



# wwPDB X-ray Structure Validation Summary Report ⓘ

Jun 12, 2024 – 11:49 PM EDT

PDB ID : 1K9I  
Title : Complex of DC-SIGN and GlcNAc2Man3  
Authors : Feinberg, H.; Mitchell, D.A.; Drickamer, K.; Weis, W.I.  
Deposited on : 2001-10-29  
Resolution : 2.50 Å(reported)

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

We welcome your comments at [validation@mail.wwpdb.org](mailto: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>.

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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 : 2.36.2  
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) : 2.36.2

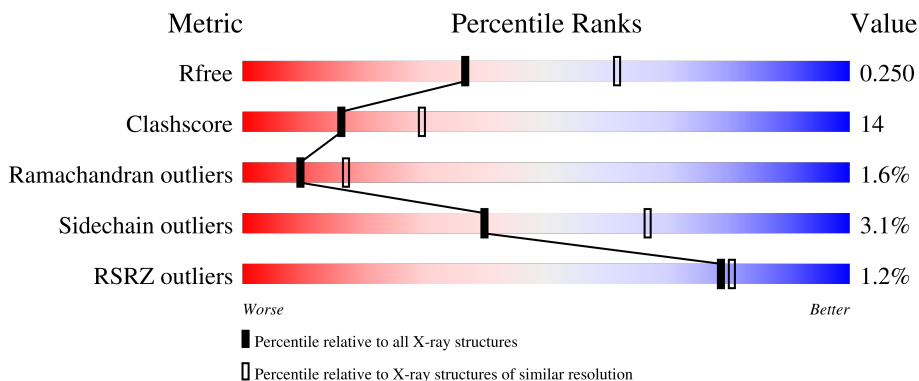
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.50 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



| Metric                | Whole archive<br>(#Entries) | Similar resolution<br>(#Entries, resolution range(Å)) |
|-----------------------|-----------------------------|---|
| $R_{free}$            | 130704                      | 4661 (2.50-2.50)                                      |
| Clashscore            | 141614                      | 5346 (2.50-2.50)                                      |
| Ramachandran outliers | 138981                      | 5231 (2.50-2.50)                                      |
| Sidechain outliers    | 138945                      | 5233 (2.50-2.50)                                      |
| RSRZ outliers         | 127900                      | 4559 (2.50-2.50)                                      |

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  $\geq 3$ , 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     | 156    | <br>4% 52% 28% 18% |
| 1   | B     | 156    | <br>% 61% 20% 18%  |
| 1   | C     | 156    | <br>61% 19% 18%    |
| 1   | D     | 156    | <br>67% 18% 15%    |
| 1   | E     | 156    | <br>59% 22% 18%    |

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| Mol | Chain | Length | Quality of chain             |
|-----|-------|--------|------------------------------|
| 1   | F     | 156    | <p>%</p> <p>56% 24% 18%</p>  |
| 1   | G     | 156    | <p>59% 21% 18%</p>           |
| 1   | H     | 156    | <p>%</p> <p>56% 24% 19%</p>  |
| 1   | I     | 156    | <p>%</p> <p>50% 31% 18%</p>  |
| 1   | J     | 156    | <p>4%</p> <p>54% 24% 18%</p> |
| 2   | K     | 5      | <p>60% 20% 20%</p>           |
| 2   | L     | 5      | <p>40% 40% 20%</p>           |
| 2   | M     | 5      | <p>40% 40% 20%</p>           |
| 2   | N     | 5      | <p>20% 40% 40%</p>           |
| 2   | O     | 5      | <p>40% 60%</p>               |

## 2 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 11035 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 mDC-SIGN1B type I isoform.

| Mol | Chain | Residues | Atoms |     |     |     |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|----|---------|---------|-------|
|     |       |          | Total | C   | N   | O   | S  |         |         |       |
| 1   | A     | 128      | 1042  | 658 | 179 | 197 | 8  | 0       | 0       | 0     |
| 1   | B     | 128      | 1042  | 658 | 179 | 197 | 8  | 0       | 0       | 0     |
| 1   | C     | 128      | 1042  | 658 | 179 | 197 | 8  | 0       | 0       | 0     |
| 1   | D     | 132      | 1070  | 673 | 185 | 202 | 10 | 0       | 0       | 0     |
| 1   | E     | 128      | 1042  | 658 | 179 | 197 | 8  | 0       | 0       | 0     |
| 1   | F     | 128      | 1042  | 658 | 179 | 197 | 8  | 0       | 0       | 0     |
| 1   | G     | 128      | 1042  | 658 | 179 | 197 | 8  | 0       | 0       | 0     |
| 1   | H     | 127      | 1037  | 655 | 178 | 196 | 8  | 0       | 0       | 0     |
| 1   | I     | 128      | 1042  | 658 | 179 | 197 | 8  | 0       | 0       | 0     |
| 1   | J     | 128      | 1042  | 658 | 179 | 197 | 8  | 0       | 0       | 0     |

There are 10 discrepancies between the modelled and reference sequences:

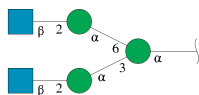
| Chain | Residue | Modelled | Actual | Comment        | Reference   |
|-------|---------|----------|--------|----------------|-------------|
| A     | 249     | ALA      | -      | see remark 999 | GB 15281089 |
| B     | 249     | ALA      | -      | see remark 999 | GB 15281089 |
| C     | 249     | ALA      | -      | see remark 999 | GB 15281089 |
| D     | 249     | ALA      | -      | see remark 999 | GB 15281089 |
| E     | 249     | ALA      | -      | see remark 999 | GB 15281089 |
| F     | 249     | ALA      | -      | see remark 999 | GB 15281089 |
| G     | 249     | ALA      | -      | see remark 999 | GB 15281089 |
| H     | 249     | ALA      | -      | see remark 999 | GB 15281089 |
| I     | 249     | ALA      | -      | see remark 999 | GB 15281089 |

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| Chain | Residue | Modelled | Actual | Comment        | Reference   |
|-------|---------|----------|--------|----------------|-------------|
| J     | 249     | ALA      | -      | see remark 999 | GB 15281089 |

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



| Mol | Chain | Residues | Atoms |    |   |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|----|---|----|---------|---------|-------|
|     |       |          | Total | C  | N | O  |         |         |       |
| 2   | K     | 5        | Total | C  | N | O  | 0       | 0       | 0     |
|     |       |          | 62    | 34 | 2 | 26 |         |         |       |
| 2   | L     | 5        | Total | C  | N | O  | 0       | 0       | 0     |
|     |       |          | 62    | 34 | 2 | 26 |         |         |       |
| 2   | M     | 5        | Total | C  | N | O  | 0       | 0       | 0     |
|     |       |          | 62    | 34 | 2 | 26 |         |         |       |
| 2   | N     | 5        | Total | C  | N | O  | 0       | 0       | 0     |
|     |       |          | 62    | 34 | 2 | 26 |         |         |       |
| 2   | O     | 5        | Total | C  | N | O  | 0       | 0       | 0     |
|     |       |          | 62    | 34 | 2 | 26 |         |         |       |

- Molecule 3 is CALCIUM ION (three-letter code: CA) (formula: Ca).

| Mol | Chain | Residues | Atoms |    | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|---------|---------|
| 3   | A     | 3        | Total | Ca | 0       | 0       |
|     |       |          | 3     | 3  |         |         |
| 3   | B     | 3        | Total | Ca | 0       | 0       |
|     |       |          | 3     | 3  |         |         |
| 3   | C     | 3        | Total | Ca | 0       | 0       |
|     |       |          | 3     | 3  |         |         |
| 3   | D     | 3        | Total | Ca | 0       | 0       |
|     |       |          | 3     | 3  |         |         |
| 3   | E     | 3        | Total | Ca | 0       | 0       |
|     |       |          | 3     | 3  |         |         |
| 3   | F     | 3        | Total | Ca | 0       | 0       |
|     |       |          | 3     | 3  |         |         |
| 3   | G     | 3        | Total | Ca | 0       | 0       |
|     |       |          | 3     | 3  |         |         |
| 3   | H     | 3        | Total | Ca | 0       | 0       |
|     |       |          | 3     | 3  |         |         |

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| Mol | Chain | Residues | Atoms      |         | ZeroOcc | AltConf |
|-----|-------|----------|------------|---------|---------|---------|
| 3   | I     | 3        | Total<br>3 | Ca<br>3 | 0       | 0       |
| 3   | J     | 3        | Total<br>3 | Ca<br>3 | 0       | 0       |

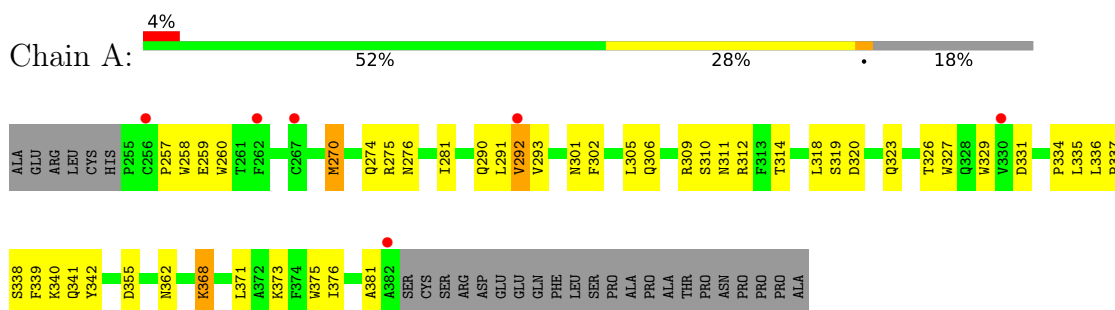
- Molecule 4 is water.

| Mol | Chain | Residues | Atoms       |         | ZeroOcc | AltConf |
|-----|-------|----------|-------------|---------|---------|---------|
| 4   | A     | 13       | Total<br>13 | O<br>13 | 0       | 0       |
| 4   | B     | 29       | Total<br>29 | O<br>29 | 0       | 0       |
| 4   | C     | 36       | Total<br>36 | O<br>36 | 0       | 0       |
| 4   | D     | 38       | Total<br>38 | O<br>38 | 0       | 0       |
| 4   | E     | 31       | Total<br>31 | O<br>31 | 0       | 0       |
| 4   | F     | 30       | Total<br>30 | O<br>30 | 0       | 0       |
| 4   | G     | 25       | Total<br>25 | O<br>25 | 0       | 0       |
| 4   | H     | 23       | Total<br>23 | O<br>23 | 0       | 0       |
| 4   | I     | 15       | Total<br>15 | O<br>15 | 0       | 0       |
| 4   | J     | 12       | Total<br>12 | O<br>12 | 0       | 0       |

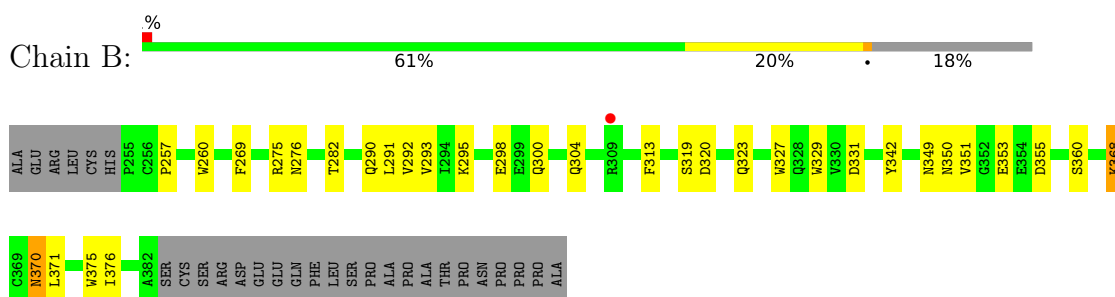
### 3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ( $RSRZ > 2$ ). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

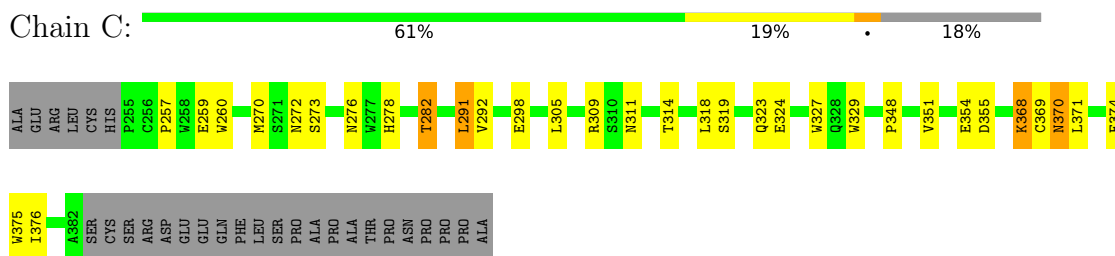
- Molecule 1: mDC-SIGN1B type I isoform



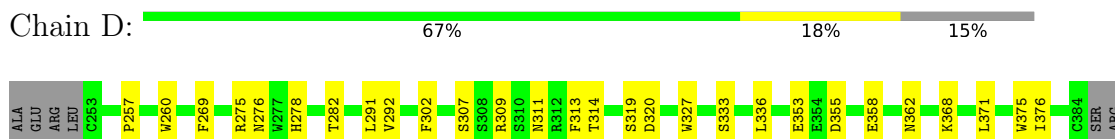
- Molecule 1: mDC-SIGN1B type I isoform



- Molecule 1: mDC-SIGN1B type I isoform



- Molecule 1: mDC-SIGN1B type I isoform



ASP  
GLU  
GLU  
GLN  
PHE  
LEU  
SER  
PRO  
ALA  
ALA  
THR  
PRO  
ASN  
PRO  
PRO  
PRO  
ALA

• Molecule 1: mDC-SIGN1B type I isoform

Chain E: 59% 22% 18%

ALA  
GLU  
ARG  
LEU  
CYS  
HIS  
P255  
W258  
E259  
F263  
Y268  
F269  
M270  
Q274  
R275  
N276  
W277  
H278  
T282  
L291  
V292  
Q300  
N301  
F302  
L303  
Q304  
L305  
Q306  
N311  
T314  
L318  
S319  
D320  
L321  
N322  
Q323  
W327  
P337  
S338  
V351  
E354  
D355  
C356  
A357  
D366

D367  
K368  
L371  
A372  
K373  
I376  
A381  
A382  
SER  
SER  
SER  
ARG  
ASP  
GLU  
GLN  
PHE  
LEU  
PRO  
PRO  
ALA  
ALA  
THR  
THR  
PRO  
PRO  
ASN  
PRO  
PRO  
PRO  
PRO  
ALA

• Molecule 1: mDC-SIGN1B type I isoform

Chain F: % 56% 24% 18%

ALA  
GLU  
ARG  
LEU  
CYS  
HIS  
P255  
C256  
P257  
W260  
V260  
N272  
R275  
N276  
T282  
K285  
Q290  
L291  
V292  
V293  
E298  
E299  
Q300  
N301  
F302  
L303  
Q304  
L305  
Q306  
R309  
R312  
F313  
S319  
D320  
W327  
Q328  
W329  
P337  
S338  
F339  
K340  
Q341  
Y342  
N349  
N350  
V351  
E354

D355  
E358  
N370  
L371  
F374  
W375  
A382  
SER  
SER  
SER  
ASP  
GLU  
GLN  
PHE  
LEU  
PRO  
PRO  
ALA  
ALA  
THR  
THR  
PRO  
PRO  
ASN  
PRO  
PRO  
PRO  
PRO  
ALA

• Molecule 1: mDC-SIGN1B type I isoform

Chain G: 59% 21% 18%

ALA  
GLU  
ARG  
LEU  
CYS  
HIS  
P255  
C256  
W258  
V260  
F269  
M270  
S271  
R275  
H278  
I281  
L291  
V292  
E298  
E299  
Q300  
N301  
F302  
L303  
Q304  
L305  
Q306  
T314  
S319  
D320  
W327  
S333  
W343  
P348  
N349  
N350  
V351  
E354  
D355  
D367  
K368  
C369  
L371

A372  
W375  
I376  
A382  
SER  
SER  
SER  
ASP  
GLU  
GLN  
PHE  
LEU  
PRO  
PRO  
ALA  
ALA  
THR  
THR  
PRO  
PRO  
ASN  
PRO  
PRO  
PRO  
PRO  
ALA

• Molecule 1: mDC-SIGN1B type I isoform

Chain H: % 56% 24% 19%

ALA  
GLU  
ARG  
LEU  
CYS  
HIS  
P255  
C256  
F262  
F263  
Q264  
Y268  
F269  
M270  
N276  
I283  
L291  
V292  
L293  
L294  
K295  
E298  
E299  
Q300  
N301  
F302  
Q306  
S310  
N311  
R312  
F313  
T314  
W315  
N316  
G317  
L318  
S319  
N322  
W327  
Q328  
W329  
V330  
D331  
P348  
V351  
D355

B366  
D367  
K368  
L371  
F374  
W375  
I376  
C377  
K378  
A381  
ALA  
SER  
SER  
SER  
CYS  
ARG  
ASP  
GLU  
GLN  
PHE  
LEU  
SER  
PRO  
PRO  
ALA  
ALA  
THR  
THR  
PRO  
PRO  
ASN  
PRO  
PRO  
PRO  
PRO  
ALA

• Molecule 1: mDC-SIGN1B type I isoform

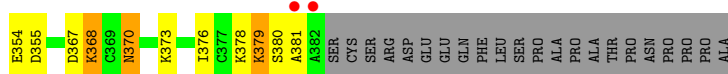
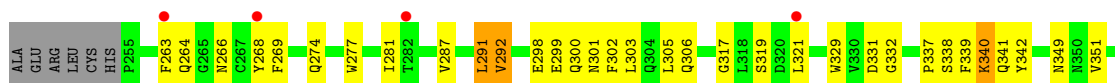
Chain I: % 50% 31% 18%

ALA  
GLU  
ARG  
LEU  
CYS  
HIS  
P255  
C256  
P257  
W260  
F263  
Y268  
F269  
M270  
N276  
W277  
S280  
L281  
T282  
A283  
V292  
K295  
S296  
A297  
E298  
E299  
Q300  
N301  
Q304  
L305  
S308  
R309  
F313  
T314  
S319  
D320  
Q323  
T326  
W327  
Q328  
W329  
V330  
D331  
L336  
P337  
S338  
F339





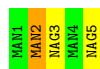
- Molecule 1: mDC-SIGN1B type I isoform



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



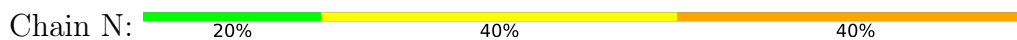
- Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-2)-alpha-D-mannopyranose-(1-3)-[2-acetamido-2-deoxy-beta-D-glucopyranose-(1-2)-alpha-D-mannopyranose-(1-6)]alpha-D-mannopyranose



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



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



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

Chain O:  40% 60%



## 4 Data and refinement statistics i

| Property  | Value   | Source           |
|---|---|------------------|
| Space group   | C 1 2 1   | Depositor        |
| Cell constants<br>a, b, c, $\alpha$ , $\beta$ , $\gamma$                | 106.81Å 148.16Å 112.99Å<br>90.00° 91.03° 90.00°             | Depositor        |
| Resolution (Å)  | 26.68 – 2.50<br>48.61 – 2.50                                | Depositor<br>EDS |
| % Data completeness<br>(in resolution range)                            | 97.8 (26.68-2.50)<br>94.6 (48.61-2.50)                      | Depositor<br>EDS |
| $R_{merge}$   | 0.05  | Depositor        |
| $R_{sym}$   | (Not available)   | Depositor        |
| $\langle I/\sigma(I) \rangle$ <sup>1</sup>                              | 4.27 (at 2.51Å)   | Xtrriage         |
| Refinement program  | CNS 1.0   | Depositor        |
| R, $R_{free}$   | 0.213 , 0.258<br>0.207 , 0.250                              | Depositor<br>DCC |
| $R_{free}$ test set   | 3585 reflections (6.04%)                                    | wwPDB-VP         |
| Wilson B-factor (Å <sup>2</sup> )                                       | 42.8  | Xtrriage         |
| Anisotropy  | 0.480   | Xtrriage         |
| Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> ) | 0.31 , 41.9   | EDS              |
| L-test for twinning <sup>2</sup>  | $\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.32$ | Xtrriage         |
| Estimated twinning fraction   | 0.022 for -h,-k,l   | Xtrriage         |
| $F_o, F_c$ correlation  | 0.94  | EDS              |
| Total number of atoms   | 11035   | wwPDB-VP         |
| Average B, all atoms (Å <sup>2</sup> )                                  | 49.0  | wwPDB-VP         |

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.28% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

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

## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

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

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     | 0.36         | 0/1075  | 0.57        | 0/1458  |
| 1   | B     | 0.41         | 0/1075  | 0.63        | 0/1458  |
| 1   | C     | 0.41         | 0/1075  | 0.59        | 0/1458  |
| 1   | D     | 0.41         | 0/1104  | 0.62        | 0/1498  |
| 1   | E     | 0.41         | 0/1075  | 0.60        | 0/1458  |
| 1   | F     | 0.44         | 0/1075  | 0.64        | 0/1458  |
| 1   | G     | 0.39         | 0/1075  | 0.59        | 0/1458  |
| 1   | H     | 0.42         | 0/1070  | 0.62        | 0/1451  |
| 1   | I     | 0.37         | 0/1075  | 0.56        | 0/1458  |
| 1   | J     | 0.37         | 0/1075  | 0.57        | 0/1458  |
| All | All   | 0.40         | 0/10774 | 0.60        | 0/14613 |

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

### 5.2 Too-close contacts [i](#)

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

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1   | A     | 1042  | 0        | 945      | 36      | 0            |
| 1   | B     | 1042  | 0        | 945      | 21      | 0            |
| 1   | C     | 1042  | 0        | 945      | 30      | 0            |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1   | D     | 1070  | 0        | 964      | 20      | 0            |
| 1   | E     | 1042  | 0        | 945      | 26      | 0            |
| 1   | F     | 1042  | 0        | 945      | 31      | 0            |
| 1   | G     | 1042  | 0        | 945      | 26      | 0            |
| 1   | H     | 1037  | 0        | 940      | 29      | 0            |
| 1   | I     | 1042  | 0        | 945      | 45      | 0            |
| 1   | J     | 1042  | 0        | 945      | 37      | 0            |
| 2   | K     | 62    | 0        | 52       | 1       | 0            |
| 2   | L     | 62    | 0        | 51       | 2       | 0            |
| 2   | M     | 62    | 0        | 50       | 3       | 0            |
| 2   | N     | 62    | 0        | 50       | 2       | 0            |
| 2   | O     | 62    | 0        | 51       | 1       | 0            |
| 3   | A     | 3     | 0        | 0        | 0       | 0            |
| 3   | B     | 3     | 0        | 0        | 0       | 0            |
| 3   | C     | 3     | 0        | 0        | 0       | 0            |
| 3   | D     | 3     | 0        | 0        | 0       | 0            |
| 3   | E     | 3     | 0        | 0        | 0       | 0            |
| 3   | F     | 3     | 0        | 0        | 0       | 0            |
| 3   | G     | 3     | 0        | 0        | 0       | 0            |
| 3   | H     | 3     | 0        | 0        | 0       | 0            |
| 3   | I     | 3     | 0        | 0        | 0       | 0            |
| 3   | J     | 3     | 0        | 0        | 0       | 0            |
| 4   | A     | 13    | 0        | 0        | 0       | 0            |
| 4   | B     | 29    | 0        | 0        | 0       | 0            |
| 4   | C     | 36    | 0        | 0        | 2       | 0            |
| 4   | D     | 38    | 0        | 0        | 5       | 0            |
| 4   | E     | 31    | 0        | 0        | 0       | 0            |
| 4   | F     | 30    | 0        | 0        | 1       | 0            |
| 4   | G     | 25    | 0        | 0        | 1       | 0            |
| 4   | H     | 23    | 0        | 0        | 1       | 0            |
| 4   | I     | 15    | 0        | 0        | 4       | 0            |
| 4   | J     | 12    | 0        | 0        | 0       | 0            |
| All | All   | 11035 | 0        | 9718     | 296     | 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 14.

The worst 5 of 296 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:J:370:ASN:HD22 | 1:J:370:ASN:H | 1.12                     | 0.95              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:368:LYS:H    | 1:A:368:LYS:HD2  | 1.40                     | 0.87              |
| 1:F:305:LEU:HD13 | 1:F:309:ARG:HH21 | 1.43                     | 0.84              |
| 1:I:368:LYS:H    | 1:I:368:LYS:HD2  | 1.43                     | 0.84              |
| 1:D:311:ASN:HA   | 2:M:5:NAG:O4     | 1.80                     | 0.81              |

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     | 126/156 (81%)   | 110 (87%)  | 13 (10%) | 3 (2%)   | 6 9         |
| 1   | B     | 126/156 (81%)   | 117 (93%)  | 8 (6%)   | 1 (1%)   | 19 35       |
| 1   | C     | 126/156 (81%)   | 116 (92%)  | 9 (7%)   | 1 (1%)   | 19 35       |
| 1   | D     | 130/156 (83%)   | 126 (97%)  | 2 (2%)   | 2 (2%)   | 10 18       |
| 1   | E     | 126/156 (81%)   | 119 (94%)  | 5 (4%)   | 2 (2%)   | 9 17        |
| 1   | F     | 126/156 (81%)   | 121 (96%)  | 4 (3%)   | 1 (1%)   | 19 35       |
| 1   | G     | 126/156 (81%)   | 116 (92%)  | 9 (7%)   | 1 (1%)   | 19 35       |
| 1   | H     | 125/156 (80%)   | 119 (95%)  | 4 (3%)   | 2 (2%)   | 9 17        |
| 1   | I     | 126/156 (81%)   | 115 (91%)  | 9 (7%)   | 2 (2%)   | 9 17        |
| 1   | J     | 126/156 (81%)   | 109 (86%)  | 12 (10%) | 5 (4%)   | 3 3         |
| All | All   | 1263/1560 (81%) | 1168 (92%) | 75 (6%)  | 20 (2%)  | 9 17        |

5 of 20 Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | E     | 381 | ALA  |
| 1   | I     | 292 | VAL  |
| 1   | A     | 292 | VAL  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | A     | 381 | ALA  |
| 1   | D     | 292 | VAL  |

### 5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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     | 112/136 (82%)   | 110 (98%)  | 2 (2%)   | 59 81       |
| 1   | B     | 112/136 (82%)   | 107 (96%)  | 5 (4%)   | 27 51       |
| 1   | C     | 112/136 (82%)   | 107 (96%)  | 5 (4%)   | 27 51       |
| 1   | D     | 116/136 (85%)   | 114 (98%)  | 2 (2%)   | 60 82       |
| 1   | E     | 112/136 (82%)   | 108 (96%)  | 4 (4%)   | 35 61       |
| 1   | F     | 112/136 (82%)   | 108 (96%)  | 4 (4%)   | 35 61       |
| 1   | G     | 112/136 (82%)   | 107 (96%)  | 5 (4%)   | 27 51       |
| 1   | H     | 112/136 (82%)   | 109 (97%)  | 3 (3%)   | 44 71       |
| 1   | I     | 112/136 (82%)   | 110 (98%)  | 2 (2%)   | 59 81       |
| 1   | J     | 112/136 (82%)   | 109 (97%)  | 3 (3%)   | 44 71       |
| All | All   | 1124/1360 (83%) | 1089 (97%) | 35 (3%)  | 40 67       |

5 of 35 residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | H     | 291 | LEU  |
| 1   | H     | 368 | LYS  |
| 1   | J     | 291 | LEU  |
| 1   | D     | 291 | LEU  |
| 1   | C     | 370 | ASN  |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 30 such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | E     | 322 | ASN  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | J     | 301 | ASN  |
| 1   | F     | 272 | ASN  |
| 1   | J     | 370 | ASN  |
| 1   | H     | 328 | 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](#)

25 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   | MAN  | K     | 1   | 2    | 12,12,12     | 0.40 | 0           | 17,17,17    | 0.54 | 0           |
| 2   | MAN  | K     | 2   | 2,3  | 11,11,12     | 0.52 | 0           | 15,15,17    | 0.81 | 1 (6%)      |
| 2   | NAG  | K     | 3   | 2,3  | 14,14,15     | 0.52 | 0           | 17,19,21    | 0.80 | 0           |
| 2   | MAN  | K     | 4   | 2    | 11,11,12     | 0.56 | 0           | 15,15,17    | 0.55 | 0           |
| 2   | NAG  | K     | 5   | 2    | 14,14,15     | 0.46 | 0           | 17,19,21    | 1.01 | 2 (11%)     |
| 2   | MAN  | L     | 1   | 2    | 12,12,12     | 0.46 | 0           | 17,17,17    | 0.52 | 0           |
| 2   | MAN  | L     | 2   | 2,3  | 11,11,12     | 0.55 | 0           | 15,15,17    | 0.73 | 1 (6%)      |
| 2   | NAG  | L     | 3   | 2,3  | 14,14,15     | 0.53 | 0           | 17,19,21    | 1.00 | 1 (5%)      |
| 2   | MAN  | L     | 4   | 2    | 11,11,12     | 0.62 | 0           | 15,15,17    | 0.66 | 0           |
| 2   | NAG  | L     | 5   | 2    | 14,14,15     | 0.49 | 0           | 17,19,21    | 0.64 | 0           |
| 2   | MAN  | M     | 1   | 2    | 12,12,12     | 0.37 | 0           | 17,17,17    | 0.41 | 0           |
| 2   | MAN  | M     | 2   | 2,3  | 11,11,12     | 0.53 | 0           | 15,15,17    | 0.67 | 1 (6%)      |
| 2   | NAG  | M     | 3   | 2,3  | 14,14,15     | 0.37 | 0           | 17,19,21    | 0.81 | 1 (5%)      |



| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 2   | MAN  | M     | 4   | 2    | 11,11,12     | 0.53 | 0        | 15,15,17    | 0.61 | 0        |
| 2   | NAG  | M     | 5   | 2    | 14,14,15     | 0.55 | 0        | 17,19,21    | 0.61 | 0        |
| 2   | MAN  | N     | 1   | 2    | 12,12,12     | 0.54 | 0        | 17,17,17    | 0.61 | 0        |
| 2   | MAN  | N     | 2   | 2,3  | 11,11,12     | 0.49 | 0        | 15,15,17    | 0.73 | 1 (6%)   |
| 2   | NAG  | N     | 3   | 2,3  | 14,14,15     | 0.47 | 0        | 17,19,21    | 0.78 | 1 (5%)   |
| 2   | MAN  | N     | 4   | 2    | 11,11,12     | 0.45 | 0        | 15,15,17    | 0.77 | 1 (6%)   |
| 2   | NAG  | N     | 5   | 2    | 14,14,15     | 0.52 | 0        | 17,19,21    | 0.76 | 1 (5%)   |
| 2   | MAN  | O     | 1   | 2    | 12,12,12     | 0.40 | 0        | 17,17,17    | 0.53 | 0        |
| 2   | MAN  | O     | 2   | 2,3  | 11,11,12     | 0.51 | 0        | 15,15,17    | 0.68 | 1 (6%)   |
| 2   | NAG  | O     | 3   | 2,3  | 14,14,15     | 0.43 | 0        | 17,19,21    | 0.76 | 0        |
| 2   | MAN  | O     | 4   | 2    | 11,11,12     | 0.54 | 0        | 15,15,17    | 0.70 | 1 (6%)   |
| 2   | NAG  | O     | 5   | 2    | 14,14,15     | 0.50 | 0        | 17,19,21    | 0.73 | 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   | MAN  | K     | 1   | 2    | -       | 0/2/22/22 | 0/1/1/1 |
| 2   | MAN  | K     | 2   | 2,3  | -       | 2/2/19/22 | 0/1/1/1 |
| 2   | NAG  | K     | 3   | 2,3  | -       | 4/6/23/26 | 0/1/1/1 |
| 2   | MAN  | K     | 4   | 2    | -       | 0/2/19/22 | 0/1/1/1 |
| 2   | NAG  | K     | 5   | 2    | -       | 2/6/23/26 | 0/1/1/1 |
| 2   | MAN  | L     | 1   | 2    | -       | 0/2/22/22 | 0/1/1/1 |
| 2   | MAN  | L     | 2   | 2,3  | -       | 0/2/19/22 | 0/1/1/1 |
| 2   | NAG  | L     | 3   | 2,3  | -       | 1/6/23/26 | 0/1/1/1 |
| 2   | MAN  | L     | 4   | 2    | -       | 0/2/19/22 | 0/1/1/1 |
| 2   | NAG  | L     | 5   | 2    | -       | 0/6/23/26 | 0/1/1/1 |
| 2   | MAN  | M     | 1   | 2    | -       | 0/2/22/22 | 0/1/1/1 |
| 2   | MAN  | M     | 2   | 2,3  | -       | 1/2/19/22 | 0/1/1/1 |
| 2   | NAG  | M     | 3   | 2,3  | -       | 0/6/23/26 | 0/1/1/1 |
| 2   | MAN  | M     | 4   | 2    | -       | 0/2/19/22 | 0/1/1/1 |
| 2   | NAG  | M     | 5   | 2    | -       | 0/6/23/26 | 0/1/1/1 |
| 2   | MAN  | N     | 1   | 2    | -       | 0/2/22/22 | 0/1/1/1 |
| 2   | MAN  | N     | 2   | 2,3  | -       | 0/2/19/22 | 0/1/1/1 |
| 2   | NAG  | N     | 3   | 2,3  | -       | 0/6/23/26 | 0/1/1/1 |
| 2   | MAN  | N     | 4   | 2    | -       | 2/2/19/22 | 0/1/1/1 |
| 2   | NAG  | N     | 5   | 2    | -       | 0/6/23/26 | 0/1/1/1 |
| 2   | MAN  | O     | 1   | 2    | -       | 0/2/22/22 | 0/1/1/1 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions  | Rings   |
|-----|------|-------|-----|------|---------|-----------|---------|
| 2   | MAN  | O     | 2   | 2,3  | -       | 0/2/19/22 | 0/1/1/1 |
| 2   | NAG  | O     | 3   | 2,3  | -       | 2/6/23/26 | 0/1/1/1 |
| 2   | MAN  | O     | 4   | 2    | -       | 0/2/19/22 | 0/1/1/1 |
| 2   | NAG  | O     | 5   | 2    | -       | 0/6/23/26 | 0/1/1/1 |

There are no bond length outliers.

The worst 5 of 13 bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms    | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|----------|-------|-------------|----------|
| 2   | K     | 5   | NAG  | C4-C3-C2 | -2.66 | 107.13      | 111.02   |
| 2   | K     | 2   | MAN  | C1-O5-C5 | 2.53  | 115.63      | 112.19   |
| 2   | L     | 3   | NAG  | C2-N2-C7 | -2.46 | 119.39      | 122.90   |
| 2   | L     | 2   | MAN  | C1-O5-C5 | 2.43  | 115.49      | 112.19   |
| 2   | N     | 3   | NAG  | C2-N2-C7 | -2.43 | 119.44      | 122.90   |

There are no chirality outliers.

5 of 14 torsion outliers are listed below:

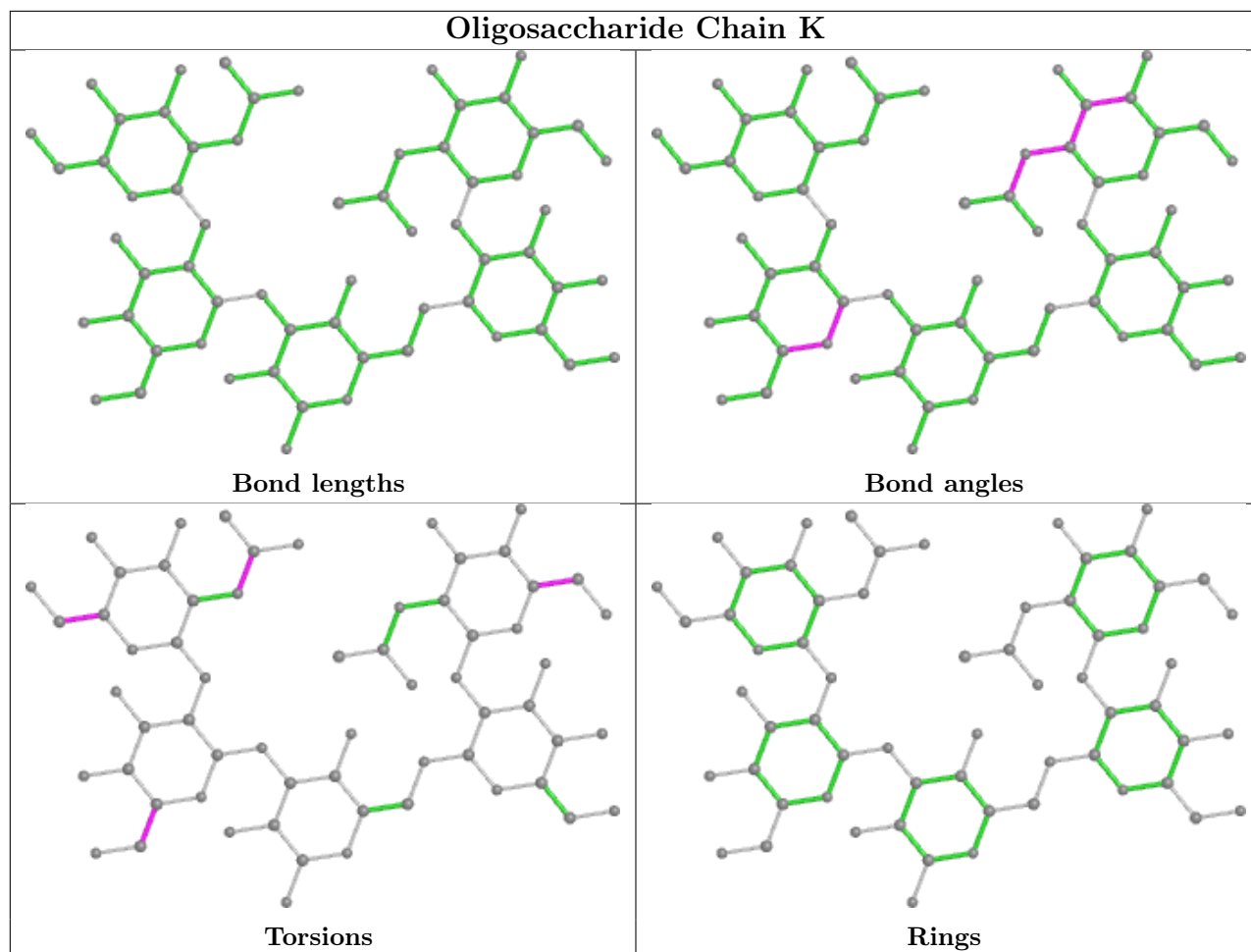
| Mol | Chain | Res | Type | Atoms       |
|-----|-------|-----|------|-------------|
| 2   | K     | 3   | NAG  | O5-C5-C6-O6 |
| 2   | K     | 3   | NAG  | C4-C5-C6-O6 |
| 2   | K     | 5   | NAG  | C4-C5-C6-O6 |
| 2   | K     | 2   | MAN  | C4-C5-C6-O6 |
| 2   | N     | 4   | MAN  | O5-C5-C6-O6 |

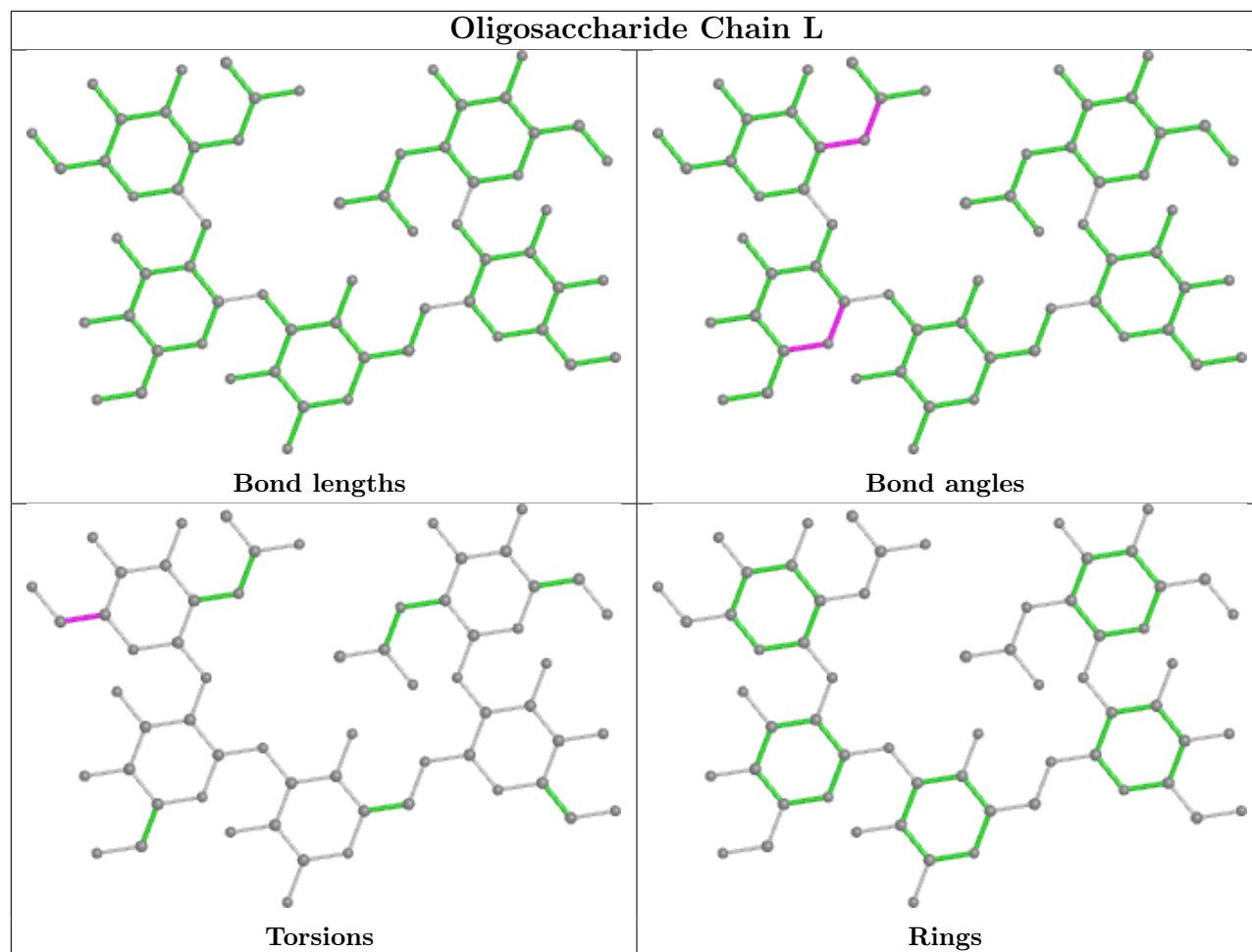
There are no ring outliers.

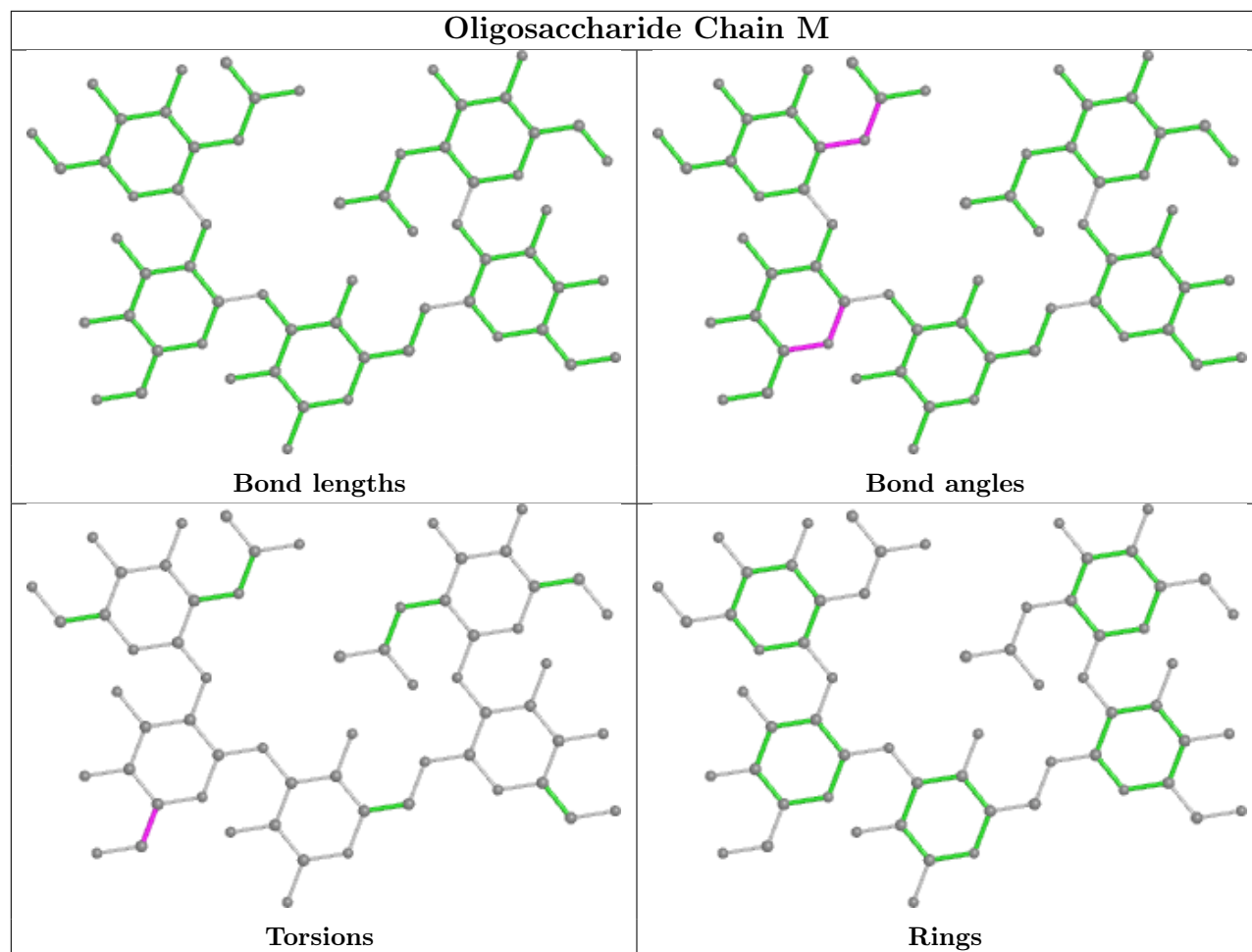
8 monomers are involved in 9 short contacts:

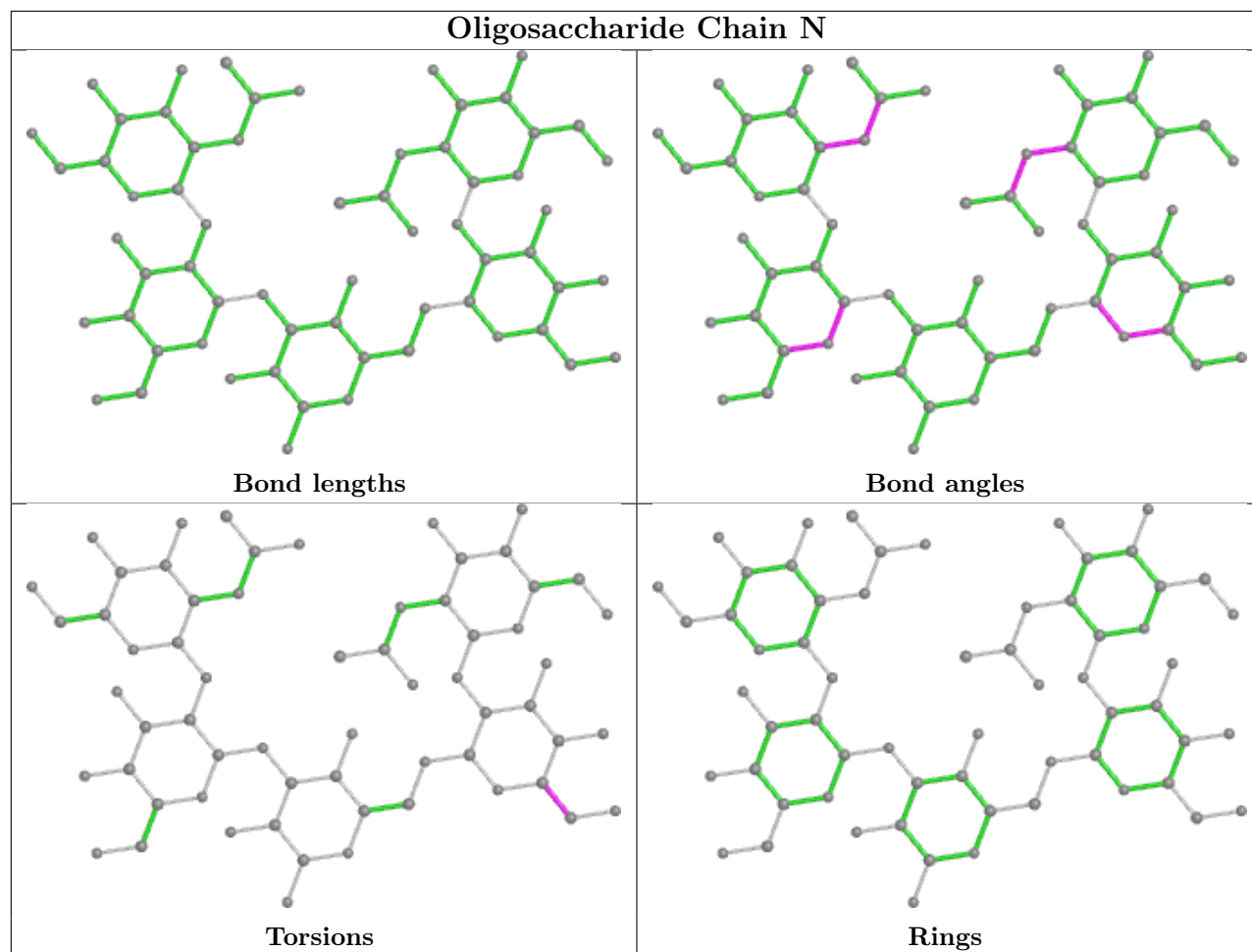
| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 2   | L     | 2   | MAN  | 1       | 0            |
| 2   | N     | 2   | MAN  | 1       | 0            |
| 2   | L     | 5   | NAG  | 1       | 0            |
| 2   | M     | 5   | NAG  | 1       | 0            |
| 2   | O     | 5   | NAG  | 1       | 0            |
| 2   | K     | 5   | NAG  | 1       | 0            |
| 2   | N     | 5   | NAG  | 1       | 0            |
| 2   | M     | 3   | NAG  | 2       | 0            |

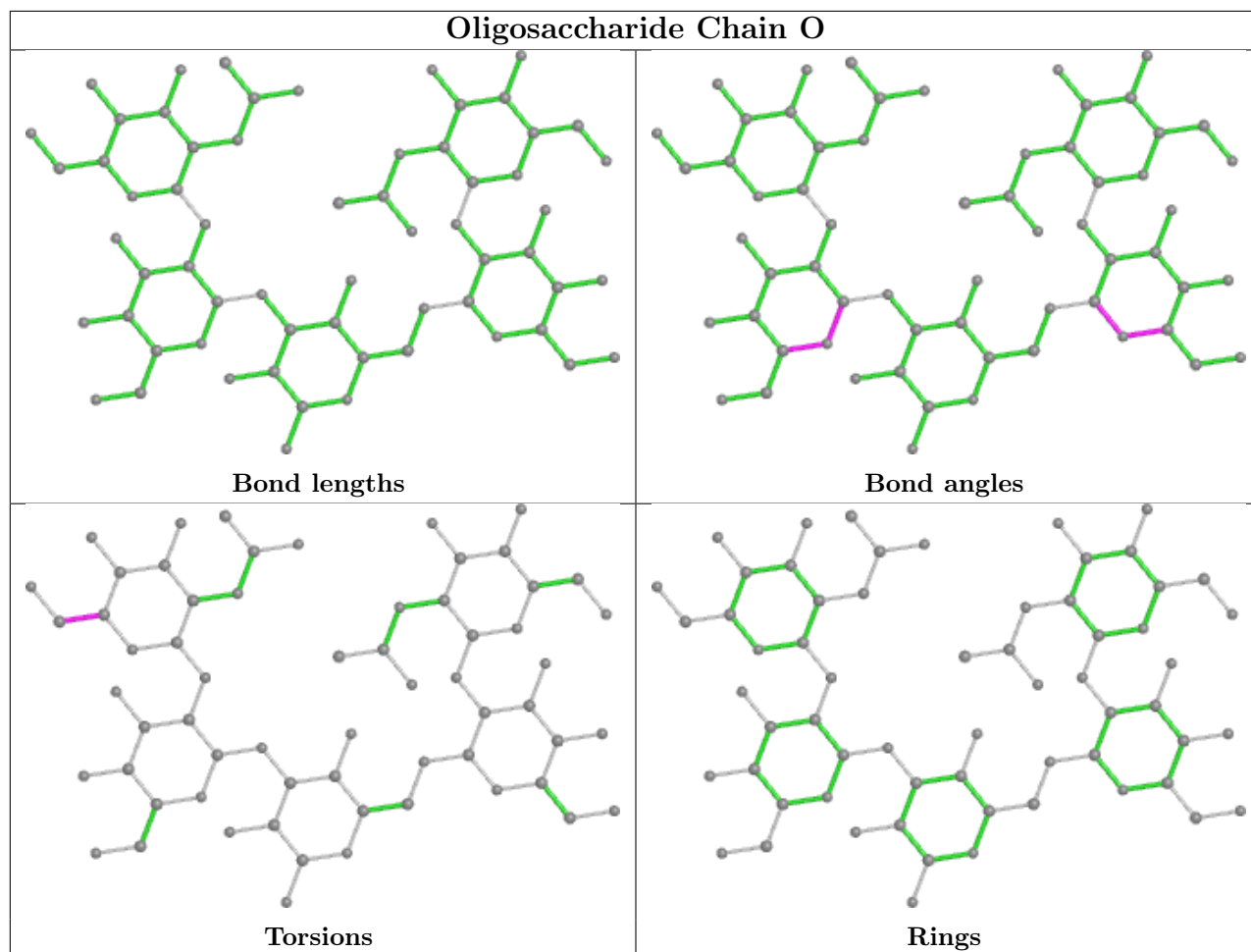
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.











## 5.6 Ligand geometry [i](#)

Of 30 ligands modelled in this entry, 30 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.



## 6 Fit of model and data [i](#)

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

In the following table, the column labelled '#RSRZ > 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> 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 <sup>2</sup> ) | Q<0.9 |
|-----|-------|-----------------|--------|---------------|-----------------------|-------|
| 1   | A     | 128/156 (82%)   | 0.37   | 6 (4%) 31 33  | 39, 66, 81, 87        | 0     |
| 1   | B     | 128/156 (82%)   | -0.13  | 1 (0%) 86 87  | 27, 43, 59, 77        | 0     |
| 1   | C     | 128/156 (82%)   | -0.06  | 0 100 100     | 26, 42, 56, 68        | 0     |
| 1   | D     | 132/156 (84%)   | -0.03  | 0 100 100     | 25, 43, 57, 74        | 0     |
| 1   | E     | 128/156 (82%)   | 0.05   | 0 100 100     | 26, 44, 57, 67        | 0     |
| 1   | F     | 128/156 (82%)   | -0.05  | 1 (0%) 86 87  | 26, 38, 54, 69        | 0     |
| 1   | G     | 128/156 (82%)   | -0.12  | 0 100 100     | 30, 45, 64, 83        | 0     |
| 1   | H     | 127/156 (81%)   | 0.11   | 1 (0%) 86 87  | 31, 47, 60, 68        | 0     |
| 1   | I     | 128/156 (82%)   | 0.22   | 1 (0%) 86 87  | 43, 62, 81, 84        | 0     |
| 1   | J     | 128/156 (82%)   | 0.34   | 6 (4%) 31 33  | 43, 62, 76, 83        | 0     |
| All | All   | 1283/1560 (82%) | 0.07   | 16 (1%) 79 80 | 25, 48, 74, 87        | 0     |

The worst 5 of 16 RSRZ outliers are listed below:

| Mol | Chain | Res | Type | RSRZ |
|-----|-------|-----|------|------|
| 1   | A     | 382 | ALA  | 3.6  |
| 1   | A     | 256 | CYS  | 3.2  |
| 1   | A     | 292 | VAL  | 3.2  |
| 1   | A     | 267 | CYS  | 2.9  |
| 1   | J     | 321 | LEU  | 2.9  |

### 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](#)

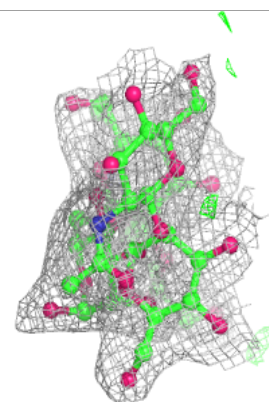
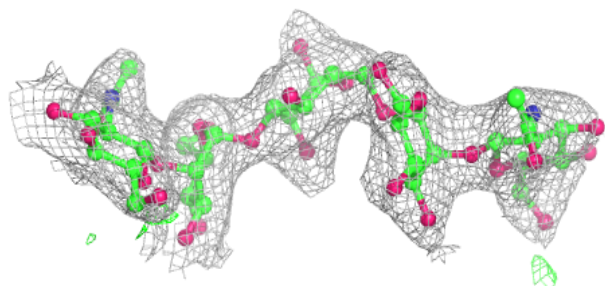
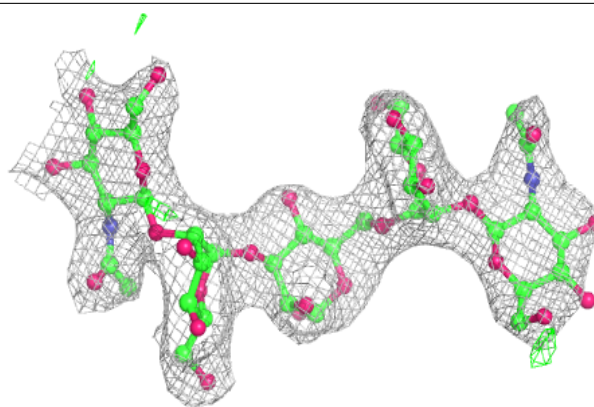
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q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

| Mol | Type | Chain | Res | Atoms | RSCC | RSR  | B-factors(Å <sup>2</sup> ) | Q<0.9 |
|-----|------|-------|-----|-------|------|------|----------------------------|-------|
| 2   | NAG  | K     | 5   | 14/15 | 0.90 | 0.22 | 68,71,73,73                | 0     |
| 2   | NAG  | O     | 5   | 14/15 | 0.92 | 0.14 | 51,52,54,54                | 0     |
| 2   | MAN  | N     | 1   | 12/12 | 0.93 | 0.16 | 38,41,44,45                | 0     |
| 2   | NAG  | N     | 5   | 14/15 | 0.93 | 0.16 | 47,49,51,54                | 0     |
| 2   | MAN  | K     | 1   | 12/12 | 0.93 | 0.14 | 49,55,59,62                | 0     |
| 2   | NAG  | M     | 5   | 14/15 | 0.94 | 0.16 | 32,41,42,43                | 0     |
| 2   | MAN  | K     | 4   | 11/12 | 0.94 | 0.11 | 61,63,66,66                | 0     |
| 2   | NAG  | L     | 5   | 14/15 | 0.95 | 0.17 | 42,46,48,49                | 0     |
| 2   | MAN  | M     | 1   | 12/12 | 0.95 | 0.17 | 31,39,42,48                | 0     |
| 2   | NAG  | O     | 3   | 14/15 | 0.95 | 0.15 | 33,38,46,47                | 0     |
| 2   | MAN  | O     | 4   | 11/12 | 0.95 | 0.12 | 42,46,48,53                | 0     |
| 2   | MAN  | K     | 2   | 11/12 | 0.95 | 0.14 | 39,45,49,50                | 0     |
| 2   | MAN  | N     | 4   | 11/12 | 0.96 | 0.17 | 39,44,46,47                | 0     |
| 2   | NAG  | K     | 3   | 14/15 | 0.96 | 0.17 | 48,50,52,52                | 0     |
| 2   | MAN  | L     | 1   | 12/12 | 0.96 | 0.15 | 44,48,50,50                | 0     |
| 2   | NAG  | L     | 3   | 14/15 | 0.96 | 0.15 | 41,42,46,50                | 0     |
| 2   | MAN  | L     | 4   | 11/12 | 0.96 | 0.19 | 47,49,51,55                | 0     |
| 2   | MAN  | O     | 1   | 12/12 | 0.97 | 0.12 | 35,40,42,44                | 0     |
| 2   | MAN  | O     | 2   | 11/12 | 0.97 | 0.14 | 28,33,36,36                | 0     |
| 2   | NAG  | N     | 3   | 14/15 | 0.97 | 0.15 | 31,35,39,42                | 0     |
| 2   | MAN  | L     | 2   | 11/12 | 0.97 | 0.15 | 30,37,41,45                | 0     |
| 2   | MAN  | M     | 4   | 11/12 | 0.97 | 0.16 | 36,38,40,42                | 0     |
| 2   | MAN  | N     | 2   | 11/12 | 0.98 | 0.15 | 29,33,38,39                | 0     |
| 2   | NAG  | M     | 3   | 14/15 | 0.98 | 0.14 | 25,27,31,34                | 0     |
| 2   | MAN  | M     | 2   | 11/12 | 0.98 | 0.15 | 23,27,30,33                | 0     |

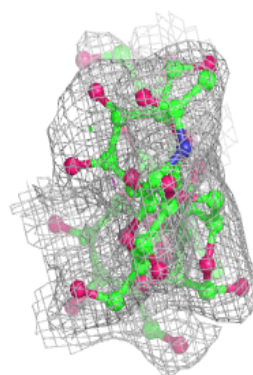
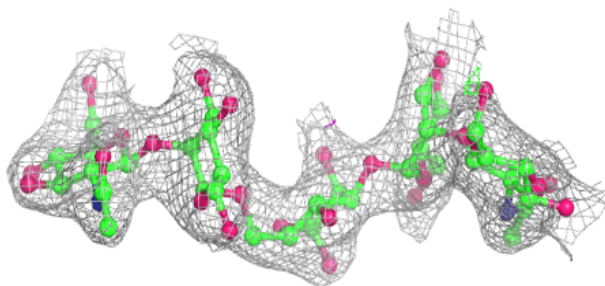
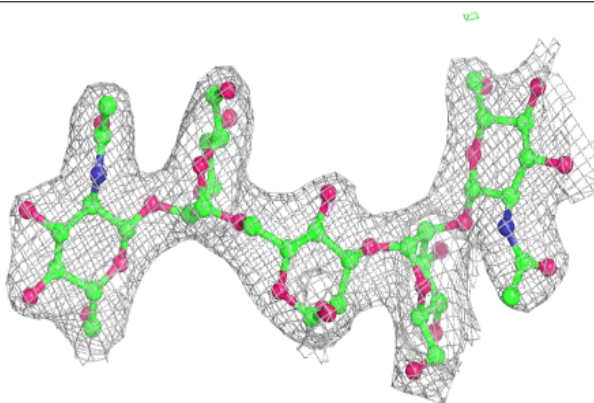
The following is a graphical depiction of the model fit to experimental electron density for oligosaccharide. Each fit is shown from different orientation to approximate a three-dimensional view.

**Electron density around Chain K:**

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

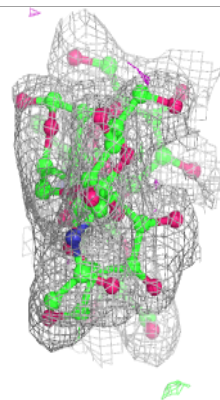
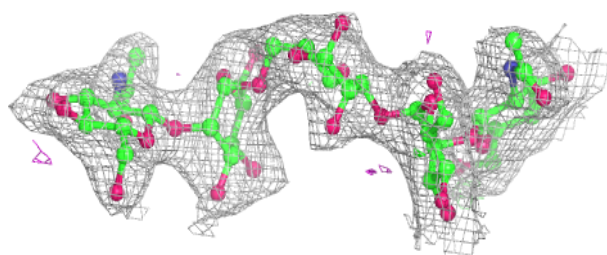
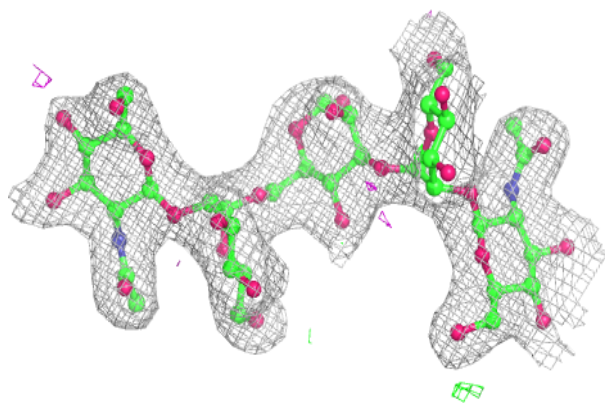
**Electron density around Chain L:**

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

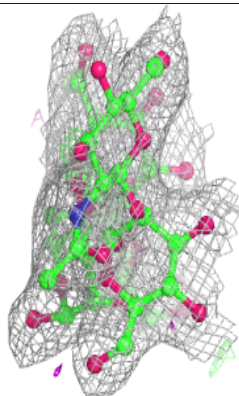
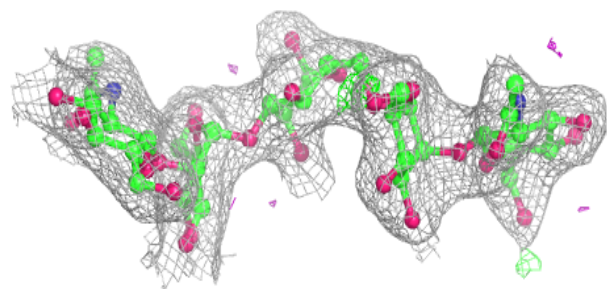
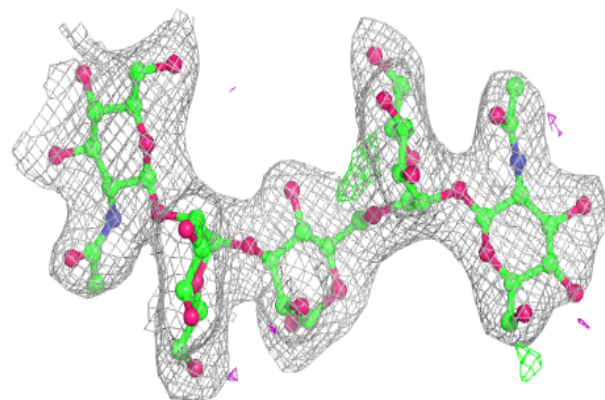


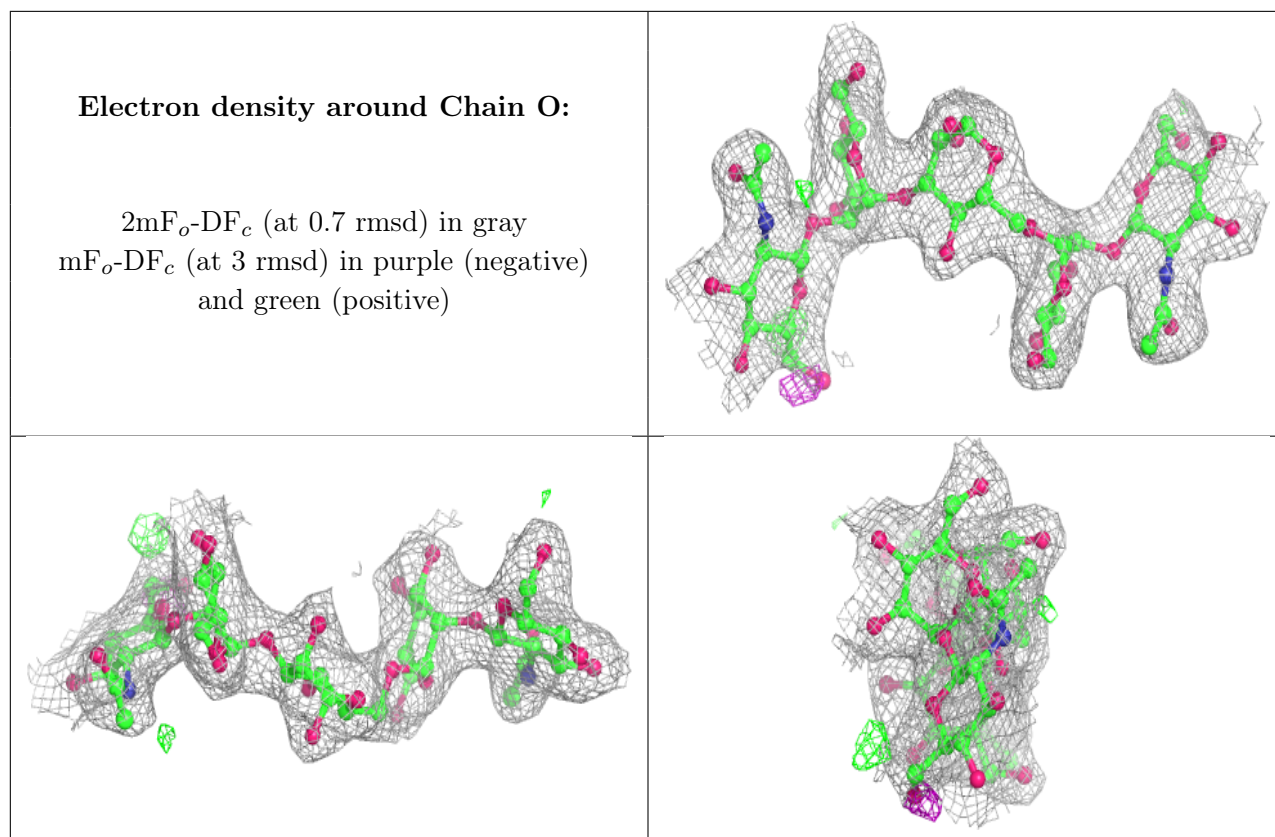
**Electron density around Chain M:**

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

**Electron density around Chain N:**

$2mF_o-DF_c$  (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, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

| Mol | Type | Chain | Res  | Atoms | RSCC | RSR  | B-factors( $\text{\AA}^2$ ) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 3   | CA   | A     | 407  | 1/1   | 0.91 | 0.13 | 64,64,64,64                 | 0     |
| 3   | CA   | J     | 1303 | 1/1   | 0.93 | 0.06 | 53,53,53,53                 | 0     |
| 3   | CA   | C     | 601  | 1/1   | 0.96 | 0.08 | 54,54,54,54                 | 0     |
| 3   | CA   | F     | 903  | 1/1   | 0.96 | 0.09 | 48,48,48,48                 | 0     |
| 3   | CA   | G     | 1001 | 1/1   | 0.96 | 0.11 | 32,32,32,32                 | 0     |
| 3   | CA   | G     | 1003 | 1/1   | 0.96 | 0.13 | 43,43,43,43                 | 0     |
| 3   | CA   | A     | 405  | 1/1   | 0.96 | 0.09 | 56,56,56,56                 | 0     |
| 3   | CA   | C     | 603  | 1/1   | 0.97 | 0.12 | 59,59,59,59                 | 0     |
| 3   | CA   | H     | 1102 | 1/1   | 0.97 | 0.15 | 33,33,33,33                 | 0     |
| 3   | CA   | I     | 1201 | 1/1   | 0.97 | 0.10 | 44,44,44,44                 | 0     |
| 3   | CA   | D     | 703  | 1/1   | 0.97 | 0.08 | 50,50,50,50                 | 0     |
| 3   | CA   | H     | 1101 | 1/1   | 0.98 | 0.17 | 37,37,37,37                 | 0     |
| 3   | CA   | A     | 406  | 1/1   | 0.98 | 0.15 | 41,41,41,41                 | 0     |
| 3   | CA   | C     | 602  | 1/1   | 0.98 | 0.12 | 34,34,34,34                 | 0     |

*Continued on next page...*

*Continued from previous page...*

| Mol | Type | Chain | Res  | Atoms | RSCC | RSR  | B-factors( $\text{\AA}^2$ ) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 3   | CA   | I     | 1202 | 1/1   | 0.98 | 0.14 | 43,43,43,43                 | 0     |
| 3   | CA   | I     | 1203 | 1/1   | 0.98 | 0.13 | 56,56,56,56                 | 0     |
| 3   | CA   | J     | 1301 | 1/1   | 0.98 | 0.10 | 46,46,46,46                 | 0     |
| 3   | CA   | E     | 803  | 1/1   | 0.98 | 0.09 | 40,40,40,40                 | 0     |
| 3   | CA   | D     | 701  | 1/1   | 0.99 | 0.11 | 37,37,37,37                 | 0     |
| 3   | CA   | G     | 1002 | 1/1   | 0.99 | 0.12 | 30,30,30,30                 | 0     |
| 3   | CA   | D     | 702  | 1/1   | 0.99 | 0.13 | 32,32,32,32                 | 0     |
| 3   | CA   | B     | 501  | 1/1   | 0.99 | 0.13 | 32,32,32,32                 | 0     |
| 3   | CA   | E     | 801  | 1/1   | 0.99 | 0.16 | 33,33,33,33                 | 0     |
| 3   | CA   | H     | 1103 | 1/1   | 0.99 | 0.20 | 51,51,51,51                 | 0     |
| 3   | CA   | E     | 802  | 1/1   | 0.99 | 0.16 | 31,31,31,31                 | 0     |
| 3   | CA   | B     | 502  | 1/1   | 0.99 | 0.13 | 27,27,27,27                 | 0     |
| 3   | CA   | F     | 901  | 1/1   | 0.99 | 0.12 | 29,29,29,29                 | 0     |
| 3   | CA   | F     | 902  | 1/1   | 0.99 | 0.12 | 28,28,28,28                 | 0     |
| 3   | CA   | J     | 1302 | 1/1   | 0.99 | 0.14 | 39,39,39,39                 | 0     |
| 3   | CA   | B     | 503  | 1/1   | 0.99 | 0.07 | 49,49,49,49                 | 0     |

## 6.5 Other polymers [i](#)

There are no such residues in this entry.