



Full wwPDB EM Validation Report ⓘ

Apr 16, 2024 – 05:41 pm BST

PDB ID : 8P2K
EMDB ID : EMD-17367
Title : Ternary complex of translating ribosome, NAC and METAP1
Authors : Jia, M.; Jaskolowski, M.; Scaiola, A.; Jomaa, A.; Ban, N.
Deposited on : 2023-05-16
Resolution : 2.90 Å(reported)
Based on initial models : 7O7Y, 2B3K, 7QWR

This is a Full wwPDB EM 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/EMValidationReportHelp>

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:

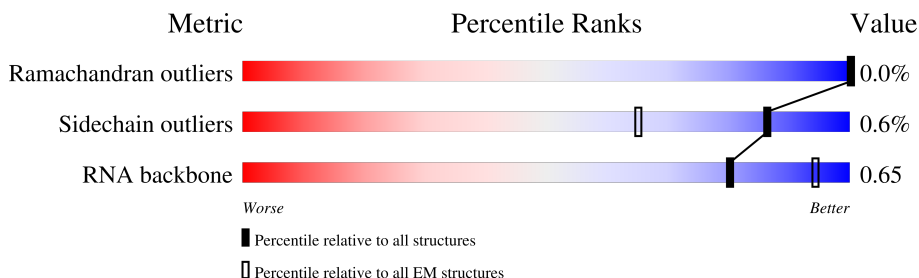
EMDB validation analysis : 0.0.1.dev92
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : 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:
ELECTRON MICROSCOPY

The reported resolution of this entry is 2.90 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.





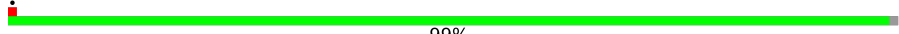
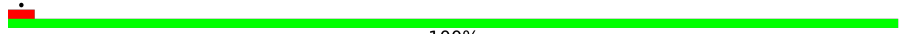



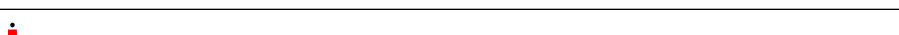
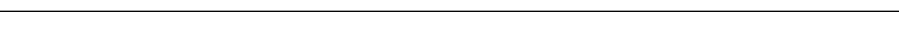
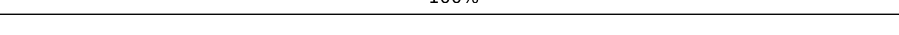
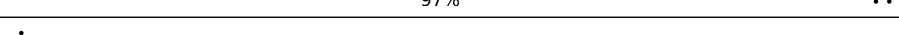
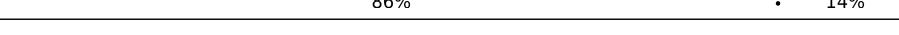
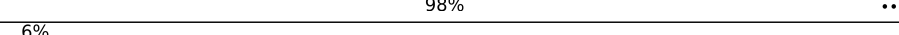
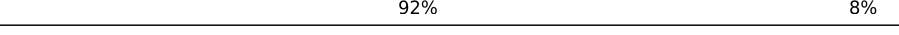
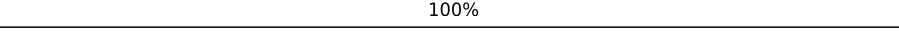
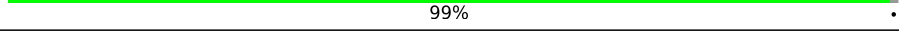

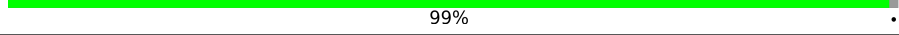


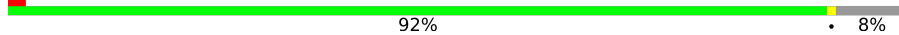
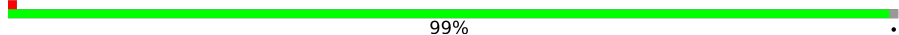
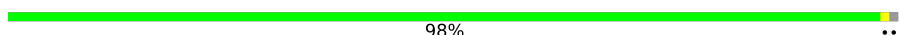

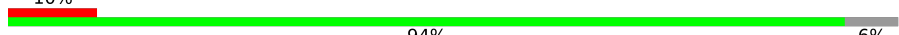
| Metric | Whole archive (#Entries) | EM structures (#Entries) |
|-----------------------|-----------------------------|-----------------------------|
| Ramachandran outliers | 154571 | 4023 |
| Sidechain outliers | 154315 | 3826 |
| RNA backbone | 4643 | 859 |

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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 EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1 | B5 | 4808 | |
| 2 | B7 | 120 | |
| 3 | B8 | 158 | |
| 4 | BA | 257 | |
| 5 | BB | 403 | |
| 6 | BC | 413 | |
| 7 | BD | 297 | |
| 8 | BE | 291 | |

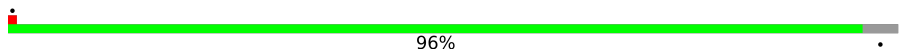
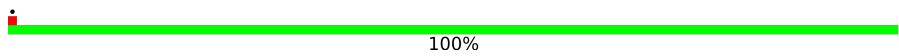
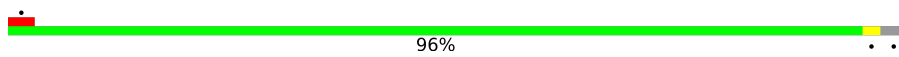
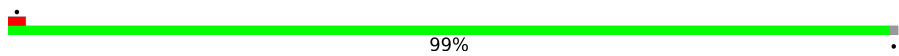
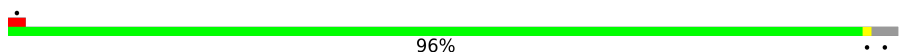

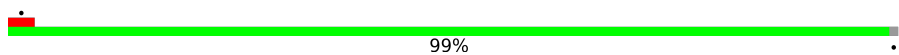
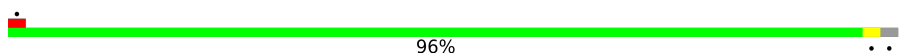

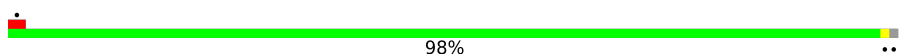
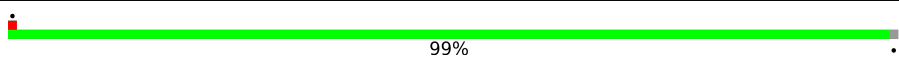
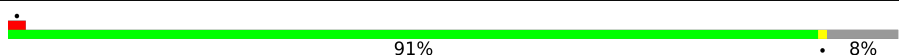
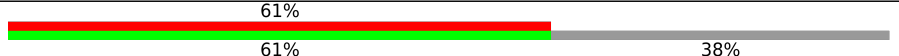
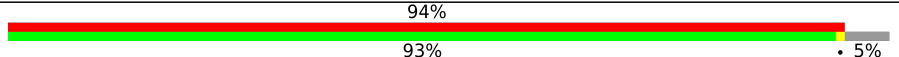
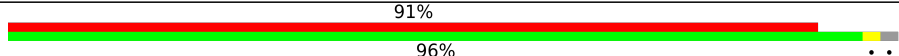

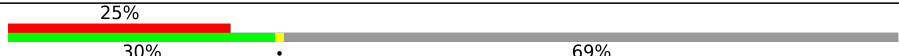

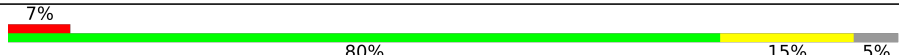
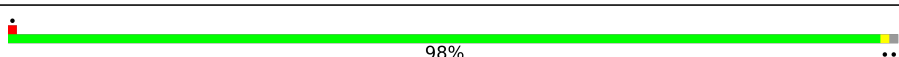
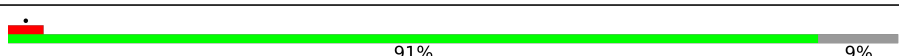
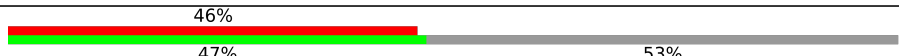


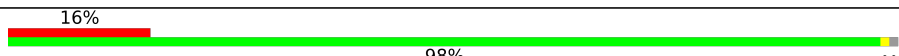
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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|--|
| 9 | BF | 247 |  91% 9% |
| 10 | BG | 266 |  6% 86% 12% |
| 11 | BH | 192 |  99% |
| 12 | BI | 214 |  100% |
| 13 | BJ | 178 |  96% |
| 14 | BK | 65 |  9% 42% 55% |
| 15 | BL | 211 |  99% |
| 16 | BM | 218 |  63% 37% |
| 17 | BN | 204 |  100% |
| 18 | BO | 203 |  97% |
| 19 | BP | 184 |  86% 14% |
| 20 | BQ | 188 |  98% |
| 21 | BR | 196 |  6% 92% 8% |
| 22 | BS | 176 |  100% |
| 23 | BT | 160 |  99% |
| 24 | BU | 128 |  77% 23% |
| 25 | BV | 140 |  99% |
| 26 | BW | 157 |  24% 77% 23% |
| 27 | BX | 156 |  76% 24% |
| 28 | BY | 145 |  92% 8% |
| 29 | BZ | 136 |  99% |
| 30 | Ba | 148 |  98% |
| 31 | Bb | 245 |  5% 44% 56% |
| 32 | Bc | 115 |  10% 94% 6% |
| 33 | Bd | 125 |  86% 14% |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|--|
| 34 | Be | 135 |  96% |
| 35 | Bf | 110 |  100% |
| 36 | Bg | 117 |  96% |
| 37 | Bh | 123 |  99% |
| 38 | Bi | 105 |  96% |
| 39 | Bj | 97 |  89% 11% |
| 40 | Bk | 70 |  99% |
| 41 | Bl | 51 |  96% |
| 42 | Bm | 128 |  41% 59% |
| 43 | Bo | 106 |  98% |
| 44 | Bp | 92 |  99% |
| 45 | Br | 137 |  91% 8% |
| 46 | Bs | 318 |  61% 61% 38% |
| 47 | Bt | 165 |  94% 93% 5% |
| 48 | Bv | 217 |  91% 96% |
| 49 | MA | 386 |  37% 81% 18% |
| 50 | Na | 215 |  25% 30% 69% |
| 51 | Nb | 132 |  48% 78% 20% |
| 52 | A2 | 1870 |  7% 80% 15% 5% |
| 53 | AA | 84 |  98% |
| 54 | AB | 69 |  91% 9% |
| 55 | AC | 156 |  46% 47% 53% |
| 56 | AD | 133 |  6% 42% 57% |
| 57 | AE | 115 |  87% 12% |
| 58 | AF | 317 |  16% 98% |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 59 | AG | 56 | 5% 98% |
| 60 | AI | 76 | 96% |
| 61 | AT | 76 | 5% 83% 17% |
| 62 | AZ | 295 | 6% 74% 25% |
| 63 | Aa | 264 | 84% 15% |
| 64 | Ab | 293 | 74% 25% |
| 65 | Ac | 281 | 6% 80% 20% |
| 66 | Ad | 263 | 99% |
| 67 | Ae | 204 | 94% 6% |
| 68 | Af | 249 | 7% 95% 5% |
| 69 | Ag | 432 | 14% 44% 56% |
| 70 | Ah | 208 | 99% |
| 71 | Ai | 194 | 95% 5% |
| 72 | Aj | 165 | 5% 58% 42% |
| 73 | Ak | 158 | 10% 97% |
| 74 | Al | 132 | 94% 92% 6% |
| 75 | Am | 151 | 99% |
| 76 | An | 151 | 88% 10% |
| 77 | Ao | 145 | 88% 12% |
| 78 | Ap | 172 | 82% 18% |
| 79 | Aq | 135 | 21% 99% |
| 80 | Ar | 152 | 5% 96% |
| 81 | As | 145 | 99% |
| 82 | At | 119 | 19% 87% 13% |
| 83 | Au | 83 | 98% |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|---|
| 84 | Av | 130 |  98% |
| 85 | Aw | 143 |  97% |
| 86 | Ax | 130 |  95% |
| 87 | Ay | 124 |  10% 69% 31% |
| 88 | Az | 25 |  100% |

2 Entry composition [i](#)

There are 97 unique types of molecules in this entry. The entry contains 231486 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 RNA chain called 28S rRNA.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-------|-------|-------|------|---------|-------|
| | | | Total | C | N | O | P | | |
| 1 | B5 | 3764 | 80772 | 36003 | 14762 | 26243 | 3764 | 0 | 0 |

- Molecule 2 is a RNA chain called 5S rRNA.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|-----|---------|-------|
| | | | Total | C | N | O | P | | |
| 2 | B7 | 119 | 2538 | 1131 | 451 | 837 | 119 | 0 | 0 |

- Molecule 3 is a RNA chain called 5.8S rRNA.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|------|-----|---------|-------|
| | | | Total | C | N | O | P | | |
| 3 | B8 | 156 | 3319 | 1481 | 585 | 1097 | 156 | 0 | 0 |

- Molecule 4 is a protein called 60S ribosomal protein L8.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 4 | BA | 253 | 1940 | 1214 | 396 | 324 | 6 | 0 | 0 |

- Molecule 5 is a protein called Ribosomal protein L3.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 5 | BB | 398 | 3206 | 2042 | 605 | 546 | 13 | 0 | 0 |

- Molecule 6 is a protein called 60S ribosomal protein L4.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 6 | BC | 362 | 2886 | 1814 | 577 | 481 | 14 | 0 | 0 |

- Molecule 7 is a protein called Ribosomal protein L5 eukaryotic C-terminal domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 7 | BD | 293 | 2391 | 1512 | 438 | 427 | 14 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| BD | 2 | UNK | GLY | conflict | UNP G1SYJ6 |

- Molecule 8 is a protein called 60S ribosomal protein L6.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 8 | BE | 243 | 1960 | 1258 | 378 | 321 | 3 | 0 | 0 |

- Molecule 9 is a protein called Ribosomal Protein uL30.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 9 | BF | 226 | 1886 | 1211 | 362 | 304 | 9 | 0 | 0 |

There are 4 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| BF | 61 | ARG | GLY | conflict | UNP G1TUB1 |
| BF | 93 | ARG | GLY | conflict | UNP G1TUB1 |
| BF | 131 | MET | VAL | conflict | UNP G1TUB1 |
| BF | 153 | ILE | VAL | conflict | UNP G1TUB1 |

- Molecule 10 is a protein called 60S ribosomal protein L7a.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 10 | BG | 233 | 1877 | 1197 | 361 | 315 | 4 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| BG | 184 | LEU | ILE | conflict | UNP P62424 |

- Molecule 11 is a protein called 60S ribosomal protein L9.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 11 | BH | 190 | 1516 | 954 | 284 | 272 | 6 | 0 | 0 |

- Molecule 12 is a protein called 60S ribosomal protein L10.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 12 | BI | 213 | 1717 | 1086 | 332 | 285 | 14 | 0 | 0 |

- Molecule 13 is a protein called 60S ribosomal protein L11.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 13 | BJ | 170 | 1362 | 861 | 254 | 241 | 6 | 0 | 0 |

- Molecule 14 is a protein called Glucose-6-phosphate isomerase.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 14 | BK | 29 | 237 | 152 | 40 | 40 | 5 | 0 | 0 |

There are 6 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------------|------------|
| BK | 60 | MET | VAL | conflict | UNP P06744 |
| BK | 61 | MET | - | expression tag | UNP P06744 |
| BK | 62 | MET | - | expression tag | UNP P06744 |
| BK | 63 | MET | - | expression tag | UNP P06744 |
| BK | 64 | MET | - | expression tag | UNP P06744 |
| BK | 65 | VAL | - | expression tag | UNP P06744 |

- Molecule 15 is a protein called 60S ribosomal protein L13.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 15 | BL | 210 | 1702 | 1065 | 354 | 279 | 4 | 0 | 0 |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| BL | 74 | ARG | HIS | conflict | UNP G1TKB3 |
| BL | 190 | ARG | HIS | conflict | UNP G1TKB3 |

- Molecule 16 is a protein called 60S ribosomal protein L14.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 16 | BM | 138 | 1137 | 727 | 221 | 182 | 7 | 0 | 0 |

- Molecule 17 is a protein called Ribosomal protein L15.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 17 | BN | 203 | 1701 | 1072 | 359 | 266 | 4 | 0 | 0 |

- Molecule 18 is a protein called 60S ribosomal protein L13a.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 18 | BO | 199 | 1630 | 1051 | 319 | 255 | 5 | 0 | 0 |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| BO | 174 | LEU | ILE | conflict | UNP A0A0N8ETI8 |
| BO | 194 | ASP | GLU | conflict | UNP A0A0N8ETI8 |

- Molecule 19 is a protein called uL22.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 19 | BP | 159 | 1289 | 809 | 249 | 222 | 9 | 0 | 0 |

- Molecule 20 is a protein called eL18.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 20 | BQ | 187 | 1515 | 946 | 315 | 250 | 4 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| BQ | 134 | ARG | CYS | conflict | UNP F6QKI9 |

- Molecule 21 is a protein called Ribosomal protein L19.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 21 | BR | 180 | 1508 | 933 | 328 | 238 | 9 | 0 | 0 |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| BR | 38 | ARG | HIS | conflict | UNP G1TYL6 |
| BR | 151 | ARG | HIS | conflict | UNP G1TYL6 |

- Molecule 22 is a protein called 60S ribosomal protein L18a.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 22 | BS | 176 | 1457 | 924 | 288 | 234 | 11 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| BS | 36 | ASN | ILE | conflict | UNP A0A1Z5LHJ5 |

- Molecule 23 is a protein called 60S ribosomal protein L21.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 23 | BT | 159 | 1298 | 823 | 252 | 217 | 6 | 0 | 0 |

- Molecule 24 is a protein called 60S ribosomal protein L22.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 24 | BU | 99 | 806 | 516 | 141 | 147 | 2 | 0 | 0 |

There are 5 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| BU | 32 | GLY | ARG | conflict | UNP G1TSG1 |
| BU | 36 | ALA | GLU | conflict | UNP G1TSG1 |

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| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| BU | 39 | PHE | SER | conflict | UNP G1TSG1 |
| BU | 54 | GLY | ARG | conflict | UNP G1TSG1 |
| BU | 97 | ARG | HIS | conflict | UNP G1TSG1 |

- Molecule 25 is a protein called Ribosomal protein L23.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 25 | BV | 139 | 1034 | 648 | 199 | 182 | 5 | 0 | 0 |

- Molecule 26 is a protein called Ribosomal protein L24.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 26 | BW | 121 | 991 | 619 | 202 | 166 | 4 | 0 | 0 |

- Molecule 27 is a protein called Ribosomal_L23eN domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 27 | BX | 118 | 967 | 618 | 181 | 167 | 1 | 0 | 0 |

- Molecule 28 is a protein called Ribosomal protein L26.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 28 | BY | 134 | 1115 | 700 | 226 | 186 | 3 | 0 | 0 |

- Molecule 29 is a protein called 60S ribosomal protein L27.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 29 | BZ | 135 | 1107 | 714 | 208 | 182 | 3 | 0 | 0 |

- Molecule 30 is a protein called 60S ribosomal protein L27a.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 30 | Ba | 147 | 1163 | 734 | 239 | 186 | 4 | 0 | 0 |

- Molecule 31 is a protein called 60S ribosomal protein L29.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 31 | Bb | 108 | Total | C | N | O | S | 0 | 0 |
| | | | 881 | 548 | 196 | 134 | 3 | | |

- Molecule 32 is a protein called 60S ribosomal protein L30.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 32 | Bc | 108 | Total | C | N | O | S | 0 | 0 |
| | | | 836 | 530 | 148 | 151 | 7 | | |

- Molecule 33 is a protein called 60S ribosomal protein L31.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 33 | Bd | 107 | Total | C | N | O | S | 0 | 0 |
| | | | 888 | 560 | 171 | 155 | 2 | | |

- Molecule 34 is a protein called Ribosomal protein L32.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 34 | Be | 130 | Total | C | N | O | S | 0 | 0 |
| | | | 1070 | 676 | 221 | 168 | 5 | | |

- Molecule 35 is a protein called 60S ribosomal protein L35a.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 35 | Bf | 110 | Total | C | N | O | S | 0 | 0 |
| | | | 884 | 560 | 175 | 144 | 5 | | |

- Molecule 36 is a protein called 60S ribosomal protein L34.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 36 | Bg | 114 | Total | C | N | O | S | 0 | 0 |
| | | | 906 | 566 | 187 | 147 | 6 | | |

- Molecule 37 is a protein called 60S ribosomal protein L35.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 37 | Bh | 122 | Total | C | N | O | S | 0 | 0 |
| | | | 1013 | 640 | 204 | 168 | 1 | | |

- Molecule 38 is a protein called 60S ribosomal protein L36.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 38 | Bi | 102 | 830 | 520 | 176 | 129 | 5 | 0 | 0 |

- Molecule 39 is a protein called Ribosomal protein L37.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 39 | Bj | 86 | 705 | 434 | 155 | 111 | 5 | 0 | 0 |

- Molecule 40 is a protein called 60S ribosomal protein L38.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 40 | Bk | 69 | 569 | 366 | 103 | 99 | 1 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| Bk | 24 | LYS | ASN | conflict | UNP G1U001 |

- Molecule 41 is a protein called 60S ribosomal protein L39-like.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 41 | Bl | 50 | 447 | 286 | 96 | 64 | 1 | 0 | 0 |

- Molecule 42 is a protein called Ubiquitin-60S ribosomal protein L40.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 42 | Bm | 52 | 432 | 269 | 90 | 67 | 6 | 0 | 0 |

- Molecule 43 is a protein called eL42.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 43 | Bo | 105 | 863 | 543 | 175 | 139 | 6 | 0 | 0 |

- Molecule 44 is a protein called 60S ribosomal protein L37a.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 44 | Bp | 91 | 708 | 445 | 136 | 120 | 7 | 0 | 0 |

- Molecule 45 is a protein called 60S ribosomal protein L28.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 45 | Br | 126 | 1014 | 629 | 209 | 170 | 6 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| Br | 103 | ARG | HIS | conflict | UNP G1U7L1 |

- Molecule 46 is a protein called 60S acidic ribosomal protein P0.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 46 | Bs | 196 | 1507 | 959 | 263 | 276 | 9 | 0 | 0 |

- Molecule 47 is a protein called 60S ribosomal protein L12.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 47 | Bt | 156 | 1178 | 733 | 221 | 220 | 4 | 0 | 0 |

- Molecule 48 is a protein called Ribosomal protein uL1.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 48 | Bv | 212 | 1707 | 1092 | 308 | 299 | 8 | 0 | 0 |

- Molecule 49 is a protein called Methionine aminopeptidase 1.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 49 | MA | 315 | 2485 | 1562 | 444 | 461 | 18 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| MA | 220 | ASN | ASP | conflict | UNP P53582 |

- Molecule 50 is a protein called Nascent polypeptide-associated complex subunit alpha.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 50 | Na | 67 | 531 | 335 | 97 | 98 | 1 | 0 | 0 |

- Molecule 51 is a protein called Transcription factor BTF3.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 51 | Nb | 106 | 821 | 514 | 153 | 151 | 3 | 0 | 0 |

- Molecule 52 is a RNA chain called 18s rRNA.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-------|------|-------|------|---------|-------|
| | | | Total | C | N | O | P | | |
| 52 | A2 | 1770 | 37833 | 16911 | 6781 | 12371 | 1770 | 0 | 0 |

There are 3 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|-------------------|
| A2 | 1249 | B8N | C | conflict | GB GBCT01000564.1 |
| A2 | 1338 | 4AC | C | conflict | GB GBCT01000564.1 |
| A2 | 1843 | 4AC | C | conflict | GB GBCT01000564.1 |

- Molecule 53 is a protein called 40S ribosomal protein S27.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 53 | AA | 83 | 651 | 408 | 121 | 115 | 7 | 0 | 0 |

- Molecule 54 is a protein called 40S ribosomal protein S28.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 54 | AB | 63 | 495 | 302 | 98 | 93 | 2 | 0 | 0 |

- Molecule 55 is a protein called Ribosomal protein S27a.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 55 | AC | 74 | 610 | 385 | 117 | 101 | 7 | 0 | 0 |

- Molecule 56 is a protein called 40S ribosomal protein S30.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|----|---|---------|-------|
| 56 | AD | 57 | Total | C | N | O | S | 0 | 0 |
| | | | 457 | 282 | 101 | 73 | 1 | | |

- Molecule 57 is a protein called eS26.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 57 | AE | 101 | Total | C | N | O | S | 0 | 0 |
| | | | 814 | 507 | 170 | 132 | 5 | | |

- Molecule 58 is a protein called RACK1.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 58 | AF | 313 | Total | C | N | O | S | 0 | 0 |
| | | | 2436 | 1535 | 424 | 465 | 12 | | |

- Molecule 59 is a protein called 40S ribosomal protein S29.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| 59 | AG | 55 | Total | C | N | O | S | 0 | 0 |
| | | | 459 | 286 | 94 | 74 | 5 | | |

- Molecule 60 is a RNA chain called E-site tRNA.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|----|----|----|---|---------|-------|
| 60 | AI | 3 | Total | C | N | O | P | 0 | 0 |
| | | | 62 | 28 | 11 | 20 | 3 | | |

- Molecule 61 is a RNA chain called P-site Val-tRNA.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|----|---------|-------|
| 61 | AT | 76 | Total | C | N | O | P | 0 | 0 |
| | | | 1621 | 724 | 290 | 531 | 76 | | |

- Molecule 62 is a protein called 40S ribosomal protein SA.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| 62 | AZ | 221 | Total | C | N | O | S | 0 | 0 |
| | | | 1743 | 1107 | 305 | 323 | 8 | | |

- Molecule 63 is a protein called 40S ribosomal protein S3a.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 63 | Aa | 224 | 1815 | 1152 | 328 | 321 | 14 | 0 | 0 |

- Molecule 64 is a protein called 40S ribosomal protein S2.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 64 | Ab | 220 | 1706 | 1105 | 292 | 300 | 9 | 0 | 0 |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| Ab | 33 | ILE | VAL | conflict | UNP O18789 |
| Ab | 101 | ALA | SER | conflict | UNP O18789 |

- Molecule 65 is a protein called 40S ribosomal protein S3.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 65 | Ac | 225 | 1751 | 1116 | 315 | 313 | 7 | 0 | 0 |

- Molecule 66 is a protein called 40S ribosomal protein S4.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 66 | Ad | 262 | 2076 | 1324 | 386 | 358 | 8 | 0 | 0 |

There are 4 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| Ad | 25 | GLY | SER | conflict | UNP G1TK17 |
| Ad | 51 | ARG | LYS | conflict | UNP G1TK17 |
| Ad | 78 | THR | ALA | conflict | UNP G1TK17 |
| Ad | 156 | VAL | MET | conflict | UNP G1TK17 |

- Molecule 67 is a protein called Ribosomal protein S5.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 67 | Ae | 191 | 1509 | 943 | 286 | 273 | 7 | 0 | 0 |

- Molecule 68 is a protein called 40S ribosomal protein S6.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| 68 | Af | 237 | Total | C | N | O | S | 0 | 0 |
| | | | 1923 | 1200 | 387 | 329 | 7 | | |

- Molecule 69 is a protein called 40S ribosomal protein S7.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 69 | Ag | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1529 | 975 | 281 | 272 | 1 | | |

- Molecule 70 is a protein called 40S ribosomal protein S8.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| 70 | Ah | 206 | Total | C | N | O | S | 0 | 0 |
| | | | 1686 | 1058 | 332 | 291 | 5 | | |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| Ah | 47 | ARG | GLY | conflict | UNP G1TJW1 |

- Molecule 71 is a protein called 40S ribosomal protein S9.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 71 | Ai | 185 | Total | C | N | O | S | 0 | 0 |
| | | | 1525 | 969 | 306 | 248 | 2 | | |

- Molecule 72 is a protein called S10_ plectin domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 72 | Aj | 96 | Total | C | N | O | S | 0 | 0 |
| | | | 810 | 530 | 143 | 131 | 6 | | |

- Molecule 73 is a protein called 40S ribosomal protein S11.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 73 | Ak | 154 | Total | C | N | O | S | 0 | 0 |
| | | | 1262 | 804 | 236 | 216 | 6 | | |

- Molecule 74 is a protein called 40S ribosomal protein S12.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 74 | Al | 124 | 958 | 600 | 170 | 179 | 9 | 0 | 0 |

- Molecule 75 is a protein called 40S ribosomal protein S13.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 75 | Am | 150 | 1208 | 773 | 229 | 205 | 1 | 0 | 0 |

- Molecule 76 is a protein called 40S ribosomal protein S14.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 76 | An | 136 | 1017 | 622 | 199 | 190 | 6 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| An | 138 | 5F0 | ASP | conflict | UNP G1U472 |

- Molecule 77 is a protein called 40S ribosomal protein uS19.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 77 | Ao | 128 | 1048 | 665 | 197 | 179 | 7 | 0 | 0 |

- Molecule 78 is a protein called uS9.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 78 | Ap | 141 | 1124 | 715 | 212 | 194 | 3 | 0 | 0 |

- Molecule 79 is a protein called 40S ribosomal protein eS17.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 79 | Aq | 134 | 1080 | 678 | 201 | 197 | 4 | 0 | 0 |

- Molecule 80 is a protein called 40S ribosomal protein S18.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 80 | Ar | 148 | Total | C | N | O | S | 0 | 0 |
| | | | 1217 | 763 | 245 | 208 | 1 | | |

- Molecule 81 is a protein called 40S ribosomal protein S19.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 81 | As | 143 | Total | C | N | O | S | 0 | 0 |
| | | | 1113 | 698 | 214 | 198 | 3 | | |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| As | 119 | GLY | TRP | conflict | UNP G1TN62 |
| As | 142 | ASN | LYS | conflict | UNP G1TN62 |

- Molecule 82 is a protein called 40S ribosomal protein uS10.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 82 | At | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 821 | 514 | 155 | 148 | 4 | | |

- Molecule 83 is a protein called 40S ribosomal protein S21.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 83 | Au | 83 | Total | C | N | O | S | 0 | 0 |
| | | | 640 | 394 | 117 | 124 | 5 | | |

- Molecule 84 is a protein called Ribosomal protein S15a.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 84 | Av | 129 | Total | C | N | O | S | 0 | 0 |
| | | | 1034 | 659 | 193 | 176 | 6 | | |

- Molecule 85 is a protein called 40S ribosomal protein S23.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 85 | Aw | 141 | Total | C | N | O | S | 0 | 0 |
| | | | 1099 | 693 | 219 | 184 | 3 | | |

- Molecule 86 is a protein called 40S ribosomal protein S24.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 86 | Ax | 125 | 1015 | 642 | 199 | 169 | 5 | 0 | 0 |

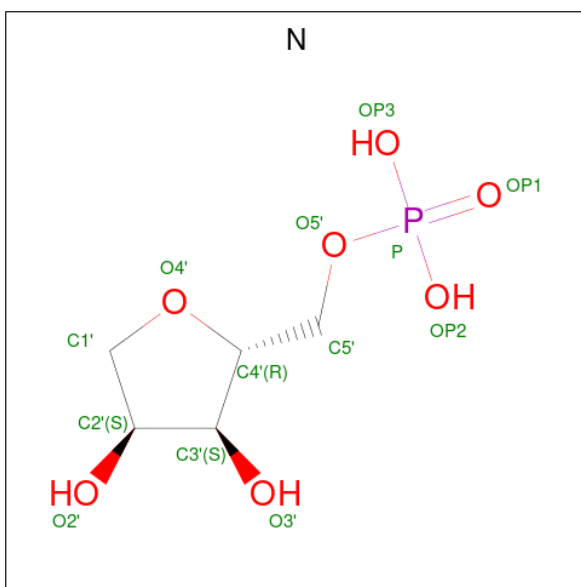
- Molecule 87 is a protein called 40S ribosomal protein S25.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 87 | Ay | 85 | 683 | 439 | 128 | 115 | 1 | 0 | 0 |

- Molecule 88 is a protein called 60S ribosomal protein L41.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 88 | Az | 25 | 239 | 145 | 64 | 27 | 3 | 0 | 0 |

- Molecule 89 is ANY 5'-MONOPHOSPHATE NUCLEOTIDE (three-letter code: N) (formula: $C_5H_{11}O_7P$).



| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------|---|---|---|---------|
| | | | Total | C | O | P | |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |

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| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------|---|---|---|---------|
| | | | Total | C | O | P | |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | B5 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | Bo | 1 | 13 | 5 | 7 | 1 | 0 |
| 89 | Bo | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | Bo | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | Bo | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | Bo | 1 | 12 | 5 | 6 | 1 | 0 |

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| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------|---|---|---|---------|
| | | | Total | C | O | P | |
| 89 | Bo | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | Bo | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | Bo | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | Bo | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | Bo | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | Bo | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | Bv | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | Bv | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | Bv | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | Bv | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | Bv | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | Bv | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | Bv | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | Bv | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | A2 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | A2 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | A2 | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | AI | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | AT | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | AT | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | AT | 1 | 12 | 5 | 6 | 1 | 0 |
| 89 | AT | 1 | 12 | 5 | 6 | 1 | 0 |

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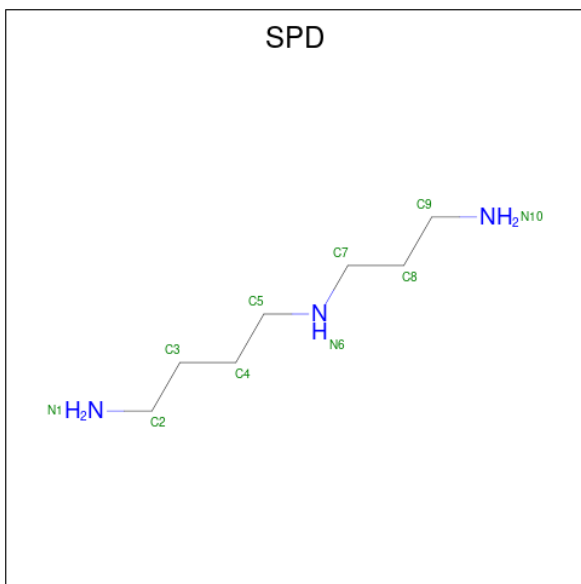
| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------------|--------|--------|--------|---------|
| | | | Total | C | O | P | |
| 89 | AT | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | AT | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Aa | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Aa | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Aa | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Aa | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Aa | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Aa | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Aa | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Aa | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Aa | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Aa | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Aa | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Ae | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Ae | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Ae | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Ae | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Ae | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Ae | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Ae | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Ae | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |
| 89 | Ae | 1 | Total 12 | C 5 | O 6 | P 1 | 0 |

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| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------|---|---|---|---------|
| 89 | Ae | 1 | Total | C | O | P | 0 |
| | | | 12 | 5 | 6 | 1 | |
| 89 | Ay | 1 | Total | C | O | P | 0 |
| | | | 12 | 5 | 6 | 1 | |
| 89 | Ay | 1 | Total | C | O | P | 0 |
| | | | 12 | 5 | 6 | 1 | |
| 89 | Ay | 1 | Total | C | O | P | 0 |
| | | | 12 | 5 | 6 | 1 | |
| 89 | Ay | 1 | Total | C | O | P | 0 |
| | | | 12 | 5 | 6 | 1 | |

- Molecule 90 is SPERMIDINE (three-letter code: SPD) (formula: $C_7H_{19}N_3$).



| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|---|---|---------|
| 90 | B5 | 1 | Total | C | N | 0 |
| | | | 10 | 7 | 3 | |
| 90 | B5 | 1 | Total | C | N | 0 |
| | | | 10 | 7 | 3 | |
| 90 | B5 | 1 | Total | C | N | 0 |
| | | | 10 | 7 | 3 | |
| 90 | B5 | 1 | Total | C | N | 0 |
| | | | 10 | 7 | 3 | |
| 90 | B5 | 1 | Total | C | N | 0 |
| | | | 10 | 7 | 3 | |

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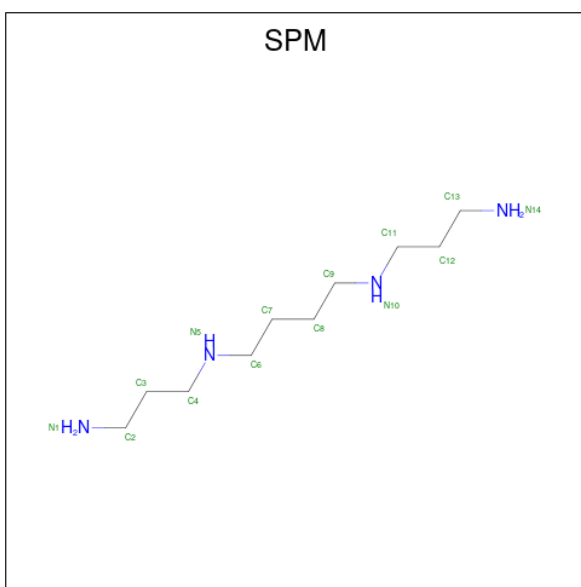
| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|---|---|---------|
| | | | Total | C | N | |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | B5 | 1 | 10 | 7 | 3 | 0 |
| 90 | A2 | 1 | 10 | 7 | 3 | 0 |
| 90 | A2 | 1 | 10 | 7 | 3 | 0 |
| 90 | A2 | 1 | 10 | 7 | 3 | 0 |
| 90 | A2 | 1 | 10 | 7 | 3 | 0 |

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| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|---|---|---------|
| | | | Total | C | N | |
| 90 | A2 | 1 | 10 | 7 | 3 | 0 |
| 90 | A2 | 1 | 10 | 7 | 3 | 0 |
| 90 | A2 | 1 | 10 | 7 | 3 | 0 |
| 90 | A2 | 1 | 10 | 7 | 3 | 0 |

- Molecule 91 is SPERMINE (three-letter code: SPM) (formula: C₁₀H₂₆N₄).



| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|----|---|---------|
| | | | Total | C | N | |
| 91 | B5 | 1 | 14 | 10 | 4 | 0 |
| 91 | B5 | 1 | 14 | 10 | 4 | 0 |
| 91 | A2 | 1 | 14 | 10 | 4 | 0 |

- Molecule 92 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------|-----|---------|
| | | | Total | Mg | |
| 92 | B5 | 282 | 282 | 282 | 0 |
| 92 | B7 | 9 | 9 | 9 | 0 |

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| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|--------------|-----------|---------|
| 92 | B8 | 9 | Total 9 | Mg 9 | 0 |
| 92 | BI | 1 | Total 1 | Mg 1 | 0 |
| 92 | BP | 1 | Total 1 | Mg 1 | 0 |
| 92 | BR | 1 | Total 1 | Mg 1 | 0 |
| 92 | BV | 1 | Total 1 | Mg 1 | 0 |
| 92 | Ba | 1 | Total 1 | Mg 1 | 0 |
| 92 | Bj | 1 | Total 1 | Mg 1 | 0 |
| 92 | Na | 1 | Total 1 | Mg 1 | 0 |
| 92 | A2 | 108 | Total 108 | Mg 108 | 0 |
| 92 | AT | 3 | Total 3 | Mg 3 | 0 |
| 92 | Af | 1 | Total 1 | Mg 1 | 0 |
| 92 | An | 1 | Total 1 | Mg 1 | 0 |

- Molecule 93 is UNKNOWN ATOM OR ION (three-letter code: UNX) (formula: X).

| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|--------------|----------|---------|
| 93 | B5 | 214 | Total 214 | X 214 | 0 |
| 93 | B7 | 6 | Total 6 | X 6 | 0 |
| 93 | B8 | 6 | Total 6 | X 6 | 0 |
| 93 | BA | 3 | Total 3 | X 3 | 0 |
| 93 | BB | 2 | Total 2 | X 2 | 0 |
| 93 | BH | 1 | Total 1 | X 1 | 0 |
| 93 | BI | 1 | Total 1 | X 1 | 0 |

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| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------------|---------|---------|
| 93 | BL | 1 | Total 1 | X 1 | 0 |
| 93 | BN | 1 | Total 1 | X 1 | 0 |
| 93 | BP | 1 | Total 1 | X 1 | 0 |
| 93 | BQ | 2 | Total 2 | X 2 | 0 |
| 93 | BT | 1 | Total 1 | X 1 | 0 |
| 93 | Bb | 2 | Total 2 | X 2 | 0 |
| 93 | Be | 3 | Total 3 | X 3 | 0 |
| 93 | Bf | 1 | Total 1 | X 1 | 0 |
| 93 | Bl | 2 | Total 2 | X 2 | 0 |
| 93 | Bo | 1 | Total 1 | X 1 | 0 |
| 93 | A2 | 56 | Total 56 | X 56 | 0 |
| 93 | AE | 1 | Total 1 | X 1 | 0 |
| 93 | AT | 2 | Total 2 | X 2 | 0 |
| 93 | Ae | 1 | Total 1 | X 1 | 0 |
| 93 | Ak | 1 | Total 1 | X 1 | 0 |
| 93 | An | 1 | Total 1 | X 1 | 0 |
| 93 | Ar | 1 | Total 1 | X 1 | 0 |
| 93 | Az | 1 | Total 1 | X 1 | 0 |

- Molecule 94 is GUANOSINE-5'-TRIPHOSPHATE (three-letter code: GTP) (formula: $C_{10}H_{16}N_5O_{14}P_3$).

| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|------------|---------|---------|
| 96 | Bg | 1 | Total 1 | Zn 1 | 0 |
| 96 | Bj | 1 | Total 1 | Zn 1 | 0 |
| 96 | Bm | 1 | Total 1 | Zn 1 | 0 |
| 96 | Bo | 1 | Total 1 | Zn 1 | 0 |
| 96 | Bp | 1 | Total 1 | Zn 1 | 0 |
| 96 | AC | 1 | Total 1 | Zn 1 | 0 |
| 96 | AE | 1 | Total 1 | Zn 1 | 0 |
| 96 | AG | 1 | Total 1 | Zn 1 | 0 |

- Molecule 97 is water.

| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|---------------|-----------|---------|
| 97 | B5 | 1388 | Total 1388 | O 1388 | 0 |
| 97 | B7 | 44 | Total 44 | O 44 | 0 |
| 97 | B8 | 49 | Total 49 | O 49 | 0 |
| 97 | BA | 9 | Total 9 | O 9 | 0 |
| 97 | BB | 6 | Total 6 | O 6 | 0 |
| 97 | BC | 7 | Total 7 | O 7 | 0 |
| 97 | BD | 1 | Total 1 | O 1 | 0 |
| 97 | BF | 1 | Total 1 | O 1 | 0 |
| 97 | BH | 2 | Total 2 | O 2 | 0 |
| 97 | BI | 1 | Total 1 | O 1 | 0 |
| 97 | BL | 3 | Total 3 | O 3 | 0 |
| 97 | BN | 5 | Total 5 | O 5 | 0 |

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| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|--------------|----------|---------|
| 97 | BP | 2 | Total 2 | O 2 | 0 |
| 97 | BR | 5 | Total 5 | O 5 | 0 |
| 97 | BT | 1 | Total 1 | O 1 | 0 |
| 97 | BV | 3 | Total 3 | O 3 | 0 |
| 97 | BX | 1 | Total 1 | O 1 | 0 |
| 97 | Ba | 7 | Total 7 | O 7 | 0 |
| 97 | Bb | 1 | Total 1 | O 1 | 0 |
| 97 | Bd | 1 | Total 1 | O 1 | 0 |
| 97 | Be | 5 | Total 5 | O 5 | 0 |
| 97 | Bg | 2 | Total 2 | O 2 | 0 |
| 97 | Bj | 2 | Total 2 | O 2 | 0 |
| 97 | Bl | 1 | Total 1 | O 1 | 0 |
| 97 | Bo | 1 | Total 1 | O 1 | 0 |
| 97 | Na | 3 | Total 3 | O 3 | 0 |
| 97 | A2 | 530 | Total 530 | O 530 | 0 |
| 97 | AI | 1 | Total 1 | O 1 | 0 |
| 97 | AT | 13 | Total 13 | O 13 | 0 |
| 97 | Aa | 2 | Total 2 | O 2 | 0 |
| 97 | Ad | 1 | Total 1 | O 1 | 0 |
| 97 | Af | 1 | Total 1 | O 1 | 0 |
| 97 | Ak | 2 | Total 2 | O 2 | 0 |

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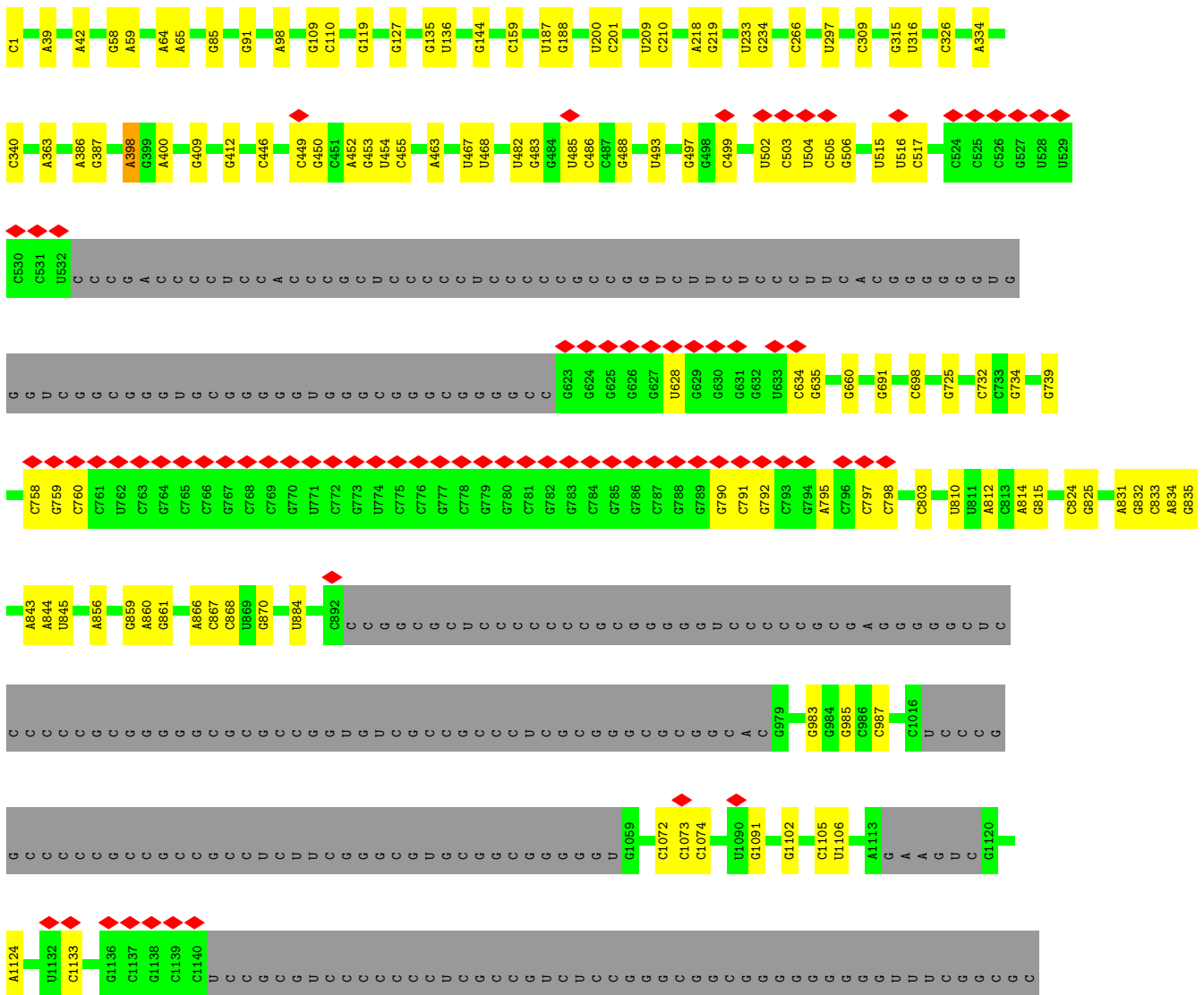
| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|------------|--------|---------|
| 97 | Am | 1 | Total 1 | O 1 | 0 |
| 97 | An | 3 | Total 3 | O 3 | 0 |
| 97 | Ap | 2 | Total 2 | O 2 | 0 |
| 97 | Ar | 2 | Total 2 | O 2 | 0 |
| 97 | As | 2 | Total 2 | O 2 | 0 |
| 97 | At | 1 | Total 1 | O 1 | 0 |
| 97 | Aw | 5 | Total 5 | O 5 | 0 |

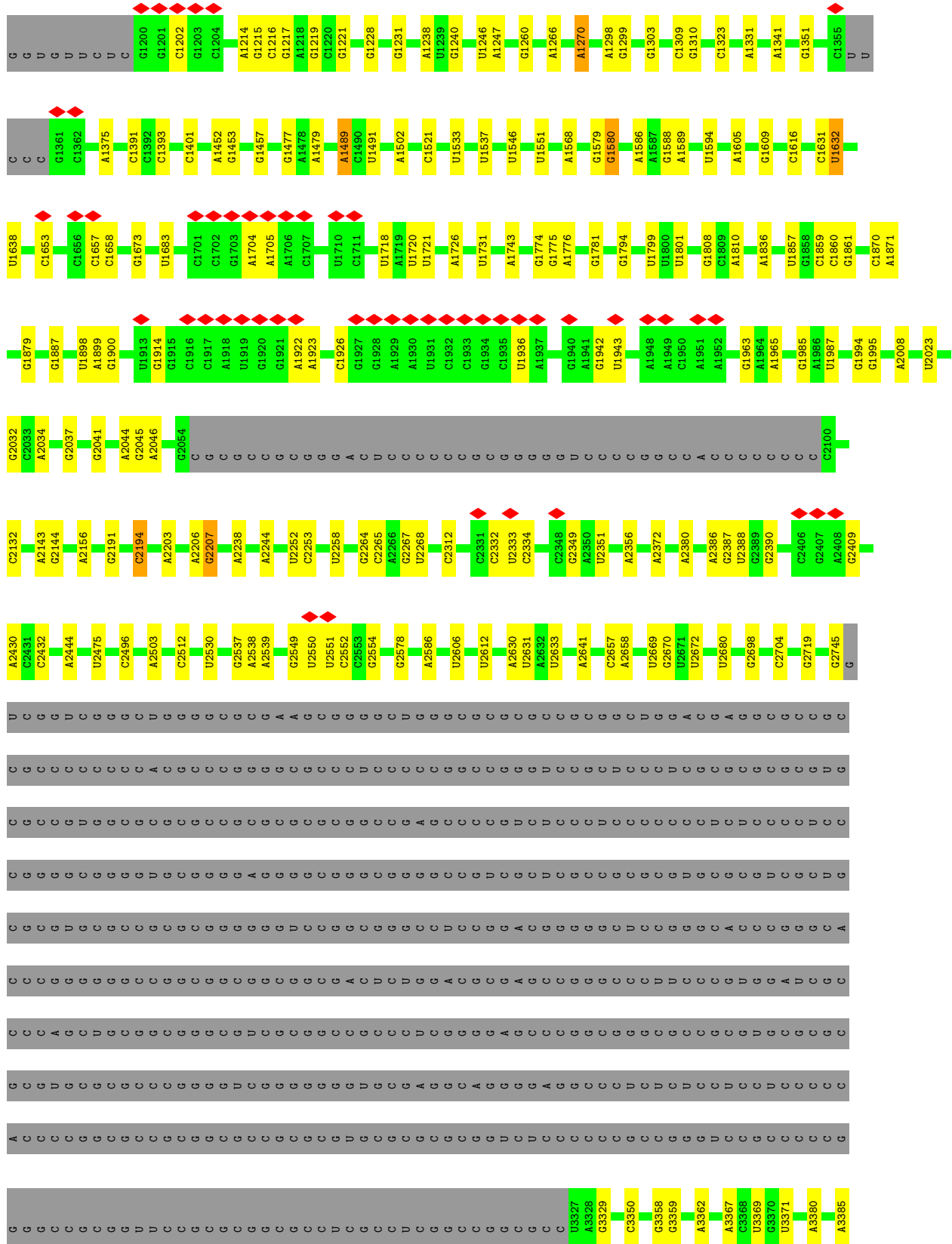
3 Residue-property plots [i](#)

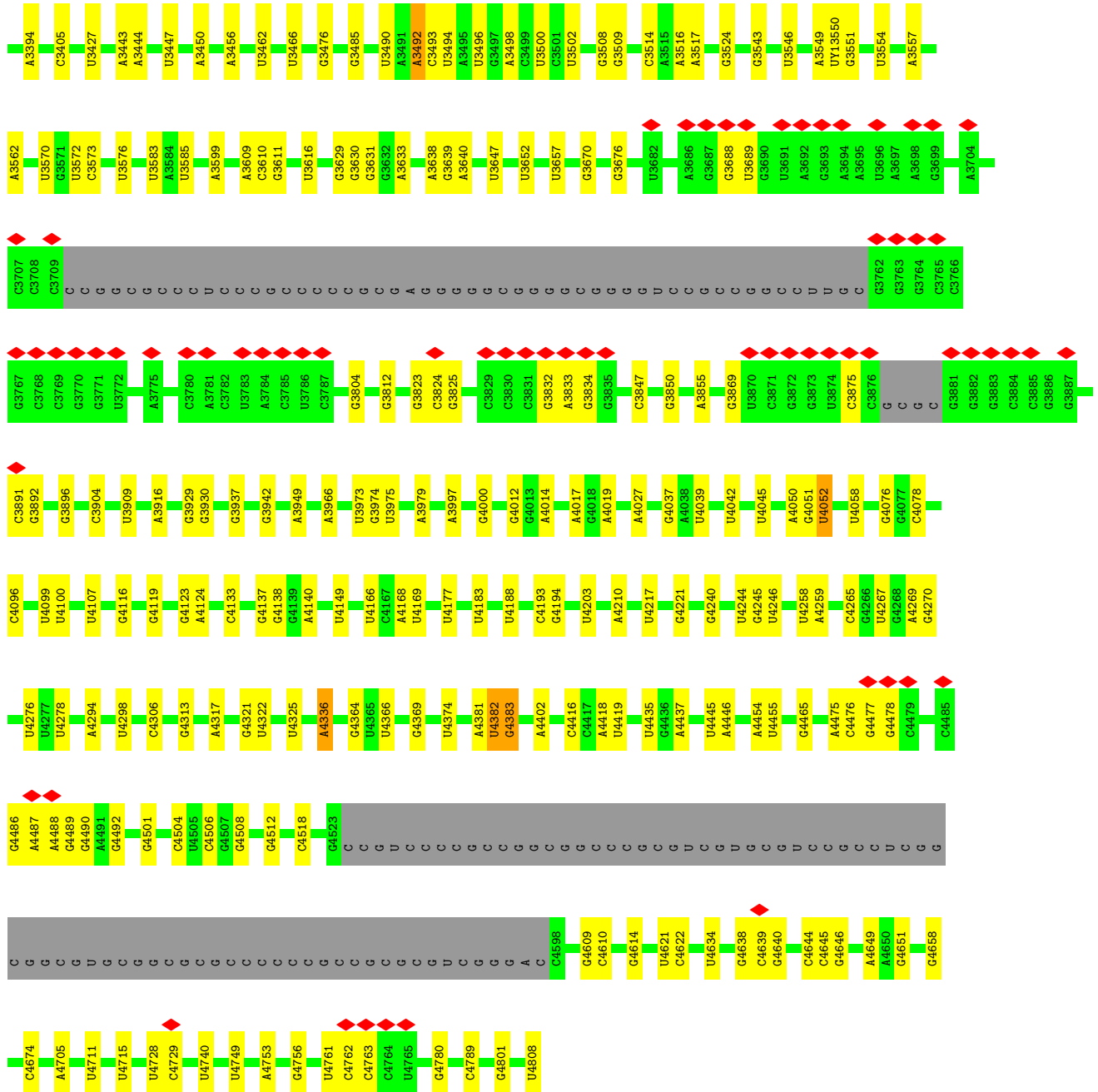
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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: 28S rRNA

Chain B5:





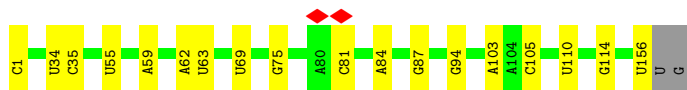


• Molecule 2: 5S rRNA

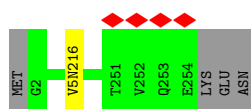


• Molecule 3: 5.8S rRNA

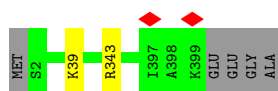




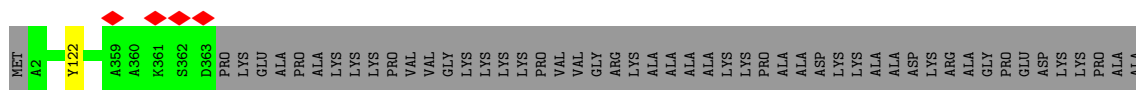
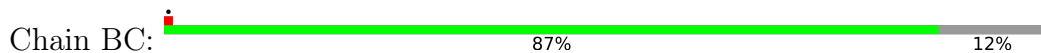
• Molecule 4: 60S ribosomal protein L8



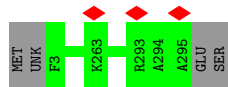
• Molecule 5: Ribosomal protein L3



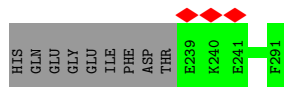
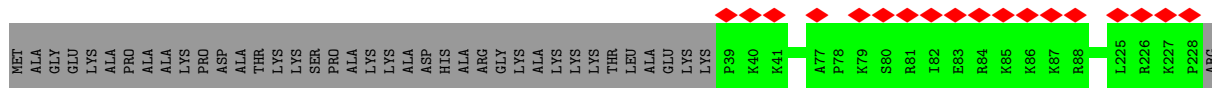
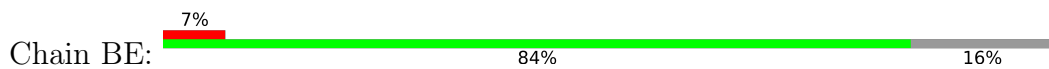
• Molecule 6: 60S ribosomal protein L4



• Molecule 7: Ribosomal protein L5 eukaryotic C-terminal domain-containing protein

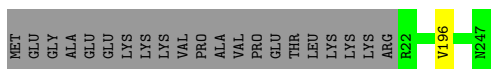


• Molecule 8: 60S ribosomal protein L6

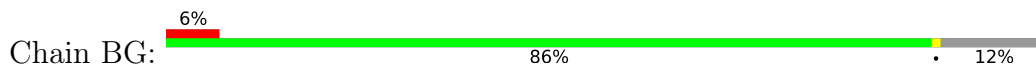


• Molecule 9: Ribosomal Protein uL30

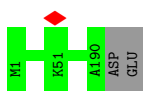




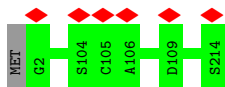
- Molecule 10: 60S ribosomal protein L7a



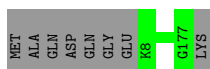
- Molecule 11: 60S ribosomal protein L9



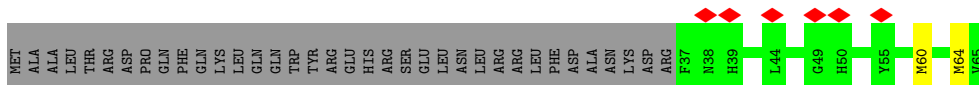
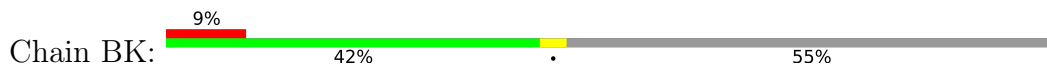
- Molecule 12: 60S ribosomal protein L10



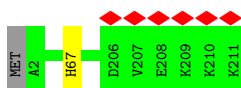
- Molecule 13: 60S ribosomal protein L11



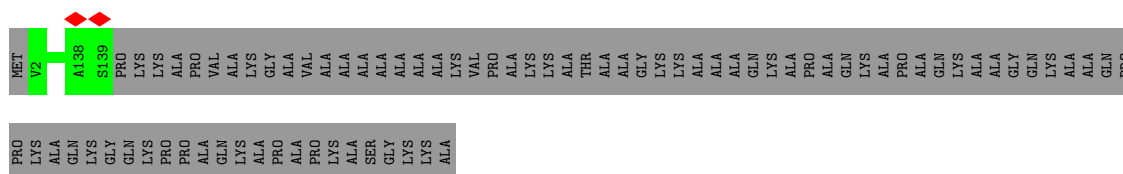
- Molecule 14: Glucose-6-phosphate isomerase



- Molecule 15: 60S ribosomal protein L13



- Molecule 16: 60S ribosomal protein L14



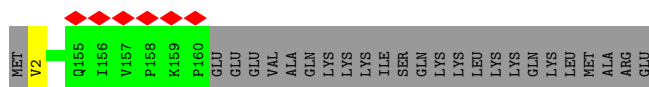
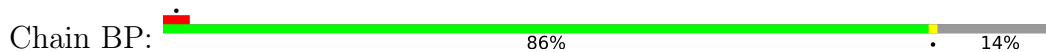
- Molecule 17: Ribosomal protein L15



- Molecule 18: 60S ribosomal protein L13a



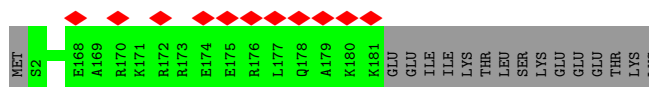
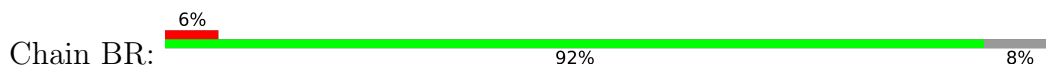
- Molecule 19: uL22



- Molecule 20: eL18



- Molecule 21: Ribosomal protein L19

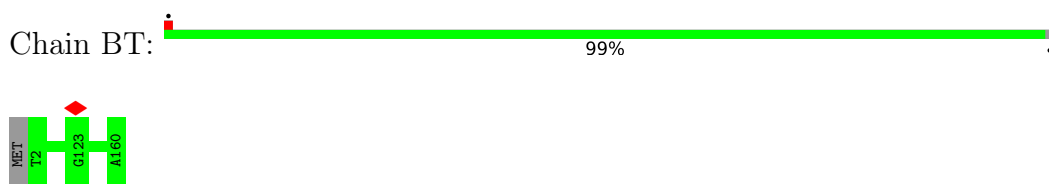


- Molecule 22: 60S ribosomal protein L18a

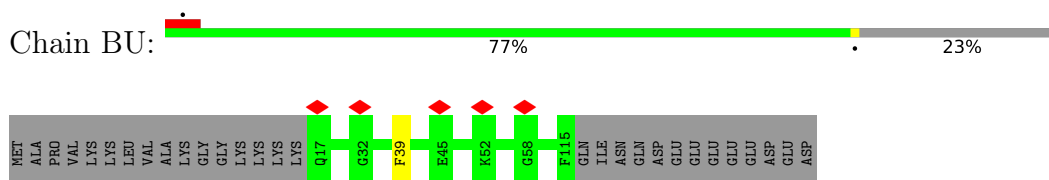


There are no outlier residues recorded for this chain.

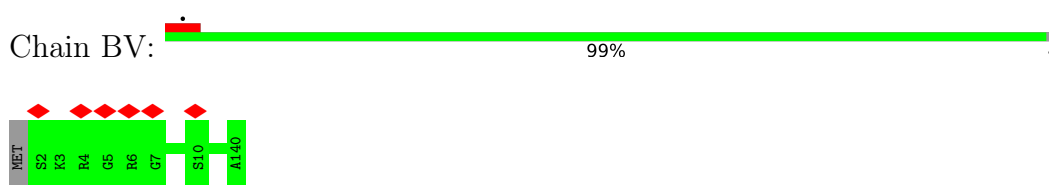
- Molecule 23: 60S ribosomal protein L21



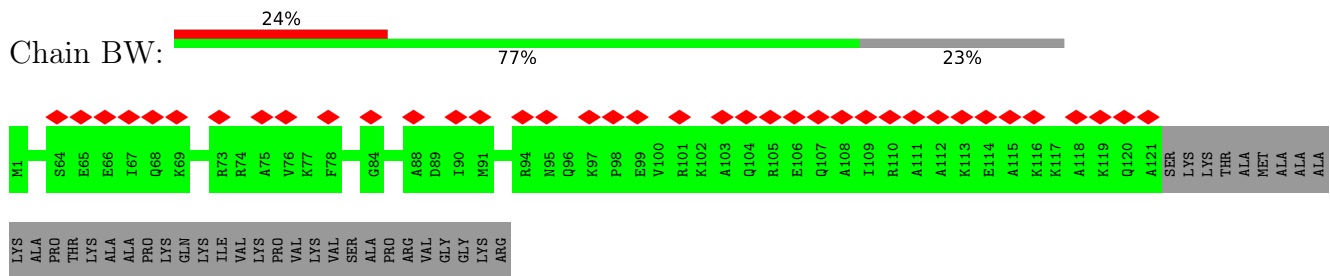
- Molecule 24: 60S ribosomal protein L22



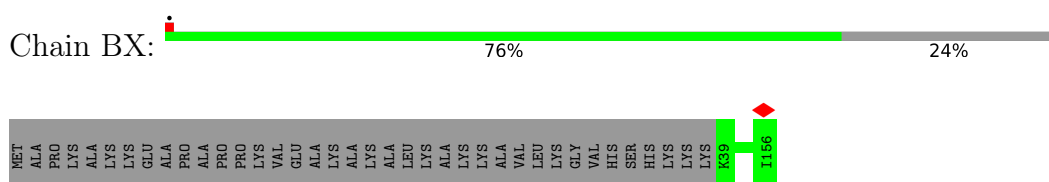
- Molecule 25: Ribosomal protein L23



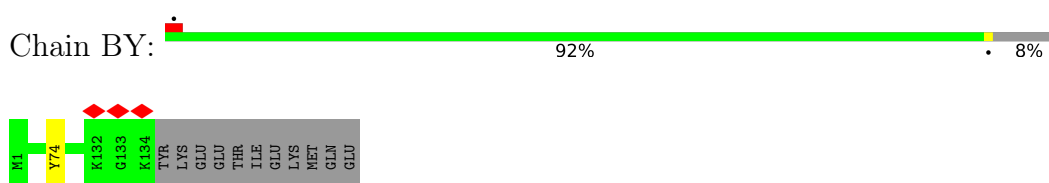
- Molecule 26: Ribosomal protein L24



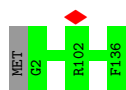
- Molecule 27: Ribosomal_L23eN domain-containing protein



- Molecule 28: Ribosomal protein L26



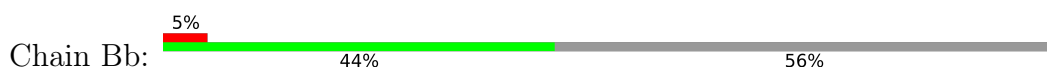
- Molecule 29: 60S ribosomal protein L27



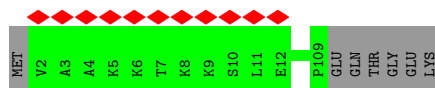
- Molecule 30: 60S ribosomal protein L27a



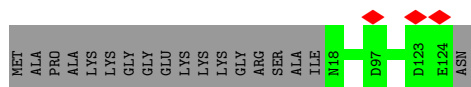
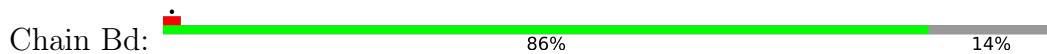
- Molecule 31: 60S ribosomal protein L29



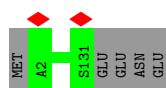
- Molecule 32: 60S ribosomal protein L30



- Molecule 33: 60S ribosomal protein L31



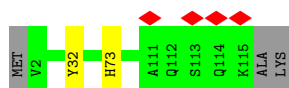
- Molecule 34: Ribosomal protein L32



- Molecule 35: 60S ribosomal protein L35a



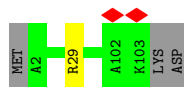
- Molecule 36: 60S ribosomal protein L34



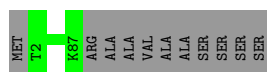
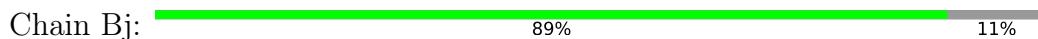
- Molecule 37: 60S ribosomal protein L35



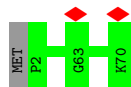
- Molecule 38: 60S ribosomal protein L36



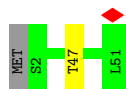
- Molecule 39: Ribosomal protein L37



- Molecule 40: 60S ribosomal protein L38



- Molecule 41: 60S ribosomal protein L39-like



• Molecule 42: Ubiquitin-60S ribosomal protein L40



MET GLN ILE PHE VAL LYS THR LEU THR LEU GLY LYS THR ILE THR LEU VAL GLU PRO SER ASP THR ILE LEU ASN VAL LYS LYS ILE ILE ASP LYS GLU GLY ILE PRO PRO ASP GLN GLN ARG LEU ILE PHE ALA GLY LYS GLN LEU ASP GLY ARG THR LEU SER ASP TYR ASN

ILE GLN LYS GLU SER THR LEU HIS LEU VAL LEU ARG ARG ARG GLY I77 K128

• Molecule 43: eL42



MET V2 K53 Q106 F106

• Molecule 44: 60S ribosomal protein L37a



MET K2 D91 Q92

• Molecule 45: 60S ribosomal protein L28



MET S2 M125 V126 K127 ARG LYS ARG ARG ARG ARG PRO THR LYS SER SER

• Molecule 46: 60S acidic ribosomal protein P0

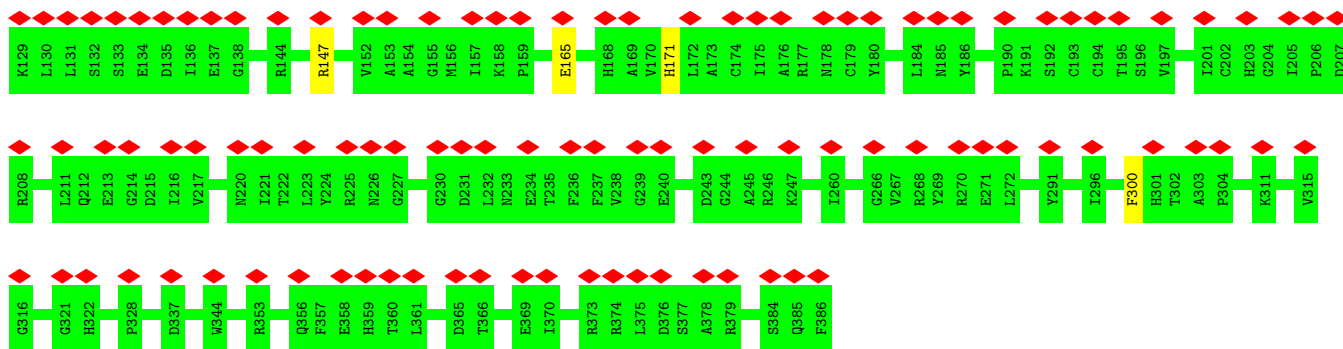


MET PRD ARG GLU D5 R6 A7 T8 W9 K10 S11 M12 N13 Y14 F14 L15 K16 I17 I18 Q19 L20 L21 D22 D23 Y24 P25 K26 C27 F28 I29 W30 G31 A32 D33 N34 V35 G36 S37 K38 Q39 M40 Q41 Q42 I43 R44 M45 S46 L47 R48 G49 A109 K50 A51 V52 V53 L54 M55 G56 K57 M58 T59 M60

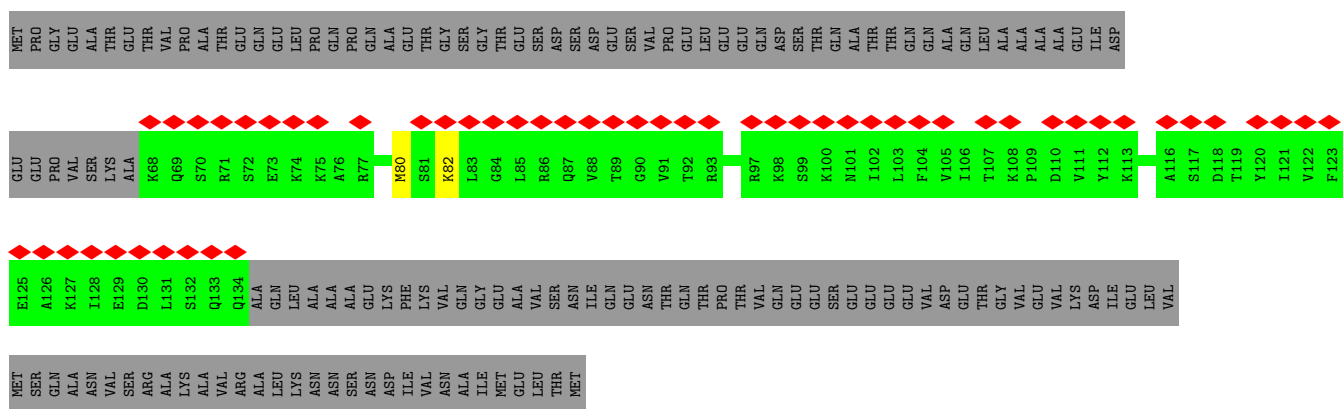
M61 R62 K63 A64 I65 R66 S67 H68 L69 E70 M71 N72 P73 A74 L75 E76 K77 L78 L79 P80 H81 I82 R83 G84 M85 K86 G87 F88 W89 F90 T91 I92 E93 G94 I95 L96 T96 E97 I98 R99 D100 M101 L102 L103 A104 M105 K106 V107 P108 A109 S170 E171 A172 T173 G174 L175 M176 M177 P178 C179 E120

V121 T122 V123 P124 A125 Q126 M127 T128 I129 L130 G131 P132 E133 K134 T135 S136 F137 F138 Q139 A140 L141 L142 I143 T144 I145 T146 K146 G147 S148 R149 H150 T151 I152 E153 G154 L155 S156 D157 V158 Q159 L160 I161 L162 T163 G164 D165 K166 V167 G168 A169 S170 E171 A172 T173 L174 L175 M176 M177 P178 C179 E120

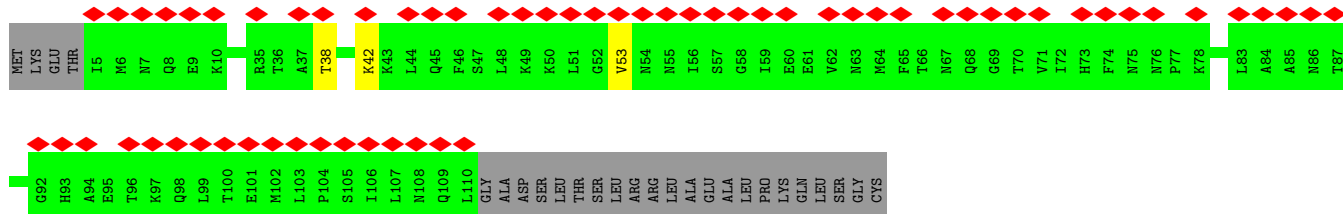
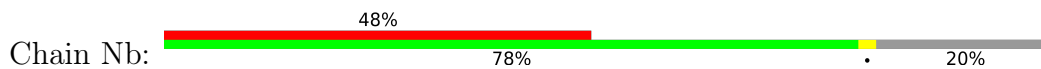
S181 P182 F183 S184 F185 G186 L187 I188 I189 Q190 Q191 V192 F193 D194 M195 G196 S197 I198 Y199 PRO GLU VAL LEU LEU ASP ILE THR LEU ASP THR LEU LEU HIS SER ARG PHE LEU LEU GLY VAL ASN VAL ALA SER VAL VAL CYS LEU LEU ILE GLY TYR PRO THR VAL ALA SER VAL PRO HIS SER



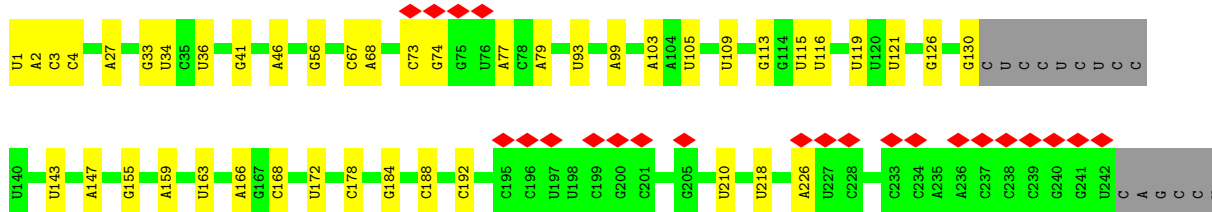
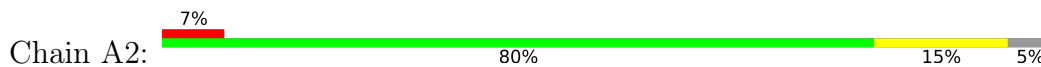
• Molecule 50: Nascent polypeptide-associated complex subunit alpha

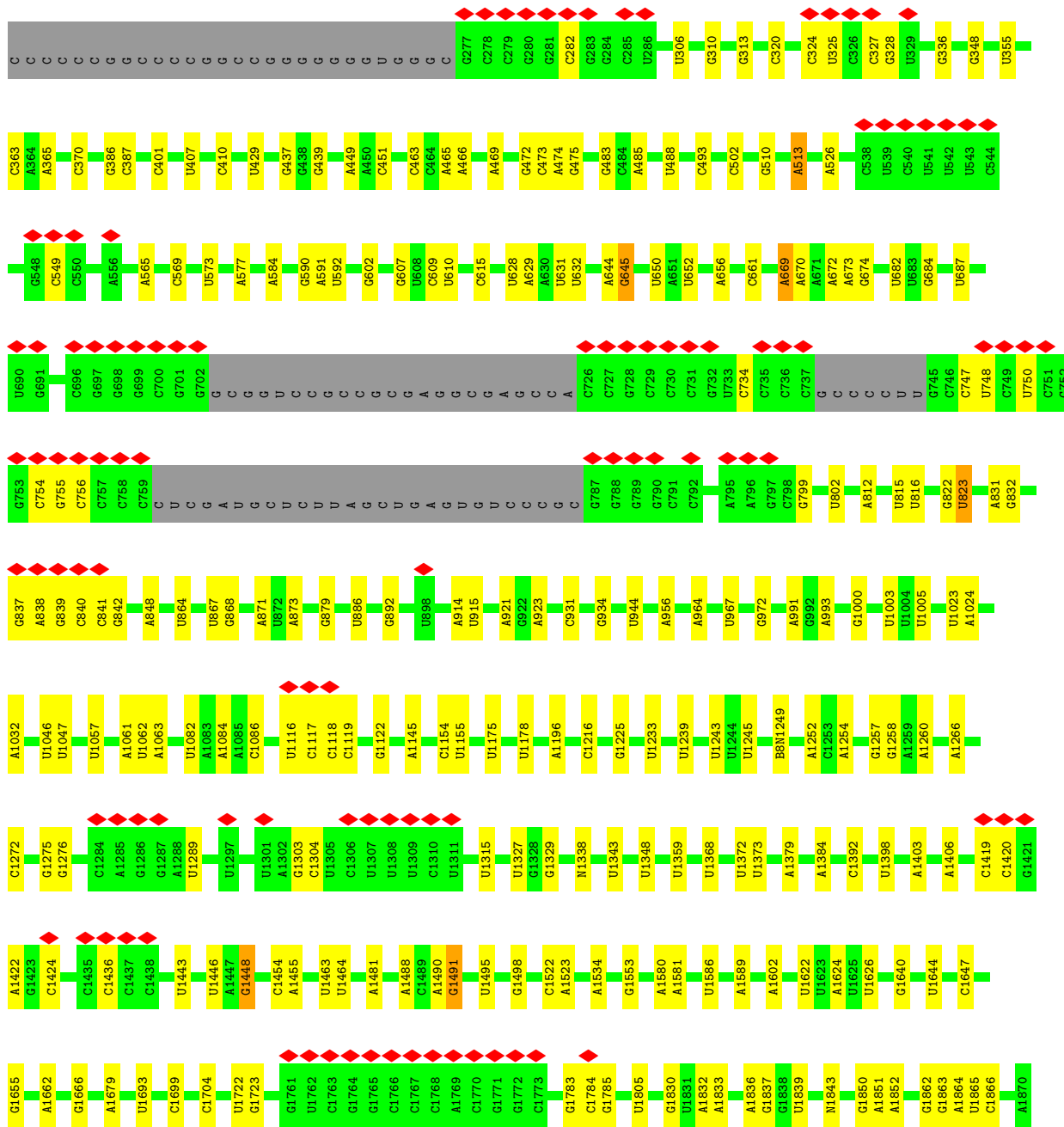


• Molecule 51: Transcription factor BTF3

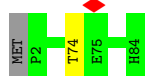


• Molecule 52: 18s rRNA



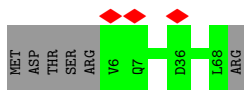


• Molecule 53: 40S ribosomal protein S27

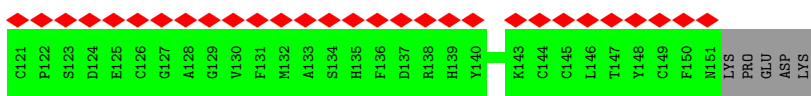
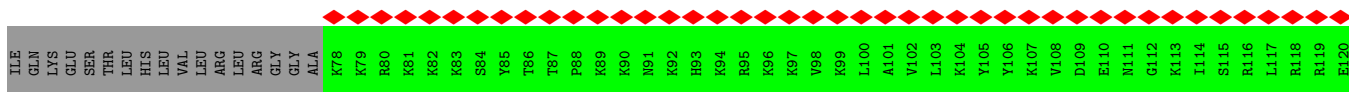
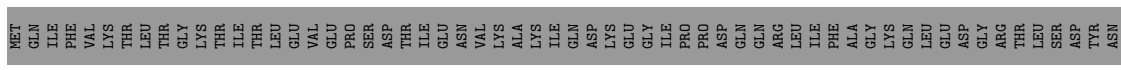


• Molecule 54: 40S ribosomal protein S28

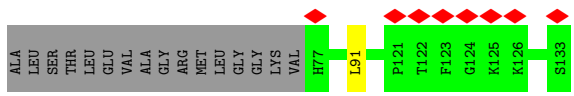
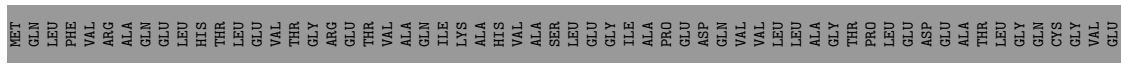
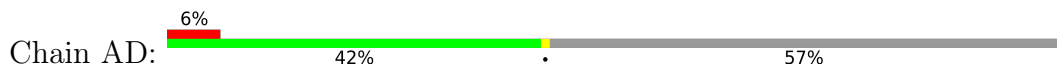




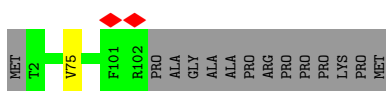
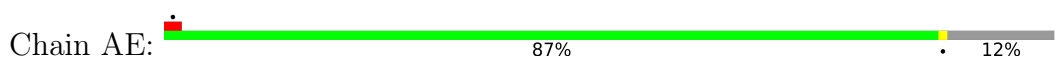
• Molecule 55: Ribosomal protein S27a



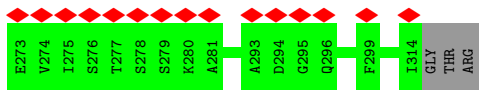
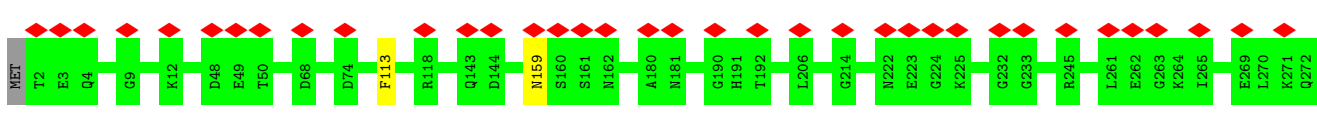
• Molecule 56: 40S ribosomal protein S30



• Molecule 57: eS26

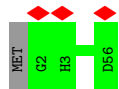


• Molecule 58: RACK1

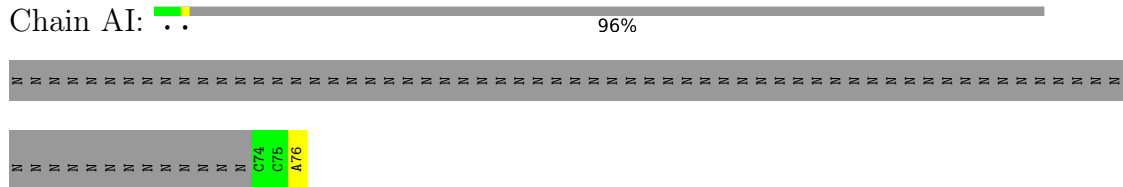


• Molecule 59: 40S ribosomal protein S29

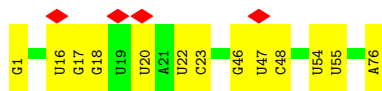
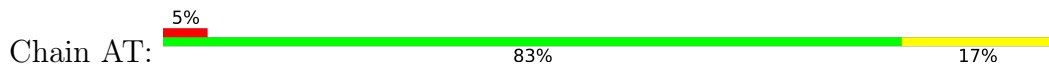




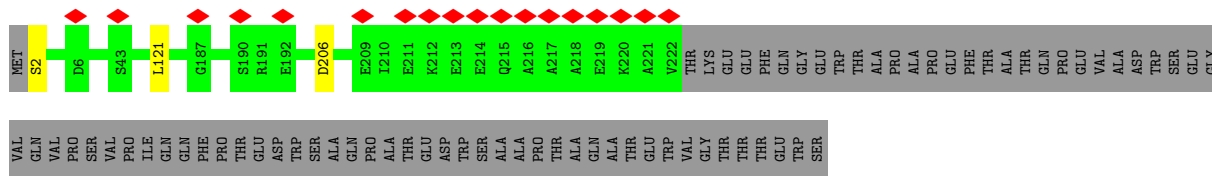
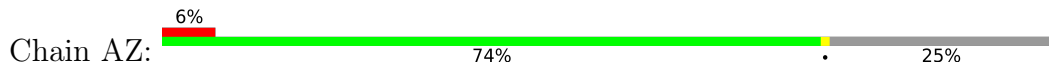
- Molecule 60: E-site tRNA



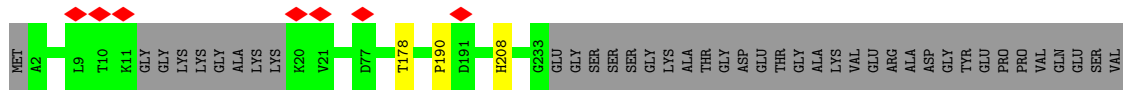
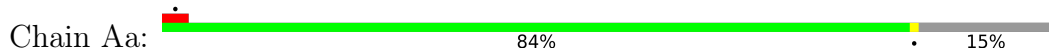
- Molecule 61: P-site Val-tRNA



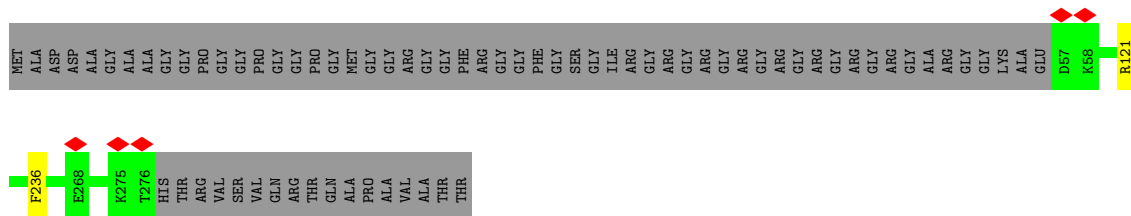
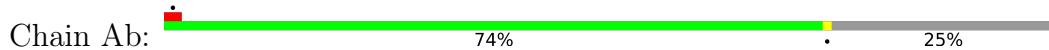
- Molecule 62: 40S ribosomal protein SA



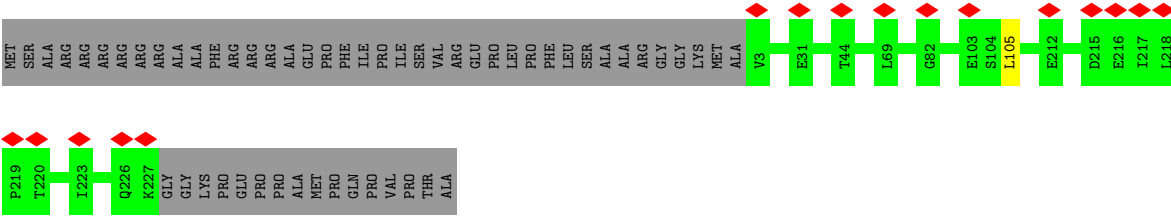
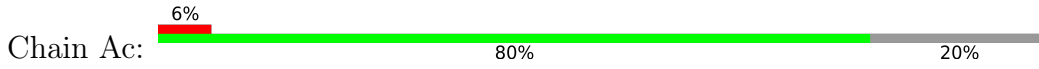
- Molecule 63: 40S ribosomal protein S3a



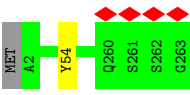
- Molecule 64: 40S ribosomal protein S2



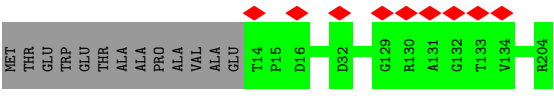
- Molecule 65: 40S ribosomal protein S3



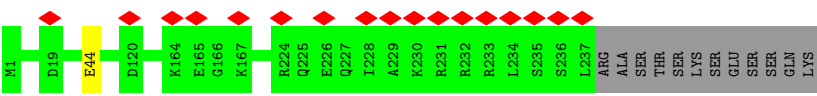
Molecule 66: 40S ribosomal protein S4



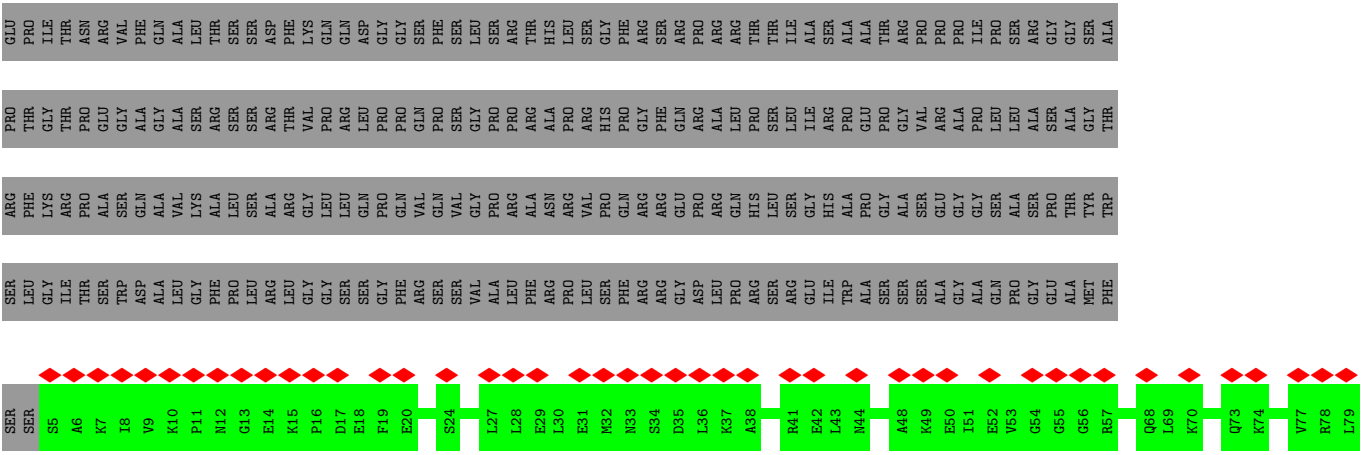
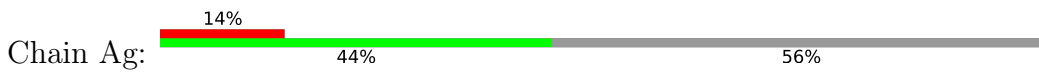
Molecule 67: Ribosomal protein S5

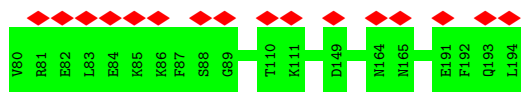


Molecule 68: 40S ribosomal protein S6

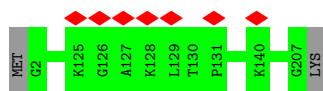


Molecule 69: 40S ribosomal protein S7

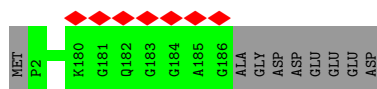




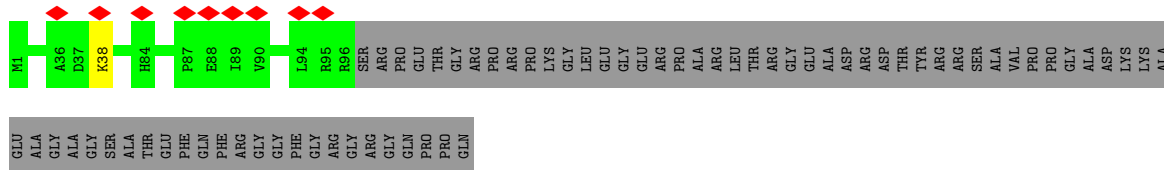
- Molecule 70: 40S ribosomal protein S8



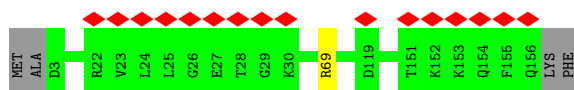
- Molecule 71: 40S ribosomal protein S9



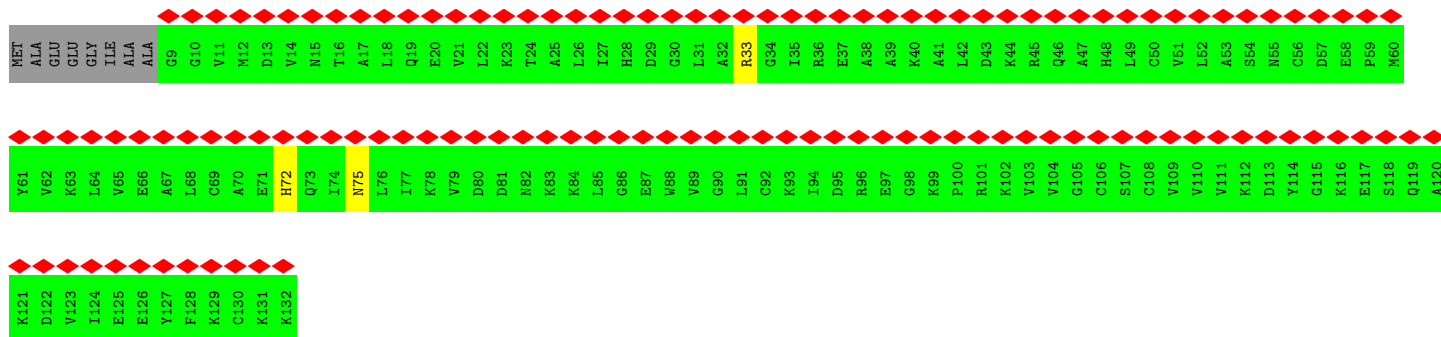
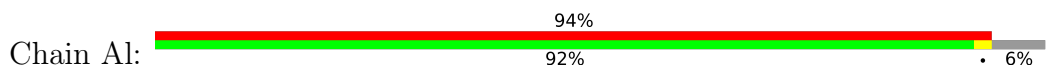
- Molecule 72: S10_ plectin domain-containing protein



- Molecule 73: 40S ribosomal protein S11



- Molecule 74: 40S ribosomal protein S12




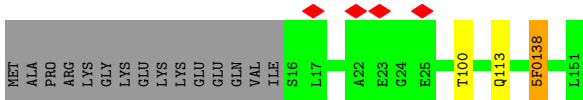
- Molecule 75: 40S ribosomal protein S13

Chain Am:  99%




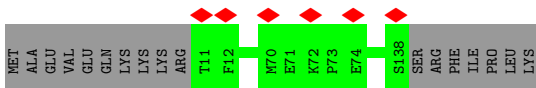
- Molecule 76: 40S ribosomal protein S14

Chain An:  88% 10%




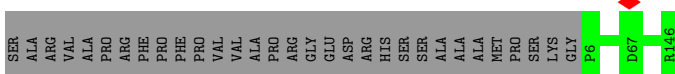
- Molecule 77: 40S ribosomal protein uS19

Chain Ao:  88% 12%



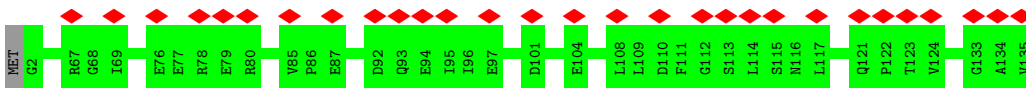
- Molecule 78: uS9

Chain Ap:  82% 18%



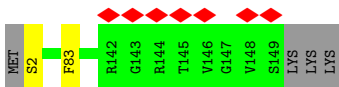
- Molecule 79: 40S ribosomal protein eS17

Chain Aq:  21% 99%



- Molecule 80: 40S ribosomal protein S18

Chain Ar:  5% 96%

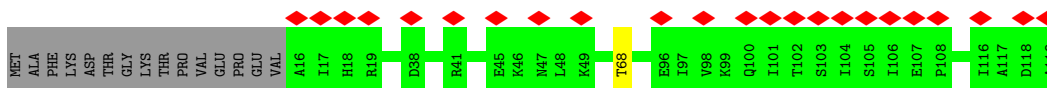
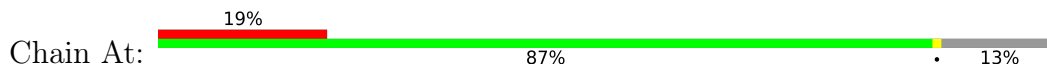


- Molecule 81: 40S ribosomal protein S19

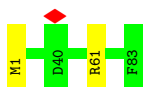
Chain As:  99%



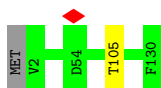
- Molecule 82: 40S ribosomal protein uS10



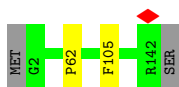
- Molecule 83: 40S ribosomal protein S21



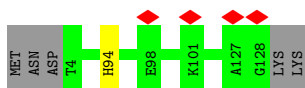
- Molecule 84: Ribosomal protein S15a



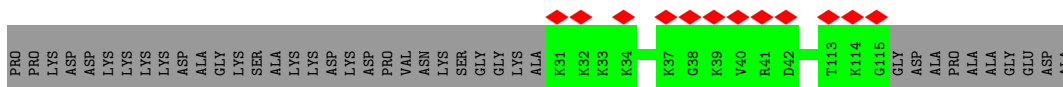
- Molecule 85: 40S ribosomal protein S23



- Molecule 86: 40S ribosomal protein S24



- Molecule 87: 40S ribosomal protein S25



- Molecule 88: 60S ribosomal protein L41

Chain Az:  100%

There are no outlier residues recorded for this chain.

4 Experimental information

| Property | Value | Source |
|--------------------------------------|---|-----------|
| EM reconstruction method | SINGLE PARTICLE | Depositor |
| Imposed symmetry | POINT, Not provided | |
| Number of particles used | 21221 | Depositor |
| Resolution determination method | FSC 0.143 CUT-OFF | Depositor |
| CTF correction method | PHASE FLIPPING AND AMPLITUDE CORRECTION | Depositor |
| Microscope | FEI TITAN KRIOS | Depositor |
| Voltage (kV) | 300 | Depositor |
| Electron dose ($e^-/\text{\AA}^2$) | 60 | Depositor |
| Minimum defocus (nm) | 600 | Depositor |
| Maximum defocus (nm) | 2400 | Depositor |
| Magnification | 81000 | Depositor |
| Image detector | GATAN K3 (6k x 4k) | Depositor |
| Maximum map value | 5.350 | Depositor |
| Minimum map value | -1.922 | Depositor |
| Average map value | 0.010 | Depositor |
| Map value standard deviation | 0.221 | Depositor |
| Recommended contour level | 0.75 | Depositor |
| Map size (Å) | 542.717, 542.717, 542.717 | wwPDB |
| Map dimensions | 434, 434, 434 | wwPDB |
| Map angles (°) | 90.0, 90.0, 90.0 | wwPDB |
| Pixel spacing (Å) | 1.2505, 1.2505, 1.2505 | Depositor |

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, A2M, AYA, MA6, 5F0, G7M, V5N, GTP, ZN, HIC, SPD, OMG, PSU, MLZ, OMU, SAC, M3L, 4AC, UR3, 6MZ, 1MA, OMC, UY1, AAC, 5MU, HY3, AME, UNX, B8N, NMM, 5MC, SPM

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 | B5 | 0.17 | 1/87403 (0.0%) | 0.67 | 10/136359 (0.0%) |
| 2 | B7 | 0.16 | 0/2835 | 0.66 | 0/4418 |
| 3 | B8 | 0.24 | 1/3635 (0.0%) | 0.67 | 0/5661 |
| 4 | BA | 0.25 | 0/1965 | 0.55 | 0/2633 |
| 5 | BB | 0.24 | 0/3261 | 0.49 | 0/4364 |
| 6 | BC | 0.23 | 0/2932 | 0.50 | 0/3939 |
| 7 | BD | 0.24 | 0/2437 | 0.48 | 0/3264 |
| 8 | BE | 0.24 | 0/1998 | 0.50 | 0/2673 |
| 9 | BF | 0.24 | 0/1922 | 0.49 | 0/2563 |
| 10 | BG | 0.24 | 0/1908 | 0.47 | 0/2566 |
| 11 | BH | 0.24 | 0/1535 | 0.49 | 0/2063 |
| 12 | BI | 0.24 | 0/1756 | 0.50 | 0/2346 |
| 13 | BJ | 0.24 | 0/1385 | 0.50 | 0/1852 |
| 14 | BK | 0.26 | 0/242 | 0.49 | 0/324 |
| 15 | BL | 0.24 | 0/1733 | 0.53 | 0/2316 |
| 16 | BM | 0.24 | 0/1158 | 0.48 | 0/1547 |
| 17 | BN | 0.24 | 0/1746 | 0.54 | 0/2338 |
| 18 | BO | 0.24 | 0/1662 | 0.48 | 0/2222 |
| 19 | BP | 0.23 | 0/1317 | 0.48 | 0/1768 |
| 20 | BQ | 0.24 | 0/1539 | 0.56 | 0/2054 |
| 21 | BR | 0.22 | 0/1524 | 0.53 | 0/2013 |
| 22 | BS | 0.25 | 0/1497 | 0.52 | 0/2008 |
| 23 | BT | 0.25 | 0/1326 | 0.49 | 0/1770 |
| 24 | BU | 0.24 | 0/820 | 0.47 | 0/1100 |
| 25 | BV | 0.25 | 0/1048 | 0.51 | 0/1402 |
| 26 | BW | 0.24 | 0/1006 | 0.49 | 0/1334 |
| 27 | BX | 0.24 | 0/984 | 0.49 | 0/1323 |
| 28 | BY | 0.23 | 0/1132 | 0.51 | 0/1504 |
| 29 | BZ | 0.25 | 0/1130 | 0.49 | 0/1507 |
| 30 | Ba | 0.24 | 0/1179 | 0.50 | 0/1572 |
| 31 | Bb | 0.23 | 0/884 | 0.51 | 0/1169 |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|----------------|-------------|-----------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 32 | Bc | 0.24 | 0/847 | 0.43 | 0/1134 |
| 33 | Bd | 0.24 | 0/903 | 0.51 | 0/1216 |
| 34 | Be | 0.23 | 0/1088 | 0.51 | 0/1451 |
| 35 | Bf | 0.25 | 0/903 | 0.53 | 0/1208 |
| 36 | Bg | 0.23 | 0/916 | 0.54 | 0/1220 |
| 37 | Bh | 0.23 | 0/1021 | 0.48 | 0/1348 |
| 38 | Bi | 0.23 | 0/841 | 0.51 | 0/1112 |
| 39 | Bj | 0.24 | 0/720 | 0.57 | 0/952 |
| 40 | Bk | 0.24 | 0/575 | 0.45 | 0/761 |
| 41 | Bl | 0.22 | 0/459 | 0.51 | 0/608 |
| 42 | Bm | 0.23 | 0/426 | 0.50 | 0/564 |
| 43 | Bo | 0.25 | 0/866 | 0.51 | 0/1141 |
| 44 | Bp | 0.23 | 0/718 | 0.49 | 0/953 |
| 45 | Br | 0.23 | 0/1020 | 0.53 | 0/1366 |
| 46 | Bs | 0.24 | 0/1530 | 0.45 | 0/2064 |
| 47 | Bt | 0.23 | 0/1193 | 0.47 | 0/1609 |
| 48 | Bv | 0.23 | 0/1735 | 0.45 | 0/2328 |
| 49 | MA | 0.23 | 0/2549 | 0.47 | 0/3462 |
| 50 | Na | 0.24 | 0/536 | 0.49 | 0/715 |
| 51 | Nb | 0.25 | 0/829 | 0.47 | 0/1112 |
| 52 | A2 | 0.16 | 1/40342 (0.0%) | 0.68 | 14/62877 (0.0%) |
| 53 | AA | 0.23 | 0/665 | 0.46 | 0/891 |
| 54 | AB | 0.23 | 0/497 | 0.56 | 0/666 |
| 55 | AC | 0.24 | 0/622 | 0.48 | 0/822 |
| 56 | AD | 0.24 | 0/462 | 0.53 | 0/607 |
| 57 | AE | 0.23 | 0/828 | 0.53 | 0/1109 |
| 58 | AF | 0.23 | 0/2493 | 0.46 | 0/3394 |
| 59 | AG | 0.24 | 0/470 | 0.50 | 0/623 |
| 60 | AI | 0.16 | 0/68 | 0.65 | 0/103 |
| 61 | AT | 0.28 | 1/1766 (0.1%) | 0.65 | 0/2749 |
| 62 | AZ | 0.23 | 0/1771 | 0.46 | 0/2406 |
| 63 | Aa | 0.23 | 0/1841 | 0.46 | 0/2459 |
| 64 | Ab | 0.24 | 0/1742 | 0.45 | 0/2354 |
| 65 | Ac | 0.24 | 0/1779 | 0.49 | 0/2395 |
| 66 | Ad | 0.24 | 0/2118 | 0.50 | 0/2849 |
| 67 | Ae | 0.23 | 0/1531 | 0.48 | 0/2059 |
| 68 | Af | 0.24 | 0/1946 | 0.52 | 0/2590 |
| 69 | Ag | 0.24 | 0/1552 | 0.46 | 0/2079 |
| 70 | Ah | 0.24 | 0/1715 | 0.51 | 0/2287 |
| 71 | Ai | 0.23 | 0/1550 | 0.52 | 0/2069 |
| 72 | Aj | 0.23 | 0/834 | 0.42 | 0/1125 |
| 73 | Ak | 0.25 | 0/1284 | 0.51 | 0/1717 |
| 74 | Al | 0.23 | 0/968 | 0.41 | 0/1296 |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|-----------------|-------------|------------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 75 | Am | 0.23 | 0/1232 | 0.47 | 0/1656 |
| 76 | An | 0.24 | 0/1020 | 0.53 | 0/1366 |
| 77 | Ao | 0.25 | 0/1069 | 0.47 | 0/1429 |
| 78 | Ap | 0.23 | 0/1142 | 0.50 | 0/1528 |
| 79 | Aq | 0.23 | 0/1094 | 0.48 | 0/1469 |
| 80 | Ar | 0.24 | 0/1226 | 0.53 | 0/1643 |
| 81 | As | 0.23 | 0/1119 | 0.45 | 0/1498 |
| 82 | At | 0.23 | 0/831 | 0.51 | 0/1115 |
| 83 | Au | 0.24 | 0/636 | 0.48 | 0/852 |
| 84 | Av | 0.24 | 0/1051 | 0.48 | 0/1406 |
| 85 | Aw | 0.24 | 0/1107 | 0.50 | 0/1475 |
| 86 | Ax | 0.24 | 0/1032 | 0.51 | 0/1371 |
| 87 | Ay | 0.23 | 0/691 | 0.46 | 0/922 |
| 88 | Az | 0.22 | 0/240 | 0.65 | 0/305 |
| All | All | 0.20 | 4/238908 (0.0%) | 0.61 | 24/349857 (0.0%) |

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 |
|-----|-------|---------------------|---------------------|
| 43 | Bo | 0 | 1 |
| 76 | An | 0 | 1 |
| All | All | 0 | 2 |

All (4) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 3 | B8 | 1 | C | OP3-P | -10.67 | 1.48 | 1.61 |
| 52 | A2 | 1 | U | OP3-P | -10.65 | 1.48 | 1.61 |
| 1 | B5 | 1 | C | OP3-P | -10.53 | 1.48 | 1.61 |
| 61 | AT | 1 | G | OP3-P | -10.50 | 1.48 | 1.61 |

All (24) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|------|-------------|----------|
| 52 | A2 | 1454 | C | C2-N1-C1' | 8.98 | 128.68 | 118.80 |
| 52 | A2 | 1454 | C | N1-C2-O2 | 8.85 | 124.21 | 118.90 |
| 1 | B5 | 2312 | C | N1-C2-O2 | 8.26 | 123.86 | 118.90 |
| 1 | B5 | 2312 | C | C2-N1-C1' | 8.23 | 127.85 | 118.80 |
| 52 | A2 | 631 | U | C2-N1-C1' | 7.79 | 127.05 | 117.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 52 | A2 | 631 | U | N1-C2-O2 | 7.25 | 127.88 | 122.80 |
| 1 | B5 | 2252 | U | C2-N1-C1' | 7.00 | 126.10 | 117.70 |
| 52 | A2 | 1454 | C | N3-C2-O2 | -6.91 | 117.06 | 121.90 |
| 52 | A2 | 631 | U | N3-C2-O2 | -6.66 | 117.54 | 122.20 |
| 1 | B5 | 2312 | C | N3-C2-O2 | -6.61 | 117.27 | 121.90 |
| 52 | A2 | 1315 | U | C2-N1-C1' | 6.55 | 125.56 | 117.70 |
| 1 | B5 | 2252 | U | N1-C2-O2 | 6.50 | 127.35 | 122.80 |
| 1 | B5 | 1594 | U | C2-N1-C1' | 6.45 | 125.43 | 117.70 |
| 52 | A2 | 1454 | C | C6-N1-C1' | -6.18 | 113.38 | 120.80 |
| 52 | A2 | 1454 | C | C6-N1-C2 | -5.97 | 117.91 | 120.30 |
| 1 | B5 | 2252 | U | N3-C2-O2 | -5.88 | 118.09 | 122.20 |
| 52 | A2 | 1315 | U | N1-C2-O2 | 5.82 | 126.87 | 122.80 |
| 1 | B5 | 2312 | C | C6-N1-C1' | -5.67 | 114.00 | 120.80 |
| 52 | A2 | 1023 | U | C2-N1-C1' | 5.58 | 124.39 | 117.70 |
| 52 | A2 | 1315 | U | N3-C2-O2 | -5.48 | 118.36 | 122.20 |
| 1 | B5 | 2312 | C | C6-N1-C2 | -5.45 | 118.12 | 120.30 |
| 1 | B5 | 1594 | U | N1-C2-O2 | 5.39 | 126.57 | 122.80 |
| 52 | A2 | 1454 | C | C5-C6-N1 | 5.35 | 123.67 | 121.00 |
| 52 | A2 | 631 | U | C6-N1-C1' | -5.04 | 114.14 | 121.20 |

There are no chirality outliers.

All (2) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-----------|
| 76 | An | 138 | 5F0 | Peptide |
| 43 | Bo | 53 | MLZ | Mainchain |

5.2 Too-close contacts [i](#)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

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 PDB entries followed by that with respect to all EM entries.

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 | |
|-----|-------|---------------|------------|---------|----------|-------------|-----|
| 4 | BA | 250/257 (97%) | 242 (97%) | 8 (3%) | 0 | 100 | 100 |
| 5 | BB | 395/403 (98%) | 390 (99%) | 5 (1%) | 0 | 100 | 100 |
| 6 | BC | 360/413 (87%) | 356 (99%) | 4 (1%) | 0 | 100 | 100 |
| 7 | BD | 291/297 (98%) | 286 (98%) | 5 (2%) | 0 | 100 | 100 |
| 8 | BE | 239/291 (82%) | 235 (98%) | 4 (2%) | 0 | 100 | 100 |
| 9 | BF | 224/247 (91%) | 219 (98%) | 4 (2%) | 1 (0%) | 34 | 66 |
| 10 | BG | 229/266 (86%) | 227 (99%) | 2 (1%) | 0 | 100 | 100 |
| 11 | BH | 188/192 (98%) | 188 (100%) | 0 | 0 | 100 | 100 |
| 12 | BI | 211/214 (99%) | 209 (99%) | 2 (1%) | 0 | 100 | 100 |
| 13 | BJ | 168/178 (94%) | 167 (99%) | 1 (1%) | 0 | 100 | 100 |
| 14 | BK | 27/65 (42%) | 25 (93%) | 2 (7%) | 0 | 100 | 100 |
| 15 | BL | 208/211 (99%) | 205 (99%) | 3 (1%) | 0 | 100 | 100 |
| 16 | BM | 136/218 (62%) | 134 (98%) | 2 (2%) | 0 | 100 | 100 |
| 17 | BN | 201/204 (98%) | 198 (98%) | 3 (2%) | 0 | 100 | 100 |
| 18 | BO | 197/203 (97%) | 197 (100%) | 0 | 0 | 100 | 100 |
| 19 | BP | 157/184 (85%) | 155 (99%) | 2 (1%) | 0 | 100 | 100 |
| 20 | BQ | 185/188 (98%) | 182 (98%) | 3 (2%) | 0 | 100 | 100 |
| 21 | BR | 178/196 (91%) | 178 (100%) | 0 | 0 | 100 | 100 |
| 22 | BS | 174/176 (99%) | 173 (99%) | 1 (1%) | 0 | 100 | 100 |
| 23 | BT | 157/160 (98%) | 155 (99%) | 2 (1%) | 0 | 100 | 100 |
| 24 | BU | 97/128 (76%) | 96 (99%) | 1 (1%) | 0 | 100 | 100 |
| 25 | BV | 137/140 (98%) | 134 (98%) | 3 (2%) | 0 | 100 | 100 |
| 26 | BW | 119/157 (76%) | 118 (99%) | 1 (1%) | 0 | 100 | 100 |
| 27 | BX | 116/156 (74%) | 115 (99%) | 1 (1%) | 0 | 100 | 100 |
| 28 | BY | 132/145 (91%) | 131 (99%) | 1 (1%) | 0 | 100 | 100 |
| 29 | BZ | 133/136 (98%) | 131 (98%) | 2 (2%) | 0 | 100 | 100 |
| 30 | Ba | 144/148 (97%) | 137 (95%) | 6 (4%) | 1 (1%) | 22 | 54 |
| 31 | Bb | 103/245 (42%) | 100 (97%) | 3 (3%) | 0 | 100 | 100 |
| 32 | Bc | 106/115 (92%) | 106 (100%) | 0 | 0 | 100 | 100 |
| 33 | Bd | 105/125 (84%) | 105 (100%) | 0 | 0 | 100 | 100 |
| 34 | Be | 128/135 (95%) | 126 (98%) | 2 (2%) | 0 | 100 | 100 |
| 35 | Bf | 108/110 (98%) | 108 (100%) | 0 | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|------------|---------|----------|-------------|-----|
| 36 | Bg | 112/117 (96%) | 111 (99%) | 1 (1%) | 0 | 100 | 100 |
| 37 | Bh | 120/123 (98%) | 119 (99%) | 1 (1%) | 0 | 100 | 100 |
| 38 | Bi | 100/105 (95%) | 98 (98%) | 2 (2%) | 0 | 100 | 100 |
| 39 | Bj | 84/97 (87%) | 84 (100%) | 0 | 0 | 100 | 100 |
| 40 | Bk | 67/70 (96%) | 67 (100%) | 0 | 0 | 100 | 100 |
| 41 | Bl | 48/51 (94%) | 48 (100%) | 0 | 0 | 100 | 100 |
| 42 | Bm | 49/128 (38%) | 49 (100%) | 0 | 0 | 100 | 100 |
| 43 | Bo | 102/106 (96%) | 102 (100%) | 0 | 0 | 100 | 100 |
| 44 | Bp | 89/92 (97%) | 89 (100%) | 0 | 0 | 100 | 100 |
| 45 | Br | 124/137 (90%) | 123 (99%) | 1 (1%) | 0 | 100 | 100 |
| 46 | Bs | 194/318 (61%) | 190 (98%) | 4 (2%) | 0 | 100 | 100 |
| 47 | Bt | 154/165 (93%) | 152 (99%) | 2 (1%) | 0 | 100 | 100 |
| 48 | Bv | 210/217 (97%) | 202 (96%) | 8 (4%) | 0 | 100 | 100 |
| 49 | MA | 313/386 (81%) | 309 (99%) | 4 (1%) | 0 | 100 | 100 |
| 50 | Na | 65/215 (30%) | 63 (97%) | 2 (3%) | 0 | 100 | 100 |
| 51 | Nb | 104/132 (79%) | 100 (96%) | 4 (4%) | 0 | 100 | 100 |
| 53 | AA | 81/84 (96%) | 81 (100%) | 0 | 0 | 100 | 100 |
| 54 | AB | 61/69 (88%) | 61 (100%) | 0 | 0 | 100 | 100 |
| 55 | AC | 72/156 (46%) | 71 (99%) | 1 (1%) | 0 | 100 | 100 |
| 56 | AD | 55/133 (41%) | 54 (98%) | 1 (2%) | 0 | 100 | 100 |
| 57 | AE | 99/115 (86%) | 98 (99%) | 1 (1%) | 0 | 100 | 100 |
| 58 | AF | 311/317 (98%) | 305 (98%) | 6 (2%) | 0 | 100 | 100 |
| 59 | AG | 53/56 (95%) | 53 (100%) | 0 | 0 | 100 | 100 |
| 62 | AZ | 219/295 (74%) | 218 (100%) | 1 (0%) | 0 | 100 | 100 |
| 63 | Aa | 220/264 (83%) | 217 (99%) | 3 (1%) | 0 | 100 | 100 |
| 64 | Ab | 218/293 (74%) | 218 (100%) | 0 | 0 | 100 | 100 |
| 65 | Ac | 223/281 (79%) | 222 (100%) | 1 (0%) | 0 | 100 | 100 |
| 66 | Ad | 260/263 (99%) | 257 (99%) | 3 (1%) | 0 | 100 | 100 |
| 67 | Ae | 189/204 (93%) | 188 (100%) | 1 (0%) | 0 | 100 | 100 |
| 68 | Af | 235/249 (94%) | 235 (100%) | 0 | 0 | 100 | 100 |
| 69 | Ag | 188/432 (44%) | 186 (99%) | 2 (1%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|-------------------|-------------|----------|----------|-------------|-----|
| 70 | Ah | 204/208 (98%) | 202 (99%) | 2 (1%) | 0 | 100 | 100 |
| 71 | Ai | 183/194 (94%) | 180 (98%) | 3 (2%) | 0 | 100 | 100 |
| 72 | Aj | 94/165 (57%) | 93 (99%) | 1 (1%) | 0 | 100 | 100 |
| 73 | Ak | 152/158 (96%) | 150 (99%) | 2 (1%) | 0 | 100 | 100 |
| 74 | Al | 122/132 (92%) | 121 (99%) | 1 (1%) | 0 | 100 | 100 |
| 75 | Am | 148/151 (98%) | 147 (99%) | 1 (1%) | 0 | 100 | 100 |
| 76 | An | 133/151 (88%) | 129 (97%) | 4 (3%) | 0 | 100 | 100 |
| 77 | Ao | 126/145 (87%) | 124 (98%) | 2 (2%) | 0 | 100 | 100 |
| 78 | Ap | 139/172 (81%) | 134 (96%) | 5 (4%) | 0 | 100 | 100 |
| 79 | Aq | 132/135 (98%) | 132 (100%) | 0 | 0 | 100 | 100 |
| 80 | Ar | 146/152 (96%) | 144 (99%) | 2 (1%) | 0 | 100 | 100 |
| 81 | As | 140/145 (97%) | 140 (100%) | 0 | 0 | 100 | 100 |
| 82 | At | 102/119 (86%) | 99 (97%) | 3 (3%) | 0 | 100 | 100 |
| 83 | Au | 81/83 (98%) | 79 (98%) | 2 (2%) | 0 | 100 | 100 |
| 84 | Av | 127/130 (98%) | 127 (100%) | 0 | 0 | 100 | 100 |
| 85 | Aw | 138/143 (96%) | 136 (99%) | 2 (1%) | 0 | 100 | 100 |
| 86 | Ax | 123/130 (95%) | 122 (99%) | 1 (1%) | 0 | 100 | 100 |
| 87 | Ay | 83/124 (67%) | 82 (99%) | 1 (1%) | 0 | 100 | 100 |
| 88 | Az | 23/25 (92%) | 23 (100%) | 0 | 0 | 100 | 100 |
| All | All | 12418/14635 (85%) | 12262 (99%) | 154 (1%) | 2 (0%) | 100 | 100 |

All (2) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 9 | BF | 196 | VAL |
| 30 | Ba | 15 | 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 PDB entries followed by that with respect to all EM entries.

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 | |
|-----|-------|----------------|------------|----------|-------------|-----|
| 4 | BA | 194/198 (98%) | 194 (100%) | 0 | 100 | 100 |
| 5 | BB | 344/347 (99%) | 342 (99%) | 2 (1%) | 86 | 96 |
| 6 | BC | 302/337 (90%) | 301 (100%) | 1 (0%) | 92 | 98 |
| 7 | BD | 247/250 (99%) | 247 (100%) | 0 | 100 | 100 |
| 8 | BE | 216/251 (86%) | 216 (100%) | 0 | 100 | 100 |
| 9 | BF | 197/215 (92%) | 197 (100%) | 0 | 100 | 100 |
| 10 | BG | 199/223 (89%) | 196 (98%) | 3 (2%) | 65 | 87 |
| 11 | BH | 169/171 (99%) | 169 (100%) | 0 | 100 | 100 |
| 12 | BI | 180/181 (99%) | 180 (100%) | 0 | 100 | 100 |
| 13 | BJ | 143/149 (96%) | 143 (100%) | 0 | 100 | 100 |
| 14 | BK | 28/61 (46%) | 26 (93%) | 2 (7%) | 14 | 40 |
| 15 | BL | 175/176 (99%) | 174 (99%) | 1 (1%) | 86 | 96 |
| 16 | BM | 117/161 (73%) | 117 (100%) | 0 | 100 | 100 |
| 17 | BN | 171/172 (99%) | 171 (100%) | 0 | 100 | 100 |
| 18 | BO | 171/173 (99%) | 169 (99%) | 2 (1%) | 71 | 91 |
| 19 | BP | 140/163 (86%) | 139 (99%) | 1 (1%) | 84 | 95 |
| 20 | BQ | 164/165 (99%) | 162 (99%) | 2 (1%) | 71 | 91 |
| 21 | BR | 159/175 (91%) | 159 (100%) | 0 | 100 | 100 |
| 22 | BS | 154/154 (100%) | 154 (100%) | 0 | 100 | 100 |
| 23 | BT | 139/140 (99%) | 139 (100%) | 0 | 100 | 100 |
| 24 | BU | 88/113 (78%) | 87 (99%) | 1 (1%) | 73 | 92 |
| 25 | BV | 106/107 (99%) | 106 (100%) | 0 | 100 | 100 |
| 26 | BW | 100/126 (79%) | 100 (100%) | 0 | 100 | 100 |
| 27 | BX | 106/134 (79%) | 106 (100%) | 0 | 100 | 100 |
| 28 | BY | 124/135 (92%) | 123 (99%) | 1 (1%) | 81 | 94 |
| 29 | BZ | 117/118 (99%) | 117 (100%) | 0 | 100 | 100 |
| 30 | Ba | 118/119 (99%) | 118 (100%) | 0 | 100 | 100 |
| 31 | Bb | 87/183 (48%) | 87 (100%) | 0 | 100 | 100 |
| 32 | Bc | 92/98 (94%) | 92 (100%) | 0 | 100 | 100 |
| 33 | Bd | 98/110 (89%) | 98 (100%) | 0 | 100 | 100 |
| 34 | Be | 116/121 (96%) | 116 (100%) | 0 | 100 | 100 |
| 35 | Bf | 89/89 (100%) | 89 (100%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|----------------|------------|----------|-------------|-----|
| 36 | Bg | 98/100 (98%) | 96 (98%) | 2 (2%) | 55 | 82 |
| 37 | Bh | 109/110 (99%) | 109 (100%) | 0 | 100 | 100 |
| 38 | Bi | 86/89 (97%) | 85 (99%) | 1 (1%) | 71 | 91 |
| 39 | Bj | 73/80 (91%) | 73 (100%) | 0 | 100 | 100 |
| 40 | Bk | 64/65 (98%) | 64 (100%) | 0 | 100 | 100 |
| 41 | Bl | 47/48 (98%) | 46 (98%) | 1 (2%) | 53 | 81 |
| 42 | Bm | 47/115 (41%) | 47 (100%) | 0 | 100 | 100 |
| 43 | Bo | 92/93 (99%) | 92 (100%) | 0 | 100 | 100 |
| 44 | Bp | 74/75 (99%) | 74 (100%) | 0 | 100 | 100 |
| 45 | Br | 109/120 (91%) | 109 (100%) | 0 | 100 | 100 |
| 46 | Bs | 164/258 (64%) | 163 (99%) | 1 (1%) | 86 | 96 |
| 47 | Bt | 128/137 (93%) | 126 (98%) | 2 (2%) | 62 | 86 |
| 48 | Bv | 191/195 (98%) | 187 (98%) | 4 (2%) | 53 | 81 |
| 49 | MA | 270/330 (82%) | 266 (98%) | 4 (2%) | 65 | 87 |
| 50 | Na | 60/183 (33%) | 58 (97%) | 2 (3%) | 38 | 72 |
| 51 | Nb | 90/111 (81%) | 87 (97%) | 3 (3%) | 38 | 72 |
| 53 | AA | 75/76 (99%) | 74 (99%) | 1 (1%) | 69 | 90 |
| 54 | AB | 56/62 (90%) | 56 (100%) | 0 | 100 | 100 |
| 55 | AC | 67/140 (48%) | 67 (100%) | 0 | 100 | 100 |
| 56 | AD | 47/106 (44%) | 46 (98%) | 1 (2%) | 53 | 81 |
| 57 | AE | 88/98 (90%) | 87 (99%) | 1 (1%) | 73 | 92 |
| 58 | AF | 272/275 (99%) | 270 (99%) | 2 (1%) | 84 | 95 |
| 59 | AG | 48/49 (98%) | 48 (100%) | 0 | 100 | 100 |
| 62 | AZ | 182/243 (75%) | 180 (99%) | 2 (1%) | 73 | 92 |
| 63 | Aa | 203/231 (88%) | 200 (98%) | 3 (2%) | 65 | 87 |
| 64 | Ab | 185/223 (83%) | 183 (99%) | 2 (1%) | 73 | 92 |
| 65 | Ac | 189/232 (82%) | 188 (100%) | 1 (0%) | 88 | 96 |
| 66 | Ad | 224/225 (100%) | 223 (100%) | 1 (0%) | 91 | 97 |
| 67 | Ae | 161/170 (95%) | 161 (100%) | 0 | 100 | 100 |
| 68 | Af | 207/218 (95%) | 206 (100%) | 1 (0%) | 88 | 96 |
| 69 | Ag | 170/360 (47%) | 170 (100%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|-------------------|-------------|----------|-------------|-----|
| 70 | Ah | 178/180 (99%) | 178 (100%) | 0 | 100 | 100 |
| 71 | Ai | 161/168 (96%) | 161 (100%) | 0 | 100 | 100 |
| 72 | Aj | 87/136 (64%) | 86 (99%) | 1 (1%) | 73 | 92 |
| 73 | Ak | 139/142 (98%) | 138 (99%) | 1 (1%) | 84 | 95 |
| 74 | Al | 104/108 (96%) | 101 (97%) | 3 (3%) | 42 | 76 |
| 75 | Am | 130/131 (99%) | 130 (100%) | 0 | 100 | 100 |
| 76 | An | 105/118 (89%) | 103 (98%) | 2 (2%) | 57 | 84 |
| 77 | Ao | 114/130 (88%) | 114 (100%) | 0 | 100 | 100 |
| 78 | Ap | 117/140 (84%) | 117 (100%) | 0 | 100 | 100 |
| 79 | Aq | 120/121 (99%) | 120 (100%) | 0 | 100 | 100 |
| 80 | Ar | 127/131 (97%) | 126 (99%) | 1 (1%) | 81 | 94 |
| 81 | As | 112/114 (98%) | 112 (100%) | 0 | 100 | 100 |
| 82 | At | 94/107 (88%) | 93 (99%) | 1 (1%) | 73 | 92 |
| 83 | Au | 67/67 (100%) | 66 (98%) | 1 (2%) | 65 | 87 |
| 84 | Av | 112/113 (99%) | 111 (99%) | 1 (1%) | 78 | 93 |
| 85 | Aw | 112/114 (98%) | 111 (99%) | 1 (1%) | 78 | 93 |
| 86 | Ax | 107/112 (96%) | 106 (99%) | 1 (1%) | 78 | 93 |
| 87 | Ay | 75/102 (74%) | 75 (100%) | 0 | 100 | 100 |
| 88 | Az | 24/24 (100%) | 24 (100%) | 0 | 100 | 100 |
| All | All | 10811/12390 (87%) | 10747 (99%) | 64 (1%) | 86 | 96 |

All (64) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 5 | BB | 39 | LYS |
| 5 | BB | 343 | ARG |
| 6 | BC | 122 | TYR |
| 10 | BG | 88 | ASP |
| 10 | BG | 106 | THR |
| 10 | BG | 220 | GLU |
| 14 | BK | 60 | MET |
| 14 | BK | 64 | MET |
| 15 | BL | 67 | HIS |
| 18 | BO | 117 | ARG |
| 18 | BO | 174 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 19 | BP | 2 | VAL |
| 20 | BQ | 14 | ARG |
| 20 | BQ | 115 | LYS |
| 24 | BU | 39 | PHE |
| 28 | BY | 74 | TYR |
| 36 | Bg | 32 | TYR |
| 36 | Bg | 73 | HIS |
| 38 | Bi | 29 | ARG |
| 41 | Bl | 47 | THR |
| 46 | Bs | 54 | LEU |
| 47 | Bt | 35 | LEU |
| 47 | Bt | 74 | VAL |
| 48 | Bv | 58 | THR |
| 48 | Bv | 60 | ARG |
| 48 | Bv | 73 | HIS |
| 48 | Bv | 96 | ASN |
| 49 | MA | 147 | ARG |
| 49 | MA | 165 | GLU |
| 49 | MA | 171 | HIS |
| 49 | MA | 300 | PHE |
| 50 | Na | 80 | MET |
| 50 | Na | 82 | LYS |
| 51 | Nb | 38 | THR |
| 51 | Nb | 42 | LYS |
| 51 | Nb | 53 | VAL |
| 53 | AA | 74 | THR |
| 56 | AD | 91 | LEU |
| 57 | AE | 75 | VAL |
| 58 | AF | 113 | PHE |
| 58 | AF | 159 | ASN |
| 62 | AZ | 121 | LEU |
| 62 | AZ | 206 | ASP |
| 63 | Aa | 178 | THR |
| 63 | Aa | 190 | PRO |
| 63 | Aa | 208 | HIS |
| 64 | Ab | 121 | ARG |
| 64 | Ab | 236 | PHE |
| 65 | Ac | 105 | LEU |
| 66 | Ad | 54 | TYR |
| 68 | Af | 44 | GLU |
| 72 | Aj | 38 | LYS |
| 73 | Ak | 69 | ARG |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 74 | Al | 33 | ARG |
| 74 | Al | 72 | HIS |
| 74 | Al | 75 | ASN |
| 76 | An | 100 | THR |
| 76 | An | 113 | GLN |
| 80 | Ar | 83 | PHE |
| 82 | At | 68 | THR |
| 83 | Au | 61 | ARG |
| 84 | Av | 105 | THR |
| 85 | Aw | 105 | PHE |
| 86 | Ax | 94 | HIS |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (95) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 4 | BA | 50 | HIS |
| 4 | BA | 140 | ASN |
| 5 | BB | 184 | GLN |
| 5 | BB | 289 | GLN |
| 6 | BC | 38 | ASN |
| 6 | BC | 48 | ASN |
| 6 | BC | 61 | GLN |
| 6 | BC | 212 | ASN |
| 6 | BC | 310 | HIS |
| 7 | BD | 122 | GLN |
| 7 | BD | 202 | GLN |
| 7 | BD | 222 | GLN |
| 8 | BE | 131 | HIS |
| 10 | BG | 43 | GLN |
| 10 | BG | 64 | GLN |
| 10 | BG | 81 | ASN |
| 11 | BH | 42 | ASN |
| 12 | BI | 59 | GLN |
| 12 | BI | 147 | HIS |
| 12 | BI | 163 | GLN |
| 14 | BK | 45 | ASN |
| 14 | BK | 50 | HIS |
| 16 | BM | 33 | GLN |
| 16 | BM | 34 | ASN |
| 17 | BN | 109 | HIS |
| 18 | BO | 180 | GLN |
| 19 | BP | 75 | GLN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 21 | BR | 39 | GLN |
| 21 | BR | 40 | GLN |
| 23 | BT | 131 | GLN |
| 24 | BU | 17 | GLN |
| 26 | BW | 120 | GLN |
| 27 | BX | 73 | HIS |
| 27 | BX | 111 | GLN |
| 28 | BY | 14 | ASN |
| 28 | BY | 56 | GLN |
| 30 | Ba | 14 | HIS |
| 31 | Bb | 17 | HIS |
| 31 | Bb | 50 | ASN |
| 32 | Bc | 33 | GLN |
| 32 | Bc | 40 | GLN |
| 35 | Bf | 20 | ASN |
| 36 | Bg | 114 | GLN |
| 37 | Bh | 98 | HIS |
| 39 | Bj | 13 | ASN |
| 39 | Bj | 30 | GLN |
| 40 | Bk | 58 | GLN |
| 41 | Bl | 4 | HIS |
| 41 | Bl | 25 | GLN |
| 45 | Br | 4 | HIS |
| 45 | Br | 6 | GLN |
| 46 | Bs | 34 | ASN |
| 46 | Bs | 41 | GLN |
| 46 | Bs | 179 | ASN |
| 46 | Bs | 191 | GLN |
| 46 | Bs | 195 | ASN |
| 47 | Bt | 65 | GLN |
| 47 | Bt | 70 | GLN |
| 48 | Bv | 96 | ASN |
| 48 | Bv | 188 | ASN |
| 49 | MA | 168 | HIS |
| 49 | MA | 171 | HIS |
| 49 | MA | 185 | ASN |
| 49 | MA | 336 | GLN |
| 50 | Na | 69 | GLN |
| 51 | Nb | 7 | ASN |
| 51 | Nb | 34 | HIS |
| 53 | AA | 19 | HIS |
| 53 | AA | 29 | ASN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 53 | AA | 51 | GLN |
| 56 | AD | 89 | GLN |
| 58 | AF | 159 | ASN |
| 59 | AG | 37 | ASN |
| 62 | AZ | 141 | ASN |
| 65 | Ac | 145 | GLN |
| 66 | Ad | 98 | ASN |
| 66 | Ad | 142 | HIS |
| 67 | Ae | 65 | GLN |
| 69 | Ag | 91 | HIS |
| 70 | Ah | 7 | ASN |
| 70 | Ah | 146 | GLN |
| 70 | Ah | 167 | GLN |
| 72 | Aj | 77 | GLN |
| 74 | Al | 28 | HIS |
| 75 | Am | 13 | GLN |
| 75 | Am | 36 | GLN |
| 75 | Am | 105 | ASN |
| 77 | Ao | 103 | ASN |
| 78 | Ap | 11 | GLN |
| 78 | Ap | 97 | GLN |
| 78 | Ap | 114 | GLN |
| 79 | Aq | 121 | GLN |
| 80 | Ar | 72 | GLN |
| 83 | Au | 2 | GLN |
| 87 | Ay | 64 | ASN |

5.3.3 RNA [i](#)

| Mol | Chain | Analysed | Backbone Outliers | Pucker Outliers |
|-----|-------|-----------------|-------------------|-----------------|
| 1 | B5 | 3750/4808 (77%) | 422 (11%) | 2 (0%) |
| 2 | B7 | 118/120 (98%) | 6 (5%) | 0 |
| 3 | B8 | 155/158 (98%) | 14 (9%) | 0 |
| 52 | A2 | 1758/1870 (94%) | 204 (11%) | 0 |
| 60 | AI | 2/76 (2%) | 1 (50%) | 0 |
| 61 | AT | 75/76 (98%) | 10 (13%) | 0 |
| All | All | 5858/7108 (82%) | 657 (11%) | 2 (0%) |

All (657) RNA backbone outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | B5 | 39 | A |
| 1 | B5 | 42 | A |
| 1 | B5 | 58 | G |
| 1 | B5 | 59 | A |
| 1 | B5 | 64 | A |
| 1 | B5 | 65 | A |
| 1 | B5 | 85 | G |
| 1 | B5 | 91 | G |
| 1 | B5 | 98 | A |
| 1 | B5 | 109 | G |
| 1 | B5 | 110 | C |
| 1 | B5 | 119 | G |
| 1 | B5 | 127 | G |
| 1 | B5 | 135 | G |
| 1 | B5 | 136 | U |
| 1 | B5 | 144 | G |
| 1 | B5 | 159 | C |
| 1 | B5 | 187 | U |
| 1 | B5 | 188 | G |
| 1 | B5 | 200 | U |
| 1 | B5 | 201 | C |
| 1 | B5 | 209 | U |
| 1 | B5 | 210 | C |
| 1 | B5 | 218 | A |
| 1 | B5 | 219 | G |
| 1 | B5 | 233 | U |
| 1 | B5 | 234 | G |
| 1 | B5 | 266 | C |
| 1 | B5 | 297 | U |
| 1 | B5 | 309 | C |
| 1 | B5 | 315 | G |
| 1 | B5 | 316 | U |
| 1 | B5 | 326 | C |
| 1 | B5 | 334 | A |
| 1 | B5 | 340 | C |
| 1 | B5 | 363 | A |
| 1 | B5 | 386 | A |
| 1 | B5 | 387 | G |
| 1 | B5 | 398 | A2M |
| 1 | B5 | 409 | G |
| 1 | B5 | 412 | G |
| 1 | B5 | 446 | C |
| 1 | B5 | 449 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | B5 | 450 | G |
| 1 | B5 | 452 | A |
| 1 | B5 | 453 | G |
| 1 | B5 | 454 | U |
| 1 | B5 | 455 | C |
| 1 | B5 | 463 | A |
| 1 | B5 | 467 | U |
| 1 | B5 | 468 | U |
| 1 | B5 | 482 | U |
| 1 | B5 | 483 | G |
| 1 | B5 | 485 | U |
| 1 | B5 | 486 | C |
| 1 | B5 | 488 | G |
| 1 | B5 | 493 | U |
| 1 | B5 | 497 | G |
| 1 | B5 | 499 | C |
| 1 | B5 | 502 | U |
| 1 | B5 | 503 | C |
| 1 | B5 | 504 | U |
| 1 | B5 | 505 | C |
| 1 | B5 | 506 | G |
| 1 | B5 | 515 | U |
| 1 | B5 | 516 | U |
| 1 | B5 | 517 | C |
| 1 | B5 | 628 | U |
| 1 | B5 | 634 | C |
| 1 | B5 | 635 | G |
| 1 | B5 | 660 | G |
| 1 | B5 | 691 | G |
| 1 | B5 | 698 | C |
| 1 | B5 | 725 | G |
| 1 | B5 | 732 | C |
| 1 | B5 | 734 | G |
| 1 | B5 | 739 | G |
| 1 | B5 | 758 | C |
| 1 | B5 | 759 | G |
| 1 | B5 | 760 | C |
| 1 | B5 | 790 | G |
| 1 | B5 | 791 | C |
| 1 | B5 | 792 | G |
| 1 | B5 | 795 | A |
| 1 | B5 | 797 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | B5 | 798 | C |
| 1 | B5 | 803 | C |
| 1 | B5 | 810 | U |
| 1 | B5 | 812 | A |
| 1 | B5 | 814 | A |
| 1 | B5 | 815 | G |
| 1 | B5 | 824 | C |
| 1 | B5 | 825 | G |
| 1 | B5 | 831 | A |
| 1 | B5 | 832 | G |
| 1 | B5 | 833 | C |
| 1 | B5 | 834 | A |
| 1 | B5 | 835 | G |
| 1 | B5 | 843 | A |
| 1 | B5 | 844 | A |
| 1 | B5 | 845 | U |
| 1 | B5 | 856 | A |
| 1 | B5 | 859 | G |
| 1 | B5 | 860 | A |
| 1 | B5 | 861 | G |
| 1 | B5 | 866 | A |
| 1 | B5 | 867 | C |
| 1 | B5 | 868 | C |
| 1 | B5 | 870 | G |
| 1 | B5 | 884 | U |
| 1 | B5 | 983 | G |
| 1 | B5 | 985 | G |
| 1 | B5 | 987 | C |
| 1 | B5 | 1072 | C |
| 1 | B5 | 1073 | C |
| 1 | B5 | 1074 | C |
| 1 | B5 | 1091 | G |
| 1 | B5 | 1102 | G |
| 1 | B5 | 1105 | C |
| 1 | B5 | 1106 | U |
| 1 | B5 | 1124 | A |
| 1 | B5 | 1133 | C |
| 1 | B5 | 1202 | C |
| 1 | B5 | 1214 | A |
| 1 | B5 | 1215 | G |
| 1 | B5 | 1216 | C |
| 1 | B5 | 1217 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | B5 | 1219 | G |
| 1 | B5 | 1221 | G |
| 1 | B5 | 1228 | G |
| 1 | B5 | 1231 | G |
| 1 | B5 | 1238 | A |
| 1 | B5 | 1240 | G |
| 1 | B5 | 1246 | U |
| 1 | B5 | 1247 | A |
| 1 | B5 | 1270 | A2M |
| 1 | B5 | 1298 | A |
| 1 | B5 | 1299 | G |
| 1 | B5 | 1303 | G |
| 1 | B5 | 1309 | C |
| 1 | B5 | 1310 | G |
| 1 | B5 | 1323 | C |
| 1 | B5 | 1331 | A |
| 1 | B5 | 1341 | A |
| 1 | B5 | 1351 | G |
| 1 | B5 | 1375 | A |
| 1 | B5 | 1391 | C |
| 1 | B5 | 1393 | C |
| 1 | B5 | 1401 | C |
| 1 | B5 | 1452 | A |
| 1 | B5 | 1453 | G |
| 1 | B5 | 1457 | G |
| 1 | B5 | 1489 | A2M |
| 1 | B5 | 1502 | A |
| 1 | B5 | 1521 | C |
| 1 | B5 | 1533 | U |
| 1 | B5 | 1546 | U |
| 1 | B5 | 1551 | U |
| 1 | B5 | 1568 | A |
| 1 | B5 | 1579 | G |
| 1 | B5 | 1580 | OMG |
| 1 | B5 | 1586 | A |
| 1 | B5 | 1588 | G |
| 1 | B5 | 1589 | A |
| 1 | B5 | 1605 | A |
| 1 | B5 | 1609 | G |
| 1 | B5 | 1616 | C |
| 1 | B5 | 1631 | C |
| 1 | B5 | 1632 | PSU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | B5 | 1653 | C |
| 1 | B5 | 1657 | C |
| 1 | B5 | 1658 | C |
| 1 | B5 | 1673 | G |
| 1 | B5 | 1704 | A |
| 1 | B5 | 1705 | A |
| 1 | B5 | 1726 | A |
| 1 | B5 | 1743 | A |
| 1 | B5 | 1774 | G |
| 1 | B5 | 1775 | G |
| 1 | B5 | 1776 | A |
| 1 | B5 | 1781 | G |
| 1 | B5 | 1794 | G |
| 1 | B5 | 1808 | G |
| 1 | B5 | 1836 | A |
| 1 | B5 | 1857 | U |
| 1 | B5 | 1859 | C |
| 1 | B5 | 1860 | C |
| 1 | B5 | 1861 | G |
| 1 | B5 | 1870 | C |
| 1 | B5 | 1871 | A |
| 1 | B5 | 1879 | G |
| 1 | B5 | 1887 | G |
| 1 | B5 | 1898 | U |
| 1 | B5 | 1899 | A |
| 1 | B5 | 1900 | G |
| 1 | B5 | 1914 | G |
| 1 | B5 | 1922 | A |
| 1 | B5 | 1923 | A |
| 1 | B5 | 1926 | C |
| 1 | B5 | 1936 | U |
| 1 | B5 | 1942 | G |
| 1 | B5 | 1943 | U |
| 1 | B5 | 1963 | G |
| 1 | B5 | 1965 | A |
| 1 | B5 | 1985 | G |
| 1 | B5 | 1987 | U |
| 1 | B5 | 1994 | G |
| 1 | B5 | 1995 | G |
| 1 | B5 | 2008 | A |
| 1 | B5 | 2023 | U |
| 1 | B5 | 2032 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | B5 | 2034 | A |
| 1 | B5 | 2037 | G |
| 1 | B5 | 2041 | G |
| 1 | B5 | 2044 | A |
| 1 | B5 | 2045 | G |
| 1 | B5 | 2046 | A |
| 1 | B5 | 2132 | C |
| 1 | B5 | 2143 | A |
| 1 | B5 | 2144 | G |
| 1 | B5 | 2156 | A |
| 1 | B5 | 2191 | G |
| 1 | B5 | 2194 | OMC |
| 1 | B5 | 2203 | A |
| 1 | B5 | 2207 | OMG |
| 1 | B5 | 2238 | A |
| 1 | B5 | 2253 | C |
| 1 | B5 | 2264 | G |
| 1 | B5 | 2268 | U |
| 1 | B5 | 2332 | C |
| 1 | B5 | 2333 | U |
| 1 | B5 | 2334 | C |
| 1 | B5 | 2349 | G |
| 1 | B5 | 2356 | A |
| 1 | B5 | 2372 | A |
| 1 | B5 | 2380 | A |
| 1 | B5 | 2386 | A |
| 1 | B5 | 2387 | G |
| 1 | B5 | 2388 | U |
| 1 | B5 | 2390 | G |
| 1 | B5 | 2409 | G |
| 1 | B5 | 2430 | A |
| 1 | B5 | 2432 | C |
| 1 | B5 | 2444 | A |
| 1 | B5 | 2496 | C |
| 1 | B5 | 2503 | A |
| 1 | B5 | 2512 | C |
| 1 | B5 | 2530 | U |
| 1 | B5 | 2537 | G |
| 1 | B5 | 2538 | A |
| 1 | B5 | 2539 | A |
| 1 | B5 | 2549 | G |
| 1 | B5 | 2550 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | B5 | 2551 | U |
| 1 | B5 | 2552 | C |
| 1 | B5 | 2554 | G |
| 1 | B5 | 2578 | G |
| 1 | B5 | 2586 | A |
| 1 | B5 | 2606 | U |
| 1 | B5 | 2612 | U |
| 1 | B5 | 2631 | U |
| 1 | B5 | 2633 | U |
| 1 | B5 | 2641 | A |
| 1 | B5 | 2657 | C |
| 1 | B5 | 2669 | U |
| 1 | B5 | 2670 | G |
| 1 | B5 | 2672 | U |
| 1 | B5 | 2698 | G |
| 1 | B5 | 2745 | G |
| 1 | B5 | 3329 | G |
| 1 | B5 | 3350 | C |
| 1 | B5 | 3358 | G |
| 1 | B5 | 3362 | A |
| 1 | B5 | 3367 | A |
| 1 | B5 | 3380 | A |
| 1 | B5 | 3385 | A |
| 1 | B5 | 3394 | A |
| 1 | B5 | 3405 | C |
| 1 | B5 | 3443 | A |
| 1 | B5 | 3444 | A |
| 1 | B5 | 3485 | G |
| 1 | B5 | 3492 | A2M |
| 1 | B5 | 3493 | C |
| 1 | B5 | 3498 | A |
| 1 | B5 | 3508 | G |
| 1 | B5 | 3509 | G |
| 1 | B5 | 3516 | A |
| 1 | B5 | 3543 | G |
| 1 | B5 | 3546 | U |
| 1 | B5 | 3549 | A |
| 1 | B5 | 3551 | G |
| 1 | B5 | 3570 | U |
| 1 | B5 | 3572 | U |
| 1 | B5 | 3609 | A |
| 1 | B5 | 3610 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | B5 | 3611 | G |
| 1 | B5 | 3629 | G |
| 1 | B5 | 3630 | G |
| 1 | B5 | 3633 | A |
| 1 | B5 | 3638 | A |
| 1 | B5 | 3639 | G |
| 1 | B5 | 3640 | A |
| 1 | B5 | 3647 | U |
| 1 | B5 | 3670 | G |
| 1 | B5 | 3688 | G |
| 1 | B5 | 3689 | U |
| 1 | B5 | 3804 | G |
| 1 | B5 | 3812 | G |
| 1 | B5 | 3823 | G |
| 1 | B5 | 3824 | C |
| 1 | B5 | 3825 | G |
| 1 | B5 | 3832 | G |
| 1 | B5 | 3833 | A |
| 1 | B5 | 3834 | G |
| 1 | B5 | 3847 | C |
| 1 | B5 | 3850 | G |
| 1 | B5 | 3855 | A |
| 1 | B5 | 3869 | G |
| 1 | B5 | 3875 | C |
| 1 | B5 | 3891 | C |
| 1 | B5 | 3892 | G |
| 1 | B5 | 3896 | G |
| 1 | B5 | 3904 | C |
| 1 | B5 | 3909 | U |
| 1 | B5 | 3916 | A |
| 1 | B5 | 3929 | G |
| 1 | B5 | 3930 | G |
| 1 | B5 | 3937 | G |
| 1 | B5 | 3949 | A |
| 1 | B5 | 3975 | U |
| 1 | B5 | 3979 | A |
| 1 | B5 | 3997 | A |
| 1 | B5 | 4000 | G |
| 1 | B5 | 4012 | G |
| 1 | B5 | 4014 | A |
| 1 | B5 | 4017 | A |
| 1 | B5 | 4019 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | B5 | 4027 | A |
| 1 | B5 | 4037 | G |
| 1 | B5 | 4050 | A |
| 1 | B5 | 4051 | G |
| 1 | B5 | 4052 | OMU |
| 1 | B5 | 4076 | G |
| 1 | B5 | 4078 | C |
| 1 | B5 | 4096 | C |
| 1 | B5 | 4100 | U |
| 1 | B5 | 4119 | G |
| 1 | B5 | 4123 | G |
| 1 | B5 | 4124 | A |
| 1 | B5 | 4133 | C |
| 1 | B5 | 4137 | G |
| 1 | B5 | 4140 | A |
| 1 | B5 | 4168 | A |
| 1 | B5 | 4183 | U |
| 1 | B5 | 4194 | G |
| 1 | B5 | 4210 | A |
| 1 | B5 | 4221 | G |
| 1 | B5 | 4258 | U |
| 1 | B5 | 4259 | A |
| 1 | B5 | 4265 | C |
| 1 | B5 | 4270 | G |
| 1 | B5 | 4294 | A |
| 1 | B5 | 4306 | C |
| 1 | B5 | 4313 | G |
| 1 | B5 | 4321 | G |
| 1 | B5 | 4336 | A2M |
| 1 | B5 | 4381 | A |
| 1 | B5 | 4382 | PSU |
| 1 | B5 | 4383 | OMG |
| 1 | B5 | 4402 | A |
| 1 | B5 | 4416 | C |
| 1 | B5 | 4418 | A |
| 1 | B5 | 4437 | A |
| 1 | B5 | 4446 | A |
| 1 | B5 | 4454 | A |
| 1 | B5 | 4455 | U |
| 1 | B5 | 4465 | G |
| 1 | B5 | 4475 | A |
| 1 | B5 | 4476 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | B5 | 4477 | G |
| 1 | B5 | 4478 | G |
| 1 | B5 | 4486 | G |
| 1 | B5 | 4487 | A |
| 1 | B5 | 4488 | A |
| 1 | B5 | 4489 | G |
| 1 | B5 | 4490 | G |
| 1 | B5 | 4492 | G |
| 1 | B5 | 4501 | G |
| 1 | B5 | 4504 | C |
| 1 | B5 | 4506 | C |
| 1 | B5 | 4508 | G |
| 1 | B5 | 4512 | G |
| 1 | B5 | 4518 | C |
| 1 | B5 | 4609 | G |
| 1 | B5 | 4610 | C |
| 1 | B5 | 4614 | G |
| 1 | B5 | 4621 | U |
| 1 | B5 | 4622 | C |
| 1 | B5 | 4634 | U |
| 1 | B5 | 4638 | G |
| 1 | B5 | 4639 | C |
| 1 | B5 | 4640 | G |
| 1 | B5 | 4644 | C |
| 1 | B5 | 4645 | C |
| 1 | B5 | 4646 | G |
| 1 | B5 | 4649 | A |
| 1 | B5 | 4651 | G |
| 1 | B5 | 4658 | G |
| 1 | B5 | 4674 | C |
| 1 | B5 | 4705 | A |
| 1 | B5 | 4715 | U |
| 1 | B5 | 4728 | U |
| 1 | B5 | 4729 | C |
| 1 | B5 | 4753 | A |
| 1 | B5 | 4756 | G |
| 1 | B5 | 4761 | U |
| 1 | B5 | 4762 | C |
| 1 | B5 | 4763 | C |
| 1 | B5 | 4780 | G |
| 1 | B5 | 4789 | C |
| 1 | B5 | 4801 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | B5 | 4808 | U |
| 2 | B7 | 7 | G |
| 2 | B7 | 53 | U |
| 2 | B7 | 54 | A |
| 2 | B7 | 64 | G |
| 2 | B7 | 110 | G |
| 2 | B7 | 120 | U |
| 3 | B8 | 34 | U |
| 3 | B8 | 35 | C |
| 3 | B8 | 59 | A |
| 3 | B8 | 62 | A |
| 3 | B8 | 63 | U |
| 3 | B8 | 81 | C |
| 3 | B8 | 84 | A |
| 3 | B8 | 87 | G |
| 3 | B8 | 94 | G |
| 3 | B8 | 103 | A |
| 3 | B8 | 105 | C |
| 3 | B8 | 110 | U |
| 3 | B8 | 114 | G |
| 3 | B8 | 156 | U |
| 52 | A2 | 2 | A |
| 52 | A2 | 3 | C |
| 52 | A2 | 4 | C |
| 52 | A2 | 33 | G |
| 52 | A2 | 41 | G |
| 52 | A2 | 46 | A |
| 52 | A2 | 56 | G |
| 52 | A2 | 67 | C |
| 52 | A2 | 68 | A |
| 52 | A2 | 73 | C |
| 52 | A2 | 74 | G |
| 52 | A2 | 77 | A |
| 52 | A2 | 79 | A |
| 52 | A2 | 103 | A |
| 52 | A2 | 113 | G |
| 52 | A2 | 115 | U |
| 52 | A2 | 126 | G |
| 52 | A2 | 130 | G |
| 52 | A2 | 143 | U |
| 52 | A2 | 147 | A |
| 52 | A2 | 155 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 52 | A2 | 163 | U |
| 52 | A2 | 168 | C |
| 52 | A2 | 178 | C |
| 52 | A2 | 184 | G |
| 52 | A2 | 188 | C |
| 52 | A2 | 192 | C |
| 52 | A2 | 226 | A |
| 52 | A2 | 282 | C |
| 52 | A2 | 306 | U |
| 52 | A2 | 310 | G |
| 52 | A2 | 313 | G |
| 52 | A2 | 320 | C |
| 52 | A2 | 324 | C |
| 52 | A2 | 325 | U |
| 52 | A2 | 327 | C |
| 52 | A2 | 328 | G |
| 52 | A2 | 336 | G |
| 52 | A2 | 348 | G |
| 52 | A2 | 363 | C |
| 52 | A2 | 365 | A |
| 52 | A2 | 370 | C |
| 52 | A2 | 386 | G |
| 52 | A2 | 387 | C |
| 52 | A2 | 401 | C |
| 52 | A2 | 410 | C |
| 52 | A2 | 439 | G |
| 52 | A2 | 449 | A |
| 52 | A2 | 451 | C |
| 52 | A2 | 465 | A |
| 52 | A2 | 466 | A |
| 52 | A2 | 472 | G |
| 52 | A2 | 473 | C |
| 52 | A2 | 474 | A |
| 52 | A2 | 475 | G |
| 52 | A2 | 483 | G |
| 52 | A2 | 488 | U |
| 52 | A2 | 493 | C |
| 52 | A2 | 502 | C |
| 52 | A2 | 513 | A2M |
| 52 | A2 | 526 | A |
| 52 | A2 | 549 | C |
| 52 | A2 | 565 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 52 | A2 | 569 | C |
| 52 | A2 | 584 | A |
| 52 | A2 | 590 | G |
| 52 | A2 | 592 | U |
| 52 | A2 | 607 | G |
| 52 | A2 | 609 | C |
| 52 | A2 | 615 | C |
| 52 | A2 | 629 | A |
| 52 | A2 | 632 | U |
| 52 | A2 | 644 | A |
| 52 | A2 | 645 | OMG |
| 52 | A2 | 656 | A |
| 52 | A2 | 661 | C |
| 52 | A2 | 669 | A2M |
| 52 | A2 | 670 | A |
| 52 | A2 | 672 | A |
| 52 | A2 | 673 | A |
| 52 | A2 | 674 | G |
| 52 | A2 | 734 | C |
| 52 | A2 | 747 | C |
| 52 | A2 | 748 | U |
| 52 | A2 | 750 | U |
| 52 | A2 | 754 | C |
| 52 | A2 | 755 | G |
| 52 | A2 | 756 | C |
| 52 | A2 | 799 | G |
| 52 | A2 | 812 | A |
| 52 | A2 | 822 | G |
| 52 | A2 | 823 | PSU |
| 52 | A2 | 831 | A |
| 52 | A2 | 832 | G |
| 52 | A2 | 837 | G |
| 52 | A2 | 838 | A |
| 52 | A2 | 839 | G |
| 52 | A2 | 840 | C |
| 52 | A2 | 841 | C |
| 52 | A2 | 842 | G |
| 52 | A2 | 848 | A |
| 52 | A2 | 871 | A |
| 52 | A2 | 873 | A |
| 52 | A2 | 879 | G |
| 52 | A2 | 886 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 52 | A2 | 892 | G |
| 52 | A2 | 914 | A |
| 52 | A2 | 915 | U |
| 52 | A2 | 921 | A |
| 52 | A2 | 923 | A |
| 52 | A2 | 931 | C |
| 52 | A2 | 934 | G |
| 52 | A2 | 944 | U |
| 52 | A2 | 956 | A |
| 52 | A2 | 964 | A |
| 52 | A2 | 972 | G |
| 52 | A2 | 991 | A |
| 52 | A2 | 993 | A |
| 52 | A2 | 1000 | G |
| 52 | A2 | 1003 | U |
| 52 | A2 | 1024 | A |
| 52 | A2 | 1061 | A |
| 52 | A2 | 1062 | U |
| 52 | A2 | 1063 | A |
| 52 | A2 | 1084 | A |
| 52 | A2 | 1086 | C |
| 52 | A2 | 1116 | U |
| 52 | A2 | 1117 | C |
| 52 | A2 | 1118 | C |
| 52 | A2 | 1119 | C |
| 52 | A2 | 1122 | G |
| 52 | A2 | 1145 | A |
| 52 | A2 | 1154 | C |
| 52 | A2 | 1155 | U |
| 52 | A2 | 1196 | A |
| 52 | A2 | 1216 | C |
| 52 | A2 | 1225 | G |
| 52 | A2 | 1243 | U |
| 52 | A2 | 1252 | A |
| 52 | A2 | 1254 | A |
| 52 | A2 | 1257 | G |
| 52 | A2 | 1258 | G |
| 52 | A2 | 1260 | A |
| 52 | A2 | 1266 | A |
| 52 | A2 | 1272 | C |
| 52 | A2 | 1275 | G |
| 52 | A2 | 1276 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 52 | A2 | 1303 | G |
| 52 | A2 | 1304 | C |
| 52 | A2 | 1343 | U |
| 52 | A2 | 1359 | U |
| 52 | A2 | 1372 | U |
| 52 | A2 | 1373 | U |
| 52 | A2 | 1379 | A |
| 52 | A2 | 1398 | U |
| 52 | A2 | 1403 | A |
| 52 | A2 | 1406 | A |
| 52 | A2 | 1419 | C |
| 52 | A2 | 1420 | C |
| 52 | A2 | 1422 | A |
| 52 | A2 | 1424 | C |
| 52 | A2 | 1436 | C |
| 52 | A2 | 1448 | OMG |
| 52 | A2 | 1455 | A |
| 52 | A2 | 1463 | U |
| 52 | A2 | 1464 | U |
| 52 | A2 | 1481 | A |
| 52 | A2 | 1488 | A |
| 52 | A2 | 1490 | A |
| 52 | A2 | 1491 | OMG |
| 52 | A2 | 1495 | U |
| 52 | A2 | 1498 | G |
| 52 | A2 | 1522 | C |
| 52 | A2 | 1523 | A |
| 52 | A2 | 1534 | A |
| 52 | A2 | 1553 | G |
| 52 | A2 | 1580 | A |
| 52 | A2 | 1581 | A |
| 52 | A2 | 1586 | U |
| 52 | A2 | 1589 | A |
| 52 | A2 | 1602 | A |
| 52 | A2 | 1622 | U |
| 52 | A2 | 1624 | A |
| 52 | A2 | 1647 | C |
| 52 | A2 | 1655 | G |
| 52 | A2 | 1662 | A |
| 52 | A2 | 1666 | G |
| 52 | A2 | 1699 | C |
| 52 | A2 | 1722 | U |

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| Mol | Chain | Res | Type |
|-----|-------|------|------|
| 52 | A2 | 1723 | G |
| 52 | A2 | 1783 | G |
| 52 | A2 | 1784 | C |
| 52 | A2 | 1785 | G |
| 52 | A2 | 1830 | G |
| 52 | A2 | 1832 | A |
| 52 | A2 | 1836 | A |
| 52 | A2 | 1837 | G |
| 52 | A2 | 1839 | U |
| 52 | A2 | 1850 | G |
| 52 | A2 | 1862 | G |
| 52 | A2 | 1863 | G |
| 52 | A2 | 1864 | A |
| 52 | A2 | 1865 | U |
| 52 | A2 | 1866 | C |
| 60 | AI | 76 | A |
| 61 | AT | 16 | U |
| 61 | AT | 17 | G |
| 61 | AT | 18 | G |
| 61 | AT | 20 | U |
| 61 | AT | 22 | U |
| 61 | AT | 23 | C |
| 61 | AT | 46 | G |
| 61 | AT | 47 | U |
| 61 | AT | 48 | C |
| 61 | AT | 76 | A |

All (2) RNA pucker outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|------|------|
| 1 | B5 | 1588 | G |
| 1 | B5 | 4445 | U |

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

225 non-standard protein/DNA/RNA residues 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$ |
| 1 | A2M | B5 | 1489 | 92,1 | 18,25,26 | 1.00 | 1 (5%) | 18,36,39 | 1.36 | 2 (11%) |
| 52 | OMU | A2 | 1805 | 52 | 19,22,23 | 1.22 | 3 (15%) | 26,31,34 | 1.69 | 4 (15%) |
| 1 | PSU | B5 | 4169 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 1 | A2M | B5 | 3557 | 1 | 18,25,26 | 1.03 | 1 (5%) | 18,36,39 | 1.22 | 2 (11%) |
| 1 | OMU | B5 | 3973 | 1 | 19,22,23 | 1.23 | 3 (15%) | 26,31,34 | 1.70 | 4 (15%) |
| 1 | PSU | B5 | 4246 | 1 | 18,21,22 | 1.33 | 2 (11%) | 22,30,33 | 1.91 | 3 (13%) |
| 1 | PSU | B5 | 4749 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.89 | 3 (13%) |
| 52 | PSU | A2 | 1239 | 52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 52 | PSU | A2 | 210 | 52 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.85 | 3 (13%) |
| 52 | PSU | A2 | 1047 | 52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 1 | PSU | B5 | 3583 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.85 | 3 (13%) |
| 1 | OMG | B5 | 2267 | 1 | 18,26,27 | 0.92 | 1 (5%) | 19,38,41 | 1.07 | 2 (10%) |
| 52 | PSU | A2 | 687 | 52 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 3 | PSU | B8 | 55 | 3 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.89 | 3 (13%) |
| 1 | PSU | B5 | 3652 | 92,1 | 18,21,22 | 1.36 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 1 | 5MC | B5 | 3514 | 92,1 | 18,22,23 | 0.95 | 2 (11%) | 26,32,35 | 1.13 | 3 (11%) |
| 52 | PSU | A2 | 867 | 52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 1 | PSU | B5 | 4435 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.89 | 3 (13%) |
| 52 | PSU | A2 | 816 | 52 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.89 | 3 (13%) |
| 1 | PSU | B5 | 4058 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 1 | 6MZ | B5 | 3966 | 1 | 18,25,26 | 0.89 | 1 (5%) | 16,36,39 | 2.03 | 4 (25%) |
| 85 | HY3 | Aw | 62 | 85 | 6,8,9 | 2.01 | 1 (16%) | 5,10,12 | 1.14 | 1 (20%) |
| 1 | A2M | B5 | 3456 | 1 | 18,25,26 | 1.04 | 1 (5%) | 18,36,39 | 1.21 | 2 (11%) |
| 52 | PSU | A2 | 109 | 52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 1 | PSU | B5 | 4166 | 1 | 18,21,22 | 1.37 | 2 (11%) | 22,30,33 | 1.85 | 3 (13%) |
| 52 | A2M | A2 | 591 | 52 | 18,25,26 | 1.04 | 1 (5%) | 18,36,39 | 1.24 | 2 (11%) |
| 52 | OMG | A2 | 1448 | 52 | 18,26,27 | 0.93 | 1 (5%) | 19,38,41 | 1.07 | 2 (10%) |
| 52 | OMU | A2 | 355 | 52 | 19,22,23 | 1.22 | 2 (10%) | 26,31,34 | 1.71 | 4 (15%) |
| 1 | PSU | B5 | 1721 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.89 | 3 (13%) |
| 1 | OMG | B5 | 4116 | 1 | 18,26,27 | 0.92 | 1 (5%) | 19,38,41 | 1.07 | 2 (10%) |
| 1 | A2M | B5 | 2658 | 92,1 | 18,25,26 | 1.02 | 1 (5%) | 18,36,39 | 1.21 | 2 (11%) |
| 52 | A2M | A2 | 485 | 52 | 18,25,26 | 1.01 | 1 (5%) | 18,36,39 | 1.26 | 2 (11%) |
| 61 | PSU | AT | 55 | 61 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|-------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 1 | PSU | B5 | 4203 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 1 | OMG | B5 | 1580 | 1 | 18,26,27 | 0.93 | 1 (5%) | 19,38,41 | 1.10 | 2 (10%) |
| 1 | PSU | B5 | 3502 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.89 | 3 (13%) |
| 52 | 4AC | A2 | 1338 | 52 | 21,24,25 | 1.07 | 1 (4%) | 29,34,37 | 1.21 | 3 (10%) |
| 52 | PSU | A2 | 1245 | 52 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 1 | PSU | B5 | 3490 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 1 | A2M | B5 | 3599 | 1 | 18,25,26 | 0.99 | 1 (5%) | 18,36,39 | 1.24 | 2 (11%) |
| 1 | OMG | B5 | 4364 | 1 | 18,26,27 | 0.92 | 1 (5%) | 19,38,41 | 1.09 | 2 (10%) |
| 52 | OMU | A2 | 1289 | 52 | 19,22,23 | 1.21 | 3 (15%) | 26,31,34 | 1.67 | 4 (15%) |
| 1 | A2M | B5 | 1479 | 1 | 18,25,26 | 1.01 | 1 (5%) | 18,36,39 | 1.26 | 2 (11%) |
| 1 | PSU | B5 | 4188 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.90 | 3 (13%) |
| 1 | PSU | B5 | 4177 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.86 | 3 (13%) |
| 1 | OMG | B5 | 2719 | 1 | 18,26,27 | 0.93 | 1 (5%) | 19,38,41 | 1.07 | 2 (10%) |
| 52 | MA6 | A2 | 1852 | 52 | 18,26,27 | 1.09 | 2 (11%) | 19,38,41 | 1.97 | 3 (15%) |
| 1 | OMG | B5 | 3359 | 1 | 18,26,27 | 0.93 | 1 (5%) | 19,38,41 | 1.09 | 2 (10%) |
| 1 | OMG | B5 | 3974 | 1 | 18,26,27 | 0.91 | 1 (5%) | 19,38,41 | 1.12 | 2 (10%) |
| 1 | PSU | B5 | 4325 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 1 | OMG | B5 | 4383 | 1 | 18,26,27 | 0.94 | 1 (5%) | 19,38,41 | 1.09 | 2 (10%) |
| 1 | A2M | B5 | 2206 | 92,1 | 18,25,26 | 1.03 | 1 (5%) | 18,36,39 | 1.19 | 2 (11%) |
| 1 | PSU | B5 | 4419 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 1 | PSU | B5 | 1731 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.89 | 3 (13%) |
| 1 | PSU | B5 | 1683 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 1 | OMG | B5 | 4240 | 1 | 18,26,27 | 0.94 | 1 (5%) | 19,38,41 | 1.08 | 2 (10%) |
| 1 | PSU | B5 | 1801 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 1 | A2M | B5 | 3492 | 1,52 | 18,25,26 | 1.01 | 1 (5%) | 18,36,39 | 1.37 | 2 (11%) |
| 52 | PSU | A2 | 1368 | 52 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 76 | 5F0 | An | 138 | 76 | 8,8,9 | 1.47 | 2 (25%) | 7,9,11 | 1.74 | 1 (14%) |
| 1 | UY1 | B5 | 3550 | 1 | 19,22,23 | 1.37 | 3 (15%) | 22,31,34 | 1.90 | 5 (22%) |
| 52 | OMG | A2 | 437 | 52 | 18,26,27 | 0.92 | 1 (5%) | 19,38,41 | 1.10 | 2 (10%) |
| 52 | B8N | A2 | 1249 | 52 | 24,29,30 | 1.29 | 3 (12%) | 29,42,45 | 1.28 | 3 (10%) |
| 52 | A2M | A2 | 27 | 92,52 | 18,25,26 | 1.02 | 1 (5%) | 18,36,39 | 1.19 | 2 (11%) |
| 52 | PSU | A2 | 1446 | 52 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 1 | PSU | B5 | 3496 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.90 | 3 (13%) |
| 1 | OMC | B5 | 2667 | 1 | 19,22,23 | 0.82 | 0 | 26,31,34 | 0.82 | 0 |
| 4 | V5N | BA | 216 | 4 | 4,11,12 | 0.78 | 0 | 5,14,16 | 1.54 | 1 (20%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|-------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 1 | A2M | B5 | 1810 | 92,1 | 18,25,26 | 1.04 | 1 (5%) | 18,36,39 | 1.24 | 2 (11%) |
| 1 | OMG | B5 | 4369 | 1 | 18,26,27 | 0.92 | 1 (5%) | 19,38,41 | 1.11 | 2 (10%) |
| 52 | OMU | A2 | 121 | 52 | 19,22,23 | 1.21 | 3 (15%) | 26,31,34 | 1.70 | 4 (15%) |
| 52 | PSU | A2 | 682 | 52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 52 | OMG | A2 | 1329 | 52 | 18,26,27 | 0.94 | 1 (5%) | 19,38,41 | 1.07 | 2 (10%) |
| 52 | OMC | A2 | 1392 | 52 | 19,22,23 | 0.83 | 0 | 26,31,34 | 0.89 | 1 (3%) |
| 52 | PSU | A2 | 1178 | 52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.89 | 3 (13%) |
| 1 | OMG | B5 | 3676 | 1 | 18,26,27 | 0.93 | 1 (5%) | 19,38,41 | 1.09 | 2 (10%) |
| 52 | PSU | A2 | 610 | 52 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 52 | A2M | A2 | 1032 | 52 | 18,25,26 | 1.02 | 1 (5%) | 18,36,39 | 1.24 | 2 (11%) |
| 1 | PSU | B5 | 4740 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 52 | PSU | A2 | 1082 | 52 | 18,21,22 | 1.37 | 2 (11%) | 22,30,33 | 1.85 | 3 (13%) |
| 1 | PSU | B5 | 3494 | 1 | 18,21,22 | 1.36 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 52 | PSU | A2 | 407 | 52 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.89 | 3 (13%) |
| 1 | PSU | B5 | 2351 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 80 | SAC | Ar | 2 | 80 | 7,8,9 | 0.53 | 0 | 8,9,11 | 0.91 | 1 (12%) |
| 31 | MLZ | Bb | 5 | 31 | 8,9,10 | 0.49 | 0 | 4,9,11 | 0.13 | 0 |
| 52 | PSU | A2 | 93 | 52 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 52 | PSU | A2 | 1348 | 52 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 52 | PSU | A2 | 1644 | 92,52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 1 | OMC | B5 | 4282 | 92,1 | 19,22,23 | 0.82 | 0 | 26,31,34 | 0.84 | 0 |
| 30 | V5N | Ba | 39 | 30 | 4,11,12 | 0.77 | 0 | 5,14,16 | 1.55 | 1 (20%) |
| 1 | OMC | B5 | 3601 | 1 | 19,22,23 | 0.81 | 0 | 26,31,34 | 0.85 | 0 |
| 52 | PSU | A2 | 119 | 52 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.85 | 3 (13%) |
| 52 | OMU | A2 | 429 | 52 | 19,22,23 | 1.20 | 3 (15%) | 26,31,34 | 1.68 | 4 (15%) |
| 1 | OMC | B5 | 3573 | 1 | 19,22,23 | 0.82 | 0 | 26,31,34 | 0.88 | 1 (3%) |
| 1 | PSU | B5 | 3616 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.90 | 3 (13%) |
| 1 | PSU | B5 | 4107 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 1 | PSU | B5 | 4045 | 1 | 18,21,22 | 1.36 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 1 | OMC | B5 | 1820 | 92,1 | 19,22,23 | 0.80 | 0 | 26,31,34 | 0.80 | 0 |
| 52 | 6MZ | A2 | 1833 | 92,52 | 18,25,26 | 0.93 | 1 (5%) | 16,36,39 | 1.82 | 4 (25%) |
| 1 | A2M | B5 | 3517 | 1 | 18,25,26 | 0.96 | 1 (5%) | 18,36,39 | 1.34 | 2 (11%) |
| 1 | PSU | B5 | 3576 | 1 | 18,21,22 | 1.37 | 2 (11%) | 22,30,33 | 1.86 | 3 (13%) |
| 3 | OMG | B8 | 75 | 3 | 18,26,27 | 0.93 | 1 (5%) | 19,38,41 | 1.06 | 2 (10%) |
| 52 | OMU | A2 | 116 | 52 | 19,22,23 | 1.20 | 3 (15%) | 26,31,34 | 1.67 | 4 (15%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|-------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 52 | PSU | A2 | 650 | 52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.90 | 3 (13%) |
| 52 | OMG | A2 | 868 | 52 | 18,26,27 | 0.92 | 1 (5%) | 19,38,41 | 1.07 | 2 (10%) |
| 42 | M3L | Bm | 98 | 42 | 10,11,12 | 0.83 | 0 | 9,14,16 | 0.55 | 0 |
| 52 | PSU | A2 | 967 | 52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 1 | PSU | B5 | 1537 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 83 | AME | Au | 1 | 83 | 9,10,11 | 0.48 | 0 | 9,11,13 | 0.86 | 1 (11%) |
| 1 | OMU | B5 | 4366 | 1 | 19,22,23 | 1.21 | 2 (10%) | 26,31,34 | 1.73 | 4 (15%) |
| 1 | PSU | B5 | 4278 | 1 | 18,21,22 | 1.36 | 2 (11%) | 22,30,33 | 1.84 | 3 (13%) |
| 52 | PSU | A2 | 652 | 52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.89 | 3 (13%) |
| 1 | OMC | B5 | 1284 | 1 | 19,22,23 | 0.81 | 0 | 26,31,34 | 0.81 | 0 |
| 52 | G7M | A2 | 1640 | 61,52 | 20,26,27 | 2.99 | 7 (35%) | 17,39,42 | 0.94 | 1 (5%) |
| 1 | PSU | B5 | 3427 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 1 | OMG | B5 | 4245 | 1 | 18,26,27 | 0.92 | 1 (5%) | 19,38,41 | 1.07 | 2 (10%) |
| 1 | OMU | B5 | 3657 | 1 | 19,22,23 | 1.23 | 2 (10%) | 26,31,34 | 1.75 | 5 (19%) |
| 62 | SAC | AZ | 2 | 62 | 7,8,9 | 0.53 | 0 | 8,9,11 | 0.86 | 1 (12%) |
| 52 | PSU | A2 | 864 | 52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 1 | PSU | B5 | 4149 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.91 | 3 (13%) |
| 52 | A2M | A2 | 577 | 52 | 18,25,26 | 1.02 | 1 (5%) | 18,36,39 | 1.19 | 2 (11%) |
| 1 | OMU | B5 | 2680 | 1 | 19,22,23 | 1.21 | 2 (10%) | 26,31,34 | 1.72 | 5 (19%) |
| 45 | SAC | Br | 2 | 45 | 7,8,9 | 0.52 | 0 | 8,9,11 | 0.85 | 1 (12%) |
| 52 | PSU | A2 | 802 | 52 | 18,21,22 | 1.36 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 1 | OMC | B5 | 2647 | 1 | 19,22,23 | 0.81 | 0 | 26,31,34 | 0.82 | 0 |
| 1 | A2M | B5 | 1270 | 1 | 18,25,26 | 0.98 | 1 (5%) | 18,36,39 | 1.24 | 2 (11%) |
| 1 | OMG | B5 | 4138 | 1 | 18,26,27 | 0.92 | 1 (5%) | 19,38,41 | 1.09 | 2 (10%) |
| 52 | PSU | A2 | 823 | 52 | 18,21,22 | 1.36 | 2 (11%) | 22,30,33 | 1.87 | 4 (18%) |
| 52 | PSU | A2 | 573 | 52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 81 | NMM | As | 67 | 81 | 9,11,12 | 0.59 | 0 | 6,12,14 | 0.44 | 0 |
| 1 | OMG | B5 | 1260 | 1 | 18,26,27 | 0.93 | 1 (5%) | 19,38,41 | 1.12 | 2 (10%) |
| 1 | OMC | B5 | 2704 | 1 | 19,22,23 | 0.82 | 0 | 26,31,34 | 0.85 | 1 (3%) |
| 1 | A2M | B5 | 398 | 1 | 18,25,26 | 1.01 | 1 (5%) | 18,36,39 | 1.25 | 2 (11%) |
| 1 | OMC | B5 | 2194 | 92,1 | 19,22,23 | 0.82 | 0 | 26,31,34 | 0.93 | 1 (3%) |
| 52 | PSU | A2 | 1626 | 52 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 1 | PSU | B5 | 4039 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 1 | PSU | B5 | 4217 | 1 | 18,21,22 | 1.36 | 2 (11%) | 22,30,33 | 1.86 | 3 (13%) |
| 1 | PSU | B5 | 1720 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|-------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 1 | UR3 | B5 | 4276 | 1 | 19,22,23 | 0.99 | 0 | 26,32,35 | 1.41 | 1 (3%) |
| 52 | PSU | A2 | 1046 | 52 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 3 | PSU | B8 | 69 | 3 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.89 | 3 (13%) |
| 1 | OMC | B5 | 3433 | 1 | 19,22,23 | 0.79 | 0 | 26,31,34 | 0.75 | 0 |
| 1 | A2M | B5 | 3562 | 1 | 18,25,26 | 1.03 | 1 (5%) | 18,36,39 | 1.22 | 2 (11%) |
| 1 | PSU | B5 | 3585 | 92,1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 61 | 5MU | AT | 54 | 61 | 19,22,23 | 1.41 | 5 (26%) | 28,32,35 | 2.04 | 6 (21%) |
| 1 | OMG | B5 | 3942 | 61,1 | 18,26,27 | 0.93 | 1 (5%) | 19,38,41 | 1.07 | 2 (10%) |
| 1 | PSU | B5 | 1718 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 1 | PSU | B5 | 3447 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 1 | 5MC | B5 | 4193 | 1 | 18,22,23 | 0.99 | 2 (11%) | 26,32,35 | 1.17 | 2 (7%) |
| 52 | A2M | A2 | 1384 | 52 | 18,25,26 | 1.03 | 1 (5%) | 18,36,39 | 1.21 | 2 (11%) |
| 1 | PSU | B5 | 4711 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 52 | PSU | A2 | 105 | 52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.86 | 3 (13%) |
| 52 | OMG | A2 | 510 | 92,52 | 18,26,27 | 0.94 | 1 (5%) | 19,38,41 | 1.09 | 2 (10%) |
| 52 | OMG | A2 | 684 | 52 | 18,26,27 | 0.93 | 1 (5%) | 19,38,41 | 1.09 | 2 (10%) |
| 1 | PSU | B5 | 4267 | 92,1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.91 | 3 (13%) |
| 1 | PSU | B5 | 1638 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 1 | OMU | B5 | 2258 | 1 | 19,22,23 | 1.21 | 2 (10%) | 26,31,34 | 1.68 | 4 (15%) |
| 1 | OMU | B5 | 4052 | 1 | 19,22,23 | 1.22 | 2 (10%) | 26,31,34 | 1.67 | 4 (15%) |
| 1 | PSU | B5 | 3554 | 1 | 18,21,22 | 1.36 | 2 (11%) | 22,30,33 | 1.86 | 3 (13%) |
| 1 | A2M | B5 | 400 | 1 | 18,25,26 | 1.02 | 1 (5%) | 18,36,39 | 1.22 | 2 (11%) |
| 1 | OMC | B5 | 4202 | 1 | 19,22,23 | 0.81 | 0 | 26,31,34 | 0.79 | 0 |
| 1 | A2M | B5 | 3450 | 1 | 18,25,26 | 1.02 | 1 (5%) | 18,36,39 | 1.19 | 2 (11%) |
| 1 | OMC | B5 | 3540 | 1 | 19,22,23 | 0.82 | 0 | 26,31,34 | 0.82 | 0 |
| 1 | 1MA | B5 | 1266 | 92,1 | 16,25,26 | 1.57 | 2 (12%) | 18,37,40 | 1.05 | 3 (16%) |
| 1 | OMC | B5 | 2208 | 92,1 | 19,22,23 | 0.81 | 0 | 26,31,34 | 0.80 | 0 |
| 1 | OMC | B5 | 3619 | 1 | 19,22,23 | 0.80 | 0 | 26,31,34 | 0.84 | 0 |
| 52 | OMU | A2 | 1327 | 92,52 | 19,22,23 | 1.18 | 2 (10%) | 26,31,34 | 1.70 | 5 (19%) |
| 1 | PSU | B5 | 3500 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 1 | PSU | B5 | 4042 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.91 | 4 (18%) |
| 1 | OMG | B5 | 1477 | 1 | 18,26,27 | 0.93 | 1 (5%) | 19,38,41 | 1.08 | 2 (10%) |
| 1 | PSU | B5 | 2475 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.89 | 3 (13%) |
| 52 | OMG | A2 | 1491 | 92,52 | 18,26,27 | 0.94 | 1 (5%) | 19,38,41 | 1.08 | 2 (10%) |
| 52 | OMG | A2 | 602 | 52 | 18,26,27 | 0.93 | 1 (5%) | 19,38,41 | 1.07 | 2 (10%) |
| 52 | A2M | A2 | 1679 | 52 | 18,25,26 | 1.02 | 1 (5%) | 18,36,39 | 1.28 | 2 (11%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|-------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 1 | OMG | B5 | 3631 | 1 | 18,26,27 | 0.92 | 1 (5%) | 19,38,41 | 1.10 | 2 (10%) |
| 52 | PSU | A2 | 1057 | 52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 1 | OMG | B5 | 2207 | 1 | 18,26,27 | 0.92 | 1 (5%) | 19,38,41 | 1.08 | 2 (10%) |
| 1 | OMU | B5 | 4244 | 1 | 19,22,23 | 1.21 | 2 (10%) | 26,31,34 | 1.70 | 5 (19%) |
| 5 | HIC | BB | 245 | 5 | 8,11,12 | 0.87 | 0 | 6,14,16 | 0.83 | 0 |
| 1 | PSU | B5 | 1491 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.92 | 3 (13%) |
| 52 | OMU | A2 | 628 | 52 | 19,22,23 | 1.17 | 2 (10%) | 26,31,34 | 1.69 | 5 (19%) |
| 52 | A2M | A2 | 469 | 52 | 18,25,26 | 1.03 | 1 (5%) | 18,36,39 | 1.22 | 2 (11%) |
| 52 | A2M | A2 | 513 | 52 | 18,25,26 | 1.04 | 1 (5%) | 18,36,39 | 1.20 | 2 (11%) |
| 52 | A2M | A2 | 669 | 92,52 | 18,25,26 | 0.98 | 1 (5%) | 18,36,39 | 1.33 | 2 (11%) |
| 52 | PSU | A2 | 1175 | 52 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.89 | 3 (13%) |
| 1 | PSU | B5 | 3462 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 1 | OMG | B5 | 3524 | 1 | 18,26,27 | 0.92 | 1 (5%) | 19,38,41 | 1.06 | 2 (10%) |
| 1 | OMC | B5 | 2265 | 92,1 | 19,22,23 | 0.82 | 0 | 26,31,34 | 0.86 | 1 (3%) |
| 1 | PSU | B5 | 4298 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.90 | 3 (13%) |
| 52 | 4AC | A2 | 1843 | 52 | 21,24,25 | 1.12 | 2 (9%) | 29,34,37 | 1.32 | 3 (10%) |
| 1 | PSU | B5 | 1632 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.87 | 4 (18%) |
| 1 | PSU | B5 | 4382 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 52 | OMC | A2 | 463 | 52 | 19,22,23 | 0.82 | 0 | 26,31,34 | 0.86 | 1 (3%) |
| 1 | PSU | B5 | 4374 | 1 | 18,21,22 | 1.36 | 2 (11%) | 22,30,33 | 1.89 | 3 (13%) |
| 52 | PSU | A2 | 1233 | 52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 52 | OMG | A2 | 645 | 52 | 18,26,27 | 0.93 | 1 (5%) | 19,38,41 | 1.10 | 2 (10%) |
| 52 | PSU | A2 | 1693 | 52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 52 | OMC | A2 | 1704 | 52 | 19,22,23 | 0.82 | 0 | 26,31,34 | 0.86 | 1 (3%) |
| 1 | OMG | B5 | 3476 | 1 | 18,26,27 | 0.93 | 1 (5%) | 19,38,41 | 1.08 | 2 (10%) |
| 6 | AYA | BC | 2 | 6 | 6,7,8 | 0.72 | 0 | 5,8,10 | 0.30 | 0 |
| 52 | MA6 | A2 | 1851 | 52 | 18,26,27 | 1.09 | 2 (11%) | 19,38,41 | 2.00 | 3 (15%) |
| 52 | PSU | A2 | 815 | 52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.86 | 3 (13%) |
| 1 | A2M | B5 | 4336 | 1 | 18,25,26 | 1.02 | 1 (5%) | 18,36,39 | 1.22 | 2 (11%) |
| 1 | A2M | B5 | 4269 | 92,1 | 18,25,26 | 1.03 | 1 (5%) | 18,36,39 | 1.23 | 2 (11%) |
| 52 | OMU | A2 | 172 | 52 | 19,22,23 | 1.19 | 2 (10%) | 26,31,34 | 1.70 | 4 (15%) |
| 52 | PSU | A2 | 34 | 52 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 52 | PSU | A2 | 36 | 52 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 1 | PSU | B5 | 4322 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.89 | 3 (13%) |
| 52 | A2M | A2 | 99 | 92,52 | 18,25,26 | 1.03 | 1 (5%) | 18,36,39 | 1.21 | 2 (11%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|-------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 1 | A2M | B5 | 2630 | 92,1 | 18,25,26 | 0.99 | 1 (5%) | 18,36,39 | 1.32 | 2 (11%) |
| 1 | PSU | B5 | 1799 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.88 | 3 (13%) |
| 1 | PSU | B5 | 3369 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.90 | 4 (18%) |
| 52 | PSU | A2 | 1005 | 52 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.86 | 3 (13%) |
| 1 | A2M | B5 | 4317 | 1 | 18,25,26 | 1.02 | 1 (5%) | 18,36,39 | 1.23 | 2 (11%) |
| 1 | PSU | B5 | 3371 | 1 | 18,21,22 | 1.36 | 2 (11%) | 22,30,33 | 1.86 | 3 (13%) |
| 52 | OMC | A2 | 174 | 92,52 | 19,22,23 | 0.82 | 0 | 26,31,34 | 0.81 | 0 |
| 52 | OMC | A2 | 518 | 52 | 19,22,23 | 0.81 | 0 | 26,31,34 | 0.81 | 0 |
| 52 | A2M | A2 | 159 | 52 | 18,25,26 | 1.01 | 1 (5%) | 18,36,39 | 1.26 | 2 (11%) |
| 1 | A2M | B5 | 2244 | 92,1 | 18,25,26 | 1.01 | 1 (5%) | 18,36,39 | 1.22 | 2 (11%) |
| 1 | PSU | B5 | 3466 | 1 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 52 | PSU | A2 | 218 | 52 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.87 | 3 (13%) |
| 43 | MLZ | Bo | 53 | 43 | 8,9,10 | 0.48 | 0 | 4,9,11 | 0.09 | 0 |
| 1 | PSU | B5 | 4099 | 1 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.89 | 3 (13%) |
| 52 | A2M | A2 | 166 | 52 | 18,25,26 | 1.04 | 1 (5%) | 18,36,39 | 1.24 | 2 (11%) |
| 52 | OMU | A2 | 1443 | 92,52 | 19,22,23 | 1.24 | 3 (15%) | 26,31,34 | 1.69 | 5 (19%) |

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 |
|-----|------|-------|------|------|---------|-----------|---------|
| 1 | A2M | B5 | 1489 | 92,1 | - | 2/5/27/28 | 0/3/3/3 |
| 52 | OMU | A2 | 1805 | 52 | - | 0/9/27/28 | 0/2/2/2 |
| 1 | PSU | B5 | 4169 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | A2M | B5 | 3557 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | OMU | B5 | 3973 | 1 | - | 0/9/27/28 | 0/2/2/2 |
| 1 | PSU | B5 | 4246 | 1 | - | 1/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 4749 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | PSU | A2 | 1239 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | PSU | A2 | 210 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | PSU | A2 | 1047 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 3583 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMG | B5 | 2267 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 52 | PSU | A2 | 687 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 3 | PSU | B8 | 55 | 3 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 3652 | 92,1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | 5MC | B5 | 3514 | 92,1 | - | 0/7/25/26 | 0/2/2/2 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|---------|------------|---------|
| 52 | PSU | A2 | 867 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 4435 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | PSU | A2 | 816 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 4058 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | 6MZ | B5 | 3966 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 85 | HY3 | Aw | 62 | 85 | - | 1/1/12/14 | 0/1/1/1 |
| 1 | A2M | B5 | 3456 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 52 | PSU | A2 | 109 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 4166 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | A2M | A2 | 591 | 52 | - | 0/5/27/28 | 0/3/3/3 |
| 52 | OMG | A2 | 1448 | 52 | - | 3/5/27/28 | 0/3/3/3 |
| 52 | OMU | A2 | 355 | 52 | - | 1/9/27/28 | 0/2/2/2 |
| 1 | PSU | B5 | 1721 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMG | B5 | 4116 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | A2M | B5 | 2658 | 92,1 | - | 0/5/27/28 | 0/3/3/3 |
| 52 | A2M | A2 | 485 | 52 | - | 0/5/27/28 | 0/3/3/3 |
| 61 | PSU | AT | 55 | 61 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 4203 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMG | B5 | 1580 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | PSU | B5 | 3502 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | 4AC | A2 | 1338 | 52 | - | 4/11/29/30 | 0/2/2/2 |
| 52 | PSU | A2 | 1245 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 3490 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | A2M | B5 | 3599 | 1 | - | 1/5/27/28 | 0/3/3/3 |
| 1 | OMG | B5 | 4364 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 52 | OMU | A2 | 1289 | 52 | - | 0/9/27/28 | 0/2/2/2 |
| 1 | A2M | B5 | 1479 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | PSU | B5 | 4188 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 4177 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMG | B5 | 2719 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 52 | MA6 | A2 | 1852 | 52 | - | 2/7/29/30 | 0/3/3/3 |
| 1 | OMG | B5 | 3359 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | OMG | B5 | 3974 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | PSU | B5 | 4325 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMG | B5 | 4383 | 1 | - | 1/5/27/28 | 0/3/3/3 |
| 1 | A2M | B5 | 2206 | 92,1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | PSU | B5 | 4419 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 1731 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 1683 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMG | B5 | 4240 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | PSU | B5 | 1801 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | A2M | B5 | 3492 | 1,52 | - | 1/5/27/28 | 0/3/3/3 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|-------|---------|------------|---------|
| 52 | PSU | A2 | 1368 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 76 | 5F0 | An | 138 | 76 | - | 1/9/9/10 | - |
| 1 | UY1 | B5 | 3550 | 1 | - | 1/9/27/28 | 0/2/2/2 |
| 52 | OMG | A2 | 437 | 52 | - | 0/5/27/28 | 0/3/3/3 |
| 52 | B8N | A2 | 1249 | 52 | - | 4/16/34/35 | 0/2/2/2 |
| 52 | A2M | A2 | 27 | 92,52 | - | 1/5/27/28 | 0/3/3/3 |
| 52 | PSU | A2 | 1446 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 3496 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMC | B5 | 2667 | 1 | - | 1/9/27/28 | 0/2/2/2 |
| 4 | V5N | BA | 216 | 4 | - | 1/5/10/12 | 0/1/1/1 |
| 1 | A2M | B5 | 1810 | 92,1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | OMG | B5 | 4369 | 1 | - | 1/5/27/28 | 0/3/3/3 |
| 52 | OMU | A2 | 121 | 52 | - | 0/9/27/28 | 0/2/2/2 |
| 52 | PSU | A2 | 682 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | OMG | A2 | 1329 | 52 | - | 0/5/27/28 | 0/3/3/3 |
| 52 | OMC | A2 | 1392 | 52 | - | 0/9/27/28 | 0/2/2/2 |
| 52 | PSU | A2 | 1178 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMG | B5 | 3676 | 1 | - | 2/5/27/28 | 0/3/3/3 |
| 52 | PSU | A2 | 610 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | A2M | A2 | 1032 | 52 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | PSU | B5 | 4740 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | PSU | A2 | 1082 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 3494 | 1 | - | 1/7/25/26 | 0/2/2/2 |
| 52 | PSU | A2 | 407 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 2351 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 80 | SAC | Ar | 2 | 80 | - | 0/7/8/10 | - |
| 31 | MLZ | Bb | 5 | 31 | - | 2/7/8/10 | - |
| 52 | PSU | A2 | 93 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | PSU | A2 | 1348 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | PSU | A2 | 1644 | 92,52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMC | B5 | 4282 | 92,1 | - | 0/9/27/28 | 0/2/2/2 |
| 30 | V5N | Ba | 39 | 30 | - | 0/5/10/12 | 0/1/1/1 |
| 1 | OMC | B5 | 3601 | 1 | - | 0/9/27/28 | 0/2/2/2 |
| 52 | PSU | A2 | 119 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | OMU | A2 | 429 | 52 | - | 4/9/27/28 | 0/2/2/2 |
| 1 | OMC | B5 | 3573 | 1 | - | 0/9/27/28 | 0/2/2/2 |
| 1 | PSU | B5 | 3616 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 4107 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 4045 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMC | B5 | 1820 | 92,1 | - | 1/9/27/28 | 0/2/2/2 |
| 52 | 6MZ | A2 | 1833 | 92,52 | - | 0/5/27/28 | 0/3/3/3 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|-------|---------|-----------|---------|
| 1 | A2M | B5 | 3517 | 1 | - | 2/5/27/28 | 0/3/3/3 |
| 1 | PSU | B5 | 3576 | 1 | - | 1/7/25/26 | 0/2/2/2 |
| 3 | OMG | B8 | 75 | 3 | - | 0/5/27/28 | 0/3/3/3 |
| 52 | OMU | A2 | 116 | 52 | - | 1/9/27/28 | 0/2/2/2 |
| 52 | PSU | A2 | 650 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | OMG | A2 | 868 | 52 | - | 0/5/27/28 | 0/3/3/3 |
| 42 | M3L | Bm | 98 | 42 | - | 0/9/10/12 | - |
| 52 | PSU | A2 | 967 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 1537 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 83 | AME | Au | 1 | 83 | - | 2/9/10/12 | - |
| 1 | OMU | B5 | 4366 | 1 | - | 1/9/27/28 | 0/2/2/2 |
| 1 | PSU | B5 | 4278 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | PSU | A2 | 652 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMC | B5 | 1284 | 1 | - | 0/9/27/28 | 0/2/2/2 |
| 52 | G7M | A2 | 1640 | 61,52 | - | 2/3/25/26 | 0/3/3/3 |
| 1 | PSU | B5 | 3427 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMG | B5 | 4245 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | OMU | B5 | 3657 | 1 | - | 1/9/27/28 | 0/2/2/2 |
| 62 | SAC | AZ | 2 | 62 | - | 2/7/8/10 | - |
| 52 | PSU | A2 | 864 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 4149 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | A2M | A2 | 577 | 52 | - | 2/5/27/28 | 0/3/3/3 |
| 1 | OMU | B5 | 2680 | 1 | - | 1/9/27/28 | 0/2/2/2 |
| 45 | SAC | Br | 2 | 45 | - | 0/7/8/10 | - |
| 52 | PSU | A2 | 802 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMC | B5 | 2647 | 1 | - | 0/9/27/28 | 0/2/2/2 |
| 1 | A2M | B5 | 1270 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | OMG | B5 | 4138 | 1 | - | 1/5/27/28 | 0/3/3/3 |
| 52 | PSU | A2 | 823 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | PSU | A2 | 573 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 81 | NMM | As | 67 | 81 | - | 1/9/11/13 | - |
| 1 | OMG | B5 | 1260 | 1 | - | 1/5/27/28 | 0/3/3/3 |
| 1 | OMC | B5 | 2704 | 1 | - | 0/9/27/28 | 0/2/2/2 |
| 1 | A2M | B5 | 398 | 1 | - | 3/5/27/28 | 0/3/3/3 |
| 1 | OMC | B5 | 2194 | 92,1 | - | 2/9/27/28 | 0/2/2/2 |
| 52 | PSU | A2 | 1626 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 4039 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 4217 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 1720 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | UR3 | B5 | 4276 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | PSU | A2 | 1046 | 52 | - | 0/7/25/26 | 0/2/2/2 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|-------|---------|-----------|---------|
| 3 | PSU | B8 | 69 | 3 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMC | B5 | 3433 | 1 | - | 4/9/27/28 | 0/2/2/2 |
| 1 | A2M | B5 | 3562 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | PSU | B5 | 3585 | 92,1 | - | 0/7/25/26 | 0/2/2/2 |
| 61 | 5MU | AT | 54 | 61 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMG | B5 | 3942 | 61,1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | PSU | B5 | 1718 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 3447 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | 5MC | B5 | 4193 | 1 | - | 4/7/25/26 | 0/2/2/2 |
| 52 | A2M | A2 | 1384 | 52 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | PSU | B5 | 4711 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | PSU | A2 | 105 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | OMG | A2 | 510 | 92,52 | - | 1/5/27/28 | 0/3/3/3 |
| 52 | OMG | A2 | 684 | 52 | - | 2/5/27/28 | 0/3/3/3 |
| 1 | PSU | B5 | 4267 | 92,1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 1638 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMU | B5 | 2258 | 1 | - | 0/9/27/28 | 0/2/2/2 |
| 1 | OMU | B5 | 4052 | 1 | - | 0/9/27/28 | 0/2/2/2 |
| 1 | PSU | B5 | 3554 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | A2M | B5 | 400 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | OMC | B5 | 4202 | 1 | - | 0/9/27/28 | 0/2/2/2 |
| 1 | A2M | B5 | 3450 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | OMC | B5 | 3540 | 1 | - | 0/9/27/28 | 0/2/2/2 |
| 1 | 1MA | B5 | 1266 | 92,1 | - | 0/3/25/26 | 0/3/3/3 |
| 1 | OMC | B5 | 2208 | 92,1 | - | 0/9/27/28 | 0/2/2/2 |
| 1 | OMC | B5 | 3619 | 1 | - | 2/9/27/28 | 0/2/2/2 |
| 52 | OMU | A2 | 1327 | 92,52 | - | 0/9/27/28 | 0/2/2/2 |
| 1 | PSU | B5 | 3500 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 4042 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMG | B5 | 1477 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | PSU | B5 | 2475 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | OMG | A2 | 1491 | 92,52 | - | 0/5/27/28 | 0/3/3/3 |
| 52 | OMG | A2 | 602 | 52 | - | 0/5/27/28 | 0/3/3/3 |
| 52 | A2M | A2 | 1679 | 52 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | OMG | B5 | 3631 | 1 | - | 1/5/27/28 | 0/3/3/3 |
| 52 | PSU | A2 | 1057 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMG | B5 | 2207 | 1 | - | 3/5/27/28 | 0/3/3/3 |
| 1 | OMU | B5 | 4244 | 1 | - | 0/9/27/28 | 0/2/2/2 |
| 5 | HIC | BB | 245 | 5 | - | 2/5/6/8 | 0/1/1/1 |
| 1 | PSU | B5 | 1491 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | OMU | A2 | 628 | 52 | - | 4/9/27/28 | 0/2/2/2 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|-------|---------|------------|---------|
| 52 | A2M | A2 | 469 | 52 | - | 1/5/27/28 | 0/3/3/3 |
| 52 | A2M | A2 | 513 | 52 | - | 2/5/27/28 | 0/3/3/3 |
| 52 | A2M | A2 | 669 | 92,52 | - | 2/5/27/28 | 0/3/3/3 |
| 52 | PSU | A2 | 1175 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 3462 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | OMG | B5 | 3524 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | OMC | B5 | 2265 | 92,1 | - | 2/9/27/28 | 0/2/2/2 |
| 1 | PSU | B5 | 4298 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | 4AC | A2 | 1843 | 52 | - | 4/11/29/30 | 0/2/2/2 |
| 1 | PSU | B5 | 1632 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 4382 | 1 | - | 4/7/25/26 | 0/2/2/2 |
| 52 | OMC | A2 | 463 | 52 | - | 0/9/27/28 | 0/2/2/2 |
| 1 | PSU | B5 | 4374 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | PSU | A2 | 1233 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | OMG | A2 | 645 | 52 | - | 3/5/27/28 | 0/3/3/3 |
| 52 | PSU | A2 | 1693 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | OMC | A2 | 1704 | 52 | - | 1/9/27/28 | 0/2/2/2 |
| 1 | OMG | B5 | 3476 | 1 | - | 2/5/27/28 | 0/3/3/3 |
| 6 | AYA | BC | 2 | 6 | - | 3/4/6/8 | - |
| 52 | MA6 | A2 | 1851 | 52 | - | 0/7/29/30 | 0/3/3/3 |
| 52 | PSU | A2 | 815 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | A2M | B5 | 4336 | 1 | - | 1/5/27/28 | 0/3/3/3 |
| 1 | A2M | B5 | 4269 | 92,1 | - | 0/5/27/28 | 0/3/3/3 |
| 52 | OMU | A2 | 172 | 52 | - | 0/9/27/28 | 0/2/2/2 |
| 52 | PSU | A2 | 34 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | PSU | A2 | 36 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 4322 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | A2M | A2 | 99 | 92,52 | - | 2/5/27/28 | 0/3/3/3 |
| 1 | A2M | B5 | 2630 | 92,1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | PSU | B5 | 1799 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | B5 | 3369 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | PSU | A2 | 1005 | 52 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | A2M | B5 | 4317 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | PSU | B5 | 3371 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | OMC | A2 | 174 | 92,52 | - | 0/9/27/28 | 0/2/2/2 |
| 52 | OMC | A2 | 518 | 52 | - | 0/9/27/28 | 0/2/2/2 |
| 52 | A2M | A2 | 159 | 52 | - | 1/5/27/28 | 0/3/3/3 |
| 1 | A2M | B5 | 2244 | 92,1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | PSU | B5 | 3466 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | PSU | A2 | 218 | 52 | - | 0/7/25/26 | 0/2/2/2 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|----------------|------|-------|---------|-----------|---------|
| 43 | MLZ | B ₀ | 53 | 43 | - | 0/7/8/10 | - |
| 1 | PSU | B5 | 4099 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 52 | A2M | A2 | 166 | 52 | - | 0/5/27/28 | 0/3/3/3 |
| 52 | OMU | A2 | 1443 | 92,52 | - | 1/9/27/28 | 0/2/2/2 |

All (334) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 52 | A2 | 1640 | G7M | C5-C4 | 7.39 | 1.53 | 1.39 |
| 52 | A2 | 1640 | G7M | O6-C6 | 7.28 | 1.38 | 1.23 |
| 1 | B5 | 1266 | 1MA | C2-N3 | 4.81 | 1.34 | 1.29 |
| 85 | Aw | 62 | HY3 | C3-CA | -4.55 | 1.50 | 1.55 |
| 52 | A2 | 1640 | G7M | C2-N2 | 4.45 | 1.44 | 1.34 |
| 52 | A2 | 1640 | G7M | C2-N1 | 3.85 | 1.47 | 1.37 |
| 1 | B5 | 3550 | UY1 | C6-C5 | 3.60 | 1.39 | 1.35 |
| 52 | A2 | 1640 | G7M | C8-N9 | 3.49 | 1.39 | 1.33 |
| 52 | A2 | 1851 | MA6 | C5-N7 | 3.35 | 1.51 | 1.39 |
| 52 | A2 | 1852 | MA6 | C5-N7 | 3.33 | 1.51 | 1.39 |
| 1 | B5 | 1266 | 1MA | C6-N6 | 3.25 | 1.35 | 1.27 |
| 52 | A2 | 1640 | G7M | C2-N3 | 3.25 | 1.41 | 1.33 |
| 1 | B5 | 4166 | PSU | C6-C5 | 3.23 | 1.39 | 1.35 |
| 52 | A2 | 1640 | G7M | C6-N1 | 3.23 | 1.42 | 1.37 |
| 1 | B5 | 1632 | PSU | C6-C5 | 3.21 | 1.39 | 1.35 |
| 1 | B5 | 3494 | PSU | C6-C5 | 3.19 | 1.39 | 1.35 |
| 52 | A2 | 210 | PSU | C6-C5 | 3.18 | 1.39 | 1.35 |
| 52 | A2 | 802 | PSU | C6-C5 | 3.18 | 1.39 | 1.35 |
| 52 | A2 | 823 | PSU | C6-C5 | 3.17 | 1.39 | 1.35 |
| 1 | B5 | 2475 | PSU | C6-C5 | 3.17 | 1.39 | 1.35 |
| 61 | AT | 55 | PSU | C6-C5 | 3.17 | 1.39 | 1.35 |
| 52 | A2 | 105 | PSU | C6-C5 | 3.16 | 1.39 | 1.35 |
| 1 | B5 | 3554 | PSU | C6-C5 | 3.16 | 1.39 | 1.35 |
| 52 | A2 | 864 | PSU | C6-C5 | 3.16 | 1.39 | 1.35 |
| 1 | B5 | 1799 | PSU | C6-C5 | 3.16 | 1.39 | 1.35 |
| 52 | A2 | 34 | PSU | C6-C5 | 3.15 | 1.39 | 1.35 |
| 52 | A2 | 1368 | PSU | C6-C5 | 3.15 | 1.39 | 1.35 |
| 1 | B5 | 4382 | PSU | C6-C5 | 3.15 | 1.39 | 1.35 |
| 52 | A2 | 573 | PSU | C6-C5 | 3.15 | 1.39 | 1.35 |
| 52 | A2 | 1082 | PSU | C6-C5 | 3.15 | 1.39 | 1.35 |
| 1 | B5 | 4278 | PSU | C6-C5 | 3.15 | 1.39 | 1.35 |
| 52 | A2 | 1047 | PSU | C6-C5 | 3.15 | 1.39 | 1.35 |
| 1 | B5 | 3466 | PSU | C6-C5 | 3.14 | 1.39 | 1.35 |
| 52 | A2 | 218 | PSU | C6-C5 | 3.14 | 1.39 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 52 | A2 | 610 | PSU | C6-C5 | 3.14 | 1.39 | 1.35 |
| 52 | A2 | 1348 | PSU | C6-C5 | 3.14 | 1.39 | 1.35 |
| 1 | B5 | 4322 | PSU | C6-C5 | 3.14 | 1.39 | 1.35 |
| 1 | B5 | 3500 | PSU | C6-C5 | 3.13 | 1.39 | 1.35 |
| 52 | A2 | 1233 | PSU | C6-C5 | 3.13 | 1.39 | 1.35 |
| 52 | A2 | 1245 | PSU | C6-C5 | 3.13 | 1.39 | 1.35 |
| 1 | B5 | 3462 | PSU | C6-C5 | 3.13 | 1.39 | 1.35 |
| 52 | A2 | 652 | PSU | C6-C5 | 3.13 | 1.39 | 1.35 |
| 1 | B5 | 3576 | PSU | C6-C5 | 3.13 | 1.39 | 1.35 |
| 1 | B5 | 4740 | PSU | C6-C5 | 3.13 | 1.39 | 1.35 |
| 1 | B5 | 3427 | PSU | C6-C5 | 3.13 | 1.39 | 1.35 |
| 52 | A2 | 109 | PSU | C6-C5 | 3.12 | 1.39 | 1.35 |
| 1 | B5 | 4217 | PSU | C6-C5 | 3.12 | 1.39 | 1.35 |
| 52 | A2 | 1239 | PSU | C6-C5 | 3.12 | 1.39 | 1.35 |
| 52 | A2 | 1626 | PSU | C6-C5 | 3.12 | 1.39 | 1.35 |
| 52 | A2 | 867 | PSU | C6-C5 | 3.12 | 1.39 | 1.35 |
| 1 | B5 | 3371 | PSU | C6-C5 | 3.12 | 1.39 | 1.35 |
| 52 | A2 | 119 | PSU | C6-C5 | 3.12 | 1.39 | 1.35 |
| 52 | A2 | 815 | PSU | C6-C5 | 3.12 | 1.39 | 1.35 |
| 1 | B5 | 4749 | PSU | C6-C5 | 3.12 | 1.39 | 1.35 |
| 52 | A2 | 1693 | PSU | C6-C5 | 3.12 | 1.39 | 1.35 |
| 52 | A2 | 407 | PSU | C6-C5 | 3.12 | 1.39 | 1.35 |
| 52 | A2 | 1249 | B8N | C4-N3 | -3.12 | 1.34 | 1.40 |
| 52 | A2 | 1178 | PSU | C6-C5 | 3.11 | 1.38 | 1.35 |
| 52 | A2 | 1644 | PSU | C6-C5 | 3.11 | 1.38 | 1.35 |
| 1 | B5 | 4374 | PSU | C6-C5 | 3.11 | 1.38 | 1.35 |
| 52 | A2 | 93 | PSU | C6-C5 | 3.11 | 1.38 | 1.35 |
| 52 | A2 | 967 | PSU | C6-C5 | 3.11 | 1.38 | 1.35 |
| 1 | B5 | 1721 | PSU | C6-C5 | 3.11 | 1.38 | 1.35 |
| 1 | B5 | 3502 | PSU | C6-C5 | 3.11 | 1.38 | 1.35 |
| 1 | B5 | 4177 | PSU | C6-C5 | 3.10 | 1.38 | 1.35 |
| 1 | B5 | 4419 | PSU | C6-C5 | 3.10 | 1.38 | 1.35 |
| 1 | B5 | 1683 | PSU | C6-C5 | 3.10 | 1.38 | 1.35 |
| 1 | B5 | 4039 | PSU | C6-C5 | 3.10 | 1.38 | 1.35 |
| 52 | A2 | 1446 | PSU | C6-C5 | 3.10 | 1.38 | 1.35 |
| 3 | B8 | 69 | PSU | C6-C5 | 3.10 | 1.38 | 1.35 |
| 1 | B5 | 3447 | PSU | C6-C5 | 3.10 | 1.38 | 1.35 |
| 1 | B5 | 4169 | PSU | C6-C5 | 3.10 | 1.38 | 1.35 |
| 52 | A2 | 1057 | PSU | C6-C5 | 3.10 | 1.38 | 1.35 |
| 1 | B5 | 1537 | PSU | C6-C5 | 3.10 | 1.38 | 1.35 |
| 1 | B5 | 4058 | PSU | C6-C5 | 3.10 | 1.38 | 1.35 |
| 52 | A2 | 687 | PSU | C6-C5 | 3.09 | 1.38 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|--------|-------|-------------|----------|
| 52 | A2 | 816 | PSU | C6-C5 | 3.09 | 1.38 | 1.35 |
| 1 | B5 | 1720 | PSU | C6-C5 | 3.09 | 1.38 | 1.35 |
| 1 | B5 | 3583 | PSU | C6-C5 | 3.09 | 1.38 | 1.35 |
| 3 | B8 | 55 | PSU | C6-C5 | 3.09 | 1.38 | 1.35 |
| 1 | B5 | 4711 | PSU | C6-C5 | 3.09 | 1.38 | 1.35 |
| 1 | B5 | 4188 | PSU | C6-C5 | 3.09 | 1.38 | 1.35 |
| 1 | B5 | 1801 | PSU | C6-C5 | 3.09 | 1.38 | 1.35 |
| 1 | B5 | 4107 | PSU | C6-C5 | 3.08 | 1.38 | 1.35 |
| 1 | B5 | 3496 | PSU | C6-C5 | 3.08 | 1.38 | 1.35 |
| 1 | B5 | 4099 | PSU | C6-C5 | 3.08 | 1.38 | 1.35 |
| 1 | B5 | 1491 | PSU | C6-C5 | 3.08 | 1.38 | 1.35 |
| 1 | B5 | 1638 | PSU | C6-C5 | 3.08 | 1.38 | 1.35 |
| 52 | A2 | 1005 | PSU | C6-C5 | 3.08 | 1.38 | 1.35 |
| 1 | B5 | 3490 | PSU | C6-C5 | 3.08 | 1.38 | 1.35 |
| 52 | A2 | 650 | PSU | C6-C5 | 3.08 | 1.38 | 1.35 |
| 1 | B5 | 4435 | PSU | C6-C5 | 3.08 | 1.38 | 1.35 |
| 1 | B5 | 1731 | PSU | C6-C5 | 3.08 | 1.38 | 1.35 |
| 52 | A2 | 1175 | PSU | C6-C5 | 3.07 | 1.38 | 1.35 |
| 1 | B5 | 4267 | PSU | C6-C5 | 3.07 | 1.38 | 1.35 |
| 1 | B5 | 1718 | PSU | C6-C5 | 3.07 | 1.38 | 1.35 |
| 1 | B5 | 3652 | PSU | C6-C5 | 3.07 | 1.38 | 1.35 |
| 52 | A2 | 1046 | PSU | C6-C5 | 3.07 | 1.38 | 1.35 |
| 1 | B5 | 4045 | PSU | C6-C5 | 3.07 | 1.38 | 1.35 |
| 52 | A2 | 36 | PSU | C6-C5 | 3.07 | 1.38 | 1.35 |
| 1 | B5 | 4325 | PSU | C6-C5 | 3.06 | 1.38 | 1.35 |
| 1 | B5 | 4203 | PSU | C6-C5 | 3.06 | 1.38 | 1.35 |
| 1 | B5 | 4298 | PSU | C6-C5 | 3.06 | 1.38 | 1.35 |
| 1 | B5 | 2351 | PSU | C6-C5 | 3.05 | 1.38 | 1.35 |
| 1 | B5 | 4042 | PSU | C6-C5 | 3.05 | 1.38 | 1.35 |
| 52 | A2 | 682 | PSU | C6-C5 | 3.05 | 1.38 | 1.35 |
| 1 | B5 | 4246 | PSU | C6-C5 | 3.05 | 1.38 | 1.35 |
| 1 | B5 | 3585 | PSU | C6-C5 | 3.04 | 1.38 | 1.35 |
| 1 | B5 | 4149 | PSU | C6-C5 | 3.03 | 1.38 | 1.35 |
| 52 | A2 | 1249 | B8N | C6-C5 | 3.03 | 1.39 | 1.34 |
| 1 | B5 | 3369 | PSU | C6-C5 | 3.00 | 1.38 | 1.35 |
| 1 | B5 | 3616 | PSU | C6-C5 | 2.97 | 1.38 | 1.35 |
| 52 | A2 | 1843 | 4AC | C4-N4 | -2.96 | 1.35 | 1.39 |
| 76 | An | 138 | 5F0 | OD1-C1 | 2.93 | 1.40 | 1.33 |
| 52 | A2 | 1338 | 4AC | C4-N4 | -2.83 | 1.35 | 1.39 |
| 1 | B5 | 4193 | 5MC | C6-C5 | 2.82 | 1.39 | 1.34 |
| 1 | B5 | 3369 | PSU | C4-N3 | -2.76 | 1.33 | 1.38 |
| 1 | B5 | 4042 | PSU | C4-N3 | -2.73 | 1.33 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 1 | B5 | 4039 | PSU | C4-N3 | -2.73 | 1.33 | 1.38 |
| 61 | AT | 54 | 5MU | C6-C5 | 2.72 | 1.39 | 1.34 |
| 1 | B5 | 3616 | PSU | C4-N3 | -2.72 | 1.33 | 1.38 |
| 1 | B5 | 4045 | PSU | C4-N3 | -2.72 | 1.33 | 1.38 |
| 1 | B5 | 4298 | PSU | C4-N3 | -2.72 | 1.33 | 1.38 |
| 1 | B5 | 3652 | PSU | C4-N3 | -2.71 | 1.33 | 1.38 |
| 1 | B5 | 4419 | PSU | C4-N3 | -2.71 | 1.33 | 1.38 |
| 1 | B5 | 4382 | PSU | C4-N3 | -2.70 | 1.33 | 1.38 |
| 1 | B5 | 1720 | PSU | C4-N3 | -2.70 | 1.33 | 1.38 |
| 1 | B5 | 3550 | UY1 | C2-N1 | 2.70 | 1.40 | 1.36 |
| 1 | B5 | 4188 | PSU | C4-N3 | -2.70 | 1.33 | 1.38 |
| 52 | A2 | 1178 | PSU | C4-N3 | -2.69 | 1.33 | 1.38 |
| 1 | B5 | 3583 | PSU | C4-N3 | -2.69 | 1.33 | 1.38 |
| 1 | B5 | 3585 | PSU | C4-N3 | -2.69 | 1.33 | 1.38 |
| 1 | B5 | 4217 | PSU | C4-N3 | -2.69 | 1.33 | 1.38 |
| 1 | B5 | 4267 | PSU | C4-N3 | -2.69 | 1.33 | 1.38 |
| 1 | B5 | 3490 | PSU | C4-N3 | -2.69 | 1.33 | 1.38 |
| 52 | A2 | 967 | PSU | C4-N3 | -2.69 | 1.33 | 1.38 |
| 52 | A2 | 1082 | PSU | C4-N3 | -2.69 | 1.33 | 1.38 |
| 1 | B5 | 4203 | PSU | C4-N3 | -2.69 | 1.33 | 1.38 |
| 3 | B8 | 55 | PSU | C4-N3 | -2.69 | 1.33 | 1.38 |
| 1 | B5 | 1731 | PSU | C4-N3 | -2.69 | 1.33 | 1.38 |
| 1 | B5 | 3576 | PSU | C4-N3 | -2.69 | 1.33 | 1.38 |
| 1 | B5 | 3371 | PSU | C4-N3 | -2.68 | 1.33 | 1.38 |
| 1 | B5 | 1638 | PSU | C4-N3 | -2.68 | 1.33 | 1.38 |
| 1 | B5 | 4058 | PSU | C4-N3 | -2.68 | 1.33 | 1.38 |
| 1 | B5 | 1721 | PSU | C4-N3 | -2.68 | 1.33 | 1.38 |
| 1 | B5 | 3514 | 5MC | C6-C5 | 2.68 | 1.39 | 1.34 |
| 1 | B5 | 4099 | PSU | C4-N3 | -2.68 | 1.33 | 1.38 |
| 52 | A2 | 650 | PSU | C4-N3 | -2.68 | 1.33 | 1.38 |
| 52 | A2 | 864 | PSU | C4-N3 | -2.68 | 1.33 | 1.38 |
| 52 | A2 | 1046 | PSU | C4-N3 | -2.68 | 1.33 | 1.38 |
| 1 | B5 | 4711 | PSU | C4-N3 | -2.68 | 1.33 | 1.38 |
| 52 | A2 | 652 | PSU | C4-N3 | -2.68 | 1.33 | 1.38 |
| 1 | B5 | 1799 | PSU | C4-N3 | -2.68 | 1.33 | 1.38 |
| 1 | B5 | 1801 | PSU | C4-N3 | -2.68 | 1.33 | 1.38 |
| 52 | A2 | 682 | PSU | C4-N3 | -2.67 | 1.33 | 1.38 |
| 52 | A2 | 1693 | PSU | C4-N3 | -2.67 | 1.33 | 1.38 |
| 1 | B5 | 4325 | PSU | C4-N3 | -2.67 | 1.33 | 1.38 |
| 1 | B5 | 1537 | PSU | C4-N3 | -2.67 | 1.33 | 1.38 |
| 1 | B5 | 4177 | PSU | C4-N3 | -2.67 | 1.33 | 1.38 |
| 1 | B5 | 1491 | PSU | C4-N3 | -2.67 | 1.33 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 1 | B5 | 2351 | PSU | C4-N3 | -2.67 | 1.33 | 1.38 |
| 61 | AT | 55 | PSU | C4-N3 | -2.67 | 1.33 | 1.38 |
| 52 | A2 | 1348 | PSU | C4-N3 | -2.67 | 1.33 | 1.38 |
| 1 | B5 | 4435 | PSU | C4-N3 | -2.67 | 1.33 | 1.38 |
| 52 | A2 | 34 | PSU | C4-N3 | -2.67 | 1.33 | 1.38 |
| 1 | B5 | 4278 | PSU | C4-N3 | -2.67 | 1.33 | 1.38 |
| 1 | B5 | 3427 | PSU | C4-N3 | -2.67 | 1.33 | 1.38 |
| 52 | A2 | 1239 | PSU | C4-N3 | -2.67 | 1.33 | 1.38 |
| 52 | A2 | 1057 | PSU | C4-N3 | -2.67 | 1.33 | 1.38 |
| 1 | B5 | 4169 | PSU | C4-N3 | -2.67 | 1.33 | 1.38 |
| 52 | A2 | 407 | PSU | C4-N3 | -2.66 | 1.33 | 1.38 |
| 1 | B5 | 4749 | PSU | C4-N3 | -2.66 | 1.33 | 1.38 |
| 1 | B5 | 4322 | PSU | C4-N3 | -2.66 | 1.33 | 1.38 |
| 1 | B5 | 4740 | PSU | C4-N3 | -2.66 | 1.33 | 1.38 |
| 1 | B5 | 3502 | PSU | C4-N3 | -2.66 | 1.33 | 1.38 |
| 52 | A2 | 687 | PSU | C4-N3 | -2.66 | 1.33 | 1.38 |
| 52 | A2 | 802 | PSU | C4-N3 | -2.66 | 1.33 | 1.38 |
| 52 | A2 | 816 | PSU | C4-N3 | -2.66 | 1.33 | 1.38 |
| 52 | A2 | 1644 | PSU | C4-N3 | -2.66 | 1.33 | 1.38 |
| 1 | B5 | 1718 | PSU | C4-N3 | -2.66 | 1.33 | 1.38 |
| 3 | B8 | 69 | PSU | C4-N3 | -2.66 | 1.33 | 1.38 |
| 1 | B5 | 1683 | PSU | C4-N3 | -2.66 | 1.33 | 1.38 |
| 52 | A2 | 93 | PSU | C4-N3 | -2.66 | 1.33 | 1.38 |
| 52 | A2 | 1005 | PSU | C4-N3 | -2.65 | 1.33 | 1.38 |
| 52 | A2 | 1175 | PSU | C4-N3 | -2.65 | 1.33 | 1.38 |
| 52 | A2 | 109 | PSU | C4-N3 | -2.65 | 1.33 | 1.38 |
| 1 | B5 | 2475 | PSU | C4-N3 | -2.65 | 1.33 | 1.38 |
| 1 | B5 | 4107 | PSU | C4-N3 | -2.65 | 1.33 | 1.38 |
| 1 | B5 | 4149 | PSU | C4-N3 | -2.65 | 1.33 | 1.38 |
| 1 | B5 | 3500 | PSU | C4-N3 | -2.65 | 1.33 | 1.38 |
| 1 | B5 | 4246 | PSU | C4-N3 | -2.65 | 1.33 | 1.38 |
| 52 | A2 | 867 | PSU | C4-N3 | -2.65 | 1.33 | 1.38 |
| 1 | B5 | 4374 | PSU | C4-N3 | -2.65 | 1.33 | 1.38 |
| 52 | A2 | 218 | PSU | C4-N3 | -2.65 | 1.33 | 1.38 |
| 52 | A2 | 815 | PSU | C4-N3 | -2.65 | 1.33 | 1.38 |
| 1 | B5 | 3462 | PSU | C4-N3 | -2.65 | 1.33 | 1.38 |
| 1 | B5 | 3554 | PSU | C4-N3 | -2.65 | 1.33 | 1.38 |
| 52 | A2 | 1233 | PSU | C4-N3 | -2.64 | 1.33 | 1.38 |
| 52 | A2 | 1446 | PSU | C4-N3 | -2.64 | 1.33 | 1.38 |
| 1 | B5 | 3496 | PSU | C4-N3 | -2.64 | 1.33 | 1.38 |
| 52 | A2 | 1368 | PSU | C4-N3 | -2.64 | 1.33 | 1.38 |
| 1 | B5 | 3447 | PSU | C4-N3 | -2.64 | 1.33 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 1 | B5 | 3466 | PSU | C4-N3 | -2.64 | 1.33 | 1.38 |
| 52 | A2 | 105 | PSU | C4-N3 | -2.64 | 1.33 | 1.38 |
| 52 | A2 | 1047 | PSU | C4-N3 | -2.63 | 1.33 | 1.38 |
| 52 | A2 | 1245 | PSU | C4-N3 | -2.63 | 1.34 | 1.38 |
| 52 | A2 | 36 | PSU | C4-N3 | -2.63 | 1.34 | 1.38 |
| 52 | A2 | 573 | PSU | C4-N3 | -2.62 | 1.34 | 1.38 |
| 52 | A2 | 119 | PSU | C4-N3 | -2.62 | 1.34 | 1.38 |
| 52 | A2 | 610 | PSU | C4-N3 | -2.62 | 1.34 | 1.38 |
| 52 | A2 | 1626 | PSU | C4-N3 | -2.62 | 1.34 | 1.38 |
| 52 | A2 | 823 | PSU | C4-N3 | -2.61 | 1.34 | 1.38 |
| 1 | B5 | 3494 | PSU | C4-N3 | -2.61 | 1.34 | 1.38 |
| 1 | B5 | 4166 | PSU | C4-N3 | -2.60 | 1.34 | 1.38 |
| 52 | A2 | 210 | PSU | C4-N3 | -2.60 | 1.34 | 1.38 |
| 1 | B5 | 3657 | OMU | C4-N3 | -2.59 | 1.33 | 1.38 |
| 61 | AT | 54 | 5MU | C4-N3 | -2.59 | 1.34 | 1.38 |
| 1 | B5 | 1632 | PSU | C4-N3 | -2.57 | 1.34 | 1.38 |
| 52 | A2 | 1443 | OMU | C4-N3 | -2.54 | 1.34 | 1.38 |
| 52 | A2 | 121 | OMU | C4-N3 | -2.53 | 1.34 | 1.38 |
| 1 | B5 | 4244 | OMU | C4-N3 | -2.53 | 1.34 | 1.38 |
| 1 | B5 | 4052 | OMU | C4-N3 | -2.53 | 1.34 | 1.38 |
| 1 | B5 | 2258 | OMU | C4-N3 | -2.53 | 1.34 | 1.38 |
| 1 | B5 | 4366 | OMU | C4-N3 | -2.52 | 1.34 | 1.38 |
| 52 | A2 | 355 | OMU | C4-N3 | -2.52 | 1.34 | 1.38 |
| 1 | B5 | 3973 | OMU | C4-N3 | -2.52 | 1.34 | 1.38 |
| 52 | A2 | 591 | A2M | C5-C4 | 2.52 | 1.47 | 1.40 |
| 52 | A2 | 1805 | OMU | C4-N3 | -2.50 | 1.34 | 1.38 |
| 1 | B5 | 2680 | OMU | C4-N3 | -2.49 | 1.34 | 1.38 |
| 52 | A2 | 172 | OMU | C4-N3 | -2.48 | 1.34 | 1.38 |
| 1 | B5 | 3492 | A2M | C5-C4 | 2.48 | 1.47 | 1.40 |
| 1 | B5 | 2719 | OMG | C6-N1 | -2.48 | 1.34 | 1.37 |
| 52 | A2 | 429 | OMU | C4-N3 | -2.48 | 1.34 | 1.38 |
| 1 | B5 | 3524 | OMG | C6-N1 | -2.48 | 1.34 | 1.37 |
| 52 | A2 | 1491 | OMG | C6-N1 | -2.48 | 1.34 | 1.37 |
| 1 | B5 | 4383 | OMG | C6-N1 | -2.47 | 1.34 | 1.37 |
| 52 | A2 | 510 | OMG | C6-N1 | -2.47 | 1.34 | 1.37 |
| 1 | B5 | 3942 | OMG | C6-N1 | -2.47 | 1.34 | 1.37 |
| 52 | A2 | 116 | OMU | C4-N3 | -2.46 | 1.34 | 1.38 |
| 1 | B5 | 4317 | A2M | C5-C4 | 2.46 | 1.47 | 1.40 |
| 1 | B5 | 4116 | OMG | C6-N1 | -2.46 | 1.34 | 1.37 |
| 52 | A2 | 166 | A2M | C5-C4 | 2.46 | 1.47 | 1.40 |
| 52 | A2 | 1289 | OMU | C4-N3 | -2.46 | 1.34 | 1.38 |
| 1 | B5 | 1580 | OMG | C6-N1 | -2.46 | 1.34 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 52 | A2 | 1833 | 6MZ | C5-C4 | 2.46 | 1.47 | 1.40 |
| 1 | B5 | 2206 | A2M | C5-C4 | 2.46 | 1.47 | 1.40 |
| 52 | A2 | 1249 | B8N | C2-N3 | -2.46 | 1.34 | 1.38 |
| 1 | B5 | 4240 | OMG | C6-N1 | -2.46 | 1.34 | 1.37 |
| 52 | A2 | 577 | A2M | C5-C4 | 2.46 | 1.47 | 1.40 |
| 52 | A2 | 469 | A2M | C5-C4 | 2.45 | 1.47 | 1.40 |
| 1 | B5 | 1477 | OMG | C6-N1 | -2.45 | 1.34 | 1.37 |
| 1 | B5 | 400 | A2M | C5-C4 | 2.45 | 1.47 | 1.40 |
| 52 | A2 | 513 | A2M | C5-C4 | 2.45 | 1.47 | 1.40 |
| 52 | A2 | 1384 | A2M | C5-C4 | 2.45 | 1.47 | 1.40 |
| 52 | A2 | 159 | A2M | C5-C4 | 2.45 | 1.47 | 1.40 |
| 52 | A2 | 602 | OMG | C6-N1 | -2.45 | 1.34 | 1.37 |
| 1 | B5 | 2658 | A2M | C5-C4 | 2.45 | 1.47 | 1.40 |
| 1 | B5 | 3450 | A2M | C5-C4 | 2.45 | 1.47 | 1.40 |
| 1 | B5 | 2630 | A2M | C5-C4 | 2.45 | 1.47 | 1.40 |
| 52 | A2 | 485 | A2M | C5-C4 | 2.45 | 1.47 | 1.40 |
| 1 | B5 | 398 | A2M | C5-C4 | 2.45 | 1.47 | 1.40 |
| 1 | B5 | 1479 | A2M | C5-C4 | 2.44 | 1.47 | 1.40 |
| 52 | A2 | 99 | A2M | C5-C4 | 2.44 | 1.47 | 1.40 |
| 1 | B5 | 1260 | OMG | C6-N1 | -2.44 | 1.34 | 1.37 |
| 1 | B5 | 3966 | 6MZ | C5-C4 | 2.44 | 1.47 | 1.40 |
| 52 | A2 | 1327 | OMU | C4-N3 | -2.43 | 1.34 | 1.38 |
| 1 | B5 | 3476 | OMG | C6-N1 | -2.43 | 1.34 | 1.37 |
| 1 | B5 | 3562 | A2M | C5-C4 | 2.43 | 1.47 | 1.40 |
| 1 | B5 | 3456 | A2M | C5-C4 | 2.43 | 1.47 | 1.40 |
| 1 | B5 | 4336 | A2M | C5-C4 | 2.43 | 1.47 | 1.40 |
| 52 | A2 | 645 | OMG | C6-N1 | -2.43 | 1.34 | 1.37 |
| 1 | B5 | 3359 | OMG | C6-N1 | -2.43 | 1.34 | 1.37 |
| 1 | B5 | 2267 | OMG | C6-N1 | -2.43 | 1.34 | 1.37 |
| 52 | A2 | 27 | A2M | C5-C4 | 2.43 | 1.47 | 1.40 |
| 1 | B5 | 2244 | A2M | C5-C4 | 2.43 | 1.47 | 1.40 |
| 1 | B5 | 3599 | A2M | C5-C4 | 2.43 | 1.47 | 1.40 |
| 52 | A2 | 1448 | OMG | C6-N1 | -2.43 | 1.34 | 1.37 |
| 52 | A2 | 1679 | A2M | C5-C4 | 2.43 | 1.47 | 1.40 |
| 1 | B5 | 4364 | OMG | C6-N1 | -2.43 | 1.34 | 1.37 |
| 52 | A2 | 628 | OMU | C4-N3 | -2.43 | 1.34 | 1.38 |
| 1 | B5 | 4369 | OMG | C6-N1 | -2.42 | 1.34 | 1.37 |
| 3 | B8 | 75 | OMG | C6-N1 | -2.42 | 1.34 | 1.37 |
| 1 | B5 | 1810 | A2M | C5-C4 | 2.42 | 1.47 | 1.40 |
| 1 | B5 | 4245 | OMG | C6-N1 | -2.42 | 1.34 | 1.37 |
| 52 | A2 | 1329 | OMG | C6-N1 | -2.42 | 1.34 | 1.37 |
| 1 | B5 | 2207 | OMG | C6-N1 | -2.42 | 1.34 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 1 | B5 | 3557 | A2M | C5-C4 | 2.42 | 1.47 | 1.40 |
| 1 | B5 | 4138 | OMG | C6-N1 | -2.42 | 1.34 | 1.37 |
| 1 | B5 | 3631 | OMG | C6-N1 | -2.41 | 1.34 | 1.37 |
| 1 | B5 | 1270 | A2M | C5-C4 | 2.41 | 1.47 | 1.40 |
| 1 | B5 | 3974 | OMG | C6-N1 | -2.41 | 1.34 | 1.37 |
| 52 | A2 | 437 | OMG | C6-N1 | -2.41 | 1.34 | 1.37 |
| 52 | A2 | 1032 | A2M | C5-C4 | 2.40 | 1.47 | 1.40 |
| 52 | A2 | 684 | OMG | C6-N1 | -2.40 | 1.34 | 1.37 |
| 1 | B5 | 4269 | A2M | C5-C4 | 2.40 | 1.47 | 1.40 |
| 1 | B5 | 1489 | A2M | C5-C4 | 2.40 | 1.47 | 1.40 |
| 52 | A2 | 669 | A2M | C5-C4 | 2.40 | 1.47 | 1.40 |
| 1 | B5 | 3676 | OMG | C6-N1 | -2.40 | 1.34 | 1.37 |
| 52 | A2 | 868 | OMG | C6-N1 | -2.38 | 1.34 | 1.37 |
| 61 | AT | 54 | 5MU | C4-C5 | 2.35 | 1.48 | 1.44 |
| 1 | B5 | 3517 | A2M | C5-C4 | 2.33 | 1.47 | 1.40 |
| 1 | B5 | 3514 | 5MC | C6-N1 | -2.32 | 1.34 | 1.38 |
| 1 | B5 | 4193 | 5MC | C6-N1 | -2.28 | 1.34 | 1.38 |
| 1 | B5 | 3657 | OMU | C2-N3 | -2.27 | 1.33 | 1.38 |
| 61 | AT | 54 | 5MU | C2-N1 | 2.24 | 1.42 | 1.38 |
| 52 | A2 | 1443 | OMU | C2-N1 | 2.23 | 1.42 | 1.38 |
| 52 | A2 | 1843 | 4AC | C7-N4 | -2.23 | 1.33 | 1.37 |
| 61 | AT | 54 | 5MU | C6-N1 | -2.23 | 1.34 | 1.38 |
| 1 | B5 | 3550 | UY1 | C6-N1 | -2.19 | 1.32 | 1.36 |
| 1 | B5 | 3973 | OMU | C2-N3 | -2.18 | 1.34 | 1.38 |
| 1 | B5 | 4244 | OMU | C2-N3 | -2.18 | 1.34 | 1.38 |
| 52 | A2 | 355 | OMU | C2-N3 | -2.18 | 1.34 | 1.38 |
| 1 | B5 | 4366 | OMU | C2-N3 | -2.16 | 1.34 | 1.38 |
| 1 | B5 | 2258 | OMU | C2-N3 | -2.16 | 1.34 | 1.38 |
| 1 | B5 | 2680 | OMU | C2-N3 | -2.15 | 1.34 | 1.38 |
| 1 | B5 | 4052 | OMU | C2-N3 | -2.14 | 1.34 | 1.38 |
| 52 | A2 | 121 | OMU | C2-N3 | -2.14 | 1.34 | 1.38 |
| 52 | A2 | 1327 | OMU | C2-N3 | -2.13 | 1.34 | 1.38 |
| 52 | A2 | 1443 | OMU | C2-N3 | -2.13 | 1.34 | 1.38 |
| 52 | A2 | 172 | OMU | C2-N3 | -2.13 | 1.34 | 1.38 |
| 52 | A2 | 628 | OMU | C2-N3 | -2.12 | 1.34 | 1.38 |
| 52 | A2 | 429 | OMU | C2-N3 | -2.12 | 1.34 | 1.38 |
| 52 | A2 | 1805 | OMU | C2-N3 | -2.11 | 1.34 | 1.38 |
| 76 | An | 138 | 5F0 | OD1-CXT | -2.11 | 1.40 | 1.45 |
| 52 | A2 | 1852 | MA6 | C4-N3 | -2.10 | 1.32 | 1.35 |
| 52 | A2 | 116 | OMU | C2-N3 | -2.10 | 1.34 | 1.38 |
| 52 | A2 | 1805 | OMU | C2-N1 | 2.10 | 1.41 | 1.38 |
| 52 | A2 | 1289 | OMU | C2-N1 | 2.10 | 1.41 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 52 | A2 | 1289 | OMU | C2-N3 | -2.09 | 1.34 | 1.38 |
| 52 | A2 | 1851 | MA6 | C4-N3 | -2.08 | 1.32 | 1.35 |
| 52 | A2 | 116 | OMU | C5-C4 | -2.02 | 1.39 | 1.43 |
| 52 | A2 | 429 | OMU | C2-N1 | 2.01 | 1.41 | 1.38 |
| 1 | B5 | 3973 | OMU | C2-N1 | 2.01 | 1.41 | 1.38 |
| 52 | A2 | 121 | OMU | C5-C4 | -2.00 | 1.39 | 1.43 |

All (554) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|----------|------|-------------|----------|
| 1 | B5 | 1491 | PSU | N1-C2-N3 | 6.08 | 122.02 | 115.13 |
| 1 | B5 | 4267 | PSU | N1-C2-N3 | 6.08 | 122.02 | 115.13 |
| 1 | B5 | 3494 | PSU | N1-C2-N3 | 6.06 | 122.00 | 115.13 |
| 1 | B5 | 4042 | PSU | N1-C2-N3 | 6.05 | 121.98 | 115.13 |
| 1 | B5 | 4246 | PSU | N1-C2-N3 | 6.04 | 121.98 | 115.13 |
| 1 | B5 | 4374 | PSU | N1-C2-N3 | 6.04 | 121.97 | 115.13 |
| 52 | A2 | 650 | PSU | N1-C2-N3 | 6.04 | 121.97 | 115.13 |
| 1 | B5 | 4149 | PSU | N1-C2-N3 | 6.04 | 121.97 | 115.13 |
| 1 | B5 | 3369 | PSU | N1-C2-N3 | 6.02 | 121.95 | 115.13 |
| 1 | B5 | 4435 | PSU | N1-C2-N3 | 6.02 | 121.95 | 115.13 |
| 1 | B5 | 4188 | PSU | N1-C2-N3 | 6.02 | 121.94 | 115.13 |
| 1 | B5 | 2475 | PSU | N1-C2-N3 | 6.01 | 121.94 | 115.13 |
| 1 | B5 | 4298 | PSU | N1-C2-N3 | 6.01 | 121.94 | 115.13 |
| 1 | B5 | 3496 | PSU | N1-C2-N3 | 6.01 | 121.94 | 115.13 |
| 1 | B5 | 4039 | PSU | N1-C2-N3 | 6.00 | 121.93 | 115.13 |
| 52 | A2 | 1178 | PSU | N1-C2-N3 | 6.00 | 121.93 | 115.13 |
| 3 | B8 | 69 | PSU | N1-C2-N3 | 6.00 | 121.93 | 115.13 |
| 1 | B5 | 1721 | PSU | N1-C2-N3 | 6.00 | 121.93 | 115.13 |
| 52 | A2 | 687 | PSU | N1-C2-N3 | 6.00 | 121.92 | 115.13 |
| 1 | B5 | 4749 | PSU | N1-C2-N3 | 6.00 | 121.92 | 115.13 |
| 1 | B5 | 3616 | PSU | N1-C2-N3 | 6.00 | 121.92 | 115.13 |
| 1 | B5 | 4382 | PSU | N1-C2-N3 | 6.00 | 121.92 | 115.13 |
| 52 | A2 | 1693 | PSU | N1-C2-N3 | 5.99 | 121.92 | 115.13 |
| 52 | A2 | 867 | PSU | N1-C2-N3 | 5.99 | 121.92 | 115.13 |
| 52 | A2 | 1175 | PSU | N1-C2-N3 | 5.99 | 121.92 | 115.13 |
| 52 | A2 | 652 | PSU | N1-C2-N3 | 5.99 | 121.92 | 115.13 |
| 1 | B5 | 4322 | PSU | N1-C2-N3 | 5.99 | 121.92 | 115.13 |
| 52 | A2 | 407 | PSU | N1-C2-N3 | 5.99 | 121.91 | 115.13 |
| 1 | B5 | 1731 | PSU | N1-C2-N3 | 5.99 | 121.91 | 115.13 |
| 1 | B5 | 4099 | PSU | N1-C2-N3 | 5.99 | 121.91 | 115.13 |
| 61 | AT | 55 | PSU | N1-C2-N3 | 5.98 | 121.91 | 115.13 |
| 52 | A2 | 816 | PSU | N1-C2-N3 | 5.98 | 121.91 | 115.13 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|----------|------|-------------|----------|
| 1 | B5 | 3502 | PSU | N1-C2-N3 | 5.98 | 121.91 | 115.13 |
| 1 | B5 | 4058 | PSU | N1-C2-N3 | 5.98 | 121.91 | 115.13 |
| 52 | A2 | 1057 | PSU | N1-C2-N3 | 5.98 | 121.91 | 115.13 |
| 52 | A2 | 802 | PSU | N1-C2-N3 | 5.98 | 121.91 | 115.13 |
| 3 | B8 | 55 | PSU | N1-C2-N3 | 5.98 | 121.91 | 115.13 |
| 1 | B5 | 4203 | PSU | N1-C2-N3 | 5.98 | 121.90 | 115.13 |
| 1 | B5 | 4711 | PSU | N1-C2-N3 | 5.98 | 121.90 | 115.13 |
| 52 | A2 | 93 | PSU | N1-C2-N3 | 5.98 | 121.90 | 115.13 |
| 52 | A2 | 823 | PSU | N1-C2-N3 | 5.98 | 121.90 | 115.13 |
| 1 | B5 | 3652 | PSU | N1-C2-N3 | 5.98 | 121.90 | 115.13 |
| 1 | B5 | 1799 | PSU | N1-C2-N3 | 5.97 | 121.90 | 115.13 |
| 1 | B5 | 2351 | PSU | N1-C2-N3 | 5.97 | 121.90 | 115.13 |
| 1 | B5 | 4045 | PSU | N1-C2-N3 | 5.97 | 121.90 | 115.13 |
| 52 | A2 | 967 | PSU | N1-C2-N3 | 5.97 | 121.90 | 115.13 |
| 1 | B5 | 3427 | PSU | N1-C2-N3 | 5.97 | 121.90 | 115.13 |
| 52 | A2 | 682 | PSU | N1-C2-N3 | 5.97 | 121.89 | 115.13 |
| 1 | B5 | 3490 | PSU | N1-C2-N3 | 5.97 | 121.89 | 115.13 |
| 1 | B5 | 3576 | PSU | N1-C2-N3 | 5.97 | 121.89 | 115.13 |
| 1 | B5 | 1537 | PSU | N1-C2-N3 | 5.97 | 121.89 | 115.13 |
| 52 | A2 | 109 | PSU | N1-C2-N3 | 5.96 | 121.89 | 115.13 |
| 1 | B5 | 1720 | PSU | N1-C2-N3 | 5.96 | 121.89 | 115.13 |
| 1 | B5 | 4169 | PSU | N1-C2-N3 | 5.96 | 121.89 | 115.13 |
| 52 | A2 | 1368 | PSU | N1-C2-N3 | 5.96 | 121.89 | 115.13 |
| 52 | A2 | 1245 | PSU | N1-C2-N3 | 5.96 | 121.88 | 115.13 |
| 52 | A2 | 1644 | PSU | N1-C2-N3 | 5.96 | 121.88 | 115.13 |
| 52 | A2 | 1348 | PSU | N1-C2-N3 | 5.96 | 121.88 | 115.13 |
| 1 | B5 | 1632 | PSU | N1-C2-N3 | 5.96 | 121.88 | 115.13 |
| 1 | B5 | 1638 | PSU | N1-C2-N3 | 5.96 | 121.88 | 115.13 |
| 52 | A2 | 1046 | PSU | N1-C2-N3 | 5.95 | 121.88 | 115.13 |
| 1 | B5 | 4419 | PSU | N1-C2-N3 | 5.95 | 121.88 | 115.13 |
| 52 | A2 | 610 | PSU | N1-C2-N3 | 5.95 | 121.88 | 115.13 |
| 52 | A2 | 864 | PSU | N1-C2-N3 | 5.95 | 121.88 | 115.13 |
| 52 | A2 | 34 | PSU | N1-C2-N3 | 5.95 | 121.87 | 115.13 |
| 52 | A2 | 1047 | PSU | N1-C2-N3 | 5.95 | 121.87 | 115.13 |
| 52 | A2 | 1626 | PSU | N1-C2-N3 | 5.95 | 121.87 | 115.13 |
| 1 | B5 | 3447 | PSU | N1-C2-N3 | 5.95 | 121.87 | 115.13 |
| 52 | A2 | 105 | PSU | N1-C2-N3 | 5.95 | 121.87 | 115.13 |
| 52 | A2 | 1446 | PSU | N1-C2-N3 | 5.95 | 121.87 | 115.13 |
| 1 | B5 | 3500 | PSU | N1-C2-N3 | 5.95 | 121.87 | 115.13 |
| 1 | B5 | 3554 | PSU | N1-C2-N3 | 5.95 | 121.87 | 115.13 |
| 1 | B5 | 3462 | PSU | N1-C2-N3 | 5.95 | 121.87 | 115.13 |
| 1 | B5 | 3585 | PSU | N1-C2-N3 | 5.95 | 121.87 | 115.13 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1 | B5 | 1718 | PSU | N1-C2-N3 | 5.95 | 121.87 | 115.13 |
| 52 | A2 | 218 | PSU | N1-C2-N3 | 5.94 | 121.86 | 115.13 |
| 1 | B5 | 3371 | PSU | N1-C2-N3 | 5.94 | 121.86 | 115.13 |
| 52 | A2 | 1239 | PSU | N1-C2-N3 | 5.94 | 121.86 | 115.13 |
| 1 | B5 | 4325 | PSU | N1-C2-N3 | 5.94 | 121.86 | 115.13 |
| 1 | B5 | 1801 | PSU | N1-C2-N3 | 5.94 | 121.86 | 115.13 |
| 52 | A2 | 36 | PSU | N1-C2-N3 | 5.93 | 121.85 | 115.13 |
| 52 | A2 | 573 | PSU | N1-C2-N3 | 5.93 | 121.85 | 115.13 |
| 1 | B5 | 4217 | PSU | N1-C2-N3 | 5.93 | 121.85 | 115.13 |
| 1 | B5 | 4740 | PSU | N1-C2-N3 | 5.93 | 121.85 | 115.13 |
| 1 | B5 | 3583 | PSU | N1-C2-N3 | 5.93 | 121.85 | 115.13 |
| 1 | B5 | 4107 | PSU | N1-C2-N3 | 5.92 | 121.84 | 115.13 |
| 52 | A2 | 1233 | PSU | N1-C2-N3 | 5.92 | 121.84 | 115.13 |
| 1 | B5 | 4177 | PSU | N1-C2-N3 | 5.92 | 121.83 | 115.13 |
| 52 | A2 | 815 | PSU | N1-C2-N3 | 5.92 | 121.83 | 115.13 |
| 1 | B5 | 1683 | PSU | N1-C2-N3 | 5.92 | 121.83 | 115.13 |
| 52 | A2 | 1005 | PSU | N1-C2-N3 | 5.91 | 121.83 | 115.13 |
| 1 | B5 | 3466 | PSU | N1-C2-N3 | 5.91 | 121.83 | 115.13 |
| 1 | B5 | 3966 | 6MZ | C2-N1-C6 | 5.91 | 121.66 | 116.59 |
| 52 | A2 | 210 | PSU | N1-C2-N3 | 5.90 | 121.82 | 115.13 |
| 1 | B5 | 4166 | PSU | N1-C2-N3 | 5.89 | 121.81 | 115.13 |
| 52 | A2 | 1082 | PSU | N1-C2-N3 | 5.89 | 121.81 | 115.13 |
| 52 | A2 | 119 | PSU | N1-C2-N3 | 5.89 | 121.80 | 115.13 |
| 1 | B5 | 4278 | PSU | N1-C2-N3 | 5.88 | 121.79 | 115.13 |
| 1 | B5 | 4276 | UR3 | C4-N3-C2 | -5.81 | 119.10 | 124.56 |
| 52 | A2 | 1851 | MA6 | C4-C5-N7 | -5.71 | 103.45 | 109.40 |
| 52 | A2 | 1852 | MA6 | C4-C5-N7 | -5.64 | 103.52 | 109.40 |
| 52 | A2 | 1833 | 6MZ | C2-N1-C6 | 5.62 | 121.41 | 116.59 |
| 1 | B5 | 3550 | UY1 | C4-N3-C2 | -5.24 | 118.80 | 126.34 |
| 61 | AT | 54 | 5MU | C4-N3-C2 | -5.06 | 120.80 | 127.35 |
| 52 | A2 | 1843 | 4AC | N4-C4-N3 | 4.86 | 122.01 | 113.85 |
| 61 | AT | 54 | 5MU | N3-C2-N1 | 4.82 | 121.28 | 114.89 |
| 1 | B5 | 3657 | OMU | C4-N3-C2 | -4.61 | 120.49 | 126.58 |
| 52 | A2 | 1851 | MA6 | C1'-N9-C4 | -4.55 | 118.65 | 126.64 |
| 52 | A2 | 1327 | OMU | C4-N3-C2 | -4.51 | 120.64 | 126.58 |
| 1 | B5 | 4244 | OMU | C4-N3-C2 | -4.51 | 120.64 | 126.58 |
| 1 | B5 | 2680 | OMU | C4-N3-C2 | -4.49 | 120.65 | 126.58 |
| 52 | A2 | 628 | OMU | C4-N3-C2 | -4.49 | 120.66 | 126.58 |
| 1 | B5 | 3973 | OMU | C4-N3-C2 | -4.46 | 120.69 | 126.58 |
| 52 | A2 | 1338 | 4AC | N4-C4-N3 | 4.46 | 121.34 | 113.85 |
| 1 | B5 | 4366 | OMU | C4-N3-C2 | -4.46 | 120.70 | 126.58 |
| 52 | A2 | 172 | OMU | C4-N3-C2 | -4.44 | 120.72 | 126.58 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 52 | A2 | 355 | OMU | C4-N3-C2 | -4.42 | 120.75 | 126.58 |
| 1 | B5 | 2258 | OMU | C4-N3-C2 | -4.42 | 120.75 | 126.58 |
| 61 | AT | 54 | 5MU | C5-C4-N3 | 4.41 | 119.07 | 115.31 |
| 52 | A2 | 121 | OMU | C4-N3-C2 | -4.38 | 120.80 | 126.58 |
| 52 | A2 | 429 | OMU | C4-N3-C2 | -4.36 | 120.83 | 126.58 |
| 52 | A2 | 116 | OMU | C4-N3-C2 | -4.33 | 120.87 | 126.58 |
| 52 | A2 | 1852 | MA6 | C1'-N9-C4 | -4.33 | 119.04 | 126.64 |
| 52 | A2 | 1805 | OMU | C4-N3-C2 | -4.32 | 120.88 | 126.58 |
| 52 | A2 | 1851 | MA6 | N3-C2-N1 | -4.31 | 121.94 | 128.68 |
| 52 | A2 | 1289 | OMU | C4-N3-C2 | -4.29 | 120.92 | 126.58 |
| 1 | B5 | 4052 | OMU | C4-N3-C2 | -4.28 | 120.93 | 126.58 |
| 1 | B5 | 3657 | OMU | N3-C2-N1 | 4.24 | 120.52 | 114.89 |
| 52 | A2 | 1443 | OMU | C4-N3-C2 | -4.23 | 121.01 | 126.58 |
| 52 | A2 | 1852 | MA6 | N3-C2-N1 | -4.22 | 122.08 | 128.68 |
| 1 | B5 | 3550 | UY1 | N1-C2-N3 | 4.18 | 119.87 | 115.13 |
| 1 | B5 | 4244 | OMU | N3-C2-N1 | 4.15 | 120.40 | 114.89 |
| 1 | B5 | 2680 | OMU | N3-C2-N1 | 4.13 | 120.38 | 114.89 |
| 1 | B5 | 3973 | OMU | N3-C2-N1 | 4.10 | 120.33 | 114.89 |
| 1 | B5 | 4366 | OMU | N3-C2-N1 | 4.10 | 120.33 | 114.89 |
| 52 | A2 | 355 | OMU | N3-C2-N1 | 4.08 | 120.30 | 114.89 |
| 52 | A2 | 429 | OMU | N3-C2-N1 | 4.06 | 120.29 | 114.89 |
| 52 | A2 | 121 | OMU | N3-C2-N1 | 4.06 | 120.28 | 114.89 |
| 52 | A2 | 628 | OMU | N3-C2-N1 | 4.06 | 120.28 | 114.89 |
| 52 | A2 | 172 | OMU | N3-C2-N1 | 4.06 | 120.28 | 114.89 |
| 52 | A2 | 1327 | OMU | N3-C2-N1 | 4.06 | 120.27 | 114.89 |
| 1 | B5 | 2258 | OMU | N3-C2-N1 | 4.05 | 120.27 | 114.89 |
| 52 | A2 | 1805 | OMU | N3-C2-N1 | 4.04 | 120.25 | 114.89 |
| 1 | B5 | 3616 | PSU | C4-N3-C2 | -4.01 | 120.56 | 126.34 |
| 1 | B5 | 4042 | PSU | C4-N3-C2 | -4.01 | 120.56 | 126.34 |
| 52 | A2 | 1443 | OMU | N3-C2-N1 | 4.01 | 120.21 | 114.89 |
| 1 | B5 | 4052 | OMU | N3-C2-N1 | 4.00 | 120.20 | 114.89 |
| 52 | A2 | 116 | OMU | N3-C2-N1 | 3.99 | 120.19 | 114.89 |
| 1 | B5 | 3369 | PSU | C4-N3-C2 | -3.99 | 120.58 | 126.34 |
| 1 | B5 | 1491 | PSU | C4-N3-C2 | -3.99 | 120.60 | 126.34 |
| 52 | A2 | 1289 | OMU | N3-C2-N1 | 3.98 | 120.17 | 114.89 |
| 1 | B5 | 4298 | PSU | C4-N3-C2 | -3.95 | 120.64 | 126.34 |
| 1 | B5 | 1731 | PSU | C4-N3-C2 | -3.95 | 120.64 | 126.34 |
| 1 | B5 | 4267 | PSU | C4-N3-C2 | -3.95 | 120.64 | 126.34 |
| 1 | B5 | 4039 | PSU | C4-N3-C2 | -3.95 | 120.65 | 126.34 |
| 1 | B5 | 1721 | PSU | C4-N3-C2 | -3.95 | 120.65 | 126.34 |
| 1 | B5 | 4246 | PSU | C4-N3-C2 | -3.95 | 120.65 | 126.34 |
| 52 | A2 | 652 | PSU | C4-N3-C2 | -3.94 | 120.66 | 126.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|----------|-------|-------------|----------|
| 52 | A2 | 93 | PSU | C4-N3-C2 | -3.94 | 120.67 | 126.34 |
| 1 | B5 | 4188 | PSU | C4-N3-C2 | -3.94 | 120.67 | 126.34 |
| 52 | A2 | 816 | PSU | C4-N3-C2 | -3.93 | 120.67 | 126.34 |
| 1 | B5 | 4149 | PSU | C4-N3-C2 | -3.93 | 120.67 | 126.34 |
| 1 | B5 | 3490 | PSU | C4-N3-C2 | -3.93 | 120.67 | 126.34 |
| 52 | A2 | 407 | PSU | C4-N3-C2 | -3.93 | 120.68 | 126.34 |
| 1 | B5 | 4099 | PSU | C4-N3-C2 | -3.93 | 120.68 | 126.34 |
| 52 | A2 | 1178 | PSU | C4-N3-C2 | -3.93 | 120.68 | 126.34 |
| 1 | B5 | 4749 | PSU | C4-N3-C2 | -3.93 | 120.68 | 126.34 |
| 61 | AT | 55 | PSU | C4-N3-C2 | -3.93 | 120.68 | 126.34 |
| 1 | B5 | 4711 | PSU | C4-N3-C2 | -3.92 | 120.68 | 126.34 |
| 1 | B5 | 4419 | PSU | C4-N3-C2 | -3.92 | 120.69 | 126.34 |
| 1 | B5 | 3502 | PSU | C4-N3-C2 | -3.92 | 120.69 | 126.34 |
| 1 | B5 | 4322 | PSU | C4-N3-C2 | -3.92 | 120.69 | 126.34 |
| 3 | B8 | 69 | PSU | C4-N3-C2 | -3.92 | 120.69 | 126.34 |
| 1 | B5 | 3496 | PSU | C4-N3-C2 | -3.92 | 120.69 | 126.34 |
| 52 | A2 | 1175 | PSU | C4-N3-C2 | -3.92 | 120.70 | 126.34 |
| 1 | B5 | 4203 | PSU | C4-N3-C2 | -3.92 | 120.70 | 126.34 |
| 1 | B5 | 3427 | PSU | C4-N3-C2 | -3.91 | 120.70 | 126.34 |
| 52 | A2 | 650 | PSU | C4-N3-C2 | -3.91 | 120.70 | 126.34 |
| 52 | A2 | 1368 | PSU | C4-N3-C2 | -3.91 | 120.70 | 126.34 |
| 52 | A2 | 1446 | PSU | C4-N3-C2 | -3.91 | 120.71 | 126.34 |
| 52 | A2 | 1245 | PSU | C4-N3-C2 | -3.91 | 120.71 | 126.34 |
| 1 | B5 | 1801 | PSU | C4-N3-C2 | -3.91 | 120.71 | 126.34 |
| 1 | B5 | 1638 | PSU | C4-N3-C2 | -3.90 | 120.71 | 126.34 |
| 52 | A2 | 687 | PSU | C4-N3-C2 | -3.90 | 120.72 | 126.34 |
| 1 | B5 | 2351 | PSU | C4-N3-C2 | -3.90 | 120.72 | 126.34 |
| 1 | B5 | 4107 | PSU | C4-N3-C2 | -3.90 | 120.72 | 126.34 |
| 52 | A2 | 1057 | PSU | C4-N3-C2 | -3.90 | 120.72 | 126.34 |
| 52 | A2 | 1348 | PSU | C4-N3-C2 | -3.90 | 120.72 | 126.34 |
| 1 | B5 | 1718 | PSU | C4-N3-C2 | -3.89 | 120.73 | 126.34 |
| 1 | B5 | 1683 | PSU | C4-N3-C2 | -3.89 | 120.73 | 126.34 |
| 3 | B8 | 55 | PSU | C4-N3-C2 | -3.89 | 120.73 | 126.34 |
| 52 | A2 | 864 | PSU | C4-N3-C2 | -3.89 | 120.73 | 126.34 |
| 52 | A2 | 1046 | PSU | C4-N3-C2 | -3.89 | 120.73 | 126.34 |
| 52 | A2 | 1693 | PSU | C4-N3-C2 | -3.89 | 120.74 | 126.34 |
| 1 | B5 | 1720 | PSU | C4-N3-C2 | -3.89 | 120.74 | 126.34 |
| 52 | A2 | 1239 | PSU | C4-N3-C2 | -3.89 | 120.74 | 126.34 |
| 1 | B5 | 1799 | PSU | C4-N3-C2 | -3.89 | 120.74 | 126.34 |
| 52 | A2 | 109 | PSU | C4-N3-C2 | -3.88 | 120.75 | 126.34 |
| 52 | A2 | 867 | PSU | C4-N3-C2 | -3.88 | 120.75 | 126.34 |
| 1 | B5 | 3466 | PSU | C4-N3-C2 | -3.88 | 120.75 | 126.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|----------|-------|-------------|----------|
| 52 | A2 | 1644 | PSU | C4-N3-C2 | -3.88 | 120.75 | 126.34 |
| 52 | A2 | 1233 | PSU | C4-N3-C2 | -3.88 | 120.75 | 126.34 |
| 1 | B5 | 1537 | PSU | C4-N3-C2 | -3.88 | 120.75 | 126.34 |
| 52 | A2 | 1047 | PSU | C4-N3-C2 | -3.88 | 120.75 | 126.34 |
| 52 | A2 | 36 | PSU | C4-N3-C2 | -3.87 | 120.76 | 126.34 |
| 1 | B5 | 4740 | PSU | C4-N3-C2 | -3.87 | 120.76 | 126.34 |
| 52 | A2 | 802 | PSU | C4-N3-C2 | -3.87 | 120.76 | 126.34 |
| 1 | B5 | 2475 | PSU | C4-N3-C2 | -3.87 | 120.76 | 126.34 |
| 52 | A2 | 682 | PSU | C4-N3-C2 | -3.87 | 120.77 | 126.34 |
| 1 | B5 | 4058 | PSU | C4-N3-C2 | -3.87 | 120.77 | 126.34 |
| 52 | A2 | 573 | PSU | C4-N3-C2 | -3.87 | 120.77 | 126.34 |
| 1 | B5 | 4374 | PSU | C4-N3-C2 | -3.86 | 120.77 | 126.34 |
| 52 | A2 | 610 | PSU | C4-N3-C2 | -3.86 | 120.78 | 126.34 |
| 52 | A2 | 1626 | PSU | C4-N3-C2 | -3.86 | 120.78 | 126.34 |
| 1 | B5 | 4045 | PSU | C4-N3-C2 | -3.86 | 120.78 | 126.34 |
| 52 | A2 | 34 | PSU | C4-N3-C2 | -3.86 | 120.78 | 126.34 |
| 1 | B5 | 4217 | PSU | C4-N3-C2 | -3.86 | 120.78 | 126.34 |
| 1 | B5 | 4435 | PSU | C4-N3-C2 | -3.86 | 120.78 | 126.34 |
| 52 | A2 | 218 | PSU | C4-N3-C2 | -3.86 | 120.78 | 126.34 |
| 1 | B5 | 3585 | PSU | C4-N3-C2 | -3.86 | 120.78 | 126.34 |
| 1 | B5 | 4325 | PSU | C4-N3-C2 | -3.85 | 120.79 | 126.34 |
| 1 | B5 | 3462 | PSU | C4-N3-C2 | -3.85 | 120.80 | 126.34 |
| 1 | B5 | 3652 | PSU | C4-N3-C2 | -3.85 | 120.80 | 126.34 |
| 52 | A2 | 1005 | PSU | C4-N3-C2 | -3.84 | 120.80 | 126.34 |
| 1 | B5 | 3447 | PSU | C4-N3-C2 | -3.84 | 120.80 | 126.34 |
| 1 | B5 | 4177 | PSU | C4-N3-C2 | -3.84 | 120.81 | 126.34 |
| 52 | A2 | 967 | PSU | C4-N3-C2 | -3.84 | 120.81 | 126.34 |
| 1 | B5 | 3500 | PSU | C4-N3-C2 | -3.84 | 120.81 | 126.34 |
| 1 | B5 | 4193 | 5MC | C5-C6-N1 | -3.83 | 119.39 | 123.34 |
| 52 | A2 | 105 | PSU | C4-N3-C2 | -3.83 | 120.82 | 126.34 |
| 1 | B5 | 4169 | PSU | C4-N3-C2 | -3.83 | 120.82 | 126.34 |
| 52 | A2 | 815 | PSU | C4-N3-C2 | -3.83 | 120.82 | 126.34 |
| 52 | A2 | 210 | PSU | C4-N3-C2 | -3.83 | 120.83 | 126.34 |
| 1 | B5 | 3494 | PSU | C4-N3-C2 | -3.82 | 120.83 | 126.34 |
| 1 | B5 | 3583 | PSU | C4-N3-C2 | -3.82 | 120.83 | 126.34 |
| 61 | AT | 54 | 5MU | O4-C4-C5 | -3.82 | 120.47 | 124.90 |
| 1 | B5 | 4382 | PSU | C4-N3-C2 | -3.81 | 120.84 | 126.34 |
| 52 | A2 | 119 | PSU | C4-N3-C2 | -3.81 | 120.85 | 126.34 |
| 1 | B5 | 3576 | PSU | C4-N3-C2 | -3.80 | 120.86 | 126.34 |
| 1 | B5 | 3554 | PSU | C4-N3-C2 | -3.80 | 120.87 | 126.34 |
| 1 | B5 | 3371 | PSU | C4-N3-C2 | -3.79 | 120.88 | 126.34 |
| 52 | A2 | 823 | PSU | C4-N3-C2 | -3.78 | 120.89 | 126.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|----------|-------|-------------|----------|
| 1 | B5 | 4278 | PSU | C4-N3-C2 | -3.74 | 120.95 | 126.34 |
| 1 | B5 | 4166 | PSU | C4-N3-C2 | -3.74 | 120.95 | 126.34 |
| 52 | A2 | 1082 | PSU | C4-N3-C2 | -3.73 | 120.97 | 126.34 |
| 1 | B5 | 1632 | PSU | C4-N3-C2 | -3.73 | 120.97 | 126.34 |
| 1 | B5 | 3657 | OMU | C5-C4-N3 | 3.61 | 120.24 | 114.84 |
| 1 | B5 | 2258 | OMU | C5-C4-N3 | 3.59 | 120.21 | 114.84 |
| 52 | A2 | 1327 | OMU | C5-C4-N3 | 3.59 | 120.21 | 114.84 |
| 52 | A2 | 355 | OMU | C5-C4-N3 | 3.58 | 120.20 | 114.84 |
| 52 | A2 | 628 | OMU | C5-C4-N3 | 3.58 | 120.20 | 114.84 |
| 1 | B5 | 3973 | OMU | C5-C4-N3 | 3.58 | 120.20 | 114.84 |
| 1 | B5 | 4149 | PSU | O2-C2-N1 | -3.58 | 118.85 | 122.79 |
| 1 | B5 | 4244 | OMU | C5-C4-N3 | 3.58 | 120.19 | 114.84 |
| 61 | AT | 54 | 5MU | C5-C6-N1 | -3.57 | 119.66 | 123.34 |
| 52 | A2 | 172 | OMU | C5-C4-N3 | 3.57 | 120.18 | 114.84 |
| 1 | B5 | 2680 | OMU | C5-C4-N3 | 3.57 | 120.18 | 114.84 |
| 1 | B5 | 4366 | OMU | C5-C4-N3 | 3.56 | 120.17 | 114.84 |
| 1 | B5 | 4435 | PSU | O2-C2-N1 | -3.56 | 118.87 | 122.79 |
| 52 | A2 | 116 | OMU | C5-C4-N3 | 3.55 | 120.15 | 114.84 |
| 52 | A2 | 429 | OMU | C5-C4-N3 | 3.55 | 120.15 | 114.84 |
| 52 | A2 | 1289 | OMU | C5-C4-N3 | 3.55 | 120.14 | 114.84 |
| 52 | A2 | 121 | OMU | C5-C4-N3 | 3.54 | 120.14 | 114.84 |
| 1 | B5 | 1491 | PSU | O2-C2-N1 | -3.53 | 118.90 | 122.79 |
| 52 | A2 | 1805 | OMU | C5-C4-N3 | 3.52 | 120.11 | 114.84 |
| 1 | B5 | 4374 | PSU | O2-C2-N1 | -3.52 | 118.92 | 122.79 |
| 1 | B5 | 4052 | OMU | C5-C4-N3 | 3.51 | 120.09 | 114.84 |
| 1 | B5 | 4267 | PSU | O2-C2-N1 | -3.51 | 118.93 | 122.79 |
| 1 | B5 | 3494 | PSU | O2-C2-N1 | -3.50 | 118.94 | 122.79 |
| 1 | B5 | 3496 | PSU | O2-C2-N1 | -3.49 | 118.94 | 122.79 |
| 52 | A2 | 1175 | PSU | O2-C2-N1 | -3.49 | 118.95 | 122.79 |
| 52 | A2 | 1443 | OMU | C5-C4-N3 | 3.49 | 120.05 | 114.84 |
| 1 | B5 | 4298 | PSU | O2-C2-N1 | -3.48 | 118.96 | 122.79 |
| 1 | B5 | 3966 | 6MZ | C9-N6-C6 | -3.48 | 119.88 | 122.87 |
| 52 | A2 | 650 | PSU | O2-C2-N1 | -3.47 | 118.97 | 122.79 |
| 1 | B5 | 4246 | PSU | O2-C2-N1 | -3.46 | 118.98 | 122.79 |
| 1 | B5 | 3371 | PSU | O2-C2-N1 | -3.45 | 118.99 | 122.79 |
| 3 | B8 | 55 | PSU | O2-C2-N1 | -3.45 | 118.99 | 122.79 |
| 52 | A2 | 610 | PSU | O2-C2-N1 | -3.44 | 119.00 | 122.79 |
| 1 | B5 | 4749 | PSU | O2-C2-N1 | -3.44 | 119.00 | 122.79 |
| 1 | B5 | 4169 | PSU | O2-C2-N1 | -3.44 | 119.00 | 122.79 |
| 52 | A2 | 867 | PSU | O2-C2-N1 | -3.43 | 119.02 | 122.79 |
| 1 | B5 | 2475 | PSU | O2-C2-N1 | -3.43 | 119.02 | 122.79 |
| 1 | B5 | 1632 | PSU | O2-C2-N1 | -3.42 | 119.02 | 122.79 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|----------|-------|-------------|----------|
| 52 | A2 | 36 | PSU | O2-C2-N1 | -3.42 | 119.02 | 122.79 |
| 52 | A2 | 407 | PSU | O2-C2-N1 | -3.42 | 119.02 | 122.79 |
| 1 | B5 | 1801 | PSU | O2-C2-N1 | -3.42 | 119.02 | 122.79 |
| 52 | A2 | 1245 | PSU | O2-C2-N1 | -3.42 | 119.02 | 122.79 |
| 52 | A2 | 1626 | PSU | O2-C2-N1 | -3.42 | 119.02 | 122.79 |
| 3 | B8 | 69 | PSU | O2-C2-N1 | -3.42 | 119.03 | 122.79 |
| 1 | B5 | 1683 | PSU | O2-C2-N1 | -3.41 | 119.03 | 122.79 |
| 1 | B5 | 4058 | PSU | O2-C2-N1 | -3.41 | 119.03 | 122.79 |
| 1 | B5 | 3554 | PSU | O2-C2-N1 | -3.41 | 119.04 | 122.79 |
| 52 | A2 | 1233 | PSU | O2-C2-N1 | -3.40 | 119.04 | 122.79 |
| 1 | B5 | 1799 | PSU | O2-C2-N1 | -3.40 | 119.05 | 122.79 |
| 1 | B5 | 4188 | PSU | O2-C2-N1 | -3.40 | 119.05 | 122.79 |
| 52 | A2 | 1348 | PSU | O2-C2-N1 | -3.40 | 119.05 | 122.79 |
| 1 | B5 | 1718 | PSU | O2-C2-N1 | -3.40 | 119.05 | 122.79 |
| 1 | B5 | 3616 | PSU | O2-C2-N1 | -3.40 | 119.05 | 122.79 |
| 52 | A2 | 815 | PSU | O2-C2-N1 | -3.39 | 119.05 | 122.79 |
| 52 | A2 | 687 | PSU | O2-C2-N1 | -3.39 | 119.05 | 122.79 |
| 1 | B5 | 4099 | PSU | O2-C2-N1 | -3.39 | 119.05 | 122.79 |
| 1 | B5 | 1537 | PSU | O2-C2-N1 | -3.39 | 119.06 | 122.79 |
| 1 | B5 | 3502 | PSU | O2-C2-N1 | -3.39 | 119.06 | 122.79 |
| 52 | A2 | 573 | PSU | O2-C2-N1 | -3.39 | 119.06 | 122.79 |
| 52 | A2 | 1693 | PSU | O2-C2-N1 | -3.39 | 119.06 | 122.79 |
| 52 | A2 | 1249 | B8N | C4-N3-C2 | -3.39 | 121.17 | 125.46 |
| 52 | A2 | 823 | PSU | O2-C2-N1 | -3.38 | 119.06 | 122.79 |
| 52 | A2 | 1046 | PSU | O2-C2-N1 | -3.38 | 119.07 | 122.79 |
| 52 | A2 | 1644 | PSU | O2-C2-N1 | -3.38 | 119.07 | 122.79 |
| 52 | A2 | 1057 | PSU | O2-C2-N1 | -3.38 | 119.07 | 122.79 |
| 52 | A2 | 1047 | PSU | O2-C2-N1 | -3.38 | 119.07 | 122.79 |
| 1 | B5 | 4325 | PSU | O2-C2-N1 | -3.38 | 119.07 | 122.79 |
| 52 | A2 | 652 | PSU | O2-C2-N1 | -3.38 | 119.07 | 122.79 |
| 52 | A2 | 1446 | PSU | O2-C2-N1 | -3.38 | 119.07 | 122.79 |
| 1 | B5 | 4322 | PSU | O2-C2-N1 | -3.37 | 119.08 | 122.79 |
| 52 | A2 | 1368 | PSU | O2-C2-N1 | -3.37 | 119.08 | 122.79 |
| 1 | B5 | 4203 | PSU | O2-C2-N1 | -3.37 | 119.08 | 122.79 |
| 1 | B5 | 3500 | PSU | O2-C2-N1 | -3.37 | 119.08 | 122.79 |
| 52 | A2 | 105 | PSU | O2-C2-N1 | -3.37 | 119.08 | 122.79 |
| 1 | B5 | 3652 | PSU | O2-C2-N1 | -3.37 | 119.08 | 122.79 |
| 1 | B5 | 2351 | PSU | O2-C2-N1 | -3.37 | 119.08 | 122.79 |
| 52 | A2 | 109 | PSU | O2-C2-N1 | -3.37 | 119.08 | 122.79 |
| 52 | A2 | 93 | PSU | O2-C2-N1 | -3.36 | 119.09 | 122.79 |
| 1 | B5 | 3427 | PSU | O2-C2-N1 | -3.36 | 119.09 | 122.79 |
| 1 | B5 | 3576 | PSU | O2-C2-N1 | -3.36 | 119.09 | 122.79 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 52 | A2 | 210 | PSU | O2-C2-N1 | -3.36 | 119.09 | 122.79 |
| 1 | B5 | 1638 | PSU | O2-C2-N1 | -3.36 | 119.09 | 122.79 |
| 1 | B5 | 3585 | PSU | O2-C2-N1 | -3.36 | 119.09 | 122.79 |
| 1 | B5 | 4711 | PSU | O2-C2-N1 | -3.36 | 119.09 | 122.79 |
| 1 | B5 | 3447 | PSU | O2-C2-N1 | -3.36 | 119.09 | 122.79 |
| 52 | A2 | 119 | PSU | O2-C2-N1 | -3.36 | 119.09 | 122.79 |
| 1 | B5 | 1721 | PSU | O2-C2-N1 | -3.36 | 119.09 | 122.79 |
| 1 | B5 | 3462 | PSU | O2-C2-N1 | -3.35 | 119.10 | 122.79 |
| 1 | B5 | 4166 | PSU | O2-C2-N1 | -3.35 | 119.10 | 122.79 |
| 1 | B5 | 4382 | PSU | O2-C2-N1 | -3.35 | 119.10 | 122.79 |
| 1 | B5 | 4107 | PSU | O2-C2-N1 | -3.35 | 119.11 | 122.79 |
| 52 | A2 | 802 | PSU | O2-C2-N1 | -3.34 | 119.11 | 122.79 |
| 1 | B5 | 1720 | PSU | O2-C2-N1 | -3.34 | 119.11 | 122.79 |
| 1 | B5 | 4419 | PSU | O2-C2-N1 | -3.34 | 119.11 | 122.79 |
| 52 | A2 | 816 | PSU | O2-C2-N1 | -3.34 | 119.11 | 122.79 |
| 1 | B5 | 4278 | PSU | O2-C2-N1 | -3.34 | 119.11 | 122.79 |
| 52 | A2 | 218 | PSU | O2-C2-N1 | -3.34 | 119.11 | 122.79 |
| 1 | B5 | 3490 | PSU | O2-C2-N1 | -3.34 | 119.12 | 122.79 |
| 1 | B5 | 1731 | PSU | O2-C2-N1 | -3.33 | 119.12 | 122.79 |
| 52 | A2 | 864 | PSU | O2-C2-N1 | -3.33 | 119.12 | 122.79 |
| 1 | B5 | 3466 | PSU | O2-C2-N1 | -3.33 | 119.12 | 122.79 |
| 52 | A2 | 1178 | PSU | O2-C2-N1 | -3.33 | 119.12 | 122.79 |
| 1 | B5 | 4217 | PSU | O2-C2-N1 | -3.33 | 119.12 | 122.79 |
| 52 | A2 | 967 | PSU | O2-C2-N1 | -3.33 | 119.12 | 122.79 |
| 76 | An | 138 | 5F0 | OD1-C1-CA | 3.33 | 120.04 | 111.52 |
| 1 | B5 | 4045 | PSU | O2-C2-N1 | -3.33 | 119.13 | 122.79 |
| 52 | A2 | 1005 | PSU | O2-C2-N1 | -3.32 | 119.13 | 122.79 |
| 1 | B5 | 4740 | PSU | O2-C2-N1 | -3.32 | 119.14 | 122.79 |
| 61 | AT | 55 | PSU | O2-C2-N1 | -3.32 | 119.14 | 122.79 |
| 52 | A2 | 682 | PSU | O2-C2-N1 | -3.32 | 119.14 | 122.79 |
| 1 | B5 | 4042 | PSU | O2-C2-N1 | -3.32 | 119.14 | 122.79 |
| 1 | B5 | 4177 | PSU | O2-C2-N1 | -3.32 | 119.14 | 122.79 |
| 52 | A2 | 34 | PSU | O2-C2-N1 | -3.31 | 119.15 | 122.79 |
| 52 | A2 | 1239 | PSU | O2-C2-N1 | -3.29 | 119.17 | 122.79 |
| 1 | B5 | 3369 | PSU | O2-C2-N1 | -3.29 | 119.17 | 122.79 |
| 52 | A2 | 1032 | A2M | N3-C2-N1 | -3.28 | 123.54 | 128.68 |
| 1 | B5 | 3583 | PSU | O2-C2-N1 | -3.27 | 119.19 | 122.79 |
| 1 | B5 | 1489 | A2M | N3-C2-N1 | -3.27 | 123.56 | 128.68 |
| 1 | B5 | 3517 | A2M | N3-C2-N1 | -3.26 | 123.58 | 128.68 |
| 52 | A2 | 591 | A2M | N3-C2-N1 | -3.25 | 123.60 | 128.68 |
| 1 | B5 | 3514 | 5MC | C5-C6-N1 | -3.24 | 120.01 | 123.34 |
| 1 | B5 | 2244 | A2M | N3-C2-N1 | -3.23 | 123.63 | 128.68 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|----------|-------|-------------|----------|
| 1 | B5 | 398 | A2M | N3-C2-N1 | -3.22 | 123.64 | 128.68 |
| 52 | A2 | 1082 | PSU | O2-C2-N1 | -3.21 | 119.25 | 122.79 |
| 1 | B5 | 4039 | PSU | O2-C2-N1 | -3.21 | 119.25 | 122.79 |
| 1 | B5 | 3492 | A2M | N3-C2-N1 | -3.21 | 123.66 | 128.68 |
| 52 | A2 | 1679 | A2M | N3-C2-N1 | -3.20 | 123.68 | 128.68 |
| 1 | B5 | 4336 | A2M | N3-C2-N1 | -3.20 | 123.68 | 128.68 |
| 52 | A2 | 166 | A2M | N3-C2-N1 | -3.20 | 123.68 | 128.68 |
| 52 | A2 | 99 | A2M | N3-C2-N1 | -3.19 | 123.69 | 128.68 |
| 1 | B5 | 4269 | A2M | N3-C2-N1 | -3.19 | 123.70 | 128.68 |
| 1 | B5 | 3456 | A2M | N3-C2-N1 | -3.18 | 123.71 | 128.68 |
| 1 | B5 | 1479 | A2M | N3-C2-N1 | -3.18 | 123.71 | 128.68 |
| 1 | B5 | 3599 | A2M | N3-C2-N1 | -3.17 | 123.72 | 128.68 |
| 52 | A2 | 1384 | A2M | N3-C2-N1 | -3.17 | 123.72 | 128.68 |
| 1 | B5 | 1810 | A2M | N3-C2-N1 | -3.17 | 123.72 | 128.68 |
| 1 | B5 | 400 | A2M | N3-C2-N1 | -3.16 | 123.74 | 128.68 |
| 52 | A2 | 485 | A2M | N3-C2-N1 | -3.16 | 123.74 | 128.68 |
| 1 | B5 | 1270 | A2M | N3-C2-N1 | -3.16 | 123.74 | 128.68 |
| 1 | B5 | 3562 | A2M | N3-C2-N1 | -3.16 | 123.74 | 128.68 |
| 1 | B5 | 2658 | A2M | N3-C2-N1 | -3.15 | 123.75 | 128.68 |
| 1 | B5 | 4317 | A2M | N3-C2-N1 | -3.15 | 123.75 | 128.68 |
| 1 | B5 | 3966 | 6MZ | N3-C2-N1 | -3.15 | 123.75 | 128.68 |
| 52 | A2 | 469 | A2M | N3-C2-N1 | -3.15 | 123.75 | 128.68 |
| 1 | B5 | 2630 | A2M | N3-C2-N1 | -3.15 | 123.76 | 128.68 |
| 1 | B5 | 3557 | A2M | N3-C2-N1 | -3.15 | 123.76 | 128.68 |
| 52 | A2 | 513 | A2M | N3-C2-N1 | -3.14 | 123.77 | 128.68 |
| 52 | A2 | 27 | A2M | N3-C2-N1 | -3.14 | 123.78 | 128.68 |
| 52 | A2 | 669 | A2M | N3-C2-N1 | -3.12 | 123.80 | 128.68 |
| 1 | B5 | 2206 | A2M | N3-C2-N1 | -3.12 | 123.80 | 128.68 |
| 52 | A2 | 577 | A2M | N3-C2-N1 | -3.11 | 123.81 | 128.68 |
| 1 | B5 | 3450 | A2M | N3-C2-N1 | -3.11 | 123.81 | 128.68 |
| 52 | A2 | 159 | A2M | N3-C2-N1 | -3.11 | 123.82 | 128.68 |
| 52 | A2 | 1833 | 6MZ | N3-C2-N1 | -3.04 | 123.92 | 128.68 |
| 52 | A2 | 1249 | B8N | N3-C2-N1 | 3.04 | 121.05 | 116.76 |
| 1 | B5 | 4366 | OMU | O4-C4-C5 | -3.01 | 119.86 | 125.16 |
| 52 | A2 | 116 | OMU | O4-C4-C5 | -3.01 | 119.87 | 125.16 |
| 52 | A2 | 429 | OMU | O4-C4-C5 | -3.01 | 119.88 | 125.16 |
| 1 | B5 | 2680 | OMU | O4-C4-C5 | -3.00 | 119.88 | 125.16 |
| 52 | A2 | 1327 | OMU | O4-C4-C5 | -3.00 | 119.88 | 125.16 |
| 52 | A2 | 121 | OMU | O4-C4-C5 | -3.00 | 119.88 | 125.16 |
| 52 | A2 | 355 | OMU | O4-C4-C5 | -3.00 | 119.89 | 125.16 |
| 1 | B5 | 2258 | OMU | O4-C4-C5 | -2.98 | 119.92 | 125.16 |
| 1 | B5 | 3973 | OMU | O4-C4-C5 | -2.97 | 119.94 | 125.16 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 52 | A2 | 172 | OMU | O4-C4-C5 | -2.97 | 119.94 | 125.16 |
| 52 | A2 | 628 | OMU | O4-C4-C5 | -2.96 | 119.95 | 125.16 |
| 52 | A2 | 1805 | OMU | O4-C4-C5 | -2.96 | 119.96 | 125.16 |
| 1 | B5 | 3657 | OMU | O4-C4-C5 | -2.95 | 119.97 | 125.16 |
| 1 | B5 | 4244 | OMU | O4-C4-C5 | -2.95 | 119.97 | 125.16 |
| 52 | A2 | 1289 | OMU | O4-C4-C5 | -2.95 | 119.98 | 125.16 |
| 1 | B5 | 4052 | OMU | O4-C4-C5 | -2.91 | 120.05 | 125.16 |
| 52 | A2 | 1640 | G7M | C2-N1-C6 | -2.90 | 119.75 | 125.10 |
| 52 | A2 | 1443 | OMU | O4-C4-C5 | -2.89 | 120.07 | 125.16 |
| 52 | A2 | 1843 | 4AC | C5-C4-N4 | -2.77 | 118.10 | 122.92 |
| 1 | B5 | 1489 | A2M | C4-C5-N7 | -2.77 | 106.51 | 109.40 |
| 52 | A2 | 159 | A2M | C4-C5-N7 | -2.76 | 106.53 | 109.40 |
| 52 | A2 | 669 | A2M | C4-C5-N7 | -2.74 | 106.55 | 109.40 |
| 52 | A2 | 1679 | A2M | C4-C5-N7 | -2.74 | 106.55 | 109.40 |
| 1 | B5 | 2658 | A2M | C4-C5-N7 | -2.72 | 106.56 | 109.40 |
| 52 | A2 | 513 | A2M | C4-C5-N7 | -2.72 | 106.57 | 109.40 |
| 1 | B5 | 3562 | A2M | C4-C5-N7 | -2.71 | 106.57 | 109.40 |
| 52 | A2 | 166 | A2M | C4-C5-N7 | -2.71 | 106.57 | 109.40 |
| 1 | B5 | 2244 | A2M | C4-C5-N7 | -2.70 | 106.58 | 109.40 |
| 1 | B5 | 2206 | A2M | C4-C5-N7 | -2.70 | 106.58 | 109.40 |
| 52 | A2 | 27 | A2M | C4-C5-N7 | -2.70 | 106.59 | 109.40 |
| 52 | A2 | 485 | A2M | C4-C5-N7 | -2.70 | 106.59 | 109.40 |
| 1 | B5 | 398 | A2M | C4-C5-N7 | -2.69 | 106.60 | 109.40 |
| 1 | B5 | 4269 | A2M | C4-C5-N7 | -2.69 | 106.60 | 109.40 |
| 52 | A2 | 99 | A2M | C4-C5-N7 | -2.68 | 106.60 | 109.40 |
| 52 | A2 | 1032 | A2M | C4-C5-N7 | -2.68 | 106.61 | 109.40 |
| 1 | B5 | 4336 | A2M | C4-C5-N7 | -2.68 | 106.61 | 109.40 |
| 1 | B5 | 3450 | A2M | C4-C5-N7 | -2.67 | 106.61 | 109.40 |
| 1 | B5 | 3599 | A2M | C4-C5-N7 | -2.67 | 106.61 | 109.40 |
| 52 | A2 | 577 | A2M | C4-C5-N7 | -2.66 | 106.62 | 109.40 |
| 52 | A2 | 469 | A2M | C4-C5-N7 | -2.66 | 106.63 | 109.40 |
| 1 | B5 | 4317 | A2M | C4-C5-N7 | -2.66 | 106.63 | 109.40 |
| 1 | B5 | 3557 | A2M | C4-C5-N7 | -2.66 | 106.63 | 109.40 |
| 1 | B5 | 3550 | UY1 | CM2-O2'-C2' | -2.64 | 107.58 | 114.52 |
| 1 | B5 | 3456 | A2M | C4-C5-N7 | -2.63 | 106.66 | 109.40 |
| 1 | B5 | 1810 | A2M | C4-C5-N7 | -2.63 | 106.66 | 109.40 |
| 1 | B5 | 400 | A2M | C4-C5-N7 | -2.63 | 106.66 | 109.40 |
| 1 | B5 | 1479 | A2M | C4-C5-N7 | -2.62 | 106.66 | 109.40 |
| 52 | A2 | 1384 | A2M | C4-C5-N7 | -2.60 | 106.69 | 109.40 |
| 1 | B5 | 3492 | A2M | C4-C5-N7 | -2.60 | 106.69 | 109.40 |
| 1 | B5 | 3514 | 5MC | C5-C4-N3 | -2.57 | 118.90 | 121.67 |
| 1 | B5 | 1270 | A2M | C4-C5-N7 | -2.57 | 106.72 | 109.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1 | B5 | 3966 | 6MZ | C4-C5-N7 | -2.55 | 106.74 | 109.40 |
| 1 | B5 | 3517 | A2M | C4-C5-N7 | -2.54 | 106.75 | 109.40 |
| 1 | B5 | 2630 | A2M | C4-C5-N7 | -2.51 | 106.78 | 109.40 |
| 1 | B5 | 4193 | 5MC | C5-C4-N3 | -2.51 | 118.96 | 121.67 |
| 52 | A2 | 591 | A2M | C4-C5-N7 | -2.51 | 106.78 | 109.40 |
| 1 | B5 | 3550 | UY1 | C6-C5-C4 | 2.47 | 119.93 | 118.20 |
| 83 | Au | 1 | AME | O-C-CA | -2.47 | 118.32 | 124.78 |
| 80 | Ar | 2 | SAC | O-C-CA | -2.44 | 118.38 | 124.78 |
| 4 | BA | 216 | V5N | O-C-CA | -2.43 | 118.40 | 124.78 |
| 52 | A2 | 1443 | OMU | C1'-N1-C2 | 2.42 | 121.94 | 117.57 |
| 30 | Ba | 39 | V5N | O-C-CA | -2.42 | 118.45 | 124.78 |
| 1 | B5 | 4369 | OMG | C8-N7-C5 | 2.40 | 107.56 | 102.99 |
| 52 | A2 | 1338 | 4AC | C6-C5-C4 | 2.39 | 119.88 | 116.96 |
| 52 | A2 | 684 | OMG | C8-N7-C5 | 2.38 | 107.53 | 102.99 |
| 1 | B5 | 1260 | OMG | C8-N7-C5 | 2.37 | 107.51 | 102.99 |
| 1 | B5 | 3676 | OMG | C8-N7-C5 | 2.37 | 107.51 | 102.99 |
| 52 | A2 | 645 | OMG | C8-N7-C5 | 2.37 | 107.50 | 102.99 |
| 1 | B5 | 1477 | OMG | C8-N7-C5 | 2.36 | 107.48 | 102.99 |
| 1 | B5 | 3631 | OMG | C8-N7-C5 | 2.35 | 107.47 | 102.99 |
| 1 | B5 | 3974 | OMG | C8-N7-C5 | 2.35 | 107.47 | 102.99 |
| 1 | B5 | 4383 | OMG | C8-N7-C5 | 2.35 | 107.47 | 102.99 |
| 1 | B5 | 4138 | OMG | C5-C6-N1 | 2.35 | 118.10 | 113.95 |
| 52 | A2 | 1843 | 4AC | C6-C5-C4 | 2.35 | 119.83 | 116.96 |
| 1 | B5 | 3476 | OMG | C8-N7-C5 | 2.34 | 107.46 | 102.99 |
| 62 | AZ | 2 | SAC | O-C-CA | -2.34 | 118.64 | 124.78 |
| 52 | A2 | 437 | OMG | C8-N7-C5 | 2.34 | 107.45 | 102.99 |
| 1 | B5 | 2207 | OMG | C8-N7-C5 | 2.34 | 107.45 | 102.99 |
| 1 | B5 | 4369 | OMG | C5-C6-N1 | 2.33 | 118.07 | 113.95 |
| 1 | B5 | 4364 | OMG | C8-N7-C5 | 2.33 | 107.43 | 102.99 |
| 1 | B5 | 1266 | 1MA | C8-N7-C5 | 2.33 | 107.43 | 102.99 |
| 1 | B5 | 4116 | OMG | C5-C6-N1 | 2.32 | 118.06 | 113.95 |
| 52 | A2 | 1448 | OMG | C8-N7-C5 | 2.32 | 107.42 | 102.99 |
| 1 | B5 | 4240 | OMG | C8-N7-C5 | 2.32 | 107.42 | 102.99 |
| 52 | A2 | 1491 | OMG | C5-C6-N1 | 2.32 | 118.06 | 113.95 |
| 1 | B5 | 2267 | OMG | C5-C6-N1 | 2.32 | 118.06 | 113.95 |
| 52 | A2 | 602 | OMG | C8-N7-C5 | 2.32 | 107.41 | 102.99 |
| 52 | A2 | 602 | OMG | C5-C6-N1 | 2.32 | 118.05 | 113.95 |
| 1 | B5 | 2719 | OMG | C5-C6-N1 | 2.32 | 118.05 | 113.95 |
| 3 | B8 | 75 | OMG | C8-N7-C5 | 2.32 | 107.41 | 102.99 |
| 52 | A2 | 1329 | OMG | C8-N7-C5 | 2.32 | 107.41 | 102.99 |
| 1 | B5 | 3359 | OMG | C8-N7-C5 | 2.32 | 107.41 | 102.99 |
| 1 | B5 | 2207 | OMG | C5-C6-N1 | 2.32 | 118.04 | 113.95 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|----------|-------|-------------|----------|
| 1 | B5 | 2719 | OMG | C8-N7-C5 | 2.32 | 107.40 | 102.99 |
| 1 | B5 | 4116 | OMG | C8-N7-C5 | 2.31 | 107.40 | 102.99 |
| 52 | A2 | 510 | OMG | C8-N7-C5 | 2.31 | 107.39 | 102.99 |
| 1 | B5 | 3942 | OMG | C5-C6-N1 | 2.31 | 118.03 | 113.95 |
| 1 | B5 | 4383 | OMG | C5-C6-N1 | 2.31 | 118.03 | 113.95 |
| 1 | B5 | 3942 | OMG | C8-N7-C5 | 2.31 | 107.39 | 102.99 |
| 1 | B5 | 4245 | OMG | C8-N7-C5 | 2.31 | 107.39 | 102.99 |
| 52 | A2 | 684 | OMG | C5-C6-N1 | 2.31 | 118.03 | 113.95 |
| 1 | B5 | 1260 | OMG | C5-C6-N1 | 2.31 | 118.03 | 113.95 |
| 1 | B5 | 1477 | OMG | C5-C6-N1 | 2.31 | 118.03 | 113.95 |
| 1 | B5 | 4138 | OMG | C8-N7-C5 | 2.31 | 107.38 | 102.99 |
| 1 | B5 | 3550 | UY1 | O2-C2-N1 | -2.31 | 120.25 | 122.79 |
| 1 | B5 | 3524 | OMG | C8-N7-C5 | 2.31 | 107.38 | 102.99 |
| 1 | B5 | 1580 | OMG | C5-C6-N1 | 2.30 | 118.02 | 113.95 |
| 1 | B5 | 3476 | OMG | C5-C6-N1 | 2.30 | 118.02 | 113.95 |
| 52 | A2 | 868 | OMG | C8-N7-C5 | 2.30 | 107.37 | 102.99 |
| 52 | A2 | 645 | OMG | C5-C6-N1 | 2.30 | 118.01 | 113.95 |
| 52 | A2 | 1338 | 4AC | C5-C4-N4 | -2.30 | 118.93 | 122.92 |
| 52 | A2 | 437 | OMG | C5-C6-N1 | 2.29 | 118.00 | 113.95 |
| 1 | B5 | 3359 | OMG | C5-C6-N1 | 2.29 | 118.00 | 113.95 |
| 3 | B8 | 75 | OMG | C5-C6-N1 | 2.29 | 118.00 | 113.95 |
| 1 | B5 | 3676 | OMG | C5-C6-N1 | 2.29 | 118.00 | 113.95 |
| 1 | B5 | 4245 | OMG | C5-C6-N1 | 2.29 | 118.00 | 113.95 |
| 52 | A2 | 1491 | OMG | C8-N7-C5 | 2.29 | 107.35 | 102.99 |
| 1 | B5 | 2267 | OMG | C8-N7-C5 | 2.28 | 107.34 | 102.99 |
| 1 | B5 | 2194 | OMC | O2-C2-N3 | -2.28 | 118.62 | 122.33 |
| 1 | B5 | 3631 | OMG | C5-C6-N1 | 2.28 | 117.98 | 113.95 |
| 1 | B5 | 4240 | OMG | C5-C6-N1 | 2.28 | 117.98 | 113.95 |
| 52 | A2 | 510 | OMG | C5-C6-N1 | 2.28 | 117.98 | 113.95 |
| 1 | B5 | 4364 | OMG | C5-C6-N1 | 2.28 | 117.98 | 113.95 |
| 45 | Br | 2 | SAC | O-C-CA | -2.28 | 118.80 | 124.78 |
| 1 | B5 | 3974 | OMG | C5-C6-N1 | 2.28 | 117.98 | 113.95 |
| 52 | A2 | 868 | OMG | C5-C6-N1 | 2.27 | 117.97 | 113.95 |
| 52 | A2 | 1448 | OMG | C5-C6-N1 | 2.27 | 117.97 | 113.95 |
| 1 | B5 | 1580 | OMG | C8-N7-C5 | 2.27 | 107.32 | 102.99 |
| 52 | A2 | 1329 | OMG | C5-C6-N1 | 2.27 | 117.95 | 113.95 |
| 52 | A2 | 1833 | 6MZ | C4-C5-N7 | -2.26 | 107.04 | 109.40 |
| 1 | B5 | 1266 | 1MA | C5-C6-N1 | 2.26 | 117.27 | 113.90 |
| 1 | B5 | 3524 | OMG | C5-C6-N1 | 2.26 | 117.94 | 113.95 |
| 52 | A2 | 1833 | 6MZ | C9-N6-C6 | -2.25 | 120.93 | 122.87 |
| 85 | Aw | 62 | HY3 | O-C-CA | -2.24 | 118.59 | 124.83 |
| 52 | A2 | 1327 | OMU | O2-C2-N1 | -2.23 | 119.82 | 122.79 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 52 | A2 | 628 | OMU | O2-C2-N1 | -2.23 | 119.82 | 122.79 |
| 1 | B5 | 2265 | OMC | O2-C2-N3 | -2.22 | 118.71 | 122.33 |
| 61 | AT | 54 | 5MU | O2-C2-N1 | -2.22 | 119.83 | 122.79 |
| 52 | A2 | 1249 | B8N | C5-C4-N3 | 2.17 | 120.20 | 116.17 |
| 52 | A2 | 1392 | OMC | O2-C2-N3 | -2.15 | 118.83 | 122.33 |
| 1 | B5 | 3573 | OMC | O2-C2-N3 | -2.14 | 118.86 | 122.33 |
| 1 | B5 | 4244 | OMU | O2-C2-N1 | -2.10 | 119.99 | 122.79 |
| 1 | B5 | 2680 | OMU | O2-C2-N1 | -2.09 | 120.01 | 122.79 |
| 1 | B5 | 3514 | 5MC | O2-C2-N3 | -2.08 | 118.95 | 122.33 |
| 52 | A2 | 1704 | OMC | O2-C2-N3 | -2.06 | 118.98 | 122.33 |
| 1 | B5 | 1632 | PSU | O4'-C1'-C2' | 2.06 | 108.04 | 105.14 |
| 1 | B5 | 2704 | OMC | O2-C2-N3 | -2.05 | 118.99 | 122.33 |
| 1 | B5 | 3657 | OMU | O2-C2-N1 | -2.05 | 120.06 | 122.79 |
| 52 | A2 | 463 | OMC | O2-C2-N3 | -2.03 | 119.02 | 122.33 |
| 1 | B5 | 3369 | PSU | C5-C6-N1 | -2.03 | 119.06 | 122.11 |
| 1 | B5 | 1266 | 1MA | N1-C2-N3 | -2.02 | 123.66 | 126.02 |
| 1 | B5 | 4042 | PSU | C5-C6-N1 | -2.02 | 119.08 | 122.11 |
| 52 | A2 | 823 | PSU | O4'-C1'-C2' | 2.01 | 107.98 | 105.14 |

There are no chirality outliers.

All (112) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 4 | BA | 216 | V5N | O-C-CA-CB |
| 5 | BB | 245 | HIC | CA-CB-CG-ND1 |
| 6 | BC | 2 | AYA | OT-CT-N-CA |
| 6 | BC | 2 | AYA | CM-CT-N-CA |
| 31 | Bb | 5 | MLZ | C-CA-CB-CG |
| 52 | A2 | 429 | OMU | C2'-C1'-N1-C2 |
| 52 | A2 | 429 | OMU | C2'-C1'-N1-C6 |
| 52 | A2 | 645 | OMG | O4'-C4'-C5'-O5' |
| 52 | A2 | 1448 | OMG | C3'-C4'-C5'-O5' |
| 81 | As | 67 | NMM | O-C-CA-CB |
| 1 | B5 | 3433 | OMC | C2'-C1'-N1-C2 |
| 1 | B5 | 3433 | OMC | C2'-C1'-N1-C6 |
| 1 | B5 | 4193 | 5MC | C2'-C1'-N1-C6 |
| 1 | B5 | 4336 | A2M | C4'-C5'-O5'-P |
| 1 | B5 | 4382 | PSU | O4'-C1'-C5-C4 |
| 1 | B5 | 4382 | PSU | O4'-C1'-C5-C6 |
| 1 | B5 | 4382 | PSU | C3'-C4'-C5'-O5' |
| 52 | A2 | 1249 | B8N | N34-C33-C34-O35 |
| 52 | A2 | 1338 | 4AC | N3-C4-N4-C7 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 52 | A2 | 1338 | 4AC | O7-C7-N4-C4 |
| 52 | A2 | 1338 | 4AC | CM7-C7-N4-C4 |
| 52 | A2 | 1843 | 4AC | N3-C4-N4-C7 |
| 52 | A2 | 1843 | 4AC | C5-C4-N4-C7 |
| 52 | A2 | 1843 | 4AC | O7-C7-N4-C4 |
| 52 | A2 | 1843 | 4AC | CM7-C7-N4-C4 |
| 52 | A2 | 99 | A2M | O4'-C4'-C5'-O5' |
| 52 | A2 | 513 | A2M | O4'-C4'-C5'-O5' |
| 52 | A2 | 645 | OMG | C3'-C4'-C5'-O5' |
| 52 | A2 | 669 | A2M | O4'-C4'-C5'-O5' |
| 52 | A2 | 669 | A2M | C3'-C4'-C5'-O5' |
| 1 | B5 | 398 | A2M | O4'-C4'-C5'-O5' |
| 1 | B5 | 2207 | OMG | O4'-C4'-C5'-O5' |
| 1 | B5 | 3517 | A2M | O4'-C4'-C5'-O5' |
| 83 | Au | 1 | AME | CT2-CT1-N-CA |
| 83 | Au | 1 | AME | OT-CT1-N-CA |
| 52 | A2 | 429 | OMU | O4'-C1'-N1-C2 |
| 1 | B5 | 4193 | 5MC | C2'-C1'-N1-C2 |
| 52 | A2 | 99 | A2M | C3'-C4'-C5'-O5' |
| 52 | A2 | 513 | A2M | C3'-C4'-C5'-O5' |
| 1 | B5 | 398 | A2M | C3'-C4'-C5'-O5' |
| 1 | B5 | 2207 | OMG | C3'-C4'-C5'-O5' |
| 1 | B5 | 3517 | A2M | C3'-C4'-C5'-O5' |
| 52 | A2 | 1249 | B8N | N34-C33-C34-O36 |
| 52 | A2 | 628 | OMU | C2'-C1'-N1-C6 |
| 52 | A2 | 429 | OMU | O4'-C1'-N1-C6 |
| 1 | B5 | 1489 | A2M | O4'-C4'-C5'-O5' |
| 1 | B5 | 4382 | PSU | O4'-C4'-C5'-O5' |
| 52 | A2 | 1448 | OMG | O4'-C4'-C5'-O5' |
| 52 | A2 | 577 | A2M | C3'-C4'-C5'-O5' |
| 52 | A2 | 1640 | G7M | O4'-C4'-C5'-O5' |
| 6 | BC | 2 | AYA | C-CA-N-CT |
| 52 | A2 | 628 | OMU | O4'-C1'-N1-C6 |
| 52 | A2 | 645 | OMG | C4'-C5'-O5'-P |
| 52 | A2 | 1852 | MA6 | C4'-C5'-O5'-P |
| 1 | B5 | 3576 | PSU | C4'-C5'-O5'-P |
| 62 | AZ | 2 | SAC | C-CA-N-C1A |
| 62 | AZ | 2 | SAC | CB-CA-N-C1A |
| 52 | A2 | 1249 | B8N | C32-C33-C34-O36 |
| 52 | A2 | 1704 | OMC | C3'-C2'-O2'-CM2 |
| 1 | B5 | 398 | A2M | C3'-C2'-O2'-CM' |
| 1 | B5 | 4193 | 5MC | O4'-C1'-N1-C6 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 1 | B5 | 3550 | UY1 | C4'-C5'-O5'-P |
| 31 | Bb | 5 | MLZ | N-CA-CB-CG |
| 52 | A2 | 1640 | G7M | C3'-C4'-C5'-O5' |
| 1 | B5 | 4193 | 5MC | O4'-C1'-N1-C2 |
| 52 | A2 | 628 | OMU | C2'-C1'-N1-C2 |
| 52 | A2 | 1249 | B8N | C32-C33-C34-O35 |
| 1 | B5 | 4246 | PSU | C4'-C5'-O5'-P |
| 52 | A2 | 577 | A2M | O4'-C4'-C5'-O5' |
| 1 | B5 | 3433 | OMC | O4'-C1'-N1-C6 |
| 1 | B5 | 1820 | OMC | C3'-C2'-O2'-CM2 |
| 1 | B5 | 2265 | OMC | C3'-C2'-O2'-CM2 |
| 1 | B5 | 2680 | OMU | C3'-C2'-O2'-CM2 |
| 1 | B5 | 3619 | OMC | C3'-C2'-O2'-CM2 |
| 1 | B5 | 4369 | OMG | C3'-C2'-O2'-CM2 |
| 1 | B5 | 3619 | OMC | C4'-C5'-O5'-P |
| 76 | An | 138 | 5F0 | O-C-CB-CA |
| 1 | B5 | 1489 | A2M | C3'-C4'-C5'-O5' |
| 52 | A2 | 628 | OMU | O4'-C1'-N1-C2 |
| 1 | B5 | 3599 | A2M | C3'-C4'-C5'-O5' |
| 52 | A2 | 355 | OMU | C3'-C2'-O2'-CM2 |
| 1 | B5 | 1260 | OMG | C3'-C2'-O2'-CM2 |
| 1 | B5 | 2667 | OMC | C3'-C2'-O2'-CM2 |
| 1 | B5 | 3631 | OMG | C3'-C2'-O2'-CM2 |
| 1 | B5 | 3676 | OMG | C3'-C2'-O2'-CM2 |
| 1 | B5 | 4138 | OMG | C3'-C2'-O2'-CM2 |
| 1 | B5 | 4366 | OMU | C3'-C2'-O2'-CM2 |
| 1 | B5 | 4383 | OMG | C3'-C2'-O2'-CM2 |
| 1 | B5 | 2194 | OMC | O4'-C4'-C5'-O5' |
| 1 | B5 | 3433 | OMC | O4'-C1'-N1-C2 |
| 52 | A2 | 159 | A2M | O4'-C4'-C5'-O5' |
| 52 | A2 | 116 | OMU | O4'-C4'-C5'-O5' |
| 52 | A2 | 684 | OMG | O4'-C4'-C5'-O5' |
| 1 | B5 | 3476 | OMG | C1'-C2'-O2'-CM2 |
| 1 | B5 | 3676 | OMG | C1'-C2'-O2'-CM2 |
| 52 | A2 | 27 | A2M | C3'-C2'-O2'-CM' |
| 1 | B5 | 2207 | OMG | C3'-C2'-O2'-CM2 |
| 52 | A2 | 510 | OMG | O4'-C4'-C5'-O5' |
| 85 | Aw | 62 | HY3 | O-C-CA-C3 |
| 1 | B5 | 2194 | OMC | C2'-C1'-N1-C2 |
| 52 | A2 | 1443 | OMU | C2'-C1'-N1-C2 |
| 52 | A2 | 684 | OMG | C3'-C2'-O2'-CM2 |
| 1 | B5 | 3476 | OMG | C3'-C2'-O2'-CM2 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 1 | B5 | 3657 | OMU | C3'-C2'-O2'-CM2 |
| 52 | A2 | 469 | A2M | O4'-C4'-C5'-O5' |
| 52 | A2 | 1852 | MA6 | C3'-C4'-C5'-O5' |
| 1 | B5 | 3492 | A2M | O4'-C4'-C5'-O5' |
| 5 | BB | 245 | HIC | CA-CB-CG-CD2 |
| 52 | A2 | 1338 | 4AC | C5-C4-N4-C7 |
| 52 | A2 | 1448 | OMG | C4'-C5'-O5'-P |
| 1 | B5 | 2265 | OMC | C3'-C4'-C5'-O5' |
| 1 | B5 | 3494 | PSU | C3'-C4'-C5'-O5' |

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 848 ligands modelled in this entry, 428 are monoatomic and 312 are unknown - leaving 108 for Mogul analysis.

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 | $\# Z > 2$ |
| 90 | SPD | B5 | 4923 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.18 | 0 |
| 89 | N | AT | 103 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.67 | 0 |
| 90 | SPD | B5 | 4936 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.17 | 0 |
| 89 | N | Bo | 209 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.67 | 0 |
| 89 | N | Ae | 303 | 89 | 9,12,13 | 0.64 | 0 | 10,16,19 | 0.68 | 0 |
| 89 | N | AI | 101 | 60,89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.68 | 0 |
| 89 | N | Aa | 307 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.64 | 0 |
| 89 | N | Bv | 302 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.68 | 0 |
| 90 | SPD | B5 | 4925 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.19 | 0 |
| 89 | N | B5 | 4915 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.64 | 0 |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 89 | N | Bo | 210 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.67 | 0 |
| 89 | N | B5 | 4904 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.68 | 0 |
| 89 | N | Bv | 303 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.67 | 0 |
| 90 | SPD | B5 | 4940 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.20 | 0 |
| 89 | N | B5 | 4909 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.66 | 0 |
| 90 | SPD | B5 | 4941 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.18 | 0 |
| 89 | N | B5 | 4902 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.66 | 0 |
| 89 | N | B5 | 4918 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.67 | 0 |
| 89 | N | Ae | 307 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.67 | 0 |
| 90 | SPD | B5 | 4926 | - | 9,9,9 | 0.16 | 0 | 8,8,8 | 0.18 | 0 |
| 89 | N | Ae | 304 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.67 | 0 |
| 90 | SPD | A2 | 1906 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.19 | 0 |
| 90 | SPD | A2 | 1904 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.18 | 0 |
| 90 | SPD | B5 | 4933 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.20 | 0 |
| 89 | N | Aa | 305 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.65 | 0 |
| 89 | N | B5 | 4905 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.67 | 0 |
| 89 | N | Bo | 212 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.68 | 0 |
| 90 | SPD | B5 | 4939 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.17 | 0 |
| 90 | SPD | B5 | 4921 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.14 | 0 |
| 90 | SPD | B5 | 4922 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.18 | 0 |
| 89 | N | B5 | 4914 | 89 | 9,12,13 | 0.64 | 0 | 10,16,19 | 0.70 | 0 |
| 89 | N | Aa | 301 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.67 | 0 |
| 89 | N | Ay | 205 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.66 | 0 |
| 90 | SPD | A2 | 1907 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.20 | 0 |
| 89 | N | AT | 106 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.65 | 0 |
| 89 | N | AT | 101 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.65 | 0 |
| 89 | N | B5 | 4917 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.69 | 0 |
| 90 | SPD | B5 | 4924 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.21 | 0 |
| 89 | N | B5 | 4916 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.68 | 0 |
| 95 | AAC | BD | 301 | 7 | 6,6,7 | 0.88 | 0 | 6,6,8 | 1.13 | 1 (16%) |
| 89 | N | AT | 102 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.66 | 0 |
| 89 | N | B5 | 4910 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.66 | 0 |
| 90 | SPD | B5 | 4937 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.17 | 0 |
| 89 | N | Ae | 308 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.66 | 0 |
| 90 | SPD | A2 | 1908 | - | 9,9,9 | 0.16 | 0 | 8,8,8 | 0.16 | 0 |
| 90 | SPD | B5 | 4927 | - | 9,9,9 | 0.16 | 0 | 8,8,8 | 0.19 | 0 |
| 91 | SPM | B5 | 4932 | - | 13,13,13 | 0.15 | 0 | 12,12,12 | 0.22 | 0 |
| 89 | N | Aa | 308 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.68 | 0 |
| 90 | SPD | B5 | 4931 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.19 | 0 |
| 89 | N | Bo | 211 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.69 | 0 |
| 89 | N | B5 | 4913 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.68 | 0 |
| 89 | N | AT | 104 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.65 | 0 |
| 89 | N | B5 | 4903 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.69 | 0 |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 89 | N | Aa | 306 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.66 | 0 |
| 89 | N | B5 | 4901 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.69 | 0 |
| 89 | N | Bo | 206 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.69 | 0 |
| 90 | SPD | A2 | 1910 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.19 | 0 |
| 90 | SPD | B5 | 4938 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.18 | 0 |
| 89 | N | Bv | 306 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.68 | 0 |
| 89 | N | Bv | 301 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.66 | 0 |
| 89 | N | Ay | 201 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.68 | 0 |
| 89 | N | Aa | 303 | 89 | 9,12,13 | 0.64 | 0 | 10,16,19 | 0.66 | 0 |
| 89 | N | Ae | 305 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.67 | 0 |
| 90 | SPD | B5 | 4943 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.21 | 0 |
| 90 | SPD | B5 | 4928 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.16 | 0 |
| 94 | GTP | B7 | 201 | 2 | 26,34,34 | 0.94 | 2 (7%) | 32,54,54 | 0.78 | 0 |
| 89 | N | Bo | 205 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.67 | 0 |
| 89 | N | Bo | 204 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.65 | 0 |
| 89 | N | B5 | 4908 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.64 | 0 |
| 89 | N | Bo | 207 | 89 | 9,12,13 | 0.64 | 0 | 10,16,19 | 0.66 | 0 |
| 89 | N | Ae | 310 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.66 | 0 |
| 89 | N | Bo | 202 | 89 | 13,13,13 | 0.80 | 0 | 17,19,19 | 0.87 | 1 (5%) |
| 90 | SPD | B5 | 4944 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.15 | 0 |
| 89 | N | Bv | 307 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.68 | 0 |
| 90 | SPD | B5 | 4934 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.19 | 0 |
| 90 | SPD | A2 | 1905 | - | 9,9,9 | 0.16 | 0 | 8,8,8 | 0.16 | 0 |
| 89 | N | Ae | 301 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.68 | 0 |
| 89 | N | Bv | 304 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.65 | 0 |
| 89 | N | Ay | 203 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.67 | 0 |
| 89 | N | A2 | 1902 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.66 | 0 |
| 91 | SPM | B5 | 4935 | - | 13,13,13 | 0.15 | 0 | 12,12,12 | 0.14 | 0 |
| 89 | N | B5 | 4912 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.67 | 0 |
| 89 | N | AT | 105 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.65 | 0 |
| 89 | N | Aa | 302 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.66 | 0 |
| 89 | N | Aa | 309 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.67 | 0 |
| 89 | N | B5 | 4906 | 89 | 9,12,13 | 0.64 | 0 | 10,16,19 | 0.64 | 0 |
| 89 | N | Bo | 203 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.63 | 0 |
| 89 | N | Aa | 304 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.66 | 0 |
| 90 | SPD | B5 | 4942 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.18 | 0 |
| 90 | SPD | A2 | 1911 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.17 | 0 |
| 90 | SPD | A2 | 1909 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.18 | 0 |
| 89 | N | Ay | 204 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.67 | 0 |
| 89 | N | Bo | 208 | 89 | 9,12,13 | 0.64 | 0 | 10,16,19 | 0.68 | 0 |
| 89 | N | B5 | 4907 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.66 | 0 |
| 89 | N | Aa | 310 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.68 | 0 |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 89 | N | Bv | 305 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.68 | 0 |
| 89 | N | B5 | 4919 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.66 | 0 |
| 91 | SPM | A2 | 1912 | - | 13,13,13 | 0.15 | 0 | 12,12,12 | 0.16 | 0 |
| 89 | N | Ae | 309 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.69 | 0 |
| 90 | SPD | B5 | 4929 | - | 9,9,9 | 0.16 | 0 | 8,8,8 | 0.17 | 0 |
| 89 | N | B5 | 4920 | 89 | 9,12,13 | 0.64 | 0 | 10,16,19 | 0.68 | 0 |
| 89 | N | A2 | 1901 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.69 | 0 |
| 90 | SPD | B5 | 4930 | - | 9,9,9 | 0.15 | 0 | 8,8,8 | 0.20 | 0 |
| 89 | N | A2 | 1903 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.64 | 0 |
| 89 | N | Ay | 202 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.68 | 0 |
| 89 | N | Ae | 306 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.68 | 0 |
| 89 | N | Ae | 302 | 89 | 9,12,13 | 0.66 | 0 | 10,16,19 | 0.68 | 0 |
| 89 | N | B5 | 4911 | 89 | 9,12,13 | 0.65 | 0 | 10,16,19 | 0.65 | 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 |
|-----|------|-------|------|-------|---------|-----------|---------|
| 90 | SPD | B5 | 4923 | - | - | 1/7/7/7 | - |
| 89 | N | AT | 103 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 90 | SPD | B5 | 4936 | - | - | 1/7/7/7 | - |
| 89 | N | Bo | 209 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 89 | N | Ae | 303 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 89 | N | AI | 101 | 60,89 | - | 1/3/18/19 | 0/1/1/1 |
| 89 | N | Aa | 307 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 89 | N | Bv | 302 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 90 | SPD | B5 | 4925 | - | - | 1/7/7/7 | - |
| 89 | N | B5 | 4915 | 89 | - | 1/3/18/19 | 0/1/1/1 |
| 89 | N | Bo | 210 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 89 | N | B5 | 4904 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 89 | N | Bv | 303 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 90 | SPD | B5 | 4940 | - | - | 1/7/7/7 | - |
| 89 | N | B5 | 4909 | 89 | - | 1/3/18/19 | 0/1/1/1 |
| 90 | SPD | B5 | 4941 | - | - | 0/7/7/7 | - |
| 89 | N | B5 | 4902 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 89 | N | B5 | 4918 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 89 | N | Ae | 307 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 90 | SPD | B5 | 4926 | - | - | 1/7/7/7 | - |
| 89 | N | Ae | 304 | 89 | - | 3/3/18/19 | 0/1/1/1 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|---------|------------|---------|
| 90 | SPD | A2 | 1906 | - | - | 0/7/7/7 | - |
| 90 | SPD | A2 | 1904 | - | - | 1/7/7/7 | - |
| 90 | SPD | B5 | 4933 | - | - | 0/7/7/7 | - |
| 89 | N | Aa | 305 | 89 | - | 1/3/18/19 | 0/1/1/1 |
| 89 | N | B5 | 4905 | 89 | - | 1/3/18/19 | 0/1/1/1 |
| 89 | N | Bo | 212 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 90 | SPD | B5 | 4939 | - | - | 0/7/7/7 | - |
| 90 | SPD | B5 | 4921 | - | - | 1/7/7/7 | - |
| 90 | SPD | B5 | 4922 | - | - | 1/7/7/7 | - |
| 89 | N | B5 | 4914 | 89 | - | 1/3/18/19 | 0/1/1/1 |
| 89 | N | Aa | 301 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 89 | N | Ay | 205 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 90 | SPD | A2 | 1907 | - | - | 0/7/7/7 | - |
| 89 | N | AT | 106 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 89 | N | AT | 101 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 89 | N | B5 | 4917 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 90 | SPD | B5 | 4924 | - | - | 0/7/7/7 | - |
| 89 | N | B5 | 4916 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 95 | AAC | BD | 301 | 7 | - | 0/3/4/5 | - |
| 89 | N | AT | 102 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 89 | N | B5 | 4910 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 90 | SPD | B5 | 4937 | - | - | 0/7/7/7 | - |
| 89 | N | Ae | 308 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 90 | SPD | A2 | 1908 | - | - | 0/7/7/7 | - |
| 90 | SPD | B5 | 4927 | - | - | 0/7/7/7 | - |
| 91 | SPM | B5 | 4932 | - | - | 0/11/11/11 | - |
| 89 | N | Aa | 308 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 90 | SPD | B5 | 4931 | - | - | 0/7/7/7 | - |
| 89 | N | Bo | 211 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 89 | N | B5 | 4913 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 89 | N | AT | 104 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 89 | N | B5 | 4903 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 89 | N | Aa | 306 | 89 | - | 1/3/18/19 | 0/1/1/1 |
| 89 | N | B5 | 4901 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 89 | N | Bo | 206 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 90 | SPD | A2 | 1910 | - | - | 1/7/7/7 | - |
| 90 | SPD | B5 | 4938 | - | - | 0/7/7/7 | - |
| 89 | N | Bv | 306 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 89 | N | Bv | 301 | 89 | - | 0/3/18/19 | 0/1/1/1 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|---------|------------|---------|
| 89 | N | Ay | 201 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 89 | N | Aa | 303 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 89 | N | Ae | 305 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 90 | SPD | B5 | 4943 | - | - | 0/7/7/7 | - |
| 90 | SPD | B5 | 4928 | - | - | 0/7/7/7 | - |
| 94 | GTP | B7 | 201 | 2 | - | 0/18/38/38 | 0/3/3/3 |
| 89 | N | Bo | 205 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 89 | N | Bo | 204 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 89 | N | B5 | 4908 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 89 | N | Bo | 207 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 89 | N | Ae | 310 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 89 | N | Bo | 202 | 89 | - | 0/6/19/19 | 0/1/1/1 |
| 90 | SPD | B5 | 4944 | - | - | 1/7/7/7 | - |
| 89 | N | Bv | 307 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 90 | SPD | B5 | 4934 | - | - | 0/7/7/7 | - |
| 90 | SPD | A2 | 1905 | - | - | 0/7/7/7 | - |
| 89 | N | Ae | 301 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 89 | N | Bv | 304 | 89 | - | 1/3/18/19 | 0/1/1/1 |
| 89 | N | Ay | 203 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 89 | N | A2 | 1902 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 91 | SPM | B5 | 4935 | - | - | 0/11/11/11 | - |
| 89 | N | B5 | 4912 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 89 | N | AT | 105 | 89 | - | 1/3/18/19 | 0/1/1/1 |
| 89 | N | Aa | 302 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 89 | N | Aa | 309 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 89 | N | B5 | 4906 | 89 | - | 1/3/18/19 | 0/1/1/1 |
| 89 | N | Bo | 203 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 89 | N | Aa | 304 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 90 | SPD | B5 | 4942 | - | - | 1/7/7/7 | - |
| 90 | SPD | A2 | 1911 | - | - | 0/7/7/7 | - |
| 90 | SPD | A2 | 1909 | - | - | 0/7/7/7 | - |
| 89 | N | Ay | 204 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 89 | N | Bo | 208 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 89 | N | B5 | 4907 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 89 | N | Aa | 310 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 89 | N | Bv | 305 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 89 | N | B5 | 4919 | 89 | - | 0/3/18/19 | 0/1/1/1 |
| 91 | SPM | A2 | 1912 | - | - | 2/11/11/11 | - |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|---------|-----------|---------|
| 89 | N | Ae | 309 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 90 | SPD | B5 | 4929 | - | - | 0/7/7/7 | - |
| 89 | N | B5 | 4920 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 89 | N | A2 | 1901 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 90 | SPD | B5 | 4930 | - | - | 1/7/7/7 | - |
| 89 | N | A2 | 1903 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 89 | N | Ay | 202 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 89 | N | Ae | 306 | 89 | - | 3/3/18/19 | 0/1/1/1 |
| 89 | N | Ae | 302 | 89 | - | 2/3/18/19 | 0/1/1/1 |
| 89 | N | B5 | 4911 | 89 | - | 2/3/18/19 | 0/1/1/1 |

All (2) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 94 | B7 | 201 | GTP | C5-C6 | -2.60 | 1.42 | 1.47 |
| 94 | B7 | 201 | GTP | C8-N7 | -2.05 | 1.31 | 1.35 |

All (2) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 89 | Bo | 202 | N | OP2-P-OP1 | 2.27 | 119.58 | 110.68 |
| 95 | BD | 301 | AAC | O2-C1-C2 | -2.25 | 118.92 | 125.42 |

There are no chirality outliers.

All (129) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 89 | B5 | 4911 | N | O4'-C4'-C5'-O5' |
| 89 | A2 | 1902 | N | C3'-C4'-C5'-O5' |
| 89 | Aa | 304 | N | C3'-C4'-C5'-O5' |
| 89 | B5 | 4908 | N | O4'-C4'-C5'-O5' |
| 89 | B5 | 4910 | N | O4'-C4'-C5'-O5' |
| 89 | B5 | 4910 | N | C3'-C4'-C5'-O5' |
| 89 | Bo | 203 | N | O4'-C4'-C5'-O5' |
| 89 | A2 | 1902 | N | O4'-C4'-C5'-O5' |
| 89 | Aa | 304 | N | O4'-C4'-C5'-O5' |
| 89 | B5 | 4911 | N | C3'-C4'-C5'-O5' |
| 89 | Bo | 203 | N | C3'-C4'-C5'-O5' |
| 89 | Bv | 302 | N | C3'-C4'-C5'-O5' |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 89 | Bv | 305 | N | O4'-C4'-C5'-O5' |
| 89 | Bv | 305 | N | C3'-C4'-C5'-O5' |
| 89 | Ae | 301 | N | O4'-C4'-C5'-O5' |
| 89 | Ae | 301 | N | C3'-C4'-C5'-O5' |
| 89 | Ae | 306 | N | O4'-C4'-C5'-O5' |
| 89 | Ae | 306 | N | C3'-C4'-C5'-O5' |
| 89 | Ay | 201 | N | C3'-C4'-C5'-O5' |
| 89 | Ay | 203 | N | O4'-C4'-C5'-O5' |
| 89 | Ay | 203 | N | C3'-C4'-C5'-O5' |
| 89 | Ay | 201 | N | O4'-C4'-C5'-O5' |
| 89 | B5 | 4908 | N | C3'-C4'-C5'-O5' |
| 89 | Bv | 302 | N | O4'-C4'-C5'-O5' |
| 89 | Bv | 307 | N | C3'-C4'-C5'-O5' |
| 89 | AT | 101 | N | C3'-C4'-C5'-O5' |
| 89 | Ae | 302 | N | C3'-C4'-C5'-O5' |
| 89 | B5 | 4902 | N | O4'-C4'-C5'-O5' |
| 89 | B5 | 4916 | N | O4'-C4'-C5'-O5' |
| 89 | B5 | 4920 | N | O4'-C4'-C5'-O5' |
| 89 | Bo | 207 | N | O4'-C4'-C5'-O5' |
| 89 | Bo | 212 | N | O4'-C4'-C5'-O5' |
| 89 | Bv | 306 | N | O4'-C4'-C5'-O5' |
| 89 | A2 | 1901 | N | O4'-C4'-C5'-O5' |
| 89 | A2 | 1903 | N | C3'-C4'-C5'-O5' |
| 89 | AT | 101 | N | O4'-C4'-C5'-O5' |
| 89 | Aa | 309 | N | O4'-C4'-C5'-O5' |
| 89 | Aa | 310 | N | O4'-C4'-C5'-O5' |
| 89 | Ae | 304 | N | O4'-C4'-C5'-O5' |
| 89 | Ae | 305 | N | O4'-C4'-C5'-O5' |
| 89 | Ae | 309 | N | O4'-C4'-C5'-O5' |
| 89 | Ay | 202 | N | O4'-C4'-C5'-O5' |
| 89 | B5 | 4913 | N | C4'-C5'-O5'-P |
| 89 | B5 | 4902 | N | C3'-C4'-C5'-O5' |
| 89 | B5 | 4920 | N | C3'-C4'-C5'-O5' |
| 89 | Bo | 212 | N | C3'-C4'-C5'-O5' |
| 89 | Bv | 307 | N | O4'-C4'-C5'-O5' |
| 89 | AT | 106 | N | O4'-C4'-C5'-O5' |
| 89 | Aa | 310 | N | C3'-C4'-C5'-O5' |
| 89 | Ae | 302 | N | O4'-C4'-C5'-O5' |
| 89 | Ae | 305 | N | C3'-C4'-C5'-O5' |
| 89 | Ay | 202 | N | C3'-C4'-C5'-O5' |
| 89 | B5 | 4901 | N | C4'-C5'-O5'-P |
| 89 | B5 | 4916 | N | C4'-C5'-O5'-P |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 89 | Bo | 206 | N | C4'-C5'-O5'-P |
| 89 | AT | 103 | N | C4'-C5'-O5'-P |
| 89 | Ae | 303 | N | C4'-C5'-O5'-P |
| 89 | B5 | 4917 | N | O4'-C4'-C5'-O5' |
| 89 | B5 | 4918 | N | O4'-C4'-C5'-O5' |
| 89 | Bo | 206 | N | O4'-C4'-C5'-O5' |
| 89 | Bo | 207 | N | C3'-C4'-C5'-O5' |
| 89 | Bv | 306 | N | C3'-C4'-C5'-O5' |
| 89 | A2 | 1901 | N | C3'-C4'-C5'-O5' |
| 89 | Ae | 309 | N | C3'-C4'-C5'-O5' |
| 89 | Ay | 204 | N | O4'-C4'-C5'-O5' |
| 89 | Aa | 305 | N | C4'-C5'-O5'-P |
| 89 | AT | 103 | N | O4'-C4'-C5'-O5' |
| 89 | Aa | 308 | N | O4'-C4'-C5'-O5' |
| 89 | Aa | 309 | N | C3'-C4'-C5'-O5' |
| 89 | Ae | 304 | N | C3'-C4'-C5'-O5' |
| 89 | Bv | 306 | N | C4'-C5'-O5'-P |
| 89 | B5 | 4901 | N | O4'-C4'-C5'-O5' |
| 89 | B5 | 4916 | N | C3'-C4'-C5'-O5' |
| 89 | Bo | 211 | N | O4'-C4'-C5'-O5' |
| 89 | Ae | 303 | N | O4'-C4'-C5'-O5' |
| 89 | Ay | 205 | N | O4'-C4'-C5'-O5' |
| 91 | A2 | 1912 | SPM | C8-C9-N10-C11 |
| 89 | B5 | 4920 | N | C4'-C5'-O5'-P |
| 89 | A2 | 1901 | N | C4'-C5'-O5'-P |
| 89 | B5 | 4917 | N | C3'-C4'-C5'-O5' |
| 89 | B5 | 4918 | N | C3'-C4'-C5'-O5' |
| 89 | AT | 103 | N | C3'-C4'-C5'-O5' |
| 89 | Ay | 204 | N | C3'-C4'-C5'-O5' |
| 89 | B5 | 4906 | N | C4'-C5'-O5'-P |
| 89 | B5 | 4917 | N | C4'-C5'-O5'-P |
| 89 | Ae | 301 | N | C4'-C5'-O5'-P |
| 89 | B5 | 4901 | N | C3'-C4'-C5'-O5' |
| 89 | Bo | 206 | N | C3'-C4'-C5'-O5' |
| 89 | Bo | 211 | N | C3'-C4'-C5'-O5' |
| 89 | Aa | 308 | N | C3'-C4'-C5'-O5' |
| 89 | Ae | 303 | N | C3'-C4'-C5'-O5' |
| 89 | Ay | 205 | N | C3'-C4'-C5'-O5' |
| 89 | B5 | 4905 | N | C4'-C5'-O5'-P |
| 89 | B5 | 4914 | N | C4'-C5'-O5'-P |
| 89 | Bo | 208 | N | C4'-C5'-O5'-P |
| 89 | Bv | 302 | N | C4'-C5'-O5'-P |

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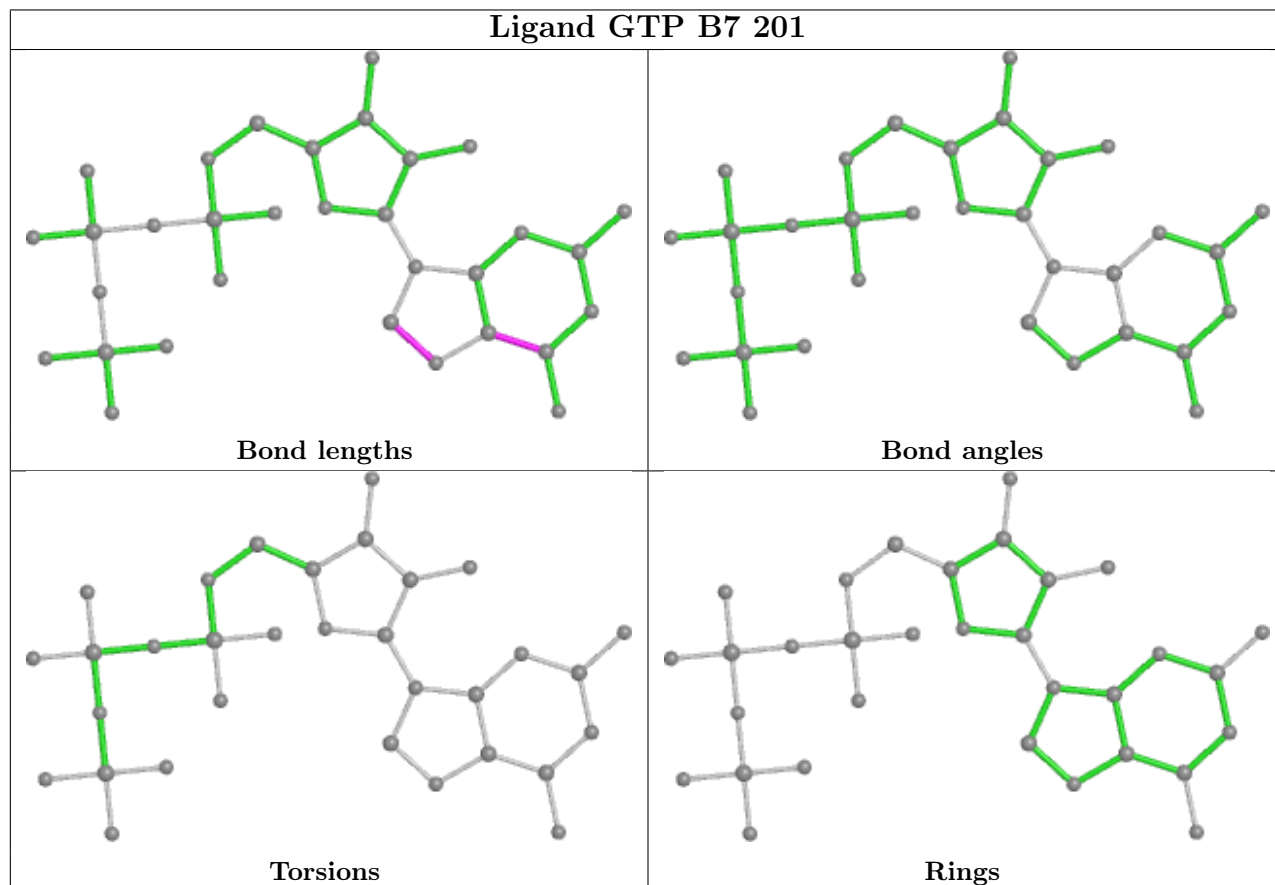
| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 89 | Bv | 304 | N | C4'-C5'-O5'-P |
| 89 | AI | 101 | N | C4'-C5'-O5'-P |
| 89 | AT | 105 | N | C4'-C5'-O5'-P |
| 89 | Ay | 204 | N | C4'-C5'-O5'-P |
| 89 | Bo | 208 | N | O4'-C4'-C5'-O5' |
| 89 | Aa | 308 | N | C4'-C5'-O5'-P |
| 89 | Ae | 304 | N | C4'-C5'-O5'-P |
| 89 | AT | 101 | N | C4'-C5'-O5'-P |
| 89 | Ae | 306 | N | C4'-C5'-O5'-P |
| 89 | Ae | 309 | N | C4'-C5'-O5'-P |
| 89 | Bo | 208 | N | C3'-C4'-C5'-O5' |
| 91 | A2 | 1912 | SPM | C12-C11-N10-C9 |
| 89 | Aa | 306 | N | C4'-C5'-O5'-P |
| 90 | B5 | 4926 | SPD | C2-C3-C4-C5 |
| 89 | AT | 106 | N | C3'-C4'-C5'-O5' |
| 90 | B5 | 4930 | SPD | C4-C5-N6-C7 |
| 90 | A2 | 1904 | SPD | C2-C3-C4-C5 |
| 89 | B5 | 4915 | N | C4'-C5'-O5'-P |
| 90 | B5 | 4921 | SPD | C4-C5-N6-C7 |
| 89 | A2 | 1903 | N | O4'-C4'-C5'-O5' |
| 90 | B5 | 4922 | SPD | C2-C3-C4-C5 |
| 90 | B5 | 4944 | SPD | C2-C3-C4-C5 |
| 90 | B5 | 4923 | SPD | C2-C3-C4-C5 |
| 89 | Bo | 207 | N | C4'-C5'-O5'-P |
| 90 | B5 | 4925 | SPD | C2-C3-C4-C5 |
| 90 | A2 | 1910 | SPD | C2-C3-C4-C5 |
| 90 | B5 | 4936 | SPD | C8-C7-N6-C5 |
| 89 | B5 | 4913 | N | O4'-C4'-C5'-O5' |
| 89 | B5 | 4909 | N | C4'-C5'-O5'-P |
| 89 | Bv | 307 | N | C4'-C5'-O5'-P |
| 89 | B5 | 4913 | N | C3'-C4'-C5'-O5' |
| 90 | B5 | 4942 | SPD | C2-C3-C4-C5 |
| 90 | B5 | 4940 | SPD | C2-C3-C4-C5 |

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 all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be

highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



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.

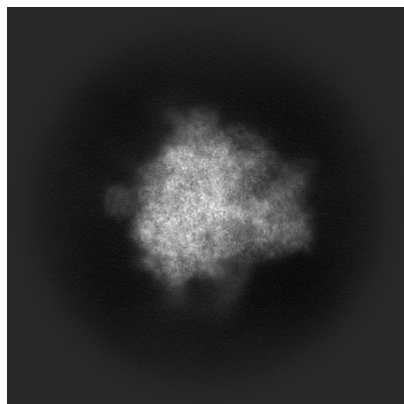
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-17367. These allow visual inspection of the internal detail of the map and identification of artifacts.

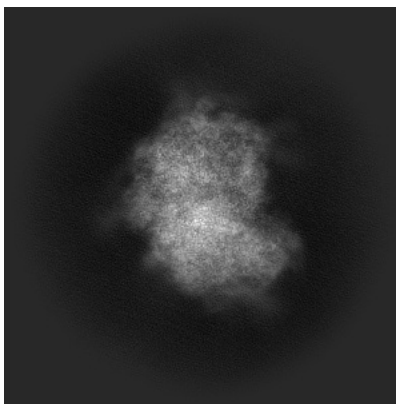
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

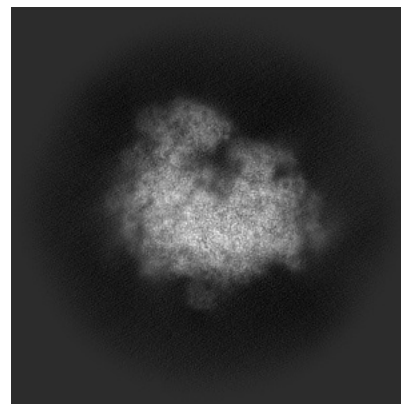
6.1.1 Primary map



X

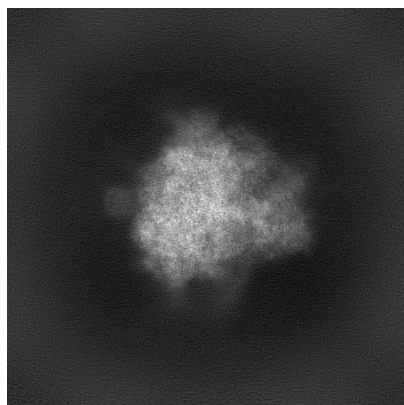


Y

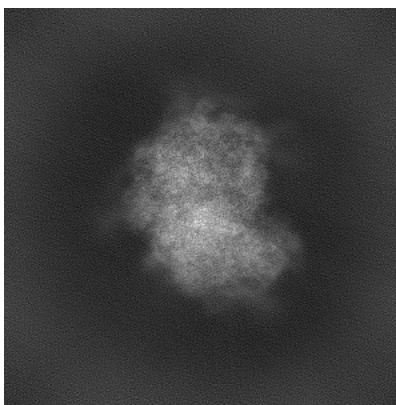


Z

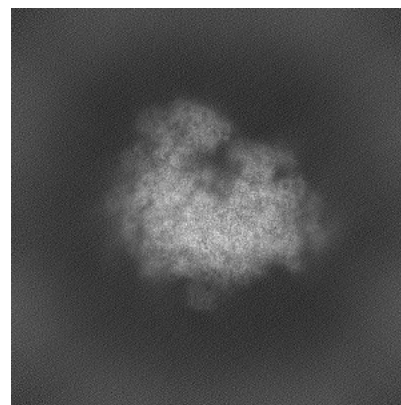
6.1.2 Raw map



X



Y

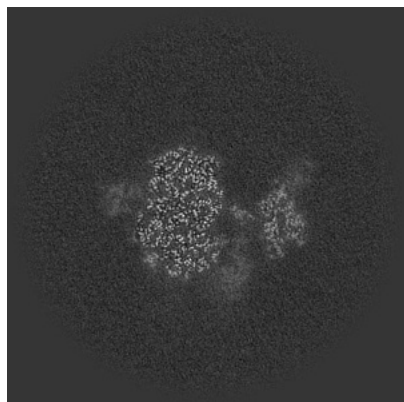


Z

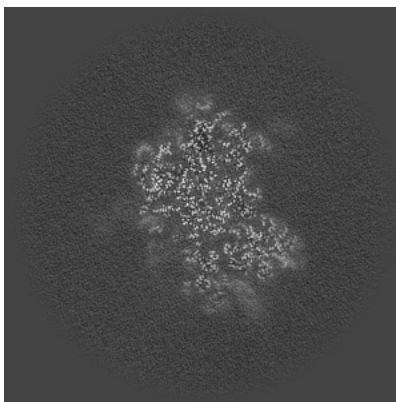
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

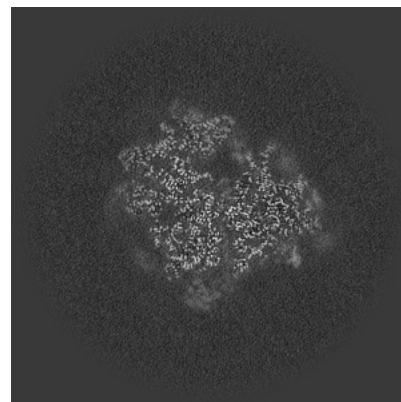
6.2.1 Primary map



X Index: 217

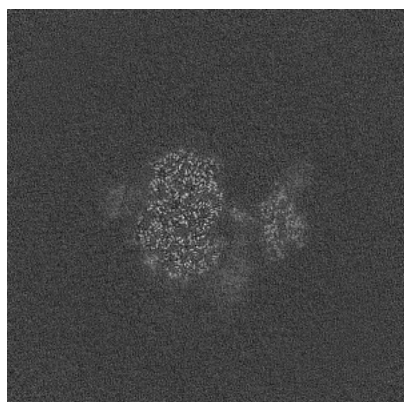


Y Index: 217

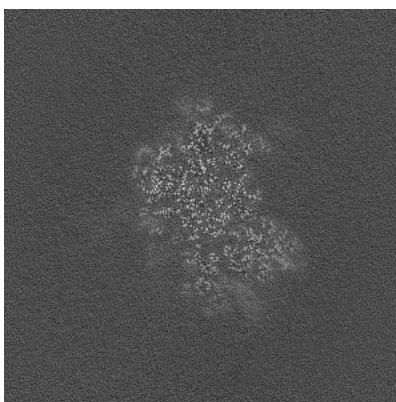


Z Index: 217

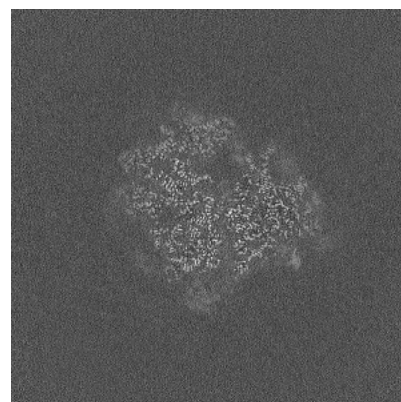
6.2.2 Raw map



X Index: 217



Y Index: 217

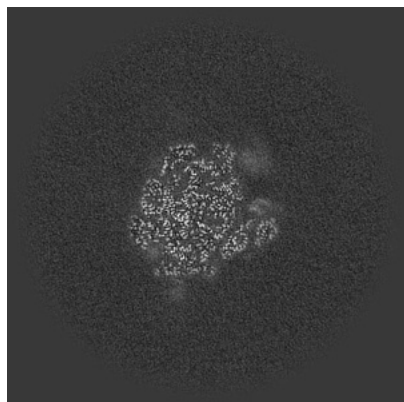


Z Index: 217

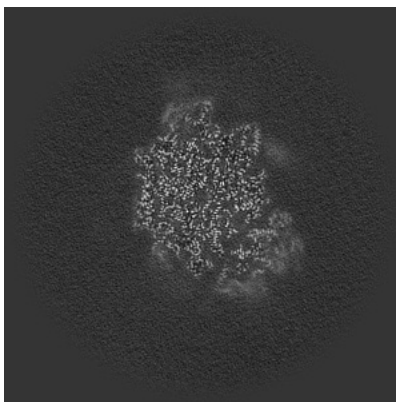
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

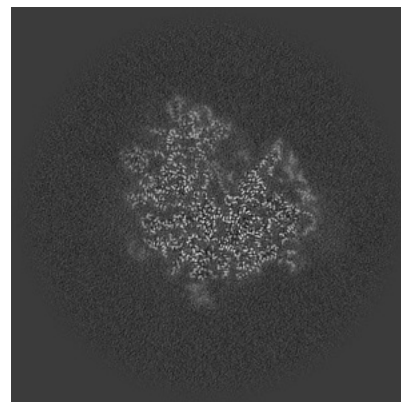
6.3.1 Primary map



X Index: 250

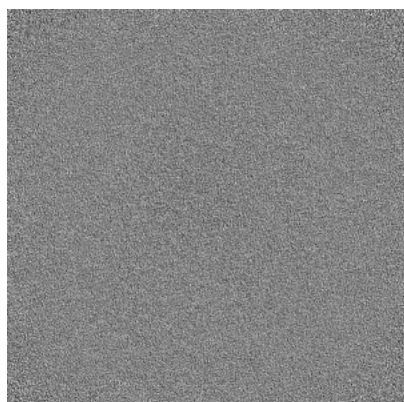


Y Index: 199

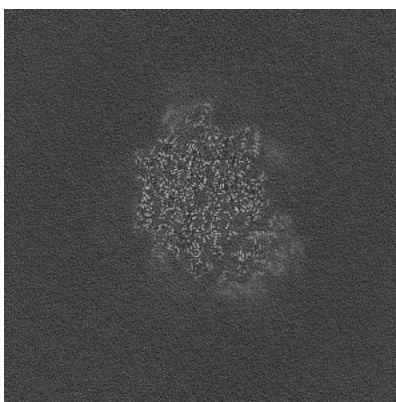


Z Index: 208

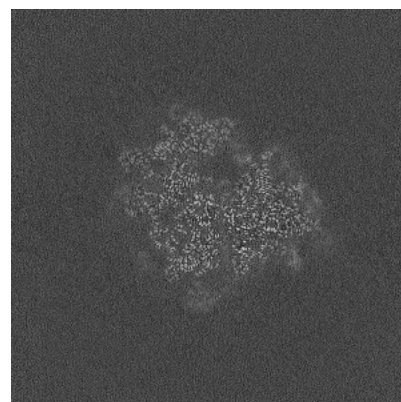
6.3.2 Raw map



X Index: 0



Y Index: 199

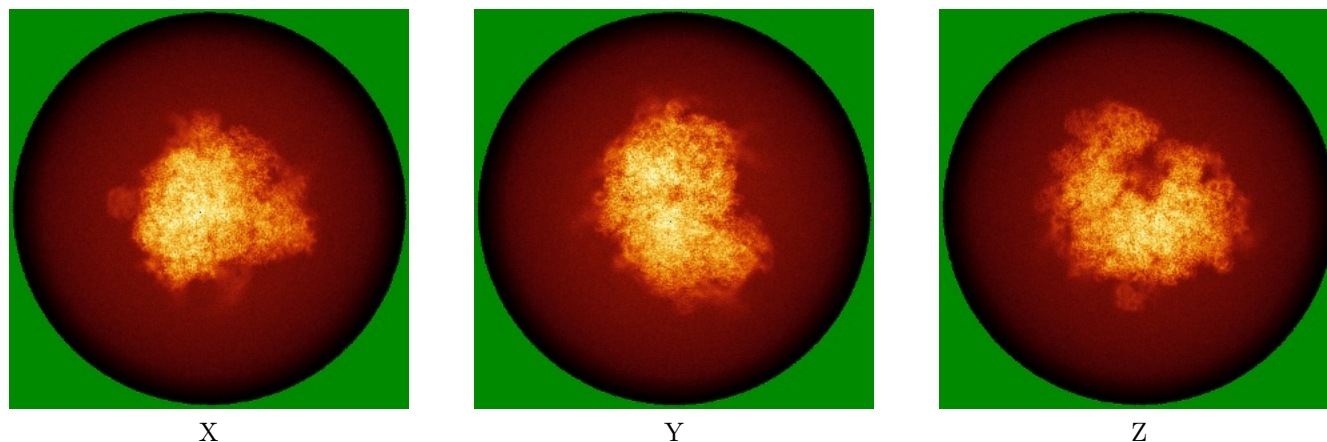


Z Index: 216

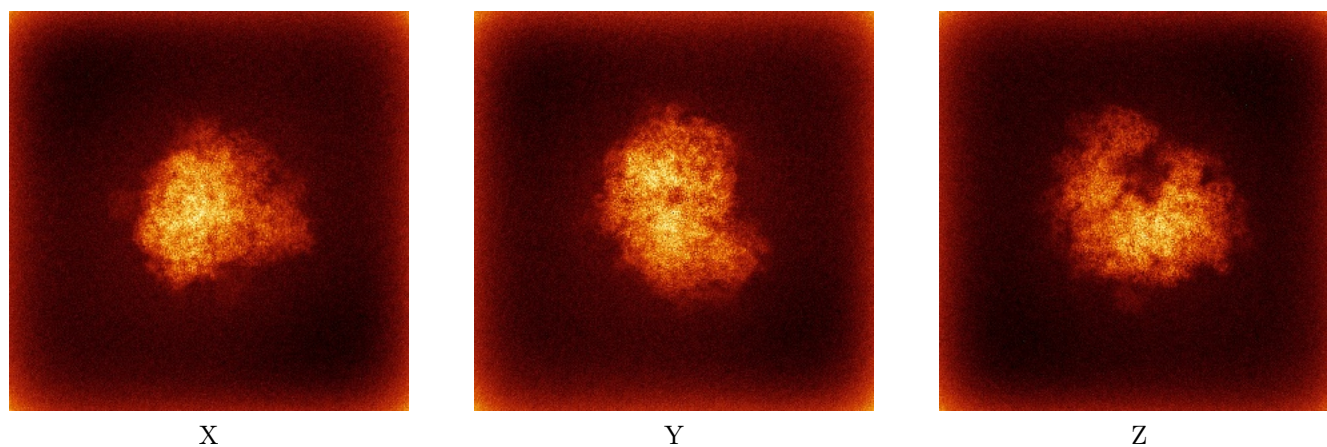
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

6.4.1 Primary map



6.4.2 Raw map



The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



X



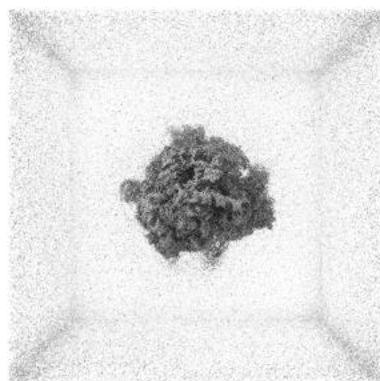
Y



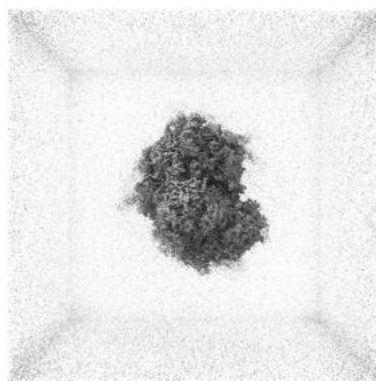
Z

The images above show the 3D surface view of the map at the recommended contour level 0.75. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

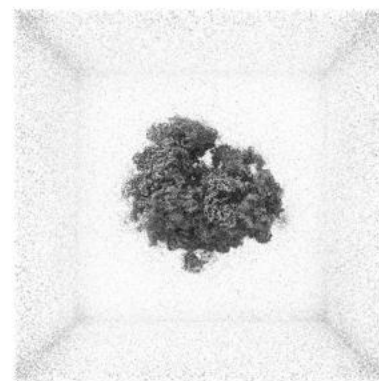
6.5.2 Raw map



X



Y



Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

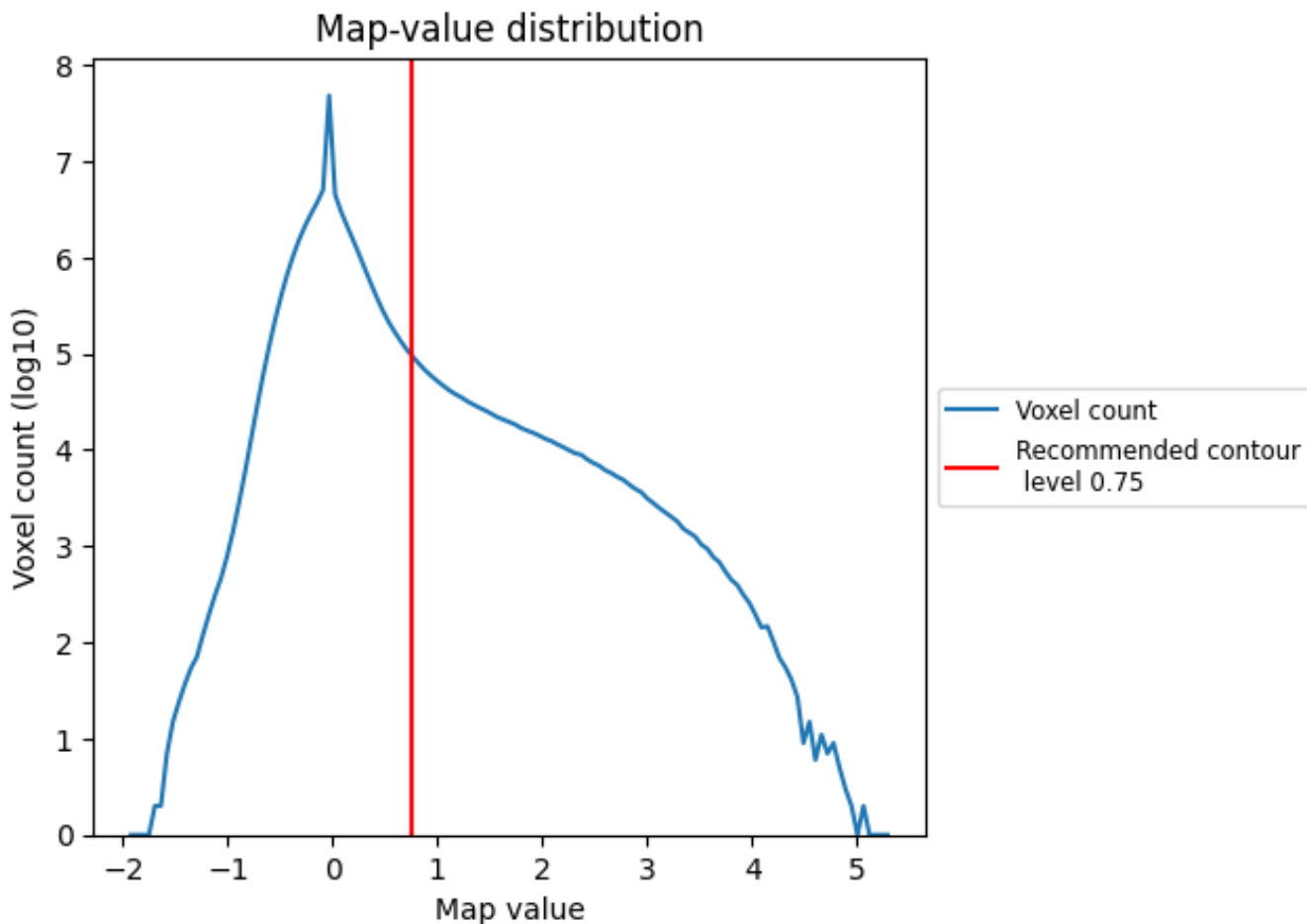
6.6 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis [i](#)

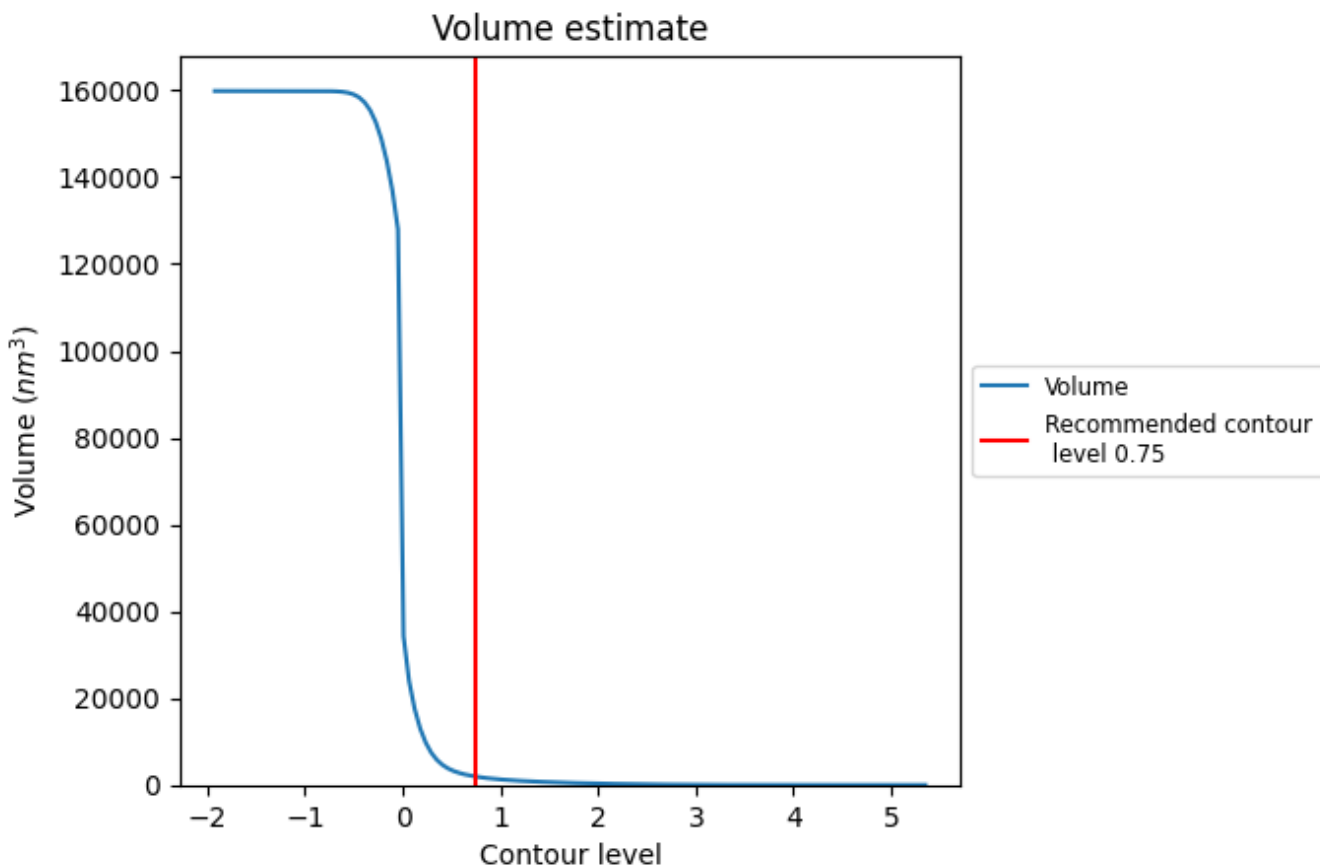
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

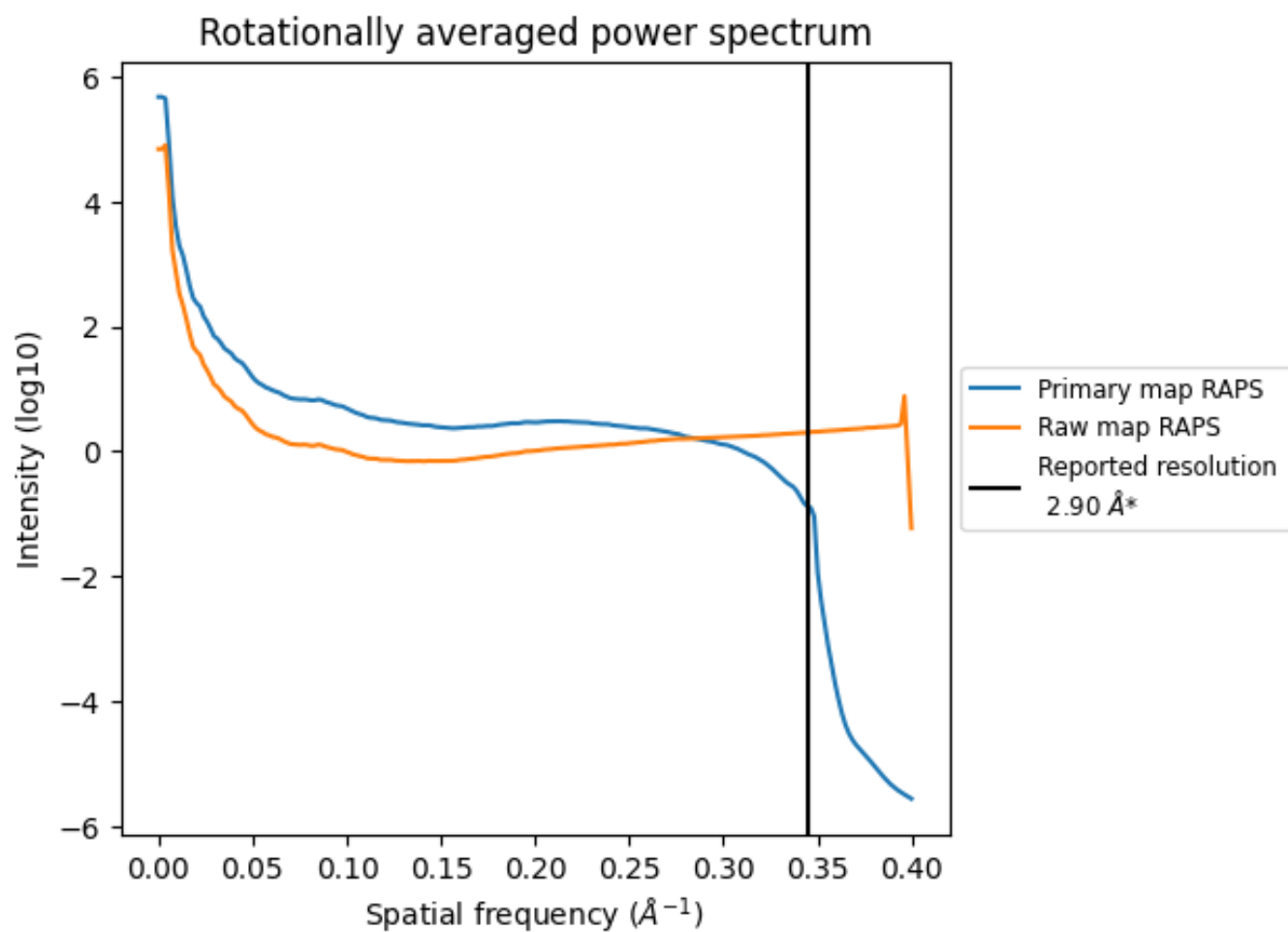
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1923 nm^3 ; this corresponds to an approximate mass of 1737 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum i

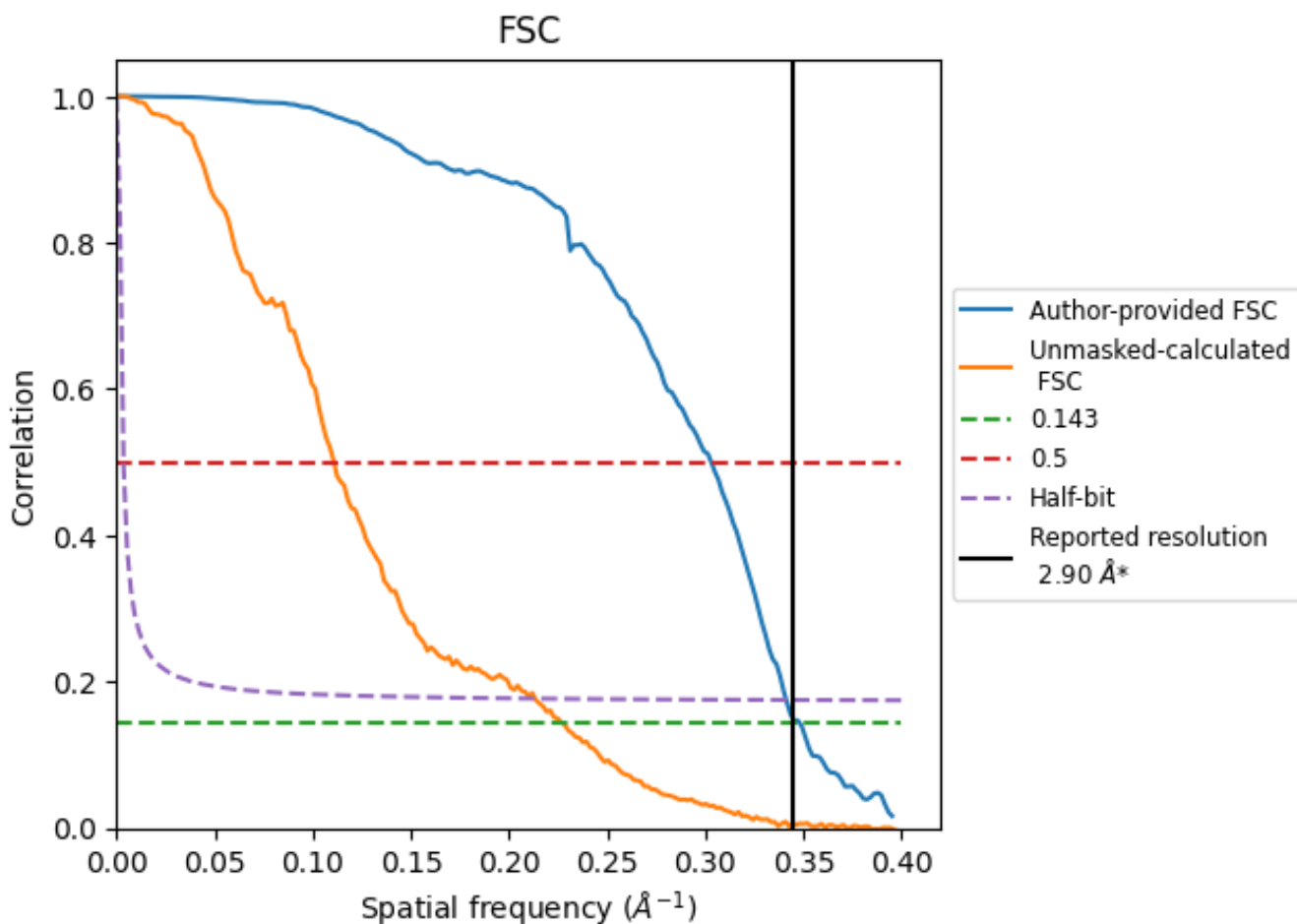


*Reported resolution corresponds to spatial frequency of 0.345 Å⁻¹

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.345 Å⁻¹

8.2 Resolution estimates [i](#)

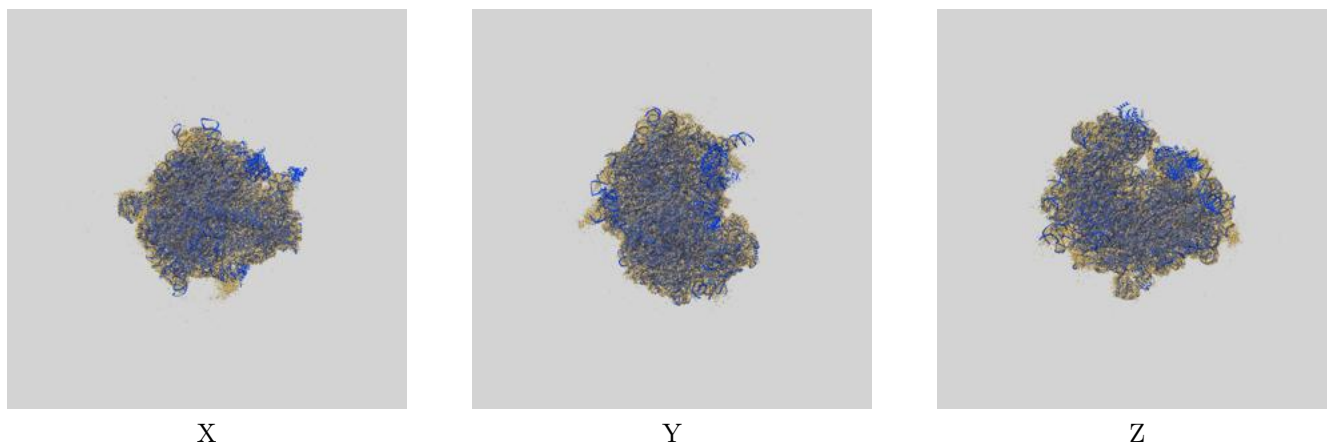
| Resolution estimate (Å) | Estimation criterion (FSC cut-off) | | |
|---------------------------|------------------------------------|------|----------|
| | 0.143 | 0.5 | Half-bit |
| Reported by author | 2.90 | - | - |
| Author-provided FSC curve | 2.87 | 3.30 | 2.93 |
| Unmasked-calculated* | 4.40 | 9.03 | 4.69 |

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.40 differs from the reported value 2.9 by more than 10 %

9 Map-model fit [i](#)

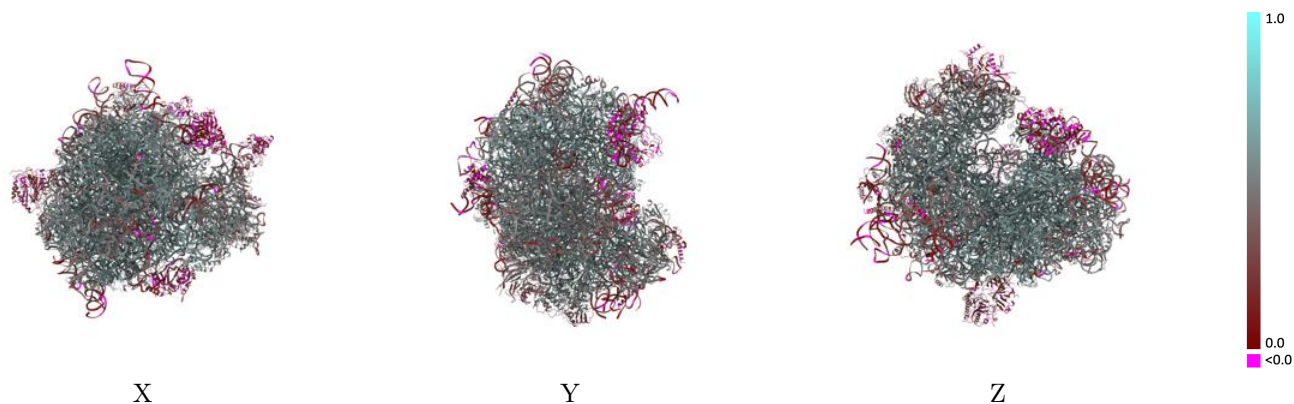
This section contains information regarding the fit between EMDB map EMD-17367 and PDB model 8P2K. Per-residue inclusion information can be found in section 3 on page 35.

9.1 Map-model overlay [i](#)



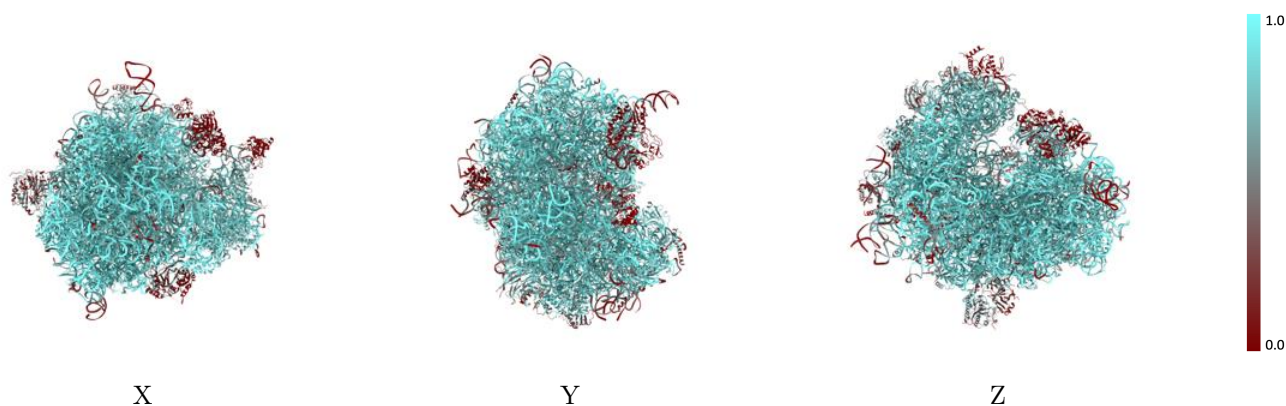
The images above show the 3D surface view of the map at the recommended contour level 0.75 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [\(i\)](#)



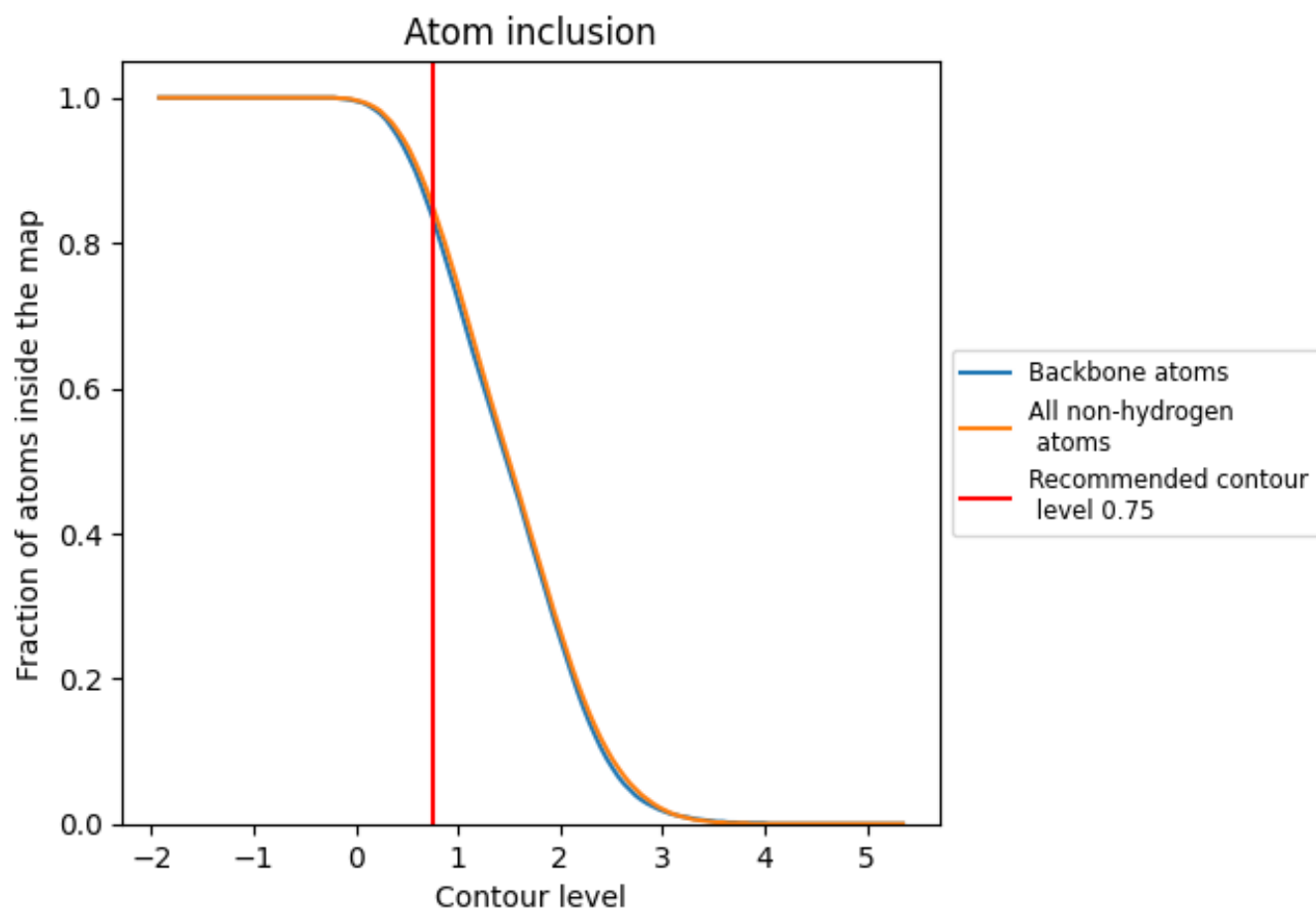
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [\(i\)](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.75).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 84% of all backbone atoms, 85% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.75) and Q-score for the entire model and for each chain.

| Chain | Atom inclusion | Q-score |
|-------|--|--|
| All |  0.8510 |  0.4830 |
| A2 |  0.8920 |  0.4740 |
| AA |  0.8010 |  0.4780 |
| AB |  0.7860 |  0.4830 |
| AC |  0.0470 |  0.1220 |
| AD |  0.7250 |  0.4230 |
| AE |  0.8790 |  0.5200 |
| AF |  0.6310 |  0.3680 |
| AG |  0.8620 |  0.4800 |
| AI |  0.7840 |  0.4710 |
| AT |  0.7900 |  0.4410 |
| AZ |  0.7640 |  0.4670 |
| Aa |  0.8090 |  0.4860 |
| Ab |  0.8520 |  0.5200 |
| Ac |  0.7370 |  0.4370 |
| Ad |  0.8850 |  0.5090 |
| Ae |  0.7630 |  0.4660 |
| Af |  0.7590 |  0.4030 |
| Ag |  0.5680 |  0.3850 |
| Ah |  0.8530 |  0.4960 |
| Ai |  0.8540 |  0.4920 |
| Aj |  0.7280 |  0.3800 |
| Ak |  0.8270 |  0.4980 |
| Al |  0.0090 |  0.1370 |
| Am |  0.8810 |  0.5250 |
| An |  0.8760 |  0.5240 |
| Ao |  0.7610 |  0.4290 |
| Ap |  0.8370 |  0.4760 |
| Aq |  0.6590 |  0.4260 |
| Ar |  0.7960 |  0.4620 |
| As |  0.8330 |  0.4620 |
| At |  0.6550 |  0.3890 |
| Au |  0.7940 |  0.4790 |
| Av |  0.8920 |  0.5440 |
| Aw |  0.8910 |  0.5410 |



























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| Chain | Atom inclusion | Q-score |
|-------|----------------|---------|
| Ax | 0.8200 | 0.4770 |
| Ay | 0.6560 | 0.4100 |
| Az | 0.9450 | 0.5650 |
| B5 | 0.9130 | 0.5000 |
| B7 | 0.9870 | 0.5590 |
| B8 | 0.9570 | 0.5330 |
| BA | 0.9360 | 0.5690 |
| BB | 0.9190 | 0.5560 |
| BC | 0.9350 | 0.5540 |
| BD | 0.8950 | 0.5230 |
| BE | 0.8190 | 0.4910 |
| BF | 0.9180 | 0.5500 |
| BG | 0.8410 | 0.4870 |
| BH | 0.8900 | 0.5400 |
| BI | 0.8970 | 0.5470 |
| BJ | 0.8600 | 0.5040 |
| BK | 0.5890 | 0.3770 |
| BL | 0.8960 | 0.5310 |
| BM | 0.8930 | 0.5240 |
| BN | 0.9680 | 0.5820 |
| BO | 0.9380 | 0.5590 |
| BP | 0.9010 | 0.5560 |
| BQ | 0.9370 | 0.5670 |
| BR | 0.8560 | 0.5160 |
| BS | 0.9410 | 0.5600 |
| BT | 0.9030 | 0.5390 |
| BU | 0.8170 | 0.4400 |
| BV | 0.8960 | 0.5470 |
| BW | 0.6500 | 0.3800 |
| BX | 0.8940 | 0.5400 |
| BY | 0.9020 | 0.5420 |
| BZ | 0.9050 | 0.5290 |
| Ba | 0.9510 | 0.5770 |
| Bb | 0.7830 | 0.4580 |
| Bc | 0.8070 | 0.4920 |
| Bd | 0.8980 | 0.5430 |
| Be | 0.9270 | 0.5640 |
| Bf | 0.9380 | 0.5650 |
| Bg | 0.8970 | 0.5380 |
| Bh | 0.9010 | 0.5330 |
| Bi | 0.9120 | 0.5230 |
| Bj | 0.9660 | 0.5750 |

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| Chain | Atom inclusion | Q-score |
|-------|--|--|
| Bk |  0.8040 |  0.4830 |
| Bl |  0.9280 |  0.5470 |
| Bm |  0.9120 |  0.5390 |
| Bo |  0.8170 |  0.5170 |
| Bp |  0.9100 |  0.5540 |
| Br |  0.9240 |  0.5440 |
| Bs |  0.0090 |  0.0580 |
| Bt |  0.0190 |  0.0570 |
| Bv |  0.1200 |  0.1370 |
| MA |  0.4630 |  0.1940 |
| Na |  0.2130 |  0.1450 |
| Nb |  0.3510 |  0.2510 |