



Full wwPDB EM Validation Report ⓘ

Apr 20, 2024 – 11:55 pm BST

PDB ID : 7QIZ
EMDB ID : EMD-14004
Title : Specific features and methylation sites of a plant 80S ribosome
Authors : Cottilli, P.; Itoh, Y.; Amunts, A.
Deposited on : 2021-12-16
Resolution : 2.38 Å (reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

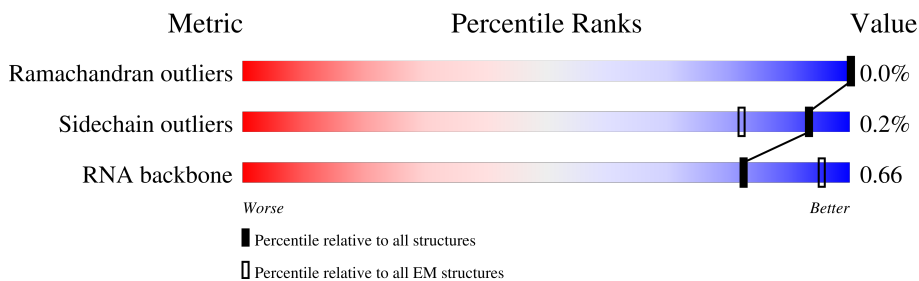
EMDB validation analysis : 0.0.1.dev92
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36.2

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 2.38 Å.

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



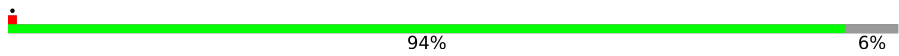

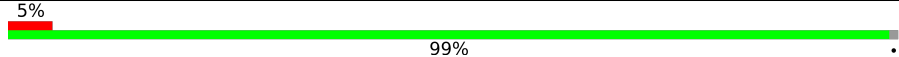
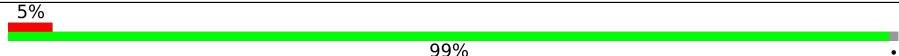
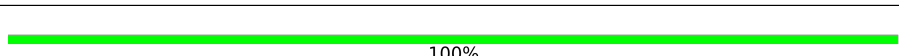
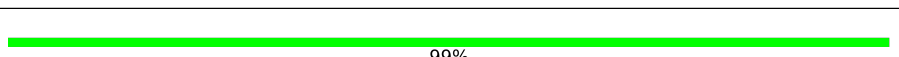
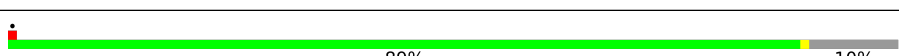
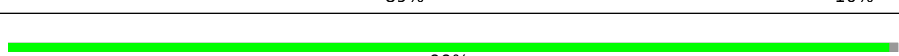
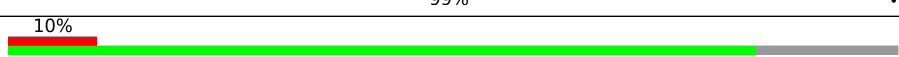

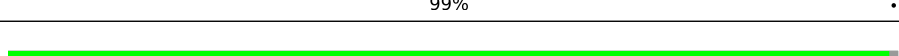
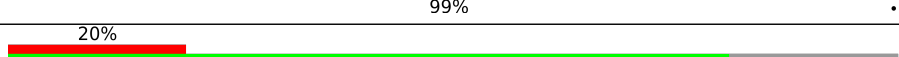

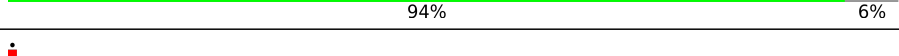
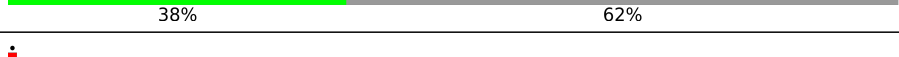

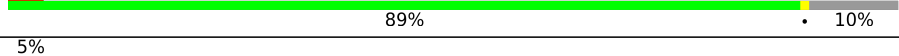
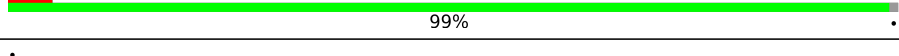
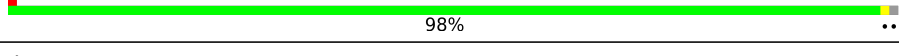
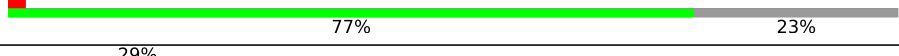

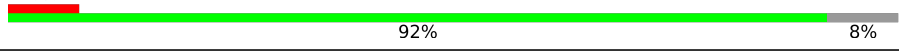
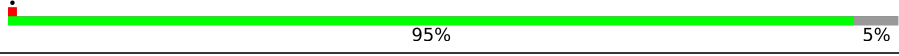
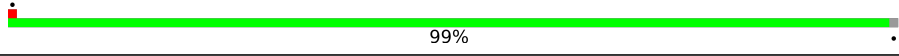
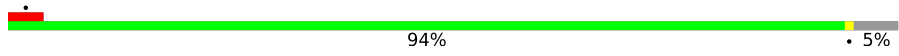
| Metric | Whole archive (#Entries) | EM structures (#Entries) |
|-----------------------|-----------------------------|-----------------------------|
| Ramachandran outliers | 154571 | 4023 |
| Sidechain outliers | 154315 | 3826 |
| RNA backbone | 4643 | 859 |

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1 | D | 260 | |
| 2 | F | 406 | |
| 3 | E | 389 | |
| 4 | G | 301 | |
| 5 | H | 229 | |
| 6 | I | 242 | |
| 7 | J | 258 | |
| 8 | K | 194 | |

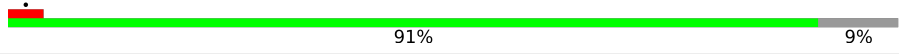
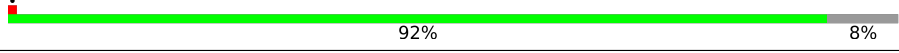
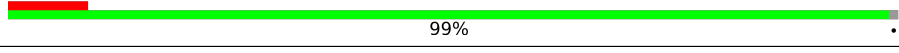
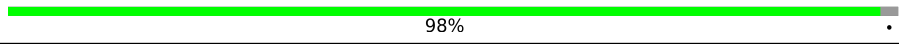

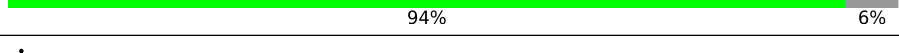
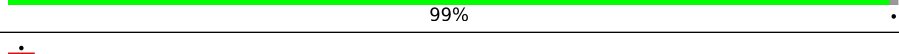
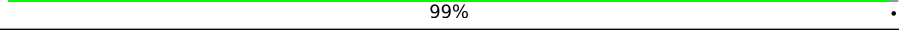
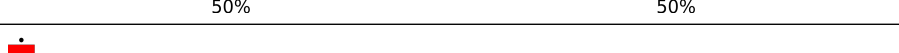
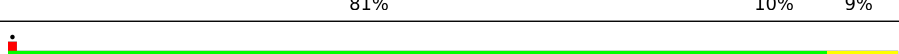
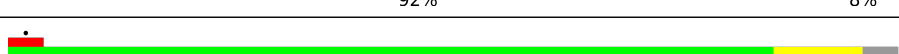

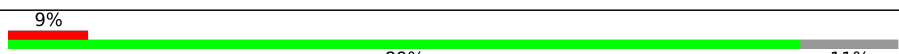
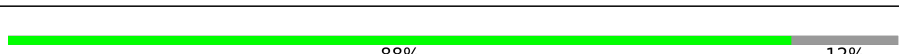
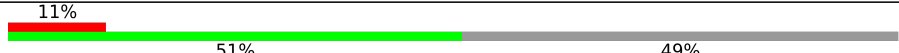

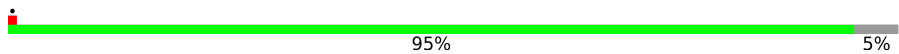
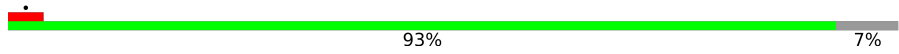
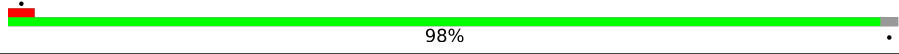
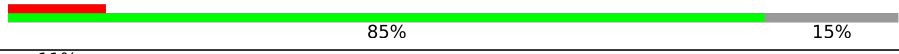
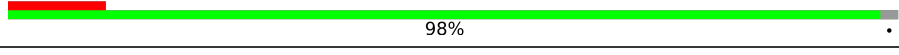

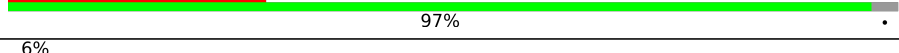


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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|--|
| 9 | L | 220 |  94% 6% |
| 10 | M | 181 |  10% 88% 12% |
| 11 | N | 206 |  5% 99% |
| 12 | O | 133 |  5% 99% |
| 13 | P | 204 |  100% |
| 14 | Q | 206 |  99% |
| 15 | R | 173 |  89% 10% |
| 16 | S | 187 |  99% |
| 17 | T | 213 |  10% 84% 16% |
| 18 | U | 178 |  99% |
| 19 | V | 164 |  99% |
| 20 | W | 124 |  20% 81% 19% |
| 21 | X | 140 |  94% 6% |
| 22 | Y | 165 |  38% 62% |
| 23 | Z | 154 |  76% 24% |
| 24 | a | 146 |  89% 10% |
| 25 | b | 135 |  5% 99% |
| 26 | c | 148 |  98% |
| 27 | d | 60 |  77% 23% |
| 28 | e | 112 |  29% 85% 15% |
| 29 | f | 120 |  8% 92% 8% |
| 30 | g | 133 |  95% 5% |
| 31 | h | 112 |  99% |
| 32 | i | 120 |  94% 5% |
| 33 | j | 123 |  99% |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|--|
| 34 | k | 110 |  91% 9% |
| 35 | l | 95 |  92% 8% |
| 36 | m | 69 |  99% 9% |
| 37 | n | 51 |  98% |
| 38 | o | 128 |  41% 59% |
| 39 | p | 105 |  94% 6% |
| 40 | q | 92 |  99% |
| 41 | r | 143 |  99% |
| 42 | s | 2 |  50% 50% |
| 43 | 2 | 3391 |  81% 10% 9% |
| 44 | 5 | 120 |  92% 8% |
| 45 | 8 | 165 |  86% 10% |
| 46 | S2 | 1808 |  77% 10% 12% |
| 47 | NA | 239 |  89% 11% 9% |
| 48 | OA | 211 |  88% 12% |
| 49 | PA | 180 |  51% 49% 11% |
| 50 | QA | 151 |  83% 17% 11% |
| 51 | RA | 147 |  95% 5% |
| 52 | TA | 152 |  93% 7% |
| 53 | UA | 143 |  98% |
| 54 | VA | 123 |  85% 15% 11% |
| 55 | WA | 65 |  98% 11% |
| 56 | XA | 56 |  89% 11% |
| 57 | YA | 326 |  97% 29% |
| 58 | ZA | 108 |  69% 31% 6% |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 59 | aA | 14 | 100% |
| 60 | bA | 3 | 100% |
| 61 | t | 25 | 100% |
| 62 | u | 296 | 68% 32% |
| 63 | v | 260 | 15% 82% 17% |
| 64 | w | 264 | 98% |
| 65 | x | 191 | 29% 98% |
| 66 | y | 220 | 83% 16% |
| 67 | z | 159 | 92% 8% |
| 68 | AA | 144 | 22% 83% 17% |
| 69 | BA | 82 | 12% 100% |
| 70 | CA | 142 | 99% |
| 71 | DA | 127 | 77% 23% |
| 72 | EA | 280 | 78% 21% |
| 73 | FA | 249 | 20% 95% 5% |
| 74 | GA | 197 | 5% 93% 7% |
| 75 | HA | 151 | 99% |
| 76 | IA | 150 | 5% 88% 12% |
| 77 | KA | 133 | 8% 95% 5% |
| 78 | LA | 86 | 10% 79% 21% |
| 79 | MA | 62 | 5% 77% 23% |
| 80 | JA | 130 | 99% |

2 Entry composition i

There are 88 unique types of molecules in this entry. The entry contains 344910 atoms, of which 144985 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called 60S ribosomal protein L8.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|------|-----|-----|----|---------|-------|
| | | | Total | C | H | N | O | S | | |
| 1 | D | 251 | 3892 | 1201 | 1965 | 395 | 321 | 10 | 0 | 0 |

- Molecule 2 is a protein called Ribos_L4_asso_C domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|------|-----|-----|----|---------|-------|
| | | | Total | C | H | N | O | S | | |
| 2 | F | 385 | 6099 | 1892 | 3104 | 563 | 530 | 10 | 0 | 0 |

There are 4 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| F | 162 | VAL | ILE | conflict | UNP A0A3Q7HW81 |
| F | 170 | ASN | VAL | conflict | UNP A0A3Q7HW81 |
| F | 277 | GLN | LEU | conflict | UNP A0A3Q7HW81 |
| F | 366 | ALA | GLN | conflict | UNP A0A3Q7HW81 |

- Molecule 3 is a protein called Ribosomal protein L3.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|------|-----|-----|----|---------|-------|
| | | | Total | C | H | N | O | S | | |
| 3 | E | 386 | 6343 | 1984 | 3237 | 578 | 530 | 14 | 0 | 0 |

- Molecule 4 is a protein called Ribosomal_L18_c domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|------|-----|-----|---|---------|-------|
| | | | Total | C | H | N | O | S | | |
| 4 | G | 278 | 4537 | 1433 | 2278 | 409 | 412 | 5 | 0 | 0 |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| G | 51 | PHE | LEU | conflict | UNP A0A3Q7H274 |

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| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| G | 85 | HIS | ARG | conflict | UNP A0A3Q7H274 |

- Molecule 5 is a protein called Ribosomal_L6e_N domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|------|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 5 | H | 201 | 3311 | 1030 | 1727 | 284 | 268 | 2 | 0 | 0 |

- Molecule 6 is a protein called Thaliana 60S ribosomal protein L7.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|------|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 6 | I | 239 | 4024 | 1259 | 2068 | 358 | 335 | 4 | 0 | 0 |

- Molecule 7 is a protein called Ribosomal_L7Ae domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|------|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 7 | J | 230 | 3845 | 1183 | 1999 | 341 | 314 | 8 | 0 | 0 |

There are 3 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|---------|----------------|
| J | 10 | SER | ALA | variant | UNP A0A3Q7GV73 |
| J | 18 | ALA | SER | variant | UNP A0A3Q7GV73 |
| J | 21 | LEU | VAL | variant | UNP A0A3Q7GV73 |

- Molecule 8 is a protein called 60S ribosomal protein uL6.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 8 | K | 184 | 3023 | 932 | 1558 | 265 | 263 | 5 | 0 | 0 |

There are 5 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| K | 24 | GLN | LEU | conflict | UNP A0A3Q7JDZ0 |
| K | 27 | VAL | ILE | conflict | UNP A0A3Q7JDZ0 |
| K | 65 | GLY | SER | conflict | UNP A0A3Q7JDZ0 |
| K | 69 | THR | ALA | conflict | UNP A0A3Q7JDZ0 |
| K | 109 | SER | THR | conflict | UNP A0A3Q7JDZ0 |

- Molecule 9 is a protein called 60S ribosomal protein L10.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|------|-----|-----|----|---------|-------|
| | | | Total | C | H | N | O | S | | |
| 9 | L | 207 | 3362 | 1045 | 1709 | 327 | 271 | 10 | 0 | 0 |

- Molecule 10 is a protein called 60S ribosomal protein uL5.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|------|-----|-----|---|---------|-------|
| | | | Total | C | H | N | O | S | | |
| 10 | M | 160 | 2642 | 819 | 1344 | 244 | 228 | 7 | 0 | 0 |

- Molecule 11 is a protein called 60S ribosomal protein L13.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|------|-----|-----|---|---------|-------|
| | | | Total | C | H | N | O | S | | |
| 11 | N | 204 | 3378 | 1036 | 1733 | 329 | 277 | 3 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| N | 128 | ARG | HIS | conflict | UNP A0A3Q7JCM5 |

- Molecule 12 is a protein called Ribosomal_L14e domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|------|-----|-----|---|---------|-------|
| | | | Total | C | H | N | O | S | | |
| 12 | O | 132 | 2239 | 687 | 1167 | 200 | 181 | 4 | 0 | 0 |

- Molecule 13 is a protein called Ribosomal protein L15.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|------|-----|-----|---|---------|-------|
| | | | Total | C | H | N | O | S | | |
| 13 | P | 203 | 3471 | 1068 | 1770 | 354 | 276 | 3 | 0 | 0 |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| P | 135 | VAL | ILE | conflict | UNP A0A3Q7HQH0 |
| P | 137 | GLN | SER | conflict | UNP A0A3Q7HQH0 |

- Molecule 14 is a protein called Pectinesterase.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|------|-----|-----|---|---------|-------|
| | | | Total | C | H | N | O | S | | |
| 14 | Q | 205 | 3418 | 1045 | 1775 | 320 | 270 | 8 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|---------|----------------|
| Q | 206 | TYR | GLU | variant | UNP A0A3Q7HGG4 |

- Molecule 15 is a protein called 50S ribosomal protein L22, chloroplastic.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|------|-----|-----|---|---------|-------|
| | | | Total | C | H | N | O | S | | |
| 15 | R | 155 | 2506 | 773 | 1258 | 245 | 225 | 5 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| R | 46 | SER | ARG | conflict | UNP A0A3Q7FNQ5 |

- Molecule 16 is a protein called Ribosomal_L18e/L15P domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|------|-----|-----|---|---------|-------|
| | | | Total | C | H | N | O | S | | |
| 16 | S | 186 | 3013 | 924 | 1561 | 277 | 248 | 3 | 0 | 0 |

There are 12 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| S | 17 | THR | ILE | conflict | UNP A0A3Q7I5W4 |
| S | 37 | ALA | SER | conflict | UNP A0A3Q7I5W4 |
| S | 60 | PRO | ALA | conflict | UNP A0A3Q7I5W4 |
| S | 68 | ILE | VAL | conflict | UNP A0A3Q7I5W4 |
| S | 71 | ALA | MET | conflict | UNP A0A3Q7I5W4 |
| S | 75 | GLY | GLU | conflict | UNP A0A3Q7I5W4 |
| S | 79 | VAL | ALA | conflict | UNP A0A3Q7I5W4 |
| S | 81 | LEU | VAL | conflict | UNP A0A3Q7I5W4 |
| S | 100 | CYS | THR | conflict | UNP A0A3Q7I5W4 |
| S | 103 | LYS | ARG | conflict | UNP A0A3Q7I5W4 |
| S | 136 | LEU | VAL | conflict | UNP A0A3Q7I5W4 |
| S | 153 | PRO | LYS | conflict | UNP A0A3Q7I5W4 |

- Molecule 17 is a protein called Ribosomal protein L19.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 17 | T | 178 | 3126 | 929 | 1632 | 319 | 238 | 8 | 0 | 0 |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| T | 178 | LYS | GLU | conflict | UNP A0A3Q7GQ29 |
| T | 179 | LYS | GLU | conflict | UNP A0A3Q7GQ29 |

- Molecule 18 is a protein called 60S ribosomal protein L18a.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 18 | U | 177 | 3056 | 971 | 1553 | 273 | 251 | 8 | 0 | 0 |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| U | 73 | THR | LYS | conflict | UNP A0A3Q7IGB1 |
| U | 104 | ALA | GLY | conflict | UNP A0A3Q7IGB1 |

- Molecule 19 is a protein called 60S ribosomal protein eL21.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 19 | V | 163 | 2673 | 821 | 1365 | 258 | 226 | 3 | 0 | 0 |

- Molecule 20 is a protein called 60S ribosomal protein eL22.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 20 | W | 101 | 1663 | 518 | 849 | 144 | 149 | 3 | 0 | 0 |

- Molecule 21 is a protein called 60S ribosomal protein uL14.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 21 | X | 131 | 2032 | 623 | 1047 | 183 | 170 | 9 | 0 | 0 |

- Molecule 22 is a protein called TRASH domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|----|----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 22 | Y | 62 | 1071 | 341 | 548 | 98 | 81 | 3 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|-----------------------|----------------|
| Y | 0 | MET | - | initiating methionine | UNP A0A3Q7IN69 |

- Molecule 23 is a protein called Ribosomal_L23eN domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 23 | Z | 117 | 1981 | 610 | 1030 | 170 | 169 | 2 | 0 | 0 |

There are 6 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| Z | 55 | SER | ASN | conflict | UNP A0A3Q7INK3 |
| Z | 61 | VAL | ILE | conflict | UNP A0A3Q7INK3 |
| Z | 73 | ALA | GLN | conflict | UNP A0A3Q7INK3 |
| Z | 74 | ILE | VAL | conflict | UNP A0A3Q7INK3 |
| Z | 77 | TYR | CYS | conflict | UNP A0A3Q7INK3 |
| Z | 101 | LYS | HIS | conflict | UNP A0A3Q7INK3 |

- Molecule 24 is a protein called KOW domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 24 | a | 132 | 2207 | 657 | 1144 | 218 | 185 | 3 | 0 | 0 |

There are 4 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| a | 25 | VAL | LEU | conflict | UNP A0A3Q7FBC6 |
| a | 43 | ASN | SER | conflict | UNP A0A3Q7FBC6 |
| a | 99 | ASN | HIS | conflict | UNP A0A3Q7FBC6 |
| a | 105 | VAL | ILE | conflict | UNP A0A3Q7FBC6 |

- Molecule 25 is a protein called 60S ribosomal protein L27.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 25 | b | 134 | 2275 | 708 | 1177 | 206 | 182 | 2 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| b | 117 | PHE | LEU | conflict | UNP A0A3Q7GZ83 |

- Molecule 26 is a protein called Ribosomal_L18e/L15P domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 26 | c | 147 | 2358 | 739 | 1204 | 224 | 188 | 3 | 0 | 0 |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| c | 82 | VAL | LEU | conflict | UNP A0A3Q7GZ10 |
| c | 129 | ILE | VAL | conflict | UNP A0A3Q7GZ10 |

- Molecule 27 is a protein called 60S ribosomal protein L29.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|----|----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 27 | d | 46 | 775 | 235 | 388 | 88 | 63 | 1 | 0 | 0 |

- Molecule 28 is a protein called 60S ribosomal protein eL30.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 28 | e | 95 | 1497 | 464 | 766 | 128 | 134 | 5 | 0 | 0 |

- Molecule 29 is a protein called 60S ribosomal protein eL31.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 29 | f | 110 | 1841 | 558 | 951 | 171 | 159 | 2 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| f | 76 | VAL | ILE | conflict | UNP A0A3Q7JRW8 |

- Molecule 30 is a protein called 60S ribosomal protein eL32.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 30 | g | 127 | 2173 | 662 | 1125 | 211 | 170 | 5 | 0 | 0 |

- Molecule 31 is a protein called 60S ribosomal protein eL33.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 31 | h | 111 | 1839 | 573 | 937 | 172 | 153 | 4 | 0 | 0 |

- Molecule 32 is a protein called 60S ribosomal protein eL34.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 32 | i | 114 | 1942 | 580 | 1015 | 194 | 152 | 1 | 0 | 0 |

- Molecule 33 is a protein called Similar to 60S ribosomal protein L35.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 33 | j | 122 | 2134 | 640 | 1137 | 191 | 165 | 1 | 0 | 0 |

There are 4 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| j | 67 | ALA | LEU | conflict | UNP Q53U38 |
| j | 72 | VAL | ALA | conflict | UNP Q53U38 |
| j | 100 | SER | ALA | conflict | UNP Q53U38 |
| j | 112 | MET | LEU | conflict | UNP Q53U38 |

- Molecule 34 is a protein called 60S ribosomal protein L36.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 34 | k | 100 | 1692 | 501 | 893 | 164 | 132 | 2 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| k | 88 | LYS | ARG | conflict | UNP A0A3Q7GUG2 |

- Molecule 35 is a protein called Ribosomal protein L37.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 35 | l | 87 | 1434 | 431 | 729 | 156 | 113 | 5 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| l | 44 | LEU | LYS | conflict | UNP A0A3Q7FV98 |

- Molecule 36 is a protein called 60S ribosomal protein L38.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|----|----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 36 | m | 68 | 1163 | 358 | 605 | 99 | 98 | 3 | 0 | 0 |

- Molecule 37 is a protein called 60S ribosomal protein eL39.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|----|----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 37 | n | 50 | 927 | 285 | 479 | 96 | 65 | 2 | 0 | 0 |

- Molecule 38 is a protein called Ubiquitin.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|----|----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 38 | o | 52 | 901 | 268 | 470 | 91 | 66 | 6 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| o | 113 | ARG | LYS | conflict | UNP K4B017 |

- Molecule 39 is a protein called 60S ribosomal protein eL42.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 39 | p | 99 | 1653 | 500 | 857 | 159 | 132 | 5 | 0 | 0 |

- Molecule 40 is a protein called 60S ribosomal protein eL43.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 40 | q | 91 | 1455 | 443 | 746 | 136 | 125 | 5 | 0 | 0 |

- Molecule 41 is a protein called Ribosomal_L28e domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 41 | r | 142 | 2302 | 703 | 1185 | 210 | 202 | 2 | 0 | 0 |

- Molecule 42 is a RNA chain called tRNA.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|----|----|---|----|---------|-------|---|
| | | | Total | C | H | N | O | | | P |
| 42 | s | 2 | 64 | 19 | 22 | 8 | 13 | 2 | 0 | 0 |

- Molecule 43 is a RNA chain called 25S rRNA.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-------|-------|-------|-------|---------|-------|---|
| | | | Total | C | H | N | O | | | P |
| 43 | 2 | 3098 | 98740 | 29664 | 32316 | 12094 | 21568 | 3098 | 0 | 0 |

- Molecule 44 is a RNA chain called 5S rRNA.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|------|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | P |
| 44 | 5 | 120 | 3796 | 1142 | 1237 | 459 | 838 | 120 | 0 | 0 |

- Molecule 45 is a RNA chain called 5.8S rRNA.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|------|------|-----|------|---------|-------|---|
| | | | Total | C | H | N | O | | | P |
| 45 | 8 | 159 | 5049 | 1517 | 1653 | 613 | 1107 | 159 | 0 | 0 |

- Molecule 46 is a RNA chain called 18S.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-------|-------|------|-------|---------|-------|---|
| | | | Total | C | H | N | O | | | P |
| 46 | S2 | 1584 | 50958 | 15153 | 17097 | 6050 | 11074 | 1584 | 0 | 0 |

- Molecule 47 is a protein called KH type-2 domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|------|-----|-----|---|---------|-------|
| | | | Total | C | H | N | O | S | | |
| 47 | NA | 213 | 3429 | 1060 | 1751 | 307 | 302 | 9 | 0 | 0 |

- Molecule 48 is a protein called Ribosomal_S7 domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|------|-----|-----|---|---------|-------|
| | | | Total | C | H | N | O | S | | |
| 48 | OA | 185 | 2965 | 912 | 1499 | 277 | 269 | 8 | 0 | 0 |

There are 4 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| OA | 37 | GLY | ASP | conflict | UNP A0A3Q7IVL4 |
| OA | 43 | MET | ILE | conflict | UNP A0A3Q7IVL4 |
| OA | 60 | MET | THR | conflict | UNP A0A3Q7IVL4 |
| OA | 117 | GLN | LEU | conflict | UNP A0A3Q7IVL4 |

- Molecule 49 is a protein called S10_ plectin domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|-----|---|---------|-------|
| | | | Total | C | H | N | O | S | | |
| 49 | PA | 92 | 1572 | 514 | 790 | 128 | 136 | 4 | 0 | 0 |

- Molecule 50 is a protein called 40S ribosomal protein uS19.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|------|-----|-----|---|---------|-------|
| | | | Total | C | H | N | O | S | | |
| 50 | QA | 126 | 2096 | 650 | 1078 | 190 | 173 | 5 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| QA | 75 | GLN | PRO | conflict | UNP A0A3Q7F5X2 |

- Molecule 51 is a protein called 40S ribosomal protein uS9.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|------|-----|-----|---|---------|-------|
| | | | Total | C | H | N | O | S | | |
| 51 | RA | 140 | 2339 | 722 | 1204 | 220 | 189 | 4 | 0 | 0 |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| RA | 62 | HIS | GLN | conflict | UNP A0A3Q7GDB0 |
| RA | 105 | GLN | THR | conflict | UNP A0A3Q7GDB0 |

- Molecule 52 is a protein called 40S ribosomal protein uS13.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 52 | TA | 142 | 2343 | 720 | 1189 | 227 | 202 | 5 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| TA | 67 | LEU | VAL | conflict | UNP A0A3Q7FJL7 |

- Molecule 53 is a protein called 40S ribosomal protein eS19.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 53 | UA | 140 | 2208 | 692 | 1104 | 215 | 194 | 3 | 0 | 0 |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| UA | 6 | SER | ASN | conflict | UNP A0A3Q7FTS1 |
| UA | 14 | ASP | GLU | conflict | UNP A0A3Q7FTS1 |

- Molecule 54 is a protein called Ribosomal_S10 domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 54 | VA | 104 | 1701 | 515 | 880 | 152 | 150 | 4 | 0 | 0 |

- Molecule 55 is a protein called 40S ribosomal protein eS28.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|-----|----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 55 | WA | 64 | 1070 | 319 | 551 | 105 | 93 | 2 | 0 | 0 |

- Molecule 56 is a protein called 40S ribosomal protein uS14.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|----|----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 56 | XA | 50 | 805 | 253 | 400 | 82 | 64 | 6 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| XA | 13 | ASN | TYR | conflict | UNP A0A3Q7ITW7 |

- Molecule 57 is a protein called Mitogen-activated protein kinase.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|------|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 57 | YA | 317 | 4898 | 1554 | 2434 | 427 | 472 | 11 | 0 | 0 |

- Molecule 58 is a protein called 40S ribosomal protein S25.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 58 | ZA | 75 | 1228 | 373 | 636 | 108 | 108 | 3 | 0 | 0 |

- Molecule 59 is a RNA chain called tRNA_1.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|----|----|---------|-------|---|
| | | | Total | C | H | N | O | | | P |
| 59 | aA | 14 | 451 | 134 | 152 | 55 | 96 | 14 | 0 | 0 |

- Molecule 60 is a RNA chain called mRNA.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|----|----|----|----|---------|-------|---|
| | | | Total | C | H | N | O | | | P |
| 60 | bA | 3 | 95 | 28 | 33 | 10 | 21 | 3 | 0 | 0 |

- Molecule 61 is a protein called 60S ribosomal protein L41.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|----|----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 61 | t | 25 | 527 | 145 | 289 | 62 | 28 | 3 | 0 | 0 |

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

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|------|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 62 | u | 202 | 3230 | 1024 | 1621 | 288 | 287 | 10 | 0 | 0 |

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

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|------|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 63 | v | 215 | 3570 | 1112 | 1810 | 322 | 318 | 8 | 0 | 0 |

There are 6 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| v | 39 | GLU | GLY | conflict | UNP A0A3Q7I881 |
| v | 141 | ALA | GLY | conflict | UNP A0A3Q7I881 |
| v | 169 | VAL | ARG | conflict | UNP A0A3Q7I881 |
| v | 173 | ARG | VAL | conflict | UNP A0A3Q7I881 |
| v | 185 | VAL | ALA | conflict | UNP A0A3Q7I881 |
| v | 205 | PHE | TYR | conflict | UNP A0A3Q7I881 |

- Molecule 64 is a protein called 40S ribosomal protein S4.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|------|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 64 | w | 261 | 4264 | 1326 | 2180 | 389 | 361 | 8 | 0 | 0 |

There are 12 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| w | 48 | LEU | MET | conflict | UNP A0A3Q7GQU3 |
| w | 91 | THR | SER | conflict | UNP A0A3Q7GQU3 |
| w | 98 | SER | ASN | conflict | UNP A0A3Q7GQU3 |
| w | 114 | LEU | VAL | conflict | UNP A0A3Q7GQU3 |
| w | 119 | ALA | SER | conflict | UNP A0A3Q7GQU3 |
| w | 165 | ASP | GLU | conflict | UNP A0A3Q7GQU3 |
| w | 194 | ILE | VAL | conflict | UNP A0A3Q7GQU3 |
| w | 195 | LEU | ILE | conflict | UNP A0A3Q7GQU3 |
| w | 208 | VAL | LEU | conflict | UNP A0A3Q7GQU3 |
| w | 232 | SER | THR | conflict | UNP A0A3Q7GQU3 |
| w | 247 | SER | THR | conflict | UNP A0A3Q7GQU3 |
| w | 256 | MET | LEU | conflict | UNP A0A3Q7GQU3 |

- Molecule 65 is a protein called 40S ribosomal protein S7.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 65 | x | 187 | 3103 | 962 | 1582 | 282 | 276 | 1 | 0 | 0 |

There are 4 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| x | 13 | ALA | ASP | conflict | UNP A0A3Q7H0E8 |
| x | 19 | HIS | PHE | conflict | UNP A0A3Q7H0E8 |
| x | 22 | SER | THR | conflict | UNP A0A3Q7H0E8 |
| x | 24 | GLY | ALA | conflict | UNP A0A3Q7H0E8 |

- Molecule 66 is a protein called 40S ribosomal protein S8.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 66 | y | 184 | 3032 | 929 | 1539 | 296 | 264 | 4 | 0 | 0 |

There are 8 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| y | 18 | LYS | GLN | conflict | UNP A0A3Q7HJ03 |
| y | 20 | SER | THR | conflict | UNP A0A3Q7HJ03 |
| y | 66 | PHE | TYR | conflict | UNP A0A3Q7HJ03 |
| y | 159 | ASN | LYS | conflict | UNP A0A3Q7HJ03 |
| y | 162 | ALA | LYS | conflict | UNP A0A3Q7HJ03 |
| y | 165 | LYS | THR | conflict | UNP A0A3Q7HJ03 |
| y | 175 | ALA | SER | conflict | UNP A0A3Q7HJ03 |
| y | 180 | LEU | TYR | conflict | UNP A0A3Q7HJ03 |

- Molecule 67 is a protein called Ribosomal_S17_N domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 67 | z | 147 | 2381 | 737 | 1217 | 224 | 198 | 5 | 0 | 0 |

- Molecule 68 is a protein called 40S ribosomal protein S17.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 68 | AA | 119 | 1985 | 603 | 1024 | 176 | 177 | 5 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| AA | 87 | GLU | ASP | conflict | UNP P49215 |

- Molecule 69 is a protein called 40S ribosomal protein S21.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 69 | BA | 82 | 1257 | 391 | 617 | 116 | 128 | 5 | 0 | 0 |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| BA | 44 | VAL | ARG | conflict | UNP A0A3Q7G7P4 |
| BA | 68 | MET | LEU | conflict | UNP A0A3Q7G7P4 |

- Molecule 70 is a protein called 40S body ribosomal protein uS12.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 70 | CA | 141 | 2267 | 695 | 1167 | 215 | 187 | 3 | 0 | 0 |

- Molecule 71 is a protein called 40S ribosomal protein S26.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 71 | DA | 98 | 1628 | 495 | 831 | 164 | 130 | 8 | 0 | 0 |

- Molecule 72 is a protein called S5 DRBM domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|------|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 72 | EA | 220 | 3515 | 1104 | 1809 | 303 | 291 | 8 | 0 | 0 |

- Molecule 73 is a protein called 40S ribosomal protein S6.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|------|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 73 | FA | 237 | 3934 | 1187 | 2028 | 374 | 337 | 8 | 0 | 0 |

- Molecule 74 is a protein called 40S body ribosomal protein uS4.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 74 | GA | 184 | 3130 | 965 | 1601 | 303 | 256 | 5 | 0 | 0 |

- Molecule 75 is a protein called 30S ribosomal protein S15, chloroplastic.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 75 | HA | 150 | 2480 | 765 | 1285 | 224 | 204 | 2 | 0 | 0 |

- Molecule 76 is a protein called Ribosomal protein S14.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 76 | IA | 132 | 2031 | 612 | 1032 | 197 | 185 | 5 | 0 | 0 |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| IA | 137 | IAS | ASP | conflict | UNP Q38JI8 |

- Molecule 77 is a protein called 40S ribosomal protein S24.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 77 | KA | 126 | 2136 | 654 | 1106 | 199 | 174 | 3 | 0 | 0 |

- Molecule 78 is a protein called 40S ribosomal protein S27.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|-----|----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 78 | LA | 68 | 1098 | 341 | 558 | 101 | 95 | 3 | 0 | 0 |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| LA | 19 | LYS | ARG | conflict | UNP A0A1U8DQX3 |
| LA | 76 | ILE | THR | conflict | UNP A0A1U8DQX3 |

- Molecule 79 is a protein called 40S ribosomal protein S30.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|----|----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 79 | MA | 48 | 794 | 232 | 411 | 87 | 63 | 1 | 0 | 0 |

- Molecule 80 is a protein called 40S ribosomal protein S15a-1.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace | |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
| | | | Total | C | H | N | O | | | S |
| 80 | JA | 129 | 2062 | 650 | 1047 | 182 | 179 | 4 | 0 | 0 |

There are 9 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| JA | 20 | ALA | ARG | conflict | UNP A0A1U7YEG5 |
| JA | 23 | ALA | ARG | conflict | UNP A0A1U7YEG5 |
| JA | 26 | GLU | MET | conflict | UNP A0A1U7YEG5 |
| JA | 27 | LEU | ILE | conflict | UNP A0A1U7YEG5 |
| JA | 49 | ASP | GLU | conflict | UNP A0A1U7YEG5 |
| JA | 51 | GLN | GLU | conflict | UNP A0A1U7YEG5 |
| JA | 58 | VAL | SER | conflict | UNP A0A1U7YEG5 |
| JA | 84 | ALA | LYS | conflict | UNP A0A1U7YEG5 |
| JA | 85 | THR | GLU | conflict | UNP A0A1U7YEG5 |

- Molecule 81 is POTASSIUM ION (three-letter code: K) (formula: K).

| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------------|---------|---------|
| 81 | D | 2 | Total 2 | K 2 | 0 |
| 81 | E | 1 | Total 1 | K 1 | 0 |
| 81 | L | 1 | Total 1 | K 1 | 0 |
| 81 | N | 2 | Total 2 | K 2 | 0 |
| 81 | i | 1 | Total 1 | K 1 | 0 |
| 81 | p | 1 | Total 1 | K 1 | 0 |
| 81 | 2 | 78 | Total 78 | K 78 | 0 |
| 81 | 8 | 4 | Total 4 | K 4 | 0 |
| 81 | S2 | 26 | Total 26 | K 26 | 0 |

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| Mol | Chain | Residues | Atoms | AltConf |
|-----|-------|----------|----------------|---------|
| 81 | TA | 1 | Total K 1 1 | 0 |
| 81 | UA | 1 | Total K 1 1 | 0 |
| 81 | XA | 1 | Total K 1 1 | 0 |

- Molecule 82 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

| Mol | Chain | Residues | Atoms | AltConf |
|-----|-------|----------|---------------------|---------|
| 82 | E | 1 | Total Mg 1 1 | 0 |
| 82 | I | 1 | Total Mg 1 1 | 0 |
| 82 | L | 1 | Total Mg 1 1 | 0 |
| 82 | N | 1 | Total Mg 1 1 | 0 |
| 82 | R | 1 | Total Mg 1 1 | 0 |
| 82 | X | 1 | Total Mg 1 1 | 0 |
| 82 | 1 | 1 | Total Mg 1 1 | 0 |
| 82 | 2 | 259 | Total Mg 259 259 | 0 |
| 82 | 5 | 5 | Total Mg 5 5 | 0 |
| 82 | 8 | 5 | Total Mg 5 5 | 0 |
| 82 | S2 | 86 | Total Mg 86 86 | 0 |
| 82 | TA | 1 | Total Mg 1 1 | 0 |
| 82 | FA | 1 | Total Mg 1 1 | 0 |

- Molecule 83 is ZINC ION (three-letter code: ZN) (formula: Zn).

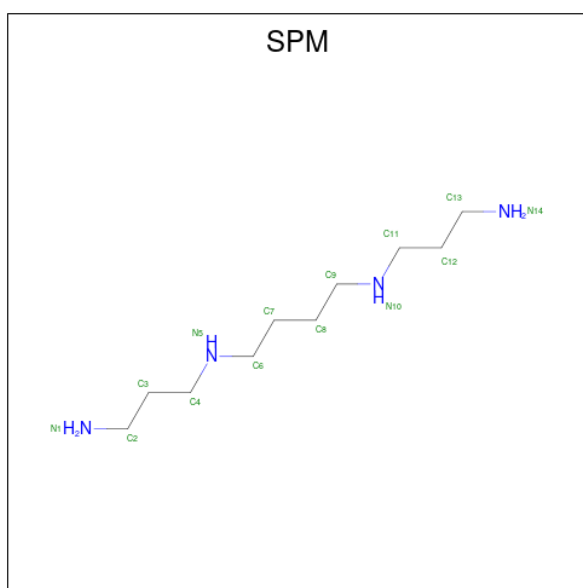
| Mol | Chain | Residues | Atoms | AltConf |
|-----|-------|----------|-----------------|---------|
| 83 | 1 | 1 | Total Zn 1 1 | 0 |

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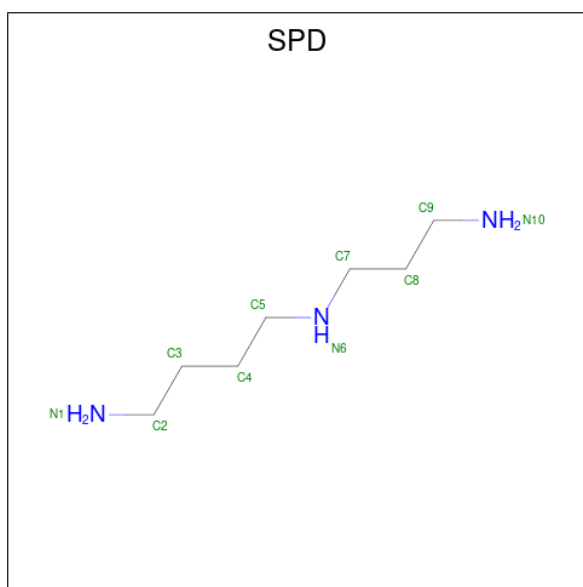
| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------|----|---------|
| 83 | o | 1 | Total | Zn | 0 |
| | | | 1 | 1 | |
| 83 | p | 1 | Total | Zn | 0 |
| | | | 1 | 1 | |
| 83 | q | 1 | Total | Zn | 0 |
| | | | 1 | 1 | |
| 83 | XA | 1 | Total | Zn | 0 |
| | | | 1 | 1 | |
| 83 | DA | 1 | Total | Zn | 0 |
| | | | 1 | 1 | |

- Molecule 84 is SPERMINE (three-letter code: SPM) (formula: $C_{10}H_{26}N_4$).



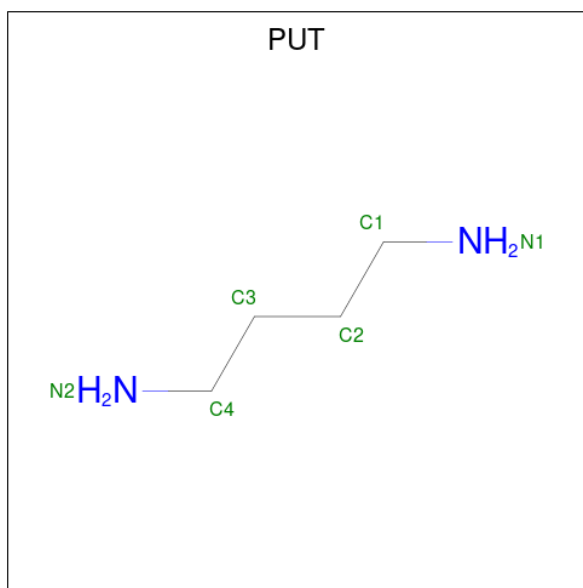
| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------|----|----|---|---------|
| 84 | 2 | 1 | Total | C | H | N | 0 |
| | | | 40 | 10 | 26 | 4 | |
| 84 | 2 | 1 | Total | C | H | N | 0 |
| | | | 40 | 10 | 26 | 4 | |
| 84 | 2 | 1 | Total | C | H | N | 0 |
| | | | 40 | 10 | 26 | 4 | |

- Molecule 85 is SPERMIDINE (three-letter code: SPD) (formula: $C_7H_{19}N_3$).



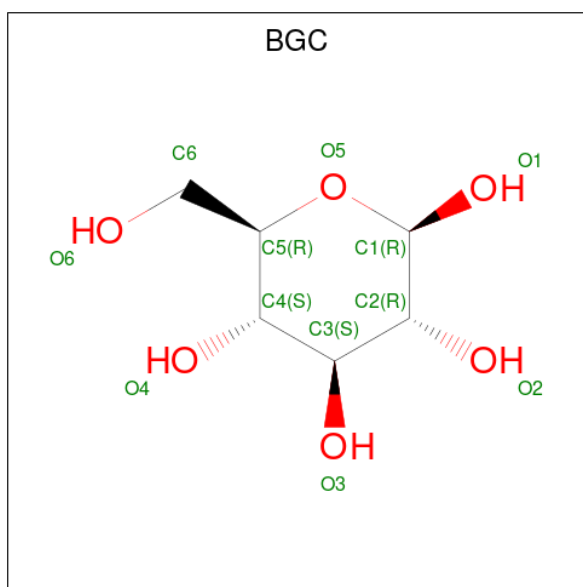
| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------|---|----|---|---------|
| | | | Total | C | H | N | |
| 85 | 2 | 1 | 29 | 7 | 19 | 3 | 0 |

- Molecule 86 is 1,4-DIAMINOBTUTANE (three-letter code: PUT) (formula: $C_4H_{12}N_2$).



| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------|---|----|---|---------|
| | | | Total | C | H | N | |
| 86 | S2 | 1 | 18 | 4 | 12 | 2 | 0 |

- Molecule 87 is beta-D-glucopyranose (three-letter code: BGC) (formula: $C_6H_{12}O_6$).



| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------|---|----|---|---------|
| | | | Total | C | H | O | |
| 87 | NA | 1 | 22 | 6 | 11 | 5 | 0 |

- Molecule 88 is water.

| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------|----|---------|
| 88 | D | 45 | Total | O | 0 |
| | | | 45 | 45 | |
| 88 | F | 53 | Total | O | 0 |
| | | | 53 | 53 | |
| 88 | E | 67 | Total | O | 0 |
| | | | 67 | 67 | |
| 88 | G | 17 | Total | O | 0 |
| | | | 17 | 17 | |
| 88 | H | 1 | Total | O | 0 |
| | | | 1 | 1 | |
| 88 | I | 26 | Total | O | 0 |
| | | | 26 | 26 | |
| 88 | J | 8 | Total | O | 0 |
| | | | 8 | 8 | |
| 88 | K | 1 | Total | O | 0 |
| | | | 1 | 1 | |
| 88 | L | 3 | Total | O | 0 |
| | | | 3 | 3 | |
| 88 | M | 1 | Total | O | 0 |
| | | | 1 | 1 | |
| 88 | N | 35 | Total | O | 0 |
| | | | 35 | 35 | |

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| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------------|---------|---------|
| 88 | O | 8 | Total 8 | O 8 | 0 |
| 88 | P | 47 | Total 47 | O 47 | 0 |
| 88 | Q | 20 | Total 20 | O 20 | 0 |
| 88 | R | 17 | Total 17 | O 17 | 0 |
| 88 | S | 21 | Total 21 | O 21 | 0 |
| 88 | T | 13 | Total 13 | O 13 | 0 |
| 88 | U | 8 | Total 8 | O 8 | 0 |
| 88 | V | 15 | Total 15 | O 15 | 0 |
| 88 | X | 7 | Total 7 | O 7 | 0 |
| 88 | Y | 3 | Total 3 | O 3 | 0 |
| 88 | Z | 4 | Total 4 | O 4 | 0 |
| 88 | a | 8 | Total 8 | O 8 | 0 |
| 88 | b | 4 | Total 4 | O 4 | 0 |
| 88 | c | 28 | Total 28 | O 28 | 0 |
| 88 | d | 10 | Total 10 | O 10 | 0 |
| 88 | f | 10 | Total 10 | O 10 | 0 |
| 88 | g | 29 | Total 29 | O 29 | 0 |
| 88 | h | 15 | Total 15 | O 15 | 0 |
| 88 | i | 11 | Total 11 | O 11 | 0 |
| 88 | j | 7 | Total 7 | O 7 | 0 |
| 88 | k | 5 | Total 5 | O 5 | 0 |

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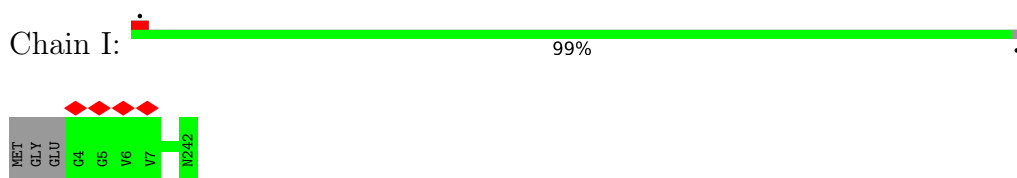
| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|---------------|-----------|---------|
| 88 | l | 29 | Total 29 | O 29 | 0 |
| 88 | n | 6 | Total 6 | O 6 | 0 |
| 88 | o | 2 | Total 2 | O 2 | 0 |
| 88 | p | 17 | Total 17 | O 17 | 0 |
| 88 | q | 8 | Total 8 | O 8 | 0 |
| 88 | r | 7 | Total 7 | O 7 | 0 |
| 88 | s | 4 | Total 4 | O 4 | 0 |
| 88 | 2 | 3141 | Total 3141 | O 3141 | 0 |
| 88 | 5 | 59 | Total 59 | O 59 | 0 |
| 88 | 8 | 115 | Total 115 | O 115 | 0 |
| 88 | S2 | 626 | Total 626 | O 626 | 0 |
| 88 | OA | 8 | Total 8 | O 8 | 0 |
| 88 | QA | 1 | Total 1 | O 1 | 0 |
| 88 | RA | 5 | Total 5 | O 5 | 0 |
| 88 | TA | 8 | Total 8 | O 8 | 0 |
| 88 | UA | 23 | Total 23 | O 23 | 0 |
| 88 | VA | 7 | Total 7 | O 7 | 0 |
| 88 | WA | 1 | Total 1 | O 1 | 0 |
| 88 | XA | 2 | Total 2 | O 2 | 0 |
| 88 | ZA | 4 | Total 4 | O 4 | 0 |
| 88 | t | 2 | Total 2 | O 2 | 0 |

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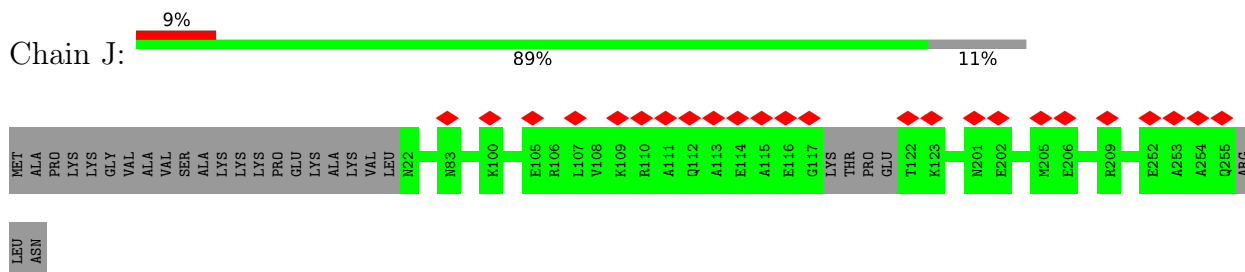
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| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------------|---------|---------|
| 88 | v | 3 | Total 3 | O 3 | 0 |
| 88 | w | 6 | Total 6 | O 6 | 0 |
| 88 | y | 5 | Total 5 | O 5 | 0 |
| 88 | z | 24 | Total 24 | O 24 | 0 |
| 88 | BA | 2 | Total 2 | O 2 | 0 |
| 88 | CA | 13 | Total 13 | O 13 | 0 |
| 88 | DA | 15 | Total 15 | O 15 | 0 |
| 88 | EA | 2 | Total 2 | O 2 | 0 |
| 88 | FA | 2 | Total 2 | O 2 | 0 |
| 88 | GA | 12 | Total 12 | O 12 | 0 |
| 88 | HA | 6 | Total 6 | O 6 | 0 |
| 88 | IA | 5 | Total 5 | O 5 | 0 |
| 88 | LA | 2 | Total 2 | O 2 | 0 |
| 88 | MA | 2 | Total 2 | O 2 | 0 |
| 88 | JA | 7 | Total 7 | O 7 | 0 |

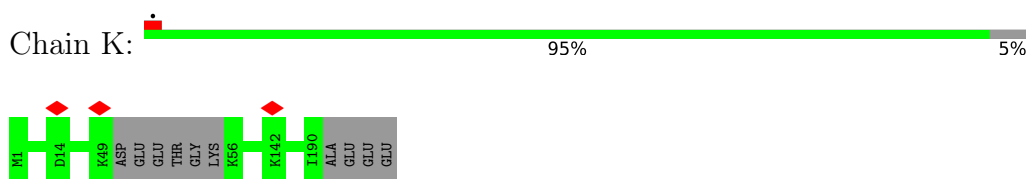
- Molecule 6: Thaliana 60S ribosomal protein L7



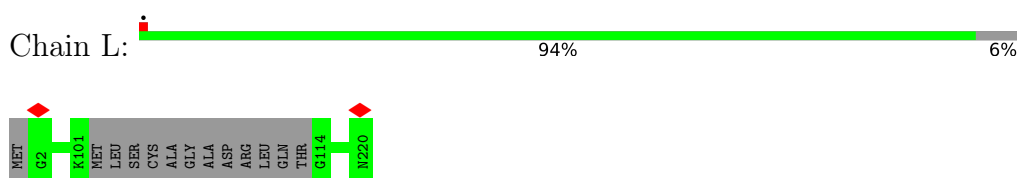
- Molecule 7: Ribosomal_L7Ae domain-containing protein



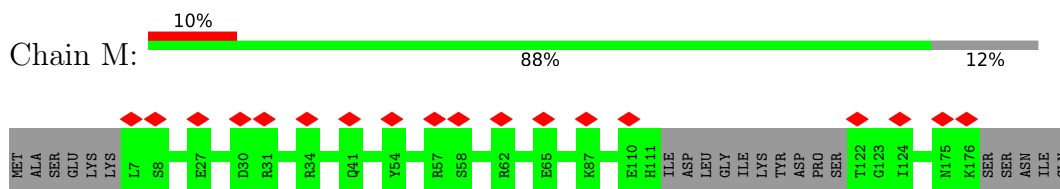
- Molecule 8: 60S ribosomal protein uL6



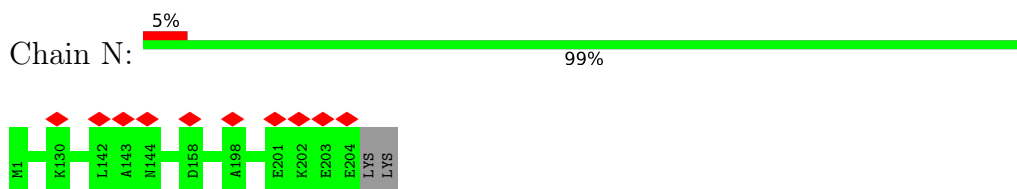
- Molecule 9: 60S ribosomal protein L10



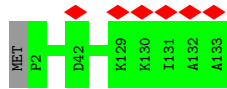
- Molecule 10: 60S ribosomal protein uL5



- Molecule 11: 60S ribosomal protein L13



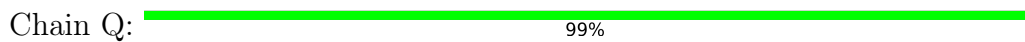
- Molecule 12: Ribosomal_L14e domain-containing protein



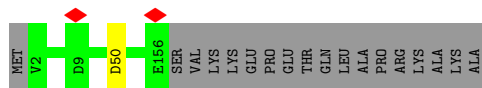
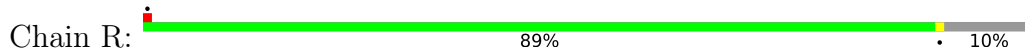
- Molecule 13: Ribosomal protein L15



- Molecule 14: Pectinesterase



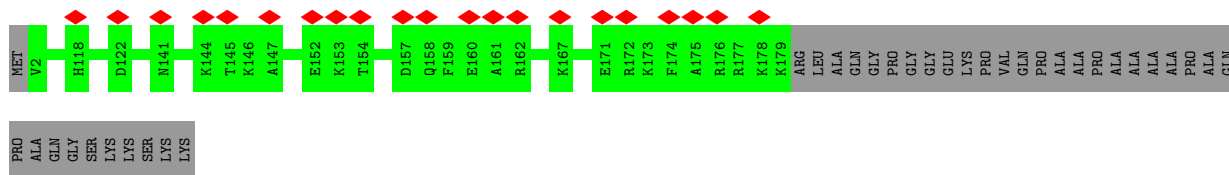
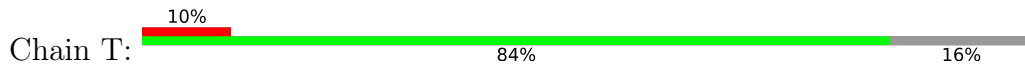
- Molecule 15: 50S ribosomal protein L22, chloroplastic



- Molecule 16: Ribosomal_L18e/L15P domain-containing protein

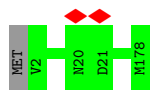


- Molecule 17: Ribosomal protein L19



- Molecule 18: 60S ribosomal protein L18a

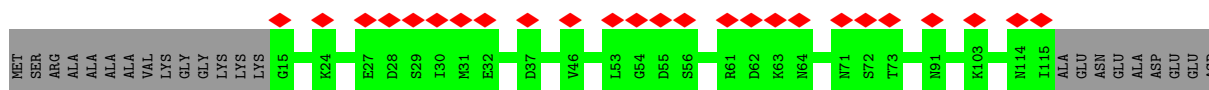
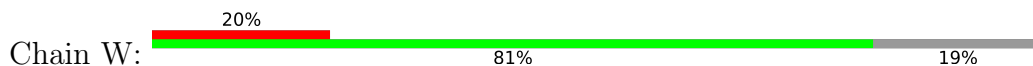




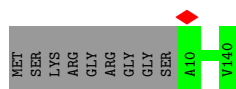
• Molecule 19: 60S ribosomal protein eL21



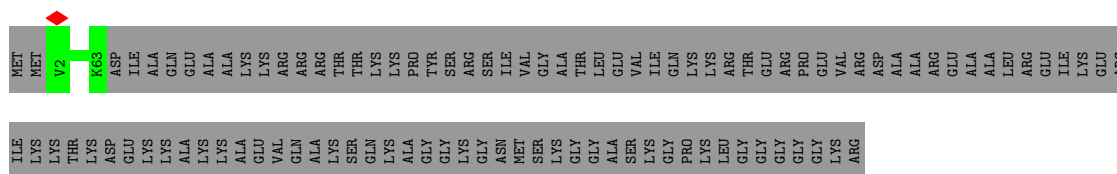
• Molecule 20: 60S ribosomal protein eL22



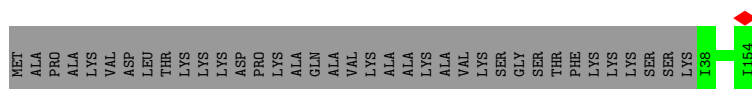
• Molecule 21: 60S ribosomal protein uL14



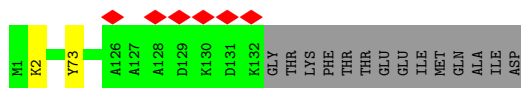
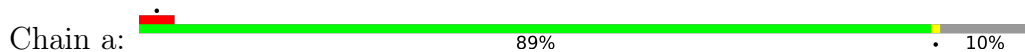
• Molecule 22: TRASH domain-containing protein



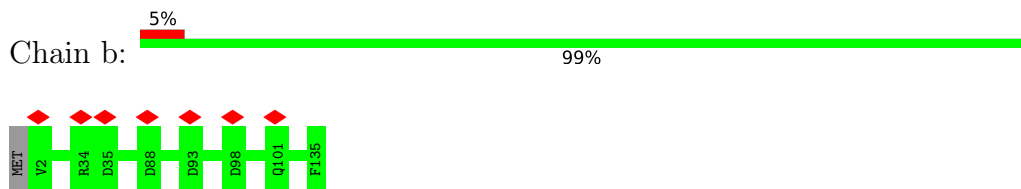
• Molecule 23: Ribosomal_L23eN domain-containing protein



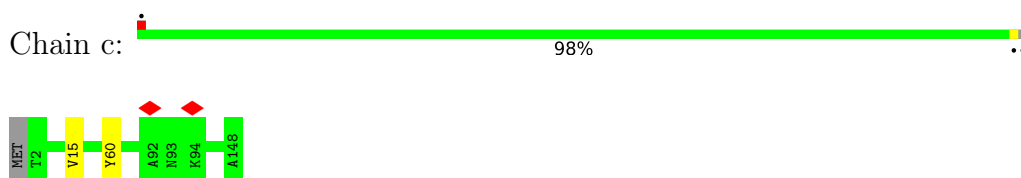
• Molecule 24: KOW domain-containing protein



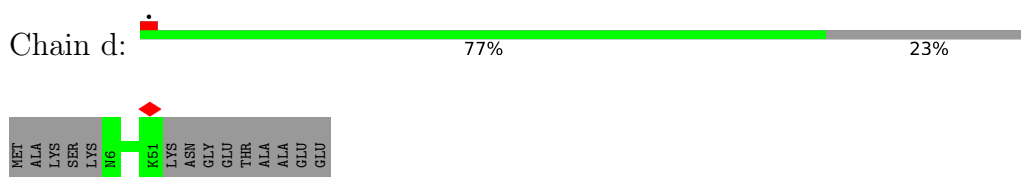
- Molecule 25: 60S ribosomal protein L27



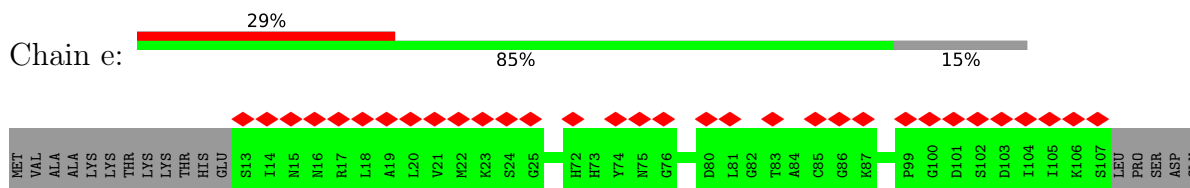
- Molecule 26: Ribosomal_L18e/L15P domain-containing protein



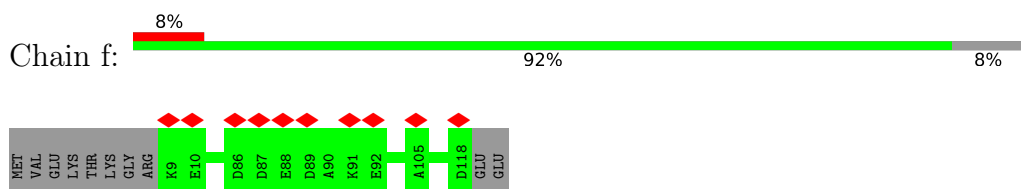
- Molecule 27: 60S ribosomal protein L29



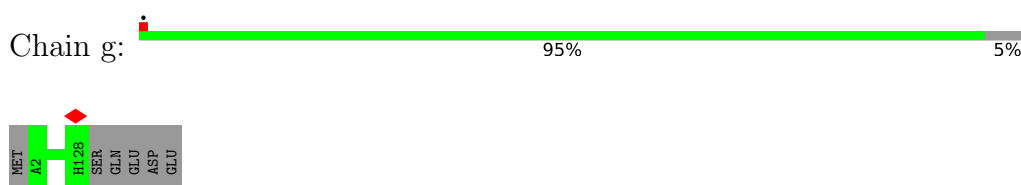
- Molecule 28: 60S ribosomal protein eL30



- Molecule 29: 60S ribosomal protein eL31



- Molecule 30: 60S ribosomal protein eL32

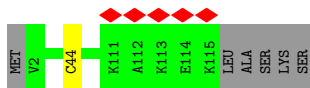


- Molecule 31: 60S ribosomal protein eL33

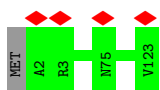




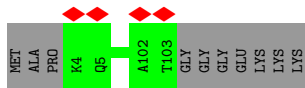
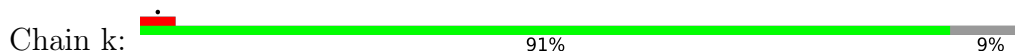
- Molecule 32: 60S ribosomal protein eL34



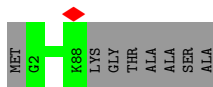
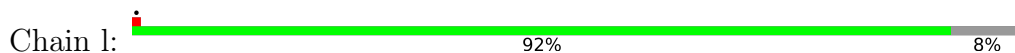
- Molecule 33: Similar to 60S ribosomal protein L35



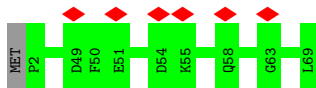
- Molecule 34: 60S ribosomal protein L36



- Molecule 35: Ribosomal protein L37



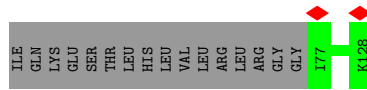
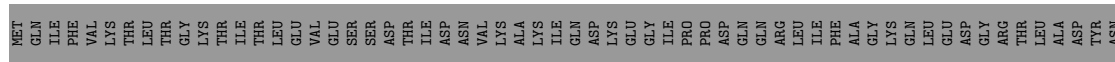
- Molecule 36: 60S ribosomal protein L38



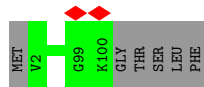
- Molecule 37: 60S ribosomal protein eL39



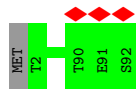
- Molecule 38: Ubiquitin



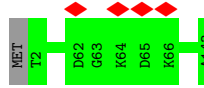
• Molecule 39: 60S ribosomal protein eL42



• Molecule 40: 60S ribosomal protein eL43



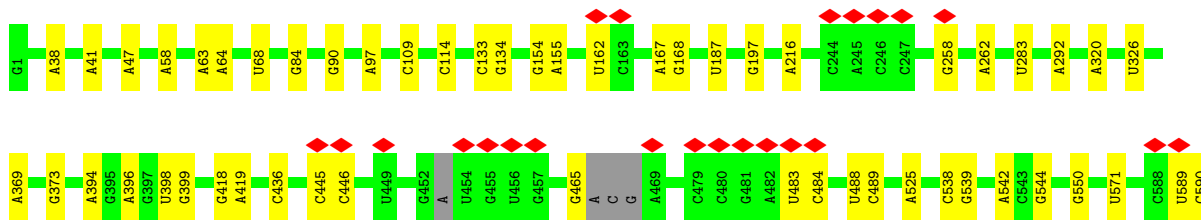
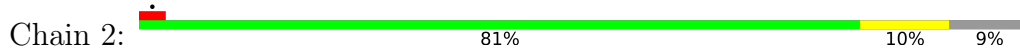
• Molecule 41: Ribosomal_L28e domain-containing protein

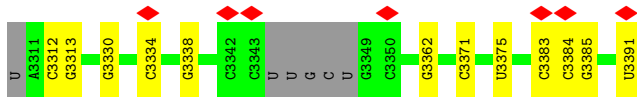


• Molecule 42: tRNA

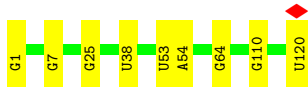
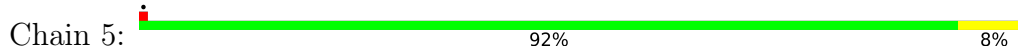


• Molecule 43: 25S rRNA

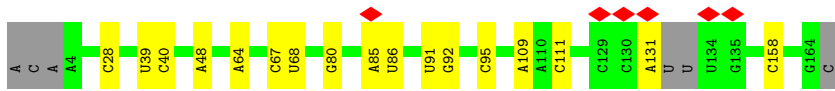
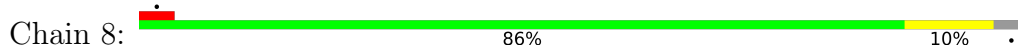




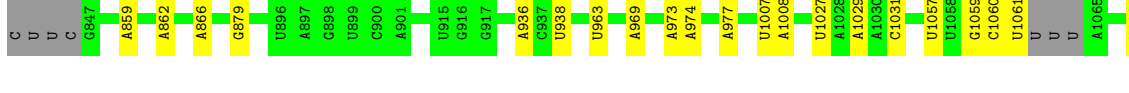
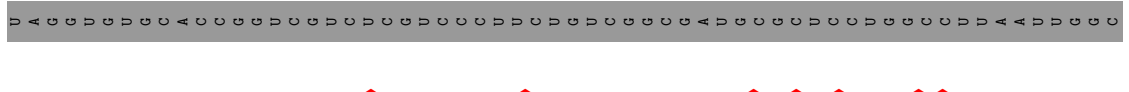
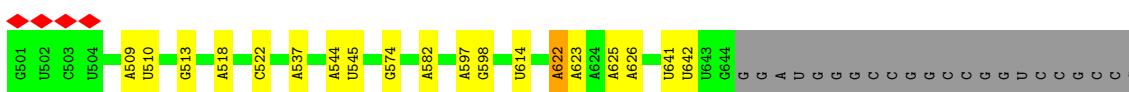
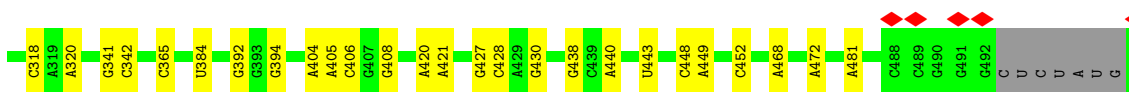
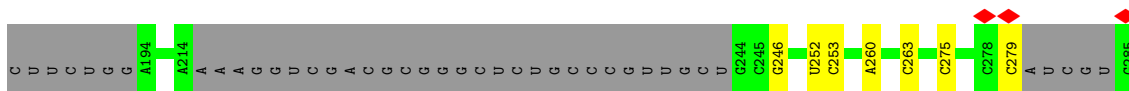
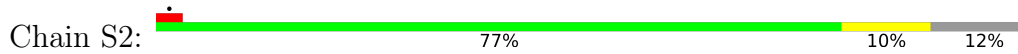
• Molecule 44: 5S rRNA

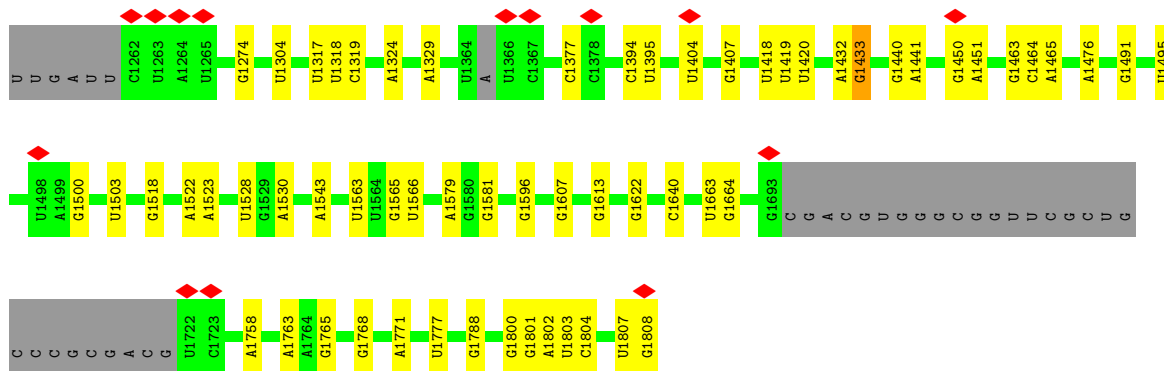


• Molecule 45: 5.8S rRNA

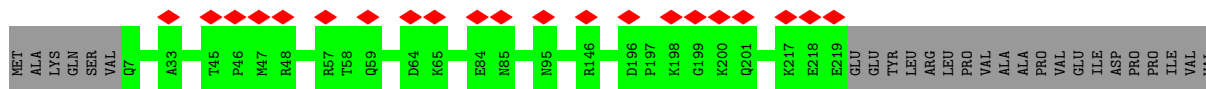
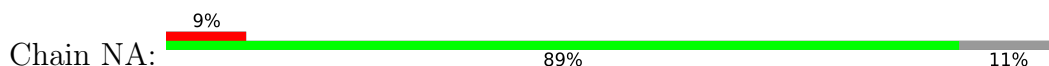


• Molecule 46: 18S

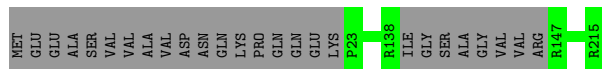
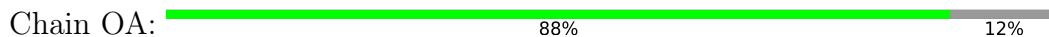




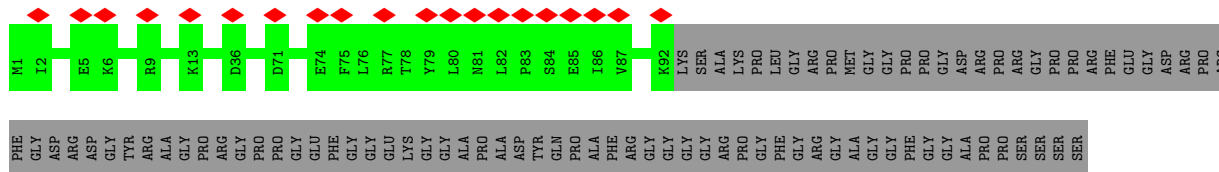
• Molecule 47: KH type-2 domain-containing protein



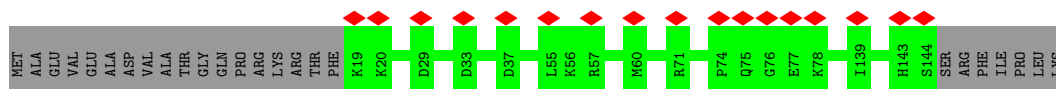
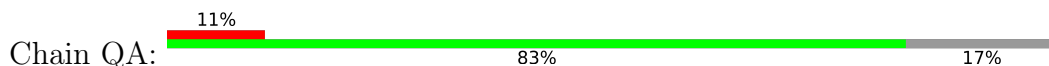
• Molecule 48: Ribosomal_S7 domain-containing protein



• Molecule 49: S10_pectin domain-containing protein

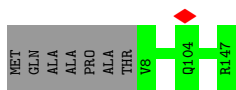


• Molecule 50: 40S ribosomal protein uS19

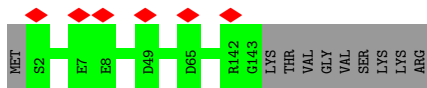


• Molecule 51: 40S ribosomal protein uS9

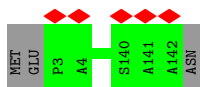




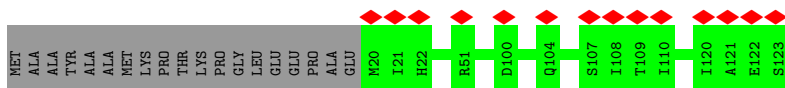
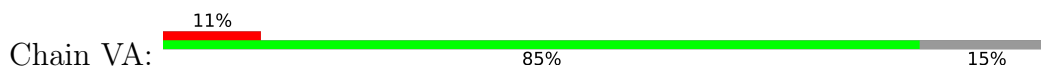
- Molecule 52: 40S ribosomal protein uS13



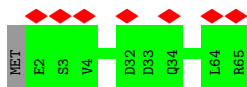
- Molecule 53: 40S ribosomal protein eS19



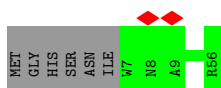
- Molecule 54: Ribosomal_S10 domain-containing protein



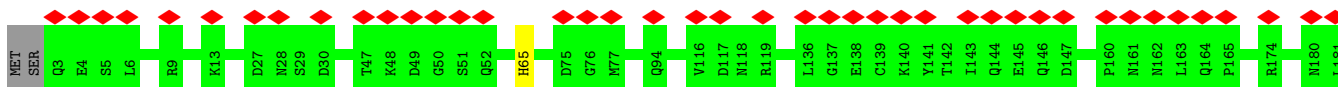
- Molecule 55: 40S ribosomal protein eS28

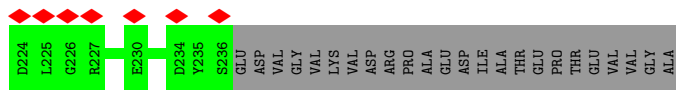


- Molecule 56: 40S ribosomal protein uS14



- Molecule 57: Mitogen-activated protein kinase

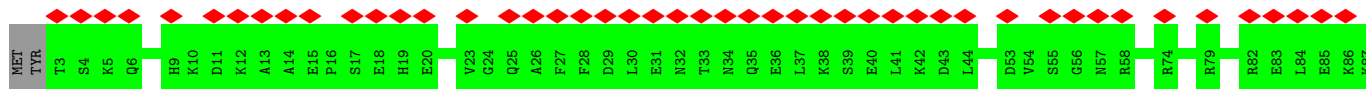




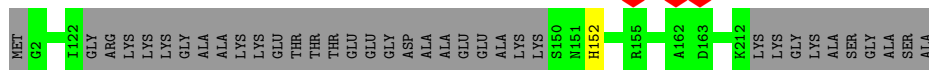
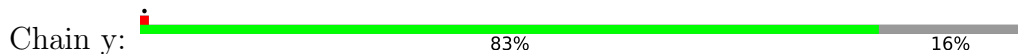
• Molecule 64: 40S ribosomal protein S4



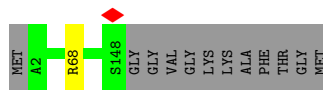
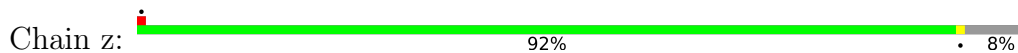
• Molecule 65: 40S ribosomal protein S7



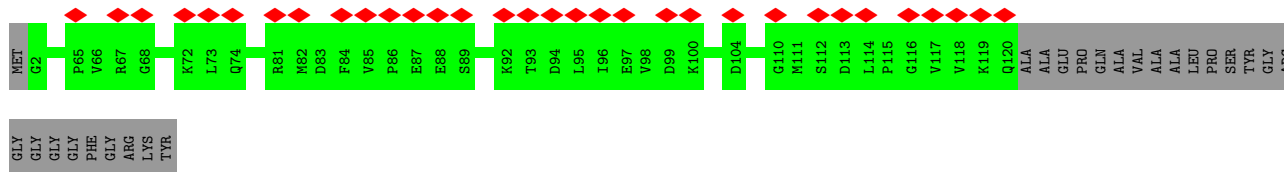
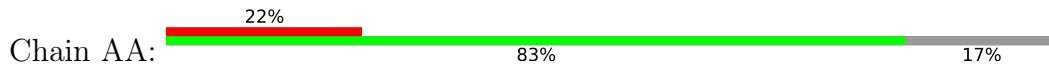
• Molecule 66: 40S ribosomal protein S8



• Molecule 67: Ribosomal_S17_N domain-containing protein

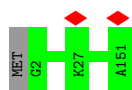


• Molecule 68: 40S ribosomal protein S17

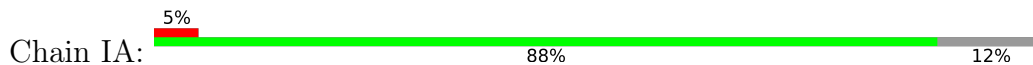


• Molecule 69: 40S ribosomal protein S21

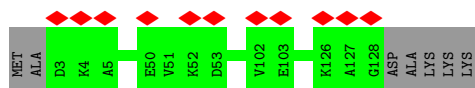
- Molecule 75: 30S ribosomal protein S15, chloroplastic



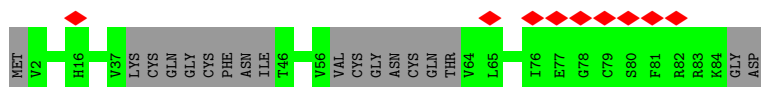
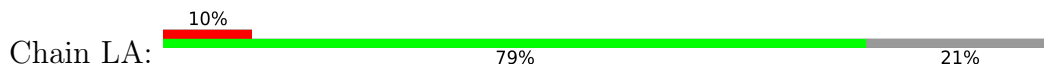
- Molecule 76: Ribosomal protein S14



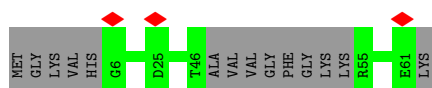
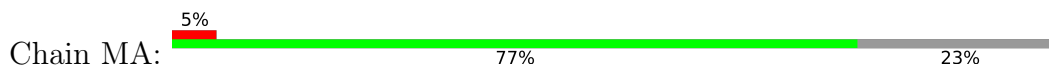
- Molecule 77: 40S ribosomal protein S24



- Molecule 78: 40S ribosomal protein S27



- Molecule 79: 40S ribosomal protein S30



- Molecule 80: 40S ribosomal protein S15a-1



4 Experimental information

| Property | Value | Source |
|--------------------------------------|---|-----------|
| EM reconstruction method | SINGLE PARTICLE | Depositor |
| Imposed symmetry | POINT, Not provided | |
| Number of particles used | 335806 | Depositor |
| Resolution determination method | FSC 0.143 CUT-OFF | Depositor |
| CTF correction method | PHASE FLIPPING AND AMPLITUDE CORRECTION | Depositor |
| Microscope | FEI TITAN KRIOS | Depositor |
| Voltage (kV) | 300 | Depositor |
| Electron dose ($e^-/\text{\AA}^2$) | 30.2 | Depositor |
| Minimum defocus (nm) | 1000 | Depositor |
| Maximum defocus (nm) | 2800 | Depositor |
| Magnification | Not provided | |
| Image detector | GATAN K2 SUMMIT (4k x 4k) | Depositor |
| Maximum map value | 0.642 | Depositor |
| Minimum map value | -0.311 | Depositor |
| Average map value | 0.001 | Depositor |
| Map value standard deviation | 0.013 | Depositor |
| Recommended contour level | 0.0352 | Depositor |
| Map size (\AA) | 448.19998, 448.19998, 448.19998 | wwPDB |
| Map dimensions | 540, 540, 540 | wwPDB |
| Map angles ($^\circ$) | 90.0, 90.0, 90.0 | wwPDB |
| Pixel spacing (\AA) | 0.83, 0.83, 0.83 | Depositor |

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 1MA, 4AC, 6MZ, MA6, PSU, THC, 7MG, BGC, 5MC, IAS, OMU, I2T, UY1, OMG, ZN, SPD, K, PUT, A2M, OMC, MG, SPM, UR3, HIC

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 | D | 0.24 | 0/1972 | 0.56 | 0/2651 |
| 2 | F | 0.23 | 0/3056 | 0.49 | 0/4123 |
| 3 | E | 0.24 | 0/3160 | 0.51 | 0/4230 |
| 4 | G | 0.24 | 0/2301 | 0.49 | 0/3087 |
| 5 | H | 0.24 | 0/1615 | 0.44 | 0/2163 |
| 6 | I | 0.24 | 0/1991 | 0.47 | 0/2669 |
| 7 | J | 0.23 | 0/1876 | 0.46 | 0/2513 |
| 8 | K | 0.23 | 0/1483 | 0.48 | 0/1982 |
| 9 | L | 0.24 | 0/1689 | 0.51 | 0/2258 |
| 10 | M | 0.23 | 0/1317 | 0.52 | 0/1758 |
| 11 | N | 0.24 | 0/1677 | 0.53 | 0/2249 |
| 12 | O | 0.23 | 0/1085 | 0.50 | 0/1448 |
| 13 | P | 0.23 | 0/1739 | 0.59 | 0/2330 |
| 14 | Q | 0.23 | 0/1672 | 0.50 | 0/2238 |
| 15 | R | 0.23 | 0/1273 | 0.51 | 0/1709 |
| 16 | S | 0.24 | 0/1477 | 0.53 | 0/1980 |
| 17 | T | 0.23 | 0/1513 | 0.55 | 0/1994 |
| 18 | U | 0.24 | 0/1543 | 0.49 | 0/2070 |
| 19 | V | 0.24 | 0/1332 | 0.54 | 0/1784 |
| 20 | W | 0.23 | 0/825 | 0.47 | 0/1106 |
| 21 | X | 0.25 | 0/1001 | 0.53 | 0/1345 |
| 22 | Y | 0.25 | 0/537 | 0.47 | 0/715 |
| 23 | Z | 0.23 | 0/966 | 0.47 | 0/1297 |
| 24 | a | 0.23 | 0/1076 | 0.57 | 0/1436 |
| 25 | b | 0.24 | 0/1118 | 0.50 | 0/1492 |
| 26 | c | 0.24 | 0/1183 | 0.49 | 0/1583 |
| 27 | d | 0.24 | 0/397 | 0.51 | 0/526 |
| 28 | e | 0.24 | 0/742 | 0.45 | 0/999 |
| 29 | f | 0.23 | 0/900 | 0.53 | 0/1202 |
| 30 | g | 0.23 | 0/1066 | 0.53 | 0/1425 |
| 31 | h | 0.25 | 0/922 | 0.53 | 0/1234 |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|---------------|-------------|-----------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 32 | i | 0.23 | 0/940 | 0.57 | 0/1253 |
| 33 | j | 0.23 | 0/1007 | 0.48 | 0/1339 |
| 34 | k | 0.23 | 0/808 | 0.52 | 0/1069 |
| 35 | l | 0.24 | 0/718 | 0.64 | 0/954 |
| 36 | m | 0.23 | 0/566 | 0.46 | 0/752 |
| 37 | n | 0.23 | 0/460 | 0.56 | 0/609 |
| 38 | o | 0.22 | 0/437 | 0.53 | 0/576 |
| 39 | p | 0.24 | 0/810 | 0.47 | 0/1069 |
| 40 | q | 0.23 | 0/718 | 0.53 | 0/952 |
| 41 | r | 0.23 | 0/1124 | 0.46 | 0/1504 |
| 42 | s | 0.18 | 0/46 | 0.67 | 0/69 |
| 43 | 2 | 0.19 | 0/71398 | 0.68 | 1/111346 (0.0%) |
| 44 | 5 | 0.26 | 1/2860 (0.0%) | 0.66 | 0/4454 |
| 45 | 8 | 0.18 | 0/3699 | 0.67 | 0/5762 |
| 46 | S2 | 0.18 | 0/36046 | 0.67 | 1/56150 (0.0%) |
| 47 | NA | 0.24 | 0/1702 | 0.50 | 0/2285 |
| 48 | OA | 0.23 | 0/1488 | 0.49 | 0/2005 |
| 49 | PA | 0.24 | 0/804 | 0.43 | 0/1087 |
| 50 | QA | 0.25 | 0/1039 | 0.51 | 0/1391 |
| 51 | RA | 0.23 | 0/1154 | 0.54 | 0/1540 |
| 52 | TA | 0.23 | 0/1171 | 0.51 | 0/1565 |
| 53 | UA | 0.23 | 0/1128 | 0.50 | 0/1515 |
| 54 | VA | 0.23 | 0/831 | 0.50 | 0/1118 |
| 55 | WA | 0.24 | 0/522 | 0.58 | 0/694 |
| 56 | XA | 0.24 | 0/416 | 0.52 | 0/555 |
| 57 | YA | 0.23 | 0/2516 | 0.48 | 0/3414 |
| 58 | ZA | 0.23 | 0/598 | 0.50 | 0/800 |
| 59 | aA | 0.13 | 0/334 | 0.63 | 0/518 |
| 60 | bA | 0.14 | 0/68 | 0.63 | 0/103 |
| 61 | t | 0.24 | 0/239 | 0.67 | 0/302 |
| 62 | u | 0.24 | 0/1645 | 0.47 | 0/2228 |
| 63 | v | 0.23 | 0/1790 | 0.50 | 0/2402 |
| 64 | w | 0.24 | 0/2124 | 0.51 | 0/2849 |
| 65 | x | 0.23 | 0/1547 | 0.50 | 0/2081 |
| 66 | y | 0.24 | 0/1516 | 0.54 | 0/2026 |
| 67 | z | 0.25 | 0/1189 | 0.52 | 0/1591 |
| 68 | AA | 0.24 | 0/971 | 0.48 | 0/1295 |
| 69 | BA | 0.24 | 0/649 | 0.46 | 0/871 |
| 70 | CA | 0.24 | 0/1119 | 0.51 | 0/1487 |
| 71 | DA | 0.24 | 0/810 | 0.55 | 0/1081 |
| 72 | EA | 0.24 | 0/1743 | 0.47 | 0/2350 |
| 73 | FA | 0.24 | 0/1930 | 0.53 | 0/2567 |
| 74 | GA | 0.24 | 0/1555 | 0.53 | 0/2078 |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|-----------------|-------------|-----------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 75 | HA | 0.24 | 0/1220 | 0.47 | 0/1639 |
| 76 | IA | 0.24 | 0/1002 | 0.56 | 0/1339 |
| 77 | KA | 0.24 | 0/1045 | 0.51 | 0/1385 |
| 78 | LA | 0.24 | 0/549 | 0.47 | 0/737 |
| 79 | MA | 0.23 | 0/387 | 0.56 | 0/508 |
| 80 | JA | 0.24 | 0/1033 | 0.48 | 0/1388 |
| All | All | 0.21 | 1/203975 (0.0%) | 0.61 | 2/298248 (0.0%) |

All (1) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 44 | 5 | 1 | G | OP3-P | -10.65 | 1.48 | 1.61 |

All (2) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|------|-------------|----------|
| 43 | 2 | 1565 | C | C2-N1-C1' | 5.39 | 124.73 | 118.80 |
| 46 | S2 | 1394 | C | C2-N1-C1' | 5.11 | 124.42 | 118.80 |

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles |
|-----|-------|---------------|-----------|---------|----------|-----------------------|
| 1 | D | 249/260 (96%) | 240 (96%) | 9 (4%) | 0 | 100 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|------------|---------|----------|-------------|-----|
| 2 | F | 377/406 (93%) | 374 (99%) | 3 (1%) | 0 | 100 | 100 |
| 3 | E | 383/389 (98%) | 377 (98%) | 6 (2%) | 0 | 100 | 100 |
| 4 | G | 274/301 (91%) | 272 (99%) | 2 (1%) | 0 | 100 | 100 |
| 5 | H | 195/229 (85%) | 195 (100%) | 0 | 0 | 100 | 100 |
| 6 | I | 237/242 (98%) | 232 (98%) | 5 (2%) | 0 | 100 | 100 |
| 7 | J | 226/258 (88%) | 225 (100%) | 1 (0%) | 0 | 100 | 100 |
| 8 | K | 180/194 (93%) | 180 (100%) | 0 | 0 | 100 | 100 |
| 9 | L | 203/220 (92%) | 202 (100%) | 1 (0%) | 0 | 100 | 100 |
| 10 | M | 156/181 (86%) | 155 (99%) | 1 (1%) | 0 | 100 | 100 |
| 11 | N | 202/206 (98%) | 199 (98%) | 3 (2%) | 0 | 100 | 100 |
| 12 | O | 130/133 (98%) | 127 (98%) | 3 (2%) | 0 | 100 | 100 |
| 13 | P | 201/204 (98%) | 197 (98%) | 4 (2%) | 0 | 100 | 100 |
| 14 | Q | 203/206 (98%) | 202 (100%) | 1 (0%) | 0 | 100 | 100 |
| 15 | R | 153/173 (88%) | 151 (99%) | 2 (1%) | 0 | 100 | 100 |
| 16 | S | 184/187 (98%) | 181 (98%) | 3 (2%) | 0 | 100 | 100 |
| 17 | T | 176/213 (83%) | 176 (100%) | 0 | 0 | 100 | 100 |
| 18 | U | 175/178 (98%) | 175 (100%) | 0 | 0 | 100 | 100 |
| 19 | V | 161/164 (98%) | 158 (98%) | 3 (2%) | 0 | 100 | 100 |
| 20 | W | 99/124 (80%) | 99 (100%) | 0 | 0 | 100 | 100 |
| 21 | X | 129/140 (92%) | 127 (98%) | 2 (2%) | 0 | 100 | 100 |
| 22 | Y | 60/165 (36%) | 60 (100%) | 0 | 0 | 100 | 100 |
| 23 | Z | 115/154 (75%) | 114 (99%) | 1 (1%) | 0 | 100 | 100 |
| 24 | a | 130/146 (89%) | 130 (100%) | 0 | 0 | 100 | 100 |
| 25 | b | 132/135 (98%) | 132 (100%) | 0 | 0 | 100 | 100 |
| 26 | c | 145/148 (98%) | 139 (96%) | 5 (3%) | 1 (1%) | 22 | 30 |
| 27 | d | 44/60 (73%) | 44 (100%) | 0 | 0 | 100 | 100 |
| 28 | e | 93/112 (83%) | 93 (100%) | 0 | 0 | 100 | 100 |
| 29 | f | 108/120 (90%) | 107 (99%) | 1 (1%) | 0 | 100 | 100 |
| 30 | g | 125/133 (94%) | 123 (98%) | 2 (2%) | 0 | 100 | 100 |
| 31 | h | 109/112 (97%) | 109 (100%) | 0 | 0 | 100 | 100 |
| 32 | i | 112/120 (93%) | 111 (99%) | 1 (1%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|------------|---------|----------|-------------|-----|
| 33 | j | 120/123 (98%) | 118 (98%) | 2 (2%) | 0 | 100 | 100 |
| 34 | k | 98/110 (89%) | 98 (100%) | 0 | 0 | 100 | 100 |
| 35 | l | 85/95 (90%) | 84 (99%) | 1 (1%) | 0 | 100 | 100 |
| 36 | m | 66/69 (96%) | 66 (100%) | 0 | 0 | 100 | 100 |
| 37 | n | 48/51 (94%) | 47 (98%) | 1 (2%) | 0 | 100 | 100 |
| 38 | o | 50/128 (39%) | 49 (98%) | 1 (2%) | 0 | 100 | 100 |
| 39 | p | 97/105 (92%) | 96 (99%) | 1 (1%) | 0 | 100 | 100 |
| 40 | q | 89/92 (97%) | 86 (97%) | 3 (3%) | 0 | 100 | 100 |
| 41 | r | 140/143 (98%) | 138 (99%) | 2 (1%) | 0 | 100 | 100 |
| 47 | NA | 211/239 (88%) | 209 (99%) | 2 (1%) | 0 | 100 | 100 |
| 48 | OA | 181/211 (86%) | 177 (98%) | 4 (2%) | 0 | 100 | 100 |
| 49 | PA | 90/180 (50%) | 88 (98%) | 2 (2%) | 0 | 100 | 100 |
| 50 | QA | 124/151 (82%) | 122 (98%) | 2 (2%) | 0 | 100 | 100 |
| 51 | RA | 138/147 (94%) | 136 (99%) | 2 (1%) | 0 | 100 | 100 |
| 52 | TA | 140/152 (92%) | 138 (99%) | 2 (1%) | 0 | 100 | 100 |
| 53 | UA | 138/143 (96%) | 138 (100%) | 0 | 0 | 100 | 100 |
| 54 | VA | 102/123 (83%) | 101 (99%) | 1 (1%) | 0 | 100 | 100 |
| 55 | WA | 62/65 (95%) | 61 (98%) | 1 (2%) | 0 | 100 | 100 |
| 56 | XA | 48/56 (86%) | 48 (100%) | 0 | 0 | 100 | 100 |
| 57 | YA | 313/326 (96%) | 312 (100%) | 1 (0%) | 0 | 100 | 100 |
| 58 | ZA | 73/108 (68%) | 73 (100%) | 0 | 0 | 100 | 100 |
| 61 | t | 23/25 (92%) | 23 (100%) | 0 | 0 | 100 | 100 |
| 62 | u | 200/296 (68%) | 200 (100%) | 0 | 0 | 100 | 100 |
| 63 | v | 213/260 (82%) | 213 (100%) | 0 | 0 | 100 | 100 |
| 64 | w | 259/264 (98%) | 258 (100%) | 1 (0%) | 0 | 100 | 100 |
| 65 | x | 185/191 (97%) | 182 (98%) | 3 (2%) | 0 | 100 | 100 |
| 66 | y | 180/220 (82%) | 179 (99%) | 1 (1%) | 0 | 100 | 100 |
| 67 | z | 145/159 (91%) | 145 (100%) | 0 | 0 | 100 | 100 |
| 68 | AA | 117/144 (81%) | 114 (97%) | 3 (3%) | 0 | 100 | 100 |
| 69 | BA | 80/82 (98%) | 80 (100%) | 0 | 0 | 100 | 100 |
| 70 | CA | 139/142 (98%) | 138 (99%) | 1 (1%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|-------------------|-------------|----------|----------|-------------|-----|
| 71 | DA | 96/127 (76%) | 96 (100%) | 0 | 0 | 100 | 100 |
| 72 | EA | 218/280 (78%) | 217 (100%) | 1 (0%) | 0 | 100 | 100 |
| 73 | FA | 235/249 (94%) | 234 (100%) | 1 (0%) | 0 | 100 | 100 |
| 74 | GA | 182/197 (92%) | 182 (100%) | 0 | 0 | 100 | 100 |
| 75 | HA | 148/151 (98%) | 148 (100%) | 0 | 0 | 100 | 100 |
| 76 | IA | 128/150 (85%) | 127 (99%) | 1 (1%) | 0 | 100 | 100 |
| 77 | KA | 124/133 (93%) | 122 (98%) | 2 (2%) | 0 | 100 | 100 |
| 78 | LA | 62/86 (72%) | 62 (100%) | 0 | 0 | 100 | 100 |
| 79 | MA | 44/62 (71%) | 43 (98%) | 1 (2%) | 0 | 100 | 100 |
| 80 | JA | 127/130 (98%) | 125 (98%) | 2 (2%) | 0 | 100 | 100 |
| All | All | 10784/12178 (89%) | 10679 (99%) | 104 (1%) | 1 (0%) | 100 | 100 |

All (1) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 26 | c | 15 | VAL |

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|------------|----------|-------------|-----|
| 1 | D | 194/199 (98%) | 191 (98%) | 3 (2%) | 65 | 79 |
| 2 | F | 316/332 (95%) | 315 (100%) | 1 (0%) | 92 | 97 |
| 3 | E | 330/332 (99%) | 329 (100%) | 1 (0%) | 92 | 97 |
| 4 | G | 232/254 (91%) | 232 (100%) | 0 | 100 | 100 |
| 5 | H | 174/196 (89%) | 174 (100%) | 0 | 100 | 100 |
| 6 | I | 208/210 (99%) | 208 (100%) | 0 | 100 | 100 |
| 7 | J | 198/221 (90%) | 198 (100%) | 0 | 100 | 100 |
| 8 | K | 162/170 (95%) | 162 (100%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|------------|----------|-------------|-----|
| 9 | L | 170/180 (94%) | 170 (100%) | 0 | 100 | 100 |
| 10 | M | 140/159 (88%) | 140 (100%) | 0 | 100 | 100 |
| 11 | N | 168/170 (99%) | 168 (100%) | 0 | 100 | 100 |
| 12 | O | 114/115 (99%) | 114 (100%) | 0 | 100 | 100 |
| 13 | P | 176/177 (99%) | 176 (100%) | 0 | 100 | 100 |
| 14 | Q | 174/176 (99%) | 173 (99%) | 1 (1%) | 86 | 93 |
| 15 | R | 135/150 (90%) | 134 (99%) | 1 (1%) | 84 | 92 |
| 16 | S | 153/154 (99%) | 153 (100%) | 0 | 100 | 100 |
| 17 | T | 157/179 (88%) | 157 (100%) | 0 | 100 | 100 |
| 18 | U | 163/164 (99%) | 163 (100%) | 0 | 100 | 100 |
| 19 | V | 139/140 (99%) | 139 (100%) | 0 | 100 | 100 |
| 20 | W | 91/106 (86%) | 91 (100%) | 0 | 100 | 100 |
| 21 | X | 103/109 (94%) | 103 (100%) | 0 | 100 | 100 |
| 22 | Y | 57/135 (42%) | 57 (100%) | 0 | 100 | 100 |
| 23 | Z | 106/135 (78%) | 106 (100%) | 0 | 100 | 100 |
| 24 | a | 118/130 (91%) | 116 (98%) | 2 (2%) | 60 | 76 |
| 25 | b | 115/116 (99%) | 115 (100%) | 0 | 100 | 100 |
| 26 | c | 118/119 (99%) | 117 (99%) | 1 (1%) | 81 | 91 |
| 27 | d | 41/51 (80%) | 41 (100%) | 0 | 100 | 100 |
| 28 | e | 82/97 (84%) | 82 (100%) | 0 | 100 | 100 |
| 29 | f | 96/105 (91%) | 96 (100%) | 0 | 100 | 100 |
| 30 | g | 115/121 (95%) | 115 (100%) | 0 | 100 | 100 |
| 31 | h | 97/98 (99%) | 97 (100%) | 0 | 100 | 100 |
| 32 | i | 99/104 (95%) | 98 (99%) | 1 (1%) | 76 | 87 |
| 33 | j | 109/110 (99%) | 109 (100%) | 0 | 100 | 100 |
| 34 | k | 86/92 (94%) | 86 (100%) | 0 | 100 | 100 |
| 35 | l | 72/76 (95%) | 72 (100%) | 0 | 100 | 100 |
| 36 | m | 64/65 (98%) | 64 (100%) | 0 | 100 | 100 |
| 37 | n | 47/48 (98%) | 47 (100%) | 0 | 100 | 100 |
| 38 | o | 47/114 (41%) | 47 (100%) | 0 | 100 | 100 |
| 39 | p | 87/92 (95%) | 87 (100%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|------------|----------|-------------|-----|
| 40 | q | 73/74 (99%) | 73 (100%) | 0 | 100 | 100 |
| 41 | r | 122/123 (99%) | 122 (100%) | 0 | 100 | 100 |
| 47 | NA | 180/204 (88%) | 180 (100%) | 0 | 100 | 100 |
| 48 | OA | 157/178 (88%) | 157 (100%) | 0 | 100 | 100 |
| 49 | PA | 86/141 (61%) | 86 (100%) | 0 | 100 | 100 |
| 50 | QA | 111/132 (84%) | 111 (100%) | 0 | 100 | 100 |
| 51 | RA | 118/122 (97%) | 118 (100%) | 0 | 100 | 100 |
| 52 | TA | 122/131 (93%) | 122 (100%) | 0 | 100 | 100 |
| 53 | UA | 113/116 (97%) | 113 (100%) | 0 | 100 | 100 |
| 54 | VA | 96/109 (88%) | 96 (100%) | 0 | 100 | 100 |
| 55 | WA | 57/58 (98%) | 57 (100%) | 0 | 100 | 100 |
| 56 | XA | 42/47 (89%) | 42 (100%) | 0 | 100 | 100 |
| 57 | YA | 275/282 (98%) | 274 (100%) | 1 (0%) | 91 | 96 |
| 58 | ZA | 65/91 (71%) | 65 (100%) | 0 | 100 | 100 |
| 61 | t | 24/24 (100%) | 24 (100%) | 0 | 100 | 100 |
| 62 | u | 170/229 (74%) | 170 (100%) | 0 | 100 | 100 |
| 63 | v | 196/229 (86%) | 195 (100%) | 1 (0%) | 88 | 95 |
| 64 | w | 226/228 (99%) | 225 (100%) | 1 (0%) | 91 | 96 |
| 65 | x | 168/171 (98%) | 168 (100%) | 0 | 100 | 100 |
| 66 | y | 158/181 (87%) | 157 (99%) | 1 (1%) | 86 | 93 |
| 67 | z | 125/132 (95%) | 124 (99%) | 1 (1%) | 81 | 91 |
| 68 | AA | 109/123 (89%) | 109 (100%) | 0 | 100 | 100 |
| 69 | BA | 68/68 (100%) | 68 (100%) | 0 | 100 | 100 |
| 70 | CA | 113/114 (99%) | 112 (99%) | 1 (1%) | 78 | 89 |
| 71 | DA | 87/109 (80%) | 87 (100%) | 0 | 100 | 100 |
| 72 | EA | 185/222 (83%) | 183 (99%) | 2 (1%) | 73 | 86 |
| 73 | FA | 206/214 (96%) | 206 (100%) | 0 | 100 | 100 |
| 74 | GA | 162/170 (95%) | 162 (100%) | 0 | 100 | 100 |
| 75 | HA | 130/131 (99%) | 130 (100%) | 0 | 100 | 100 |
| 76 | IA | 103/120 (86%) | 103 (100%) | 0 | 100 | 100 |
| 77 | KA | 109/114 (96%) | 109 (100%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|------------------|-------------|----------|-------------|-----|
| 78 | LA | 63/78 (81%) | 63 (100%) | 0 | 100 | 100 |
| 79 | MA | 39/49 (80%) | 39 (100%) | 0 | 100 | 100 |
| 80 | JA | 108/109 (99%) | 108 (100%) | 0 | 100 | 100 |
| All | All | 9419/10324 (91%) | 9400 (100%) | 19 (0%) | 93 | 97 |

All (19) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | D | 208 | GLU |
| 1 | D | 218 | HIS |
| 1 | D | 251 | ARG |
| 2 | F | 126 | TYR |
| 3 | E | 369 | PHE |
| 14 | Q | 155 | TYR |
| 15 | R | 50 | ASP |
| 24 | a | 2 | LYS |
| 24 | a | 73 | TYR |
| 26 | c | 60 | TYR |
| 32 | i | 44 | CYS |
| 57 | YA | 65 | HIS |
| 63 | v | 47 | LEU |
| 64 | w | 130 | GLN |
| 66 | y | 152 | HIS |
| 67 | z | 68 | ARG |
| 70 | CA | 104 | PHE |
| 72 | EA | 57 | ASP |
| 72 | EA | 221 | PHE |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (12) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 9 | L | 123 | GLN |
| 17 | T | 40 | ASN |
| 41 | r | 103 | ASN |
| 41 | r | 104 | GLN |
| 47 | NA | 148 | GLN |
| 47 | NA | 177 | HIS |
| 51 | RA | 12 | GLN |
| 62 | u | 114 | GLN |
| 70 | CA | 60 | GLN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 73 | FA | 7 | ASN |
| 78 | LA | 51 | HIS |
| 80 | JA | 51 | GLN |

5.3.3 RNA [i](#)

| Mol | Chain | Analysed | Backbone Outliers | Pucker Outliers |
|-----|-------|-----------------|-------------------|-----------------|
| 42 | s | 1/2 (50%) | 1 (100%) | 0 |
| 43 | 2 | 3083/3391 (90%) | 315 (10%) | 2 (0%) |
| 44 | 5 | 119/120 (99%) | 8 (6%) | 0 |
| 45 | 8 | 157/165 (95%) | 15 (9%) | 0 |
| 46 | S2 | 1562/1808 (86%) | 168 (10%) | 1 (0%) |
| 59 | aA | 13/14 (92%) | 0 | 0 |
| 60 | bA | 2/3 (66%) | 0 | 0 |
| All | All | 4937/5503 (89%) | 507 (10%) | 3 (0%) |

All (507) RNA backbone outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 42 | s | 2 | A |
| 43 | 2 | 38 | A |
| 43 | 2 | 41 | A |
| 43 | 2 | 47 | A |
| 43 | 2 | 58 | A |
| 43 | 2 | 63 | A |
| 43 | 2 | 64 | A |
| 43 | 2 | 68 | PSU |
| 43 | 2 | 84 | G |
| 43 | 2 | 90 | G |
| 43 | 2 | 97 | A |
| 43 | 2 | 109 | C |
| 43 | 2 | 114 | C |
| 43 | 2 | 133 | C |
| 43 | 2 | 134 | G |
| 43 | 2 | 154 | G |
| 43 | 2 | 155 | A |
| 43 | 2 | 162 | U |
| 43 | 2 | 167 | A |
| 43 | 2 | 168 | G |
| 43 | 2 | 187 | U |
| 43 | 2 | 197 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 43 | 2 | 216 | A |
| 43 | 2 | 258 | G |
| 43 | 2 | 262 | A |
| 43 | 2 | 283 | U |
| 43 | 2 | 292 | A |
| 43 | 2 | 320 | A |
| 43 | 2 | 326 | U |
| 43 | 2 | 373 | G |
| 43 | 2 | 394 | A |
| 43 | 2 | 396 | A |
| 43 | 2 | 398 | U |
| 43 | 2 | 418 | G |
| 43 | 2 | 419 | A |
| 43 | 2 | 436 | C |
| 43 | 2 | 445 | C |
| 43 | 2 | 446 | C |
| 43 | 2 | 465 | G |
| 43 | 2 | 483 | U |
| 43 | 2 | 484 | C |
| 43 | 2 | 488 | U |
| 43 | 2 | 489 | C |
| 43 | 2 | 525 | A |
| 43 | 2 | 538 | C |
| 43 | 2 | 539 | G |
| 43 | 2 | 542 | A |
| 43 | 2 | 544 | G |
| 43 | 2 | 550 | G |
| 43 | 2 | 571 | U |
| 43 | 2 | 589 | U |
| 43 | 2 | 590 | C |
| 43 | 2 | 591 | C |
| 43 | 2 | 592 | G |
| 43 | 2 | 600 | U |
| 43 | 2 | 603 | G |
| 43 | 2 | 607 | C |
| 43 | 2 | 608 | U |
| 43 | 2 | 609 | G |
| 43 | 2 | 620 | A |
| 43 | 2 | 629 | U |
| 43 | 2 | 632 | G |
| 43 | 2 | 636 | U |
| 43 | 2 | 660 | A2M |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 43 | 2 | 671 | A |
| 43 | 2 | 688 | A |
| 43 | 2 | 692 | A |
| 43 | 2 | 693 | A |
| 43 | 2 | 700 | A |
| 43 | 2 | 701 | G |
| 43 | 2 | 728 | A |
| 43 | 2 | 729 | U |
| 43 | 2 | 730 | U |
| 43 | 2 | 732 | G |
| 43 | 2 | 745 | G |
| 43 | 2 | 771 | A |
| 43 | 2 | 777 | U |
| 43 | 2 | 781 | A |
| 43 | 2 | 791 | G |
| 43 | 2 | 795 | G |
| 43 | 2 | 797 | G |
| 43 | 2 | 809 | G |
| 43 | 2 | 827 | A2M |
| 43 | 2 | 840 | G |
| 43 | 2 | 856 | A |
| 43 | 2 | 859 | C |
| 43 | 2 | 871 | C |
| 43 | 2 | 884 | U |
| 43 | 2 | 889 | U |
| 43 | 2 | 917 | G |
| 43 | 2 | 918 | OMG |
| 43 | 2 | 924 | A |
| 43 | 2 | 926 | G |
| 43 | 2 | 927 | A |
| 43 | 2 | 931 | A |
| 43 | 2 | 947 | G |
| 43 | 2 | 954 | C |
| 43 | 2 | 969 | C |
| 43 | 2 | 970 | PSU |
| 43 | 2 | 984 | G |
| 43 | 2 | 987 | C |
| 43 | 2 | 991 | U |
| 43 | 2 | 1013 | C |
| 43 | 2 | 1014 | A |
| 43 | 2 | 1022 | G |
| 43 | 2 | 1032 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 43 | 2 | 1059 | A |
| 43 | 2 | 1076 | A |
| 43 | 2 | 1093 | U |
| 43 | 2 | 1107 | G |
| 43 | 2 | 1108 | G |
| 43 | 2 | 1109 | A |
| 43 | 2 | 1114 | A |
| 43 | 2 | 1115 | G |
| 43 | 2 | 1128 | G |
| 43 | 2 | 1142 | G |
| 43 | 2 | 1166 | C |
| 43 | 2 | 1170 | A |
| 43 | 2 | 1185 | G |
| 43 | 2 | 1191 | C |
| 43 | 2 | 1192 | U |
| 43 | 2 | 1202 | C |
| 43 | 2 | 1205 | A |
| 43 | 2 | 1213 | C |
| 43 | 2 | 1220 | U |
| 43 | 2 | 1233 | A |
| 43 | 2 | 1234 | G |
| 43 | 2 | 1297 | G |
| 43 | 2 | 1299 | A |
| 43 | 2 | 1319 | G |
| 43 | 2 | 1321 | U |
| 43 | 2 | 1328 | U |
| 43 | 2 | 1329 | A |
| 43 | 2 | 1360 | A |
| 43 | 2 | 1361 | A |
| 43 | 2 | 1362 | G |
| 43 | 2 | 1363 | U |
| 43 | 2 | 1364 | G |
| 43 | 2 | 1365 | C |
| 43 | 2 | 1366 | C |
| 43 | 2 | 1410 | U |
| 43 | 2 | 1430 | G |
| 43 | 2 | 1445 | G |
| 43 | 2 | 1448 | OMC |
| 43 | 2 | 1454 | G |
| 43 | 2 | 1457 | A |
| 43 | 2 | 1466 | U |
| 43 | 2 | 1492 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 43 | 2 | 1513 | G |
| 43 | 2 | 1518 | G |
| 43 | 2 | 1547 | G |
| 43 | 2 | 1566 | A |
| 43 | 2 | 1571 | G |
| 43 | 2 | 1585 | U |
| 43 | 2 | 1592 | A |
| 43 | 2 | 1594 | A |
| 43 | 2 | 1598 | A |
| 43 | 2 | 1601 | C |
| 43 | 2 | 1602 | G |
| 43 | 2 | 1625 | C |
| 43 | 2 | 1633 | U |
| 43 | 2 | 1647 | A |
| 43 | 2 | 1649 | G |
| 43 | 2 | 1661 | C |
| 43 | 2 | 1691 | U |
| 43 | 2 | 1696 | G |
| 43 | 2 | 1729 | G |
| 43 | 2 | 1755 | A |
| 43 | 2 | 1756 | G |
| 43 | 2 | 1763 | G |
| 43 | 2 | 1802 | G |
| 43 | 2 | 1803 | A |
| 43 | 2 | 1820 | A |
| 43 | 2 | 1821 | U |
| 43 | 2 | 1827 | C |
| 43 | 2 | 1848 | A |
| 43 | 2 | 1856 | A |
| 43 | 2 | 1872 | C |
| 43 | 2 | 1884 | G |
| 43 | 2 | 1885 | A |
| 43 | 2 | 1886 | U |
| 43 | 2 | 1899 | G |
| 43 | 2 | 1912 | G |
| 43 | 2 | 1949 | C |
| 43 | 2 | 1959 | G |
| 43 | 2 | 2118 | C |
| 43 | 2 | 2126 | OMG |
| 43 | 2 | 2135 | A |
| 43 | 2 | 2153 | A |
| 43 | 2 | 2162 | A |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 43 | 2 | 2195 | C |
| 43 | 2 | 2209 | G |
| 43 | 2 | 2213 | G |
| 43 | 2 | 2259 | A2M |
| 43 | 2 | 2275 | G |
| 43 | 2 | 2276 | G |
| 43 | 2 | 2283 | A |
| 43 | 2 | 2284 | A2M |
| 43 | 2 | 2310 | G |
| 43 | 2 | 2313 | U |
| 43 | 2 | 2316 | A |
| 43 | 2 | 2318 | G |
| 43 | 2 | 2337 | U |
| 43 | 2 | 2338 | G |
| 43 | 2 | 2339 | U |
| 43 | 2 | 2376 | A |
| 43 | 2 | 2377 | C |
| 43 | 2 | 2378 | G |
| 43 | 2 | 2396 | G |
| 43 | 2 | 2397 | G |
| 43 | 2 | 2400 | A |
| 43 | 2 | 2405 | A |
| 43 | 2 | 2406 | G |
| 43 | 2 | 2407 | A |
| 43 | 2 | 2414 | U |
| 43 | 2 | 2415 | G |
| 43 | 2 | 2438 | G |
| 43 | 2 | 2440 | G |
| 43 | 2 | 2519 | U |
| 43 | 2 | 2520 | A |
| 43 | 2 | 2539 | G |
| 43 | 2 | 2556 | U |
| 43 | 2 | 2564 | A |
| 43 | 2 | 2574 | U |
| 43 | 2 | 2575 | C |
| 43 | 2 | 2589 | G |
| 43 | 2 | 2590 | G |
| 43 | 2 | 2597 | A |
| 43 | 2 | 2610 | G |
| 43 | 2 | 2611 | G |
| 43 | 2 | 2618 | G |
| 43 | 2 | 2630 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 43 | 2 | 2656 | U |
| 43 | 2 | 2660 | A |
| 43 | 2 | 2678 | A |
| 43 | 2 | 2681 | G |
| 43 | 2 | 2693 | G |
| 43 | 2 | 2695 | A |
| 43 | 2 | 2700 | A |
| 43 | 2 | 2708 | A |
| 43 | 2 | 2718 | G |
| 43 | 2 | 2732 | G |
| 43 | 2 | 2733 | OMU |
| 43 | 2 | 2757 | G |
| 43 | 2 | 2759 | C |
| 43 | 2 | 2766 | A |
| 43 | 2 | 2776 | C |
| 43 | 2 | 2781 | G |
| 43 | 2 | 2782 | G |
| 43 | 2 | 2800 | G |
| 43 | 2 | 2803 | A |
| 43 | 2 | 2804 | G |
| 43 | 2 | 2805 | A |
| 43 | 2 | 2814 | C |
| 43 | 2 | 2818 | G |
| 43 | 2 | 2821 | A |
| 43 | 2 | 2849 | A |
| 43 | 2 | 2857 | G |
| 43 | 2 | 2875 | G |
| 43 | 2 | 2876 | A |
| 43 | 2 | 2879 | U |
| 43 | 2 | 2891 | A |
| 43 | 2 | 2939 | U |
| 43 | 2 | 2940 | A |
| 43 | 2 | 2946 | C |
| 43 | 2 | 2951 | G |
| 43 | 2 | 2975 | A |
| 43 | 2 | 2987 | C |
| 43 | 2 | 2994 | G |
| 43 | 2 | 3000 | A |
| 43 | 2 | 3001 | G |
| 43 | 2 | 3015 | A |
| 43 | 2 | 3061 | C |
| 43 | 2 | 3062 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 43 | 2 | 3081 | G |
| 43 | 2 | 3082 | U |
| 43 | 2 | 3095 | C |
| 43 | 2 | 3096 | C |
| 43 | 2 | 3125 | A |
| 43 | 2 | 3133 | A |
| 43 | 2 | 3134 | U |
| 43 | 2 | 3145 | A |
| 43 | 2 | 3156 | C |
| 43 | 2 | 3157 | G |
| 43 | 2 | 3164 | G |
| 43 | 2 | 3176 | A |
| 43 | 2 | 3177 | C |
| 43 | 2 | 3180 | G |
| 43 | 2 | 3186 | G |
| 43 | 2 | 3196 | G |
| 43 | 2 | 3202 | A |
| 43 | 2 | 3209 | C |
| 43 | 2 | 3210 | G |
| 43 | 2 | 3213 | U |
| 43 | 2 | 3216 | U |
| 43 | 2 | 3222 | A |
| 43 | 2 | 3223 | A |
| 43 | 2 | 3237 | A |
| 43 | 2 | 3269 | U |
| 43 | 2 | 3273 | U |
| 43 | 2 | 3274 | C |
| 43 | 2 | 3276 | A |
| 43 | 2 | 3287 | G |
| 43 | 2 | 3297 | C |
| 43 | 2 | 3312 | C |
| 43 | 2 | 3313 | G |
| 43 | 2 | 3330 | G |
| 43 | 2 | 3334 | C |
| 43 | 2 | 3338 | G |
| 43 | 2 | 3362 | G |
| 43 | 2 | 3371 | C |
| 43 | 2 | 3375 | U |
| 43 | 2 | 3383 | C |
| 43 | 2 | 3384 | C |
| 43 | 2 | 3385 | G |
| 43 | 2 | 3391 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 44 | 5 | 7 | G |
| 44 | 5 | 25 | G |
| 44 | 5 | 38 | U |
| 44 | 5 | 53 | U |
| 44 | 5 | 54 | A |
| 44 | 5 | 64 | G |
| 44 | 5 | 110 | G |
| 44 | 5 | 120 | U |
| 45 | 8 | 28 | C |
| 45 | 8 | 39 | U |
| 45 | 8 | 40 | C |
| 45 | 8 | 64 | A |
| 45 | 8 | 67 | C |
| 45 | 8 | 68 | U |
| 45 | 8 | 85 | A |
| 45 | 8 | 86 | U |
| 45 | 8 | 91 | U |
| 45 | 8 | 92 | G |
| 45 | 8 | 95 | C |
| 45 | 8 | 109 | A |
| 45 | 8 | 111 | C |
| 45 | 8 | 131 | A |
| 45 | 8 | 158 | C |
| 46 | S2 | 8 | U |
| 46 | S2 | 25 | C |
| 46 | S2 | 26 | A |
| 46 | S2 | 34 | G |
| 46 | S2 | 42 | G |
| 46 | S2 | 45 | U |
| 46 | S2 | 47 | A |
| 46 | S2 | 59 | G |
| 46 | S2 | 68 | A |
| 46 | S2 | 105 | A |
| 46 | S2 | 115 | A |
| 46 | S2 | 128 | G |
| 46 | S2 | 139 | U |
| 46 | S2 | 151 | A |
| 46 | S2 | 158 | C |
| 46 | S2 | 164 | C |
| 46 | S2 | 252 | U |
| 46 | S2 | 253 | C |
| 46 | S2 | 260 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 46 | S2 | 263 | C |
| 46 | S2 | 275 | C |
| 46 | S2 | 279 | C |
| 46 | S2 | 318 | C |
| 46 | S2 | 320 | A |
| 46 | S2 | 341 | G |
| 46 | S2 | 342 | C |
| 46 | S2 | 365 | C |
| 46 | S2 | 384 | U |
| 46 | S2 | 394 | G |
| 46 | S2 | 404 | A |
| 46 | S2 | 405 | A |
| 46 | S2 | 406 | C |
| 46 | S2 | 408 | G |
| 46 | S2 | 420 | A |
| 46 | S2 | 421 | A |
| 46 | S2 | 427 | G |
| 46 | S2 | 428 | C |
| 46 | S2 | 430 | G |
| 46 | S2 | 438 | G |
| 46 | S2 | 443 | U |
| 46 | S2 | 448 | C |
| 46 | S2 | 449 | A |
| 46 | S2 | 452 | C |
| 46 | S2 | 472 | A |
| 46 | S2 | 481 | A |
| 46 | S2 | 509 | A |
| 46 | S2 | 510 | U |
| 46 | S2 | 513 | G |
| 46 | S2 | 518 | A |
| 46 | S2 | 522 | C |
| 46 | S2 | 537 | A |
| 46 | S2 | 545 | U |
| 46 | S2 | 574 | G |
| 46 | S2 | 582 | A |
| 46 | S2 | 597 | A |
| 46 | S2 | 614 | OMU |
| 46 | S2 | 622 | A2M |
| 46 | S2 | 623 | A |
| 46 | S2 | 625 | A |
| 46 | S2 | 626 | A |
| 46 | S2 | 641 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 46 | S2 | 642 | U |
| 46 | S2 | 758 | G |
| 46 | S2 | 759 | A |
| 46 | S2 | 770 | C |
| 46 | S2 | 782 | C |
| 46 | S2 | 785 | C |
| 46 | S2 | 786 | G |
| 46 | S2 | 789 | C |
| 46 | S2 | 790 | U |
| 46 | S2 | 793 | A |
| 46 | S2 | 816 | A |
| 46 | S2 | 817 | U |
| 46 | S2 | 818 | A |
| 46 | S2 | 823 | U |
| 46 | S2 | 859 | A |
| 46 | S2 | 862 | A |
| 46 | S2 | 866 | A |
| 46 | S2 | 879 | G |
| 46 | S2 | 936 | A |
| 46 | S2 | 938 | U |
| 46 | S2 | 963 | U |
| 46 | S2 | 969 | A |
| 46 | S2 | 973 | A |
| 46 | S2 | 974 | A |
| 46 | S2 | 1007 | U |
| 46 | S2 | 1008 | A |
| 46 | S2 | 1029 | A |
| 46 | S2 | 1031 | C |
| 46 | S2 | 1057 | U |
| 46 | S2 | 1059 | G |
| 46 | S2 | 1060 | C |
| 46 | S2 | 1061 | U |
| 46 | S2 | 1085 | U |
| 46 | S2 | 1092 | U |
| 46 | S2 | 1095 | A |
| 46 | S2 | 1100 | U |
| 46 | S2 | 1141 | A |
| 46 | S2 | 1149 | G |
| 46 | S2 | 1153 | G |
| 46 | S2 | 1154 | A |
| 46 | S2 | 1161 | C |
| 46 | S2 | 1162 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 46 | S2 | 1167 | G |
| 46 | S2 | 1170 | G |
| 46 | S2 | 1188 | U |
| 46 | S2 | 1197 | A |
| 46 | S2 | 1199 | A |
| 46 | S2 | 1202 | G |
| 46 | S2 | 1203 | G |
| 46 | S2 | 1205 | A |
| 46 | S2 | 1210 | PSU |
| 46 | S2 | 1220 | A |
| 46 | S2 | 1221 | G |
| 46 | S2 | 1247 | A |
| 46 | S2 | 1304 | PSU |
| 46 | S2 | 1317 | U |
| 46 | S2 | 1318 | U |
| 46 | S2 | 1319 | C |
| 46 | S2 | 1324 | A |
| 46 | S2 | 1377 | C |
| 46 | S2 | 1395 | U |
| 46 | S2 | 1404 | U |
| 46 | S2 | 1407 | G |
| 46 | S2 | 1418 | U |
| 46 | S2 | 1419 | U |
| 46 | S2 | 1420 | U |
| 46 | S2 | 1432 | A |
| 46 | S2 | 1433 | OMG |
| 46 | S2 | 1440 | G |
| 46 | S2 | 1441 | A |
| 46 | S2 | 1450 | G |
| 46 | S2 | 1451 | A |
| 46 | S2 | 1464 | C |
| 46 | S2 | 1465 | A |
| 46 | S2 | 1476 | A |
| 46 | S2 | 1491 | G |
| 46 | S2 | 1495 | U |
| 46 | S2 | 1500 | G |
| 46 | S2 | 1503 | U |
| 46 | S2 | 1518 | G |
| 46 | S2 | 1522 | A |
| 46 | S2 | 1523 | A |
| 46 | S2 | 1528 | U |
| 46 | S2 | 1530 | A |

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| Mol | Chain | Res | Type |
|-----|-------|------|------|
| 46 | S2 | 1543 | A |
| 46 | S2 | 1563 | U |
| 46 | S2 | 1565 | G |
| 46 | S2 | 1566 | U |
| 46 | S2 | 1596 | G |
| 46 | S2 | 1607 | G |
| 46 | S2 | 1613 | G |
| 46 | S2 | 1622 | G |
| 46 | S2 | 1640 | C |
| 46 | S2 | 1663 | U |
| 46 | S2 | 1664 | G |
| 46 | S2 | 1763 | A |
| 46 | S2 | 1765 | G |
| 46 | S2 | 1768 | G |
| 46 | S2 | 1777 | U |
| 46 | S2 | 1788 | G |
| 46 | S2 | 1800 | G |
| 46 | S2 | 1801 | G |
| 46 | S2 | 1802 | A |
| 46 | S2 | 1803 | U |
| 46 | S2 | 1804 | C |
| 46 | S2 | 1807 | U |
| 46 | S2 | 1808 | G |

All (3) RNA pucker outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|------|------|
| 43 | 2 | 926 | G |
| 43 | 2 | 3124 | U |
| 46 | S2 | 1463 | G |

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

207 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 |
| 43 | PSU | 2 | 2269 | 43 | 18,21,22 | 0.46 | 0 | 22,30,33 | 0.57 | 0 |
| 46 | PSU | S2 | 762 | 46 | 18,21,22 | 0.46 | 0 | 22,30,33 | 0.56 | 0 |
| 43 | OMC | 2 | 2340 | 43 | 19,22,23 | 0.28 | 0 | 26,31,34 | 0.47 | 0 |
| 43 | OMU | 2 | 1068 | 43 | 19,22,23 | 0.30 | 0 | 26,31,34 | 0.53 | 0 |
| 43 | PSU | 2 | 2979 | 43 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.58 | 0 |
| 46 | OMU | S2 | 1012 | 46 | 19,22,23 | 0.29 | 0 | 26,31,34 | 0.51 | 0 |
| 43 | A2M | 2 | 2915 | 43 | 18,25,26 | 0.64 | 0 | 18,36,39 | 0.76 | 1 (5%) |
| 46 | OMG | S2 | 598 | 46 | 18,26,27 | 0.91 | 2 (11%) | 19,38,41 | 0.63 | 0 |
| 43 | PSU | 2 | 895 | 43 | 18,21,22 | 0.53 | 0 | 22,30,33 | 0.54 | 0 |
| 46 | PSU | S2 | 103 | 46 | 18,21,22 | 0.49 | 0 | 22,30,33 | 0.56 | 0 |
| 46 | 4AC | S2 | 1781 | 46 | 21,24,25 | 0.29 | 0 | 29,34,37 | 0.30 | 0 |
| 46 | OMU | S2 | 1263 | 46 | 19,22,23 | 0.27 | 0 | 26,31,34 | 0.44 | 0 |
| 46 | OMC | S2 | 418 | 46 | 19,22,23 | 0.28 | 0 | 26,31,34 | 0.44 | 0 |
| 46 | A2M | S2 | 977 | 46 | 18,25,26 | 0.68 | 0 | 18,36,39 | 0.78 | 1 (5%) |
| 43 | PSU | 2 | 2267 | 43 | 18,21,22 | 0.46 | 0 | 22,30,33 | 0.57 | 0 |
| 43 | OMU | 2 | 2350 | 81,43 | 19,22,23 | 0.30 | 0 | 26,31,34 | 0.41 | 0 |
| 43 | OMU | 2 | 2413 | 81,43 | 19,22,23 | 0.29 | 0 | 26,31,34 | 0.41 | 0 |
| 43 | PSU | 2 | 2317 | 81,43 | 18,21,22 | 0.47 | 0 | 22,30,33 | 0.59 | 0 |
| 46 | PSU | S2 | 1634 | 46 | 18,21,22 | 0.50 | 0 | 22,30,33 | 0.54 | 0 |
| 43 | OMU | 2 | 2887 | 43 | 19,22,23 | 0.29 | 0 | 26,31,34 | 0.55 | 0 |
| 43 | PSU | 2 | 2419 | 43,82 | 18,21,22 | 0.49 | 0 | 22,30,33 | 0.56 | 0 |
| 43 | A2M | 2 | 2324 | 43 | 18,25,26 | 0.67 | 0 | 18,36,39 | 0.82 | 1 (5%) |
| 43 | PSU | 2 | 2927 | 43 | 18,21,22 | 0.45 | 0 | 22,30,33 | 0.59 | 0 |
| 43 | OMG | 2 | 399 | 43 | 18,26,27 | 0.89 | 1 (5%) | 19,38,41 | 0.69 | 0 |
| 46 | PSU | S2 | 111 | 81,46 | 18,21,22 | 0.47 | 0 | 22,30,33 | 0.57 | 0 |
| 43 | 5MC | 2 | 2874 | 81,43 | 18,22,23 | 0.44 | 0 | 26,32,35 | 0.52 | 0 |
| 46 | I2T | S2 | 1194 | 46 | 24,29,30 | 0.59 | 0 | 29,42,45 | 0.61 | 0 |
| 43 | PSU | 2 | 1133 | 43 | 18,21,22 | 0.46 | 0 | 22,30,33 | 0.55 | 0 |
| 46 | OMU | S2 | 1447 | 46 | 19,22,23 | 0.27 | 0 | 26,31,34 | 0.46 | 0 |
| 43 | PSU | 2 | 2228 | 43 | 18,21,22 | 0.53 | 0 | 22,30,33 | 0.52 | 0 |
| 43 | PSU | 2 | 2996 | 43 | 18,21,22 | 0.55 | 0 | 22,30,33 | 0.50 | 0 |
| 43 | OMU | 2 | 2733 | 43 | 19,22,23 | 0.30 | 0 | 26,31,34 | 0.45 | 0 |
| 46 | A2M | S2 | 162 | 46 | 18,25,26 | 0.66 | 0 | 18,36,39 | 0.85 | 1 (5%) |
| 43 | A2M | 2 | 2644 | 43 | 18,25,26 | 0.66 | 0 | 18,36,39 | 0.72 | 1 (5%) |
| 43 | PSU | 2 | 2884 | 43 | 18,21,22 | 0.50 | 0 | 22,30,33 | 0.55 | 0 |
| 43 | OMC | 2 | 674 | 43 | 19,22,23 | 0.27 | 0 | 26,31,34 | 0.46 | 0 |
| 46 | PSU | S2 | 1304 | 46 | 18,21,22 | 0.49 | 0 | 22,30,33 | 0.56 | 0 |
| 46 | PSU | S2 | 1217 | 46 | 18,21,22 | 0.49 | 0 | 22,30,33 | 0.55 | 0 |
| 46 | PSU | S2 | 1538 | 46 | 18,21,22 | 0.46 | 0 | 22,30,33 | 0.56 | 0 |
| 43 | PSU | 2 | 2352 | 43,82 | 18,21,22 | 0.49 | 0 | 22,30,33 | 0.56 | 0 |
| 46 | 4AC | S2 | 1283 | 46 | 21,24,25 | 0.30 | 0 | 29,34,37 | 0.36 | 0 |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|-------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 46 | PSU | S2 | 1178 | 46 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.58 | 0 |
| 46 | PSU | S2 | 753 | 46 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.57 | 0 |
| 46 | PSU | S2 | 635 | 46 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.60 | 0 |
| 43 | PSU | 2 | 2830 | 43 | 18,21,22 | 0.49 | 0 | 22,30,33 | 0.56 | 0 |
| 43 | 1MA | 2 | 656 | 43,82 | 16,25,26 | 1.16 | 3 (18%) | 18,37,40 | 0.83 | 1 (5%) |
| 43 | OMC | 2 | 1849 | 43 | 19,22,23 | 0.28 | 0 | 26,31,34 | 0.39 | 0 |
| 43 | OMG | 2 | 918 | 81,43 | 18,26,27 | 0.95 | 2 (11%) | 19,38,41 | 0.59 | 0 |
| 46 | PSU | S2 | 1210 | 46 | 18,21,22 | 0.46 | 0 | 22,30,33 | 0.40 | 0 |
| 43 | A2M | 2 | 1460 | 43,82 | 18,25,26 | 0.67 | 0 | 18,36,39 | 0.78 | 1 (5%) |
| 43 | A2M | 2 | 2259 | 43 | 18,25,26 | 0.65 | 0 | 18,36,39 | 0.74 | 1 (5%) |
| 43 | OMU | 2 | 144 | 43 | 19,22,23 | 0.25 | 0 | 26,31,34 | 0.40 | 0 |
| 46 | OMU | S2 | 1272 | 82,46 | 19,22,23 | 0.23 | 0 | 26,31,34 | 0.43 | 0 |
| 46 | PSU | S2 | 949 | 46 | 18,21,22 | 0.50 | 0 | 22,30,33 | 0.54 | 0 |
| 46 | PSU | S2 | 1027 | 46 | 18,21,22 | 0.52 | 0 | 22,30,33 | 0.63 | 1 (4%) |
| 43 | OMG | 2 | 2623 | 43,82 | 18,26,27 | 0.91 | 2 (11%) | 19,38,41 | 0.59 | 0 |
| 43 | OMC | 2 | 2686 | 43 | 19,22,23 | 0.28 | 0 | 26,31,34 | 0.45 | 0 |
| 46 | A2M | S2 | 1329 | 46 | 18,25,26 | 0.67 | 0 | 18,36,39 | 0.79 | 1 (5%) |
| 46 | OMC | S2 | 473 | 46 | 19,22,23 | 0.29 | 0 | 26,31,34 | 0.50 | 0 |
| 43 | OMG | 2 | 2127 | 43 | 18,26,27 | 0.93 | 1 (5%) | 19,38,41 | 0.72 | 0 |
| 43 | OMC | 2 | 1862 | 43 | 19,22,23 | 0.29 | 0 | 26,31,34 | 0.40 | 0 |
| 43 | OMG | 2 | 2795 | 43 | 18,26,27 | 0.94 | 2 (11%) | 19,38,41 | 0.61 | 0 |
| 45 | A2M | 8 | 48 | 45 | 18,25,26 | 0.67 | 0 | 18,36,39 | 0.81 | 1 (5%) |
| 43 | OMU | 2 | 1537 | 81,43 | 19,22,23 | 0.24 | 0 | 26,31,34 | 0.39 | 0 |
| 46 | PSU | S2 | 584 | 46 | 18,21,22 | 0.49 | 0 | 22,30,33 | 0.58 | 0 |
| 43 | OMU | 2 | 48 | 43 | 19,22,23 | 0.26 | 0 | 26,31,34 | 0.41 | 0 |
| 43 | OMG | 2 | 2797 | 43 | 18,26,27 | 0.93 | 1 (5%) | 19,38,41 | 0.63 | 0 |
| 43 | PSU | 2 | 970 | 43 | 18,21,22 | 0.53 | 0 | 22,30,33 | 0.64 | 1 (4%) |
| 43 | PSU | 2 | 1474 | 43 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.56 | 0 |
| 46 | MA6 | S2 | 1789 | 46 | 18,26,27 | 0.72 | 0 | 19,38,41 | 0.57 | 0 |
| 46 | OMU | S2 | 123 | 46 | 19,22,23 | 0.29 | 0 | 26,31,34 | 0.46 | 0 |
| 46 | PSU | S2 | 1002 | 46 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.55 | 0 |
| 46 | PSU | S2 | 208 | 46 | 18,21,22 | 0.46 | 0 | 22,30,33 | 0.57 | 0 |
| 46 | OMG | S2 | 1433 | 82,46 | 18,26,27 | 0.92 | 2 (11%) | 19,38,41 | 0.61 | 0 |
| 46 | OMC | S2 | 1218 | 46 | 19,22,23 | 0.27 | 0 | 26,31,34 | 0.40 | 0 |
| 43 | OMU | 2 | 675 | 43 | 19,22,23 | 0.30 | 0 | 26,31,34 | 0.52 | 0 |
| 43 | PSU | 2 | 2847 | 43 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.57 | 0 |
| 46 | OMU | S2 | 1383 | 82,46 | 19,22,23 | 0.29 | 0 | 26,31,34 | 0.45 | 0 |
| 43 | A2M | 2 | 1378 | 43,82 | 18,25,26 | 0.66 | 0 | 18,36,39 | 0.71 | 1 (5%) |
| 43 | PSU | 2 | 68 | 43 | 18,21,22 | 0.51 | 0 | 22,30,33 | 0.58 | 0 |
| 43 | PSU | 2 | 2959 | 43 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.55 | 0 |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|----------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 43 | PSU | 2 | 1135 | 43 | 18,21,22 | 0.45 | 0 | 22,30,33 | 0.59 | 0 |
| 46 | PSU | S2 | 912 | 46 | 18,21,22 | 0.46 | 0 | 22,30,33 | 0.57 | 0 |
| 46 | A2M | S2 | 440 | 46 | 18,25,26 | 0.65 | 0 | 18,36,39 | 0.72 | 1 (5%) |
| 43 | PSU | 2 | 35 | 43 | 18,21,22 | 0.44 | 0 | 22,30,33 | 0.56 | 0 |
| 43 | OMU | 2 | 3305 | 43 | 19,22,23 | 0.29 | 0 | 26,31,34 | 0.42 | 0 |
| 46 | PSU | S2 | 1293 | 46 | 18,21,22 | 0.45 | 0 | 22,30,33 | 0.58 | 0 |
| 46 | PSU | S2 | 306 | 46 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.56 | 0 |
| 43 | OMC | 2 | 2963 | 43 | 19,22,23 | 0.29 | 0 | 26,31,34 | 0.47 | 0 |
| 43 | PSU | 2 | 2869 | 43 | 18,21,22 | 0.49 | 0 | 22,30,33 | 0.57 | 0 |
| 43 | 5MC | 2 | 2281 | 43,82 | 18,22,23 | 0.30 | 0 | 26,32,35 | 0.44 | 0 |
| 43 | PSU | 2 | 2521 | 43 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.58 | 0 |
| 43 | OMG | 2 | 2291 | 43 | 18,26,27 | 0.92 | 2 (11%) | 19,38,41 | 0.59 | 0 |
| 46 | OMG | S2 | 246 | 46 | 18,26,27 | 0.92 | 1 (5%) | 19,38,41 | 0.64 | 0 |
| 46 | PSU | S2 | 1190 | 46 | 18,21,22 | 0.46 | 0 | 22,30,33 | 0.58 | 0 |
| 43 | A2M | 2 | 2329 | 43 | 18,25,26 | 0.67 | 0 | 18,36,39 | 0.84 | 1 (5%) |
| 43 | OMU | 2 | 2739 | 43,82 | 19,22,23 | 0.29 | 0 | 26,31,34 | 0.46 | 0 |
| 43 | OMU | 2 | 2654 | 43 | 19,22,23 | 0.29 | 0 | 26,31,34 | 0.42 | 0 |
| 46 | OMU | S2 | 1265 | 46 | 19,22,23 | 0.27 | 0 | 26,31,34 | 0.47 | 0 |
| 46 | PSU | S2 | 1308 | 46 | 18,21,22 | 0.45 | 0 | 22,30,33 | 0.38 | 0 |
| 43 | PSU | 2 | 2321 | 43,82 | 18,21,22 | 0.50 | 0 | 22,30,33 | 0.54 | 0 |
| 43 | OMC | 2 | 2840 | 43 | 19,22,23 | 0.27 | 0 | 26,31,34 | 0.37 | 0 |
| 43 | PSU | 2 | 2139 | 43 | 18,21,22 | 0.49 | 0 | 22,30,33 | 0.55 | 0 |
| 46 | PSU | S2 | 383 | 82,46 | 18,21,22 | 0.46 | 0 | 22,30,33 | 0.56 | 0 |
| 45 | PSU | 8 | 23 | 43,45 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.54 | 0 |
| 46 | 6MZ | S2 | 1771 | 81,82,46 | 18,25,26 | 0.72 | 0 | 16,36,39 | 0.73 | 1 (6%) |
| 43 | A2M | 2 | 369 | 43 | 18,25,26 | 0.65 | 0 | 18,36,39 | 0.72 | 1 (5%) |
| 43 | UR3 | 2 | 2957 | 43 | 19,22,23 | 0.30 | 0 | 26,32,35 | 0.32 | 0 |
| 43 | PSU | 2 | 1909 | 81,43,82 | 18,21,22 | 0.47 | 0 | 22,30,33 | 0.54 | 0 |
| 46 | A2M | S2 | 800 | 46 | 18,25,26 | 0.67 | 0 | 18,36,39 | 0.82 | 1 (5%) |
| 46 | PSU | S2 | 255 | 82,46 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.58 | 0 |
| 43 | PSU | 2 | 2898 | 43 | 18,21,22 | 0.52 | 0 | 22,30,33 | 0.53 | 0 |
| 46 | OMU | S2 | 614 | 81,46 | 19,22,23 | 0.27 | 0 | 26,31,34 | 0.39 | 0 |
| 46 | PSU | S2 | 1106 | 46 | 18,21,22 | 0.46 | 0 | 22,30,33 | 0.56 | 0 |
| 43 | A2M | 2 | 1144 | 43,82 | 18,25,26 | 0.67 | 0 | 18,36,39 | 0.87 | 1 (5%) |
| 43 | OMG | 2 | 2412 | 43 | 18,26,27 | 0.91 | 1 (5%) | 19,38,41 | 0.67 | 0 |
| 46 | A2M | S2 | 28 | 82,46 | 18,25,26 | 0.66 | 0 | 18,36,39 | 0.78 | 1 (5%) |
| 43 | OMC | 2 | 2296 | 43 | 19,22,23 | 0.29 | 0 | 26,31,34 | 0.44 | 0 |
| 46 | PSU | S2 | 605 | 46 | 18,21,22 | 0.47 | 0 | 22,30,33 | 0.57 | 0 |
| 46 | PSU | S2 | 809 | 46 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.56 | 0 |
| 43 | OMC | 2 | 1480 | 43 | 19,22,23 | 0.24 | 0 | 26,31,34 | 0.37 | 0 |
| 43 | OMC | 2 | 2952 | 43 | 19,22,23 | 0.27 | 0 | 26,31,34 | 0.37 | 0 |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|----------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 46 | A2M | S2 | 468 | 46 | 18,25,26 | 0.67 | 0 | 18,36,39 | 0.83 | 1 (5%) |
| 43 | PSU | 2 | 2435 | 43 | 18,21,22 | 0.47 | 0 | 22,30,33 | 0.56 | 0 |
| 46 | 7MG | S2 | 1581 | 59,46 | 22,26,27 | 1.21 | 1 (4%) | 29,39,42 | 0.79 | 1 (3%) |
| 46 | OMC | S2 | 38 | 46 | 19,22,23 | 0.28 | 0 | 26,31,34 | 0.48 | 0 |
| 43 | PSU | 2 | 2263 | 43 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.56 | 0 |
| 43 | PSU | 2 | 2748 | 43 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.55 | 0 |
| 46 | PSU | S2 | 258 | 46 | 18,21,22 | 0.46 | 0 | 22,30,33 | 0.56 | 0 |
| 46 | A2M | S2 | 1579 | 46 | 18,25,26 | 0.65 | 0 | 18,36,39 | 0.76 | 1 (5%) |
| 43 | PSU | 2 | 1064 | 81,43 | 18,21,22 | 0.45 | 0 | 22,30,33 | 0.58 | 0 |
| 43 | PSU | 2 | 2194 | 43 | 18,21,22 | 0.54 | 0 | 22,30,33 | 0.52 | 0 |
| 43 | OMC | 2 | 2368 | 43 | 19,22,23 | 0.28 | 0 | 26,31,34 | 0.41 | 0 |
| 45 | OMG | 8 | 80 | 45 | 18,26,27 | 0.91 | 1 (5%) | 19,38,41 | 0.62 | 0 |
| 43 | A2M | 2 | 946 | 43 | 18,25,26 | 0.65 | 0 | 18,36,39 | 0.77 | 1 (5%) |
| 43 | A2M | 2 | 2950 | 81,43,82 | 18,25,26 | 0.68 | 0 | 18,36,39 | 0.88 | 1 (5%) |
| 46 | PSU | S2 | 1535 | 46 | 18,21,22 | 0.46 | 0 | 22,30,33 | 0.56 | 0 |
| 43 | A2M | 2 | 817 | 43 | 18,25,26 | 0.65 | 0 | 18,36,39 | 0.77 | 1 (5%) |
| 43 | PSU | 2 | 2137 | 81,43 | 18,21,22 | 0.45 | 0 | 22,30,33 | 0.59 | 0 |
| 43 | A2M | 2 | 2223 | 43 | 18,25,26 | 0.67 | 0 | 18,36,39 | 0.80 | 1 (5%) |
| 46 | PSU | S2 | 121 | 46 | 18,21,22 | 0.45 | 0 | 22,30,33 | 0.56 | 0 |
| 43 | A2M | 2 | 2284 | 43 | 18,25,26 | 0.66 | 0 | 18,36,39 | 0.87 | 1 (5%) |
| 43 | PSU | 2 | 1230 | 43 | 18,21,22 | 0.45 | 0 | 22,30,33 | 0.58 | 0 |
| 46 | MA6 | S2 | 1790 | 46 | 18,26,27 | 0.75 | 0 | 19,38,41 | 0.57 | 0 |
| 43 | OMU | 2 | 2721 | 43 | 19,22,23 | 0.28 | 0 | 26,31,34 | 0.48 | 0 |
| 46 | PSU | S2 | 1313 | 46 | 18,21,22 | 0.47 | 0 | 22,30,33 | 0.57 | 0 |
| 43 | OMG | 2 | 2126 | 43 | 18,26,27 | 0.96 | 2 (11%) | 19,38,41 | 0.67 | 0 |
| 43 | OMG | 2 | 2655 | 43 | 18,26,27 | 0.93 | 1 (5%) | 19,38,41 | 0.68 | 0 |
| 43 | OMU | 2 | 2116 | 43 | 19,22,23 | 0.24 | 0 | 26,31,34 | 0.42 | 0 |
| 43 | A2M | 2 | 2129 | 43 | 18,25,26 | 0.67 | 0 | 18,36,39 | 0.75 | 1 (5%) |
| 43 | PSU | 2 | 1016 | 81,43 | 18,21,22 | 0.49 | 0 | 22,30,33 | 0.58 | 0 |
| 46 | OMC | S2 | 140 | 46 | 19,22,23 | 0.28 | 0 | 26,31,34 | 0.45 | 0 |
| 43 | A2M | 2 | 827 | 43,82 | 18,25,26 | 0.66 | 0 | 18,36,39 | 0.86 | 1 (5%) |
| 43 | PSU | 2 | 2858 | 43 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.56 | 0 |
| 43 | A2M | 2 | 886 | 43 | 18,25,26 | 0.64 | 0 | 18,36,39 | 0.73 | 1 (5%) |
| 46 | PSU | S2 | 950 | 46 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.56 | 0 |
| 43 | PSU | 2 | 1134 | 43 | 18,21,22 | 0.47 | 0 | 22,30,33 | 0.58 | 0 |
| 43 | OMG | 2 | 2921 | 43 | 18,26,27 | 0.95 | 2 (11%) | 19,38,41 | 0.63 | 0 |
| 43 | PSU | 2 | 1482 | 43 | 18,21,22 | 0.50 | 0 | 22,30,33 | 0.55 | 0 |
| 46 | PSU | S2 | 362 | 46 | 18,21,22 | 0.49 | 0 | 22,30,33 | 0.56 | 0 |
| 43 | PSU | 2 | 2617 | 43 | 18,21,22 | 0.49 | 0 | 22,30,33 | 0.56 | 0 |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|----------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 43 | OMC | 2 | 2883 | 43 | 19,22,23 | 0.28 | 0 | 26,31,34 | 0.39 | 0 |
| 43 | OMG | 2 | 1857 | 81,43 | 18,26,27 | 0.94 | 2 (11%) | 19,38,41 | 0.61 | 0 |
| 43 | OMG | 2 | 815 | 43 | 18,26,27 | 0.92 | 1 (5%) | 19,38,41 | 0.66 | 0 |
| 46 | PSU | S2 | 451 | 81,46 | 18,21,22 | 0.49 | 0 | 22,30,33 | 0.55 | 0 |
| 46 | A2M | S2 | 1758 | 46 | 18,25,26 | 0.66 | 0 | 18,36,39 | 0.84 | 1 (5%) |
| 46 | PSU | S2 | 1485 | 46 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.55 | 0 |
| 43 | PSU | 2 | 2948 | 81,43,82 | 18,21,22 | 0.53 | 0 | 22,30,33 | 0.62 | 1 (4%) |
| 41 | THC | r | 2 | 41 | 8,9,10 | 0.29 | 0 | 9,11,13 | 0.50 | 0 |
| 46 | UY1 | S2 | 603 | 46 | 19,22,23 | 0.45 | 0 | 22,31,34 | 0.57 | 0 |
| 76 | IAS | IA | 137 | 76 | 6,7,8 | 1.10 | 0 | 6,8,10 | 1.07 | 0 |
| 43 | A2M | 2 | 660 | 43 | 18,25,26 | 0.66 | 0 | 18,36,39 | 0.74 | 1 (5%) |
| 43 | PSU | 2 | 2261 | 43 | 18,21,22 | 0.51 | 0 | 22,30,33 | 0.53 | 0 |
| 43 | PSU | 2 | 2257 | 43 | 18,21,22 | 0.47 | 0 | 22,30,33 | 0.58 | 0 |
| 46 | A2M | S2 | 544 | 46 | 18,25,26 | 0.66 | 0 | 18,36,39 | 0.78 | 1 (5%) |
| 46 | PSU | S2 | 1184 | 46 | 18,21,22 | 0.47 | 0 | 22,30,33 | 0.55 | 0 |
| 46 | PSU | S2 | 1567 | 46 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.55 | 0 |
| 43 | PSU | 2 | 2716 | 43 | 18,21,22 | 0.53 | 0 | 22,30,33 | 0.62 | 1 (4%) |
| 43 | OMU | 2 | 2424 | 43 | 19,22,23 | 0.29 | 0 | 26,31,34 | 0.53 | 0 |
| 46 | OMG | S2 | 392 | 46 | 18,26,27 | 0.92 | 1 (5%) | 19,38,41 | 0.62 | 0 |
| 43 | PSU | 2 | 1002 | 43 | 18,21,22 | 0.47 | 0 | 22,30,33 | 0.58 | 0 |
| 46 | PSU | S2 | 300 | 46 | 18,21,22 | 0.47 | 0 | 22,30,33 | 0.55 | 0 |
| 46 | PSU | S2 | 1120 | 46 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.56 | 0 |
| 43 | OMC | 2 | 1448 | 43,82 | 19,22,23 | 0.29 | 0 | 26,31,34 | 0.39 | 0 |
| 43 | OMU | 2 | 1894 | 81,43 | 19,22,23 | 0.32 | 0 | 26,31,34 | 0.66 | 0 |
| 43 | OMG | 2 | 2398 | 43 | 18,26,27 | 0.89 | 0 | 19,38,41 | 0.71 | 0 |
| 43 | OMG | 2 | 2819 | 43 | 18,26,27 | 0.90 | 1 (5%) | 19,38,41 | 0.61 | 0 |
| 43 | OMU | 2 | 2925 | 43,82 | 19,22,23 | 0.28 | 0 | 26,31,34 | 0.47 | 0 |
| 45 | PSU | 8 | 79 | 45 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.56 | 0 |
| 3 | HIC | E | 246 | 3 | 8,11,12 | 0.80 | 0 | 6,14,16 | 0.59 | 0 |
| 43 | OMG | 2 | 2394 | 43 | 18,26,27 | 0.92 | 1 (5%) | 19,38,41 | 0.60 | 0 |
| 43 | OMG | 2 | 2926 | 43 | 18,26,27 | 0.90 | 1 (5%) | 19,38,41 | 0.62 | 0 |
| 43 | OMG | 2 | 2239 | 43 | 18,26,27 | 0.90 | 1 (5%) | 19,38,41 | 0.62 | 0 |
| 46 | OMC | S2 | 1645 | 46 | 19,22,23 | 0.26 | 0 | 26,31,34 | 0.43 | 0 |
| 46 | OMG | S2 | 1274 | 81,46 | 18,26,27 | 0.92 | 1 (5%) | 19,38,41 | 0.63 | 0 |
| 43 | OMU | 2 | 44 | 81,43 | 19,22,23 | 0.28 | 0 | 26,31,34 | 0.38 | 0 |
| 43 | OMG | 2 | 1461 | 43 | 18,26,27 | 0.91 | 1 (5%) | 19,38,41 | 0.65 | 0 |
| 43 | PSU | 2 | 1054 | 43 | 18,21,22 | 0.46 | 0 | 22,30,33 | 0.58 | 0 |
| 43 | OMU | 2 | 804 | 43 | 19,22,23 | 0.29 | 0 | 26,31,34 | 0.51 | 0 |
| 43 | PSU | 2 | 2214 | 43 | 18,21,22 | 0.49 | 0 | 22,30,33 | 0.55 | 0 |
| 43 | PSU | 2 | 378 | 43 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.56 | 0 |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|-------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 43 | PSU | 2 | 3114 | 43 | 18,21,22 | 0.47 | 0 | 22,30,33 | 0.55 | 0 |
| 46 | OMU | S2 | 581 | 46 | 19,22,23 | 0.25 | 0 | 26,31,34 | 0.41 | 0 |
| 43 | OMC | 2 | 2200 | 81,43 | 19,22,23 | 0.26 | 0 | 26,31,34 | 0.60 | 0 |
| 43 | PSU | 2 | 829 | 43 | 18,21,22 | 0.48 | 0 | 22,30,33 | 0.58 | 0 |
| 43 | OMC | 2 | 1852 | 43,82 | 19,22,23 | 0.26 | 0 | 26,31,34 | 0.42 | 0 |
| 46 | A2M | S2 | 622 | 82,46 | 18,25,26 | 0.64 | 0 | 18,36,39 | 0.75 | 1 (5%) |

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 |
|-----|------|-------|------|-------|---------|------------|---------|
| 43 | PSU | 2 | 2269 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 762 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMC | 2 | 2340 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | OMU | 2 | 1068 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | PSU | 2 | 2979 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | OMU | S2 | 1012 | 46 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | A2M | 2 | 2915 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 46 | OMG | S2 | 598 | 46 | - | 1/5/27/28 | 0/3/3/3 |
| 43 | PSU | 2 | 895 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 103 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | 4AC | S2 | 1781 | 46 | - | 2/11/29/30 | 0/2/2/2 |
| 46 | OMU | S2 | 1263 | 46 | - | 0/9/27/28 | 0/2/2/2 |
| 46 | OMC | S2 | 418 | 46 | - | 0/9/27/28 | 0/2/2/2 |
| 46 | A2M | S2 | 977 | 46 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | PSU | 2 | 2267 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMU | 2 | 2350 | 81,43 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | OMU | 2 | 2413 | 81,43 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | PSU | 2 | 2317 | 81,43 | - | 1/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 1634 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMU | 2 | 2887 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | PSU | 2 | 2419 | 43,82 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | A2M | 2 | 2324 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | PSU | 2 | 2927 | 43 | - | 1/7/25/26 | 0/2/2/2 |
| 43 | OMG | 2 | 399 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 46 | PSU | S2 | 111 | 81,46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | 5MC | 2 | 2874 | 81,43 | - | 2/7/25/26 | 0/2/2/2 |
| 46 | I2T | S2 | 1194 | 46 | - | 1/16/34/35 | 0/2/2/2 |
| 43 | PSU | 2 | 1133 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | OMU | S2 | 1447 | 46 | - | 0/9/27/28 | 0/2/2/2 |

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Continued from previous page...

| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|-------|---------|------------|---------|
| 43 | PSU | 2 | 2228 | 43 | - | 2/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 2996 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMU | 2 | 2733 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 46 | A2M | S2 | 162 | 46 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | A2M | 2 | 2644 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | PSU | 2 | 2884 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMC | 2 | 674 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 46 | PSU | S2 | 1304 | 46 | - | 2/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 1217 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 1538 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 2352 | 43,82 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | 4AC | S2 | 1283 | 46 | - | 0/11/29/30 | 0/2/2/2 |
| 46 | PSU | S2 | 1178 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 753 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 635 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 2830 | 43 | - | 2/7/25/26 | 0/2/2/2 |
| 43 | 1MA | 2 | 656 | 43,82 | - | 0/3/25/26 | 0/3/3/3 |
| 43 | OMC | 2 | 1849 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | OMG | 2 | 918 | 81,43 | - | 1/5/27/28 | 0/3/3/3 |
| 46 | PSU | S2 | 1210 | 46 | - | 2/7/25/26 | 0/2/2/2 |
| 43 | A2M | 2 | 1460 | 43,82 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | A2M | 2 | 2259 | 43 | - | 2/5/27/28 | 0/3/3/3 |
| 43 | OMU | 2 | 144 | 43 | - | 1/9/27/28 | 0/2/2/2 |
| 46 | OMU | S2 | 1272 | 82,46 | - | 0/9/27/28 | 0/2/2/2 |
| 46 | PSU | S2 | 949 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 1027 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMG | 2 | 2623 | 43,82 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | OMC | 2 | 2686 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 46 | A2M | S2 | 1329 | 46 | - | 0/5/27/28 | 0/3/3/3 |
| 46 | OMC | S2 | 473 | 46 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | OMG | 2 | 2127 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | OMC | 2 | 1862 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | OMG | 2 | 2795 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 45 | A2M | 8 | 48 | 45 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | OMU | 2 | 1537 | 81,43 | - | 0/9/27/28 | 0/2/2/2 |
| 46 | PSU | S2 | 584 | 46 | - | 3/7/25/26 | 0/2/2/2 |
| 43 | OMU | 2 | 48 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | OMG | 2 | 2797 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | PSU | 2 | 970 | 43 | - | 1/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 1474 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | MA6 | S2 | 1789 | 46 | - | 0/7/29/30 | 0/3/3/3 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|----------|---------|-----------|---------|
| 46 | OMU | S2 | 123 | 46 | - | 0/9/27/28 | 0/2/2/2 |
| 46 | PSU | S2 | 1002 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 208 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | OMG | S2 | 1433 | 82,46 | - | 1/5/27/28 | 0/3/3/3 |
| 46 | OMC | S2 | 1218 | 46 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | OMU | 2 | 675 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | PSU | 2 | 2847 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | OMU | S2 | 1383 | 82,46 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | A2M | 2 | 1378 | 43,82 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | PSU | 2 | 68 | 43 | - | 2/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 2959 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 1135 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 912 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | A2M | S2 | 440 | 46 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | PSU | 2 | 35 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMU | 2 | 3305 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 46 | PSU | S2 | 1293 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 306 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMC | 2 | 2963 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | PSU | 2 | 2869 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | 5MC | 2 | 2281 | 43,82 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 2521 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMG | 2 | 2291 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 46 | OMG | S2 | 246 | 46 | - | 0/5/27/28 | 0/3/3/3 |
| 46 | PSU | S2 | 1190 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | A2M | 2 | 2329 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | OMU | 2 | 2739 | 43,82 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | OMU | 2 | 2654 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 46 | OMU | S2 | 1265 | 46 | - | 0/9/27/28 | 0/2/2/2 |
| 46 | PSU | S2 | 1308 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 2321 | 43,82 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMC | 2 | 2840 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | PSU | 2 | 2139 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 383 | 82,46 | - | 0/7/25/26 | 0/2/2/2 |
| 45 | PSU | 8 | 23 | 43,45 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | 6MZ | S2 | 1771 | 81,82,46 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | A2M | 2 | 369 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | UR3 | 2 | 2957 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 1909 | 81,43,82 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | A2M | S2 | 800 | 46 | - | 0/5/27/28 | 0/3/3/3 |
| 46 | PSU | S2 | 255 | 82,46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 2898 | 43 | - | 0/7/25/26 | 0/2/2/2 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|----------|---------|-----------|---------|
| 46 | OMU | S2 | 614 | 81,46 | - | 0/9/27/28 | 0/2/2/2 |
| 46 | PSU | S2 | 1106 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | A2M | 2 | 1144 | 43,82 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | OMG | 2 | 2412 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 46 | A2M | S2 | 28 | 82,46 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | OMC | 2 | 2296 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 46 | PSU | S2 | 605 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 809 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMC | 2 | 1480 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | OMC | 2 | 2952 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 46 | A2M | S2 | 468 | 46 | - | 1/5/27/28 | 0/3/3/3 |
| 43 | PSU | 2 | 2435 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | 7MG | S2 | 1581 | 59,46 | - | 0/7/37/38 | 0/3/3/3 |
| 46 | OMC | S2 | 38 | 46 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | PSU | 2 | 2263 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 2748 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 258 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | A2M | S2 | 1579 | 46 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | PSU | 2 | 1064 | 81,43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 2194 | 43 | - | 2/7/25/26 | 0/2/2/2 |
| 43 | OMC | 2 | 2368 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 45 | OMG | 8 | 80 | 45 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | A2M | 2 | 946 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | A2M | 2 | 2950 | 81,43,82 | - | 0/5/27/28 | 0/3/3/3 |
| 46 | PSU | S2 | 1535 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | A2M | 2 | 817 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | PSU | 2 | 2137 | 81,43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | A2M | 2 | 2223 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 46 | PSU | S2 | 121 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | A2M | 2 | 2284 | 43 | - | 2/5/27/28 | 0/3/3/3 |
| 43 | PSU | 2 | 1230 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | MA6 | S2 | 1790 | 46 | - | 3/7/29/30 | 0/3/3/3 |
| 43 | OMU | 2 | 2721 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 46 | PSU | S2 | 1313 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMG | 2 | 2126 | 43 | - | 3/5/27/28 | 0/3/3/3 |
| 43 | OMG | 2 | 2655 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | OMU | 2 | 2116 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | A2M | 2 | 2129 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | PSU | 2 | 1016 | 81,43 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | OMC | S2 | 140 | 46 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | A2M | 2 | 827 | 43,82 | - | 2/5/27/28 | 0/3/3/3 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|----------|---------|-----------|---------|
| 43 | PSU | 2 | 2858 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | A2M | 2 | 886 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 46 | PSU | S2 | 950 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 1134 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMG | 2 | 2921 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | PSU | 2 | 1482 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 362 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 2617 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMC | 2 | 2883 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | OMG | 2 | 1857 | 81,43 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | OMG | 2 | 815 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 46 | PSU | S2 | 451 | 81,46 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | A2M | S2 | 1758 | 46 | - | 0/5/27/28 | 0/3/3/3 |
| 46 | PSU | S2 | 1485 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 2948 | 81,43,82 | - | 1/7/25/26 | 0/2/2/2 |
| 41 | THC | r | 2 | 41 | - | 4/8/10/12 | - |
| 46 | UY1 | S2 | 603 | 46 | - | 0/9/27/28 | 0/2/2/2 |
| 76 | IAS | IA | 137 | 76 | - | 1/7/7/8 | - |
| 43 | A2M | 2 | 660 | 43 | - | 1/5/27/28 | 0/3/3/3 |
| 43 | PSU | 2 | 2261 | 43 | - | 2/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 2257 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | A2M | S2 | 544 | 46 | - | 0/5/27/28 | 0/3/3/3 |
| 46 | PSU | S2 | 1184 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 1567 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 2716 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMU | 2 | 2424 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 46 | OMG | S2 | 392 | 46 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | PSU | 2 | 1002 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 300 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | PSU | S2 | 1120 | 46 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMC | 2 | 1448 | 43,82 | - | 2/9/27/28 | 0/2/2/2 |
| 43 | OMU | 2 | 1894 | 81,43 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | OMG | 2 | 2398 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | OMG | 2 | 2819 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | OMU | 2 | 2925 | 43,82 | - | 0/9/27/28 | 0/2/2/2 |
| 45 | PSU | 8 | 79 | 45 | - | 0/7/25/26 | 0/2/2/2 |
| 3 | HIC | E | 246 | 3 | - | 1/5/6/8 | 0/1/1/1 |
| 43 | OMG | 2 | 2394 | 43 | - | 1/5/27/28 | 0/3/3/3 |
| 43 | OMG | 2 | 2926 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 43 | OMG | 2 | 2239 | 43 | - | 0/5/27/28 | 0/3/3/3 |
| 46 | OMC | S2 | 1645 | 46 | - | 0/9/27/28 | 0/2/2/2 |
| 46 | OMG | S2 | 1274 | 81,46 | - | 0/5/27/28 | 0/3/3/3 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|-------|---------|-----------|---------|
| 43 | OMU | 2 | 44 | 81,43 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | OMG | 2 | 1461 | 43 | - | 1/5/27/28 | 0/3/3/3 |
| 43 | PSU | 2 | 1054 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMU | 2 | 804 | 43 | - | 0/9/27/28 | 0/2/2/2 |
| 43 | PSU | 2 | 2214 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 378 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | PSU | 2 | 3114 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 46 | OMU | S2 | 581 | 46 | - | 1/9/27/28 | 0/2/2/2 |
| 43 | OMC | 2 | 2200 | 81,43 | - | 4/9/27/28 | 0/2/2/2 |
| 43 | PSU | 2 | 829 | 43 | - | 0/7/25/26 | 0/2/2/2 |
| 43 | OMC | 2 | 1852 | 43,82 | - | 1/9/27/28 | 0/2/2/2 |
| 46 | A2M | S2 | 622 | 82,46 | - | 2/5/27/28 | 0/3/3/3 |

All (37) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 46 | S2 | 1581 | 7MG | C5-N7 | 5.00 | 1.41 | 1.35 |
| 43 | 2 | 656 | 1MA | C6-N6 | 2.96 | 1.35 | 1.27 |
| 43 | 2 | 2795 | OMG | C5-C6 | -2.37 | 1.42 | 1.47 |
| 43 | 2 | 918 | OMG | C5-C6 | -2.33 | 1.42 | 1.47 |
| 43 | 2 | 2126 | OMG | C5-C6 | -2.32 | 1.42 | 1.47 |
| 43 | 2 | 2921 | OMG | C5-C6 | -2.30 | 1.42 | 1.47 |
| 46 | S2 | 1433 | OMG | C5-C6 | -2.28 | 1.42 | 1.47 |
| 43 | 2 | 1857 | OMG | C5-C6 | -2.28 | 1.42 | 1.47 |
| 43 | 2 | 2797 | OMG | C5-C6 | -2.28 | 1.42 | 1.47 |
| 43 | 2 | 2291 | OMG | C5-C6 | -2.25 | 1.42 | 1.47 |
| 43 | 2 | 2394 | OMG | C5-C6 | -2.25 | 1.42 | 1.47 |
| 46 | S2 | 1274 | OMG | C5-C6 | -2.23 | 1.42 | 1.47 |
| 46 | S2 | 246 | OMG | C5-C6 | -2.22 | 1.42 | 1.47 |
| 43 | 2 | 2623 | OMG | C5-C6 | -2.20 | 1.42 | 1.47 |
| 46 | S2 | 392 | OMG | C5-C6 | -2.19 | 1.43 | 1.47 |
| 43 | 2 | 2127 | OMG | C5-C6 | -2.18 | 1.43 | 1.47 |
| 43 | 2 | 2412 | OMG | C5-C6 | -2.18 | 1.43 | 1.47 |
| 43 | 2 | 815 | OMG | C5-C6 | -2.17 | 1.43 | 1.47 |
| 46 | S2 | 598 | OMG | C5-C6 | -2.15 | 1.43 | 1.47 |
| 43 | 2 | 2239 | OMG | C5-C6 | -2.13 | 1.43 | 1.47 |
| 43 | 2 | 2655 | OMG | C5-C6 | -2.13 | 1.43 | 1.47 |
| 43 | 2 | 1461 | OMG | C5-C6 | -2.12 | 1.43 | 1.47 |
| 43 | 2 | 2819 | OMG | C5-C6 | -2.11 | 1.43 | 1.47 |
| 43 | 2 | 656 | 1MA | C5-C4 | -2.11 | 1.37 | 1.43 |
| 43 | 2 | 2926 | OMG | C5-C6 | -2.10 | 1.43 | 1.47 |
| 43 | 2 | 2921 | OMG | C8-N7 | -2.09 | 1.31 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 43 | 2 | 656 | 1MA | C8-N7 | -2.09 | 1.31 | 1.35 |
| 45 | 8 | 80 | OMG | C5-C6 | -2.08 | 1.43 | 1.47 |
| 43 | 2 | 1857 | OMG | C8-N7 | -2.07 | 1.31 | 1.35 |
| 43 | 2 | 918 | OMG | C8-N7 | -2.07 | 1.31 | 1.35 |
| 43 | 2 | 2795 | OMG | C8-N7 | -2.06 | 1.31 | 1.35 |
| 43 | 2 | 2126 | OMG | C8-N7 | -2.05 | 1.31 | 1.35 |
| 43 | 2 | 399 | OMG | C5-C6 | -2.02 | 1.43 | 1.47 |
| 43 | 2 | 2623 | OMG | C8-N7 | -2.02 | 1.31 | 1.35 |
| 46 | S2 | 598 | OMG | C8-N7 | -2.01 | 1.31 | 1.35 |
| 46 | S2 | 1433 | OMG | C8-N7 | -2.01 | 1.31 | 1.35 |
| 43 | 2 | 2291 | OMG | C8-N7 | -2.01 | 1.31 | 1.35 |

All (37) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|----------|------|-------------|----------|
| 43 | 2 | 946 | A2M | C5-C6-N6 | 2.39 | 123.99 | 120.35 |
| 43 | 2 | 2915 | A2M | C5-C6-N6 | 2.38 | 123.97 | 120.35 |
| 46 | S2 | 800 | A2M | C5-C6-N6 | 2.37 | 123.95 | 120.35 |
| 43 | 2 | 886 | A2M | C5-C6-N6 | 2.37 | 123.95 | 120.35 |
| 43 | 2 | 827 | A2M | C5-C6-N6 | 2.36 | 123.94 | 120.35 |
| 43 | 2 | 2950 | A2M | C5-C6-N6 | 2.35 | 123.93 | 120.35 |
| 46 | S2 | 544 | A2M | C5-C6-N6 | 2.35 | 123.93 | 120.35 |
| 43 | 2 | 369 | A2M | C5-C6-N6 | 2.35 | 123.92 | 120.35 |
| 43 | 2 | 2329 | A2M | C5-C6-N6 | 2.34 | 123.92 | 120.35 |
| 46 | S2 | 622 | A2M | C5-C6-N6 | 2.34 | 123.91 | 120.35 |
| 43 | 2 | 1378 | A2M | C5-C6-N6 | 2.34 | 123.91 | 120.35 |
| 43 | 2 | 2223 | A2M | C5-C6-N6 | 2.34 | 123.91 | 120.35 |
| 43 | 2 | 817 | A2M | C5-C6-N6 | 2.34 | 123.90 | 120.35 |
| 46 | S2 | 28 | A2M | C5-C6-N6 | 2.33 | 123.90 | 120.35 |
| 46 | S2 | 1579 | A2M | C5-C6-N6 | 2.33 | 123.90 | 120.35 |
| 46 | S2 | 1329 | A2M | C5-C6-N6 | 2.33 | 123.89 | 120.35 |
| 46 | S2 | 440 | A2M | C5-C6-N6 | 2.32 | 123.89 | 120.35 |
| 43 | 2 | 1460 | A2M | C5-C6-N6 | 2.32 | 123.88 | 120.35 |
| 43 | 2 | 2259 | A2M | C5-C6-N6 | 2.32 | 123.88 | 120.35 |
| 43 | 2 | 2324 | A2M | C5-C6-N6 | 2.32 | 123.88 | 120.35 |
| 43 | 2 | 2644 | A2M | C5-C6-N6 | 2.32 | 123.87 | 120.35 |
| 46 | S2 | 162 | A2M | C5-C6-N6 | 2.31 | 123.86 | 120.35 |
| 43 | 2 | 2284 | A2M | C5-C6-N6 | 2.30 | 123.85 | 120.35 |
| 46 | S2 | 468 | A2M | C5-C6-N6 | 2.29 | 123.84 | 120.35 |
| 43 | 2 | 660 | A2M | C5-C6-N6 | 2.28 | 123.82 | 120.35 |
| 43 | 2 | 2129 | A2M | C5-C6-N6 | 2.27 | 123.81 | 120.35 |
| 43 | 2 | 1144 | A2M | C5-C6-N6 | 2.27 | 123.81 | 120.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|------|-------------|----------|
| 45 | 8 | 48 | A2M | C5-C6-N6 | 2.27 | 123.80 | 120.35 |
| 46 | S2 | 1758 | A2M | C5-C6-N6 | 2.26 | 123.79 | 120.35 |
| 43 | 2 | 2948 | PSU | O4'-C1'-C2' | 2.22 | 108.27 | 105.14 |
| 46 | S2 | 1581 | 7MG | C5-C4-N9 | 2.22 | 109.22 | 106.35 |
| 43 | 2 | 2716 | PSU | O4'-C1'-C2' | 2.21 | 108.26 | 105.14 |
| 46 | S2 | 977 | A2M | C5-C6-N6 | 2.19 | 123.68 | 120.35 |
| 46 | S2 | 1771 | 6MZ | C2-N1-C6 | 2.15 | 118.43 | 116.59 |
| 43 | 2 | 970 | PSU | O4'-C1'-C2' | 2.08 | 108.08 | 105.14 |
| 43 | 2 | 656 | 1MA | N1-C6-N6 | 2.04 | 124.97 | 119.77 |
| 46 | S2 | 1027 | PSU | O4'-C1'-C2' | 2.03 | 108.01 | 105.14 |

There are no chirality outliers.

All (62) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 3 | E | 246 | HIC | CA-CB-CG-ND1 |
| 41 | r | 2 | THC | N1-CA-CB-OG1 |
| 41 | r | 2 | THC | N1-CA-CB-CG2 |
| 41 | r | 2 | THC | C-CA-CB-OG1 |
| 41 | r | 2 | THC | C-CA-CB-CG2 |
| 43 | 2 | 918 | OMG | C3'-C2'-O2'-CM2 |
| 43 | 2 | 1852 | OMC | C1'-C2'-O2'-CM2 |
| 43 | 2 | 2126 | OMG | O4'-C4'-C5'-O5' |
| 43 | 2 | 2259 | A2M | O4'-C4'-C5'-O5' |
| 46 | S2 | 584 | PSU | C2'-C1'-C5-C4 |
| 46 | S2 | 1790 | MA6 | C5-C6-N6-C9 |
| 43 | 2 | 68 | PSU | C3'-C4'-C5'-O5' |
| 43 | 2 | 68 | PSU | O4'-C4'-C5'-O5' |
| 43 | 2 | 2126 | OMG | C3'-C4'-C5'-O5' |
| 43 | 2 | 2261 | PSU | C3'-C4'-C5'-O5' |
| 43 | 2 | 2261 | PSU | O4'-C4'-C5'-O5' |
| 43 | 2 | 2194 | PSU | C3'-C4'-C5'-O5' |
| 43 | 2 | 2194 | PSU | O4'-C4'-C5'-O5' |
| 43 | 2 | 2284 | A2M | C3'-C4'-C5'-O5' |
| 46 | S2 | 622 | A2M | O4'-C4'-C5'-O5' |
| 46 | S2 | 1304 | PSU | O4'-C4'-C5'-O5' |
| 43 | 2 | 2200 | OMC | C2'-C1'-N1-C6 |
| 43 | 2 | 2284 | A2M | O4'-C4'-C5'-O5' |
| 46 | S2 | 622 | A2M | C3'-C4'-C5'-O5' |
| 46 | S2 | 1304 | PSU | C3'-C4'-C5'-O5' |
| 43 | 2 | 2317 | PSU | C4'-C5'-O5'-P |
| 43 | 2 | 2200 | OMC | O4'-C1'-N1-C6 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 43 | 2 | 2927 | PSU | C4'-C5'-O5'-P |
| 46 | S2 | 1194 | I2T | C32-C31-N3-C4 |
| 46 | S2 | 468 | A2M | O4'-C4'-C5'-O5' |
| 43 | 2 | 2200 | OMC | C2'-C1'-N1-C2 |
| 43 | 2 | 827 | A2M | C4'-C5'-O5'-P |
| 46 | S2 | 598 | OMG | C4'-C5'-O5'-P |
| 46 | S2 | 581 | OMU | O4'-C4'-C5'-O5' |
| 43 | 2 | 2228 | PSU | C3'-C4'-C5'-O5' |
| 43 | 2 | 2200 | OMC | O4'-C1'-N1-C2 |
| 46 | S2 | 1790 | MA6 | C5-C6-N6-C10 |
| 46 | S2 | 1790 | MA6 | C4'-C5'-O5'-P |
| 43 | 2 | 1448 | OMC | C3'-C2'-O2'-CM2 |
| 43 | 2 | 660 | A2M | C4'-C5'-O5'-P |
| 43 | 2 | 2126 | OMG | C4'-C5'-O5'-P |
| 46 | S2 | 1433 | OMG | C4'-C5'-O5'-P |
| 76 | IA | 137 | IAS | CA-CB-CG-OD1 |
| 43 | 2 | 144 | OMU | O4'-C4'-C5'-O5' |
| 43 | 2 | 2830 | PSU | O4'-C1'-C5-C4 |
| 43 | 2 | 2948 | PSU | O4'-C1'-C5-C4 |
| 46 | S2 | 584 | PSU | O4'-C1'-C5-C4 |
| 46 | S2 | 1210 | PSU | O4'-C1'-C5-C4 |
| 43 | 2 | 2874 | 5MC | O4'-C1'-N1-C6 |
| 43 | 2 | 2874 | 5MC | C2'-C1'-N1-C6 |
| 43 | 2 | 2228 | PSU | O4'-C4'-C5'-O5' |
| 43 | 2 | 1448 | OMC | O4'-C4'-C5'-O5' |
| 43 | 2 | 2259 | A2M | C3'-C4'-C5'-O5' |
| 43 | 2 | 970 | PSU | O4'-C1'-C5-C6 |
| 43 | 2 | 2830 | PSU | O4'-C1'-C5-C6 |
| 46 | S2 | 584 | PSU | O4'-C1'-C5-C6 |
| 46 | S2 | 1210 | PSU | O4'-C1'-C5-C6 |
| 43 | 2 | 827 | A2M | O4'-C4'-C5'-O5' |
| 43 | 2 | 1461 | OMG | O4'-C4'-C5'-O5' |
| 46 | S2 | 1781 | 4AC | N3-C4-N4-C7 |
| 46 | S2 | 1781 | 4AC | C5-C4-N4-C7 |
| 43 | 2 | 2394 | OMG | C3'-C4'-C5'-O5' |

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry

Of 495 ligands modelled in this entry, 489 are monoatomic - leaving 6 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 |
| 86 | PUT | S2 | 1927 | - | 5,5,5 | 0.14 | 0 | 4,4,4 | 0.18 | 0 |
| 87 | BGC | NA | 301 | 47 | 11,11,12 | 0.20 | 0 | 15,15,17 | 0.38 | 0 |
| 84 | SPM | 2 | 3482 | - | 13,13,13 | 0.28 | 0 | 12,12,12 | 0.94 | 0 |
| 84 | SPM | 2 | 3479 | - | 13,13,13 | 0.29 | 0 | 12,12,12 | 0.90 | 0 |
| 85 | SPD | 2 | 3481 | - | 9,9,9 | 0.26 | 0 | 8,8,8 | 0.87 | 0 |
| 84 | SPM | 2 | 3480 | - | 13,13,13 | 0.32 | 0 | 12,12,12 | 0.87 | 0 |

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

| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|---------|------------|---------|
| 86 | PUT | S2 | 1927 | - | - | 0/3/3/3 | - |
| 87 | BGC | NA | 301 | 47 | - | 1/2/19/22 | 0/1/1/1 |
| 84 | SPM | 2 | 3482 | - | - | 3/11/11/11 | - |
| 84 | SPM | 2 | 3479 | - | - | 1/11/11/11 | - |
| 85 | SPD | 2 | 3481 | - | - | 0/7/7/7 | - |
| 84 | SPM | 2 | 3480 | - | - | 0/11/11/11 | - |

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (5) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|--------------|
| 84 | 2 | 3482 | SPM | N5-C6-C7-C8 |
| 87 | NA | 301 | BGC | O5-C5-C6-O6 |
| 84 | 2 | 3479 | SPM | C7-C8-C9-N10 |
| 84 | 2 | 3482 | SPM | C3-C4-N5-C6 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-------------|
| 84 | 2 | 3482 | SPM | C7-C6-N5-C4 |

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

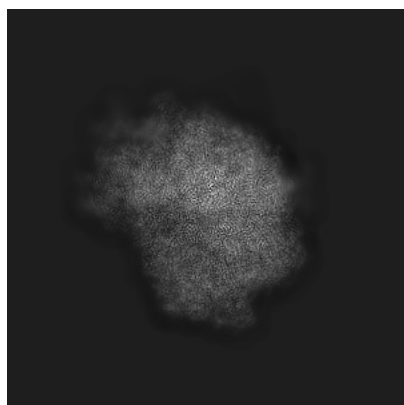
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-14004. These allow visual inspection of the internal detail of the map and identification of artifacts.

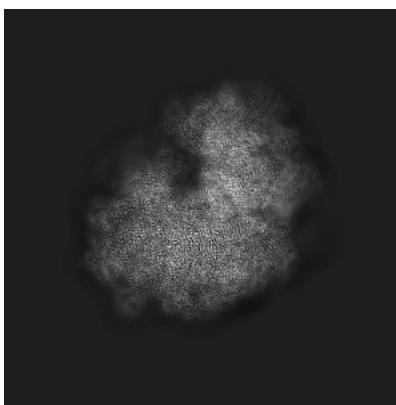
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

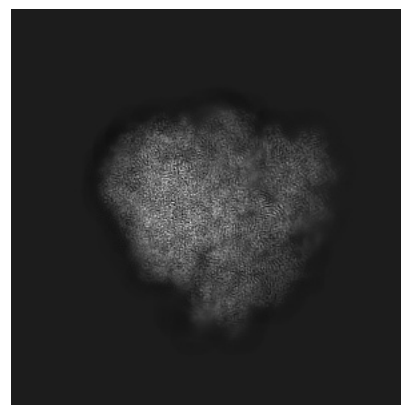
6.1.1 Primary map



X



Y

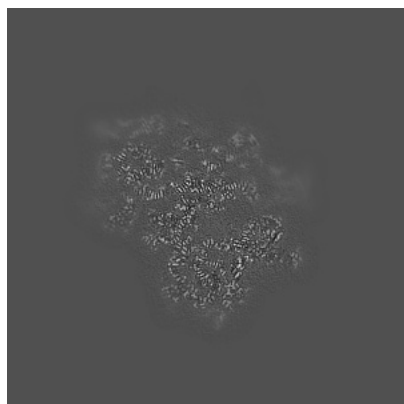


Z

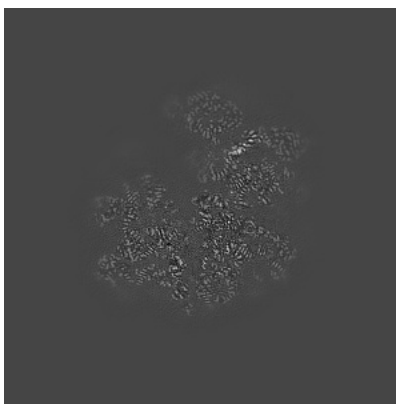
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

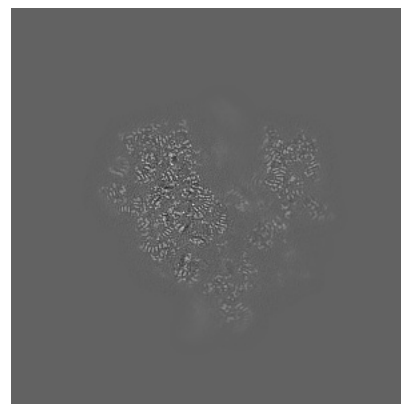
6.2.1 Primary map



X Index: 270



Y Index: 270

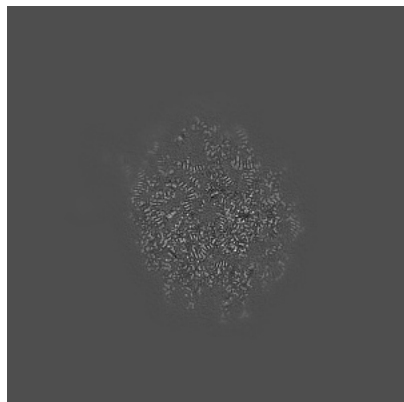


Z Index: 270

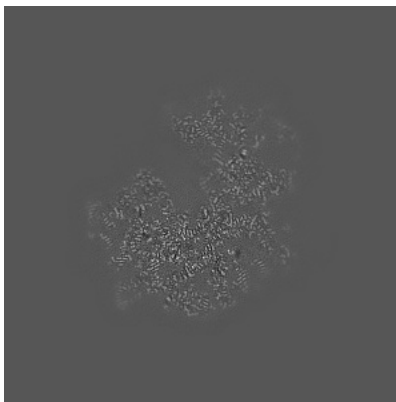
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

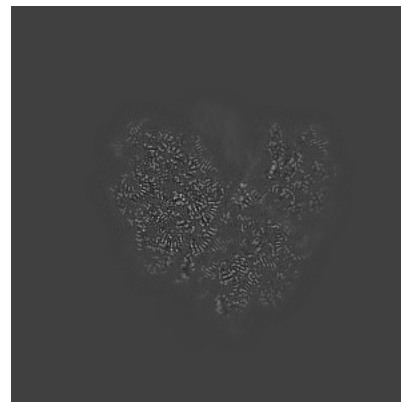
6.3.1 Primary map



X Index: 232



Y Index: 289

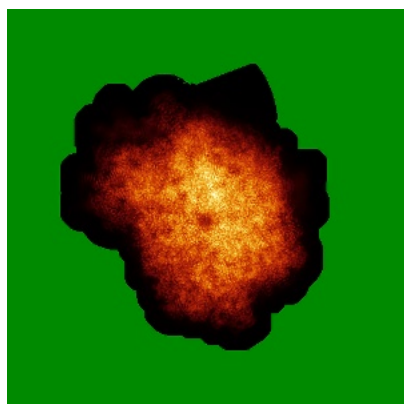


Z Index: 294

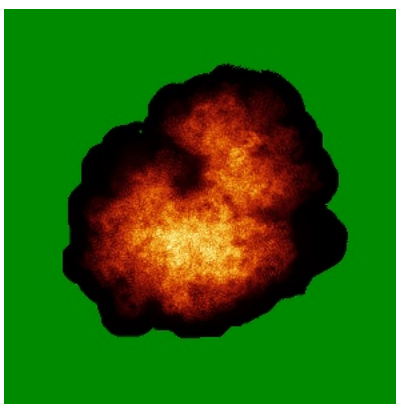
The images above show the largest variance slices of the map in three orthogonal directions.

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

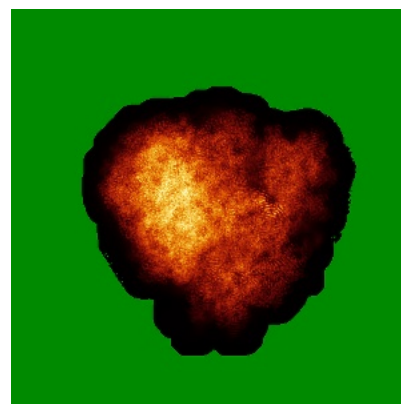
6.4.1 Primary map



X



Y

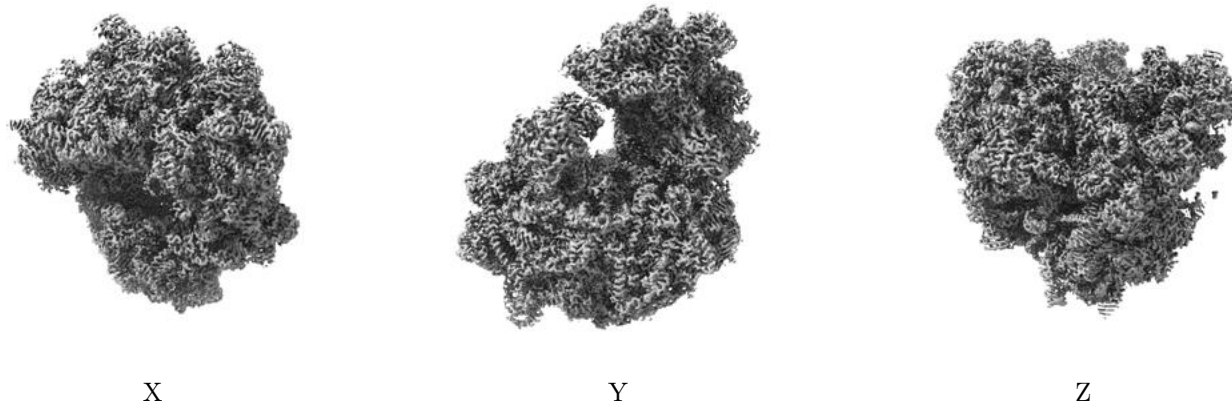


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.0352. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

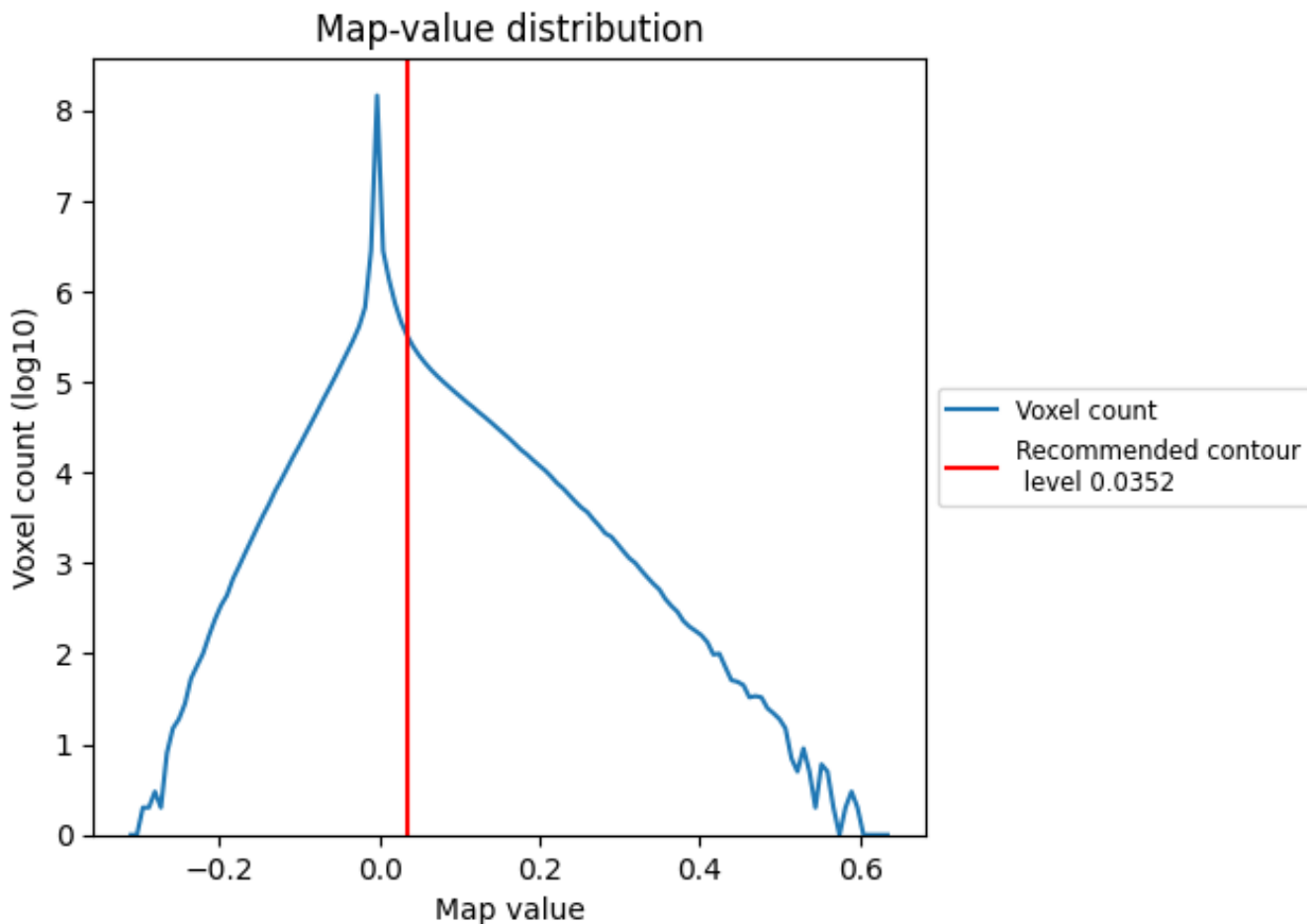
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

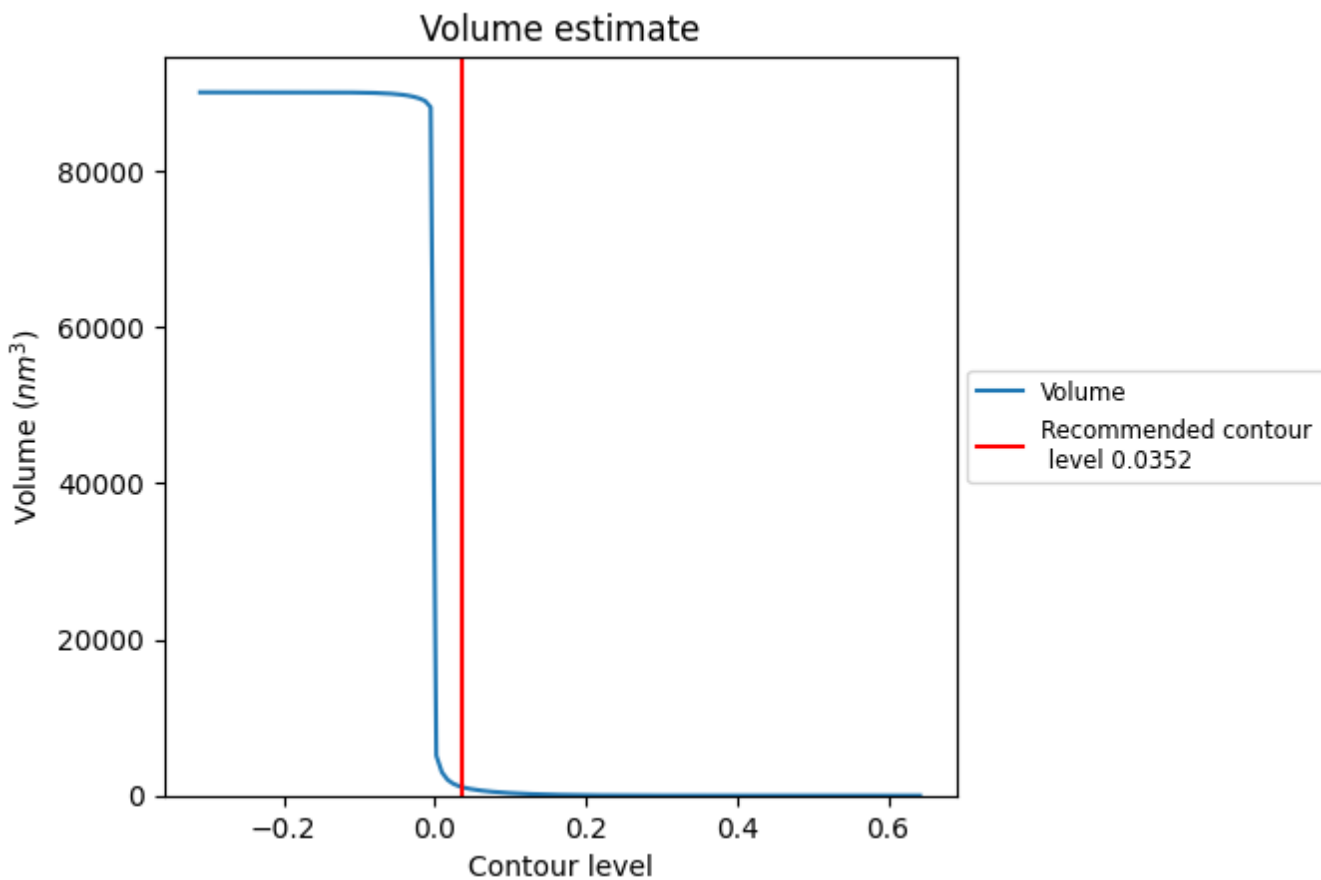
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

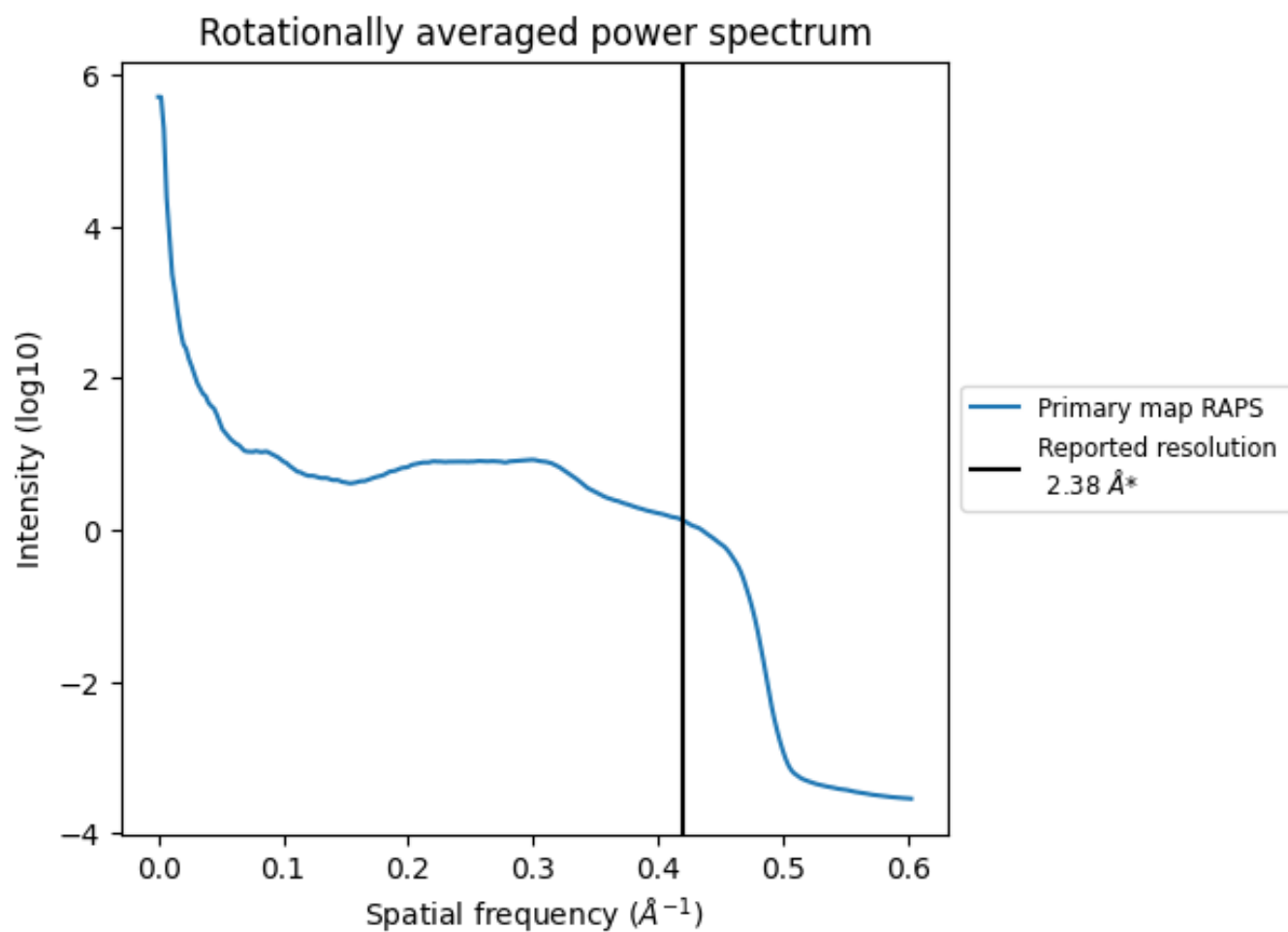
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1118 nm^3 ; this corresponds to an approximate mass of 1010 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)



*Reported resolution corresponds to spatial frequency of 0.420 Å⁻¹

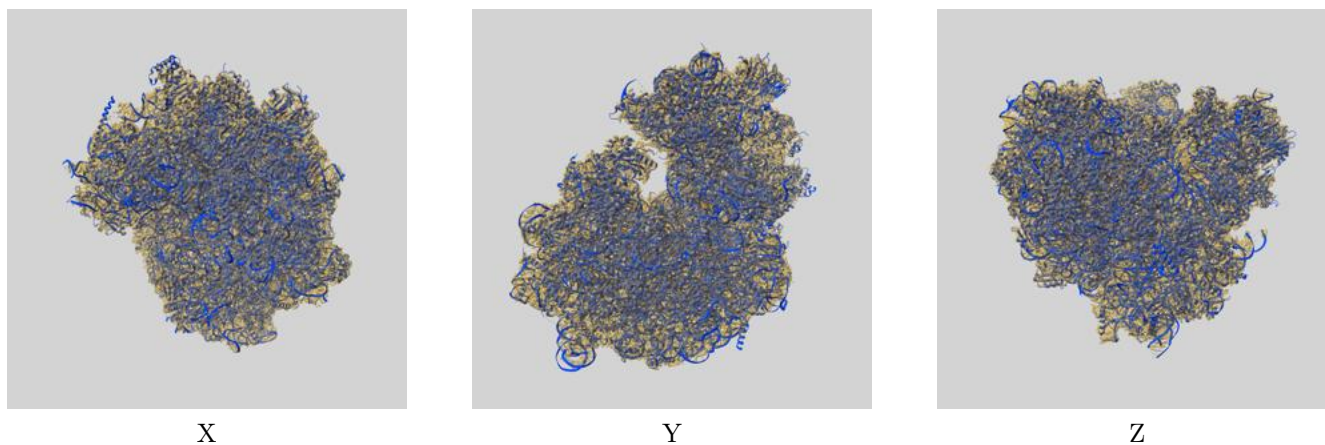
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit [i](#)

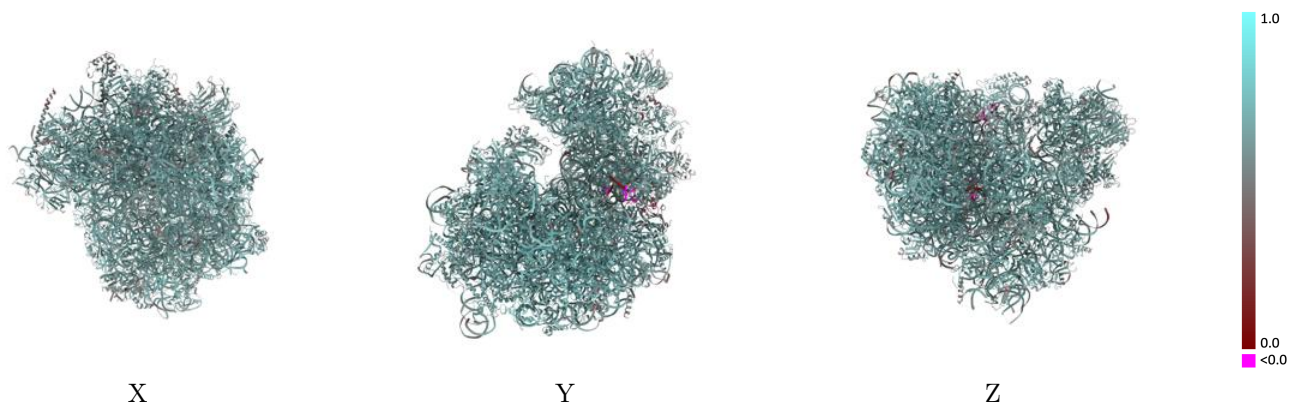
This section contains information regarding the fit between EMDB map EMD-14004 and PDB model 7QIZ. Per-residue inclusion information can be found in section 3 on page 31.

9.1 Map-model overlay [i](#)



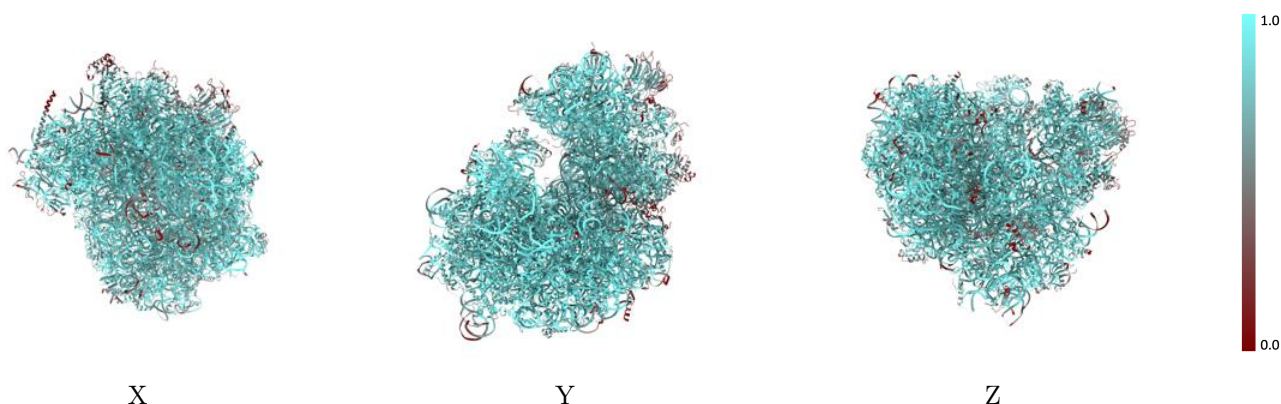
The images above show the 3D surface view of the map at the recommended contour level 0.0352 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



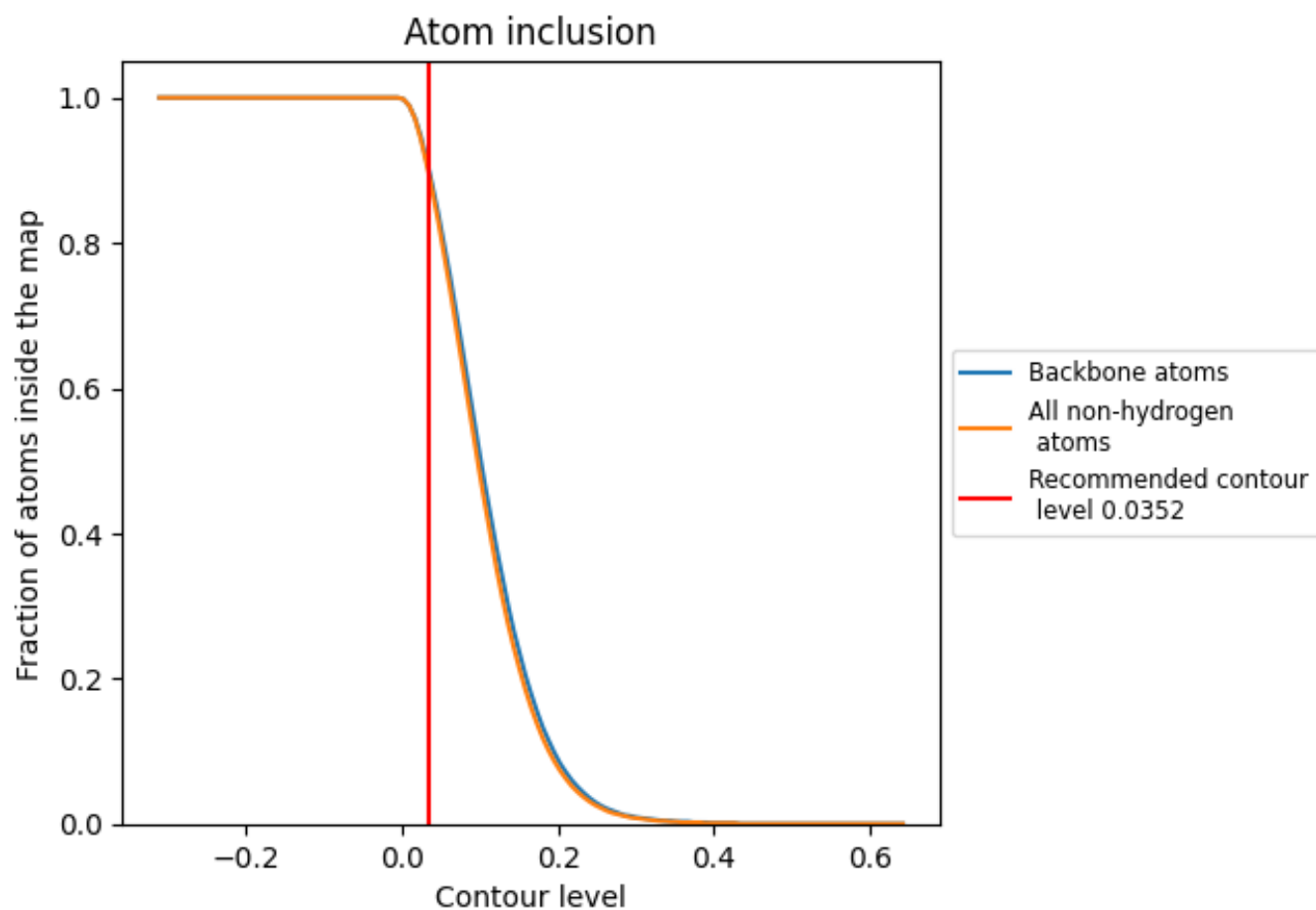
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.0352).

9.4 Atom inclusion [i](#)



At the recommended contour level, 90% of all backbone atoms, 89% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.0352) and Q-score for the entire model and for each chain.

| Chain | Atom inclusion | Q-score |
|-------|----------------|---------|
| All | 0.8920 | 0.6660 |
| 2 | 0.9420 | 0.6880 |
| 5 | 0.9830 | 0.6810 |
| 8 | 0.9360 | 0.6850 |
| AA | 0.6460 | 0.5600 |
| BA | 0.7950 | 0.6140 |
| CA | 0.9010 | 0.6680 |
| D | 0.9710 | 0.7270 |
| DA | 0.9020 | 0.6660 |
| E | 0.9440 | 0.7100 |
| EA | 0.8700 | 0.6310 |
| F | 0.9220 | 0.7020 |
| FA | 0.6890 | 0.5810 |
| G | 0.8500 | 0.6450 |
| GA | 0.8560 | 0.6310 |
| H | 0.8180 | 0.6340 |
| HA | 0.8690 | 0.6550 |
| I | 0.9150 | 0.6970 |
| IA | 0.8680 | 0.6090 |
| J | 0.8060 | 0.6380 |
| JA | 0.9530 | 0.6810 |
| K | 0.8570 | 0.6420 |
| KA | 0.7700 | 0.6120 |
| L | 0.8820 | 0.6560 |
| LA | 0.7420 | 0.6280 |
| M | 0.7120 | 0.5810 |
| MA | 0.8000 | 0.6040 |
| N | 0.8830 | 0.6770 |
| NA | 0.7490 | 0.6040 |
| O | 0.8560 | 0.6440 |
| OA | 0.9010 | 0.6530 |
| P | 0.9910 | 0.7410 |
| PA | 0.6290 | 0.5780 |
| Q | 0.9320 | 0.6970 |
| QA | 0.7660 | 0.6210 |



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| Chain | Atom inclusion | Q-score |
|-------|----------------|---------|
| R | 0.9350 | 0.7060 |
| RA | 0.9100 | 0.6630 |
| S | 0.9670 | 0.7210 |
| S2 | 0.9260 | 0.6540 |
| T | 0.8040 | 0.6180 |
| TA | 0.8560 | 0.6410 |
| U | 0.9470 | 0.6990 |
| UA | 0.9090 | 0.6690 |
| V | 0.9100 | 0.6800 |
| VA | 0.7480 | 0.6080 |
| W | 0.6250 | 0.5720 |
| WA | 0.7610 | 0.5680 |
| X | 0.9440 | 0.7020 |
| XA | 0.8930 | 0.6700 |
| Y | 0.9230 | 0.6900 |
| YA | 0.5600 | 0.5750 |
| Z | 0.9050 | 0.6800 |
| ZA | 0.7750 | 0.6100 |
| a | 0.8920 | 0.6760 |
| aA | 0.9200 | 0.6430 |
| b | 0.8610 | 0.6470 |
| bA | 0.9520 | 0.6280 |
| c | 0.9570 | 0.7200 |
| d | 0.9490 | 0.7090 |
| e | 0.6490 | 0.4550 |
| f | 0.8460 | 0.6630 |
| g | 0.9600 | 0.7150 |
| h | 0.9500 | 0.7050 |
| i | 0.8930 | 0.6840 |
| j | 0.8820 | 0.6680 |
| k | 0.8970 | 0.6620 |
| l | 0.9780 | 0.7430 |
| m | 0.7540 | 0.6190 |
| n | 0.9700 | 0.7230 |
| o | 0.8920 | 0.6650 |
| p | 0.9140 | 0.6960 |
| q | 0.9170 | 0.6980 |
| r | 0.9040 | 0.6820 |
| s | 1.0000 | 0.7480 |
| t | 0.9040 | 0.6380 |
| u | 0.8190 | 0.6120 |
| v | 0.7160 | 0.5320 |

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| Chain | Atom inclusion | Q-score |
|-------|--|--|
| w |  0.8860 |  0.6490 |
| x |  0.5630 |  0.5460 |
| y |  0.8960 |  0.6500 |
| z |  0.9330 |  0.6850 |