1	4:G:197:ASN:HB3	2.36	0.40
4:G:329:PRO:HG2	4:G:418:CYS:O	2.21	0.40
4:G:452:LEU:HD13	4:G:454:LEU:HD21	2.02	0.40
4:G:52:LEU:HD11	4:G:100:MET:HG2	2.02	0.40
2:D:19:LYS:HD2	2:D:79:TYR:HB3	2.04	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	B	116/154 (75%)	108 (93%)	8 (7%)	0	100 100
2	D	126/134 (94%)	109 (86%)	14 (11%)	3 (2%)	4 11
3	E	105/114 (92%)	87 (83%)	17 (16%)	1 (1%)	12 30
4	G	411/471 (87%)	372 (90%)	32 (8%)	7 (2%)	7 17
5	H	222/244 (91%)	196 (88%)	23 (10%)	3 (1%)	9 22
6	L	209/217 (96%)	198 (95%)	11 (5%)	0	100 100
All	All	1189/1334 (89%)	1070 (90%)	105 (9%)	14 (1%)	10 25

All (14) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	G	393	ASN
4	G	428	GLN
2	D	82(A)	ARG

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Mol	Chain	Res	Type
2	D	82(B)	ASN
4	G	279	ASP
5	H	190	GLN
4	G	71	THR
4	G	280	ASN
4	G	301	ASN
5	H	117	PRO
4	G	198	THR
5	H	189	THR
2	D	100(F)	PRO
3	E	44	PRO

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	B	103/129 (80%)	102 (99%)	1 (1%)	68 85
2	D	107/112 (96%)	104 (97%)	3 (3%)	38 67
3	E	94/100 (94%)	93 (99%)	1 (1%)	65 84
4	G	383/424 (90%)	368 (96%)	15 (4%)	28 56
5	H	196/212 (92%)	176 (90%)	20 (10%)	7 17
6	L	175/181 (97%)	156 (89%)	19 (11%)	6 15
All	All	1058/1158 (91%)	999 (94%)	59 (6%)	19 42

All (59) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	658	LYS
2	D	6	GLN
2	D	28	ARG
2	D	86	ASP
3	E	6	GLN
4	G	54	CYS
4	G	59	LYS

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Mol	Chain	Res	Type
4	G	66	HIS
4	G	114	GLN
4	G	210	PHE
4	G	280	ASN
4	G	304	ARG
4	G	308	ARG
4	G	317	PHE
4	G	351	GLU
4	G	392	PHE
4	G	428	GLN
4	G	453	LEU
4	G	469	ARG
4	G	500	GLU
5	H	4	LEU
5	H	7	SER
5	H	11	LEU
5	H	63	LEU
5	H	73	THR
5	H	75	LYS
5	H	78	LEU
5	H	79	SER
5	H	105	THR
5	H	119	VAL
5	H	136	LEU
5	H	138	CYS
5	H	168	LEU
5	H	173	LEU
5	H	180	VAL
5	H	182	VAL
5	H	187	LEU
5	H	189	THR
5	H	205	VAL
5	H	209	VAL
6	L	9	ARG
6	L	50	ASN
6	L	58	ILE
6	L	93	SER
6	L	102	THR
6	L	106	VAL
6	L	123	SER
6	L	125	GLU
6	L	134	VAL

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Mol	Chain	Res	Type
6	L	137	ILE
6	L	147	VAL
6	L	163	THR
6	L	164	THR
6	L	169	SER
6	L	170	ASN
6	L	181	LEU
6	L	202	THR
6	L	204	GLU
6	L	206	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (8) such sidechains are listed below:

Mol	Chain	Res	Type
2	D	68	ASN
2	D	105	GLN
3	E	52	ASN
3	E	93	HIS
4	G	67	ASN
4	G	188	ASN
4	G	374	HIS
6	L	109	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)

28 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	$\#\|Z\| > 2$
7	NAG	A	1	4,7	14,14,15	0.23	0	17,19,21	0.59	0
7	NAG	A	2	7	14,14,15	0.47	0	17,19,21	1.33	2 (11%)
7	BMA	A	3	7	11,11,12	0.65	0	15,15,17	0.70	0
7	MAN	A	4	7	11,11,12	1.01	1 (9%)	15,15,17	1.32	3 (20%)
7	MAN	A	5	7	11,11,12	1.51	3 (27%)	15,15,17	2.31	2 (13%)
7	MAN	A	6	7	11,11,12	0.68	0	15,15,17	1.08	2 (13%)
8	NAG	C	1	8,4	14,14,15	0.42	0	17,19,21	0.52	0
8	NAG	C	2	8	14,14,15	0.27	0	17,19,21	0.90	1 (5%)
8	BMA	C	3	8	11,11,12	0.99	1 (9%)	15,15,17	1.15	1 (6%)
8	NAG	F	1	8,4	14,14,15	0.27	0	17,19,21	0.50	0
8	NAG	F	2	8	14,14,15	0.46	0	17,19,21	0.40	0
8	BMA	F	3	8	11,11,12	0.69	0	15,15,17	0.72	0
9	NAG	I	1	9,4	14,14,15	0.88	1 (7%)	17,19,21	1.12	2 (11%)
9	NAG	I	2	9	14,14,15	0.26	0	17,19,21	0.52	0
10	NAG	J	1	10,4	14,14,15	0.28	0	17,19,21	1.46	2 (11%)
10	MAN	J	10	10	11,11,12	1.05	1 (9%)	15,15,17	0.95	1 (6%)
10	NAG	J	2	10	14,14,15	0.21	0	17,19,21	0.44	0
10	BMA	J	3	10	11,11,12	0.80	1 (9%)	15,15,17	1.07	1 (6%)
10	MAN	J	4	10	11,11,12	0.75	1 (9%)	15,15,17	1.38	2 (13%)
10	MAN	J	5	10	11,11,12	0.67	0	15,15,17	0.98	2 (13%)
10	MAN	J	6	10	11,11,12	0.69	0	15,15,17	0.92	2 (13%)
10	MAN	J	7	10	11,11,12	0.85	1 (9%)	15,15,17	1.12	2 (13%)
10	MAN	J	8	10	11,11,12	0.67	0	15,15,17	1.14	2 (13%)
10	MAN	J	9	10	11,11,12	0.88	1 (9%)	15,15,17	1.71	2 (13%)
9	NAG	K	1	9,4	14,14,15	0.48	0	17,19,21	0.94	1 (5%)
9	NAG	K	2	9	14,14,15	0.63	1 (7%)	17,19,21	0.60	0
9	NAG	M	1	9,4	14,14,15	0.62	0	17,19,21	0.90	1 (5%)
9	NAG	M	2	9	14,14,15	0.23	0	17,19,21	0.54	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	A	1	4,7	-	0/6/23/26	0/1/1/1
7	NAG	A	2	7	-	4/6/23/26	0/1/1/1
7	BMA	A	3	7	-	2/2/19/22	0/1/1/1
7	MAN	A	4	7	-	0/2/19/22	0/1/1/1
7	MAN	A	5	7	-	1/2/19/22	0/1/1/1
7	MAN	A	6	7	-	0/2/19/22	0/1/1/1
8	NAG	C	1	8,4	-	1/6/23/26	0/1/1/1
8	NAG	C	2	8	-	1/6/23/26	0/1/1/1
8	BMA	C	3	8	-	0/2/19/22	0/1/1/1
8	NAG	F	1	8,4	-	0/6/23/26	0/1/1/1
8	NAG	F	2	8	-	0/6/23/26	0/1/1/1
8	BMA	F	3	8	-	2/2/19/22	0/1/1/1
9	NAG	I	1	9,4	-	4/6/23/26	0/1/1/1
9	NAG	I	2	9	-	2/6/23/26	0/1/1/1
10	NAG	J	1	10,4	-	4/6/23/26	0/1/1/1
10	MAN	J	10	10	-	2/2/19/22	0/1/1/1
10	NAG	J	2	10	-	2/6/23/26	0/1/1/1
10	BMA	J	3	10	-	0/2/19/22	0/1/1/1
10	MAN	J	4	10	-	2/2/19/22	0/1/1/1
10	MAN	J	5	10	-	0/2/19/22	0/1/1/1
10	MAN	J	6	10	-	2/2/19/22	0/1/1/1
10	MAN	J	7	10	-	0/2/19/22	0/1/1/1
10	MAN	J	8	10	-	2/2/19/22	0/1/1/1
10	MAN	J	9	10	-	0/2/19/22	1/1/1/1
9	NAG	K	1	9,4	-	1/6/23/26	0/1/1/1
9	NAG	K	2	9	-	2/6/23/26	0/1/1/1
9	NAG	M	1	9,4	-	1/6/23/26	0/1/1/1
9	NAG	M	2	9	-	2/6/23/26	0/1/1/1

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	A	5	MAN	C1-C2	2.92	1.59	1.52
7	A	5	MAN	O5-C1	2.78	1.48	1.43
7	A	5	MAN	O5-C5	2.72	1.48	1.43
9	I	1	NAG	O5-C1	-2.67	1.39	1.43
7	A	4	MAN	C1-C2	2.65	1.58	1.52
8	C	3	BMA	C4-C5	2.26	1.57	1.53
10	J	7	MAN	C1-C2	2.26	1.57	1.52
10	J	9	MAN	O5-C5	2.08	1.47	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	J	4	MAN	C1-C2	2.08	1.57	1.52
10	J	10	MAN	O5-C1	-2.07	1.40	1.43
9	K	2	NAG	C1-C2	2.06	1.55	1.52
10	J	3	BMA	O5-C1	-2.04	1.40	1.43

All (31) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	A	5	MAN	C1-O5-C5	8.15	123.11	112.19
10	J	9	MAN	C1-O5-C5	5.73	119.87	112.19
10	J	1	NAG	C2-N2-C7	4.70	129.20	122.90
7	A	2	NAG	C2-N2-C7	4.51	128.94	122.90
10	J	4	MAN	C1-O5-C5	4.11	117.70	112.19
9	K	1	NAG	C1-O5-C5	3.14	116.39	112.19
7	A	6	MAN	C1-O5-C5	3.06	116.29	112.19
7	A	4	MAN	C1-C2-C3	3.02	114.04	109.64
10	J	8	MAN	O2-C2-C3	-2.86	104.23	110.15
10	J	8	MAN	C1-O5-C5	2.84	115.99	112.19
10	J	1	NAG	C1-C2-N2	2.72	114.72	110.43
8	C	3	BMA	C3-C4-C5	2.69	115.11	110.23
8	C	2	NAG	C1-O5-C5	2.66	115.76	112.19
7	A	4	MAN	C1-O5-C5	2.49	115.52	112.19
10	J	3	BMA	C1-O5-C5	2.43	115.44	112.19
10	J	5	MAN	O2-C2-C3	-2.41	105.16	110.15
10	J	7	MAN	C1-O5-C5	2.40	115.40	112.19
9	I	1	NAG	C1-O5-C5	2.38	115.38	112.19
10	J	5	MAN	C1-O5-C5	2.29	115.26	112.19
10	J	4	MAN	O2-C2-C3	-2.24	105.51	110.15
10	J	10	MAN	O2-C2-C3	-2.23	105.54	110.15
7	A	5	MAN	O2-C2-C3	-2.22	105.56	110.15
9	M	1	NAG	C3-C4-C5	2.22	114.25	110.23
9	I	1	NAG	C3-C4-C5	2.20	114.22	110.23
10	J	6	MAN	C1-O5-C5	2.17	115.09	112.19
7	A	6	MAN	O2-C2-C3	-2.13	105.73	110.15
7	A	2	NAG	C1-C2-N2	2.10	113.74	110.43
7	A	4	MAN	O2-C2-C3	-2.07	105.87	110.15
10	J	7	MAN	O2-C2-C3	-2.05	105.91	110.15
10	J	6	MAN	O2-C2-C3	-2.05	105.91	110.15
10	J	9	MAN	O2-C2-C3	-2.03	105.95	110.15

There are no chirality outliers.

All (37) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
7	A	3	BMA	O5-C5-C6-O6
10	J	10	MAN	O5-C5-C6-O6
9	M	2	NAG	C4-C5-C6-O6
8	F	3	BMA	O5-C5-C6-O6
7	A	3	BMA	C4-C5-C6-O6
10	J	10	MAN	C4-C5-C6-O6
9	I	1	NAG	O5-C5-C6-O6
8	F	3	BMA	C4-C5-C6-O6
10	J	8	MAN	O5-C5-C6-O6
9	M	2	NAG	O5-C5-C6-O6
7	A	2	NAG	C8-C7-N2-C2
7	A	2	NAG	O7-C7-N2-C2
9	I	1	NAG	C8-C7-N2-C2
9	I	1	NAG	O7-C7-N2-C2
10	J	1	NAG	C8-C7-N2-C2
10	J	1	NAG	O7-C7-N2-C2
9	I	2	NAG	O5-C5-C6-O6
7	A	5	MAN	O5-C5-C6-O6
10	J	6	MAN	O5-C5-C6-O6
10	J	8	MAN	C4-C5-C6-O6
9	I	1	NAG	C4-C5-C6-O6
9	K	2	NAG	O5-C5-C6-O6
10	J	1	NAG	C1-C2-N2-C7
10	J	4	MAN	C4-C5-C6-O6
10	J	6	MAN	C4-C5-C6-O6
10	J	1	NAG	C3-C2-N2-C7
10	J	4	MAN	O5-C5-C6-O6
10	J	2	NAG	C4-C5-C6-O6
9	I	2	NAG	C4-C5-C6-O6
7	A	2	NAG	C1-C2-N2-C7
8	C	1	NAG	C1-C2-N2-C7
9	K	1	NAG	C1-C2-N2-C7
9	K	2	NAG	C1-C2-N2-C7
7	A	2	NAG	C3-C2-N2-C7
9	M	1	NAG	C4-C5-C6-O6
8	C	2	NAG	C4-C5-C6-O6
10	J	2	NAG	O5-C5-C6-O6

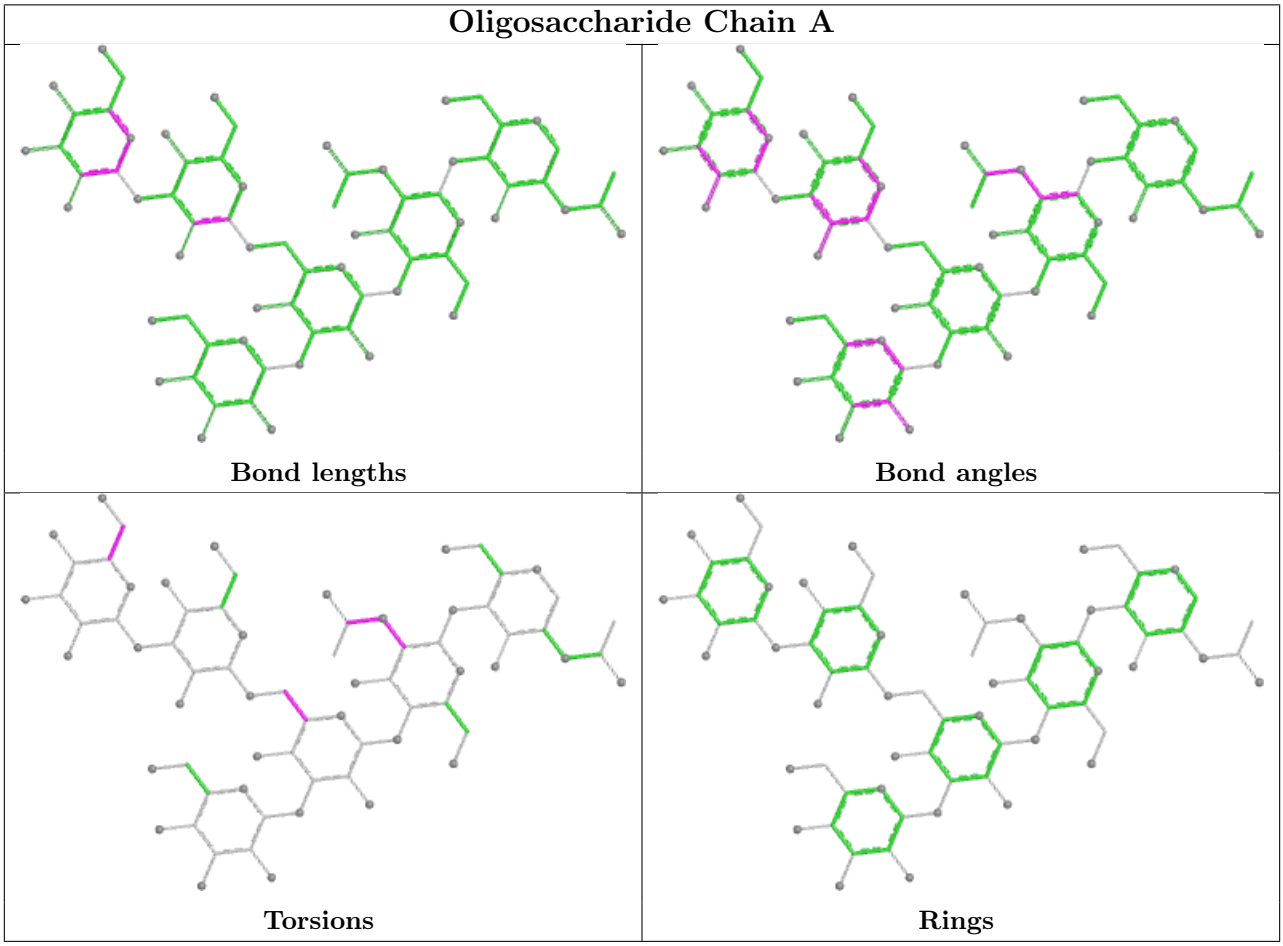
All (1) ring outliers are listed below:

Mol	Chain	Res	Type	Atoms
10	J	9	MAN	C1-C2-C3-C4-C5-O5

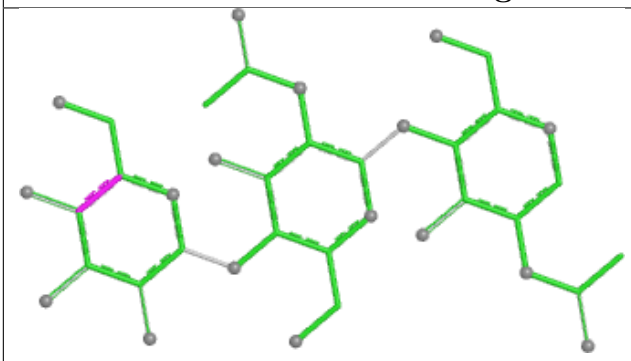
6 monomers are involved in 6 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
9	I	1	NAG	1	0
7	A	5	MAN	1	0
7	A	6	MAN	1	0
8	C	1	NAG	1	0
7	A	2	NAG	1	0
10	J	1	NAG	1	0

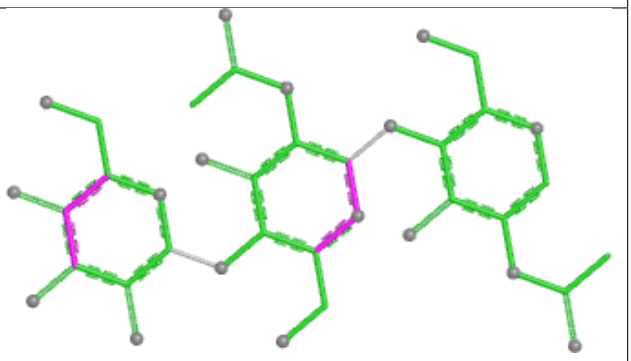
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.



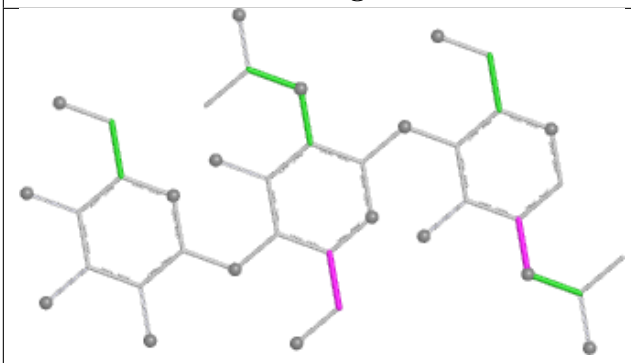
Oligosaccharide Chain C



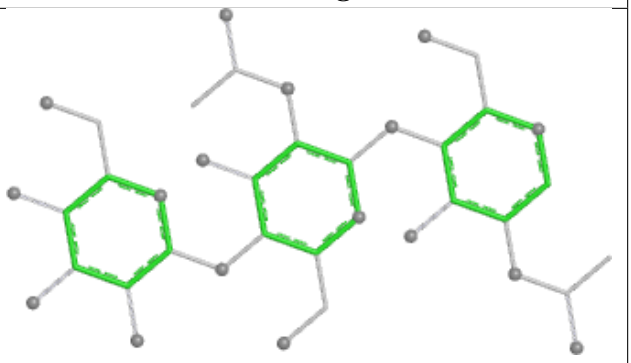
Bond lengths



Bond angles

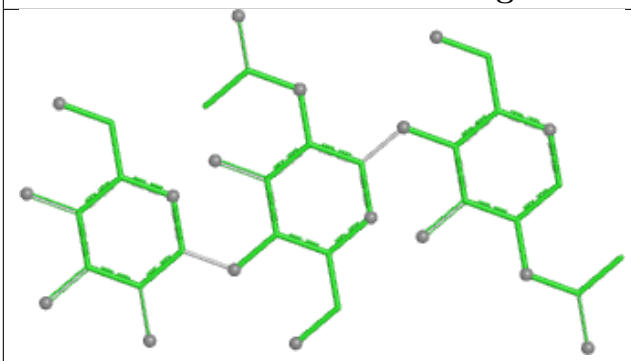


Torsions

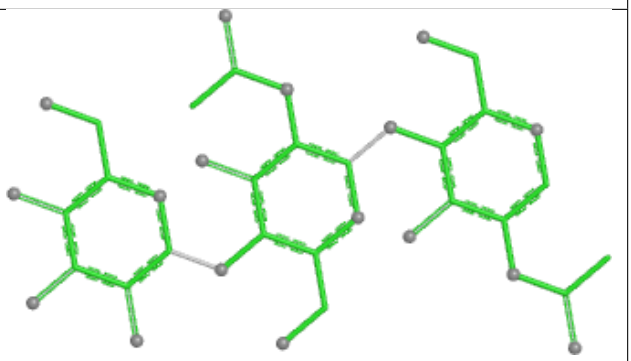


Rings

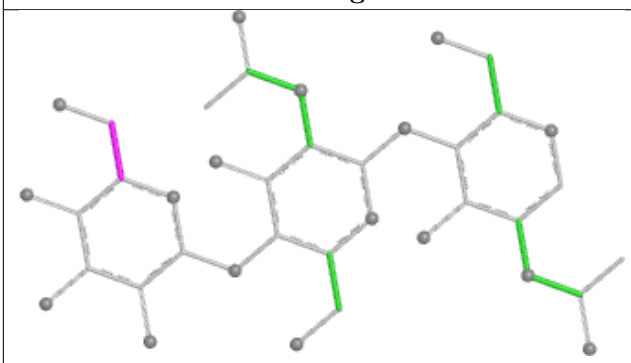
Oligosaccharide Chain F



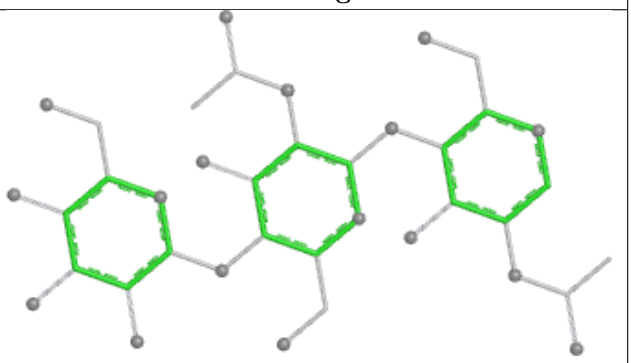
Bond lengths



Bond angles

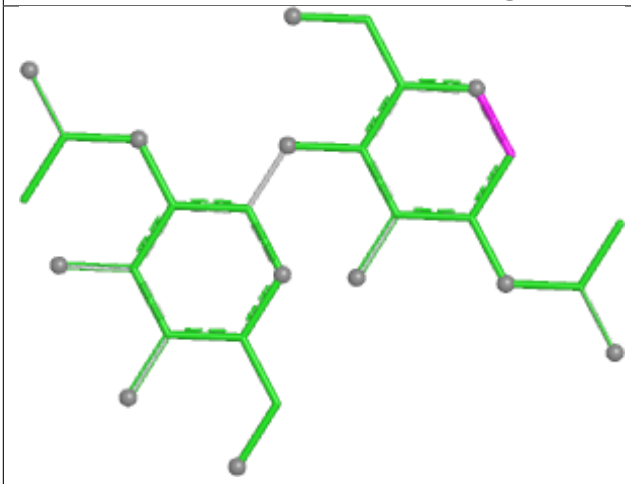


Torsions

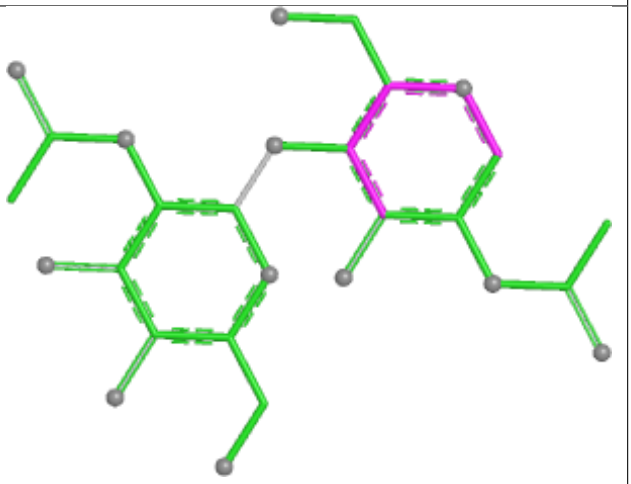


Rings

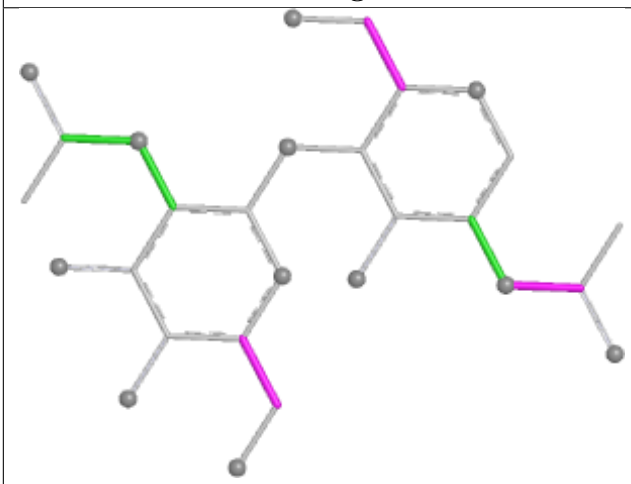
Oligosaccharide Chain I



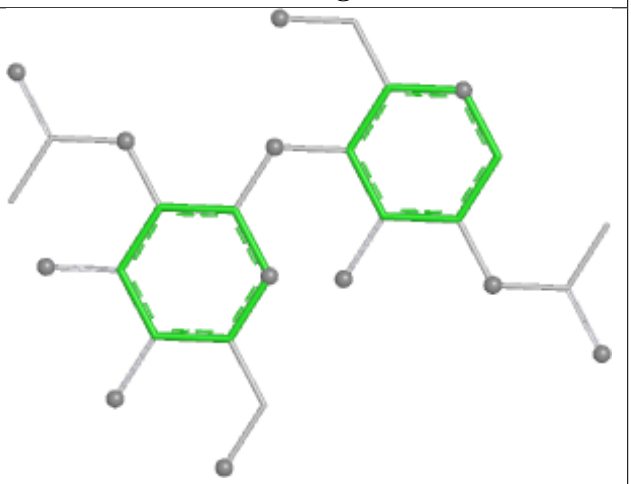
Bond lengths



Bond angles

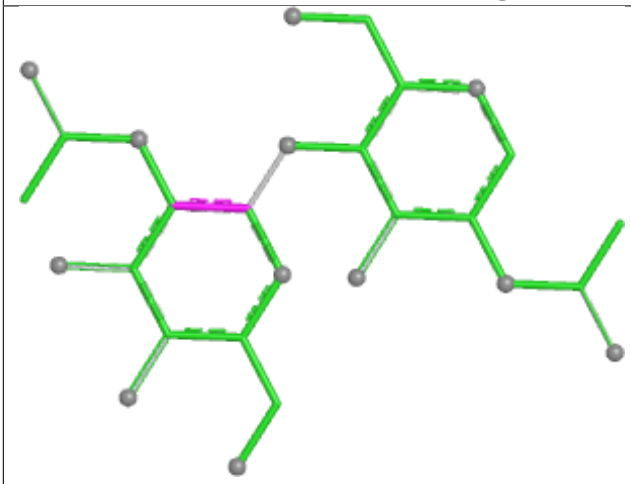


Torsions

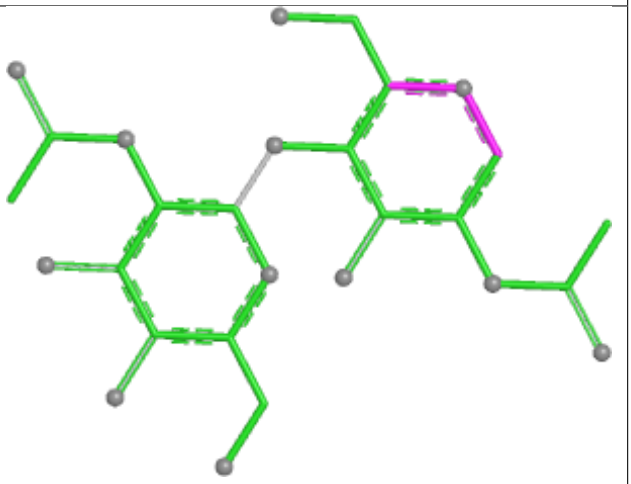


Rings

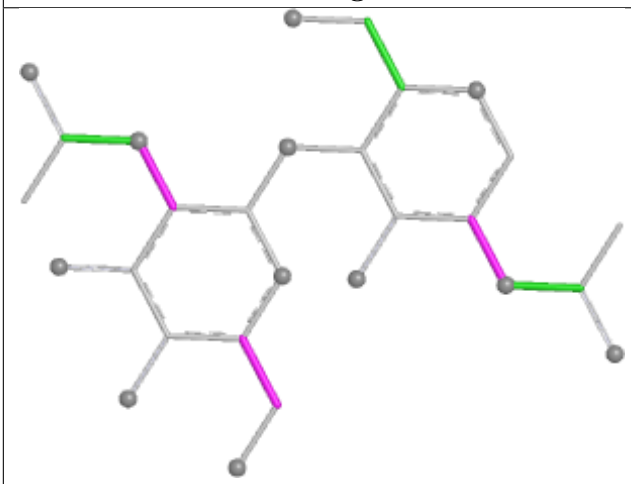
Oligosaccharide Chain K



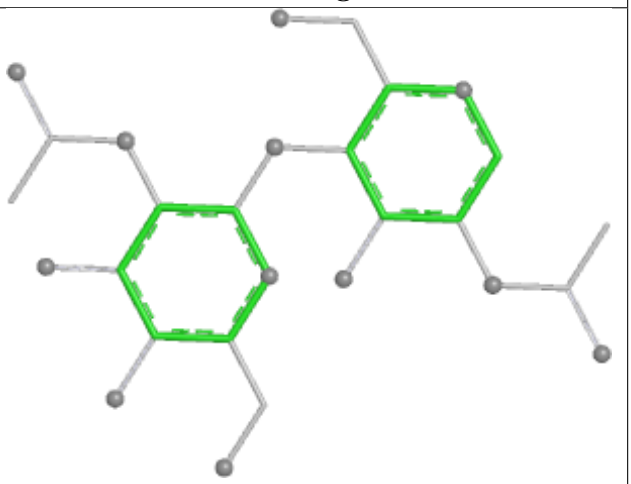
Bond lengths



Bond angles

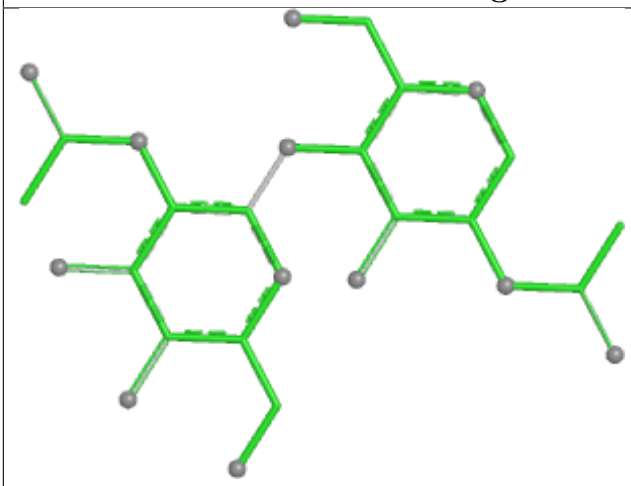


Torsions

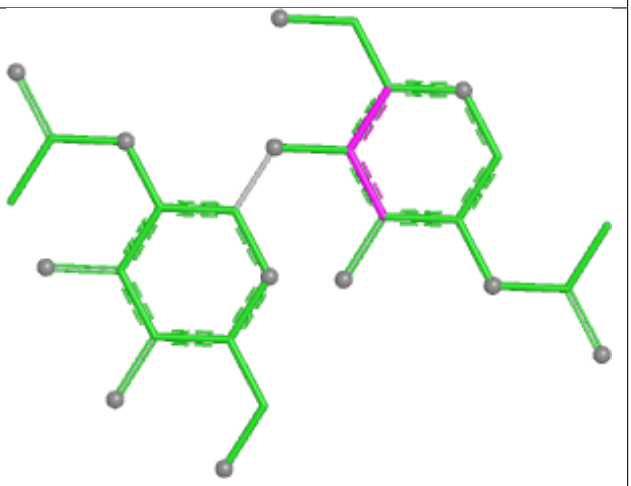


Rings

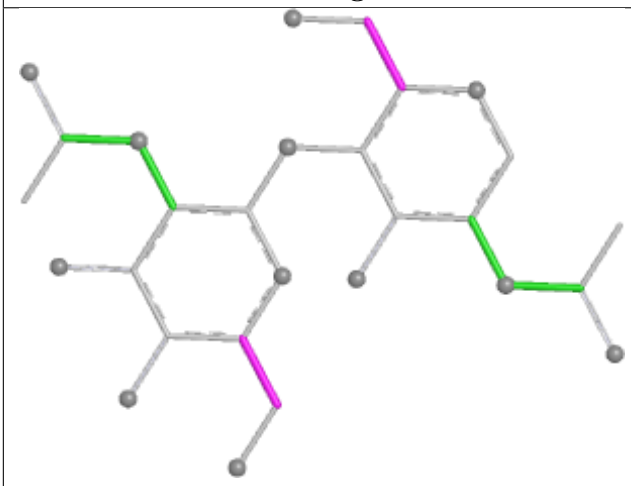
Oligosaccharide Chain M



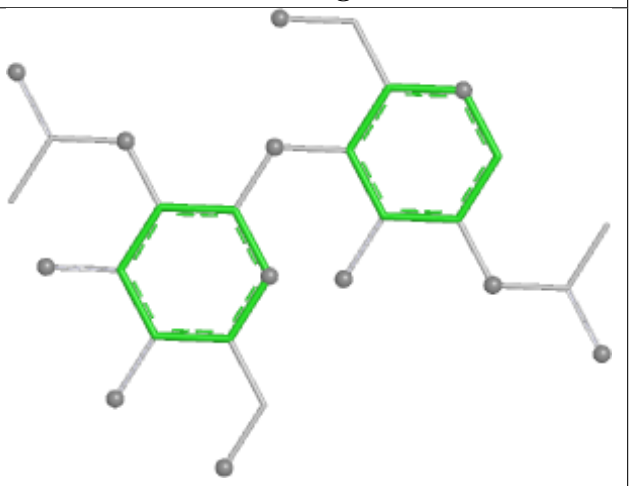
Bond lengths



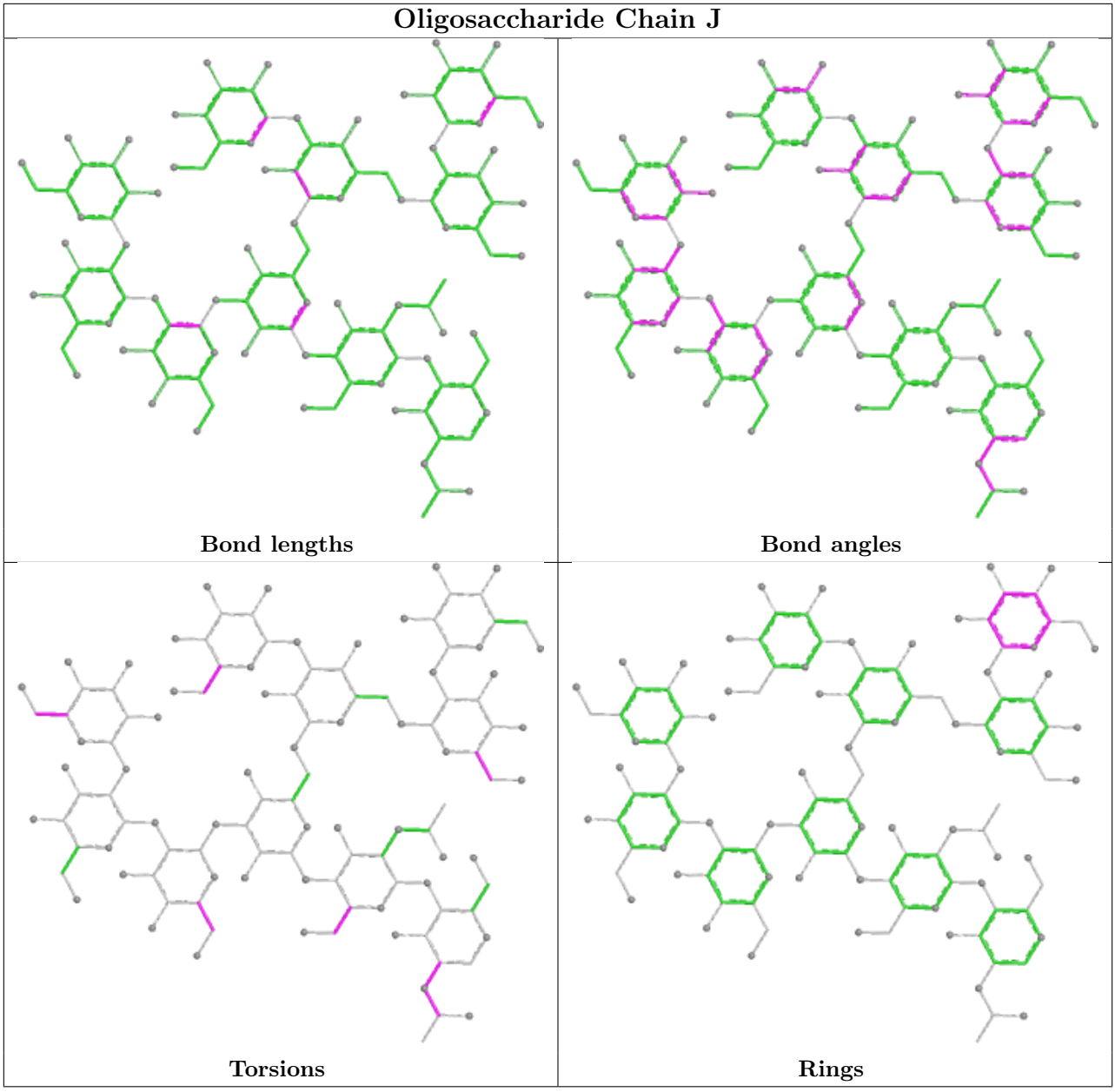
Bond angles



Torsions



Rings



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	$\#\|Z\|>2$
11	NAG	G	628	4	14,14,15	0.33	0	17,19,21	0.57	0
11	NAG	G	611	4	14,14,15	0.93	1 (7%)	17,19,21	0.71	0
11	NAG	G	633	4	14,14,15	0.38	0	17,19,21	0.50	0
11	NAG	G	631	4	14,14,15	0.28	0	17,19,21	0.43	0
11	NAG	G	636	4	14,14,15	0.30	0	17,19,21	0.44	0
11	NAG	G	612	4	14,14,15	0.56	0	17,19,21	0.45	0
11	NAG	G	632	4	14,14,15	0.39	0	17,19,21	2.19	4 (23%)
11	NAG	G	610	4	14,14,15	0.17	0	17,19,21	0.56	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
11	NAG	G	628	4	-	2/6/23/26	0/1/1/1
11	NAG	G	611	4	-	2/6/23/26	0/1/1/1
11	NAG	G	633	4	-	2/6/23/26	0/1/1/1
11	NAG	G	631	4	-	1/6/23/26	0/1/1/1
11	NAG	G	636	4	-	3/6/23/26	0/1/1/1
11	NAG	G	612	4	-	1/6/23/26	0/1/1/1
11	NAG	G	632	4	-	6/6/23/26	0/1/1/1
11	NAG	G	610	4	-	0/6/23/26	0/1/1/1

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	G	611	NAG	C1-C2	3.26	1.56	1.52

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	G	632	NAG	C1-O5-C5	6.04	120.28	112.19
11	G	632	NAG	C2-N2-C7	4.82	129.36	122.90
11	G	632	NAG	C3-C4-C5	2.97	115.61	110.23
11	G	632	NAG	C1-C2-N2	2.39	114.20	110.43

There are no chirality outliers.

All (17) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
11	G	632	NAG	C4-C5-C6-O6
11	G	632	NAG	O5-C5-C6-O6
11	G	628	NAG	O5-C5-C6-O6
11	G	632	NAG	C8-C7-N2-C2
11	G	632	NAG	O7-C7-N2-C2
11	G	636	NAG	C8-C7-N2-C2
11	G	636	NAG	O7-C7-N2-C2
11	G	633	NAG	O5-C5-C6-O6
11	G	633	NAG	C4-C5-C6-O6
11	G	628	NAG	C4-C5-C6-O6
11	G	612	NAG	O5-C5-C6-O6
11	G	631	NAG	O5-C5-C6-O6
11	G	611	NAG	O5-C5-C6-O6
11	G	636	NAG	O5-C5-C6-O6
11	G	632	NAG	C3-C2-N2-C7
11	G	611	NAG	C1-C2-N2-C7
11	G	632	NAG	C1-C2-N2-C7

There are no ring outliers.

4 monomers are involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
11	G	611	NAG	1	0
11	G	631	NAG	2	0
11	G	612	NAG	1	0
11	G	632	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	B	120/154 (77%)	1.23	22 (18%) 3 3	18, 47, 91, 108	0
2	D	128/134 (95%)	1.76	45 (35%) 1 1	37, 69, 104, 121	0
3	E	107/114 (93%)	1.90	47 (43%) 0 0	28, 62, 116, 128	0
4	G	423/471 (89%)	1.02	61 (14%) 6 5	8, 42, 85, 109	0
5	H	226/244 (92%)	0.96	36 (15%) 5 4	10, 41, 82, 109	0
6	L	211/217 (97%)	0.28	8 (3%) 44 40	8, 28, 56, 105	0
All	All	1215/1334 (91%)	1.06	219 (18%) 3 3	8, 43, 94, 128	0

All (219) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	518	VAL	7.6
3	E	42	ARG	7.4
4	G	472	GLY	7.1
5	H	73	THR	6.3
4	G	81	PRO	6.1
1	B	519	PHE	5.6
1	B	537	LEU	5.3
3	E	105	SER	5.2
4	G	82	GLN	5.2
1	B	538	THR	5.2
4	G	312	GLY	5.2
1	B	520	LEU	5.1
4	G	353	PHE	5.0
4	G	188	ASN	5.0
3	E	29	SER	4.9
2	D	60	ALA	4.9
4	G	365	SER	4.8
4	G	392	PHE	4.8
2	D	18	VAL	4.8

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Mol	Chain	Res	Type	RSRZ
3	E	106	VAL	4.8
4	G	368	ASP	4.7
3	E	38	TRP	4.6
2	D	89	THR	4.6
4	G	430	VAL	4.6
2	D	57	LYS	4.5
3	E	98	PHE	4.5
4	G	350	ARG	4.5
4	G	395	THR	4.5
2	D	10	THR	4.4
2	D	12	THR	4.4
3	E	83	GLU	4.4
4	G	198	THR	4.3
3	E	89	CYS	4.3
2	D	48	MET	4.3
1	B	591	GLN	4.2
5	H	119	VAL	4.2
2	D	41	ALA	4.2
4	G	246	GLN	4.1
4	G	73	ALA	4.1
1	B	619	TYR	4.0
4	G	72	HIS	4.0
1	B	651	PHE	4.0
2	D	108	LEU	4.0
2	D	37	ILE	3.9
2	D	65	ASP	3.9
3	E	36	TYR	3.9
4	G	352	HIS	3.8
2	D	67	VAL	3.8
2	D	43	ARG	3.8
2	D	54	SER	3.8
4	G	388	SER	3.8
5	H	188	GLY	3.8
1	B	567	GLN	3.7
4	G	393	ASN	3.7
1	B	565	MET	3.7
4	G	71	THR	3.7
4	G	458	GLY	3.6
4	G	347	GLU	3.6
3	E	41	GLY	3.6
4	G	183	PRO	3.6
4	G	394	LYS	3.6

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Mol	Chain	Res	Type	RSRZ
2	D	69	MET	3.5
5	H	95	ALA	3.5
1	B	573	PHE	3.5
2	D	36	TRP	3.5
6	L	7	TYR	3.5
6	L	70	ARG	3.5
3	E	79	ARG	3.4
2	D	110	THR	3.4
6	L	127	GLN	3.4
2	D	45	PRO	3.3
1	B	524	GLY	3.3
1	B	568	LEU	3.3
3	E	17	GLN	3.3
4	G	358	ILE	3.3
1	B	657	GLU	3.2
4	G	168	LYS	3.2
3	E	30	HIS	3.2
5	H	206	ASP	3.2
4	G	315	GLN	3.2
2	D	59	LEU	3.1
5	H	117	PRO	3.1
4	G	357	THR	3.1
3	E	12	SER	3.1
4	G	217	TYR	3.1
1	B	640	ASP	3.1
5	H	211	PRO	3.1
3	E	104	VAL	3.1
5	H	75	LYS	3.0
5	H	125	SER	3.0
2	D	1	GLN	3.0
4	G	162	THR	3.0
6	L	9	ARG	3.0
3	E	11	VAL	3.0
6	L	169	SER	2.9
5	H	120	PHE	2.9
3	E	40	PRO	2.9
4	G	219	ALA	2.9
3	E	81	GLU	2.9
4	G	313	PRO	2.9
1	B	536	THR	2.9
2	D	91	PHE	2.9
2	D	103	TRP	2.8

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Mol	Chain	Res	Type	RSRZ
5	H	100(O)	TYR	2.8
4	G	348	LYS	2.8
2	D	15	GLY	2.8
4	G	475	MET	2.8
5	H	118	SER	2.8
2	D	58	ASN	2.8
3	E	8	ALA	2.8
4	G	504	ARG	2.8
4	G	428	GLN	2.7
5	H	186	SER	2.7
4	G	366	GLY	2.7
4	G	473	GLY	2.7
6	L	129	ASN	2.7
4	G	426	MET	2.7
5	H	193	ILE	2.7
3	E	27(A)	SER	2.7
5	H	56	SER	2.7
3	E	68	TYR	2.7
2	D	104	GLY	2.7
3	E	90	SER	2.7
4	G	276	ASN	2.7
3	E	76	SER	2.6
2	D	49	GLY	2.6
3	E	87	TYR	2.6
2	D	62	ALA	2.6
5	H	23	THR	2.5
3	E	15	LEU	2.5
5	H	199	LYS	2.5
3	E	102	THR	2.5
2	D	51	ILE	2.5
3	E	3	VAL	2.5
4	G	292	VAL	2.5
3	E	62	PHE	2.5
2	D	83	THR	2.5
4	G	239	CYS	2.5
5	H	184	SER	2.5
3	E	39	PRO	2.5
4	G	197	ASN	2.5
3	E	80	PRO	2.5
2	D	39	GLN	2.5
2	D	82	ILE	2.4
3	E	47	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
3	E	58	ILE	2.4
3	E	7	SER	2.4
2	D	55	GLY	2.4
3	E	99	GLY	2.4
6	L	184	MET	2.4
3	E	101	GLY	2.4
4	G	120	VAL	2.4
5	H	3	GLN	2.4
4	G	163	THR	2.4
4	G	287	HIS	2.4
2	D	92	CYS	2.4
2	D	63	PHE	2.4
4	G	270	ILE	2.4
4	G	79	PRO	2.4
5	H	136	LEU	2.3
3	E	95	SER	2.3
1	B	570	VAL	2.3
4	G	268	GLU	2.3
3	E	77	ASP	2.3
5	H	196	VAL	2.3
5	H	11	LEU	2.3
1	B	577	GLN	2.3
5	H	100(G)	PHE	2.3
5	H	32	TYR	2.3
4	G	466	GLU	2.3
3	E	34	SER	2.3
4	G	308	ARG	2.3
3	E	78	LEU	2.3
4	G	411	ASN	2.2
2	D	44	GLY	2.2
5	H	18	LEU	2.2
5	H	36	TRP	2.2
2	D	40	THR	2.2
6	L	42	GLN	2.2
1	B	566	LEU	2.2
4	G	288	LEU	2.2
3	E	35	TRP	2.2
3	E	103	LYS	2.2
5	H	139	LEU	2.2
5	H	172	GLY	2.2
5	H	187	LEU	2.2
5	H	29	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
5	H	5	GLN	2.2
3	E	16	GLY	2.2
4	G	84	LEU	2.2
2	D	72(F)	THR	2.1
5	H	133	THR	2.1
2	D	56	ASP	2.1
3	E	14	SER	2.1
3	E	75	ILE	2.1
4	G	345	VAL	2.1
1	B	581	LEU	2.1
2	D	20	ILE	2.1
5	H	82(B)	SER	2.1
4	G	351	GLU	2.1
5	H	108	THR	2.1
4	G	386	ASN	2.1
4	G	425	ASN	2.1
1	B	600	GLY	2.1
2	D	16	SER	2.1
1	B	607	ASN	2.1
4	G	503	ARG	2.0
2	D	84	SER	2.0
3	E	100	THR	2.0
2	D	14	PRO	2.0
5	H	190	GLN	2.0
2	D	82(B)	ASN	2.0
3	E	43	ALA	2.0
4	G	58	ALA	2.0
4	G	70	ALA	2.0
5	H	74	SER	2.0
2	D	42	GLY	2.0
2	D	66	ARG	2.0
3	E	86	TYR	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,

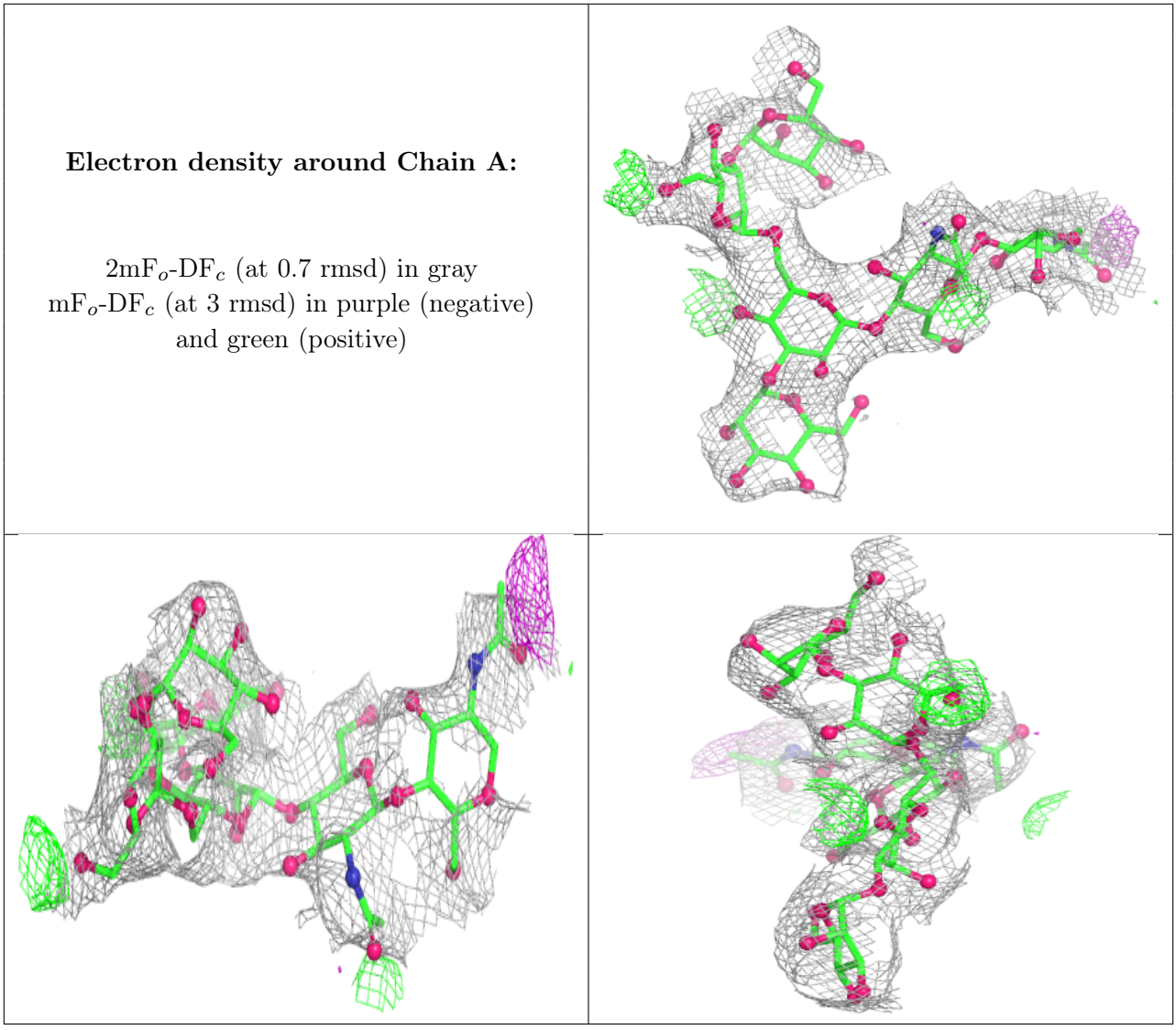
median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
7	NAG	A	1	14/15	-	-	17,37,49,56	0
7	NAG	A	2	14/15	-	-	35,50,58,58	0
7	BMA	A	3	11/12	-	-	48,63,71,74	0
7	MAN	A	4	11/12	-	-	89,109,113,116	0
7	MAN	A	5	11/12	-	-	105,121,134,134	0
7	MAN	A	6	11/12	-	-	43,49,70,71	0
8	NAG	C	1	14/15	-	-	45,65,76,86	0
8	NAG	C	2	14/15	-	-	82,97,110,136	0
8	BMA	C	3	11/12	-	-	82,104,131,134	0
8	NAG	F	1	14/15	-	-	20,37,57,74	0
8	NAG	F	2	14/15	-	-	39,80,90,105	0
8	BMA	F	3	11/12	-	-	73,90,121,122	0
9	NAG	I	2	14/15	0.72	0.19	50,93,125,125	0
9	NAG	M	2	14/15	0.72	0.17	52,72,103,106	0
10	NAG	J	2	14/15	0.75	0.20	34,59,71,80	0
9	NAG	M	1	14/15	0.78	0.20	62,73,82,83	0
9	NAG	K	1	14/15	0.82	0.15	76,100,138,147	0
10	NAG	J	1	14/15	0.88	0.15	34,46,60,66	0
9	NAG	K	2	14/15	0.90	0.14	67,144,154,156	0
9	NAG	I	1	14/15	0.91	0.14	38,70,89,89	0
10	BMA	J	3	11/12	-	-	28,37,51,67	0
10	MAN	J	4	11/12	-	-	12,18,30,48	0
10	MAN	J	5	11/12	-	-	20,29,48,50	0
10	MAN	J	6	11/12	-	-	49,60,75,79	0
10	MAN	J	7	11/12	-	-	46,64,73,79	0
10	MAN	J	8	11/12	-	-	46,66,72,73	0
10	MAN	J	9	11/12	-	-	49,69,82,88	0
10	MAN	J	10	11/12	-	-	37,77,94,94	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.

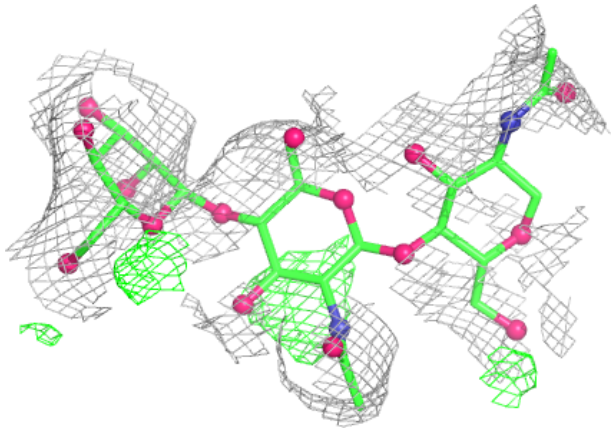
Electron density around Chain A:

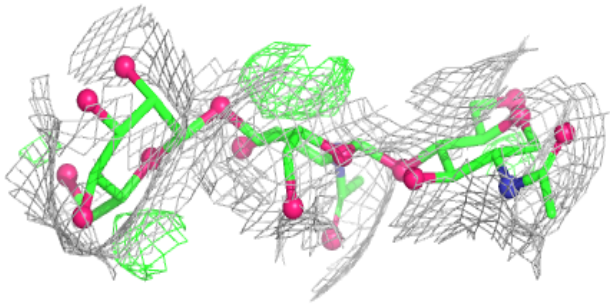
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

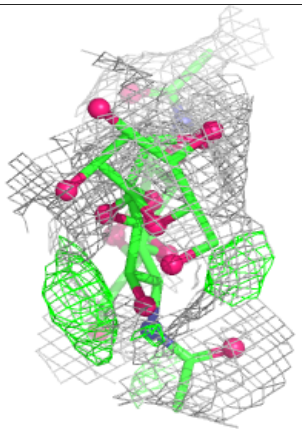


Electron density around Chain C:

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

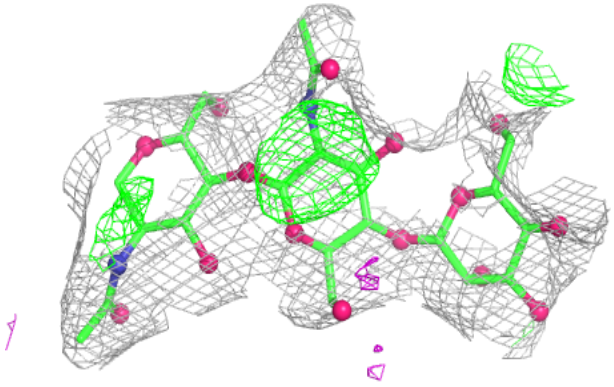


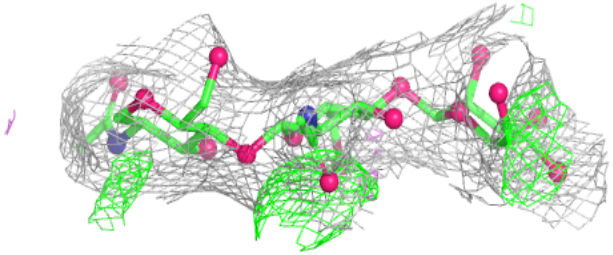


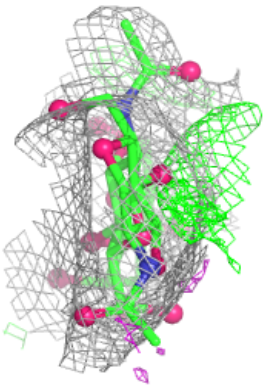


Electron density around Chain F:

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

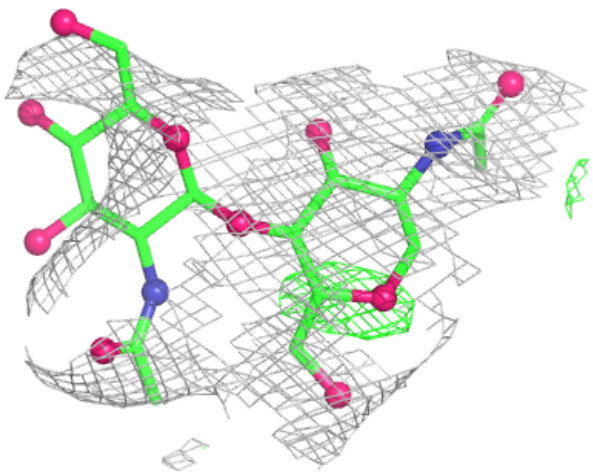


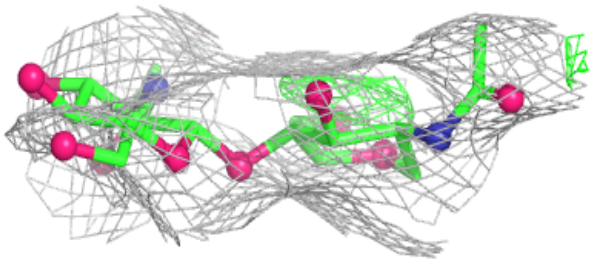


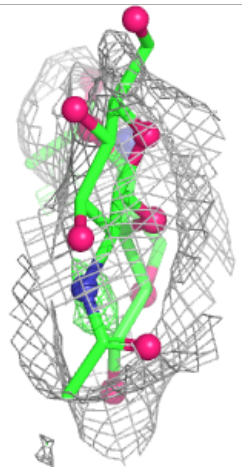


Electron density around Chain I:

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

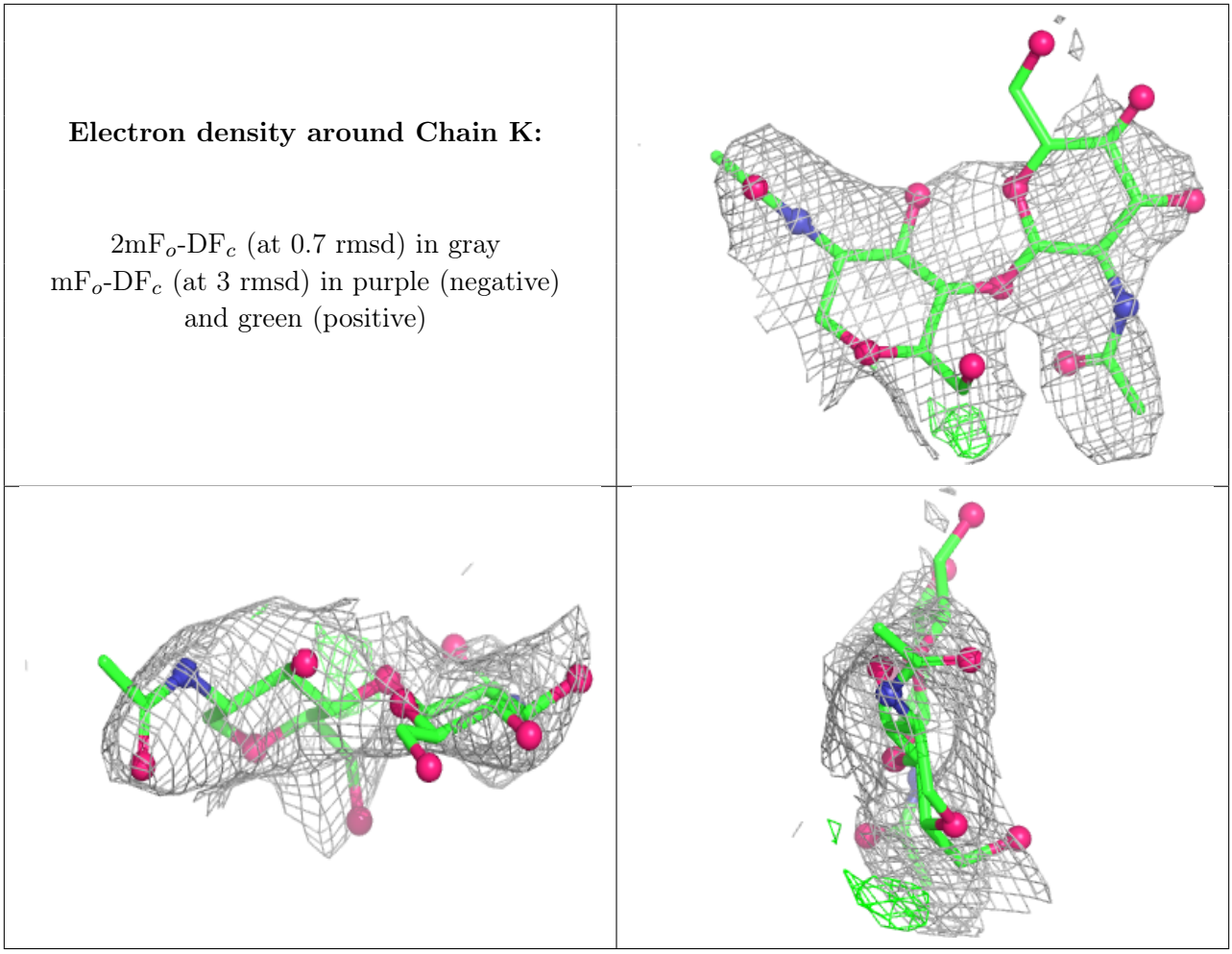






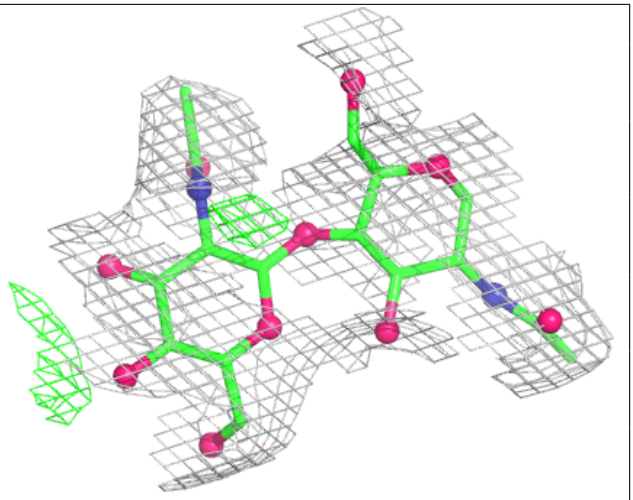
Electron density around Chain K:

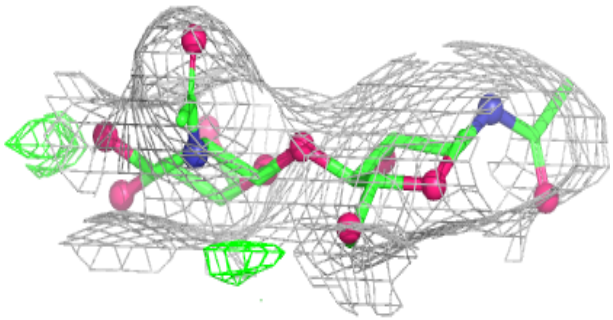
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

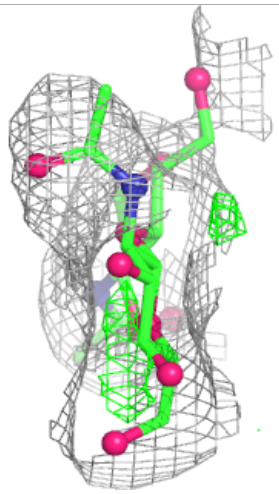


Electron density around Chain M:

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

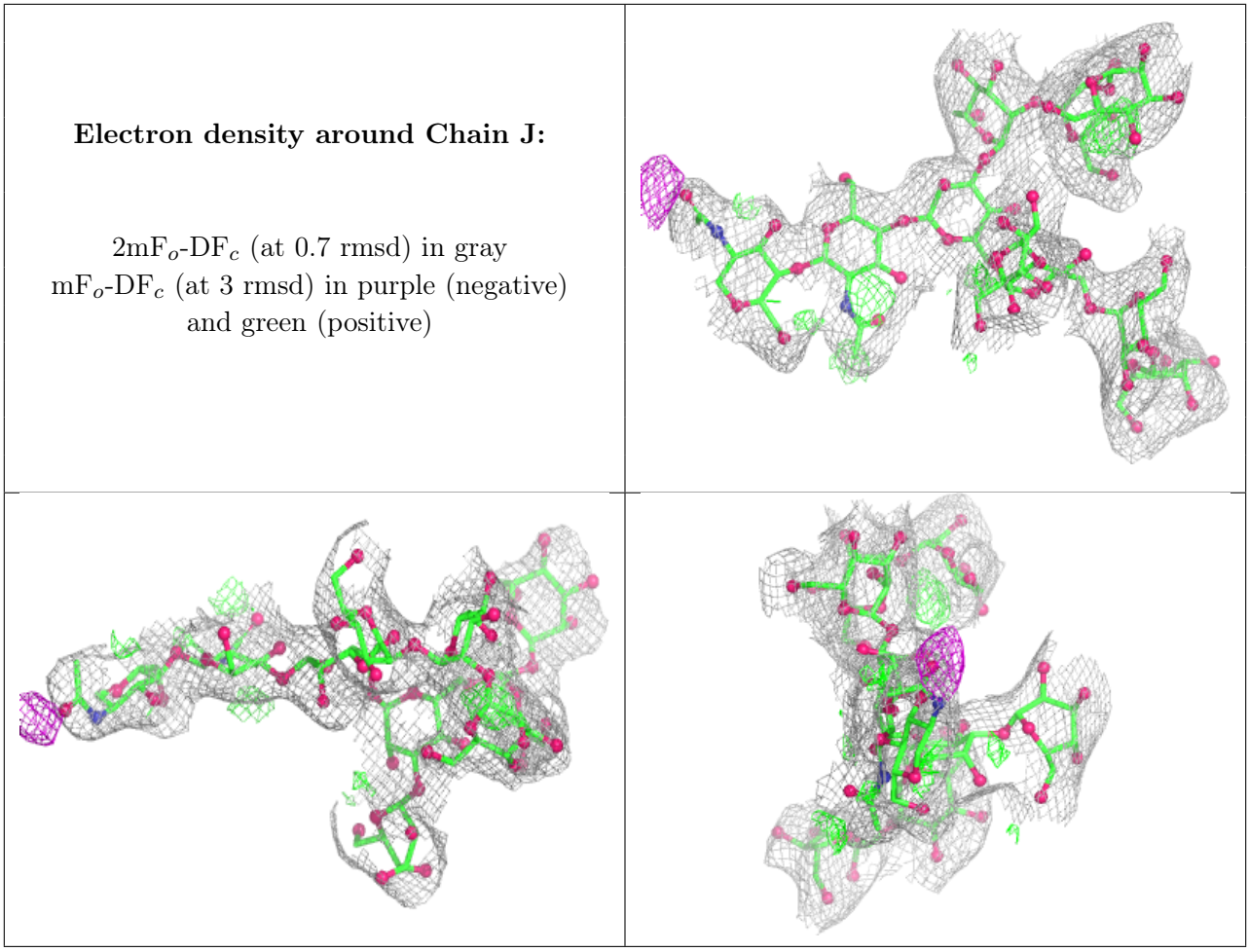






Electron density around Chain J:

$2mF_o$-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
11	NAG	G	632	14/15	0.64	0.26	100,125,134,138	0
11	NAG	G	610	14/15	0.68	0.17	69,91,103,110	0
11	NAG	G	611	14/15	0.81	0.17	65,86,109,111	0
11	NAG	G	631	14/15	0.82	0.16	61,70,82,85	0
11	NAG	G	612	14/15	0.83	0.17	39,65,88,94	0
11	NAG	G	633	14/15	0.84	0.14	72,96,118,123	0
11	NAG	G	636	14/15	0.89	0.14	50,69,92,104	0
11	NAG	G	628	14/15	0.96	0.08	38,48,59,81	0

6.5 Other polymers (i)

There are no such residues in this entry.