# WORLDWIDE wwPDB PROTEIN DATA BANK

# wwPDB X-ray Structure Validation Summary Report (i)

Jan 11, 2021 – 10:24 AM EST

| | | |
|---|---|---|
| PDB ID | : | 6WXX |
| Title | : | crystal structure of cA4-activated Card1 |
| Authors | : | Rostol, J.; Xie, W.; Patel, D.J.; Marraffini, L. |
| Deposited on | : | 2020-05-12 |
| Resolution | : | 3.00 Å(reported) |

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

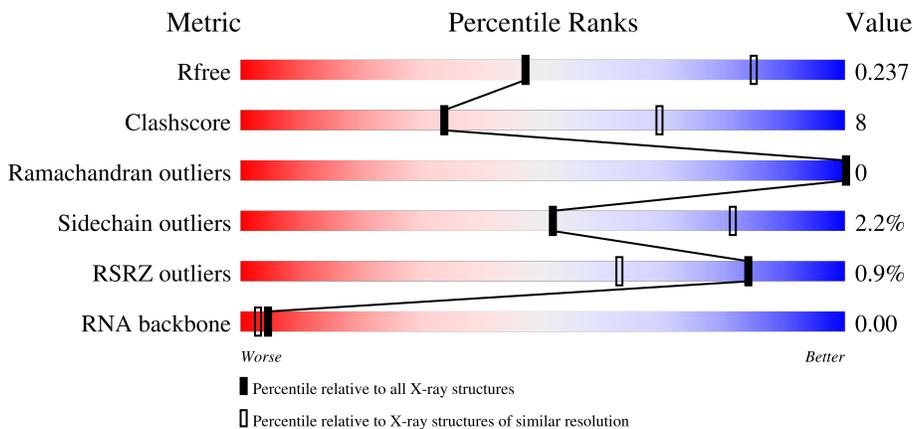| | | |
|---|---|---|
| MolProbity | : | 4.02b-467 |
| Xtriage (Phenix) | : | 1.13 |
| EDS | : | 2.16 |
| buster-report | : | 1.1.7 (2018) |
| Percentile statistics | : | 20191225.v01 (using entries in the PDB archive December 25th 2019) |
| Refmac | : | 5.8.0158 |
| CCP4 | : | 7.0.044 (Gargrove) |
| Ideal geometry (proteins) | : | Engh & Huber (2001) |
| Ideal geometry (DNA, RNA) | : | Parkinson et al. (1996) |
| Validation Pipeline (wwPDB-VP) | : | 2.16 |

# 1 Overall quality at a glance ⓘ

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

The reported resolution of this entry is 3.00 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 | | 0.237 |
| Clashscore | | 8 |
| Ramachandran outliers | | 0 |
| Sidechain outliers | | 2.2% |
| RSRZ outliers | | 0.9% |
| RNA backbone | | 0.00 |

*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 | 2092 (3.00-3.00) |
| Clashscore | 141614 | 2416 (3.00-3.00) |
| Ramachandran outliers | 138981 | 2333 (3.00-3.00) |
| Sidechain outliers | 138945 | 2336 (3.00-3.00) |
| RSRZ outliers | 127900 | 1990 (3.00-3.00) |
| RNA backbone | 3102 | 1173 (3.30-2.70) |

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 | 382 | 79% ... 17% .. |
| 1 | B | 382 | 79% ... 18% .. |
| 1 | C | 382 | 77% ... 20% . |
| 1 | D | 382 | 75% ... 21% .. |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 2 | X | 4 | 25% 50% 25% |
| 2 | Y | 4 | 75% 25% |

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 |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 3 | MN | A | 901 | - | - | - | X |
| 3 | MN | C | 901 | - | - | - | X |
| 3 | MN | D | 901 | - | - | - | X |

# 2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 12548 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 Card1.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|---|---|---|---|---------|---------|-------|
| 1 | B | 372 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 3092 | 1991 | 506 | 585 | 10 | | | |
| 1 | A | 372 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 3092 | 1991 | 506 | 585 | 10 | | | |
| 1 | D | 372 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 3092 | 1991 | 506 | 585 | 10 | | | |
| 1 | C | 372 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 3092 | 1991 | 506 | 585 | 10 | | | |

There are 36 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|---------|-----------|
| B | 374 | GLY | - | expression tag | UNP F2NWD3 |
| B | 375 | SER | - | expression tag | UNP F2NWD3 |
| B | 376 | GLY | - | expression tag | UNP F2NWD3 |
| B | 377 | HIS | - | expression tag | UNP F2NWD3 |
| B | 378 | HIS | - | expression tag | UNP F2NWD3 |
| B | 379 | HIS | - | expression tag | UNP F2NWD3 |
| B | 380 | HIS | - | expression tag | UNP F2NWD3 |
| B | 381 | HIS | - | expression tag | UNP F2NWD3 |
| B | 382 | HIS | - | expression tag | UNP F2NWD3 |
| A | 374 | GLY | - | expression tag | UNP F2NWD3 |
| A | 375 | SER | - | expression tag | UNP F2NWD3 |
| A | 376 | GLY | - | expression tag | UNP F2NWD3 |
| A | 377 | HIS | - | expression tag | UNP F2NWD3 |
| A | 378 | HIS | - | expression tag | UNP F2NWD3 |
| A | 379 | HIS | - | expression tag | UNP F2NWD3 |
| A | 380 | HIS | - | expression tag | UNP F2NWD3 |
| A | 381 | HIS | - | expression tag | UNP F2NWD3 |
| A | 382 | HIS | - | expression tag | UNP F2NWD3 |
| D | 374 | GLY | - | expression tag | UNP F2NWD3 |
| D | 375 | SER | - | expression tag | UNP F2NWD3 |
| D | 376 | GLY | - | expression tag | UNP F2NWD3 |

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| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|---------|-----------|
| D | 377 | HIS | - | expression tag | UNP F2NWD3 |
| D | 378 | HIS | - | expression tag | UNP F2NWD3 |
| D | 379 | HIS | - | expression tag | UNP F2NWD3 |
| D | 380 | HIS | - | expression tag | UNP F2NWD3 |
| D | 381 | HIS | - | expression tag | UNP F2NWD3 |
| D | 382 | HIS | - | expression tag | UNP F2NWD3 |
| C | 374 | GLY | - | expression tag | UNP F2NWD3 |
| C | 375 | SER | - | expression tag | UNP F2NWD3 |
| C | 376 | GLY | - | expression tag | UNP F2NWD3 |
| C | 377 | HIS | - | expression tag | UNP F2NWD3 |
| C | 378 | HIS | - | expression tag | UNP F2NWD3 |
| C | 379 | HIS | - | expression tag | UNP F2NWD3 |
| C | 380 | HIS | - | expression tag | UNP F2NWD3 |
| C | 381 | HIS | - | expression tag | UNP F2NWD3 |
| C | 382 | HIS | - | expression tag | UNP F2NWD3 |

- Molecule 2 is a RNA chain called cA4.

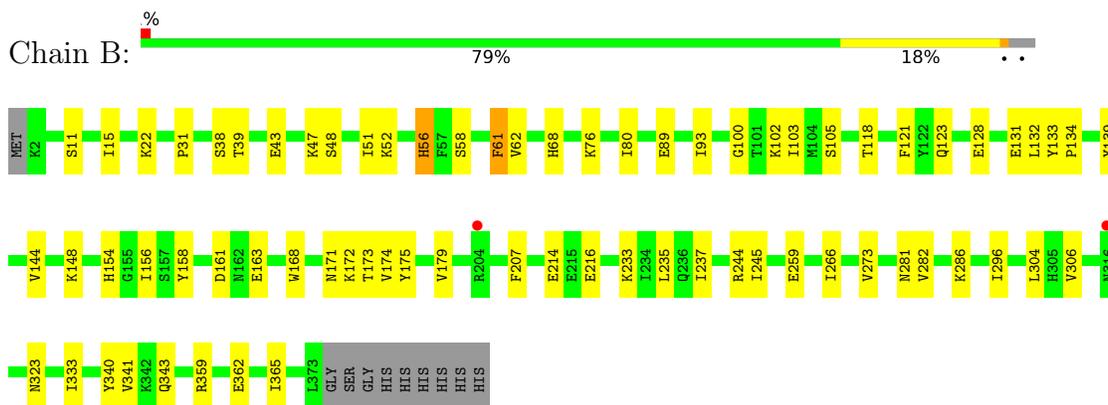| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|---|---|---|---|---------|---------|-------|
| 2 | Y | 4 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 88 | 40 | 20 | 24 | 4 | | | |
| 2 | X | 4 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 88 | 40 | 20 | 24 | 4 | | | |

- Molecule 3 is MANGANESE (II) ION (three-letter code: MN) (formula: Mn) (labeled as "Ligand of Interest" by depositor).

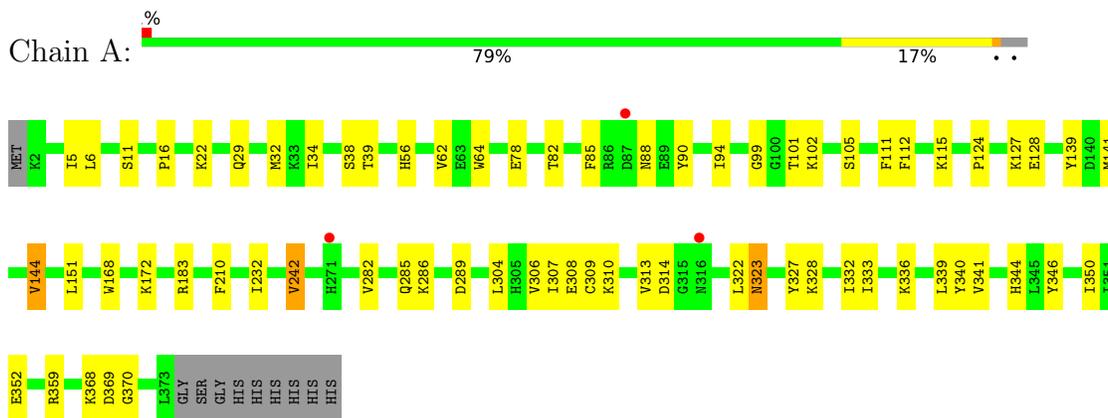| Mol | Chain | Residues | Atoms | | ZeroOcc | AltConf |
|-----|-------|----------|-------|---|---------|---------|
| 3 | B | 1 | Total | Mn | 0 | 0 |
| | | | 1 | 1 | | |
| 3 | A | 1 | Total | Mn | 0 | 0 |
| | | | 1 | 1 | | |
| 3 | D | 1 | Total | Mn | 0 | 0 |
| | | | 1 | 1 | | |
| 3 | C | 1 | Total | Mn | 0 | 0 |
| | | | 1 | 1 | | |

# 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.
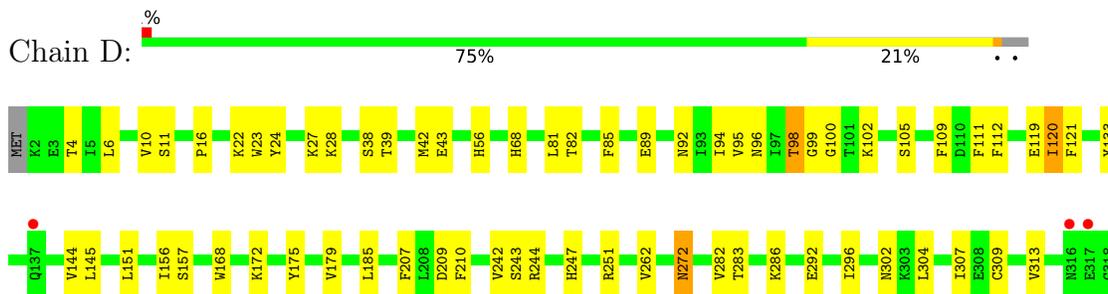
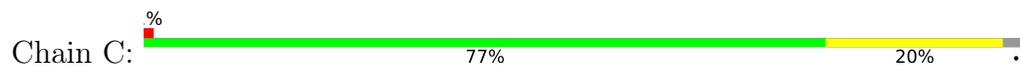- Molecule 1: Card1



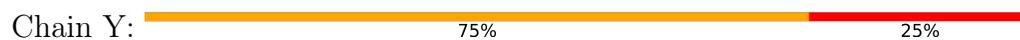- Molecule 1: Card1



- Molecule 1: Card1

N319 N323 Q330 I333 K334 Y340 V341 K342 Q343 H344 L345 Y346 T347 K348 S349 E352 K353 P356 R359 F363 K368 Q372 L373 GLY SER GLY HIS HIS HIS HIS HIS HIS

• Molecule 1: Card1

Chain C:

%

77% 20%

MET K2 E3 T4 I5 L6 V7 N8 L9 V10 S11 P16 I21 M32 K33 S38 T39 K47 F57 S58 D59 S60 F61 V62 G71 K76 N79 I80 L81 T82 N88 E89 I93 I94 V95 T98 G99 G100 T101 K102 I103 M104 S105 L106 F112 N113 N114

T118 E119 I120 Q123 P124 I125 G126 K127 E128 L129 L132 Y133 M141 H154 V165 K166 Y170 Y175 V179 N182 I186 M189 R204 M231 H271 N272 V273 D274 E275 K276 V282 I296 I307 E308 N316 E317 Q330 I333 K334

F337 G338 L339 Y340 Q343 H344 L345 F363 D369 G370 T371 Q372 L373 GLY SER GLY HIS HIS HIS HIS HIS HIS

• Molecule 2: cA4

Chain Y:

75% 25%

A1 A2 A3 A4

• Molecule 2: cA4

Chain X:

25% 50% 25%

A1 A2 A3 A4

# 4   Data and refinement statistics   ⓘ

| Property | Value | Source |
|:---:|:---:|:---:|
| Space group | P 1 21 1 | Depositor |
| Cell constants<br>a, b, c, $\alpha$, $\beta$, $\gamma$ | 85.06Å    121.22Å    103.71Å<br>90.00°    113.06°    90.00° | Depositor |
| Resolution (Å) | 28.88  –  3.00<br>28.88  –  3.00 | Depositor<br>EDS |
| % Data completeness<br>(in resolution range) | 98.8 (28.88-3.00)<br>98.8 (28.88-3.00) | Depositor<br>EDS |
| $R_{merge}$ | 0.14 | Depositor |
| $R_{sym}$ | (Not available) | Depositor |
| $< I/\sigma(I) >$ [1] | 1.34 (at 3.00Å) | Xtriage |
| Refinement program | PHENIX 1.18_3855, PHENIX 1.18_3855 | Depositor |
| R, $R_{free}$ | 0.204  ,  0.237<br>0.204  ,  0.237 | Depositor<br>DCC |
| $R_{free}$ test set | 1886 reflections (4.92%) | wwPDB-VP |
| Wilson B-factor (Å$^2$) | 80.0 | Xtriage |
| Anisotropy | 0.276 | Xtriage |
| Bulk solvent $k_{sol}$(e/Å$^3$), $B_{sol}$(Å$^2$) | 0.33 , 56.8 | EDS |
| L-test for twinning[2] | $< \lvert L \rvert > = 0.49, < L^2 > = 0.33$ | Xtriage |
| Estimated twinning fraction | 0.059 for h,-k,-h-l | Xtriage |
| $F_o,F_c$ correlation | 0.94 | EDS |
| Total number of atoms | 12548 | wwPDB-VP |
| Average B, all atoms (Å$^2$) | 78.0 | wwPDB-VP |

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 8.83% 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 $< \lvert L \rvert >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

# 5 Model quality ⓘ

## 5.1 Standard geometry ⓘ

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

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 | 0.32 | 0/3157 | 0.50 | 0/4257 |
| 1 | B | 0.39 | 0/3157 | 0.53 | 0/4257 |
| 1 | C | 0.35 | 0/3157 | 0.51 | 0/4257 |
| 1 | D | 0.33 | 0/3157 | 0.49 | 0/4257 |
| 2 | X | 1.62 | 2/99 (2.0%) | 0.96 | 0/152 |
| 2 | Y | 1.56 | 2/99 (2.0%) | 1.08 | 0/152 |
| All | All | 0.40 | 4/12826 (0.0%) | 0.52 | 0/17332 |

All (4) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|------|-------------|----------|
| 2 | X | 2 | A | O3'-P | -7.17 | 1.52 | 1.61 |
| 2 | Y | 3 | A | O3'-P | -6.88 | 1.52 | 1.61 |
| 2 | Y | 1 | A | O3'-P | -6.49 | 1.53 | 1.61 |
| 2 | X | 3 | A | O3'-P | -5.96 | 1.53 | 1.61 |

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

## 5.2 Too-close contacts ⓘ

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

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1 | A | 3092 | 0 | 3063 | 40 | 0 |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1 | B | 3092 | 0 | 3063 | 69 | 0 |
| 1 | C | 3092 | 0 | 3063 | 58 | 0 |
| 1 | D | 3092 | 0 | 3063 | 58 | 0 |
| 2 | X | 88 | 0 | 44 | 3 | 0 |
| 2 | Y | 88 | 0 | 44 | 6 | 0 |
| 3 | A | 1 | 0 | 0 | 0 | 0 |
| 3 | B | 1 | 0 | 0 | 0 | 0 |
| 3 | C | 1 | 0 | 0 | 0 | 0 |
| 3 | D | 1 | 0 | 0 | 0 | 0 |
| All | All | 12548 | 0 | 12340 | 211 | 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.

The worst 5 of 211 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:31:PRO:HB3 | 1:B:61:PHE:CD2 | 2.01 | 0.95 |
| 1:B:31:PRO:CD | 1:B:61:PHE:HE2 | 1.80 | 0.93 |
| 1:B:31:PRO:HB3 | 1:B:61:PHE:CE2 | 2.08 | 0.89 |
| 1:B:31:PRO:CB | 1:B:61:PHE:CE2 | 2.56 | 0.88 |
| 1:B:31:PRO:CA | 1:B:61:PHE:CE2 | 2.57 | 0.87 |

There are no symmetry-related clashes.

## 5.3   Torsion angles   ⓘ

### 5.3.1   Protein backbone   ⓘ

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 | 370/382 (97%) | 359 (97%) | 11 (3%) | 0 | 100 | 100 |
| 1 | B | 370/382 (97%) | 362 (98%) | 8 (2%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|----------|----------|---------|----------|-------------|---|
| 1 | C | 370/382 (97%) | 364 (98%) | 6 (2%) | 0 | 100 | 100 |
| 1 | D | 370/382 (97%) | 361 (98%) | 9 (2%) | 0 | 100 | 100 |
| All | All | 1480/1528 (97%) | 1446 (98%) | 34 (2%) | 0 | 100 | 100 |

There are no Ramachandran outliers to report.

### 5.3.2   Protein sidechains ⓘ

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 | 344/352 (98%) | 334 (97%) | 10 (3%) | 42 | 76 |
| 1 | B | 344/352 (98%) | 340 (99%) | 4 (1%) | 71 | 90 |
| 1 | C | 344/352 (98%) | 337 (98%) | 7 (2%) | 55 | 83 |
| 1 | D | 344/352 (98%) | 335 (97%) | 9 (3%) | 46 | 78 |
| All | All | 1376/1408 (98%) | 1346 (98%) | 30 (2%) | 52 | 81 |

5 of 30 residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 352 | GLU |
| 1 | D | 120 | ILE |
| 1 | C | 339 | LEU |
| 1 | D | 98 | THR |
| 1 | D | 151 | LEU |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 8 such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 26 | ASN |
| 1 | C | 272 | ASN |
| 1 | D | 272 | ASN |
| 1 | B | 330 | GLN |
| 1 | D | 247 | HIS |

#### 5.3.3 RNA ⓘ

| Mol | Chain | Analysed | Backbone Outliers | Pucker Outliers |
|-----|-------|----------|-------------------|-----------------|
| 2 | X | 3/4 (75%) | 3 (100%) | 0 |
| 2 | Y | 3/4 (75%) | 3 (100%) | 1 (33%) |
| All | All | 6/8 (75%) | 6 (100%) | 1 (16%) |

5 of 6 RNA backbone outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 2 | Y | 2 | A |
| 2 | Y | 3 | A |
| 2 | Y | 4 | A |
| 2 | X | 2 | A |
| 2 | X | 3 | A |

All (1) RNA pucker outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 2 | Y | 3 | A |

### 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 ⓘ

There are no monosaccharides in this entry.

### 5.6 Ligand geometry ⓘ

Of 4 ligands modelled in this entry, 4 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 ⓘ

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, $95^{th}$ 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 | 372/382 (97%) | -0.24 | 3 (0%) | 86 | 65 | 49, 74, 102, 137 | 0 |
| 1 | B | 372/382 (97%) | -0.21 | 2 (0%) | 91 | 75 | 50, 72, 106, 128 | 0 |
| 1 | C | 372/382 (97%) | -0.18 | 4 (1%) | 80 | 56 | 45, 80, 106, 142 | 0 |
| 1 | D | 372/382 (97%) | -0.15 | 4 (1%) | 80 | 56 | 52, 76, 102, 123 | 0 |
| 2 | X | 4/4 (100%) | 0.32 | 0 | 100 | 100 | 52, 52, 52, 52 | 0 |
| 2 | Y | 4/4 (100%) | 0.34 | 0 | 100 | 100 | 52, 52, 52, 52 | 0 |
| All | All | 1496/1536 (97%) | -0.19 | 13 (0%) | 84 | 63 | 45, 75, 104, 142 | 0 |

The worst 5 of 13 RSRZ outliers are listed below:

| Mol | Chain | Res | Type | RSRZ |
|-----|-------|-----|------|------|
| 1 | A | 87 | ASP | 3.8 |
| 1 | C | 271 | HIS | 3.5 |
| 1 | C | 3 | GLU | 3.0 |
| 1 | B | 204 | ARG | 2.9 |
| 1 | D | 317 | GLU | 2.8 |

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

There are no non-standard protein/DNA/RNA residues in this entry.
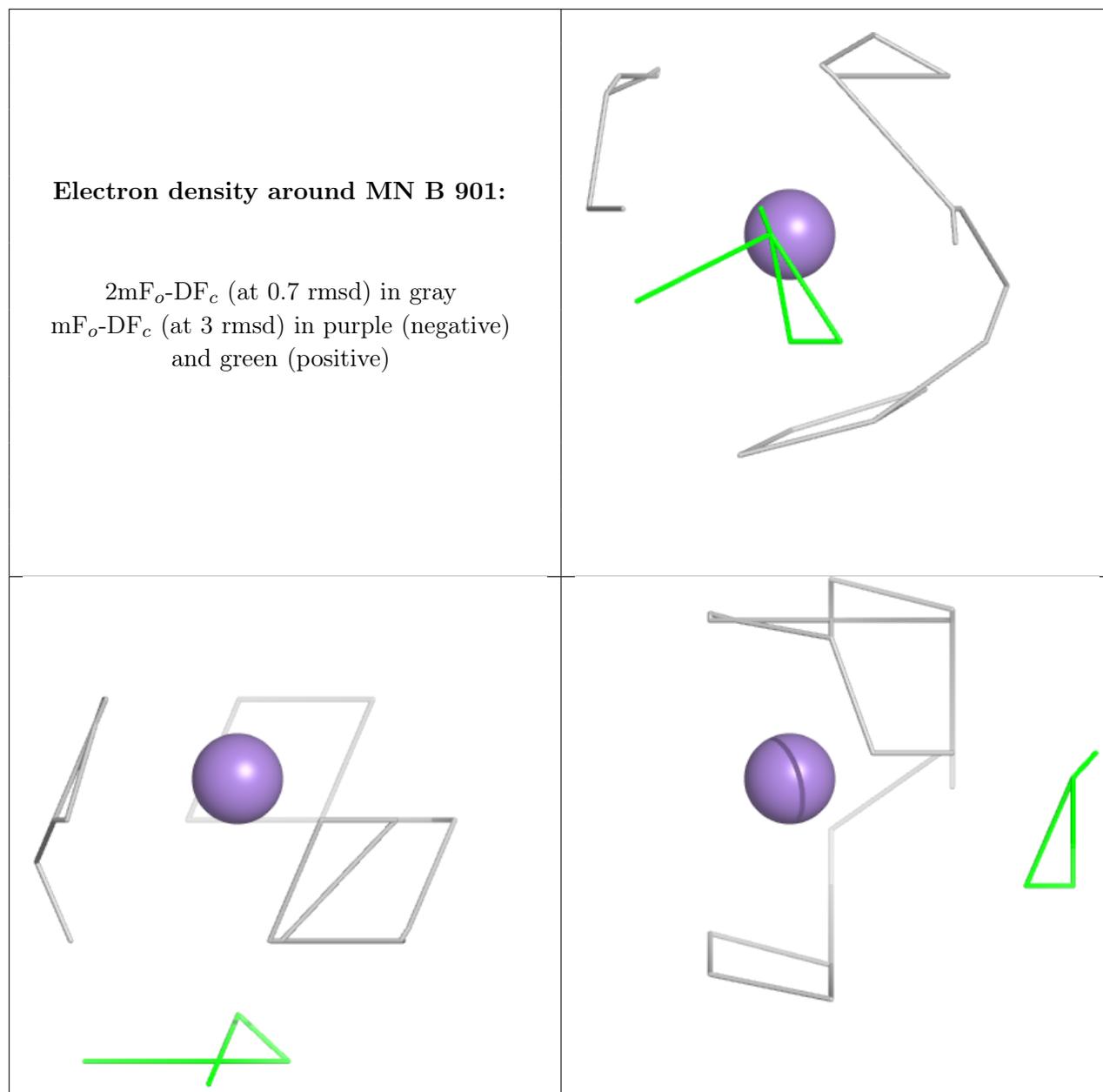
## 6.3   Carbohydrates ⓘ

There are no monosaccharides in this entry.

## 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, $95^{th}$ 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($\text{Å}^2$) | Q<0.9 |
|-----|------|-------|-----|-------|------|------|-------------------------|-------|
| 3 | MN | B | 901 | 1/1 | 0.63 | 0.30 | 123,123,123,123 | 0 |
| 3 | MN | C | 901 | 1/1 | 0.65 | 0.65 | 135,135,135,135 | 0 |
| 3 | MN | A | 901 | 1/1 | 0.74 | 0.44 | 124,124,124,124 | 0 |
| 3 | MN | D | 901 | 1/1 | 0.75 | 0.40 | 110,110,110,110 | 0 |

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.
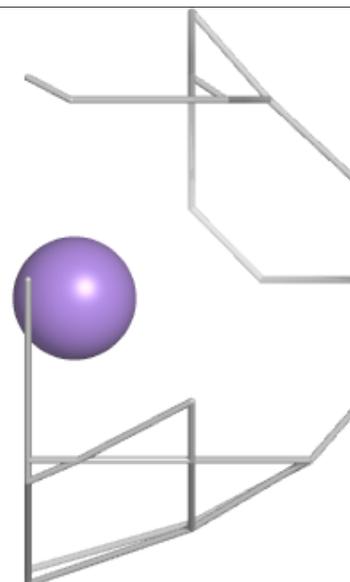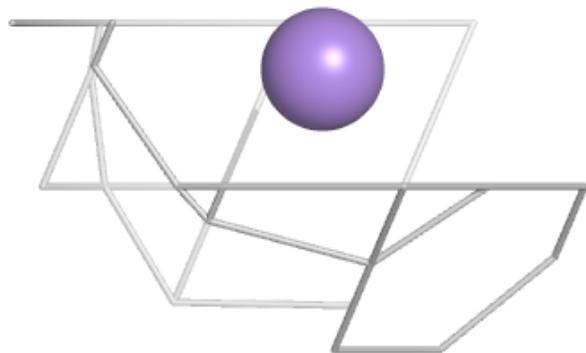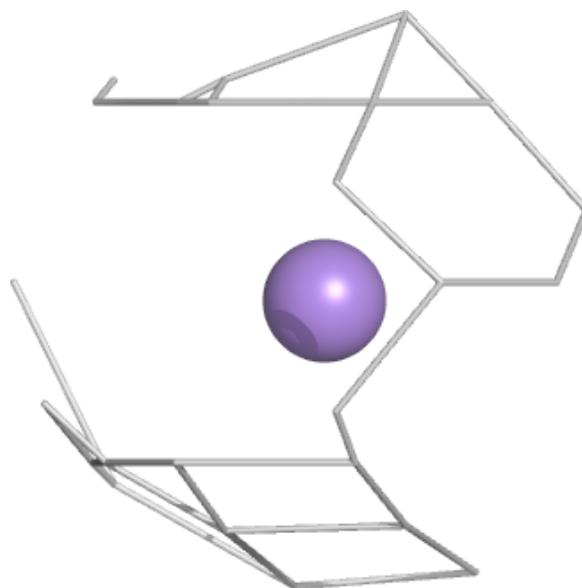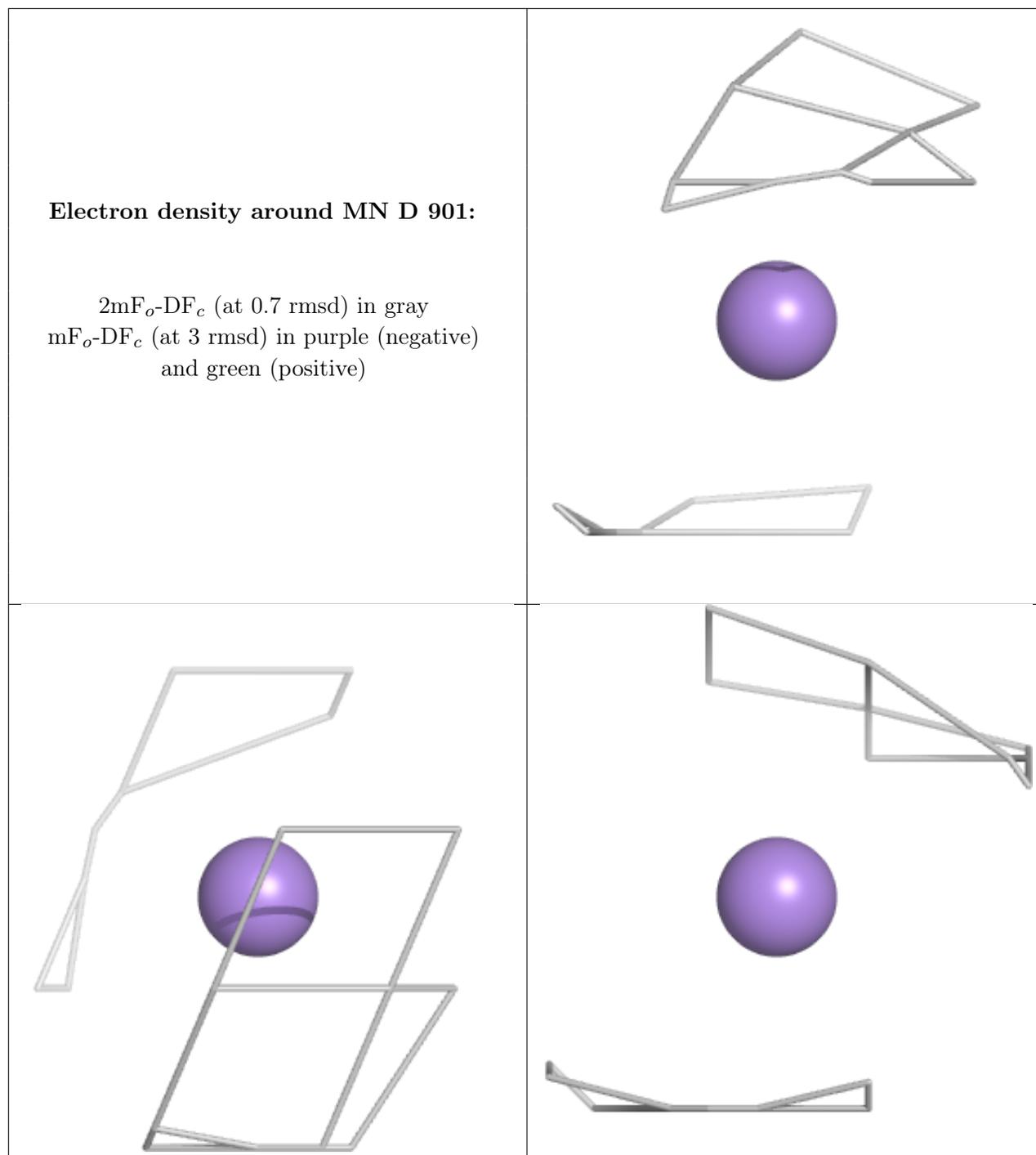
**Electron density around MN B 901:**

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

**Electron density around MN C 901:**

$2mF_o$-$DF_c$ (at 0.7 rmsd) in gray
$mF_o$-$DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)
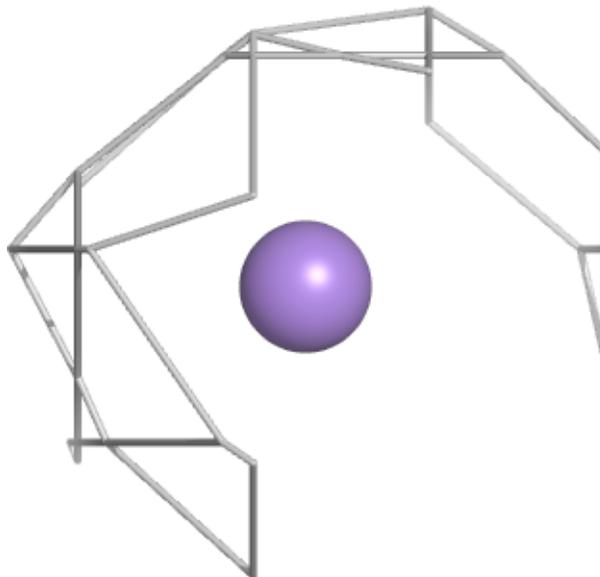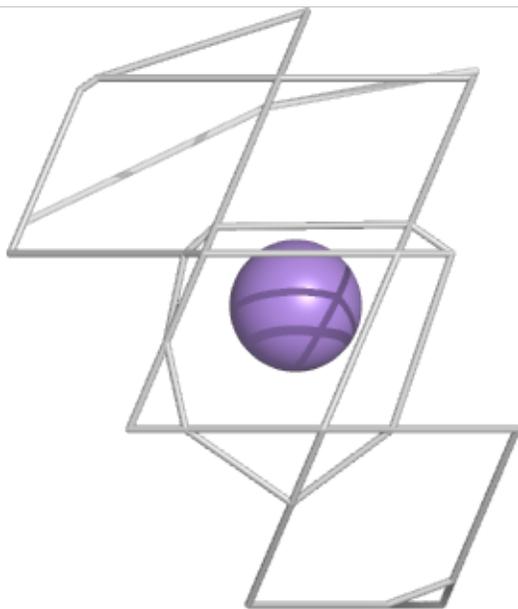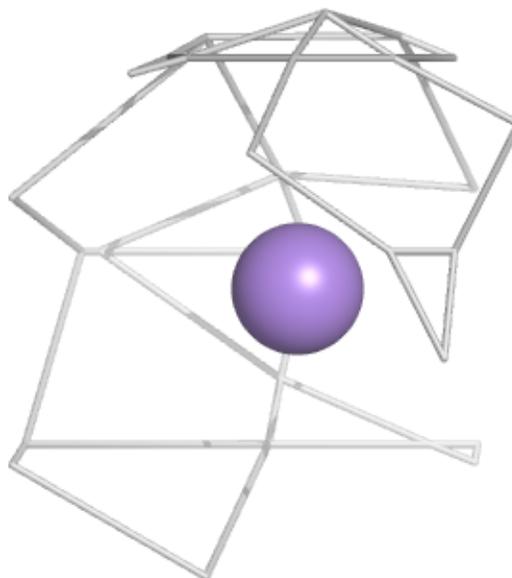
**Electron density around MN A 901:**

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

**Electron density around MN D 901:**

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



## 6.5 Other polymers ⓘ

There are no such residues in this entry.