



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 14, 2023 – 10:46 PM EDT

PDB ID : 8CX3
Title : Crystal structure of full-length mesothelin
Authors : Zhan, J.; Esser, L.; Xia, D.
Deposited on : 2022-05-19
Resolution : 3.61 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (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

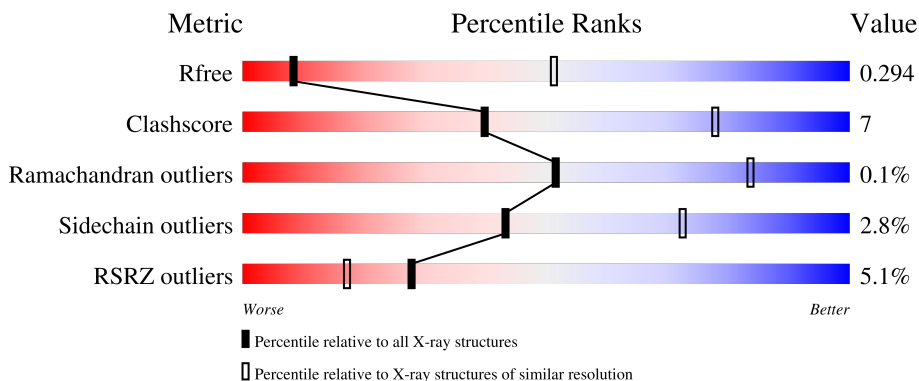
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.61 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.



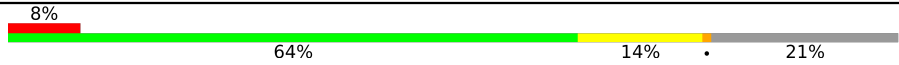
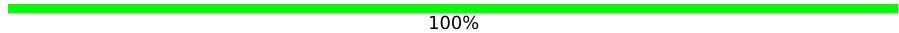
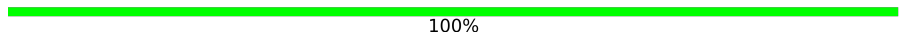
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1257 (3.70-3.50)
Clashscore	141614	1353 (3.70-3.50)
Ramachandran outliers	138981	1307 (3.70-3.50)
Sidechain outliers	138945	1307 (3.70-3.50)
RSRZ outliers	127900	1161 (3.70-3.50)

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	312	<div style="display: flex; align-items: center;"> <div style="width: 5%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 65%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 13%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 17%; height: 10px; background-color: grey;"></div> </div> <p style="text-align: center;">65% 13% 21%</p>
1	B	312	<div style="display: flex; align-items: center;"> <div style="width: 2%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 66%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 13%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 19%; height: 10px; background-color: grey;"></div> </div> <p style="text-align: center;">66% 13% 21%</p>
1	C	312	<div style="display: flex; align-items: center;"> <div style="width: 3%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 67%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 12%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 18%; height: 10px; background-color: grey;"></div> </div> <p style="text-align: center;">67% 12% 21%</p>
1	D	312	<div style="display: flex; align-items: center;"> <div style="width: 5%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 66%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 13%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 16%; height: 10px; background-color: grey;"></div> </div> <p style="text-align: center;">66% 13% 21%</p>
1	E	312	<div style="display: flex; align-items: center;"> <div style="width: 5%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 65%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 14%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 16%; height: 10px; background-color: grey;"></div> </div> <p style="text-align: center;">65% 14% 21%</p>

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Mol	Chain	Length	Quality of chain
1	F	312	 8% 64% 14% 21%
2	G	2	 100%
3	H	3	 100%

2 Entry composition [i](#)

There are 6 unique types of molecules in this entry. The entry contains 11960 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 Isoform 4 of Mesothelin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	245	Total 1942	C 1245	N 318	O 369	S 10	0	0	0
1	B	248	Total 1963	C 1258	N 323	O 372	S 10	0	0	0
1	C	248	Total 1963	C 1258	N 323	O 372	S 10	0	0	0
1	D	248	Total 1963	C 1258	N 323	O 372	S 10	0	0	0
1	E	248	Total 1963	C 1258	N 323	O 372	S 10	0	0	0
1	F	248	Total 1963	C 1258	N 323	O 372	S 10	0	0	0

There are 48 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	295	MET	-	initiating methionine	UNP Q13421
A	593	VAL	MET	conflict	UNP Q13421
A	601	HIS	-	expression tag	UNP Q13421
A	602	HIS	-	expression tag	UNP Q13421
A	603	HIS	-	expression tag	UNP Q13421
A	604	HIS	-	expression tag	UNP Q13421
A	605	HIS	-	expression tag	UNP Q13421
A	606	HIS	-	expression tag	UNP Q13421
B	295	MET	-	initiating methionine	UNP Q13421
B	593	VAL	MET	conflict	UNP Q13421
B	601	HIS	-	expression tag	UNP Q13421
B	602	HIS	-	expression tag	UNP Q13421
B	603	HIS	-	expression tag	UNP Q13421
B	604	HIS	-	expression tag	UNP Q13421
B	605	HIS	-	expression tag	UNP Q13421
B	606	HIS	-	expression tag	UNP Q13421
C	295	MET	-	initiating methionine	UNP Q13421

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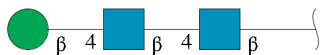
Chain	Residue	Modelled	Actual	Comment	Reference
C	593	VAL	MET	conflict	UNP Q13421
C	601	HIS	-	expression tag	UNP Q13421
C	602	HIS	-	expression tag	UNP Q13421
C	603	HIS	-	expression tag	UNP Q13421
C	604	HIS	-	expression tag	UNP Q13421
C	605	HIS	-	expression tag	UNP Q13421
C	606	HIS	-	expression tag	UNP Q13421
D	295	MET	-	initiating methionine	UNP Q13421
D	593	VAL	MET	conflict	UNP Q13421
D	601	HIS	-	expression tag	UNP Q13421
D	602	HIS	-	expression tag	UNP Q13421
D	603	HIS	-	expression tag	UNP Q13421
D	604	HIS	-	expression tag	UNP Q13421
D	605	HIS	-	expression tag	UNP Q13421
D	606	HIS	-	expression tag	UNP Q13421
E	295	MET	-	initiating methionine	UNP Q13421
E	593	VAL	MET	conflict	UNP Q13421
E	601	HIS	-	expression tag	UNP Q13421
E	602	HIS	-	expression tag	UNP Q13421
E	603	HIS	-	expression tag	UNP Q13421
E	604	HIS	-	expression tag	UNP Q13421
E	605	HIS	-	expression tag	UNP Q13421
E	606	HIS	-	expression tag	UNP Q13421
F	295	MET	-	initiating methionine	UNP Q13421
F	593	VAL	MET	conflict	UNP Q13421
F	601	HIS	-	expression tag	UNP Q13421
F	602	HIS	-	expression tag	UNP Q13421
F	603	HIS	-	expression tag	UNP Q13421
F	604	HIS	-	expression tag	UNP Q13421
F	605	HIS	-	expression tag	UNP Q13421
F	606	HIS	-	expression tag	UNP Q13421

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



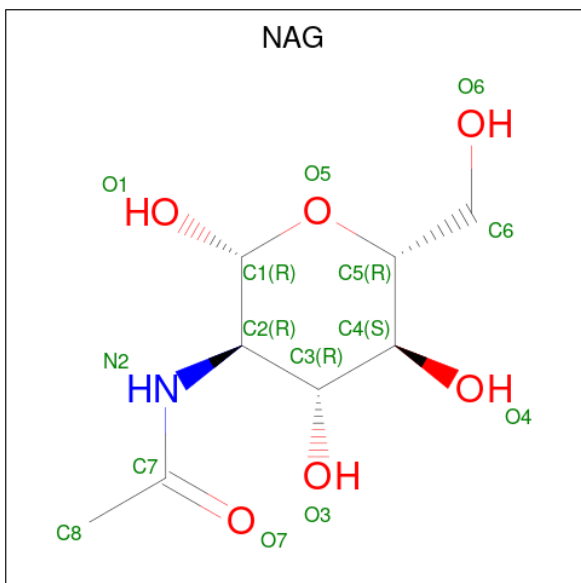
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf	Trace	
			Total	C	N				O
2	G	2	28	16	2	10	0	0	0

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



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

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



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

- Molecule 5 is PHOSPHATE ION (three-letter code: PO4) (formula: O_4P).



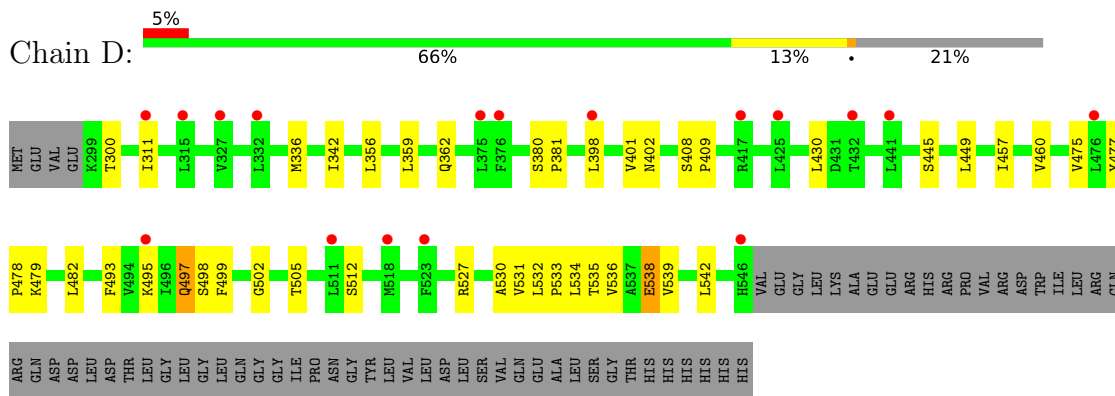
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	A	1	Total	O	P	0	0
			5	4	1		
5	B	1	Total	O	P	0	0
			5	4	1		
5	B	1	Total	O	P	0	0
			5	4	1		
5	C	1	Total	O	P	0	0
			5	4	1		
5	D	1	Total	O	P	0	0
			5	4	1		
5	E	1	Total	O	P	0	0
			5	4	1		
5	E	1	Total	O	P	0	0
			5	4	1		
5	E	1	Total	O	P	0	0
			5	4	1		
5	F	1	Total	O	P	0	0
			5	4	1		
5	F	1	Total	O	P	0	0
			5	4	1		

- Molecule 6 is GLYCEROL (three-letter code: GOL) (formula: C₃H₈O₃).

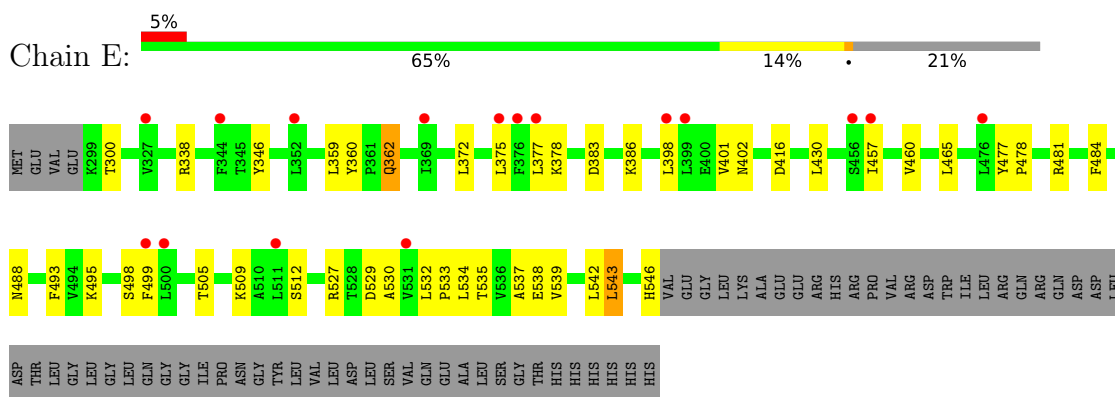


Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
6	A	1	Total	C	O	0	0
			6	3	3		
6	B	1	Total	C	O	0	0
			6	3	3		
6	C	1	Total	C	O	0	0
			6	3	3		
6	D	1	Total	C	O	0	0
			6	3	3		
6	F	1	Total	C	O	0	0
			6	3	3		

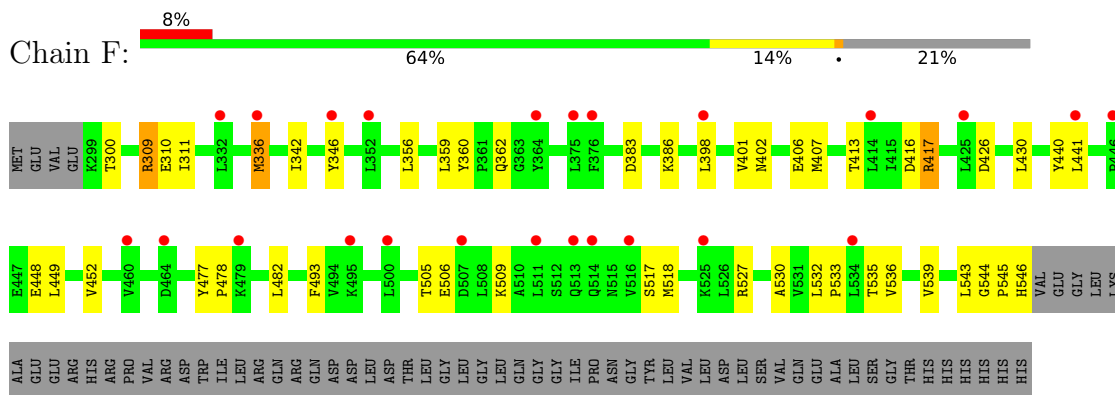
● Molecule 1: Isoform 4 of Mesothelin



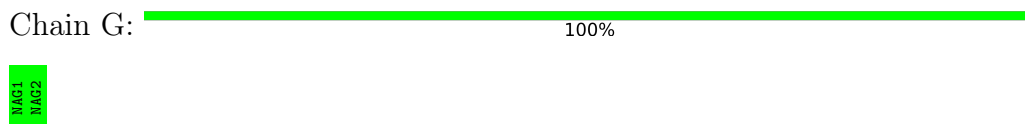
● Molecule 1: Isoform 4 of Mesothelin



● Molecule 1: Isoform 4 of Mesothelin



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



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

Chain H:  100%

3AG1
3AG2
3AG3

4 Data and refinement statistics i

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	197.17Å 279.32Å 170.05Å 90.00° 125.09° 90.00°	Depositor
Resolution (Å)	49.29 – 3.61 49.29 – 3.61	Depositor EDS
% Data completeness (in resolution range)	91.0 (49.29-3.61) 99.1 (49.29-3.61)	Depositor EDS
R_{merge}	0.12	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.96 (at 3.57Å)	Xtriage
Refinement program	REFMAC 5.8.0350	Depositor
R, R_{free}	0.291 , 0.310 0.268 , 0.294	Depositor DCC
R_{free} test set	4341 reflections (5.08%)	wwPDB-VP
Wilson B-factor (Å ²)	99.8	Xtriage
Anisotropy	0.269	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.33 , 50.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.41$, $\langle L^2 \rangle = 0.23$	Xtriage
Estimated twinning fraction	0.059 for $-1/2^*h+1/2^*k-1,3/2^*h+1/2^*k+1,1/2^*h-1/2^*k$ 0.056 for $1/2^*h-1/2^*k+1,-1/2^*h+1/2^*k+1,-h$ 0.057 for $1/2^*h+1/2^*k+1,1/2^*h+1/2^*k-1,-h$ 0.054 for $-1/2^*h-1/2^*k-1,-3/2^*h+1/2^*k-1,1/2^*h+1/2^*k$ 0.065 for $-h,-h-2^*1,1/2^*h-1/2^*k$ 0.054 for $-h,h+2^*1,1/2^*h+1/2^*k$ 0.104 for $1/2^*h+1/2^*k+1,3/2^*h-1/2^*k+1,-l$ 0.114 for $1/2^*h-1/2^*k+1,-3/2^*h-1/2^*k-1,-l$ 0.049 for $-1/2^*h+1/2^*k-1,1/2^*h-1/2^*k-1,-1/2^*h-1/2^*k$ 0.065 for $-1/2^*h-1/2^*k-1,-1/2^*h-1/2^*k+1,-1/2^*h+1/2^*k$ 0.064 for $h,-k,-h-l$	Xtriage
Reported twinning fraction	0.318 for H, K, L 0.329 for $1/2H-1/2K+L$, $-3/2H-1/2K-L$, $-L$ 0.298 for $1/2H+1/2K+L$, $3/2H-1/2K+L$, $-L$ 0.055 for H, $-K$, $-H-L$	Depositor
Outliers	0 of 85403 reflections	Xtriage

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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.

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Property	Value	Source
F _o ,F _c correlation	0.89	EDS
Total number of atoms	11960	wwPDB-VP
Average B, all atoms (Å ²)	131.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.53% of the height of the origin peak. No significant pseudotranslation is detected.*

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: PO4, BMA, NAG, 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	0.26	0/1983	0.45	0/2691
1	B	0.27	0/2006	0.46	0/2723
1	C	0.27	0/2006	0.44	0/2723
1	D	0.27	0/2006	0.45	0/2723
1	E	0.27	0/2006	0.46	0/2723
1	F	0.27	0/2006	0.46	0/2723
All	All	0.27	0/12013	0.45	0/16306

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	1
1	B	0	1
1	E	0	1
1	F	0	1
All	All	0	4

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	338	ARG	Sidechain
1	B	338	ARG	Sidechain
1	E	338	ARG	Sidechain

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Mol	Chain	Res	Type	Group
1	F	417	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	1942	0	1956	25	0
1	B	1963	0	1973	25	0
1	C	1963	0	1973	23	0
1	D	1963	0	1973	39	0
1	E	1963	0	1973	37	0
1	F	1963	0	1973	38	0
2	G	28	0	25	0	0
3	H	39	0	34	0	0
4	A	14	0	13	0	0
4	B	14	0	13	1	0
4	C	14	0	13	0	0
4	E	14	0	13	0	0
5	A	5	0	0	0	0
5	B	10	0	0	0	0
5	C	5	0	0	0	0
5	D	5	0	0	0	0
5	E	15	0	0	0	0
5	F	10	0	0	0	0
6	A	6	0	8	0	0
6	B	6	0	8	0	0
6	C	6	0	8	0	0
6	D	6	0	8	0	0
6	F	6	0	8	0	0
All	All	11960	0	11972	175	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 7.

All (175) 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:535:THR:HG22	1:F:535:THR:HG22	1.49	0.95
1:E:362:GLN:H	1:E:362:GLN:HE21	1.24	0.84
1:A:310:GLU:OE1	1:A:338:ARG:NH1	2.10	0.80
1:D:449:LEU:O	1:D:479:LYS:HE3	1.85	0.77
1:D:497:GLN:NE2	1:D:498:SER:H	1.83	0.76
1:F:426:ASP:O	1:F:430:LEU:HD23	1.86	0.76
1:D:497:GLN:HE21	1:D:497:GLN:N	1.83	0.75
1:A:457:ILE:O	1:A:460:VAL:HG12	1.86	0.75
1:D:457:ILE:O	1:D:460:VAL:HG12	1.86	0.75
1:E:457:ILE:O	1:E:460:VAL:HG12	1.85	0.74
1:F:449:LEU:O	1:F:452:VAL:HG12	1.88	0.73
1:F:440:TYR:CD1	1:F:441:LEU:N	2.60	0.70
1:E:362:GLN:HE21	1:E:362:GLN:N	1.89	0.70
1:C:537:ALA:HB2	1:E:532:LEU:HB3	1.77	0.67
1:C:535:THR:HA	1:E:535:THR:HA	1.76	0.66
1:C:543:LEU:HD12	1:C:544:GLY:N	2.11	0.66
1:F:506:GLU:O	1:F:509:LYS:HG2	1.96	0.65
1:F:430:LEU:HD12	1:F:440:TYR:CZ	2.32	0.65
1:B:543:LEU:HD12	1:B:544:GLY:N	2.11	0.65
1:D:445:SER:O	1:D:449:LEU:CD2	2.47	0.63
1:D:497:GLN:HE21	1:D:498:SER:H	1.47	0.62
1:A:407:MET:CE	1:A:415:ILE:HD12	2.30	0.61
1:B:393:GLU:O	1:B:396:LYS:HG2	1.99	0.61
1:F:517:SER:HA	1:F:543:LEU:HB2	1.83	0.60
1:B:336:MET:HE3	1:B:356:LEU:HD11	1.83	0.60
1:E:484:PHE:CE1	1:E:495:LYS:HG2	2.37	0.59
1:B:502:GLY:HA2	1:B:527:ARG:HH21	1.66	0.59
1:F:448:GLU:N	1:F:448:GLU:OE1	2.35	0.59
1:F:440:TYR:CE1	1:F:441:LEU:HB2	2.38	0.59
1:C:507:ASP:O	1:C:511:LEU:HD13	2.02	0.58
1:F:478:PRO:O	1:F:482:LEU:HD13	2.04	0.58
1:B:359:LEU:HD23	1:B:360:TYR:CE2	2.39	0.57
1:E:359:LEU:HD23	1:E:360:TYR:CE2	2.39	0.57
1:E:372:LEU:HG	1:E:375:LEU:HB2	1.87	0.57
1:E:543:LEU:C	1:E:543:LEU:HD13	2.24	0.57
1:A:359:LEU:HD23	1:A:360:TYR:CE2	2.39	0.57
1:D:478:PRO:O	1:D:482:LEU:HD13	2.04	0.57
1:E:465:LEU:CD2	1:E:498:SER:HB3	2.34	0.57
1:C:535:THR:HG23	1:C:538:GLU:H	1.70	0.57
1:D:449:LEU:HD22	1:D:449:LEU:N	2.20	0.56
1:D:534:LEU:HD12	1:D:534:LEU:O	2.06	0.55
1:F:413:THR:HA	1:F:416:ASP:OD1	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:310:GLU:CD	1:A:338:ARG:HH12	2.03	0.54
1:F:544:GLY:N	1:F:545:PRO:CD	2.70	0.54
1:A:425:LEU:O	1:A:456:SER:OG	2.23	0.54
1:F:406:GLU:OE1	1:F:407:MET:N	2.40	0.54
1:F:309:ARG:HD2	1:F:310:GLU:HB2	1.89	0.54
1:B:535:THR:O	1:B:539:VAL:HG23	2.08	0.53
1:D:538:GLU:O	1:D:542:LEU:HD23	2.08	0.53
1:E:538:GLU:O	1:E:542:LEU:CD1	2.56	0.53
1:A:535:THR:O	1:A:539:VAL:HG23	2.09	0.53
1:D:336:MET:HE3	1:D:356:LEU:HD11	1.90	0.53
1:D:535:THR:O	1:D:539:VAL:HG23	2.09	0.53
1:F:535:THR:O	1:F:539:VAL:HG23	2.09	0.53
1:C:535:THR:O	1:C:539:VAL:HG23	2.09	0.53
1:E:535:THR:O	1:E:539:VAL:HG23	2.08	0.53
1:D:408:SER:OG	1:D:409:PRO:HD2	2.10	0.52
1:F:336:MET:HE3	1:F:356:LEU:HD11	1.92	0.52
1:B:519:ASP:O	1:B:522:THR:OG1	2.28	0.51
1:D:531:VAL:HA	1:D:534:LEU:CD2	2.41	0.51
1:D:512:SER:OG	1:D:542:LEU:HD21	2.11	0.51
1:F:336:MET:CE	1:F:356:LEU:HD11	2.41	0.51
1:A:407:MET:HE2	1:A:415:ILE:HD12	1.92	0.51
1:D:495:LYS:O	1:D:497:GLN:NE2	2.43	0.51
1:D:538:GLU:O	1:D:542:LEU:CD2	2.59	0.51
1:B:344:PHE:HB2	1:E:362:GLN:OE1	2.11	0.51
1:B:534:LEU:O	1:F:536:VAL:HG22	2.11	0.51
1:C:532:LEU:HB2	1:C:533:PRO:HD3	1.94	0.50
1:A:370:GLN:HG3	1:A:371:HIS:CE1	2.46	0.50
1:E:532:LEU:HB2	1:E:533:PRO:HD3	1.94	0.49
1:A:460:VAL:HG11	1:A:499:PHE:HZ	1.77	0.49
1:B:336:MET:CE	1:B:356:LEU:HD11	2.43	0.49
1:D:445:SER:O	1:D:449:LEU:HD22	2.10	0.49
1:A:481:ARG:NH1	1:A:507:ASP:OD1	2.45	0.49
1:A:532:LEU:HB2	1:A:533:PRO:HD3	1.94	0.49
1:B:532:LEU:HB2	1:B:533:PRO:HD3	1.94	0.49
1:E:460:VAL:HG11	1:E:499:PHE:HZ	1.78	0.49
1:E:505:THR:HG21	1:E:533:PRO:HB2	1.95	0.49
1:D:505:THR:HG21	1:D:533:PRO:HB2	1.95	0.49
1:F:532:LEU:HB2	1:F:533:PRO:HD3	1.94	0.49
1:B:396:LYS:HG3	1:B:397:ALA:N	2.27	0.49
1:D:532:LEU:HB2	1:D:533:PRO:HD3	1.94	0.49
1:F:309:ARG:HD2	1:F:309:ARG:C	2.33	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:505:THR:HG21	1:B:533:PRO:HB2	1.95	0.48
1:C:532:LEU:HB3	1:E:537:ALA:HB2	1.95	0.48
1:D:460:VAL:HG11	1:D:499:PHE:HZ	1.78	0.48
4:B:701:NAG:C7	4:B:701:NAG:HO3	2.26	0.48
1:F:505:THR:HG21	1:F:533:PRO:HB2	1.95	0.48
1:C:336:MET:HE3	1:C:356:LEU:HD11	1.96	0.48
1:A:505:THR:HG21	1:A:533:PRO:HB2	1.95	0.48
1:B:364:TYR:N	1:B:364:TYR:CD2	2.80	0.48
1:A:532:LEU:HA	1:D:536:VAL:CG2	2.44	0.48
1:C:505:THR:HG21	1:C:533:PRO:HB2	1.95	0.48
1:D:531:VAL:HA	1:D:534:LEU:HD21	1.96	0.48
1:A:349:LEU:HD11	1:F:362:GLN:HG3	1.96	0.47
1:E:484:PHE:CZ	1:E:495:LYS:CG	2.97	0.47
1:B:349:LEU:HD11	1:E:362:GLN:OE1	2.14	0.47
1:D:475:VAL:HG12	1:D:479:LYS:HE2	1.95	0.47
1:B:527:ARG:HB3	1:B:530:ALA:HB3	1.95	0.47
1:D:336:MET:CE	1:D:356:LEU:HD11	2.44	0.47
1:E:527:ARG:HB3	1:E:530:ALA:HB3	1.96	0.47
1:A:449:LEU:O	1:A:479:LYS:HE3	2.15	0.47
1:C:336:MET:CE	1:C:356:LEU:HD11	2.44	0.47
1:E:484:PHE:CZ	1:E:495:LYS:HG2	2.50	0.47
1:F:543:LEU:HG	1:F:546:HIS:HB2	1.97	0.46
1:E:465:LEU:HD21	1:E:498:SER:HB3	1.98	0.46
1:C:383:ASP:HA	1:C:386:LYS:HE3	1.98	0.46
1:F:527:ARG:HB2	1:F:530:ALA:HB3	1.97	0.46
1:E:512:SER:OG	1:E:542:LEU:HD11	2.15	0.46
1:E:542:LEU:HD12	1:E:542:LEU:N	2.30	0.46
1:D:527:ARG:HB2	1:D:530:ALA:HB3	1.97	0.46
1:B:487:MET:O	1:B:492:TYR:CZ	2.69	0.46
1:F:430:LEU:HD12	1:F:440:TYR:CE1	2.50	0.46
1:F:517:SER:HB3	1:F:543:LEU:HD13	1.98	0.46
1:C:340:ASN:HA	1:D:362:GLN:CD	2.36	0.45
1:C:527:ARG:HB2	1:C:530:ALA:HB3	1.98	0.45
1:A:527:ARG:HB2	1:A:530:ALA:HB3	1.97	0.45
1:A:434:THR:HG23	1:A:461:ARG:HH12	1.81	0.45
1:D:359:LEU:O	1:D:359:LEU:HD23	2.17	0.45
1:C:535:THR:HG22	1:C:538:GLU:CD	2.37	0.45
1:F:440:TYR:CG	1:F:441:LEU:N	2.85	0.45
1:B:311:ILE:HG22	1:B:342:ILE:HD11	1.99	0.44
1:C:332:LEU:HD11	1:C:352:LEU:HG	1.99	0.44
1:C:359:LEU:HD23	1:C:359:LEU:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:383:ASP:HA	1:E:386:LYS:HE3	1.98	0.44
1:F:359:LEU:HD23	1:F:359:LEU:O	2.17	0.44
1:F:518:MET:O	1:F:543:LEU:HB3	2.18	0.44
1:B:518:MET:HG2	1:B:522:THR:OG1	2.17	0.44
1:F:311:ILE:HG22	1:F:342:ILE:HD11	1.99	0.44
1:C:311:ILE:HG22	1:C:342:ILE:HD11	2.00	0.43
1:F:383:ASP:HA	1:F:386:LYS:HE3	2.00	0.43
1:E:346:TYR:CE2	1:E:378:LYS:HE3	2.53	0.43
1:F:544:GLY:N	1:F:545:PRO:HD3	2.33	0.43
1:C:398:LEU:O	1:C:401:VAL:HG22	2.19	0.43
1:E:509:LYS:HG2	1:E:534:LEU:HD12	2.00	0.43
1:D:398:LEU:O	1:D:401:VAL:HG22	2.19	0.43
1:B:398:LEU:O	1:B:401:VAL:HG22	2.19	0.43
1:F:398:LEU:O	1:F:401:VAL:HG22	2.19	0.43
1:B:349:LEU:HD21	1:E:362:GLN:OE1	2.19	0.42
1:E:398:LEU:O	1:E:401:VAL:HG22	2.18	0.42
1:E:527:ARG:HG2	1:E:529:ASP:OD1	2.20	0.42
1:A:477:TYR:N	1:A:478:PRO:HD2	2.35	0.42
1:C:316:ILE:HD11	1:C:317:PHE:CE1	2.55	0.42
1:D:449:LEU:HD22	1:D:449:LEU:H	1.84	0.42
1:D:502:GLY:HA2	1:D:527:ARG:HD2	2.02	0.42
1:E:377:LEU:CD2	1:E:402:ASN:OD1	2.67	0.42
1:D:477:TYR:N	1:D:478:PRO:HD2	2.34	0.42
1:A:449:LEU:O	1:A:479:LYS:CE	2.67	0.42
1:B:477:TYR:N	1:B:478:PRO:HD2	2.35	0.42
1:C:477:TYR:N	1:C:478:PRO:HD2	2.35	0.42
1:E:484:PHE:CZ	1:E:495:LYS:HG3	2.54	0.42
1:A:532:LEU:HA	1:D:536:VAL:HG21	2.01	0.42
1:D:311:ILE:HG22	1:D:342:ILE:HD11	2.00	0.42
1:E:543:LEU:C	1:E:543:LEU:CD1	2.87	0.42
1:F:430:LEU:CD1	1:F:440:TYR:CE1	3.02	0.42
1:A:454:PRO:CG	1:A:482:LEU:HD23	2.50	0.42
1:C:422:ARG:NH2	1:C:428:ASP:OD2	2.53	0.42
1:A:398:LEU:O	1:A:401:VAL:HG22	2.19	0.41
1:E:538:GLU:O	1:E:542:LEU:HD13	2.19	0.41
1:B:316:ILE:HD11	1:B:317:PHE:CE1	2.55	0.41
1:B:511:LEU:HG	1:B:516:VAL:HG11	2.02	0.41
1:F:426:ASP:O	1:F:430:LEU:CD2	2.62	0.41
1:F:477:TYR:N	1:F:478:PRO:HD2	2.35	0.41
1:D:542:LEU:HD22	1:D:542:LEU:N	2.35	0.41
1:E:465:LEU:HD22	1:E:498:SER:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:477:TYR:N	1:E:478:PRO:HD2	2.35	0.41
1:F:430:LEU:HD12	1:F:440:TYR:OH	2.20	0.41
1:A:345:THR:HG22	1:F:360:TYR:CE1	2.56	0.41
1:C:392:LEU:HD11	1:C:393:GLU:OE1	2.20	0.41
1:E:465:LEU:HD21	1:E:498:SER:CB	2.51	0.41
1:D:497:GLN:NE2	1:D:497:GLN:N	2.62	0.41
1:D:445:SER:O	1:D:449:LEU:HD23	2.22	0.40
1:A:380:SER:OG	1:A:383:ASP:HB2	2.21	0.40
1:D:497:GLN:NE2	1:D:498:SER:N	2.62	0.40
1:D:380:SER:OG	1:D:381:PRO:HD2	2.22	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	243/312 (78%)	229 (94%)	14 (6%)	0	100	100
1	B	246/312 (79%)	233 (95%)	13 (5%)	0	100	100
1	C	246/312 (79%)	231 (94%)	15 (6%)	0	100	100
1	D	246/312 (79%)	232 (94%)	14 (6%)	0	100	100
1	E	246/312 (79%)	230 (94%)	15 (6%)	1 (0%)	34	71
1	F	246/312 (79%)	230 (94%)	16 (6%)	0	100	100
All	All	1473/1872 (79%)	1385 (94%)	87 (6%)	1 (0%)	51	83

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	E	488	ASN

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	217/274 (79%)	211 (97%)	6 (3%)	43	72
1	B	219/274 (80%)	214 (98%)	5 (2%)	50	76
1	C	219/274 (80%)	214 (98%)	5 (2%)	50	76
1	D	219/274 (80%)	213 (97%)	6 (3%)	44	73
1	E	219/274 (80%)	211 (96%)	8 (4%)	34	66
1	F	219/274 (80%)	212 (97%)	7 (3%)	39	70
All	All	1312/1644 (80%)	1275 (97%)	37 (3%)	43	72

All (37) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	300	THR
1	A	312	ASP
1	A	402	ASN
1	A	416	ASP
1	A	430	LEU
1	A	493	PHE
1	B	300	THR
1	B	340	ASN
1	B	364	TYR
1	B	430	LEU
1	B	493	PHE
1	C	300	THR
1	C	402	ASN
1	C	430	LEU
1	C	493	PHE
1	C	540	GLN
1	D	300	THR
1	D	402	ASN
1	D	430	LEU
1	D	493	PHE
1	D	497	GLN
1	D	538	GLU

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Mol	Chain	Res	Type
1	E	300	THR
1	E	362	GLN
1	E	416	ASP
1	E	430	LEU
1	E	481	ARG
1	E	493	PHE
1	E	543	LEU
1	E	546	HIS
1	F	300	THR
1	F	309	ARG
1	F	336	MET
1	F	346	TYR
1	F	402	ASN
1	F	417	ARG
1	F	493	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (7) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	371	HIS
1	A	515	ASN
1	B	340	ASN
1	D	497	GLN
1	E	340	ASN
1	E	540	GLN
1	F	540	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

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

5.5 Carbohydrates [i](#)

5 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	G	1	2,1	14,14,15	0.40	0	17,19,21	0.66	0
2	NAG	G	2	2	14,14,15	0.39	0	17,19,21	0.58	0
3	NAG	H	1	3,1	14,14,15	0.40	0	17,19,21	0.56	0
3	NAG	H	2	3	14,14,15	0.40	0	17,19,21	0.64	0
3	BMA	H	3	3	11,11,12	0.25	0	15,15,17	0.50	0

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

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

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (11) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	G	1	NAG	O7-C7-N2-C2
3	H	2	NAG	C3-C2-N2-C7
3	H	2	NAG	C8-C7-N2-C2
3	H	2	NAG	O7-C7-N2-C2
2	G	1	NAG	C8-C7-N2-C2
2	G	2	NAG	C8-C7-N2-C2
2	G	2	NAG	O7-C7-N2-C2
3	H	1	NAG	C8-C7-N2-C2

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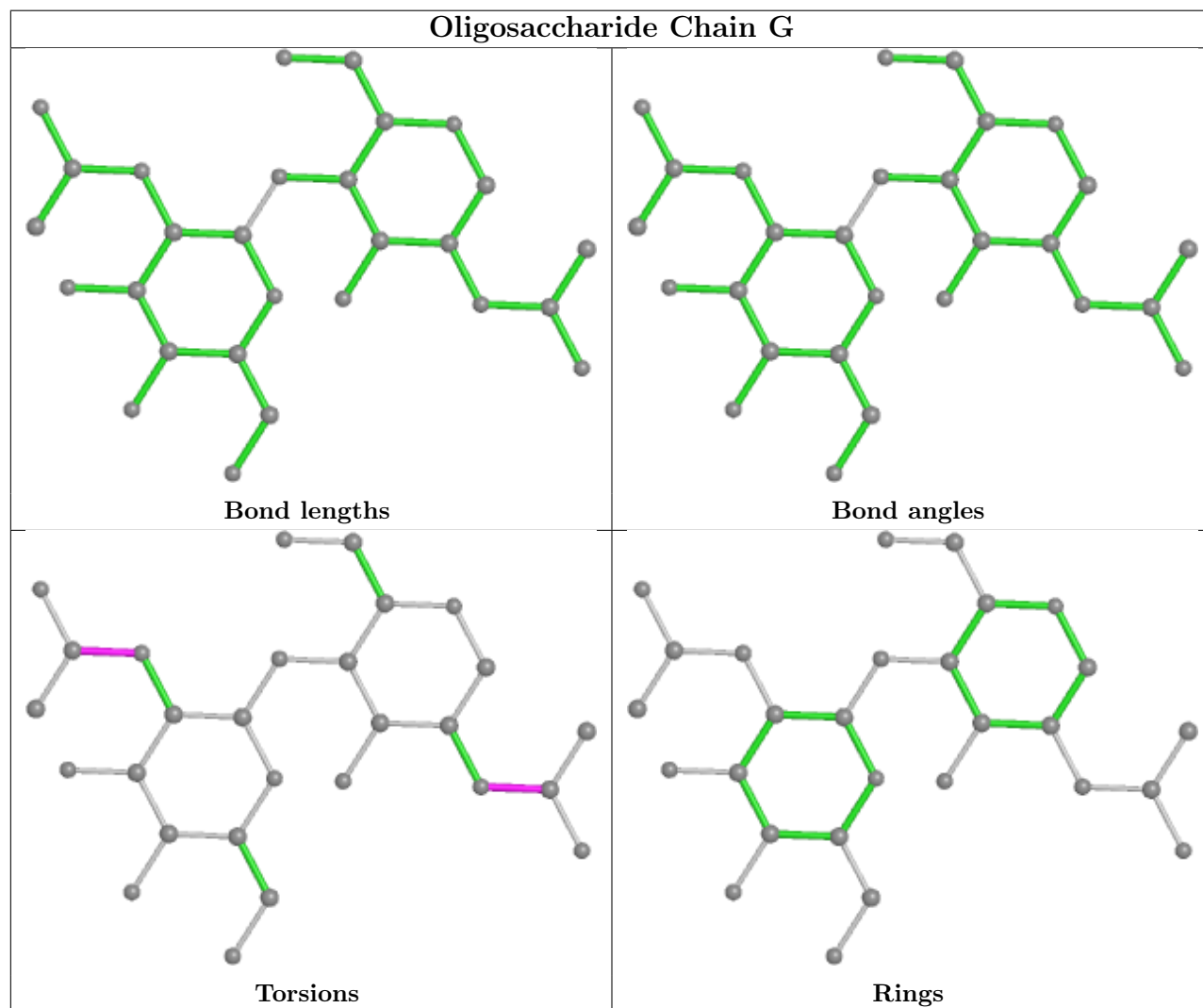
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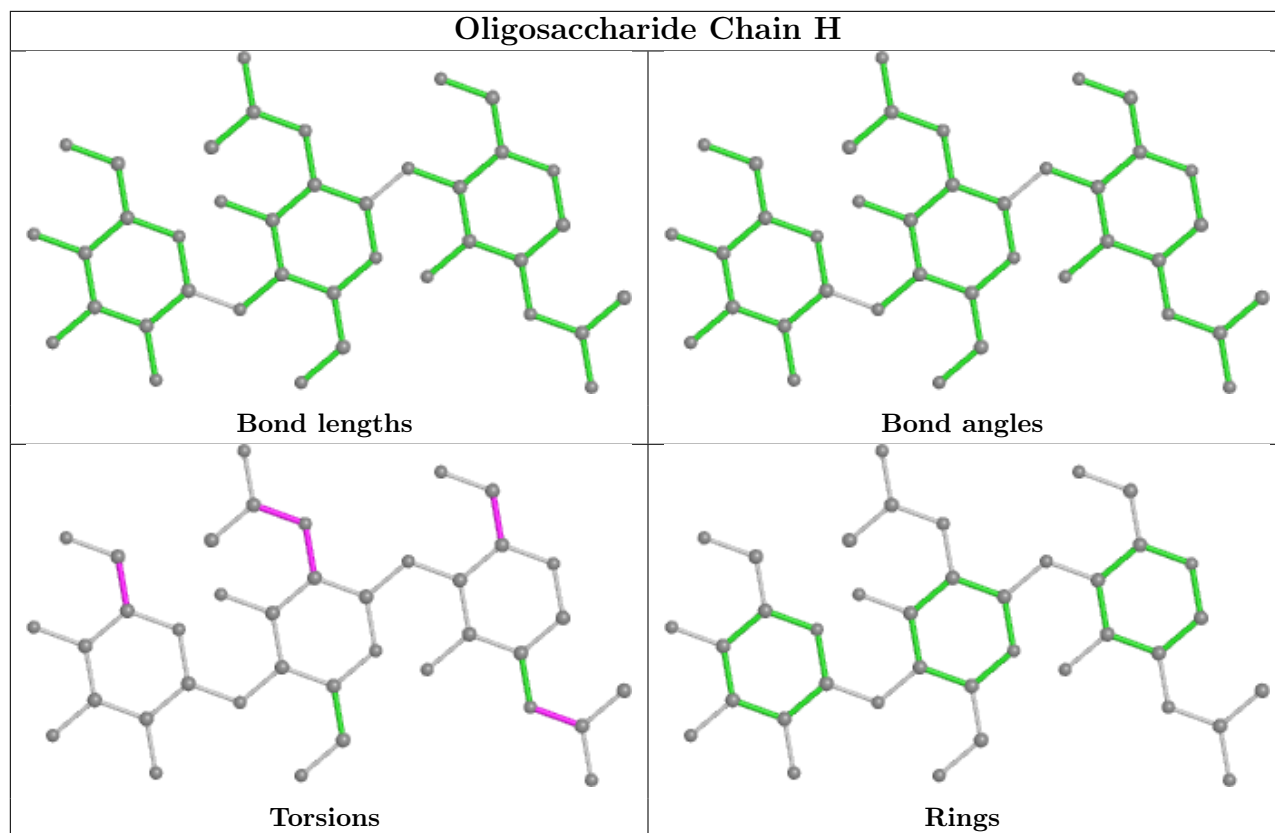
Mol	Chain	Res	Type	Atoms
3	H	1	NAG	O7-C7-N2-C2
3	H	3	BMA	O5-C5-C6-O6
3	H	1	NAG	O5-C5-C6-O6

There are no ring outliers.

No monomer is involved in short contacts.

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](#)

19 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	PO4	A	702	-	4,4,4	0.62	0	6,6,6	0.48	0
6	GOL	B	704	-	5,5,5	0.09	0	5,5,5	0.27	0
4	NAG	A	701	1	14,14,15	0.40	0	17,19,21	0.49	0
6	GOL	D	702	-	5,5,5	0.09	0	5,5,5	0.27	0
6	GOL	A	703	-	5,5,5	0.11	0	5,5,5	0.29	0
5	PO4	B	702	-	4,4,4	0.60	0	6,6,6	0.44	0
6	GOL	F	703	-	5,5,5	0.09	0	5,5,5	0.28	0
5	PO4	B	703	-	4,4,4	0.55	0	6,6,6	0.47	0
5	PO4	F	702	-	4,4,4	0.66	0	6,6,6	0.43	0
5	PO4	F	701	-	4,4,4	0.59	0	6,6,6	0.48	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
5	PO4	C	702	-	4,4,4	0.63	0	6,6,6	0.43	0
5	PO4	E	702	-	4,4,4	0.68	0	6,6,6	0.41	0
4	NAG	C	701	1	14,14,15	0.39	0	17,19,21	0.62	0
4	NAG	E	701	1	14,14,15	0.39	0	17,19,21	0.65	0
5	PO4	E	703	-	4,4,4	0.61	0	6,6,6	0.45	0
6	GOL	C	703	-	5,5,5	0.10	0	5,5,5	0.27	0
5	PO4	D	701	-	4,4,4	0.67	0	6,6,6	0.43	0
4	NAG	B	701	1	14,14,15	0.42	0	17,19,21	0.61	0
5	PO4	E	704	-	4,4,4	0.66	0	6,6,6	0.44	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	A	703	-	-	0/4/4/4	-
6	GOL	F	703	-	-	0/4/4/4	-
4	NAG	E	701	1	-	4/6/23/26	0/1/1/1
6	GOL	C	703	-	-	0/4/4/4	-
4	NAG	B	701	1	-	5/6/23/26	0/1/1/1
4	NAG	A	701	1	-	2/6/23/26	0/1/1/1
4	NAG	C	701	1	-	0/6/23/26	0/1/1/1
6	GOL	B	704	-	-	0/4/4/4	-
6	GOL	D	702	-	-	2/4/4/4	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (13) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	701	NAG	C8-C7-N2-C2
4	A	701	NAG	O7-C7-N2-C2
4	B	701	NAG	C3-C2-N2-C7
4	B	701	NAG	C8-C7-N2-C2
4	B	701	NAG	O7-C7-N2-C2
4	E	701	NAG	C3-C2-N2-C7
4	E	701	NAG	C8-C7-N2-C2
4	E	701	NAG	O7-C7-N2-C2

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Mol	Chain	Res	Type	Atoms
4	B	701	NAG	O5-C5-C6-O6
4	B	701	NAG	C4-C5-C6-O6
6	D	702	GOL	O1-C1-C2-C3
4	E	701	NAG	O5-C5-C6-O6
6	D	702	GOL	O1-C1-C2-O2

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	B	701	NAG	1	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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	245/312 (78%)	0.49	4 (1%) 72 57	90, 112, 131, 141	0
1	B	248/312 (79%)	0.54	6 (2%) 59 42	100, 113, 139, 166	0
1	C	248/312 (79%)	0.50	8 (3%) 47 32	98, 120, 137, 172	0
1	D	248/312 (79%)	0.63	17 (6%) 16 10	111, 143, 171, 184	0
1	E	248/312 (79%)	0.52	16 (6%) 18 11	107, 136, 158, 171	0
1	F	248/312 (79%)	0.73	24 (9%) 7 4	136, 164, 182, 191	0
All	All	1485/1872 (79%)	0.57	75 (5%) 28 17	90, 128, 173, 191	0

All (75) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	E	499	PHE	3.6
1	D	476	LEU	3.4
1	F	425	LEU	3.4
1	C	375	LEU	3.3
1	E	476	LEU	3.2
1	E	398	LEU	3.2
1	F	376	PHE	3.1
1	B	504	PRO	3.0
1	F	398	LEU	2.9
1	E	376	PHE	2.9
1	F	516	VAL	2.9
1	F	464	ASP	2.8
1	F	441	LEU	2.8
1	D	315	LEU	2.8
1	F	446	PRO	2.7
1	C	511	LEU	2.7
1	F	336	MET	2.6
1	E	375	LEU	2.6
1	A	375	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
1	F	495	LYS	2.6
1	F	375	LEU	2.5
1	E	531	VAL	2.5
1	E	500	LEU	2.5
1	D	398	LEU	2.5
1	D	417	ARG	2.5
1	D	511	LEU	2.5
1	D	518	MET	2.5
1	C	499	PHE	2.4
1	F	514	GLN	2.4
1	F	511	LEU	2.4
1	F	534	LEU	2.4
1	D	376	PHE	2.3
1	D	311	ILE	2.3
1	E	511	LEU	2.3
1	F	525	LYS	2.3
1	C	525	LYS	2.3
1	F	332	LEU	2.3
1	E	344	PHE	2.2
1	C	500	LEU	2.2
1	F	479	LYS	2.2
1	D	441	LEU	2.2
1	F	364	TYR	2.2
1	B	389	VAL	2.2
1	E	352	LEU	2.2
1	D	425	LEU	2.2
1	F	352	LEU	2.2
1	F	346	TYR	2.1
1	A	398	LEU	2.1
1	E	456	SER	2.1
1	E	457	ILE	2.1
1	F	513	GLN	2.1
1	D	495	LYS	2.1
1	A	495	LYS	2.1
1	C	398	LEU	2.1
1	E	377	LEU	2.1
1	E	399	LEU	2.1
1	C	484	PHE	2.1
1	E	327	VAL	2.1
1	F	460	VAL	2.1
1	B	441	LEU	2.1
1	D	546	HIS	2.1

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Mol	Chain	Res	Type	RSRZ
1	D	432	THR	2.1
1	A	487	MET	2.1
1	D	327	VAL	2.1
1	B	375	LEU	2.1
1	D	523	PHE	2.1
1	F	507	ASP	2.1
1	C	395	LEU	2.1
1	F	414	LEU	2.1
1	E	369	ILE	2.0
1	D	375	LEU	2.0
1	B	518	MET	2.0
1	F	500	LEU	2.0
1	B	398	LEU	2.0
1	D	332	LEU	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](#)

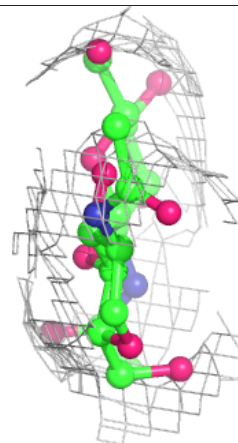
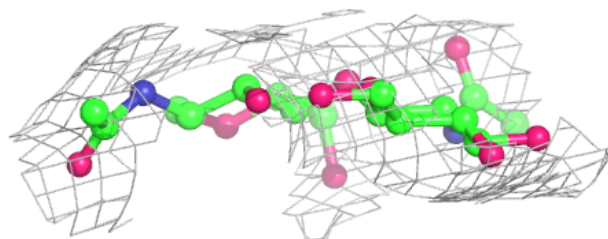
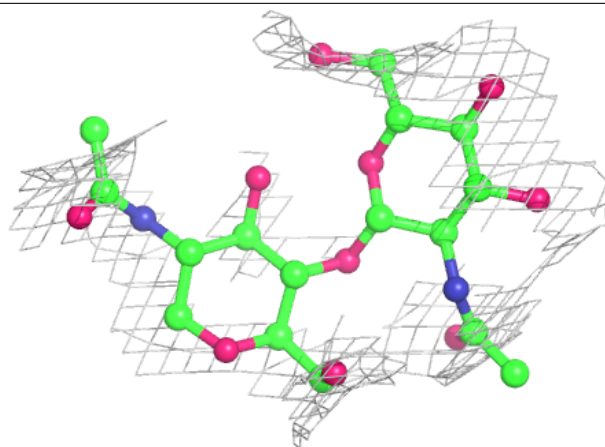
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
3	NAG	H	1	14/15	0.86	0.28	175,177,180,180	0
3	BMA	H	3	11/12	0.88	0.17	176,176,177,177	0
2	NAG	G	2	14/15	0.91	0.21	164,164,166,167	0
3	NAG	H	2	14/15	0.92	0.18	174,176,178,178	0
2	NAG	G	1	14/15	0.93	0.18	164,166,166,167	0

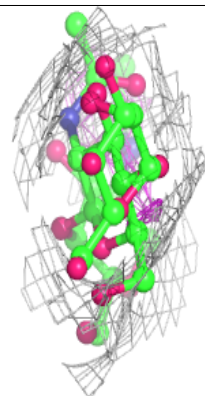
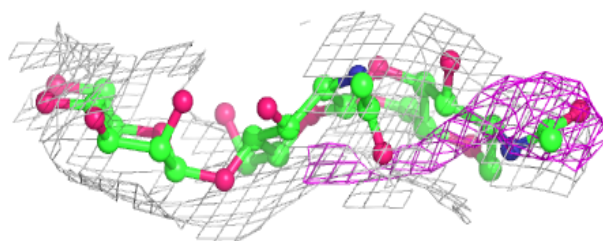
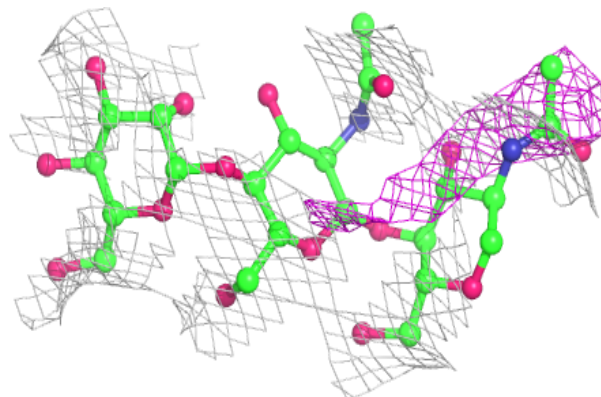
The following is a graphical depiction of the model fit to experimental electron density for oligosaccharide. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around Chain 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 H:**

$2mF_o-DF_c$ (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(Å ²)	Q<0.9
4	NAG	C	701	14/15	0.78	0.22	117,122,124,125	0
4	NAG	B	701	14/15	0.84	0.21	124,126,128,129	0
4	NAG	E	701	14/15	0.84	0.15	149,151,154,154	0
4	NAG	A	701	14/15	0.88	0.22	113,118,121,122	0
6	GOL	B	704	6/6	0.91	0.28	49,51,51,52	0
6	GOL	A	703	6/6	0.95	0.29	57,57,58,59	0
6	GOL	C	703	6/6	0.95	0.31	46,48,49,50	0
6	GOL	F	703	6/6	0.95	0.28	46,47,48,49	0
5	PO4	A	702	5/5	0.96	0.27	58,60,61,63	0
6	GOL	D	702	6/6	0.96	0.26	52,53,54,55	0
5	PO4	B	703	5/5	0.96	0.22	66,67,68,69	0
5	PO4	B	702	5/5	0.97	0.28	53,53,54,55	0
5	PO4	C	702	5/5	0.97	0.25	68,69,70,71	0
5	PO4	E	702	5/5	0.97	0.24	63,64,65,65	0
5	PO4	E	703	5/5	0.97	0.24	61,61,63,63	0
5	PO4	F	702	5/5	0.97	0.25	61,61,63,63	0
5	PO4	F	701	5/5	0.98	0.32	53,54,56,56	0
5	PO4	E	704	5/5	0.99	0.26	58,59,60,60	0
5	PO4	D	701	5/5	0.99	0.28	58,60,61,61	0

6.5 Other polymers [i](#)

There are no such residues in this entry.