



Full wwPDB X-ray Structure Validation Report ⓘ

Nov 5, 2023 – 09:12 PM EST

PDB ID : 8EV6
Title : Crystal structure of the *Thermus thermophilus* 70S ribosome in complex with amikacin, mRNA, and A-, P-, and E-site tRNAs
Authors : Seely, S.M.; Gagnon, M.G.
Deposited on : 2022-10-19
Resolution : 2.95 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

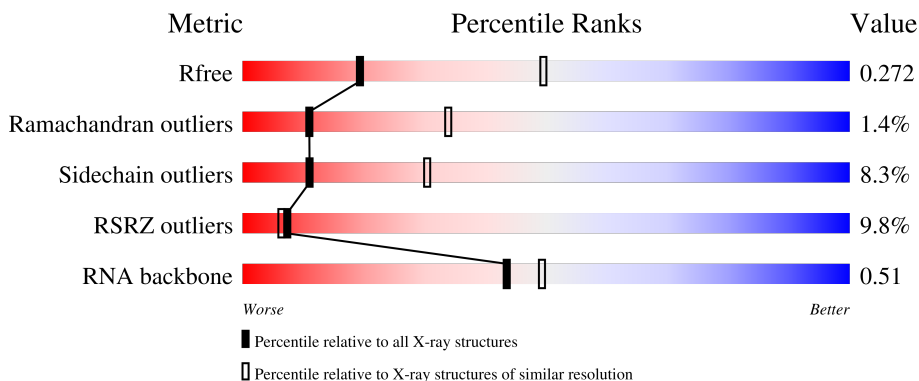
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.95 Å.

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



| Metric | Whole archive (#Entries) | Similar resolution (#Entries, resolution range(Å)) |
|-----------------------|-----------------------------|---|
| R_{free} | 130704 | 2969 (2.98-2.90) |
| Ramachandran outliers | 138981 | 3122 (2.98-2.90) |
| Sidechain outliers | 138945 | 3124 (2.98-2.90) |
| RSRZ outliers | 127900 | 2902 (2.98-2.90) |
| RNA backbone | 3102 | 1060 (3.20-2.68) |

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

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|-------------------|
| 1 | 1A | 2915 | 81% 17% .. |
| 1 | 2A | 2915 | 2% 77% 18% .. |
| 2 | 1B | 121 | 87% 12% .. |
| 2 | 2B | 121 | 74% 24% .. |
| 3 | 1D | 276 | % 93% 7% |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------------|
| 3 | 2D | 276 | 7% 92% 8% |
| 4 | 1E | 206 | 5% 88% 11% |
| 4 | 2E | 206 | 8% 92% 7% |
| 5 | 1F | 210 | 90% 6% |
| 5 | 2F | 210 | 9% 90% 6% |
| 6 | 1G | 182 | 88% 10% |
| 6 | 2G | 182 | 24% 87% 12% |
| 7 | 1H | 180 | 88% 8% |
| 7 | 2H | 180 | 48% 94% |
| 8 | 1I | 148 | 3% 89% 9% |
| 8 | 2I | 148 | 2% 90% 9% |
| 9 | 1N | 140 | 9% 91% 9% |
| 9 | 2N | 140 | 41% 91% 9% |
| 10 | 1O | 122 | 11% 94% 6% |
| 10 | 2O | 122 | 13% 93% 7% |
| 11 | 1P | 150 | 91% 9% |
| 11 | 2P | 150 | 31% 90% 9% |
| 12 | 1Q | 141 | 38% 94% 6% |
| 12 | 2Q | 141 | 48% 90% 10% |
| 13 | 1R | 118 | 86% 14% |
| 13 | 2R | 118 | 90% 10% |
| 14 | 1S | 112 | 2% 89% 9% |
| 14 | 2S | 112 | 91% 7% |
| 15 | 1T | 146 | 87% 10% |
| 15 | 2T | 146 | 2% 85% 5% 10% |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|-------------------------|
| 16 | 1U | 118 | 3% 97% .. |
| 16 | 2U | 118 | 18% 93% 5% . |
| 17 | 1V | 101 | % 87% 13% |
| 17 | 2V | 101 | 24% 90% 9% . |
| 18 | 1W | 113 | 4% 96% .. |
| 18 | 2W | 113 | 2% 95% .. |
| 19 | 1X | 96 | 2% 95% .. |
| 19 | 2X | 96 | 2% 93% 6% . |
| 20 | 1Y | 110 | 87% 10% . |
| 20 | 2Y | 110 | 5% 93% 5% . |
| 21 | 1Z | 206 | 14% 67% 8% 25% |
| 21 | 2Z | 206 | 8% 68% 9% 22% |
| 22 | 10 | 85 | 14% 95% .. |
| 22 | 20 | 85 | 26% 92% 6% . |
| 23 | 11 | 98 | 6% 94% 5% . |
| 23 | 21 | 98 | 16% 91% 8% . |
| 24 | 12 | 72 | 90% 7% . |
| 24 | 22 | 72 | % 93% . . |
| 25 | 13 | 60 | 2% 88% 10% . |
| 25 | 23 | 60 | 33% 88% 10% . |
| 26 | 14 | 71 | 79% 15% .. |
| 26 | 24 | 71 | 20% 79% 18% . |
| 27 | 15 | 60 | 5% 90% 8% . |
| 27 | 25 | 60 | 90% 8% . |
| 28 | 16 | 54 | 6% 87% 11% . |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|--------------------------|
| 28 | 26 | 54 | 43% 85% 13% |
| 29 | 17 | 49 | 4% 92% 6% |
| 29 | 27 | 49 | 2% 90% 8% |
| 30 | 18 | 65 | 6% 92% 6% |
| 30 | 28 | 65 | 57% 91% 8% |
| 31 | 19 | 37 | 32% 100% |
| 31 | 29 | 37 | 51% 97% |
| 32 | 1a | 1521 | % 80% 18% |
| 32 | 2a | 1521 | 2% 79% 18% |
| 33 | 1b | 256 | 5% 81% 9% 10% |
| 33 | 2b | 256 | 12% 80% 11% 10% |
| 34 | 1c | 239 | 23% 81% 5% 14% |
| 34 | 2c | 239 | 41% 80% 6% 14% |
| 35 | 1d | 209 | 14% 91% 8% |
| 35 | 2d | 209 | 13% 93% 6% |
| 36 | 1e | 162 | 13% 86% 5% 9% |
| 36 | 2e | 162 | 16% 86% 6% 9% |
| 37 | 1f | 101 | 2% 94% 5% |
| 37 | 2f | 101 | 6% 96% |
| 38 | 1g | 156 | 23% 94% 5% |
| 38 | 2g | 156 | 26% 92% 8% |
| 39 | 1h | 138 | 14% 93% 6% |
| 39 | 2h | 138 | 18% 95% |
| 40 | 1i | 128 | 12% 91% 8% |
| 40 | 2i | 128 | 16% 90% 9% |

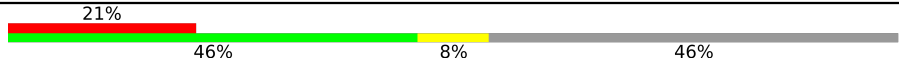

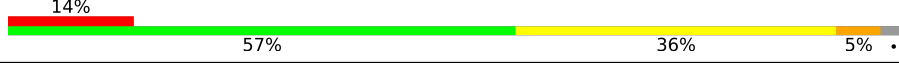
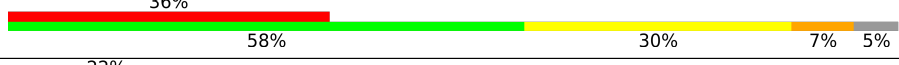

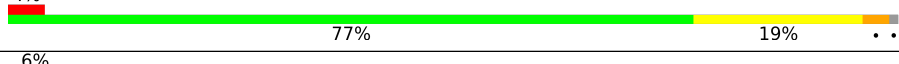

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|-------------------------|
| 41 | 1j | 105 | 15% 80% 12% 8% |
| 41 | 2j | 105 | 31% 80% 10% 9% |
| 42 | 1k | 129 | 47% 80% 9% 12% |
| 42 | 2k | 129 | 71% 82% 6% 12% |
| 43 | 1l | 132 | 14% 86% 7% 8% |
| 43 | 2l | 132 | 48% 86% 6% 8% |
| 44 | 1m | 126 | 7% 89% 9% . |
| 44 | 2m | 126 | 23% 87% 10% . |
| 45 | 1n | 61 | 11% 82% 16% . |
| 45 | 2n | 61 | 77% 92% 7% . |
| 46 | 1o | 89 | 2% 91% 8% . |
| 46 | 2o | 89 | 7% 93% 6% . |
| 47 | 1p | 88 | 20% 84% 9% 7% |
| 47 | 2p | 88 | 14% 83% 10% 7% |
| 48 | 1q | 105 | 5% 87% 8% 6% |
| 48 | 2q | 105 | 43% 88% 7% 6% |
| 49 | 1r | 88 | 16% 70% 7% 23% |
| 49 | 2r | 88 | 19% 70% 7% 23% |
| 50 | 1s | 93 | % 80% 10% 11% |
| 50 | 2s | 93 | 29% 76% 11% . 11% |
| 51 | 1t | 106 | 4% 85% 6% 9% |
| 51 | 2t | 106 | 14% 83% 8% 9% |
| 52 | 1u | 27 | 11% 85% 15% |
| 52 | 2u | 27 | 44% 81% 15% |
| 53 | 1v | 24 | 25% 46% 8% 46% |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|--|
| 53 | 2v | 24 |  |
| 54 | 1w | 76 |  |
| 54 | 1y | 76 |  |
| 54 | 2w | 76 |  |
| 54 | 2y | 76 |  |
| 55 | 1x | 77 |  |
| 55 | 2x | 77 |  |

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|------|-----------|----------|---------|------------------|
| 56 | MG | 15 | 102 | - | - | - | X |
| 56 | MG | 15 | 103 | - | - | - | X |
| 56 | MG | 1A | 3006 | - | - | - | X |
| 56 | MG | 1A | 3047 | - | - | - | X |
| 56 | MG | 1A | 3061 | - | - | - | X |
| 56 | MG | 1A | 3084 | - | - | - | X |
| 56 | MG | 1A | 3147 | - | - | - | X |
| 56 | MG | 1A | 3204 | - | - | - | X |
| 56 | MG | 1A | 3299 | - | - | - | X |
| 56 | MG | 1A | 3311 | - | - | - | X |
| 56 | MG | 1A | 3312 | - | - | - | X |
| 56 | MG | 1A | 3321 | - | - | - | X |
| 56 | MG | 1A | 3337 | - | - | - | X |
| 56 | MG | 1A | 3364 | - | - | - | X |
| 56 | MG | 1A | 3365 | - | - | - | X |
| 56 | MG | 1A | 3537 | - | - | - | X |
| 56 | MG | 1A | 3556 | - | - | - | X |
| 56 | MG | 1A | 3579 | - | - | - | X |
| 56 | MG | 1A | 3580 | - | - | - | X |
| 56 | MG | 1A | 3581 | - | - | - | X |
| 56 | MG | 1A | 3701 | - | - | - | X |
| 56 | MG | 1A | 3820 | - | - | - | X |
| 56 | MG | 1A | 3859 | - | - | - | X |
| 56 | MG | 1A | 3866 | - | - | - | X |
| 56 | MG | 1A | 3879 | - | - | - | X |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|------|-----------|----------|---------|------------------|
| 56 | MG | 1A | 3887 | - | - | - | X |
| 56 | MG | 1A | 3923 | - | - | - | X |
| 56 | MG | 1A | 3932 | - | - | - | X |
| 56 | MG | 1A | 3934 | - | - | - | X |
| 56 | MG | 1R | 202 | - | - | - | X |
| 56 | MG | 1W | 204 | - | - | - | X |
| 56 | MG | 1a | 1607 | - | - | - | X |
| 56 | MG | 1a | 1609 | - | - | - | X |
| 56 | MG | 1a | 1611 | - | - | - | X |
| 56 | MG | 1a | 1613 | - | - | - | X |
| 56 | MG | 1a | 1614 | - | - | - | X |
| 56 | MG | 1a | 1639 | - | - | - | X |
| 56 | MG | 1a | 1742 | - | - | - | X |
| 56 | MG | 1a | 1806 | - | - | - | X |
| 56 | MG | 1a | 1845 | - | - | - | X |
| 56 | MG | 1a | 1861 | - | - | - | X |
| 56 | MG | 1a | 1888 | - | - | - | X |
| 56 | MG | 1a | 1896 | - | - | - | X |
| 56 | MG | 1e | 202 | - | - | - | X |
| 56 | MG | 1l | 204 | - | - | - | X |
| 56 | MG | 1x | 103 | - | - | - | X |
| 56 | MG | 2A | 3082 | - | - | - | X |
| 56 | MG | 2A | 3203 | - | - | - | X |
| 56 | MG | 2A | 3204 | - | - | - | X |
| 56 | MG | 2A | 3224 | - | - | - | X |
| 56 | MG | 2A | 3416 | - | - | - | X |
| 56 | MG | 2A | 3493 | - | - | - | X |
| 56 | MG | 2A | 3505 | - | - | - | X |
| 56 | MG | 2A | 3545 | - | - | - | X |
| 56 | MG | 2D | 302 | - | - | - | X |
| 56 | MG | 2O | 201 | - | - | - | X |
| 56 | MG | 2a | 1638 | - | - | - | X |
| 56 | MG | 2a | 1641 | - | - | - | X |
| 56 | MG | 2a | 1653 | - | - | - | X |
| 56 | MG | 2a | 1705 | - | - | - | X |
| 56 | MG | 2a | 1725 | - | - | - | X |
| 56 | MG | 2a | 1758 | - | - | - | X |
| 56 | MG | 2a | 1868 | - | - | - | X |
| 56 | MG | 2a | 1869 | - | - | - | X |
| 56 | MG | 2t | 202 | - | - | - | X |
| 56 | MG | 2x | 105 | - | - | - | X |

2 Entry composition [i](#)

There are 60 unique types of molecules in this entry. The entry contains 297993 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 23S Ribosomal RNA.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-------|-------|-------|------|---------|---------|-------|
| | | | Total | C | N | O | P | | | |
| 1 | 1A | 2871 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 61851 | 27530 | 11572 | 19878 | 2871 | | | |
| 1 | 2A | 2800 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 60322 | 26848 | 11284 | 19390 | 2800 | | | |

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

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|-----|---------|---------|-------|
| | | | Total | C | N | O | P | | | |
| 2 | 1B | 120 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 2577 | 1146 | 476 | 835 | 120 | | | |
| 2 | 2B | 120 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 2575 | 1146 | 476 | 833 | 120 | | | |

- Molecule 3 is a protein called 50S ribosomal protein L2.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 3 | 1D | 275 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 2136 | 1349 | 423 | 361 | 3 | | | |
| 3 | 2D | 275 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 2136 | 1349 | 423 | 361 | 3 | | | |

- Molecule 4 is a protein called 50S ribosomal protein L3.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 4 | 1E | 204 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1559 | 985 | 298 | 270 | 6 | | | |
| 4 | 2E | 204 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1559 | 985 | 298 | 270 | 6 | | | |

- Molecule 5 is a protein called 50S ribosomal protein L4.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 5 | 1F | 203 | Total 1584 | C 1009 | N 298 | O 275 | S 2 | 0 | 0 | 1 |
| 5 | 2F | 203 | Total 1580 | C 1007 | N 297 | O 274 | S 2 | 0 | 0 | 1 |

- Molecule 6 is a protein called 50S ribosomal protein L5.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|---------------|----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 6 | 1G | 181 | Total 1423 | C 913 | N 253 | O 253 | S 4 | 0 | 0 | 0 |
| 6 | 2G | 181 | Total 1428 | C 913 | N 258 | O 253 | S 4 | 0 | 0 | 0 |

- Molecule 7 is a protein called 50S ribosomal protein L6.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|---------------|----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 7 | 1H | 174 | Total 1330 | C 845 | N 248 | O 236 | S 1 | 0 | 0 | 0 |
| 7 | 2H | 174 | Total 1330 | C 845 | N 248 | O 236 | S 1 | 0 | 0 | 0 |

- Molecule 8 is a protein called 50S ribosomal protein L9.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|---------------|----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 8 | 1I | 146 | Total 1097 | C 701 | N 191 | O 204 | S 1 | 0 | 0 | 0 |
| 8 | 2I | 146 | Total 1064 | C 681 | N 186 | O 196 | S 1 | 0 | 0 | 0 |

- Molecule 9 is a protein called 50S ribosomal protein L13.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|---------------|----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 9 | 1N | 140 | Total 1117 | C 719 | N 207 | O 187 | S 4 | 0 | 0 | 0 |
| 9 | 2N | 140 | Total 1117 | C 719 | N 207 | O 187 | S 4 | 0 | 0 | 0 |

- Molecule 10 is a protein called 50S ribosomal protein L14.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|--------------|----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 10 | 1O | 122 | Total 933 | C 588 | N 171 | O 170 | S 4 | 0 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 10 | 2O | 122 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 933 | 588 | 171 | 170 | 4 | | | |

- Molecule 11 is a protein called 50S ribosomal protein L15.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 11 | 1P | 149 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1135 | 706 | 230 | 196 | 3 | | | |
| 11 | 2P | 149 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1135 | 706 | 230 | 196 | 3 | | | |

- Molecule 12 is a protein called 50S ribosomal protein L16.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 12 | 1Q | 141 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1122 | 715 | 212 | 188 | 7 | | | |
| 12 | 2Q | 141 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1122 | 715 | 212 | 188 | 7 | | | |

- Molecule 13 is a protein called 50S ribosomal protein L17.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 13 | 1R | 118 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 968 | 604 | 203 | 160 | 1 | | | |
| 13 | 2R | 118 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 968 | 604 | 203 | 160 | 1 | | | |

- Molecule 14 is a protein called 50S ribosomal protein L18.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---------|---------|-------|
| 14 | 1S | 110 | Total | C | N | O | 0 | 0 | 0 |
| | | | 873 | 550 | 174 | 149 | | | |
| 14 | 2S | 110 | Total | C | N | O | 0 | 0 | 0 |
| | | | 870 | 549 | 173 | 148 | | | |

- Molecule 15 is a protein called 50S ribosomal protein L19.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 15 | 1T | 131 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1091 | 680 | 225 | 185 | 1 | | | |
| 15 | 2T | 131 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1083 | 675 | 224 | 183 | 1 | | | |

- Molecule 16 is a protein called 50S ribosomal protein L20.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|--------------|----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 16 | 1U | 116 | Total 959 | C 608 | N 201 | O 149 | S 1 | 0 | 0 | 0 |
| 16 | 2U | 116 | Total 959 | C 608 | N 201 | O 149 | S 1 | 0 | 0 | 0 |

- Molecule 17 is a protein called 50S ribosomal protein L21.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|--------------|----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 17 | 1V | 101 | Total 771 | C 495 | N 140 | O 135 | S 1 | 0 | 0 | 0 |
| 17 | 2V | 101 | Total 771 | C 495 | N 140 | O 135 | S 1 | 0 | 0 | 0 |

- Molecule 18 is a protein called 50S ribosomal protein L22.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|--------------|----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 18 | 1W | 112 | Total 886 | C 557 | N 174 | O 153 | S 2 | 0 | 0 | 0 |
| 18 | 2W | 112 | Total 886 | C 557 | N 174 | O 153 | S 2 | 0 | 0 | 0 |

- Molecule 19 is a protein called 50S ribosomal protein L23.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|--------------|----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 19 | 1X | 95 | Total 750 | C 488 | N 135 | O 126 | S 1 | 0 | 0 | 0 |
| 19 | 2X | 95 | Total 750 | C 488 | N 135 | O 126 | S 1 | 0 | 0 | 0 |

- Molecule 20 is a protein called 50S ribosomal protein L24.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|--------------|----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 20 | 1Y | 107 | Total 806 | C 517 | N 152 | O 131 | S 6 | 0 | 0 | 0 |
| 20 | 2Y | 107 | Total 806 | C 517 | N 152 | O 131 | S 6 | 0 | 0 | 0 |

- Molecule 21 is a protein called 50S ribosomal protein L25.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 21 | 1Z | 154 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1240 | 795 | 222 | 220 | 3 | | | |
| 21 | 2Z | 160 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1271 | 814 | 228 | 227 | 2 | | | |

- Molecule 22 is a protein called 50S ribosomal protein L27.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 22 | 10 | 83 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 653 | 404 | 139 | 109 | 1 | | | |
| 22 | 20 | 83 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 653 | 404 | 139 | 109 | 1 | | | |

- Molecule 23 is a protein called 50S ribosomal protein L28.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 23 | 11 | 97 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 755 | 475 | 148 | 131 | 1 | | | |
| 23 | 21 | 97 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 755 | 475 | 148 | 131 | 1 | | | |

- Molecule 24 is a protein called 50S ribosomal protein L29.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 24 | 12 | 70 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 588 | 365 | 118 | 103 | 2 | | | |
| 24 | 22 | 70 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 588 | 365 | 118 | 103 | 2 | | | |

- Molecule 25 is a protein called 50S ribosomal protein L30.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---------|---------|-------|
| 25 | 13 | 59 | Total | C | N | O | 0 | 0 | 0 |
| | | | 469 | 298 | 90 | 81 | | | |
| 25 | 23 | 59 | Total | C | N | O | 0 | 0 | 0 |
| | | | 464 | 296 | 90 | 78 | | | |

- Molecule 26 is a protein called 50S ribosomal protein L31.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 26 | 14 | 69 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 552 | 349 | 99 | 99 | 5 | | | |

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| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 26 | 24 | 69 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 532 | 339 | 97 | 91 | 5 | | | |

- Molecule 27 is a protein called 50S ribosomal protein L32.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 27 | 15 | 59 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 455 | 285 | 89 | 76 | 5 | | | |
| 27 | 25 | 59 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 455 | 285 | 89 | 76 | 5 | | | |

- Molecule 28 is a protein called 50S ribosomal protein L33.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 28 | 16 | 53 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 453 | 281 | 91 | 77 | 4 | | | |
| 28 | 26 | 53 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 449 | 279 | 91 | 75 | 4 | | | |

- Molecule 29 is a protein called 50S ribosomal protein L34.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|----|---|---------|---------|-------|
| 29 | 17 | 48 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 418 | 257 | 104 | 55 | 2 | | | |
| 29 | 27 | 48 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 418 | 257 | 104 | 55 | 2 | | | |

- Molecule 30 is a protein called 50S ribosomal protein L35.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|----|---|---------|---------|-------|
| 30 | 18 | 64 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 517 | 331 | 102 | 82 | 2 | | | |
| 30 | 28 | 64 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 517 | 331 | 102 | 82 | 2 | | | |

- Molecule 31 is a protein called 50S ribosomal protein L36.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 31 | 19 | 37 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 307 | 188 | 68 | 47 | 4 | | | |
| 31 | 29 | 37 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 307 | 188 | 68 | 47 | 4 | | | |

- Molecule 32 is a RNA chain called 16S Ribosomal RNA.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-------|------|-------|------|---------|---------|-------|
| 32 | 1a | 1500 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 32246 | 14358 | 5975 | 10413 | 1500 | | | |
| 32 | 2a | 1503 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 32327 | 14396 | 5990 | 10438 | 1503 | | | |

- Molecule 33 is a protein called 30S ribosomal protein S2.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| 33 | 1b | 231 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1846 | 1179 | 331 | 331 | 5 | | | |
| 33 | 2b | 231 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1825 | 1167 | 326 | 327 | 5 | | | |

- Molecule 34 is a protein called 30S ribosomal protein S3.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 34 | 1c | 206 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1548 | 973 | 301 | 273 | 1 | | | |
| 34 | 2c | 206 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1542 | 968 | 300 | 273 | 1 | | | |

- Molecule 35 is a protein called 30S ribosomal protein S4.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| 35 | 1d | 208 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1655 | 1038 | 326 | 284 | 7 | | | |
| 35 | 2d | 208 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1674 | 1050 | 333 | 284 | 7 | | | |

- Molecule 36 is a protein called 30S ribosomal protein S5.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 36 | 1e | 148 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1129 | 714 | 213 | 198 | 4 | | | |
| 36 | 2e | 148 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1133 | 716 | 214 | 199 | 4 | | | |

- Molecule 37 is a protein called 30S ribosomal protein S6.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 37 | 1f | 100 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 810 | 514 | 144 | 149 | 3 | | | |
| 37 | 2f | 100 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 816 | 516 | 146 | 151 | 3 | | | |

- Molecule 38 is a protein called 30S ribosomal protein S7.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 38 | 1g | 155 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1231 | 766 | 243 | 216 | 6 | | | |
| 38 | 2g | 155 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1235 | 769 | 244 | 216 | 6 | | | |

- Molecule 39 is a protein called 30S ribosomal protein S8.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 39 | 1h | 137 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1088 | 689 | 206 | 191 | 2 | | | |
| 39 | 2h | 137 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1088 | 689 | 206 | 191 | 2 | | | |

- Molecule 40 is a protein called 30S ribosomal protein S9.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---------|---------|-------|
| 40 | 1i | 127 | Total | C | N | O | 0 | 0 | 0 |
| | | | 983 | 623 | 193 | 167 | | | |
| 40 | 2i | 127 | Total | C | N | O | 0 | 0 | 0 |
| | | | 978 | 619 | 190 | 169 | | | |

- Molecule 41 is a protein called 30S ribosomal protein S10.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---------|---------|-------|
| 41 | 1j | 97 | Total | C | N | O | 0 | 0 | 0 |
| | | | 709 | 440 | 138 | 131 | | | |
| 41 | 2j | 96 | Total | C | N | O | 0 | 0 | 0 |
| | | | 714 | 445 | 138 | 131 | | | |

- Molecule 42 is a protein called 30S ribosomal protein S11.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 42 | 1k | 114 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 829 | 516 | 155 | 155 | 3 | | | |

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| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 42 | 2k | 114 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 833 | 519 | 156 | 155 | 3 | | | |

- Molecule 43 is a protein called 30S ribosomal protein S12.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 43 | 1l | 122 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 932 | 586 | 185 | 159 | 2 | | | |
| 43 | 2l | 122 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 932 | 586 | 185 | 159 | 2 | | | |

- Molecule 44 is a protein called 30S ribosomal protein S13.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 44 | 1m | 123 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 958 | 592 | 198 | 166 | 2 | | | |
| 44 | 2m | 122 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 950 | 586 | 197 | 165 | 2 | | | |

- Molecule 45 is a protein called 30S ribosomal protein S14 type Z.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|----|---|---------|---------|-------|
| 45 | 1n | 60 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 492 | 312 | 104 | 72 | 4 | | | |
| 45 | 2n | 60 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 492 | 312 | 104 | 72 | 4 | | | |

- Molecule 46 is a protein called 30S ribosomal protein S15.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 46 | 1o | 88 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 728 | 456 | 144 | 126 | 2 | | | |
| 46 | 2o | 88 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 728 | 456 | 144 | 126 | 2 | | | |

- Molecule 47 is a protein called 30S ribosomal protein S16.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 47 | 1p | 82 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 681 | 433 | 134 | 113 | 1 | | | |
| 47 | 2p | 82 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 677 | 430 | 133 | 113 | 1 | | | |

- Molecule 48 is a protein called 30S ribosomal protein S17.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|--------------|----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 48 | 1q | 99 | Total 823 | C 528 | N 151 | O 142 | S 2 | 0 | 0 | 0 |
| 48 | 2q | 99 | Total 823 | C 528 | N 151 | O 142 | S 2 | 0 | 0 | 0 |

- Molecule 49 is a protein called 30S ribosomal protein S18.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|--------------|----------|----------|---------|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 49 | 1r | 68 | Total 555 | C 355 | N 108 | O 92 | S | 0 | 0 | 0 |
| 49 | 2r | 68 | Total 555 | C 355 | N 108 | O 92 | S | 0 | 0 | 0 |

- Molecule 50 is a protein called 30S ribosomal protein S19.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|--------------|----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 50 | 1s | 83 | Total 652 | C 417 | N 120 | O 113 | S 2 | 0 | 0 | 0 |
| 50 | 2s | 83 | Total 646 | C 412 | N 119 | O 113 | S 2 | 0 | 0 | 0 |

- Molecule 51 is a protein called 30S ribosomal protein S20.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|--------------|----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 51 | 1t | 96 | Total 728 | C 446 | N 156 | O 124 | S 2 | 0 | 0 | 0 |
| 51 | 2t | 96 | Total 727 | C 446 | N 155 | O 124 | S 2 | 0 | 0 | 0 |

- Molecule 52 is a protein called 30S ribosomal protein Thx.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|--------------|----------|---------|---------|---------|---------|-------|
| | | | Total | C | N | O | | | |
| 52 | 1u | 23 | Total 199 | C 122 | N 48 | O 29 | 0 | 0 | 0 |
| 52 | 2u | 23 | Total 199 | C 122 | N 48 | O 29 | 0 | 0 | 0 |

- Molecule 53 is a RNA chain called mRNA.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|----|---------|---------|-------|
| 53 | 1v | 13 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 277 | 125 | 51 | 88 | 13 | | | |
| 53 | 2v | 13 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 277 | 125 | 51 | 88 | 13 | | | |

- Molecule 54 is a RNA chain called A-site and E-site tRNAs.

| Mol | Chain | Residues | Atoms | | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|----|---|---------|---------|-------|
| 54 | 1w | 74 | Total | C | N | O | P | S | 0 | 0 | 0 |
| | | | 1592 | 713 | 285 | 518 | 74 | 2 | | | |
| 54 | 1y | 74 | Total | C | N | O | P | S | 0 | 0 | 0 |
| | | | 1585 | 707 | 285 | 518 | 74 | 1 | | | |
| 54 | 2w | 72 | Total | C | N | O | P | S | 0 | 0 | 0 |
| | | | 1544 | 690 | 278 | 502 | 72 | 2 | | | |
| 54 | 2y | 73 | Total | C | N | O | P | S | 0 | 0 | 0 |
| | | | 1565 | 698 | 283 | 510 | 73 | 1 | | | |

- Molecule 55 is a RNA chain called P-site tRNA.

| Mol | Chain | Residues | Atoms | | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|----|---|---------|---------|-------|
| 55 | 1x | 76 | Total | C | N | O | P | S | 0 | 0 | 0 |
| | | | 1625 | 725 | 294 | 529 | 76 | 1 | | | |
| 55 | 2x | 76 | Total | C | N | O | P | S | 0 | 0 | 0 |
| | | | 1625 | 725 | 294 | 529 | 76 | 1 | | | |

- Molecule 56 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

| Mol | Chain | Residues | Atoms | | ZeroOcc | AltConf |
|-----|-------|----------|-------|-----|---------|---------|
| 56 | 1A | 935 | Total | Mg | 0 | 0 |
| | | | 935 | 935 | | |
| 56 | 1B | 32 | Total | Mg | 0 | 0 |
| | | | 32 | 32 | | |
| 56 | 1D | 6 | Total | Mg | 0 | 0 |
| | | | 6 | 6 | | |
| 56 | 1E | 3 | Total | Mg | 0 | 0 |
| | | | 3 | 3 | | |
| 56 | 1F | 6 | Total | Mg | 0 | 0 |
| | | | 6 | 6 | | |
| 56 | 1G | 2 | Total | Mg | 0 | 0 |
| | | | 2 | 2 | | |
| 56 | 1N | 5 | Total | Mg | 0 | 0 |
| | | | 5 | 5 | | |
| 56 | 1O | 1 | Total | Mg | 0 | 0 |
| | | | 1 | 1 | | |

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| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|---------------------|---------|---------|
| 56 | 1P | 3 | Total Mg 3 3 | 0 | 0 |
| 56 | 1Q | 3 | Total Mg 3 3 | 0 | 0 |
| 56 | 1R | 3 | Total Mg 3 3 | 0 | 0 |
| 56 | 1T | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 1U | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 1V | 3 | Total Mg 3 3 | 0 | 0 |
| 56 | 1W | 4 | Total Mg 4 4 | 0 | 0 |
| 56 | 1X | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 10 | 2 | Total Mg 2 2 | 0 | 0 |
| 56 | 12 | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 13 | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 15 | 3 | Total Mg 3 3 | 0 | 0 |
| 56 | 17 | 3 | Total Mg 3 3 | 0 | 0 |
| 56 | 18 | 3 | Total Mg 3 3 | 0 | 0 |
| 56 | 19 | 3 | Total Mg 3 3 | 0 | 0 |
| 56 | 1a | 312 | Total Mg 312 312 | 0 | 0 |
| 56 | 1b | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 1d | 2 | Total Mg 2 2 | 0 | 0 |
| 56 | 1e | 5 | Total Mg 5 5 | 0 | 0 |
| 56 | 1f | 3 | Total Mg 3 3 | 0 | 0 |
| 56 | 1k | 1 | Total Mg 1 1 | 0 | 0 |

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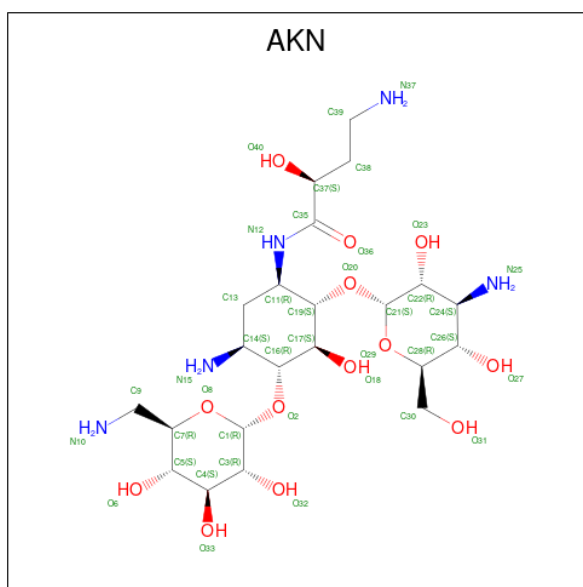
| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|---------------------|---------|---------|
| 56 | 1l | 4 | Total Mg 4 4 | 0 | 0 |
| 56 | 1m | 2 | Total Mg 2 2 | 0 | 0 |
| 56 | 1o | 2 | Total Mg 2 2 | 0 | 0 |
| 56 | 1p | 3 | Total Mg 3 3 | 0 | 0 |
| 56 | 1q | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 1r | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 1v | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 1w | 2 | Total Mg 2 2 | 0 | 0 |
| 56 | 1x | 16 | Total Mg 16 16 | 0 | 0 |
| 56 | 1y | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 2A | 575 | Total Mg 575 575 | 0 | 0 |
| 56 | 2B | 15 | Total Mg 15 15 | 0 | 0 |
| 56 | 2D | 6 | Total Mg 6 6 | 0 | 0 |
| 56 | 2E | 3 | Total Mg 3 3 | 0 | 0 |
| 56 | 2F | 4 | Total Mg 4 4 | 0 | 0 |
| 56 | 2G | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 2O | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 2P | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 2Q | 3 | Total Mg 3 3 | 0 | 0 |
| 56 | 2R | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 2T | 1 | Total Mg 1 1 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|---------------------|---------|---------|
| 56 | 2W | 2 | Total Mg 2 2 | 0 | 0 |
| 56 | 2Y | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 20 | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 21 | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 25 | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 28 | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 2a | 310 | Total Mg 310 310 | 0 | 0 |
| 56 | 2b | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 2d | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 2e | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 2g | 2 | Total Mg 2 2 | 0 | 0 |
| 56 | 2m | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 2q | 1 | Total Mg 1 1 | 0 | 0 |
| 56 | 2t | 2 | Total Mg 2 2 | 0 | 0 |
| 56 | 2v | 3 | Total Mg 3 3 | 0 | 0 |
| 56 | 2w | 2 | Total Mg 2 2 | 0 | 0 |
| 56 | 2x | 9 | Total Mg 9 9 | 0 | 0 |

- Molecule 57 is (2S)-N-[(1R,2S,3S,4R,5S)-4-[(2R,3R,4S,5S,6R)-6-(aminomethyl)-3,4,5-tris(oxidanyl)oxan-2-yl]oxy-5-azanyl-2-[(2S,3R,4S,5S,6R)-4-azanyl-6-(hydroxymethyl)-3,5-bis(oxidanyl)oxan-2-yl]oxy-3-oxidanyl-cyclohexyl]-4-azanyl-2-oxidanyl-butanamide (three-letter code: AKN) (formula: C₂₂H₄₃N₅O₁₃) (labeled as "Ligand of Interest" by depositor).



| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|---|----|---------|---------|
| 57 | 1A | 1 | Total | C | N | O | 0 | 0 |
| | | | 40 | 22 | 5 | 13 | | |
| 57 | 1A | 1 | Total | C | N | O | 0 | 0 |
| | | | 40 | 22 | 5 | 13 | | |
| 57 | 1O | 1 | Total | C | N | O | 0 | 0 |
| | | | 40 | 22 | 5 | 13 | | |
| 57 | 1a | 1 | Total | C | N | O | 0 | 0 |
| | | | 40 | 22 | 5 | 13 | | |
| 57 | 1a | 1 | Total | C | N | O | 0 | 0 |
| | | | 40 | 22 | 5 | 13 | | |
| 57 | 2A | 1 | Total | C | N | O | 0 | 0 |
| | | | 40 | 22 | 5 | 13 | | |
| 57 | 2O | 1 | Total | C | N | O | 0 | 0 |
| | | | 40 | 22 | 5 | 13 | | |
| 57 | 2a | 1 | Total | C | N | O | 0 | 0 |
| | | | 40 | 22 | 5 | 13 | | |

- Molecule 58 is ZINC ION (three-letter code: ZN) (formula: Zn).

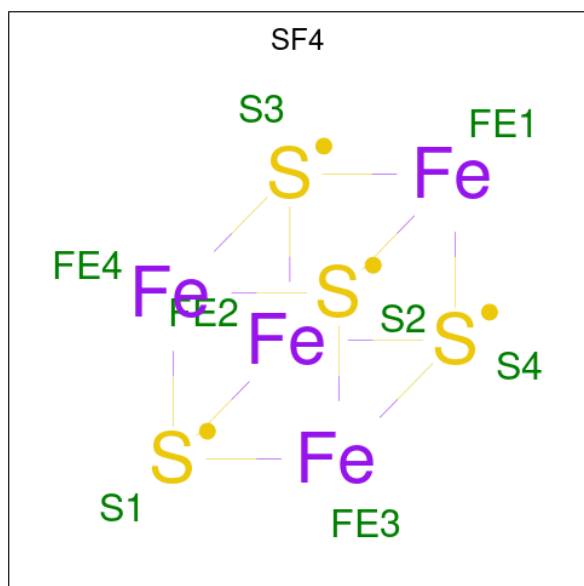
| Mol | Chain | Residues | Atoms | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|---------|---------|
| 58 | 1Y | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |
| 58 | 14 | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |
| 58 | 15 | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |
| 58 | 16 | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |

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| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|-----------------|---------|---------|
| 58 | 19 | 1 | Total Zn 1 1 | 0 | 0 |
| 58 | 1n | 1 | Total Zn 1 1 | 0 | 0 |
| 58 | 2Y | 1 | Total Zn 1 1 | 0 | 0 |
| 58 | 24 | 1 | Total Zn 1 1 | 0 | 0 |
| 58 | 25 | 1 | Total Zn 1 1 | 0 | 0 |
| 58 | 26 | 1 | Total Zn 1 1 | 0 | 0 |
| 58 | 29 | 1 | Total Zn 1 1 | 0 | 0 |
| 58 | 2n | 1 | Total Zn 1 1 | 0 | 0 |

- Molecule 59 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe₄S₄).



| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|---------------------|---------|---------|
| 59 | 1d | 1 | Total Fe S 8 4 4 | 0 | 0 |
| 59 | 2d | 1 | Total Fe S 8 4 4 | 0 | 0 |

- Molecule 60 is water.

| Mol | Chain | Residues | Atoms | | ZeroOcc | AltConf |
|-----|-------|----------|---------------|-----------|---------|---------|
| 60 | 1A | 1124 | Total 1124 | O 1124 | 0 | 0 |
| 60 | 1B | 13 | Total 13 | O 13 | 0 | 0 |
| 60 | 1D | 17 | Total 17 | O 17 | 0 | 0 |
| 60 | 1E | 10 | Total 10 | O 10 | 0 | 0 |
| 60 | 1F | 10 | Total 10 | O 10 | 0 | 0 |
| 60 | 1G | 2 | Total 2 | O 2 | 0 | 0 |
| 60 | 1H | 4 | Total 4 | O 4 | 0 | 0 |
| 60 | 1N | 2 | Total 2 | O 2 | 0 | 0 |
| 60 | 1O | 4 | Total 4 | O 4 | 0 | 0 |
| 60 | 1P | 8 | Total 8 | O 8 | 0 | 0 |
| 60 | 1Q | 3 | Total 3 | O 3 | 0 | 0 |
| 60 | 1R | 8 | Total 8 | O 8 | 0 | 0 |
| 60 | 1S | 2 | Total 2 | O 2 | 0 | 0 |
| 60 | 1T | 6 | Total 6 | O 6 | 0 | 0 |
| 60 | 1U | 3 | Total 3 | O 3 | 0 | 0 |
| 60 | 1V | 3 | Total 3 | O 3 | 0 | 0 |
| 60 | 1W | 8 | Total 8 | O 8 | 0 | 0 |
| 60 | 1X | 4 | Total 4 | O 4 | 0 | 0 |
| 60 | 1Y | 2 | Total 2 | O 2 | 0 | 0 |
| 60 | 1Z | 2 | Total 2 | O 2 | 0 | 0 |
| 60 | 10 | 2 | Total 2 | O 2 | 0 | 0 |
| 60 | 11 | 2 | Total 2 | O 2 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|--------------------|---------|---------|
| 60 | 12 | 4 | Total O 4 4 | 0 | 0 |
| 60 | 13 | 1 | Total O 1 1 | 0 | 0 |
| 60 | 14 | 1 | Total O 1 1 | 0 | 0 |
| 60 | 15 | 2 | Total O 2 2 | 0 | 0 |
| 60 | 16 | 4 | Total O 4 4 | 0 | 0 |
| 60 | 17 | 2 | Total O 2 2 | 0 | 0 |
| 60 | 18 | 5 | Total O 5 5 | 0 | 0 |
| 60 | 19 | 2 | Total O 2 2 | 0 | 0 |
| 60 | 1a | 298 | Total O 298 298 | 0 | 0 |
| 60 | 1d | 2 | Total O 2 2 | 0 | 0 |
| 60 | 1e | 2 | Total O 2 2 | 0 | 0 |
| 60 | 1f | 3 | Total O 3 3 | 0 | 0 |
| 60 | 1h | 1 | Total O 1 1 | 0 | 0 |
| 60 | 1i | 2 | Total O 2 2 | 0 | 0 |
| 60 | 1k | 1 | Total O 1 1 | 0 | 0 |
| 60 | 1l | 3 | Total O 3 3 | 0 | 0 |
| 60 | 1n | 1 | Total O 1 1 | 0 | 0 |
| 60 | 1o | 1 | Total O 1 1 | 0 | 0 |
| 60 | 1p | 2 | Total O 2 2 | 0 | 0 |
| 60 | 1s | 1 | Total O 1 1 | 0 | 0 |
| 60 | 1w | 3 | Total O 3 3 | 0 | 0 |

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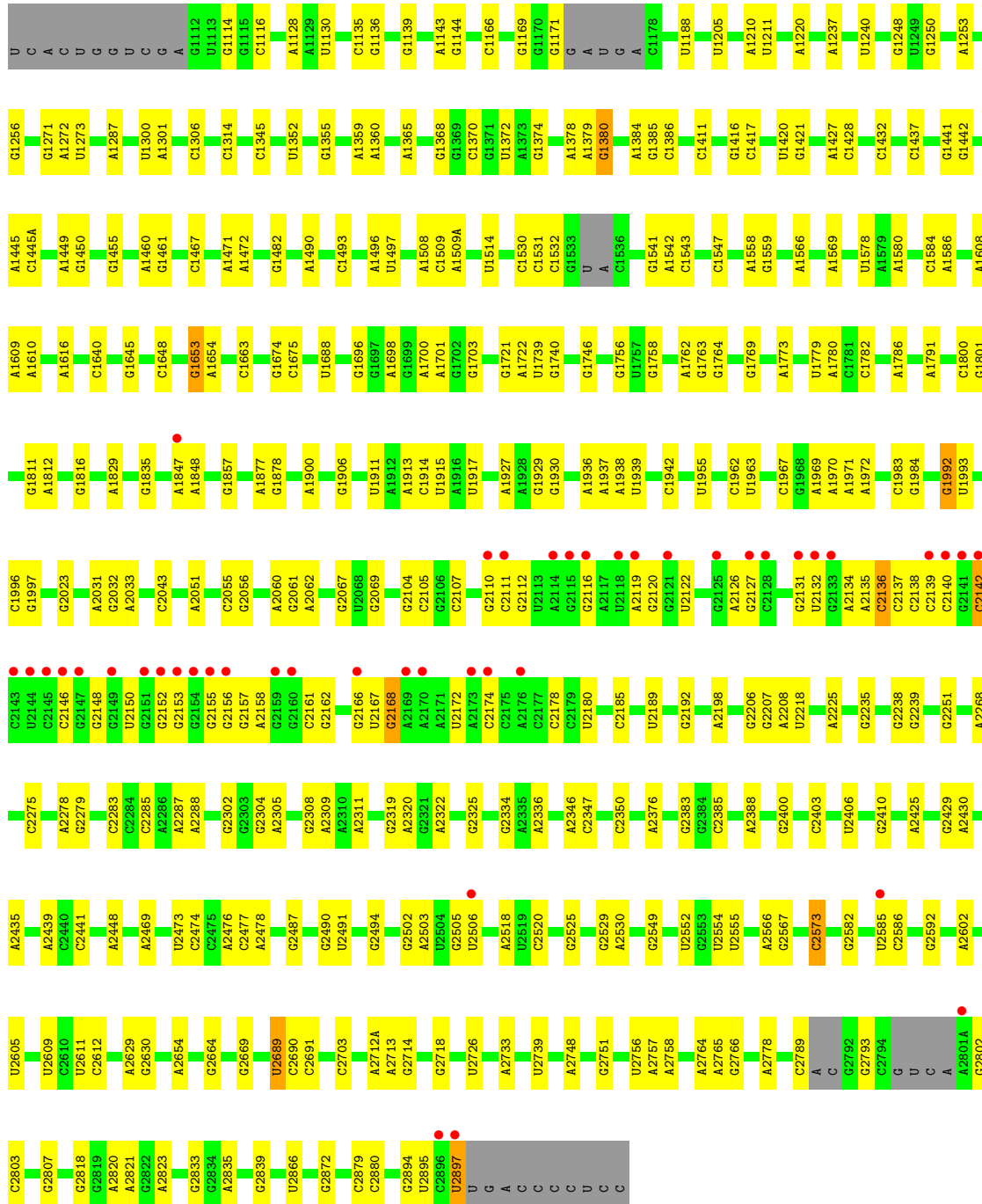
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| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|--------------------|---------|---------|
| 60 | 1x | 14 | Total O 14 14 | 0 | 0 |
| 60 | 1y | 2 | Total O 2 2 | 0 | 0 |
| 60 | 2A | 367 | Total O 367 367 | 0 | 0 |
| 60 | 2B | 22 | Total O 22 22 | 0 | 0 |
| 60 | 2D | 7 | Total O 7 7 | 0 | 0 |
| 60 | 2E | 4 | Total O 4 4 | 0 | 0 |
| 60 | 2F | 3 | Total O 3 3 | 0 | 0 |
| 60 | 2O | 2 | Total O 2 2 | 0 | 0 |
| 60 | 2P | 5 | Total O 5 5 | 0 | 0 |
| 60 | 2U | 1 | Total O 1 1 | 0 | 0 |
| 60 | 2W | 2 | Total O 2 2 | 0 | 0 |
| 60 | 2X | 1 | Total O 1 1 | 0 | 0 |
| 60 | 2Y | 1 | Total O 1 1 | 0 | 0 |
| 60 | 20 | 3 | Total O 3 3 | 0 | 0 |
| 60 | 21 | 3 | Total O 3 3 | 0 | 0 |
| 60 | 25 | 1 | Total O 1 1 | 0 | 0 |
| 60 | 27 | 2 | Total O 2 2 | 0 | 0 |
| 60 | 28 | 1 | Total O 1 1 | 0 | 0 |
| 60 | 29 | 1 | Total O 1 1 | 0 | 0 |
| 60 | 2a | 273 | Total O 273 273 | 0 | 0 |
| 60 | 2d | 3 | Total O 3 3 | 0 | 0 |

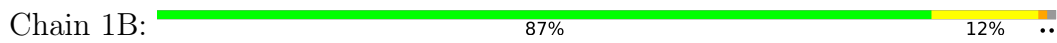
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| Mol | Chain | Residues | Atoms | | ZeroOcc | AltConf |
|------------|--------------|-----------------|--------------|--------|----------------|----------------|
| 60 | 2e | 2 | Total 2 | O 2 | 0 | 0 |
| 60 | 2h | 1 | Total 1 | O 1 | 0 | 0 |
| 60 | 2i | 2 | Total 2 | O 2 | 0 | 0 |
| 60 | 2l | 2 | Total 2 | O 2 | 0 | 0 |
| 60 | 2m | 1 | Total 1 | O 1 | 0 | 0 |
| 60 | 2n | 1 | Total 1 | O 1 | 0 | 0 |
| 60 | 2o | 2 | Total 2 | O 2 | 0 | 0 |
| 60 | 2p | 1 | Total 1 | O 1 | 0 | 0 |
| 60 | 2q | 1 | Total 1 | O 1 | 0 | 0 |
| 60 | 2s | 1 | Total 1 | O 1 | 0 | 0 |
| 60 | 2t | 6 | Total 6 | O 6 | 0 | 0 |
| 60 | 2v | 1 | Total 1 | O 1 | 0 | 0 |
| 60 | 2w | 1 | Total 1 | O 1 | 0 | 0 |
| 60 | 2x | 8 | Total 8 | O 8 | 0 | 0 |



• Molecule 2: 5S Ribosomal RNA



• Molecule 2: 5S Ribosomal RNA

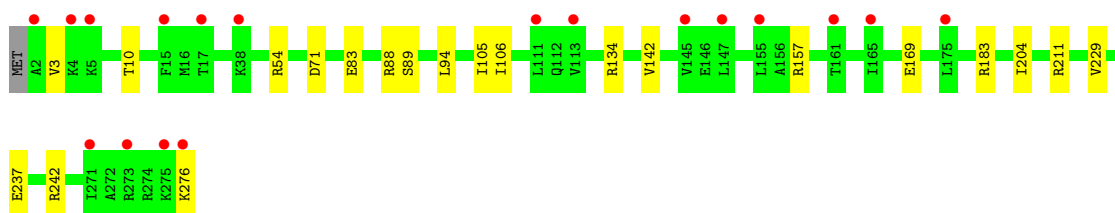
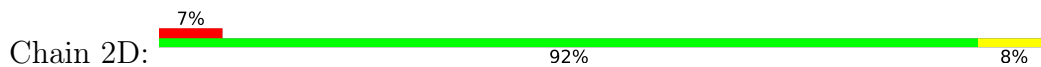




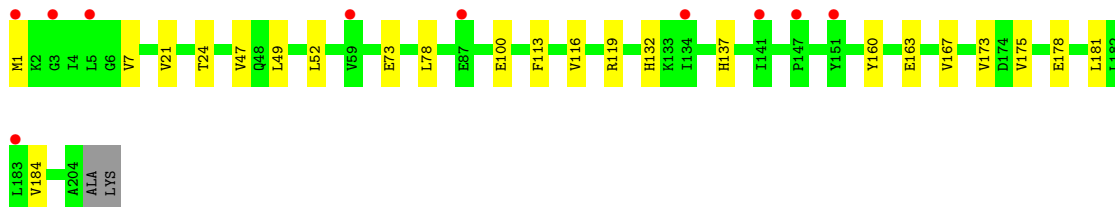
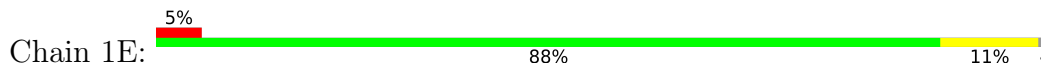
- Molecule 3: 50S ribosomal protein L2



- Molecule 3: 50S ribosomal protein L2



- Molecule 4: 50S ribosomal protein L3



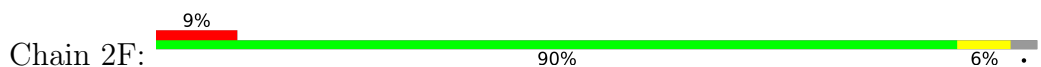
- Molecule 4: 50S ribosomal protein L3

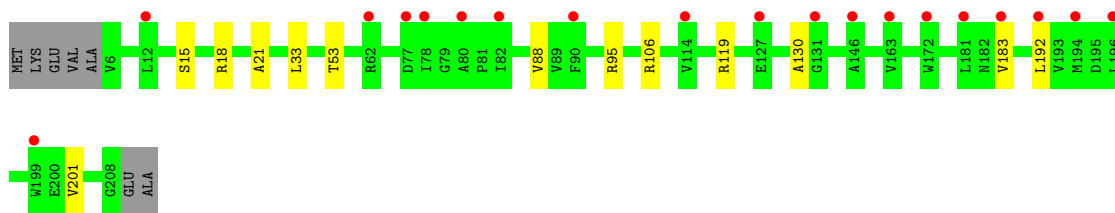


- Molecule 5: 50S ribosomal protein L4

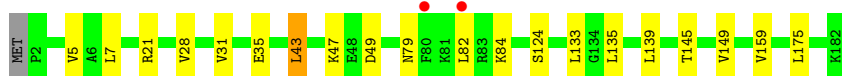
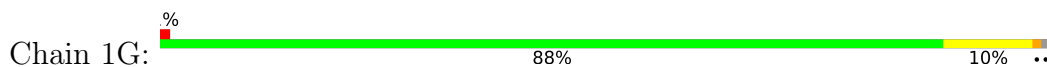


- Molecule 5: 50S ribosomal protein L4

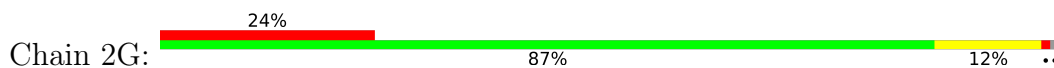




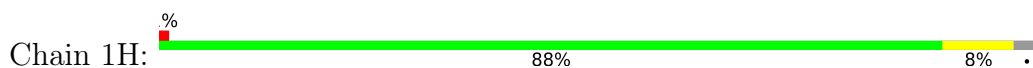
- Molecule 6: 50S ribosomal protein L5



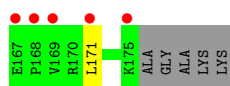
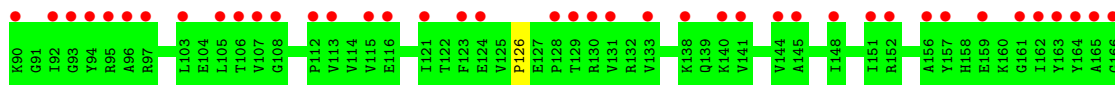
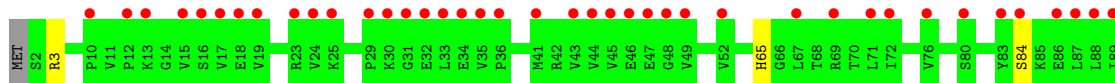
- Molecule 6: 50S ribosomal protein L5



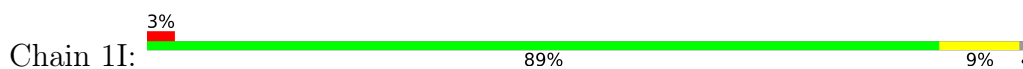
- Molecule 7: 50S ribosomal protein L6

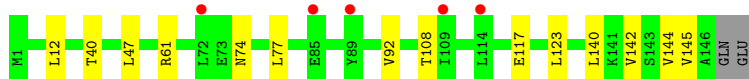


- Molecule 7: 50S ribosomal protein L6

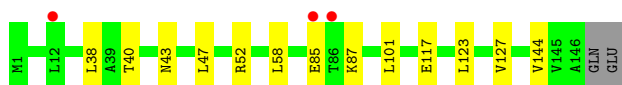
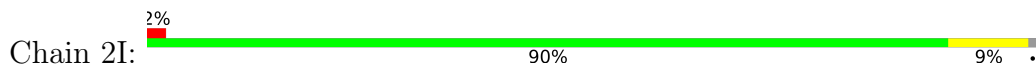


- Molecule 8: 50S ribosomal protein L9

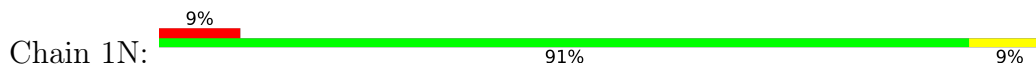




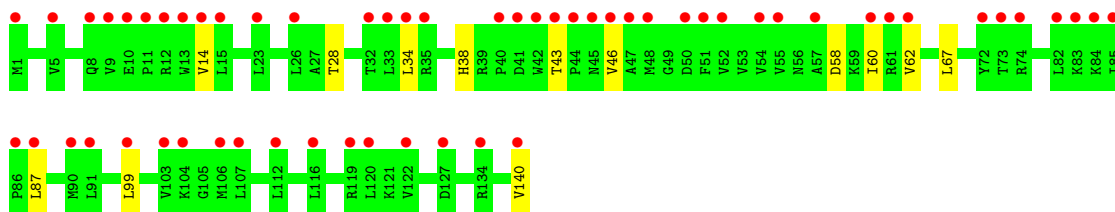
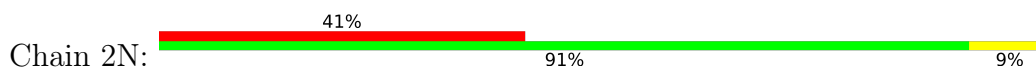
- Molecule 8: 50S ribosomal protein L9



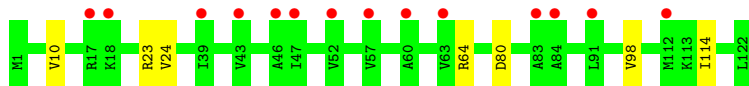
- Molecule 9: 50S ribosomal protein L13



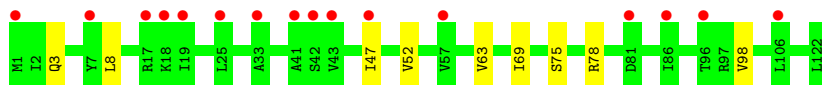
- Molecule 9: 50S ribosomal protein L13



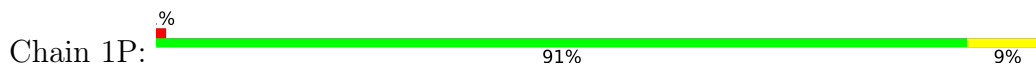
- Molecule 10: 50S ribosomal protein L14



- Molecule 10: 50S ribosomal protein L14

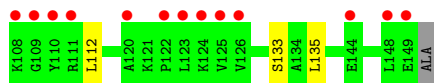
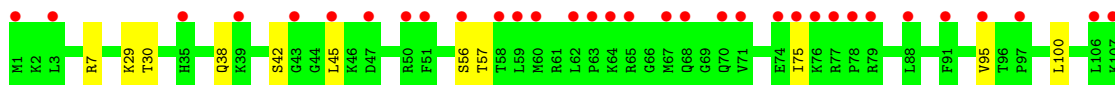
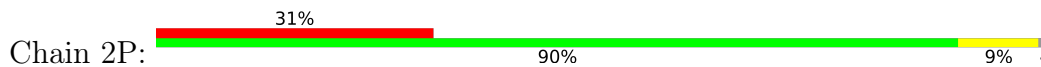


- Molecule 11: 50S ribosomal protein L15

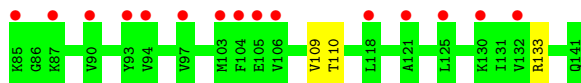
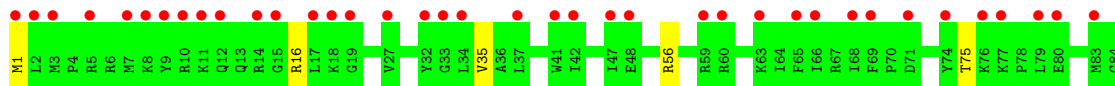
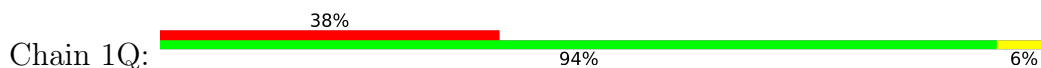




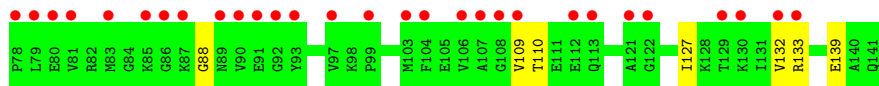
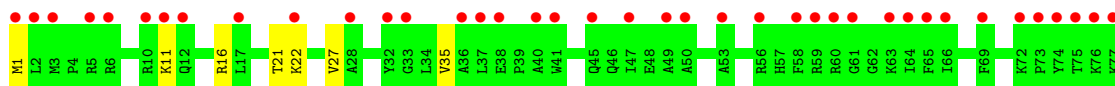
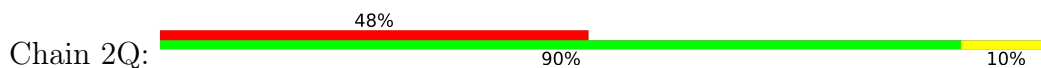
- Molecule 11: 50S ribosomal protein L15



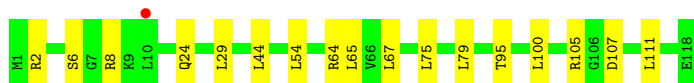
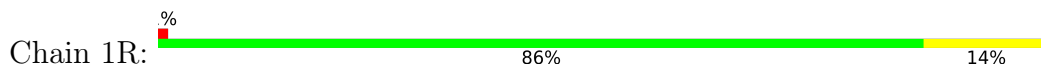
- Molecule 12: 50S ribosomal protein L16



- Molecule 12: 50S ribosomal protein L16



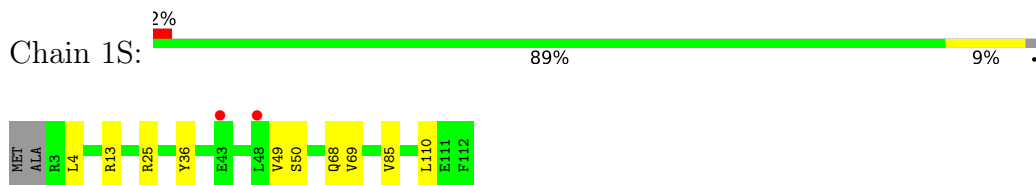
- Molecule 13: 50S ribosomal protein L17



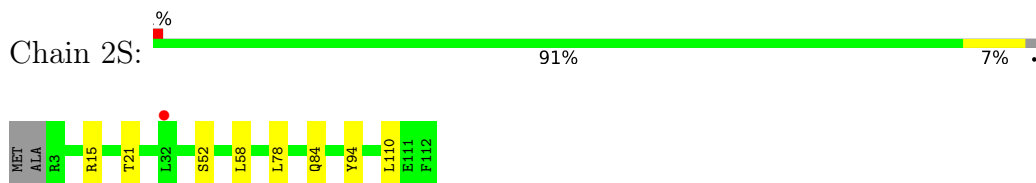
- Molecule 13: 50S ribosomal protein L17



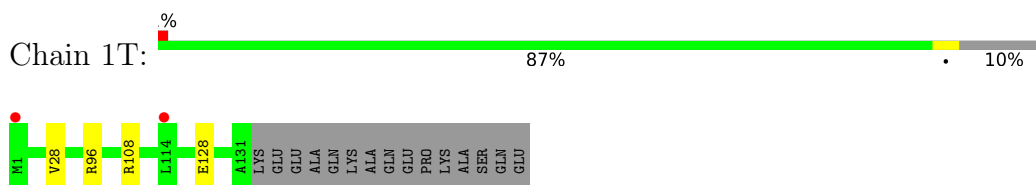
- Molecule 14: 50S ribosomal protein L18



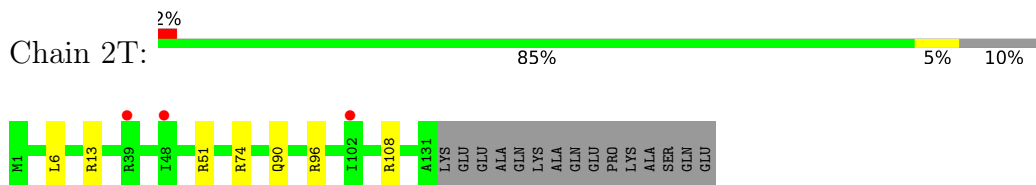
- Molecule 14: 50S ribosomal protein L18



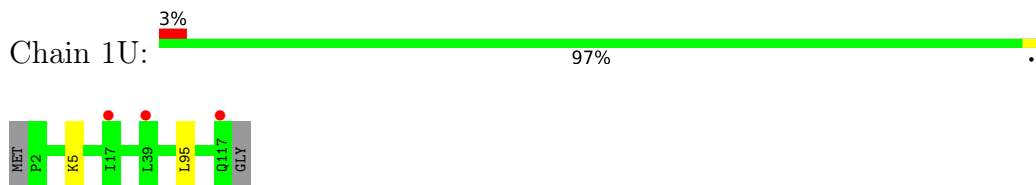
- Molecule 15: 50S ribosomal protein L19



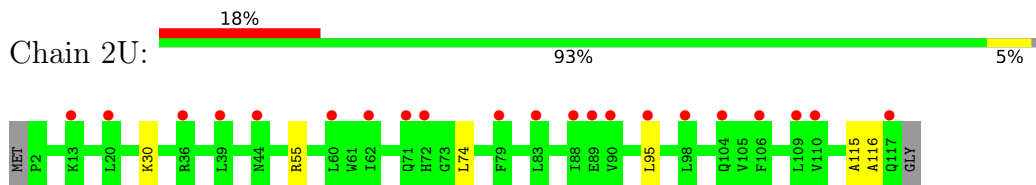
- Molecule 15: 50S ribosomal protein L19



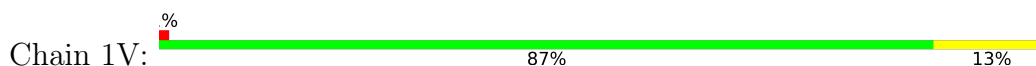
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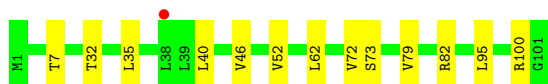


- Molecule 16: 50S ribosomal protein L20



- Molecule 17: 50S ribosomal protein L21





- Molecule 17: 50S ribosomal protein L21



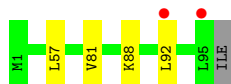
- Molecule 18: 50S ribosomal protein L22



- Molecule 18: 50S ribosomal protein L22



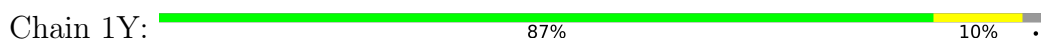
- Molecule 19: 50S ribosomal protein L23



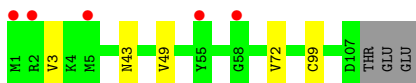
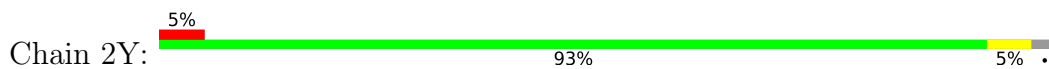
- Molecule 19: 50S ribosomal protein L23



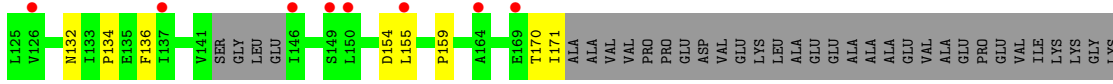
- Molecule 20: 50S ribosomal protein L24



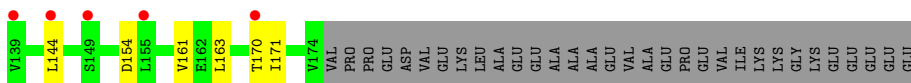
- Molecule 20: 50S ribosomal protein L24



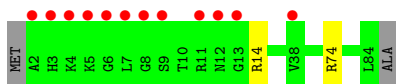
- Molecule 21: 50S ribosomal protein L25



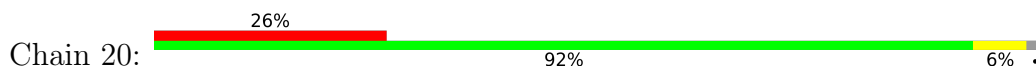
- Molecule 21: 50S ribosomal protein L25



- Molecule 22: 50S ribosomal protein L27



- Molecule 22: 50S ribosomal protein L27

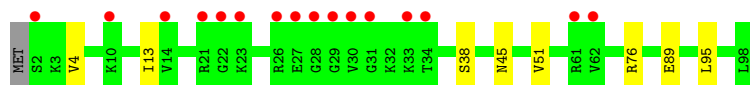
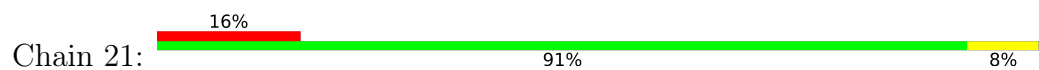


- Molecule 23: 50S ribosomal protein L28





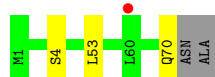
- Molecule 23: 50S ribosomal protein L28



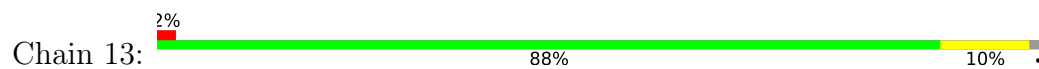
- Molecule 24: 50S ribosomal protein L29



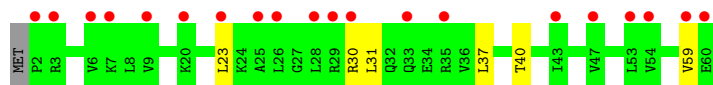
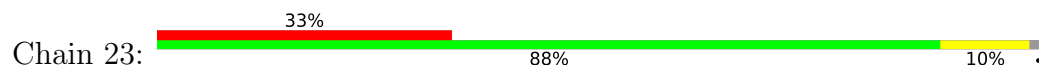
- Molecule 24: 50S ribosomal protein L29



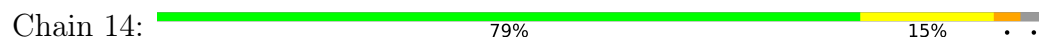
- Molecule 25: 50S ribosomal protein L30



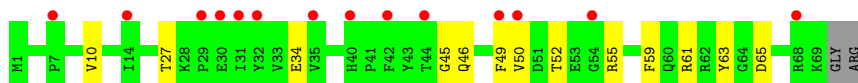
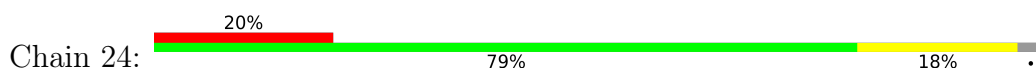
- Molecule 25: 50S ribosomal protein L30



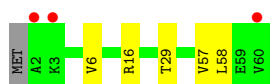
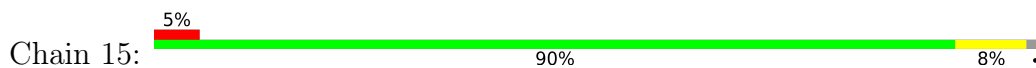
- Molecule 26: 50S ribosomal protein L31



- Molecule 26: 50S ribosomal protein L31



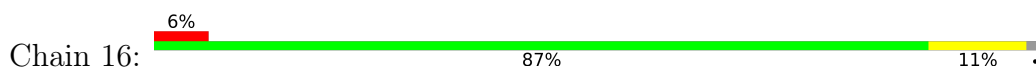
- Molecule 27: 50S ribosomal protein L32



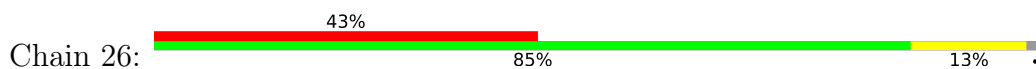
- Molecule 27: 50S ribosomal protein L32



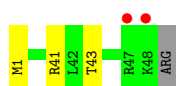
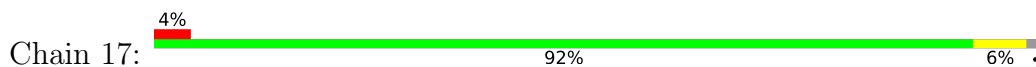
- Molecule 28: 50S ribosomal protein L33



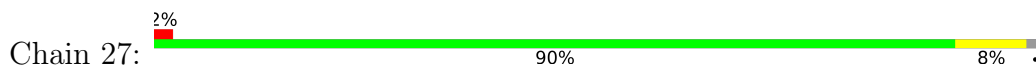
- Molecule 28: 50S ribosomal protein L33



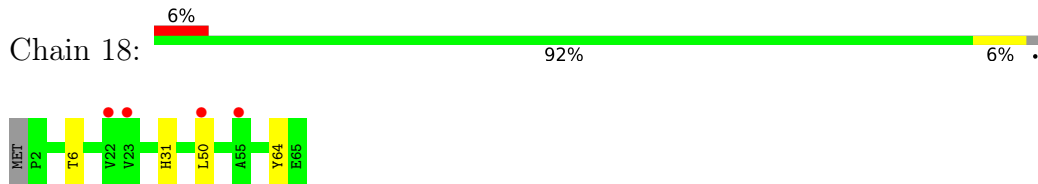
- Molecule 29: 50S ribosomal protein L34



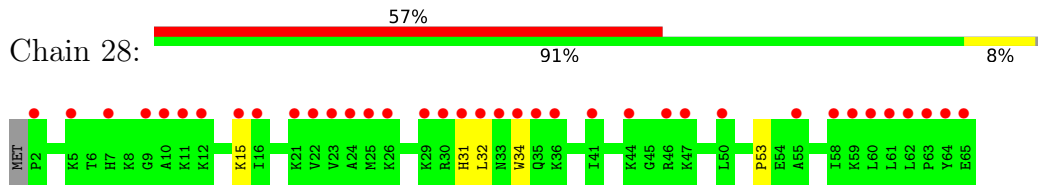
- Molecule 29: 50S ribosomal protein L34



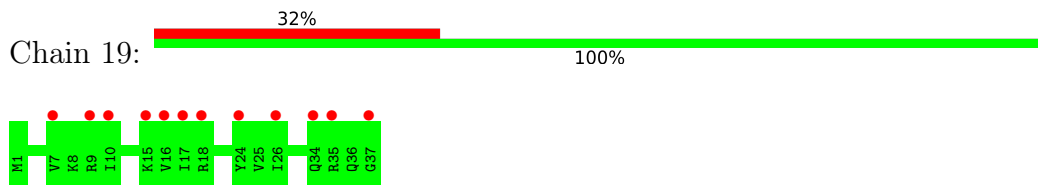
- Molecule 30: 50S ribosomal protein L35



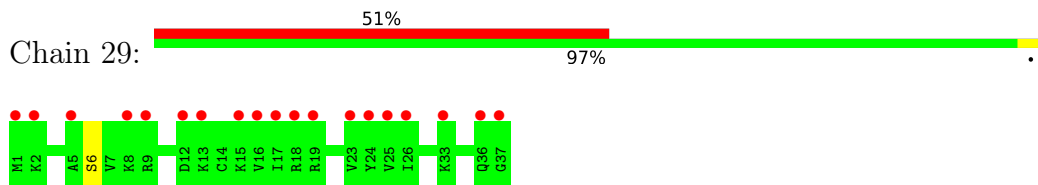
- Molecule 30: 50S ribosomal protein L35



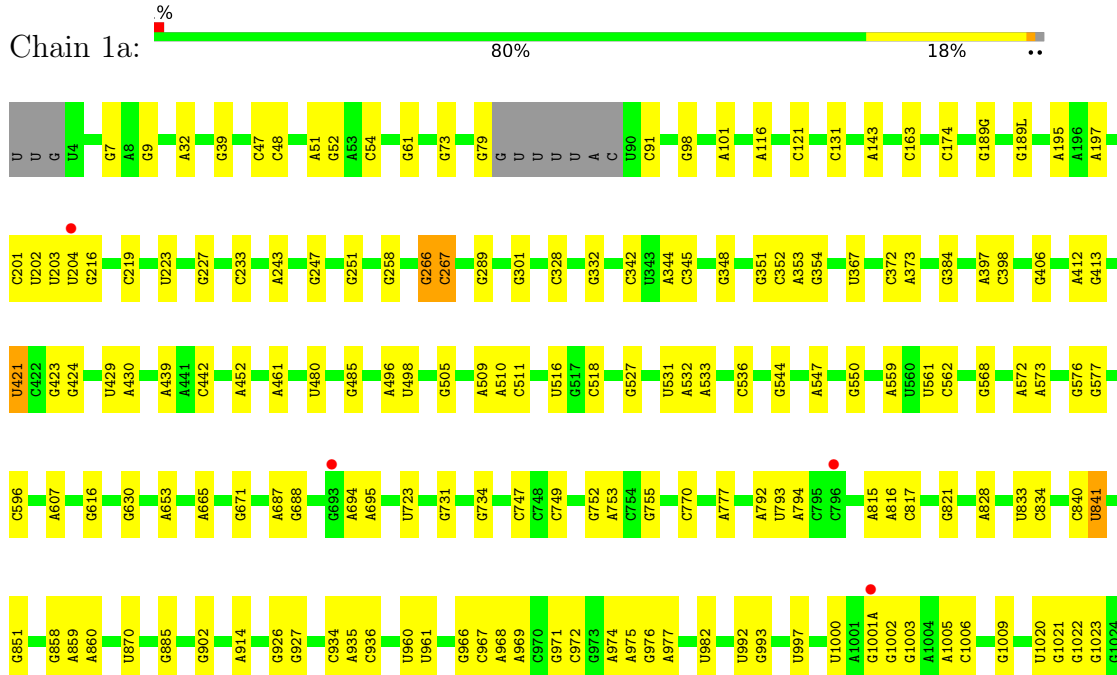
- Molecule 31: 50S ribosomal protein L36

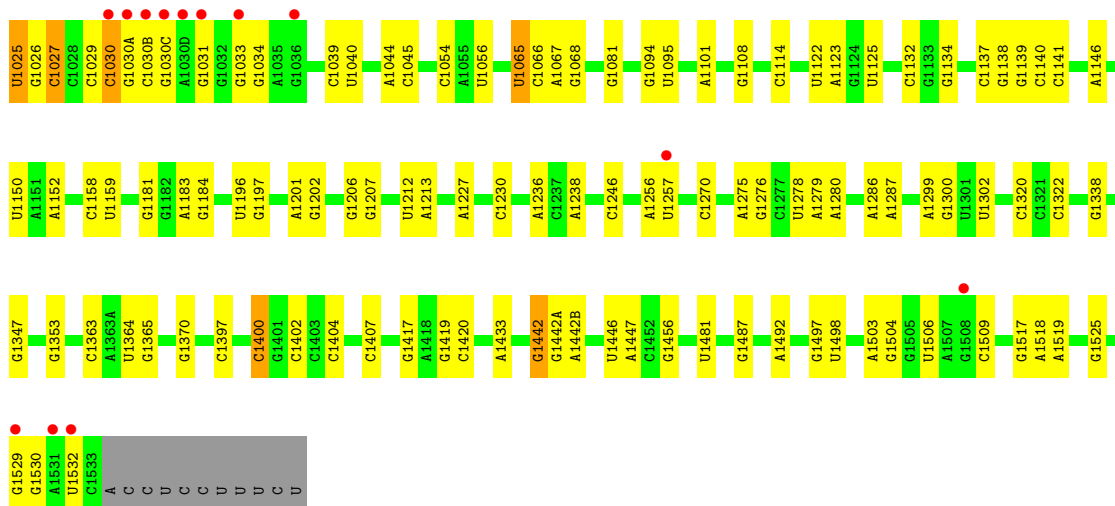


- Molecule 31: 50S ribosomal protein L36

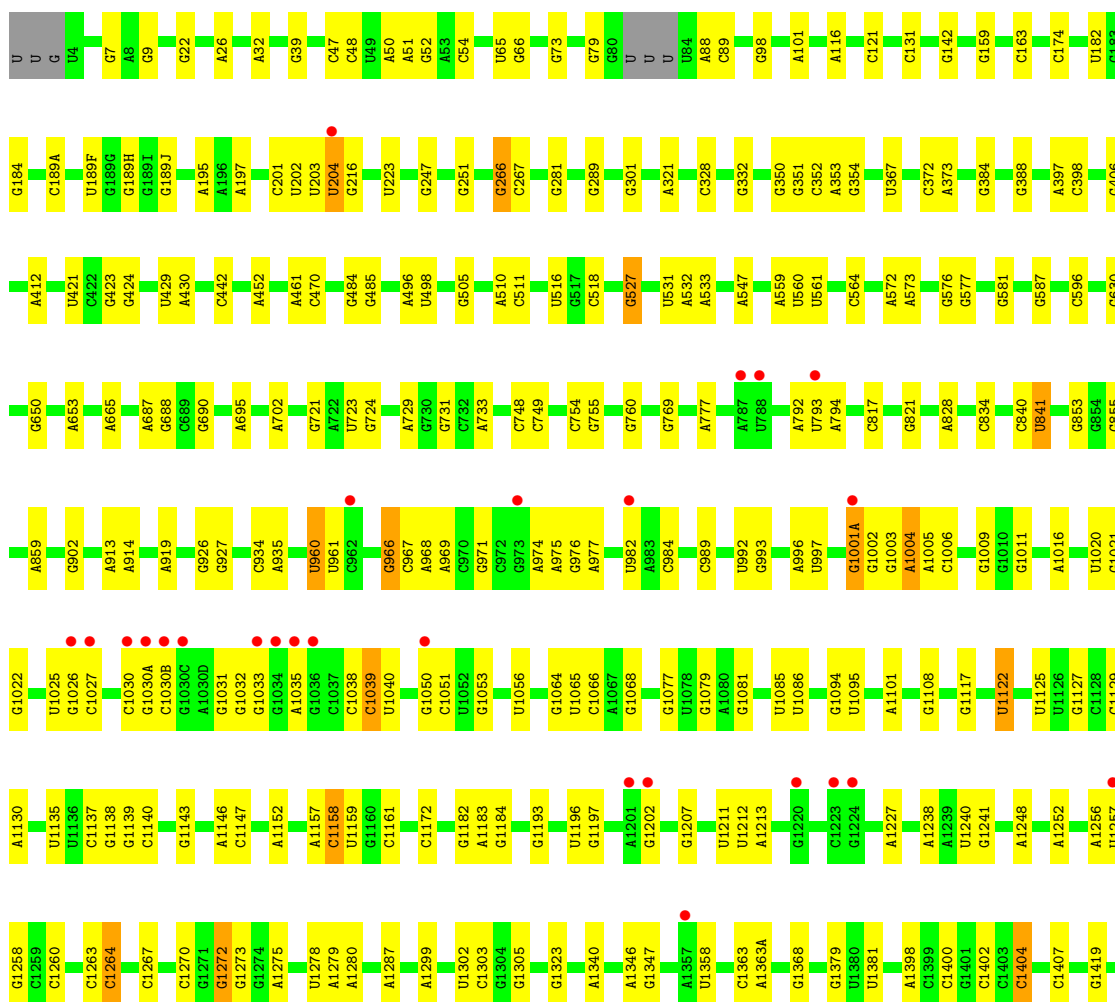
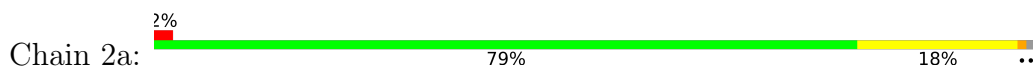


- Molecule 32: 16S Ribosomal RNA



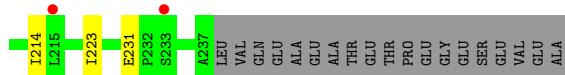
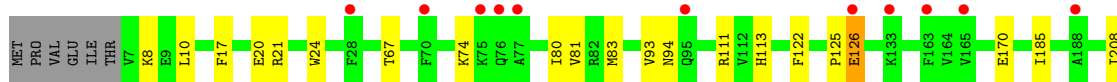
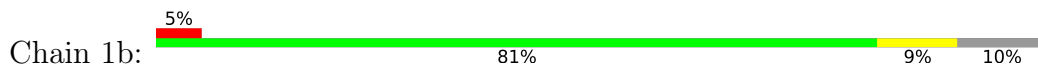


● Molecule 32: 16S Ribosomal RNA

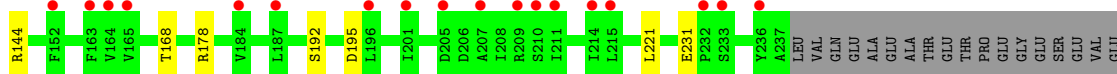
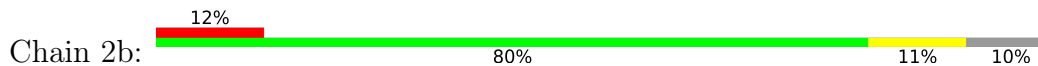




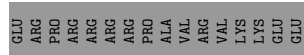
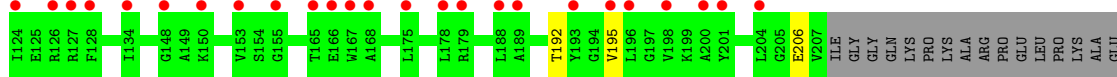
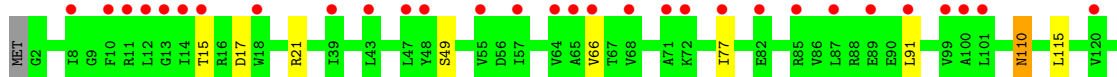
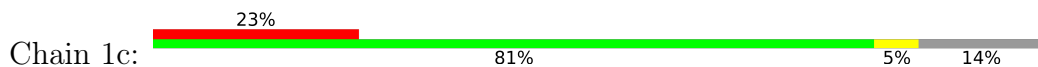
• Molecule 33: 30S ribosomal protein S2



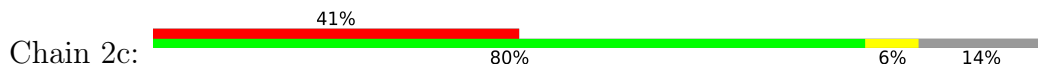
• Molecule 33: 30S ribosomal protein S2

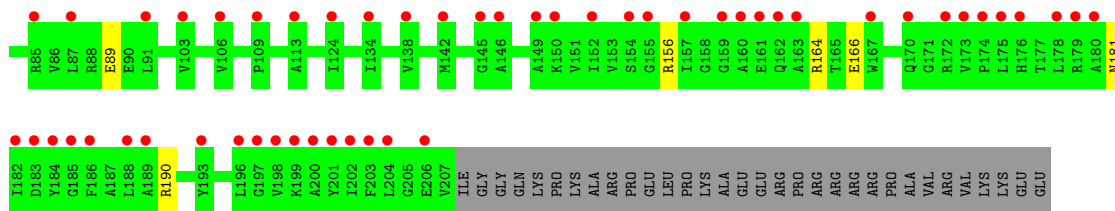


• Molecule 34: 30S ribosomal protein S3

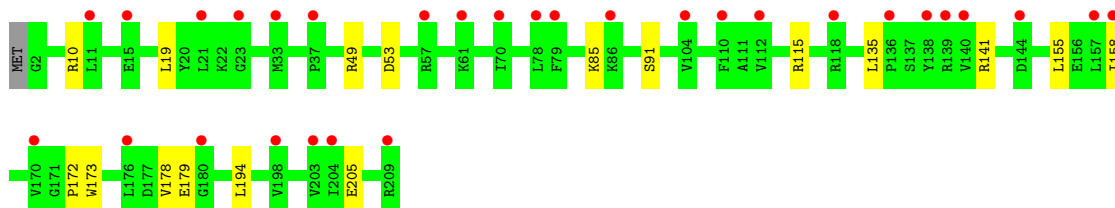
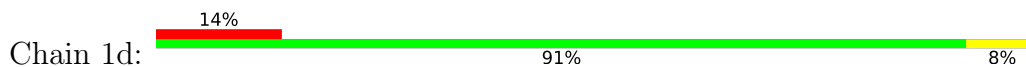


• Molecule 34: 30S ribosomal protein S3

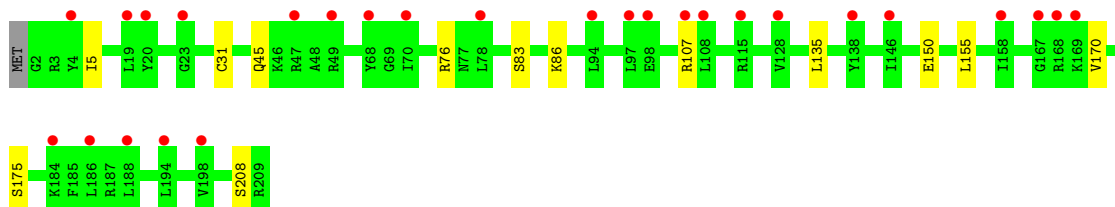




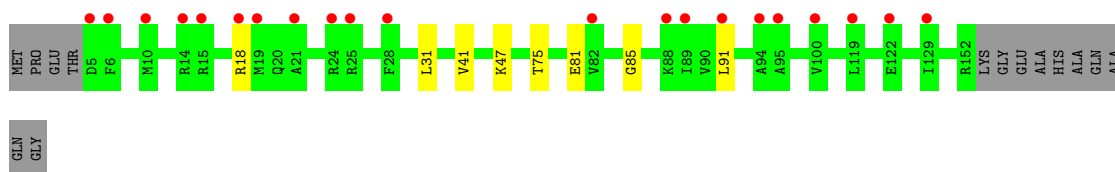
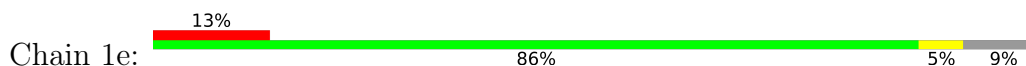
- Molecule 35: 30S ribosomal protein S4



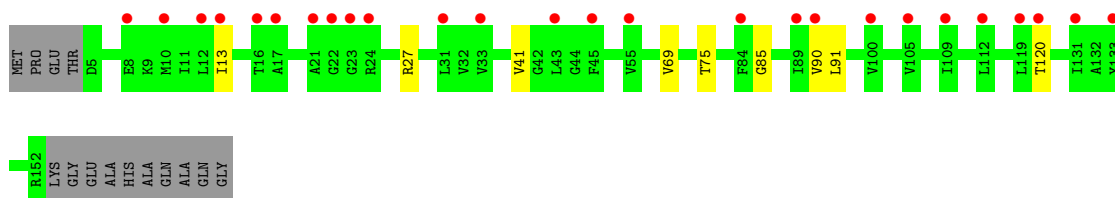
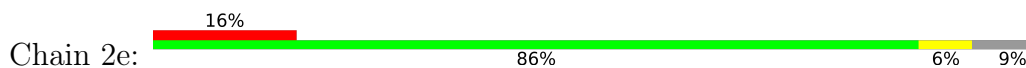
- Molecule 35: 30S ribosomal protein S4



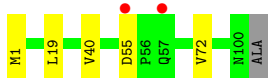
- Molecule 36: 30S ribosomal protein S5



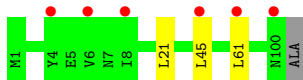
- Molecule 36: 30S ribosomal protein S5



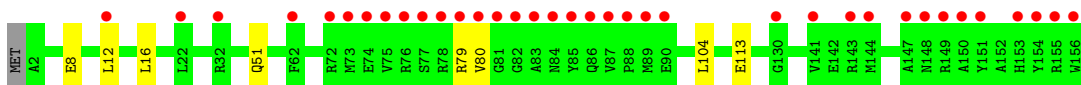
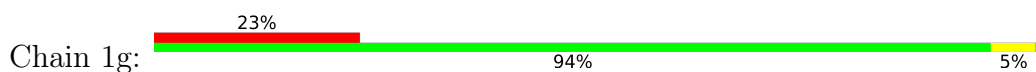
- Molecule 37: 30S ribosomal protein S6



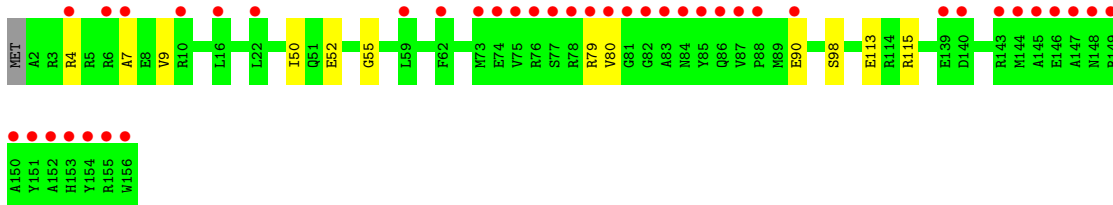
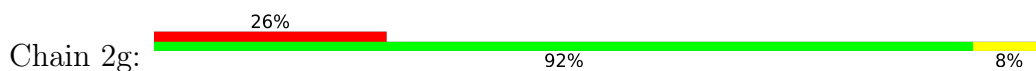
- Molecule 37: 30S ribosomal protein S6



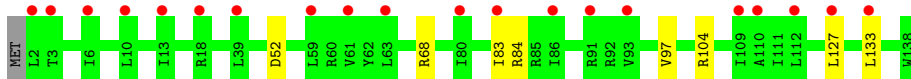
- Molecule 38: 30S ribosomal protein S7



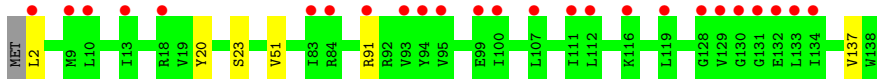
- Molecule 38: 30S ribosomal protein S7



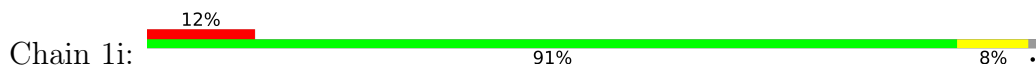
- Molecule 39: 30S ribosomal protein S8



- Molecule 39: 30S ribosomal protein S8

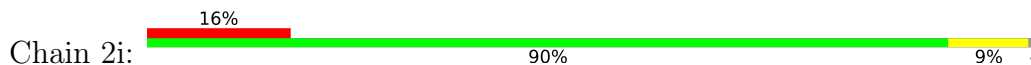


- Molecule 40: 30S ribosomal protein S9

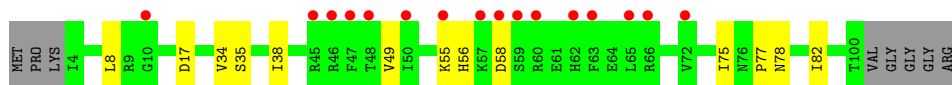
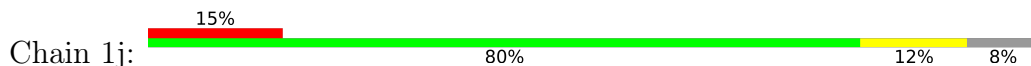




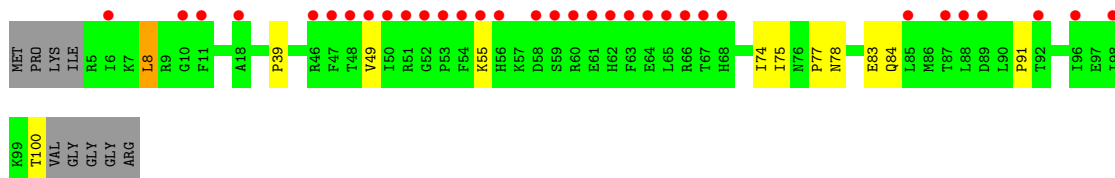
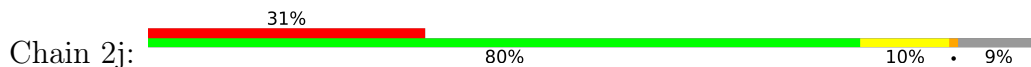
- Molecule 40: 30S ribosomal protein S9



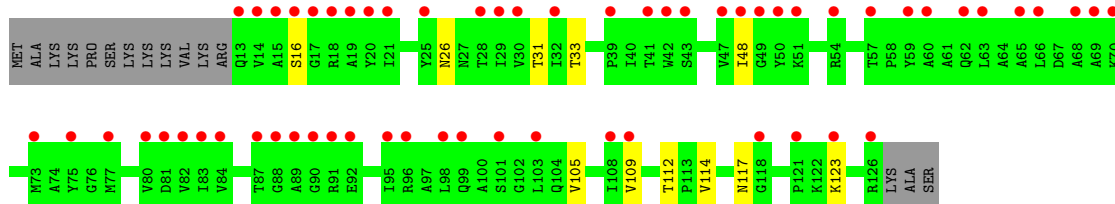
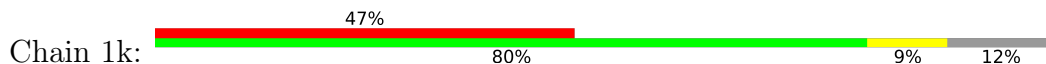
- Molecule 41: 30S ribosomal protein S10



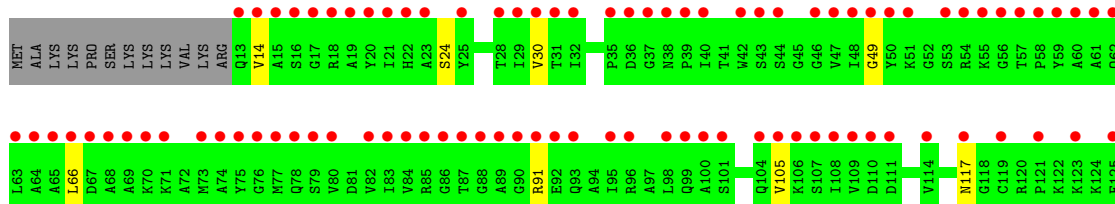
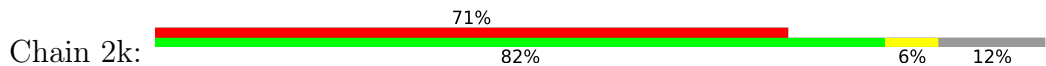
- Molecule 41: 30S ribosomal protein S10



- Molecule 42: 30S ribosomal protein S11

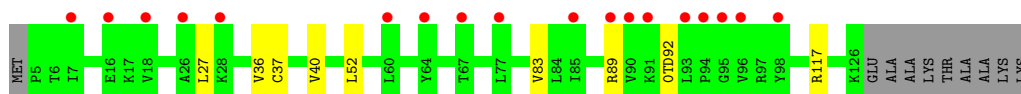
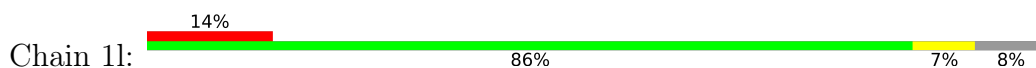


- Molecule 42: 30S ribosomal protein S11

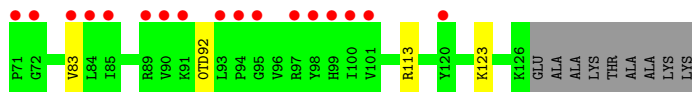
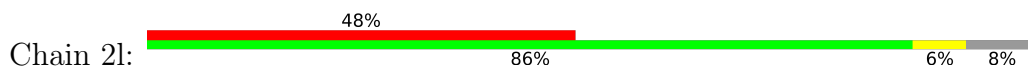




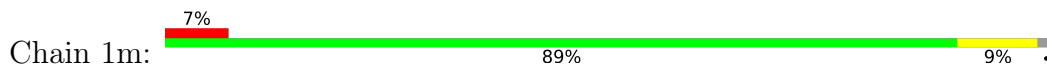
- Molecule 43: 30S ribosomal protein S12



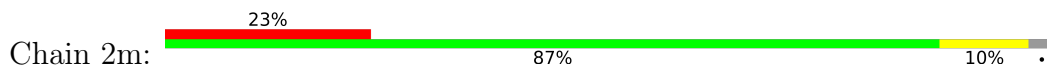
- Molecule 43: 30S ribosomal protein S12



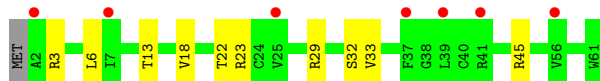
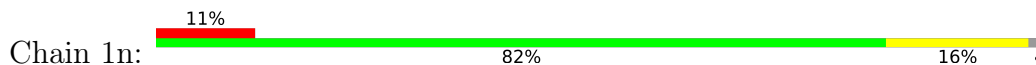
- Molecule 44: 30S ribosomal protein S13



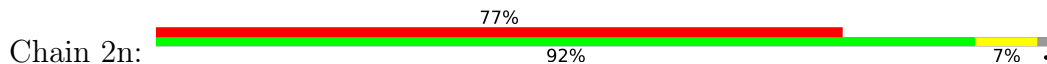
- Molecule 44: 30S ribosomal protein S13

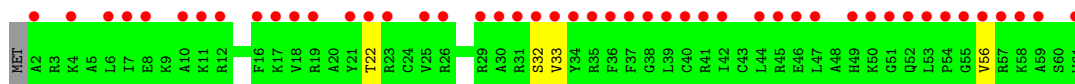


- Molecule 45: 30S ribosomal protein S14 type Z



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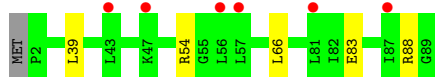




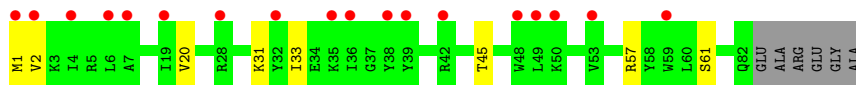
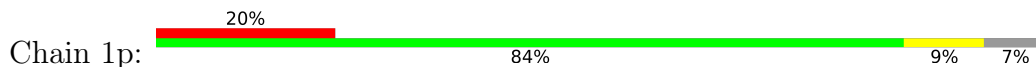
- Molecule 46: 30S ribosomal protein S15



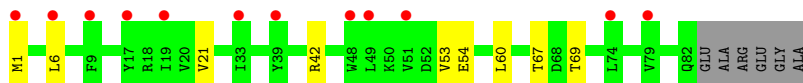
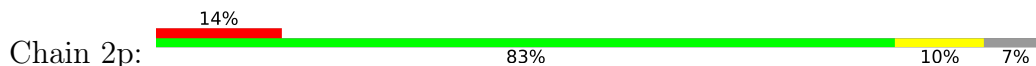
- Molecule 46: 30S ribosomal protein S15



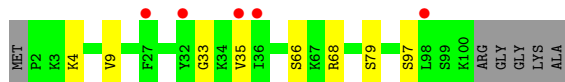
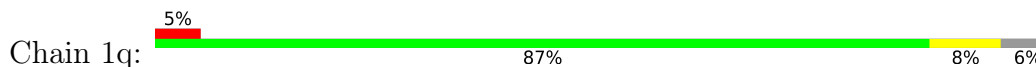
- Molecule 47: 30S ribosomal protein S16



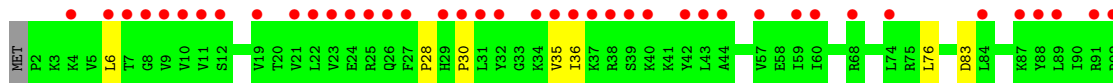
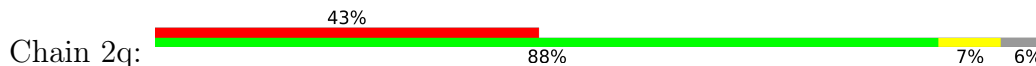
- Molecule 47: 30S ribosomal protein S16

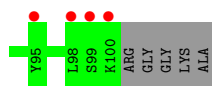


- Molecule 48: 30S ribosomal protein S17

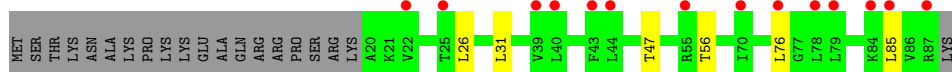


- Molecule 48: 30S ribosomal protein S17





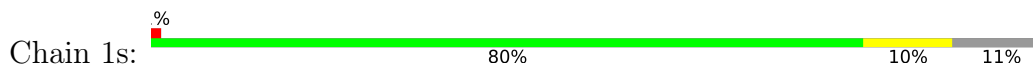
• Molecule 49: 30S ribosomal protein S18



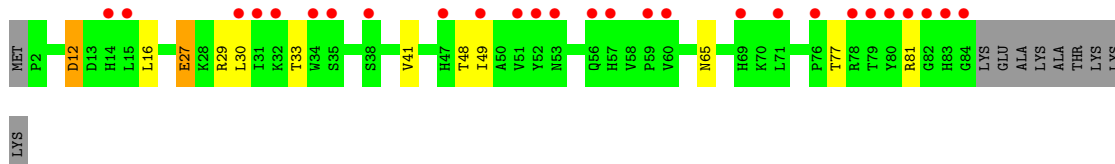
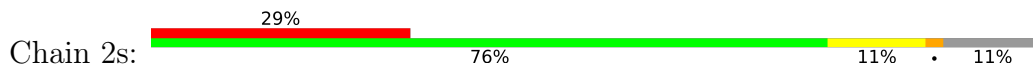
• Molecule 49: 30S ribosomal protein S18



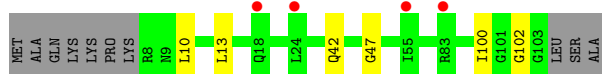
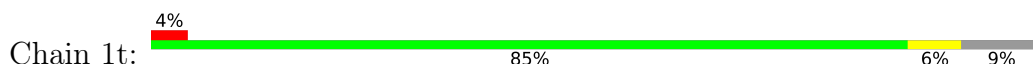
• Molecule 50: 30S ribosomal protein S19



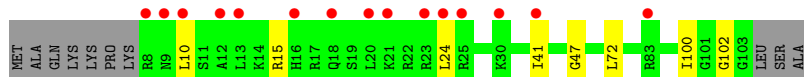
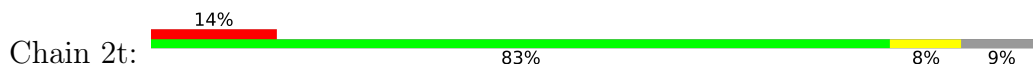
• Molecule 50: 30S ribosomal protein S19



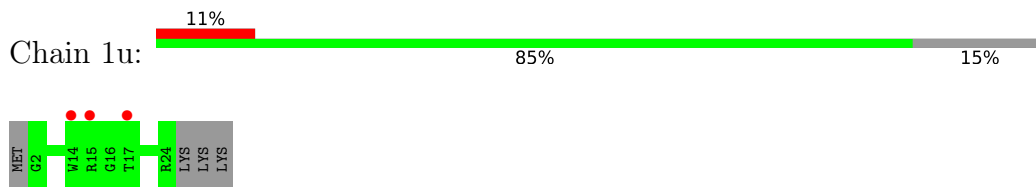
• Molecule 51: 30S ribosomal protein S20



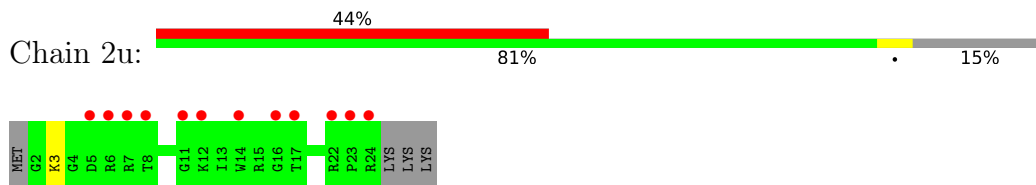
• Molecule 51: 30S ribosomal protein S20



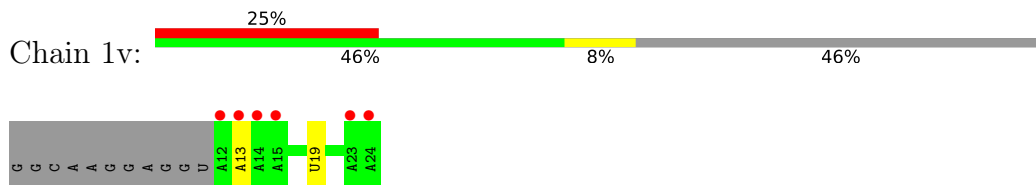
- Molecule 52: 30S ribosomal protein Thx



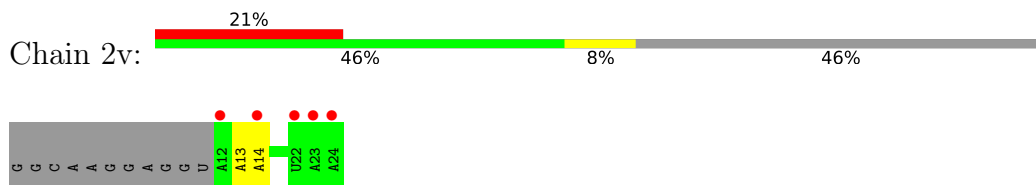
- Molecule 52: 30S ribosomal protein Thx



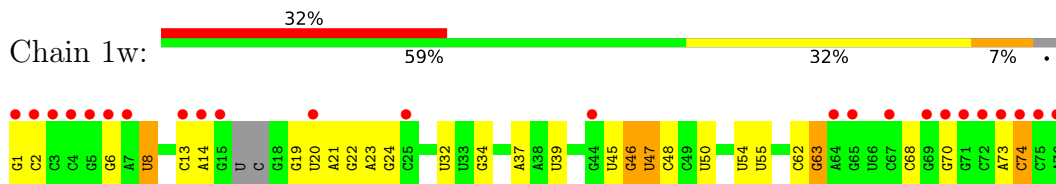
- Molecule 53: mRNA



- Molecule 53: mRNA



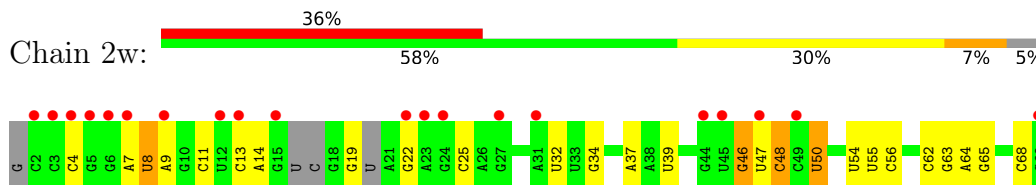
- Molecule 54: A-site and E-site tRNAs



- Molecule 54: A-site and E-site tRNAs

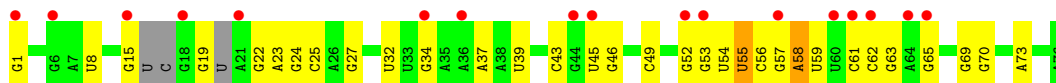


- Molecule 54: A-site and E-site tRNAs

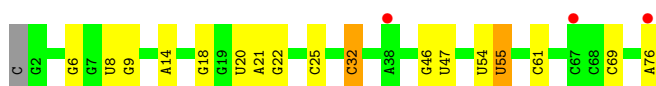
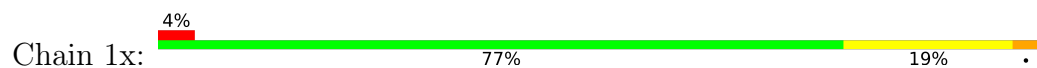




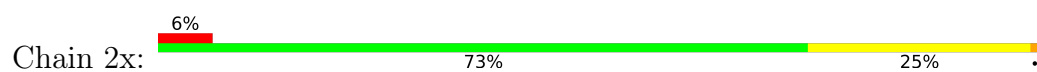
- Molecule 54: A-site and E-site tRNAs



- Molecule 55: P-site tRNA



- Molecule 55: P-site tRNA



4 Data and refinement statistics

| Property | Value | Source |
|---|---|------------------|
| Space group | P 21 21 21 | Depositor |
| Cell constants a, b, c, α , β , γ | 210.15Å 446.82Å 620.28Å 90.00° 90.00° 90.00° | Depositor |
| Resolution (Å) | 151.75 – 2.95 187.64 – 2.95 | Depositor EDS |
| % Data completeness (in resolution range) | 98.7 (151.75-2.95) 98.7 (187.64-2.95) | Depositor EDS |
| R_{merge} | 0.28 | Depositor |
| R_{sym} | (Not available) | Depositor |
| $\langle I/\sigma(I) \rangle$ ¹ | 1.07 (at 2.96Å) | Xtrriage |
| Refinement program | PHENIX 1.14_3260 | Depositor |
| R, R_{free} | 0.223 , 0.272 0.223 , 0.272 | Depositor DCC |
| R_{free} test set | 60042 reflections (5.01%) | wwPDB-VP |
| Wilson B-factor (Å ²) | 71.7 | Xtrriage |
| Anisotropy | 0.272 | Xtrriage |
| Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²) | 0.27 , 58.8 | EDS |
| L-test for twinning ² | $\langle L \rangle = 0.42$, $\langle L^2 \rangle = 0.24$ | Xtrriage |
| Estimated twinning fraction | No twinning to report. | Xtrriage |
| F_o, F_c correlation | 0.91 | EDS |
| Total number of atoms | 297993 | wwPDB-VP |
| Average B, all atoms (Å ²) | 73.0 | wwPDB-VP |

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.63% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: SF4, UR3, 5MC, OMG, 2MU, MG, MIA, 7MG, MA6, AKN, 2MA, M2G, PSU, 4OC, 5MU, 2MG, 4SU, ZN, 0TD

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 | 1A | 0.52 | 0/69006 | 0.99 | 73/107704 (0.1%) |
| 1 | 2A | 0.42 | 0/67293 | 0.93 | 44/105034 (0.0%) |
| 2 | 1B | 0.47 | 1/2882 (0.0%) | 0.94 | 0/4494 |
| 2 | 2B | 0.43 | 1/2879 (0.0%) | 0.93 | 2/4487 (0.0%) |
| 3 | 1D | 0.37 | 0/2186 | 0.57 | 0/2944 |
| 3 | 2D | 0.34 | 0/2186 | 0.57 | 0/2944 |
| 4 | 1E | 0.35 | 0/1592 | 0.55 | 0/2149 |
| 4 | 2E | 0.31 | 0/1592 | 0.53 | 0/2149 |
| 5 | 1F | 0.35 | 0/1619 | 0.52 | 0/2193 |
| 5 | 2F | 0.33 | 0/1615 | 0.51 | 0/2188 |
| 6 | 1G | 0.30 | 0/1448 | 0.51 | 0/1957 |
| 6 | 2G | 0.33 | 0/1453 | 0.58 | 1/1963 (0.1%) |
| 7 | 1H | 0.33 | 0/1356 | 0.51 | 0/1834 |
| 7 | 2H | 0.28 | 0/1356 | 0.49 | 0/1834 |
| 8 | 1I | 0.30 | 0/1112 | 0.48 | 0/1514 |
| 8 | 2I | 0.28 | 0/1079 | 0.50 | 0/1475 |
| 9 | 1N | 0.33 | 0/1144 | 0.51 | 0/1543 |
| 9 | 2N | 0.29 | 0/1144 | 0.48 | 0/1543 |
| 10 | 1O | 0.37 | 0/943 | 0.55 | 0/1269 |
| 10 | 2O | 0.32 | 0/943 | 0.53 | 0/1269 |
| 11 | 1P | 0.34 | 0/1152 | 0.56 | 0/1533 |
| 11 | 2P | 0.32 | 0/1152 | 0.57 | 0/1533 |
| 12 | 1Q | 0.36 | 0/1143 | 0.52 | 0/1527 |
| 12 | 2Q | 0.33 | 0/1143 | 0.51 | 0/1527 |
| 13 | 1R | 0.31 | 0/982 | 0.53 | 0/1312 |
| 13 | 2R | 0.29 | 0/982 | 0.49 | 0/1312 |
| 14 | 1S | 0.33 | 0/883 | 0.52 | 0/1176 |
| 14 | 2S | 0.31 | 0/880 | 0.50 | 0/1172 |
| 15 | 1T | 0.32 | 0/1105 | 0.50 | 0/1477 |
| 15 | 2T | 0.30 | 0/1097 | 0.49 | 0/1468 |
| 16 | 1U | 0.37 | 0/977 | 0.50 | 0/1301 |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|----------------|-------------|-----------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 16 | 2U | 0.30 | 0/977 | 0.44 | 0/1301 |
| 17 | 1V | 0.34 | 0/782 | 0.58 | 0/1049 |
| 17 | 2V | 0.31 | 0/782 | 0.55 | 0/1049 |
| 18 | 1W | 0.36 | 0/897 | 0.53 | 0/1205 |
| 18 | 2W | 0.31 | 0/897 | 0.50 | 0/1205 |
| 19 | 1X | 0.37 | 0/764 | 0.54 | 0/1025 |
| 19 | 2X | 0.31 | 0/764 | 0.52 | 0/1025 |
| 20 | 1Y | 0.35 | 0/819 | 0.53 | 0/1095 |
| 20 | 2Y | 0.31 | 0/819 | 0.49 | 0/1095 |
| 21 | 1Z | 0.30 | 0/1267 | 0.55 | 0/1717 |
| 21 | 2Z | 0.33 | 0/1299 | 0.51 | 0/1763 |
| 22 | 10 | 0.37 | 0/662 | 0.59 | 0/881 |
| 22 | 20 | 0.33 | 0/662 | 0.51 | 0/881 |
| 23 | 11 | 0.34 | 0/762 | 0.53 | 0/1014 |
| 23 | 21 | 0.32 | 0/762 | 0.51 | 0/1014 |
| 24 | 12 | 0.33 | 0/590 | 0.47 | 0/781 |
| 24 | 22 | 0.28 | 0/590 | 0.42 | 0/781 |
| 25 | 13 | 0.33 | 0/474 | 0.51 | 0/635 |
| 25 | 23 | 0.30 | 0/469 | 0.46 | 0/630 |
| 26 | 14 | 0.33 | 0/565 | 0.56 | 0/761 |
| 26 | 24 | 0.30 | 0/545 | 0.56 | 0/737 |
| 27 | 15 | 0.36 | 0/469 | 0.55 | 0/635 |
| 27 | 25 | 0.31 | 0/469 | 0.51 | 0/635 |
| 28 | 16 | 0.37 | 0/460 | 0.56 | 0/613 |
| 28 | 26 | 0.32 | 0/456 | 0.53 | 0/608 |
| 29 | 17 | 0.33 | 0/426 | 0.50 | 0/561 |
| 29 | 27 | 0.30 | 0/426 | 0.52 | 0/561 |
| 30 | 18 | 0.34 | 0/525 | 0.54 | 0/691 |
| 30 | 28 | 0.32 | 0/525 | 0.48 | 0/691 |
| 31 | 19 | 0.37 | 0/310 | 0.55 | 0/407 |
| 31 | 29 | 0.28 | 0/310 | 0.55 | 0/407 |
| 32 | 1a | 0.40 | 0/35795 | 0.94 | 49/55864 (0.1%) |
| 32 | 2a | 0.38 | 3/35886 (0.0%) | 0.94 | 43/56005 (0.1%) |
| 33 | 1b | 0.30 | 0/1881 | 0.52 | 0/2542 |
| 33 | 2b | 0.30 | 0/1860 | 0.50 | 0/2518 |
| 34 | 1c | 0.30 | 0/1572 | 0.49 | 0/2126 |
| 34 | 2c | 0.31 | 0/1566 | 0.49 | 0/2119 |
| 35 | 1d | 0.30 | 0/1685 | 0.49 | 0/2262 |
| 35 | 2d | 0.28 | 0/1704 | 0.46 | 0/2284 |
| 36 | 1e | 0.32 | 0/1145 | 0.55 | 0/1543 |
| 36 | 2e | 0.30 | 0/1149 | 0.55 | 0/1548 |
| 37 | 1f | 0.29 | 0/823 | 0.51 | 1/1115 (0.1%) |
| 37 | 2f | 0.29 | 0/829 | 0.48 | 0/1123 |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|-----------------|-------------|-------------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 38 | 1g | 0.29 | 0/1250 | 0.45 | 0/1679 |
| 38 | 2g | 0.29 | 0/1254 | 0.45 | 0/1683 |
| 39 | 1h | 0.29 | 0/1108 | 0.50 | 0/1494 |
| 39 | 2h | 0.28 | 0/1108 | 0.48 | 0/1494 |
| 40 | 1i | 0.32 | 0/1002 | 0.52 | 0/1346 |
| 40 | 2i | 0.31 | 0/997 | 0.51 | 0/1343 |
| 41 | 1j | 0.28 | 0/722 | 0.47 | 0/982 |
| 41 | 2j | 0.29 | 0/727 | 0.53 | 1/988 (0.1%) |
| 42 | 1k | 0.28 | 0/844 | 0.49 | 0/1145 |
| 42 | 2k | 0.29 | 0/848 | 0.50 | 0/1149 |
| 43 | 1l | 0.31 | 0/937 | 0.54 | 0/1260 |
| 43 | 2l | 0.32 | 0/937 | 0.59 | 0/1260 |
| 44 | 1m | 0.32 | 0/969 | 0.52 | 0/1302 |
| 44 | 2m | 0.30 | 0/961 | 0.49 | 0/1291 |
| 45 | 1n | 0.31 | 0/501 | 0.49 | 0/664 |
| 45 | 2n | 0.31 | 0/501 | 0.49 | 0/664 |
| 46 | 1o | 0.28 | 0/739 | 0.44 | 0/985 |
| 46 | 2o | 0.29 | 0/739 | 0.45 | 0/985 |
| 47 | 1p | 0.29 | 0/697 | 0.49 | 0/939 |
| 47 | 2p | 0.28 | 0/693 | 0.53 | 0/935 |
| 48 | 1q | 0.30 | 0/836 | 0.54 | 0/1117 |
| 48 | 2q | 0.29 | 0/836 | 0.52 | 1/1117 (0.1%) |
| 49 | 1r | 0.29 | 0/560 | 0.47 | 0/746 |
| 49 | 2r | 0.29 | 0/560 | 0.45 | 0/746 |
| 50 | 1s | 0.30 | 0/667 | 0.55 | 0/900 |
| 50 | 2s | 0.30 | 0/661 | 0.58 | 0/893 |
| 51 | 1t | 0.29 | 0/730 | 0.47 | 0/965 |
| 51 | 2t | 0.27 | 0/729 | 0.44 | 0/965 |
| 52 | 1u | 0.26 | 0/203 | 0.49 | 0/266 |
| 52 | 2u | 0.34 | 0/203 | 0.57 | 0/266 |
| 53 | 1v | 0.46 | 0/310 | 0.98 | 0/480 |
| 53 | 2v | 0.39 | 0/310 | 0.80 | 0/480 |
| 54 | 1w | 0.54 | 1/1606 (0.1%) | 1.17 | 9/2497 (0.4%) |
| 54 | 1y | 0.57 | 1/1606 (0.1%) | 1.13 | 9/2497 (0.4%) |
| 54 | 2w | 0.48 | 0/1556 | 1.13 | 3/2418 (0.1%) |
| 54 | 2y | 0.60 | 1/1583 (0.1%) | 1.18 | 4/2459 (0.2%) |
| 55 | 1x | 0.56 | 1/1725 (0.1%) | 1.17 | 17/2689 (0.6%) |
| 55 | 2x | 0.47 | 0/1725 | 1.11 | 10/2689 (0.4%) |
| All | All | 0.42 | 9/316683 (0.0%) | 0.87 | 267/474105 (0.1%) |

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

sidechain that are expected to be planar.

| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 21 | 1Z | 0 | 1 |
| 50 | 2s | 0 | 1 |
| All | All | 0 | 2 |

All (9) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|--------|-------------|----------|
| 54 | 1y | 1 | G | OP3-P | -10.30 | 1.48 | 1.61 |
| 54 | 2y | 1 | G | OP3-P | -10.26 | 1.48 | 1.61 |
| 54 | 1w | 1 | G | OP3-P | -10.20 | 1.49 | 1.61 |
| 2 | 2B | 1 | U | OP3-P | -10.18 | 1.49 | 1.61 |
| 2 | 1B | 1 | U | OP3-P | -10.04 | 1.49 | 1.61 |
| 32 | 2a | 1272 | G | N1-C2 | -9.31 | 1.30 | 1.37 |
| 32 | 2a | 1272 | G | C6-N1 | -8.77 | 1.33 | 1.39 |
| 32 | 2a | 1263 | C | N3-C4 | -5.37 | 1.30 | 1.33 |
| 55 | 1x | 22 | G | N7-C5 | 5.13 | 1.42 | 1.39 |

All (267) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|--------|-------------|----------|
| 32 | 2a | 1272 | G | N3-C2-N2 | 21.81 | 135.16 | 119.90 |
| 32 | 2a | 1263 | C | N1-C2-O2 | 21.27 | 131.66 | 118.90 |
| 32 | 2a | 1272 | G | C5-C6-O6 | 20.36 | 140.81 | 128.60 |
| 32 | 2a | 1272 | G | N1-C2-N2 | -18.98 | 99.11 | 116.20 |
| 32 | 1a | 1417 | G | N1-C6-O6 | -13.92 | 111.55 | 119.90 |
| 32 | 2a | 1263 | C | C2-N3-C4 | 13.81 | 126.81 | 119.90 |
| 32 | 2a | 1272 | G | C6-N1-C2 | 13.00 | 132.90 | 125.10 |
| 32 | 2a | 1263 | C | N3-C2-O2 | -11.91 | 113.56 | 121.90 |
| 1 | 1A | 1121 | C | N1-C2-O2 | 11.79 | 125.97 | 118.90 |
| 32 | 2a | 1272 | G | C5-C6-N1 | -11.46 | 105.77 | 111.50 |
| 32 | 2a | 1272 | G | N1-C6-O6 | -10.87 | 113.38 | 119.90 |
| 1 | 1A | 1132 | A | N1-C6-N6 | -10.83 | 112.10 | 118.60 |
| 1 | 1A | 2624 | C | C1'-O4'-C4' | 10.66 | 118.42 | 109.90 |
| 32 | 1a | 1027 | C | C5-C4-N4 | 10.51 | 127.55 | 120.20 |
| 32 | 2a | 1263 | C | C5-C6-N1 | 10.40 | 126.20 | 121.00 |
| 2 | 2B | 80 | U | O4'-C1'-N1 | 10.34 | 116.47 | 108.20 |
| 32 | 1a | 1417 | G | C5-C6-O6 | 10.24 | 134.75 | 128.60 |
| 55 | 1x | 46 | G | C6-N1-C2 | -9.90 | 119.16 | 125.10 |
| 32 | 1a | 1417 | G | N3-C2-N2 | 9.61 | 126.62 | 119.90 |
| 55 | 1x | 14 | A | C5-N7-C8 | 9.32 | 108.56 | 103.90 |
| 32 | 2a | 1272 | G | C2-N3-C4 | -9.24 | 107.28 | 111.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|---------|------|------------|-------|-------------|----------|
| 1 | 2A | 2136 | C | N1-C2-O2 | 9.11 | 124.37 | 118.90 |
| 32 | 1a | 1027 | C | N3-C4-C5 | -8.79 | 118.38 | 121.90 |
| 1 | 1A | 1109 | G | C5-C6-O6 | 8.70 | 133.82 | 128.60 |
| 32 | 1a | 1027 | C | N3-C2-O2 | -8.66 | 115.84 | 121.90 |
| 55 | 1x | 14 | A | C4-C5-C6 | 8.44 | 121.22 | 117.00 |
| 55 | 2x | 14 | A | C5-N7-C8 | 8.40 | 108.10 | 103.90 |
| 1 | 1A | 2189 | U | C2-N1-C1' | 8.36 | 127.73 | 117.70 |
| 1 | 2A | 2473 | U | C2-N1-C1' | 8.35 | 127.71 | 117.70 |
| 1 | 1A | 1121 | C | C2-N3-C4 | 8.34 | 124.07 | 119.90 |
| 55 | 2x | 14 | A | C4-C5-C6 | 8.31 | 121.16 | 117.00 |
| 54 | 1y | 33 | U | C2-N1-C1' | 8.23 | 127.58 | 117.70 |
| 1 | 1A | 848 | G | O5'-P-OP2 | -8.19 | 98.33 | 105.70 |
| 32 | 1a | 1027 | C | C6-N1-C1' | 7.98 | 130.37 | 120.80 |
| 32 | 1a | 1034 | G | N3-C2-N2 | 7.93 | 125.45 | 119.90 |
| 55 | 1x | 22 | G | C5-N7-C8 | -7.92 | 100.34 | 104.30 |
| 1 | 1A | 12 | U | C2-N1-C1' | 7.88 | 127.16 | 117.70 |
| 32 | 2a | 1263 | C | C6-N1-C2 | -7.76 | 117.20 | 120.30 |
| 1 | 1A | 1121 | C | N3-C2-O2 | -7.75 | 116.47 | 121.90 |
| 32 | 2a | 1001(A) | G | N3-C4-N9 | 7.73 | 130.64 | 126.00 |
| 32 | 2a | 1263 | C | C2-N1-C1' | 7.70 | 127.27 | 118.80 |
| 32 | 1a | 1034 | G | N9-C4-C5 | -7.64 | 102.34 | 105.40 |
| 54 | 1w | 47 | U | C2-N1-C1' | 7.63 | 126.85 | 117.70 |
| 32 | 1a | 1030(B) | C | C2-N1-C1' | 7.56 | 127.11 | 118.80 |
| 32 | 2a | 1272 | G | C8-N9-C1' | -7.47 | 117.29 | 127.00 |
| 32 | 2a | 1272 | G | C4-N9-C1' | 7.45 | 136.18 | 126.50 |
| 1 | 2A | 656 | G | N1-C6-O6 | -7.41 | 115.45 | 119.90 |
| 32 | 1a | 1027 | C | C6-N1-C2 | -7.39 | 117.34 | 120.30 |
| 55 | 2x | 46 | G | C6-N1-C2 | -7.38 | 120.67 | 125.10 |
| 32 | 2a | 1263 | C | C4-C5-C6 | -7.38 | 113.71 | 117.40 |
| 54 | 1y | 56 | C | N1-C2-O2 | 7.30 | 123.28 | 118.90 |
| 1 | 2A | 2629 | A | O4'-C1'-N9 | 7.28 | 114.02 | 108.20 |
| 1 | 2A | 2897 | U | C2-N1-C1' | 7.25 | 126.40 | 117.70 |
| 32 | 2a | 1263 | C | C5-C4-N4 | 7.20 | 125.24 | 120.20 |
| 1 | 1A | 2189 | U | N3-C2-O2 | -7.10 | 117.23 | 122.20 |
| 1 | 1A | 1660 | A | O5'-P-OP1 | -7.10 | 99.31 | 105.70 |
| 1 | 1A | 1311 | A | O5'-P-OP2 | -7.06 | 99.35 | 105.70 |
| 32 | 2a | 754 | C | C2-N1-C1' | 7.04 | 126.54 | 118.80 |
| 1 | 1A | 2189 | U | N1-C2-O2 | 7.00 | 127.70 | 122.80 |
| 32 | 1a | 1034 | G | C4-C5-N7 | 7.00 | 113.60 | 110.80 |
| 1 | 1A | 1686 | U | O5'-P-OP2 | -6.98 | 99.42 | 105.70 |
| 32 | 1a | 1417 | G | C6-C5-N7 | 6.97 | 134.58 | 130.40 |
| 1 | 2A | 2139 | C | C2-N1-C1' | 6.93 | 126.42 | 118.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|---------|------|------------|-------|-------------|----------|
| 54 | 1y | 33 | U | N1-C2-O2 | 6.92 | 127.65 | 122.80 |
| 1 | 1A | 114 | C | N1-C2-O2 | -6.92 | 114.75 | 118.90 |
| 1 | 1A | 537 | G | O4'-C1'-N9 | 6.86 | 113.69 | 108.20 |
| 1 | 2A | 1380 | G | O5'-P-OP2 | -6.85 | 99.53 | 105.70 |
| 54 | 1w | 22 | G | N1-C6-O6 | 6.76 | 123.95 | 119.90 |
| 1 | 2A | 2136 | C | N3-C2-O2 | -6.75 | 117.18 | 121.90 |
| 55 | 2x | 14 | A | C5-C6-N1 | -6.74 | 114.33 | 117.70 |
| 1 | 1A | 1128 | U | N3-C4-C5 | 6.72 | 118.63 | 114.60 |
| 1 | 1A | 611 | U | O5'-P-OP2 | -6.68 | 99.68 | 105.70 |
| 1 | 1A | 1426 | G | O5'-P-OP2 | -6.61 | 99.75 | 105.70 |
| 1 | 1A | 572 | A | P-O3'-C3' | 6.47 | 127.46 | 119.70 |
| 55 | 1x | 22 | G | C4-C5-C6 | -6.47 | 114.92 | 118.80 |
| 1 | 1A | 1121 | C | C5-C4-N4 | 6.47 | 124.73 | 120.20 |
| 1 | 1A | 1128 | U | N3-C4-O4 | -6.46 | 114.88 | 119.40 |
| 32 | 1a | 1030(B) | C | C6-N1-C2 | -6.45 | 117.72 | 120.30 |
| 1 | 1A | 2565 | G | N3-C4-C5 | -6.43 | 125.38 | 128.60 |
| 1 | 1A | 1109 | G | C6-N1-C2 | 6.42 | 128.95 | 125.10 |
| 32 | 1a | 841 | U | C5-C6-N1 | 6.42 | 125.91 | 122.70 |
| 1 | 2A | 845 | G | C4-N9-C1' | 6.41 | 134.84 | 126.50 |
| 32 | 2a | 1263 | C | N1-C2-N3 | -6.39 | 114.73 | 119.20 |
| 32 | 1a | 1025 | U | N1-C2-O2 | 6.39 | 127.27 | 122.80 |
| 1 | 1A | 2180 | A | P-O3'-C3' | 6.38 | 127.36 | 119.70 |
| 54 | 2w | 74 | C | N1-C2-O2 | 6.36 | 122.71 | 118.90 |
| 1 | 1A | 894 | U | C2-N1-C1' | 6.34 | 125.31 | 117.70 |
| 54 | 1y | 64 | A | C5-C6-N6 | 6.30 | 128.74 | 123.70 |
| 32 | 2a | 1263 | C | N3-C4-N4 | -6.30 | 113.59 | 118.00 |
| 55 | 1x | 14 | A | C5-C6-N1 | -6.28 | 114.56 | 117.70 |
| 1 | 1A | 1232 | G | N1-C6-O6 | -6.27 | 116.14 | 119.90 |
| 55 | 1x | 46 | G | N3-C2-N2 | -6.20 | 115.56 | 119.90 |
| 32 | 2a | 1039 | C | C2-N1-C1' | 6.20 | 125.61 | 118.80 |
| 32 | 2a | 1039 | C | C5-C4-N4 | -6.18 | 115.87 | 120.20 |
| 1 | 2A | 1653 | G | P-O3'-C3' | 6.17 | 127.11 | 119.70 |
| 1 | 1A | 2641 | A | P-O3'-C3' | 6.17 | 127.10 | 119.70 |
| 32 | 1a | 1509 | C | C6-N1-C2 | -6.16 | 117.84 | 120.30 |
| 54 | 1y | 64 | A | N1-C6-N6 | -6.14 | 114.92 | 118.60 |
| 55 | 1x | 22 | G | C8-N9-C1' | 6.11 | 134.95 | 127.00 |
| 32 | 1a | 267 | C | O5'-P-OP1 | -6.11 | 100.20 | 105.70 |
| 54 | 2y | 58 | A | OP1-P-O3' | 6.09 | 118.61 | 105.20 |
| 1 | 1A | 1221 | G | OP1-P-O3' | 6.09 | 118.59 | 105.20 |
| 54 | 2y | 22 | G | N1-C6-O6 | 6.08 | 123.55 | 119.90 |
| 55 | 1x | 14 | A | C4-C5-N7 | -6.07 | 107.67 | 110.70 |
| 32 | 2a | 841 | U | C5-C6-N1 | 6.06 | 125.73 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|---------|------|-------------|-------|-------------|----------|
| 32 | 2a | 1264 | C | N1-C2-O2 | 6.05 | 122.53 | 118.90 |
| 32 | 2a | 754 | C | N1-C2-O2 | 6.04 | 122.52 | 118.90 |
| 32 | 1a | 1034 | G | N3-C4-N9 | 6.03 | 129.62 | 126.00 |
| 55 | 1x | 22 | G | N3-C4-N9 | -6.03 | 122.38 | 126.00 |
| 1 | 1A | 2431 | U | N1-C2-O2 | 6.00 | 127.00 | 122.80 |
| 1 | 1A | 2459 | G | N7-C8-N9 | -6.00 | 110.10 | 113.10 |
| 32 | 1a | 1027 | C | C2-N1-C1' | -5.96 | 112.24 | 118.80 |
| 1 | 1A | 2840 | G | N1-C6-O6 | -5.94 | 116.33 | 119.90 |
| 32 | 1a | 1417 | G | N1-C2-N2 | -5.94 | 110.85 | 116.20 |
| 1 | 2A | 2139 | C | N1-C2-O2 | 5.94 | 122.46 | 118.90 |
| 32 | 1a | 1034 | G | C6-N1-C2 | 5.93 | 128.66 | 125.10 |
| 1 | 2A | 1022 | G | N3-C4-N9 | -5.92 | 122.45 | 126.00 |
| 1 | 2A | 2897 | U | N1-C2-O2 | 5.91 | 126.94 | 122.80 |
| 1 | 1A | 2624 | C | O4'-C1'-C2' | 5.91 | 112.92 | 107.60 |
| 32 | 1a | 1067 | A | P-O3'-C3' | 5.90 | 126.78 | 119.70 |
| 32 | 2a | 1122 | U | C5-C4-O4 | 5.89 | 129.44 | 125.90 |
| 32 | 1a | 266 | G | P-O3'-C3' | 5.89 | 126.77 | 119.70 |
| 55 | 1x | 46 | G | C5-C6-N1 | 5.88 | 114.44 | 111.50 |
| 32 | 1a | 1481 | U | N3-C4-O4 | -5.87 | 115.29 | 119.40 |
| 1 | 2A | 1698 | A | O4'-C1'-N9 | 5.86 | 112.88 | 108.20 |
| 32 | 1a | 1030 | C | N1-C2-O2 | 5.85 | 122.41 | 118.90 |
| 54 | 1w | 47 | U | N1-C2-O2 | 5.83 | 126.88 | 122.80 |
| 1 | 1A | 2459 | G | C8-N9-C4 | 5.82 | 108.73 | 106.40 |
| 1 | 1A | 215 | G | O4'-C1'-N9 | 5.79 | 112.83 | 108.20 |
| 1 | 2A | 656 | G | C5-C6-O6 | 5.77 | 132.06 | 128.60 |
| 55 | 2x | 22 | G | C5-N7-C8 | -5.76 | 101.42 | 104.30 |
| 55 | 1x | 14 | A | C4-N9-C1' | 5.75 | 136.64 | 126.30 |
| 1 | 2A | 122 | G | N1-C6-O6 | 5.73 | 123.34 | 119.90 |
| 1 | 1A | 1295 | U | O5'-P-OP1 | -5.72 | 100.55 | 105.70 |
| 55 | 1x | 14 | A | C8-N9-C1' | -5.69 | 117.45 | 127.70 |
| 32 | 1a | 1030(B) | C | N1-C2-O2 | 5.69 | 122.31 | 118.90 |
| 1 | 2A | 2107 | C | C2-N3-C4 | 5.69 | 122.75 | 119.90 |
| 1 | 1A | 2610 | A | O5'-P-OP1 | -5.68 | 100.59 | 105.70 |
| 2 | 2B | 30 | C | C6-N1-C2 | -5.68 | 118.03 | 120.30 |
| 32 | 1a | 1002 | G | C4-N9-C1' | 5.67 | 133.87 | 126.50 |
| 6 | 2G | 43 | LEU | CB-CG-CD1 | 5.67 | 120.63 | 111.00 |
| 32 | 1a | 1420 | C | N1-C2-O2 | 5.66 | 122.29 | 118.90 |
| 32 | 1a | 1027 | C | N3-C4-N4 | -5.63 | 114.06 | 118.00 |
| 55 | 2x | 22 | G | C4-C5-C6 | -5.63 | 115.42 | 118.80 |
| 1 | 2A | 2897 | U | C5-C6-N1 | 5.62 | 125.51 | 122.70 |
| 55 | 2x | 22 | G | N1-C6-O6 | -5.61 | 116.53 | 119.90 |
| 1 | 2A | 1992 | G | P-O3'-C3' | 5.60 | 126.42 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|---------|------|------------|-------|-------------|----------|
| 1 | 1A | 2451 | A | O5'-P-OP1 | -5.59 | 100.67 | 105.70 |
| 1 | 1A | 1219 | A | OP1-P-O3' | 5.59 | 117.49 | 105.20 |
| 1 | 2A | 228 | A | OP1-P-O3' | 5.59 | 117.49 | 105.20 |
| 1 | 1A | 2014 | G | P-O3'-C3' | 5.58 | 126.39 | 119.70 |
| 1 | 2A | 2689 | U | P-O3'-C3' | 5.55 | 126.36 | 119.70 |
| 32 | 2a | 1001(A) | G | N9-C4-C5 | -5.54 | 103.18 | 105.40 |
| 1 | 1A | 1219 | A | P-O3'-C3' | 5.54 | 126.35 | 119.70 |
| 1 | 2A | 847 | U | C2-N1-C1' | 5.54 | 124.34 | 117.70 |
| 32 | 1a | 421 | U | C2-N1-C1' | 5.53 | 124.34 | 117.70 |
| 32 | 1a | 1158 | C | C2-N1-C1' | 5.52 | 124.88 | 118.80 |
| 1 | 2A | 1779 | U | O4'-C1'-N1 | 5.52 | 112.62 | 108.20 |
| 54 | 1y | 33 | U | N3-C2-O2 | -5.52 | 118.34 | 122.20 |
| 32 | 1a | 770 | C | OP1-P-OP2 | -5.51 | 111.34 | 119.60 |
| 32 | 2a | 266 | G | N3-C4-C5 | -5.49 | 125.86 | 128.60 |
| 32 | 2a | 1004 | A | N7-C8-N9 | 5.48 | 116.54 | 113.80 |
| 48 | 2q | 28 | PRO | C-N-CA | -5.48 | 108.00 | 121.70 |
| 1 | 2A | 845 | G | C8-N9-C1' | -5.46 | 119.90 | 127.00 |
| 1 | 1A | 1121 | C | C6-N1-C2 | -5.46 | 118.11 | 120.30 |
| 32 | 2a | 754 | C | C6-N1-C1' | -5.46 | 114.25 | 120.80 |
| 1 | 2A | 2473 | U | C6-N1-C1' | -5.45 | 113.57 | 121.20 |
| 1 | 1A | 1359 | U | C2-N1-C1' | 5.44 | 124.23 | 117.70 |
| 1 | 2A | 2139 | C | C6-N1-C1' | -5.44 | 114.27 | 120.80 |
| 32 | 1a | 1123 | A | C6-N1-C2 | 5.43 | 121.86 | 118.60 |
| 54 | 1y | 33 | U | C6-N1-C1' | -5.42 | 113.61 | 121.20 |
| 1 | 2A | 2473 | U | C5-C6-N1 | 5.41 | 125.40 | 122.70 |
| 1 | 2A | 528 | A | P-O3'-C3' | 5.40 | 126.18 | 119.70 |
| 1 | 1A | 1132 | A | C5-C6-N6 | 5.39 | 128.01 | 123.70 |
| 1 | 2A | 2473 | U | N1-C2-O2 | 5.38 | 126.56 | 122.80 |
| 54 | 2y | 58 | A | P-O3'-C3' | 5.38 | 126.15 | 119.70 |
| 1 | 1A | 573 | G | O5'-P-OP1 | -5.37 | 100.86 | 105.70 |
| 1 | 2A | 90 | U | C2-N1-C1' | 5.37 | 124.15 | 117.70 |
| 1 | 1A | 12 | U | N1-C2-O2 | 5.37 | 126.56 | 122.80 |
| 32 | 2a | 960 | U | C2-N1-C1' | 5.37 | 124.14 | 117.70 |
| 1 | 1A | 2858 | G | O4'-C1'-N9 | 5.36 | 112.49 | 108.20 |
| 1 | 2A | 228 | A | P-O3'-C3' | 5.35 | 126.12 | 119.70 |
| 54 | 2w | 48 | C | N1-C2-O2 | -5.35 | 115.69 | 118.90 |
| 1 | 1A | 1109 | G | N3-C2-N2 | 5.35 | 123.64 | 119.90 |
| 54 | 1w | 13 | C | C2-N1-C1' | 5.35 | 124.68 | 118.80 |
| 41 | 2j | 8 | LEU | CA-CB-CG | 5.34 | 127.57 | 115.30 |
| 1 | 1A | 1232 | G | C5-C6-O6 | 5.32 | 131.79 | 128.60 |
| 32 | 2a | 65 | U | P-O3'-C3' | 5.31 | 126.08 | 119.70 |
| 1 | 1A | 894 | U | N1-C2-O2 | 5.31 | 126.52 | 122.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|---------|------|------------|-------|-------------|----------|
| 1 | 1A | 2431 | U | N3-C4-O4 | -5.31 | 115.68 | 119.40 |
| 32 | 2a | 204 | U | C2-N1-C1' | 5.31 | 124.07 | 117.70 |
| 32 | 2a | 266 | G | P-O3'-C3' | 5.29 | 126.05 | 119.70 |
| 1 | 1A | 2613 | C | C6-N1-C2 | -5.28 | 118.19 | 120.30 |
| 32 | 1a | 1030(B) | C | C5-C6-N1 | 5.28 | 123.64 | 121.00 |
| 32 | 2a | 1001(A) | G | C8-N9-C1' | -5.27 | 120.15 | 127.00 |
| 32 | 1a | 1002 | G | C8-N9-C1' | -5.26 | 120.16 | 127.00 |
| 54 | 1y | 56 | C | C2-N3-C4 | 5.26 | 122.53 | 119.90 |
| 32 | 2a | 1001(A) | G | C4-N9-C1' | 5.26 | 133.34 | 126.50 |
| 54 | 2w | 50 | U | C5-C4-O4 | -5.26 | 122.75 | 125.90 |
| 54 | 1w | 63 | G | C5-C6-O6 | 5.25 | 131.75 | 128.60 |
| 54 | 1y | 56 | C | N3-C2-O2 | -5.25 | 118.22 | 121.90 |
| 1 | 2A | 784 | A | P-O3'-C3' | 5.25 | 126.00 | 119.70 |
| 1 | 2A | 2897 | U | N3-C2-O2 | -5.25 | 118.53 | 122.20 |
| 1 | 1A | 12 | U | N3-C2-O2 | -5.24 | 118.53 | 122.20 |
| 1 | 2A | 265 | A | O4'-C1'-N9 | 5.24 | 112.39 | 108.20 |
| 55 | 1x | 22 | G | C4-N9-C1' | -5.24 | 119.69 | 126.50 |
| 54 | 1w | 74 | C | N1-C2-O2 | 5.24 | 122.04 | 118.90 |
| 1 | 1A | 2585 | C | N1-C2-O2 | 5.24 | 122.04 | 118.90 |
| 32 | 1a | 1002 | G | N3-C4-N9 | 5.23 | 129.14 | 126.00 |
| 32 | 1a | 1114 | C | C6-N1-C2 | -5.23 | 118.21 | 120.30 |
| 32 | 1a | 1150 | U | C2-N3-C4 | 5.22 | 130.13 | 127.00 |
| 32 | 1a | 1034 | G | N1-C2-N3 | -5.21 | 120.77 | 123.90 |
| 55 | 2x | 46 | G | N1-C2-N3 | 5.21 | 127.03 | 123.90 |
| 1 | 1A | 2802 | C | C2-N1-C1' | -5.21 | 113.07 | 118.80 |
| 1 | 1A | 2485 | U | C2-N1-C1' | 5.20 | 123.94 | 117.70 |
| 1 | 2A | 195 | A | P-O3'-C3' | 5.20 | 125.94 | 119.70 |
| 54 | 1w | 47 | U | C6-N1-C1' | -5.20 | 113.92 | 121.20 |
| 1 | 1A | 600 | G | N1-C6-O6 | 5.19 | 123.01 | 119.90 |
| 1 | 1A | 2428 | C | C6-N1-C2 | -5.19 | 118.22 | 120.30 |
| 32 | 1a | 1021 | G | O4'-C1'-N9 | 5.19 | 112.35 | 108.20 |
| 1 | 2A | 2866 | U | C2-N1-C1' | 5.19 | 123.93 | 117.70 |
| 1 | 2A | 2573 | C | N1-C2-O2 | 5.18 | 122.01 | 118.90 |
| 1 | 1A | 2248 | C | C6-N1-C2 | 5.18 | 122.37 | 120.30 |
| 32 | 1a | 1150 | U | C5-C4-O4 | 5.17 | 129.00 | 125.90 |
| 1 | 1A | 2189 | U | C5-C6-N1 | 5.17 | 125.29 | 122.70 |
| 1 | 1A | 1878 | A | O4'-C1'-N9 | 5.17 | 112.33 | 108.20 |
| 1 | 1A | 1674 | G | N1-C6-O6 | 5.17 | 123.00 | 119.90 |
| 1 | 1A | 637 | U | C2-N1-C1' | 5.16 | 123.89 | 117.70 |
| 55 | 1x | 46 | G | N1-C2-N3 | 5.16 | 127.00 | 123.90 |
| 1 | 1A | 572 | A | OP1-P-O3' | 5.16 | 116.55 | 105.20 |
| 32 | 2a | 913 | A | P-O3'-C3' | 5.16 | 125.89 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 55 | 2x | 14 | A | C8-N9-C1' | -5.15 | 118.42 | 127.70 |
| 32 | 1a | 421 | U | N3-C2-O2 | -5.15 | 118.60 | 122.20 |
| 32 | 1a | 421 | U | N1-C2-O2 | 5.14 | 126.40 | 122.80 |
| 55 | 1x | 46 | G | C5-C6-O6 | -5.14 | 125.52 | 128.60 |
| 32 | 2a | 748 | C | P-O3'-C3' | 5.13 | 125.86 | 119.70 |
| 1 | 2A | 1372 | U | N3-C4-O4 | 5.13 | 122.99 | 119.40 |
| 1 | 1A | 2701 | U | P-O3'-C3' | 5.12 | 125.85 | 119.70 |
| 37 | 1f | 19 | LEU | CA-CB-CG | 5.12 | 127.08 | 115.30 |
| 1 | 1A | 840 | A | O5'-P-OP2 | -5.12 | 101.09 | 105.70 |
| 1 | 1A | 2565 | G | N3-C4-N9 | 5.12 | 129.07 | 126.00 |
| 32 | 1a | 1442 | G | P-O3'-C3' | 5.11 | 125.83 | 119.70 |
| 32 | 2a | 1158 | C | C2-N1-C1' | 5.11 | 124.42 | 118.80 |
| 1 | 2A | 845 | G | O4'-C1'-N9 | 5.10 | 112.28 | 108.20 |
| 1 | 2A | 2142 | C | C2-N1-C1' | 5.10 | 124.41 | 118.80 |
| 1 | 2A | 845 | G | N3-C4-N9 | 5.10 | 129.06 | 126.00 |
| 32 | 2a | 581 | G | N3-C4-C5 | 5.10 | 131.15 | 128.60 |
| 54 | 2y | 43 | C | C2-N1-C1' | 5.09 | 124.40 | 118.80 |
| 1 | 1A | 1625 | U | N3-C2-O2 | -5.09 | 118.64 | 122.20 |
| 55 | 1x | 22 | G | N3-C4-C5 | 5.09 | 131.14 | 128.60 |
| 1 | 1A | 2189 | U | C6-N1-C1' | -5.08 | 114.09 | 121.20 |
| 1 | 2A | 1698 | A | C6-C5-N7 | -5.08 | 128.74 | 132.30 |
| 1 | 2A | 528 | A | OP1-P-O3' | 5.08 | 116.36 | 105.20 |
| 1 | 1A | 600 | G | C5-C6-O6 | -5.07 | 125.56 | 128.60 |
| 1 | 1A | 1221 | G | P-O3'-C3' | 5.07 | 125.78 | 119.70 |
| 54 | 1w | 22 | G | C5-C6-O6 | -5.05 | 125.57 | 128.60 |
| 32 | 1a | 841 | U | C6-N1-C2 | -5.05 | 117.97 | 121.00 |
| 1 | 1A | 1686 | U | O5'-P-OP1 | 5.04 | 116.75 | 110.70 |
| 32 | 2a | 1039 | C | N1-C2-O2 | 5.04 | 121.92 | 118.90 |
| 1 | 2A | 2168 | G | C4-N9-C1' | 5.02 | 133.03 | 126.50 |
| 1 | 1A | 12 | U | C6-N1-C1' | -5.02 | 114.17 | 121.20 |
| 32 | 2a | 960 | U | N1-C2-O2 | 5.02 | 126.32 | 122.80 |
| 32 | 1a | 1027 | C | N1-C2-N3 | 5.02 | 122.71 | 119.20 |
| 32 | 1a | 1065 | U | P-O3'-C3' | 5.01 | 125.72 | 119.70 |
| 55 | 2x | 14 | A | C4-N9-C1' | 5.01 | 135.32 | 126.30 |
| 54 | 1w | 74 | C | C2-N1-C1' | 5.00 | 124.31 | 118.80 |
| 32 | 1a | 1509 | C | N3-C4-C5 | -5.00 | 119.90 | 121.90 |

There are no chirality outliers.

All (2) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|---------|
| 21 | 1Z | 136 | PHE | Peptide |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|---------|
| 50 | 2s | 27 | GLU | Peptide |

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 X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|----------|----------|-------------|-----|
| 3 | 1D | 273/276 (99%) | 247 (90%) | 24 (9%) | 2 (1%) | 22 | 52 |
| 3 | 2D | 273/276 (99%) | 250 (92%) | 22 (8%) | 1 (0%) | 34 | 64 |
| 4 | 1E | 202/206 (98%) | 186 (92%) | 14 (7%) | 2 (1%) | 15 | 43 |
| 4 | 2E | 202/206 (98%) | 187 (93%) | 13 (6%) | 2 (1%) | 15 | 43 |
| 5 | 1F | 201/210 (96%) | 195 (97%) | 5 (2%) | 1 (0%) | 29 | 60 |
| 5 | 2F | 201/210 (96%) | 187 (93%) | 11 (6%) | 3 (2%) | 10 | 32 |
| 6 | 1G | 179/182 (98%) | 165 (92%) | 9 (5%) | 5 (3%) | 5 | 17 |
| 6 | 2G | 179/182 (98%) | 154 (86%) | 22 (12%) | 3 (2%) | 9 | 29 |
| 7 | 1H | 172/180 (96%) | 158 (92%) | 12 (7%) | 2 (1%) | 13 | 38 |
| 7 | 2H | 172/180 (96%) | 153 (89%) | 17 (10%) | 2 (1%) | 13 | 38 |
| 8 | 1I | 144/148 (97%) | 130 (90%) | 14 (10%) | 0 | 100 | 100 |
| 8 | 2I | 144/148 (97%) | 118 (82%) | 23 (16%) | 3 (2%) | 7 | 24 |
| 9 | 1N | 138/140 (99%) | 130 (94%) | 7 (5%) | 1 (1%) | 22 | 52 |
| 9 | 2N | 138/140 (99%) | 131 (95%) | 7 (5%) | 0 | 100 | 100 |
| 10 | 1O | 120/122 (98%) | 114 (95%) | 6 (5%) | 0 | 100 | 100 |
| 10 | 2O | 120/122 (98%) | 109 (91%) | 11 (9%) | 0 | 100 | 100 |
| 11 | 1P | 147/150 (98%) | 136 (92%) | 10 (7%) | 1 (1%) | 22 | 52 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|----------|----------|-------------|-----|
| 11 | 2P | 147/150 (98%) | 128 (87%) | 16 (11%) | 3 (2%) | 7 | 25 |
| 12 | 1Q | 139/141 (99%) | 126 (91%) | 12 (9%) | 1 (1%) | 22 | 52 |
| 12 | 2Q | 139/141 (99%) | 129 (93%) | 8 (6%) | 2 (1%) | 11 | 34 |
| 13 | 1R | 116/118 (98%) | 108 (93%) | 6 (5%) | 2 (2%) | 9 | 29 |
| 13 | 2R | 116/118 (98%) | 101 (87%) | 14 (12%) | 1 (1%) | 17 | 46 |
| 14 | 1S | 108/112 (96%) | 97 (90%) | 10 (9%) | 1 (1%) | 17 | 46 |
| 14 | 2S | 108/112 (96%) | 95 (88%) | 11 (10%) | 2 (2%) | 8 | 26 |
| 15 | 1T | 129/146 (88%) | 121 (94%) | 8 (6%) | 0 | 100 | 100 |
| 15 | 2T | 129/146 (88%) | 117 (91%) | 12 (9%) | 0 | 100 | 100 |
| 16 | 1U | 114/118 (97%) | 112 (98%) | 2 (2%) | 0 | 100 | 100 |
| 16 | 2U | 114/118 (97%) | 109 (96%) | 3 (3%) | 2 (2%) | 8 | 27 |
| 17 | 1V | 99/101 (98%) | 91 (92%) | 7 (7%) | 1 (1%) | 15 | 43 |
| 17 | 2V | 99/101 (98%) | 94 (95%) | 4 (4%) | 1 (1%) | 15 | 43 |
| 18 | 1W | 110/113 (97%) | 108 (98%) | 2 (2%) | 0 | 100 | 100 |
| 18 | 2W | 110/113 (97%) | 105 (96%) | 5 (4%) | 0 | 100 | 100 |
| 19 | 1X | 93/96 (97%) | 87 (94%) | 6 (6%) | 0 | 100 | 100 |
| 19 | 2X | 93/96 (97%) | 82 (88%) | 10 (11%) | 1 (1%) | 14 | 40 |
| 20 | 1Y | 105/110 (96%) | 93 (89%) | 9 (9%) | 3 (3%) | 4 | 16 |
| 20 | 2Y | 105/110 (96%) | 93 (89%) | 11 (10%) | 1 (1%) | 15 | 43 |
| 21 | 1Z | 148/206 (72%) | 131 (88%) | 14 (10%) | 3 (2%) | 7 | 25 |
| 21 | 2Z | 156/206 (76%) | 124 (80%) | 30 (19%) | 2 (1%) | 12 | 35 |
| 22 | 10 | 81/85 (95%) | 74 (91%) | 7 (9%) | 0 | 100 | 100 |
| 22 | 20 | 81/85 (95%) | 71 (88%) | 7 (9%) | 3 (4%) | 3 | 12 |
| 23 | 11 | 95/98 (97%) | 87 (92%) | 8 (8%) | 0 | 100 | 100 |
| 23 | 21 | 95/98 (97%) | 90 (95%) | 4 (4%) | 1 (1%) | 14 | 40 |
| 24 | 12 | 68/72 (94%) | 67 (98%) | 1 (2%) | 0 | 100 | 100 |
| 24 | 22 | 68/72 (94%) | 62 (91%) | 6 (9%) | 0 | 100 | 100 |
| 25 | 13 | 57/60 (95%) | 53 (93%) | 4 (7%) | 0 | 100 | 100 |
| 25 | 23 | 57/60 (95%) | 53 (93%) | 3 (5%) | 1 (2%) | 8 | 27 |
| 26 | 14 | 67/71 (94%) | 52 (78%) | 7 (10%) | 8 (12%) | 0 | 1 |
| 26 | 24 | 67/71 (94%) | 50 (75%) | 11 (16%) | 6 (9%) | 1 | 1 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|----------|----------|-------------|-----|
| 27 | 15 | 57/60 (95%) | 54 (95%) | 3 (5%) | 0 | 100 | 100 |
| 27 | 25 | 57/60 (95%) | 55 (96%) | 2 (4%) | 0 | 100 | 100 |
| 28 | 16 | 51/54 (94%) | 49 (96%) | 2 (4%) | 0 | 100 | 100 |
| 28 | 26 | 51/54 (94%) | 46 (90%) | 5 (10%) | 0 | 100 | 100 |
| 29 | 17 | 46/49 (94%) | 44 (96%) | 2 (4%) | 0 | 100 | 100 |
| 29 | 27 | 46/49 (94%) | 40 (87%) | 5 (11%) | 1 (2%) | 6 | 23 |
| 30 | 18 | 62/65 (95%) | 55 (89%) | 7 (11%) | 0 | 100 | 100 |
| 30 | 28 | 62/65 (95%) | 57 (92%) | 4 (6%) | 1 (2%) | 9 | 30 |
| 31 | 19 | 35/37 (95%) | 34 (97%) | 1 (3%) | 0 | 100 | 100 |
| 31 | 29 | 35/37 (95%) | 35 (100%) | 0 | 0 | 100 | 100 |
| 33 | 1b | 229/256 (90%) | 194 (85%) | 29 (13%) | 6 (3%) | 5 | 19 |
| 33 | 2b | 229/256 (90%) | 194 (85%) | 28 (12%) | 7 (3%) | 4 | 15 |
| 34 | 1c | 204/239 (85%) | 177 (87%) | 25 (12%) | 2 (1%) | 15 | 43 |
| 34 | 2c | 204/239 (85%) | 168 (82%) | 31 (15%) | 5 (2%) | 5 | 19 |
| 35 | 1d | 206/209 (99%) | 188 (91%) | 13 (6%) | 5 (2%) | 6 | 21 |
| 35 | 2d | 206/209 (99%) | 190 (92%) | 15 (7%) | 1 (0%) | 29 | 60 |
| 36 | 1e | 146/162 (90%) | 126 (86%) | 19 (13%) | 1 (1%) | 22 | 52 |
| 36 | 2e | 146/162 (90%) | 131 (90%) | 12 (8%) | 3 (2%) | 7 | 24 |
| 37 | 1f | 98/101 (97%) | 90 (92%) | 7 (7%) | 1 (1%) | 15 | 43 |
| 37 | 2f | 98/101 (97%) | 93 (95%) | 5 (5%) | 0 | 100 | 100 |
| 38 | 1g | 153/156 (98%) | 140 (92%) | 12 (8%) | 1 (1%) | 22 | 52 |
| 38 | 2g | 153/156 (98%) | 137 (90%) | 11 (7%) | 5 (3%) | 4 | 13 |
| 39 | 1h | 135/138 (98%) | 126 (93%) | 8 (6%) | 1 (1%) | 22 | 52 |
| 39 | 2h | 135/138 (98%) | 125 (93%) | 9 (7%) | 1 (1%) | 22 | 52 |
| 40 | 1i | 125/128 (98%) | 106 (85%) | 19 (15%) | 0 | 100 | 100 |
| 40 | 2i | 125/128 (98%) | 109 (87%) | 15 (12%) | 1 (1%) | 19 | 49 |
| 41 | 1j | 95/105 (90%) | 83 (87%) | 6 (6%) | 6 (6%) | 1 | 3 |
| 41 | 2j | 94/105 (90%) | 76 (81%) | 10 (11%) | 8 (8%) | 1 | 2 |
| 42 | 1k | 112/129 (87%) | 104 (93%) | 7 (6%) | 1 (1%) | 17 | 46 |
| 42 | 2k | 112/129 (87%) | 97 (87%) | 11 (10%) | 4 (4%) | 3 | 12 |
| 43 | 1l | 119/132 (90%) | 109 (92%) | 10 (8%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|-------------------|-------------|----------|----------|-------------|-----|
| 43 | 2l | 119/132 (90%) | 95 (80%) | 24 (20%) | 0 | 100 | 100 |
| 44 | 1m | 121/126 (96%) | 106 (88%) | 15 (12%) | 0 | 100 | 100 |
| 44 | 2m | 120/126 (95%) | 101 (84%) | 17 (14%) | 2 (2%) | 9 | 29 |
| 45 | 1n | 58/61 (95%) | 52 (90%) | 6 (10%) | 0 | 100 | 100 |
| 45 | 2n | 58/61 (95%) | 50 (86%) | 8 (14%) | 0 | 100 | 100 |
| 46 | 1o | 86/89 (97%) | 76 (88%) | 9 (10%) | 1 (1%) | 13 | 38 |
| 46 | 2o | 86/89 (97%) | 74 (86%) | 11 (13%) | 1 (1%) | 13 | 38 |
| 47 | 1p | 80/88 (91%) | 72 (90%) | 7 (9%) | 1 (1%) | 12 | 35 |
| 47 | 2p | 80/88 (91%) | 71 (89%) | 8 (10%) | 1 (1%) | 12 | 35 |
| 48 | 1q | 97/105 (92%) | 91 (94%) | 5 (5%) | 1 (1%) | 15 | 43 |
| 48 | 2q | 97/105 (92%) | 84 (87%) | 12 (12%) | 1 (1%) | 15 | 43 |
| 49 | 1r | 66/88 (75%) | 60 (91%) | 6 (9%) | 0 | 100 | 100 |
| 49 | 2r | 66/88 (75%) | 60 (91%) | 6 (9%) | 0 | 100 | 100 |
| 50 | 1s | 81/93 (87%) | 69 (85%) | 10 (12%) | 2 (2%) | 5 | 19 |
| 50 | 2s | 81/93 (87%) | 67 (83%) | 10 (12%) | 4 (5%) | 2 | 7 |
| 51 | 1t | 94/106 (89%) | 81 (86%) | 9 (10%) | 4 (4%) | 2 | 9 |
| 51 | 2t | 94/106 (89%) | 83 (88%) | 7 (7%) | 4 (4%) | 2 | 9 |
| 52 | 1u | 21/27 (78%) | 20 (95%) | 1 (5%) | 0 | 100 | 100 |
| 52 | 2u | 21/27 (78%) | 17 (81%) | 3 (14%) | 1 (5%) | 2 | 7 |
| All | All | 11370/12128 (94%) | 10221 (90%) | 992 (9%) | 157 (1%) | 11 | 34 |

All (157) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 5 | 1F | 130 | ALA |
| 12 | 1Q | 16 | ARG |
| 26 | 14 | 45 | GLY |
| 26 | 14 | 53 | GLU |
| 33 | 1b | 10 | LEU |
| 33 | 1b | 17 | PHE |
| 35 | 1d | 173 | TRP |
| 41 | 1j | 55 | LYS |
| 41 | 1j | 56 | HIS |
| 51 | 1t | 10 | LEU |
| 51 | 1t | 100 | ILE |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 5 | 2F | 130 | ALA |
| 13 | 2R | 14 | SER |
| 26 | 24 | 45 | GLY |
| 26 | 24 | 55 | ARG |
| 29 | 27 | 46 | VAL |
| 33 | 2b | 17 | PHE |
| 33 | 2b | 123 | ALA |
| 38 | 2g | 4 | ARG |
| 40 | 2i | 54 | ASP |
| 41 | 2j | 75 | ILE |
| 41 | 2j | 84 | GLN |
| 44 | 2m | 4 | ILE |
| 50 | 2s | 81 | ARG |
| 51 | 2t | 100 | ILE |
| 52 | 2u | 3 | LYS |
| 6 | 1G | 84 | LYS |
| 7 | 1H | 126 | PRO |
| 13 | 1R | 2 | ARG |
| 21 | 1Z | 31 | ARG |
| 26 | 14 | 44 | THR |
| 26 | 14 | 62 | ARG |
| 33 | 1b | 126 | GLU |
| 35 | 1d | 178 | VAL |
| 35 | 1d | 179 | GLU |
| 46 | 1o | 49 | ASP |
| 47 | 1p | 31 | LYS |
| 50 | 1s | 81 | ARG |
| 6 | 2G | 42 | GLY |
| 6 | 2G | 47 | LYS |
| 7 | 2H | 126 | PRO |
| 8 | 2I | 40 | THR |
| 11 | 2P | 29 | LYS |
| 11 | 2P | 38 | GLN |
| 12 | 2Q | 27 | VAL |
| 12 | 2Q | 88 | GLY |
| 16 | 2U | 116 | ALA |
| 17 | 2V | 79 | VAL |
| 19 | 2X | 15 | GLU |
| 22 | 20 | 55 | ARG |
| 26 | 24 | 65 | ASP |
| 33 | 2b | 78 | GLN |
| 34 | 2c | 18 | TRP |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 34 | 2c | 156 | ARG |
| 42 | 2k | 49 | GLY |
| 51 | 2t | 10 | LEU |
| 3 | 1D | 3 | VAL |
| 4 | 1E | 100 | GLU |
| 6 | 1G | 49 | ASP |
| 6 | 1G | 124 | SER |
| 9 | 1N | 88 | GLU |
| 13 | 1R | 107 | ASP |
| 14 | 1S | 13 | ARG |
| 17 | 1V | 100 | ARG |
| 20 | 1Y | 54 | LYS |
| 26 | 14 | 46 | GLN |
| 33 | 1b | 231 | GLU |
| 41 | 1j | 78 | ASN |
| 51 | 1t | 47 | GLY |
| 6 | 2G | 43 | LEU |
| 8 | 2I | 85 | GLU |
| 11 | 2P | 45 | LEU |
| 14 | 2S | 84 | GLN |
| 16 | 2U | 115 | ALA |
| 22 | 20 | 4 | LYS |
| 23 | 21 | 45 | ASN |
| 26 | 24 | 46 | GLN |
| 26 | 24 | 52 | THR |
| 26 | 24 | 61 | ARG |
| 33 | 2b | 8 | LYS |
| 33 | 2b | 125 | PRO |
| 33 | 2b | 231 | GLU |
| 34 | 2c | 3 | ASN |
| 41 | 2j | 55 | LYS |
| 41 | 2j | 78 | ASN |
| 42 | 2k | 91 | ARG |
| 4 | 1E | 52 | LEU |
| 6 | 1G | 47 | LYS |
| 20 | 1Y | 51 | VAL |
| 21 | 1Z | 134 | PRO |
| 26 | 14 | 47 | GLN |
| 34 | 1c | 110 | ASN |
| 35 | 1d | 85 | LYS |
| 36 | 1e | 85 | GLY |
| 37 | 1f | 40 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 48 | 1q | 33 | GLY |
| 50 | 1s | 27 | GLU |
| 51 | 1t | 102 | GLY |
| 3 | 2D | 3 | VAL |
| 4 | 2E | 52 | LEU |
| 4 | 2E | 113 | PHE |
| 8 | 2I | 117 | GLU |
| 14 | 2S | 94 | TYR |
| 20 | 2Y | 43 | ASN |
| 25 | 23 | 59 | VAL |
| 33 | 2b | 16 | HIS |
| 36 | 2e | 27 | ARG |
| 38 | 2g | 7 | ALA |
| 38 | 2g | 80 | VAL |
| 39 | 2h | 20 | TYR |
| 41 | 2j | 83 | GLU |
| 42 | 2k | 117 | ASN |
| 46 | 2o | 88 | ARG |
| 3 | 1D | 156 | ALA |
| 6 | 1G | 43 | LEU |
| 7 | 1H | 59 | ARG |
| 26 | 14 | 56 | VAL |
| 26 | 14 | 57 | GLU |
| 39 | 1h | 83 | ILE |
| 5 | 2F | 21 | ALA |
| 7 | 2H | 65 | HIS |
| 21 | 2Z | 134 | PRO |
| 21 | 2Z | 163 | LEU |
| 34 | 2c | 12 | LEU |
| 34 | 2c | 181 | ASN |
| 44 | 2m | 5 | ALA |
| 11 | 1P | 93 | GLY |
| 33 | 1b | 20 | GLU |
| 38 | 1g | 80 | VAL |
| 41 | 1j | 77 | PRO |
| 5 | 2F | 119 | ARG |
| 30 | 28 | 53 | PRO |
| 38 | 2g | 55 | GLY |
| 42 | 2k | 105 | VAL |
| 50 | 2s | 12 | ASP |
| 50 | 2s | 27 | GLU |
| 50 | 2s | 29 | ARG |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 21 | 1Z | 159 | PRO |
| 34 | 1c | 66 | VAL |
| 41 | 2j | 39 | PRO |
| 41 | 2j | 77 | PRO |
| 20 | 1Y | 53 | PRO |
| 22 | 20 | 30 | VAL |
| 36 | 2e | 69 | VAL |
| 38 | 2g | 50 | ILE |
| 47 | 2p | 53 | VAL |
| 48 | 2q | 30 | PRO |
| 51 | 2t | 47 | GLY |
| 41 | 1j | 75 | ILE |
| 36 | 2e | 85 | GLY |
| 51 | 2t | 102 | GLY |
| 41 | 1j | 82 | ILE |
| 42 | 1k | 105 | VAL |
| 35 | 2d | 5 | ILE |
| 41 | 2j | 91 | PRO |
| 35 | 1d | 172 | PRO |
| 33 | 1b | 125 | PRO |

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|-----------|----------|-------------|----|
| 3 | 1D | 215/218 (99%) | 199 (93%) | 16 (7%) | 13 | 36 |
| 3 | 2D | 215/218 (99%) | 195 (91%) | 20 (9%) | 9 | 25 |
| 4 | 1E | 164/166 (99%) | 143 (87%) | 21 (13%) | 4 | 12 |
| 4 | 2E | 164/166 (99%) | 150 (92%) | 14 (8%) | 10 | 29 |
| 5 | 1F | 160/166 (96%) | 148 (92%) | 12 (8%) | 13 | 35 |
| 5 | 2F | 159/166 (96%) | 149 (94%) | 10 (6%) | 18 | 44 |
| 6 | 1G | 143/156 (92%) | 127 (89%) | 16 (11%) | 6 | 17 |
| 6 | 2G | 143/156 (92%) | 123 (86%) | 20 (14%) | 3 | 10 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|----------------|-----------|----------|-------------|----|
| 7 | 1H | 144/148 (97%) | 131 (91%) | 13 (9%) | 9 | 27 |
| 7 | 2H | 144/148 (97%) | 141 (98%) | 3 (2%) | 53 | 79 |
| 8 | 1I | 113/124 (91%) | 99 (88%) | 14 (12%) | 4 | 13 |
| 8 | 2I | 105/124 (85%) | 95 (90%) | 10 (10%) | 8 | 24 |
| 9 | 1N | 118/119 (99%) | 107 (91%) | 11 (9%) | 9 | 25 |
| 9 | 2N | 118/119 (99%) | 105 (89%) | 13 (11%) | 6 | 18 |
| 10 | 1O | 100/100 (100%) | 93 (93%) | 7 (7%) | 15 | 39 |
| 10 | 2O | 100/100 (100%) | 91 (91%) | 9 (9%) | 9 | 27 |
| 11 | 1P | 115/116 (99%) | 103 (90%) | 12 (10%) | 7 | 20 |
| 11 | 2P | 115/116 (99%) | 104 (90%) | 11 (10%) | 8 | 24 |
| 12 | 1Q | 111/111 (100%) | 104 (94%) | 7 (6%) | 18 | 44 |
| 12 | 2Q | 111/111 (100%) | 99 (89%) | 12 (11%) | 6 | 19 |
| 13 | 1R | 101/101 (100%) | 86 (85%) | 15 (15%) | 3 | 8 |
| 13 | 2R | 101/101 (100%) | 90 (89%) | 11 (11%) | 6 | 18 |
| 14 | 1S | 86/88 (98%) | 77 (90%) | 9 (10%) | 7 | 20 |
| 14 | 2S | 85/88 (97%) | 79 (93%) | 6 (7%) | 14 | 38 |
| 15 | 1T | 115/127 (91%) | 111 (96%) | 4 (4%) | 36 | 67 |
| 15 | 2T | 113/127 (89%) | 106 (94%) | 7 (6%) | 18 | 45 |
| 16 | 1U | 93/94 (99%) | 91 (98%) | 2 (2%) | 52 | 78 |
| 16 | 2U | 93/94 (99%) | 89 (96%) | 4 (4%) | 29 | 60 |
| 17 | 1V | 80/82 (98%) | 68 (85%) | 12 (15%) | 3 | 8 |
| 17 | 2V | 80/82 (98%) | 70 (88%) | 10 (12%) | 4 | 13 |
| 18 | 1W | 90/92 (98%) | 86 (96%) | 4 (4%) | 28 | 59 |
| 18 | 2W | 90/92 (98%) | 85 (94%) | 5 (6%) | 21 | 50 |
| 19 | 1X | 77/78 (99%) | 73 (95%) | 4 (5%) | 23 | 53 |
| 19 | 2X | 77/78 (99%) | 72 (94%) | 5 (6%) | 17 | 43 |
| 20 | 1Y | 85/91 (93%) | 77 (91%) | 8 (9%) | 8 | 25 |
| 20 | 2Y | 85/91 (93%) | 81 (95%) | 4 (5%) | 26 | 57 |
| 21 | 1Z | 135/179 (75%) | 123 (91%) | 12 (9%) | 9 | 27 |
| 21 | 2Z | 137/179 (76%) | 120 (88%) | 17 (12%) | 4 | 13 |
| 22 | 10 | 65/67 (97%) | 63 (97%) | 2 (3%) | 40 | 71 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|-----------|----------|-------------|-----|
| 22 | 20 | 65/67 (97%) | 63 (97%) | 2 (3%) | 40 | 71 |
| 23 | 11 | 80/83 (96%) | 75 (94%) | 5 (6%) | 18 | 44 |
| 23 | 21 | 80/83 (96%) | 73 (91%) | 7 (9%) | 10 | 28 |
| 24 | 12 | 65/67 (97%) | 60 (92%) | 5 (8%) | 13 | 34 |
| 24 | 22 | 65/67 (97%) | 62 (95%) | 3 (5%) | 27 | 57 |
| 25 | 13 | 51/52 (98%) | 45 (88%) | 6 (12%) | 5 | 15 |
| 25 | 23 | 50/52 (96%) | 45 (90%) | 5 (10%) | 7 | 22 |
| 26 | 14 | 59/63 (94%) | 52 (88%) | 7 (12%) | 5 | 15 |
| 26 | 24 | 53/63 (84%) | 46 (87%) | 7 (13%) | 4 | 11 |
| 27 | 15 | 50/52 (96%) | 45 (90%) | 5 (10%) | 7 | 22 |
| 27 | 25 | 50/52 (96%) | 45 (90%) | 5 (10%) | 7 | 22 |
| 28 | 16 | 51/52 (98%) | 45 (88%) | 6 (12%) | 5 | 15 |
| 28 | 26 | 50/52 (96%) | 43 (86%) | 7 (14%) | 3 | 10 |
| 29 | 17 | 41/42 (98%) | 38 (93%) | 3 (7%) | 14 | 37 |
| 29 | 27 | 41/42 (98%) | 38 (93%) | 3 (7%) | 14 | 37 |
| 30 | 18 | 54/55 (98%) | 50 (93%) | 4 (7%) | 13 | 36 |
| 30 | 28 | 54/55 (98%) | 50 (93%) | 4 (7%) | 13 | 36 |
| 31 | 19 | 34/34 (100%) | 34 (100%) | 0 | 100 | 100 |
| 31 | 29 | 34/34 (100%) | 33 (97%) | 1 (3%) | 42 | 73 |
| 33 | 1b | 192/220 (87%) | 173 (90%) | 19 (10%) | 8 | 23 |
| 33 | 2b | 187/220 (85%) | 167 (89%) | 20 (11%) | 6 | 19 |
| 34 | 1c | 142/188 (76%) | 131 (92%) | 11 (8%) | 13 | 34 |
| 34 | 2c | 140/188 (74%) | 131 (94%) | 9 (6%) | 17 | 43 |
| 35 | 1d | 169/181 (93%) | 157 (93%) | 12 (7%) | 14 | 38 |
| 35 | 2d | 173/181 (96%) | 161 (93%) | 12 (7%) | 15 | 40 |
| 36 | 1e | 113/123 (92%) | 106 (94%) | 7 (6%) | 18 | 45 |
| 36 | 2e | 114/123 (93%) | 108 (95%) | 6 (5%) | 22 | 52 |
| 37 | 1f | 84/90 (93%) | 81 (96%) | 3 (4%) | 35 | 66 |
| 37 | 2f | 85/90 (94%) | 82 (96%) | 3 (4%) | 36 | 67 |
| 38 | 1g | 119/127 (94%) | 112 (94%) | 7 (6%) | 19 | 47 |
| 38 | 2g | 120/127 (94%) | 113 (94%) | 7 (6%) | 20 | 48 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|------------------|------------|----------|-------------|-----|
| 39 | 1h | 114/119 (96%) | 107 (94%) | 7 (6%) | 18 | 45 |
| 39 | 2h | 114/119 (96%) | 109 (96%) | 5 (4%) | 28 | 59 |
| 40 | 1i | 90/99 (91%) | 80 (89%) | 10 (11%) | 6 | 18 |
| 40 | 2i | 89/99 (90%) | 78 (88%) | 11 (12%) | 4 | 13 |
| 41 | 1j | 66/92 (72%) | 59 (89%) | 7 (11%) | 6 | 19 |
| 41 | 2j | 69/92 (75%) | 65 (94%) | 4 (6%) | 20 | 48 |
| 42 | 1k | 82/99 (83%) | 72 (88%) | 10 (12%) | 5 | 14 |
| 42 | 2k | 83/99 (84%) | 79 (95%) | 4 (5%) | 25 | 56 |
| 43 | 1l | 96/108 (89%) | 88 (92%) | 8 (8%) | 11 | 30 |
| 43 | 2l | 96/108 (89%) | 89 (93%) | 7 (7%) | 14 | 37 |
| 44 | 1m | 93/101 (92%) | 82 (88%) | 11 (12%) | 5 | 15 |
| 44 | 2m | 92/101 (91%) | 81 (88%) | 11 (12%) | 5 | 15 |
| 45 | 1n | 49/50 (98%) | 39 (80%) | 10 (20%) | 1 | 3 |
| 45 | 2n | 49/50 (98%) | 45 (92%) | 4 (8%) | 11 | 31 |
| 46 | 1o | 78/80 (98%) | 72 (92%) | 6 (8%) | 13 | 34 |
| 46 | 2o | 78/80 (98%) | 74 (95%) | 4 (5%) | 24 | 53 |
| 47 | 1p | 69/74 (93%) | 62 (90%) | 7 (10%) | 7 | 22 |
| 47 | 2p | 68/74 (92%) | 60 (88%) | 8 (12%) | 5 | 15 |
| 48 | 1q | 94/97 (97%) | 87 (93%) | 7 (7%) | 13 | 36 |
| 48 | 2q | 94/97 (97%) | 89 (95%) | 5 (5%) | 22 | 52 |
| 49 | 1r | 59/77 (77%) | 53 (90%) | 6 (10%) | 7 | 21 |
| 49 | 2r | 59/77 (77%) | 53 (90%) | 6 (10%) | 7 | 21 |
| 50 | 1s | 69/80 (86%) | 62 (90%) | 7 (10%) | 7 | 22 |
| 50 | 2s | 67/80 (84%) | 58 (87%) | 9 (13%) | 4 | 11 |
| 51 | 1t | 70/82 (85%) | 68 (97%) | 2 (3%) | 42 | 73 |
| 51 | 2t | 70/82 (85%) | 66 (94%) | 4 (6%) | 20 | 49 |
| 52 | 1u | 18/22 (82%) | 18 (100%) | 0 | 100 | 100 |
| 52 | 2u | 18/22 (82%) | 18 (100%) | 0 | 100 | 100 |
| All | All | 9303/10064 (92%) | 8530 (92%) | 773 (8%) | 11 | 30 |

All (773) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 3 | 1D | 27 | THR |
| 3 | 1D | 61 | LEU |
| 3 | 1D | 71 | ASP |
| 3 | 1D | 99 | ASP |
| 3 | 1D | 106 | ILE |
| 3 | 1D | 113 | VAL |
| 3 | 1D | 131 | LEU |
| 3 | 1D | 162 | SER |
| 3 | 1D | 200 | ASP |
| 3 | 1D | 211 | ARG |
| 3 | 1D | 217 | ARG |
| 3 | 1D | 229 | VAL |
| 3 | 1D | 242 | ARG |
| 3 | 1D | 257 | LEU |
| 3 | 1D | 260 | ARG |
| 3 | 1D | 266 | SER |
| 4 | 1E | 1 | MET |
| 4 | 1E | 7 | VAL |
| 4 | 1E | 21 | VAL |
| 4 | 1E | 24 | THR |
| 4 | 1E | 47 | VAL |
| 4 | 1E | 49 | LEU |
| 4 | 1E | 73 | GLU |
| 4 | 1E | 78 | LEU |
| 4 | 1E | 113 | PHE |
| 4 | 1E | 116 | VAL |
| 4 | 1E | 119 | ARG |
| 4 | 1E | 132 | HIS |
| 4 | 1E | 137 | HIS |
| 4 | 1E | 160 | TYR |
| 4 | 1E | 163 | GLU |
| 4 | 1E | 167 | VAL |
| 4 | 1E | 173 | VAL |
| 4 | 1E | 175 | VAL |
| 4 | 1E | 178 | GLU |
| 4 | 1E | 181 | LEU |
| 4 | 1E | 184 | VAL |
| 5 | 1F | 18 | ARG |
| 5 | 1F | 33 | LEU |
| 5 | 1F | 57 | VAL |
| 5 | 1F | 70 | THR |
| 5 | 1F | 74 | ARG |
| 5 | 1F | 88 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 5 | 1F | 106 | ARG |
| 5 | 1F | 125 | LEU |
| 5 | 1F | 170 | LEU |
| 5 | 1F | 181 | LEU |
| 5 | 1F | 192 | LEU |
| 5 | 1F | 195 | ASP |
| 6 | 1G | 5 | VAL |
| 6 | 1G | 7 | LEU |
| 6 | 1G | 21 | ARG |
| 6 | 1G | 28 | VAL |
| 6 | 1G | 31 | VAL |
| 6 | 1G | 35 | GLU |
| 6 | 1G | 43 | LEU |
| 6 | 1G | 79 | ASN |
| 6 | 1G | 82 | LEU |
| 6 | 1G | 133 | LEU |
| 6 | 1G | 135 | LEU |
| 6 | 1G | 139 | LEU |
| 6 | 1G | 145 | THR |
| 6 | 1G | 149 | VAL |
| 6 | 1G | 159 | VAL |
| 6 | 1G | 175 | LEU |
| 7 | 1H | 23 | ARG |
| 7 | 1H | 24 | VAL |
| 7 | 1H | 30 | LYS |
| 7 | 1H | 33 | LEU |
| 7 | 1H | 44 | VAL |
| 7 | 1H | 45 | VAL |
| 7 | 1H | 51 | ARG |
| 7 | 1H | 56 | SER |
| 7 | 1H | 84 | SER |
| 7 | 1H | 122 | THR |
| 7 | 1H | 129 | THR |
| 7 | 1H | 134 | SER |
| 7 | 1H | 139 | GLN |
| 8 | 1I | 12 | LEU |
| 8 | 1I | 40 | THR |
| 8 | 1I | 47 | LEU |
| 8 | 1I | 61 | ARG |
| 8 | 1I | 74 | ASN |
| 8 | 1I | 77 | LEU |
| 8 | 1I | 92 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 8 | 1I | 108 | THR |
| 8 | 1I | 117 | GLU |
| 8 | 1I | 123 | LEU |
| 8 | 1I | 140 | LEU |
| 8 | 1I | 142 | VAL |
| 8 | 1I | 144 | VAL |
| 8 | 1I | 145 | VAL |
| 9 | 1N | 4 | TYR |
| 9 | 1N | 28 | THR |
| 9 | 1N | 32 | THR |
| 9 | 1N | 33 | LEU |
| 9 | 1N | 34 | LEU |
| 9 | 1N | 39 | ARG |
| 9 | 1N | 46 | VAL |
| 9 | 1N | 48 | MET |
| 9 | 1N | 55 | VAL |
| 9 | 1N | 67 | LEU |
| 9 | 1N | 99 | LEU |
| 10 | 1O | 10 | VAL |
| 10 | 1O | 23 | ARG |
| 10 | 1O | 24 | VAL |
| 10 | 1O | 64 | ARG |
| 10 | 1O | 80 | ASP |
| 10 | 1O | 98 | VAL |
| 10 | 1O | 114 | ILE |
| 11 | 1P | 59 | LEU |
| 11 | 1P | 61 | ARG |
| 11 | 1P | 65 | ARG |
| 11 | 1P | 95 | VAL |
| 11 | 1P | 98 | GLU |
| 11 | 1P | 101 | VAL |
| 11 | 1P | 105 | LEU |
| 11 | 1P | 112 | LEU |
| 11 | 1P | 125 | VAL |
| 11 | 1P | 133 | SER |
| 11 | 1P | 135 | LEU |
| 11 | 1P | 148 | LEU |
| 12 | 1Q | 1 | MET |
| 12 | 1Q | 35 | VAL |
| 12 | 1Q | 56 | ARG |
| 12 | 1Q | 75 | THR |
| 12 | 1Q | 109 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 12 | 1Q | 110 | THR |
| 12 | 1Q | 133 | ARG |
| 13 | 1R | 6 | SER |
| 13 | 1R | 8 | ARG |
| 13 | 1R | 24 | GLN |
| 13 | 1R | 29 | LEU |
| 13 | 1R | 44 | LEU |
| 13 | 1R | 54 | LEU |
| 13 | 1R | 64 | ARG |
| 13 | 1R | 65 | LEU |
| 13 | 1R | 67 | LEU |
| 13 | 1R | 75 | LEU |
| 13 | 1R | 79 | LEU |
| 13 | 1R | 95 | THR |
| 13 | 1R | 100 | LEU |
| 13 | 1R | 105 | ARG |
| 13 | 1R | 111 | LEU |
| 14 | 1S | 4 | LEU |
| 14 | 1S | 25 | ARG |
| 14 | 1S | 36 | TYR |
| 14 | 1S | 49 | VAL |
| 14 | 1S | 50 | SER |
| 14 | 1S | 68 | GLN |
| 14 | 1S | 69 | VAL |
| 14 | 1S | 85 | VAL |
| 14 | 1S | 110 | LEU |
| 15 | 1T | 28 | VAL |
| 15 | 1T | 96 | ARG |
| 15 | 1T | 108 | ARG |
| 15 | 1T | 128 | GLU |
| 16 | 1U | 5 | LYS |
| 16 | 1U | 95 | LEU |
| 17 | 1V | 7 | THR |
| 17 | 1V | 32 | THR |
| 17 | 1V | 35 | LEU |
| 17 | 1V | 40 | LEU |
| 17 | 1V | 46 | VAL |
| 17 | 1V | 52 | VAL |
| 17 | 1V | 62 | LEU |
| 17 | 1V | 72 | VAL |
| 17 | 1V | 73 | SER |
| 17 | 1V | 79 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 17 | 1V | 82 | ARG |
| 17 | 1V | 95 | LEU |
| 18 | 1W | 2 | GLU |
| 18 | 1W | 28 | SER |
| 18 | 1W | 80 | PRO |
| 18 | 1W | 107 | LEU |
| 19 | 1X | 57 | LEU |
| 19 | 1X | 81 | VAL |
| 19 | 1X | 88 | LYS |
| 19 | 1X | 92 | LEU |
| 20 | 1Y | 1 | MET |
| 20 | 1Y | 11 | ASP |
| 20 | 1Y | 23 | ARG |
| 20 | 1Y | 43 | ASN |
| 20 | 1Y | 49 | VAL |
| 20 | 1Y | 55 | TYR |
| 20 | 1Y | 72 | VAL |
| 20 | 1Y | 90 | LEU |
| 21 | 1Z | 1 | MET |
| 21 | 1Z | 18 | LEU |
| 21 | 1Z | 33 | LEU |
| 21 | 1Z | 52 | SER |
| 21 | 1Z | 81 | ARG |
| 21 | 1Z | 87 | ASP |
| 21 | 1Z | 91 | LEU |
| 21 | 1Z | 132 | ASN |
| 21 | 1Z | 154 | ASP |
| 21 | 1Z | 155 | LEU |
| 21 | 1Z | 170 | THR |
| 21 | 1Z | 171 | ILE |
| 22 | 10 | 14 | ARG |
| 22 | 10 | 74 | ARG |
| 23 | 11 | 3 | LYS |
| 23 | 11 | 59 | THR |
| 23 | 11 | 62 | VAL |
| 23 | 11 | 83 | GLU |
| 23 | 11 | 95 | LEU |
| 24 | 12 | 3 | LEU |
| 24 | 12 | 19 | VAL |
| 24 | 12 | 30 | ARG |
| 24 | 12 | 62 | THR |
| 24 | 12 | 70 | GLN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 25 | 13 | 6 | VAL |
| 25 | 13 | 31 | LEU |
| 25 | 13 | 34 | GLU |
| 25 | 13 | 35 | ARG |
| 25 | 13 | 54 | VAL |
| 25 | 13 | 58 | VAL |
| 26 | 14 | 49 | PHE |
| 26 | 14 | 50 | VAL |
| 26 | 14 | 53 | GLU |
| 26 | 14 | 56 | VAL |
| 26 | 14 | 60 | GLN |
| 26 | 14 | 63 | TYR |
| 26 | 14 | 66 | SER |
| 27 | 15 | 6 | VAL |
| 27 | 15 | 16 | ARG |
| 27 | 15 | 29 | THR |
| 27 | 15 | 57 | VAL |
| 27 | 15 | 58 | LEU |
| 28 | 16 | 6 | ARG |
| 28 | 16 | 19 | ARG |
| 28 | 16 | 41 | PRO |
| 28 | 16 | 47 | THR |
| 28 | 16 | 48 | VAL |
| 28 | 16 | 51 | GLU |
| 29 | 17 | 1 | MET |
| 29 | 17 | 41 | ARG |
| 29 | 17 | 43 | THR |
| 30 | 18 | 6 | THR |
| 30 | 18 | 31 | HIS |
| 30 | 18 | 50 | LEU |
| 30 | 18 | 64 | TYR |
| 33 | 1b | 8 | LYS |
| 33 | 1b | 21 | ARG |
| 33 | 1b | 24 | TRP |
| 33 | 1b | 67 | THR |
| 33 | 1b | 74 | LYS |
| 33 | 1b | 80 | ILE |
| 33 | 1b | 81 | VAL |
| 33 | 1b | 83 | MET |
| 33 | 1b | 93 | VAL |
| 33 | 1b | 94 | ASN |
| 33 | 1b | 111 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 33 | 1b | 113 | HIS |
| 33 | 1b | 122 | PHE |
| 33 | 1b | 126 | GLU |
| 33 | 1b | 170 | GLU |
| 33 | 1b | 185 | ILE |
| 33 | 1b | 208 | ILE |
| 33 | 1b | 214 | ILE |
| 33 | 1b | 223 | ILE |
| 34 | 1c | 15 | THR |
| 34 | 1c | 17 | ASP |
| 34 | 1c | 21 | ARG |
| 34 | 1c | 49 | SER |
| 34 | 1c | 77 | ILE |
| 34 | 1c | 91 | LEU |
| 34 | 1c | 110 | ASN |
| 34 | 1c | 115 | LEU |
| 34 | 1c | 192 | THR |
| 34 | 1c | 195 | VAL |
| 34 | 1c | 206 | GLU |
| 35 | 1d | 10 | ARG |
| 35 | 1d | 19 | LEU |
| 35 | 1d | 49 | ARG |
| 35 | 1d | 53 | ASP |
| 35 | 1d | 91 | SER |
| 35 | 1d | 115 | ARG |
| 35 | 1d | 135 | LEU |
| 35 | 1d | 141 | ARG |
| 35 | 1d | 155 | LEU |
| 35 | 1d | 158 | ILE |
| 35 | 1d | 194 | LEU |
| 35 | 1d | 205 | GLU |
| 36 | 1e | 18 | ARG |
| 36 | 1e | 31 | LEU |
| 36 | 1e | 41 | VAL |
| 36 | 1e | 47 | LYS |
| 36 | 1e | 75 | THR |
| 36 | 1e | 81 | GLU |
| 36 | 1e | 91 | LEU |
| 37 | 1f | 1 | MET |
| 37 | 1f | 55 | ASP |
| 37 | 1f | 72 | VAL |
| 38 | 1g | 8 | GLU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 38 | 1g | 12 | LEU |
| 38 | 1g | 16 | LEU |
| 38 | 1g | 51 | GLN |
| 38 | 1g | 79 | ARG |
| 38 | 1g | 104 | LEU |
| 38 | 1g | 113 | GLU |
| 39 | 1h | 52 | ASP |
| 39 | 1h | 68 | ARG |
| 39 | 1h | 84 | ARG |
| 39 | 1h | 97 | VAL |
| 39 | 1h | 104 | ARG |
| 39 | 1h | 127 | LEU |
| 39 | 1h | 133 | LEU |
| 40 | 1i | 23 | ASN |
| 40 | 1i | 64 | THR |
| 40 | 1i | 83 | ARG |
| 40 | 1i | 88 | TYR |
| 40 | 1i | 89 | ASN |
| 40 | 1i | 92 | TYR |
| 40 | 1i | 108 | VAL |
| 40 | 1i | 111 | ARG |
| 40 | 1i | 127 | LYS |
| 40 | 1i | 128 | ARG |
| 41 | 1j | 8 | LEU |
| 41 | 1j | 17 | ASP |
| 41 | 1j | 34 | VAL |
| 41 | 1j | 35 | SER |
| 41 | 1j | 38 | ILE |
| 41 | 1j | 49 | VAL |
| 41 | 1j | 58 | ASP |
| 42 | 1k | 16 | SER |
| 42 | 1k | 26 | ASN |
| 42 | 1k | 31 | THR |
| 42 | 1k | 33 | THR |
| 42 | 1k | 48 | ILE |
| 42 | 1k | 109 | VAL |
| 42 | 1k | 112 | THR |
| 42 | 1k | 114 | VAL |
| 42 | 1k | 117 | ASN |
| 42 | 1k | 123 | LYS |
| 43 | 1l | 27 | LEU |
| 43 | 1l | 36 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 43 | 1l | 37 | CYS |
| 43 | 1l | 40 | VAL |
| 43 | 1l | 52 | LEU |
| 43 | 1l | 83 | VAL |
| 43 | 1l | 89 | ARG |
| 43 | 1l | 117 | ARG |
| 44 | 1m | 4 | ILE |
| 44 | 1m | 14 | ARG |
| 44 | 1m | 16 | ASP |
| 44 | 1m | 17 | VAL |
| 44 | 1m | 19 | LEU |
| 44 | 1m | 47 | ASP |
| 44 | 1m | 70 | LEU |
| 44 | 1m | 102 | ARG |
| 44 | 1m | 105 | THR |
| 44 | 1m | 110 | ARG |
| 44 | 1m | 122 | LYS |
| 45 | 1n | 3 | ARG |
| 45 | 1n | 6 | LEU |
| 45 | 1n | 13 | THR |
| 45 | 1n | 18 | VAL |
| 45 | 1n | 22 | THR |
| 45 | 1n | 23 | ARG |
| 45 | 1n | 29 | ARG |
| 45 | 1n | 32 | SER |
| 45 | 1n | 33 | VAL |
| 45 | 1n | 45 | ARG |
| 46 | 1o | 6 | GLU |
| 46 | 1o | 7 | GLU |
| 46 | 1o | 21 | ASP |
| 46 | 1o | 39 | LEU |
| 46 | 1o | 63 | ARG |
| 46 | 1o | 87 | ILE |
| 47 | 1p | 1 | MET |
| 47 | 1p | 2 | VAL |
| 47 | 1p | 20 | VAL |
| 47 | 1p | 33 | ILE |
| 47 | 1p | 45 | THR |
| 47 | 1p | 57 | ARG |
| 47 | 1p | 61 | SER |
| 48 | 1q | 4 | LYS |
| 48 | 1q | 9 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 48 | 1q | 35 | VAL |
| 48 | 1q | 66 | SER |
| 48 | 1q | 68 | ARG |
| 48 | 1q | 79 | SER |
| 48 | 1q | 97 | SER |
| 49 | 1r | 26 | LEU |
| 49 | 1r | 31 | LEU |
| 49 | 1r | 47 | THR |
| 49 | 1r | 56 | THR |
| 49 | 1r | 76 | LEU |
| 49 | 1r | 85 | LEU |
| 50 | 1s | 4 | SER |
| 50 | 1s | 32 | LYS |
| 50 | 1s | 35 | SER |
| 50 | 1s | 41 | VAL |
| 50 | 1s | 48 | THR |
| 50 | 1s | 77 | THR |
| 50 | 1s | 79 | THR |
| 51 | 1t | 13 | LEU |
| 51 | 1t | 42 | GLN |
| 3 | 2D | 10 | THR |
| 3 | 2D | 54 | ARG |
| 3 | 2D | 71 | ASP |
| 3 | 2D | 83 | GLU |
| 3 | 2D | 88 | ARG |
| 3 | 2D | 89 | SER |
| 3 | 2D | 94 | LEU |
| 3 | 2D | 105 | ILE |
| 3 | 2D | 106 | ILE |
| 3 | 2D | 134 | ARG |
| 3 | 2D | 142 | VAL |
| 3 | 2D | 157 | ARG |
| 3 | 2D | 169 | GLU |
| 3 | 2D | 183 | ARG |
| 3 | 2D | 204 | ILE |
| 3 | 2D | 211 | ARG |
| 3 | 2D | 229 | VAL |
| 3 | 2D | 237 | GLU |
| 3 | 2D | 242 | ARG |
| 3 | 2D | 276 | LYS |
| 4 | 2E | 7 | VAL |
| 4 | 2E | 12 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 4 | 2E | 21 | VAL |
| 4 | 2E | 34 | VAL |
| 4 | 2E | 38 | THR |
| 4 | 2E | 45 | THR |
| 4 | 2E | 52 | LEU |
| 4 | 2E | 75 | VAL |
| 4 | 2E | 82 | ARG |
| 4 | 2E | 101 | ARG |
| 4 | 2E | 116 | VAL |
| 4 | 2E | 119 | ARG |
| 4 | 2E | 160 | TYR |
| 4 | 2E | 181 | LEU |
| 5 | 2F | 15 | SER |
| 5 | 2F | 18 | ARG |
| 5 | 2F | 33 | LEU |
| 5 | 2F | 53 | THR |
| 5 | 2F | 88 | VAL |
| 5 | 2F | 95 | ARG |
| 5 | 2F | 106 | ARG |
| 5 | 2F | 183 | VAL |
| 5 | 2F | 192 | LEU |
| 5 | 2F | 201 | VAL |
| 6 | 2G | 3 | LEU |
| 6 | 2G | 5 | VAL |
| 6 | 2G | 26 | GLN |
| 6 | 2G | 27 | ASN |
| 6 | 2G | 28 | VAL |
| 6 | 2G | 31 | VAL |
| 6 | 2G | 35 | GLU |
| 6 | 2G | 43 | LEU |
| 6 | 2G | 45 | GLU |
| 6 | 2G | 51 | ARG |
| 6 | 2G | 53 | LEU |
| 6 | 2G | 60 | LEU |
| 6 | 2G | 70 | VAL |
| 6 | 2G | 79 | ASN |
| 6 | 2G | 91 | ARG |
| 6 | 2G | 113 | ARG |
| 6 | 2G | 135 | LEU |
| 6 | 2G | 140 | ILE |
| 6 | 2G | 155 | MET |
| 6 | 2G | 159 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 7 | 2H | 3 | ARG |
| 7 | 2H | 84 | SER |
| 7 | 2H | 171 | LEU |
| 8 | 2I | 38 | LEU |
| 8 | 2I | 43 | ASN |
| 8 | 2I | 47 | LEU |
| 8 | 2I | 52 | ARG |
| 8 | 2I | 58 | LEU |
| 8 | 2I | 87 | LYS |
| 8 | 2I | 101 | LEU |
| 8 | 2I | 123 | LEU |
| 8 | 2I | 127 | VAL |
| 8 | 2I | 144 | VAL |
| 9 | 2N | 14 | VAL |
| 9 | 2N | 28 | THR |
| 9 | 2N | 34 | LEU |
| 9 | 2N | 38 | HIS |
| 9 | 2N | 43 | THR |
| 9 | 2N | 46 | VAL |
| 9 | 2N | 58 | ASP |
| 9 | 2N | 60 | ILE |
| 9 | 2N | 62 | VAL |
| 9 | 2N | 67 | LEU |
| 9 | 2N | 87 | LEU |
| 9 | 2N | 99 | LEU |
| 9 | 2N | 140 | VAL |
| 10 | 2O | 3 | GLN |
| 10 | 2O | 8 | LEU |
| 10 | 2O | 47 | ILE |
| 10 | 2O | 52 | VAL |
| 10 | 2O | 63 | VAL |
| 10 | 2O | 69 | ILE |
| 10 | 2O | 75 | SER |
| 10 | 2O | 78 | ARG |
| 10 | 2O | 98 | VAL |
| 11 | 2P | 7 | ARG |
| 11 | 2P | 30 | THR |
| 11 | 2P | 42 | SER |
| 11 | 2P | 56 | SER |
| 11 | 2P | 57 | THR |
| 11 | 2P | 75 | ILE |
| 11 | 2P | 95 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 11 | 2P | 100 | LEU |
| 11 | 2P | 112 | LEU |
| 11 | 2P | 133 | SER |
| 11 | 2P | 135 | LEU |
| 12 | 2Q | 1 | MET |
| 12 | 2Q | 11 | LYS |
| 12 | 2Q | 16 | ARG |
| 12 | 2Q | 21 | THR |
| 12 | 2Q | 22 | LYS |
| 12 | 2Q | 35 | VAL |
| 12 | 2Q | 109 | VAL |
| 12 | 2Q | 110 | THR |
| 12 | 2Q | 127 | ILE |
| 12 | 2Q | 132 | VAL |
| 12 | 2Q | 133 | ARG |
| 12 | 2Q | 139 | GLU |
| 13 | 2R | 18 | LEU |
| 13 | 2R | 27 | SER |
| 13 | 2R | 29 | LEU |
| 13 | 2R | 44 | LEU |
| 13 | 2R | 54 | LEU |
| 13 | 2R | 60 | LEU |
| 13 | 2R | 65 | LEU |
| 13 | 2R | 100 | LEU |
| 13 | 2R | 111 | LEU |
| 13 | 2R | 113 | LEU |
| 13 | 2R | 118 | GLU |
| 14 | 2S | 15 | ARG |
| 14 | 2S | 21 | THR |
| 14 | 2S | 52 | SER |
| 14 | 2S | 58 | LEU |
| 14 | 2S | 78 | LEU |
| 14 | 2S | 110 | LEU |
| 15 | 2T | 6 | LEU |
| 15 | 2T | 13 | ARG |
| 15 | 2T | 51 | ARG |
| 15 | 2T | 74 | ARG |
| 15 | 2T | 90 | GLN |
| 15 | 2T | 96 | ARG |
| 15 | 2T | 108 | ARG |
| 16 | 2U | 30 | LYS |
| 16 | 2U | 55 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 16 | 2U | 74 | LEU |
| 16 | 2U | 95 | LEU |
| 17 | 2V | 7 | THR |
| 17 | 2V | 33 | VAL |
| 17 | 2V | 43 | GLU |
| 17 | 2V | 46 | VAL |
| 17 | 2V | 51 | VAL |
| 17 | 2V | 62 | LEU |
| 17 | 2V | 72 | VAL |
| 17 | 2V | 79 | VAL |
| 17 | 2V | 82 | ARG |
| 17 | 2V | 95 | LEU |
| 18 | 2W | 1 | MET |
| 18 | 2W | 17 | VAL |
| 18 | 2W | 23 | LEU |
| 18 | 2W | 67 | ASP |
| 18 | 2W | 107 | LEU |
| 19 | 2X | 1 | MET |
| 19 | 2X | 35 | THR |
| 19 | 2X | 76 | ARG |
| 19 | 2X | 81 | VAL |
| 19 | 2X | 83 | VAL |
| 20 | 2Y | 3 | VAL |
| 20 | 2Y | 49 | VAL |
| 20 | 2Y | 72 | VAL |
| 20 | 2Y | 99 | CYS |
| 21 | 2Z | 5 | LEU |
| 21 | 2Z | 19 | ARG |
| 21 | 2Z | 24 | LEU |
| 21 | 2Z | 38 | TYR |
| 21 | 2Z | 41 | LEU |
| 21 | 2Z | 72 | ARG |
| 21 | 2Z | 77 | ASP |
| 21 | 2Z | 91 | LEU |
| 21 | 2Z | 96 | VAL |
| 21 | 2Z | 98 | MET |
| 21 | 2Z | 128 | VAL |
| 21 | 2Z | 135 | GLU |
| 21 | 2Z | 144 | LEU |
| 21 | 2Z | 154 | ASP |
| 21 | 2Z | 161 | VAL |
| 21 | 2Z | 170 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 21 | 2Z | 171 | ILE |
| 22 | 20 | 62 | LEU |
| 22 | 20 | 74 | ARG |
| 23 | 21 | 4 | VAL |
| 23 | 21 | 13 | ILE |
| 23 | 21 | 38 | SER |
| 23 | 21 | 51 | VAL |
| 23 | 21 | 76 | ARG |
| 23 | 21 | 89 | GLU |
| 23 | 21 | 95 | LEU |
| 24 | 22 | 4 | SER |
| 24 | 22 | 53 | LEU |
| 24 | 22 | 70 | GLN |
| 25 | 23 | 23 | LEU |
| 25 | 23 | 30 | ARG |
| 25 | 23 | 31 | LEU |
| 25 | 23 | 37 | LEU |
| 25 | 23 | 40 | THR |
| 26 | 24 | 10 | VAL |
| 26 | 24 | 27 | THR |
| 26 | 24 | 34 | GLU |
| 26 | 24 | 49 | PHE |
| 26 | 24 | 50 | VAL |
| 26 | 24 | 59 | PHE |
| 26 | 24 | 63 | TYR |
| 27 | 25 | 6 | VAL |
| 27 | 25 | 16 | ARG |
| 27 | 25 | 29 | THR |
| 27 | 25 | 46 | CYS |
| 27 | 25 | 58 | LEU |
| 28 | 26 | 6 | ARG |
| 28 | 26 | 9 | LEU |
| 28 | 26 | 13 | CYS |
| 28 | 26 | 32 | ASN |
| 28 | 26 | 40 | CYS |
| 28 | 26 | 44 | ARG |
| 28 | 26 | 48 | VAL |
| 29 | 27 | 10 | ARG |
| 29 | 27 | 39 | ARG |
| 29 | 27 | 41 | ARG |
| 30 | 28 | 15 | LYS |
| 30 | 28 | 31 | HIS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 30 | 28 | 32 | LEU |
| 30 | 28 | 34 | TRP |
| 31 | 29 | 6 | SER |
| 33 | 2b | 11 | LEU |
| 33 | 2b | 23 | ARG |
| 33 | 2b | 24 | TRP |
| 33 | 2b | 48 | MET |
| 33 | 2b | 49 | GLU |
| 33 | 2b | 60 | ASP |
| 33 | 2b | 67 | THR |
| 33 | 2b | 87 | ARG |
| 33 | 2b | 94 | ASN |
| 33 | 2b | 117 | GLU |
| 33 | 2b | 126 | GLU |
| 33 | 2b | 127 | ILE |
| 33 | 2b | 135 | GLN |
| 33 | 2b | 140 | HIS |
| 33 | 2b | 144 | ARG |
| 33 | 2b | 168 | THR |
| 33 | 2b | 178 | ARG |
| 33 | 2b | 192 | SER |
| 33 | 2b | 195 | ASP |
| 33 | 2b | 221 | LEU |
| 34 | 2c | 32 | LEU |
| 34 | 2c | 39 | ILE |
| 34 | 2c | 47 | LEU |
| 34 | 2c | 49 | SER |
| 34 | 2c | 70 | VAL |
| 34 | 2c | 89 | GLU |
| 34 | 2c | 164 | ARG |
| 34 | 2c | 166 | GLU |
| 34 | 2c | 190 | ARG |
| 35 | 2d | 31 | CYS |
| 35 | 2d | 45 | GLN |
| 35 | 2d | 76 | ARG |
| 35 | 2d | 83 | SER |
| 35 | 2d | 86 | LYS |
| 35 | 2d | 107 | ARG |
| 35 | 2d | 135 | LEU |
| 35 | 2d | 150 | GLU |
| 35 | 2d | 155 | LEU |
| 35 | 2d | 170 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 35 | 2d | 175 | SER |
| 35 | 2d | 208 | SER |
| 36 | 2e | 13 | ILE |
| 36 | 2e | 41 | VAL |
| 36 | 2e | 75 | THR |
| 36 | 2e | 90 | VAL |
| 36 | 2e | 91 | LEU |
| 36 | 2e | 120 | THR |
| 37 | 2f | 21 | LEU |
| 37 | 2f | 45 | LEU |
| 37 | 2f | 61 | LEU |
| 38 | 2g | 9 | VAL |
| 38 | 2g | 52 | GLU |
| 38 | 2g | 79 | ARG |
| 38 | 2g | 90 | GLU |
| 38 | 2g | 98 | SER |
| 38 | 2g | 113 | GLU |
| 38 | 2g | 115 | ARG |
| 39 | 2h | 2 | LEU |
| 39 | 2h | 23 | SER |
| 39 | 2h | 51 | VAL |
| 39 | 2h | 91 | ARG |
| 39 | 2h | 137 | VAL |
| 40 | 2i | 27 | THR |
| 40 | 2i | 34 | ASN |
| 40 | 2i | 50 | LEU |
| 40 | 2i | 53 | VAL |
| 40 | 2i | 65 | VAL |
| 40 | 2i | 89 | ASN |
| 40 | 2i | 93 | ARG |
| 40 | 2i | 102 | LEU |
| 40 | 2i | 107 | ARG |
| 40 | 2i | 108 | VAL |
| 40 | 2i | 125 | TYR |
| 41 | 2j | 8 | LEU |
| 41 | 2j | 49 | VAL |
| 41 | 2j | 74 | ILE |
| 41 | 2j | 100 | THR |
| 42 | 2k | 14 | VAL |
| 42 | 2k | 24 | SER |
| 42 | 2k | 30 | VAL |
| 42 | 2k | 66 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 43 | 2l | 24 | VAL |
| 43 | 2l | 27 | LEU |
| 43 | 2l | 33 | ARG |
| 43 | 2l | 52 | LEU |
| 43 | 2l | 83 | VAL |
| 43 | 2l | 113 | ARG |
| 43 | 2l | 123 | LYS |
| 44 | 2m | 15 | VAL |
| 44 | 2m | 19 | LEU |
| 44 | 2m | 27 | LYS |
| 44 | 2m | 47 | ASP |
| 44 | 2m | 64 | TRP |
| 44 | 2m | 65 | LYS |
| 44 | 2m | 77 | ASN |
| 44 | 2m | 93 | ARG |
| 44 | 2m | 102 | ARG |
| 44 | 2m | 103 | THR |
| 44 | 2m | 106 | ASN |
| 45 | 2n | 22 | THR |
| 45 | 2n | 32 | SER |
| 45 | 2n | 33 | VAL |
| 45 | 2n | 56 | VAL |
| 46 | 2o | 39 | LEU |
| 46 | 2o | 54 | ARG |
| 46 | 2o | 66 | LEU |
| 46 | 2o | 83 | GLU |
| 47 | 2p | 1 | MET |
| 47 | 2p | 6 | LEU |
| 47 | 2p | 21 | VAL |
| 47 | 2p | 42 | ARG |
| 47 | 2p | 54 | GLU |
| 47 | 2p | 60 | LEU |
| 47 | 2p | 67 | THR |
| 47 | 2p | 69 | THR |
| 48 | 2q | 6 | LEU |
| 48 | 2q | 35 | VAL |
| 48 | 2q | 36 | ILE |
| 48 | 2q | 76 | LEU |
| 48 | 2q | 83 | ASP |
| 49 | 2r | 26 | LEU |
| 49 | 2r | 37 | VAL |
| 49 | 2r | 47 | THR |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 49 | 2r | 54 | ARG |
| 49 | 2r | 59 | SER |
| 49 | 2r | 85 | LEU |
| 50 | 2s | 12 | ASP |
| 50 | 2s | 16 | LEU |
| 50 | 2s | 30 | LEU |
| 50 | 2s | 33 | THR |
| 50 | 2s | 41 | VAL |
| 50 | 2s | 48 | THR |
| 50 | 2s | 49 | ILE |
| 50 | 2s | 65 | ASN |
| 50 | 2s | 77 | THR |
| 51 | 2t | 15 | ARG |
| 51 | 2t | 24 | LEU |
| 51 | 2t | 41 | ILE |
| 51 | 2t | 72 | LEU |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (119) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 3 | 1D | 87 | ASN |
| 3 | 1D | 116 | GLN |
| 3 | 1D | 126 | GLN |
| 3 | 1D | 201 | HIS |
| 4 | 1E | 48 | GLN |
| 4 | 1E | 85 | ASN |
| 5 | 1F | 8 | GLN |
| 5 | 1F | 69 | HIS |
| 5 | 1F | 203 | GLN |
| 6 | 1G | 26 | GLN |
| 7 | 1H | 139 | GLN |
| 7 | 1H | 147 | ASN |
| 8 | 1I | 105 | HIS |
| 8 | 1I | 139 | GLN |
| 10 | 1O | 5 | GLN |
| 11 | 1P | 27 | HIS |
| 12 | 1Q | 57 | HIS |
| 13 | 1R | 24 | GLN |
| 14 | 1S | 95 | HIS |
| 15 | 1T | 58 | ASN |
| 16 | 1U | 94 | ASN |
| 17 | 1V | 80 | GLN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 19 | 1X | 31 | HIS |
| 19 | 1X | 82 | GLN |
| 21 | 1Z | 32 | HIS |
| 21 | 1Z | 73 | GLN |
| 21 | 1Z | 132 | ASN |
| 21 | 1Z | 151 | HIS |
| 23 | 11 | 56 | GLN |
| 25 | 13 | 32 | GLN |
| 27 | 15 | 23 | HIS |
| 30 | 18 | 35 | GLN |
| 31 | 19 | 20 | HIS |
| 31 | 19 | 32 | HIS |
| 33 | 1b | 40 | HIS |
| 33 | 1b | 78 | GLN |
| 33 | 1b | 94 | ASN |
| 34 | 1c | 6 | HIS |
| 34 | 1c | 118 | GLN |
| 34 | 1c | 162 | GLN |
| 35 | 1d | 42 | GLN |
| 35 | 1d | 43 | HIS |
| 35 | 1d | 116 | GLN |
| 35 | 1d | 119 | GLN |
| 35 | 1d | 123 | HIS |
| 36 | 1e | 78 | HIS |
| 37 | 1f | 100 | ASN |
| 38 | 1g | 13 | GLN |
| 38 | 1g | 28 | ASN |
| 38 | 1g | 51 | GLN |
| 40 | 1i | 3 | GLN |
| 40 | 1i | 23 | ASN |
| 40 | 1i | 31 | GLN |
| 40 | 1i | 73 | GLN |
| 40 | 1i | 89 | ASN |
| 40 | 1i | 117 | HIS |
| 40 | 1i | 124 | GLN |
| 41 | 1j | 56 | HIS |
| 43 | 1l | 99 | HIS |
| 44 | 1m | 12 | ASN |
| 47 | 1p | 13 | HIS |
| 47 | 1p | 16 | HIS |
| 48 | 1q | 26 | GLN |
| 50 | 1s | 69 | HIS |

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Continued from previous page...

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 50 | 1s | 83 | HIS |
| 4 | 2E | 35 | GLN |
| 4 | 2E | 48 | GLN |
| 5 | 2F | 69 | HIS |
| 5 | 2F | 75 | HIS |
| 6 | 2G | 132 | ASN |
| 7 | 2H | 139 | GLN |
| 10 | 2O | 5 | GLN |
| 12 | 2Q | 12 | GLN |
| 12 | 2Q | 89 | ASN |
| 14 | 2S | 38 | GLN |
| 15 | 2T | 43 | GLN |
| 15 | 2T | 84 | GLN |
| 15 | 2T | 123 | GLN |
| 16 | 2U | 81 | HIS |
| 16 | 2U | 94 | ASN |
| 17 | 2V | 80 | GLN |
| 19 | 2X | 31 | HIS |
| 20 | 2Y | 6 | HIS |
| 21 | 2Z | 32 | HIS |
| 21 | 2Z | 55 | HIS |
| 21 | 2Z | 73 | GLN |
| 23 | 2l | 56 | GLN |
| 24 | 2m | 70 | GLN |
| 33 | 2b | 40 | HIS |
| 33 | 2b | 212 | GLN |
| 34 | 2c | 6 | HIS |
| 34 | 2c | 37 | GLN |
| 34 | 2c | 139 | GLN |
| 34 | 2c | 162 | GLN |
| 35 | 2d | 77 | ASN |
| 35 | 2d | 116 | GLN |
| 35 | 2d | 119 | GLN |
| 35 | 2d | 123 | HIS |
| 35 | 2d | 125 | HIS |
| 35 | 2d | 161 | ASN |
| 36 | 2e | 73 | ASN |
| 36 | 2e | 78 | HIS |
| 37 | 2f | 64 | GLN |
| 37 | 2f | 73 | ASN |
| 38 | 2g | 37 | ASN |
| 38 | 2g | 86 | GLN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 38 | 2g | 122 | HIS |
| 40 | 2i | 89 | ASN |
| 40 | 2i | 124 | GLN |
| 41 | 2j | 13 | HIS |
| 41 | 2j | 68 | HIS |
| 42 | 2k | 22 | HIS |
| 43 | 2l | 78 | GLN |
| 44 | 2m | 77 | ASN |
| 46 | 2o | 28 | GLN |
| 49 | 2r | 63 | GLN |
| 50 | 2s | 47 | HIS |
| 51 | 2t | 16 | HIS |
| 51 | 2t | 75 | ASN |

5.3.3 RNA [i](#)

| Mol | Chain | Analysed | Backbone Outliers | Pucker Outliers |
|-----|-------|-----------------|-------------------|-----------------|
| 1 | 1A | 2860/2915 (98%) | 462 (16%) | 36 (1%) |
| 1 | 2A | 2788/2915 (95%) | 518 (18%) | 26 (0%) |
| 2 | 1B | 120/121 (99%) | 14 (11%) | 1 (0%) |
| 2 | 2B | 118/121 (97%) | 28 (23%) | 0 |
| 32 | 1a | 1494/1521 (98%) | 255 (17%) | 0 |
| 32 | 2a | 1498/1521 (98%) | 279 (18%) | 0 |
| 53 | 1v | 12/24 (50%) | 2 (16%) | 0 |
| 53 | 2v | 12/24 (50%) | 2 (16%) | 0 |
| 54 | 1w | 71/76 (93%) | 21 (29%) | 0 |
| 54 | 1y | 71/76 (93%) | 24 (33%) | 0 |
| 54 | 2w | 68/76 (89%) | 23 (33%) | 0 |
| 54 | 2y | 69/76 (90%) | 23 (33%) | 0 |
| 55 | 1x | 75/77 (97%) | 12 (16%) | 0 |
| 55 | 2x | 75/77 (97%) | 14 (18%) | 0 |
| All | All | 9331/9620 (96%) | 1677 (17%) | 63 (0%) |

All (1677) RNA backbone outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | 1A | 12 | U |
| 1 | 1A | 15 | G |
| 1 | 1A | 34 | C |
| 1 | 1A | 45 | C |
| 1 | 1A | 48 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 1A | 54 | G |
| 1 | 1A | 57 | G |
| 1 | 1A | 60 | G |
| 1 | 1A | 70 | A |
| 1 | 1A | 71 | U |
| 1 | 1A | 73 | A |
| 1 | 1A | 74 | G |
| 1 | 1A | 83 | A |
| 1 | 1A | 94 | G |
| 1 | 1A | 110 | U |
| 1 | 1A | 116 | A |
| 1 | 1A | 117 | A |
| 1 | 1A | 118 | U |
| 1 | 1A | 123 | G |
| 1 | 1A | 137 | G |
| 1 | 1A | 177 | G |
| 1 | 1A | 185 | A |
| 1 | 1A | 188 | A |
| 1 | 1A | 189 | U |
| 1 | 1A | 194 | G |
| 1 | 1A | 203 | G |
| 1 | 1A | 204 | G |
| 1 | 1A | 205 | A |
| 1 | 1A | 211 | A |
| 1 | 1A | 214 | A |
| 1 | 1A | 217 | A |
| 1 | 1A | 218 | A |
| 1 | 1A | 222 | A |
| 1 | 1A | 237 | G |
| 1 | 1A | 238 | C |
| 1 | 1A | 250 | G |
| 1 | 1A | 258 | U |
| 1 | 1A | 272 | U |
| 1 | 1A | 273 | G |
| 1 | 1A | 274 | U |
| 1 | 1A | 278 | G |
| 1 | 1A | 289 | G |
| 1 | 1A | 296 | U |
| 1 | 1A | 303 | C |
| 1 | 1A | 309 | C |
| 1 | 1A | 335 | A |
| 1 | 1A | 353 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 1A | 354 | A |
| 1 | 1A | 376 | G |
| 1 | 1A | 387 | G |
| 1 | 1A | 388 | A |
| 1 | 1A | 389 | G |
| 1 | 1A | 397 | G |
| 1 | 1A | 407 | U |
| 1 | 1A | 413 | G |
| 1 | 1A | 423 | G |
| 1 | 1A | 432 | U |
| 1 | 1A | 438 | G |
| 1 | 1A | 455 | A |
| 1 | 1A | 470 | C |
| 1 | 1A | 474 | U |
| 1 | 1A | 480 | A |
| 1 | 1A | 482 | C |
| 1 | 1A | 483 | A |
| 1 | 1A | 493 | G |
| 1 | 1A | 507 | G |
| 1 | 1A | 529 | U |
| 1 | 1A | 530 | A |
| 1 | 1A | 534 | C |
| 1 | 1A | 555 | G |
| 1 | 1A | 556 | C |
| 1 | 1A | 557 | A |
| 1 | 1A | 558 | G |
| 1 | 1A | 569 | G |
| 1 | 1A | 573 | G |
| 1 | 1A | 586 | G |
| 1 | 1A | 590 | A |
| 1 | 1A | 591 | U |
| 1 | 1A | 596 | G |
| 1 | 1A | 598 | A |
| 1 | 1A | 609 | A |
| 1 | 1A | 616 | G |
| 1 | 1A | 626 | A |
| 1 | 1A | 627 | G |
| 1 | 1A | 630 | U |
| 1 | 1A | 637 | U |
| 1 | 1A | 638 | U |
| 1 | 1A | 639 | G |
| 1 | 1A | 641 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 1A | 652 | A |
| 1 | 1A | 662 | A |
| 1 | 1A | 671 | A |
| 1 | 1A | 693 | G |
| 1 | 1A | 697 | C |
| 1 | 1A | 716 | G |
| 1 | 1A | 733 | G |
| 1 | 1A | 777 | C |
| 1 | 1A | 811 | A |
| 1 | 1A | 822 | G |
| 1 | 1A | 823 | G |
| 1 | 1A | 826 | U |
| 1 | 1A | 829 | A |
| 1 | 1A | 831 | A |
| 1 | 1A | 832 | G |
| 1 | 1A | 836 | A |
| 1 | 1A | 837 | C |
| 1 | 1A | 839 | G |
| 1 | 1A | 852 | G |
| 1 | 1A | 857 | U |
| 1 | 1A | 859 | C |
| 1 | 1A | 866 | A |
| 1 | 1A | 874 | U |
| 1 | 1A | 875 | U |
| 1 | 1A | 902 | G |
| 1 | 1A | 906 | G |
| 1 | 1A | 921 | G |
| 1 | 1A | 926 | G |
| 1 | 1A | 927 | G |
| 1 | 1A | 931 | C |
| 1 | 1A | 932 | C |
| 1 | 1A | 933 | C |
| 1 | 1A | 934 | A |
| 1 | 1A | 935 | C |
| 1 | 1A | 936 | C |
| 1 | 1A | 937 | A |
| 1 | 1A | 942 | A |
| 1 | 1A | 943 | C |
| 1 | 1A | 944 | C |
| 1 | 1A | 946 | A |
| 1 | 1A | 953 | U |
| 1 | 1A | 956 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 1A | 972 | A |
| 1 | 1A | 977 | G |
| 1 | 1A | 983 | G |
| 1 | 1A | 990 | A |
| 1 | 1A | 991 | G |
| 1 | 1A | 998 | A |
| 1 | 1A | 1003 | U |
| 1 | 1A | 1004 | A |
| 1 | 1A | 1006 | C |
| 1 | 1A | 1013 | G |
| 1 | 1A | 1019 | G |
| 1 | 1A | 1020 | C |
| 1 | 1A | 1029 | A |
| 1 | 1A | 1042 | A |
| 1 | 1A | 1051 | C |
| 1 | 1A | 1058 | U |
| 1 | 1A | 1059 | C |
| 1 | 1A | 1068 | G |
| 1 | 1A | 1071 | G |
| 1 | 1A | 1072 | U |
| 1 | 1A | 1073 | A |
| 1 | 1A | 1076 | G |
| 1 | 1A | 1079 | U |
| 1 | 1A | 1084 | C |
| 1 | 1A | 1090 | G |
| 1 | 1A | 1091 | A |
| 1 | 1A | 1092 | A |
| 1 | 1A | 1093 | G |
| 1 | 1A | 1094 | A |
| 1 | 1A | 1100 | A |
| 1 | 1A | 1101 | G |
| 1 | 1A | 1104 | G |
| 1 | 1A | 1112 | U |
| 1 | 1A | 1114 | G |
| 1 | 1A | 1116 | A |
| 1 | 1A | 1117 | G |
| 1 | 1A | 1119 | A |
| 1 | 1A | 1120 | G |
| 1 | 1A | 1121 | C |
| 1 | 1A | 1122 | C |
| 1 | 1A | 1124 | U |
| 1 | 1A | 1125 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 1A | 1127 | U |
| 1 | 1A | 1129 | U |
| 1 | 1A | 1132 | A |
| 1 | 1A | 1134 | A |
| 1 | 1A | 1135 | G |
| 1 | 1A | 1136 | U |
| 1 | 1A | 1140 | U |
| 1 | 1A | 1142 | A |
| 1 | 1A | 1147 | U |
| 1 | 1A | 1149 | A |
| 1 | 1A | 1153 | G |
| 1 | 1A | 1154 | U |
| 1 | 1A | 1155 | C |
| 1 | 1A | 1157 | A |
| 1 | 1A | 1158 | G |
| 1 | 1A | 1162 | C |
| 1 | 1A | 1174 | A |
| 1 | 1A | 1176 | U |
| 1 | 1A | 1178 | A |
| 1 | 1A | 1180 | C |
| 1 | 1A | 1181 | G |
| 1 | 1A | 1217 | G |
| 1 | 1A | 1218 | G |
| 1 | 1A | 1219 | A |
| 1 | 1A | 1220 | U |
| 1 | 1A | 1221 | G |
| 1 | 1A | 1222 | A |
| 1 | 1A | 1223 | C |
| 1 | 1A | 1239 | A |
| 1 | 1A | 1256 | U |
| 1 | 1A | 1263 | C |
| 1 | 1A | 1274 | G |
| 1 | 1A | 1275 | G |
| 1 | 1A | 1282 | G |
| 1 | 1A | 1290 | G |
| 1 | 1A | 1296 | G |
| 1 | 1A | 1299 | A |
| 1 | 1A | 1302 | G |
| 1 | 1A | 1317 | G |
| 1 | 1A | 1318 | A |
| 1 | 1A | 1319 | U |
| 1 | 1A | 1346 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 1A | 1347 | A |
| 1 | 1A | 1349 | G |
| 1 | 1A | 1384 | G |
| 1 | 1A | 1398 | U |
| 1 | 1A | 1405 | A |
| 1 | 1A | 1406 | A |
| 1 | 1A | 1411 | A |
| 1 | 1A | 1426 | G |
| 1 | 1A | 1430 | A |
| 1 | 1A | 1431 | G |
| 1 | 1A | 1432 | C |
| 1 | 1A | 1441 | A |
| 1 | 1A | 1442 | U |
| 1 | 1A | 1462 | G |
| 1 | 1A | 1463 | C |
| 1 | 1A | 1466 | U |
| 1 | 1A | 1467 | G |
| 1 | 1A | 1468 | G |
| 1 | 1A | 1474 | C |
| 1 | 1A | 1497 | G |
| 1 | 1A | 1502 | G |
| 1 | 1A | 1514 | C |
| 1 | 1A | 1525 | G |
| 1 | 1A | 1529 | G |
| 1 | 1A | 1539 | C |
| 1 | 1A | 1540 | A |
| 1 | 1A | 1546 | G |
| 1 | 1A | 1554 | A |
| 1 | 1A | 1555 | C |
| 1 | 1A | 1556 | A |
| 1 | 1A | 1586 | G |
| 1 | 1A | 1588 | G |
| 1 | 1A | 1590 | C |
| 1 | 1A | 1605 | A |
| 1 | 1A | 1606 | G |
| 1 | 1A | 1613 | A |
| 1 | 1A | 1616 | A |
| 1 | 1A | 1625 | U |
| 1 | 1A | 1627 | A |
| 1 | 1A | 1628 | G |
| 1 | 1A | 1631 | C |
| 1 | 1A | 1632 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 1A | 1654 | A |
| 1 | 1A | 1655 | A |
| 1 | 1A | 1694 | G |
| 1 | 1A | 1695 | C |
| 1 | 1A | 1706 | U |
| 1 | 1A | 1711 | A |
| 1 | 1A | 1716 | A |
| 1 | 1A | 1721 | G |
| 1 | 1A | 1742 | G |
| 1 | 1A | 1743 | G |
| 1 | 1A | 1747 | A |
| 1 | 1A | 1748 | A |
| 1 | 1A | 1767 | A |
| 1 | 1A | 1787 | G |
| 1 | 1A | 1793 | A |
| 1 | 1A | 1794 | G |
| 1 | 1A | 1795 | G |
| 1 | 1A | 1804 | A |
| 1 | 1A | 1811 | A |
| 1 | 1A | 1822 | A |
| 1 | 1A | 1831 | C |
| 1 | 1A | 1832 | G |
| 1 | 1A | 1847 | G |
| 1 | 1A | 1870 | G |
| 1 | 1A | 1878 | A |
| 1 | 1A | 1889 | G |
| 1 | 1A | 1892 | G |
| 1 | 1A | 1899 | A |
| 1 | 1A | 1922 | A |
| 1 | 1A | 1924 | C |
| 1 | 1A | 1928 | G |
| 1 | 1A | 1951 | G |
| 1 | 1A | 1952 | G |
| 1 | 1A | 1959 | A |
| 1 | 1A | 1960 | A |
| 1 | 1A | 1963 | C |
| 1 | 1A | 1977 | U |
| 1 | 1A | 1985 | U |
| 1 | 1A | 1986 | G |
| 1 | 1A | 1989 | C |
| 1 | 1A | 1992 | A |
| 1 | 1A | 1993 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 1A | 1994 | A |
| 1 | 1A | 2005 | C |
| 1 | 1A | 2006 | G |
| 1 | 1A | 2014 | G |
| 1 | 1A | 2015 | U |
| 1 | 1A | 2019 | G |
| 1 | 1A | 2042 | A |
| 1 | 1A | 2045 | G |
| 1 | 1A | 2053 | A |
| 1 | 1A | 2055 | A |
| 1 | 1A | 2065 | C |
| 1 | 1A | 2074 | G |
| 1 | 1A | 2077 | C |
| 1 | 1A | 2078 | G |
| 1 | 1A | 2082 | A |
| 1 | 1A | 2083 | G |
| 1 | 1A | 2084 | A |
| 1 | 1A | 2091 | G |
| 1 | 1A | 2120 | U |
| 1 | 1A | 2123 | G |
| 1 | 1A | 2127 | C |
| 1 | 1A | 2129 | C |
| 1 | 1A | 2130 | C |
| 1 | 1A | 2132 | G |
| 1 | 1A | 2135 | U |
| 1 | 1A | 2138 | G |
| 1 | 1A | 2142 | G |
| 1 | 1A | 2143 | G |
| 1 | 1A | 2148 | A |
| 1 | 1A | 2149 | G |
| 1 | 1A | 2151 | C |
| 1 | 1A | 2152 | U |
| 1 | 1A | 2153 | G |
| 1 | 1A | 2154 | U |
| 1 | 1A | 2155 | G |
| 1 | 1A | 2156 | A |
| 1 | 1A | 2157 | A |
| 1 | 1A | 2158 | C |
| 1 | 1A | 2162 | C |
| 1 | 1A | 2164 | C |
| 1 | 1A | 2165 | C |
| 1 | 1A | 2166 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 1A | 2168 | C |
| 1 | 1A | 2169 | G |
| 1 | 1A | 2172 | U |
| 1 | 1A | 2173 | G |
| 1 | 1A | 2178 | G |
| 1 | 1A | 2179 | G |
| 1 | 1A | 2180 | A |
| 1 | 1A | 2181 | G |
| 1 | 1A | 2187 | G |
| 1 | 1A | 2188 | G |
| 1 | 1A | 2189 | U |
| 1 | 1A | 2193 | A |
| 1 | 1A | 2194 | U |
| 1 | 1A | 2196 | C |
| 1 | 1A | 2200 | C |
| 1 | 1A | 2203 | G |
| 1 | 1A | 2204 | G |
| 1 | 1A | 2206 | G |
| 1 | 1A | 2210 | C |
| 1 | 1A | 2214 | G |
| 1 | 1A | 2220 | A |
| 1 | 1A | 2227 | G |
| 1 | 1A | 2228 | G |
| 1 | 1A | 2229 | A |
| 1 | 1A | 2230 | U |
| 1 | 1A | 2231 | G |
| 1 | 1A | 2237 | A |
| 1 | 1A | 2250 | G |
| 1 | 1A | 2251 | G |
| 1 | 1A | 2281 | A |
| 1 | 1A | 2290 | A |
| 1 | 1A | 2292 | G |
| 1 | 1A | 2295 | C |
| 1 | 1A | 2299 | A |
| 1 | 1A | 2310 | A |
| 1 | 1A | 2317 | A |
| 1 | 1A | 2320 | G |
| 1 | 1A | 2324 | U |
| 1 | 1A | 2332 | A |
| 1 | 1A | 2337 | G |
| 1 | 1A | 2346 | G |
| 1 | 1A | 2347 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 1A | 2348 | A |
| 1 | 1A | 2359 | C |
| 1 | 1A | 2362 | C |
| 1 | 1A | 2373 | A |
| 1 | 1A | 2391 | G |
| 1 | 1A | 2395 | G |
| 1 | 1A | 2397 | C |
| 1 | 1A | 2403 | G |
| 1 | 1A | 2417 | G |
| 1 | 1A | 2418 | U |
| 1 | 1A | 2422 | G |
| 1 | 1A | 2437 | A |
| 1 | 1A | 2441 | G |
| 1 | 1A | 2442 | A |
| 1 | 1A | 2443 | U |
| 1 | 1A | 2447 | A |
| 1 | 1A | 2450 | U |
| 1 | 1A | 2451 | A |
| 1 | 1A | 2453 | C |
| 1 | 1A | 2460 | A |
| 1 | 1A | 2481 | A |
| 1 | 1A | 2483 | C |
| 1 | 1A | 2488 | A |
| 1 | 1A | 2490 | A |
| 1 | 1A | 2498 | G |
| 1 | 1A | 2509 | A |
| 1 | 1A | 2514 | G |
| 1 | 1A | 2516 | U |
| 1 | 1A | 2517 | G |
| 1 | 1A | 2518 | U |
| 1 | 1A | 2519 | C |
| 1 | 1A | 2530 | A |
| 1 | 1A | 2532 | C |
| 1 | 1A | 2541 | G |
| 1 | 1A | 2566 | U |
| 1 | 1A | 2578 | A |
| 1 | 1A | 2579 | G |
| 1 | 1A | 2585 | C |
| 1 | 1A | 2586 | G |
| 1 | 1A | 2594 | G |
| 1 | 1A | 2614 | A |
| 1 | 1A | 2621 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 1A | 2623 | U |
| 1 | 1A | 2641 | A |
| 1 | 1A | 2642 | G |
| 1 | 1A | 2666 | A |
| 1 | 1A | 2701 | U |
| 1 | 1A | 2702 | C |
| 1 | 1A | 2714 | U |
| 1 | 1A | 2715 | C |
| 1 | 1A | 2725 | A |
| 1 | 1A | 2726 | A |
| 1 | 1A | 2727 | G |
| 1 | 1A | 2739 | U |
| 1 | 1A | 2745 | G |
| 1 | 1A | 2746 | A |
| 1 | 1A | 2757 | G |
| 1 | 1A | 2770 | A |
| 1 | 1A | 2774 | G |
| 1 | 1A | 2777 | A |
| 1 | 1A | 2778 | A |
| 1 | 1A | 2779 | G |
| 1 | 1A | 2782 | C |
| 1 | 1A | 2791 | A |
| 1 | 1A | 2793 | G |
| 1 | 1A | 2803 | A |
| 1 | 1A | 2804 | C |
| 1 | 1A | 2806 | G |
| 1 | 1A | 2813 | G |
| 1 | 1A | 2828 | G |
| 1 | 1A | 2830 | A |
| 1 | 1A | 2831 | A |
| 1 | 1A | 2845 | A |
| 1 | 1A | 2849 | G |
| 1 | 1A | 2882 | G |
| 1 | 1A | 2890 | C |
| 1 | 1A | 2893 | A |
| 1 | 1A | 2901 | A |
| 1 | 1A | 2903 | G |
| 2 | 1B | 2 | C |
| 2 | 1B | 13 | A |
| 2 | 1B | 15 | A |
| 2 | 1B | 21 | G |
| 2 | 1B | 25 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | 1B | 29 | A |
| 2 | 1B | 33 | G |
| 2 | 1B | 42 | C |
| 2 | 1B | 45 | A |
| 2 | 1B | 56 | G |
| 2 | 1B | 73 | A |
| 2 | 1B | 85 | G |
| 2 | 1B | 106 | G |
| 2 | 1B | 110 | G |
| 32 | 1a | 7 | G |
| 32 | 1a | 9 | G |
| 32 | 1a | 32 | A |
| 32 | 1a | 39 | G |
| 32 | 1a | 47 | C |
| 32 | 1a | 48 | C |
| 32 | 1a | 51 | A |
| 32 | 1a | 52 | G |
| 32 | 1a | 54 | C |
| 32 | 1a | 61 | G |
| 32 | 1a | 73 | G |
| 32 | 1a | 79 | G |
| 32 | 1a | 91 | C |
| 32 | 1a | 98 | G |
| 32 | 1a | 101 | A |
| 32 | 1a | 116 | A |
| 32 | 1a | 121 | C |
| 32 | 1a | 131 | C |
| 32 | 1a | 143 | A |
| 32 | 1a | 163 | C |
| 32 | 1a | 174 | C |
| 32 | 1a | 189(G) | G |
| 32 | 1a | 189(L) | G |
| 32 | 1a | 195 | A |
| 32 | 1a | 197 | A |
| 32 | 1a | 201 | C |
| 32 | 1a | 202 | U |
| 32 | 1a | 203 | U |
| 32 | 1a | 204 | U |
| 32 | 1a | 216 | G |
| 32 | 1a | 219 | C |
| 32 | 1a | 223 | U |
| 32 | 1a | 227 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 32 | 1a | 233 | C |
| 32 | 1a | 243 | A |
| 32 | 1a | 247 | G |
| 32 | 1a | 251 | G |
| 32 | 1a | 258 | G |
| 32 | 1a | 266 | G |
| 32 | 1a | 267 | C |
| 32 | 1a | 289 | G |
| 32 | 1a | 301 | G |
| 32 | 1a | 328 | C |
| 32 | 1a | 332 | G |
| 32 | 1a | 342 | C |
| 32 | 1a | 344 | A |
| 32 | 1a | 345 | C |
| 32 | 1a | 348 | G |
| 32 | 1a | 351 | G |
| 32 | 1a | 352 | C |
| 32 | 1a | 353 | A |
| 32 | 1a | 354 | G |
| 32 | 1a | 367 | U |
| 32 | 1a | 372 | C |
| 32 | 1a | 373 | A |
| 32 | 1a | 384 | G |
| 32 | 1a | 397 | A |
| 32 | 1a | 398 | C |
| 32 | 1a | 406 | G |
| 32 | 1a | 412 | A |
| 32 | 1a | 413 | G |
| 32 | 1a | 421 | U |
| 32 | 1a | 423 | G |
| 32 | 1a | 424 | G |
| 32 | 1a | 429 | U |
| 32 | 1a | 430 | A |
| 32 | 1a | 439 | A |
| 32 | 1a | 442 | C |
| 32 | 1a | 452 | A |
| 32 | 1a | 461 | A |
| 32 | 1a | 480 | U |
| 32 | 1a | 485 | G |
| 32 | 1a | 496 | A |
| 32 | 1a | 498 | U |
| 32 | 1a | 505 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 32 | 1a | 509 | A |
| 32 | 1a | 510 | A |
| 32 | 1a | 511 | C |
| 32 | 1a | 518 | C |
| 32 | 1a | 531 | U |
| 32 | 1a | 532 | A |
| 32 | 1a | 533 | A |
| 32 | 1a | 536 | C |
| 32 | 1a | 544 | G |
| 32 | 1a | 547 | A |
| 32 | 1a | 550 | G |
| 32 | 1a | 559 | A |
| 32 | 1a | 561 | U |
| 32 | 1a | 562 | C |
| 32 | 1a | 568 | G |
| 32 | 1a | 572 | A |
| 32 | 1a | 573 | A |
| 32 | 1a | 576 | G |
| 32 | 1a | 577 | G |
| 32 | 1a | 596 | C |
| 32 | 1a | 607 | A |
| 32 | 1a | 616 | G |
| 32 | 1a | 630 | G |
| 32 | 1a | 653 | A |
| 32 | 1a | 665 | A |
| 32 | 1a | 671 | G |
| 32 | 1a | 687 | A |
| 32 | 1a | 688 | G |
| 32 | 1a | 694 | A |
| 32 | 1a | 695 | A |
| 32 | 1a | 723 | U |
| 32 | 1a | 731 | G |
| 32 | 1a | 734 | G |
| 32 | 1a | 747 | C |
| 32 | 1a | 749 | C |
| 32 | 1a | 752 | G |
| 32 | 1a | 753 | A |
| 32 | 1a | 755 | G |
| 32 | 1a | 777 | A |
| 32 | 1a | 792 | A |
| 32 | 1a | 793 | U |
| 32 | 1a | 794 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 32 | 1a | 815 | A |
| 32 | 1a | 816 | A |
| 32 | 1a | 817 | C |
| 32 | 1a | 821 | G |
| 32 | 1a | 828 | A |
| 32 | 1a | 833 | U |
| 32 | 1a | 834 | C |
| 32 | 1a | 840 | C |
| 32 | 1a | 841 | U |
| 32 | 1a | 851 | G |
| 32 | 1a | 858 | G |
| 32 | 1a | 859 | A |
| 32 | 1a | 860 | A |
| 32 | 1a | 870 | U |
| 32 | 1a | 885 | G |
| 32 | 1a | 902 | G |
| 32 | 1a | 914 | A |
| 32 | 1a | 926 | G |
| 32 | 1a | 927 | G |
| 32 | 1a | 934 | C |
| 32 | 1a | 935 | A |
| 32 | 1a | 936 | C |
| 32 | 1a | 960 | U |
| 32 | 1a | 961 | U |
| 32 | 1a | 968 | A |
| 32 | 1a | 969 | A |
| 32 | 1a | 971 | G |
| 32 | 1a | 972 | C |
| 32 | 1a | 974 | A |
| 32 | 1a | 975 | A |
| 32 | 1a | 976 | G |
| 32 | 1a | 977 | A |
| 32 | 1a | 982 | U |
| 32 | 1a | 992 | U |
| 32 | 1a | 993 | G |
| 32 | 1a | 997 | U |
| 32 | 1a | 1000 | U |
| 32 | 1a | 1001(A) | G |
| 32 | 1a | 1003 | G |
| 32 | 1a | 1005 | A |
| 32 | 1a | 1006 | C |
| 32 | 1a | 1009 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 32 | 1a | 1020 | U |
| 32 | 1a | 1022 | G |
| 32 | 1a | 1023 | G |
| 32 | 1a | 1025 | U |
| 32 | 1a | 1026 | G |
| 32 | 1a | 1027 | C |
| 32 | 1a | 1029 | C |
| 32 | 1a | 1030 | C |
| 32 | 1a | 1030(A) | G |
| 32 | 1a | 1030(C) | G |
| 32 | 1a | 1031 | G |
| 32 | 1a | 1033 | G |
| 32 | 1a | 1039 | C |
| 32 | 1a | 1040 | U |
| 32 | 1a | 1044 | A |
| 32 | 1a | 1045 | C |
| 32 | 1a | 1054 | C |
| 32 | 1a | 1056 | U |
| 32 | 1a | 1065 | U |
| 32 | 1a | 1066 | C |
| 32 | 1a | 1068 | G |
| 32 | 1a | 1081 | G |
| 32 | 1a | 1094 | G |
| 32 | 1a | 1095 | U |
| 32 | 1a | 1101 | A |
| 32 | 1a | 1108 | G |
| 32 | 1a | 1122 | U |
| 32 | 1a | 1125 | U |
| 32 | 1a | 1132 | C |
| 32 | 1a | 1134 | G |
| 32 | 1a | 1137 | C |
| 32 | 1a | 1138 | G |
| 32 | 1a | 1139 | G |
| 32 | 1a | 1140 | C |
| 32 | 1a | 1141 | C |
| 32 | 1a | 1146 | A |
| 32 | 1a | 1152 | A |
| 32 | 1a | 1159 | U |
| 32 | 1a | 1181 | G |
| 32 | 1a | 1183 | A |
| 32 | 1a | 1184 | G |
| 32 | 1a | 1196 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 32 | 1a | 1197 | G |
| 32 | 1a | 1201 | A |
| 32 | 1a | 1202 | G |
| 32 | 1a | 1206 | G |
| 32 | 1a | 1212 | U |
| 32 | 1a | 1213 | A |
| 32 | 1a | 1227 | A |
| 32 | 1a | 1230 | C |
| 32 | 1a | 1236 | A |
| 32 | 1a | 1238 | A |
| 32 | 1a | 1246 | C |
| 32 | 1a | 1256 | A |
| 32 | 1a | 1257 | U |
| 32 | 1a | 1270 | C |
| 32 | 1a | 1275 | A |
| 32 | 1a | 1276 | G |
| 32 | 1a | 1278 | U |
| 32 | 1a | 1279 | A |
| 32 | 1a | 1280 | A |
| 32 | 1a | 1286 | A |
| 32 | 1a | 1287 | A |
| 32 | 1a | 1299 | A |
| 32 | 1a | 1300 | G |
| 32 | 1a | 1302 | U |
| 32 | 1a | 1320 | C |
| 32 | 1a | 1322 | C |
| 32 | 1a | 1338 | G |
| 32 | 1a | 1347 | G |
| 32 | 1a | 1353 | G |
| 32 | 1a | 1363 | C |
| 32 | 1a | 1364 | U |
| 32 | 1a | 1365 | G |
| 32 | 1a | 1370 | G |
| 32 | 1a | 1397 | C |
| 32 | 1a | 1400 | 5MC |
| 32 | 1a | 1419 | G |
| 32 | 1a | 1433 | A |
| 32 | 1a | 1442 | G |
| 32 | 1a | 1442(A) | G |
| 32 | 1a | 1442(B) | A |
| 32 | 1a | 1446 | U |
| 32 | 1a | 1447 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 32 | 1a | 1456 | G |
| 32 | 1a | 1487 | G |
| 32 | 1a | 1492 | A |
| 32 | 1a | 1497 | G |
| 32 | 1a | 1503 | A |
| 32 | 1a | 1504 | G |
| 32 | 1a | 1506 | U |
| 32 | 1a | 1517 | G |
| 32 | 1a | 1525 | G |
| 32 | 1a | 1529 | G |
| 32 | 1a | 1530 | G |
| 32 | 1a | 1532 | U |
| 53 | 1v | 13 | A |
| 53 | 1v | 19 | U |
| 54 | 1w | 2 | C |
| 54 | 1w | 6 | G |
| 54 | 1w | 8 | 4SU |
| 54 | 1w | 14 | A |
| 54 | 1w | 19 | G |
| 54 | 1w | 20 | U |
| 54 | 1w | 21 | A |
| 54 | 1w | 23 | A |
| 54 | 1w | 24 | G |
| 54 | 1w | 34 | G |
| 54 | 1w | 45 | U |
| 54 | 1w | 46 | 7MG |
| 54 | 1w | 47 | U |
| 54 | 1w | 48 | C |
| 54 | 1w | 50 | U |
| 54 | 1w | 62 | C |
| 54 | 1w | 63 | G |
| 54 | 1w | 68 | C |
| 54 | 1w | 70 | G |
| 54 | 1w | 73 | A |
| 54 | 1w | 74 | C |
| 55 | 1x | 6 | G |
| 55 | 1x | 9 | G |
| 55 | 1x | 18 | G |
| 55 | 1x | 20 | U |
| 55 | 1x | 21 | A |
| 55 | 1x | 25 | C |
| 55 | 1x | 32 | 5MC |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 55 | 1x | 47 | U |
| 55 | 1x | 55 | PSU |
| 55 | 1x | 61 | C |
| 55 | 1x | 69 | C |
| 55 | 1x | 76 | A |
| 54 | 1y | 5 | G |
| 54 | 1y | 6 | G |
| 54 | 1y | 8 | 4SU |
| 54 | 1y | 9 | A |
| 54 | 1y | 13 | C |
| 54 | 1y | 19 | G |
| 54 | 1y | 20 | U |
| 54 | 1y | 21 | A |
| 54 | 1y | 23 | A |
| 54 | 1y | 35 | A |
| 54 | 1y | 44 | G |
| 54 | 1y | 45 | U |
| 54 | 1y | 46 | 7MG |
| 54 | 1y | 47 | U |
| 54 | 1y | 48 | C |
| 54 | 1y | 49 | C |
| 54 | 1y | 53 | G |
| 54 | 1y | 54 | 5MU |
| 54 | 1y | 56 | C |
| 54 | 1y | 59 | U |
| 54 | 1y | 61 | C |
| 54 | 1y | 65 | G |
| 54 | 1y | 69 | G |
| 54 | 1y | 70 | G |
| 1 | 2A | 10 | G |
| 1 | 2A | 15 | G |
| 1 | 2A | 34 | C |
| 1 | 2A | 35 | G |
| 1 | 2A | 45 | C |
| 1 | 2A | 61 | G |
| 1 | 2A | 63 | U |
| 1 | 2A | 71 | A |
| 1 | 2A | 72 | U |
| 1 | 2A | 74 | A |
| 1 | 2A | 75 | G |
| 1 | 2A | 84 | A |
| 1 | 2A | 90 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2A | 94 | C |
| 1 | 2A | 95 | G |
| 1 | 2A | 100 | G |
| 1 | 2A | 102 | G |
| 1 | 2A | 118 | A |
| 1 | 2A | 120 | U |
| 1 | 2A | 125 | G |
| 1 | 2A | 154(A) | C |
| 1 | 2A | 157 | U |
| 1 | 2A | 181 | A |
| 1 | 2A | 195 | A |
| 1 | 2A | 196 | A |
| 1 | 2A | 199 | A |
| 1 | 2A | 204 | A |
| 1 | 2A | 205 | G |
| 1 | 2A | 214 | G |
| 1 | 2A | 215 | G |
| 1 | 2A | 216 | A |
| 1 | 2A | 221 | A |
| 1 | 2A | 222 | A |
| 1 | 2A | 228 | A |
| 1 | 2A | 229 | A |
| 1 | 2A | 233 | A |
| 1 | 2A | 248 | G |
| 1 | 2A | 249 | C |
| 1 | 2A | 250 | G |
| 1 | 2A | 266 | G |
| 1 | 2A | 271(J) | C |
| 1 | 2A | 271(K) | U |
| 1 | 2A | 271(L) | U |
| 1 | 2A | 271(M) | G |
| 1 | 2A | 271(N) | U |
| 1 | 2A | 271(O) | C |
| 1 | 2A | 272(B) | G |
| 1 | 2A | 272(I) | U |
| 1 | 2A | 272(J) | C |
| 1 | 2A | 274 | G |
| 1 | 2A | 277 | C |
| 1 | 2A | 278 | A |
| 1 | 2A | 282 | A |
| 1 | 2A | 294 | A |
| 1 | 2A | 311 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2A | 317 | G |
| 1 | 2A | 327 | G |
| 1 | 2A | 329 | G |
| 1 | 2A | 330 | A |
| 1 | 2A | 348 | G |
| 1 | 2A | 352 | G |
| 1 | 2A | 354 | G |
| 1 | 2A | 362 | U |
| 1 | 2A | 363 | G |
| 1 | 2A | 363(B) | G |
| 1 | 2A | 363(D) | G |
| 1 | 2A | 364 | C |
| 1 | 2A | 386 | G |
| 1 | 2A | 396 | G |
| 1 | 2A | 402 | A |
| 1 | 2A | 403 | U |
| 1 | 2A | 406 | G |
| 1 | 2A | 411 | G |
| 1 | 2A | 412 | A |
| 1 | 2A | 421 | U |
| 1 | 2A | 422 | A |
| 1 | 2A | 434 | U |
| 1 | 2A | 435 | C |
| 1 | 2A | 444 | C |
| 1 | 2A | 454 | A |
| 1 | 2A | 455 | C |
| 1 | 2A | 457 | A |
| 1 | 2A | 479 | A |
| 1 | 2A | 481 | G |
| 1 | 2A | 482 | A |
| 1 | 2A | 498 | G |
| 1 | 2A | 504 | U |
| 1 | 2A | 505 | A |
| 1 | 2A | 509 | C |
| 1 | 2A | 528 | A |
| 1 | 2A | 529 | A |
| 1 | 2A | 530 | G |
| 1 | 2A | 531 | C |
| 1 | 2A | 532 | A |
| 1 | 2A | 533 | G |
| 1 | 2A | 556 | G |
| 1 | 2A | 563 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2A | 568 | U |
| 1 | 2A | 573 | G |
| 1 | 2A | 575 | A |
| 1 | 2A | 592 | G |
| 1 | 2A | 599 | G |
| 1 | 2A | 603 | A |
| 1 | 2A | 604 | G |
| 1 | 2A | 607 | U |
| 1 | 2A | 611 | C |
| 1 | 2A | 614(A) | U |
| 1 | 2A | 614(B) | G |
| 1 | 2A | 615 | G |
| 1 | 2A | 627 | A |
| 1 | 2A | 634 | C |
| 1 | 2A | 637 | A |
| 1 | 2A | 645 | C |
| 1 | 2A | 646 | A |
| 1 | 2A | 652(B) | A |
| 1 | 2A | 652(C) | G |
| 1 | 2A | 669 | G |
| 1 | 2A | 686 | G |
| 1 | 2A | 708 | C |
| 1 | 2A | 709 | U |
| 1 | 2A | 717 | G |
| 1 | 2A | 726 | G |
| 1 | 2A | 730 | C |
| 1 | 2A | 752 | A |
| 1 | 2A | 753 | C |
| 1 | 2A | 764 | A |
| 1 | 2A | 775 | G |
| 1 | 2A | 776 | G |
| 1 | 2A | 782 | A |
| 1 | 2A | 784 | A |
| 1 | 2A | 785 | G |
| 1 | 2A | 790 | C |
| 1 | 2A | 792 | G |
| 1 | 2A | 805 | G |
| 1 | 2A | 812 | C |
| 1 | 2A | 819 | A |
| 1 | 2A | 827 | U |
| 1 | 2A | 828 | U |
| 1 | 2A | 847 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2A | 857 | C |
| 1 | 2A | 859 | G |
| 1 | 2A | 866 | A |
| 1 | 2A | 869 | G |
| 1 | 2A | 872 | A |
| 1 | 2A | 874 | G |
| 1 | 2A | 875 | G |
| 1 | 2A | 878 | A |
| 1 | 2A | 879 | G |
| 1 | 2A | 880 | G |
| 1 | 2A | 884 | C |
| 1 | 2A | 886 | C |
| 1 | 2A | 887 | A |
| 1 | 2A | 888 | C |
| 1 | 2A | 889 | C |
| 1 | 2A | 890 | A |
| 1 | 2A | 893 | C |
| 1 | 2A | 894 | C |
| 1 | 2A | 896 | A |
| 1 | 2A | 900 | A |
| 1 | 2A | 901 | A |
| 1 | 2A | 910 | A |
| 1 | 2A | 914 | C |
| 1 | 2A | 917 | A |
| 1 | 2A | 933 | A |
| 1 | 2A | 938 | G |
| 1 | 2A | 941 | A |
| 1 | 2A | 945 | A |
| 1 | 2A | 946 | G |
| 1 | 2A | 953 | A |
| 1 | 2A | 958 | U |
| 1 | 2A | 959 | A |
| 1 | 2A | 961 | C |
| 1 | 2A | 974 | G |
| 1 | 2A | 975 | C |
| 1 | 2A | 982 | C |
| 1 | 2A | 983 | A |
| 1 | 2A | 996 | A |
| 1 | 2A | 997 | G |
| 1 | 2A | 1012 | U |
| 1 | 2A | 1013 | C |
| 1 | 2A | 1017 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2A | 1020 | A |
| 1 | 2A | 1022 | G |
| 1 | 2A | 1025 | G |
| 1 | 2A | 1026 | U |
| 1 | 2A | 1033 | U |
| 1 | 2A | 1036 | G |
| 1 | 2A | 1038 | C |
| 1 | 2A | 1039 | G |
| 1 | 2A | 1043 | C |
| 1 | 2A | 1114 | G |
| 1 | 2A | 1116 | C |
| 1 | 2A | 1128 | A |
| 1 | 2A | 1130 | U |
| 1 | 2A | 1135 | C |
| 1 | 2A | 1136 | G |
| 1 | 2A | 1139 | G |
| 1 | 2A | 1143 | A |
| 1 | 2A | 1144 | G |
| 1 | 2A | 1166 | C |
| 1 | 2A | 1169 | G |
| 1 | 2A | 1171 | G |
| 1 | 2A | 1188 | U |
| 1 | 2A | 1205 | U |
| 1 | 2A | 1210 | A |
| 1 | 2A | 1211 | U |
| 1 | 2A | 1220 | A |
| 1 | 2A | 1237 | A |
| 1 | 2A | 1240 | U |
| 1 | 2A | 1248 | G |
| 1 | 2A | 1250 | G |
| 1 | 2A | 1253 | A |
| 1 | 2A | 1256 | G |
| 1 | 2A | 1271 | G |
| 1 | 2A | 1272 | A |
| 1 | 2A | 1273 | U |
| 1 | 2A | 1287 | A |
| 1 | 2A | 1300 | U |
| 1 | 2A | 1301 | A |
| 1 | 2A | 1306 | C |
| 1 | 2A | 1314 | C |
| 1 | 2A | 1345 | C |
| 1 | 2A | 1352 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2A | 1355 | G |
| 1 | 2A | 1359 | A |
| 1 | 2A | 1360 | A |
| 1 | 2A | 1365 | A |
| 1 | 2A | 1368 | G |
| 1 | 2A | 1370 | C |
| 1 | 2A | 1374 | G |
| 1 | 2A | 1378 | A |
| 1 | 2A | 1380 | G |
| 1 | 2A | 1384 | A |
| 1 | 2A | 1385 | G |
| 1 | 2A | 1386 | C |
| 1 | 2A | 1411 | C |
| 1 | 2A | 1416 | G |
| 1 | 2A | 1417 | C |
| 1 | 2A | 1420 | U |
| 1 | 2A | 1421 | G |
| 1 | 2A | 1427 | A |
| 1 | 2A | 1428 | C |
| 1 | 2A | 1432 | C |
| 1 | 2A | 1437 | C |
| 1 | 2A | 1441 | G |
| 1 | 2A | 1445 | A |
| 1 | 2A | 1445(A) | C |
| 1 | 2A | 1449 | A |
| 1 | 2A | 1450 | G |
| 1 | 2A | 1455 | G |
| 1 | 2A | 1460 | A |
| 1 | 2A | 1461 | G |
| 1 | 2A | 1467 | C |
| 1 | 2A | 1471 | A |
| 1 | 2A | 1472 | A |
| 1 | 2A | 1482 | G |
| 1 | 2A | 1490 | A |
| 1 | 2A | 1493 | C |
| 1 | 2A | 1496 | A |
| 1 | 2A | 1497 | U |
| 1 | 2A | 1508 | A |
| 1 | 2A | 1509 | C |
| 1 | 2A | 1509(A) | A |
| 1 | 2A | 1514 | U |
| 1 | 2A | 1531 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2A | 1532 | C |
| 1 | 2A | 1541 | G |
| 1 | 2A | 1542 | A |
| 1 | 2A | 1543 | C |
| 1 | 2A | 1547 | C |
| 1 | 2A | 1558 | A |
| 1 | 2A | 1559 | G |
| 1 | 2A | 1566 | A |
| 1 | 2A | 1569 | A |
| 1 | 2A | 1578 | U |
| 1 | 2A | 1580 | A |
| 1 | 2A | 1584 | C |
| 1 | 2A | 1586 | A |
| 1 | 2A | 1608 | A |
| 1 | 2A | 1609 | A |
| 1 | 2A | 1610 | A |
| 1 | 2A | 1616 | A |
| 1 | 2A | 1640 | C |
| 1 | 2A | 1645 | G |
| 1 | 2A | 1648 | C |
| 1 | 2A | 1654 | A |
| 1 | 2A | 1663 | C |
| 1 | 2A | 1674 | G |
| 1 | 2A | 1675 | C |
| 1 | 2A | 1688 | U |
| 1 | 2A | 1696 | G |
| 1 | 2A | 1700 | A |
| 1 | 2A | 1701 | A |
| 1 | 2A | 1703 | G |
| 1 | 2A | 1721 | G |
| 1 | 2A | 1722 | A |
| 1 | 2A | 1739 | U |
| 1 | 2A | 1740 | G |
| 1 | 2A | 1746 | G |
| 1 | 2A | 1756 | G |
| 1 | 2A | 1758 | G |
| 1 | 2A | 1762 | A |
| 1 | 2A | 1763 | G |
| 1 | 2A | 1764 | G |
| 1 | 2A | 1769 | G |
| 1 | 2A | 1773 | A |
| 1 | 2A | 1780 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2A | 1782 | C |
| 1 | 2A | 1786 | A |
| 1 | 2A | 1791 | A |
| 1 | 2A | 1800 | C |
| 1 | 2A | 1801 | G |
| 1 | 2A | 1811 | G |
| 1 | 2A | 1812 | A |
| 1 | 2A | 1816 | G |
| 1 | 2A | 1829 | A |
| 1 | 2A | 1835 | G |
| 1 | 2A | 1847 | A |
| 1 | 2A | 1848 | A |
| 1 | 2A | 1857 | G |
| 1 | 2A | 1877 | A |
| 1 | 2A | 1878 | G |
| 1 | 2A | 1900 | A |
| 1 | 2A | 1906 | G |
| 1 | 2A | 1913 | A |
| 1 | 2A | 1914 | C |
| 1 | 2A | 1927 | A |
| 1 | 2A | 1929 | G |
| 1 | 2A | 1930 | G |
| 1 | 2A | 1936 | A |
| 1 | 2A | 1937 | A |
| 1 | 2A | 1938 | A |
| 1 | 2A | 1955 | U |
| 1 | 2A | 1963 | U |
| 1 | 2A | 1967 | C |
| 1 | 2A | 1969 | A |
| 1 | 2A | 1970 | A |
| 1 | 2A | 1971 | A |
| 1 | 2A | 1972 | A |
| 1 | 2A | 1983 | C |
| 1 | 2A | 1984 | G |
| 1 | 2A | 1992 | G |
| 1 | 2A | 1993 | U |
| 1 | 2A | 1996 | C |
| 1 | 2A | 1997 | G |
| 1 | 2A | 2023 | G |
| 1 | 2A | 2031 | A |
| 1 | 2A | 2032 | G |
| 1 | 2A | 2033 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2A | 2043 | C |
| 1 | 2A | 2051 | A |
| 1 | 2A | 2055 | C |
| 1 | 2A | 2056 | G |
| 1 | 2A | 2060 | A |
| 1 | 2A | 2061 | G |
| 1 | 2A | 2062 | A |
| 1 | 2A | 2067 | G |
| 1 | 2A | 2069 | G |
| 1 | 2A | 2104 | G |
| 1 | 2A | 2105 | C |
| 1 | 2A | 2110 | G |
| 1 | 2A | 2111 | C |
| 1 | 2A | 2112 | G |
| 1 | 2A | 2116 | G |
| 1 | 2A | 2119 | A |
| 1 | 2A | 2120 | G |
| 1 | 2A | 2122 | U |
| 1 | 2A | 2126 | A |
| 1 | 2A | 2127 | G |
| 1 | 2A | 2131 | G |
| 1 | 2A | 2132 | U |
| 1 | 2A | 2134 | A |
| 1 | 2A | 2135 | A |
| 1 | 2A | 2136 | C |
| 1 | 2A | 2137 | C |
| 1 | 2A | 2138 | C |
| 1 | 2A | 2140 | C |
| 1 | 2A | 2142 | C |
| 1 | 2A | 2146 | C |
| 1 | 2A | 2148 | G |
| 1 | 2A | 2150 | U |
| 1 | 2A | 2152 | G |
| 1 | 2A | 2153 | G |
| 1 | 2A | 2155 | G |
| 1 | 2A | 2156 | G |
| 1 | 2A | 2157 | G |
| 1 | 2A | 2158 | A |
| 1 | 2A | 2161 | C |
| 1 | 2A | 2162 | G |
| 1 | 2A | 2166 | G |
| 1 | 2A | 2167 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2A | 2168 | G |
| 1 | 2A | 2172 | U |
| 1 | 2A | 2174 | C |
| 1 | 2A | 2178 | C |
| 1 | 2A | 2180 | U |
| 1 | 2A | 2185 | C |
| 1 | 2A | 2189 | U |
| 1 | 2A | 2192 | G |
| 1 | 2A | 2198 | A |
| 1 | 2A | 2206 | G |
| 1 | 2A | 2207 | G |
| 1 | 2A | 2208 | A |
| 1 | 2A | 2218 | U |
| 1 | 2A | 2225 | A |
| 1 | 2A | 2235 | G |
| 1 | 2A | 2238 | G |
| 1 | 2A | 2239 | G |
| 1 | 2A | 2268 | A |
| 1 | 2A | 2275 | C |
| 1 | 2A | 2278 | A |
| 1 | 2A | 2279 | G |
| 1 | 2A | 2283 | C |
| 1 | 2A | 2285 | C |
| 1 | 2A | 2287 | A |
| 1 | 2A | 2288 | A |
| 1 | 2A | 2302 | G |
| 1 | 2A | 2304 | G |
| 1 | 2A | 2305 | A |
| 1 | 2A | 2308 | G |
| 1 | 2A | 2309 | A |
| 1 | 2A | 2311 | A |
| 1 | 2A | 2319 | G |
| 1 | 2A | 2320 | A |
| 1 | 2A | 2322 | A |
| 1 | 2A | 2325 | G |
| 1 | 2A | 2334 | G |
| 1 | 2A | 2336 | A |
| 1 | 2A | 2346 | A |
| 1 | 2A | 2347 | C |
| 1 | 2A | 2350 | C |
| 1 | 2A | 2376 | A |
| 1 | 2A | 2383 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2A | 2385 | C |
| 1 | 2A | 2388 | A |
| 1 | 2A | 2400 | G |
| 1 | 2A | 2403 | C |
| 1 | 2A | 2406 | U |
| 1 | 2A | 2410 | G |
| 1 | 2A | 2425 | A |
| 1 | 2A | 2429 | G |
| 1 | 2A | 2430 | A |
| 1 | 2A | 2435 | A |
| 1 | 2A | 2439 | A |
| 1 | 2A | 2441 | C |
| 1 | 2A | 2448 | A |
| 1 | 2A | 2469 | A |
| 1 | 2A | 2474 | C |
| 1 | 2A | 2476 | A |
| 1 | 2A | 2477 | C |
| 1 | 2A | 2478 | A |
| 1 | 2A | 2487 | G |
| 1 | 2A | 2490 | G |
| 1 | 2A | 2491 | U |
| 1 | 2A | 2494 | G |
| 1 | 2A | 2502 | G |
| 1 | 2A | 2505 | G |
| 1 | 2A | 2506 | U |
| 1 | 2A | 2518 | A |
| 1 | 2A | 2520 | C |
| 1 | 2A | 2525 | G |
| 1 | 2A | 2529 | G |
| 1 | 2A | 2530 | A |
| 1 | 2A | 2549 | G |
| 1 | 2A | 2554 | U |
| 1 | 2A | 2555 | U |
| 1 | 2A | 2566 | A |
| 1 | 2A | 2567 | G |
| 1 | 2A | 2573 | C |
| 1 | 2A | 2582 | G |
| 1 | 2A | 2585 | U |
| 1 | 2A | 2586 | C |
| 1 | 2A | 2592 | G |
| 1 | 2A | 2602 | A |
| 1 | 2A | 2609 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2A | 2611 | U |
| 1 | 2A | 2612 | C |
| 1 | 2A | 2630 | G |
| 1 | 2A | 2654 | A |
| 1 | 2A | 2664 | G |
| 1 | 2A | 2669 | G |
| 1 | 2A | 2689 | U |
| 1 | 2A | 2690 | C |
| 1 | 2A | 2691 | C |
| 1 | 2A | 2703 | C |
| 1 | 2A | 2712(A) | A |
| 1 | 2A | 2713 | A |
| 1 | 2A | 2714 | G |
| 1 | 2A | 2718 | G |
| 1 | 2A | 2726 | U |
| 1 | 2A | 2733 | A |
| 1 | 2A | 2739 | U |
| 1 | 2A | 2748 | A |
| 1 | 2A | 2751 | G |
| 1 | 2A | 2757 | A |
| 1 | 2A | 2758 | A |
| 1 | 2A | 2764 | A |
| 1 | 2A | 2765 | A |
| 1 | 2A | 2766 | G |
| 1 | 2A | 2778 | A |
| 1 | 2A | 2789 | C |
| 1 | 2A | 2793 | G |
| 1 | 2A | 2802 | G |
| 1 | 2A | 2803 | C |
| 1 | 2A | 2807 | G |
| 1 | 2A | 2818 | G |
| 1 | 2A | 2820 | A |
| 1 | 2A | 2821 | A |
| 1 | 2A | 2823 | A |
| 1 | 2A | 2833 | G |
| 1 | 2A | 2835 | A |
| 1 | 2A | 2839 | G |
| 1 | 2A | 2872 | G |
| 1 | 2A | 2879 | C |
| 1 | 2A | 2880 | C |
| 1 | 2A | 2894 | G |
| 1 | 2A | 2895 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2A | 2897 | U |
| 2 | 2B | 2 | C |
| 2 | 2B | 5 | C |
| 2 | 2B | 8 | U |
| 2 | 2B | 9 | G |
| 2 | 2B | 13 | A |
| 2 | 2B | 19 | G |
| 2 | 2B | 30 | C |
| 2 | 2B | 32 | C |
| 2 | 2B | 42 | C |
| 2 | 2B | 53 | A |
| 2 | 2B | 56 | G |
| 2 | 2B | 58 | A |
| 2 | 2B | 63 | G |
| 2 | 2B | 65 | C |
| 2 | 2B | 66 | A |
| 2 | 2B | 67 | G |
| 2 | 2B | 72 | G |
| 2 | 2B | 73 | A |
| 2 | 2B | 74 | U |
| 2 | 2B | 75 | G |
| 2 | 2B | 85 | G |
| 2 | 2B | 88 | C |
| 2 | 2B | 106 | G |
| 2 | 2B | 108 | U |
| 2 | 2B | 110 | G |
| 2 | 2B | 114 | C |
| 2 | 2B | 119 | G |
| 2 | 2B | 120 | A |
| 32 | 2a | 7 | G |
| 32 | 2a | 9 | G |
| 32 | 2a | 22 | G |
| 32 | 2a | 26 | A |
| 32 | 2a | 32 | A |
| 32 | 2a | 39 | G |
| 32 | 2a | 47 | C |
| 32 | 2a | 48 | C |
| 32 | 2a | 50 | A |
| 32 | 2a | 51 | A |
| 32 | 2a | 52 | G |
| 32 | 2a | 54 | C |
| 32 | 2a | 66 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 32 | 2a | 73 | G |
| 32 | 2a | 79 | G |
| 32 | 2a | 88 | A |
| 32 | 2a | 89 | C |
| 32 | 2a | 98 | G |
| 32 | 2a | 101 | A |
| 32 | 2a | 116 | A |
| 32 | 2a | 121 | C |
| 32 | 2a | 131 | C |
| 32 | 2a | 142 | G |
| 32 | 2a | 159 | G |
| 32 | 2a | 163 | C |
| 32 | 2a | 174 | C |
| 32 | 2a | 182 | U |
| 32 | 2a | 184 | G |
| 32 | 2a | 189(A) | C |
| 32 | 2a | 189(F) | U |
| 32 | 2a | 189(H) | G |
| 32 | 2a | 189(J) | G |
| 32 | 2a | 195 | A |
| 32 | 2a | 197 | A |
| 32 | 2a | 201 | C |
| 32 | 2a | 202 | U |
| 32 | 2a | 203 | U |
| 32 | 2a | 204 | U |
| 32 | 2a | 216 | G |
| 32 | 2a | 223 | U |
| 32 | 2a | 247 | G |
| 32 | 2a | 251 | G |
| 32 | 2a | 266 | G |
| 32 | 2a | 267 | C |
| 32 | 2a | 281 | G |
| 32 | 2a | 289 | G |
| 32 | 2a | 301 | G |
| 32 | 2a | 321 | A |
| 32 | 2a | 328 | C |
| 32 | 2a | 332 | G |
| 32 | 2a | 350 | G |
| 32 | 2a | 351 | G |
| 32 | 2a | 352 | C |
| 32 | 2a | 353 | A |
| 32 | 2a | 354 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 32 | 2a | 367 | U |
| 32 | 2a | 372 | C |
| 32 | 2a | 373 | A |
| 32 | 2a | 384 | G |
| 32 | 2a | 388 | G |
| 32 | 2a | 397 | A |
| 32 | 2a | 398 | C |
| 32 | 2a | 406 | G |
| 32 | 2a | 412 | A |
| 32 | 2a | 421 | U |
| 32 | 2a | 423 | G |
| 32 | 2a | 424 | G |
| 32 | 2a | 429 | U |
| 32 | 2a | 430 | A |
| 32 | 2a | 442 | C |
| 32 | 2a | 452 | A |
| 32 | 2a | 461 | A |
| 32 | 2a | 470 | C |
| 32 | 2a | 484 | G |
| 32 | 2a | 485 | G |
| 32 | 2a | 496 | A |
| 32 | 2a | 498 | U |
| 32 | 2a | 505 | G |
| 32 | 2a | 510 | A |
| 32 | 2a | 511 | C |
| 32 | 2a | 518 | C |
| 32 | 2a | 527 | 7MG |
| 32 | 2a | 531 | U |
| 32 | 2a | 532 | A |
| 32 | 2a | 533 | A |
| 32 | 2a | 547 | A |
| 32 | 2a | 559 | A |
| 32 | 2a | 560 | U |
| 32 | 2a | 561 | U |
| 32 | 2a | 564 | C |
| 32 | 2a | 572 | A |
| 32 | 2a | 573 | A |
| 32 | 2a | 576 | G |
| 32 | 2a | 577 | G |
| 32 | 2a | 587 | G |
| 32 | 2a | 596 | C |
| 32 | 2a | 630 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 32 | 2a | 650 | G |
| 32 | 2a | 653 | A |
| 32 | 2a | 665 | A |
| 32 | 2a | 687 | A |
| 32 | 2a | 688 | G |
| 32 | 2a | 690 | G |
| 32 | 2a | 695 | A |
| 32 | 2a | 702 | A |
| 32 | 2a | 721 | G |
| 32 | 2a | 723 | U |
| 32 | 2a | 724 | G |
| 32 | 2a | 729 | A |
| 32 | 2a | 731 | G |
| 32 | 2a | 733 | A |
| 32 | 2a | 749 | C |
| 32 | 2a | 755 | G |
| 32 | 2a | 760 | G |
| 32 | 2a | 769 | G |
| 32 | 2a | 777 | A |
| 32 | 2a | 792 | A |
| 32 | 2a | 793 | U |
| 32 | 2a | 794 | A |
| 32 | 2a | 817 | C |
| 32 | 2a | 821 | G |
| 32 | 2a | 828 | A |
| 32 | 2a | 834 | C |
| 32 | 2a | 840 | C |
| 32 | 2a | 841 | U |
| 32 | 2a | 853 | G |
| 32 | 2a | 855 | G |
| 32 | 2a | 859 | A |
| 32 | 2a | 902 | G |
| 32 | 2a | 914 | A |
| 32 | 2a | 919 | A |
| 32 | 2a | 926 | G |
| 32 | 2a | 927 | G |
| 32 | 2a | 934 | C |
| 32 | 2a | 935 | A |
| 32 | 2a | 960 | U |
| 32 | 2a | 961 | U |
| 32 | 2a | 966 | M2G |
| 32 | 2a | 968 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 32 | 2a | 969 | A |
| 32 | 2a | 971 | G |
| 32 | 2a | 974 | A |
| 32 | 2a | 975 | A |
| 32 | 2a | 976 | G |
| 32 | 2a | 977 | A |
| 32 | 2a | 982 | U |
| 32 | 2a | 984 | C |
| 32 | 2a | 989 | C |
| 32 | 2a | 992 | U |
| 32 | 2a | 993 | G |
| 32 | 2a | 996 | A |
| 32 | 2a | 997 | U |
| 32 | 2a | 1001(A) | G |
| 32 | 2a | 1002 | G |
| 32 | 2a | 1003 | G |
| 32 | 2a | 1004 | A |
| 32 | 2a | 1005 | A |
| 32 | 2a | 1006 | C |
| 32 | 2a | 1009 | G |
| 32 | 2a | 1011 | G |
| 32 | 2a | 1016 | A |
| 32 | 2a | 1020 | U |
| 32 | 2a | 1021 | G |
| 32 | 2a | 1022 | G |
| 32 | 2a | 1025 | U |
| 32 | 2a | 1026 | G |
| 32 | 2a | 1027 | C |
| 32 | 2a | 1030 | C |
| 32 | 2a | 1030(A) | G |
| 32 | 2a | 1030(B) | C |
| 32 | 2a | 1031 | G |
| 32 | 2a | 1032 | G |
| 32 | 2a | 1033 | G |
| 32 | 2a | 1035 | A |
| 32 | 2a | 1038 | C |
| 32 | 2a | 1039 | C |
| 32 | 2a | 1040 | U |
| 32 | 2a | 1050 | G |
| 32 | 2a | 1051 | C |
| 32 | 2a | 1053 | G |
| 32 | 2a | 1056 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 32 | 2a | 1064 | G |
| 32 | 2a | 1065 | U |
| 32 | 2a | 1066 | C |
| 32 | 2a | 1068 | G |
| 32 | 2a | 1077 | G |
| 32 | 2a | 1079 | G |
| 32 | 2a | 1081 | G |
| 32 | 2a | 1085 | U |
| 32 | 2a | 1086 | U |
| 32 | 2a | 1094 | G |
| 32 | 2a | 1095 | U |
| 32 | 2a | 1101 | A |
| 32 | 2a | 1108 | G |
| 32 | 2a | 1117 | G |
| 32 | 2a | 1122 | U |
| 32 | 2a | 1125 | U |
| 32 | 2a | 1127 | G |
| 32 | 2a | 1129 | C |
| 32 | 2a | 1130 | A |
| 32 | 2a | 1135 | U |
| 32 | 2a | 1137 | C |
| 32 | 2a | 1138 | G |
| 32 | 2a | 1139 | G |
| 32 | 2a | 1140 | C |
| 32 | 2a | 1143 | G |
| 32 | 2a | 1146 | A |
| 32 | 2a | 1147 | C |
| 32 | 2a | 1152 | A |
| 32 | 2a | 1157 | A |
| 32 | 2a | 1158 | C |
| 32 | 2a | 1159 | U |
| 32 | 2a | 1161 | C |
| 32 | 2a | 1172 | C |
| 32 | 2a | 1182 | G |
| 32 | 2a | 1183 | A |
| 32 | 2a | 1184 | G |
| 32 | 2a | 1193 | G |
| 32 | 2a | 1196 | U |
| 32 | 2a | 1197 | G |
| 32 | 2a | 1202 | G |
| 32 | 2a | 1211 | U |
| 32 | 2a | 1212 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 32 | 2a | 1213 | A |
| 32 | 2a | 1227 | A |
| 32 | 2a | 1238 | A |
| 32 | 2a | 1240 | U |
| 32 | 2a | 1241 | G |
| 32 | 2a | 1248 | A |
| 32 | 2a | 1252 | A |
| 32 | 2a | 1256 | A |
| 32 | 2a | 1257 | U |
| 32 | 2a | 1258 | G |
| 32 | 2a | 1260 | C |
| 32 | 2a | 1264 | C |
| 32 | 2a | 1267 | C |
| 32 | 2a | 1270 | C |
| 32 | 2a | 1272 | G |
| 32 | 2a | 1273 | G |
| 32 | 2a | 1275 | A |
| 32 | 2a | 1278 | U |
| 32 | 2a | 1279 | A |
| 32 | 2a | 1280 | A |
| 32 | 2a | 1287 | A |
| 32 | 2a | 1299 | A |
| 32 | 2a | 1302 | U |
| 32 | 2a | 1303 | C |
| 32 | 2a | 1305 | G |
| 32 | 2a | 1323 | G |
| 32 | 2a | 1340 | A |
| 32 | 2a | 1346 | A |
| 32 | 2a | 1347 | G |
| 32 | 2a | 1358 | U |
| 32 | 2a | 1363 | C |
| 32 | 2a | 1363(A) | A |
| 32 | 2a | 1368 | G |
| 32 | 2a | 1379 | G |
| 32 | 2a | 1381 | U |
| 32 | 2a | 1398 | A |
| 32 | 2a | 1404 | 5MC |
| 32 | 2a | 1419 | G |
| 32 | 2a | 1442 | G |
| 32 | 2a | 1442(A) | G |
| 32 | 2a | 1447 | A |
| 32 | 2a | 1452 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 32 | 2a | 1456 | G |
| 32 | 2a | 1492 | A |
| 32 | 2a | 1497 | G |
| 32 | 2a | 1499 | A |
| 32 | 2a | 1503 | A |
| 32 | 2a | 1504 | G |
| 32 | 2a | 1506 | U |
| 32 | 2a | 1507 | A |
| 32 | 2a | 1517 | G |
| 32 | 2a | 1520 | G |
| 32 | 2a | 1529 | G |
| 32 | 2a | 1530 | G |
| 32 | 2a | 1531 | A |
| 32 | 2a | 1532 | U |
| 53 | 2v | 13 | A |
| 53 | 2v | 14 | A |
| 54 | 2w | 4 | C |
| 54 | 2w | 7 | A |
| 54 | 2w | 8 | 4SU |
| 54 | 2w | 9 | A |
| 54 | 2w | 11 | C |
| 54 | 2w | 13 | C |
| 54 | 2w | 14 | A |
| 54 | 2w | 19 | G |
| 54 | 2w | 22 | G |
| 54 | 2w | 25 | C |
| 54 | 2w | 34 | G |
| 54 | 2w | 46 | 7MG |
| 54 | 2w | 47 | U |
| 54 | 2w | 48 | C |
| 54 | 2w | 50 | U |
| 54 | 2w | 56 | C |
| 54 | 2w | 62 | C |
| 54 | 2w | 63 | G |
| 54 | 2w | 64 | A |
| 54 | 2w | 65 | G |
| 54 | 2w | 68 | C |
| 54 | 2w | 71 | G |
| 54 | 2w | 74 | C |
| 55 | 2x | 4 | G |
| 55 | 2x | 9 | G |
| 55 | 2x | 10 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 55 | 2x | 18 | G |
| 55 | 2x | 21 | A |
| 55 | 2x | 22 | G |
| 55 | 2x | 47 | U |
| 55 | 2x | 48 | C |
| 55 | 2x | 52 | G |
| 55 | 2x | 53 | G |
| 55 | 2x | 63 | G |
| 55 | 2x | 67 | C |
| 55 | 2x | 68 | C |
| 55 | 2x | 76 | A |
| 54 | 2y | 15 | G |
| 54 | 2y | 19 | G |
| 54 | 2y | 23 | A |
| 54 | 2y | 24 | G |
| 54 | 2y | 25 | C |
| 54 | 2y | 27 | G |
| 54 | 2y | 34 | G |
| 54 | 2y | 45 | U |
| 54 | 2y | 49 | C |
| 54 | 2y | 52 | G |
| 54 | 2y | 53 | G |
| 54 | 2y | 55 | PSU |
| 54 | 2y | 56 | C |
| 54 | 2y | 57 | G |
| 54 | 2y | 58 | A |
| 54 | 2y | 59 | U |
| 54 | 2y | 61 | C |
| 54 | 2y | 62 | C |
| 54 | 2y | 63 | G |
| 54 | 2y | 65 | G |
| 54 | 2y | 69 | G |
| 54 | 2y | 70 | G |
| 54 | 2y | 73 | A |

All (63) RNA pucker outliers are listed below:

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 1A | 115 | G |
| 1 | 1A | 185 | A |
| 1 | 1A | 271 | U |
| 1 | 1A | 302 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 1A | 509 | A |
| 1 | 1A | 572 | A |
| 1 | 1A | 820 | U |
| 1 | 1A | 913 | A |
| 1 | 1A | 941 | U |
| 1 | 1A | 1065 | U |
| 1 | 1A | 1067 | A |
| 1 | 1A | 1093 | G |
| 1 | 1A | 1119 | A |
| 1 | 1A | 1124 | U |
| 1 | 1A | 1201 | A |
| 1 | 1A | 1219 | A |
| 1 | 1A | 1220 | U |
| 1 | 1A | 1221 | G |
| 1 | 1A | 1255 | A |
| 1 | 1A | 1425 | A |
| 1 | 1A | 1466 | U |
| 1 | 1A | 1554 | A |
| 1 | 1A | 1654 | A |
| 1 | 1A | 2014 | G |
| 1 | 1A | 2156 | A |
| 1 | 1A | 2180 | A |
| 1 | 1A | 2192 | A |
| 1 | 1A | 2203 | G |
| 1 | 1A | 2205 | C |
| 1 | 1A | 2418 | U |
| 1 | 1A | 2442 | A |
| 1 | 1A | 2450 | U |
| 1 | 1A | 2624 | C |
| 1 | 1A | 2641 | A |
| 1 | 1A | 2701 | U |
| 1 | 1A | 2769 | U |
| 2 | 1B | 1 | U |
| 1 | 2A | 34 | C |
| 1 | 2A | 195 | A |
| 1 | 2A | 228 | A |
| 1 | 2A | 266 | G |
| 1 | 2A | 271(M) | G |
| 1 | 2A | 277 | C |
| 1 | 2A | 528 | A |
| 1 | 2A | 752 | A |
| 1 | 2A | 774 | A |

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| Mol | Chain | Res | Type |
|-----|-------|------|------|
| 1 | 2A | 856 | C |
| 1 | 2A | 900 | A |
| 1 | 2A | 1210 | A |
| 1 | 2A | 1378 | A |
| 1 | 2A | 1379 | A |
| 1 | 2A | 1420 | U |
| 1 | 2A | 1442 | G |
| 1 | 2A | 1530 | C |
| 1 | 2A | 1608 | A |
| 1 | 2A | 1653 | G |
| 1 | 2A | 1913 | A |
| 1 | 2A | 1992 | G |
| 1 | 2A | 2119 | A |
| 1 | 2A | 2126 | A |
| 1 | 2A | 2439 | A |
| 1 | 2A | 2689 | U |
| 1 | 2A | 2756 | U |

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

84 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 |
| 32 | 5MC | 2a | 1404 | 32 | 18,22,23 | 1.00 | 2 (11%) | 26,32,35 | 1.25 | 3 (11%) |
| 43 | 0TD | 1l | 92 | 43 | 7,9,10 | 4.68 | 1 (14%) | 6,11,13 | 4.88 | 2 (33%) |
| 32 | MA6 | 1a | 1519 | 32 | 19,26,27 | 1.03 | 1 (5%) | 18,38,41 | 1.77 | 4 (22%) |
| 54 | 5MU | 1y | 54 | 54 | 19,22,23 | 1.57 | 6 (31%) | 28,32,35 | 1.94 | 6 (21%) |
| 32 | PSU | 2a | 516 | 32 | 18,21,22 | 1.30 | 2 (11%) | 22,30,33 | 1.80 | 4 (18%) |
| 54 | PSU | 2y | 55 | 54 | 18,21,22 | 1.31 | 3 (16%) | 22,30,33 | 1.80 | 5 (22%) |
| 32 | 5MC | 1a | 1407 | 32 | 18,22,23 | 0.95 | 2 (11%) | 26,32,35 | 1.13 | 2 (7%) |
| 54 | MIA | 1y | 37 | 54 | 18,24,32 | 1.15 | 2 (11%) | 18,35,47 | 1.33 | 2 (11%) |
| 32 | 7MG | 1a | 527 | 32 | 22,26,27 | 1.44 | 4 (18%) | 29,39,42 | 2.41 | 6 (20%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|-------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 1 | 2MU | 2A | 2552 | 1,56 | 19,22,24 | 1.24 | 2 (10%) | 26,31,36 | 2.02 | 5 (19%) |
| 32 | 5MC | 1a | 1400 | 32 | 18,22,23 | 0.97 | 2 (11%) | 26,32,35 | 1.12 | 2 (7%) |
| 1 | PSU | 1A | 2617 | 1 | 18,21,22 | 1.38 | 3 (16%) | 22,30,33 | 1.88 | 4 (18%) |
| 32 | M2G | 1a | 966 | 32 | 20,27,28 | 1.47 | 3 (15%) | 22,40,43 | 0.92 | 2 (9%) |
| 55 | 5MU | 1x | 54 | 55 | 19,22,23 | 1.35 | 4 (21%) | 28,32,35 | 1.88 | 6 (21%) |
| 54 | 4SU | 1y | 8 | 54 | 18,21,22 | 1.65 | 4 (22%) | 26,30,33 | 1.82 | 5 (19%) |
| 1 | PSU | 2A | 1911 | 1 | 18,21,22 | 1.32 | 2 (11%) | 22,30,33 | 1.74 | 4 (18%) |
| 54 | 5MU | 2w | 54 | 54 | 19,22,23 | 1.39 | 6 (31%) | 28,32,35 | 1.84 | 6 (21%) |
| 54 | PSU | 2w | 39 | 54 | 18,21,22 | 1.41 | 2 (11%) | 22,30,33 | 1.59 | 2 (9%) |
| 54 | 4SU | 1w | 8 | 54 | 18,21,22 | 1.64 | 4 (22%) | 26,30,33 | 2.24 | 4 (15%) |
| 32 | 2MG | 2a | 1207 | 32 | 18,26,27 | 0.91 | 1 (5%) | 16,38,41 | 1.12 | 2 (12%) |
| 43 | 0TD | 2l | 92 | 43 | 7,9,10 | 4.74 | 1 (14%) | 6,11,13 | 3.70 | 3 (50%) |
| 55 | 4SU | 2x | 8 | 56,55 | 18,21,22 | 1.97 | 6 (33%) | 26,30,33 | 1.50 | 5 (19%) |
| 32 | 5MC | 2a | 1400 | 32 | 18,22,23 | 0.95 | 2 (11%) | 26,32,35 | 1.19 | 2 (7%) |
| 55 | PSU | 1x | 55 | 55 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.89 | 4 (18%) |
| 55 | 5MU | 2x | 54 | 55 | 19,22,23 | 1.43 | 6 (31%) | 28,32,35 | 1.84 | 6 (21%) |
| 54 | 7MG | 2w | 46 | 54 | 22,26,27 | 1.40 | 4 (18%) | 29,39,42 | 2.41 | 7 (24%) |
| 55 | 5MC | 2x | 32 | 55 | 18,22,23 | 0.99 | 2 (11%) | 26,32,35 | 1.23 | 3 (11%) |
| 1 | 4OC | 1A | 1942 | 1 | 19,22,24 | 0.87 | 0 | 26,31,35 | 0.86 | 0 |
| 54 | PSU | 1y | 32 | 54 | 18,21,22 | 1.38 | 3 (16%) | 22,30,33 | 1.74 | 4 (18%) |
| 32 | 5MC | 1a | 1404 | 32 | 18,22,23 | 0.93 | 2 (11%) | 26,32,35 | 1.20 | 2 (7%) |
| 32 | 5MC | 2a | 1407 | 32 | 18,22,23 | 1.00 | 2 (11%) | 26,32,35 | 1.20 | 3 (11%) |
| 54 | 5MU | 2y | 54 | 54 | 19,22,23 | 1.48 | 4 (21%) | 28,32,35 | 2.11 | 9 (32%) |
| 54 | PSU | 2y | 39 | 54 | 18,21,22 | 1.35 | 2 (11%) | 22,30,33 | 1.82 | 3 (13%) |
| 32 | M2G | 2a | 966 | 32 | 20,27,28 | 1.51 | 3 (15%) | 22,40,43 | 1.03 | 1 (4%) |
| 1 | OMG | 2A | 2251 | 1,55 | 18,26,27 | 1.02 | 1 (5%) | 19,38,41 | 1.04 | 2 (10%) |
| 32 | UR3 | 1a | 1498 | 32 | 19,22,23 | 1.03 | 1 (5%) | 26,32,35 | 1.47 | 2 (7%) |
| 54 | PSU | 2y | 32 | 54 | 18,21,22 | 1.31 | 2 (11%) | 22,30,33 | 1.79 | 4 (18%) |
| 32 | PSU | 1a | 516 | 32,56 | 18,21,22 | 1.33 | 2 (11%) | 22,30,33 | 1.83 | 4 (18%) |
| 32 | 2MG | 1a | 1207 | 32 | 18,26,27 | 0.98 | 1 (5%) | 16,38,41 | 1.08 | 2 (12%) |
| 32 | 4OC | 2a | 1402 | 32 | 20,23,24 | 0.76 | 0 | 26,32,35 | 1.07 | 2 (7%) |
| 1 | PSU | 2A | 2605 | 1 | 18,21,22 | 1.40 | 3 (16%) | 22,30,33 | 1.84 | 4 (18%) |
| 32 | MA6 | 1a | 1518 | 32 | 19,26,27 | 0.95 | 1 (5%) | 18,38,41 | 1.76 | 5 (27%) |
| 32 | 7MG | 2a | 527 | 32 | 22,26,27 | 1.37 | 3 (13%) | 29,39,42 | 2.45 | 7 (24%) |
| 1 | PSU | 1A | 1939 | 1 | 18,21,22 | 1.37 | 2 (11%) | 22,30,33 | 1.79 | 3 (13%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|---------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 54 | PSU | 1w | 32 | 54 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.70 | 4 (18%) |
| 54 | PSU | 1w | 55 | 54 | 18,21,22 | 1.44 | 2 (11%) | 22,30,33 | 1.83 | 3 (13%) |
| 1 | 2MA | 2A | 2503 | 1,56 | 17,25,26 | 0.99 | 0 | 17,37,40 | 1.00 | 2 (11%) |
| 54 | 7MG | 2y | 46 | 54 | 22,26,27 | 1.46 | 4 (18%) | 29,39,42 | 2.68 | 7 (24%) |
| 1 | 5MU | 2A | 1939 | 1,56 | 19,22,23 | 1.43 | 6 (31%) | 28,32,35 | 2.14 | 5 (17%) |
| 55 | PSU | 2x | 55 | 55 | 18,21,22 | 1.34 | 2 (11%) | 22,30,33 | 1.83 | 3 (13%) |
| 32 | 5MC | 1a | 967 | 32 | 18,22,23 | 0.96 | 2 (11%) | 26,32,35 | 1.12 | 2 (7%) |
| 1 | 2MA | 1A | 2515 | 1,56 | 17,25,26 | 1.00 | 1 (5%) | 17,37,40 | 0.94 | 2 (11%) |
| 55 | 4SU | 1x | 8 | 56,55 | 18,21,22 | 2.07 | 4 (22%) | 26,30,33 | 1.53 | 4 (15%) |
| 32 | 4OC | 1a | 1402 | 32 | 20,23,24 | 0.76 | 0 | 26,32,35 | 1.06 | 2 (7%) |
| 54 | 7MG | 1y | 46 | 54 | 22,26,27 | 1.35 | 4 (18%) | 29,39,42 | 2.49 | 6 (20%) |
| 32 | MA6 | 2a | 1518 | 32 | 19,26,27 | 1.01 | 1 (5%) | 18,38,41 | 1.71 | 4 (22%) |
| 1 | 5MC | 2A | 1942 | 1 | 18,22,23 | 0.98 | 2 (11%) | 26,32,35 | 1.33 | 4 (15%) |
| 54 | PSU | 2w | 32 | 54 | 18,21,22 | 1.37 | 3 (16%) | 22,30,33 | 1.81 | 3 (13%) |
| 32 | 5MC | 2a | 967 | 32 | 18,22,23 | 0.96 | 1 (5%) | 26,32,35 | 1.07 | 1 (3%) |
| 54 | PSU | 1w | 39 | 54 | 18,21,22 | 1.30 | 2 (11%) | 22,30,33 | 1.91 | 4 (18%) |
| 32 | UR3 | 2a | 1498 | 32 | 19,22,23 | 1.01 | 1 (5%) | 26,32,35 | 1.59 | 2 (7%) |
| 1 | 5MU | 1A | 1961 | 1,56 | 19,22,23 | 1.33 | 4 (21%) | 28,32,35 | 2.32 | 6 (21%) |
| 1 | 5MU | 1A | 1937 | 1 | 19,22,23 | 1.43 | 5 (26%) | 28,32,35 | 2.25 | 5 (17%) |
| 1 | 5MC | 1A | 1964 | 1 | 18,22,23 | 0.94 | 1 (5%) | 26,32,35 | 1.11 | 2 (7%) |
| 55 | 5MC | 1x | 32 | 55 | 18,22,23 | 1.03 | 2 (11%) | 26,32,35 | 1.25 | 3 (11%) |
| 54 | MIA | 2w | 37 | 54 | 20,27,32 | 1.85 | 3 (15%) | 22,39,47 | 1.82 | 7 (31%) |
| 54 | 5MU | 1w | 54 | 54 | 19,22,23 | 1.41 | 5 (26%) | 28,32,35 | 1.77 | 5 (17%) |
| 54 | MIA | 2y | 37 | 54 | 18,24,32 | 1.12 | 2 (11%) | 18,35,47 | 1.33 | 3 (16%) |
| 54 | 4SU | 2w | 8 | 54 | 18,21,22 | 1.66 | 4 (22%) | 26,30,33 | 2.39 | 5 (19%) |
| 1 | 5MC | 2A | 1962 | 1,56 | 18,22,23 | 0.94 | 2 (11%) | 26,32,35 | 1.24 | 4 (15%) |
| 1 | 4OC | 2A | 1920 | 1 | 19,22,24 | 0.83 | 0 | 26,31,35 | 0.92 | 0 |
| 1 | OMG | 1A | 2263 | 1,56,55 | 18,26,27 | 1.02 | 1 (5%) | 19,38,41 | 1.15 | 2 (10%) |
| 54 | PSU | 1y | 39 | 54 | 18,21,22 | 1.40 | 2 (11%) | 22,30,33 | 1.73 | 3 (13%) |
| 1 | 2MU | 1A | 2564 | 1,56 | 19,22,24 | 1.17 | 2 (10%) | 26,31,36 | 2.00 | 6 (23%) |
| 1 | 5MC | 1A | 1984 | 1,56 | 18,22,23 | 0.99 | 2 (11%) | 26,32,35 | 1.15 | 2 (7%) |
| 54 | 4SU | 2y | 8 | 54 | 18,21,22 | 1.77 | 4 (22%) | 26,30,33 | 2.18 | 5 (19%) |
| 1 | PSU | 2A | 1917 | 1 | 18,21,22 | 1.37 | 2 (11%) | 22,30,33 | 1.97 | 4 (18%) |
| 1 | PSU | 1A | 1933 | 1 | 18,21,22 | 1.42 | 3 (16%) | 22,30,33 | 1.91 | 4 (18%) |
| 54 | PSU | 1y | 55 | 54 | 18,21,22 | 1.32 | 2 (11%) | 22,30,33 | 1.95 | 4 (18%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 54 | 7MG | 1w | 46 | 54 | 22,26,27 | 1.51 | 4 (18%) | 29,39,42 | 2.37 | 5 (17%) |
| 54 | MIA | 1w | 37 | 54 | 24,31,32 | 2.24 | 4 (16%) | 26,44,47 | 2.67 | 8 (30%) |
| 32 | MA6 | 2a | 1519 | 32 | 19,26,27 | 1.03 | 1 (5%) | 18,38,41 | 1.65 | 4 (22%) |
| 54 | PSU | 2w | 55 | 54 | 18,21,22 | 1.37 | 2 (11%) | 22,30,33 | 1.91 | 3 (13%) |
| 1 | 5MU | 2A | 1915 | 1 | 19,22,23 | 1.49 | 5 (26%) | 28,32,35 | 2.22 | 5 (17%) |

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 |
|-----|------|-------|------|-------|---------|-----------|---------|
| 32 | 5MC | 2a | 1404 | 32 | - | 2/7/25/26 | 0/2/2/2 |
| 43 | 0TD | 1l | 92 | 43 | - | 1/7/12/14 | - |
| 32 | MA6 | 1a | 1519 | 32 | - | 3/7/29/30 | 0/3/3/3 |
| 54 | 5MU | 1y | 54 | 54 | - | 3/7/25/26 | 0/2/2/2 |
| 32 | PSU | 2a | 516 | 32 | - | 0/7/25/26 | 0/2/2/2 |
| 54 | PSU | 2y | 55 | 54 | - | 3/7/25/26 | 0/2/2/2 |
| 32 | 5MC | 1a | 1407 | 32 | - | 0/7/25/26 | 0/2/2/2 |
| 54 | MIA | 1y | 37 | 54 | - | 0/3/25/34 | 0/3/3/3 |
| 32 | 7MG | 1a | 527 | 32 | - | 3/7/37/38 | 0/3/3/3 |
| 1 | 2MU | 2A | 2552 | 1,56 | - | 0/9/27/28 | 0/2/2/2 |
| 32 | 5MC | 1a | 1400 | 32 | - | 2/7/25/26 | 0/2/2/2 |
| 1 | PSU | 1A | 2617 | 1 | - | 2/7/25/26 | 0/2/2/2 |
| 32 | M2G | 1a | 966 | 32 | - | 0/7/29/30 | 0/3/3/3 |
| 55 | 5MU | 1x | 54 | 55 | - | 0/7/25/26 | 0/2/2/2 |
| 54 | 4SU | 1y | 8 | 54 | - | 3/7/25/26 | 0/2/2/2 |
| 1 | PSU | 2A | 1911 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 54 | 5MU | 2w | 54 | 54 | - | 0/7/25/26 | 0/2/2/2 |
| 54 | PSU | 2w | 39 | 54 | - | 0/7/25/26 | 0/2/2/2 |
| 54 | 4SU | 1w | 8 | 54 | - | 0/7/25/26 | 0/2/2/2 |
| 32 | 2MG | 2a | 1207 | 32 | - | 3/5/27/28 | 0/3/3/3 |
| 43 | 0TD | 2l | 92 | 43 | - | 3/7/12/14 | - |
| 55 | 4SU | 2x | 8 | 56,55 | - | 1/7/25/26 | 0/2/2/2 |
| 32 | 5MC | 2a | 1400 | 32 | - | 0/7/25/26 | 0/2/2/2 |
| 55 | PSU | 1x | 55 | 55 | - | 1/7/25/26 | 0/2/2/2 |
| 55 | 5MU | 2x | 54 | 55 | - | 0/7/25/26 | 0/2/2/2 |
| 54 | 7MG | 2w | 46 | 54 | - | 3/7/37/38 | 0/3/3/3 |
| 55 | 5MC | 2x | 32 | 55 | - | 0/7/25/26 | 0/2/2/2 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|-------|---------|-----------|---------|
| 1 | 4OC | 1A | 1942 | 1 | - | 3/9/27/30 | 0/2/2/2 |
| 54 | PSU | 1y | 32 | 54 | - | 0/7/25/26 | 0/2/2/2 |
| 32 | 5MC | 1a | 1404 | 32 | - | 0/7/25/26 | 0/2/2/2 |
| 32 | 5MC | 2a | 1407 | 32 | - | 0/7/25/26 | 0/2/2/2 |
| 54 | 5MU | 2y | 54 | 54 | - | 2/7/25/26 | 0/2/2/2 |
| 54 | PSU | 2y | 39 | 54 | - | 0/7/25/26 | 0/2/2/2 |
| 32 | M2G | 2a | 966 | 32 | - | 0/7/29/30 | 0/3/3/3 |
| 1 | OMG | 2A | 2251 | 1,55 | - | 0/5/27/28 | 0/3/3/3 |
| 32 | UR3 | 1a | 1498 | 32 | - | 0/7/25/26 | 0/2/2/2 |
| 54 | PSU | 2y | 32 | 54 | - | 1/7/25/26 | 0/2/2/2 |
| 32 | PSU | 1a | 516 | 32,56 | - | 0/7/25/26 | 0/2/2/2 |
| 32 | 2MG | 1a | 1207 | 32 | - | 0/5/27/28 | 0/3/3/3 |
| 32 | 4OC | 2a | 1402 | 32 | - | 2/9/29/30 | 0/2/2/2 |
| 1 | PSU | 2A | 2605 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 32 | MA6 | 1a | 1518 | 32 | - | 2/7/29/30 | 0/3/3/3 |
| 32 | 7MG | 2a | 527 | 32 | - | 3/7/37/38 | 0/3/3/3 |
| 1 | PSU | 1A | 1939 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 54 | PSU | 1w | 32 | 54 | - | 0/7/25/26 | 0/2/2/2 |
| 54 | PSU | 1w | 55 | 54 | - | 2/7/25/26 | 0/2/2/2 |
| 1 | 2MA | 2A | 2503 | 1,56 | - | 1/3/25/26 | 0/3/3/3 |
| 54 | 7MG | 2y | 46 | 54 | - | 3/7/37/38 | 0/3/3/3 |
| 1 | 5MU | 2A | 1939 | 1,56 | - | 0/7/25/26 | 0/2/2/2 |
| 55 | PSU | 2x | 55 | 55 | - | 0/7/25/26 | 0/2/2/2 |
| 32 | 5MC | 1a | 967 | 32 | - | 2/7/25/26 | 0/2/2/2 |
| 1 | 2MA | 1A | 2515 | 1,56 | - | 1/3/25/26 | 0/3/3/3 |
| 55 | 4SU | 1x | 8 | 56,55 | - | 0/7/25/26 | 0/2/2/2 |
| 32 | 4OC | 1a | 1402 | 32 | - | 2/9/29/30 | 0/2/2/2 |
| 54 | 7MG | 1y | 46 | 54 | - | 2/7/37/38 | 0/3/3/3 |
| 32 | MA6 | 2a | 1518 | 32 | - | 3/7/29/30 | 0/3/3/3 |
| 1 | 5MC | 2A | 1942 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 54 | PSU | 2w | 32 | 54 | - | 0/7/25/26 | 0/2/2/2 |
| 32 | 5MC | 2a | 967 | 32 | - | 0/7/25/26 | 0/2/2/2 |
| 54 | PSU | 1w | 39 | 54 | - | 0/7/25/26 | 0/2/2/2 |
| 32 | UR3 | 2a | 1498 | 32 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | 5MU | 1A | 1961 | 1,56 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | 5MU | 1A | 1937 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | 5MC | 1A | 1964 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 55 | 5MC | 1x | 32 | 55 | - | 0/7/25/26 | 0/2/2/2 |
| 54 | MIA | 2w | 37 | 54 | - | 2/7/29/34 | 0/3/3/3 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|---------|---------|------------|---------|
| 54 | 5MU | 1w | 54 | 54 | - | 0/7/25/26 | 0/2/2/2 |
| 54 | MIA | 2y | 37 | 54 | - | 3/3/25/34 | 0/3/3/3 |
| 54 | 4SU | 2w | 8 | 54 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | 5MC | 2A | 1962 | 1,56 | - | 2/7/25/26 | 0/2/2/2 |
| 1 | 4OC | 2A | 1920 | 1 | - | 1/9/27/30 | 0/2/2/2 |
| 1 | OMG | 1A | 2263 | 1,56,55 | - | 0/5/27/28 | 0/3/3/3 |
| 54 | PSU | 1y | 39 | 54 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | 2MU | 1A | 2564 | 1,56 | - | 0/9/27/28 | 0/2/2/2 |
| 1 | 5MC | 1A | 1984 | 1,56 | - | 0/7/25/26 | 0/2/2/2 |
| 54 | 4SU | 2y | 8 | 54 | - | 1/7/25/26 | 0/2/2/2 |
| 1 | PSU | 2A | 1917 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | PSU | 1A | 1933 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 54 | PSU | 1y | 55 | 54 | - | 1/7/25/26 | 0/2/2/2 |
| 54 | 7MG | 1w | 46 | 54 | - | 2/7/37/38 | 0/3/3/3 |
| 54 | MIA | 1w | 37 | 54 | - | 3/11/33/34 | 0/3/3/3 |
| 32 | MA6 | 2a | 1519 | 32 | - | 4/7/29/30 | 0/3/3/3 |
| 54 | PSU | 2w | 55 | 54 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | 5MU | 2A | 1915 | 1 | - | 0/7/25/26 | 0/2/2/2 |

All (210) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 43 | 2l | 92 | 0TD | CB-SB | -12.23 | 1.69 | 1.82 |
| 43 | 1l | 92 | 0TD | CB-SB | -12.05 | 1.69 | 1.82 |
| 54 | 1w | 37 | MIA | C2-S10 | -7.15 | 1.69 | 1.75 |
| 54 | 1w | 37 | MIA | C13-C14 | 7.02 | 1.52 | 1.32 |
| 54 | 2w | 37 | MIA | C2-S10 | -6.73 | 1.70 | 1.75 |
| 32 | 2a | 966 | M2G | C2-N3 | 5.12 | 1.36 | 1.30 |
| 55 | 1x | 8 | 4SU | C4-N3 | -4.63 | 1.32 | 1.37 |
| 55 | 2x | 8 | 4SU | C4-N3 | -4.58 | 1.32 | 1.37 |
| 54 | 2y | 8 | 4SU | C4-S4 | -4.54 | 1.59 | 1.68 |
| 54 | 2w | 8 | 4SU | C4-S4 | -4.47 | 1.59 | 1.68 |
| 55 | 1x | 8 | 4SU | C4-S4 | -4.42 | 1.60 | 1.68 |
| 32 | 1a | 966 | M2G | C2-N3 | 4.42 | 1.36 | 1.30 |
| 54 | 1w | 8 | 4SU | C4-S4 | -4.28 | 1.60 | 1.68 |
| 54 | 1w | 46 | 7MG | C4-N9 | -4.13 | 1.32 | 1.37 |
| 54 | 1w | 55 | PSU | C6-C5 | 4.01 | 1.40 | 1.35 |
| 55 | 2x | 8 | 4SU | C4-S4 | -4.01 | 1.60 | 1.68 |
| 32 | 2a | 527 | 7MG | C4-N9 | -3.98 | 1.33 | 1.37 |
| 54 | 1y | 32 | PSU | C6-C5 | 3.92 | 1.39 | 1.35 |
| 54 | 1y | 39 | PSU | C6-C5 | 3.92 | 1.39 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 54 | 2w | 55 | PSU | C6-C5 | 3.92 | 1.39 | 1.35 |
| 54 | 1y | 8 | 4SU | C4-S4 | -3.91 | 1.61 | 1.68 |
| 54 | 2w | 46 | 7MG | C4-N9 | -3.84 | 1.33 | 1.37 |
| 55 | 1x | 8 | 4SU | C5-C4 | -3.68 | 1.37 | 1.42 |
| 54 | 2w | 39 | PSU | C6-C5 | 3.68 | 1.39 | 1.35 |
| 54 | 1w | 32 | PSU | C6-C5 | 3.61 | 1.39 | 1.35 |
| 55 | 2x | 55 | PSU | C6-C5 | 3.60 | 1.39 | 1.35 |
| 54 | 2y | 32 | PSU | C6-C5 | 3.57 | 1.39 | 1.35 |
| 54 | 2y | 39 | PSU | C6-C5 | 3.50 | 1.39 | 1.35 |
| 55 | 1x | 8 | 4SU | C2-N3 | -3.49 | 1.31 | 1.38 |
| 1 | 2A | 1911 | PSU | C6-C5 | 3.45 | 1.39 | 1.35 |
| 1 | 1A | 1933 | PSU | C6-C5 | 3.43 | 1.39 | 1.35 |
| 54 | 2y | 46 | 7MG | C5-C4 | 3.42 | 1.49 | 1.38 |
| 54 | 2w | 32 | PSU | C6-C5 | 3.41 | 1.39 | 1.35 |
| 55 | 1x | 55 | PSU | C6-C5 | 3.37 | 1.39 | 1.35 |
| 54 | 1y | 8 | 4SU | C4-N3 | -3.32 | 1.34 | 1.37 |
| 32 | 2a | 516 | PSU | C6-C5 | 3.32 | 1.39 | 1.35 |
| 1 | 1A | 1939 | PSU | C6-C5 | 3.31 | 1.39 | 1.35 |
| 54 | 1y | 55 | PSU | C6-C5 | 3.30 | 1.39 | 1.35 |
| 54 | 2y | 54 | 5MU | C2-N1 | 3.29 | 1.43 | 1.38 |
| 1 | 2A | 2605 | PSU | C6-C5 | 3.24 | 1.39 | 1.35 |
| 1 | 2A | 1917 | PSU | C6-C5 | 3.21 | 1.39 | 1.35 |
| 32 | 1a | 527 | 7MG | C5-C4 | 3.18 | 1.48 | 1.38 |
| 55 | 1x | 32 | 5MC | C6-C5 | 3.18 | 1.39 | 1.34 |
| 32 | 1a | 516 | PSU | C6-C5 | 3.18 | 1.39 | 1.35 |
| 54 | 1y | 46 | 7MG | C5-C4 | 3.17 | 1.48 | 1.38 |
| 54 | 1w | 39 | PSU | C6-C5 | 3.11 | 1.38 | 1.35 |
| 32 | 1a | 527 | 7MG | C4-N9 | -3.10 | 1.34 | 1.37 |
| 54 | 1y | 54 | 5MU | C6-C5 | 3.09 | 1.39 | 1.34 |
| 55 | 2x | 8 | 4SU | C2-N3 | -3.05 | 1.32 | 1.38 |
| 54 | 1w | 46 | 7MG | C5-C4 | 2.99 | 1.47 | 1.38 |
| 55 | 2x | 54 | 5MU | C6-C5 | 2.97 | 1.39 | 1.34 |
| 55 | 2x | 8 | 4SU | C5-C4 | -2.97 | 1.38 | 1.42 |
| 1 | 1A | 1937 | 5MU | C6-C5 | 2.96 | 1.39 | 1.34 |
| 32 | 2a | 1404 | 5MC | C6-C5 | 2.95 | 1.39 | 1.34 |
| 32 | 1a | 967 | 5MC | C6-C5 | 2.95 | 1.39 | 1.34 |
| 1 | 2A | 2251 | OMG | C6-N1 | -2.92 | 1.33 | 1.37 |
| 54 | 2w | 46 | 7MG | C5-C4 | 2.92 | 1.47 | 1.38 |
| 54 | 1y | 54 | 5MU | C2-N1 | 2.90 | 1.43 | 1.38 |
| 1 | 1A | 2263 | OMG | C6-N1 | -2.90 | 1.33 | 1.37 |
| 32 | 1a | 527 | 7MG | C8-N9 | 2.88 | 1.47 | 1.46 |
| 32 | 2a | 1407 | 5MC | C6-C5 | 2.86 | 1.39 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 1 | 2A | 1915 | 5MU | C6-C5 | 2.84 | 1.39 | 1.34 |
| 32 | 1a | 966 | M2G | C6-N1 | -2.83 | 1.33 | 1.37 |
| 54 | 2y | 8 | 4SU | C4-N3 | -2.82 | 1.34 | 1.37 |
| 1 | 2A | 2605 | PSU | C4-N3 | -2.82 | 1.33 | 1.38 |
| 54 | 1w | 54 | 5MU | C4-N3 | -2.81 | 1.33 | 1.38 |
| 54 | 2y | 46 | 7MG | C8-N9 | 2.80 | 1.47 | 1.46 |
| 1 | 1A | 2617 | PSU | C6-C5 | 2.80 | 1.38 | 1.35 |
| 1 | 2A | 1915 | 5MU | C2-N1 | 2.78 | 1.42 | 1.38 |
| 1 | 1A | 2617 | PSU | C4-N3 | -2.77 | 1.33 | 1.38 |
| 1 | 1A | 1933 | PSU | C4-N3 | -2.77 | 1.33 | 1.38 |
| 54 | 2y | 55 | PSU | C6-C5 | 2.76 | 1.38 | 1.35 |
| 1 | 1A | 1961 | 5MU | C6-C5 | 2.74 | 1.39 | 1.34 |
| 55 | 2x | 32 | 5MC | C6-C5 | 2.73 | 1.39 | 1.34 |
| 32 | 2a | 967 | 5MC | C6-C5 | 2.73 | 1.39 | 1.34 |
| 54 | 2w | 39 | PSU | C4-N3 | -2.72 | 1.33 | 1.38 |
| 32 | 2a | 527 | 7MG | C5-C4 | 2.72 | 1.47 | 1.38 |
| 54 | 2y | 37 | MIA | C2-N3 | 2.71 | 1.36 | 1.32 |
| 54 | 1y | 37 | MIA | C5-C4 | 2.71 | 1.48 | 1.40 |
| 54 | 1w | 8 | 4SU | C4-N3 | -2.71 | 1.34 | 1.37 |
| 54 | 1y | 54 | 5MU | C4-N3 | -2.70 | 1.33 | 1.38 |
| 54 | 1w | 54 | 5MU | C6-C5 | 2.70 | 1.39 | 1.34 |
| 1 | 1A | 1964 | 5MC | C6-C5 | 2.70 | 1.39 | 1.34 |
| 1 | 2A | 1917 | PSU | C4-N3 | -2.70 | 1.33 | 1.38 |
| 32 | 1a | 966 | M2G | C2-N2 | 2.70 | 1.40 | 1.35 |
| 1 | 1A | 1937 | 5MU | C4-N3 | -2.69 | 1.33 | 1.38 |
| 32 | 1a | 1207 | 2MG | C6-N1 | -2.69 | 1.33 | 1.37 |
| 32 | 1a | 1400 | 5MC | C6-C5 | 2.69 | 1.39 | 1.34 |
| 1 | 2A | 1942 | 5MC | C6-C5 | 2.68 | 1.39 | 1.34 |
| 54 | 2y | 37 | MIA | C5-C4 | 2.68 | 1.48 | 1.40 |
| 32 | 2a | 1518 | MA6 | C5-C4 | 2.68 | 1.48 | 1.40 |
| 1 | 1A | 1984 | 5MC | C6-C5 | 2.68 | 1.39 | 1.34 |
| 54 | 2y | 8 | 4SU | C5-C4 | -2.68 | 1.39 | 1.42 |
| 32 | 2a | 1519 | MA6 | C5-C4 | 2.68 | 1.48 | 1.40 |
| 32 | 1a | 1407 | 5MC | C6-C5 | 2.66 | 1.39 | 1.34 |
| 32 | 2a | 1400 | 5MC | C6-C5 | 2.66 | 1.39 | 1.34 |
| 54 | 1w | 46 | 7MG | C6-N1 | -2.65 | 1.33 | 1.38 |
| 54 | 2y | 8 | 4SU | C2-N1 | 2.65 | 1.42 | 1.38 |
| 54 | 2w | 8 | 4SU | C4-N3 | -2.65 | 1.34 | 1.37 |
| 54 | 1y | 54 | 5MU | C4-C5 | 2.64 | 1.49 | 1.44 |
| 55 | 1x | 55 | PSU | C4-N3 | -2.62 | 1.34 | 1.38 |
| 1 | 2A | 1915 | 5MU | C4-N3 | -2.62 | 1.34 | 1.38 |
| 54 | 2y | 54 | 5MU | C6-C5 | 2.62 | 1.38 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 1 | 2A | 1939 | 5MU | C4-N3 | -2.62 | 1.34 | 1.38 |
| 55 | 1x | 54 | 5MU | C6-C5 | 2.61 | 1.38 | 1.34 |
| 54 | 2w | 8 | 4SU | C2-N1 | 2.60 | 1.42 | 1.38 |
| 54 | 2w | 37 | MIA | C5-C4 | 2.60 | 1.47 | 1.40 |
| 1 | 2A | 1915 | 5MU | C4-C5 | 2.59 | 1.49 | 1.44 |
| 1 | 2A | 1939 | 5MU | C6-C5 | 2.59 | 1.38 | 1.34 |
| 1 | 2A | 1962 | 5MC | C6-N1 | -2.59 | 1.33 | 1.38 |
| 32 | 2a | 966 | M2G | C2-N2 | 2.59 | 1.40 | 1.35 |
| 54 | 2w | 54 | 5MU | C6-C5 | 2.58 | 1.38 | 1.34 |
| 54 | 1w | 55 | PSU | C4-N3 | -2.56 | 1.34 | 1.38 |
| 55 | 2x | 54 | 5MU | C4-N3 | -2.56 | 1.34 | 1.38 |
| 54 | 2y | 46 | 7MG | C6-N1 | -2.54 | 1.34 | 1.38 |
| 32 | 2a | 966 | M2G | C6-N1 | -2.54 | 1.34 | 1.37 |
| 54 | 1y | 39 | PSU | C4-N3 | -2.54 | 1.34 | 1.38 |
| 54 | 1y | 37 | MIA | C2-N3 | 2.53 | 1.36 | 1.32 |
| 1 | 1A | 2564 | 2MU | C4-N3 | -2.53 | 1.34 | 1.38 |
| 54 | 2w | 37 | MIA | C6-N1 | 2.53 | 1.36 | 1.32 |
| 54 | 2y | 54 | 5MU | C4-C5 | 2.50 | 1.48 | 1.44 |
| 1 | 1A | 1939 | PSU | C4-N3 | -2.50 | 1.34 | 1.38 |
| 54 | 2y | 39 | PSU | C4-N3 | -2.49 | 1.34 | 1.38 |
| 1 | 1A | 1937 | 5MU | C2-N1 | 2.48 | 1.42 | 1.38 |
| 32 | 1a | 1518 | MA6 | C5-C4 | 2.48 | 1.47 | 1.40 |
| 1 | 1A | 1961 | 5MU | C4-N3 | -2.48 | 1.34 | 1.38 |
| 55 | 1x | 54 | 5MU | C4-N3 | -2.47 | 1.34 | 1.38 |
| 54 | 1y | 55 | PSU | C4-N3 | -2.47 | 1.34 | 1.38 |
| 54 | 1w | 39 | PSU | C4-N3 | -2.47 | 1.34 | 1.38 |
| 54 | 1w | 32 | PSU | C4-N3 | -2.46 | 1.34 | 1.38 |
| 1 | 2A | 2552 | 2MU | C5-C4 | 2.46 | 1.49 | 1.43 |
| 32 | 2a | 527 | 7MG | C6-N1 | -2.45 | 1.34 | 1.38 |
| 54 | 2y | 55 | PSU | C4-N3 | -2.44 | 1.34 | 1.38 |
| 54 | 2w | 54 | 5MU | C4-N3 | -2.43 | 1.34 | 1.38 |
| 54 | 1y | 46 | 7MG | C4-N9 | -2.42 | 1.34 | 1.37 |
| 54 | 2y | 54 | 5MU | C4-N3 | -2.40 | 1.34 | 1.38 |
| 1 | 2A | 1911 | PSU | C4-N3 | -2.38 | 1.34 | 1.38 |
| 54 | 2w | 55 | PSU | C4-N3 | -2.38 | 1.34 | 1.38 |
| 55 | 2x | 55 | PSU | C4-N3 | -2.38 | 1.34 | 1.38 |
| 1 | 1A | 1984 | 5MC | C6-N1 | -2.37 | 1.34 | 1.38 |
| 32 | 1a | 1498 | UR3 | C2-N1 | 2.37 | 1.41 | 1.38 |
| 32 | 2a | 1207 | 2MG | C6-N1 | -2.36 | 1.34 | 1.37 |
| 32 | 1a | 1407 | 5MC | C6-N1 | -2.36 | 1.34 | 1.38 |
| 1 | 2A | 1939 | 5MU | C4-C5 | 2.35 | 1.48 | 1.44 |
| 54 | 2w | 32 | PSU | C4-N3 | -2.35 | 1.34 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 1 | 2A | 1939 | 5MU | C6-N1 | -2.34 | 1.34 | 1.38 |
| 32 | 1a | 1519 | MA6 | C5-C4 | 2.34 | 1.47 | 1.40 |
| 1 | 2A | 1939 | 5MU | C2-N1 | 2.34 | 1.42 | 1.38 |
| 54 | 1w | 8 | 4SU | C2-N1 | 2.34 | 1.42 | 1.38 |
| 1 | 2A | 2605 | PSU | C2-N3 | -2.33 | 1.33 | 1.37 |
| 1 | 1A | 1937 | 5MU | C2-N3 | -2.33 | 1.33 | 1.38 |
| 54 | 1y | 32 | PSU | C4-N3 | -2.33 | 1.34 | 1.38 |
| 1 | 2A | 1942 | 5MC | C6-N1 | -2.33 | 1.34 | 1.38 |
| 1 | 1A | 1961 | 5MU | C6-N1 | -2.33 | 1.34 | 1.38 |
| 1 | 1A | 2515 | 2MA | C2-N3 | 2.31 | 1.36 | 1.31 |
| 32 | 1a | 1400 | 5MC | C6-N1 | -2.31 | 1.34 | 1.38 |
| 55 | 2x | 32 | 5MC | C6-N1 | -2.31 | 1.34 | 1.38 |
| 1 | 1A | 2617 | PSU | C2-N3 | -2.30 | 1.33 | 1.37 |
| 54 | 1y | 46 | 7MG | C6-N1 | -2.30 | 1.34 | 1.38 |
| 54 | 1y | 46 | 7MG | C8-N9 | 2.30 | 1.47 | 1.46 |
| 55 | 1x | 54 | 5MU | C6-N1 | -2.30 | 1.34 | 1.38 |
| 54 | 2w | 54 | 5MU | C4-C5 | 2.29 | 1.48 | 1.44 |
| 32 | 1a | 1404 | 5MC | C6-N1 | -2.29 | 1.34 | 1.38 |
| 55 | 2x | 54 | 5MU | C4-C5 | 2.28 | 1.48 | 1.44 |
| 32 | 2a | 516 | PSU | C4-N3 | -2.27 | 1.34 | 1.38 |
| 1 | 2A | 2552 | 2MU | C4-N3 | -2.27 | 1.34 | 1.38 |
| 1 | 2A | 1915 | 5MU | C6-N1 | -2.26 | 1.34 | 1.38 |
| 54 | 1w | 37 | MIA | C5-C4 | 2.26 | 1.46 | 1.40 |
| 32 | 1a | 1404 | 5MC | C6-C5 | 2.26 | 1.38 | 1.34 |
| 54 | 1w | 8 | 4SU | C5-C4 | -2.25 | 1.39 | 1.42 |
| 32 | 1a | 516 | PSU | C4-N3 | -2.25 | 1.34 | 1.38 |
| 54 | 1w | 54 | 5MU | C2-N3 | -2.25 | 1.34 | 1.38 |
| 54 | 2y | 32 | PSU | C4-N3 | -2.25 | 1.34 | 1.38 |
| 54 | 1y | 8 | 4SU | C5-C4 | -2.22 | 1.39 | 1.42 |
| 54 | 2w | 54 | 5MU | C2-N1 | 2.20 | 1.42 | 1.38 |
| 1 | 2A | 1939 | 5MU | C2-N3 | -2.20 | 1.34 | 1.38 |
| 32 | 2a | 1407 | 5MC | C6-N1 | -2.19 | 1.34 | 1.38 |
| 54 | 2y | 55 | PSU | C2-N1 | -2.18 | 1.33 | 1.36 |
| 32 | 2a | 1498 | UR3 | C2-N1 | 2.17 | 1.41 | 1.38 |
| 54 | 2w | 8 | 4SU | C5-C4 | -2.17 | 1.39 | 1.42 |
| 1 | 2A | 1962 | 5MC | C6-C5 | 2.16 | 1.38 | 1.34 |
| 32 | 2a | 1400 | 5MC | C6-N1 | -2.15 | 1.34 | 1.38 |
| 55 | 1x | 32 | 5MC | C6-N1 | -2.15 | 1.34 | 1.38 |
| 54 | 2y | 46 | 7MG | C2-N3 | 2.14 | 1.38 | 1.33 |
| 54 | 2w | 46 | 7MG | C8-N9 | 2.14 | 1.47 | 1.46 |
| 54 | 1y | 54 | 5MU | C2-N3 | -2.13 | 1.34 | 1.38 |
| 32 | 1a | 527 | 7MG | C6-N1 | -2.13 | 1.34 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 55 | 2x | 54 | 5MU | C2-N1 | 2.13 | 1.41 | 1.38 |
| 54 | 1y | 54 | 5MU | C6-N1 | -2.12 | 1.34 | 1.38 |
| 54 | 2w | 54 | 5MU | C6-N1 | -2.10 | 1.34 | 1.38 |
| 55 | 2x | 54 | 5MU | C6-N1 | -2.09 | 1.34 | 1.38 |
| 54 | 1w | 37 | MIA | C6-N1 | 2.08 | 1.35 | 1.32 |
| 54 | 1w | 54 | 5MU | C4-C5 | 2.08 | 1.48 | 1.44 |
| 55 | 2x | 54 | 5MU | C2-N3 | -2.07 | 1.34 | 1.38 |
| 54 | 1y | 8 | 4SU | C6-C5 | 2.06 | 1.39 | 1.35 |
| 1 | 1A | 1937 | 5MU | C4-C5 | 2.06 | 1.48 | 1.44 |
| 1 | 1A | 1933 | PSU | C2-N3 | -2.05 | 1.34 | 1.37 |
| 1 | 1A | 1961 | 5MU | C2-N3 | -2.05 | 1.34 | 1.38 |
| 54 | 2w | 54 | 5MU | C2-N3 | -2.05 | 1.34 | 1.38 |
| 32 | 2a | 1404 | 5MC | C6-N1 | -2.04 | 1.34 | 1.38 |
| 54 | 1y | 32 | PSU | C4-C5 | 2.03 | 1.49 | 1.44 |
| 54 | 1w | 46 | 7MG | C5-N7 | -2.02 | 1.33 | 1.35 |
| 54 | 2w | 32 | PSU | C4-C5 | 2.02 | 1.49 | 1.44 |
| 55 | 1x | 54 | 5MU | C2-N3 | -2.02 | 1.34 | 1.38 |
| 32 | 1a | 967 | 5MC | C6-N1 | -2.01 | 1.34 | 1.38 |
| 54 | 2w | 46 | 7MG | C6-N1 | -2.01 | 1.35 | 1.38 |
| 1 | 1A | 2564 | 2MU | C5-C4 | 2.01 | 1.48 | 1.43 |
| 55 | 2x | 8 | 4SU | O2-C2 | 2.01 | 1.26 | 1.23 |
| 54 | 1w | 54 | 5MU | C2-N1 | 2.01 | 1.41 | 1.38 |
| 55 | 2x | 8 | 4SU | C2-N1 | 2.00 | 1.41 | 1.38 |

All (316) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 43 | 1l | 92 | 0TD | CSB-SB-CB | 11.41 | 123.08 | 102.44 |
| 54 | 2y | 46 | 7MG | N9-C4-N3 | 9.87 | 140.24 | 125.47 |
| 54 | 1w | 37 | MIA | C12-C13-C14 | -9.01 | 109.61 | 127.14 |
| 54 | 1y | 46 | 7MG | N9-C4-N3 | 8.89 | 138.76 | 125.47 |
| 54 | 1w | 46 | 7MG | N9-C4-N3 | 8.39 | 138.02 | 125.47 |
| 32 | 2a | 527 | 7MG | N9-C4-N3 | 8.29 | 137.86 | 125.47 |
| 32 | 1a | 527 | 7MG | N9-C4-N3 | 8.26 | 137.82 | 125.47 |
| 43 | 2l | 92 | 0TD | CSB-SB-CB | -8.17 | 87.65 | 102.44 |
| 54 | 2w | 46 | 7MG | N9-C4-N3 | 7.92 | 137.31 | 125.47 |
| 54 | 2w | 8 | 4SU | C4-N3-C2 | -7.65 | 119.91 | 127.34 |
| 54 | 1w | 8 | 4SU | C4-N3-C2 | -7.02 | 120.52 | 127.34 |
| 32 | 2a | 1498 | UR3 | C4-N3-C2 | -6.60 | 118.35 | 124.56 |
| 54 | 2w | 8 | 4SU | C5-C4-N3 | 6.39 | 120.61 | 114.69 |
| 32 | 1a | 1498 | UR3 | C4-N3-C2 | -6.26 | 118.67 | 124.56 |
| 1 | 2A | 1917 | PSU | N1-C2-N3 | 6.26 | 122.22 | 115.13 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|----------|-------|-------------|----------|
| 54 | 1y | 55 | PSU | N1-C2-N3 | 6.15 | 122.10 | 115.13 |
| 54 | 2y | 8 | 4SU | C4-N3-C2 | -6.15 | 121.37 | 127.34 |
| 54 | 1w | 8 | 4SU | C5-C4-N3 | 6.14 | 120.38 | 114.69 |
| 54 | 2y | 8 | 4SU | C5-C4-N3 | 6.11 | 120.35 | 114.69 |
| 32 | 2a | 527 | 7MG | N9-C8-N7 | -5.97 | 94.83 | 103.38 |
| 1 | 1A | 1933 | PSU | N1-C2-N3 | 5.96 | 121.89 | 115.13 |
| 54 | 2w | 55 | PSU | N1-C2-N3 | 5.93 | 121.85 | 115.13 |
| 54 | 1w | 39 | PSU | N1-C2-N3 | 5.91 | 121.83 | 115.13 |
| 55 | 1x | 55 | PSU | N1-C2-N3 | 5.88 | 121.79 | 115.13 |
| 54 | 1w | 55 | PSU | N1-C2-N3 | 5.81 | 121.71 | 115.13 |
| 1 | 1A | 1937 | 5MU | C5-C4-N3 | 5.79 | 120.26 | 115.31 |
| 55 | 2x | 55 | PSU | N1-C2-N3 | 5.79 | 121.69 | 115.13 |
| 54 | 2w | 32 | PSU | N1-C2-N3 | 5.72 | 121.61 | 115.13 |
| 1 | 1A | 1961 | 5MU | C4-N3-C2 | -5.67 | 120.01 | 127.35 |
| 54 | 2y | 39 | PSU | N1-C2-N3 | 5.66 | 121.54 | 115.13 |
| 54 | 2y | 46 | 7MG | C5-C4-N3 | -5.65 | 117.37 | 128.13 |
| 1 | 2A | 1915 | 5MU | C4-N3-C2 | -5.64 | 120.05 | 127.35 |
| 1 | 2A | 2605 | PSU | N1-C2-N3 | 5.63 | 121.51 | 115.13 |
| 54 | 2y | 32 | PSU | N1-C2-N3 | 5.62 | 121.50 | 115.13 |
| 1 | 1A | 2617 | PSU | N1-C2-N3 | 5.57 | 121.44 | 115.13 |
| 32 | 2a | 516 | PSU | N1-C2-N3 | 5.56 | 121.44 | 115.13 |
| 32 | 1a | 516 | PSU | N1-C2-N3 | 5.56 | 121.43 | 115.13 |
| 54 | 1y | 39 | PSU | N1-C2-N3 | 5.55 | 121.42 | 115.13 |
| 1 | 2A | 2552 | 2MU | N3-C2-N1 | 5.52 | 122.22 | 114.89 |
| 1 | 1A | 1937 | 5MU | C4-N3-C2 | -5.50 | 120.23 | 127.35 |
| 1 | 1A | 1939 | PSU | N1-C2-N3 | 5.47 | 121.33 | 115.13 |
| 1 | 1A | 2564 | 2MU | N3-C2-N1 | 5.47 | 122.15 | 114.89 |
| 54 | 1y | 8 | 4SU | C4-N3-C2 | -5.45 | 122.05 | 127.34 |
| 1 | 1A | 1961 | 5MU | O4-C4-C5 | -5.39 | 118.65 | 124.90 |
| 54 | 2w | 46 | 7MG | N9-C8-N7 | -5.38 | 95.68 | 103.38 |
| 54 | 1y | 32 | PSU | N1-C2-N3 | 5.37 | 121.21 | 115.13 |
| 1 | 2A | 1939 | 5MU | C4-N3-C2 | -5.34 | 120.43 | 127.35 |
| 54 | 1w | 46 | 7MG | N9-C8-N7 | -5.34 | 95.74 | 103.38 |
| 1 | 2A | 2552 | 2MU | C4-N3-C2 | -5.23 | 119.68 | 126.58 |
| 1 | 2A | 1939 | 5MU | C5-C4-N3 | 5.23 | 119.77 | 115.31 |
| 54 | 1y | 46 | 7MG | N9-C8-N7 | -5.21 | 95.93 | 103.38 |
| 1 | 2A | 1915 | 5MU | N3-C2-N1 | 5.18 | 121.77 | 114.89 |
| 54 | 1w | 32 | PSU | N1-C2-N3 | 5.17 | 120.99 | 115.13 |
| 32 | 1a | 527 | 7MG | C5-C4-N3 | -5.16 | 118.30 | 128.13 |
| 1 | 1A | 1937 | 5MU | O4-C4-C5 | -5.13 | 118.96 | 124.90 |
| 1 | 2A | 1911 | PSU | N1-C2-N3 | 5.12 | 120.93 | 115.13 |
| 54 | 1y | 46 | 7MG | C5-C4-N3 | -5.07 | 118.47 | 128.13 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 54 | 2y | 55 | PSU | N1-C2-N3 | 5.06 | 120.86 | 115.13 |
| 1 | 1A | 1961 | 5MU | N3-C2-N1 | 5.02 | 121.56 | 114.89 |
| 1 | 2A | 1915 | 5MU | C5-C4-N3 | 4.94 | 119.53 | 115.31 |
| 54 | 2w | 39 | PSU | N1-C2-N3 | 4.92 | 120.71 | 115.13 |
| 32 | 1a | 527 | 7MG | N9-C8-N7 | -4.90 | 96.37 | 103.38 |
| 1 | 1A | 1937 | 5MU | N3-C2-N1 | 4.88 | 121.37 | 114.89 |
| 54 | 2w | 46 | 7MG | C5-C4-N3 | -4.81 | 118.97 | 128.13 |
| 54 | 1y | 54 | 5MU | C4-N3-C2 | -4.80 | 121.14 | 127.35 |
| 54 | 1y | 54 | 5MU | N3-C2-N1 | 4.80 | 121.26 | 114.89 |
| 1 | 1A | 1961 | 5MU | C5-C4-N3 | 4.75 | 119.37 | 115.31 |
| 1 | 1A | 2564 | 2MU | C4-N3-C2 | -4.75 | 120.32 | 126.58 |
| 55 | 2x | 54 | 5MU | N3-C2-N1 | 4.71 | 121.15 | 114.89 |
| 55 | 1x | 8 | 4SU | C6-C5-C4 | -4.70 | 115.88 | 119.95 |
| 32 | 2a | 527 | 7MG | C5-C4-N3 | -4.70 | 119.18 | 128.13 |
| 54 | 2y | 46 | 7MG | N9-C8-N7 | -4.66 | 96.71 | 103.38 |
| 54 | 2y | 46 | 7MG | C2-N3-C4 | 4.65 | 120.58 | 112.30 |
| 1 | 1A | 1961 | 5MU | C5-C6-N1 | -4.62 | 118.59 | 123.34 |
| 54 | 1w | 46 | 7MG | C5-C4-N3 | -4.61 | 119.34 | 128.13 |
| 54 | 2y | 54 | 5MU | C5-C4-N3 | 4.61 | 119.24 | 115.31 |
| 55 | 1x | 54 | 5MU | N3-C2-N1 | 4.58 | 120.97 | 114.89 |
| 54 | 2y | 54 | 5MU | C4-N3-C2 | -4.51 | 121.52 | 127.35 |
| 54 | 1w | 37 | MIA | C5-C6-N1 | -4.48 | 117.09 | 120.81 |
| 54 | 1w | 54 | 5MU | C5-C4-N3 | 4.45 | 119.11 | 115.31 |
| 1 | 2A | 1939 | 5MU | N3-C2-N1 | 4.44 | 120.78 | 114.89 |
| 55 | 2x | 54 | 5MU | C4-N3-C2 | -4.42 | 121.64 | 127.35 |
| 54 | 2w | 46 | 7MG | C2-N3-C4 | 4.33 | 120.01 | 112.30 |
| 54 | 1y | 54 | 5MU | C5-C4-N3 | 4.33 | 119.00 | 115.31 |
| 54 | 2w | 54 | 5MU | C4-N3-C2 | -4.33 | 121.75 | 127.35 |
| 55 | 1x | 54 | 5MU | O4-C4-C5 | -4.31 | 119.90 | 124.90 |
| 32 | 1a | 527 | 7MG | C2-N3-C4 | 4.31 | 119.97 | 112.30 |
| 54 | 2w | 54 | 5MU | C5-C4-N3 | 4.30 | 118.98 | 115.31 |
| 54 | 1w | 37 | MIA | C16-C14-C13 | -4.30 | 110.21 | 122.65 |
| 55 | 1x | 54 | 5MU | C4-N3-C2 | -4.25 | 121.85 | 127.35 |
| 1 | 2A | 1939 | 5MU | C5-C6-N1 | -4.22 | 119.00 | 123.34 |
| 54 | 1y | 8 | 4SU | N3-C2-N1 | 4.21 | 120.47 | 114.89 |
| 54 | 1y | 46 | 7MG | C2-N3-C4 | 4.19 | 119.77 | 112.30 |
| 54 | 1w | 54 | 5MU | C4-N3-C2 | -4.18 | 121.94 | 127.35 |
| 54 | 2w | 8 | 4SU | N3-C2-N1 | 4.15 | 120.41 | 114.89 |
| 55 | 1x | 55 | PSU | C4-N3-C2 | -4.15 | 120.36 | 126.34 |
| 54 | 2y | 8 | 4SU | C5-C4-S4 | -4.15 | 119.12 | 124.47 |
| 32 | 1a | 1519 | MA6 | N3-C2-N1 | -4.14 | 122.20 | 128.68 |
| 54 | 2w | 37 | MIA | C5-C6-N1 | -4.12 | 117.39 | 120.81 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 1 | 2A | 1915 | 5MU | O4-C4-C5 | -4.10 | 120.15 | 124.90 |
| 54 | 1w | 37 | MIA | C15-C14-C13 | -4.10 | 110.81 | 122.65 |
| 54 | 2y | 54 | 5MU | N3-C2-N1 | 4.09 | 120.32 | 114.89 |
| 54 | 1w | 8 | 4SU | N3-C2-N1 | 4.06 | 120.28 | 114.89 |
| 54 | 2w | 37 | MIA | C2-N3-C4 | 4.05 | 120.90 | 115.32 |
| 1 | 2A | 1915 | 5MU | C5-C6-N1 | -4.01 | 119.21 | 123.34 |
| 54 | 1y | 8 | 4SU | C5-C4-N3 | 4.01 | 118.41 | 114.69 |
| 55 | 2x | 8 | 4SU | C1'-N1-C2 | 3.99 | 124.79 | 117.57 |
| 1 | 2A | 1917 | PSU | C4-N3-C2 | -3.99 | 120.59 | 126.34 |
| 54 | 1w | 39 | PSU | C4-N3-C2 | -3.98 | 120.60 | 126.34 |
| 54 | 2y | 54 | 5MU | O4-C4-C5 | -3.97 | 120.30 | 124.90 |
| 1 | 1A | 2617 | PSU | C4-N3-C2 | -3.96 | 120.63 | 126.34 |
| 54 | 1w | 37 | MIA | C2-N3-C4 | 3.93 | 120.74 | 115.32 |
| 1 | 2A | 2605 | PSU | C4-N3-C2 | -3.92 | 120.69 | 126.34 |
| 55 | 2x | 55 | PSU | C4-N3-C2 | -3.90 | 120.72 | 126.34 |
| 1 | 2A | 1939 | 5MU | O4-C4-C5 | -3.90 | 120.38 | 124.90 |
| 54 | 1w | 54 | 5MU | N3-C2-N1 | 3.84 | 119.99 | 114.89 |
| 1 | 1A | 1937 | 5MU | C5-C6-N1 | -3.83 | 119.40 | 123.34 |
| 54 | 2w | 54 | 5MU | N3-C2-N1 | 3.81 | 119.95 | 114.89 |
| 1 | 1A | 1939 | PSU | C4-N3-C2 | -3.81 | 120.85 | 126.34 |
| 32 | 1a | 967 | 5MC | C5-C6-N1 | -3.80 | 119.43 | 123.34 |
| 32 | 1a | 1404 | 5MC | C5-C6-N1 | -3.79 | 119.44 | 123.34 |
| 32 | 1a | 1400 | 5MC | C5-C6-N1 | -3.78 | 119.45 | 123.34 |
| 32 | 1a | 516 | PSU | C4-N3-C2 | -3.77 | 120.91 | 126.34 |
| 54 | 2w | 8 | 4SU | C5-C4-S4 | -3.76 | 119.62 | 124.47 |
| 32 | 2a | 527 | 7MG | C2-N3-C4 | 3.75 | 118.98 | 112.30 |
| 32 | 2a | 516 | PSU | C4-N3-C2 | -3.75 | 120.94 | 126.34 |
| 54 | 2y | 55 | PSU | C4-N3-C2 | -3.75 | 120.94 | 126.34 |
| 54 | 2w | 55 | PSU | C4-N3-C2 | -3.75 | 120.94 | 126.34 |
| 1 | 1A | 1933 | PSU | C4-N3-C2 | -3.74 | 120.95 | 126.34 |
| 54 | 1w | 8 | 4SU | C5-C4-S4 | -3.72 | 119.67 | 124.47 |
| 54 | 2y | 37 | MIA | N3-C2-N1 | -3.72 | 122.87 | 128.68 |
| 1 | 2A | 2552 | 2MU | O2-C2-N1 | -3.72 | 117.84 | 122.79 |
| 1 | 2A | 1917 | PSU | O2-C2-N1 | -3.70 | 118.72 | 122.79 |
| 54 | 2y | 39 | PSU | C4-N3-C2 | -3.69 | 121.02 | 126.34 |
| 54 | 1w | 46 | 7MG | C2-N3-C4 | 3.68 | 118.85 | 112.30 |
| 54 | 2w | 54 | 5MU | O4-C4-C5 | -3.67 | 120.64 | 124.90 |
| 54 | 1y | 55 | PSU | O2-C2-N1 | -3.67 | 118.75 | 122.79 |
| 54 | 2y | 32 | PSU | C4-N3-C2 | -3.67 | 121.06 | 126.34 |
| 54 | 2y | 55 | PSU | O2-C2-N1 | -3.66 | 118.76 | 122.79 |
| 54 | 1y | 55 | PSU | C4-N3-C2 | -3.66 | 121.07 | 126.34 |
| 54 | 1y | 54 | 5MU | C5-C6-N1 | -3.64 | 119.59 | 123.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 54 | 1w | 54 | 5MU | O4-C4-C5 | -3.62 | 120.70 | 124.90 |
| 54 | 1y | 37 | MIA | N3-C2-N1 | -3.62 | 123.02 | 128.68 |
| 1 | 1A | 2564 | 2MU | O2-C2-N1 | -3.61 | 117.98 | 122.79 |
| 32 | 2a | 967 | 5MC | C5-C6-N1 | -3.61 | 119.63 | 123.34 |
| 32 | 2a | 1518 | MA6 | C4-C5-N7 | -3.60 | 105.65 | 109.40 |
| 32 | 1a | 1518 | MA6 | C9-N6-C6 | -3.59 | 108.66 | 119.51 |
| 55 | 1x | 8 | 4SU | C5-C4-N3 | 3.58 | 118.01 | 114.69 |
| 55 | 1x | 32 | 5MC | C5-C6-N1 | -3.58 | 119.66 | 123.34 |
| 55 | 2x | 54 | 5MU | O4-C4-C5 | -3.57 | 120.77 | 124.90 |
| 54 | 1w | 54 | 5MU | C5-C6-N1 | -3.56 | 119.67 | 123.34 |
| 55 | 2x | 54 | 5MU | C5-C4-N3 | 3.55 | 118.34 | 115.31 |
| 1 | 2A | 1911 | PSU | C4-N3-C2 | -3.54 | 121.24 | 126.34 |
| 32 | 1a | 1518 | MA6 | N3-C2-N1 | -3.51 | 123.19 | 128.68 |
| 32 | 1a | 1518 | MA6 | C4-C5-N7 | -3.50 | 105.75 | 109.40 |
| 54 | 2y | 8 | 4SU | N3-C2-N1 | 3.49 | 119.52 | 114.89 |
| 32 | 2a | 1518 | MA6 | C9-N6-C6 | -3.48 | 108.98 | 119.51 |
| 54 | 2y | 54 | 5MU | C1'-N1-C2 | 3.47 | 123.86 | 117.57 |
| 54 | 2w | 32 | PSU | C4-N3-C2 | -3.47 | 121.34 | 126.34 |
| 55 | 2x | 32 | 5MC | C5-C6-N1 | -3.46 | 119.77 | 123.34 |
| 54 | 2w | 54 | 5MU | C5-C6-N1 | -3.45 | 119.79 | 123.34 |
| 32 | 1a | 516 | PSU | O2-C2-N1 | -3.44 | 119.00 | 122.79 |
| 54 | 2w | 32 | PSU | O2-C2-N1 | -3.42 | 119.02 | 122.79 |
| 32 | 1a | 1407 | 5MC | C5-C4-N3 | -3.42 | 117.98 | 121.67 |
| 54 | 1w | 32 | PSU | O2-C2-N1 | -3.42 | 119.03 | 122.79 |
| 55 | 2x | 54 | 5MU | C5-C6-N1 | -3.41 | 119.83 | 123.34 |
| 1 | 1A | 2564 | 2MU | O4-C4-C5 | -3.40 | 119.18 | 125.16 |
| 1 | 1A | 1933 | PSU | O2-C2-N1 | -3.37 | 119.08 | 122.79 |
| 54 | 2w | 55 | PSU | O2-C2-N1 | -3.36 | 119.09 | 122.79 |
| 32 | 2a | 1400 | 5MC | C5-C6-N1 | -3.35 | 119.89 | 123.34 |
| 54 | 1y | 54 | 5MU | O4-C4-C5 | -3.34 | 121.03 | 124.90 |
| 55 | 1x | 54 | 5MU | C5-C4-N3 | 3.32 | 118.14 | 115.31 |
| 54 | 1w | 55 | PSU | C4-N3-C2 | -3.30 | 121.58 | 126.34 |
| 1 | 1A | 1984 | 5MC | C5-C4-N3 | -3.30 | 118.11 | 121.67 |
| 54 | 1y | 32 | PSU | C4-N3-C2 | -3.30 | 121.59 | 126.34 |
| 1 | 1A | 1961 | 5MU | O2-C2-N1 | -3.29 | 118.41 | 122.79 |
| 54 | 1y | 39 | PSU | C4-N3-C2 | -3.29 | 121.60 | 126.34 |
| 32 | 2a | 1518 | MA6 | N3-C2-N1 | -3.28 | 123.56 | 128.68 |
| 32 | 2a | 1407 | 5MC | C5-C6-N1 | -3.26 | 119.99 | 123.34 |
| 54 | 2y | 54 | 5MU | C1'-N1-C6 | -3.26 | 115.70 | 121.12 |
| 1 | 2A | 1942 | 5MC | C5-C6-N1 | -3.24 | 120.00 | 123.34 |
| 32 | 2a | 1519 | MA6 | C9-N6-C6 | -3.24 | 109.71 | 119.51 |
| 55 | 2x | 8 | 4SU | C5-C4-N3 | 3.23 | 117.69 | 114.69 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1 | 1A | 1964 | 5MC | C5-C6-N1 | -3.23 | 120.02 | 123.34 |
| 54 | 1w | 39 | PSU | O2-C2-N1 | -3.22 | 119.24 | 122.79 |
| 32 | 2a | 1404 | 5MC | C5-C4-N3 | -3.22 | 118.20 | 121.67 |
| 1 | 2A | 1962 | 5MC | C5-C6-N1 | -3.22 | 120.03 | 123.34 |
| 54 | 2y | 39 | PSU | O2-C2-N1 | -3.21 | 119.25 | 122.79 |
| 54 | 1w | 32 | PSU | C4-N3-C2 | -3.18 | 121.76 | 126.34 |
| 54 | 1y | 32 | PSU | O2-C2-N1 | -3.17 | 119.30 | 122.79 |
| 32 | 2a | 516 | PSU | O2-C2-N1 | -3.15 | 119.32 | 122.79 |
| 32 | 2a | 1519 | MA6 | N3-C2-N1 | -3.14 | 123.77 | 128.68 |
| 32 | 1a | 1519 | MA6 | C4-C5-N7 | -3.14 | 106.12 | 109.40 |
| 1 | 2A | 2552 | 2MU | O4-C4-C5 | -3.13 | 119.65 | 125.16 |
| 32 | 1a | 1519 | MA6 | N1-C6-N6 | 3.13 | 120.35 | 117.06 |
| 32 | 2a | 1519 | MA6 | C4-C5-N7 | -3.12 | 106.14 | 109.40 |
| 1 | 2A | 1942 | 5MC | C5-C4-N3 | -3.11 | 118.32 | 121.67 |
| 1 | 1A | 1984 | 5MC | C5-C6-N1 | -3.09 | 120.16 | 123.34 |
| 54 | 2w | 39 | PSU | C4-N3-C2 | -3.07 | 121.92 | 126.34 |
| 32 | 2a | 1407 | 5MC | C5-C4-N3 | -3.06 | 118.37 | 121.67 |
| 54 | 2y | 46 | 7MG | C5-C4-N9 | -3.05 | 102.38 | 106.35 |
| 54 | 1w | 55 | PSU | O2-C2-N1 | -3.04 | 119.44 | 122.79 |
| 43 | 2l | 92 | 0TD | OD2-CG-CB | 3.00 | 119.64 | 113.15 |
| 55 | 1x | 32 | 5MC | C5-C4-N3 | -2.98 | 118.46 | 121.67 |
| 54 | 1w | 37 | MIA | C4-C5-N7 | -2.98 | 106.29 | 109.40 |
| 32 | 2a | 1404 | 5MC | C5-C6-N1 | -2.96 | 120.29 | 123.34 |
| 1 | 2A | 1911 | PSU | O2-C2-N1 | -2.96 | 119.53 | 122.79 |
| 32 | 2a | 1519 | MA6 | N1-C6-N6 | 2.94 | 120.15 | 117.06 |
| 55 | 2x | 8 | 4SU | O2-C2-N1 | 2.92 | 126.67 | 122.79 |
| 54 | 1w | 37 | MIA | C2-N1-C6 | 2.92 | 122.41 | 117.19 |
| 54 | 2y | 32 | PSU | O2-C2-N1 | -2.92 | 119.58 | 122.79 |
| 1 | 1A | 2617 | PSU | O2-C2-N1 | -2.91 | 119.58 | 122.79 |
| 1 | 2A | 2552 | 2MU | C5-C4-N3 | 2.89 | 119.16 | 114.84 |
| 54 | 2w | 37 | MIA | C2-N1-C6 | 2.88 | 122.35 | 117.19 |
| 54 | 1w | 46 | 7MG | C5-C4-N9 | -2.88 | 102.61 | 106.35 |
| 55 | 2x | 55 | PSU | O2-C2-N1 | -2.86 | 119.64 | 122.79 |
| 54 | 1y | 37 | MIA | C4-C5-N7 | -2.86 | 106.42 | 109.40 |
| 55 | 2x | 32 | 5MC | C5-C4-N3 | -2.85 | 118.60 | 121.67 |
| 54 | 2y | 54 | 5MU | C5-C6-N1 | -2.84 | 120.42 | 123.34 |
| 1 | 1A | 1939 | PSU | O2-C2-N1 | -2.83 | 119.68 | 122.79 |
| 54 | 1y | 46 | 7MG | C5-C4-N9 | -2.77 | 102.76 | 106.35 |
| 55 | 1x | 32 | 5MC | O2-C2-N3 | -2.75 | 117.86 | 122.33 |
| 32 | 1a | 1207 | 2MG | C8-N7-C5 | 2.75 | 108.22 | 102.99 |
| 55 | 1x | 55 | PSU | O2-C2-N1 | -2.74 | 119.77 | 122.79 |
| 32 | 1a | 1519 | MA6 | C9-N6-C6 | -2.74 | 111.22 | 119.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 55 | 2x | 8 | 4SU | C6-C5-C4 | -2.74 | 117.58 | 119.95 |
| 54 | 2w | 37 | MIA | C4-C5-N7 | -2.72 | 106.57 | 109.40 |
| 55 | 1x | 54 | 5MU | C5-C6-N1 | -2.69 | 120.57 | 123.34 |
| 1 | 2A | 1942 | 5MC | O2-C2-N3 | -2.68 | 117.98 | 122.33 |
| 54 | 2y | 54 | 5MU | O2-C2-N3 | -2.66 | 116.55 | 121.50 |
| 54 | 2w | 37 | MIA | N6-C6-N1 | 2.65 | 121.81 | 118.50 |
| 32 | 1a | 527 | 7MG | C5-C6-N1 | 2.64 | 115.65 | 110.99 |
| 32 | 2a | 527 | 7MG | C5-C4-N9 | -2.62 | 102.94 | 106.35 |
| 32 | 2a | 1404 | 5MC | O2-C2-N3 | -2.62 | 118.07 | 122.33 |
| 55 | 1x | 8 | 4SU | C1'-N1-C2 | 2.62 | 122.31 | 117.57 |
| 1 | 2A | 1962 | 5MC | C5-C4-N3 | -2.61 | 118.85 | 121.67 |
| 54 | 1y | 8 | 4SU | C5-C4-S4 | -2.61 | 121.11 | 124.47 |
| 1 | 1A | 2564 | 2MU | C5-C4-N3 | 2.59 | 118.72 | 114.84 |
| 32 | 2a | 1518 | MA6 | C10-N6-C9 | -2.58 | 107.81 | 116.12 |
| 1 | 1A | 2617 | PSU | C6-C5-C4 | -2.55 | 116.41 | 118.20 |
| 43 | 1l | 92 | 0TD | OD2-CG-CB | 2.55 | 118.67 | 113.15 |
| 54 | 2w | 46 | 7MG | C5-C6-N1 | 2.55 | 115.48 | 110.99 |
| 32 | 1a | 1518 | MA6 | C10-N6-C9 | -2.55 | 107.92 | 116.12 |
| 1 | 1A | 2515 | 2MA | C5-C6-N1 | 2.55 | 118.41 | 114.02 |
| 32 | 2a | 527 | 7MG | C5-C6-N1 | 2.54 | 115.47 | 110.99 |
| 1 | 2A | 1942 | 5MC | CM5-C5-C6 | -2.54 | 119.46 | 122.85 |
| 32 | 1a | 1402 | 4OC | C6-C5-C4 | 2.50 | 120.02 | 116.96 |
| 32 | 2a | 1207 | 2MG | C8-N7-C5 | 2.48 | 107.71 | 102.99 |
| 32 | 2a | 1402 | 4OC | C6-C5-C4 | 2.46 | 119.98 | 116.96 |
| 32 | 1a | 966 | M2G | C8-N7-C5 | 2.46 | 107.68 | 102.99 |
| 1 | 2A | 2251 | OMG | C8-N7-C5 | 2.46 | 107.67 | 102.99 |
| 32 | 1a | 967 | 5MC | C5-C4-N3 | -2.45 | 119.03 | 121.67 |
| 1 | 1A | 2263 | OMG | O6-C6-C5 | -2.44 | 119.61 | 124.37 |
| 55 | 2x | 8 | 4SU | C1'-N1-C6 | -2.40 | 115.62 | 120.84 |
| 54 | 2w | 8 | 4SU | C1'-N1-C2 | 2.39 | 121.91 | 117.57 |
| 1 | 2A | 2503 | 2MA | C8-N7-C5 | 2.39 | 107.55 | 102.99 |
| 55 | 1x | 8 | 4SU | O2-C2-N1 | 2.39 | 125.96 | 122.79 |
| 1 | 1A | 1933 | PSU | C6-C5-C4 | -2.38 | 116.53 | 118.20 |
| 54 | 2w | 37 | MIA | N3-C2-N1 | -2.37 | 122.62 | 126.98 |
| 32 | 2a | 1402 | 4OC | O2-C2-N3 | -2.37 | 118.48 | 122.33 |
| 1 | 2A | 1911 | PSU | C6-C5-C4 | -2.36 | 116.55 | 118.20 |
| 1 | 1A | 1964 | 5MC | C5-C4-N3 | -2.34 | 119.15 | 121.67 |
| 32 | 1a | 1400 | 5MC | C5-C4-N3 | -2.32 | 119.17 | 121.67 |
| 54 | 2y | 54 | 5MU | C5M-C5-C4 | 2.32 | 121.32 | 118.77 |
| 54 | 1w | 37 | MIA | N3-C2-N1 | -2.31 | 122.73 | 126.98 |
| 55 | 1x | 55 | PSU | C5-C6-N1 | -2.31 | 118.65 | 122.11 |
| 32 | 1a | 527 | 7MG | CM7-N7-C5 | 2.30 | 132.34 | 126.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 54 | 2y | 37 | MIA | C4-C5-N7 | -2.29 | 107.02 | 109.40 |
| 54 | 1y | 46 | 7MG | C5-C6-N1 | 2.28 | 115.01 | 110.99 |
| 32 | 2a | 966 | M2G | C5-C6-N1 | 2.25 | 117.93 | 113.95 |
| 55 | 1x | 54 | 5MU | O2-C2-N1 | -2.23 | 119.82 | 122.79 |
| 54 | 2w | 37 | MIA | C12-N6-C6 | -2.22 | 120.96 | 122.87 |
| 1 | 2A | 1917 | PSU | C5-C6-N1 | -2.22 | 118.78 | 122.11 |
| 1 | 2A | 1962 | 5MC | C1'-N1-C6 | -2.20 | 117.46 | 121.12 |
| 1 | 2A | 2503 | 2MA | C5-C6-N1 | 2.20 | 117.81 | 114.02 |
| 32 | 1a | 516 | PSU | O4'-C1'-C2' | 2.20 | 108.24 | 105.14 |
| 32 | 1a | 1404 | 5MC | C1'-N1-C6 | -2.19 | 117.47 | 121.12 |
| 54 | 1y | 39 | PSU | O2-C2-N1 | -2.19 | 120.38 | 122.79 |
| 54 | 2y | 8 | 4SU | C1'-N1-C2 | 2.19 | 121.54 | 117.57 |
| 54 | 1y | 54 | 5MU | O2-C2-N3 | -2.18 | 117.44 | 121.50 |
| 32 | 2a | 1498 | UR3 | C3U-N3-C4 | 2.17 | 120.99 | 117.89 |
| 32 | 1a | 1498 | UR3 | C3U-N3-C2 | 2.16 | 121.10 | 117.31 |
| 54 | 1w | 39 | PSU | C5-C6-N1 | -2.16 | 118.87 | 122.11 |
| 55 | 2x | 54 | 5MU | O2-C2-N1 | -2.16 | 119.92 | 122.79 |
| 32 | 1a | 1407 | 5MC | C5-C6-N1 | -2.15 | 121.13 | 123.34 |
| 1 | 1A | 2263 | OMG | C5-C6-N1 | 2.14 | 117.73 | 113.95 |
| 54 | 2y | 46 | 7MG | C5-C6-N1 | 2.14 | 114.75 | 110.99 |
| 54 | 2y | 55 | PSU | C6-C5-C4 | -2.13 | 116.71 | 118.20 |
| 1 | 2A | 1962 | 5MC | CM5-C5-C6 | -2.13 | 120.00 | 122.85 |
| 54 | 2w | 54 | 5MU | C5M-C5-C4 | 2.13 | 121.11 | 118.77 |
| 1 | 1A | 2515 | 2MA | C8-N7-C5 | 2.13 | 107.04 | 102.99 |
| 32 | 2a | 1407 | 5MC | O2-C2-N3 | -2.12 | 118.88 | 122.33 |
| 55 | 2x | 32 | 5MC | O2-C2-N3 | -2.12 | 118.88 | 122.33 |
| 54 | 1y | 55 | PSU | O4'-C1'-C2' | 2.12 | 108.13 | 105.14 |
| 54 | 2w | 46 | 7MG | O6-C6-C5 | -2.08 | 122.44 | 127.54 |
| 32 | 2a | 527 | 7MG | O6-C6-C5 | -2.08 | 122.44 | 127.54 |
| 54 | 2y | 46 | 7MG | CM7-N7-C5 | 2.08 | 131.77 | 126.40 |
| 54 | 1y | 8 | 4SU | C1'-N1-C2 | 2.08 | 121.33 | 117.57 |
| 54 | 2y | 37 | MIA | C2-N1-C6 | 2.07 | 122.29 | 118.75 |
| 54 | 2y | 32 | PSU | O4'-C1'-C2' | 2.07 | 108.06 | 105.14 |
| 1 | 2A | 2251 | OMG | C5-C6-N1 | 2.06 | 117.60 | 113.95 |
| 1 | 2A | 2605 | PSU | O2-C2-N3 | -2.06 | 117.94 | 121.82 |
| 54 | 1y | 32 | PSU | C6-C5-C4 | -2.05 | 116.77 | 118.20 |
| 43 | 2l | 92 | 0TD | OD1-CG-CB | -2.04 | 118.16 | 122.44 |
| 54 | 2y | 55 | PSU | O4'-C1'-C2' | 2.04 | 108.03 | 105.14 |
| 54 | 2w | 46 | 7MG | C5-C4-N9 | -2.04 | 103.70 | 106.35 |
| 32 | 1a | 966 | M2G | C5-C6-N1 | 2.04 | 117.55 | 113.95 |
| 1 | 1A | 2564 | 2MU | C2'-C1'-N1 | -2.03 | 110.28 | 114.22 |
| 1 | 2A | 2605 | PSU | O2-C2-N1 | -2.03 | 120.56 | 122.79 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 32 | 2a | 1207 | 2MG | C5-C6-N1 | 2.03 | 117.53 | 113.95 |
| 32 | 1a | 1402 | 4OC | CM4-N4-C4 | -2.02 | 118.50 | 122.45 |
| 32 | 2a | 1400 | 5MC | C5-C4-N3 | -2.01 | 119.50 | 121.67 |
| 32 | 1a | 1207 | 2MG | C5-C6-N1 | 2.01 | 117.50 | 113.95 |
| 32 | 1a | 1518 | MA6 | C1'-N9-C4 | -2.01 | 123.11 | 126.64 |
| 32 | 2a | 516 | PSU | O4'-C1'-C2' | 2.01 | 107.98 | 105.14 |
| 54 | 1w | 32 | PSU | C6-C5-C4 | -2.00 | 116.80 | 118.20 |

There are no chirality outliers.

All (81) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 32 | 1a | 1400 | 5MC | O4'-C4'-C5'-O5' |
| 32 | 1a | 1400 | 5MC | C3'-C4'-C5'-O5' |
| 32 | 1a | 1518 | MA6 | C5-C6-N6-C10 |
| 32 | 1a | 1519 | MA6 | O4'-C4'-C5'-O5' |
| 54 | 1w | 37 | MIA | N1-C2-S10-C11 |
| 54 | 1w | 37 | MIA | N3-C2-S10-C11 |
| 54 | 1w | 37 | MIA | C12-C13-C14-C16 |
| 54 | 1y | 46 | 7MG | C4'-C5'-O5'-P |
| 54 | 1y | 54 | 5MU | O4'-C4'-C5'-O5' |
| 32 | 2a | 527 | 7MG | C3'-C4'-C5'-O5' |
| 32 | 2a | 1207 | 2MG | N1-C2-N2-CM2 |
| 32 | 2a | 1207 | 2MG | N3-C2-N2-CM2 |
| 32 | 2a | 1518 | MA6 | C5-C6-N6-C9 |
| 32 | 2a | 1518 | MA6 | C5-C6-N6-C10 |
| 32 | 2a | 1519 | MA6 | O4'-C4'-C5'-O5' |
| 32 | 2a | 1519 | MA6 | C3'-C4'-C5'-O5' |
| 32 | 2a | 1519 | MA6 | C5-C6-N6-C10 |
| 43 | 2l | 92 | 0TD | O-C-CA-CB |
| 54 | 2y | 37 | MIA | C3'-C4'-C5'-O5' |
| 54 | 2y | 55 | PSU | C2'-C1'-C5-C6 |
| 54 | 2y | 55 | PSU | O4'-C1'-C5-C6 |
| 32 | 1a | 1519 | MA6 | C3'-C4'-C5'-O5' |
| 54 | 1y | 54 | 5MU | C3'-C4'-C5'-O5' |
| 54 | 1y | 8 | 4SU | C3'-C4'-C5'-O5' |
| 54 | 1y | 8 | 4SU | O4'-C4'-C5'-O5' |
| 32 | 2a | 1402 | 4OC | O4'-C4'-C5'-O5' |
| 54 | 2w | 46 | 7MG | O4'-C4'-C5'-O5' |
| 54 | 2w | 46 | 7MG | C3'-C4'-C5'-O5' |
| 32 | 2a | 1518 | MA6 | N1-C6-N6-C9 |
| 54 | 2y | 46 | 7MG | O4'-C1'-N9-C4 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 32 | 1a | 967 | 5MC | O4'-C4'-C5'-O5' |
| 32 | 2a | 527 | 7MG | O4'-C4'-C5'-O5' |
| 32 | 2a | 1404 | 5MC | O4'-C4'-C5'-O5' |
| 54 | 2y | 37 | MIA | O4'-C4'-C5'-O5' |
| 32 | 1a | 1518 | MA6 | C5-C6-N6-C9 |
| 32 | 1a | 1519 | MA6 | C5-C6-N6-C10 |
| 32 | 1a | 527 | 7MG | C3'-C4'-C5'-O5' |
| 32 | 2a | 1402 | 4OC | C3'-C4'-C5'-O5' |
| 32 | 2a | 1404 | 5MC | C3'-C4'-C5'-O5' |
| 32 | 1a | 1402 | 4OC | O4'-C4'-C5'-O5' |
| 1 | 2A | 2503 | 2MA | O4'-C4'-C5'-O5' |
| 54 | 2y | 32 | PSU | O4'-C4'-C5'-O5' |
| 43 | 1l | 92 | 0TD | CG-CB-SB-CSB |
| 43 | 2l | 92 | 0TD | CG-CB-SB-CSB |
| 32 | 2a | 1519 | MA6 | C4'-C5'-O5'-P |
| 54 | 1w | 46 | 7MG | C2'-C1'-N9-C8 |
| 54 | 2y | 46 | 7MG | C2'-C1'-N9-C8 |
| 54 | 2y | 46 | 7MG | O4'-C1'-N9-C8 |
| 32 | 1a | 527 | 7MG | O4'-C4'-C5'-O5' |
| 32 | 2a | 1207 | 2MG | O4'-C4'-C5'-O5' |
| 32 | 1a | 527 | 7MG | C4'-C5'-O5'-P |
| 32 | 2a | 527 | 7MG | C4'-C5'-O5'-P |
| 54 | 1y | 8 | 4SU | C4'-C5'-O5'-P |
| 54 | 2y | 37 | MIA | C4'-C5'-O5'-P |
| 54 | 1y | 46 | 7MG | C2'-C1'-N9-C8 |
| 54 | 2y | 54 | 5MU | C2'-C1'-N1-C2 |
| 54 | 2y | 54 | 5MU | C2'-C1'-N1-C6 |
| 54 | 2w | 37 | MIA | N1-C2-S10-C11 |
| 1 | 1A | 2617 | PSU | O4'-C1'-C5-C4 |
| 54 | 1w | 55 | PSU | O4'-C1'-C5-C4 |
| 55 | 1x | 55 | PSU | O4'-C1'-C5-C4 |
| 54 | 1y | 55 | PSU | O4'-C1'-C5-C4 |
| 1 | 2A | 1920 | 4OC | C3'-C2'-O2'-CM2 |
| 54 | 1w | 46 | 7MG | O4'-C1'-N9-C8 |
| 43 | 2l | 92 | 0TD | CA-CB-SB-CSB |
| 1 | 2A | 1962 | 5MC | O4'-C4'-C5'-O5' |
| 54 | 2w | 46 | 7MG | C2'-C1'-N9-C8 |
| 32 | 1a | 967 | 5MC | C3'-C4'-C5'-O5' |
| 1 | 1A | 1942 | 4OC | C1'-C2'-O2'-CM2 |
| 54 | 2w | 37 | MIA | N3-C2-S10-C11 |
| 55 | 2x | 8 | 4SU | C2'-C1'-N1-C2 |
| 1 | 1A | 2617 | PSU | O4'-C1'-C5-C6 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 54 | 1w | 55 | PSU | O4'-C1'-C5-C6 |
| 1 | 1A | 2515 | 2MA | O4'-C4'-C5'-O5' |
| 32 | 1a | 1402 | 4OC | C3'-C4'-C5'-O5' |
| 1 | 2A | 1962 | 5MC | C3'-C4'-C5'-O5' |
| 1 | 1A | 1942 | 4OC | C3'-C2'-O2'-CM2 |
| 54 | 2y | 55 | PSU | O4'-C4'-C5'-O5' |
| 1 | 1A | 1942 | 4OC | C2'-C1'-N1-C2 |
| 54 | 2y | 8 | 4SU | C2'-C1'-N1-C2 |
| 54 | 1y | 54 | 5MU | C4'-C5'-O5'-P |

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 2355 ligands modelled in this entry, 2345 are monoatomic - leaving 10 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$ |
| 57 | AKN | 1A | 3937 | - | 42,42,42 | 1.95 | 11 (26%) | 53,61,61 | 1.61 | 11 (20%) |
| 57 | AKN | 1O | 202 | - | 42,42,42 | 2.10 | 12 (28%) | 53,61,61 | 1.36 | 3 (5%) |
| 57 | AKN | 1A | 3936 | - | 42,42,42 | 2.00 | 10 (23%) | 53,61,61 | 1.18 | 5 (9%) |
| 57 | AKN | 2a | 1911 | - | 42,42,42 | 2.03 | 10 (23%) | 53,61,61 | 1.45 | 6 (11%) |
| 57 | AKN | 1a | 1913 | - | 42,42,42 | 2.10 | 13 (30%) | 53,61,61 | 1.47 | 10 (18%) |
| 59 | SF4 | 1d | 303 | 35 | 0,12,12 | - | - | - | - | - |
| 57 | AKN | 2A | 3576 | - | 42,42,42 | 1.98 | 11 (26%) | 53,61,61 | 1.12 | 4 (7%) |
| 59 | SF4 | 2d | 302 | 35 | 0,12,12 | - | - | - | - | - |
| 57 | AKN | 2O | 202 | - | 42,42,42 | 2.04 | 12 (28%) | 53,61,61 | 1.40 | 6 (11%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 57 | AKN | 1a | 1914 | - | 42,42,42 | 2.12 | 14 (33%) | 53,61,61 | 2.27 | 14 (26%) |

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 |
|-----|------|-------|------|------|---------|-------------|---------|
| 57 | AKN | 1A | 3937 | - | - | 7/23/83/83 | 0/3/3/3 |
| 57 | AKN | 1O | 202 | - | - | 10/23/83/83 | 0/3/3/3 |
| 57 | AKN | 1A | 3936 | - | - | 5/23/83/83 | 0/3/3/3 |
| 57 | AKN | 2a | 1911 | - | - | 3/23/83/83 | 0/3/3/3 |
| 57 | AKN | 1a | 1913 | - | - | 4/23/83/83 | 0/3/3/3 |
| 59 | SF4 | 1d | 303 | 35 | - | - | 0/6/5/5 |
| 57 | AKN | 2A | 3576 | - | - | 9/23/83/83 | 0/3/3/3 |
| 59 | SF4 | 2d | 302 | 35 | - | - | 0/6/5/5 |
| 57 | AKN | 2O | 202 | - | - | 7/23/83/83 | 0/3/3/3 |
| 57 | AKN | 1a | 1914 | - | - | 19/23/83/83 | 0/3/3/3 |

All (93) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 57 | 1a | 1914 | AKN | C35-N12 | 6.13 | 1.47 | 1.34 |
| 57 | 1O | 202 | AKN | C35-N12 | 6.03 | 1.47 | 1.34 |
| 57 | 2a | 1911 | AKN | C35-N12 | 5.92 | 1.47 | 1.34 |
| 57 | 2O | 202 | AKN | C35-N12 | 5.91 | 1.47 | 1.34 |
| 57 | 2A | 3576 | AKN | C35-N12 | 5.82 | 1.46 | 1.34 |
| 57 | 1a | 1913 | AKN | C35-N12 | 5.77 | 1.46 | 1.34 |
| 57 | 1A | 3936 | AKN | C35-N12 | 5.70 | 1.46 | 1.34 |
| 57 | 1A | 3937 | AKN | C35-N12 | 5.58 | 1.46 | 1.34 |
| 57 | 1a | 1913 | AKN | C22-C24 | -5.29 | 1.46 | 1.53 |
| 57 | 2a | 1911 | AKN | C22-C24 | -5.21 | 1.47 | 1.53 |
| 57 | 1A | 3936 | AKN | C22-C24 | -4.99 | 1.47 | 1.53 |
| 57 | 1O | 202 | AKN | C24-N25 | 4.97 | 1.54 | 1.47 |
| 57 | 1A | 3937 | AKN | C24-N25 | 4.96 | 1.54 | 1.47 |
| 57 | 1a | 1914 | AKN | C24-N25 | 4.95 | 1.54 | 1.47 |
| 57 | 2O | 202 | AKN | C22-C24 | -4.94 | 1.47 | 1.53 |
| 57 | 1A | 3936 | AKN | C24-N25 | 4.93 | 1.54 | 1.47 |
| 57 | 2A | 3576 | AKN | C24-N25 | 4.82 | 1.54 | 1.47 |
| 57 | 2O | 202 | AKN | C24-N25 | 4.80 | 1.54 | 1.47 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 57 | 1O | 202 | AKN | C22-C24 | -4.74 | 1.47 | 1.53 |
| 57 | 2a | 1911 | AKN | C24-N25 | 4.59 | 1.54 | 1.47 |
| 57 | 1a | 1913 | AKN | C24-N25 | 4.55 | 1.54 | 1.47 |
| 57 | 2A | 3576 | AKN | C22-C24 | -4.51 | 1.47 | 1.53 |
| 57 | 1a | 1914 | AKN | C22-C24 | -4.46 | 1.47 | 1.53 |
| 57 | 1a | 1913 | AKN | C26-C24 | -4.43 | 1.48 | 1.53 |
| 57 | 2a | 1911 | AKN | C26-C24 | -4.18 | 1.48 | 1.53 |
| 57 | 1A | 3936 | AKN | C9-C7 | -4.14 | 1.46 | 1.52 |
| 57 | 1a | 1914 | AKN | C26-C24 | -4.09 | 1.48 | 1.53 |
| 57 | 1A | 3937 | AKN | C9-C7 | -3.95 | 1.46 | 1.52 |
| 57 | 1O | 202 | AKN | C9-C7 | -3.92 | 1.46 | 1.52 |
| 57 | 2A | 3576 | AKN | C26-C24 | -3.86 | 1.48 | 1.53 |
| 57 | 1a | 1913 | AKN | C9-C7 | -3.74 | 1.47 | 1.52 |
| 57 | 2a | 1911 | AKN | C9-C7 | -3.65 | 1.47 | 1.52 |
| 57 | 2A | 3576 | AKN | C9-C7 | -3.52 | 1.47 | 1.52 |
| 57 | 1O | 202 | AKN | C26-C24 | -3.50 | 1.49 | 1.53 |
| 57 | 2O | 202 | AKN | C9-C7 | -3.50 | 1.47 | 1.52 |
| 57 | 1A | 3937 | AKN | C22-C24 | -3.44 | 1.49 | 1.53 |
| 57 | 2O | 202 | AKN | C26-C24 | -3.44 | 1.49 | 1.53 |
| 57 | 1O | 202 | AKN | C37-C35 | 3.41 | 1.56 | 1.52 |
| 57 | 1A | 3936 | AKN | C26-C24 | -3.41 | 1.49 | 1.53 |
| 57 | 1A | 3937 | AKN | C26-C24 | -3.10 | 1.49 | 1.53 |
| 57 | 1O | 202 | AKN | O29-C21 | 3.00 | 1.49 | 1.41 |
| 57 | 1A | 3937 | AKN | C38-C39 | 2.97 | 1.63 | 1.52 |
| 57 | 1a | 1914 | AKN | O29-C21 | 2.92 | 1.49 | 1.41 |
| 57 | 2O | 202 | AKN | O29-C21 | 2.92 | 1.49 | 1.41 |
| 57 | 1O | 202 | AKN | C38-C39 | 2.89 | 1.62 | 1.52 |
| 57 | 1a | 1914 | AKN | C9-C7 | -2.89 | 1.48 | 1.52 |
| 57 | 1a | 1913 | AKN | C38-C39 | 2.84 | 1.62 | 1.52 |
| 57 | 2O | 202 | AKN | C38-C39 | 2.83 | 1.62 | 1.52 |
| 57 | 1a | 1914 | AKN | C37-C35 | 2.83 | 1.56 | 1.52 |
| 57 | 2a | 1911 | AKN | O29-C21 | 2.83 | 1.49 | 1.41 |
| 57 | 1a | 1914 | AKN | C38-C39 | 2.79 | 1.62 | 1.52 |
| 57 | 1a | 1913 | AKN | O29-C21 | 2.79 | 1.48 | 1.41 |
| 57 | 1a | 1913 | AKN | O40-C37 | -2.78 | 1.36 | 1.42 |
| 57 | 2A | 3576 | AKN | C38-C39 | 2.78 | 1.62 | 1.52 |
| 57 | 1A | 3936 | AKN | O29-C21 | 2.76 | 1.48 | 1.41 |
| 57 | 2a | 1911 | AKN | C38-C39 | 2.76 | 1.62 | 1.52 |
| 57 | 1a | 1914 | AKN | O8-C7 | 2.76 | 1.51 | 1.44 |
| 57 | 1A | 3936 | AKN | C38-C39 | 2.72 | 1.62 | 1.52 |
| 57 | 1a | 1913 | AKN | C5-C4 | -2.62 | 1.45 | 1.52 |
| 57 | 1A | 3937 | AKN | O29-C21 | 2.61 | 1.48 | 1.41 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 57 | 1A | 3937 | AKN | O8-C7 | 2.58 | 1.50 | 1.44 |
| 57 | 1A | 3937 | AKN | O40-C37 | -2.57 | 1.37 | 1.42 |
| 57 | 1O | 202 | AKN | O8-C7 | 2.57 | 1.50 | 1.44 |
| 57 | 2O | 202 | AKN | O40-C37 | -2.57 | 1.37 | 1.42 |
| 57 | 2A | 3576 | AKN | C5-C4 | -2.53 | 1.45 | 1.52 |
| 57 | 2A | 3576 | AKN | O29-C21 | 2.51 | 1.48 | 1.41 |
| 57 | 2A | 3576 | AKN | O36-C35 | -2.47 | 1.18 | 1.23 |
| 57 | 2A | 3576 | AKN | O40-C37 | -2.46 | 1.37 | 1.42 |
| 57 | 1a | 1913 | AKN | O8-C7 | 2.44 | 1.50 | 1.44 |
| 57 | 2O | 202 | AKN | O8-C7 | 2.44 | 1.50 | 1.44 |
| 57 | 1a | 1913 | AKN | O36-C35 | -2.44 | 1.18 | 1.23 |
| 57 | 1a | 1914 | AKN | O36-C35 | -2.39 | 1.18 | 1.23 |
| 57 | 1O | 202 | AKN | C5-C4 | -2.37 | 1.46 | 1.52 |
| 57 | 2O | 202 | AKN | O36-C35 | -2.36 | 1.18 | 1.23 |
| 57 | 2a | 1911 | AKN | O33-C4 | 2.32 | 1.48 | 1.43 |
| 57 | 1A | 3936 | AKN | C5-C4 | -2.30 | 1.46 | 1.52 |
| 57 | 1a | 1914 | AKN | O40-C37 | -2.28 | 1.38 | 1.42 |
| 57 | 2O | 202 | AKN | C5-C4 | -2.27 | 1.46 | 1.52 |
| 57 | 2O | 202 | AKN | O33-C4 | 2.26 | 1.48 | 1.43 |
| 57 | 1A | 3937 | AKN | O36-C35 | -2.26 | 1.18 | 1.23 |
| 57 | 1A | 3936 | AKN | O33-C4 | 2.24 | 1.48 | 1.43 |
| 57 | 1a | 1913 | AKN | O33-C4 | 2.23 | 1.48 | 1.43 |
| 57 | 2a | 1911 | AKN | C37-C35 | 2.20 | 1.55 | 1.52 |
| 57 | 1O | 202 | AKN | O40-C37 | -2.19 | 1.38 | 1.42 |
| 57 | 1a | 1914 | AKN | C5-C4 | -2.18 | 1.46 | 1.52 |
| 57 | 2A | 3576 | AKN | O33-C4 | 2.17 | 1.48 | 1.43 |
| 57 | 2a | 1911 | AKN | O40-C37 | -2.13 | 1.38 | 1.42 |
| 57 | 1A | 3936 | AKN | O36-C35 | -2.12 | 1.19 | 1.23 |
| 57 | 1a | 1914 | AKN | O33-C4 | 2.11 | 1.48 | 1.43 |
| 57 | 1a | 1913 | AKN | C37-C35 | 2.09 | 1.55 | 1.52 |
| 57 | 1O | 202 | AKN | O33-C4 | 2.07 | 1.47 | 1.43 |
| 57 | 1A | 3937 | AKN | C5-C4 | -2.04 | 1.47 | 1.52 |
| 57 | 1a | 1914 | AKN | C13-C11 | 2.00 | 1.56 | 1.53 |

All (59) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 57 | 1a | 1914 | AKN | C17-C19-C11 | -7.20 | 98.62 | 111.18 |
| 57 | 1a | 1914 | AKN | O20-C19-C17 | 7.10 | 126.16 | 107.28 |
| 57 | 2a | 1911 | AKN | C13-C11-N12 | -6.13 | 101.38 | 110.86 |
| 57 | 1a | 1914 | AKN | O2-C16-C17 | 5.38 | 121.58 | 107.28 |
| 57 | 1O | 202 | AKN | C19-C11-N12 | 4.54 | 118.98 | 110.58 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 57 | 1A | 3937 | AKN | O2-C16-C17 | 4.40 | 118.99 | 107.28 |
| 57 | 1a | 1914 | AKN | C21-C22-C24 | 4.09 | 115.89 | 110.40 |
| 57 | 1a | 1914 | AKN | O20-C21-C22 | 4.09 | 118.69 | 108.10 |
| 57 | 1a | 1913 | AKN | C19-C17-C16 | 3.88 | 117.00 | 108.96 |
| 57 | 1O | 202 | AKN | C11-N12-C35 | 3.73 | 129.67 | 123.07 |
| 57 | 2O | 202 | AKN | C11-N12-C35 | -3.57 | 116.76 | 123.07 |
| 57 | 2A | 3576 | AKN | C21-O20-C19 | -3.56 | 109.14 | 117.96 |
| 57 | 1O | 202 | AKN | C19-C17-C16 | 3.56 | 116.34 | 108.96 |
| 57 | 1a | 1914 | AKN | O29-C28-C26 | 3.52 | 116.09 | 109.69 |
| 57 | 2a | 1911 | AKN | C21-O20-C19 | -3.50 | 109.29 | 117.96 |
| 57 | 1a | 1913 | AKN | C13-C11-N12 | -3.47 | 105.50 | 110.86 |
| 57 | 1A | 3937 | AKN | C21-C22-C24 | 3.45 | 115.03 | 110.40 |
| 57 | 2O | 202 | AKN | O29-C28-C26 | 3.44 | 115.94 | 109.69 |
| 57 | 1A | 3937 | AKN | O20-C19-C17 | 3.40 | 116.31 | 107.28 |
| 57 | 2O | 202 | AKN | C17-C19-C11 | -3.31 | 105.41 | 111.18 |
| 57 | 1a | 1914 | AKN | C30-C28-C26 | -3.24 | 105.41 | 113.00 |
| 57 | 1A | 3936 | AKN | C21-C22-C24 | 3.21 | 114.71 | 110.40 |
| 57 | 2A | 3576 | AKN | C11-N12-C35 | 2.94 | 128.28 | 123.07 |
| 57 | 2a | 1911 | AKN | O2-C16-C14 | -2.92 | 102.22 | 109.18 |
| 57 | 1A | 3937 | AKN | C11-N12-C35 | -2.92 | 117.92 | 123.07 |
| 57 | 2O | 202 | AKN | C1-O2-C16 | -2.90 | 110.78 | 117.96 |
| 57 | 1a | 1914 | AKN | O8-C7-C9 | 2.88 | 111.37 | 106.01 |
| 57 | 1a | 1914 | AKN | C9-C7-C5 | -2.87 | 107.46 | 113.10 |
| 57 | 1A | 3937 | AKN | C4-C5-C7 | -2.76 | 105.32 | 110.24 |
| 57 | 1a | 1914 | AKN | O18-C17-C16 | 2.75 | 117.24 | 109.94 |
| 57 | 2A | 3576 | AKN | C13-C11-N12 | 2.74 | 115.09 | 110.86 |
| 57 | 2a | 1911 | AKN | C1-O8-C7 | -2.71 | 108.36 | 113.69 |
| 57 | 1a | 1913 | AKN | C11-N12-C35 | -2.71 | 118.29 | 123.07 |
| 57 | 1a | 1913 | AKN | O36-C35-N12 | -2.69 | 117.94 | 122.93 |
| 57 | 1A | 3937 | AKN | C19-C17-C16 | -2.64 | 103.49 | 108.96 |
| 57 | 1a | 1914 | AKN | O36-C35-N12 | -2.60 | 118.12 | 122.93 |
| 57 | 2O | 202 | AKN | C21-O20-C19 | -2.48 | 111.83 | 117.96 |
| 57 | 1A | 3937 | AKN | C21-O20-C19 | -2.46 | 111.88 | 117.96 |
| 57 | 1a | 1913 | AKN | C4-C5-C7 | -2.43 | 105.90 | 110.24 |
| 57 | 2a | 1911 | AKN | C19-C17-C16 | 2.41 | 113.96 | 108.96 |
| 57 | 2O | 202 | AKN | O8-C7-C5 | 2.37 | 114.00 | 109.69 |
| 57 | 1A | 3937 | AKN | O8-C7-C9 | 2.34 | 110.36 | 106.01 |
| 57 | 1a | 1913 | AKN | O8-C1-C3 | 2.33 | 115.27 | 110.35 |
| 57 | 2a | 1911 | AKN | O2-C1-C3 | -2.30 | 102.14 | 108.10 |
| 57 | 1A | 3936 | AKN | C13-C11-N12 | 2.29 | 114.40 | 110.86 |
| 57 | 1A | 3937 | AKN | O20-C21-C22 | 2.29 | 114.02 | 108.10 |
| 57 | 1a | 1913 | AKN | O8-C7-C9 | 2.27 | 110.23 | 106.01 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 57 | 1a | 1913 | AKN | C21-O20-C19 | -2.26 | 112.38 | 117.96 |
| 57 | 1A | 3937 | AKN | C17-C19-C11 | -2.25 | 107.25 | 111.18 |
| 57 | 1a | 1914 | AKN | C19-C17-C16 | -2.22 | 104.36 | 108.96 |
| 57 | 1a | 1914 | AKN | O18-C17-C19 | 2.20 | 115.78 | 109.94 |
| 57 | 2A | 3576 | AKN | C1-O2-C16 | -2.16 | 112.61 | 117.96 |
| 57 | 1A | 3936 | AKN | O29-C21-C22 | 2.16 | 114.93 | 110.35 |
| 57 | 1a | 1914 | AKN | C21-O20-C19 | 2.13 | 123.23 | 117.96 |
| 57 | 1a | 1913 | AKN | C1-O2-C16 | -2.10 | 112.78 | 117.96 |
| 57 | 1A | 3937 | AKN | C21-O29-C28 | -2.08 | 109.61 | 113.69 |
| 57 | 1a | 1913 | AKN | O27-C26-C24 | -2.08 | 106.49 | 110.22 |
| 57 | 1A | 3936 | AKN | C21-O20-C19 | -2.06 | 112.85 | 117.96 |
| 57 | 1A | 3936 | AKN | C22-C24-N25 | -2.03 | 106.90 | 111.05 |

There are no chirality outliers.

All (64) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 57 | 1A | 3937 | AKN | N12-C35-C37-O40 |
| 57 | 1A | 3937 | AKN | O40-C37-C38-C39 |
| 57 | 1A | 3937 | AKN | C37-C38-C39-N37 |
| 57 | 1O | 202 | AKN | N12-C35-C37-C38 |
| 57 | 1O | 202 | AKN | O36-C35-C37-C38 |
| 57 | 1O | 202 | AKN | O40-C37-C38-C39 |
| 57 | 1a | 1913 | AKN | C5-C7-C9-N10 |
| 57 | 1a | 1914 | AKN | C5-C7-C9-N10 |
| 57 | 1a | 1914 | AKN | O8-C7-C9-N10 |
| 57 | 1a | 1914 | AKN | C37-C35-N12-C11 |
| 57 | 1a | 1914 | AKN | N12-C35-C37-O40 |
| 57 | 1a | 1914 | AKN | O40-C37-C38-C39 |
| 57 | 1a | 1914 | AKN | C37-C38-C39-N37 |
| 57 | 2A | 3576 | AKN | C14-C16-O2-C1 |
| 57 | 2A | 3576 | AKN | C13-C11-N12-C35 |
| 57 | 2A | 3576 | AKN | N12-C35-C37-O40 |
| 57 | 2A | 3576 | AKN | O36-C35-C37-O40 |
| 57 | 2A | 3576 | AKN | C35-C37-C38-C39 |
| 57 | 2A | 3576 | AKN | O40-C37-C38-C39 |
| 57 | 2O | 202 | AKN | C35-C37-C38-C39 |
| 57 | 2O | 202 | AKN | O40-C37-C38-C39 |
| 57 | 1A | 3937 | AKN | C17-C16-O2-C1 |
| 57 | 1O | 202 | AKN | O8-C1-O2-C16 |
| 57 | 1a | 1914 | AKN | C17-C19-O20-C21 |
| 57 | 1a | 1914 | AKN | O29-C21-O20-C19 |

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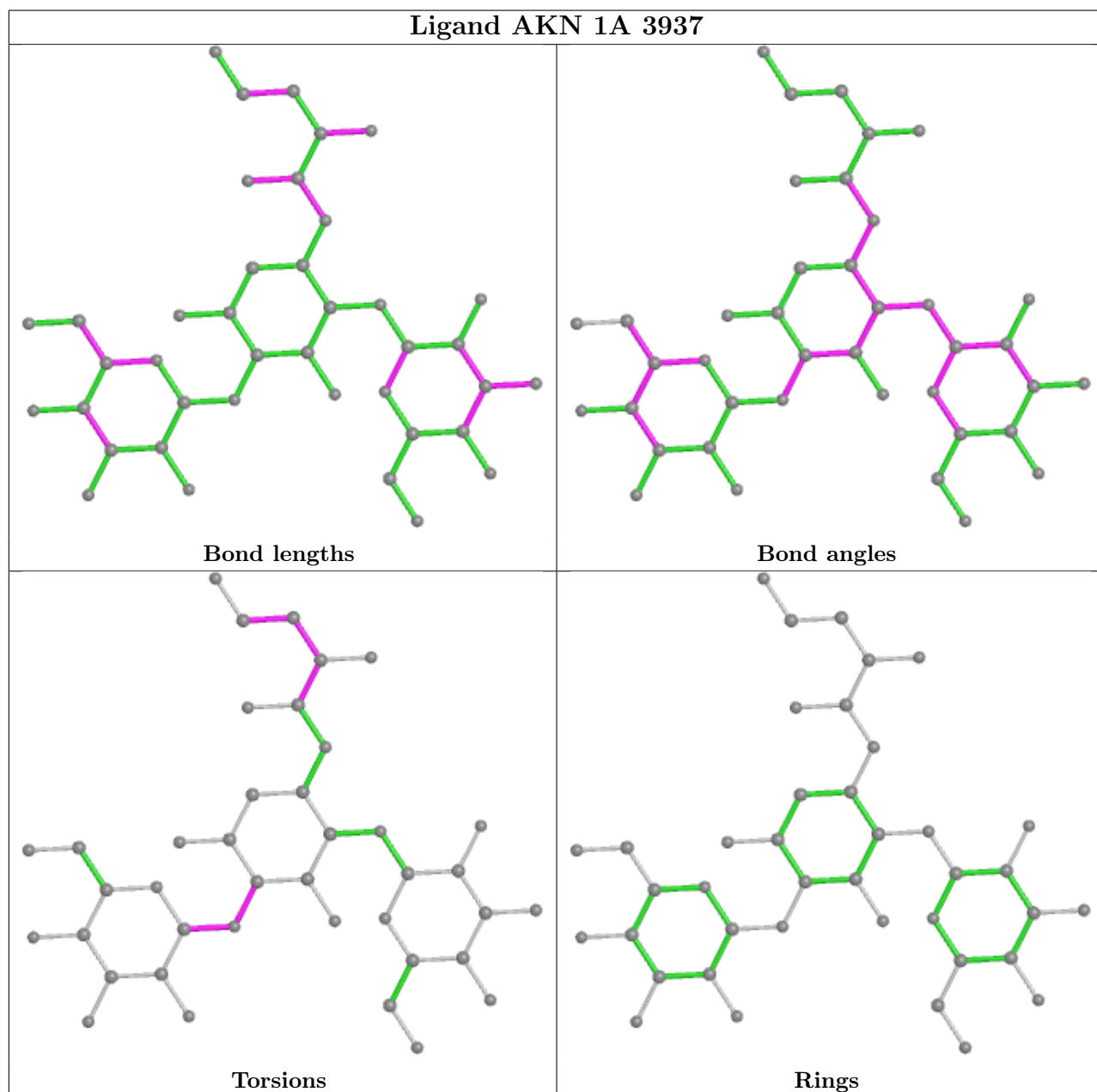
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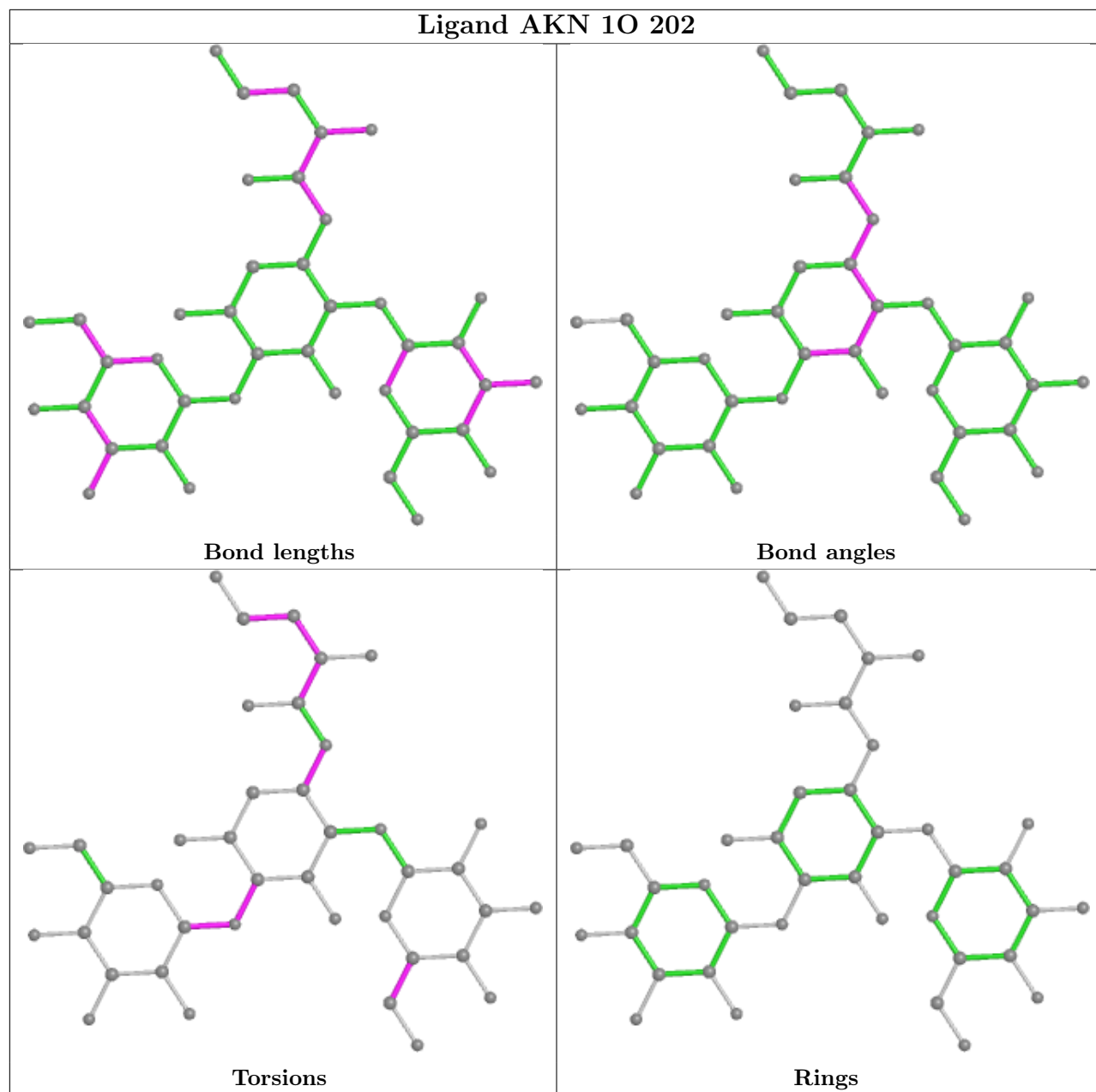
| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 57 | 1a | 1914 | AKN | C22-C21-O20-C19 |
| 57 | 1a | 1914 | AKN | C17-C16-O2-C1 |
| 57 | 1O | 202 | AKN | O29-C28-C30-O31 |
| 57 | 1a | 1914 | AKN | O29-C28-C30-O31 |
| 57 | 1a | 1914 | AKN | C26-C28-C30-O31 |
| 57 | 1O | 202 | AKN | C26-C28-C30-O31 |
| 57 | 1a | 1913 | AKN | O8-C1-O2-C16 |
| 57 | 1A | 3937 | AKN | C3-C1-O2-C16 |
| 57 | 1a | 1914 | AKN | O8-C1-O2-C16 |
| 57 | 1a | 1914 | AKN | O36-C35-N12-C11 |
| 57 | 1A | 3936 | AKN | C17-C16-O2-C1 |
| 57 | 2A | 3576 | AKN | C17-C16-O2-C1 |
| 57 | 1A | 3937 | AKN | O8-C1-O2-C16 |
| 57 | 1A | 3937 | AKN | O36-C35-C37-O40 |
| 57 | 1a | 1914 | AKN | O36-C35-C37-O40 |
| 57 | 2O | 202 | AKN | O29-C28-C30-O31 |
| 57 | 2a | 1911 | AKN | C26-C28-C30-O31 |
| 57 | 1A | 3936 | AKN | O40-C37-C38-C39 |
| 57 | 2a | 1911 | AKN | O29-C28-C30-O31 |
| 57 | 1O | 202 | AKN | C19-C11-N12-C35 |
| 57 | 2O | 202 | AKN | O8-C1-O2-C16 |
| 57 | 2a | 1911 | AKN | C17-C16-O2-C1 |
| 57 | 1O | 202 | AKN | N12-C35-C37-O40 |
| 57 | 1O | 202 | AKN | C37-C38-C39-N37 |
| 57 | 1a | 1913 | AKN | C37-C38-C39-N37 |
| 57 | 2O | 202 | AKN | C37-C38-C39-N37 |
| 57 | 2A | 3576 | AKN | C26-C28-C30-O31 |
| 57 | 1a | 1914 | AKN | C35-C37-C38-C39 |
| 57 | 2O | 202 | AKN | O8-C7-C9-N10 |
| 57 | 2O | 202 | AKN | C3-C1-O2-C16 |
| 57 | 1a | 1914 | AKN | N12-C35-C37-C38 |
| 57 | 1a | 1914 | AKN | C3-C1-O2-C16 |
| 57 | 2A | 3576 | AKN | O29-C28-C30-O31 |
| 57 | 1O | 202 | AKN | C17-C16-O2-C1 |
| 57 | 1a | 1913 | AKN | C3-C1-O2-C16 |
| 57 | 1A | 3936 | AKN | C14-C16-O2-C1 |
| 57 | 1A | 3936 | AKN | N12-C35-C37-O40 |
| 57 | 1A | 3936 | AKN | C37-C38-C39-N37 |
| 57 | 1a | 1914 | AKN | O36-C35-C37-C38 |

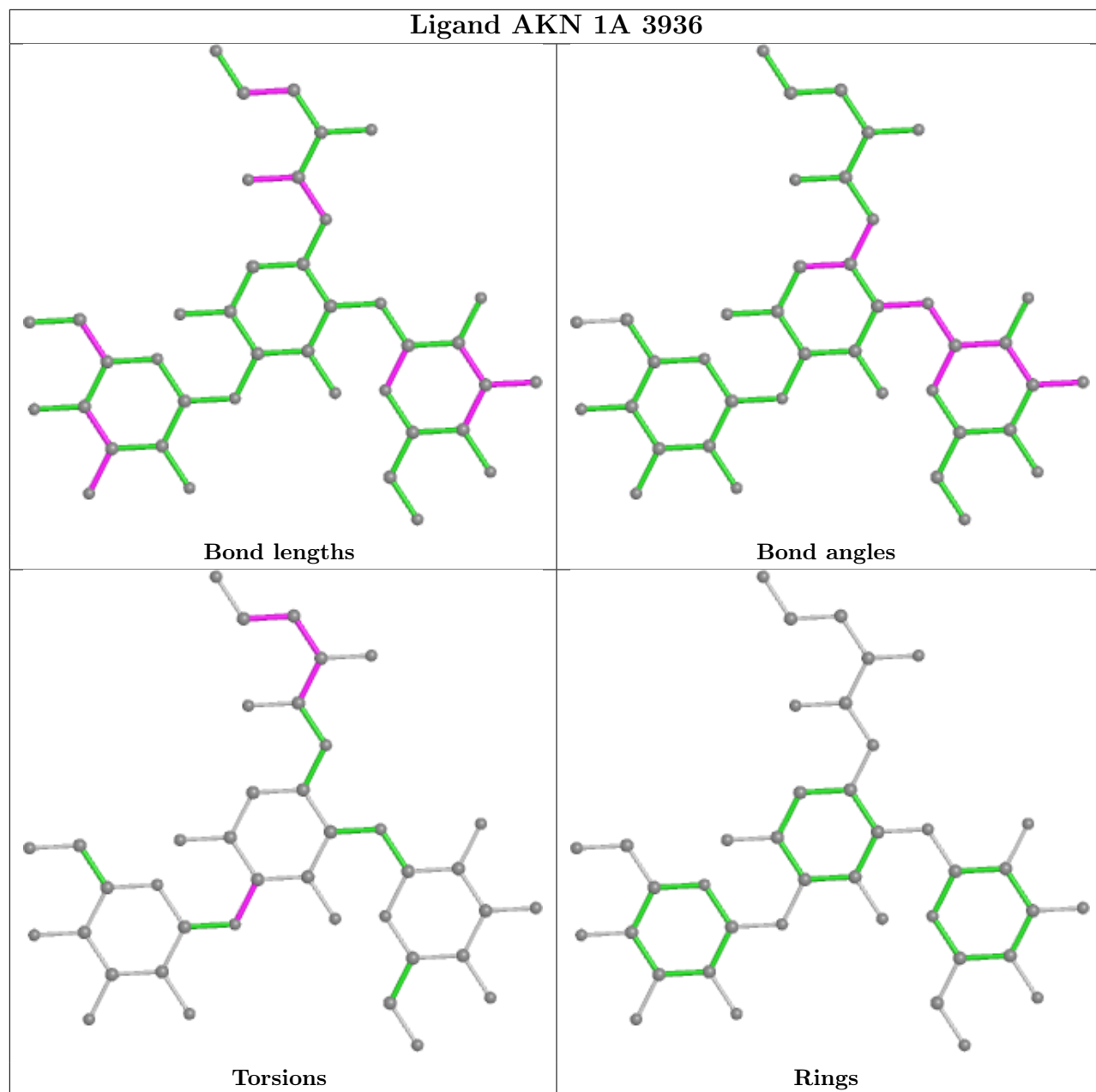
There are no ring outliers.

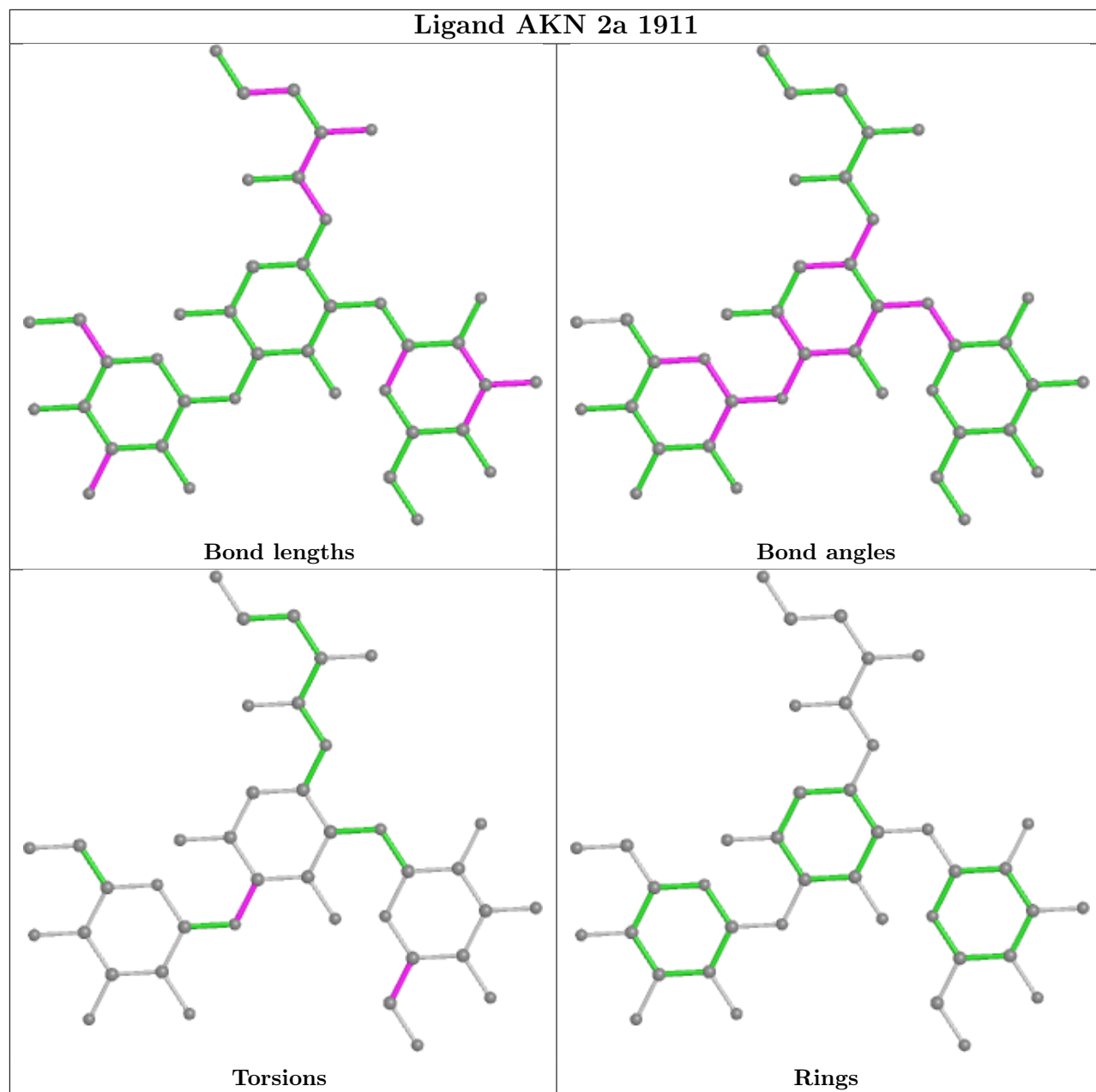
No monomer is involved in short contacts.

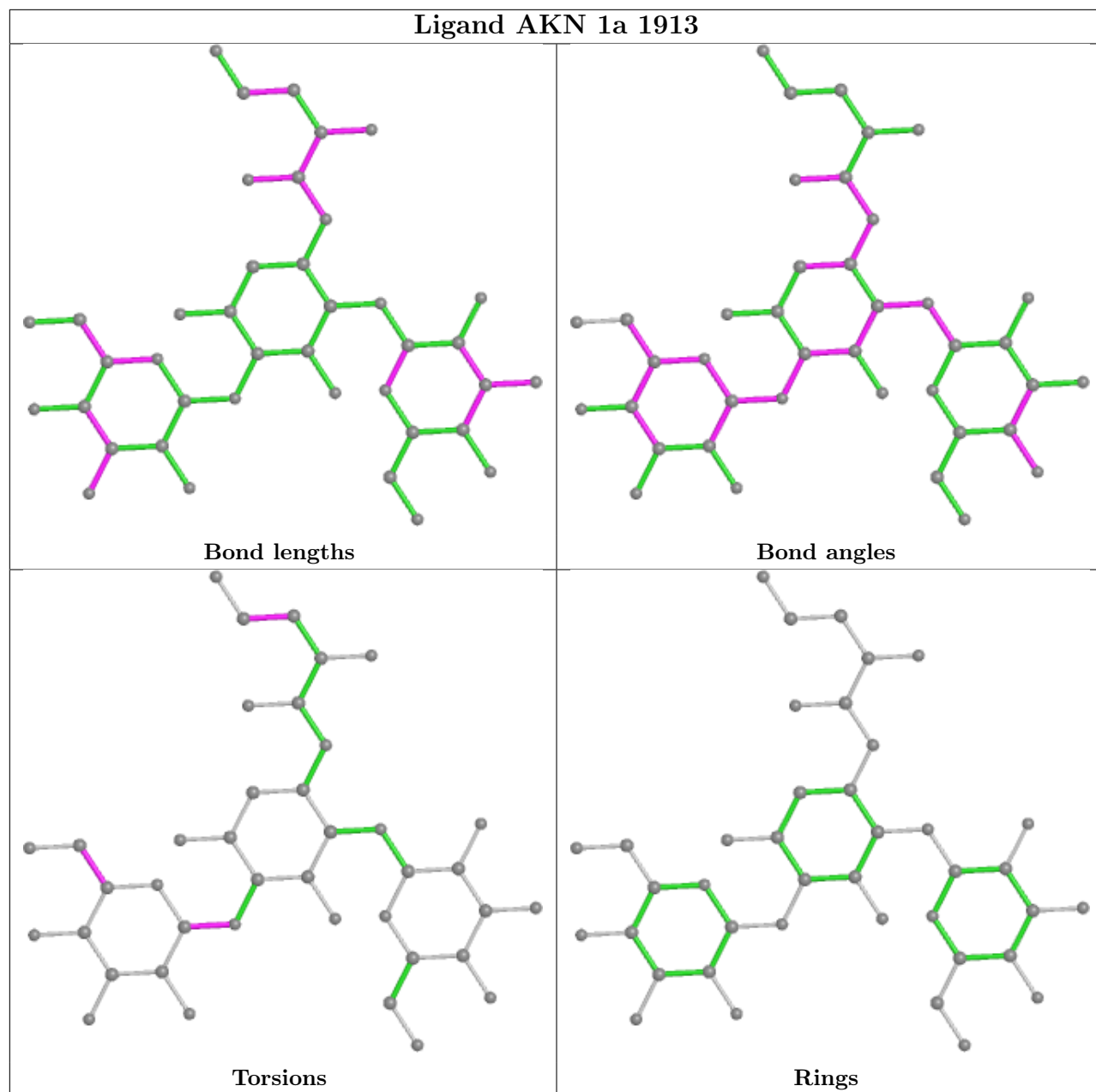
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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.

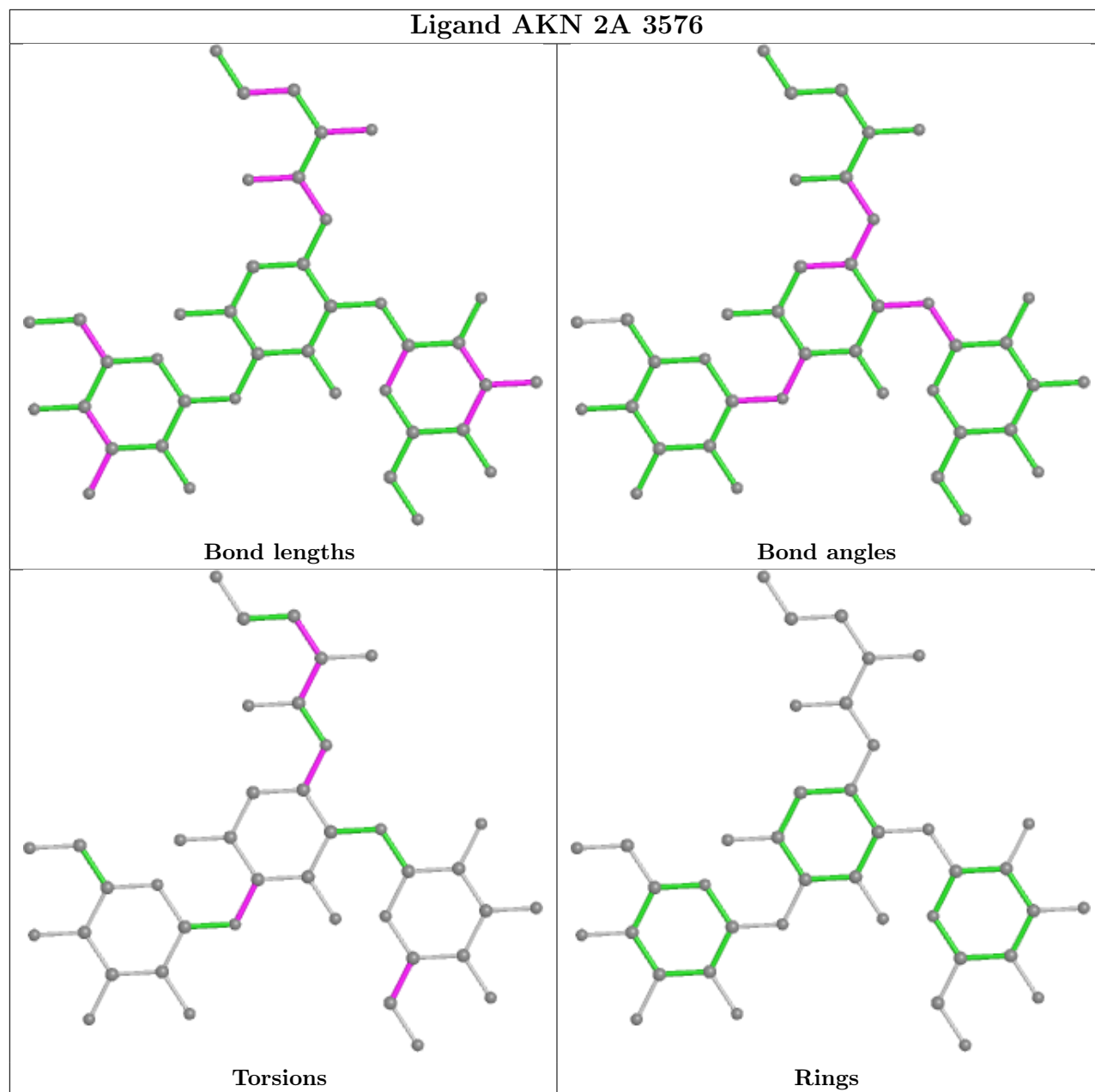


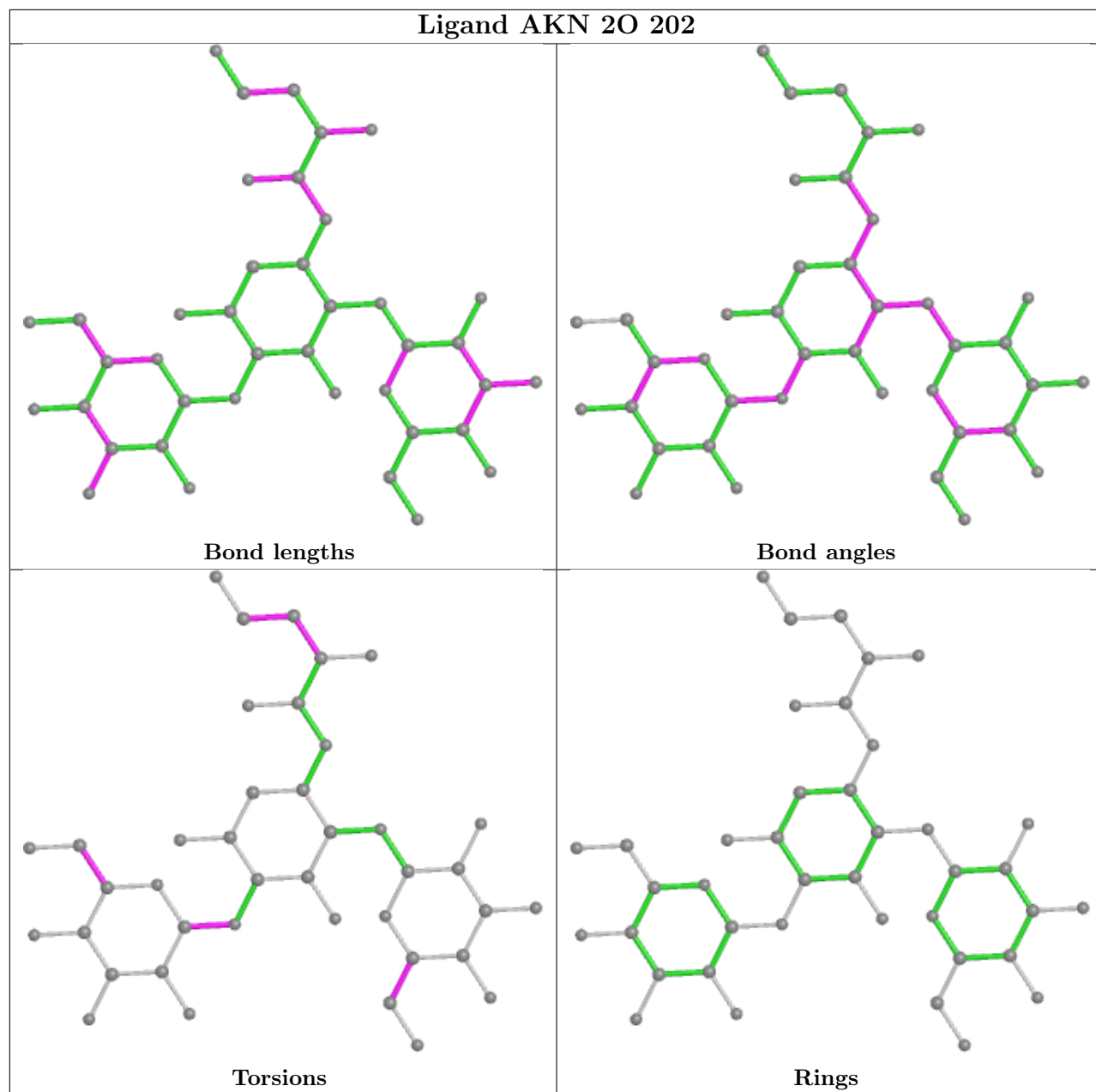


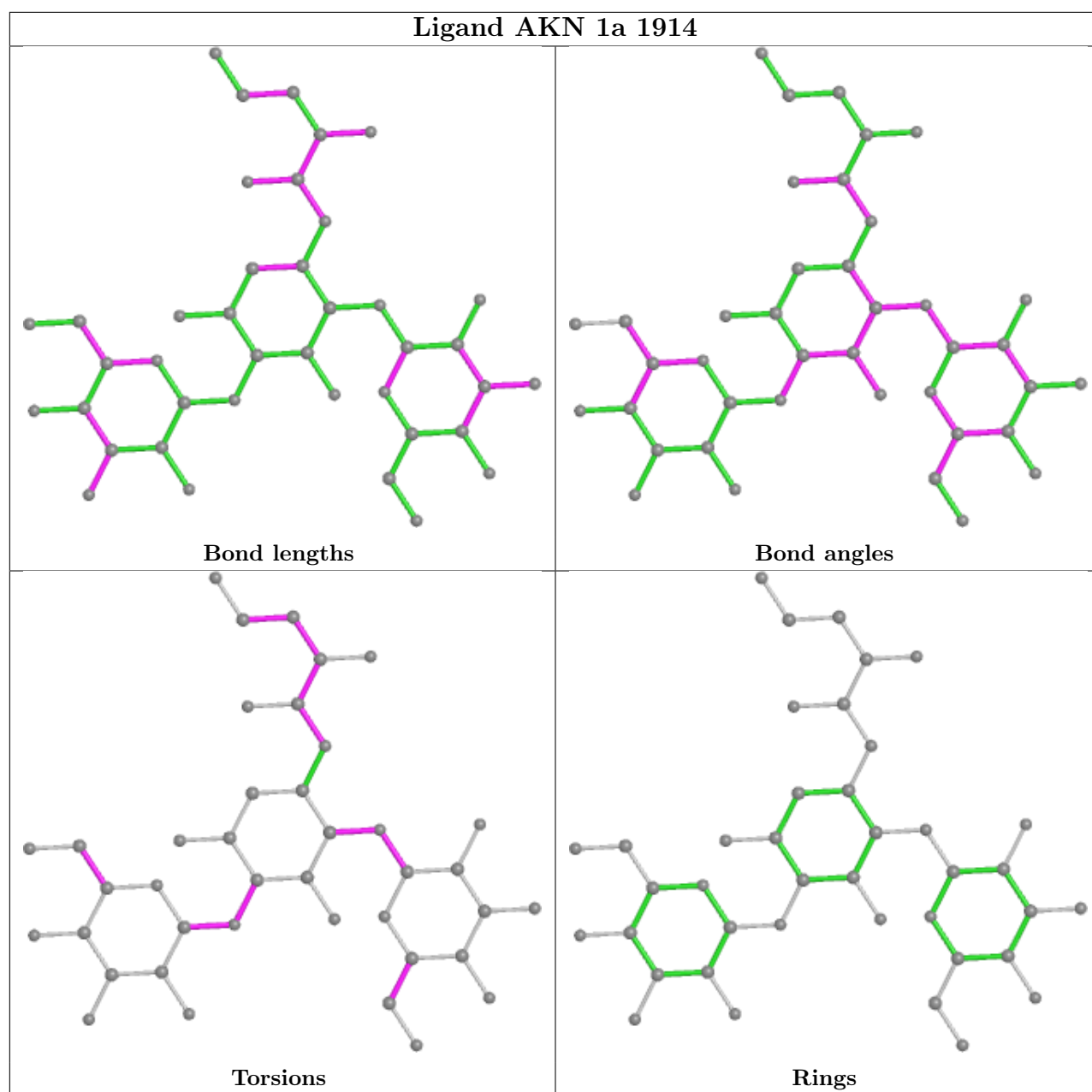












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data i

6.1 Protein, DNA and RNA chains i

In the following table, the column labelled '#RSRZ > 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q < 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

| Mol | Chain | Analysed | <RSRZ> | #RSRZ > 2 | OWAB(Å ²) | Q < 0.9 |
|-----|-------|-----------------|--------|---------------|-----------------------|---------|
| 1 | 1A | 2860/2915 (98%) | 0.15 | 30 (1%) 82 83 | 26, 47, 115, 136 | 0 |
| 1 | 2A | 2789/2915 (95%) | 0.06 | 56 (2%) 65 66 | 39, 71, 115, 136 | 0 |
| 2 | 1B | 120/121 (99%) | -0.19 | 0 100 100 | 37, 60, 77, 107 | 0 |
| 2 | 2B | 120/121 (99%) | -0.47 | 0 100 100 | 74, 95, 108, 119 | 0 |
| 3 | 1D | 275/276 (99%) | 0.26 | 3 (1%) 80 82 | 29, 47, 62, 83 | 0 |
| 3 | 2D | 275/276 (99%) | 0.54 | 18 (6%) 18 17 | 39, 60, 76, 94 | 0 |
| 4 | 1E | 204/206 (99%) | 0.53 | 10 (4%) 29 29 | 30, 50, 71, 91 | 0 |
| 4 | 2E | 204/206 (99%) | 0.42 | 17 (8%) 11 9 | 45, 73, 88, 96 | 0 |
| 5 | 1F | 203/210 (96%) | 0.06 | 1 (0%) 91 91 | 27, 50, 78, 100 | 0 |
| 5 | 2F | 203/210 (96%) | 0.67 | 19 (9%) 8 7 | 47, 79, 98, 105 | 0 |
| 6 | 1G | 181/182 (99%) | 0.00 | 2 (1%) 80 82 | 50, 68, 87, 101 | 0 |
| 6 | 2G | 181/182 (99%) | 1.08 | 43 (23%) 0 0 | 80, 95, 105, 117 | 0 |
| 7 | 1H | 174/180 (96%) | 0.11 | 1 (0%) 89 90 | 49, 68, 80, 90 | 0 |
| 7 | 2H | 174/180 (96%) | 2.13 | 86 (49%) 0 0 | 84, 101, 113, 117 | 0 |
| 8 | 1I | 146/148 (98%) | 0.16 | 5 (3%) 45 43 | 56, 86, 100, 103 | 0 |
| 8 | 2I | 146/148 (98%) | -0.11 | 3 (2%) 63 64 | 67, 87, 102, 107 | 0 |
| 9 | 1N | 140/140 (100%) | 0.80 | 13 (9%) 8 7 | 36, 49, 77, 91 | 0 |
| 9 | 2N | 140/140 (100%) | 1.93 | 58 (41%) 0 0 | 57, 80, 94, 102 | 0 |
| 10 | 1O | 122/122 (100%) | 0.85 | 14 (11%) 4 4 | 38, 51, 68, 76 | 0 |
| 10 | 2O | 122/122 (100%) | 0.95 | 16 (13%) 3 3 | 55, 70, 83, 93 | 0 |
| 11 | 1P | 149/150 (99%) | 0.22 | 2 (1%) 77 78 | 27, 56, 80, 89 | 0 |
| 11 | 2P | 149/150 (99%) | 1.49 | 46 (30%) 0 0 | 49, 82, 101, 107 | 0 |
| 12 | 1Q | 141/141 (100%) | 1.67 | 53 (37%) 0 0 | 36, 51, 64, 84 | 0 |
| 12 | 2Q | 141/141 (100%) | 2.01 | 68 (48%) 0 0 | 62, 81, 94, 99 | 0 |

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| Mol | Chain | Analysed | <RSRZ> | #RSRZ>2 | OWAB(Å ²) | Q<0.9 |
|-----|-------|----------------|--------|--------------|-----------------------|-------|
| 13 | 1R | 118/118 (100%) | 0.33 | 1 (0%) 86 87 | 34, 44, 59, 75 | 0 |
| 13 | 2R | 118/118 (100%) | -0.13 | 0 100 100 | 52, 63, 77, 84 | 0 |
| 14 | 1S | 110/112 (98%) | 0.15 | 2 (1%) 68 69 | 45, 58, 73, 82 | 0 |
| 14 | 2S | 110/112 (98%) | 0.30 | 1 (0%) 84 85 | 74, 89, 98, 102 | 0 |
| 15 | 1T | 131/146 (89%) | 0.34 | 2 (1%) 73 75 | 42, 57, 84, 98 | 0 |
| 15 | 2T | 131/146 (89%) | 0.17 | 3 (2%) 60 61 | 60, 74, 97, 105 | 0 |
| 16 | 1U | 116/118 (98%) | 0.44 | 3 (2%) 56 56 | 30, 41, 61, 75 | 0 |
| 16 | 2U | 116/118 (98%) | 1.20 | 21 (18%) 1 1 | 56, 77, 92, 98 | 0 |
| 17 | 1V | 101/101 (100%) | 0.14 | 1 (0%) 82 83 | 32, 49, 67, 83 | 0 |
| 17 | 2V | 101/101 (100%) | 1.34 | 24 (23%) 0 0 | 52, 88, 98, 104 | 0 |
| 18 | 1W | 112/113 (99%) | 0.50 | 4 (3%) 42 41 | 31, 42, 61, 89 | 0 |
| 18 | 2W | 112/113 (99%) | 0.40 | 2 (1%) 68 69 | 50, 62, 80, 106 | 0 |
| 19 | 1X | 95/96 (98%) | 0.19 | 2 (2%) 63 64 | 34, 49, 69, 85 | 0 |
| 19 | 2X | 95/96 (98%) | 0.13 | 2 (2%) 63 64 | 51, 72, 85, 93 | 0 |
| 20 | 1Y | 107/110 (97%) | 0.01 | 0 100 100 | 47, 61, 83, 95 | 0 |
| 20 | 2Y | 107/110 (97%) | 0.56 | 5 (4%) 31 31 | 73, 86, 97, 106 | 0 |
| 21 | 1Z | 154/206 (74%) | 1.02 | 28 (18%) 1 1 | 50, 73, 97, 112 | 0 |
| 21 | 2Z | 160/206 (77%) | 0.43 | 17 (10%) 6 5 | 81, 99, 113, 119 | 0 |
| 22 | 10 | 83/85 (97%) | 1.72 | 12 (14%) 2 2 | 36, 48, 78, 98 | 0 |
| 22 | 20 | 83/85 (97%) | 1.86 | 22 (26%) 0 0 | 61, 74, 92, 100 | 0 |
| 23 | 11 | 97/98 (98%) | 0.53 | 6 (6%) 20 18 | 36, 52, 81, 89 | 0 |
| 23 | 21 | 97/98 (98%) | 0.85 | 16 (16%) 1 1 | 48, 66, 92, 96 | 0 |
| 24 | 12 | 70/72 (97%) | 0.41 | 0 100 100 | 40, 59, 70, 95 | 0 |
| 24 | 22 | 70/72 (97%) | 0.28 | 1 (1%) 75 77 | 67, 84, 93, 95 | 0 |
| 25 | 13 | 59/60 (98%) | 0.41 | 1 (1%) 70 71 | 32, 45, 69, 96 | 0 |
| 25 | 23 | 59/60 (98%) | 1.86 | 20 (33%) 0 0 | 66, 79, 96, 101 | 0 |
| 26 | 14 | 69/71 (97%) | -0.41 | 0 100 100 | 64, 85, 108, 112 | 0 |
| 26 | 24 | 69/71 (97%) | 0.82 | 14 (20%) 1 1 | 91, 104, 114, 120 | 0 |
| 27 | 15 | 59/60 (98%) | 0.52 | 3 (5%) 28 27 | 29, 43, 57, 71 | 0 |
| 27 | 25 | 59/60 (98%) | 0.14 | 0 100 100 | 51, 65, 83, 87 | 0 |
| 28 | 16 | 53/54 (98%) | 0.60 | 3 (5%) 23 22 | 42, 47, 61, 73 | 0 |

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| Mol | Chain | Analysed | <RSRZ> | #RSRZ>2 | OWAB(Å ²) | Q<0.9 |
|-----|-------|-----------------|--------|---------------|-----------------------|-------|
| 28 | 26 | 53/54 (98%) | 1.98 | 23 (43%) 0 0 | 57, 70, 78, 86 | 0 |
| 29 | 17 | 48/49 (97%) | 0.15 | 2 (4%) 36 35 | 30, 37, 72, 79 | 0 |
| 29 | 27 | 48/49 (97%) | 0.31 | 1 (2%) 63 64 | 41, 51, 71, 87 | 0 |
| 30 | 18 | 64/65 (98%) | 0.64 | 4 (6%) 20 18 | 32, 44, 51, 65 | 0 |
| 30 | 28 | 64/65 (98%) | 2.38 | 37 (57%) 0 0 | 56, 66, 76, 80 | 0 |
| 31 | 19 | 37/37 (100%) | 1.45 | 12 (32%) 0 0 | 43, 50, 68, 79 | 0 |
| 31 | 29 | 37/37 (100%) | 2.51 | 19 (51%) 0 0 | 75, 84, 94, 97 | 0 |
| 32 | 1a | 1488/1521 (97%) | -0.11 | 17 (1%) 80 82 | 45, 76, 112, 134 | 0 |
| 32 | 2a | 1491/1521 (98%) | -0.01 | 29 (1%) 66 67 | 65, 92, 116, 137 | 0 |
| 33 | 1b | 231/256 (90%) | 0.37 | 13 (5%) 24 23 | 73, 94, 110, 119 | 0 |
| 33 | 2b | 231/256 (90%) | 0.60 | 32 (13%) 2 2 | 96, 107, 113, 123 | 0 |
| 34 | 1c | 206/239 (86%) | 1.32 | 55 (26%) 0 0 | 66, 80, 96, 106 | 0 |
| 34 | 2c | 206/239 (86%) | 2.15 | 97 (47%) 0 0 | 85, 102, 109, 117 | 0 |
| 35 | 1d | 208/209 (99%) | 0.78 | 30 (14%) 2 2 | 66, 83, 95, 102 | 0 |
| 35 | 2d | 208/209 (99%) | 0.75 | 27 (12%) 3 3 | 73, 89, 101, 107 | 0 |
| 36 | 1e | 148/162 (91%) | 0.90 | 21 (14%) 2 2 | 59, 75, 87, 108 | 0 |
| 36 | 2e | 148/162 (91%) | 0.84 | 26 (17%) 1 1 | 83, 95, 104, 111 | 0 |
| 37 | 1f | 100/101 (99%) | 0.06 | 2 (2%) 65 66 | 64, 78, 90, 95 | 0 |
| 37 | 2f | 100/101 (99%) | 0.53 | 6 (6%) 21 20 | 72, 85, 96, 106 | 0 |
| 38 | 1g | 155/156 (99%) | 1.22 | 36 (23%) 0 0 | 65, 81, 98, 111 | 0 |
| 38 | 2g | 155/156 (99%) | 1.49 | 41 (26%) 0 0 | 85, 96, 106, 114 | 0 |
| 39 | 1h | 137/138 (99%) | 0.71 | 20 (14%) 2 2 | 65, 78, 90, 95 | 0 |
| 39 | 2h | 137/138 (99%) | 0.85 | 25 (18%) 1 1 | 87, 96, 103, 110 | 0 |
| 40 | 1i | 127/128 (99%) | 0.29 | 16 (12%) 3 3 | 63, 87, 99, 103 | 0 |
| 40 | 2i | 127/128 (99%) | 0.78 | 21 (16%) 1 1 | 89, 103, 110, 114 | 0 |
| 41 | 1j | 97/105 (92%) | 0.53 | 16 (16%) 1 1 | 64, 90, 105, 112 | 0 |
| 41 | 2j | 96/105 (91%) | 1.67 | 33 (34%) 0 0 | 91, 105, 111, 116 | 0 |
| 42 | 1k | 114/129 (88%) | 2.32 | 60 (52%) 0 0 | 58, 77, 89, 94 | 0 |
| 42 | 2k | 114/129 (88%) | 3.26 | 92 (80%) 0 0 | 75, 89, 99, 104 | 0 |
| 43 | 1l | 121/132 (91%) | 0.84 | 18 (14%) 2 2 | 51, 63, 79, 95 | 0 |
| 43 | 2l | 121/132 (91%) | 2.10 | 63 (52%) 0 0 | 63, 81, 92, 100 | 0 |

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| Mol | Chain | Analysed | <RSRZ> | #RSRZ>2 | OWAB(Å ²) | Q<0.9 |
|-----|-------|-------------------|--------|---------------|-----------------------|-------|
| 44 | 1m | 123/126 (97%) | 0.29 | 9 (7%) 15 13 | 60, 77, 89, 99 | 0 |
| 44 | 2m | 122/126 (96%) | 1.51 | 29 (23%) 0 0 | 80, 99, 109, 117 | 0 |
| 45 | 1n | 60/61 (98%) | 0.94 | 7 (11%) 4 4 | 63, 74, 84, 89 | 0 |
| 45 | 2n | 60/61 (98%) | 4.01 | 47 (78%) 0 0 | 88, 101, 107, 108 | 0 |
| 46 | 1o | 88/89 (98%) | 0.02 | 2 (2%) 60 61 | 59, 75, 89, 100 | 0 |
| 46 | 2o | 88/89 (98%) | 0.49 | 6 (6%) 17 15 | 72, 87, 99, 102 | 0 |
| 47 | 1p | 82/88 (93%) | 1.39 | 18 (21%) 0 0 | 70, 82, 92, 96 | 0 |
| 47 | 2p | 82/88 (93%) | 0.91 | 12 (14%) 2 2 | 72, 84, 96, 105 | 0 |
| 48 | 1q | 99/105 (94%) | 0.03 | 5 (5%) 28 27 | 64, 80, 92, 101 | 0 |
| 48 | 2q | 99/105 (94%) | 1.81 | 45 (45%) 0 0 | 74, 86, 98, 105 | 0 |
| 49 | 1r | 68/88 (77%) | 0.83 | 14 (20%) 1 0 | 67, 76, 91, 96 | 0 |
| 49 | 2r | 68/88 (77%) | 1.28 | 17 (25%) 0 0 | 76, 90, 98, 105 | 0 |
| 50 | 1s | 83/93 (89%) | -0.14 | 1 (1%) 79 80 | 68, 80, 92, 98 | 0 |
| 50 | 2s | 83/93 (89%) | 1.59 | 27 (32%) 0 0 | 88, 102, 111, 118 | 0 |
| 51 | 1t | 96/106 (90%) | 0.18 | 4 (4%) 36 35 | 70, 82, 94, 103 | 0 |
| 51 | 2t | 96/106 (90%) | 0.59 | 15 (15%) 2 1 | 70, 85, 101, 106 | 0 |
| 52 | 1u | 23/27 (85%) | 0.49 | 3 (13%) 3 3 | 69, 76, 81, 90 | 0 |
| 52 | 2u | 23/27 (85%) | 1.81 | 12 (52%) 0 0 | 91, 96, 100, 102 | 0 |
| 53 | 1v | 13/24 (54%) | 2.07 | 6 (46%) 0 0 | 56, 68, 91, 118 | 0 |
| 53 | 2v | 13/24 (54%) | 1.93 | 5 (38%) 0 0 | 79, 94, 117, 126 | 0 |
| 54 | 1w | 67/76 (88%) | 1.93 | 24 (35%) 0 0 | 65, 102, 124, 129 | 0 |
| 54 | 1y | 67/76 (88%) | 0.92 | 11 (16%) 1 1 | 49, 111, 120, 137 | 0 |
| 54 | 2w | 65/76 (85%) | 2.38 | 27 (41%) 0 0 | 88, 116, 128, 134 | 0 |
| 54 | 2y | 66/76 (86%) | 1.42 | 17 (25%) 0 0 | 67, 119, 126, 129 | 0 |
| 55 | 1x | 72/77 (93%) | 0.50 | 3 (4%) 36 35 | 47, 69, 94, 105 | 0 |
| 55 | 2x | 72/77 (93%) | 0.66 | 5 (6%) 16 15 | 63, 92, 104, 118 | 0 |
| All | All | 20875/21748 (95%) | 0.50 | 2045 (9%) 7 6 | 26, 76, 109, 137 | 0 |

All (2045) RSRZ outliers are listed below:

| Mol | Chain | Res | Type | RSRZ |
|-----|-------|-----|------|------|
| 44 | 2m | 124 | PRO | 16.5 |
| 22 | 10 | 7 | LEU | 15.7 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 45 | 2n | 39 | LEU | 15.2 |
| 22 | 10 | 6 | GLY | 14.7 |
| 45 | 2n | 38 | GLY | 13.3 |
| 22 | 20 | 7 | LEU | 13.1 |
| 38 | 2g | 81 | GLY | 12.5 |
| 44 | 2m | 123 | ALA | 12.4 |
| 22 | 10 | 5 | LYS | 12.2 |
| 44 | 1m | 124 | PRO | 12.2 |
| 38 | 1g | 80 | VAL | 12.0 |
| 38 | 2g | 82 | GLY | 12.0 |
| 22 | 10 | 4 | LYS | 11.7 |
| 22 | 10 | 8 | GLY | 11.6 |
| 22 | 20 | 8 | GLY | 11.2 |
| 38 | 1g | 82 | GLY | 10.3 |
| 38 | 1g | 84 | ASN | 10.2 |
| 42 | 2k | 13 | GLN | 10.1 |
| 45 | 2n | 25 | VAL | 10.0 |
| 54 | 1w | 71 | G | 10.0 |
| 22 | 10 | 3 | HIS | 10.0 |
| 44 | 2m | 102 | ARG | 9.7 |
| 41 | 2j | 47 | PHE | 9.7 |
| 45 | 2n | 34 | TYR | 9.5 |
| 38 | 2g | 85 | TYR | 9.5 |
| 44 | 2m | 122 | LYS | 9.3 |
| 38 | 1g | 85 | TYR | 9.3 |
| 38 | 2g | 83 | ALA | 9.1 |
| 45 | 2n | 2 | ALA | 9.1 |
| 34 | 2c | 198 | VAL | 9.0 |
| 22 | 20 | 5 | LYS | 9.0 |
| 9 | 2N | 44 | PRO | 8.7 |
| 50 | 2s | 84 | GLY | 8.6 |
| 49 | 2r | 87 | ARG | 8.6 |
| 31 | 29 | 37 | GLY | 8.4 |
| 54 | 2w | 71 | G | 8.4 |
| 33 | 2b | 165 | VAL | 8.4 |
| 22 | 20 | 9 | SER | 8.3 |
| 38 | 2g | 80 | VAL | 8.2 |
| 38 | 2g | 154 | TYR | 8.2 |
| 43 | 2l | 64 | TYR | 7.9 |
| 38 | 1g | 79 | ARG | 7.9 |
| 23 | 21 | 2 | SER | 7.8 |
| 45 | 2n | 35 | ARG | 7.8 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 7 | 2H | 13 | LYS | 7.8 |
| 12 | 2Q | 104 | PHE | 7.8 |
| 28 | 26 | 54 | ILE | 7.7 |
| 38 | 2g | 156 | TRP | 7.6 |
| 41 | 2j | 55 | LYS | 7.6 |
| 45 | 2n | 37 | PHE | 7.6 |
| 7 | 2H | 159 | GLU | 7.6 |
| 38 | 1g | 83 | ALA | 7.6 |
| 54 | 1w | 70 | G | 7.5 |
| 1 | 2A | 2146 | C | 7.5 |
| 42 | 2k | 31 | THR | 7.5 |
| 41 | 2j | 87 | THR | 7.3 |
| 34 | 1c | 193 | TYR | 7.3 |
| 36 | 2e | 22 | GLY | 7.2 |
| 9 | 2N | 11 | PRO | 7.2 |
| 54 | 2w | 70 | G | 7.2 |
| 38 | 2g | 149 | ARG | 7.1 |
| 9 | 2N | 1 | MET | 7.0 |
| 11 | 2P | 51 | PHE | 7.0 |
| 22 | 20 | 4 | LYS | 7.0 |
| 39 | 2h | 112 | LEU | 6.9 |
| 40 | 2i | 127 | LYS | 6.9 |
| 34 | 2c | 60 | ALA | 6.9 |
| 38 | 2g | 86 | GLN | 6.9 |
| 41 | 2j | 63 | PHE | 6.9 |
| 38 | 1g | 156 | TRP | 6.9 |
| 21 | 2Z | 144 | LEU | 6.8 |
| 7 | 2H | 105 | LEU | 6.8 |
| 7 | 2H | 94 | TYR | 6.7 |
| 49 | 2r | 85 | LEU | 6.7 |
| 54 | 2w | 76 | A | 6.7 |
| 44 | 2m | 120 | LYS | 6.6 |
| 45 | 2n | 54 | PRO | 6.6 |
| 34 | 2c | 200 | ALA | 6.6 |
| 38 | 1g | 78 | ARG | 6.6 |
| 6 | 2G | 138 | GLN | 6.6 |
| 54 | 1w | 3 | C | 6.6 |
| 1 | 2A | 883 | G | 6.5 |
| 53 | 1v | 24 | A | 6.5 |
| 22 | 10 | 2 | ALA | 6.5 |
| 42 | 2k | 50 | TYR | 6.4 |
| 43 | 2l | 68 | ALA | 6.4 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 49 | 2r | 20 | ALA | 6.3 |
| 42 | 2k | 16 | SER | 6.3 |
| 38 | 2g | 84 | ASN | 6.3 |
| 34 | 2c | 28 | GLN | 6.3 |
| 54 | 2w | 72 | C | 6.3 |
| 43 | 2l | 26 | ALA | 6.3 |
| 22 | 20 | 6 | GLY | 6.2 |
| 34 | 2c | 32 | LEU | 6.2 |
| 44 | 1m | 123 | ALA | 6.2 |
| 28 | 26 | 5 | VAL | 6.1 |
| 44 | 2m | 5 | ALA | 6.1 |
| 7 | 2H | 17 | VAL | 6.1 |
| 42 | 1k | 50 | TYR | 6.1 |
| 22 | 20 | 2 | ALA | 6.1 |
| 32 | 2a | 1030(B) | C | 6.1 |
| 38 | 2g | 151 | TYR | 6.1 |
| 45 | 2n | 11 | LYS | 6.1 |
| 42 | 1k | 98 | LEU | 6.1 |
| 30 | 28 | 16 | ILE | 6.0 |
| 54 | 1w | 76 | A | 6.0 |
| 34 | 2c | 91 | LEU | 6.0 |
| 7 | 2H | 89 | ILE | 6.0 |
| 43 | 2l | 69 | TYR | 6.0 |
| 43 | 2l | 28 | LYS | 6.0 |
| 48 | 2q | 100 | LYS | 6.0 |
| 42 | 2k | 18 | ARG | 5.9 |
| 17 | 2V | 94 | LEU | 5.9 |
| 50 | 2s | 82 | GLY | 5.9 |
| 6 | 2G | 2 | PRO | 5.9 |
| 42 | 2k | 90 | GLY | 5.9 |
| 53 | 2v | 24 | A | 5.8 |
| 45 | 2n | 10 | ALA | 5.8 |
| 34 | 2c | 184 | TYR | 5.8 |
| 34 | 2c | 182 | ILE | 5.8 |
| 41 | 2j | 65 | LEU | 5.8 |
| 32 | 2a | 1257 | U | 5.8 |
| 50 | 2s | 80 | TYR | 5.8 |
| 38 | 1g | 81 | GLY | 5.8 |
| 1 | 1A | 942 | A | 5.8 |
| 20 | 2Y | 1 | MET | 5.7 |
| 28 | 26 | 8 | LYS | 5.7 |
| 11 | 2P | 123 | LEU | 5.7 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 9 | 2N | 10 | GLU | 5.7 |
| 34 | 1c | 39 | ILE | 5.7 |
| 43 | 1l | 64 | TYR | 5.7 |
| 34 | 1c | 100 | ALA | 5.7 |
| 7 | 2H | 113 | VAL | 5.6 |
| 49 | 2r | 46 | GLU | 5.6 |
| 43 | 2l | 27 | LEU | 5.6 |
| 25 | 23 | 60 | GLU | 5.6 |
| 48 | 2q | 42 | TYR | 5.6 |
| 41 | 2j | 59 | SER | 5.6 |
| 45 | 2n | 23 | ARG | 5.6 |
| 42 | 2k | 14 | VAL | 5.6 |
| 17 | 2V | 101 | GLY | 5.5 |
| 42 | 2k | 36 | ASP | 5.5 |
| 34 | 2c | 199 | LYS | 5.4 |
| 22 | 20 | 3 | HIS | 5.4 |
| 34 | 2c | 21 | ARG | 5.4 |
| 31 | 29 | 17 | ILE | 5.4 |
| 7 | 2H | 96 | ALA | 5.4 |
| 34 | 2c | 4 | LYS | 5.4 |
| 16 | 2U | 88 | ILE | 5.4 |
| 50 | 2s | 83 | HIS | 5.4 |
| 38 | 2g | 150 | ALA | 5.4 |
| 32 | 2a | 1030(A) | G | 5.4 |
| 1 | 2A | 2145 | C | 5.4 |
| 30 | 28 | 29 | LYS | 5.4 |
| 39 | 2h | 133 | LEU | 5.4 |
| 54 | 2w | 44 | G | 5.3 |
| 42 | 2k | 86 | GLY | 5.3 |
| 45 | 2n | 50 | LYS | 5.3 |
| 12 | 2Q | 37 | LEU | 5.3 |
| 7 | 2H | 169 | VAL | 5.3 |
| 42 | 2k | 51 | LYS | 5.3 |
| 34 | 2c | 124 | ILE | 5.3 |
| 25 | 23 | 26 | LEU | 5.3 |
| 42 | 2k | 87 | THR | 5.3 |
| 23 | 11 | 2 | SER | 5.3 |
| 34 | 2c | 188 | LEU | 5.3 |
| 42 | 2k | 49 | GLY | 5.3 |
| 42 | 2k | 89 | ALA | 5.3 |
| 41 | 2j | 48 | THR | 5.3 |
| 12 | 2Q | 85 | LYS | 5.2 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 34 | 2c | 33 | LEU | 5.2 |
| 42 | 1k | 42 | TRP | 5.2 |
| 41 | 1j | 60 | ARG | 5.2 |
| 7 | 2H | 45 | VAL | 5.2 |
| 43 | 2l | 32 | PHE | 5.2 |
| 44 | 2m | 66 | LEU | 5.2 |
| 9 | 2N | 51 | PHE | 5.2 |
| 34 | 2c | 14 | ILE | 5.2 |
| 38 | 2g | 88 | PRO | 5.2 |
| 12 | 2Q | 76 | LYS | 5.2 |
| 9 | 2N | 45 | ASN | 5.2 |
| 45 | 2n | 6 | LEU | 5.2 |
| 34 | 2c | 59 | ARG | 5.2 |
| 44 | 2m | 103 | THR | 5.2 |
| 45 | 2n | 12 | ARG | 5.2 |
| 50 | 2s | 79 | THR | 5.2 |
| 54 | 2w | 45 | U | 5.2 |
| 36 | 2e | 13 | ILE | 5.1 |
| 38 | 1g | 86 | GLN | 5.1 |
| 44 | 1m | 121 | LYS | 5.1 |
| 38 | 2g | 78 | ARG | 5.1 |
| 48 | 2q | 95 | TYR | 5.1 |
| 7 | 2H | 93 | GLY | 5.1 |
| 38 | 1g | 154 | TYR | 5.1 |
| 34 | 2c | 71 | ALA | 5.1 |
| 38 | 2g | 73 | MET | 5.1 |
| 48 | 2q | 22 | LEU | 5.1 |
| 28 | 26 | 50 | ARG | 5.1 |
| 34 | 2c | 57 | ILE | 5.1 |
| 25 | 23 | 35 | ARG | 5.1 |
| 38 | 1g | 153 | HIS | 5.1 |
| 40 | 2i | 125 | TYR | 5.1 |
| 45 | 2n | 49 | HIS | 5.1 |
| 7 | 2H | 115 | VAL | 5.1 |
| 11 | 2P | 125 | VAL | 5.1 |
| 12 | 2Q | 103 | MET | 5.1 |
| 34 | 2c | 160 | ALA | 5.1 |
| 42 | 2k | 76 | GLY | 5.1 |
| 54 | 1y | 20 | U | 5.1 |
| 55 | 2x | 70 | G | 5.1 |
| 12 | 2Q | 79 | LEU | 5.0 |
| 33 | 2b | 37 | ASN | 5.0 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 26 | 24 | 49 | PHE | 5.0 |
| 9 | 2N | 140 | VAL | 5.0 |
| 42 | 2k | 93 | GLN | 5.0 |
| 42 | 1k | 59 | TYR | 5.0 |
| 45 | 2n | 29 | ARG | 5.0 |
| 41 | 2j | 53 | PRO | 5.0 |
| 42 | 2k | 35 | PRO | 5.0 |
| 54 | 2w | 13 | C | 5.0 |
| 45 | 1n | 2 | ALA | 5.0 |
| 51 | 2t | 9 | ASN | 5.0 |
| 42 | 2k | 68 | ALA | 5.0 |
| 12 | 1Q | 33 | GLY | 5.0 |
| 16 | 2U | 60 | LEU | 5.0 |
| 41 | 2j | 50 | ILE | 5.0 |
| 41 | 2j | 58 | ASP | 5.0 |
| 12 | 1Q | 76 | LYS | 5.0 |
| 12 | 2Q | 1 | MET | 5.0 |
| 7 | 2H | 171 | LEU | 5.0 |
| 12 | 2Q | 80 | GLU | 5.0 |
| 38 | 2g | 4 | ARG | 5.0 |
| 45 | 2n | 36 | PHE | 4.9 |
| 43 | 2l | 51 | ALA | 4.9 |
| 30 | 28 | 61 | LEU | 4.9 |
| 34 | 1c | 87 | LEU | 4.9 |
| 42 | 2k | 25 | TYR | 4.9 |
| 45 | 2n | 22 | THR | 4.9 |
| 28 | 26 | 10 | LEU | 4.9 |
| 41 | 2j | 98 | ILE | 4.9 |
| 12 | 1Q | 41 | TRP | 4.9 |
| 42 | 2k | 91 | ARG | 4.9 |
| 38 | 2g | 152 | ALA | 4.9 |
| 43 | 2l | 7 | ILE | 4.9 |
| 32 | 1a | 1531 | A | 4.9 |
| 38 | 2g | 75 | VAL | 4.9 |
| 10 | 2O | 1 | MET | 4.9 |
| 54 | 1w | 73 | A | 4.9 |
| 34 | 2c | 201 | TYR | 4.9 |
| 41 | 2j | 62 | HIS | 4.9 |
| 1 | 2A | 2147 | G | 4.9 |
| 43 | 2l | 56 | ALA | 4.9 |
| 34 | 2c | 39 | ILE | 4.9 |
| 47 | 1p | 4 | ILE | 4.9 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 21 | 2Z | 149 | SER | 4.9 |
| 32 | 2a | 1202 | G | 4.9 |
| 34 | 1c | 12 | LEU | 4.8 |
| 42 | 2k | 32 | ILE | 4.8 |
| 48 | 2q | 11 | VAL | 4.8 |
| 41 | 2j | 54 | PHE | 4.8 |
| 7 | 2H | 47 | GLU | 4.8 |
| 42 | 1k | 25 | TYR | 4.8 |
| 11 | 2P | 79 | ARG | 4.8 |
| 34 | 2c | 79 | ARG | 4.8 |
| 50 | 2s | 81 | ARG | 4.8 |
| 34 | 2c | 19 | GLU | 4.8 |
| 54 | 1w | 20 | U | 4.8 |
| 22 | 20 | 11 | ARG | 4.8 |
| 41 | 2j | 46 | ARG | 4.8 |
| 42 | 2k | 59 | TYR | 4.8 |
| 41 | 1j | 50 | ILE | 4.8 |
| 32 | 1a | 1030(B) | C | 4.7 |
| 31 | 29 | 16 | VAL | 4.7 |
| 43 | 2l | 39 | VAL | 4.7 |
| 48 | 2q | 23 | VAL | 4.7 |
| 40 | 1i | 126 | SER | 4.7 |
| 34 | 2c | 65 | ALA | 4.7 |
| 45 | 2n | 30 | ALA | 4.7 |
| 6 | 2G | 39 | ILE | 4.7 |
| 45 | 2n | 52 | GLN | 4.7 |
| 54 | 1w | 72 | C | 4.7 |
| 28 | 26 | 7 | ILE | 4.7 |
| 38 | 2g | 76 | ARG | 4.7 |
| 3 | 2D | 276 | LYS | 4.7 |
| 50 | 2s | 32 | LYS | 4.7 |
| 11 | 2P | 45 | LEU | 4.7 |
| 39 | 2h | 94 | TYR | 4.7 |
| 28 | 26 | 4 | GLU | 4.7 |
| 41 | 2j | 64 | GLU | 4.7 |
| 33 | 2b | 215 | LEU | 4.7 |
| 42 | 2k | 109 | VAL | 4.7 |
| 42 | 1k | 68 | ALA | 4.7 |
| 34 | 2c | 56 | ASP | 4.7 |
| 26 | 24 | 31 | ILE | 4.7 |
| 43 | 2l | 62 | SER | 4.7 |
| 48 | 2q | 37 | LYS | 4.7 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 42 | 2k | 54 | ARG | 4.7 |
| 48 | 2q | 38 | ARG | 4.7 |
| 17 | 2V | 42 | GLY | 4.6 |
| 12 | 2Q | 2 | LEU | 4.6 |
| 38 | 1g | 151 | TYR | 4.6 |
| 38 | 2g | 148 | ASN | 4.6 |
| 7 | 2H | 24 | VAL | 4.6 |
| 7 | 2H | 95 | ARG | 4.6 |
| 6 | 2G | 102 | PHE | 4.6 |
| 34 | 2c | 197 | GLY | 4.6 |
| 41 | 2j | 10 | GLY | 4.6 |
| 44 | 2m | 4 | ILE | 4.6 |
| 54 | 1w | 69 | G | 4.6 |
| 38 | 2g | 7 | ALA | 4.6 |
| 38 | 1g | 74 | GLU | 4.6 |
| 39 | 2h | 131 | GLY | 4.6 |
| 6 | 2G | 75 | LYS | 4.6 |
| 22 | 20 | 13 | GLY | 4.6 |
| 48 | 2q | 32 | TYR | 4.5 |
| 39 | 1h | 133 | LEU | 4.5 |
| 43 | 2l | 55 | VAL | 4.5 |
| 54 | 1w | 4 | C | 4.5 |
| 50 | 2s | 38 | SER | 4.5 |
| 34 | 2c | 51 | GLY | 4.5 |
| 42 | 2k | 29 | ILE | 4.5 |
| 9 | 2N | 12 | ARG | 4.5 |
| 36 | 1e | 10 | MET | 4.5 |
| 41 | 2j | 51 | ARG | 4.5 |
| 42 | 2k | 77 | MET | 4.5 |
| 9 | 2N | 8 | GLN | 4.5 |
| 31 | 29 | 15 | LYS | 4.5 |
| 45 | 2n | 17 | LYS | 4.5 |
| 40 | 2i | 128 | ARG | 4.5 |
| 40 | 1i | 125 | TYR | 4.5 |
| 48 | 2q | 12 | SER | 4.5 |
| 12 | 1Q | 2 | LEU | 4.5 |
| 54 | 1y | 35 | A | 4.5 |
| 43 | 2l | 100 | ILE | 4.5 |
| 9 | 2N | 43 | THR | 4.5 |
| 38 | 2g | 147 | ALA | 4.5 |
| 40 | 2i | 110 | GLU | 4.5 |
| 12 | 2Q | 87 | LYS | 4.5 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 54 | 2w | 6 | G | 4.5 |
| 34 | 2c | 189 | ALA | 4.4 |
| 33 | 2b | 163 | PHE | 4.4 |
| 38 | 2g | 79 | ARG | 4.4 |
| 42 | 2k | 19 | ALA | 4.4 |
| 23 | 2l | 28 | GLY | 4.4 |
| 49 | 1r | 87 | ARG | 4.4 |
| 53 | 2v | 12 | A | 4.4 |
| 25 | 23 | 6 | VAL | 4.4 |
| 43 | 2l | 101 | VAL | 4.4 |
| 45 | 2n | 57 | ARG | 4.4 |
| 7 | 2H | 175 | LYS | 4.4 |
| 53 | 2v | 14 | A | 4.4 |
| 42 | 1k | 82 | VAL | 4.4 |
| 18 | 1W | 112 | GLY | 4.4 |
| 22 | 10 | 9 | SER | 4.4 |
| 48 | 2q | 26 | GLN | 4.4 |
| 47 | 1p | 38 | TYR | 4.4 |
| 42 | 1k | 80 | VAL | 4.4 |
| 54 | 2w | 4 | C | 4.4 |
| 42 | 2k | 114 | VAL | 4.4 |
| 45 | 2n | 53 | LEU | 4.3 |
| 34 | 2c | 64 | VAL | 4.3 |
| 42 | 1k | 84 | VAL | 4.3 |
| 42 | 2k | 17 | GLY | 4.3 |
| 54 | 2w | 69 | G | 4.3 |
| 54 | 2w | 75 | C | 4.3 |
| 12 | 2Q | 81 | VAL | 4.3 |
| 28 | 26 | 52 | VAL | 4.3 |
| 49 | 2r | 86 | VAL | 4.3 |
| 1 | 1A | 1140 | U | 4.3 |
| 28 | 26 | 11 | LEU | 4.3 |
| 33 | 2b | 31 | TYR | 4.3 |
| 25 | 23 | 3 | ARG | 4.3 |
| 38 | 2g | 145 | ALA | 4.3 |
| 47 | 1p | 7 | ALA | 4.3 |
| 1 | 1A | 931 | C | 4.3 |
| 47 | 1p | 1 | MET | 4.3 |
| 3 | 1D | 276 | LYS | 4.3 |
| 26 | 24 | 42 | PHE | 4.3 |
| 41 | 2j | 60 | ARG | 4.3 |
| 7 | 2H | 148 | ILE | 4.3 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 42 | 1k | 81 | ASP | 4.3 |
| 44 | 2m | 121 | LYS | 4.3 |
| 30 | 28 | 65 | GLU | 4.3 |
| 54 | 2w | 73 | A | 4.3 |
| 11 | 2P | 68 | GLN | 4.3 |
| 30 | 28 | 2 | PRO | 4.3 |
| 16 | 2U | 90 | VAL | 4.2 |
| 34 | 2c | 186 | PHE | 4.2 |
| 47 | 1p | 32 | TYR | 4.2 |
| 12 | 2Q | 10 | ARG | 4.2 |
| 45 | 2n | 56 | VAL | 4.2 |
| 34 | 1c | 65 | ALA | 4.2 |
| 28 | 26 | 34 | LEU | 4.2 |
| 43 | 2l | 47 | LYS | 4.2 |
| 54 | 2w | 5 | G | 4.2 |
| 26 | 24 | 32 | TYR | 4.2 |
| 30 | 28 | 64 | TYR | 4.2 |
| 38 | 1g | 88 | PRO | 4.2 |
| 34 | 2c | 175 | LEU | 4.2 |
| 44 | 1m | 122 | LYS | 4.2 |
| 32 | 2a | 1034 | G | 4.2 |
| 32 | 1a | 204 | U | 4.2 |
| 7 | 2H | 48 | GLY | 4.2 |
| 42 | 2k | 38 | ASN | 4.2 |
| 6 | 2G | 149 | VAL | 4.2 |
| 34 | 2c | 206 | GLU | 4.2 |
| 42 | 1k | 48 | ILE | 4.2 |
| 43 | 2l | 31 | PRO | 4.2 |
| 34 | 2c | 13 | GLY | 4.2 |
| 54 | 1y | 36 | A | 4.2 |
| 7 | 2H | 97 | ARG | 4.2 |
| 7 | 2H | 29 | PRO | 4.2 |
| 35 | 1d | 138 | TYR | 4.2 |
| 44 | 2m | 6 | GLY | 4.2 |
| 39 | 2h | 95 | VAL | 4.2 |
| 42 | 1k | 87 | THR | 4.2 |
| 33 | 1b | 77 | ALA | 4.1 |
| 1 | 2A | 2111 | C | 4.1 |
| 9 | 2N | 23 | LEU | 4.1 |
| 54 | 1y | 24 | G | 4.1 |
| 35 | 2d | 108 | LEU | 4.1 |
| 34 | 1c | 72 | LYS | 4.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 7 | 2H | 106 | THR | 4.1 |
| 39 | 2h | 2 | LEU | 4.1 |
| 9 | 2N | 9 | VAL | 4.1 |
| 54 | 1w | 2 | C | 4.1 |
| 43 | 2l | 25 | PRO | 4.1 |
| 40 | 2i | 117 | HIS | 4.1 |
| 39 | 1h | 18 | ARG | 4.1 |
| 42 | 2k | 83 | ILE | 4.1 |
| 45 | 2n | 41 | ARG | 4.1 |
| 42 | 2k | 73 | MET | 4.1 |
| 6 | 2G | 140 | ILE | 4.1 |
| 45 | 2n | 42 | ILE | 4.1 |
| 6 | 2G | 139 | LEU | 4.1 |
| 42 | 2k | 42 | TRP | 4.1 |
| 27 | 15 | 2 | ALA | 4.1 |
| 27 | 15 | 60 | VAL | 4.1 |
| 42 | 2k | 95 | ILE | 4.1 |
| 11 | 2P | 78 | PRO | 4.0 |
| 23 | 21 | 33 | LYS | 4.1 |
| 40 | 2i | 36 | TYR | 4.0 |
| 34 | 2c | 163 | ALA | 4.0 |
| 1 | 1A | 1141 | A | 4.0 |
| 31 | 29 | 25 | VAL | 4.0 |
| 35 | 1d | 170 | VAL | 4.0 |
| 35 | 2d | 146 | ILE | 4.0 |
| 7 | 2H | 88 | LEU | 4.0 |
| 28 | 26 | 9 | LEU | 4.0 |
| 3 | 1D | 275 | LYS | 4.0 |
| 9 | 1N | 54 | VAL | 4.0 |
| 54 | 2y | 6 | G | 4.0 |
| 38 | 2g | 155 | ARG | 4.0 |
| 5 | 2F | 127 | GLU | 4.0 |
| 42 | 2k | 62 | GLN | 4.0 |
| 40 | 2i | 115 | GLY | 4.0 |
| 44 | 2m | 119 | GLY | 4.0 |
| 7 | 2H | 72 | ILE | 4.0 |
| 35 | 2d | 49 | ARG | 4.0 |
| 7 | 2H | 138 | LYS | 4.0 |
| 1 | 2A | 2896 | C | 4.0 |
| 38 | 1g | 155 | ARG | 4.0 |
| 12 | 1Q | 27 | VAL | 4.0 |
| 40 | 1i | 121 | ARG | 4.0 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 44 | 1m | 87 | TYR | 4.0 |
| 11 | 2P | 109 | GLY | 4.0 |
| 1 | 2A | 884 | C | 4.0 |
| 54 | 1w | 44 | G | 4.0 |
| 7 | 2H | 164 | TYR | 4.0 |
| 47 | 2p | 74 | LEU | 4.0 |
| 42 | 2k | 23 | ALA | 4.0 |
| 1 | 1A | 2168 | C | 3.9 |
| 34 | 1c | 201 | TYR | 3.9 |
| 7 | 2H | 167 | GLU | 3.9 |
| 30 | 28 | 12 | LYS | 3.9 |
| 6 | 2G | 92 | VAL | 3.9 |
| 36 | 2e | 31 | LEU | 3.9 |
| 41 | 2j | 88 | LEU | 3.9 |
| 11 | 2P | 124 | LYS | 3.9 |
| 12 | 2Q | 77 | LYS | 3.9 |
| 30 | 28 | 9 | GLY | 3.9 |
| 42 | 2k | 43 | SER | 3.9 |
| 43 | 2l | 20 | LYS | 3.9 |
| 34 | 1c | 196 | LEU | 3.9 |
| 51 | 2t | 24 | LEU | 3.9 |
| 34 | 2c | 23 | TYR | 3.9 |
| 32 | 1a | 1030(C) | G | 3.9 |
| 32 | 1a | 1532 | U | 3.9 |
| 42 | 1k | 126 | ARG | 3.9 |
| 5 | 2F | 82 | ILE | 3.9 |
| 12 | 2Q | 109 | VAL | 3.9 |
| 1 | 2A | 2143 | C | 3.9 |
| 6 | 2G | 146 | TYR | 3.9 |
| 42 | 1k | 19 | ALA | 3.9 |
| 4 | 2E | 134 | ILE | 3.9 |
| 25 | 23 | 2 | PRO | 3.9 |
| 44 | 2m | 78 | ILE | 3.9 |
| 1 | 2A | 888 | C | 3.9 |
| 34 | 2c | 196 | LEU | 3.9 |
| 35 | 2d | 47 | ARG | 3.9 |
| 40 | 2i | 114 | TYR | 3.9 |
| 47 | 1p | 39 | TYR | 3.9 |
| 7 | 2H | 34 | GLU | 3.9 |
| 33 | 2b | 187 | LEU | 3.9 |
| 50 | 2s | 78 | ARG | 3.9 |
| 50 | 2s | 52 | TYR | 3.9 |

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| Mol | Chain | Res | Type | RSRZ |
|-----|-------|------|------|------|
| 38 | 2g | 87 | VAL | 3.9 |
| 21 | 1Z | 70 | LEU | 3.9 |
| 36 | 2e | 12 | LEU | 3.9 |
| 41 | 2j | 11 | PHE | 3.9 |
| 30 | 28 | 59 | LYS | 3.9 |
| 52 | 2u | 14 | TRP | 3.9 |
| 54 | 1w | 13 | C | 3.9 |
| 48 | 2q | 21 | VAL | 3.9 |
| 7 | 2H | 112 | PRO | 3.9 |
| 42 | 2k | 75 | TYR | 3.8 |
| 31 | 29 | 26 | ILE | 3.8 |
| 7 | 2H | 116 | GLU | 3.8 |
| 16 | 2U | 72 | HIS | 3.8 |
| 44 | 2m | 90 | LEU | 3.8 |
| 1 | 2A | 896 | A | 3.8 |
| 1 | 2A | 2173 | A | 3.8 |
| 42 | 1k | 54 | ARG | 3.8 |
| 7 | 2H | 44 | VAL | 3.8 |
| 12 | 1Q | 104 | PHE | 3.8 |
| 9 | 2N | 116 | LEU | 3.8 |
| 40 | 1i | 127 | LYS | 3.8 |
| 47 | 1p | 35 | LYS | 3.8 |
| 40 | 1i | 128 | ARG | 3.8 |
| 33 | 2b | 236 | TYR | 3.8 |
| 34 | 2c | 157 | ILE | 3.8 |
| 42 | 1k | 75 | TYR | 3.8 |
| 31 | 29 | 13 | LYS | 3.8 |
| 25 | 13 | 60 | GLU | 3.8 |
| 7 | 2H | 144 | VAL | 3.8 |
| 22 | 20 | 10 | THR | 3.8 |
| 35 | 1d | 23 | GLY | 3.8 |
| 48 | 2q | 8 | GLY | 3.8 |
| 7 | 2H | 32 | GLU | 3.8 |
| 17 | 2V | 73 | SER | 3.8 |
| 12 | 1Q | 10 | ARG | 3.8 |
| 54 | 2y | 53 | G | 3.8 |
| 1 | 2A | 887 | A | 3.8 |
| 42 | 2k | 21 | ILE | 3.8 |
| 31 | 29 | 18 | ARG | 3.8 |
| 48 | 2q | 87 | LYS | 3.8 |
| 16 | 2U | 98 | LEU | 3.8 |
| 23 | 21 | 22 | GLY | 3.8 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 36 | 2e | 23 | GLY | 3.8 |
| 43 | 2l | 33 | ARG | 3.8 |
| 34 | 2c | 6 | HIS | 3.8 |
| 9 | 2N | 42 | TRP | 3.8 |
| 42 | 1k | 49 | GLY | 3.8 |
| 9 | 2N | 74 | ARG | 3.8 |
| 6 | 2G | 157 | ILE | 3.8 |
| 12 | 2Q | 92 | GLY | 3.7 |
| 26 | 24 | 7 | PRO | 3.7 |
| 32 | 1a | 1030 | C | 3.7 |
| 42 | 2k | 65 | ALA | 3.7 |
| 48 | 2q | 92 | ARG | 3.7 |
| 42 | 2k | 55 | LYS | 3.7 |
| 43 | 2l | 52 | LEU | 3.7 |
| 7 | 2H | 157 | TYR | 3.7 |
| 11 | 2P | 110 | TYR | 3.7 |
| 1 | 2A | 2128 | C | 3.7 |
| 30 | 28 | 34 | TRP | 3.7 |
| 42 | 1k | 29 | ILE | 3.7 |
| 30 | 28 | 11 | LYS | 3.7 |
| 12 | 2Q | 49 | ALA | 3.7 |
| 6 | 2G | 28 | VAL | 3.7 |
| 12 | 2Q | 106 | VAL | 3.7 |
| 31 | 29 | 23 | VAL | 3.7 |
| 12 | 2Q | 75 | THR | 3.7 |
| 34 | 2c | 138 | VAL | 3.7 |
| 42 | 1k | 14 | VAL | 3.7 |
| 6 | 2G | 137 | GLU | 3.7 |
| 31 | 29 | 12 | ASP | 3.7 |
| 42 | 2k | 66 | LEU | 3.7 |
| 42 | 2k | 39 | PRO | 3.7 |
| 43 | 2l | 66 | VAL | 3.7 |
| 54 | 2y | 61 | C | 3.7 |
| 11 | 2P | 1 | MET | 3.7 |
| 12 | 1Q | 1 | MET | 3.7 |
| 7 | 2H | 151 | ILE | 3.7 |
| 42 | 1k | 47 | VAL | 3.7 |
| 45 | 2n | 46 | GLU | 3.7 |
| 38 | 2g | 153 | HIS | 3.7 |
| 44 | 1m | 120 | LYS | 3.7 |
| 43 | 2l | 120 | TYR | 3.7 |
| 33 | 2b | 121 | LEU | 3.7 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 34 | 2c | 87 | LEU | 3.7 |
| 41 | 1j | 58 | ASP | 3.7 |
| 26 | 24 | 40 | HIS | 3.7 |
| 39 | 2h | 83 | ILE | 3.7 |
| 32 | 2a | 1033 | G | 3.7 |
| 54 | 1w | 1 | G | 3.7 |
| 37 | 1f | 57 | GLN | 3.6 |
| 47 | 1p | 2 | VAL | 3.6 |
| 55 | 2x | 69 | C | 3.6 |
| 22 | 10 | 12 | ASN | 3.6 |
| 45 | 2n | 59 | ALA | 3.6 |
| 3 | 2D | 155 | LEU | 3.6 |
| 7 | 2H | 71 | LEU | 3.6 |
| 31 | 19 | 16 | VAL | 3.6 |
| 48 | 2q | 43 | LEU | 3.6 |
| 38 | 2g | 140 | ASP | 3.6 |
| 43 | 2l | 19 | ARG | 3.6 |
| 42 | 2k | 119 | CYS | 3.6 |
| 7 | 2H | 145 | ALA | 3.6 |
| 12 | 2Q | 66 | ILE | 3.6 |
| 34 | 2c | 178 | LEU | 3.6 |
| 40 | 1i | 114 | TYR | 3.6 |
| 32 | 2a | 1220 | G | 3.6 |
| 42 | 2k | 60 | ALA | 3.6 |
| 10 | 2O | 57 | VAL | 3.6 |
| 22 | 20 | 12 | ASN | 3.6 |
| 36 | 2e | 119 | LEU | 3.6 |
| 39 | 2h | 111 | ILE | 3.6 |
| 48 | 2q | 9 | VAL | 3.6 |
| 52 | 2u | 6 | ARG | 3.6 |
| 17 | 2V | 5 | VAL | 3.6 |
| 35 | 2d | 158 | ILE | 3.6 |
| 34 | 1c | 167 | TRP | 3.6 |
| 52 | 1u | 14 | TRP | 3.6 |
| 42 | 2k | 126 | ARG | 3.6 |
| 42 | 1k | 95 | ILE | 3.6 |
| 1 | 1A | 1139 | G | 3.6 |
| 21 | 2Z | 50 | GLN | 3.6 |
| 54 | 2y | 34 | G | 3.6 |
| 36 | 1e | 25 | ARG | 3.6 |
| 42 | 2k | 106 | LYS | 3.6 |
| 12 | 2Q | 121 | ALA | 3.6 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 30 | 28 | 23 | VAL | 3.6 |
| 43 | 2l | 18 | VAL | 3.6 |
| 9 | 2N | 50 | ASP | 3.6 |
| 21 | 2Z | 121 | HIS | 3.6 |
| 1 | 2A | 2144 | U | 3.5 |
| 12 | 2Q | 3 | MET | 3.5 |
| 48 | 2q | 27 | PHE | 3.5 |
| 42 | 1k | 92 | GLU | 3.5 |
| 16 | 2U | 20 | LEU | 3.5 |
| 42 | 1k | 83 | ILE | 3.5 |
| 3 | 2D | 5 | LYS | 3.5 |
| 8 | 2I | 85 | GLU | 3.5 |
| 45 | 2n | 61 | TRP | 3.5 |
| 16 | 2U | 109 | LEU | 3.5 |
| 42 | 2k | 30 | VAL | 3.5 |
| 9 | 2N | 72 | TYR | 3.5 |
| 12 | 2Q | 91 | GLU | 3.5 |
| 21 | 1Z | 104 | PHE | 3.5 |
| 38 | 2g | 74 | GLU | 3.5 |
| 45 | 2n | 26 | ARG | 3.5 |
| 9 | 2N | 84 | LYS | 3.5 |
| 11 | 2P | 59 | LEU | 3.5 |
| 40 | 2i | 19 | LEU | 3.5 |
| 43 | 1l | 91 | LYS | 3.5 |
| 44 | 2m | 15 | VAL | 3.5 |
| 33 | 2b | 232 | PRO | 3.5 |
| 50 | 2s | 47 | HIS | 3.5 |
| 1 | 1A | 932 | C | 3.5 |
| 6 | 2G | 136 | ARG | 3.5 |
| 31 | 29 | 2 | LYS | 3.5 |
| 34 | 1c | 47 | LEU | 3.5 |
| 50 | 2s | 15 | LEU | 3.5 |
| 34 | 2c | 162 | GLN | 3.5 |
| 51 | 1t | 83 | ARG | 3.5 |
| 34 | 2c | 22 | TRP | 3.5 |
| 28 | 26 | 20 | ASN | 3.5 |
| 42 | 2k | 63 | LEU | 3.5 |
| 49 | 1r | 78 | LEU | 3.5 |
| 36 | 2e | 10 | MET | 3.5 |
| 12 | 1Q | 17 | LEU | 3.5 |
| 11 | 2P | 76 | LYS | 3.5 |
| 22 | 20 | 68 | GLU | 3.5 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 42 | 2k | 40 | ILE | 3.5 |
| 21 | 1Z | 59 | LEU | 3.5 |
| 21 | 1Z | 99 | TYR | 3.5 |
| 7 | 2H | 162 | ILE | 3.5 |
| 23 | 11 | 21 | ARG | 3.5 |
| 34 | 1c | 198 | VAL | 3.5 |
| 42 | 2k | 82 | VAL | 3.5 |
| 41 | 1j | 59 | SER | 3.4 |
| 9 | 2N | 13 | TRP | 3.4 |
| 9 | 2N | 40 | PRO | 3.4 |
| 25 | 23 | 20 | LYS | 3.4 |
| 42 | 2k | 70 | LYS | 3.4 |
| 34 | 2c | 142 | MET | 3.4 |
| 43 | 2l | 84 | LEU | 3.4 |
| 5 | 2F | 90 | PHE | 3.4 |
| 45 | 2n | 55 | GLY | 3.4 |
| 38 | 1g | 77 | SER | 3.4 |
| 38 | 1g | 90 | GLU | 3.4 |
| 41 | 2j | 56 | HIS | 3.4 |
| 16 | 2U | 117 | GLN | 3.4 |
| 38 | 1g | 87 | VAL | 3.4 |
| 41 | 2j | 89 | ASP | 3.4 |
| 54 | 2w | 49 | C | 3.4 |
| 7 | 2H | 168 | PRO | 3.4 |
| 53 | 1v | 23 | A | 3.4 |
| 17 | 2V | 1 | MET | 3.4 |
| 43 | 2l | 93 | LEU | 3.4 |
| 25 | 23 | 47 | VAL | 3.4 |
| 31 | 29 | 24 | TYR | 3.4 |
| 36 | 1e | 82 | VAL | 3.4 |
| 12 | 2Q | 33 | GLY | 3.4 |
| 11 | 2P | 149 | GLU | 3.4 |
| 54 | 2w | 74 | C | 3.4 |
| 48 | 2q | 99 | SER | 3.4 |
| 1 | 2A | 229 | A | 3.4 |
| 33 | 2b | 40 | HIS | 3.4 |
| 42 | 2k | 104 | GLN | 3.4 |
| 48 | 2q | 44 | ALA | 3.4 |
| 54 | 2w | 31 | A | 3.4 |
| 10 | 2O | 43 | VAL | 3.4 |
| 10 | 2O | 47 | ILE | 3.4 |
| 11 | 2P | 71 | VAL | 3.4 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 26 | 24 | 30 | GLU | 3.4 |
| 1 | 2A | 2132 | U | 3.4 |
| 30 | 28 | 36 | LYS | 3.4 |
| 33 | 1b | 215 | LEU | 3.4 |
| 34 | 2c | 7 | PRO | 3.4 |
| 12 | 2Q | 53 | ALA | 3.4 |
| 16 | 2U | 71 | GLN | 3.4 |
| 12 | 2Q | 6 | ARG | 3.4 |
| 42 | 1k | 41 | THR | 3.4 |
| 44 | 2m | 105 | THR | 3.4 |
| 52 | 2u | 22 | ARG | 3.4 |
| 54 | 2y | 65 | G | 3.4 |
| 42 | 2k | 71 | LYS | 3.4 |
| 42 | 2k | 58 | PRO | 3.4 |
| 50 | 2s | 76 | PRO | 3.4 |
| 12 | 2Q | 83 | MET | 3.4 |
| 45 | 2n | 7 | ILE | 3.4 |
| 36 | 2e | 90 | VAL | 3.4 |
| 1 | 1A | 1142 | A | 3.4 |
| 1 | 2A | 2131 | G | 3.4 |
| 12 | 2Q | 47 | ILE | 3.4 |
| 34 | 1c | 168 | ALA | 3.4 |
| 47 | 2p | 33 | ILE | 3.4 |
| 37 | 2f | 6 | VAL | 3.4 |
| 41 | 2j | 92 | THR | 3.4 |
| 30 | 28 | 62 | LEU | 3.4 |
| 38 | 1g | 22 | LEU | 3.4 |
| 5 | 2F | 80 | ALA | 3.4 |
| 33 | 2b | 108 | ILE | 3.4 |
| 7 | 2H | 35 | VAL | 3.4 |
| 42 | 1k | 60 | ALA | 3.4 |
| 42 | 1k | 70 | LYS | 3.4 |
| 43 | 1l | 96 | VAL | 3.4 |
| 34 | 2c | 10 | PHE | 3.4 |
| 42 | 2k | 85 | ARG | 3.3 |
| 44 | 2m | 88 | ARG | 3.3 |
| 12 | 2Q | 130 | LYS | 3.3 |
| 36 | 1e | 88 | LYS | 3.3 |
| 47 | 2p | 49 | LEU | 3.3 |
| 48 | 2q | 24 | GLU | 3.3 |
| 12 | 1Q | 65 | PHE | 3.3 |
| 42 | 1k | 16 | SER | 3.3 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 35 | 2d | 138 | TYR | 3.3 |
| 42 | 1k | 123 | LYS | 3.3 |
| 12 | 2Q | 12 | GLN | 3.3 |
| 21 | 1Z | 18 | LEU | 3.3 |
| 34 | 1c | 101 | LEU | 3.3 |
| 21 | 2Z | 42 | VAL | 3.3 |
| 54 | 1w | 6 | G | 3.3 |
| 12 | 2Q | 113 | GLN | 3.3 |
| 45 | 2n | 44 | LEU | 3.3 |
| 9 | 2N | 60 | ILE | 3.3 |
| 35 | 1d | 180 | GLY | 3.3 |
| 38 | 1g | 75 | VAL | 3.3 |
| 42 | 2k | 79 | SER | 3.3 |
| 30 | 28 | 32 | LEU | 3.3 |
| 21 | 1Z | 53 | ILE | 3.3 |
| 21 | 1Z | 100 | VAL | 3.3 |
| 42 | 2k | 96 | ARG | 3.3 |
| 43 | 1l | 94 | PRO | 3.3 |
| 47 | 2p | 1 | MET | 3.3 |
| 54 | 1w | 7 | A | 3.3 |
| 3 | 2D | 4 | LYS | 3.3 |
| 11 | 2P | 95 | VAL | 3.3 |
| 28 | 26 | 2 | ALA | 3.3 |
| 42 | 2k | 100 | ALA | 3.3 |
| 43 | 2l | 30 | ALA | 3.3 |
| 30 | 28 | 25 | MET | 3.3 |
| 1 | 2A | 2119 | A | 3.3 |
| 11 | 2P | 88 | LEU | 3.3 |
| 41 | 2j | 85 | LEU | 3.3 |
| 9 | 1N | 81 | GLY | 3.3 |
| 6 | 2G | 80 | PHE | 3.3 |
| 36 | 1e | 89 | ILE | 3.3 |
| 42 | 1k | 32 | ILE | 3.3 |
| 44 | 2m | 7 | VAL | 3.3 |
| 34 | 1c | 89 | GLU | 3.3 |
| 34 | 2c | 20 | SER | 3.3 |
| 41 | 1j | 57 | LYS | 3.3 |
| 6 | 2G | 159 | VAL | 3.3 |
| 30 | 28 | 10 | ALA | 3.3 |
| 33 | 1b | 126 | GLU | 3.3 |
| 35 | 1d | 144 | ASP | 3.3 |
| 28 | 26 | 24 | GLU | 3.3 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 34 | 2c | 203 | PHE | 3.3 |
| 48 | 1q | 27 | PHE | 3.3 |
| 30 | 28 | 22 | VAL | 3.3 |
| 35 | 1d | 140 | VAL | 3.3 |
| 40 | 1i | 122 | ALA | 3.3 |
| 42 | 1k | 89 | ALA | 3.3 |
| 47 | 2p | 51 | VAL | 3.3 |
| 43 | 2l | 61 | THR | 3.3 |
| 38 | 2g | 16 | LEU | 3.3 |
| 8 | 1I | 109 | ILE | 3.2 |
| 34 | 2c | 134 | ILE | 3.2 |
| 7 | 2H | 141 | VAL | 3.2 |
| 12 | 2Q | 50 | ALA | 3.2 |
| 51 | 2t | 12 | ALA | 3.2 |
| 36 | 1e | 18 | ARG | 3.2 |
| 42 | 1k | 91 | ARG | 3.2 |
| 43 | 2l | 15 | ARG | 3.2 |
| 43 | 2l | 94 | PRO | 3.2 |
| 30 | 28 | 60 | LEU | 3.2 |
| 38 | 1g | 12 | LEU | 3.2 |
| 7 | 2H | 86 | GLU | 3.2 |
| 44 | 2m | 94 | ARG | 3.2 |
| 53 | 1v | 15 | A | 3.2 |
| 6 | 2G | 49 | ASP | 3.2 |
| 29 | 27 | 48 | LYS | 3.2 |
| 40 | 1i | 113 | LYS | 3.2 |
| 43 | 2l | 23 | LYS | 3.2 |
| 31 | 29 | 9 | ARG | 3.2 |
| 43 | 2l | 70 | ILE | 3.2 |
| 54 | 2w | 22 | G | 3.2 |
| 28 | 26 | 23 | THR | 3.2 |
| 34 | 2c | 12 | LEU | 3.2 |
| 11 | 2P | 111 | ARG | 3.2 |
| 36 | 1e | 24 | ARG | 3.2 |
| 41 | 2j | 66 | ARG | 3.2 |
| 42 | 2k | 125 | PHE | 3.2 |
| 49 | 2r | 43 | PHE | 3.2 |
| 11 | 2P | 75 | ILE | 3.2 |
| 7 | 2H | 76 | VAL | 3.2 |
| 25 | 23 | 25 | ALA | 3.2 |
| 54 | 1w | 5 | G | 3.2 |
| 9 | 2N | 112 | LEU | 3.2 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 11 | 2P | 3 | LEU | 3.2 |
| 4 | 2E | 137 | HIS | 3.2 |
| 47 | 1p | 19 | ILE | 3.2 |
| 54 | 1y | 47 | U | 3.2 |
| 34 | 2c | 66 | VAL | 3.2 |
| 12 | 2Q | 61 | GLY | 3.2 |
| 23 | 2I | 31 | GLY | 3.2 |
| 6 | 2G | 135 | LEU | 3.2 |
| 51 | 2t | 23 | ARG | 3.2 |
| 43 | 2l | 89 | ARG | 3.2 |
| 29 | 17 | 48 | LYS | 3.2 |
| 11 | 2P | 126 | VAL | 3.2 |
| 34 | 2c | 185 | GLY | 3.2 |
| 31 | 29 | 1 | MET | 3.2 |
| 12 | 1Q | 5 | ARG | 3.2 |
| 48 | 1q | 35 | VAL | 3.2 |
| 42 | 1k | 21 | ILE | 3.1 |
| 48 | 2q | 36 | ILE | 3.1 |
| 23 | 2I | 62 | VAL | 3.1 |
| 51 | 2t | 8 | ARG | 3.1 |
| 54 | 2w | 23 | A | 3.1 |
| 47 | 1p | 6 | LEU | 3.1 |
| 45 | 2n | 16 | PHE | 3.1 |
| 39 | 1h | 109 | ILE | 3.1 |
| 1 | 1A | 1072 | U | 3.1 |
| 6 | 2G | 73 | ALA | 3.1 |
| 42 | 1k | 13 | GLN | 3.1 |
| 17 | 2V | 38 | LEU | 3.1 |
| 54 | 2w | 7 | A | 3.1 |
| 42 | 1k | 73 | MET | 3.1 |
| 15 | 2T | 48 | ILE | 3.1 |
| 34 | 2c | 202 | ILE | 3.1 |
| 7 | 2H | 107 | VAL | 3.1 |
| 12 | 1Q | 132 | VAL | 3.1 |
| 22 | 10 | 13 | GLY | 3.1 |
| 12 | 2Q | 129 | THR | 3.1 |
| 12 | 1Q | 32 | TYR | 3.1 |
| 12 | 2Q | 74 | TYR | 3.1 |
| 47 | 2p | 6 | LEU | 3.1 |
| 33 | 2b | 122 | PHE | 3.1 |
| 41 | 1j | 66 | ARG | 3.1 |
| 42 | 2k | 48 | ILE | 3.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 47 | 1p | 36 | ILE | 3.1 |
| 33 | 1b | 165 | VAL | 3.1 |
| 43 | 2l | 72 | GLY | 3.1 |
| 21 | 1Z | 121 | HIS | 3.1 |
| 30 | 28 | 30 | ARG | 3.1 |
| 34 | 1c | 128 | PHE | 3.1 |
| 26 | 24 | 29 | PRO | 3.1 |
| 40 | 2i | 123 | PRO | 3.1 |
| 12 | 2Q | 86 | GLY | 3.1 |
| 23 | 2l | 30 | VAL | 3.1 |
| 34 | 2c | 103 | VAL | 3.1 |
| 7 | 2H | 30 | LYS | 3.1 |
| 32 | 2a | 1001(A) | G | 3.1 |
| 17 | 2V | 71 | LEU | 3.1 |
| 51 | 1t | 18 | GLN | 3.1 |
| 6 | 2G | 29 | TRP | 3.1 |
| 38 | 2g | 146 | GLU | 3.1 |
| 43 | 2l | 65 | GLU | 3.1 |
| 1 | 2A | 2133 | G | 3.1 |
| 34 | 1c | 178 | LEU | 3.1 |
| 37 | 2f | 61 | LEU | 3.1 |
| 7 | 2H | 163 | TYR | 3.1 |
| 12 | 1Q | 74 | TYR | 3.1 |
| 31 | 19 | 17 | ILE | 3.1 |
| 35 | 2d | 70 | ILE | 3.1 |
| 7 | 2H | 19 | VAL | 3.1 |
| 25 | 23 | 29 | ARG | 3.1 |
| 30 | 28 | 35 | GLN | 3.1 |
| 45 | 2n | 31 | ARG | 3.1 |
| 35 | 1d | 110 | PHE | 3.1 |
| 50 | 2s | 14 | HIS | 3.1 |
| 1 | 2A | 2155 | G | 3.1 |
| 35 | 2d | 169 | LYS | 3.1 |
| 43 | 1l | 16 | GLU | 3.1 |
| 38 | 1g | 149 | ARG | 3.1 |
| 52 | 2u | 5 | ASP | 3.1 |
| 25 | 23 | 43 | ILE | 3.1 |
| 37 | 2f | 8 | ILE | 3.1 |
| 17 | 2V | 72 | VAL | 3.0 |
| 34 | 2c | 55 | VAL | 3.0 |
| 42 | 2k | 78 | GLN | 3.1 |
| 31 | 29 | 33 | LYS | 3.0 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 21 | 1Z | 88 | PHE | 3.0 |
| 21 | 1Z | 102 | LEU | 3.0 |
| 45 | 2n | 47 | LEU | 3.0 |
| 3 | 2D | 273 | ARG | 3.0 |
| 33 | 2b | 32 | ILE | 3.0 |
| 43 | 2l | 29 | GLY | 3.0 |
| 42 | 1k | 57 | THR | 3.0 |
| 12 | 1Q | 85 | LYS | 3.0 |
| 41 | 2j | 49 | VAL | 3.0 |
| 42 | 1k | 15 | ALA | 3.0 |
| 12 | 2Q | 69 | PHE | 3.0 |
| 36 | 2e | 24 | ARG | 3.0 |
| 44 | 2m | 110 | ARG | 3.0 |
| 52 | 2u | 11 | GLY | 3.0 |
| 26 | 24 | 44 | THR | 3.0 |
| 19 | 1X | 92 | LEU | 3.0 |
| 32 | 1a | 1030(A) | G | 3.0 |
| 28 | 26 | 27 | LYS | 3.0 |
| 38 | 1g | 89 | MET | 3.0 |
| 34 | 1c | 195 | VAL | 3.0 |
| 39 | 1h | 93 | VAL | 3.0 |
| 17 | 2V | 75 | PHE | 3.0 |
| 49 | 2r | 26 | LEU | 3.0 |
| 1 | 2A | 882 | G | 3.0 |
| 7 | 2H | 31 | GLY | 3.0 |
| 11 | 2P | 47 | ASP | 3.0 |
| 43 | 1l | 95 | GLY | 3.0 |
| 6 | 2G | 63 | ILE | 3.0 |
| 36 | 2e | 33 | VAL | 3.0 |
| 34 | 2c | 61 | ALA | 3.0 |
| 54 | 2w | 2 | C | 3.0 |
| 54 | 2w | 3 | C | 3.0 |
| 6 | 2G | 41 | GLN | 3.0 |
| 26 | 24 | 68 | ARG | 3.0 |
| 42 | 1k | 18 | ARG | 3.0 |
| 54 | 1w | 15 | G | 3.0 |
| 12 | 2Q | 63 | LYS | 3.0 |
| 1 | 2A | 2174 | C | 3.0 |
| 12 | 1Q | 80 | GLU | 3.0 |
| 25 | 23 | 53 | LEU | 3.0 |
| 34 | 2c | 62 | ASP | 3.0 |
| 50 | 2s | 49 | ILE | 3.0 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 9 | 2N | 104 | LYS | 3.0 |
| 32 | 1a | 1036 | G | 3.0 |
| 11 | 2P | 77 | ARG | 3.0 |
| 12 | 1Q | 71 | ASP | 3.0 |
| 36 | 1e | 129 | ILE | 3.0 |
| 41 | 2j | 96 | ILE | 3.0 |
| 10 | 2O | 7 | TYR | 3.0 |
| 21 | 2Z | 76 | LEU | 3.0 |
| 35 | 2d | 4 | TYR | 3.0 |
| 47 | 2p | 9 | PHE | 3.0 |
| 38 | 2g | 139 | GLU | 3.0 |
| 30 | 28 | 7 | HIS | 3.0 |
| 12 | 1Q | 60 | ARG | 2.9 |
| 32 | 2a | 793 | U | 2.9 |
| 35 | 2d | 167 | GLY | 2.9 |
| 39 | 2h | 91 | ARG | 2.9 |
| 42 | 1k | 103 | LEU | 2.9 |
| 50 | 1s | 71 | LEU | 2.9 |
| 1 | 2A | 2142 | C | 2.9 |
| 34 | 2c | 37 | GLN | 2.9 |
| 54 | 2w | 24 | G | 2.9 |
| 55 | 1x | 67 | C | 2.9 |
| 1 | 2A | 2169 | A | 2.9 |
| 7 | 2H | 49 | VAL | 2.9 |
| 42 | 2k | 84 | VAL | 2.9 |
| 5 | 2F | 12 | LEU | 2.9 |
| 6 | 2G | 142 | PRO | 2.9 |
| 23 | 2l | 23 | LYS | 2.9 |
| 30 | 28 | 63 | PRO | 2.9 |
| 36 | 2e | 17 | ALA | 2.9 |
| 35 | 1d | 86 | LYS | 2.9 |
| 35 | 2d | 188 | LEU | 2.9 |
| 43 | 2l | 71 | PRO | 2.9 |
| 45 | 2n | 19 | ARG | 2.9 |
| 1 | 2A | 2140 | C | 2.9 |
| 1 | 2A | 2127 | G | 2.9 |
| 12 | 1Q | 7 | MET | 2.9 |
| 1 | 1A | 1144 | A | 2.9 |
| 45 | 2n | 33 | VAL | 2.9 |
| 10 | 1O | 84 | ALA | 2.9 |
| 39 | 2h | 119 | LEU | 2.9 |
| 48 | 2q | 98 | LEU | 2.9 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 1 | 2A | 1026 | U | 2.9 |
| 4 | 1E | 87 | GLU | 2.9 |
| 38 | 1g | 76 | ARG | 2.9 |
| 35 | 1d | 104 | VAL | 2.9 |
| 16 | 2U | 79 | PHE | 2.9 |
| 9 | 2N | 15 | LEU | 2.9 |
| 9 | 2N | 47 | ALA | 2.9 |
| 5 | 2F | 131 | GLY | 2.9 |
| 35 | 1d | 136 | PRO | 2.9 |
| 34 | 1c | 179 | ARG | 2.9 |
| 44 | 2m | 104 | ARG | 2.9 |
| 48 | 1q | 36 | ILE | 2.9 |
| 51 | 2t | 25 | ARG | 2.9 |
| 12 | 2Q | 41 | TRP | 2.9 |
| 48 | 2q | 7 | THR | 2.9 |
| 19 | 2X | 92 | LEU | 2.9 |
| 23 | 11 | 36 | GLY | 2.9 |
| 48 | 1q | 98 | LEU | 2.9 |
| 39 | 2h | 99 | GLU | 2.9 |
| 23 | 11 | 23 | LYS | 2.9 |
| 11 | 2P | 43 | GLY | 2.9 |
| 25 | 23 | 28 | LEU | 2.9 |
| 48 | 2q | 89 | LEU | 2.9 |
| 49 | 1r | 79 | LEU | 2.9 |
| 49 | 1r | 85 | LEU | 2.9 |
| 11 | 2P | 97 | PRO | 2.9 |
| 12 | 2Q | 60 | ARG | 2.9 |
| 22 | 10 | 11 | ARG | 2.9 |
| 43 | 2l | 98 | TYR | 2.9 |
| 7 | 2H | 92 | ILE | 2.9 |
| 16 | 2U | 62 | ILE | 2.9 |
| 34 | 1c | 134 | ILE | 2.9 |
| 5 | 2F | 114 | VAL | 2.9 |
| 9 | 2N | 52 | VAL | 2.9 |
| 9 | 2N | 62 | VAL | 2.9 |
| 17 | 2V | 43 | GLU | 2.9 |
| 34 | 1c | 120 | VAL | 2.9 |
| 6 | 2G | 133 | LEU | 2.9 |
| 33 | 2b | 118 | LEU | 2.9 |
| 35 | 1d | 11 | LEU | 2.9 |
| 50 | 2s | 71 | LEU | 2.9 |
| 43 | 2l | 59 | ARG | 2.9 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 50 | 2s | 69 | HIS | 2.9 |
| 9 | 1N | 71 | ILE | 2.9 |
| 46 | 2o | 87 | ILE | 2.9 |
| 12 | 2Q | 65 | PHE | 2.9 |
| 35 | 2d | 23 | GLY | 2.9 |
| 20 | 2Y | 2 | ARG | 2.9 |
| 1 | 1A | 2167 | C | 2.9 |
| 21 | 1Z | 137 | ILE | 2.9 |
| 8 | 1I | 72 | LEU | 2.9 |
| 11 | 2P | 65 | ARG | 2.9 |
| 48 | 2q | 19 | VAL | 2.9 |
| 6 | 2G | 169 | ALA | 2.9 |
| 9 | 2N | 57 | ALA | 2.9 |
| 34 | 1c | 188 | LEU | 2.9 |
| 44 | 1m | 118 | ALA | 2.9 |
| 42 | 1k | 99 | GLN | 2.8 |
| 43 | 2l | 5 | PRO | 2.8 |
| 55 | 2x | 20 | U | 2.8 |
| 9 | 2N | 85 | ILE | 2.8 |
| 42 | 2k | 20 | TYR | 2.8 |
| 41 | 2j | 52 | GLY | 2.8 |
| 42 | 1k | 90 | GLY | 2.8 |
| 6 | 2G | 34 | LEU | 2.8 |
| 12 | 2Q | 107 | ALA | 2.8 |
| 54 | 2y | 36 | A | 2.8 |
| 1 | 2A | 2151 | G | 2.8 |
| 7 | 2H | 69 | ARG | 2.8 |
| 34 | 2c | 30 | ARG | 2.8 |
| 42 | 1k | 108 | ILE | 2.8 |
| 45 | 2n | 45 | ARG | 2.8 |
| 9 | 2N | 33 | LEU | 2.8 |
| 34 | 2c | 50 | ALA | 2.8 |
| 12 | 1Q | 59 | ARG | 2.8 |
| 42 | 2k | 57 | THR | 2.8 |
| 42 | 2k | 108 | ILE | 2.8 |
| 42 | 2k | 117 | ASN | 2.8 |
| 49 | 2r | 22 | VAL | 2.8 |
| 1 | 2A | 2176 | A | 2.8 |
| 30 | 28 | 31 | HIS | 2.8 |
| 7 | 2H | 108 | GLY | 2.8 |
| 33 | 2b | 214 | ILE | 2.8 |
| 1 | 2A | 2115 | G | 2.8 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 25 | 23 | 7 | LYS | 2.8 |
| 42 | 1k | 88 | GLY | 2.8 |
| 42 | 1k | 20 | TYR | 2.8 |
| 48 | 2q | 88 | TYR | 2.8 |
| 39 | 1h | 127 | LEU | 2.8 |
| 6 | 2G | 48 | GLU | 2.8 |
| 17 | 2V | 74 | LYS | 2.8 |
| 21 | 1Z | 124 | ILE | 2.8 |
| 34 | 2c | 159 | GLY | 2.8 |
| 41 | 2j | 67 | THR | 2.8 |
| 12 | 2Q | 132 | VAL | 2.8 |
| 33 | 2b | 164 | VAL | 2.8 |
| 40 | 1i | 19 | LEU | 2.8 |
| 9 | 2N | 134 | ARG | 2.8 |
| 34 | 1c | 166 | GLU | 2.8 |
| 38 | 1g | 32 | ARG | 2.8 |
| 51 | 2t | 30 | LYS | 2.8 |
| 43 | 2l | 85 | ILE | 2.8 |
| 6 | 1G | 80 | PHE | 2.8 |
| 45 | 1n | 37 | PHE | 2.8 |
| 12 | 1Q | 79 | LEU | 2.8 |
| 17 | 2V | 81 | TYR | 2.8 |
| 36 | 1e | 119 | LEU | 2.8 |
| 42 | 2k | 80 | VAL | 2.8 |
| 43 | 1l | 89 | ARG | 2.8 |
| 39 | 1h | 110 | ALA | 2.8 |
| 43 | 2l | 21 | LYS | 2.8 |
| 50 | 2s | 34 | TRP | 2.8 |
| 36 | 1e | 28 | PHE | 2.8 |
| 36 | 2e | 84 | PHE | 2.8 |
| 39 | 1h | 80 | ILE | 2.8 |
| 4 | 2E | 149 | ARG | 2.8 |
| 7 | 2H | 43 | VAL | 2.8 |
| 9 | 2N | 55 | VAL | 2.8 |
| 1 | 2A | 885 | C | 2.8 |
| 17 | 2V | 12 | TYR | 2.8 |
| 40 | 2i | 116 | LYS | 2.8 |
| 42 | 1k | 77 | MET | 2.8 |
| 1 | 2A | 2141 | G | 2.8 |
| 32 | 2a | 973 | G | 2.8 |
| 40 | 1i | 115 | GLY | 2.8 |
| 9 | 2N | 35 | ARG | 2.8 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 34 | 2c | 85 | ARG | 2.8 |
| 5 | 2F | 163 | VAL | 2.8 |
| 45 | 2n | 21 | TYR | 2.8 |
| 10 | 1O | 18 | LYS | 2.7 |
| 21 | 1Z | 149 | SER | 2.7 |
| 54 | 2w | 15 | G | 2.7 |
| 22 | 10 | 38 | VAL | 2.7 |
| 34 | 1c | 64 | VAL | 2.7 |
| 43 | 2l | 60 | LEU | 2.7 |
| 38 | 1g | 147 | ALA | 2.7 |
| 41 | 1j | 48 | THR | 2.7 |
| 39 | 2h | 9 | MET | 2.7 |
| 30 | 28 | 5 | LYS | 2.7 |
| 47 | 1p | 50 | LYS | 2.7 |
| 54 | 1w | 14 | A | 2.7 |
| 30 | 28 | 58 | ILE | 2.7 |
| 5 | 2F | 196 | LEU | 2.7 |
| 7 | 2H | 84 | SER | 2.7 |
| 1 | 2A | 2152 | G | 2.7 |
| 32 | 1a | 1529 | G | 2.7 |
| 42 | 2k | 99 | GLN | 2.7 |
| 4 | 2E | 133 | LYS | 2.7 |
| 34 | 2c | 193 | TYR | 2.7 |
| 42 | 2k | 28 | THR | 2.7 |
| 48 | 2q | 25 | ARG | 2.7 |
| 36 | 1e | 122 | GLU | 2.7 |
| 4 | 1E | 141 | ILE | 2.7 |
| 7 | 2H | 33 | LEU | 2.7 |
| 34 | 2c | 183 | ASP | 2.7 |
| 36 | 1e | 91 | LEU | 2.7 |
| 34 | 2c | 154 | SER | 2.7 |
| 40 | 1i | 118 | LYS | 2.7 |
| 42 | 2k | 22 | HIS | 2.7 |
| 45 | 2n | 4 | LYS | 2.7 |
| 39 | 2h | 130 | GLY | 2.7 |
| 42 | 2k | 92 | GLU | 2.7 |
| 30 | 28 | 33 | ASN | 2.7 |
| 32 | 2a | 962 | C | 2.7 |
| 32 | 2a | 1030 | C | 2.7 |
| 10 | 1O | 39 | ILE | 2.7 |
| 12 | 1Q | 42 | ILE | 2.7 |
| 9 | 2N | 86 | PRO | 2.7 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 28 | 26 | 42 | TRP | 2.7 |
| 51 | 2t | 20 | LEU | 2.7 |
| 11 | 2P | 120 | ALA | 2.7 |
| 36 | 1e | 21 | ALA | 2.7 |
| 4 | 2E | 4 | ILE | 2.7 |
| 6 | 2G | 77 | ILE | 2.7 |
| 34 | 1c | 55 | VAL | 2.7 |
| 39 | 1h | 10 | LEU | 2.7 |
| 47 | 1p | 42 | ARG | 2.7 |
| 49 | 2r | 66 | LEU | 2.7 |
| 50 | 2s | 30 | LEU | 2.7 |
| 8 | 1I | 85 | GLU | 2.7 |
| 8 | 1I | 89 | TYR | 2.7 |
| 21 | 2Z | 9 | TYR | 2.7 |
| 3 | 2D | 15 | PHE | 2.7 |
| 33 | 1b | 75 | LYS | 2.7 |
| 35 | 2d | 184 | LYS | 2.7 |
| 40 | 2i | 7 | THR | 2.7 |
| 40 | 2i | 113 | LYS | 2.7 |
| 48 | 2q | 59 | ILE | 2.7 |
| 9 | 2N | 91 | LEU | 2.7 |
| 22 | 20 | 75 | LEU | 2.7 |
| 45 | 1n | 25 | VAL | 2.7 |
| 34 | 2c | 149 | ALA | 2.7 |
| 42 | 1k | 17 | GLY | 2.7 |
| 42 | 2k | 15 | ALA | 2.7 |
| 31 | 19 | 24 | TYR | 2.7 |
| 36 | 2e | 45 | PHE | 2.7 |
| 19 | 2X | 68 | ARG | 2.7 |
| 34 | 2c | 8 | ILE | 2.7 |
| 35 | 1d | 204 | ILE | 2.7 |
| 45 | 1n | 7 | ILE | 2.7 |
| 34 | 2c | 3 | ASN | 2.7 |
| 17 | 2V | 93 | GLU | 2.7 |
| 21 | 1Z | 24 | LEU | 2.7 |
| 3 | 2D | 2 | ALA | 2.7 |
| 34 | 1c | 148 | GLY | 2.7 |
| 40 | 1i | 119 | ALA | 2.7 |
| 41 | 1j | 10 | GLY | 2.7 |
| 53 | 1v | 12 | A | 2.7 |
| 11 | 1P | 15 | ARG | 2.7 |
| 34 | 1c | 127 | ARG | 2.7 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 12 | 2Q | 17 | LEU | 2.7 |
| 11 | 2P | 64 | LYS | 2.7 |
| 31 | 19 | 7 | VAL | 2.7 |
| 34 | 2c | 204 | LEU | 2.7 |
| 39 | 2h | 93 | VAL | 2.7 |
| 42 | 2k | 98 | LEU | 2.7 |
| 43 | 1l | 93 | LEU | 2.7 |
| 20 | 2Y | 58 | GLY | 2.7 |
| 7 | 2H | 165 | ALA | 2.7 |
| 12 | 2Q | 36 | ALA | 2.7 |
| 10 | 2O | 17 | ARG | 2.7 |
| 35 | 1d | 209 | ARG | 2.7 |
| 40 | 2i | 120 | ARG | 2.7 |
| 42 | 1k | 101 | SER | 2.6 |
| 43 | 2l | 22 | SER | 2.6 |
| 28 | 26 | 12 | GLU | 2.6 |
| 8 | 2I | 86 | THR | 2.6 |
| 17 | 2V | 25 | LEU | 2.6 |
| 10 | 1O | 43 | VAL | 2.6 |
| 42 | 2k | 67 | ASP | 2.6 |
| 38 | 1g | 130 | GLY | 2.6 |
| 54 | 1w | 75 | C | 2.6 |
| 35 | 2d | 168 | ARG | 2.6 |
| 33 | 1b | 163 | PHE | 2.6 |
| 1 | 2A | 2897 | U | 2.6 |
| 14 | 1S | 43 | GLU | 2.6 |
| 43 | 2l | 16 | GLU | 2.6 |
| 49 | 2r | 49 | LYS | 2.6 |
| 54 | 1y | 34 | G | 2.6 |
| 4 | 2E | 195 | LEU | 2.6 |
| 6 | 2G | 43 | LEU | 2.6 |
| 10 | 1O | 91 | LEU | 2.6 |
| 11 | 2P | 70 | GLN | 2.6 |
| 12 | 1Q | 37 | LEU | 2.6 |
| 31 | 19 | 34 | GLN | 2.6 |
| 32 | 2a | 1035 | A | 2.6 |
| 36 | 2e | 112 | LEU | 2.6 |
| 38 | 2g | 22 | LEU | 2.6 |
| 51 | 1t | 24 | LEU | 2.6 |
| 12 | 2Q | 89 | ASN | 2.6 |
| 17 | 2V | 22 | VAL | 2.6 |
| 34 | 1c | 165 | THR | 2.6 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 42 | 2k | 56 | GLY | 2.6 |
| 34 | 1c | 11 | ARG | 2.6 |
| 11 | 2P | 144 | GLU | 2.6 |
| 12 | 2Q | 22 | LYS | 2.6 |
| 34 | 2c | 176 | HIS | 2.6 |
| 34 | 1c | 14 | ILE | 2.6 |
| 38 | 2g | 77 | SER | 2.6 |
| 39 | 1h | 86 | ILE | 2.6 |
| 1 | 1A | 1114 | G | 2.6 |
| 10 | 2O | 25 | LEU | 2.6 |
| 34 | 2c | 29 | TYR | 2.6 |
| 36 | 2e | 133 | TYR | 2.6 |
| 54 | 2y | 1 | G | 2.6 |
| 6 | 2G | 37 | VAL | 2.6 |
| 7 | 2H | 161 | GLY | 2.6 |
| 10 | 2O | 81 | ASP | 2.6 |
| 44 | 2m | 3 | ARG | 2.6 |
| 54 | 2w | 9 | A | 2.6 |
| 54 | 2y | 64 | A | 2.6 |
| 33 | 1b | 70 | PHE | 2.6 |
| 12 | 1Q | 68 | ILE | 2.6 |
| 6 | 2G | 152 | LEU | 2.6 |
| 9 | 2N | 87 | LEU | 2.6 |
| 33 | 1b | 233 | SER | 2.6 |
| 44 | 2m | 19 | LEU | 2.6 |
| 48 | 2q | 31 | LEU | 2.6 |
| 25 | 23 | 9 | VAL | 2.6 |
| 42 | 1k | 30 | VAL | 2.6 |
| 52 | 2u | 16 | GLY | 2.6 |
| 1 | 2A | 2110 | G | 2.6 |
| 32 | 1a | 1001(A) | G | 2.6 |
| 53 | 2v | 23 | A | 2.6 |
| 39 | 2h | 132 | GLU | 2.6 |
| 54 | 1y | 13 | C | 2.6 |
| 33 | 2b | 233 | SER | 2.6 |
| 39 | 1h | 112 | LEU | 2.6 |
| 48 | 2q | 6 | LEU | 2.6 |
| 12 | 1Q | 106 | VAL | 2.6 |
| 38 | 1g | 141 | VAL | 2.6 |
| 44 | 2m | 60 | VAL | 2.6 |
| 40 | 2i | 106 | ALA | 2.6 |
| 3 | 2D | 161 | THR | 2.6 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 21 | 2Z | 170 | THR | 2.6 |
| 54 | 2y | 18 | G | 2.6 |
| 1 | 1A | 935 | C | 2.6 |
| 35 | 1d | 70 | ILE | 2.6 |
| 40 | 1i | 117 | HIS | 2.6 |
| 43 | 1l | 28 | LYS | 2.6 |
| 51 | 2t | 18 | GLN | 2.6 |
| 8 | 1I | 114 | LEU | 2.6 |
| 21 | 2Z | 155 | LEU | 2.6 |
| 42 | 1k | 63 | LEU | 2.6 |
| 46 | 2o | 57 | LEU | 2.6 |
| 5 | 2F | 172 | TRP | 2.6 |
| 7 | 2H | 12 | PRO | 2.6 |
| 34 | 2c | 63 | ASN | 2.6 |
| 34 | 2c | 146 | ALA | 2.6 |
| 36 | 1e | 6 | PHE | 2.6 |
| 1 | 2A | 2125 | G | 2.6 |
| 21 | 2Z | 57 | ILE | 2.6 |
| 48 | 2q | 40 | LYS | 2.6 |
| 55 | 2x | 2 | G | 2.6 |
| 7 | 2H | 103 | LEU | 2.6 |
| 8 | 2I | 12 | LEU | 2.6 |
| 9 | 1N | 87 | LEU | 2.6 |
| 12 | 1Q | 103 | MET | 2.6 |
| 38 | 1g | 73 | MET | 2.6 |
| 45 | 2n | 51 | GLY | 2.6 |
| 3 | 2D | 145 | VAL | 2.6 |
| 12 | 1Q | 97 | VAL | 2.6 |
| 34 | 1c | 82 | GLU | 2.6 |
| 42 | 2k | 110 | ASP | 2.6 |
| 48 | 1q | 32 | TYR | 2.6 |
| 5 | 2F | 146 | ALA | 2.6 |
| 47 | 1p | 28 | ARG | 2.6 |
| 1 | 1A | 554 | A | 2.6 |
| 9 | 2N | 107 | LEU | 2.6 |
| 12 | 1Q | 34 | LEU | 2.6 |
| 43 | 1l | 60 | LEU | 2.6 |
| 1 | 2A | 2139 | C | 2.6 |
| 1 | 2A | 2149 | G | 2.6 |
| 12 | 2Q | 112 | GLU | 2.6 |
| 21 | 1Z | 126 | VAL | 2.6 |
| 11 | 2P | 91 | PHE | 2.6 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 34 | 1c | 10 | PHE | 2.6 |
| 48 | 2q | 4 | LYS | 2.6 |
| 4 | 2E | 141 | ILE | 2.5 |
| 20 | 2Y | 5 | MET | 2.5 |
| 21 | 1Z | 169 | GLU | 2.5 |
| 35 | 1d | 139 | ARG | 2.5 |
| 36 | 1e | 100 | VAL | 2.5 |
| 43 | 1l | 18 | VAL | 2.5 |
| 54 | 1y | 23 | A | 2.5 |
| 10 | 1O | 17 | ARG | 2.5 |
| 42 | 1k | 96 | ARG | 2.5 |
| 40 | 2i | 33 | PHE | 2.5 |
| 7 | 2H | 36 | PRO | 2.5 |
| 34 | 1c | 18 | TRP | 2.5 |
| 34 | 1c | 13 | GLY | 2.5 |
| 6 | 2G | 90 | LEU | 2.5 |
| 7 | 2H | 124 | GLU | 2.5 |
| 42 | 2k | 46 | GLY | 2.5 |
| 34 | 1c | 204 | LEU | 2.5 |
| 47 | 1p | 49 | LEU | 2.5 |
| 9 | 2N | 61 | ARG | 2.5 |
| 12 | 2Q | 11 | LYS | 2.5 |
| 25 | 23 | 59 | VAL | 2.5 |
| 31 | 29 | 19 | ARG | 2.5 |
| 36 | 2e | 55 | VAL | 2.5 |
| 39 | 1h | 61 | VAL | 2.5 |
| 40 | 2i | 28 | VAL | 2.5 |
| 41 | 1j | 45 | ARG | 2.5 |
| 48 | 2q | 29 | HIS | 2.5 |
| 4 | 1E | 151 | TYR | 2.5 |
| 54 | 2y | 52 | G | 2.5 |
| 7 | 2H | 90 | LYS | 2.5 |
| 46 | 1o | 87 | ILE | 2.5 |
| 47 | 1p | 59 | TRP | 2.5 |
| 48 | 2q | 60 | ILE | 2.5 |
| 3 | 2D | 111 | LEU | 2.5 |
| 17 | 2V | 20 | LEU | 2.5 |
| 54 | 1y | 12 | U | 2.5 |
| 9 | 2N | 54 | VAL | 2.5 |
| 6 | 2G | 178 | PHE | 2.5 |
| 1 | 2A | 2801(A) | A | 2.5 |
| 32 | 2a | 1027 | C | 2.5 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 45 | 2n | 40 | CYS | 2.5 |
| 4 | 2E | 2 | LYS | 2.5 |
| 34 | 2c | 174 | PRO | 2.5 |
| 43 | 2l | 46 | LYS | 2.5 |
| 1 | 1A | 930 | G | 2.5 |
| 39 | 2h | 13 | ILE | 2.5 |
| 12 | 1Q | 3 | MET | 2.5 |
| 10 | 2O | 18 | LYS | 2.5 |
| 30 | 28 | 44 | LYS | 2.5 |
| 1 | 2A | 886 | C | 2.5 |
| 34 | 2c | 2 | GLY | 2.5 |
| 34 | 2c | 43 | LEU | 2.5 |
| 49 | 2r | 40 | LEU | 2.5 |
| 1 | 2A | 2153 | G | 2.5 |
| 41 | 1j | 55 | LYS | 2.5 |
| 49 | 1r | 25 | THR | 2.5 |
| 39 | 2h | 84 | ARG | 2.5 |
| 42 | 1k | 65 | ALA | 2.5 |
| 42 | 1k | 69 | ALA | 2.5 |
| 4 | 2E | 151 | TYR | 2.5 |
| 12 | 2Q | 93 | TYR | 2.5 |
| 1 | 1A | 944 | C | 2.5 |
| 7 | 2H | 166 | GLY | 2.5 |
| 33 | 2b | 38 | GLY | 2.5 |
| 42 | 2k | 37 | GLY | 2.5 |
| 49 | 2r | 34 | TYR | 2.5 |
| 6 | 2G | 62 | LEU | 2.5 |
| 12 | 1Q | 83 | MET | 2.5 |
| 34 | 2c | 150 | LYS | 2.5 |
| 45 | 1n | 56 | VAL | 2.5 |
| 16 | 2U | 89 | GLU | 2.5 |
| 54 | 2y | 15 | G | 2.5 |
| 18 | 1W | 68 | ARG | 2.5 |
| 36 | 2e | 16 | THR | 2.5 |
| 21 | 1Z | 164 | ALA | 2.5 |
| 22 | 20 | 42 | GLY | 2.5 |
| 35 | 2d | 20 | TYR | 2.5 |
| 52 | 2u | 23 | PRO | 2.5 |
| 1 | 1A | 2518 | U | 2.5 |
| 36 | 1e | 19 | MET | 2.5 |
| 48 | 2q | 10 | VAL | 2.5 |
| 34 | 2c | 172 | ARG | 2.5 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 12 | 1Q | 121 | ALA | 2.5 |
| 21 | 2Z | 51 | ALA | 2.5 |
| 36 | 1e | 95 | ALA | 2.5 |
| 3 | 2D | 275 | LYS | 2.5 |
| 12 | 1Q | 11 | LYS | 2.5 |
| 5 | 2F | 181 | LEU | 2.5 |
| 33 | 2b | 201 | ILE | 2.5 |
| 5 | 2F | 62 | ARG | 2.5 |
| 7 | 2H | 46 | GLU | 2.5 |
| 50 | 2s | 53 | ASN | 2.5 |
| 9 | 2N | 103 | VAL | 2.5 |
| 12 | 2Q | 90 | VAL | 2.5 |
| 34 | 1c | 68 | VAL | 2.5 |
| 43 | 2l | 90 | VAL | 2.5 |
| 7 | 2H | 123 | PHE | 2.5 |
| 25 | 23 | 33 | GLN | 2.5 |
| 38 | 1g | 150 | ALA | 2.5 |
| 51 | 2t | 16 | HIS | 2.5 |
| 32 | 2a | 1036 | G | 2.5 |
| 34 | 1c | 48 | TYR | 2.5 |
| 37 | 2f | 4 | TYR | 2.5 |
| 39 | 2h | 134 | ILE | 2.5 |
| 51 | 1t | 55 | ILE | 2.5 |
| 33 | 2b | 209 | ARG | 2.4 |
| 34 | 2c | 179 | ARG | 2.4 |
| 39 | 1h | 91 | ARG | 2.4 |
| 43 | 2l | 97 | ARG | 2.4 |
| 6 | 2G | 141 | PHE | 2.4 |
| 51 | 2t | 21 | LYS | 2.4 |
| 16 | 1U | 117 | GLN | 2.4 |
| 12 | 2Q | 64 | ILE | 2.4 |
| 16 | 2U | 95 | LEU | 2.4 |
| 17 | 2V | 35 | LEU | 2.4 |
| 33 | 2b | 39 | ILE | 2.4 |
| 36 | 2e | 131 | ILE | 2.4 |
| 1 | 1A | 2163 | G | 2.4 |
| 6 | 2G | 67 | LYS | 2.4 |
| 7 | 2H | 140 | LYS | 2.4 |
| 16 | 2U | 110 | VAL | 2.4 |
| 21 | 2Z | 139 | VAL | 2.4 |
| 41 | 1j | 72 | VAL | 2.4 |
| 42 | 1k | 109 | VAL | 2.4 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 44 | 2m | 13 | LYS | 2.4 |
| 49 | 1r | 43 | PHE | 2.4 |
| 1 | 1A | 2614 | A | 2.4 |
| 32 | 2a | 1201 | A | 2.4 |
| 4 | 1E | 183 | LEU | 2.4 |
| 21 | 2Z | 5 | LEU | 2.4 |
| 28 | 16 | 10 | LEU | 2.4 |
| 45 | 2n | 58 | LYS | 2.4 |
| 49 | 2r | 84 | LYS | 2.4 |
| 1 | 2A | 2585 | U | 2.4 |
| 30 | 18 | 23 | VAL | 2.4 |
| 42 | 2k | 47 | VAL | 2.4 |
| 54 | 1w | 67 | C | 2.4 |
| 54 | 2w | 27 | G | 2.4 |
| 12 | 2Q | 45 | GLN | 2.4 |
| 11 | 2P | 50 | ARG | 2.4 |
| 22 | 20 | 14 | ARG | 2.4 |
| 42 | 2k | 61 | ALA | 2.4 |
| 12 | 1Q | 48 | GLU | 2.4 |
| 41 | 2j | 61 | GLU | 2.4 |
| 10 | 1O | 47 | ILE | 2.4 |
| 39 | 1h | 6 | ILE | 2.4 |
| 39 | 2h | 100 | ILE | 2.4 |
| 44 | 2m | 92 | HIS | 2.4 |
| 12 | 1Q | 130 | LYS | 2.4 |
| 13 | 1R | 10 | LEU | 2.4 |
| 16 | 2U | 83 | LEU | 2.4 |
| 17 | 2V | 39 | LEU | 2.4 |
| 30 | 28 | 50 | LEU | 2.4 |
| 46 | 2o | 56 | LEU | 2.4 |
| 34 | 1c | 15 | THR | 2.4 |
| 34 | 2c | 48 | TYR | 2.4 |
| 43 | 1l | 90 | VAL | 2.4 |
| 49 | 1r | 22 | VAL | 2.4 |
| 42 | 1k | 62 | GLN | 2.4 |
| 45 | 1n | 41 | ARG | 2.4 |
| 32 | 2a | 1030(C) | G | 2.4 |
| 28 | 26 | 38 | LYS | 2.4 |
| 6 | 2G | 88 | ILE | 2.4 |
| 43 | 2l | 99 | HIS | 2.4 |
| 51 | 2t | 41 | ILE | 2.4 |
| 9 | 2N | 73 | THR | 2.4 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 11 | 2P | 58 | THR | 2.4 |
| 42 | 2k | 105 | VAL | 2.4 |
| 48 | 2q | 30 | PRO | 2.4 |
| 52 | 1u | 17 | THR | 2.4 |
| 11 | 2P | 39 | LYS | 2.4 |
| 1 | 1A | 943 | C | 2.4 |
| 1 | 1A | 1138 | C | 2.4 |
| 54 | 1w | 74 | C | 2.4 |
| 1 | 2A | 2159 | G | 2.4 |
| 6 | 2G | 94 | LEU | 2.4 |
| 39 | 2h | 10 | LEU | 2.4 |
| 43 | 2l | 10 | LEU | 2.4 |
| 49 | 1r | 44 | LEU | 2.4 |
| 54 | 1w | 65 | G | 2.4 |
| 9 | 1N | 72 | TYR | 2.4 |
| 26 | 24 | 50 | VAL | 2.4 |
| 5 | 2F | 199 | TRP | 2.4 |
| 11 | 2P | 107 | LYS | 2.4 |
| 32 | 2a | 787 | A | 2.4 |
| 34 | 1c | 126 | ARG | 2.4 |
| 41 | 1j | 47 | PHE | 2.4 |
| 41 | 1j | 63 | PHE | 2.4 |
| 52 | 2u | 17 | THR | 2.4 |
| 34 | 2c | 167 | TRP | 2.4 |
| 45 | 2n | 8 | GLU | 2.4 |
| 9 | 2N | 26 | LEU | 2.4 |
| 9 | 2N | 34 | LEU | 2.4 |
| 34 | 1c | 43 | LEU | 2.4 |
| 37 | 2f | 45 | LEU | 2.4 |
| 1 | 2A | 1042 | G | 2.4 |
| 1 | 2A | 2154 | G | 2.4 |
| 16 | 2U | 36 | ARG | 2.4 |
| 32 | 1a | 1508 | G | 2.4 |
| 11 | 2P | 122 | PRO | 2.4 |
| 12 | 1Q | 8 | LYS | 2.4 |
| 36 | 1e | 15 | ARG | 2.4 |
| 40 | 2i | 14 | VAL | 2.4 |
| 36 | 2e | 120 | THR | 2.4 |
| 9 | 2N | 41 | ASP | 2.4 |
| 33 | 2b | 101 | MET | 2.4 |
| 38 | 1g | 144 | MET | 2.4 |
| 33 | 2b | 211 | ILE | 2.4 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 35 | 1d | 157 | LEU | 2.4 |
| 43 | 1l | 7 | ILE | 2.4 |
| 43 | 2l | 41 | ARG | 2.4 |
| 4 | 2E | 125 | GLY | 2.4 |
| 9 | 1N | 140 | VAL | 2.4 |
| 12 | 1Q | 15 | GLY | 2.4 |
| 12 | 2Q | 108 | GLY | 2.4 |
| 43 | 1l | 98 | TYR | 2.4 |
| 1 | 1A | 1003 | U | 2.4 |
| 54 | 2y | 44 | G | 2.4 |
| 54 | 2y | 45 | U | 2.4 |
| 1 | 1A | 1113 | A | 2.4 |
| 53 | 1v | 14 | A | 2.4 |
| 9 | 1N | 85 | ILE | 2.4 |
| 14 | 1S | 48 | LEU | 2.4 |
| 16 | 1U | 17 | ILE | 2.4 |
| 23 | 2l | 26 | ARG | 2.4 |
| 23 | 2l | 61 | ARG | 2.4 |
| 42 | 1k | 51 | LYS | 2.4 |
| 46 | 2o | 81 | LEU | 2.4 |
| 22 | 20 | 80 | HIS | 2.3 |
| 34 | 1c | 99 | VAL | 2.3 |
| 43 | 2l | 24 | VAL | 2.3 |
| 4 | 1E | 147 | PRO | 2.3 |
| 32 | 2a | 1532 | U | 2.3 |
| 9 | 2N | 83 | LYS | 2.3 |
| 9 | 2N | 119 | ARG | 2.3 |
| 10 | 1O | 46 | ALA | 2.3 |
| 12 | 1Q | 77 | LYS | 2.3 |
| 31 | 29 | 8 | LYS | 2.3 |
| 34 | 1c | 85 | ARG | 2.3 |
| 36 | 1e | 94 | ALA | 2.3 |
| 14 | 2S | 32 | LEU | 2.3 |
| 21 | 1Z | 5 | LEU | 2.3 |
| 21 | 1Z | 150 | LEU | 2.3 |
| 35 | 1d | 158 | ILE | 2.3 |
| 39 | 1h | 63 | LEU | 2.3 |
| 41 | 1j | 65 | LEU | 2.3 |
| 34 | 2c | 58 | GLU | 2.3 |
| 33 | 2b | 81 | VAL | 2.3 |
| 43 | 2l | 91 | LYS | 2.3 |
| 30 | 28 | 46 | ARG | 2.3 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 10 | 1O | 60 | ALA | 2.3 |
| 12 | 2Q | 28 | ALA | 2.3 |
| 5 | 2F | 78 | ILE | 2.3 |
| 9 | 1N | 16 | ILE | 2.3 |
| 10 | 2O | 19 | ILE | 2.3 |
| 15 | 2T | 102 | ILE | 2.3 |
| 28 | 16 | 11 | LEU | 2.3 |
| 36 | 2e | 109 | ILE | 2.3 |
| 33 | 1b | 28 | PHE | 2.3 |
| 38 | 2g | 62 | PHE | 2.3 |
| 17 | 2V | 47 | VAL | 2.3 |
| 46 | 2o | 47 | LYS | 2.3 |
| 4 | 1E | 1 | MET | 2.3 |
| 7 | 2H | 87 | LEU | 2.3 |
| 12 | 1Q | 47 | ILE | 2.3 |
| 34 | 1c | 124 | ILE | 2.3 |
| 35 | 1d | 176 | LEU | 2.3 |
| 35 | 2d | 94 | LEU | 2.3 |
| 45 | 1n | 39 | LEU | 2.3 |
| 48 | 2q | 74 | LEU | 2.3 |
| 5 | 1F | 208 | GLY | 2.3 |
| 1 | 2A | 2160 | G | 2.3 |
| 7 | 2H | 25 | LYS | 2.3 |
| 49 | 1r | 84 | LYS | 2.3 |
| 9 | 2N | 122 | VAL | 2.3 |
| 28 | 26 | 49 | HIS | 2.3 |
| 34 | 2c | 106 | VAL | 2.3 |
| 34 | 2c | 173 | VAL | 2.3 |
| 49 | 1r | 55 | ARG | 2.3 |
| 54 | 1y | 14 | A | 2.3 |
| 1 | 2A | 2506 | U | 2.3 |
| 32 | 2a | 788 | U | 2.3 |
| 7 | 2H | 41 | MET | 2.3 |
| 28 | 26 | 53 | LYS | 2.3 |
| 26 | 24 | 54 | GLY | 2.3 |
| 44 | 2m | 24 | GLY | 2.3 |
| 35 | 1d | 118 | ARG | 2.3 |
| 52 | 2u | 7 | ARG | 2.3 |
| 3 | 2D | 113 | VAL | 2.3 |
| 7 | 2H | 52 | VAL | 2.3 |
| 12 | 2Q | 97 | VAL | 2.3 |
| 32 | 2a | 1224 | G | 2.3 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 22 | 20 | 15 | ASP | 2.3 |
| 9 | 2N | 48 | MET | 2.3 |
| 16 | 2U | 13 | LYS | 2.3 |
| 28 | 16 | 34 | LEU | 2.3 |
| 35 | 2d | 19 | LEU | 2.3 |
| 39 | 2h | 107 | LEU | 2.3 |
| 35 | 2d | 115 | ARG | 2.3 |
| 6 | 2G | 70 | VAL | 2.3 |
| 9 | 2N | 5 | VAL | 2.3 |
| 17 | 2V | 14 | VAL | 2.3 |
| 3 | 1D | 233 | HIS | 2.3 |
| 21 | 1Z | 97 | GLU | 2.3 |
| 28 | 26 | 51 | GLU | 2.3 |
| 30 | 28 | 15 | LYS | 2.3 |
| 54 | 2w | 12 | U | 2.3 |
| 20 | 2Y | 55 | TYR | 2.3 |
| 32 | 2a | 1026 | G | 2.3 |
| 55 | 1x | 76 | A | 2.3 |
| 33 | 2b | 196 | LEU | 2.3 |
| 51 | 2t | 10 | LEU | 2.3 |
| 21 | 1Z | 82 | ARG | 2.3 |
| 34 | 2c | 38 | ARG | 2.3 |
| 4 | 2E | 150 | VAL | 2.3 |
| 6 | 2G | 78 | SER | 2.3 |
| 48 | 2q | 39 | SER | 2.3 |
| 12 | 1Q | 63 | LYS | 2.3 |
| 30 | 28 | 47 | LYS | 2.3 |
| 7 | 2H | 128 | PRO | 2.3 |
| 7 | 2H | 156 | ALA | 2.3 |
| 1 | 2A | 1847 | A | 2.3 |
| 12 | 2Q | 5 | ARG | 2.3 |
| 12 | 2Q | 59 | ARG | 2.3 |
| 15 | 1T | 1 | MET | 2.3 |
| 21 | 1Z | 122 | ARG | 2.3 |
| 28 | 26 | 19 | ARG | 2.3 |
| 35 | 1d | 33 | MET | 2.3 |
| 42 | 1k | 66 | LEU | 2.3 |
| 47 | 2p | 39 | TYR | 2.3 |
| 54 | 1w | 25 | C | 2.3 |
| 1 | 1A | 2173 | G | 2.3 |
| 1 | 2A | 2166 | G | 2.3 |
| 31 | 19 | 37 | GLY | 2.3 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 53 | 1v | 13 | A | 2.3 |
| 35 | 1d | 79 | PHE | 2.3 |
| 21 | 1Z | 11 | GLU | 2.3 |
| 48 | 2q | 34 | LYS | 2.3 |
| 18 | 1W | 92 | ARG | 2.3 |
| 31 | 19 | 18 | ARG | 2.3 |
| 1 | 1A | 1121 | C | 2.3 |
| 12 | 1Q | 93 | TYR | 2.3 |
| 39 | 1h | 83 | ILE | 2.3 |
| 39 | 2h | 128 | GLY | 2.3 |
| 1 | 2A | 2170 | A | 2.3 |
| 12 | 2Q | 58 | PHE | 2.3 |
| 31 | 19 | 15 | LYS | 2.3 |
| 31 | 29 | 36 | GLN | 2.3 |
| 35 | 1d | 15 | GLU | 2.3 |
| 34 | 1c | 153 | VAL | 2.2 |
| 35 | 2d | 128 | VAL | 2.2 |
| 39 | 1h | 3 | THR | 2.2 |
| 45 | 2n | 18 | VAL | 2.2 |
| 7 | 2H | 67 | LEU | 2.2 |
| 30 | 28 | 24 | ALA | 2.2 |
| 42 | 2k | 123 | LYS | 2.2 |
| 43 | 2l | 95 | GLY | 2.2 |
| 49 | 2r | 76 | LEU | 2.2 |
| 34 | 1c | 8 | ILE | 2.2 |
| 34 | 2c | 152 | ILE | 2.2 |
| 25 | 23 | 30 | ARG | 2.2 |
| 39 | 2h | 18 | ARG | 2.2 |
| 39 | 2h | 129 | VAL | 2.2 |
| 44 | 1m | 102 | ARG | 2.2 |
| 48 | 2q | 91 | ARG | 2.2 |
| 50 | 2s | 51 | VAL | 2.2 |
| 10 | 2O | 42 | SER | 2.2 |
| 50 | 2s | 35 | SER | 2.2 |
| 10 | 2O | 41 | ALA | 2.2 |
| 34 | 1c | 155 | GLY | 2.2 |
| 39 | 1h | 2 | LEU | 2.2 |
| 49 | 1r | 76 | LEU | 2.2 |
| 10 | 2O | 86 | ILE | 2.2 |
| 21 | 1Z | 146 | ILE | 2.2 |
| 47 | 2p | 19 | ILE | 2.2 |
| 12 | 1Q | 9 | TYR | 2.2 |

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| Mol | Chain | Res | Type | RSRZ |
|-----|-------|---------|------|------|
| 7 | 2H | 133 | VAL | 2.2 |
| 12 | 2Q | 56 | ARG | 2.2 |
| 36 | 2e | 100 | VAL | 2.2 |
| 6 | 2G | 79 | ASN | 2.2 |
| 12 | 2Q | 72 | LYS | 2.2 |
| 32 | 1a | 1030(D) | A | 2.2 |
| 34 | 1c | 150 | LYS | 2.2 |
| 43 | 2l | 8 | ASN | 2.2 |
| 3 | 2D | 17 | THR | 2.2 |
| 21 | 1Z | 69 | THR | 2.2 |
| 33 | 2b | 210 | SER | 2.2 |
| 42 | 1k | 28 | THR | 2.2 |
| 42 | 1k | 43 | SER | 2.2 |
| 42 | 2k | 44 | SER | 2.2 |
| 4 | 2E | 10 | GLY | 2.2 |
| 4 | 2E | 52 | LEU | 2.2 |
| 21 | 1Z | 155 | LEU | 2.2 |
| 32 | 1a | 1257 | U | 2.2 |
| 42 | 2k | 111 | ASP | 2.2 |
| 32 | 2a | 1050 | G | 2.2 |
| 39 | 1h | 39 | LEU | 2.2 |
| 42 | 2k | 74 | ALA | 2.2 |
| 49 | 1r | 40 | LEU | 2.2 |
| 55 | 2x | 4 | G | 2.2 |
| 23 | 2l | 27 | GLU | 2.2 |
| 38 | 2g | 90 | GLU | 2.2 |
| 7 | 2H | 83 | TYR | 2.2 |
| 15 | 2T | 39 | ARG | 2.2 |
| 48 | 2q | 68 | ARG | 2.2 |
| 4 | 1E | 59 | VAL | 2.2 |
| 12 | 1Q | 18 | LYS | 2.2 |
| 22 | 20 | 79 | VAL | 2.2 |
| 49 | 1r | 39 | VAL | 2.2 |
| 50 | 2s | 60 | VAL | 2.2 |
| 54 | 2y | 62 | C | 2.2 |
| 32 | 2a | 1531 | A | 2.2 |
| 1 | 1A | 1143 | U | 2.2 |
| 7 | 1H | 105 | LEU | 2.2 |
| 35 | 2d | 194 | LEU | 2.2 |
| 54 | 2y | 60 | U | 2.2 |
| 36 | 2e | 89 | ILE | 2.2 |
| 43 | 2l | 48 | PRO | 2.2 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 50 | 2s | 57 | HIS | 2.2 |
| 47 | 2p | 48 | TRP | 2.2 |
| 47 | 1p | 53 | VAL | 2.2 |
| 42 | 2k | 88 | GLY | 2.2 |
| 11 | 2P | 56 | SER | 2.2 |
| 32 | 2a | 982 | U | 2.2 |
| 35 | 2d | 78 | LEU | 2.2 |
| 12 | 1Q | 69 | PHE | 2.2 |
| 12 | 2Q | 133 | ARG | 2.2 |
| 23 | 2l | 21 | ARG | 2.2 |
| 33 | 2b | 152 | PHE | 2.2 |
| 17 | 2V | 76 | LYS | 2.2 |
| 30 | 28 | 26 | LYS | 2.2 |
| 30 | 28 | 41 | ILE | 2.2 |
| 34 | 2c | 180 | ALA | 2.2 |
| 38 | 2g | 6 | ARG | 2.2 |
| 50 | 2s | 31 | ILE | 2.2 |
| 50 | 2s | 59 | PRO | 2.2 |
| 51 | 2t | 83 | ARG | 2.2 |
| 9 | 2N | 14 | VAL | 2.2 |
| 34 | 2c | 155 | GLY | 2.2 |
| 34 | 2c | 161 | GLU | 2.2 |
| 3 | 2D | 38 | LYS | 2.2 |
| 6 | 1G | 82 | LEU | 2.2 |
| 7 | 2H | 23 | ARG | 2.2 |
| 7 | 2H | 152 | ARG | 2.2 |
| 11 | 1P | 45 | LEU | 2.2 |
| 16 | 2U | 39 | LEU | 2.2 |
| 33 | 2b | 205 | ASP | 2.2 |
| 21 | 1Z | 44 | PHE | 2.2 |
| 9 | 2N | 32 | THR | 2.2 |
| 22 | 20 | 61 | ALA | 2.2 |
| 27 | 15 | 3 | LYS | 2.2 |
| 33 | 2b | 77 | ALA | 2.2 |
| 34 | 2c | 5 | ILE | 2.2 |
| 42 | 2k | 107 | SER | 2.2 |
| 1 | 2A | 2114 | A | 2.2 |
| 9 | 2N | 90 | MET | 2.2 |
| 11 | 2P | 35 | HIS | 2.2 |
| 42 | 1k | 39 | PRO | 2.2 |
| 54 | 1w | 64 | A | 2.2 |
| 7 | 2H | 15 | VAL | 2.2 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 12 | 1Q | 94 | VAL | 2.2 |
| 47 | 2p | 17 | TYR | 2.2 |
| 38 | 2g | 10 | ARG | 2.2 |
| 40 | 2i | 111 | ARG | 2.2 |
| 43 | 2l | 53 | ARG | 2.2 |
| 47 | 1p | 48 | TRP | 2.2 |
| 1 | 1A | 2162 | C | 2.2 |
| 1 | 2A | 2118 | U | 2.2 |
| 11 | 2P | 148 | LEU | 2.2 |
| 10 | 1O | 83 | ALA | 2.2 |
| 34 | 2c | 113 | ALA | 2.2 |
| 42 | 2k | 53 | SER | 2.2 |
| 9 | 2N | 106 | MET | 2.2 |
| 41 | 2j | 68 | HIS | 2.2 |
| 11 | 2P | 74 | GLU | 2.2 |
| 23 | 2l | 14 | VAL | 2.2 |
| 34 | 1c | 66 | VAL | 2.2 |
| 36 | 2e | 105 | VAL | 2.2 |
| 43 | 2l | 43 | VAL | 2.2 |
| 44 | 2m | 87 | TYR | 2.2 |
| 48 | 2q | 35 | VAL | 2.2 |
| 48 | 2q | 57 | VAL | 2.2 |
| 34 | 2c | 16 | ARG | 2.2 |
| 38 | 1g | 143 | ARG | 2.2 |
| 49 | 2r | 54 | ARG | 2.2 |
| 32 | 1a | 1031 | G | 2.2 |
| 36 | 2e | 43 | LEU | 2.2 |
| 46 | 2o | 43 | LEU | 2.2 |
| 51 | 2t | 13 | LEU | 2.2 |
| 34 | 1c | 189 | ALA | 2.2 |
| 41 | 2j | 18 | ALA | 2.2 |
| 12 | 1Q | 12 | GLN | 2.2 |
| 9 | 1N | 86 | PRO | 2.2 |
| 11 | 2P | 63 | PRO | 2.2 |
| 45 | 2n | 32 | SER | 2.2 |
| 43 | 1l | 67 | THR | 2.2 |
| 33 | 1b | 133 | LYS | 2.2 |
| 39 | 2h | 116 | LYS | 2.2 |
| 35 | 1d | 203 | VAL | 2.2 |
| 35 | 2d | 68 | TYR | 2.2 |
| 44 | 2m | 96 | LEU | 2.1 |
| 1 | 1A | 2154 | U | 2.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 31 | 29 | 5 | ALA | 2.1 |
| 33 | 1b | 95 | GLN | 2.1 |
| 34 | 1c | 77 | ILE | 2.1 |
| 41 | 2j | 6 | ILE | 2.1 |
| 42 | 2k | 64 | ALA | 2.1 |
| 1 | 2A | 2121 | G | 2.1 |
| 11 | 2P | 67 | MET | 2.1 |
| 12 | 2Q | 73 | PRO | 2.1 |
| 43 | 2l | 57 | LYS | 2.1 |
| 35 | 2d | 98 | GLU | 2.1 |
| 36 | 1e | 14 | ARG | 2.1 |
| 36 | 2e | 8 | GLU | 2.1 |
| 49 | 2r | 83 | GLU | 2.1 |
| 12 | 2Q | 122 | GLY | 2.1 |
| 33 | 2b | 184 | VAL | 2.1 |
| 3 | 2D | 175 | LEU | 2.1 |
| 11 | 2P | 108 | LYS | 2.1 |
| 16 | 2U | 104 | GLN | 2.1 |
| 49 | 1r | 70 | ILE | 2.1 |
| 53 | 2v | 22 | U | 2.1 |
| 18 | 2W | 92 | ARG | 2.1 |
| 37 | 2f | 100 | ASN | 2.1 |
| 38 | 1g | 72 | ARG | 2.1 |
| 49 | 2r | 55 | ARG | 2.1 |
| 4 | 2E | 126 | PRO | 2.1 |
| 1 | 2A | 2156 | G | 2.1 |
| 54 | 2y | 57 | G | 2.1 |
| 47 | 2p | 79 | VAL | 2.1 |
| 9 | 2N | 82 | LEU | 2.1 |
| 12 | 1Q | 118 | LEU | 2.1 |
| 15 | 1T | 114 | LEU | 2.1 |
| 17 | 1V | 38 | LEU | 2.1 |
| 34 | 1c | 91 | LEU | 2.1 |
| 43 | 2l | 13 | LYS | 2.1 |
| 12 | 1Q | 14 | ARG | 2.1 |
| 23 | 11 | 20 | ARG | 2.1 |
| 33 | 1b | 76 | GLN | 2.1 |
| 42 | 2k | 69 | ALA | 2.1 |
| 43 | 1l | 85 | ILE | 2.1 |
| 50 | 2s | 56 | GLN | 2.1 |
| 5 | 2F | 183 | VAL | 2.1 |
| 7 | 2H | 16 | SER | 2.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 9 | 2N | 46 | VAL | 2.1 |
| 12 | 1Q | 87 | LYS | 2.1 |
| 32 | 2a | 1521 | G | 2.1 |
| 16 | 2U | 106 | PHE | 2.1 |
| 21 | 2Z | 48 | PHE | 2.1 |
| 54 | 2w | 47 | U | 2.1 |
| 12 | 2Q | 99 | PRO | 2.1 |
| 34 | 2c | 145 | GLY | 2.1 |
| 38 | 2g | 144 | MET | 2.1 |
| 7 | 2H | 131 | VAL | 2.1 |
| 11 | 2P | 106 | LEU | 2.1 |
| 16 | 1U | 39 | LEU | 2.1 |
| 19 | 1X | 95 | LEU | 2.1 |
| 38 | 2g | 143 | ARG | 2.1 |
| 52 | 2u | 24 | ARG | 2.1 |
| 1 | 2A | 2116 | G | 2.1 |
| 34 | 2c | 170 | GLN | 2.1 |
| 1 | 2A | 958 | U | 2.1 |
| 30 | 28 | 21 | LYS | 2.1 |
| 34 | 2c | 109 | PRO | 2.1 |
| 10 | 1O | 52 | VAL | 2.1 |
| 30 | 18 | 22 | VAL | 2.1 |
| 35 | 1d | 112 | VAL | 2.1 |
| 29 | 17 | 47 | ARG | 2.1 |
| 52 | 1u | 15 | ARG | 2.1 |
| 3 | 2D | 147 | LEU | 2.1 |
| 22 | 20 | 21 | LEU | 2.1 |
| 25 | 23 | 23 | LEU | 2.1 |
| 35 | 1d | 78 | LEU | 2.1 |
| 35 | 2d | 97 | LEU | 2.1 |
| 34 | 2c | 17 | ASP | 2.1 |
| 36 | 1e | 5 | ASP | 2.1 |
| 1 | 1A | 1112 | U | 2.1 |
| 26 | 24 | 14 | ILE | 2.1 |
| 9 | 1N | 109 | LYS | 2.1 |
| 10 | 2O | 33 | ALA | 2.1 |
| 30 | 18 | 55 | ALA | 2.1 |
| 39 | 1h | 13 | ILE | 2.1 |
| 43 | 1l | 26 | ALA | 2.1 |
| 52 | 2u | 12 | LYS | 2.1 |
| 21 | 2Z | 22 | GLY | 2.1 |
| 23 | 21 | 29 | GLY | 2.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 38 | 1g | 148 | ASN | 2.1 |
| 31 | 19 | 9 | ARG | 2.1 |
| 40 | 2i | 90 | PRO | 2.1 |
| 42 | 1k | 121 | PRO | 2.1 |
| 32 | 2a | 1223 | C | 2.1 |
| 18 | 2W | 86 | LEU | 2.1 |
| 34 | 1c | 175 | LEU | 2.1 |
| 34 | 2c | 47 | LEU | 2.1 |
| 48 | 2q | 84 | LEU | 2.1 |
| 5 | 2F | 77 | ASP | 2.1 |
| 7 | 2H | 121 | ILE | 2.1 |
| 12 | 2Q | 40 | ALA | 2.1 |
| 21 | 2Z | 21 | ALA | 2.1 |
| 32 | 2a | 204 | U | 2.1 |
| 33 | 1b | 188 | ALA | 2.1 |
| 4 | 1E | 3 | GLY | 2.1 |
| 23 | 11 | 26 | ARG | 2.1 |
| 35 | 2d | 107 | ARG | 2.1 |
| 41 | 1j | 46 | ARG | 2.1 |
| 10 | 1O | 63 | VAL | 2.1 |
| 12 | 1Q | 105 | GLU | 2.1 |
| 12 | 2Q | 38 | GLU | 2.1 |
| 25 | 23 | 54 | VAL | 2.1 |
| 40 | 1i | 123 | PRO | 2.1 |
| 54 | 1y | 22 | G | 2.1 |
| 9 | 1N | 84 | LYS | 2.1 |
| 21 | 2Z | 88 | PHE | 2.1 |
| 24 | 22 | 60 | LEU | 2.1 |
| 35 | 1d | 21 | LEU | 2.1 |
| 35 | 2d | 186 | LEU | 2.1 |
| 38 | 2g | 59 | LEU | 2.1 |
| 54 | 2y | 21 | A | 2.1 |
| 17 | 2V | 80 | GLN | 2.1 |
| 7 | 2H | 129 | THR | 2.1 |
| 10 | 2O | 96 | THR | 2.1 |
| 30 | 28 | 55 | ALA | 2.1 |
| 34 | 1c | 71 | ALA | 2.1 |
| 12 | 1Q | 19 | GLY | 2.1 |
| 12 | 2Q | 78 | PRO | 2.1 |
| 26 | 24 | 35 | VAL | 2.1 |
| 35 | 1d | 37 | PRO | 2.1 |
| 4 | 2E | 49 | LEU | 2.0 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 5 | 2F | 192 | LEU | 2.0 |
| 11 | 2P | 62 | LEU | 2.0 |
| 12 | 1Q | 125 | LEU | 2.0 |
| 39 | 1h | 59 | LEU | 2.0 |
| 1 | 1A | 934 | A | 2.0 |
| 6 | 2G | 76 | SER | 2.0 |
| 3 | 2D | 165 | ILE | 2.0 |
| 12 | 1Q | 66 | ILE | 2.0 |
| 37 | 1f | 55 | ASP | 2.0 |
| 23 | 2I | 34 | THR | 2.0 |
| 33 | 2b | 207 | ALA | 2.0 |
| 34 | 1c | 200 | ALA | 2.0 |
| 40 | 1i | 120 | ARG | 2.0 |
| 22 | 20 | 46 | LYS | 2.0 |
| 40 | 1i | 116 | LYS | 2.0 |
| 10 | 1O | 57 | VAL | 2.0 |
| 35 | 1d | 198 | VAL | 2.0 |
| 16 | 2U | 44 | ASN | 2.0 |
| 4 | 2E | 51 | PHE | 2.0 |
| 9 | 1N | 82 | LEU | 2.0 |
| 30 | 18 | 50 | LEU | 2.0 |
| 41 | 1j | 62 | HIS | 2.0 |
| 4 | 1E | 134 | ILE | 2.0 |
| 31 | 19 | 10 | ILE | 2.0 |
| 31 | 19 | 35 | ARG | 2.0 |
| 34 | 1c | 57 | ILE | 2.0 |
| 42 | 2k | 101 | SER | 2.0 |
| 36 | 2e | 21 | ALA | 2.0 |
| 35 | 1d | 61 | LYS | 2.0 |
| 42 | 1k | 118 | GLY | 2.0 |
| 44 | 1m | 107 | ALA | 2.0 |
| 7 | 2H | 18 | GLU | 2.0 |
| 5 | 2F | 194 | MET | 2.0 |
| 7 | 2H | 10 | PRO | 2.0 |
| 11 | 2P | 60 | MET | 2.0 |
| 35 | 2d | 198 | VAL | 2.0 |
| 40 | 2i | 109 | VAL | 2.0 |
| 43 | 2l | 40 | VAL | 2.0 |
| 43 | 2l | 83 | VAL | 2.0 |
| 42 | 2k | 121 | PRO | 2.0 |
| 4 | 1E | 5 | LEU | 2.0 |
| 6 | 2G | 60 | LEU | 2.0 |

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| Mol | Chain | Res | Type | RSRZ |
|-----|-------|------|------|------|
| 18 | 1W | 29 | LEU | 2.0 |
| 43 | 1l | 77 | LEU | 2.0 |
| 9 | 2N | 127 | ASP | 2.0 |
| 21 | 1Z | 123 | ASP | 2.0 |
| 23 | 2l | 10 | LYS | 2.0 |
| 33 | 2b | 127 | ILE | 2.0 |
| 12 | 2Q | 32 | TYR | 2.0 |
| 32 | 1a | 693 | G | 2.0 |
| 32 | 1a | 796 | C | 2.0 |
| 32 | 2a | 1357 | A | 2.0 |
| 52 | 2u | 8 | THR | 2.0 |
| 4 | 2E | 116 | VAL | 2.0 |
| 7 | 2H | 130 | ARG | 2.0 |
| 9 | 1N | 51 | PHE | 2.0 |
| 38 | 1g | 62 | PHE | 2.0 |
| 9 | 2N | 120 | LEU | 2.0 |
| 10 | 2O | 106 | LEU | 2.0 |
| 46 | 1o | 67 | LEU | 2.0 |
| 3 | 2D | 271 | ILE | 2.0 |
| 31 | 19 | 26 | ILE | 2.0 |
| 7 | 2H | 80 | SER | 2.0 |
| 12 | 1Q | 90 | VAL | 2.0 |
| 32 | 1a | 1033 | G | 2.0 |
| 55 | 1x | 38 | A | 2.0 |
| 10 | 1O | 112 | MET | 2.0 |
| 35 | 1d | 57 | ARG | 2.0 |
| 9 | 2N | 99 | LEU | 2.0 |

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

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

| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|-----|-------|------|------|----------------------------|-------|
| 54 | PSU | 1y | 55 | 20/21 | 0.67 | 0.21 | 108,115,127,131 | 0 |
| 54 | 4SU | 1y | 8 | 20/21 | 0.78 | 0.23 | 105,113,126,129 | 0 |
| 54 | 4SU | 2w | 8 | 20/21 | 0.78 | 0.30 | 109,121,129,137 | 0 |
| 54 | 7MG | 2w | 46 | 24/25 | 0.78 | 0.36 | 106,118,134,152 | 0 |
| 54 | PSU | 2w | 55 | 20/21 | 0.78 | 0.26 | 95,105,114,117 | 0 |
| 54 | 4SU | 2y | 8 | 20/21 | 0.80 | 0.14 | 110,120,126,128 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 54 | 5MU | 1y | 54 | 21/22 | 0.81 | 0.22 | 101,110,119,130 | 0 |
| 54 | 7MG | 1w | 46 | 24/25 | 0.81 | 0.20 | 93,103,126,142 | 0 |
| 54 | 7MG | 2y | 46 | 24/25 | 0.81 | 0.20 | 116,124,130,143 | 0 |
| 54 | PSU | 2y | 55 | 20/21 | 0.81 | 0.38 | 113,126,131,134 | 0 |
| 54 | 7MG | 1y | 46 | 24/25 | 0.82 | 0.26 | 108,116,129,134 | 0 |
| 54 | 5MU | 2y | 54 | 21/22 | 0.84 | 0.40 | 110,119,130,143 | 0 |
| 54 | 4SU | 1w | 8 | 20/21 | 0.85 | 0.25 | 99,103,117,119 | 0 |
| 54 | PSU | 1w | 55 | 20/21 | 0.86 | 0.26 | 62,87,97,97 | 0 |
| 55 | 4SU | 2x | 8 | 20/21 | 0.86 | 0.21 | 75,91,102,103 | 0 |
| 54 | PSU | 2y | 32 | 20/21 | 0.87 | 0.20 | 91,110,120,121 | 0 |
| 54 | MIA | 2y | 37 | 22/30 | 0.88 | 0.25 | 98,109,118,131 | 0 |
| 54 | PSU | 2w | 39 | 20/21 | 0.90 | 0.32 | 86,97,103,103 | 0 |
| 32 | PSU | 2a | 516 | 20/21 | 0.90 | 0.18 | 69,89,97,100 | 0 |
| 55 | PSU | 2x | 55 | 20/21 | 0.90 | 0.15 | 86,93,107,108 | 0 |
| 32 | 2MG | 2a | 1207 | 24/25 | 0.91 | 0.15 | 97,103,108,110 | 0 |
| 54 | MIA | 1y | 37 | 22/30 | 0.91 | 0.20 | 86,96,100,103 | 0 |
| 54 | PSU | 2y | 39 | 20/21 | 0.91 | 0.28 | 96,104,108,110 | 0 |
| 54 | PSU | 1y | 32 | 20/21 | 0.92 | 0.22 | 85,97,104,105 | 0 |
| 54 | 5MU | 2w | 54 | 21/22 | 0.92 | 0.20 | 86,95,101,111 | 0 |
| 32 | 5MC | 2a | 967 | 21/22 | 0.93 | 0.22 | 84,92,97,104 | 0 |
| 54 | PSU | 1w | 32 | 20/21 | 0.93 | 0.20 | 69,79,86,86 | 0 |
| 32 | 4OC | 2a | 1402 | 22/23 | 0.93 | 0.20 | 73,84,89,91 | 0 |
| 32 | MA6 | 2a | 1518 | 24/25 | 0.93 | 0.31 | 67,80,85,86 | 0 |
| 32 | MA6 | 2a | 1519 | 24/25 | 0.93 | 0.33 | 66,78,84,88 | 0 |
| 54 | PSU | 1y | 39 | 20/21 | 0.93 | 0.27 | 72,93,98,109 | 0 |
| 54 | PSU | 2w | 32 | 20/21 | 0.93 | 0.36 | 92,102,106,113 | 0 |
| 1 | PSU | 2A | 1911 | 20/21 | 0.93 | 0.16 | 69,81,84,90 | 0 |
| 55 | PSU | 1x | 55 | 20/21 | 0.93 | 0.12 | 71,76,84,87 | 0 |
| 32 | M2G | 2a | 966 | 25/26 | 0.93 | 0.20 | 75,88,98,103 | 0 |
| 32 | 5MC | 2a | 1400 | 21/22 | 0.94 | 0.27 | 79,84,90,91 | 0 |
| 32 | 7MG | 2a | 527 | 24/25 | 0.94 | 0.22 | 69,77,84,87 | 0 |
| 32 | 5MC | 2a | 1404 | 21/22 | 0.94 | 0.23 | 69,78,82,83 | 0 |
| 55 | 4SU | 1x | 8 | 20/21 | 0.94 | 0.19 | 60,68,78,81 | 0 |
| 1 | PSU | 2A | 1917 | 20/21 | 0.95 | 0.18 | 70,79,86,96 | 0 |
| 1 | 5MC | 2A | 1942 | 21/22 | 0.95 | 0.18 | 53,68,74,78 | 0 |
| 32 | 5MC | 2a | 1407 | 21/22 | 0.95 | 0.20 | 70,76,77,78 | 0 |
| 55 | 5MC | 2x | 32 | 21/22 | 0.95 | 0.21 | 78,86,91,92 | 0 |
| 55 | 5MU | 2x | 54 | 21/22 | 0.95 | 0.17 | 88,96,101,104 | 0 |
| 32 | 5MC | 1a | 1407 | 21/22 | 0.95 | 0.26 | 48,53,57,62 | 0 |
| 55 | 5MC | 1x | 32 | 21/22 | 0.95 | 0.29 | 63,69,76,78 | 0 |
| 43 | 0TD | 2l | 92 | 10/11 | 0.95 | 0.31 | 74,78,82,90 | 0 |
| 55 | 5MU | 1x | 54 | 21/22 | 0.95 | 0.13 | 72,77,80,83 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 54 | PSU | 1w | 39 | 20/21 | 0.95 | 0.23 | 56,73,81,88 | 0 |
| 54 | MIA | 2w | 37 | 25/30 | 0.95 | 0.22 | 77,89,99,103 | 0 |
| 32 | MA6 | 1a | 1519 | 24/25 | 0.95 | 0.25 | 47,51,57,64 | 0 |
| 1 | 4OC | 1A | 1942 | 21/23 | 0.95 | 0.23 | 48,60,64,65 | 0 |
| 54 | MIA | 1w | 37 | 29/30 | 0.96 | 0.23 | 53,62,74,77 | 0 |
| 32 | PSU | 1a | 516 | 20/21 | 0.96 | 0.12 | 51,66,70,72 | 0 |
| 32 | 5MC | 1a | 967 | 21/22 | 0.96 | 0.25 | 57,62,67,70 | 0 |
| 32 | 2MG | 1a | 1207 | 24/25 | 0.96 | 0.14 | 65,74,79,81 | 0 |
| 32 | 4OC | 1a | 1402 | 22/23 | 0.96 | 0.23 | 51,59,62,66 | 0 |
| 1 | PSU | 1A | 1939 | 20/21 | 0.96 | 0.23 | 47,59,66,66 | 0 |
| 1 | 5MU | 1A | 1937 | 21/22 | 0.96 | 0.24 | 59,66,71,72 | 0 |
| 43 | 0TD | 1l | 92 | 10/11 | 0.96 | 0.28 | 57,59,63,66 | 0 |
| 1 | 5MC | 2A | 1962 | 21/22 | 0.96 | 0.17 | 56,61,73,81 | 0 |
| 1 | OMG | 2A | 2251 | 24/25 | 0.96 | 0.24 | 49,58,60,65 | 0 |
| 1 | 2MA | 2A | 2503 | 23/24 | 0.96 | 0.19 | 37,46,49,51 | 0 |
| 1 | 2MU | 2A | 2552 | 21/23 | 0.96 | 0.18 | 43,52,60,64 | 0 |
| 1 | 5MU | 1A | 1961 | 21/22 | 0.96 | 0.22 | 37,47,50,60 | 0 |
| 1 | 2MA | 1A | 2515 | 23/24 | 0.96 | 0.21 | 27,32,37,41 | 0 |
| 1 | 2MU | 1A | 2564 | 21/23 | 0.97 | 0.19 | 36,41,46,52 | 0 |
| 32 | UR3 | 1a | 1498 | 21/22 | 0.97 | 0.28 | 44,51,54,59 | 0 |
| 32 | MA6 | 1a | 1518 | 24/25 | 0.97 | 0.26 | 41,49,53,56 | 0 |
| 1 | PSU | 1A | 2617 | 20/21 | 0.97 | 0.18 | 36,39,43,47 | 0 |
| 1 | PSU | 2A | 2605 | 20/21 | 0.97 | 0.19 | 36,52,60,62 | 0 |
| 1 | 5MC | 1A | 1964 | 21/22 | 0.97 | 0.18 | 44,52,57,61 | 0 |
| 32 | 7MG | 1a | 527 | 24/25 | 0.97 | 0.16 | 45,53,60,63 | 0 |
| 32 | M2G | 1a | 966 | 25/26 | 0.97 | 0.25 | 50,59,65,74 | 0 |
| 1 | 5MC | 1A | 1984 | 21/22 | 0.97 | 0.20 | 33,48,55,62 | 0 |
| 1 | OMG | 1A | 2263 | 24/25 | 0.97 | 0.21 | 30,35,43,50 | 0 |
| 32 | 5MC | 1a | 1400 | 21/22 | 0.97 | 0.24 | 52,57,63,72 | 0 |
| 54 | 5MU | 1w | 54 | 21/22 | 0.97 | 0.24 | 66,74,81,83 | 0 |
| 1 | 5MU | 2A | 1915 | 21/22 | 0.97 | 0.14 | 76,81,87,88 | 0 |
| 1 | PSU | 1A | 1933 | 20/21 | 0.97 | 0.21 | 42,52,58,60 | 0 |
| 32 | UR3 | 2a | 1498 | 21/22 | 0.97 | 0.27 | 60,75,80,82 | 0 |
| 1 | 4OC | 2A | 1920 | 21/23 | 0.97 | 0.21 | 70,74,83,84 | 0 |
| 1 | 5MU | 2A | 1939 | 21/22 | 0.97 | 0.15 | 51,56,62,67 | 0 |
| 32 | 5MC | 1a | 1404 | 21/22 | 0.97 | 0.27 | 46,54,57,60 | 0 |

6.3 Carbohydrates [\(i\)](#)

There are no monosaccharides in this entry.

6.4 Ligands i

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

| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 56 | MG | 1B | 218 | 1/1 | 0.33 | 0.23 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3558 | 1/1 | 0.35 | 0.13 | 113,113,113,113 | 0 |
| 56 | MG | 2a | 1904 | 1/1 | 0.35 | 0.20 | 94,94,94,94 | 0 |
| 56 | MG | 2A | 3514 | 1/1 | 0.37 | 0.24 | 87,87,87,87 | 0 |
| 56 | MG | 2A | 3533 | 1/1 | 0.42 | 0.14 | 88,88,88,88 | 0 |
| 56 | MG | 1a | 1709 | 1/1 | 0.42 | 0.35 | 85,85,85,85 | 0 |
| 56 | MG | 1q | 201 | 1/1 | 0.43 | 0.25 | 82,82,82,82 | 0 |
| 56 | MG | 1a | 1702 | 1/1 | 0.45 | 0.23 | 97,97,97,97 | 0 |
| 56 | MG | 1a | 1611 | 1/1 | 0.47 | 1.00 | 98,98,98,98 | 0 |
| 56 | MG | 2A | 3082 | 1/1 | 0.50 | 0.45 | 72,72,72,72 | 0 |
| 56 | MG | 1a | 1613 | 1/1 | 0.50 | 0.94 | 97,97,97,97 | 0 |
| 56 | MG | 1A | 3546 | 1/1 | 0.52 | 0.27 | 69,69,69,69 | 0 |
| 56 | MG | 1a | 1712 | 1/1 | 0.53 | 0.22 | 78,78,78,78 | 0 |
| 56 | MG | 2B | 212 | 1/1 | 0.53 | 0.19 | 75,75,75,75 | 0 |
| 56 | MG | 1A | 3897 | 1/1 | 0.53 | 0.19 | 76,76,76,76 | 0 |
| 56 | MG | 2a | 1860 | 1/1 | 0.54 | 0.40 | 83,83,83,83 | 0 |
| 56 | MG | 1B | 227 | 1/1 | 0.54 | 0.28 | 86,86,86,86 | 0 |
| 56 | MG | 2A | 3506 | 1/1 | 0.55 | 0.31 | 75,75,75,75 | 0 |
| 56 | MG | 1A | 3709 | 1/1 | 0.55 | 0.26 | 65,65,65,65 | 0 |
| 56 | MG | 1a | 1827 | 1/1 | 0.55 | 0.27 | 79,79,79,79 | 0 |
| 56 | MG | 1A | 3593 | 1/1 | 0.56 | 0.34 | 75,75,75,75 | 0 |
| 56 | MG | 2a | 1887 | 1/1 | 0.56 | 0.15 | 103,103,103,103 | 0 |
| 56 | MG | 1A | 3924 | 1/1 | 0.56 | 0.14 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3537 | 1/1 | 0.57 | 0.49 | 108,108,108,108 | 0 |
| 56 | MG | 2a | 1705 | 1/1 | 0.58 | 0.56 | 68,68,68,68 | 0 |
| 56 | MG | 1a | 1796 | 1/1 | 0.58 | 0.22 | 104,104,104,104 | 0 |
| 56 | MG | 1a | 1609 | 1/1 | 0.58 | 1.72 | 98,98,98,98 | 0 |
| 56 | MG | 1a | 1845 | 1/1 | 0.58 | 0.83 | 107,107,107,107 | 0 |
| 56 | MG | 1A | 3880 | 1/1 | 0.59 | 0.24 | 63,63,63,63 | 0 |
| 56 | MG | 1a | 1725 | 1/1 | 0.59 | 0.23 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3325 | 1/1 | 0.59 | 0.26 | 82,82,82,82 | 0 |
| 56 | MG | 2a | 1758 | 1/1 | 0.60 | 0.77 | 86,86,86,86 | 0 |
| 56 | MG | 2A | 3182 | 1/1 | 0.60 | 0.19 | 92,92,92,92 | 0 |
| 56 | MG | 1A | 3789 | 1/1 | 0.60 | 0.20 | 80,80,80,80 | 0 |
| 56 | MG | 1A | 3111 | 1/1 | 0.60 | 0.20 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3364 | 1/1 | 0.61 | 0.84 | 74,74,74,74 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 56 | MG | 2A | 3565 | 1/1 | 0.61 | 0.29 | 72,72,72,72 | 0 |
| 56 | MG | 2a | 1858 | 1/1 | 0.62 | 0.15 | 106,106,106,106 | 0 |
| 56 | MG | 1A | 3830 | 1/1 | 0.62 | 0.19 | 72,72,72,72 | 0 |
| 56 | MG | 2A | 3469 | 1/1 | 0.62 | 0.22 | 76,76,76,76 | 0 |
| 56 | MG | 1A | 3596 | 1/1 | 0.62 | 0.18 | 47,47,47,47 | 0 |
| 56 | MG | 1w | 101 | 1/1 | 0.63 | 0.19 | 83,83,83,83 | 0 |
| 56 | MG | 2a | 1768 | 1/1 | 0.63 | 0.17 | 79,79,79,79 | 0 |
| 56 | MG | 2a | 1826 | 1/1 | 0.63 | 0.12 | 87,87,87,87 | 0 |
| 56 | MG | 2A | 3199 | 1/1 | 0.63 | 0.18 | 67,67,67,67 | 0 |
| 56 | MG | 2A | 3332 | 1/1 | 0.63 | 0.18 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3798 | 1/1 | 0.63 | 0.23 | 78,78,78,78 | 0 |
| 56 | MG | 2A | 3166 | 1/1 | 0.63 | 0.34 | 65,65,65,65 | 0 |
| 56 | MG | 2t | 202 | 1/1 | 0.63 | 0.42 | 79,79,79,79 | 0 |
| 56 | MG | 2A | 3044 | 1/1 | 0.64 | 0.35 | 71,71,71,71 | 0 |
| 56 | MG | 1a | 1682 | 1/1 | 0.64 | 0.25 | 68,68,68,68 | 0 |
| 56 | MG | 2a | 1673 | 1/1 | 0.64 | 0.36 | 76,76,76,76 | 0 |
| 56 | MG | 2a | 1752 | 1/1 | 0.65 | 0.14 | 77,77,77,77 | 0 |
| 56 | MG | 2a | 1893 | 1/1 | 0.65 | 0.12 | 82,82,82,82 | 0 |
| 56 | MG | 1A | 3923 | 1/1 | 0.65 | 0.89 | 57,57,57,57 | 0 |
| 56 | MG | 1a | 1816 | 1/1 | 0.65 | 0.14 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3493 | 1/1 | 0.66 | 0.44 | 92,92,92,92 | 0 |
| 56 | MG | 1A | 3825 | 1/1 | 0.66 | 0.26 | 78,78,78,78 | 0 |
| 56 | MG | 2a | 1605 | 1/1 | 0.66 | 0.26 | 93,93,93,93 | 0 |
| 56 | MG | 1A | 3934 | 1/1 | 0.66 | 1.30 | 99,99,99,99 | 0 |
| 56 | MG | 1a | 1901 | 1/1 | 0.66 | 0.18 | 80,80,80,80 | 0 |
| 56 | MG | 2A | 3526 | 1/1 | 0.67 | 0.16 | 101,101,101,101 | 0 |
| 56 | MG | 2a | 1741 | 1/1 | 0.67 | 0.24 | 87,87,87,87 | 0 |
| 56 | MG | 1a | 1817 | 1/1 | 0.67 | 0.25 | 84,84,84,84 | 0 |
| 56 | MG | 1A | 3248 | 1/1 | 0.67 | 0.23 | 62,62,62,62 | 0 |
| 56 | MG | 1a | 1619 | 1/1 | 0.68 | 0.28 | 58,58,58,58 | 0 |
| 56 | MG | 2A | 3204 | 1/1 | 0.68 | 0.54 | 80,80,80,80 | 0 |
| 56 | MG | 2A | 3545 | 1/1 | 0.68 | 0.41 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3228 | 1/1 | 0.68 | 0.36 | 79,79,79,79 | 0 |
| 56 | MG | 2A | 3447 | 1/1 | 0.68 | 0.26 | 50,50,50,50 | 0 |
| 56 | MG | 1A | 3811 | 1/1 | 0.68 | 0.12 | 93,93,93,93 | 0 |
| 56 | MG | 2a | 1869 | 1/1 | 0.68 | 0.44 | 96,96,96,96 | 0 |
| 56 | MG | 2a | 1649 | 1/1 | 0.68 | 0.21 | 87,87,87,87 | 0 |
| 56 | MG | 1A | 3084 | 1/1 | 0.68 | 0.46 | 82,82,82,82 | 0 |
| 56 | MG | 1A | 3258 | 1/1 | 0.68 | 0.36 | 78,78,78,78 | 0 |
| 56 | MG | 1A | 3879 | 1/1 | 0.68 | 0.58 | 96,96,96,96 | 0 |
| 56 | MG | 1A | 3815 | 1/1 | 0.69 | 0.22 | 89,89,89,89 | 0 |
| 56 | MG | 1A | 3823 | 1/1 | 0.69 | 0.29 | 78,78,78,78 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 56 | MG | 1A | 3736 | 1/1 | 0.69 | 0.34 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3222 | 1/1 | 0.69 | 0.27 | 80,80,80,80 | 0 |
| 56 | MG | 1A | 3870 | 1/1 | 0.69 | 0.39 | 58,58,58,58 | 0 |
| 56 | MG | 1a | 1866 | 1/1 | 0.69 | 0.25 | 77,77,77,77 | 0 |
| 56 | MG | 1A | 3142 | 1/1 | 0.69 | 0.16 | 72,72,72,72 | 0 |
| 56 | MG | 1e | 202 | 1/1 | 0.69 | 0.79 | 87,87,87,87 | 0 |
| 56 | MG | 2a | 1607 | 1/1 | 0.69 | 0.10 | 90,90,90,90 | 0 |
| 56 | MG | 2a | 1641 | 1/1 | 0.69 | 0.88 | 85,85,85,85 | 0 |
| 56 | MG | 1W | 204 | 1/1 | 0.69 | 1.59 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3193 | 1/1 | 0.69 | 0.18 | 58,58,58,58 | 0 |
| 56 | MG | 2a | 1675 | 1/1 | 0.69 | 0.13 | 101,101,101,101 | 0 |
| 56 | MG | 1l | 201 | 1/1 | 0.70 | 0.38 | 73,73,73,73 | 0 |
| 56 | MG | 1A | 3565 | 1/1 | 0.70 | 0.23 | 60,60,60,60 | 0 |
| 56 | MG | 2A | 3224 | 1/1 | 0.70 | 0.46 | 73,73,73,73 | 0 |
| 56 | MG | 1A | 3058 | 1/1 | 0.70 | 0.27 | 64,64,64,64 | 0 |
| 56 | MG | 2A | 3019 | 1/1 | 0.70 | 0.22 | 61,61,61,61 | 0 |
| 56 | MG | 1a | 1888 | 1/1 | 0.70 | 0.64 | 84,84,84,84 | 0 |
| 56 | MG | 1A | 3866 | 1/1 | 0.70 | 0.44 | 97,97,97,97 | 0 |
| 56 | MG | 2A | 3131 | 1/1 | 0.70 | 0.32 | 60,60,60,60 | 0 |
| 56 | MG | 2a | 1888 | 1/1 | 0.70 | 0.15 | 90,90,90,90 | 0 |
| 56 | MG | 2A | 3152 | 1/1 | 0.70 | 0.15 | 60,60,60,60 | 0 |
| 56 | MG | 1a | 1902 | 1/1 | 0.70 | 0.18 | 83,83,83,83 | 0 |
| 56 | MG | 1A | 3892 | 1/1 | 0.70 | 0.18 | 98,98,98,98 | 0 |
| 56 | MG | 2x | 105 | 1/1 | 0.70 | 0.43 | 93,93,93,93 | 0 |
| 56 | MG | 1a | 1830 | 1/1 | 0.71 | 0.10 | 61,61,61,61 | 0 |
| 56 | MG | 2O | 201 | 1/1 | 0.71 | 0.67 | 67,67,67,67 | 0 |
| 56 | MG | 2a | 1868 | 1/1 | 0.71 | 0.63 | 96,96,96,96 | 0 |
| 56 | MG | 1a | 1837 | 1/1 | 0.71 | 0.18 | 77,77,77,77 | 0 |
| 56 | MG | 2A | 3416 | 1/1 | 0.71 | 0.70 | 65,65,65,65 | 0 |
| 56 | MG | 1A | 3147 | 1/1 | 0.71 | 0.67 | 42,42,42,42 | 0 |
| 56 | MG | 2a | 1762 | 1/1 | 0.71 | 0.14 | 91,91,91,91 | 0 |
| 56 | MG | 1A | 3063 | 1/1 | 0.71 | 0.35 | 78,78,78,78 | 0 |
| 56 | MG | 2a | 1771 | 1/1 | 0.71 | 0.14 | 75,75,75,75 | 0 |
| 56 | MG | 1A | 3321 | 1/1 | 0.71 | 0.51 | 65,65,65,65 | 0 |
| 56 | MG | 1a | 1776 | 1/1 | 0.72 | 0.25 | 65,65,65,65 | 0 |
| 56 | MG | 1a | 1887 | 1/1 | 0.72 | 0.12 | 89,89,89,89 | 0 |
| 56 | MG | 2a | 1626 | 1/1 | 0.72 | 0.19 | 70,70,70,70 | 0 |
| 56 | MG | 2a | 1829 | 1/1 | 0.72 | 0.19 | 87,87,87,87 | 0 |
| 56 | MG | 1A | 3043 | 1/1 | 0.72 | 0.27 | 95,95,95,95 | 0 |
| 56 | MG | 1A | 3472 | 1/1 | 0.72 | 0.29 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3108 | 1/1 | 0.72 | 0.30 | 62,62,62,62 | 0 |
| 56 | MG | 1a | 1819 | 1/1 | 0.72 | 0.23 | 82,82,82,82 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3885 | 1/1 | 0.72 | 0.13 | 63,63,63,63 | 0 |
| 56 | MG | 2a | 1725 | 1/1 | 0.72 | 0.40 | 82,82,82,82 | 0 |
| 56 | MG | 1A | 3047 | 1/1 | 0.72 | 1.70 | 64,64,64,64 | 0 |
| 56 | MG | 1A | 3839 | 1/1 | 0.72 | 0.29 | 55,55,55,55 | 0 |
| 56 | MG | 1x | 103 | 1/1 | 0.72 | 0.55 | 83,83,83,83 | 0 |
| 56 | MG | 1A | 3627 | 1/1 | 0.72 | 0.09 | 49,49,49,49 | 0 |
| 56 | MG | 2A | 3221 | 1/1 | 0.73 | 0.36 | 72,72,72,72 | 0 |
| 56 | MG | 1a | 1713 | 1/1 | 0.73 | 0.22 | 67,67,67,67 | 0 |
| 56 | MG | 2D | 302 | 1/1 | 0.73 | 1.09 | 82,82,82,82 | 0 |
| 56 | MG | 1A | 3814 | 1/1 | 0.73 | 0.33 | 78,78,78,78 | 0 |
| 56 | MG | 15 | 103 | 1/1 | 0.73 | 0.53 | 79,79,79,79 | 0 |
| 56 | MG | 2A | 3420 | 1/1 | 0.73 | 0.35 | 66,66,66,66 | 0 |
| 56 | MG | 2A | 3106 | 1/1 | 0.73 | 0.13 | 69,69,69,69 | 0 |
| 56 | MG | 1a | 1689 | 1/1 | 0.73 | 0.27 | 72,72,72,72 | 0 |
| 56 | MG | 1m | 202 | 1/1 | 0.73 | 0.25 | 87,87,87,87 | 0 |
| 56 | MG | 2A | 3154 | 1/1 | 0.73 | 0.39 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3579 | 1/1 | 0.73 | 0.63 | 61,61,61,61 | 0 |
| 56 | MG | 1A | 3580 | 1/1 | 0.73 | 1.57 | 76,76,76,76 | 0 |
| 56 | MG | 2A | 3527 | 1/1 | 0.73 | 0.12 | 74,74,74,74 | 0 |
| 56 | MG | 1A | 3860 | 1/1 | 0.73 | 0.13 | 75,75,75,75 | 0 |
| 56 | MG | 1x | 105 | 1/1 | 0.73 | 0.16 | 72,72,72,72 | 0 |
| 56 | MG | 2a | 1757 | 1/1 | 0.73 | 0.22 | 66,66,66,66 | 0 |
| 56 | MG | 2A | 3175 | 1/1 | 0.74 | 0.29 | 73,73,73,73 | 0 |
| 56 | MG | 2a | 1774 | 1/1 | 0.74 | 0.19 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3219 | 1/1 | 0.74 | 0.38 | 57,57,57,57 | 0 |
| 56 | MG | 2B | 207 | 1/1 | 0.74 | 0.12 | 77,77,77,77 | 0 |
| 56 | MG | 2a | 1685 | 1/1 | 0.74 | 0.26 | 83,83,83,83 | 0 |
| 56 | MG | 1a | 1762 | 1/1 | 0.74 | 0.15 | 58,58,58,58 | 0 |
| 56 | MG | 2a | 1862 | 1/1 | 0.74 | 0.24 | 75,75,75,75 | 0 |
| 56 | MG | 1A | 3536 | 1/1 | 0.74 | 0.28 | 54,54,54,54 | 0 |
| 56 | MG | 2A | 3217 | 1/1 | 0.74 | 0.17 | 66,66,66,66 | 0 |
| 56 | MG | 20 | 101 | 1/1 | 0.74 | 0.14 | 55,55,55,55 | 0 |
| 56 | MG | 1A | 3592 | 1/1 | 0.74 | 0.22 | 73,73,73,73 | 0 |
| 56 | MG | 2a | 1889 | 1/1 | 0.74 | 0.31 | 87,87,87,87 | 0 |
| 56 | MG | 12 | 101 | 1/1 | 0.74 | 0.26 | 68,68,68,68 | 0 |
| 56 | MG | 2a | 1903 | 1/1 | 0.74 | 0.20 | 93,93,93,93 | 0 |
| 56 | MG | 1y | 101 | 1/1 | 0.74 | 0.39 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3390 | 1/1 | 0.74 | 0.29 | 62,62,62,62 | 0 |
| 56 | MG | 2a | 1770 | 1/1 | 0.74 | 0.28 | 84,84,84,84 | 0 |
| 56 | MG | 1A | 3299 | 1/1 | 0.75 | 0.88 | 73,73,73,73 | 0 |
| 56 | MG | 1A | 3849 | 1/1 | 0.75 | 0.20 | 86,86,86,86 | 0 |
| 56 | MG | 2A | 3475 | 1/1 | 0.75 | 0.37 | 84,84,84,84 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3859 | 1/1 | 0.75 | 0.51 | 82,82,82,82 | 0 |
| 56 | MG | 1a | 1607 | 1/1 | 0.75 | 0.44 | 77,77,77,77 | 0 |
| 56 | MG | 1A | 3006 | 1/1 | 0.75 | 0.41 | 67,67,67,67 | 0 |
| 56 | MG | 2A | 3187 | 1/1 | 0.75 | 0.13 | 77,77,77,77 | 0 |
| 56 | MG | 2A | 3197 | 1/1 | 0.75 | 0.28 | 78,78,78,78 | 0 |
| 56 | MG | 1A | 3820 | 1/1 | 0.75 | 0.42 | 84,84,84,84 | 0 |
| 56 | MG | 1A | 3393 | 1/1 | 0.75 | 0.23 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3560 | 1/1 | 0.75 | 0.18 | 90,90,90,90 | 0 |
| 56 | MG | 1a | 1785 | 1/1 | 0.75 | 0.29 | 79,79,79,79 | 0 |
| 56 | MG | 2A | 3024 | 1/1 | 0.75 | 0.18 | 78,78,78,78 | 0 |
| 56 | MG | 1B | 206 | 1/1 | 0.75 | 0.38 | 79,79,79,79 | 0 |
| 56 | MG | 1A | 3176 | 1/1 | 0.75 | 0.21 | 66,66,66,66 | 0 |
| 56 | MG | 1a | 1907 | 1/1 | 0.75 | 0.20 | 93,93,93,93 | 0 |
| 56 | MG | 1A | 3354 | 1/1 | 0.75 | 0.28 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3894 | 1/1 | 0.76 | 0.22 | 71,71,71,71 | 0 |
| 56 | MG | 1a | 1878 | 1/1 | 0.76 | 0.19 | 84,84,84,84 | 0 |
| 56 | MG | 1A | 3547 | 1/1 | 0.76 | 0.20 | 66,66,66,66 | 0 |
| 56 | MG | 2a | 1824 | 1/1 | 0.76 | 0.19 | 83,83,83,83 | 0 |
| 56 | MG | 2a | 1634 | 1/1 | 0.76 | 0.13 | 73,73,73,73 | 0 |
| 56 | MG | 2a | 1638 | 1/1 | 0.76 | 0.66 | 92,92,92,92 | 0 |
| 56 | MG | 2a | 1830 | 1/1 | 0.76 | 0.17 | 100,100,100,100 | 0 |
| 56 | MG | 1a | 1797 | 1/1 | 0.76 | 0.15 | 67,67,67,67 | 0 |
| 56 | MG | 15 | 102 | 1/1 | 0.76 | 0.45 | 48,48,48,48 | 0 |
| 56 | MG | 2A | 3043 | 1/1 | 0.76 | 0.17 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3587 | 1/1 | 0.76 | 0.17 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3555 | 1/1 | 0.76 | 0.33 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3337 | 1/1 | 0.76 | 1.37 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3111 | 1/1 | 0.76 | 0.28 | 73,73,73,73 | 0 |
| 56 | MG | 2B | 202 | 1/1 | 0.76 | 0.16 | 81,81,81,81 | 0 |
| 56 | MG | 1A | 3137 | 1/1 | 0.76 | 0.27 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3417 | 1/1 | 0.76 | 0.28 | 77,77,77,77 | 0 |
| 56 | MG | 1A | 3204 | 1/1 | 0.76 | 0.60 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3701 | 1/1 | 0.76 | 0.62 | 92,92,92,92 | 0 |
| 56 | MG | 1a | 1848 | 1/1 | 0.76 | 0.17 | 73,73,73,73 | 0 |
| 56 | MG | 1A | 3365 | 1/1 | 0.77 | 0.41 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3179 | 1/1 | 0.77 | 0.27 | 66,66,66,66 | 0 |
| 56 | MG | 1a | 1604 | 1/1 | 0.77 | 0.21 | 56,56,56,56 | 0 |
| 56 | MG | 1a | 1722 | 1/1 | 0.77 | 0.28 | 79,79,79,79 | 0 |
| 56 | MG | 1A | 3312 | 1/1 | 0.77 | 0.55 | 72,72,72,72 | 0 |
| 56 | MG | 1a | 1728 | 1/1 | 0.77 | 0.10 | 60,60,60,60 | 0 |
| 56 | MG | 2A | 3203 | 1/1 | 0.77 | 0.47 | 66,66,66,66 | 0 |
| 56 | MG | 1a | 1861 | 1/1 | 0.77 | 1.11 | 62,62,62,62 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3288 | 1/1 | 0.77 | 0.14 | 64,64,64,64 | 0 |
| 56 | MG | 1A | 3581 | 1/1 | 0.77 | 0.68 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3361 | 1/1 | 0.77 | 0.17 | 59,59,59,59 | 0 |
| 56 | MG | 1B | 231 | 1/1 | 0.77 | 0.17 | 83,83,83,83 | 0 |
| 56 | MG | 2A | 3346 | 1/1 | 0.77 | 0.11 | 86,86,86,86 | 0 |
| 56 | MG | 1V | 203 | 1/1 | 0.77 | 0.22 | 62,62,62,62 | 0 |
| 56 | MG | 1a | 1806 | 1/1 | 0.77 | 1.20 | 80,80,80,80 | 0 |
| 56 | MG | 1A | 3727 | 1/1 | 0.77 | 0.09 | 63,63,63,63 | 0 |
| 56 | MG | 2A | 3114 | 1/1 | 0.77 | 0.14 | 80,80,80,80 | 0 |
| 56 | MG | 2A | 3118 | 1/1 | 0.77 | 0.19 | 93,93,93,93 | 0 |
| 56 | MG | 2a | 1653 | 1/1 | 0.77 | 0.43 | 67,67,67,67 | 0 |
| 56 | MG | 1a | 1908 | 1/1 | 0.77 | 0.30 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3864 | 1/1 | 0.77 | 0.25 | 65,65,65,65 | 0 |
| 56 | MG | 1A | 3026 | 1/1 | 0.77 | 0.12 | 61,61,61,61 | 0 |
| 56 | MG | 2a | 1700 | 1/1 | 0.77 | 0.14 | 78,78,78,78 | 0 |
| 56 | MG | 2A | 3161 | 1/1 | 0.77 | 0.12 | 78,78,78,78 | 0 |
| 56 | MG | 2t | 201 | 1/1 | 0.77 | 0.08 | 69,69,69,69 | 0 |
| 56 | MG | 2a | 1707 | 1/1 | 0.77 | 0.14 | 74,74,74,74 | 0 |
| 56 | MG | 1l | 204 | 1/1 | 0.77 | 0.44 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3014 | 1/1 | 0.78 | 0.33 | 64,64,64,64 | 0 |
| 56 | MG | 2A | 3189 | 1/1 | 0.78 | 0.15 | 72,72,72,72 | 0 |
| 56 | MG | 1A | 3217 | 1/1 | 0.78 | 0.23 | 48,48,48,48 | 0 |
| 56 | MG | 1a | 1841 | 1/1 | 0.78 | 0.11 | 82,82,82,82 | 0 |
| 56 | MG | 1P | 201 | 1/1 | 0.78 | 0.30 | 67,67,67,67 | 0 |
| 56 | MG | 1R | 202 | 1/1 | 0.78 | 0.52 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3281 | 1/1 | 0.78 | 0.18 | 89,89,89,89 | 0 |
| 56 | MG | 1A | 3887 | 1/1 | 0.78 | 0.47 | 67,67,67,67 | 0 |
| 56 | MG | 1a | 1872 | 1/1 | 0.78 | 0.10 | 89,89,89,89 | 0 |
| 56 | MG | 2a | 1778 | 1/1 | 0.78 | 0.22 | 82,82,82,82 | 0 |
| 56 | MG | 1A | 3061 | 1/1 | 0.78 | 0.43 | 75,75,75,75 | 0 |
| 56 | MG | 1A | 3782 | 1/1 | 0.78 | 0.32 | 75,75,75,75 | 0 |
| 56 | MG | 1a | 1763 | 1/1 | 0.78 | 0.16 | 81,81,81,81 | 0 |
| 56 | MG | 2a | 1613 | 1/1 | 0.78 | 0.12 | 80,80,80,80 | 0 |
| 56 | MG | 2a | 1842 | 1/1 | 0.78 | 0.14 | 97,97,97,97 | 0 |
| 56 | MG | 1a | 1896 | 1/1 | 0.78 | 1.08 | 80,80,80,80 | 0 |
| 56 | MG | 1A | 3088 | 1/1 | 0.78 | 0.25 | 55,55,55,55 | 0 |
| 56 | MG | 2a | 1861 | 1/1 | 0.78 | 0.25 | 91,91,91,91 | 0 |
| 56 | MG | 1A | 3922 | 1/1 | 0.78 | 0.21 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3311 | 1/1 | 0.78 | 0.71 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3801 | 1/1 | 0.78 | 0.22 | 90,90,90,90 | 0 |
| 56 | MG | 2A | 3481 | 1/1 | 0.78 | 0.09 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3932 | 1/1 | 0.78 | 0.47 | 62,62,62,62 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 2A | 3505 | 1/1 | 0.78 | 0.45 | 91,91,91,91 | 0 |
| 56 | MG | 1A | 3138 | 1/1 | 0.78 | 0.21 | 71,71,71,71 | 0 |
| 56 | MG | 2a | 1695 | 1/1 | 0.78 | 0.18 | 81,81,81,81 | 0 |
| 56 | MG | 2A | 3512 | 1/1 | 0.78 | 0.29 | 82,82,82,82 | 0 |
| 56 | MG | 1A | 3388 | 1/1 | 0.78 | 0.16 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3389 | 1/1 | 0.78 | 0.39 | 56,56,56,56 | 0 |
| 56 | MG | 2v | 102 | 1/1 | 0.78 | 0.16 | 66,66,66,66 | 0 |
| 56 | MG | 1B | 225 | 1/1 | 0.78 | 0.18 | 58,58,58,58 | 0 |
| 56 | MG | 1B | 211 | 1/1 | 0.79 | 0.26 | 62,62,62,62 | 0 |
| 56 | MG | 1a | 1807 | 1/1 | 0.79 | 0.14 | 72,72,72,72 | 0 |
| 56 | MG | 1a | 1706 | 1/1 | 0.79 | 0.23 | 63,63,63,63 | 0 |
| 56 | MG | 2W | 202 | 1/1 | 0.79 | 0.39 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3553 | 1/1 | 0.79 | 0.27 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3130 | 1/1 | 0.79 | 0.31 | 73,73,73,73 | 0 |
| 56 | MG | 1A | 3556 | 1/1 | 0.79 | 0.46 | 70,70,70,70 | 0 |
| 56 | MG | 1a | 1715 | 1/1 | 0.79 | 0.32 | 74,74,74,74 | 0 |
| 56 | MG | 1A | 3309 | 1/1 | 0.79 | 0.10 | 73,73,73,73 | 0 |
| 56 | MG | 1p | 102 | 1/1 | 0.79 | 0.17 | 85,85,85,85 | 0 |
| 56 | MG | 1A | 3183 | 1/1 | 0.79 | 0.33 | 52,52,52,52 | 0 |
| 56 | MG | 2a | 1851 | 1/1 | 0.79 | 0.26 | 80,80,80,80 | 0 |
| 56 | MG | 1a | 1612 | 1/1 | 0.79 | 0.12 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3510 | 1/1 | 0.79 | 0.11 | 75,75,75,75 | 0 |
| 56 | MG | 1a | 1742 | 1/1 | 0.79 | 0.51 | 78,78,78,78 | 0 |
| 56 | MG | 1A | 3573 | 1/1 | 0.79 | 0.37 | 55,55,55,55 | 0 |
| 56 | MG | 2a | 1864 | 1/1 | 0.79 | 0.33 | 79,79,79,79 | 0 |
| 56 | MG | 2A | 3524 | 1/1 | 0.79 | 0.23 | 86,86,86,86 | 0 |
| 56 | MG | 1x | 110 | 1/1 | 0.79 | 0.12 | 65,65,65,65 | 0 |
| 56 | MG | 2a | 1872 | 1/1 | 0.79 | 0.18 | 80,80,80,80 | 0 |
| 56 | MG | 1a | 1614 | 1/1 | 0.79 | 0.92 | 87,87,87,87 | 0 |
| 56 | MG | 1a | 1770 | 1/1 | 0.79 | 0.40 | 82,82,82,82 | 0 |
| 56 | MG | 2A | 3537 | 1/1 | 0.79 | 0.15 | 90,90,90,90 | 0 |
| 56 | MG | 2A | 3541 | 1/1 | 0.79 | 0.40 | 90,90,90,90 | 0 |
| 56 | MG | 1A | 3797 | 1/1 | 0.79 | 0.13 | 80,80,80,80 | 0 |
| 56 | MG | 1a | 1884 | 1/1 | 0.79 | 0.09 | 85,85,85,85 | 0 |
| 56 | MG | 2a | 1748 | 1/1 | 0.79 | 0.11 | 83,83,83,83 | 0 |
| 56 | MG | 1a | 1639 | 1/1 | 0.79 | 0.66 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3291 | 1/1 | 0.79 | 0.17 | 51,51,51,51 | 0 |
| 56 | MG | 1A | 3689 | 1/1 | 0.79 | 0.10 | 46,46,46,46 | 0 |
| 56 | MG | 1A | 3134 | 1/1 | 0.80 | 0.15 | 63,63,63,63 | 0 |
| 56 | MG | 2a | 1671 | 1/1 | 0.80 | 0.12 | 62,62,62,62 | 0 |
| 56 | MG | 2A | 3036 | 1/1 | 0.80 | 0.23 | 81,81,81,81 | 0 |
| 56 | MG | 1B | 209 | 1/1 | 0.80 | 0.25 | 61,61,61,61 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3577 | 1/1 | 0.80 | 0.36 | 54,54,54,54 | 0 |
| 56 | MG | 2A | 3048 | 1/1 | 0.80 | 0.15 | 66,66,66,66 | 0 |
| 56 | MG | 1A | 3161 | 1/1 | 0.80 | 0.32 | 50,50,50,50 | 0 |
| 56 | MG | 1A | 3042 | 1/1 | 0.80 | 0.26 | 86,86,86,86 | 0 |
| 56 | MG | 2B | 213 | 1/1 | 0.80 | 0.12 | 83,83,83,83 | 0 |
| 56 | MG | 1A | 3861 | 1/1 | 0.80 | 0.20 | 75,75,75,75 | 0 |
| 56 | MG | 1A | 3619 | 1/1 | 0.80 | 0.21 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3739 | 1/1 | 0.80 | 0.17 | 35,35,35,35 | 0 |
| 56 | MG | 2A | 3507 | 1/1 | 0.80 | 0.48 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3274 | 1/1 | 0.80 | 0.96 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3134 | 1/1 | 0.80 | 0.14 | 93,93,93,93 | 0 |
| 56 | MG | 1x | 113 | 1/1 | 0.80 | 0.76 | 81,81,81,81 | 0 |
| 56 | MG | 2A | 3229 | 1/1 | 0.80 | 0.27 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3259 | 1/1 | 0.80 | 0.21 | 72,72,72,72 | 0 |
| 56 | MG | 1A | 3660 | 1/1 | 0.80 | 0.14 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3676 | 1/1 | 0.80 | 0.10 | 41,41,41,41 | 0 |
| 56 | MG | 2a | 1644 | 1/1 | 0.80 | 0.20 | 74,74,74,74 | 0 |
| 56 | MG | 2a | 1808 | 1/1 | 0.80 | 0.13 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3378 | 1/1 | 0.80 | 0.15 | 58,58,58,58 | 0 |
| 56 | MG | 1D | 305 | 1/1 | 0.81 | 0.19 | 77,77,77,77 | 0 |
| 56 | MG | 1a | 1883 | 1/1 | 0.81 | 0.13 | 74,74,74,74 | 0 |
| 56 | MG | 2B | 211 | 1/1 | 0.81 | 0.20 | 78,78,78,78 | 0 |
| 56 | MG | 2A | 3285 | 1/1 | 0.81 | 0.23 | 76,76,76,76 | 0 |
| 56 | MG | 2a | 1769 | 1/1 | 0.81 | 0.08 | 90,90,90,90 | 0 |
| 56 | MG | 1A | 3473 | 1/1 | 0.81 | 0.35 | 56,56,56,56 | 0 |
| 56 | MG | 1a | 1771 | 1/1 | 0.81 | 0.13 | 89,89,89,89 | 0 |
| 56 | MG | 1a | 1772 | 1/1 | 0.81 | 0.13 | 94,94,94,94 | 0 |
| 56 | MG | 2A | 3109 | 1/1 | 0.81 | 0.48 | 70,70,70,70 | 0 |
| 56 | MG | 1a | 1889 | 1/1 | 0.81 | 0.17 | 74,74,74,74 | 0 |
| 56 | MG | 2a | 1813 | 1/1 | 0.81 | 0.15 | 61,61,61,61 | 0 |
| 56 | MG | 1a | 1641 | 1/1 | 0.81 | 0.33 | 76,76,76,76 | 0 |
| 56 | MG | 1a | 1651 | 1/1 | 0.81 | 0.10 | 56,56,56,56 | 0 |
| 56 | MG | 2a | 1609 | 1/1 | 0.81 | 0.22 | 71,71,71,71 | 0 |
| 56 | MG | 2a | 1612 | 1/1 | 0.81 | 0.11 | 68,68,68,68 | 0 |
| 56 | MG | 2A | 3129 | 1/1 | 0.81 | 0.36 | 50,50,50,50 | 0 |
| 56 | MG | 1a | 1665 | 1/1 | 0.81 | 0.12 | 71,71,71,71 | 0 |
| 56 | MG | 2A | 3479 | 1/1 | 0.81 | 0.09 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3561 | 1/1 | 0.81 | 0.23 | 72,72,72,72 | 0 |
| 56 | MG | 1A | 3784 | 1/1 | 0.81 | 0.41 | 67,67,67,67 | 0 |
| 56 | MG | 1a | 1693 | 1/1 | 0.81 | 0.27 | 84,84,84,84 | 0 |
| 56 | MG | 1A | 3785 | 1/1 | 0.81 | 0.27 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3484 | 1/1 | 0.81 | 0.25 | 64,64,64,64 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3322 | 1/1 | 0.81 | 0.47 | 54,54,54,54 | 0 |
| 56 | MG | 1A | 3300 | 1/1 | 0.81 | 0.49 | 66,66,66,66 | 0 |
| 56 | MG | 1A | 3220 | 1/1 | 0.81 | 0.59 | 61,61,61,61 | 0 |
| 56 | MG | 1a | 1832 | 1/1 | 0.81 | 0.16 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3199 | 1/1 | 0.81 | 0.25 | 83,83,83,83 | 0 |
| 56 | MG | 2a | 1891 | 1/1 | 0.81 | 0.15 | 76,76,76,76 | 0 |
| 56 | MG | 1a | 1840 | 1/1 | 0.81 | 0.35 | 69,69,69,69 | 0 |
| 56 | MG | 2a | 1898 | 1/1 | 0.81 | 0.45 | 78,78,78,78 | 0 |
| 56 | MG | 1A | 3263 | 1/1 | 0.81 | 0.35 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3584 | 1/1 | 0.81 | 0.45 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3441 | 1/1 | 0.81 | 0.11 | 64,64,64,64 | 0 |
| 56 | MG | 1A | 3080 | 1/1 | 0.81 | 0.19 | 61,61,61,61 | 0 |
| 56 | MG | 1a | 1754 | 1/1 | 0.81 | 0.16 | 79,79,79,79 | 0 |
| 56 | MG | 1A | 3738 | 1/1 | 0.81 | 0.14 | 29,29,29,29 | 0 |
| 56 | MG | 1A | 3691 | 1/1 | 0.82 | 0.17 | 37,37,37,37 | 0 |
| 56 | MG | 2A | 3052 | 1/1 | 0.82 | 0.12 | 64,64,64,64 | 0 |
| 56 | MG | 2a | 1750 | 1/1 | 0.82 | 0.28 | 68,68,68,68 | 0 |
| 56 | MG | 2A | 3552 | 1/1 | 0.82 | 0.26 | 77,77,77,77 | 0 |
| 56 | MG | 2A | 3232 | 1/1 | 0.82 | 0.20 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3564 | 1/1 | 0.82 | 0.12 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3293 | 1/1 | 0.82 | 0.16 | 75,75,75,75 | 0 |
| 56 | MG | 1a | 1890 | 1/1 | 0.82 | 0.72 | 77,77,77,77 | 0 |
| 56 | MG | 1A | 3296 | 1/1 | 0.82 | 0.24 | 64,64,64,64 | 0 |
| 56 | MG | 1a | 1812 | 1/1 | 0.82 | 0.12 | 83,83,83,83 | 0 |
| 56 | MG | 1A | 3349 | 1/1 | 0.82 | 0.21 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3021 | 1/1 | 0.82 | 0.13 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3356 | 1/1 | 0.82 | 0.52 | 65,65,65,65 | 0 |
| 56 | MG | 2D | 305 | 1/1 | 0.82 | 0.44 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3857 | 1/1 | 0.82 | 0.62 | 63,63,63,63 | 0 |
| 56 | MG | 2A | 3425 | 1/1 | 0.82 | 0.18 | 81,81,81,81 | 0 |
| 56 | MG | 1a | 1829 | 1/1 | 0.82 | 0.36 | 87,87,87,87 | 0 |
| 56 | MG | 2A | 3450 | 1/1 | 0.82 | 0.21 | 76,76,76,76 | 0 |
| 56 | MG | 2A | 3464 | 1/1 | 0.82 | 0.14 | 76,76,76,76 | 0 |
| 56 | MG | 1A | 3582 | 1/1 | 0.82 | 0.22 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3359 | 1/1 | 0.82 | 0.32 | 62,62,62,62 | 0 |
| 56 | MG | 2A | 3157 | 1/1 | 0.82 | 0.19 | 94,94,94,94 | 0 |
| 56 | MG | 2a | 1622 | 1/1 | 0.82 | 0.12 | 83,83,83,83 | 0 |
| 56 | MG | 1A | 3273 | 1/1 | 0.82 | 0.92 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3306 | 1/1 | 0.82 | 0.44 | 49,49,49,49 | 0 |
| 56 | MG | 2A | 3498 | 1/1 | 0.82 | 0.17 | 75,75,75,75 | 0 |
| 56 | MG | 2a | 1865 | 1/1 | 0.82 | 0.32 | 85,85,85,85 | 0 |
| 56 | MG | 1a | 1760 | 1/1 | 0.82 | 0.33 | 45,45,45,45 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1a | 1844 | 1/1 | 0.82 | 0.19 | 72,72,72,72 | 0 |
| 56 | MG | 2a | 1871 | 1/1 | 0.82 | 0.09 | 81,81,81,81 | 0 |
| 56 | MG | 1A | 3242 | 1/1 | 0.82 | 0.18 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3280 | 1/1 | 0.82 | 0.15 | 74,74,74,74 | 0 |
| 56 | MG | 1A | 3207 | 1/1 | 0.82 | 0.15 | 43,43,43,43 | 0 |
| 56 | MG | 1A | 3256 | 1/1 | 0.82 | 0.48 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3035 | 1/1 | 0.82 | 0.31 | 52,52,52,52 | 0 |
| 56 | MG | 1Q | 203 | 1/1 | 0.82 | 0.23 | 71,71,71,71 | 0 |
| 56 | MG | 2a | 1894 | 1/1 | 0.82 | 0.10 | 82,82,82,82 | 0 |
| 56 | MG | 2a | 1692 | 1/1 | 0.82 | 0.15 | 83,83,83,83 | 0 |
| 56 | MG | 1A | 3564 | 1/1 | 0.82 | 0.61 | 55,55,55,55 | 0 |
| 56 | MG | 2A | 3530 | 1/1 | 0.82 | 0.68 | 68,68,68,68 | 0 |
| 56 | MG | 2A | 3531 | 1/1 | 0.82 | 0.16 | 89,89,89,89 | 0 |
| 56 | MG | 1a | 1792 | 1/1 | 0.82 | 0.25 | 74,74,74,74 | 0 |
| 56 | MG | 2a | 1720 | 1/1 | 0.82 | 0.07 | 96,96,96,96 | 0 |
| 56 | MG | 1A | 3420 | 1/1 | 0.82 | 0.31 | 56,56,56,56 | 0 |
| 56 | MG | 2A | 3428 | 1/1 | 0.83 | 0.16 | 47,47,47,47 | 0 |
| 56 | MG | 2A | 3434 | 1/1 | 0.83 | 0.44 | 84,84,84,84 | 0 |
| 56 | MG | 2A | 3440 | 1/1 | 0.83 | 0.29 | 64,64,64,64 | 0 |
| 56 | MG | 1A | 3016 | 1/1 | 0.83 | 0.45 | 47,47,47,47 | 0 |
| 56 | MG | 1r | 101 | 1/1 | 0.83 | 0.28 | 70,70,70,70 | 0 |
| 56 | MG | 1a | 1710 | 1/1 | 0.83 | 0.17 | 82,82,82,82 | 0 |
| 56 | MG | 1A | 3735 | 1/1 | 0.83 | 0.08 | 66,66,66,66 | 0 |
| 56 | MG | 1A | 3376 | 1/1 | 0.83 | 1.01 | 43,43,43,43 | 0 |
| 56 | MG | 1a | 1880 | 1/1 | 0.83 | 0.13 | 67,67,67,67 | 0 |
| 56 | MG | 1a | 1714 | 1/1 | 0.83 | 0.17 | 58,58,58,58 | 0 |
| 56 | MG | 1x | 116 | 1/1 | 0.83 | 0.16 | 90,90,90,90 | 0 |
| 56 | MG | 1A | 3028 | 1/1 | 0.83 | 0.34 | 66,66,66,66 | 0 |
| 56 | MG | 2a | 1619 | 1/1 | 0.83 | 0.08 | 90,90,90,90 | 0 |
| 56 | MG | 1A | 3015 | 1/1 | 0.83 | 0.54 | 67,67,67,67 | 0 |
| 56 | MG | 2a | 1832 | 1/1 | 0.83 | 0.20 | 61,61,61,61 | 0 |
| 56 | MG | 2a | 1838 | 1/1 | 0.83 | 0.10 | 60,60,60,60 | 0 |
| 56 | MG | 1a | 1621 | 1/1 | 0.83 | 0.11 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3762 | 1/1 | 0.83 | 0.38 | 48,48,48,48 | 0 |
| 56 | MG | 2a | 1637 | 1/1 | 0.83 | 0.17 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3335 | 1/1 | 0.83 | 0.22 | 63,63,63,63 | 0 |
| 56 | MG | 2A | 3211 | 1/1 | 0.83 | 0.21 | 74,74,74,74 | 0 |
| 56 | MG | 1A | 3877 | 1/1 | 0.83 | 0.21 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3563 | 1/1 | 0.83 | 0.14 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3215 | 1/1 | 0.83 | 0.39 | 59,59,59,59 | 0 |
| 56 | MG | 2A | 3078 | 1/1 | 0.83 | 0.41 | 62,62,62,62 | 0 |
| 56 | MG | 1a | 1835 | 1/1 | 0.83 | 0.24 | 74,74,74,74 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 56 | MG | 1a | 1687 | 1/1 | 0.83 | 0.21 | 61,61,61,61 | 0 |
| 56 | MG | 1a | 1910 | 1/1 | 0.83 | 0.43 | 96,96,96,96 | 0 |
| 56 | MG | 2A | 3304 | 1/1 | 0.83 | 0.26 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3324 | 1/1 | 0.83 | 0.26 | 60,60,60,60 | 0 |
| 56 | MG | 1a | 1911 | 1/1 | 0.83 | 0.10 | 80,80,80,80 | 0 |
| 56 | MG | 19 | 101 | 1/1 | 0.83 | 0.80 | 49,49,49,49 | 0 |
| 56 | MG | 2A | 3376 | 1/1 | 0.83 | 0.16 | 58,58,58,58 | 0 |
| 56 | MG | 2A | 3563 | 1/1 | 0.83 | 0.65 | 70,70,70,70 | 0 |
| 56 | MG | 2a | 1722 | 1/1 | 0.83 | 0.16 | 74,74,74,74 | 0 |
| 56 | MG | 1k | 201 | 1/1 | 0.83 | 0.24 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3348 | 1/1 | 0.83 | 0.28 | 72,72,72,72 | 0 |
| 56 | MG | 2A | 3570 | 1/1 | 0.83 | 0.21 | 81,81,81,81 | 0 |
| 56 | MG | 1a | 1697 | 1/1 | 0.83 | 0.22 | 74,74,74,74 | 0 |
| 56 | MG | 1A | 3440 | 1/1 | 0.83 | 0.38 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3856 | 1/1 | 0.83 | 0.63 | 66,66,66,66 | 0 |
| 56 | MG | 1A | 3858 | 1/1 | 0.84 | 0.49 | 68,68,68,68 | 0 |
| 56 | MG | 1a | 1779 | 1/1 | 0.84 | 0.34 | 87,87,87,87 | 0 |
| 56 | MG | 1A | 3704 | 1/1 | 0.84 | 0.21 | 48,48,48,48 | 0 |
| 56 | MG | 1A | 3799 | 1/1 | 0.84 | 0.25 | 69,69,69,69 | 0 |
| 56 | MG | 2A | 3165 | 1/1 | 0.84 | 0.17 | 64,64,64,64 | 0 |
| 56 | MG | 1A | 3314 | 1/1 | 0.84 | 0.14 | 77,77,77,77 | 0 |
| 56 | MG | 1A | 3224 | 1/1 | 0.84 | 0.18 | 58,58,58,58 | 0 |
| 56 | MG | 1a | 1802 | 1/1 | 0.84 | 0.24 | 88,88,88,88 | 0 |
| 56 | MG | 1a | 1677 | 1/1 | 0.84 | 0.20 | 80,80,80,80 | 0 |
| 56 | MG | 2A | 3528 | 1/1 | 0.84 | 0.42 | 89,89,89,89 | 0 |
| 56 | MG | 1A | 3576 | 1/1 | 0.84 | 0.16 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3869 | 1/1 | 0.84 | 0.24 | 63,63,63,63 | 0 |
| 56 | MG | 1B | 232 | 1/1 | 0.84 | 0.87 | 78,78,78,78 | 0 |
| 56 | MG | 1p | 101 | 1/1 | 0.84 | 1.48 | 79,79,79,79 | 0 |
| 56 | MG | 1D | 304 | 1/1 | 0.84 | 0.84 | 50,50,50,50 | 0 |
| 56 | MG | 1A | 3607 | 1/1 | 0.84 | 0.10 | 50,50,50,50 | 0 |
| 56 | MG | 1a | 1699 | 1/1 | 0.84 | 0.35 | 72,72,72,72 | 0 |
| 56 | MG | 1E | 303 | 1/1 | 0.84 | 1.09 | 65,65,65,65 | 0 |
| 56 | MG | 1A | 3873 | 1/1 | 0.84 | 0.24 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3819 | 1/1 | 0.84 | 0.17 | 55,55,55,55 | 0 |
| 56 | MG | 1x | 108 | 1/1 | 0.84 | 0.23 | 64,64,64,64 | 0 |
| 56 | MG | 2A | 3569 | 1/1 | 0.84 | 0.15 | 88,88,88,88 | 0 |
| 56 | MG | 1A | 3181 | 1/1 | 0.84 | 0.12 | 35,35,35,35 | 0 |
| 56 | MG | 2a | 1810 | 1/1 | 0.84 | 0.33 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3229 | 1/1 | 0.84 | 0.46 | 84,84,84,84 | 0 |
| 56 | MG | 2A | 3264 | 1/1 | 0.84 | 0.35 | 54,54,54,54 | 0 |
| 56 | MG | 2B | 210 | 1/1 | 0.84 | 0.18 | 90,90,90,90 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1a | 1838 | 1/1 | 0.84 | 0.19 | 81,81,81,81 | 0 |
| 56 | MG | 1A | 3232 | 1/1 | 0.84 | 0.24 | 60,60,60,60 | 0 |
| 56 | MG | 2A | 3012 | 1/1 | 0.84 | 0.22 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3235 | 1/1 | 0.84 | 0.17 | 69,69,69,69 | 0 |
| 56 | MG | 2a | 1840 | 1/1 | 0.84 | 0.16 | 77,77,77,77 | 0 |
| 56 | MG | 1a | 1843 | 1/1 | 0.84 | 0.08 | 79,79,79,79 | 0 |
| 56 | MG | 2G | 201 | 1/1 | 0.84 | 0.08 | 82,82,82,82 | 0 |
| 56 | MG | 2A | 3370 | 1/1 | 0.84 | 0.21 | 52,52,52,52 | 0 |
| 56 | MG | 1A | 3890 | 1/1 | 0.84 | 0.29 | 78,78,78,78 | 0 |
| 56 | MG | 1A | 3891 | 1/1 | 0.84 | 0.18 | 85,85,85,85 | 0 |
| 56 | MG | 2I | 101 | 1/1 | 0.84 | 0.27 | 72,72,72,72 | 0 |
| 56 | MG | 2A | 3415 | 1/1 | 0.84 | 0.23 | 48,48,48,48 | 0 |
| 56 | MG | 1a | 1723 | 1/1 | 0.84 | 0.27 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3046 | 1/1 | 0.84 | 0.17 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3833 | 1/1 | 0.84 | 0.62 | 52,52,52,52 | 0 |
| 56 | MG | 1A | 3681 | 1/1 | 0.84 | 0.14 | 54,54,54,54 | 0 |
| 56 | MG | 2a | 1615 | 1/1 | 0.84 | 0.18 | 83,83,83,83 | 0 |
| 56 | MG | 2A | 3076 | 1/1 | 0.84 | 0.13 | 49,49,49,49 | 0 |
| 56 | MG | 1A | 3840 | 1/1 | 0.84 | 0.41 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3844 | 1/1 | 0.84 | 0.28 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3205 | 1/1 | 0.84 | 0.19 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3851 | 1/1 | 0.84 | 0.40 | 66,66,66,66 | 0 |
| 56 | MG | 1A | 3032 | 1/1 | 0.84 | 0.18 | 58,58,58,58 | 0 |
| 56 | MG | 2A | 3468 | 1/1 | 0.84 | 0.23 | 69,69,69,69 | 0 |
| 56 | MG | 1a | 1766 | 1/1 | 0.84 | 0.28 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3200 | 1/1 | 0.84 | 0.13 | 59,59,59,59 | 0 |
| 56 | MG | 1a | 1616 | 1/1 | 0.84 | 0.94 | 86,86,86,86 | 0 |
| 56 | MG | 1B | 201 | 1/1 | 0.84 | 0.70 | 75,75,75,75 | 0 |
| 56 | MG | 1a | 1774 | 1/1 | 0.84 | 0.08 | 79,79,79,79 | 0 |
| 56 | MG | 2A | 3148 | 1/1 | 0.84 | 0.24 | 43,43,43,43 | 0 |
| 56 | MG | 2A | 3053 | 1/1 | 0.85 | 0.14 | 44,44,44,44 | 0 |
| 56 | MG | 2A | 3535 | 1/1 | 0.85 | 0.09 | 90,90,90,90 | 0 |
| 56 | MG | 2a | 1715 | 1/1 | 0.85 | 0.47 | 86,86,86,86 | 0 |
| 56 | MG | 2A | 3057 | 1/1 | 0.85 | 0.23 | 75,75,75,75 | 0 |
| 56 | MG | 2A | 3234 | 1/1 | 0.85 | 0.18 | 53,53,53,53 | 0 |
| 56 | MG | 2A | 3059 | 1/1 | 0.85 | 0.12 | 91,91,91,91 | 0 |
| 56 | MG | 2a | 1735 | 1/1 | 0.85 | 0.12 | 83,83,83,83 | 0 |
| 56 | MG | 2a | 1739 | 1/1 | 0.85 | 1.69 | 98,98,98,98 | 0 |
| 56 | MG | 2A | 3548 | 1/1 | 0.85 | 0.18 | 88,88,88,88 | 0 |
| 56 | MG | 2A | 3551 | 1/1 | 0.85 | 0.10 | 69,69,69,69 | 0 |
| 56 | MG | 2A | 3064 | 1/1 | 0.85 | 0.11 | 84,84,84,84 | 0 |
| 56 | MG | 1A | 3360 | 1/1 | 0.85 | 0.34 | 69,69,69,69 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3817 | 1/1 | 0.85 | 0.17 | 53,53,53,53 | 0 |
| 56 | MG | 2A | 3317 | 1/1 | 0.85 | 0.14 | 88,88,88,88 | 0 |
| 56 | MG | 1A | 3136 | 1/1 | 0.85 | 0.19 | 55,55,55,55 | 0 |
| 56 | MG | 2A | 3083 | 1/1 | 0.85 | 0.35 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3363 | 1/1 | 0.85 | 0.25 | 72,72,72,72 | 0 |
| 56 | MG | 1A | 3822 | 1/1 | 0.85 | 0.20 | 63,63,63,63 | 0 |
| 56 | MG | 1a | 1692 | 1/1 | 0.85 | 1.03 | 62,62,62,62 | 0 |
| 56 | MG | 2A | 3112 | 1/1 | 0.85 | 0.34 | 65,65,65,65 | 0 |
| 56 | MG | 1a | 1768 | 1/1 | 0.85 | 0.16 | 100,100,100,100 | 0 |
| 56 | MG | 1A | 3024 | 1/1 | 0.85 | 0.12 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3783 | 1/1 | 0.85 | 0.48 | 74,74,74,74 | 0 |
| 56 | MG | 1A | 3269 | 1/1 | 0.85 | 0.25 | 70,70,70,70 | 0 |
| 56 | MG | 1p | 103 | 1/1 | 0.85 | 0.80 | 86,86,86,86 | 0 |
| 56 | MG | 2D | 306 | 1/1 | 0.85 | 0.21 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3139 | 1/1 | 0.85 | 0.15 | 75,75,75,75 | 0 |
| 56 | MG | 1a | 1700 | 1/1 | 0.85 | 0.17 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3876 | 1/1 | 0.85 | 0.38 | 71,71,71,71 | 0 |
| 56 | MG | 1a | 1850 | 1/1 | 0.85 | 0.67 | 78,78,78,78 | 0 |
| 56 | MG | 1a | 1853 | 1/1 | 0.85 | 0.12 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3463 | 1/1 | 0.85 | 0.21 | 74,74,74,74 | 0 |
| 56 | MG | 1a | 1704 | 1/1 | 0.85 | 0.62 | 68,68,68,68 | 0 |
| 56 | MG | 2A | 3162 | 1/1 | 0.85 | 0.35 | 76,76,76,76 | 0 |
| 56 | MG | 1A | 3463 | 1/1 | 0.85 | 0.32 | 57,57,57,57 | 0 |
| 56 | MG | 1a | 1789 | 1/1 | 0.85 | 0.15 | 82,82,82,82 | 0 |
| 56 | MG | 2A | 3172 | 1/1 | 0.85 | 0.44 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3368 | 1/1 | 0.85 | 0.43 | 53,53,53,53 | 0 |
| 56 | MG | 2A | 3486 | 1/1 | 0.85 | 0.25 | 50,50,50,50 | 0 |
| 56 | MG | 1A | 3794 | 1/1 | 0.85 | 0.66 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3497 | 1/1 | 0.85 | 0.09 | 88,88,88,88 | 0 |
| 56 | MG | 1A | 3841 | 1/1 | 0.85 | 0.24 | 69,69,69,69 | 0 |
| 56 | MG | 2A | 3003 | 1/1 | 0.85 | 0.10 | 86,86,86,86 | 0 |
| 56 | MG | 2a | 1874 | 1/1 | 0.85 | 0.14 | 67,67,67,67 | 0 |
| 56 | MG | 2a | 1878 | 1/1 | 0.85 | 0.34 | 96,96,96,96 | 0 |
| 56 | MG | 2a | 1883 | 1/1 | 0.85 | 0.11 | 94,94,94,94 | 0 |
| 56 | MG | 2a | 1884 | 1/1 | 0.85 | 0.14 | 75,75,75,75 | 0 |
| 56 | MG | 2a | 1886 | 1/1 | 0.85 | 0.10 | 103,103,103,103 | 0 |
| 56 | MG | 1a | 1798 | 1/1 | 0.85 | 0.24 | 80,80,80,80 | 0 |
| 56 | MG | 2A | 3190 | 1/1 | 0.85 | 0.28 | 75,75,75,75 | 0 |
| 56 | MG | 2A | 3196 | 1/1 | 0.85 | 0.12 | 87,87,87,87 | 0 |
| 56 | MG | 1A | 3289 | 1/1 | 0.85 | 0.13 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3221 | 1/1 | 0.85 | 0.26 | 76,76,76,76 | 0 |
| 56 | MG | 1A | 3504 | 1/1 | 0.85 | 0.20 | 58,58,58,58 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1a | 1719 | 1/1 | 0.85 | 0.18 | 54,54,54,54 | 0 |
| 56 | MG | 2a | 1680 | 1/1 | 0.85 | 0.20 | 85,85,85,85 | 0 |
| 56 | MG | 1A | 3524 | 1/1 | 0.85 | 0.42 | 57,57,57,57 | 0 |
| 56 | MG | 1F | 302 | 1/1 | 0.85 | 0.24 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3602 | 1/1 | 0.85 | 0.16 | 31,31,31,31 | 0 |
| 56 | MG | 1A | 3206 | 1/1 | 0.85 | 0.18 | 59,59,59,59 | 0 |
| 56 | MG | 2a | 1701 | 1/1 | 0.85 | 0.27 | 83,83,83,83 | 0 |
| 56 | MG | 2x | 109 | 1/1 | 0.85 | 0.51 | 86,86,86,86 | 0 |
| 56 | MG | 2a | 1805 | 1/1 | 0.86 | 0.27 | 82,82,82,82 | 0 |
| 56 | MG | 1A | 3276 | 1/1 | 0.86 | 1.07 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3915 | 1/1 | 0.86 | 0.27 | 64,64,64,64 | 0 |
| 56 | MG | 1A | 3667 | 1/1 | 0.86 | 0.11 | 24,24,24,24 | 0 |
| 56 | MG | 1w | 102 | 1/1 | 0.86 | 0.88 | 101,101,101,101 | 0 |
| 56 | MG | 2a | 1825 | 1/1 | 0.86 | 0.12 | 106,106,106,106 | 0 |
| 56 | MG | 1A | 3002 | 1/1 | 0.86 | 0.19 | 62,62,62,62 | 0 |
| 56 | MG | 2A | 3090 | 1/1 | 0.86 | 0.30 | 61,61,61,61 | 0 |
| 56 | MG | 2A | 3553 | 1/1 | 0.86 | 0.12 | 75,75,75,75 | 0 |
| 56 | MG | 1A | 3230 | 1/1 | 0.86 | 0.36 | 93,93,93,93 | 0 |
| 56 | MG | 1A | 3826 | 1/1 | 0.86 | 0.15 | 92,92,92,92 | 0 |
| 56 | MG | 2A | 3462 | 1/1 | 0.86 | 0.07 | 89,89,89,89 | 0 |
| 56 | MG | 1x | 109 | 1/1 | 0.86 | 0.12 | 48,48,48,48 | 0 |
| 56 | MG | 1a | 1897 | 1/1 | 0.86 | 1.46 | 71,71,71,71 | 0 |
| 56 | MG | 2A | 3212 | 1/1 | 0.86 | 0.16 | 59,59,59,59 | 0 |
| 56 | MG | 1a | 1899 | 1/1 | 0.86 | 0.28 | 77,77,77,77 | 0 |
| 56 | MG | 2B | 205 | 1/1 | 0.86 | 0.09 | 81,81,81,81 | 0 |
| 56 | MG | 1x | 115 | 1/1 | 0.86 | 0.38 | 80,80,80,80 | 0 |
| 56 | MG | 1A | 3175 | 1/1 | 0.86 | 0.15 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3140 | 1/1 | 0.86 | 0.21 | 74,74,74,74 | 0 |
| 56 | MG | 1B | 205 | 1/1 | 0.86 | 0.29 | 58,58,58,58 | 0 |
| 56 | MG | 1a | 1755 | 1/1 | 0.86 | 0.28 | 87,87,87,87 | 0 |
| 56 | MG | 1A | 3122 | 1/1 | 0.86 | 0.09 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3025 | 1/1 | 0.86 | 0.27 | 46,46,46,46 | 0 |
| 56 | MG | 1d | 302 | 1/1 | 0.86 | 0.12 | 81,81,81,81 | 0 |
| 56 | MG | 2a | 1732 | 1/1 | 0.86 | 0.24 | 88,88,88,88 | 0 |
| 56 | MG | 1a | 1705 | 1/1 | 0.86 | 0.18 | 108,108,108,108 | 0 |
| 56 | MG | 2a | 1738 | 1/1 | 0.86 | 0.20 | 77,77,77,77 | 0 |
| 56 | MG | 1A | 3525 | 1/1 | 0.86 | 0.18 | 64,64,64,64 | 0 |
| 56 | MG | 2Q | 201 | 1/1 | 0.86 | 0.09 | 81,81,81,81 | 0 |
| 56 | MG | 1B | 213 | 1/1 | 0.86 | 0.30 | 61,61,61,61 | 0 |
| 56 | MG | 1a | 1869 | 1/1 | 0.86 | 0.79 | 96,96,96,96 | 0 |
| 56 | MG | 1A | 3868 | 1/1 | 0.86 | 0.31 | 87,87,87,87 | 0 |
| 56 | MG | 2a | 1892 | 1/1 | 0.86 | 0.24 | 90,90,90,90 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 2a | 1604 | 1/1 | 0.86 | 0.22 | 67,67,67,67 | 0 |
| 56 | MG | 2A | 3367 | 1/1 | 0.86 | 0.27 | 66,66,66,66 | 0 |
| 56 | MG | 2A | 3169 | 1/1 | 0.86 | 0.26 | 72,72,72,72 | 0 |
| 56 | MG | 2A | 3372 | 1/1 | 0.86 | 0.17 | 68,68,68,68 | 0 |
| 56 | MG | 1a | 1664 | 1/1 | 0.86 | 0.23 | 65,65,65,65 | 0 |
| 56 | MG | 2b | 301 | 1/1 | 0.86 | 0.10 | 89,89,89,89 | 0 |
| 56 | MG | 2A | 3377 | 1/1 | 0.86 | 2.12 | 74,74,74,74 | 0 |
| 56 | MG | 1a | 1828 | 1/1 | 0.86 | 0.19 | 85,85,85,85 | 0 |
| 56 | MG | 2A | 3177 | 1/1 | 0.86 | 0.12 | 77,77,77,77 | 0 |
| 56 | MG | 1A | 3313 | 1/1 | 0.86 | 0.48 | 54,54,54,54 | 0 |
| 56 | MG | 2a | 1781 | 1/1 | 0.86 | 0.20 | 71,71,71,71 | 0 |
| 56 | MG | 2a | 1763 | 1/1 | 0.87 | 0.11 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3040 | 1/1 | 0.87 | 0.45 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3835 | 1/1 | 0.87 | 0.14 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3693 | 1/1 | 0.87 | 0.30 | 80,80,80,80 | 0 |
| 56 | MG | 1A | 3594 | 1/1 | 0.87 | 0.19 | 76,76,76,76 | 0 |
| 56 | MG | 2a | 1606 | 1/1 | 0.87 | 0.06 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3575 | 1/1 | 0.87 | 0.51 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3275 | 1/1 | 0.87 | 0.55 | 52,52,52,52 | 0 |
| 56 | MG | 1a | 1876 | 1/1 | 0.87 | 0.20 | 102,102,102,102 | 0 |
| 56 | MG | 1A | 3605 | 1/1 | 0.87 | 0.15 | 52,52,52,52 | 0 |
| 56 | MG | 2A | 3519 | 1/1 | 0.87 | 0.10 | 94,94,94,94 | 0 |
| 56 | MG | 1A | 3268 | 1/1 | 0.87 | 0.70 | 65,65,65,65 | 0 |
| 56 | MG | 2a | 1816 | 1/1 | 0.87 | 0.17 | 62,62,62,62 | 0 |
| 56 | MG | 2a | 1817 | 1/1 | 0.87 | 0.24 | 68,68,68,68 | 0 |
| 56 | MG | 2A | 3130 | 1/1 | 0.87 | 0.22 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3888 | 1/1 | 0.87 | 0.34 | 72,72,72,72 | 0 |
| 56 | MG | 2A | 3320 | 1/1 | 0.87 | 0.17 | 86,86,86,86 | 0 |
| 56 | MG | 1a | 1618 | 1/1 | 0.87 | 0.53 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3325 | 1/1 | 0.87 | 0.14 | 89,89,89,89 | 0 |
| 56 | MG | 1x | 112 | 1/1 | 0.87 | 0.12 | 83,83,83,83 | 0 |
| 56 | MG | 2a | 1833 | 1/1 | 0.87 | 0.50 | 92,92,92,92 | 0 |
| 56 | MG | 2a | 1835 | 1/1 | 0.87 | 0.13 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3853 | 1/1 | 0.87 | 0.09 | 84,84,84,84 | 0 |
| 56 | MG | 2A | 3150 | 1/1 | 0.87 | 0.53 | 59,59,59,59 | 0 |
| 56 | MG | 1a | 1808 | 1/1 | 0.87 | 0.25 | 64,64,64,64 | 0 |
| 56 | MG | 2a | 1658 | 1/1 | 0.87 | 0.23 | 93,93,93,93 | 0 |
| 56 | MG | 1A | 3854 | 1/1 | 0.87 | 0.09 | 86,86,86,86 | 0 |
| 56 | MG | 1a | 1628 | 1/1 | 0.87 | 0.69 | 89,89,89,89 | 0 |
| 56 | MG | 2A | 3002 | 1/1 | 0.87 | 0.39 | 70,70,70,70 | 0 |
| 56 | MG | 1a | 1637 | 1/1 | 0.87 | 0.22 | 67,67,67,67 | 0 |
| 56 | MG | 1a | 1638 | 1/1 | 0.87 | 0.29 | 55,55,55,55 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3615 | 1/1 | 0.87 | 0.23 | 47,47,47,47 | 0 |
| 56 | MG | 1A | 3178 | 1/1 | 0.87 | 0.43 | 55,55,55,55 | 0 |
| 56 | MG | 2a | 1697 | 1/1 | 0.87 | 0.13 | 68,68,68,68 | 0 |
| 56 | MG | 2A | 3035 | 1/1 | 0.87 | 0.18 | 50,50,50,50 | 0 |
| 56 | MG | 2A | 3173 | 1/1 | 0.87 | 1.66 | 71,71,71,71 | 0 |
| 56 | MG | 2A | 3426 | 1/1 | 0.87 | 0.17 | 68,68,68,68 | 0 |
| 56 | MG | 2a | 1875 | 1/1 | 0.87 | 0.07 | 49,49,49,49 | 0 |
| 56 | MG | 1A | 3326 | 1/1 | 0.87 | 0.82 | 46,46,46,46 | 0 |
| 56 | MG | 2A | 3574 | 1/1 | 0.87 | 0.52 | 56,56,56,56 | 0 |
| 56 | MG | 1N | 205 | 1/1 | 0.87 | 0.44 | 72,72,72,72 | 0 |
| 56 | MG | 1A | 3645 | 1/1 | 0.87 | 0.13 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3459 | 1/1 | 0.87 | 0.50 | 49,49,49,49 | 0 |
| 56 | MG | 2a | 1727 | 1/1 | 0.87 | 0.26 | 69,69,69,69 | 0 |
| 56 | MG | 2a | 1728 | 1/1 | 0.87 | 0.28 | 87,87,87,87 | 0 |
| 56 | MG | 2a | 1729 | 1/1 | 0.87 | 0.29 | 69,69,69,69 | 0 |
| 56 | MG | 2A | 3185 | 1/1 | 0.87 | 0.39 | 77,77,77,77 | 0 |
| 56 | MG | 1A | 3562 | 1/1 | 0.87 | 0.09 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3824 | 1/1 | 0.87 | 0.33 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3930 | 1/1 | 0.87 | 0.19 | 47,47,47,47 | 0 |
| 56 | MG | 2A | 3055 | 1/1 | 0.87 | 0.51 | 70,70,70,70 | 0 |
| 56 | MG | 2a | 1745 | 1/1 | 0.87 | 0.13 | 82,82,82,82 | 0 |
| 56 | MG | 2a | 1908 | 1/1 | 0.87 | 0.11 | 70,70,70,70 | 0 |
| 56 | MG | 1a | 1690 | 1/1 | 0.87 | 0.13 | 64,64,64,64 | 0 |
| 56 | MG | 1a | 1691 | 1/1 | 0.87 | 0.30 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3141 | 1/1 | 0.87 | 0.23 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3538 | 1/1 | 0.87 | 0.17 | 70,70,70,70 | 0 |
| 56 | MG | 2w | 101 | 1/1 | 0.87 | 0.26 | 73,73,73,73 | 0 |
| 56 | MG | 2x | 103 | 1/1 | 0.87 | 0.44 | 79,79,79,79 | 0 |
| 56 | MG | 1o | 102 | 1/1 | 0.87 | 0.17 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3282 | 1/1 | 0.87 | 0.17 | 90,90,90,90 | 0 |
| 56 | MG | 1a | 1646 | 1/1 | 0.88 | 0.14 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3257 | 1/1 | 0.88 | 0.39 | 86,86,86,86 | 0 |
| 56 | MG | 1A | 3588 | 1/1 | 0.88 | 0.11 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3716 | 1/1 | 0.88 | 0.26 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3214 | 1/1 | 0.88 | 0.09 | 76,76,76,76 | 0 |
| 56 | MG | 1F | 306 | 1/1 | 0.88 | 0.13 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3436 | 1/1 | 0.88 | 0.08 | 80,80,80,80 | 0 |
| 56 | MG | 1A | 3101 | 1/1 | 0.88 | 0.37 | 94,94,94,94 | 0 |
| 56 | MG | 1A | 3889 | 1/1 | 0.88 | 0.10 | 52,52,52,52 | 0 |
| 56 | MG | 1a | 1775 | 1/1 | 0.88 | 0.35 | 90,90,90,90 | 0 |
| 56 | MG | 2A | 3009 | 1/1 | 0.88 | 0.22 | 60,60,60,60 | 0 |
| 56 | MG | 2a | 1780 | 1/1 | 0.88 | 0.07 | 89,89,89,89 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 56 | MG | 1A | 3036 | 1/1 | 0.88 | 0.20 | 51,51,51,51 | 0 |
| 56 | MG | 2a | 1602 | 1/1 | 0.88 | 0.12 | 67,67,67,67 | 0 |
| 56 | MG | 2a | 1807 | 1/1 | 0.88 | 0.09 | 67,67,67,67 | 0 |
| 56 | MG | 2A | 3181 | 1/1 | 0.88 | 0.05 | 93,93,93,93 | 0 |
| 56 | MG | 1A | 3298 | 1/1 | 0.88 | 0.58 | 73,73,73,73 | 0 |
| 56 | MG | 1V | 202 | 1/1 | 0.88 | 0.21 | 52,52,52,52 | 0 |
| 56 | MG | 1A | 3182 | 1/1 | 0.88 | 0.22 | 51,51,51,51 | 0 |
| 56 | MG | 1a | 1696 | 1/1 | 0.88 | 0.14 | 50,50,50,50 | 0 |
| 56 | MG | 2A | 3038 | 1/1 | 0.88 | 0.12 | 69,69,69,69 | 0 |
| 56 | MG | 2A | 3192 | 1/1 | 0.88 | 0.38 | 72,72,72,72 | 0 |
| 56 | MG | 2A | 3492 | 1/1 | 0.88 | 0.30 | 69,69,69,69 | 0 |
| 56 | MG | 1a | 1794 | 1/1 | 0.88 | 0.26 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3050 | 1/1 | 0.88 | 0.26 | 37,37,37,37 | 0 |
| 56 | MG | 1A | 3303 | 1/1 | 0.88 | 0.62 | 46,46,46,46 | 0 |
| 56 | MG | 1A | 3237 | 1/1 | 0.88 | 0.36 | 61,61,61,61 | 0 |
| 56 | MG | 1a | 1800 | 1/1 | 0.88 | 0.15 | 68,68,68,68 | 0 |
| 56 | MG | 2A | 3206 | 1/1 | 0.88 | 0.38 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3618 | 1/1 | 0.88 | 0.15 | 31,31,31,31 | 0 |
| 56 | MG | 1a | 1703 | 1/1 | 0.88 | 0.12 | 65,65,65,65 | 0 |
| 56 | MG | 2a | 1848 | 1/1 | 0.88 | 0.10 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3192 | 1/1 | 0.88 | 0.31 | 39,39,39,39 | 0 |
| 56 | MG | 1a | 1602 | 1/1 | 0.88 | 0.74 | 60,60,60,60 | 0 |
| 56 | MG | 2a | 1655 | 1/1 | 0.88 | 0.28 | 86,86,86,86 | 0 |
| 56 | MG | 2A | 3222 | 1/1 | 0.88 | 0.23 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3483 | 1/1 | 0.88 | 0.28 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3630 | 1/1 | 0.88 | 0.17 | 32,32,32,32 | 0 |
| 56 | MG | 1A | 3244 | 1/1 | 0.88 | 0.18 | 61,61,61,61 | 0 |
| 56 | MG | 1A | 3653 | 1/1 | 0.88 | 0.09 | 53,53,53,53 | 0 |
| 56 | MG | 2a | 1683 | 1/1 | 0.88 | 0.08 | 110,110,110,110 | 0 |
| 56 | MG | 2a | 1684 | 1/1 | 0.88 | 0.09 | 86,86,86,86 | 0 |
| 56 | MG | 1a | 1823 | 1/1 | 0.88 | 0.58 | 79,79,79,79 | 0 |
| 56 | MG | 2A | 3260 | 1/1 | 0.88 | 0.23 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3245 | 1/1 | 0.88 | 0.41 | 52,52,52,52 | 0 |
| 56 | MG | 2a | 1696 | 1/1 | 0.88 | 0.29 | 68,68,68,68 | 0 |
| 56 | MG | 2a | 1880 | 1/1 | 0.88 | 0.12 | 91,91,91,91 | 0 |
| 56 | MG | 2A | 3267 | 1/1 | 0.88 | 0.20 | 76,76,76,76 | 0 |
| 56 | MG | 1A | 3665 | 1/1 | 0.88 | 0.11 | 51,51,51,51 | 0 |
| 56 | MG | 1A | 3805 | 1/1 | 0.88 | 0.33 | 47,47,47,47 | 0 |
| 56 | MG | 1o | 101 | 1/1 | 0.88 | 0.13 | 71,71,71,71 | 0 |
| 56 | MG | 2A | 3550 | 1/1 | 0.88 | 0.16 | 71,71,71,71 | 0 |
| 56 | MG | 2a | 1712 | 1/1 | 0.88 | 0.42 | 64,64,64,64 | 0 |
| 56 | MG | 1A | 3098 | 1/1 | 0.88 | 0.18 | 47,47,47,47 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 56 | MG | 1A | 3254 | 1/1 | 0.88 | 0.15 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3317 | 1/1 | 0.88 | 0.79 | 52,52,52,52 | 0 |
| 56 | MG | 1A | 3685 | 1/1 | 0.88 | 0.12 | 48,48,48,48 | 0 |
| 56 | MG | 1A | 3285 | 1/1 | 0.88 | 0.38 | 50,50,50,50 | 0 |
| 56 | MG | 2a | 1902 | 1/1 | 0.88 | 0.47 | 102,102,102,102 | 0 |
| 56 | MG | 1A | 3212 | 1/1 | 0.88 | 0.56 | 56,56,56,56 | 0 |
| 56 | MG | 1a | 1748 | 1/1 | 0.88 | 0.11 | 47,47,47,47 | 0 |
| 56 | MG | 2a | 1906 | 1/1 | 0.88 | 0.15 | 96,96,96,96 | 0 |
| 56 | MG | 2A | 3137 | 1/1 | 0.88 | 0.19 | 63,63,63,63 | 0 |
| 56 | MG | 1a | 1842 | 1/1 | 0.88 | 0.15 | 97,97,97,97 | 0 |
| 56 | MG | 2g | 201 | 1/1 | 0.88 | 0.27 | 83,83,83,83 | 0 |
| 56 | MG | 2q | 201 | 1/1 | 0.88 | 0.56 | 82,82,82,82 | 0 |
| 56 | MG | 1x | 102 | 1/1 | 0.88 | 1.37 | 60,60,60,60 | 0 |
| 56 | MG | 1B | 230 | 1/1 | 0.88 | 0.16 | 66,66,66,66 | 0 |
| 56 | MG | 2A | 3384 | 1/1 | 0.88 | 0.17 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3542 | 1/1 | 0.88 | 0.18 | 68,68,68,68 | 0 |
| 56 | MG | 2x | 101 | 1/1 | 0.88 | 0.14 | 77,77,77,77 | 0 |
| 56 | MG | 2B | 209 | 1/1 | 0.88 | 0.32 | 56,56,56,56 | 0 |
| 56 | MG | 2a | 1749 | 1/1 | 0.88 | 0.10 | 77,77,77,77 | 0 |
| 56 | MG | 1A | 3543 | 1/1 | 0.88 | 0.18 | 61,61,61,61 | 0 |
| 57 | AKN | 2a | 1911 | 40/40 | 0.88 | 0.34 | 65,73,78,83 | 0 |
| 56 | MG | 1a | 1780 | 1/1 | 0.89 | 0.25 | 91,91,91,91 | 0 |
| 56 | MG | 1B | 222 | 1/1 | 0.89 | 0.54 | 62,62,62,62 | 0 |
| 56 | MG | 1a | 1669 | 1/1 | 0.89 | 0.15 | 58,58,58,58 | 0 |
| 56 | MG | 2A | 3230 | 1/1 | 0.89 | 0.16 | 73,73,73,73 | 0 |
| 56 | MG | 1A | 3038 | 1/1 | 0.89 | 0.23 | 66,66,66,66 | 0 |
| 56 | MG | 2A | 3547 | 1/1 | 0.89 | 0.23 | 89,89,89,89 | 0 |
| 56 | MG | 1A | 3159 | 1/1 | 0.89 | 0.55 | 34,34,34,34 | 0 |
| 56 | MG | 2A | 3245 | 1/1 | 0.89 | 0.36 | 39,39,39,39 | 0 |
| 56 | MG | 1a | 1795 | 1/1 | 0.89 | 0.08 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3290 | 1/1 | 0.89 | 0.11 | 81,81,81,81 | 0 |
| 56 | MG | 2A | 3079 | 1/1 | 0.89 | 0.09 | 54,54,54,54 | 0 |
| 56 | MG | 1A | 3392 | 1/1 | 0.89 | 0.42 | 33,33,33,33 | 0 |
| 56 | MG | 2A | 3282 | 1/1 | 0.89 | 0.28 | 32,32,32,32 | 0 |
| 56 | MG | 1a | 1909 | 1/1 | 0.89 | 0.12 | 85,85,85,85 | 0 |
| 56 | MG | 1A | 3788 | 1/1 | 0.89 | 0.29 | 90,90,90,90 | 0 |
| 56 | MG | 1A | 3017 | 1/1 | 0.89 | 0.28 | 66,66,66,66 | 0 |
| 56 | MG | 1b | 301 | 1/1 | 0.89 | 0.18 | 84,84,84,84 | 0 |
| 56 | MG | 1A | 3624 | 1/1 | 0.89 | 0.19 | 34,34,34,34 | 0 |
| 56 | MG | 1A | 3267 | 1/1 | 0.89 | 0.43 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3169 | 1/1 | 0.89 | 0.10 | 68,68,68,68 | 0 |
| 56 | MG | 1F | 304 | 1/1 | 0.89 | 0.14 | 58,58,58,58 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 2B | 208 | 1/1 | 0.89 | 0.13 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3351 | 1/1 | 0.89 | 0.31 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3355 | 1/1 | 0.89 | 0.12 | 62,62,62,62 | 0 |
| 56 | MG | 2A | 3124 | 1/1 | 0.89 | 0.12 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3634 | 1/1 | 0.89 | 0.14 | 49,49,49,49 | 0 |
| 56 | MG | 2a | 1783 | 1/1 | 0.89 | 0.10 | 70,70,70,70 | 0 |
| 56 | MG | 2a | 1800 | 1/1 | 0.89 | 0.22 | 75,75,75,75 | 0 |
| 56 | MG | 2a | 1804 | 1/1 | 0.89 | 0.13 | 78,78,78,78 | 0 |
| 56 | MG | 1A | 3339 | 1/1 | 0.89 | 0.16 | 71,71,71,71 | 0 |
| 56 | MG | 2A | 3374 | 1/1 | 0.89 | 0.41 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3874 | 1/1 | 0.89 | 0.09 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3133 | 1/1 | 0.89 | 0.10 | 72,72,72,72 | 0 |
| 56 | MG | 2F | 304 | 1/1 | 0.89 | 0.19 | 74,74,74,74 | 0 |
| 56 | MG | 1P | 203 | 1/1 | 0.89 | 0.10 | 61,61,61,61 | 0 |
| 56 | MG | 1A | 3443 | 1/1 | 0.89 | 0.17 | 39,39,39,39 | 0 |
| 56 | MG | 2a | 1823 | 1/1 | 0.89 | 0.21 | 89,89,89,89 | 0 |
| 56 | MG | 2A | 3392 | 1/1 | 0.89 | 0.17 | 53,53,53,53 | 0 |
| 56 | MG | 2A | 3394 | 1/1 | 0.89 | 0.34 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3809 | 1/1 | 0.89 | 0.94 | 48,48,48,48 | 0 |
| 56 | MG | 2A | 3140 | 1/1 | 0.89 | 0.20 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3195 | 1/1 | 0.89 | 0.18 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3569 | 1/1 | 0.89 | 0.06 | 79,79,79,79 | 0 |
| 56 | MG | 1A | 3218 | 1/1 | 0.89 | 0.15 | 52,52,52,52 | 0 |
| 56 | MG | 1A | 3092 | 1/1 | 0.89 | 0.40 | 40,40,40,40 | 0 |
| 56 | MG | 1A | 3355 | 1/1 | 0.89 | 0.15 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3124 | 1/1 | 0.89 | 0.13 | 73,73,73,73 | 0 |
| 56 | MG | 2a | 1611 | 1/1 | 0.89 | 0.25 | 76,76,76,76 | 0 |
| 56 | MG | 1A | 3177 | 1/1 | 0.89 | 0.42 | 54,54,54,54 | 0 |
| 56 | MG | 1A | 3279 | 1/1 | 0.89 | 0.61 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3521 | 1/1 | 0.89 | 0.29 | 46,46,46,46 | 0 |
| 56 | MG | 1A | 3698 | 1/1 | 0.89 | 0.15 | 25,25,25,25 | 0 |
| 56 | MG | 1A | 3523 | 1/1 | 0.89 | 0.56 | 61,61,61,61 | 0 |
| 56 | MG | 2a | 1625 | 1/1 | 0.89 | 0.07 | 88,88,88,88 | 0 |
| 56 | MG | 1A | 3068 | 1/1 | 0.89 | 0.21 | 44,44,44,44 | 0 |
| 56 | MG | 2a | 1627 | 1/1 | 0.89 | 0.11 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3832 | 1/1 | 0.89 | 0.34 | 88,88,88,88 | 0 |
| 56 | MG | 2a | 1635 | 1/1 | 0.89 | 0.14 | 64,64,64,64 | 0 |
| 56 | MG | 2A | 3465 | 1/1 | 0.89 | 0.17 | 84,84,84,84 | 0 |
| 56 | MG | 1a | 1846 | 1/1 | 0.89 | 0.15 | 74,74,74,74 | 0 |
| 56 | MG | 2a | 1640 | 1/1 | 0.89 | 0.43 | 58,58,58,58 | 0 |
| 56 | MG | 2A | 3178 | 1/1 | 0.89 | 0.34 | 54,54,54,54 | 0 |
| 56 | MG | 1A | 3705 | 1/1 | 0.89 | 0.11 | 58,58,58,58 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 2A | 3478 | 1/1 | 0.89 | 0.27 | 76,76,76,76 | 0 |
| 56 | MG | 2a | 1651 | 1/1 | 0.89 | 0.18 | 92,92,92,92 | 0 |
| 56 | MG | 1A | 3586 | 1/1 | 0.89 | 0.20 | 74,74,74,74 | 0 |
| 56 | MG | 1A | 3929 | 1/1 | 0.89 | 0.25 | 53,53,53,53 | 0 |
| 56 | MG | 2a | 1656 | 1/1 | 0.89 | 0.26 | 74,74,74,74 | 0 |
| 56 | MG | 2A | 3484 | 1/1 | 0.89 | 0.34 | 85,85,85,85 | 0 |
| 56 | MG | 1A | 3251 | 1/1 | 0.89 | 0.40 | 64,64,64,64 | 0 |
| 56 | MG | 2a | 1672 | 1/1 | 0.89 | 0.15 | 78,78,78,78 | 0 |
| 56 | MG | 2A | 3006 | 1/1 | 0.89 | 0.27 | 54,54,54,54 | 0 |
| 56 | MG | 2a | 1674 | 1/1 | 0.89 | 0.19 | 79,79,79,79 | 0 |
| 56 | MG | 1a | 1862 | 1/1 | 0.89 | 0.12 | 70,70,70,70 | 0 |
| 56 | MG | 2a | 1676 | 1/1 | 0.89 | 0.13 | 72,72,72,72 | 0 |
| 56 | MG | 2A | 3011 | 1/1 | 0.89 | 0.18 | 73,73,73,73 | 0 |
| 56 | MG | 1A | 3045 | 1/1 | 0.89 | 0.26 | 72,72,72,72 | 0 |
| 56 | MG | 1A | 3225 | 1/1 | 0.89 | 0.46 | 56,56,56,56 | 0 |
| 56 | MG | 1a | 1626 | 1/1 | 0.89 | 0.20 | 55,55,55,55 | 0 |
| 56 | MG | 2A | 3198 | 1/1 | 0.89 | 0.13 | 83,83,83,83 | 0 |
| 56 | MG | 2a | 1909 | 1/1 | 0.89 | 0.17 | 73,73,73,73 | 0 |
| 56 | MG | 2a | 1910 | 1/1 | 0.89 | 0.19 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3286 | 1/1 | 0.89 | 0.12 | 82,82,82,82 | 0 |
| 56 | MG | 2A | 3202 | 1/1 | 0.89 | 0.37 | 74,74,74,74 | 0 |
| 56 | MG | 1A | 3370 | 1/1 | 0.89 | 0.43 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3850 | 1/1 | 0.89 | 0.56 | 66,66,66,66 | 0 |
| 56 | MG | 1A | 3374 | 1/1 | 0.89 | 0.14 | 44,44,44,44 | 0 |
| 56 | MG | 2A | 3525 | 1/1 | 0.89 | 0.11 | 82,82,82,82 | 0 |
| 56 | MG | 1A | 3752 | 1/1 | 0.89 | 0.12 | 24,24,24,24 | 0 |
| 56 | MG | 1B | 212 | 1/1 | 0.89 | 0.33 | 74,74,74,74 | 0 |
| 56 | MG | 2a | 1714 | 1/1 | 0.89 | 0.27 | 88,88,88,88 | 0 |
| 56 | MG | 2A | 3213 | 1/1 | 0.89 | 0.23 | 67,67,67,67 | 0 |
| 56 | MG | 2x | 108 | 1/1 | 0.89 | 0.15 | 55,55,55,55 | 0 |
| 56 | MG | 1A | 3318 | 1/1 | 0.89 | 0.61 | 57,57,57,57 | 0 |
| 57 | AKN | 1a | 1914 | 40/40 | 0.89 | 0.23 | 62,75,81,88 | 0 |
| 56 | MG | 1A | 3780 | 1/1 | 0.89 | 0.18 | 61,61,61,61 | 0 |
| 56 | MG | 1A | 3781 | 1/1 | 0.90 | 0.21 | 54,54,54,54 | 0 |
| 56 | MG | 1A | 3241 | 1/1 | 0.90 | 0.39 | 51,51,51,51 | 0 |
| 56 | MG | 1a | 1617 | 1/1 | 0.90 | 0.08 | 97,97,97,97 | 0 |
| 56 | MG | 1A | 3051 | 1/1 | 0.90 | 0.16 | 50,50,50,50 | 0 |
| 56 | MG | 2A | 3075 | 1/1 | 0.90 | 0.19 | 66,66,66,66 | 0 |
| 56 | MG | 1A | 3451 | 1/1 | 0.90 | 0.24 | 40,40,40,40 | 0 |
| 56 | MG | 2A | 3263 | 1/1 | 0.90 | 0.28 | 66,66,66,66 | 0 |
| 56 | MG | 2A | 3077 | 1/1 | 0.90 | 0.21 | 51,51,51,51 | 0 |
| 56 | MG | 1a | 1620 | 1/1 | 0.90 | 0.13 | 71,71,71,71 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 2A | 3562 | 1/1 | 0.90 | 0.13 | 65,65,65,65 | 0 |
| 56 | MG | 1A | 3007 | 1/1 | 0.90 | 0.23 | 72,72,72,72 | 0 |
| 56 | MG | 2a | 1755 | 1/1 | 0.90 | 0.22 | 73,73,73,73 | 0 |
| 56 | MG | 1B | 210 | 1/1 | 0.90 | 0.22 | 55,55,55,55 | 0 |
| 56 | MG | 1A | 3639 | 1/1 | 0.90 | 0.16 | 54,54,54,54 | 0 |
| 56 | MG | 2A | 3084 | 1/1 | 0.90 | 0.11 | 90,90,90,90 | 0 |
| 56 | MG | 1a | 1630 | 1/1 | 0.90 | 0.09 | 79,79,79,79 | 0 |
| 56 | MG | 2a | 1764 | 1/1 | 0.90 | 0.11 | 81,81,81,81 | 0 |
| 56 | MG | 1A | 3308 | 1/1 | 0.90 | 0.25 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3465 | 1/1 | 0.90 | 0.24 | 32,32,32,32 | 0 |
| 56 | MG | 2A | 3110 | 1/1 | 0.90 | 0.08 | 58,58,58,58 | 0 |
| 56 | MG | 1a | 1783 | 1/1 | 0.90 | 0.18 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3796 | 1/1 | 0.90 | 0.35 | 58,58,58,58 | 0 |
| 56 | MG | 2a | 1777 | 1/1 | 0.90 | 0.42 | 83,83,83,83 | 0 |
| 56 | MG | 1A | 3357 | 1/1 | 0.90 | 0.17 | 49,49,49,49 | 0 |
| 56 | MG | 1a | 1644 | 1/1 | 0.90 | 0.11 | 61,61,61,61 | 0 |
| 56 | MG | 1A | 3170 | 1/1 | 0.90 | 0.16 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3865 | 1/1 | 0.90 | 0.46 | 61,61,61,61 | 0 |
| 56 | MG | 2a | 1792 | 1/1 | 0.90 | 0.23 | 49,49,49,49 | 0 |
| 56 | MG | 1A | 3037 | 1/1 | 0.90 | 0.18 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3867 | 1/1 | 0.90 | 0.09 | 64,64,64,64 | 0 |
| 56 | MG | 2A | 3132 | 1/1 | 0.90 | 0.17 | 47,47,47,47 | 0 |
| 56 | MG | 1A | 3674 | 1/1 | 0.90 | 0.10 | 26,26,26,26 | 0 |
| 56 | MG | 2A | 3381 | 1/1 | 0.90 | 0.17 | 45,45,45,45 | 0 |
| 56 | MG | 1A | 3013 | 1/1 | 0.90 | 0.24 | 84,84,84,84 | 0 |
| 56 | MG | 2a | 1812 | 1/1 | 0.90 | 0.15 | 61,61,61,61 | 0 |
| 56 | MG | 1A | 3139 | 1/1 | 0.90 | 0.43 | 56,56,56,56 | 0 |
| 56 | MG | 2A | 3138 | 1/1 | 0.90 | 0.18 | 68,68,68,68 | 0 |
| 56 | MG | 2A | 3395 | 1/1 | 0.90 | 0.31 | 60,60,60,60 | 0 |
| 56 | MG | 2A | 3411 | 1/1 | 0.90 | 0.28 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3518 | 1/1 | 0.90 | 0.23 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3227 | 1/1 | 0.90 | 0.17 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3046 | 1/1 | 0.90 | 0.15 | 82,82,82,82 | 0 |
| 56 | MG | 1F | 305 | 1/1 | 0.90 | 0.14 | 78,78,78,78 | 0 |
| 56 | MG | 1A | 3071 | 1/1 | 0.90 | 0.66 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3153 | 1/1 | 0.90 | 0.09 | 77,77,77,77 | 0 |
| 56 | MG | 1N | 202 | 1/1 | 0.90 | 0.42 | 57,57,57,57 | 0 |
| 56 | MG | 1N | 204 | 1/1 | 0.90 | 0.21 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3818 | 1/1 | 0.90 | 0.08 | 77,77,77,77 | 0 |
| 56 | MG | 1v | 101 | 1/1 | 0.90 | 0.29 | 69,69,69,69 | 0 |
| 56 | MG | 2A | 3441 | 1/1 | 0.90 | 0.08 | 71,71,71,71 | 0 |
| 56 | MG | 2a | 1843 | 1/1 | 0.90 | 0.08 | 65,65,65,65 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 2a | 1847 | 1/1 | 0.90 | 0.17 | 84,84,84,84 | 0 |
| 56 | MG | 1A | 3585 | 1/1 | 0.90 | 0.66 | 65,65,65,65 | 0 |
| 56 | MG | 1A | 3075 | 1/1 | 0.90 | 0.42 | 78,78,78,78 | 0 |
| 56 | MG | 2A | 3454 | 1/1 | 0.90 | 0.10 | 75,75,75,75 | 0 |
| 56 | MG | 1Q | 201 | 1/1 | 0.90 | 0.49 | 56,56,56,56 | 0 |
| 56 | MG | 2A | 3171 | 1/1 | 0.90 | 0.13 | 88,88,88,88 | 0 |
| 56 | MG | 1A | 3027 | 1/1 | 0.90 | 1.33 | 48,48,48,48 | 0 |
| 56 | MG | 1A | 3233 | 1/1 | 0.90 | 0.34 | 47,47,47,47 | 0 |
| 56 | MG | 1A | 3294 | 1/1 | 0.90 | 0.12 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3333 | 1/1 | 0.90 | 0.25 | 57,57,57,57 | 0 |
| 56 | MG | 1W | 201 | 1/1 | 0.90 | 0.33 | 61,61,61,61 | 0 |
| 56 | MG | 2A | 3477 | 1/1 | 0.90 | 0.19 | 58,58,58,58 | 0 |
| 56 | MG | 1W | 203 | 1/1 | 0.90 | 0.28 | 46,46,46,46 | 0 |
| 56 | MG | 1A | 3295 | 1/1 | 0.90 | 0.14 | 87,87,87,87 | 0 |
| 56 | MG | 2A | 3480 | 1/1 | 0.90 | 0.07 | 54,54,54,54 | 0 |
| 56 | MG | 1A | 3149 | 1/1 | 0.90 | 0.21 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3483 | 1/1 | 0.90 | 0.19 | 73,73,73,73 | 0 |
| 56 | MG | 13 | 101 | 1/1 | 0.90 | 0.27 | 82,82,82,82 | 0 |
| 56 | MG | 2a | 1657 | 1/1 | 0.90 | 0.12 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3236 | 1/1 | 0.90 | 0.25 | 65,65,65,65 | 0 |
| 56 | MG | 2a | 1665 | 1/1 | 0.90 | 0.09 | 87,87,87,87 | 0 |
| 56 | MG | 2A | 3188 | 1/1 | 0.90 | 0.38 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3552 | 1/1 | 0.90 | 0.22 | 76,76,76,76 | 0 |
| 56 | MG | 2A | 3494 | 1/1 | 0.90 | 0.15 | 58,58,58,58 | 0 |
| 56 | MG | 2A | 3496 | 1/1 | 0.90 | 0.21 | 75,75,75,75 | 0 |
| 56 | MG | 1a | 1720 | 1/1 | 0.90 | 0.27 | 88,88,88,88 | 0 |
| 56 | MG | 1A | 3908 | 1/1 | 0.90 | 0.21 | 27,27,27,27 | 0 |
| 56 | MG | 2A | 3503 | 1/1 | 0.90 | 0.12 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3402 | 1/1 | 0.90 | 0.27 | 40,40,40,40 | 0 |
| 56 | MG | 2A | 3010 | 1/1 | 0.90 | 0.31 | 64,64,64,64 | 0 |
| 56 | MG | 1A | 3345 | 1/1 | 0.90 | 0.45 | 53,53,53,53 | 0 |
| 56 | MG | 1a | 1854 | 1/1 | 0.90 | 0.17 | 61,61,61,61 | 0 |
| 56 | MG | 1a | 1858 | 1/1 | 0.90 | 0.36 | 79,79,79,79 | 0 |
| 56 | MG | 1a | 1727 | 1/1 | 0.90 | 0.37 | 83,83,83,83 | 0 |
| 56 | MG | 2A | 3026 | 1/1 | 0.90 | 0.12 | 40,40,40,40 | 0 |
| 56 | MG | 2a | 1698 | 1/1 | 0.90 | 0.21 | 70,70,70,70 | 0 |
| 56 | MG | 1a | 1605 | 1/1 | 0.90 | 0.21 | 66,66,66,66 | 0 |
| 56 | MG | 1A | 3431 | 1/1 | 0.90 | 0.25 | 43,43,43,43 | 0 |
| 56 | MG | 1A | 3764 | 1/1 | 0.90 | 0.15 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3770 | 1/1 | 0.90 | 0.17 | 58,58,58,58 | 0 |
| 56 | MG | 2a | 1708 | 1/1 | 0.90 | 0.13 | 79,79,79,79 | 0 |
| 56 | MG | 1a | 1874 | 1/1 | 0.90 | 0.73 | 79,79,79,79 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 2A | 3218 | 1/1 | 0.90 | 0.33 | 66,66,66,66 | 0 |
| 56 | MG | 1A | 3845 | 1/1 | 0.90 | 0.24 | 82,82,82,82 | 0 |
| 56 | MG | 1a | 1877 | 1/1 | 0.90 | 0.31 | 71,71,71,71 | 0 |
| 56 | MG | 2A | 3534 | 1/1 | 0.90 | 0.86 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3041 | 1/1 | 0.90 | 0.24 | 56,56,56,56 | 0 |
| 57 | AKN | 1A | 3937 | 40/40 | 0.90 | 0.21 | 46,66,84,92 | 0 |
| 56 | MG | 1a | 1879 | 1/1 | 0.90 | 0.20 | 67,67,67,67 | 0 |
| 56 | MG | 2A | 3538 | 1/1 | 0.90 | 0.24 | 65,65,65,65 | 0 |
| 58 | ZN | 14 | 501 | 1/1 | 0.90 | 0.10 | 114,114,114,114 | 0 |
| 58 | ZN | 2n | 501 | 1/1 | 0.90 | 0.05 | 111,111,111,111 | 0 |
| 56 | MG | 1A | 3330 | 1/1 | 0.91 | 0.53 | 41,41,41,41 | 0 |
| 56 | MG | 2a | 1731 | 1/1 | 0.91 | 0.07 | 96,96,96,96 | 0 |
| 56 | MG | 1A | 3332 | 1/1 | 0.91 | 0.19 | 53,53,53,53 | 0 |
| 56 | MG | 1a | 1904 | 1/1 | 0.91 | 0.07 | 100,100,100,100 | 0 |
| 56 | MG | 2A | 3276 | 1/1 | 0.91 | 0.47 | 46,46,46,46 | 0 |
| 56 | MG | 1A | 3702 | 1/1 | 0.91 | 0.10 | 29,29,29,29 | 0 |
| 56 | MG | 1A | 3022 | 1/1 | 0.91 | 0.13 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3512 | 1/1 | 0.91 | 0.21 | 59,59,59,59 | 0 |
| 56 | MG | 2A | 3307 | 1/1 | 0.91 | 0.29 | 51,51,51,51 | 0 |
| 56 | MG | 1a | 1804 | 1/1 | 0.91 | 0.20 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3089 | 1/1 | 0.91 | 0.29 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3262 | 1/1 | 0.91 | 0.14 | 45,45,45,45 | 0 |
| 56 | MG | 1A | 3712 | 1/1 | 0.91 | 0.06 | 65,65,65,65 | 0 |
| 56 | MG | 18 | 102 | 1/1 | 0.91 | 0.53 | 60,60,60,60 | 0 |
| 56 | MG | 1a | 1811 | 1/1 | 0.91 | 0.29 | 62,62,62,62 | 0 |
| 56 | MG | 2A | 3573 | 1/1 | 0.91 | 0.36 | 63,63,63,63 | 0 |
| 56 | MG | 1e | 204 | 1/1 | 0.91 | 0.49 | 84,84,84,84 | 0 |
| 56 | MG | 1A | 3810 | 1/1 | 0.91 | 0.72 | 48,48,48,48 | 0 |
| 56 | MG | 1A | 3424 | 1/1 | 0.91 | 0.28 | 24,24,24,24 | 0 |
| 56 | MG | 1A | 3722 | 1/1 | 0.91 | 0.09 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3726 | 1/1 | 0.91 | 0.22 | 72,72,72,72 | 0 |
| 56 | MG | 2A | 3128 | 1/1 | 0.91 | 0.11 | 59,59,59,59 | 0 |
| 56 | MG | 2a | 1773 | 1/1 | 0.91 | 0.33 | 72,72,72,72 | 0 |
| 56 | MG | 1A | 3116 | 1/1 | 0.91 | 0.29 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3210 | 1/1 | 0.91 | 0.89 | 49,49,49,49 | 0 |
| 56 | MG | 1A | 3247 | 1/1 | 0.91 | 0.14 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3632 | 1/1 | 0.91 | 0.11 | 44,44,44,44 | 0 |
| 56 | MG | 2B | 214 | 1/1 | 0.91 | 0.11 | 95,95,95,95 | 0 |
| 56 | MG | 2B | 215 | 1/1 | 0.91 | 0.20 | 62,62,62,62 | 0 |
| 56 | MG | 1B | 214 | 1/1 | 0.91 | 0.09 | 64,64,64,64 | 0 |
| 56 | MG | 2a | 1796 | 1/1 | 0.91 | 0.20 | 81,81,81,81 | 0 |
| 56 | MG | 2a | 1798 | 1/1 | 0.91 | 0.26 | 55,55,55,55 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 56 | MG | 2D | 303 | 1/1 | 0.91 | 0.15 | 44,44,44,44 | 0 |
| 56 | MG | 2a | 1801 | 1/1 | 0.91 | 0.15 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3821 | 1/1 | 0.91 | 0.12 | 64,64,64,64 | 0 |
| 56 | MG | 1A | 3871 | 1/1 | 0.91 | 0.46 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3533 | 1/1 | 0.91 | 0.17 | 50,50,50,50 | 0 |
| 56 | MG | 1A | 3535 | 1/1 | 0.91 | 1.30 | 56,56,56,56 | 0 |
| 56 | MG | 2A | 3412 | 1/1 | 0.91 | 0.28 | 75,75,75,75 | 0 |
| 56 | MG | 2a | 1811 | 1/1 | 0.91 | 0.20 | 74,74,74,74 | 0 |
| 56 | MG | 1A | 3754 | 1/1 | 0.91 | 0.10 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3144 | 1/1 | 0.91 | 0.32 | 56,56,56,56 | 0 |
| 56 | MG | 2A | 3147 | 1/1 | 0.91 | 0.07 | 55,55,55,55 | 0 |
| 56 | MG | 1A | 3163 | 1/1 | 0.91 | 0.39 | 39,39,39,39 | 0 |
| 56 | MG | 1a | 1729 | 1/1 | 0.91 | 0.19 | 72,72,72,72 | 0 |
| 56 | MG | 1A | 3878 | 1/1 | 0.91 | 0.23 | 71,71,71,71 | 0 |
| 56 | MG | 1x | 107 | 1/1 | 0.91 | 0.29 | 69,69,69,69 | 0 |
| 56 | MG | 2A | 3430 | 1/1 | 0.91 | 0.43 | 58,58,58,58 | 0 |
| 56 | MG | 2A | 3433 | 1/1 | 0.91 | 0.42 | 64,64,64,64 | 0 |
| 56 | MG | 1D | 303 | 1/1 | 0.91 | 0.18 | 68,68,68,68 | 0 |
| 56 | MG | 2a | 1610 | 1/1 | 0.91 | 0.16 | 78,78,78,78 | 0 |
| 56 | MG | 2A | 3156 | 1/1 | 0.91 | 0.17 | 73,73,73,73 | 0 |
| 56 | MG | 1a | 1753 | 1/1 | 0.91 | 0.31 | 50,50,50,50 | 0 |
| 56 | MG | 2A | 3158 | 1/1 | 0.91 | 0.04 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3446 | 1/1 | 0.91 | 0.22 | 31,31,31,31 | 0 |
| 56 | MG | 1A | 3034 | 1/1 | 0.91 | 0.50 | 65,65,65,65 | 0 |
| 56 | MG | 2a | 1620 | 1/1 | 0.91 | 0.08 | 87,87,87,87 | 0 |
| 56 | MG | 1a | 1759 | 1/1 | 0.91 | 0.46 | 78,78,78,78 | 0 |
| 56 | MG | 2a | 1623 | 1/1 | 0.91 | 0.10 | 103,103,103,103 | 0 |
| 56 | MG | 1x | 114 | 1/1 | 0.91 | 0.62 | 64,64,64,64 | 0 |
| 56 | MG | 2a | 1855 | 1/1 | 0.91 | 0.06 | 95,95,95,95 | 0 |
| 56 | MG | 1a | 1633 | 1/1 | 0.91 | 0.26 | 39,39,39,39 | 0 |
| 56 | MG | 1D | 306 | 1/1 | 0.91 | 0.26 | 58,58,58,58 | 0 |
| 56 | MG | 1a | 1857 | 1/1 | 0.91 | 0.19 | 66,66,66,66 | 0 |
| 56 | MG | 1A | 3776 | 1/1 | 0.91 | 0.22 | 16,16,16,16 | 0 |
| 56 | MG | 2a | 1636 | 1/1 | 0.91 | 0.22 | 93,93,93,93 | 0 |
| 56 | MG | 1a | 1859 | 1/1 | 0.91 | 0.12 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3004 | 1/1 | 0.91 | 0.16 | 65,65,65,65 | 0 |
| 56 | MG | 1a | 1764 | 1/1 | 0.91 | 0.20 | 89,89,89,89 | 0 |
| 56 | MG | 2A | 3008 | 1/1 | 0.91 | 0.30 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3452 | 1/1 | 0.91 | 0.43 | 63,63,63,63 | 0 |
| 56 | MG | 1a | 1767 | 1/1 | 0.91 | 0.16 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3458 | 1/1 | 0.91 | 0.17 | 45,45,45,45 | 0 |
| 56 | MG | 1A | 3838 | 1/1 | 0.91 | 0.12 | 62,62,62,62 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 56 | MG | 2A | 3016 | 1/1 | 0.91 | 0.16 | 52,52,52,52 | 0 |
| 56 | MG | 1A | 3012 | 1/1 | 0.91 | 0.16 | 54,54,54,54 | 0 |
| 56 | MG | 1a | 1875 | 1/1 | 0.91 | 0.10 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3377 | 1/1 | 0.91 | 0.11 | 66,66,66,66 | 0 |
| 56 | MG | 2A | 3027 | 1/1 | 0.91 | 0.30 | 72,72,72,72 | 0 |
| 56 | MG | 2A | 3032 | 1/1 | 0.91 | 0.09 | 41,41,41,41 | 0 |
| 56 | MG | 1a | 1773 | 1/1 | 0.91 | 0.05 | 94,94,94,94 | 0 |
| 56 | MG | 1a | 1659 | 1/1 | 0.91 | 0.29 | 57,57,57,57 | 0 |
| 56 | MG | 1N | 203 | 1/1 | 0.91 | 0.14 | 37,37,37,37 | 0 |
| 56 | MG | 2A | 3039 | 1/1 | 0.91 | 0.39 | 58,58,58,58 | 0 |
| 56 | MG | 2A | 3042 | 1/1 | 0.91 | 0.28 | 66,66,66,66 | 0 |
| 56 | MG | 1A | 3029 | 1/1 | 0.91 | 1.11 | 48,48,48,48 | 0 |
| 56 | MG | 2A | 3208 | 1/1 | 0.91 | 0.78 | 51,51,51,51 | 0 |
| 56 | MG | 1A | 3467 | 1/1 | 0.91 | 0.44 | 49,49,49,49 | 0 |
| 56 | MG | 1A | 3895 | 1/1 | 0.91 | 0.21 | 79,79,79,79 | 0 |
| 56 | MG | 2a | 1691 | 1/1 | 0.91 | 0.26 | 102,102,102,102 | 0 |
| 56 | MG | 2a | 1907 | 1/1 | 0.91 | 0.07 | 89,89,89,89 | 0 |
| 56 | MG | 1a | 1886 | 1/1 | 0.91 | 0.30 | 86,86,86,86 | 0 |
| 56 | MG | 1A | 3307 | 1/1 | 0.91 | 0.52 | 61,61,61,61 | 0 |
| 56 | MG | 1A | 3902 | 1/1 | 0.91 | 0.25 | 45,45,45,45 | 0 |
| 56 | MG | 2A | 3220 | 1/1 | 0.91 | 0.21 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3054 | 1/1 | 0.91 | 0.17 | 64,64,64,64 | 0 |
| 56 | MG | 2g | 202 | 1/1 | 0.91 | 0.33 | 91,91,91,91 | 0 |
| 56 | MG | 1A | 3905 | 1/1 | 0.91 | 0.23 | 46,46,46,46 | 0 |
| 56 | MG | 1a | 1790 | 1/1 | 0.91 | 0.28 | 73,73,73,73 | 0 |
| 56 | MG | 2a | 1703 | 1/1 | 0.91 | 0.39 | 86,86,86,86 | 0 |
| 56 | MG | 1A | 3188 | 1/1 | 0.91 | 0.94 | 48,48,48,48 | 0 |
| 56 | MG | 2A | 3532 | 1/1 | 0.91 | 0.70 | 52,52,52,52 | 0 |
| 56 | MG | 2A | 3062 | 1/1 | 0.91 | 0.19 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3911 | 1/1 | 0.91 | 0.25 | 45,45,45,45 | 0 |
| 56 | MG | 2A | 3065 | 1/1 | 0.91 | 0.10 | 59,59,59,59 | 0 |
| 56 | MG | 2A | 3536 | 1/1 | 0.91 | 0.10 | 88,88,88,88 | 0 |
| 56 | MG | 2a | 1718 | 1/1 | 0.91 | 0.12 | 87,87,87,87 | 0 |
| 56 | MG | 2A | 3067 | 1/1 | 0.91 | 0.22 | 66,66,66,66 | 0 |
| 56 | MG | 2A | 3071 | 1/1 | 0.91 | 0.11 | 62,62,62,62 | 0 |
| 56 | MG | 2A | 3540 | 1/1 | 0.91 | 0.10 | 79,79,79,79 | 0 |
| 56 | MG | 1A | 3480 | 1/1 | 0.91 | 0.19 | 47,47,47,47 | 0 |
| 58 | ZN | 29 | 501 | 1/1 | 0.91 | 0.07 | 92,92,92,92 | 0 |
| 56 | MG | 2A | 3543 | 1/1 | 0.91 | 0.10 | 91,91,91,91 | 0 |
| 56 | MG | 1B | 228 | 1/1 | 0.92 | 0.15 | 79,79,79,79 | 0 |
| 56 | MG | 1a | 1905 | 1/1 | 0.92 | 0.18 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3109 | 1/1 | 0.92 | 0.31 | 35,35,35,35 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 2A | 3081 | 1/1 | 0.92 | 0.36 | 62,62,62,62 | 0 |
| 56 | MG | 2A | 3266 | 1/1 | 0.92 | 0.32 | 46,46,46,46 | 0 |
| 56 | MG | 2a | 1737 | 1/1 | 0.92 | 0.08 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3795 | 1/1 | 0.92 | 0.14 | 76,76,76,76 | 0 |
| 56 | MG | 1A | 3223 | 1/1 | 0.92 | 0.53 | 72,72,72,72 | 0 |
| 56 | MG | 1a | 1791 | 1/1 | 0.92 | 0.15 | 75,75,75,75 | 0 |
| 56 | MG | 2A | 3085 | 1/1 | 0.92 | 0.22 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3293 | 1/1 | 0.92 | 0.34 | 45,45,45,45 | 0 |
| 56 | MG | 2A | 3299 | 1/1 | 0.92 | 0.22 | 39,39,39,39 | 0 |
| 56 | MG | 2A | 3301 | 1/1 | 0.92 | 0.31 | 54,54,54,54 | 0 |
| 56 | MG | 1a | 1654 | 1/1 | 0.92 | 0.08 | 66,66,66,66 | 0 |
| 56 | MG | 2A | 3306 | 1/1 | 0.92 | 0.30 | 38,38,38,38 | 0 |
| 56 | MG | 1A | 3557 | 1/1 | 0.92 | 0.09 | 49,49,49,49 | 0 |
| 56 | MG | 2A | 3310 | 1/1 | 0.92 | 0.34 | 49,49,49,49 | 0 |
| 56 | MG | 1a | 1660 | 1/1 | 0.92 | 0.11 | 67,67,67,67 | 0 |
| 56 | MG | 2A | 3108 | 1/1 | 0.92 | 0.21 | 47,47,47,47 | 0 |
| 56 | MG | 1A | 3519 | 1/1 | 0.92 | 0.27 | 60,60,60,60 | 0 |
| 56 | MG | 2a | 1767 | 1/1 | 0.92 | 0.08 | 85,85,85,85 | 0 |
| 56 | MG | 1A | 3699 | 1/1 | 0.92 | 0.22 | 42,42,42,42 | 0 |
| 56 | MG | 2A | 3328 | 1/1 | 0.92 | 0.47 | 50,50,50,50 | 0 |
| 56 | MG | 1a | 1666 | 1/1 | 0.92 | 0.11 | 65,65,65,65 | 0 |
| 56 | MG | 1A | 3700 | 1/1 | 0.92 | 0.20 | 33,33,33,33 | 0 |
| 56 | MG | 2a | 1772 | 1/1 | 0.92 | 0.21 | 81,81,81,81 | 0 |
| 56 | MG | 2A | 3113 | 1/1 | 0.92 | 0.18 | 82,82,82,82 | 0 |
| 56 | MG | 1A | 3167 | 1/1 | 0.92 | 0.40 | 68,68,68,68 | 0 |
| 56 | MG | 2a | 1775 | 1/1 | 0.92 | 0.16 | 72,72,72,72 | 0 |
| 56 | MG | 2A | 3356 | 1/1 | 0.92 | 0.17 | 56,56,56,56 | 0 |
| 56 | MG | 2A | 3364 | 1/1 | 0.92 | 0.11 | 46,46,46,46 | 0 |
| 56 | MG | 1a | 1680 | 1/1 | 0.92 | 0.15 | 67,67,67,67 | 0 |
| 56 | MG | 1a | 1681 | 1/1 | 0.92 | 0.16 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3384 | 1/1 | 0.92 | 0.12 | 59,59,59,59 | 0 |
| 56 | MG | 2a | 1788 | 1/1 | 0.92 | 0.18 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3703 | 1/1 | 0.92 | 0.08 | 31,31,31,31 | 0 |
| 56 | MG | 2A | 3375 | 1/1 | 0.92 | 0.22 | 72,72,72,72 | 0 |
| 56 | MG | 1A | 3097 | 1/1 | 0.92 | 0.13 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3453 | 1/1 | 0.92 | 0.28 | 39,39,39,39 | 0 |
| 56 | MG | 1G | 201 | 1/1 | 0.92 | 0.16 | 40,40,40,40 | 0 |
| 56 | MG | 1N | 201 | 1/1 | 0.92 | 0.27 | 47,47,47,47 | 0 |
| 56 | MG | 1A | 3707 | 1/1 | 0.92 | 0.16 | 32,32,32,32 | 0 |
| 56 | MG | 2A | 3386 | 1/1 | 0.92 | 0.10 | 45,45,45,45 | 0 |
| 56 | MG | 2A | 3388 | 1/1 | 0.92 | 0.33 | 36,36,36,36 | 0 |
| 56 | MG | 2A | 3391 | 1/1 | 0.92 | 0.18 | 78,78,78,78 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 56 | MG | 1A | 3526 | 1/1 | 0.92 | 0.37 | 42,42,42,42 | 0 |
| 56 | MG | 1a | 1826 | 1/1 | 0.92 | 0.08 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3711 | 1/1 | 0.92 | 0.11 | 60,60,60,60 | 0 |
| 56 | MG | 2A | 3401 | 1/1 | 0.92 | 0.32 | 39,39,39,39 | 0 |
| 56 | MG | 1A | 3343 | 1/1 | 0.92 | 0.25 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3620 | 1/1 | 0.92 | 0.23 | 42,42,42,42 | 0 |
| 56 | MG | 1x | 106 | 1/1 | 0.92 | 1.21 | 92,92,92,92 | 0 |
| 56 | MG | 1a | 1701 | 1/1 | 0.92 | 0.23 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3344 | 1/1 | 0.92 | 1.02 | 54,54,54,54 | 0 |
| 56 | MG | 2a | 1828 | 1/1 | 0.92 | 0.07 | 77,77,77,77 | 0 |
| 56 | MG | 1A | 3725 | 1/1 | 0.92 | 0.19 | 75,75,75,75 | 0 |
| 56 | MG | 1A | 3574 | 1/1 | 0.92 | 0.54 | 81,81,81,81 | 0 |
| 56 | MG | 1A | 3391 | 1/1 | 0.92 | 0.16 | 36,36,36,36 | 0 |
| 56 | MG | 1U | 201 | 1/1 | 0.92 | 0.15 | 38,38,38,38 | 0 |
| 56 | MG | 2A | 3429 | 1/1 | 0.92 | 0.26 | 71,71,71,71 | 0 |
| 56 | MG | 2a | 1837 | 1/1 | 0.92 | 0.09 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3362 | 1/1 | 0.92 | 0.16 | 53,53,53,53 | 0 |
| 56 | MG | 2A | 3432 | 1/1 | 0.92 | 0.43 | 47,47,47,47 | 0 |
| 56 | MG | 1A | 3896 | 1/1 | 0.92 | 0.36 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3074 | 1/1 | 0.92 | 0.08 | 67,67,67,67 | 0 |
| 56 | MG | 2a | 1845 | 1/1 | 0.92 | 0.23 | 94,94,94,94 | 0 |
| 56 | MG | 1A | 3637 | 1/1 | 0.92 | 0.12 | 31,31,31,31 | 0 |
| 56 | MG | 1A | 3578 | 1/1 | 0.92 | 0.07 | 77,77,77,77 | 0 |
| 56 | MG | 2a | 1849 | 1/1 | 0.92 | 0.47 | 81,81,81,81 | 0 |
| 56 | MG | 2a | 1850 | 1/1 | 0.92 | 0.17 | 67,67,67,67 | 0 |
| 56 | MG | 10 | 102 | 1/1 | 0.92 | 0.28 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3749 | 1/1 | 0.92 | 0.23 | 42,42,42,42 | 0 |
| 56 | MG | 2a | 1629 | 1/1 | 0.92 | 0.09 | 69,69,69,69 | 0 |
| 56 | MG | 2a | 1630 | 1/1 | 0.92 | 0.12 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3750 | 1/1 | 0.92 | 0.20 | 42,42,42,42 | 0 |
| 56 | MG | 2A | 3452 | 1/1 | 0.92 | 0.07 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3453 | 1/1 | 0.92 | 0.13 | 57,57,57,57 | 0 |
| 56 | MG | 1a | 1851 | 1/1 | 0.92 | 0.12 | 74,74,74,74 | 0 |
| 56 | MG | 2A | 3457 | 1/1 | 0.92 | 0.14 | 64,64,64,64 | 0 |
| 56 | MG | 2A | 3458 | 1/1 | 0.92 | 0.27 | 92,92,92,92 | 0 |
| 56 | MG | 1A | 3644 | 1/1 | 0.92 | 0.17 | 59,59,59,59 | 0 |
| 56 | MG | 2a | 1642 | 1/1 | 0.92 | 0.28 | 56,56,56,56 | 0 |
| 56 | MG | 2a | 1643 | 1/1 | 0.92 | 0.04 | 76,76,76,76 | 0 |
| 56 | MG | 1A | 3540 | 1/1 | 0.92 | 0.28 | 67,67,67,67 | 0 |
| 56 | MG | 1a | 1856 | 1/1 | 0.92 | 0.13 | 80,80,80,80 | 0 |
| 56 | MG | 2a | 1879 | 1/1 | 0.92 | 0.10 | 104,104,104,104 | 0 |
| 56 | MG | 17 | 101 | 1/1 | 0.92 | 0.12 | 45,45,45,45 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3649 | 1/1 | 0.92 | 0.28 | 81,81,81,81 | 0 |
| 56 | MG | 1A | 3328 | 1/1 | 0.92 | 0.62 | 52,52,52,52 | 0 |
| 56 | MG | 19 | 102 | 1/1 | 0.92 | 0.09 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3842 | 1/1 | 0.92 | 0.59 | 83,83,83,83 | 0 |
| 56 | MG | 1a | 1864 | 1/1 | 0.92 | 0.19 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3843 | 1/1 | 0.92 | 0.47 | 68,68,68,68 | 0 |
| 56 | MG | 2A | 3033 | 1/1 | 0.92 | 0.12 | 52,52,52,52 | 0 |
| 56 | MG | 1A | 3766 | 1/1 | 0.92 | 0.23 | 56,56,56,56 | 0 |
| 56 | MG | 1a | 1870 | 1/1 | 0.92 | 0.25 | 82,82,82,82 | 0 |
| 56 | MG | 2A | 3194 | 1/1 | 0.92 | 0.10 | 85,85,85,85 | 0 |
| 56 | MG | 1A | 3768 | 1/1 | 0.92 | 0.28 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3935 | 1/1 | 0.92 | 0.27 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3769 | 1/1 | 0.92 | 0.13 | 63,63,63,63 | 0 |
| 56 | MG | 1B | 204 | 1/1 | 0.92 | 0.22 | 56,56,56,56 | 0 |
| 56 | MG | 2a | 1905 | 1/1 | 0.92 | 0.09 | 63,63,63,63 | 0 |
| 56 | MG | 2A | 3200 | 1/1 | 0.92 | 0.50 | 64,64,64,64 | 0 |
| 56 | MG | 1a | 1761 | 1/1 | 0.92 | 0.09 | 63,63,63,63 | 0 |
| 56 | MG | 2a | 1689 | 1/1 | 0.92 | 0.06 | 94,94,94,94 | 0 |
| 56 | MG | 1A | 3246 | 1/1 | 0.92 | 0.21 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3664 | 1/1 | 0.92 | 0.08 | 35,35,35,35 | 0 |
| 56 | MG | 2A | 3049 | 1/1 | 0.92 | 0.08 | 75,75,75,75 | 0 |
| 56 | MG | 1A | 3544 | 1/1 | 0.92 | 0.14 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3209 | 1/1 | 0.92 | 0.10 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3353 | 1/1 | 0.92 | 0.14 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3672 | 1/1 | 0.92 | 0.17 | 34,34,34,34 | 0 |
| 56 | MG | 1A | 3425 | 1/1 | 0.92 | 0.15 | 42,42,42,42 | 0 |
| 56 | MG | 2A | 3214 | 1/1 | 0.92 | 0.13 | 74,74,74,74 | 0 |
| 56 | MG | 2A | 3056 | 1/1 | 0.92 | 0.13 | 53,53,53,53 | 0 |
| 56 | MG | 2w | 102 | 1/1 | 0.92 | 0.20 | 85,85,85,85 | 0 |
| 56 | MG | 1A | 3548 | 1/1 | 0.92 | 0.13 | 29,29,29,29 | 0 |
| 56 | MG | 1A | 3679 | 1/1 | 0.92 | 0.11 | 35,35,35,35 | 0 |
| 56 | MG | 2a | 1710 | 1/1 | 0.92 | 0.26 | 63,63,63,63 | 0 |
| 56 | MG | 2A | 3061 | 1/1 | 0.92 | 0.21 | 85,85,85,85 | 0 |
| 56 | MG | 1B | 215 | 1/1 | 0.92 | 0.13 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3786 | 1/1 | 0.92 | 0.12 | 46,46,46,46 | 0 |
| 56 | MG | 1B | 219 | 1/1 | 0.92 | 0.14 | 69,69,69,69 | 0 |
| 56 | MG | 1B | 220 | 1/1 | 0.92 | 0.29 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3131 | 1/1 | 0.92 | 0.36 | 48,48,48,48 | 0 |
| 58 | ZN | 24 | 501 | 1/1 | 0.92 | 0.06 | 138,138,138,138 | 0 |
| 56 | MG | 1A | 3372 | 1/1 | 0.92 | 0.89 | 51,51,51,51 | 0 |
| 56 | MG | 1A | 3790 | 1/1 | 0.92 | 0.19 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3491 | 1/1 | 0.93 | 0.13 | 70,70,70,70 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1V | 201 | 1/1 | 0.93 | 0.20 | 46,46,46,46 | 0 |
| 56 | MG | 1a | 1849 | 1/1 | 0.93 | 0.08 | 75,75,75,75 | 0 |
| 56 | MG | 1A | 3409 | 1/1 | 0.93 | 0.11 | 32,32,32,32 | 0 |
| 56 | MG | 2A | 3029 | 1/1 | 0.93 | 0.15 | 76,76,76,76 | 0 |
| 56 | MG | 2A | 3031 | 1/1 | 0.93 | 0.23 | 65,65,65,65 | 0 |
| 56 | MG | 1A | 3148 | 1/1 | 0.93 | 0.39 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3005 | 1/1 | 0.93 | 0.24 | 42,42,42,42 | 0 |
| 56 | MG | 2A | 3504 | 1/1 | 0.93 | 0.08 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3055 | 1/1 | 0.93 | 0.22 | 44,44,44,44 | 0 |
| 56 | MG | 1A | 3595 | 1/1 | 0.93 | 0.12 | 53,53,53,53 | 0 |
| 56 | MG | 2a | 1723 | 1/1 | 0.93 | 0.46 | 71,71,71,71 | 0 |
| 56 | MG | 2A | 3037 | 1/1 | 0.93 | 0.17 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3283 | 1/1 | 0.93 | 0.10 | 79,79,79,79 | 0 |
| 56 | MG | 1A | 3436 | 1/1 | 0.93 | 0.28 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3513 | 1/1 | 0.93 | 0.21 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3041 | 1/1 | 0.93 | 0.12 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3515 | 1/1 | 0.93 | 0.27 | 67,67,67,67 | 0 |
| 56 | MG | 2a | 1734 | 1/1 | 0.93 | 0.17 | 78,78,78,78 | 0 |
| 56 | MG | 2A | 3517 | 1/1 | 0.93 | 0.34 | 73,73,73,73 | 0 |
| 56 | MG | 1A | 3708 | 1/1 | 0.93 | 0.36 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3604 | 1/1 | 0.93 | 0.20 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3439 | 1/1 | 0.93 | 0.15 | 48,48,48,48 | 0 |
| 56 | MG | 1A | 3606 | 1/1 | 0.93 | 0.14 | 34,34,34,34 | 0 |
| 56 | MG | 2a | 1743 | 1/1 | 0.93 | 0.08 | 80,80,80,80 | 0 |
| 56 | MG | 1a | 1865 | 1/1 | 0.93 | 0.26 | 82,82,82,82 | 0 |
| 56 | MG | 1A | 3713 | 1/1 | 0.93 | 0.17 | 80,80,80,80 | 0 |
| 56 | MG | 2A | 3050 | 1/1 | 0.93 | 0.14 | 39,39,39,39 | 0 |
| 56 | MG | 1a | 1731 | 1/1 | 0.93 | 0.36 | 57,57,57,57 | 0 |
| 56 | MG | 1a | 1732 | 1/1 | 0.93 | 0.20 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3715 | 1/1 | 0.93 | 0.23 | 45,45,45,45 | 0 |
| 56 | MG | 1A | 3284 | 1/1 | 0.93 | 0.15 | 53,53,53,53 | 0 |
| 56 | MG | 2A | 3235 | 1/1 | 0.93 | 0.19 | 50,50,50,50 | 0 |
| 56 | MG | 2A | 3236 | 1/1 | 0.93 | 0.12 | 42,42,42,42 | 0 |
| 56 | MG | 1a | 1601 | 1/1 | 0.93 | 0.23 | 72,72,72,72 | 0 |
| 56 | MG | 1A | 3928 | 1/1 | 0.93 | 0.11 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3078 | 1/1 | 0.93 | 0.14 | 41,41,41,41 | 0 |
| 56 | MG | 1a | 1756 | 1/1 | 0.93 | 0.14 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3617 | 1/1 | 0.93 | 0.10 | 36,36,36,36 | 0 |
| 56 | MG | 1A | 3240 | 1/1 | 0.93 | 0.32 | 75,75,75,75 | 0 |
| 56 | MG | 2A | 3546 | 1/1 | 0.93 | 0.12 | 95,95,95,95 | 0 |
| 56 | MG | 1a | 1608 | 1/1 | 0.93 | 0.10 | 66,66,66,66 | 0 |
| 56 | MG | 1A | 3933 | 1/1 | 0.93 | 0.81 | 85,85,85,85 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 2A | 3068 | 1/1 | 0.93 | 0.21 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3445 | 1/1 | 0.93 | 0.40 | 52,52,52,52 | 0 |
| 56 | MG | 2A | 3286 | 1/1 | 0.93 | 0.39 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3836 | 1/1 | 0.93 | 0.10 | 72,72,72,72 | 0 |
| 56 | MG | 1A | 3316 | 1/1 | 0.93 | 0.38 | 47,47,47,47 | 0 |
| 56 | MG | 2A | 3561 | 1/1 | 0.93 | 0.07 | 88,88,88,88 | 0 |
| 56 | MG | 2a | 1782 | 1/1 | 0.93 | 0.29 | 76,76,76,76 | 0 |
| 56 | MG | 2A | 3300 | 1/1 | 0.93 | 0.30 | 39,39,39,39 | 0 |
| 56 | MG | 1A | 3039 | 1/1 | 0.93 | 0.94 | 60,60,60,60 | 0 |
| 56 | MG | 1a | 1615 | 1/1 | 0.93 | 0.40 | 69,69,69,69 | 0 |
| 56 | MG | 2a | 1794 | 1/1 | 0.93 | 0.14 | 58,58,58,58 | 0 |
| 56 | MG | 2a | 1795 | 1/1 | 0.93 | 0.31 | 47,47,47,47 | 0 |
| 56 | MG | 1A | 3265 | 1/1 | 0.93 | 0.13 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3319 | 1/1 | 0.93 | 0.70 | 77,77,77,77 | 0 |
| 56 | MG | 2A | 3308 | 1/1 | 0.93 | 0.48 | 38,38,38,38 | 0 |
| 56 | MG | 2A | 3571 | 1/1 | 0.93 | 0.24 | 70,70,70,70 | 0 |
| 56 | MG | 1a | 1898 | 1/1 | 0.93 | 0.32 | 52,52,52,52 | 0 |
| 56 | MG | 1A | 3457 | 1/1 | 0.93 | 0.46 | 45,45,45,45 | 0 |
| 56 | MG | 2B | 201 | 1/1 | 0.93 | 0.10 | 64,64,64,64 | 0 |
| 56 | MG | 1A | 3320 | 1/1 | 0.93 | 0.14 | 62,62,62,62 | 0 |
| 56 | MG | 2a | 1809 | 1/1 | 0.93 | 0.13 | 77,77,77,77 | 0 |
| 56 | MG | 2A | 3322 | 1/1 | 0.93 | 0.10 | 77,77,77,77 | 0 |
| 56 | MG | 1A | 3186 | 1/1 | 0.93 | 0.41 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3462 | 1/1 | 0.93 | 0.39 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3847 | 1/1 | 0.93 | 0.19 | 56,56,56,56 | 0 |
| 56 | MG | 2A | 3329 | 1/1 | 0.93 | 0.34 | 63,63,63,63 | 0 |
| 56 | MG | 2A | 3091 | 1/1 | 0.93 | 0.14 | 74,74,74,74 | 0 |
| 56 | MG | 2A | 3339 | 1/1 | 0.93 | 0.49 | 66,66,66,66 | 0 |
| 56 | MG | 2A | 3102 | 1/1 | 0.93 | 0.17 | 61,61,61,61 | 0 |
| 56 | MG | 1a | 1906 | 1/1 | 0.93 | 0.13 | 84,84,84,84 | 0 |
| 56 | MG | 2A | 3354 | 1/1 | 0.93 | 0.22 | 45,45,45,45 | 0 |
| 56 | MG | 1a | 1627 | 1/1 | 0.93 | 0.18 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3642 | 1/1 | 0.93 | 0.12 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3060 | 1/1 | 0.93 | 0.10 | 45,45,45,45 | 0 |
| 56 | MG | 1a | 1784 | 1/1 | 0.93 | 0.12 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3765 | 1/1 | 0.93 | 0.39 | 57,57,57,57 | 0 |
| 56 | MG | 2a | 1834 | 1/1 | 0.93 | 0.20 | 73,73,73,73 | 0 |
| 56 | MG | 1a | 1787 | 1/1 | 0.93 | 0.23 | 51,51,51,51 | 0 |
| 56 | MG | 1d | 301 | 1/1 | 0.93 | 0.11 | 86,86,86,86 | 0 |
| 56 | MG | 2A | 3116 | 1/1 | 0.93 | 0.17 | 55,55,55,55 | 0 |
| 56 | MG | 2Q | 202 | 1/1 | 0.93 | 0.10 | 72,72,72,72 | 0 |
| 56 | MG | 2A | 3117 | 1/1 | 0.93 | 0.15 | 47,47,47,47 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 56 | MG | 1A | 3292 | 1/1 | 0.93 | 0.13 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3213 | 1/1 | 0.93 | 0.11 | 53,53,53,53 | 0 |
| 56 | MG | 1e | 203 | 1/1 | 0.93 | 0.41 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3271 | 1/1 | 0.93 | 0.23 | 45,45,45,45 | 0 |
| 56 | MG | 1f | 203 | 1/1 | 0.93 | 0.12 | 83,83,83,83 | 0 |
| 56 | MG | 1A | 3658 | 1/1 | 0.93 | 0.15 | 37,37,37,37 | 0 |
| 56 | MG | 1A | 3773 | 1/1 | 0.93 | 0.13 | 50,50,50,50 | 0 |
| 56 | MG | 2a | 1854 | 1/1 | 0.93 | 0.29 | 75,75,75,75 | 0 |
| 56 | MG | 1A | 3774 | 1/1 | 0.93 | 0.11 | 47,47,47,47 | 0 |
| 56 | MG | 2a | 1857 | 1/1 | 0.93 | 0.12 | 63,63,63,63 | 0 |
| 56 | MG | 2A | 3393 | 1/1 | 0.93 | 0.49 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3272 | 1/1 | 0.93 | 0.63 | 45,45,45,45 | 0 |
| 56 | MG | 2A | 3135 | 1/1 | 0.93 | 0.17 | 30,30,30,30 | 0 |
| 56 | MG | 1A | 3662 | 1/1 | 0.93 | 0.19 | 40,40,40,40 | 0 |
| 56 | MG | 2A | 3408 | 1/1 | 0.93 | 0.34 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3409 | 1/1 | 0.93 | 0.24 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3663 | 1/1 | 0.93 | 0.15 | 25,25,25,25 | 0 |
| 56 | MG | 1a | 1799 | 1/1 | 0.93 | 0.27 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3413 | 1/1 | 0.93 | 0.13 | 72,72,72,72 | 0 |
| 56 | MG | 2a | 1624 | 1/1 | 0.93 | 0.06 | 98,98,98,98 | 0 |
| 56 | MG | 2a | 1873 | 1/1 | 0.93 | 0.37 | 97,97,97,97 | 0 |
| 56 | MG | 1D | 302 | 1/1 | 0.93 | 0.22 | 51,51,51,51 | 0 |
| 56 | MG | 1a | 1663 | 1/1 | 0.93 | 0.09 | 60,60,60,60 | 0 |
| 56 | MG | 2a | 1876 | 1/1 | 0.93 | 0.24 | 82,82,82,82 | 0 |
| 56 | MG | 1A | 3331 | 1/1 | 0.93 | 0.57 | 52,52,52,52 | 0 |
| 56 | MG | 1A | 3102 | 1/1 | 0.93 | 0.28 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3423 | 1/1 | 0.93 | 0.28 | 44,44,44,44 | 0 |
| 56 | MG | 1A | 3379 | 1/1 | 0.93 | 0.31 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3670 | 1/1 | 0.93 | 0.10 | 47,47,47,47 | 0 |
| 56 | MG | 1A | 3125 | 1/1 | 0.93 | 0.23 | 40,40,40,40 | 0 |
| 56 | MG | 1F | 301 | 1/1 | 0.93 | 0.54 | 42,42,42,42 | 0 |
| 56 | MG | 1a | 1814 | 1/1 | 0.93 | 0.11 | 48,48,48,48 | 0 |
| 56 | MG | 1A | 3673 | 1/1 | 0.93 | 0.15 | 27,27,27,27 | 0 |
| 56 | MG | 2a | 1890 | 1/1 | 0.93 | 0.20 | 105,105,105,105 | 0 |
| 56 | MG | 1A | 3509 | 1/1 | 0.93 | 0.09 | 40,40,40,40 | 0 |
| 56 | MG | 2A | 3160 | 1/1 | 0.93 | 0.10 | 57,57,57,57 | 0 |
| 56 | MG | 1a | 1683 | 1/1 | 0.93 | 0.33 | 77,77,77,77 | 0 |
| 56 | MG | 1A | 3872 | 1/1 | 0.93 | 0.32 | 64,64,64,64 | 0 |
| 56 | MG | 2A | 3163 | 1/1 | 0.93 | 0.19 | 55,55,55,55 | 0 |
| 56 | MG | 2a | 1899 | 1/1 | 0.93 | 0.20 | 51,51,51,51 | 0 |
| 56 | MG | 1A | 3103 | 1/1 | 0.93 | 0.17 | 48,48,48,48 | 0 |
| 56 | MG | 2a | 1652 | 1/1 | 0.93 | 0.11 | 60,60,60,60 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3792 | 1/1 | 0.93 | 0.45 | 51,51,51,51 | 0 |
| 56 | MG | 2A | 3168 | 1/1 | 0.93 | 0.13 | 80,80,80,80 | 0 |
| 56 | MG | 1G | 202 | 1/1 | 0.93 | 0.25 | 37,37,37,37 | 0 |
| 56 | MG | 2A | 3170 | 1/1 | 0.93 | 0.41 | 51,51,51,51 | 0 |
| 56 | MG | 1A | 3793 | 1/1 | 0.93 | 0.13 | 65,65,65,65 | 0 |
| 56 | MG | 2a | 1661 | 1/1 | 0.93 | 0.15 | 59,59,59,59 | 0 |
| 56 | MG | 2a | 1662 | 1/1 | 0.93 | 0.20 | 73,73,73,73 | 0 |
| 56 | MG | 1A | 3677 | 1/1 | 0.93 | 0.13 | 36,36,36,36 | 0 |
| 56 | MG | 2e | 201 | 1/1 | 0.93 | 0.10 | 78,78,78,78 | 0 |
| 56 | MG | 2A | 3460 | 1/1 | 0.93 | 0.18 | 68,68,68,68 | 0 |
| 56 | MG | 1a | 1831 | 1/1 | 0.93 | 0.15 | 43,43,43,43 | 0 |
| 56 | MG | 1A | 3513 | 1/1 | 0.93 | 0.29 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3104 | 1/1 | 0.93 | 0.17 | 39,39,39,39 | 0 |
| 56 | MG | 1a | 1836 | 1/1 | 0.93 | 0.27 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3301 | 1/1 | 0.93 | 0.55 | 50,50,50,50 | 0 |
| 56 | MG | 2v | 103 | 1/1 | 0.93 | 0.35 | 67,67,67,67 | 0 |
| 56 | MG | 1O | 201 | 1/1 | 0.93 | 0.23 | 61,61,61,61 | 0 |
| 56 | MG | 2A | 3471 | 1/1 | 0.93 | 0.18 | 67,67,67,67 | 0 |
| 56 | MG | 2A | 3472 | 1/1 | 0.93 | 0.52 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3881 | 1/1 | 0.93 | 0.21 | 71,71,71,71 | 0 |
| 56 | MG | 2a | 1687 | 1/1 | 0.93 | 0.16 | 97,97,97,97 | 0 |
| 56 | MG | 1A | 3341 | 1/1 | 0.93 | 0.24 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3302 | 1/1 | 0.93 | 0.77 | 46,46,46,46 | 0 |
| 56 | MG | 1A | 3278 | 1/1 | 0.93 | 0.35 | 54,54,54,54 | 0 |
| 56 | MG | 1A | 3400 | 1/1 | 0.93 | 0.28 | 34,34,34,34 | 0 |
| 56 | MG | 1T | 201 | 1/1 | 0.93 | 0.32 | 53,53,53,53 | 0 |
| 56 | MG | 2A | 3482 | 1/1 | 0.93 | 0.26 | 34,34,34,34 | 0 |
| 56 | MG | 1A | 3253 | 1/1 | 0.93 | 0.12 | 49,49,49,49 | 0 |
| 56 | MG | 1a | 1847 | 1/1 | 0.93 | 0.15 | 66,66,66,66 | 0 |
| 56 | MG | 2A | 3021 | 1/1 | 0.93 | 0.29 | 52,52,52,52 | 0 |
| 56 | MG | 1A | 3515 | 1/1 | 0.94 | 0.28 | 34,34,34,34 | 0 |
| 56 | MG | 1A | 3198 | 1/1 | 0.94 | 0.33 | 66,66,66,66 | 0 |
| 56 | MG | 1a | 1891 | 1/1 | 0.94 | 0.14 | 85,85,85,85 | 0 |
| 56 | MG | 1a | 1892 | 1/1 | 0.94 | 0.10 | 73,73,73,73 | 0 |
| 56 | MG | 2a | 1663 | 1/1 | 0.94 | 0.06 | 79,79,79,79 | 0 |
| 56 | MG | 2A | 3120 | 1/1 | 0.94 | 0.31 | 50,50,50,50 | 0 |
| 56 | MG | 2a | 1667 | 1/1 | 0.94 | 0.10 | 89,89,89,89 | 0 |
| 56 | MG | 2a | 1670 | 1/1 | 0.94 | 0.15 | 88,88,88,88 | 0 |
| 56 | MG | 1a | 1893 | 1/1 | 0.94 | 0.20 | 72,72,72,72 | 0 |
| 56 | MG | 2A | 3424 | 1/1 | 0.94 | 0.21 | 78,78,78,78 | 0 |
| 56 | MG | 1a | 1894 | 1/1 | 0.94 | 0.41 | 81,81,81,81 | 0 |
| 56 | MG | 1A | 3164 | 1/1 | 0.94 | 0.31 | 31,31,31,31 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 2A | 3427 | 1/1 | 0.94 | 0.69 | 68,68,68,68 | 0 |
| 56 | MG | 1a | 1735 | 1/1 | 0.94 | 0.13 | 46,46,46,46 | 0 |
| 56 | MG | 2a | 1678 | 1/1 | 0.94 | 0.20 | 85,85,85,85 | 0 |
| 56 | MG | 1A | 3086 | 1/1 | 0.94 | 0.29 | 62,62,62,62 | 0 |
| 56 | MG | 1a | 1744 | 1/1 | 0.94 | 0.29 | 31,31,31,31 | 0 |
| 56 | MG | 1A | 3522 | 1/1 | 0.94 | 0.17 | 27,27,27,27 | 0 |
| 56 | MG | 1A | 3611 | 1/1 | 0.94 | 0.10 | 25,25,25,25 | 0 |
| 56 | MG | 2a | 1686 | 1/1 | 0.94 | 0.09 | 85,85,85,85 | 0 |
| 56 | MG | 1A | 3297 | 1/1 | 0.94 | 0.11 | 78,78,78,78 | 0 |
| 56 | MG | 1A | 3336 | 1/1 | 0.94 | 0.20 | 55,55,55,55 | 0 |
| 56 | MG | 1A | 3394 | 1/1 | 0.94 | 0.19 | 46,46,46,46 | 0 |
| 56 | MG | 1a | 1757 | 1/1 | 0.94 | 0.56 | 73,73,73,73 | 0 |
| 56 | MG | 2a | 1693 | 1/1 | 0.94 | 0.08 | 97,97,97,97 | 0 |
| 56 | MG | 2a | 1694 | 1/1 | 0.94 | 0.07 | 73,73,73,73 | 0 |
| 56 | MG | 1A | 3759 | 1/1 | 0.94 | 0.39 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3031 | 1/1 | 0.94 | 0.31 | 64,64,64,64 | 0 |
| 56 | MG | 2A | 3451 | 1/1 | 0.94 | 0.22 | 55,55,55,55 | 0 |
| 56 | MG | 1A | 3532 | 1/1 | 0.94 | 0.20 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3112 | 1/1 | 0.94 | 0.08 | 62,62,62,62 | 0 |
| 56 | MG | 1a | 1912 | 1/1 | 0.94 | 0.09 | 79,79,79,79 | 0 |
| 56 | MG | 2A | 3151 | 1/1 | 0.94 | 0.09 | 52,52,52,52 | 0 |
| 56 | MG | 2a | 1704 | 1/1 | 0.94 | 0.21 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3171 | 1/1 | 0.94 | 0.14 | 51,51,51,51 | 0 |
| 56 | MG | 2a | 1706 | 1/1 | 0.94 | 0.21 | 91,91,91,91 | 0 |
| 56 | MG | 1A | 3629 | 1/1 | 0.94 | 0.12 | 25,25,25,25 | 0 |
| 56 | MG | 1A | 3417 | 1/1 | 0.94 | 0.26 | 47,47,47,47 | 0 |
| 56 | MG | 1A | 3342 | 1/1 | 0.94 | 0.18 | 39,39,39,39 | 0 |
| 56 | MG | 2a | 1711 | 1/1 | 0.94 | 0.07 | 74,74,74,74 | 0 |
| 56 | MG | 17 | 102 | 1/1 | 0.94 | 0.18 | 31,31,31,31 | 0 |
| 56 | MG | 1a | 1769 | 1/1 | 0.94 | 0.12 | 93,93,93,93 | 0 |
| 56 | MG | 2A | 3466 | 1/1 | 0.94 | 0.23 | 77,77,77,77 | 0 |
| 56 | MG | 2a | 1716 | 1/1 | 0.94 | 0.21 | 99,99,99,99 | 0 |
| 56 | MG | 2A | 3159 | 1/1 | 0.94 | 0.07 | 50,50,50,50 | 0 |
| 56 | MG | 1e | 205 | 1/1 | 0.94 | 0.22 | 69,69,69,69 | 0 |
| 56 | MG | 2A | 3470 | 1/1 | 0.94 | 0.22 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3633 | 1/1 | 0.94 | 0.12 | 43,43,43,43 | 0 |
| 56 | MG | 18 | 103 | 1/1 | 0.94 | 0.19 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3474 | 1/1 | 0.94 | 0.13 | 64,64,64,64 | 0 |
| 56 | MG | 1A | 3886 | 1/1 | 0.94 | 0.17 | 76,76,76,76 | 0 |
| 56 | MG | 1A | 3270 | 1/1 | 0.94 | 0.19 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3636 | 1/1 | 0.94 | 0.10 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3174 | 1/1 | 0.94 | 0.12 | 85,85,85,85 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1a | 1603 | 1/1 | 0.94 | 0.17 | 61,61,61,61 | 0 |
| 56 | MG | 1A | 3638 | 1/1 | 0.94 | 0.18 | 29,29,29,29 | 0 |
| 56 | MG | 2a | 1736 | 1/1 | 0.94 | 0.24 | 89,89,89,89 | 0 |
| 56 | MG | 1A | 3430 | 1/1 | 0.94 | 0.15 | 35,35,35,35 | 0 |
| 56 | MG | 1A | 3208 | 1/1 | 0.94 | 0.31 | 48,48,48,48 | 0 |
| 56 | MG | 1A | 3304 | 1/1 | 0.94 | 0.18 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3545 | 1/1 | 0.94 | 0.10 | 62,62,62,62 | 0 |
| 56 | MG | 2A | 3487 | 1/1 | 0.94 | 0.37 | 64,64,64,64 | 0 |
| 56 | MG | 2A | 3490 | 1/1 | 0.94 | 0.09 | 72,72,72,72 | 0 |
| 56 | MG | 2a | 1747 | 1/1 | 0.94 | 0.18 | 76,76,76,76 | 0 |
| 56 | MG | 2A | 3176 | 1/1 | 0.94 | 0.12 | 79,79,79,79 | 0 |
| 56 | MG | 1A | 3646 | 1/1 | 0.94 | 0.45 | 59,59,59,59 | 0 |
| 56 | MG | 1a | 1788 | 1/1 | 0.94 | 0.06 | 99,99,99,99 | 0 |
| 56 | MG | 1A | 3648 | 1/1 | 0.94 | 0.21 | 56,56,56,56 | 0 |
| 56 | MG | 2A | 3495 | 1/1 | 0.94 | 0.27 | 49,49,49,49 | 0 |
| 56 | MG | 1A | 3020 | 1/1 | 0.94 | 0.25 | 45,45,45,45 | 0 |
| 56 | MG | 1A | 3650 | 1/1 | 0.94 | 0.26 | 66,66,66,66 | 0 |
| 56 | MG | 2A | 3183 | 1/1 | 0.94 | 0.05 | 78,78,78,78 | 0 |
| 56 | MG | 2A | 3184 | 1/1 | 0.94 | 0.11 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3352 | 1/1 | 0.94 | 0.22 | 42,42,42,42 | 0 |
| 56 | MG | 2a | 1766 | 1/1 | 0.94 | 0.27 | 92,92,92,92 | 0 |
| 56 | MG | 1A | 3654 | 1/1 | 0.94 | 0.15 | 41,41,41,41 | 0 |
| 56 | MG | 1A | 3657 | 1/1 | 0.94 | 0.10 | 55,55,55,55 | 0 |
| 56 | MG | 1A | 3918 | 1/1 | 0.94 | 0.10 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3009 | 1/1 | 0.94 | 0.35 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3191 | 1/1 | 0.94 | 0.75 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3549 | 1/1 | 0.94 | 0.13 | 55,55,55,55 | 0 |
| 56 | MG | 1A | 3550 | 1/1 | 0.94 | 0.56 | 68,68,68,68 | 0 |
| 56 | MG | 1a | 1624 | 1/1 | 0.94 | 0.46 | 49,49,49,49 | 0 |
| 56 | MG | 1a | 1801 | 1/1 | 0.94 | 0.20 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3925 | 1/1 | 0.94 | 0.24 | 40,40,40,40 | 0 |
| 56 | MG | 2A | 3520 | 1/1 | 0.94 | 0.22 | 94,94,94,94 | 0 |
| 56 | MG | 2A | 3522 | 1/1 | 0.94 | 0.09 | 73,73,73,73 | 0 |
| 56 | MG | 1A | 3048 | 1/1 | 0.94 | 0.19 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3444 | 1/1 | 0.94 | 0.40 | 45,45,45,45 | 0 |
| 56 | MG | 1A | 3145 | 1/1 | 0.94 | 0.16 | 44,44,44,44 | 0 |
| 56 | MG | 2a | 1786 | 1/1 | 0.94 | 0.50 | 70,70,70,70 | 0 |
| 56 | MG | 2a | 1787 | 1/1 | 0.94 | 0.19 | 70,70,70,70 | 0 |
| 56 | MG | 1a | 1632 | 1/1 | 0.94 | 0.15 | 47,47,47,47 | 0 |
| 56 | MG | 1A | 3803 | 1/1 | 0.94 | 0.08 | 55,55,55,55 | 0 |
| 56 | MG | 1A | 3666 | 1/1 | 0.94 | 0.15 | 36,36,36,36 | 0 |
| 56 | MG | 1a | 1813 | 1/1 | 0.94 | 0.11 | 69,69,69,69 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3310 | 1/1 | 0.94 | 0.32 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3668 | 1/1 | 0.94 | 0.18 | 31,31,31,31 | 0 |
| 56 | MG | 1A | 3447 | 1/1 | 0.94 | 0.14 | 35,35,35,35 | 0 |
| 56 | MG | 1a | 1818 | 1/1 | 0.94 | 0.18 | 56,56,56,56 | 0 |
| 56 | MG | 2a | 1802 | 1/1 | 0.94 | 0.28 | 75,75,75,75 | 0 |
| 56 | MG | 2A | 3014 | 1/1 | 0.94 | 0.46 | 57,57,57,57 | 0 |
| 56 | MG | 1B | 202 | 1/1 | 0.94 | 0.37 | 48,48,48,48 | 0 |
| 56 | MG | 2a | 1806 | 1/1 | 0.94 | 0.26 | 63,63,63,63 | 0 |
| 56 | MG | 2A | 3018 | 1/1 | 0.94 | 0.08 | 55,55,55,55 | 0 |
| 56 | MG | 1a | 1822 | 1/1 | 0.94 | 0.20 | 63,63,63,63 | 0 |
| 56 | MG | 1a | 1645 | 1/1 | 0.94 | 0.18 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3022 | 1/1 | 0.94 | 0.22 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3813 | 1/1 | 0.94 | 0.52 | 56,56,56,56 | 0 |
| 56 | MG | 1a | 1648 | 1/1 | 0.94 | 0.13 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3450 | 1/1 | 0.94 | 0.31 | 48,48,48,48 | 0 |
| 56 | MG | 2a | 1815 | 1/1 | 0.94 | 0.08 | 79,79,79,79 | 0 |
| 56 | MG | 1A | 3560 | 1/1 | 0.94 | 0.23 | 63,63,63,63 | 0 |
| 56 | MG | 2A | 3549 | 1/1 | 0.94 | 0.19 | 82,82,82,82 | 0 |
| 56 | MG | 2a | 1819 | 1/1 | 0.94 | 0.35 | 60,60,60,60 | 0 |
| 56 | MG | 2a | 1820 | 1/1 | 0.94 | 0.08 | 84,84,84,84 | 0 |
| 56 | MG | 2A | 3030 | 1/1 | 0.94 | 0.17 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3243 | 1/1 | 0.94 | 0.25 | 88,88,88,88 | 0 |
| 56 | MG | 1A | 3179 | 1/1 | 0.94 | 0.32 | 34,34,34,34 | 0 |
| 56 | MG | 1A | 3216 | 1/1 | 0.94 | 0.14 | 40,40,40,40 | 0 |
| 56 | MG | 2A | 3555 | 1/1 | 0.94 | 0.05 | 83,83,83,83 | 0 |
| 56 | MG | 2A | 3556 | 1/1 | 0.94 | 0.07 | 71,71,71,71 | 0 |
| 56 | MG | 2A | 3247 | 1/1 | 0.94 | 0.16 | 51,51,51,51 | 0 |
| 56 | MG | 2A | 3248 | 1/1 | 0.94 | 0.43 | 43,43,43,43 | 0 |
| 56 | MG | 2A | 3252 | 1/1 | 0.94 | 0.36 | 35,35,35,35 | 0 |
| 56 | MG | 2A | 3255 | 1/1 | 0.94 | 0.20 | 56,56,56,56 | 0 |
| 56 | MG | 1a | 1833 | 1/1 | 0.94 | 0.14 | 43,43,43,43 | 0 |
| 56 | MG | 1a | 1834 | 1/1 | 0.94 | 0.24 | 80,80,80,80 | 0 |
| 56 | MG | 2A | 3567 | 1/1 | 0.94 | 0.34 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3146 | 1/1 | 0.94 | 0.34 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3315 | 1/1 | 0.94 | 0.14 | 52,52,52,52 | 0 |
| 56 | MG | 1A | 3567 | 1/1 | 0.94 | 0.22 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3686 | 1/1 | 0.94 | 0.14 | 68,68,68,68 | 0 |
| 56 | MG | 2A | 3270 | 1/1 | 0.94 | 0.26 | 41,41,41,41 | 0 |
| 56 | MG | 2A | 3575 | 1/1 | 0.94 | 0.37 | 78,78,78,78 | 0 |
| 56 | MG | 1B | 216 | 1/1 | 0.94 | 0.28 | 76,76,76,76 | 0 |
| 56 | MG | 1A | 3077 | 1/1 | 0.94 | 0.09 | 34,34,34,34 | 0 |
| 56 | MG | 1A | 3690 | 1/1 | 0.94 | 0.10 | 58,58,58,58 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 56 | MG | 2a | 1853 | 1/1 | 0.94 | 0.28 | 75,75,75,75 | 0 |
| 56 | MG | 1A | 3049 | 1/1 | 0.94 | 0.11 | 48,48,48,48 | 0 |
| 56 | MG | 2A | 3290 | 1/1 | 0.94 | 0.37 | 45,45,45,45 | 0 |
| 56 | MG | 2A | 3047 | 1/1 | 0.94 | 0.12 | 66,66,66,66 | 0 |
| 56 | MG | 2A | 3296 | 1/1 | 0.94 | 0.27 | 38,38,38,38 | 0 |
| 56 | MG | 2a | 1859 | 1/1 | 0.94 | 0.16 | 87,87,87,87 | 0 |
| 56 | MG | 1A | 3827 | 1/1 | 0.94 | 0.14 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3692 | 1/1 | 0.94 | 0.17 | 19,19,19,19 | 0 |
| 56 | MG | 1a | 1688 | 1/1 | 0.94 | 0.13 | 68,68,68,68 | 0 |
| 56 | MG | 1B | 226 | 1/1 | 0.94 | 0.29 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3011 | 1/1 | 0.94 | 0.29 | 42,42,42,42 | 0 |
| 56 | MG | 2a | 1867 | 1/1 | 0.94 | 0.11 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3187 | 1/1 | 0.94 | 0.27 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3466 | 1/1 | 0.94 | 0.26 | 44,44,44,44 | 0 |
| 56 | MG | 2a | 1870 | 1/1 | 0.94 | 0.23 | 72,72,72,72 | 0 |
| 56 | MG | 1A | 3157 | 1/1 | 0.94 | 0.20 | 34,34,34,34 | 0 |
| 56 | MG | 2A | 3315 | 1/1 | 0.94 | 0.17 | 68,68,68,68 | 0 |
| 56 | MG | 2E | 303 | 1/1 | 0.94 | 0.13 | 47,47,47,47 | 0 |
| 56 | MG | 1a | 1694 | 1/1 | 0.94 | 0.87 | 64,64,64,64 | 0 |
| 56 | MG | 1A | 3468 | 1/1 | 0.94 | 0.39 | 52,52,52,52 | 0 |
| 56 | MG | 2A | 3060 | 1/1 | 0.94 | 0.19 | 40,40,40,40 | 0 |
| 56 | MG | 1A | 3132 | 1/1 | 0.94 | 0.10 | 80,80,80,80 | 0 |
| 56 | MG | 1A | 3373 | 1/1 | 0.94 | 0.17 | 27,27,27,27 | 0 |
| 56 | MG | 2T | 201 | 1/1 | 0.94 | 0.12 | 42,42,42,42 | 0 |
| 56 | MG | 2a | 1881 | 1/1 | 0.94 | 0.05 | 89,89,89,89 | 0 |
| 56 | MG | 2W | 201 | 1/1 | 0.94 | 0.12 | 54,54,54,54 | 0 |
| 56 | MG | 1A | 3479 | 1/1 | 0.94 | 0.20 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3083 | 1/1 | 0.94 | 0.17 | 40,40,40,40 | 0 |
| 56 | MG | 1A | 3375 | 1/1 | 0.94 | 0.22 | 26,26,26,26 | 0 |
| 56 | MG | 1A | 3066 | 1/1 | 0.94 | 0.27 | 39,39,39,39 | 0 |
| 56 | MG | 2A | 3070 | 1/1 | 0.94 | 0.17 | 56,56,56,56 | 0 |
| 56 | MG | 2A | 3348 | 1/1 | 0.94 | 0.42 | 65,65,65,65 | 0 |
| 56 | MG | 1A | 3496 | 1/1 | 0.94 | 0.14 | 37,37,37,37 | 0 |
| 56 | MG | 1A | 3710 | 1/1 | 0.94 | 0.07 | 59,59,59,59 | 0 |
| 56 | MG | 2a | 1608 | 1/1 | 0.94 | 0.37 | 81,81,81,81 | 0 |
| 56 | MG | 1A | 3502 | 1/1 | 0.94 | 0.30 | 23,23,23,23 | 0 |
| 56 | MG | 1a | 1867 | 1/1 | 0.94 | 0.05 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3259 | 1/1 | 0.94 | 0.14 | 55,55,55,55 | 0 |
| 56 | MG | 2A | 3366 | 1/1 | 0.94 | 0.30 | 47,47,47,47 | 0 |
| 56 | MG | 1A | 3508 | 1/1 | 0.94 | 0.86 | 58,58,58,58 | 0 |
| 56 | MG | 2A | 3080 | 1/1 | 0.94 | 0.09 | 64,64,64,64 | 0 |
| 56 | MG | 2a | 1617 | 1/1 | 0.94 | 0.09 | 103,103,103,103 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 2A | 3371 | 1/1 | 0.94 | 0.15 | 91,91,91,91 | 0 |
| 56 | MG | 1A | 3852 | 1/1 | 0.94 | 0.37 | 64,64,64,64 | 0 |
| 56 | MG | 2a | 1621 | 1/1 | 0.94 | 0.10 | 100,100,100,100 | 0 |
| 56 | MG | 1a | 1873 | 1/1 | 0.94 | 0.05 | 85,85,85,85 | 0 |
| 56 | MG | 1A | 3714 | 1/1 | 0.94 | 0.26 | 45,45,45,45 | 0 |
| 56 | MG | 1A | 3327 | 1/1 | 0.94 | 0.88 | 51,51,51,51 | 0 |
| 56 | MG | 1A | 3511 | 1/1 | 0.94 | 0.15 | 34,34,34,34 | 0 |
| 56 | MG | 1a | 1718 | 1/1 | 0.94 | 0.12 | 97,97,97,97 | 0 |
| 56 | MG | 2A | 3379 | 1/1 | 0.94 | 0.49 | 51,51,51,51 | 0 |
| 56 | MG | 1A | 3720 | 1/1 | 0.94 | 0.15 | 59,59,59,59 | 0 |
| 56 | MG | 2A | 3383 | 1/1 | 0.94 | 0.35 | 54,54,54,54 | 0 |
| 56 | MG | 1A | 3721 | 1/1 | 0.94 | 0.13 | 35,35,35,35 | 0 |
| 56 | MG | 2v | 101 | 1/1 | 0.94 | 0.20 | 72,72,72,72 | 0 |
| 56 | MG | 2A | 3094 | 1/1 | 0.94 | 0.10 | 47,47,47,47 | 0 |
| 56 | MG | 2A | 3387 | 1/1 | 0.94 | 0.23 | 56,56,56,56 | 0 |
| 56 | MG | 2A | 3100 | 1/1 | 0.94 | 0.13 | 52,52,52,52 | 0 |
| 56 | MG | 2A | 3390 | 1/1 | 0.94 | 1.07 | 81,81,81,81 | 0 |
| 56 | MG | 2A | 3101 | 1/1 | 0.94 | 0.21 | 65,65,65,65 | 0 |
| 56 | MG | 2x | 102 | 1/1 | 0.94 | 0.07 | 83,83,83,83 | 0 |
| 56 | MG | 1A | 3260 | 1/1 | 0.94 | 0.27 | 42,42,42,42 | 0 |
| 56 | MG | 1a | 1882 | 1/1 | 0.94 | 0.06 | 74,74,74,74 | 0 |
| 56 | MG | 2x | 106 | 1/1 | 0.94 | 0.06 | 72,72,72,72 | 0 |
| 56 | MG | 2A | 3107 | 1/1 | 0.94 | 0.20 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3261 | 1/1 | 0.94 | 0.12 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3600 | 1/1 | 0.94 | 0.30 | 82,82,82,82 | 0 |
| 56 | MG | 2A | 3406 | 1/1 | 0.94 | 0.45 | 42,42,42,42 | 0 |
| 57 | AKN | 2O | 202 | 40/40 | 0.94 | 0.28 | 56,66,76,82 | 0 |
| 56 | MG | 1a | 1885 | 1/1 | 0.94 | 0.25 | 77,77,77,77 | 0 |
| 56 | MG | 1a | 1726 | 1/1 | 0.94 | 0.44 | 69,69,69,69 | 0 |
| 56 | MG | 2a | 1654 | 1/1 | 0.94 | 0.07 | 54,54,54,54 | 0 |
| 56 | MG | 1P | 202 | 1/1 | 0.94 | 0.44 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3863 | 1/1 | 0.94 | 1.10 | 75,75,75,75 | 0 |
| 56 | MG | 1A | 3008 | 1/1 | 0.95 | 0.42 | 55,55,55,55 | 0 |
| 56 | MG | 1B | 208 | 1/1 | 0.95 | 0.15 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3539 | 1/1 | 0.95 | 0.17 | 69,69,69,69 | 0 |
| 56 | MG | 2a | 1690 | 1/1 | 0.95 | 0.32 | 97,97,97,97 | 0 |
| 56 | MG | 1a | 1815 | 1/1 | 0.95 | 0.13 | 54,54,54,54 | 0 |
| 56 | MG | 1A | 3614 | 1/1 | 0.95 | 0.09 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3201 | 1/1 | 0.95 | 0.12 | 88,88,88,88 | 0 |
| 56 | MG | 1A | 3616 | 1/1 | 0.95 | 0.11 | 46,46,46,46 | 0 |
| 56 | MG | 1A | 3706 | 1/1 | 0.95 | 0.24 | 76,76,76,76 | 0 |
| 56 | MG | 2A | 3193 | 1/1 | 0.95 | 0.19 | 56,56,56,56 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3541 | 1/1 | 0.95 | 0.07 | 61,61,61,61 | 0 |
| 56 | MG | 1A | 3168 | 1/1 | 0.95 | 0.29 | 29,29,29,29 | 0 |
| 56 | MG | 1a | 1824 | 1/1 | 0.95 | 0.07 | 57,57,57,57 | 0 |
| 56 | MG | 1a | 1825 | 1/1 | 0.95 | 0.11 | 58,58,58,58 | 0 |
| 56 | MG | 2a | 1702 | 1/1 | 0.95 | 0.12 | 75,75,75,75 | 0 |
| 56 | MG | 1A | 3070 | 1/1 | 0.95 | 0.10 | 39,39,39,39 | 0 |
| 56 | MG | 1A | 3338 | 1/1 | 0.95 | 0.11 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3621 | 1/1 | 0.95 | 0.15 | 62,62,62,62 | 0 |
| 56 | MG | 1a | 1676 | 1/1 | 0.95 | 0.10 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3831 | 1/1 | 0.95 | 0.22 | 92,92,92,92 | 0 |
| 56 | MG | 2A | 3485 | 1/1 | 0.95 | 0.12 | 88,88,88,88 | 0 |
| 56 | MG | 1a | 1679 | 1/1 | 0.95 | 0.14 | 60,60,60,60 | 0 |
| 56 | MG | 1B | 221 | 1/1 | 0.95 | 0.39 | 43,43,43,43 | 0 |
| 56 | MG | 1A | 3623 | 1/1 | 0.95 | 0.20 | 52,52,52,52 | 0 |
| 56 | MG | 1B | 223 | 1/1 | 0.95 | 0.12 | 44,44,44,44 | 0 |
| 56 | MG | 1A | 3018 | 1/1 | 0.95 | 0.12 | 42,42,42,42 | 0 |
| 56 | MG | 1a | 1685 | 1/1 | 0.95 | 0.07 | 47,47,47,47 | 0 |
| 56 | MG | 1A | 3626 | 1/1 | 0.95 | 0.09 | 58,58,58,58 | 0 |
| 56 | MG | 2a | 1719 | 1/1 | 0.95 | 0.10 | 82,82,82,82 | 0 |
| 56 | MG | 2A | 3215 | 1/1 | 0.95 | 0.58 | 85,85,85,85 | 0 |
| 56 | MG | 2A | 3216 | 1/1 | 0.95 | 0.31 | 64,64,64,64 | 0 |
| 56 | MG | 1A | 3385 | 1/1 | 0.95 | 0.16 | 56,56,56,56 | 0 |
| 56 | MG | 2a | 1724 | 1/1 | 0.95 | 0.30 | 80,80,80,80 | 0 |
| 56 | MG | 1a | 1839 | 1/1 | 0.95 | 0.15 | 52,52,52,52 | 0 |
| 56 | MG | 2A | 3499 | 1/1 | 0.95 | 0.17 | 58,58,58,58 | 0 |
| 56 | MG | 2A | 3500 | 1/1 | 0.95 | 0.29 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3110 | 1/1 | 0.95 | 0.14 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3717 | 1/1 | 0.95 | 0.08 | 41,41,41,41 | 0 |
| 56 | MG | 1A | 3072 | 1/1 | 0.95 | 0.21 | 49,49,49,49 | 0 |
| 56 | MG | 1A | 3090 | 1/1 | 0.95 | 0.10 | 52,52,52,52 | 0 |
| 56 | MG | 1A | 3114 | 1/1 | 0.95 | 0.16 | 28,28,28,28 | 0 |
| 56 | MG | 1A | 3724 | 1/1 | 0.95 | 0.23 | 60,60,60,60 | 0 |
| 56 | MG | 2A | 3511 | 1/1 | 0.95 | 0.12 | 65,65,65,65 | 0 |
| 56 | MG | 1A | 3143 | 1/1 | 0.95 | 0.17 | 26,26,26,26 | 0 |
| 56 | MG | 1A | 3347 | 1/1 | 0.95 | 0.34 | 31,31,31,31 | 0 |
| 56 | MG | 1A | 3470 | 1/1 | 0.95 | 0.11 | 40,40,40,40 | 0 |
| 56 | MG | 1E | 301 | 1/1 | 0.95 | 0.16 | 46,46,46,46 | 0 |
| 56 | MG | 2A | 3516 | 1/1 | 0.95 | 0.06 | 80,80,80,80 | 0 |
| 56 | MG | 2A | 3238 | 1/1 | 0.95 | 0.25 | 40,40,40,40 | 0 |
| 56 | MG | 2A | 3243 | 1/1 | 0.95 | 0.20 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3732 | 1/1 | 0.95 | 0.13 | 39,39,39,39 | 0 |
| 56 | MG | 2A | 3521 | 1/1 | 0.95 | 0.14 | 69,69,69,69 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 56 | MG | 1A | 3144 | 1/1 | 0.95 | 0.19 | 44,44,44,44 | 0 |
| 56 | MG | 2a | 1753 | 1/1 | 0.95 | 0.06 | 79,79,79,79 | 0 |
| 56 | MG | 1a | 1852 | 1/1 | 0.95 | 0.08 | 68,68,68,68 | 0 |
| 56 | MG | 2A | 3251 | 1/1 | 0.95 | 0.27 | 55,55,55,55 | 0 |
| 56 | MG | 1A | 3115 | 1/1 | 0.95 | 0.11 | 42,42,42,42 | 0 |
| 56 | MG | 2a | 1759 | 1/1 | 0.95 | 0.09 | 62,62,62,62 | 0 |
| 56 | MG | 2a | 1761 | 1/1 | 0.95 | 0.11 | 94,94,94,94 | 0 |
| 56 | MG | 1F | 303 | 1/1 | 0.95 | 0.10 | 50,50,50,50 | 0 |
| 56 | MG | 2A | 3257 | 1/1 | 0.95 | 0.10 | 59,59,59,59 | 0 |
| 56 | MG | 2A | 3529 | 1/1 | 0.95 | 0.21 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3737 | 1/1 | 0.95 | 0.07 | 51,51,51,51 | 0 |
| 56 | MG | 1A | 3478 | 1/1 | 0.95 | 0.23 | 74,74,74,74 | 0 |
| 56 | MG | 1a | 1708 | 1/1 | 0.95 | 0.18 | 64,64,64,64 | 0 |
| 56 | MG | 1A | 3091 | 1/1 | 0.95 | 0.10 | 34,34,34,34 | 0 |
| 56 | MG | 1A | 3855 | 1/1 | 0.95 | 0.33 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3740 | 1/1 | 0.95 | 0.10 | 54,54,54,54 | 0 |
| 56 | MG | 2A | 3268 | 1/1 | 0.95 | 0.48 | 34,34,34,34 | 0 |
| 56 | MG | 1a | 1863 | 1/1 | 0.95 | 0.08 | 72,72,72,72 | 0 |
| 56 | MG | 1A | 3742 | 1/1 | 0.95 | 0.08 | 53,53,53,53 | 0 |
| 56 | MG | 2A | 3279 | 1/1 | 0.95 | 0.39 | 33,33,33,33 | 0 |
| 56 | MG | 1A | 3743 | 1/1 | 0.95 | 0.29 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3283 | 1/1 | 0.95 | 0.26 | 38,38,38,38 | 0 |
| 56 | MG | 1A | 3405 | 1/1 | 0.95 | 0.25 | 29,29,29,29 | 0 |
| 56 | MG | 1a | 1717 | 1/1 | 0.95 | 0.08 | 100,100,100,100 | 0 |
| 56 | MG | 2A | 3287 | 1/1 | 0.95 | 0.35 | 40,40,40,40 | 0 |
| 56 | MG | 2A | 3288 | 1/1 | 0.95 | 0.52 | 51,51,51,51 | 0 |
| 56 | MG | 2A | 3289 | 1/1 | 0.95 | 0.34 | 33,33,33,33 | 0 |
| 56 | MG | 1a | 1868 | 1/1 | 0.95 | 0.07 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3408 | 1/1 | 0.95 | 0.33 | 33,33,33,33 | 0 |
| 56 | MG | 1A | 3059 | 1/1 | 0.95 | 0.19 | 33,33,33,33 | 0 |
| 56 | MG | 2a | 1793 | 1/1 | 0.95 | 0.09 | 60,60,60,60 | 0 |
| 56 | MG | 1a | 1871 | 1/1 | 0.95 | 0.10 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3862 | 1/1 | 0.95 | 0.24 | 47,47,47,47 | 0 |
| 56 | MG | 1A | 3488 | 1/1 | 0.95 | 0.26 | 37,37,37,37 | 0 |
| 56 | MG | 2A | 3303 | 1/1 | 0.95 | 0.19 | 51,51,51,51 | 0 |
| 56 | MG | 1A | 3756 | 1/1 | 0.95 | 0.27 | 36,36,36,36 | 0 |
| 56 | MG | 1A | 3757 | 1/1 | 0.95 | 0.12 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3490 | 1/1 | 0.95 | 0.24 | 50,50,50,50 | 0 |
| 56 | MG | 1A | 3761 | 1/1 | 0.95 | 0.22 | 61,61,61,61 | 0 |
| 56 | MG | 1R | 201 | 1/1 | 0.95 | 0.24 | 27,27,27,27 | 0 |
| 56 | MG | 2A | 3311 | 1/1 | 0.95 | 0.50 | 32,32,32,32 | 0 |
| 56 | MG | 2A | 3568 | 1/1 | 0.95 | 0.09 | 67,67,67,67 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3651 | 1/1 | 0.95 | 0.18 | 58,58,58,58 | 0 |
| 56 | MG | 2A | 3316 | 1/1 | 0.95 | 0.34 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3763 | 1/1 | 0.95 | 0.26 | 46,46,46,46 | 0 |
| 56 | MG | 1A | 3492 | 1/1 | 0.95 | 0.25 | 27,27,27,27 | 0 |
| 56 | MG | 2A | 3087 | 1/1 | 0.95 | 0.15 | 47,47,47,47 | 0 |
| 56 | MG | 1a | 1733 | 1/1 | 0.95 | 0.13 | 51,51,51,51 | 0 |
| 56 | MG | 1A | 3414 | 1/1 | 0.95 | 0.19 | 46,46,46,46 | 0 |
| 56 | MG | 2A | 3326 | 1/1 | 0.95 | 0.21 | 76,76,76,76 | 0 |
| 56 | MG | 2B | 203 | 1/1 | 0.95 | 0.21 | 54,54,54,54 | 0 |
| 56 | MG | 2A | 3327 | 1/1 | 0.95 | 0.11 | 59,59,59,59 | 0 |
| 56 | MG | 1a | 1736 | 1/1 | 0.95 | 0.14 | 51,51,51,51 | 0 |
| 56 | MG | 2a | 1822 | 1/1 | 0.95 | 0.34 | 59,59,59,59 | 0 |
| 56 | MG | 1a | 1737 | 1/1 | 0.95 | 0.14 | 56,56,56,56 | 0 |
| 56 | MG | 2A | 3331 | 1/1 | 0.95 | 0.45 | 60,60,60,60 | 0 |
| 56 | MG | 2A | 3097 | 1/1 | 0.95 | 0.35 | 46,46,46,46 | 0 |
| 56 | MG | 1a | 1741 | 1/1 | 0.95 | 0.11 | 54,54,54,54 | 0 |
| 56 | MG | 2A | 3345 | 1/1 | 0.95 | 0.36 | 40,40,40,40 | 0 |
| 56 | MG | 1A | 3655 | 1/1 | 0.95 | 0.18 | 52,52,52,52 | 0 |
| 56 | MG | 1A | 3571 | 1/1 | 0.95 | 0.05 | 73,73,73,73 | 0 |
| 56 | MG | 2A | 3103 | 1/1 | 0.95 | 0.19 | 61,61,61,61 | 0 |
| 56 | MG | 1A | 3498 | 1/1 | 0.95 | 0.40 | 24,24,24,24 | 0 |
| 56 | MG | 1a | 1750 | 1/1 | 0.95 | 0.27 | 41,41,41,41 | 0 |
| 56 | MG | 1a | 1751 | 1/1 | 0.95 | 0.29 | 49,49,49,49 | 0 |
| 56 | MG | 2A | 3358 | 1/1 | 0.95 | 0.18 | 37,37,37,37 | 0 |
| 56 | MG | 2E | 302 | 1/1 | 0.95 | 0.23 | 43,43,43,43 | 0 |
| 56 | MG | 1A | 3501 | 1/1 | 0.95 | 0.36 | 22,22,22,22 | 0 |
| 56 | MG | 2F | 301 | 1/1 | 0.95 | 0.09 | 50,50,50,50 | 0 |
| 56 | MG | 2F | 302 | 1/1 | 0.95 | 0.19 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3415 | 1/1 | 0.95 | 0.23 | 49,49,49,49 | 0 |
| 56 | MG | 1A | 3416 | 1/1 | 0.95 | 0.26 | 38,38,38,38 | 0 |
| 56 | MG | 2A | 3368 | 1/1 | 0.95 | 0.31 | 58,58,58,58 | 0 |
| 56 | MG | 2P | 201 | 1/1 | 0.95 | 0.32 | 102,102,102,102 | 0 |
| 56 | MG | 2A | 3369 | 1/1 | 0.95 | 0.10 | 83,83,83,83 | 0 |
| 56 | MG | 1A | 3506 | 1/1 | 0.95 | 0.29 | 23,23,23,23 | 0 |
| 56 | MG | 2Q | 203 | 1/1 | 0.95 | 0.11 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3777 | 1/1 | 0.95 | 0.22 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3778 | 1/1 | 0.95 | 0.30 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3882 | 1/1 | 0.95 | 0.07 | 48,48,48,48 | 0 |
| 56 | MG | 2Y | 201 | 1/1 | 0.95 | 0.35 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3779 | 1/1 | 0.95 | 0.11 | 39,39,39,39 | 0 |
| 56 | MG | 1A | 3252 | 1/1 | 0.95 | 0.17 | 59,59,59,59 | 0 |
| 56 | MG | 25 | 101 | 1/1 | 0.95 | 0.20 | 56,56,56,56 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 56 | MG | 2A | 3119 | 1/1 | 0.95 | 0.20 | 73,73,73,73 | 0 |
| 56 | MG | 18 | 101 | 1/1 | 0.95 | 0.60 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3033 | 1/1 | 0.95 | 0.47 | 64,64,64,64 | 0 |
| 56 | MG | 2A | 3125 | 1/1 | 0.95 | 0.14 | 37,37,37,37 | 0 |
| 56 | MG | 2A | 3127 | 1/1 | 0.95 | 0.26 | 61,61,61,61 | 0 |
| 56 | MG | 1A | 3510 | 1/1 | 0.95 | 0.14 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3184 | 1/1 | 0.95 | 0.26 | 48,48,48,48 | 0 |
| 56 | MG | 1A | 3669 | 1/1 | 0.95 | 0.11 | 21,21,21,21 | 0 |
| 56 | MG | 1A | 3185 | 1/1 | 0.95 | 1.01 | 49,49,49,49 | 0 |
| 56 | MG | 1A | 3671 | 1/1 | 0.95 | 0.14 | 45,45,45,45 | 0 |
| 56 | MG | 1A | 3787 | 1/1 | 0.95 | 0.20 | 78,78,78,78 | 0 |
| 56 | MG | 2a | 1614 | 1/1 | 0.95 | 0.13 | 86,86,86,86 | 0 |
| 56 | MG | 1A | 3428 | 1/1 | 0.95 | 0.19 | 43,43,43,43 | 0 |
| 56 | MG | 2a | 1877 | 1/1 | 0.95 | 0.13 | 75,75,75,75 | 0 |
| 56 | MG | 1A | 3019 | 1/1 | 0.95 | 0.21 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3127 | 1/1 | 0.95 | 0.24 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3433 | 1/1 | 0.95 | 0.09 | 35,35,35,35 | 0 |
| 56 | MG | 2A | 3400 | 1/1 | 0.95 | 0.47 | 28,28,28,28 | 0 |
| 56 | MG | 2a | 1882 | 1/1 | 0.95 | 0.20 | 65,65,65,65 | 0 |
| 56 | MG | 1A | 3903 | 1/1 | 0.95 | 0.32 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3158 | 1/1 | 0.95 | 0.34 | 27,27,27,27 | 0 |
| 56 | MG | 1A | 3678 | 1/1 | 0.95 | 0.10 | 35,35,35,35 | 0 |
| 56 | MG | 2A | 3146 | 1/1 | 0.95 | 0.15 | 37,37,37,37 | 0 |
| 56 | MG | 1f | 202 | 1/1 | 0.95 | 0.17 | 77,77,77,77 | 0 |
| 56 | MG | 1a | 1782 | 1/1 | 0.95 | 0.08 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3149 | 1/1 | 0.95 | 0.08 | 74,74,74,74 | 0 |
| 56 | MG | 1A | 3910 | 1/1 | 0.95 | 0.15 | 48,48,48,48 | 0 |
| 56 | MG | 1A | 3437 | 1/1 | 0.95 | 0.22 | 46,46,46,46 | 0 |
| 56 | MG | 1l | 202 | 1/1 | 0.95 | 0.34 | 65,65,65,65 | 0 |
| 56 | MG | 1A | 3913 | 1/1 | 0.95 | 0.23 | 48,48,48,48 | 0 |
| 56 | MG | 2a | 1895 | 1/1 | 0.95 | 0.18 | 54,54,54,54 | 0 |
| 56 | MG | 2A | 3421 | 1/1 | 0.95 | 0.35 | 57,57,57,57 | 0 |
| 56 | MG | 1a | 1786 | 1/1 | 0.95 | 0.07 | 73,73,73,73 | 0 |
| 56 | MG | 1A | 3438 | 1/1 | 0.95 | 0.17 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3916 | 1/1 | 0.95 | 0.29 | 37,37,37,37 | 0 |
| 56 | MG | 1A | 3683 | 1/1 | 0.95 | 0.06 | 32,32,32,32 | 0 |
| 56 | MG | 1A | 3191 | 1/1 | 0.95 | 0.33 | 49,49,49,49 | 0 |
| 56 | MG | 1A | 3100 | 1/1 | 0.95 | 0.24 | 66,66,66,66 | 0 |
| 56 | MG | 2a | 1648 | 1/1 | 0.95 | 0.11 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3160 | 1/1 | 0.95 | 0.21 | 25,25,25,25 | 0 |
| 56 | MG | 1a | 1793 | 1/1 | 0.95 | 0.10 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3802 | 1/1 | 0.95 | 0.07 | 82,82,82,82 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3597 | 1/1 | 0.95 | 0.21 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3598 | 1/1 | 0.95 | 0.21 | 47,47,47,47 | 0 |
| 56 | MG | 1x | 101 | 1/1 | 0.95 | 0.26 | 75,75,75,75 | 0 |
| 56 | MG | 2A | 3437 | 1/1 | 0.95 | 0.17 | 87,87,87,87 | 0 |
| 56 | MG | 2A | 3438 | 1/1 | 0.95 | 0.13 | 65,65,65,65 | 0 |
| 56 | MG | 1A | 3806 | 1/1 | 0.95 | 0.11 | 46,46,46,46 | 0 |
| 56 | MG | 2a | 1660 | 1/1 | 0.95 | 0.21 | 78,78,78,78 | 0 |
| 56 | MG | 1A | 3807 | 1/1 | 0.95 | 0.07 | 51,51,51,51 | 0 |
| 56 | MG | 2A | 3442 | 1/1 | 0.95 | 0.31 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3443 | 1/1 | 0.95 | 0.22 | 69,69,69,69 | 0 |
| 56 | MG | 2A | 3445 | 1/1 | 0.95 | 0.12 | 79,79,79,79 | 0 |
| 56 | MG | 2a | 1666 | 1/1 | 0.95 | 0.35 | 74,74,74,74 | 0 |
| 56 | MG | 1A | 3052 | 1/1 | 0.95 | 0.10 | 36,36,36,36 | 0 |
| 56 | MG | 2a | 1669 | 1/1 | 0.95 | 0.49 | 91,91,91,91 | 0 |
| 56 | MG | 1A | 3196 | 1/1 | 0.95 | 0.43 | 59,59,59,59 | 0 |
| 56 | MG | 2x | 104 | 1/1 | 0.95 | 0.30 | 80,80,80,80 | 0 |
| 56 | MG | 1a | 1634 | 1/1 | 0.95 | 0.09 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3694 | 1/1 | 0.95 | 0.11 | 76,76,76,76 | 0 |
| 56 | MG | 1A | 3697 | 1/1 | 0.95 | 0.10 | 41,41,41,41 | 0 |
| 56 | MG | 1A | 3266 | 1/1 | 0.95 | 0.34 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3456 | 1/1 | 0.95 | 0.16 | 73,73,73,73 | 0 |
| 56 | MG | 1x | 111 | 1/1 | 0.95 | 0.28 | 76,76,76,76 | 0 |
| 57 | AKN | 2A | 3576 | 40/40 | 0.95 | 0.33 | 41,54,64,67 | 0 |
| 56 | MG | 1a | 1640 | 1/1 | 0.95 | 0.13 | 59,59,59,59 | 0 |
| 56 | MG | 2a | 1679 | 1/1 | 0.95 | 0.20 | 66,66,66,66 | 0 |
| 56 | MG | 2A | 3459 | 1/1 | 0.95 | 0.08 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3079 | 1/1 | 0.95 | 0.23 | 46,46,46,46 | 0 |
| 56 | MG | 1a | 1809 | 1/1 | 0.95 | 0.13 | 83,83,83,83 | 0 |
| 56 | MG | 1A | 3054 | 1/1 | 0.95 | 0.06 | 53,53,53,53 | 0 |
| 56 | MG | 2A | 3034 | 1/1 | 0.96 | 0.14 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3210 | 1/1 | 0.96 | 0.21 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3264 | 1/1 | 0.96 | 0.17 | 70,70,70,70 | 0 |
| 56 | MG | 2a | 1688 | 1/1 | 0.96 | 0.24 | 92,92,92,92 | 0 |
| 56 | MG | 2A | 3473 | 1/1 | 0.96 | 0.19 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3493 | 1/1 | 0.96 | 0.31 | 35,35,35,35 | 0 |
| 56 | MG | 1A | 3150 | 1/1 | 0.96 | 0.09 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3153 | 1/1 | 0.96 | 0.31 | 23,23,23,23 | 0 |
| 56 | MG | 1A | 3411 | 1/1 | 0.96 | 0.42 | 24,24,24,24 | 0 |
| 56 | MG | 1A | 3154 | 1/1 | 0.96 | 0.55 | 53,53,53,53 | 0 |
| 56 | MG | 1a | 1711 | 1/1 | 0.96 | 0.08 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3305 | 1/1 | 0.96 | 0.13 | 49,49,49,49 | 0 |
| 56 | MG | 1A | 3875 | 1/1 | 0.96 | 0.21 | 77,77,77,77 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3583 | 1/1 | 0.96 | 0.28 | 64,64,64,64 | 0 |
| 56 | MG | 1A | 3155 | 1/1 | 0.96 | 0.44 | 40,40,40,40 | 0 |
| 56 | MG | 2A | 3223 | 1/1 | 0.96 | 0.20 | 54,54,54,54 | 0 |
| 56 | MG | 1a | 1855 | 1/1 | 0.96 | 0.18 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3225 | 1/1 | 0.96 | 0.33 | 68,68,68,68 | 0 |
| 56 | MG | 2A | 3488 | 1/1 | 0.96 | 0.11 | 56,56,56,56 | 0 |
| 56 | MG | 2A | 3227 | 1/1 | 0.96 | 0.23 | 57,57,57,57 | 0 |
| 56 | MG | 1a | 1716 | 1/1 | 0.96 | 0.07 | 82,82,82,82 | 0 |
| 56 | MG | 1A | 3350 | 1/1 | 0.96 | 0.15 | 49,49,49,49 | 0 |
| 56 | MG | 2A | 3231 | 1/1 | 0.96 | 0.08 | 82,82,82,82 | 0 |
| 56 | MG | 1A | 3351 | 1/1 | 0.96 | 0.25 | 22,22,22,22 | 0 |
| 56 | MG | 1A | 3053 | 1/1 | 0.96 | 0.24 | 40,40,40,40 | 0 |
| 56 | MG | 1a | 1860 | 1/1 | 0.96 | 0.07 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3126 | 1/1 | 0.96 | 0.12 | 74,74,74,74 | 0 |
| 56 | MG | 1A | 3680 | 1/1 | 0.96 | 0.15 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3241 | 1/1 | 0.96 | 0.36 | 33,33,33,33 | 0 |
| 56 | MG | 1A | 3590 | 1/1 | 0.96 | 0.10 | 45,45,45,45 | 0 |
| 56 | MG | 2A | 3058 | 1/1 | 0.96 | 0.14 | 45,45,45,45 | 0 |
| 56 | MG | 2A | 3246 | 1/1 | 0.96 | 0.30 | 67,67,67,67 | 0 |
| 56 | MG | 2a | 1721 | 1/1 | 0.96 | 0.25 | 72,72,72,72 | 0 |
| 56 | MG | 1A | 3010 | 1/1 | 0.96 | 0.36 | 72,72,72,72 | 0 |
| 56 | MG | 1A | 3128 | 1/1 | 0.96 | 0.07 | 35,35,35,35 | 0 |
| 56 | MG | 1W | 202 | 1/1 | 0.96 | 0.20 | 43,43,43,43 | 0 |
| 56 | MG | 1A | 3129 | 1/1 | 0.96 | 0.35 | 58,58,58,58 | 0 |
| 56 | MG | 2a | 1726 | 1/1 | 0.96 | 0.20 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3253 | 1/1 | 0.96 | 0.21 | 45,45,45,45 | 0 |
| 56 | MG | 2A | 3063 | 1/1 | 0.96 | 0.14 | 39,39,39,39 | 0 |
| 56 | MG | 1A | 3687 | 1/1 | 0.96 | 0.04 | 37,37,37,37 | 0 |
| 56 | MG | 2A | 3258 | 1/1 | 0.96 | 0.27 | 56,56,56,56 | 0 |
| 56 | MG | 1a | 1730 | 1/1 | 0.96 | 0.06 | 97,97,97,97 | 0 |
| 56 | MG | 2a | 1733 | 1/1 | 0.96 | 0.18 | 59,59,59,59 | 0 |
| 56 | MG | 10 | 101 | 1/1 | 0.96 | 0.16 | 47,47,47,47 | 0 |
| 56 | MG | 1A | 3791 | 1/1 | 0.96 | 0.53 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3688 | 1/1 | 0.96 | 0.12 | 28,28,28,28 | 0 |
| 56 | MG | 2A | 3265 | 1/1 | 0.96 | 0.34 | 35,35,35,35 | 0 |
| 56 | MG | 1A | 3432 | 1/1 | 0.96 | 0.10 | 34,34,34,34 | 0 |
| 56 | MG | 2A | 3072 | 1/1 | 0.96 | 0.15 | 49,49,49,49 | 0 |
| 56 | MG | 2a | 1740 | 1/1 | 0.96 | 0.11 | 79,79,79,79 | 0 |
| 56 | MG | 2A | 3523 | 1/1 | 0.96 | 0.26 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3023 | 1/1 | 0.96 | 0.10 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3057 | 1/1 | 0.96 | 0.60 | 57,57,57,57 | 0 |
| 56 | MG | 2a | 1746 | 1/1 | 0.96 | 0.13 | 68,68,68,68 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 2A | 3272 | 1/1 | 0.96 | 0.23 | 46,46,46,46 | 0 |
| 56 | MG | 2A | 3273 | 1/1 | 0.96 | 0.33 | 37,37,37,37 | 0 |
| 56 | MG | 2A | 3274 | 1/1 | 0.96 | 0.36 | 35,35,35,35 | 0 |
| 56 | MG | 2A | 3275 | 1/1 | 0.96 | 0.36 | 44,44,44,44 | 0 |
| 56 | MG | 2a | 1751 | 1/1 | 0.96 | 0.11 | 89,89,89,89 | 0 |
| 56 | MG | 1a | 1738 | 1/1 | 0.96 | 0.15 | 52,52,52,52 | 0 |
| 56 | MG | 1a | 1740 | 1/1 | 0.96 | 0.30 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3280 | 1/1 | 0.96 | 0.24 | 46,46,46,46 | 0 |
| 56 | MG | 1A | 3239 | 1/1 | 0.96 | 0.24 | 61,61,61,61 | 0 |
| 56 | MG | 1A | 3599 | 1/1 | 0.96 | 0.23 | 69,69,69,69 | 0 |
| 56 | MG | 1a | 1743 | 1/1 | 0.96 | 0.16 | 64,64,64,64 | 0 |
| 56 | MG | 1A | 3900 | 1/1 | 0.96 | 0.18 | 62,62,62,62 | 0 |
| 56 | MG | 1a | 1746 | 1/1 | 0.96 | 0.21 | 46,46,46,46 | 0 |
| 56 | MG | 1A | 3202 | 1/1 | 0.96 | 0.09 | 83,83,83,83 | 0 |
| 56 | MG | 1a | 1749 | 1/1 | 0.96 | 0.10 | 51,51,51,51 | 0 |
| 56 | MG | 2A | 3086 | 1/1 | 0.96 | 0.28 | 78,78,78,78 | 0 |
| 56 | MG | 2A | 3542 | 1/1 | 0.96 | 0.25 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3695 | 1/1 | 0.96 | 0.14 | 32,32,32,32 | 0 |
| 56 | MG | 1A | 3166 | 1/1 | 0.96 | 0.21 | 30,30,30,30 | 0 |
| 56 | MG | 1a | 1752 | 1/1 | 0.96 | 0.29 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3906 | 1/1 | 0.96 | 0.27 | 37,37,37,37 | 0 |
| 56 | MG | 2A | 3092 | 1/1 | 0.96 | 0.14 | 39,39,39,39 | 0 |
| 56 | MG | 19 | 103 | 1/1 | 0.96 | 0.40 | 67,67,67,67 | 0 |
| 56 | MG | 2A | 3095 | 1/1 | 0.96 | 0.43 | 61,61,61,61 | 0 |
| 56 | MG | 2A | 3096 | 1/1 | 0.96 | 0.09 | 42,42,42,42 | 0 |
| 56 | MG | 2a | 1776 | 1/1 | 0.96 | 0.21 | 91,91,91,91 | 0 |
| 56 | MG | 1A | 3087 | 1/1 | 0.96 | 0.19 | 49,49,49,49 | 0 |
| 56 | MG | 2A | 3099 | 1/1 | 0.96 | 0.30 | 87,87,87,87 | 0 |
| 56 | MG | 2a | 1779 | 1/1 | 0.96 | 0.18 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3909 | 1/1 | 0.96 | 0.25 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3133 | 1/1 | 0.96 | 0.57 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3558 | 1/1 | 0.96 | 0.16 | 53,53,53,53 | 0 |
| 56 | MG | 2A | 3314 | 1/1 | 0.96 | 0.34 | 40,40,40,40 | 0 |
| 56 | MG | 1A | 3804 | 1/1 | 0.96 | 0.36 | 55,55,55,55 | 0 |
| 56 | MG | 1A | 3529 | 1/1 | 0.96 | 0.41 | 50,50,50,50 | 0 |
| 56 | MG | 2A | 3105 | 1/1 | 0.96 | 0.31 | 79,79,79,79 | 0 |
| 56 | MG | 2A | 3319 | 1/1 | 0.96 | 0.37 | 36,36,36,36 | 0 |
| 56 | MG | 1A | 3914 | 1/1 | 0.96 | 0.15 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3442 | 1/1 | 0.96 | 0.30 | 33,33,33,33 | 0 |
| 56 | MG | 2A | 3323 | 1/1 | 0.96 | 0.14 | 87,87,87,87 | 0 |
| 56 | MG | 1A | 3609 | 1/1 | 0.96 | 0.21 | 52,52,52,52 | 0 |
| 56 | MG | 1a | 1900 | 1/1 | 0.96 | 0.09 | 88,88,88,88 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3917 | 1/1 | 0.96 | 0.18 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3808 | 1/1 | 0.96 | 0.26 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3919 | 1/1 | 0.96 | 0.18 | 43,43,43,43 | 0 |
| 56 | MG | 2a | 1803 | 1/1 | 0.96 | 0.22 | 46,46,46,46 | 0 |
| 56 | MG | 1A | 3004 | 1/1 | 0.96 | 0.30 | 78,78,78,78 | 0 |
| 56 | MG | 2A | 3330 | 1/1 | 0.96 | 0.36 | 54,54,54,54 | 0 |
| 56 | MG | 1A | 3534 | 1/1 | 0.96 | 0.15 | 50,50,50,50 | 0 |
| 56 | MG | 1A | 3366 | 1/1 | 0.96 | 0.10 | 51,51,51,51 | 0 |
| 56 | MG | 2B | 204 | 1/1 | 0.96 | 0.13 | 79,79,79,79 | 0 |
| 56 | MG | 2A | 3335 | 1/1 | 0.96 | 0.32 | 44,44,44,44 | 0 |
| 56 | MG | 2B | 206 | 1/1 | 0.96 | 0.11 | 78,78,78,78 | 0 |
| 56 | MG | 2A | 3336 | 1/1 | 0.96 | 0.14 | 51,51,51,51 | 0 |
| 56 | MG | 1A | 3812 | 1/1 | 0.96 | 0.30 | 39,39,39,39 | 0 |
| 56 | MG | 2A | 3341 | 1/1 | 0.96 | 0.27 | 52,52,52,52 | 0 |
| 56 | MG | 2A | 3342 | 1/1 | 0.96 | 0.25 | 41,41,41,41 | 0 |
| 56 | MG | 1A | 3927 | 1/1 | 0.96 | 0.14 | 84,84,84,84 | 0 |
| 56 | MG | 1A | 3089 | 1/1 | 0.96 | 0.24 | 49,49,49,49 | 0 |
| 56 | MG | 2a | 1818 | 1/1 | 0.96 | 0.24 | 73,73,73,73 | 0 |
| 56 | MG | 1A | 3209 | 1/1 | 0.96 | 0.45 | 60,60,60,60 | 0 |
| 56 | MG | 2A | 3349 | 1/1 | 0.96 | 0.31 | 32,32,32,32 | 0 |
| 56 | MG | 2A | 3121 | 1/1 | 0.96 | 0.25 | 34,34,34,34 | 0 |
| 56 | MG | 2D | 301 | 1/1 | 0.96 | 0.14 | 59,59,59,59 | 0 |
| 56 | MG | 2A | 3352 | 1/1 | 0.96 | 0.32 | 21,21,21,21 | 0 |
| 56 | MG | 2A | 3123 | 1/1 | 0.96 | 0.11 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3030 | 1/1 | 0.96 | 0.46 | 56,56,56,56 | 0 |
| 56 | MG | 2a | 1827 | 1/1 | 0.96 | 0.17 | 65,65,65,65 | 0 |
| 56 | MG | 1a | 1622 | 1/1 | 0.96 | 0.12 | 37,37,37,37 | 0 |
| 56 | MG | 2E | 301 | 1/1 | 0.96 | 0.09 | 52,52,52,52 | 0 |
| 56 | MG | 2A | 3126 | 1/1 | 0.96 | 0.41 | 54,54,54,54 | 0 |
| 56 | MG | 2a | 1831 | 1/1 | 0.96 | 0.14 | 67,67,67,67 | 0 |
| 56 | MG | 1a | 1778 | 1/1 | 0.96 | 0.28 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3816 | 1/1 | 0.96 | 0.06 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3449 | 1/1 | 0.96 | 0.22 | 34,34,34,34 | 0 |
| 56 | MG | 2F | 303 | 1/1 | 0.96 | 0.51 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3324 | 1/1 | 0.96 | 0.13 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3211 | 1/1 | 0.96 | 0.31 | 40,40,40,40 | 0 |
| 56 | MG | 2a | 1839 | 1/1 | 0.96 | 0.49 | 77,77,77,77 | 0 |
| 56 | MG | 1A | 3287 | 1/1 | 0.96 | 0.54 | 69,69,69,69 | 0 |
| 56 | MG | 2a | 1841 | 1/1 | 0.96 | 0.10 | 66,66,66,66 | 0 |
| 56 | MG | 1A | 3001 | 1/1 | 0.96 | 0.15 | 26,26,26,26 | 0 |
| 56 | MG | 1A | 3456 | 1/1 | 0.96 | 0.13 | 50,50,50,50 | 0 |
| 56 | MG | 2a | 1844 | 1/1 | 0.96 | 0.13 | 64,64,64,64 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 56 | MG | 1A | 3044 | 1/1 | 0.96 | 0.13 | 60,60,60,60 | 0 |
| 56 | MG | 1a | 1635 | 1/1 | 0.96 | 0.15 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3628 | 1/1 | 0.96 | 0.10 | 33,33,33,33 | 0 |
| 56 | MG | 1B | 207 | 1/1 | 0.96 | 0.12 | 54,54,54,54 | 0 |
| 56 | MG | 1A | 3378 | 1/1 | 0.96 | 0.29 | 48,48,48,48 | 0 |
| 56 | MG | 2A | 3142 | 1/1 | 0.96 | 0.19 | 38,38,38,38 | 0 |
| 56 | MG | 2a | 1852 | 1/1 | 0.96 | 0.17 | 79,79,79,79 | 0 |
| 56 | MG | 1A | 3113 | 1/1 | 0.96 | 0.35 | 43,43,43,43 | 0 |
| 56 | MG | 2A | 3145 | 1/1 | 0.96 | 0.17 | 37,37,37,37 | 0 |
| 56 | MG | 1A | 3461 | 1/1 | 0.96 | 0.31 | 21,21,21,21 | 0 |
| 56 | MG | 2a | 1856 | 1/1 | 0.96 | 0.10 | 66,66,66,66 | 0 |
| 56 | MG | 2a | 1601 | 1/1 | 0.96 | 0.48 | 78,78,78,78 | 0 |
| 56 | MG | 1a | 1643 | 1/1 | 0.96 | 0.08 | 66,66,66,66 | 0 |
| 56 | MG | 1A | 3828 | 1/1 | 0.96 | 0.32 | 54,54,54,54 | 0 |
| 56 | MG | 1A | 3380 | 1/1 | 0.96 | 0.10 | 43,43,43,43 | 0 |
| 56 | MG | 1A | 3381 | 1/1 | 0.96 | 0.08 | 58,58,58,58 | 0 |
| 56 | MG | 1a | 1647 | 1/1 | 0.96 | 0.12 | 44,44,44,44 | 0 |
| 56 | MG | 2a | 1863 | 1/1 | 0.96 | 0.50 | 72,72,72,72 | 0 |
| 56 | MG | 1A | 3551 | 1/1 | 0.96 | 0.09 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3464 | 1/1 | 0.96 | 0.36 | 45,45,45,45 | 0 |
| 56 | MG | 1a | 1652 | 1/1 | 0.96 | 0.05 | 64,64,64,64 | 0 |
| 56 | MG | 2A | 3155 | 1/1 | 0.96 | 0.26 | 60,60,60,60 | 0 |
| 56 | MG | 2A | 3398 | 1/1 | 0.96 | 0.42 | 44,44,44,44 | 0 |
| 56 | MG | 2A | 3399 | 1/1 | 0.96 | 0.09 | 50,50,50,50 | 0 |
| 56 | MG | 1A | 3094 | 1/1 | 0.96 | 0.11 | 35,35,35,35 | 0 |
| 56 | MG | 1a | 1656 | 1/1 | 0.96 | 0.11 | 55,55,55,55 | 0 |
| 56 | MG | 2a | 1616 | 1/1 | 0.96 | 0.26 | 88,88,88,88 | 0 |
| 56 | MG | 1a | 1805 | 1/1 | 0.96 | 0.14 | 41,41,41,41 | 0 |
| 56 | MG | 2a | 1618 | 1/1 | 0.96 | 0.12 | 132,132,132,132 | 0 |
| 56 | MG | 1A | 3728 | 1/1 | 0.96 | 0.23 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3729 | 1/1 | 0.96 | 0.04 | 47,47,47,47 | 0 |
| 56 | MG | 2A | 3410 | 1/1 | 0.96 | 0.37 | 26,26,26,26 | 0 |
| 56 | MG | 1a | 1662 | 1/1 | 0.96 | 0.11 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3554 | 1/1 | 0.96 | 0.12 | 64,64,64,64 | 0 |
| 56 | MG | 1a | 1810 | 1/1 | 0.96 | 0.11 | 61,61,61,61 | 0 |
| 56 | MG | 1A | 3641 | 1/1 | 0.96 | 0.15 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3255 | 1/1 | 0.96 | 0.19 | 50,50,50,50 | 0 |
| 56 | MG | 2A | 3167 | 1/1 | 0.96 | 0.21 | 67,67,67,67 | 0 |
| 56 | MG | 2a | 1628 | 1/1 | 0.96 | 0.20 | 52,52,52,52 | 0 |
| 56 | MG | 1A | 3095 | 1/1 | 0.96 | 0.17 | 30,30,30,30 | 0 |
| 56 | MG | 1B | 224 | 1/1 | 0.96 | 0.50 | 65,65,65,65 | 0 |
| 56 | MG | 2a | 1632 | 1/1 | 0.96 | 0.07 | 75,75,75,75 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1a | 1671 | 1/1 | 0.96 | 0.25 | 43,43,43,43 | 0 |
| 56 | MG | 1A | 3334 | 1/1 | 0.96 | 1.00 | 54,54,54,54 | 0 |
| 56 | MG | 1A | 3096 | 1/1 | 0.96 | 0.30 | 44,44,44,44 | 0 |
| 56 | MG | 1a | 1678 | 1/1 | 0.96 | 0.09 | 42,42,42,42 | 0 |
| 56 | MG | 2A | 3174 | 1/1 | 0.96 | 0.13 | 48,48,48,48 | 0 |
| 56 | MG | 1A | 3647 | 1/1 | 0.96 | 0.45 | 63,63,63,63 | 0 |
| 56 | MG | 2a | 1896 | 1/1 | 0.96 | 0.29 | 51,51,51,51 | 0 |
| 56 | MG | 2a | 1897 | 1/1 | 0.96 | 0.14 | 76,76,76,76 | 0 |
| 56 | MG | 1A | 3117 | 1/1 | 0.96 | 0.23 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3119 | 1/1 | 0.96 | 0.17 | 41,41,41,41 | 0 |
| 56 | MG | 2A | 3431 | 1/1 | 0.96 | 0.27 | 29,29,29,29 | 0 |
| 56 | MG | 1A | 3746 | 1/1 | 0.96 | 0.11 | 37,37,37,37 | 0 |
| 56 | MG | 2A | 3007 | 1/1 | 0.96 | 0.15 | 46,46,46,46 | 0 |
| 56 | MG | 1A | 3747 | 1/1 | 0.96 | 0.37 | 49,49,49,49 | 0 |
| 56 | MG | 2a | 1650 | 1/1 | 0.96 | 0.17 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3748 | 1/1 | 0.96 | 0.38 | 48,48,48,48 | 0 |
| 56 | MG | 1a | 1686 | 1/1 | 0.96 | 0.03 | 103,103,103,103 | 0 |
| 56 | MG | 1A | 3474 | 1/1 | 0.96 | 0.27 | 49,49,49,49 | 0 |
| 56 | MG | 1A | 3477 | 1/1 | 0.96 | 0.25 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3013 | 1/1 | 0.96 | 0.40 | 53,53,53,53 | 0 |
| 56 | MG | 2d | 301 | 1/1 | 0.96 | 0.15 | 82,82,82,82 | 0 |
| 56 | MG | 1A | 3751 | 1/1 | 0.96 | 0.22 | 47,47,47,47 | 0 |
| 56 | MG | 1A | 3120 | 1/1 | 0.96 | 0.11 | 43,43,43,43 | 0 |
| 56 | MG | 1A | 3003 | 1/1 | 0.96 | 0.17 | 53,53,53,53 | 0 |
| 56 | MG | 2m | 201 | 1/1 | 0.96 | 0.07 | 80,80,80,80 | 0 |
| 56 | MG | 2a | 1659 | 1/1 | 0.96 | 0.25 | 46,46,46,46 | 0 |
| 56 | MG | 1A | 3566 | 1/1 | 0.96 | 0.14 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3020 | 1/1 | 0.96 | 0.43 | 55,55,55,55 | 0 |
| 56 | MG | 1A | 3398 | 1/1 | 0.96 | 0.14 | 26,26,26,26 | 0 |
| 56 | MG | 1A | 3482 | 1/1 | 0.96 | 0.21 | 38,38,38,38 | 0 |
| 56 | MG | 2a | 1664 | 1/1 | 0.96 | 0.28 | 78,78,78,78 | 0 |
| 56 | MG | 2A | 3195 | 1/1 | 0.96 | 0.20 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3659 | 1/1 | 0.96 | 0.08 | 77,77,77,77 | 0 |
| 56 | MG | 2A | 3455 | 1/1 | 0.96 | 0.17 | 76,76,76,76 | 0 |
| 56 | MG | 2a | 1668 | 1/1 | 0.96 | 0.20 | 61,61,61,61 | 0 |
| 56 | MG | 2A | 3025 | 1/1 | 0.96 | 0.33 | 50,50,50,50 | 0 |
| 56 | MG | 1A | 3570 | 1/1 | 0.96 | 0.26 | 61,61,61,61 | 0 |
| 56 | MG | 1a | 1698 | 1/1 | 0.96 | 0.11 | 94,94,94,94 | 0 |
| 56 | MG | 2A | 3028 | 1/1 | 0.96 | 0.21 | 53,53,53,53 | 0 |
| 56 | MG | 2A | 3201 | 1/1 | 0.96 | 0.24 | 53,53,53,53 | 0 |
| 56 | MG | 2A | 3461 | 1/1 | 0.96 | 0.18 | 59,59,59,59 | 0 |
| 57 | AKN | 1A | 3936 | 40/40 | 0.96 | 0.31 | 23,36,46,48 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 56 | MG | 1A | 3661 | 1/1 | 0.96 | 0.19 | 25,25,25,25 | 0 |
| 57 | AKN | 1O | 202 | 40/40 | 0.96 | 0.19 | 43,52,59,65 | 0 |
| 57 | AKN | 1a | 1913 | 40/40 | 0.96 | 0.32 | 44,55,62,63 | 0 |
| 56 | MG | 1A | 3399 | 1/1 | 0.96 | 0.20 | 47,47,47,47 | 0 |
| 56 | MG | 2a | 1677 | 1/1 | 0.96 | 0.27 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3123 | 1/1 | 0.96 | 0.19 | 45,45,45,45 | 0 |
| 56 | MG | 2A | 3205 | 1/1 | 0.96 | 0.26 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3065 | 1/1 | 0.96 | 0.89 | 72,72,72,72 | 0 |
| 58 | ZN | 15 | 104 | 1/1 | 0.96 | 0.26 | 80,80,80,80 | 0 |
| 56 | MG | 2a | 1682 | 1/1 | 0.96 | 0.29 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3207 | 1/1 | 0.96 | 0.16 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3404 | 1/1 | 0.96 | 0.36 | 39,39,39,39 | 0 |
| 56 | MG | 2a | 1742 | 1/1 | 0.97 | 0.18 | 76,76,76,76 | 0 |
| 56 | MG | 1A | 3731 | 1/1 | 0.97 | 0.17 | 54,54,54,54 | 0 |
| 56 | MG | 2A | 3382 | 1/1 | 0.97 | 0.23 | 62,62,62,62 | 0 |
| 56 | MG | 2A | 3066 | 1/1 | 0.97 | 0.08 | 76,76,76,76 | 0 |
| 56 | MG | 1A | 3893 | 1/1 | 0.97 | 0.20 | 50,50,50,50 | 0 |
| 56 | MG | 2A | 3385 | 1/1 | 0.97 | 0.15 | 51,51,51,51 | 0 |
| 56 | MG | 2A | 3572 | 1/1 | 0.97 | 0.22 | 58,58,58,58 | 0 |
| 56 | MG | 1a | 1667 | 1/1 | 0.97 | 0.11 | 60,60,60,60 | 0 |
| 56 | MG | 1A | 3085 | 1/1 | 0.97 | 0.12 | 37,37,37,37 | 0 |
| 56 | MG | 1a | 1670 | 1/1 | 0.97 | 0.07 | 59,59,59,59 | 0 |
| 56 | MG | 2A | 3389 | 1/1 | 0.97 | 0.14 | 51,51,51,51 | 0 |
| 56 | MG | 2a | 1754 | 1/1 | 0.97 | 0.06 | 83,83,83,83 | 0 |
| 56 | MG | 1A | 3733 | 1/1 | 0.97 | 0.09 | 21,21,21,21 | 0 |
| 56 | MG | 1a | 1675 | 1/1 | 0.97 | 0.28 | 41,41,41,41 | 0 |
| 56 | MG | 1A | 3277 | 1/1 | 0.97 | 0.25 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3238 | 1/1 | 0.97 | 0.12 | 57,57,57,57 | 0 |
| 56 | MG | 2a | 1760 | 1/1 | 0.97 | 0.27 | 78,78,78,78 | 0 |
| 56 | MG | 1A | 3899 | 1/1 | 0.97 | 0.10 | 50,50,50,50 | 0 |
| 56 | MG | 1A | 3395 | 1/1 | 0.97 | 0.33 | 43,43,43,43 | 0 |
| 56 | MG | 2A | 3397 | 1/1 | 0.97 | 0.21 | 32,32,32,32 | 0 |
| 56 | MG | 1A | 3485 | 1/1 | 0.97 | 0.34 | 55,55,55,55 | 0 |
| 56 | MG | 2a | 1765 | 1/1 | 0.97 | 0.23 | 76,76,76,76 | 0 |
| 56 | MG | 1A | 3486 | 1/1 | 0.97 | 0.17 | 32,32,32,32 | 0 |
| 56 | MG | 1Q | 202 | 1/1 | 0.97 | 0.14 | 18,18,18,18 | 0 |
| 56 | MG | 1A | 3601 | 1/1 | 0.97 | 0.17 | 36,36,36,36 | 0 |
| 56 | MG | 2A | 3403 | 1/1 | 0.97 | 0.09 | 56,56,56,56 | 0 |
| 56 | MG | 2A | 3405 | 1/1 | 0.97 | 0.27 | 43,43,43,43 | 0 |
| 56 | MG | 1a | 1684 | 1/1 | 0.97 | 0.07 | 56,56,56,56 | 0 |
| 56 | MG | 2A | 3407 | 1/1 | 0.97 | 0.41 | 36,36,36,36 | 0 |
| 56 | MG | 1A | 3487 | 1/1 | 0.97 | 0.11 | 39,39,39,39 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3907 | 1/1 | 0.97 | 0.13 | 48,48,48,48 | 0 |
| 56 | MG | 2D | 304 | 1/1 | 0.97 | 0.09 | 33,33,33,33 | 0 |
| 56 | MG | 1R | 203 | 1/1 | 0.97 | 0.19 | 59,59,59,59 | 0 |
| 56 | MG | 1e | 201 | 1/1 | 0.97 | 0.05 | 46,46,46,46 | 0 |
| 56 | MG | 1A | 3603 | 1/1 | 0.97 | 0.06 | 43,43,43,43 | 0 |
| 56 | MG | 1A | 3744 | 1/1 | 0.97 | 0.07 | 43,43,43,43 | 0 |
| 56 | MG | 1a | 1803 | 1/1 | 0.97 | 0.20 | 70,70,70,70 | 0 |
| 56 | MG | 2A | 3093 | 1/1 | 0.97 | 0.20 | 42,42,42,42 | 0 |
| 56 | MG | 2A | 3226 | 1/1 | 0.97 | 0.29 | 44,44,44,44 | 0 |
| 56 | MG | 2A | 3418 | 1/1 | 0.97 | 0.24 | 53,53,53,53 | 0 |
| 56 | MG | 2A | 3419 | 1/1 | 0.97 | 0.39 | 37,37,37,37 | 0 |
| 56 | MG | 1A | 3397 | 1/1 | 0.97 | 0.30 | 28,28,28,28 | 0 |
| 56 | MG | 1f | 201 | 1/1 | 0.97 | 0.12 | 57,57,57,57 | 0 |
| 56 | MG | 2a | 1789 | 1/1 | 0.97 | 0.29 | 45,45,45,45 | 0 |
| 56 | MG | 2a | 1790 | 1/1 | 0.97 | 0.15 | 39,39,39,39 | 0 |
| 56 | MG | 2a | 1791 | 1/1 | 0.97 | 0.09 | 73,73,73,73 | 0 |
| 56 | MG | 1A | 3203 | 1/1 | 0.97 | 0.45 | 48,48,48,48 | 0 |
| 56 | MG | 1A | 3912 | 1/1 | 0.97 | 0.10 | 62,62,62,62 | 0 |
| 56 | MG | 2A | 3098 | 1/1 | 0.97 | 0.32 | 41,41,41,41 | 0 |
| 56 | MG | 1A | 3152 | 1/1 | 0.97 | 0.35 | 28,28,28,28 | 0 |
| 56 | MG | 1A | 3093 | 1/1 | 0.97 | 0.12 | 42,42,42,42 | 0 |
| 56 | MG | 1a | 1695 | 1/1 | 0.97 | 0.64 | 68,68,68,68 | 0 |
| 56 | MG | 1l | 203 | 1/1 | 0.97 | 0.65 | 60,60,60,60 | 0 |
| 56 | MG | 2A | 3240 | 1/1 | 0.97 | 0.27 | 50,50,50,50 | 0 |
| 56 | MG | 1A | 3608 | 1/1 | 0.97 | 0.08 | 38,38,38,38 | 0 |
| 56 | MG | 2A | 3242 | 1/1 | 0.97 | 0.32 | 42,42,42,42 | 0 |
| 56 | MG | 1m | 201 | 1/1 | 0.97 | 0.15 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3829 | 1/1 | 0.97 | 0.08 | 51,51,51,51 | 0 |
| 56 | MG | 2A | 3435 | 1/1 | 0.97 | 0.32 | 69,69,69,69 | 0 |
| 56 | MG | 1X | 101 | 1/1 | 0.97 | 0.15 | 44,44,44,44 | 0 |
| 56 | MG | 1A | 3494 | 1/1 | 0.97 | 0.43 | 50,50,50,50 | 0 |
| 56 | MG | 1A | 3610 | 1/1 | 0.97 | 0.16 | 31,31,31,31 | 0 |
| 56 | MG | 2A | 3439 | 1/1 | 0.97 | 0.12 | 52,52,52,52 | 0 |
| 56 | MG | 2A | 3249 | 1/1 | 0.97 | 0.42 | 34,34,34,34 | 0 |
| 56 | MG | 2A | 3250 | 1/1 | 0.97 | 0.26 | 39,39,39,39 | 0 |
| 56 | MG | 1A | 3401 | 1/1 | 0.97 | 0.26 | 39,39,39,39 | 0 |
| 56 | MG | 1A | 3921 | 1/1 | 0.97 | 0.28 | 32,32,32,32 | 0 |
| 56 | MG | 1A | 3612 | 1/1 | 0.97 | 0.18 | 35,35,35,35 | 0 |
| 56 | MG | 2A | 3446 | 1/1 | 0.97 | 0.10 | 50,50,50,50 | 0 |
| 56 | MG | 1A | 3497 | 1/1 | 0.97 | 0.28 | 27,27,27,27 | 0 |
| 56 | MG | 2A | 3449 | 1/1 | 0.97 | 0.13 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3758 | 1/1 | 0.97 | 0.22 | 72,72,72,72 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 56 | MG | 2a | 1821 | 1/1 | 0.97 | 0.08 | 82,82,82,82 | 0 |
| 56 | MG | 2A | 3115 | 1/1 | 0.97 | 0.29 | 57,57,57,57 | 0 |
| 56 | MG | 1a | 1821 | 1/1 | 0.97 | 0.06 | 55,55,55,55 | 0 |
| 56 | MG | 1A | 3837 | 1/1 | 0.97 | 0.07 | 60,60,60,60 | 0 |
| 56 | MG | 2A | 3261 | 1/1 | 0.97 | 0.21 | 81,81,81,81 | 0 |
| 56 | MG | 2A | 3262 | 1/1 | 0.97 | 0.19 | 50,50,50,50 | 0 |
| 56 | MG | 17 | 103 | 1/1 | 0.97 | 0.25 | 51,51,51,51 | 0 |
| 56 | MG | 1A | 3926 | 1/1 | 0.97 | 0.09 | 61,61,61,61 | 0 |
| 56 | MG | 1A | 3682 | 1/1 | 0.97 | 0.14 | 52,52,52,52 | 0 |
| 56 | MG | 1A | 3067 | 1/1 | 0.97 | 0.23 | 35,35,35,35 | 0 |
| 56 | MG | 2A | 3122 | 1/1 | 0.97 | 0.05 | 44,44,44,44 | 0 |
| 56 | MG | 1A | 3499 | 1/1 | 0.97 | 0.22 | 39,39,39,39 | 0 |
| 56 | MG | 2A | 3269 | 1/1 | 0.97 | 0.40 | 38,38,38,38 | 0 |
| 56 | MG | 1A | 3500 | 1/1 | 0.97 | 0.34 | 40,40,40,40 | 0 |
| 56 | MG | 1A | 3346 | 1/1 | 0.97 | 0.27 | 23,23,23,23 | 0 |
| 56 | MG | 2a | 1836 | 1/1 | 0.97 | 0.17 | 61,61,61,61 | 0 |
| 56 | MG | 2a | 1631 | 1/1 | 0.97 | 0.26 | 90,90,90,90 | 0 |
| 56 | MG | 1A | 3323 | 1/1 | 0.97 | 0.16 | 81,81,81,81 | 0 |
| 56 | MG | 2a | 1633 | 1/1 | 0.97 | 0.11 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3406 | 1/1 | 0.97 | 0.31 | 35,35,35,35 | 0 |
| 56 | MG | 2A | 3467 | 1/1 | 0.97 | 0.32 | 66,66,66,66 | 0 |
| 56 | MG | 1A | 3767 | 1/1 | 0.97 | 0.35 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3505 | 1/1 | 0.97 | 0.14 | 27,27,27,27 | 0 |
| 56 | MG | 2A | 3278 | 1/1 | 0.97 | 0.41 | 44,44,44,44 | 0 |
| 56 | MG | 2a | 1639 | 1/1 | 0.97 | 0.08 | 42,42,42,42 | 0 |
| 56 | MG | 2a | 1846 | 1/1 | 0.97 | 0.06 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3073 | 1/1 | 0.97 | 0.12 | 50,50,50,50 | 0 |
| 56 | MG | 1a | 1606 | 1/1 | 0.97 | 0.22 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3281 | 1/1 | 0.97 | 0.34 | 38,38,38,38 | 0 |
| 56 | MG | 1a | 1721 | 1/1 | 0.97 | 0.11 | 70,70,70,70 | 0 |
| 56 | MG | 1A | 3507 | 1/1 | 0.97 | 0.41 | 37,37,37,37 | 0 |
| 56 | MG | 2a | 1645 | 1/1 | 0.97 | 0.06 | 75,75,75,75 | 0 |
| 56 | MG | 2A | 3476 | 1/1 | 0.97 | 0.16 | 49,49,49,49 | 0 |
| 56 | MG | 1A | 3771 | 1/1 | 0.97 | 0.32 | 46,46,46,46 | 0 |
| 56 | MG | 1a | 1724 | 1/1 | 0.97 | 0.10 | 64,64,64,64 | 0 |
| 56 | MG | 2A | 3136 | 1/1 | 0.97 | 0.16 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3625 | 1/1 | 0.97 | 0.06 | 47,47,47,47 | 0 |
| 56 | MG | 1A | 3189 | 1/1 | 0.97 | 0.24 | 55,55,55,55 | 0 |
| 56 | MG | 1A | 3775 | 1/1 | 0.97 | 0.05 | 67,67,67,67 | 0 |
| 56 | MG | 2A | 3291 | 1/1 | 0.97 | 0.33 | 35,35,35,35 | 0 |
| 56 | MG | 2A | 3292 | 1/1 | 0.97 | 0.13 | 45,45,45,45 | 0 |
| 56 | MG | 1A | 3105 | 1/1 | 0.97 | 0.23 | 33,33,33,33 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 2A | 3294 | 1/1 | 0.97 | 0.19 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3696 | 1/1 | 0.97 | 0.14 | 44,44,44,44 | 0 |
| 56 | MG | 2A | 3297 | 1/1 | 0.97 | 0.09 | 71,71,71,71 | 0 |
| 56 | MG | 2A | 3489 | 1/1 | 0.97 | 0.18 | 69,69,69,69 | 0 |
| 56 | MG | 2A | 3143 | 1/1 | 0.97 | 0.20 | 43,43,43,43 | 0 |
| 56 | MG | 1A | 3413 | 1/1 | 0.97 | 0.33 | 28,28,28,28 | 0 |
| 56 | MG | 1A | 3106 | 1/1 | 0.97 | 0.12 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3064 | 1/1 | 0.97 | 0.33 | 28,28,28,28 | 0 |
| 56 | MG | 1A | 3081 | 1/1 | 0.97 | 0.14 | 31,31,31,31 | 0 |
| 56 | MG | 1A | 3460 | 1/1 | 0.97 | 0.33 | 25,25,25,25 | 0 |
| 56 | MG | 1A | 3516 | 1/1 | 0.97 | 0.32 | 48,48,48,48 | 0 |
| 56 | MG | 1B | 217 | 1/1 | 0.97 | 0.28 | 56,56,56,56 | 0 |
| 56 | MG | 2A | 3017 | 1/1 | 0.97 | 0.11 | 55,55,55,55 | 0 |
| 56 | MG | 1A | 3635 | 1/1 | 0.97 | 0.14 | 53,53,53,53 | 0 |
| 56 | MG | 2A | 3313 | 1/1 | 0.97 | 0.31 | 36,36,36,36 | 0 |
| 56 | MG | 2A | 3501 | 1/1 | 0.97 | 0.13 | 47,47,47,47 | 0 |
| 56 | MG | 2A | 3502 | 1/1 | 0.97 | 0.31 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3572 | 1/1 | 0.97 | 0.22 | 69,69,69,69 | 0 |
| 56 | MG | 1a | 1625 | 1/1 | 0.97 | 0.07 | 47,47,47,47 | 0 |
| 56 | MG | 1A | 3249 | 1/1 | 0.97 | 0.28 | 48,48,48,48 | 0 |
| 56 | MG | 1A | 3418 | 1/1 | 0.97 | 0.26 | 39,39,39,39 | 0 |
| 56 | MG | 2a | 1885 | 1/1 | 0.97 | 0.20 | 84,84,84,84 | 0 |
| 56 | MG | 2A | 3023 | 1/1 | 0.97 | 0.10 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3520 | 1/1 | 0.97 | 0.38 | 24,24,24,24 | 0 |
| 56 | MG | 2A | 3321 | 1/1 | 0.97 | 0.12 | 75,75,75,75 | 0 |
| 56 | MG | 1a | 1745 | 1/1 | 0.97 | 0.22 | 55,55,55,55 | 0 |
| 56 | MG | 1A | 3640 | 1/1 | 0.97 | 0.19 | 53,53,53,53 | 0 |
| 56 | MG | 1a | 1747 | 1/1 | 0.97 | 0.19 | 21,21,21,21 | 0 |
| 56 | MG | 1a | 1631 | 1/1 | 0.97 | 0.10 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3419 | 1/1 | 0.97 | 0.32 | 35,35,35,35 | 0 |
| 56 | MG | 2A | 3164 | 1/1 | 0.97 | 0.18 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3518 | 1/1 | 0.97 | 0.13 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3062 | 1/1 | 0.97 | 0.48 | 22,22,22,22 | 0 |
| 56 | MG | 1A | 3421 | 1/1 | 0.97 | 0.32 | 37,37,37,37 | 0 |
| 56 | MG | 1A | 3383 | 1/1 | 0.97 | 0.04 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3162 | 1/1 | 0.97 | 0.29 | 28,28,28,28 | 0 |
| 56 | MG | 1A | 3426 | 1/1 | 0.97 | 0.13 | 33,33,33,33 | 0 |
| 56 | MG | 1A | 3527 | 1/1 | 0.97 | 0.16 | 74,74,74,74 | 0 |
| 56 | MG | 1A | 3528 | 1/1 | 0.97 | 0.10 | 49,49,49,49 | 0 |
| 56 | MG | 2A | 3337 | 1/1 | 0.97 | 0.16 | 52,52,52,52 | 0 |
| 56 | MG | 1D | 301 | 1/1 | 0.97 | 0.20 | 26,26,26,26 | 0 |
| 56 | MG | 2A | 3340 | 1/1 | 0.97 | 0.17 | 55,55,55,55 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1a | 1758 | 1/1 | 0.97 | 0.26 | 63,63,63,63 | 0 |
| 56 | MG | 1a | 1642 | 1/1 | 0.97 | 0.29 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3344 | 1/1 | 0.97 | 0.26 | 39,39,39,39 | 0 |
| 56 | MG | 1A | 3469 | 1/1 | 0.97 | 0.31 | 44,44,44,44 | 0 |
| 56 | MG | 1A | 3718 | 1/1 | 0.97 | 0.23 | 68,68,68,68 | 0 |
| 56 | MG | 1A | 3719 | 1/1 | 0.97 | 0.20 | 43,43,43,43 | 0 |
| 56 | MG | 1A | 3531 | 1/1 | 0.97 | 0.40 | 33,33,33,33 | 0 |
| 56 | MG | 1A | 3135 | 1/1 | 0.97 | 0.43 | 61,61,61,61 | 0 |
| 56 | MG | 1a | 1765 | 1/1 | 0.97 | 0.33 | 78,78,78,78 | 0 |
| 56 | MG | 1A | 3429 | 1/1 | 0.97 | 0.23 | 29,29,29,29 | 0 |
| 56 | MG | 2A | 3539 | 1/1 | 0.97 | 0.15 | 63,63,63,63 | 0 |
| 56 | MG | 1a | 1650 | 1/1 | 0.97 | 0.33 | 55,55,55,55 | 0 |
| 56 | MG | 1a | 1881 | 1/1 | 0.97 | 0.10 | 64,64,64,64 | 0 |
| 56 | MG | 2A | 3357 | 1/1 | 0.97 | 0.26 | 42,42,42,42 | 0 |
| 56 | MG | 2A | 3051 | 1/1 | 0.97 | 0.09 | 42,42,42,42 | 0 |
| 56 | MG | 2A | 3544 | 1/1 | 0.97 | 0.10 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3363 | 1/1 | 0.97 | 0.42 | 55,55,55,55 | 0 |
| 56 | MG | 2A | 3186 | 1/1 | 0.97 | 0.13 | 45,45,45,45 | 0 |
| 56 | MG | 2A | 3365 | 1/1 | 0.97 | 0.43 | 33,33,33,33 | 0 |
| 56 | MG | 1A | 3883 | 1/1 | 0.97 | 0.11 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3884 | 1/1 | 0.97 | 0.15 | 69,69,69,69 | 0 |
| 56 | MG | 1a | 1653 | 1/1 | 0.97 | 0.19 | 72,72,72,72 | 0 |
| 56 | MG | 1A | 3723 | 1/1 | 0.97 | 0.08 | 33,33,33,33 | 0 |
| 56 | MG | 2x | 107 | 1/1 | 0.97 | 0.16 | 66,66,66,66 | 0 |
| 56 | MG | 1a | 1655 | 1/1 | 0.97 | 0.12 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3386 | 1/1 | 0.97 | 0.08 | 46,46,46,46 | 0 |
| 56 | MG | 2A | 3554 | 1/1 | 0.97 | 0.19 | 80,80,80,80 | 0 |
| 56 | MG | 2a | 1730 | 1/1 | 0.97 | 0.05 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3589 | 1/1 | 0.97 | 0.25 | 54,54,54,54 | 0 |
| 56 | MG | 2A | 3373 | 1/1 | 0.97 | 0.25 | 45,45,45,45 | 0 |
| 56 | MG | 2A | 3557 | 1/1 | 0.97 | 0.16 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3358 | 1/1 | 0.97 | 0.37 | 29,29,29,29 | 0 |
| 56 | MG | 1a | 1661 | 1/1 | 0.97 | 0.09 | 64,64,64,64 | 0 |
| 56 | MG | 1a | 1777 | 1/1 | 0.97 | 0.14 | 88,88,88,88 | 0 |
| 56 | MG | 1A | 3234 | 1/1 | 0.97 | 0.15 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3099 | 1/1 | 0.97 | 0.13 | 31,31,31,31 | 0 |
| 58 | ZN | 16 | 501 | 1/1 | 0.97 | 0.18 | 58,58,58,58 | 0 |
| 56 | MG | 1A | 3056 | 1/1 | 0.97 | 0.09 | 52,52,52,52 | 0 |
| 58 | ZN | 26 | 501 | 1/1 | 0.97 | 0.14 | 73,73,73,73 | 0 |
| 56 | MG | 2A | 3380 | 1/1 | 0.97 | 0.21 | 42,42,42,42 | 0 |
| 56 | MG | 2A | 3566 | 1/1 | 0.97 | 0.29 | 75,75,75,75 | 0 |
| 56 | MG | 1A | 3455 | 1/1 | 0.98 | 0.25 | 42,42,42,42 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 2A | 3350 | 1/1 | 0.98 | 0.25 | 44,44,44,44 | 0 |
| 56 | MG | 2A | 3244 | 1/1 | 0.98 | 0.48 | 34,34,34,34 | 0 |
| 56 | MG | 1A | 3848 | 1/1 | 0.98 | 0.16 | 50,50,50,50 | 0 |
| 56 | MG | 2A | 3353 | 1/1 | 0.98 | 0.36 | 30,30,30,30 | 0 |
| 56 | MG | 2A | 3073 | 1/1 | 0.98 | 0.17 | 49,49,49,49 | 0 |
| 56 | MG | 2A | 3074 | 1/1 | 0.98 | 0.31 | 51,51,51,51 | 0 |
| 56 | MG | 1A | 3745 | 1/1 | 0.98 | 0.13 | 47,47,47,47 | 0 |
| 56 | MG | 1B | 229 | 1/1 | 0.98 | 0.15 | 33,33,33,33 | 0 |
| 56 | MG | 1a | 1739 | 1/1 | 0.98 | 0.20 | 42,42,42,42 | 0 |
| 56 | MG | 2A | 3362 | 1/1 | 0.98 | 0.18 | 43,43,43,43 | 0 |
| 56 | MG | 1A | 3231 | 1/1 | 0.98 | 0.19 | 94,94,94,94 | 0 |
| 56 | MG | 1A | 3514 | 1/1 | 0.98 | 0.32 | 34,34,34,34 | 0 |
| 56 | MG | 2a | 1699 | 1/1 | 0.98 | 0.46 | 84,84,84,84 | 0 |
| 56 | MG | 1A | 3173 | 1/1 | 0.98 | 0.29 | 24,24,24,24 | 0 |
| 56 | MG | 2A | 3254 | 1/1 | 0.98 | 0.14 | 62,62,62,62 | 0 |
| 56 | MG | 2A | 3001 | 1/1 | 0.98 | 0.17 | 69,69,69,69 | 0 |
| 56 | MG | 2A | 3256 | 1/1 | 0.98 | 0.35 | 30,30,30,30 | 0 |
| 56 | MG | 1a | 1673 | 1/1 | 0.98 | 0.12 | 41,41,41,41 | 0 |
| 56 | MG | 1a | 1674 | 1/1 | 0.98 | 0.31 | 51,51,51,51 | 0 |
| 56 | MG | 1A | 3082 | 1/1 | 0.98 | 0.23 | 35,35,35,35 | 0 |
| 56 | MG | 2A | 3005 | 1/1 | 0.98 | 0.20 | 57,57,57,57 | 0 |
| 56 | MG | 1A | 3517 | 1/1 | 0.98 | 0.41 | 19,19,19,19 | 0 |
| 56 | MG | 2a | 1709 | 1/1 | 0.98 | 0.10 | 89,89,89,89 | 0 |
| 56 | MG | 1A | 3622 | 1/1 | 0.98 | 0.08 | 59,59,59,59 | 0 |
| 56 | MG | 2A | 3088 | 1/1 | 0.98 | 0.07 | 39,39,39,39 | 0 |
| 56 | MG | 1A | 3410 | 1/1 | 0.98 | 0.22 | 30,30,30,30 | 0 |
| 56 | MG | 1A | 3753 | 1/1 | 0.98 | 0.12 | 29,29,29,29 | 0 |
| 56 | MG | 1A | 3190 | 1/1 | 0.98 | 0.39 | 63,63,63,63 | 0 |
| 56 | MG | 1a | 1610 | 1/1 | 0.98 | 0.15 | 68,68,68,68 | 0 |
| 56 | MG | 2R | 201 | 1/1 | 0.98 | 0.26 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3755 | 1/1 | 0.98 | 0.17 | 42,42,42,42 | 0 |
| 56 | MG | 1E | 302 | 1/1 | 0.98 | 0.36 | 22,22,22,22 | 0 |
| 56 | MG | 1A | 3107 | 1/1 | 0.98 | 0.17 | 34,34,34,34 | 0 |
| 56 | MG | 2A | 3271 | 1/1 | 0.98 | 0.06 | 45,45,45,45 | 0 |
| 56 | MG | 2A | 3015 | 1/1 | 0.98 | 0.10 | 56,56,56,56 | 0 |
| 56 | MG | 2A | 3180 | 1/1 | 0.98 | 0.12 | 61,61,61,61 | 0 |
| 56 | MG | 1A | 3489 | 1/1 | 0.98 | 0.19 | 49,49,49,49 | 0 |
| 56 | MG | 28 | 101 | 1/1 | 0.98 | 0.09 | 49,49,49,49 | 0 |
| 56 | MG | 1A | 3226 | 1/1 | 0.98 | 0.12 | 59,59,59,59 | 0 |
| 56 | MG | 1A | 3591 | 1/1 | 0.98 | 0.11 | 50,50,50,50 | 0 |
| 56 | MG | 2a | 1603 | 1/1 | 0.98 | 0.14 | 80,80,80,80 | 0 |
| 56 | MG | 1A | 3920 | 1/1 | 0.98 | 0.08 | 38,38,38,38 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3760 | 1/1 | 0.98 | 0.16 | 46,46,46,46 | 0 |
| 56 | MG | 1a | 1903 | 1/1 | 0.98 | 0.18 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3491 | 1/1 | 0.98 | 0.20 | 41,41,41,41 | 0 |
| 56 | MG | 2A | 3104 | 1/1 | 0.98 | 0.24 | 43,43,43,43 | 0 |
| 56 | MG | 2A | 3508 | 1/1 | 0.98 | 0.13 | 55,55,55,55 | 0 |
| 56 | MG | 2a | 1866 | 1/1 | 0.98 | 0.06 | 63,63,63,63 | 0 |
| 56 | MG | 2A | 3509 | 1/1 | 0.98 | 0.18 | 46,46,46,46 | 0 |
| 56 | MG | 1A | 3076 | 1/1 | 0.98 | 0.26 | 51,51,51,51 | 0 |
| 56 | MG | 2A | 3284 | 1/1 | 0.98 | 0.41 | 33,33,33,33 | 0 |
| 56 | MG | 1A | 3631 | 1/1 | 0.98 | 0.14 | 49,49,49,49 | 0 |
| 56 | MG | 1A | 3340 | 1/1 | 0.98 | 0.62 | 45,45,45,45 | 0 |
| 56 | MG | 1a | 1623 | 1/1 | 0.98 | 0.08 | 52,52,52,52 | 0 |
| 56 | MG | 1A | 3559 | 1/1 | 0.98 | 0.30 | 41,41,41,41 | 0 |
| 56 | MG | 1A | 3675 | 1/1 | 0.98 | 0.10 | 33,33,33,33 | 0 |
| 56 | MG | 2A | 3402 | 1/1 | 0.98 | 0.34 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3396 | 1/1 | 0.98 | 0.24 | 19,19,19,19 | 0 |
| 56 | MG | 2A | 3404 | 1/1 | 0.98 | 0.34 | 37,37,37,37 | 0 |
| 56 | MG | 1A | 3495 | 1/1 | 0.98 | 0.26 | 32,32,32,32 | 0 |
| 56 | MG | 1A | 3329 | 1/1 | 0.98 | 0.21 | 32,32,32,32 | 0 |
| 56 | MG | 1a | 1629 | 1/1 | 0.98 | 0.05 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3931 | 1/1 | 0.98 | 0.17 | 36,36,36,36 | 0 |
| 56 | MG | 2A | 3295 | 1/1 | 0.98 | 0.35 | 43,43,43,43 | 0 |
| 56 | MG | 1A | 3165 | 1/1 | 0.98 | 0.21 | 18,18,18,18 | 0 |
| 56 | MG | 1A | 3530 | 1/1 | 0.98 | 0.06 | 41,41,41,41 | 0 |
| 56 | MG | 2A | 3298 | 1/1 | 0.98 | 0.11 | 78,78,78,78 | 0 |
| 56 | MG | 2a | 1756 | 1/1 | 0.98 | 0.12 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3772 | 1/1 | 0.98 | 0.33 | 58,58,58,58 | 0 |
| 56 | MG | 2A | 3414 | 1/1 | 0.98 | 0.19 | 61,61,61,61 | 0 |
| 56 | MG | 1A | 3382 | 1/1 | 0.98 | 0.18 | 51,51,51,51 | 0 |
| 56 | MG | 1A | 3367 | 1/1 | 0.98 | 0.22 | 28,28,28,28 | 0 |
| 56 | MG | 2A | 3302 | 1/1 | 0.98 | 0.34 | 32,32,32,32 | 0 |
| 56 | MG | 1a | 1707 | 1/1 | 0.98 | 0.12 | 56,56,56,56 | 0 |
| 56 | MG | 2A | 3040 | 1/1 | 0.98 | 0.15 | 34,34,34,34 | 0 |
| 56 | MG | 2A | 3305 | 1/1 | 0.98 | 0.37 | 48,48,48,48 | 0 |
| 56 | MG | 1a | 1636 | 1/1 | 0.98 | 0.07 | 74,74,74,74 | 0 |
| 56 | MG | 2A | 3422 | 1/1 | 0.98 | 0.11 | 36,36,36,36 | 0 |
| 56 | MG | 1A | 3422 | 1/1 | 0.98 | 0.19 | 61,61,61,61 | 0 |
| 56 | MG | 1B | 203 | 1/1 | 0.98 | 0.24 | 51,51,51,51 | 0 |
| 56 | MG | 2A | 3309 | 1/1 | 0.98 | 0.08 | 36,36,36,36 | 0 |
| 56 | MG | 2a | 1900 | 1/1 | 0.98 | 0.54 | 74,74,74,74 | 0 |
| 56 | MG | 2a | 1901 | 1/1 | 0.98 | 0.19 | 49,49,49,49 | 0 |
| 56 | MG | 1A | 3684 | 1/1 | 0.98 | 0.12 | 47,47,47,47 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 2A | 3045 | 1/1 | 0.98 | 0.29 | 59,59,59,59 | 0 |
| 56 | MG | 2A | 3312 | 1/1 | 0.98 | 0.32 | 32,32,32,32 | 0 |
| 56 | MG | 1A | 3471 | 1/1 | 0.98 | 0.45 | 29,29,29,29 | 0 |
| 56 | MG | 2a | 1646 | 1/1 | 0.98 | 0.12 | 78,78,78,78 | 0 |
| 56 | MG | 2a | 1647 | 1/1 | 0.98 | 0.28 | 65,65,65,65 | 0 |
| 56 | MG | 1A | 3643 | 1/1 | 0.98 | 0.07 | 40,40,40,40 | 0 |
| 56 | MG | 1A | 3423 | 1/1 | 0.98 | 0.20 | 28,28,28,28 | 0 |
| 56 | MG | 1A | 3730 | 1/1 | 0.98 | 0.15 | 44,44,44,44 | 0 |
| 56 | MG | 1A | 3503 | 1/1 | 0.98 | 0.35 | 27,27,27,27 | 0 |
| 56 | MG | 2A | 3318 | 1/1 | 0.98 | 0.45 | 36,36,36,36 | 0 |
| 56 | MG | 1A | 3118 | 1/1 | 0.98 | 0.47 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3834 | 1/1 | 0.98 | 0.17 | 58,58,58,58 | 0 |
| 56 | MG | 2A | 3219 | 1/1 | 0.98 | 0.41 | 67,67,67,67 | 0 |
| 56 | MG | 2a | 1784 | 1/1 | 0.98 | 0.06 | 77,77,77,77 | 0 |
| 56 | MG | 2a | 1785 | 1/1 | 0.98 | 0.08 | 71,71,71,71 | 0 |
| 56 | MG | 1A | 3369 | 1/1 | 0.98 | 0.21 | 63,63,63,63 | 0 |
| 56 | MG | 1A | 3734 | 1/1 | 0.98 | 0.17 | 40,40,40,40 | 0 |
| 56 | MG | 1a | 1649 | 1/1 | 0.98 | 0.13 | 66,66,66,66 | 0 |
| 56 | MG | 1A | 3475 | 1/1 | 0.98 | 0.18 | 32,32,32,32 | 0 |
| 56 | MG | 1A | 3403 | 1/1 | 0.98 | 0.32 | 28,28,28,28 | 0 |
| 56 | MG | 1A | 3172 | 1/1 | 0.98 | 0.39 | 22,22,22,22 | 0 |
| 56 | MG | 2A | 3559 | 1/1 | 0.98 | 0.17 | 39,39,39,39 | 0 |
| 56 | MG | 2A | 3444 | 1/1 | 0.98 | 0.12 | 45,45,45,45 | 0 |
| 56 | MG | 2A | 3141 | 1/1 | 0.98 | 0.26 | 40,40,40,40 | 0 |
| 56 | MG | 1A | 3387 | 1/1 | 0.98 | 0.09 | 49,49,49,49 | 0 |
| 56 | MG | 2A | 3228 | 1/1 | 0.98 | 0.08 | 54,54,54,54 | 0 |
| 56 | MG | 2A | 3448 | 1/1 | 0.98 | 0.26 | 59,59,59,59 | 0 |
| 56 | MG | 2a | 1799 | 1/1 | 0.98 | 0.33 | 56,56,56,56 | 0 |
| 56 | MG | 1A | 3652 | 1/1 | 0.98 | 0.13 | 38,38,38,38 | 0 |
| 56 | MG | 1A | 3613 | 1/1 | 0.98 | 0.20 | 40,40,40,40 | 0 |
| 56 | MG | 2A | 3333 | 1/1 | 0.98 | 0.36 | 36,36,36,36 | 0 |
| 56 | MG | 2A | 3334 | 1/1 | 0.98 | 0.21 | 44,44,44,44 | 0 |
| 56 | MG | 1A | 3741 | 1/1 | 0.98 | 0.19 | 46,46,46,46 | 0 |
| 56 | MG | 1A | 3454 | 1/1 | 0.98 | 0.52 | 45,45,45,45 | 0 |
| 56 | MG | 2A | 3233 | 1/1 | 0.98 | 0.22 | 36,36,36,36 | 0 |
| 56 | MG | 1x | 104 | 1/1 | 0.98 | 0.28 | 69,69,69,69 | 0 |
| 56 | MG | 1A | 3898 | 1/1 | 0.98 | 0.09 | 46,46,46,46 | 0 |
| 56 | MG | 1A | 3481 | 1/1 | 0.98 | 0.17 | 41,41,41,41 | 0 |
| 56 | MG | 1A | 3846 | 1/1 | 0.98 | 0.29 | 63,63,63,63 | 0 |
| 58 | ZN | 1Y | 501 | 1/1 | 0.98 | 0.17 | 81,81,81,81 | 0 |
| 56 | MG | 2A | 3343 | 1/1 | 0.98 | 0.45 | 28,28,28,28 | 0 |
| 56 | MG | 2A | 3239 | 1/1 | 0.98 | 0.17 | 39,39,39,39 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3901 | 1/1 | 0.98 | 0.20 | 40,40,40,40 | 0 |
| 58 | ZN | 1n | 501 | 1/1 | 0.98 | 0.15 | 63,63,63,63 | 0 |
| 56 | MG | 2a | 1814 | 1/1 | 0.98 | 0.33 | 50,50,50,50 | 0 |
| 56 | MG | 2A | 3069 | 1/1 | 0.98 | 0.20 | 48,48,48,48 | 0 |
| 56 | MG | 2A | 3347 | 1/1 | 0.98 | 0.23 | 37,37,37,37 | 0 |
| 56 | MG | 1a | 1734 | 1/1 | 0.98 | 0.11 | 70,70,70,70 | 0 |
| 56 | MG | 2a | 1713 | 1/1 | 0.99 | 0.14 | 69,69,69,69 | 0 |
| 56 | MG | 1a | 1668 | 1/1 | 0.99 | 0.21 | 64,64,64,64 | 0 |
| 56 | MG | 1A | 3412 | 1/1 | 0.99 | 0.29 | 35,35,35,35 | 0 |
| 56 | MG | 1A | 3197 | 1/1 | 0.99 | 0.21 | 81,81,81,81 | 0 |
| 56 | MG | 2a | 1717 | 1/1 | 0.99 | 0.19 | 67,67,67,67 | 0 |
| 56 | MG | 1A | 3156 | 1/1 | 0.99 | 0.26 | 59,59,59,59 | 0 |
| 56 | MG | 2a | 1797 | 1/1 | 0.99 | 0.25 | 68,68,68,68 | 0 |
| 56 | MG | 2a | 1681 | 1/1 | 0.99 | 0.15 | 72,72,72,72 | 0 |
| 56 | MG | 1a | 1672 | 1/1 | 0.99 | 0.30 | 51,51,51,51 | 0 |
| 56 | MG | 1A | 3069 | 1/1 | 0.99 | 0.20 | 32,32,32,32 | 0 |
| 56 | MG | 1A | 3427 | 1/1 | 0.99 | 0.36 | 27,27,27,27 | 0 |
| 56 | MG | 1A | 3568 | 1/1 | 0.99 | 0.33 | 44,44,44,44 | 0 |
| 56 | MG | 1A | 3151 | 1/1 | 0.99 | 0.25 | 27,27,27,27 | 0 |
| 56 | MG | 15 | 101 | 1/1 | 0.99 | 0.21 | 31,31,31,31 | 0 |
| 56 | MG | 1A | 3250 | 1/1 | 0.99 | 0.21 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3237 | 1/1 | 0.99 | 0.20 | 50,50,50,50 | 0 |
| 56 | MG | 1A | 3800 | 1/1 | 0.99 | 0.13 | 57,57,57,57 | 0 |
| 56 | MG | 2A | 3359 | 1/1 | 0.99 | 0.34 | 31,31,31,31 | 0 |
| 56 | MG | 2A | 3360 | 1/1 | 0.99 | 0.19 | 40,40,40,40 | 0 |
| 56 | MG | 2A | 3361 | 1/1 | 0.99 | 0.26 | 38,38,38,38 | 0 |
| 56 | MG | 2A | 3396 | 1/1 | 0.99 | 0.10 | 62,62,62,62 | 0 |
| 56 | MG | 1A | 3656 | 1/1 | 0.99 | 0.29 | 54,54,54,54 | 0 |
| 56 | MG | 1a | 1781 | 1/1 | 0.99 | 0.10 | 53,53,53,53 | 0 |
| 56 | MG | 1A | 3407 | 1/1 | 0.99 | 0.18 | 39,39,39,39 | 0 |
| 56 | MG | 1a | 1657 | 1/1 | 0.99 | 0.07 | 54,54,54,54 | 0 |
| 56 | MG | 1a | 1658 | 1/1 | 0.99 | 0.17 | 35,35,35,35 | 0 |
| 56 | MG | 1A | 3371 | 1/1 | 0.99 | 0.27 | 23,23,23,23 | 0 |
| 56 | MG | 1A | 3476 | 1/1 | 0.99 | 0.37 | 21,21,21,21 | 0 |
| 56 | MG | 1A | 3194 | 1/1 | 0.99 | 0.18 | 23,23,23,23 | 0 |
| 56 | MG | 1a | 1895 | 1/1 | 0.99 | 0.13 | 65,65,65,65 | 0 |
| 56 | MG | 2A | 3277 | 1/1 | 0.99 | 0.28 | 48,48,48,48 | 0 |
| 56 | MG | 2A | 3338 | 1/1 | 0.99 | 0.30 | 74,74,74,74 | 0 |
| 56 | MG | 2a | 1744 | 1/1 | 0.99 | 0.14 | 91,91,91,91 | 0 |
| 56 | MG | 1A | 3121 | 1/1 | 0.99 | 0.44 | 49,49,49,49 | 0 |
| 56 | MG | 1A | 3448 | 1/1 | 0.99 | 0.12 | 40,40,40,40 | 0 |
| 58 | ZN | 19 | 104 | 1/1 | 0.99 | 0.19 | 59,59,59,59 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 56 | MG | 1A | 3434 | 1/1 | 0.99 | 0.29 | 64,64,64,64 | 0 |
| 58 | ZN | 2Y | 202 | 1/1 | 0.99 | 0.19 | 109,109,109,109 | 0 |
| 56 | MG | 1A | 3904 | 1/1 | 0.99 | 0.11 | 38,38,38,38 | 0 |
| 58 | ZN | 25 | 102 | 1/1 | 0.99 | 0.22 | 74,74,74,74 | 0 |
| 56 | MG | 1A | 3435 | 1/1 | 0.99 | 0.32 | 42,42,42,42 | 0 |
| 56 | MG | 1A | 3180 | 1/1 | 0.99 | 0.37 | 26,26,26,26 | 0 |
| 56 | MG | 1a | 1820 | 1/1 | 0.99 | 0.13 | 43,43,43,43 | 0 |
| 59 | SF4 | 1d | 303 | 8/8 | 0.99 | 0.19 | 64,71,77,78 | 0 |
| 59 | SF4 | 2d | 302 | 8/8 | 0.99 | 0.17 | 71,89,99,107 | 0 |

6.5 Other polymers [i](#)

There are no such residues in this entry.