Full wwPDB EM Validation Report

May 14, 2024 – 10:25 am BST

PDB ID	:	8R54
EMDB ID	:	EMD-18891
Title	:	Mouse teneurin-3 non-compact subunit - A0B0 isoform
Authors	:	Gogou, C.; Meijer, D.H.
Deposited on	:	2023-11-15
Resolution	:	3.50 Å(reported)

This is a Full wwPDB EM 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/EMValidationReportHelp
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:

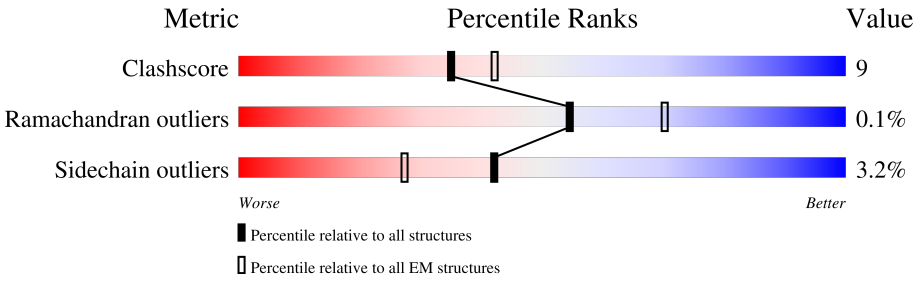
EMDB validation analysis	:	0.0.1.dev92
Mogul	:	1.8.4, CSD as541be (2020)
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	FAILED
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.2

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.50 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)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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%

Mol	Chain	Length	Quality of chain
1	A	2391	64% 18% • 17%
2	B	2	50% 50%
2	E	2	100%
2	F	2	100%
2	G	2	100%
2	H	2	100%
2	I	2	100%
2	J	2	100%
3	C	3	67% 33%

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Mol	Chain	Length	Quality of chain
3	D	3	100%

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 15900 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 Teneurin-3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	1982	15570	9813	2683	2994	80	1	0

There are 34 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	312	MET	-	initiating methionine	UNP Q9WTS6
A	313	ALA	-	expression tag	UNP Q9WTS6
A	314	ARG	-	expression tag	UNP Q9WTS6
A	315	PRO	-	expression tag	UNP Q9WTS6
A	316	LEU	-	expression tag	UNP Q9WTS6
A	317	CYS	-	expression tag	UNP Q9WTS6
A	318	THR	-	expression tag	UNP Q9WTS6
A	319	LEU	-	expression tag	UNP Q9WTS6
A	320	LEU	-	expression tag	UNP Q9WTS6
A	321	LEU	-	expression tag	UNP Q9WTS6
A	322	LEU	-	expression tag	UNP Q9WTS6
A	323	MET	-	expression tag	UNP Q9WTS6
A	324	ALA	-	expression tag	UNP Q9WTS6
A	325	THR	-	expression tag	UNP Q9WTS6
A	326	LEU	-	expression tag	UNP Q9WTS6
A	327	ALA	-	expression tag	UNP Q9WTS6
A	328	GLY	-	expression tag	UNP Q9WTS6
A	329	ALA	-	expression tag	UNP Q9WTS6
A	330	LEU	-	expression tag	UNP Q9WTS6
A	331	ALA	-	expression tag	UNP Q9WTS6
A	332	GLY	-	expression tag	UNP Q9WTS6
A	333	SER	-	expression tag	UNP Q9WTS6
A	334	HIS	-	expression tag	UNP Q9WTS6
A	335	HIS	-	expression tag	UNP Q9WTS6
A	336	HIS	-	expression tag	UNP Q9WTS6
A	337	HIS	-	expression tag	UNP Q9WTS6
A	338	HIS	-	expression tag	UNP Q9WTS6
A	339	HIS	-	expression tag	UNP Q9WTS6

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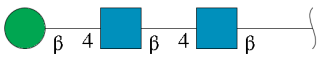
Chain	Residue	Modelled	Actual	Comment	Reference
A	340	GLY	-	expression tag	UNP Q9WTS6
A	341	SER	-	expression tag	UNP Q9WTS6
A	2316	ILE	THR	conflict	UNP Q9WTS6
A	2700	ALA	-	expression tag	UNP Q9WTS6
A	2701	ALA	-	expression tag	UNP Q9WTS6
A	2702	ALA	-	expression tag	UNP Q9WTS6

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

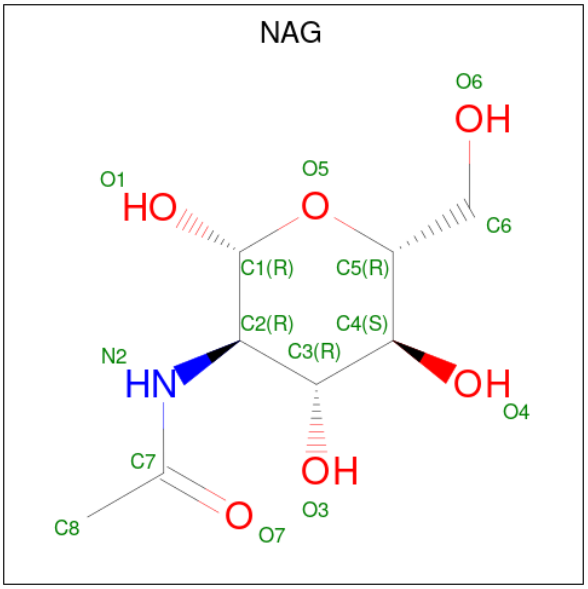
Mol	Chain	Residues	Atoms				AltConf	Trace
2	B	2	Total	C	N	O	0	0
			28	16	2	10		
2	E	2	Total	C	N	O	0	0
			28	16	2	10		
2	F	2	Total	C	N	O	0	0
			28	16	2	10		
2	G	2	Total	C	N	O	0	0
			28	16	2	10		
2	H	2	Total	C	N	O	0	0
			28	16	2	10		
2	I	2	Total	C	N	O	0	0
			28	16	2	10		
2	J	2	Total	C	N	O	0	0
			28	16	2	10		

- Molecule 3 is an oligosaccharide called beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.



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

- Molecule 4 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$).



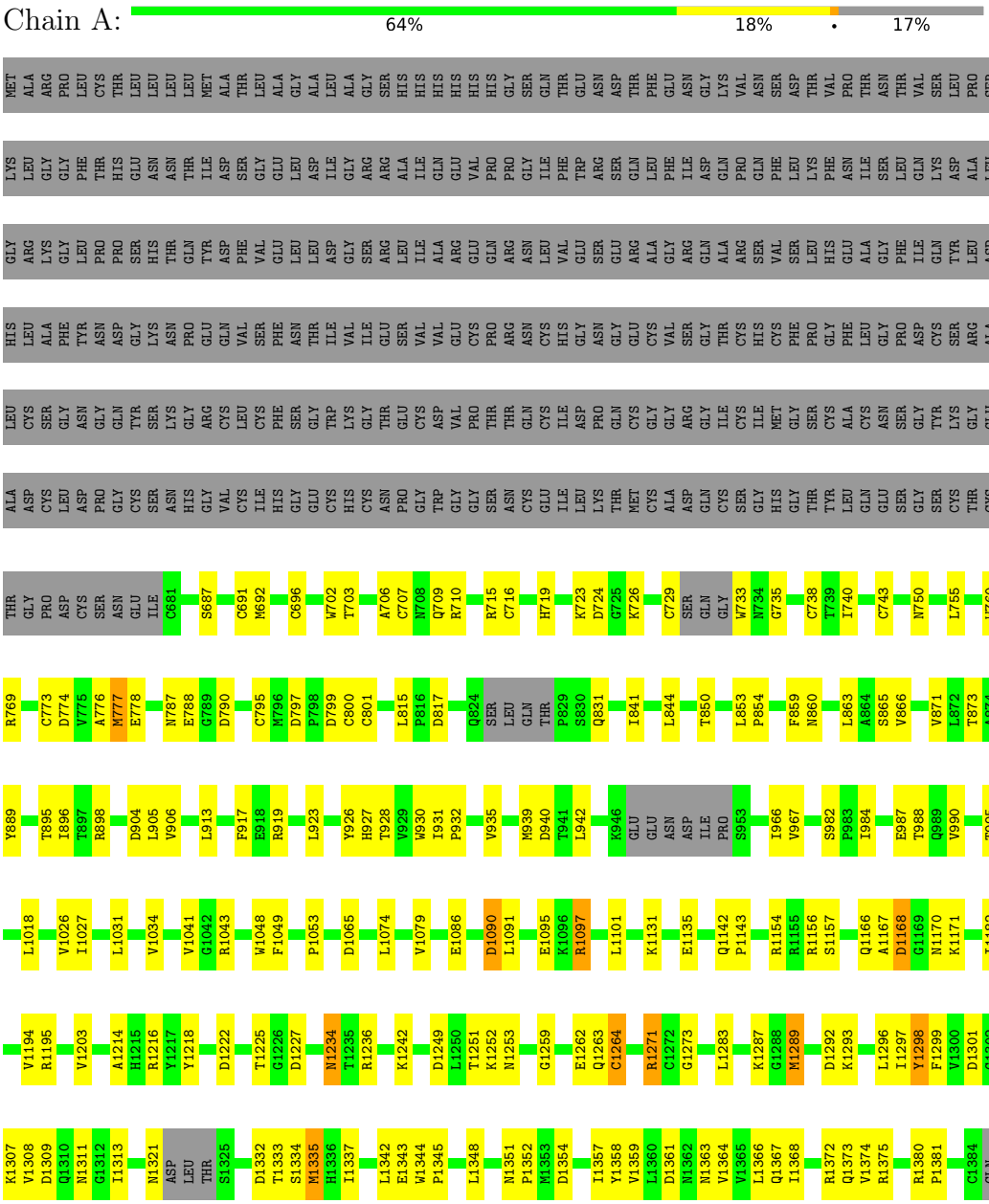
Mol	Chain	Residues	Atoms				AltConf
4	A	1	Total	C	N	O	0
			14	8	1	5	
4	A	1	Total	C	N	O	0
			14	8	1	5	
4	A	1	Total	C	N	O	0
			14	8	1	5	
4	A	1	Total	C	N	O	0
			14	8	1	5	

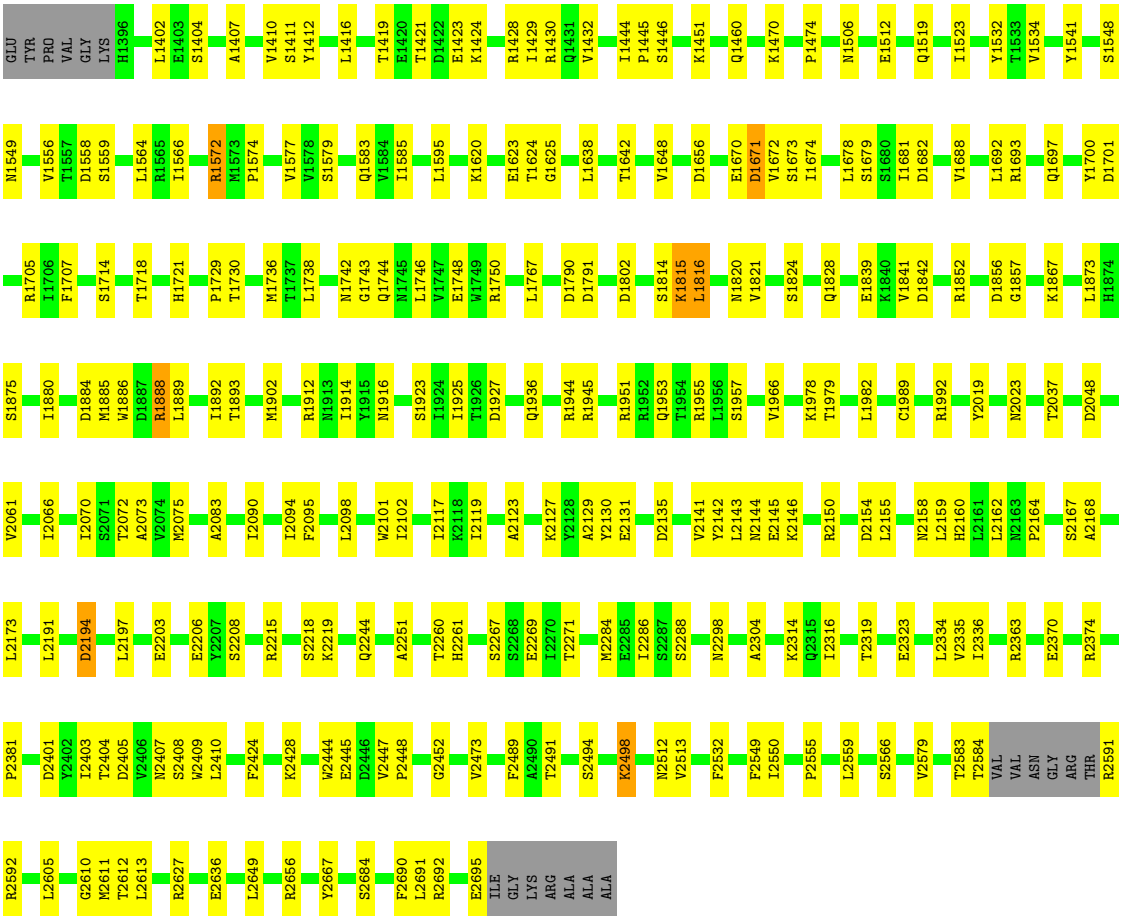
3 Residue-property plots (i)

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. 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. 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: Teneurin-3

Chain A:



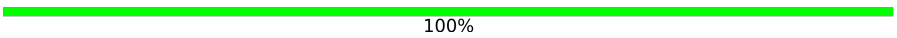


• Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain B:

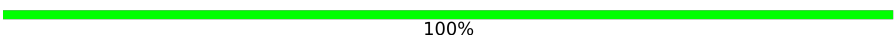
• Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain E:



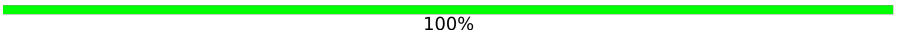
• Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain F:



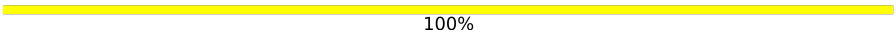
• Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain G:



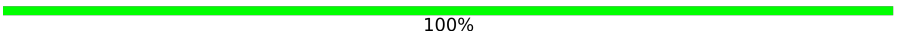
• Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain H:



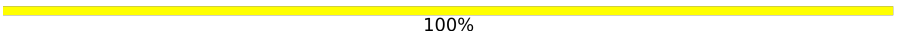
• Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain I:



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

Chain J:

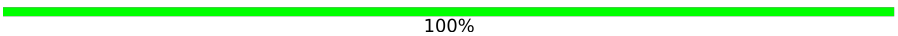


• Molecule 3: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain C:

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

Chain D:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	66637	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	50.0	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: NAG, 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	A	0.34	0/15910	0.53	0/21597

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	15570	0	15032	266	0
2	B	28	0	25	1	0
2	E	28	0	25	0	0
2	F	28	0	25	0	0
2	G	28	0	25	0	0
2	H	28	0	25	4	0
2	I	28	0	25	0	0
2	J	28	0	25	2	0
3	C	39	0	34	0	0
3	D	39	0	34	0	0
4	A	56	0	52	0	0
All	All	15900	0	15327	271	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 9.

All (271) 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:2447:VAL:HG13	1:A:2448:PRO:HD3	1.69	0.74
1:A:2119:ILE:HD11	1:A:2304:ALA:HB2	1.70	0.72
1:A:1880:ILE:HB	1:A:1893:THR:HB	1.71	0.71
1:A:2123:ALA:HB1	2:H:1:NAG:H61	1.73	0.70
1:A:1506:ASN:ND2	1:A:1512:GLU:OE2	2.25	0.70
1:A:706:ALA:H	1:A:709:GLN:HE22	1.39	0.68
1:A:1234:ASN:O	1:A:1236:ARG:NH1	2.27	0.67
1:A:1558:ASP:OD1	1:A:1559:SER:N	2.28	0.67
1:A:1297:ILE:HG23	1:A:1308:VAL:HB	1.77	0.67
1:A:2164:PRO:HG2	1:A:2167:SER:HB3	1.76	0.67
1:A:2160:HIS:HA	1:A:2173:LEU:HB2	1.78	0.66
1:A:1043:ARG:NH2	1:A:1065:ASP:O	2.27	0.65
1:A:715:ARG:NH2	1:A:738:CYS:O	2.29	0.65
1:A:769:ARG:HG2	1:A:777:MET:HE2	1.76	0.65
1:A:1351:ASN:HB3	1:A:1410:VAL:HG11	1.80	0.64
1:A:1143:PRO:HG3	1:A:1700:TYR:HD2	1.62	0.64
1:A:2286:ILE:HG22	1:A:2288:SER:H	1.63	0.64
1:A:1790:ASP:OD1	1:A:1791:ASP:N	2.31	0.64
1:A:1335:MET:O	1:A:1373:GLN:NE2	2.32	0.63
1:A:729:CYS:SG	1:A:738:CYS:N	2.72	0.63
1:A:2583:THR:OG1	1:A:2592:ARG:NH1	2.32	0.63
1:A:1190:ASP:OD2	1:A:1195:ARG:NH2	2.32	0.62
1:A:777:MET:SD	1:A:777:MET:N	2.71	0.62
1:A:1815:LYS:HE3	1:A:2066:ILE:HD11	1.81	0.62
1:A:1411:SER:OG	1:A:1412:TYR:N	2.32	0.62
1:A:1548:SER:OG	1:A:1549:ASN:N	2.34	0.61
1:A:2191:LEU:HD23	1:A:2197:LEU:HA	1.83	0.61
1:A:1191:PHE:HD1	1:A:1214:ALA:HB2	1.65	0.61
1:A:1363:ASN:ND2	1:A:1402:LEU:O	2.31	0.61
1:A:735:GLY:HA2	1:A:740:ILE:HB	1.82	0.61
1:A:2072:THR:HG22	1:A:2073:ALA:H	1.66	0.60
1:A:1236:ARG:HB3	1:A:1283:LEU:HD21	1.82	0.60
2:J:1:NAG:H61	2:J:2:NAG:HN2	1.66	0.60
1:A:987:GLU:OE2	1:A:2452:GLY:N	2.35	0.60
1:A:1884:ASP:OD1	1:A:1888:ARG:N	2.28	0.59
1:A:1701:ASP:N	1:A:1701:ASP:OD1	2.33	0.59
1:A:2591:ARG:NH2	1:A:2610:GLY:O	2.35	0.59
1:A:1416:LEU:HB3	1:A:1432:VAL:HB	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1292:ASP:OD1	1:A:1293:LYS:N	2.28	0.58
1:A:2194:ASP:OD1	1:A:2194:ASP:N	2.33	0.58
1:A:702:TRP:HE1	1:A:707:CYS:HA	1.68	0.58
1:A:2167:SER:OG	1:A:2168:ALA:N	2.37	0.58
1:A:709:GLN:N	1:A:709:GLN:OE1	2.36	0.57
1:A:2549:PHE:HE2	1:A:2605:LEU:HD23	1.67	0.57
1:A:2584:THR:O	1:A:2591:ARG:N	2.37	0.57
1:A:1820:ASN:OD1	1:A:1821:VAL:N	2.38	0.57
1:A:1873:LEU:HD11	1:A:2381:PRO:HG3	1.87	0.57
1:A:873:THR:OG1	1:A:875:ASP:OD1	2.23	0.56
1:A:2405:ASP:OD2	1:A:2408:SER:N	2.38	0.56
1:A:1936:GLN:OE1	1:A:1945:ARG:NH1	2.38	0.56
1:A:2260:THR:HG1	1:A:2261:HIS:CE1	2.23	0.56
1:A:2284:MET:HE1	1:A:2334:LEU:HD21	1.85	0.56
1:A:723:LYS:N	1:A:726:LYS:O	2.39	0.56
1:A:2061:VAL:HG22	1:A:2070:ILE:HG12	1.87	0.56
1:A:2636:GLU:HG3	1:A:2690:PHE:HE2	1.71	0.56
1:A:778:GLU:HA	1:A:787:ASN:HB2	1.86	0.56
1:A:853:LEU:HD23	1:A:854:PRO:HD2	1.87	0.56
1:A:1216:ARG:NH2	1:A:1218:TYR:OH	2.35	0.55
1:A:898:ARG:NH2	1:A:904:ASP:OD1	2.39	0.55
1:A:1743:GLY:O	1:A:1744:GLN:NE2	2.40	0.55
1:A:1682:ASP:OD2	1:A:1697:GLN:NE2	2.40	0.55
1:A:1167:ALA:HB1	1:A:1170:ASN:HB2	1.88	0.55
1:A:1718:THR:HG21	1:A:1729:PRO:HB2	1.89	0.55
1:A:2206:GLU:OE2	1:A:2215:ARG:NH1	2.35	0.54
1:A:687:SER:OG	1:A:1671:ASP:OD2	2.18	0.54
1:A:2401:ASP:O	1:A:2403:ILE:HG13	2.06	0.54
1:A:769:ARG:H	1:A:777:MET:HE1	1.72	0.54
1:A:831:GLN:OE1	1:A:1572:ARG:NH2	2.40	0.54
1:A:1824:SER:OG	1:A:1828:GLN:O	2.23	0.54
1:A:1333:THR:OG1	1:A:1334:SER:N	2.40	0.54
1:A:1289:MET:HB3	1:A:1299:PHE:HA	1.90	0.54
1:A:1688:VAL:HG22	1:A:1693:ARG:HG2	1.90	0.54
1:A:1289:MET:HA	1:A:1348:LEU:HD12	1.90	0.54
1:A:817:ASP:OD2	1:A:898:ARG:NH1	2.42	0.53
1:A:1742:ASN:ND2	1:A:2023:ASN:H	2.06	0.53
1:A:1889:LEU:HD21	1:A:1892:ILE:HD11	1.89	0.53
1:A:1018:LEU:HD12	1:A:1101:LEU:HD21	1.90	0.53
1:A:1363:ASN:HD21	1:A:1404:SER:H	1.56	0.53
1:A:1875:SER:OG	1:A:2135:ASP:OD1	2.25	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1978:LYS:HG3	1:A:1979:THR:HG23	1.90	0.53
2:H:1:NAG:H62	2:H:2:NAG:C7	2.39	0.53
1:A:1523:ILE:HD11	1:A:1532:TYR:HD2	1.72	0.53
1:A:860:ASN:HB3	1:A:863:LEU:HB2	1.91	0.53
1:A:966:ILE:HD11	1:A:1079:VAL:HG21	1.90	0.53
1:A:1166:GLN:NE2	1:A:1168:ASP:OD1	2.42	0.53
1:A:1839:GLU:OE2	1:A:1852:ARG:NH1	2.38	0.53
1:A:2158:ASN:OD1	1:A:2363:ARG:NH2	2.42	0.53
1:A:2532:PHE:HB2	1:A:2550:ILE:HG23	1.91	0.52
1:A:1842:ASP:OD1	1:A:1842:ASP:N	2.42	0.52
1:A:1856:ASP:OD1	1:A:1857:GLY:N	2.42	0.52
1:A:2566:SER:HA	1:A:2579:VAL:HG13	1.91	0.52
1:A:1026:VAL:HG12	1:A:1026:VAL:O	2.10	0.52
1:A:1293:LYS:HE3	1:A:1352:PRO:HA	1.91	0.52
1:A:2403:ILE:HG22	1:A:2404:THR:H	1.75	0.52
1:A:1131:LYS:HE2	1:A:1135:GLU:HB3	1.92	0.51
1:A:1697:GLN:HB2	1:A:1705:ARG:HB3	1.92	0.51
1:A:1041:VAL:HG23	1:A:1041:VAL:O	2.11	0.51
1:A:1095:GLU:OE2	1:A:1097:ARG:NH2	2.44	0.51
1:A:1342:LEU:HG	1:A:1345:PRO:HG3	1.92	0.51
1:A:815:LEU:HG	1:A:896:ILE:HG22	1.93	0.51
1:A:930:TRP:HH2	1:A:1182:ILE:HG22	1.76	0.51
1:A:1566:ILE:HD11	1:A:1574:PRO:HB3	1.92	0.51
1:A:2037:THR:O	1:A:2037:THR:OG1	2.28	0.51
1:A:2691:LEU:HD11	1:A:2695:GLU:HB2	1.93	0.51
1:A:1264:CYS:N	1:A:1283:LEU:O	2.42	0.51
1:A:2319:THR:HG22	1:A:2323:GLU:H	1.75	0.51
1:A:2298:ASN:N	1:A:2298:ASN:OD1	2.44	0.50
1:A:750:ASN:ND2	1:A:773:CYS:O	2.44	0.50
1:A:1154:ARG:HG3	1:A:1171:LYS:HD3	1.92	0.50
1:A:774:ASP:OD1	1:A:774:ASP:N	2.42	0.50
1:A:1642:THR:HG22	1:A:1648:VAL:HG12	1.93	0.50
1:A:1916:ASN:OD1	1:A:1923:SER:OG	2.27	0.50
1:A:2335:VAL:HG23	1:A:2336:ILE:HG12	1.93	0.50
1:A:768:TRP:HZ3	1:A:776:ALA:HA	1.77	0.50
1:A:1027:ILE:HD12	1:A:1027:ILE:H	1.76	0.50
1:A:1444:ILE:HG13	1:A:1445:PRO:HD2	1.94	0.50
1:A:850:THR:O	1:A:895:THR:OG1	2.19	0.49
1:A:859:PHE:HE2	1:A:906:VAL:HG13	1.78	0.49
1:A:719:HIS:HB3	1:A:733:TRP:CE2	2.47	0.49
1:A:2512:ASN:OD1	1:A:2513:VAL:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1337:ILE:HG13	1:A:1372:ARG:HB2	1.95	0.49
1:A:1367:GLN:OE1	1:A:1375:ARG:NH1	2.44	0.49
1:A:984:ILE:HG23	1:A:1638:LEU:HD23	1.94	0.49
1:A:2129:ALA:HB3	1:A:2142:TYR:HB2	1.95	0.48
1:A:1625:GLY:HA2	1:A:2498:LYS:HD2	1.94	0.48
1:A:988:THR:OG1	1:A:990:VAL:HG23	2.13	0.48
1:A:1372:ARG:O	1:A:1372:ARG:HG3	2.13	0.48
1:A:1407:ALA:O	1:A:1419:THR:OG1	2.29	0.48
1:A:2409:TRP:O	1:A:2410:LEU:HB2	2.14	0.48
1:A:1167:ALA:HB3	1:A:1203:VAL:HB	1.96	0.48
1:A:1262:GLU:OE2	1:A:1263:GLN:N	2.46	0.48
1:A:1334:SER:HB3	1:A:1373:GLN:OE1	2.13	0.48
1:A:1332:ASP:OD1	1:A:1332:ASP:N	2.44	0.48
1:A:884:VAL:HG22	1:A:917:PHE:CD1	2.49	0.48
1:A:755:LEU:HD22	1:A:760:TRP:CZ2	2.49	0.48
1:A:932:PRO:HG2	1:A:935:VAL:HG21	1.95	0.47
1:A:927:HIS:NE2	1:A:942:LEU:HD11	2.28	0.47
1:A:1623:GLU:CD	1:A:1886:TRP:HE1	2.17	0.47
1:A:2409:TRP:HB2	1:A:2410:LEU:HD12	1.97	0.47
1:A:1579:SER:OG	1:A:1583:GLN:O	2.27	0.47
1:A:2612:THR:OG1	1:A:2613:LEU:N	2.46	0.47
1:A:1222:ASP:HB3	1:A:1225:THR:O	2.14	0.47
1:A:2143:LEU:HA	1:A:2143:LEU:HD12	1.76	0.47
1:A:844:LEU:HD22	1:A:850:THR:HG22	1.97	0.47
1:A:1249:ASP:OD2	1:A:1251:THR:OG1	2.31	0.47
1:A:2159:LEU:HD21	1:A:2162:LEU:HD13	1.96	0.47
1:A:2444:TRP:NE1	1:A:2445:GLU:OE2	2.48	0.47
1:A:2656:ARG:O	1:A:2656:ARG:NE	2.36	0.47
1:A:1342:LEU:HD12	1:A:1343:GLU:H	1.79	0.47
1:A:1361:ASP:O	1:A:1364:VAL:HG22	2.15	0.47
1:A:1419:THR:HG22	1:A:1429:ILE:HG12	1.96	0.47
1:A:1673:SER:O	1:A:1674:ILE:HD13	2.15	0.47
1:A:1721:HIS:ND1	1:A:1730:THR:HG21	2.30	0.47
1:A:967:VAL:HG21	1:A:1656:ASP:O	2.16	0.46
1:A:1681:ILE:HA	1:A:1700:TYR:CE1	2.51	0.46
1:A:1705:ARG:HG2	1:A:1707:PHE:CZ	2.50	0.46
1:A:2102:ILE:HG22	1:A:2117:ILE:HG12	1.96	0.46
1:A:1670:GLU:O	1:A:1672:VAL:HG13	2.15	0.46
1:A:1912:ARG:NH1	1:A:1925:ILE:HD12	2.30	0.46
1:A:696:CYS:HB3	1:A:707:CYS:SG	2.56	0.46
1:A:2405:ASP:O	1:A:2407[B]:ASN:N	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1446:SER:HB3	1:A:1470:LYS:HD2	1.98	0.46
1:A:2143:LEU:HG	1:A:2144:ASN:H	1.81	0.46
1:A:1951:ARG:HB2	1:A:1957:SER:HB3	1.98	0.46
1:A:2667:TYR:CE1	1:A:2692:ARG:HG2	2.51	0.46
1:A:1249:ASP:H	1:A:1252:LYS:NZ	2.14	0.45
1:A:1305:ILE:HD11	1:A:1342:LEU:HD23	1.98	0.45
1:A:1927:ASP:OD2	1:A:1936:GLN:NE2	2.49	0.45
2:H:1:NAG:H4	2:H:2:NAG:HN2	1.80	0.45
1:A:2019:TYR:OH	1:A:2251:ALA:O	2.32	0.45
1:A:743:CYS:HA	1:A:762:CYS:SG	2.57	0.45
1:A:1678:LEU:HD12	1:A:1679:SER:N	2.31	0.45
1:A:795:CYS:HA	1:A:800:CYS:SG	2.57	0.45
1:A:1424:LYS:HD3	1:A:1424:LYS:N	2.31	0.45
2:H:1:NAG:H4	2:H:2:NAG:N2	2.32	0.45
1:A:1027:ILE:HD11	1:A:1053:PRO:HA	1.97	0.45
1:A:1358:TYR:CE2	1:A:1367:GLN:HG3	2.52	0.45
1:A:1642:THR:O	1:A:1642:THR:OG1	2.34	0.45
1:A:1966:VAL:HG22	1:A:1982:LEU:HD12	1.99	0.45
1:A:2549:PHE:CE2	1:A:2605:LEU:HD23	2.49	0.45
1:A:1816:LEU:HD13	1:A:2083:ALA:O	2.17	0.44
1:A:1889:LEU:HD12	1:A:1889:LEU:HA	1.73	0.44
1:A:1090:ASP:OD1	1:A:1090:ASP:N	2.50	0.44
1:A:2555:PRO:O	1:A:2559:LEU:HD12	2.17	0.44
1:A:1263:GLN:HG2	1:A:1264:CYS:O	2.18	0.44
1:A:1428:ARG:HE	1:A:1430:ARG:HD3	1.82	0.44
1:A:1523:ILE:HD11	1:A:1532:TYR:CD2	2.51	0.44
1:A:2072:THR:HG22	1:A:2073:ALA:N	2.31	0.44
1:A:1335:MET:SD	1:A:1335:MET:N	2.91	0.44
1:A:2203:GLU:HG3	1:A:2218:SER:HB2	1.99	0.44
1:A:795:CYS:SG	1:A:801:CYS:HB3	2.58	0.44
1:A:1902:MET:HB3	1:A:2489:PHE:CG	2.53	0.44
1:A:2219:LYS:H	1:A:2219:LYS:HG2	1.53	0.44
1:A:1259:GLY:HA2	1:A:1283:LEU:HD22	1.99	0.44
1:A:703:THR:O	1:A:710:ARG:HA	2.18	0.43
1:A:2267:SER:OG	1:A:2269:GLU:OE2	2.25	0.43
1:A:1746:LEU:HB3	1:A:1748:GLU:OE2	2.18	0.43
1:A:2550:ILE:HD11	1:A:2611:MET:O	2.19	0.43
1:A:1688:VAL:HA	1:A:1692:LEU:O	2.18	0.43
1:A:1296:LEU:HD11	1:A:1307:LYS:HD3	2.00	0.43
1:A:1914:ILE:HD13	1:A:1925:ILE:HG22	2.00	0.43
1:A:2154:ASP:OD1	1:A:2155:LEU:N	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1189:GLY:HA2	1:A:1194:VAL:HG12	2.01	0.43
1:A:1156:ARG:HB2	1:A:1171:LYS:HB2	2.01	0.43
1:A:797:ASP:OD2	1:A:799:ASP:HB2	2.19	0.43
1:A:1034:VAL:HG23	1:A:1049:PHE:HB2	2.01	0.43
1:A:1380:ARG:HE	1:A:1381:PRO:HD2	1.82	0.43
1:A:2260:THR:OG1	1:A:2261:HIS:ND1	2.50	0.43
1:A:1292:ASP:N	1:A:1296:LEU:O	2.38	0.43
1:A:923:LEU:H	1:A:923:LEU:HD23	1.83	0.42
1:A:1242:LYS:N	1:A:1253:ASN:OD1	2.51	0.42
1:A:1301:ASP:OD2	1:A:1306:ARG:NH1	2.52	0.42
1:A:932:PRO:HB3	1:A:1412:TYR:HD2	1.84	0.42
1:A:1292:ASP:OD2	1:A:1298:TYR:OH	2.37	0.42
1:A:2267:SER:HB2	2:B:1:NAG:O6	2.19	0.42
1:A:865:SER:HB2	1:A:935:VAL:H	1.84	0.42
1:A:930:TRP:HE1	1:A:1412:TYR:HH	1.65	0.42
1:A:1271:ARG:HG2	1:A:1273:GLY:H	1.84	0.42
1:A:2649:LEU:HD12	1:A:2649:LEU:O	2.19	0.42
1:A:905:LEU:HD23	1:A:905:LEU:HA	1.83	0.42
1:A:1885:MET:HG2	1:A:1886:TRP:CD2	2.54	0.42
1:A:2090:ILE:O	1:A:2101:TRP:HA	2.20	0.42
1:A:2314:LYS:HE2	1:A:2316:ILE:HD11	2.02	0.42
2:J:1:NAG:H61	2:J:2:NAG:N2	2.33	0.42
1:A:995:THR:HG23	1:A:1004:LEU:HB2	2.01	0.42
1:A:1814:SER:O	1:A:1815:LYS:HG3	2.20	0.42
1:A:2146:LYS:HE2	1:A:2146:LYS:HB3	1.74	0.42
1:A:2260:THR:HG1	1:A:2261:HIS:CG	2.37	0.42
1:A:871:VAL:HG12	1:A:942:LEU:HB2	2.02	0.42
1:A:913:LEU:O	1:A:928:THR:HA	2.20	0.42
1:A:1027:ILE:HG21	1:A:1031:LEU:HD22	2.01	0.42
1:A:1156:ARG:HG2	1:A:1157:SER:O	2.20	0.42
1:A:1303:THR:HG23	1:A:1342:LEU:O	2.19	0.42
1:A:715:ARG:HG3	1:A:716:CYS:N	2.35	0.42
1:A:1714:SER:HA	1:A:1736:MET:HA	2.01	0.42
1:A:2144:ASN:OD1	1:A:2145:GLU:N	2.53	0.42
1:A:2428:LYS:HE3	1:A:2428:LYS:HB2	1.73	0.42
1:A:1534:VAL:HG12	1:A:1541:TYR:CD1	2.55	0.41
1:A:2370:GLU:OE2	1:A:2374:ARG:NH2	2.34	0.41
1:A:1287:LYS:HZ1	1:A:1344:TRP:HZ3	1.67	0.41
1:A:1143:PRO:HG3	1:A:1700:TYR:CD2	2.50	0.41
1:A:1577:VAL:HG23	1:A:1585:ILE:HB	2.02	0.41
1:A:1299:PHE:CZ	1:A:1306:ARG:HB2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1359:VAL:HG12	1:A:1366:LEU:HB2	2.02	0.41
1:A:1595:LEU:HD12	1:A:1595:LEU:HA	1.87	0.41
1:A:1841:VAL:HG12	1:A:1852:ARG:HG3	2.01	0.41
1:A:710:ARG:HE	1:A:710:ARG:HB2	1.70	0.41
1:A:1556:VAL:HG22	1:A:1564:LEU:HB3	2.02	0.41
1:A:1953:GLN:HB3	1:A:1955:ARG:HD2	2.03	0.41
1:A:2271:THR:HG23	1:A:2286:ILE:HG12	2.03	0.41
1:A:841:ILE:HD13	1:A:866:VAL:HG23	2.02	0.41
1:A:1421:THR:HB	1:A:1474:PRO:HD2	2.03	0.41
1:A:2094:ILE:HG22	1:A:2095:PHE:CD2	2.56	0.41
1:A:1309:ASP:OD1	1:A:1313:ILE:HB	2.22	0.40
1:A:1423:GLU:C	1:A:1424:LYS:HD3	2.41	0.40
1:A:768:TRP:HB3	1:A:773:CYS:HB2	2.04	0.40
1:A:865:SER:OG	1:A:931:ILE:HD12	2.21	0.40
1:A:1624:THR:HG21	1:A:2491:THR:OG1	2.20	0.40
1:A:2127:LYS:HG3	1:A:2144:ASN:HA	2.04	0.40
1:A:2130:TYR:HD1	1:A:2141:VAL:HG22	1.85	0.40
1:A:1249:ASP:HB3	1:A:1252:LYS:HZ2	1.87	0.40
1:A:1304:MET:H	1:A:1304:MET:HG2	1.74	0.40
1:A:1460:GLN:HE22	1:A:1470:LYS:NZ	2.19	0.40
1:A:2098:LEU:HD12	1:A:2098:LEU:HA	1.80	0.40
1:A:919:ARG:HA	1:A:919:ARG:HD2	1.88	0.40
1:A:1742:ASN:OD1	1:A:2023:ASN:ND2	2.54	0.40
1:A:788:GLU:HG2	1:A:790:ASP:CG	2.41	0.40
1:A:997:ILE:HG22	1:A:1585:ILE:HD13	2.03	0.40
1:A:1357:ILE:HB	1:A:1368:ILE:HB	2.02	0.40
1:A:1373:GLN:OE1	1:A:1374:VAL:N	2.55	0.40
1:A:2405:ASP:O	1:A:2407[A]:ASN:N	2.46	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 PDB entries followed by that with respect to all EM entries.

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	1969/2391 (82%)	1794 (91%)	174 (9%)	1 (0%)	51 84

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	2473	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 PDB entries followed by that with respect to all EM entries.

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	1695/2060 (82%)	1640 (97%)	55 (3%)	39 69

All (55) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	691	CYS
1	A	692	MET
1	A	724	ASP
1	A	777	MET
1	A	889	TYR
1	A	926	TYR
1	A	939	MET
1	A	940	ASP
1	A	982	SER
1	A	1048	TRP
1	A	1074	LEU
1	A	1086	GLU
1	A	1090	ASP
1	A	1091	LEU
1	A	1097	ARG
1	A	1142	GLN
1	A	1168	ASP
1	A	1227	ASP
1	A	1234	ASN
1	A	1264	CYS

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Mol	Chain	Res	Type
1	A	1271	ARG
1	A	1289	MET
1	A	1298	TYR
1	A	1311	ASN
1	A	1321	ASN
1	A	1335	MET
1	A	1354	ASP
1	A	1451	LYS
1	A	1519	GLN
1	A	1572	ARG
1	A	1620	LYS
1	A	1671	ASP
1	A	1738	LEU
1	A	1750	ARG
1	A	1767	LEU
1	A	1802	ASP
1	A	1815	LYS
1	A	1816	LEU
1	A	1867	LYS
1	A	1888	ARG
1	A	1944	ARG
1	A	1989	CYS
1	A	1992	ARG
1	A	2048	ASP
1	A	2075	MET
1	A	2131	GLU
1	A	2150	ARG
1	A	2194	ASP
1	A	2208	SER
1	A	2244	GLN
1	A	2424	PHE
1	A	2494	SER
1	A	2498	LYS
1	A	2627	ARG
1	A	2684	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (2) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	1742	ASN
1	A	2023	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates

20 monosaccharides are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
2	NAG	B	1	2,1	14,14,15	0.24	0	17,19,21	0.54	0
2	NAG	B	2	2	14,14,15	0.18	0	17,19,21	0.36	0
3	NAG	C	1	1,3	14,14,15	0.24	0	17,19,21	0.43	0
3	NAG	C	2	3	14,14,15	0.17	0	17,19,21	0.43	0
3	BMA	C	3	3	11,11,12	0.59	0	15,15,17	0.89	1 (6%)
3	NAG	D	1	1,3	14,14,15	0.45	0	17,19,21	0.51	0
3	NAG	D	2	3	14,14,15	0.22	0	17,19,21	0.41	0
3	BMA	D	3	3	11,11,12	0.60	0	15,15,17	0.72	0
2	NAG	E	1	2,1	14,14,15	0.29	0	17,19,21	0.43	0
2	NAG	E	2	2	14,14,15	0.28	0	17,19,21	0.38	0
2	NAG	F	1	2,1	14,14,15	0.47	0	17,19,21	0.38	0
2	NAG	F	2	2	14,14,15	0.23	0	17,19,21	0.49	0
2	NAG	G	1	2,1	14,14,15	0.17	0	17,19,21	0.57	0
2	NAG	G	2	2	14,14,15	0.25	0	17,19,21	0.40	0
2	NAG	H	1	2,1	14,14,15	0.33	0	17,19,21	0.52	0
2	NAG	H	2	2	14,14,15	0.50	0	17,19,21	0.58	0
2	NAG	I	1	2,1	14,14,15	0.38	0	17,19,21	0.47	0
2	NAG	I	2	2	14,14,15	0.23	0	17,19,21	0.46	0
2	NAG	J	1	2,1	14,14,15	0.20	0	17,19,21	0.60	0
2	NAG	J	2	2	14,14,15	0.24	0	17,19,21	0.36	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
2	NAG	B	1	2,1	-	1/6/23/26	0/1/1/1
2	NAG	B	2	2	-	2/6/23/26	0/1/1/1
3	NAG	C	1	1,3	-	0/6/23/26	0/1/1/1
3	NAG	C	2	3	-	2/6/23/26	0/1/1/1
3	BMA	C	3	3	-	1/2/19/22	0/1/1/1
3	NAG	D	1	1,3	-	4/6/23/26	0/1/1/1
3	NAG	D	2	3	-	2/6/23/26	0/1/1/1
3	BMA	D	3	3	-	0/2/19/22	0/1/1/1
2	NAG	E	1	2,1	-	2/6/23/26	0/1/1/1
2	NAG	E	2	2	-	1/6/23/26	0/1/1/1
2	NAG	F	1	2,1	-	0/6/23/26	0/1/1/1
2	NAG	F	2	2	-	4/6/23/26	0/1/1/1
2	NAG	G	1	2,1	-	2/6/23/26	0/1/1/1
2	NAG	G	2	2	-	2/6/23/26	0/1/1/1
2	NAG	H	1	2,1	-	2/6/23/26	0/1/1/1
2	NAG	H	2	2	-	2/6/23/26	0/1/1/1
2	NAG	I	1	2,1	-	1/6/23/26	0/1/1/1
2	NAG	I	2	2	-	2/6/23/26	0/1/1/1
2	NAG	J	1	2,1	-	3/6/23/26	0/1/1/1
2	NAG	J	2	2	-	0/6/23/26	0/1/1/1

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	C	3	BMA	O2-C2-C3	-2.06	106.01	110.14

There are no chirality outliers.

All (33) torsion outliers are listed below:

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

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Mol	Chain	Res	Type	Atoms
2	G	1	NAG	C4-C5-C6-O6
3	D	2	NAG	O5-C5-C6-O6
2	E	1	NAG	C4-C5-C6-O6
3	C	2	NAG	O5-C5-C6-O6
2	E	1	NAG	O5-C5-C6-O6
3	D	2	NAG	C4-C5-C6-O6
2	I	2	NAG	C8-C7-N2-C2
2	I	2	NAG	O7-C7-N2-C2
3	D	1	NAG	C8-C7-N2-C2
3	D	1	NAG	O7-C7-N2-C2
3	C	2	NAG	C4-C5-C6-O6
2	H	2	NAG	O5-C5-C6-O6
3	D	1	NAG	O5-C5-C6-O6
2	B	2	NAG	O5-C5-C6-O6
2	H	1	NAG	C4-C5-C6-O6
2	J	1	NAG	O5-C5-C6-O6
2	J	1	NAG	C4-C5-C6-O6
2	I	1	NAG	O5-C5-C6-O6
2	F	2	NAG	C4-C5-C6-O6
3	D	1	NAG	C4-C5-C6-O6
2	F	2	NAG	O5-C5-C6-O6
2	J	1	NAG	C3-C2-N2-C7
3	C	3	BMA	O5-C5-C6-O6
2	E	2	NAG	C4-C5-C6-O6
2	H	2	NAG	C4-C5-C6-O6
2	B	1	NAG	O5-C5-C6-O6
2	F	2	NAG	C3-C2-N2-C7
2	F	2	NAG	C1-C2-N2-C7

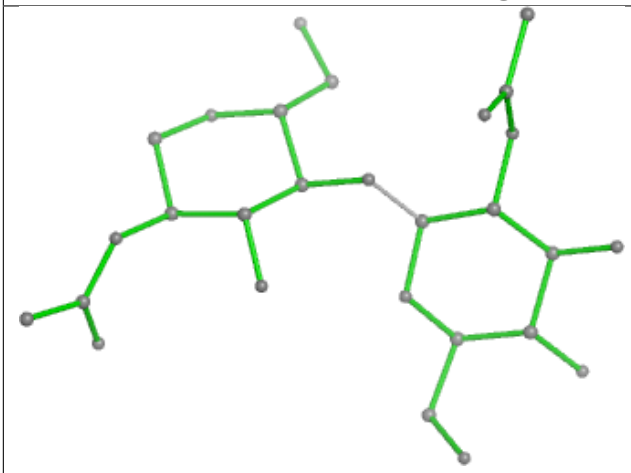
There are no ring outliers.

5 monomers are involved in 7 short contacts:

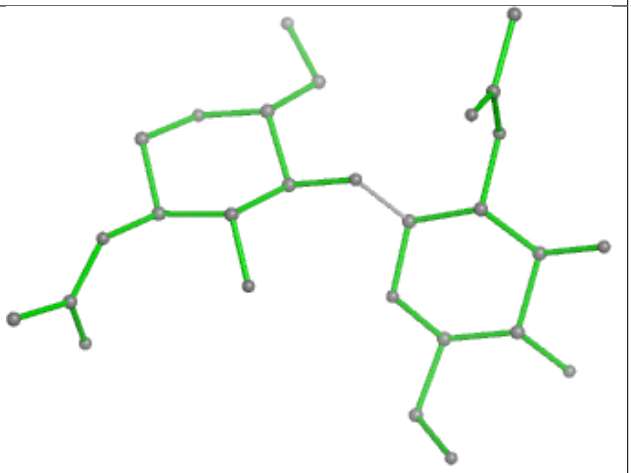
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	J	2	NAG	2	0
2	B	1	NAG	1	0
2	H	1	NAG	4	0
2	H	2	NAG	3	0
2	J	1	NAG	2	0

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

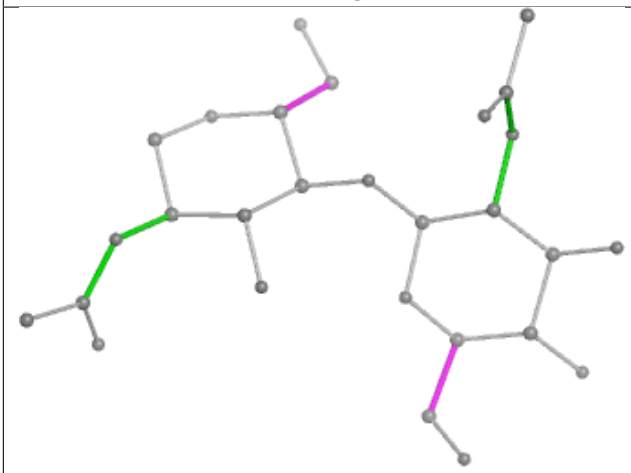
Oligosaccharide Chain B



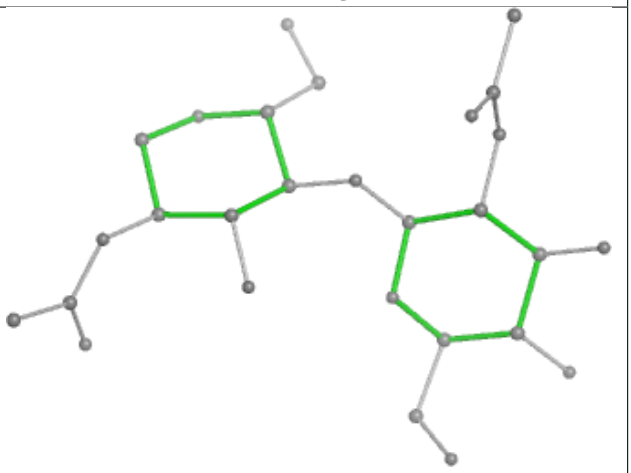
Bond lengths



Bond angles

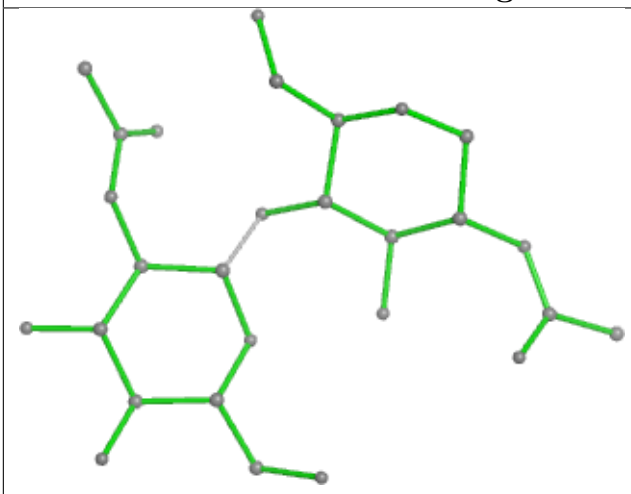


Torsions

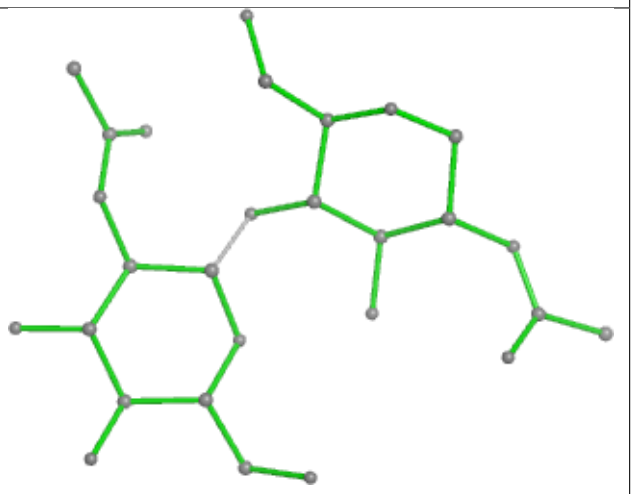


Rings

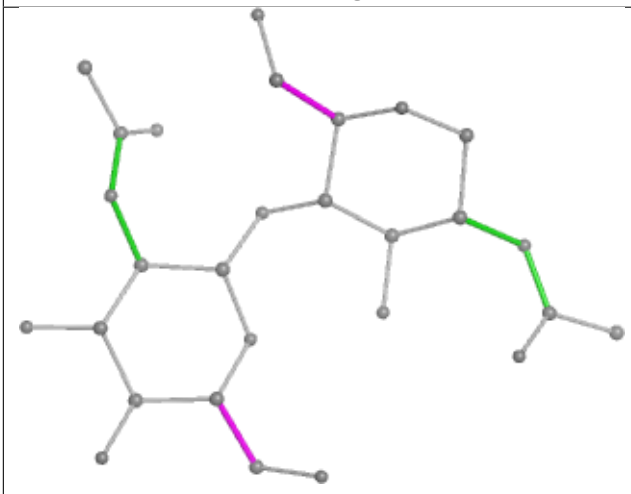
Oligosaccharide Chain E



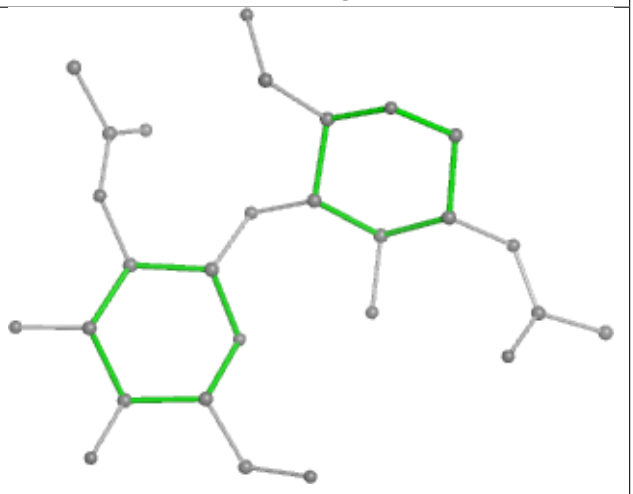
Bond lengths



Bond angles

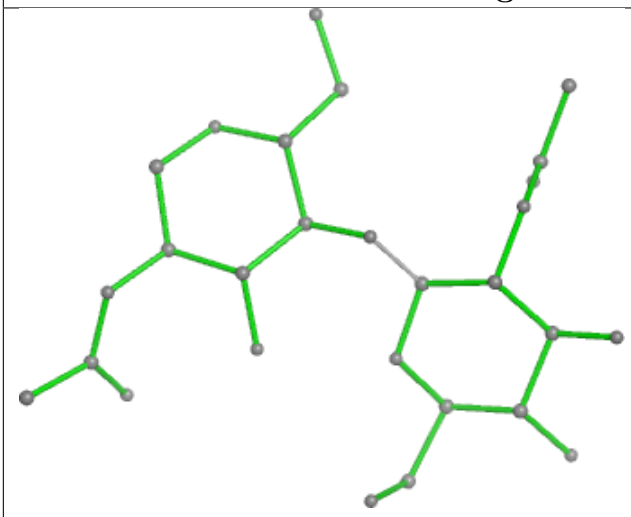


Torsions

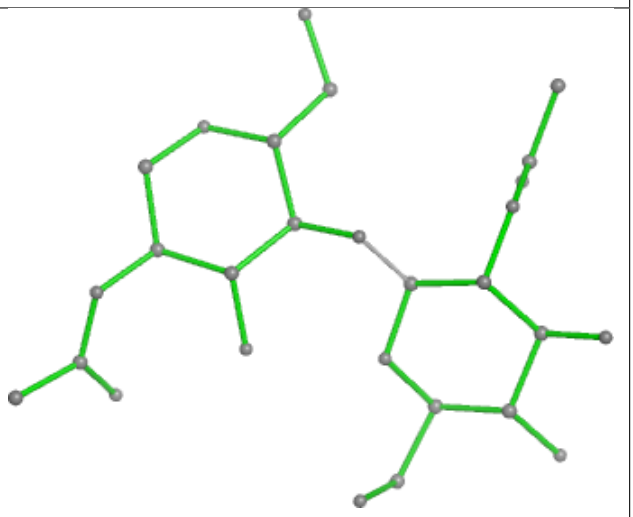


Rings

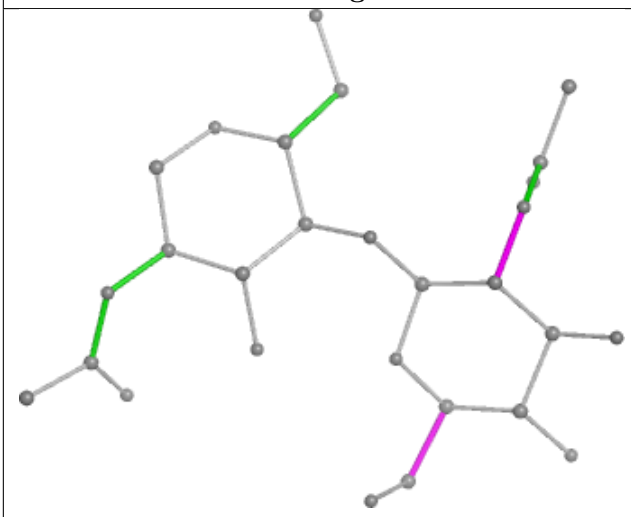
Oligosaccharide Chain F



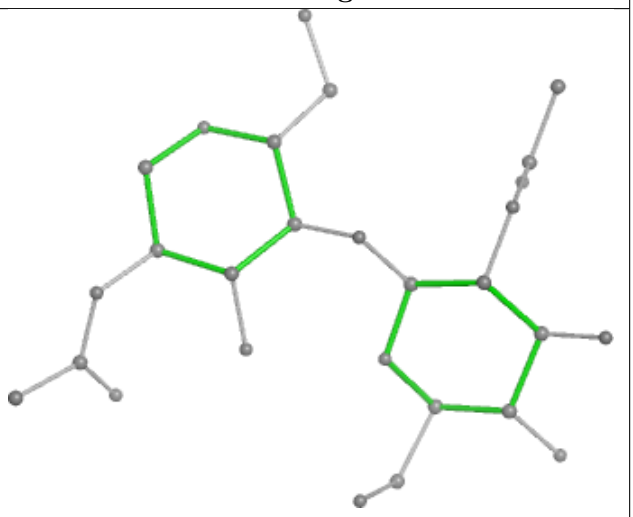
Bond lengths



Bond angles

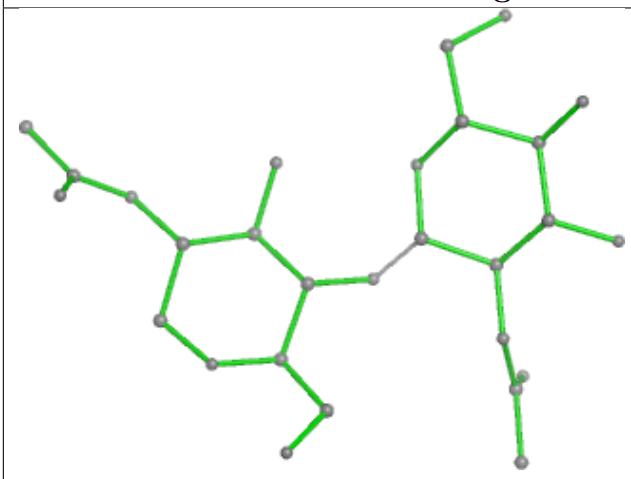


Torsions

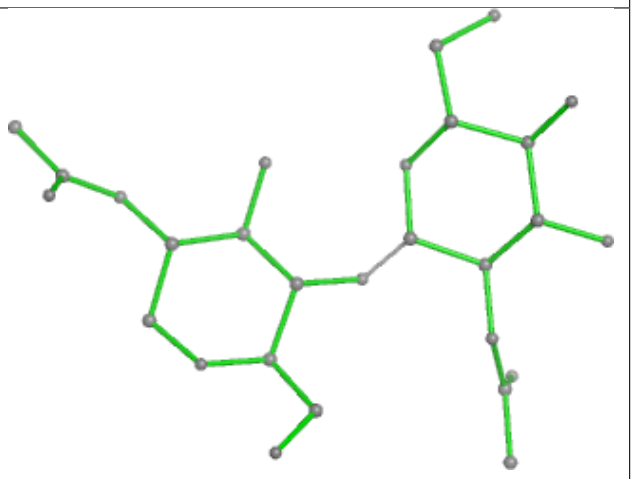


Rings

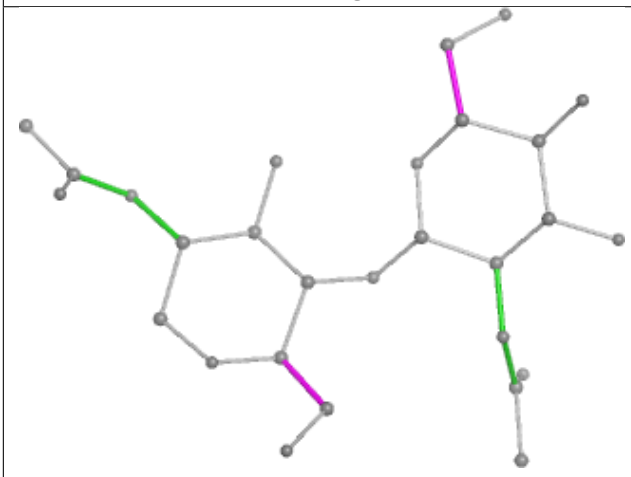
Oligosaccharide Chain G



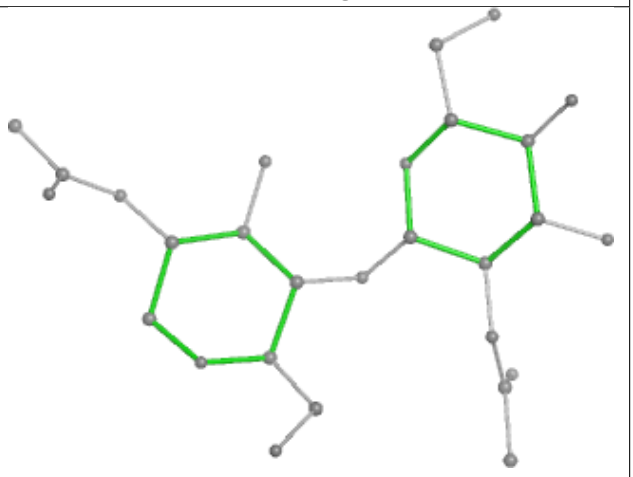
Bond lengths



Bond angles

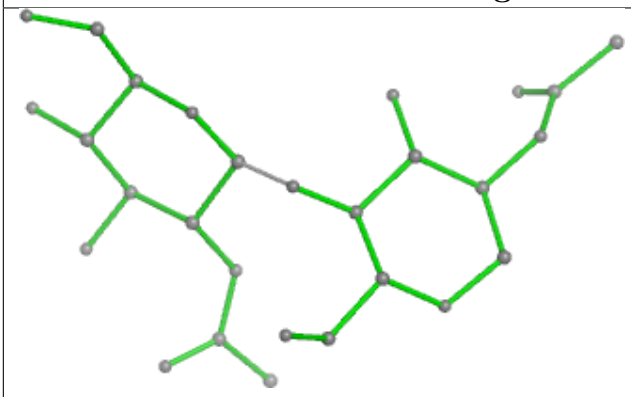


Torsions

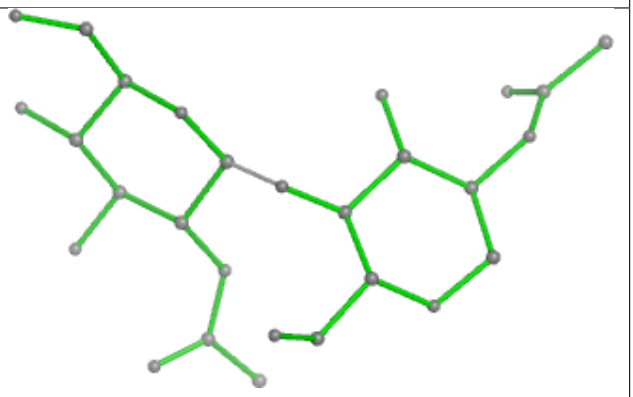


Rings

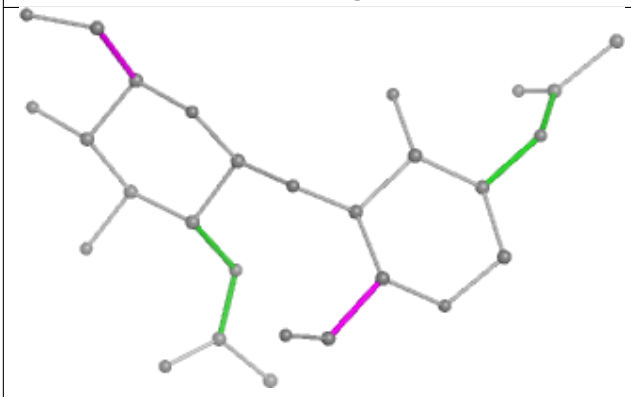
Oligosaccharide Chain H



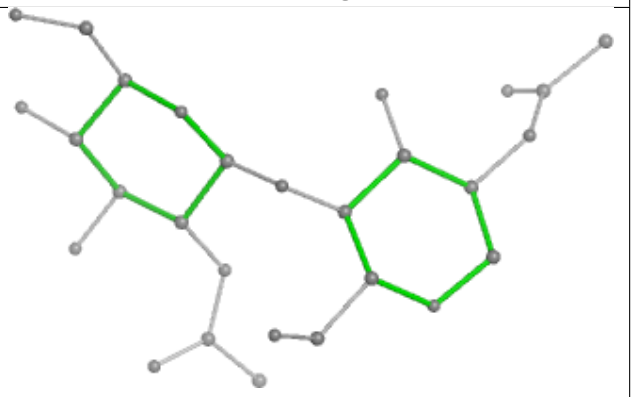
Bond lengths



Bond angles

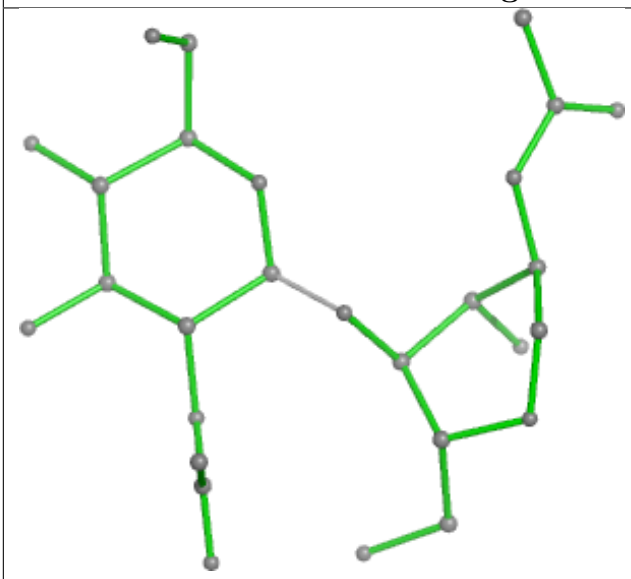


Torsions

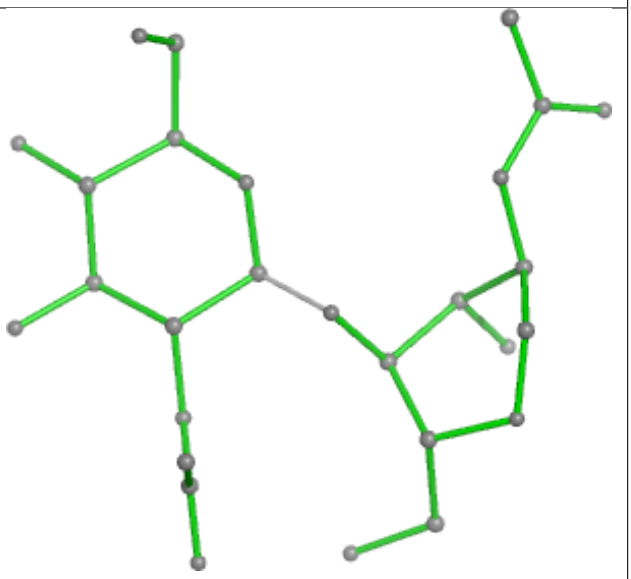


Rings

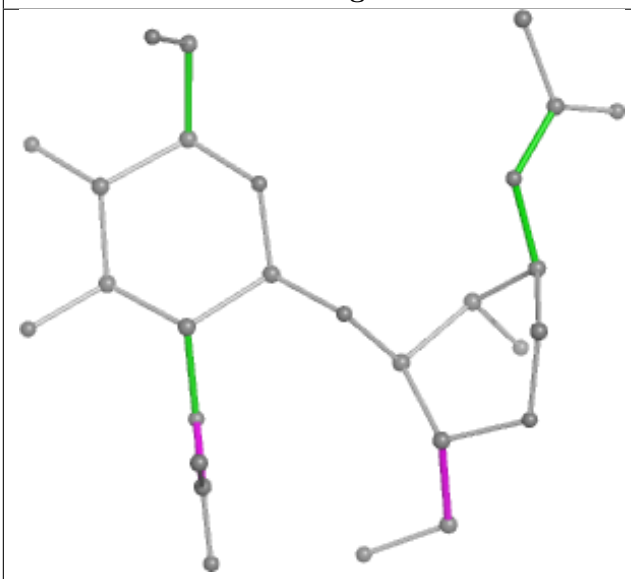
Oligosaccharide Chain I



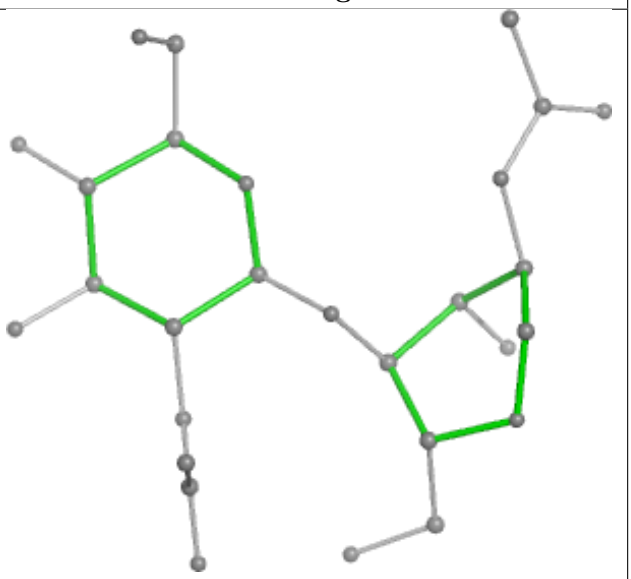
Bond lengths



Bond angles

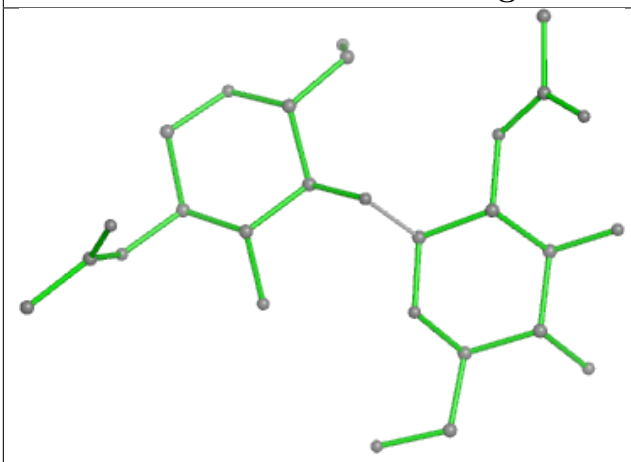


Torsions

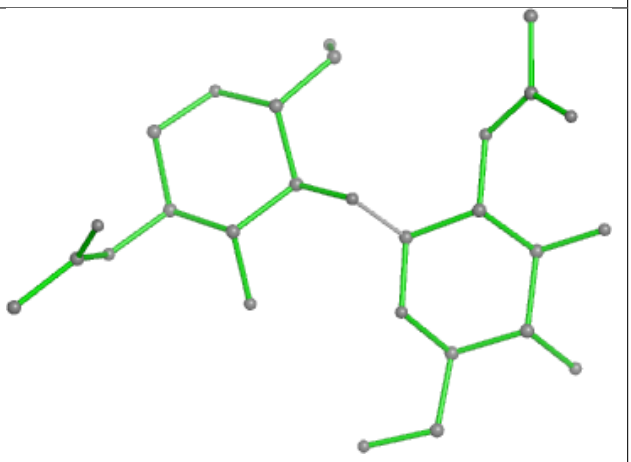


Rings

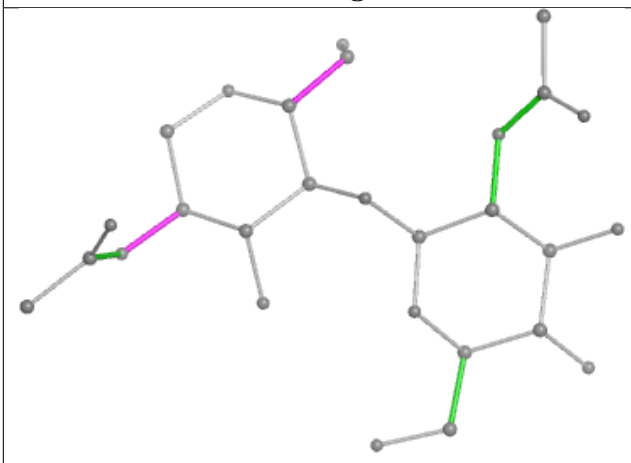
Oligosaccharide Chain J



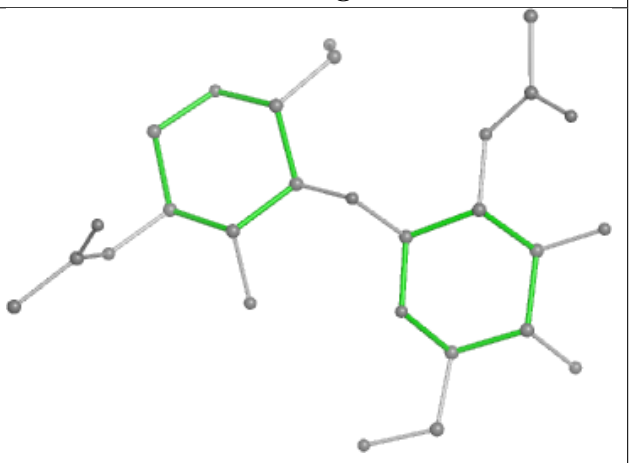
Bond lengths



Bond angles

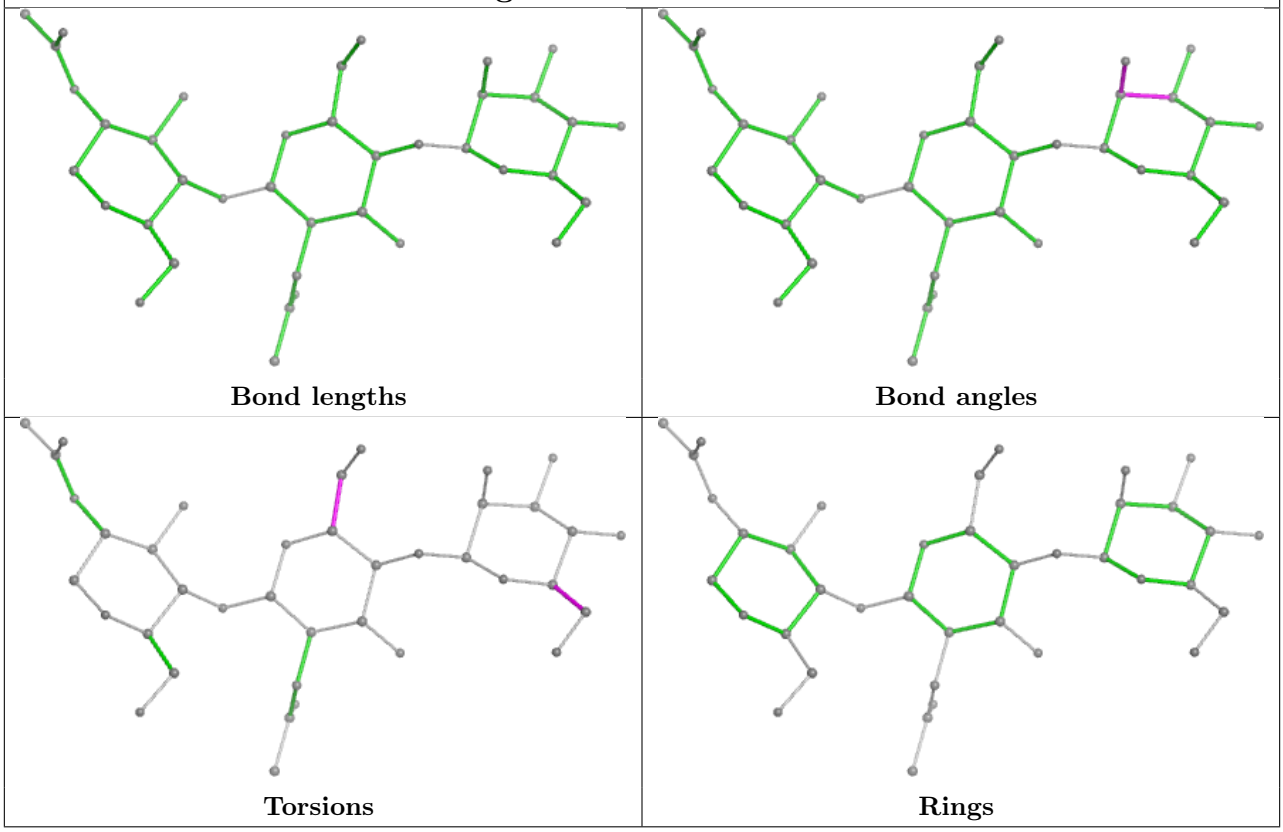


Torsions

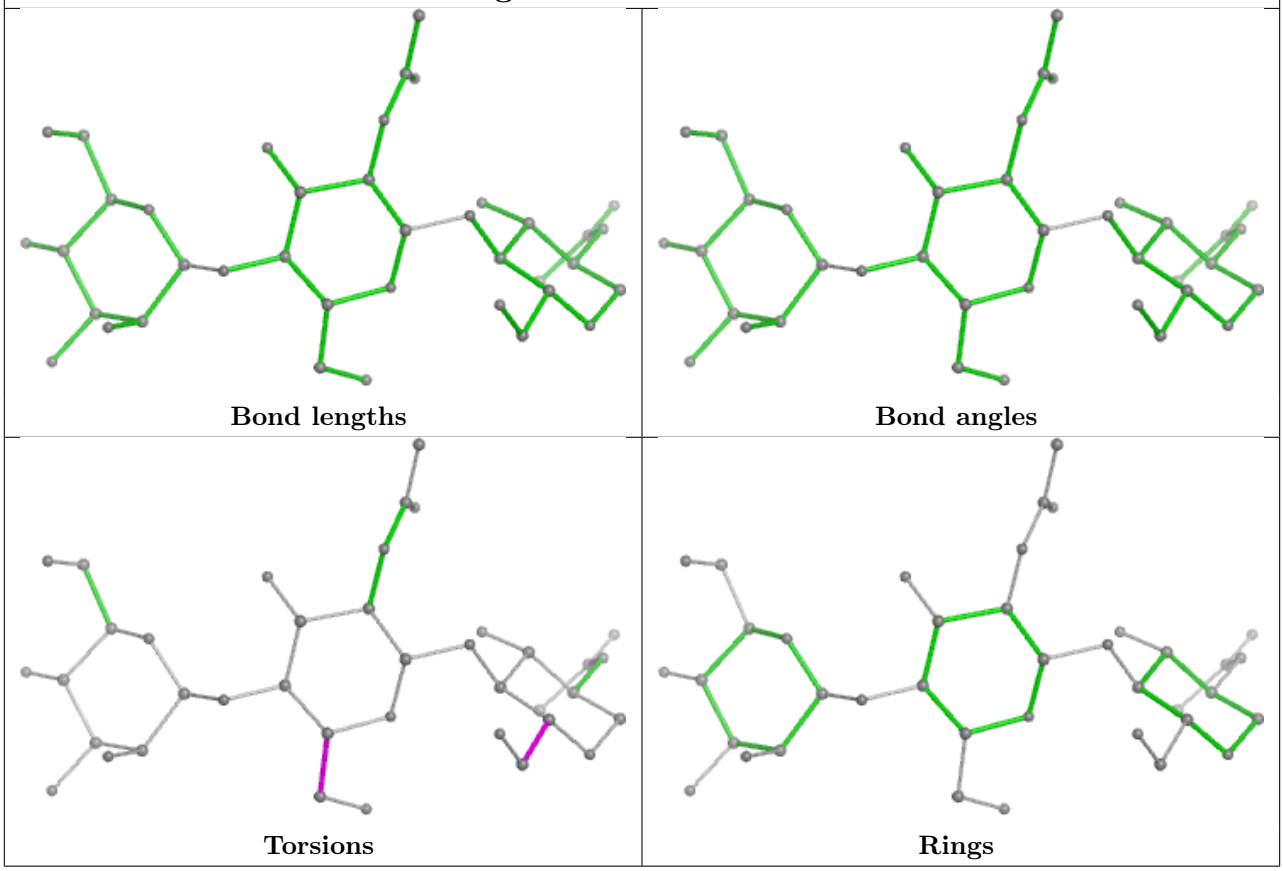


Rings

Oligosaccharide Chain C



Oligosaccharide Chain D



5.6 Ligand geometry (i)

4 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
4	NAG	A	2804	1	14,14,15	0.27	0	17,19,21	0.35	0
4	NAG	A	2803	1	14,14,15	0.49	0	17,19,21	0.39	0
4	NAG	A	2801	1	14,14,15	0.29	0	17,19,21	0.40	0
4	NAG	A	2802	1	14,14,15	0.20	0	17,19,21	0.50	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	NAG	A	2804	1	-	3/6/23/26	0/1/1/1
4	NAG	A	2803	1	-	2/6/23/26	0/1/1/1
4	NAG	A	2801	1	-	1/6/23/26	0/1/1/1
4	NAG	A	2802	1	-	1/6/23/26	0/1/1/1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (7) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	2803	NAG	O5-C5-C6-O6
4	A	2803	NAG	C4-C5-C6-O6
4	A	2804	NAG	C8-C7-N2-C2
4	A	2804	NAG	O7-C7-N2-C2
4	A	2801	NAG	O5-C5-C6-O6
4	A	2804	NAG	O5-C5-C6-O6
4	A	2802	NAG	O5-C5-C6-O6

There are no ring outliers.

No monomer is involved in short contacts.

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 Map visualisation

This section contains visualisations of the EMDB entry EMD-18891. These allow visual inspection of the internal detail of the map and identification of artifacts.

Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

This section was not generated.

6.2 Central slices

This section was not generated.

6.3 Largest variance slices

This section was not generated.

6.4 Orthogonal standard-deviation projections (False-color)

This section was not generated.

6.5 Orthogonal surface views

This section was not generated.

6.6 Mask visualisation

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

This section contains the results of statistical analysis of the map.

7.1 Map-value distribution

This section was not generated.

7.2 Volume estimate versus contour level

This section was not generated.

7.3 Rotationally averaged power spectrum

This section was not generated. The rotationally averaged power spectrum had issues being displayed.

8 Fourier-Shell correlation (i)

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit

This section was not generated.