



Full wwPDB X-ray Structure Validation Report ⓘ

Apr 25, 2026 – 07:04 PM EDT

PDB ID : 6A5E / pdb_00006a5e
Title : Crystal structure of plant peptide RALF23 in complex with FER and LLG2
Authors : Xiao, Y.; Chai, J.
Deposited on : 2018-06-23
Resolution : 2.77 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

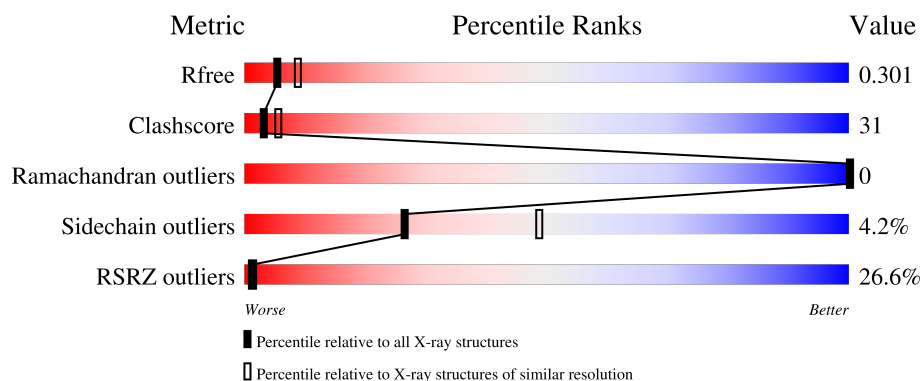
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.77 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	1009 (2.76-2.76)
Clashscore	190562	1044 (2.76-2.76)
Ramachandran outliers	187476	1024 (2.76-2.76)
Sidechain outliers	187428	1024 (2.76-2.76)
RSRZ outliers	180081	1009 (2.76-2.76)

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	396	26% 50% 41% 5%
1	B	396	32% 50% 40% 5%
2	C	84	10% 58% 38% .
2	D	84	7% 60% 37% .
3	E	15	27% 47% 47% 7%

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Mol	Chain	Length	Quality of chain
3	F	15	
4	G	2	
4	H	2	
4	I	2	
4	J	2	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
5	NAG	B	1004	-	-	-	X

2 Entry composition [i](#)

There are 5 unique types of molecules in this entry. The entry contains 7564 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 Receptor-like protein kinase FERONIA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	375	Total	C	N	O	S	0	0	0
			2924	1871	466	577	10			
1	B	375	Total	C	N	O	S	0	0	0
			2924	1871	466	577	10			

- Molecule 2 is a protein called GPI-anchored protein LLG2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	C	84	Total	C	N	O	S	0	0	0
			650	408	105	127	10			
2	D	84	Total	C	N	O	S	0	0	0
			650	408	105	127	10			

- Molecule 3 is a protein called RALF23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	E	15	Total	C	N	O	S	0	0	0
			124	78	25	20	1			
3	F	15	Total	C	N	O	S	0	0	0
			124	78	25	20	1			

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



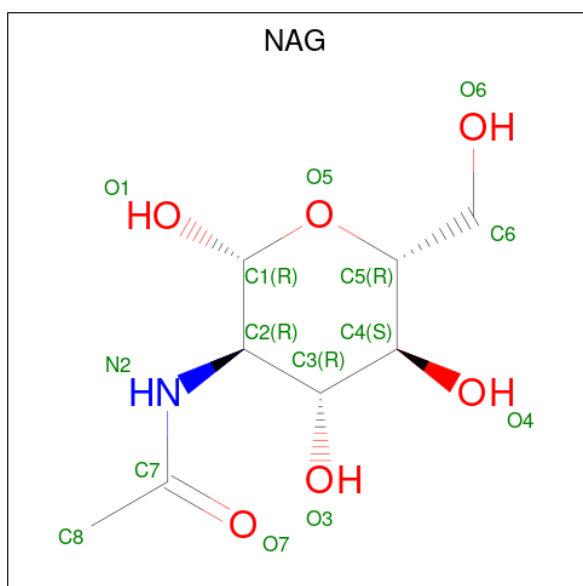
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	G	2	Total	C	N	O		0	0	0
			28	16	2	10				

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
4	H	2	Total	C	N	O	0	0	0
			28	16	2	10			
4	I	2	Total	C	N	O	0	0	0
			28	16	2	10			
4	J	2	Total	C	N	O	0	0	0
			28	16	2	10			

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

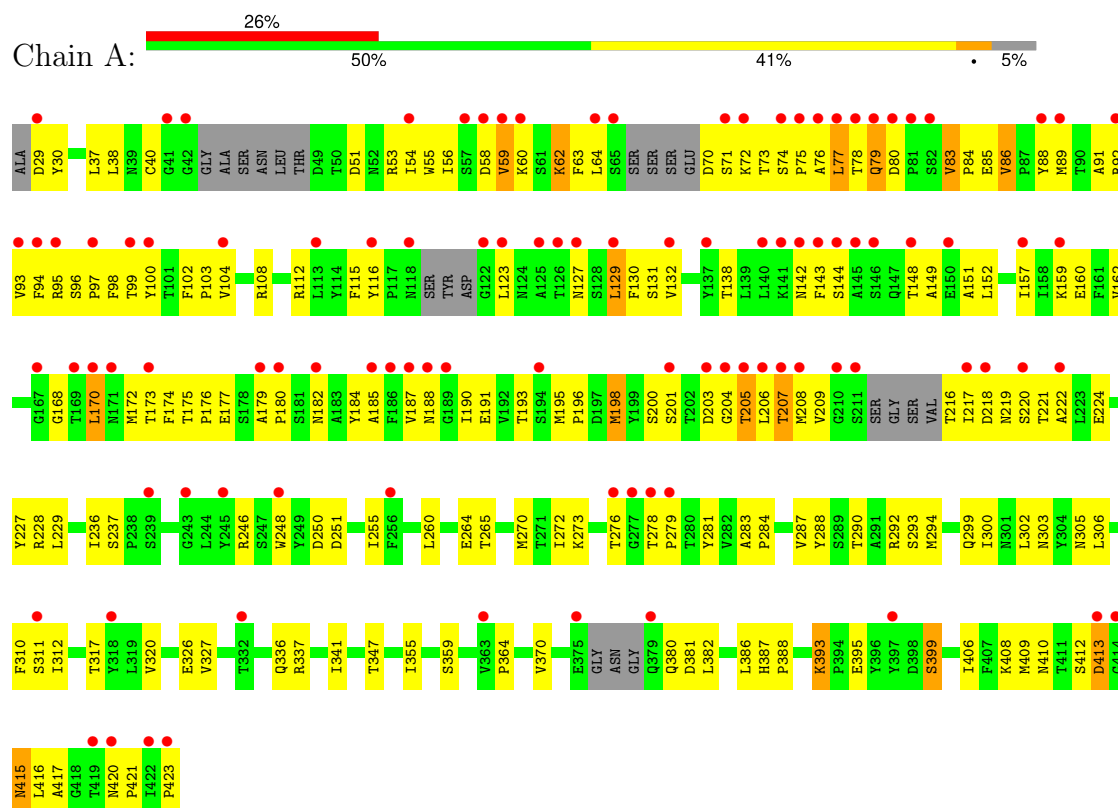


Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
5	A	1	Total	C	N	O	0	0
			14	8	1	5		
5	C	1	Total	C	N	O	0	0
			14	8	1	5		
5	D	1	Total	C	N	O	0	0
			14	8	1	5		
5	B	1	Total	C	N	O	0	0
			14	8	1	5		

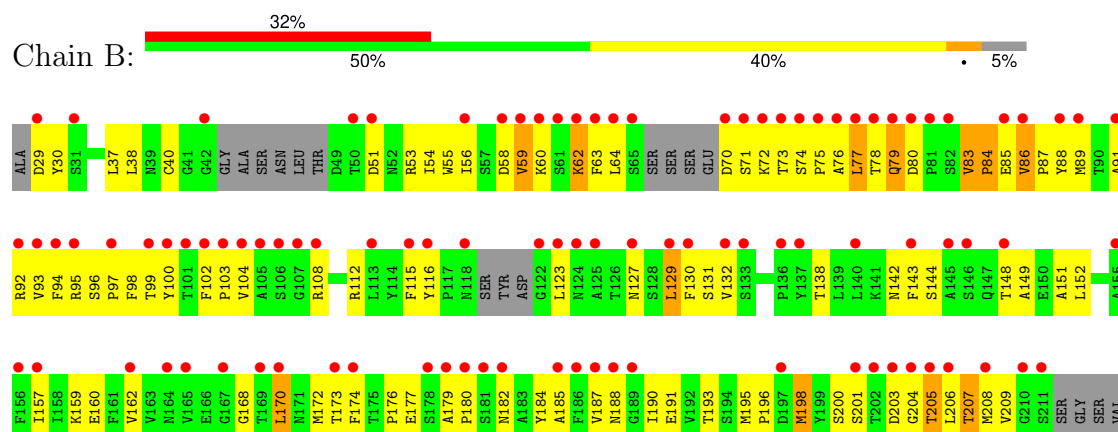
3 Residue-property plots

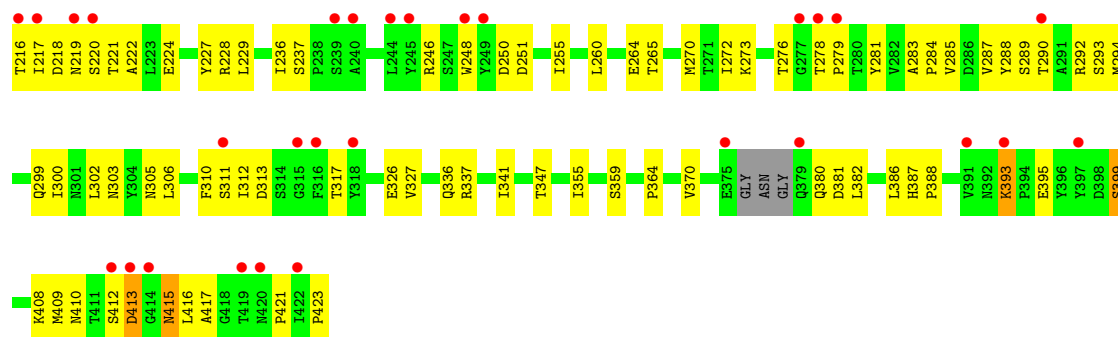
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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: Receptor-like protein kinase FERONIA

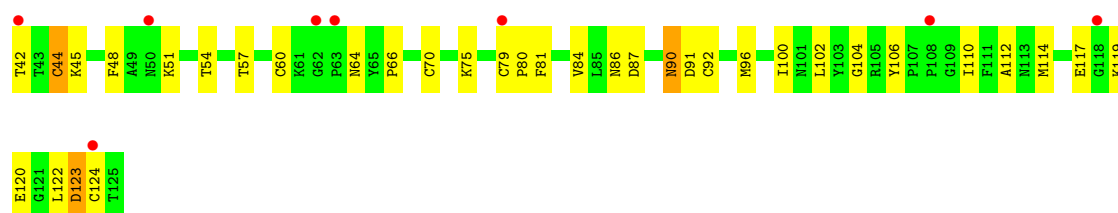


• Molecule 1: Receptor-like protein kinase FERONIA

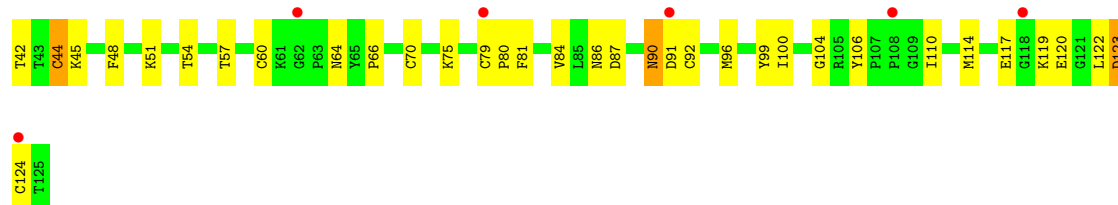




• Molecule 2: GPI-anchored protein LLG2



• Molecule 2: GPI-anchored protein LLG2



• Molecule 3: RALF23



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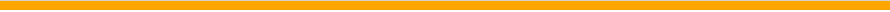


• Molecule 4: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain G:  100%

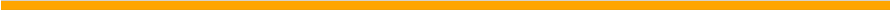
MAG1
MAG2

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

Chain H:  100%

MAG1
MAG2

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

Chain I:  100%

MAG1
MAG2

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

Chain J:  100%

MAG1
MAG2

4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α , β , γ	62.31Å 62.36Å 97.48Å 105.72° 91.30° 108.48°	Depositor
Resolution (Å)	42.61 – 2.77 42.61 – 2.77	Depositor EDS
% Data completeness (in resolution range)	96.5 (42.61-2.77) 96.5 (42.61-2.77)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.10	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.17 (at 2.77Å)	Xtriage
Refinement program	PHENIX (1.13_2998: ???)	Depositor
R, R_{free}	0.233 , 0.285 0.266 , 0.301	Depositor DCC
R_{free} test set	1674 reflections (4.92%)	wwPDB-VP
Wilson B-factor (Å ²)	58.1	Xtriage
Anisotropy	0.307	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.32 , 66.6	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.89	EDS
Total number of atoms	7564	wwPDB-VP
Average B, all atoms (Å ²)	70.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 14.27% 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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: NAG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.96	3/3002 (0.1%)	0.99	19/4106 (0.5%)
1	B	0.96	3/3002 (0.1%)	0.99	19/4106 (0.5%)
2	C	1.01	3/665 (0.5%)	1.05	6/898 (0.7%)
2	D	1.01	3/665 (0.5%)	1.05	6/898 (0.7%)
3	E	0.71	0/126	1.02	1/169 (0.6%)
3	F	0.71	0/126	1.01	1/169 (0.6%)
All	All	0.96	12/7586 (0.2%)	1.00	52/10346 (0.5%)

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	92	CYS	CB-SG	-9.25	1.50	1.81
2	D	92	CYS	CB-SG	-9.25	1.50	1.81
2	D	44	CYS	CB-SG	-8.39	1.53	1.81
2	C	44	CYS	CB-SG	-8.38	1.53	1.81
1	A	393	LYS	C-O	-7.45	1.20	1.23
1	B	393	LYS	C-O	-7.36	1.20	1.23
1	B	387	HIS	CG-ND1	-6.20	1.31	1.38
1	A	387	HIS	CG-ND1	-6.15	1.31	1.38
2	D	44	CYS	C-N	-6.08	1.25	1.33
2	C	44	CYS	C-N	-6.05	1.25	1.33
1	B	387	HIS	CD2-NE2	-5.79	1.31	1.37
1	A	387	HIS	CD2-NE2	-5.77	1.31	1.37

All (52) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	92	CYS	CA-CB-SG	12.62	143.42	114.40
2	C	92	CYS	CA-CB-SG	12.59	143.36	114.40
2	C	92	CYS	N-CA-C	9.85	121.77	111.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	92	CYS	N-CA-C	9.83	121.76	111.14
2	C	123	ASP	N-CA-C	7.89	119.51	111.07
2	D	123	ASP	N-CA-C	7.88	119.50	111.07
1	A	415	ASN	N-CA-C	7.87	121.65	110.23
1	B	415	ASN	N-CA-C	7.87	121.64	110.23
1	A	59	VAL	N-CA-C	7.81	117.92	110.42
1	B	59	VAL	N-CA-C	7.79	117.89	110.42
1	B	198	MET	N-CA-C	7.44	119.47	111.36
1	A	198	MET	N-CA-C	7.38	119.40	111.36
1	A	217	ILE	N-CA-C	6.94	118.12	108.12
1	B	217	ILE	N-CA-C	6.92	118.09	108.12
1	A	413	ASP	N-CA-C	-6.27	98.06	108.34
1	B	413	ASP	N-CA-C	-6.26	98.07	108.34
1	A	204	GLY	N-CA-C	6.15	120.56	110.97
1	A	93	VAL	N-CA-C	6.13	116.75	108.17
1	B	93	VAL	N-CA-C	6.13	116.75	108.17
1	B	204	GLY	N-CA-C	6.13	120.53	110.97
1	B	306	LEU	N-CA-C	-6.11	99.24	108.96
1	A	306	LEU	N-CA-C	-6.10	99.25	108.96
1	A	347	THR	N-CA-C	6.10	118.58	109.25
1	B	347	THR	N-CA-C	6.09	118.57	109.25
1	B	62	LYS	N-CA-C	-5.90	105.18	112.38
1	A	62	LYS	N-CA-C	-5.89	105.19	112.38
2	D	90	ASN	N-CA-C	5.83	118.23	110.53
2	C	90	ASN	N-CA-C	5.81	118.20	110.53
1	B	74	SER	CA-C-N	-5.71	114.71	120.31
1	B	74	SER	C-N-CA	-5.71	114.71	120.31
1	A	74	SER	CA-C-N	-5.70	114.72	120.31
1	A	74	SER	C-N-CA	-5.70	114.72	120.31
1	A	272	ILE	CB-CA-C	-5.63	105.15	111.23
1	B	272	ILE	CB-CA-C	-5.62	105.16	111.23
2	D	44	CYS	CA-C-N	5.60	128.06	120.44
2	D	44	CYS	C-N-CA	5.60	128.06	120.44
2	C	44	CYS	CA-C-N	5.56	128.00	120.44
2	C	44	CYS	C-N-CA	5.56	128.00	120.44
1	A	413	ASP	CB-CA-C	5.42	118.81	110.14
1	B	413	ASP	CB-CA-C	5.40	118.78	110.14
1	A	416	LEU	N-CA-C	-5.40	105.33	112.94
1	B	416	LEU	N-CA-C	-5.39	105.33	112.94
1	B	83	VAL	C-N-CD	-5.39	102.90	125.00
1	A	83	VAL	C-N-CD	-5.38	102.92	125.00
3	F	16	ILE	N-CA-C	5.38	114.22	108.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	E	16	ILE	N-CA-C	5.36	114.21	108.95
1	B	207	THR	N-CA-C	5.33	117.59	108.90
1	A	207	THR	N-CA-C	5.32	117.58	108.90
1	B	59	VAL	CB-CA-C	-5.12	105.42	111.97
1	A	88	TYR	N-CA-C	5.12	116.86	111.28
1	B	88	TYR	N-CA-C	5.08	116.82	111.28
1	A	59	VAL	CB-CA-C	-5.08	105.47	111.97

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	2924	0	2793	200	0
1	B	2924	0	2793	198	0
2	C	650	0	606	31	0
2	D	650	0	606	29	0
3	E	124	0	127	11	0
3	F	124	0	127	6	0
4	G	28	0	25	2	0
4	H	28	0	25	1	0
4	I	28	0	25	1	0
4	J	28	0	25	2	0
5	A	14	0	13	3	0
5	B	14	0	13	3	0
5	C	14	0	13	0	0
5	D	14	0	13	0	0
All	All	7564	0	7204	456	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 31.

All (456) 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:B:305:ASN:HD21	4:J:1:NAG:C1	1.07	1.60
1:A:305:ASN:HD21	4:G:1:NAG:C1	1.07	1.58
1:A:123:LEU:HD23	1:A:184:TYR:CZ	1.53	1.43
1:B:123:LEU:HD23	1:B:184:TYR:CZ	1.53	1.40
1:A:222:ALA:H	1:A:410:ASN:ND2	1.18	1.38
1:B:222:ALA:H	1:B:410:ASN:ND2	1.18	1.37
1:B:305:ASN:ND2	4:J:1:NAG:C1	1.91	1.34
1:A:305:ASN:ND2	4:G:1:NAG:C1	1.91	1.33
1:A:123:LEU:CD2	1:A:184:TYR:CE1	2.15	1.30
1:B:123:LEU:CD2	1:B:184:TYR:CE1	2.15	1.29
1:B:71:SER:OG	1:B:92:ARG:NH1	1.70	1.24
1:A:71:SER:OG	1:A:92:ARG:NH1	1.70	1.23
1:A:123:LEU:CD2	1:A:184:TYR:CZ	2.23	1.21
1:A:123:LEU:HD21	1:A:184:TYR:CE1	1.76	1.20
1:B:123:LEU:CD2	1:B:184:TYR:CZ	2.23	1.20
1:B:221:THR:HG22	1:B:410:ASN:ND2	1.60	1.17
1:A:221:THR:HG22	1:A:410:ASN:ND2	1.60	1.16
1:B:55:TRP:O	1:B:56:ILE:HD13	1.46	1.15
1:B:123:LEU:HD21	1:B:184:TYR:CE1	1.77	1.15
1:B:123:LEU:HD21	1:B:184:TYR:CD1	1.82	1.14
1:A:55:TRP:O	1:A:56:ILE:HD13	1.46	1.13
1:A:123:LEU:HD21	1:A:184:TYR:CD1	1.82	1.13
1:A:127:ASN:O	1:A:184:TYR:CE1	2.03	1.12
1:B:127:ASN:O	1:B:184:TYR:CE1	2.03	1.11
1:A:72:LYS:HG3	1:A:95:ARG:NE	1.62	1.11
1:B:174:PHE:CE2	1:B:187:VAL:HG11	1.87	1.10
1:B:222:ALA:N	1:B:410:ASN:ND2	1.98	1.10
1:A:174:PHE:CE2	1:A:187:VAL:CG1	2.33	1.10
1:B:174:PHE:CE2	1:B:187:VAL:CG1	2.33	1.10
1:A:222:ALA:N	1:A:410:ASN:ND2	1.98	1.10
1:A:174:PHE:CE2	1:A:187:VAL:HG11	1.87	1.09
1:B:127:ASN:O	1:B:184:TYR:HE1	1.31	1.09
1:A:127:ASN:O	1:A:184:TYR:HE1	1.31	1.08
1:B:72:LYS:HG3	1:B:95:ARG:NE	1.62	1.07
1:A:123:LEU:HD23	1:A:184:TYR:CE1	1.85	1.06
1:B:123:LEU:HD23	1:B:184:TYR:CE1	1.85	1.05
1:B:203:ASP:OD1	1:B:206:LEU:HB2	1.62	0.99
1:B:222:ALA:H	1:B:410:ASN:HD22	0.99	0.98
1:A:203:ASP:OD1	1:A:206:LEU:HB2	1.62	0.98
1:B:174:PHE:HE2	1:B:187:VAL:CG1	1.78	0.96
1:A:94:PHE:CE2	1:A:98:PHE:CG	2.54	0.95
1:B:94:PHE:CE2	1:B:98:PHE:CG	2.54	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:174:PHE:HE2	1:A:187:VAL:CG1	1.78	0.94
1:A:222:ALA:N	1:A:410:ASN:HD22	1.59	0.92
1:B:102:PHE:HD1	1:B:170:LEU:HD11	1.35	0.91
1:A:102:PHE:HD1	1:A:170:LEU:HD11	1.35	0.91
1:B:222:ALA:N	1:B:410:ASN:HD22	1.59	0.90
1:B:129:LEU:HD21	1:B:142:ASN:OD1	1.72	0.90
1:A:221:THR:CG2	1:A:410:ASN:ND2	2.36	0.88
1:B:221:THR:CG2	1:B:410:ASN:ND2	2.36	0.88
1:A:222:ALA:H	1:A:410:ASN:HD22	0.99	0.88
1:A:129:LEU:HD21	1:A:142:ASN:OD1	1.72	0.88
1:A:123:LEU:CD2	1:A:184:TYR:CD1	2.49	0.87
1:B:203:ASP:OD1	1:B:206:LEU:CB	2.22	0.87
1:A:203:ASP:OD1	1:A:206:LEU:CB	2.22	0.86
3:E:4:ARG:HG3	3:E:4:ARG:HH11	1.41	0.86
2:D:119:LYS:NZ	1:B:381:ASP:OD2	2.08	0.85
1:B:94:PHE:CD2	1:B:98:PHE:HB2	2.12	0.85
1:A:381:ASP:OD2	2:C:119:LYS:NZ	2.09	0.85
1:A:94:PHE:CD2	1:A:98:PHE:HB2	2.12	0.85
1:B:123:LEU:CD2	1:B:184:TYR:CD1	2.49	0.84
1:A:94:PHE:HE2	1:A:98:PHE:CG	1.95	0.84
1:B:94:PHE:HE2	1:B:98:PHE:CG	1.94	0.84
2:D:84:VAL:O	2:D:90:ASN:ND2	2.10	0.84
1:B:294:MET:SD	1:B:399:SER:OG	2.36	0.84
1:A:100:TYR:HB2	1:A:172:MET:HB3	1.60	0.84
1:A:116:TYR:HB3	1:A:188:ASN:HD21	1.43	0.84
2:C:84:VAL:O	2:C:90:ASN:ND2	2.10	0.84
1:A:294:MET:SD	1:A:399:SER:OG	2.36	0.83
1:B:100:TYR:HB2	1:B:172:MET:HB3	1.60	0.83
1:B:71:SER:CB	1:B:92:ARG:HH11	1.92	0.82
1:A:71:SER:CB	1:A:92:ARG:HH11	1.91	0.82
1:B:116:TYR:HB3	1:B:188:ASN:HD21	1.43	0.82
1:B:174:PHE:CZ	1:B:187:VAL:HG11	2.15	0.82
1:A:123:LEU:CD2	1:A:184:TYR:CE2	2.63	0.81
1:A:174:PHE:CZ	1:A:187:VAL:HG11	2.15	0.81
1:B:222:ALA:H	1:B:410:ASN:HD21	1.25	0.81
1:B:123:LEU:CD2	1:B:184:TYR:CE2	2.63	0.81
1:B:102:PHE:CD1	1:B:170:LEU:HD11	2.18	0.79
1:B:116:TYR:HB3	1:B:188:ASN:ND2	1.98	0.79
1:A:116:TYR:HB3	1:A:188:ASN:ND2	1.98	0.78
1:A:72:LYS:HG3	1:A:95:ARG:HE	1.45	0.78
1:B:72:LYS:HG3	1:B:95:ARG:HE	1.45	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:222:ALA:H	1:A:410:ASN:HD21	1.25	0.77
1:A:85:GLU:HA	1:A:89:MET:HG2	1.65	0.77
1:B:85:GLU:HA	1:B:89:MET:HG2	1.65	0.77
1:A:102:PHE:CD1	1:A:170:LEU:HD11	2.18	0.77
1:A:412:SER:OG	1:A:413:ASP:N	2.14	0.77
1:A:94:PHE:CD2	1:A:98:PHE:CB	2.68	0.76
1:B:79:GLN:HA	1:B:89:MET:HE1	1.68	0.76
1:A:104:VAL:O	1:A:168:GLY:HA2	1.86	0.76
1:B:130:PHE:HA	1:B:177:GLU:HG2	1.68	0.76
1:B:94:PHE:CD2	1:B:98:PHE:CB	2.68	0.75
1:A:174:PHE:CE2	1:A:187:VAL:HG13	2.20	0.75
1:B:174:PHE:CE2	1:B:187:VAL:HG13	2.20	0.75
1:B:104:VAL:O	1:B:168:GLY:HA2	1.86	0.75
1:A:79:GLN:HA	1:A:89:MET:HE1	1.68	0.74
1:A:130:PHE:HA	1:A:177:GLU:HG2	1.67	0.74
3:F:4:ARG:O	2:D:123:ASP:O	2.05	0.74
1:A:72:LYS:CG	1:A:95:ARG:NE	2.39	0.73
3:E:4:ARG:HG3	3:E:4:ARG:NH1	1.99	0.73
1:B:72:LYS:CG	1:B:95:ARG:NE	2.39	0.71
1:B:412:SER:OG	1:B:413:ASP:N	2.14	0.71
1:A:162:VAL:HG13	1:A:195:MET:HE1	1.73	0.71
1:A:221:THR:CG2	1:A:410:ASN:HD21	2.03	0.71
3:F:5:TYR:CD1	2:D:123:ASP:HA	2.25	0.71
2:C:120:GLU:H	2:C:120:GLU:CD	1.99	0.70
1:A:299:GLN:HA	1:A:302:LEU:HD12	1.74	0.70
1:A:172:MET:HE3	1:A:190:ILE:HD13	1.74	0.70
1:A:55:TRP:C	1:A:56:ILE:HD13	2.15	0.70
1:A:170:LEU:O	1:A:170:LEU:HD12	1.91	0.70
1:B:55:TRP:C	1:B:56:ILE:HD13	2.15	0.70
1:A:221:THR:HG22	1:A:410:ASN:HD21	1.57	0.70
1:B:170:LEU:HD12	1:B:170:LEU:O	1.91	0.70
2:C:86:ASN:OD1	3:E:7:SER:OG	2.01	0.70
1:B:299:GLN:HA	1:B:302:LEU:HD12	1.74	0.70
2:D:120:GLU:H	2:D:120:GLU:CD	1.99	0.69
2:C:123:ASP:O	3:E:4:ARG:O	2.11	0.69
1:B:162:VAL:HG13	1:B:195:MET:HE1	1.73	0.69
1:B:172:MET:HE3	1:B:190:ILE:HD13	1.74	0.69
1:A:123:LEU:HD22	1:A:184:TYR:CE2	2.29	0.68
1:B:123:LEU:HD22	1:B:184:TYR:CE2	2.29	0.68
1:A:54:ILE:HD12	1:A:54:ILE:O	1.93	0.68
1:A:77:LEU:H	1:A:77:LEU:CD1	2.07	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:221:THR:CG2	1:B:410:ASN:HD21	2.03	0.68
1:A:200:SER:OG	1:A:218:ASP:O	2.11	0.68
1:B:54:ILE:HD12	1:B:54:ILE:O	1.93	0.68
1:A:123:LEU:HD22	1:A:184:TYR:CD2	2.30	0.67
1:B:62:LYS:HE2	1:B:63:PHE:CZ	2.30	0.67
1:B:77:LEU:H	1:B:77:LEU:CD1	2.07	0.67
1:B:200:SER:OG	1:B:218:ASP:O	2.12	0.67
1:B:123:LEU:HD22	1:B:184:TYR:CD2	2.30	0.67
1:A:85:GLU:HG3	1:A:89:MET:HB2	1.75	0.66
1:A:62:LYS:HE2	1:A:63:PHE:CZ	2.30	0.66
1:B:94:PHE:CE2	1:B:98:PHE:CD2	2.83	0.66
1:B:59:VAL:HG13	1:B:60:LYS:N	2.10	0.66
1:B:94:PHE:HE2	1:B:98:PHE:CD2	2.12	0.66
1:A:94:PHE:HE2	1:A:98:PHE:CD2	2.13	0.66
1:A:59:VAL:HG13	1:A:60:LYS:N	2.10	0.65
1:B:85:GLU:HG3	1:B:89:MET:HB2	1.75	0.65
1:B:317:THR:OG1	1:B:409:MET:HE3	1.97	0.65
2:C:117:GLU:OE2	2:C:123:ASP:HB2	1.97	0.64
1:A:94:PHE:CE2	1:A:98:PHE:CD2	2.83	0.64
2:D:120:GLU:OE1	2:D:120:GLU:N	2.21	0.64
2:D:117:GLU:OE2	2:D:123:ASP:HB2	1.97	0.64
1:B:108:ARG:HB3	1:B:195:MET:HE3	1.80	0.64
1:A:317:THR:OG1	1:A:409:MET:HE3	1.97	0.64
1:A:108:ARG:HB3	1:A:195:MET:HE3	1.80	0.63
2:C:120:GLU:OE1	2:C:120:GLU:N	2.21	0.63
1:A:123:LEU:HD23	1:A:184:TYR:CE2	2.25	0.63
1:B:224:GLU:OE1	1:B:408:LYS:HE3	1.99	0.63
1:A:224:GLU:OE1	1:A:408:LYS:HE3	1.99	0.62
1:B:265:THR:HG22	1:B:290:THR:HG22	1.82	0.62
1:A:176:PRO:HB3	1:A:184:TYR:HA	1.82	0.61
1:B:176:PRO:HB3	1:B:184:TYR:HA	1.82	0.61
1:A:71:SER:HG	1:A:92:ARG:NH1	1.97	0.61
1:A:206:LEU:C	1:A:206:LEU:HD23	2.26	0.61
2:C:54:THR:HA	2:C:57:THR:OG1	2.01	0.61
1:B:206:LEU:C	1:B:206:LEU:HD23	2.26	0.61
1:B:209:VAL:HG12	1:B:370:VAL:HG12	1.82	0.61
1:A:94:PHE:CD2	1:A:98:PHE:CG	2.88	0.61
3:E:4:ARG:HH11	3:E:4:ARG:CG	2.14	0.61
2:D:54:THR:HA	2:D:57:THR:OG1	2.01	0.60
1:A:94:PHE:HD2	1:A:98:PHE:HB2	1.66	0.60
1:A:209:VAL:HG12	1:A:370:VAL:HG12	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:205:THR:O	1:B:205:THR:HG23	2.01	0.60
1:A:127:ASN:O	1:A:184:TYR:CD1	2.55	0.60
1:B:94:PHE:CD2	1:B:98:PHE:CG	2.88	0.60
1:A:265:THR:HG22	1:A:290:THR:HG22	1.82	0.60
1:B:94:PHE:HD2	1:B:98:PHE:HB2	1.66	0.60
1:B:127:ASN:O	1:B:184:TYR:CD1	2.55	0.59
1:A:187:VAL:O	1:A:187:VAL:HG23	2.02	0.59
2:C:124:CYS:SG	3:E:6:ILE:HG13	2.42	0.59
1:A:100:TYR:N	1:A:172:MET:O	2.27	0.59
1:A:300:ILE:HG23	2:C:114:MET:HE3	1.83	0.59
1:B:236:ILE:HB	1:B:248:TRP:HB2	1.85	0.59
1:A:159:LYS:NZ	1:A:224:GLU:OE2	2.20	0.59
1:B:102:PHE:H	1:B:170:LEU:CD1	2.16	0.59
1:A:102:PHE:N	1:A:170:LEU:HD11	2.18	0.58
1:A:205:THR:HG23	1:A:205:THR:O	2.01	0.58
1:B:159:LYS:NZ	1:B:224:GLU:OE2	2.20	0.58
1:B:94:PHE:CE2	1:B:98:PHE:CB	2.87	0.58
1:A:94:PHE:CE2	1:A:98:PHE:CB	2.87	0.58
1:A:112:ARG:HD3	1:A:160:GLU:HG3	1.85	0.58
1:A:123:LEU:CD2	1:A:184:TYR:CG	2.87	0.58
1:B:102:PHE:N	1:B:170:LEU:HD11	2.18	0.58
1:A:102:PHE:H	1:A:170:LEU:CD1	2.16	0.57
1:B:123:LEU:CD2	1:B:184:TYR:CG	2.87	0.57
1:B:187:VAL:HG23	1:B:187:VAL:O	2.02	0.57
2:D:110:ILE:O	2:D:114:MET:HG2	2.04	0.57
1:A:236:ILE:HB	1:A:248:TRP:HB2	1.85	0.57
1:B:142:ASN:OD1	5:B:1004:NAG:O5	2.23	0.57
1:B:222:ALA:N	1:B:410:ASN:HD21	1.90	0.57
1:B:112:ARG:HD3	1:B:160:GLU:HG3	1.85	0.57
2:C:110:ILE:O	2:C:114:MET:HG2	2.04	0.57
1:A:209:VAL:HG12	1:A:370:VAL:CG1	2.35	0.57
1:B:71:SER:CB	1:B:92:ARG:NH1	2.56	0.57
1:B:62:LYS:HE2	1:B:63:PHE:CE1	2.41	0.56
1:A:80:ASP:HB3	1:A:83:VAL:HG23	1.87	0.56
1:B:209:VAL:HG12	1:B:370:VAL:CG1	2.35	0.56
1:A:142:ASN:OD1	5:A:1004:NAG:O5	2.23	0.56
1:A:71:SER:CB	1:A:92:ARG:NH1	2.56	0.56
1:A:221:THR:CA	1:A:410:ASN:HD21	2.19	0.55
1:B:115:PHE:HE1	1:B:187:VAL:HG12	1.71	0.55
1:B:221:THR:CA	1:B:410:ASN:HD21	2.20	0.55
1:A:130:PHE:HE1	1:A:132:VAL:HG23	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:80:ASP:HB3	1:B:83:VAL:HG23	1.87	0.55
3:F:6:ILE:HG13	2:D:124:CYS:SG	2.46	0.55
1:B:130:PHE:HE1	1:B:132:VAL:HG23	1.71	0.55
1:A:144:SER:O	1:A:148:THR:HG23	2.07	0.55
1:B:203:ASP:OD1	1:B:206:LEU:HB3	2.05	0.55
2:C:64:ASN:O	2:C:66:PRO:HD3	2.07	0.55
1:A:130:PHE:CD1	1:A:130:PHE:C	2.86	0.54
1:A:38:LEU:HD23	1:A:38:LEU:C	2.32	0.54
1:B:38:LEU:C	1:B:38:LEU:HD23	2.32	0.54
1:B:129:LEU:HD11	5:B:1004:NAG:O6	2.07	0.54
1:B:130:PHE:CD1	1:B:130:PHE:C	2.86	0.54
1:A:129:LEU:HD11	5:A:1004:NAG:O6	2.07	0.54
1:B:96:SER:HB2	1:B:97:PRO:CD	2.37	0.54
1:A:62:LYS:HE2	1:A:63:PHE:CE1	2.41	0.54
2:C:123:ASP:HA	3:E:5:TYR:CD1	2.42	0.54
1:B:144:SER:O	1:B:148:THR:HG23	2.07	0.54
1:A:115:PHE:HE1	1:A:187:VAL:HG12	1.71	0.54
1:B:100:TYR:N	1:B:172:MET:O	2.27	0.54
1:A:40:CYS:HA	1:A:58:ASP:CG	2.32	0.54
1:A:51:ASP:OD2	1:A:237:SER:HB2	2.08	0.54
1:B:170:LEU:HD12	1:B:170:LEU:C	2.33	0.54
1:A:222:ALA:N	1:A:410:ASN:HD21	1.90	0.54
2:D:64:ASN:O	2:D:66:PRO:HD3	2.07	0.54
1:A:96:SER:HB2	1:A:97:PRO:CD	2.37	0.53
2:D:104:GLY:HA3	2:D:106:TYR:CE2	2.44	0.53
1:B:40:CYS:HA	1:B:58:ASP:CG	2.32	0.53
1:B:59:VAL:O	1:B:60:LYS:HD3	2.08	0.53
1:A:77:LEU:HD12	1:A:77:LEU:N	2.23	0.53
1:A:203:ASP:OD1	1:A:206:LEU:HB3	2.05	0.53
1:A:279:PRO:HB3	1:A:281:TYR:CE2	2.44	0.53
1:B:77:LEU:N	1:B:77:LEU:HD12	2.23	0.53
1:A:179:ALA:HB3	1:A:180:PRO:HD3	1.91	0.53
1:A:59:VAL:O	1:A:60:LYS:HD3	2.08	0.53
1:B:77:LEU:CD1	1:B:77:LEU:N	2.72	0.53
1:B:51:ASP:OD2	1:B:237:SER:HB2	2.08	0.53
1:B:96:SER:HB2	1:B:97:PRO:HD2	1.90	0.53
1:A:77:LEU:CD1	1:A:77:LEU:N	2.72	0.53
1:A:96:SER:HB2	1:A:97:PRO:HD2	1.90	0.53
2:C:104:GLY:HA3	2:C:106:TYR:CE2	2.43	0.53
1:A:170:LEU:HD12	1:A:170:LEU:C	2.33	0.53
1:B:143:PHE:HE1	1:B:148:THR:HG21	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:179:ALA:HB3	1:B:180:PRO:HD3	1.91	0.52
1:B:279:PRO:HB3	1:B:281:TYR:CE2	2.43	0.52
1:A:79:GLN:HB3	1:A:89:MET:CE	2.40	0.52
1:B:54:ILE:HD12	1:B:54:ILE:C	2.35	0.52
1:A:326:GLU:OE2	1:A:337:ARG:NH2	2.31	0.52
2:D:114:MET:HE2	1:B:303:ASN:HB2	1.92	0.52
4:H:1:NAG:O4	4:H:2:NAG:O7	2.28	0.52
1:A:77:LEU:H	1:A:77:LEU:HD12	1.75	0.51
2:D:114:MET:HE3	1:B:300:ILE:HG23	1.92	0.51
1:B:326:GLU:OE2	1:B:337:ARG:NH2	2.31	0.51
1:A:415:ASN:ND2	1:A:417:ALA:O	2.41	0.51
1:A:54:ILE:HD12	1:A:54:ILE:C	2.34	0.51
1:A:143:PHE:HE1	1:A:148:THR:HG21	1.74	0.51
1:B:79:GLN:HB3	1:B:89:MET:CE	2.40	0.51
1:A:180:PRO:HB2	1:A:182:ASN:OD1	2.10	0.51
1:A:219:ASN:OD1	1:A:219:ASN:N	2.42	0.51
4:I:1:NAG:O4	4:I:2:NAG:O7	2.28	0.51
1:B:180:PRO:HB2	1:B:182:ASN:OD1	2.10	0.51
1:A:103:PRO:HA	1:A:168:GLY:O	2.10	0.51
1:B:59:VAL:CG1	1:B:60:LYS:N	2.74	0.51
1:B:123:LEU:HD23	1:B:184:TYR:OH	2.05	0.51
1:B:227:TYR:CE2	1:B:310:PHE:HB3	2.46	0.51
1:A:138:THR:HG23	1:A:415:ASN:HA	1.93	0.51
1:B:264:GLU:OE1	1:B:293:SER:OG	2.24	0.51
1:A:294:MET:SD	1:A:388:PRO:HD3	2.51	0.50
1:B:86:VAL:HG13	1:B:86:VAL:O	2.11	0.50
1:B:219:ASN:N	1:B:219:ASN:OD1	2.42	0.50
1:B:294:MET:SD	1:B:388:PRO:HD3	2.51	0.50
1:A:59:VAL:CG1	1:A:60:LYS:N	2.73	0.50
1:B:103:PRO:HA	1:B:168:GLY:O	2.10	0.50
1:A:123:LEU:CD2	1:A:184:TYR:CD2	2.91	0.50
1:A:170:LEU:CD1	1:A:170:LEU:C	2.85	0.50
2:C:122:LEU:O	3:E:5:TYR:HA	2.12	0.50
1:B:138:THR:HG23	1:B:415:ASN:HA	1.93	0.50
3:F:5:TYR:HA	2:D:122:LEU:O	2.11	0.50
1:A:86:VAL:HG13	1:A:86:VAL:O	2.11	0.50
1:A:112:ARG:HA	1:A:159:LYS:O	2.12	0.50
1:B:79:GLN:HB3	1:B:89:MET:HE3	1.94	0.50
1:A:227:TYR:CE2	1:A:310:PHE:HB3	2.46	0.49
1:A:94:PHE:CE2	1:A:98:PHE:CD1	3.00	0.49
1:A:143:PHE:CE1	1:A:148:THR:HG21	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:229:LEU:HD11	1:B:310:PHE:HE1	1.77	0.49
1:B:112:ARG:HA	1:B:159:LYS:O	2.12	0.49
1:A:79:GLN:CA	1:A:89:MET:HE1	2.41	0.49
1:A:229:LEU:HD11	1:A:310:PHE:HE1	1.77	0.49
1:A:191:GLU:OE1	1:A:193:THR:OG1	2.30	0.49
1:A:229:LEU:HD11	1:A:310:PHE:CE1	2.47	0.49
3:F:5:TYR:O	2:D:86:ASN:ND2	2.43	0.49
1:B:170:LEU:CD1	1:B:170:LEU:C	2.85	0.49
1:B:123:LEU:CD2	1:B:184:TYR:CD2	2.91	0.49
1:B:91:ALA:HB2	1:B:188:ASN:OD1	2.13	0.49
1:A:71:SER:HB2	1:A:92:ARG:HG3	1.95	0.49
1:A:79:GLN:HB3	1:A:89:MET:HE3	1.94	0.49
1:A:142:ASN:O	1:A:420:ASN:ND2	2.36	0.49
1:B:317:THR:OG1	1:B:409:MET:CE	2.60	0.49
1:A:415:ASN:CG	1:A:417:ALA:H	2.21	0.48
1:A:37:LEU:HD23	1:A:37:LEU:HA	1.68	0.48
1:B:148:THR:O	1:B:152:LEU:HG	2.13	0.48
1:B:229:LEU:HD11	1:B:310:PHE:CE1	2.47	0.48
1:B:71:SER:HB2	1:B:92:ARG:HG3	1.95	0.48
1:B:143:PHE:CE1	1:B:148:THR:HG21	2.48	0.48
1:B:94:PHE:CE2	1:B:98:PHE:CD1	3.00	0.48
1:B:415:ASN:CG	1:B:417:ALA:H	2.21	0.48
1:A:91:ALA:HB2	1:A:188:ASN:OD1	2.13	0.48
1:A:270:MET:HE1	1:A:327:VAL:HA	1.95	0.48
1:A:317:THR:OG1	1:A:409:MET:CE	2.60	0.48
1:B:102:PHE:HD1	1:B:170:LEU:CD1	2.18	0.48
1:A:148:THR:O	1:A:152:LEU:HG	2.13	0.48
1:B:123:LEU:HD22	1:B:184:TYR:CG	2.49	0.48
1:B:80:ASP:HB3	1:B:83:VAL:CG2	2.44	0.47
1:B:77:LEU:H	1:B:77:LEU:HD12	1.75	0.47
1:B:270:MET:HE1	1:B:327:VAL:HA	1.95	0.47
1:B:355:ILE:O	1:B:359:SER:N	2.33	0.47
1:A:85:GLU:HG3	1:A:89:MET:CB	2.43	0.47
1:A:216:THR:HG21	1:A:370:VAL:HG21	1.97	0.47
2:C:51:LYS:HE3	2:C:81:PHE:CZ	2.49	0.47
1:B:86:VAL:HA	1:B:87:PRO:HA	1.62	0.47
1:A:303:ASN:HB2	2:C:114:MET:HE2	1.94	0.47
2:D:51:LYS:HE3	2:D:81:PHE:CZ	2.49	0.47
1:B:198:MET:HE3	1:B:198:MET:HB2	1.59	0.47
1:B:255:ILE:HG13	1:B:260:LEU:HD23	1.96	0.47
2:D:48:PHE:HA	2:D:51:LYS:HG3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:102:PHE:HB2	1:B:170:LEU:HD21	1.97	0.47
1:B:216:THR:HG21	1:B:370:VAL:HG21	1.97	0.47
1:A:255:ILE:HG13	1:A:260:LEU:HD23	1.96	0.47
2:C:48:PHE:HA	2:C:51:LYS:HG3	1.97	0.46
1:A:294:MET:CG	1:A:399:SER:OG	2.64	0.46
1:A:58:ASP:OD1	1:A:58:ASP:N	2.31	0.46
1:A:80:ASP:HB3	1:A:83:VAL:CG2	2.45	0.46
1:A:123:LEU:HD23	1:A:184:TYR:OH	2.05	0.46
1:B:76:ALA:N	1:B:89:MET:O	2.48	0.46
1:B:108:ARG:HB3	1:B:195:MET:CE	2.44	0.46
1:B:191:GLU:OE1	1:B:193:THR:OG1	2.30	0.46
1:A:94:PHE:HE2	1:A:98:PHE:CD1	2.32	0.46
2:D:96:MET:O	2:D:100:ILE:HG13	2.16	0.46
1:B:273:LYS:O	1:B:364:PRO:HD2	2.16	0.46
1:B:294:MET:CG	1:B:399:SER:OG	2.64	0.46
1:A:273:LYS:O	1:A:364:PRO:HD2	2.16	0.46
2:C:96:MET:O	2:C:100:ILE:HG13	2.16	0.46
1:B:317:THR:HG1	1:B:409:MET:HE3	1.80	0.46
1:A:102:PHE:HB2	1:A:170:LEU:HD21	1.97	0.46
1:B:94:PHE:HE2	1:B:98:PHE:CD1	2.32	0.46
1:B:283:ALA:HB3	1:B:288:TYR:CE2	2.51	0.46
1:A:51:ASP:O	1:A:53:ARG:HG3	2.16	0.46
1:B:51:ASP:O	1:B:53:ARG:HG3	2.16	0.46
1:A:108:ARG:HB3	1:A:195:MET:CE	2.44	0.45
1:A:58:ASP:O	1:A:64:LEU:HD11	2.16	0.45
1:A:283:ALA:HB3	1:A:288:TYR:CE2	2.51	0.45
1:B:100:TYR:CB	1:B:172:MET:HB3	2.39	0.45
1:A:221:THR:HA	1:A:410:ASN:HD21	1.82	0.45
1:A:264:GLU:OE1	1:A:293:SER:OG	2.24	0.45
1:A:341:ILE:HG12	1:A:386:LEU:HD22	1.99	0.45
1:A:123:LEU:HD22	1:A:184:TYR:CG	2.49	0.45
2:C:112:ALA:HB2	3:E:14:ASN:HB3	1.98	0.45
2:D:79:CYS:HB3	2:D:124:CYS:HB3	1.86	0.45
1:A:148:THR:HG22	1:A:421:PRO:HD2	1.98	0.45
1:A:219:ASN:O	1:A:220:SER:C	2.60	0.45
1:A:393:LYS:HG3	1:A:393:LYS:O	2.17	0.45
1:A:100:TYR:CB	1:A:172:MET:HB3	2.39	0.45
3:E:8:TYR:O	3:E:12:ARG:HG3	2.17	0.45
1:B:129:LEU:CD1	5:B:1004:NAG:O6	2.65	0.45
1:A:149:ALA:HB2	1:A:157:ILE:HD11	1.98	0.45
2:C:86:ASN:ND2	3:E:5:TYR:O	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:120:GLU:CD	2:C:120:GLU:N	2.71	0.45
1:A:129:LEU:CD1	5:A:1004:NAG:O6	2.65	0.45
1:A:130:PHE:CD2	1:A:185:ALA:HA	2.52	0.45
3:F:8:TYR:O	3:F:12:ARG:HG3	2.17	0.45
1:A:251:ASP:CG	1:A:292:ARG:HH21	2.25	0.45
1:B:30:TYR:CE1	1:B:196:PRO:HG3	2.52	0.45
1:B:393:LYS:O	1:B:393:LYS:HG3	2.17	0.45
2:D:114:MET:CE	1:B:303:ASN:HB2	2.46	0.44
1:B:58:ASP:O	1:B:64:LEU:HD11	2.16	0.44
1:B:222:ALA:CA	1:B:410:ASN:HD22	2.29	0.44
1:B:250:ASP:OD1	1:B:251:ASP:N	2.50	0.44
1:A:76:ALA:N	1:A:89:MET:O	2.48	0.44
1:A:250:ASP:OD1	1:A:251:ASP:N	2.50	0.44
1:A:273:LYS:HE2	1:A:273:LYS:HB2	1.88	0.44
1:A:175:THR:O	1:A:175:THR:OG1	2.35	0.44
1:B:221:THR:HA	1:B:410:ASN:HD21	1.82	0.44
1:B:415:ASN:ND2	1:B:417:ALA:O	2.41	0.44
1:B:219:ASN:O	1:B:220:SER:C	2.60	0.44
1:B:341:ILE:HG12	1:B:386:LEU:HD22	1.99	0.44
1:A:102:PHE:HD1	1:A:170:LEU:CD1	2.18	0.44
1:A:130:PHE:HD1	1:A:131:SER:N	2.16	0.44
1:B:149:ALA:HB2	1:B:157:ILE:HD11	1.98	0.44
1:B:251:ASP:CG	1:B:292:ARG:HH21	2.25	0.44
1:A:30:TYR:CE1	1:A:196:PRO:HG3	2.52	0.44
2:D:79:CYS:N	2:D:80:PRO:HD2	2.33	0.44
1:B:29:ASP:HB3	1:B:30:TYR:H	1.69	0.44
1:B:148:THR:HG22	1:B:421:PRO:HD2	1.98	0.44
1:B:313:ASP:OD2	1:B:408:LYS:NZ	2.32	0.44
1:B:85:GLU:HG3	1:B:89:MET:CB	2.44	0.44
1:B:130:PHE:CD2	1:B:185:ALA:HA	2.52	0.44
1:B:37:LEU:HD23	1:B:37:LEU:HA	1.68	0.43
1:B:130:PHE:HD1	1:B:131:SER:N	2.16	0.43
1:B:79:GLN:CA	1:B:89:MET:HE1	2.41	0.43
1:A:151:ALA:HB2	1:A:423:PRO:HG3	2.00	0.43
1:A:393:LYS:C	1:A:393:LYS:HD2	2.44	0.43
1:B:311:SER:HA	1:B:380:GLN:O	2.18	0.43
1:A:311:SER:HA	1:A:380:GLN:O	2.18	0.43
1:B:336:GLN:HG2	1:B:395:GLU:OE1	2.19	0.43
1:A:130:PHE:HE1	1:A:132:VAL:CG2	2.31	0.43
1:A:198:MET:HE3	1:A:198:MET:HB2	1.59	0.43
2:C:60:CYS:CB	2:C:70:CYS:HG	2.25	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:44:CYS:SG	2:D:45:LYS:N	2.88	0.43
1:A:112:ARG:HG2	1:A:160:GLU:HG3	2.01	0.43
2:D:114:MET:HE2	2:D:114:MET:HB3	1.80	0.43
2:C:44:CYS:SG	2:C:45:LYS:N	2.88	0.42
2:D:120:GLU:CD	2:D:120:GLU:N	2.71	0.42
2:C:79:CYS:N	2:C:80:PRO:HD2	2.33	0.42
2:C:114:MET:HE2	2:C:114:MET:HB3	1.80	0.42
1:B:284:PRO:HG2	1:B:287:VAL:HG23	2.02	0.42
1:A:29:ASP:HB3	1:A:30:TYR:H	1.69	0.42
1:A:336:GLN:HG2	1:A:395:GLU:OE1	2.19	0.42
1:B:112:ARG:HG2	1:B:160:GLU:HG3	2.01	0.42
1:A:312:ILE:HD13	1:A:382:LEU:HB2	2.01	0.42
1:B:130:PHE:HE1	1:B:132:VAL:CG2	2.31	0.42
1:B:151:ALA:HB2	1:B:423:PRO:HG3	2.00	0.41
1:B:312:ILE:HD13	1:B:382:LEU:HB2	2.01	0.41
1:A:284:PRO:HG2	1:A:287:VAL:HG23	2.02	0.41
2:C:75:LYS:O	2:C:79:CYS:SG	2.78	0.41
1:B:393:LYS:HD2	1:B:393:LYS:C	2.44	0.41
2:C:60:CYS:SG	2:C:70:CYS:CB	3.08	0.41
1:A:58:ASP:O	1:A:64:LEU:HG	2.20	0.41
1:B:99:THR:HA	1:B:173:THR:HA	2.02	0.41
1:A:99:THR:HA	1:A:173:THR:HA	2.02	0.41
2:D:75:LYS:O	2:D:79:CYS:SG	2.79	0.41
1:B:228:ARG:NH1	1:B:246:ARG:HD2	2.36	0.41
1:B:207:THR:O	1:B:216:THR:N	2.54	0.41
1:A:207:THR:O	1:A:216:THR:N	2.54	0.41
1:A:228:ARG:NH1	1:A:246:ARG:HD2	2.36	0.41
1:B:58:ASP:O	1:B:64:LEU:HG	2.20	0.41
1:B:59:VAL:HG13	1:B:60:LYS:HG2	2.03	0.41
1:B:102:PHE:N	1:B:170:LEU:CD1	2.80	0.41
1:B:221:THR:HG22	1:B:410:ASN:CG	2.37	0.41
1:A:102:PHE:H	1:A:170:LEU:HD12	1.86	0.41
1:A:303:ASN:HB2	2:C:114:MET:CE	2.51	0.41
2:D:60:CYS:SG	2:D:70:CYS:CB	3.08	0.41
1:B:285:VAL:O	1:B:289:SER:OG	2.30	0.41
1:A:58:ASP:O	1:A:64:LEU:CD1	2.69	0.40
1:A:59:VAL:HG13	1:A:60:LYS:HG2	2.03	0.40
2:C:42:THR:O	2:C:91:ASP:HB2	2.21	0.40
2:D:42:THR:O	2:D:91:ASP:HB2	2.21	0.40
1:A:227:TYR:OH	1:A:311:SER:O	2.37	0.40
2:C:102:LEU:HD13	2:D:99:TYR:CE1	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:83:VAL:HA	1:B:84:PRO:HD2	1.93	0.40
1:A:320:VAL:HG22	1:A:406:ILE:HG12	2.03	0.40
1:A:355:ILE:O	1:A:359:SER:N	2.33	0.40
1:B:58:ASP:O	1:B:64:LEU:CD1	2.70	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	363/396 (92%)	348 (96%)	15 (4%)	0	100	100
1	B	363/396 (92%)	348 (96%)	15 (4%)	0	100	100
2	C	82/84 (98%)	77 (94%)	5 (6%)	0	100	100
2	D	82/84 (98%)	77 (94%)	5 (6%)	0	100	100
3	E	13/15 (87%)	12 (92%)	1 (8%)	0	100	100
3	F	13/15 (87%)	12 (92%)	1 (8%)	0	100	100
All	All	916/990 (92%)	874 (95%)	42 (5%)	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	329/344 (96%)	313 (95%)	16 (5%)	22	43
1	B	329/344 (96%)	313 (95%)	16 (5%)	22	43
2	C	72/72 (100%)	71 (99%)	1 (1%)	59	75
2	D	72/72 (100%)	71 (99%)	1 (1%)	59	75
3	E	13/13 (100%)	12 (92%)	1 (8%)	12	22
3	F	13/13 (100%)	13 (100%)	0	100	100
All	All	828/858 (96%)	793 (96%)	35 (4%)	26	49

All (35) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	70	ASP
1	A	73	THR
1	A	75	PRO
1	A	77	LEU
1	A	78	THR
1	A	79	GLN
1	A	84	PRO
1	A	86	VAL
1	A	129	LEU
1	A	170	LEU
1	A	201	SER
1	A	205	THR
1	A	208	MET
1	A	276	THR
1	A	278	THR
1	A	399	SER
2	C	87	ASP
3	E	4	ARG
2	D	87	ASP
1	B	70	ASP
1	B	73	THR
1	B	75	PRO
1	B	77	LEU
1	B	78	THR
1	B	79	GLN
1	B	84	PRO
1	B	86	VAL
1	B	129	LEU
1	B	170	LEU
1	B	201	SER

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Mol	Chain	Res	Type
1	B	205	THR
1	B	208	MET
1	B	276	THR
1	B	278	THR
1	B	399	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (21) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	52	ASN
1	A	164	ASN
1	A	188	ASN
1	A	234	ASN
1	A	303	ASN
1	A	305	ASN
1	A	379	GLN
1	A	387	HIS
1	A	410	ASN
2	C	64	ASN
2	D	64	ASN
1	B	52	ASN
1	B	164	ASN
1	B	188	ASN
1	B	234	ASN
1	B	303	ASN
1	B	305	ASN
1	B	379	GLN
1	B	387	HIS
1	B	389	ASN
1	B	410	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 ⓘ

8 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$
4	NAG	G	1	4	14,14,15	0.34	0	17,19,21	0.62	0
4	NAG	G	2	4	14,14,15	0.47	0	17,19,21	1.19	1 (5%)
4	NAG	H	1	4,1	14,14,15	0.83	0	17,19,21	2.62	5 (29%)
4	NAG	H	2	4	14,14,15	1.00	0	17,19,21	1.95	5 (29%)
4	NAG	I	1	4,1	14,14,15	0.83	0	17,19,21	2.62	5 (29%)
4	NAG	I	2	4	14,14,15	1.00	0	17,19,21	1.95	6 (35%)
4	NAG	J	1	4	14,14,15	0.33	0	17,19,21	0.62	0
4	NAG	J	2	4	14,14,15	0.47	0	17,19,21	1.19	1 (5%)

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	G	1	4	-	0/6/23/26	0/1/1/1
4	NAG	G	2	4	-	2/6/23/26	0/1/1/1
4	NAG	H	1	4,1	-	1/6/23/26	0/1/1/1
4	NAG	H	2	4	-	4/6/23/26	0/1/1/1
4	NAG	I	1	4,1	-	1/6/23/26	0/1/1/1
4	NAG	I	2	4	-	4/6/23/26	0/1/1/1
4	NAG	J	1	4	-	0/6/23/26	0/1/1/1
4	NAG	J	2	4	-	2/6/23/26	0/1/1/1

There are no bond length outliers.

All (23) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	I	1	NAG	C4-C3-C2	-5.59	102.82	111.02
4	H	1	NAG	C4-C3-C2	-5.58	102.84	111.02
4	H	1	NAG	C1-O5-C5	5.52	119.59	112.19
4	I	1	NAG	C1-O5-C5	5.51	119.57	112.19
4	H	1	NAG	O4-C4-C5	5.03	121.72	109.32
4	I	1	NAG	O4-C4-C5	5.03	121.71	109.32
4	G	2	NAG	C1-O5-C5	3.97	117.50	112.19
4	J	2	NAG	C1-O5-C5	3.96	117.49	112.19
4	H	2	NAG	O5-C1-C2	-3.56	105.78	111.29
4	I	2	NAG	O5-C1-C2	-3.55	105.79	111.29
4	H	2	NAG	C4-C3-C2	-3.49	105.91	111.02
4	I	2	NAG	C4-C3-C2	-3.48	105.91	111.02
4	H	1	NAG	C3-C4-C5	-3.35	104.15	110.23
4	I	1	NAG	C3-C4-C5	-3.35	104.16	110.23
4	I	1	NAG	O4-C4-C3	3.18	117.87	110.38
4	H	1	NAG	O4-C4-C3	3.17	117.85	110.38
4	I	2	NAG	O6-C6-C5	-2.99	101.14	111.33
4	H	2	NAG	O6-C6-C5	-2.99	101.14	111.33
4	H	2	NAG	C3-C4-C5	-2.98	104.83	110.23
4	I	2	NAG	C3-C4-C5	-2.97	104.85	110.23
4	H	2	NAG	O4-C4-C3	-2.82	103.74	110.38
4	I	2	NAG	O4-C4-C3	-2.81	103.75	110.38
4	I	2	NAG	C2-N2-C7	-2.00	120.22	122.90

There are no chirality outliers.

All (14) torsion outliers are listed below:

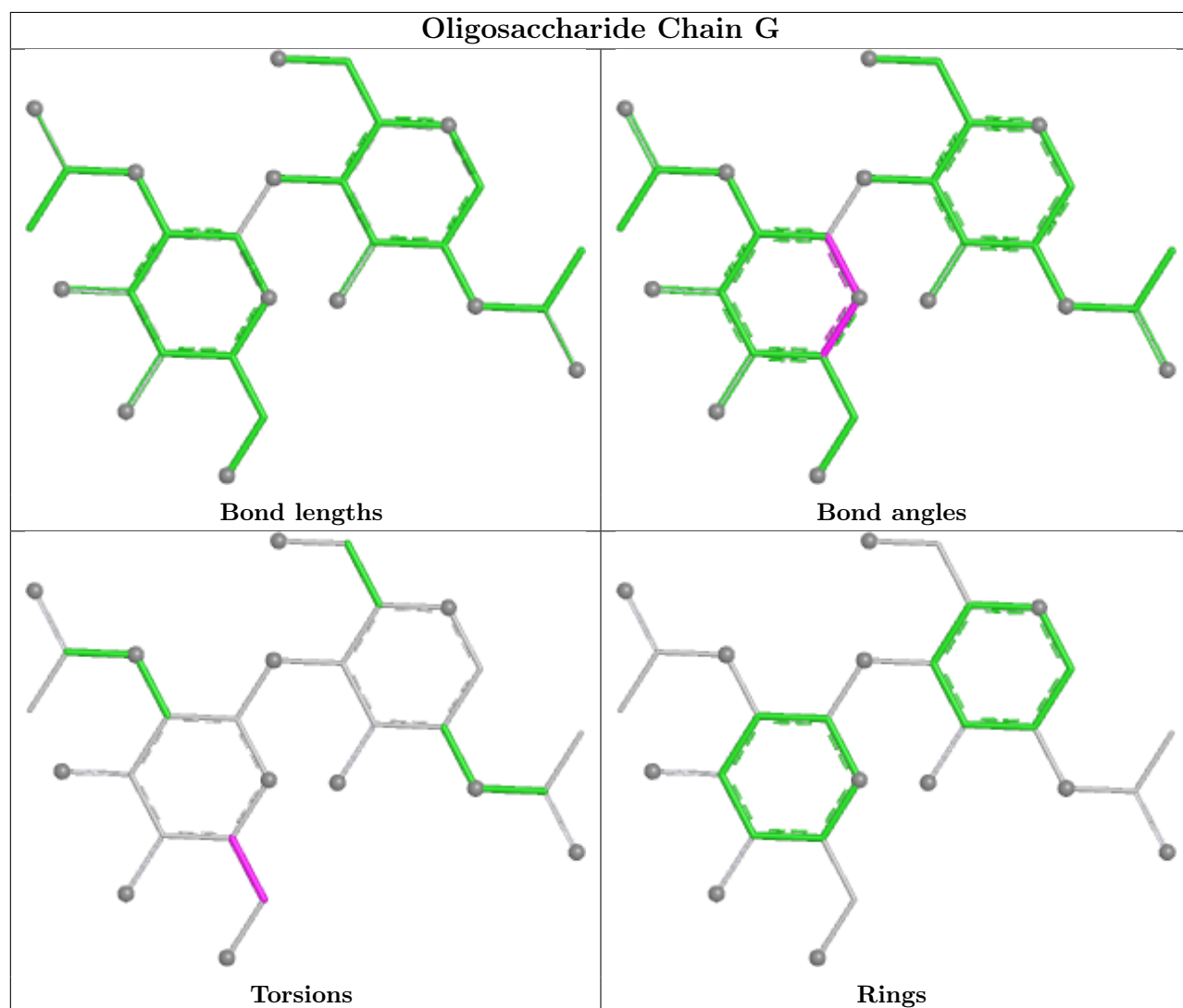
Mol	Chain	Res	Type	Atoms
4	J	2	NAG	O5-C5-C6-O6
4	H	2	NAG	C4-C5-C6-O6
4	I	2	NAG	C4-C5-C6-O6
4	G	2	NAG	O5-C5-C6-O6
4	H	2	NAG	O5-C5-C6-O6
4	I	2	NAG	O5-C5-C6-O6
4	G	2	NAG	C4-C5-C6-O6
4	J	2	NAG	C4-C5-C6-O6
4	H	2	NAG	C1-C2-N2-C7
4	I	2	NAG	C1-C2-N2-C7
4	I	2	NAG	C3-C2-N2-C7
4	H	1	NAG	C1-C2-N2-C7
4	I	1	NAG	C1-C2-N2-C7
4	H	2	NAG	C3-C2-N2-C7

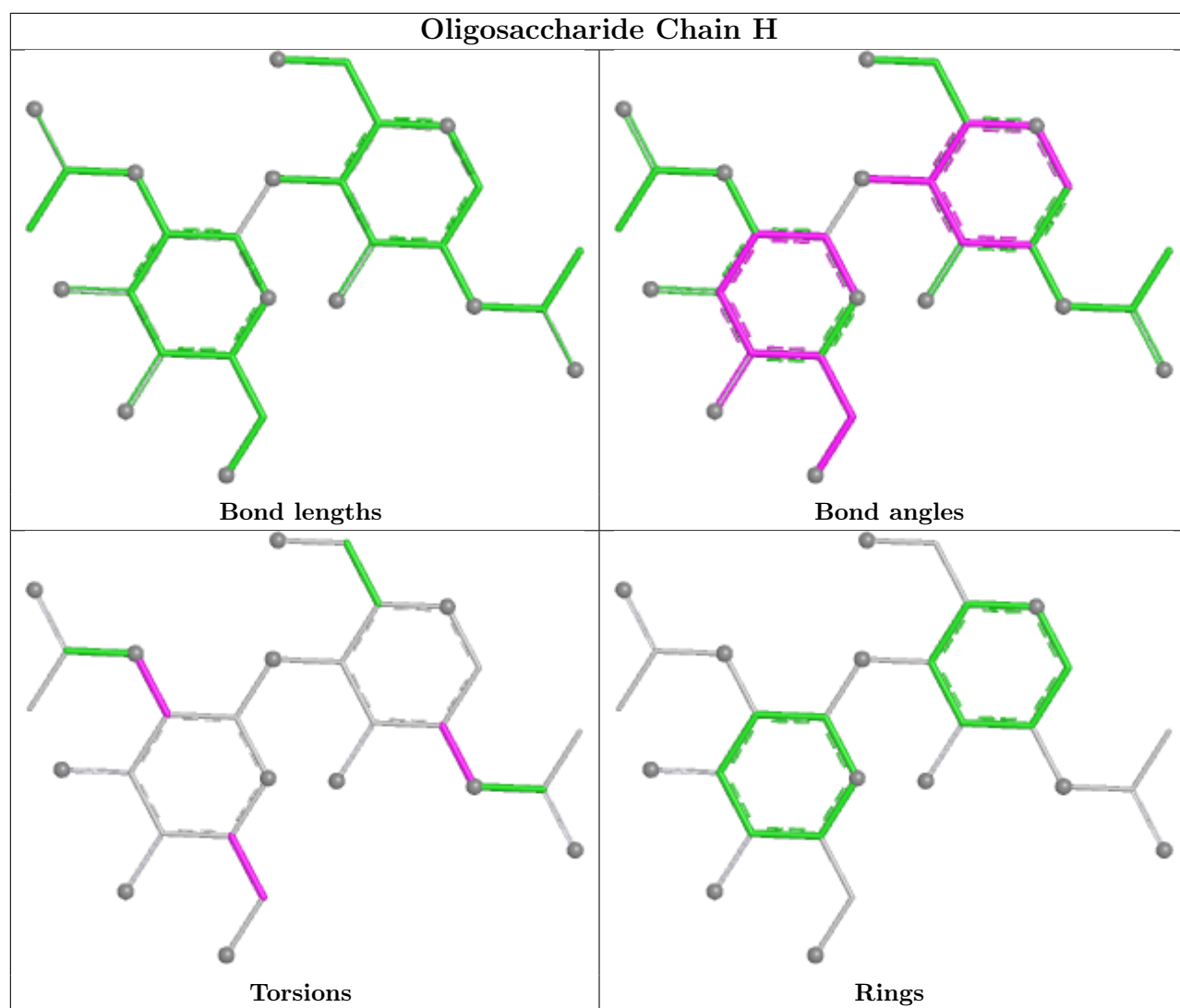
There are no ring outliers.

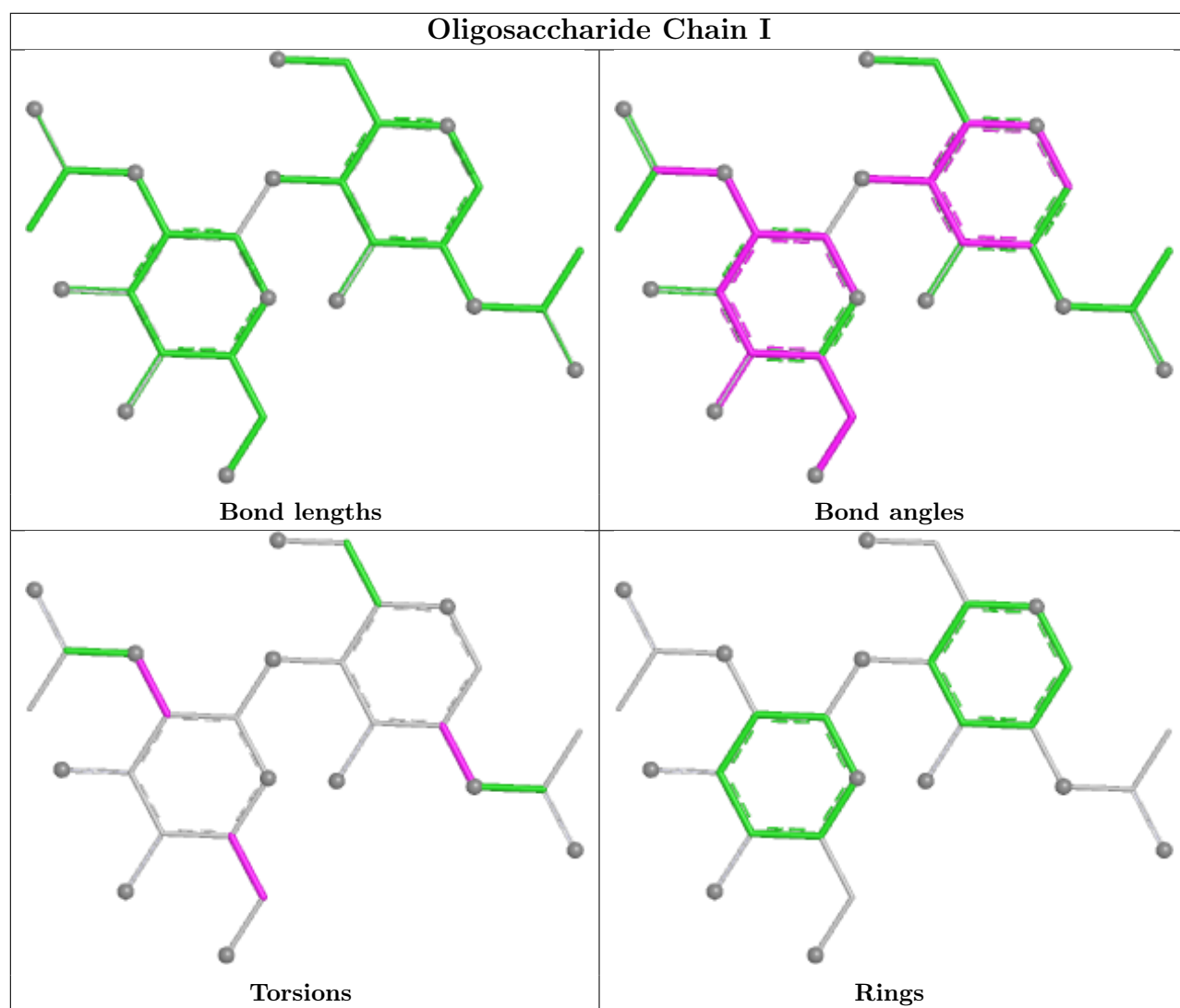
6 monomers are involved in 6 short contacts:

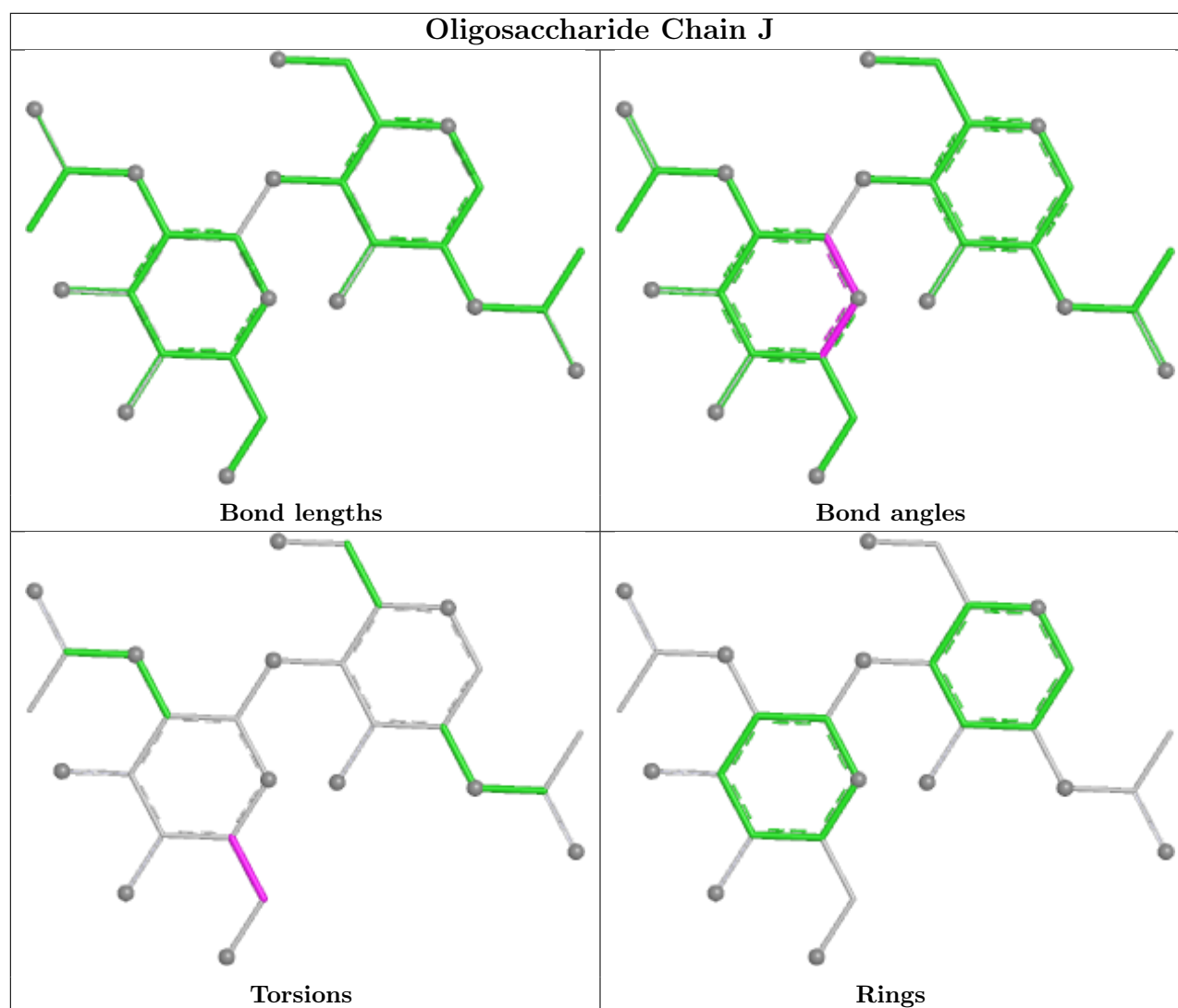
Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	I	1	NAG	1	0
4	J	1	NAG	2	0
4	G	1	NAG	2	0
4	H	1	NAG	1	0
4	I	2	NAG	1	0
4	H	2	NAG	1	0

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](#)

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	$\# Z > 2$
5	NAG	B	1004	1	14,14,15	0.42	0	17,19,21	1.16	2 (11%)
5	NAG	A	1004	1	14,14,15	0.43	0	17,19,21	1.16	2 (11%)
5	NAG	D	1001	2	14,14,15	0.53	0	17,19,21	0.65	1 (5%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
5	NAG	C	202	2	14,14,15	0.53	0	17,19,21	0.65	1 (5%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
5	NAG	B	1004	1	-	0/6/23/26	0/1/1/1
5	NAG	A	1004	1	-	0/6/23/26	0/1/1/1
5	NAG	D	1001	2	-	2/6/23/26	0/1/1/1
5	NAG	C	202	2	-	2/6/23/26	0/1/1/1

There are no bond length outliers.

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	B	1004	NAG	C8-C7-N2	2.38	120.06	116.12
5	A	1004	NAG	C8-C7-N2	2.36	120.03	116.12
5	A	1004	NAG	C2-N2-C7	-2.16	120.01	122.90
5	B	1004	NAG	C2-N2-C7	-2.13	120.05	122.90
5	C	202	NAG	C1-O5-C5	2.12	115.02	112.19
5	D	1001	NAG	C1-O5-C5	2.11	115.02	112.19

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	C	202	NAG	O5-C5-C6-O6
5	D	1001	NAG	O5-C5-C6-O6
5	C	202	NAG	C4-C5-C6-O6
5	D	1001	NAG	C4-C5-C6-O6

There are no ring outliers.

2 monomers are involved in 6 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	B	1004	NAG	3	0
5	A	1004	NAG	3	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, 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	375/396 (94%)	1.37	102 (27%)  	31, 69, 122, 147	0
1	B	375/396 (94%)	1.58	127 (33%)  	31, 69, 122, 147	0
2	C	84/84 (100%)	0.83	8 (9%)  	30, 52, 92, 97	0
2	D	84/84 (100%)	0.90	6 (7%)  	30, 52, 92, 97	0
3	E	15/15 (100%)	1.36	4 (26%)  	44, 61, 100, 115	0
3	F	15/15 (100%)	1.48	5 (33%)  	44, 61, 100, 115	0
All	All	948/990 (95%)	1.36	252 (26%)  	30, 64, 117, 147	0

All (252) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	179	ALA	5.3
1	B	71	SER	5.2
1	A	93	VAL	4.9
1	B	205	THR	4.8
1	A	76	ALA	4.6
1	A	419	THR	4.6
1	B	92	ARG	4.6
1	B	77	LEU	4.6
1	B	72	LYS	4.5
1	A	95	ARG	4.4
1	B	104	VAL	4.4
1	B	122	GLY	4.4
1	A	205	THR	4.2
1	B	189	GLY	4.2
1	A	179	ALA	4.2
1	B	95	ARG	4.1
1	B	118	ASN	4.1
2	C	124	CYS	4.1
1	A	71	SER	4.0

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Mol	Chain	Res	Type	RSRZ
1	B	180	PRO	4.0
1	A	157	ILE	4.0
1	B	59	VAL	4.0
1	B	93	VAL	4.0
1	A	92	ARG	3.9
1	B	106	SER	3.9
1	B	64	LEU	3.9
1	B	137	TYR	3.9
1	B	414	GLY	3.9
1	A	78	THR	3.8
2	D	62	GLY	3.8
1	A	204	GLY	3.8
1	B	80	ASP	3.8
1	A	211	SER	3.8
1	A	77	LEU	3.7
1	B	58	ASP	3.7
3	E	18	CYS	3.7
1	B	186	PHE	3.7
1	A	279	PRO	3.7
1	A	80	ASP	3.6
2	D	124	CYS	3.6
1	A	171	ASN	3.6
1	B	146	SER	3.6
1	B	211	SER	3.6
1	A	122	GLY	3.6
1	B	204	GLY	3.6
1	A	277	GLY	3.6
1	B	279	PRO	3.6
1	A	170	LEU	3.5
1	A	116	TYR	3.5
1	A	239	SER	3.5
1	B	42	GLY	3.5
1	A	413	ASP	3.4
1	B	78	THR	3.4
1	B	88	TYR	3.3
1	B	201	SER	3.3
1	A	64	LEU	3.3
1	B	75	PRO	3.3
1	A	182	ASN	3.3
1	A	118	ASN	3.3
1	A	127	ASN	3.3
1	B	97	PRO	3.3

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Mol	Chain	Res	Type	RSRZ
1	A	208	MET	3.3
1	B	277	GLY	3.3
1	B	132	VAL	3.3
1	B	187	VAL	3.3
1	B	123	LEU	3.2
1	A	59	VAL	3.2
1	A	58	ASP	3.2
1	B	203	ASP	3.2
1	B	170	LEU	3.2
1	B	105	ALA	3.2
1	B	81	PRO	3.1
1	B	102	PHE	3.1
1	A	42	GLY	3.1
1	A	143	PHE	3.1
1	B	116	TYR	3.1
1	B	397	TYR	3.1
1	A	79	GLN	3.1
1	B	79	GLN	3.1
1	A	173	THR	3.1
2	C	62	GLY	3.1
1	A	125	ALA	3.1
1	B	240	ALA	3.1
1	B	413	ASP	3.1
1	A	203	ASP	3.0
1	A	180	PRO	3.0
1	B	157	ILE	3.0
1	B	148	THR	3.0
1	B	210	GLY	3.0
1	A	186	PHE	3.0
1	A	379	GLN	2.9
1	A	137	TYR	2.9
1	B	115	PHE	2.9
1	B	375	GLU	2.9
2	C	63	PRO	2.9
1	B	178	SER	2.9
3	F	18	CYS	2.9
1	B	249	TYR	2.9
1	A	210	GLY	2.9
1	A	169	THR	2.9
1	B	311	SER	2.9
1	A	201	SER	2.9
1	B	61	SER	2.9

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Mol	Chain	Res	Type	RSRZ
1	B	420	ASN	2.9
1	A	206	LEU	2.9
1	B	86	VAL	2.9
1	B	412	SER	2.8
1	A	188	ASN	2.8
1	B	182	ASN	2.8
1	B	188	ASN	2.8
1	A	113	LEU	2.8
1	B	124	ASN	2.8
1	A	88	TYR	2.8
1	B	50	THR	2.8
1	B	94	PHE	2.8
1	B	133	SER	2.8
1	A	142	ASN	2.8
1	A	318	TYR	2.8
1	B	113	LEU	2.7
1	A	276	THR	2.7
1	B	76	ALA	2.7
1	B	169	THR	2.7
3	F	4	ARG	2.7
1	A	414	GLY	2.7
1	B	82	SER	2.7
1	B	248	TRP	2.7
1	A	185	ALA	2.7
1	A	94	PHE	2.7
1	B	100	TYR	2.7
1	B	318	TYR	2.7
1	B	393	LYS	2.7
1	B	127	ASN	2.7
1	B	156	PHE	2.7
1	B	419	THR	2.7
1	A	81	PRO	2.7
1	B	73	THR	2.7
1	B	91	ALA	2.7
1	B	99	THR	2.7
1	B	101	THR	2.7
1	B	173	THR	2.7
1	B	217	ILE	2.6
1	B	315	GLY	2.6
1	A	311	SER	2.6
1	A	420	ASN	2.6
1	A	72	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
1	B	155	ALA	2.6
1	B	216	THR	2.6
1	B	167	GLY	2.6
1	A	222	ALA	2.6
1	B	219	ASN	2.6
1	B	220	SER	2.6
1	B	145	ALA	2.6
2	D	108	PRO	2.6
1	A	74	SER	2.5
1	B	208	MET	2.5
1	B	125	ALA	2.5
1	B	130	PHE	2.5
1	A	159	LYS	2.5
1	B	206	LEU	2.5
1	A	187	VAL	2.5
3	F	15	THR	2.5
1	B	239	SER	2.5
1	A	104	VAL	2.5
1	A	41	GLY	2.5
2	C	50	ASN	2.4
1	A	140	LEU	2.4
1	B	65	SER	2.4
1	B	162	VAL	2.4
1	B	185	ALA	2.4
1	B	197	ASP	2.4
1	A	167	GLY	2.4
1	A	245	TYR	2.4
1	A	332	THR	2.4
1	A	29	ASP	2.4
1	A	100	TYR	2.4
1	A	278	THR	2.4
1	A	220	SER	2.4
1	A	243	GLY	2.4
2	D	118	GLY	2.4
1	B	140	LEU	2.3
1	A	217	ILE	2.3
1	A	57	SER	2.3
1	B	31	SER	2.3
2	C	79	CYS	2.3
1	B	107	GLY	2.3
1	B	108	ARG	2.3
1	B	202	THR	2.3

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Mol	Chain	Res	Type	RSRZ
1	B	164	ASN	2.3
1	B	181	SER	2.3
1	A	248	TRP	2.3
1	B	103	PRO	2.3
1	B	63	PHE	2.3
1	A	145	ALA	2.3
3	E	6	ILE	2.3
3	F	16	ILE	2.3
1	A	82	SER	2.3
1	B	136	PRO	2.3
1	B	129	LEU	2.3
1	A	99	THR	2.3
1	B	74	SER	2.3
1	A	123	LEU	2.3
1	A	89	MET	2.2
1	A	148	THR	2.2
2	C	42	THR	2.2
1	B	245	TYR	2.2
1	B	379	GLN	2.2
1	A	132	VAL	2.2
1	A	60	LYS	2.2
1	A	150	GLU	2.2
1	A	375	GLU	2.2
1	A	75	PRO	2.2
1	A	423	PRO	2.2
1	B	60	LYS	2.2
1	A	207	THR	2.2
1	B	85	GLU	2.2
2	D	79	CYS	2.2
1	B	89	MET	2.2
1	A	54	ILE	2.2
1	A	97	PRO	2.2
1	A	146	SER	2.2
1	A	194	SER	2.2
1	B	174	PHE	2.2
1	A	126	THR	2.1
3	E	17	PRO	2.1
3	F	17	PRO	2.1
1	A	218	ASP	2.1
1	B	278	THR	2.1
1	B	70	ASP	2.1
2	D	91	ASP	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	144	SER	2.1
1	A	141	LYS	2.1
1	A	129	LEU	2.1
2	C	118	GLY	2.1
1	B	391	VAL	2.1
1	B	51	ASP	2.1
1	B	316	PHE	2.1
1	A	65	SER	2.1
1	A	397	TYR	2.1
1	A	422	ILE	2.1
1	B	56	ILE	2.1
1	B	29	ASP	2.0
1	B	143	PHE	2.1
3	E	4	ARG	2.0
1	B	62	LYS	2.0
1	B	290	THR	2.0
2	C	108	PRO	2.0
1	B	244	LEU	2.0
1	B	422	ILE	2.0
1	A	256	PHE	2.0
1	A	189	GLY	2.0
1	A	363	VAL	2.0
1	B	165	VAL	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, 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.

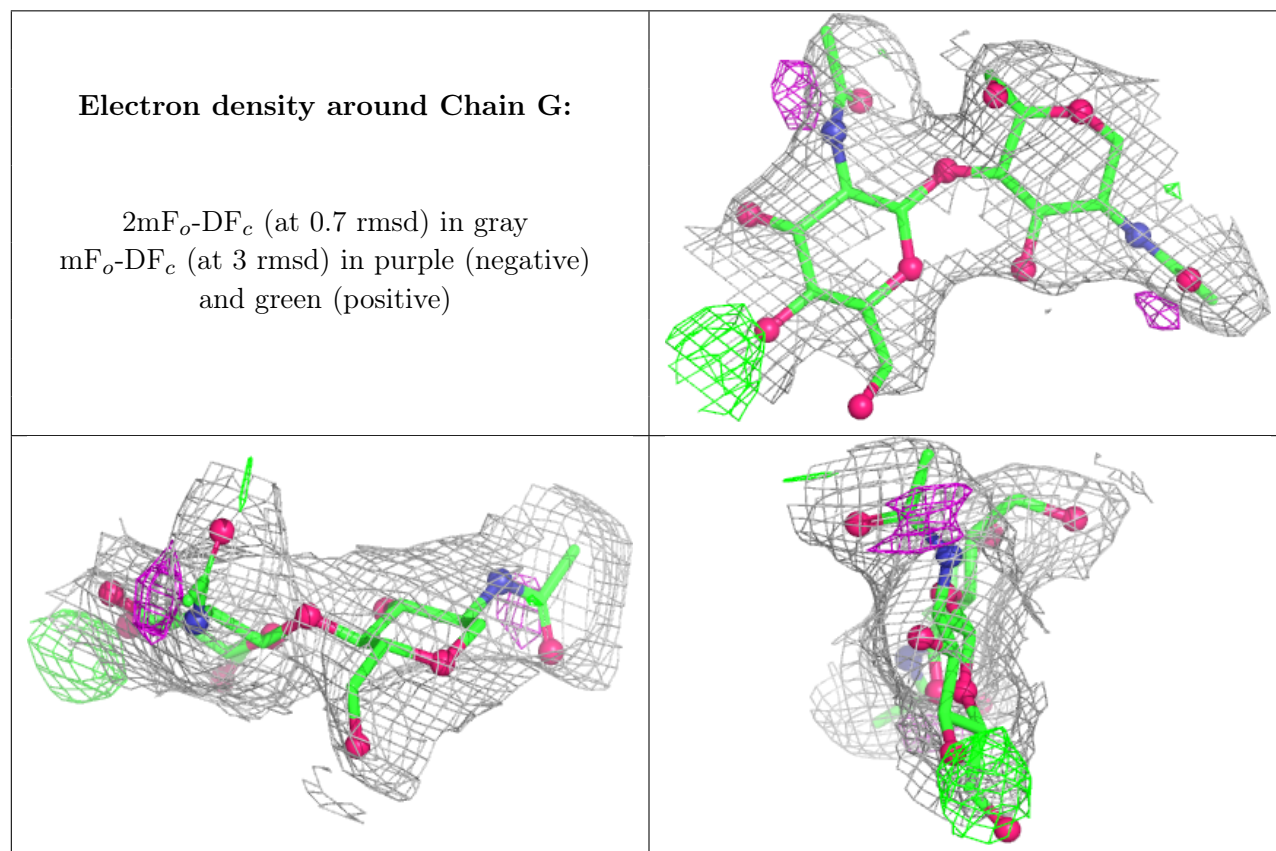
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
4	NAG	I	2	14/15	0.61	0.24	41,96,111,121	0
4	NAG	H	2	14/15	0.62	0.22	41,96,111,121	0
4	NAG	G	2	14/15	0.69	0.18	41,63,113,116	0
4	NAG	J	2	14/15	0.73	0.19	41,63,113,116	0
4	NAG	I	1	14/15	0.79	0.15	48,67,107,112	0

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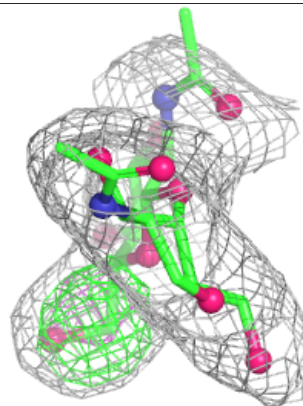
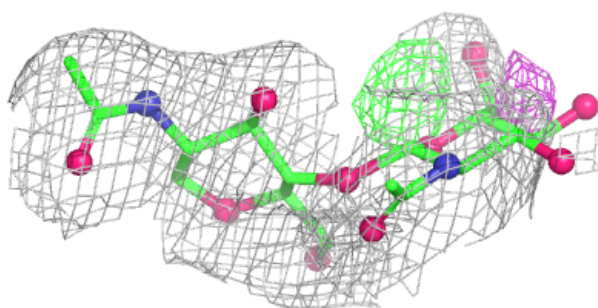
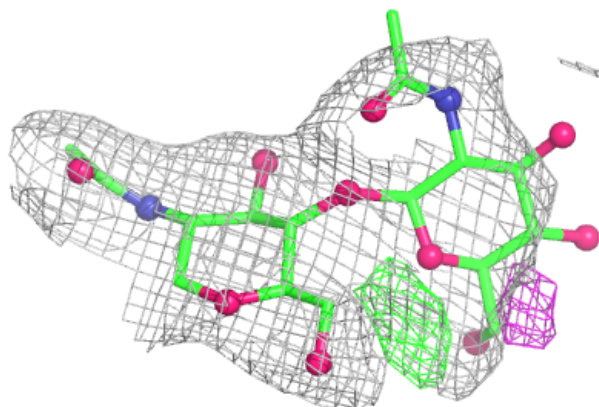
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
4	NAG	G	1	14/15	0.83	0.15	19,44,66,69	0
4	NAG	H	1	14/15	0.87	0.12	48,67,107,112	0
4	NAG	J	1	14/15	0.88	0.12	19,44,66,69	0

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.

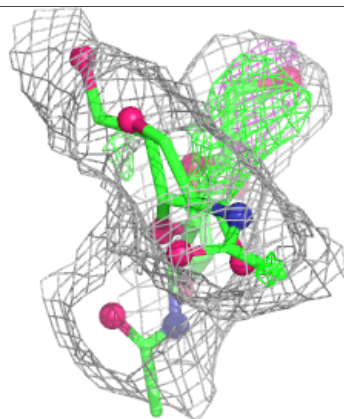
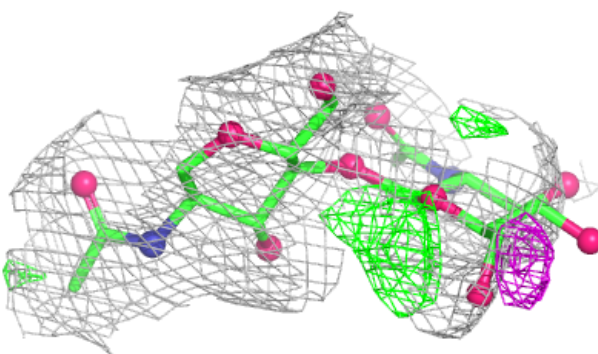
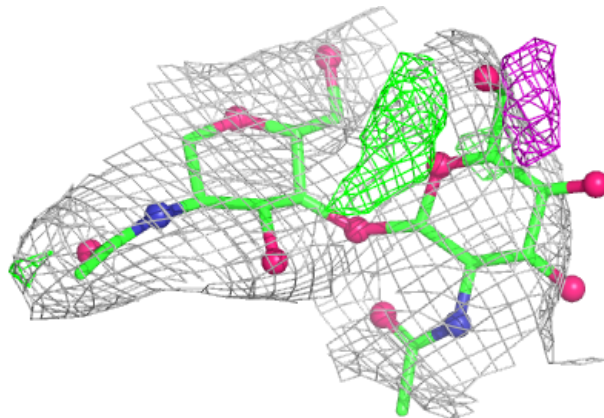


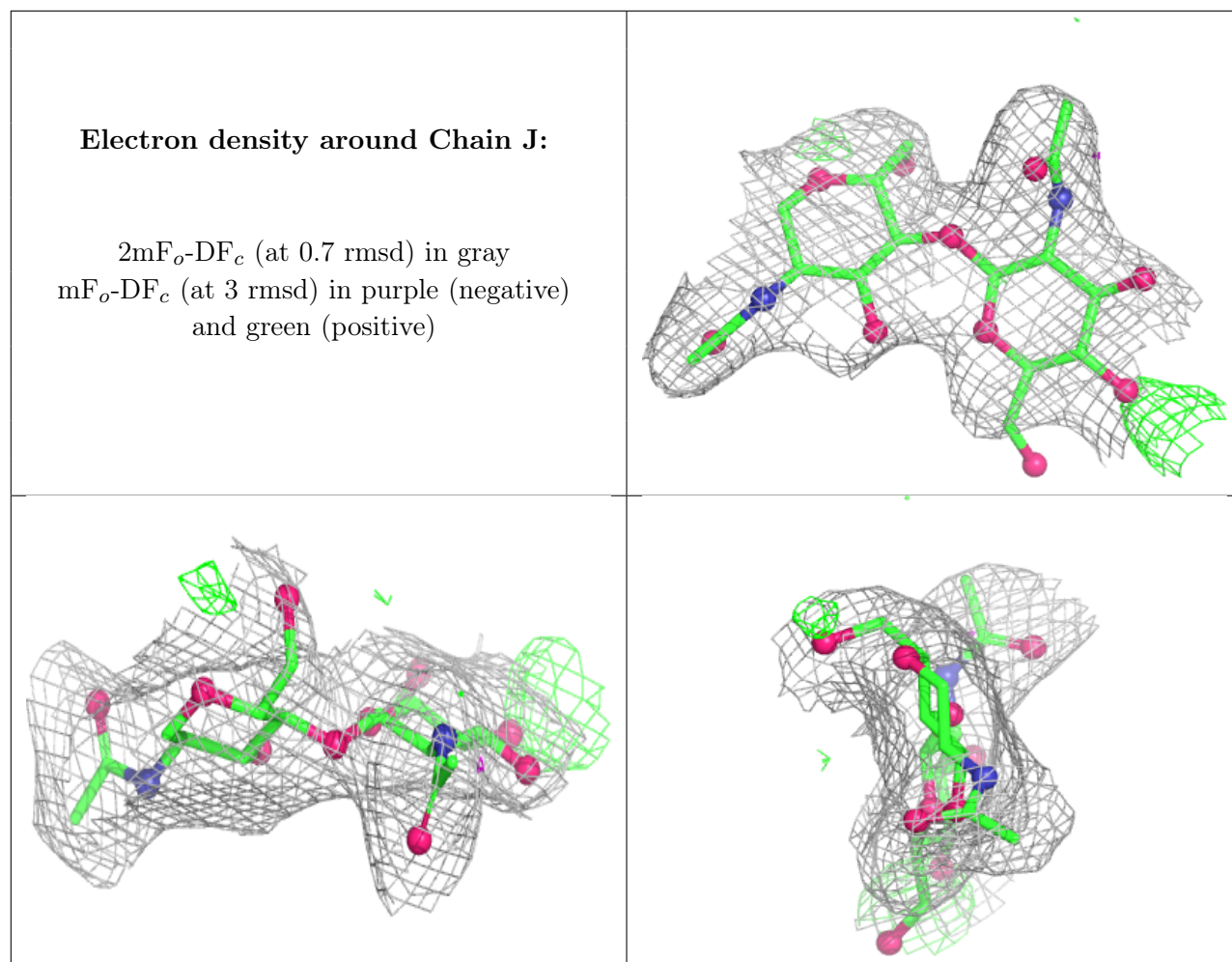
Electron density around Chain H:

$2mF_o-DF_c$ (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)





6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 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($\text{\AA}^2$)	Q<0.9
5	NAG	B	1004	14/15	0.52	0.41	20,20,20,20	0
5	NAG	A	1004	14/15	0.53	0.36	20,20,20,20	0
5	NAG	D	1001	14/15	0.71	0.20	67,107,148,151	0
5	NAG	C	202	14/15	0.71	0.21	67,107,148,151	0

6.5 Other polymers [i](#)

There are no such residues in this entry.