



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 28, 2024 – 08:19 pm GMT

PDB ID : 6GFF
Title : Structure of GARP (LRRC32) in complex with latent TGF-beta1 and MHG-8 Fab
Authors : Merceron, R.; Lienart, S.; Vanderaa, C.; Colau, D.; Stockis, J.; Van Der Woning, B.; De Haard, H.; Saunders, M.; Coulie, P.G.; Savvides, S.N.; Lucas, S.
Deposited on : 2018-04-30
Resolution : 3.10 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.8.4, CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 3.0
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4 : 9.0.003 (Gargrove)
Density-Fitness : 1.0.11
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.39

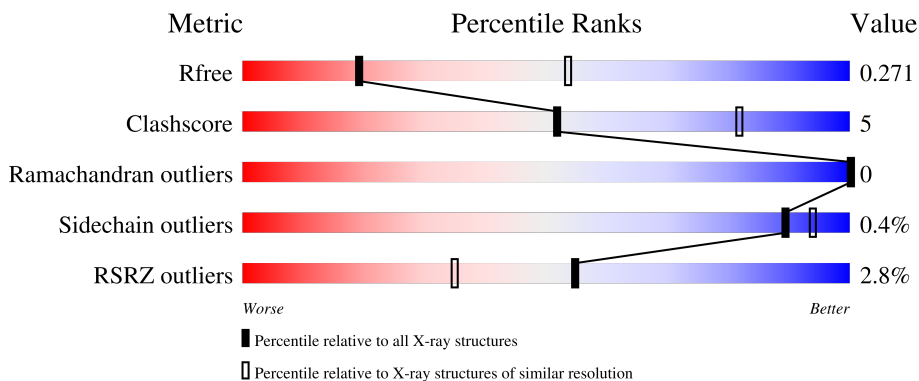
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.10 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}	164625	1351 (3.10-3.10)
Clashscore	180529	1454 (3.10-3.10)
Ramachandran outliers	177936	1391 (3.10-3.10)
Sidechain outliers	177891	1391 (3.10-3.10)
RSRZ outliers	164620	1351 (3.10-3.10)

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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	249	
1	C	249	
1	E	249	
1	G	249	

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Mol	Chain	Length	Quality of chain
2	B	112	 2% 85% 15%
2	D	112	 % 80% 18% ..
2	F	112	 4% 83% 16% .
2	H	112	 4% 79% 19% .
3	I	618	 2% 77% 12% 11%
3	J	618	 2% 70% 10% 20%
4	K	212	 5% 93% 7%
4	M	212	 3% 48% 51%
5	L	221	 5% 84% 13% .
5	N	221	 % 50% 47%
6	O	3	 100%
6	P	3	 67% 33%
6	Q	3	 67% 33%
6	S	3	 100%
6	T	3	 67% 33%
7	R	2	 100%
8	U	4	 50% 50%

2 Entry composition [i](#)

There are 8 unique types of molecules in this entry. The entry contains 21668 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 Transforming growth factor beta-1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	168	Total 1070	C 676	N 194	O 195	S 5	0	0	0
1	C	209	Total 1410	C 884	N 259	O 260	S 7	0	0	0
1	E	222	Total 1666	C 1062	N 290	O 306	S 8	0	0	0
1	G	218	Total 1643	C 1042	N 289	O 305	S 7	0	0	0

- Molecule 2 is a protein called Transforming growth factor beta-1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	112	Total 849	C 548	N 139	O 152	S 10	0	0	0
2	D	111	Total 847	C 542	N 142	O 153	S 10	0	0	0
2	F	112	Total 850	C 545	N 143	O 152	S 10	0	0	0
2	H	109	Total 849	C 545	N 144	O 150	S 10	0	0	0

- Molecule 3 is a protein called Leucine-rich repeat-containing protein 32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	I	551	Total 4055	C 2579	N 693	O 765	S 18	0	0	0
3	J	493	Total 3533	C 2237	N 608	O 673	S 15	0	0	0

There are 18 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
I	629	GLU	-	expression tag	UNP Q14392
I	630	ALA	-	expression tag	UNP Q14392
I	631	ALA	-	expression tag	UNP Q14392
I	632	GLU	-	expression tag	UNP Q14392
I	633	ASN	-	expression tag	UNP Q14392
I	634	LEU	-	expression tag	UNP Q14392
I	635	TYR	-	expression tag	UNP Q14392
I	636	PHE	-	expression tag	UNP Q14392
I	637	GLN	-	expression tag	UNP Q14392
J	629	GLU	-	expression tag	UNP Q14392
J	630	ALA	-	expression tag	UNP Q14392
J	631	ALA	-	expression tag	UNP Q14392
J	632	GLU	-	expression tag	UNP Q14392
J	633	ASN	-	expression tag	UNP Q14392
J	634	LEU	-	expression tag	UNP Q14392
J	635	TYR	-	expression tag	UNP Q14392
J	636	PHE	-	expression tag	UNP Q14392
J	637	GLN	-	expression tag	UNP Q14392

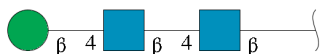
- Molecule 4 is a protein called MHG-8 Fab light chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	K	212	Total	C	N	O	S	0	0	0
			1505	948	256	296	5			
4	M	104	Total	C	N	O	S	0	0	0
			715	450	123	140	2			

- Molecule 5 is a protein called MHG-8 Fab heavy chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	L	214	Total	C	N	O	S	0	0	0
			1520	951	261	301	7			
5	N	118	Total	C	N	O	S	0	0	0
			883	550	149	179	5			

- Molecule 6 is an oligosaccharide called beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
6	O	3	Total	C	N	O	0	0	0
			39	22	2	15			
6	P	3	Total	C	N	O	0	0	0
			39	22	2	15			
6	Q	3	Total	C	N	O	0	0	0
			39	22	2	15			
6	S	3	Total	C	N	O	0	0	0
			39	22	2	15			
6	T	3	Total	C	N	O	0	0	0
			39	22	2	15			

- Molecule 7 is 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
7	R	2	Total	C	N	O	0	0	0
			28	16	2	10			

- Molecule 8 is an oligosaccharide called 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.

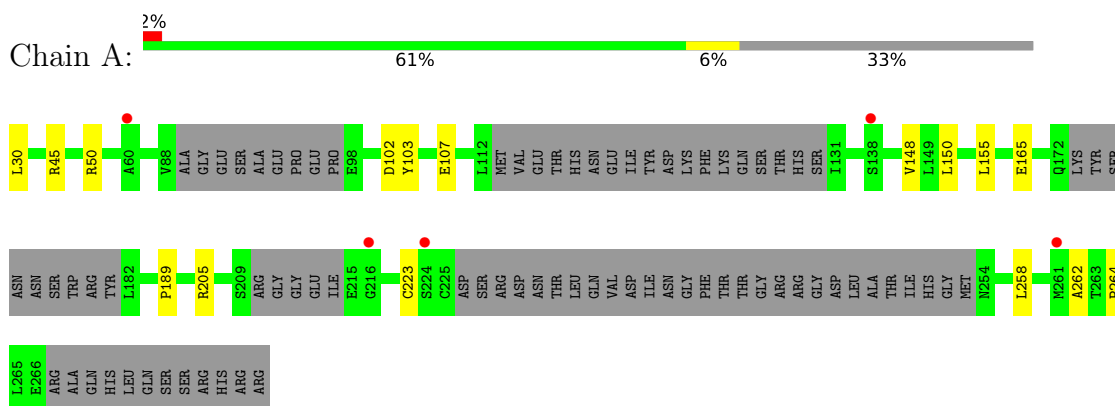


Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
8	U	4	Total	C	N	O	0	0	0
			50	28	2	20			

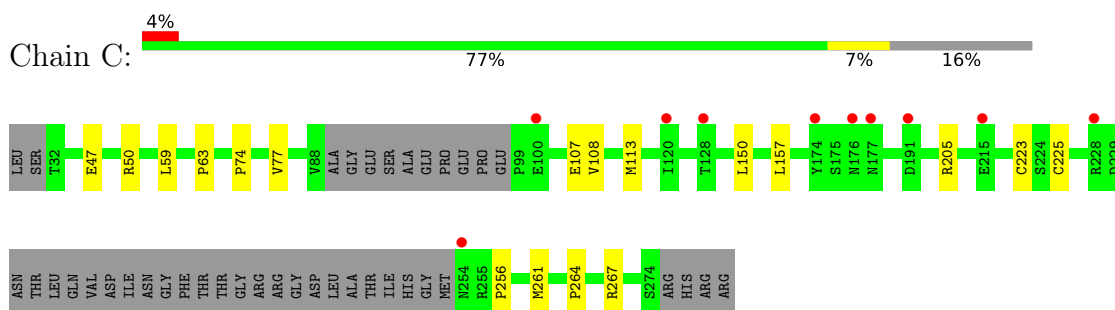
3 Residue-property plots [i](#)

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.

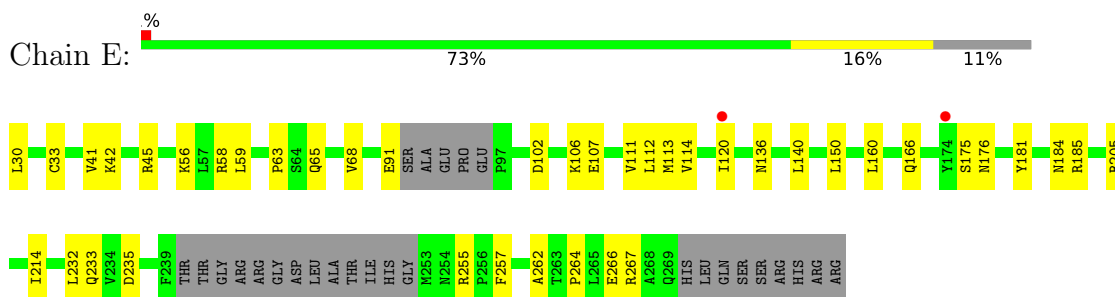
- Molecule 1: Transforming growth factor beta-1



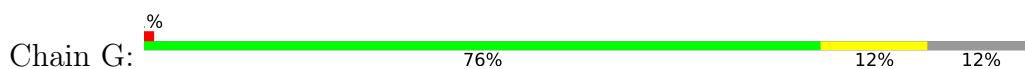
- Molecule 1: Transforming growth factor beta-1

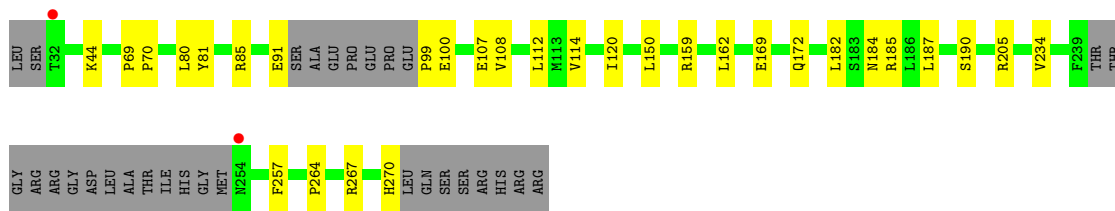


- Molecule 1: Transforming growth factor beta-1

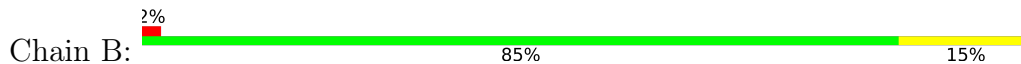


- Molecule 1: Transforming growth factor beta-1

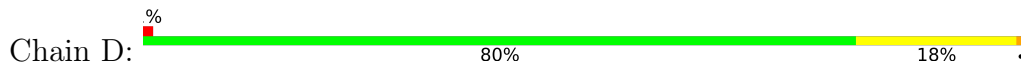




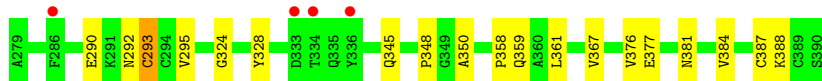
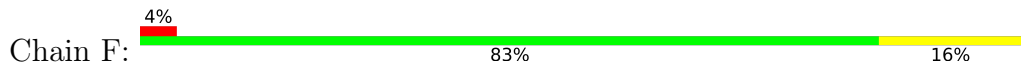
• Molecule 2: Transforming growth factor beta-1



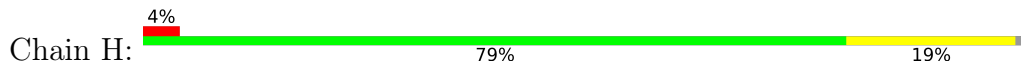
• Molecule 2: Transforming growth factor beta-1



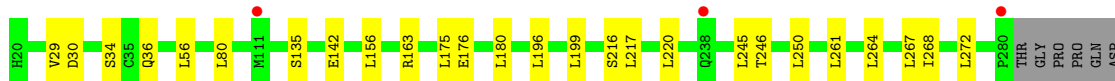
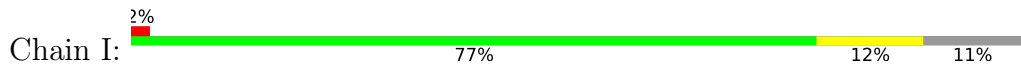
• Molecule 2: Transforming growth factor beta-1



• Molecule 2: Transforming growth factor beta-1

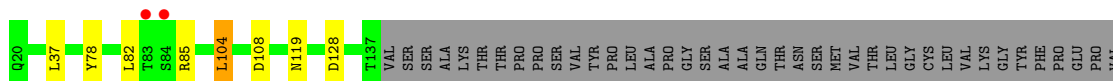


• Molecule 3: Leucine-rich repeat-containing protein 32





- Molecule 5: MHG-8 Fab heavy chain



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



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



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



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



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

Chain T:  67% 33%


MAG1
MAG2
BGA3

- Molecule 7: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain R:  100%


MAG1
MAG2

- Molecule 8: 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 U:  50% 50%


MAG1
MAG2
BMA3
MAN4

4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	103.86Å 175.01Å 145.77Å 90.00° 92.23° 90.00°	Depositor
Resolution (Å)	29.92 – 3.10 29.92 – 3.10	Depositor EDS
% Data completeness (in resolution range)	90.1 (29.92-3.10) 90.0 (29.92-3.10)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.41 (at 3.12Å)	Xtrriage
Refinement program	PHENIX, BUSTER	Depositor
R, R_{free}	0.233 , 0.268 0.235 , 0.271	Depositor DCC
R_{free} test set	4245 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å ²)	86.1	Xtrriage
Anisotropy	0.236	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.25 , 73.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtrriage
Estimated twinning fraction	0.022 for h,-k,-l	Xtrriage
F_o, F_c correlation	0.91	EDS
Total number of atoms	21668	wwPDB-VP
Average B, all atoms (Å ²)	96.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.41% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: MAN, 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	0.23	0/1086	0.40	0/1494
1	C	0.23	0/1430	0.43	0/1957
1	E	0.24	0/1699	0.42	0/2315
1	G	0.23	0/1676	0.43	0/2281
2	B	0.33	0/877	0.49	0/1204
2	D	0.27	0/873	0.47	0/1195
2	F	0.27	0/877	0.45	0/1201
2	H	0.26	0/876	0.47	0/1196
3	I	0.24	0/4128	0.45	0/5635
3	J	0.24	0/3591	0.44	0/4913
4	K	0.24	0/1543	0.44	0/2119
4	M	0.25	0/734	0.44	0/1010
5	L	0.25	0/1561	0.46	0/2148
5	N	0.23	0/904	0.44	0/1234
All	All	0.25	0/21855	0.44	0/29902

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 [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1070	0	831	12	0
1	C	1410	0	1213	12	0
1	E	1666	0	1575	28	0
1	G	1643	0	1550	18	0
2	B	849	0	758	12	0
2	D	847	0	767	14	0
2	F	850	0	764	12	0
2	H	849	0	796	14	0
3	I	4055	0	3965	43	0
3	J	3533	0	3334	36	0
4	K	1505	0	1267	8	0
4	M	715	0	572	2	0
5	L	1520	0	1299	18	0
5	N	883	0	776	5	0
6	O	39	0	34	0	0
6	P	39	0	34	1	0
6	Q	39	0	34	1	0
6	S	39	0	34	0	0
6	T	39	0	34	1	0
7	R	28	0	25	0	0
8	U	50	0	43	1	0
All	All	21668	0	19705	208	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 5.

All (208) 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:G:159:ARG:HH22	1:G:190:SER:HB3	1.51	0.75
1:E:267:ARG:NH2	2:H:377:GLU:OE2	2.20	0.74
1:E:58:ARG:HD2	1:E:267:ARG:HB3	1.68	0.73
2:H:284:TYR:HB2	2:H:295:VAL:HG12	1.69	0.73
1:A:107:GLU:HB2	1:A:264:PRO:HG3	1.71	0.72
1:C:107:GLU:HB2	1:C:264:PRO:HG3	1.70	0.71
1:G:112:LEU:HD23	1:G:257:PHE:HB3	1.73	0.70
1:A:155:LEU:HA	1:A:258:LEU:HA	1.75	0.69
1:E:150:LEU:O	1:E:205:ARG:NH2	2.26	0.69
1:G:91:GLU:H	1:G:185:ARG:HH12	1.42	0.68
1:E:91:GLU:OE1	1:E:185:ARG:NH2	2.28	0.66
2:B:345:GLN:OE1	2:B:388:LYS:NZ	2.28	0.66
1:E:56:LYS:NZ	2:H:380:SER:O	2.19	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:91:ASP:OD2	5:L:94:ASN:ND2	2.30	0.65
1:E:107:GLU:HB2	1:E:264:PRO:HG3	1.79	0.64
1:G:169:GLU:HG2	1:G:184:ASN:HB3	1.80	0.64
5:L:146:PRO:HB3	5:L:172:TYR:HB3	1.78	0.64
5:L:84:SER:O	5:L:102:ASN:ND2	2.30	0.63
2:B:367:VAL:HG22	2:B:376:VAL:HG22	1.81	0.63
2:F:290:GLU:HG3	2:F:292:ASN:H	1.63	0.62
6:P:2:NAG:H62	6:Q:2:NAG:H62	1.82	0.62
1:E:45:ARG:NH1	2:F:350:ALA:O	2.31	0.61
1:G:107:GLU:HB2	1:G:264:PRO:HG3	1.82	0.61
5:L:78:TYR:HB2	5:L:82:LEU:HD22	1.83	0.60
5:N:37:LEU:HB2	5:N:104:LEU:HD11	1.84	0.59
2:B:361:LEU:HD13	2:B:381:ASN:HB3	1.85	0.59
2:H:367:VAL:HG22	2:H:376:VAL:HG22	1.84	0.59
3:J:414:ARG:NH1	3:J:447:SER:OG	2.36	0.59
1:A:223:CYS:SG	1:C:225:CYS:N	2.76	0.59
5:N:78:TYR:HB2	5:N:82:LEU:HD22	1.83	0.59
1:E:65:GLN:HG2	1:E:68:VAL:HG21	1.84	0.58
4:K:109:GLN:HE21	4:K:116:TRP:HB3	1.68	0.58
1:C:157:LEU:HD23	1:C:256:PRO:HB3	1.85	0.58
3:J:251:ARG:NH1	3:J:252:GLU:OE2	2.36	0.58
3:I:245:LEU:HD23	3:I:264:LEU:HD13	1.85	0.57
3:J:176:GLU:HA	3:J:199:LEU:HA	1.84	0.57
5:L:32:ALA:HB3	5:L:35:GLN:HG3	1.87	0.56
1:G:150:LEU:O	1:G:205:ARG:NH2	2.38	0.56
3:I:414:ARG:NH1	3:I:447:SER:OG	2.38	0.56
4:M:105:THR:HA	4:M:123:THR:HA	1.87	0.56
2:H:361:LEU:HD13	2:H:381:ASN:HB3	1.86	0.56
1:A:148:VAL:HA	1:A:205:ARG:HH12	1.71	0.55
2:D:309:LYS:NZ	3:J:454:GLU:OE1	2.38	0.55
2:F:361:LEU:HD13	2:F:381:ASN:HB3	1.87	0.55
3:J:127:THR:HB	3:J:152:HIS:HD2	1.71	0.55
1:A:102:ASP:OD1	1:A:103:TYR:N	2.40	0.55
4:K:209:HIS:O	4:K:231:ARG:NE	2.40	0.55
1:A:45:ARG:NH2	2:D:322:CYS:O	2.41	0.54
3:I:421:ARG:HA	3:I:453:ASN:O	2.08	0.54
2:H:325:PRO:HD3	3:J:295:GLU:HA	1.89	0.54
1:E:42:LYS:NZ	2:H:297:GLN:O	2.41	0.54
1:E:114:VAL:HB	1:E:120:ILE:HD11	1.89	0.54
2:H:284:TYR:HB3	2:H:294:CYS:HB2	1.91	0.53
4:K:81:ARG:NH1	4:K:102:ASP:OD2	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:246:THR:HA	3:I:267:LEU:HA	1.89	0.53
6:T:2:NAG:H62	8:U:2:NAG:H62	1.91	0.53
3:I:409:LEU:HD12	3:I:412:LEU:HD22	1.90	0.53
3:J:393:LEU:O	3:J:420:ASN:ND2	2.40	0.53
1:E:113:MET:O	1:E:255:ARG:NH1	2.40	0.53
1:E:112:LEU:HD23	1:E:257:PHE:HB3	1.90	0.53
1:G:44:LYS:O	2:H:328:TYR:OH	2.23	0.52
2:D:335:GLN:OE1	2:D:343:TYR:OH	2.26	0.52
3:I:335:LEU:HD22	3:I:362:LEU:HD11	1.90	0.52
1:E:107:GLU:N	1:E:262:ALA:O	2.42	0.52
2:H:327:PRO:HB2	3:J:208:SER:HB3	1.92	0.52
3:I:324:TYR:CZ	3:I:348:ARG:HG3	2.44	0.52
1:E:166:GLN:HE22	1:E:233:GLN:H	1.56	0.52
3:I:291:HIS:ND1	3:I:298:SER:HB3	2.24	0.52
3:I:176:GLU:HA	3:I:199:LEU:HA	1.92	0.51
3:I:315:SER:O	3:I:340:SER:OG	2.28	0.51
2:F:345:GLN:OE1	2:F:388:LYS:NZ	2.38	0.51
2:D:280:LEU:HD13	2:D:294:CYS:SG	2.50	0.51
1:E:59:LEU:HD13	1:E:63:PRO:HD3	1.91	0.51
3:I:29:VAL:HG12	3:I:30:ASP:H	1.75	0.51
1:E:166:GLN:HE22	1:E:232:LEU:HA	1.76	0.51
1:A:150:LEU:O	1:A:205:ARG:NH2	2.44	0.51
5:L:53:ILE:HG13	5:L:97:VAL:HG21	1.92	0.51
3:J:250:LEU:HB2	3:J:272:LEU:HD23	1.93	0.51
5:N:85:ARG:NH2	5:N:108:ASP:OD2	2.44	0.51
1:E:56:LYS:HE3	2:H:379:LEU:HB3	1.93	0.50
3:I:460:ALA:HA	3:I:485:ALA:HA	1.93	0.50
3:J:246:THR:HA	3:J:267:LEU:HA	1.94	0.50
1:E:41:VAL:O	1:E:45:ARG:HG2	2.12	0.50
3:I:346:LEU:HB2	3:I:370:LEU:HD23	1.94	0.50
3:I:522:ALA:O	3:I:524:ASN:ND2	2.44	0.50
2:B:326:CYS:SG	2:B:356:CYS:HB2	2.52	0.50
3:I:542:ASP:HA	3:I:567:TYR:HB2	1.94	0.50
3:I:544:ARG:HG3	3:I:567:TYR:HB3	1.94	0.50
4:K:199:LEU:HG	4:K:201:LEU:HD11	1.94	0.49
3:I:163:ARG:NH1	5:L:119:ASN:O	2.44	0.49
3:I:34:SER:HB3	3:I:36:GLN:HE22	1.78	0.49
3:J:53:THR:HG23	3:J:77:HIS:HB3	1.92	0.49
1:A:107:GLU:N	1:A:262:ALA:O	2.44	0.49
1:A:165:GLU:N	1:A:189:PRO:HG3	2.27	0.49
2:B:327:PRO:HG2	2:B:332:LEU:HD12	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:124:PRO:HA	3:J:149:PRO:HD2	1.94	0.49
1:E:160:LEU:HB2	1:E:235:ASP:HB2	1.95	0.49
1:A:50:ARG:HG3	2:D:308:TRP:CZ2	2.48	0.48
2:B:370:VAL:HG12	2:B:375:LYS:HD2	1.95	0.48
2:D:336:TYR:O	2:D:339:VAL:HG12	2.13	0.48
3:J:29:VAL:HG12	3:J:30:ASP:H	1.78	0.48
3:J:370:LEU:HB2	3:J:393:LEU:HD23	1.94	0.48
1:G:187:LEU:HD12	1:G:234:VAL:HG11	1.95	0.48
1:C:150:LEU:O	1:C:205:ARG:NH2	2.47	0.48
3:J:156:LEU:HB2	3:J:180:LEU:HD23	1.94	0.48
4:K:53:LEU:HD11	4:K:108:CYS:HB2	1.95	0.48
3:I:261:LEU:HD22	3:I:264:LEU:HD12	1.96	0.48
2:H:336:TYR:O	2:H:339:VAL:HG12	2.14	0.48
1:E:33:CYS:HB3	3:J:297:TRP:CD1	2.48	0.48
2:F:377:GLU:CD	1:G:267:ARG:HH12	2.17	0.47
2:F:367:VAL:HG22	2:F:376:VAL:HG22	1.95	0.47
1:G:159:ARG:NH2	1:G:190:SER:HB3	2.25	0.47
1:G:159:ARG:HD2	1:G:162:LEU:HD22	1.96	0.47
1:A:223:CYS:HB2	1:C:223:CYS:O	2.14	0.47
1:C:113:MET:SD	1:C:256:PRO:HG2	2.55	0.47
1:E:136:ASN:HA	1:E:214:ILE:HD13	1.97	0.47
5:L:55:TRP:CE2	5:L:99:LEU:HB2	2.50	0.47
3:I:385:LEU:HD22	3:I:388:LEU:HD22	1.97	0.46
2:D:365:PRO:HA	2:D:378:GLN:HA	1.96	0.46
3:J:460:ALA:HA	3:J:485:ALA:HA	1.96	0.46
5:L:176:PRO:HD2	5:L:227:PRO:HG3	1.98	0.46
2:D:326:CYS:O	2:D:354:PRO:HG2	2.15	0.46
2:H:355:CYS:O	2:H:389:CYS:HA	2.16	0.46
2:F:295:VAL:HG22	2:F:387:CYS:SG	2.56	0.46
2:B:377:GLU:CD	1:C:267:ARG:HH22	2.19	0.46
3:J:163:ARG:NH1	5:N:119:ASN:O	2.47	0.46
3:J:291:HIS:ND1	3:J:298:SER:HB3	2.31	0.46
3:I:418:GLN:HG3	3:I:451:VAL:HB	1.97	0.46
2:D:364:LEU:HB3	2:D:382:MET:HG3	1.98	0.45
3:I:261:LEU:HB2	3:I:314:LEU:HD21	1.99	0.45
3:J:142:GLU:OE1	3:J:142:GLU:N	2.49	0.45
3:I:142:GLU:N	3:I:142:GLU:OE1	2.49	0.45
5:L:85:ARG:O	5:L:101:MET:HG3	2.16	0.45
1:G:172:GLN:HB2	1:G:182:LEU:HD11	1.98	0.45
1:E:30:LEU:N	3:J:216:SER:H	2.14	0.45
1:E:102:ASP:HB3	1:E:106:LYS:NZ	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:543:LEU:HB2	3:I:568:LEU:HD23	1.99	0.45
3:J:245:LEU:HD23	3:J:264:LEU:HD13	1.99	0.45
3:J:418:GLN:HG3	3:J:451:VAL:HB	1.99	0.45
2:F:328:TYR:CE2	2:F:348:PRO:HB3	2.52	0.44
1:G:99:PRO:HB2	1:G:100:GLU:H	1.62	0.44
4:K:58:GLN:NE2	5:L:58:GLN:OE1	2.41	0.44
2:F:358:PRO:HB3	2:F:384:VAL:HG13	2.00	0.44
1:G:114:VAL:HB	1:G:120:ILE:HD11	1.98	0.44
3:I:370:LEU:HB2	3:I:393:LEU:HD23	1.98	0.44
5:L:226:HIS:CD2	5:L:227:PRO:HD2	2.53	0.44
3:I:175:LEU:HB3	3:I:196:LEU:HD22	2.00	0.44
4:K:21:ASP:OD2	5:L:80:SER:OG	2.33	0.44
2:D:344:ASN:O	2:D:348:PRO:HG3	2.17	0.44
3:I:506:LEU:HD23	3:I:510:LEU:HD11	1.99	0.44
5:L:85:ARG:O	5:L:101:MET:HA	2.18	0.44
3:I:217:LEU:HB3	3:I:220:LEU:HB2	1.99	0.44
2:D:280:LEU:HA	2:D:280:LEU:HD23	1.63	0.43
3:J:522:ALA:O	3:J:524:ASN:ND2	2.51	0.43
1:E:181:TYR:OH	1:E:184:ASN:ND2	2.42	0.43
3:I:578:ASN:OD1	3:I:579:GLY:N	2.50	0.43
3:I:56:LEU:HB2	3:I:80:LEU:HD23	1.99	0.43
3:I:494:GLU:HA	3:I:516:LEU:HA	2.00	0.43
3:J:385:LEU:HD22	3:J:388:LEU:HD22	1.99	0.43
3:J:122:PRO:HB3	3:J:147:GLU:HG3	2.01	0.43
2:B:336:TYR:HD2	1:E:266:GLU:HB2	1.84	0.43
1:C:108:VAL:HG22	1:C:261:MET:SD	2.59	0.43
5:L:216:PRO:HB3	5:L:239:PRO:HG2	2.00	0.43
3:I:250:LEU:HB2	3:I:272:LEU:HD23	2.01	0.43
3:I:407:ALA:HA	3:I:442:ILE:HG13	2.00	0.43
3:I:432:GLY:HA2	3:I:433:PRO:HD3	1.91	0.42
3:J:324:TYR:CZ	3:J:348:ARG:HG3	2.54	0.42
4:K:127:ARG:HA	4:K:160:TYR:OH	2.19	0.42
2:D:361:LEU:HD13	2:D:381:ASN:HB3	2.00	0.42
2:F:359:GLN:HB2	2:F:388:LYS:HD3	2.01	0.42
1:G:69:PRO:HA	1:G:70:PRO:HD3	1.92	0.42
1:C:47:GLU:O	2:D:331:SER:OG	2.34	0.42
2:D:334:THR:HG22	3:I:135:SER:HB3	2.01	0.42
3:I:432:GLY:HA3	3:I:436:CYS:SG	2.59	0.42
1:A:30:LEU:N	3:I:216:SER:H	2.18	0.42
1:E:111:VAL:HG21	1:E:140:LEU:HD23	2.02	0.42
1:G:81:TYR:CZ	1:G:85:ARG:HD3	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:59:LEU:HD13	1:C:63:PRO:HD3	2.01	0.42
3:I:268:ILE:HG23	3:I:318:LEU:HB2	2.01	0.42
5:L:31:VAL:O	5:L:138:VAL:HA	2.20	0.42
3:I:175:LEU:HD23	3:I:196:LEU:HD13	2.01	0.41
1:E:175:SER:OG	1:E:176:ASN:N	2.53	0.41
2:B:293:CYS:HB2	2:B:324:GLY:C	2.41	0.41
2:B:336:TYR:CD2	1:E:266:GLU:HB2	2.56	0.41
2:F:293:CYS:HA	2:F:324:GLY:HA3	2.02	0.41
3:I:297:TRP:CZ2	3:I:299:ALA:HB3	2.55	0.41
3:I:532:TRP:HB3	3:I:558:GLY:HA3	2.01	0.41
3:J:401:LEU:HB2	3:J:437:VAL:HG22	2.02	0.41
3:J:268:ILE:HG23	3:J:318:LEU:HB2	2.03	0.41
1:G:80:LEU:HD21	1:G:108:VAL:O	2.20	0.41
5:N:128:ASP:OD1	5:N:128:ASP:N	2.51	0.41
2:F:290:GLU:OE2	2:F:292:ASN:HB2	2.21	0.41
1:G:264:PRO:HG2	1:G:267:ARG:NH1	2.36	0.41
2:H:365:PRO:HA	2:H:378:GLN:HA	2.02	0.41
3:I:351:LEU:HB2	3:I:373:ASN:OD1	2.21	0.41
3:J:253:ASN:HB3	3:J:254:LYS:H	1.73	0.41
2:B:308:TRP:CZ2	1:C:50:ARG:HG3	2.56	0.41
3:J:29:VAL:HB	3:J:32:LYS:HB3	2.02	0.41
3:J:180:LEU:HB2	3:J:204:LEU:HD23	2.03	0.41
3:J:341:LEU:HD21	3:J:344:LEU:HB2	2.03	0.41
1:C:74:PRO:HG2	1:C:77:VAL:HB	2.03	0.41
3:I:156:LEU:HB2	3:I:180:LEU:HD23	2.01	0.41
5:L:78:TYR:HE1	5:L:88:ILE:HG13	1.86	0.40
3:J:117:ALA:HA	4:M:112:TRP:NE1	2.36	0.40
3:J:120:LEU:HB2	3:J:144:LEU:O	2.21	0.40
3:J:417:LEU:O	3:J:420:ASN:HB2	2.22	0.40
2:B:370:VAL:O	2:B:370:VAL:HG13	2.22	0.40
5:L:109:THR:HG23	5:L:137:THR:HA	2.02	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	156/249 (63%)	151 (97%)	5 (3%)	0	100	100
1	C	203/249 (82%)	191 (94%)	12 (6%)	0	100	100
1	E	216/249 (87%)	202 (94%)	14 (6%)	0	100	100
1	G	212/249 (85%)	197 (93%)	15 (7%)	0	100	100
2	B	110/112 (98%)	107 (97%)	3 (3%)	0	100	100
2	D	109/112 (97%)	105 (96%)	4 (4%)	0	100	100
2	F	110/112 (98%)	105 (96%)	5 (4%)	0	100	100
2	H	107/112 (96%)	102 (95%)	5 (5%)	0	100	100
3	I	545/618 (88%)	506 (93%)	39 (7%)	0	100	100
3	J	485/618 (78%)	451 (93%)	34 (7%)	0	100	100
4	K	210/212 (99%)	201 (96%)	9 (4%)	0	100	100
4	M	102/212 (48%)	95 (93%)	7 (7%)	0	100	100
5	L	210/221 (95%)	197 (94%)	13 (6%)	0	100	100
5	N	116/221 (52%)	106 (91%)	10 (9%)	0	100	100
All	All	2891/3546 (82%)	2716 (94%)	175 (6%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	69/222 (31%)	69 (100%)	0	100	100
1	C	112/222 (50%)	112 (100%)	0	100	100
1	E	166/222 (75%)	166 (100%)	0	100	100
1	G	165/222 (74%)	164 (99%)	1 (1%)	84	91
2	B	86/100 (86%)	86 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	D	87/100 (87%)	86 (99%)	1 (1%)	70	84
2	F	86/100 (86%)	85 (99%)	1 (1%)	67	83
2	H	91/100 (91%)	90 (99%)	1 (1%)	70	84
3	I	425/530 (80%)	424 (100%)	1 (0%)	92	96
3	J	353/530 (67%)	352 (100%)	1 (0%)	91	95
4	K	134/187 (72%)	133 (99%)	1 (1%)	81	90
4	M	58/187 (31%)	58 (100%)	0	100	100
5	L	145/193 (75%)	145 (100%)	0	100	100
5	N	89/193 (46%)	88 (99%)	1 (1%)	70	84
All	All	2066/3108 (66%)	2058 (100%)	8 (0%)	89	94

All (8) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	D	294	CYS
2	F	293	CYS
1	G	270	HIS
2	H	351	SER
3	I	463	PHE
3	J	463	PHE
4	K	43	CYS
5	N	104	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1) such sidechains are listed below:

Mol	Chain	Res	Type
5	L	102	ASN

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

21 monosaccharides are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
6	NAG	O	1	6,3	14,14,15	0.39	0	17,19,21	0.46	0
6	NAG	O	2	6	14,14,15	0.21	0	17,19,21	0.49	0
6	BMA	O	3	6	11,11,12	0.56	0	15,15,17	0.83	0
6	NAG	P	1	6,3	14,14,15	0.39	0	17,19,21	0.45	0
6	NAG	P	2	6	14,14,15	0.16	0	17,19,21	0.59	1 (5%)
6	BMA	P	3	6	11,11,12	0.54	0	15,15,17	0.78	0
6	NAG	Q	1	6,3	14,14,15	0.18	0	17,19,21	0.47	0
6	NAG	Q	2	6	14,14,15	0.19	0	17,19,21	0.44	0
6	BMA	Q	3	6	11,11,12	0.59	0	15,15,17	0.68	0
7	NAG	R	1	3,7	14,14,15	0.24	0	17,19,21	0.45	0
7	NAG	R	2	7	14,14,15	0.39	0	17,19,21	0.52	0
6	NAG	S	1	6,3	14,14,15	0.43	0	17,19,21	0.49	0
6	NAG	S	2	6	14,14,15	0.20	0	17,19,21	0.48	0
6	BMA	S	3	6	11,11,12	0.61	0	15,15,17	0.86	0
6	NAG	T	1	6,3	14,14,15	0.37	0	17,19,21	0.46	0
6	NAG	T	2	6	14,14,15	0.19	0	17,19,21	0.60	1 (5%)
6	BMA	T	3	6	11,11,12	0.60	0	15,15,17	0.73	0
8	NAG	U	1	3,8	14,14,15	0.21	0	17,19,21	0.49	0
8	NAG	U	2	8	14,14,15	0.28	0	17,19,21	0.73	0
8	BMA	U	3	8	11,11,12	0.54	0	15,15,17	0.79	0
8	MAN	U	4	8	11,11,12	0.70	0	15,15,17	1.21	2 (13%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	NAG	O	1	6,3	-	0/6/23/26	0/1/1/1
6	NAG	O	2	6	-	0/6/23/26	0/1/1/1
6	BMA	O	3	6	-	0/2/19/22	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	NAG	P	1	6,3	-	2/6/23/26	0/1/1/1
6	NAG	P	2	6	-	0/6/23/26	0/1/1/1
6	BMA	P	3	6	-	0/2/19/22	0/1/1/1
6	NAG	Q	1	6,3	-	0/6/23/26	0/1/1/1
6	NAG	Q	2	6	-	0/6/23/26	0/1/1/1
6	BMA	Q	3	6	-	0/2/19/22	0/1/1/1
7	NAG	R	1	3,7	-	0/6/23/26	0/1/1/1
7	NAG	R	2	7	-	1/6/23/26	0/1/1/1
6	NAG	S	1	6,3	-	0/6/23/26	0/1/1/1
6	NAG	S	2	6	-	2/6/23/26	0/1/1/1
6	BMA	S	3	6	-	0/2/19/22	0/1/1/1
6	NAG	T	1	6,3	-	0/6/23/26	0/1/1/1
6	NAG	T	2	6	-	2/6/23/26	0/1/1/1
6	BMA	T	3	6	-	0/2/19/22	0/1/1/1
8	NAG	U	1	3,8	-	0/6/23/26	0/1/1/1
8	NAG	U	2	8	-	0/6/23/26	0/1/1/1
8	BMA	U	3	8	-	0/2/19/22	0/1/1/1
8	MAN	U	4	8	-	1/2/19/22	0/1/1/1

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	U	4	MAN	C1-O5-C5	2.88	116.09	112.19
8	U	4	MAN	O2-C2-C3	-2.09	105.94	110.14
6	T	2	NAG	C1-O5-C5	2.09	115.02	112.19
6	P	2	NAG	C1-O5-C5	2.07	114.99	112.19

There are no chirality outliers.

All (8) torsion outliers are listed below:

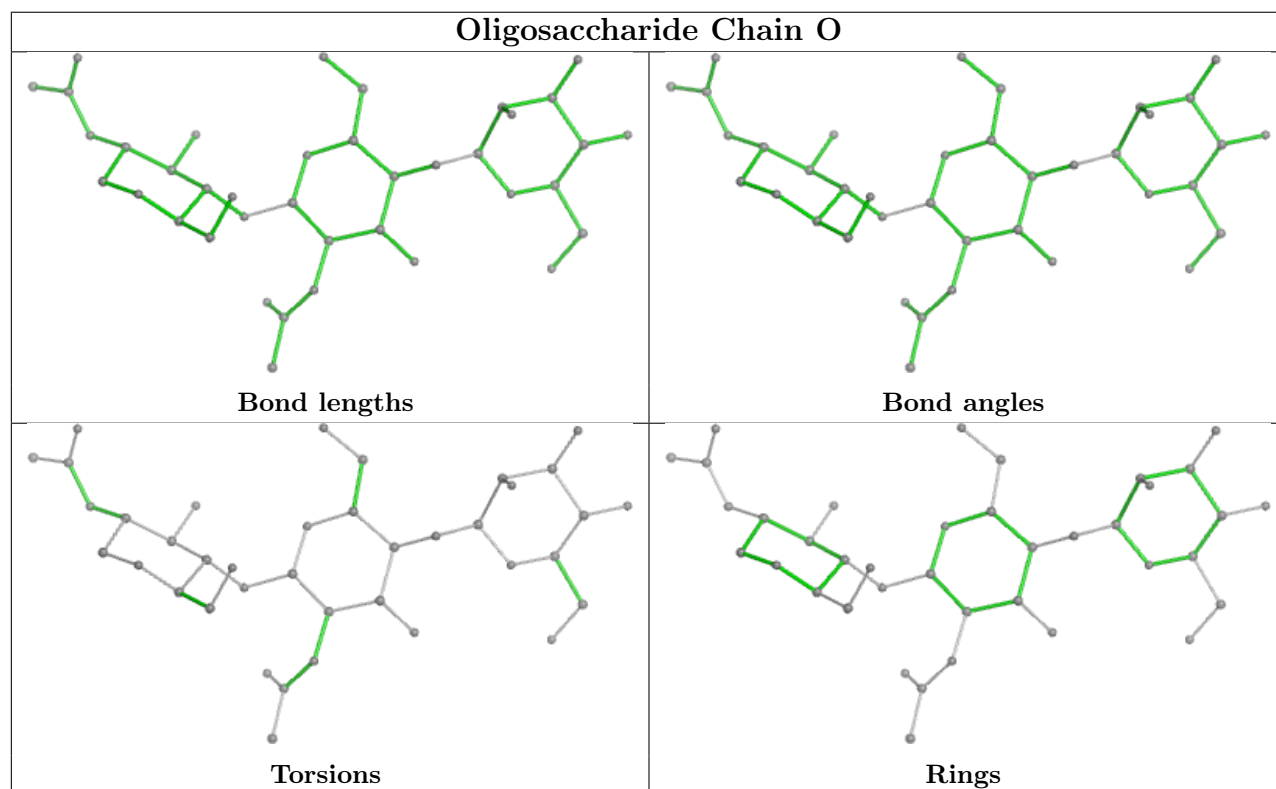
Mol	Chain	Res	Type	Atoms
6	P	1	NAG	C4-C5-C6-O6
6	S	2	NAG	O5-C5-C6-O6
6	P	1	NAG	O5-C5-C6-O6
7	R	2	NAG	C3-C2-N2-C7
6	S	2	NAG	C4-C5-C6-O6
6	T	2	NAG	C4-C5-C6-O6
8	U	4	MAN	C4-C5-C6-O6
6	T	2	NAG	O5-C5-C6-O6

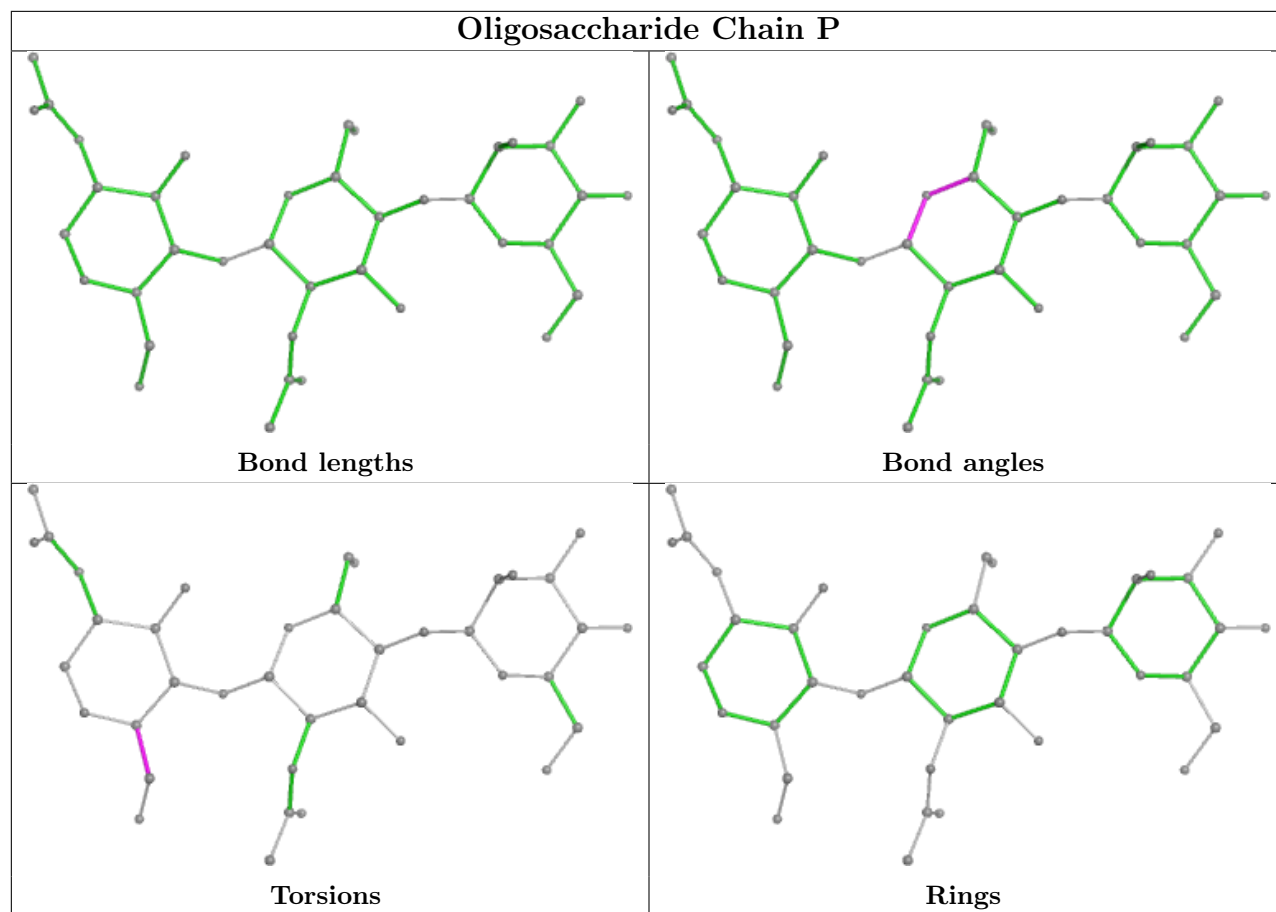
There are no ring outliers.

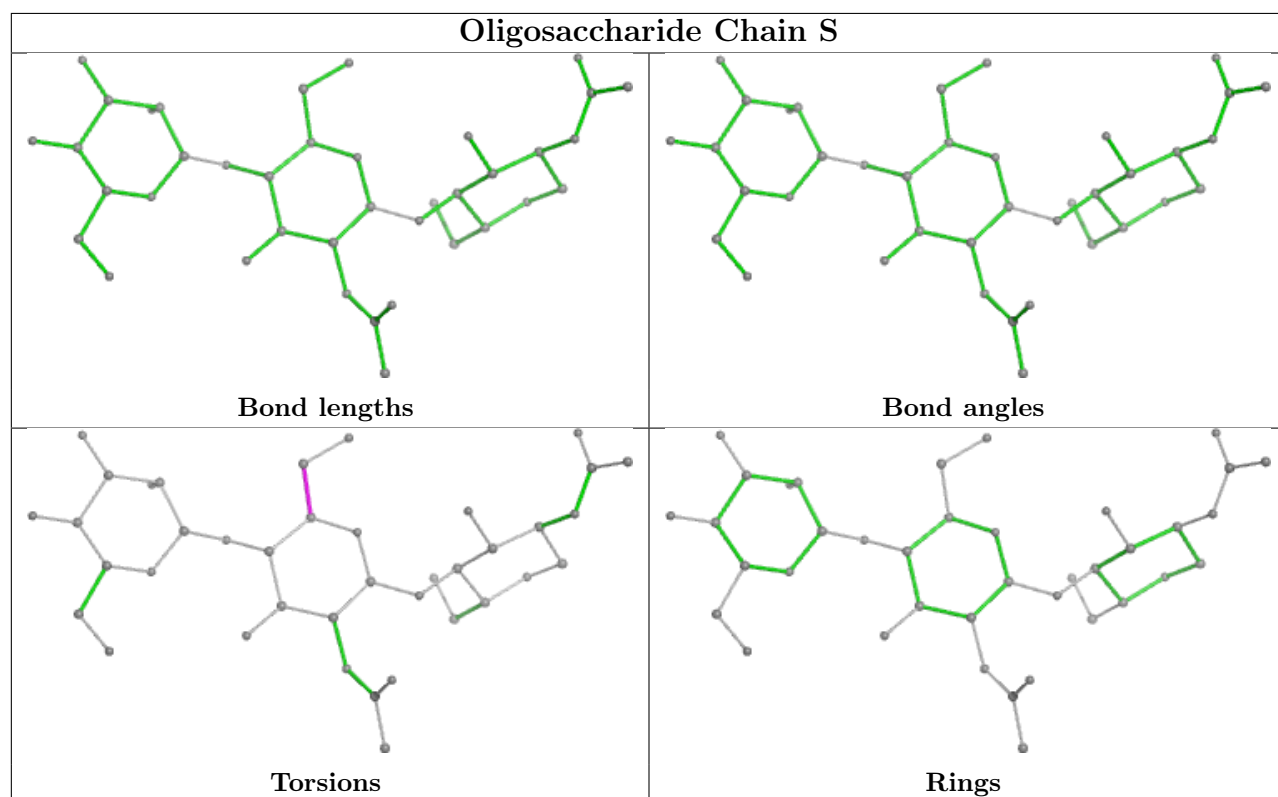
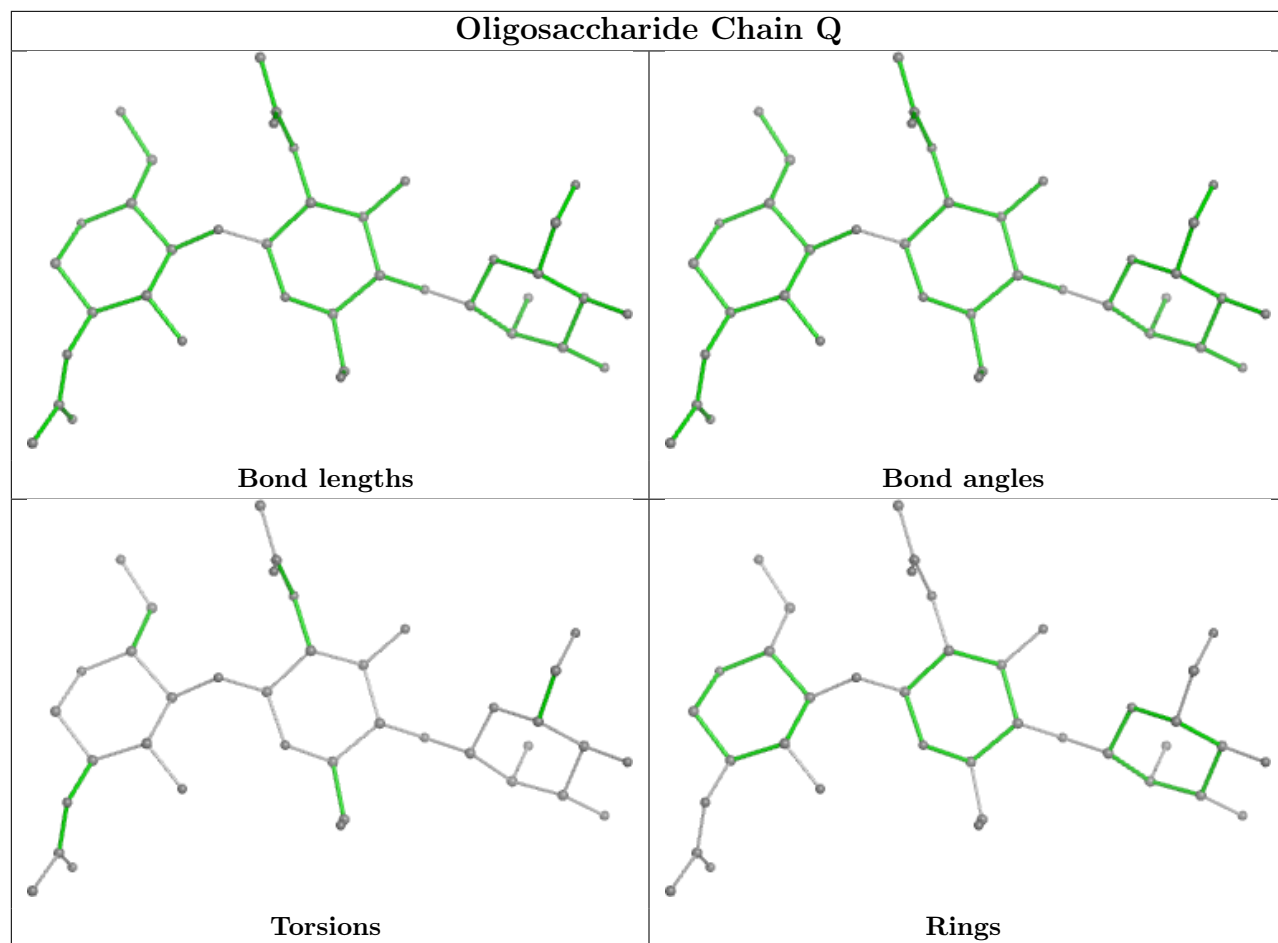
4 monomers are involved in 2 short contacts:

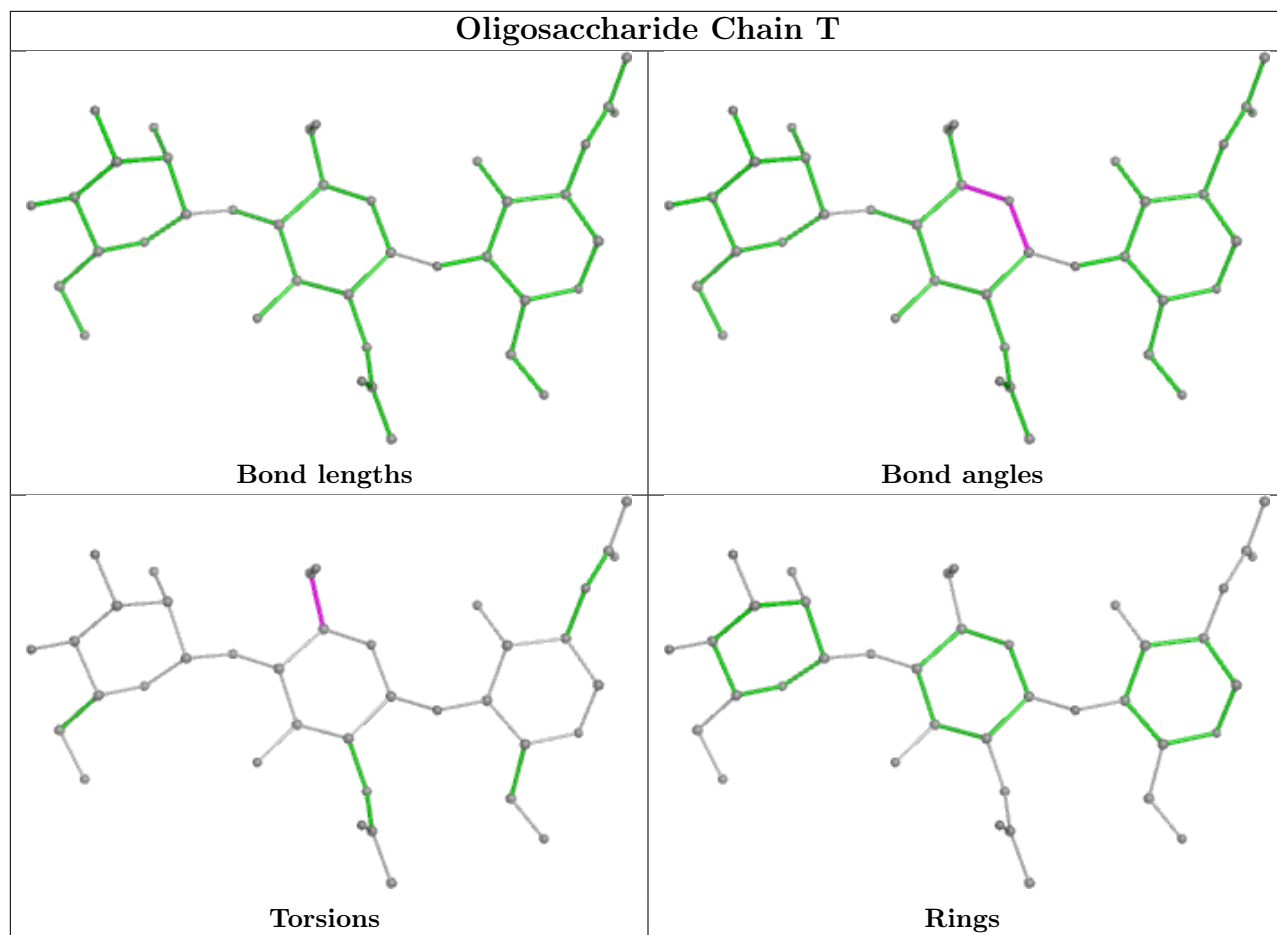
Mol	Chain	Res	Type	Clashes	Symm-Clashes
6	P	2	NAG	1	0
6	T	2	NAG	1	0
6	Q	2	NAG	1	0
8	U	2	NAG	1	0

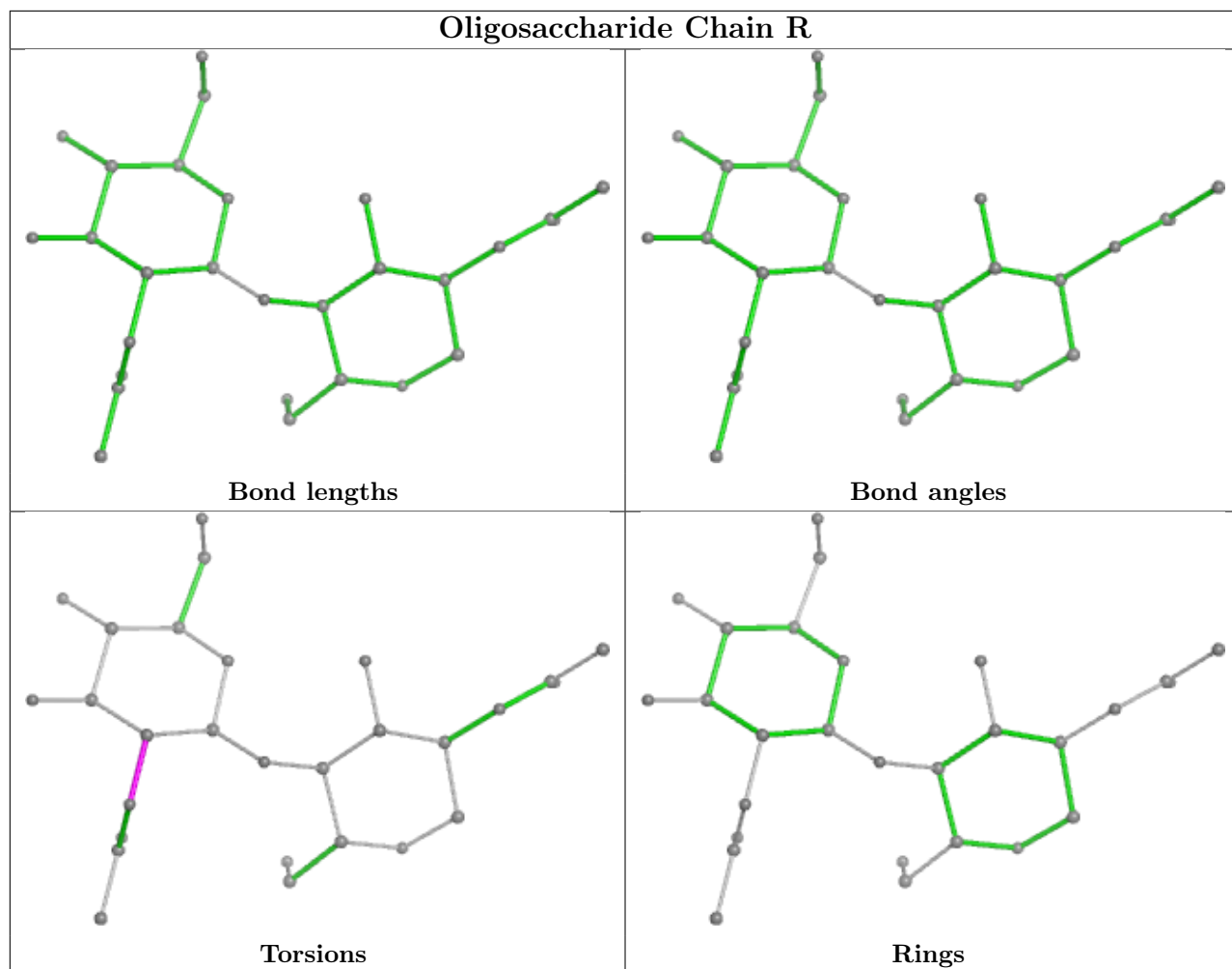
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.

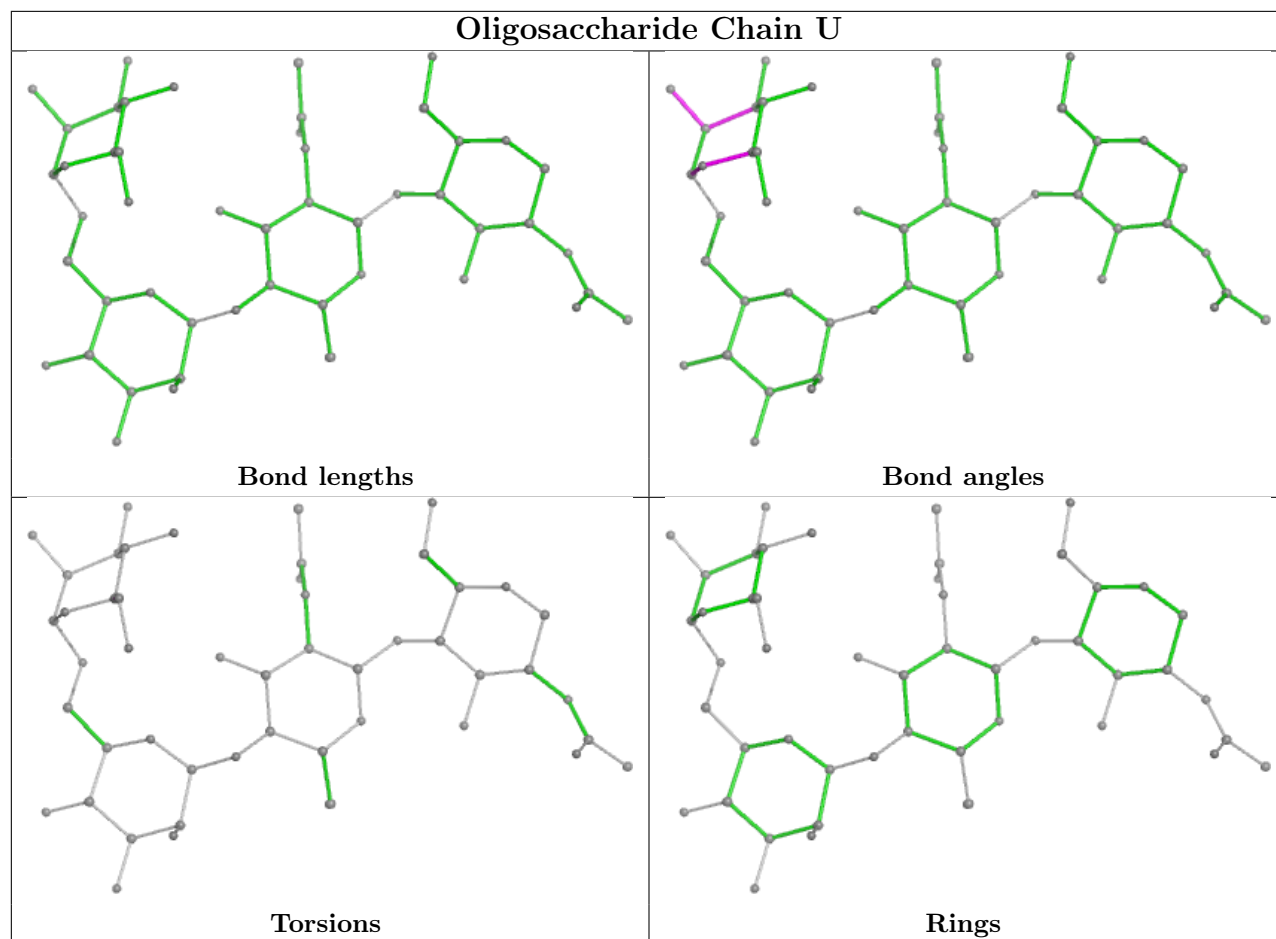












5.6 Ligand geometry [i](#)

There are no ligands in this entry.

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 [i](#)

6.1 Protein, DNA and RNA chains [i](#)

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	168/249 (67%)	0.33	5 (2%) 52 33	64, 130, 163, 175	0
1	C	209/249 (83%)	0.32	10 (4%) 36 21	46, 114, 177, 206	0
1	E	222/249 (89%)	0.04	2 (0%) 81 66	61, 95, 135, 176	0
1	G	218/249 (87%)	-0.07	2 (0%) 81 66	45, 90, 131, 150	0
2	B	112/112 (100%)	0.01	2 (1%) 67 49	48, 75, 117, 128	0
2	D	111/112 (99%)	0.04	1 (0%) 81 66	47, 83, 135, 216	0
2	F	112/112 (100%)	-0.05	4 (3%) 46 27	46, 69, 122, 152	0
2	H	109/112 (97%)	0.07	4 (3%) 45 27	47, 70, 118, 141	0
3	I	551/618 (89%)	-0.05	10 (1%) 67 49	42, 82, 128, 151	0
3	J	493/618 (79%)	0.03	13 (2%) 57 38	45, 88, 146, 179	0
4	K	212/212 (100%)	0.23	10 (4%) 37 22	63, 119, 149, 159	0
4	M	104/212 (49%)	0.40	6 (5%) 30 18	71, 125, 171, 195	0
5	L	214/221 (96%)	0.34	12 (5%) 31 19	52, 118, 179, 186	0
5	N	118/221 (53%)	0.12	2 (1%) 69 50	69, 95, 144, 157	0
All	All	2953/3546 (83%)	0.10	83 (2%) 55 35	42, 94, 153, 216	0

All (83) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
5	L	146	PRO	6.8
5	L	171	GLY	5.2
5	N	84	SER	4.4
3	I	238	GLN	4.3
3	I	527	SER	4.2
2	H	287	SER	4.1
3	J	67	SER	3.5
3	J	533	THR	3.4

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Mol	Chain	Res	Type	RSRZ
3	I	290	ILE	3.3
4	M	37	ASP	3.3
2	F	336	TYR	3.2
1	C	100	GLU	3.2
3	J	409	LEU	3.1
3	I	280	PRO	3.0
5	L	84	SER	3.0
4	K	34	SER	2.8
3	J	300	LEU	2.7
3	J	338	LEU	2.6
3	J	500	GLY	2.6
5	L	68	GLY	2.6
1	A	60	ALA	2.6
4	K	191	SER	2.6
3	J	528	HIS	2.6
1	A	261	MET	2.6
5	L	209	THR	2.5
3	J	20	HIS	2.5
5	L	152	ALA	2.5
1	C	174	TYR	2.4
3	I	397	ALA	2.4
4	K	232	ASN	2.4
2	D	280	LEU	2.4
3	J	450	LEU	2.4
1	C	128	THR	2.4
5	L	192	THR	2.4
2	B	285	CYS	2.4
1	E	120	ILE	2.4
2	B	287	SER	2.4
1	C	176	ASN	2.4
1	A	138	SER	2.4
2	H	379	LEU	2.4
4	M	87	SER	2.4
5	N	83	THR	2.3
4	K	188	SER	2.3
4	M	26	GLN	2.3
3	I	573	LEU	2.3
4	K	180	LEU	2.3
3	I	298	SER	2.3
5	L	22	GLN	2.3
3	I	576	CYS	2.2
5	L	222	CYS	2.2

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Mol	Chain	Res	Type	RSRZ
3	I	438	ALA	2.2
3	J	114	ALA	2.2
4	K	151	SER	2.2
2	F	334	THR	2.2
3	I	111	MET	2.2
2	F	286	PHE	2.2
2	F	333	ASP	2.2
4	K	210	ASN	2.2
2	H	288	SER	2.1
4	K	197	SER	2.1
4	M	91	PHE	2.1
4	M	35	LEU	2.1
3	J	236	ALA	2.1
5	L	82	LEU	2.1
3	J	508	VAL	2.1
1	E	174	TYR	2.1
1	G	254	ASN	2.1
1	C	215	GLU	2.1
5	L	148	VAL	2.1
1	C	120	ILE	2.1
1	G	32	THR	2.1
1	A	224	SER	2.1
1	C	228	ARG	2.0
4	K	136	SER	2.0
1	C	254	ASN	2.0
2	H	389	CYS	2.0
5	L	83	THR	2.0
3	J	273	SER	2.0
4	M	69	SER	2.0
1	C	177	ASN	2.0
1	C	191	ASP	2.0
4	K	47	ASP	2.0
1	A	216	GLY	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

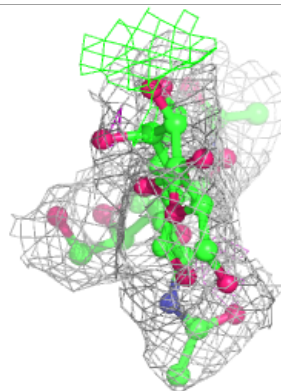
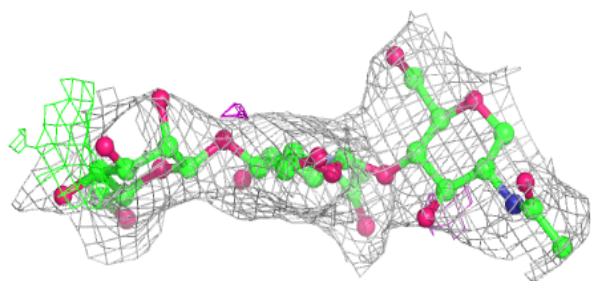
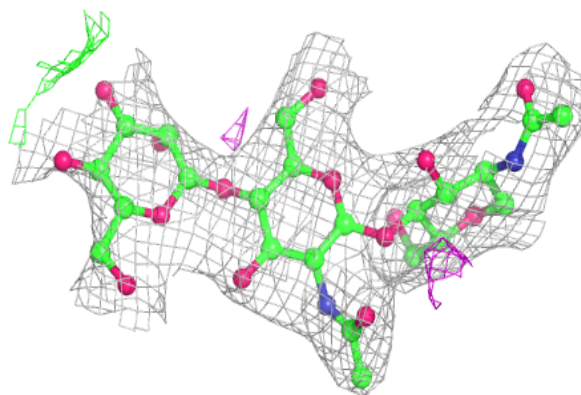
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
8	BMA	U	3	11/12	0.49	0.13	118,126,157,203	0
6	BMA	T	3	11/12	0.50	0.17	160,163,165,165	0
6	BMA	P	3	11/12	0.57	0.15	93,114,140,144	0
7	NAG	R	2	14/15	0.58	0.12	119,139,148,149	0
6	BMA	O	3	11/12	0.59	0.15	89,112,133,137	0
6	BMA	Q	3	11/12	0.68	0.10	113,121,124,128	0
6	BMA	S	3	11/12	0.70	0.09	119,126,129,131	0
8	MAN	U	4	11/12	0.78	0.12	101,126,152,167	0
6	NAG	T	2	14/15	0.81	0.14	104,126,137,148	0
8	NAG	U	2	14/15	0.87	0.13	80,105,110,120	0
6	NAG	O	2	14/15	0.89	0.10	63,69,82,97	0
7	NAG	R	1	14/15	0.90	0.11	101,129,138,143	0
6	NAG	S	2	14/15	0.90	0.09	63,85,95,113	0
8	NAG	U	1	14/15	0.90	0.17	59,77,111,127	0
6	NAG	Q	2	14/15	0.92	0.10	40,94,119,124	0
6	NAG	T	1	14/15	0.94	0.13	54,74,87,90	0
6	NAG	O	1	14/15	0.94	0.08	43,49,77,91	0
6	NAG	Q	1	14/15	0.94	0.09	46,68,91,94	0
6	NAG	P	2	14/15	0.95	0.14	67,96,116,117	0
6	NAG	P	1	14/15	0.95	0.10	28,46,66,74	0
6	NAG	S	1	14/15	0.97	0.07	46,60,75,76	0

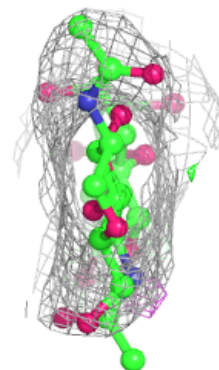
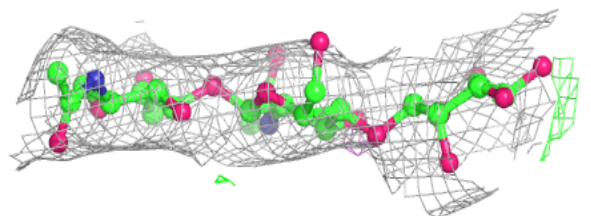
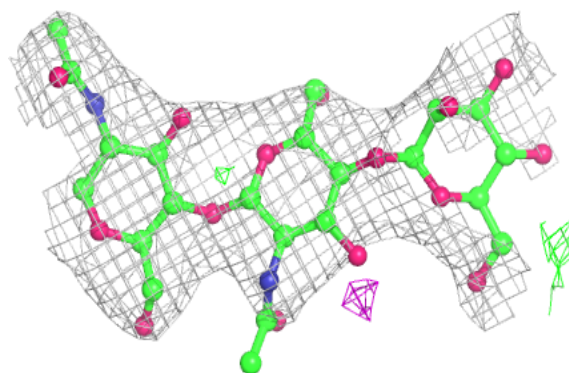
The following is a graphical depiction of the model fit to experimental electron density for oligosaccharide. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around Chain O:

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

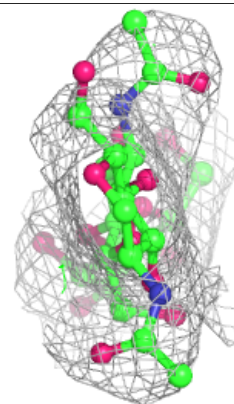
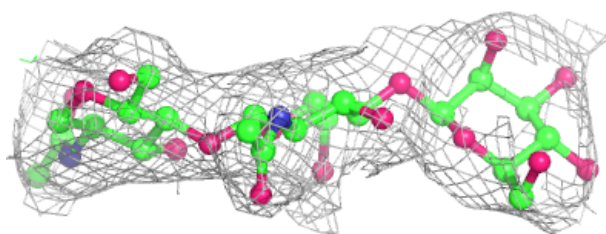
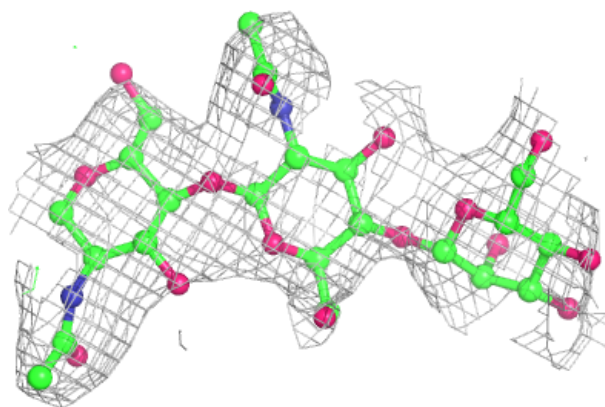
**Electron density around Chain P:**

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

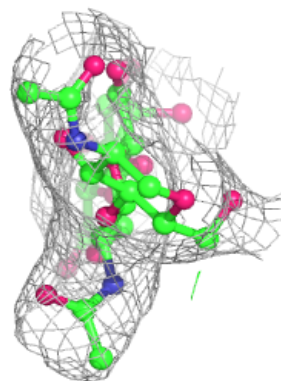
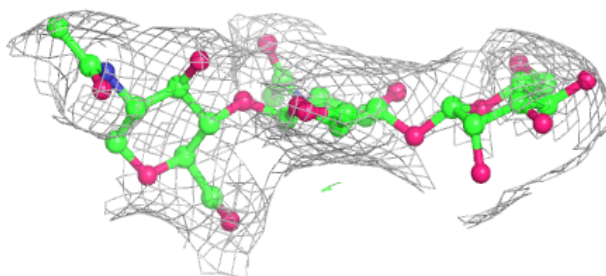
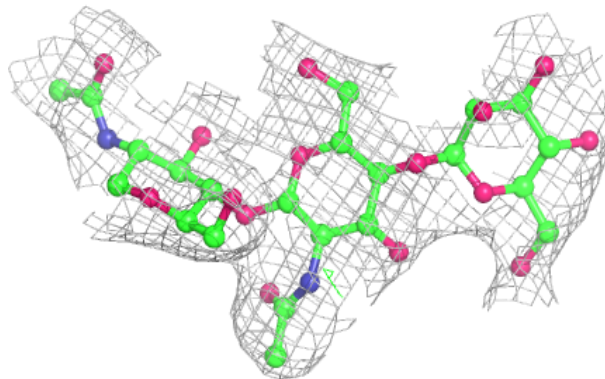


Electron density around Chain Q:

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

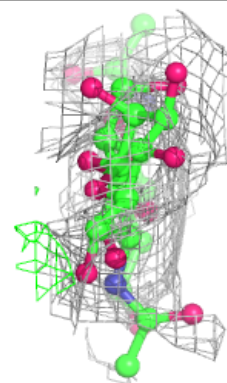
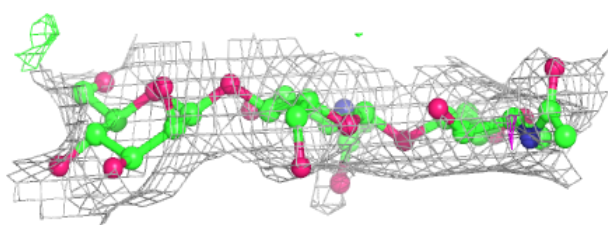
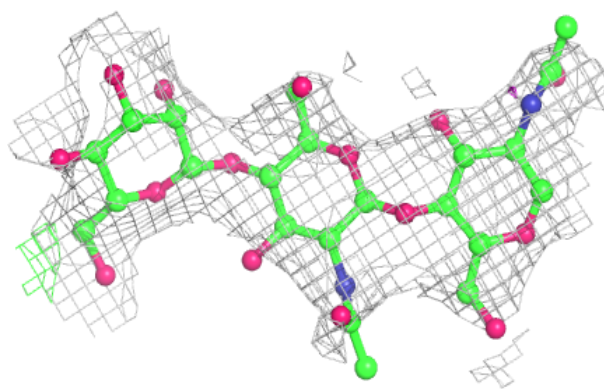
**Electron density around Chain S:**

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

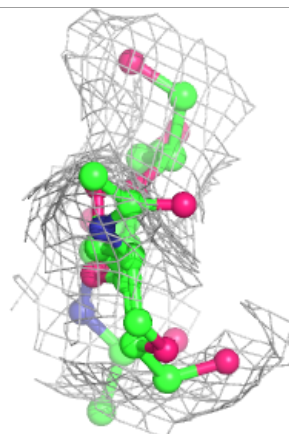
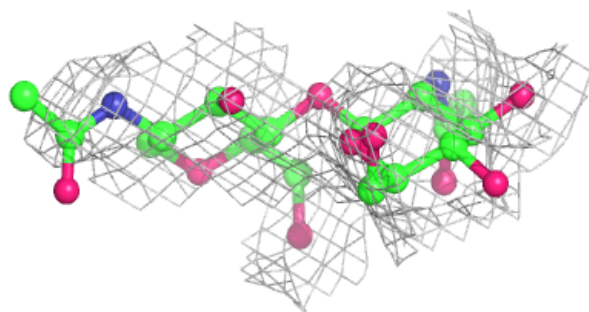
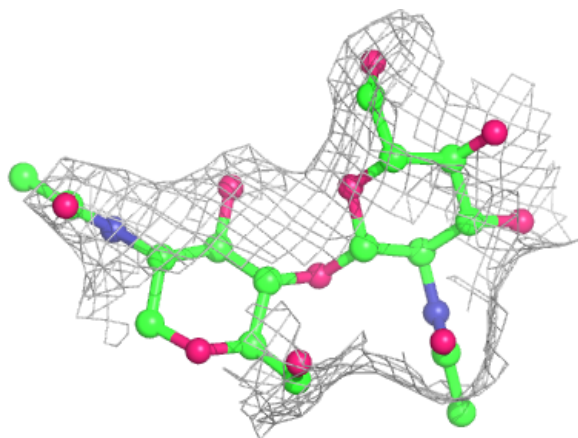


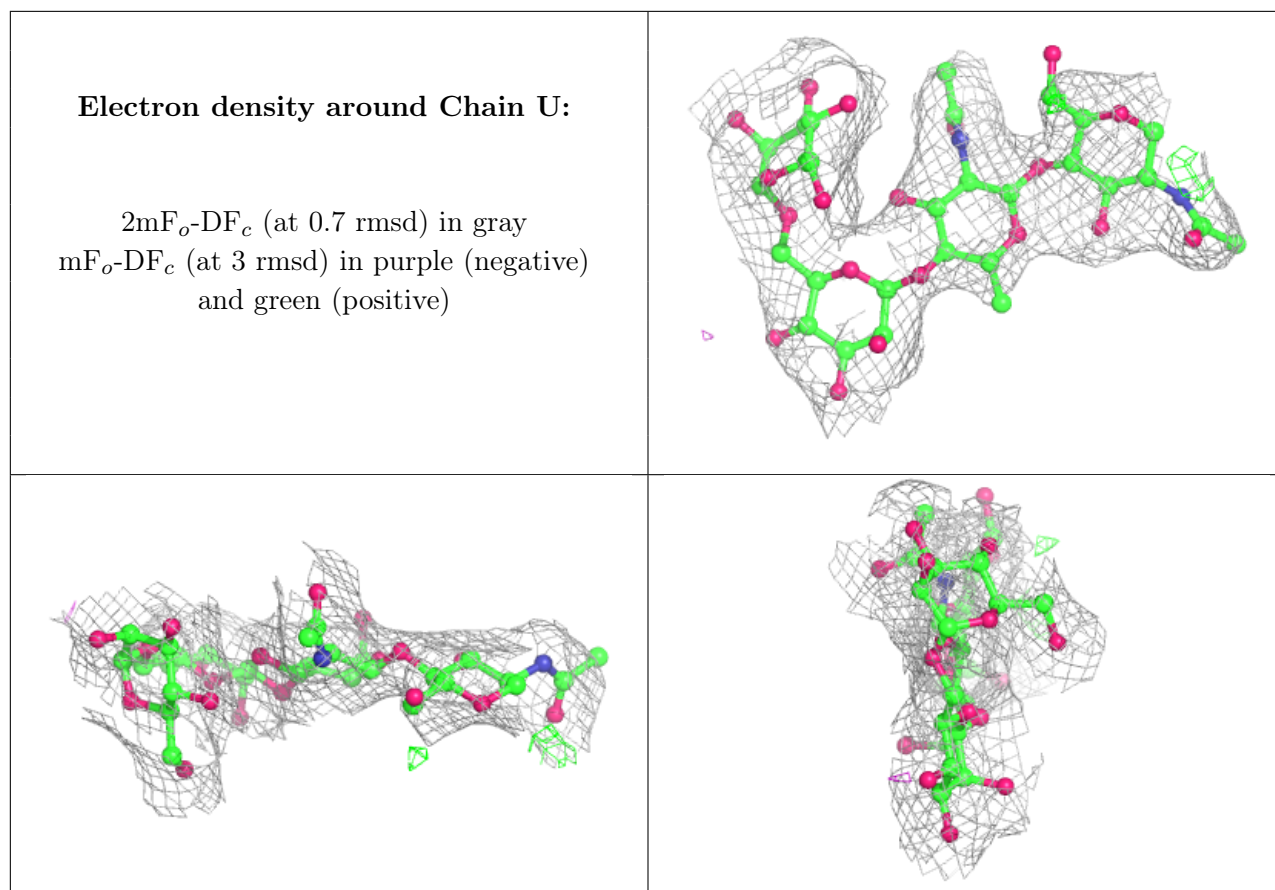
Electron density around Chain T:

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

**Electron density around Chain R:**

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





6.4 Ligands [i](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.