Full wwPDB X-ray Structure Validation Report ⓘ

Mar 5, 2024 – 03:03 AM EST

PDB ID	:	8V07
Title	:	Crystal structure of mouse PLD3 co-crystallized with 5'Pi-ssDNA for 30 days
Authors	:	Yuan, M.; Wilson, I.A.
Deposited on	:	2023-11-17
Resolution	:	1.99 Å(reported)

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

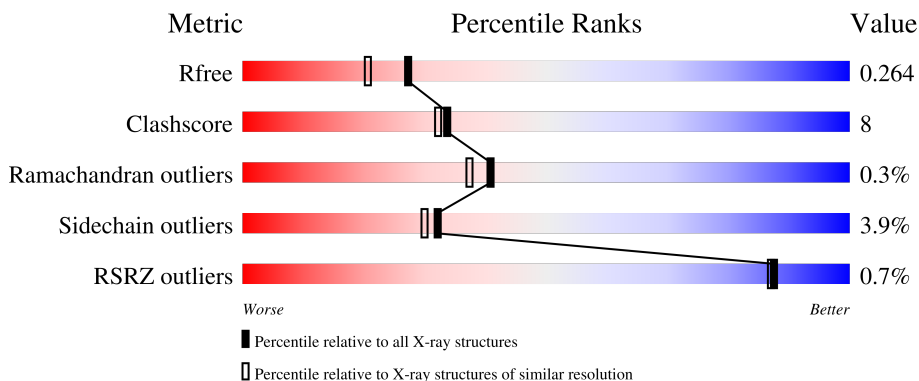|		
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry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

1 Overall quality at a glance ⓘ

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 1.99 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	Percentile Ranks	Value
Rfree		0.264
Clashscore		8
Ramachandran outliers		0.3%
Sidechain outliers		3.9%
RSRZ outliers		0.7%

Worse   *Better*

▌ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	8085 (2.00-2.00)
Clashscore	141614	9178 (2.00-2.00)
Ramachandran outliers	138981	9054 (2.00-2.00)
Sidechain outliers	138945	9053 (2.00-2.00)
RSRZ outliers	127900	7900 (2.00-2.00)

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

Mol	Chain	Length	Quality of chain
1	A	467	69% 16% • 13%
1	B	467	72% 14% • 13%
1	C	467	74% 11% • 13%
1	D	467	66% 19% • 13%
2	E	7	14% 86%

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Mol	Chain	Length	Quality of chain
2	H	7	71% 29%
3	F	2	100%
3	G	2	100%
3	J	2	100%
3	K	2	50% 50%
4	I	4	50% 50%

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
8	PO4	D	503	-	-	X	-

2　Entry composition ⓘ

There are 10 unique types of molecules in this entry. The entry contains 13786 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 5'-3' exonuclease PLD3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	B	408	Total	C	N	O	S	0	0	0
			3194	2020	556	601	17			
1	A	408	Total	C	N	O	S	0	2	0
			3217	2034	562	604	17			
1	C	408	Total	C	N	O	S	0	0	0
			3197	2022	559	599	17			
1	D	407	Total	C	N	O	S	0	2	0
			3206	2028	561	600	17			

There are 164 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	22	HIS	-	expression tag	UNP O35405
B	23	HIS	-	expression tag	UNP O35405
B	24	HIS	-	expression tag	UNP O35405
B	25	HIS	-	expression tag	UNP O35405
B	26	HIS	-	expression tag	UNP O35405
B	27	HIS	-	expression tag	UNP O35405
B	28	GLY	-	expression tag	UNP O35405
B	29	PRO	-	expression tag	UNP O35405
B	30	LEU	-	expression tag	UNP O35405
B	31	VAL	-	expression tag	UNP O35405
B	32	ASP	-	expression tag	UNP O35405
B	33	VAL	-	expression tag	UNP O35405
B	34	ALA	-	expression tag	UNP O35405
B	35	SER	-	expression tag	UNP O35405
B	36	ASN	-	expression tag	UNP O35405
B	37	GLU	-	expression tag	UNP O35405
B	38	GLN	-	expression tag	UNP O35405
B	39	LYS	-	expression tag	UNP O35405
B	40	LEU	-	expression tag	UNP O35405
B	41	ILE	-	expression tag	UNP O35405
B	42	SER	-	expression tag	UNP O35405

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Chain	Residue	Modelled	Actual	Comment	Reference
B	43	GLU	-	expression tag	UNP O35405
B	44	GLU	-	expression tag	UNP O35405
B	45	ASP	-	expression tag	UNP O35405
B	46	LEU	-	expression tag	UNP O35405
B	47	ALA	-	expression tag	UNP O35405
B	48	SER	-	expression tag	UNP O35405
B	49	MET	-	expression tag	UNP O35405
B	50	THR	-	expression tag	UNP O35405
B	51	GLY	-	expression tag	UNP O35405
B	52	GLY	-	expression tag	UNP O35405
B	53	GLN	-	expression tag	UNP O35405
B	54	GLN	-	expression tag	UNP O35405
B	55	MET	-	expression tag	UNP O35405
B	56	GLY	-	expression tag	UNP O35405
B	57	ARG	-	expression tag	UNP O35405
B	58	ASP	-	expression tag	UNP O35405
B	59	ILE	-	expression tag	UNP O35405
B	60	GLU	-	expression tag	UNP O35405
B	61	GLY	-	expression tag	UNP O35405
B	62	ARG	-	expression tag	UNP O35405
A	22	HIS	-	expression tag	UNP O35405
A	23	HIS	-	expression tag	UNP O35405
A	24	HIS	-	expression tag	UNP O35405
A	25	HIS	-	expression tag	UNP O35405
A	26	HIS	-	expression tag	UNP O35405
A	27	HIS	-	expression tag	UNP O35405
A	28	GLY	-	expression tag	UNP O35405
A	29	PRO	-	expression tag	UNP O35405
A	30	LEU	-	expression tag	UNP O35405
A	31	VAL	-	expression tag	UNP O35405
A	32	ASP	-	expression tag	UNP O35405
A	33	VAL	-	expression tag	UNP O35405
A	34	ALA	-	expression tag	UNP O35405
A	35	SER	-	expression tag	UNP O35405
A	36	ASN	-	expression tag	UNP O35405
A	37	GLU	-	expression tag	UNP O35405
A	38	GLN	-	expression tag	UNP O35405
A	39	LYS	-	expression tag	UNP O35405
A	40	LEU	-	expression tag	UNP O35405
A	41	ILE	-	expression tag	UNP O35405
A	42	SER	-	expression tag	UNP O35405
A	43	GLU	-	expression tag	UNP O35405

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Chain	Residue	Modelled	Actual	Comment	Reference
A	44	GLU	-	expression tag	UNP O35405
A	45	ASP	-	expression tag	UNP O35405
A	46	LEU	-	expression tag	UNP O35405
A	47	ALA	-	expression tag	UNP O35405
A	48	SER	-	expression tag	UNP O35405
A	49	MET	-	expression tag	UNP O35405
A	50	THR	-	expression tag	UNP O35405
A	51	GLY	-	expression tag	UNP O35405
A	52	GLY	-	expression tag	UNP O35405
A	53	GLN	-	expression tag	UNP O35405
A	54	GLN	-	expression tag	UNP O35405
A	55	MET	-	expression tag	UNP O35405
A	56	GLY	-	expression tag	UNP O35405
A	57	ARG	-	expression tag	UNP O35405
A	58	ASP	-	expression tag	UNP O35405
A	59	ILE	-	expression tag	UNP O35405
A	60	GLU	-	expression tag	UNP O35405
A	61	GLY	-	expression tag	UNP O35405
A	62	ARG	-	expression tag	UNP O35405
C	22	HIS	-	expression tag	UNP O35405
C	23	HIS	-	expression tag	UNP O35405
C	24	HIS	-	expression tag	UNP O35405
C	25	HIS	-	expression tag	UNP O35405
C	26	HIS	-	expression tag	UNP O35405
C	27	HIS	-	expression tag	UNP O35405
C	28	GLY	-	expression tag	UNP O35405
C	29	PRO	-	expression tag	UNP O35405
C	30	LEU	-	expression tag	UNP O35405
C	31	VAL	-	expression tag	UNP O35405
C	32	ASP	-	expression tag	UNP O35405
C	33	VAL	-	expression tag	UNP O35405
C	34	ALA	-	expression tag	UNP O35405
C	35	SER	-	expression tag	UNP O35405
C	36	ASN	-	expression tag	UNP O35405
C	37	GLU	-	expression tag	UNP O35405
C	38	GLN	-	expression tag	UNP O35405
C	39	LYS	-	expression tag	UNP O35405
C	40	LEU	-	expression tag	UNP O35405
C	41	ILE	-	expression tag	UNP O35405
C	42	SER	-	expression tag	UNP O35405
C	43	GLU	-	expression tag	UNP O35405
C	44	GLU	-	expression tag	UNP O35405

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Chain	Residue	Modelled	Actual	Comment	Reference
C	45	ASP	-	expression tag	UNP O35405
C	46	LEU	-	expression tag	UNP O35405
C	47	ALA	-	expression tag	UNP O35405
C	48	SER	-	expression tag	UNP O35405
C	49	MET	-	expression tag	UNP O35405
C	50	THR	-	expression tag	UNP O35405
C	51	GLY	-	expression tag	UNP O35405
C	52	GLY	-	expression tag	UNP O35405
C	53	GLN	-	expression tag	UNP O35405
C	54	GLN	-	expression tag	UNP O35405
C	55	MET	-	expression tag	UNP O35405
C	56	GLY	-	expression tag	UNP O35405
C	57	ARG	-	expression tag	UNP O35405
C	58	ASP	-	expression tag	UNP O35405
C	59	ILE	-	expression tag	UNP O35405
C	60	GLU	-	expression tag	UNP O35405
C	61	GLY	-	expression tag	UNP O35405
C	62	ARG	-	expression tag	UNP O35405
D	22	HIS	-	expression tag	UNP O35405
D	23	HIS	-	expression tag	UNP O35405
D	24	HIS	-	expression tag	UNP O35405
D	25	HIS	-	expression tag	UNP O35405
D	26	HIS	-	expression tag	UNP O35405
D	27	HIS	-	expression tag	UNP O35405
D	28	GLY	-	expression tag	UNP O35405
D	29	PRO	-	expression tag	UNP O35405
D	30	LEU	-	expression tag	UNP O35405
D	31	VAL	-	expression tag	UNP O35405
D	32	ASP	-	expression tag	UNP O35405
D	33	VAL	-	expression tag	UNP O35405
D	34	ALA	-	expression tag	UNP O35405
D	35	SER	-	expression tag	UNP O35405
D	36	ASN	-	expression tag	UNP O35405
D	37	GLU	-	expression tag	UNP O35405
D	38	GLN	-	expression tag	UNP O35405
D	39	LYS	-	expression tag	UNP O35405
D	40	LEU	-	expression tag	UNP O35405
D	41	ILE	-	expression tag	UNP O35405
D	42	SER	-	expression tag	UNP O35405
D	43	GLU	-	expression tag	UNP O35405
D	44	GLU	-	expression tag	UNP O35405
D	45	ASP	-	expression tag	UNP O35405

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Chain	Residue	Modelled	Actual	Comment	Reference
D	46	LEU	-	expression tag	UNP O35405
D	47	ALA	-	expression tag	UNP O35405
D	48	SER	-	expression tag	UNP O35405
D	49	MET	-	expression tag	UNP O35405
D	50	THR	-	expression tag	UNP O35405
D	51	GLY	-	expression tag	UNP O35405
D	52	GLY	-	expression tag	UNP O35405
D	53	GLN	-	expression tag	UNP O35405
D	54	GLN	-	expression tag	UNP O35405
D	55	MET	-	expression tag	UNP O35405
D	56	GLY	-	expression tag	UNP O35405
D	57	ARG	-	expression tag	UNP O35405
D	58	ASP	-	expression tag	UNP O35405
D	59	ILE	-	expression tag	UNP O35405
D	60	GLU	-	expression tag	UNP O35405
D	61	GLY	-	expression tag	UNP O35405
D	62	ARG	-	expression tag	UNP O35405

- Molecule 2 is an oligosaccharide called alpha-D-mannopyranose-(1-3)-[alpha-D-mannopyranose-(1-6)]alpha-D-mannopyranose-(1-6)-[alpha-D-mannopyranose-(1-3)]beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.
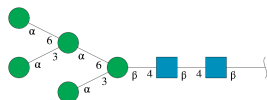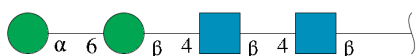

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
2	E	7	Total 83	C 46	N 2	O 35	0	0	0
2	H	7	Total 83	C 46	N 2	O 35	0	0	0

- Molecule 3 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.
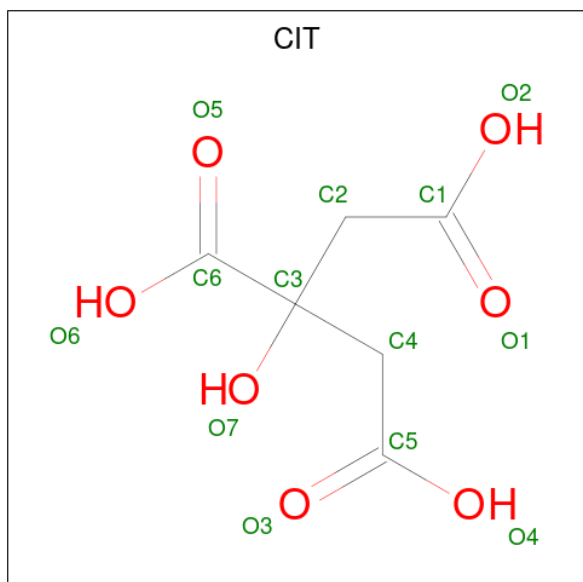
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
3	F	2	Total	C	N	O	0	0	0
			28	16	2	10			
3	G	2	Total	C	N	O	0	0	0
			28	16	2	10			
3	J	2	Total	C	N	O	0	0	0
			28	16	2	10			
3	K	2	Total	C	N	O	0	0	0
			28	16	2	10			

- Molecule 4 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.
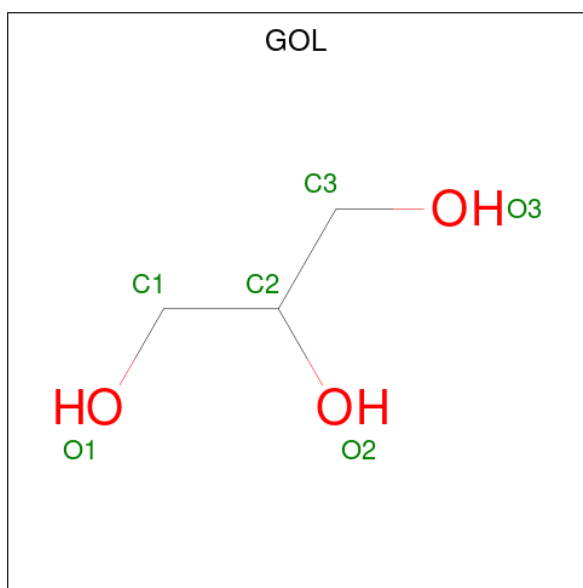

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
4	I	4	Total	C	N	O	0	0	0
			50	28	2	20			

- Molecule 5 is CITRIC ACID (three-letter code: CIT) (formula: $C_6H_8O_7$).

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	B	1	Total	C	O	0	0
			13	6	7		

- Molecule 6 is GLYCEROL (three-letter code: GOL) (formula: $C_3H_8O_3$).

GOL

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
6	B	1	Total 6	C 3	O 3	0	0
6	B	1	Total 6	C 3	O 3	0	0
6	A	1	Total 6	C 3	O 3	0	0
6	C	1	Total 6	C 3	O 3	0	0
6	D	1	Total 6	C 3	O 3	0	0
6	D	1	Total 6	C 3	O 3	0	0

- Molecule 7 is ACETYL GROUP (three-letter code: ACE) (formula: C_2H_4O).

ACE
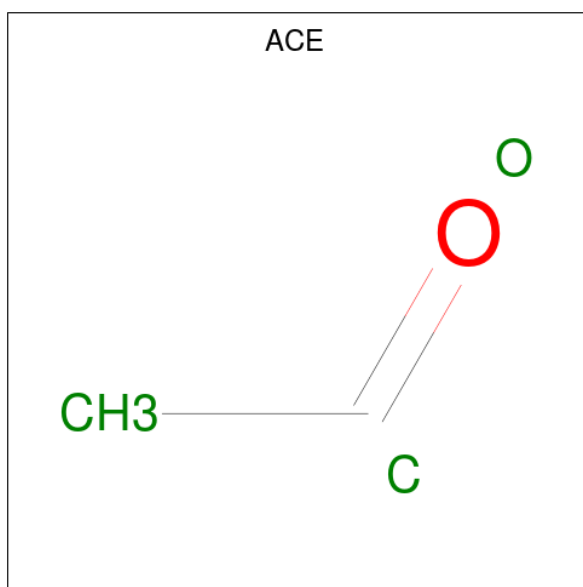
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
7	B	1	Total 3	C 2	O 1	0	0

• Molecule 8 is PHOSPHATE ION (three-letter code: PO4) (formula: O_4P).

PO4
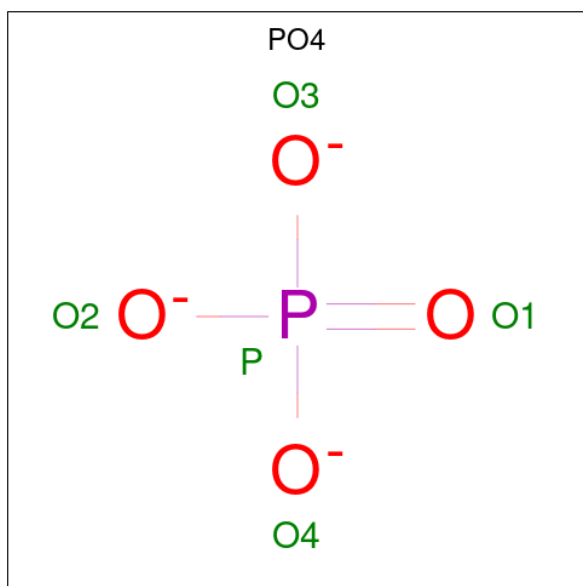
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
8	B	1	Total 5	O 4	P 1	0	0
8	A	1	Total 5	O 4	P 1	0	0
8	C	1	Total 5	O 4	P 1	0	0

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
8	D	1	Total 5	O 4	P 1	0	0

- Molecule 9 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$).
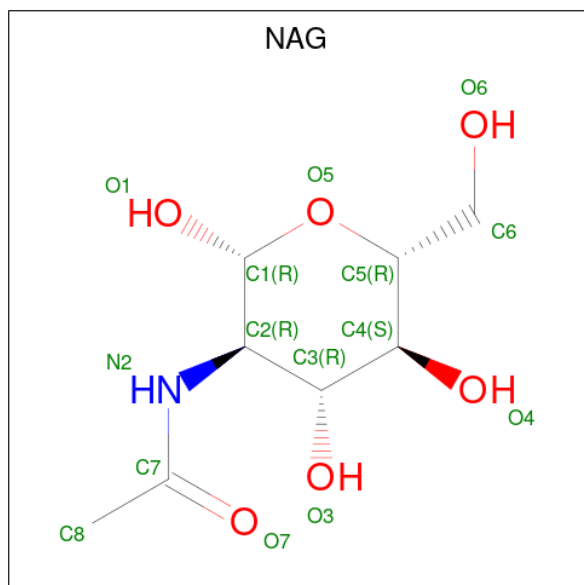
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
9	A	1	Total 14	C 8	N 1	O 5	0	0

- Molecule 10 is water.

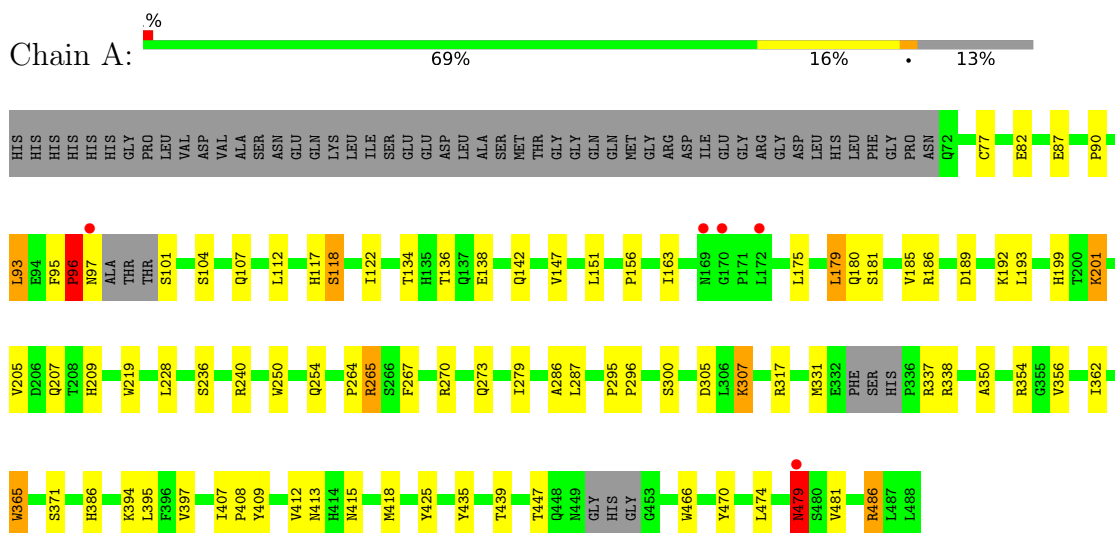| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
10	B	172	Total 172	O 172	0	0
10	A	135	Total 135	O 135	0	0
10	C	149	Total 149	O 149	0	0
10	D	102	Total 102	O 102	0	0

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.
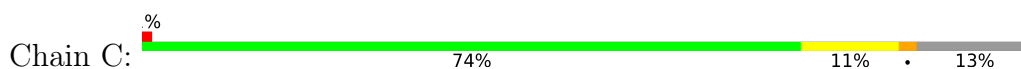
• Molecule 1: 5'-3' exonuclease PLD3

Chain B:

• Molecule 1: 5'-3' exonuclease PLD3

Chain A:

• Molecule 1: 5'-3' exonuclease PLD3

Chain C:

HIS HIS HIS HIS HIS GLY PRO LEU VAL ASP VAL ALA SER ASN GLU GLN LYS LEU ILE SER GLU GLU ASP LEU ALA SER MET THR GLY GLN GLN MET GLY ARG ASP ILE GLU GLY ARG GLY ASP LEU HIS LEU PHE GLY PRO ASN Q72 E82 V86 E87 E91 G92 L93

N97 ALA THR THR SER N102 P103 S104 T105 L113 D121 Q142 Q150 L154 K160 N169 G170 P171 Q180 M187 V188 D189 L193 L198 K201 F202 T223 K226 A255 R265 D268 N282 L287 S300 R317 V324 M325

N326 M331 GLU PHE SER H335 P336 R337 R338 R354 G355 V356 S363 C364 W365 P370 S371 M372 L377 H383 D384 N385 H386 T387 D390 K394 V397 Y409 V412 N413 R422 A440 T447 Q448 N449 GLY HIS G452 W466 Y470 L474 V481

G482 N483 R486 L487 L488

• Molecule 1: 5'-3' exonuclease PLD3

Chain D:

66%   19%   •   13%

HIS HIS HIS HIS HIS GLY PRO LEU VAL ASP VAL ALA SER ASN GLU GLN LYS LEU ILE SER GLU GLU ASP LEU ALA SER MET THR GLY GLN GLN MET GLY ARG ASP ILE GLU GLY ARG GLY ASP LEU HIS LEU PHE GLY PRO ASN Q72 C77 C81 E82 L85 V86 E87

P90 L93 P96 ASN ALA THR T100 S101 S104 L113 T130 D133 T134 H135 T136 L148 Q149 Q152 A153 L154 A155 P156 I163 K167 L172 Q176 S177 Q180 R186 D189 H199 T200 K201 F202 W203 F210 Y211 L212 M217 K226

E227 L228 S236 C237 L238 A239 R240 D241 L242 W250 Q254 P264 F267 D268 Q273 M277 E278 I279 N282 L287 A293 S300 T303 K307 V312 S315 A316 R317 N326 Y327 M331 GLU PHE SER HIS P336 R337 R338 R348 R349 A350

V356 K357 V358 I362 W365 G366 H367 P370 S371 M372 L377 L382 H386 D390 I391 L395 F396 V397 V412 N413 H414 N415 M418 E421 R422 A423 S424 Y425 A440 G441 T442 T447 Q448 N449 GLY HIS GLY G453 V481 G482 N483 A484 C485 R486

L487 L488

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

Chain E:

14%   86%

NAG1 NAG2 BMA3 MAN4 MAN5 MAN6 MAN7

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

Chain H:

71%   29%

NAG1 NAG2 BMA3 MAN4 MAN5 MAN6 MAN7

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

Chain F:

100%

NAG1 NAG2

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

Chain G:

100%

NAG1 NAG2

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

Chain J:

100%

NAG1 NAG2

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

Chain K:

50% 50%

NAG1 NAG2

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

Chain I:

50% 50%

NAG1 NAG2 BMA3 MAN4

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α, β, γ	54.52Å 54.79Å 203.57Å 83.65° 89.10° 89.90°	Depositor
Resolution (Å)	37.12 – 1.99 37.12 – 1.99	Depositor EDS
% Data completeness (in resolution range)	82.2 (37.12-1.99) 82.2 (37.12-1.99)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.25 (at 2.00Å)	Xtriage
Refinement program	PHENIX (1.19.2_4158: ???)	Depositor
R, R_{free}	0.224 , 0.264 0.224 , 0.264	Depositor DCC
R_{free} test set	6469 reflections (4.90%)	wwPDB-VP
Wilson B-factor (Å^2)	33.3	Xtriage
Anisotropy	0.343	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 33.2	EDS
L-test for twinning[2]	$< \|L\| > = 0.42, < L^2 > = 0.24$	Xtriage
Estimated twinning fraction	0.150 for h,-k,-l 0.077 for -h,k,k-l 0.076 for -h,-k,-k+l	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	13786	wwPDB-VP
Average B, all atoms (Å^2)	35.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.00% of the height of the origin peak. No significant pseudotranslation is detected.*

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[1]Intensities estimated from amplitudes.
[2]Theoretical values of $< \|L\| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: CIT, BMA, NAG, MAN, PO4, ACE, GOL

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	0.65	0/3299	0.77	5/4494 (0.1%)
1	B	0.69	1/3275 (0.0%)	0.79	3/4462 (0.1%)
1	C	0.67	0/3279	0.76	2/4469 (0.0%)
1	D	0.61	0/3291	0.72	1/4484 (0.0%)
All	All	0.66	1/13144 (0.0%)	0.76	11/17909 (0.1%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2
1	B	0	1
1	C	0	2
1	D	0	1
All	All	0	6

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	358	VAL	CB-CG1	-5.69	1.41	1.52

All (11) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	96	PRO	N-CA-CB	-6.33	95.64	102.60
1	A	479	ASN	N-CA-CB	5.71	120.88	110.60
1	C	390	ASP	CB-CG-OD1	5.67	123.41	118.30
1	B	217	MET	CG-SD-CE	-5.60	91.23	100.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	390	ASP	CB-CG-OD2	-5.49	113.36	118.30
1	B	93	LEU	CA-CB-CG	5.23	127.33	115.30
1	B	228	LEU	CA-CB-CG	-5.21	103.32	115.30
1	A	179	LEU	CB-CG-CD2	-5.17	102.22	111.00
1	A	305	ASP	CB-CG-OD2	-5.09	113.72	118.30
1	A	93	LEU	CA-CB-CG	5.06	126.94	115.30
1	D	445	LEU	CA-CB-CG	-5.03	103.74	115.30

There are no chirality outliers.

All (6) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	479	ASN	Mainchain
1	A	486	ARG	Sidechain
1	B	73	ARG	Sidechain
1	C	354	ARG	Sidechain
1	C	486	ARG	Sidechain
1	D	486	ARG	Sidechain

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	3217	0	3127	62	0
1	B	3194	0	3106	55	0
1	C	3197	0	3107	39	0
1	D	3206	0	3123	67	0
2	E	83	0	70	0	0
2	H	83	0	70	1	0
3	F	28	0	25	0	0
3	G	28	0	25	0	0
3	J	28	0	25	1	0
3	K	28	0	25	0	0
4	I	50	0	43	0	0
5	B	13	0	5	4	0
6	A	6	0	8	1	0
6	B	12	0	15	4	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	C	6	0	7	1	0
6	D	12	0	16	1	0
7	B	3	0	3	0	0
8	A	5	0	0	0	0
8	B	5	0	0	1	0
8	C	5	0	0	0	0
8	D	5	0	0	3	0
9	A	14	0	13	1	0
10	A	135	0	0	5	0
10	B	172	0	0	7	0
10	C	149	0	0	5	0
10	D	102	0	0	5	0
All	All	13786	0	12813	220	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 8.

All (220) 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:112:LEU:HA	6:B:504:GOL:H31	1.48	0.93
1:D:82:GLU:OE2	1:D:282:ASN:HA	1.72	0.90
1:C:397:VAL:HG11	1:C:481:VAL:HG13	1.56	0.87
1:A:270:ARG:HA	1:A:270:ARG:NH1	1.97	0.79
1:D:421:GLU:HG2	1:D:422[A]:ARG:HG3	1.66	0.77
1:C:202:PHE:HB3	10:C:602:HOH:O	1.86	0.76
1:D:397:VAL:HG21	1:D:481:VAL:HG13	1.68	0.76
1:A:386:HIS:ND1	10:A:601:HOH:O	2.20	0.74
1:C:397:VAL:HG11	1:C:481:VAL:CG1	2.18	0.74
1:C:409:TYR:H	6:C:501:GOL:H11	1.53	0.72
1:D:149:GLN:HA	1:D:152:GLN:HE21	1.51	0.72
1:D:350:ALA:HB1	1:D:356:VAL:HG21	1.72	0.71
1:D:236:SER:O	1:D:240:ARG:HG3	1.91	0.70
1:D:397:VAL:HG23	10:D:667:HOH:O	1.92	0.70
1:B:89:ILE:HD12	1:B:89:ILE:O	1.92	0.70
1:A:186:ARG:HD2	1:A:250:TRP:CE3	2.27	0.69
1:B:409:TYR:N	6:B:502:GOL:O2	2.21	0.69
1:A:186:ARG:HD2	1:A:250:TRP:CZ3	2.27	0.69
1:B:94:GLU:OE2	10:B:601:HOH:O	2.11	0.68
1:D:358:VAL:HB	1:D:391:ILE:HD13	1.75	0.67
1:A:270:ARG:HA	1:A:270:ARG:HH11	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:179:LEU:HD21	1:A:185:VAL:CG1	2.26	0.66
1:D:423:ALA:HB3	10:D:601:HOH:O	1.94	0.66
1:B:104:SER:OG	1:B:107:GLN:HG3	1.95	0.65
1:B:265:ARG:H	1:B:265:ARG:HD3	1.61	0.65
1:C:82:GLU:OE2	1:C:282:ASN:HA	1.97	0.65
1:D:148:LEU:O	1:D:152:GLN:HG3	1.97	0.65
1:D:203:TRP:HE1	1:D:217:MET:HE1	1.62	0.65
1:A:354:ARG:NH2	10:A:603:HOH:O	2.23	0.65
1:B:264:PRO:HG2	1:B:267:PHE:CE1	2.32	0.65
1:D:273:GLN:HE22	1:D:307:LYS:HE2	1.62	0.63
1:B:270:ARG:NH2	10:B:602:HOH:O	2.25	0.63
1:B:338:ARG:NH2	10:B:604:HOH:O	2.30	0.62
1:C:268:ASP:OD2	1:C:300:SER:OG	2.17	0.62
1:C:335:HIS:HB3	1:C:336:PRO:HD2	1.80	0.62
1:B:357:LYS:HE3	10:B:663:HOH:O	2.00	0.62
1:A:273:GLN:HE22	1:A:307[B]:LYS:HD3	1.65	0.61
1:A:395:LEU:HD21	1:A:474:LEU:HD23	1.82	0.61
1:B:397:VAL:HG11	1:B:481:VAL:HG13	1.82	0.61
1:A:254:GLN:NE2	10:A:602:HOH:O	2.21	0.60
1:C:370:PRO:HB2	1:D:386:HIS:ND1	2.17	0.60
1:D:414:HIS:CE1	8:D:503:PO4:O3	2.54	0.60
1:A:95:PHE:O	1:A:96:PRO:C	2.40	0.59
1:B:265:ARG:H	1:B:265:ARG:CD	2.16	0.59
1:A:179:LEU:HD21	1:A:185:VAL:HG12	1.84	0.59
1:D:90:PRO:HD2	1:D:93:LEU:HD22	1.85	0.59
1:A:95:PHE:O	1:A:97:ASN:OD1	2.21	0.58
1:B:122:ILE:HB	1:B:163:ILE:HD12	1.83	0.58
1:A:179:LEU:N	1:A:179:LEU:HD23	2.19	0.57
1:B:160:LYS:HE2	1:B:162:ARG:HD3	1.85	0.57
1:A:394:LYS:HE3	1:A:466:TRP:CZ2	2.38	0.57
1:A:156:PRO:HD3	1:A:181:SER:O	2.05	0.57
1:C:387:THR:HG22	1:D:371:SER:HB2	1.86	0.56
1:D:176:GLN:O	1:D:180:GLN:HG2	2.04	0.56
1:A:175:LEU:HD13	1:A:185:VAL:HG21	1.87	0.56
1:C:180:GLN:NE2	10:C:604:HOH:O	2.30	0.56
1:B:250:TRP:NE1	5:B:501:CIT:H21	2.20	0.56
1:B:250:TRP:CD1	5:B:501:CIT:H21	2.41	0.56
1:B:250:TRP:HE1	5:B:501:CIT:H21	1.71	0.56
1:A:90:PRO:HD2	1:A:93:LEU:HD12	1.88	0.56
1:C:377:LEU:HD23	1:C:474:LEU:HD13	1.88	0.55
1:D:81:CYS:O	1:D:82:GLU:HG2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:236:SER:O	1:A:240:ARG:HG3	2.08	0.54
1:A:394:LYS:HG2	1:A:466:TRP:CZ3	2.43	0.54
1:A:77:CYS:SG	10:A:681:HOH:O	2.58	0.54
1:B:226:LYS:HB3	1:B:413:ASN:HA	1.90	0.54
1:A:394:LYS:HG2	1:A:466:TRP:CH2	2.43	0.54
1:C:121:ASP:OD2	10:C:601:HOH:O	2.18	0.53
1:C:201:LYS:O	10:C:602:HOH:O	2.19	0.53
1:D:331:MET:HG3	1:D:338:ARG:HB2	1.90	0.53
1:B:149:GLN:NE2	1:C:150:GLN:OE1	2.41	0.53
1:C:317:ARG:HG2	1:C:317:ARG:HH11	1.74	0.53
1:A:207:GLN:HB3	1:A:240:ARG:NH1	2.24	0.53
1:C:87:GLU:O	1:C:104:SER:HA	2.09	0.53
1:B:77:CYS:HB2	10:B:740:HOH:O	2.09	0.53
1:C:226:LYS:HB3	1:C:413:ASN:HA	1.90	0.53
1:D:130:THR:HG22	1:D:133:ASP:OD2	2.09	0.52
1:A:350:ALA:HB1	1:A:356:VAL:HG21	1.90	0.52
1:A:413:ASN:HD21	1:A:415:ASN:ND2	2.07	0.52
1:D:315:SER:O	1:D:422[A]:ARG:NH1	2.41	0.52
1:B:186:ARG:NH2	5:B:501:CIT:H42	2.25	0.52
1:D:415:ASN:C	1:D:415:ASN:HD22	2.13	0.52
1:C:287:LEU:HB2	1:C:447:THR:OG1	2.10	0.52
1:D:365:TRP:CE2	1:D:367:HIS:HB2	2.44	0.52
1:B:74:PRO:HB3	1:B:270:ARG:HG3	1.92	0.52
1:B:358:VAL:CG1	1:B:391:ILE:HG12	2.40	0.51
1:D:264:PRO:HG2	1:D:267:PHE:CE1	2.47	0.50
1:B:397:VAL:HG11	1:B:481:VAL:CG1	2.40	0.50
1:D:483:ASN:OD1	1:D:484:ALA:N	2.45	0.50
1:A:93:LEU:HD22	1:A:470:TYR:CE2	2.47	0.50
1:A:192:LYS:HG3	1:A:193:LEU:N	2.26	0.50
1:C:113:LEU:HD22	1:C:154:LEU:HD11	1.94	0.50
1:D:357:LYS:NZ	1:D:390:ASP:CG	2.65	0.50
1:B:228:LEU:HG	1:B:229:GLY:N	2.26	0.49
1:A:122:ILE:HB	1:A:163:ILE:HD13	1.94	0.49
1:C:481:VAL:HG12	1:C:483:ASN:O	2.11	0.49
1:B:414:HIS:HD2	8:B:505:PO4:O2	1.96	0.49
1:D:236:SER:OG	1:D:240:ARG:NH1	2.46	0.49
1:B:387:THR:HG22	1:A:371:SER:HB2	1.95	0.49
1:A:397:VAL:HG11	1:A:481:VAL:CG1	2.44	0.48
1:B:112:LEU:HA	6:B:504:GOL:C3	2.33	0.48
1:B:359:ARG:HD3	1:B:466:TRP:CE2	2.48	0.48
1:A:331:MET:HG2	1:A:338:ARG:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:372:MET:CE	1:C:487:LEU:HD11	2.43	0.48
1:B:320:ILE:HG23	1:B:418:MET:CE	2.43	0.48
1:D:186:ARG:NH1	1:D:254:GLN:HG3	2.28	0.48
1:A:147:VAL:O	1:A:151:LEU:HD13	2.14	0.47
1:A:199:HIS:O	1:A:201:LYS:HD2	2.13	0.47
1:D:303:THR:HA	6:D:502:GOL:H2	1.97	0.47
1:D:414:HIS:HE1	8:D:503:PO4:O3	1.97	0.47
1:D:357:LYS:HZ1	1:D:390:ASP:CB	2.27	0.47
1:C:365:TRP:HB3	1:C:412:VAL:HG13	1.97	0.47
1:B:86:VAL:CG1	1:B:105:THR:HA	2.44	0.47
1:A:87:GLU:O	1:A:104:SER:HA	2.15	0.47
1:A:273:GLN:HE22	1:A:307[B]:LYS:CD	2.27	0.47
1:C:370:PRO:HB2	1:D:386:HIS:CE1	2.50	0.47
1:D:226:LYS:HB3	1:D:413:ASN:HA	1.97	0.47
1:C:317:ARG:HG2	1:C:317:ARG:NH1	2.30	0.47
1:B:258:SER:O	1:B:258:SER:OG	2.29	0.47
1:B:265:ARG:HD3	1:B:265:ARG:N	2.26	0.47
1:B:268:ASP:OD2	1:B:300:SER:HB3	2.15	0.47
1:A:273:GLN:HE22	1:A:307[A]:LYS:HG3	1.79	0.47
1:B:373:ARG:HB2	1:B:487:LEU:HD12	1.96	0.46
1:D:153:ALA:O	1:D:156:PRO:HD2	2.14	0.46
1:D:268:ASP:OD2	1:D:300:SER:OG	2.33	0.46
1:B:258:SER:O	1:B:259:ILE:HB	2.15	0.46
1:D:326:ASN:ND2	10:D:612:HOH:O	2.48	0.46
1:D:312:VAL:HG13	10:D:601:HOH:O	2.14	0.46
1:B:365:TRP:CE2	1:B:367:HIS:HB2	2.51	0.46
1:C:422:ARG:CZ	1:C:422:ARG:HB2	2.46	0.46
1:B:293:ALA:O	1:B:440:ALA:HA	2.16	0.46
1:D:365:TRP:HB3	1:D:412:VAL:HG13	1.97	0.46
1:C:91:GLU:HG2	1:C:223:THR:O	2.16	0.46
1:A:205:VAL:HG13	1:A:209:HIS:HB2	1.98	0.45
1:D:370:PRO:HD3	1:D:486:ARG:HD3	1.98	0.45
1:A:418:MET:HB3	1:A:425:TYR:HB3	1.98	0.45
1:C:325:MET:HA	1:C:363:SER:HB2	1.98	0.45
1:B:225:VAL:HG11	1:B:414:HIS:ND1	2.32	0.45
1:D:134:THR:O	1:D:136:THR:HG23	2.16	0.45
10:D:666:HOH:O	3:J:1:NAG:H83	2.16	0.45
1:A:189:ASP:HB3	1:A:192:LYS:HE2	1.98	0.45
1:B:176:GLN:O	1:B:180:GLN:HG3	2.17	0.45
1:D:152:GLN:OE1	1:D:177:SER:OG	2.35	0.45
1:A:265:ARG:H	1:A:265:ARG:NE	2.13	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:435:TYR:HA	1:A:439:THR:HB	1.98	0.45
1:C:385:ASN:ND2	1:C:385:ASN:H	2.13	0.45
1:B:93:LEU:HD22	1:B:470:TYR:CZ	2.51	0.44
1:D:421:GLU:HG2	1:D:422[B]:ARG:HG3	1.98	0.44
1:D:362:ILE:O	1:D:395:LEU:HA	2.17	0.44
1:D:199:HIS:NE2	8:D:503:PO4:O1	2.49	0.44
1:A:205:VAL:CG1	1:A:209:HIS:HB2	2.48	0.44
1:B:358:VAL:HG13	1:B:391:ILE:HG23	1.99	0.44
1:A:134:THR:O	1:A:136:THR:HG23	2.17	0.44
1:C:189:ASP:O	1:C:193:LEU:HG	2.16	0.44
1:A:265:ARG:H	1:A:265:ARG:CD	2.30	0.44
1:C:372:MET:HE2	1:C:487:LEU:HD11	1.98	0.44
1:D:113:LEU:HD22	1:D:154:LEU:HD11	1.99	0.44
1:A:77:CYS:HB3	1:A:279:ILE:HG22	1.99	0.43
1:D:130:THR:HG22	1:D:133:ASP:CG	2.37	0.43
1:A:82:GLU:OE1	9:A:501:NAG:N2	2.48	0.43
1:D:293:ALA:O	1:D:440:ALA:HA	2.17	0.43
1:B:328:LEU:C	1:B:328:LEU:HD13	2.39	0.43
1:C:160:LYS:HG2	10:C:610:HOH:O	2.18	0.43
1:D:167:LYS:HG2	1:D:189:ASP:HA	1.99	0.43
1:C:354:ARG:HB2	1:C:356:VAL:HG23	1.99	0.43
1:A:117[A]:HIS:ND1	1:A:118:SER:HB2	2.33	0.43
1:D:154:LEU:HD23	1:D:154:LEU:HA	1.87	0.43
1:C:265:ARG:NE	1:C:265:ARG:H	2.17	0.43
1:B:111:GLY:O	6:B:504:GOL:H12	2.19	0.43
1:D:418:MET:HB3	1:D:425:TYR:HB3	2.00	0.42
1:A:112:LEU:HD22	1:A:205:VAL:HG11	2.02	0.42
1:A:362:ILE:O	1:A:395:LEU:HA	2.19	0.42
1:A:107:GLN:HE21	1:A:107:GLN:HB3	1.60	0.42
1:A:365:TRP:CH2	1:A:409:TYR:HD1	2.38	0.42
1:D:212:LEU:HD11	1:D:442:THR:OG1	2.20	0.42
1:A:287:LEU:HB2	1:A:447:THR:OG1	2.18	0.42
1:B:414:HIS:HE1	10:B:651:HOH:O	2.02	0.42
1:A:219:TRP:HB2	10:A:654:HOH:O	2.18	0.42
1:D:237:CYS:HB3	1:D:277:MET:HE2	2.02	0.42
1:D:130:THR:HG23	1:D:133:ASP:H	1.84	0.42
2:H:2:NAG:H83	2:H:5:MAN:H2	2.02	0.42
1:C:169:ASN:HD22	1:C:169:ASN:HA	1.59	0.42
1:C:198:LEU:HD22	1:C:440:ALA:CB	2.50	0.42
1:D:203:TRP:NE1	1:D:217:MET:HE1	2.31	0.42
1:D:203:TRP:O	1:D:210:PHE:HA	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:86:VAL:CG1	1:C:105:THR:HA	2.50	0.42
1:D:87:GLU:O	1:D:104:SER:HA	2.20	0.42
1:D:163:ILE:O	1:D:250:TRP:HZ3	2.02	0.41
1:D:273:GLN:NE2	1:D:307:LYS:HE2	2.31	0.41
1:B:328:LEU:CD1	1:B:330:THR:OG1	2.68	0.41
1:D:264:PRO:HG2	1:D:267:PHE:CD1	2.56	0.41
1:A:295:PRO:HB2	1:A:296:PRO:HD3	2.01	0.41
1:A:397:VAL:HG11	1:A:481:VAL:HG12	2.02	0.41
1:C:335:HIS:HB3	1:C:336:PRO:CD	2.46	0.41
1:D:85:LEU:HD23	1:D:85:LEU:HA	1.91	0.41
1:B:476:THR:O	1:B:488:LEU:HD22	2.20	0.41
1:C:93:LEU:HD22	1:C:470:TYR:CZ	2.56	0.41
1:A:408:PRO:HA	6:A:502:GOL:H31	2.03	0.41
1:D:77:CYS:HB3	1:D:279:ILE:HG22	2.03	0.41
1:B:394:LYS:HG3	1:B:466:TRP:CH2	2.56	0.41
1:C:394:LYS:HG3	1:C:466:TRP:CH2	2.56	0.41
1:B:264:PRO:HG2	1:B:267:PHE:CD1	2.55	0.41
1:B:291:ALA:HB3	1:B:443:SER:OG	2.21	0.41
1:B:365:TRP:CE3	1:B:412:VAL:HG22	2.56	0.41
1:A:264:PRO:HG2	1:A:267:PHE:HE1	1.86	0.41
1:D:397:VAL:CG2	1:D:481:VAL:HG13	2.44	0.41
1:B:328:LEU:HD11	1:B:330:THR:OG1	2.20	0.41
1:A:365:TRP:N	1:A:365:TRP:CD1	2.89	0.41
1:D:287:LEU:HB2	1:D:447:THR:OG1	2.21	0.41
1:D:377:LEU:HD23	1:D:377:LEU:HA	1.81	0.41
1:A:279:ILE:CD1	1:A:286:ALA:HB3	2.50	0.40
1:D:327:TYR:O	1:D:372:MET:HG2	2.20	0.40
1:B:175:LEU:HD23	1:B:175:LEU:HA	1.86	0.40
1:A:138:GLU:CD	1:A:407:ILE:HD11	2.42	0.40
1:A:192:LYS:HG3	1:A:193:LEU:HG	2.04	0.40
1:D:238:LEU:HA	1:D:277:MET:HE1	2.02	0.40
1:B:238:LEU:HA	1:B:238:LEU:HD12	1.80	0.40
1:B:422:ARG:NH2	10:B:617:HOH:O	2.54	0.40
1:D:348:ARG:NH1	1:D:382:LEU:HD11	2.37	0.40
1:A:317:ARG:HA	1:A:317:ARG:HH11	1.86	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	402/467 (86%)	390 (97%)	10 (2%)	2 (0%)	29	23
1	B	400/467 (86%)	390 (98%)	9 (2%)	1 (0%)	41	37
1	C	400/467 (86%)	390 (98%)	10 (2%)	0	100	100
1	D	401/467 (86%)	390 (97%)	10 (2%)	1 (0%)	47	44
All	All	1603/1868 (86%)	1560 (97%)	39 (2%)	4 (0%)	41	44

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	96	PRO
1	D	101	SER
1	A	479	ASN
1	B	259	ILE

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	353/398 (89%)	338 (96%)	15 (4%)	30	27
1	B	350/398 (88%)	336 (96%)	14 (4%)	31	29
1	C	350/398 (88%)	335 (96%)	15 (4%)	29	26
1	D	352/398 (88%)	340 (97%)	12 (3%)	37	36
All	All	1405/1592 (88%)	1349 (96%)	56 (4%)	32	29

All (56) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	118	SER
1	B	201	LYS
1	B	242	LEU
1	B	261	SER
1	B	265	ARG
1	B	268	ASP
1	B	270	ARG
1	B	317	ARG
1	B	326	ASN
1	B	365	TRP
1	B	412	VAL
1	B	422	ARG
1	B	483	ASN
1	B	486	ARG
1	A	96	PRO
1	A	101	SER
1	A	118	SER
1	A	142	GLN
1	A	180	GLN
1	A	201	LYS
1	A	228	LEU
1	A	265	ARG
1	A	300	SER
1	A	307[A]	LYS
1	A	307[B]	LYS
1	A	337	ARG
1	A	365	TRP
1	A	412	VAL
1	A	486	ARG
1	C	142	GLN
1	C	187	MET
1	C	201	LYS
1	C	265	ARG
1	C	300	SER
1	C	324	VAL
1	C	326	ASN
1	C	338	ARG
1	C	365	TRP
1	C	372	MET
1	C	383	HIS
1	C	385	ASN
1	C	412	VAL

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Mol	Chain	Res	Type
1	C	481	VAL
1	C	486	ARG
1	D	177	SER
1	D	201	LYS
1	D	212	LEU
1	D	228	LEU
1	D	242	LEU
1	D	268	ASP
1	D	317	ARG
1	D	365	TRP
1	D	412	VAL
1	D	415	ASN
1	D	481	VAL
1	D	487	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (14) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	117	HIS
1	B	143	GLN
1	B	149	GLN
1	B	326	ASN
1	B	414	HIS
1	B	415	ASN
1	A	273	GLN
1	A	385	ASN
1	A	415	ASN
1	C	169	ASN
1	C	385	ASN
1	C	415	ASN
1	D	273	GLN
1	D	326	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 ⓘ

26 monosaccharides are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#$|Z| > 2$	Counts	RMSZ	#$|Z| > 2$
2	NAG	E	1	1,2	14,14,15	0.31	0	17,19,21	0.78	0
2	NAG	E	2	2	14,14,15	0.92	1 (7%)	17,19,21	0.80	2 (11%)
2	BMA	E	3	2	11,11,12	1.02	1 (9%)	15,15,17	0.95	1 (6%)
2	MAN	E	4	2	11,11,12	1.59	2 (18%)	15,15,17	1.14	1 (6%)
2	MAN	E	5	2	11,11,12	1.39	2 (18%)	15,15,17	1.22	1 (6%)
2	MAN	E	6	2	11,11,12	0.90	0	15,15,17	0.92	1 (6%)
2	MAN	E	7	2	11,11,12	1.06	1 (9%)	15,15,17	1.25	2 (13%)
3	NAG	F	1	3,1	14,14,15	0.30	0	17,19,21	0.66	0
3	NAG	F	2	3	14,14,15	0.40	0	17,19,21	0.67	0
3	NAG	G	1	3,1	14,14,15	0.44	0	17,19,21	0.47	0
3	NAG	G	2	3	14,14,15	0.31	0	17,19,21	0.68	0
2	NAG	H	1	1,2	14,14,15	0.71	1 (7%)	17,19,21	0.71	0
2	NAG	H	2	2	14,14,15	0.67	0	17,19,21	0.83	1 (5%)
2	BMA	H	3	2	11,11,12	1.20	1 (9%)	15,15,17	1.23	1 (6%)
2	MAN	H	4	2	11,11,12	0.85	0	15,15,17	1.38	2 (13%)
2	MAN	H	5	2	11,11,12	1.57	2 (18%)	15,15,17	1.64	3 (20%)
2	MAN	H	6	2	11,11,12	0.99	1 (9%)	15,15,17	1.54	1 (6%)
2	MAN	H	7	2	11,11,12	1.25	0	15,15,17	1.41	2 (13%)
4	NAG	I	1	4,1	14,14,15	0.20	0	17,19,21	0.60	0
4	NAG	I	2	4	14,14,15	0.23	0	17,19,21	0.72	0
4	BMA	I	3	4	11,11,12	1.02	1 (9%)	15,15,17	0.86	0
4	MAN	I	4	4	11,11,12	0.95	0	15,15,17	1.05	2 (13%)
3	NAG	J	1	3,1	14,14,15	0.39	0	17,19,21	0.57	0
3	NAG	J	2	3	14,14,15	0.63	1 (7%)	17,19,21	0.64	0
3	NAG	K	1	3,1	14,14,15	0.45	0	17,19,21	0.91	1 (5%)
3	NAG	K	2	3	14,14,15	0.28	0	17,19,21	0.47	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	NAG	E	1	1,2	-	0/6/23/26	0/1/1/1
2	NAG	E	2	2	-	0/6/23/26	0/1/1/1
2	BMA	E	3	2	-	0/2/19/22	0/1/1/1
2	MAN	E	4	2	-	0/2/19/22	0/1/1/1
2	MAN	E	5	2	-	2/2/19/22	0/1/1/1
2	MAN	E	6	2	-	0/2/19/22	0/1/1/1
2	MAN	E	7	2	-	2/2/19/22	0/1/1/1
3	NAG	F	1	3,1	-	2/6/23/26	0/1/1/1
3	NAG	F	2	3	-	0/6/23/26	0/1/1/1
3	NAG	G	1	3,1	-	0/6/23/26	0/1/1/1
3	NAG	G	2	3	-	2/6/23/26	0/1/1/1
2	NAG	H	1	1,2	-	0/6/23/26	0/1/1/1
2	NAG	H	2	2	-	0/6/23/26	0/1/1/1
2	BMA	H	3	2	-	0/2/19/22	0/1/1/1
2	MAN	H	4	2	-	0/2/19/22	0/1/1/1
2	MAN	H	5	2	-	2/2/19/22	0/1/1/1
2	MAN	H	6	2	-	2/2/19/22	0/1/1/1
2	MAN	H	7	2	-	2/2/19/22	0/1/1/1
4	NAG	I	1	4,1	-	0/6/23/26	0/1/1/1
4	NAG	I	2	4	-	0/6/23/26	0/1/1/1
4	BMA	I	3	4	-	0/2/19/22	0/1/1/1
4	MAN	I	4	4	-	2/2/19/22	0/1/1/1
3	NAG	J	1	3,1	-	1/6/23/26	0/1/1/1
3	NAG	J	2	3	-	2/6/23/26	0/1/1/1
3	NAG	K	1	3,1	-	2/6/23/26	0/1/1/1
3	NAG	K	2	3	-	2/6/23/26	0/1/1/1

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	4	MAN	C2-C3	4.07	1.58	1.52
2	H	5	MAN	C2-C3	-3.91	1.46	1.52
2	H	3	BMA	C2-C3	3.33	1.57	1.52
2	E	2	NAG	O5-C1	-3.23	1.38	1.43
2	H	5	MAN	O5-C5	2.84	1.49	1.43
2	E	5	MAN	C2-C3	2.65	1.56	1.52
2	H	6	MAN	O5-C5	2.41	1.48	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	7	MAN	C1-C2	2.30	1.57	1.52
2	E	5	MAN	O5-C5	2.28	1.48	1.43
2	H	1	NAG	O5-C1	-2.26	1.40	1.43
2	E	4	MAN	O5-C5	2.08	1.47	1.43
2	E	3	BMA	C2-C3	2.06	1.55	1.52
3	J	2	NAG	C1-C2	2.03	1.55	1.52
4	I	3	BMA	C1-C2	2.01	1.56	1.52

All (21) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	H	6	MAN	C1-O5-C5	4.78	118.67	112.19
2	H	5	MAN	O2-C2-C3	-4.20	101.73	110.14
2	H	4	MAN	C1-O5-C5	3.93	117.52	112.19
2	H	7	MAN	C1-O5-C5	3.58	117.04	112.19
2	E	7	MAN	C1-O5-C5	3.39	116.78	112.19
2	H	3	BMA	C1-O5-C5	3.21	116.54	112.19
2	E	5	MAN	C1-O5-C5	3.07	116.35	112.19
2	H	5	MAN	C1-C2-C3	2.75	113.05	109.67
3	K	1	NAG	C1-O5-C5	2.62	115.74	112.19
2	E	4	MAN	C1-O5-C5	2.53	115.62	112.19
2	H	2	NAG	C1-O5-C5	2.47	115.53	112.19
2	E	3	BMA	C1-O5-C5	2.40	115.44	112.19
4	I	4	MAN	O2-C2-C3	-2.30	105.54	110.14
2	H	4	MAN	O2-C2-C3	-2.29	105.54	110.14
4	I	4	MAN	C1-O5-C5	2.21	115.18	112.19
2	E	6	MAN	C1-O5-C5	2.19	115.16	112.19
2	E	7	MAN	O2-C2-C3	-2.14	105.86	110.14
2	H	7	MAN	O2-C2-C3	-2.13	105.88	110.14
2	E	2	NAG	C1-O5-C5	2.04	114.96	112.19
2	E	2	NAG	O4-C4-C5	-2.03	104.25	109.30
2	H	5	MAN	C1-O5-C5	2.02	114.93	112.19

There are no chirality outliers.

All (23) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	E	7	MAN	O5-C5-C6-O6
2	H	6	MAN	O5-C5-C6-O6
2	H	7	MAN	C4-C5-C6-O6
2	H	6	MAN	C4-C5-C6-O6
2	H	7	MAN	O5-C5-C6-O6

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Mol	Chain	Res	Type	Atoms
3	G	2	NAG	O5-C5-C6-O6
2	E	7	MAN	C4-C5-C6-O6
3	F	1	NAG	C4-C5-C6-O6
3	G	2	NAG	C4-C5-C6-O6
3	K	2	NAG	O5-C5-C6-O6
3	K	2	NAG	C4-C5-C6-O6
3	F	1	NAG	O5-C5-C6-O6
2	H	5	MAN	O5-C5-C6-O6
4	I	4	MAN	C4-C5-C6-O6
3	J	2	NAG	C4-C5-C6-O6
4	I	4	MAN	O5-C5-C6-O6
3	J	2	NAG	O5-C5-C6-O6
3	K	1	NAG	C3-C2-N2-C7
2	H	5	MAN	C4-C5-C6-O6
2	E	5	MAN	O5-C5-C6-O6
2	E	5	MAN	C4-C5-C6-O6
3	K	1	NAG	C1-C2-N2-C7
3	J	1	NAG	C1-C2-N2-C7

There are no ring outliers.

3 monomers are involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	H	2	NAG	1	0
2	H	5	MAN	1	0
3	J	1	NAG	1	0

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

Oligosaccharide Chain E

Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain H

Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain F

Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain G

Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain J

Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain K

Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain I

Bond lengths	Bond angles

Torsions	Rings

5.6 Ligand geometry ⓘ

13 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
8	PO4	A	503	-	4,4,4	1.08	0	6,6,6	1.18	1 (16%)
8	PO4	C	502	-	4,4,4	1.15	0	6,6,6	0.62	0
7	ACE	B	503	-	1,2,2	1.07	0	1,1,1	0.06	0
6	GOL	D	501	-	5,5,5	0.93	0	5,5,5	0.81	0
5	CIT	B	501	-	12,12,12	0.98	0	17,17,17	1.81	6 (35%)
9	NAG	A	501	1	14,14,15	1.16	2 (14%)	17,19,21	0.75	0
8	PO4	B	505	-	4,4,4	1.43	1 (25%)	6,6,6	0.53	0
6	GOL	B	502	-	5,5,5	1.44	1 (20%)	5,5,5	0.99	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
6	GOL	D	502	-	5,5,5	0.88	0	5,5,5	1.07	0
6	GOL	B	504	-	5,5,5	0.93	0	5,5,5	0.99	0
6	GOL	C	501	-	5,5,5	1.51	1 (20%)	5,5,5	1.12	0
8	PO4	D	503	-	4,4,4	1.32	0	6,6,6	0.87	0
6	GOL	A	502	-	5,5,5	1.33	1 (20%)	5,5,5	1.00	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	GOL	D	501	-	-	2/4/4/4	-
5	CIT	B	501	-	-	7/16/16/16	-
9	NAG	A	501	1	-	4/6/23/26	0/1/1/1
6	GOL	B	502	-	-	2/4/4/4	-
6	GOL	D	502	-	-	4/4/4/4	-
6	GOL	B	504	-	-	2/4/4/4	-
6	GOL	C	501	-	-	2/4/4/4	-
6	GOL	A	502	-	-	4/4/4/4	-

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	A	501	NAG	O5-C1	3.01	1.48	1.43
9	A	501	NAG	C1-C2	2.90	1.56	1.52
6	B	502	GOL	O2-C2	-2.82	1.35	1.43
8	B	505	PO4	P-O2	-2.27	1.47	1.54
6	C	501	GOL	C3-C2	-2.16	1.42	1.51
6	A	502	GOL	O2-C2	-2.13	1.37	1.43

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(º)	Ideal(º)
5	B	501	CIT	C3-C4-C5	-3.87	104.45	113.81
5	B	501	CIT	O6-C6-C3	2.93	118.15	113.05
5	B	501	CIT	C4-C3-C6	-2.52	104.70	110.11
5	B	501	CIT	C2-C3-C6	2.51	115.50	110.11
5	B	501	CIT	O2-C1-C2	2.42	122.13	114.35
5	B	501	CIT	O2-C1-O1	-2.19	117.84	123.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	A	503	PO4	O3-P-O1	-2.12	103.12	110.89

There are no chirality outliers.

All (27) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	B	501	CIT	C2-C3-C4-C5
5	B	501	CIT	O7-C3-C4-C5
5	B	501	CIT	C6-C3-C4-C5
5	B	501	CIT	C2-C3-C6-O5
5	B	501	CIT	C2-C3-C6-O6
5	B	501	CIT	O7-C3-C6-O5
5	B	501	CIT	O7-C3-C6-O6
6	B	502	GOL	O1-C1-C2-C3
6	B	504	GOL	C1-C2-C3-O3
6	A	502	GOL	O1-C1-C2-O2
6	A	502	GOL	O1-C1-C2-C3
6	A	502	GOL	C1-C2-C3-O3
6	D	502	GOL	C1-C2-C3-O3
9	A	501	NAG	O5-C5-C6-O6
9	A	501	NAG	C4-C5-C6-O6
6	C	501	GOL	C1-C2-C3-O3
6	D	501	GOL	C1-C2-C3-O3
6	D	502	GOL	O1-C1-C2-C3
6	B	502	GOL	O1-C1-C2-O2
6	B	504	GOL	O2-C2-C3-O3
6	D	501	GOL	O2-C2-C3-O3
6	A	502	GOL	O2-C2-C3-O3
6	D	502	GOL	O2-C2-C3-O3
6	C	501	GOL	O2-C2-C3-O3
6	D	502	GOL	O1-C1-C2-O2
9	A	501	NAG	C1-C2-N2-C7
9	A	501	NAG	C3-C2-N2-C7

There are no ring outliers.

9 monomers are involved in 16 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	B	501	CIT	4	0
9	A	501	NAG	1	0
8	B	505	PO4	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
6	B	502	GOL	1	0
6	D	502	GOL	1	0
6	B	504	GOL	3	0
6	C	501	GOL	1	0
8	D	503	PO4	3	0
6	A	502	GOL	1	0

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

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	408/467 (87%)	-0.13	5 (1%)	79	78	23, 34, 54, 91	0
1	B	408/467 (87%)	-0.15	2 (0%)	91	90	22, 31, 50, 72	0
1	C	408/467 (87%)	-0.19	3 (0%)	87	87	23, 31, 51, 77	0
1	D	407/467 (87%)	-0.09	2 (0%)	91	90	26, 36, 57, 72	0
All	All	1631/1868 (87%)	-0.14	12 (0%)	87	87	22, 33, 54, 91	0

All (12) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	255	ALA	4.7
1	D	172	LEU	4.0
1	A	170	GLY	3.8
1	B	170	GLY	3.3
1	A	169	ASN	3.3
1	A	97	ASN	2.9
1	A	479	ASN	2.9
1	C	171	PRO	2.7
1	D	72	GLN	2.7
1	A	172	LEU	2.3
1	B	171	PRO	2.2
1	C	335	HIS	2.0

6.2 Non-standard residues in protein, DNA, RNA chains ⓘ

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
2	MAN	H	6	11/12	0.81	0.15	64,66,67,70	0
3	NAG	K	2	14/15	0.82	0.22	65,73,78,79	0
3	NAG	J	2	14/15	0.85	0.18	52,69,76,82	0
2	MAN	E	7	11/12	0.86	0.19	60,66,69,72	0
4	BMA	I	3	11/12	0.87	0.19	56,60,64,65	0
2	MAN	E	6	11/12	0.88	0.21	62,64,68,68	0
4	MAN	I	4	11/12	0.88	0.15	58,61,65,66	0
3	NAG	K	1	14/15	0.91	0.10	44,51,59,70	0
3	NAG	F	1	14/15	0.91	0.14	42,44,51,54	0
3	NAG	G	2	14/15	0.91	0.16	46,59,65,65	0
2	MAN	H	5	11/12	0.91	0.15	44,51,55,55	0
3	NAG	J	1	14/15	0.93	0.12	50,62,64,65	0
3	NAG	F	2	14/15	0.93	0.13	35,48,56,69	0
2	MAN	H	7	11/12	0.93	0.11	41,44,48,51	0
2	MAN	H	4	11/12	0.94	0.09	43,49,57,59	0
2	NAG	E	1	14/15	0.94	0.11	33,41,45,47	0
3	NAG	G	1	14/15	0.94	0.10	42,50,54,58	0
2	MAN	E	5	11/12	0.94	0.08	37,41,43,56	0
2	BMA	H	3	11/12	0.94	0.09	42,45,47,47	0
4	NAG	I	2	14/15	0.95	0.12	40,51,58,65	0
2	BMA	E	3	11/12	0.96	0.07	41,46,50,53	0
2	MAN	E	4	11/12	0.96	0.09	36,44,51,54	0
4	NAG	I	1	14/15	0.96	0.10	38,42,45,47	0
2	NAG	H	1	14/15	0.96	0.08	30,37,40,41	0
2	NAG	H	2	14/15	0.96	0.08	37,41,44,46	0
2	NAG	E	2	14/15	0.96	0.07	40,46,50,62	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.
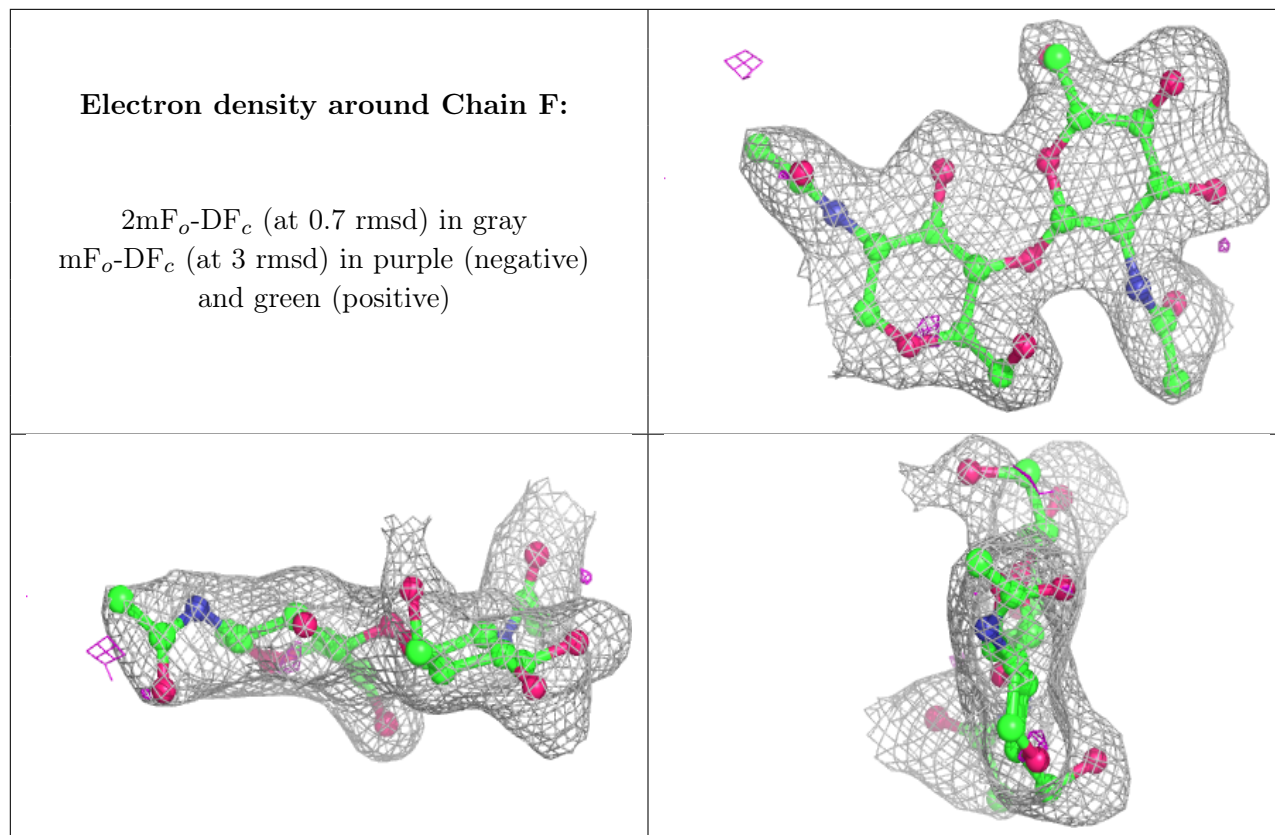
Electron density around Chain E:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
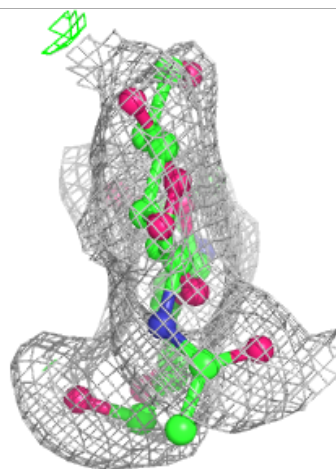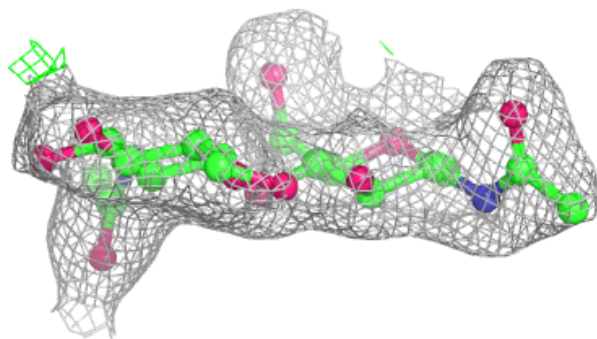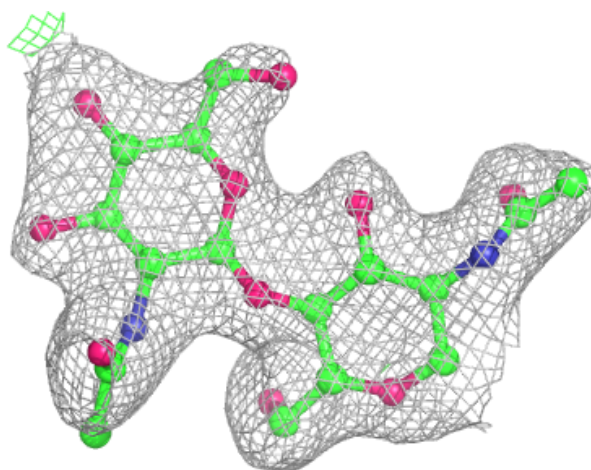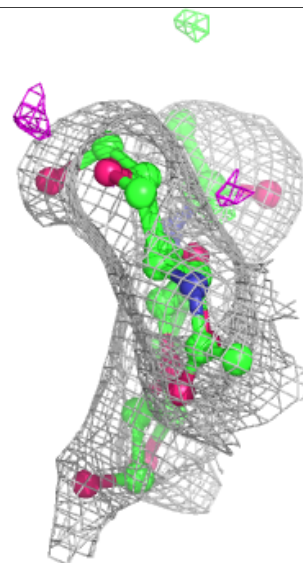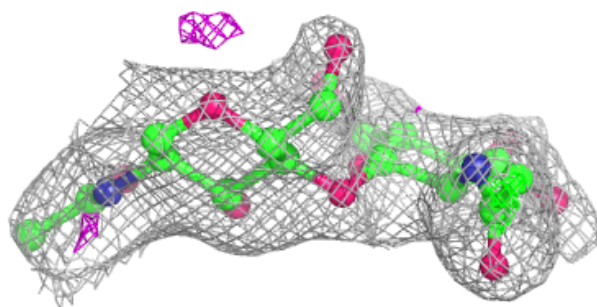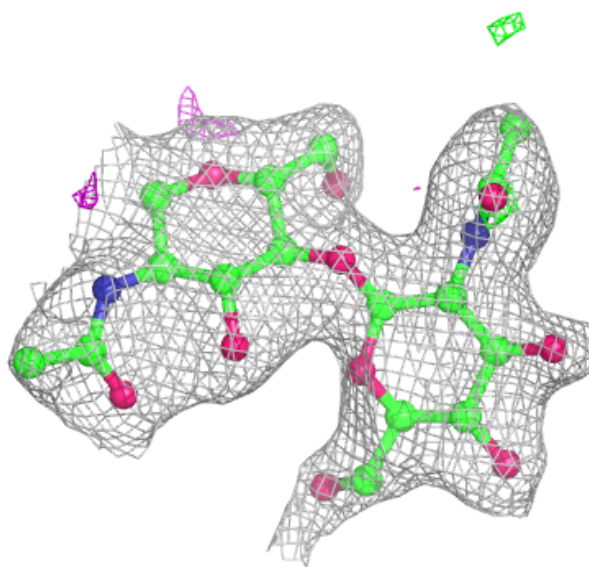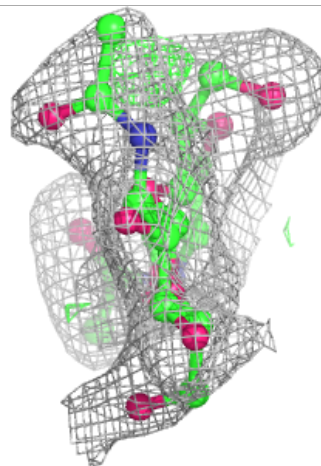and green (positive)
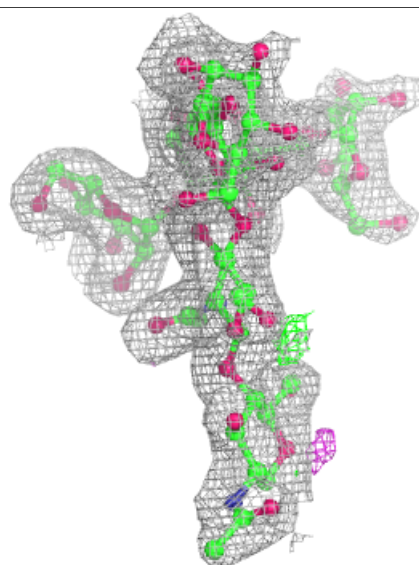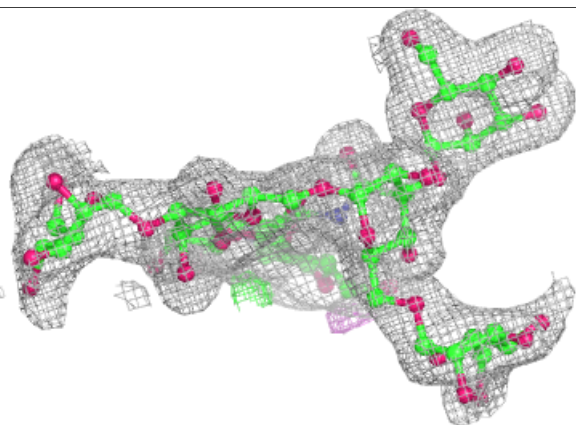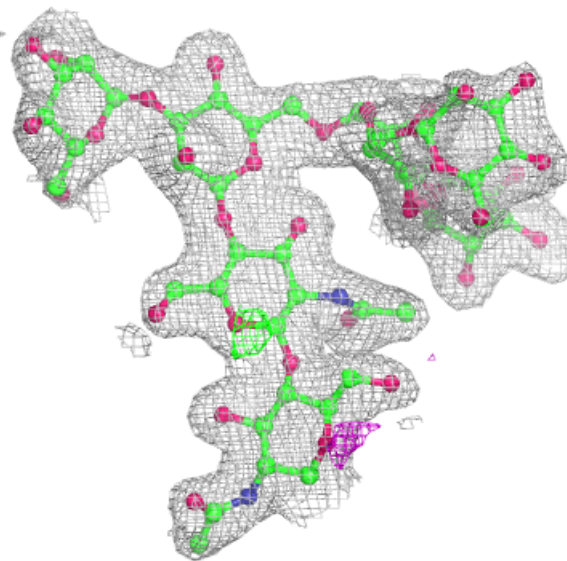
Electron density around Chain H:

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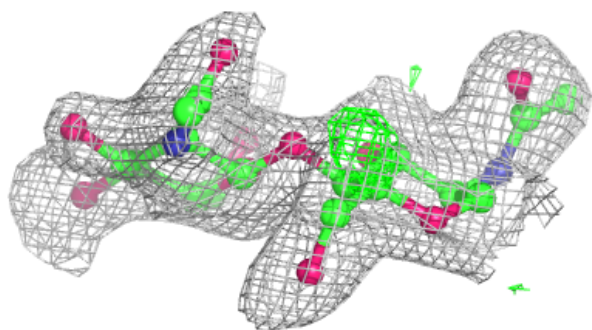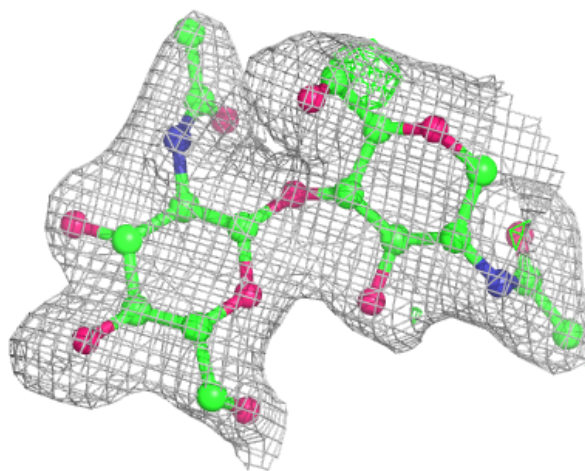and green (positive)

Electron density around Chain F:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
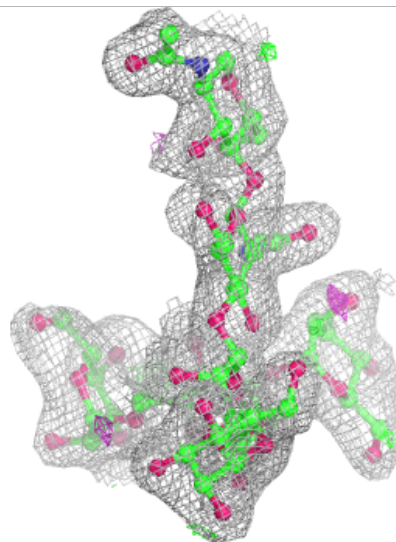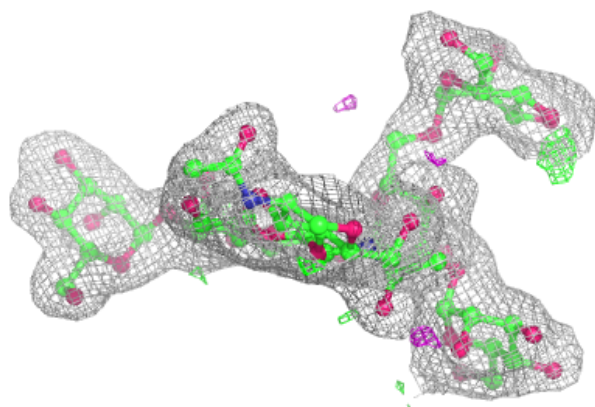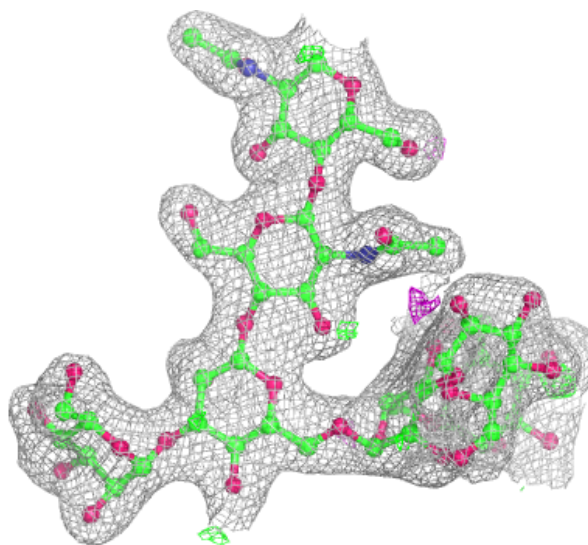
Electron density around Chain G:

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

Electron density around Chain J:

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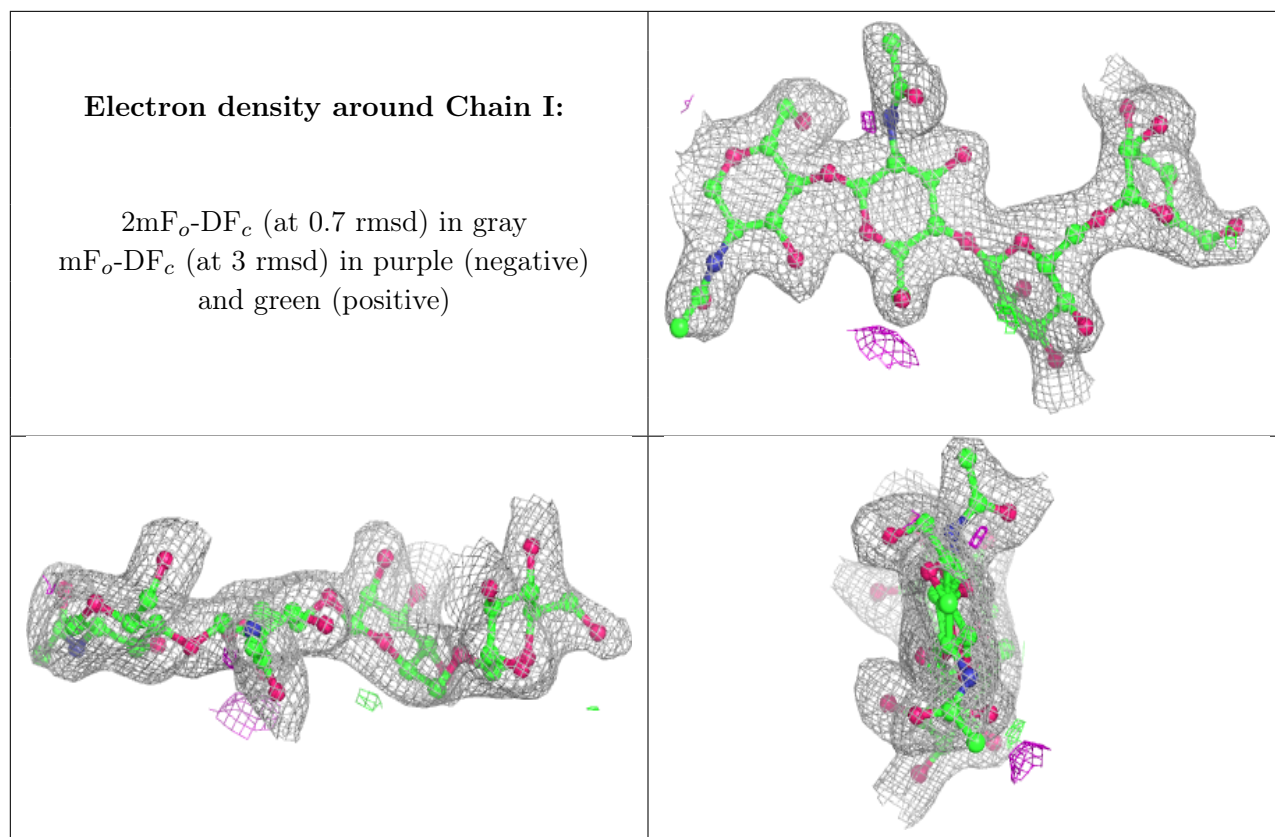and green (positive)

Electron density around Chain K:

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

Electron density around Chain I:

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

6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 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
5	CIT	B	501	13/13	0.86	0.15	45,56,66,68	0
6	GOL	B	502	6/6	0.88	0.16	38,40,44,45	0
6	GOL	D	501	6/6	0.91	0.09	36,39,41,51	0
6	GOL	D	502	6/6	0.94	0.08	38,40,44,46	0
9	NAG	A	501	14/15	0.94	0.10	42,49,55,59	0
6	GOL	B	504	6/6	0.95	0.12	26,28,32,40	0
6	GOL	A	502	6/6	0.95	0.11	40,42,48,48	0
7	ACE	B	503	3/3	0.95	0.10	34,34,35,37	0
6	GOL	C	501	6/6	0.95	0.13	37,40,42,45	0
8	PO4	C	502	5/5	0.98	0.10	35,35,38,39	0
8	PO4	B	505	5/5	0.99	0.09	35,38,40,43	0
8	PO4	D	503	5/5	0.99	0.09	40,41,42,44	0
8	PO4	A	503	5/5	0.99	0.09	35,37,39,41	0

6.5 Other polymers ⓘ

There are no such residues in this entry.