



Full wwPDB X-ray Structure Validation Report ⓘ

Sep 16, 2020 – 06:47 PM BST

PDB ID : 5NDG
Title : Crystal structure of geneticin (G418) bound to the yeast 80S ribosome
Authors : Prokhorova, I.; Djumagulov, M.; Urzhumtsev, A.; Yusupov, M.; Yusupova, G.
Deposited on : 2017-03-08
Resolution : 3.70 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.14.3.dev2
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.14.3.dev2

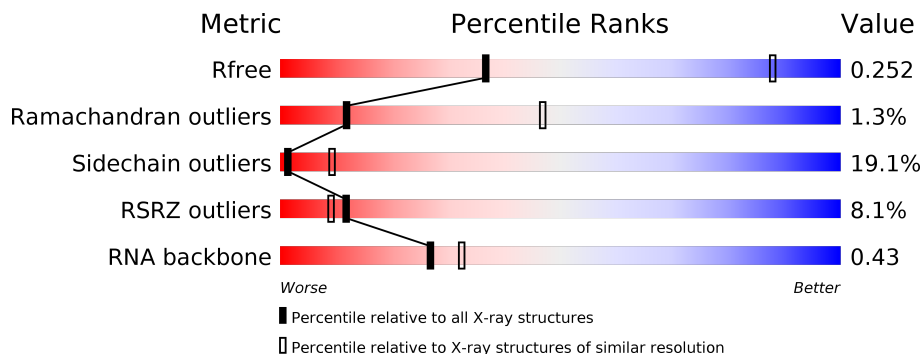
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.70 Å.

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



| Metric | Whole archive (#Entries) | Similar resolution (#Entries, resolution range(Å)) |
|-----------------------|-----------------------------|---|
| R_{free} | 130704 | 1049 (3.88-3.52) |
| Ramachandran outliers | 138981 | 1069 (3.88-3.52) |
| Sidechain outliers | 138945 | 1065 (3.88-3.52) |
| RSRZ outliers | 127900 | 1578 (3.90-3.50) |
| RNA backbone | 3102 | 1027 (4.40-3.00) |

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

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1 | 2 | 1800 | |
| 1 | 6 | 1800 | |
| 2 | S0 | 206 | |
| 2 | s0 | 206 | |
| 3 | S1 | 216 | |
| 3 | s1 | 216 | |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 4 | S2 | 217 | % |
| 4 | s2 | 217 | 4% |
| 5 | S3 | 223 | 3% |
| 5 | s3 | 223 | 6% |
| 6 | S4 | 260 | 21% |
| 6 | s4 | 260 | 9% |
| 7 | S5 | 206 | 11% |
| 7 | s5 | 206 | 28% |
| 8 | S6 | 236 | 16% |
| 8 | s6 | 236 | 11% |
| 9 | S7 | 185 | 18% |
| 9 | s7 | 185 | 14% |
| 10 | S8 | 200 | 27% |
| 10 | s8 | 200 | 10% |
| 11 | S9 | 185 | 36% |
| 11 | s9 | 185 | 42% |
| 12 | C0 | 105 | 20% |
| 12 | c0 | 105 | 39% |
| 13 | C1 | 156 | 11% |
| 13 | c1 | 156 | 4% |
| 14 | C2 | 143 | 31% |
| 14 | c2 | 143 | 55% |
| 15 | C3 | 150 | 3% |
| 15 | c3 | 150 | 2% |
| 16 | C4 | 128 | 4% |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|----------------------------|
| 16 | c4 | 128 | 5% 84% 16% |
| 17 | C5 | 141 | 5% 70% 16% 13% |
| 17 | c5 | 141 | 14% 70% 15% 16% |
| 18 | C6 | 141 | 16% 79% 19% .. |
| 18 | c6 | 141 | 56% 84% 16% . |
| 19 | C7 | 136 | 12% 70% 15% 14% |
| 19 | c7 | 136 | 6% 72% 13% 14% |
| 20 | C8 | 145 | 6% 77% 21% . |
| 20 | c8 | 145 | 19% 81% 19% . |
| 21 | C9 | 143 | 11% 83% 16% . |
| 21 | c9 | 143 | 43% 84% 15% . |
| 22 | D0 | 107 | 19% 79% 19% . |
| 22 | d0 | 107 | 25% 77% 16% .. 6% |
| 23 | D1 | 87 | 5% 82% 17% . |
| 23 | d1 | 87 | 3% 84% 16% |
| 24 | D2 | 129 | 9% 85% 13% .. |
| 24 | d2 | 129 | 5% 87% 12% . |
| 25 | D3 | 144 | 2% 80% 20% |
| 25 | d3 | 144 | 92% 8% |
| 26 | D4 | 134 | 22% 81% 17% . |
| 26 | d4 | 134 | 11% 81% 19% |
| 27 | D5 | 70 | 20% 67% 30% . |
| 27 | d5 | 70 | 36% 86% 13% . |
| 28 | D6 | 97 | 5% 65% 31% . |
| 28 | d6 | 97 | 8% 87% 13% |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 29 | D7 | 81 | |
| 29 | d7 | 81 | |
| 30 | D8 | 63 | |
| 30 | d8 | 63 | |
| 31 | D9 | 53 | |
| 31 | d9 | 53 | |
| 32 | E0 | 60 | |
| 32 | e0 | 60 | |
| 33 | E1 | 152 | |
| 33 | e1 | 152 | |
| 34 | SR | 318 | |
| 34 | sR | 318 | |
| 35 | SM | 272 | |
| 35 | sM | 272 | |
| 36 | 1 | 3396 | |
| 36 | 5 | 3396 | |
| 37 | 3 | 121 | |
| 37 | 7 | 121 | |
| 38 | 4 | 158 | |
| 38 | 8 | 158 | |
| 39 | L2 | 252 | |
| 39 | l2 | 252 | |
| 40 | L3 | 386 | |
| 40 | l3 | 386 | |
| 41 | L4 | 361 | |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 41 | l4 | 361 | 2% 82% 18% |
| 42 | L5 | 296 | 24% 81% 18% |
| 42 | l5 | 296 | 17% 84% 15% |
| 43 | L6 | 176 | 2% 72% 16% 11% |
| 43 | l6 | 176 | 2% 75% 14% 11% |
| 44 | L7 | 223 | 0% 91% 9% |
| 44 | l7 | 223 | 0% 87% 13% |
| 45 | L8 | 233 | 21% 83% 16% |
| 45 | l8 | 233 | 11% 81% 17% |
| 46 | L9 | 191 | 2% 77% 21% |
| 46 | l9 | 191 | 0% 77% 22% |
| 47 | M0 | 221 | 0% 83% 11% 6% |
| 47 | m0 | 221 | 4% 78% 16% 5% |
| 48 | M1 | 169 | 9% 83% 16% |
| 48 | m1 | 169 | 14% 80% 17% |
| 49 | M3 | 194 | 3% 79% 20% |
| 49 | m3 | 194 | 3% 81% 19% |
| 50 | M4 | 137 | 0% 82% 17% |
| 50 | m4 | 137 | 0% 84% 15% |
| 51 | M5 | 203 | 13% 84% 15% |
| 51 | m5 | 203 | 8% 85% 14% |
| 52 | M6 | 197 | 0% 85% 14% |
| 52 | m6 | 197 | 0% 81% 19% |
| 53 | M7 | 184 | 0% 77% 21% |
| 53 | m7 | 184 | 2% 75% 20% 5% |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|-------------------------|
| 54 | M8 | 185 | 4% 86% 14% |
| 54 | m8 | 185 | % 86% 14% |
| 55 | M9 | 188 | 11% 80% 20% |
| 55 | m9 | 188 | 10% 77% 20% |
| 56 | N0 | 172 | 81% 16% |
| 56 | n0 | 172 | 81% 19% |
| 57 | N1 | 159 | 16% 82% 17% |
| 57 | n1 | 159 | 5% 82% 18% |
| 58 | N2 | 98 | 23% 88% 12% |
| 58 | n2 | 98 | 9% 83% 17% |
| 59 | N3 | 135 | 12% 89% 11% |
| 59 | n3 | 135 | 2% 88% 10% |
| 60 | N4 | 155 | 11% 70% 9% 21% |
| 60 | n4 | 155 | 12% 68% 8% 24% |
| 61 | N5 | 121 | 11% 82% 18% |
| 61 | n5 | 121 | 2% 82% 17% |
| 62 | N6 | 126 | 24% 81% 18% |
| 62 | n6 | 126 | 12% 79% 19% |
| 63 | N7 | 135 | 35% 84% 14% |
| 63 | n7 | 135 | 18% 79% 19% |
| 64 | N8 | 148 | 11% 80% 19% |
| 64 | n8 | 148 | % 82% 17% |
| 65 | N9 | 58 | 17% 86% 14% |
| 65 | n9 | 58 | 14% 84% 16% |
| 66 | O0 | 100 | 18% 77% 19% |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|-------------------|
| 66 | o0 | 100 | 5% 87% 13% |
| 67 | O1 | 109 | 15% 81% 18% |
| 67 | o1 | 109 | 8% 80% 18% |
| 68 | O2 | 127 | 5% 87% 13% |
| 68 | o2 | 127 | 86% 14% |
| 69 | O3 | 106 | 2% 86% 14% |
| 69 | o3 | 106 | 2% 82% 18% |
| 70 | O4 | 112 | 11% 79% 21% |
| 70 | o4 | 112 | 6% 84% 16% |
| 71 | O5 | 119 | 4% 82% 18% |
| 71 | o5 | 119 | 3% 82% 18% |
| 72 | O6 | 99 | 14% 75% 24% |
| 72 | o6 | 99 | 7% 77% 22% |
| 73 | O7 | 84 | 76% 24% |
| 73 | o7 | 84 | 82% 14% .. |
| 74 | O8 | 77 | 19% 81% 19% |
| 74 | o8 | 77 | 21% 83% 16% |
| 75 | O9 | 50 | 80% 18% |
| 75 | o9 | 50 | 84% 16% |
| 76 | Q0 | 52 | 4% 79% 21% |
| 76 | q0 | 52 | 4% 81% 19% |
| 77 | Q1 | 25 | 12% 88% 12% |
| 77 | q1 | 25 | 4% 60% 40% |
| 78 | Q2 | 105 | 23% 80% 20% |
| 78 | q2 | 105 | 12% 88% 12% |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 79 | Q3 | 91 | |
| 79 | q3 | 91 | |
| 80 | p0 | 312 | |

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

| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|------|-----------|----------|---------|------------------|
| 81 | MG | 1 | 3404 | - | - | - | X |
| 81 | MG | 1 | 3423 | - | - | - | X |
| 81 | MG | 1 | 3425 | - | - | - | X |
| 81 | MG | 1 | 3429 | - | - | - | X |
| 81 | MG | 1 | 3431 | - | - | - | X |
| 81 | MG | 1 | 3441 | - | - | - | X |
| 81 | MG | 1 | 3485 | - | - | - | X |
| 81 | MG | 1 | 3486 | - | - | - | X |
| 81 | MG | 1 | 3487 | - | - | - | X |
| 81 | MG | 1 | 3505 | - | - | - | X |
| 81 | MG | 1 | 3523 | - | - | - | X |
| 81 | MG | 1 | 3540 | - | - | - | X |
| 81 | MG | 1 | 3543 | - | - | - | X |
| 81 | MG | 1 | 3547 | - | - | - | X |
| 81 | MG | 1 | 3553 | - | - | - | X |
| 81 | MG | 1 | 3565 | - | - | - | X |
| 81 | MG | 1 | 3578 | - | - | - | X |
| 81 | MG | 1 | 3579 | - | - | - | X |
| 81 | MG | 1 | 3582 | - | - | - | X |
| 81 | MG | 1 | 3609 | - | - | - | X |
| 81 | MG | 1 | 3612 | - | - | - | X |
| 81 | MG | 1 | 3620 | - | - | - | X |
| 81 | MG | 1 | 3630 | - | - | - | X |
| 81 | MG | 1 | 3634 | - | - | - | X |
| 81 | MG | 1 | 3635 | - | - | - | X |
| 81 | MG | 1 | 3641 | - | - | - | X |
| 81 | MG | 1 | 3643 | - | - | - | X |
| 81 | MG | 1 | 3645 | - | - | - | X |
| 81 | MG | 1 | 3659 | - | - | - | X |
| 81 | MG | 1 | 3660 | - | - | - | X |
| 81 | MG | 1 | 3663 | - | - | - | X |
| 81 | MG | 1 | 3668 | - | - | - | X |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|------|-----------|----------|---------|------------------|
| 81 | MG | 1 | 3673 | - | - | - | X |
| 81 | MG | 1 | 3676 | - | - | - | X |
| 81 | MG | 1 | 3687 | - | - | - | X |
| 81 | MG | 1 | 3688 | - | - | - | X |
| 81 | MG | 1 | 3690 | - | - | - | X |
| 81 | MG | 1 | 3692 | - | - | - | X |
| 81 | MG | 1 | 3693 | - | - | - | X |
| 81 | MG | 1 | 3695 | - | - | - | X |
| 81 | MG | 1 | 3700 | - | - | - | X |
| 81 | MG | 1 | 3704 | - | - | - | X |
| 81 | MG | 1 | 3712 | - | - | - | X |
| 81 | MG | 1 | 3720 | - | - | - | X |
| 81 | MG | 1 | 3721 | - | - | - | X |
| 81 | MG | 1 | 3723 | - | - | - | X |
| 81 | MG | 1 | 3724 | - | - | - | X |
| 81 | MG | 1 | 3725 | - | - | - | X |
| 81 | MG | 1 | 3726 | - | - | - | X |
| 81 | MG | 1 | 3727 | - | - | - | X |
| 81 | MG | 1 | 3733 | - | - | - | X |
| 81 | MG | 1 | 3744 | - | - | - | X |
| 81 | MG | 1 | 3745 | - | - | - | X |
| 81 | MG | 1 | 3748 | - | - | - | X |
| 81 | MG | 1 | 3761 | - | - | - | X |
| 81 | MG | 1 | 3762 | - | - | - | X |
| 81 | MG | 1 | 3763 | - | - | - | X |
| 81 | MG | 1 | 3769 | - | - | - | X |
| 81 | MG | 1 | 3771 | - | - | - | X |
| 81 | MG | 1 | 3773 | - | - | - | X |
| 81 | MG | 1 | 3780 | - | - | - | X |
| 81 | MG | 1 | 3781 | - | - | - | X |
| 81 | MG | 1 | 3782 | - | - | - | X |
| 81 | MG | 1 | 3783 | - | - | - | X |
| 81 | MG | 1 | 3784 | - | - | - | X |
| 81 | MG | 1 | 3785 | - | - | - | X |
| 81 | MG | 1 | 3788 | - | - | - | X |
| 81 | MG | 1 | 3789 | - | - | - | X |
| 81 | MG | 1 | 3791 | - | - | - | X |
| 81 | MG | 1 | 3792 | - | - | - | X |
| 81 | MG | 1 | 3795 | - | - | - | X |
| 81 | MG | 1 | 3800 | - | - | - | X |
| 81 | MG | 1 | 3801 | - | - | - | X |
| 81 | MG | 1 | 3802 | - | - | - | X |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|------|-----------|----------|---------|------------------|
| 81 | MG | 1 | 3804 | - | - | - | X |
| 81 | MG | 1 | 3806 | - | - | - | X |
| 81 | MG | 2 | 1904 | - | - | - | X |
| 81 | MG | 2 | 1907 | - | - | - | X |
| 81 | MG | 2 | 1915 | - | - | - | X |
| 81 | MG | 2 | 1921 | - | - | - | X |
| 81 | MG | 2 | 1928 | - | - | - | X |
| 81 | MG | 2 | 1937 | - | - | - | X |
| 81 | MG | 2 | 1951 | - | - | - | X |
| 81 | MG | 2 | 1953 | - | - | - | X |
| 81 | MG | 2 | 1967 | - | - | - | X |
| 81 | MG | 2 | 1970 | - | - | - | X |
| 81 | MG | 2 | 1972 | - | - | - | X |
| 81 | MG | 2 | 1985 | - | - | - | X |
| 81 | MG | 2 | 1986 | - | - | - | X |
| 81 | MG | 2 | 1989 | - | - | - | X |
| 81 | MG | 2 | 1990 | - | - | - | X |
| 81 | MG | 2 | 1995 | - | - | - | X |
| 81 | MG | 2 | 1999 | - | - | - | X |
| 81 | MG | 2 | 2006 | - | - | - | X |
| 81 | MG | 3 | 201 | - | - | - | X |
| 81 | MG | 3 | 202 | - | - | - | X |
| 81 | MG | 3 | 205 | - | - | - | X |
| 81 | MG | 4 | 202 | - | - | - | X |
| 81 | MG | 4 | 206 | - | - | - | X |
| 81 | MG | 4 | 208 | - | - | - | X |
| 81 | MG | 4 | 210 | - | - | - | X |
| 81 | MG | 4 | 211 | - | - | - | X |
| 81 | MG | 4 | 215 | - | - | - | X |
| 81 | MG | 4 | 216 | - | - | - | X |
| 81 | MG | 4 | 222 | - | - | - | X |
| 81 | MG | 5 | 3412 | - | - | - | X |
| 81 | MG | 5 | 3426 | - | - | - | X |
| 81 | MG | 5 | 3465 | - | - | - | X |
| 81 | MG | 5 | 3488 | - | - | - | X |
| 81 | MG | 5 | 3491 | - | - | - | X |
| 81 | MG | 5 | 3493 | - | - | - | X |
| 81 | MG | 5 | 3500 | - | - | - | X |
| 81 | MG | 5 | 3514 | - | - | - | X |
| 81 | MG | 5 | 3516 | - | - | - | X |
| 81 | MG | 5 | 3549 | - | - | - | X |
| 81 | MG | 5 | 3555 | - | - | - | X |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|------|-----------|----------|---------|------------------|
| 81 | MG | 5 | 3558 | - | - | - | X |
| 81 | MG | 5 | 3566 | - | - | - | X |
| 81 | MG | 5 | 3567 | - | - | - | X |
| 81 | MG | 5 | 3594 | - | - | - | X |
| 81 | MG | 5 | 3601 | - | - | - | X |
| 81 | MG | 5 | 3606 | - | - | - | X |
| 81 | MG | 5 | 3617 | - | - | - | X |
| 81 | MG | 5 | 3634 | - | - | - | X |
| 81 | MG | 5 | 3636 | - | - | - | X |
| 81 | MG | 5 | 3638 | - | - | - | X |
| 81 | MG | 5 | 3643 | - | - | - | X |
| 81 | MG | 5 | 3647 | - | - | - | X |
| 81 | MG | 5 | 3648 | - | - | - | X |
| 81 | MG | 5 | 3660 | - | - | - | X |
| 81 | MG | 5 | 3667 | - | - | - | X |
| 81 | MG | 5 | 3669 | - | - | - | X |
| 81 | MG | 5 | 3672 | - | - | - | X |
| 81 | MG | 5 | 3675 | - | - | - | X |
| 81 | MG | 5 | 3676 | - | - | - | X |
| 81 | MG | 5 | 3677 | - | - | - | X |
| 81 | MG | 5 | 3684 | - | - | - | X |
| 81 | MG | 5 | 3693 | - | - | - | X |
| 81 | MG | 5 | 3708 | - | - | - | X |
| 81 | MG | 5 | 3710 | - | - | - | X |
| 81 | MG | 5 | 3712 | - | - | - | X |
| 81 | MG | 5 | 3713 | - | - | - | X |
| 81 | MG | 5 | 3716 | - | - | - | X |
| 81 | MG | 5 | 3722 | - | - | - | X |
| 81 | MG | 5 | 3724 | - | - | - | X |
| 81 | MG | 5 | 3726 | - | - | - | X |
| 81 | MG | 5 | 3728 | - | - | - | X |
| 81 | MG | 5 | 3740 | - | - | - | X |
| 81 | MG | 5 | 3743 | - | - | - | X |
| 81 | MG | 5 | 3745 | - | - | - | X |
| 81 | MG | 5 | 3750 | - | - | - | X |
| 81 | MG | 5 | 3754 | - | - | - | X |
| 81 | MG | 5 | 3758 | - | - | - | X |
| 81 | MG | 5 | 3759 | - | - | - | X |
| 81 | MG | 5 | 3761 | - | - | - | X |
| 81 | MG | 5 | 3762 | - | - | - | X |
| 81 | MG | 5 | 3765 | - | - | - | X |
| 81 | MG | 5 | 3771 | - | - | - | X |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|------|-----------|----------|---------|------------------|
| 81 | MG | 5 | 3779 | - | - | - | X |
| 81 | MG | 5 | 3787 | - | - | - | X |
| 81 | MG | 5 | 3788 | - | - | - | X |
| 81 | MG | 5 | 3789 | - | - | - | X |
| 81 | MG | 5 | 3790 | - | - | - | X |
| 81 | MG | 5 | 3792 | - | - | - | X |
| 81 | MG | 5 | 3793 | - | - | - | X |
| 81 | MG | 5 | 3794 | - | - | - | X |
| 81 | MG | 5 | 3800 | - | - | - | X |
| 81 | MG | 5 | 3803 | - | - | - | X |
| 81 | MG | 5 | 3806 | - | - | - | X |
| 81 | MG | 5 | 3807 | - | - | - | X |
| 81 | MG | 5 | 3811 | - | - | - | X |
| 81 | MG | 5 | 3812 | - | - | - | X |
| 81 | MG | 5 | 3818 | - | - | - | X |
| 81 | MG | 5 | 3819 | - | - | - | X |
| 81 | MG | 5 | 3820 | - | - | - | X |
| 81 | MG | 5 | 3822 | - | - | - | X |
| 81 | MG | 5 | 3823 | - | - | - | X |
| 81 | MG | 5 | 3825 | - | - | - | X |
| 81 | MG | 5 | 3826 | - | - | - | X |
| 81 | MG | 5 | 3832 | - | - | - | X |
| 81 | MG | 5 | 3833 | - | - | - | X |
| 81 | MG | 5 | 3834 | - | - | - | X |
| 81 | MG | 5 | 3837 | - | - | - | X |
| 81 | MG | 5 | 3838 | - | - | - | X |
| 81 | MG | 5 | 3839 | - | - | - | X |
| 81 | MG | 5 | 3840 | - | - | - | X |
| 81 | MG | 5 | 3841 | - | - | - | X |
| 81 | MG | 5 | 3842 | - | - | - | X |
| 81 | MG | 6 | 1910 | - | - | - | X |
| 81 | MG | 6 | 1911 | - | - | - | X |
| 81 | MG | 6 | 1916 | - | - | - | X |
| 81 | MG | 6 | 1918 | - | - | - | X |
| 81 | MG | 6 | 1919 | - | - | - | X |
| 81 | MG | 6 | 1922 | - | - | - | X |
| 81 | MG | 6 | 1939 | - | - | - | X |
| 81 | MG | 6 | 1952 | - | - | - | X |
| 81 | MG | 6 | 1958 | - | - | - | X |
| 81 | MG | 6 | 1972 | - | - | - | X |
| 81 | MG | 6 | 1978 | - | - | - | X |
| 81 | MG | 6 | 1980 | - | - | - | X |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|------|-----------|----------|---------|------------------|
| 81 | MG | 6 | 1985 | - | - | - | X |
| 81 | MG | 6 | 1997 | - | - | - | X |
| 81 | MG | 6 | 2000 | - | - | - | X |
| 81 | MG | 6 | 2003 | - | - | - | X |
| 81 | MG | 6 | 2006 | - | - | - | X |
| 81 | MG | 6 | 2008 | - | - | - | X |
| 81 | MG | 6 | 2009 | - | - | - | X |
| 81 | MG | 6 | 2011 | - | - | - | X |
| 81 | MG | 6 | 2012 | - | - | - | X |
| 81 | MG | 7 | 206 | - | - | - | X |
| 81 | MG | 7 | 207 | - | - | - | X |
| 81 | MG | 8 | 204 | - | - | - | X |
| 81 | MG | 8 | 205 | - | - | - | X |
| 81 | MG | 8 | 206 | - | - | - | X |
| 81 | MG | 8 | 210 | - | - | - | X |
| 81 | MG | 8 | 213 | - | - | - | X |
| 81 | MG | M6 | 201 | - | - | - | X |
| 81 | MG | M7 | 201 | - | - | - | X |
| 81 | MG | M7 | 205 | - | - | - | X |
| 81 | MG | N8 | 202 | - | - | - | X |
| 81 | MG | O2 | 202 | - | - | - | X |
| 81 | MG | O3 | 201 | - | - | - | X |
| 81 | MG | O9 | 101 | - | - | - | X |
| 81 | MG | S1 | 301 | - | - | - | X |
| 81 | MG | S8 | 301 | - | - | - | X |
| 81 | MG | d3 | 201 | - | - | - | X |
| 81 | MG | l2 | 301 | - | - | - | X |
| 81 | MG | l3 | 403 | - | - | - | X |
| 81 | MG | m6 | 201 | - | - | - | X |
| 81 | MG | n0 | 201 | - | - | - | X |
| 81 | MG | n0 | 202 | - | - | - | X |
| 81 | MG | n5 | 201 | - | - | - | X |
| 81 | MG | o2 | 202 | - | - | - | X |
| 81 | MG | o3 | 201 | - | - | - | X |
| 81 | MG | o3 | 203 | - | - | - | X |
| 81 | MG | o5 | 201 | - | - | - | X |
| 81 | MG | o7 | 505 | - | - | - | X |
| 81 | MG | q2 | 503 | - | - | - | X |
| 81 | MG | q2 | 504 | - | - | - | X |
| 81 | MG | s8 | 302 | - | - | - | X |

2 Entry composition [i](#)

There are 84 unique types of molecules in this entry. The entry contains 397710 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 18S ribosomal RNA.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-------|------|-------|------|---------|---------|-------|
| | | | Total | C | N | O | P | | | |
| 1 | 2 | 1688 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 35985 | 16089 | 6386 | 11822 | 1688 | | | |
| 1 | 6 | 1700 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 36234 | 16201 | 6426 | 11907 | 1700 | | | |

- Molecule 2 is a protein called 40S ribosomal protein S0-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 2 | S0 | 206 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1577 | 1014 | 278 | 283 | 2 | | | |
| 2 | s0 | 206 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1583 | 1017 | 281 | 283 | 2 | | | |

- Molecule 3 is a protein called 40S ribosomal protein S1-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 3 | S1 | 214 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1709 | 1084 | 310 | 311 | 4 | | | |
| 3 | s1 | 216 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1722 | 1091 | 312 | 315 | 4 | | | |

- Molecule 4 is a protein called 40S ribosomal protein S2.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 4 | S2 | 217 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1635 | 1047 | 289 | 297 | 2 | | | |
| 4 | s2 | 217 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1635 | 1047 | 289 | 297 | 2 | | | |

- Molecule 5 is a protein called 40S ribosomal protein S3.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| 5 | S3 | 223 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1734 | 1101 | 313 | 314 | 6 | | | |
| 5 | s3 | 223 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1734 | 1101 | 313 | 314 | 6 | | | |

- Molecule 6 is a protein called 40S ribosomal protein S4-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| 6 | S4 | 260 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 2068 | 1316 | 389 | 360 | 3 | | | |
| 6 | s4 | 260 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 2068 | 1316 | 389 | 360 | 3 | | | |

- Molecule 7 is a protein called 40S ribosomal protein S5.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| 7 | S5 | 206 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1609 | 1007 | 300 | 299 | 3 | | | |
| 7 | s5 | 206 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1609 | 1007 | 300 | 299 | 3 | | | |

- Molecule 8 is a protein called 40S ribosomal protein S6-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| 8 | S6 | 226 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1799 | 1129 | 346 | 321 | 3 | | | |
| 8 | s6 | 218 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1755 | 1102 | 337 | 313 | 3 | | | |

- Molecule 9 is a protein called 40S ribosomal protein S7-A.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---------|---------|-------|
| 9 | S7 | 184 | Total | C | N | O | 0 | 0 | 0 |
| | | | 1481 | 951 | 265 | 265 | | | |
| 9 | s7 | 185 | Total | C | N | O | 0 | 0 | 0 |
| | | | 1486 | 954 | 266 | 266 | | | |

- Molecule 10 is a protein called 40S ribosomal protein S8-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 10 | S8 | 188 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1489 | 925 | 298 | 264 | 2 | | | |

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| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 10 | s8 | 188 | 1489 | 925 | 298 | 264 | 2 | 0 | 0 | 0 |

- Molecule 11 is a protein called 40S ribosomal protein S9-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 11 | S9 | 185 | 1494 | 943 | 289 | 261 | 1 | 0 | 0 | 0 |
| 11 | s9 | 185 | 1494 | 943 | 289 | 261 | 1 | 0 | 0 | 0 |

- Molecule 12 is a protein called 40S ribosomal protein S10-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 12 | C0 | 92 | 752 | 487 | 122 | 141 | 2 | 0 | 0 | 0 |
| 12 | c0 | 92 | 741 | 478 | 121 | 140 | 2 | 0 | 0 | 0 |

- Molecule 13 is a protein called 40S ribosomal protein S11-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 13 | C1 | 142 | 1146 | 735 | 217 | 191 | 3 | 0 | 0 | 0 |
| 13 | c1 | 146 | 1168 | 747 | 221 | 197 | 3 | 0 | 0 | 0 |

- Molecule 14 is a protein called 40S ribosomal protein S12.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 14 | C2 | 120 | 870 | 548 | 152 | 168 | 2 | 0 | 0 | 0 |
| 14 | c2 | 124 | 890 | 560 | 156 | 172 | 2 | 0 | 0 | 0 |

- Molecule 15 is a protein called 40S ribosomal protein S13.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 15 | C3 | 150 | 1192 | 759 | 224 | 207 | 2 | 0 | 0 | 0 |
| 15 | c3 | 150 | 1192 | 759 | 224 | 207 | 2 | 0 | 0 | 0 |

- Molecule 16 is a protein called 40S ribosomal protein S14-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|--------------|----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 16 | C4 | 127 | Total 891 | C 545 | N 182 | O 163 | S 1 | 0 | 0 | 0 |
| 16 | c4 | 128 | Total 949 | C 582 | N 188 | O 176 | S 3 | 0 | 0 | 0 |

- Molecule 17 is a protein called 40S ribosomal protein S15.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|--------------|----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 17 | C5 | 122 | Total 967 | C 616 | N 180 | O 164 | S 7 | 0 | 0 | 0 |
| 17 | c5 | 119 | Total 939 | C 595 | N 176 | O 161 | S 7 | 0 | 0 | 0 |

- Molecule 18 is a protein called 40S ribosomal protein S16-A.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|---------------|----------|----------|----------|---------|---------|-------|
| | | | Total | C | N | O | | | |
| 18 | C6 | 141 | Total 1105 | C 708 | N 203 | O 194 | 0 | 0 | 0 |
| 18 | c6 | 141 | Total 1105 | C 708 | N 203 | O 194 | 0 | 0 | 0 |

- Molecule 19 is a protein called 40S ribosomal protein S17-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|--------------|----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 19 | C7 | 117 | Total 911 | C 568 | N 174 | O 167 | S 2 | 0 | 0 | 0 |
| 19 | c7 | 117 | Total 906 | C 563 | N 174 | O 167 | S 2 | 0 | 0 | 0 |

- Molecule 20 is a protein called 40S ribosomal protein S18-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|---------------|----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 20 | C8 | 145 | Total 1192 | C 743 | N 237 | O 210 | S 2 | 0 | 0 | 0 |
| 20 | c8 | 145 | Total 1192 | C 743 | N 237 | O 210 | S 2 | 0 | 0 | 0 |

- Molecule 21 is a protein called 40S ribosomal protein S19-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 21 | C9 | 143 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1112 | 694 | 208 | 208 | 2 | | | |
| 21 | c9 | 143 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1112 | 694 | 208 | 208 | 2 | | | |

- Molecule 22 is a protein called 40S ribosomal protein S20.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 22 | D0 | 105 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 837 | 529 | 152 | 155 | 1 | | | |
| 22 | d0 | 101 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 805 | 512 | 145 | 147 | 1 | | | |

- Molecule 23 is a protein called 40S ribosomal protein S21-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 23 | D1 | 87 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 684 | 420 | 125 | 137 | 2 | | | |
| 23 | d1 | 87 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 684 | 420 | 125 | 137 | 2 | | | |

- Molecule 24 is a protein called 40S ribosomal protein S22-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 24 | D2 | 129 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1021 | 650 | 188 | 180 | 3 | | | |
| 24 | d2 | 129 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1021 | 650 | 188 | 180 | 3 | | | |

- Molecule 25 is a protein called 40S ribosomal protein S23-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 25 | D3 | 144 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1121 | 708 | 220 | 191 | 2 | | | |
| 25 | d3 | 144 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1121 | 708 | 220 | 191 | 2 | | | |

- Molecule 26 is a protein called 40S ribosomal protein S24-A.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---------|---------|-------|
| 26 | D4 | 134 | Total | C | N | O | 0 | 0 | 0 |
| | | | 1073 | 676 | 208 | 189 | | | |

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| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---------|---------|-------|
| 26 | d4 | 134 | Total | C | N | O | 0 | 0 | 0 |
| | | | 1073 | 676 | 208 | 189 | | | |

- Molecule 27 is a protein called 40S ribosomal protein S25-A.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|----|---------|---------|-------|
| 27 | D5 | 70 | Total | C | N | O | 0 | 0 | 0 |
| | | | 563 | 360 | 104 | 99 | | | |
| 27 | d5 | 69 | Total | C | N | O | 0 | 0 | 0 |
| | | | 558 | 357 | 103 | 98 | | | |

- Molecule 28 is a protein called 40S ribosomal protein S26-B.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 28 | D6 | 97 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 769 | 475 | 160 | 129 | 5 | | | |
| 28 | d6 | 97 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 769 | 475 | 160 | 129 | 5 | | | |

- Molecule 29 is a protein called 40S ribosomal protein S27-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 29 | D7 | 81 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 610 | 382 | 110 | 113 | 5 | | | |
| 29 | d7 | 81 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 610 | 382 | 110 | 113 | 5 | | | |

- Molecule 30 is a protein called 40S ribosomal protein S28-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 30 | D8 | 63 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 497 | 306 | 99 | 91 | 1 | | | |
| 30 | d8 | 63 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 497 | 306 | 99 | 91 | 1 | | | |

- Molecule 31 is a protein called 40S ribosomal protein S29-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 31 | D9 | 53 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 442 | 274 | 92 | 72 | 4 | | | |
| 31 | d9 | 53 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 442 | 274 | 92 | 72 | 4 | | | |

- Molecule 32 is a protein called 40S ribosomal protein S30-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|--------------|----------|---------|---------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 32 | E0 | 60 | Total 475 | C 299 | N 98 | O 77 | S 1 | 0 | 0 | 0 |
| 32 | e0 | 60 | Total 475 | C 299 | N 98 | O 77 | S 1 | 0 | 0 | 0 |

- Molecule 33 is a protein called Ubiquitin-40S ribosomal protein S31.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|--------------|----------|----------|---------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 33 | E1 | 71 | Total 566 | C 362 | N 106 | O 94 | S 4 | 0 | 0 | 0 |
| 33 | e1 | 45 | Total 352 | C 222 | N 66 | O 60 | S 4 | 0 | 0 | 0 |

- Molecule 34 is a protein called Guanine nucleotide-binding protein subunit beta-like protein.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 34 | SR | 318 | Total 2437 | C 1541 | N 418 | O 470 | S 8 | 0 | 0 | 0 |
| 34 | sR | 313 | Total 2403 | C 1521 | N 411 | O 463 | S 8 | 0 | 0 | 0 |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| SR | 161 | ALA | LYS | conflict | UNP P38011 |
| sR | 161 | ALA | LYS | conflict | UNP P38011 |

- Molecule 35 is a protein called Suppressor protein STM1.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|--------------|----------|----------|----------|---------|---------|-------|
| | | | Total | C | N | O | | | |
| 35 | SM | 135 | Total 985 | C 581 | N 197 | O 207 | 0 | 0 | 0 |
| 35 | sM | 115 | Total 874 | C 514 | N 177 | O 183 | 0 | 0 | 0 |

- Molecule 36 is a RNA chain called 25S ribosomal RNA.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|----------------|------------|------------|------------|-----------|---------|---------|-------|
| | | | Total | C | N | O | P | | | |
| 36 | 1 | 3078 | Total 65838 | C 29408 | N 11870 | O 21482 | P 3078 | 0 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-------|-------|-------|------|---------|---------|-------|
| | | | Total | C | N | O | P | | | |
| 36 | 5 | 3127 | 66891 | 29878 | 12066 | 21820 | 3127 | 0 | 0 | 0 |

- Molecule 37 is a RNA chain called 5S ribosomal RNA.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|-----|---------|---------|-------|
| | | | Total | C | N | O | P | | | |
| 37 | 3 | 121 | 2579 | 1152 | 461 | 845 | 121 | 0 | 0 | 0 |
| 37 | 7 | 121 | 2579 | 1152 | 461 | 845 | 121 | 0 | 0 | 0 |

- Molecule 38 is a RNA chain called 5.8S ribosomal RNA.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|------|-----|---------|---------|-------|
| | | | Total | C | N | O | P | | | |
| 38 | 4 | 158 | 3353 | 1500 | 586 | 1109 | 158 | 0 | 0 | 0 |
| 38 | 8 | 157 | 3333 | 1491 | 584 | 1101 | 157 | 0 | 0 | 0 |

- Molecule 39 is a protein called 60S ribosomal protein L2-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 39 | L2 | 252 | 1914 | 1191 | 388 | 334 | 1 | 0 | 0 | 0 |
| 39 | l2 | 252 | 1912 | 1190 | 388 | 333 | 1 | 0 | 0 | 0 |

- Molecule 40 is a protein called 60S ribosomal protein L3.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 40 | L3 | 386 | 3075 | 1950 | 584 | 533 | 8 | 0 | 0 | 0 |
| 40 | l3 | 386 | 3075 | 1950 | 584 | 533 | 8 | 0 | 0 | 0 |

- Molecule 41 is a protein called 60S ribosomal protein L4-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 41 | L4 | 361 | 2748 | 1729 | 522 | 494 | 3 | 0 | 0 | 0 |
| 41 | l4 | 361 | 2748 | 1729 | 522 | 494 | 3 | 0 | 0 | 0 |

- Molecule 42 is a protein called 60S ribosomal protein L5.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 42 | L5 | 294 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 2357 | 1491 | 410 | 454 | 2 | | | |
| 42 | 15 | 294 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 2359 | 1489 | 412 | 456 | 2 | | | |

- Molecule 43 is a protein called 60S ribosomal protein L6-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 43 | L6 | 156 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1239 | 800 | 222 | 216 | 1 | | | |
| 43 | 16 | 157 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1248 | 806 | 224 | 217 | 1 | | | |

- Molecule 44 is a protein called 60S ribosomal protein L7-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 44 | L7 | 222 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1784 | 1151 | 324 | 308 | 1 | | | |
| 44 | 17 | 223 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1791 | 1155 | 325 | 310 | 1 | | | |

- Molecule 45 is a protein called 60S ribosomal protein L8-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 45 | L8 | 233 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1804 | 1151 | 323 | 327 | 3 | | | |
| 45 | 18 | 231 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1763 | 1130 | 316 | 314 | 3 | | | |

- Molecule 46 is a protein called 60S ribosomal protein L9-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 46 | L9 | 191 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1518 | 963 | 274 | 277 | 4 | | | |
| 46 | 19 | 190 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1510 | 957 | 273 | 276 | 4 | | | |

- Molecule 47 is a protein called 60S ribosomal protein L10.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| 47 | M0 | 208 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1690 | 1074 | 319 | 291 | 6 | | | |
| 47 | m0 | 209 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1696 | 1077 | 321 | 293 | 5 | | | |

- Molecule 48 is a protein called 60S ribosomal protein L11-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 48 | M1 | 169 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1353 | 847 | 253 | 249 | 4 | | | |
| 48 | m1 | 169 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1353 | 847 | 253 | 249 | 4 | | | |

- Molecule 49 is a protein called 60S ribosomal protein L13-A.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---------|---------|-------|
| 49 | M3 | 193 | Total | C | N | O | 0 | 0 | 0 |
| | | | 1543 | 962 | 315 | 266 | | | |
| 49 | m3 | 194 | Total | C | N | O | 0 | 0 | 0 |
| | | | 1548 | 965 | 316 | 267 | | | |

- Molecule 50 is a protein called 60S ribosomal protein L14-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 50 | M4 | 136 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1053 | 675 | 199 | 177 | 2 | | | |
| 50 | m4 | 137 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1059 | 678 | 200 | 179 | 2 | | | |

- Molecule 51 is a protein called 60S ribosomal protein L15-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| 51 | M5 | 203 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1720 | 1077 | 361 | 281 | 1 | | | |
| 51 | m5 | 203 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1720 | 1077 | 361 | 281 | 1 | | | |

- Molecule 52 is a protein called 60S ribosomal protein L16-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| 52 | M6 | 197 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1555 | 1003 | 289 | 262 | 1 | | | |

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| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 52 | m6 | 197 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1555 | 1003 | 289 | 262 | 1 | | | |

- Molecule 53 is a protein called 60S ribosomal protein L17-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 53 | M7 | 183 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1420 | 882 | 281 | 257 | | | | |
| 53 | m7 | 175 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1378 | 856 | 273 | 249 | | | | |

- Molecule 54 is a protein called 60S ribosomal protein L18-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 54 | M8 | 185 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1441 | 908 | 290 | 241 | 2 | | | |
| 54 | m8 | 185 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1441 | 908 | 290 | 241 | 2 | | | |

- Molecule 55 is a protein called 60S ribosomal protein L19-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 55 | M9 | 188 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1521 | 935 | 326 | 260 | | | | |
| 55 | m9 | 183 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1482 | 911 | 320 | 251 | | | | |

- Molecule 56 is a protein called 60S ribosomal protein L20-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 56 | N0 | 170 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1432 | 922 | 265 | 242 | 3 | | | |
| 56 | n0 | 172 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1445 | 930 | 267 | 244 | 4 | | | |

- Molecule 57 is a protein called 60S ribosomal protein L21-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 57 | N1 | 159 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1276 | 805 | 246 | 221 | 4 | | | |
| 57 | n1 | 159 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1276 | 805 | 246 | 221 | 4 | | | |

- Molecule 58 is a protein called 60S ribosomal protein L22-A.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---------|---------|-------|
| | | | Total | C | N | O | | | |
| 58 | N2 | 98 | 778 | 505 | 127 | 146 | 0 | 0 | 0 |
| 58 | n2 | 98 | 778 | 505 | 127 | 146 | 0 | 0 | 0 |

- Molecule 59 is a protein called 60S ribosomal protein L23-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 59 | N3 | 135 | 997 | 625 | 188 | 177 | 7 | 0 | 0 | 0 |
| 59 | n3 | 134 | 993 | 623 | 187 | 176 | 7 | 0 | 0 | 0 |

- Molecule 60 is a protein called 60S ribosomal protein L24-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 60 | N4 | 122 | 925 | 582 | 184 | 158 | 1 | 0 | 0 | 0 |
| 60 | n4 | 118 | 946 | 597 | 188 | 160 | 1 | 0 | 0 | 0 |

- Molecule 61 is a protein called 60S ribosomal protein L25.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 61 | N5 | 121 | 964 | 620 | 169 | 173 | 2 | 0 | 0 | 0 |
| 61 | n5 | 120 | 959 | 617 | 168 | 172 | 2 | 0 | 0 | 0 |

- Molecule 62 is a protein called 60S ribosomal protein L26-A.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---------|---------|-------|
| | | | Total | C | N | O | | | |
| 62 | N6 | 126 | 993 | 625 | 192 | 176 | 0 | 0 | 0 |
| 62 | n6 | 124 | 976 | 614 | 190 | 172 | 0 | 0 | 0 |

- Molecule 63 is a protein called 60S ribosomal protein L27-A.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---------|---------|-------|
| 63 | N7 | 135 | Total | C | N | O | 0 | 0 | 0 |
| | | | 1092 | 710 | 202 | 180 | | | |
| 63 | n7 | 135 | Total | C | N | O | 0 | 0 | 0 |
| | | | 1092 | 710 | 202 | 180 | | | |

- Molecule 64 is a protein called 60S ribosomal protein L28.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 64 | N8 | 148 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1173 | 749 | 231 | 190 | 3 | | | |
| 64 | n8 | 148 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1173 | 749 | 231 | 190 | 3 | | | |

- Molecule 65 is a protein called 60S ribosomal protein L29.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|----|---------|---------|-------|
| 65 | N9 | 58 | Total | C | N | O | 0 | 0 | 0 |
| | | | 462 | 289 | 100 | 73 | | | |
| 65 | n9 | 58 | Total | C | N | O | 0 | 0 | 0 |
| | | | 462 | 289 | 100 | 73 | | | |

- Molecule 66 is a protein called 60S ribosomal protein L30.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 66 | O0 | 97 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 743 | 479 | 124 | 139 | 1 | | | |
| 66 | o0 | 100 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 767 | 492 | 128 | 146 | 1 | | | |

- Molecule 67 is a protein called 60S ribosomal protein L31-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 67 | O1 | 109 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 876 | 556 | 167 | 152 | 1 | | | |
| 67 | o1 | 109 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 883 | 559 | 167 | 156 | 1 | | | |

- Molecule 68 is a protein called 60S ribosomal protein L32.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 68 | O2 | 127 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1020 | 647 | 205 | 167 | 1 | | | |

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| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 68 | o2 | 127 | 1020 | 647 | 205 | 167 | 1 | 0 | 0 | 0 |

- Molecule 69 is a protein called 60S ribosomal protein L33-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 69 | O3 | 106 | 850 | 540 | 165 | 144 | 1 | 0 | 0 | 0 |
| 69 | o3 | 106 | 850 | 540 | 165 | 144 | 1 | 0 | 0 | 0 |

- Molecule 70 is a protein called 60S ribosomal protein L34-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 70 | O4 | 112 | 880 | 545 | 179 | 152 | 4 | 0 | 0 | 0 |
| 70 | o4 | 112 | 880 | 545 | 179 | 152 | 4 | 0 | 0 | 0 |

- Molecule 71 is a protein called 60S ribosomal protein L35-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 71 | O5 | 119 | 969 | 615 | 186 | 167 | 1 | 0 | 0 | 0 |
| 71 | o5 | 119 | 965 | 612 | 185 | 167 | 1 | 0 | 0 | 0 |

- Molecule 72 is a protein called 60S ribosomal protein L36-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 72 | O6 | 99 | 771 | 481 | 156 | 132 | 2 | 0 | 0 | 0 |
| 72 | o6 | 99 | 770 | 481 | 156 | 131 | 2 | 0 | 0 | 0 |

- Molecule 73 is a protein called 60S ribosomal protein L37-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 73 | O7 | 84 | 665 | 405 | 145 | 110 | 5 | 0 | 0 | 0 |
| 73 | o7 | 82 | 650 | 396 | 142 | 107 | 5 | 0 | 0 | 0 |

- Molecule 74 is a protein called 60S ribosomal protein L38.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---------|---------|-------|
| | | | Total | C | N | O | | | |
| 74 | O8 | 77 | 612 | 391 | 115 | 106 | 0 | 0 | 0 |
| 74 | o8 | 77 | 608 | 388 | 114 | 106 | 0 | 0 | 0 |

- Molecule 75 is a protein called 60S ribosomal protein L39.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 75 | O9 | 49 | 431 | 269 | 96 | 64 | 2 | 0 | 0 | 0 |
| 75 | o9 | 50 | 436 | 272 | 97 | 65 | 2 | 0 | 0 | 0 |

- Molecule 76 is a protein called Ubiquitin-60S ribosomal protein L40.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 76 | Q0 | 52 | 417 | 259 | 86 | 67 | 5 | 0 | 0 | 0 |
| 76 | q0 | 52 | 417 | 259 | 86 | 67 | 5 | 0 | 0 | 0 |

- Molecule 77 is a protein called 60S ribosomal protein L41-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 77 | Q1 | 25 | 233 | 142 | 63 | 27 | 1 | 0 | 0 | 0 |
| 77 | q1 | 25 | 233 | 142 | 63 | 27 | 1 | 0 | 0 | 0 |

- Molecule 78 is a protein called 60S ribosomal protein L42-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 78 | Q2 | 105 | 847 | 534 | 170 | 138 | 5 | 0 | 0 | 0 |
| 78 | q2 | 105 | 847 | 534 | 170 | 138 | 5 | 0 | 0 | 0 |

- Molecule 79 is a protein called 60S ribosomal protein L43-A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 79 | Q3 | 91 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 694 | 429 | 138 | 121 | 6 | | | |
| 79 | q3 | 91 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 694 | 429 | 138 | 121 | 6 | | | |

- Molecule 80 is a protein called 60S acidic ribosomal protein P0.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 80 | p0 | 138 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1052 | 672 | 187 | 190 | 3 | | | |

- Molecule 81 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

| Mol | Chain | Residues | Atoms | | ZeroOcc | AltConf |
|-----|-------|----------|-------|-----|---------|---------|
| 81 | m6 | 1 | Total | Mg | 0 | 0 |
| | | | 1 | 1 | | |
| 81 | 6 | 112 | Total | Mg | 0 | 0 |
| | | | 112 | 112 | | |
| 81 | D2 | 2 | Total | Mg | 0 | 0 |
| | | | 2 | 2 | | |
| 81 | sM | 1 | Total | Mg | 0 | 0 |
| | | | 1 | 1 | | |
| 81 | l3 | 4 | Total | Mg | 0 | 0 |
| | | | 4 | 4 | | |
| 81 | o5 | 1 | Total | Mg | 0 | 0 |
| | | | 1 | 1 | | |
| 81 | C8 | 1 | Total | Mg | 0 | 0 |
| | | | 1 | 1 | | |
| 81 | n0 | 2 | Total | Mg | 0 | 0 |
| | | | 2 | 2 | | |
| 81 | 2 | 111 | Total | Mg | 0 | 0 |
| | | | 111 | 111 | | |
| 81 | l7 | 2 | Total | Mg | 0 | 0 |
| | | | 2 | 2 | | |
| 81 | M5 | 1 | Total | Mg | 0 | 0 |
| | | | 1 | 1 | | |
| 81 | C4 | 2 | Total | Mg | 0 | 0 |
| | | | 2 | 2 | | |
| 81 | L8 | 1 | Total | Mg | 0 | 0 |
| | | | 1 | 1 | | |
| 81 | n5 | 1 | Total | Mg | 0 | 0 |
| | | | 1 | 1 | | |
| 81 | O3 | 2 | Total | Mg | 0 | 0 |
| | | | 2 | 2 | | |

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| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|---------------------|---------|---------|
| 81 | SM | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | C0 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | M0 | 2 | Total Mg 2 2 | 0 | 0 |
| 81 | N2 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | 5 | 443 | Total Mg 443 443 | 1 | 0 |
| 81 | L5 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | O7 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | Q2 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | M4 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | 1 | 407 | Total Mg 407 407 | 0 | 0 |
| 81 | n4 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | S1 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | N7 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | d3 | 2 | Total Mg 2 2 | 0 | 0 |
| 81 | S8 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | O2 | 3 | Total Mg 3 3 | 0 | 0 |
| 81 | D9 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | o3 | 3 | Total Mg 3 3 | 0 | 0 |
| 81 | O9 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | N8 | 2 | Total Mg 2 2 | 0 | 0 |
| 81 | 4 | 25 | Total Mg 25 25 | 1 | 0 |

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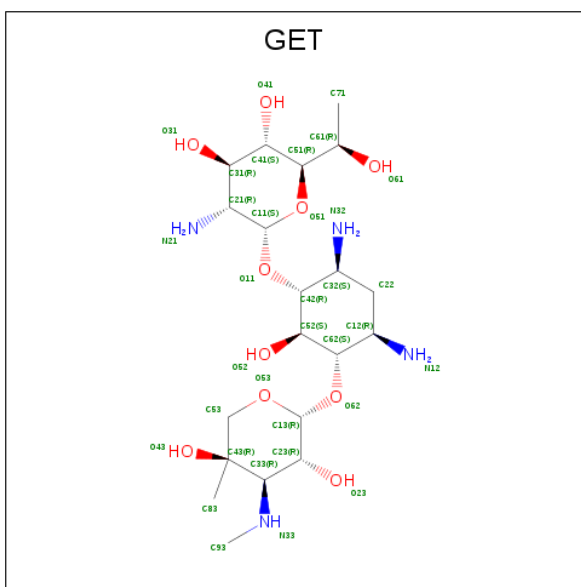
| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|-------------------|---------|---------|
| 81 | L2 | 3 | Total Mg 3 3 | 0 | 0 |
| 81 | O6 | 2 | Total Mg 2 2 | 0 | 0 |
| 81 | o7 | 5 | Total Mg 5 5 | 0 | 0 |
| 81 | m7 | 5 | Total Mg 5 5 | 0 | 0 |
| 81 | M7 | 6 | Total Mg 6 6 | 0 | 0 |
| 81 | q2 | 4 | Total Mg 4 4 | 0 | 0 |
| 81 | L6 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | n7 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | l9 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | s8 | 2 | Total Mg 2 2 | 0 | 0 |
| 81 | o2 | 2 | Total Mg 2 2 | 0 | 0 |
| 81 | O8 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | l4 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | 7 | 8 | Total Mg 8 8 | 0 | 0 |
| 81 | n3 | 2 | Total Mg 2 2 | 0 | 0 |
| 81 | L3 | 2 | Total Mg 2 2 | 0 | 0 |
| 81 | O5 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | l2 | 4 | Total Mg 4 4 | 0 | 0 |
| 81 | 8 | 14 | Total Mg 14 14 | 0 | 0 |
| 81 | m0 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | M6 | 1 | Total Mg 1 1 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|-----------------|---------|---------|
| 81 | c3 | 1 | Total Mg 1 1 | 0 | 0 |
| 81 | 3 | 9 | Total Mg 9 9 | 0 | 0 |

- Molecule 82 is GENETICIN (three-letter code: GET) (formula: C₂₀H₄₀N₄O₁₀).



| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|---------------------------|---------|---------|
| 82 | 2 | 1 | Total C N O 34 20 4 10 | 0 | 0 |
| 82 | 2 | 1 | Total C N O 34 20 4 10 | 0 | 0 |
| 82 | 2 | 1 | Total C N O 34 20 4 10 | 0 | 0 |
| 82 | 1 | 1 | Total C N O 34 20 4 10 | 0 | 0 |
| 82 | 1 | 1 | Total C N O 34 20 4 10 | 0 | 0 |
| 82 | 1 | 1 | Total C N O 34 20 4 10 | 0 | 0 |
| 82 | 1 | 1 | Total C N O 34 20 4 10 | 0 | 0 |
| 82 | 1 | 1 | Total C N O 34 20 4 10 | 0 | 0 |
| 82 | 1 | 1 | Total C N O 34 20 4 10 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf |
|-----|-------|----------|-------------|---------|--------|---------|---------|---------|
| | | | Total | C | N | O | | |
| 82 | 6 | 1 | Total 34 | C 20 | N 4 | O 10 | 0 | 0 |
| 82 | 6 | 1 | Total 34 | C 20 | N 4 | O 10 | 0 | 0 |
| 82 | 6 | 1 | Total 34 | C 20 | N 4 | O 10 | 0 | 0 |
| 82 | 5 | 1 | Total 34 | C 20 | N 4 | O 10 | 0 | 0 |
| 82 | 5 | 1 | Total 34 | C 20 | N 4 | O 10 | 0 | 0 |
| 82 | 5 | 1 | Total 34 | C 20 | N 4 | O 10 | 0 | 0 |
| 82 | 5 | 1 | Total 34 | C 20 | N 4 | O 10 | 0 | 0 |
| 82 | 5 | 1 | Total 34 | C 20 | N 4 | O 10 | 0 | 0 |
| 82 | 5 | 1 | Total 34 | C 20 | N 4 | O 10 | 0 | 0 |
| 82 | 5 | 1 | Total 34 | C 20 | N 4 | O 10 | 0 | 0 |
| 82 | 5 | 1 | Total 34 | C 20 | N 4 | O 10 | 0 | 0 |
| 82 | 5 | 1 | Total 34 | C 20 | N 4 | O 10 | 0 | 0 |
| 82 | n6 | 1 | Total 34 | C 20 | N 4 | O 10 | 0 | 0 |

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

| Mol | Chain | Residues | Atoms | | ZeroOcc | AltConf |
|-----|-------|----------|------------|---------|---------|---------|
| 83 | o4 | 1 | Total 1 | Zn 1 | 0 | 0 |
| 83 | D6 | 1 | Total 1 | Zn 1 | 0 | 0 |
| 83 | q3 | 1 | Total 1 | Zn 1 | 0 | 0 |
| 83 | q0 | 1 | Total 1 | Zn 1 | 0 | 0 |
| 83 | Q2 | 1 | Total 1 | Zn 1 | 0 | 0 |
| 83 | e1 | 1 | Total 1 | Zn 1 | 0 | 0 |
| 83 | Q3 | 1 | Total 1 | Zn 1 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|-----------------|---------|---------|
| 83 | D9 | 1 | Total Zn 1 1 | 0 | 0 |
| 83 | E1 | 1 | Total Zn 1 1 | 0 | 0 |
| 83 | Q0 | 1 | Total Zn 1 1 | 0 | 0 |
| 83 | d7 | 1 | Total Zn 1 1 | 0 | 0 |
| 83 | O4 | 1 | Total Zn 1 1 | 0 | 0 |
| 83 | d9 | 1 | Total Zn 1 1 | 0 | 0 |
| 83 | D7 | 1 | Total Zn 1 1 | 0 | 0 |
| 83 | d6 | 1 | Total Zn 1 1 | 0 | 0 |
| 83 | o7 | 1 | Total Zn 1 1 | 0 | 0 |
| 83 | O7 | 1 | Total Zn 1 1 | 0 | 0 |
| 83 | q2 | 1 | Total Zn 1 1 | 0 | 0 |

- Molecule 84 is water.

| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|------------------|---------|---------|
| 84 | 2 | 99 | Total O 99 99 | 0 | 0 |
| 84 | S4 | 1 | Total O 1 1 | 0 | 0 |
| 84 | C1 | 1 | Total O 1 1 | 0 | 0 |
| 84 | C3 | 1 | Total O 1 1 | 0 | 0 |
| 84 | C6 | 1 | Total O 1 1 | 0 | 0 |
| 84 | C9 | 2 | Total O 2 2 | 0 | 0 |
| 84 | D3 | 1 | Total O 1 1 | 0 | 0 |
| 84 | D9 | 1 | Total O 1 1 | 0 | 0 |

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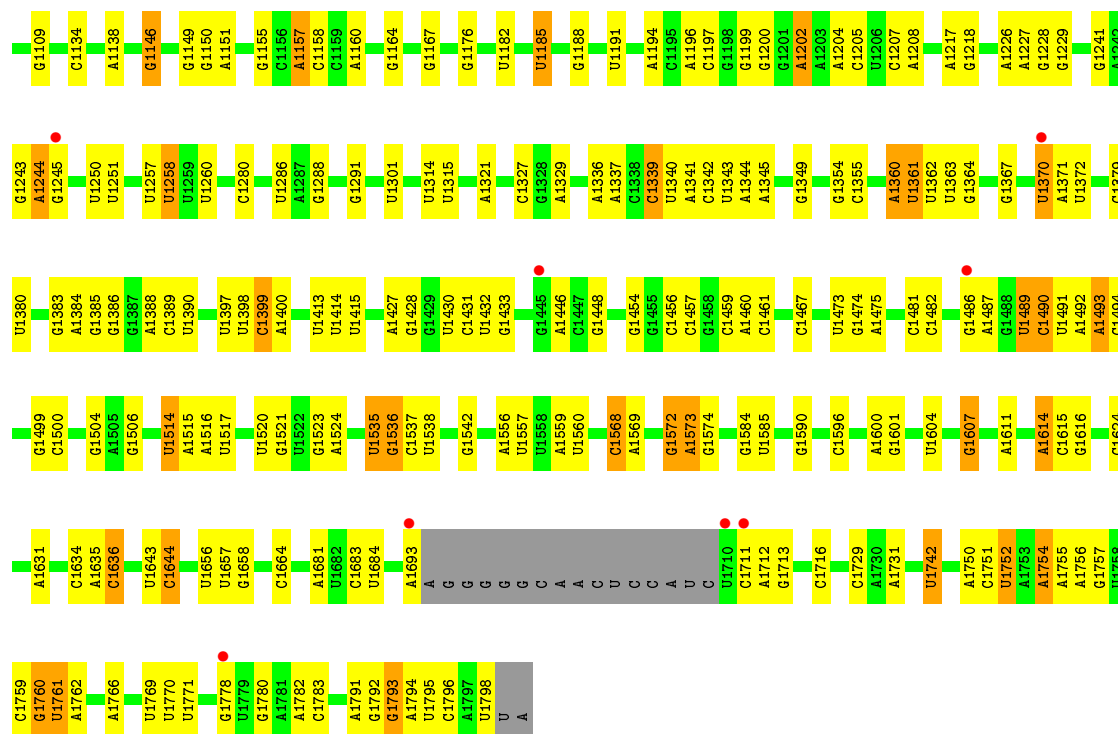
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| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|--------------------|---------|---------|
| 84 | SM | 1 | Total O 1 1 | 0 | 0 |
| 84 | 1 | 367 | Total O 367 367 | 2 | 0 |
| 84 | 3 | 18 | Total O 18 18 | 0 | 0 |
| 84 | 4 | 7 | Total O 7 7 | 0 | 0 |
| 84 | L2 | 1 | Total O 1 1 | 0 | 0 |
| 84 | L3 | 1 | Total O 1 1 | 0 | 0 |
| 84 | L4 | 1 | Total O 1 1 | 0 | 0 |
| 84 | M0 | 2 | Total O 2 2 | 0 | 0 |
| 84 | M5 | 1 | Total O 1 1 | 0 | 0 |
| 84 | M6 | 2 | Total O 2 2 | 0 | 0 |
| 84 | M7 | 4 | Total O 4 4 | 0 | 0 |
| 84 | N1 | 3 | Total O 3 3 | 0 | 0 |
| 84 | N3 | 3 | Total O 3 3 | 0 | 0 |
| 84 | N5 | 1 | Total O 1 1 | 0 | 0 |
| 84 | N8 | 1 | Total O 1 1 | 0 | 0 |
| 84 | O1 | 2 | Total O 2 2 | 0 | 0 |
| 84 | O2 | 2 | Total O 2 2 | 0 | 0 |
| 84 | 6 | 111 | Total O 111 111 | 0 | 0 |
| 84 | c3 | 1 | Total O 1 1 | 0 | 0 |
| 84 | c8 | 1 | Total O 1 1 | 0 | 0 |
| 84 | c9 | 2 | Total O 2 2 | 0 | 0 |

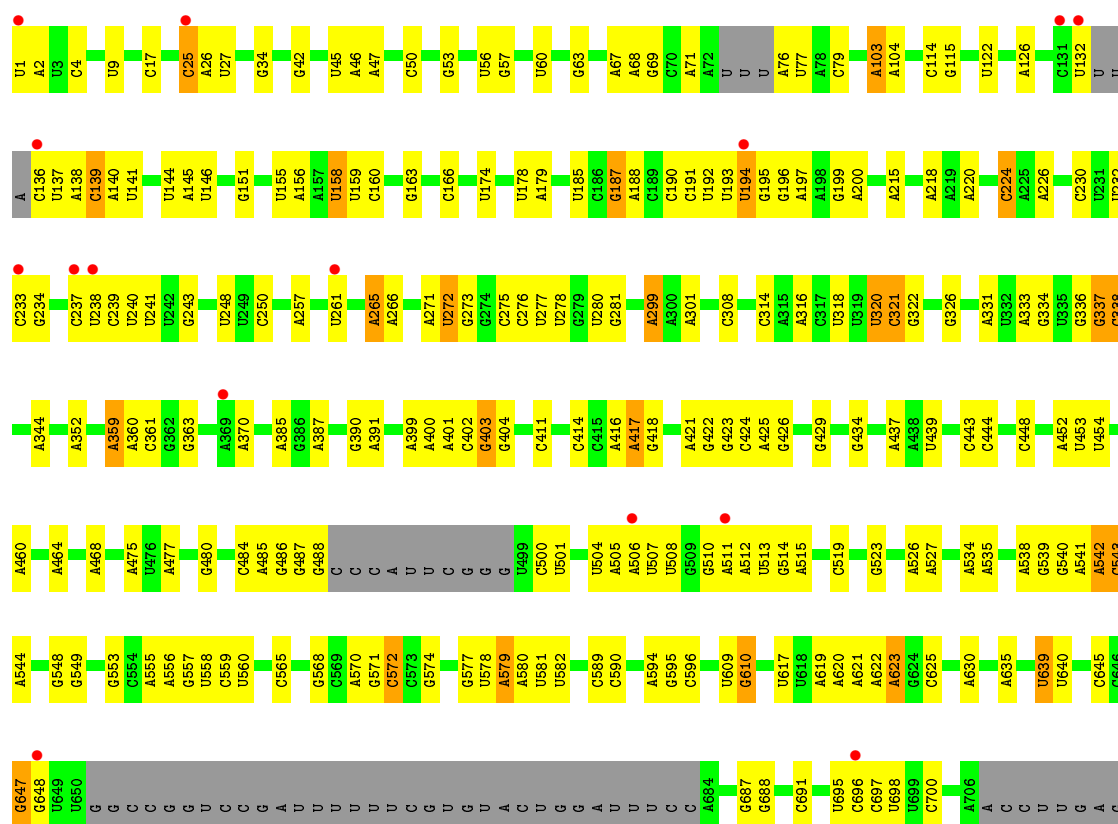
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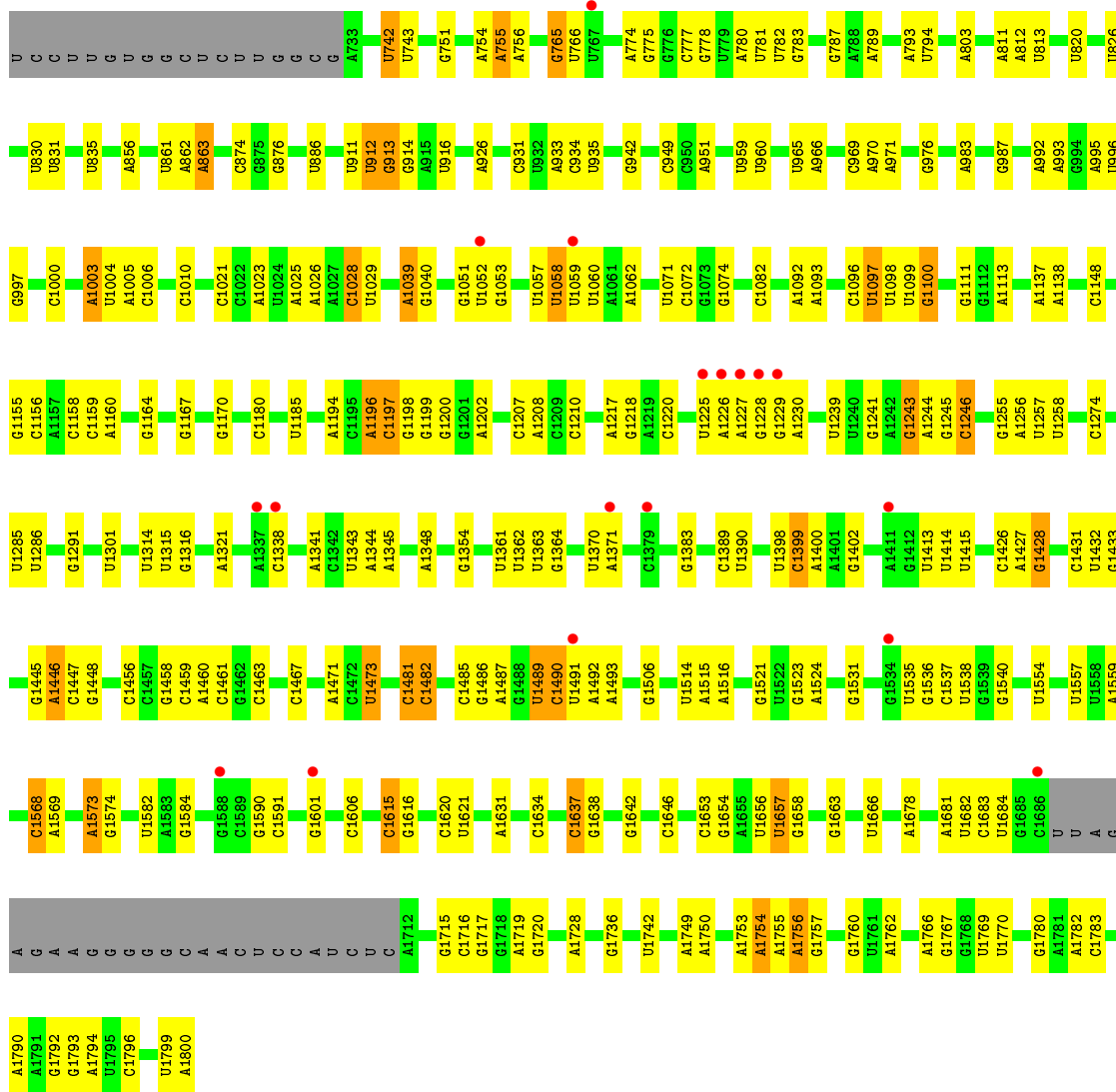
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| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|--------------------|---------|---------|
| 84 | d3 | 2 | Total O 2 2 | 0 | 0 |
| 84 | 5 | 365 | Total O 365 365 | 1 | 0 |
| 84 | 7 | 11 | Total O 11 11 | 0 | 0 |
| 84 | 8 | 7 | Total O 7 7 | 0 | 0 |
| 84 | 12 | 1 | Total O 1 1 | 0 | 0 |
| 84 | l3 | 4 | Total O 4 4 | 0 | 0 |
| 84 | 14 | 2 | Total O 2 2 | 0 | 0 |
| 84 | 19 | 1 | Total O 1 1 | 0 | 0 |
| 84 | m0 | 1 | Total O 1 1 | 0 | 0 |
| 84 | m5 | 3 | Total O 3 3 | 0 | 0 |
| 84 | m6 | 1 | Total O 1 1 | 0 | 0 |
| 84 | m7 | 2 | Total O 2 2 | 0 | 0 |
| 84 | m9 | 2 | Total O 2 2 | 0 | 0 |
| 84 | n1 | 3 | Total O 3 3 | 0 | 0 |
| 84 | n3 | 3 | Total O 3 3 | 0 | 0 |
| 84 | o2 | 3 | Total O 3 3 | 0 | 0 |
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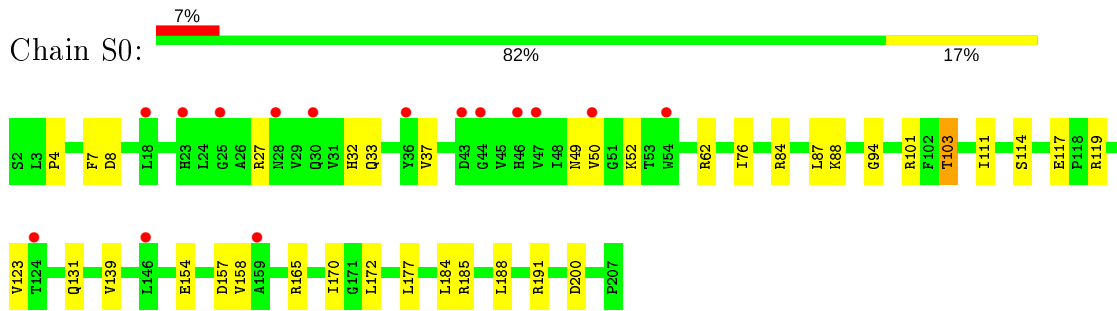


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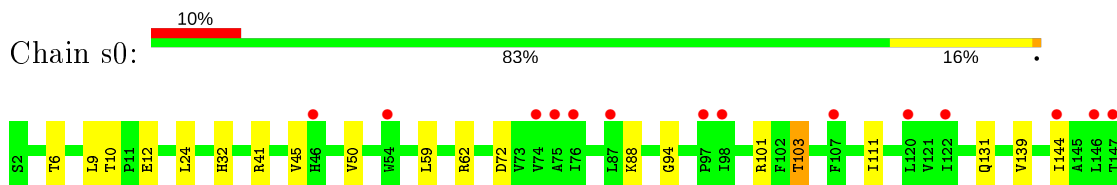


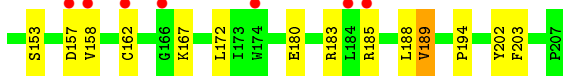


- Molecule 2: 40S ribosomal protein S0-A

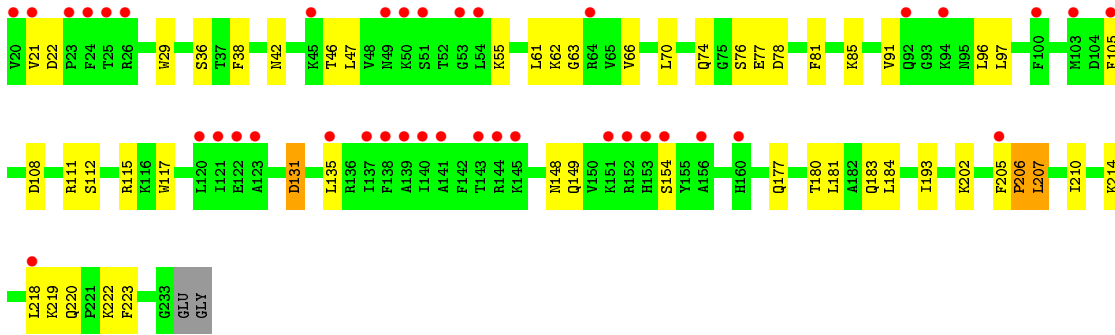
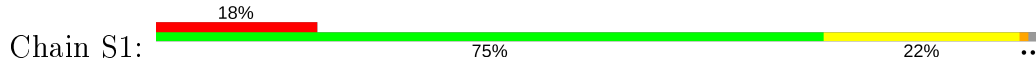


- Molecule 2: 40S ribosomal protein S0-A

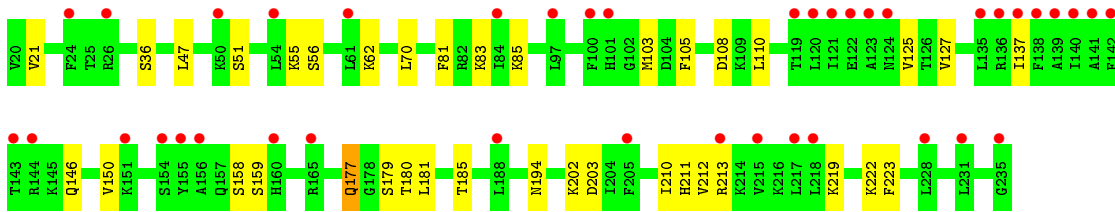
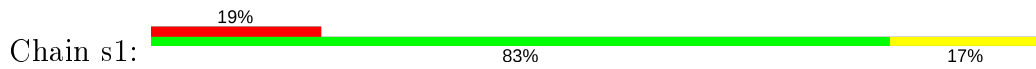




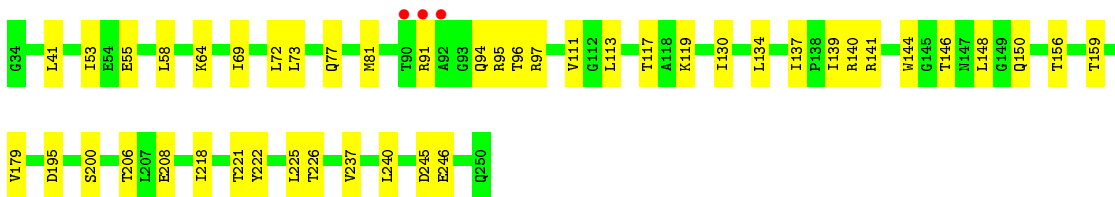
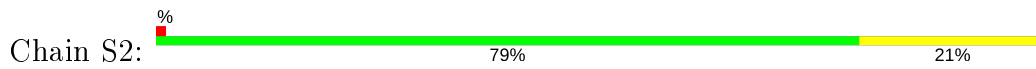
- Molecule 3: 40S ribosomal protein S1-A



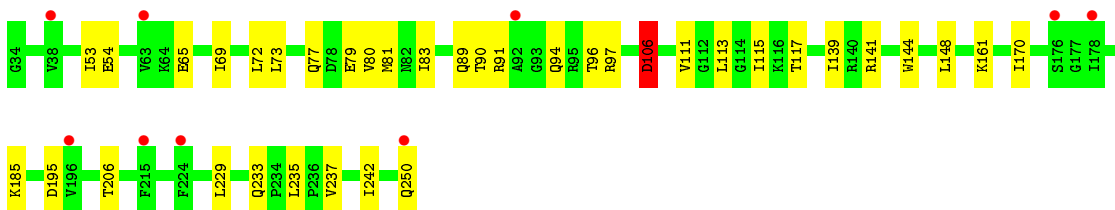
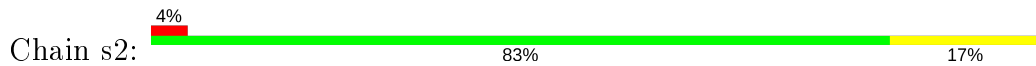
- Molecule 3: 40S ribosomal protein S1-A



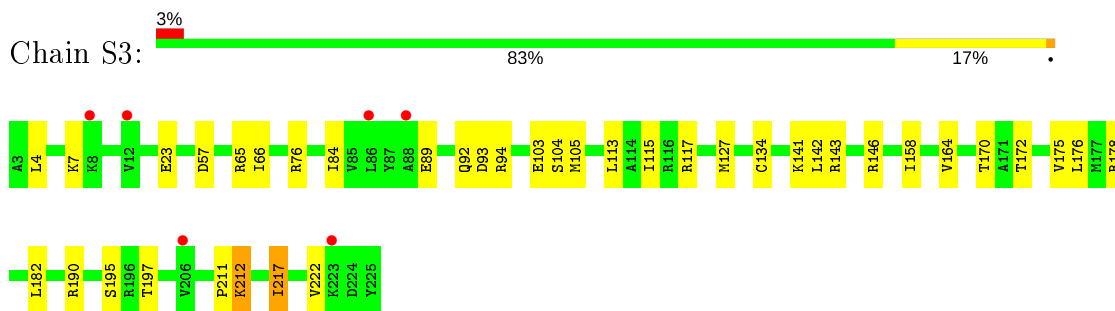
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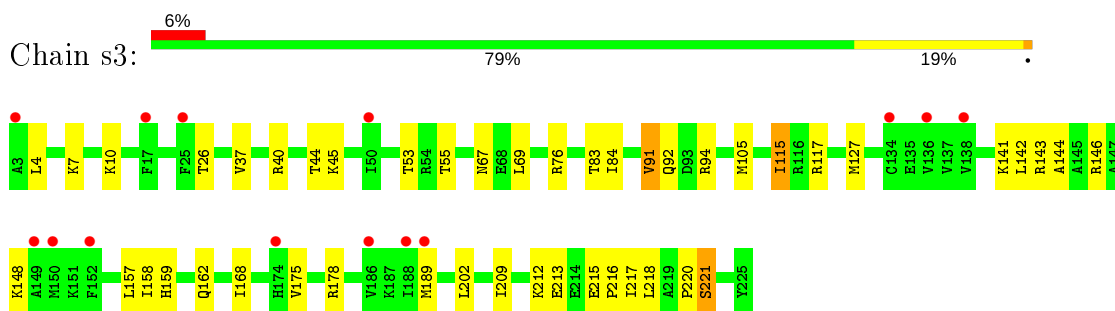
- Molecule 4: 40S ribosomal protein S2



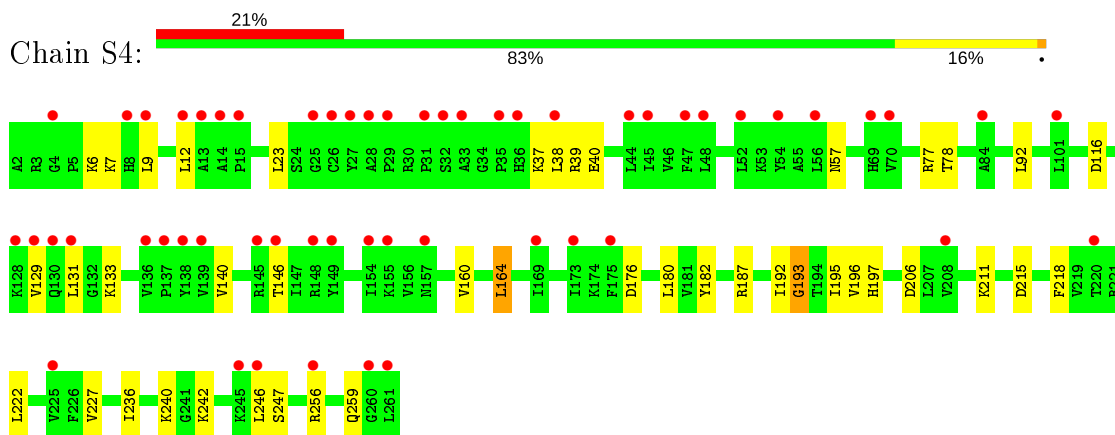
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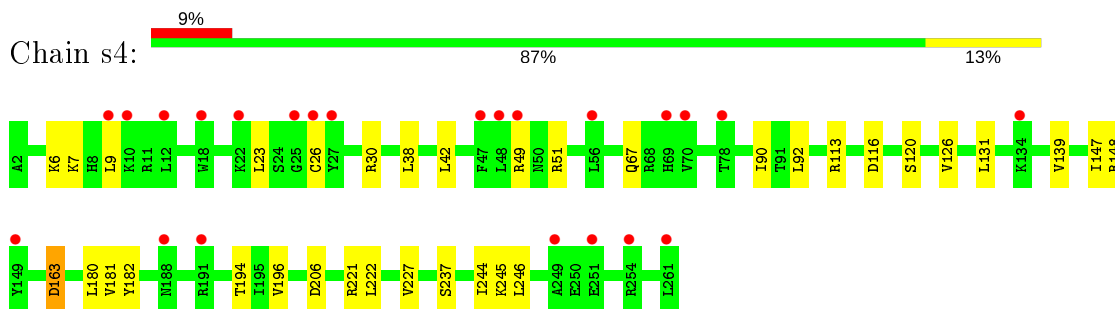
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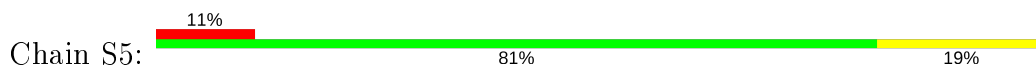
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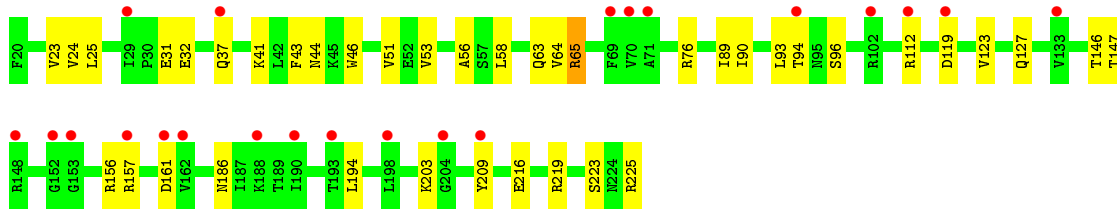


- Molecule 6: 40S ribosomal protein S4-A

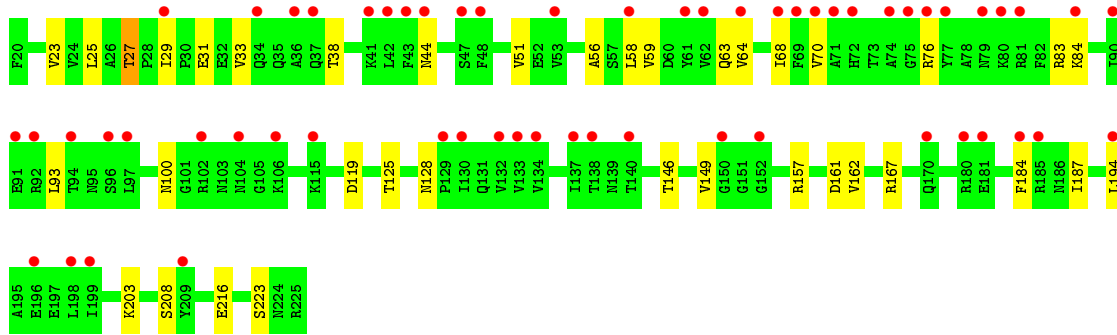
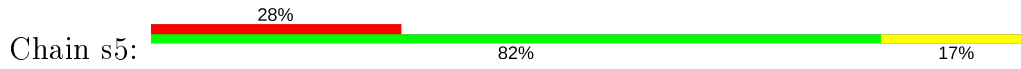


- Molecule 7: 40S ribosomal protein S5

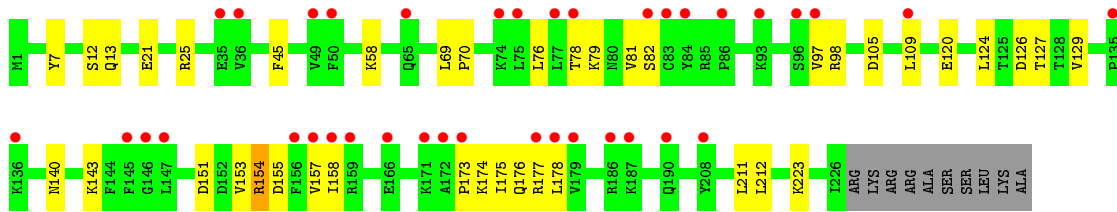
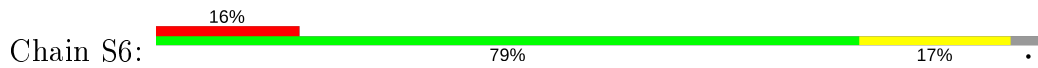




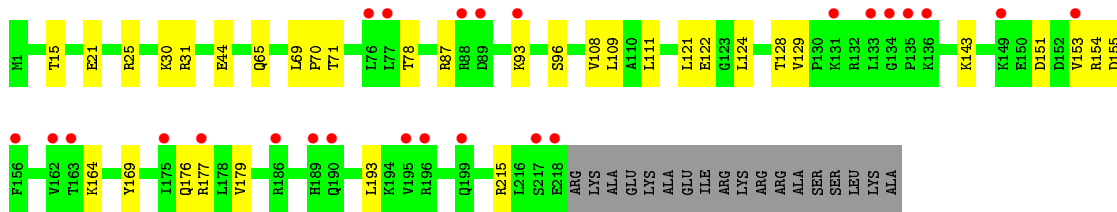
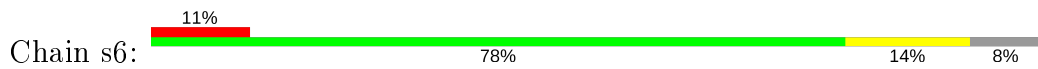
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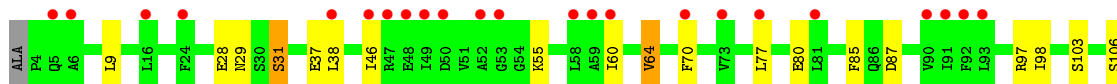
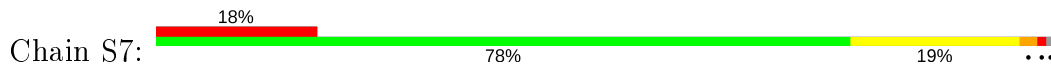
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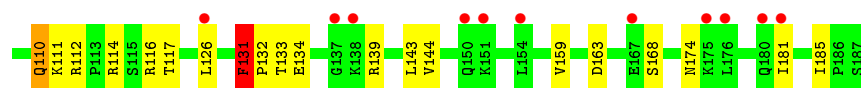


• Molecule 8: 40S ribosomal protein S6-A

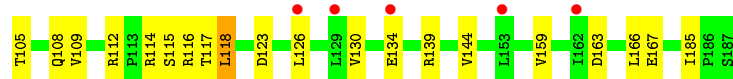
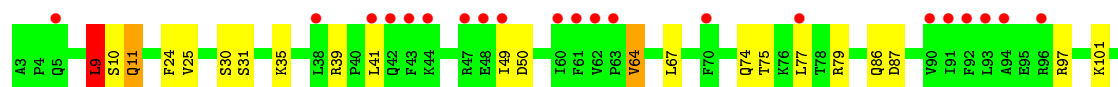
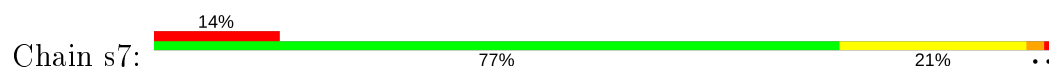


• Molecule 9: 40S ribosomal protein S7-A

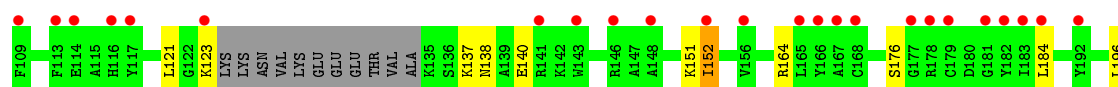
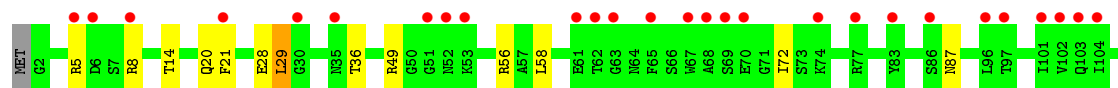
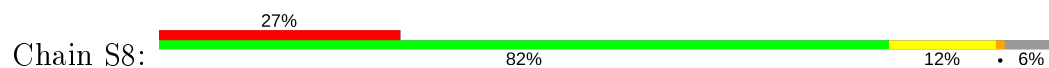




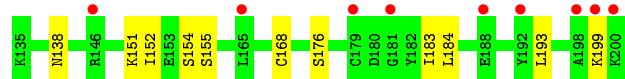
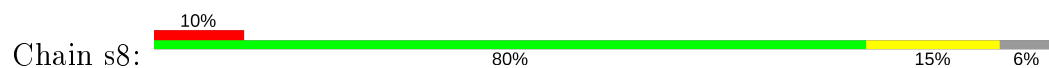
- Molecule 9: 40S ribosomal protein S7-A



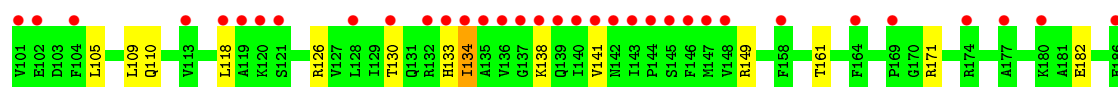
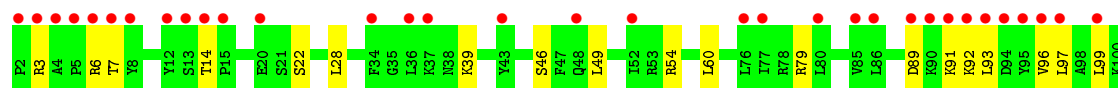
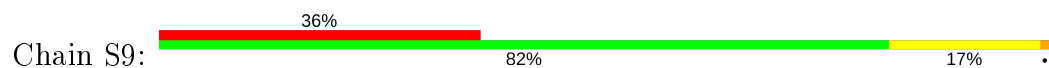
- Molecule 10: 40S ribosomal protein S8-A



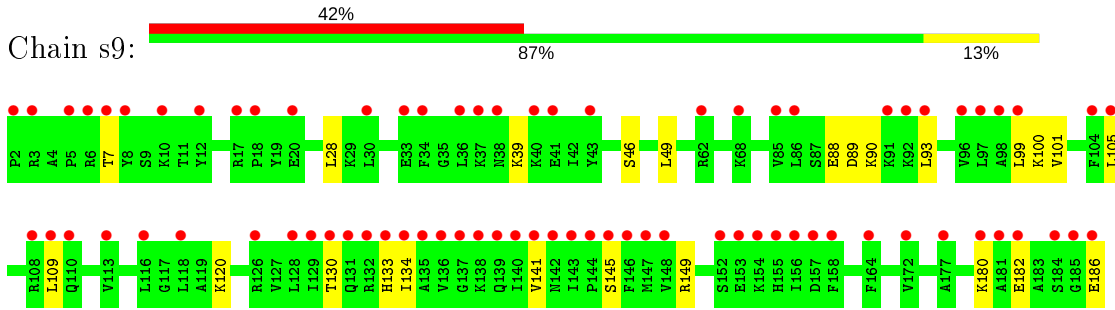
- Molecule 10: 40S ribosomal protein S8-A



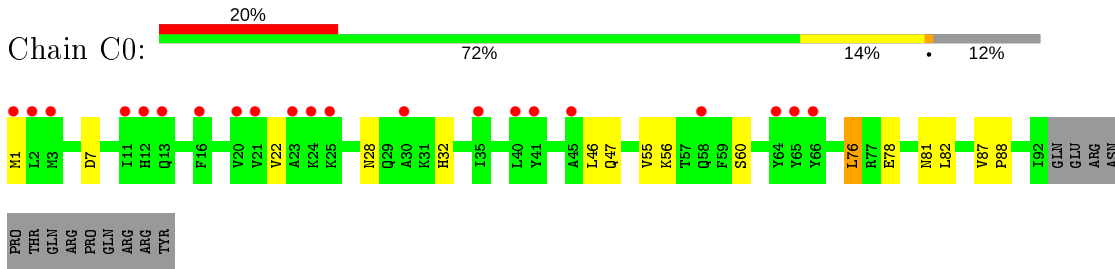
- Molecule 11: 40S ribosomal protein S9-A



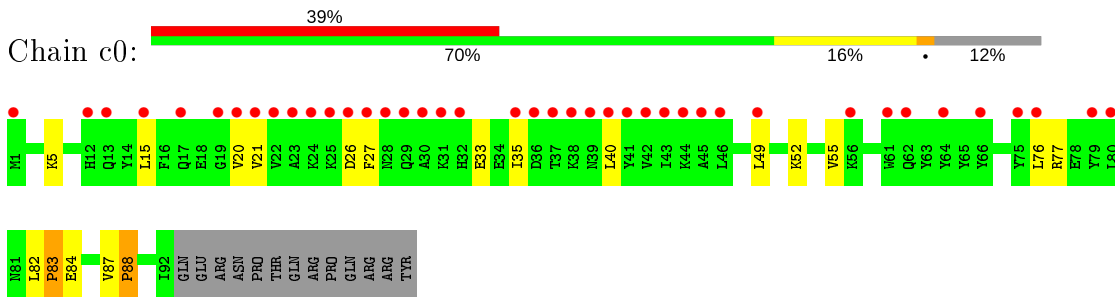
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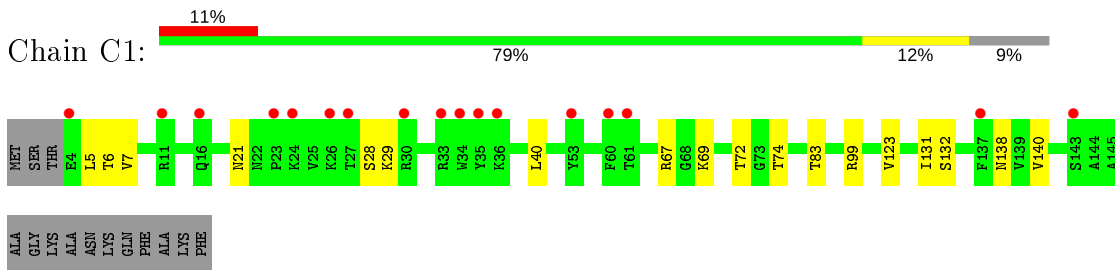
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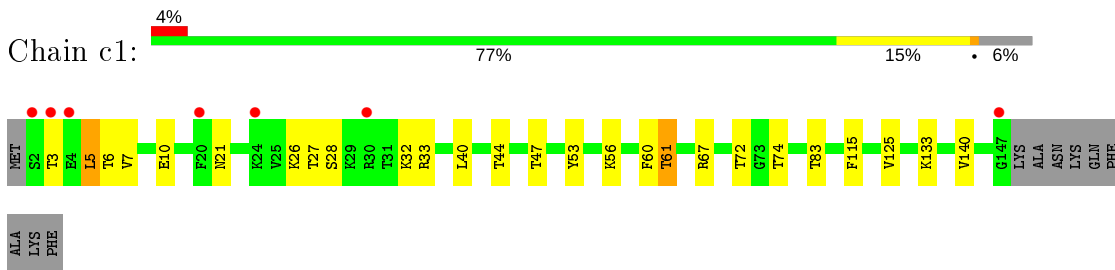
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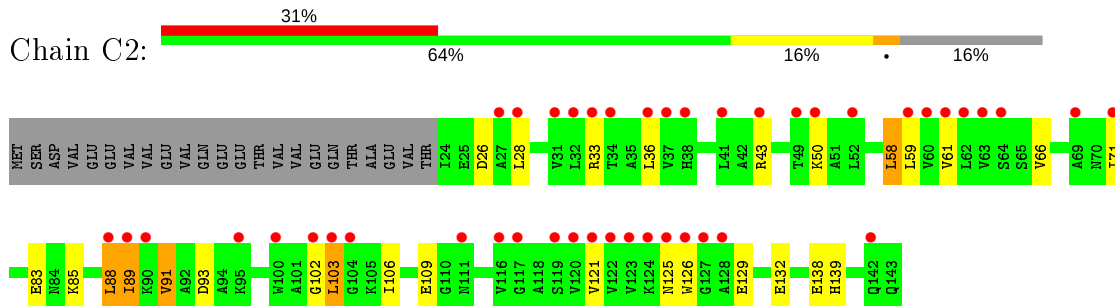
• Molecule 13: 40S ribosomal protein S11-A



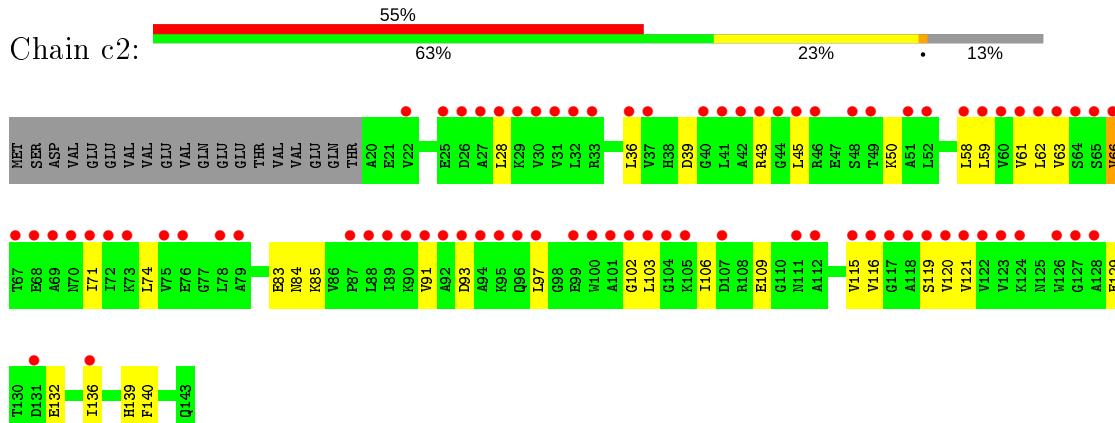
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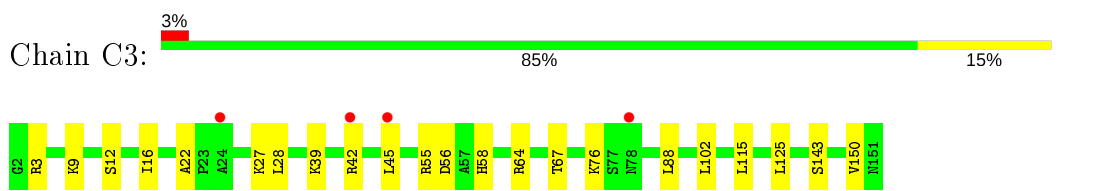
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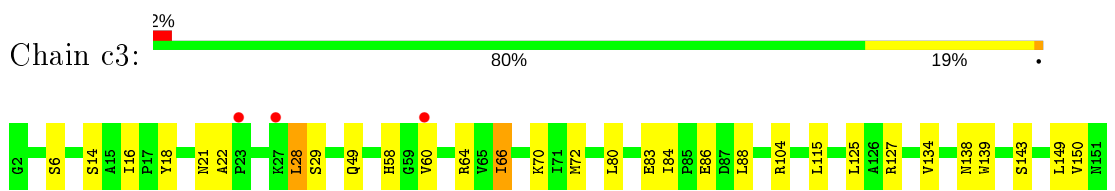
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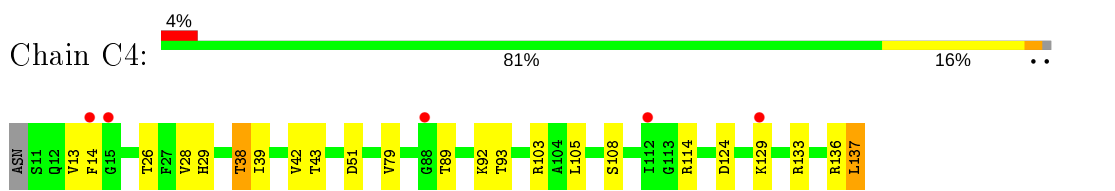
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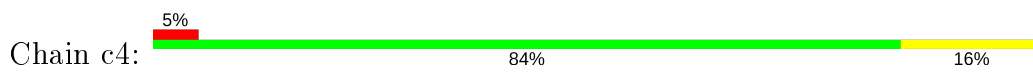
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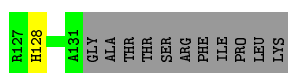
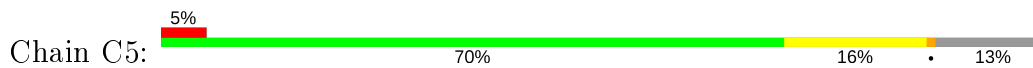
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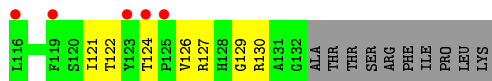
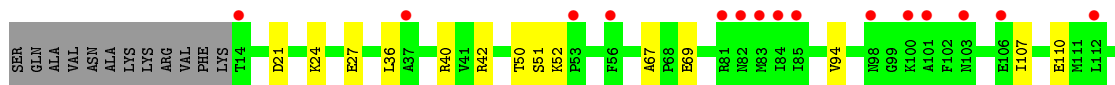
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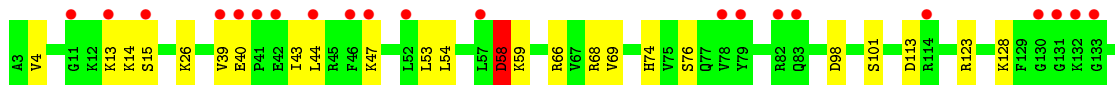
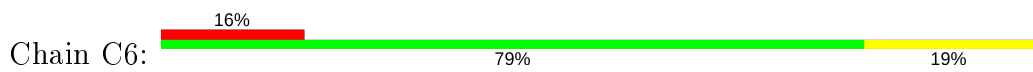
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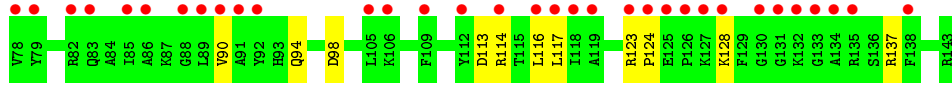
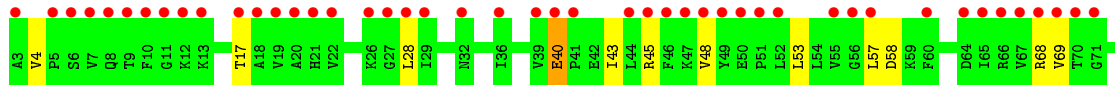
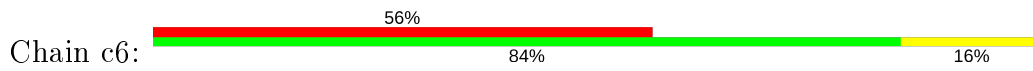
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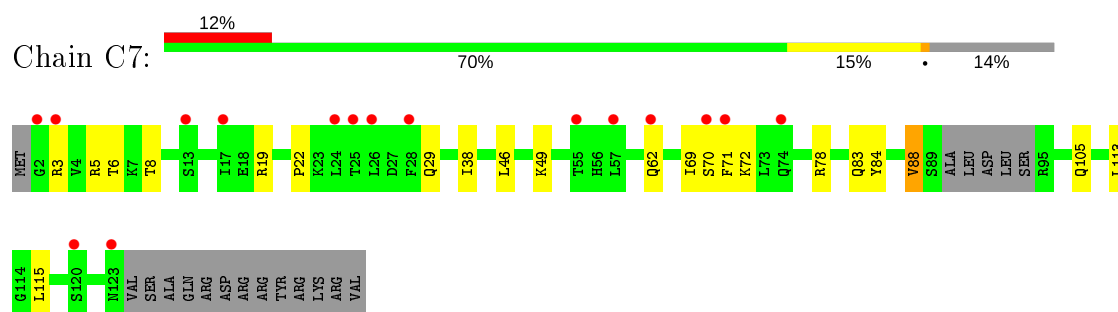
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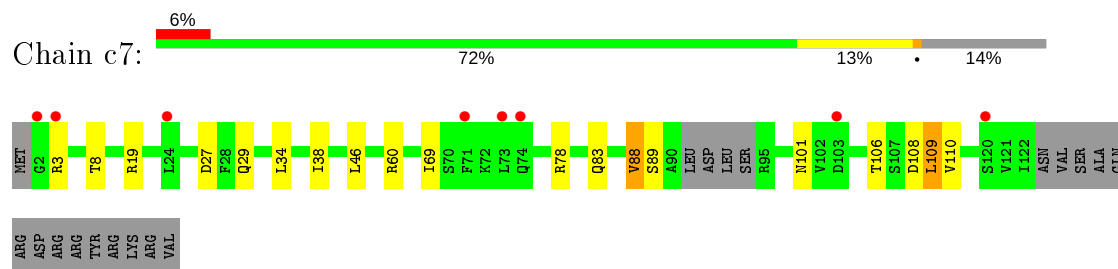
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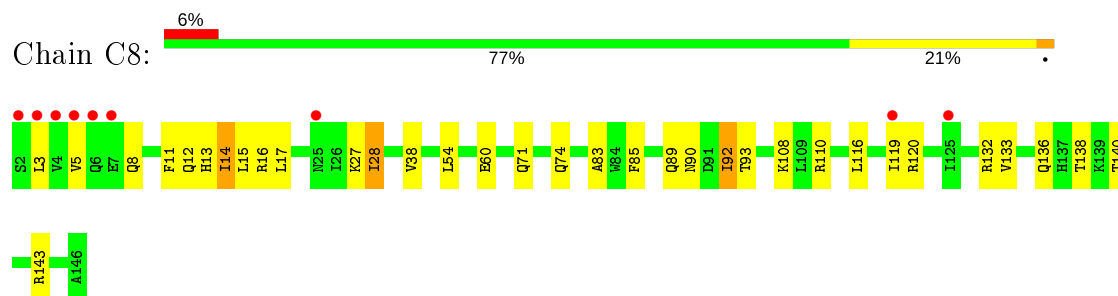
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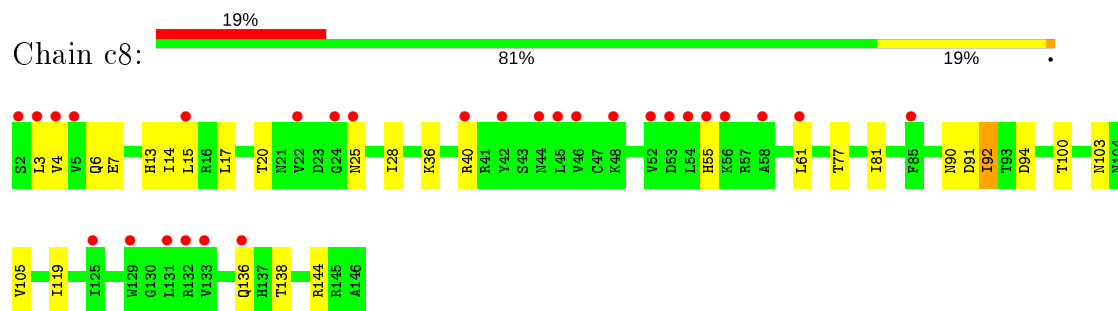
- Molecule 19: 40S ribosomal protein S17-A



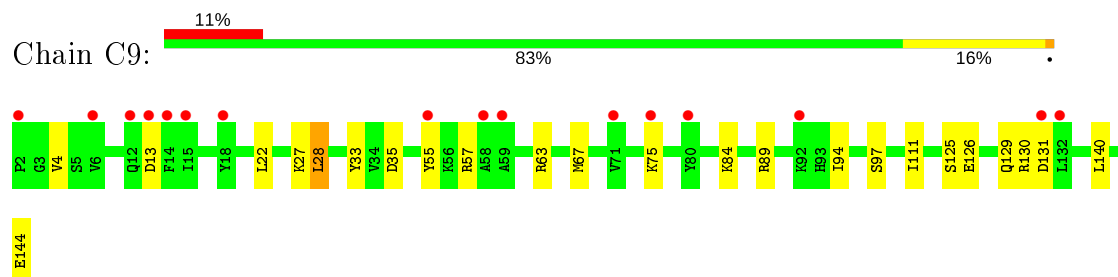
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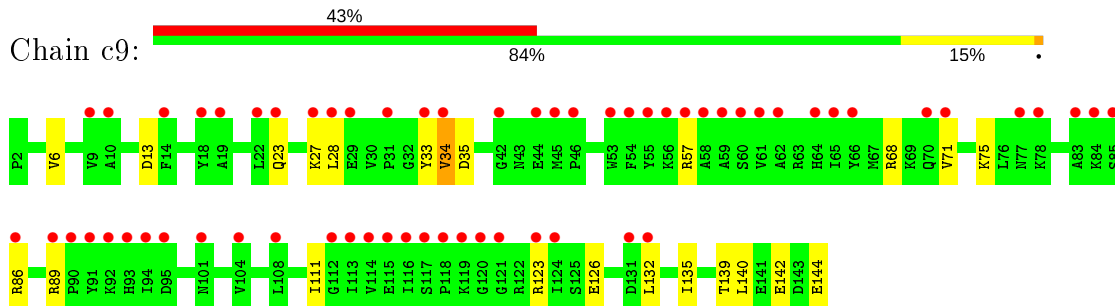
- Molecule 20: 40S ribosomal protein S18-A



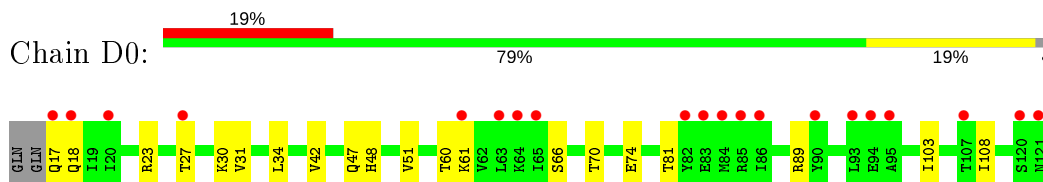
- Molecule 21: 40S ribosomal protein S19-A



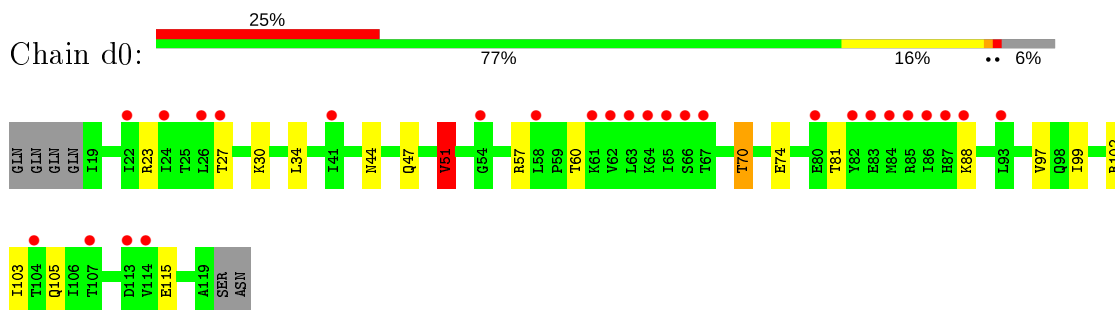
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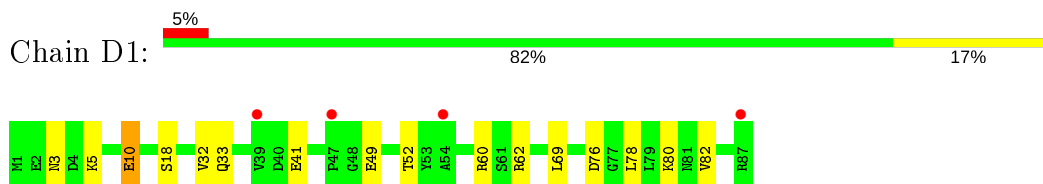
- Molecule 22: 40S ribosomal protein S20



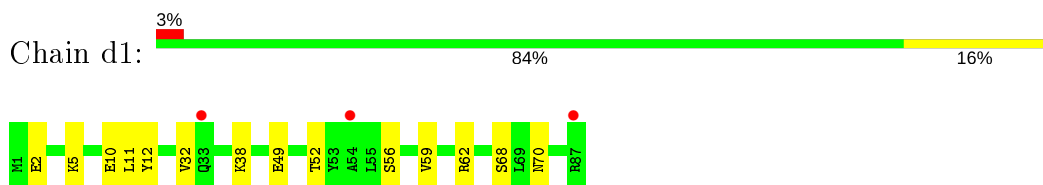
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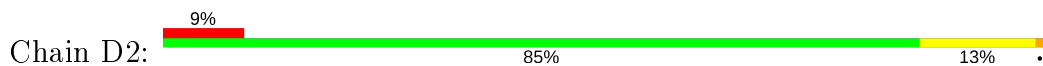
- Molecule 23: 40S ribosomal protein S21-A



- Molecule 23: 40S ribosomal protein S21-A

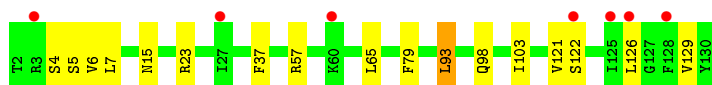
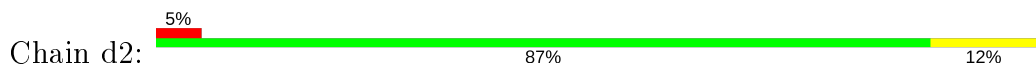


- Molecule 24: 40S ribosomal protein S22-A

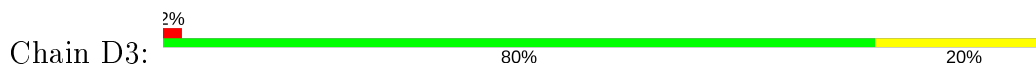




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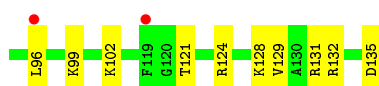
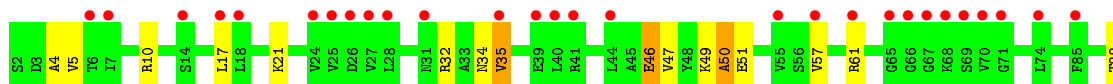
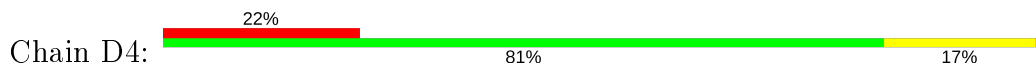
- Molecule 25: 40S ribosomal protein S23-A



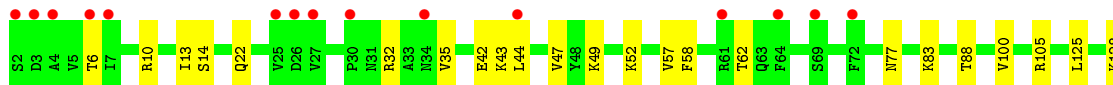
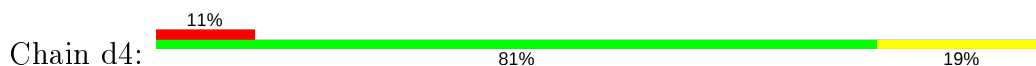
- Molecule 25: 40S ribosomal protein S23-A



- Molecule 26: 40S ribosomal protein S24-A

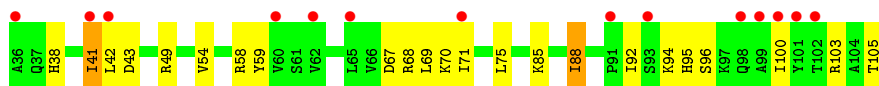


- Molecule 26: 40S ribosomal protein S24-A

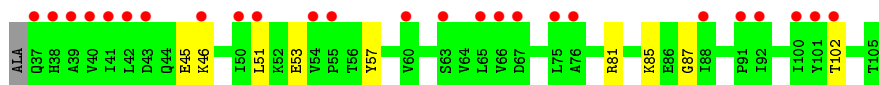
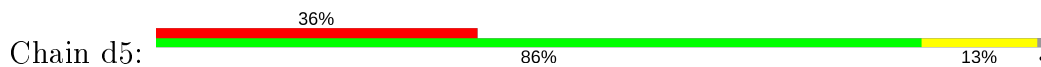


- Molecule 27: 40S ribosomal protein S25-A

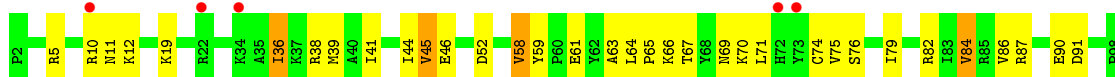




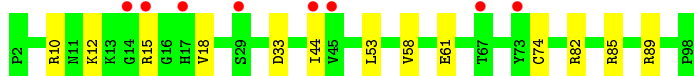
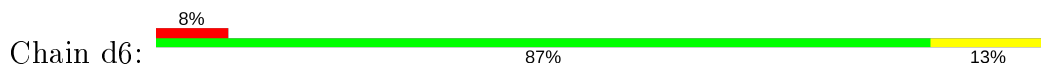
- Molecule 27: 40S ribosomal protein S25-A



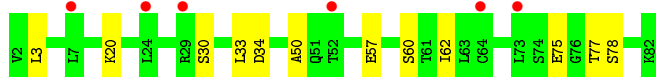
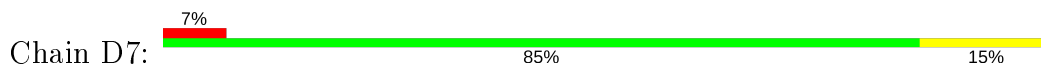
- Molecule 28: 40S ribosomal protein S26-B



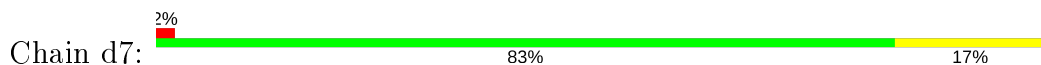
- Molecule 28: 40S ribosomal protein S26-B



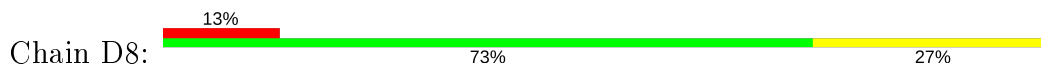
- Molecule 29: 40S ribosomal protein S27-A



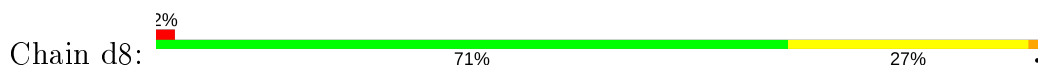
- Molecule 29: 40S ribosomal protein S27-A



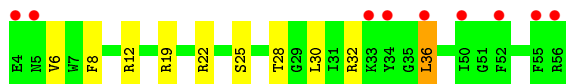
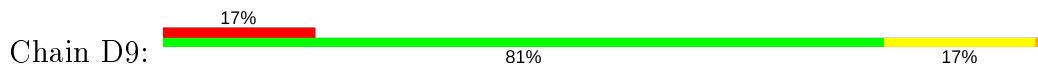
- Molecule 30: 40S ribosomal protein S28-A



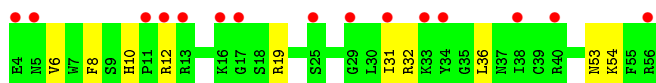
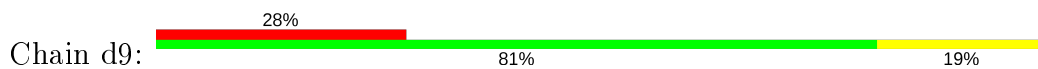
- Molecule 30: 40S ribosomal protein S28-A



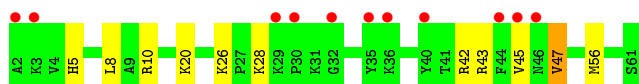
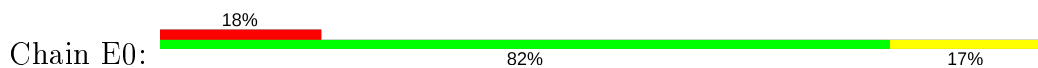
• Molecule 31: 40S ribosomal protein S29-A



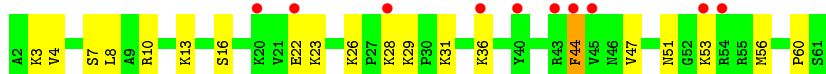
• Molecule 31: 40S ribosomal protein S29-A



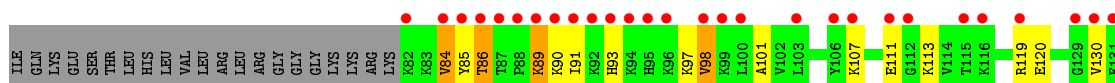
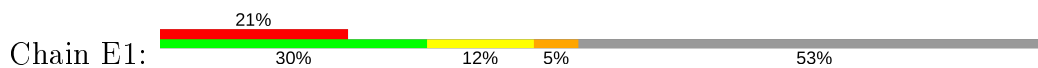
• Molecule 32: 40S ribosomal protein S30-A



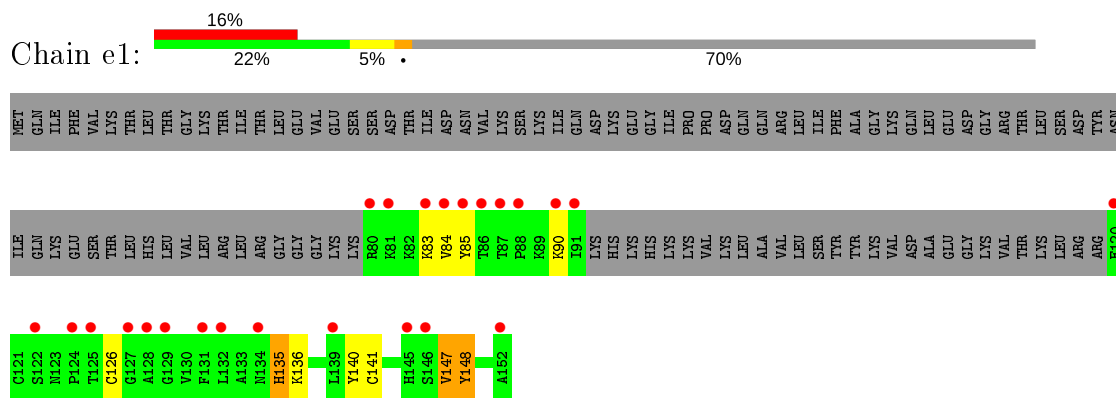
• Molecule 32: 40S ribosomal protein S30-A



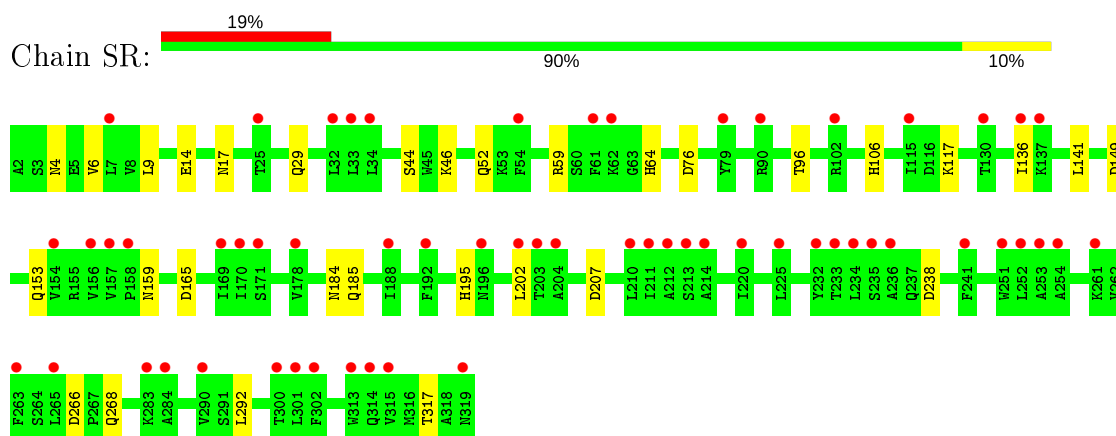
• Molecule 33: Ubiquitin-40S ribosomal protein S31



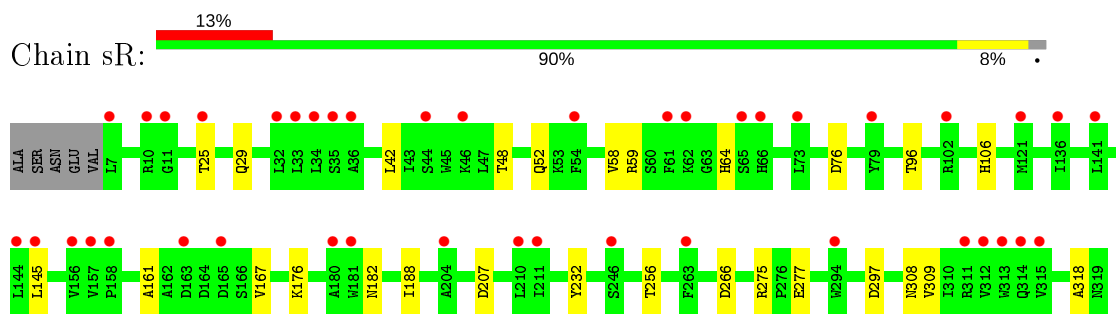
• Molecule 33: Ubiquitin-40S ribosomal protein S31



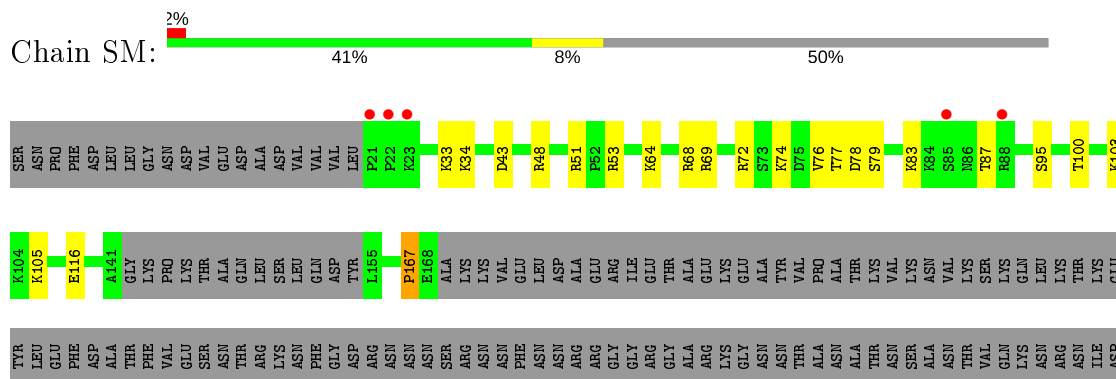
- Molecule 34: Guanine nucleotide-binding protein subunit beta-like protein



- Molecule 34: Guanine nucleotide-binding protein subunit beta-like protein

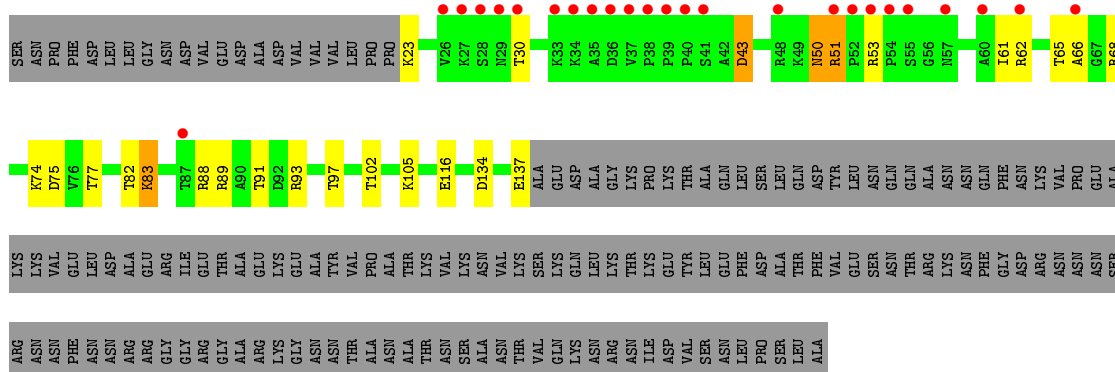
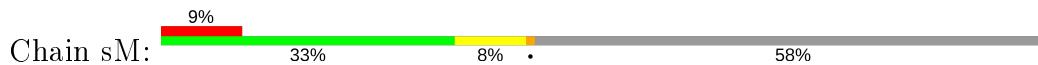


- Molecule 35: Suppressor protein STM1

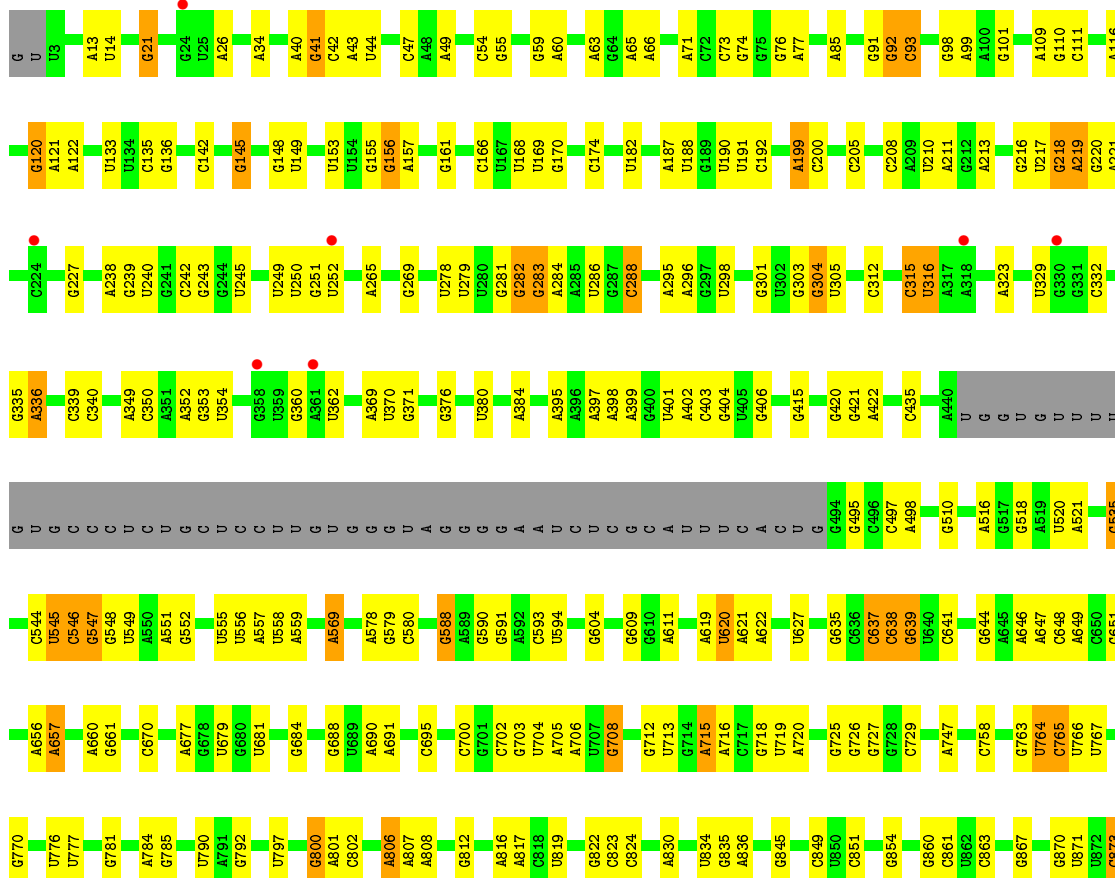


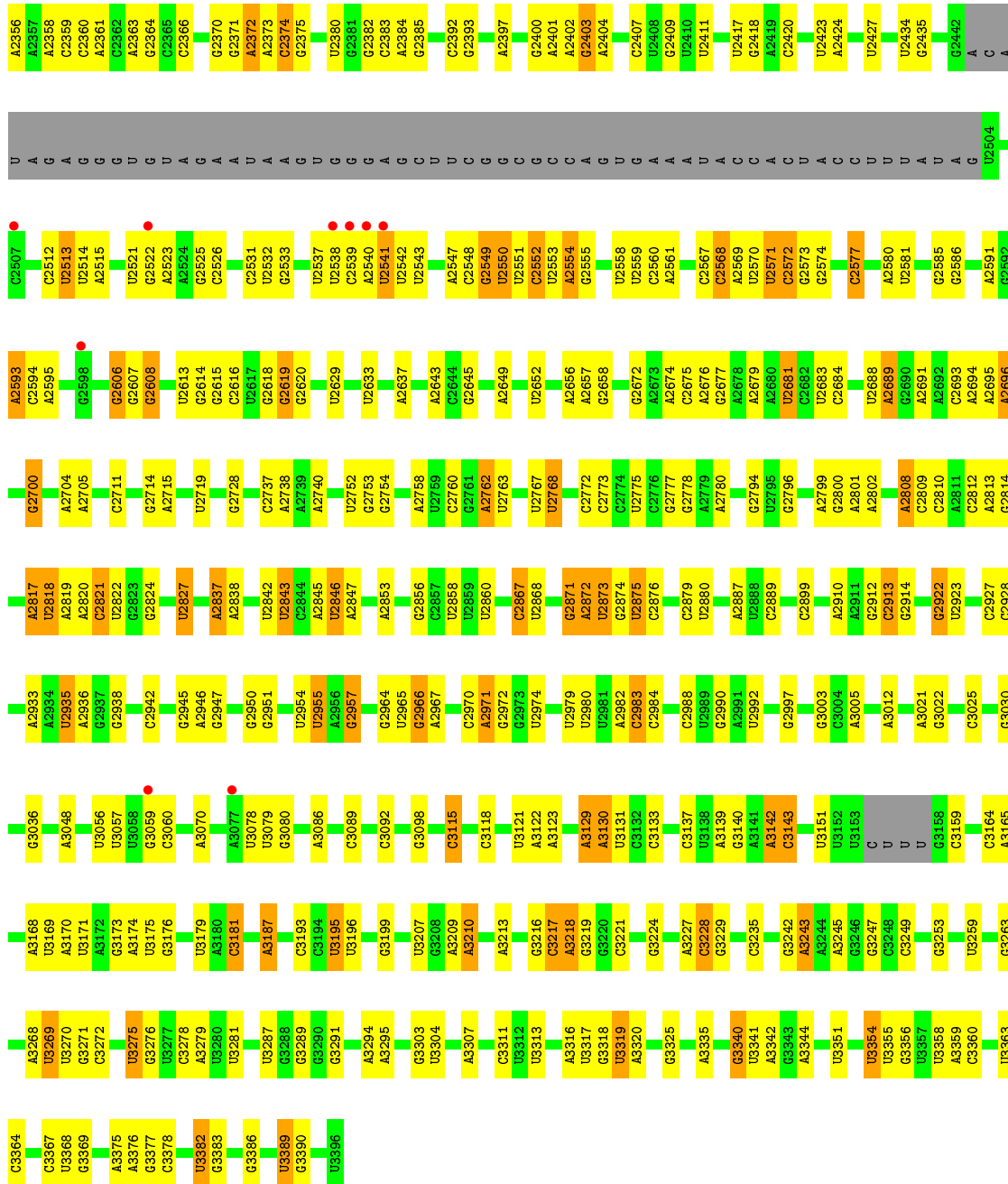
VAL
SER
ASN
LEU
PRO
SER
LEU
ALA

• Molecule 35: Suppressor protein STM1

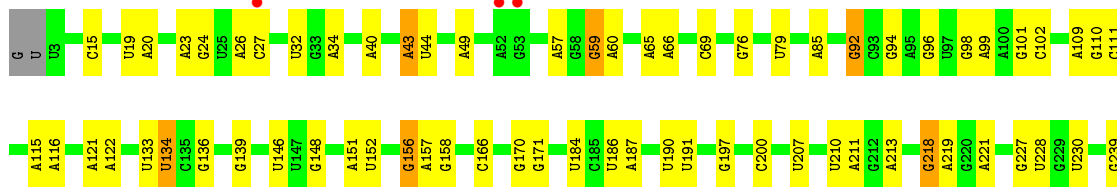


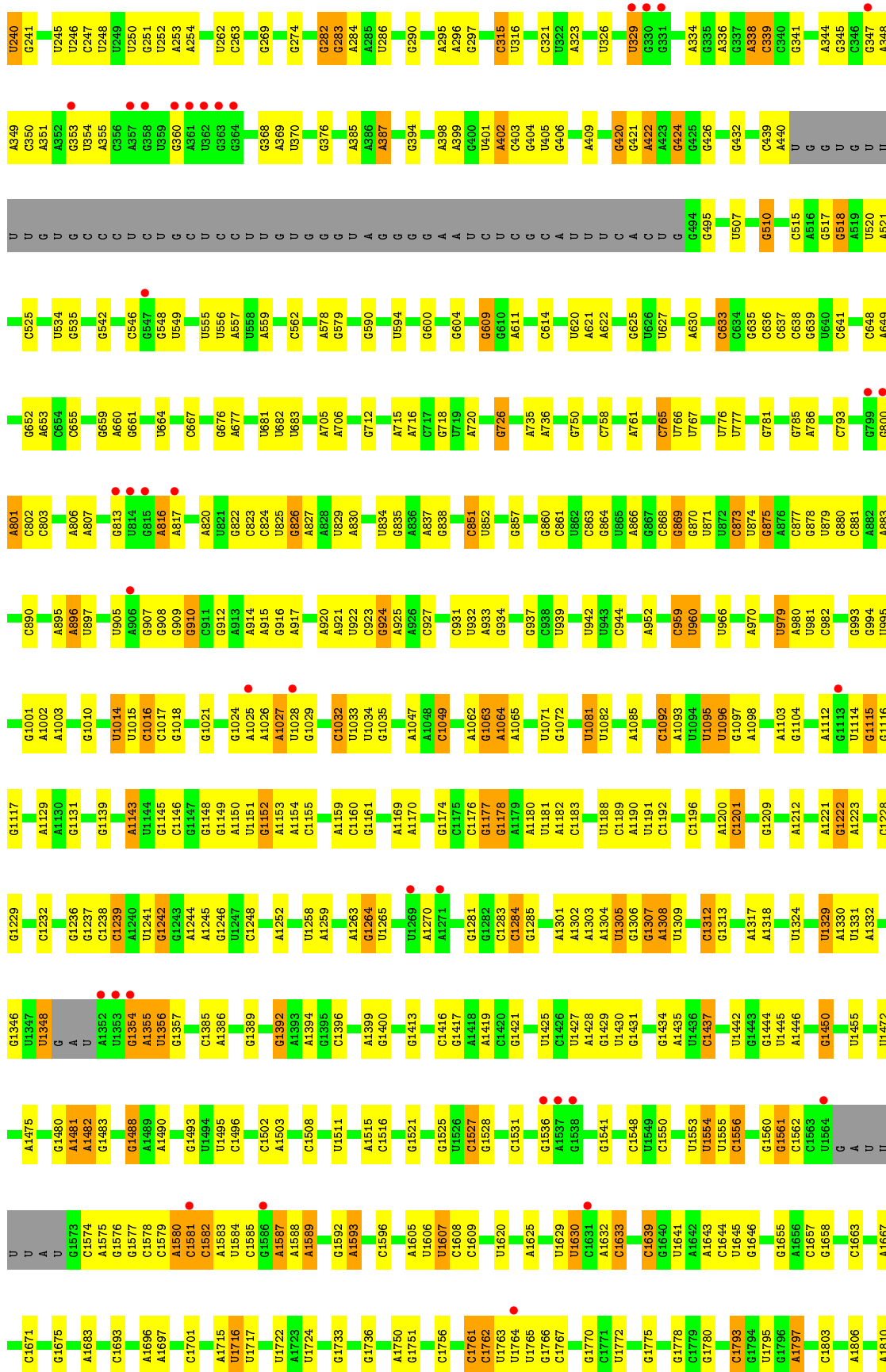
• Molecule 36: 25S ribosomal RNA





● Molecule 36: 25S ribosomal RNA



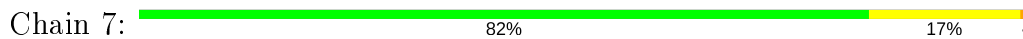




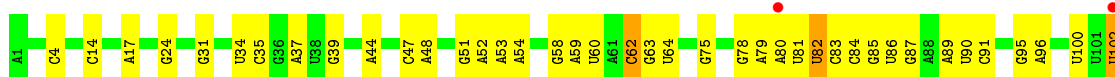
- Molecule 37: 5S ribosomal RNA



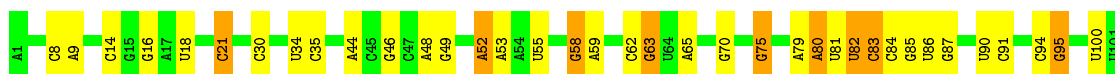
- Molecule 37: 5S ribosomal RNA



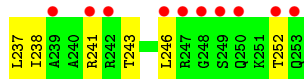
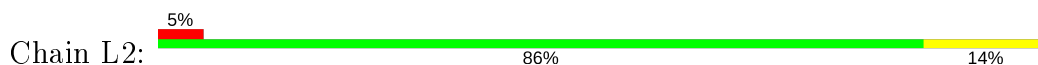
- Molecule 38: 5.8S ribosomal RNA



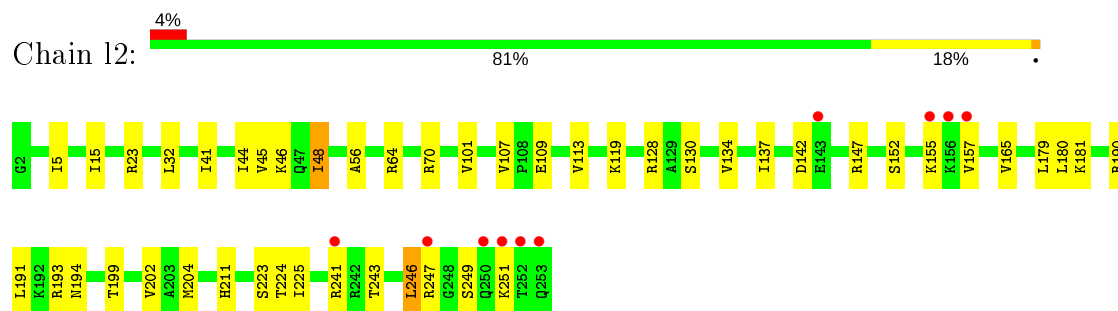
- Molecule 38: 5.8S ribosomal RNA



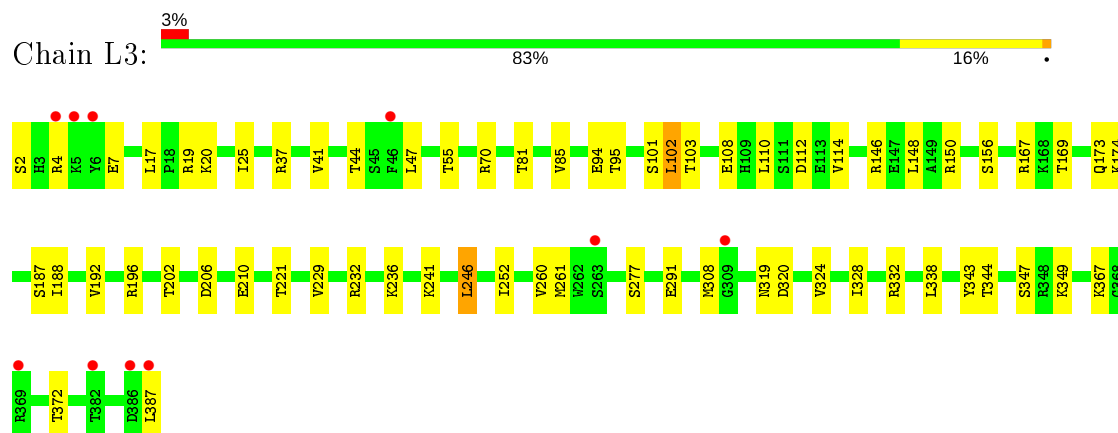
- Molecule 39: 60S ribosomal protein L2-A



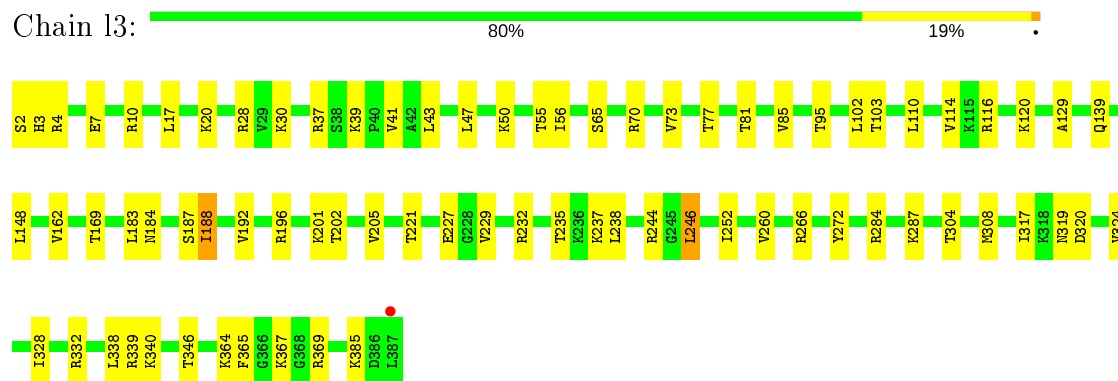
- Molecule 39: 60S ribosomal protein L2-A



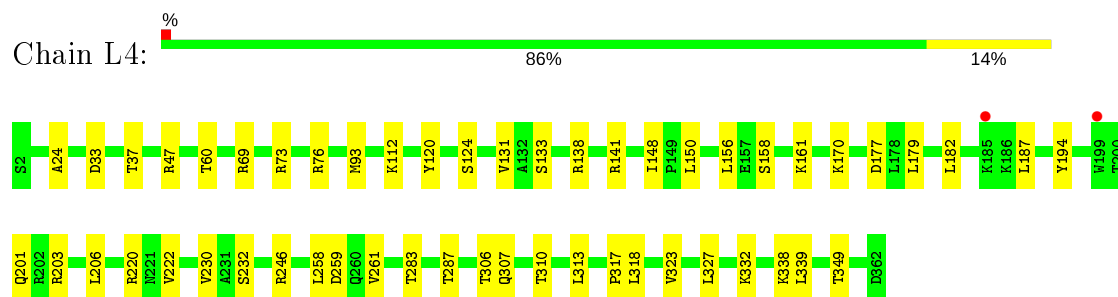
- Molecule 40: 60S ribosomal protein L3



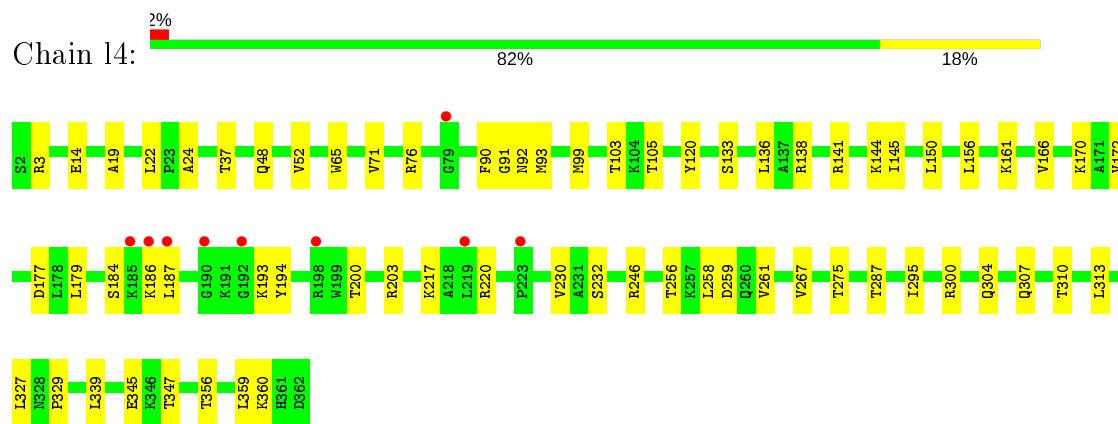
- Molecule 40: 60S ribosomal protein L3



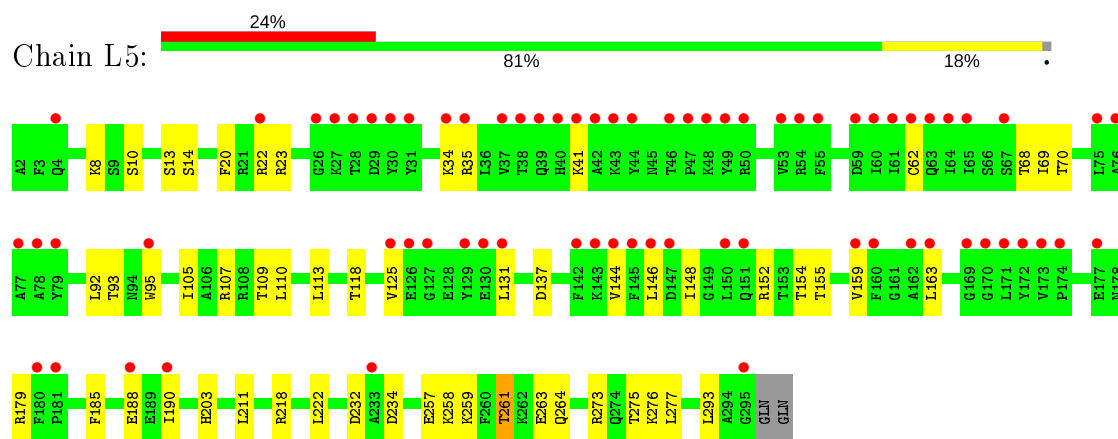
- Molecule 41: 60S ribosomal protein L4-A



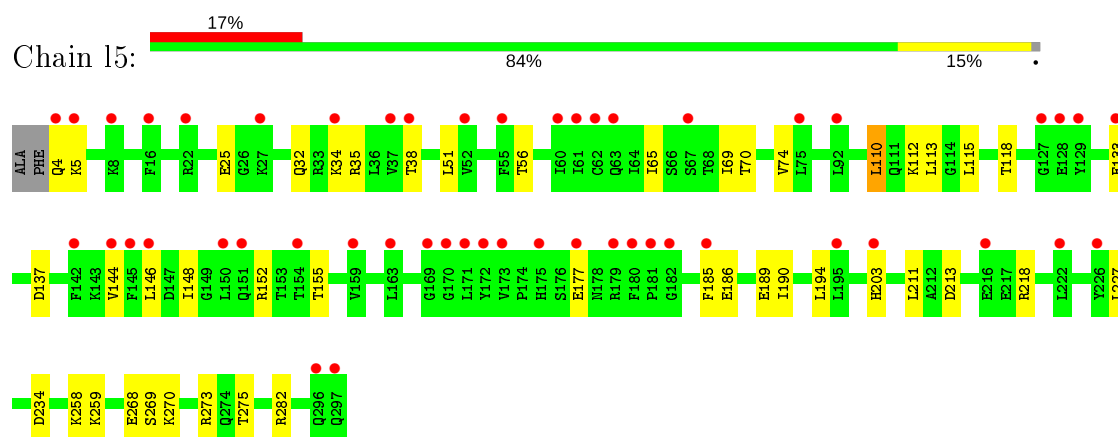
- Molecule 41: 60S ribosomal protein L4-A



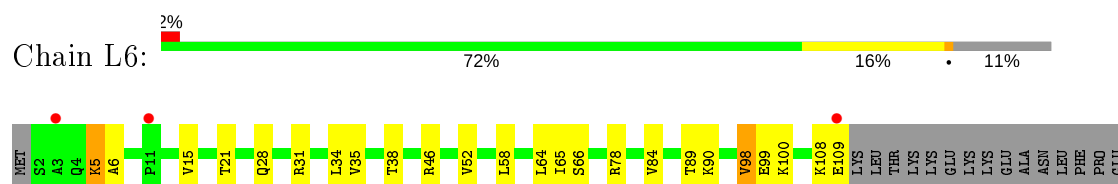
- Molecule 42: 60S ribosomal protein L5



- Molecule 42: 60S ribosomal protein L5

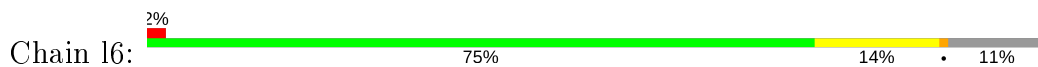


- Molecule 43: 60S ribosomal protein L6-A

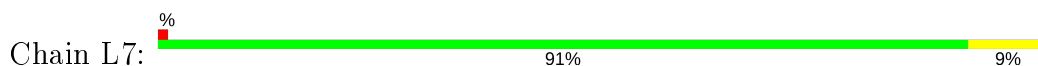




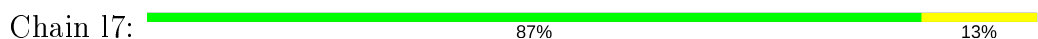
● Molecule 43: 60S ribosomal protein L6-A



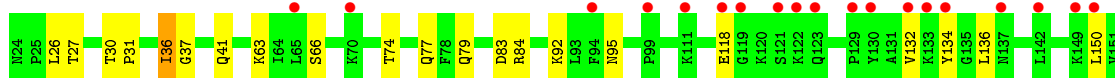
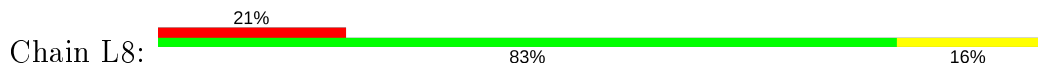
● Molecule 44: 60S ribosomal protein L7-A



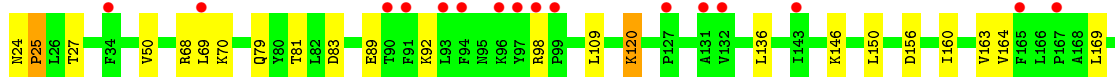
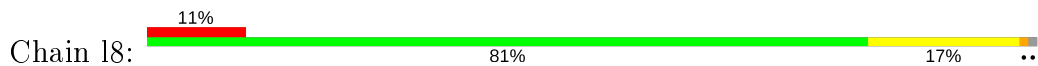
● Molecule 44: 60S ribosomal protein L7-A



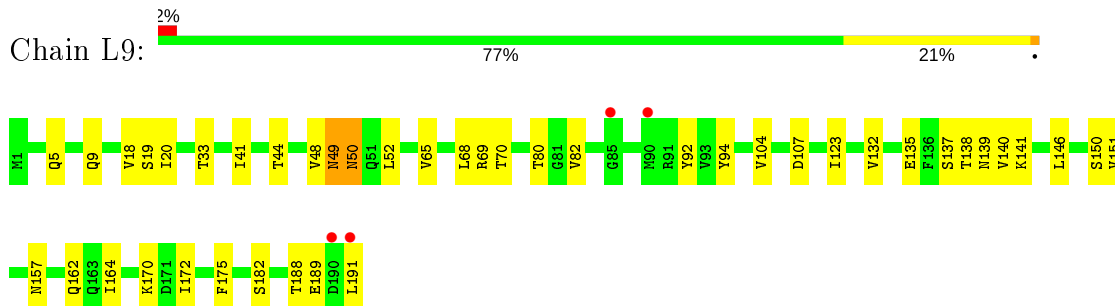
● Molecule 45: 60S ribosomal protein L8-A



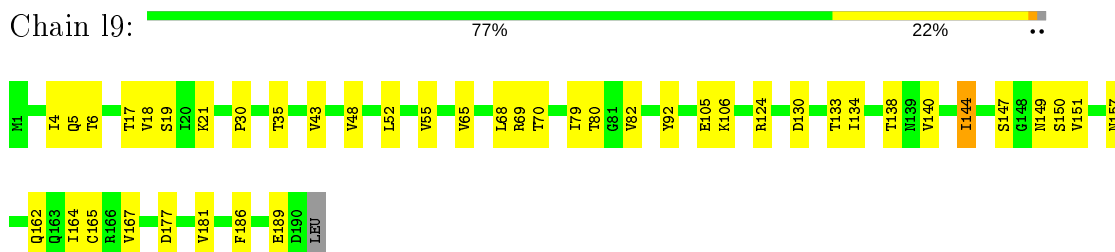
● Molecule 45: 60S ribosomal protein L8-A



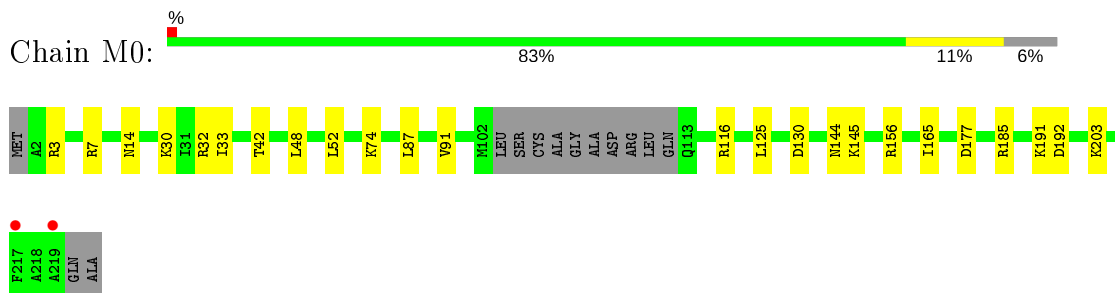
- Molecule 46: 60S ribosomal protein L9-A



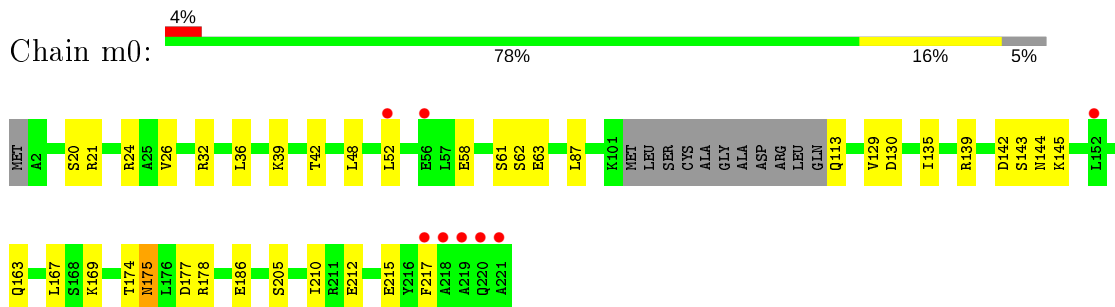
- Molecule 46: 60S ribosomal protein L9-A



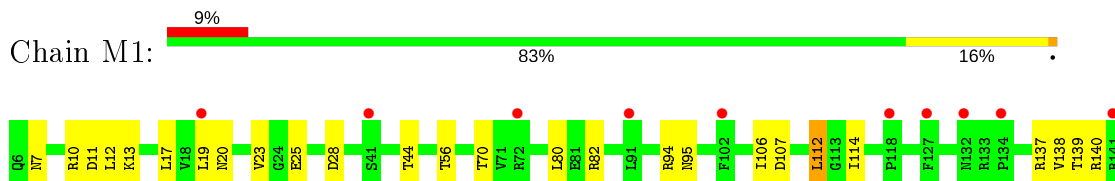
- Molecule 47: 60S ribosomal protein L10

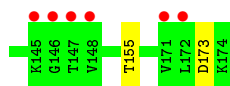


- Molecule 47: 60S ribosomal protein L10

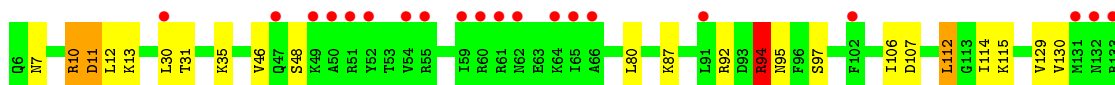
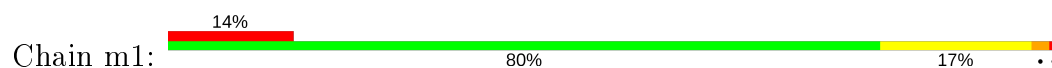


- Molecule 48: 60S ribosomal protein L11-A

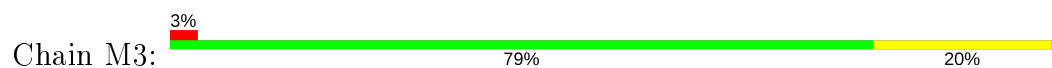




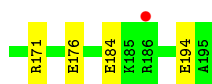
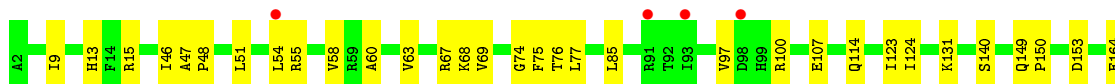
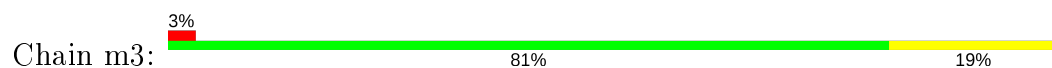
- Molecule 48: 60S ribosomal protein L11-A



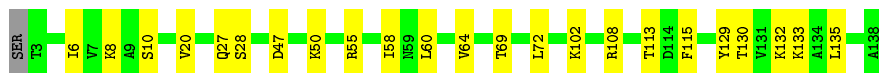
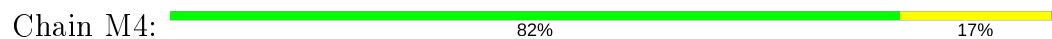
- Molecule 49: 60S ribosomal protein L13-A



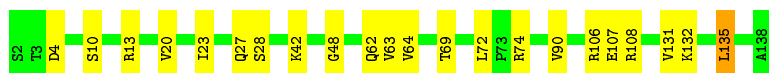
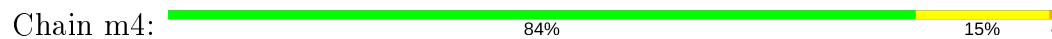
- Molecule 49: 60S ribosomal protein L13-A



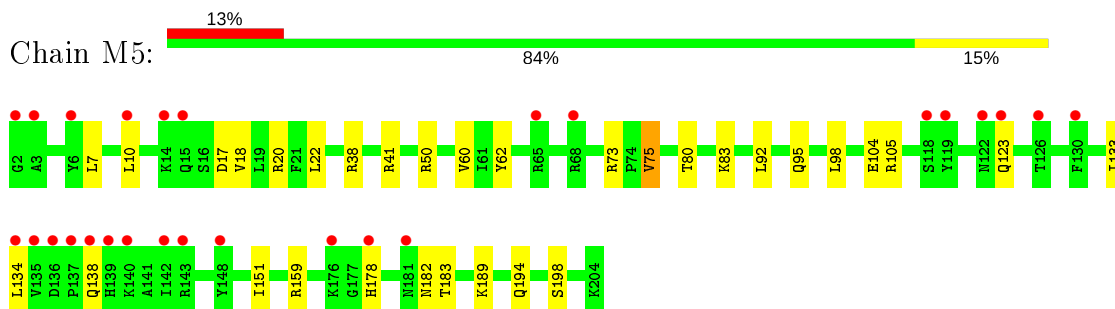
- Molecule 50: 60S ribosomal protein L14-A



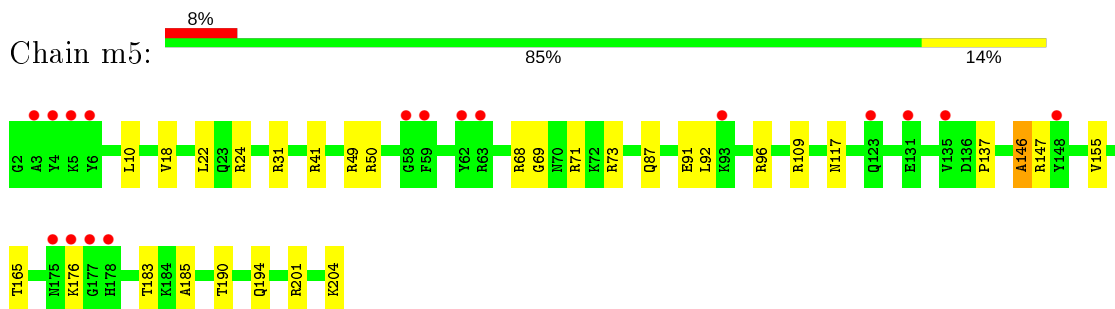
- Molecule 50: 60S ribosomal protein L14-A



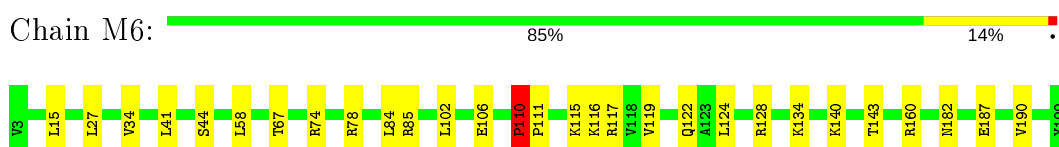
- Molecule 51: 60S ribosomal protein L15-A



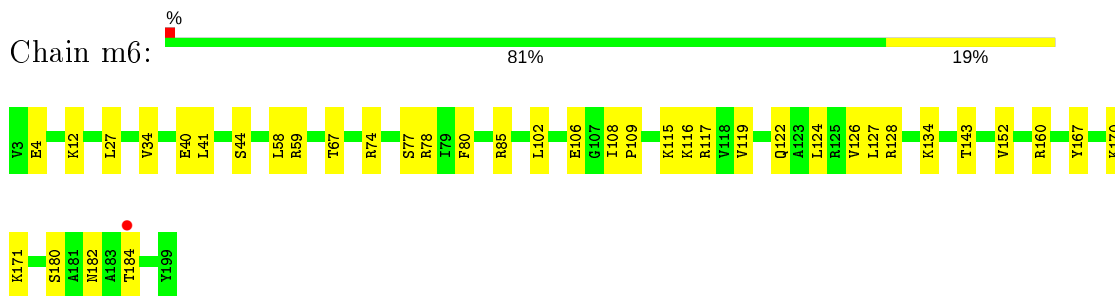
- Molecule 51: 60S ribosomal protein L15-A



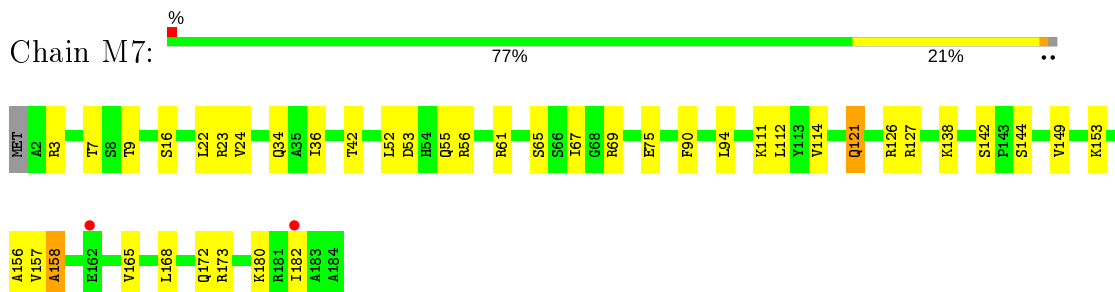
- Molecule 52: 60S ribosomal protein L16-A



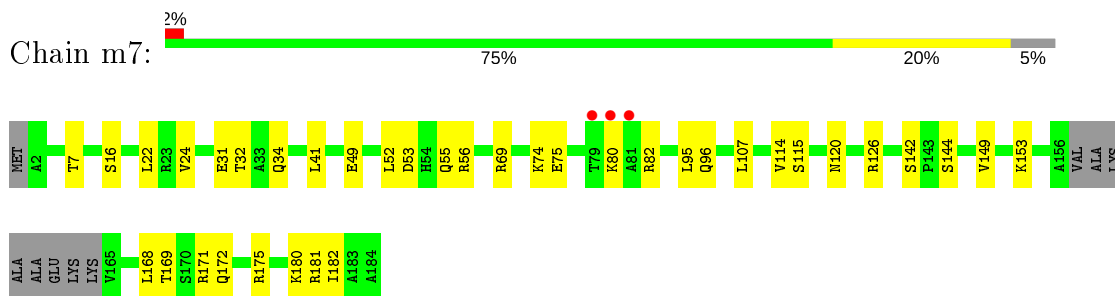
- Molecule 52: 60S ribosomal protein L16-A



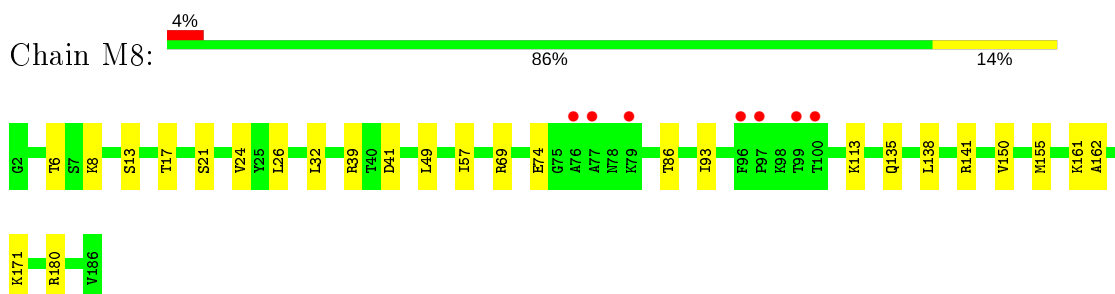
- Molecule 53: 60S ribosomal protein L17-A



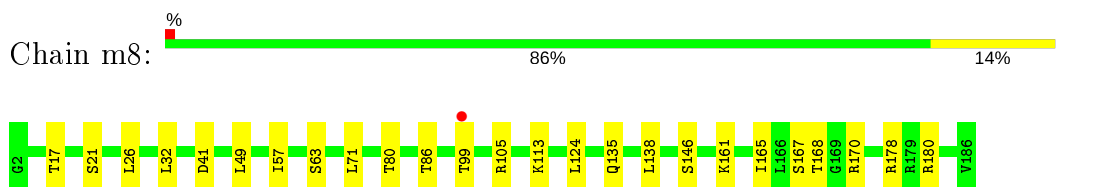
- Molecule 53: 60S ribosomal protein L17-A



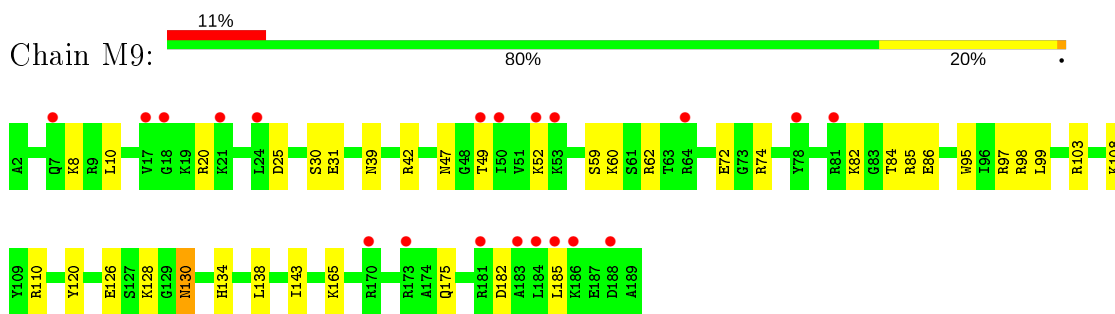
- Molecule 54: 60S ribosomal protein L18-A



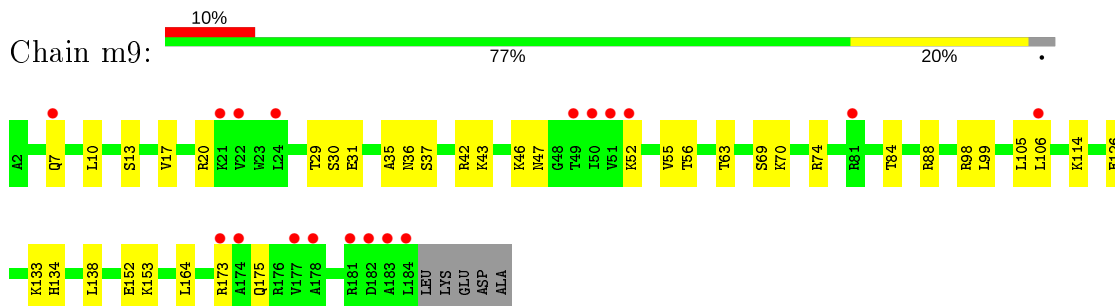
- Molecule 54: 60S ribosomal protein L18-A



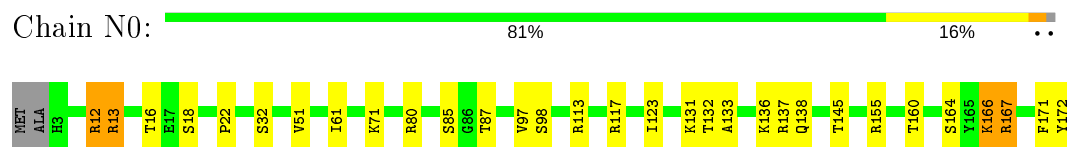
- Molecule 55: 60S ribosomal protein L19-A



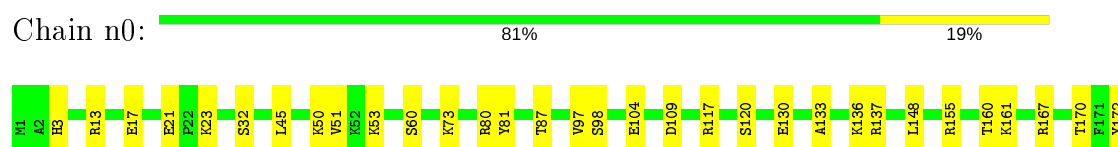
- Molecule 55: 60S ribosomal protein L19-A



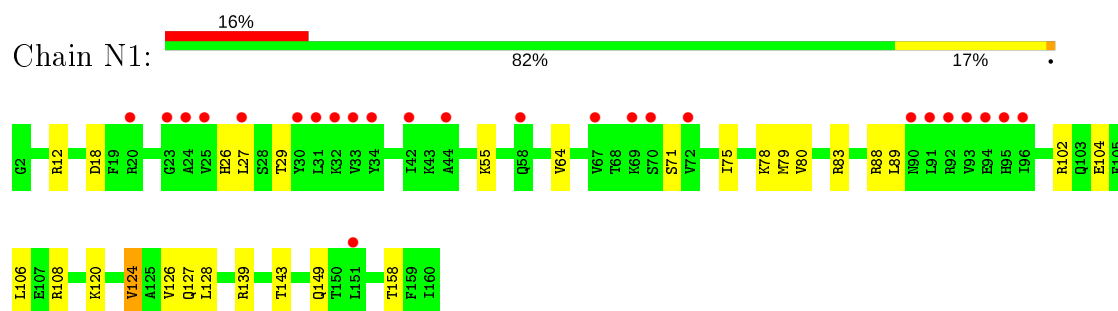
- Molecule 56: 60S ribosomal protein L20-A



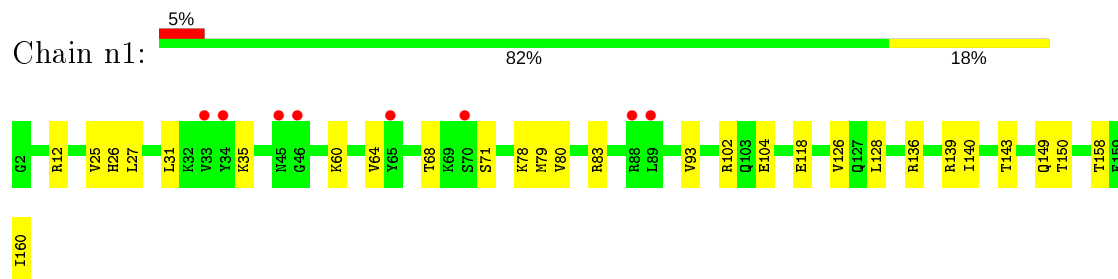
- Molecule 56: 60S ribosomal protein L20-A



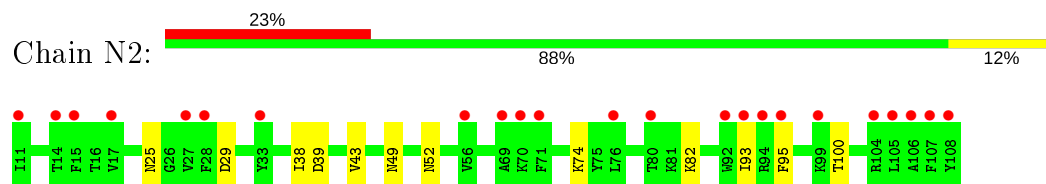
- Molecule 57: 60S ribosomal protein L21-A



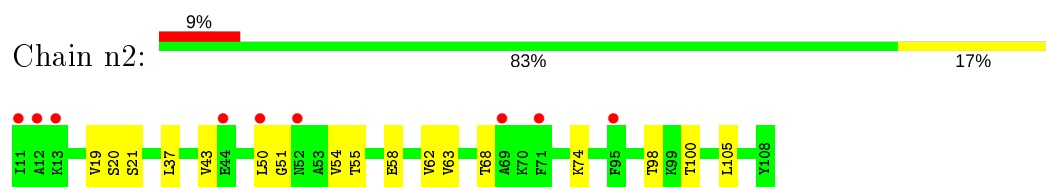
- Molecule 57: 60S ribosomal protein L21-A



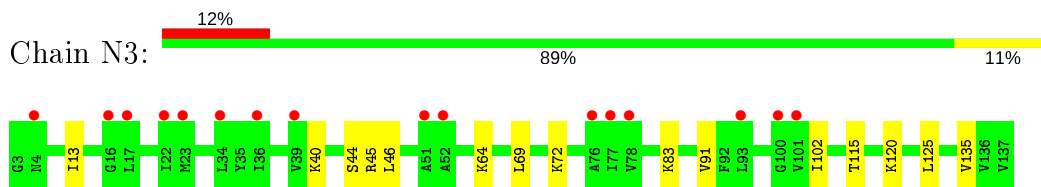
- Molecule 58: 60S ribosomal protein L22-A



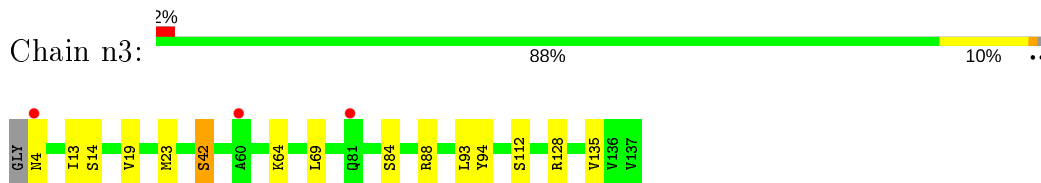
- Molecule 58: 60S ribosomal protein L22-A



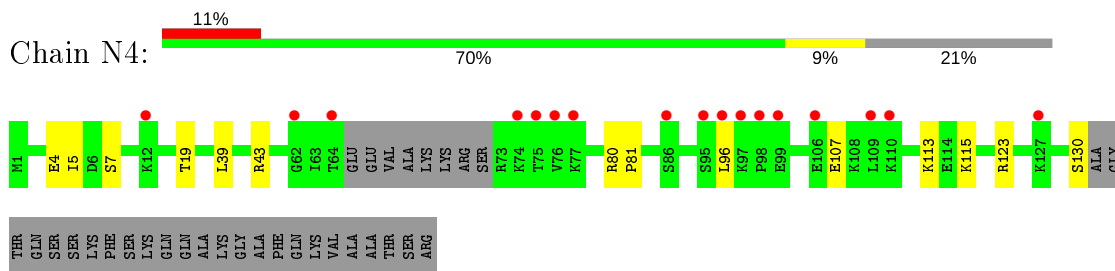
- Molecule 59: 60S ribosomal protein L23-A



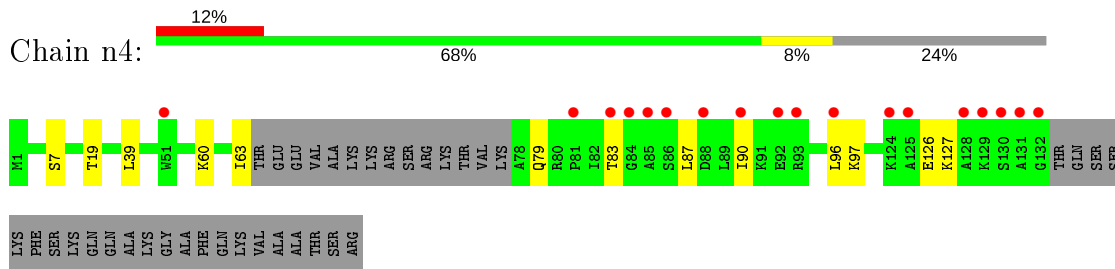
- Molecule 59: 60S ribosomal protein L23-A



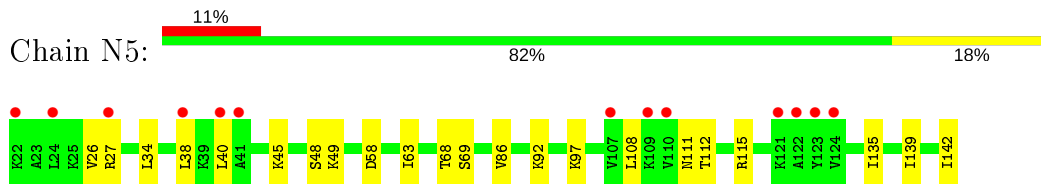
- Molecule 60: 60S ribosomal protein L24-A



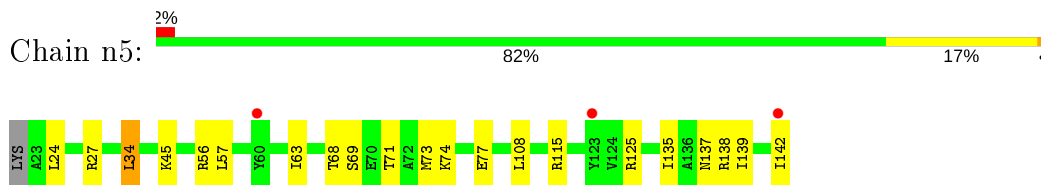
- Molecule 60: 60S ribosomal protein L24-A



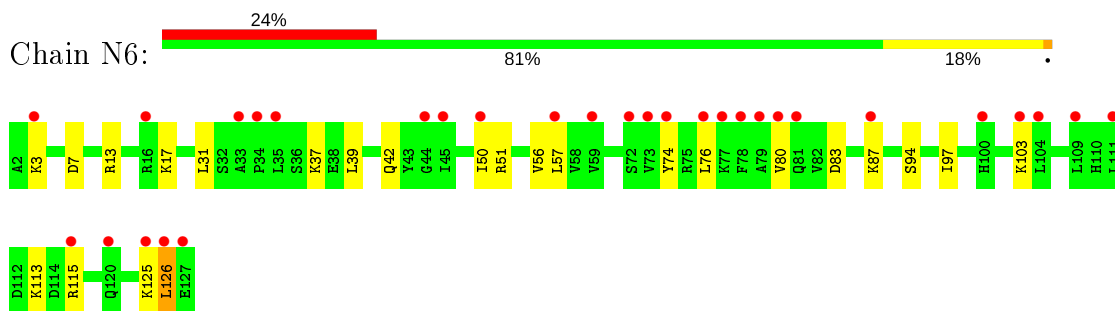
- Molecule 61: 60S ribosomal protein L25



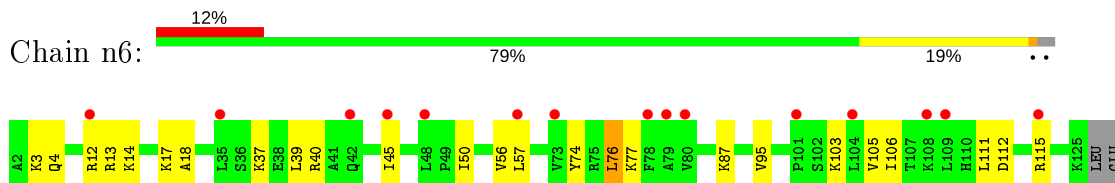
- Molecule 61: 60S ribosomal protein L25



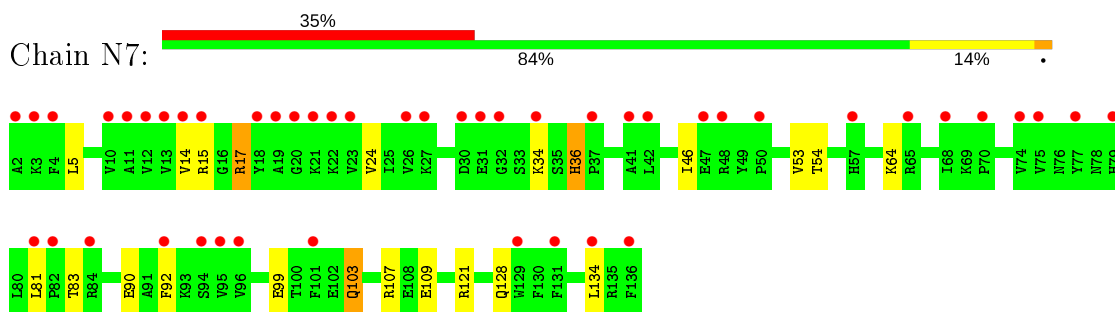
- Molecule 62: 60S ribosomal protein L26-A



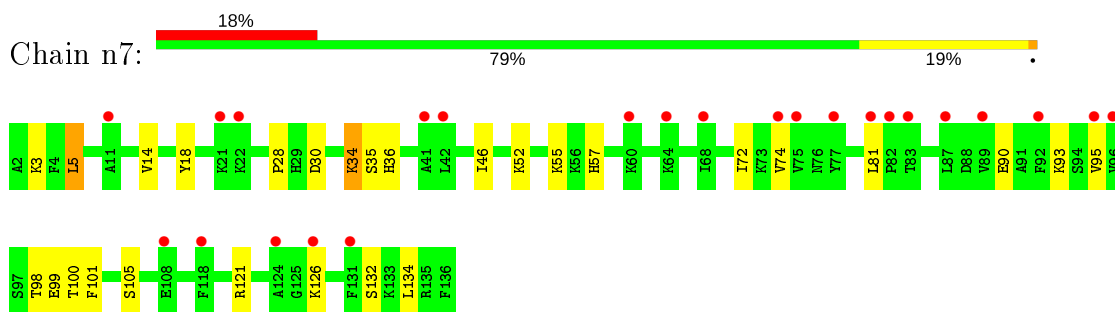
- Molecule 62: 60S ribosomal protein L26-A



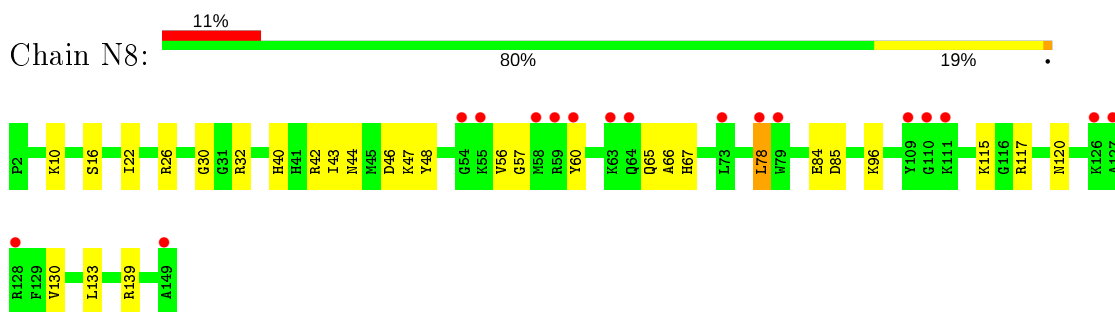
- Molecule 63: 60S ribosomal protein L27-A



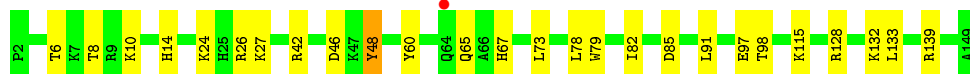
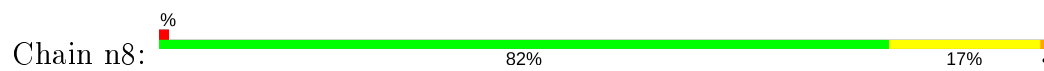
- Molecule 63: 60S ribosomal protein L27-A



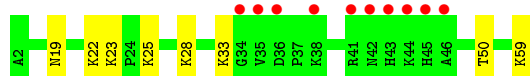
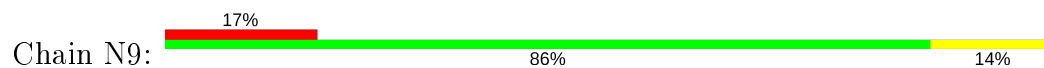
- Molecule 64: 60S ribosomal protein L28



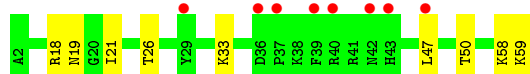
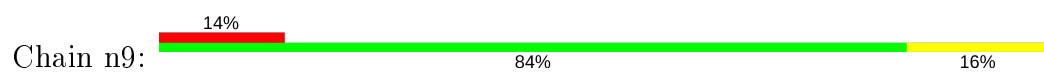
- Molecule 64: 60S ribosomal protein L28



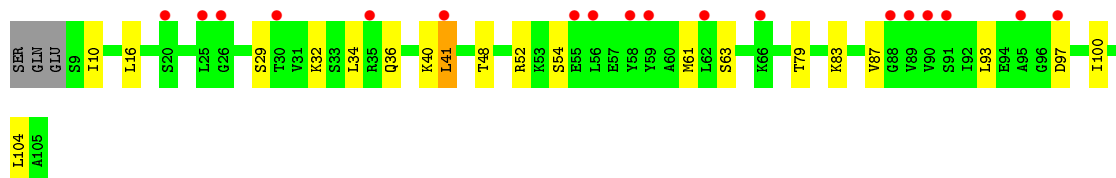
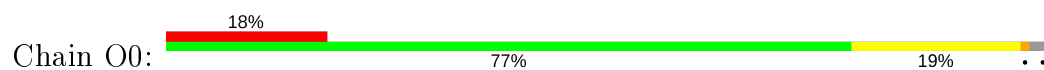
- Molecule 65: 60S ribosomal protein L29



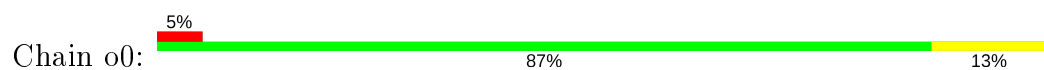
- Molecule 65: 60S ribosomal protein L29



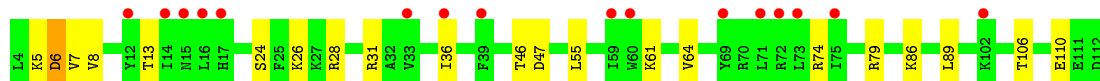
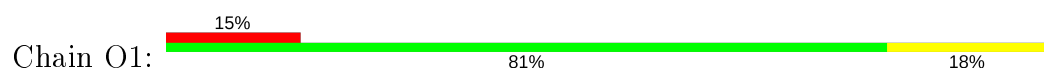
- Molecule 66: 60S ribosomal protein L30



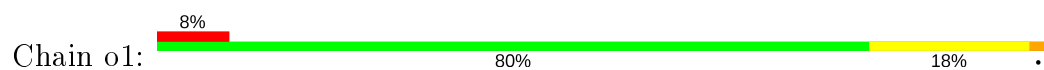
- Molecule 66: 60S ribosomal protein L30

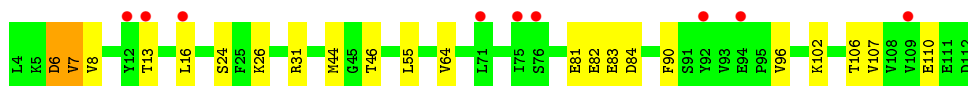


- Molecule 67: 60S ribosomal protein L31-A

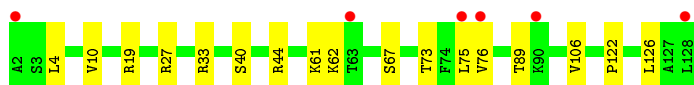
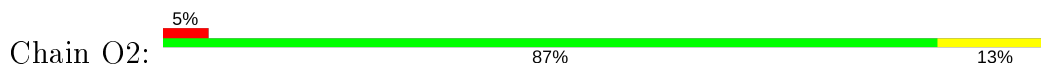


- Molecule 67: 60S ribosomal protein L31-A

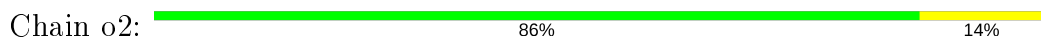




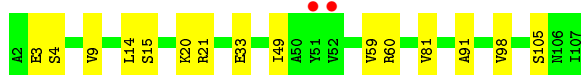
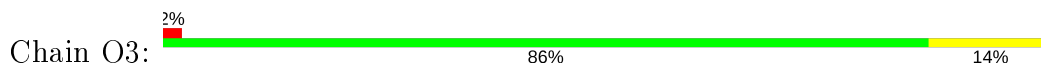
- Molecule 68: 60S ribosomal protein L32



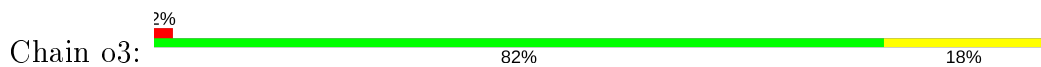
- Molecule 68: 60S ribosomal protein L32



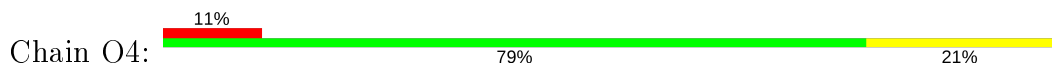
- Molecule 69: 60S ribosomal protein L33-A



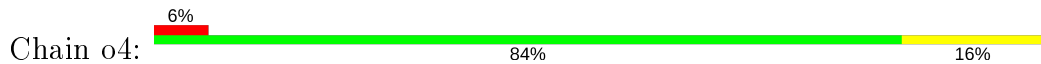
- Molecule 69: 60S ribosomal protein L33-A



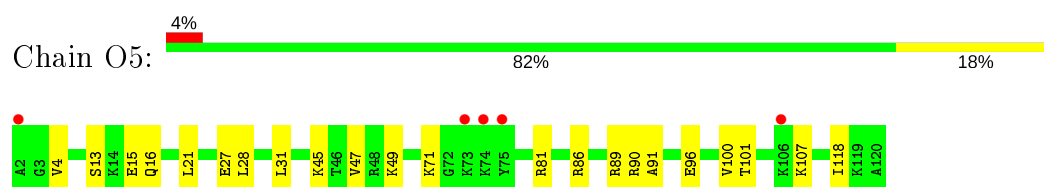
- Molecule 70: 60S ribosomal protein L34-A



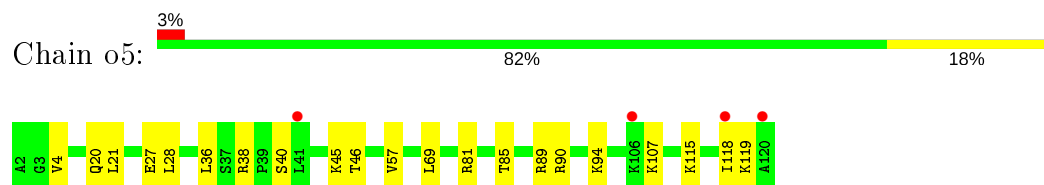
- Molecule 70: 60S ribosomal protein L34-A



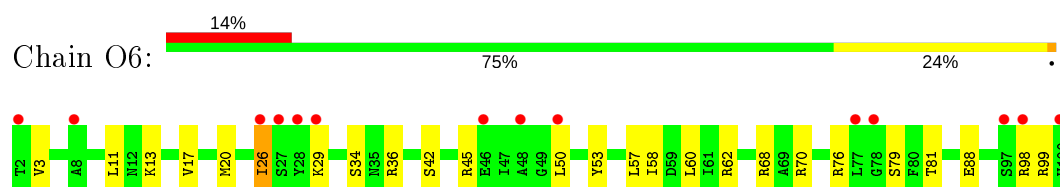
- Molecule 71: 60S ribosomal protein L35-A



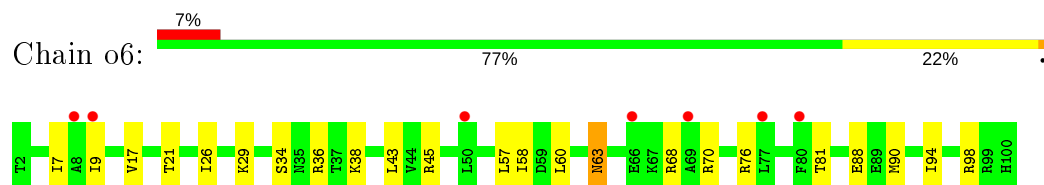
- Molecule 71: 60S ribosomal protein L35-A



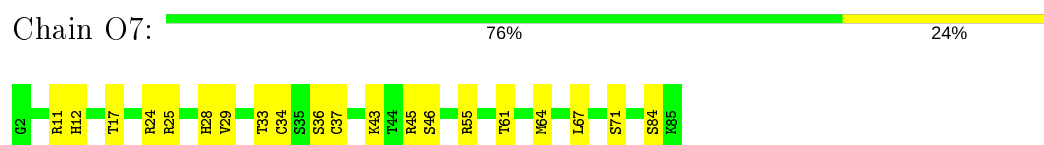
- Molecule 72: 60S ribosomal protein L36-A



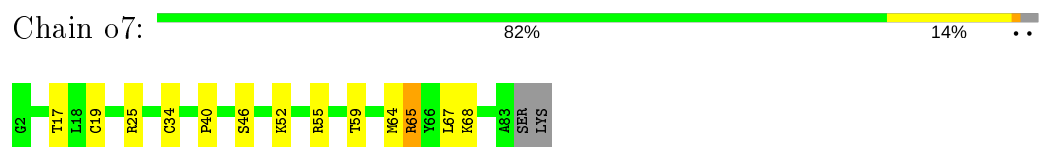
- Molecule 72: 60S ribosomal protein L36-A



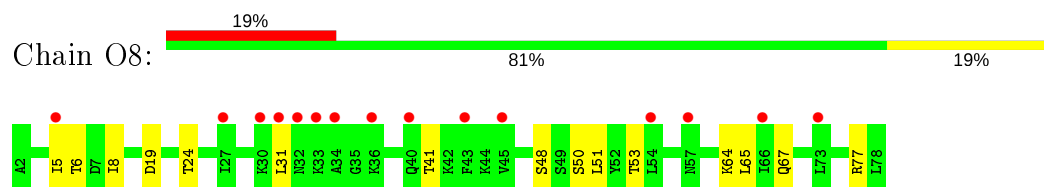
- Molecule 73: 60S ribosomal protein L37-A



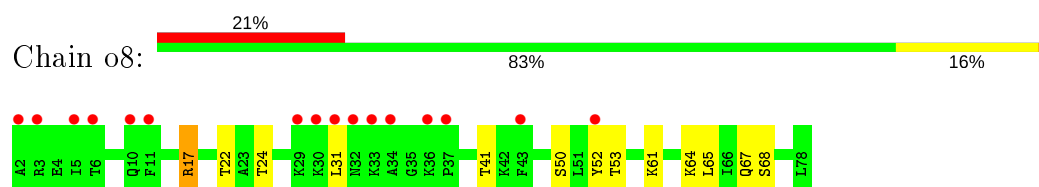
- Molecule 73: 60S ribosomal protein L37-A



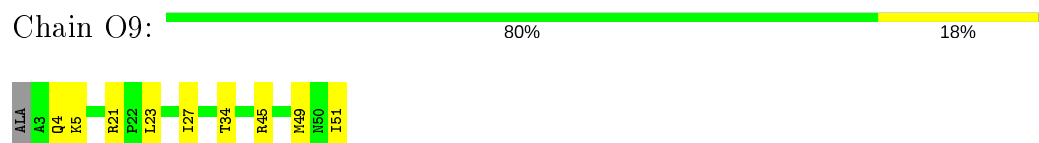
- Molecule 74: 60S ribosomal protein L38



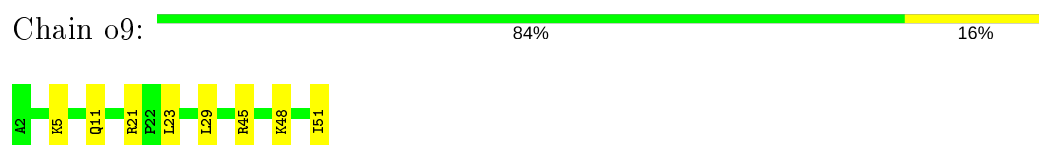
- Molecule 74: 60S ribosomal protein L38



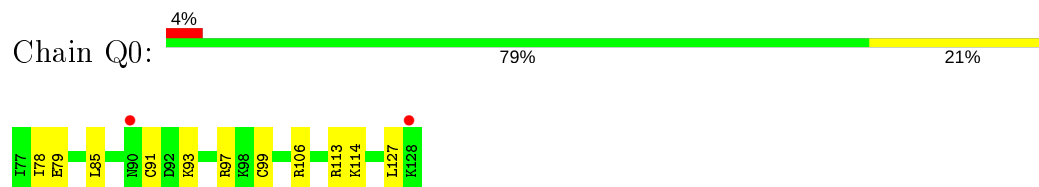
- Molecule 75: 60S ribosomal protein L39



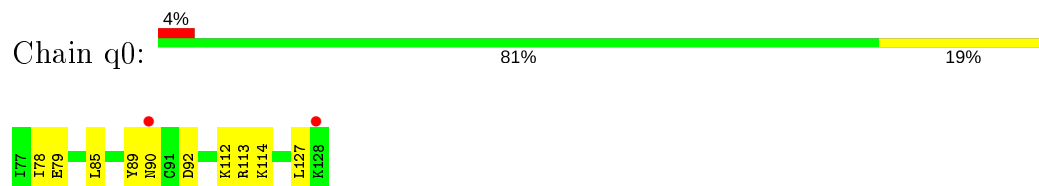
- Molecule 75: 60S ribosomal protein L39



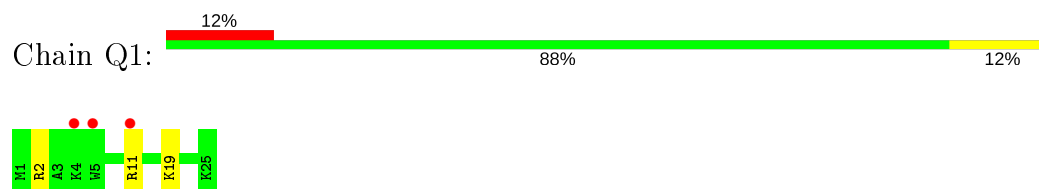
- Molecule 76: Ubiquitin-60S ribosomal protein L40



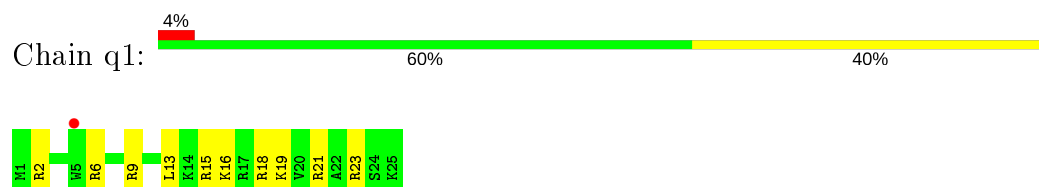
- Molecule 76: Ubiquitin-60S ribosomal protein L40



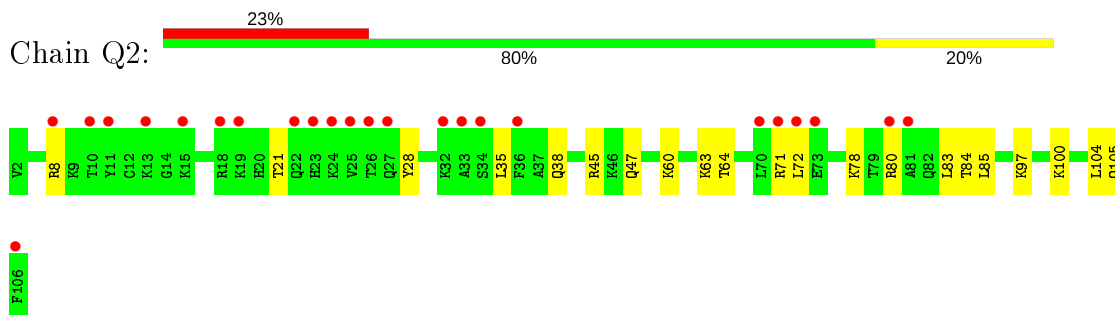
- Molecule 77: 60S ribosomal protein L41-A



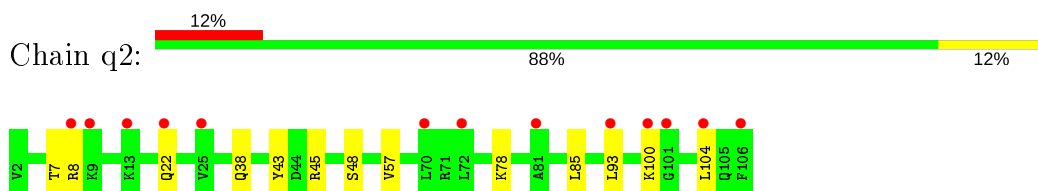
- Molecule 77: 60S ribosomal protein L41-A



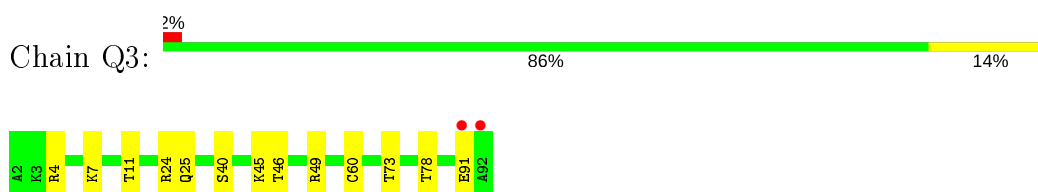
• Molecule 78: 60S ribosomal protein L42-A



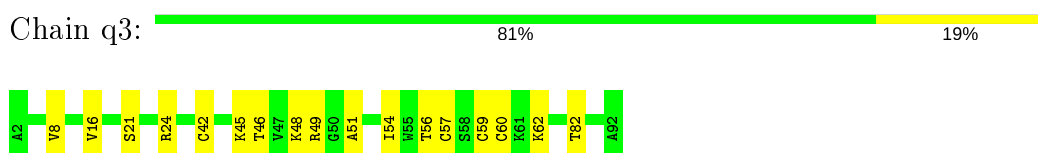
• Molecule 78: 60S ribosomal protein L42-A



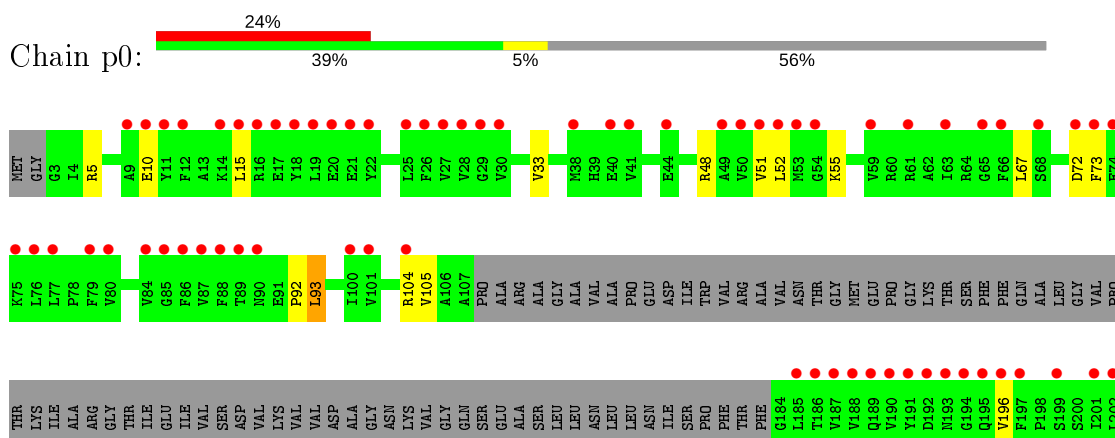
• Molecule 79: 60S ribosomal protein L43-A



• Molecule 79: 60S ribosomal protein L43-A



• Molecule 80: 60S acidic ribosomal protein P0



| | |
|------|-----|
| V210 | VAL |
| S211 | SER |
| H212 | THR |
| F213 | ILE |
| V214 | ALA |
| S215 | SER |
| A216 | ILE |
| | SER |
| | ILE |
| | SER |
| | LEU |
| | ALA |
| | ILE |
| | GLY |
| | TYR |
| | PRO |
| | THR |
| | LEU |
| | PRO |
| | SER |
| | VAL |
| | GLY |
| | HIS |
| | THR |
| | LEU |
| | ILE |
| | ASN |
| | ASN |
| | TYR |
| | LYS |
| | ASP |
| | LEU |
| | LEU |
| | ALA |
| | VAL |
| | ALA |
| | ILE |
| | ALA |
| | ALA |
| | SER |
| | TYR |
| | HIS |
| | TYR |
| | PRO |
| | GLU |
| | ILE |
| | GLU |
| | ASP |
| | VAL |
| | ASP |
| | ARG |
| | ILE |
| | GLU |

| |
|-----|
| ASN |
| PRO |
| GLU |
| LYS |
| TYR |
| ALA |
| ALA |
| ALA |
| PRO |
| ALA |
| THR |
| SER |
| ALA |
| ALA |
| SER |
| GLY |
| ASP |
| ALA |
| ALA |
| PRO |
| ALA |
| GLU |
| GLU |
| ALA |
| ALA |
| ALA |
| GLU |
| GLU |
| GLU |
| GLU |
| SER |
| ASP |
| ASP |
| ASP |
| MET |
| GLY |
| PHE |
| GLY |
| LEU |
| PHE |
| ASP |

4 Data and refinement statistics

| Property | Value | Source |
|---|---|------------------|
| Space group | P 1 21 1 | Depositor |
| Cell constants a, b, c, α , β , γ | 443.59Å 297.32Å 300.15Å 90.00° 99.28° 90.00° | Depositor |
| Resolution (Å) | 91.75 – 3.70 101.93 – 3.70 | Depositor EDS |
| % Data completeness (in resolution range) | 99.9 (91.75-3.70) 89.5 (101.93-3.70) | Depositor EDS |
| R_{merge} | 0.16 | Depositor |
| R_{sym} | (Not available) | Depositor |
| $\langle I/\sigma(I) \rangle$ ¹ | 0.77 (at 3.67Å) | Xtrriage |
| Refinement program | PHENIX | Depositor |
| R, R_{free} | 0.210 , 0.253 0.210 , 0.252 | Depositor DCC |
| R_{free} test set | 16296 reflections (2.00%) | wwPDB-VP |
| Wilson B-factor (Å ²) | 120.7 | Xtrriage |
| Anisotropy | 0.428 | Xtrriage |
| Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²) | 0.30 , 113.5 | EDS |
| L-test for twinning ² | $\langle L \rangle = 0.47$, $\langle L^2 \rangle = 0.30$ | Xtrriage |
| Estimated twinning fraction | No twinning to report. | Xtrriage |
| F_o, F_c correlation | 0.93 | EDS |
| Total number of atoms | 397710 | wwPDB-VP |
| Average B, all atoms (Å ²) | 159.0 | wwPDB-VP |

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.61% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, MG, GET

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 | 2 | 0.58 | 1/40250 (0.0%) | 1.19 | 219/62707 (0.3%) |
| 1 | 6 | 0.60 | 8/40528 (0.0%) | 1.18 | 200/63141 (0.3%) |
| 2 | S0 | 0.36 | 0/1617 | 0.61 | 0/2215 |
| 2 | s0 | 0.35 | 0/1623 | 0.60 | 0/2222 |
| 3 | S1 | 0.34 | 0/1735 | 0.68 | 2/2335 (0.1%) |
| 3 | s1 | 0.34 | 0/1748 | 0.59 | 0/2352 |
| 4 | S2 | 0.37 | 0/1665 | 0.65 | 1/2263 (0.0%) |
| 4 | s2 | 0.39 | 0/1665 | 0.65 | 1/2263 (0.0%) |
| 5 | S3 | 0.42 | 0/1759 | 0.61 | 0/2368 |
| 5 | s3 | 0.36 | 0/1759 | 0.61 | 0/2368 |
| 6 | S4 | 0.37 | 0/2109 | 0.64 | 3/2839 (0.1%) |
| 6 | s4 | 0.41 | 1/2109 (0.0%) | 0.66 | 0/2839 |
| 7 | S5 | 0.35 | 0/1629 | 0.59 | 0/2202 |
| 7 | s5 | 0.34 | 0/1629 | 0.60 | 0/2202 |
| 8 | S6 | 0.36 | 0/1823 | 0.56 | 0/2439 |
| 8 | s6 | 0.40 | 0/1779 | 0.61 | 0/2379 |
| 9 | S7 | 0.38 | 0/1506 | 0.64 | 0/2028 |
| 9 | s7 | 0.39 | 0/1511 | 0.70 | 2/2036 (0.1%) |
| 10 | S8 | 0.40 | 0/1514 | 0.64 | 2/2021 (0.1%) |
| 10 | s8 | 0.47 | 0/1514 | 0.65 | 0/2021 |
| 11 | S9 | 0.36 | 0/1519 | 0.62 | 0/2035 |
| 11 | s9 | 0.39 | 0/1519 | 0.61 | 1/2035 (0.0%) |
| 12 | C0 | 0.37 | 0/769 | 0.71 | 1/1039 (0.1%) |
| 12 | c0 | 0.36 | 0/757 | 0.73 | 1/1022 (0.1%) |
| 13 | C1 | 0.40 | 0/1172 | 0.69 | 1/1580 (0.1%) |
| 13 | c1 | 0.47 | 0/1194 | 0.68 | 1/1610 (0.1%) |
| 14 | C2 | 0.33 | 0/878 | 0.71 | 3/1192 (0.3%) |
| 14 | c2 | 0.32 | 0/898 | 0.70 | 0/1220 |
| 15 | C3 | 0.39 | 0/1215 | 0.65 | 0/1638 |
| 15 | c3 | 0.40 | 0/1215 | 0.63 | 1/1638 (0.1%) |
| 16 | C4 | 0.37 | 0/901 | 0.65 | 1/1217 (0.1%) |
| 16 | c4 | 0.34 | 0/960 | 0.63 | 0/1290 |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|-----------------|-------------|-------------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 17 | C5 | 0.50 | 1/988 (0.1%) | 0.69 | 0/1327 |
| 17 | c5 | 0.40 | 0/959 | 0.67 | 0/1288 |
| 18 | C6 | 0.43 | 0/1125 | 0.65 | 0/1510 |
| 18 | c6 | 0.68 | 2/1125 (0.2%) | 0.62 | 0/1510 |
| 19 | C7 | 0.35 | 0/920 | 0.61 | 0/1233 |
| 19 | c7 | 0.34 | 0/915 | 0.64 | 1/1227 (0.1%) |
| 20 | C8 | 0.40 | 0/1211 | 0.68 | 0/1628 |
| 20 | c8 | 0.35 | 0/1211 | 0.63 | 0/1628 |
| 21 | C9 | 0.45 | 0/1130 | 0.65 | 1/1517 (0.1%) |
| 21 | c9 | 0.37 | 0/1130 | 0.64 | 0/1517 |
| 22 | D0 | 0.41 | 0/847 | 0.64 | 0/1145 |
| 22 | d0 | 0.37 | 0/815 | 0.58 | 0/1102 |
| 23 | D1 | 0.40 | 0/693 | 0.66 | 0/935 |
| 23 | d1 | 0.37 | 0/693 | 0.61 | 0/935 |
| 24 | D2 | 0.37 | 0/1038 | 0.70 | 2/1395 (0.1%) |
| 24 | d2 | 0.40 | 0/1038 | 0.64 | 1/1395 (0.1%) |
| 25 | D3 | 0.46 | 0/1139 | 0.73 | 1/1518 (0.1%) |
| 25 | d3 | 0.48 | 0/1139 | 0.68 | 0/1518 |
| 26 | D4 | 0.32 | 0/1087 | 0.59 | 1/1449 (0.1%) |
| 26 | d4 | 0.39 | 0/1087 | 0.66 | 0/1449 |
| 27 | D5 | 0.37 | 0/571 | 0.72 | 0/768 |
| 27 | d5 | 0.34 | 0/566 | 0.58 | 0/761 |
| 28 | D6 | 0.70 | 1/782 (0.1%) | 0.73 | 1/1047 (0.1%) |
| 28 | d6 | 0.36 | 0/782 | 0.64 | 0/1047 |
| 29 | D7 | 0.33 | 0/620 | 0.62 | 0/838 |
| 29 | d7 | 0.36 | 0/620 | 0.68 | 0/838 |
| 30 | D8 | 1.18 | 1/499 (0.2%) | 0.61 | 0/670 |
| 30 | d8 | 0.84 | 1/499 (0.2%) | 0.61 | 0/670 |
| 31 | D9 | 0.49 | 0/452 | 0.77 | 1/600 (0.2%) |
| 31 | d9 | 0.44 | 0/452 | 0.64 | 0/600 |
| 32 | E0 | 0.42 | 0/483 | 0.68 | 0/643 |
| 32 | e0 | 0.43 | 0/483 | 0.72 | 0/643 |
| 33 | E1 | 0.44 | 0/577 | 0.89 | 0/770 |
| 33 | e1 | 0.37 | 0/358 | 0.68 | 0/477 |
| 34 | SR | 0.31 | 0/2490 | 0.56 | 0/3389 |
| 34 | sR | 0.32 | 0/2456 | 0.57 | 0/3343 |
| 35 | SM | 0.41 | 0/994 | 0.70 | 1/1335 (0.1%) |
| 35 | sM | 0.43 | 0/882 | 0.65 | 0/1180 |
| 36 | 1 | 0.76 | 18/73692 (0.0%) | 1.39 | 806/114882 (0.7%) |
| 36 | 5 | 0.79 | 25/74873 (0.0%) | 1.40 | 785/116727 (0.7%) |
| 37 | 3 | 0.64 | 0/2883 | 1.23 | 21/4491 (0.5%) |
| 37 | 7 | 0.60 | 0/2883 | 1.11 | 9/4491 (0.2%) |
| 38 | 4 | 0.74 | 0/3746 | 1.38 | 36/5832 (0.6%) |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|---------------|-------------|----------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 38 | 8 | 0.80 | 0/3724 | 1.47 | 46/5798 (0.8%) |
| 39 | L2 | 0.45 | 0/1948 | 0.71 | 2/2617 (0.1%) |
| 39 | l2 | 0.53 | 1/1946 (0.1%) | 0.77 | 1/2614 (0.0%) |
| 40 | L3 | 0.51 | 0/3146 | 0.70 | 2/4228 (0.0%) |
| 40 | l3 | 0.56 | 0/3146 | 0.72 | 1/4228 (0.0%) |
| 41 | L4 | 0.46 | 0/2800 | 0.71 | 3/3790 (0.1%) |
| 41 | l4 | 0.54 | 2/2800 (0.1%) | 0.72 | 1/3790 (0.0%) |
| 42 | L5 | 0.42 | 0/2407 | 0.65 | 0/3247 |
| 42 | l5 | 0.37 | 0/2408 | 0.58 | 1/3248 (0.0%) |
| 43 | L6 | 0.51 | 0/1260 | 0.70 | 0/1694 |
| 43 | l6 | 0.58 | 0/1269 | 0.73 | 0/1705 |
| 44 | L7 | 0.51 | 0/1821 | 0.66 | 0/2451 |
| 44 | l7 | 0.52 | 0/1828 | 0.68 | 0/2461 |
| 45 | L8 | 0.44 | 1/1836 (0.1%) | 0.62 | 1/2481 (0.0%) |
| 45 | l8 | 0.43 | 1/1795 (0.1%) | 0.65 | 1/2429 (0.0%) |
| 46 | L9 | 0.48 | 0/1539 | 0.66 | 0/2073 |
| 46 | l9 | 0.49 | 0/1531 | 0.71 | 0/2062 |
| 47 | M0 | 0.51 | 0/1726 | 0.68 | 0/2314 |
| 47 | m0 | 0.47 | 0/1732 | 0.72 | 0/2323 |
| 48 | M1 | 0.42 | 0/1374 | 0.66 | 1/1842 (0.1%) |
| 48 | m1 | 0.37 | 0/1374 | 0.62 | 1/1842 (0.1%) |
| 49 | M3 | 0.46 | 1/1568 (0.1%) | 0.68 | 1/2106 (0.0%) |
| 49 | m3 | 0.47 | 0/1573 | 0.71 | 0/2113 |
| 50 | M4 | 0.48 | 0/1068 | 0.68 | 0/1438 |
| 50 | m4 | 0.55 | 0/1074 | 0.74 | 1/1446 (0.1%) |
| 51 | M5 | 0.46 | 0/1757 | 0.68 | 0/2354 |
| 51 | m5 | 0.50 | 0/1757 | 0.75 | 1/2354 (0.0%) |
| 52 | M6 | 0.59 | 0/1585 | 0.74 | 2/2128 (0.1%) |
| 52 | m6 | 0.62 | 0/1585 | 0.76 | 1/2128 (0.0%) |
| 53 | M7 | 0.53 | 0/1443 | 0.72 | 1/1944 (0.1%) |
| 53 | m7 | 0.56 | 0/1400 | 0.77 | 1/1882 (0.1%) |
| 54 | M8 | 0.40 | 0/1465 | 0.62 | 0/1965 |
| 54 | m8 | 0.45 | 0/1465 | 0.69 | 2/1965 (0.1%) |
| 55 | M9 | 0.40 | 0/1538 | 0.60 | 0/2050 |
| 55 | m9 | 0.43 | 0/1499 | 0.61 | 0/1998 |
| 56 | N0 | 0.51 | 0/1468 | 0.68 | 0/1973 |
| 56 | n0 | 0.52 | 0/1481 | 0.70 | 0/1990 |
| 57 | N1 | 0.48 | 0/1300 | 0.67 | 0/1743 |
| 57 | n1 | 0.43 | 0/1300 | 0.61 | 0/1743 |
| 58 | N2 | 0.40 | 0/794 | 0.63 | 0/1076 |
| 58 | n2 | 0.39 | 0/794 | 0.57 | 0/1076 |
| 59 | N3 | 0.49 | 0/1012 | 0.71 | 1/1361 (0.1%) |
| 59 | n3 | 0.58 | 0/1008 | 0.79 | 0/1356 |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|------------------|-------------|--------------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 60 | N4 | 0.44 | 0/937 | 0.56 | 0/1243 |
| 60 | n4 | 0.47 | 1/959 (0.1%) | 0.66 | 2/1267 (0.2%) |
| 61 | N5 | 0.44 | 0/979 | 0.72 | 0/1321 |
| 61 | n5 | 0.53 | 0/974 | 0.78 | 1/1314 (0.1%) |
| 62 | N6 | 0.45 | 0/1004 | 0.75 | 2/1341 (0.1%) |
| 62 | n6 | 0.48 | 0/987 | 0.82 | 2/1318 (0.2%) |
| 63 | N7 | 0.47 | 1/1118 (0.1%) | 0.63 | 0/1497 |
| 63 | n7 | 0.49 | 0/1118 | 0.63 | 1/1497 (0.1%) |
| 64 | N8 | 0.43 | 0/1204 | 0.73 | 1/1612 (0.1%) |
| 64 | n8 | 0.47 | 0/1204 | 0.72 | 1/1612 (0.1%) |
| 65 | N9 | 0.41 | 0/473 | 0.60 | 0/629 |
| 65 | n9 | 0.44 | 0/473 | 0.72 | 0/629 |
| 66 | O0 | 0.40 | 0/751 | 0.61 | 1/1008 (0.1%) |
| 66 | o0 | 0.45 | 0/775 | 0.62 | 0/1040 |
| 67 | O1 | 0.47 | 0/890 | 0.71 | 0/1196 |
| 67 | o1 | 0.52 | 0/897 | 0.71 | 1/1205 (0.1%) |
| 68 | O2 | 0.50 | 0/1041 | 0.72 | 0/1394 |
| 68 | o2 | 0.53 | 0/1041 | 0.73 | 0/1394 |
| 69 | O3 | 0.56 | 0/868 | 0.72 | 0/1168 |
| 69 | o3 | 0.59 | 0/868 | 0.79 | 1/1168 (0.1%) |
| 70 | O4 | 0.43 | 0/890 | 0.71 | 1/1189 (0.1%) |
| 70 | o4 | 0.48 | 0/890 | 0.73 | 1/1189 (0.1%) |
| 71 | O5 | 0.44 | 0/978 | 0.66 | 0/1301 |
| 71 | o5 | 0.51 | 0/974 | 0.69 | 0/1297 |
| 72 | O6 | 0.45 | 1/778 (0.1%) | 0.70 | 1/1034 (0.1%) |
| 72 | o6 | 0.43 | 0/777 | 0.67 | 0/1033 |
| 73 | O7 | 0.54 | 1/680 (0.1%) | 0.75 | 0/901 |
| 73 | o7 | 0.63 | 0/665 | 0.84 | 1/882 (0.1%) |
| 74 | O8 | 0.38 | 0/618 | 0.60 | 0/826 |
| 74 | o8 | 0.42 | 0/614 | 0.62 | 0/822 |
| 75 | O9 | 0.45 | 0/438 | 0.66 | 0/581 |
| 75 | o9 | 0.52 | 0/443 | 0.67 | 0/588 |
| 76 | Q0 | 0.55 | 0/423 | 0.78 | 0/562 |
| 76 | q0 | 0.66 | 0/423 | 0.76 | 0/562 |
| 77 | Q1 | 0.41 | 0/234 | 0.67 | 0/300 |
| 77 | q1 | 0.48 | 0/234 | 0.74 | 0/300 |
| 78 | Q2 | 0.48 | 0/860 | 0.67 | 0/1136 |
| 78 | q2 | 0.47 | 0/860 | 0.68 | 0/1136 |
| 79 | Q3 | 0.45 | 0/701 | 0.62 | 0/934 |
| 79 | q3 | 0.43 | 0/701 | 0.68 | 0/934 |
| 80 | p0 | 0.34 | 0/1067 | 0.58 | 1/1439 (0.1%) |
| All | All | 0.62 | 69/423555 (0.0%) | 1.11 | 2197/621249 (0.4%) |

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

| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 2 | S0 | 0 | 1 |
| 2 | s0 | 0 | 1 |
| 3 | S1 | 0 | 4 |
| 4 | S2 | 0 | 1 |
| 4 | s2 | 0 | 2 |
| 5 | s3 | 0 | 1 |
| 6 | S4 | 0 | 1 |
| 7 | S5 | 0 | 3 |
| 7 | s5 | 0 | 4 |
| 8 | s6 | 0 | 1 |
| 9 | S7 | 0 | 4 |
| 9 | s7 | 0 | 6 |
| 11 | s9 | 0 | 2 |
| 12 | c0 | 0 | 1 |
| 13 | C1 | 0 | 1 |
| 14 | C2 | 0 | 3 |
| 14 | c2 | 0 | 1 |
| 15 | c3 | 0 | 1 |
| 16 | C4 | 0 | 1 |
| 17 | C5 | 0 | 2 |
| 17 | c5 | 0 | 4 |
| 18 | C6 | 0 | 3 |
| 18 | c6 | 0 | 1 |
| 19 | C7 | 0 | 1 |
| 20 | C8 | 0 | 3 |
| 20 | c8 | 0 | 1 |
| 22 | d0 | 0 | 2 |
| 24 | D2 | 0 | 1 |
| 25 | D3 | 0 | 1 |
| 26 | D4 | 0 | 2 |
| 27 | D5 | 0 | 2 |
| 27 | d5 | 0 | 2 |
| 28 | D6 | 0 | 2 |
| 29 | D7 | 0 | 1 |
| 32 | e0 | 0 | 2 |
| 33 | E1 | 0 | 5 |
| 33 | e1 | 0 | 3 |
| 34 | SR | 0 | 1 |
| 34 | sR | 0 | 1 |

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| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 35 | sM | 0 | 1 |
| 39 | l2 | 0 | 2 |
| 40 | L3 | 0 | 2 |
| 40 | l3 | 0 | 1 |
| 41 | l4 | 0 | 1 |
| 42 | L5 | 0 | 3 |
| 42 | l5 | 0 | 2 |
| 43 | L6 | 0 | 2 |
| 43 | l6 | 0 | 1 |
| 44 | l7 | 0 | 2 |
| 45 | L8 | 0 | 2 |
| 45 | l8 | 0 | 3 |
| 46 | L9 | 0 | 1 |
| 48 | m1 | 0 | 1 |
| 49 | m3 | 0 | 2 |
| 50 | m4 | 0 | 1 |
| 51 | M5 | 0 | 1 |
| 51 | m5 | 0 | 2 |
| 52 | M6 | 0 | 1 |
| 52 | m6 | 0 | 1 |
| 53 | M7 | 0 | 2 |
| 56 | N0 | 0 | 4 |
| 56 | n0 | 0 | 2 |
| 58 | n2 | 0 | 1 |
| 60 | N4 | 0 | 2 |
| 62 | N6 | 0 | 1 |
| 63 | n7 | 0 | 2 |
| 64 | N8 | 0 | 2 |
| 65 | N9 | 0 | 1 |
| 65 | n9 | 0 | 1 |
| 67 | O1 | 0 | 1 |
| 67 | o1 | 0 | 2 |
| 69 | O3 | 0 | 1 |
| 70 | o4 | 0 | 1 |
| 71 | O5 | 0 | 1 |
| 71 | o5 | 0 | 1 |
| 72 | O6 | 0 | 1 |
| 72 | o6 | 0 | 1 |
| 79 | q3 | 0 | 2 |
| 80 | p0 | 0 | 1 |
| All | All | 0 | 141 |

All (69) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 30 | D8 | 5 | THR | C-N | 25.28 | 1.82 | 1.34 |
| 18 | c6 | 4 | VAL | C-N | 18.52 | 1.69 | 1.34 |
| 30 | d8 | 5 | THR | C-N | 17.27 | 1.67 | 1.34 |
| 28 | D6 | 59 | TYR | C-N | 16.33 | 1.65 | 1.34 |
| 17 | C5 | 67 | ALA | C-N | 9.82 | 1.52 | 1.34 |
| 45 | L8 | 158 | ASP | C-N | 8.96 | 1.51 | 1.34 |
| 1 | 6 | 1756 | A | N9-C4 | 8.52 | 1.43 | 1.37 |
| 36 | 1 | 1858 | A | N9-C4 | 8.28 | 1.42 | 1.37 |
| 39 | l2 | 204 | MET | C-N | -7.68 | 1.16 | 1.34 |
| 36 | 5 | 1152 | G | N9-C4 | -7.43 | 1.32 | 1.38 |
| 18 | c6 | 124 | PRO | C-N | 7.08 | 1.50 | 1.34 |
| 36 | 1 | 807 | A | N9-C4 | -6.94 | 1.33 | 1.37 |
| 36 | 5 | 23 | A | N9-C4 | -6.54 | 1.33 | 1.37 |
| 41 | l4 | 65 | TRP | CB-CG | -6.48 | 1.38 | 1.50 |
| 1 | 6 | 803 | A | N9-C4 | 6.46 | 1.41 | 1.37 |
| 36 | 5 | 336 | A | N9-C4 | -6.43 | 1.33 | 1.37 |
| 36 | 5 | 3006 | A | N9-C4 | -6.20 | 1.34 | 1.37 |
| 36 | 1 | 1153 | A | N9-C4 | -6.19 | 1.34 | 1.37 |
| 36 | 1 | 2348 | A | N9-C4 | -6.18 | 1.34 | 1.37 |
| 1 | 6 | 623 | A | N9-C4 | -6.06 | 1.34 | 1.37 |
| 36 | 5 | 3129 | A | N9-C4 | -5.96 | 1.34 | 1.37 |
| 1 | 6 | 385 | A | N9-C4 | 5.92 | 1.41 | 1.37 |
| 36 | 1 | 970 | A | N9-C4 | -5.89 | 1.34 | 1.37 |
| 36 | 1 | 2821 | C | N1-C2 | 5.88 | 1.46 | 1.40 |
| 1 | 6 | 359 | A | N9-C4 | -5.83 | 1.34 | 1.37 |
| 6 | s4 | 237 | SER | C-N | -5.77 | 1.20 | 1.34 |
| 36 | 5 | 2902 | A | N9-C4 | -5.77 | 1.34 | 1.37 |
| 60 | n4 | 96 | LEU | C-N | 5.73 | 1.47 | 1.34 |
| 36 | 5 | 2404 | A | N9-C4 | -5.71 | 1.34 | 1.37 |
| 36 | 5 | 1587 | A | N9-C4 | -5.71 | 1.34 | 1.37 |
| 36 | 1 | 1589 | A | N9-C4 | -5.70 | 1.34 | 1.37 |
| 36 | 1 | 2403 | G | N7-C5 | -5.70 | 1.35 | 1.39 |
| 36 | 5 | 1152 | G | C8-N7 | 5.68 | 1.34 | 1.30 |
| 36 | 1 | 2875 | U | N1-C2 | 5.62 | 1.43 | 1.38 |
| 36 | 1 | 806 | A | N9-C4 | -5.59 | 1.34 | 1.37 |
| 36 | 5 | 2933 | A | N9-C4 | -5.58 | 1.34 | 1.37 |
| 1 | 6 | 1023 | A | N9-C4 | 5.55 | 1.41 | 1.37 |
| 49 | M3 | 125 | VAL | C-N | -5.54 | 1.21 | 1.34 |
| 36 | 5 | 630 | A | N9-C4 | -5.50 | 1.34 | 1.37 |
| 41 | l4 | 19 | ALA | C-N | 5.45 | 1.46 | 1.34 |
| 36 | 5 | 3011 | A | N9-C4 | -5.43 | 1.34 | 1.37 |
| 36 | 5 | 2100 | A | N9-C4 | 5.42 | 1.41 | 1.37 |
| 36 | 5 | 1355 | A | N9-C4 | 5.38 | 1.41 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|--------|-------|-------------|----------|
| 73 | O7 | 37 | CYS | CB-SG | -5.37 | 1.73 | 1.81 |
| 36 | 5 | 2397 | A | N9-C4 | -5.34 | 1.34 | 1.37 |
| 36 | 5 | 1304 | A | N9-C4 | -5.34 | 1.34 | 1.37 |
| 63 | N7 | 36 | HIS | C-N | 5.33 | 1.44 | 1.34 |
| 36 | 1 | 2207 | A | N9-C4 | 5.33 | 1.41 | 1.37 |
| 36 | 5 | 1909 | A | N9-C4 | -5.26 | 1.34 | 1.37 |
| 1 | 2 | 1614 | A | N9-C4 | 5.24 | 1.41 | 1.37 |
| 36 | 1 | 2093 | A | N9-C4 | 5.19 | 1.41 | 1.37 |
| 36 | 5 | 2837 | A | N9-C4 | -5.19 | 1.34 | 1.37 |
| 36 | 5 | 2934 | A | N9-C4 | -5.17 | 1.34 | 1.37 |
| 36 | 1 | 2820 | A | N9-C4 | -5.16 | 1.34 | 1.37 |
| 1 | 6 | 1756 | A | C5-C4 | 5.15 | 1.42 | 1.38 |
| 36 | 1 | 1302 | A | N9-C4 | -5.13 | 1.34 | 1.37 |
| 36 | 5 | 439 | C | N1-C2 | 5.13 | 1.45 | 1.40 |
| 36 | 1 | 2348 | A | N3-C4 | -5.12 | 1.31 | 1.34 |
| 36 | 1 | 3129 | A | N9-C4 | -5.12 | 1.34 | 1.37 |
| 36 | 5 | 27 | C | N1-C6 | -5.12 | 1.34 | 1.37 |
| 36 | 5 | 1813 | A | N9-C4 | 5.10 | 1.41 | 1.37 |
| 36 | 5 | 864 | G | C2-N3 | 5.10 | 1.36 | 1.32 |
| 72 | O6 | 50 | LEU | C-N | 5.09 | 1.45 | 1.34 |
| 36 | 1 | 718 | G | N9-C4 | -5.06 | 1.33 | 1.38 |
| 36 | 5 | 2397 | A | N3-C4 | -5.05 | 1.31 | 1.34 |
| 45 | 18 | 190 | VAL | CB-CG1 | -5.05 | 1.42 | 1.52 |
| 36 | 5 | 960 | U | N1-C2 | 5.03 | 1.43 | 1.38 |
| 1 | 6 | 265 | A | N9-C4 | -5.03 | 1.34 | 1.37 |
| 36 | 1 | 3291 | G | N9-C4 | -5.00 | 1.33 | 1.38 |

All (2197) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|--------|-------------|----------|
| 36 | 5 | 1152 | G | C4-N9-C1' | -16.36 | 105.24 | 126.50 |
| 36 | 5 | 1152 | G | N3-C4-N9 | -16.24 | 116.26 | 126.00 |
| 36 | 5 | 1152 | G | C8-N9-C1' | 15.84 | 147.59 | 127.00 |
| 36 | 5 | 1152 | G | N3-C4-C5 | 14.71 | 135.96 | 128.60 |
| 36 | 1 | 2392 | C | C6-N1-C2 | 13.33 | 125.63 | 120.30 |
| 36 | 5 | 2138 | A | O5'-P-OP2 | -13.27 | 93.76 | 105.70 |
| 36 | 5 | 1437 | C | C6-N1-C2 | -12.56 | 115.28 | 120.30 |
| 36 | 5 | 1063 | G | C4-N9-C1' | 11.81 | 141.85 | 126.50 |
| 36 | 5 | 1063 | G | N7-C8-N9 | 11.64 | 118.92 | 113.10 |
| 36 | 5 | 1143 | A | O5'-P-OP2 | -11.32 | 95.52 | 105.70 |
| 36 | 1 | 1858 | A | C2-N3-C4 | 11.11 | 116.15 | 110.60 |
| 1 | 2 | 1025 | A | O5'-P-OP2 | -11.02 | 95.78 | 105.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|--------|-------------|----------|
| 36 | 1 | 340 | C | O5'-P-OP1 | -10.64 | 96.13 | 105.70 |
| 1 | 2 | 1754 | A | N7-C8-N9 | 10.55 | 119.08 | 113.80 |
| 36 | 1 | 1858 | A | N3-C4-C5 | -10.54 | 119.42 | 126.80 |
| 36 | 1 | 1581 | C | N1-C2-O2 | 10.32 | 125.09 | 118.90 |
| 36 | 5 | 1152 | G | C6-C5-N7 | 10.32 | 136.59 | 130.40 |
| 36 | 5 | 2609 | A | O5'-P-OP2 | -10.28 | 96.45 | 105.70 |
| 36 | 5 | 2548 | C | N1-C2-O2 | 10.25 | 125.05 | 118.90 |
| 36 | 5 | 420 | G | N3-C4-N9 | 9.96 | 131.98 | 126.00 |
| 36 | 5 | 439 | C | N1-C2-O2 | 9.95 | 124.87 | 118.90 |
| 36 | 5 | 1152 | G | C4-C5-C6 | -9.92 | 112.85 | 118.80 |
| 36 | 1 | 984 | G | N3-C4-N9 | 9.78 | 131.87 | 126.00 |
| 36 | 5 | 2269 | U | C5-C6-N1 | 9.68 | 127.54 | 122.70 |
| 1 | 6 | 1490 | C | C6-N1-C2 | -9.63 | 116.45 | 120.30 |
| 36 | 5 | 1495 | U | C6-N1-C2 | -9.63 | 115.22 | 121.00 |
| 36 | 5 | 1115 | G | C8-N9-C4 | -9.52 | 102.59 | 106.40 |
| 36 | 5 | 864 | G | N3-C4-C5 | -9.52 | 123.84 | 128.60 |
| 36 | 5 | 863 | C | C6-N1-C2 | -9.50 | 116.50 | 120.30 |
| 1 | 6 | 453 | U | C2-N1-C1' | 9.49 | 129.09 | 117.70 |
| 36 | 5 | 1308 | A | C8-N9-C4 | -9.48 | 102.01 | 105.80 |
| 1 | 2 | 620 | A | O5'-P-OP2 | -9.48 | 97.17 | 105.70 |
| 36 | 5 | 1063 | G | C8-N9-C4 | -9.48 | 102.61 | 106.40 |
| 36 | 1 | 1581 | C | C2-N1-C1' | 9.47 | 129.21 | 118.80 |
| 72 | O6 | 50 | LEU | C-N-CA | 9.45 | 145.33 | 121.70 |
| 36 | 5 | 2548 | C | N3-C2-O2 | -9.43 | 115.30 | 121.90 |
| 36 | 5 | 2931 | C | C6-N1-C2 | 9.42 | 124.07 | 120.30 |
| 36 | 1 | 644 | G | N3-C4-C5 | -9.40 | 123.90 | 128.60 |
| 36 | 5 | 1496 | C | C6-N1-C2 | -9.39 | 116.55 | 120.30 |
| 36 | 1 | 3217 | C | N1-C2-O2 | 9.37 | 124.52 | 118.90 |
| 1 | 2 | 1490 | C | O5'-P-OP1 | -9.35 | 97.28 | 105.70 |
| 36 | 5 | 1607 | U | P-O3'-C3' | 9.35 | 130.92 | 119.70 |
| 36 | 1 | 1866 | C | C2-N1-C1' | 9.35 | 129.08 | 118.80 |
| 36 | 1 | 2400 | G | C5-C6-O6 | -9.34 | 123.00 | 128.60 |
| 36 | 5 | 439 | C | N3-C2-O2 | -9.30 | 115.39 | 121.90 |
| 36 | 1 | 2145 | A | N1-C6-N6 | 9.20 | 124.12 | 118.60 |
| 36 | 1 | 1306 | G | N1-C6-O6 | 9.18 | 125.41 | 119.90 |
| 36 | 5 | 2572 | C | N1-C2-O2 | 9.15 | 124.39 | 118.90 |
| 36 | 5 | 1495 | U | C5-C6-N1 | 9.11 | 127.26 | 122.70 |
| 1 | 6 | 1467 | C | C6-N1-C2 | -9.10 | 116.66 | 120.30 |
| 36 | 1 | 2552 | C | O5'-P-OP1 | -9.05 | 97.55 | 105.70 |
| 36 | 1 | 1526 | U | O5'-P-OP2 | -8.99 | 97.61 | 105.70 |
| 36 | 1 | 1589 | A | C8-N9-C4 | 8.98 | 109.39 | 105.80 |
| 36 | 5 | 1496 | C | C2-N1-C1' | 8.96 | 128.65 | 118.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 1763 | U | C2-N1-C1' | 8.93 | 128.41 | 117.70 |
| 50 | m4 | 135 | LEU | CA-CB-CG | 8.90 | 135.77 | 115.30 |
| 36 | 1 | 2966 | G | N3-C4-N9 | 8.89 | 131.34 | 126.00 |
| 36 | 5 | 1556 | C | C2-N1-C1' | 8.87 | 128.56 | 118.80 |
| 36 | 1 | 635 | G | N3-C4-N9 | 8.84 | 131.30 | 126.00 |
| 36 | 5 | 1063 | G | C8-N9-C1' | -8.84 | 115.51 | 127.00 |
| 36 | 1 | 1444 | G | C5-C6-O6 | -8.84 | 123.30 | 128.60 |
| 36 | 1 | 1581 | C | N3-C2-O2 | -8.82 | 115.72 | 121.90 |
| 1 | 2 | 626 | U | C5-C6-N1 | 8.82 | 127.11 | 122.70 |
| 36 | 5 | 1482 | A | O5'-P-OP2 | -8.82 | 97.76 | 105.70 |
| 1 | 2 | 947 | U | C5-C6-N1 | 8.80 | 127.10 | 122.70 |
| 36 | 5 | 420 | G | N3-C4-C5 | -8.79 | 124.21 | 128.60 |
| 1 | 6 | 1756 | A | C4-C5-C6 | 8.76 | 121.38 | 117.00 |
| 36 | 1 | 2966 | G | N3-C4-C5 | -8.75 | 124.22 | 128.60 |
| 36 | 1 | 2400 | G | N1-C6-O6 | 8.75 | 125.15 | 119.90 |
| 36 | 1 | 3278 | C | C6-N1-C2 | -8.74 | 116.80 | 120.30 |
| 36 | 1 | 1192 | C | C5-C6-N1 | 8.74 | 125.37 | 121.00 |
| 36 | 1 | 1556 | C | C2-N1-C1' | 8.73 | 128.41 | 118.80 |
| 36 | 5 | 1531 | C | C6-N1-C2 | 8.70 | 123.78 | 120.30 |
| 36 | 1 | 1765 | U | O4'-C1'-N1 | 8.66 | 115.13 | 108.20 |
| 36 | 5 | 360 | G | N3-C4-C5 | -8.66 | 124.27 | 128.60 |
| 36 | 1 | 1759 | C | O5'-P-OP1 | 8.63 | 121.05 | 110.70 |
| 36 | 1 | 371 | G | N3-C4-C5 | 8.61 | 132.90 | 128.60 |
| 36 | 1 | 3217 | C | N3-C2-O2 | -8.59 | 115.89 | 121.90 |
| 36 | 1 | 884 | A | O5'-P-OP1 | -8.59 | 97.97 | 105.70 |
| 36 | 5 | 1196 | C | C6-N1-C2 | 8.57 | 123.73 | 120.30 |
| 36 | 5 | 1014 | U | C2-N1-C1' | 8.55 | 127.96 | 117.70 |
| 36 | 1 | 638 | C | O5'-P-OP2 | -8.54 | 98.01 | 105.70 |
| 36 | 5 | 635 | G | N9-C4-C5 | -8.53 | 101.99 | 105.40 |
| 36 | 5 | 1092 | C | C6-N1-C2 | -8.51 | 116.89 | 120.30 |
| 36 | 1 | 2696 | A | O5'-P-OP2 | -8.51 | 98.04 | 105.70 |
| 36 | 1 | 1444 | G | N1-C6-O6 | 8.50 | 125.00 | 119.90 |
| 1 | 6 | 1756 | A | C8-N9-C4 | -8.47 | 102.41 | 105.80 |
| 36 | 5 | 1115 | G | N7-C8-N9 | 8.47 | 117.34 | 113.10 |
| 36 | 5 | 1841 | A | O5'-P-OP1 | -8.46 | 98.08 | 105.70 |
| 36 | 5 | 1303 | A | O5'-P-OP1 | -8.46 | 98.08 | 105.70 |
| 36 | 1 | 2821 | C | N1-C2-O2 | 8.44 | 123.96 | 118.90 |
| 9 | s7 | 9 | LEU | CA-CB-CG | 8.43 | 134.68 | 115.30 |
| 36 | 1 | 635 | G | N9-C4-C5 | -8.42 | 102.03 | 105.40 |
| 1 | 2 | 1754 | A | C8-N9-C4 | -8.42 | 102.43 | 105.80 |
| 36 | 5 | 360 | G | N3-C4-N9 | 8.39 | 131.04 | 126.00 |
| 36 | 1 | 981 | U | C5-C6-N1 | 8.38 | 126.89 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1 | 2 | 309 | C | C6-N1-C2 | -8.35 | 116.96 | 120.30 |
| 36 | 1 | 875 | G | O5'-P-OP2 | -8.35 | 98.19 | 105.70 |
| 36 | 5 | 424 | G | O5'-P-OP1 | -8.35 | 98.19 | 105.70 |
| 36 | 5 | 2263 | C | O5'-P-OP1 | -8.34 | 98.20 | 105.70 |
| 36 | 5 | 2664 | C | C6-N1-C2 | -8.34 | 116.97 | 120.30 |
| 36 | 5 | 827 | A | O5'-P-OP1 | -8.33 | 98.20 | 105.70 |
| 36 | 5 | 2548 | C | C6-N1-C2 | -8.31 | 116.97 | 120.30 |
| 36 | 5 | 864 | G | N3-C4-N9 | 8.30 | 130.98 | 126.00 |
| 36 | 5 | 3270 | U | O5'-P-OP1 | -8.30 | 98.23 | 105.70 |
| 1 | 2 | 1560 | U | N3-C2-O2 | -8.29 | 116.40 | 122.20 |
| 36 | 1 | 919 | U | O5'-P-OP2 | -8.29 | 98.24 | 105.70 |
| 36 | 5 | 329 | U | C2-N1-C1' | 8.28 | 127.64 | 117.70 |
| 36 | 5 | 1437 | C | C5-C6-N1 | 8.28 | 125.14 | 121.00 |
| 36 | 1 | 1589 | A | N9-C4-C5 | -8.26 | 102.50 | 105.80 |
| 36 | 1 | 3278 | C | N1-C2-O2 | 8.25 | 123.85 | 118.90 |
| 36 | 1 | 1589 | A | N1-C6-N6 | 8.25 | 123.55 | 118.60 |
| 1 | 6 | 156 | A | C8-N9-C4 | 8.25 | 109.10 | 105.80 |
| 36 | 1 | 1495 | U | C4-C5-C6 | 8.24 | 124.65 | 119.70 |
| 36 | 5 | 3143 | C | C6-N1-C2 | 8.22 | 123.59 | 120.30 |
| 36 | 1 | 1000 | C | C6-N1-C2 | 8.21 | 123.58 | 120.30 |
| 36 | 1 | 1607 | U | P-O3'-C3' | 8.21 | 129.55 | 119.70 |
| 36 | 1 | 3278 | C | N3-C2-O2 | -8.21 | 116.16 | 121.90 |
| 36 | 1 | 2132 | C | C6-N1-C2 | -8.20 | 117.02 | 120.30 |
| 36 | 1 | 651 | G | C8-N9-C4 | -8.17 | 103.13 | 106.40 |
| 36 | 5 | 835 | G | N3-C4-C5 | 8.16 | 132.68 | 128.60 |
| 36 | 5 | 2572 | C | N3-C2-O2 | -8.16 | 116.19 | 121.90 |
| 36 | 5 | 3005 | A | C8-N9-C4 | -8.14 | 102.54 | 105.80 |
| 36 | 5 | 824 | C | N3-C2-O2 | -8.13 | 116.21 | 121.90 |
| 36 | 5 | 939 | U | C5-C6-N1 | 8.11 | 126.75 | 122.70 |
| 36 | 1 | 1556 | C | P-O3'-C3' | 8.10 | 129.42 | 119.70 |
| 9 | s7 | 118 | LEU | CA-CB-CG | 8.07 | 133.87 | 115.30 |
| 36 | 1 | 1493 | G | N3-C4-C5 | -8.07 | 124.56 | 128.60 |
| 1 | 6 | 1485 | C | C6-N1-C2 | -8.07 | 117.07 | 120.30 |
| 36 | 5 | 3129 | A | C8-N9-C4 | 8.07 | 109.03 | 105.80 |
| 38 | 4 | 17 | A | O5'-P-OP2 | -8.06 | 98.44 | 105.70 |
| 36 | 5 | 1437 | C | N3-C4-C5 | -8.05 | 118.68 | 121.90 |
| 36 | 1 | 863 | C | C5-C6-N1 | 8.04 | 125.02 | 121.00 |
| 36 | 1 | 1866 | C | C6-N1-C1' | -8.04 | 111.15 | 120.80 |
| 36 | 5 | 368 | G | C8-N9-C4 | 8.04 | 109.62 | 106.40 |
| 36 | 5 | 2608 | G | C8-N9-C4 | 8.03 | 109.61 | 106.40 |
| 60 | n4 | 96 | LEU | C-N-CA | 8.02 | 141.75 | 121.70 |
| 1 | 6 | 1657 | U | N3-C2-O2 | 8.01 | 127.81 | 122.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 5 | 3022 | G | O4'-C1'-N9 | 8.01 | 114.61 | 108.20 |
| 1 | 2 | 1389 | C | N3-C2-O2 | -8.01 | 116.29 | 121.90 |
| 38 | 8 | 14 | C | C6-N1-C2 | 8.01 | 123.50 | 120.30 |
| 36 | 1 | 2392 | C | C5-C6-N1 | -8.00 | 117.00 | 121.00 |
| 1 | 2 | 934 | C | C2-N1-C1' | 7.99 | 127.59 | 118.80 |
| 36 | 1 | 1415 | U | C5-C4-O4 | 7.98 | 130.69 | 125.90 |
| 38 | 4 | 126 | A | N1-C2-N3 | 7.97 | 133.28 | 129.30 |
| 1 | 6 | 1756 | A | N3-C4-C5 | -7.94 | 121.24 | 126.80 |
| 36 | 5 | 1445 | U | O5'-P-OP1 | -7.94 | 98.56 | 105.70 |
| 36 | 5 | 402 | A | O5'-P-OP1 | -7.94 | 98.56 | 105.70 |
| 36 | 1 | 315 | C | C6-N1-C2 | -7.92 | 117.13 | 120.30 |
| 36 | 5 | 1772 | U | C5-C6-N1 | -7.92 | 118.74 | 122.70 |
| 36 | 1 | 3137 | C | C6-N1-C2 | -7.92 | 117.13 | 120.30 |
| 36 | 1 | 1639 | C | C5-C6-N1 | 7.92 | 124.96 | 121.00 |
| 36 | 1 | 1858 | A | N3-C4-N9 | 7.91 | 133.73 | 127.40 |
| 1 | 2 | 1754 | A | C5-N7-C8 | -7.89 | 99.95 | 103.90 |
| 36 | 1 | 1512 | U | C6-N1-C2 | -7.87 | 116.28 | 121.00 |
| 1 | 6 | 1606 | C | C6-N1-C2 | -7.86 | 117.16 | 120.30 |
| 36 | 5 | 27 | C | O5'-P-OP1 | -7.86 | 98.62 | 105.70 |
| 36 | 1 | 984 | G | N3-C4-C5 | -7.86 | 124.67 | 128.60 |
| 36 | 5 | 2400 | G | OP2-P-O3' | 7.86 | 122.49 | 105.20 |
| 36 | 1 | 1329 | U | P-O3'-C3' | 7.85 | 129.12 | 119.70 |
| 1 | 2 | 1389 | C | C6-N1-C2 | -7.84 | 117.16 | 120.30 |
| 36 | 5 | 1592 | G | C5-C6-O6 | -7.84 | 123.90 | 128.60 |
| 36 | 5 | 1585 | C | C6-N1-C2 | -7.83 | 117.17 | 120.30 |
| 36 | 1 | 3228 | C | C4-C5-C6 | 7.83 | 121.31 | 117.40 |
| 38 | 8 | 100 | U | C2-N1-C1' | 7.83 | 127.09 | 117.70 |
| 37 | 3 | 47 | C | C6-N1-C2 | -7.83 | 117.17 | 120.30 |
| 1 | 6 | 1274 | C | C2-N1-C1' | 7.83 | 127.41 | 118.80 |
| 36 | 1 | 873 | C | P-O3'-C3' | 7.82 | 129.09 | 119.70 |
| 36 | 1 | 2145 | A | N9-C4-C5 | -7.82 | 102.67 | 105.80 |
| 36 | 1 | 2616 | C | C6-N1-C2 | 7.82 | 123.43 | 120.30 |
| 36 | 5 | 2996 | U | C5-C6-N1 | -7.81 | 118.80 | 122.70 |
| 36 | 1 | 55 | G | C8-N9-C4 | 7.80 | 109.52 | 106.40 |
| 36 | 1 | 312 | C | C6-N1-C2 | -7.80 | 117.18 | 120.30 |
| 1 | 6 | 1653 | C | C6-N1-C2 | -7.78 | 117.19 | 120.30 |
| 36 | 5 | 2283 | G | O5'-P-OP2 | -7.76 | 98.71 | 105.70 |
| 36 | 5 | 835 | G | N3-C4-N9 | -7.74 | 121.36 | 126.00 |
| 36 | 1 | 3367 | C | C6-N1-C2 | 7.70 | 123.38 | 120.30 |
| 1 | 2 | 934 | C | N1-C2-O2 | 7.70 | 123.52 | 118.90 |
| 36 | 5 | 2988 | C | C2-N1-C1' | 7.68 | 127.25 | 118.80 |
| 1 | 6 | 1756 | A | N7-C8-N9 | 7.67 | 117.64 | 113.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 2967 | A | N1-C6-N6 | 7.67 | 123.20 | 118.60 |
| 36 | 5 | 1516 | C | C6-N1-C2 | 7.66 | 123.36 | 120.30 |
| 36 | 1 | 2568 | C | C2-N1-C1' | 7.64 | 127.21 | 118.80 |
| 1 | 6 | 1463 | C | C6-N1-C2 | 7.64 | 123.36 | 120.30 |
| 36 | 5 | 924 | G | O5'-P-OP1 | -7.63 | 98.83 | 105.70 |
| 36 | 5 | 2906 | C | C6-N1-C2 | -7.62 | 117.25 | 120.30 |
| 36 | 5 | 1609 | C | C6-N1-C2 | 7.62 | 123.35 | 120.30 |
| 36 | 1 | 644 | G | O5'-P-OP2 | 7.62 | 119.84 | 110.70 |
| 36 | 1 | 3217 | C | C2-N1-C1' | 7.61 | 127.17 | 118.80 |
| 38 | 8 | 94 | C | C6-N1-C2 | 7.59 | 123.34 | 120.30 |
| 36 | 5 | 3278 | C | N1-C2-O2 | 7.58 | 123.45 | 118.90 |
| 36 | 5 | 1556 | C | C6-N1-C1' | -7.58 | 111.71 | 120.80 |
| 1 | 2 | 1752 | U | C5-C6-N1 | 7.57 | 126.49 | 122.70 |
| 36 | 1 | 2132 | C | C5-C6-N1 | 7.57 | 124.79 | 121.00 |
| 36 | 5 | 1495 | U | C2-N1-C1' | 7.57 | 126.79 | 117.70 |
| 36 | 5 | 2548 | C | C2-N1-C1' | 7.57 | 127.13 | 118.80 |
| 36 | 5 | 2281 | A | O4'-C1'-N9 | 7.56 | 114.25 | 108.20 |
| 36 | 5 | 2572 | C | C2-N1-C1' | 7.56 | 127.12 | 118.80 |
| 36 | 5 | 3269 | U | C5-C6-N1 | 7.56 | 126.48 | 122.70 |
| 36 | 1 | 2145 | A | C4-C5-N7 | 7.54 | 114.47 | 110.70 |
| 36 | 1 | 1493 | G | C4-N9-C1' | 7.54 | 136.31 | 126.50 |
| 36 | 5 | 1152 | G | N1-C2-N2 | 7.53 | 122.98 | 116.20 |
| 1 | 6 | 1654 | G | C4-N9-C1' | 7.53 | 136.29 | 126.50 |
| 36 | 5 | 1593 | A | C8-N9-C4 | -7.53 | 102.79 | 105.80 |
| 36 | 5 | 2837 | A | C8-N9-C4 | 7.53 | 108.81 | 105.80 |
| 36 | 5 | 406 | G | O4'-C1'-N9 | 7.52 | 114.22 | 108.20 |
| 1 | 2 | 1028 | C | C6-N1-C2 | 7.52 | 123.31 | 120.30 |
| 38 | 4 | 119 | C | C5-C6-N1 | 7.52 | 124.76 | 121.00 |
| 1 | 2 | 1280 | C | C6-N1-C2 | -7.52 | 117.29 | 120.30 |
| 36 | 5 | 1149 | G | N3-C4-N9 | 7.52 | 130.51 | 126.00 |
| 1 | 2 | 1389 | C | N1-C2-O2 | 7.51 | 123.41 | 118.90 |
| 36 | 1 | 1589 | A | C5-C6-N6 | -7.51 | 117.69 | 123.70 |
| 36 | 1 | 2407 | C | C2-N1-C1' | 7.50 | 127.05 | 118.80 |
| 36 | 5 | 635 | G | C5-C6-O6 | -7.50 | 124.10 | 128.60 |
| 36 | 1 | 3382 | U | N1-C2-O2 | 7.49 | 128.04 | 122.80 |
| 36 | 5 | 1561 | G | O4'-C1'-N9 | 7.48 | 114.19 | 108.20 |
| 36 | 5 | 1063 | G | O4'-C1'-N9 | 7.47 | 114.18 | 108.20 |
| 1 | 6 | 813 | U | N1-C2-O2 | 7.47 | 128.03 | 122.80 |
| 36 | 1 | 822 | G | O5'-P-OP2 | -7.47 | 98.98 | 105.70 |
| 36 | 5 | 2381 | G | O5'-P-OP2 | -7.47 | 98.98 | 105.70 |
| 39 | 12 | 246 | LEU | CA-CB-CG | 7.46 | 132.45 | 115.30 |
| 1 | 2 | 1751 | C | C6-N1-C2 | 7.45 | 123.28 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 205 | C | C6-N1-C2 | 7.45 | 123.28 | 120.30 |
| 36 | 5 | 939 | U | N3-C2-O2 | -7.45 | 116.98 | 122.20 |
| 36 | 1 | 2922 | G | N9-C4-C5 | -7.45 | 102.42 | 105.40 |
| 38 | 8 | 9 | A | C8-N9-C4 | 7.45 | 108.78 | 105.80 |
| 36 | 1 | 591 | G | N1-C6-O6 | -7.44 | 115.44 | 119.90 |
| 36 | 1 | 959 | C | C6-N1-C2 | 7.44 | 123.28 | 120.30 |
| 36 | 1 | 1639 | C | C6-N1-C2 | -7.42 | 117.33 | 120.30 |
| 36 | 5 | 1063 | G | N3-C4-C5 | -7.41 | 124.89 | 128.60 |
| 4 | S2 | 113 | LEU | CA-CB-CG | 7.41 | 132.33 | 115.30 |
| 37 | 7 | 69 | C | C6-N1-C2 | -7.41 | 117.34 | 120.30 |
| 36 | 5 | 1312 | C | C6-N1-C2 | -7.40 | 117.34 | 120.30 |
| 36 | 5 | 1866 | C | C2-N1-C1' | 7.39 | 126.93 | 118.80 |
| 36 | 1 | 1086 | C | C6-N1-C2 | -7.39 | 117.34 | 120.30 |
| 37 | 3 | 85 | G | N3-C4-C5 | 7.39 | 132.29 | 128.60 |
| 36 | 5 | 426 | G | N3-C4-N9 | -7.38 | 121.57 | 126.00 |
| 36 | 1 | 1541 | G | N3-C2-N2 | -7.38 | 114.74 | 119.90 |
| 36 | 1 | 2403 | G | C6-C5-N7 | -7.37 | 125.98 | 130.40 |
| 36 | 5 | 297 | G | C4-N9-C1' | 7.37 | 136.08 | 126.50 |
| 36 | 5 | 432 | G | N1-C6-O6 | 7.37 | 124.32 | 119.90 |
| 1 | 6 | 1591 | C | C6-N1-C2 | -7.36 | 117.36 | 120.30 |
| 36 | 5 | 726 | G | N7-C8-N9 | 7.35 | 116.78 | 113.10 |
| 1 | 6 | 1654 | G | N3-C4-C5 | -7.34 | 124.93 | 128.60 |
| 1 | 6 | 572 | C | C6-N1-C2 | -7.34 | 117.36 | 120.30 |
| 36 | 1 | 2407 | C | C5-C6-N1 | 7.33 | 124.67 | 121.00 |
| 36 | 1 | 1531 | C | C6-N1-C2 | 7.33 | 123.23 | 120.30 |
| 1 | 6 | 1137 | A | C8-N9-C4 | 7.33 | 108.73 | 105.80 |
| 62 | n6 | 76 | LEU | CA-CB-CG | 7.33 | 132.15 | 115.30 |
| 36 | 1 | 2427 | U | O5'-P-OP2 | -7.31 | 99.12 | 105.70 |
| 36 | 5 | 19 | U | C2-N1-C1' | -7.31 | 108.93 | 117.70 |
| 36 | 1 | 98 | G | N3-C4-N9 | 7.30 | 130.38 | 126.00 |
| 1 | 2 | 577 | G | N1-C6-O6 | 7.30 | 124.28 | 119.90 |
| 36 | 1 | 371 | G | N3-C4-N9 | -7.30 | 121.62 | 126.00 |
| 1 | 2 | 145 | A | N1-C6-N6 | -7.29 | 114.22 | 118.60 |
| 36 | 5 | 92 | G | C8-N9-C4 | 7.29 | 109.31 | 106.40 |
| 36 | 5 | 1633 | C | C2-N1-C1' | 7.29 | 126.81 | 118.80 |
| 36 | 5 | 1389 | G | O5'-P-OP1 | -7.28 | 99.15 | 105.70 |
| 36 | 1 | 1001 | G | N3-C4-N9 | 7.28 | 130.37 | 126.00 |
| 36 | 5 | 1348 | U | C6-N1-C2 | -7.28 | 116.64 | 121.00 |
| 36 | 1 | 1001 | G | N3-C4-C5 | -7.27 | 124.96 | 128.60 |
| 36 | 1 | 2980 | U | O5'-P-OP2 | -7.27 | 99.15 | 105.70 |
| 36 | 1 | 406 | G | O4'-C1'-N9 | 7.27 | 114.02 | 108.20 |
| 36 | 5 | 354 | U | C2-N1-C1' | 7.27 | 126.42 | 117.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 36 | 5 | 3278 | C | N3-C2-O2 | -7.27 | 116.81 | 121.90 |
| 36 | 5 | 510 | G | N1-C6-O6 | 7.26 | 124.26 | 119.90 |
| 36 | 1 | 3278 | C | C2-N1-C1' | 7.26 | 126.79 | 118.80 |
| 1 | 6 | 156 | A | N9-C4-C5 | -7.26 | 102.89 | 105.80 |
| 36 | 1 | 1115 | G | C4-C5-N7 | 7.26 | 113.70 | 110.80 |
| 36 | 1 | 1886 | A | N1-C6-N6 | -7.25 | 114.25 | 118.60 |
| 38 | 4 | 14 | C | C6-N1-C2 | 7.25 | 123.20 | 120.30 |
| 1 | 2 | 1157 | A | C8-N9-C4 | -7.24 | 102.90 | 105.80 |
| 1 | 6 | 1389 | C | C2-N1-C1' | 7.23 | 126.75 | 118.80 |
| 36 | 1 | 2549 | G | N3-C4-N9 | -7.22 | 121.67 | 126.00 |
| 36 | 5 | 3217 | C | C6-N1-C2 | 7.22 | 123.19 | 120.30 |
| 1 | 6 | 1657 | U | N1-C2-O2 | -7.21 | 117.75 | 122.80 |
| 36 | 5 | 1014 | U | C5-C6-N1 | 7.21 | 126.31 | 122.70 |
| 36 | 5 | 939 | U | C2-N1-C1' | 7.21 | 126.35 | 117.70 |
| 36 | 5 | 3269 | U | P-O3'-C3' | 7.20 | 128.34 | 119.70 |
| 36 | 1 | 1047 | A | O5'-P-OP2 | -7.20 | 99.22 | 105.70 |
| 36 | 5 | 345 | G | N3-C4-N9 | 7.19 | 130.31 | 126.00 |
| 36 | 1 | 1773 | C | C6-N1-C2 | 7.19 | 123.17 | 120.30 |
| 36 | 5 | 3078 | U | N3-C2-O2 | -7.18 | 117.18 | 122.20 |
| 1 | 6 | 1003 | A | C8-N9-C4 | 7.17 | 108.67 | 105.80 |
| 36 | 5 | 518 | G | N3-C4-C5 | -7.17 | 125.01 | 128.60 |
| 36 | 5 | 3338 | C | C6-N1-C2 | 7.17 | 123.17 | 120.30 |
| 36 | 1 | 1780 | G | C4-N9-C1' | 7.17 | 135.82 | 126.50 |
| 36 | 5 | 676 | G | C4-N9-C1' | 7.17 | 135.82 | 126.50 |
| 36 | 5 | 1151 | U | N3-C4-C5 | -7.17 | 110.30 | 114.60 |
| 36 | 1 | 3139 | A | N7-C8-N9 | 7.16 | 117.38 | 113.80 |
| 36 | 5 | 927 | C | C6-N1-C2 | -7.16 | 117.44 | 120.30 |
| 36 | 1 | 1525 | G | C4-N9-C1' | 7.15 | 135.80 | 126.50 |
| 36 | 1 | 2966 | G | C8-N9-C1' | -7.15 | 117.70 | 127.00 |
| 36 | 1 | 1859 | A | OP1-P-O3' | 7.14 | 120.91 | 105.20 |
| 36 | 1 | 2762 | A | N1-C6-N6 | -7.13 | 114.32 | 118.60 |
| 36 | 5 | 518 | G | C4-N9-C1' | 7.13 | 135.77 | 126.50 |
| 38 | 4 | 102 | U | O5'-P-OP2 | -7.12 | 99.29 | 105.70 |
| 36 | 5 | 2988 | C | C6-N1-C2 | -7.12 | 117.45 | 120.30 |
| 36 | 1 | 877 | C | C6-N1-C2 | 7.12 | 123.15 | 120.30 |
| 36 | 1 | 1303 | A | C8-N9-C4 | 7.10 | 108.64 | 105.80 |
| 36 | 1 | 2118 | C | C2-N1-C1' | 7.10 | 126.61 | 118.80 |
| 36 | 1 | 729 | C | C6-N1-C2 | -7.10 | 117.46 | 120.30 |
| 36 | 1 | 635 | G | C6-C5-N7 | -7.10 | 126.14 | 130.40 |
| 36 | 1 | 1858 | A | C8-N9-C4 | -7.10 | 102.96 | 105.80 |
| 36 | 5 | 922 | U | C5-C6-N1 | -7.09 | 119.15 | 122.70 |
| 36 | 1 | 1134 | G | N9-C4-C5 | 7.09 | 108.24 | 105.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 5 | 1909 | A | C8-N9-C4 | 7.09 | 108.64 | 105.80 |
| 1 | 6 | 194 | U | C2-N1-C1' | 7.08 | 126.20 | 117.70 |
| 36 | 1 | 1585 | C | C6-N1-C2 | -7.08 | 117.47 | 120.30 |
| 36 | 5 | 939 | U | C6-N1-C2 | -7.08 | 116.75 | 121.00 |
| 36 | 5 | 1455 | U | C6-N1-C2 | 7.07 | 125.25 | 121.00 |
| 36 | 1 | 718 | G | N3-C4-C5 | 7.07 | 132.13 | 128.60 |
| 36 | 5 | 635 | G | C4-C5-N7 | 7.07 | 113.63 | 110.80 |
| 38 | 8 | 137 | C | C6-N1-C2 | 7.07 | 123.13 | 120.30 |
| 36 | 5 | 2572 | C | C6-N1-C2 | -7.06 | 117.48 | 120.30 |
| 36 | 5 | 2996 | U | C6-N1-C2 | 7.05 | 125.23 | 121.00 |
| 36 | 1 | 2760 | C | C6-N1-C2 | 7.04 | 123.12 | 120.30 |
| 36 | 5 | 1556 | C | N1-C2-O2 | 7.04 | 123.12 | 118.90 |
| 1 | 2 | 1291 | G | N3-C4-N9 | -7.04 | 121.78 | 126.00 |
| 1 | 6 | 453 | U | C6-N1-C1' | -7.04 | 111.35 | 121.20 |
| 36 | 5 | 676 | G | N3-C4-N9 | 7.04 | 130.22 | 126.00 |
| 36 | 5 | 3278 | C | C2-N1-C1' | 7.02 | 126.53 | 118.80 |
| 36 | 5 | 635 | G | C8-N9-C4 | 7.02 | 109.21 | 106.40 |
| 1 | 2 | 507 | U | N3-C2-O2 | -7.01 | 117.29 | 122.20 |
| 36 | 1 | 1907 | C | C6-N1-C2 | -7.01 | 117.49 | 120.30 |
| 36 | 5 | 1897 | G | N9-C4-C5 | -7.01 | 102.59 | 105.40 |
| 1 | 2 | 581 | U | C2-N1-C1' | -7.01 | 109.28 | 117.70 |
| 36 | 1 | 2966 | G | C4-N9-C1' | 7.01 | 135.61 | 126.50 |
| 36 | 5 | 1329 | U | P-O3'-C3' | 7.01 | 128.11 | 119.70 |
| 36 | 5 | 909 | G | N3-C4-N9 | 7.01 | 130.21 | 126.00 |
| 36 | 1 | 1807 | G | C8-N9-C4 | -7.01 | 103.60 | 106.40 |
| 36 | 1 | 546 | C | C2-N1-C1' | 7.00 | 126.50 | 118.80 |
| 36 | 1 | 639 | G | C8-N9-C4 | 7.00 | 109.20 | 106.40 |
| 36 | 1 | 1820 | U | P-O3'-C3' | 7.00 | 128.10 | 119.70 |
| 36 | 5 | 1527 | C | N3-C2-O2 | -6.99 | 117.01 | 121.90 |
| 1 | 6 | 194 | U | N3-C2-O2 | -6.99 | 117.31 | 122.20 |
| 1 | 2 | 863 | A | O4'-C1'-N9 | 6.98 | 113.79 | 108.20 |
| 36 | 1 | 2827 | U | C2-N1-C1' | -6.98 | 109.32 | 117.70 |
| 36 | 5 | 1762 | C | C6-N1-C2 | -6.97 | 117.51 | 120.30 |
| 36 | 5 | 283 | G | C4-N9-C1' | 6.97 | 135.56 | 126.50 |
| 36 | 5 | 2978 | U | O4'-C1'-N1 | 6.97 | 113.77 | 108.20 |
| 36 | 1 | 1493 | G | N3-C4-N9 | 6.96 | 130.18 | 126.00 |
| 36 | 5 | 2256 | A | C4-C5-C6 | -6.96 | 113.52 | 117.00 |
| 36 | 5 | 639 | G | C8-N9-C4 | 6.96 | 109.18 | 106.40 |
| 36 | 5 | 2988 | C | N1-C2-O2 | 6.96 | 123.07 | 118.90 |
| 13 | c1 | 5 | LEU | CA-CB-CG | 6.96 | 131.30 | 115.30 |
| 36 | 5 | 2138 | A | C8-N9-C4 | 6.95 | 108.58 | 105.80 |
| 36 | 5 | 510 | G | C4-C5-N7 | 6.95 | 113.58 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 36 | 5 | 1146 | C | C6-N1-C2 | 6.95 | 123.08 | 120.30 |
| 37 | 3 | 58 | C | C6-N1-C2 | -6.94 | 117.52 | 120.30 |
| 38 | 8 | 75 | G | C4-N9-C1' | -6.93 | 117.48 | 126.50 |
| 36 | 5 | 2772 | C | P-O3'-C3' | 6.93 | 128.02 | 119.70 |
| 36 | 1 | 2311 | G | O5'-P-OP1 | -6.93 | 99.46 | 105.70 |
| 36 | 1 | 3291 | G | N3-C4-N9 | -6.92 | 121.85 | 126.00 |
| 36 | 1 | 1389 | G | C8-N9-C4 | 6.92 | 109.17 | 106.40 |
| 36 | 1 | 2306 | C | C2-N1-C1' | 6.92 | 126.41 | 118.80 |
| 1 | 2 | 784 | C | C5-C6-N1 | 6.91 | 124.45 | 121.00 |
| 36 | 1 | 2541 | U | C2-N1-C1' | 6.91 | 125.99 | 117.70 |
| 36 | 5 | 868 | C | N1-C2-O2 | -6.91 | 114.76 | 118.90 |
| 36 | 1 | 1788 | C | C5-C6-N1 | 6.90 | 124.45 | 121.00 |
| 1 | 6 | 1568 | C | C6-N1-C2 | -6.90 | 117.54 | 120.30 |
| 36 | 5 | 824 | C | N1-C2-O2 | 6.90 | 123.04 | 118.90 |
| 36 | 5 | 79 | U | C5-C6-N1 | 6.89 | 126.15 | 122.70 |
| 36 | 5 | 1822 | C | C6-N1-C2 | -6.89 | 117.54 | 120.30 |
| 36 | 5 | 297 | G | C8-N9-C1' | -6.89 | 118.04 | 127.00 |
| 38 | 8 | 113 | U | C2-N1-C1' | 6.88 | 125.96 | 117.70 |
| 36 | 1 | 2145 | A | C5-N7-C8 | -6.88 | 100.46 | 103.90 |
| 36 | 5 | 1308 | A | N9-C4-C5 | 6.88 | 108.55 | 105.80 |
| 36 | 1 | 1017 | C | C6-N1-C2 | -6.87 | 117.55 | 120.30 |
| 36 | 5 | 1897 | G | C5-C6-O6 | -6.87 | 124.48 | 128.60 |
| 36 | 1 | 639 | G | N9-C4-C5 | -6.87 | 102.65 | 105.40 |
| 36 | 1 | 1740 | U | C5-C6-N1 | -6.87 | 119.27 | 122.70 |
| 45 | 18 | 69 | LEU | CA-CB-CG | 6.87 | 131.10 | 115.30 |
| 1 | 2 | 1258 | U | N3-C2-O2 | -6.85 | 117.41 | 122.20 |
| 36 | 5 | 1081 | U | P-O3'-C3' | 6.84 | 127.91 | 119.70 |
| 1 | 2 | 1644 | C | C6-N1-C2 | -6.84 | 117.56 | 120.30 |
| 36 | 1 | 91 | G | N3-C4-C5 | -6.84 | 125.18 | 128.60 |
| 36 | 5 | 824 | C | OP1-P-O3' | 6.84 | 120.25 | 105.20 |
| 36 | 1 | 2971 | A | C8-N9-C4 | 6.84 | 108.53 | 105.80 |
| 36 | 5 | 1176 | C | C6-N1-C2 | 6.83 | 123.03 | 120.30 |
| 36 | 5 | 297 | G | N3-C4-N9 | 6.83 | 130.10 | 126.00 |
| 1 | 2 | 192 | U | C2-N1-C1' | 6.83 | 125.90 | 117.70 |
| 36 | 5 | 1580 | A | N7-C8-N9 | 6.83 | 117.22 | 113.80 |
| 36 | 5 | 2842 | U | C2-N1-C1' | 6.83 | 125.90 | 117.70 |
| 36 | 5 | 2912 | G | N3-C4-C5 | 6.82 | 132.01 | 128.60 |
| 1 | 6 | 1749 | A | C8-N9-C4 | 6.82 | 108.53 | 105.80 |
| 36 | 1 | 824 | C | C6-N1-C2 | -6.81 | 117.58 | 120.30 |
| 36 | 1 | 219 | A | P-O3'-C3' | 6.81 | 127.87 | 119.70 |
| 36 | 5 | 518 | G | C8-N9-C4 | -6.80 | 103.68 | 106.40 |
| 1 | 6 | 321 | C | P-O3'-C3' | 6.80 | 127.86 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 1604 | G | C4-N9-C1' | 6.80 | 135.34 | 126.50 |
| 36 | 5 | 1496 | C | C5-C6-N1 | 6.80 | 124.40 | 121.00 |
| 36 | 5 | 1445 | U | C2-N1-C1' | -6.80 | 109.54 | 117.70 |
| 36 | 1 | 2407 | C | C6-N1-C2 | -6.80 | 117.58 | 120.30 |
| 36 | 5 | 510 | G | C5-C6-O6 | -6.79 | 124.52 | 128.60 |
| 36 | 5 | 3299 | A | O5'-P-OP2 | -6.79 | 99.59 | 105.70 |
| 36 | 1 | 1556 | C | C6-N1-C1' | -6.78 | 112.67 | 120.80 |
| 36 | 1 | 3382 | U | C2-N1-C1' | 6.77 | 125.83 | 117.70 |
| 36 | 1 | 1307 | G | P-O3'-C3' | 6.77 | 127.83 | 119.70 |
| 36 | 5 | 345 | G | C6-C5-N7 | -6.77 | 126.34 | 130.40 |
| 36 | 5 | 2988 | C | N3-C2-O2 | -6.77 | 117.16 | 121.90 |
| 36 | 1 | 2633 | U | O5'-P-OP2 | 6.77 | 118.82 | 110.70 |
| 36 | 1 | 2371 | G | C8-N9-C4 | 6.76 | 109.10 | 106.40 |
| 36 | 5 | 3065 | G | N3-C4-C5 | 6.76 | 131.98 | 128.60 |
| 36 | 5 | 394 | G | N3-C4-C5 | 6.76 | 131.98 | 128.60 |
| 36 | 1 | 2971 | A | N9-C4-C5 | -6.75 | 103.10 | 105.80 |
| 37 | 3 | 83 | U | C2-N1-C1' | -6.75 | 109.60 | 117.70 |
| 1 | 2 | 783 | G | C5-C6-O6 | -6.75 | 124.55 | 128.60 |
| 37 | 3 | 89 | G | C8-N9-C4 | 6.75 | 109.10 | 106.40 |
| 36 | 5 | 2355 | G | N1-C6-O6 | 6.75 | 123.95 | 119.90 |
| 36 | 5 | 3278 | C | C6-N1-C2 | -6.74 | 117.60 | 120.30 |
| 1 | 2 | 39 | A | O4'-C1'-N9 | 6.73 | 113.58 | 108.20 |
| 36 | 1 | 1103 | A | P-O3'-C3' | 6.73 | 127.77 | 119.70 |
| 36 | 5 | 2138 | A | N1-C6-N6 | 6.72 | 122.64 | 118.60 |
| 36 | 1 | 2403 | G | C8-N9-C4 | -6.72 | 103.71 | 106.40 |
| 36 | 1 | 2335 | G | N3-C4-C5 | -6.72 | 125.24 | 128.60 |
| 1 | 6 | 103 | A | P-O3'-C3' | 6.72 | 127.76 | 119.70 |
| 35 | SM | 167 | PRO | N-CA-CB | 6.71 | 111.36 | 103.30 |
| 36 | 1 | 1742 | U | C5-C6-N1 | 6.71 | 126.06 | 122.70 |
| 36 | 1 | 116 | A | C8-N9-C4 | -6.71 | 103.12 | 105.80 |
| 36 | 1 | 2808 | A | O4'-C1'-N9 | -6.71 | 102.83 | 108.20 |
| 36 | 1 | 1472 | U | O5'-P-OP2 | -6.70 | 99.67 | 105.70 |
| 36 | 1 | 2221 | G | N3-C4-N9 | -6.70 | 121.98 | 126.00 |
| 1 | 2 | 1399 | C | N1-C2-O2 | 6.70 | 122.92 | 118.90 |
| 1 | 2 | 937 | C | C6-N1-C2 | -6.70 | 117.62 | 120.30 |
| 36 | 5 | 1429 | G | N3-C4-N9 | 6.70 | 130.02 | 126.00 |
| 1 | 6 | 156 | A | N1-C6-N6 | 6.69 | 122.62 | 118.60 |
| 36 | 1 | 1604 | G | N3-C4-C5 | -6.69 | 125.25 | 128.60 |
| 36 | 1 | 2871 | G | N3-C4-N9 | 6.69 | 130.01 | 126.00 |
| 36 | 1 | 2359 | C | C6-N1-C2 | -6.69 | 117.63 | 120.30 |
| 36 | 5 | 1174 | G | C4-N9-C1' | 6.68 | 135.19 | 126.50 |
| 36 | 1 | 1306 | G | C6-C5-N7 | -6.68 | 126.39 | 130.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1 | 2 | 1258 | U | C4-C5-C6 | 6.68 | 123.71 | 119.70 |
| 36 | 1 | 1495 | U | C5-C6-N1 | -6.68 | 119.36 | 122.70 |
| 36 | 1 | 1201 | C | C6-N1-C2 | -6.67 | 117.63 | 120.30 |
| 52 | M6 | 15 | LEU | CA-CB-CG | -6.67 | 99.96 | 115.30 |
| 1 | 2 | 1490 | C | C2-N1-C1' | 6.67 | 126.14 | 118.80 |
| 36 | 1 | 916 | G | N3-C4-C5 | -6.66 | 125.27 | 128.60 |
| 36 | 5 | 240 | U | C5-C6-N1 | 6.66 | 126.03 | 122.70 |
| 36 | 1 | 2335 | G | C8-N9-C4 | -6.65 | 103.74 | 106.40 |
| 1 | 6 | 813 | U | N3-C2-O2 | -6.65 | 117.54 | 122.20 |
| 36 | 5 | 1416 | C | N1-C2-O2 | 6.65 | 122.89 | 118.90 |
| 37 | 3 | 18 | C | C5-C6-N1 | 6.64 | 124.32 | 121.00 |
| 1 | 2 | 577 | G | C4-C5-N7 | 6.64 | 113.46 | 110.80 |
| 36 | 5 | 2138 | A | N9-C4-C5 | -6.64 | 103.14 | 105.80 |
| 36 | 5 | 2966 | G | N3-C4-C5 | -6.64 | 125.28 | 128.60 |
| 36 | 5 | 525 | C | C6-N1-C2 | -6.64 | 117.64 | 120.30 |
| 36 | 5 | 1332 | A | C8-N9-C4 | -6.64 | 103.14 | 105.80 |
| 38 | 4 | 24 | G | N3-C4-C5 | 6.64 | 131.92 | 128.60 |
| 1 | 2 | 1022 | C | C6-N1-C2 | 6.63 | 122.95 | 120.30 |
| 36 | 1 | 637 | C | P-O3'-C3' | 6.63 | 127.66 | 119.70 |
| 1 | 2 | 1291 | G | N3-C4-C5 | 6.63 | 131.91 | 128.60 |
| 36 | 5 | 1389 | G | N3-C4-N9 | 6.62 | 129.97 | 126.00 |
| 36 | 5 | 2878 | G | N3-C4-C5 | -6.62 | 125.29 | 128.60 |
| 38 | 4 | 117 | C | C6-N1-C2 | 6.62 | 122.95 | 120.30 |
| 1 | 6 | 1568 | C | P-O3'-C3' | 6.62 | 127.64 | 119.70 |
| 1 | 6 | 194 | U | N1-C2-O2 | 6.61 | 127.43 | 122.80 |
| 36 | 5 | 329 | U | C6-N1-C1' | -6.61 | 111.94 | 121.20 |
| 36 | 5 | 1848 | G | O5'-P-OP2 | -6.61 | 99.75 | 105.70 |
| 36 | 1 | 1581 | C | C6-N1-C1' | -6.61 | 112.87 | 120.80 |
| 36 | 1 | 3354 | U | C2-N1-C1' | 6.61 | 125.63 | 117.70 |
| 36 | 5 | 282 | G | P-O3'-C3' | 6.61 | 127.63 | 119.70 |
| 36 | 5 | 1308 | A | N7-C8-N9 | 6.61 | 117.10 | 113.80 |
| 36 | 5 | 1902 | G | C6-C5-N7 | -6.61 | 126.44 | 130.40 |
| 36 | 1 | 3115 | C | C6-N1-C2 | 6.60 | 122.94 | 120.30 |
| 36 | 5 | 240 | U | C2-N1-C1' | 6.60 | 125.62 | 117.70 |
| 36 | 1 | 644 | G | C4-N9-C1' | 6.60 | 135.08 | 126.50 |
| 36 | 1 | 1521 | G | O5'-P-OP1 | -6.60 | 99.76 | 105.70 |
| 1 | 6 | 1 | U | C2-N1-C1' | 6.60 | 125.62 | 117.70 |
| 36 | 1 | 1607 | U | C6-N1-C2 | -6.59 | 117.04 | 121.00 |
| 36 | 1 | 635 | G | C5-C6-O6 | -6.59 | 124.64 | 128.60 |
| 36 | 5 | 2615 | G | N3-C4-C5 | 6.59 | 131.90 | 128.60 |
| 36 | 5 | 881 | C | C6-N1-C2 | 6.58 | 122.93 | 120.30 |
| 36 | 1 | 227 | G | N3-C4-N9 | 6.58 | 129.95 | 126.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 36 | 1 | 2572 | C | C6-N1-C2 | -6.58 | 117.67 | 120.30 |
| 36 | 1 | 993 | G | C8-N9-C4 | -6.58 | 103.77 | 106.40 |
| 36 | 5 | 24 | G | C8-N9-C4 | 6.58 | 109.03 | 106.40 |
| 36 | 1 | 282 | G | C8-N9-C4 | -6.58 | 103.77 | 106.40 |
| 36 | 1 | 718 | G | N3-C4-N9 | -6.58 | 122.05 | 126.00 |
| 36 | 5 | 3078 | U | C5-C4-O4 | 6.58 | 129.84 | 125.90 |
| 1 | 6 | 1634 | C | N1-C2-O2 | 6.57 | 122.84 | 118.90 |
| 36 | 1 | 3291 | G | N3-C4-C5 | 6.57 | 131.88 | 128.60 |
| 36 | 5 | 439 | C | C2-N1-C1' | 6.57 | 126.03 | 118.80 |
| 1 | 2 | 507 | U | C2-N1-C1' | 6.57 | 125.58 | 117.70 |
| 36 | 5 | 1639 | C | C6-N1-C2 | -6.57 | 117.67 | 120.30 |
| 36 | 5 | 562 | C | C6-N1-C2 | -6.56 | 117.67 | 120.30 |
| 1 | 2 | 1514 | U | N3-C4-O4 | -6.56 | 114.81 | 119.40 |
| 36 | 1 | 2935 | U | C5-C6-N1 | 6.56 | 125.98 | 122.70 |
| 36 | 1 | 2356 | A | C8-N9-C4 | 6.56 | 108.42 | 105.80 |
| 36 | 1 | 2392 | C | C2-N1-C1' | -6.55 | 111.59 | 118.80 |
| 36 | 1 | 2821 | C | N3-C2-O2 | -6.55 | 117.31 | 121.90 |
| 36 | 1 | 371 | G | C4-N9-C1' | -6.55 | 117.99 | 126.50 |
| 1 | 2 | 139 | C | P-O3'-C3' | 6.54 | 127.55 | 119.70 |
| 36 | 1 | 2403 | G | O5'-P-OP2 | -6.54 | 99.81 | 105.70 |
| 36 | 5 | 2917 | G | N1-C6-O6 | -6.54 | 115.98 | 119.90 |
| 36 | 5 | 2607 | G | N1-C6-O6 | 6.54 | 123.82 | 119.90 |
| 36 | 5 | 909 | G | N3-C4-C5 | -6.54 | 125.33 | 128.60 |
| 36 | 5 | 979 | U | C6-N1-C2 | -6.53 | 117.08 | 121.00 |
| 36 | 5 | 1429 | G | C8-N9-C1' | -6.53 | 118.51 | 127.00 |
| 36 | 1 | 898 | U | C2-N1-C1' | 6.53 | 125.54 | 117.70 |
| 1 | 6 | 1756 | A | N3-C4-N9 | 6.52 | 132.62 | 127.40 |
| 36 | 5 | 3275 | U | OP1-P-O3' | 6.52 | 119.55 | 105.20 |
| 36 | 5 | 609 | G | O5'-P-OP2 | -6.52 | 99.83 | 105.70 |
| 36 | 1 | 2711 | C | C6-N1-C2 | -6.52 | 117.69 | 120.30 |
| 1 | 2 | 934 | C | C6-N1-C1' | -6.52 | 112.98 | 120.80 |
| 36 | 1 | 282 | G | P-O3'-C3' | 6.52 | 127.52 | 119.70 |
| 36 | 1 | 1306 | G | N9-C4-C5 | -6.52 | 102.79 | 105.40 |
| 1 | 2 | 1568 | C | P-O3'-C3' | 6.51 | 127.51 | 119.70 |
| 36 | 5 | 2621 | G | C8-N9-C1' | -6.51 | 118.54 | 127.00 |
| 36 | 1 | 2403 | G | N3-C4-C5 | -6.50 | 125.35 | 128.60 |
| 36 | 5 | 1228 | C | C6-N1-C2 | -6.50 | 117.70 | 120.30 |
| 38 | 4 | 54 | A | N7-C8-N9 | 6.50 | 117.05 | 113.80 |
| 36 | 1 | 2608 | G | N7-C8-N9 | -6.50 | 109.85 | 113.10 |
| 36 | 5 | 3065 | G | N3-C4-N9 | -6.50 | 122.10 | 126.00 |
| 36 | 5 | 1307 | G | P-O3'-C3' | 6.50 | 127.50 | 119.70 |
| 36 | 5 | 2396 | G | N1-C6-O6 | 6.50 | 123.80 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 5 | 803 | C | C2-N1-C1' | 6.50 | 125.95 | 118.80 |
| 36 | 5 | 3245 | A | N7-C8-N9 | 6.50 | 117.05 | 113.80 |
| 36 | 1 | 1886 | A | N9-C4-C5 | 6.50 | 108.40 | 105.80 |
| 36 | 1 | 593 | C | C6-N1-C2 | 6.49 | 122.90 | 120.30 |
| 36 | 5 | 1671 | C | C6-N1-C2 | 6.49 | 122.90 | 120.30 |
| 36 | 5 | 2181 | C | C6-N1-C2 | 6.49 | 122.90 | 120.30 |
| 36 | 1 | 1451 | C | C6-N1-C2 | 6.49 | 122.89 | 120.30 |
| 36 | 5 | 1480 | G | N9-C4-C5 | -6.49 | 102.81 | 105.40 |
| 36 | 1 | 354 | U | C5-C6-N1 | 6.48 | 125.94 | 122.70 |
| 1 | 6 | 385 | A | C8-N9-C4 | -6.48 | 103.21 | 105.80 |
| 36 | 1 | 2142 | A | N1-C2-N3 | 6.48 | 132.54 | 129.30 |
| 36 | 5 | 1149 | G | C6-C5-N7 | -6.48 | 126.51 | 130.40 |
| 36 | 5 | 2947 | G | C8-N9-C4 | -6.48 | 103.81 | 106.40 |
| 36 | 5 | 3078 | U | N3-C4-O4 | -6.48 | 114.86 | 119.40 |
| 36 | 5 | 360 | G | C4-N9-C1' | 6.47 | 134.92 | 126.50 |
| 73 | o7 | 65 | ARG | NE-CZ-NH1 | 6.47 | 123.54 | 120.30 |
| 36 | 5 | 1016 | C | C2-N1-C1' | 6.47 | 125.92 | 118.80 |
| 1 | 6 | 1180 | C | C5-C6-N1 | 6.47 | 124.23 | 121.00 |
| 36 | 5 | 2876 | C | N3-C2-O2 | -6.47 | 117.37 | 121.90 |
| 36 | 1 | 2913 | C | C5-C6-N1 | 6.46 | 124.23 | 121.00 |
| 36 | 5 | 1902 | G | C4-N9-C1' | 6.46 | 134.90 | 126.50 |
| 36 | 1 | 867 | G | C4-C5-N7 | 6.46 | 113.39 | 110.80 |
| 36 | 1 | 3269 | U | P-O3'-C3' | 6.46 | 127.46 | 119.70 |
| 1 | 6 | 813 | U | C2-N1-C1' | 6.46 | 125.45 | 117.70 |
| 36 | 5 | 726 | G | C8-N9-C4 | -6.46 | 103.82 | 106.40 |
| 36 | 5 | 1581 | C | C4-C5-C6 | 6.46 | 120.63 | 117.40 |
| 36 | 1 | 715 | A | P-O3'-C3' | 6.46 | 127.45 | 119.70 |
| 1 | 2 | 453 | U | C2-N1-C1' | 6.45 | 125.43 | 117.70 |
| 36 | 1 | 3139 | A | C8-N9-C4 | -6.45 | 103.22 | 105.80 |
| 36 | 5 | 2983 | C | O4'-C1'-N1 | 6.45 | 113.36 | 108.20 |
| 36 | 5 | 1527 | C | N1-C2-O2 | 6.44 | 122.77 | 118.90 |
| 1 | 6 | 158 | U | P-O3'-C3' | 6.44 | 127.43 | 119.70 |
| 36 | 5 | 3164 | C | O4'-C1'-N1 | 6.44 | 113.35 | 108.20 |
| 37 | 3 | 26 | C | C6-N1-C2 | -6.44 | 117.72 | 120.30 |
| 36 | 5 | 939 | U | N1-C2-O2 | 6.44 | 127.31 | 122.80 |
| 36 | 1 | 2950 | G | O4'-C1'-N9 | 6.43 | 113.35 | 108.20 |
| 1 | 6 | 1399 | C | C6-N1-C2 | -6.43 | 117.73 | 120.30 |
| 36 | 5 | 422 | A | C8-N9-C4 | -6.43 | 103.23 | 105.80 |
| 36 | 5 | 635 | G | N1-C6-O6 | 6.43 | 123.76 | 119.90 |
| 36 | 5 | 2314 | U | C4-C5-C6 | 6.43 | 123.56 | 119.70 |
| 36 | 5 | 3194 | C | C6-N1-C2 | -6.43 | 117.73 | 120.30 |
| 36 | 5 | 218 | G | N3-C4-N9 | 6.43 | 129.86 | 126.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 5 | 439 | C | C6-N1-C2 | -6.43 | 117.73 | 120.30 |
| 1 | 6 | 1426 | C | C6-N1-C2 | 6.42 | 122.87 | 120.30 |
| 1 | 6 | 1458 | G | N3-C4-N9 | 6.42 | 129.85 | 126.00 |
| 36 | 1 | 2227 | C | P-O3'-C3' | 6.41 | 127.39 | 119.70 |
| 36 | 5 | 1495 | U | N3-C2-O2 | -6.41 | 117.71 | 122.20 |
| 1 | 2 | 581 | U | C5-C6-N1 | -6.41 | 119.50 | 122.70 |
| 36 | 1 | 208 | C | C5-C6-N1 | 6.41 | 124.20 | 121.00 |
| 36 | 5 | 1413 | G | N1-C6-O6 | 6.41 | 123.74 | 119.90 |
| 36 | 5 | 1556 | C | O4'-C1'-N1 | -6.40 | 103.08 | 108.20 |
| 36 | 5 | 2922 | G | N3-C4-N9 | 6.40 | 129.84 | 126.00 |
| 38 | 8 | 100 | U | C6-N1-C1' | -6.40 | 112.24 | 121.20 |
| 1 | 6 | 1473 | U | C2-N1-C1' | 6.40 | 125.38 | 117.70 |
| 36 | 5 | 1354 | G | C8-N9-C4 | -6.40 | 103.84 | 106.40 |
| 1 | 6 | 1654 | G | C8-N9-C4 | -6.40 | 103.84 | 106.40 |
| 36 | 5 | 825 | U | O5'-P-OP1 | -6.40 | 99.94 | 105.70 |
| 1 | 6 | 151 | G | N3-C4-N9 | -6.40 | 122.16 | 126.00 |
| 36 | 1 | 1508 | C | O5'-P-OP2 | -6.39 | 99.94 | 105.70 |
| 36 | 5 | 283 | G | C8-N9-C4 | -6.39 | 103.84 | 106.40 |
| 36 | 5 | 2621 | G | N3-C4-N9 | 6.39 | 129.84 | 126.00 |
| 36 | 5 | 1149 | G | N9-C4-C5 | -6.39 | 102.84 | 105.40 |
| 38 | 8 | 110 | C | OP2-P-O3' | 6.39 | 119.25 | 105.20 |
| 1 | 2 | 950 | C | C6-N1-C2 | -6.38 | 117.75 | 120.30 |
| 36 | 1 | 2221 | G | N3-C4-C5 | 6.38 | 131.79 | 128.60 |
| 1 | 2 | 1514 | U | C5-C4-O4 | 6.38 | 129.73 | 125.90 |
| 36 | 5 | 426 | G | C8-N9-C4 | -6.38 | 103.85 | 106.40 |
| 36 | 1 | 2719 | U | C2-N1-C1' | -6.38 | 110.05 | 117.70 |
| 1 | 2 | 15 | U | C5-C6-N1 | 6.37 | 125.89 | 122.70 |
| 36 | 1 | 1183 | C | C6-N1-C2 | 6.37 | 122.85 | 120.30 |
| 36 | 1 | 3175 | U | N1-C2-O2 | 6.37 | 127.26 | 122.80 |
| 36 | 5 | 1521 | G | N3-C4-N9 | -6.37 | 122.18 | 126.00 |
| 36 | 1 | 1327 | C | O5'-P-OP1 | -6.36 | 99.97 | 105.70 |
| 36 | 1 | 2645 | G | C6-C5-N7 | -6.36 | 126.58 | 130.40 |
| 1 | 6 | 1431 | C | C6-N1-C2 | 6.36 | 122.84 | 120.30 |
| 1 | 2 | 1604 | U | C6-N1-C2 | -6.36 | 117.19 | 121.00 |
| 36 | 1 | 984 | G | C8-N9-C1' | -6.36 | 118.74 | 127.00 |
| 36 | 5 | 676 | G | C8-N9-C1' | -6.36 | 118.74 | 127.00 |
| 36 | 5 | 134 | U | C2-N1-C1' | 6.36 | 125.33 | 117.70 |
| 36 | 1 | 1780 | G | N3-C4-C5 | -6.35 | 125.42 | 128.60 |
| 1 | 2 | 190 | C | O4'-C1'-N1 | 6.35 | 113.28 | 108.20 |
| 1 | 2 | 794 | U | N1-C2-O2 | 6.34 | 127.24 | 122.80 |
| 69 | o3 | 88 | ASN | C-N-CA | -6.34 | 105.84 | 121.70 |
| 36 | 1 | 635 | G | C4-C5-N7 | 6.34 | 113.34 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 352 | A | O5'-P-OP1 | -6.34 | 100.00 | 105.70 |
| 36 | 1 | 1484 | U | P-O3'-C3' | 6.34 | 127.30 | 119.70 |
| 36 | 1 | 2689 | A | C8-N9-C4 | -6.33 | 103.27 | 105.80 |
| 36 | 1 | 2549 | G | C8-N9-C1' | 6.33 | 135.23 | 127.00 |
| 36 | 1 | 765 | C | OP1-P-O3' | 6.33 | 119.11 | 105.20 |
| 36 | 1 | 984 | G | C4-N9-C1' | 6.33 | 134.72 | 126.50 |
| 36 | 1 | 1134 | G | C8-N9-C4 | -6.33 | 103.87 | 106.40 |
| 36 | 1 | 2964 | G | O5'-P-OP1 | -6.33 | 100.01 | 105.70 |
| 36 | 5 | 835 | G | C4-N9-C1' | -6.33 | 118.28 | 126.50 |
| 36 | 5 | 1284 | C | P-O3'-C3' | 6.33 | 127.29 | 119.70 |
| 36 | 1 | 1115 | G | C5-N7-C8 | -6.32 | 101.14 | 104.30 |
| 36 | 1 | 1456 | A | C8-N9-C4 | -6.32 | 103.27 | 105.80 |
| 36 | 1 | 2967 | A | C5-C6-N6 | -6.32 | 118.64 | 123.70 |
| 36 | 1 | 546 | C | N1-C2-O2 | 6.32 | 122.69 | 118.90 |
| 36 | 1 | 3221 | C | C6-N1-C2 | -6.32 | 117.77 | 120.30 |
| 1 | 2 | 322 | G | O5'-P-OP1 | -6.32 | 100.01 | 105.70 |
| 36 | 1 | 2400 | G | C4-C5-N7 | 6.32 | 113.33 | 110.80 |
| 36 | 1 | 2615 | G | O5'-P-OP1 | -6.32 | 100.02 | 105.70 |
| 36 | 5 | 2396 | G | C5-C6-O6 | -6.31 | 124.81 | 128.60 |
| 36 | 1 | 3025 | C | C6-N1-C2 | 6.31 | 122.82 | 120.30 |
| 40 | l3 | 246 | LEU | CA-CB-CG | 6.31 | 129.81 | 115.30 |
| 1 | 2 | 1504 | G | C4-N9-C1' | 6.30 | 134.69 | 126.50 |
| 36 | 1 | 1201 | C | C5-C6-N1 | 6.30 | 124.15 | 121.00 |
| 37 | 3 | 89 | G | N9-C4-C5 | -6.30 | 102.88 | 105.40 |
| 36 | 1 | 2983 | C | O4'-C1'-N1 | 6.30 | 113.24 | 108.20 |
| 1 | 2 | 1399 | C | N3-C2-O2 | -6.30 | 117.49 | 121.90 |
| 36 | 5 | 1150 | A | O5'-P-OP2 | -6.30 | 100.03 | 105.70 |
| 36 | 1 | 1710 | C | C6-N1-C2 | 6.29 | 122.82 | 120.30 |
| 36 | 1 | 3210 | A | C8-N9-C4 | 6.29 | 108.32 | 105.80 |
| 31 | D9 | 36 | LEU | CA-CB-CG | 6.29 | 129.77 | 115.30 |
| 36 | 1 | 2843 | U | N3-C2-O2 | -6.29 | 117.80 | 122.20 |
| 36 | 5 | 3354 | U | O4'-C1'-N1 | -6.29 | 103.17 | 108.20 |
| 36 | 1 | 2179 | C | C6-N1-C2 | 6.29 | 122.82 | 120.30 |
| 36 | 1 | 2967 | A | N9-C4-C5 | -6.29 | 103.28 | 105.80 |
| 1 | 2 | 1389 | C | C2-N1-C1' | 6.29 | 125.71 | 118.80 |
| 36 | 5 | 1096 | U | O5'-P-OP1 | -6.29 | 100.04 | 105.70 |
| 36 | 5 | 1174 | G | C8-N9-C1' | -6.29 | 118.83 | 127.00 |
| 36 | 1 | 708 | G | N3-C4-N9 | 6.28 | 129.77 | 126.00 |
| 1 | 6 | 1039 | A | O4'-C1'-N9 | 6.28 | 113.22 | 108.20 |
| 1 | 2 | 1070 | C | C6-N1-C2 | 6.28 | 122.81 | 120.30 |
| 36 | 1 | 2554 | A | P-O3'-C3' | 6.28 | 127.23 | 119.70 |
| 36 | 1 | 1094 | U | N3-C2-O2 | -6.28 | 117.81 | 122.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1 | 6 | 163 | G | N3-C2-N2 | -6.28 | 115.51 | 119.90 |
| 1 | 2 | 1600 | A | C4-N9-C1' | 6.27 | 137.59 | 126.30 |
| 36 | 1 | 312 | C | C5-C6-N1 | 6.27 | 124.14 | 121.00 |
| 36 | 1 | 718 | G | C5-N7-C8 | -6.27 | 101.16 | 104.30 |
| 36 | 1 | 764 | U | P-O3'-C3' | 6.27 | 127.23 | 119.70 |
| 36 | 1 | 922 | U | C6-N1-C1' | -6.27 | 112.42 | 121.20 |
| 36 | 1 | 1815 | U | P-O3'-C3' | 6.27 | 127.23 | 119.70 |
| 36 | 5 | 347 | G | N1-C6-O6 | 6.27 | 123.66 | 119.90 |
| 36 | 5 | 2726 | C | N3-C2-O2 | -6.27 | 117.51 | 121.90 |
| 36 | 1 | 1306 | G | C8-N9-C1' | -6.27 | 118.85 | 127.00 |
| 36 | 5 | 870 | G | C8-N9-C4 | 6.27 | 108.91 | 106.40 |
| 38 | 4 | 100 | U | C2-N1-C1' | 6.27 | 125.22 | 117.70 |
| 36 | 1 | 635 | G | C8-N9-C1' | -6.26 | 118.86 | 127.00 |
| 36 | 1 | 1114 | U | N3-C4-C5 | -6.26 | 110.84 | 114.60 |
| 36 | 5 | 1793 | C | C6-N1-C2 | 6.26 | 122.81 | 120.30 |
| 36 | 1 | 2403 | G | C4-C5-C6 | 6.26 | 122.56 | 118.80 |
| 1 | 6 | 1180 | C | C6-N1-C2 | -6.26 | 117.80 | 120.30 |
| 36 | 5 | 614 | C | N3-C4-C5 | 6.26 | 124.40 | 121.90 |
| 36 | 5 | 1152 | G | N3-C2-N2 | -6.26 | 115.52 | 119.90 |
| 1 | 2 | 158 | U | P-O3'-C3' | 6.25 | 127.21 | 119.70 |
| 36 | 1 | 3048 | A | N9-C4-C5 | -6.25 | 103.30 | 105.80 |
| 1 | 2 | 1489 | U | O5'-P-OP1 | -6.25 | 100.08 | 105.70 |
| 36 | 5 | 3195 | U | P-O3'-C3' | 6.25 | 127.20 | 119.70 |
| 36 | 1 | 1556 | C | OP2-P-O3' | 6.25 | 118.94 | 105.20 |
| 38 | 4 | 144 | G | C8-N9-C4 | 6.25 | 108.90 | 106.40 |
| 36 | 5 | 1149 | G | N1-C6-O6 | 6.25 | 123.65 | 119.90 |
| 36 | 5 | 1838 | G | OP1-P-O3' | 6.25 | 118.94 | 105.20 |
| 36 | 5 | 1716 | U | P-O3'-C3' | 6.24 | 127.19 | 119.70 |
| 36 | 1 | 281 | G | N3-C4-N9 | 6.24 | 129.75 | 126.00 |
| 41 | L4 | 339 | LEU | CA-CB-CG | 6.24 | 129.65 | 115.30 |
| 1 | 6 | 1642 | G | N3-C4-C5 | -6.24 | 125.48 | 128.60 |
| 36 | 5 | 2252 | A | O5'-P-OP2 | -6.24 | 100.08 | 105.70 |
| 36 | 5 | 2163 | C | C6-N1-C2 | -6.24 | 117.81 | 120.30 |
| 36 | 1 | 2933 | A | N9-C4-C5 | 6.24 | 108.30 | 105.80 |
| 36 | 1 | 1759 | C | C6-N1-C1' | -6.24 | 113.32 | 120.80 |
| 1 | 2 | 275 | C | C6-N1-C2 | -6.23 | 117.81 | 120.30 |
| 1 | 6 | 1023 | A | C8-N9-C4 | -6.23 | 103.31 | 105.80 |
| 36 | 1 | 315 | C | C5-C6-N1 | 6.23 | 124.12 | 121.00 |
| 1 | 6 | 338 | C | C6-N1-C2 | 6.23 | 122.79 | 120.30 |
| 36 | 1 | 1355 | A | P-O3'-C3' | 6.23 | 127.17 | 119.70 |
| 36 | 5 | 1815 | U | P-O3'-C3' | 6.22 | 127.17 | 119.70 |
| 36 | 5 | 1772 | U | C2-N1-C1' | -6.22 | 110.23 | 117.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 2615 | G | O5'-P-OP2 | 6.22 | 118.16 | 110.70 |
| 36 | 1 | 2827 | U | C5-C6-N1 | -6.22 | 119.59 | 122.70 |
| 36 | 5 | 2285 | C | C6-N1-C2 | -6.21 | 117.81 | 120.30 |
| 36 | 5 | 321 | C | C6-N1-C2 | 6.21 | 122.78 | 120.30 |
| 36 | 1 | 2348 | A | N1-C6-N6 | -6.21 | 114.87 | 118.60 |
| 36 | 1 | 2319 | U | C2-N1-C1' | -6.21 | 110.25 | 117.70 |
| 36 | 5 | 2916 | U | C5-C6-N1 | -6.21 | 119.60 | 122.70 |
| 38 | 8 | 30 | C | C2-N1-C1' | -6.21 | 111.97 | 118.80 |
| 36 | 1 | 2711 | C | C5-C6-N1 | 6.21 | 124.10 | 121.00 |
| 36 | 5 | 1902 | G | N3-C4-N9 | 6.21 | 129.72 | 126.00 |
| 36 | 1 | 2935 | U | C2-N1-C1' | 6.20 | 125.14 | 117.70 |
| 36 | 1 | 1444 | G | C4-C5-N7 | 6.20 | 113.28 | 110.80 |
| 36 | 1 | 3311 | C | C2-N1-C1' | 6.20 | 125.62 | 118.80 |
| 38 | 4 | 144 | G | C4-N9-C1' | -6.20 | 118.44 | 126.50 |
| 36 | 5 | 1305 | U | O5'-P-OP1 | -6.20 | 100.12 | 105.70 |
| 36 | 5 | 2269 | U | C6-N1-C2 | -6.20 | 117.28 | 121.00 |
| 70 | O4 | 51 | LEU | CA-CB-CG | 6.19 | 129.54 | 115.30 |
| 36 | 5 | 676 | G | N3-C4-C5 | -6.19 | 125.50 | 128.60 |
| 36 | 1 | 684 | G | C8-N9-C4 | 6.19 | 108.88 | 106.40 |
| 36 | 1 | 3382 | U | N3-C2-O2 | -6.19 | 117.87 | 122.20 |
| 38 | 4 | 44 | A | O5'-P-OP1 | -6.19 | 100.13 | 105.70 |
| 62 | N6 | 126 | LEU | CA-CB-CG | 6.19 | 129.53 | 115.30 |
| 36 | 5 | 432 | G | C6-C5-N7 | -6.19 | 126.69 | 130.40 |
| 36 | 1 | 384 | A | C8-N9-C4 | 6.18 | 108.27 | 105.80 |
| 36 | 1 | 1115 | G | C5-C6-O6 | -6.18 | 124.89 | 128.60 |
| 36 | 1 | 1856 | C | C5-C6-N1 | 6.18 | 124.09 | 121.00 |
| 36 | 1 | 304 | G | O4'-C1'-N9 | -6.18 | 103.26 | 108.20 |
| 42 | 15 | 110 | LEU | CA-CB-CG | 6.18 | 129.51 | 115.30 |
| 36 | 1 | 1300 | G | N1-C6-O6 | 6.17 | 123.60 | 119.90 |
| 1 | 2 | 1793 | G | N3-C4-C5 | -6.17 | 125.52 | 128.60 |
| 36 | 5 | 1701 | C | C6-N1-C2 | -6.17 | 117.83 | 120.30 |
| 36 | 1 | 688 | G | C8-N9-C4 | -6.17 | 103.93 | 106.40 |
| 1 | 6 | 1000 | C | C2-N1-C1' | 6.17 | 125.58 | 118.80 |
| 36 | 1 | 304 | G | N3-C4-C5 | 6.17 | 131.68 | 128.60 |
| 61 | n5 | 34 | LEU | CA-CB-CG | 6.16 | 129.47 | 115.30 |
| 1 | 2 | 1504 | G | N3-C4-N9 | 6.16 | 129.70 | 126.00 |
| 36 | 5 | 2392 | C | C6-N1-C2 | 6.15 | 122.76 | 120.30 |
| 36 | 5 | 3213 | A | N1-C6-N6 | 6.15 | 122.29 | 118.60 |
| 1 | 2 | 617 | U | C2-N1-C1' | 6.15 | 125.08 | 117.70 |
| 1 | 2 | 794 | U | P-O3'-C3' | 6.15 | 127.08 | 119.70 |
| 36 | 1 | 288 | C | O5'-P-OP1 | -6.15 | 100.17 | 105.70 |
| 36 | 1 | 797 | U | C6-N1-C2 | -6.15 | 117.31 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 1389 | G | N9-C4-C5 | -6.15 | 102.94 | 105.40 |
| 1 | 6 | 453 | U | N1-C2-O2 | 6.15 | 127.11 | 122.80 |
| 36 | 5 | 2206 | G | O4'-C1'-N9 | -6.15 | 103.28 | 108.20 |
| 36 | 1 | 1866 | C | O4'-C1'-N1 | -6.14 | 103.28 | 108.20 |
| 1 | 6 | 334 | G | N3-C4-N9 | -6.14 | 122.31 | 126.00 |
| 36 | 5 | 1308 | A | O5'-P-OP2 | -6.14 | 100.17 | 105.70 |
| 36 | 1 | 1197 | A | N1-C6-N6 | 6.14 | 122.29 | 118.60 |
| 36 | 1 | 708 | G | C4-N9-C1' | 6.14 | 134.48 | 126.50 |
| 36 | 1 | 1495 | U | N1-C2-N3 | 6.14 | 118.58 | 114.90 |
| 36 | 5 | 922 | U | C2-N1-C1' | -6.14 | 110.33 | 117.70 |
| 36 | 5 | 2269 | U | C5-C4-O4 | -6.14 | 122.22 | 125.90 |
| 36 | 5 | 590 | G | N1-C6-O6 | -6.14 | 116.22 | 119.90 |
| 36 | 5 | 422 | A | C4-N9-C1' | 6.14 | 137.34 | 126.30 |
| 1 | 6 | 934 | C | C2-N1-C1' | 6.13 | 125.55 | 118.80 |
| 36 | 5 | 1657 | C | C6-N1-C2 | -6.13 | 117.85 | 120.30 |
| 36 | 1 | 834 | U | C5-C6-N1 | -6.13 | 119.63 | 122.70 |
| 36 | 1 | 2966 | G | N3-C2-N2 | 6.13 | 124.19 | 119.90 |
| 36 | 5 | 875 | G | N3-C4-N9 | -6.13 | 122.32 | 126.00 |
| 36 | 5 | 1324 | U | C5-C6-N1 | -6.12 | 119.64 | 122.70 |
| 36 | 1 | 908 | G | C4-N9-C1' | 6.12 | 134.46 | 126.50 |
| 36 | 5 | 3005 | A | N7-C8-N9 | 6.12 | 116.86 | 113.80 |
| 36 | 5 | 510 | G | N9-C4-C5 | -6.12 | 102.95 | 105.40 |
| 1 | 6 | 543 | C | N1-C2-O2 | 6.12 | 122.57 | 118.90 |
| 36 | 1 | 1192 | C | C4-C5-C6 | -6.11 | 114.34 | 117.40 |
| 1 | 2 | 136 | C | C2-N1-C1' | 6.11 | 125.52 | 118.80 |
| 1 | 6 | 1389 | C | C6-N1-C2 | -6.11 | 117.86 | 120.30 |
| 36 | 5 | 2550 | U | C5-C4-O4 | 6.11 | 129.56 | 125.90 |
| 60 | n4 | 96 | LEU | CA-CB-CG | 6.11 | 129.34 | 115.30 |
| 36 | 1 | 1314 | C | C6-N1-C2 | 6.10 | 122.74 | 120.30 |
| 1 | 6 | 326 | G | C8-N9-C1' | 6.10 | 134.93 | 127.00 |
| 36 | 5 | 1527 | C | C6-N1-C2 | -6.10 | 117.86 | 120.30 |
| 36 | 5 | 2404 | A | C8-N9-C4 | 6.10 | 108.24 | 105.80 |
| 36 | 5 | 329 | U | N1-C2-O2 | 6.10 | 127.07 | 122.80 |
| 36 | 1 | 2423 | U | O5'-P-OP2 | -6.10 | 100.21 | 105.70 |
| 1 | 2 | 453 | U | C5-C6-N1 | 6.10 | 125.75 | 122.70 |
| 36 | 5 | 2816 | G | N9-C4-C5 | -6.10 | 102.96 | 105.40 |
| 16 | C4 | 137 | LEU | CA-CB-CG | 6.09 | 129.31 | 115.30 |
| 36 | 1 | 765 | C | P-O3'-C3' | 6.09 | 127.01 | 119.70 |
| 36 | 1 | 1578 | C | C2-N1-C1' | 6.09 | 125.50 | 118.80 |
| 41 | 14 | 339 | LEU | CA-CB-CG | 6.09 | 129.32 | 115.30 |
| 36 | 5 | 2144 | A | O5'-P-OP2 | -6.09 | 100.22 | 105.70 |
| 1 | 6 | 326 | G | N3-C4-N9 | -6.09 | 122.35 | 126.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 36 | 5 | 347 | G | C5-C6-O6 | -6.09 | 124.95 | 128.60 |
| 37 | 3 | 99 | G | N1-C6-O6 | 6.09 | 123.55 | 119.90 |
| 1 | 6 | 1637 | C | C2-N1-C1' | 6.08 | 125.49 | 118.80 |
| 37 | 3 | 15 | C | C6-N1-C2 | 6.08 | 122.73 | 120.30 |
| 36 | 5 | 3209 | A | N9-C4-C5 | -6.08 | 103.37 | 105.80 |
| 36 | 1 | 644 | G | N3-C4-N9 | 6.08 | 129.65 | 126.00 |
| 1 | 6 | 1642 | G | N3-C4-N9 | 6.08 | 129.65 | 126.00 |
| 1 | 6 | 1756 | A | C4-N9-C1' | 6.07 | 137.23 | 126.30 |
| 36 | 5 | 2621 | G | C6-C5-N7 | -6.07 | 126.76 | 130.40 |
| 36 | 5 | 2393 | G | C8-N9-C4 | -6.07 | 103.97 | 106.40 |
| 1 | 2 | 639 | U | N1-C2-O2 | 6.07 | 127.05 | 122.80 |
| 36 | 5 | 2324 | A | C8-N9-C4 | 6.07 | 108.23 | 105.80 |
| 36 | 1 | 1763 | U | C5-C6-N1 | 6.07 | 125.73 | 122.70 |
| 36 | 5 | 793 | C | C2-N1-C1' | 6.07 | 125.47 | 118.80 |
| 36 | 1 | 42 | C | O5'-P-OP1 | -6.07 | 100.24 | 105.70 |
| 36 | 1 | 1589 | A | C4-C5-N7 | 6.07 | 113.73 | 110.70 |
| 36 | 1 | 703 | G | O5'-P-OP2 | -6.06 | 100.25 | 105.70 |
| 36 | 1 | 1493 | G | C8-N9-C1' | -6.06 | 119.12 | 127.00 |
| 36 | 1 | 2118 | C | C6-N1-C1' | -6.06 | 113.53 | 120.80 |
| 1 | 2 | 321 | C | O4'-C1'-N1 | 6.06 | 113.05 | 108.20 |
| 36 | 1 | 2316 | G | N3-C4-C5 | -6.06 | 125.57 | 128.60 |
| 12 | c0 | 88 | PRO | N-CA-CB | 6.06 | 110.57 | 103.30 |
| 36 | 1 | 2572 | C | C5-C6-N1 | 6.05 | 124.03 | 121.00 |
| 36 | 1 | 1512 | U | N3-C2-O2 | -6.05 | 117.97 | 122.20 |
| 66 | O0 | 41 | LEU | CA-CB-CG | 6.04 | 129.20 | 115.30 |
| 36 | 1 | 1602 | A | N1-C6-N6 | -6.04 | 114.97 | 118.60 |
| 36 | 1 | 2874 | G | C5-C6-O6 | 6.04 | 132.22 | 128.60 |
| 1 | 6 | 1654 | G | N3-C4-N9 | 6.04 | 129.62 | 126.00 |
| 36 | 5 | 942 | U | C6-N1-C2 | 6.04 | 124.62 | 121.00 |
| 1 | 2 | 577 | G | C5-C6-O6 | -6.04 | 124.98 | 128.60 |
| 1 | 6 | 617 | U | C2-N1-C1' | 6.04 | 124.95 | 117.70 |
| 1 | 6 | 1028 | C | C6-N1-C2 | 6.04 | 122.72 | 120.30 |
| 36 | 1 | 1854 | C | C6-N1-C2 | -6.04 | 117.89 | 120.30 |
| 38 | 4 | 144 | G | N7-C8-N9 | -6.04 | 110.08 | 113.10 |
| 36 | 5 | 197 | G | C4-N9-C1' | 6.04 | 134.34 | 126.50 |
| 36 | 5 | 3112 | G | N3-C4-N9 | 6.03 | 129.62 | 126.00 |
| 38 | 8 | 63 | G | N3-C4-N9 | -6.03 | 122.38 | 126.00 |
| 36 | 5 | 3061 | G | C5-C6-O6 | -6.03 | 124.98 | 128.60 |
| 36 | 1 | 282 | G | C2'-C3'-O3' | 6.03 | 123.35 | 113.70 |
| 36 | 1 | 2837 | A | N1-C6-N6 | -6.03 | 114.98 | 118.60 |
| 1 | 6 | 163 | G | C8-N9-C4 | -6.03 | 103.99 | 106.40 |
| 36 | 1 | 332 | C | O5'-P-OP2 | -6.03 | 100.28 | 105.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 1 | 6 | 1653 | C | C5-C6-N1 | 6.03 | 124.01 | 121.00 |
| 36 | 1 | 1716 | U | P-O3'-C3' | 6.03 | 126.93 | 119.70 |
| 36 | 1 | 2818 | U | C5-C6-N1 | 6.03 | 125.71 | 122.70 |
| 36 | 5 | 1482 | A | O5'-P-OP1 | 6.03 | 117.93 | 110.70 |
| 36 | 5 | 2719 | U | C2-N1-C1' | -6.03 | 110.47 | 117.70 |
| 36 | 1 | 1514 | G | C4-N9-C1' | 6.02 | 134.32 | 126.50 |
| 1 | 6 | 697 | C | C6-N1-C2 | -6.02 | 117.89 | 120.30 |
| 36 | 5 | 2324 | A | C4-C5-C6 | -6.02 | 113.99 | 117.00 |
| 36 | 1 | 1306 | G | C5-C6-O6 | -6.02 | 124.99 | 128.60 |
| 36 | 1 | 93 | C | C6-N1-C2 | 6.01 | 122.71 | 120.30 |
| 38 | 8 | 44 | A | N1-C6-N6 | 6.01 | 122.21 | 118.60 |
| 1 | 2 | 1490 | C | C6-N1-C2 | -6.01 | 117.89 | 120.30 |
| 36 | 1 | 2679 | A | O4'-C1'-N9 | 6.01 | 113.01 | 108.20 |
| 36 | 5 | 1927 | G | N3-C4-N9 | 6.01 | 129.61 | 126.00 |
| 36 | 1 | 641 | C | C6-N1-C2 | 6.01 | 122.70 | 120.30 |
| 36 | 1 | 708 | G | N3-C4-C5 | -6.01 | 125.60 | 128.60 |
| 36 | 1 | 835 | G | O4'-C1'-N9 | 6.00 | 113.00 | 108.20 |
| 1 | 6 | 56 | U | O4'-C1'-N1 | 6.00 | 113.00 | 108.20 |
| 1 | 2 | 1146 | G | C8-N9-C4 | -6.00 | 104.00 | 106.40 |
| 28 | D6 | 63 | ALA | C-N-CA | 6.00 | 136.69 | 121.70 |
| 37 | 7 | 114 | U | C2-N1-C1' | -6.00 | 110.51 | 117.70 |
| 1 | 2 | 1536 | G | C4-N9-C1' | 5.99 | 134.29 | 126.50 |
| 1 | 2 | 1771 | U | O5'-P-OP1 | -5.99 | 100.31 | 105.70 |
| 6 | S4 | 193 | GLY | N-CA-C | 5.99 | 128.08 | 113.10 |
| 36 | 5 | 1897 | G | N1-C6-O6 | 5.99 | 123.49 | 119.90 |
| 36 | 1 | 546 | C | C6-N1-C2 | -5.99 | 117.91 | 120.30 |
| 36 | 1 | 1759 | C | C2-N1-C1' | 5.99 | 125.39 | 118.80 |
| 36 | 1 | 3159 | C | C2-N1-C1' | -5.99 | 112.21 | 118.80 |
| 36 | 5 | 864 | G | C4-N9-C1' | 5.99 | 134.28 | 126.50 |
| 36 | 5 | 1803 | C | C6-N1-C2 | -5.99 | 117.91 | 120.30 |
| 37 | 3 | 85 | G | N3-C4-N9 | -5.99 | 122.41 | 126.00 |
| 36 | 1 | 101 | G | N3-C4-C5 | 5.99 | 131.59 | 128.60 |
| 36 | 1 | 1631 | C | C6-N1-C2 | 5.99 | 122.69 | 120.30 |
| 1 | 6 | 526 | A | C8-N9-C4 | -5.99 | 103.41 | 105.80 |
| 36 | 1 | 2719 | U | C5-C6-N1 | -5.98 | 119.71 | 122.70 |
| 36 | 1 | 199 | A | O4'-C1'-N9 | 5.98 | 112.99 | 108.20 |
| 36 | 1 | 2356 | A | N9-C4-C5 | -5.98 | 103.41 | 105.80 |
| 36 | 5 | 2664 | C | N3-C4-C5 | -5.98 | 119.51 | 121.90 |
| 1 | 6 | 1654 | G | C4-C5-C6 | 5.98 | 122.39 | 118.80 |
| 36 | 5 | 2899 | C | C6-N1-C2 | -5.97 | 117.91 | 120.30 |
| 38 | 8 | 94 | C | C5-C6-N1 | -5.97 | 118.01 | 121.00 |
| 36 | 1 | 2593 | A | P-O3'-C3' | 5.97 | 126.87 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1 | 2 | 1431 | C | C6-N1-C2 | 5.97 | 122.69 | 120.30 |
| 38 | 8 | 58 | G | C4-C5-N7 | 5.97 | 113.19 | 110.80 |
| 36 | 1 | 1179 | A | O5'-P-OP1 | -5.97 | 100.33 | 105.70 |
| 36 | 1 | 1581 | C | C6-N1-C2 | -5.97 | 117.91 | 120.30 |
| 36 | 1 | 3021 | A | C8-N9-C4 | 5.97 | 108.19 | 105.80 |
| 1 | 2 | 1059 | U | N3-C2-O2 | -5.96 | 118.03 | 122.20 |
| 36 | 1 | 2613 | U | O5'-P-OP2 | -5.96 | 100.33 | 105.70 |
| 36 | 5 | 2206 | G | P-O3'-C3' | 5.96 | 126.86 | 119.70 |
| 36 | 5 | 3209 | A | N1-C6-N6 | 5.96 | 122.18 | 118.60 |
| 36 | 5 | 1152 | G | N9-C4-C5 | 5.96 | 107.78 | 105.40 |
| 36 | 1 | 34 | A | O5'-P-OP2 | -5.96 | 100.34 | 105.70 |
| 1 | 2 | 187 | G | P-O3'-C3' | 5.96 | 126.85 | 119.70 |
| 36 | 1 | 360 | G | C8-N9-C4 | -5.96 | 104.02 | 106.40 |
| 36 | 5 | 59 | G | C5-C6-O6 | -5.95 | 125.03 | 128.60 |
| 36 | 5 | 2376 | G | C5-C6-O6 | -5.95 | 125.03 | 128.60 |
| 36 | 5 | 186 | U | O5'-P-OP1 | -5.95 | 100.34 | 105.70 |
| 36 | 5 | 905 | U | O5'-P-OP1 | -5.95 | 100.34 | 105.70 |
| 38 | 8 | 105 | A | N1-C6-N6 | 5.95 | 122.17 | 118.60 |
| 37 | 3 | 77 | G | N3-C4-N9 | -5.95 | 122.43 | 126.00 |
| 36 | 5 | 2613 | U | O5'-P-OP2 | -5.95 | 100.35 | 105.70 |
| 36 | 5 | 873 | C | P-O3'-C3' | 5.95 | 126.84 | 119.70 |
| 36 | 5 | 1589 | A | O5'-P-OP2 | -5.95 | 100.35 | 105.70 |
| 1 | 2 | 1572 | G | C4-C5-N7 | 5.95 | 113.18 | 110.80 |
| 36 | 5 | 1177 | G | N9-C4-C5 | -5.95 | 103.02 | 105.40 |
| 36 | 5 | 1878 | G | C8-N9-C4 | -5.95 | 104.02 | 106.40 |
| 36 | 5 | 426 | G | N9-C4-C5 | 5.94 | 107.78 | 105.40 |
| 36 | 1 | 2979 | U | N3-C2-O2 | -5.94 | 118.04 | 122.20 |
| 36 | 5 | 1331 | U | C6-N1-C2 | 5.94 | 124.57 | 121.00 |
| 1 | 2 | 1504 | G | N3-C4-C5 | -5.94 | 125.63 | 128.60 |
| 36 | 5 | 2621 | G | N1-C6-O6 | 5.94 | 123.46 | 119.90 |
| 36 | 1 | 2145 | A | C5-C6-N6 | -5.94 | 118.95 | 123.70 |
| 36 | 5 | 2353 | G | N3-C4-C5 | -5.94 | 125.63 | 128.60 |
| 36 | 1 | 688 | G | N7-C8-N9 | 5.94 | 116.07 | 113.10 |
| 36 | 1 | 718 | G | N1-C6-O6 | 5.94 | 123.46 | 119.90 |
| 36 | 5 | 800 | G | C4-N9-C1' | 5.94 | 134.22 | 126.50 |
| 1 | 6 | 337 | G | N7-C8-N9 | 5.93 | 116.07 | 113.10 |
| 36 | 5 | 1049 | C | C6-N1-C2 | -5.93 | 117.93 | 120.30 |
| 36 | 1 | 208 | C | C6-N1-C2 | -5.93 | 117.93 | 120.30 |
| 36 | 1 | 2355 | G | N1-C6-O6 | 5.93 | 123.46 | 119.90 |
| 36 | 5 | 355 | A | O5'-P-OP1 | -5.93 | 100.36 | 105.70 |
| 36 | 5 | 803 | C | C6-N1-C2 | -5.93 | 117.93 | 120.30 |
| 36 | 5 | 1772 | U | C6-N1-C2 | 5.93 | 124.56 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 900 | G | C8-N9-C4 | -5.93 | 104.03 | 106.40 |
| 1 | 2 | 25 | C | P-O3'-C3' | 5.93 | 126.81 | 119.70 |
| 36 | 1 | 590 | G | N3-C4-N9 | -5.93 | 122.44 | 126.00 |
| 36 | 5 | 2878 | G | N3-C4-N9 | 5.93 | 129.56 | 126.00 |
| 38 | 8 | 70 | G | N9-C4-C5 | -5.93 | 103.03 | 105.40 |
| 36 | 1 | 3133 | C | C6-N1-C2 | 5.92 | 122.67 | 120.30 |
| 1 | 2 | 1370 | U | P-O3'-C3' | 5.92 | 126.81 | 119.70 |
| 1 | 6 | 1058 | U | P-O3'-C3' | 5.92 | 126.81 | 119.70 |
| 36 | 1 | 1763 | U | C6-N1-C1' | -5.92 | 112.91 | 121.20 |
| 1 | 6 | 1754 | A | OP2-P-O3' | 5.92 | 118.22 | 105.20 |
| 36 | 5 | 1096 | U | C2-N1-C1' | 5.92 | 124.80 | 117.70 |
| 36 | 5 | 1239 | C | C2-N1-C1' | 5.92 | 125.31 | 118.80 |
| 36 | 1 | 2269 | U | O5'-P-OP2 | -5.92 | 100.38 | 105.70 |
| 36 | 1 | 2290 | C | N3-C4-C5 | 5.91 | 124.27 | 121.90 |
| 36 | 1 | 283 | G | N3-C4-N9 | 5.91 | 129.55 | 126.00 |
| 36 | 1 | 922 | U | C2-N1-C1' | 5.91 | 124.79 | 117.70 |
| 36 | 5 | 895 | A | N1-C2-N3 | 5.91 | 132.25 | 129.30 |
| 36 | 5 | 2140 | U | C4-C5-C6 | 5.91 | 123.25 | 119.70 |
| 36 | 1 | 900 | G | N9-C4-C5 | 5.91 | 107.76 | 105.40 |
| 36 | 1 | 2541 | U | P-O3'-C3' | 5.91 | 126.79 | 119.70 |
| 1 | 2 | 1504 | G | C8-N9-C1' | -5.91 | 119.32 | 127.00 |
| 36 | 1 | 2281 | A | O4'-C1'-N9 | 5.91 | 112.93 | 108.20 |
| 36 | 1 | 2837 | A | N9-C4-C5 | 5.91 | 108.16 | 105.80 |
| 36 | 1 | 2838 | A | N1-C6-N6 | -5.91 | 115.06 | 118.60 |
| 36 | 1 | 927 | C | C6-N1-C2 | -5.90 | 117.94 | 120.30 |
| 1 | 2 | 1433 | G | N1-C6-O6 | -5.90 | 116.36 | 119.90 |
| 36 | 1 | 635 | G | N1-C6-O6 | 5.90 | 123.44 | 119.90 |
| 51 | m5 | 185 | ALA | C-N-CA | 5.90 | 134.70 | 122.30 |
| 1 | 2 | 549 | G | C4-N9-C1' | 5.90 | 134.17 | 126.50 |
| 36 | 1 | 2846 | U | N3-C2-O2 | -5.90 | 118.07 | 122.20 |
| 36 | 5 | 2405 | C | C6-N1-C2 | 5.90 | 122.66 | 120.30 |
| 36 | 1 | 2873 | U | N1-C2-O2 | 5.90 | 126.93 | 122.80 |
| 36 | 1 | 929 | A | OP1-P-O3' | 5.90 | 118.17 | 105.20 |
| 36 | 1 | 1879 | A | O4'-C1'-N9 | 5.90 | 112.92 | 108.20 |
| 36 | 1 | 2112 | U | P-O3'-C3' | 5.89 | 126.77 | 119.70 |
| 36 | 1 | 2568 | C | N1-C2-O2 | 5.89 | 122.44 | 118.90 |
| 36 | 5 | 1429 | G | C8-N9-C4 | 5.89 | 108.76 | 106.40 |
| 36 | 5 | 1032 | C | C6-N1-C2 | -5.89 | 117.94 | 120.30 |
| 36 | 1 | 435 | C | C6-N1-C2 | 5.89 | 122.66 | 120.30 |
| 36 | 1 | 2643 | A | O5'-P-OP1 | -5.89 | 100.40 | 105.70 |
| 36 | 5 | 2943 | G | N3-C4-N9 | 5.89 | 129.53 | 126.00 |
| 36 | 5 | 2398 | A | C6-C5-N7 | -5.89 | 128.18 | 132.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 2258 | U | P-O3'-C3' | 5.88 | 126.76 | 119.70 |
| 36 | 5 | 966 | U | C6-N1-C2 | -5.88 | 117.47 | 121.00 |
| 36 | 5 | 3244 | A | O5'-P-OP2 | -5.88 | 100.41 | 105.70 |
| 38 | 8 | 30 | C | C6-N1-C2 | 5.88 | 122.65 | 120.30 |
| 36 | 1 | 3140 | G | N3-C4-N9 | 5.88 | 129.53 | 126.00 |
| 1 | 6 | 1654 | G | C6-C5-N7 | -5.88 | 126.87 | 130.40 |
| 36 | 5 | 2312 | A | O5'-P-OP1 | -5.88 | 100.41 | 105.70 |
| 36 | 5 | 2550 | U | N3-C2-O2 | -5.88 | 118.09 | 122.20 |
| 36 | 5 | 3120 | C | C2-N1-C1' | 5.87 | 125.26 | 118.80 |
| 36 | 5 | 910 | G | C8-N9-C4 | -5.87 | 104.05 | 106.40 |
| 36 | 5 | 2621 | G | C4-N9-C1' | 5.87 | 134.13 | 126.50 |
| 1 | 2 | 77 | U | O4'-C1'-N1 | -5.87 | 103.50 | 108.20 |
| 36 | 5 | 1304 | A | O5'-P-OP1 | -5.87 | 100.42 | 105.70 |
| 36 | 5 | 3317 | U | N3-C2-O2 | -5.87 | 118.09 | 122.20 |
| 1 | 6 | 1097 | U | P-O3'-C3' | 5.87 | 126.74 | 119.70 |
| 1 | 6 | 1274 | C | C6-N1-C1' | -5.87 | 113.76 | 120.80 |
| 36 | 5 | 2912 | G | N1-C6-O6 | 5.87 | 123.42 | 119.90 |
| 36 | 5 | 338 | A | C8-N9-C4 | -5.86 | 103.45 | 105.80 |
| 1 | 6 | 79 | C | C6-N1-C2 | -5.86 | 117.96 | 120.30 |
| 1 | 6 | 543 | C | N3-C2-O2 | -5.86 | 117.80 | 121.90 |
| 36 | 5 | 1854 | C | C6-N1-C2 | -5.86 | 117.96 | 120.30 |
| 25 | D3 | 15 | LEU | CA-CB-CG | 5.86 | 128.77 | 115.30 |
| 36 | 1 | 2257 | C | N1-C2-O2 | 5.86 | 122.41 | 118.90 |
| 36 | 1 | 2868 | U | N1-C2-O2 | 5.86 | 126.90 | 122.80 |
| 36 | 1 | 1708 | C | C5-C6-N1 | 5.85 | 123.93 | 121.00 |
| 36 | 5 | 800 | G | N3-C4-N9 | 5.85 | 129.51 | 126.00 |
| 1 | 2 | 507 | U | N1-C2-O2 | 5.85 | 126.90 | 122.80 |
| 36 | 5 | 765 | C | C6-N1-C2 | 5.85 | 122.64 | 120.30 |
| 38 | 8 | 55 | U | N3-C4-O4 | 5.85 | 123.50 | 119.40 |
| 36 | 5 | 2141 | U | C6-N1-C2 | 5.85 | 124.51 | 121.00 |
| 36 | 1 | 3022 | G | O4'-C1'-N9 | 5.85 | 112.88 | 108.20 |
| 36 | 5 | 2593 | A | P-O3'-C3' | 5.85 | 126.72 | 119.70 |
| 36 | 5 | 2876 | C | C6-N1-C2 | -5.85 | 117.96 | 120.30 |
| 36 | 5 | 3394 | U | C2-N1-C1' | -5.84 | 110.69 | 117.70 |
| 36 | 5 | 1092 | C | C5-C6-N1 | 5.84 | 123.92 | 121.00 |
| 1 | 2 | 1134 | C | C6-N1-C2 | 5.84 | 122.64 | 120.30 |
| 36 | 1 | 2693 | C | C6-N1-C2 | 5.84 | 122.64 | 120.30 |
| 36 | 1 | 1654 | A | N1-C2-N3 | 5.84 | 132.22 | 129.30 |
| 1 | 6 | 863 | A | C8-N9-C4 | 5.84 | 108.13 | 105.80 |
| 36 | 5 | 2383 | C | C6-N1-C1' | 5.84 | 127.80 | 120.80 |
| 1 | 2 | 294 | C | C6-N1-C2 | 5.83 | 122.63 | 120.30 |
| 59 | N3 | 46 | LEU | CA-CB-CG | -5.83 | 101.88 | 115.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 1 | 2 | 1355 | C | C6-N1-C2 | -5.83 | 117.97 | 120.30 |
| 36 | 1 | 627 | U | N3-C4-C5 | -5.83 | 111.10 | 114.60 |
| 36 | 1 | 1856 | C | C6-N1-C2 | -5.83 | 117.97 | 120.30 |
| 36 | 5 | 676 | G | C6-C5-N7 | -5.83 | 126.90 | 130.40 |
| 36 | 5 | 1488 | G | C8-N9-C4 | -5.83 | 104.07 | 106.40 |
| 1 | 2 | 321 | C | C2-N1-C1' | 5.83 | 125.21 | 118.80 |
| 1 | 6 | 639 | U | N3-C2-O2 | -5.83 | 118.12 | 122.20 |
| 1 | 6 | 1010 | C | C6-N1-C2 | 5.83 | 122.63 | 120.30 |
| 1 | 6 | 1654 | G | N7-C8-N9 | 5.83 | 116.01 | 113.10 |
| 36 | 5 | 667 | C | C6-N1-C2 | 5.83 | 122.63 | 120.30 |
| 36 | 5 | 1014 | U | C6-N1-C1' | -5.83 | 113.04 | 121.20 |
| 36 | 5 | 1806 | A | C8-N9-C4 | 5.83 | 108.13 | 105.80 |
| 36 | 5 | 3180 | A | C8-N9-C4 | 5.83 | 108.13 | 105.80 |
| 37 | 3 | 85 | G | C8-N9-C4 | 5.83 | 108.73 | 106.40 |
| 1 | 2 | 1568 | C | C2-N1-C1' | 5.82 | 125.21 | 118.80 |
| 36 | 5 | 823 | C | C5-C6-N1 | 5.82 | 123.91 | 121.00 |
| 36 | 5 | 864 | G | N1-C2-N2 | -5.82 | 110.96 | 116.20 |
| 38 | 8 | 112 | U | C5-C6-N1 | -5.82 | 119.79 | 122.70 |
| 36 | 1 | 860 | G | O5'-P-OP2 | -5.82 | 100.47 | 105.70 |
| 36 | 5 | 3354 | U | C2-N1-C1' | 5.82 | 124.68 | 117.70 |
| 1 | 2 | 949 | C | C6-N1-C2 | -5.81 | 117.97 | 120.30 |
| 36 | 1 | 54 | C | C6-N1-C2 | 5.81 | 122.62 | 120.30 |
| 36 | 1 | 218 | G | P-O3'-C3' | 5.81 | 126.68 | 119.70 |
| 38 | 8 | 75 | G | C8-N9-C4 | 5.81 | 108.72 | 106.40 |
| 36 | 1 | 1415 | U | N3-C4-C5 | -5.81 | 111.11 | 114.60 |
| 36 | 1 | 823 | C | C6-N1-C2 | -5.81 | 117.98 | 120.30 |
| 36 | 5 | 2821 | C | N1-C2-O2 | 5.81 | 122.39 | 118.90 |
| 1 | 2 | 1185 | U | C2-N1-C1' | 5.81 | 124.67 | 117.70 |
| 36 | 5 | 345 | G | C8-N9-C1' | -5.81 | 119.45 | 127.00 |
| 36 | 1 | 569 | A | C8-N9-C4 | 5.80 | 108.12 | 105.80 |
| 36 | 1 | 2512 | C | C6-N1-C2 | 5.80 | 122.62 | 120.30 |
| 36 | 5 | 1521 | G | O5'-P-OP1 | -5.80 | 100.48 | 105.70 |
| 1 | 2 | 959 | U | N3-C2-O2 | -5.80 | 118.14 | 122.20 |
| 38 | 8 | 8 | C | C6-N1-C2 | 5.80 | 122.62 | 120.30 |
| 1 | 6 | 1196 | A | P-O3'-C3' | 5.80 | 126.66 | 119.70 |
| 10 | S8 | 121 | LEU | CA-CB-CG | 5.80 | 128.63 | 115.30 |
| 36 | 1 | 156 | G | C8-N9-C4 | -5.80 | 104.08 | 106.40 |
| 36 | 1 | 1886 | A | C8-N9-C4 | -5.80 | 103.48 | 105.80 |
| 36 | 5 | 3245 | A | N1-C6-N6 | 5.79 | 122.08 | 118.60 |
| 36 | 5 | 282 | G | C2'-C3'-O3' | 5.79 | 122.96 | 113.70 |
| 36 | 1 | 979 | U | P-O3'-C3' | 5.79 | 126.65 | 119.70 |
| 36 | 1 | 2874 | G | N9-C4-C5 | 5.79 | 107.72 | 105.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 3187 | A | C8-N9-C4 | 5.79 | 108.11 | 105.80 |
| 36 | 5 | 1394 | A | C8-N9-C4 | 5.79 | 108.11 | 105.80 |
| 36 | 5 | 3011 | A | N3-C4-N9 | -5.79 | 122.77 | 127.40 |
| 36 | 1 | 1294 | A | C8-N9-C4 | 5.78 | 108.11 | 105.80 |
| 37 | 3 | 51 | A | N1-C2-N3 | 5.78 | 132.19 | 129.30 |
| 36 | 5 | 1445 | U | O5'-P-OP2 | 5.78 | 117.64 | 110.70 |
| 1 | 2 | 1600 | A | N7-C8-N9 | 5.78 | 116.69 | 113.80 |
| 36 | 1 | 3291 | G | C4-N9-C1' | -5.78 | 118.98 | 126.50 |
| 36 | 5 | 1063 | G | N3-C4-N9 | 5.78 | 129.47 | 126.00 |
| 36 | 5 | 1797 | A | C8-N9-C4 | 5.78 | 108.11 | 105.80 |
| 36 | 1 | 656 | A | C8-N9-C4 | -5.78 | 103.49 | 105.80 |
| 36 | 1 | 984 | G | N3-C2-N2 | 5.78 | 123.94 | 119.90 |
| 36 | 1 | 2812 | C | N3-C4-C5 | 5.78 | 124.21 | 121.90 |
| 36 | 1 | 1552 | G | N3-C4-N9 | 5.78 | 129.47 | 126.00 |
| 1 | 6 | 477 | A | C8-N9-C4 | 5.78 | 108.11 | 105.80 |
| 36 | 5 | 426 | G | N3-C2-N2 | -5.78 | 115.86 | 119.90 |
| 1 | 2 | 1568 | C | C6-N1-C2 | -5.77 | 117.99 | 120.30 |
| 36 | 1 | 2938 | G | C5-C6-O6 | -5.77 | 125.14 | 128.60 |
| 1 | 2 | 1077 | C | C6-N1-C2 | -5.77 | 117.99 | 120.30 |
| 1 | 6 | 9 | U | C5-C6-N1 | 5.77 | 125.59 | 122.70 |
| 36 | 1 | 283 | G | C8-N9-C1' | -5.77 | 119.50 | 127.00 |
| 36 | 1 | 2871 | G | C6-C5-N7 | -5.77 | 126.94 | 130.40 |
| 1 | 2 | 813 | U | P-O3'-C3' | 5.77 | 126.62 | 119.70 |
| 36 | 5 | 3245 | A | C2-N3-C4 | -5.77 | 107.72 | 110.60 |
| 36 | 1 | 863 | C | C4-C5-C6 | -5.76 | 114.52 | 117.40 |
| 36 | 1 | 898 | U | C5-C6-N1 | 5.76 | 125.58 | 122.70 |
| 36 | 1 | 1635 | G | N3-C4-N9 | -5.76 | 122.55 | 126.00 |
| 36 | 5 | 1354 | G | N7-C8-N9 | 5.76 | 115.98 | 113.10 |
| 1 | 2 | 697 | C | C6-N1-C2 | -5.76 | 118.00 | 120.30 |
| 36 | 1 | 620 | U | C2-N1-C1' | -5.76 | 110.79 | 117.70 |
| 38 | 4 | 54 | A | N1-C6-N6 | 5.76 | 122.05 | 118.60 |
| 36 | 5 | 2949 | U | C5-C6-N1 | -5.76 | 119.82 | 122.70 |
| 36 | 1 | 2549 | G | C4-N9-C1' | -5.75 | 119.02 | 126.50 |
| 36 | 5 | 1548 | C | C6-N1-C2 | -5.75 | 118.00 | 120.30 |
| 1 | 2 | 322 | G | O4'-C1'-N9 | -5.75 | 103.60 | 108.20 |
| 1 | 6 | 949 | C | C6-N1-C2 | -5.75 | 118.00 | 120.30 |
| 36 | 5 | 1633 | C | C6-N1-C1' | -5.75 | 113.90 | 120.80 |
| 36 | 5 | 3231 | U | C2-N1-C1' | -5.75 | 110.80 | 117.70 |
| 36 | 1 | 2767 | U | C5-C6-N1 | -5.75 | 119.83 | 122.70 |
| 36 | 5 | 409 | A | N1-C6-N6 | 5.75 | 122.05 | 118.60 |
| 1 | 2 | 913 | G | P-O3'-C3' | 5.75 | 126.59 | 119.70 |
| 36 | 1 | 715 | A | C8-N9-C4 | -5.75 | 103.50 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 2922 | G | C4-C5-N7 | 5.75 | 113.10 | 110.80 |
| 36 | 5 | 98 | G | N3-C4-C5 | 5.75 | 131.47 | 128.60 |
| 36 | 1 | 1329 | U | OP1-P-O3' | 5.74 | 117.84 | 105.20 |
| 1 | 2 | 1051 | G | P-O3'-C3' | 5.74 | 126.59 | 119.70 |
| 36 | 1 | 92 | G | N3-C4-C5 | 5.74 | 131.47 | 128.60 |
| 36 | 1 | 1183 | C | C2-N1-C1' | -5.74 | 112.48 | 118.80 |
| 36 | 1 | 1740 | U | C6-N1-C2 | 5.74 | 124.44 | 121.00 |
| 36 | 5 | 2917 | G | C5-C6-O6 | 5.74 | 132.04 | 128.60 |
| 36 | 5 | 2954 | U | N1-C2-O2 | 5.74 | 126.82 | 122.80 |
| 36 | 1 | 591 | G | C5-C6-O6 | 5.74 | 132.04 | 128.60 |
| 1 | 6 | 610 | G | O4'-C1'-N9 | 5.74 | 112.79 | 108.20 |
| 37 | 3 | 85 | G | C4-N9-C1' | -5.74 | 119.04 | 126.50 |
| 36 | 5 | 2878 | G | C4-N9-C1' | 5.74 | 133.96 | 126.50 |
| 1 | 2 | 1243 | G | C4-N9-C1' | 5.73 | 133.95 | 126.50 |
| 36 | 1 | 1408 | G | N3-C4-C5 | 5.73 | 131.47 | 128.60 |
| 38 | 8 | 108 | C | C6-N1-C2 | 5.73 | 122.59 | 120.30 |
| 36 | 1 | 867 | G | C5-C6-O6 | -5.73 | 125.16 | 128.60 |
| 36 | 5 | 934 | G | C4-N9-C1' | 5.73 | 133.95 | 126.50 |
| 36 | 1 | 2982 | A | C8-N9-C4 | -5.73 | 103.51 | 105.80 |
| 36 | 5 | 405 | U | OP2-P-O3' | 5.73 | 117.80 | 105.20 |
| 38 | 8 | 114 | G | C8-N9-C4 | 5.73 | 108.69 | 106.40 |
| 36 | 1 | 1300 | G | C8-N9-C4 | 5.72 | 108.69 | 106.40 |
| 36 | 1 | 1879 | A | N1-C6-N6 | 5.72 | 122.03 | 118.60 |
| 36 | 1 | 3275 | U | OP1-P-O3' | 5.72 | 117.79 | 105.20 |
| 36 | 5 | 1174 | G | C6-C5-N7 | -5.72 | 126.97 | 130.40 |
| 36 | 1 | 1866 | C | N1-C2-O2 | 5.72 | 122.33 | 118.90 |
| 36 | 1 | 2645 | G | N3-C4-N9 | 5.72 | 129.43 | 126.00 |
| 1 | 6 | 542 | A | P-O3'-C3' | 5.72 | 126.57 | 119.70 |
| 36 | 5 | 1866 | C | C5-C6-N1 | 5.72 | 123.86 | 121.00 |
| 36 | 1 | 3181 | C | N3-C2-O2 | -5.72 | 117.90 | 121.90 |
| 37 | 3 | 99 | G | C5-C6-O6 | -5.72 | 125.17 | 128.60 |
| 36 | 5 | 1222 | G | P-O3'-C3' | 5.72 | 126.56 | 119.70 |
| 36 | 1 | 1300 | G | N9-C4-C5 | -5.72 | 103.11 | 105.40 |
| 37 | 3 | 99 | G | N3-C4-C5 | 5.72 | 131.46 | 128.60 |
| 1 | 2 | 1761 | U | C2-N1-C1' | 5.71 | 124.56 | 117.70 |
| 36 | 1 | 547 | G | P-O3'-C3' | 5.71 | 126.56 | 119.70 |
| 36 | 1 | 1456 | A | N9-C4-C5 | 5.71 | 108.09 | 105.80 |
| 36 | 1 | 340 | C | O5'-P-OP2 | 5.71 | 117.55 | 110.70 |
| 36 | 1 | 1443 | G | OP1-P-O3' | 5.71 | 117.77 | 105.20 |
| 36 | 1 | 3036 | G | C6-C5-N7 | 5.71 | 133.83 | 130.40 |
| 1 | 2 | 1535 | U | O5'-P-OP1 | 5.71 | 117.55 | 110.70 |
| 14 | C2 | 103 | LEU | CA-CB-CG | 5.71 | 128.43 | 115.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 2403 | G | C4-N9-C1' | 5.71 | 133.92 | 126.50 |
| 36 | 5 | 609 | G | O5'-P-OP1 | 5.71 | 117.55 | 110.70 |
| 1 | 6 | 320 | U | C5-C6-N1 | 5.71 | 125.55 | 122.70 |
| 36 | 5 | 2383 | C | N1-C2-O2 | -5.71 | 115.48 | 118.90 |
| 13 | C1 | 5 | LEU | CA-CB-CG | 5.70 | 128.40 | 115.30 |
| 36 | 1 | 497 | C | C6-N1-C2 | -5.70 | 118.02 | 120.30 |
| 36 | 1 | 3354 | U | N3-C2-O2 | -5.70 | 118.21 | 122.20 |
| 36 | 5 | 1302 | A | O5'-P-OP1 | -5.70 | 100.57 | 105.70 |
| 1 | 2 | 1573 | A | P-O3'-C3' | 5.70 | 126.54 | 119.70 |
| 36 | 5 | 1081 | U | C6-N1-C2 | -5.70 | 117.58 | 121.00 |
| 36 | 5 | 1329 | U | N3-C2-O2 | -5.70 | 118.21 | 122.20 |
| 36 | 5 | 1435 | A | N1-C6-N6 | -5.70 | 115.18 | 118.60 |
| 36 | 1 | 2142 | A | C8-N9-C4 | -5.69 | 103.52 | 105.80 |
| 36 | 5 | 1633 | C | C5-C6-N1 | 5.69 | 123.85 | 121.00 |
| 36 | 5 | 3005 | A | O5'-P-OP1 | -5.69 | 100.58 | 105.70 |
| 36 | 1 | 278 | U | C2-N1-C1' | -5.69 | 110.87 | 117.70 |
| 36 | 1 | 1858 | A | C4-N9-C1' | 5.69 | 136.54 | 126.30 |
| 36 | 1 | 41 | G | C8-N9-C4 | -5.69 | 104.12 | 106.40 |
| 36 | 1 | 2118 | C | O5'-P-OP1 | -5.69 | 100.58 | 105.70 |
| 36 | 5 | 1481 | A | C4-N9-C1' | 5.69 | 136.54 | 126.30 |
| 36 | 5 | 1878 | G | N7-C8-N9 | 5.69 | 115.94 | 113.10 |
| 36 | 5 | 1902 | G | C8-N9-C1' | -5.69 | 119.61 | 127.00 |
| 36 | 1 | 1115 | G | N1-C6-O6 | 5.68 | 123.31 | 119.90 |
| 36 | 1 | 2321 | A | O5'-P-OP2 | -5.68 | 100.59 | 105.70 |
| 1 | 6 | 163 | G | N3-C4-N9 | -5.68 | 122.59 | 126.00 |
| 12 | C0 | 76 | LEU | CA-CB-CG | 5.68 | 128.37 | 115.30 |
| 36 | 1 | 1444 | G | C5-N7-C8 | -5.68 | 101.46 | 104.30 |
| 36 | 1 | 2618 | G | C5-C6-O6 | 5.68 | 132.01 | 128.60 |
| 36 | 5 | 860 | G | N1-C6-O6 | 5.68 | 123.31 | 119.90 |
| 36 | 5 | 633 | C | C6-N1-C2 | -5.68 | 118.03 | 120.30 |
| 1 | 2 | 626 | U | C6-N1-C2 | -5.67 | 117.59 | 121.00 |
| 36 | 1 | 1432 | C | C6-N1-C2 | -5.67 | 118.03 | 120.30 |
| 36 | 1 | 1795 | U | O5'-P-OP1 | -5.67 | 100.59 | 105.70 |
| 36 | 5 | 92 | G | N3-C4-C5 | 5.67 | 131.44 | 128.60 |
| 36 | 5 | 2662 | G | N9-C1'-C2' | -5.67 | 105.76 | 112.00 |
| 36 | 5 | 2996 | U | C2-N1-C1' | -5.67 | 110.89 | 117.70 |
| 36 | 1 | 316 | U | O5'-P-OP1 | -5.67 | 100.59 | 105.70 |
| 36 | 1 | 2715 | A | O5'-P-OP1 | -5.67 | 100.59 | 105.70 |
| 36 | 1 | 925 | A | N9-C4-C5 | -5.67 | 103.53 | 105.80 |
| 36 | 1 | 2305 | G | C4-N9-C1' | 5.67 | 133.87 | 126.50 |
| 36 | 5 | 3394 | U | C5-C6-N1 | -5.67 | 119.86 | 122.70 |
| 36 | 5 | 360 | G | OP1-P-O3' | 5.67 | 117.67 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 36 | 5 | 34 | A | O5'-P-OP2 | -5.66 | 100.60 | 105.70 |
| 36 | 5 | 3061 | G | C8-N9-C4 | 5.66 | 108.67 | 106.40 |
| 1 | 2 | 1059 | U | C2-N1-C1' | 5.66 | 124.49 | 117.70 |
| 36 | 5 | 2922 | G | C8-N9-C1' | -5.66 | 119.64 | 127.00 |
| 36 | 5 | 420 | G | C2-N3-C4 | 5.66 | 114.73 | 111.90 |
| 37 | 3 | 83 | U | C5-C6-N1 | -5.66 | 119.87 | 122.70 |
| 1 | 6 | 755 | A | C3'-C2'-C1' | 5.66 | 106.03 | 101.50 |
| 1 | 6 | 1100 | G | N9-C4-C5 | -5.66 | 103.14 | 105.40 |
| 36 | 5 | 2715 | A | C8-N9-C4 | 5.66 | 108.06 | 105.80 |
| 1 | 6 | 1615 | C | P-O3'-C3' | 5.66 | 126.49 | 119.70 |
| 36 | 5 | 896 | A | O5'-P-OP2 | -5.66 | 100.61 | 105.70 |
| 36 | 5 | 534 | U | N1-C2-O2 | 5.65 | 126.76 | 122.80 |
| 36 | 1 | 2982 | A | N9-C4-C5 | 5.65 | 108.06 | 105.80 |
| 1 | 2 | 192 | U | C6-N1-C2 | -5.65 | 117.61 | 121.00 |
| 36 | 5 | 3158 | G | C8-N9-C4 | -5.65 | 104.14 | 106.40 |
| 36 | 1 | 1902 | G | N3-C4-N9 | 5.65 | 129.39 | 126.00 |
| 38 | 8 | 111 | A | N1-C6-N6 | 5.65 | 121.99 | 118.60 |
| 1 | 2 | 74 | U | OP1-P-O3' | 5.65 | 117.62 | 105.20 |
| 36 | 1 | 1938 | U | C5-C6-N1 | -5.65 | 119.88 | 122.70 |
| 36 | 1 | 1654 | A | O4'-C1'-N9 | -5.64 | 103.68 | 108.20 |
| 38 | 8 | 44 | A | O5'-P-OP1 | -5.64 | 100.62 | 105.70 |
| 1 | 2 | 94 | U | C5-C6-N1 | -5.64 | 119.88 | 122.70 |
| 36 | 1 | 2982 | A | N1-C6-N6 | -5.64 | 115.22 | 118.60 |
| 36 | 1 | 3275 | U | P-O3'-C3' | 5.64 | 126.47 | 119.70 |
| 36 | 1 | 1783 | U | O5'-P-OP1 | -5.64 | 100.62 | 105.70 |
| 36 | 1 | 3389 | U | P-O3'-C3' | 5.64 | 126.47 | 119.70 |
| 36 | 5 | 1733 | G | N1-C6-O6 | 5.64 | 123.28 | 119.90 |
| 36 | 5 | 2381 | G | N1-C6-O6 | 5.64 | 123.28 | 119.90 |
| 1 | 2 | 1146 | G | C4-N9-C1' | 5.64 | 133.83 | 126.50 |
| 36 | 1 | 644 | G | C5-C6-O6 | 5.64 | 131.98 | 128.60 |
| 1 | 2 | 75 | U | O5'-P-OP1 | -5.64 | 100.63 | 105.70 |
| 36 | 1 | 1780 | G | C8-N9-C1' | -5.64 | 119.67 | 127.00 |
| 36 | 1 | 1943 | C | C6-N1-C2 | -5.64 | 118.05 | 120.30 |
| 36 | 1 | 2541 | U | C6-N1-C1' | -5.64 | 113.31 | 121.20 |
| 1 | 6 | 639 | U | N1-C2-O2 | 5.64 | 126.75 | 122.80 |
| 6 | S4 | 12 | LEU | CA-CB-CG | 5.63 | 128.26 | 115.30 |
| 1 | 2 | 1399 | C | C2-N1-C1' | 5.63 | 125.00 | 118.80 |
| 36 | 5 | 1862 | U | C2-N1-C1' | -5.63 | 110.95 | 117.70 |
| 1 | 2 | 1778 | G | C8-N9-C4 | -5.63 | 104.15 | 106.40 |
| 36 | 1 | 922 | U | N1-C2-N3 | -5.63 | 111.52 | 114.90 |
| 36 | 1 | 1127 | G | C4-C5-N7 | -5.63 | 108.55 | 110.80 |
| 38 | 4 | 39 | G | N3-C4-C5 | -5.63 | 125.79 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 36 | 1 | 2315 | G | O5'-P-OP1 | -5.62 | 100.64 | 105.70 |
| 36 | 1 | 2867 | C | C6-N1-C2 | 5.62 | 122.55 | 120.30 |
| 36 | 1 | 823 | C | C5-C6-N1 | 5.62 | 123.81 | 121.00 |
| 62 | N6 | 31 | LEU | CA-CB-CG | -5.62 | 102.37 | 115.30 |
| 52 | m6 | 27 | LEU | CA-CB-CG | -5.62 | 102.38 | 115.30 |
| 36 | 1 | 1780 | G | N3-C4-N9 | 5.62 | 129.37 | 126.00 |
| 36 | 5 | 1444 | G | N1-C6-O6 | 5.62 | 123.27 | 119.90 |
| 36 | 5 | 2718 | U | C2-N1-C1' | -5.62 | 110.96 | 117.70 |
| 36 | 5 | 2370 | G | N3-C4-N9 | -5.62 | 122.63 | 126.00 |
| 36 | 1 | 155 | G | O5'-P-OP1 | -5.62 | 100.65 | 105.70 |
| 36 | 1 | 2983 | C | C4-C5-C6 | 5.62 | 120.21 | 117.40 |
| 64 | n8 | 48 | TYR | CA-CB-CG | 5.62 | 124.07 | 113.40 |
| 36 | 1 | 1604 | G | N3-C4-N9 | 5.61 | 129.37 | 126.00 |
| 38 | 4 | 108 | C | C6-N1-C2 | 5.61 | 122.55 | 120.30 |
| 36 | 5 | 1849 | C | C2-N3-C4 | -5.61 | 117.09 | 119.90 |
| 36 | 5 | 2868 | U | OP2-P-O3' | 5.61 | 117.55 | 105.20 |
| 36 | 5 | 102 | C | C2-N1-C1' | 5.61 | 124.97 | 118.80 |
| 36 | 5 | 2416 | U | O5'-P-OP2 | -5.61 | 100.65 | 105.70 |
| 38 | 4 | 54 | A | O5'-P-OP1 | -5.61 | 100.65 | 105.70 |
| 36 | 5 | 800 | G | C8-N9-C1' | -5.61 | 119.71 | 127.00 |
| 36 | 5 | 3317 | U | C6-N1-C2 | -5.61 | 117.64 | 121.00 |
| 36 | 1 | 1495 | U | C6-N1-C1' | 5.61 | 129.05 | 121.20 |
| 36 | 1 | 2278 | C | OP2-P-O3' | 5.61 | 117.54 | 105.20 |
| 38 | 8 | 46 | G | C4-N9-C1' | 5.61 | 133.79 | 126.50 |
| 1 | 6 | 9 | U | C6-N1-C2 | -5.60 | 117.64 | 121.00 |
| 1 | 6 | 589 | C | C6-N1-C2 | -5.60 | 118.06 | 120.30 |
| 36 | 5 | 1149 | G | C8-N9-C1' | -5.60 | 119.72 | 127.00 |
| 36 | 1 | 1879 | A | N9-C4-C5 | -5.60 | 103.56 | 105.80 |
| 36 | 1 | 2420 | C | C6-N1-C2 | -5.60 | 118.06 | 120.30 |
| 36 | 1 | 670 | C | C6-N1-C2 | 5.60 | 122.54 | 120.30 |
| 36 | 5 | 2101 | C | O5'-P-OP1 | -5.60 | 100.66 | 105.70 |
| 36 | 1 | 1158 | A | N1-C6-N6 | 5.60 | 121.96 | 118.60 |
| 1 | 6 | 156 | A | C5-C6-N6 | -5.59 | 119.22 | 123.70 |
| 24 | D2 | 104 | LEU | CA-CB-CG | 5.59 | 128.16 | 115.30 |
| 1 | 2 | 1059 | U | P-O3'-C3' | 5.59 | 126.41 | 119.70 |
| 36 | 1 | 639 | G | N1-C6-O6 | 5.59 | 123.25 | 119.90 |
| 36 | 1 | 1303 | A | N7-C8-N9 | -5.59 | 111.00 | 113.80 |
| 36 | 1 | 925 | A | N1-C6-N6 | 5.59 | 121.95 | 118.60 |
| 36 | 1 | 1843 | C | C6-N1-C1' | -5.59 | 114.09 | 120.80 |
| 36 | 1 | 1525 | G | C8-N9-C1' | -5.59 | 119.74 | 127.00 |
| 36 | 1 | 2407 | C | N3-C4-N4 | 5.59 | 121.91 | 118.00 |
| 41 | L4 | 182 | LEU | CA-CB-CG | 5.59 | 128.15 | 115.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 5 | 2879 | C | O5'-P-OP1 | -5.59 | 100.67 | 105.70 |
| 36 | 1 | 3340 | G | OP1-P-O3' | -5.58 | 92.91 | 105.20 |
| 36 | 5 | 69 | C | O5'-P-OP1 | -5.58 | 100.67 | 105.70 |
| 38 | 8 | 102 | U | O5'-P-OP2 | -5.58 | 100.67 | 105.70 |
| 36 | 1 | 1037 | C | C2-N1-C1' | 5.58 | 124.94 | 118.80 |
| 36 | 1 | 3098 | G | N3-C4-C5 | -5.58 | 125.81 | 128.60 |
| 1 | 6 | 590 | C | C2-N1-C1' | 5.58 | 124.94 | 118.80 |
| 36 | 5 | 2256 | A | C8-N9-C4 | 5.58 | 108.03 | 105.80 |
| 36 | 5 | 659 | G | C8-N9-C4 | -5.58 | 104.17 | 106.40 |
| 36 | 1 | 887 | G | O5'-P-OP1 | -5.58 | 100.68 | 105.70 |
| 36 | 1 | 2817 | A | C5-N7-C8 | -5.58 | 101.11 | 103.90 |
| 36 | 5 | 652 | G | O5'-P-OP2 | -5.58 | 100.68 | 105.70 |
| 36 | 5 | 3112 | G | C6-C5-N7 | -5.58 | 127.05 | 130.40 |
| 36 | 5 | 2266 | U | C2-N1-C1' | 5.58 | 124.39 | 117.70 |
| 36 | 1 | 800 | G | C8-N9-C4 | 5.58 | 108.63 | 106.40 |
| 36 | 5 | 3228 | C | P-O3'-C3' | 5.58 | 126.39 | 119.70 |
| 1 | 2 | 794 | U | N3-C2-O2 | -5.57 | 118.30 | 122.20 |
| 36 | 1 | 3070 | A | C8-N9-C4 | 5.57 | 108.03 | 105.80 |
| 1 | 6 | 610 | G | C4-N9-C1' | 5.57 | 133.74 | 126.50 |
| 36 | 5 | 1525 | G | C4-N9-C1' | 5.57 | 133.74 | 126.50 |
| 36 | 1 | 3325 | G | C8-N9-C4 | 5.57 | 108.63 | 106.40 |
| 1 | 2 | 276 | C | C6-N1-C1' | 5.57 | 127.48 | 120.80 |
| 1 | 2 | 1568 | C | C5-C6-N1 | 5.57 | 123.78 | 121.00 |
| 36 | 5 | 920 | A | N1-C6-N6 | 5.57 | 121.94 | 118.60 |
| 39 | L2 | 150 | LEU | CA-CB-CG | -5.56 | 102.50 | 115.30 |
| 38 | 8 | 111 | A | C8-N9-C4 | 5.56 | 108.03 | 105.80 |
| 54 | m8 | 71 | LEU | CA-CB-CG | -5.56 | 102.51 | 115.30 |
| 1 | 2 | 321 | C | C6-N1-C1' | -5.56 | 114.13 | 120.80 |
| 36 | 5 | 1592 | G | N1-C6-O6 | 5.56 | 123.24 | 119.90 |
| 36 | 5 | 2117 | A | O5'-P-OP1 | -5.56 | 100.69 | 105.70 |
| 36 | 5 | 2398 | A | C4-C5-C6 | 5.56 | 119.78 | 117.00 |
| 36 | 5 | 2418 | G | O4'-C1'-N9 | -5.56 | 103.75 | 108.20 |
| 36 | 1 | 546 | C | N3-C2-O2 | -5.56 | 118.01 | 121.90 |
| 36 | 1 | 647 | A | C8-N9-C4 | -5.56 | 103.58 | 105.80 |
| 36 | 1 | 2875 | U | N1-C2-O2 | 5.56 | 126.69 | 122.80 |
| 1 | 6 | 53 | G | N3-C4-C5 | 5.56 | 131.38 | 128.60 |
| 1 | 2 | 1585 | U | C2-N3-C4 | 5.56 | 130.34 | 127.00 |
| 36 | 5 | 297 | G | N3-C4-C5 | -5.56 | 125.82 | 128.60 |
| 36 | 5 | 1170 | A | O5'-P-OP1 | -5.56 | 100.70 | 105.70 |
| 1 | 2 | 577 | G | C5-N7-C8 | -5.55 | 101.52 | 104.30 |
| 36 | 1 | 648 | C | O5'-P-OP1 | -5.55 | 100.70 | 105.70 |
| 36 | 1 | 1607 | U | C5-C6-N1 | 5.55 | 125.48 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 5 | 1907 | C | OP2-P-O3' | 5.55 | 117.42 | 105.20 |
| 36 | 1 | 1495 | U | C2-N1-C1' | -5.55 | 111.04 | 117.70 |
| 36 | 1 | 2794 | G | N3-C4-C5 | 5.55 | 131.37 | 128.60 |
| 36 | 1 | 2971 | A | C4-C5-C6 | -5.55 | 114.23 | 117.00 |
| 36 | 5 | 966 | U | C2-N1-C1' | 5.55 | 124.36 | 117.70 |
| 36 | 5 | 3241 | G | N3-C4-N9 | 5.55 | 129.33 | 126.00 |
| 36 | 1 | 877 | C | C5-C6-N1 | -5.54 | 118.23 | 121.00 |
| 1 | 6 | 1683 | C | N1-C2-O2 | 5.54 | 122.23 | 118.90 |
| 36 | 5 | 871 | U | C5-C6-N1 | -5.54 | 119.93 | 122.70 |
| 36 | 1 | 1486 | G | O5'-P-OP2 | -5.54 | 100.71 | 105.70 |
| 1 | 6 | 337 | G | C8-N9-C4 | -5.54 | 104.18 | 106.40 |
| 1 | 2 | 1572 | G | C5-C6-O6 | -5.54 | 125.28 | 128.60 |
| 1 | 2 | 1604 | U | C5-C6-N1 | 5.54 | 125.47 | 122.70 |
| 36 | 1 | 3098 | G | N3-C4-N9 | 5.54 | 129.32 | 126.00 |
| 36 | 5 | 1307 | G | O5'-P-OP1 | -5.54 | 100.72 | 105.70 |
| 36 | 5 | 1554 | U | O4'-C1'-N1 | 5.54 | 112.63 | 108.20 |
| 36 | 5 | 1763 | U | C2-N1-C1' | 5.54 | 124.35 | 117.70 |
| 1 | 2 | 276 | C | C2-N1-C1' | -5.54 | 112.71 | 118.80 |
| 36 | 5 | 1697 | A | O5'-P-OP1 | -5.54 | 100.72 | 105.70 |
| 36 | 5 | 1761 | C | P-O3'-C3' | 5.54 | 126.34 | 119.70 |
| 36 | 1 | 2808 | A | N9-C4-C5 | -5.54 | 103.59 | 105.80 |
| 38 | 8 | 21 | C | C6-N1-C2 | 5.54 | 122.52 | 120.30 |
| 1 | 2 | 913 | G | OP1-P-O3' | 5.53 | 117.38 | 105.20 |
| 36 | 1 | 2131 | A | C8-N9-C4 | 5.53 | 108.01 | 105.80 |
| 1 | 6 | 803 | A | C8-N9-C4 | -5.53 | 103.59 | 105.80 |
| 36 | 5 | 718 | G | C4-N9-C1' | 5.53 | 133.69 | 126.50 |
| 36 | 1 | 91 | G | N3-C4-N9 | 5.53 | 129.32 | 126.00 |
| 36 | 1 | 807 | A | C2-N3-C4 | -5.53 | 107.83 | 110.60 |
| 36 | 5 | 326 | U | C6-N1-C2 | -5.53 | 117.68 | 121.00 |
| 36 | 1 | 2645 | G | N1-C6-O6 | 5.53 | 123.22 | 119.90 |
| 36 | 1 | 218 | G | N3-C4-C5 | -5.53 | 125.84 | 128.60 |
| 36 | 1 | 2274 | U | C5-C6-N1 | 5.53 | 125.46 | 122.70 |
| 36 | 1 | 2874 | G | C4-C5-N7 | -5.53 | 108.59 | 110.80 |
| 36 | 1 | 2875 | U | C6-N1-C1' | -5.53 | 113.46 | 121.20 |
| 1 | 6 | 996 | U | C5-C6-N1 | 5.53 | 125.46 | 122.70 |
| 1 | 2 | 782 | U | P-O3'-C3' | 5.53 | 126.33 | 119.70 |
| 36 | 1 | 2571 | U | O4'-C1'-N1 | 5.53 | 112.62 | 108.20 |
| 38 | 4 | 103 | G | N3-C4-N9 | 5.53 | 129.31 | 126.00 |
| 36 | 5 | 614 | C | C6-N1-C2 | 5.52 | 122.51 | 120.30 |
| 36 | 1 | 116 | A | N9-C4-C5 | 5.52 | 108.01 | 105.80 |
| 36 | 5 | 297 | G | O4'-C1'-N9 | 5.52 | 112.61 | 108.20 |
| 36 | 5 | 3201 | C | C6-N1-C2 | 5.52 | 122.51 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 1875 | G | N3-C4-C5 | 5.51 | 131.36 | 128.60 |
| 36 | 5 | 2614 | G | N1-C6-O6 | 5.51 | 123.21 | 119.90 |
| 36 | 1 | 2980 | U | O5'-P-OP1 | 5.51 | 117.31 | 110.70 |
| 36 | 5 | 354 | U | C5-C6-N1 | 5.51 | 125.46 | 122.70 |
| 36 | 1 | 620 | U | C6-N1-C1' | 5.51 | 128.92 | 121.20 |
| 40 | L3 | 246 | LEU | CA-CB-CG | 5.51 | 127.98 | 115.30 |
| 67 | o1 | 81 | GLU | C-N-CA | 5.51 | 135.48 | 121.70 |
| 1 | 2 | 783 | G | N1-C6-O6 | 5.51 | 123.21 | 119.90 |
| 36 | 1 | 2314 | U | O4'-C1'-N1 | 5.51 | 112.61 | 108.20 |
| 36 | 1 | 2591 | A | C8-N9-C4 | 5.51 | 108.00 | 105.80 |
| 1 | 6 | 911 | U | C5-C6-N1 | 5.51 | 125.45 | 122.70 |
| 36 | 5 | 2621 | G | N9-C4-C5 | -5.51 | 103.20 | 105.40 |
| 36 | 5 | 2607 | G | C5-C6-O6 | -5.51 | 125.30 | 128.60 |
| 36 | 1 | 1198 | C | C6-N1-C2 | -5.51 | 118.10 | 120.30 |
| 36 | 1 | 2618 | G | N9-C4-C5 | 5.51 | 107.60 | 105.40 |
| 38 | 4 | 105 | A | N1-C6-N6 | 5.51 | 121.90 | 118.60 |
| 36 | 5 | 422 | A | C4-C5-C6 | 5.51 | 119.75 | 117.00 |
| 36 | 5 | 1356 | U | C6-N1-C2 | -5.51 | 117.70 | 121.00 |
| 36 | 5 | 1901 | A | N1-C6-N6 | -5.51 | 115.30 | 118.60 |
| 36 | 5 | 406 | G | N3-C4-N9 | -5.50 | 122.70 | 126.00 |
| 36 | 5 | 422 | A | N7-C8-N9 | 5.50 | 116.55 | 113.80 |
| 1 | 6 | 272 | U | P-O3'-C3' | 5.50 | 126.30 | 119.70 |
| 1 | 6 | 1389 | C | C5-C6-N1 | 5.50 | 123.75 | 121.00 |
| 36 | 1 | 1742 | U | C6-N1-C2 | -5.50 | 117.70 | 121.00 |
| 36 | 1 | 2403 | G | N1-C6-O6 | 5.50 | 123.20 | 119.90 |
| 36 | 1 | 2409 | G | N3-C4-N9 | 5.50 | 129.30 | 126.00 |
| 36 | 5 | 2093 | A | O4'-C1'-N9 | 5.50 | 112.60 | 108.20 |
| 36 | 5 | 3140 | G | N9-C4-C5 | -5.50 | 103.20 | 105.40 |
| 36 | 1 | 153 | U | C6-N1-C2 | -5.50 | 117.70 | 121.00 |
| 36 | 1 | 281 | G | N3-C4-C5 | -5.50 | 125.85 | 128.60 |
| 36 | 5 | 1148 | G | N3-C4-N9 | 5.50 | 129.30 | 126.00 |
| 38 | 8 | 100 | U | N3-C4-O4 | 5.50 | 123.25 | 119.40 |
| 36 | 1 | 970 | A | C8-N9-C4 | 5.49 | 108.00 | 105.80 |
| 36 | 1 | 1735 | G | C8-N9-C4 | 5.49 | 108.60 | 106.40 |
| 36 | 1 | 2568 | C | C5-C6-N1 | 5.49 | 123.75 | 121.00 |
| 36 | 5 | 931 | C | C6-N1-C2 | -5.49 | 118.10 | 120.30 |
| 21 | C9 | 28 | LEU | CA-CB-CG | 5.49 | 127.93 | 115.30 |
| 36 | 5 | 1826 | C | C6-N1-C2 | 5.49 | 122.50 | 120.30 |
| 36 | 1 | 1306 | G | N3-C4-N9 | 5.49 | 129.29 | 126.00 |
| 36 | 1 | 2355 | G | C4-C5-N7 | 5.49 | 113.00 | 110.80 |
| 1 | 6 | 1654 | G | C8-N9-C1' | -5.49 | 119.86 | 127.00 |
| 36 | 5 | 1306 | G | C5-C6-O6 | -5.49 | 125.31 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 38 | 8 | 95 | G | N3-C4-N9 | 5.49 | 129.29 | 126.00 |
| 36 | 1 | 3218 | A | N1-C6-N6 | 5.49 | 121.89 | 118.60 |
| 1 | 6 | 617 | U | C5-C6-N1 | 5.49 | 125.44 | 122.70 |
| 36 | 5 | 424 | G | OP1-P-OP2 | 5.49 | 127.83 | 119.60 |
| 36 | 5 | 1495 | U | C2-N3-C4 | 5.49 | 130.29 | 127.00 |
| 36 | 5 | 1897 | G | N3-C4-N9 | 5.49 | 129.29 | 126.00 |
| 36 | 1 | 2858 | U | C6-N1-C2 | -5.48 | 117.71 | 121.00 |
| 1 | 6 | 414 | C | C6-N1-C2 | 5.48 | 122.49 | 120.30 |
| 1 | 2 | 1360 | A | N1-C2-N3 | 5.48 | 132.04 | 129.30 |
| 36 | 5 | 1450 | G | O4'-C1'-N9 | -5.48 | 103.81 | 108.20 |
| 36 | 1 | 2794 | G | C4-N9-C1' | -5.48 | 119.38 | 126.50 |
| 1 | 2 | 1572 | G | N1-C6-O6 | 5.48 | 123.19 | 119.90 |
| 1 | 2 | 279 | G | OP1-P-O3' | 5.48 | 117.25 | 105.20 |
| 36 | 1 | 2221 | G | C4-N9-C1' | -5.48 | 119.38 | 126.50 |
| 36 | 1 | 2767 | U | C6-N1-C2 | 5.48 | 124.29 | 121.00 |
| 36 | 5 | 878 | G | N3-C4-C5 | -5.48 | 125.86 | 128.60 |
| 1 | 2 | 8 | U | C6-N1-C2 | 5.47 | 124.28 | 121.00 |
| 1 | 2 | 784 | C | C6-N1-C2 | -5.47 | 118.11 | 120.30 |
| 36 | 1 | 283 | G | C4-N9-C1' | 5.47 | 133.62 | 126.50 |
| 36 | 1 | 1080 | A | C8-N9-C4 | 5.47 | 107.99 | 105.80 |
| 36 | 1 | 1426 | C | N1-C2-O2 | 5.47 | 122.18 | 118.90 |
| 36 | 5 | 655 | C | O5'-P-OP2 | 5.47 | 117.27 | 110.70 |
| 36 | 5 | 835 | G | C8-N9-C1' | 5.47 | 134.12 | 127.00 |
| 1 | 2 | 1176 | G | C8-N9-C4 | -5.47 | 104.21 | 106.40 |
| 1 | 6 | 913 | G | P-O3'-C3' | 5.47 | 126.27 | 119.70 |
| 36 | 5 | 981 | U | C6-N1-C2 | -5.47 | 117.72 | 121.00 |
| 1 | 2 | 947 | U | C6-N1-C2 | -5.47 | 117.72 | 121.00 |
| 36 | 1 | 1017 | C | C5-C6-N1 | 5.47 | 123.73 | 121.00 |
| 36 | 1 | 2868 | U | N3-C2-O2 | -5.47 | 118.37 | 122.20 |
| 36 | 1 | 770 | G | O4'-C1'-N9 | 5.47 | 112.57 | 108.20 |
| 36 | 5 | 1145 | G | O5'-P-OP2 | -5.47 | 100.78 | 105.70 |
| 36 | 5 | 2256 | A | P-O3'-C3' | 5.46 | 126.26 | 119.70 |
| 36 | 5 | 2891 | U | C6-N1-C2 | 5.46 | 124.28 | 121.00 |
| 36 | 5 | 3082 | C | C6-N1-C2 | 5.46 | 122.48 | 120.30 |
| 36 | 5 | 2373 | A | N1-C6-N6 | -5.46 | 115.32 | 118.60 |
| 36 | 1 | 1856 | C | OP1-P-O3' | 5.46 | 117.21 | 105.20 |
| 36 | 5 | 1722 | U | N3-C2-O2 | -5.46 | 118.38 | 122.20 |
| 36 | 1 | 2938 | G | N1-C6-O6 | 5.46 | 123.17 | 119.90 |
| 36 | 5 | 344 | A | O5'-P-OP1 | -5.46 | 100.79 | 105.70 |
| 36 | 5 | 1481 | A | C8-N9-C4 | -5.46 | 103.62 | 105.80 |
| 36 | 1 | 3193 | C | C6-N1-C2 | -5.46 | 118.12 | 120.30 |
| 36 | 5 | 1866 | C | C6-N1-C1' | -5.46 | 114.25 | 120.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 5 | 2374 | C | O4'-C1'-N1 | -5.46 | 103.83 | 108.20 |
| 36 | 5 | 3164 | C | C6-N1-C2 | 5.46 | 122.48 | 120.30 |
| 36 | 5 | 518 | G | N7-C8-N9 | 5.45 | 115.83 | 113.10 |
| 1 | 2 | 1146 | G | N3-C4-C5 | -5.45 | 125.88 | 128.60 |
| 36 | 1 | 2821 | C | C2-N1-C1' | 5.45 | 124.80 | 118.80 |
| 36 | 5 | 3231 | U | C5-C6-N1 | -5.45 | 119.97 | 122.70 |
| 36 | 1 | 3181 | C | N1-C2-O2 | 5.45 | 122.17 | 118.90 |
| 36 | 1 | 3243 | A | O4'-C1'-N9 | -5.45 | 103.84 | 108.20 |
| 1 | 6 | 1006 | C | C6-N1-C2 | -5.45 | 118.12 | 120.30 |
| 36 | 1 | 2618 | G | N1-C6-O6 | -5.45 | 116.63 | 119.90 |
| 38 | 4 | 62 | C | C6-N1-C2 | 5.45 | 122.48 | 120.30 |
| 1 | 6 | 1642 | G | C6-C5-N7 | -5.45 | 127.13 | 130.40 |
| 36 | 5 | 1481 | A | N7-C8-N9 | 5.45 | 116.52 | 113.80 |
| 36 | 5 | 1139 | G | O5'-P-OP1 | -5.44 | 100.80 | 105.70 |
| 36 | 1 | 637 | C | C2-N1-C1' | 5.44 | 124.79 | 118.80 |
| 36 | 1 | 2194 | G | C4-N9-C1' | 5.44 | 133.58 | 126.50 |
| 36 | 1 | 2608 | G | C8-N9-C4 | 5.44 | 108.58 | 106.40 |
| 36 | 1 | 2629 | U | C6-N1-C2 | 5.44 | 124.27 | 121.00 |
| 36 | 5 | 3206 | C | C6-N1-C2 | -5.44 | 118.12 | 120.30 |
| 1 | 2 | 1756 | A | C8-N9-C4 | -5.44 | 103.62 | 105.80 |
| 36 | 5 | 959 | C | N1-C2-O2 | 5.44 | 122.16 | 118.90 |
| 1 | 2 | 544 | A | OP2-P-O3' | 5.44 | 117.16 | 105.20 |
| 36 | 5 | 156 | G | N3-C4-N9 | 5.44 | 129.26 | 126.00 |
| 36 | 5 | 1593 | A | N9-C4-C5 | 5.44 | 107.97 | 105.80 |
| 36 | 1 | 3005 | A | C8-N9-C4 | -5.43 | 103.63 | 105.80 |
| 36 | 1 | 3118 | C | C6-N1-C2 | 5.43 | 122.47 | 120.30 |
| 1 | 6 | 1446 | A | C8-N9-C4 | 5.43 | 107.97 | 105.80 |
| 36 | 5 | 1115 | G | C5-N7-C8 | -5.43 | 101.58 | 104.30 |
| 36 | 5 | 2427 | U | O5'-P-OP1 | 5.43 | 117.22 | 110.70 |
| 36 | 5 | 2719 | U | C5-C6-N1 | -5.43 | 119.98 | 122.70 |
| 36 | 1 | 41 | G | N9-C4-C5 | 5.43 | 107.57 | 105.40 |
| 36 | 1 | 2137 | U | C2-N1-C1' | -5.43 | 111.18 | 117.70 |
| 36 | 1 | 3142 | A | C8-N9-C4 | 5.43 | 107.97 | 105.80 |
| 1 | 6 | 965 | U | N3-C2-O2 | -5.43 | 118.40 | 122.20 |
| 36 | 5 | 1063 | G | C4-C5-C6 | 5.43 | 122.06 | 118.80 |
| 36 | 5 | 2816 | G | C8-N9-C4 | 5.43 | 108.57 | 106.40 |
| 1 | 2 | 1536 | G | C8-N9-C1' | -5.43 | 119.94 | 127.00 |
| 1 | 2 | 1572 | G | N9-C4-C5 | -5.43 | 103.23 | 105.40 |
| 1 | 2 | 1742 | U | C5-C6-N1 | 5.43 | 125.41 | 122.70 |
| 36 | 5 | 1149 | G | C4-N9-C1' | 5.43 | 133.56 | 126.50 |
| 36 | 5 | 1190 | A | O5'-P-OP1 | -5.43 | 100.81 | 105.70 |
| 36 | 5 | 2931 | C | C5-C6-N1 | -5.43 | 118.29 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 36 | 1 | 1442 | U | C6-N1-C2 | 5.42 | 124.25 | 121.00 |
| 36 | 1 | 1713 | G | N3-C4-N9 | -5.42 | 122.75 | 126.00 |
| 4 | s2 | 235 | LEU | CA-CB-CG | 5.42 | 127.77 | 115.30 |
| 36 | 5 | 3245 | A | N1-C2-N3 | 5.42 | 132.01 | 129.30 |
| 36 | 1 | 315 | C | C2-N1-C1' | 5.42 | 124.76 | 118.80 |
| 1 | 6 | 874 | C | C6-N1-C2 | -5.42 | 118.13 | 120.30 |
| 36 | 5 | 3164 | C | N3-C4-C5 | 5.42 | 124.07 | 121.90 |
| 36 | 1 | 380 | U | C2-N1-C1' | 5.42 | 124.20 | 117.70 |
| 36 | 5 | 353 | G | C8-N9-C1' | 5.42 | 134.04 | 127.00 |
| 36 | 5 | 2609 | A | O5'-P-OP1 | 5.42 | 117.20 | 110.70 |
| 36 | 5 | 875 | G | N3-C2-N2 | -5.42 | 116.11 | 119.90 |
| 38 | 8 | 46 | G | C8-N9-C1' | -5.42 | 119.96 | 127.00 |
| 36 | 1 | 916 | G | N3-C4-N9 | 5.41 | 129.25 | 126.00 |
| 36 | 1 | 2384 | A | C8-N9-C4 | -5.41 | 103.63 | 105.80 |
| 1 | 6 | 1490 | C | C2-N1-C1' | 5.41 | 124.75 | 118.80 |
| 36 | 5 | 826 | G | O5'-P-OP2 | 5.41 | 117.19 | 110.70 |
| 36 | 5 | 1582 | C | N1-C2-O2 | 5.41 | 122.15 | 118.90 |
| 36 | 5 | 800 | G | C6-C5-N7 | -5.41 | 127.15 | 130.40 |
| 36 | 5 | 1183 | C | C6-N1-C2 | 5.41 | 122.46 | 120.30 |
| 36 | 5 | 1348 | U | C5-C6-N1 | 5.41 | 125.41 | 122.70 |
| 36 | 5 | 2608 | G | N9-C4-C5 | -5.41 | 103.24 | 105.40 |
| 1 | 2 | 1636 | C | C6-N1-C2 | -5.41 | 118.14 | 120.30 |
| 36 | 5 | 59 | G | N1-C6-O6 | 5.41 | 123.14 | 119.90 |
| 36 | 5 | 934 | G | C8-N9-C1' | -5.41 | 119.97 | 127.00 |
| 1 | 2 | 914 | G | N1-C6-O6 | -5.41 | 116.66 | 119.90 |
| 1 | 6 | 464 | A | N1-C6-N6 | 5.41 | 121.84 | 118.60 |
| 38 | 8 | 117 | C | O5'-P-OP2 | -5.41 | 100.83 | 105.70 |
| 10 | S8 | 29 | LEU | CA-CB-CG | 5.40 | 127.73 | 115.30 |
| 36 | 5 | 875 | G | N3-C4-C5 | 5.40 | 131.30 | 128.60 |
| 36 | 1 | 282 | G | N7-C8-N9 | 5.40 | 115.80 | 113.10 |
| 36 | 1 | 2872 | A | C2-N3-C4 | -5.40 | 107.90 | 110.60 |
| 36 | 5 | 3120 | C | C6-N1-C2 | -5.40 | 118.14 | 120.30 |
| 38 | 4 | 105 | A | N9-C4-C5 | -5.40 | 103.64 | 105.80 |
| 1 | 6 | 647 | G | P-O3'-C3' | 5.40 | 126.18 | 119.70 |
| 36 | 5 | 1878 | G | C4-N9-C1' | 5.40 | 133.52 | 126.50 |
| 1 | 2 | 1754 | A | C6-C5-N7 | -5.40 | 128.52 | 132.30 |
| 36 | 1 | 635 | G | C4-N9-C1' | 5.40 | 133.51 | 126.50 |
| 36 | 5 | 807 | A | C5-N7-C8 | -5.39 | 101.20 | 103.90 |
| 36 | 5 | 3208 | G | N9-C4-C5 | -5.39 | 103.24 | 105.40 |
| 36 | 1 | 2966 | G | C4-C5-C6 | 5.39 | 122.04 | 118.80 |
| 1 | 6 | 1100 | G | N3-C4-N9 | 5.39 | 129.24 | 126.00 |
| 36 | 5 | 406 | G | N3-C4-C5 | 5.39 | 131.30 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 2314 | U | C2-N1-C1' | 5.39 | 124.17 | 117.70 |
| 1 | 6 | 1458 | G | N9-C4-C5 | -5.39 | 103.24 | 105.40 |
| 36 | 1 | 1353 | U | O4'-C1'-N1 | -5.39 | 103.89 | 108.20 |
| 36 | 1 | 1820 | U | OP2-P-O3' | 5.39 | 117.05 | 105.20 |
| 37 | 3 | 18 | C | C6-N1-C2 | -5.39 | 118.14 | 120.30 |
| 19 | c7 | 109 | LEU | CA-CB-CG | 5.39 | 127.69 | 115.30 |
| 36 | 5 | 915 | A | C2-N3-C4 | 5.39 | 113.29 | 110.60 |
| 1 | 2 | 1560 | U | N1-C2-O2 | 5.38 | 126.57 | 122.80 |
| 1 | 6 | 1447 | C | C6-N1-C2 | -5.38 | 118.15 | 120.30 |
| 36 | 5 | 360 | G | C8-N9-C1' | -5.38 | 120.00 | 127.00 |
| 36 | 5 | 2870 | C | C2-N1-C1' | -5.38 | 112.88 | 118.80 |
| 36 | 5 | 2943 | G | C6-C5-N7 | -5.38 | 127.17 | 130.40 |
| 36 | 1 | 893 | C | C6-N1-C2 | -5.38 | 118.15 | 120.30 |
| 36 | 1 | 1875 | G | N3-C4-N9 | -5.38 | 122.77 | 126.00 |
| 36 | 1 | 3263 | G | OP1-P-O3' | 5.38 | 117.04 | 105.20 |
| 36 | 1 | 2568 | C | C6-N1-C2 | -5.38 | 118.15 | 120.30 |
| 1 | 6 | 1756 | A | C6-C5-N7 | -5.38 | 128.53 | 132.30 |
| 36 | 5 | 345 | G | C4-N9-C1' | 5.38 | 133.49 | 126.50 |
| 36 | 5 | 2260 | U | P-O3'-C3' | 5.38 | 126.16 | 119.70 |
| 1 | 2 | 1433 | G | C5-C6-O6 | 5.38 | 131.83 | 128.60 |
| 36 | 5 | 2332 | A | N1-C6-N6 | 5.38 | 121.83 | 118.60 |
| 36 | 1 | 145 | G | C8-N9-C4 | -5.38 | 104.25 | 106.40 |
| 36 | 1 | 1578 | C | C6-N1-C1' | -5.38 | 114.35 | 120.80 |
| 36 | 1 | 2858 | U | OP2-P-O3' | 5.38 | 117.03 | 105.20 |
| 36 | 1 | 2971 | A | N3-C4-C5 | 5.37 | 130.56 | 126.80 |
| 36 | 1 | 3269 | U | N3-C2-O2 | -5.37 | 118.44 | 122.20 |
| 36 | 5 | 2314 | U | C5-C6-N1 | -5.37 | 120.01 | 122.70 |
| 36 | 5 | 2777 | G | OP1-P-O3' | 5.37 | 117.02 | 105.20 |
| 1 | 2 | 1760 | G | C5-C6-O6 | -5.37 | 125.38 | 128.60 |
| 36 | 1 | 836 | A | N1-C6-N6 | 5.37 | 121.82 | 118.60 |
| 36 | 1 | 1480 | G | O4'-C1'-N9 | 5.37 | 112.50 | 108.20 |
| 1 | 6 | 1058 | U | OP1-P-O3' | 5.37 | 117.01 | 105.20 |
| 1 | 6 | 1246 | C | C2-N1-C1' | 5.37 | 124.71 | 118.80 |
| 36 | 1 | 371 | G | C8-N9-C1' | 5.37 | 133.98 | 127.00 |
| 36 | 5 | 336 | A | N3-C4-C5 | 5.37 | 130.56 | 126.80 |
| 38 | 8 | 65 | A | C8-N9-C4 | 5.37 | 107.95 | 105.80 |
| 36 | 5 | 290 | G | N3-C4-C5 | -5.36 | 125.92 | 128.60 |
| 36 | 5 | 345 | G | N9-C4-C5 | -5.36 | 103.25 | 105.40 |
| 36 | 5 | 1696 | A | O5'-P-OP1 | -5.36 | 100.87 | 105.70 |
| 54 | m8 | 124 | LEU | CA-CB-CG | -5.36 | 102.97 | 115.30 |
| 1 | 2 | 1756 | A | N7-C8-N9 | 5.36 | 116.48 | 113.80 |
| 1 | 6 | 421 | A | C8-N9-C4 | 5.36 | 107.94 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 1 | 6 | 874 | C | C5-C6-N1 | 5.36 | 123.68 | 121.00 |
| 36 | 5 | 1857 | C | N1-C2-O2 | 5.36 | 122.12 | 118.90 |
| 36 | 1 | 1620 | U | O5'-P-OP2 | -5.36 | 100.88 | 105.70 |
| 38 | 4 | 115 | C | C5-C6-N1 | -5.36 | 118.32 | 121.00 |
| 36 | 5 | 2140 | U | N1-C2-N3 | 5.36 | 118.12 | 114.90 |
| 1 | 2 | 72 | A | OP1-P-O3' | 5.36 | 116.98 | 105.20 |
| 1 | 2 | 309 | C | C5-C6-N1 | 5.36 | 123.68 | 121.00 |
| 36 | 1 | 205 | C | N3-C4-C5 | 5.36 | 124.04 | 121.90 |
| 36 | 1 | 547 | G | OP1-P-O3' | 5.36 | 116.99 | 105.20 |
| 36 | 1 | 2355 | G | C5-N7-C8 | -5.36 | 101.62 | 104.30 |
| 1 | 6 | 1170 | G | N9-C4-C5 | -5.36 | 103.26 | 105.40 |
| 36 | 1 | 2374 | C | N1-C2-O2 | -5.36 | 115.69 | 118.90 |
| 36 | 1 | 3089 | C | C6-N1-C2 | -5.36 | 118.16 | 120.30 |
| 36 | 5 | 283 | G | C8-N9-C1' | -5.36 | 120.04 | 127.00 |
| 1 | 2 | 1039 | A | O4'-C1'-N9 | 5.35 | 112.48 | 108.20 |
| 36 | 1 | 545 | U | C2-N1-C1' | 5.35 | 124.12 | 117.70 |
| 36 | 1 | 2409 | G | N3-C4-C5 | -5.35 | 125.92 | 128.60 |
| 1 | 6 | 1473 | U | C5-C6-N1 | 5.35 | 125.38 | 122.70 |
| 36 | 5 | 387 | A | N7-C8-N9 | 5.35 | 116.48 | 113.80 |
| 36 | 1 | 1858 | A | C4-C5-C6 | 5.35 | 119.67 | 117.00 |
| 36 | 5 | 639 | G | N9-C1'-C2' | -5.35 | 106.11 | 112.00 |
| 36 | 1 | 21 | G | N1-C6-O6 | -5.35 | 116.69 | 119.90 |
| 36 | 1 | 304 | G | N3-C2-N2 | -5.35 | 116.16 | 119.90 |
| 36 | 5 | 1192 | C | C6-N1-C2 | 5.35 | 122.44 | 120.30 |
| 1 | 2 | 1760 | G | N1-C6-O6 | 5.35 | 123.11 | 119.90 |
| 36 | 1 | 1490 | A | O5'-P-OP1 | -5.35 | 100.89 | 105.70 |
| 36 | 1 | 2392 | C | O5'-P-OP1 | -5.35 | 100.89 | 105.70 |
| 1 | 6 | 163 | G | N9-C4-C5 | 5.35 | 107.54 | 105.40 |
| 1 | 6 | 623 | A | O4'-C1'-N9 | 5.35 | 112.48 | 108.20 |
| 36 | 5 | 838 | G | OP2-P-O3' | 5.35 | 116.96 | 105.20 |
| 38 | 8 | 100 | U | O5'-P-OP2 | 5.35 | 117.12 | 110.70 |
| 36 | 1 | 1938 | U | C6-N1-C2 | 5.35 | 124.21 | 121.00 |
| 36 | 5 | 851 | C | C6-N1-C2 | -5.35 | 118.16 | 120.30 |
| 36 | 5 | 2964 | G | N3-C4-N9 | -5.35 | 122.79 | 126.00 |
| 36 | 1 | 1536 | G | O5'-P-OP2 | -5.34 | 100.89 | 105.70 |
| 36 | 5 | 297 | G | C6-C5-N7 | -5.34 | 127.19 | 130.40 |
| 38 | 4 | 4 | C | C6-N1-C2 | -5.34 | 118.16 | 120.30 |
| 36 | 1 | 2403 | G | N3-C4-N9 | 5.34 | 129.21 | 126.00 |
| 36 | 5 | 1115 | G | N3-C2-N2 | -5.34 | 116.16 | 119.90 |
| 36 | 5 | 2727 | A | N1-C6-N6 | -5.34 | 115.40 | 118.60 |
| 36 | 1 | 2700 | G | N9-C4-C5 | -5.34 | 103.27 | 105.40 |
| 1 | 2 | 1751 | C | C5-C6-N1 | -5.34 | 118.33 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 48 | M1 | 112 | LEU | CA-CB-CG | 5.34 | 127.57 | 115.30 |
| 1 | 6 | 765 | G | C6-C5-N7 | 5.34 | 133.60 | 130.40 |
| 36 | 5 | 2121 | G | C8-N9-C4 | -5.34 | 104.27 | 106.40 |
| 36 | 1 | 2306 | C | C6-N1-C1' | -5.33 | 114.40 | 120.80 |
| 36 | 1 | 2568 | C | C6-N1-C1' | -5.33 | 114.40 | 120.80 |
| 36 | 5 | 338 | A | N9-C4-C5 | 5.33 | 107.93 | 105.80 |
| 1 | 6 | 187 | G | P-O3'-C3' | 5.33 | 126.10 | 119.70 |
| 1 | 6 | 934 | C | N1-C2-O2 | 5.33 | 122.10 | 118.90 |
| 36 | 1 | 725 | G | C8-N9-C4 | 5.33 | 108.53 | 106.40 |
| 36 | 1 | 870 | G | N3-C4-N9 | 5.33 | 129.20 | 126.00 |
| 36 | 1 | 908 | G | C8-N9-C1' | -5.33 | 120.07 | 127.00 |
| 36 | 1 | 2808 | A | C8-N9-C4 | 5.33 | 107.93 | 105.80 |
| 36 | 1 | 2933 | A | N1-C6-N6 | -5.33 | 115.40 | 118.60 |
| 36 | 1 | 908 | G | O4'-C1'-N9 | -5.33 | 103.94 | 108.20 |
| 36 | 1 | 2619 | G | N3-C4-N9 | 5.33 | 129.20 | 126.00 |
| 36 | 5 | 1149 | G | C5-C6-O6 | -5.33 | 125.40 | 128.60 |
| 36 | 5 | 2968 | G | N1-C6-O6 | 5.33 | 123.10 | 119.90 |
| 36 | 5 | 3285 | C | N3-C2-O2 | -5.33 | 118.17 | 121.90 |
| 1 | 2 | 1490 | C | N3-C2-O2 | -5.33 | 118.17 | 121.90 |
| 36 | 5 | 637 | C | C5-C4-N4 | -5.33 | 116.47 | 120.20 |
| 1 | 2 | 1493 | A | P-O3'-C3' | 5.33 | 126.09 | 119.70 |
| 36 | 1 | 369 | A | C5-N7-C8 | -5.32 | 101.24 | 103.90 |
| 36 | 5 | 207 | U | C6-N1-C2 | -5.32 | 117.81 | 121.00 |
| 36 | 5 | 655 | C | N3-C4-C5 | 5.32 | 124.03 | 121.90 |
| 36 | 5 | 1580 | A | C8-N9-C4 | -5.32 | 103.67 | 105.80 |
| 1 | 2 | 1607 | G | C8-N9-C4 | -5.32 | 104.27 | 106.40 |
| 36 | 5 | 1148 | G | O5'-P-OP1 | 5.32 | 117.09 | 110.70 |
| 36 | 5 | 3213 | A | N9-C4-C5 | -5.32 | 103.67 | 105.80 |
| 36 | 1 | 964 | G | C6-C5-N7 | -5.32 | 127.21 | 130.40 |
| 36 | 1 | 1331 | U | N3-C2-O2 | -5.32 | 118.47 | 122.20 |
| 36 | 1 | 1666 | G | N1-C6-O6 | 5.32 | 123.09 | 119.90 |
| 36 | 1 | 1866 | C | C5-C6-N1 | 5.32 | 123.66 | 121.00 |
| 36 | 1 | 2827 | U | C6-N1-C1' | 5.32 | 128.65 | 121.20 |
| 36 | 1 | 943 | U | N1-C2-O2 | -5.32 | 119.08 | 122.80 |
| 36 | 5 | 864 | G | N3-C2-N2 | 5.32 | 123.62 | 119.90 |
| 36 | 5 | 2507 | C | C6-N1-C2 | -5.32 | 118.17 | 120.30 |
| 36 | 1 | 979 | U | N3-C4-O4 | -5.32 | 115.68 | 119.40 |
| 36 | 5 | 793 | C | N1-C2-O2 | 5.32 | 122.09 | 118.90 |
| 36 | 5 | 1063 | G | C6-C5-N7 | -5.32 | 127.21 | 130.40 |
| 36 | 1 | 700 | C | C5-C6-N1 | 5.31 | 123.66 | 121.00 |
| 36 | 1 | 1113 | G | N3-C4-C5 | -5.31 | 125.94 | 128.60 |
| 36 | 1 | 1902 | G | C4-N9-C1' | 5.31 | 133.41 | 126.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 5 | 2987 | A | N1-C2-N3 | -5.31 | 126.64 | 129.30 |
| 38 | 8 | 125 | U | C2-N1-C1' | 5.31 | 124.08 | 117.70 |
| 36 | 5 | 1016 | C | O4'-C1'-N1 | -5.31 | 103.95 | 108.20 |
| 1 | 6 | 299 | A | C8-N9-C4 | -5.31 | 103.68 | 105.80 |
| 1 | 6 | 700 | C | C6-N1-C2 | -5.31 | 118.18 | 120.30 |
| 1 | 6 | 1428 | G | O5'-P-OP1 | -5.31 | 100.92 | 105.70 |
| 36 | 5 | 1112 | A | C4-N9-C1' | 5.31 | 135.85 | 126.30 |
| 36 | 5 | 2209 | U | O4'-C1'-N1 | 5.31 | 112.44 | 108.20 |
| 36 | 1 | 890 | C | C6-N1-C2 | 5.30 | 122.42 | 120.30 |
| 36 | 1 | 1001 | G | C4-N9-C1' | 5.30 | 133.40 | 126.50 |
| 36 | 1 | 1902 | G | C6-C5-N7 | -5.30 | 127.22 | 130.40 |
| 36 | 1 | 2768 | U | O5'-P-OP2 | -5.30 | 100.92 | 105.70 |
| 36 | 5 | 1953 | G | N3-C4-N9 | 5.30 | 129.18 | 126.00 |
| 36 | 5 | 3394 | U | C6-N1-C2 | 5.30 | 124.18 | 121.00 |
| 1 | 6 | 579 | A | O4'-C1'-N9 | 5.30 | 112.44 | 108.20 |
| 36 | 5 | 1493 | G | N1-C6-O6 | -5.30 | 116.72 | 119.90 |
| 36 | 5 | 1511 | U | C5-C6-N1 | -5.30 | 120.05 | 122.70 |
| 36 | 5 | 2251 | G | C4-N9-C1' | 5.30 | 133.39 | 126.50 |
| 36 | 1 | 1115 | G | N7-C8-N9 | 5.30 | 115.75 | 113.10 |
| 36 | 1 | 2577 | C | C2-N1-C1' | 5.30 | 124.63 | 118.80 |
| 36 | 5 | 336 | A | C8-N9-C4 | 5.30 | 107.92 | 105.80 |
| 36 | 1 | 964 | G | C4-N9-C1' | 5.30 | 133.39 | 126.50 |
| 36 | 1 | 1187 | C | C2-N1-C1' | 5.29 | 124.62 | 118.80 |
| 1 | 6 | 1489 | U | C5-C6-N1 | 5.29 | 125.35 | 122.70 |
| 1 | 2 | 453 | U | C6-N1-C2 | -5.29 | 117.82 | 121.00 |
| 1 | 2 | 1596 | C | C6-N1-C2 | 5.29 | 122.42 | 120.30 |
| 1 | 2 | 192 | U | C5-C6-N1 | 5.29 | 125.34 | 122.70 |
| 1 | 2 | 1490 | C | N1-C2-O2 | 5.29 | 122.07 | 118.90 |
| 36 | 1 | 1604 | G | C8-N9-C1' | -5.29 | 120.13 | 127.00 |
| 36 | 1 | 622 | A | N1-C6-N6 | 5.28 | 121.77 | 118.60 |
| 36 | 5 | 875 | G | N1-C2-N2 | 5.28 | 120.95 | 116.20 |
| 1 | 2 | 1514 | U | N3-C2-O2 | -5.28 | 118.50 | 122.20 |
| 6 | S4 | 164 | LEU | CA-CB-CG | 5.28 | 127.44 | 115.30 |
| 1 | 6 | 987 | G | N1-C6-O6 | 5.28 | 123.07 | 119.90 |
| 36 | 1 | 2571 | U | O5'-P-OP2 | -5.28 | 100.95 | 105.70 |
| 36 | 1 | 2197 | C | C6-N1-C2 | 5.28 | 122.41 | 120.30 |
| 36 | 5 | 1480 | G | C8-N9-C4 | 5.28 | 108.51 | 106.40 |
| 36 | 5 | 2922 | G | C4-N9-C1' | 5.28 | 133.36 | 126.50 |
| 1 | 2 | 8 | U | C5-C6-N1 | -5.28 | 120.06 | 122.70 |
| 36 | 1 | 2148 | U | C5-C6-N1 | -5.27 | 120.06 | 122.70 |
| 3 | S1 | 207 | LEU | CA-CB-CG | -5.27 | 103.17 | 115.30 |
| 36 | 1 | 1852 | G | OP2-P-O3' | 5.27 | 116.80 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 2922 | G | N3-C4-N9 | 5.27 | 129.16 | 126.00 |
| 36 | 5 | 2156 | C | N3-C4-C5 | 5.27 | 124.01 | 121.90 |
| 1 | 2 | 1536 | G | N3-C4-N9 | 5.27 | 129.16 | 126.00 |
| 36 | 1 | 3195 | U | O4'-C1'-N1 | 5.27 | 112.42 | 108.20 |
| 37 | 7 | 86 | U | C5-C4-O4 | 5.27 | 129.06 | 125.90 |
| 38 | 8 | 111 | A | N9-C4-C5 | -5.27 | 103.69 | 105.80 |
| 36 | 1 | 1113 | G | C4-N9-C1' | 5.27 | 133.35 | 126.50 |
| 38 | 4 | 31 | G | C8-N9-C4 | 5.27 | 108.51 | 106.40 |
| 1 | 6 | 987 | G | N3-C4-C5 | 5.27 | 131.23 | 128.60 |
| 36 | 5 | 2251 | G | C8-N9-C1' | -5.27 | 120.15 | 127.00 |
| 36 | 5 | 3143 | C | N3-C2-O2 | 5.27 | 125.59 | 121.90 |
| 1 | 2 | 276 | C | O4'-C1'-N1 | 5.26 | 112.41 | 108.20 |
| 36 | 1 | 3130 | A | N1-C6-N6 | 5.26 | 121.76 | 118.60 |
| 1 | 6 | 326 | G | N9-C4-C5 | 5.26 | 107.51 | 105.40 |
| 36 | 1 | 1149 | G | N9-C4-C5 | -5.26 | 103.30 | 105.40 |
| 36 | 1 | 627 | U | C5-C4-O4 | 5.26 | 129.06 | 125.90 |
| 36 | 1 | 2619 | G | C8-N9-C1' | -5.26 | 120.16 | 127.00 |
| 36 | 5 | 910 | G | N7-C8-N9 | 5.26 | 115.73 | 113.10 |
| 1 | 2 | 814 | A | P-O3'-C3' | 5.26 | 126.01 | 119.70 |
| 36 | 1 | 2382 | G | N1-C6-O6 | 5.26 | 123.06 | 119.90 |
| 36 | 1 | 2619 | G | C4-N9-C1' | 5.26 | 133.34 | 126.50 |
| 11 | s9 | 99 | LEU | CA-CB-CG | 5.26 | 127.40 | 115.30 |
| 36 | 5 | 2417 | U | C5-C6-N1 | -5.26 | 120.07 | 122.70 |
| 36 | 5 | 2614 | G | C8-N9-C1' | -5.26 | 120.16 | 127.00 |
| 1 | 2 | 783 | G | C4-C5-N7 | 5.26 | 112.90 | 110.80 |
| 38 | 4 | 54 | A | C5-N7-C8 | -5.26 | 101.27 | 103.90 |
| 1 | 6 | 931 | C | C6-N1-C2 | 5.26 | 122.40 | 120.30 |
| 36 | 5 | 922 | U | O5'-P-OP1 | -5.26 | 100.97 | 105.70 |
| 36 | 5 | 2266 | U | C5-C6-N1 | 5.26 | 125.33 | 122.70 |
| 1 | 2 | 1611 | A | N1-C2-N3 | 5.25 | 131.93 | 129.30 |
| 36 | 1 | 2142 | A | C4-C5-C6 | 5.25 | 119.63 | 117.00 |
| 36 | 5 | 3120 | C | C5-C6-N1 | 5.25 | 123.63 | 121.00 |
| 38 | 8 | 70 | G | C8-N9-C1' | -5.25 | 120.17 | 127.00 |
| 70 | o4 | 30 | LEU | CA-CB-CG | -5.25 | 103.22 | 115.30 |
| 36 | 1 | 718 | G | N7-C8-N9 | 5.25 | 115.73 | 113.10 |
| 36 | 5 | 197 | G | N7-C8-N9 | 5.25 | 115.73 | 113.10 |
| 36 | 5 | 3285 | C | N1-C2-O2 | 5.25 | 122.05 | 118.90 |
| 37 | 3 | 47 | C | C5-C6-N1 | 5.25 | 123.62 | 121.00 |
| 53 | M7 | 121 | GLN | C-N-CA | 5.25 | 134.82 | 121.70 |
| 1 | 6 | 765 | G | N3-C2-N2 | -5.25 | 116.22 | 119.90 |
| 36 | 5 | 347 | G | C6-C5-N7 | -5.25 | 127.25 | 130.40 |
| 36 | 5 | 2400 | G | N3-C4-C5 | 5.25 | 131.22 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 5 | 2647 | A | C5-N7-C8 | -5.25 | 101.28 | 103.90 |
| 37 | 7 | 89 | G | N1-C6-O6 | 5.25 | 123.05 | 119.90 |
| 36 | 1 | 1724 | U | O4'-C1'-N1 | 5.25 | 112.40 | 108.20 |
| 36 | 1 | 1870 | C | C6-N1-C2 | -5.25 | 118.20 | 120.30 |
| 36 | 5 | 1521 | G | N3-C4-C5 | 5.25 | 131.22 | 128.60 |
| 36 | 5 | 1625 | A | C8-N9-C4 | 5.25 | 107.90 | 105.80 |
| 1 | 2 | 543 | C | C4-C5-C6 | 5.24 | 120.02 | 117.40 |
| 36 | 1 | 545 | U | C5-C6-N1 | 5.24 | 125.32 | 122.70 |
| 36 | 1 | 2957 | G | N9-C4-C5 | -5.24 | 103.30 | 105.40 |
| 36 | 5 | 2186 | U | N1-C2-O2 | 5.24 | 126.47 | 122.80 |
| 36 | 1 | 2967 | A | C4-C5-N7 | 5.24 | 113.32 | 110.70 |
| 36 | 5 | 912 | G | N1-C6-O6 | 5.24 | 123.05 | 119.90 |
| 36 | 5 | 2145 | A | C6-C5-N7 | -5.24 | 128.63 | 132.30 |
| 36 | 1 | 1017 | C | C2-N1-C1' | 5.24 | 124.56 | 118.80 |
| 36 | 1 | 1609 | C | C6-N1-C2 | 5.24 | 122.40 | 120.30 |
| 36 | 1 | 1661 | G | C4-N9-C1' | 5.24 | 133.31 | 126.50 |
| 36 | 1 | 3175 | U | C2-N1-C1' | 5.24 | 123.99 | 117.70 |
| 1 | 6 | 1100 | G | C5-C6-O6 | -5.24 | 125.46 | 128.60 |
| 36 | 1 | 55 | G | C4-N9-C1' | -5.24 | 119.69 | 126.50 |
| 36 | 1 | 1843 | C | C2-N1-C1' | 5.24 | 124.56 | 118.80 |
| 1 | 6 | 334 | G | N3-C4-C5 | 5.24 | 131.22 | 128.60 |
| 36 | 5 | 816 | A | OP1-P-OP2 | 5.24 | 127.46 | 119.60 |
| 36 | 5 | 1150 | A | O5'-P-OP1 | 5.24 | 116.99 | 110.70 |
| 36 | 5 | 2591 | A | C8-N9-C4 | 5.24 | 107.90 | 105.80 |
| 37 | 7 | 114 | U | C5-C6-N1 | -5.24 | 120.08 | 122.70 |
| 62 | n6 | 111 | LEU | CA-CB-CG | -5.24 | 103.25 | 115.30 |
| 38 | 4 | 39 | G | N3-C4-N9 | 5.24 | 129.14 | 126.00 |
| 36 | 5 | 2112 | U | P-O3'-C3' | 5.24 | 125.98 | 119.70 |
| 36 | 5 | 2300 | G | N3-C4-N9 | 5.24 | 129.14 | 126.00 |
| 36 | 5 | 2876 | C | N1-C2-O2 | 5.24 | 122.04 | 118.90 |
| 1 | 6 | 1156 | C | C5-C6-N1 | 5.24 | 123.62 | 121.00 |
| 36 | 5 | 1242 | G | N3-C4-C5 | -5.24 | 125.98 | 128.60 |
| 36 | 5 | 1389 | G | N9-C4-C5 | -5.23 | 103.31 | 105.40 |
| 36 | 1 | 2629 | U | N1-C2-N3 | -5.23 | 111.76 | 114.90 |
| 64 | N8 | 66 | ALA | N-CA-C | -5.23 | 96.87 | 111.00 |
| 36 | 1 | 792 | G | N3-C4-N9 | -5.23 | 122.86 | 126.00 |
| 36 | 1 | 906 | A | N9-C4-C5 | 5.23 | 107.89 | 105.80 |
| 36 | 1 | 2205 | U | P-O3'-C3' | 5.23 | 125.98 | 119.70 |
| 36 | 5 | 2126 | A | C8-N9-C4 | 5.23 | 107.89 | 105.80 |
| 36 | 1 | 353 | G | C4-N9-C1' | -5.23 | 119.70 | 126.50 |
| 36 | 1 | 2818 | U | P-O3'-C3' | 5.23 | 125.97 | 119.70 |
| 36 | 5 | 283 | G | N7-C8-N9 | 5.23 | 115.72 | 113.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 36 | 5 | 868 | C | N3-C2-O2 | 5.23 | 125.56 | 121.90 |
| 38 | 8 | 82 | U | P-O3'-C3' | 5.23 | 125.97 | 119.70 |
| 1 | 2 | 1059 | U | N1-C2-O2 | 5.23 | 126.46 | 122.80 |
| 40 | L3 | 102 | LEU | CA-CB-CG | 5.23 | 127.32 | 115.30 |
| 1 | 6 | 25 | C | P-O3'-C3' | 5.23 | 125.97 | 119.70 |
| 24 | d2 | 93 | LEU | CA-CB-CG | 5.23 | 127.32 | 115.30 |
| 36 | 1 | 867 | G | N1-C6-O6 | 5.23 | 123.04 | 119.90 |
| 36 | 1 | 1284 | C | P-O3'-C3' | 5.23 | 125.97 | 119.70 |
| 1 | 6 | 275 | C | C2-N1-C1' | 5.23 | 124.55 | 118.80 |
| 1 | 2 | 571 | G | N3-C4-N9 | 5.22 | 129.13 | 126.00 |
| 36 | 1 | 2688 | U | C6-N1-C2 | 5.22 | 124.14 | 121.00 |
| 38 | 4 | 126 | A | P-O3'-C3' | 5.22 | 125.97 | 119.70 |
| 36 | 5 | 2397 | A | N1-C2-N3 | 5.22 | 131.91 | 129.30 |
| 36 | 1 | 644 | G | C8-N9-C1' | -5.22 | 120.21 | 127.00 |
| 36 | 1 | 2308 | C | C6-N1-C1' | 5.22 | 127.07 | 120.80 |
| 38 | 4 | 64 | U | N3-C2-O2 | -5.22 | 118.55 | 122.20 |
| 36 | 5 | 1697 | A | O5'-P-OP2 | 5.22 | 116.97 | 110.70 |
| 36 | 1 | 916 | G | C4-N9-C1' | 5.22 | 133.29 | 126.50 |
| 36 | 1 | 2131 | A | N1-C2-N3 | -5.22 | 126.69 | 129.30 |
| 36 | 1 | 2606 | G | C4-N9-C1' | 5.22 | 133.29 | 126.50 |
| 36 | 5 | 1303 | A | C8-N9-C4 | 5.22 | 107.89 | 105.80 |
| 36 | 1 | 2675 | C | C2-N1-C1' | 5.22 | 124.54 | 118.80 |
| 1 | 6 | 139 | C | P-O3'-C3' | 5.22 | 125.96 | 119.70 |
| 1 | 6 | 174 | U | C2-N1-C1' | 5.22 | 123.96 | 117.70 |
| 36 | 5 | 1392 | G | N3-C4-C5 | -5.22 | 125.99 | 128.60 |
| 36 | 5 | 2417 | U | C2-N1-C1' | -5.22 | 111.44 | 117.70 |
| 36 | 1 | 227 | G | N3-C4-C5 | -5.22 | 125.99 | 128.60 |
| 36 | 1 | 1537 | A | O5'-P-OP1 | -5.22 | 101.00 | 105.70 |
| 36 | 5 | 2355 | G | C5-C6-O6 | -5.22 | 125.47 | 128.60 |
| 36 | 5 | 3057 | U | C2-N1-C1' | 5.22 | 123.96 | 117.70 |
| 38 | 8 | 80 | A | P-O3'-C3' | 5.22 | 125.96 | 119.70 |
| 1 | 6 | 1631 | A | N9-C4-C5 | 5.21 | 107.89 | 105.80 |
| 36 | 5 | 3011 | A | C8-N9-C1' | 5.21 | 137.09 | 127.70 |
| 38 | 8 | 75 | G | C8-N9-C1' | 5.21 | 133.78 | 127.00 |
| 36 | 1 | 1889 | G | N3-C2-N2 | -5.21 | 116.25 | 119.90 |
| 36 | 1 | 3217 | C | C6-N1-C1' | -5.21 | 114.55 | 120.80 |
| 1 | 2 | 192 | U | N3-C2-O2 | -5.21 | 118.55 | 122.20 |
| 1 | 2 | 1327 | C | C5-C6-N1 | 5.21 | 123.61 | 121.00 |
| 36 | 5 | 823 | C | C6-N1-C2 | -5.21 | 118.22 | 120.30 |
| 36 | 1 | 569 | A | N9-C4-C5 | -5.21 | 103.72 | 105.80 |
| 36 | 1 | 2366 | C | C4-C5-C6 | -5.21 | 114.80 | 117.40 |
| 36 | 5 | 517 | G | N1-C6-O6 | 5.21 | 123.03 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 1 | 6 | 417 | A | C8-N9-C4 | -5.21 | 103.72 | 105.80 |
| 36 | 5 | 341 | G | OP2-P-O3' | 5.21 | 116.66 | 105.20 |
| 36 | 5 | 2937 | G | N9-C4-C5 | -5.21 | 103.32 | 105.40 |
| 36 | 5 | 348 | A | N1-C6-N6 | 5.21 | 121.72 | 118.60 |
| 36 | 5 | 2610 | G | C4-N9-C1' | -5.21 | 119.73 | 126.50 |
| 36 | 5 | 339 | C | N3-C4-C5 | 5.21 | 123.98 | 121.90 |
| 1 | 2 | 1430 | U | N3-C4-C5 | -5.20 | 111.48 | 114.60 |
| 36 | 1 | 2922 | G | C6-C5-N7 | -5.20 | 127.28 | 130.40 |
| 36 | 1 | 1635 | G | C4-N9-C1' | -5.20 | 119.74 | 126.50 |
| 36 | 1 | 1713 | G | C4-N9-C1' | -5.20 | 119.74 | 126.50 |
| 36 | 1 | 3060 | C | C6-N1-C2 | -5.20 | 118.22 | 120.30 |
| 36 | 5 | 1868 | G | OP1-P-O3' | 5.20 | 116.64 | 105.20 |
| 36 | 1 | 845 | G | C8-N9-C4 | 5.20 | 108.48 | 106.40 |
| 36 | 1 | 1115 | G | N9-C4-C5 | -5.20 | 103.32 | 105.40 |
| 36 | 1 | 63 | A | N1-C6-N6 | 5.20 | 121.72 | 118.60 |
| 36 | 1 | 1005 | G | C8-N9-C4 | 5.20 | 108.48 | 106.40 |
| 36 | 5 | 2108 | C | C6-N1-C2 | 5.20 | 122.38 | 120.30 |
| 36 | 1 | 2550 | U | N3-C2-O2 | -5.20 | 118.56 | 122.20 |
| 36 | 5 | 1511 | U | C2-N1-C1' | -5.20 | 111.46 | 117.70 |
| 36 | 5 | 2549 | G | N3-C4-C5 | 5.20 | 131.20 | 128.60 |
| 36 | 1 | 964 | G | N3-C4-N9 | 5.20 | 129.12 | 126.00 |
| 36 | 1 | 3249 | C | C2-N1-C1' | -5.20 | 113.09 | 118.80 |
| 36 | 5 | 43 | A | O4'-C1'-N9 | 5.20 | 112.36 | 108.20 |
| 36 | 5 | 1495 | U | C5-C4-O4 | 5.20 | 129.02 | 125.90 |
| 36 | 5 | 1675 | G | N3-C4-C5 | 5.20 | 131.20 | 128.60 |
| 1 | 2 | 558 | U | C2-N1-C1' | 5.19 | 123.93 | 117.70 |
| 36 | 5 | 2278 | C | N1-C2-O2 | 5.19 | 122.02 | 118.90 |
| 36 | 1 | 354 | U | C2-N1-C1' | 5.19 | 123.93 | 117.70 |
| 36 | 1 | 1510 | G | N3-C4-C5 | -5.19 | 126.00 | 128.60 |
| 1 | 2 | 1058 | U | P-O3'-C3' | 5.19 | 125.93 | 119.70 |
| 36 | 1 | 984 | G | C6-C5-N7 | -5.19 | 127.29 | 130.40 |
| 36 | 5 | 247 | C | C6-N1-C2 | -5.19 | 118.22 | 120.30 |
| 36 | 5 | 2966 | G | OP2-P-O3' | 5.19 | 116.61 | 105.20 |
| 1 | 2 | 17 | C | C6-N1-C2 | -5.19 | 118.22 | 120.30 |
| 36 | 1 | 700 | C | C6-N1-C2 | -5.19 | 118.22 | 120.30 |
| 36 | 1 | 966 | U | N3-C4-O4 | 5.19 | 123.03 | 119.40 |
| 36 | 1 | 1556 | C | C5-C6-N1 | 5.19 | 123.59 | 121.00 |
| 36 | 1 | 2966 | G | N1-C2-N2 | -5.19 | 111.53 | 116.20 |
| 36 | 1 | 695 | C | C6-N1-C2 | 5.19 | 122.37 | 120.30 |
| 36 | 1 | 2984 | C | C2-N1-C1' | -5.19 | 113.09 | 118.80 |
| 1 | 6 | 976 | G | N1-C6-O6 | 5.19 | 123.01 | 119.90 |
| 38 | 8 | 44 | A | C4-C5-N7 | 5.19 | 113.29 | 110.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 1785 | U | C5-C6-N1 | -5.18 | 120.11 | 122.70 |
| 36 | 1 | 2913 | C | C6-N1-C2 | -5.18 | 118.23 | 120.30 |
| 36 | 5 | 1389 | G | O5'-P-OP2 | 5.18 | 116.92 | 110.70 |
| 36 | 1 | 2875 | U | C2-N1-C1' | 5.18 | 123.92 | 117.70 |
| 1 | 6 | 1482 | C | C6-N1-C2 | -5.18 | 118.23 | 120.30 |
| 36 | 5 | 347 | G | C4-C5-N7 | 5.18 | 112.87 | 110.80 |
| 36 | 5 | 422 | A | N1-C2-N3 | 5.18 | 131.89 | 129.30 |
| 36 | 1 | 657 | A | OP1-P-O3' | 5.18 | 116.60 | 105.20 |
| 36 | 1 | 914 | A | N1-C6-N6 | -5.18 | 115.49 | 118.60 |
| 36 | 5 | 2954 | U | N3-C2-O2 | -5.18 | 118.57 | 122.20 |
| 36 | 5 | 3368 | U | C6-N1-C2 | 5.18 | 124.11 | 121.00 |
| 36 | 1 | 2874 | G | C8-N9-C4 | -5.18 | 104.33 | 106.40 |
| 36 | 5 | 869 | G | C8-N9-C4 | 5.18 | 108.47 | 106.40 |
| 37 | 7 | 17 | A | C8-N9-C4 | 5.18 | 107.87 | 105.80 |
| 48 | m1 | 112 | LEU | CA-CB-CG | 5.18 | 127.21 | 115.30 |
| 1 | 2 | 780 | A | N1-C2-N3 | 5.18 | 131.89 | 129.30 |
| 38 | 4 | 54 | A | C6-C5-N7 | -5.18 | 128.68 | 132.30 |
| 36 | 5 | 641 | C | C5-C4-N4 | -5.18 | 116.58 | 120.20 |
| 36 | 5 | 1152 | G | O4'-C1'-N9 | 5.18 | 112.34 | 108.20 |
| 36 | 1 | 336 | A | O4'-C1'-N9 | -5.17 | 104.06 | 108.20 |
| 36 | 1 | 867 | G | C6-C5-N7 | -5.17 | 127.30 | 130.40 |
| 1 | 6 | 1642 | G | C4-C5-C6 | 5.17 | 121.90 | 118.80 |
| 1 | 2 | 145 | A | N1-C2-N3 | 5.17 | 131.89 | 129.30 |
| 1 | 2 | 1600 | A | N9-C1'-C2' | 5.17 | 120.72 | 114.00 |
| 36 | 1 | 2403 | G | N7-C8-N9 | 5.17 | 115.69 | 113.10 |
| 1 | 6 | 581 | U | C5-C6-N1 | -5.17 | 120.11 | 122.70 |
| 36 | 1 | 979 | U | N3-C2-O2 | -5.17 | 118.58 | 122.20 |
| 36 | 1 | 1726 | C | C6-N1-C2 | 5.17 | 122.37 | 120.30 |
| 36 | 5 | 2809 | C | C6-N1-C2 | -5.17 | 118.23 | 120.30 |
| 36 | 5 | 2937 | G | C8-N9-C4 | 5.17 | 108.47 | 106.40 |
| 36 | 5 | 3287 | U | N1-C2-O2 | 5.17 | 126.42 | 122.80 |
| 1 | 2 | 1090 | C | C6-N1-C2 | 5.17 | 122.37 | 120.30 |
| 36 | 1 | 384 | A | N9-C4-C5 | -5.17 | 103.73 | 105.80 |
| 1 | 2 | 794 | U | C2-N1-C1' | 5.17 | 123.90 | 117.70 |
| 36 | 1 | 1902 | G | C8-N9-C1' | -5.17 | 120.28 | 127.00 |
| 1 | 6 | 577 | G | C5-C6-O6 | -5.17 | 125.50 | 128.60 |
| 36 | 5 | 227 | G | C4-N9-C1' | 5.17 | 133.22 | 126.50 |
| 36 | 5 | 2354 | C | C6-N1-C2 | -5.17 | 118.23 | 120.30 |
| 36 | 5 | 2355 | G | OP1-P-O3' | 5.17 | 116.57 | 105.20 |
| 36 | 5 | 2364 | G | O5'-P-OP2 | -5.17 | 101.05 | 105.70 |
| 36 | 5 | 2383 | C | C2-N1-C1' | -5.17 | 113.12 | 118.80 |
| 36 | 5 | 3120 | C | N1-C2-O2 | 5.17 | 122.00 | 118.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 1858 | A | C6-N1-C2 | -5.17 | 115.50 | 118.60 |
| 1 | 2 | 1202 | A | C2-N3-C4 | 5.16 | 113.18 | 110.60 |
| 1 | 2 | 1361 | U | C5-C6-N1 | 5.16 | 125.28 | 122.70 |
| 24 | D2 | 28 | ARG | C-N-CD | -5.16 | 109.24 | 120.60 |
| 36 | 1 | 2138 | A | N1-C6-N6 | 5.16 | 121.70 | 118.60 |
| 36 | 1 | 2315 | G | O4'-C1'-N9 | 5.16 | 112.33 | 108.20 |
| 1 | 6 | 765 | G | C4-N9-C1' | -5.16 | 119.79 | 126.50 |
| 36 | 5 | 2355 | G | O5'-P-OP1 | -5.16 | 101.05 | 105.70 |
| 36 | 5 | 3354 | U | N1-C2-O2 | 5.16 | 126.41 | 122.80 |
| 36 | 5 | 2122 | G | N3-C4-C5 | 5.16 | 131.18 | 128.60 |
| 36 | 1 | 1510 | G | N3-C4-N9 | 5.16 | 129.10 | 126.00 |
| 1 | 2 | 272 | U | C2-N1-C1' | 5.16 | 123.89 | 117.70 |
| 36 | 1 | 1382 | G | N3-C4-N9 | -5.16 | 122.90 | 126.00 |
| 36 | 1 | 1522 | U | O4'-C1'-N1 | 5.16 | 112.33 | 108.20 |
| 36 | 1 | 1635 | G | N3-C4-C5 | 5.16 | 131.18 | 128.60 |
| 36 | 1 | 2248 | C | OP1-P-O3' | 5.16 | 116.55 | 105.20 |
| 36 | 5 | 2899 | C | C2-N1-C1' | 5.16 | 124.47 | 118.80 |
| 36 | 1 | 1140 | G | C4-N9-C1' | 5.16 | 133.20 | 126.50 |
| 36 | 1 | 1192 | C | C5-C4-N4 | -5.16 | 116.59 | 120.20 |
| 36 | 5 | 2943 | G | C4-N9-C1' | 5.16 | 133.20 | 126.50 |
| 1 | 2 | 1600 | A | C8-N9-C1' | -5.16 | 118.42 | 127.70 |
| 36 | 5 | 32 | U | C2-N1-C1' | 5.16 | 123.89 | 117.70 |
| 36 | 5 | 2735 | U | C5-C6-N1 | 5.16 | 125.28 | 122.70 |
| 36 | 1 | 2824 | G | O5'-P-OP2 | -5.15 | 101.06 | 105.70 |
| 1 | 2 | 1778 | G | N3-C4-C5 | -5.15 | 126.02 | 128.60 |
| 36 | 1 | 1306 | G | C4-N9-C1' | 5.15 | 133.20 | 126.50 |
| 36 | 1 | 2967 | A | C8-N9-C4 | 5.15 | 107.86 | 105.80 |
| 38 | 4 | 47 | C | O5'-P-OP2 | 5.15 | 116.88 | 110.70 |
| 36 | 5 | 315 | C | C2-N1-C1' | 5.15 | 124.47 | 118.80 |
| 1 | 2 | 502 | U | C5-C6-N1 | 5.15 | 125.28 | 122.70 |
| 36 | 1 | 41 | G | N1-C6-O6 | -5.15 | 116.81 | 119.90 |
| 36 | 1 | 580 | C | C6-N1-C2 | 5.15 | 122.36 | 120.30 |
| 1 | 6 | 326 | G | C4-N9-C1' | -5.15 | 119.81 | 126.50 |
| 1 | 6 | 1197 | C | N3-C2-O2 | -5.15 | 118.30 | 121.90 |
| 36 | 5 | 102 | C | C5-C6-N1 | 5.15 | 123.58 | 121.00 |
| 38 | 8 | 52 | A | N1-C6-N6 | -5.15 | 115.51 | 118.60 |
| 36 | 1 | 2290 | C | C6-N1-C2 | 5.15 | 122.36 | 120.30 |
| 36 | 5 | 3180 | A | N9-C4-C5 | -5.15 | 103.74 | 105.80 |
| 36 | 1 | 2370 | G | O5'-P-OP1 | -5.15 | 101.07 | 105.70 |
| 36 | 5 | 860 | G | C4-C5-N7 | 5.15 | 112.86 | 110.80 |
| 36 | 1 | 2150 | G | N3-C4-C5 | 5.14 | 131.17 | 128.60 |
| 36 | 1 | 3382 | U | C6-N1-C1' | -5.14 | 114.00 | 121.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 5 | 230 | U | C5-C6-N1 | 5.14 | 125.27 | 122.70 |
| 1 | 2 | 633 | U | C5-C6-N1 | -5.14 | 120.13 | 122.70 |
| 36 | 5 | 2852 | C | C2-N1-C1' | 5.14 | 124.46 | 118.80 |
| 1 | 2 | 1644 | C | C5-C6-N1 | 5.14 | 123.57 | 121.00 |
| 39 | L2 | 237 | LEU | CA-CB-CG | -5.14 | 103.48 | 115.30 |
| 36 | 5 | 881 | C | N1-C2-O2 | 5.14 | 121.98 | 118.90 |
| 53 | m7 | 95 | LEU | CA-CB-CG | -5.14 | 103.48 | 115.30 |
| 36 | 1 | 1525 | G | N3-C4-C5 | -5.14 | 126.03 | 128.60 |
| 1 | 6 | 122 | U | C5-C6-N1 | 5.14 | 125.27 | 122.70 |
| 36 | 5 | 1888 | U | C2-N1-C1' | 5.14 | 123.87 | 117.70 |
| 1 | 2 | 815 | G | P-O3'-C3' | 5.14 | 125.86 | 119.70 |
| 36 | 1 | 2363 | A | C8-N9-C4 | -5.14 | 103.75 | 105.80 |
| 1 | 6 | 742 | U | C6-N1-C2 | -5.14 | 117.92 | 121.00 |
| 36 | 5 | 1667 | A | N7-C8-N9 | 5.14 | 116.37 | 113.80 |
| 36 | 1 | 2649 | A | C8-N9-C4 | -5.14 | 103.75 | 105.80 |
| 36 | 5 | 2608 | G | N7-C8-N9 | -5.14 | 110.53 | 113.10 |
| 1 | 2 | 618 | U | C5-C6-N1 | 5.13 | 125.27 | 122.70 |
| 3 | S1 | 219 | LYS | C-N-CA | 5.13 | 134.54 | 121.70 |
| 36 | 1 | 149 | U | C6-N1-C2 | -5.13 | 117.92 | 121.00 |
| 36 | 1 | 2988 | C | C5-C6-N1 | 5.13 | 123.57 | 121.00 |
| 36 | 1 | 3325 | G | C4-N9-C1' | -5.13 | 119.82 | 126.50 |
| 52 | M6 | 27 | LEU | CA-CB-CG | -5.13 | 103.49 | 115.30 |
| 1 | 6 | 1481 | C | P-O3'-C3' | 5.13 | 125.86 | 119.70 |
| 36 | 5 | 92 | G | N9-C4-C5 | -5.13 | 103.35 | 105.40 |
| 63 | n7 | 5 | LEU | CA-CB-CG | -5.13 | 103.49 | 115.30 |
| 1 | 2 | 1051 | G | OP1-P-O3' | 5.13 | 116.49 | 105.20 |
| 36 | 1 | 1915 | A | N7-C8-N9 | -5.13 | 111.23 | 113.80 |
| 36 | 5 | 1264 | G | C8-N9-C4 | -5.13 | 104.35 | 106.40 |
| 36 | 1 | 1603 | A | N1-C2-N3 | 5.13 | 131.87 | 129.30 |
| 36 | 1 | 2171 | G | O5'-P-OP1 | -5.13 | 101.08 | 105.70 |
| 36 | 5 | 627 | U | C6-N1-C2 | -5.13 | 117.92 | 121.00 |
| 36 | 5 | 1496 | C | C6-N1-C1' | -5.13 | 114.64 | 120.80 |
| 36 | 5 | 2709 | C | C6-N1-C2 | 5.13 | 122.35 | 120.30 |
| 1 | 2 | 16 | G | C8-N9-C4 | -5.13 | 104.35 | 106.40 |
| 36 | 1 | 1222 | G | P-O3'-C3' | 5.13 | 125.86 | 119.70 |
| 36 | 1 | 1834 | U | C6-N1-C2 | -5.13 | 117.92 | 121.00 |
| 36 | 5 | 19 | U | C6-N1-C1' | 5.13 | 128.38 | 121.20 |
| 36 | 5 | 354 | U | C6-N1-C1' | -5.13 | 114.02 | 121.20 |
| 37 | 7 | 91 | G | N3-C4-N9 | -5.13 | 122.92 | 126.00 |
| 36 | 1 | 47 | C | C4-C5-C6 | 5.13 | 119.96 | 117.40 |
| 36 | 5 | 925 | A | O5'-P-OP1 | -5.13 | 101.09 | 105.70 |
| 36 | 5 | 970 | A | N9-C1'-C2' | -5.13 | 106.36 | 112.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 5 | 1027 | A | OP1-P-O3' | 5.13 | 116.48 | 105.20 |
| 38 | 4 | 24 | G | N3-C4-N9 | -5.12 | 122.92 | 126.00 |
| 36 | 5 | 1892 | G | OP1-P-O3' | 5.12 | 116.48 | 105.20 |
| 36 | 1 | 812 | G | O5'-P-OP2 | -5.12 | 101.09 | 105.70 |
| 36 | 5 | 1306 | G | OP2-P-O3' | 5.12 | 116.47 | 105.20 |
| 36 | 5 | 2346 | C | OP1-P-O3' | 5.12 | 116.47 | 105.20 |
| 36 | 1 | 2130 | G | N3-C4-C5 | 5.12 | 131.16 | 128.60 |
| 36 | 1 | 1607 | U | C2-N1-C1' | 5.12 | 123.84 | 117.70 |
| 36 | 1 | 2305 | G | C8-N9-C4 | -5.12 | 104.35 | 106.40 |
| 36 | 5 | 3002 | C | C6-N1-C2 | 5.12 | 122.35 | 120.30 |
| 36 | 5 | 3157 | U | C5-C6-N1 | 5.12 | 125.26 | 122.70 |
| 36 | 5 | 3197 | G | N3-C2-N2 | -5.12 | 116.32 | 119.90 |
| 36 | 5 | 2837 | A | N9-C4-C5 | -5.12 | 103.75 | 105.80 |
| 36 | 1 | 1536 | G | OP1-P-O3' | 5.12 | 116.45 | 105.20 |
| 36 | 1 | 2871 | G | C5-C6-O6 | -5.12 | 125.53 | 128.60 |
| 36 | 5 | 838 | G | N3-C4-C5 | -5.12 | 126.04 | 128.60 |
| 36 | 5 | 1178 | G | N1-C6-O6 | -5.12 | 116.83 | 119.90 |
| 36 | 5 | 1588 | A | C8-N9-C4 | 5.12 | 107.85 | 105.80 |
| 36 | 5 | 2348 | A | N1-C6-N6 | -5.12 | 115.53 | 118.60 |
| 36 | 1 | 952 | A | N1-C6-N6 | -5.11 | 115.53 | 118.60 |
| 38 | 4 | 62 | C | O5'-P-OP1 | -5.11 | 101.10 | 105.70 |
| 36 | 5 | 835 | G | O4'-C1'-N9 | 5.11 | 112.29 | 108.20 |
| 1 | 6 | 581 | U | C2-N1-C1' | -5.11 | 111.56 | 117.70 |
| 1 | 6 | 912 | U | P-O3'-C3' | 5.11 | 125.83 | 119.70 |
| 1 | 6 | 1156 | C | C6-N1-C2 | -5.11 | 118.26 | 120.30 |
| 36 | 5 | 420 | G | C8-N9-C1' | -5.11 | 120.36 | 127.00 |
| 36 | 5 | 2895 | G | O5'-P-OP2 | -5.11 | 101.10 | 105.70 |
| 1 | 2 | 549 | G | C8-N9-C1' | -5.11 | 120.36 | 127.00 |
| 36 | 1 | 535 | G | N3-C4-N9 | 5.11 | 129.06 | 126.00 |
| 36 | 5 | 970 | A | N9-C4-C5 | -5.11 | 103.76 | 105.80 |
| 36 | 1 | 2763 | U | O5'-P-OP2 | -5.11 | 101.10 | 105.70 |
| 1 | 6 | 1 | U | N1-C2-O2 | 5.11 | 126.38 | 122.80 |
| 1 | 6 | 1615 | C | OP2-P-O3' | 5.11 | 116.44 | 105.20 |
| 1 | 2 | 61 | A | O4'-C1'-N9 | 5.11 | 112.28 | 108.20 |
| 1 | 2 | 417 | A | P-O3'-C3' | 5.11 | 125.83 | 119.70 |
| 36 | 1 | 870 | G | N3-C4-C5 | -5.11 | 126.05 | 128.60 |
| 36 | 1 | 1114 | U | OP2-P-O3' | 5.11 | 116.43 | 105.20 |
| 1 | 6 | 266 | A | C8-N9-C4 | 5.11 | 107.84 | 105.80 |
| 36 | 5 | 860 | G | C5-C6-O6 | -5.11 | 125.54 | 128.60 |
| 36 | 5 | 1442 | U | C5-C6-N1 | -5.11 | 120.15 | 122.70 |
| 36 | 5 | 3317 | U | P-O3'-C3' | 5.11 | 125.83 | 119.70 |
| 36 | 5 | 1064 | A | P-O3'-C3' | 5.10 | 125.83 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 36 | 1 | 1612 | A | N9-C1'-C2' | -5.10 | 106.39 | 112.00 |
| 36 | 5 | 1909 | A | N7-C8-N9 | -5.10 | 111.25 | 113.80 |
| 38 | 8 | 46 | G | N3-C4-N9 | 5.10 | 129.06 | 126.00 |
| 1 | 2 | 321 | C | OP1-P-O3' | 5.10 | 116.42 | 105.20 |
| 36 | 5 | 2521 | U | C5-C6-N1 | -5.10 | 120.15 | 122.70 |
| 1 | 2 | 1456 | C | C2-N1-C1' | 5.10 | 124.41 | 118.80 |
| 1 | 2 | 1157 | A | N7-C8-N9 | 5.10 | 116.35 | 113.80 |
| 36 | 1 | 2335 | G | N7-C8-N9 | 5.10 | 115.65 | 113.10 |
| 36 | 1 | 2424 | A | N9-C4-C5 | -5.10 | 103.76 | 105.80 |
| 1 | 6 | 337 | G | C5-N7-C8 | -5.10 | 101.75 | 104.30 |
| 36 | 5 | 1606 | U | OP2-P-O3' | 5.10 | 116.41 | 105.20 |
| 36 | 5 | 2642 | A | N1-C2-N3 | 5.10 | 131.85 | 129.30 |
| 36 | 5 | 2813 | A | C5-N7-C8 | -5.10 | 101.35 | 103.90 |
| 36 | 1 | 1525 | G | C8-N9-C4 | -5.09 | 104.36 | 106.40 |
| 36 | 1 | 1769 | G | N7-C8-N9 | 5.09 | 115.65 | 113.10 |
| 36 | 1 | 661 | G | C4-N9-C1' | 5.09 | 133.12 | 126.50 |
| 36 | 1 | 1661 | G | N3-C4-N9 | 5.09 | 129.06 | 126.00 |
| 36 | 1 | 1762 | C | C6-N1-C2 | -5.09 | 118.26 | 120.30 |
| 1 | 6 | 363 | G | N1-C6-O6 | 5.09 | 122.95 | 119.90 |
| 1 | 6 | 429 | G | N1-C6-O6 | 5.09 | 122.95 | 119.90 |
| 36 | 5 | 360 | G | C6-C5-N7 | -5.09 | 127.34 | 130.40 |
| 36 | 5 | 2614 | G | N3-C4-N9 | 5.09 | 129.06 | 126.00 |
| 80 | p0 | 93 | LEU | CA-CB-CG | 5.09 | 127.01 | 115.30 |
| 36 | 1 | 395 | A | C8-N9-C4 | -5.09 | 103.76 | 105.80 |
| 1 | 6 | 1573 | A | P-O3'-C3' | 5.09 | 125.81 | 119.70 |
| 36 | 1 | 1542 | G | C4-C5-N7 | 5.09 | 112.83 | 110.80 |
| 37 | 3 | 44 | C | C6-N1-C2 | 5.09 | 122.33 | 120.30 |
| 1 | 6 | 275 | C | N1-C2-O2 | 5.09 | 121.95 | 118.90 |
| 36 | 5 | 635 | G | C6-C5-N7 | -5.09 | 127.35 | 130.40 |
| 36 | 5 | 2719 | U | N1-C2-O2 | -5.09 | 119.24 | 122.80 |
| 36 | 1 | 2141 | U | N1-C2-O2 | -5.09 | 119.24 | 122.80 |
| 36 | 5 | 1761 | C | OP1-P-O3' | 5.09 | 116.39 | 105.20 |
| 36 | 5 | 2856 | G | N1-C6-O6 | 5.09 | 122.95 | 119.90 |
| 1 | 2 | 1399 | C | C6-N1-C2 | -5.08 | 118.27 | 120.30 |
| 1 | 6 | 1458 | G | C8-N9-C1' | -5.08 | 120.39 | 127.00 |
| 36 | 5 | 982 | C | C5-C6-N1 | 5.08 | 123.54 | 121.00 |
| 36 | 5 | 1762 | C | C5-C6-N1 | 5.08 | 123.54 | 121.00 |
| 36 | 5 | 2814 | G | N1-C6-O6 | -5.08 | 116.85 | 119.90 |
| 36 | 5 | 2842 | U | C6-N1-C1' | -5.08 | 114.08 | 121.20 |
| 36 | 1 | 188 | U | C6-N1-C2 | -5.08 | 117.95 | 121.00 |
| 36 | 1 | 98 | G | N9-C4-C5 | -5.08 | 103.37 | 105.40 |
| 36 | 1 | 2922 | G | C5-C6-O6 | -5.08 | 125.55 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 1 | 6 | 336 | G | N3-C4-N9 | -5.08 | 122.95 | 126.00 |
| 36 | 5 | 3056 | U | C6-N1-C2 | 5.08 | 124.05 | 121.00 |
| 36 | 1 | 1480 | G | C4-C5-N7 | 5.08 | 112.83 | 110.80 |
| 36 | 1 | 2145 | A | C6-C5-N7 | -5.08 | 128.75 | 132.30 |
| 36 | 1 | 2675 | C | C6-N1-C1' | -5.08 | 114.71 | 120.80 |
| 36 | 1 | 2683 | U | C5-C6-N1 | -5.08 | 120.16 | 122.70 |
| 36 | 5 | 385 | A | N1-C6-N6 | 5.08 | 121.65 | 118.60 |
| 36 | 5 | 2947 | G | N9-C4-C5 | 5.08 | 107.43 | 105.40 |
| 1 | 2 | 617 | U | C5-C6-N1 | 5.07 | 125.24 | 122.70 |
| 36 | 1 | 55 | G | N9-C1'-C2' | -5.07 | 106.42 | 112.00 |
| 36 | 1 | 2819 | A | C8-N9-C4 | -5.07 | 103.77 | 105.80 |
| 1 | 6 | 224 | C | C6-N1-C2 | -5.07 | 118.27 | 120.30 |
| 36 | 1 | 2358 | A | OP1-P-O3' | 5.07 | 116.35 | 105.20 |
| 36 | 5 | 2968 | G | OP2-P-O3' | 5.07 | 116.36 | 105.20 |
| 1 | 2 | 1339 | C | C6-N1-C2 | -5.07 | 118.27 | 120.30 |
| 1 | 2 | 1467 | C | C6-N1-C2 | -5.07 | 118.27 | 120.30 |
| 36 | 1 | 588 | G | OP2-P-O3' | 5.07 | 116.35 | 105.20 |
| 36 | 1 | 1086 | C | C5-C6-N1 | 5.07 | 123.53 | 121.00 |
| 36 | 5 | 793 | C | C5-C6-N1 | 5.07 | 123.53 | 121.00 |
| 36 | 5 | 1095 | U | C2-N1-C1' | 5.07 | 123.78 | 117.70 |
| 36 | 1 | 718 | G | C2-N3-C4 | -5.07 | 109.37 | 111.90 |
| 36 | 1 | 2221 | G | C8-N9-C1' | 5.07 | 133.59 | 127.00 |
| 1 | 6 | 155 | U | N3-C2-O2 | -5.07 | 118.65 | 122.20 |
| 36 | 5 | 2288 | G | C4-N9-C1' | 5.07 | 133.09 | 126.50 |
| 1 | 2 | 187 | G | OP1-P-O3' | 5.07 | 116.34 | 105.20 |
| 36 | 1 | 1124 | U | N3-C2-O2 | -5.06 | 118.66 | 122.20 |
| 36 | 1 | 2606 | G | N3-C4-C5 | -5.06 | 126.07 | 128.60 |
| 36 | 5 | 1663 | C | C6-N1-C2 | 5.06 | 122.33 | 120.30 |
| 36 | 5 | 2424 | A | C6-N1-C2 | 5.06 | 121.64 | 118.60 |
| 36 | 1 | 2372 | A | C8-N9-C4 | -5.06 | 103.78 | 105.80 |
| 36 | 1 | 2645 | G | N9-C4-C5 | -5.06 | 103.38 | 105.40 |
| 36 | 1 | 2762 | A | N9-C4-C5 | 5.06 | 107.83 | 105.80 |
| 1 | 6 | 1728 | A | C8-N9-C4 | -5.06 | 103.78 | 105.80 |
| 36 | 5 | 813 | G | C5-C6-O6 | -5.06 | 125.56 | 128.60 |
| 1 | 2 | 1182 | U | N3-C2-O2 | -5.06 | 118.66 | 122.20 |
| 36 | 1 | 2794 | G | C8-N9-C1' | 5.06 | 133.58 | 127.00 |
| 36 | 5 | 3087 | A | N3-C4-N9 | -5.06 | 123.35 | 127.40 |
| 36 | 1 | 1599 | G | C8-N9-C4 | 5.06 | 108.42 | 106.40 |
| 36 | 1 | 2645 | G | C5-C6-O6 | -5.06 | 125.56 | 128.60 |
| 38 | 4 | 58 | G | N3-C4-N9 | 5.06 | 129.04 | 126.00 |
| 36 | 1 | 2513 | U | C5-C6-N1 | 5.06 | 125.23 | 122.70 |
| 36 | 1 | 3228 | C | N3-C4-C5 | -5.06 | 119.88 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 49 | M3 | 85 | LEU | CA-CB-CG | 5.06 | 126.93 | 115.30 |
| 36 | 5 | 1396 | C | C6-N1-C2 | 5.06 | 122.32 | 120.30 |
| 36 | 5 | 1897 | G | C4-C5-N7 | 5.06 | 112.82 | 110.80 |
| 36 | 5 | 2405 | C | C5-C6-N1 | -5.06 | 118.47 | 121.00 |
| 36 | 5 | 2726 | C | C6-N1-C2 | -5.06 | 118.28 | 120.30 |
| 1 | 2 | 1456 | C | N1-C2-O2 | 5.06 | 121.93 | 118.90 |
| 36 | 1 | 2380 | U | C6-N1-C2 | 5.06 | 124.03 | 121.00 |
| 41 | L4 | 318 | LEU | CA-CB-CG | 5.06 | 126.93 | 115.30 |
| 1 | 6 | 1148 | C | C6-N1-C2 | -5.06 | 118.28 | 120.30 |
| 36 | 5 | 664 | U | N3-C2-O2 | -5.06 | 118.66 | 122.20 |
| 1 | 6 | 687 | G | N3-C2-N2 | -5.05 | 116.36 | 119.90 |
| 36 | 1 | 620 | U | C4-C5-C6 | 5.05 | 122.73 | 119.70 |
| 36 | 5 | 345 | G | N1-C6-O6 | 5.05 | 122.93 | 119.90 |
| 36 | 5 | 2837 | A | N3-C4-C5 | 5.05 | 130.34 | 126.80 |
| 1 | 2 | 403 | G | N7-C8-N9 | 5.05 | 115.63 | 113.10 |
| 36 | 5 | 3085 | G | N3-C4-C5 | 5.05 | 131.13 | 128.60 |
| 36 | 1 | 3217 | C | C6-N1-C2 | -5.05 | 118.28 | 120.30 |
| 1 | 6 | 1 | U | C6-N1-C1' | -5.05 | 114.13 | 121.20 |
| 1 | 2 | 1082 | C | C2-N1-C1' | 5.05 | 124.35 | 118.80 |
| 36 | 1 | 2138 | A | N9-C4-C5 | -5.05 | 103.78 | 105.80 |
| 36 | 1 | 2359 | C | C5-C6-N1 | 5.05 | 123.52 | 121.00 |
| 36 | 5 | 2751 | G | N3-C4-C5 | 5.05 | 131.12 | 128.60 |
| 1 | 2 | 966 | A | C8-N9-C4 | 5.05 | 107.82 | 105.80 |
| 14 | C2 | 58 | LEU | CA-CB-CG | 5.05 | 126.91 | 115.30 |
| 36 | 1 | 1111 | U | C6-N1-C2 | 5.05 | 124.03 | 121.00 |
| 36 | 1 | 3143 | C | C6-N1-C2 | 5.05 | 122.32 | 120.30 |
| 36 | 1 | 3344 | A | O4'-C1'-N9 | 5.05 | 112.24 | 108.20 |
| 38 | 4 | 75 | G | N3-C4-C5 | 5.05 | 131.12 | 128.60 |
| 36 | 5 | 1846 | C | C6-N1-C2 | 5.05 | 122.32 | 120.30 |
| 1 | 2 | 1244 | A | P-O3'-C3' | 5.04 | 125.75 | 119.70 |
| 1 | 6 | 1646 | C | C6-N1-C2 | -5.04 | 118.28 | 120.30 |
| 36 | 1 | 2101 | C | P-O3'-C3' | 5.04 | 125.75 | 119.70 |
| 36 | 5 | 895 | A | C8-N9-C4 | -5.04 | 103.78 | 105.80 |
| 36 | 5 | 2689 | A | O4'-C1'-N9 | 5.04 | 112.23 | 108.20 |
| 36 | 5 | 3286 | G | N3-C4-C5 | 5.04 | 131.12 | 128.60 |
| 36 | 1 | 2366 | C | C5-C6-N1 | 5.04 | 123.52 | 121.00 |
| 36 | 1 | 2955 | U | C5-C6-N1 | 5.04 | 125.22 | 122.70 |
| 36 | 5 | 1324 | U | C6-N1-C2 | 5.04 | 124.02 | 121.00 |
| 36 | 5 | 2163 | C | C5-C6-N1 | 5.04 | 123.52 | 121.00 |
| 36 | 5 | 2615 | G | O5'-P-OP1 | -5.04 | 101.16 | 105.70 |
| 36 | 5 | 2794 | G | O4'-C1'-N9 | 5.04 | 112.23 | 108.20 |
| 36 | 5 | 2987 | A | C2-N3-C4 | 5.04 | 113.12 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|-------|-------------|----------|
| 37 | 7 | 91 | G | N3-C4-C5 | 5.04 | 131.12 | 128.60 |
| 36 | 1 | 2286 | U | C2-N1-C1' | -5.04 | 111.65 | 117.70 |
| 1 | 6 | 321 | C | OP1-P-O3' | 5.04 | 116.29 | 105.20 |
| 1 | 2 | 387 | A | O5'-P-OP2 | -5.04 | 101.17 | 105.70 |
| 36 | 1 | 1190 | A | C4-N9-C1' | 5.04 | 135.37 | 126.30 |
| 36 | 1 | 1525 | G | N7-C8-N9 | 5.04 | 115.62 | 113.10 |
| 36 | 1 | 2513 | U | OP1-P-O3' | 5.04 | 116.28 | 105.20 |
| 1 | 6 | 1456 | C | O4'-C1'-N1 | 5.04 | 112.23 | 108.20 |
| 36 | 5 | 1188 | U | N1-C2-N3 | 5.04 | 117.92 | 114.90 |
| 36 | 5 | 1639 | C | C5-C6-N1 | 5.04 | 123.52 | 121.00 |
| 36 | 5 | 2834 | G | C4-N9-C1' | 5.04 | 133.05 | 126.50 |
| 37 | 7 | 62 | U | C6-N1-C2 | 5.04 | 124.02 | 121.00 |
| 1 | 2 | 1000 | C | C2-N1-C1' | 5.03 | 124.34 | 118.80 |
| 36 | 5 | 20 | A | OP2-P-O3' | 5.03 | 116.28 | 105.20 |
| 36 | 5 | 2935 | U | C5-C6-N1 | 5.03 | 125.22 | 122.70 |
| 1 | 2 | 1520 | U | C6-N1-C2 | 5.03 | 124.02 | 121.00 |
| 36 | 1 | 120 | G | N3-C4-C5 | -5.03 | 126.08 | 128.60 |
| 36 | 1 | 211 | A | O5'-P-OP1 | -5.03 | 101.17 | 105.70 |
| 36 | 1 | 1925 | U | C5-C6-N1 | -5.03 | 120.19 | 122.70 |
| 36 | 1 | 2282 | U | N3-C2-O2 | -5.03 | 118.68 | 122.20 |
| 1 | 6 | 965 | U | N1-C2-O2 | 5.03 | 126.32 | 122.80 |
| 36 | 5 | 927 | C | C5-C6-N1 | 5.03 | 123.52 | 121.00 |
| 36 | 5 | 1693 | C | C6-N1-C2 | 5.03 | 122.31 | 120.30 |
| 36 | 5 | 2924 | U | C5-C6-N1 | -5.03 | 120.19 | 122.70 |
| 36 | 5 | 139 | G | N9-C4-C5 | -5.03 | 103.39 | 105.40 |
| 36 | 5 | 1151 | U | C4-C5-C6 | 5.03 | 122.72 | 119.70 |
| 36 | 5 | 1355 | A | P-O3'-C3' | 5.03 | 125.73 | 119.70 |
| 36 | 5 | 1630 | U | C6-N1-C2 | 5.03 | 124.02 | 121.00 |
| 36 | 1 | 2125 | A | N1-C2-N3 | 5.03 | 131.81 | 129.30 |
| 36 | 5 | 801 | A | O4'-C1'-N9 | -5.03 | 104.18 | 108.20 |
| 36 | 5 | 822 | G | C8-N9-C4 | -5.03 | 104.39 | 106.40 |
| 36 | 5 | 3143 | C | C2-N1-C1' | -5.03 | 113.27 | 118.80 |
| 36 | 5 | 3244 | A | C8-N9-C4 | 5.03 | 107.81 | 105.80 |
| 36 | 1 | 315 | C | N1-C2-O2 | 5.02 | 121.91 | 118.90 |
| 36 | 1 | 3319 | U | P-O3'-C3' | 5.02 | 125.73 | 119.70 |
| 36 | 5 | 207 | U | C5-C6-N1 | 5.02 | 125.21 | 122.70 |
| 36 | 1 | 2371 | G | N9-C4-C5 | -5.02 | 103.39 | 105.40 |
| 36 | 1 | 2417 | U | C6-N1-C2 | 5.02 | 124.01 | 121.00 |
| 36 | 1 | 2420 | C | C5-C6-N1 | 5.02 | 123.51 | 121.00 |
| 36 | 1 | 2549 | G | N3-C4-C5 | 5.02 | 131.11 | 128.60 |
| 1 | 6 | 755 | A | N9-C1'-C2' | -5.02 | 106.47 | 112.00 |
| 36 | 5 | 1201 | C | C6-N1-C2 | 5.02 | 122.31 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 36 | 5 | 3218 | A | P-O3'-C3' | 5.02 | 125.73 | 119.70 |
| 1 | 2 | 1600 | A | C4-C5-C6 | 5.02 | 119.51 | 117.00 |
| 36 | 5 | 344 | A | C5-N7-C8 | -5.02 | 101.39 | 103.90 |
| 36 | 1 | 3048 | A | C8-N9-C4 | 5.02 | 107.81 | 105.80 |
| 1 | 6 | 443 | C | C6-N1-C2 | 5.02 | 122.31 | 120.30 |
| 1 | 6 | 1243 | G | N3-C4-N9 | 5.02 | 129.01 | 126.00 |
| 36 | 5 | 518 | G | C8-N9-C1' | -5.02 | 120.47 | 127.00 |
| 36 | 5 | 2136 | C | C6-N1-C2 | 5.02 | 122.31 | 120.30 |
| 36 | 5 | 2177 | G | C8-N9-C4 | 5.02 | 108.41 | 106.40 |
| 1 | 2 | 814 | A | C3'-C2'-C1' | 5.02 | 105.52 | 101.50 |
| 14 | C2 | 125 | ASN | C-N-CA | 5.02 | 134.24 | 121.70 |
| 36 | 1 | 1761 | C | OP1-P-O3' | 5.02 | 116.24 | 105.20 |
| 45 | L8 | 189 | LEU | CA-CB-CG | 5.02 | 126.84 | 115.30 |
| 1 | 6 | 308 | C | C6-N1-C2 | 5.02 | 122.31 | 120.30 |
| 36 | 5 | 1148 | G | N1-C2-N2 | -5.02 | 111.68 | 116.20 |
| 26 | D4 | 50 | ALA | C-N-CA | 5.02 | 134.24 | 121.70 |
| 38 | 8 | 21 | C | C5-C6-N1 | -5.02 | 118.49 | 121.00 |
| 36 | 1 | 1306 | G | C4-C5-N7 | 5.01 | 112.81 | 110.80 |
| 1 | 6 | 308 | C | C2-N1-C1' | -5.01 | 113.28 | 118.80 |
| 36 | 1 | 3175 | U | N3-C2-O2 | -5.01 | 118.69 | 122.20 |
| 15 | c3 | 28 | LEU | C-N-CA | 5.01 | 134.23 | 121.70 |
| 36 | 1 | 415 | G | N3-C4-C5 | 5.01 | 131.11 | 128.60 |
| 1 | 6 | 553 | G | C6-C5-N7 | -5.01 | 127.39 | 130.40 |
| 36 | 5 | 1825 | G | N3-C4-C5 | -5.01 | 126.09 | 128.60 |
| 36 | 5 | 2912 | G | N3-C4-N9 | -5.01 | 122.99 | 126.00 |
| 36 | 1 | 2704 | A | OP2-P-O3' | 5.01 | 116.22 | 105.20 |
| 36 | 1 | 2813 | A | C8-N9-C4 | -5.01 | 103.80 | 105.80 |
| 1 | 6 | 403 | G | OP2-P-O3' | 5.01 | 116.22 | 105.20 |
| 1 | 2 | 1514 | U | N1-C2-O2 | 5.01 | 126.30 | 122.80 |
| 38 | 4 | 82 | U | C2-N3-C4 | 5.01 | 130.00 | 127.00 |
| 38 | 4 | 114 | G | N3-C4-N9 | -5.01 | 123.00 | 126.00 |
| 1 | 6 | 1210 | C | C5-C6-N1 | 5.01 | 123.50 | 121.00 |
| 1 | 2 | 1038 | U | C2-N1-C1' | -5.00 | 111.69 | 117.70 |
| 36 | 1 | 3036 | G | N3-C4-N9 | -5.00 | 123.00 | 126.00 |
| 38 | 8 | 83 | C | C6-N1-C1' | 5.00 | 126.81 | 120.80 |
| 1 | 2 | 987 | G | N9-C4-C5 | -5.00 | 103.40 | 105.40 |
| 36 | 1 | 2681 | U | C5-C6-N1 | 5.00 | 125.20 | 122.70 |
| 36 | 1 | 3210 | A | N9-C4-C5 | -5.00 | 103.80 | 105.80 |
| 36 | 5 | 726 | G | C6-C5-N7 | -5.00 | 127.40 | 130.40 |
| 1 | 2 | 1535 | U | OP2-P-O3' | 5.00 | 116.20 | 105.20 |
| 36 | 1 | 1094 | U | C2-N1-C1' | 5.00 | 123.70 | 117.70 |
| 36 | 5 | 1425 | U | C5-C6-N1 | -5.00 | 120.20 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|------|-------------|----------|
| 36 | 5 | 2735 | U | C2-N1-C1' | 5.00 | 123.70 | 117.70 |

There are no chirality outliers.

All (141) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|---------|
| 13 | C1 | 28 | SER | Peptide |
| 14 | C2 | 102 | GLY | Peptide |
| 14 | C2 | 88 | LEU | Peptide |
| 14 | C2 | 91 | VAL | Peptide |
| 16 | C4 | 38 | THR | Peptide |
| 17 | C5 | 12 | PHE | Peptide |
| 17 | C5 | 124 | THR | Peptide |
| 18 | C6 | 113 | ASP | Peptide |
| 18 | C6 | 40 | GLU | Peptide |
| 18 | C6 | 58 | ASP | Peptide |
| 19 | C7 | 22 | PRO | Peptide |
| 20 | C8 | 27 | LYS | Peptide |
| 20 | C8 | 83 | ALA | Peptide |
| 20 | C8 | 90 | ASN | Peptide |
| 24 | D2 | 83 | ILE | Peptide |
| 25 | D3 | 44 | GLY | Peptide |
| 26 | D4 | 46 | GLU | Peptide |
| 26 | D4 | 50 | ALA | Peptide |
| 27 | D5 | 54 | VAL | Peptide |
| 27 | D5 | 94 | LYS | Peptide |
| 28 | D6 | 10 | ARG | Peptide |
| 28 | D6 | 11 | ASN | Peptide |
| 29 | D7 | 50 | ALA | Peptide |
| 33 | E1 | 101 | ALA | Peptide |
| 33 | E1 | 138 | ARG | Peptide |
| 33 | E1 | 143 | LYS | Peptide |
| 33 | E1 | 146 | SER | Peptide |
| 33 | E1 | 147 | VAL | Peptide |
| 40 | L3 | 2 | SER | Peptide |
| 40 | L3 | 349 | LYS | Peptide |
| 42 | L5 | 257 | GLU | Peptide |
| 42 | L5 | 258 | LYS | Peptide |
| 42 | L5 | 275 | THR | Peptide |
| 43 | L6 | 129 | GLU | Peptide |
| 43 | L6 | 173 | MET | Peptide |
| 45 | L8 | 30 | THR | Peptide |

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| Mol | Chain | Res | Type | Group |
|------------|--------------|------------|-------------|--------------|
| 45 | L8 | 77 | GLN | Peptide |
| 46 | L9 | 49 | ASN | Peptide |
| 51 | M5 | 73 | ARG | Peptide |
| 52 | M6 | 110 | PRO | Peptide |
| 53 | M7 | 157 | VAL | Peptide |
| 53 | M7 | 158 | ALA | Peptide |
| 56 | N0 | 12 | ARG | Peptide |
| 56 | N0 | 133 | ALA | Peptide |
| 56 | N0 | 166 | LYS | Peptide |
| 56 | N0 | 22 | PRO | Peptide |
| 60 | N4 | 80 | ARG | Peptide |
| 60 | N4 | 81 | PRO | Peptide |
| 62 | N6 | 83 | ASP | Peptide |
| 64 | N8 | 30 | GLY | Peptide |
| 64 | N8 | 46 | ASP | Peptide |
| 65 | N9 | 19 | ASN | Peptide |
| 67 | O1 | 6 | ASP | Peptide |
| 69 | O3 | 91 | ALA | Peptide |
| 71 | O5 | 90 | ARG | Peptide |
| 72 | O6 | 26 | ILE | Peptide |
| 2 | S0 | 94 | GLY | Peptide |
| 3 | S1 | 131 | ASP | Peptide |
| 3 | S1 | 205 | PHE | Peptide |
| 3 | S1 | 206 | PRO | Peptide |
| 3 | S1 | 36 | SER | Peptide |
| 4 | S2 | 144 | TRP | Peptide |
| 6 | S4 | 193 | GLY | Peptide |
| 7 | S5 | 44 | ASN | Peptide |
| 7 | S5 | 56 | ALA | Peptide |
| 7 | S5 | 65 | ARG | Peptide |
| 9 | S7 | 110 | GLN | Peptide |
| 9 | S7 | 131 | PHE | Peptide |
| 9 | S7 | 31 | SER | Peptide |
| 9 | S7 | 64 | VAL | Peptide |
| 34 | SR | 96 | THR | Peptide |
| 12 | c0 | 83 | PRO | Peptide |
| 14 | c2 | 102 | GLY | Peptide |
| 15 | c3 | 29 | SER | Peptide |
| 17 | c5 | 129 | GLY | Peptide |
| 17 | c5 | 50 | THR | Peptide |
| 17 | c5 | 52 | LYS | Peptide |
| 17 | c5 | 67 | ALA | Peptide |

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| Mol | Chain | Res | Type | Group |
|------------|--------------|------------|-------------|--------------|
| 18 | c6 | 40 | GLU | Peptide |
| 20 | c8 | 90 | ASN | Peptide |
| 22 | d0 | 51 | VAL | Peptide |
| 22 | d0 | 70 | THR | Peptide |
| 27 | d5 | 85 | LYS | Peptide |
| 27 | d5 | 87 | GLY | Peptide |
| 32 | e0 | 44 | PHE | Peptide |
| 32 | e0 | 51 | ASN | Peptide |
| 33 | e1 | 135 | HIS | Peptide |
| 33 | e1 | 147 | VAL | Peptide |
| 33 | e1 | 83 | LYS | Peptide |
| 39 | l2 | 211 | HIS | Peptide |
| 39 | l2 | 48 | ILE | Peptide |
| 40 | l3 | 346 | THR | Peptide |
| 41 | l4 | 300 | ARG | Peptide |
| 42 | l5 | 269 | SER | Peptide |
| 42 | l5 | 270 | LYS | Peptide |
| 43 | l6 | 67 | GLY | Peptide |
| 44 | l7 | 226 | GLY | Peptide |
| 44 | l7 | 228 | SER | Peptide |
| 45 | l8 | 120 | LYS | Peptide |
| 45 | l8 | 24 | ASN | Peptide |
| 45 | l8 | 25 | PRO | Peptide |
| 48 | m1 | 94 | ARG | Peptide |
| 49 | m3 | 150 | PRO | Peptide |
| 49 | m3 | 74 | GLY | Peptide |
| 50 | m4 | 48 | GLY | Peptide |
| 51 | m5 | 146 | ALA | Peptide |
| 51 | m5 | 69 | GLY | Peptide |
| 52 | m6 | 109 | PRO | Peptide |
| 56 | n0 | 133 | ALA | Peptide |
| 56 | n0 | 170 | THR | Peptide |
| 58 | n2 | 51 | GLY | Peptide |
| 63 | n7 | 101 | PHE | Peptide |
| 63 | n7 | 5 | LEU | Peptide |
| 65 | n9 | 19 | ASN | Peptide |
| 67 | o1 | 6 | ASP | Peptide |
| 67 | o1 | 82 | GLU | Peptide |
| 70 | o4 | 81 | CYS | Peptide |
| 71 | o5 | 118 | ILE | Peptide |
| 72 | o6 | 63 | ASN | Peptide |
| 80 | p0 | 92 | PRO | Peptide |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|---------|
| 79 | q3 | 49 | ARG | Peptide |
| 79 | q3 | 51 | ALA | Peptide |
| 2 | s0 | 94 | GLY | Peptide |
| 4 | s2 | 106 | ASP | Peptide |
| 4 | s2 | 144 | TRP | Peptide |
| 5 | s3 | 221 | SER | Peptide |
| 7 | s5 | 100 | ASN | Peptide |
| 7 | s5 | 27 | THR | Peptide |
| 7 | s5 | 44 | ASN | Peptide |
| 7 | s5 | 56 | ALA | Peptide |
| 8 | s6 | 164 | LYS | Peptide |
| 9 | s7 | 115 | SER | Peptide |
| 9 | s7 | 130 | VAL | Peptide |
| 9 | s7 | 30 | SER | Peptide |
| 9 | s7 | 31 | SER | Peptide |
| 9 | s7 | 64 | VAL | Peptide |
| 9 | s7 | 9 | LEU | Peptide |
| 11 | s9 | 88 | GLU | Peptide |
| 11 | s9 | 89 | ASP | Peptide |
| 35 | sM | 51 | ARG | Peptide |
| 34 | sR | 161 | ALA | Peptide |

5.2 Too-close contacts [i](#)

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

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles |
|-----|-------|---------------|-----------|----------|----------|-------------|
| 2 | S0 | 204/206 (99%) | 174 (85%) | 26 (13%) | 4 (2%) | 7 39 |
| 2 | s0 | 204/206 (99%) | 176 (86%) | 23 (11%) | 5 (2%) | 5 35 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|----------|----------|-------------|-----|
| 3 | S1 | 212/216 (98%) | 162 (76%) | 45 (21%) | 5 (2%) | 6 | 35 |
| 3 | s1 | 214/216 (99%) | 195 (91%) | 15 (7%) | 4 (2%) | 8 | 40 |
| 4 | S2 | 215/217 (99%) | 194 (90%) | 19 (9%) | 2 (1%) | 17 | 54 |
| 4 | s2 | 215/217 (99%) | 203 (94%) | 11 (5%) | 1 (0%) | 29 | 66 |
| 5 | S3 | 221/223 (99%) | 202 (91%) | 15 (7%) | 4 (2%) | 8 | 41 |
| 5 | s3 | 221/223 (99%) | 195 (88%) | 18 (8%) | 8 (4%) | 3 | 29 |
| 6 | S4 | 258/260 (99%) | 226 (88%) | 30 (12%) | 2 (1%) | 19 | 56 |
| 6 | s4 | 258/260 (99%) | 234 (91%) | 21 (8%) | 3 (1%) | 13 | 48 |
| 7 | S5 | 204/206 (99%) | 178 (87%) | 21 (10%) | 5 (2%) | 5 | 35 |
| 7 | s5 | 204/206 (99%) | 183 (90%) | 18 (9%) | 3 (2%) | 10 | 44 |
| 8 | S6 | 224/236 (95%) | 209 (93%) | 9 (4%) | 6 (3%) | 5 | 33 |
| 8 | s6 | 216/236 (92%) | 196 (91%) | 17 (8%) | 3 (1%) | 11 | 45 |
| 9 | S7 | 182/185 (98%) | 154 (85%) | 20 (11%) | 8 (4%) | 2 | 24 |
| 9 | s7 | 183/185 (99%) | 157 (86%) | 23 (13%) | 3 (2%) | 9 | 43 |
| 10 | S8 | 184/200 (92%) | 160 (87%) | 23 (12%) | 1 (0%) | 29 | 66 |
| 10 | s8 | 184/200 (92%) | 171 (93%) | 11 (6%) | 2 (1%) | 14 | 50 |
| 11 | S9 | 183/185 (99%) | 162 (88%) | 20 (11%) | 1 (0%) | 29 | 66 |
| 11 | s9 | 183/185 (99%) | 169 (92%) | 14 (8%) | 0 | 100 | 100 |
| 12 | C0 | 90/105 (86%) | 77 (86%) | 10 (11%) | 3 (3%) | 4 | 31 |
| 12 | c0 | 90/105 (86%) | 65 (72%) | 19 (21%) | 6 (7%) | 1 | 16 |
| 13 | C1 | 140/156 (90%) | 128 (91%) | 10 (7%) | 2 (1%) | 11 | 45 |
| 13 | c1 | 144/156 (92%) | 130 (90%) | 11 (8%) | 3 (2%) | 7 | 38 |
| 14 | C2 | 118/143 (82%) | 87 (74%) | 27 (23%) | 4 (3%) | 3 | 30 |
| 14 | c2 | 122/143 (85%) | 89 (73%) | 25 (20%) | 8 (7%) | 1 | 16 |
| 15 | C3 | 148/150 (99%) | 134 (90%) | 12 (8%) | 2 (1%) | 11 | 45 |
| 15 | c3 | 148/150 (99%) | 129 (87%) | 16 (11%) | 3 (2%) | 7 | 39 |
| 16 | C4 | 125/128 (98%) | 112 (90%) | 12 (10%) | 1 (1%) | 19 | 56 |
| 16 | c4 | 126/128 (98%) | 111 (88%) | 15 (12%) | 0 | 100 | 100 |
| 17 | C5 | 120/141 (85%) | 100 (83%) | 18 (15%) | 2 (2%) | 9 | 42 |
| 17 | c5 | 117/141 (83%) | 99 (85%) | 14 (12%) | 4 (3%) | 3 | 30 |
| 18 | C6 | 139/141 (99%) | 121 (87%) | 14 (10%) | 4 (3%) | 4 | 32 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|----------|----------|-------------|-----|
| 18 | c6 | 139/141 (99%) | 130 (94%) | 8 (6%) | 1 (1%) | 22 | 59 |
| 19 | C7 | 113/136 (83%) | 100 (88%) | 12 (11%) | 1 (1%) | 17 | 54 |
| 19 | c7 | 115/136 (85%) | 104 (90%) | 10 (9%) | 1 (1%) | 17 | 54 |
| 20 | C8 | 143/145 (99%) | 123 (86%) | 17 (12%) | 3 (2%) | 7 | 38 |
| 20 | c8 | 143/145 (99%) | 122 (85%) | 18 (13%) | 3 (2%) | 7 | 38 |
| 21 | C9 | 141/143 (99%) | 125 (89%) | 16 (11%) | 0 | 100 | 100 |
| 21 | c9 | 141/143 (99%) | 128 (91%) | 12 (8%) | 1 (1%) | 22 | 59 |
| 22 | D0 | 103/107 (96%) | 98 (95%) | 5 (5%) | 0 | 100 | 100 |
| 22 | d0 | 99/107 (92%) | 88 (89%) | 9 (9%) | 2 (2%) | 7 | 39 |
| 23 | D1 | 85/87 (98%) | 72 (85%) | 11 (13%) | 2 (2%) | 6 | 35 |
| 23 | d1 | 85/87 (98%) | 75 (88%) | 10 (12%) | 0 | 100 | 100 |
| 24 | D2 | 127/129 (98%) | 113 (89%) | 13 (10%) | 1 (1%) | 19 | 56 |
| 24 | d2 | 127/129 (98%) | 119 (94%) | 7 (6%) | 1 (1%) | 19 | 56 |
| 25 | D3 | 142/144 (99%) | 119 (84%) | 19 (13%) | 4 (3%) | 5 | 33 |
| 25 | d3 | 142/144 (99%) | 131 (92%) | 11 (8%) | 0 | 100 | 100 |
| 26 | D4 | 132/134 (98%) | 121 (92%) | 8 (6%) | 3 (2%) | 6 | 36 |
| 26 | d4 | 132/134 (98%) | 114 (86%) | 16 (12%) | 2 (2%) | 10 | 44 |
| 27 | D5 | 68/70 (97%) | 52 (76%) | 14 (21%) | 2 (3%) | 4 | 32 |
| 27 | d5 | 67/70 (96%) | 61 (91%) | 6 (9%) | 0 | 100 | 100 |
| 28 | D6 | 95/97 (98%) | 68 (72%) | 17 (18%) | 10 (10%) | 0 | 6 |
| 28 | d6 | 95/97 (98%) | 77 (81%) | 17 (18%) | 1 (1%) | 14 | 50 |
| 29 | D7 | 79/81 (98%) | 69 (87%) | 9 (11%) | 1 (1%) | 12 | 47 |
| 29 | d7 | 79/81 (98%) | 72 (91%) | 6 (8%) | 1 (1%) | 12 | 47 |
| 30 | D8 | 61/63 (97%) | 51 (84%) | 10 (16%) | 0 | 100 | 100 |
| 30 | d8 | 61/63 (97%) | 52 (85%) | 9 (15%) | 0 | 100 | 100 |
| 31 | D9 | 51/53 (96%) | 49 (96%) | 2 (4%) | 0 | 100 | 100 |
| 31 | d9 | 51/53 (96%) | 45 (88%) | 4 (8%) | 2 (4%) | 3 | 27 |
| 32 | E0 | 58/60 (97%) | 51 (88%) | 4 (7%) | 3 (5%) | 2 | 21 |
| 32 | e0 | 58/60 (97%) | 47 (81%) | 8 (14%) | 3 (5%) | 2 | 21 |
| 33 | E1 | 69/152 (45%) | 44 (64%) | 19 (28%) | 6 (9%) | 1 | 10 |
| 33 | e1 | 41/152 (27%) | 31 (76%) | 8 (20%) | 2 (5%) | 2 | 22 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|----------------|-----------|----------|----------|-------------|-----|
| 34 | SR | 316/318 (99%) | 298 (94%) | 18 (6%) | 0 | 100 | 100 |
| 34 | sR | 311/318 (98%) | 291 (94%) | 19 (6%) | 1 (0%) | 41 | 74 |
| 35 | SM | 131/272 (48%) | 116 (88%) | 12 (9%) | 3 (2%) | 6 | 36 |
| 35 | sM | 113/272 (42%) | 94 (83%) | 13 (12%) | 6 (5%) | 2 | 21 |
| 39 | L2 | 250/252 (99%) | 235 (94%) | 15 (6%) | 0 | 100 | 100 |
| 39 | l2 | 250/252 (99%) | 230 (92%) | 19 (8%) | 1 (0%) | 34 | 69 |
| 40 | L3 | 384/386 (100%) | 352 (92%) | 30 (8%) | 2 (0%) | 29 | 66 |
| 40 | l3 | 384/386 (100%) | 361 (94%) | 19 (5%) | 4 (1%) | 15 | 51 |
| 41 | L4 | 359/361 (99%) | 321 (89%) | 35 (10%) | 3 (1%) | 19 | 56 |
| 41 | l4 | 359/361 (99%) | 322 (90%) | 31 (9%) | 6 (2%) | 9 | 42 |
| 42 | L5 | 292/296 (99%) | 264 (90%) | 23 (8%) | 5 (2%) | 9 | 42 |
| 42 | l5 | 292/296 (99%) | 276 (94%) | 16 (6%) | 0 | 100 | 100 |
| 43 | L6 | 152/176 (86%) | 142 (93%) | 6 (4%) | 4 (3%) | 5 | 34 |
| 43 | l6 | 153/176 (87%) | 139 (91%) | 11 (7%) | 3 (2%) | 7 | 39 |
| 44 | L7 | 220/223 (99%) | 205 (93%) | 15 (7%) | 0 | 100 | 100 |
| 44 | l7 | 221/223 (99%) | 210 (95%) | 9 (4%) | 2 (1%) | 17 | 54 |
| 45 | L8 | 231/233 (99%) | 202 (87%) | 25 (11%) | 4 (2%) | 9 | 42 |
| 45 | l8 | 229/233 (98%) | 201 (88%) | 23 (10%) | 5 (2%) | 6 | 37 |
| 46 | L9 | 189/191 (99%) | 173 (92%) | 15 (8%) | 1 (0%) | 29 | 66 |
| 46 | l9 | 188/191 (98%) | 176 (94%) | 9 (5%) | 3 (2%) | 9 | 43 |
| 47 | M0 | 204/221 (92%) | 193 (95%) | 11 (5%) | 0 | 100 | 100 |
| 47 | m0 | 205/221 (93%) | 186 (91%) | 18 (9%) | 1 (0%) | 29 | 66 |
| 48 | M1 | 167/169 (99%) | 136 (81%) | 29 (17%) | 2 (1%) | 13 | 48 |
| 48 | m1 | 167/169 (99%) | 141 (84%) | 20 (12%) | 6 (4%) | 3 | 29 |
| 49 | M3 | 191/194 (98%) | 172 (90%) | 14 (7%) | 5 (3%) | 5 | 34 |
| 49 | m3 | 192/194 (99%) | 162 (84%) | 25 (13%) | 5 (3%) | 5 | 34 |
| 50 | M4 | 134/137 (98%) | 123 (92%) | 9 (7%) | 2 (2%) | 10 | 44 |
| 50 | m4 | 135/137 (98%) | 127 (94%) | 8 (6%) | 0 | 100 | 100 |
| 51 | M5 | 201/203 (99%) | 181 (90%) | 18 (9%) | 2 (1%) | 15 | 51 |
| 51 | m5 | 201/203 (99%) | 185 (92%) | 13 (6%) | 3 (2%) | 10 | 44 |
| 52 | M6 | 195/197 (99%) | 182 (93%) | 11 (6%) | 2 (1%) | 15 | 51 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|----------|----------|-------------|-----|
| 52 | m6 | 195/197 (99%) | 185 (95%) | 10 (5%) | 0 | 100 | 100 |
| 53 | M7 | 181/184 (98%) | 168 (93%) | 11 (6%) | 2 (1%) | 14 | 50 |
| 53 | m7 | 171/184 (93%) | 159 (93%) | 12 (7%) | 0 | 100 | 100 |
| 54 | M8 | 183/185 (99%) | 171 (93%) | 11 (6%) | 1 (0%) | 29 | 66 |
| 54 | m8 | 183/185 (99%) | 171 (93%) | 12 (7%) | 0 | 100 | 100 |
| 55 | M9 | 186/188 (99%) | 174 (94%) | 10 (5%) | 2 (1%) | 14 | 50 |
| 55 | m9 | 181/188 (96%) | 171 (94%) | 9 (5%) | 1 (1%) | 25 | 62 |
| 56 | N0 | 168/172 (98%) | 154 (92%) | 12 (7%) | 2 (1%) | 13 | 48 |
| 56 | n0 | 170/172 (99%) | 165 (97%) | 5 (3%) | 0 | 100 | 100 |
| 57 | N1 | 157/159 (99%) | 143 (91%) | 13 (8%) | 1 (1%) | 25 | 62 |
| 57 | n1 | 157/159 (99%) | 151 (96%) | 5 (3%) | 1 (1%) | 25 | 62 |
| 58 | N2 | 96/98 (98%) | 86 (90%) | 10 (10%) | 0 | 100 | 100 |
| 58 | n2 | 96/98 (98%) | 91 (95%) | 4 (4%) | 1 (1%) | 15 | 51 |
| 59 | N3 | 133/135 (98%) | 128 (96%) | 5 (4%) | 0 | 100 | 100 |
| 59 | n3 | 132/135 (98%) | 128 (97%) | 3 (2%) | 1 (1%) | 19 | 56 |
| 60 | N4 | 118/155 (76%) | 110 (93%) | 8 (7%) | 0 | 100 | 100 |
| 60 | n4 | 114/155 (74%) | 106 (93%) | 8 (7%) | 0 | 100 | 100 |
| 61 | N5 | 119/121 (98%) | 109 (92%) | 10 (8%) | 0 | 100 | 100 |
| 61 | n5 | 118/121 (98%) | 102 (86%) | 15 (13%) | 1 (1%) | 19 | 56 |
| 62 | N6 | 124/126 (98%) | 116 (94%) | 8 (6%) | 0 | 100 | 100 |
| 62 | n6 | 122/126 (97%) | 116 (95%) | 4 (3%) | 2 (2%) | 9 | 43 |
| 63 | N7 | 133/135 (98%) | 120 (90%) | 11 (8%) | 2 (2%) | 10 | 44 |
| 63 | n7 | 133/135 (98%) | 117 (88%) | 14 (10%) | 2 (2%) | 10 | 44 |
| 64 | N8 | 146/148 (99%) | 125 (86%) | 16 (11%) | 5 (3%) | 3 | 30 |
| 64 | n8 | 146/148 (99%) | 128 (88%) | 16 (11%) | 2 (1%) | 11 | 45 |
| 65 | N9 | 56/58 (97%) | 50 (89%) | 6 (11%) | 0 | 100 | 100 |
| 65 | n9 | 56/58 (97%) | 46 (82%) | 8 (14%) | 2 (4%) | 3 | 29 |
| 66 | O0 | 95/100 (95%) | 93 (98%) | 2 (2%) | 0 | 100 | 100 |
| 66 | o0 | 98/100 (98%) | 93 (95%) | 5 (5%) | 0 | 100 | 100 |
| 67 | O1 | 107/109 (98%) | 97 (91%) | 7 (6%) | 3 (3%) | 5 | 33 |
| 67 | o1 | 107/109 (98%) | 98 (92%) | 7 (6%) | 2 (2%) | 8 | 40 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|-------------------|-------------|-----------|----------|-------------|-----|
| 68 | O2 | 125/127 (98%) | 117 (94%) | 8 (6%) | 0 | 100 | 100 |
| 68 | o2 | 125/127 (98%) | 112 (90%) | 13 (10%) | 0 | 100 | 100 |
| 69 | O3 | 104/106 (98%) | 98 (94%) | 6 (6%) | 0 | 100 | 100 |
| 69 | o3 | 104/106 (98%) | 93 (89%) | 11 (11%) | 0 | 100 | 100 |
| 70 | O4 | 110/112 (98%) | 102 (93%) | 6 (6%) | 2 (2%) | 8 | 41 |
| 70 | o4 | 110/112 (98%) | 105 (96%) | 4 (4%) | 1 (1%) | 17 | 54 |
| 71 | O5 | 117/119 (98%) | 106 (91%) | 9 (8%) | 2 (2%) | 9 | 42 |
| 71 | o5 | 117/119 (98%) | 107 (92%) | 9 (8%) | 1 (1%) | 17 | 54 |
| 72 | O6 | 97/99 (98%) | 84 (87%) | 12 (12%) | 1 (1%) | 15 | 51 |
| 72 | o6 | 97/99 (98%) | 88 (91%) | 8 (8%) | 1 (1%) | 15 | 51 |
| 73 | O7 | 82/84 (98%) | 76 (93%) | 5 (6%) | 1 (1%) | 13 | 48 |
| 73 | o7 | 80/84 (95%) | 74 (92%) | 5 (6%) | 1 (1%) | 12 | 47 |
| 74 | O8 | 75/77 (97%) | 67 (89%) | 8 (11%) | 0 | 100 | 100 |
| 74 | o8 | 75/77 (97%) | 68 (91%) | 6 (8%) | 1 (1%) | 12 | 47 |
| 75 | O9 | 47/50 (94%) | 43 (92%) | 4 (8%) | 0 | 100 | 100 |
| 75 | o9 | 48/50 (96%) | 44 (92%) | 3 (6%) | 1 (2%) | 7 | 38 |
| 76 | Q0 | 50/52 (96%) | 46 (92%) | 3 (6%) | 1 (2%) | 7 | 39 |
| 76 | q0 | 50/52 (96%) | 47 (94%) | 2 (4%) | 1 (2%) | 7 | 39 |
| 77 | Q1 | 23/25 (92%) | 22 (96%) | 1 (4%) | 0 | 100 | 100 |
| 77 | q1 | 23/25 (92%) | 23 (100%) | 0 | 0 | 100 | 100 |
| 78 | Q2 | 103/105 (98%) | 89 (86%) | 14 (14%) | 0 | 100 | 100 |
| 78 | q2 | 103/105 (98%) | 99 (96%) | 4 (4%) | 0 | 100 | 100 |
| 79 | Q3 | 89/91 (98%) | 80 (90%) | 9 (10%) | 0 | 100 | 100 |
| 79 | q3 | 89/91 (98%) | 82 (92%) | 7 (8%) | 0 | 100 | 100 |
| 80 | p0 | 134/312 (43%) | 121 (90%) | 12 (9%) | 1 (1%) | 22 | 59 |
| All | All | 22212/23608 (94%) | 19993 (90%) | 1922 (9%) | 297 (1%) | 12 | 47 |

All (297) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 3 | S1 | 207 | LEU |
| 8 | S6 | 153 | VAL |
| 9 | S7 | 111 | LYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 12 | C0 | 87 | VAL |
| 12 | C0 | 88 | PRO |
| 18 | C6 | 58 | ASP |
| 18 | C6 | 59 | LYS |
| 20 | C8 | 28 | ILE |
| 20 | C8 | 92 | ILE |
| 24 | D2 | 83 | ILE |
| 25 | D3 | 97 | ASP |
| 33 | E1 | 86 | THR |
| 35 | SM | 167 | PRO |
| 43 | L6 | 98 | VAL |
| 46 | L9 | 50 | ASN |
| 50 | M4 | 8 | LYS |
| 52 | M6 | 111 | PRO |
| 64 | N8 | 48 | TYR |
| 5 | s3 | 220 | PRO |
| 6 | s4 | 196 | VAL |
| 12 | c0 | 84 | GLU |
| 12 | c0 | 88 | PRO |
| 13 | c1 | 133 | LYS |
| 14 | c2 | 91 | VAL |
| 17 | c5 | 126 | VAL |
| 18 | c6 | 116 | LEU |
| 20 | c8 | 91 | ASP |
| 21 | c9 | 34 | VAL |
| 24 | d2 | 6 | VAL |
| 29 | d7 | 62 | ILE |
| 32 | e0 | 4 | VAL |
| 43 | l6 | 98 | VAL |
| 48 | m1 | 95 | ASN |
| 48 | m1 | 115 | LYS |
| 51 | m5 | 147 | ARG |
| 3 | S1 | 63 | GLY |
| 3 | S1 | 206 | PRO |
| 5 | S3 | 217 | ILE |
| 8 | S6 | 154 | ARG |
| 8 | S6 | 173 | PRO |
| 8 | S6 | 174 | LYS |
| 9 | S7 | 133 | THR |
| 13 | C1 | 6 | THR |
| 13 | C1 | 7 | VAL |
| 14 | C2 | 91 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 18 | C6 | 138 | PHE |
| 19 | C7 | 88 | VAL |
| 28 | D6 | 45 | VAL |
| 28 | D6 | 65 | PRO |
| 28 | D6 | 75 | VAL |
| 28 | D6 | 86 | VAL |
| 29 | D7 | 62 | ILE |
| 42 | L5 | 261 | THR |
| 42 | L5 | 276 | LYS |
| 43 | L6 | 5 | LYS |
| 45 | L8 | 36 | ILE |
| 48 | M1 | 11 | ASP |
| 57 | N1 | 124 | VAL |
| 67 | O1 | 6 | ASP |
| 5 | s3 | 216 | PRO |
| 5 | s3 | 217 | ILE |
| 5 | s3 | 221 | SER |
| 7 | s5 | 58 | LEU |
| 8 | s6 | 153 | VAL |
| 9 | s7 | 10 | SER |
| 9 | s7 | 11 | GLN |
| 12 | c0 | 82 | LEU |
| 12 | c0 | 87 | VAL |
| 13 | c1 | 7 | VAL |
| 14 | c2 | 63 | VAL |
| 14 | c2 | 84 | ASN |
| 14 | c2 | 119 | SER |
| 15 | c3 | 66 | ILE |
| 17 | c5 | 127 | ARG |
| 19 | c7 | 88 | VAL |
| 26 | d4 | 52 | LYS |
| 35 | sM | 66 | ALA |
| 35 | sM | 83 | LYS |
| 44 | l7 | 229 | PHE |
| 59 | n3 | 42 | SER |
| 63 | n7 | 18 | TYR |
| 65 | n9 | 21 | ILE |
| 67 | o1 | 83 | GLU |
| 72 | o6 | 63 | ASN |
| 74 | o8 | 17 | ARG |
| 80 | p0 | 33 | VAL |
| 4 | S2 | 146 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 7 | S5 | 58 | LEU |
| 9 | S7 | 112 | ARG |
| 9 | S7 | 132 | PRO |
| 9 | S7 | 134 | GLU |
| 14 | C2 | 89 | ILE |
| 14 | C2 | 106 | ILE |
| 15 | C3 | 28 | LEU |
| 23 | D1 | 82 | VAL |
| 26 | D4 | 5 | VAL |
| 27 | D5 | 88 | ILE |
| 28 | D6 | 46 | GLU |
| 33 | E1 | 89 | LYS |
| 33 | E1 | 98 | VAL |
| 33 | E1 | 137 | ASP |
| 33 | E1 | 148 | TYR |
| 42 | L5 | 259 | LYS |
| 43 | L6 | 6 | ALA |
| 56 | N0 | 13 | ARG |
| 63 | N7 | 17 | ARG |
| 67 | O1 | 5 | LYS |
| 70 | O4 | 83 | ASN |
| 71 | O5 | 91 | ALA |
| 5 | s3 | 45 | LYS |
| 5 | s3 | 115 | ILE |
| 6 | s4 | 163 | ASP |
| 7 | s5 | 184 | PHE |
| 13 | c1 | 61 | THR |
| 14 | c2 | 106 | ILE |
| 14 | c2 | 109 | GLU |
| 17 | c5 | 51 | SER |
| 17 | c5 | 130 | ARG |
| 31 | d9 | 19 | ARG |
| 33 | e1 | 136 | LYS |
| 33 | e1 | 148 | TYR |
| 34 | sR | 318 | ALA |
| 47 | m0 | 175 | ASN |
| 62 | n6 | 77 | LYS |
| 64 | n8 | 79 | TRP |
| 2 | S0 | 4 | PRO |
| 2 | S0 | 191 | ARG |
| 5 | S3 | 211 | PRO |
| 7 | S5 | 51 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 7 | S5 | 64 | VAL |
| 10 | S8 | 152 | ILE |
| 12 | C0 | 60 | SER |
| 14 | C2 | 109 | GLU |
| 25 | D3 | 96 | VAL |
| 26 | D4 | 4 | ALA |
| 28 | D6 | 64 | LEU |
| 35 | SM | 87 | THR |
| 40 | L3 | 108 | GLU |
| 42 | L5 | 20 | PHE |
| 49 | M3 | 5 | LYS |
| 49 | M3 | 77 | LEU |
| 49 | M3 | 166 | ALA |
| 52 | M6 | 110 | PRO |
| 64 | N8 | 78 | LEU |
| 70 | O4 | 82 | ALA |
| 3 | s1 | 177 | GLN |
| 3 | s1 | 179 | SER |
| 4 | s2 | 106 | ASP |
| 8 | s6 | 70 | PRO |
| 9 | s7 | 74 | GLN |
| 22 | d0 | 97 | VAL |
| 26 | d4 | 32 | ARG |
| 28 | d6 | 61 | GLU |
| 31 | d9 | 6 | VAL |
| 35 | sM | 50 | ASN |
| 35 | sM | 65 | THR |
| 41 | l4 | 145 | ILE |
| 44 | l7 | 191 | VAL |
| 45 | l8 | 120 | LYS |
| 45 | l8 | 196 | ALA |
| 48 | m1 | 10 | ARG |
| 49 | m3 | 51 | LEU |
| 49 | m3 | 140 | SER |
| 58 | n2 | 20 | SER |
| 61 | n5 | 77 | GLU |
| 64 | n8 | 48 | TYR |
| 67 | o1 | 7 | VAL |
| 3 | S1 | 62 | LYS |
| 4 | S2 | 150 | GLN |
| 6 | S4 | 196 | VAL |
| 7 | S5 | 31 | GLU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 7 | S5 | 37 | GLN |
| 20 | C8 | 14 | ILE |
| 25 | D3 | 3 | LYS |
| 32 | E0 | 5 | HIS |
| 32 | E0 | 10 | ARG |
| 45 | L8 | 31 | PRO |
| 49 | M3 | 62 | THR |
| 53 | M7 | 156 | ALA |
| 53 | M7 | 158 | ALA |
| 54 | M8 | 162 | ALA |
| 55 | M9 | 95 | TRP |
| 56 | N0 | 167 | ARG |
| 64 | N8 | 47 | LYS |
| 64 | N8 | 117 | ARG |
| 2 | s0 | 189 | VAL |
| 3 | s1 | 223 | PHE |
| 20 | c8 | 92 | ILE |
| 22 | d0 | 51 | VAL |
| 40 | l3 | 187 | SER |
| 41 | l4 | 24 | ALA |
| 41 | l4 | 90 | PHE |
| 41 | l4 | 329 | PRO |
| 43 | l6 | 97 | ASN |
| 45 | l8 | 25 | PRO |
| 48 | m1 | 11 | ASP |
| 48 | m1 | 94 | ARG |
| 51 | m5 | 146 | ALA |
| 51 | m5 | 183 | THR |
| 55 | m9 | 35 | ALA |
| 57 | n1 | 136 | ARG |
| 62 | n6 | 18 | ALA |
| 65 | n9 | 18 | ARG |
| 71 | o5 | 40 | SER |
| 2 | S0 | 158 | VAL |
| 5 | S3 | 212 | LYS |
| 6 | S4 | 195 | ILE |
| 8 | S6 | 69 | LEU |
| 8 | S6 | 70 | PRO |
| 9 | S7 | 31 | SER |
| 11 | S9 | 134 | ILE |
| 16 | C4 | 42 | VAL |
| 17 | C5 | 125 | PRO |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 17 | C5 | 126 | VAL |
| 18 | C6 | 39 | VAL |
| 23 | D1 | 10 | GLU |
| 33 | E1 | 84 | VAL |
| 40 | L3 | 174 | LYS |
| 41 | L4 | 24 | ALA |
| 43 | L6 | 140 | VAL |
| 45 | L8 | 37 | GLY |
| 48 | M1 | 114 | ILE |
| 49 | M3 | 47 | ALA |
| 51 | M5 | 95 | GLN |
| 55 | M9 | 130 | ASN |
| 63 | N7 | 103 | GLN |
| 64 | N8 | 57 | GLY |
| 73 | O7 | 29 | VAL |
| 76 | Q0 | 79 | GLU |
| 2 | s0 | 103 | THR |
| 3 | s1 | 210 | ILE |
| 5 | s3 | 144 | ALA |
| 12 | c0 | 35 | ILE |
| 40 | l3 | 129 | ALA |
| 40 | l3 | 385 | LYS |
| 41 | l4 | 91 | GLY |
| 45 | l8 | 203 | VAL |
| 46 | l9 | 144 | ILE |
| 49 | m3 | 47 | ALA |
| 63 | n7 | 34 | LYS |
| 75 | o9 | 11 | GLN |
| 9 | S7 | 131 | PHE |
| 27 | D5 | 41 | ILE |
| 32 | E0 | 47 | VAL |
| 41 | L4 | 317 | PRO |
| 51 | M5 | 75 | VAL |
| 2 | s0 | 158 | VAL |
| 12 | c0 | 83 | PRO |
| 15 | c3 | 22 | ALA |
| 32 | e0 | 60 | PRO |
| 35 | sM | 51 | ARG |
| 39 | l2 | 56 | ALA |
| 43 | l6 | 10 | TYR |
| 45 | l8 | 237 | ILE |
| 49 | m3 | 48 | PRO |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | S1 | 210 | ILE |
| 71 | O5 | 4 | VAL |
| 8 | s6 | 69 | LEU |
| 14 | c2 | 66 | VAL |
| 32 | e0 | 47 | VAL |
| 40 | l3 | 188 | ILE |
| 48 | m1 | 114 | ILE |
| 76 | q0 | 78 | ILE |
| 2 | S0 | 103 | THR |
| 26 | D4 | 35 | VAL |
| 28 | D6 | 36 | ILE |
| 28 | D6 | 84 | VAL |
| 35 | SM | 53 | ARG |
| 41 | L4 | 131 | VAL |
| 45 | L8 | 157 | VAL |
| 67 | O1 | 7 | VAL |
| 5 | s3 | 91 | VAL |
| 6 | s4 | 90 | ILE |
| 10 | s8 | 101 | ILE |
| 5 | S3 | 222 | VAL |
| 9 | S7 | 98 | ILE |
| 28 | D6 | 19 | LYS |
| 28 | D6 | 58 | VAL |
| 50 | M4 | 6 | ILE |
| 72 | O6 | 3 | VAL |
| 10 | s8 | 78 | ILE |
| 14 | c2 | 115 | VAL |
| 15 | c3 | 60 | VAL |
| 20 | c8 | 14 | ILE |
| 35 | sM | 43 | ASP |
| 41 | l4 | 166 | VAL |
| 49 | m3 | 60 | ALA |
| 70 | o4 | 89 | ILE |
| 15 | C3 | 22 | ALA |
| 42 | L5 | 125 | VAL |
| 2 | s0 | 10 | THR |
| 2 | s0 | 194 | PRO |
| 7 | s5 | 29 | ILE |
| 46 | l9 | 79 | ILE |
| 46 | l9 | 167 | VAL |
| 25 | D3 | 64 | PRO |
| 73 | o7 | 40 | PRO |

5.3.2 Protein sidechains [i](#)

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

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

| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|----------------|-----------|----------|-------------|----|
| 2 | S0 | 164/173 (95%) | 131 (80%) | 33 (20%) | 1 | 8 |
| 2 | s0 | 165/173 (95%) | 135 (82%) | 30 (18%) | 1 | 11 |
| 3 | S1 | 191/192 (100%) | 148 (78%) | 43 (22%) | 1 | 6 |
| 3 | s1 | 192/192 (100%) | 158 (82%) | 34 (18%) | 2 | 12 |
| 4 | S2 | 176/176 (100%) | 135 (77%) | 41 (23%) | 1 | 6 |
| 4 | s2 | 176/176 (100%) | 141 (80%) | 35 (20%) | 1 | 8 |
| 5 | S3 | 182/182 (100%) | 145 (80%) | 37 (20%) | 1 | 8 |
| 5 | s3 | 182/182 (100%) | 142 (78%) | 40 (22%) | 1 | 6 |
| 6 | S4 | 221/221 (100%) | 182 (82%) | 39 (18%) | 2 | 12 |
| 6 | s4 | 221/221 (100%) | 189 (86%) | 32 (14%) | 3 | 18 |
| 7 | S5 | 173/173 (100%) | 140 (81%) | 33 (19%) | 1 | 9 |
| 7 | s5 | 173/173 (100%) | 142 (82%) | 31 (18%) | 2 | 11 |
| 8 | S6 | 188/201 (94%) | 153 (81%) | 35 (19%) | 1 | 10 |
| 8 | s6 | 187/201 (93%) | 157 (84%) | 30 (16%) | 2 | 15 |
| 9 | S7 | 165/165 (100%) | 133 (81%) | 32 (19%) | 1 | 9 |
| 9 | s7 | 165/165 (100%) | 129 (78%) | 36 (22%) | 1 | 6 |
| 10 | S8 | 150/161 (93%) | 126 (84%) | 24 (16%) | 2 | 15 |
| 10 | s8 | 150/161 (93%) | 123 (82%) | 27 (18%) | 1 | 11 |
| 11 | S9 | 158/158 (100%) | 125 (79%) | 33 (21%) | 1 | 7 |
| 11 | s9 | 158/158 (100%) | 137 (87%) | 21 (13%) | 4 | 22 |
| 12 | C0 | 77/98 (79%) | 64 (83%) | 13 (17%) | 2 | 13 |
| 12 | c0 | 73/98 (74%) | 60 (82%) | 13 (18%) | 2 | 12 |
| 13 | C1 | 127/137 (93%) | 113 (89%) | 14 (11%) | 6 | 29 |
| 13 | c1 | 129/137 (94%) | 105 (81%) | 24 (19%) | 1 | 10 |
| 14 | C2 | 88/119 (74%) | 65 (74%) | 23 (26%) | 0 | 4 |
| 14 | c2 | 88/119 (74%) | 62 (70%) | 26 (30%) | 0 | 2 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|----------------|-----------|----------|-------------|----|
| 15 | C3 | 127/127 (100%) | 107 (84%) | 20 (16%) | 2 | 16 |
| 15 | c3 | 127/127 (100%) | 100 (79%) | 27 (21%) | 1 | 7 |
| 16 | C4 | 81/97 (84%) | 59 (73%) | 22 (27%) | 0 | 3 |
| 16 | c4 | 97/97 (100%) | 76 (78%) | 21 (22%) | 1 | 7 |
| 17 | C5 | 101/117 (86%) | 81 (80%) | 20 (20%) | 1 | 8 |
| 17 | c5 | 98/117 (84%) | 85 (87%) | 13 (13%) | 4 | 22 |
| 18 | C6 | 117/117 (100%) | 92 (79%) | 25 (21%) | 1 | 7 |
| 18 | c6 | 117/117 (100%) | 97 (83%) | 20 (17%) | 2 | 13 |
| 19 | C7 | 94/124 (76%) | 73 (78%) | 21 (22%) | 1 | 6 |
| 19 | c7 | 92/124 (74%) | 73 (79%) | 19 (21%) | 1 | 7 |
| 20 | C8 | 128/128 (100%) | 97 (76%) | 31 (24%) | 0 | 5 |
| 20 | c8 | 128/128 (100%) | 103 (80%) | 25 (20%) | 1 | 9 |
| 21 | C9 | 115/115 (100%) | 91 (79%) | 24 (21%) | 1 | 7 |
| 21 | c9 | 115/115 (100%) | 92 (80%) | 23 (20%) | 1 | 8 |
| 22 | D0 | 98/100 (98%) | 78 (80%) | 20 (20%) | 1 | 8 |
| 22 | d0 | 94/100 (94%) | 76 (81%) | 18 (19%) | 1 | 9 |
| 23 | D1 | 74/74 (100%) | 59 (80%) | 15 (20%) | 1 | 8 |
| 23 | d1 | 74/74 (100%) | 60 (81%) | 14 (19%) | 1 | 9 |
| 24 | D2 | 110/110 (100%) | 92 (84%) | 18 (16%) | 2 | 15 |
| 24 | d2 | 110/110 (100%) | 94 (86%) | 16 (14%) | 3 | 18 |
| 25 | D3 | 119/119 (100%) | 96 (81%) | 23 (19%) | 1 | 9 |
| 25 | d3 | 119/119 (100%) | 108 (91%) | 11 (9%) | 9 | 36 |
| 26 | D4 | 112/112 (100%) | 89 (80%) | 23 (20%) | 1 | 7 |
| 26 | d4 | 112/112 (100%) | 89 (80%) | 23 (20%) | 1 | 7 |
| 27 | D5 | 61/61 (100%) | 40 (66%) | 21 (34%) | 0 | 1 |
| 27 | d5 | 61/61 (100%) | 54 (88%) | 7 (12%) | 5 | 27 |
| 28 | D6 | 83/83 (100%) | 59 (71%) | 24 (29%) | 0 | 2 |
| 28 | d6 | 83/83 (100%) | 71 (86%) | 12 (14%) | 3 | 18 |
| 29 | D7 | 70/70 (100%) | 60 (86%) | 10 (14%) | 3 | 19 |
| 29 | d7 | 70/70 (100%) | 57 (81%) | 13 (19%) | 1 | 10 |
| 30 | D8 | 56/56 (100%) | 40 (71%) | 16 (29%) | 0 | 2 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|----------------|-----------|----------|-------------|----|
| 30 | d8 | 56/56 (100%) | 38 (68%) | 18 (32%) | 0 | 1 |
| 31 | D9 | 47/47 (100%) | 37 (79%) | 10 (21%) | 1 | 7 |
| 31 | d9 | 47/47 (100%) | 39 (83%) | 8 (17%) | 2 | 13 |
| 32 | E0 | 51/51 (100%) | 42 (82%) | 9 (18%) | 2 | 12 |
| 32 | e0 | 51/51 (100%) | 35 (69%) | 16 (31%) | 0 | 1 |
| 33 | E1 | 62/135 (46%) | 41 (66%) | 21 (34%) | 0 | 1 |
| 33 | e1 | 39/135 (29%) | 30 (77%) | 9 (23%) | 1 | 6 |
| 34 | SR | 259/260 (100%) | 229 (88%) | 30 (12%) | 5 | 27 |
| 34 | sR | 255/260 (98%) | 230 (90%) | 25 (10%) | 8 | 33 |
| 35 | SM | 97/227 (43%) | 77 (79%) | 20 (21%) | 1 | 7 |
| 35 | sM | 93/227 (41%) | 70 (75%) | 23 (25%) | 0 | 5 |
| 39 | L2 | 193/194 (100%) | 160 (83%) | 33 (17%) | 2 | 13 |
| 39 | l2 | 192/194 (99%) | 148 (77%) | 44 (23%) | 1 | 6 |
| 40 | L3 | 320/322 (99%) | 260 (81%) | 60 (19%) | 1 | 10 |
| 40 | l3 | 318/322 (99%) | 246 (77%) | 72 (23%) | 1 | 6 |
| 41 | L4 | 288/288 (100%) | 242 (84%) | 46 (16%) | 2 | 15 |
| 41 | l4 | 288/288 (100%) | 232 (81%) | 56 (19%) | 1 | 9 |
| 42 | L5 | 242/244 (99%) | 194 (80%) | 48 (20%) | 1 | 8 |
| 42 | l5 | 243/244 (100%) | 200 (82%) | 43 (18%) | 2 | 12 |
| 43 | L6 | 134/153 (88%) | 108 (81%) | 26 (19%) | 1 | 9 |
| 43 | l6 | 135/153 (88%) | 113 (84%) | 22 (16%) | 2 | 15 |
| 44 | L7 | 186/187 (100%) | 166 (89%) | 20 (11%) | 6 | 29 |
| 44 | l7 | 187/187 (100%) | 161 (86%) | 26 (14%) | 3 | 20 |
| 45 | L8 | 187/191 (98%) | 154 (82%) | 33 (18%) | 2 | 12 |
| 45 | l8 | 177/191 (93%) | 143 (81%) | 34 (19%) | 1 | 9 |
| 46 | L9 | 171/171 (100%) | 128 (75%) | 43 (25%) | 0 | 4 |
| 46 | l9 | 170/171 (99%) | 129 (76%) | 41 (24%) | 0 | 5 |
| 47 | M0 | 177/187 (95%) | 153 (86%) | 24 (14%) | 3 | 21 |
| 47 | m0 | 177/187 (95%) | 140 (79%) | 37 (21%) | 1 | 7 |
| 48 | M1 | 147/147 (100%) | 121 (82%) | 26 (18%) | 2 | 12 |
| 48 | m1 | 147/147 (100%) | 117 (80%) | 30 (20%) | 1 | 8 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|----------------|-----------|----------|-------------|----|
| 49 | M3 | 154/154 (100%) | 119 (77%) | 35 (23%) | 1 | 6 |
| 49 | m3 | 154/154 (100%) | 125 (81%) | 29 (19%) | 1 | 10 |
| 50 | M4 | 107/108 (99%) | 86 (80%) | 21 (20%) | 1 | 9 |
| 50 | m4 | 108/108 (100%) | 87 (81%) | 21 (19%) | 1 | 9 |
| 51 | M5 | 175/175 (100%) | 145 (83%) | 30 (17%) | 2 | 13 |
| 51 | m5 | 175/175 (100%) | 150 (86%) | 25 (14%) | 3 | 19 |
| 52 | M6 | 160/160 (100%) | 134 (84%) | 26 (16%) | 2 | 15 |
| 52 | m6 | 160/160 (100%) | 124 (78%) | 36 (22%) | 1 | 6 |
| 53 | M7 | 140/146 (96%) | 102 (73%) | 38 (27%) | 0 | 3 |
| 53 | m7 | 139/146 (95%) | 103 (74%) | 36 (26%) | 0 | 4 |
| 54 | M8 | 150/150 (100%) | 125 (83%) | 25 (17%) | 2 | 14 |
| 54 | m8 | 150/150 (100%) | 127 (85%) | 23 (15%) | 2 | 17 |
| 55 | M9 | 153/153 (100%) | 116 (76%) | 37 (24%) | 0 | 5 |
| 55 | m9 | 149/153 (97%) | 112 (75%) | 37 (25%) | 0 | 5 |
| 56 | N0 | 155/156 (99%) | 126 (81%) | 29 (19%) | 1 | 10 |
| 56 | n0 | 156/156 (100%) | 126 (81%) | 30 (19%) | 1 | 9 |
| 57 | N1 | 136/136 (100%) | 108 (79%) | 28 (21%) | 1 | 7 |
| 57 | n1 | 136/136 (100%) | 109 (80%) | 27 (20%) | 1 | 8 |
| 58 | N2 | 85/85 (100%) | 73 (86%) | 12 (14%) | 3 | 20 |
| 58 | n2 | 85/85 (100%) | 70 (82%) | 15 (18%) | 2 | 12 |
| 59 | N3 | 103/103 (100%) | 89 (86%) | 14 (14%) | 3 | 21 |
| 59 | n3 | 103/103 (100%) | 88 (85%) | 15 (15%) | 3 | 18 |
| 60 | N4 | 85/129 (66%) | 73 (86%) | 12 (14%) | 3 | 20 |
| 60 | n4 | 97/129 (75%) | 85 (88%) | 12 (12%) | 4 | 24 |
| 61 | N5 | 104/105 (99%) | 82 (79%) | 22 (21%) | 1 | 7 |
| 61 | n5 | 104/105 (99%) | 84 (81%) | 20 (19%) | 1 | 9 |
| 62 | N6 | 109/109 (100%) | 87 (80%) | 22 (20%) | 1 | 8 |
| 62 | n6 | 107/109 (98%) | 85 (79%) | 22 (21%) | 1 | 7 |
| 63 | N7 | 115/115 (100%) | 93 (81%) | 22 (19%) | 1 | 9 |
| 63 | n7 | 115/115 (100%) | 90 (78%) | 25 (22%) | 1 | 7 |
| 64 | N8 | 118/118 (100%) | 96 (81%) | 22 (19%) | 1 | 10 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|----------------|-----------|----------|-------------|----|
| 64 | n8 | 118/118 (100%) | 94 (80%) | 24 (20%) | 1 | 8 |
| 65 | N9 | 46/46 (100%) | 39 (85%) | 7 (15%) | 3 | 17 |
| 65 | n9 | 46/46 (100%) | 40 (87%) | 6 (13%) | 4 | 22 |
| 66 | O0 | 81/84 (96%) | 61 (75%) | 20 (25%) | 0 | 5 |
| 66 | o0 | 84/84 (100%) | 71 (84%) | 13 (16%) | 2 | 17 |
| 67 | O1 | 92/96 (96%) | 74 (80%) | 18 (20%) | 1 | 9 |
| 67 | o1 | 94/96 (98%) | 75 (80%) | 19 (20%) | 1 | 8 |
| 68 | O2 | 109/109 (100%) | 92 (84%) | 17 (16%) | 2 | 17 |
| 68 | o2 | 109/109 (100%) | 91 (84%) | 18 (16%) | 2 | 14 |
| 69 | O3 | 90/90 (100%) | 76 (84%) | 14 (16%) | 2 | 17 |
| 69 | o3 | 90/90 (100%) | 72 (80%) | 18 (20%) | 1 | 8 |
| 70 | O4 | 95/95 (100%) | 73 (77%) | 22 (23%) | 1 | 6 |
| 70 | o4 | 95/95 (100%) | 80 (84%) | 15 (16%) | 2 | 16 |
| 71 | O5 | 104/104 (100%) | 85 (82%) | 19 (18%) | 1 | 10 |
| 71 | o5 | 103/104 (99%) | 84 (82%) | 19 (18%) | 1 | 10 |
| 72 | O6 | 81/81 (100%) | 58 (72%) | 23 (28%) | 0 | 2 |
| 72 | o6 | 80/81 (99%) | 58 (72%) | 22 (28%) | 0 | 3 |
| 73 | O7 | 69/69 (100%) | 51 (74%) | 18 (26%) | 0 | 4 |
| 73 | o7 | 67/69 (97%) | 55 (82%) | 12 (18%) | 2 | 11 |
| 74 | O8 | 68/68 (100%) | 53 (78%) | 15 (22%) | 1 | 6 |
| 74 | o8 | 67/68 (98%) | 54 (81%) | 13 (19%) | 1 | 9 |
| 75 | O9 | 45/45 (100%) | 36 (80%) | 9 (20%) | 1 | 8 |
| 75 | o9 | 45/45 (100%) | 38 (84%) | 7 (16%) | 2 | 17 |
| 76 | Q0 | 47/47 (100%) | 37 (79%) | 10 (21%) | 1 | 7 |
| 76 | q0 | 47/47 (100%) | 38 (81%) | 9 (19%) | 1 | 9 |
| 77 | Q1 | 23/23 (100%) | 20 (87%) | 3 (13%) | 4 | 22 |
| 77 | q1 | 23/23 (100%) | 13 (56%) | 10 (44%) | 0 | 0 |
| 78 | Q2 | 90/90 (100%) | 69 (77%) | 21 (23%) | 1 | 6 |
| 78 | q2 | 90/90 (100%) | 77 (86%) | 13 (14%) | 3 | 19 |
| 79 | Q3 | 71/71 (100%) | 58 (82%) | 13 (18%) | 1 | 10 |
| 79 | q3 | 71/71 (100%) | 56 (79%) | 15 (21%) | 1 | 7 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles |
|-----|-------|-------------------|-------------|------------|-------------|
| 80 | p0 | 105/254 (41%) | 91 (87%) | 14 (13%) | 4 22 |
| All | All | 18730/19834 (94%) | 15159 (81%) | 3571 (19%) | 1 9 |

All (3571) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 2 | S0 | 7 | PHE |
| 2 | S0 | 8 | ASP |
| 2 | S0 | 27 | ARG |
| 2 | S0 | 32 | HIS |
| 2 | S0 | 33 | GLN |
| 2 | S0 | 37 | VAL |
| 2 | S0 | 49 | ASN |
| 2 | S0 | 50 | VAL |
| 2 | S0 | 52 | LYS |
| 2 | S0 | 62 | ARG |
| 2 | S0 | 76 | ILE |
| 2 | S0 | 84 | ARG |
| 2 | S0 | 87 | LEU |
| 2 | S0 | 88 | LYS |
| 2 | S0 | 101 | ARG |
| 2 | S0 | 103 | THR |
| 2 | S0 | 111 | ILE |
| 2 | S0 | 114 | SER |
| 2 | S0 | 117 | GLU |
| 2 | S0 | 119 | ARG |
| 2 | S0 | 123 | VAL |
| 2 | S0 | 131 | GLN |
| 2 | S0 | 139 | VAL |
| 2 | S0 | 154 | GLU |
| 2 | S0 | 157 | ASP |
| 2 | S0 | 165 | ARG |
| 2 | S0 | 170 | ILE |
| 2 | S0 | 172 | LEU |
| 2 | S0 | 177 | LEU |
| 2 | S0 | 184 | LEU |
| 2 | S0 | 185 | ARG |
| 2 | S0 | 188 | LEU |
| 2 | S0 | 200 | ASP |
| 3 | S1 | 21 | VAL |
| 3 | S1 | 22 | ASP |
| 3 | S1 | 29 | TRP |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | S1 | 38 | PHE |
| 3 | S1 | 42 | ASN |
| 3 | S1 | 46 | THR |
| 3 | S1 | 47 | LEU |
| 3 | S1 | 55 | LYS |
| 3 | S1 | 61 | LEU |
| 3 | S1 | 66 | VAL |
| 3 | S1 | 70 | LEU |
| 3 | S1 | 74 | GLN |
| 3 | S1 | 76 | SER |
| 3 | S1 | 77 | GLU |
| 3 | S1 | 78 | ASP |
| 3 | S1 | 81 | PHE |
| 3 | S1 | 85 | LYS |
| 3 | S1 | 91 | VAL |
| 3 | S1 | 96 | LEU |
| 3 | S1 | 97 | LEU |
| 3 | S1 | 105 | PHE |
| 3 | S1 | 108 | ASP |
| 3 | S1 | 111 | ARG |
| 3 | S1 | 112 | SER |
| 3 | S1 | 115 | ARG |
| 3 | S1 | 117 | TRP |
| 3 | S1 | 131 | ASP |
| 3 | S1 | 135 | LEU |
| 3 | S1 | 148 | ASN |
| 3 | S1 | 149 | GLN |
| 3 | S1 | 154 | SER |
| 3 | S1 | 177 | GLN |
| 3 | S1 | 180 | THR |
| 3 | S1 | 181 | LEU |
| 3 | S1 | 183 | GLN |
| 3 | S1 | 184 | LEU |
| 3 | S1 | 193 | ILE |
| 3 | S1 | 202 | LYS |
| 3 | S1 | 214 | LYS |
| 3 | S1 | 218 | LEU |
| 3 | S1 | 220 | GLN |
| 3 | S1 | 222 | LYS |
| 3 | S1 | 223 | PHE |
| 4 | S2 | 41 | LEU |
| 4 | S2 | 53 | ILE |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 4 | S2 | 55 | GLU |
| 4 | S2 | 58 | LEU |
| 4 | S2 | 64 | LYS |
| 4 | S2 | 69 | ILE |
| 4 | S2 | 72 | LEU |
| 4 | S2 | 73 | LEU |
| 4 | S2 | 77 | GLN |
| 4 | S2 | 81 | MET |
| 4 | S2 | 91 | ARG |
| 4 | S2 | 94 | GLN |
| 4 | S2 | 95 | ARG |
| 4 | S2 | 96 | THR |
| 4 | S2 | 97 | ARG |
| 4 | S2 | 111 | VAL |
| 4 | S2 | 117 | THR |
| 4 | S2 | 119 | LYS |
| 4 | S2 | 130 | ILE |
| 4 | S2 | 134 | LEU |
| 4 | S2 | 137 | ILE |
| 4 | S2 | 139 | ILE |
| 4 | S2 | 140 | ARG |
| 4 | S2 | 141 | ARG |
| 4 | S2 | 148 | LEU |
| 4 | S2 | 156 | THR |
| 4 | S2 | 159 | THR |
| 4 | S2 | 179 | VAL |
| 4 | S2 | 195 | ASP |
| 4 | S2 | 200 | SER |
| 4 | S2 | 206 | THR |
| 4 | S2 | 208 | GLU |
| 4 | S2 | 218 | ILE |
| 4 | S2 | 221 | THR |
| 4 | S2 | 222 | TYR |
| 4 | S2 | 225 | LEU |
| 4 | S2 | 226 | THR |
| 4 | S2 | 237 | VAL |
| 4 | S2 | 240 | LEU |
| 4 | S2 | 245 | ASP |
| 4 | S2 | 246 | GLU |
| 5 | S3 | 4 | LEU |
| 5 | S3 | 7 | LYS |
| 5 | S3 | 23 | GLU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 5 | S3 | 57 | ASP |
| 5 | S3 | 65 | ARG |
| 5 | S3 | 66 | ILE |
| 5 | S3 | 76 | ARG |
| 5 | S3 | 84 | ILE |
| 5 | S3 | 89 | GLU |
| 5 | S3 | 92 | GLN |
| 5 | S3 | 93 | ASP |
| 5 | S3 | 94 | ARG |
| 5 | S3 | 103 | GLU |
| 5 | S3 | 104 | SER |
| 5 | S3 | 105 | MET |
| 5 | S3 | 113 | LEU |
| 5 | S3 | 115 | ILE |
| 5 | S3 | 117 | ARG |
| 5 | S3 | 127 | MET |
| 5 | S3 | 134 | CYS |
| 5 | S3 | 141 | LYS |
| 5 | S3 | 142 | LEU |
| 5 | S3 | 143 | ARG |
| 5 | S3 | 146 | ARG |
| 5 | S3 | 158 | ILE |
| 5 | S3 | 164 | VAL |
| 5 | S3 | 170 | THR |
| 5 | S3 | 172 | THR |
| 5 | S3 | 175 | VAL |
| 5 | S3 | 176 | LEU |
| 5 | S3 | 178 | ARG |
| 5 | S3 | 182 | LEU |
| 5 | S3 | 190 | ARG |
| 5 | S3 | 195 | SER |
| 5 | S3 | 197 | THR |
| 5 | S3 | 212 | LYS |
| 5 | S3 | 217 | ILE |
| 6 | S4 | 6 | LYS |
| 6 | S4 | 7 | LYS |
| 6 | S4 | 9 | LEU |
| 6 | S4 | 23 | LEU |
| 6 | S4 | 37 | LYS |
| 6 | S4 | 38 | LEU |
| 6 | S4 | 39 | ARG |
| 6 | S4 | 40 | GLU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 6 | S4 | 57 | ASN |
| 6 | S4 | 77 | ARG |
| 6 | S4 | 78 | THR |
| 6 | S4 | 92 | LEU |
| 6 | S4 | 116 | ASP |
| 6 | S4 | 129 | VAL |
| 6 | S4 | 131 | LEU |
| 6 | S4 | 133 | LYS |
| 6 | S4 | 140 | VAL |
| 6 | S4 | 146 | THR |
| 6 | S4 | 160 | VAL |
| 6 | S4 | 164 | LEU |
| 6 | S4 | 176 | ASP |
| 6 | S4 | 180 | LEU |
| 6 | S4 | 182 | TYR |
| 6 | S4 | 187 | ARG |
| 6 | S4 | 192 | ILE |
| 6 | S4 | 197 | HIS |
| 6 | S4 | 206 | ASP |
| 6 | S4 | 211 | LYS |
| 6 | S4 | 215 | ASP |
| 6 | S4 | 218 | PHE |
| 6 | S4 | 222 | LEU |
| 6 | S4 | 227 | VAL |
| 6 | S4 | 236 | ILE |
| 6 | S4 | 240 | LYS |
| 6 | S4 | 242 | LYS |
| 6 | S4 | 246 | LEU |
| 6 | S4 | 247 | SER |
| 6 | S4 | 256 | ARG |
| 6 | S4 | 259 | GLN |
| 7 | S5 | 23 | VAL |
| 7 | S5 | 24 | VAL |
| 7 | S5 | 25 | LEU |
| 7 | S5 | 32 | GLU |
| 7 | S5 | 41 | LYS |
| 7 | S5 | 43 | PHE |
| 7 | S5 | 46 | TRP |
| 7 | S5 | 53 | VAL |
| 7 | S5 | 63 | GLN |
| 7 | S5 | 65 | ARG |
| 7 | S5 | 76 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 7 | S5 | 89 | ILE |
| 7 | S5 | 90 | ILE |
| 7 | S5 | 93 | LEU |
| 7 | S5 | 94 | THR |
| 7 | S5 | 96 | SER |
| 7 | S5 | 112 | ARG |
| 7 | S5 | 119 | ASP |
| 7 | S5 | 123 | VAL |
| 7 | S5 | 127 | GLN |
| 7 | S5 | 146 | THR |
| 7 | S5 | 147 | THR |
| 7 | S5 | 156 | ARG |
| 7 | S5 | 157 | ARG |
| 7 | S5 | 161 | ASP |
| 7 | S5 | 186 | ASN |
| 7 | S5 | 194 | LEU |
| 7 | S5 | 203 | LYS |
| 7 | S5 | 209 | TYR |
| 7 | S5 | 216 | GLU |
| 7 | S5 | 219 | ARG |
| 7 | S5 | 223 | SER |
| 7 | S5 | 225 | ARG |
| 8 | S6 | 7 | TYR |
| 8 | S6 | 12 | SER |
| 8 | S6 | 13 | GLN |
| 8 | S6 | 21 | GLU |
| 8 | S6 | 25 | ARG |
| 8 | S6 | 45 | PHE |
| 8 | S6 | 58 | LYS |
| 8 | S6 | 76 | LEU |
| 8 | S6 | 78 | THR |
| 8 | S6 | 79 | LYS |
| 8 | S6 | 81 | VAL |
| 8 | S6 | 82 | SER |
| 8 | S6 | 97 | VAL |
| 8 | S6 | 98 | ARG |
| 8 | S6 | 105 | ASP |
| 8 | S6 | 109 | LEU |
| 8 | S6 | 120 | GLU |
| 8 | S6 | 124 | LEU |
| 8 | S6 | 126 | ASP |
| 8 | S6 | 127 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 8 | S6 | 129 | VAL |
| 8 | S6 | 140 | ASN |
| 8 | S6 | 143 | LYS |
| 8 | S6 | 151 | ASP |
| 8 | S6 | 154 | ARG |
| 8 | S6 | 155 | ASP |
| 8 | S6 | 157 | VAL |
| 8 | S6 | 158 | ILE |
| 8 | S6 | 175 | ILE |
| 8 | S6 | 176 | GLN |
| 8 | S6 | 177 | ARG |
| 8 | S6 | 178 | LEU |
| 8 | S6 | 211 | LEU |
| 8 | S6 | 212 | LEU |
| 8 | S6 | 223 | LYS |
| 9 | S7 | 9 | LEU |
| 9 | S7 | 28 | GLU |
| 9 | S7 | 29 | ASN |
| 9 | S7 | 37 | GLU |
| 9 | S7 | 38 | LEU |
| 9 | S7 | 46 | ILE |
| 9 | S7 | 55 | LYS |
| 9 | S7 | 60 | ILE |
| 9 | S7 | 64 | VAL |
| 9 | S7 | 70 | PHE |
| 9 | S7 | 77 | LEU |
| 9 | S7 | 80 | GLU |
| 9 | S7 | 85 | PHE |
| 9 | S7 | 87 | ASP |
| 9 | S7 | 97 | ARG |
| 9 | S7 | 103 | SER |
| 9 | S7 | 106 | SER |
| 9 | S7 | 110 | GLN |
| 9 | S7 | 114 | ARG |
| 9 | S7 | 116 | ARG |
| 9 | S7 | 117 | THR |
| 9 | S7 | 126 | LEU |
| 9 | S7 | 131 | PHE |
| 9 | S7 | 139 | ARG |
| 9 | S7 | 143 | LEU |
| 9 | S7 | 144 | VAL |
| 9 | S7 | 159 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 9 | S7 | 163 | ASP |
| 9 | S7 | 168 | SER |
| 9 | S7 | 174 | ASN |
| 9 | S7 | 181 | ILE |
| 9 | S7 | 185 | ILE |
| 10 | S8 | 5 | ARG |
| 10 | S8 | 8 | ARG |
| 10 | S8 | 14 | THR |
| 10 | S8 | 20 | GLN |
| 10 | S8 | 21 | PHE |
| 10 | S8 | 28 | GLU |
| 10 | S8 | 29 | LEU |
| 10 | S8 | 36 | THR |
| 10 | S8 | 49 | ARG |
| 10 | S8 | 56 | ARG |
| 10 | S8 | 58 | LEU |
| 10 | S8 | 72 | ILE |
| 10 | S8 | 87 | ASN |
| 10 | S8 | 123 | LYS |
| 10 | S8 | 137 | LYS |
| 10 | S8 | 138 | ASN |
| 10 | S8 | 140 | GLU |
| 10 | S8 | 151 | LYS |
| 10 | S8 | 152 | ILE |
| 10 | S8 | 164 | ARG |
| 10 | S8 | 176 | SER |
| 10 | S8 | 184 | LEU |
| 10 | S8 | 196 | LEU |
| 10 | S8 | 199 | LYS |
| 11 | S9 | 3 | ARG |
| 11 | S9 | 6 | ARG |
| 11 | S9 | 7 | THR |
| 11 | S9 | 14 | THR |
| 11 | S9 | 22 | SER |
| 11 | S9 | 28 | LEU |
| 11 | S9 | 39 | LYS |
| 11 | S9 | 46 | SER |
| 11 | S9 | 49 | LEU |
| 11 | S9 | 54 | ARG |
| 11 | S9 | 60 | LEU |
| 11 | S9 | 79 | ARG |
| 11 | S9 | 89 | ASP |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 11 | S9 | 91 | LYS |
| 11 | S9 | 92 | LYS |
| 11 | S9 | 93 | LEU |
| 11 | S9 | 96 | VAL |
| 11 | S9 | 97 | LEU |
| 11 | S9 | 99 | LEU |
| 11 | S9 | 105 | LEU |
| 11 | S9 | 109 | LEU |
| 11 | S9 | 110 | GLN |
| 11 | S9 | 118 | LEU |
| 11 | S9 | 126 | ARG |
| 11 | S9 | 130 | THR |
| 11 | S9 | 133 | HIS |
| 11 | S9 | 134 | ILE |
| 11 | S9 | 138 | LYS |
| 11 | S9 | 141 | VAL |
| 11 | S9 | 149 | ARG |
| 11 | S9 | 161 | THR |
| 11 | S9 | 171 | ARG |
| 11 | S9 | 182 | GLU |
| 12 | C0 | 1 | MET |
| 12 | C0 | 7 | ASP |
| 12 | C0 | 22 | VAL |
| 12 | C0 | 28 | ASN |
| 12 | C0 | 32 | HIS |
| 12 | C0 | 46 | LEU |
| 12 | C0 | 47 | GLN |
| 12 | C0 | 55 | VAL |
| 12 | C0 | 56 | LYS |
| 12 | C0 | 76 | LEU |
| 12 | C0 | 78 | GLU |
| 12 | C0 | 81 | ASN |
| 12 | C0 | 82 | LEU |
| 13 | C1 | 21 | ASN |
| 13 | C1 | 29 | LYS |
| 13 | C1 | 40 | LEU |
| 13 | C1 | 67 | ARG |
| 13 | C1 | 69 | LYS |
| 13 | C1 | 72 | THR |
| 13 | C1 | 74 | THR |
| 13 | C1 | 83 | THR |
| 13 | C1 | 99 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 13 | C1 | 123 | VAL |
| 13 | C1 | 131 | ILE |
| 13 | C1 | 132 | SER |
| 13 | C1 | 138 | ASN |
| 13 | C1 | 140 | VAL |
| 14 | C2 | 26 | ASP |
| 14 | C2 | 28 | LEU |
| 14 | C2 | 33 | ARG |
| 14 | C2 | 36 | LEU |
| 14 | C2 | 43 | ARG |
| 14 | C2 | 50 | LYS |
| 14 | C2 | 58 | LEU |
| 14 | C2 | 59 | LEU |
| 14 | C2 | 61 | VAL |
| 14 | C2 | 66 | VAL |
| 14 | C2 | 71 | ILE |
| 14 | C2 | 83 | GLU |
| 14 | C2 | 85 | LYS |
| 14 | C2 | 88 | LEU |
| 14 | C2 | 89 | ILE |
| 14 | C2 | 93 | ASP |
| 14 | C2 | 103 | LEU |
| 14 | C2 | 121 | VAL |
| 14 | C2 | 126 | TRP |
| 14 | C2 | 129 | GLU |
| 14 | C2 | 132 | GLU |
| 14 | C2 | 138 | GLU |
| 14 | C2 | 139 | HIS |
| 15 | C3 | 3 | ARG |
| 15 | C3 | 9 | LYS |
| 15 | C3 | 12 | SER |
| 15 | C3 | 16 | ILE |
| 15 | C3 | 27 | LYS |
| 15 | C3 | 39 | LYS |
| 15 | C3 | 42 | ARG |
| 15 | C3 | 45 | LEU |
| 15 | C3 | 55 | ARG |
| 15 | C3 | 56 | ASP |
| 15 | C3 | 58 | HIS |
| 15 | C3 | 64 | ARG |
| 15 | C3 | 67 | THR |
| 15 | C3 | 76 | LYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 15 | C3 | 88 | LEU |
| 15 | C3 | 102 | LEU |
| 15 | C3 | 115 | LEU |
| 15 | C3 | 125 | LEU |
| 15 | C3 | 143 | SER |
| 15 | C3 | 150 | VAL |
| 16 | C4 | 13 | VAL |
| 16 | C4 | 14 | PHE |
| 16 | C4 | 26 | THR |
| 16 | C4 | 28 | VAL |
| 16 | C4 | 29 | HIS |
| 16 | C4 | 38 | THR |
| 16 | C4 | 39 | ILE |
| 16 | C4 | 43 | THR |
| 16 | C4 | 51 | ASP |
| 16 | C4 | 79 | VAL |
| 16 | C4 | 89 | THR |
| 16 | C4 | 92 | LYS |
| 16 | C4 | 93 | THR |
| 16 | C4 | 103 | ARG |
| 16 | C4 | 105 | LEU |
| 16 | C4 | 108 | SER |
| 16 | C4 | 114 | ARG |
| 16 | C4 | 124 | ASP |
| 16 | C4 | 129 | LYS |
| 16 | C4 | 133 | ARG |
| 16 | C4 | 136 | ARG |
| 16 | C4 | 137 | LEU |
| 17 | C5 | 22 | LEU |
| 17 | C5 | 26 | LEU |
| 17 | C5 | 27 | GLU |
| 17 | C5 | 31 | GLU |
| 17 | C5 | 34 | VAL |
| 17 | C5 | 35 | LYS |
| 17 | C5 | 36 | LEU |
| 17 | C5 | 40 | ARG |
| 17 | C5 | 44 | ARG |
| 17 | C5 | 50 | THR |
| 17 | C5 | 65 | LEU |
| 17 | C5 | 69 | GLU |
| 17 | C5 | 70 | ASN |
| 17 | C5 | 78 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 17 | C5 | 86 | VAL |
| 17 | C5 | 89 | MET |
| 17 | C5 | 110 | GLU |
| 17 | C5 | 121 | ILE |
| 17 | C5 | 124 | THR |
| 17 | C5 | 128 | HIS |
| 18 | C6 | 4 | VAL |
| 18 | C6 | 13 | LYS |
| 18 | C6 | 14 | LYS |
| 18 | C6 | 15 | SER |
| 18 | C6 | 26 | LYS |
| 18 | C6 | 43 | ILE |
| 18 | C6 | 44 | LEU |
| 18 | C6 | 47 | LYS |
| 18 | C6 | 53 | LEU |
| 18 | C6 | 54 | LEU |
| 18 | C6 | 58 | ASP |
| 18 | C6 | 66 | ARG |
| 18 | C6 | 68 | ARG |
| 18 | C6 | 69 | VAL |
| 18 | C6 | 74 | HIS |
| 18 | C6 | 76 | SER |
| 18 | C6 | 98 | ASP |
| 18 | C6 | 101 | SER |
| 18 | C6 | 123 | ARG |
| 18 | C6 | 128 | LYS |
| 18 | C6 | 136 | SER |
| 18 | C6 | 137 | ARG |
| 18 | C6 | 138 | PHE |
| 18 | C6 | 141 | SER |
| 18 | C6 | 143 | ARG |
| 19 | C7 | 3 | ARG |
| 19 | C7 | 5 | ARG |
| 19 | C7 | 6 | THR |
| 19 | C7 | 8 | THR |
| 19 | C7 | 19 | ARG |
| 19 | C7 | 29 | GLN |
| 19 | C7 | 38 | ILE |
| 19 | C7 | 46 | LEU |
| 19 | C7 | 49 | LYS |
| 19 | C7 | 62 | GLN |
| 19 | C7 | 69 | ILE |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 19 | C7 | 70 | SER |
| 19 | C7 | 71 | PHE |
| 19 | C7 | 72 | LYS |
| 19 | C7 | 78 | ARG |
| 19 | C7 | 83 | GLN |
| 19 | C7 | 84 | TYR |
| 19 | C7 | 88 | VAL |
| 19 | C7 | 105 | GLN |
| 19 | C7 | 113 | LEU |
| 19 | C7 | 115 | LEU |
| 20 | C8 | 3 | LEU |
| 20 | C8 | 5 | VAL |
| 20 | C8 | 8 | GLN |
| 20 | C8 | 11 | PHE |
| 20 | C8 | 12 | GLN |
| 20 | C8 | 13 | HIS |
| 20 | C8 | 14 | ILE |
| 20 | C8 | 15 | LEU |
| 20 | C8 | 16 | ARG |
| 20 | C8 | 17 | LEU |
| 20 | C8 | 28 | ILE |
| 20 | C8 | 38 | VAL |
| 20 | C8 | 54 | LEU |
| 20 | C8 | 60 | GLU |
| 20 | C8 | 71 | GLN |
| 20 | C8 | 74 | GLN |
| 20 | C8 | 85 | PHE |
| 20 | C8 | 89 | GLN |
| 20 | C8 | 92 | ILE |
| 20 | C8 | 93 | THR |
| 20 | C8 | 108 | LYS |
| 20 | C8 | 110 | ARG |
| 20 | C8 | 116 | LEU |
| 20 | C8 | 119 | ILE |
| 20 | C8 | 120 | ARG |
| 20 | C8 | 132 | ARG |
| 20 | C8 | 133 | VAL |
| 20 | C8 | 136 | GLN |
| 20 | C8 | 138 | THR |
| 20 | C8 | 140 | THR |
| 20 | C8 | 143 | ARG |
| 21 | C9 | 4 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 21 | C9 | 13 | ASP |
| 21 | C9 | 22 | LEU |
| 21 | C9 | 27 | LYS |
| 21 | C9 | 28 | LEU |
| 21 | C9 | 33 | TYR |
| 21 | C9 | 35 | ASP |
| 21 | C9 | 55 | TYR |
| 21 | C9 | 57 | ARG |
| 21 | C9 | 63 | ARG |
| 21 | C9 | 67 | MET |
| 21 | C9 | 75 | LYS |
| 21 | C9 | 84 | LYS |
| 21 | C9 | 89 | ARG |
| 21 | C9 | 94 | ILE |
| 21 | C9 | 97 | SER |
| 21 | C9 | 111 | ILE |
| 21 | C9 | 125 | SER |
| 21 | C9 | 126 | GLU |
| 21 | C9 | 129 | GLN |
| 21 | C9 | 130 | ARG |
| 21 | C9 | 131 | ASP |
| 21 | C9 | 140 | LEU |
| 21 | C9 | 144 | GLU |
| 22 | D0 | 17 | GLN |
| 22 | D0 | 18 | GLN |
| 22 | D0 | 23 | ARG |
| 22 | D0 | 27 | THR |
| 22 | D0 | 30 | LYS |
| 22 | D0 | 31 | VAL |
| 22 | D0 | 34 | LEU |
| 22 | D0 | 42 | VAL |
| 22 | D0 | 47 | GLN |
| 22 | D0 | 48 | HIS |
| 22 | D0 | 51 | VAL |
| 22 | D0 | 60 | THR |
| 22 | D0 | 61 | LYS |
| 22 | D0 | 66 | SER |
| 22 | D0 | 70 | THR |
| 22 | D0 | 74 | GLU |
| 22 | D0 | 81 | THR |
| 22 | D0 | 89 | ARG |
| 22 | D0 | 103 | ILE |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 22 | D0 | 108 | ILE |
| 23 | D1 | 3 | ASN |
| 23 | D1 | 5 | LYS |
| 23 | D1 | 10 | GLU |
| 23 | D1 | 18 | SER |
| 23 | D1 | 32 | VAL |
| 23 | D1 | 33 | GLN |
| 23 | D1 | 41 | GLU |
| 23 | D1 | 49 | GLU |
| 23 | D1 | 52 | THR |
| 23 | D1 | 60 | ARG |
| 23 | D1 | 62 | ARG |
| 23 | D1 | 69 | LEU |
| 23 | D1 | 76 | ASP |
| 23 | D1 | 78 | LEU |
| 23 | D1 | 80 | LYS |
| 24 | D2 | 7 | LEU |
| 24 | D2 | 20 | THR |
| 24 | D2 | 23 | ARG |
| 24 | D2 | 24 | GLN |
| 24 | D2 | 27 | ILE |
| 24 | D2 | 53 | ILE |
| 24 | D2 | 56 | HIS |
| 24 | D2 | 65 | LEU |
| 24 | D2 | 76 | SER |
| 24 | D2 | 83 | ILE |
| 24 | D2 | 93 | LEU |
| 24 | D2 | 98 | GLN |
| 24 | D2 | 103 | ILE |
| 24 | D2 | 104 | LEU |
| 24 | D2 | 105 | THR |
| 24 | D2 | 111 | MET |
| 24 | D2 | 121 | VAL |
| 24 | D2 | 122 | SER |
| 25 | D3 | 7 | ARG |
| 25 | D3 | 9 | LEU |
| 25 | D3 | 18 | HIS |
| 25 | D3 | 19 | ARG |
| 25 | D3 | 28 | ASN |
| 25 | D3 | 46 | SER |
| 25 | D3 | 79 | ASN |
| 25 | D3 | 82 | LYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 25 | D3 | 83 | VAL |
| 25 | D3 | 94 | ASN |
| 25 | D3 | 100 | ASP |
| 25 | D3 | 107 | PHE |
| 25 | D3 | 110 | LYS |
| 25 | D3 | 114 | LYS |
| 25 | D3 | 117 | ILE |
| 25 | D3 | 126 | LYS |
| 25 | D3 | 131 | SER |
| 25 | D3 | 132 | LEU |
| 25 | D3 | 133 | LEU |
| 25 | D3 | 138 | GLU |
| 25 | D3 | 140 | LYS |
| 25 | D3 | 144 | ARG |
| 25 | D3 | 145 | SER |
| 26 | D4 | 10 | ARG |
| 26 | D4 | 17 | LEU |
| 26 | D4 | 21 | LYS |
| 26 | D4 | 32 | ARG |
| 26 | D4 | 34 | ASN |
| 26 | D4 | 35 | VAL |
| 26 | D4 | 46 | GLU |
| 26 | D4 | 47 | VAL |
| 26 | D4 | 49 | LYS |
| 26 | D4 | 51 | GLU |
| 26 | D4 | 57 | VAL |
| 26 | D4 | 61 | ARG |
| 26 | D4 | 88 | THR |
| 26 | D4 | 96 | LEU |
| 26 | D4 | 99 | LYS |
| 26 | D4 | 102 | LYS |
| 26 | D4 | 121 | THR |
| 26 | D4 | 124 | ARG |
| 26 | D4 | 128 | LYS |
| 26 | D4 | 129 | VAL |
| 26 | D4 | 131 | ARG |
| 26 | D4 | 132 | ARG |
| 26 | D4 | 135 | ASP |
| 27 | D5 | 38 | HIS |
| 27 | D5 | 41 | ILE |
| 27 | D5 | 42 | LEU |
| 27 | D5 | 43 | ASP |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 27 | D5 | 49 | ARG |
| 27 | D5 | 58 | ARG |
| 27 | D5 | 59 | TYR |
| 27 | D5 | 67 | ASP |
| 27 | D5 | 68 | ARG |
| 27 | D5 | 69 | LEU |
| 27 | D5 | 70 | LYS |
| 27 | D5 | 71 | ILE |
| 27 | D5 | 75 | LEU |
| 27 | D5 | 85 | LYS |
| 27 | D5 | 88 | ILE |
| 27 | D5 | 92 | ILE |
| 27 | D5 | 95 | HIS |
| 27 | D5 | 96 | SER |
| 27 | D5 | 100 | ILE |
| 27 | D5 | 103 | ARG |
| 27 | D5 | 105 | THR |
| 28 | D6 | 5 | ARG |
| 28 | D6 | 12 | LYS |
| 28 | D6 | 36 | ILE |
| 28 | D6 | 38 | ARG |
| 28 | D6 | 39 | MET |
| 28 | D6 | 41 | ILE |
| 28 | D6 | 44 | ILE |
| 28 | D6 | 45 | VAL |
| 28 | D6 | 52 | ASP |
| 28 | D6 | 58 | VAL |
| 28 | D6 | 61 | GLU |
| 28 | D6 | 66 | LYS |
| 28 | D6 | 67 | THR |
| 28 | D6 | 69 | ASN |
| 28 | D6 | 70 | LYS |
| 28 | D6 | 71 | LEU |
| 28 | D6 | 74 | CYS |
| 28 | D6 | 76 | SER |
| 28 | D6 | 79 | ILE |
| 28 | D6 | 82 | ARG |
| 28 | D6 | 84 | VAL |
| 28 | D6 | 87 | ARG |
| 28 | D6 | 90 | GLU |
| 28 | D6 | 91 | ASP |
| 29 | D7 | 3 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 29 | D7 | 20 | LYS |
| 29 | D7 | 30 | SER |
| 29 | D7 | 33 | LEU |
| 29 | D7 | 34 | ASP |
| 29 | D7 | 57 | GLU |
| 29 | D7 | 60 | SER |
| 29 | D7 | 75 | GLU |
| 29 | D7 | 77 | THR |
| 29 | D7 | 78 | SER |
| 30 | D8 | 14 | LYS |
| 30 | D8 | 15 | VAL |
| 30 | D8 | 18 | ARG |
| 30 | D8 | 19 | THR |
| 30 | D8 | 30 | VAL |
| 30 | D8 | 32 | PHE |
| 30 | D8 | 33 | LEU |
| 30 | D8 | 36 | THR |
| 30 | D8 | 39 | THR |
| 30 | D8 | 44 | VAL |
| 30 | D8 | 49 | ARG |
| 30 | D8 | 56 | LEU |
| 30 | D8 | 58 | GLU |
| 30 | D8 | 62 | GLU |
| 30 | D8 | 64 | ARG |
| 30 | D8 | 65 | ARG |
| 31 | D9 | 6 | VAL |
| 31 | D9 | 8 | PHE |
| 31 | D9 | 12 | ARG |
| 31 | D9 | 19 | ARG |
| 31 | D9 | 22 | ARG |
| 31 | D9 | 25 | SER |
| 31 | D9 | 28 | THR |
| 31 | D9 | 30 | LEU |
| 31 | D9 | 32 | ARG |
| 31 | D9 | 36 | LEU |
| 32 | E0 | 8 | LEU |
| 32 | E0 | 20 | LYS |
| 32 | E0 | 26 | LYS |
| 32 | E0 | 28 | LYS |
| 32 | E0 | 42 | ARG |
| 32 | E0 | 43 | ARG |
| 32 | E0 | 45 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 32 | E0 | 47 | VAL |
| 32 | E0 | 56 | MET |
| 33 | E1 | 84 | VAL |
| 33 | E1 | 85 | TYR |
| 33 | E1 | 86 | THR |
| 33 | E1 | 89 | LYS |
| 33 | E1 | 90 | LYS |
| 33 | E1 | 91 | ILE |
| 33 | E1 | 93 | HIS |
| 33 | E1 | 97 | LYS |
| 33 | E1 | 98 | VAL |
| 33 | E1 | 107 | LYS |
| 33 | E1 | 111 | GLU |
| 33 | E1 | 113 | LYS |
| 33 | E1 | 119 | ARG |
| 33 | E1 | 120 | GLU |
| 33 | E1 | 130 | VAL |
| 33 | E1 | 138 | ARG |
| 33 | E1 | 140 | TYR |
| 33 | E1 | 147 | VAL |
| 33 | E1 | 148 | TYR |
| 33 | E1 | 149 | LYS |
| 33 | E1 | 151 | ASN |
| 34 | SR | 4 | ASN |
| 34 | SR | 6 | VAL |
| 34 | SR | 9 | LEU |
| 34 | SR | 14 | GLU |
| 34 | SR | 17 | ASN |
| 34 | SR | 29 | GLN |
| 34 | SR | 44 | SER |
| 34 | SR | 46 | LYS |
| 34 | SR | 52 | GLN |
| 34 | SR | 59 | ARG |
| 34 | SR | 64 | HIS |
| 34 | SR | 76 | ASP |
| 34 | SR | 106 | HIS |
| 34 | SR | 117 | LYS |
| 34 | SR | 136 | ILE |
| 34 | SR | 141 | LEU |
| 34 | SR | 149 | ASP |
| 34 | SR | 153 | GLN |
| 34 | SR | 159 | ASN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 34 | SR | 165 | ASP |
| 34 | SR | 184 | ASN |
| 34 | SR | 185 | GLN |
| 34 | SR | 195 | HIS |
| 34 | SR | 202 | LEU |
| 34 | SR | 207 | ASP |
| 34 | SR | 238 | ASP |
| 34 | SR | 266 | ASP |
| 34 | SR | 268 | GLN |
| 34 | SR | 292 | LEU |
| 34 | SR | 317 | THR |
| 35 | SM | 33 | LYS |
| 35 | SM | 34 | LYS |
| 35 | SM | 43 | ASP |
| 35 | SM | 48 | ARG |
| 35 | SM | 51 | ARG |
| 35 | SM | 64 | LYS |
| 35 | SM | 68 | ARG |
| 35 | SM | 69 | ARG |
| 35 | SM | 72 | ARG |
| 35 | SM | 74 | LYS |
| 35 | SM | 76 | VAL |
| 35 | SM | 77 | THR |
| 35 | SM | 78 | ASP |
| 35 | SM | 79 | SER |
| 35 | SM | 83 | LYS |
| 35 | SM | 95 | SER |
| 35 | SM | 100 | THR |
| 35 | SM | 103 | LYS |
| 35 | SM | 105 | LYS |
| 35 | SM | 116 | GLU |
| 39 | L2 | 14 | SER |
| 39 | L2 | 20 | THR |
| 39 | L2 | 23 | ARG |
| 39 | L2 | 37 | ARG |
| 39 | L2 | 44 | ILE |
| 39 | L2 | 45 | VAL |
| 39 | L2 | 50 | HIS |
| 39 | L2 | 62 | VAL |
| 39 | L2 | 72 | ARG |
| 39 | L2 | 74 | GLU |
| 39 | L2 | 101 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 39 | L2 | 104 | LEU |
| 39 | L2 | 109 | GLU |
| 39 | L2 | 113 | VAL |
| 39 | L2 | 116 | VAL |
| 39 | L2 | 119 | LYS |
| 39 | L2 | 143 | GLU |
| 39 | L2 | 152 | SER |
| 39 | L2 | 157 | VAL |
| 39 | L2 | 165 | VAL |
| 39 | L2 | 179 | LEU |
| 39 | L2 | 180 | LEU |
| 39 | L2 | 191 | LEU |
| 39 | L2 | 193 | ARG |
| 39 | L2 | 199 | THR |
| 39 | L2 | 202 | VAL |
| 39 | L2 | 204 | MET |
| 39 | L2 | 225 | ILE |
| 39 | L2 | 238 | ILE |
| 39 | L2 | 241 | ARG |
| 39 | L2 | 243 | THR |
| 39 | L2 | 246 | LEU |
| 39 | L2 | 252 | THR |
| 40 | L3 | 4 | ARG |
| 40 | L3 | 7 | GLU |
| 40 | L3 | 17 | LEU |
| 40 | L3 | 19 | ARG |
| 40 | L3 | 20 | LYS |
| 40 | L3 | 25 | ILE |
| 40 | L3 | 37 | ARG |
| 40 | L3 | 41 | VAL |
| 40 | L3 | 44 | THR |
| 40 | L3 | 47 | LEU |
| 40 | L3 | 55 | THR |
| 40 | L3 | 70 | ARG |
| 40 | L3 | 81 | THR |
| 40 | L3 | 85 | VAL |
| 40 | L3 | 94 | GLU |
| 40 | L3 | 95 | THR |
| 40 | L3 | 101 | SER |
| 40 | L3 | 102 | LEU |
| 40 | L3 | 103 | THR |
| 40 | L3 | 110 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 40 | L3 | 112 | ASP |
| 40 | L3 | 114 | VAL |
| 40 | L3 | 146 | ARG |
| 40 | L3 | 148 | LEU |
| 40 | L3 | 150 | ARG |
| 40 | L3 | 156 | SER |
| 40 | L3 | 167 | ARG |
| 40 | L3 | 169 | THR |
| 40 | L3 | 173 | GLN |
| 40 | L3 | 187 | SER |
| 40 | L3 | 188 | ILE |
| 40 | L3 | 192 | VAL |
| 40 | L3 | 196 | ARG |
| 40 | L3 | 202 | THR |
| 40 | L3 | 206 | ASP |
| 40 | L3 | 210 | GLU |
| 40 | L3 | 221 | THR |
| 40 | L3 | 229 | VAL |
| 40 | L3 | 232 | ARG |
| 40 | L3 | 236 | LYS |
| 40 | L3 | 241 | LYS |
| 40 | L3 | 246 | LEU |
| 40 | L3 | 252 | ILE |
| 40 | L3 | 260 | VAL |
| 40 | L3 | 261 | MET |
| 40 | L3 | 277 | SER |
| 40 | L3 | 291 | GLU |
| 40 | L3 | 308 | MET |
| 40 | L3 | 319 | ASN |
| 40 | L3 | 320 | ASP |
| 40 | L3 | 324 | VAL |
| 40 | L3 | 328 | ILE |
| 40 | L3 | 332 | ARG |
| 40 | L3 | 338 | LEU |
| 40 | L3 | 343 | TYR |
| 40 | L3 | 344 | THR |
| 40 | L3 | 347 | SER |
| 40 | L3 | 367 | LYS |
| 40 | L3 | 372 | THR |
| 40 | L3 | 387 | LEU |
| 41 | L4 | 33 | ASP |
| 41 | L4 | 37 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 41 | L4 | 47 | ARG |
| 41 | L4 | 60 | THR |
| 41 | L4 | 69 | ARG |
| 41 | L4 | 73 | ARG |
| 41 | L4 | 76 | ARG |
| 41 | L4 | 93 | MET |
| 41 | L4 | 112 | LYS |
| 41 | L4 | 120 | TYR |
| 41 | L4 | 124 | SER |
| 41 | L4 | 133 | SER |
| 41 | L4 | 138 | ARG |
| 41 | L4 | 141 | ARG |
| 41 | L4 | 148 | ILE |
| 41 | L4 | 150 | LEU |
| 41 | L4 | 156 | LEU |
| 41 | L4 | 158 | SER |
| 41 | L4 | 161 | LYS |
| 41 | L4 | 170 | LYS |
| 41 | L4 | 177 | ASP |
| 41 | L4 | 179 | LEU |
| 41 | L4 | 187 | LEU |
| 41 | L4 | 194 | TYR |
| 41 | L4 | 201 | GLN |
| 41 | L4 | 203 | ARG |
| 41 | L4 | 206 | LEU |
| 41 | L4 | 220 | ARG |
| 41 | L4 | 222 | VAL |
| 41 | L4 | 230 | VAL |
| 41 | L4 | 232 | SER |
| 41 | L4 | 246 | ARG |
| 41 | L4 | 258 | LEU |
| 41 | L4 | 259 | ASP |
| 41 | L4 | 261 | VAL |
| 41 | L4 | 283 | THR |
| 41 | L4 | 287 | THR |
| 41 | L4 | 306 | THR |
| 41 | L4 | 307 | GLN |
| 41 | L4 | 310 | THR |
| 41 | L4 | 313 | LEU |
| 41 | L4 | 323 | VAL |
| 41 | L4 | 327 | LEU |
| 41 | L4 | 332 | LYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 41 | L4 | 338 | LYS |
| 41 | L4 | 349 | THR |
| 42 | L5 | 8 | LYS |
| 42 | L5 | 10 | SER |
| 42 | L5 | 13 | SER |
| 42 | L5 | 14 | SER |
| 42 | L5 | 22 | ARG |
| 42 | L5 | 23 | ARG |
| 42 | L5 | 34 | LYS |
| 42 | L5 | 35 | ARG |
| 42 | L5 | 41 | LYS |
| 42 | L5 | 62 | CYS |
| 42 | L5 | 68 | THR |
| 42 | L5 | 69 | ILE |
| 42 | L5 | 70 | THR |
| 42 | L5 | 92 | LEU |
| 42 | L5 | 93 | THR |
| 42 | L5 | 95 | TRP |
| 42 | L5 | 105 | ILE |
| 42 | L5 | 107 | ARG |
| 42 | L5 | 109 | THR |
| 42 | L5 | 110 | LEU |
| 42 | L5 | 113 | LEU |
| 42 | L5 | 118 | THR |
| 42 | L5 | 131 | LEU |
| 42 | L5 | 137 | ASP |
| 42 | L5 | 144 | VAL |
| 42 | L5 | 146 | LEU |
| 42 | L5 | 148 | ILE |
| 42 | L5 | 152 | ARG |
| 42 | L5 | 154 | THR |
| 42 | L5 | 155 | THR |
| 42 | L5 | 159 | VAL |
| 42 | L5 | 163 | LEU |
| 42 | L5 | 179 | ARG |
| 42 | L5 | 185 | PHE |
| 42 | L5 | 188 | GLU |
| 42 | L5 | 190 | ILE |
| 42 | L5 | 203 | HIS |
| 42 | L5 | 211 | LEU |
| 42 | L5 | 218 | ARG |
| 42 | L5 | 222 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 42 | L5 | 232 | ASP |
| 42 | L5 | 234 | ASP |
| 42 | L5 | 261 | THR |
| 42 | L5 | 263 | GLU |
| 42 | L5 | 264 | GLN |
| 42 | L5 | 273 | ARG |
| 42 | L5 | 277 | LEU |
| 42 | L5 | 293 | LEU |
| 43 | L6 | 5 | LYS |
| 43 | L6 | 15 | VAL |
| 43 | L6 | 21 | THR |
| 43 | L6 | 28 | GLN |
| 43 | L6 | 31 | ARG |
| 43 | L6 | 34 | LEU |
| 43 | L6 | 35 | VAL |
| 43 | L6 | 38 | THR |
| 43 | L6 | 46 | ARG |
| 43 | L6 | 52 | VAL |
| 43 | L6 | 58 | LEU |
| 43 | L6 | 64 | LEU |
| 43 | L6 | 65 | ILE |
| 43 | L6 | 66 | SER |
| 43 | L6 | 78 | ARG |
| 43 | L6 | 84 | VAL |
| 43 | L6 | 89 | THR |
| 43 | L6 | 90 | LYS |
| 43 | L6 | 98 | VAL |
| 43 | L6 | 99 | GLU |
| 43 | L6 | 100 | LYS |
| 43 | L6 | 108 | LYS |
| 43 | L6 | 109 | GLU |
| 43 | L6 | 134 | ARG |
| 43 | L6 | 160 | SER |
| 43 | L6 | 167 | ASN |
| 44 | L7 | 25 | GLN |
| 44 | L7 | 46 | GLU |
| 44 | L7 | 60 | ARG |
| 44 | L7 | 82 | LYS |
| 44 | L7 | 83 | LEU |
| 44 | L7 | 84 | VAL |
| 44 | L7 | 88 | ARG |
| 44 | L7 | 92 | ILE |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 44 | L7 | 101 | LYS |
| 44 | L7 | 109 | THR |
| 44 | L7 | 121 | LYS |
| 44 | L7 | 124 | LEU |
| 44 | L7 | 140 | SER |
| 44 | L7 | 175 | LYS |
| 44 | L7 | 178 | ILE |
| 44 | L7 | 179 | LEU |
| 44 | L7 | 181 | ILE |
| 44 | L7 | 184 | LEU |
| 44 | L7 | 216 | VAL |
| 44 | L7 | 239 | LEU |
| 45 | L8 | 26 | LEU |
| 45 | L8 | 27 | THR |
| 45 | L8 | 36 | ILE |
| 45 | L8 | 41 | GLN |
| 45 | L8 | 63 | LYS |
| 45 | L8 | 66 | SER |
| 45 | L8 | 74 | THR |
| 45 | L8 | 79 | GLN |
| 45 | L8 | 83 | ASP |
| 45 | L8 | 84 | ARG |
| 45 | L8 | 92 | LYS |
| 45 | L8 | 95 | ASN |
| 45 | L8 | 118 | GLU |
| 45 | L8 | 132 | VAL |
| 45 | L8 | 134 | TYR |
| 45 | L8 | 136 | LEU |
| 45 | L8 | 150 | LEU |
| 45 | L8 | 160 | ILE |
| 45 | L8 | 162 | LEU |
| 45 | L8 | 163 | VAL |
| 45 | L8 | 169 | LEU |
| 45 | L8 | 180 | VAL |
| 45 | L8 | 185 | ARG |
| 45 | L8 | 186 | LEU |
| 45 | L8 | 189 | LEU |
| 45 | L8 | 190 | VAL |
| 45 | L8 | 197 | VAL |
| 45 | L8 | 203 | VAL |
| 45 | L8 | 214 | LEU |
| 45 | L8 | 232 | HIS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 45 | L8 | 246 | MET |
| 45 | L8 | 248 | LYS |
| 45 | L8 | 251 | LYS |
| 46 | L9 | 5 | GLN |
| 46 | L9 | 9 | GLN |
| 46 | L9 | 18 | VAL |
| 46 | L9 | 19 | SER |
| 46 | L9 | 20 | ILE |
| 46 | L9 | 33 | THR |
| 46 | L9 | 41 | ILE |
| 46 | L9 | 44 | THR |
| 46 | L9 | 48 | VAL |
| 46 | L9 | 49 | ASN |
| 46 | L9 | 50 | ASN |
| 46 | L9 | 52 | LEU |
| 46 | L9 | 65 | VAL |
| 46 | L9 | 68 | LEU |
| 46 | L9 | 69 | ARG |
| 46 | L9 | 70 | THR |
| 46 | L9 | 80 | THR |
| 46 | L9 | 82 | VAL |
| 46 | L9 | 92 | TYR |
| 46 | L9 | 94 | TYR |
| 46 | L9 | 104 | VAL |
| 46 | L9 | 107 | ASP |
| 46 | L9 | 123 | ILE |
| 46 | L9 | 132 | VAL |
| 46 | L9 | 135 | GLU |
| 46 | L9 | 137 | SER |
| 46 | L9 | 138 | THR |
| 46 | L9 | 139 | ASN |
| 46 | L9 | 140 | VAL |
| 46 | L9 | 141 | LYS |
| 46 | L9 | 146 | LEU |
| 46 | L9 | 150 | SER |
| 46 | L9 | 151 | VAL |
| 46 | L9 | 157 | ASN |
| 46 | L9 | 162 | GLN |
| 46 | L9 | 164 | ILE |
| 46 | L9 | 170 | LYS |
| 46 | L9 | 172 | ILE |
| 46 | L9 | 175 | PHE |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 46 | L9 | 182 | SER |
| 46 | L9 | 188 | THR |
| 46 | L9 | 189 | GLU |
| 46 | L9 | 191 | LEU |
| 47 | M0 | 3 | ARG |
| 47 | M0 | 7 | ARG |
| 47 | M0 | 14 | ASN |
| 47 | M0 | 30 | LYS |
| 47 | M0 | 32 | ARG |
| 47 | M0 | 33 | ILE |
| 47 | M0 | 42 | THR |
| 47 | M0 | 48 | LEU |
| 47 | M0 | 52 | LEU |
| 47 | M0 | 74 | LYS |
| 47 | M0 | 87 | LEU |
| 47 | M0 | 91 | VAL |
| 47 | M0 | 116 | ARG |
| 47 | M0 | 125 | LEU |
| 47 | M0 | 130 | ASP |
| 47 | M0 | 144 | ASN |
| 47 | M0 | 145 | LYS |
| 47 | M0 | 156 | ARG |
| 47 | M0 | 165 | ILE |
| 47 | M0 | 177 | ASP |
| 47 | M0 | 185 | ARG |
| 47 | M0 | 191 | LYS |
| 47 | M0 | 192 | ASP |
| 47 | M0 | 203 | LYS |
| 48 | M1 | 7 | ASN |
| 48 | M1 | 10 | ARG |
| 48 | M1 | 12 | LEU |
| 48 | M1 | 13 | LYS |
| 48 | M1 | 17 | LEU |
| 48 | M1 | 19 | LEU |
| 48 | M1 | 20 | ASN |
| 48 | M1 | 23 | VAL |
| 48 | M1 | 25 | GLU |
| 48 | M1 | 28 | ASP |
| 48 | M1 | 44 | THR |
| 48 | M1 | 56 | THR |
| 48 | M1 | 70 | THR |
| 48 | M1 | 80 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 48 | M1 | 82 | ARG |
| 48 | M1 | 94 | ARG |
| 48 | M1 | 95 | ASN |
| 48 | M1 | 106 | ILE |
| 48 | M1 | 107 | ASP |
| 48 | M1 | 112 | LEU |
| 48 | M1 | 137 | ARG |
| 48 | M1 | 138 | VAL |
| 48 | M1 | 139 | THR |
| 48 | M1 | 140 | ARG |
| 48 | M1 | 155 | THR |
| 48 | M1 | 173 | ASP |
| 49 | M3 | 4 | SER |
| 49 | M3 | 10 | LEU |
| 49 | M3 | 13 | HIS |
| 49 | M3 | 14 | PHE |
| 49 | M3 | 15 | ARG |
| 49 | M3 | 23 | LYS |
| 49 | M3 | 27 | ASP |
| 49 | M3 | 42 | ARG |
| 49 | M3 | 46 | ILE |
| 49 | M3 | 54 | LEU |
| 49 | M3 | 55 | ARG |
| 49 | M3 | 58 | VAL |
| 49 | M3 | 59 | ARG |
| 49 | M3 | 67 | ARG |
| 49 | M3 | 69 | VAL |
| 49 | M3 | 77 | LEU |
| 49 | M3 | 85 | LEU |
| 49 | M3 | 100 | ARG |
| 49 | M3 | 107 | GLU |
| 49 | M3 | 108 | ILE |
| 49 | M3 | 112 | ASN |
| 49 | M3 | 114 | GLN |
| 49 | M3 | 117 | LYS |
| 49 | M3 | 120 | GLN |
| 49 | M3 | 124 | ILE |
| 49 | M3 | 131 | LYS |
| 49 | M3 | 134 | GLU |
| 49 | M3 | 136 | GLU |
| 49 | M3 | 140 | SER |
| 49 | M3 | 144 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 49 | M3 | 147 | ILE |
| 49 | M3 | 164 | GLU |
| 49 | M3 | 165 | SER |
| 49 | M3 | 171 | ARG |
| 49 | M3 | 190 | LYS |
| 50 | M4 | 10 | SER |
| 50 | M4 | 20 | VAL |
| 50 | M4 | 27 | GLN |
| 50 | M4 | 28 | SER |
| 50 | M4 | 47 | ASP |
| 50 | M4 | 50 | LYS |
| 50 | M4 | 55 | ARG |
| 50 | M4 | 58 | ILE |
| 50 | M4 | 60 | LEU |
| 50 | M4 | 64 | VAL |
| 50 | M4 | 69 | THR |
| 50 | M4 | 72 | LEU |
| 50 | M4 | 102 | LYS |
| 50 | M4 | 108 | ARG |
| 50 | M4 | 113 | THR |
| 50 | M4 | 115 | PHE |
| 50 | M4 | 129 | TYR |
| 50 | M4 | 130 | THR |
| 50 | M4 | 132 | LYS |
| 50 | M4 | 133 | LYS |
| 50 | M4 | 135 | LEU |
| 51 | M5 | 7 | LEU |
| 51 | M5 | 10 | LEU |
| 51 | M5 | 17 | ASP |
| 51 | M5 | 18 | VAL |
| 51 | M5 | 20 | ARG |
| 51 | M5 | 22 | LEU |
| 51 | M5 | 38 | ARG |
| 51 | M5 | 41 | ARG |
| 51 | M5 | 50 | ARG |
| 51 | M5 | 60 | VAL |
| 51 | M5 | 62 | TYR |
| 51 | M5 | 75 | VAL |
| 51 | M5 | 80 | THR |
| 51 | M5 | 83 | LYS |
| 51 | M5 | 92 | LEU |
| 51 | M5 | 98 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 51 | M5 | 104 | GLU |
| 51 | M5 | 105 | ARG |
| 51 | M5 | 123 | GLN |
| 51 | M5 | 133 | ILE |
| 51 | M5 | 134 | LEU |
| 51 | M5 | 138 | GLN |
| 51 | M5 | 151 | ILE |
| 51 | M5 | 159 | ARG |
| 51 | M5 | 178 | HIS |
| 51 | M5 | 182 | ASN |
| 51 | M5 | 183 | THR |
| 51 | M5 | 189 | LYS |
| 51 | M5 | 194 | GLN |
| 51 | M5 | 198 | SER |
| 52 | M6 | 34 | VAL |
| 52 | M6 | 41 | LEU |
| 52 | M6 | 44 | SER |
| 52 | M6 | 58 | LEU |
| 52 | M6 | 67 | THR |
| 52 | M6 | 74 | ARG |
| 52 | M6 | 78 | ARG |
| 52 | M6 | 84 | LEU |
| 52 | M6 | 85 | ARG |
| 52 | M6 | 102 | LEU |
| 52 | M6 | 106 | GLU |
| 52 | M6 | 110 | PRO |
| 52 | M6 | 115 | LYS |
| 52 | M6 | 116 | LYS |
| 52 | M6 | 117 | ARG |
| 52 | M6 | 119 | VAL |
| 52 | M6 | 122 | GLN |
| 52 | M6 | 124 | LEU |
| 52 | M6 | 128 | ARG |
| 52 | M6 | 134 | LYS |
| 52 | M6 | 140 | LYS |
| 52 | M6 | 143 | THR |
| 52 | M6 | 160 | ARG |
| 52 | M6 | 182 | ASN |
| 52 | M6 | 187 | GLU |
| 52 | M6 | 190 | VAL |
| 53 | M7 | 3 | ARG |
| 53 | M7 | 7 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 53 | M7 | 9 | THR |
| 53 | M7 | 16 | SER |
| 53 | M7 | 22 | LEU |
| 53 | M7 | 23 | ARG |
| 53 | M7 | 24 | VAL |
| 53 | M7 | 34 | GLN |
| 53 | M7 | 36 | ILE |
| 53 | M7 | 42 | THR |
| 53 | M7 | 52 | LEU |
| 53 | M7 | 53 | ASP |
| 53 | M7 | 55 | GLN |
| 53 | M7 | 56 | ARG |
| 53 | M7 | 61 | ARG |
| 53 | M7 | 65 | SER |
| 53 | M7 | 67 | ILE |
| 53 | M7 | 69 | ARG |
| 53 | M7 | 75 | GLU |
| 53 | M7 | 90 | PHE |
| 53 | M7 | 94 | LEU |
| 53 | M7 | 111 | LYS |
| 53 | M7 | 112 | LEU |
| 53 | M7 | 114 | VAL |
| 53 | M7 | 121 | GLN |
| 53 | M7 | 126 | ARG |
| 53 | M7 | 127 | ARG |
| 53 | M7 | 138 | LYS |
| 53 | M7 | 142 | SER |
| 53 | M7 | 144 | SER |
| 53 | M7 | 149 | VAL |
| 53 | M7 | 153 | LYS |
| 53 | M7 | 165 | VAL |
| 53 | M7 | 168 | LEU |
| 53 | M7 | 172 | GLN |
| 53 | M7 | 173 | ARG |
| 53 | M7 | 180 | LYS |
| 53 | M7 | 182 | ILE |
| 54 | M8 | 6 | THR |
| 54 | M8 | 8 | LYS |
| 54 | M8 | 13 | SER |
| 54 | M8 | 17 | THR |
| 54 | M8 | 21 | SER |
| 54 | M8 | 24 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 54 | M8 | 26 | LEU |
| 54 | M8 | 32 | LEU |
| 54 | M8 | 39 | ARG |
| 54 | M8 | 41 | ASP |
| 54 | M8 | 49 | LEU |
| 54 | M8 | 57 | ILE |
| 54 | M8 | 69 | ARG |
| 54 | M8 | 74 | GLU |
| 54 | M8 | 86 | THR |
| 54 | M8 | 93 | ILE |
| 54 | M8 | 113 | LYS |
| 54 | M8 | 135 | GLN |
| 54 | M8 | 138 | LEU |
| 54 | M8 | 141 | ARG |
| 54 | M8 | 150 | VAL |
| 54 | M8 | 155 | MET |
| 54 | M8 | 161 | LYS |
| 54 | M8 | 171 | LYS |
| 54 | M8 | 180 | ARG |
| 55 | M9 | 8 | LYS |
| 55 | M9 | 10 | LEU |
| 55 | M9 | 20 | ARG |
| 55 | M9 | 25 | ASP |
| 55 | M9 | 30 | SER |
| 55 | M9 | 31 | GLU |
| 55 | M9 | 39 | ASN |
| 55 | M9 | 42 | ARG |
| 55 | M9 | 47 | ASN |
| 55 | M9 | 49 | THR |
| 55 | M9 | 52 | LYS |
| 55 | M9 | 59 | SER |
| 55 | M9 | 60 | LYS |
| 55 | M9 | 62 | ARG |
| 55 | M9 | 72 | GLU |
| 55 | M9 | 74 | ARG |
| 55 | M9 | 82 | LYS |
| 55 | M9 | 84 | THR |
| 55 | M9 | 85 | ARG |
| 55 | M9 | 86 | GLU |
| 55 | M9 | 97 | ARG |
| 55 | M9 | 98 | ARG |
| 55 | M9 | 99 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 55 | M9 | 103 | ARG |
| 55 | M9 | 108 | LYS |
| 55 | M9 | 110 | ARG |
| 55 | M9 | 120 | TYR |
| 55 | M9 | 126 | GLU |
| 55 | M9 | 128 | LYS |
| 55 | M9 | 130 | ASN |
| 55 | M9 | 134 | HIS |
| 55 | M9 | 138 | LEU |
| 55 | M9 | 143 | ILE |
| 55 | M9 | 165 | LYS |
| 55 | M9 | 175 | GLN |
| 55 | M9 | 182 | ASP |
| 55 | M9 | 185 | LEU |
| 56 | N0 | 12 | ARG |
| 56 | N0 | 13 | ARG |
| 56 | N0 | 16 | THR |
| 56 | N0 | 18 | SER |
| 56 | N0 | 32 | SER |
| 56 | N0 | 51 | VAL |
| 56 | N0 | 61 | ILE |
| 56 | N0 | 71 | LYS |
| 56 | N0 | 80 | ARG |
| 56 | N0 | 85 | SER |
| 56 | N0 | 87 | THR |
| 56 | N0 | 97 | VAL |
| 56 | N0 | 98 | SER |
| 56 | N0 | 113 | ARG |
| 56 | N0 | 117 | ARG |
| 56 | N0 | 123 | ILE |
| 56 | N0 | 131 | LYS |
| 56 | N0 | 132 | THR |
| 56 | N0 | 136 | LYS |
| 56 | N0 | 137 | ARG |
| 56 | N0 | 138 | GLN |
| 56 | N0 | 145 | THR |
| 56 | N0 | 155 | ARG |
| 56 | N0 | 160 | THR |
| 56 | N0 | 164 | SER |
| 56 | N0 | 166 | LYS |
| 56 | N0 | 167 | ARG |
| 56 | N0 | 171 | PHE |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 56 | N0 | 172 | TYR |
| 57 | N1 | 12 | ARG |
| 57 | N1 | 18 | ASP |
| 57 | N1 | 26 | HIS |
| 57 | N1 | 27 | LEU |
| 57 | N1 | 29 | THR |
| 57 | N1 | 55 | LYS |
| 57 | N1 | 64 | VAL |
| 57 | N1 | 71 | SER |
| 57 | N1 | 75 | ILE |
| 57 | N1 | 78 | LYS |
| 57 | N1 | 79 | MET |
| 57 | N1 | 80 | VAL |
| 57 | N1 | 83 | ARG |
| 57 | N1 | 88 | ARG |
| 57 | N1 | 89 | LEU |
| 57 | N1 | 102 | ARG |
| 57 | N1 | 104 | GLU |
| 57 | N1 | 106 | LEU |
| 57 | N1 | 108 | ARG |
| 57 | N1 | 120 | LYS |
| 57 | N1 | 124 | VAL |
| 57 | N1 | 126 | VAL |
| 57 | N1 | 127 | GLN |
| 57 | N1 | 128 | LEU |
| 57 | N1 | 139 | ARG |
| 57 | N1 | 143 | THR |
| 57 | N1 | 149 | GLN |
| 57 | N1 | 158 | THR |
| 58 | N2 | 25 | ASN |
| 58 | N2 | 29 | ASP |
| 58 | N2 | 38 | ILE |
| 58 | N2 | 39 | ASP |
| 58 | N2 | 43 | VAL |
| 58 | N2 | 49 | ASN |
| 58 | N2 | 52 | ASN |
| 58 | N2 | 74 | LYS |
| 58 | N2 | 82 | LYS |
| 58 | N2 | 93 | ILE |
| 58 | N2 | 95 | PHE |
| 58 | N2 | 100 | THR |
| 59 | N3 | 13 | ILE |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 59 | N3 | 40 | LYS |
| 59 | N3 | 44 | SER |
| 59 | N3 | 45 | ARG |
| 59 | N3 | 64 | LYS |
| 59 | N3 | 69 | LEU |
| 59 | N3 | 72 | LYS |
| 59 | N3 | 83 | LYS |
| 59 | N3 | 91 | VAL |
| 59 | N3 | 102 | ILE |
| 59 | N3 | 115 | THR |
| 59 | N3 | 120 | LYS |
| 59 | N3 | 125 | LEU |
| 59 | N3 | 135 | VAL |
| 60 | N4 | 4 | GLU |
| 60 | N4 | 5 | ILE |
| 60 | N4 | 7 | SER |
| 60 | N4 | 19 | THR |
| 60 | N4 | 39 | LEU |
| 60 | N4 | 43 | ARG |
| 60 | N4 | 96 | LEU |
| 60 | N4 | 107 | GLU |
| 60 | N4 | 113 | LYS |
| 60 | N4 | 115 | LYS |
| 60 | N4 | 123 | ARG |
| 60 | N4 | 130 | SER |
| 61 | N5 | 26 | VAL |
| 61 | N5 | 27 | ARG |
| 61 | N5 | 34 | LEU |
| 61 | N5 | 38 | LEU |
| 61 | N5 | 40 | LEU |
| 61 | N5 | 45 | LYS |
| 61 | N5 | 48 | SER |
| 61 | N5 | 49 | LYS |
| 61 | N5 | 58 | ASP |
| 61 | N5 | 63 | ILE |
| 61 | N5 | 68 | THR |
| 61 | N5 | 69 | SER |
| 61 | N5 | 86 | VAL |
| 61 | N5 | 92 | LYS |
| 61 | N5 | 97 | LYS |
| 61 | N5 | 108 | LEU |
| 61 | N5 | 111 | ASN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 61 | N5 | 112 | THR |
| 61 | N5 | 115 | ARG |
| 61 | N5 | 135 | ILE |
| 61 | N5 | 139 | ILE |
| 61 | N5 | 142 | ILE |
| 62 | N6 | 3 | LYS |
| 62 | N6 | 7 | ASP |
| 62 | N6 | 13 | ARG |
| 62 | N6 | 17 | LYS |
| 62 | N6 | 37 | LYS |
| 62 | N6 | 39 | LEU |
| 62 | N6 | 42 | GLN |
| 62 | N6 | 50 | ILE |
| 62 | N6 | 51 | ARG |
| 62 | N6 | 56 | VAL |
| 62 | N6 | 57 | LEU |
| 62 | N6 | 74 | TYR |
| 62 | N6 | 76 | LEU |
| 62 | N6 | 80 | VAL |
| 62 | N6 | 87 | LYS |
| 62 | N6 | 94 | SER |
| 62 | N6 | 97 | ILE |
| 62 | N6 | 103 | LYS |
| 62 | N6 | 113 | LYS |
| 62 | N6 | 115 | ARG |
| 62 | N6 | 125 | LYS |
| 62 | N6 | 126 | LEU |
| 63 | N7 | 5 | LEU |
| 63 | N7 | 14 | VAL |
| 63 | N7 | 15 | ARG |
| 63 | N7 | 17 | ARG |
| 63 | N7 | 24 | VAL |
| 63 | N7 | 34 | LYS |
| 63 | N7 | 36 | HIS |
| 63 | N7 | 46 | ILE |
| 63 | N7 | 53 | VAL |
| 63 | N7 | 54 | THR |
| 63 | N7 | 64 | LYS |
| 63 | N7 | 81 | LEU |
| 63 | N7 | 83 | THR |
| 63 | N7 | 90 | GLU |
| 63 | N7 | 92 | PHE |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 63 | N7 | 99 | GLU |
| 63 | N7 | 103 | GLN |
| 63 | N7 | 107 | ARG |
| 63 | N7 | 109 | GLU |
| 63 | N7 | 121 | ARG |
| 63 | N7 | 128 | GLN |
| 63 | N7 | 134 | LEU |
| 64 | N8 | 10 | LYS |
| 64 | N8 | 16 | SER |
| 64 | N8 | 22 | ILE |
| 64 | N8 | 26 | ARG |
| 64 | N8 | 32 | ARG |
| 64 | N8 | 40 | HIS |
| 64 | N8 | 42 | ARG |
| 64 | N8 | 43 | ILE |
| 64 | N8 | 44 | ASN |
| 64 | N8 | 56 | VAL |
| 64 | N8 | 60 | TYR |
| 64 | N8 | 65 | GLN |
| 64 | N8 | 67 | HIS |
| 64 | N8 | 78 | LEU |
| 64 | N8 | 84 | GLU |
| 64 | N8 | 85 | ASP |
| 64 | N8 | 96 | LYS |
| 64 | N8 | 115 | LYS |
| 64 | N8 | 120 | ASN |
| 64 | N8 | 130 | VAL |
| 64 | N8 | 133 | LEU |
| 64 | N8 | 139 | ARG |
| 65 | N9 | 22 | LYS |
| 65 | N9 | 23 | LYS |
| 65 | N9 | 25 | LYS |
| 65 | N9 | 28 | LYS |
| 65 | N9 | 33 | LYS |
| 65 | N9 | 50 | THR |
| 65 | N9 | 59 | LYS |
| 66 | O0 | 10 | ILE |
| 66 | O0 | 16 | LEU |
| 66 | O0 | 29 | SER |
| 66 | O0 | 32 | LYS |
| 66 | O0 | 34 | LEU |
| 66 | O0 | 36 | GLN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 66 | O0 | 40 | LYS |
| 66 | O0 | 41 | LEU |
| 66 | O0 | 48 | THR |
| 66 | O0 | 52 | ARG |
| 66 | O0 | 54 | SER |
| 66 | O0 | 61 | MET |
| 66 | O0 | 63 | SER |
| 66 | O0 | 79 | THR |
| 66 | O0 | 83 | LYS |
| 66 | O0 | 87 | VAL |
| 66 | O0 | 93 | LEU |
| 66 | O0 | 97 | ASP |
| 66 | O0 | 100 | ILE |
| 66 | O0 | 104 | LEU |
| 67 | O1 | 8 | VAL |
| 67 | O1 | 13 | THR |
| 67 | O1 | 24 | SER |
| 67 | O1 | 26 | LYS |
| 67 | O1 | 28 | ARG |
| 67 | O1 | 31 | ARG |
| 67 | O1 | 36 | ILE |
| 67 | O1 | 46 | THR |
| 67 | O1 | 47 | ASP |
| 67 | O1 | 55 | LEU |
| 67 | O1 | 61 | LYS |
| 67 | O1 | 64 | VAL |
| 67 | O1 | 74 | ARG |
| 67 | O1 | 79 | ARG |
| 67 | O1 | 86 | LYS |
| 67 | O1 | 89 | LEU |
| 67 | O1 | 106 | THR |
| 67 | O1 | 110 | GLU |
| 68 | O2 | 4 | LEU |
| 68 | O2 | 10 | VAL |
| 68 | O2 | 19 | ARG |
| 68 | O2 | 27 | ARG |
| 68 | O2 | 33 | ARG |
| 68 | O2 | 40 | SER |
| 68 | O2 | 44 | ARG |
| 68 | O2 | 61 | LYS |
| 68 | O2 | 62 | LYS |
| 68 | O2 | 67 | SER |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 68 | O2 | 73 | THR |
| 68 | O2 | 75 | LEU |
| 68 | O2 | 76 | VAL |
| 68 | O2 | 89 | THR |
| 68 | O2 | 106 | VAL |
| 68 | O2 | 122 | PRO |
| 68 | O2 | 126 | LEU |
| 69 | O3 | 3 | GLU |
| 69 | O3 | 4 | SER |
| 69 | O3 | 9 | VAL |
| 69 | O3 | 14 | LEU |
| 69 | O3 | 15 | SER |
| 69 | O3 | 20 | LYS |
| 69 | O3 | 21 | ARG |
| 69 | O3 | 33 | GLU |
| 69 | O3 | 49 | ILE |
| 69 | O3 | 59 | VAL |
| 69 | O3 | 60 | ARG |
| 69 | O3 | 81 | VAL |
| 69 | O3 | 98 | VAL |
| 69 | O3 | 105 | SER |
| 70 | O4 | 3 | GLN |
| 70 | O4 | 8 | ARG |
| 70 | O4 | 15 | THR |
| 70 | O4 | 18 | ASN |
| 70 | O4 | 20 | ILE |
| 70 | O4 | 29 | ILE |
| 70 | O4 | 33 | GLN |
| 70 | O4 | 51 | LEU |
| 70 | O4 | 52 | GLN |
| 70 | O4 | 55 | SER |
| 70 | O4 | 58 | ARG |
| 70 | O4 | 59 | PRO |
| 70 | O4 | 65 | VAL |
| 70 | O4 | 69 | HIS |
| 70 | O4 | 72 | VAL |
| 70 | O4 | 73 | SER |
| 70 | O4 | 74 | ARG |
| 70 | O4 | 81 | CYS |
| 70 | O4 | 90 | ILE |
| 70 | O4 | 95 | ILE |
| 70 | O4 | 102 | LYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 70 | O4 | 104 | VAL |
| 71 | O5 | 13 | SER |
| 71 | O5 | 15 | GLU |
| 71 | O5 | 16 | GLN |
| 71 | O5 | 21 | LEU |
| 71 | O5 | 27 | GLU |
| 71 | O5 | 28 | LEU |
| 71 | O5 | 31 | LEU |
| 71 | O5 | 45 | LYS |
| 71 | O5 | 47 | VAL |
| 71 | O5 | 49 | LYS |
| 71 | O5 | 71 | LYS |
| 71 | O5 | 81 | ARG |
| 71 | O5 | 86 | ARG |
| 71 | O5 | 89 | ARG |
| 71 | O5 | 96 | GLU |
| 71 | O5 | 100 | VAL |
| 71 | O5 | 101 | THR |
| 71 | O5 | 107 | LYS |
| 71 | O5 | 118 | ILE |
| 72 | O6 | 11 | LEU |
| 72 | O6 | 13 | LYS |
| 72 | O6 | 17 | VAL |
| 72 | O6 | 20 | MET |
| 72 | O6 | 26 | ILE |
| 72 | O6 | 29 | LYS |
| 72 | O6 | 34 | SER |
| 72 | O6 | 36 | ARG |
| 72 | O6 | 42 | SER |
| 72 | O6 | 45 | ARG |
| 72 | O6 | 53 | TYR |
| 72 | O6 | 57 | LEU |
| 72 | O6 | 58 | ILE |
| 72 | O6 | 60 | LEU |
| 72 | O6 | 62 | ARG |
| 72 | O6 | 68 | ARG |
| 72 | O6 | 70 | ARG |
| 72 | O6 | 76 | ARG |
| 72 | O6 | 79 | SER |
| 72 | O6 | 81 | THR |
| 72 | O6 | 88 | GLU |
| 72 | O6 | 98 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 72 | O6 | 99 | ARG |
| 73 | O7 | 11 | ARG |
| 73 | O7 | 12 | HIS |
| 73 | O7 | 17 | THR |
| 73 | O7 | 24 | ARG |
| 73 | O7 | 25 | ARG |
| 73 | O7 | 28 | HIS |
| 73 | O7 | 33 | THR |
| 73 | O7 | 34 | CYS |
| 73 | O7 | 36 | SER |
| 73 | O7 | 43 | LYS |
| 73 | O7 | 45 | ARG |
| 73 | O7 | 46 | SER |
| 73 | O7 | 55 | ARG |
| 73 | O7 | 61 | THR |
| 73 | O7 | 64 | MET |
| 73 | O7 | 67 | LEU |
| 73 | O7 | 71 | SER |
| 73 | O7 | 84 | SER |
| 74 | O8 | 5 | ILE |
| 74 | O8 | 6 | THR |
| 74 | O8 | 8 | ILE |
| 74 | O8 | 19 | ASP |
| 74 | O8 | 24 | THR |
| 74 | O8 | 31 | LEU |
| 74 | O8 | 41 | THR |
| 74 | O8 | 48 | SER |
| 74 | O8 | 50 | SER |
| 74 | O8 | 51 | LEU |
| 74 | O8 | 53 | THR |
| 74 | O8 | 64 | LYS |
| 74 | O8 | 65 | LEU |
| 74 | O8 | 67 | GLN |
| 74 | O8 | 77 | ARG |
| 75 | O9 | 4 | GLN |
| 75 | O9 | 5 | LYS |
| 75 | O9 | 21 | ARG |
| 75 | O9 | 23 | LEU |
| 75 | O9 | 27 | ILE |
| 75 | O9 | 34 | THR |
| 75 | O9 | 45 | ARG |
| 75 | O9 | 49 | MET |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 75 | O9 | 51 | ILE |
| 76 | Q0 | 78 | ILE |
| 76 | Q0 | 85 | LEU |
| 76 | Q0 | 91 | CYS |
| 76 | Q0 | 93 | LYS |
| 76 | Q0 | 97 | ARG |
| 76 | Q0 | 99 | CYS |
| 76 | Q0 | 106 | ARG |
| 76 | Q0 | 113 | ARG |
| 76 | Q0 | 114 | LYS |
| 76 | Q0 | 127 | LEU |
| 77 | Q1 | 2 | ARG |
| 77 | Q1 | 11 | ARG |
| 77 | Q1 | 19 | LYS |
| 78 | Q2 | 8 | ARG |
| 78 | Q2 | 21 | THR |
| 78 | Q2 | 28 | TYR |
| 78 | Q2 | 35 | LEU |
| 78 | Q2 | 38 | GLN |
| 78 | Q2 | 45 | ARG |
| 78 | Q2 | 47 | GLN |
| 78 | Q2 | 60 | LYS |
| 78 | Q2 | 63 | LYS |
| 78 | Q2 | 64 | THR |
| 78 | Q2 | 71 | ARG |
| 78 | Q2 | 72 | LEU |
| 78 | Q2 | 78 | LYS |
| 78 | Q2 | 80 | ARG |
| 78 | Q2 | 83 | LEU |
| 78 | Q2 | 84 | THR |
| 78 | Q2 | 85 | LEU |
| 78 | Q2 | 97 | LYS |
| 78 | Q2 | 100 | LYS |
| 78 | Q2 | 104 | LEU |
| 78 | Q2 | 105 | GLN |
| 79 | Q3 | 4 | ARG |
| 79 | Q3 | 7 | LYS |
| 79 | Q3 | 11 | THR |
| 79 | Q3 | 24 | ARG |
| 79 | Q3 | 25 | GLN |
| 79 | Q3 | 40 | SER |
| 79 | Q3 | 45 | LYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 79 | Q3 | 46 | THR |
| 79 | Q3 | 49 | ARG |
| 79 | Q3 | 60 | CYS |
| 79 | Q3 | 73 | THR |
| 79 | Q3 | 78 | THR |
| 79 | Q3 | 91 | GLU |
| 2 | s0 | 6 | THR |
| 2 | s0 | 9 | LEU |
| 2 | s0 | 12 | GLU |
| 2 | s0 | 24 | LEU |
| 2 | s0 | 32 | HIS |
| 2 | s0 | 41 | ARG |
| 2 | s0 | 45 | VAL |
| 2 | s0 | 50 | VAL |
| 2 | s0 | 59 | LEU |
| 2 | s0 | 62 | ARG |
| 2 | s0 | 72 | ASP |
| 2 | s0 | 88 | LYS |
| 2 | s0 | 101 | ARG |
| 2 | s0 | 103 | THR |
| 2 | s0 | 111 | ILE |
| 2 | s0 | 131 | GLN |
| 2 | s0 | 139 | VAL |
| 2 | s0 | 144 | ILE |
| 2 | s0 | 153 | SER |
| 2 | s0 | 157 | ASP |
| 2 | s0 | 162 | CYS |
| 2 | s0 | 167 | LYS |
| 2 | s0 | 172 | LEU |
| 2 | s0 | 180 | GLU |
| 2 | s0 | 183 | ARG |
| 2 | s0 | 185 | ARG |
| 2 | s0 | 188 | LEU |
| 2 | s0 | 189 | VAL |
| 2 | s0 | 202 | TYR |
| 2 | s0 | 203 | PHE |
| 3 | s1 | 21 | VAL |
| 3 | s1 | 36 | SER |
| 3 | s1 | 47 | LEU |
| 3 | s1 | 51 | SER |
| 3 | s1 | 55 | LYS |
| 3 | s1 | 56 | SER |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | s1 | 62 | LYS |
| 3 | s1 | 70 | LEU |
| 3 | s1 | 81 | PHE |
| 3 | s1 | 83 | LYS |
| 3 | s1 | 85 | LYS |
| 3 | s1 | 103 | MET |
| 3 | s1 | 105 | PHE |
| 3 | s1 | 108 | ASP |
| 3 | s1 | 110 | LEU |
| 3 | s1 | 125 | VAL |
| 3 | s1 | 127 | VAL |
| 3 | s1 | 137 | ILE |
| 3 | s1 | 146 | GLN |
| 3 | s1 | 150 | VAL |
| 3 | s1 | 158 | SER |
| 3 | s1 | 159 | SER |
| 3 | s1 | 177 | GLN |
| 3 | s1 | 180 | THR |
| 3 | s1 | 181 | LEU |
| 3 | s1 | 185 | THR |
| 3 | s1 | 194 | ASN |
| 3 | s1 | 202 | LYS |
| 3 | s1 | 203 | ASP |
| 3 | s1 | 211 | HIS |
| 3 | s1 | 212 | VAL |
| 3 | s1 | 213 | ARG |
| 3 | s1 | 219 | LYS |
| 3 | s1 | 222 | LYS |
| 4 | s2 | 53 | ILE |
| 4 | s2 | 54 | GLU |
| 4 | s2 | 65 | GLU |
| 4 | s2 | 69 | ILE |
| 4 | s2 | 72 | LEU |
| 4 | s2 | 73 | LEU |
| 4 | s2 | 77 | GLN |
| 4 | s2 | 79 | GLU |
| 4 | s2 | 80 | VAL |
| 4 | s2 | 81 | MET |
| 4 | s2 | 83 | ILE |
| 4 | s2 | 89 | GLN |
| 4 | s2 | 90 | THR |
| 4 | s2 | 91 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 4 | s2 | 94 | GLN |
| 4 | s2 | 96 | THR |
| 4 | s2 | 97 | ARG |
| 4 | s2 | 106 | ASP |
| 4 | s2 | 111 | VAL |
| 4 | s2 | 113 | LEU |
| 4 | s2 | 115 | ILE |
| 4 | s2 | 117 | THR |
| 4 | s2 | 139 | ILE |
| 4 | s2 | 141 | ARG |
| 4 | s2 | 148 | LEU |
| 4 | s2 | 161 | LYS |
| 4 | s2 | 170 | ILE |
| 4 | s2 | 185 | LYS |
| 4 | s2 | 195 | ASP |
| 4 | s2 | 206 | THR |
| 4 | s2 | 229 | LEU |
| 4 | s2 | 233 | GLN |
| 4 | s2 | 237 | VAL |
| 4 | s2 | 242 | ILE |
| 4 | s2 | 250 | GLN |
| 5 | s3 | 4 | LEU |
| 5 | s3 | 7 | LYS |
| 5 | s3 | 10 | LYS |
| 5 | s3 | 26 | THR |
| 5 | s3 | 37 | VAL |
| 5 | s3 | 40 | ARG |
| 5 | s3 | 44 | THR |
| 5 | s3 | 53 | THR |
| 5 | s3 | 55 | THR |
| 5 | s3 | 67 | ASN |
| 5 | s3 | 69 | LEU |
| 5 | s3 | 76 | ARG |
| 5 | s3 | 83 | THR |
| 5 | s3 | 84 | ILE |
| 5 | s3 | 91 | VAL |
| 5 | s3 | 92 | GLN |
| 5 | s3 | 94 | ARG |
| 5 | s3 | 105 | MET |
| 5 | s3 | 115 | ILE |
| 5 | s3 | 117 | ARG |
| 5 | s3 | 127 | MET |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 5 | s3 | 141 | LYS |
| 5 | s3 | 142 | LEU |
| 5 | s3 | 143 | ARG |
| 5 | s3 | 146 | ARG |
| 5 | s3 | 148 | LYS |
| 5 | s3 | 157 | LEU |
| 5 | s3 | 158 | ILE |
| 5 | s3 | 159 | HIS |
| 5 | s3 | 162 | GLN |
| 5 | s3 | 168 | ILE |
| 5 | s3 | 175 | VAL |
| 5 | s3 | 178 | ARG |
| 5 | s3 | 189 | MET |
| 5 | s3 | 202 | LEU |
| 5 | s3 | 209 | ILE |
| 5 | s3 | 212 | LYS |
| 5 | s3 | 213 | GLU |
| 5 | s3 | 215 | GLU |
| 5 | s3 | 218 | LEU |
| 6 | s4 | 6 | LYS |
| 6 | s4 | 7 | LYS |
| 6 | s4 | 9 | LEU |
| 6 | s4 | 23 | LEU |
| 6 | s4 | 26 | CYS |
| 6 | s4 | 30 | ARG |
| 6 | s4 | 38 | LEU |
| 6 | s4 | 42 | LEU |
| 6 | s4 | 49 | ARG |
| 6 | s4 | 51 | ARG |
| 6 | s4 | 67 | GLN |
| 6 | s4 | 92 | LEU |
| 6 | s4 | 113 | ARG |
| 6 | s4 | 116 | ASP |
| 6 | s4 | 120 | SER |
| 6 | s4 | 126 | VAL |
| 6 | s4 | 131 | LEU |
| 6 | s4 | 139 | VAL |
| 6 | s4 | 147 | ILE |
| 6 | s4 | 148 | ARG |
| 6 | s4 | 163 | ASP |
| 6 | s4 | 180 | LEU |
| 6 | s4 | 181 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 6 | s4 | 182 | TYR |
| 6 | s4 | 194 | THR |
| 6 | s4 | 206 | ASP |
| 6 | s4 | 221 | ARG |
| 6 | s4 | 222 | LEU |
| 6 | s4 | 227 | VAL |
| 6 | s4 | 244 | ILE |
| 6 | s4 | 245 | LYS |
| 6 | s4 | 246 | LEU |
| 7 | s5 | 23 | VAL |
| 7 | s5 | 25 | LEU |
| 7 | s5 | 27 | THR |
| 7 | s5 | 31 | GLU |
| 7 | s5 | 33 | VAL |
| 7 | s5 | 38 | THR |
| 7 | s5 | 51 | VAL |
| 7 | s5 | 59 | VAL |
| 7 | s5 | 63 | GLN |
| 7 | s5 | 64 | VAL |
| 7 | s5 | 68 | ILE |
| 7 | s5 | 70 | VAL |
| 7 | s5 | 76 | ARG |
| 7 | s5 | 83 | ARG |
| 7 | s5 | 84 | LYS |
| 7 | s5 | 93 | LEU |
| 7 | s5 | 119 | ASP |
| 7 | s5 | 125 | THR |
| 7 | s5 | 128 | ASN |
| 7 | s5 | 146 | THR |
| 7 | s5 | 149 | VAL |
| 7 | s5 | 157 | ARG |
| 7 | s5 | 161 | ASP |
| 7 | s5 | 162 | VAL |
| 7 | s5 | 167 | ARG |
| 7 | s5 | 187 | ILE |
| 7 | s5 | 194 | LEU |
| 7 | s5 | 203 | LYS |
| 7 | s5 | 208 | SER |
| 7 | s5 | 216 | GLU |
| 7 | s5 | 223 | SER |
| 8 | s6 | 15 | THR |
| 8 | s6 | 21 | GLU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 8 | s6 | 25 | ARG |
| 8 | s6 | 30 | LYS |
| 8 | s6 | 31 | ARG |
| 8 | s6 | 44 | GLU |
| 8 | s6 | 65 | GLN |
| 8 | s6 | 71 | THR |
| 8 | s6 | 78 | THR |
| 8 | s6 | 87 | ARG |
| 8 | s6 | 93 | LYS |
| 8 | s6 | 96 | SER |
| 8 | s6 | 108 | VAL |
| 8 | s6 | 109 | LEU |
| 8 | s6 | 111 | LEU |
| 8 | s6 | 121 | LEU |
| 8 | s6 | 122 | GLU |
| 8 | s6 | 124 | LEU |
| 8 | s6 | 128 | THR |
| 8 | s6 | 129 | VAL |
| 8 | s6 | 143 | LYS |
| 8 | s6 | 151 | ASP |
| 8 | s6 | 154 | ARG |
| 8 | s6 | 155 | ASP |
| 8 | s6 | 169 | TYR |
| 8 | s6 | 176 | GLN |
| 8 | s6 | 177 | ARG |
| 8 | s6 | 179 | VAL |
| 8 | s6 | 193 | LEU |
| 8 | s6 | 215 | ARG |
| 9 | s7 | 9 | LEU |
| 9 | s7 | 11 | GLN |
| 9 | s7 | 24 | PHE |
| 9 | s7 | 25 | VAL |
| 9 | s7 | 35 | LYS |
| 9 | s7 | 39 | ARG |
| 9 | s7 | 41 | LEU |
| 9 | s7 | 49 | ILE |
| 9 | s7 | 50 | ASP |
| 9 | s7 | 64 | VAL |
| 9 | s7 | 67 | LEU |
| 9 | s7 | 75 | THR |
| 9 | s7 | 77 | LEU |
| 9 | s7 | 79 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 9 | s7 | 86 | GLN |
| 9 | s7 | 87 | ASP |
| 9 | s7 | 97 | ARG |
| 9 | s7 | 101 | LYS |
| 9 | s7 | 105 | THR |
| 9 | s7 | 108 | GLN |
| 9 | s7 | 109 | VAL |
| 9 | s7 | 112 | ARG |
| 9 | s7 | 114 | ARG |
| 9 | s7 | 116 | ARG |
| 9 | s7 | 117 | THR |
| 9 | s7 | 118 | LEU |
| 9 | s7 | 123 | ASP |
| 9 | s7 | 126 | LEU |
| 9 | s7 | 134 | GLU |
| 9 | s7 | 139 | ARG |
| 9 | s7 | 144 | VAL |
| 9 | s7 | 159 | VAL |
| 9 | s7 | 163 | ASP |
| 9 | s7 | 166 | LEU |
| 9 | s7 | 167 | GLU |
| 9 | s7 | 185 | ILE |
| 10 | s8 | 7 | SER |
| 10 | s8 | 12 | SER |
| 10 | s8 | 18 | ARG |
| 10 | s8 | 25 | ARG |
| 10 | s8 | 29 | LEU |
| 10 | s8 | 36 | THR |
| 10 | s8 | 58 | LEU |
| 10 | s8 | 59 | ARG |
| 10 | s8 | 60 | ILE |
| 10 | s8 | 61 | GLU |
| 10 | s8 | 66 | SER |
| 10 | s8 | 74 | LYS |
| 10 | s8 | 77 | ARG |
| 10 | s8 | 97 | THR |
| 10 | s8 | 121 | LEU |
| 10 | s8 | 123 | LYS |
| 10 | s8 | 138 | ASN |
| 10 | s8 | 151 | LYS |
| 10 | s8 | 152 | ILE |
| 10 | s8 | 154 | SER |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 10 | s8 | 155 | SER |
| 10 | s8 | 168 | CYS |
| 10 | s8 | 176 | SER |
| 10 | s8 | 183 | ILE |
| 10 | s8 | 184 | LEU |
| 10 | s8 | 193 | LEU |
| 10 | s8 | 199 | LYS |
| 11 | s9 | 7 | THR |
| 11 | s9 | 28 | LEU |
| 11 | s9 | 39 | LYS |
| 11 | s9 | 46 | SER |
| 11 | s9 | 49 | LEU |
| 11 | s9 | 90 | LYS |
| 11 | s9 | 93 | LEU |
| 11 | s9 | 100 | LYS |
| 11 | s9 | 101 | VAL |
| 11 | s9 | 105 | LEU |
| 11 | s9 | 109 | LEU |
| 11 | s9 | 120 | LYS |
| 11 | s9 | 130 | THR |
| 11 | s9 | 133 | HIS |
| 11 | s9 | 134 | ILE |
| 11 | s9 | 141 | VAL |
| 11 | s9 | 145 | SER |
| 11 | s9 | 149 | ARG |
| 11 | s9 | 180 | LYS |
| 11 | s9 | 182 | GLU |
| 11 | s9 | 186 | GLU |
| 12 | c0 | 5 | LYS |
| 12 | c0 | 15 | LEU |
| 12 | c0 | 20 | VAL |
| 12 | c0 | 21 | VAL |
| 12 | c0 | 26 | ASP |
| 12 | c0 | 27 | PHE |
| 12 | c0 | 33 | GLU |
| 12 | c0 | 40 | LEU |
| 12 | c0 | 49 | LEU |
| 12 | c0 | 52 | LYS |
| 12 | c0 | 55 | VAL |
| 12 | c0 | 76 | LEU |
| 12 | c0 | 77 | ARG |
| 13 | c1 | 3 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 13 | c1 | 5 | LEU |
| 13 | c1 | 6 | THR |
| 13 | c1 | 10 | GLU |
| 13 | c1 | 21 | ASN |
| 13 | c1 | 26 | LYS |
| 13 | c1 | 27 | THR |
| 13 | c1 | 28 | SER |
| 13 | c1 | 32 | LYS |
| 13 | c1 | 33 | ARG |
| 13 | c1 | 40 | LEU |
| 13 | c1 | 44 | THR |
| 13 | c1 | 47 | THR |
| 13 | c1 | 53 | TYR |
| 13 | c1 | 56 | LYS |
| 13 | c1 | 60 | PHE |
| 13 | c1 | 61 | THR |
| 13 | c1 | 67 | ARG |
| 13 | c1 | 72 | THR |
| 13 | c1 | 74 | THR |
| 13 | c1 | 83 | THR |
| 13 | c1 | 115 | PHE |
| 13 | c1 | 125 | VAL |
| 13 | c1 | 140 | VAL |
| 14 | c2 | 28 | LEU |
| 14 | c2 | 36 | LEU |
| 14 | c2 | 39 | ASP |
| 14 | c2 | 43 | ARG |
| 14 | c2 | 45 | LEU |
| 14 | c2 | 50 | LYS |
| 14 | c2 | 58 | LEU |
| 14 | c2 | 59 | LEU |
| 14 | c2 | 61 | VAL |
| 14 | c2 | 62 | LEU |
| 14 | c2 | 66 | VAL |
| 14 | c2 | 71 | ILE |
| 14 | c2 | 74 | LEU |
| 14 | c2 | 83 | GLU |
| 14 | c2 | 85 | LYS |
| 14 | c2 | 93 | ASP |
| 14 | c2 | 97 | LEU |
| 14 | c2 | 103 | LEU |
| 14 | c2 | 116 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 14 | c2 | 120 | VAL |
| 14 | c2 | 121 | VAL |
| 14 | c2 | 129 | GLU |
| 14 | c2 | 132 | GLU |
| 14 | c2 | 136 | ILE |
| 14 | c2 | 139 | HIS |
| 14 | c2 | 140 | PHE |
| 15 | c3 | 6 | SER |
| 15 | c3 | 14 | SER |
| 15 | c3 | 16 | ILE |
| 15 | c3 | 18 | TYR |
| 15 | c3 | 21 | ASN |
| 15 | c3 | 28 | LEU |
| 15 | c3 | 49 | GLN |
| 15 | c3 | 58 | HIS |
| 15 | c3 | 64 | ARG |
| 15 | c3 | 66 | ILE |
| 15 | c3 | 70 | LYS |
| 15 | c3 | 72 | MET |
| 15 | c3 | 80 | LEU |
| 15 | c3 | 83 | GLU |
| 15 | c3 | 84 | ILE |
| 15 | c3 | 86 | GLU |
| 15 | c3 | 88 | LEU |
| 15 | c3 | 104 | ARG |
| 15 | c3 | 115 | LEU |
| 15 | c3 | 125 | LEU |
| 15 | c3 | 127 | ARG |
| 15 | c3 | 134 | VAL |
| 15 | c3 | 138 | ASN |
| 15 | c3 | 139 | TRP |
| 15 | c3 | 143 | SER |
| 15 | c3 | 149 | LEU |
| 15 | c3 | 150 | VAL |
| 16 | c4 | 12 | GLN |
| 16 | c4 | 13 | VAL |
| 16 | c4 | 28 | VAL |
| 16 | c4 | 31 | THR |
| 16 | c4 | 33 | LEU |
| 16 | c4 | 34 | SER |
| 16 | c4 | 38 | THR |
| 16 | c4 | 42 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 16 | c4 | 51 | ASP |
| 16 | c4 | 52 | ARG |
| 16 | c4 | 61 | MET |
| 16 | c4 | 65 | GLN |
| 16 | c4 | 66 | ASP |
| 16 | c4 | 81 | VAL |
| 16 | c4 | 92 | LYS |
| 16 | c4 | 102 | LEU |
| 16 | c4 | 114 | ARG |
| 16 | c4 | 118 | VAL |
| 16 | c4 | 124 | ASP |
| 16 | c4 | 136 | ARG |
| 16 | c4 | 137 | LEU |
| 17 | c5 | 21 | ASP |
| 17 | c5 | 24 | LYS |
| 17 | c5 | 27 | GLU |
| 17 | c5 | 36 | LEU |
| 17 | c5 | 40 | ARG |
| 17 | c5 | 42 | ARG |
| 17 | c5 | 69 | GLU |
| 17 | c5 | 94 | VAL |
| 17 | c5 | 107 | ILE |
| 17 | c5 | 110 | GLU |
| 17 | c5 | 121 | ILE |
| 17 | c5 | 122 | THR |
| 17 | c5 | 124 | THR |
| 18 | c6 | 17 | THR |
| 18 | c6 | 28 | LEU |
| 18 | c6 | 40 | GLU |
| 18 | c6 | 43 | ILE |
| 18 | c6 | 45 | ARG |
| 18 | c6 | 48 | VAL |
| 18 | c6 | 53 | LEU |
| 18 | c6 | 57 | LEU |
| 18 | c6 | 58 | ASP |
| 18 | c6 | 68 | ARG |
| 18 | c6 | 69 | VAL |
| 18 | c6 | 90 | VAL |
| 18 | c6 | 94 | GLN |
| 18 | c6 | 98 | ASP |
| 18 | c6 | 113 | ASP |
| 18 | c6 | 114 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 18 | c6 | 117 | LEU |
| 18 | c6 | 123 | ARG |
| 18 | c6 | 128 | LYS |
| 18 | c6 | 137 | ARG |
| 19 | c7 | 3 | ARG |
| 19 | c7 | 8 | THR |
| 19 | c7 | 19 | ARG |
| 19 | c7 | 27 | ASP |
| 19 | c7 | 29 | GLN |
| 19 | c7 | 34 | LEU |
| 19 | c7 | 38 | ILE |
| 19 | c7 | 46 | LEU |
| 19 | c7 | 60 | ARG |
| 19 | c7 | 69 | ILE |
| 19 | c7 | 78 | ARG |
| 19 | c7 | 83 | GLN |
| 19 | c7 | 88 | VAL |
| 19 | c7 | 89 | SER |
| 19 | c7 | 101 | ASN |
| 19 | c7 | 106 | THR |
| 19 | c7 | 108 | ASP |
| 19 | c7 | 109 | LEU |
| 19 | c7 | 110 | VAL |
| 20 | c8 | 3 | LEU |
| 20 | c8 | 4 | VAL |
| 20 | c8 | 6 | GLN |
| 20 | c8 | 7 | GLU |
| 20 | c8 | 13 | HIS |
| 20 | c8 | 15 | LEU |
| 20 | c8 | 17 | LEU |
| 20 | c8 | 20 | THR |
| 20 | c8 | 25 | ASN |
| 20 | c8 | 28 | ILE |
| 20 | c8 | 36 | LYS |
| 20 | c8 | 40 | ARG |
| 20 | c8 | 55 | HIS |
| 20 | c8 | 61 | LEU |
| 20 | c8 | 77 | THR |
| 20 | c8 | 81 | ILE |
| 20 | c8 | 92 | ILE |
| 20 | c8 | 94 | ASP |
| 20 | c8 | 100 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 20 | c8 | 103 | ASN |
| 20 | c8 | 105 | VAL |
| 20 | c8 | 119 | ILE |
| 20 | c8 | 136 | GLN |
| 20 | c8 | 138 | THR |
| 20 | c8 | 144 | ARG |
| 21 | c9 | 6 | VAL |
| 21 | c9 | 13 | ASP |
| 21 | c9 | 23 | GLN |
| 21 | c9 | 27 | LYS |
| 21 | c9 | 28 | LEU |
| 21 | c9 | 33 | TYR |
| 21 | c9 | 34 | VAL |
| 21 | c9 | 35 | ASP |
| 21 | c9 | 57 | ARG |
| 21 | c9 | 68 | ARG |
| 21 | c9 | 71 | VAL |
| 21 | c9 | 75 | LYS |
| 21 | c9 | 86 | ARG |
| 21 | c9 | 89 | ARG |
| 21 | c9 | 111 | ILE |
| 21 | c9 | 123 | ARG |
| 21 | c9 | 126 | GLU |
| 21 | c9 | 132 | LEU |
| 21 | c9 | 135 | ILE |
| 21 | c9 | 139 | THR |
| 21 | c9 | 140 | LEU |
| 21 | c9 | 142 | GLU |
| 21 | c9 | 144 | GLU |
| 22 | d0 | 23 | ARG |
| 22 | d0 | 27 | THR |
| 22 | d0 | 30 | LYS |
| 22 | d0 | 34 | LEU |
| 22 | d0 | 44 | ASN |
| 22 | d0 | 47 | GLN |
| 22 | d0 | 51 | VAL |
| 22 | d0 | 57 | ARG |
| 22 | d0 | 60 | THR |
| 22 | d0 | 70 | THR |
| 22 | d0 | 74 | GLU |
| 22 | d0 | 81 | THR |
| 22 | d0 | 88 | LYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 22 | d0 | 99 | ILE |
| 22 | d0 | 102 | ARG |
| 22 | d0 | 103 | ILE |
| 22 | d0 | 105 | GLN |
| 22 | d0 | 115 | GLU |
| 23 | d1 | 2 | GLU |
| 23 | d1 | 5 | LYS |
| 23 | d1 | 10 | GLU |
| 23 | d1 | 11 | LEU |
| 23 | d1 | 12 | TYR |
| 23 | d1 | 32 | VAL |
| 23 | d1 | 38 | LYS |
| 23 | d1 | 49 | GLU |
| 23 | d1 | 52 | THR |
| 23 | d1 | 56 | SER |
| 23 | d1 | 59 | VAL |
| 23 | d1 | 62 | ARG |
| 23 | d1 | 68 | SER |
| 23 | d1 | 70 | ASN |
| 24 | d2 | 4 | SER |
| 24 | d2 | 5 | SER |
| 24 | d2 | 7 | LEU |
| 24 | d2 | 15 | ASN |
| 24 | d2 | 23 | ARG |
| 24 | d2 | 37 | PHE |
| 24 | d2 | 57 | ARG |
| 24 | d2 | 65 | LEU |
| 24 | d2 | 79 | PHE |
| 24 | d2 | 93 | LEU |
| 24 | d2 | 98 | GLN |
| 24 | d2 | 103 | ILE |
| 24 | d2 | 121 | VAL |
| 24 | d2 | 122 | SER |
| 24 | d2 | 126 | LEU |
| 24 | d2 | 129 | VAL |
| 25 | d3 | 9 | LEU |
| 25 | d3 | 16 | ARG |
| 25 | d3 | 19 | ARG |
| 25 | d3 | 41 | SER |
| 25 | d3 | 71 | CYS |
| 25 | d3 | 73 | ARG |
| 25 | d3 | 79 | ASN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 25 | d3 | 84 | THR |
| 25 | d3 | 103 | LEU |
| 25 | d3 | 107 | PHE |
| 25 | d3 | 133 | LEU |
| 26 | d4 | 6 | THR |
| 26 | d4 | 10 | ARG |
| 26 | d4 | 13 | ILE |
| 26 | d4 | 14 | SER |
| 26 | d4 | 22 | GLN |
| 26 | d4 | 35 | VAL |
| 26 | d4 | 42 | GLU |
| 26 | d4 | 43 | LYS |
| 26 | d4 | 44 | LEU |
| 26 | d4 | 47 | VAL |
| 26 | d4 | 49 | LYS |
| 26 | d4 | 57 | VAL |
| 26 | d4 | 58 | PHE |
| 26 | d4 | 62 | THR |
| 26 | d4 | 77 | ASN |
| 26 | d4 | 83 | LYS |
| 26 | d4 | 88 | THR |
| 26 | d4 | 100 | VAL |
| 26 | d4 | 105 | ARG |
| 26 | d4 | 125 | LEU |
| 26 | d4 | 128 | LYS |
| 26 | d4 | 131 | ARG |
| 26 | d4 | 133 | ASN |
| 27 | d5 | 45 | GLU |
| 27 | d5 | 46 | LYS |
| 27 | d5 | 51 | LEU |
| 27 | d5 | 53 | GLU |
| 27 | d5 | 57 | TYR |
| 27 | d5 | 81 | ARG |
| 27 | d5 | 102 | THR |
| 28 | d6 | 10 | ARG |
| 28 | d6 | 12 | LYS |
| 28 | d6 | 15 | ARG |
| 28 | d6 | 18 | VAL |
| 28 | d6 | 33 | ASP |
| 28 | d6 | 44 | ILE |
| 28 | d6 | 53 | LEU |
| 28 | d6 | 58 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 28 | d6 | 74 | CYS |
| 28 | d6 | 82 | ARG |
| 28 | d6 | 85 | ARG |
| 28 | d6 | 89 | ARG |
| 29 | d7 | 3 | LEU |
| 29 | d7 | 4 | VAL |
| 29 | d7 | 20 | LYS |
| 29 | d7 | 22 | LYS |
| 29 | d7 | 34 | ASP |
| 29 | d7 | 37 | CYS |
| 29 | d7 | 42 | ASN |
| 29 | d7 | 43 | ILE |
| 29 | d7 | 44 | THR |
| 29 | d7 | 52 | THR |
| 29 | d7 | 61 | THR |
| 29 | d7 | 77 | THR |
| 29 | d7 | 81 | ARG |
| 30 | d8 | 5 | THR |
| 30 | d8 | 11 | LYS |
| 30 | d8 | 18 | ARG |
| 30 | d8 | 19 | THR |
| 30 | d8 | 22 | ARG |
| 30 | d8 | 28 | VAL |
| 30 | d8 | 30 | VAL |
| 30 | d8 | 32 | PHE |
| 30 | d8 | 33 | LEU |
| 30 | d8 | 36 | THR |
| 30 | d8 | 39 | THR |
| 30 | d8 | 40 | ILE |
| 30 | d8 | 41 | VAL |
| 30 | d8 | 49 | ARG |
| 30 | d8 | 54 | LEU |
| 30 | d8 | 62 | GLU |
| 30 | d8 | 64 | ARG |
| 30 | d8 | 65 | ARG |
| 31 | d9 | 8 | PHE |
| 31 | d9 | 10 | HIS |
| 31 | d9 | 12 | ARG |
| 31 | d9 | 31 | ILE |
| 31 | d9 | 32 | ARG |
| 31 | d9 | 36 | LEU |
| 31 | d9 | 53 | ASN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 31 | d9 | 54 | LYS |
| 32 | e0 | 3 | LYS |
| 32 | e0 | 7 | SER |
| 32 | e0 | 8 | LEU |
| 32 | e0 | 10 | ARG |
| 32 | e0 | 13 | LYS |
| 32 | e0 | 16 | SER |
| 32 | e0 | 22 | GLU |
| 32 | e0 | 23 | LYS |
| 32 | e0 | 26 | LYS |
| 32 | e0 | 28 | LYS |
| 32 | e0 | 29 | LYS |
| 32 | e0 | 31 | LYS |
| 32 | e0 | 36 | LYS |
| 32 | e0 | 44 | PHE |
| 32 | e0 | 53 | LYS |
| 32 | e0 | 56 | MET |
| 33 | e1 | 84 | VAL |
| 33 | e1 | 85 | TYR |
| 33 | e1 | 90 | LYS |
| 33 | e1 | 126 | CYS |
| 33 | e1 | 135 | HIS |
| 33 | e1 | 140 | TYR |
| 33 | e1 | 141 | CYS |
| 33 | e1 | 147 | VAL |
| 33 | e1 | 148 | TYR |
| 34 | sR | 25 | THR |
| 34 | sR | 29 | GLN |
| 34 | sR | 42 | LEU |
| 34 | sR | 48 | THR |
| 34 | sR | 52 | GLN |
| 34 | sR | 58 | VAL |
| 34 | sR | 59 | ARG |
| 34 | sR | 64 | HIS |
| 34 | sR | 76 | ASP |
| 34 | sR | 96 | THR |
| 34 | sR | 106 | HIS |
| 34 | sR | 145 | LEU |
| 34 | sR | 167 | VAL |
| 34 | sR | 176 | LYS |
| 34 | sR | 182 | ASN |
| 34 | sR | 188 | ILE |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 34 | sR | 207 | ASP |
| 34 | sR | 232 | TYR |
| 34 | sR | 256 | THR |
| 34 | sR | 266 | ASP |
| 34 | sR | 275 | ARG |
| 34 | sR | 277 | GLU |
| 34 | sR | 297 | ASP |
| 34 | sR | 308 | ASN |
| 34 | sR | 309 | VAL |
| 35 | sM | 23 | LYS |
| 35 | sM | 30 | THR |
| 35 | sM | 43 | ASP |
| 35 | sM | 50 | ASN |
| 35 | sM | 53 | ARG |
| 35 | sM | 61 | ILE |
| 35 | sM | 62 | ARG |
| 35 | sM | 68 | ARG |
| 35 | sM | 74 | LYS |
| 35 | sM | 75 | ASP |
| 35 | sM | 77 | THR |
| 35 | sM | 82 | THR |
| 35 | sM | 83 | LYS |
| 35 | sM | 88 | ARG |
| 35 | sM | 89 | ARG |
| 35 | sM | 91 | THR |
| 35 | sM | 93 | ARG |
| 35 | sM | 97 | THR |
| 35 | sM | 102 | THR |
| 35 | sM | 105 | LYS |
| 35 | sM | 116 | GLU |
| 35 | sM | 134 | ASP |
| 35 | sM | 137 | GLU |
| 39 | l2 | 5 | ILE |
| 39 | l2 | 15 | ILE |
| 39 | l2 | 23 | ARG |
| 39 | l2 | 32 | LEU |
| 39 | l2 | 41 | ILE |
| 39 | l2 | 44 | ILE |
| 39 | l2 | 45 | VAL |
| 39 | l2 | 46 | LYS |
| 39 | l2 | 48 | ILE |
| 39 | l2 | 64 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 39 | 12 | 70 | ARG |
| 39 | 12 | 101 | VAL |
| 39 | 12 | 107 | VAL |
| 39 | 12 | 109 | GLU |
| 39 | 12 | 113 | VAL |
| 39 | 12 | 119 | LYS |
| 39 | 12 | 128 | ARG |
| 39 | 12 | 130 | SER |
| 39 | 12 | 134 | VAL |
| 39 | 12 | 137 | ILE |
| 39 | 12 | 142 | ASP |
| 39 | 12 | 147 | ARG |
| 39 | 12 | 152 | SER |
| 39 | 12 | 155 | LYS |
| 39 | 12 | 157 | VAL |
| 39 | 12 | 165 | VAL |
| 39 | 12 | 179 | LEU |
| 39 | 12 | 180 | LEU |
| 39 | 12 | 181 | LYS |
| 39 | 12 | 190 | ARG |
| 39 | 12 | 191 | LEU |
| 39 | 12 | 193 | ARG |
| 39 | 12 | 194 | ASN |
| 39 | 12 | 199 | THR |
| 39 | 12 | 202 | VAL |
| 39 | 12 | 223 | SER |
| 39 | 12 | 224 | THR |
| 39 | 12 | 225 | ILE |
| 39 | 12 | 241 | ARG |
| 39 | 12 | 243 | THR |
| 39 | 12 | 246 | LEU |
| 39 | 12 | 247 | ARG |
| 39 | 12 | 249 | SER |
| 39 | 12 | 251 | LYS |
| 40 | 13 | 2 | SER |
| 40 | 13 | 3 | HIS |
| 40 | 13 | 4 | ARG |
| 40 | 13 | 7 | GLU |
| 40 | 13 | 10 | ARG |
| 40 | 13 | 17 | LEU |
| 40 | 13 | 20 | LYS |
| 40 | 13 | 28 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 40 | 13 | 30 | LYS |
| 40 | 13 | 37 | ARG |
| 40 | 13 | 39 | LYS |
| 40 | 13 | 41 | VAL |
| 40 | 13 | 43 | LEU |
| 40 | 13 | 47 | LEU |
| 40 | 13 | 50 | LYS |
| 40 | 13 | 55 | THR |
| 40 | 13 | 56 | ILE |
| 40 | 13 | 65 | SER |
| 40 | 13 | 70 | ARG |
| 40 | 13 | 73 | VAL |
| 40 | 13 | 77 | THR |
| 40 | 13 | 81 | THR |
| 40 | 13 | 85 | VAL |
| 40 | 13 | 95 | THR |
| 40 | 13 | 102 | LEU |
| 40 | 13 | 103 | THR |
| 40 | 13 | 110 | LEU |
| 40 | 13 | 114 | VAL |
| 40 | 13 | 116 | ARG |
| 40 | 13 | 120 | LYS |
| 40 | 13 | 139 | GLN |
| 40 | 13 | 148 | LEU |
| 40 | 13 | 162 | VAL |
| 40 | 13 | 169 | THR |
| 40 | 13 | 183 | LEU |
| 40 | 13 | 184 | ASN |
| 40 | 13 | 188 | ILE |
| 40 | 13 | 192 | VAL |
| 40 | 13 | 196 | ARG |
| 40 | 13 | 201 | LYS |
| 40 | 13 | 202 | THR |
| 40 | 13 | 205 | VAL |
| 40 | 13 | 221 | THR |
| 40 | 13 | 227 | GLU |
| 40 | 13 | 229 | VAL |
| 40 | 13 | 232 | ARG |
| 40 | 13 | 235 | THR |
| 40 | 13 | 237 | LYS |
| 40 | 13 | 238 | LEU |
| 40 | 13 | 244 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 40 | 13 | 246 | LEU |
| 40 | 13 | 252 | ILE |
| 40 | 13 | 260 | VAL |
| 40 | 13 | 266 | ARG |
| 40 | 13 | 272 | TYR |
| 40 | 13 | 284 | ARG |
| 40 | 13 | 287 | LYS |
| 40 | 13 | 304 | THR |
| 40 | 13 | 308 | MET |
| 40 | 13 | 317 | ILE |
| 40 | 13 | 319 | ASN |
| 40 | 13 | 320 | ASP |
| 40 | 13 | 324 | VAL |
| 40 | 13 | 328 | ILE |
| 40 | 13 | 332 | ARG |
| 40 | 13 | 338 | LEU |
| 40 | 13 | 339 | ARG |
| 40 | 13 | 340 | LYS |
| 40 | 13 | 364 | LYS |
| 40 | 13 | 365 | PHE |
| 40 | 13 | 367 | LYS |
| 40 | 13 | 369 | ARG |
| 41 | 14 | 3 | ARG |
| 41 | 14 | 14 | GLU |
| 41 | 14 | 22 | LEU |
| 41 | 14 | 37 | THR |
| 41 | 14 | 48 | GLN |
| 41 | 14 | 52 | VAL |
| 41 | 14 | 71 | VAL |
| 41 | 14 | 76 | ARG |
| 41 | 14 | 92 | ASN |
| 41 | 14 | 93 | MET |
| 41 | 14 | 99 | MET |
| 41 | 14 | 103 | THR |
| 41 | 14 | 105 | THR |
| 41 | 14 | 120 | TYR |
| 41 | 14 | 133 | SER |
| 41 | 14 | 136 | LEU |
| 41 | 14 | 138 | ARG |
| 41 | 14 | 141 | ARG |
| 41 | 14 | 144 | LYS |
| 41 | 14 | 150 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 41 | 14 | 156 | LEU |
| 41 | 14 | 161 | LYS |
| 41 | 14 | 170 | LYS |
| 41 | 14 | 172 | VAL |
| 41 | 14 | 177 | ASP |
| 41 | 14 | 179 | LEU |
| 41 | 14 | 184 | SER |
| 41 | 14 | 186 | LYS |
| 41 | 14 | 187 | LEU |
| 41 | 14 | 193 | LYS |
| 41 | 14 | 194 | TYR |
| 41 | 14 | 200 | THR |
| 41 | 14 | 203 | ARG |
| 41 | 14 | 217 | LYS |
| 41 | 14 | 220 | ARG |
| 41 | 14 | 230 | VAL |
| 41 | 14 | 232 | SER |
| 41 | 14 | 246 | ARG |
| 41 | 14 | 256 | THR |
| 41 | 14 | 258 | LEU |
| 41 | 14 | 259 | ASP |
| 41 | 14 | 261 | VAL |
| 41 | 14 | 267 | VAL |
| 41 | 14 | 275 | THR |
| 41 | 14 | 287 | THR |
| 41 | 14 | 295 | ILE |
| 41 | 14 | 304 | GLN |
| 41 | 14 | 307 | GLN |
| 41 | 14 | 310 | THR |
| 41 | 14 | 313 | LEU |
| 41 | 14 | 327 | LEU |
| 41 | 14 | 345 | GLU |
| 41 | 14 | 347 | THR |
| 41 | 14 | 356 | THR |
| 41 | 14 | 359 | LEU |
| 41 | 14 | 360 | LYS |
| 42 | 15 | 4 | GLN |
| 42 | 15 | 5 | LYS |
| 42 | 15 | 25 | GLU |
| 42 | 15 | 32 | GLN |
| 42 | 15 | 34 | LYS |
| 42 | 15 | 35 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 42 | 15 | 38 | THR |
| 42 | 15 | 51 | LEU |
| 42 | 15 | 56 | THR |
| 42 | 15 | 65 | ILE |
| 42 | 15 | 69 | ILE |
| 42 | 15 | 70 | THR |
| 42 | 15 | 74 | VAL |
| 42 | 15 | 110 | LEU |
| 42 | 15 | 112 | LYS |
| 42 | 15 | 113 | LEU |
| 42 | 15 | 115 | LEU |
| 42 | 15 | 118 | THR |
| 42 | 15 | 133 | GLU |
| 42 | 15 | 137 | ASP |
| 42 | 15 | 144 | VAL |
| 42 | 15 | 146 | LEU |
| 42 | 15 | 148 | ILE |
| 42 | 15 | 152 | ARG |
| 42 | 15 | 155 | THR |
| 42 | 15 | 177 | GLU |
| 42 | 15 | 185 | PHE |
| 42 | 15 | 186 | GLU |
| 42 | 15 | 189 | GLU |
| 42 | 15 | 190 | ILE |
| 42 | 15 | 194 | LEU |
| 42 | 15 | 203 | HIS |
| 42 | 15 | 211 | LEU |
| 42 | 15 | 213 | ASP |
| 42 | 15 | 218 | ARG |
| 42 | 15 | 227 | LEU |
| 42 | 15 | 234 | ASP |
| 42 | 15 | 258 | LYS |
| 42 | 15 | 259 | LYS |
| 42 | 15 | 268 | GLU |
| 42 | 15 | 273 | ARG |
| 42 | 15 | 275 | THR |
| 42 | 15 | 282 | ARG |
| 43 | 16 | 8 | LYS |
| 43 | 16 | 15 | VAL |
| 43 | 16 | 20 | LYS |
| 43 | 16 | 21 | THR |
| 43 | 16 | 26 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 43 | 16 | 29 | LYS |
| 43 | 16 | 33 | SER |
| 43 | 16 | 41 | ILE |
| 43 | 16 | 46 | ARG |
| 43 | 16 | 50 | LYS |
| 43 | 16 | 52 | VAL |
| 43 | 16 | 54 | TYR |
| 43 | 16 | 64 | LEU |
| 43 | 16 | 79 | VAL |
| 43 | 16 | 88 | SER |
| 43 | 16 | 91 | VAL |
| 43 | 16 | 98 | VAL |
| 43 | 16 | 108 | LYS |
| 43 | 16 | 109 | GLU |
| 43 | 16 | 152 | THR |
| 43 | 16 | 155 | LEU |
| 43 | 16 | 166 | LYS |
| 44 | 17 | 22 | THR |
| 44 | 17 | 33 | ARG |
| 44 | 17 | 45 | LEU |
| 44 | 17 | 60 | ARG |
| 44 | 17 | 77 | VAL |
| 44 | 17 | 82 | LYS |
| 44 | 17 | 83 | LEU |
| 44 | 17 | 84 | VAL |
| 44 | 17 | 87 | VAL |
| 44 | 17 | 88 | ARG |
| 44 | 17 | 90 | LYS |
| 44 | 17 | 98 | LYS |
| 44 | 17 | 101 | LYS |
| 44 | 17 | 103 | LEU |
| 44 | 17 | 108 | LEU |
| 44 | 17 | 110 | ARG |
| 44 | 17 | 124 | LEU |
| 44 | 17 | 158 | LYS |
| 44 | 17 | 178 | ILE |
| 44 | 17 | 179 | LEU |
| 44 | 17 | 184 | LEU |
| 44 | 17 | 196 | LYS |
| 44 | 17 | 208 | SER |
| 44 | 17 | 216 | VAL |
| 44 | 17 | 229 | PHE |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 44 | 17 | 239 | LEU |
| 45 | 18 | 27 | THR |
| 45 | 18 | 50 | VAL |
| 45 | 18 | 68 | ARG |
| 45 | 18 | 70 | LYS |
| 45 | 18 | 79 | GLN |
| 45 | 18 | 81 | THR |
| 45 | 18 | 83 | ASP |
| 45 | 18 | 89 | GLU |
| 45 | 18 | 92 | LYS |
| 45 | 18 | 98 | ARG |
| 45 | 18 | 109 | LEU |
| 45 | 18 | 136 | LEU |
| 45 | 18 | 146 | LYS |
| 45 | 18 | 150 | LEU |
| 45 | 18 | 156 | ASP |
| 45 | 18 | 160 | ILE |
| 45 | 18 | 163 | VAL |
| 45 | 18 | 164 | VAL |
| 45 | 18 | 169 | LEU |
| 45 | 18 | 172 | LYS |
| 45 | 18 | 180 | VAL |
| 45 | 18 | 183 | LYS |
| 45 | 18 | 194 | THR |
| 45 | 18 | 197 | VAL |
| 45 | 18 | 200 | LEU |
| 45 | 18 | 208 | GLU |
| 45 | 18 | 214 | LEU |
| 45 | 18 | 217 | THR |
| 45 | 18 | 221 | ASN |
| 45 | 18 | 230 | LYS |
| 45 | 18 | 240 | ASN |
| 45 | 18 | 241 | LYS |
| 45 | 18 | 245 | LYS |
| 45 | 18 | 248 | LYS |
| 46 | 19 | 4 | ILE |
| 46 | 19 | 5 | GLN |
| 46 | 19 | 6 | THR |
| 46 | 19 | 17 | THR |
| 46 | 19 | 18 | VAL |
| 46 | 19 | 19 | SER |
| 46 | 19 | 21 | LYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 46 | 19 | 30 | PRO |
| 46 | 19 | 35 | THR |
| 46 | 19 | 43 | VAL |
| 46 | 19 | 48 | VAL |
| 46 | 19 | 52 | LEU |
| 46 | 19 | 55 | VAL |
| 46 | 19 | 65 | VAL |
| 46 | 19 | 68 | LEU |
| 46 | 19 | 69 | ARG |
| 46 | 19 | 70 | THR |
| 46 | 19 | 80 | THR |
| 46 | 19 | 82 | VAL |
| 46 | 19 | 92 | TYR |
| 46 | 19 | 105 | GLU |
| 46 | 19 | 106 | LYS |
| 46 | 19 | 124 | ARG |
| 46 | 19 | 130 | ASP |
| 46 | 19 | 133 | THR |
| 46 | 19 | 134 | ILE |
| 46 | 19 | 138 | THR |
| 46 | 19 | 140 | VAL |
| 46 | 19 | 144 | ILE |
| 46 | 19 | 147 | SER |
| 46 | 19 | 149 | ASN |
| 46 | 19 | 150 | SER |
| 46 | 19 | 151 | VAL |
| 46 | 19 | 157 | ASN |
| 46 | 19 | 162 | GLN |
| 46 | 19 | 164 | ILE |
| 46 | 19 | 165 | CYS |
| 46 | 19 | 177 | ASP |
| 46 | 19 | 181 | VAL |
| 46 | 19 | 186 | PHE |
| 46 | 19 | 189 | GLU |
| 47 | m0 | 20 | SER |
| 47 | m0 | 21 | ARG |
| 47 | m0 | 24 | ARG |
| 47 | m0 | 26 | VAL |
| 47 | m0 | 32 | ARG |
| 47 | m0 | 36 | LEU |
| 47 | m0 | 39 | LYS |
| 47 | m0 | 42 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 47 | m0 | 48 | LEU |
| 47 | m0 | 52 | LEU |
| 47 | m0 | 58 | GLU |
| 47 | m0 | 61 | SER |
| 47 | m0 | 62 | SER |
| 47 | m0 | 63 | GLU |
| 47 | m0 | 87 | LEU |
| 47 | m0 | 113 | GLN |
| 47 | m0 | 129 | VAL |
| 47 | m0 | 130 | ASP |
| 47 | m0 | 135 | ILE |
| 47 | m0 | 139 | ARG |
| 47 | m0 | 142 | ASP |
| 47 | m0 | 143 | SER |
| 47 | m0 | 144 | ASN |
| 47 | m0 | 145 | LYS |
| 47 | m0 | 163 | GLN |
| 47 | m0 | 167 | LEU |
| 47 | m0 | 169 | LYS |
| 47 | m0 | 174 | THR |
| 47 | m0 | 175 | ASN |
| 47 | m0 | 177 | ASP |
| 47 | m0 | 178 | ARG |
| 47 | m0 | 186 | GLU |
| 47 | m0 | 205 | SER |
| 47 | m0 | 210 | ILE |
| 47 | m0 | 212 | GLU |
| 47 | m0 | 215 | GLU |
| 47 | m0 | 217 | PHE |
| 48 | m1 | 7 | ASN |
| 48 | m1 | 10 | ARG |
| 48 | m1 | 11 | ASP |
| 48 | m1 | 12 | LEU |
| 48 | m1 | 13 | LYS |
| 48 | m1 | 30 | LEU |
| 48 | m1 | 31 | THR |
| 48 | m1 | 35 | LYS |
| 48 | m1 | 46 | VAL |
| 48 | m1 | 48 | SER |
| 48 | m1 | 80 | LEU |
| 48 | m1 | 87 | LYS |
| 48 | m1 | 92 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 48 | m1 | 94 | ARG |
| 48 | m1 | 97 | SER |
| 48 | m1 | 106 | ILE |
| 48 | m1 | 107 | ASP |
| 48 | m1 | 112 | LEU |
| 48 | m1 | 129 | VAL |
| 48 | m1 | 130 | VAL |
| 48 | m1 | 137 | ARG |
| 48 | m1 | 139 | THR |
| 48 | m1 | 140 | ARG |
| 48 | m1 | 143 | ARG |
| 48 | m1 | 147 | THR |
| 48 | m1 | 151 | SER |
| 48 | m1 | 152 | HIS |
| 48 | m1 | 158 | ASP |
| 48 | m1 | 171 | VAL |
| 48 | m1 | 174 | LYS |
| 49 | m3 | 9 | ILE |
| 49 | m3 | 13 | HIS |
| 49 | m3 | 15 | ARG |
| 49 | m3 | 46 | ILE |
| 49 | m3 | 54 | LEU |
| 49 | m3 | 55 | ARG |
| 49 | m3 | 58 | VAL |
| 49 | m3 | 63 | VAL |
| 49 | m3 | 67 | ARG |
| 49 | m3 | 68 | LYS |
| 49 | m3 | 69 | VAL |
| 49 | m3 | 75 | PHE |
| 49 | m3 | 76 | THR |
| 49 | m3 | 77 | LEU |
| 49 | m3 | 85 | LEU |
| 49 | m3 | 97 | VAL |
| 49 | m3 | 100 | ARG |
| 49 | m3 | 107 | GLU |
| 49 | m3 | 114 | GLN |
| 49 | m3 | 123 | ILE |
| 49 | m3 | 124 | ILE |
| 49 | m3 | 131 | LYS |
| 49 | m3 | 149 | GLN |
| 49 | m3 | 153 | ASP |
| 49 | m3 | 164 | GLU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 49 | m3 | 171 | ARG |
| 49 | m3 | 176 | GLU |
| 49 | m3 | 184 | GLU |
| 49 | m3 | 194 | GLU |
| 50 | m4 | 4 | ASP |
| 50 | m4 | 10 | SER |
| 50 | m4 | 13 | ARG |
| 50 | m4 | 20 | VAL |
| 50 | m4 | 23 | ILE |
| 50 | m4 | 27 | GLN |
| 50 | m4 | 28 | SER |
| 50 | m4 | 42 | LYS |
| 50 | m4 | 62 | GLN |
| 50 | m4 | 63 | VAL |
| 50 | m4 | 64 | VAL |
| 50 | m4 | 69 | THR |
| 50 | m4 | 72 | LEU |
| 50 | m4 | 74 | ARG |
| 50 | m4 | 90 | VAL |
| 50 | m4 | 106 | ARG |
| 50 | m4 | 107 | GLU |
| 50 | m4 | 108 | ARG |
| 50 | m4 | 131 | VAL |
| 50 | m4 | 132 | LYS |
| 50 | m4 | 135 | LEU |
| 51 | m5 | 10 | LEU |
| 51 | m5 | 18 | VAL |
| 51 | m5 | 22 | LEU |
| 51 | m5 | 24 | ARG |
| 51 | m5 | 31 | ARG |
| 51 | m5 | 41 | ARG |
| 51 | m5 | 49 | ARG |
| 51 | m5 | 50 | ARG |
| 51 | m5 | 68 | ARG |
| 51 | m5 | 71 | ARG |
| 51 | m5 | 73 | ARG |
| 51 | m5 | 87 | GLN |
| 51 | m5 | 91 | GLU |
| 51 | m5 | 92 | LEU |
| 51 | m5 | 96 | ARG |
| 51 | m5 | 109 | ARG |
| 51 | m5 | 117 | ASN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 51 | m5 | 137 | PRO |
| 51 | m5 | 155 | VAL |
| 51 | m5 | 165 | THR |
| 51 | m5 | 176 | LYS |
| 51 | m5 | 190 | THR |
| 51 | m5 | 194 | GLN |
| 51 | m5 | 201 | ARG |
| 51 | m5 | 204 | LYS |
| 52 | m6 | 4 | GLU |
| 52 | m6 | 12 | LYS |
| 52 | m6 | 34 | VAL |
| 52 | m6 | 40 | GLU |
| 52 | m6 | 41 | LEU |
| 52 | m6 | 44 | SER |
| 52 | m6 | 58 | LEU |
| 52 | m6 | 59 | ARG |
| 52 | m6 | 67 | THR |
| 52 | m6 | 74 | ARG |
| 52 | m6 | 77 | SER |
| 52 | m6 | 78 | ARG |
| 52 | m6 | 80 | PHE |
| 52 | m6 | 85 | ARG |
| 52 | m6 | 102 | LEU |
| 52 | m6 | 106 | GLU |
| 52 | m6 | 108 | ILE |
| 52 | m6 | 115 | LYS |
| 52 | m6 | 116 | LYS |
| 52 | m6 | 117 | ARG |
| 52 | m6 | 119 | VAL |
| 52 | m6 | 122 | GLN |
| 52 | m6 | 124 | LEU |
| 52 | m6 | 126 | VAL |
| 52 | m6 | 127 | LEU |
| 52 | m6 | 128 | ARG |
| 52 | m6 | 134 | LYS |
| 52 | m6 | 143 | THR |
| 52 | m6 | 152 | VAL |
| 52 | m6 | 160 | ARG |
| 52 | m6 | 167 | TYR |
| 52 | m6 | 170 | LYS |
| 52 | m6 | 171 | LYS |
| 52 | m6 | 180 | SER |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 52 | m6 | 182 | ASN |
| 52 | m6 | 184 | THR |
| 53 | m7 | 7 | THR |
| 53 | m7 | 16 | SER |
| 53 | m7 | 22 | LEU |
| 53 | m7 | 24 | VAL |
| 53 | m7 | 31 | GLU |
| 53 | m7 | 32 | THR |
| 53 | m7 | 34 | GLN |
| 53 | m7 | 41 | LEU |
| 53 | m7 | 49 | GLU |
| 53 | m7 | 52 | LEU |
| 53 | m7 | 53 | ASP |
| 53 | m7 | 55 | GLN |
| 53 | m7 | 56 | ARG |
| 53 | m7 | 69 | ARG |
| 53 | m7 | 74 | LYS |
| 53 | m7 | 75 | GLU |
| 53 | m7 | 80 | LYS |
| 53 | m7 | 82 | ARG |
| 53 | m7 | 96 | GLN |
| 53 | m7 | 107 | LEU |
| 53 | m7 | 114 | VAL |
| 53 | m7 | 115 | SER |
| 53 | m7 | 120 | ASN |
| 53 | m7 | 126 | ARG |
| 53 | m7 | 142 | SER |
| 53 | m7 | 144 | SER |
| 53 | m7 | 149 | VAL |
| 53 | m7 | 153 | LYS |
| 53 | m7 | 168 | LEU |
| 53 | m7 | 169 | THR |
| 53 | m7 | 171 | ARG |
| 53 | m7 | 172 | GLN |
| 53 | m7 | 175 | ARG |
| 53 | m7 | 180 | LYS |
| 53 | m7 | 181 | ARG |
| 53 | m7 | 182 | ILE |
| 54 | m8 | 17 | THR |
| 54 | m8 | 21 | SER |
| 54 | m8 | 26 | LEU |
| 54 | m8 | 32 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 54 | m8 | 41 | ASP |
| 54 | m8 | 49 | LEU |
| 54 | m8 | 57 | ILE |
| 54 | m8 | 63 | SER |
| 54 | m8 | 80 | THR |
| 54 | m8 | 86 | THR |
| 54 | m8 | 99 | THR |
| 54 | m8 | 105 | ARG |
| 54 | m8 | 113 | LYS |
| 54 | m8 | 135 | GLN |
| 54 | m8 | 138 | LEU |
| 54 | m8 | 146 | SER |
| 54 | m8 | 161 | LYS |
| 54 | m8 | 165 | ILE |
| 54 | m8 | 167 | SER |
| 54 | m8 | 168 | THR |
| 54 | m8 | 170 | ARG |
| 54 | m8 | 178 | ARG |
| 54 | m8 | 180 | ARG |
| 55 | m9 | 7 | GLN |
| 55 | m9 | 10 | LEU |
| 55 | m9 | 13 | SER |
| 55 | m9 | 17 | VAL |
| 55 | m9 | 20 | ARG |
| 55 | m9 | 29 | THR |
| 55 | m9 | 30 | SER |
| 55 | m9 | 31 | GLU |
| 55 | m9 | 36 | ASN |
| 55 | m9 | 37 | SER |
| 55 | m9 | 42 | ARG |
| 55 | m9 | 43 | LYS |
| 55 | m9 | 46 | LYS |
| 55 | m9 | 47 | ASN |
| 55 | m9 | 52 | LYS |
| 55 | m9 | 55 | VAL |
| 55 | m9 | 56 | THR |
| 55 | m9 | 63 | THR |
| 55 | m9 | 69 | SER |
| 55 | m9 | 70 | LYS |
| 55 | m9 | 74 | ARG |
| 55 | m9 | 84 | THR |
| 55 | m9 | 88 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 55 | m9 | 98 | ARG |
| 55 | m9 | 99 | LEU |
| 55 | m9 | 105 | LEU |
| 55 | m9 | 106 | LEU |
| 55 | m9 | 114 | LYS |
| 55 | m9 | 126 | GLU |
| 55 | m9 | 133 | LYS |
| 55 | m9 | 134 | HIS |
| 55 | m9 | 138 | LEU |
| 55 | m9 | 152 | GLU |
| 55 | m9 | 153 | LYS |
| 55 | m9 | 164 | LEU |
| 55 | m9 | 173 | ARG |
| 55 | m9 | 175 | GLN |
| 56 | n0 | 3 | HIS |
| 56 | n0 | 13 | ARG |
| 56 | n0 | 17 | GLU |
| 56 | n0 | 21 | GLU |
| 56 | n0 | 23 | LYS |
| 56 | n0 | 32 | SER |
| 56 | n0 | 45 | LEU |
| 56 | n0 | 50 | LYS |
| 56 | n0 | 51 | VAL |
| 56 | n0 | 53 | LYS |
| 56 | n0 | 60 | SER |
| 56 | n0 | 73 | LYS |
| 56 | n0 | 80 | ARG |
| 56 | n0 | 81 | TYR |
| 56 | n0 | 87 | THR |
| 56 | n0 | 97 | VAL |
| 56 | n0 | 98 | SER |
| 56 | n0 | 104 | GLU |
| 56 | n0 | 109 | ASP |
| 56 | n0 | 117 | ARG |
| 56 | n0 | 120 | SER |
| 56 | n0 | 130 | GLU |
| 56 | n0 | 136 | LYS |
| 56 | n0 | 137 | ARG |
| 56 | n0 | 148 | LEU |
| 56 | n0 | 155 | ARG |
| 56 | n0 | 160 | THR |
| 56 | n0 | 161 | LYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 56 | n0 | 167 | ARG |
| 56 | n0 | 172 | TYR |
| 57 | n1 | 12 | ARG |
| 57 | n1 | 25 | VAL |
| 57 | n1 | 26 | HIS |
| 57 | n1 | 27 | LEU |
| 57 | n1 | 31 | LEU |
| 57 | n1 | 35 | LYS |
| 57 | n1 | 60 | LYS |
| 57 | n1 | 64 | VAL |
| 57 | n1 | 68 | THR |
| 57 | n1 | 71 | SER |
| 57 | n1 | 78 | LYS |
| 57 | n1 | 79 | MET |
| 57 | n1 | 80 | VAL |
| 57 | n1 | 83 | ARG |
| 57 | n1 | 93 | VAL |
| 57 | n1 | 102 | ARG |
| 57 | n1 | 104 | GLU |
| 57 | n1 | 118 | GLU |
| 57 | n1 | 126 | VAL |
| 57 | n1 | 128 | LEU |
| 57 | n1 | 139 | ARG |
| 57 | n1 | 140 | ILE |
| 57 | n1 | 143 | THR |
| 57 | n1 | 149 | GLN |
| 57 | n1 | 150 | THR |
| 57 | n1 | 158 | THR |
| 57 | n1 | 160 | ILE |
| 58 | n2 | 19 | VAL |
| 58 | n2 | 21 | SER |
| 58 | n2 | 37 | LEU |
| 58 | n2 | 43 | VAL |
| 58 | n2 | 50 | LEU |
| 58 | n2 | 54 | VAL |
| 58 | n2 | 55 | THR |
| 58 | n2 | 58 | GLU |
| 58 | n2 | 62 | VAL |
| 58 | n2 | 63 | VAL |
| 58 | n2 | 68 | THR |
| 58 | n2 | 74 | LYS |
| 58 | n2 | 98 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 58 | n2 | 100 | THR |
| 58 | n2 | 105 | LEU |
| 59 | n3 | 4 | ASN |
| 59 | n3 | 13 | ILE |
| 59 | n3 | 14 | SER |
| 59 | n3 | 19 | VAL |
| 59 | n3 | 23 | MET |
| 59 | n3 | 42 | SER |
| 59 | n3 | 64 | LYS |
| 59 | n3 | 69 | LEU |
| 59 | n3 | 84 | SER |
| 59 | n3 | 88 | ARG |
| 59 | n3 | 93 | LEU |
| 59 | n3 | 94 | TYR |
| 59 | n3 | 112 | SER |
| 59 | n3 | 128 | ARG |
| 59 | n3 | 135 | VAL |
| 60 | n4 | 7 | SER |
| 60 | n4 | 19 | THR |
| 60 | n4 | 39 | LEU |
| 60 | n4 | 60 | LYS |
| 60 | n4 | 63 | ILE |
| 60 | n4 | 79 | GLN |
| 60 | n4 | 83 | THR |
| 60 | n4 | 87 | LEU |
| 60 | n4 | 90 | ILE |
| 60 | n4 | 97 | LYS |
| 60 | n4 | 126 | GLU |
| 60 | n4 | 127 | LYS |
| 61 | n5 | 24 | LEU |
| 61 | n5 | 27 | ARG |
| 61 | n5 | 34 | LEU |
| 61 | n5 | 45 | LYS |
| 61 | n5 | 56 | ARG |
| 61 | n5 | 57 | LEU |
| 61 | n5 | 63 | ILE |
| 61 | n5 | 68 | THR |
| 61 | n5 | 69 | SER |
| 61 | n5 | 71 | THR |
| 61 | n5 | 73 | MET |
| 61 | n5 | 74 | LYS |
| 61 | n5 | 108 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 61 | n5 | 115 | ARG |
| 61 | n5 | 125 | ARG |
| 61 | n5 | 135 | ILE |
| 61 | n5 | 137 | ASN |
| 61 | n5 | 138 | ARG |
| 61 | n5 | 139 | ILE |
| 61 | n5 | 142 | ILE |
| 62 | n6 | 3 | LYS |
| 62 | n6 | 4 | GLN |
| 62 | n6 | 12 | ARG |
| 62 | n6 | 13 | ARG |
| 62 | n6 | 14 | LYS |
| 62 | n6 | 17 | LYS |
| 62 | n6 | 37 | LYS |
| 62 | n6 | 39 | LEU |
| 62 | n6 | 40 | ARG |
| 62 | n6 | 45 | ILE |
| 62 | n6 | 50 | ILE |
| 62 | n6 | 56 | VAL |
| 62 | n6 | 57 | LEU |
| 62 | n6 | 74 | TYR |
| 62 | n6 | 76 | LEU |
| 62 | n6 | 87 | LYS |
| 62 | n6 | 95 | VAL |
| 62 | n6 | 103 | LYS |
| 62 | n6 | 105 | VAL |
| 62 | n6 | 106 | ILE |
| 62 | n6 | 112 | ASP |
| 62 | n6 | 115 | ARG |
| 63 | n7 | 3 | LYS |
| 63 | n7 | 14 | VAL |
| 63 | n7 | 28 | PRO |
| 63 | n7 | 30 | ASP |
| 63 | n7 | 34 | LYS |
| 63 | n7 | 35 | SER |
| 63 | n7 | 36 | HIS |
| 63 | n7 | 46 | ILE |
| 63 | n7 | 52 | LYS |
| 63 | n7 | 55 | LYS |
| 63 | n7 | 57 | HIS |
| 63 | n7 | 72 | ILE |
| 63 | n7 | 74 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 63 | n7 | 81 | LEU |
| 63 | n7 | 90 | GLU |
| 63 | n7 | 93 | LYS |
| 63 | n7 | 95 | VAL |
| 63 | n7 | 98 | THR |
| 63 | n7 | 99 | GLU |
| 63 | n7 | 100 | THR |
| 63 | n7 | 105 | SER |
| 63 | n7 | 121 | ARG |
| 63 | n7 | 126 | LYS |
| 63 | n7 | 132 | SER |
| 63 | n7 | 134 | LEU |
| 64 | n8 | 6 | THR |
| 64 | n8 | 8 | THR |
| 64 | n8 | 10 | LYS |
| 64 | n8 | 14 | HIS |
| 64 | n8 | 24 | LYS |
| 64 | n8 | 26 | ARG |
| 64 | n8 | 27 | LYS |
| 64 | n8 | 42 | ARG |
| 64 | n8 | 46 | ASP |
| 64 | n8 | 60 | TYR |
| 64 | n8 | 65 | GLN |
| 64 | n8 | 67 | HIS |
| 64 | n8 | 73 | LEU |
| 64 | n8 | 78 | LEU |
| 64 | n8 | 82 | ILE |
| 64 | n8 | 85 | ASP |
| 64 | n8 | 91 | LEU |
| 64 | n8 | 97 | GLU |
| 64 | n8 | 98 | THR |
| 64 | n8 | 115 | LYS |
| 64 | n8 | 128 | ARG |
| 64 | n8 | 132 | LYS |
| 64 | n8 | 133 | LEU |
| 64 | n8 | 139 | ARG |
| 65 | n9 | 26 | THR |
| 65 | n9 | 33 | LYS |
| 65 | n9 | 47 | LEU |
| 65 | n9 | 50 | THR |
| 65 | n9 | 58 | LYS |
| 65 | n9 | 59 | LYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 66 | o0 | 10 | ILE |
| 66 | o0 | 32 | LYS |
| 66 | o0 | 34 | LEU |
| 66 | o0 | 39 | SER |
| 66 | o0 | 40 | LYS |
| 66 | o0 | 41 | LEU |
| 66 | o0 | 52 | ARG |
| 66 | o0 | 61 | MET |
| 66 | o0 | 68 | TYR |
| 66 | o0 | 86 | ARG |
| 66 | o0 | 97 | ASP |
| 66 | o0 | 100 | ILE |
| 66 | o0 | 103 | THR |
| 67 | o1 | 6 | ASP |
| 67 | o1 | 7 | VAL |
| 67 | o1 | 8 | VAL |
| 67 | o1 | 13 | THR |
| 67 | o1 | 16 | LEU |
| 67 | o1 | 24 | SER |
| 67 | o1 | 26 | LYS |
| 67 | o1 | 31 | ARG |
| 67 | o1 | 44 | MET |
| 67 | o1 | 46 | THR |
| 67 | o1 | 55 | LEU |
| 67 | o1 | 64 | VAL |
| 67 | o1 | 84 | ASP |
| 67 | o1 | 90 | PHE |
| 67 | o1 | 96 | VAL |
| 67 | o1 | 102 | LYS |
| 67 | o1 | 106 | THR |
| 67 | o1 | 107 | VAL |
| 67 | o1 | 110 | GLU |
| 68 | o2 | 10 | VAL |
| 68 | o2 | 14 | THR |
| 68 | o2 | 24 | ARG |
| 68 | o2 | 25 | TYR |
| 68 | o2 | 33 | ARG |
| 68 | o2 | 34 | LYS |
| 68 | o2 | 45 | ARG |
| 68 | o2 | 51 | SER |
| 68 | o2 | 62 | LYS |
| 68 | o2 | 67 | SER |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 68 | o2 | 73 | THR |
| 68 | o2 | 75 | LEU |
| 68 | o2 | 82 | LEU |
| 68 | o2 | 87 | MET |
| 68 | o2 | 89 | THR |
| 68 | o2 | 106 | VAL |
| 68 | o2 | 125 | ARG |
| 68 | o2 | 126 | LEU |
| 69 | o3 | 4 | SER |
| 69 | o3 | 10 | LYS |
| 69 | o3 | 19 | SER |
| 69 | o3 | 21 | ARG |
| 69 | o3 | 28 | SER |
| 69 | o3 | 31 | LYS |
| 69 | o3 | 40 | ASP |
| 69 | o3 | 48 | ARG |
| 69 | o3 | 49 | ILE |
| 69 | o3 | 57 | LYS |
| 69 | o3 | 59 | VAL |
| 69 | o3 | 60 | ARG |
| 69 | o3 | 70 | LYS |
| 69 | o3 | 80 | VAL |
| 69 | o3 | 81 | VAL |
| 69 | o3 | 86 | ARG |
| 69 | o3 | 98 | VAL |
| 69 | o3 | 106 | ASN |
| 70 | o4 | 16 | ARG |
| 70 | o4 | 17 | SER |
| 70 | o4 | 44 | CYS |
| 70 | o4 | 46 | ASP |
| 70 | o4 | 47 | CYS |
| 70 | o4 | 55 | SER |
| 70 | o4 | 58 | ARG |
| 70 | o4 | 65 | VAL |
| 70 | o4 | 71 | THR |
| 70 | o4 | 73 | SER |
| 70 | o4 | 79 | SER |
| 70 | o4 | 80 | ARG |
| 70 | o4 | 83 | ASN |
| 70 | o4 | 88 | ARG |
| 70 | o4 | 102 | LYS |
| 71 | o5 | 4 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 71 | o5 | 20 | GLN |
| 71 | o5 | 21 | LEU |
| 71 | o5 | 27 | GLU |
| 71 | o5 | 28 | LEU |
| 71 | o5 | 36 | LEU |
| 71 | o5 | 38 | ARG |
| 71 | o5 | 45 | LYS |
| 71 | o5 | 46 | THR |
| 71 | o5 | 57 | VAL |
| 71 | o5 | 69 | LEU |
| 71 | o5 | 81 | ARG |
| 71 | o5 | 85 | THR |
| 71 | o5 | 89 | ARG |
| 71 | o5 | 90 | ARG |
| 71 | o5 | 94 | LYS |
| 71 | o5 | 107 | LYS |
| 71 | o5 | 115 | LYS |
| 71 | o5 | 119 | LYS |
| 72 | o6 | 7 | ILE |
| 72 | o6 | 9 | ILE |
| 72 | o6 | 17 | VAL |
| 72 | o6 | 21 | THR |
| 72 | o6 | 26 | ILE |
| 72 | o6 | 29 | LYS |
| 72 | o6 | 34 | SER |
| 72 | o6 | 36 | ARG |
| 72 | o6 | 38 | LYS |
| 72 | o6 | 43 | LEU |
| 72 | o6 | 45 | ARG |
| 72 | o6 | 57 | LEU |
| 72 | o6 | 58 | ILE |
| 72 | o6 | 60 | LEU |
| 72 | o6 | 68 | ARG |
| 72 | o6 | 70 | ARG |
| 72 | o6 | 76 | ARG |
| 72 | o6 | 81 | THR |
| 72 | o6 | 88 | GLU |
| 72 | o6 | 90 | MET |
| 72 | o6 | 94 | ILE |
| 72 | o6 | 98 | ARG |
| 73 | o7 | 17 | THR |
| 73 | o7 | 19 | CYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 73 | o7 | 25 | ARG |
| 73 | o7 | 34 | CYS |
| 73 | o7 | 46 | SER |
| 73 | o7 | 52 | LYS |
| 73 | o7 | 55 | ARG |
| 73 | o7 | 59 | THR |
| 73 | o7 | 64 | MET |
| 73 | o7 | 65 | ARG |
| 73 | o7 | 67 | LEU |
| 73 | o7 | 68 | LYS |
| 74 | o8 | 17 | ARG |
| 74 | o8 | 22 | THR |
| 74 | o8 | 24 | THR |
| 74 | o8 | 31 | LEU |
| 74 | o8 | 41 | THR |
| 74 | o8 | 50 | SER |
| 74 | o8 | 52 | TYR |
| 74 | o8 | 53 | THR |
| 74 | o8 | 61 | LYS |
| 74 | o8 | 64 | LYS |
| 74 | o8 | 65 | LEU |
| 74 | o8 | 67 | GLN |
| 74 | o8 | 68 | SER |
| 75 | o9 | 5 | LYS |
| 75 | o9 | 21 | ARG |
| 75 | o9 | 23 | LEU |
| 75 | o9 | 29 | LEU |
| 75 | o9 | 45 | ARG |
| 75 | o9 | 48 | LYS |
| 75 | o9 | 51 | ILE |
| 76 | q0 | 79 | GLU |
| 76 | q0 | 85 | LEU |
| 76 | q0 | 89 | TYR |
| 76 | q0 | 90 | ASN |
| 76 | q0 | 92 | ASP |
| 76 | q0 | 112 | LYS |
| 76 | q0 | 113 | ARG |
| 76 | q0 | 114 | LYS |
| 76 | q0 | 127 | LEU |
| 77 | q1 | 2 | ARG |
| 77 | q1 | 6 | ARG |
| 77 | q1 | 9 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 77 | q1 | 13 | LEU |
| 77 | q1 | 15 | ARG |
| 77 | q1 | 16 | LYS |
| 77 | q1 | 18 | ARG |
| 77 | q1 | 19 | LYS |
| 77 | q1 | 21 | ARG |
| 77 | q1 | 23 | ARG |
| 78 | q2 | 7 | THR |
| 78 | q2 | 8 | ARG |
| 78 | q2 | 22 | GLN |
| 78 | q2 | 38 | GLN |
| 78 | q2 | 43 | TYR |
| 78 | q2 | 45 | ARG |
| 78 | q2 | 48 | SER |
| 78 | q2 | 57 | VAL |
| 78 | q2 | 78 | LYS |
| 78 | q2 | 85 | LEU |
| 78 | q2 | 93 | LEU |
| 78 | q2 | 100 | LYS |
| 78 | q2 | 104 | LEU |
| 79 | q3 | 8 | VAL |
| 79 | q3 | 16 | VAL |
| 79 | q3 | 21 | SER |
| 79 | q3 | 24 | ARG |
| 79 | q3 | 42 | CYS |
| 79 | q3 | 45 | LYS |
| 79 | q3 | 46 | THR |
| 79 | q3 | 48 | LYS |
| 79 | q3 | 54 | ILE |
| 79 | q3 | 56 | THR |
| 79 | q3 | 57 | CYS |
| 79 | q3 | 59 | CYS |
| 79 | q3 | 60 | CYS |
| 79 | q3 | 62 | LYS |
| 79 | q3 | 82 | THR |
| 80 | p0 | 5 | ARG |
| 80 | p0 | 10 | GLU |
| 80 | p0 | 15 | LEU |
| 80 | p0 | 48 | ARG |
| 80 | p0 | 51 | VAL |
| 80 | p0 | 52 | LEU |
| 80 | p0 | 55 | LYS |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 80 | p0 | 67 | LEU |
| 80 | p0 | 72 | ASP |
| 80 | p0 | 73 | PHE |
| 80 | p0 | 93 | LEU |
| 80 | p0 | 104 | ARG |
| 80 | p0 | 105 | VAL |
| 80 | p0 | 196 | VAL |

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (56) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 3 | S1 | 149 | GLN |
| 7 | S5 | 104 | ASN |
| 7 | S5 | 224 | ASN |
| 8 | S6 | 59 | GLN |
| 8 | S6 | 176 | GLN |
| 10 | S8 | 32 | GLN |
| 13 | C1 | 14 | GLN |
| 19 | C7 | 83 | GLN |
| 20 | C8 | 63 | GLN |
| 26 | D4 | 110 | GLN |
| 34 | SR | 106 | HIS |
| 40 | L3 | 139 | GLN |
| 41 | L4 | 201 | GLN |
| 42 | L5 | 17 | GLN |
| 42 | L5 | 40 | HIS |
| 46 | L9 | 163 | GLN |
| 47 | M0 | 144 | ASN |
| 49 | M3 | 25 | HIS |
| 51 | M5 | 178 | HIS |
| 51 | M5 | 194 | GLN |
| 59 | N3 | 98 | ASN |
| 62 | N6 | 110 | HIS |
| 63 | N7 | 78 | ASN |
| 65 | N9 | 19 | ASN |
| 70 | O4 | 34 | HIS |
| 71 | O5 | 16 | GLN |
| 3 | s1 | 209 | ASN |
| 5 | s3 | 74 | GLN |
| 12 | c0 | 32 | HIS |
| 13 | c1 | 14 | GLN |
| 13 | c1 | 21 | ASN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 20 | c8 | 122 | HIS |
| 26 | d4 | 22 | GLN |
| 28 | d6 | 72 | HIS |
| 32 | e0 | 17 | GLN |
| 39 | l2 | 19 | HIS |
| 39 | l2 | 140 | ASN |
| 39 | l2 | 187 | HIS |
| 41 | l4 | 175 | HIS |
| 42 | l5 | 40 | HIS |
| 42 | l5 | 264 | GLN |
| 45 | l8 | 33 | ASN |
| 48 | m1 | 95 | ASN |
| 48 | m1 | 101 | ASN |
| 49 | m3 | 99 | HIS |
| 52 | m6 | 29 | ASN |
| 54 | m8 | 5 | HIS |
| 54 | m8 | 9 | GLN |
| 54 | m8 | 73 | GLN |
| 57 | n1 | 146 | ASN |
| 59 | n3 | 47 | ASN |
| 60 | n4 | 79 | GLN |
| 63 | n7 | 57 | HIS |
| 67 | o1 | 43 | HIS |
| 68 | o2 | 13 | HIS |
| 68 | o2 | 35 | GLN |

5.3.3 RNA [i](#)

| Mol | Chain | Analysed | Backbone Outliers | Pucker Outliers |
|-----|-------|-------------------|-------------------|-----------------|
| 1 | 2 | 1680/1800 (93%) | 462 (27%) | 67 (3%) |
| 1 | 6 | 1695/1800 (94%) | 427 (25%) | 51 (3%) |
| 36 | 1 | 3071/3396 (90%) | 760 (24%) | 101 (3%) |
| 36 | 5 | 3120/3396 (91%) | 739 (23%) | 109 (3%) |
| 37 | 3 | 120/121 (99%) | 20 (16%) | 1 (0%) |
| 37 | 7 | 120/121 (99%) | 15 (12%) | 1 (0%) |
| 38 | 4 | 157/158 (99%) | 48 (30%) | 6 (3%) |
| 38 | 8 | 156/158 (98%) | 41 (26%) | 8 (5%) |
| All | All | 10119/10950 (92%) | 2512 (24%) | 344 (3%) |

All (2512) RNA backbone outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | 2 | 2 | A |
| 1 | 2 | 4 | C |
| 1 | 2 | 17 | C |
| 1 | 2 | 25 | C |
| 1 | 2 | 26 | A |
| 1 | 2 | 27 | U |
| 1 | 2 | 34 | G |
| 1 | 2 | 39 | A |
| 1 | 2 | 45 | U |
| 1 | 2 | 46 | A |
| 1 | 2 | 47 | A |
| 1 | 2 | 50 | C |
| 1 | 2 | 57 | G |
| 1 | 2 | 60 | U |
| 1 | 2 | 67 | A |
| 1 | 2 | 68 | A |
| 1 | 2 | 69 | G |
| 1 | 2 | 72 | A |
| 1 | 2 | 73 | U |
| 1 | 2 | 74 | U |
| 1 | 2 | 75 | U |
| 1 | 2 | 76 | A |
| 1 | 2 | 77 | U |
| 1 | 2 | 78 | A |
| 1 | 2 | 79 | C |
| 1 | 2 | 80 | A |
| 1 | 2 | 104 | A |
| 1 | 2 | 105 | A |
| 1 | 2 | 114 | C |
| 1 | 2 | 115 | G |
| 1 | 2 | 128 | U |
| 1 | 2 | 137 | U |
| 1 | 2 | 140 | A |
| 1 | 2 | 141 | U |
| 1 | 2 | 143 | G |
| 1 | 2 | 144 | U |
| 1 | 2 | 145 | A |
| 1 | 2 | 146 | U |
| 1 | 2 | 153 | G |
| 1 | 2 | 158 | U |
| 1 | 2 | 159 | U |
| 1 | 2 | 160 | C |
| 1 | 2 | 161 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2 | 178 | U |
| 1 | 2 | 185 | U |
| 1 | 2 | 186 | C |
| 1 | 2 | 188 | A |
| 1 | 2 | 190 | C |
| 1 | 2 | 191 | C |
| 1 | 2 | 192 | U |
| 1 | 2 | 193 | U |
| 1 | 2 | 194 | U |
| 1 | 2 | 195 | G |
| 1 | 2 | 196 | G |
| 1 | 2 | 197 | A |
| 1 | 2 | 198 | A |
| 1 | 2 | 200 | A |
| 1 | 2 | 215 | A |
| 1 | 2 | 217 | A |
| 1 | 2 | 218 | A |
| 1 | 2 | 220 | A |
| 1 | 2 | 249 | U |
| 1 | 2 | 250 | C |
| 1 | 2 | 257 | A |
| 1 | 2 | 260 | U |
| 1 | 2 | 261 | U |
| 1 | 2 | 265 | A |
| 1 | 2 | 266 | A |
| 1 | 2 | 271 | A |
| 1 | 2 | 272 | U |
| 1 | 2 | 274 | G |
| 1 | 2 | 275 | C |
| 1 | 2 | 276 | C |
| 1 | 2 | 278 | U |
| 1 | 2 | 279 | G |
| 1 | 2 | 280 | U |
| 1 | 2 | 281 | G |
| 1 | 2 | 282 | C |
| 1 | 2 | 288 | A |
| 1 | 2 | 290 | G |
| 1 | 2 | 299 | A |
| 1 | 2 | 301 | A |
| 1 | 2 | 309 | C |
| 1 | 2 | 312 | A |
| 1 | 2 | 314 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2 | 316 | A |
| 1 | 2 | 319 | U |
| 1 | 2 | 320 | U |
| 1 | 2 | 321 | C |
| 1 | 2 | 322 | G |
| 1 | 2 | 323 | A |
| 1 | 2 | 324 | U |
| 1 | 2 | 333 | A |
| 1 | 2 | 337 | G |
| 1 | 2 | 338 | C |
| 1 | 2 | 341 | A |
| 1 | 2 | 352 | A |
| 1 | 2 | 359 | A |
| 1 | 2 | 360 | A |
| 1 | 2 | 361 | C |
| 1 | 2 | 378 | A |
| 1 | 2 | 380 | U |
| 1 | 2 | 390 | G |
| 1 | 2 | 393 | C |
| 1 | 2 | 400 | A |
| 1 | 2 | 401 | A |
| 1 | 2 | 402 | C |
| 1 | 2 | 403 | G |
| 1 | 2 | 404 | G |
| 1 | 2 | 416 | A |
| 1 | 2 | 418 | G |
| 1 | 2 | 423 | G |
| 1 | 2 | 424 | C |
| 1 | 2 | 425 | A |
| 1 | 2 | 426 | G |
| 1 | 2 | 428 | A |
| 1 | 2 | 434 | G |
| 1 | 2 | 437 | A |
| 1 | 2 | 439 | U |
| 1 | 2 | 444 | C |
| 1 | 2 | 448 | C |
| 1 | 2 | 454 | U |
| 1 | 2 | 459 | G |
| 1 | 2 | 475 | A |
| 1 | 2 | 477 | A |
| 1 | 2 | 484 | C |
| 1 | 2 | 485 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2 | 486 | G |
| 1 | 2 | 488 | G |
| 1 | 2 | 501 | U |
| 1 | 2 | 502 | U |
| 1 | 2 | 503 | G |
| 1 | 2 | 504 | U |
| 1 | 2 | 505 | A |
| 1 | 2 | 506 | A |
| 1 | 2 | 507 | U |
| 1 | 2 | 508 | U |
| 1 | 2 | 510 | G |
| 1 | 2 | 511 | A |
| 1 | 2 | 512 | A |
| 1 | 2 | 513 | U |
| 1 | 2 | 515 | A |
| 1 | 2 | 516 | G |
| 1 | 2 | 519 | C |
| 1 | 2 | 527 | A |
| 1 | 2 | 532 | U |
| 1 | 2 | 538 | A |
| 1 | 2 | 539 | G |
| 1 | 2 | 540 | G |
| 1 | 2 | 541 | A |
| 1 | 2 | 542 | A |
| 1 | 2 | 543 | C |
| 1 | 2 | 544 | A |
| 1 | 2 | 545 | A |
| 1 | 2 | 548 | G |
| 1 | 2 | 554 | C |
| 1 | 2 | 555 | A |
| 1 | 2 | 556 | A |
| 1 | 2 | 557 | G |
| 1 | 2 | 558 | U |
| 1 | 2 | 559 | C |
| 1 | 2 | 565 | C |
| 1 | 2 | 570 | A |
| 1 | 2 | 571 | G |
| 1 | 2 | 572 | C |
| 1 | 2 | 579 | A |
| 1 | 2 | 580 | A |
| 1 | 2 | 582 | U |
| 1 | 2 | 594 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2 | 595 | G |
| 1 | 2 | 606 | A |
| 1 | 2 | 609 | U |
| 1 | 2 | 610 | G |
| 1 | 2 | 611 | U |
| 1 | 2 | 619 | A |
| 1 | 2 | 620 | A |
| 1 | 2 | 622 | A |
| 1 | 2 | 623 | A |
| 1 | 2 | 630 | A |
| 1 | 2 | 635 | A |
| 1 | 2 | 638 | U |
| 1 | 2 | 639 | U |
| 1 | 2 | 640 | U |
| 1 | 2 | 648 | G |
| 1 | 2 | 650 | U |
| 1 | 2 | 684 | A |
| 1 | 2 | 686 | C |
| 1 | 2 | 691 | C |
| 1 | 2 | 696 | C |
| 1 | 2 | 700 | C |
| 1 | 2 | 742 | U |
| 1 | 2 | 743 | U |
| 1 | 2 | 745 | U |
| 1 | 2 | 754 | A |
| 1 | 2 | 755 | A |
| 1 | 2 | 756 | A |
| 1 | 2 | 758 | U |
| 1 | 2 | 759 | U |
| 1 | 2 | 765 | G |
| 1 | 2 | 766 | U |
| 1 | 2 | 771 | A |
| 1 | 2 | 774 | A |
| 1 | 2 | 775 | G |
| 1 | 2 | 779 | U |
| 1 | 2 | 780 | A |
| 1 | 2 | 781 | U |
| 1 | 2 | 782 | U |
| 1 | 2 | 783 | G |
| 1 | 2 | 784 | C |
| 1 | 2 | 789 | A |
| 1 | 2 | 794 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2 | 795 | U |
| 1 | 2 | 803 | A |
| 1 | 2 | 806 | A |
| 1 | 2 | 812 | A |
| 1 | 2 | 813 | U |
| 1 | 2 | 814 | A |
| 1 | 2 | 815 | G |
| 1 | 2 | 816 | G |
| 1 | 2 | 819 | G |
| 1 | 2 | 820 | U |
| 1 | 2 | 821 | U |
| 1 | 2 | 831 | U |
| 1 | 2 | 833 | U |
| 1 | 2 | 856 | A |
| 1 | 2 | 860 | U |
| 1 | 2 | 863 | A |
| 1 | 2 | 864 | U |
| 1 | 2 | 871 | G |
| 1 | 2 | 873 | U |
| 1 | 2 | 896 | U |
| 1 | 2 | 897 | C |
| 1 | 2 | 898 | A |
| 1 | 2 | 912 | U |
| 1 | 2 | 913 | G |
| 1 | 2 | 914 | G |
| 1 | 2 | 916 | U |
| 1 | 2 | 921 | U |
| 1 | 2 | 926 | A |
| 1 | 2 | 933 | A |
| 1 | 2 | 935 | U |
| 1 | 2 | 942 | G |
| 1 | 2 | 944 | A |
| 1 | 2 | 951 | A |
| 1 | 2 | 958 | U |
| 1 | 2 | 959 | U |
| 1 | 2 | 960 | U |
| 1 | 2 | 966 | A |
| 1 | 2 | 970 | A |
| 1 | 2 | 973 | A |
| 1 | 2 | 988 | A |
| 1 | 2 | 992 | A |
| 1 | 2 | 993 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2 | 995 | A |
| 1 | 2 | 997 | G |
| 1 | 2 | 1003 | A |
| 1 | 2 | 1004 | U |
| 1 | 2 | 1005 | A |
| 1 | 2 | 1007 | C |
| 1 | 2 | 1020 | A |
| 1 | 2 | 1021 | C |
| 1 | 2 | 1026 | A |
| 1 | 2 | 1028 | C |
| 1 | 2 | 1029 | U |
| 1 | 2 | 1032 | G |
| 1 | 2 | 1039 | A |
| 1 | 2 | 1040 | G |
| 1 | 2 | 1052 | U |
| 1 | 2 | 1053 | G |
| 1 | 2 | 1057 | U |
| 1 | 2 | 1058 | U |
| 1 | 2 | 1059 | U |
| 1 | 2 | 1060 | U |
| 1 | 2 | 1063 | U |
| 1 | 2 | 1074 | G |
| 1 | 2 | 1079 | U |
| 1 | 2 | 1081 | A |
| 1 | 2 | 1082 | C |
| 1 | 2 | 1083 | G |
| 1 | 2 | 1086 | A |
| 1 | 2 | 1091 | A |
| 1 | 2 | 1092 | A |
| 1 | 2 | 1093 | A |
| 1 | 2 | 1094 | G |
| 1 | 2 | 1095 | U |
| 1 | 2 | 1096 | C |
| 1 | 2 | 1097 | U |
| 1 | 2 | 1099 | U |
| 1 | 2 | 1100 | G |
| 1 | 2 | 1109 | G |
| 1 | 2 | 1138 | A |
| 1 | 2 | 1146 | G |
| 1 | 2 | 1149 | G |
| 1 | 2 | 1150 | G |
| 1 | 2 | 1151 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2 | 1155 | G |
| 1 | 2 | 1157 | A |
| 1 | 2 | 1158 | C |
| 1 | 2 | 1160 | A |
| 1 | 2 | 1164 | G |
| 1 | 2 | 1167 | G |
| 1 | 2 | 1185 | U |
| 1 | 2 | 1188 | G |
| 1 | 2 | 1191 | U |
| 1 | 2 | 1194 | A |
| 1 | 2 | 1196 | A |
| 1 | 2 | 1197 | C |
| 1 | 2 | 1199 | G |
| 1 | 2 | 1200 | G |
| 1 | 2 | 1202 | A |
| 1 | 2 | 1204 | A |
| 1 | 2 | 1205 | C |
| 1 | 2 | 1207 | C |
| 1 | 2 | 1208 | A |
| 1 | 2 | 1217 | A |
| 1 | 2 | 1218 | G |
| 1 | 2 | 1227 | A |
| 1 | 2 | 1228 | G |
| 1 | 2 | 1229 | G |
| 1 | 2 | 1241 | G |
| 1 | 2 | 1244 | A |
| 1 | 2 | 1245 | G |
| 1 | 2 | 1250 | U |
| 1 | 2 | 1251 | U |
| 1 | 2 | 1257 | U |
| 1 | 2 | 1258 | U |
| 1 | 2 | 1260 | U |
| 1 | 2 | 1286 | U |
| 1 | 2 | 1288 | G |
| 1 | 2 | 1301 | U |
| 1 | 2 | 1314 | U |
| 1 | 2 | 1315 | U |
| 1 | 2 | 1321 | A |
| 1 | 2 | 1329 | A |
| 1 | 2 | 1336 | A |
| 1 | 2 | 1337 | A |
| 1 | 2 | 1339 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2 | 1340 | U |
| 1 | 2 | 1341 | A |
| 1 | 2 | 1342 | C |
| 1 | 2 | 1343 | U |
| 1 | 2 | 1344 | A |
| 1 | 2 | 1345 | A |
| 1 | 2 | 1349 | G |
| 1 | 2 | 1354 | G |
| 1 | 2 | 1360 | A |
| 1 | 2 | 1361 | U |
| 1 | 2 | 1362 | U |
| 1 | 2 | 1363 | U |
| 1 | 2 | 1364 | G |
| 1 | 2 | 1367 | G |
| 1 | 2 | 1370 | U |
| 1 | 2 | 1371 | A |
| 1 | 2 | 1372 | U |
| 1 | 2 | 1379 | C |
| 1 | 2 | 1380 | U |
| 1 | 2 | 1383 | G |
| 1 | 2 | 1384 | A |
| 1 | 2 | 1385 | G |
| 1 | 2 | 1386 | G |
| 1 | 2 | 1388 | A |
| 1 | 2 | 1390 | U |
| 1 | 2 | 1397 | U |
| 1 | 2 | 1398 | U |
| 1 | 2 | 1399 | C |
| 1 | 2 | 1400 | A |
| 1 | 2 | 1413 | U |
| 1 | 2 | 1414 | U |
| 1 | 2 | 1415 | U |
| 1 | 2 | 1427 | A |
| 1 | 2 | 1428 | G |
| 1 | 2 | 1432 | U |
| 1 | 2 | 1446 | A |
| 1 | 2 | 1448 | G |
| 1 | 2 | 1454 | G |
| 1 | 2 | 1457 | C |
| 1 | 2 | 1459 | C |
| 1 | 2 | 1460 | A |
| 1 | 2 | 1461 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2 | 1473 | U |
| 1 | 2 | 1474 | G |
| 1 | 2 | 1475 | A |
| 1 | 2 | 1481 | C |
| 1 | 2 | 1482 | C |
| 1 | 2 | 1486 | G |
| 1 | 2 | 1487 | A |
| 1 | 2 | 1489 | U |
| 1 | 2 | 1490 | C |
| 1 | 2 | 1491 | U |
| 1 | 2 | 1492 | A |
| 1 | 2 | 1493 | A |
| 1 | 2 | 1494 | C |
| 1 | 2 | 1499 | G |
| 1 | 2 | 1500 | C |
| 1 | 2 | 1506 | G |
| 1 | 2 | 1514 | U |
| 1 | 2 | 1515 | A |
| 1 | 2 | 1516 | A |
| 1 | 2 | 1517 | U |
| 1 | 2 | 1521 | G |
| 1 | 2 | 1523 | G |
| 1 | 2 | 1524 | A |
| 1 | 2 | 1535 | U |
| 1 | 2 | 1536 | G |
| 1 | 2 | 1537 | C |
| 1 | 2 | 1538 | U |
| 1 | 2 | 1542 | G |
| 1 | 2 | 1556 | A |
| 1 | 2 | 1557 | U |
| 1 | 2 | 1559 | A |
| 1 | 2 | 1569 | A |
| 1 | 2 | 1572 | G |
| 1 | 2 | 1573 | A |
| 1 | 2 | 1574 | G |
| 1 | 2 | 1584 | G |
| 1 | 2 | 1590 | G |
| 1 | 2 | 1601 | G |
| 1 | 2 | 1607 | G |
| 1 | 2 | 1614 | A |
| 1 | 2 | 1616 | G |
| 1 | 2 | 1624 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2 | 1631 | A |
| 1 | 2 | 1634 | C |
| 1 | 2 | 1636 | C |
| 1 | 2 | 1643 | U |
| 1 | 2 | 1644 | C |
| 1 | 2 | 1656 | U |
| 1 | 2 | 1657 | U |
| 1 | 2 | 1658 | G |
| 1 | 2 | 1664 | C |
| 1 | 2 | 1681 | A |
| 1 | 2 | 1683 | C |
| 1 | 2 | 1684 | U |
| 1 | 2 | 1693 | A |
| 1 | 2 | 1712 | A |
| 1 | 2 | 1713 | G |
| 1 | 2 | 1716 | C |
| 1 | 2 | 1729 | C |
| 1 | 2 | 1731 | A |
| 1 | 2 | 1742 | U |
| 1 | 2 | 1750 | A |
| 1 | 2 | 1752 | U |
| 1 | 2 | 1754 | A |
| 1 | 2 | 1755 | A |
| 1 | 2 | 1757 | G |
| 1 | 2 | 1759 | C |
| 1 | 2 | 1760 | G |
| 1 | 2 | 1761 | U |
| 1 | 2 | 1762 | A |
| 1 | 2 | 1766 | A |
| 1 | 2 | 1769 | U |
| 1 | 2 | 1770 | U |
| 1 | 2 | 1780 | G |
| 1 | 2 | 1782 | A |
| 1 | 2 | 1783 | C |
| 1 | 2 | 1791 | A |
| 1 | 2 | 1792 | G |
| 1 | 2 | 1793 | G |
| 1 | 2 | 1794 | A |
| 1 | 2 | 1795 | U |
| 1 | 2 | 1796 | C |
| 1 | 2 | 1798 | U |
| 36 | 1 | 13 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 14 | U |
| 36 | 1 | 21 | G |
| 36 | 1 | 26 | A |
| 36 | 1 | 40 | A |
| 36 | 1 | 41 | G |
| 36 | 1 | 43 | A |
| 36 | 1 | 44 | U |
| 36 | 1 | 49 | A |
| 36 | 1 | 59 | G |
| 36 | 1 | 60 | A |
| 36 | 1 | 65 | A |
| 36 | 1 | 66 | A |
| 36 | 1 | 71 | A |
| 36 | 1 | 73 | C |
| 36 | 1 | 74 | G |
| 36 | 1 | 76 | G |
| 36 | 1 | 77 | A |
| 36 | 1 | 85 | A |
| 36 | 1 | 92 | G |
| 36 | 1 | 93 | C |
| 36 | 1 | 99 | A |
| 36 | 1 | 109 | A |
| 36 | 1 | 110 | G |
| 36 | 1 | 111 | C |
| 36 | 1 | 120 | G |
| 36 | 1 | 121 | A |
| 36 | 1 | 122 | A |
| 36 | 1 | 133 | U |
| 36 | 1 | 135 | C |
| 36 | 1 | 136 | G |
| 36 | 1 | 142 | C |
| 36 | 1 | 145 | G |
| 36 | 1 | 148 | G |
| 36 | 1 | 156 | G |
| 36 | 1 | 157 | A |
| 36 | 1 | 161 | G |
| 36 | 1 | 166 | C |
| 36 | 1 | 168 | U |
| 36 | 1 | 169 | U |
| 36 | 1 | 170 | G |
| 36 | 1 | 174 | C |
| 36 | 1 | 182 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 187 | A |
| 36 | 1 | 190 | U |
| 36 | 1 | 191 | U |
| 36 | 1 | 192 | C |
| 36 | 1 | 199 | A |
| 36 | 1 | 200 | C |
| 36 | 1 | 210 | U |
| 36 | 1 | 213 | A |
| 36 | 1 | 217 | U |
| 36 | 1 | 218 | G |
| 36 | 1 | 219 | A |
| 36 | 1 | 220 | G |
| 36 | 1 | 221 | A |
| 36 | 1 | 238 | A |
| 36 | 1 | 240 | U |
| 36 | 1 | 242 | C |
| 36 | 1 | 243 | G |
| 36 | 1 | 245 | U |
| 36 | 1 | 249 | U |
| 36 | 1 | 250 | U |
| 36 | 1 | 251 | G |
| 36 | 1 | 252 | U |
| 36 | 1 | 265 | A |
| 36 | 1 | 269 | G |
| 36 | 1 | 279 | U |
| 36 | 1 | 282 | G |
| 36 | 1 | 283 | G |
| 36 | 1 | 284 | A |
| 36 | 1 | 286 | U |
| 36 | 1 | 288 | C |
| 36 | 1 | 295 | A |
| 36 | 1 | 296 | A |
| 36 | 1 | 298 | U |
| 36 | 1 | 301 | G |
| 36 | 1 | 303 | G |
| 36 | 1 | 304 | G |
| 36 | 1 | 305 | U |
| 36 | 1 | 315 | C |
| 36 | 1 | 316 | U |
| 36 | 1 | 323 | A |
| 36 | 1 | 329 | U |
| 36 | 1 | 335 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 336 | A |
| 36 | 1 | 339 | C |
| 36 | 1 | 349 | A |
| 36 | 1 | 350 | C |
| 36 | 1 | 362 | U |
| 36 | 1 | 370 | U |
| 36 | 1 | 376 | G |
| 36 | 1 | 397 | A |
| 36 | 1 | 398 | A |
| 36 | 1 | 399 | A |
| 36 | 1 | 401 | U |
| 36 | 1 | 402 | A |
| 36 | 1 | 403 | C |
| 36 | 1 | 404 | G |
| 36 | 1 | 420 | G |
| 36 | 1 | 421 | G |
| 36 | 1 | 422 | A |
| 36 | 1 | 495 | G |
| 36 | 1 | 498 | A |
| 36 | 1 | 510 | G |
| 36 | 1 | 516 | A |
| 36 | 1 | 518 | G |
| 36 | 1 | 520 | U |
| 36 | 1 | 521 | A |
| 36 | 1 | 535 | G |
| 36 | 1 | 544 | C |
| 36 | 1 | 545 | U |
| 36 | 1 | 546 | C |
| 36 | 1 | 547 | G |
| 36 | 1 | 548 | G |
| 36 | 1 | 549 | U |
| 36 | 1 | 551 | A |
| 36 | 1 | 552 | G |
| 36 | 1 | 555 | U |
| 36 | 1 | 556 | U |
| 36 | 1 | 557 | A |
| 36 | 1 | 558 | U |
| 36 | 1 | 559 | A |
| 36 | 1 | 569 | A |
| 36 | 1 | 578 | A |
| 36 | 1 | 579 | G |
| 36 | 1 | 604 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 609 | G |
| 36 | 1 | 611 | A |
| 36 | 1 | 619 | A |
| 36 | 1 | 620 | U |
| 36 | 1 | 621 | A |
| 36 | 1 | 637 | C |
| 36 | 1 | 638 | C |
| 36 | 1 | 639 | G |
| 36 | 1 | 646 | A |
| 36 | 1 | 649 | A |
| 36 | 1 | 657 | A |
| 36 | 1 | 660 | A |
| 36 | 1 | 677 | A |
| 36 | 1 | 679 | U |
| 36 | 1 | 681 | U |
| 36 | 1 | 690 | A |
| 36 | 1 | 691 | A |
| 36 | 1 | 702 | C |
| 36 | 1 | 704 | U |
| 36 | 1 | 705 | A |
| 36 | 1 | 706 | A |
| 36 | 1 | 708 | G |
| 36 | 1 | 712 | G |
| 36 | 1 | 713 | U |
| 36 | 1 | 715 | A |
| 36 | 1 | 716 | A |
| 36 | 1 | 719 | U |
| 36 | 1 | 720 | A |
| 36 | 1 | 726 | G |
| 36 | 1 | 727 | G |
| 36 | 1 | 747 | A |
| 36 | 1 | 758 | C |
| 36 | 1 | 763 | G |
| 36 | 1 | 764 | U |
| 36 | 1 | 765 | C |
| 36 | 1 | 766 | U |
| 36 | 1 | 767 | U |
| 36 | 1 | 776 | U |
| 36 | 1 | 777 | U |
| 36 | 1 | 781 | G |
| 36 | 1 | 784 | A |
| 36 | 1 | 785 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 790 | U |
| 36 | 1 | 800 | G |
| 36 | 1 | 801 | A |
| 36 | 1 | 802 | C |
| 36 | 1 | 806 | A |
| 36 | 1 | 808 | A |
| 36 | 1 | 817 | A |
| 36 | 1 | 819 | U |
| 36 | 1 | 830 | A |
| 36 | 1 | 849 | C |
| 36 | 1 | 851 | C |
| 36 | 1 | 854 | G |
| 36 | 1 | 861 | C |
| 36 | 1 | 871 | U |
| 36 | 1 | 874 | U |
| 36 | 1 | 877 | C |
| 36 | 1 | 879 | U |
| 36 | 1 | 883 | A |
| 36 | 1 | 896 | A |
| 36 | 1 | 900 | G |
| 36 | 1 | 907 | G |
| 36 | 1 | 908 | G |
| 36 | 1 | 913 | A |
| 36 | 1 | 914 | A |
| 36 | 1 | 916 | G |
| 36 | 1 | 917 | A |
| 36 | 1 | 920 | A |
| 36 | 1 | 921 | A |
| 36 | 1 | 923 | C |
| 36 | 1 | 924 | G |
| 36 | 1 | 934 | G |
| 36 | 1 | 937 | G |
| 36 | 1 | 943 | U |
| 36 | 1 | 944 | C |
| 36 | 1 | 959 | C |
| 36 | 1 | 960 | U |
| 36 | 1 | 974 | G |
| 36 | 1 | 978 | G |
| 36 | 1 | 979 | U |
| 36 | 1 | 980 | A |
| 36 | 1 | 981 | U |
| 36 | 1 | 982 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 993 | G |
| 36 | 1 | 994 | G |
| 36 | 1 | 1000 | C |
| 36 | 1 | 1001 | G |
| 36 | 1 | 1002 | A |
| 36 | 1 | 1006 | A |
| 36 | 1 | 1010 | G |
| 36 | 1 | 1014 | U |
| 36 | 1 | 1017 | C |
| 36 | 1 | 1018 | G |
| 36 | 1 | 1020 | G |
| 36 | 1 | 1021 | G |
| 36 | 1 | 1024 | G |
| 36 | 1 | 1025 | A |
| 36 | 1 | 1029 | G |
| 36 | 1 | 1036 | A |
| 36 | 1 | 1037 | C |
| 36 | 1 | 1041 | U |
| 36 | 1 | 1047 | A |
| 36 | 1 | 1049 | C |
| 36 | 1 | 1052 | U |
| 36 | 1 | 1063 | G |
| 36 | 1 | 1064 | A |
| 36 | 1 | 1065 | A |
| 36 | 1 | 1071 | U |
| 36 | 1 | 1072 | G |
| 36 | 1 | 1081 | U |
| 36 | 1 | 1082 | U |
| 36 | 1 | 1083 | G |
| 36 | 1 | 1087 | G |
| 36 | 1 | 1093 | A |
| 36 | 1 | 1094 | U |
| 36 | 1 | 1095 | U |
| 36 | 1 | 1096 | U |
| 36 | 1 | 1097 | G |
| 36 | 1 | 1098 | A |
| 36 | 1 | 1103 | A |
| 36 | 1 | 1104 | G |
| 36 | 1 | 1117 | G |
| 36 | 1 | 1123 | U |
| 36 | 1 | 1128 | U |
| 36 | 1 | 1129 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 1131 | G |
| 36 | 1 | 1153 | A |
| 36 | 1 | 1159 | A |
| 36 | 1 | 1160 | C |
| 36 | 1 | 1175 | C |
| 36 | 1 | 1177 | G |
| 36 | 1 | 1180 | A |
| 36 | 1 | 1181 | U |
| 36 | 1 | 1182 | A |
| 36 | 1 | 1189 | C |
| 36 | 1 | 1191 | U |
| 36 | 1 | 1192 | C |
| 36 | 1 | 1193 | A |
| 36 | 1 | 1200 | A |
| 36 | 1 | 1201 | C |
| 36 | 1 | 1202 | A |
| 36 | 1 | 1206 | G |
| 36 | 1 | 1209 | G |
| 36 | 1 | 1221 | A |
| 36 | 1 | 1222 | G |
| 36 | 1 | 1223 | A |
| 36 | 1 | 1229 | G |
| 36 | 1 | 1281 | G |
| 36 | 1 | 1285 | G |
| 36 | 1 | 1292 | C |
| 36 | 1 | 1295 | G |
| 36 | 1 | 1307 | G |
| 36 | 1 | 1308 | A |
| 36 | 1 | 1309 | U |
| 36 | 1 | 1312 | C |
| 36 | 1 | 1313 | G |
| 36 | 1 | 1318 | A |
| 36 | 1 | 1325 | U |
| 36 | 1 | 1330 | A |
| 36 | 1 | 1345 | G |
| 36 | 1 | 1346 | G |
| 36 | 1 | 1348 | U |
| 36 | 1 | 1355 | A |
| 36 | 1 | 1356 | U |
| 36 | 1 | 1357 | G |
| 36 | 1 | 1386 | A |
| 36 | 1 | 1392 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 1399 | A |
| 36 | 1 | 1400 | G |
| 36 | 1 | 1417 | G |
| 36 | 1 | 1418 | A |
| 36 | 1 | 1419 | A |
| 36 | 1 | 1429 | G |
| 36 | 1 | 1431 | G |
| 36 | 1 | 1433 | A |
| 36 | 1 | 1434 | G |
| 36 | 1 | 1437 | C |
| 36 | 1 | 1438 | U |
| 36 | 1 | 1446 | A |
| 36 | 1 | 1450 | G |
| 36 | 1 | 1455 | U |
| 36 | 1 | 1481 | A |
| 36 | 1 | 1482 | A |
| 36 | 1 | 1484 | U |
| 36 | 1 | 1485 | G |
| 36 | 1 | 1502 | C |
| 36 | 1 | 1503 | A |
| 36 | 1 | 1508 | C |
| 36 | 1 | 1510 | G |
| 36 | 1 | 1519 | G |
| 36 | 1 | 1522 | U |
| 36 | 1 | 1524 | A |
| 36 | 1 | 1526 | U |
| 36 | 1 | 1527 | C |
| 36 | 1 | 1533 | U |
| 36 | 1 | 1534 | A |
| 36 | 1 | 1536 | G |
| 36 | 1 | 1541 | G |
| 36 | 1 | 1554 | U |
| 36 | 1 | 1555 | U |
| 36 | 1 | 1556 | C |
| 36 | 1 | 1557 | A |
| 36 | 1 | 1560 | G |
| 36 | 1 | 1562 | C |
| 36 | 1 | 1563 | C |
| 36 | 1 | 1564 | U |
| 36 | 1 | 1565 | G |
| 36 | 1 | 1573 | G |
| 36 | 1 | 1574 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 1575 | A |
| 36 | 1 | 1576 | G |
| 36 | 1 | 1579 | C |
| 36 | 1 | 1580 | A |
| 36 | 1 | 1581 | C |
| 36 | 1 | 1582 | C |
| 36 | 1 | 1583 | A |
| 36 | 1 | 1587 | A |
| 36 | 1 | 1589 | A |
| 36 | 1 | 1593 | A |
| 36 | 1 | 1594 | A |
| 36 | 1 | 1595 | U |
| 36 | 1 | 1596 | C |
| 36 | 1 | 1605 | A |
| 36 | 1 | 1607 | U |
| 36 | 1 | 1608 | C |
| 36 | 1 | 1613 | A |
| 36 | 1 | 1614 | C |
| 36 | 1 | 1619 | A |
| 36 | 1 | 1620 | U |
| 36 | 1 | 1621 | A |
| 36 | 1 | 1625 | A |
| 36 | 1 | 1629 | U |
| 36 | 1 | 1632 | A |
| 36 | 1 | 1636 | U |
| 36 | 1 | 1638 | A |
| 36 | 1 | 1639 | C |
| 36 | 1 | 1641 | U |
| 36 | 1 | 1643 | A |
| 36 | 1 | 1645 | U |
| 36 | 1 | 1647 | A |
| 36 | 1 | 1649 | U |
| 36 | 1 | 1655 | G |
| 36 | 1 | 1656 | A |
| 36 | 1 | 1657 | C |
| 36 | 1 | 1658 | G |
| 36 | 1 | 1659 | U |
| 36 | 1 | 1683 | A |
| 36 | 1 | 1708 | C |
| 36 | 1 | 1717 | U |
| 36 | 1 | 1724 | U |
| 36 | 1 | 1725 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 1729 | A |
| 36 | 1 | 1736 | G |
| 36 | 1 | 1741 | A |
| 36 | 1 | 1750 | A |
| 36 | 1 | 1751 | G |
| 36 | 1 | 1759 | C |
| 36 | 1 | 1760 | A |
| 36 | 1 | 1761 | C |
| 36 | 1 | 1762 | C |
| 36 | 1 | 1763 | U |
| 36 | 1 | 1764 | U |
| 36 | 1 | 1765 | U |
| 36 | 1 | 1766 | G |
| 36 | 1 | 1767 | C |
| 36 | 1 | 1769 | G |
| 36 | 1 | 1770 | G |
| 36 | 1 | 1779 | C |
| 36 | 1 | 1780 | G |
| 36 | 1 | 1781 | C |
| 36 | 1 | 1793 | C |
| 36 | 1 | 1795 | U |
| 36 | 1 | 1797 | A |
| 36 | 1 | 1801 | U |
| 36 | 1 | 1806 | A |
| 36 | 1 | 1808 | G |
| 36 | 1 | 1809 | A |
| 36 | 1 | 1810 | A |
| 36 | 1 | 1814 | A |
| 36 | 1 | 1816 | A |
| 36 | 1 | 1817 | G |
| 36 | 1 | 1819 | U |
| 36 | 1 | 1820 | U |
| 36 | 1 | 1821 | U |
| 36 | 1 | 1835 | A |
| 36 | 1 | 1839 | A |
| 36 | 1 | 1841 | A |
| 36 | 1 | 1842 | A |
| 36 | 1 | 1845 | G |
| 36 | 1 | 1846 | C |
| 36 | 1 | 1849 | C |
| 36 | 1 | 1855 | U |
| 36 | 1 | 1858 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 1866 | C |
| 36 | 1 | 1867 | A |
| 36 | 1 | 1876 | U |
| 36 | 1 | 1878 | G |
| 36 | 1 | 1879 | A |
| 36 | 1 | 1880 | U |
| 36 | 1 | 1886 | A |
| 36 | 1 | 1901 | A |
| 36 | 1 | 1906 | G |
| 36 | 1 | 1913 | A |
| 36 | 1 | 1926 | C |
| 36 | 1 | 1930 | A |
| 36 | 1 | 1931 | U |
| 36 | 1 | 1932 | A |
| 36 | 1 | 1937 | U |
| 36 | 1 | 1948 | G |
| 36 | 1 | 1951 | C |
| 36 | 1 | 1952 | G |
| 36 | 1 | 1953 | G |
| 36 | 1 | 2094 | C |
| 36 | 1 | 2102 | U |
| 36 | 1 | 2107 | A |
| 36 | 1 | 2112 | U |
| 36 | 1 | 2113 | A |
| 36 | 1 | 2114 | C |
| 36 | 1 | 2117 | A |
| 36 | 1 | 2121 | G |
| 36 | 1 | 2122 | G |
| 36 | 1 | 2125 | A |
| 36 | 1 | 2130 | G |
| 36 | 1 | 2131 | A |
| 36 | 1 | 2134 | G |
| 36 | 1 | 2139 | A |
| 36 | 1 | 2140 | U |
| 36 | 1 | 2142 | A |
| 36 | 1 | 2144 | A |
| 36 | 1 | 2158 | A |
| 36 | 1 | 2169 | G |
| 36 | 1 | 2174 | G |
| 36 | 1 | 2178 | A |
| 36 | 1 | 2179 | C |
| 36 | 1 | 2184 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 2193 | U |
| 36 | 1 | 2198 | A |
| 36 | 1 | 2201 | G |
| 36 | 1 | 2205 | U |
| 36 | 1 | 2206 | G |
| 36 | 1 | 2207 | A |
| 36 | 1 | 2208 | A |
| 36 | 1 | 2209 | U |
| 36 | 1 | 2210 | G |
| 36 | 1 | 2225 | U |
| 36 | 1 | 2228 | A |
| 36 | 1 | 2244 | A |
| 36 | 1 | 2248 | C |
| 36 | 1 | 2249 | G |
| 36 | 1 | 2250 | G |
| 36 | 1 | 2255 | A |
| 36 | 1 | 2256 | A |
| 36 | 1 | 2258 | U |
| 36 | 1 | 2259 | A |
| 36 | 1 | 2272 | G |
| 36 | 1 | 2273 | G |
| 36 | 1 | 2277 | C |
| 36 | 1 | 2281 | A |
| 36 | 1 | 2282 | U |
| 36 | 1 | 2283 | G |
| 36 | 1 | 2288 | G |
| 36 | 1 | 2298 | U |
| 36 | 1 | 2307 | G |
| 36 | 1 | 2308 | C |
| 36 | 1 | 2310 | U |
| 36 | 1 | 2313 | A |
| 36 | 1 | 2314 | U |
| 36 | 1 | 2315 | G |
| 36 | 1 | 2319 | U |
| 36 | 1 | 2334 | U |
| 36 | 1 | 2335 | G |
| 36 | 1 | 2336 | U |
| 36 | 1 | 2361 | A |
| 36 | 1 | 2364 | G |
| 36 | 1 | 2372 | A |
| 36 | 1 | 2373 | A |
| 36 | 1 | 2374 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 2375 | G |
| 36 | 1 | 2383 | C |
| 36 | 1 | 2385 | G |
| 36 | 1 | 2393 | G |
| 36 | 1 | 2397 | A |
| 36 | 1 | 2401 | A |
| 36 | 1 | 2402 | A |
| 36 | 1 | 2403 | G |
| 36 | 1 | 2404 | A |
| 36 | 1 | 2411 | U |
| 36 | 1 | 2418 | G |
| 36 | 1 | 2434 | U |
| 36 | 1 | 2435 | G |
| 36 | 1 | 2514 | U |
| 36 | 1 | 2515 | A |
| 36 | 1 | 2521 | U |
| 36 | 1 | 2522 | G |
| 36 | 1 | 2523 | A |
| 36 | 1 | 2525 | G |
| 36 | 1 | 2526 | C |
| 36 | 1 | 2531 | C |
| 36 | 1 | 2532 | U |
| 36 | 1 | 2533 | G |
| 36 | 1 | 2537 | U |
| 36 | 1 | 2538 | U |
| 36 | 1 | 2539 | C |
| 36 | 1 | 2540 | A |
| 36 | 1 | 2541 | U |
| 36 | 1 | 2542 | U |
| 36 | 1 | 2543 | U |
| 36 | 1 | 2547 | A |
| 36 | 1 | 2548 | C |
| 36 | 1 | 2549 | G |
| 36 | 1 | 2550 | U |
| 36 | 1 | 2552 | C |
| 36 | 1 | 2553 | U |
| 36 | 1 | 2554 | A |
| 36 | 1 | 2555 | G |
| 36 | 1 | 2558 | U |
| 36 | 1 | 2559 | U |
| 36 | 1 | 2560 | C |
| 36 | 1 | 2561 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 2567 | C |
| 36 | 1 | 2568 | C |
| 36 | 1 | 2569 | A |
| 36 | 1 | 2570 | U |
| 36 | 1 | 2571 | U |
| 36 | 1 | 2572 | C |
| 36 | 1 | 2573 | G |
| 36 | 1 | 2574 | G |
| 36 | 1 | 2577 | C |
| 36 | 1 | 2580 | A |
| 36 | 1 | 2581 | U |
| 36 | 1 | 2585 | G |
| 36 | 1 | 2586 | G |
| 36 | 1 | 2593 | A |
| 36 | 1 | 2594 | C |
| 36 | 1 | 2595 | A |
| 36 | 1 | 2606 | G |
| 36 | 1 | 2607 | G |
| 36 | 1 | 2608 | G |
| 36 | 1 | 2614 | G |
| 36 | 1 | 2619 | G |
| 36 | 1 | 2620 | G |
| 36 | 1 | 2637 | A |
| 36 | 1 | 2652 | U |
| 36 | 1 | 2656 | A |
| 36 | 1 | 2657 | A |
| 36 | 1 | 2658 | G |
| 36 | 1 | 2672 | G |
| 36 | 1 | 2674 | A |
| 36 | 1 | 2676 | A |
| 36 | 1 | 2677 | G |
| 36 | 1 | 2681 | U |
| 36 | 1 | 2684 | C |
| 36 | 1 | 2689 | A |
| 36 | 1 | 2691 | A |
| 36 | 1 | 2694 | A |
| 36 | 1 | 2695 | A |
| 36 | 1 | 2696 | A |
| 36 | 1 | 2700 | G |
| 36 | 1 | 2705 | A |
| 36 | 1 | 2714 | G |
| 36 | 1 | 2728 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 2737 | C |
| 36 | 1 | 2738 | A |
| 36 | 1 | 2740 | A |
| 36 | 1 | 2752 | U |
| 36 | 1 | 2753 | G |
| 36 | 1 | 2754 | G |
| 36 | 1 | 2758 | A |
| 36 | 1 | 2762 | A |
| 36 | 1 | 2768 | U |
| 36 | 1 | 2772 | C |
| 36 | 1 | 2773 | C |
| 36 | 1 | 2775 | U |
| 36 | 1 | 2777 | G |
| 36 | 1 | 2778 | G |
| 36 | 1 | 2780 | A |
| 36 | 1 | 2796 | G |
| 36 | 1 | 2799 | A |
| 36 | 1 | 2800 | G |
| 36 | 1 | 2801 | A |
| 36 | 1 | 2802 | A |
| 36 | 1 | 2808 | A |
| 36 | 1 | 2809 | C |
| 36 | 1 | 2810 | C |
| 36 | 1 | 2814 | G |
| 36 | 1 | 2817 | A |
| 36 | 1 | 2818 | U |
| 36 | 1 | 2821 | C |
| 36 | 1 | 2822 | U |
| 36 | 1 | 2827 | U |
| 36 | 1 | 2837 | A |
| 36 | 1 | 2842 | U |
| 36 | 1 | 2843 | U |
| 36 | 1 | 2845 | A |
| 36 | 1 | 2846 | U |
| 36 | 1 | 2847 | A |
| 36 | 1 | 2853 | A |
| 36 | 1 | 2856 | G |
| 36 | 1 | 2860 | U |
| 36 | 1 | 2867 | C |
| 36 | 1 | 2871 | G |
| 36 | 1 | 2872 | A |
| 36 | 1 | 2873 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 2875 | U |
| 36 | 1 | 2876 | C |
| 36 | 1 | 2879 | C |
| 36 | 1 | 2880 | U |
| 36 | 1 | 2887 | A |
| 36 | 1 | 2889 | C |
| 36 | 1 | 2899 | C |
| 36 | 1 | 2910 | A |
| 36 | 1 | 2912 | G |
| 36 | 1 | 2914 | G |
| 36 | 1 | 2922 | G |
| 36 | 1 | 2923 | U |
| 36 | 1 | 2927 | C |
| 36 | 1 | 2928 | C |
| 36 | 1 | 2935 | U |
| 36 | 1 | 2936 | A |
| 36 | 1 | 2942 | C |
| 36 | 1 | 2945 | G |
| 36 | 1 | 2946 | A |
| 36 | 1 | 2947 | G |
| 36 | 1 | 2951 | G |
| 36 | 1 | 2954 | U |
| 36 | 1 | 2955 | U |
| 36 | 1 | 2957 | G |
| 36 | 1 | 2965 | U |
| 36 | 1 | 2966 | G |
| 36 | 1 | 2971 | A |
| 36 | 1 | 2972 | G |
| 36 | 1 | 2974 | U |
| 36 | 1 | 2983 | C |
| 36 | 1 | 2990 | G |
| 36 | 1 | 2992 | U |
| 36 | 1 | 2997 | G |
| 36 | 1 | 3003 | G |
| 36 | 1 | 3012 | A |
| 36 | 1 | 3030 | G |
| 36 | 1 | 3056 | U |
| 36 | 1 | 3057 | U |
| 36 | 1 | 3059 | G |
| 36 | 1 | 3078 | U |
| 36 | 1 | 3079 | U |
| 36 | 1 | 3080 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 3086 | A |
| 36 | 1 | 3092 | C |
| 36 | 1 | 3115 | C |
| 36 | 1 | 3122 | A |
| 36 | 1 | 3123 | A |
| 36 | 1 | 3129 | A |
| 36 | 1 | 3130 | A |
| 36 | 1 | 3131 | U |
| 36 | 1 | 3142 | A |
| 36 | 1 | 3143 | C |
| 36 | 1 | 3151 | U |
| 36 | 1 | 3164 | C |
| 36 | 1 | 3165 | A |
| 36 | 1 | 3168 | A |
| 36 | 1 | 3169 | U |
| 36 | 1 | 3170 | A |
| 36 | 1 | 3171 | U |
| 36 | 1 | 3173 | G |
| 36 | 1 | 3174 | A |
| 36 | 1 | 3176 | G |
| 36 | 1 | 3179 | U |
| 36 | 1 | 3181 | C |
| 36 | 1 | 3187 | A |
| 36 | 1 | 3196 | U |
| 36 | 1 | 3199 | G |
| 36 | 1 | 3207 | U |
| 36 | 1 | 3209 | A |
| 36 | 1 | 3210 | A |
| 36 | 1 | 3213 | A |
| 36 | 1 | 3216 | G |
| 36 | 1 | 3217 | C |
| 36 | 1 | 3218 | A |
| 36 | 1 | 3219 | G |
| 36 | 1 | 3224 | G |
| 36 | 1 | 3227 | A |
| 36 | 1 | 3228 | C |
| 36 | 1 | 3229 | G |
| 36 | 1 | 3235 | C |
| 36 | 1 | 3242 | G |
| 36 | 1 | 3243 | A |
| 36 | 1 | 3245 | A |
| 36 | 1 | 3247 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 3253 | G |
| 36 | 1 | 3259 | U |
| 36 | 1 | 3268 | A |
| 36 | 1 | 3269 | U |
| 36 | 1 | 3270 | U |
| 36 | 1 | 3271 | G |
| 36 | 1 | 3272 | C |
| 36 | 1 | 3276 | G |
| 36 | 1 | 3279 | A |
| 36 | 1 | 3281 | U |
| 36 | 1 | 3287 | U |
| 36 | 1 | 3289 | G |
| 36 | 1 | 3294 | A |
| 36 | 1 | 3295 | A |
| 36 | 1 | 3303 | G |
| 36 | 1 | 3304 | U |
| 36 | 1 | 3307 | A |
| 36 | 1 | 3313 | U |
| 36 | 1 | 3316 | A |
| 36 | 1 | 3317 | U |
| 36 | 1 | 3318 | G |
| 36 | 1 | 3319 | U |
| 36 | 1 | 3320 | A |
| 36 | 1 | 3335 | A |
| 36 | 1 | 3340 | G |
| 36 | 1 | 3341 | U |
| 36 | 1 | 3342 | A |
| 36 | 1 | 3351 | U |
| 36 | 1 | 3354 | U |
| 36 | 1 | 3355 | U |
| 36 | 1 | 3356 | G |
| 36 | 1 | 3358 | U |
| 36 | 1 | 3359 | A |
| 36 | 1 | 3360 | C |
| 36 | 1 | 3363 | U |
| 36 | 1 | 3364 | C |
| 36 | 1 | 3368 | U |
| 36 | 1 | 3369 | G |
| 36 | 1 | 3375 | A |
| 36 | 1 | 3376 | A |
| 36 | 1 | 3378 | C |
| 36 | 1 | 3382 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 3383 | G |
| 36 | 1 | 3386 | G |
| 36 | 1 | 3390 | G |
| 37 | 3 | 7 | G |
| 37 | 3 | 13 | A |
| 37 | 3 | 22 | A |
| 37 | 3 | 41 | G |
| 37 | 3 | 53 | U |
| 37 | 3 | 54 | U |
| 37 | 3 | 65 | G |
| 37 | 3 | 74 | C |
| 37 | 3 | 76 | A |
| 37 | 3 | 92 | A |
| 37 | 3 | 93 | C |
| 37 | 3 | 95 | A |
| 37 | 3 | 99 | G |
| 37 | 3 | 102 | A |
| 37 | 3 | 112 | G |
| 37 | 3 | 114 | U |
| 37 | 3 | 116 | C |
| 37 | 3 | 119 | U |
| 37 | 3 | 120 | C |
| 37 | 3 | 121 | U |
| 38 | 4 | 34 | U |
| 38 | 4 | 35 | C |
| 38 | 4 | 37 | A |
| 38 | 4 | 48 | A |
| 38 | 4 | 51 | G |
| 38 | 4 | 52 | A |
| 38 | 4 | 53 | A |
| 38 | 4 | 59 | A |
| 38 | 4 | 60 | U |
| 38 | 4 | 62 | C |
| 38 | 4 | 63 | G |
| 38 | 4 | 78 | G |
| 38 | 4 | 79 | A |
| 38 | 4 | 80 | A |
| 38 | 4 | 81 | U |
| 38 | 4 | 82 | U |
| 38 | 4 | 83 | C |
| 38 | 4 | 84 | C |
| 38 | 4 | 85 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 38 | 4 | 86 | U |
| 38 | 4 | 87 | G |
| 38 | 4 | 89 | A |
| 38 | 4 | 90 | U |
| 38 | 4 | 91 | C |
| 38 | 4 | 95 | G |
| 38 | 4 | 96 | A |
| 38 | 4 | 102 | U |
| 38 | 4 | 104 | A |
| 38 | 4 | 106 | C |
| 38 | 4 | 110 | C |
| 38 | 4 | 111 | A |
| 38 | 4 | 112 | U |
| 38 | 4 | 113 | U |
| 38 | 4 | 123 | G |
| 38 | 4 | 124 | G |
| 38 | 4 | 125 | U |
| 38 | 4 | 126 | A |
| 38 | 4 | 127 | U |
| 38 | 4 | 128 | U |
| 38 | 4 | 129 | C |
| 38 | 4 | 132 | G |
| 38 | 4 | 137 | C |
| 38 | 4 | 138 | A |
| 38 | 4 | 151 | C |
| 38 | 4 | 152 | G |
| 38 | 4 | 155 | A |
| 38 | 4 | 157 | U |
| 38 | 4 | 158 | U |
| 1 | 6 | 2 | A |
| 1 | 6 | 4 | C |
| 1 | 6 | 17 | C |
| 1 | 6 | 25 | C |
| 1 | 6 | 26 | A |
| 1 | 6 | 27 | U |
| 1 | 6 | 34 | G |
| 1 | 6 | 42 | G |
| 1 | 6 | 45 | U |
| 1 | 6 | 46 | A |
| 1 | 6 | 47 | A |
| 1 | 6 | 50 | C |
| 1 | 6 | 57 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 6 | 60 | U |
| 1 | 6 | 63 | G |
| 1 | 6 | 67 | A |
| 1 | 6 | 68 | A |
| 1 | 6 | 69 | G |
| 1 | 6 | 71 | A |
| 1 | 6 | 77 | U |
| 1 | 6 | 103 | A |
| 1 | 6 | 104 | A |
| 1 | 6 | 114 | C |
| 1 | 6 | 115 | G |
| 1 | 6 | 126 | A |
| 1 | 6 | 132 | U |
| 1 | 6 | 137 | U |
| 1 | 6 | 138 | A |
| 1 | 6 | 140 | A |
| 1 | 6 | 141 | U |
| 1 | 6 | 144 | U |
| 1 | 6 | 145 | A |
| 1 | 6 | 146 | U |
| 1 | 6 | 158 | U |
| 1 | 6 | 159 | U |
| 1 | 6 | 160 | C |
| 1 | 6 | 166 | C |
| 1 | 6 | 178 | U |
| 1 | 6 | 179 | A |
| 1 | 6 | 185 | U |
| 1 | 6 | 188 | A |
| 1 | 6 | 190 | C |
| 1 | 6 | 191 | C |
| 1 | 6 | 192 | U |
| 1 | 6 | 193 | U |
| 1 | 6 | 194 | U |
| 1 | 6 | 195 | G |
| 1 | 6 | 196 | G |
| 1 | 6 | 197 | A |
| 1 | 6 | 199 | G |
| 1 | 6 | 200 | A |
| 1 | 6 | 215 | A |
| 1 | 6 | 218 | A |
| 1 | 6 | 220 | A |
| 1 | 6 | 224 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 6 | 226 | A |
| 1 | 6 | 230 | C |
| 1 | 6 | 232 | U |
| 1 | 6 | 233 | C |
| 1 | 6 | 234 | G |
| 1 | 6 | 237 | C |
| 1 | 6 | 238 | U |
| 1 | 6 | 239 | C |
| 1 | 6 | 240 | U |
| 1 | 6 | 241 | U |
| 1 | 6 | 243 | G |
| 1 | 6 | 248 | U |
| 1 | 6 | 250 | C |
| 1 | 6 | 257 | A |
| 1 | 6 | 261 | U |
| 1 | 6 | 265 | A |
| 1 | 6 | 271 | A |
| 1 | 6 | 272 | U |
| 1 | 6 | 273 | G |
| 1 | 6 | 276 | C |
| 1 | 6 | 277 | U |
| 1 | 6 | 278 | U |
| 1 | 6 | 280 | U |
| 1 | 6 | 281 | G |
| 1 | 6 | 299 | A |
| 1 | 6 | 301 | A |
| 1 | 6 | 314 | C |
| 1 | 6 | 316 | A |
| 1 | 6 | 318 | U |
| 1 | 6 | 320 | U |
| 1 | 6 | 321 | C |
| 1 | 6 | 322 | G |
| 1 | 6 | 331 | A |
| 1 | 6 | 333 | A |
| 1 | 6 | 337 | G |
| 1 | 6 | 338 | C |
| 1 | 6 | 344 | A |
| 1 | 6 | 352 | A |
| 1 | 6 | 359 | A |
| 1 | 6 | 360 | A |
| 1 | 6 | 361 | C |
| 1 | 6 | 370 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 6 | 387 | A |
| 1 | 6 | 390 | G |
| 1 | 6 | 391 | A |
| 1 | 6 | 399 | A |
| 1 | 6 | 400 | A |
| 1 | 6 | 401 | A |
| 1 | 6 | 402 | C |
| 1 | 6 | 403 | G |
| 1 | 6 | 404 | G |
| 1 | 6 | 411 | C |
| 1 | 6 | 416 | A |
| 1 | 6 | 417 | A |
| 1 | 6 | 418 | G |
| 1 | 6 | 423 | G |
| 1 | 6 | 424 | C |
| 1 | 6 | 425 | A |
| 1 | 6 | 426 | G |
| 1 | 6 | 434 | G |
| 1 | 6 | 437 | A |
| 1 | 6 | 439 | U |
| 1 | 6 | 444 | C |
| 1 | 6 | 448 | C |
| 1 | 6 | 452 | A |
| 1 | 6 | 454 | U |
| 1 | 6 | 460 | A |
| 1 | 6 | 468 | A |
| 1 | 6 | 475 | A |
| 1 | 6 | 480 | G |
| 1 | 6 | 484 | C |
| 1 | 6 | 485 | A |
| 1 | 6 | 486 | G |
| 1 | 6 | 487 | G |
| 1 | 6 | 488 | G |
| 1 | 6 | 500 | C |
| 1 | 6 | 501 | U |
| 1 | 6 | 504 | U |
| 1 | 6 | 505 | A |
| 1 | 6 | 506 | A |
| 1 | 6 | 507 | U |
| 1 | 6 | 508 | U |
| 1 | 6 | 510 | G |
| 1 | 6 | 511 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 6 | 512 | A |
| 1 | 6 | 513 | U |
| 1 | 6 | 514 | G |
| 1 | 6 | 515 | A |
| 1 | 6 | 519 | C |
| 1 | 6 | 523 | G |
| 1 | 6 | 527 | A |
| 1 | 6 | 534 | A |
| 1 | 6 | 535 | A |
| 1 | 6 | 538 | A |
| 1 | 6 | 539 | G |
| 1 | 6 | 540 | G |
| 1 | 6 | 541 | A |
| 1 | 6 | 542 | A |
| 1 | 6 | 543 | C |
| 1 | 6 | 544 | A |
| 1 | 6 | 548 | G |
| 1 | 6 | 549 | G |
| 1 | 6 | 555 | A |
| 1 | 6 | 556 | A |
| 1 | 6 | 557 | G |
| 1 | 6 | 558 | U |
| 1 | 6 | 559 | C |
| 1 | 6 | 560 | U |
| 1 | 6 | 565 | C |
| 1 | 6 | 568 | G |
| 1 | 6 | 570 | A |
| 1 | 6 | 571 | G |
| 1 | 6 | 572 | C |
| 1 | 6 | 574 | G |
| 1 | 6 | 578 | U |
| 1 | 6 | 579 | A |
| 1 | 6 | 580 | A |
| 1 | 6 | 582 | U |
| 1 | 6 | 594 | A |
| 1 | 6 | 595 | G |
| 1 | 6 | 596 | C |
| 1 | 6 | 609 | U |
| 1 | 6 | 610 | G |
| 1 | 6 | 619 | A |
| 1 | 6 | 620 | A |
| 1 | 6 | 621 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 6 | 622 | A |
| 1 | 6 | 623 | A |
| 1 | 6 | 625 | C |
| 1 | 6 | 630 | A |
| 1 | 6 | 635 | A |
| 1 | 6 | 639 | U |
| 1 | 6 | 640 | U |
| 1 | 6 | 645 | C |
| 1 | 6 | 648 | G |
| 1 | 6 | 688 | G |
| 1 | 6 | 691 | C |
| 1 | 6 | 696 | C |
| 1 | 6 | 698 | U |
| 1 | 6 | 742 | U |
| 1 | 6 | 743 | U |
| 1 | 6 | 751 | G |
| 1 | 6 | 754 | A |
| 1 | 6 | 755 | A |
| 1 | 6 | 756 | A |
| 1 | 6 | 765 | G |
| 1 | 6 | 766 | U |
| 1 | 6 | 774 | A |
| 1 | 6 | 775 | G |
| 1 | 6 | 777 | C |
| 1 | 6 | 778 | G |
| 1 | 6 | 780 | A |
| 1 | 6 | 781 | U |
| 1 | 6 | 782 | U |
| 1 | 6 | 783 | G |
| 1 | 6 | 787 | G |
| 1 | 6 | 789 | A |
| 1 | 6 | 793 | A |
| 1 | 6 | 794 | U |
| 1 | 6 | 811 | A |
| 1 | 6 | 812 | A |
| 1 | 6 | 820 | U |
| 1 | 6 | 826 | U |
| 1 | 6 | 830 | U |
| 1 | 6 | 831 | U |
| 1 | 6 | 835 | U |
| 1 | 6 | 856 | A |
| 1 | 6 | 861 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 6 | 862 | A |
| 1 | 6 | 863 | A |
| 1 | 6 | 876 | G |
| 1 | 6 | 886 | U |
| 1 | 6 | 912 | U |
| 1 | 6 | 913 | G |
| 1 | 6 | 914 | G |
| 1 | 6 | 916 | U |
| 1 | 6 | 926 | A |
| 1 | 6 | 933 | A |
| 1 | 6 | 935 | U |
| 1 | 6 | 942 | G |
| 1 | 6 | 951 | A |
| 1 | 6 | 959 | U |
| 1 | 6 | 960 | U |
| 1 | 6 | 966 | A |
| 1 | 6 | 969 | C |
| 1 | 6 | 970 | A |
| 1 | 6 | 971 | A |
| 1 | 6 | 983 | A |
| 1 | 6 | 992 | A |
| 1 | 6 | 993 | A |
| 1 | 6 | 995 | A |
| 1 | 6 | 997 | G |
| 1 | 6 | 1003 | A |
| 1 | 6 | 1004 | U |
| 1 | 6 | 1005 | A |
| 1 | 6 | 1021 | C |
| 1 | 6 | 1025 | A |
| 1 | 6 | 1026 | A |
| 1 | 6 | 1028 | C |
| 1 | 6 | 1029 | U |
| 1 | 6 | 1039 | A |
| 1 | 6 | 1040 | G |
| 1 | 6 | 1052 | U |
| 1 | 6 | 1053 | G |
| 1 | 6 | 1057 | U |
| 1 | 6 | 1058 | U |
| 1 | 6 | 1059 | U |
| 1 | 6 | 1060 | U |
| 1 | 6 | 1062 | A |
| 1 | 6 | 1071 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 6 | 1072 | C |
| 1 | 6 | 1074 | G |
| 1 | 6 | 1082 | C |
| 1 | 6 | 1092 | A |
| 1 | 6 | 1093 | A |
| 1 | 6 | 1096 | C |
| 1 | 6 | 1097 | U |
| 1 | 6 | 1098 | U |
| 1 | 6 | 1099 | U |
| 1 | 6 | 1100 | G |
| 1 | 6 | 1111 | G |
| 1 | 6 | 1113 | A |
| 1 | 6 | 1138 | A |
| 1 | 6 | 1155 | G |
| 1 | 6 | 1158 | C |
| 1 | 6 | 1159 | C |
| 1 | 6 | 1160 | A |
| 1 | 6 | 1164 | G |
| 1 | 6 | 1167 | G |
| 1 | 6 | 1185 | U |
| 1 | 6 | 1194 | A |
| 1 | 6 | 1196 | A |
| 1 | 6 | 1197 | C |
| 1 | 6 | 1198 | G |
| 1 | 6 | 1199 | G |
| 1 | 6 | 1200 | G |
| 1 | 6 | 1202 | A |
| 1 | 6 | 1207 | C |
| 1 | 6 | 1208 | A |
| 1 | 6 | 1217 | A |
| 1 | 6 | 1218 | G |
| 1 | 6 | 1220 | C |
| 1 | 6 | 1225 | U |
| 1 | 6 | 1226 | A |
| 1 | 6 | 1228 | G |
| 1 | 6 | 1229 | G |
| 1 | 6 | 1230 | A |
| 1 | 6 | 1239 | U |
| 1 | 6 | 1241 | G |
| 1 | 6 | 1243 | G |
| 1 | 6 | 1244 | A |
| 1 | 6 | 1245 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 6 | 1246 | C |
| 1 | 6 | 1255 | G |
| 1 | 6 | 1256 | A |
| 1 | 6 | 1257 | U |
| 1 | 6 | 1258 | U |
| 1 | 6 | 1285 | U |
| 1 | 6 | 1286 | U |
| 1 | 6 | 1291 | G |
| 1 | 6 | 1301 | U |
| 1 | 6 | 1314 | U |
| 1 | 6 | 1315 | U |
| 1 | 6 | 1316 | G |
| 1 | 6 | 1321 | A |
| 1 | 6 | 1338 | C |
| 1 | 6 | 1341 | A |
| 1 | 6 | 1343 | U |
| 1 | 6 | 1344 | A |
| 1 | 6 | 1345 | A |
| 1 | 6 | 1348 | A |
| 1 | 6 | 1354 | G |
| 1 | 6 | 1361 | U |
| 1 | 6 | 1362 | U |
| 1 | 6 | 1363 | U |
| 1 | 6 | 1364 | G |
| 1 | 6 | 1370 | U |
| 1 | 6 | 1371 | A |
| 1 | 6 | 1383 | G |
| 1 | 6 | 1390 | U |
| 1 | 6 | 1398 | U |
| 1 | 6 | 1399 | C |
| 1 | 6 | 1400 | A |
| 1 | 6 | 1402 | G |
| 1 | 6 | 1413 | U |
| 1 | 6 | 1414 | U |
| 1 | 6 | 1415 | U |
| 1 | 6 | 1427 | A |
| 1 | 6 | 1428 | G |
| 1 | 6 | 1432 | U |
| 1 | 6 | 1433 | G |
| 1 | 6 | 1445 | G |
| 1 | 6 | 1446 | A |
| 1 | 6 | 1448 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 6 | 1459 | C |
| 1 | 6 | 1460 | A |
| 1 | 6 | 1461 | C |
| 1 | 6 | 1471 | A |
| 1 | 6 | 1473 | U |
| 1 | 6 | 1481 | C |
| 1 | 6 | 1482 | C |
| 1 | 6 | 1486 | G |
| 1 | 6 | 1487 | A |
| 1 | 6 | 1489 | U |
| 1 | 6 | 1490 | C |
| 1 | 6 | 1491 | U |
| 1 | 6 | 1492 | A |
| 1 | 6 | 1493 | A |
| 1 | 6 | 1506 | G |
| 1 | 6 | 1514 | U |
| 1 | 6 | 1515 | A |
| 1 | 6 | 1516 | A |
| 1 | 6 | 1521 | G |
| 1 | 6 | 1523 | G |
| 1 | 6 | 1524 | A |
| 1 | 6 | 1531 | G |
| 1 | 6 | 1535 | U |
| 1 | 6 | 1536 | G |
| 1 | 6 | 1537 | C |
| 1 | 6 | 1538 | U |
| 1 | 6 | 1540 | G |
| 1 | 6 | 1554 | U |
| 1 | 6 | 1557 | U |
| 1 | 6 | 1559 | A |
| 1 | 6 | 1569 | A |
| 1 | 6 | 1574 | G |
| 1 | 6 | 1582 | U |
| 1 | 6 | 1584 | G |
| 1 | 6 | 1590 | G |
| 1 | 6 | 1601 | G |
| 1 | 6 | 1616 | G |
| 1 | 6 | 1621 | U |
| 1 | 6 | 1637 | C |
| 1 | 6 | 1638 | G |
| 1 | 6 | 1656 | U |
| 1 | 6 | 1657 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 6 | 1658 | G |
| 1 | 6 | 1663 | G |
| 1 | 6 | 1666 | U |
| 1 | 6 | 1678 | A |
| 1 | 6 | 1681 | A |
| 1 | 6 | 1682 | U |
| 1 | 6 | 1684 | U |
| 1 | 6 | 1715 | G |
| 1 | 6 | 1716 | C |
| 1 | 6 | 1717 | G |
| 1 | 6 | 1719 | A |
| 1 | 6 | 1720 | G |
| 1 | 6 | 1736 | G |
| 1 | 6 | 1742 | U |
| 1 | 6 | 1750 | A |
| 1 | 6 | 1753 | A |
| 1 | 6 | 1754 | A |
| 1 | 6 | 1755 | A |
| 1 | 6 | 1756 | A |
| 1 | 6 | 1757 | G |
| 1 | 6 | 1760 | G |
| 1 | 6 | 1762 | A |
| 1 | 6 | 1766 | A |
| 1 | 6 | 1767 | G |
| 1 | 6 | 1769 | U |
| 1 | 6 | 1770 | U |
| 1 | 6 | 1780 | G |
| 1 | 6 | 1782 | A |
| 1 | 6 | 1783 | C |
| 1 | 6 | 1790 | A |
| 1 | 6 | 1792 | G |
| 1 | 6 | 1793 | G |
| 1 | 6 | 1794 | A |
| 1 | 6 | 1796 | C |
| 1 | 6 | 1799 | U |
| 1 | 6 | 1800 | A |
| 36 | 5 | 15 | C |
| 36 | 5 | 26 | A |
| 36 | 5 | 40 | A |
| 36 | 5 | 43 | A |
| 36 | 5 | 44 | U |
| 36 | 5 | 49 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 57 | A |
| 36 | 5 | 59 | G |
| 36 | 5 | 60 | A |
| 36 | 5 | 65 | A |
| 36 | 5 | 66 | A |
| 36 | 5 | 76 | G |
| 36 | 5 | 85 | A |
| 36 | 5 | 92 | G |
| 36 | 5 | 94 | G |
| 36 | 5 | 96 | G |
| 36 | 5 | 99 | A |
| 36 | 5 | 101 | G |
| 36 | 5 | 109 | A |
| 36 | 5 | 110 | G |
| 36 | 5 | 111 | C |
| 36 | 5 | 115 | A |
| 36 | 5 | 116 | A |
| 36 | 5 | 121 | A |
| 36 | 5 | 122 | A |
| 36 | 5 | 133 | U |
| 36 | 5 | 134 | U |
| 36 | 5 | 136 | G |
| 36 | 5 | 146 | U |
| 36 | 5 | 148 | G |
| 36 | 5 | 152 | U |
| 36 | 5 | 156 | G |
| 36 | 5 | 157 | A |
| 36 | 5 | 158 | G |
| 36 | 5 | 166 | C |
| 36 | 5 | 171 | G |
| 36 | 5 | 184 | U |
| 36 | 5 | 187 | A |
| 36 | 5 | 190 | U |
| 36 | 5 | 191 | U |
| 36 | 5 | 200 | C |
| 36 | 5 | 210 | U |
| 36 | 5 | 211 | A |
| 36 | 5 | 213 | A |
| 36 | 5 | 218 | G |
| 36 | 5 | 219 | A |
| 36 | 5 | 221 | A |
| 36 | 5 | 228 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 239 | G |
| 36 | 5 | 240 | U |
| 36 | 5 | 241 | G |
| 36 | 5 | 245 | U |
| 36 | 5 | 246 | U |
| 36 | 5 | 248 | U |
| 36 | 5 | 250 | U |
| 36 | 5 | 251 | G |
| 36 | 5 | 252 | U |
| 36 | 5 | 253 | A |
| 36 | 5 | 254 | A |
| 36 | 5 | 262 | U |
| 36 | 5 | 263 | C |
| 36 | 5 | 269 | G |
| 36 | 5 | 274 | G |
| 36 | 5 | 282 | G |
| 36 | 5 | 283 | G |
| 36 | 5 | 284 | A |
| 36 | 5 | 286 | U |
| 36 | 5 | 295 | A |
| 36 | 5 | 296 | A |
| 36 | 5 | 315 | C |
| 36 | 5 | 316 | U |
| 36 | 5 | 323 | A |
| 36 | 5 | 329 | U |
| 36 | 5 | 334 | A |
| 36 | 5 | 338 | A |
| 36 | 5 | 339 | C |
| 36 | 5 | 349 | A |
| 36 | 5 | 350 | C |
| 36 | 5 | 351 | A |
| 36 | 5 | 369 | A |
| 36 | 5 | 370 | U |
| 36 | 5 | 376 | G |
| 36 | 5 | 387 | A |
| 36 | 5 | 398 | A |
| 36 | 5 | 399 | A |
| 36 | 5 | 401 | U |
| 36 | 5 | 402 | A |
| 36 | 5 | 403 | C |
| 36 | 5 | 404 | G |
| 36 | 5 | 420 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 421 | G |
| 36 | 5 | 422 | A |
| 36 | 5 | 424 | G |
| 36 | 5 | 440 | A |
| 36 | 5 | 495 | G |
| 36 | 5 | 507 | U |
| 36 | 5 | 510 | G |
| 36 | 5 | 515 | C |
| 36 | 5 | 518 | G |
| 36 | 5 | 520 | U |
| 36 | 5 | 521 | A |
| 36 | 5 | 535 | G |
| 36 | 5 | 542 | G |
| 36 | 5 | 546 | C |
| 36 | 5 | 548 | G |
| 36 | 5 | 549 | U |
| 36 | 5 | 555 | U |
| 36 | 5 | 556 | U |
| 36 | 5 | 557 | A |
| 36 | 5 | 559 | A |
| 36 | 5 | 578 | A |
| 36 | 5 | 579 | G |
| 36 | 5 | 594 | U |
| 36 | 5 | 600 | G |
| 36 | 5 | 604 | G |
| 36 | 5 | 609 | G |
| 36 | 5 | 611 | A |
| 36 | 5 | 620 | U |
| 36 | 5 | 621 | A |
| 36 | 5 | 622 | A |
| 36 | 5 | 625 | G |
| 36 | 5 | 633 | C |
| 36 | 5 | 636 | C |
| 36 | 5 | 638 | C |
| 36 | 5 | 649 | A |
| 36 | 5 | 653 | A |
| 36 | 5 | 660 | A |
| 36 | 5 | 661 | G |
| 36 | 5 | 677 | A |
| 36 | 5 | 681 | U |
| 36 | 5 | 682 | U |
| 36 | 5 | 683 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 705 | A |
| 36 | 5 | 706 | A |
| 36 | 5 | 712 | G |
| 36 | 5 | 715 | A |
| 36 | 5 | 716 | A |
| 36 | 5 | 720 | A |
| 36 | 5 | 726 | G |
| 36 | 5 | 736 | A |
| 36 | 5 | 750 | G |
| 36 | 5 | 758 | C |
| 36 | 5 | 761 | A |
| 36 | 5 | 766 | U |
| 36 | 5 | 767 | U |
| 36 | 5 | 776 | U |
| 36 | 5 | 777 | U |
| 36 | 5 | 781 | G |
| 36 | 5 | 785 | G |
| 36 | 5 | 786 | A |
| 36 | 5 | 801 | A |
| 36 | 5 | 802 | C |
| 36 | 5 | 806 | A |
| 36 | 5 | 816 | A |
| 36 | 5 | 817 | A |
| 36 | 5 | 820 | A |
| 36 | 5 | 826 | G |
| 36 | 5 | 829 | U |
| 36 | 5 | 830 | A |
| 36 | 5 | 834 | U |
| 36 | 5 | 837 | A |
| 36 | 5 | 851 | C |
| 36 | 5 | 852 | U |
| 36 | 5 | 857 | G |
| 36 | 5 | 861 | C |
| 36 | 5 | 866 | A |
| 36 | 5 | 869 | G |
| 36 | 5 | 874 | U |
| 36 | 5 | 875 | G |
| 36 | 5 | 877 | C |
| 36 | 5 | 879 | U |
| 36 | 5 | 880 | G |
| 36 | 5 | 883 | A |
| 36 | 5 | 890 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 896 | A |
| 36 | 5 | 897 | U |
| 36 | 5 | 907 | G |
| 36 | 5 | 908 | G |
| 36 | 5 | 910 | G |
| 36 | 5 | 914 | A |
| 36 | 5 | 916 | G |
| 36 | 5 | 917 | A |
| 36 | 5 | 921 | A |
| 36 | 5 | 923 | C |
| 36 | 5 | 924 | G |
| 36 | 5 | 932 | U |
| 36 | 5 | 933 | A |
| 36 | 5 | 937 | G |
| 36 | 5 | 944 | C |
| 36 | 5 | 952 | A |
| 36 | 5 | 959 | C |
| 36 | 5 | 960 | U |
| 36 | 5 | 979 | U |
| 36 | 5 | 980 | A |
| 36 | 5 | 994 | G |
| 36 | 5 | 995 | U |
| 36 | 5 | 1001 | G |
| 36 | 5 | 1002 | A |
| 36 | 5 | 1003 | A |
| 36 | 5 | 1010 | G |
| 36 | 5 | 1014 | U |
| 36 | 5 | 1015 | U |
| 36 | 5 | 1016 | C |
| 36 | 5 | 1017 | C |
| 36 | 5 | 1018 | G |
| 36 | 5 | 1021 | G |
| 36 | 5 | 1024 | G |
| 36 | 5 | 1025 | A |
| 36 | 5 | 1026 | A |
| 36 | 5 | 1027 | A |
| 36 | 5 | 1028 | U |
| 36 | 5 | 1029 | G |
| 36 | 5 | 1032 | C |
| 36 | 5 | 1034 | U |
| 36 | 5 | 1035 | G |
| 36 | 5 | 1047 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 1049 | C |
| 36 | 5 | 1063 | G |
| 36 | 5 | 1064 | A |
| 36 | 5 | 1065 | A |
| 36 | 5 | 1071 | U |
| 36 | 5 | 1072 | G |
| 36 | 5 | 1081 | U |
| 36 | 5 | 1082 | U |
| 36 | 5 | 1085 | A |
| 36 | 5 | 1092 | C |
| 36 | 5 | 1093 | A |
| 36 | 5 | 1095 | U |
| 36 | 5 | 1096 | U |
| 36 | 5 | 1097 | G |
| 36 | 5 | 1098 | A |
| 36 | 5 | 1103 | A |
| 36 | 5 | 1104 | G |
| 36 | 5 | 1114 | U |
| 36 | 5 | 1115 | G |
| 36 | 5 | 1116 | G |
| 36 | 5 | 1117 | G |
| 36 | 5 | 1129 | A |
| 36 | 5 | 1131 | G |
| 36 | 5 | 1143 | A |
| 36 | 5 | 1152 | G |
| 36 | 5 | 1153 | A |
| 36 | 5 | 1154 | A |
| 36 | 5 | 1155 | C |
| 36 | 5 | 1159 | A |
| 36 | 5 | 1160 | C |
| 36 | 5 | 1161 | G |
| 36 | 5 | 1169 | A |
| 36 | 5 | 1177 | G |
| 36 | 5 | 1178 | G |
| 36 | 5 | 1180 | A |
| 36 | 5 | 1181 | U |
| 36 | 5 | 1182 | A |
| 36 | 5 | 1191 | U |
| 36 | 5 | 1200 | A |
| 36 | 5 | 1201 | C |
| 36 | 5 | 1209 | G |
| 36 | 5 | 1212 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 1221 | A |
| 36 | 5 | 1222 | G |
| 36 | 5 | 1223 | A |
| 36 | 5 | 1229 | G |
| 36 | 5 | 1232 | C |
| 36 | 5 | 1236 | G |
| 36 | 5 | 1237 | G |
| 36 | 5 | 1239 | C |
| 36 | 5 | 1241 | U |
| 36 | 5 | 1242 | G |
| 36 | 5 | 1244 | A |
| 36 | 5 | 1245 | A |
| 36 | 5 | 1246 | G |
| 36 | 5 | 1248 | C |
| 36 | 5 | 1252 | A |
| 36 | 5 | 1258 | U |
| 36 | 5 | 1259 | A |
| 36 | 5 | 1263 | A |
| 36 | 5 | 1264 | G |
| 36 | 5 | 1265 | U |
| 36 | 5 | 1270 | A |
| 36 | 5 | 1281 | G |
| 36 | 5 | 1283 | C |
| 36 | 5 | 1285 | G |
| 36 | 5 | 1301 | A |
| 36 | 5 | 1305 | U |
| 36 | 5 | 1308 | A |
| 36 | 5 | 1309 | U |
| 36 | 5 | 1312 | C |
| 36 | 5 | 1313 | G |
| 36 | 5 | 1318 | A |
| 36 | 5 | 1330 | A |
| 36 | 5 | 1346 | G |
| 36 | 5 | 1348 | U |
| 36 | 5 | 1354 | G |
| 36 | 5 | 1355 | A |
| 36 | 5 | 1356 | U |
| 36 | 5 | 1357 | G |
| 36 | 5 | 1385 | C |
| 36 | 5 | 1386 | A |
| 36 | 5 | 1392 | G |
| 36 | 5 | 1399 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 1400 | G |
| 36 | 5 | 1417 | G |
| 36 | 5 | 1419 | A |
| 36 | 5 | 1421 | G |
| 36 | 5 | 1427 | U |
| 36 | 5 | 1428 | A |
| 36 | 5 | 1430 | U |
| 36 | 5 | 1431 | G |
| 36 | 5 | 1434 | G |
| 36 | 5 | 1437 | C |
| 36 | 5 | 1446 | A |
| 36 | 5 | 1450 | G |
| 36 | 5 | 1472 | U |
| 36 | 5 | 1475 | A |
| 36 | 5 | 1481 | A |
| 36 | 5 | 1482 | A |
| 36 | 5 | 1483 | G |
| 36 | 5 | 1488 | G |
| 36 | 5 | 1490 | A |
| 36 | 5 | 1502 | C |
| 36 | 5 | 1503 | A |
| 36 | 5 | 1508 | C |
| 36 | 5 | 1515 | A |
| 36 | 5 | 1527 | C |
| 36 | 5 | 1528 | G |
| 36 | 5 | 1536 | G |
| 36 | 5 | 1541 | G |
| 36 | 5 | 1550 | C |
| 36 | 5 | 1553 | U |
| 36 | 5 | 1554 | U |
| 36 | 5 | 1555 | U |
| 36 | 5 | 1556 | C |
| 36 | 5 | 1560 | G |
| 36 | 5 | 1561 | G |
| 36 | 5 | 1562 | C |
| 36 | 5 | 1574 | C |
| 36 | 5 | 1575 | A |
| 36 | 5 | 1576 | G |
| 36 | 5 | 1577 | G |
| 36 | 5 | 1578 | C |
| 36 | 5 | 1579 | C |
| 36 | 5 | 1580 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 1581 | C |
| 36 | 5 | 1582 | C |
| 36 | 5 | 1583 | A |
| 36 | 5 | 1584 | U |
| 36 | 5 | 1587 | A |
| 36 | 5 | 1589 | A |
| 36 | 5 | 1593 | A |
| 36 | 5 | 1596 | C |
| 36 | 5 | 1605 | A |
| 36 | 5 | 1607 | U |
| 36 | 5 | 1608 | C |
| 36 | 5 | 1620 | U |
| 36 | 5 | 1629 | U |
| 36 | 5 | 1632 | A |
| 36 | 5 | 1633 | C |
| 36 | 5 | 1639 | C |
| 36 | 5 | 1641 | U |
| 36 | 5 | 1643 | A |
| 36 | 5 | 1644 | C |
| 36 | 5 | 1645 | U |
| 36 | 5 | 1646 | G |
| 36 | 5 | 1655 | G |
| 36 | 5 | 1658 | G |
| 36 | 5 | 1683 | A |
| 36 | 5 | 1715 | A |
| 36 | 5 | 1716 | U |
| 36 | 5 | 1717 | U |
| 36 | 5 | 1724 | U |
| 36 | 5 | 1736 | G |
| 36 | 5 | 1750 | A |
| 36 | 5 | 1751 | G |
| 36 | 5 | 1756 | C |
| 36 | 5 | 1762 | C |
| 36 | 5 | 1764 | U |
| 36 | 5 | 1765 | U |
| 36 | 5 | 1766 | G |
| 36 | 5 | 1767 | C |
| 36 | 5 | 1770 | G |
| 36 | 5 | 1775 | G |
| 36 | 5 | 1778 | G |
| 36 | 5 | 1780 | G |
| 36 | 5 | 1793 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 1795 | U |
| 36 | 5 | 1797 | A |
| 36 | 5 | 1810 | A |
| 36 | 5 | 1814 | A |
| 36 | 5 | 1815 | U |
| 36 | 5 | 1816 | A |
| 36 | 5 | 1817 | G |
| 36 | 5 | 1818 | U |
| 36 | 5 | 1821 | U |
| 36 | 5 | 1834 | U |
| 36 | 5 | 1837 | U |
| 36 | 5 | 1838 | G |
| 36 | 5 | 1839 | A |
| 36 | 5 | 1841 | A |
| 36 | 5 | 1842 | A |
| 36 | 5 | 1846 | C |
| 36 | 5 | 1849 | C |
| 36 | 5 | 1850 | A |
| 36 | 5 | 1851 | G |
| 36 | 5 | 1866 | C |
| 36 | 5 | 1876 | U |
| 36 | 5 | 1877 | U |
| 36 | 5 | 1878 | G |
| 36 | 5 | 1879 | A |
| 36 | 5 | 1880 | U |
| 36 | 5 | 1884 | A |
| 36 | 5 | 1885 | U |
| 36 | 5 | 1886 | A |
| 36 | 5 | 1894 | U |
| 36 | 5 | 1901 | A |
| 36 | 5 | 1906 | G |
| 36 | 5 | 1918 | C |
| 36 | 5 | 1930 | A |
| 36 | 5 | 1935 | G |
| 36 | 5 | 1953 | G |
| 36 | 5 | 2100 | A |
| 36 | 5 | 2101 | C |
| 36 | 5 | 2102 | U |
| 36 | 5 | 2112 | U |
| 36 | 5 | 2113 | A |
| 36 | 5 | 2114 | C |
| 36 | 5 | 2121 | G |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 2122 | G |
| 36 | 5 | 2131 | A |
| 36 | 5 | 2134 | G |
| 36 | 5 | 2140 | U |
| 36 | 5 | 2142 | A |
| 36 | 5 | 2144 | A |
| 36 | 5 | 2158 | A |
| 36 | 5 | 2169 | G |
| 36 | 5 | 2175 | U |
| 36 | 5 | 2176 | U |
| 36 | 5 | 2179 | C |
| 36 | 5 | 2188 | A |
| 36 | 5 | 2193 | U |
| 36 | 5 | 2205 | U |
| 36 | 5 | 2207 | A |
| 36 | 5 | 2208 | A |
| 36 | 5 | 2209 | U |
| 36 | 5 | 2210 | G |
| 36 | 5 | 2222 | A |
| 36 | 5 | 2223 | A |
| 36 | 5 | 2228 | A |
| 36 | 5 | 2229 | A |
| 36 | 5 | 2244 | A |
| 36 | 5 | 2246 | G |
| 36 | 5 | 2248 | C |
| 36 | 5 | 2249 | G |
| 36 | 5 | 2250 | G |
| 36 | 5 | 2251 | G |
| 36 | 5 | 2252 | A |
| 36 | 5 | 2253 | G |
| 36 | 5 | 2254 | U |
| 36 | 5 | 2255 | A |
| 36 | 5 | 2256 | A |
| 36 | 5 | 2257 | C |
| 36 | 5 | 2258 | U |
| 36 | 5 | 2261 | G |
| 36 | 5 | 2262 | A |
| 36 | 5 | 2263 | C |
| 36 | 5 | 2266 | U |
| 36 | 5 | 2267 | C |
| 36 | 5 | 2269 | U |
| 36 | 5 | 2270 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 2272 | G |
| 36 | 5 | 2279 | A |
| 36 | 5 | 2280 | A |
| 36 | 5 | 2281 | A |
| 36 | 5 | 2282 | U |
| 36 | 5 | 2288 | G |
| 36 | 5 | 2306 | C |
| 36 | 5 | 2307 | G |
| 36 | 5 | 2309 | A |
| 36 | 5 | 2310 | U |
| 36 | 5 | 2313 | A |
| 36 | 5 | 2315 | G |
| 36 | 5 | 2332 | A |
| 36 | 5 | 2334 | U |
| 36 | 5 | 2335 | G |
| 36 | 5 | 2336 | U |
| 36 | 5 | 2361 | A |
| 36 | 5 | 2373 | A |
| 36 | 5 | 2374 | C |
| 36 | 5 | 2375 | G |
| 36 | 5 | 2379 | U |
| 36 | 5 | 2385 | G |
| 36 | 5 | 2388 | U |
| 36 | 5 | 2393 | G |
| 36 | 5 | 2394 | G |
| 36 | 5 | 2397 | A |
| 36 | 5 | 2401 | A |
| 36 | 5 | 2402 | A |
| 36 | 5 | 2403 | G |
| 36 | 5 | 2404 | A |
| 36 | 5 | 2411 | U |
| 36 | 5 | 2418 | G |
| 36 | 5 | 2419 | A |
| 36 | 5 | 2422 | C |
| 36 | 5 | 2434 | U |
| 36 | 5 | 2435 | G |
| 36 | 5 | 2437 | G |
| 36 | 5 | 2442 | G |
| 36 | 5 | 2507 | C |
| 36 | 5 | 2510 | U |
| 36 | 5 | 2511 | A |
| 36 | 5 | 2512 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 2514 | U |
| 36 | 5 | 2515 | A |
| 36 | 5 | 2522 | G |
| 36 | 5 | 2523 | A |
| 36 | 5 | 2524 | A |
| 36 | 5 | 2525 | G |
| 36 | 5 | 2526 | C |
| 36 | 5 | 2538 | U |
| 36 | 5 | 2539 | C |
| 36 | 5 | 2540 | A |
| 36 | 5 | 2541 | U |
| 36 | 5 | 2542 | U |
| 36 | 5 | 2543 | U |
| 36 | 5 | 2544 | U |
| 36 | 5 | 2545 | C |
| 36 | 5 | 2547 | A |
| 36 | 5 | 2549 | G |
| 36 | 5 | 2550 | U |
| 36 | 5 | 2552 | C |
| 36 | 5 | 2555 | G |
| 36 | 5 | 2556 | C |
| 36 | 5 | 2566 | C |
| 36 | 5 | 2567 | C |
| 36 | 5 | 2568 | C |
| 36 | 5 | 2569 | A |
| 36 | 5 | 2570 | U |
| 36 | 5 | 2571 | U |
| 36 | 5 | 2573 | G |
| 36 | 5 | 2574 | G |
| 36 | 5 | 2581 | U |
| 36 | 5 | 2584 | G |
| 36 | 5 | 2585 | G |
| 36 | 5 | 2586 | G |
| 36 | 5 | 2589 | G |
| 36 | 5 | 2593 | A |
| 36 | 5 | 2594 | C |
| 36 | 5 | 2606 | G |
| 36 | 5 | 2607 | G |
| 36 | 5 | 2610 | G |
| 36 | 5 | 2614 | G |
| 36 | 5 | 2619 | G |
| 36 | 5 | 2637 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 2649 | A |
| 36 | 5 | 2652 | U |
| 36 | 5 | 2656 | A |
| 36 | 5 | 2657 | A |
| 36 | 5 | 2662 | G |
| 36 | 5 | 2663 | G |
| 36 | 5 | 2674 | A |
| 36 | 5 | 2677 | G |
| 36 | 5 | 2683 | U |
| 36 | 5 | 2689 | A |
| 36 | 5 | 2691 | A |
| 36 | 5 | 2694 | A |
| 36 | 5 | 2695 | A |
| 36 | 5 | 2696 | A |
| 36 | 5 | 2705 | A |
| 36 | 5 | 2714 | G |
| 36 | 5 | 2719 | U |
| 36 | 5 | 2728 | G |
| 36 | 5 | 2729 | U |
| 36 | 5 | 2737 | C |
| 36 | 5 | 2752 | U |
| 36 | 5 | 2753 | G |
| 36 | 5 | 2771 | U |
| 36 | 5 | 2772 | C |
| 36 | 5 | 2773 | C |
| 36 | 5 | 2778 | G |
| 36 | 5 | 2779 | A |
| 36 | 5 | 2796 | G |
| 36 | 5 | 2797 | C |
| 36 | 5 | 2798 | C |
| 36 | 5 | 2800 | G |
| 36 | 5 | 2801 | A |
| 36 | 5 | 2803 | A |
| 36 | 5 | 2808 | A |
| 36 | 5 | 2810 | C |
| 36 | 5 | 2814 | G |
| 36 | 5 | 2816 | G |
| 36 | 5 | 2817 | A |
| 36 | 5 | 2818 | U |
| 36 | 5 | 2819 | A |
| 36 | 5 | 2821 | C |
| 36 | 5 | 2829 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 2834 | G |
| 36 | 5 | 2845 | A |
| 36 | 5 | 2846 | U |
| 36 | 5 | 2853 | A |
| 36 | 5 | 2856 | G |
| 36 | 5 | 2871 | G |
| 36 | 5 | 2872 | A |
| 36 | 5 | 2873 | U |
| 36 | 5 | 2875 | U |
| 36 | 5 | 2876 | C |
| 36 | 5 | 2877 | G |
| 36 | 5 | 2886 | U |
| 36 | 5 | 2887 | A |
| 36 | 5 | 2888 | U |
| 36 | 5 | 2889 | C |
| 36 | 5 | 2896 | A |
| 36 | 5 | 2899 | C |
| 36 | 5 | 2910 | A |
| 36 | 5 | 2923 | U |
| 36 | 5 | 2935 | U |
| 36 | 5 | 2936 | A |
| 36 | 5 | 2942 | C |
| 36 | 5 | 2943 | G |
| 36 | 5 | 2945 | G |
| 36 | 5 | 2947 | G |
| 36 | 5 | 2948 | C |
| 36 | 5 | 2950 | G |
| 36 | 5 | 2951 | G |
| 36 | 5 | 2954 | U |
| 36 | 5 | 2955 | U |
| 36 | 5 | 2957 | G |
| 36 | 5 | 2970 | C |
| 36 | 5 | 2971 | A |
| 36 | 5 | 2972 | G |
| 36 | 5 | 2979 | U |
| 36 | 5 | 2983 | C |
| 36 | 5 | 2990 | G |
| 36 | 5 | 2995 | A |
| 36 | 5 | 2996 | U |
| 36 | 5 | 2997 | G |
| 36 | 5 | 3012 | A |
| 36 | 5 | 3025 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 3028 | G |
| 36 | 5 | 3030 | G |
| 36 | 5 | 3034 | C |
| 36 | 5 | 3049 | A |
| 36 | 5 | 3056 | U |
| 36 | 5 | 3059 | G |
| 36 | 5 | 3078 | U |
| 36 | 5 | 3079 | U |
| 36 | 5 | 3080 | G |
| 36 | 5 | 3086 | A |
| 36 | 5 | 3087 | A |
| 36 | 5 | 3092 | C |
| 36 | 5 | 3122 | A |
| 36 | 5 | 3129 | A |
| 36 | 5 | 3130 | A |
| 36 | 5 | 3131 | U |
| 36 | 5 | 3142 | A |
| 36 | 5 | 3143 | C |
| 36 | 5 | 3150 | A |
| 36 | 5 | 3151 | U |
| 36 | 5 | 3153 | U |
| 36 | 5 | 3158 | G |
| 36 | 5 | 3159 | C |
| 36 | 5 | 3164 | C |
| 36 | 5 | 3165 | A |
| 36 | 5 | 3170 | A |
| 36 | 5 | 3172 | A |
| 36 | 5 | 3173 | G |
| 36 | 5 | 3174 | A |
| 36 | 5 | 3175 | U |
| 36 | 5 | 3176 | G |
| 36 | 5 | 3179 | U |
| 36 | 5 | 3181 | C |
| 36 | 5 | 3187 | A |
| 36 | 5 | 3194 | C |
| 36 | 5 | 3195 | U |
| 36 | 5 | 3196 | U |
| 36 | 5 | 3198 | U |
| 36 | 5 | 3207 | U |
| 36 | 5 | 3210 | A |
| 36 | 5 | 3216 | G |
| 36 | 5 | 3217 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 3218 | A |
| 36 | 5 | 3219 | G |
| 36 | 5 | 3224 | G |
| 36 | 5 | 3227 | A |
| 36 | 5 | 3228 | C |
| 36 | 5 | 3229 | G |
| 36 | 5 | 3238 | G |
| 36 | 5 | 3243 | A |
| 36 | 5 | 3244 | A |
| 36 | 5 | 3245 | A |
| 36 | 5 | 3246 | G |
| 36 | 5 | 3247 | G |
| 36 | 5 | 3251 | U |
| 36 | 5 | 3253 | G |
| 36 | 5 | 3259 | U |
| 36 | 5 | 3260 | G |
| 36 | 5 | 3265 | C |
| 36 | 5 | 3266 | G |
| 36 | 5 | 3269 | U |
| 36 | 5 | 3270 | U |
| 36 | 5 | 3271 | G |
| 36 | 5 | 3273 | A |
| 36 | 5 | 3276 | G |
| 36 | 5 | 3279 | A |
| 36 | 5 | 3281 | U |
| 36 | 5 | 3286 | G |
| 36 | 5 | 3288 | G |
| 36 | 5 | 3289 | G |
| 36 | 5 | 3290 | G |
| 36 | 5 | 3294 | A |
| 36 | 5 | 3304 | U |
| 36 | 5 | 3313 | U |
| 36 | 5 | 3316 | A |
| 36 | 5 | 3317 | U |
| 36 | 5 | 3318 | G |
| 36 | 5 | 3319 | U |
| 36 | 5 | 3320 | A |
| 36 | 5 | 3335 | A |
| 36 | 5 | 3340 | G |
| 36 | 5 | 3341 | U |
| 36 | 5 | 3342 | A |
| 36 | 5 | 3343 | G |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 3345 | G |
| 36 | 5 | 3348 | G |
| 36 | 5 | 3350 | C |
| 36 | 5 | 3351 | U |
| 36 | 5 | 3352 | U |
| 36 | 5 | 3353 | G |
| 36 | 5 | 3354 | U |
| 36 | 5 | 3355 | U |
| 36 | 5 | 3356 | G |
| 36 | 5 | 3357 | U |
| 36 | 5 | 3358 | U |
| 36 | 5 | 3368 | U |
| 36 | 5 | 3369 | G |
| 36 | 5 | 3378 | C |
| 36 | 5 | 3382 | U |
| 36 | 5 | 3386 | G |
| 36 | 5 | 3389 | U |
| 36 | 5 | 3390 | G |
| 36 | 5 | 3396 | U |
| 37 | 7 | 7 | G |
| 37 | 7 | 22 | A |
| 37 | 7 | 23 | A |
| 37 | 7 | 38 | U |
| 37 | 7 | 54 | U |
| 37 | 7 | 65 | G |
| 37 | 7 | 73 | C |
| 37 | 7 | 74 | C |
| 37 | 7 | 76 | A |
| 37 | 7 | 93 | C |
| 37 | 7 | 95 | A |
| 37 | 7 | 101 | G |
| 37 | 7 | 102 | A |
| 37 | 7 | 103 | A |
| 37 | 7 | 112 | G |
| 38 | 8 | 16 | G |
| 38 | 8 | 18 | U |
| 38 | 8 | 21 | C |
| 38 | 8 | 34 | U |
| 38 | 8 | 35 | C |
| 38 | 8 | 48 | A |
| 38 | 8 | 49 | G |
| 38 | 8 | 52 | A |

Continued on next page...

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 38 | 8 | 53 | A |
| 38 | 8 | 58 | G |
| 38 | 8 | 59 | A |
| 38 | 8 | 62 | C |
| 38 | 8 | 63 | G |
| 38 | 8 | 75 | G |
| 38 | 8 | 79 | A |
| 38 | 8 | 80 | A |
| 38 | 8 | 81 | U |
| 38 | 8 | 82 | U |
| 38 | 8 | 83 | C |
| 38 | 8 | 84 | C |
| 38 | 8 | 85 | G |
| 38 | 8 | 86 | U |
| 38 | 8 | 87 | G |
| 38 | 8 | 90 | U |
| 38 | 8 | 91 | C |
| 38 | 8 | 95 | G |
| 38 | 8 | 103 | G |
| 38 | 8 | 104 | A |
| 38 | 8 | 106 | C |
| 38 | 8 | 111 | A |
| 38 | 8 | 113 | U |
| 38 | 8 | 123 | G |
| 38 | 8 | 125 | U |
| 38 | 8 | 126 | A |
| 38 | 8 | 127 | U |
| 38 | 8 | 128 | U |
| 38 | 8 | 138 | A |
| 38 | 8 | 152 | G |
| 38 | 8 | 155 | A |
| 38 | 8 | 156 | U |
| 38 | 8 | 157 | U |

All (344) RNA pucker outliers are listed below:

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2 | 25 | C |
| 1 | 2 | 45 | U |
| 1 | 2 | 68 | A |
| 1 | 2 | 72 | A |
| 1 | 2 | 73 | U |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2 | 74 | U |
| 1 | 2 | 75 | U |
| 1 | 2 | 103 | A |
| 1 | 2 | 139 | C |
| 1 | 2 | 158 | U |
| 1 | 2 | 187 | G |
| 1 | 2 | 277 | U |
| 1 | 2 | 278 | U |
| 1 | 2 | 279 | G |
| 1 | 2 | 280 | U |
| 1 | 2 | 321 | C |
| 1 | 2 | 322 | G |
| 1 | 2 | 417 | A |
| 1 | 2 | 484 | C |
| 1 | 2 | 501 | U |
| 1 | 2 | 503 | G |
| 1 | 2 | 512 | A |
| 1 | 2 | 541 | A |
| 1 | 2 | 542 | A |
| 1 | 2 | 555 | A |
| 1 | 2 | 571 | G |
| 1 | 2 | 582 | U |
| 1 | 2 | 622 | A |
| 1 | 2 | 755 | A |
| 1 | 2 | 779 | U |
| 1 | 2 | 782 | U |
| 1 | 2 | 794 | U |
| 1 | 2 | 811 | A |
| 1 | 2 | 813 | U |
| 1 | 2 | 814 | A |
| 1 | 2 | 815 | G |
| 1 | 2 | 913 | G |
| 1 | 2 | 1051 | G |
| 1 | 2 | 1058 | U |
| 1 | 2 | 1059 | U |
| 1 | 2 | 1081 | A |
| 1 | 2 | 1096 | C |
| 1 | 2 | 1150 | G |
| 1 | 2 | 1157 | A |
| 1 | 2 | 1196 | A |
| 1 | 2 | 1204 | A |
| 1 | 2 | 1207 | C |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 2 | 1226 | A |
| 1 | 2 | 1244 | A |
| 1 | 2 | 1250 | U |
| 1 | 2 | 1314 | U |
| 1 | 2 | 1339 | C |
| 1 | 2 | 1340 | U |
| 1 | 2 | 1341 | A |
| 1 | 2 | 1344 | A |
| 1 | 2 | 1370 | U |
| 1 | 2 | 1473 | U |
| 1 | 2 | 1481 | C |
| 1 | 2 | 1489 | U |
| 1 | 2 | 1493 | A |
| 1 | 2 | 1568 | C |
| 1 | 2 | 1573 | A |
| 1 | 2 | 1615 | C |
| 1 | 2 | 1635 | A |
| 1 | 2 | 1656 | U |
| 1 | 2 | 1711 | C |
| 1 | 2 | 1761 | U |
| 36 | 1 | 13 | A |
| 36 | 1 | 21 | G |
| 36 | 1 | 40 | A |
| 36 | 1 | 133 | U |
| 36 | 1 | 216 | G |
| 36 | 1 | 218 | G |
| 36 | 1 | 219 | A |
| 36 | 1 | 220 | G |
| 36 | 1 | 239 | G |
| 36 | 1 | 282 | G |
| 36 | 1 | 304 | G |
| 36 | 1 | 420 | G |
| 36 | 1 | 518 | G |
| 36 | 1 | 547 | G |
| 36 | 1 | 548 | G |
| 36 | 1 | 558 | U |
| 36 | 1 | 588 | G |
| 36 | 1 | 594 | U |
| 36 | 1 | 637 | C |
| 36 | 1 | 715 | A |
| 36 | 1 | 763 | G |
| 36 | 1 | 764 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 765 | C |
| 36 | 1 | 816 | A |
| 36 | 1 | 873 | C |
| 36 | 1 | 916 | G |
| 36 | 1 | 979 | U |
| 36 | 1 | 981 | U |
| 36 | 1 | 993 | G |
| 36 | 1 | 1064 | A |
| 36 | 1 | 1096 | U |
| 36 | 1 | 1097 | G |
| 36 | 1 | 1103 | A |
| 36 | 1 | 1222 | G |
| 36 | 1 | 1284 | C |
| 36 | 1 | 1307 | G |
| 36 | 1 | 1329 | U |
| 36 | 1 | 1355 | A |
| 36 | 1 | 1484 | U |
| 36 | 1 | 1514 | G |
| 36 | 1 | 1554 | U |
| 36 | 1 | 1555 | U |
| 36 | 1 | 1556 | C |
| 36 | 1 | 1562 | C |
| 36 | 1 | 1572 | U |
| 36 | 1 | 1593 | A |
| 36 | 1 | 1594 | A |
| 36 | 1 | 1607 | U |
| 36 | 1 | 1648 | A |
| 36 | 1 | 1716 | U |
| 36 | 1 | 1761 | C |
| 36 | 1 | 1763 | U |
| 36 | 1 | 1815 | U |
| 36 | 1 | 1816 | A |
| 36 | 1 | 1820 | U |
| 36 | 1 | 2101 | C |
| 36 | 1 | 2112 | U |
| 36 | 1 | 2206 | G |
| 36 | 1 | 2209 | U |
| 36 | 1 | 2227 | C |
| 36 | 1 | 2249 | G |
| 36 | 1 | 2258 | U |
| 36 | 1 | 2281 | A |
| 36 | 1 | 2282 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 1 | 2360 | C |
| 36 | 1 | 2372 | A |
| 36 | 1 | 2513 | U |
| 36 | 1 | 2522 | G |
| 36 | 1 | 2525 | G |
| 36 | 1 | 2537 | U |
| 36 | 1 | 2541 | U |
| 36 | 1 | 2551 | U |
| 36 | 1 | 2554 | A |
| 36 | 1 | 2570 | U |
| 36 | 1 | 2571 | U |
| 36 | 1 | 2573 | G |
| 36 | 1 | 2585 | G |
| 36 | 1 | 2593 | A |
| 36 | 1 | 2689 | A |
| 36 | 1 | 2772 | C |
| 36 | 1 | 2801 | A |
| 36 | 1 | 2808 | A |
| 36 | 1 | 2817 | A |
| 36 | 1 | 2818 | U |
| 36 | 1 | 2913 | C |
| 36 | 1 | 2970 | C |
| 36 | 1 | 3078 | U |
| 36 | 1 | 3121 | U |
| 36 | 1 | 3169 | U |
| 36 | 1 | 3195 | U |
| 36 | 1 | 3218 | A |
| 36 | 1 | 3228 | C |
| 36 | 1 | 3269 | U |
| 36 | 1 | 3275 | U |
| 36 | 1 | 3303 | G |
| 36 | 1 | 3317 | U |
| 36 | 1 | 3341 | U |
| 36 | 1 | 3355 | U |
| 36 | 1 | 3375 | A |
| 36 | 1 | 3377 | G |
| 36 | 1 | 3389 | U |
| 37 | 3 | 52 | G |
| 38 | 4 | 60 | U |
| 38 | 4 | 85 | G |
| 38 | 4 | 112 | U |
| 38 | 4 | 125 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 38 | 4 | 126 | A |
| 38 | 4 | 127 | U |
| 1 | 6 | 25 | C |
| 1 | 6 | 76 | A |
| 1 | 6 | 103 | A |
| 1 | 6 | 114 | C |
| 1 | 6 | 136 | C |
| 1 | 6 | 139 | C |
| 1 | 6 | 158 | U |
| 1 | 6 | 187 | G |
| 1 | 6 | 192 | U |
| 1 | 6 | 240 | U |
| 1 | 6 | 272 | U |
| 1 | 6 | 277 | U |
| 1 | 6 | 321 | C |
| 1 | 6 | 400 | A |
| 1 | 6 | 417 | A |
| 1 | 6 | 422 | G |
| 1 | 6 | 454 | U |
| 1 | 6 | 512 | A |
| 1 | 6 | 542 | A |
| 1 | 6 | 555 | A |
| 1 | 6 | 558 | U |
| 1 | 6 | 622 | A |
| 1 | 6 | 647 | G |
| 1 | 6 | 695 | U |
| 1 | 6 | 755 | A |
| 1 | 6 | 912 | U |
| 1 | 6 | 913 | G |
| 1 | 6 | 1051 | G |
| 1 | 6 | 1058 | U |
| 1 | 6 | 1097 | U |
| 1 | 6 | 1098 | U |
| 1 | 6 | 1196 | A |
| 1 | 6 | 1207 | C |
| 1 | 6 | 1227 | A |
| 1 | 6 | 1244 | A |
| 1 | 6 | 1255 | G |
| 1 | 6 | 1344 | A |
| 1 | 6 | 1413 | U |
| 1 | 6 | 1481 | C |
| 1 | 6 | 1489 | U |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | 6 | 1491 | U |
| 1 | 6 | 1492 | A |
| 1 | 6 | 1535 | U |
| 1 | 6 | 1568 | C |
| 1 | 6 | 1573 | A |
| 1 | 6 | 1615 | C |
| 1 | 6 | 1620 | C |
| 1 | 6 | 1657 | U |
| 1 | 6 | 1681 | A |
| 1 | 6 | 1719 | A |
| 1 | 6 | 1754 | A |
| 36 | 5 | 65 | A |
| 36 | 5 | 151 | A |
| 36 | 5 | 170 | G |
| 36 | 5 | 240 | U |
| 36 | 5 | 282 | G |
| 36 | 5 | 369 | A |
| 36 | 5 | 420 | G |
| 36 | 5 | 518 | G |
| 36 | 5 | 557 | A |
| 36 | 5 | 648 | C |
| 36 | 5 | 705 | A |
| 36 | 5 | 715 | A |
| 36 | 5 | 735 | A |
| 36 | 5 | 765 | C |
| 36 | 5 | 766 | U |
| 36 | 5 | 816 | A |
| 36 | 5 | 873 | C |
| 36 | 5 | 879 | U |
| 36 | 5 | 916 | G |
| 36 | 5 | 993 | G |
| 36 | 5 | 1015 | U |
| 36 | 5 | 1016 | C |
| 36 | 5 | 1027 | A |
| 36 | 5 | 1033 | U |
| 36 | 5 | 1062 | A |
| 36 | 5 | 1064 | A |
| 36 | 5 | 1081 | U |
| 36 | 5 | 1096 | U |
| 36 | 5 | 1103 | A |
| 36 | 5 | 1152 | G |
| 36 | 5 | 1154 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 1178 | G |
| 36 | 5 | 1189 | C |
| 36 | 5 | 1222 | G |
| 36 | 5 | 1238 | C |
| 36 | 5 | 1241 | U |
| 36 | 5 | 1284 | C |
| 36 | 5 | 1307 | G |
| 36 | 5 | 1317 | A |
| 36 | 5 | 1329 | U |
| 36 | 5 | 1355 | A |
| 36 | 5 | 1481 | A |
| 36 | 5 | 1560 | G |
| 36 | 5 | 1574 | C |
| 36 | 5 | 1581 | C |
| 36 | 5 | 1582 | C |
| 36 | 5 | 1607 | U |
| 36 | 5 | 1630 | U |
| 36 | 5 | 1655 | G |
| 36 | 5 | 1716 | U |
| 36 | 5 | 1761 | C |
| 36 | 5 | 1793 | C |
| 36 | 5 | 1815 | U |
| 36 | 5 | 1816 | A |
| 36 | 5 | 1841 | A |
| 36 | 5 | 1842 | A |
| 36 | 5 | 1846 | C |
| 36 | 5 | 1878 | G |
| 36 | 5 | 1879 | A |
| 36 | 5 | 1888 | U |
| 36 | 5 | 2101 | C |
| 36 | 5 | 2112 | U |
| 36 | 5 | 2204 | C |
| 36 | 5 | 2206 | G |
| 36 | 5 | 2207 | A |
| 36 | 5 | 2209 | U |
| 36 | 5 | 2222 | A |
| 36 | 5 | 2249 | G |
| 36 | 5 | 2256 | A |
| 36 | 5 | 2260 | U |
| 36 | 5 | 2281 | A |
| 36 | 5 | 2282 | U |
| 36 | 5 | 2372 | A |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 36 | 5 | 2373 | A |
| 36 | 5 | 2374 | C |
| 36 | 5 | 2400 | G |
| 36 | 5 | 2418 | G |
| 36 | 5 | 2513 | U |
| 36 | 5 | 2514 | U |
| 36 | 5 | 2522 | G |
| 36 | 5 | 2537 | U |
| 36 | 5 | 2585 | G |
| 36 | 5 | 2593 | A |
| 36 | 5 | 2662 | G |
| 36 | 5 | 2677 | G |
| 36 | 5 | 2682 | C |
| 36 | 5 | 2772 | C |
| 36 | 5 | 2817 | A |
| 36 | 5 | 2818 | U |
| 36 | 5 | 2872 | A |
| 36 | 5 | 2887 | A |
| 36 | 5 | 2950 | G |
| 36 | 5 | 2970 | C |
| 36 | 5 | 3078 | U |
| 36 | 5 | 3121 | U |
| 36 | 5 | 3158 | G |
| 36 | 5 | 3172 | A |
| 36 | 5 | 3195 | U |
| 36 | 5 | 3218 | A |
| 36 | 5 | 3228 | C |
| 36 | 5 | 3269 | U |
| 36 | 5 | 3275 | U |
| 36 | 5 | 3289 | G |
| 36 | 5 | 3317 | U |
| 36 | 5 | 3341 | U |
| 36 | 5 | 3352 | U |
| 36 | 5 | 3353 | G |
| 36 | 5 | 3357 | U |
| 36 | 5 | 3382 | U |
| 37 | 7 | 86 | U |
| 38 | 8 | 79 | A |
| 38 | 8 | 80 | A |
| 38 | 8 | 81 | U |
| 38 | 8 | 82 | U |
| 38 | 8 | 84 | C |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 38 | 8 | 111 | A |
| 38 | 8 | 126 | A |
| 38 | 8 | 156 | U |

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

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 1260 ligands modelled in this entry, 1239 are monoatomic - leaving 21 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 |
| 82 | GET | 1 | 3811 | - | 33,36,36 | 0.20 | 0 | 43,55,55 | 0.62 | 1 (2%) |
| 82 | GET | 5 | 3851 | - | 33,36,36 | 0.21 | 0 | 43,55,55 | 0.66 | 1 (2%) |
| 82 | GET | n6 | 201 | - | 33,36,36 | 0.22 | 0 | 43,55,55 | 1.11 | 4 (9%) |
| 82 | GET | 6 | 2015 | - | 33,36,36 | 1.93 | 8 (24%) | 43,55,55 | 2.93 | 21 (48%) |
| 82 | GET | 1 | 3812 | - | 33,36,36 | 0.31 | 0 | 43,55,55 | 1.18 | 3 (6%) |
| 82 | GET | 2 | 2014 | - | 33,36,36 | 0.39 | 0 | 43,55,55 | 1.29 | 5 (11%) |
| 82 | GET | 5 | 3848 | - | 33,36,36 | 0.26 | 0 | 43,55,55 | 1.76 | 3 (6%) |
| 82 | GET | 5 | 3847 | - | 33,36,36 | 0.40 | 0 | 43,55,55 | 1.50 | 6 (13%) |
| 82 | GET | 1 | 3809 | - | 33,36,36 | 0.28 | 0 | 43,55,55 | 1.04 | 5 (11%) |
| 82 | GET | 1 | 3808 | - | 33,36,36 | 0.34 | 0 | 43,55,55 | 1.62 | 7 (16%) |
| 82 | GET | 6 | 2013 | - | 33,36,36 | 0.24 | 0 | 43,55,55 | 0.69 | 1 (2%) |
| 82 | GET | 5 | 3846 | - | 33,36,36 | 0.26 | 0 | 43,55,55 | 1.13 | 2 (4%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 82 | GET | 5 | 3849 | - | 33,36,36 | 0.42 | 0 | 43,55,55 | 1.25 | 3 (6%) |
| 82 | GET | 2 | 2013 | - | 33,36,36 | 0.16 | 0 | 43,55,55 | 0.94 | 3 (6%) |
| 82 | GET | 1 | 3813 | - | 33,36,36 | 0.42 | 0 | 43,55,55 | 1.83 | 9 (20%) |
| 82 | GET | 5 | 3850 | - | 33,36,36 | 0.30 | 0 | 43,55,55 | 1.18 | 4 (9%) |
| 82 | GET | 2 | 2012 | - | 33,36,36 | 0.30 | 0 | 43,55,55 | 0.98 | 2 (4%) |
| 82 | GET | 1 | 3810 | - | 33,36,36 | 0.32 | 0 | 43,55,55 | 1.57 | 7 (16%) |
| 82 | GET | 6 | 2014 | - | 33,36,36 | 0.17 | 0 | 43,55,55 | 1.08 | 4 (9%) |
| 82 | GET | 5 | 3844 | - | 33,36,36 | 0.24 | 0 | 43,55,55 | 1.50 | 7 (16%) |
| 82 | GET | 5 | 3845 | - | 33,36,36 | 0.27 | 0 | 43,55,55 | 0.91 | 2 (4%) |

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 |
|-----|------|-------|------|------|---------|-------------|---------|
| 82 | GET | 1 | 3811 | - | - | 1/13/74/74 | 0/3/3/3 |
| 82 | GET | 5 | 3851 | - | - | 6/13/74/74 | 0/3/3/3 |
| 82 | GET | n6 | 201 | - | - | 6/13/74/74 | 0/3/3/3 |
| 82 | GET | 6 | 2015 | - | - | 5/13/74/74 | 0/3/3/3 |
| 82 | GET | 1 | 3812 | - | - | 6/13/74/74 | 0/3/3/3 |
| 82 | GET | 2 | 2014 | - | - | 5/13/74/74 | 1/3/3/3 |
| 82 | GET | 5 | 3848 | - | - | 3/13/74/74 | 0/3/3/3 |
| 82 | GET | 5 | 3847 | - | - | 8/13/74/74 | 0/3/3/3 |
| 82 | GET | 1 | 3809 | - | - | 10/13/74/74 | 0/3/3/3 |
| 82 | GET | 1 | 3808 | - | - | 9/13/74/74 | 0/3/3/3 |
| 82 | GET | 6 | 2013 | - | - | 1/13/74/74 | 0/3/3/3 |
| 82 | GET | 5 | 3846 | - | - | 6/13/74/74 | 0/3/3/3 |
| 82 | GET | 5 | 3849 | - | - | 4/13/74/74 | 0/3/3/3 |
| 82 | GET | 2 | 2013 | - | - | 6/13/74/74 | 0/3/3/3 |
| 82 | GET | 1 | 3813 | - | - | 7/13/74/74 | 0/3/3/3 |
| 82 | GET | 5 | 3850 | - | - | 6/13/74/74 | 0/3/3/3 |
| 82 | GET | 2 | 2012 | - | - | 2/13/74/74 | 1/3/3/3 |
| 82 | GET | 1 | 3810 | - | - | 2/13/74/74 | 0/3/3/3 |
| 82 | GET | 6 | 2014 | - | - | 6/13/74/74 | 0/3/3/3 |
| 82 | GET | 5 | 3844 | - | - | 5/13/74/74 | 0/3/3/3 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|---------|------------|---------|
| 82 | GET | 5 | 3845 | - | - | 1/13/74/74 | 0/3/3/3 |

All (8) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 82 | 6 | 2015 | GET | C23-C33 | 5.14 | 1.64 | 1.53 |
| 82 | 6 | 2015 | GET | C22-C12 | 3.63 | 1.61 | 1.53 |
| 82 | 6 | 2015 | GET | C41-C31 | 3.54 | 1.61 | 1.52 |
| 82 | 6 | 2015 | GET | C22-C32 | 2.91 | 1.60 | 1.53 |
| 82 | 6 | 2015 | GET | C51-C61 | 2.68 | 1.56 | 1.52 |
| 82 | 6 | 2015 | GET | O51-C11 | 2.40 | 1.48 | 1.41 |
| 82 | 6 | 2015 | GET | C41-C51 | 2.17 | 1.58 | 1.52 |
| 82 | 6 | 2015 | GET | C31-C21 | -2.10 | 1.50 | 1.53 |

All (100) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 82 | 5 | 3848 | GET | C23-C33-N33 | -7.62 | 90.62 | 110.84 |
| 82 | 6 | 2015 | GET | C11-C21-N21 | 7.35 | 123.45 | 110.20 |
| 82 | 6 | 2015 | GET | O31-C31-C21 | -7.02 | 97.61 | 110.22 |
| 82 | 1 | 3810 | GET | O11-C11-C21 | 6.48 | 119.38 | 108.22 |
| 82 | 6 | 2015 | GET | C31-C21-N21 | -5.66 | 99.46 | 111.05 |
| 82 | 5 | 3847 | GET | O11-C11-C21 | 5.56 | 117.79 | 108.22 |
| 82 | 6 | 2015 | GET | O31-C31-C41 | 5.50 | 123.07 | 110.35 |
| 82 | 5 | 3848 | GET | O51-C51-C41 | 5.40 | 115.46 | 107.87 |
| 82 | 6 | 2015 | GET | C23-C33-N33 | 5.30 | 124.90 | 110.84 |
| 82 | 1 | 3813 | GET | C23-C33-N33 | -5.28 | 96.83 | 110.84 |
| 82 | 1 | 3808 | GET | C23-C33-N33 | -5.18 | 97.11 | 110.84 |
| 82 | 5 | 3846 | GET | C23-C33-N33 | -5.10 | 97.31 | 110.84 |
| 82 | 5 | 3849 | GET | C23-C33-N33 | -4.86 | 97.94 | 110.84 |
| 82 | 1 | 3813 | GET | O11-C11-C21 | 4.72 | 116.35 | 108.22 |
| 82 | n6 | 201 | GET | O11-C11-C21 | 4.63 | 116.19 | 108.22 |
| 82 | 1 | 3813 | GET | O62-C13-O53 | 4.62 | 119.36 | 109.08 |
| 82 | 6 | 2015 | GET | O23-C23-C33 | 4.53 | 118.79 | 109.63 |
| 82 | 1 | 3812 | GET | C23-C33-N33 | -4.40 | 99.17 | 110.84 |
| 82 | 5 | 3847 | GET | C11-C21-N21 | 4.33 | 118.01 | 110.20 |
| 82 | 5 | 3844 | GET | O62-C62-C52 | -4.09 | 96.40 | 107.28 |
| 82 | 1 | 3813 | GET | O51-C11-C21 | 4.08 | 119.24 | 110.06 |
| 82 | 6 | 2014 | GET | O11-C42-C32 | -4.07 | 99.48 | 109.18 |
| 82 | 6 | 2015 | GET | C71-C61-C51 | 4.05 | 116.77 | 112.02 |
| 82 | 2 | 2013 | GET | O11-C42-C32 | -4.03 | 99.57 | 109.18 |
| 82 | 6 | 2015 | GET | O11-C42-C52 | 3.76 | 117.27 | 107.28 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 82 | 6 | 2015 | GET | O51-C51-C61 | 3.69 | 116.39 | 107.18 |
| 82 | 1 | 3808 | GET | O11-C42-C32 | -3.61 | 100.56 | 109.18 |
| 82 | 2 | 2012 | GET | O11-C42-C32 | -3.61 | 100.56 | 109.18 |
| 82 | 5 | 3844 | GET | O11-C42-C52 | 3.61 | 116.87 | 107.28 |
| 82 | 5 | 3844 | GET | O11-C42-C32 | -3.58 | 100.63 | 109.18 |
| 82 | 2 | 2014 | GET | O51-C51-C41 | 3.57 | 112.88 | 107.87 |
| 82 | 5 | 3850 | GET | C23-C33-N33 | -3.56 | 101.41 | 110.84 |
| 82 | 5 | 3849 | GET | C32-C22-C12 | 3.51 | 118.40 | 111.18 |
| 82 | 5 | 3847 | GET | O62-C62-C12 | -3.42 | 101.01 | 109.18 |
| 82 | 5 | 3845 | GET | O11-C11-C21 | 3.40 | 114.08 | 108.22 |
| 82 | 1 | 3813 | GET | C13-C23-C33 | 3.30 | 114.81 | 109.34 |
| 82 | 6 | 2015 | GET | C11-O51-C51 | 3.30 | 118.38 | 113.06 |
| 82 | 1 | 3808 | GET | O23-C23-C13 | 3.28 | 118.01 | 110.05 |
| 82 | 1 | 3810 | GET | C32-C22-C12 | 3.27 | 117.90 | 111.18 |
| 82 | 1 | 3812 | GET | C32-C22-C12 | -3.23 | 104.56 | 111.18 |
| 82 | 6 | 2015 | GET | O41-C41-C31 | 3.11 | 117.54 | 110.35 |
| 82 | 1 | 3813 | GET | C53-O53-C13 | 3.08 | 116.50 | 111.53 |
| 82 | 1 | 3808 | GET | C11-C21-N21 | 3.07 | 115.74 | 110.20 |
| 82 | 6 | 2013 | GET | O62-C62-C12 | -3.04 | 101.92 | 109.18 |
| 82 | 1 | 3809 | GET | O62-C62-C12 | -2.98 | 102.06 | 109.18 |
| 82 | 2 | 2014 | GET | C71-C61-C51 | 2.97 | 115.50 | 112.02 |
| 82 | 5 | 3844 | GET | O52-C52-C42 | 2.97 | 117.80 | 109.94 |
| 82 | 6 | 2015 | GET | C31-C41-C51 | 2.95 | 116.41 | 109.68 |
| 82 | 1 | 3813 | GET | C32-C22-C12 | -2.93 | 105.16 | 111.18 |
| 82 | 6 | 2015 | GET | O11-C11-O51 | 2.86 | 118.66 | 110.67 |
| 82 | 6 | 2014 | GET | O11-C11-C21 | -2.77 | 103.45 | 108.22 |
| 82 | 1 | 3812 | GET | C13-C23-C33 | 2.71 | 113.83 | 109.34 |
| 82 | 6 | 2015 | GET | O11-C11-C21 | 2.70 | 112.86 | 108.22 |
| 82 | 2 | 2013 | GET | O11-C11-C21 | -2.70 | 103.57 | 108.22 |
| 82 | 1 | 3810 | GET | C53-O53-C13 | 2.68 | 115.86 | 111.53 |
| 82 | 2 | 2014 | GET | O11-C42-C32 | 2.65 | 115.49 | 109.18 |
| 82 | 6 | 2015 | GET | O62-C62-C12 | -2.63 | 102.89 | 109.18 |
| 82 | 6 | 2015 | GET | O61-C61-C51 | 2.63 | 113.87 | 108.72 |
| 82 | 5 | 3844 | GET | C11-O51-C51 | -2.58 | 108.90 | 113.06 |
| 82 | 2 | 2012 | GET | C13-C23-C33 | -2.57 | 105.09 | 109.34 |
| 82 | 1 | 3808 | GET | O62-C13-C23 | 2.57 | 114.76 | 108.10 |
| 82 | 5 | 3847 | GET | C62-C52-C42 | 2.54 | 114.23 | 108.96 |
| 82 | n6 | 201 | GET | C11-C21-N21 | 2.54 | 114.77 | 110.20 |
| 82 | 5 | 3850 | GET | C71-C61-C51 | 2.53 | 114.98 | 112.02 |
| 82 | n6 | 201 | GET | C32-C22-C12 | -2.51 | 106.04 | 111.18 |
| 82 | 1 | 3810 | GET | C71-C61-C51 | 2.48 | 114.93 | 112.02 |
| 82 | 2 | 2013 | GET | C23-C33-N33 | -2.44 | 104.35 | 110.84 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 82 | 5 | 3850 | GET | O62-C62-C52 | -2.42 | 100.85 | 107.28 |
| 82 | 5 | 3849 | GET | O62-C62-C52 | 2.41 | 113.69 | 107.28 |
| 82 | 6 | 2015 | GET | O51-C11-C21 | 2.40 | 115.46 | 110.06 |
| 82 | 1 | 3809 | GET | O51-C51-C61 | 2.37 | 113.10 | 107.18 |
| 82 | 1 | 3813 | GET | C11-O51-C51 | 2.36 | 116.86 | 113.06 |
| 82 | 6 | 2015 | GET | O52-C52-C62 | 2.36 | 116.19 | 109.94 |
| 82 | 2 | 2014 | GET | C11-C21-N21 | 2.35 | 114.44 | 110.20 |
| 82 | 6 | 2015 | GET | O52-C52-C42 | 2.35 | 116.17 | 109.94 |
| 82 | 1 | 3810 | GET | O62-C62-C12 | -2.34 | 103.60 | 109.18 |
| 82 | 5 | 3848 | GET | C31-C41-C51 | 2.32 | 114.98 | 109.68 |
| 82 | 5 | 3846 | GET | O62-C62-C12 | -2.31 | 103.66 | 109.18 |
| 82 | 1 | 3810 | GET | O11-C42-C32 | 2.29 | 114.64 | 109.18 |
| 82 | 5 | 3851 | GET | C32-C22-C12 | -2.28 | 106.50 | 111.18 |
| 82 | 2 | 2014 | GET | O11-C11-C21 | 2.27 | 112.13 | 108.22 |
| 82 | 1 | 3808 | GET | O52-C52-C42 | 2.26 | 115.94 | 109.94 |
| 82 | 6 | 2015 | GET | C32-C22-C12 | 2.24 | 115.78 | 111.18 |
| 82 | 1 | 3810 | GET | C13-C23-C33 | 2.22 | 113.01 | 109.34 |
| 82 | n6 | 201 | GET | C23-C33-N33 | -2.19 | 105.04 | 110.84 |
| 82 | 5 | 3850 | GET | O11-C42-C52 | 2.17 | 113.05 | 107.28 |
| 82 | 1 | 3809 | GET | C62-C52-C42 | 2.16 | 113.44 | 108.96 |
| 82 | 5 | 3845 | GET | C41-C31-C21 | 2.16 | 114.78 | 111.07 |
| 82 | 1 | 3808 | GET | O51-C51-C41 | 2.15 | 110.89 | 107.87 |
| 82 | 1 | 3813 | GET | O53-C13-C23 | 2.13 | 113.32 | 110.04 |
| 82 | 1 | 3811 | GET | O11-C42-C32 | -2.12 | 104.13 | 109.18 |
| 82 | 6 | 2014 | GET | C71-C61-C51 | 2.10 | 114.48 | 112.02 |
| 82 | 6 | 2014 | GET | C11-C21-N21 | -2.08 | 106.46 | 110.20 |
| 82 | 5 | 3847 | GET | O11-C42-C52 | 2.08 | 112.80 | 107.28 |
| 82 | 5 | 3844 | GET | C11-C21-N21 | 2.07 | 113.94 | 110.20 |
| 82 | 1 | 3809 | GET | O11-C42-C32 | -2.07 | 104.23 | 109.18 |
| 82 | 5 | 3844 | GET | O41-C41-C31 | -2.07 | 105.55 | 110.35 |
| 82 | 6 | 2015 | GET | C22-C12-N12 | 2.05 | 118.14 | 110.84 |
| 82 | 1 | 3809 | GET | C32-C22-C12 | 2.05 | 115.39 | 111.18 |
| 82 | 5 | 3847 | GET | O11-C42-C32 | -2.02 | 104.36 | 109.18 |

There are no chirality outliers.

All (105) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 82 | 6 | 2013 | GET | C23-C33-N33-C93 |
| 82 | 5 | 3844 | GET | C21-C11-O11-C42 |
| 82 | 5 | 3844 | GET | C23-C33-N33-C93 |
| 82 | 2 | 2014 | GET | C21-C11-O11-C42 |

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| Mol | Chain | Res | Type | Atoms |
|------------|--------------|------------|-------------|-----------------|
| 82 | 2 | 2014 | GET | C23-C33-N33-C93 |
| 82 | 5 | 3847 | GET | C41-C51-C61-O61 |
| 82 | 5 | 3847 | GET | C41-C51-C61-C71 |
| 82 | 5 | 3847 | GET | O51-C51-C61-O61 |
| 82 | 5 | 3847 | GET | O51-C51-C61-C71 |
| 82 | 1 | 3808 | GET | C21-C11-O11-C42 |
| 82 | 1 | 3808 | GET | C41-C51-C61-O61 |
| 82 | 1 | 3808 | GET | C41-C51-C61-C71 |
| 82 | 1 | 3808 | GET | O51-C51-C61-O61 |
| 82 | 1 | 3808 | GET | O51-C51-C61-C71 |
| 82 | 1 | 3808 | GET | C23-C13-O62-C62 |
| 82 | 5 | 3850 | GET | C41-C51-C61-O61 |
| 82 | 5 | 3850 | GET | C41-C51-C61-C71 |
| 82 | 5 | 3850 | GET | O51-C51-C61-O61 |
| 82 | 5 | 3850 | GET | O51-C51-C61-C71 |
| 82 | 1 | 3813 | GET | C41-C51-C61-O61 |
| 82 | 1 | 3813 | GET | C41-C51-C61-C71 |
| 82 | 1 | 3813 | GET | O51-C51-C61-O61 |
| 82 | 2 | 2013 | GET | C41-C51-C61-O61 |
| 82 | 2 | 2013 | GET | C41-C51-C61-C71 |
| 82 | 2 | 2013 | GET | O51-C51-C61-O61 |
| 82 | 2 | 2013 | GET | C23-C33-N33-C93 |
| 82 | 1 | 3812 | GET | C41-C51-C61-O61 |
| 82 | 1 | 3812 | GET | C41-C51-C61-C71 |
| 82 | 1 | 3812 | GET | O51-C51-C61-O61 |
| 82 | 1 | 3812 | GET | O51-C51-C61-C71 |
| 82 | 1 | 3812 | GET | C23-C33-N33-C93 |
| 82 | 1 | 3810 | GET | C32-C42-O11-C11 |
| 82 | 1 | 3810 | GET | C23-C33-N33-C93 |
| 82 | 5 | 3849 | GET | C41-C51-C61-O61 |
| 82 | 5 | 3849 | GET | C41-C51-C61-C71 |
| 82 | 5 | 3849 | GET | O51-C51-C61-O61 |
| 82 | 5 | 3849 | GET | O51-C51-C61-C71 |
| 82 | 1 | 3811 | GET | C23-C33-N33-C93 |
| 82 | n6 | 201 | GET | C41-C51-C61-O61 |
| 82 | n6 | 201 | GET | C41-C51-C61-C71 |
| 82 | n6 | 201 | GET | O51-C51-C61-O61 |
| 82 | n6 | 201 | GET | C23-C33-N33-C93 |
| 82 | 6 | 2014 | GET | C41-C51-C61-O61 |
| 82 | 6 | 2014 | GET | C41-C51-C61-C71 |
| 82 | 6 | 2014 | GET | O51-C51-C61-O61 |
| 82 | 6 | 2014 | GET | O51-C51-C61-C71 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 82 | 1 | 3809 | GET | C41-C51-C61-O61 |
| 82 | 1 | 3809 | GET | C41-C51-C61-C71 |
| 82 | 1 | 3809 | GET | O51-C51-C61-O61 |
| 82 | 1 | 3809 | GET | C23-C33-N33-C93 |
| 82 | 5 | 3851 | GET | C41-C51-C61-O61 |
| 82 | 5 | 3851 | GET | C41-C51-C61-C71 |
| 82 | 5 | 3851 | GET | O51-C51-C61-O61 |
| 82 | 5 | 3851 | GET | C23-C33-N33-C93 |
| 82 | 2 | 2012 | GET | C23-C33-N33-C93 |
| 82 | 5 | 3846 | GET | C41-C51-C61-O61 |
| 82 | 5 | 3846 | GET | C41-C51-C61-C71 |
| 82 | 5 | 3846 | GET | O51-C51-C61-O61 |
| 82 | 5 | 3846 | GET | O51-C51-C61-C71 |
| 82 | 6 | 2015 | GET | C41-C51-C61-C71 |
| 82 | 1 | 3808 | GET | C52-C42-O11-C11 |
| 82 | 5 | 3844 | GET | C52-C42-O11-C11 |
| 82 | 5 | 3847 | GET | O51-C11-O11-C42 |
| 82 | 2 | 2014 | GET | O51-C11-O11-C42 |
| 82 | 1 | 3813 | GET | O53-C13-O62-C62 |
| 82 | 1 | 3809 | GET | O51-C11-O11-C42 |
| 82 | 5 | 3846 | GET | O51-C11-O11-C42 |
| 82 | 1 | 3812 | GET | O51-C11-O11-C42 |
| 82 | 1 | 3808 | GET | O53-C13-O62-C62 |
| 82 | 6 | 2014 | GET | O51-C11-O11-C42 |
| 82 | 5 | 3850 | GET | C52-C62-O62-C13 |
| 82 | 5 | 3844 | GET | O51-C11-O11-C42 |
| 82 | 6 | 2015 | GET | O51-C11-O11-C42 |
| 82 | 5 | 3848 | GET | O51-C51-C61-C71 |
| 82 | 1 | 3813 | GET | O51-C51-C61-C71 |
| 82 | 2 | 2013 | GET | O51-C51-C61-C71 |
| 82 | n6 | 201 | GET | O51-C51-C61-C71 |
| 82 | 1 | 3809 | GET | O51-C51-C61-C71 |
| 82 | 5 | 3851 | GET | O51-C11-O11-C42 |
| 82 | 5 | 3848 | GET | C52-C42-O11-C11 |
| 82 | 5 | 3847 | GET | C52-C42-O11-C11 |
| 82 | 6 | 2015 | GET | O51-C51-C61-C71 |
| 82 | 1 | 3813 | GET | C23-C13-O62-C62 |
| 82 | 2 | 2014 | GET | C52-C42-O11-C11 |
| 82 | 2 | 2013 | GET | C52-C42-O11-C11 |
| 82 | 6 | 2015 | GET | O51-C51-C61-O61 |
| 82 | 2 | 2012 | GET | C52-C42-O11-C11 |
| 82 | 1 | 3808 | GET | O51-C11-O11-C42 |

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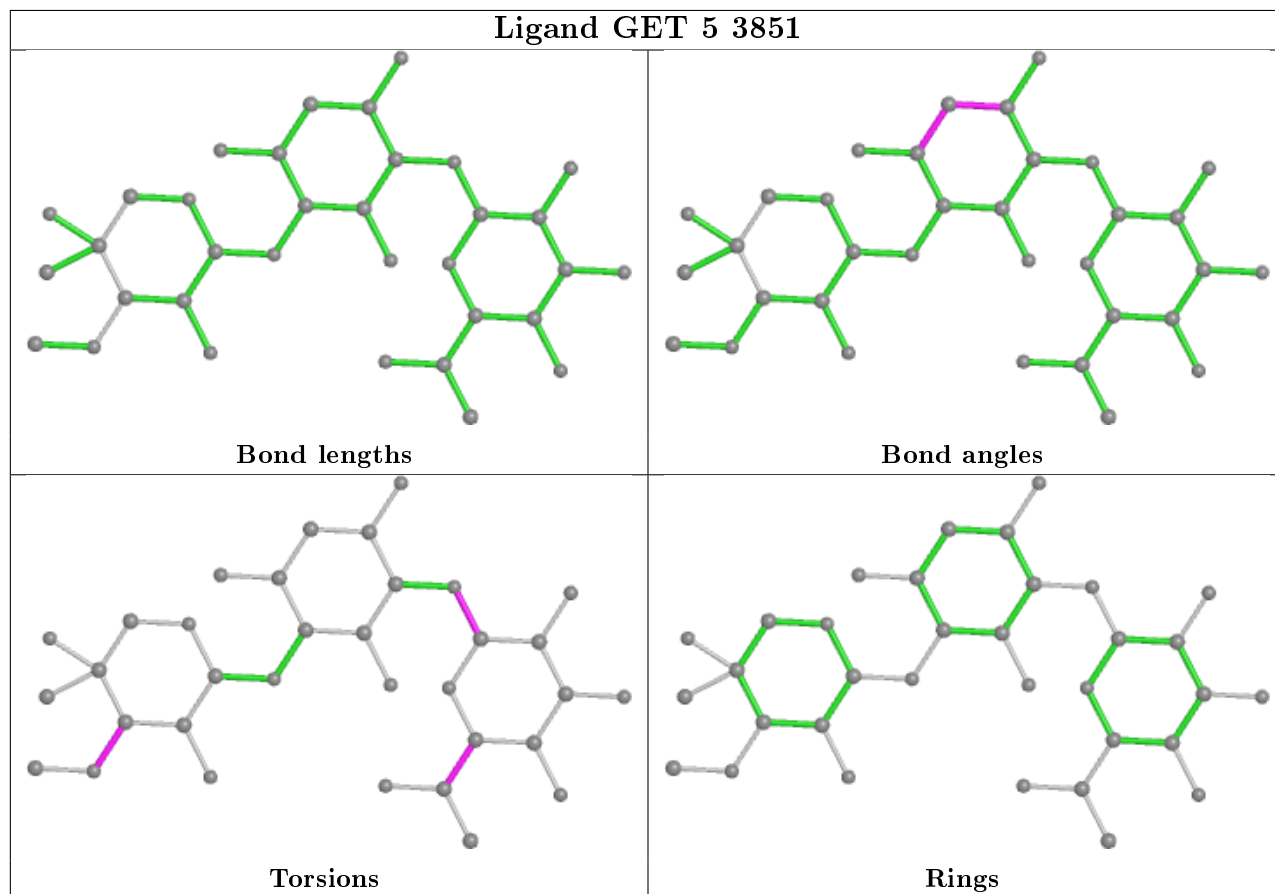
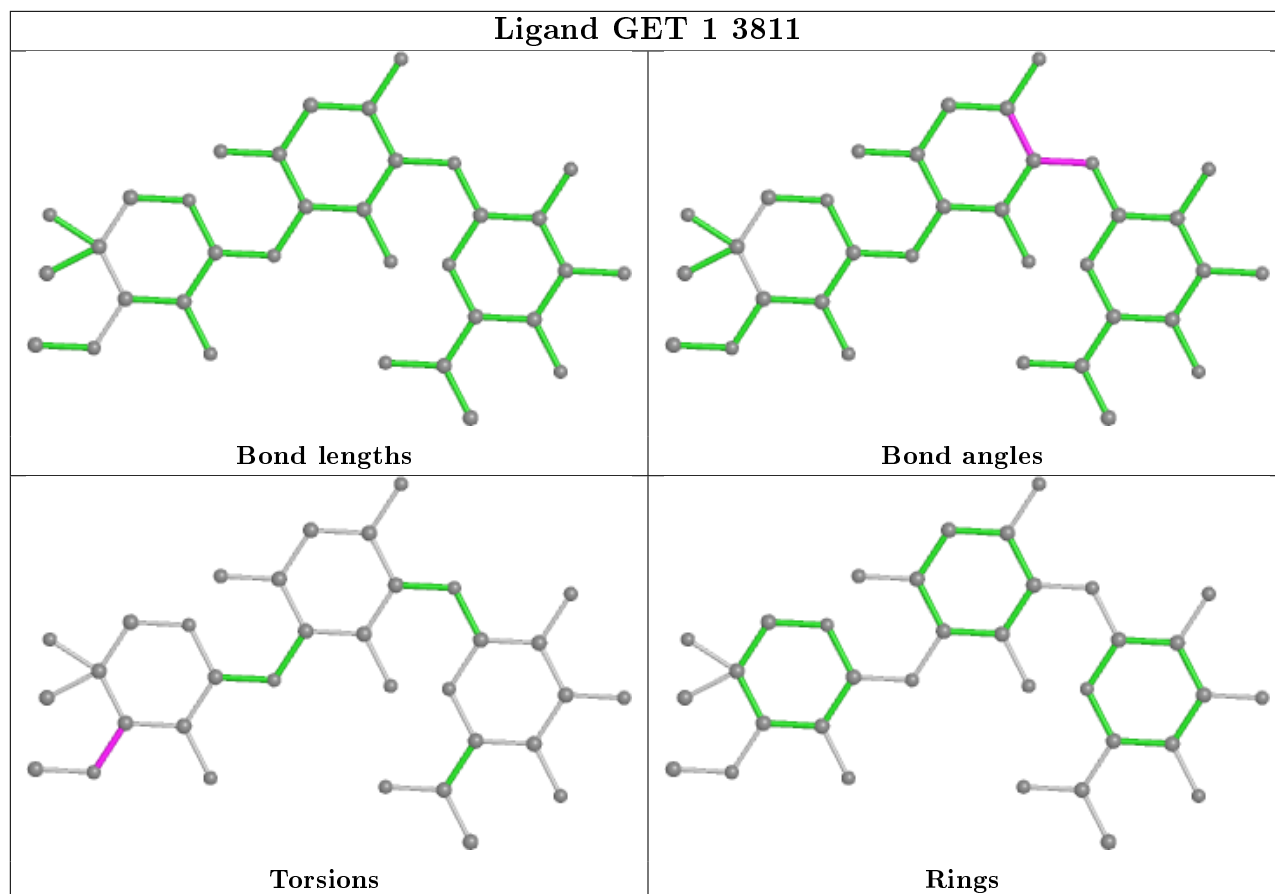
| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 82 | 5 | 3848 | GET | C32-C42-O11-C11 |
| 82 | 5 | 3845 | GET | C52-C42-O11-C11 |
| 82 | 5 | 3851 | GET | O51-C51-C61-C71 |
| 82 | 1 | 3809 | GET | C52-C62-O62-C13 |
| 82 | 1 | 3809 | GET | C52-C42-O11-C11 |
| 82 | 1 | 3809 | GET | O53-C13-O62-C62 |
| 82 | 6 | 2014 | GET | C52-C42-O11-C11 |
| 82 | 5 | 3844 | GET | O51-C51-C61-C71 |
| 82 | n6 | 201 | GET | O51-C11-O11-C42 |
| 82 | 1 | 3809 | GET | C23-C13-O62-C62 |
| 82 | 5 | 3847 | GET | C23-C33-N33-C93 |
| 82 | 1 | 3813 | GET | C23-C33-N33-C93 |
| 82 | 5 | 3846 | GET | C23-C33-N33-C93 |
| 82 | 5 | 3847 | GET | C32-C42-O11-C11 |
| 82 | 5 | 3850 | GET | C12-C62-O62-C13 |
| 82 | 2 | 2014 | GET | C52-C62-O62-C13 |
| 82 | 6 | 2015 | GET | O53-C13-O62-C62 |

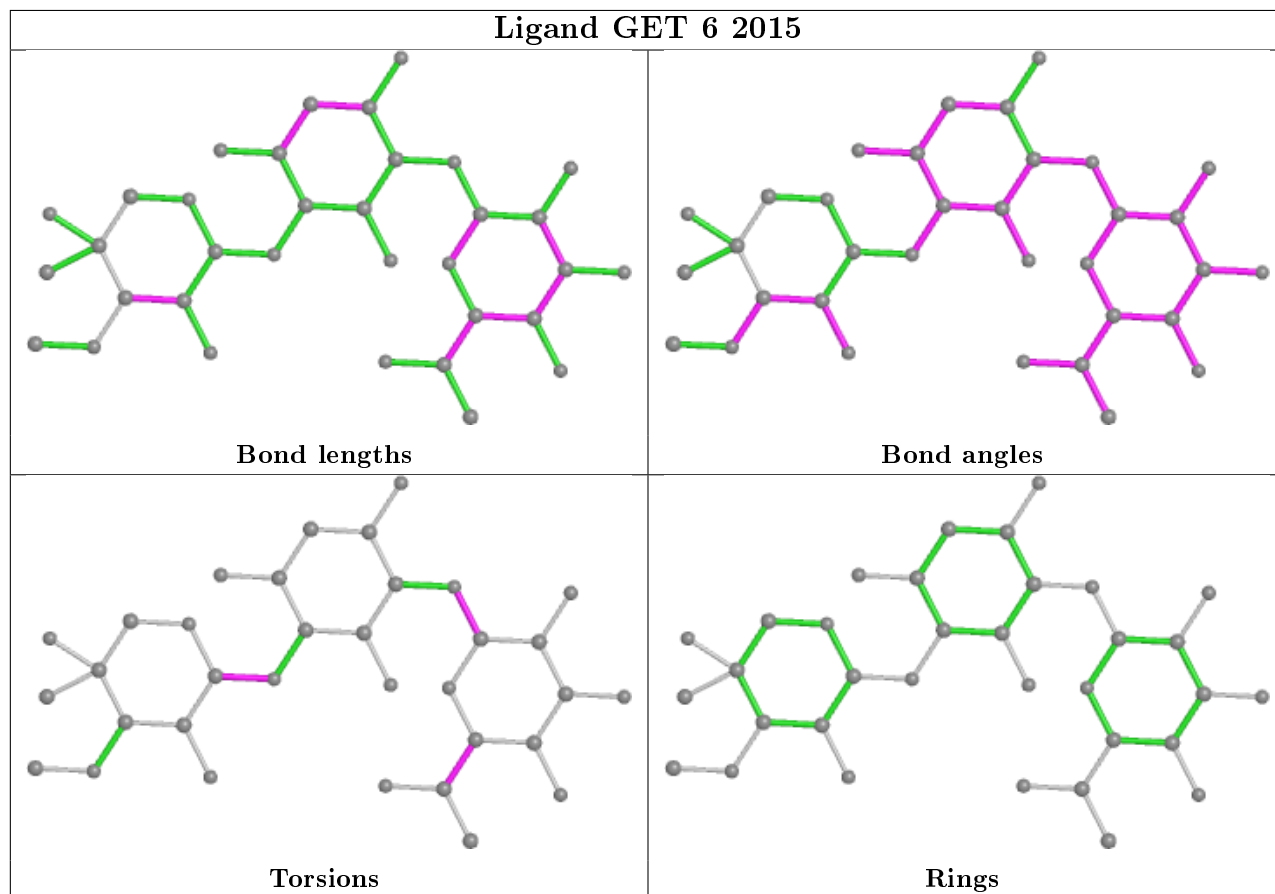
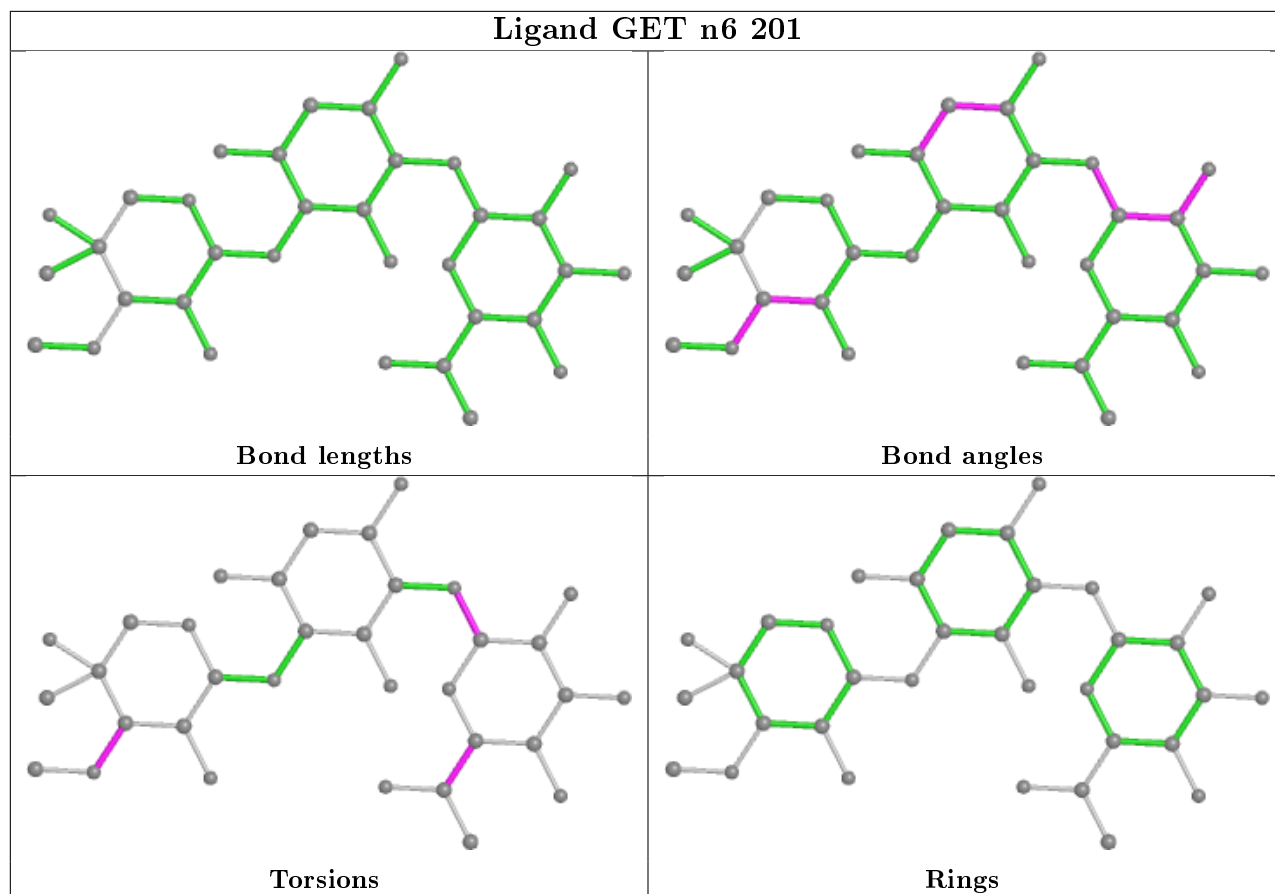
All (2) ring outliers are listed below:

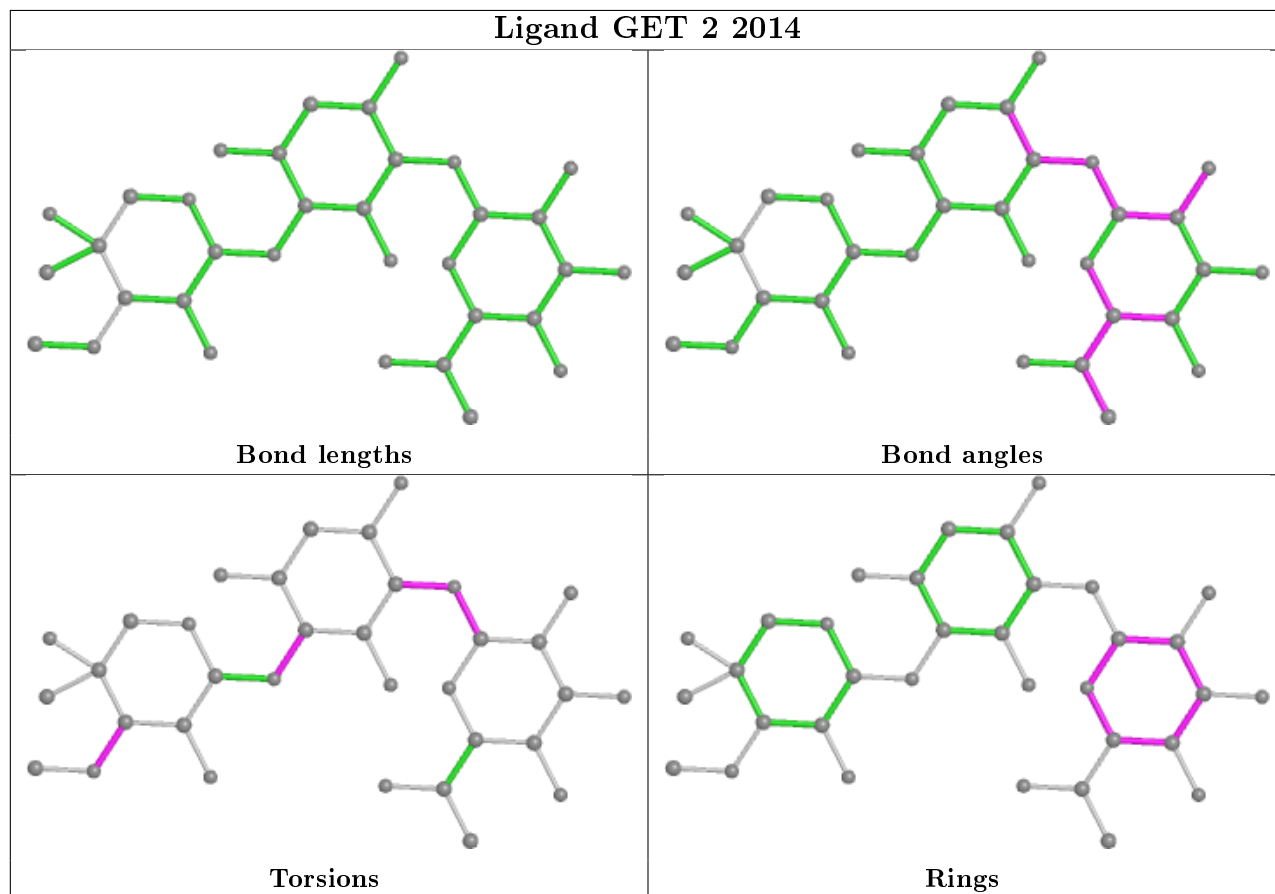
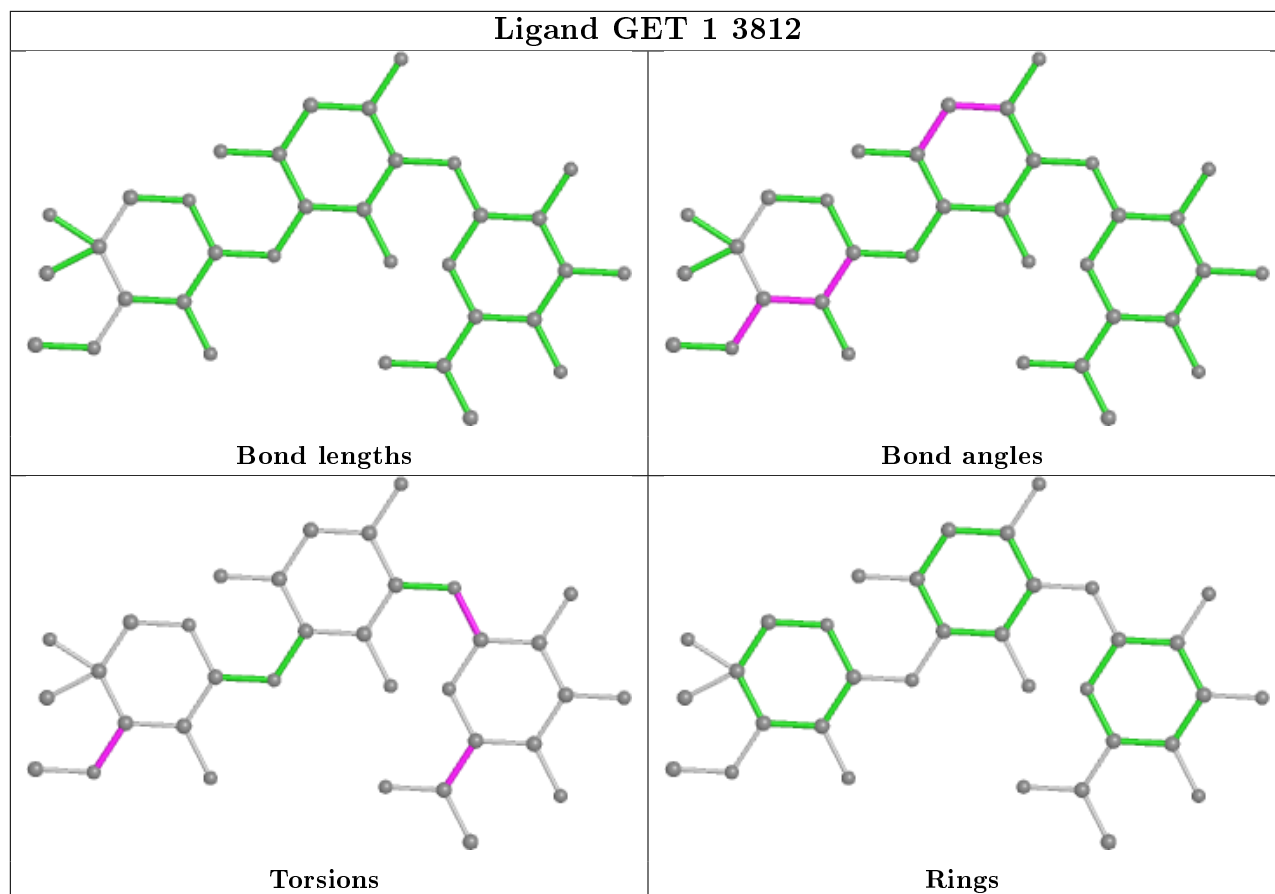
| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-------------------------|
| 82 | 2 | 2012 | GET | C13-C23-C33-C43-C53-O53 |
| 82 | 2 | 2014 | GET | C11-C21-C31-C41-C51-O51 |

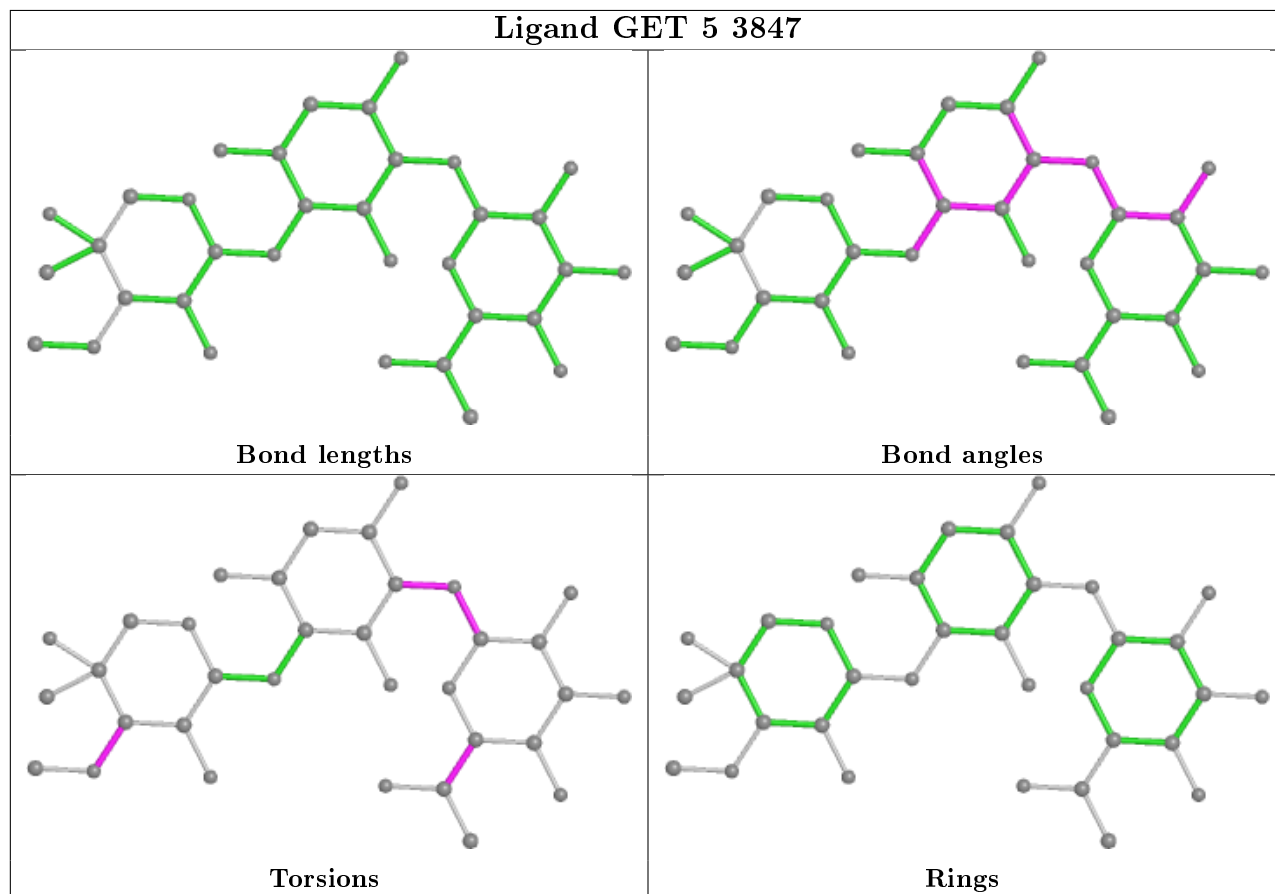
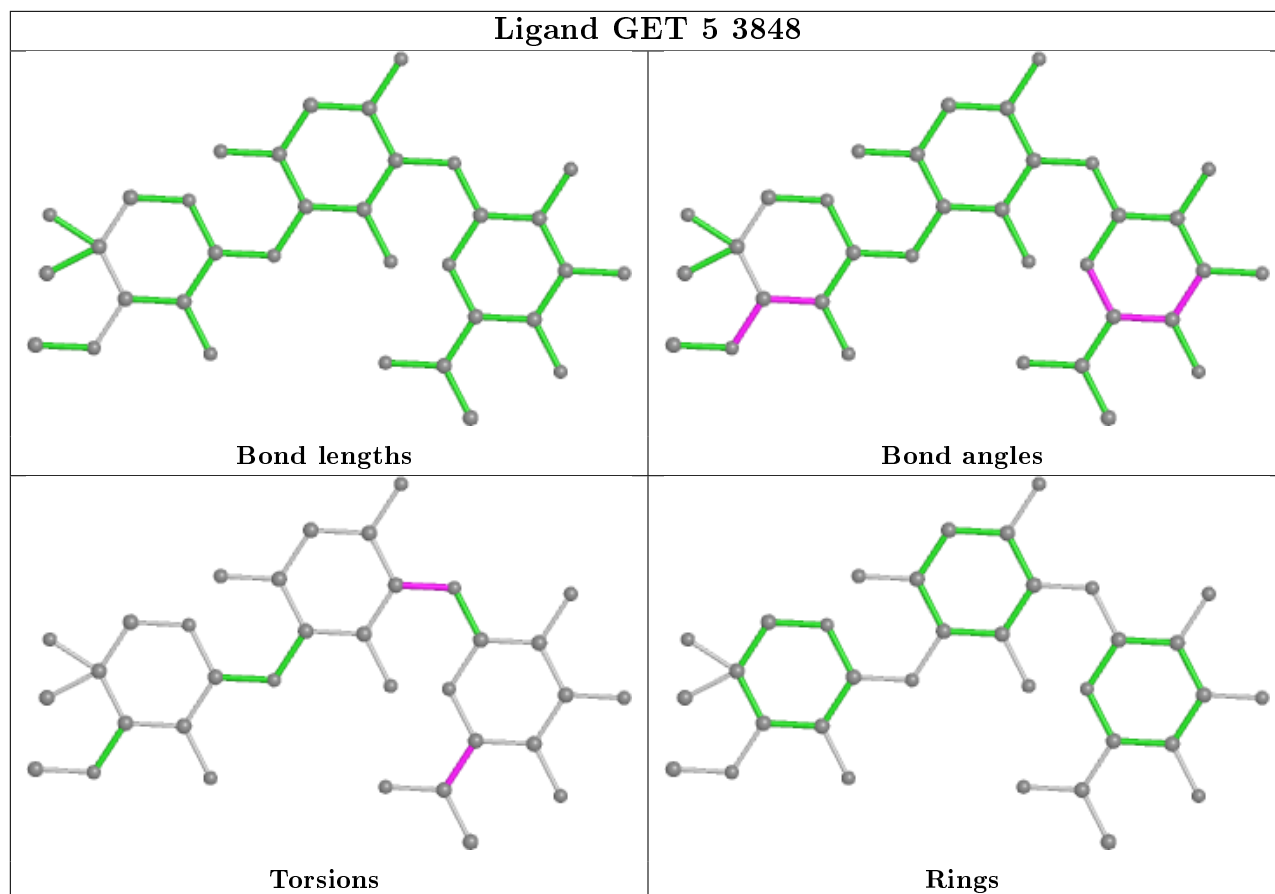
No monomer is involved in short contacts.

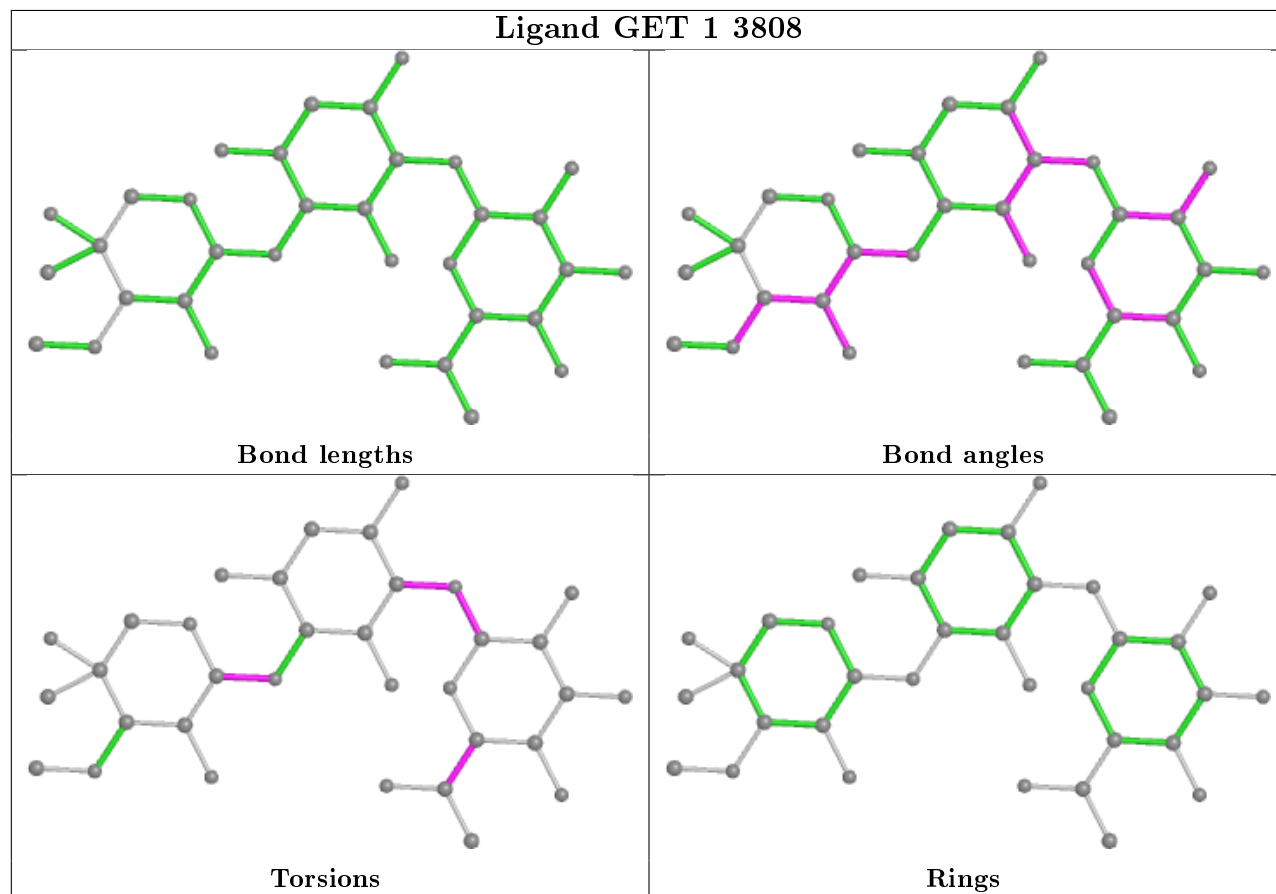
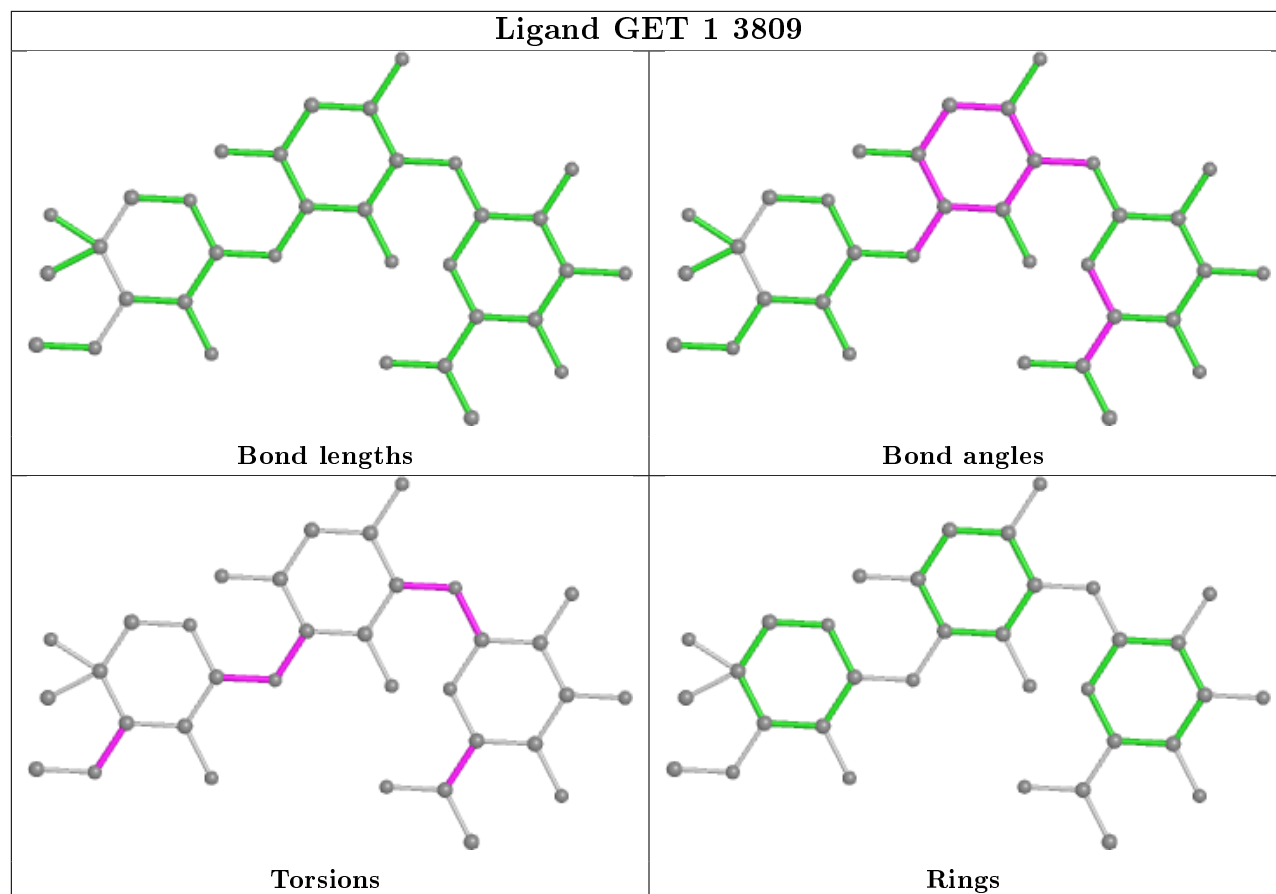
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

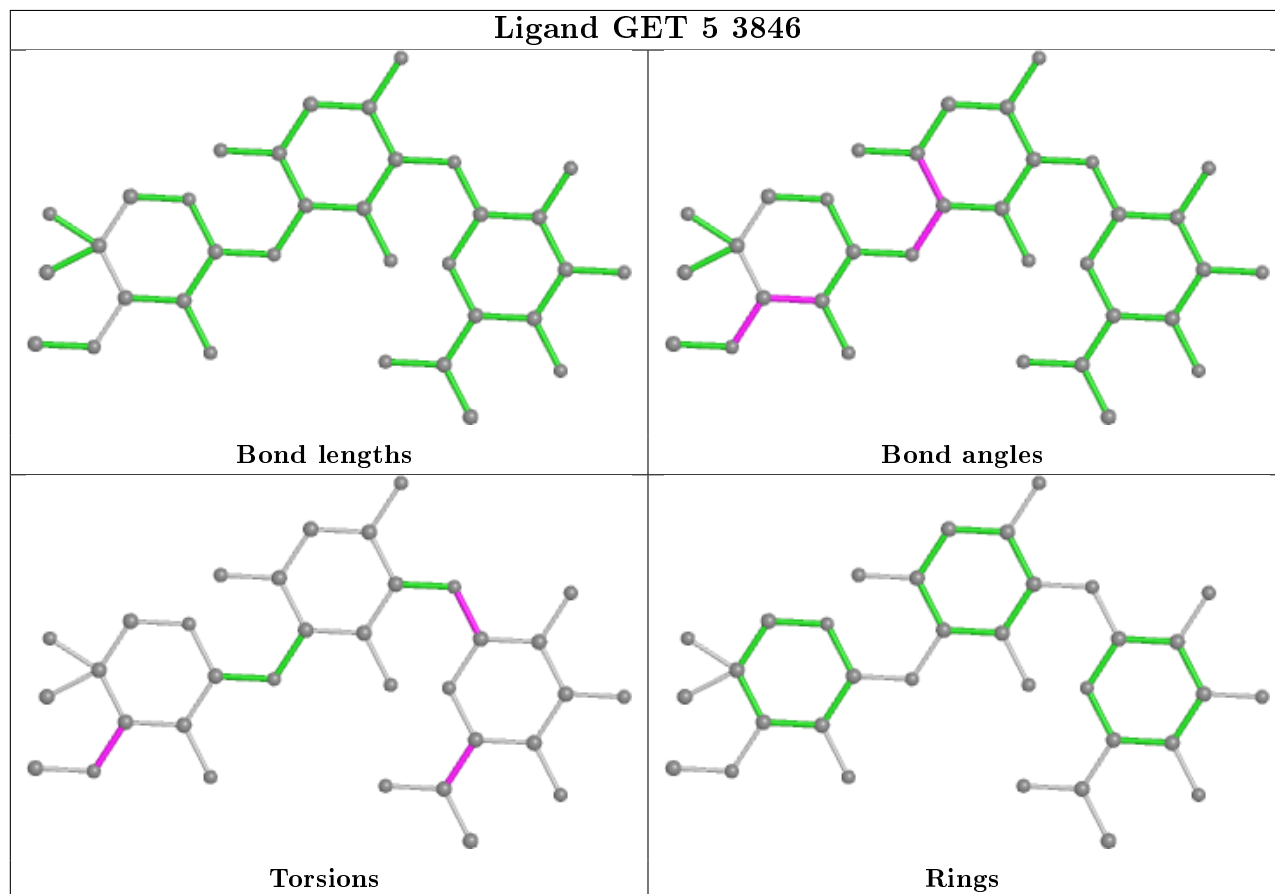
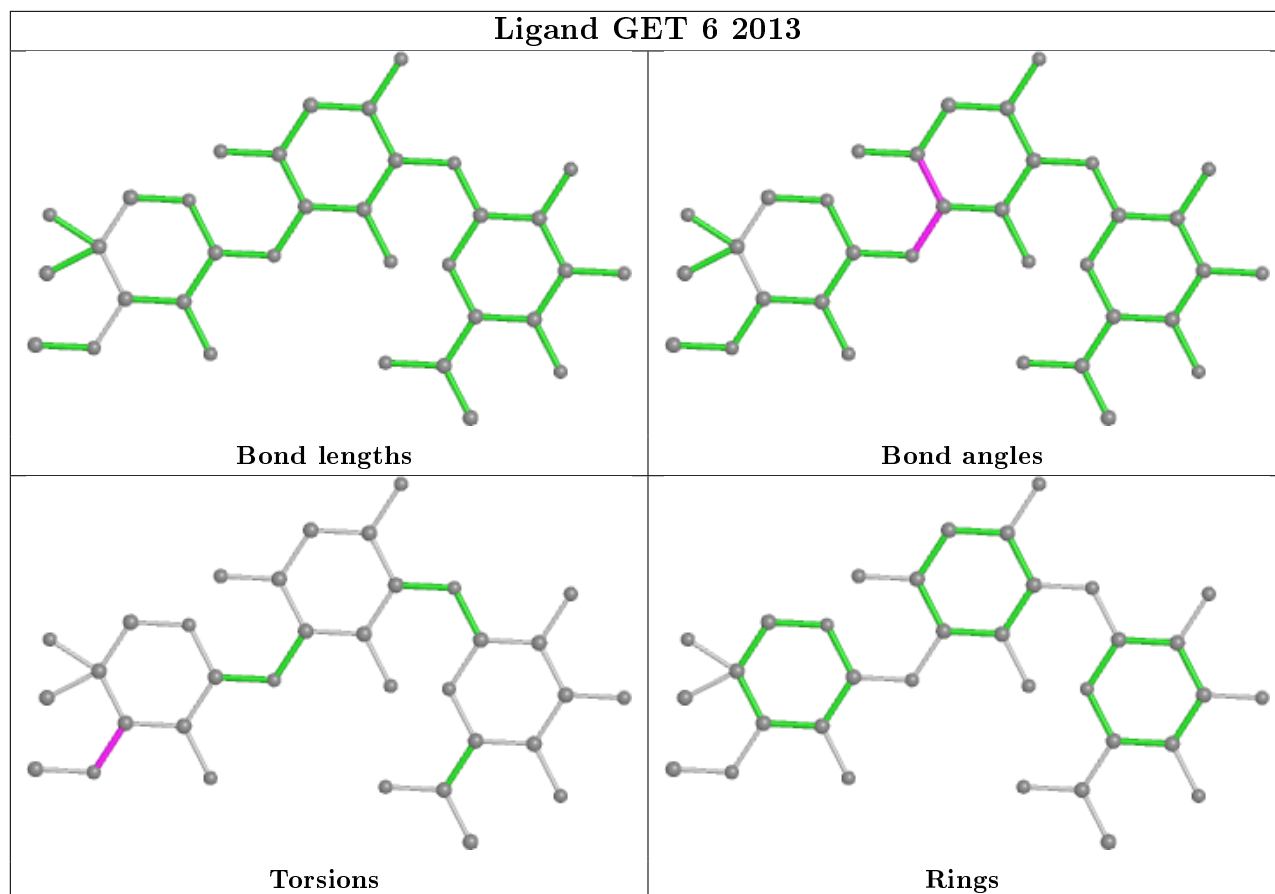


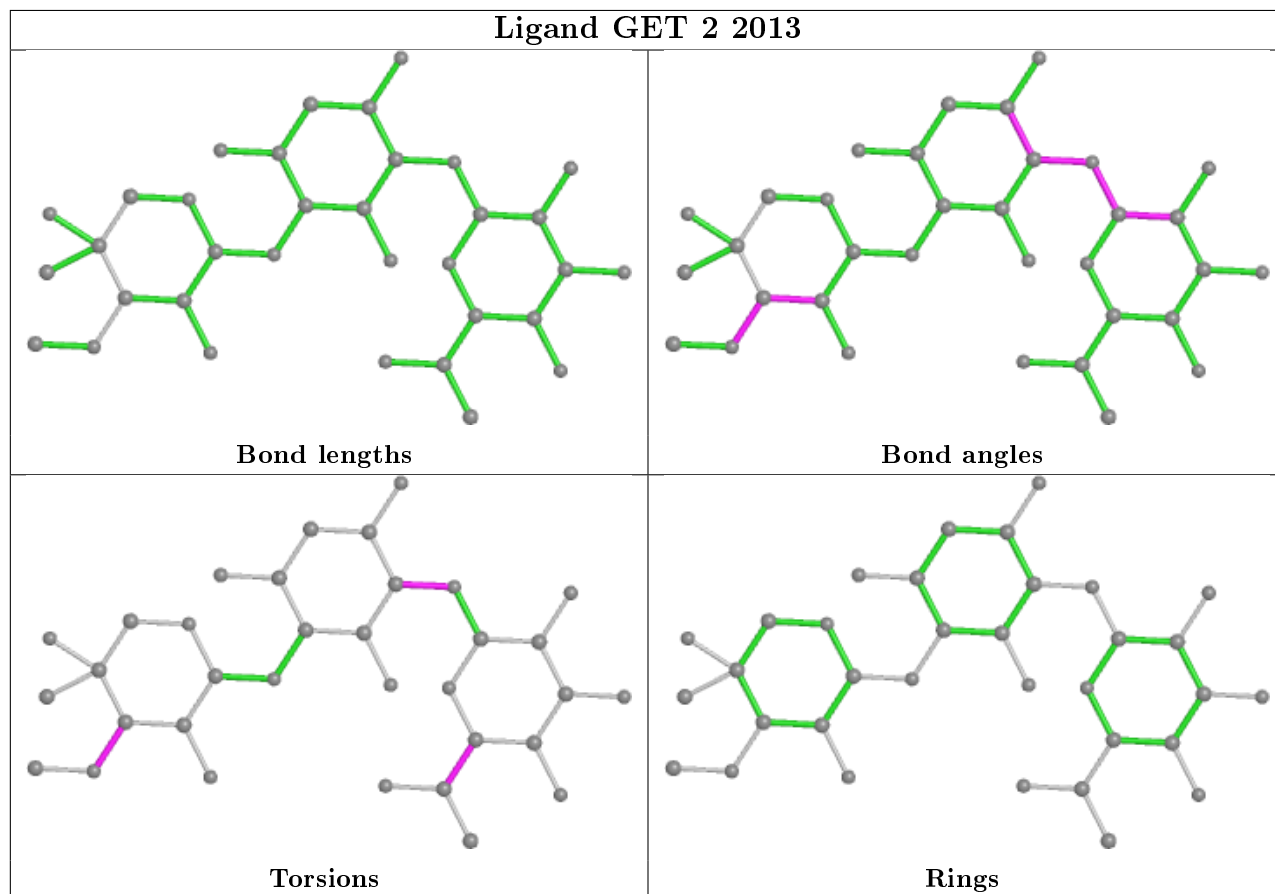
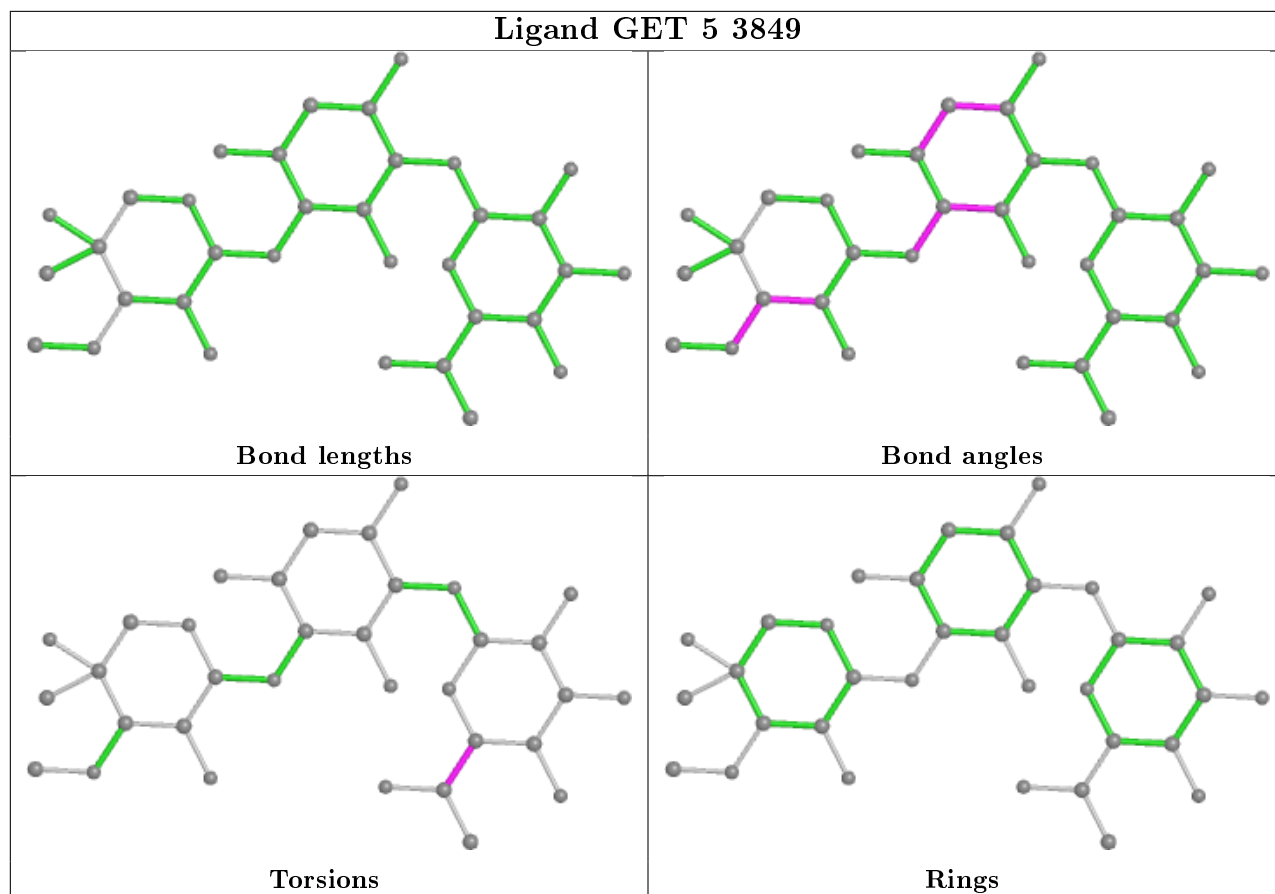


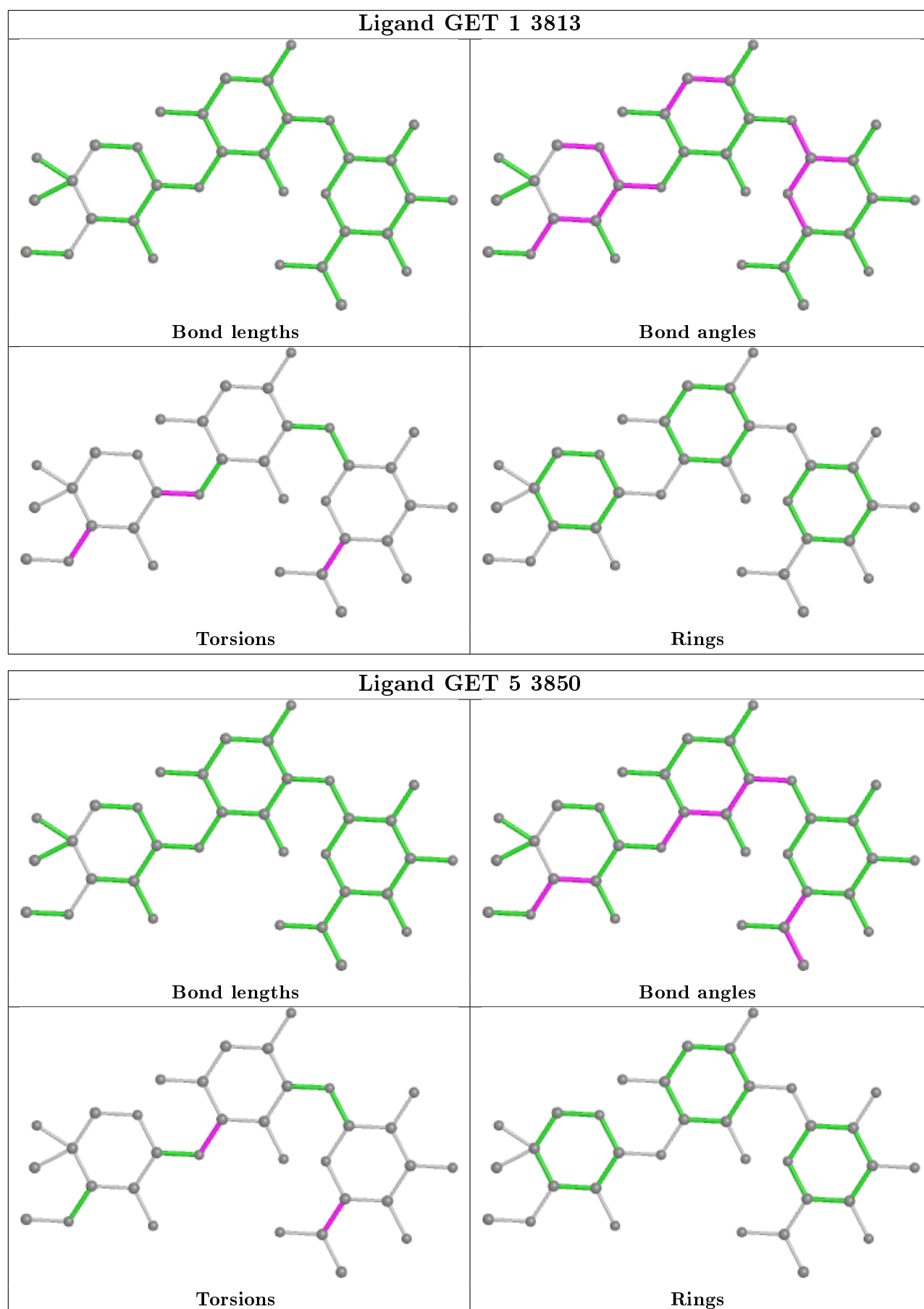


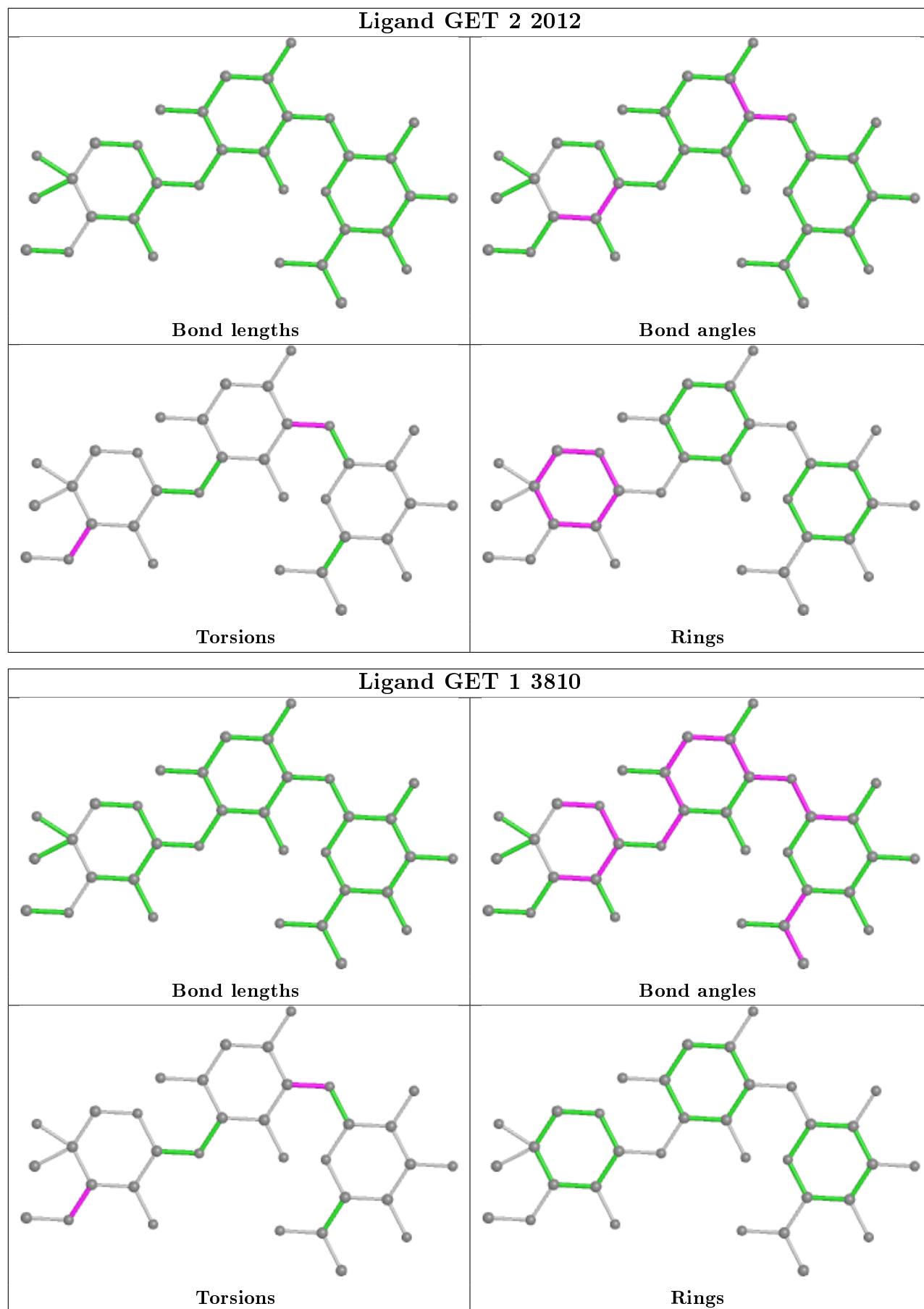


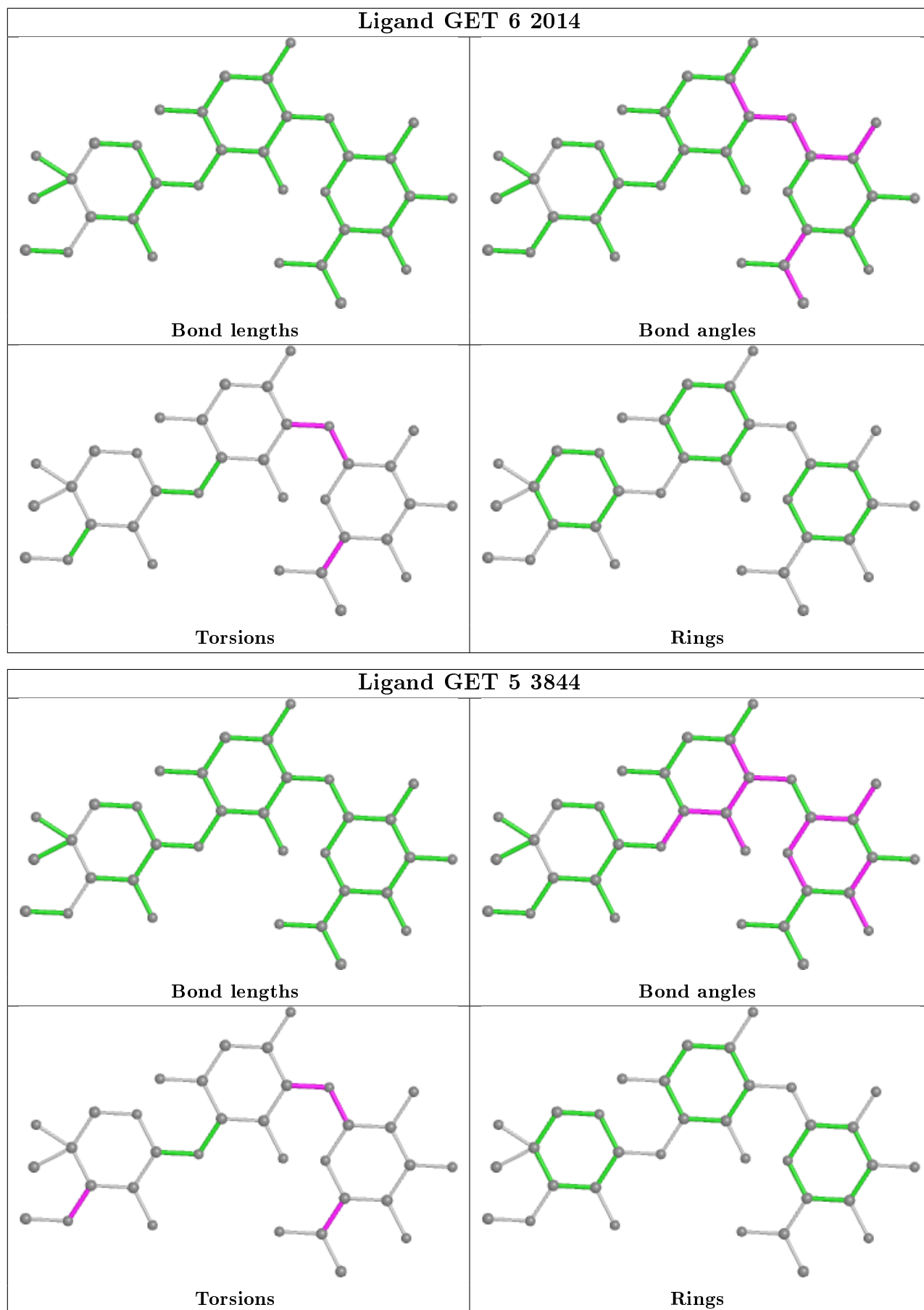


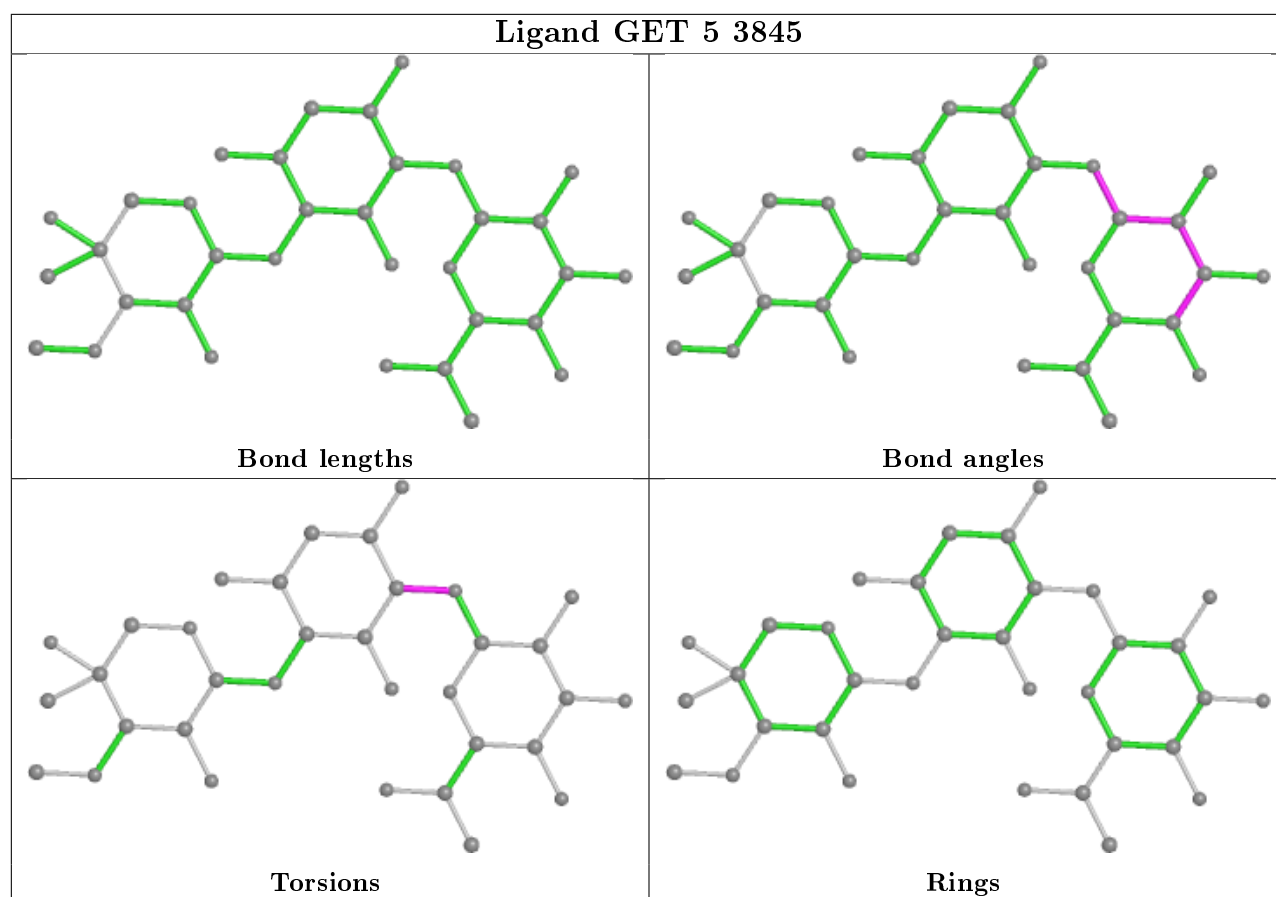












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

| Mol | Chain | Number of breaks |
|-----|-------|------------------|
| 30 | d8 | 1 |
| 18 | c6 | 1 |
| 30 | D8 | 1 |
| 39 | l2 | 1 |
| 1 | 2 | 1 |
| 28 | D6 | 1 |

All chain breaks are listed below:

| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | 2 | 1716:C | O3' | 1717:G | P | 3.84 |

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| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | D8 | 5:THR | C | 6:PRO | N | 1.82 |
| 1 | c6 | 4:VAL | C | 5:PRO | N | 1.69 |
| 1 | d8 | 5:THR | C | 6:PRO | N | 1.67 |
| 1 | D6 | 59:TYR | C | 60:PRO | N | 1.65 |
| 1 | l2 | 204:MET | C | 205:ASN | N | 1.16 |

6 Fit of model and data i

6.1 Protein, DNA and RNA chains i

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

| Mol | Chain | Analysed | <RSRZ> | #RSRZ>2 | OWAB(Å ²) | Q<0.9 |
|-----|-------|-----------------|--------|---------------|-----------------------|-------|
| 1 | 2 | 1688/1800 (93%) | 0.09 | 34 (2%) 65 53 | 109, 170, 289, 329 | 0 |
| 1 | 6 | 1700/1800 (94%) | 0.11 | 33 (1%) 66 55 | 101, 171, 254, 295 | 0 |
| 2 | S0 | 206/206 (100%) | 0.43 | 15 (7%) 15 11 | 173, 208, 229, 240 | 0 |
| 2 | s0 | 206/206 (100%) | 0.56 | 21 (10%) 6 5 | 171, 192, 212, 220 | 0 |
| 3 | S1 | 214/216 (99%) | 0.80 | 39 (18%) 1 1 | 194, 239, 265, 270 | 0 |
| 3 | s1 | 216/216 (100%) | 0.75 | 40 (18%) 1 1 | 171, 207, 229, 241 | 0 |
| 4 | S2 | 217/217 (100%) | 0.15 | 3 (1%) 75 64 | 147, 178, 199, 213 | 0 |
| 4 | s2 | 217/217 (100%) | 0.37 | 9 (4%) 37 27 | 144, 169, 192, 211 | 0 |
| 5 | S3 | 223/223 (100%) | 0.18 | 6 (2%) 54 42 | 133, 156, 222, 235 | 0 |
| 5 | s3 | 223/223 (100%) | 0.37 | 14 (6%) 20 13 | 168, 198, 240, 247 | 0 |
| 6 | S4 | 260/260 (100%) | 1.02 | 55 (21%) 0 0 | 175, 227, 242, 258 | 0 |
| 6 | s4 | 260/260 (100%) | 0.50 | 23 (8%) 10 7 | 126, 174, 193, 231 | 0 |
| 7 | S5 | 206/206 (100%) | 0.59 | 22 (10%) 6 5 | 153, 185, 199, 206 | 0 |
| 7 | s5 | 206/206 (100%) | 1.24 | 58 (28%) 0 0 | 199, 217, 245, 248 | 0 |
| 8 | S6 | 226/236 (95%) | 0.71 | 37 (16%) 1 1 | 166, 211, 269, 303 | 0 |
| 8 | s6 | 218/236 (92%) | 0.57 | 25 (11%) 4 4 | 128, 177, 205, 214 | 0 |
| 9 | S7 | 184/185 (99%) | 1.00 | 34 (18%) 1 1 | 209, 268, 310, 313 | 0 |
| 9 | s7 | 185/185 (100%) | 0.74 | 26 (14%) 2 2 | 166, 204, 230, 235 | 0 |
| 10 | S8 | 188/200 (94%) | 1.42 | 53 (28%) 0 0 | 160, 200, 261, 281 | 0 |
| 10 | s8 | 188/200 (94%) | 0.85 | 19 (10%) 7 5 | 124, 153, 209, 238 | 0 |
| 11 | S9 | 185/185 (100%) | 1.80 | 67 (36%) 0 0 | 162, 210, 238, 253 | 0 |
| 11 | s9 | 185/185 (100%) | 1.84 | 77 (41%) 0 0 | 151, 188, 220, 261 | 0 |
| 12 | C0 | 92/105 (87%) | 1.14 | 21 (22%) 0 0 | 141, 170, 190, 194 | 0 |
| 12 | c0 | 92/105 (87%) | 2.00 | 41 (44%) 0 0 | 197, 228, 244, 246 | 0 |

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| Mol | Chain | Analysed | <RSRZ> | #RSRZ>2 | OWAB(Å ²) | Q<0.9 |
|-----|-------|----------------|--------|--------------|-----------------------|-------|
| 13 | C1 | 142/156 (91%) | 0.94 | 17 (11%) 4 4 | 161, 194, 232, 265 | 0 |
| 13 | c1 | 146/156 (93%) | 0.30 | 7 (4%) 30 22 | 128, 142, 181, 197 | 0 |
| 14 | C2 | 120/143 (83%) | 1.64 | 44 (36%) 0 0 | 212, 235, 252, 258 | 0 |
| 14 | c2 | 124/143 (86%) | 2.76 | 79 (63%) 0 0 | 275, 290, 306, 315 | 0 |
| 15 | C3 | 150/150 (100%) | 0.29 | 4 (2%) 54 42 | 167, 208, 244, 247 | 0 |
| 15 | c3 | 150/150 (100%) | 0.20 | 3 (2%) 65 53 | 138, 161, 184, 191 | 0 |
| 16 | C4 | 127/128 (99%) | 0.20 | 5 (3%) 39 28 | 147, 201, 230, 236 | 0 |
| 16 | c4 | 128/128 (100%) | 0.25 | 6 (4%) 31 23 | 136, 198, 216, 223 | 0 |
| 17 | C5 | 122/141 (86%) | 0.39 | 7 (5%) 23 16 | 134, 163, 182, 196 | 0 |
| 17 | c5 | 119/141 (84%) | 0.81 | 20 (16%) 1 1 | 179, 214, 233, 237 | 0 |
| 18 | C6 | 141/141 (100%) | 0.94 | 22 (15%) 2 1 | 133, 170, 188, 197 | 0 |
| 18 | c6 | 141/141 (100%) | 2.59 | 79 (56%) 0 0 | 177, 226, 241, 246 | 0 |
| 19 | C7 | 117/136 (86%) | 0.71 | 16 (13%) 3 3 | 162, 195, 242, 247 | 0 |
| 19 | c7 | 117/136 (86%) | 0.33 | 8 (6%) 17 12 | 190, 206, 225, 229 | 0 |
| 20 | C8 | 145/145 (100%) | 0.28 | 9 (6%) 20 14 | 133, 172, 206, 215 | 0 |
| 20 | c8 | 145/145 (100%) | 0.74 | 28 (19%) 1 1 | 175, 221, 248, 254 | 0 |
| 21 | C9 | 143/143 (100%) | 0.80 | 16 (11%) 5 4 | 138, 163, 181, 198 | 0 |
| 21 | c9 | 143/143 (100%) | 2.11 | 62 (43%) 0 0 | 197, 234, 253, 259 | 0 |
| 22 | D0 | 105/107 (98%) | 0.84 | 20 (19%) 1 1 | 125, 164, 196, 202 | 0 |
| 22 | d0 | 101/107 (94%) | 1.29 | 27 (26%) 0 0 | 171, 227, 255, 261 | 0 |
| 23 | D1 | 87/87 (100%) | 0.33 | 4 (4%) 32 24 | 182, 200, 226, 237 | 0 |
| 23 | d1 | 87/87 (100%) | 0.33 | 3 (3%) 45 34 | 170, 179, 208, 215 | 0 |
| 24 | D2 | 129/129 (100%) | 0.48 | 11 (8%) 10 8 | 176, 195, 212, 224 | 0 |
| 24 | d2 | 129/129 (100%) | 0.40 | 7 (5%) 25 19 | 142, 159, 172, 186 | 0 |
| 25 | D3 | 144/144 (100%) | 0.12 | 3 (2%) 63 52 | 130, 139, 163, 169 | 0 |
| 25 | d3 | 144/144 (100%) | 0.13 | 0 100 100 | 122, 131, 147, 164 | 0 |
| 26 | D4 | 134/134 (100%) | 1.01 | 30 (22%) 0 0 | 186, 230, 242, 250 | 0 |
| 26 | d4 | 134/134 (100%) | 0.42 | 15 (11%) 5 4 | 146, 190, 211, 227 | 0 |
| 27 | D5 | 70/70 (100%) | 1.24 | 14 (20%) 1 0 | 175, 202, 214, 217 | 0 |
| 27 | d5 | 69/70 (98%) | 1.58 | 25 (36%) 0 0 | 223, 244, 254, 258 | 0 |
| 28 | D6 | 97/97 (100%) | 0.26 | 5 (5%) 27 20 | 145, 167, 227, 233 | 0 |

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| Mol | Chain | Analysed | <RSRZ> | #RSRZ>2 | OWAB(Å ²) | Q<0.9 |
|-----|-------|-----------------|--------|---------------|-----------------------|-------|
| 28 | d6 | 97/97 (100%) | 0.41 | 8 (8%) 11 9 | 140, 154, 218, 222 | 0 |
| 29 | D7 | 81/81 (100%) | 0.34 | 6 (7%) 14 10 | 196, 233, 277, 288 | 0 |
| 29 | d7 | 81/81 (100%) | 0.44 | 2 (2%) 57 45 | 161, 181, 221, 225 | 0 |
| 30 | D8 | 63/63 (100%) | 0.52 | 8 (12%) 3 4 | 169, 197, 216, 226 | 0 |
| 30 | d8 | 63/63 (100%) | -0.16 | 1 (1%) 72 61 | 187, 211, 225, 229 | 0 |
| 31 | D9 | 53/53 (100%) | 0.72 | 9 (16%) 1 1 | 125, 132, 161, 170 | 0 |
| 31 | d9 | 53/53 (100%) | 1.45 | 15 (28%) 0 0 | 180, 191, 224, 249 | 0 |
| 32 | E0 | 60/60 (100%) | 0.80 | 11 (18%) 1 1 | 137, 178, 205, 210 | 0 |
| 32 | e0 | 60/60 (100%) | 0.82 | 10 (16%) 1 1 | 141, 182, 208, 215 | 0 |
| 33 | E1 | 71/152 (46%) | 2.02 | 32 (45%) 0 0 | 157, 207, 238, 244 | 0 |
| 33 | e1 | 45/152 (29%) | 2.04 | 24 (53%) 0 0 | 198, 263, 280, 283 | 0 |
| 34 | SR | 318/318 (100%) | 0.99 | 59 (18%) 1 1 | 189, 218, 242, 262 | 0 |
| 34 | sR | 313/318 (98%) | 0.65 | 42 (13%) 3 3 | 221, 240, 258, 318 | 0 |
| 35 | SM | 135/272 (49%) | 0.07 | 5 (3%) 41 30 | 133, 155, 231, 255 | 0 |
| 35 | sM | 115/272 (42%) | 0.67 | 25 (21%) 0 0 | 154, 179, 231, 293 | 0 |
| 36 | 1 | 3078/3396 (90%) | 0.05 | 27 (0%) 84 76 | 82, 131, 236, 350 | 0 |
| 36 | 5 | 3127/3396 (92%) | 0.09 | 47 (1%) 73 63 | 83, 121, 213, 304 | 0 |
| 37 | 3 | 121/121 (100%) | -0.21 | 0 100 100 | 92, 159, 191, 204 | 0 |
| 37 | 7 | 121/121 (100%) | -0.16 | 0 100 100 | 95, 170, 205, 211 | 0 |
| 38 | 4 | 158/158 (100%) | 0.17 | 5 (3%) 47 35 | 100, 159, 221, 285 | 0 |
| 38 | 8 | 157/158 (99%) | 0.23 | 1 (0%) 89 83 | 96, 132, 183, 217 | 0 |
| 39 | L2 | 252/252 (100%) | 0.31 | 13 (5%) 27 20 | 104, 154, 189, 209 | 0 |
| 39 | l2 | 252/252 (100%) | 0.20 | 10 (3%) 38 28 | 97, 127, 152, 170 | 0 |
| 40 | L3 | 386/386 (100%) | 0.09 | 10 (2%) 56 43 | 84, 121, 147, 180 | 0 |
| 40 | l3 | 386/386 (100%) | -0.01 | 1 (0%) 94 90 | 83, 111, 131, 164 | 0 |
| 41 | L4 | 361/361 (100%) | 0.01 | 2 (0%) 89 83 | 94, 144, 170, 183 | 0 |
| 41 | l4 | 361/361 (100%) | 0.19 | 9 (2%) 57 45 | 91, 125, 147, 160 | 0 |
| 42 | L5 | 294/296 (99%) | 0.97 | 71 (24%) 0 0 | 127, 188, 205, 210 | 0 |
| 42 | l5 | 294/296 (99%) | 0.83 | 50 (17%) 1 1 | 141, 197, 221, 235 | 0 |
| 43 | L6 | 156/176 (88%) | 0.12 | 3 (1%) 66 55 | 109, 127, 147, 163 | 0 |
| 43 | l6 | 157/176 (89%) | 0.20 | 4 (2%) 57 45 | 105, 118, 143, 164 | 0 |

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| Mol | Chain | Analysed | <RSRZ> | #RSRZ>2 | OWAB(Å ²) | Q<0.9 |
|-----|-------|----------------|--------|--------------|-----------------------|-------|
| 44 | L7 | 222/223 (99%) | 0.05 | 2 (0%) 84 76 | 95, 123, 164, 193 | 0 |
| 44 | l7 | 223/223 (100%) | -0.06 | 1 (0%) 92 88 | 96, 114, 149, 189 | 0 |
| 45 | L8 | 233/233 (100%) | 1.02 | 48 (20%) 1 0 | 188, 228, 265, 283 | 0 |
| 45 | l8 | 231/233 (99%) | 0.63 | 26 (11%) 5 4 | 152, 178, 213, 223 | 0 |
| 46 | L9 | 191/191 (100%) | 0.20 | 4 (2%) 63 52 | 113, 131, 146, 172 | 0 |
| 46 | l9 | 190/191 (99%) | 0.04 | 0 100 100 | 110, 125, 145, 154 | 0 |
| 47 | M0 | 208/221 (94%) | -0.12 | 2 (0%) 82 73 | 97, 115, 162, 181 | 0 |
| 47 | m0 | 209/221 (94%) | 0.24 | 8 (3%) 40 30 | 102, 125, 180, 194 | 0 |
| 48 | M1 | 169/169 (100%) | 0.60 | 16 (9%) 8 6 | 151, 165, 173, 175 | 0 |
| 48 | m1 | 169/169 (100%) | 0.78 | 23 (13%) 3 3 | 171, 191, 201, 204 | 0 |
| 49 | M3 | 193/194 (99%) | 0.16 | 6 (3%) 49 36 | 109, 185, 219, 232 | 0 |
| 49 | m3 | 194/194 (100%) | 0.16 | 5 (2%) 56 43 | 102, 156, 197, 209 | 0 |
| 50 | M4 | 136/137 (99%) | -0.21 | 0 100 100 | 118, 129, 144, 153 | 0 |
| 50 | m4 | 137/137 (100%) | -0.13 | 0 100 100 | 113, 121, 146, 176 | 0 |
| 51 | M5 | 203/203 (100%) | 0.92 | 27 (13%) 3 3 | 117, 163, 193, 205 | 0 |
| 51 | m5 | 203/203 (100%) | 0.59 | 17 (8%) 11 8 | 106, 133, 154, 163 | 0 |
| 52 | M6 | 197/197 (100%) | -0.09 | 0 100 100 | 83, 97, 140, 150 | 0 |
| 52 | m6 | 197/197 (100%) | -0.13 | 1 (0%) 91 85 | 85, 97, 139, 147 | 0 |
| 53 | M7 | 183/184 (99%) | 0.14 | 2 (1%) 80 71 | 92, 108, 159, 196 | 0 |
| 53 | m7 | 175/184 (95%) | 0.15 | 3 (1%) 70 59 | 91, 104, 140, 157 | 0 |
| 54 | M8 | 185/185 (100%) | 0.22 | 7 (3%) 40 30 | 103, 149, 173, 180 | 0 |
| 54 | m8 | 185/185 (100%) | 0.20 | 1 (0%) 91 85 | 102, 131, 147, 155 | 0 |
| 55 | M9 | 188/188 (100%) | 0.43 | 20 (10%) 6 5 | 137, 167, 298, 318 | 0 |
| 55 | m9 | 183/188 (97%) | 0.47 | 18 (9%) 7 6 | 114, 135, 212, 223 | 0 |
| 56 | N0 | 170/172 (98%) | 0.07 | 0 100 100 | 104, 121, 143, 156 | 0 |
| 56 | n0 | 172/172 (100%) | -0.07 | 0 100 100 | 100, 116, 137, 154 | 0 |
| 57 | N1 | 159/159 (100%) | 0.75 | 25 (15%) 2 1 | 100, 136, 196, 205 | 0 |
| 57 | n1 | 159/159 (100%) | 0.35 | 8 (5%) 28 21 | 110, 134, 182, 186 | 0 |
| 58 | N2 | 98/98 (100%) | 1.41 | 23 (23%) 0 0 | 186, 205, 216, 219 | 0 |
| 58 | n2 | 98/98 (100%) | 0.34 | 9 (9%) 9 6 | 159, 174, 187, 190 | 0 |
| 59 | N3 | 135/135 (100%) | 0.69 | 16 (11%) 4 4 | 95, 117, 129, 137 | 0 |

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| Mol | Chain | Analysed | <RSRZ> | #RSRZ>2 | OWAB(Å ²) | Q<0.9 |
|-----|-------|----------------|--------|--------------|-----------------------|-------|
| 59 | n3 | 134/135 (99%) | 0.35 | 3 (2%) 62 50 | 89, 104, 116, 128 | 0 |
| 60 | N4 | 122/155 (78%) | 0.82 | 17 (13%) 2 3 | 123, 163, 280, 283 | 0 |
| 60 | n4 | 118/155 (76%) | 0.66 | 18 (15%) 2 1 | 103, 136, 235, 242 | 0 |
| 61 | N5 | 121/121 (100%) | 0.53 | 13 (10%) 6 5 | 143, 176, 210, 245 | 0 |
| 61 | n5 | 120/121 (99%) | 0.26 | 3 (2%) 57 45 | 119, 143, 165, 189 | 0 |
| 62 | N6 | 126/126 (100%) | 1.33 | 30 (23%) 0 0 | 130, 150, 177, 192 | 0 |
| 62 | n6 | 124/126 (98%) | 0.98 | 15 (12%) 4 4 | 113, 138, 166, 177 | 0 |
| 63 | N7 | 135/135 (100%) | 1.53 | 47 (34%) 0 0 | 209, 238, 257, 269 | 0 |
| 63 | n7 | 135/135 (100%) | 1.14 | 24 (17%) 1 1 | 155, 177, 193, 203 | 0 |
| 64 | N8 | 148/148 (100%) | 0.59 | 17 (11%) 4 4 | 92, 165, 197, 210 | 0 |
| 64 | n8 | 148/148 (100%) | 0.24 | 1 (0%) 87 81 | 92, 144, 169, 173 | 0 |
| 65 | N9 | 58/58 (100%) | 0.75 | 10 (17%) 1 1 | 93, 154, 197, 203 | 0 |
| 65 | n9 | 58/58 (100%) | 0.68 | 8 (13%) 2 3 | 97, 150, 197, 206 | 0 |
| 66 | O0 | 97/100 (97%) | 0.92 | 18 (18%) 1 1 | 197, 217, 237, 241 | 0 |
| 66 | o0 | 100/100 (100%) | 0.20 | 5 (5%) 28 21 | 151, 166, 186, 197 | 0 |
| 67 | O1 | 109/109 (100%) | 0.77 | 16 (14%) 2 2 | 116, 141, 173, 183 | 0 |
| 67 | o1 | 109/109 (100%) | 0.78 | 9 (8%) 11 9 | 105, 132, 166, 186 | 0 |
| 68 | O2 | 127/127 (100%) | 0.49 | 6 (4%) 31 23 | 89, 118, 134, 153 | 0 |
| 68 | o2 | 127/127 (100%) | 0.15 | 0 100 100 | 89, 111, 124, 154 | 0 |
| 69 | O3 | 106/106 (100%) | 0.17 | 2 (1%) 66 55 | 88, 103, 119, 122 | 0 |
| 69 | o3 | 106/106 (100%) | 0.33 | 2 (1%) 66 55 | 89, 101, 116, 123 | 0 |
| 70 | O4 | 112/112 (100%) | 0.86 | 12 (10%) 6 5 | 138, 186, 249, 258 | 0 |
| 70 | o4 | 112/112 (100%) | 0.25 | 7 (6%) 20 13 | 113, 144, 201, 211 | 0 |
| 71 | O5 | 119/119 (100%) | 0.25 | 5 (4%) 36 27 | 162, 182, 210, 218 | 0 |
| 71 | o5 | 119/119 (100%) | 0.34 | 4 (3%) 45 34 | 129, 152, 174, 182 | 0 |
| 72 | O6 | 99/99 (100%) | 0.76 | 14 (14%) 2 2 | 170, 194, 221, 241 | 0 |
| 72 | o6 | 99/99 (100%) | 0.70 | 7 (7%) 16 11 | 150, 162, 186, 207 | 0 |
| 73 | O7 | 84/84 (100%) | -0.04 | 0 100 100 | 103, 129, 178, 189 | 0 |
| 73 | o7 | 82/84 (97%) | 0.21 | 0 100 100 | 94, 111, 140, 153 | 0 |
| 74 | O8 | 77/77 (100%) | 1.02 | 15 (19%) 1 1 | 194, 216, 228, 229 | 0 |
| 74 | o8 | 77/77 (100%) | 1.14 | 16 (20%) 1 0 | 154, 174, 185, 187 | 0 |

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| Mol | Chain | Analysed | <RSRZ> | #RSRZ>2 | OWAB(Å ²) | Q<0.9 |
|-----|-------|-------------------|--------|----------------|-----------------------|-------|
| 75 | O9 | 49/50 (98%) | 0.30 | 0 100 100 | 122, 135, 142, 146 | 0 |
| 75 | o9 | 50/50 (100%) | 0.09 | 0 100 100 | 106, 117, 127, 129 | 0 |
| 76 | Q0 | 52/52 (100%) | 0.60 | 2 (3%) 40 30 | 100, 107, 147, 156 | 0 |
| 76 | q0 | 52/52 (100%) | 0.42 | 2 (3%) 40 30 | 101, 111, 138, 145 | 0 |
| 77 | Q1 | 25/25 (100%) | 1.16 | 3 (12%) 4 4 | 113, 125, 130, 132 | 0 |
| 77 | q1 | 25/25 (100%) | 0.62 | 1 (4%) 38 28 | 113, 121, 125, 126 | 0 |
| 78 | Q2 | 105/105 (100%) | 0.99 | 24 (22%) 0 0 | 113, 143, 167, 178 | 0 |
| 78 | q2 | 105/105 (100%) | 0.51 | 13 (12%) 4 4 | 109, 144, 170, 189 | 0 |
| 79 | Q3 | 91/91 (100%) | -0.14 | 2 (2%) 62 50 | 118, 158, 189, 203 | 0 |
| 79 | q3 | 91/91 (100%) | -0.04 | 0 100 100 | 102, 129, 153, 167 | 0 |
| 80 | p0 | 138/312 (44%) | 2.34 | 74 (53%) 0 0 | 202, 229, 270, 271 | 0 |
| All | All | 32690/34558 (94%) | 0.42 | 2661 (8%) 12 9 | 82, 159, 244, 350 | 0 |

All (2661) RSRZ outliers are listed below:

| Mol | Chain | Res | Type | RSRZ |
|-----|-------|-----|------|------|
| 18 | c6 | 20 | ALA | 12.2 |
| 45 | L8 | 199 | ALA | 11.8 |
| 31 | d9 | 4 | GLU | 10.9 |
| 60 | n4 | 132 | GLY | 9.5 |
| 6 | s4 | 261 | LEU | 9.4 |
| 12 | c0 | 23 | ALA | 8.9 |
| 11 | S9 | 141 | VAL | 8.7 |
| 33 | E1 | 93 | HIS | 8.4 |
| 51 | M5 | 6 | TYR | 8.3 |
| 33 | e1 | 87 | THR | 8.3 |
| 31 | D9 | 4 | GLU | 8.2 |
| 6 | S4 | 149 | TYR | 8.1 |
| 20 | C8 | 2 | SER | 8.1 |
| 11 | s9 | 141 | VAL | 8.0 |
| 42 | l5 | 181 | PRO | 8.0 |
| 11 | s9 | 134 | ILE | 7.9 |
| 14 | c2 | 41 | LEU | 7.8 |
| 18 | c6 | 11 | GLY | 7.8 |
| 14 | c2 | 90 | LYS | 7.8 |
| 21 | c9 | 84 | LYS | 7.7 |
| 32 | E0 | 45 | VAL | 7.7 |
| 18 | c6 | 88 | GLY | 7.6 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 60 | N4 | 75 | THR | 7.6 |
| 45 | L8 | 198 | ALA | 7.6 |
| 21 | c9 | 120 | GLY | 7.4 |
| 18 | c6 | 22 | VAL | 7.4 |
| 18 | c6 | 70 | THR | 7.3 |
| 1 | 2 | 226 | A | 7.3 |
| 1 | 6 | 1228 | G | 7.2 |
| 21 | c9 | 55 | TYR | 7.2 |
| 33 | E1 | 145 | HIS | 7.0 |
| 10 | S8 | 167 | ALA | 7.0 |
| 47 | m0 | 221 | ALA | 6.9 |
| 11 | S9 | 142 | ASN | 6.9 |
| 47 | m0 | 220 | GLN | 6.8 |
| 72 | O6 | 8 | ALA | 6.8 |
| 7 | s5 | 71 | ALA | 6.8 |
| 34 | SR | 212 | ALA | 6.7 |
| 45 | l8 | 199 | ALA | 6.6 |
| 3 | s1 | 122 | GLU | 6.6 |
| 36 | 1 | 2539 | C | 6.6 |
| 34 | SR | 253 | ALA | 6.6 |
| 60 | n4 | 131 | ALA | 6.5 |
| 14 | c2 | 62 | LEU | 6.5 |
| 12 | c0 | 64 | TYR | 6.5 |
| 34 | SR | 302 | PHE | 6.5 |
| 18 | c6 | 19 | VAL | 6.5 |
| 11 | S9 | 95 | TYR | 6.5 |
| 1 | 2 | 913 | G | 6.4 |
| 21 | c9 | 28 | LEU | 6.4 |
| 14 | c2 | 67 | THR | 6.4 |
| 58 | N2 | 95 | PHE | 6.4 |
| 31 | d9 | 5 | ASN | 6.4 |
| 9 | S7 | 5 | GLN | 6.3 |
| 13 | C1 | 36 | LYS | 6.3 |
| 80 | p0 | 88 | PHE | 6.3 |
| 7 | s5 | 72 | HIS | 6.3 |
| 21 | c9 | 119 | LYS | 6.3 |
| 18 | c6 | 18 | ALA | 6.3 |
| 18 | c6 | 114 | ARG | 6.2 |
| 45 | l8 | 198 | ALA | 6.2 |
| 12 | c0 | 20 | VAL | 6.2 |
| 8 | S6 | 156 | PHE | 6.2 |
| 14 | c2 | 111 | ASN | 6.2 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 21 | c9 | 92 | LYS | 6.2 |
| 58 | N2 | 71 | PHE | 6.2 |
| 11 | S9 | 134 | ILE | 6.2 |
| 42 | L5 | 38 | THR | 6.1 |
| 62 | N6 | 45 | ILE | 6.1 |
| 11 | s9 | 142 | ASN | 6.1 |
| 7 | s5 | 37 | GLN | 6.1 |
| 11 | S9 | 164 | PHE | 6.1 |
| 33 | e1 | 86 | THR | 6.1 |
| 11 | S9 | 85 | VAL | 6.1 |
| 80 | p0 | 84 | VAL | 6.0 |
| 33 | E1 | 90 | LYS | 6.0 |
| 10 | S8 | 123 | LYS | 6.0 |
| 14 | c2 | 91 | VAL | 6.0 |
| 6 | S4 | 47 | PHE | 6.0 |
| 80 | p0 | 26 | PHE | 6.0 |
| 11 | S9 | 86 | LEU | 6.0 |
| 42 | L5 | 49 | TYR | 5.9 |
| 11 | S9 | 92 | LYS | 5.9 |
| 33 | E1 | 89 | LYS | 5.9 |
| 14 | c2 | 119 | SER | 5.8 |
| 36 | 1 | 2540 | A | 5.8 |
| 7 | s5 | 102 | ARG | 5.8 |
| 11 | s9 | 135 | ALA | 5.8 |
| 36 | 5 | 1025 | A | 5.7 |
| 21 | c9 | 71 | VAL | 5.7 |
| 18 | c6 | 55 | VAL | 5.7 |
| 34 | SR | 254 | ALA | 5.7 |
| 63 | N7 | 2 | ALA | 5.6 |
| 10 | S8 | 74 | LYS | 5.6 |
| 18 | c6 | 49 | TYR | 5.6 |
| 18 | c6 | 21 | HIS | 5.6 |
| 10 | S8 | 168 | CYS | 5.6 |
| 21 | c9 | 54 | PHE | 5.6 |
| 34 | sR | 314 | GLN | 5.6 |
| 12 | c0 | 21 | VAL | 5.6 |
| 1 | 6 | 132 | U | 5.6 |
| 20 | c8 | 40 | ARG | 5.5 |
| 74 | o8 | 2 | ALA | 5.5 |
| 14 | c2 | 126 | TRP | 5.5 |
| 18 | c6 | 69 | VAL | 5.5 |
| 58 | N2 | 105 | LEU | 5.5 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 18 | c6 | 51 | PRO | 5.5 |
| 11 | s9 | 99 | LEU | 5.4 |
| 18 | c6 | 89 | LEU | 5.4 |
| 58 | N2 | 27 | VAL | 5.4 |
| 35 | sM | 28 | SER | 5.4 |
| 80 | p0 | 100 | ILE | 5.4 |
| 21 | c9 | 58 | ALA | 5.4 |
| 42 | L5 | 55 | PHE | 5.4 |
| 39 | l2 | 252 | THR | 5.4 |
| 21 | c9 | 101 | ASN | 5.4 |
| 80 | p0 | 54 | GLY | 5.4 |
| 11 | s9 | 37 | LYS | 5.4 |
| 14 | c2 | 89 | ILE | 5.4 |
| 33 | e1 | 85 | TYR | 5.4 |
| 33 | E1 | 92 | LYS | 5.3 |
| 34 | SR | 211 | ILE | 5.3 |
| 26 | D4 | 70 | VAL | 5.3 |
| 14 | c2 | 43 | ARG | 5.3 |
| 18 | c6 | 7 | VAL | 5.3 |
| 9 | S7 | 93 | LEU | 5.3 |
| 14 | c2 | 52 | LEU | 5.3 |
| 34 | sR | 32 | LEU | 5.3 |
| 34 | sR | 136 | ILE | 5.3 |
| 9 | S7 | 47 | ARG | 5.3 |
| 58 | N2 | 93 | ILE | 5.3 |
| 12 | c0 | 62 | GLN | 5.3 |
| 14 | C2 | 61 | VAL | 5.3 |
| 60 | N4 | 98 | PRO | 5.3 |
| 42 | L5 | 63 | GLN | 5.3 |
| 26 | D4 | 25 | VAL | 5.3 |
| 80 | p0 | 80 | VAL | 5.2 |
| 14 | C2 | 104 | GLY | 5.2 |
| 71 | O5 | 75 | TYR | 5.2 |
| 33 | E1 | 91 | ILE | 5.2 |
| 27 | d5 | 50 | ILE | 5.2 |
| 14 | c2 | 117 | GLY | 5.2 |
| 14 | c2 | 71 | ILE | 5.2 |
| 18 | c6 | 117 | LEU | 5.2 |
| 34 | SR | 235 | SER | 5.2 |
| 58 | N2 | 94 | ARG | 5.2 |
| 7 | s5 | 44 | ASN | 5.1 |
| 9 | s7 | 91 | ILE | 5.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 11 | S9 | 5 | PRO | 5.1 |
| 36 | 5 | 1815 | U | 5.1 |
| 22 | d0 | 66 | SER | 5.1 |
| 51 | M5 | 14 | LYS | 5.1 |
| 7 | s5 | 133 | VAL | 5.1 |
| 55 | M9 | 184 | LEU | 5.1 |
| 80 | p0 | 192 | ASP | 5.1 |
| 34 | SR | 213 | SER | 5.1 |
| 18 | c6 | 133 | GLY | 5.1 |
| 27 | D5 | 36 | ALA | 5.1 |
| 21 | c9 | 61 | VAL | 5.1 |
| 18 | c6 | 44 | LEU | 5.1 |
| 34 | SR | 252 | LEU | 5.1 |
| 12 | c0 | 28 | ASN | 5.0 |
| 14 | C2 | 36 | LEU | 5.0 |
| 14 | c2 | 100 | TRP | 5.0 |
| 63 | N7 | 14 | VAL | 5.0 |
| 7 | s5 | 130 | ILE | 5.0 |
| 66 | O0 | 59 | TYR | 5.0 |
| 22 | d0 | 65 | ILE | 5.0 |
| 18 | c6 | 90 | VAL | 5.0 |
| 5 | s3 | 134 | CYS | 5.0 |
| 62 | N6 | 127 | GLU | 5.0 |
| 80 | p0 | 50 | VAL | 5.0 |
| 80 | p0 | 194 | GLY | 5.0 |
| 11 | S9 | 139 | GLN | 5.0 |
| 18 | c6 | 68 | ARG | 4.9 |
| 80 | p0 | 16 | ARG | 4.9 |
| 14 | c2 | 28 | LEU | 4.9 |
| 2 | S0 | 44 | GLY | 4.9 |
| 57 | N1 | 95 | HIS | 4.9 |
| 33 | E1 | 94 | LYS | 4.9 |
| 8 | S6 | 146 | GLY | 4.9 |
| 80 | p0 | 89 | THR | 4.9 |
| 14 | c2 | 49 | THR | 4.9 |
| 21 | c9 | 18 | TYR | 4.9 |
| 10 | S8 | 200 | LYS | 4.9 |
| 14 | c2 | 120 | VAL | 4.9 |
| 22 | d0 | 86 | ILE | 4.9 |
| 12 | c0 | 22 | VAL | 4.9 |
| 11 | s9 | 6 | ARG | 4.9 |
| 18 | c6 | 48 | VAL | 4.9 |

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| Mol | Chain | Res | Type | RSRZ |
|-----|-------|------|------|------|
| 10 | S8 | 102 | VAL | 4.9 |
| 11 | s9 | 184 | SER | 4.9 |
| 12 | c0 | 40 | LEU | 4.8 |
| 23 | D1 | 39 | VAL | 4.8 |
| 12 | c0 | 29 | GLN | 4.8 |
| 80 | p0 | 86 | PHE | 4.8 |
| 11 | S9 | 93 | LEU | 4.8 |
| 11 | S9 | 118 | LEU | 4.8 |
| 45 | L8 | 177 | TYR | 4.8 |
| 3 | S1 | 26 | ARG | 4.8 |
| 23 | d1 | 87 | ARG | 4.8 |
| 6 | S4 | 175 | PHE | 4.8 |
| 9 | S7 | 175 | LYS | 4.8 |
| 18 | c6 | 92 | TYR | 4.8 |
| 11 | s9 | 136 | VAL | 4.8 |
| 58 | N2 | 70 | LYS | 4.8 |
| 18 | c6 | 9 | THR | 4.8 |
| 80 | p0 | 79 | PHE | 4.8 |
| 18 | c6 | 82 | ARG | 4.8 |
| 8 | S6 | 157 | VAL | 4.8 |
| 63 | N7 | 75 | VAL | 4.8 |
| 11 | s9 | 93 | LEU | 4.8 |
| 18 | c6 | 47 | LYS | 4.8 |
| 32 | e0 | 54 | ARG | 4.7 |
| 11 | s9 | 7 | THR | 4.7 |
| 12 | c0 | 25 | LYS | 4.7 |
| 74 | o8 | 6 | THR | 4.7 |
| 21 | c9 | 93 | HIS | 4.7 |
| 7 | s5 | 70 | VAL | 4.7 |
| 14 | c2 | 25 | GLU | 4.7 |
| 19 | C7 | 74 | GLN | 4.7 |
| 6 | S4 | 261 | LEU | 4.7 |
| 14 | C2 | 41 | LEU | 4.7 |
| 42 | L5 | 27 | LYS | 4.7 |
| 14 | c2 | 70 | ASN | 4.7 |
| 20 | c8 | 2 | SER | 4.7 |
| 22 | d0 | 88 | LYS | 4.7 |
| 48 | m1 | 49 | LYS | 4.7 |
| 9 | s7 | 92 | PHE | 4.7 |
| 80 | p0 | 28 | VAL | 4.7 |
| 63 | N7 | 11 | ALA | 4.7 |
| 1 | 2 | 1710 | U | 4.7 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 33 | E1 | 87 | THR | 4.7 |
| 14 | c2 | 61 | VAL | 4.7 |
| 18 | c6 | 17 | THR | 4.7 |
| 9 | S7 | 49 | ILE | 4.7 |
| 21 | c9 | 83 | ALA | 4.7 |
| 33 | E1 | 88 | PRO | 4.7 |
| 74 | O8 | 43 | PHE | 4.7 |
| 14 | c2 | 123 | VAL | 4.7 |
| 42 | L5 | 77 | ALA | 4.6 |
| 21 | c9 | 121 | GLY | 4.6 |
| 21 | c9 | 118 | PRO | 4.6 |
| 58 | N2 | 107 | PHE | 4.6 |
| 10 | s8 | 200 | LYS | 4.6 |
| 76 | Q0 | 128 | LYS | 4.6 |
| 14 | c2 | 102 | GLY | 4.6 |
| 63 | N7 | 77 | TYR | 4.6 |
| 12 | c0 | 32 | HIS | 4.6 |
| 14 | c2 | 32 | LEU | 4.6 |
| 34 | sR | 33 | LEU | 4.6 |
| 42 | L5 | 62 | CYS | 4.6 |
| 48 | m1 | 91 | LEU | 4.6 |
| 80 | p0 | 15 | LEU | 4.6 |
| 65 | N9 | 42 | ASN | 4.6 |
| 67 | O1 | 71 | LEU | 4.6 |
| 26 | D4 | 69 | SER | 4.5 |
| 7 | s5 | 41 | LYS | 4.5 |
| 21 | c9 | 27 | LYS | 4.5 |
| 1 | 6 | 1601 | G | 4.5 |
| 11 | S9 | 34 | PHE | 4.5 |
| 9 | s7 | 93 | LEU | 4.5 |
| 72 | O6 | 50 | LEU | 4.5 |
| 80 | p0 | 85 | GLY | 4.5 |
| 6 | S4 | 138 | TYR | 4.5 |
| 33 | e1 | 145 | HIS | 4.5 |
| 13 | C1 | 35 | TYR | 4.5 |
| 14 | c2 | 45 | LEU | 4.5 |
| 21 | c9 | 60 | SER | 4.5 |
| 65 | N9 | 41 | ARG | 4.5 |
| 14 | c2 | 122 | VAL | 4.5 |
| 11 | S9 | 6 | ARG | 4.5 |
| 3 | S1 | 138 | PHE | 4.5 |
| 4 | S2 | 90 | THR | 4.5 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 7 | s5 | 129 | PRO | 4.4 |
| 14 | c2 | 63 | VAL | 4.4 |
| 51 | M5 | 123 | GLN | 4.4 |
| 12 | c0 | 45 | ALA | 4.4 |
| 18 | c6 | 52 | LEU | 4.4 |
| 8 | S6 | 158 | ILE | 4.4 |
| 60 | N4 | 99 | GLU | 4.4 |
| 11 | S9 | 104 | PHE | 4.4 |
| 24 | D2 | 61 | ILE | 4.4 |
| 32 | E0 | 44 | PHE | 4.4 |
| 21 | c9 | 62 | ALA | 4.4 |
| 42 | l5 | 146 | LEU | 4.4 |
| 62 | N6 | 79 | ALA | 4.4 |
| 5 | s3 | 150 | MET | 4.4 |
| 3 | s1 | 156 | ALA | 4.4 |
| 39 | L2 | 250 | GLN | 4.4 |
| 22 | d0 | 64 | LYS | 4.4 |
| 11 | S9 | 147 | MET | 4.4 |
| 14 | c2 | 33 | ARG | 4.4 |
| 18 | c6 | 56 | GLY | 4.4 |
| 18 | c6 | 28 | LEU | 4.4 |
| 58 | N2 | 108 | TYR | 4.4 |
| 58 | N2 | 28 | PHE | 4.4 |
| 12 | C0 | 45 | ALA | 4.4 |
| 63 | n7 | 11 | ALA | 4.4 |
| 21 | c9 | 91 | TYR | 4.4 |
| 14 | c2 | 27 | ALA | 4.4 |
| 12 | c0 | 38 | LYS | 4.4 |
| 14 | c2 | 59 | LEU | 4.4 |
| 7 | s5 | 132 | VAL | 4.4 |
| 42 | L5 | 53 | VAL | 4.4 |
| 55 | M9 | 173 | ARG | 4.4 |
| 3 | S1 | 151 | LYS | 4.3 |
| 42 | l5 | 27 | LYS | 4.3 |
| 63 | N7 | 37 | PRO | 4.3 |
| 64 | N8 | 109 | TYR | 4.3 |
| 27 | D5 | 98 | GLN | 4.3 |
| 11 | S9 | 136 | VAL | 4.3 |
| 2 | S0 | 23 | HIS | 4.3 |
| 18 | c6 | 79 | TYR | 4.3 |
| 63 | N7 | 21 | LYS | 4.3 |
| 13 | C1 | 60 | PHE | 4.3 |

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| Mol | Chain | Res | Type | RSRZ |
|-----|-------|------|------|------|
| 19 | C7 | 71 | PHE | 4.3 |
| 27 | d5 | 51 | LEU | 4.3 |
| 21 | c9 | 64 | HIS | 4.3 |
| 33 | e1 | 88 | PRO | 4.3 |
| 17 | c5 | 85 | ILE | 4.3 |
| 39 | L2 | 247 | ARG | 4.3 |
| 10 | S8 | 97 | THR | 4.3 |
| 10 | S8 | 109 | PHE | 4.3 |
| 26 | d4 | 7 | ILE | 4.3 |
| 42 | l5 | 55 | PHE | 4.3 |
| 11 | S9 | 13 | SER | 4.3 |
| 80 | p0 | 61 | ARG | 4.2 |
| 11 | S9 | 148 | VAL | 4.2 |
| 71 | o5 | 120 | ALA | 4.2 |
| 12 | c0 | 27 | PHE | 4.2 |
| 18 | c6 | 12 | LYS | 4.2 |
| 33 | e1 | 84 | VAL | 4.2 |
| 21 | c9 | 90 | PRO | 4.2 |
| 71 | O5 | 2 | ALA | 4.2 |
| 10 | S8 | 67 | TRP | 4.2 |
| 18 | c6 | 64 | ASP | 4.2 |
| 27 | d5 | 39 | ALA | 4.2 |
| 36 | 1 | 2205 | U | 4.2 |
| 6 | S4 | 32 | SER | 4.2 |
| 42 | l5 | 127 | GLY | 4.2 |
| 14 | c2 | 26 | ASP | 4.2 |
| 70 | O4 | 79 | SER | 4.2 |
| 80 | p0 | 77 | LEU | 4.2 |
| 60 | n4 | 124 | LYS | 4.2 |
| 14 | C2 | 128 | ALA | 4.2 |
| 59 | N3 | 16 | GLY | 4.2 |
| 30 | D8 | 40 | ILE | 4.2 |
| 74 | o8 | 3 | ARG | 4.2 |
| 20 | C8 | 4 | VAL | 4.2 |
| 9 | S7 | 53 | GLY | 4.1 |
| 36 | 5 | 2539 | C | 4.1 |
| 12 | c0 | 75 | TYR | 4.1 |
| 3 | S1 | 25 | THR | 4.1 |
| 14 | C2 | 121 | VAL | 4.1 |
| 17 | c5 | 101 | ALA | 4.1 |
| 26 | d4 | 30 | PRO | 4.1 |
| 60 | N4 | 95 | SER | 4.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 12 | c0 | 26 | ASP | 4.1 |
| 35 | SM | 21 | PRO | 4.1 |
| 27 | D5 | 99 | ALA | 4.1 |
| 27 | D5 | 100 | ILE | 4.1 |
| 9 | S7 | 48 | GLU | 4.1 |
| 8 | S6 | 179 | VAL | 4.1 |
| 1 | 6 | 1059 | U | 4.1 |
| 70 | O4 | 78 | GLY | 4.1 |
| 6 | S4 | 137 | PRO | 4.1 |
| 14 | C2 | 123 | VAL | 4.1 |
| 10 | S8 | 61 | GLU | 4.1 |
| 11 | s9 | 180 | LYS | 4.1 |
| 11 | s9 | 156 | ILE | 4.1 |
| 33 | e1 | 129 | GLY | 4.1 |
| 80 | p0 | 53 | MET | 4.1 |
| 55 | M9 | 183 | ALA | 4.1 |
| 55 | m9 | 181 | ARG | 4.1 |
| 11 | s9 | 186 | GLU | 4.1 |
| 58 | N2 | 69 | ALA | 4.1 |
| 58 | N2 | 106 | ALA | 4.1 |
| 14 | c2 | 103 | LEU | 4.1 |
| 21 | c9 | 104 | VAL | 4.1 |
| 26 | D4 | 27 | VAL | 4.1 |
| 62 | n6 | 109 | LEU | 4.1 |
| 21 | c9 | 117 | SER | 4.1 |
| 6 | S4 | 44 | LEU | 4.1 |
| 1 | 6 | 1052 | U | 4.1 |
| 7 | s5 | 69 | PHE | 4.1 |
| 1 | 6 | 506 | A | 4.1 |
| 17 | c5 | 82 | ASN | 4.1 |
| 45 | l8 | 132 | VAL | 4.0 |
| 80 | p0 | 25 | LEU | 4.0 |
| 39 | L2 | 253 | GLN | 4.0 |
| 42 | l5 | 180 | PHE | 4.0 |
| 6 | S4 | 154 | ILE | 4.0 |
| 11 | s9 | 148 | VAL | 4.0 |
| 20 | c8 | 3 | LEU | 4.0 |
| 64 | N8 | 110 | GLY | 4.0 |
| 11 | s9 | 109 | LEU | 4.0 |
| 22 | d0 | 63 | LEU | 4.0 |
| 11 | s9 | 139 | GLN | 4.0 |
| 46 | L9 | 191 | LEU | 4.0 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 72 | O6 | 100 | HIS | 4.0 |
| 66 | O0 | 35 | ARG | 4.0 |
| 6 | S4 | 35 | PRO | 4.0 |
| 14 | c2 | 42 | ALA | 4.0 |
| 34 | SR | 7 | LEU | 4.0 |
| 26 | D4 | 67 | GLY | 4.0 |
| 34 | SR | 314 | GLN | 4.0 |
| 11 | s9 | 36 | LEU | 4.0 |
| 11 | s9 | 132 | ARG | 4.0 |
| 48 | m1 | 51 | ARG | 4.0 |
| 80 | p0 | 213 | PHE | 4.0 |
| 11 | s9 | 118 | LEU | 4.0 |
| 34 | SR | 192 | PHE | 4.0 |
| 11 | S9 | 3 | ARG | 4.0 |
| 14 | C2 | 119 | SER | 4.0 |
| 57 | N1 | 72 | VAL | 4.0 |
| 64 | N8 | 60 | TYR | 4.0 |
| 27 | D5 | 71 | ILE | 4.0 |
| 34 | SR | 234 | LEU | 4.0 |
| 80 | p0 | 59 | VAL | 4.0 |
| 80 | p0 | 214 | VAL | 4.0 |
| 3 | s1 | 140 | ILE | 4.0 |
| 72 | O6 | 26 | ILE | 4.0 |
| 21 | c9 | 66 | TYR | 4.0 |
| 80 | p0 | 66 | PHE | 4.0 |
| 45 | L8 | 202 | GLU | 3.9 |
| 10 | S8 | 183 | ILE | 3.9 |
| 34 | SR | 169 | ILE | 3.9 |
| 66 | O0 | 90 | VAL | 3.9 |
| 80 | p0 | 29 | GLY | 3.9 |
| 14 | c2 | 101 | ALA | 3.9 |
| 80 | p0 | 20 | GLU | 3.9 |
| 10 | s8 | 54 | LYS | 3.9 |
| 7 | s5 | 94 | THR | 3.9 |
| 21 | c9 | 57 | ARG | 3.9 |
| 12 | C0 | 12 | HIS | 3.9 |
| 42 | l5 | 170 | GLY | 3.9 |
| 33 | E1 | 111 | GLU | 3.9 |
| 34 | SR | 236 | ALA | 3.9 |
| 63 | N7 | 74 | VAL | 3.9 |
| 42 | L5 | 39 | GLN | 3.9 |
| 63 | N7 | 22 | LYS | 3.9 |

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| Mol | Chain | Res | Type | RSRZ |
|-----|-------|------|------|------|
| 6 | S4 | 33 | ALA | 3.9 |
| 63 | N7 | 31 | GLU | 3.9 |
| 70 | O4 | 39 | ALA | 3.9 |
| 6 | S4 | 148 | ARG | 3.9 |
| 21 | c9 | 22 | LEU | 3.9 |
| 69 | o3 | 2 | ALA | 3.9 |
| 27 | d5 | 101 | TYR | 3.9 |
| 15 | C3 | 42 | ARG | 3.9 |
| 45 | L8 | 162 | LEU | 3.9 |
| 3 | S1 | 218 | LEU | 3.9 |
| 8 | s6 | 162 | VAL | 3.9 |
| 63 | n7 | 126 | LYS | 3.9 |
| 13 | C1 | 33 | ARG | 3.9 |
| 33 | E1 | 82 | LYS | 3.9 |
| 1 | 2 | 225 | A | 3.9 |
| 3 | S1 | 53 | GLY | 3.9 |
| 3 | S1 | 156 | ALA | 3.9 |
| 34 | SR | 178 | VAL | 3.9 |
| 72 | o6 | 9 | ILE | 3.9 |
| 78 | Q2 | 27 | GLN | 3.9 |
| 21 | c9 | 112 | GLY | 3.9 |
| 45 | L8 | 132 | VAL | 3.9 |
| 14 | c2 | 68 | GLU | 3.9 |
| 35 | sM | 51 | ARG | 3.9 |
| 74 | o8 | 43 | PHE | 3.9 |
| 42 | L5 | 31 | TYR | 3.8 |
| 22 | d0 | 113 | ASP | 3.8 |
| 11 | s9 | 158 | PHE | 3.8 |
| 33 | E1 | 96 | LYS | 3.8 |
| 80 | p0 | 76 | LEU | 3.8 |
| 12 | c0 | 24 | LYS | 3.8 |
| 62 | N6 | 33 | ALA | 3.8 |
| 5 | s3 | 50 | ILE | 3.8 |
| 48 | m1 | 59 | ILE | 3.8 |
| 11 | s9 | 185 | GLY | 3.8 |
| 12 | c0 | 66 | TYR | 3.8 |
| 18 | c6 | 10 | PHE | 3.8 |
| 18 | c6 | 135 | ARG | 3.8 |
| 55 | m9 | 184 | LEU | 3.8 |
| 62 | N6 | 73 | VAL | 3.8 |
| 1 | 2 | 1711 | C | 3.8 |
| 57 | N1 | 34 | TYR | 3.8 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 19 | C7 | 62 | GLN | 3.8 |
| 51 | M5 | 3 | ALA | 3.8 |
| 57 | N1 | 24 | ALA | 3.8 |
| 3 | S1 | 20 | VAL | 3.8 |
| 9 | S7 | 176 | LEU | 3.8 |
| 80 | p0 | 87 | VAL | 3.8 |
| 2 | S0 | 36 | TYR | 3.8 |
| 34 | SR | 241 | PHE | 3.8 |
| 80 | p0 | 18 | TYR | 3.8 |
| 36 | 5 | 1814 | A | 3.8 |
| 8 | S6 | 145 | PHE | 3.8 |
| 22 | d0 | 67 | THR | 3.8 |
| 21 | c9 | 70 | GLN | 3.8 |
| 22 | D0 | 18 | GLN | 3.8 |
| 36 | 1 | 1028 | U | 3.8 |
| 7 | s5 | 76 | ARG | 3.8 |
| 31 | d9 | 13 | ARG | 3.8 |
| 7 | s5 | 79 | ASN | 3.8 |
| 14 | c2 | 88 | LEU | 3.8 |
| 60 | N4 | 64 | THR | 3.8 |
| 60 | N4 | 77 | LYS | 3.8 |
| 8 | S6 | 96 | SER | 3.8 |
| 74 | O8 | 57 | ASN | 3.8 |
| 45 | L8 | 150 | LEU | 3.8 |
| 45 | L8 | 161 | GLU | 3.8 |
| 7 | s5 | 53 | VAL | 3.8 |
| 11 | S9 | 146 | PHE | 3.8 |
| 12 | c0 | 19 | GLY | 3.7 |
| 14 | C2 | 62 | LEU | 3.7 |
| 7 | s5 | 74 | ALA | 3.7 |
| 42 | L5 | 61 | ILE | 3.7 |
| 60 | n4 | 130 | SER | 3.7 |
| 33 | E1 | 86 | THR | 3.7 |
| 78 | Q2 | 13 | LYS | 3.7 |
| 33 | e1 | 80 | ARG | 3.7 |
| 39 | L2 | 242 | ARG | 3.7 |
| 58 | N2 | 76 | LEU | 3.7 |
| 14 | c2 | 60 | VAL | 3.7 |
| 21 | C9 | 80 | TYR | 3.7 |
| 8 | s6 | 135 | PRO | 3.7 |
| 42 | L5 | 162 | ALA | 3.7 |
| 11 | S9 | 145 | SER | 3.7 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 34 | SR | 33 | LEU | 3.7 |
| 9 | S7 | 126 | LEU | 3.7 |
| 26 | D4 | 28 | LEU | 3.7 |
| 34 | SR | 156 | VAL | 3.7 |
| 41 | l4 | 187 | LEU | 3.7 |
| 27 | d5 | 42 | LEU | 3.7 |
| 60 | n4 | 81 | PRO | 3.7 |
| 8 | s6 | 199 | GLN | 3.7 |
| 1 | 2 | 1693 | A | 3.7 |
| 12 | c0 | 42 | VAL | 3.7 |
| 14 | C2 | 28 | LEU | 3.7 |
| 7 | s5 | 90 | ILE | 3.7 |
| 11 | s9 | 140 | ILE | 3.7 |
| 3 | S1 | 92 | GLN | 3.7 |
| 60 | N4 | 86 | SER | 3.7 |
| 14 | c2 | 116 | VAL | 3.7 |
| 63 | N7 | 13 | VAL | 3.7 |
| 18 | c6 | 91 | ALA | 3.7 |
| 45 | L8 | 249 | ARG | 3.7 |
| 1 | 2 | 136 | C | 3.7 |
| 1 | 6 | 1227 | A | 3.7 |
| 26 | D4 | 65 | GLY | 3.7 |
| 10 | S8 | 165 | LEU | 3.7 |
| 14 | c2 | 97 | LEU | 3.6 |
| 34 | sR | 7 | LEU | 3.6 |
| 63 | n7 | 92 | PHE | 3.6 |
| 67 | O1 | 14 | ILE | 3.6 |
| 42 | L5 | 146 | LEU | 3.6 |
| 55 | m9 | 177 | VAL | 3.6 |
| 4 | s2 | 92 | ALA | 3.6 |
| 11 | S9 | 132 | ARG | 3.6 |
| 3 | s1 | 135 | LEU | 3.6 |
| 26 | D4 | 17 | LEU | 3.6 |
| 26 | D4 | 26 | ASP | 3.6 |
| 10 | s8 | 72 | ILE | 3.6 |
| 18 | c6 | 138 | PHE | 3.6 |
| 42 | L5 | 67 | SER | 3.6 |
| 3 | s1 | 121 | ILE | 3.6 |
| 57 | N1 | 33 | VAL | 3.6 |
| 2 | s0 | 75 | ALA | 3.6 |
| 18 | c6 | 119 | ALA | 3.6 |
| 21 | c9 | 23 | GLN | 3.6 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 7 | S5 | 94 | THR | 3.6 |
| 10 | S8 | 70 | GLU | 3.6 |
| 18 | C6 | 41 | PRO | 3.6 |
| 20 | c8 | 132 | ARG | 3.6 |
| 35 | sM | 29 | ASN | 3.6 |
| 9 | s7 | 77 | LEU | 3.6 |
| 14 | c2 | 78 | LEU | 3.6 |
| 34 | SR | 32 | LEU | 3.6 |
| 62 | n6 | 79 | ALA | 3.6 |
| 26 | d4 | 26 | ASP | 3.6 |
| 51 | M5 | 135 | VAL | 3.6 |
| 62 | N6 | 103 | LYS | 3.6 |
| 78 | Q2 | 32 | LYS | 3.6 |
| 11 | s9 | 110 | GLN | 3.6 |
| 42 | l5 | 216 | GLU | 3.6 |
| 36 | 1 | 1025 | A | 3.6 |
| 34 | sR | 79 | TYR | 3.6 |
| 42 | L5 | 159 | VAL | 3.6 |
| 12 | C0 | 3 | MET | 3.6 |
| 48 | m1 | 47 | GLN | 3.6 |
| 62 | N6 | 74 | TYR | 3.6 |
| 6 | S4 | 31 | PRO | 3.6 |
| 1 | 2 | 192 | U | 3.6 |
| 42 | L5 | 144 | VAL | 3.6 |
| 51 | m5 | 6 | TYR | 3.6 |
| 66 | O0 | 89 | VAL | 3.6 |
| 34 | sR | 145 | LEU | 3.6 |
| 8 | S6 | 136 | LYS | 3.6 |
| 80 | p0 | 188 | VAL | 3.6 |
| 12 | C0 | 64 | TYR | 3.6 |
| 12 | c0 | 39 | ASN | 3.6 |
| 51 | m5 | 58 | GLY | 3.6 |
| 21 | c9 | 65 | ILE | 3.5 |
| 33 | e1 | 122 | SER | 3.5 |
| 42 | L5 | 64 | ILE | 3.5 |
| 2 | s0 | 107 | PHE | 3.5 |
| 45 | L8 | 197 | VAL | 3.5 |
| 42 | l5 | 92 | LEU | 3.5 |
| 48 | m1 | 147 | THR | 3.5 |
| 11 | s9 | 38 | ASN | 3.5 |
| 7 | s5 | 43 | PHE | 3.5 |
| 11 | S9 | 96 | VAL | 3.5 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 14 | c2 | 79 | ALA | 3.5 |
| 14 | c2 | 128 | ALA | 3.5 |
| 18 | c6 | 65 | ILE | 3.5 |
| 21 | C9 | 12 | GLN | 3.5 |
| 26 | D4 | 6 | THR | 3.5 |
| 33 | E1 | 85 | TYR | 3.5 |
| 14 | c2 | 105 | LYS | 3.5 |
| 18 | c6 | 66 | ARG | 3.5 |
| 45 | L8 | 163 | VAL | 3.5 |
| 45 | l8 | 197 | VAL | 3.5 |
| 18 | c6 | 57 | LEU | 3.5 |
| 62 | n6 | 104 | LEU | 3.5 |
| 63 | N7 | 81 | LEU | 3.5 |
| 11 | S9 | 36 | LEU | 3.5 |
| 42 | l5 | 171 | LEU | 3.5 |
| 54 | M8 | 96 | PHE | 3.5 |
| 58 | N2 | 15 | PHE | 3.5 |
| 78 | Q2 | 36 | PHE | 3.5 |
| 78 | Q2 | 106 | PHE | 3.5 |
| 42 | L5 | 143 | LYS | 3.5 |
| 71 | O5 | 74 | LYS | 3.5 |
| 42 | l5 | 63 | GLN | 3.5 |
| 34 | SR | 25 | THR | 3.5 |
| 66 | O0 | 62 | LEU | 3.5 |
| 3 | s1 | 165 | ARG | 3.5 |
| 42 | L5 | 177 | GLU | 3.5 |
| 13 | C1 | 30 | ARG | 3.5 |
| 32 | E0 | 32 | GLY | 3.5 |
| 14 | c2 | 115 | VAL | 3.5 |
| 17 | c5 | 56 | PHE | 3.5 |
| 33 | E1 | 95 | HIS | 3.5 |
| 18 | c6 | 131 | GLY | 3.5 |
| 48 | m1 | 134 | PRO | 3.5 |
| 31 | D9 | 5 | ASN | 3.5 |
| 12 | c0 | 44 | LYS | 3.5 |
| 63 | N7 | 134 | LEU | 3.5 |
| 80 | p0 | 19 | LEU | 3.5 |
| 60 | n4 | 85 | ALA | 3.5 |
| 3 | s1 | 119 | THR | 3.5 |
| 13 | C1 | 61 | THR | 3.5 |
| 18 | C6 | 11 | GLY | 3.5 |
| 6 | S4 | 128 | LYS | 3.5 |

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| Mol | Chain | Res | Type | RSRZ |
|-----|-------|------|------|------|
| 11 | S9 | 140 | ILE | 3.5 |
| 12 | C0 | 2 | LEU | 3.5 |
| 14 | C2 | 59 | LEU | 3.5 |
| 45 | L8 | 152 | LEU | 3.5 |
| 63 | N7 | 131 | PHE | 3.5 |
| 13 | c1 | 2 | SER | 3.5 |
| 67 | O1 | 12 | TYR | 3.5 |
| 7 | s5 | 92 | ARG | 3.5 |
| 14 | c2 | 136 | ILE | 3.5 |
| 21 | c9 | 124 | ILE | 3.5 |
| 34 | SR | 301 | LEU | 3.5 |
| 1 | 2 | 194 | U | 3.5 |
| 10 | S8 | 83 | TYR | 3.5 |
| 14 | c2 | 40 | GLY | 3.5 |
| 51 | M5 | 148 | TYR | 3.5 |
| 34 | sR | 157 | VAL | 3.5 |
| 80 | p0 | 187 | VAL | 3.5 |
| 5 | s3 | 188 | ILE | 3.5 |
| 36 | 5 | 1816 | A | 3.5 |
| 9 | s7 | 61 | PHE | 3.5 |
| 27 | d5 | 38 | HIS | 3.5 |
| 10 | S8 | 96 | LEU | 3.5 |
| 18 | c6 | 85 | ILE | 3.5 |
| 18 | c6 | 116 | LEU | 3.5 |
| 42 | L5 | 60 | ILE | 3.5 |
| 2 | s0 | 147 | THR | 3.5 |
| 6 | s4 | 26 | CYS | 3.5 |
| 42 | L5 | 48 | LYS | 3.5 |
| 2 | s0 | 144 | ILE | 3.4 |
| 5 | s3 | 186 | VAL | 3.4 |
| 2 | s0 | 146 | LEU | 3.4 |
| 78 | Q2 | 72 | LEU | 3.4 |
| 11 | S9 | 144 | PRO | 3.4 |
| 24 | D2 | 46 | TYR | 3.4 |
| 28 | D6 | 73 | TYR | 3.4 |
| 42 | l5 | 154 | THR | 3.4 |
| 60 | N4 | 97 | LYS | 3.4 |
| 61 | N5 | 124 | VAL | 3.4 |
| 27 | d5 | 75 | LEU | 3.4 |
| 80 | p0 | 63 | ILE | 3.4 |
| 10 | s8 | 67 | TRP | 3.4 |
| 39 | L2 | 248 | GLY | 3.4 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 57 | N1 | 94 | GLU | 3.4 |
| 27 | d5 | 100 | ILE | 3.4 |
| 8 | s6 | 217 | SER | 3.4 |
| 36 | 5 | 1271 | A | 3.4 |
| 10 | S8 | 8 | ARG | 3.4 |
| 20 | c8 | 85 | PHE | 3.4 |
| 80 | p0 | 38 | MET | 3.4 |
| 23 | d1 | 33 | GLN | 3.4 |
| 42 | l5 | 182 | GLY | 3.4 |
| 6 | S4 | 139 | VAL | 3.4 |
| 11 | s9 | 133 | HIS | 3.4 |
| 45 | L8 | 165 | PHE | 3.4 |
| 26 | D4 | 40 | LEU | 3.4 |
| 42 | L5 | 47 | PRO | 3.4 |
| 42 | L5 | 190 | ILE | 3.4 |
| 43 | L6 | 109 | GLU | 3.4 |
| 9 | s7 | 96 | ARG | 3.4 |
| 24 | D2 | 122 | SER | 3.4 |
| 6 | S4 | 13 | ALA | 3.4 |
| 34 | sR | 121 | MET | 3.4 |
| 6 | S4 | 12 | LEU | 3.4 |
| 64 | N8 | 79 | TRP | 3.4 |
| 8 | s6 | 149 | LYS | 3.4 |
| 21 | C9 | 71 | VAL | 3.4 |
| 1 | 2 | 820 | U | 3.4 |
| 57 | N1 | 90 | ASN | 3.4 |
| 78 | Q2 | 15 | LYS | 3.4 |
| 11 | s9 | 17 | ARG | 3.4 |
| 57 | N1 | 67 | VAL | 3.4 |
| 12 | c0 | 15 | LEU | 3.4 |
| 11 | S9 | 158 | PHE | 3.4 |
| 80 | p0 | 199 | SER | 3.4 |
| 42 | L5 | 59 | ASP | 3.4 |
| 36 | 5 | 1028 | U | 3.4 |
| 41 | l4 | 185 | LYS | 3.4 |
| 60 | n4 | 128 | ALA | 3.4 |
| 63 | n7 | 41 | ALA | 3.4 |
| 11 | s9 | 153 | GLU | 3.4 |
| 20 | c8 | 42 | TYR | 3.4 |
| 18 | c6 | 124 | PRO | 3.4 |
| 31 | d9 | 11 | PRO | 3.4 |
| 13 | C1 | 34 | TRP | 3.4 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 34 | sR | 163 | ASP | 3.4 |
| 39 | L2 | 252 | THR | 3.3 |
| 14 | c2 | 64 | SER | 3.3 |
| 1 | 6 | 1 | U | 3.3 |
| 12 | C0 | 20 | VAL | 3.3 |
| 31 | D9 | 52 | PHE | 3.3 |
| 45 | l8 | 34 | PHE | 3.3 |
| 36 | 5 | 1352 | A | 3.3 |
| 42 | L5 | 163 | LEU | 3.3 |
| 22 | d0 | 107 | THR | 3.3 |
| 79 | Q3 | 92 | ALA | 3.3 |
| 3 | s1 | 136 | ARG | 3.3 |
| 12 | c0 | 1 | MET | 3.3 |
| 9 | s7 | 70 | PHE | 3.3 |
| 10 | s8 | 146 | ARG | 3.3 |
| 39 | l2 | 253 | GLN | 3.3 |
| 48 | m1 | 60 | ARG | 3.3 |
| 64 | N8 | 59 | ARG | 3.3 |
| 64 | n8 | 64 | GLN | 3.3 |
| 11 | S9 | 97 | LEU | 3.3 |
| 78 | Q2 | 24 | LYS | 3.3 |
| 6 | s4 | 188 | ASN | 3.3 |
| 8 | S6 | 78 | THR | 3.3 |
| 8 | s6 | 134 | GLY | 3.3 |
| 10 | S8 | 192 | TYR | 3.3 |
| 8 | s6 | 218 | GLU | 3.3 |
| 42 | L5 | 37 | VAL | 3.3 |
| 42 | l5 | 203 | HIS | 3.3 |
| 3 | S1 | 137 | ILE | 3.3 |
| 51 | M5 | 119 | TYR | 3.3 |
| 48 | m1 | 132 | ASN | 3.3 |
| 34 | SR | 115 | ILE | 3.3 |
| 55 | m9 | 174 | ALA | 3.3 |
| 10 | S8 | 63 | GLY | 3.3 |
| 33 | E1 | 99 | LYS | 3.3 |
| 80 | p0 | 27 | VAL | 3.3 |
| 6 | S4 | 246 | LEU | 3.3 |
| 13 | c1 | 3 | THR | 3.3 |
| 14 | C2 | 142 | GLN | 3.3 |
| 17 | C5 | 125 | PRO | 3.3 |
| 17 | c5 | 103 | ASN | 3.3 |
| 17 | c5 | 116 | LEU | 3.3 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 5 | s3 | 25 | PHE | 3.3 |
| 6 | s4 | 149 | TYR | 3.3 |
| 63 | n7 | 74 | VAL | 3.3 |
| 11 | s9 | 2 | PRO | 3.3 |
| 36 | 5 | 360 | G | 3.3 |
| 34 | sR | 36 | ALA | 3.3 |
| 3 | s1 | 143 | THR | 3.3 |
| 28 | d6 | 17 | HIS | 3.3 |
| 42 | L5 | 41 | LYS | 3.3 |
| 57 | N1 | 91 | LEU | 3.3 |
| 51 | M5 | 15 | GLN | 3.3 |
| 6 | S4 | 225 | VAL | 3.3 |
| 11 | S9 | 99 | LEU | 3.3 |
| 53 | M7 | 162 | GLU | 3.3 |
| 22 | d0 | 27 | THR | 3.3 |
| 70 | O4 | 73 | SER | 3.3 |
| 11 | s9 | 20 | GLU | 3.3 |
| 14 | c2 | 104 | GLY | 3.3 |
| 27 | d5 | 65 | LEU | 3.3 |
| 20 | c8 | 24 | GLY | 3.3 |
| 35 | sM | 34 | LYS | 3.3 |
| 74 | o8 | 5 | ILE | 3.3 |
| 36 | 1 | 252 | U | 3.3 |
| 10 | S8 | 177 | GLY | 3.3 |
| 45 | L8 | 119 | GLY | 3.3 |
| 45 | L8 | 134 | TYR | 3.3 |
| 21 | c9 | 53 | TRP | 3.3 |
| 65 | n9 | 39 | PHE | 3.3 |
| 21 | c9 | 86 | ARG | 3.3 |
| 48 | M1 | 141 | ARG | 3.3 |
| 11 | s9 | 143 | ILE | 3.3 |
| 8 | S6 | 208 | TYR | 3.3 |
| 12 | C0 | 41 | TYR | 3.3 |
| 11 | s9 | 3 | ARG | 3.3 |
| 18 | C6 | 132 | LYS | 3.3 |
| 19 | c7 | 2 | GLY | 3.3 |
| 9 | S7 | 46 | ILE | 3.3 |
| 10 | S8 | 62 | THR | 3.3 |
| 14 | c2 | 75 | VAL | 3.3 |
| 33 | E1 | 130 | VAL | 3.3 |
| 48 | M1 | 147 | THR | 3.3 |
| 11 | s9 | 97 | LEU | 3.2 |

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| Mol | Chain | Res | Type | RSRZ |
|-----|-------|-----|------|------|
| 80 | p0 | 212 | HIS | 3.2 |
| 78 | Q2 | 81 | ALA | 3.2 |
| 14 | C2 | 60 | VAL | 3.2 |
| 11 | S9 | 14 | THR | 3.2 |
| 14 | C2 | 95 | LYS | 3.2 |
| 35 | sM | 66 | ALA | 3.2 |
| 33 | e1 | 131 | PHE | 3.2 |
| 45 | L8 | 254 | ASP | 3.2 |
| 63 | N7 | 20 | GLY | 3.2 |
| 34 | SR | 170 | ILE | 3.2 |
| 38 | 4 | 158 | U | 3.2 |
| 7 | s5 | 77 | TYR | 3.2 |
| 35 | sM | 35 | ALA | 3.2 |
| 35 | sM | 53 | ARG | 3.2 |
| 17 | c5 | 119 | PHE | 3.2 |
| 19 | C7 | 28 | PHE | 3.2 |
| 21 | c9 | 45 | MET | 3.2 |
| 63 | N7 | 47 | GLU | 3.2 |
| 1 | 6 | 136 | C | 3.2 |
| 10 | S8 | 148 | ALA | 3.2 |
| 18 | c6 | 3 | ALA | 3.2 |
| 68 | O2 | 2 | ALA | 3.2 |
| 80 | p0 | 49 | ALA | 3.2 |
| 6 | S4 | 260 | GLY | 3.2 |
| 11 | S9 | 94 | ASP | 3.2 |
| 14 | C2 | 32 | LEU | 3.2 |
| 26 | D4 | 61 | ARG | 3.2 |
| 57 | N1 | 69 | LYS | 3.2 |
| 13 | C1 | 27 | THR | 3.2 |
| 11 | S9 | 15 | PRO | 3.2 |
| 2 | s0 | 174 | TRP | 3.2 |
| 36 | 5 | 358 | G | 3.2 |
| 59 | N3 | 4 | ASN | 3.2 |
| 63 | N7 | 30 | ASP | 3.2 |
| 20 | C8 | 6 | GLN | 3.2 |
| 27 | d5 | 60 | VAL | 3.2 |
| 34 | SR | 203 | THR | 3.2 |
| 8 | S6 | 177 | ARG | 3.2 |
| 21 | c9 | 132 | LEU | 3.2 |
| 14 | c2 | 121 | VAL | 3.2 |
| 18 | C6 | 133 | GLY | 3.2 |
| 26 | D4 | 14 | SER | 3.2 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 2 | s0 | 122 | ILE | 3.2 |
| 27 | d5 | 41 | ILE | 3.2 |
| 31 | d9 | 16 | LYS | 3.2 |
| 32 | e0 | 43 | ARG | 3.2 |
| 74 | O8 | 73 | LEU | 3.2 |
| 78 | Q2 | 18 | ARG | 3.2 |
| 22 | d0 | 82 | TYR | 3.2 |
| 11 | s9 | 128 | LEU | 3.2 |
| 12 | c0 | 37 | THR | 3.2 |
| 3 | S1 | 49 | ASN | 3.2 |
| 11 | S9 | 138 | LYS | 3.2 |
| 14 | C2 | 111 | ASN | 3.2 |
| 20 | C8 | 25 | ASN | 3.2 |
| 32 | E0 | 3 | LYS | 3.2 |
| 20 | c8 | 131 | LEU | 3.2 |
| 78 | q2 | 101 | GLY | 3.2 |
| 33 | e1 | 132 | LEU | 3.2 |
| 80 | p0 | 52 | LEU | 3.2 |
| 42 | l5 | 62 | CYS | 3.2 |
| 45 | L8 | 99 | PRO | 3.2 |
| 14 | C2 | 27 | ALA | 3.2 |
| 33 | E1 | 84 | VAL | 3.2 |
| 61 | N5 | 41 | ALA | 3.2 |
| 2 | S0 | 43 | ASP | 3.2 |
| 2 | S0 | 30 | GLN | 3.2 |
| 2 | s0 | 97 | PRO | 3.2 |
| 9 | S7 | 52 | ALA | 3.2 |
| 14 | C2 | 31 | VAL | 3.2 |
| 11 | S9 | 143 | ILE | 3.2 |
| 42 | l5 | 150 | LEU | 3.2 |
| 11 | s9 | 145 | SER | 3.2 |
| 40 | L3 | 386 | ASP | 3.2 |
| 11 | S9 | 2 | PRO | 3.2 |
| 30 | D8 | 45 | LYS | 3.2 |
| 34 | SR | 261 | LYS | 3.2 |
| 3 | S1 | 51 | SER | 3.2 |
| 80 | p0 | 11 | TYR | 3.2 |
| 9 | s7 | 43 | PHE | 3.2 |
| 20 | c8 | 5 | VAL | 3.2 |
| 1 | 6 | 1337 | A | 3.1 |
| 10 | S8 | 184 | LEU | 3.1 |
| 11 | S9 | 169 | PRO | 3.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 22 | D0 | 63 | LEU | 3.1 |
| 45 | l8 | 99 | PRO | 3.1 |
| 59 | N3 | 77 | ILE | 3.1 |
| 6 | S4 | 14 | ALA | 3.1 |
| 7 | s5 | 97 | LEU | 3.1 |
| 18 | c6 | 36 | ILE | 3.1 |
| 21 | c9 | 113 | ILE | 3.1 |
| 22 | d0 | 58 | LEU | 3.1 |
| 26 | d4 | 69 | SER | 3.1 |
| 31 | d9 | 31 | ILE | 3.1 |
| 59 | N3 | 100 | GLY | 3.1 |
| 47 | m0 | 56 | GLU | 3.1 |
| 72 | o6 | 66 | GLU | 3.1 |
| 36 | 5 | 1820 | U | 3.1 |
| 80 | p0 | 14 | LYS | 3.1 |
| 16 | c4 | 126 | THR | 3.1 |
| 63 | N7 | 23 | VAL | 3.1 |
| 4 | S2 | 92 | ALA | 3.1 |
| 10 | S8 | 30 | GLY | 3.1 |
| 26 | D4 | 66 | GLY | 3.1 |
| 12 | C0 | 21 | VAL | 3.1 |
| 8 | s6 | 88 | ARG | 3.1 |
| 11 | s9 | 129 | ILE | 3.1 |
| 66 | O0 | 56 | LEU | 3.1 |
| 80 | p0 | 65 | GLY | 3.1 |
| 5 | s3 | 17 | PHE | 3.1 |
| 6 | S4 | 15 | PRO | 3.1 |
| 18 | c6 | 50 | GLU | 3.1 |
| 10 | S8 | 179 | CYS | 3.1 |
| 17 | c5 | 112 | LEU | 3.1 |
| 14 | C2 | 102 | GLY | 3.1 |
| 22 | d0 | 24 | ILE | 3.1 |
| 42 | L5 | 28 | THR | 3.1 |
| 72 | O6 | 2 | THR | 3.1 |
| 3 | s1 | 100 | PHE | 3.1 |
| 7 | s5 | 184 | PHE | 3.1 |
| 8 | S6 | 190 | GLN | 3.1 |
| 27 | d5 | 67 | ASP | 3.1 |
| 45 | l8 | 131 | ALA | 3.1 |
| 31 | d9 | 29 | GLY | 3.1 |
| 63 | N7 | 3 | LYS | 3.1 |
| 8 | S6 | 178 | LEU | 3.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 55 | m9 | 182 | ASP | 3.1 |
| 51 | M5 | 122 | ASN | 3.1 |
| 9 | S7 | 58 | LEU | 3.1 |
| 10 | S8 | 182 | TYR | 3.1 |
| 20 | c8 | 48 | LYS | 3.1 |
| 30 | D8 | 66 | LEU | 3.1 |
| 42 | L5 | 171 | LEU | 3.1 |
| 8 | S6 | 50 | PHE | 3.1 |
| 26 | D4 | 35 | VAL | 3.1 |
| 21 | c9 | 108 | LEU | 3.1 |
| 21 | c9 | 85 | SER | 3.1 |
| 21 | c9 | 116 | ILE | 3.1 |
| 48 | m1 | 64 | LYS | 3.1 |
| 74 | o8 | 29 | LYS | 3.1 |
| 51 | m5 | 131 | GLU | 3.1 |
| 20 | c8 | 44 | ASN | 3.1 |
| 55 | M9 | 21 | LYS | 3.1 |
| 5 | s3 | 152 | PHE | 3.1 |
| 55 | m9 | 183 | ALA | 3.1 |
| 63 | N7 | 4 | PHE | 3.1 |
| 36 | 1 | 2507 | C | 3.1 |
| 21 | c9 | 123 | ARG | 3.1 |
| 78 | q2 | 25 | VAL | 3.1 |
| 3 | S1 | 205 | PHE | 3.1 |
| 10 | S8 | 117 | TYR | 3.1 |
| 13 | C1 | 137 | PHE | 3.1 |
| 42 | l5 | 185 | PHE | 3.1 |
| 7 | s5 | 75 | GLY | 3.1 |
| 11 | s9 | 96 | VAL | 3.1 |
| 6 | S4 | 131 | LEU | 3.1 |
| 35 | SM | 88 | ARG | 3.1 |
| 42 | l5 | 175 | HIS | 3.1 |
| 45 | l8 | 94 | PHE | 3.1 |
| 59 | n3 | 81 | GLN | 3.1 |
| 18 | c6 | 112 | TYR | 3.1 |
| 42 | l5 | 144 | VAL | 3.1 |
| 35 | sM | 55 | SER | 3.1 |
| 42 | l5 | 8 | LYS | 3.1 |
| 64 | N8 | 78 | LEU | 3.1 |
| 72 | o6 | 80 | PHE | 3.1 |
| 6 | S4 | 157 | ASN | 3.1 |
| 11 | S9 | 120 | LYS | 3.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 35 | sM | 38 | PRO | 3.1 |
| 15 | C3 | 45 | LEU | 3.1 |
| 21 | c9 | 44 | GLU | 3.1 |
| 36 | 1 | 358 | G | 3.1 |
| 60 | n4 | 86 | SER | 3.1 |
| 18 | C6 | 143 | ARG | 3.0 |
| 33 | E1 | 131 | PHE | 3.1 |
| 51 | M5 | 139 | HIS | 3.0 |
| 33 | e1 | 83 | LYS | 3.0 |
| 34 | sR | 156 | VAL | 3.0 |
| 14 | c2 | 127 | GLY | 3.0 |
| 33 | e1 | 128 | ALA | 3.0 |
| 55 | m9 | 7 | GLN | 3.0 |
| 8 | S6 | 75 | LEU | 3.0 |
| 11 | s9 | 5 | PRO | 3.0 |
| 14 | C2 | 103 | LEU | 3.0 |
| 22 | D0 | 84 | MET | 3.0 |
| 63 | n7 | 87 | LEU | 3.0 |
| 10 | S8 | 152 | ILE | 3.0 |
| 34 | sR | 61 | PHE | 3.0 |
| 67 | O1 | 72 | ARG | 3.0 |
| 78 | Q2 | 10 | THR | 3.0 |
| 6 | s4 | 25 | GLY | 3.0 |
| 70 | O4 | 32 | ALA | 3.0 |
| 12 | C0 | 35 | ILE | 3.0 |
| 18 | c6 | 130 | GLY | 3.0 |
| 17 | c5 | 83 | MET | 3.0 |
| 19 | c7 | 71 | PHE | 3.0 |
| 12 | C0 | 25 | LYS | 3.0 |
| 65 | n9 | 43 | HIS | 3.0 |
| 42 | L5 | 76 | ALA | 3.0 |
| 57 | n1 | 34 | TYR | 3.0 |
| 80 | p0 | 211 | SER | 3.0 |
| 4 | s2 | 178 | ILE | 3.0 |
| 9 | s7 | 62 | VAL | 3.0 |
| 27 | d5 | 55 | PRO | 3.0 |
| 58 | n2 | 11 | ILE | 3.0 |
| 1 | 2 | 137 | U | 3.0 |
| 21 | C9 | 59 | ALA | 3.0 |
| 59 | N3 | 34 | LEU | 3.0 |
| 3 | s1 | 154 | SER | 3.0 |
| 14 | C2 | 120 | VAL | 3.0 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 21 | c9 | 115 | GLU | 3.0 |
| 14 | c2 | 69 | ALA | 3.0 |
| 1 | 2 | 224 | C | 3.0 |
| 18 | C6 | 82 | ARG | 3.0 |
| 63 | N7 | 65 | ARG | 3.0 |
| 18 | c6 | 67 | VAL | 3.0 |
| 80 | p0 | 101 | VAL | 3.0 |
| 80 | p0 | 193 | ASN | 3.0 |
| 21 | c9 | 31 | PRO | 3.0 |
| 60 | N4 | 96 | LEU | 3.0 |
| 63 | N7 | 41 | ALA | 3.0 |
| 74 | o8 | 31 | LEU | 3.0 |
| 13 | c1 | 20 | PHE | 3.0 |
| 78 | Q2 | 71 | ARG | 3.0 |
| 22 | d0 | 83 | GLU | 3.0 |
| 42 | L5 | 46 | THR | 3.0 |
| 59 | N3 | 78 | VAL | 3.0 |
| 80 | p0 | 41 | VAL | 3.0 |
| 11 | S9 | 177 | ALA | 3.0 |
| 11 | s9 | 8 | TYR | 3.0 |
| 32 | E0 | 46 | ASN | 3.0 |
| 6 | s4 | 47 | PHE | 3.0 |
| 22 | D0 | 61 | LYS | 3.0 |
| 32 | E0 | 36 | LYS | 3.0 |
| 41 | l4 | 186 | LYS | 3.0 |
| 9 | s7 | 90 | VAL | 3.0 |
| 6 | s4 | 48 | LEU | 3.0 |
| 63 | n7 | 42 | LEU | 3.0 |
| 72 | O6 | 28 | TYR | 3.0 |
| 34 | SR | 137 | LYS | 3.0 |
| 78 | Q2 | 19 | LYS | 3.0 |
| 9 | s7 | 134 | GLU | 3.0 |
| 14 | c2 | 107 | ASP | 3.0 |
| 22 | D0 | 120 | SER | 3.0 |
| 78 | q2 | 72 | LEU | 3.0 |
| 42 | L5 | 170 | GLY | 3.0 |
| 47 | m0 | 219 | ALA | 3.0 |
| 57 | n1 | 46 | GLY | 3.0 |
| 74 | O8 | 34 | ALA | 3.0 |
| 4 | s2 | 63 | VAL | 3.0 |
| 7 | S5 | 162 | VAL | 3.0 |
| 9 | S7 | 181 | ILE | 3.0 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 63 | n7 | 75 | VAL | 3.0 |
| 20 | c8 | 55 | HIS | 3.0 |
| 11 | S9 | 80 | LEU | 3.0 |
| 12 | C0 | 40 | LEU | 3.0 |
| 70 | O4 | 77 | GLY | 3.0 |
| 2 | s0 | 185 | ARG | 3.0 |
| 31 | d9 | 12 | ARG | 3.0 |
| 70 | O4 | 33 | GLN | 3.0 |
| 72 | O6 | 98 | ARG | 3.0 |
| 74 | o8 | 33 | LYS | 3.0 |
| 9 | S7 | 70 | PHE | 3.0 |
| 14 | c2 | 118 | ALA | 3.0 |
| 45 | L8 | 164 | VAL | 3.0 |
| 63 | n7 | 96 | VAL | 3.0 |
| 65 | n9 | 37 | PRO | 3.0 |
| 9 | s7 | 126 | LEU | 3.0 |
| 22 | d0 | 85 | ARG | 3.0 |
| 28 | d6 | 15 | ARG | 3.0 |
| 29 | D7 | 73 | LEU | 3.0 |
| 6 | S4 | 208 | VAL | 2.9 |
| 12 | c0 | 30 | ALA | 2.9 |
| 62 | n6 | 42 | GLN | 3.0 |
| 20 | c8 | 129 | TRP | 2.9 |
| 78 | q2 | 81 | ALA | 2.9 |
| 34 | SR | 300 | THR | 2.9 |
| 1 | 2 | 1445 | G | 2.9 |
| 18 | C6 | 57 | LEU | 2.9 |
| 2 | s0 | 46 | HIS | 2.9 |
| 10 | S8 | 166 | TYR | 2.9 |
| 51 | m5 | 177 | GLY | 2.9 |
| 33 | e1 | 125 | THR | 2.9 |
| 21 | C9 | 55 | TYR | 2.9 |
| 35 | sM | 37 | VAL | 2.9 |
| 57 | N1 | 30 | TYR | 2.9 |
| 14 | c2 | 93 | ASP | 2.9 |
| 21 | c9 | 29 | GLU | 2.9 |
| 34 | sR | 34 | LEU | 2.9 |
| 62 | N6 | 125 | LYS | 2.9 |
| 36 | 5 | 330 | G | 2.9 |
| 63 | N7 | 82 | PRO | 2.9 |
| 24 | D2 | 121 | VAL | 2.9 |
| 8 | s6 | 190 | GLN | 2.9 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 9 | S7 | 137 | GLY | 2.9 |
| 18 | c6 | 29 | ILE | 2.9 |
| 9 | S7 | 81 | LEU | 2.9 |
| 27 | D5 | 41 | ILE | 2.9 |
| 42 | L5 | 78 | ALA | 2.9 |
| 80 | p0 | 9 | ALA | 2.9 |
| 54 | M8 | 79 | LYS | 2.9 |
| 27 | d5 | 40 | VAL | 2.9 |
| 18 | c6 | 105 | LEU | 2.9 |
| 42 | L5 | 50 | ARG | 2.9 |
| 57 | N1 | 93 | VAL | 2.9 |
| 18 | c6 | 132 | LYS | 2.9 |
| 63 | n7 | 22 | LYS | 2.9 |
| 78 | Q2 | 73 | GLU | 2.9 |
| 80 | p0 | 196 | VAL | 2.9 |
| 3 | S1 | 140 | ILE | 2.9 |
| 42 | l5 | 61 | ILE | 2.9 |
| 55 | M9 | 185 | LEU | 2.9 |
| 18 | C6 | 40 | GLU | 2.9 |
| 42 | L5 | 151 | GLN | 2.9 |
| 42 | L5 | 188 | GLU | 2.9 |
| 80 | p0 | 10 | GLU | 2.9 |
| 11 | s9 | 144 | PRO | 2.9 |
| 26 | D4 | 68 | LYS | 2.9 |
| 42 | L5 | 40 | HIS | 2.9 |
| 17 | C5 | 113 | GLY | 2.9 |
| 20 | c8 | 125 | ILE | 2.9 |
| 26 | d4 | 2 | SER | 2.9 |
| 74 | o8 | 32 | ASN | 2.9 |
| 64 | N8 | 127 | ALA | 2.9 |
| 42 | L5 | 95 | TRP | 2.9 |
| 14 | c2 | 95 | LYS | 2.9 |
| 18 | C6 | 79 | TYR | 2.9 |
| 7 | s5 | 62 | VAL | 2.9 |
| 51 | M5 | 140 | LYS | 2.9 |
| 78 | Q2 | 26 | THR | 2.9 |
| 78 | q2 | 8 | ARG | 2.9 |
| 7 | s5 | 198 | LEU | 2.9 |
| 48 | M1 | 172 | LEU | 2.9 |
| 11 | S9 | 91 | LYS | 2.9 |
| 78 | q2 | 9 | LYS | 2.9 |
| 3 | S1 | 105 | PHE | 2.9 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 34 | SR | 202 | LEU | 2.9 |
| 35 | sM | 40 | PRO | 2.9 |
| 5 | S3 | 206 | VAL | 2.9 |
| 18 | c6 | 60 | PHE | 2.9 |
| 26 | d4 | 44 | LEU | 2.9 |
| 27 | d5 | 92 | ILE | 2.9 |
| 45 | L8 | 153 | ILE | 2.9 |
| 14 | c2 | 66 | VAL | 2.9 |
| 65 | N9 | 38 | LYS | 2.9 |
| 11 | s9 | 157 | ASP | 2.9 |
| 19 | C7 | 123 | ASN | 2.9 |
| 66 | O0 | 55 | GLU | 2.9 |
| 32 | E0 | 35 | TYR | 2.9 |
| 45 | L8 | 189 | LEU | 2.9 |
| 62 | N6 | 44 | GLY | 2.9 |
| 80 | p0 | 190 | VAL | 2.9 |
| 42 | l5 | 128 | GLU | 2.9 |
| 55 | M9 | 170 | ARG | 2.9 |
| 1 | 2 | 651 | G | 2.9 |
| 42 | l5 | 129 | TYR | 2.9 |
| 3 | s1 | 141 | ALA | 2.9 |
| 18 | c6 | 109 | PHE | 2.9 |
| 43 | L6 | 3 | ALA | 2.9 |
| 45 | L8 | 256 | ALA | 2.9 |
| 45 | l8 | 165 | PHE | 2.9 |
| 22 | d0 | 61 | LYS | 2.8 |
| 11 | S9 | 102 | GLU | 2.8 |
| 35 | sM | 48 | ARG | 2.8 |
| 2 | S0 | 146 | LEU | 2.8 |
| 80 | p0 | 68 | SER | 2.8 |
| 7 | S5 | 37 | GLN | 2.8 |
| 9 | S7 | 90 | VAL | 2.8 |
| 33 | E1 | 129 | GLY | 2.8 |
| 14 | C2 | 34 | THR | 2.8 |
| 1 | 6 | 1588 | G | 2.8 |
| 3 | s1 | 61 | LEU | 2.8 |
| 10 | S8 | 69 | SER | 2.8 |
| 11 | s9 | 164 | PHE | 2.8 |
| 35 | sM | 27 | LYS | 2.8 |
| 4 | s2 | 196 | VAL | 2.8 |
| 9 | S7 | 50 | ASP | 2.8 |
| 20 | C8 | 5 | VAL | 2.8 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 48 | m1 | 62 | ASN | 2.8 |
| 55 | M9 | 49 | THR | 2.8 |
| 45 | L8 | 226 | TYR | 2.8 |
| 57 | N1 | 31 | LEU | 2.8 |
| 61 | N5 | 40 | LEU | 2.8 |
| 7 | S5 | 71 | ALA | 2.8 |
| 55 | M9 | 181 | ARG | 2.8 |
| 11 | s9 | 91 | LYS | 2.8 |
| 12 | c0 | 49 | LEU | 2.8 |
| 27 | d5 | 91 | PRO | 2.8 |
| 34 | sR | 144 | LEU | 2.8 |
| 60 | N4 | 110 | LYS | 2.8 |
| 62 | N6 | 104 | LEU | 2.8 |
| 10 | S8 | 68 | ALA | 2.8 |
| 12 | C0 | 23 | ALA | 2.8 |
| 16 | C4 | 15 | GLY | 2.8 |
| 55 | M9 | 64 | ARG | 2.8 |
| 66 | o0 | 35 | ARG | 2.8 |
| 1 | 2 | 836 | U | 2.8 |
| 1 | 6 | 767 | U | 2.8 |
| 8 | s6 | 93 | LYS | 2.8 |
| 12 | C0 | 1 | MET | 2.8 |
| 31 | d9 | 33 | LYS | 2.8 |
| 51 | m5 | 148 | TYR | 2.8 |
| 6 | S4 | 8 | HIS | 2.8 |
| 7 | s5 | 36 | ALA | 2.8 |
| 14 | c2 | 92 | ALA | 2.8 |
| 6 | S4 | 9 | LEU | 2.8 |
| 12 | c0 | 31 | LYS | 2.8 |
| 17 | C5 | 116 | LEU | 2.8 |
| 6 | s4 | 27 | TYR | 2.8 |
| 7 | s5 | 137 | ILE | 2.8 |
| 31 | D9 | 33 | LYS | 2.8 |
| 36 | 1 | 2598 | G | 2.8 |
| 42 | L5 | 30 | TYR | 2.8 |
| 53 | M7 | 182 | ILE | 2.8 |
| 58 | N2 | 33 | TYR | 2.8 |
| 80 | p0 | 201 | ILE | 2.8 |
| 18 | c6 | 134 | ALA | 2.8 |
| 26 | D4 | 57 | VAL | 2.8 |
| 9 | S7 | 151 | LYS | 2.8 |
| 35 | sM | 52 | PRO | 2.8 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 80 | p0 | 22 | TYR | 2.8 |
| 8 | s6 | 177 | ARG | 2.8 |
| 8 | S6 | 82 | SER | 2.8 |
| 14 | c2 | 58 | LEU | 2.8 |
| 34 | SR | 225 | LEU | 2.8 |
| 58 | n2 | 44 | GLU | 2.8 |
| 22 | D0 | 121 | ASN | 2.8 |
| 20 | c8 | 45 | LEU | 2.8 |
| 51 | M5 | 10 | LEU | 2.8 |
| 7 | s5 | 96 | SER | 2.8 |
| 62 | N6 | 81 | GLN | 2.8 |
| 65 | N9 | 43 | HIS | 2.8 |
| 11 | S9 | 12 | TYR | 2.8 |
| 11 | s9 | 113 | VAL | 2.8 |
| 57 | N1 | 92 | ARG | 2.8 |
| 62 | N6 | 80 | VAL | 2.8 |
| 17 | C5 | 98 | ASN | 2.8 |
| 22 | D0 | 64 | LYS | 2.8 |
| 33 | e1 | 134 | ASN | 2.8 |
| 34 | sR | 62 | LYS | 2.8 |
| 66 | O0 | 97 | ASP | 2.8 |
| 6 | S4 | 173 | ILE | 2.8 |
| 11 | S9 | 77 | ILE | 2.8 |
| 34 | sR | 315 | VAL | 2.8 |
| 26 | D4 | 71 | GLY | 2.8 |
| 48 | M1 | 146 | GLY | 2.8 |
| 63 | n7 | 21 | LYS | 2.8 |
| 1 | 6 | 131 | C | 2.8 |
| 3 | s1 | 142 | PHE | 2.8 |
| 10 | S8 | 52 | ASN | 2.8 |
| 14 | c2 | 48 | SER | 2.8 |
| 45 | L8 | 253 | SER | 2.8 |
| 3 | s1 | 123 | ALA | 2.8 |
| 14 | C2 | 50 | LYS | 2.8 |
| 20 | c8 | 61 | LEU | 2.8 |
| 11 | S9 | 8 | TYR | 2.8 |
| 60 | N4 | 74 | LYS | 2.8 |
| 62 | N6 | 72 | SER | 2.8 |
| 63 | N7 | 34 | LYS | 2.8 |
| 74 | O8 | 30 | LYS | 2.8 |
| 5 | S3 | 88 | ALA | 2.8 |
| 22 | d0 | 93 | LEU | 2.8 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 40 | L3 | 387 | LEU | 2.8 |
| 41 | l4 | 223 | PRO | 2.8 |
| 51 | M5 | 137 | PRO | 2.8 |
| 67 | O1 | 73 | LEU | 2.8 |
| 18 | c6 | 40 | GLU | 2.8 |
| 19 | c7 | 103 | ASP | 2.8 |
| 11 | S9 | 37 | LYS | 2.8 |
| 31 | D9 | 34 | TYR | 2.8 |
| 22 | d0 | 87 | HIS | 2.8 |
| 41 | l4 | 79 | GLY | 2.8 |
| 14 | C2 | 37 | VAL | 2.8 |
| 14 | c2 | 37 | VAL | 2.8 |
| 23 | D1 | 47 | PRO | 2.8 |
| 26 | D4 | 41 | ARG | 2.8 |
| 63 | N7 | 48 | ARG | 2.8 |
| 33 | E1 | 107 | LYS | 2.8 |
| 7 | s5 | 194 | LEU | 2.8 |
| 11 | s9 | 181 | ALA | 2.8 |
| 29 | D7 | 24 | LEU | 2.8 |
| 45 | l8 | 252 | ASN | 2.8 |
| 49 | m3 | 54 | LEU | 2.8 |
| 58 | n2 | 69 | ALA | 2.8 |
| 72 | o6 | 8 | ALA | 2.8 |
| 72 | o6 | 50 | LEU | 2.8 |
| 10 | S8 | 156 | VAL | 2.7 |
| 57 | N1 | 32 | LYS | 2.7 |
| 64 | N8 | 55 | LYS | 2.7 |
| 7 | s5 | 34 | GLN | 2.7 |
| 45 | L8 | 121 | SER | 2.7 |
| 7 | s5 | 80 | LYS | 2.7 |
| 58 | N2 | 17 | VAL | 2.7 |
| 7 | S5 | 152 | GLY | 2.7 |
| 13 | c1 | 147 | GLY | 2.7 |
| 20 | C8 | 3 | LEU | 2.7 |
| 47 | m0 | 52 | LEU | 2.7 |
| 60 | n4 | 84 | GLY | 2.7 |
| 72 | o6 | 77 | LEU | 2.7 |
| 80 | p0 | 195 | GLN | 2.7 |
| 9 | S7 | 138 | LYS | 2.7 |
| 11 | S9 | 52 | ILE | 2.7 |
| 17 | c5 | 100 | LYS | 2.7 |
| 18 | c6 | 45 | ARG | 2.7 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 28 | d6 | 44 | ILE | 2.7 |
| 55 | m9 | 50 | ILE | 2.7 |
| 74 | O8 | 33 | LYS | 2.7 |
| 7 | s5 | 181 | GLU | 2.7 |
| 31 | d9 | 34 | TYR | 2.7 |
| 67 | O1 | 69 | TYR | 2.7 |
| 42 | L5 | 26 | GLY | 2.7 |
| 3 | S1 | 45 | LYS | 2.7 |
| 16 | c4 | 127 | ARG | 2.7 |
| 48 | m1 | 54 | VAL | 2.7 |
| 58 | n2 | 13 | LYS | 2.7 |
| 80 | p0 | 30 | VAL | 2.7 |
| 11 | s9 | 152 | SER | 2.7 |
| 48 | m1 | 131 | MET | 2.7 |
| 63 | n7 | 82 | PRO | 2.7 |
| 6 | S4 | 245 | LYS | 2.7 |
| 8 | S6 | 187 | LYS | 2.7 |
| 11 | S9 | 4 | ALA | 2.7 |
| 19 | C7 | 3 | ARG | 2.7 |
| 34 | SR | 214 | ALA | 2.7 |
| 35 | sM | 62 | ARG | 2.7 |
| 71 | O5 | 106 | LYS | 2.7 |
| 11 | s9 | 130 | THR | 2.7 |
| 34 | sR | 44 | SER | 2.7 |
| 54 | m8 | 99 | THR | 2.7 |
| 39 | L2 | 246 | LEU | 2.7 |
| 15 | C3 | 24 | ALA | 2.7 |
| 51 | M5 | 68 | ARG | 2.7 |
| 48 | m1 | 65 | ILE | 2.7 |
| 55 | M9 | 50 | ILE | 2.7 |
| 55 | m9 | 51 | VAL | 2.7 |
| 58 | N2 | 56 | VAL | 2.7 |
| 80 | p0 | 191 | TYR | 2.7 |
| 80 | p0 | 197 | PHE | 2.7 |
| 9 | S7 | 73 | VAL | 2.7 |
| 11 | S9 | 135 | ALA | 2.7 |
| 14 | c2 | 30 | VAL | 2.7 |
| 14 | c2 | 31 | VAL | 2.7 |
| 18 | c6 | 26 | LYS | 2.7 |
| 57 | N1 | 23 | GLY | 2.7 |
| 22 | D0 | 65 | ILE | 2.7 |
| 62 | n6 | 73 | VAL | 2.7 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 63 | n7 | 95 | VAL | 2.7 |
| 80 | p0 | 17 | GLU | 2.7 |
| 19 | C7 | 26 | LEU | 2.7 |
| 22 | d0 | 26 | LEU | 2.7 |
| 1 | 2 | 217 | A | 2.7 |
| 9 | S7 | 6 | ALA | 2.7 |
| 20 | c8 | 22 | VAL | 2.7 |
| 27 | d5 | 54 | VAL | 2.7 |
| 34 | SR | 157 | VAL | 2.7 |
| 34 | sR | 312 | VAL | 2.7 |
| 11 | S9 | 90 | LYS | 2.7 |
| 13 | c1 | 24 | LYS | 2.7 |
| 64 | N8 | 126 | LYS | 2.7 |
| 11 | S9 | 7 | THR | 2.7 |
| 16 | C4 | 88 | GLY | 2.7 |
| 34 | SR | 220 | ILE | 2.7 |
| 9 | s7 | 44 | LYS | 2.7 |
| 20 | c8 | 54 | LEU | 2.7 |
| 33 | E1 | 103 | LEU | 2.7 |
| 36 | 5 | 363 | G | 2.7 |
| 40 | L3 | 4 | ARG | 2.7 |
| 64 | N8 | 63 | LYS | 2.7 |
| 42 | l5 | 159 | VAL | 2.7 |
| 16 | c4 | 125 | SER | 2.7 |
| 63 | n7 | 124 | ALA | 2.7 |
| 20 | c8 | 46 | VAL | 2.7 |
| 14 | c2 | 131 | ASP | 2.7 |
| 36 | 5 | 27 | C | 2.7 |
| 34 | SR | 233 | THR | 2.7 |
| 34 | SR | 313 | TRP | 2.7 |
| 14 | c2 | 29 | LYS | 2.7 |
| 36 | 5 | 547 | G | 2.7 |
| 38 | 4 | 80 | A | 2.7 |
| 42 | l5 | 163 | LEU | 2.7 |
| 63 | N7 | 136 | PHE | 2.7 |
| 70 | O4 | 51 | LEU | 2.7 |
| 14 | C2 | 63 | VAL | 2.7 |
| 28 | d6 | 73 | TYR | 2.7 |
| 55 | M9 | 17 | VAL | 2.7 |
| 61 | N5 | 107 | VAL | 2.7 |
| 65 | N9 | 34 | GLY | 2.7 |
| 13 | C1 | 24 | LYS | 2.7 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 14 | C2 | 100 | TRP | 2.7 |
| 48 | M1 | 118 | PRO | 2.7 |
| 12 | C0 | 13 | GLN | 2.7 |
| 22 | d0 | 104 | THR | 2.7 |
| 14 | C2 | 122 | VAL | 2.7 |
| 48 | M1 | 171 | VAL | 2.7 |
| 1 | 2 | 265 | A | 2.7 |
| 18 | C6 | 131 | GLY | 2.7 |
| 20 | c8 | 58 | ALA | 2.7 |
| 36 | 5 | 1269 | U | 2.7 |
| 3 | S1 | 54 | LEU | 2.7 |
| 6 | S4 | 52 | LEU | 2.7 |
| 36 | 5 | 347 | G | 2.7 |
| 48 | m1 | 61 | ARG | 2.7 |
| 74 | o8 | 37 | PRO | 2.7 |
| 22 | d0 | 80 | GLU | 2.7 |
| 72 | O6 | 97 | SER | 2.7 |
| 78 | Q2 | 70 | LEU | 2.7 |
| 6 | S4 | 27 | TYR | 2.7 |
| 6 | s4 | 70 | VAL | 2.7 |
| 63 | N7 | 12 | VAL | 2.7 |
| 35 | sM | 57 | ASN | 2.7 |
| 51 | M5 | 176 | LYS | 2.7 |
| 2 | S0 | 18 | LEU | 2.7 |
| 77 | Q1 | 11 | ARG | 2.7 |
| 18 | c6 | 125 | GLU | 2.7 |
| 11 | s9 | 12 | TYR | 2.7 |
| 26 | D4 | 24 | VAL | 2.7 |
| 51 | M5 | 138 | GLN | 2.7 |
| 61 | N5 | 123 | TYR | 2.7 |
| 65 | n9 | 36 | ASP | 2.7 |
| 65 | N9 | 45 | HIS | 2.7 |
| 78 | Q2 | 23 | HIS | 2.7 |
| 32 | E0 | 2 | ALA | 2.7 |
| 8 | S6 | 77 | LEU | 2.6 |
| 11 | s9 | 116 | LEU | 2.6 |
| 66 | O0 | 25 | LEU | 2.6 |
| 6 | S4 | 28 | ALA | 2.6 |
| 10 | s8 | 199 | LYS | 2.6 |
| 22 | D0 | 27 | THR | 2.6 |
| 24 | D2 | 128 | PHE | 2.6 |
| 39 | l2 | 155 | LYS | 2.6 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 64 | N8 | 149 | ALA | 2.6 |
| 42 | l5 | 22 | ARG | 2.6 |
| 58 | N2 | 104 | ARG | 2.6 |
| 1 | 6 | 1371 | A | 2.6 |
| 32 | e0 | 22 | GLU | 2.6 |
| 63 | N7 | 26 | VAL | 2.6 |
| 10 | s8 | 117 | TYR | 2.6 |
| 63 | N7 | 18 | TYR | 2.6 |
| 9 | S7 | 60 | ILE | 2.6 |
| 11 | s9 | 177 | ALA | 2.6 |
| 14 | c2 | 96 | GLN | 2.6 |
| 59 | N3 | 17 | LEU | 2.6 |
| 10 | S8 | 199 | LYS | 2.6 |
| 36 | 5 | 1353 | U | 2.6 |
| 10 | s8 | 198 | ALA | 2.6 |
| 22 | d0 | 54 | GLY | 2.6 |
| 36 | 1 | 1016 | C | 2.6 |
| 60 | n4 | 93 | ARG | 2.6 |
| 74 | O8 | 40 | GLN | 2.6 |
| 11 | s9 | 105 | LEU | 2.6 |
| 34 | sR | 66 | HIS | 2.6 |
| 45 | L8 | 166 | LEU | 2.6 |
| 7 | S5 | 70 | VAL | 2.6 |
| 22 | d0 | 114 | VAL | 2.6 |
| 41 | L4 | 199 | TRP | 2.6 |
| 7 | S5 | 209 | TYR | 2.6 |
| 11 | S9 | 180 | LYS | 2.6 |
| 13 | C1 | 23 | PRO | 2.6 |
| 35 | SM | 22 | PRO | 2.6 |
| 51 | M5 | 181 | ASN | 2.6 |
| 65 | n9 | 29 | TYR | 2.6 |
| 1 | 6 | 1338 | C | 2.6 |
| 36 | 5 | 1581 | C | 2.6 |
| 6 | S4 | 169 | ILE | 2.6 |
| 17 | c5 | 81 | ARG | 2.6 |
| 17 | c5 | 84 | ILE | 2.6 |
| 31 | d9 | 38 | ILE | 2.6 |
| 34 | SR | 79 | TYR | 2.6 |
| 20 | c8 | 25 | ASN | 2.6 |
| 80 | p0 | 104 | ARG | 2.6 |
| 24 | D2 | 104 | LEU | 2.6 |
| 51 | m5 | 176 | LYS | 2.6 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 1 | 2 | 249 | U | 2.6 |
| 20 | C8 | 125 | ILE | 2.6 |
| 24 | D2 | 41 | MET | 2.6 |
| 24 | d2 | 3 | ARG | 2.6 |
| 9 | S7 | 38 | LEU | 2.6 |
| 11 | S9 | 128 | LEU | 2.6 |
| 2 | S0 | 28 | ASN | 2.6 |
| 9 | S7 | 180 | GLN | 2.6 |
| 18 | c6 | 32 | ASN | 2.6 |
| 66 | O0 | 95 | ALA | 2.6 |
| 7 | S5 | 188 | LYS | 2.6 |
| 7 | s5 | 209 | TYR | 2.6 |
| 10 | s8 | 113 | PHE | 2.6 |
| 39 | L2 | 241 | ARG | 2.6 |
| 45 | L8 | 130 | TYR | 2.6 |
| 51 | M5 | 178 | HIS | 2.6 |
| 14 | C2 | 127 | GLY | 2.6 |
| 60 | N4 | 109 | LEU | 2.6 |
| 11 | s9 | 172 | VAL | 2.6 |
| 10 | S8 | 86 | SER | 2.6 |
| 17 | c5 | 98 | ASN | 2.6 |
| 18 | C6 | 83 | GLN | 2.6 |
| 8 | s6 | 175 | ILE | 2.6 |
| 8 | s6 | 196 | ARG | 2.6 |
| 10 | s8 | 55 | TYR | 2.6 |
| 12 | c0 | 79 | TYR | 2.6 |
| 36 | 5 | 53 | G | 2.6 |
| 74 | o8 | 52 | TYR | 2.6 |
| 18 | c6 | 126 | PRO | 2.6 |
| 18 | c6 | 127 | LYS | 2.6 |
| 26 | D4 | 55 | VAL | 2.6 |
| 7 | s5 | 91 | GLU | 2.6 |
| 42 | l5 | 179 | ARG | 2.6 |
| 59 | N3 | 36 | ILE | 2.6 |
| 65 | n9 | 42 | ASN | 2.6 |
| 78 | Q2 | 34 | SER | 2.6 |
| 1 | 2 | 1370 | U | 2.6 |
| 35 | sM | 30 | THR | 2.6 |
| 55 | M9 | 52 | LYS | 2.6 |
| 6 | S4 | 130 | GLN | 2.6 |
| 9 | S7 | 91 | ILE | 2.6 |
| 22 | D0 | 85 | ARG | 2.6 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 51 | m5 | 175 | ASN | 2.6 |
| 80 | p0 | 12 | PHE | 2.6 |
| 80 | p0 | 185 | LEU | 2.6 |
| 3 | S1 | 50 | LYS | 2.6 |
| 14 | c2 | 73 | LYS | 2.6 |
| 18 | c6 | 86 | ALA | 2.6 |
| 36 | 1 | 1580 | A | 2.6 |
| 3 | S1 | 24 | PHE | 2.6 |
| 3 | S1 | 100 | PHE | 2.6 |
| 19 | c7 | 74 | GLN | 2.6 |
| 6 | s4 | 9 | LEU | 2.6 |
| 19 | c7 | 73 | LEU | 2.6 |
| 24 | D2 | 83 | ILE | 2.6 |
| 42 | L5 | 129 | TYR | 2.6 |
| 67 | O1 | 36 | ILE | 2.6 |
| 70 | O4 | 30 | LEU | 2.6 |
| 11 | S9 | 119 | ALA | 2.6 |
| 11 | s9 | 137 | GLY | 2.6 |
| 23 | d1 | 54 | ALA | 2.6 |
| 55 | M9 | 18 | GLY | 2.6 |
| 27 | D5 | 91 | PRO | 2.6 |
| 1 | 2 | 697 | C | 2.6 |
| 10 | S8 | 113 | PHE | 2.6 |
| 18 | c6 | 46 | PHE | 2.6 |
| 6 | s4 | 22 | LYS | 2.6 |
| 12 | c0 | 61 | TRP | 2.6 |
| 18 | c6 | 71 | GLY | 2.6 |
| 21 | c9 | 9 | VAL | 2.6 |
| 39 | l2 | 251 | LYS | 2.6 |
| 46 | L9 | 85 | GLY | 2.6 |
| 60 | n4 | 125 | ALA | 2.6 |
| 10 | s8 | 179 | CYS | 2.6 |
| 3 | s1 | 138 | PHE | 2.6 |
| 6 | S4 | 69 | HIS | 2.6 |
| 26 | D4 | 85 | PHE | 2.6 |
| 9 | s7 | 48 | GLU | 2.6 |
| 12 | c0 | 17 | GLN | 2.6 |
| 22 | D0 | 94 | GLU | 2.6 |
| 3 | S1 | 21 | VAL | 2.6 |
| 8 | S6 | 97 | VAL | 2.6 |
| 78 | Q2 | 25 | VAL | 2.6 |
| 42 | L5 | 233 | ALA | 2.6 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 66 | o0 | 6 | SER | 2.6 |
| 2 | s0 | 184 | LEU | 2.6 |
| 12 | c0 | 46 | LEU | 2.6 |
| 14 | C2 | 38 | HIS | 2.6 |
| 14 | C2 | 52 | LEU | 2.6 |
| 21 | c9 | 95 | ASP | 2.6 |
| 35 | sM | 33 | LYS | 2.6 |
| 42 | L5 | 4 | GLN | 2.6 |
| 42 | l5 | 297 | GLN | 2.6 |
| 71 | o5 | 106 | LYS | 2.6 |
| 62 | n6 | 12 | ARG | 2.6 |
| 9 | S7 | 24 | PHE | 2.6 |
| 6 | s4 | 69 | HIS | 2.5 |
| 7 | s5 | 104 | ASN | 2.5 |
| 13 | C1 | 4 | GLU | 2.5 |
| 21 | C9 | 13 | ASP | 2.5 |
| 42 | L5 | 126 | GLU | 2.5 |
| 51 | m5 | 93 | LYS | 2.5 |
| 1 | 2 | 474 | A | 2.5 |
| 1 | 2 | 1245 | G | 2.5 |
| 63 | N7 | 101 | PHE | 2.5 |
| 10 | s8 | 96 | LEU | 2.5 |
| 55 | m9 | 106 | LEU | 2.5 |
| 6 | S4 | 26 | CYS | 2.5 |
| 34 | SR | 232 | TYR | 2.5 |
| 42 | L5 | 44 | TYR | 2.5 |
| 46 | L9 | 190 | ASP | 2.5 |
| 48 | M1 | 72 | ARG | 2.5 |
| 51 | m5 | 123 | GLN | 2.5 |
| 3 | s1 | 139 | ALA | 2.5 |
| 26 | d4 | 72 | PHE | 2.5 |
| 9 | s7 | 153 | LEU | 2.5 |
| 15 | c3 | 27 | LYS | 2.5 |
| 28 | d6 | 29 | SER | 2.5 |
| 39 | L2 | 112 | ILE | 2.5 |
| 55 | M9 | 24 | LEU | 2.5 |
| 36 | 5 | 814 | U | 2.5 |
| 43 | l6 | 129 | GLU | 2.5 |
| 45 | l8 | 97 | TYR | 2.5 |
| 80 | p0 | 51 | VAL | 2.5 |
| 8 | S6 | 83 | CYS | 2.5 |
| 57 | n1 | 45 | ASN | 2.5 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 34 | sR | 180 | ALA | 2.5 |
| 18 | C6 | 47 | LYS | 2.5 |
| 21 | C9 | 92 | LYS | 2.5 |
| 22 | D0 | 86 | ILE | 2.5 |
| 49 | M3 | 95 | ILE | 2.5 |
| 57 | N1 | 96 | ILE | 2.5 |
| 67 | o1 | 16 | LEU | 2.5 |
| 4 | s2 | 176 | SER | 2.5 |
| 29 | D7 | 29 | ARG | 2.5 |
| 27 | d5 | 43 | ASP | 2.5 |
| 55 | M9 | 188 | ASP | 2.5 |
| 7 | S5 | 193 | THR | 2.5 |
| 9 | S7 | 154 | LEU | 2.5 |
| 67 | O1 | 75 | ILE | 2.5 |
| 7 | s5 | 61 | TYR | 2.5 |
| 18 | C6 | 15 | SER | 2.5 |
| 20 | C8 | 7 | GLU | 2.5 |
| 11 | s9 | 104 | PHE | 2.5 |
| 11 | s9 | 155 | HIS | 2.5 |
| 12 | c0 | 12 | HIS | 2.5 |
| 18 | c6 | 8 | GLN | 2.5 |
| 18 | c6 | 13 | LYS | 2.5 |
| 45 | L8 | 142 | LEU | 2.5 |
| 48 | m1 | 30 | LEU | 2.5 |
| 62 | N6 | 126 | LEU | 2.5 |
| 6 | s4 | 78 | THR | 2.5 |
| 11 | s9 | 33 | GLU | 2.5 |
| 11 | S9 | 121 | SER | 2.5 |
| 35 | SM | 85 | SER | 2.5 |
| 42 | L5 | 35 | ARG | 2.5 |
| 21 | c9 | 10 | ALA | 2.5 |
| 48 | m1 | 102 | PHE | 2.5 |
| 62 | N6 | 34 | PRO | 2.5 |
| 77 | Q1 | 4 | LYS | 2.5 |
| 3 | S1 | 120 | LEU | 2.5 |
| 12 | c0 | 43 | ILE | 2.5 |
| 26 | D4 | 7 | ILE | 2.5 |
| 27 | d5 | 37 | GLN | 2.5 |
| 28 | d6 | 45 | VAL | 2.5 |
| 62 | n6 | 80 | VAL | 2.5 |
| 33 | E1 | 106 | TYR | 2.5 |
| 60 | n4 | 83 | THR | 2.5 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 6 | S4 | 129 | VAL | 2.5 |
| 9 | s7 | 42 | GLN | 2.5 |
| 45 | l8 | 189 | LEU | 2.5 |
| 10 | S8 | 116 | HIS | 2.5 |
| 28 | D6 | 22 | ARG | 2.5 |
| 59 | n3 | 4 | ASN | 2.5 |
| 14 | C2 | 117 | GLY | 2.5 |
| 36 | 1 | 361 | A | 2.5 |
| 60 | N4 | 62 | GLY | 2.5 |
| 8 | S6 | 147 | LEU | 2.5 |
| 54 | M8 | 97 | PRO | 2.5 |
| 57 | N1 | 27 | LEU | 2.5 |
| 6 | S4 | 70 | VAL | 2.5 |
| 11 | S9 | 186 | GLU | 2.5 |
| 13 | c1 | 4 | GLU | 2.5 |
| 28 | D6 | 10 | ARG | 2.5 |
| 43 | l6 | 109 | GLU | 2.5 |
| 1 | 6 | 1229 | G | 2.5 |
| 4 | s2 | 215 | PHE | 2.5 |
| 7 | S5 | 69 | PHE | 2.5 |
| 60 | n4 | 88 | ASP | 2.5 |
| 14 | C2 | 49 | THR | 2.5 |
| 19 | C7 | 25 | THR | 2.5 |
| 21 | C9 | 58 | ALA | 2.5 |
| 34 | sR | 204 | ALA | 2.5 |
| 63 | N7 | 19 | ALA | 2.5 |
| 10 | s8 | 41 | LYS | 2.5 |
| 11 | s9 | 92 | LYS | 2.5 |
| 14 | c2 | 99 | GLU | 2.5 |
| 17 | c5 | 123 | TYR | 2.5 |
| 43 | l6 | 8 | LYS | 2.5 |
| 10 | s8 | 58 | LEU | 2.5 |
| 34 | sR | 73 | LEU | 2.5 |
| 34 | sR | 141 | LEU | 2.5 |
| 42 | l5 | 195 | LEU | 2.5 |
| 22 | d0 | 41 | ILE | 2.5 |
| 30 | D8 | 30 | VAL | 2.5 |
| 58 | n2 | 12 | ALA | 2.5 |
| 57 | N1 | 70 | SER | 2.5 |
| 62 | N6 | 77 | LYS | 2.5 |
| 72 | O6 | 29 | LYS | 2.5 |
| 1 | 2 | 772 | G | 2.5 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 12 | C0 | 16 | PHE | 2.5 |
| 62 | N6 | 78 | PHE | 2.5 |
| 7 | s5 | 81 | ARG | 2.5 |
| 10 | S8 | 5 | ARG | 2.5 |
| 33 | e1 | 91 | ILE | 2.5 |
| 9 | s7 | 63 | PRO | 2.5 |
| 16 | C4 | 129 | LYS | 2.5 |
| 21 | C9 | 2 | PRO | 2.5 |
| 45 | L8 | 123 | GLN | 2.5 |
| 11 | S9 | 76 | LEU | 2.5 |
| 2 | s0 | 76 | ILE | 2.5 |
| 3 | S1 | 145 | LYS | 2.5 |
| 6 | s4 | 134 | LYS | 2.5 |
| 11 | s9 | 18 | PRO | 2.5 |
| 27 | D5 | 102 | THR | 2.5 |
| 51 | m5 | 5 | LYS | 2.5 |
| 62 | n6 | 108 | LYS | 2.5 |
| 78 | q2 | 13 | LYS | 2.5 |
| 67 | o1 | 94 | GLU | 2.5 |
| 6 | S4 | 101 | LEU | 2.5 |
| 22 | d0 | 84 | MET | 2.5 |
| 12 | C0 | 24 | LYS | 2.5 |
| 48 | m1 | 66 | ALA | 2.5 |
| 70 | o4 | 2 | ALA | 2.5 |
| 80 | p0 | 75 | LYS | 2.5 |
| 2 | S0 | 124 | THR | 2.5 |
| 3 | S1 | 143 | THR | 2.5 |
| 8 | s6 | 156 | PHE | 2.5 |
| 22 | D0 | 107 | THR | 2.5 |
| 45 | L8 | 255 | SER | 2.5 |
| 48 | M1 | 134 | PRO | 2.5 |
| 54 | M8 | 100 | THR | 2.5 |
| 7 | s5 | 58 | LEU | 2.5 |
| 20 | c8 | 15 | LEU | 2.5 |
| 70 | o4 | 51 | LEU | 2.5 |
| 10 | S8 | 101 | ILE | 2.5 |
| 14 | C2 | 124 | LYS | 2.5 |
| 32 | e0 | 28 | LYS | 2.5 |
| 51 | m5 | 135 | VAL | 2.5 |
| 63 | N7 | 84 | ARG | 2.5 |
| 74 | O8 | 27 | ILE | 2.5 |
| 14 | C2 | 126 | TRP | 2.5 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 7 | s5 | 170 | GLN | 2.4 |
| 18 | C6 | 42 | GLU | 2.4 |
| 7 | S5 | 157 | ARG | 2.4 |
| 42 | l5 | 67 | SER | 2.4 |
| 13 | C1 | 26 | LYS | 2.4 |
| 16 | C4 | 112 | ILE | 2.4 |
| 63 | N7 | 27 | LYS | 2.4 |
| 26 | d4 | 64 | PHE | 2.4 |
| 29 | D7 | 64 | CYS | 2.4 |
| 34 | sR | 263 | PHE | 2.4 |
| 42 | l5 | 142 | PHE | 2.4 |
| 79 | Q3 | 91 | GLU | 2.4 |
| 80 | p0 | 21 | GLU | 2.4 |
| 2 | s0 | 166 | GLY | 2.4 |
| 8 | s6 | 136 | LYS | 2.4 |
| 32 | e0 | 36 | LYS | 2.4 |
| 40 | L3 | 309 | GLY | 2.4 |
| 57 | N1 | 25 | VAL | 2.4 |
| 59 | N3 | 39 | VAL | 2.4 |
| 63 | N7 | 10 | VAL | 2.4 |
| 3 | S1 | 123 | ALA | 2.4 |
| 36 | 1 | 24 | G | 2.4 |
| 8 | s6 | 131 | LYS | 2.4 |
| 11 | S9 | 89 | ASP | 2.4 |
| 18 | c6 | 123 | ARG | 2.4 |
| 60 | n4 | 96 | LEU | 2.4 |
| 24 | d2 | 122 | SER | 2.4 |
| 45 | L8 | 137 | ASN | 2.4 |
| 2 | s0 | 54 | TRP | 2.4 |
| 42 | L5 | 145 | PHE | 2.4 |
| 12 | c0 | 41 | TYR | 2.4 |
| 5 | s3 | 136 | VAL | 2.4 |
| 60 | N4 | 76 | VAL | 2.4 |
| 66 | o0 | 8 | GLU | 2.4 |
| 21 | c9 | 46 | PRO | 2.4 |
| 7 | s5 | 47 | SER | 2.4 |
| 14 | C2 | 64 | SER | 2.4 |
| 48 | M1 | 132 | ASN | 2.4 |
| 2 | s0 | 120 | LEU | 2.4 |
| 11 | s9 | 30 | LEU | 2.4 |
| 18 | C6 | 13 | LYS | 2.4 |
| 2 | S0 | 46 | HIS | 2.4 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 7 | S5 | 148 | ARG | 2.4 |
| 33 | E1 | 132 | LEU | 2.4 |
| 11 | S9 | 113 | VAL | 2.4 |
| 34 | sR | 10 | ARG | 2.4 |
| 3 | S1 | 121 | ILE | 2.4 |
| 7 | s5 | 152 | GLY | 2.4 |
| 10 | S8 | 65 | PHE | 2.4 |
| 11 | s9 | 98 | ALA | 2.4 |
| 12 | C0 | 30 | ALA | 2.4 |
| 39 | l2 | 250 | GLN | 2.4 |
| 63 | N7 | 32 | GLY | 2.4 |
| 70 | o4 | 28 | GLY | 2.4 |
| 1 | 6 | 1491 | U | 2.4 |
| 11 | s9 | 138 | LYS | 2.4 |
| 21 | c9 | 77 | ASN | 2.4 |
| 40 | L3 | 263 | SER | 2.4 |
| 33 | E1 | 119 | ARG | 2.4 |
| 55 | m9 | 24 | LEU | 2.4 |
| 61 | n5 | 123 | TYR | 2.4 |
| 80 | p0 | 90 | ASN | 2.4 |
| 6 | S4 | 4 | GLY | 2.4 |
| 45 | l8 | 143 | ILE | 2.4 |
| 18 | c6 | 83 | GLN | 2.4 |
| 21 | c9 | 14 | PHE | 2.4 |
| 9 | s7 | 129 | LEU | 2.4 |
| 10 | S8 | 6 | ASP | 2.4 |
| 27 | d5 | 46 | LYS | 2.4 |
| 34 | SR | 283 | LYS | 2.4 |
| 45 | L8 | 65 | LEU | 2.4 |
| 80 | p0 | 72 | ASP | 2.4 |
| 13 | c1 | 30 | ARG | 2.4 |
| 17 | c5 | 106 | GLU | 2.4 |
| 69 | O3 | 52 | VAL | 2.4 |
| 9 | s7 | 162 | ILE | 2.4 |
| 9 | S7 | 92 | PHE | 2.4 |
| 42 | L5 | 127 | GLY | 2.4 |
| 45 | L8 | 173 | MET | 2.4 |
| 22 | D0 | 95 | ALA | 2.4 |
| 58 | n2 | 95 | PHE | 2.4 |
| 14 | C2 | 33 | ARG | 2.4 |
| 1 | 6 | 1686 | C | 2.4 |
| 8 | S6 | 84 | TYR | 2.4 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 10 | s8 | 188 | GLU | 2.4 |
| 17 | c5 | 14 | THR | 2.4 |
| 18 | C6 | 39 | VAL | 2.4 |
| 33 | E1 | 100 | LEU | 2.4 |
| 35 | sM | 36 | ASP | 2.4 |
| 51 | M5 | 143 | ARG | 2.4 |
| 51 | m5 | 63 | ARG | 2.4 |
| 77 | Q1 | 5 | TRP | 2.4 |
| 78 | Q2 | 11 | TYR | 2.4 |
| 21 | c9 | 89 | ARG | 2.4 |
| 29 | D7 | 7 | LEU | 2.4 |
| 42 | L5 | 131 | LEU | 2.4 |
| 3 | s1 | 137 | ILE | 2.4 |
| 8 | S6 | 166 | GLU | 2.4 |
| 34 | SR | 263 | PHE | 2.4 |
| 78 | q2 | 100 | LYS | 2.4 |
| 6 | S4 | 48 | LEU | 2.4 |
| 9 | S7 | 150 | GLN | 2.4 |
| 19 | c7 | 3 | ARG | 2.4 |
| 63 | N7 | 50 | PRO | 2.4 |
| 70 | o4 | 33 | GLN | 2.4 |
| 6 | S4 | 45 | ILE | 2.4 |
| 7 | S5 | 119 | ASP | 2.4 |
| 5 | S3 | 8 | LYS | 2.4 |
| 11 | S9 | 137 | GLY | 2.4 |
| 34 | sR | 46 | LYS | 2.4 |
| 55 | m9 | 21 | LYS | 2.4 |
| 3 | s1 | 217 | LEU | 2.4 |
| 34 | SR | 196 | ASN | 2.4 |
| 48 | m1 | 55 | ARG | 2.4 |
| 24 | D2 | 27 | ILE | 2.4 |
| 1 | 2 | 754 | A | 2.4 |
| 3 | s1 | 97 | LEU | 2.4 |
| 3 | s1 | 228 | LEU | 2.4 |
| 6 | S4 | 256 | ARG | 2.4 |
| 8 | s6 | 163 | THR | 2.4 |
| 45 | L8 | 168 | ALA | 2.4 |
| 33 | E1 | 98 | VAL | 2.4 |
| 42 | l5 | 173 | VAL | 2.4 |
| 65 | N9 | 35 | VAL | 2.4 |
| 48 | m1 | 52 | TYR | 2.4 |
| 42 | l5 | 16 | PHE | 2.4 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 54 | M8 | 77 | ALA | 2.4 |
| 62 | N6 | 111 | LEU | 2.4 |
| 65 | N9 | 46 | ALA | 2.4 |
| 8 | s6 | 153 | VAL | 2.4 |
| 39 | L2 | 224 | THR | 2.4 |
| 8 | s6 | 189 | HIS | 2.4 |
| 11 | s9 | 182 | GLU | 2.4 |
| 36 | 1 | 928 | C | 2.4 |
| 58 | N2 | 92 | TRP | 2.4 |
| 3 | S1 | 64 | ARG | 2.4 |
| 12 | c0 | 80 | LEU | 2.4 |
| 55 | M9 | 81 | ARG | 2.4 |
| 61 | N5 | 27 | ARG | 2.4 |
| 30 | D8 | 44 | VAL | 2.4 |
| 40 | L3 | 382 | THR | 2.4 |
| 67 | o1 | 13 | THR | 2.4 |
| 3 | s1 | 84 | ILE | 2.4 |
| 35 | SM | 23 | LYS | 2.4 |
| 36 | 5 | 364 | G | 2.4 |
| 45 | L8 | 252 | ASN | 2.4 |
| 41 | l4 | 198 | ARG | 2.4 |
| 19 | C7 | 24 | LEU | 2.4 |
| 41 | l4 | 219 | LEU | 2.4 |
| 51 | M5 | 2 | GLY | 2.4 |
| 65 | n9 | 47 | LEU | 2.4 |
| 70 | o4 | 30 | LEU | 2.4 |
| 14 | c2 | 65 | SER | 2.4 |
| 36 | 5 | 2569 | A | 2.4 |
| 66 | O0 | 20 | SER | 2.4 |
| 67 | o1 | 92 | TYR | 2.4 |
| 78 | q2 | 106 | PHE | 2.4 |
| 3 | s1 | 144 | ARG | 2.3 |
| 11 | s9 | 126 | ARG | 2.3 |
| 3 | S1 | 153 | HIS | 2.3 |
| 18 | C6 | 78 | VAL | 2.3 |
| 44 | l7 | 27 | ALA | 2.3 |
| 62 | N6 | 76 | LEU | 2.3 |
| 62 | n6 | 48 | LEU | 2.3 |
| 28 | d6 | 67 | THR | 2.3 |
| 36 | 5 | 799 | G | 2.3 |
| 51 | m5 | 62 | TYR | 2.3 |
| 42 | L5 | 130 | GLU | 2.3 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 61 | n5 | 142 | ILE | 2.3 |
| 62 | n6 | 115 | ARG | 2.3 |
| 3 | S1 | 135 | LEU | 2.3 |
| 3 | s1 | 54 | LEU | 2.3 |
| 19 | C7 | 2 | GLY | 2.3 |
| 26 | D4 | 44 | LEU | 2.3 |
| 36 | 5 | 1764 | U | 2.3 |
| 8 | s6 | 89 | ASP | 2.3 |
| 33 | e1 | 124 | PRO | 2.3 |
| 34 | sR | 11 | GLY | 2.3 |
| 45 | L8 | 200 | LEU | 2.3 |
| 53 | m7 | 79 | THR | 2.3 |
| 14 | c2 | 94 | ALA | 2.3 |
| 26 | d4 | 4 | ALA | 2.3 |
| 59 | N3 | 52 | ALA | 2.3 |
| 17 | C5 | 119 | PHE | 2.3 |
| 32 | e0 | 53 | LYS | 2.3 |
| 33 | E1 | 116 | LYS | 2.3 |
| 62 | N6 | 87 | LYS | 2.3 |
| 3 | S1 | 152 | ARG | 2.3 |
| 36 | 5 | 331 | G | 2.3 |
| 36 | 5 | 815 | G | 2.3 |
| 1 | 6 | 696 | C | 2.3 |
| 7 | s5 | 64 | VAL | 2.3 |
| 7 | s5 | 150 | GLY | 2.3 |
| 8 | S6 | 65 | GLN | 2.3 |
| 62 | N6 | 35 | LEU | 2.3 |
| 45 | L8 | 129 | PRO | 2.3 |
| 60 | N4 | 12 | LYS | 2.3 |
| 7 | s5 | 180 | ARG | 2.3 |
| 42 | l5 | 60 | ILE | 2.3 |
| 57 | N1 | 42 | ILE | 2.3 |
| 62 | N6 | 100 | HIS | 2.3 |
| 22 | D0 | 93 | LEU | 2.3 |
| 26 | D4 | 74 | LEU | 2.3 |
| 57 | n1 | 70 | SER | 2.3 |
| 21 | c9 | 78 | LYS | 2.3 |
| 57 | N1 | 58 | GLN | 2.3 |
| 45 | L8 | 94 | PHE | 2.3 |
| 58 | N2 | 14 | THR | 2.3 |
| 1 | 2 | 261 | U | 2.3 |
| 1 | 6 | 369 | A | 2.3 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 4 | s2 | 38 | VAL | 2.3 |
| 9 | s7 | 38 | LEU | 2.3 |
| 11 | s9 | 86 | LEU | 2.3 |
| 10 | s8 | 181 | GLY | 2.3 |
| 27 | D5 | 62 | VAL | 2.3 |
| 28 | D6 | 34 | LYS | 2.3 |
| 39 | L2 | 249 | SER | 2.3 |
| 8 | S6 | 173 | PRO | 2.3 |
| 12 | c0 | 13 | GLN | 2.3 |
| 26 | d4 | 61 | ARG | 2.3 |
| 64 | N8 | 128 | ARG | 2.3 |
| 67 | o1 | 12 | TYR | 2.3 |
| 14 | c2 | 44 | GLY | 2.3 |
| 32 | E0 | 29 | LYS | 2.3 |
| 4 | s2 | 224 | PHE | 2.3 |
| 8 | S6 | 172 | ALA | 2.3 |
| 11 | s9 | 34 | PHE | 2.3 |
| 32 | e0 | 44 | PHE | 2.3 |
| 48 | M1 | 102 | PHE | 2.3 |
| 62 | N6 | 120 | GLN | 2.3 |
| 1 | 6 | 233 | C | 2.3 |
| 7 | s5 | 115 | LYS | 2.3 |
| 20 | c8 | 4 | VAL | 2.3 |
| 21 | c9 | 56 | LYS | 2.3 |
| 42 | L5 | 150 | LEU | 2.3 |
| 42 | L5 | 173 | VAL | 2.3 |
| 58 | n2 | 50 | LEU | 2.3 |
| 64 | N8 | 58 | MET | 2.3 |
| 74 | o8 | 34 | ALA | 2.3 |
| 49 | m3 | 93 | ILE | 2.3 |
| 62 | n6 | 101 | PRO | 2.3 |
| 12 | C0 | 65 | TYR | 2.3 |
| 12 | c0 | 36 | ASP | 2.3 |
| 20 | c8 | 53 | ASP | 2.3 |
| 26 | d4 | 6 | THR | 2.3 |
| 34 | SR | 265 | LEU | 2.3 |
| 42 | l5 | 222 | LEU | 2.3 |
| 61 | N5 | 110 | VAL | 2.3 |
| 78 | q2 | 93 | LEU | 2.3 |
| 18 | C6 | 46 | PHE | 2.3 |
| 42 | L5 | 160 | PHE | 2.3 |
| 31 | d9 | 40 | ARG | 2.3 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 36 | 1 | 1024 | G | 2.3 |
| 57 | N1 | 44 | ALA | 2.3 |
| 14 | C2 | 71 | ILE | 2.3 |
| 6 | s4 | 10 | LYS | 2.3 |
| 7 | S5 | 198 | LEU | 2.3 |
| 51 | M5 | 134 | LEU | 2.3 |
| 55 | m9 | 52 | LYS | 2.3 |
| 63 | n7 | 77 | TYR | 2.3 |
| 74 | O8 | 36 | LYS | 2.3 |
| 7 | S5 | 161 | ASP | 2.3 |
| 53 | m7 | 81 | ALA | 2.3 |
| 63 | N7 | 129 | TRP | 2.3 |
| 63 | n7 | 118 | PHE | 2.3 |
| 17 | c5 | 37 | ALA | 2.3 |
| 18 | c6 | 41 | PRO | 2.3 |
| 21 | c9 | 33 | TYR | 2.3 |
| 48 | M1 | 41 | SER | 2.3 |
| 55 | M9 | 186 | LYS | 2.3 |
| 36 | 5 | 2572 | C | 2.3 |
| 7 | S5 | 112 | ARG | 2.3 |
| 14 | C2 | 43 | ARG | 2.3 |
| 42 | l5 | 145 | PHE | 2.3 |
| 58 | N2 | 80 | THR | 2.3 |
| 59 | N3 | 23 | MET | 2.3 |
| 78 | Q2 | 80 | ARG | 2.3 |
| 26 | d4 | 25 | VAL | 2.3 |
| 62 | n6 | 35 | LEU | 2.3 |
| 78 | Q2 | 8 | ARG | 2.3 |
| 34 | SR | 136 | ILE | 2.3 |
| 34 | SR | 204 | ALA | 2.3 |
| 55 | m9 | 178 | ALA | 2.3 |
| 36 | 5 | 1537 | A | 2.3 |
| 67 | O1 | 59 | ILE | 2.3 |
| 6 | s4 | 56 | LEU | 2.3 |
| 8 | s6 | 195 | VAL | 2.3 |
| 11 | S9 | 101 | VAL | 2.3 |
| 14 | C2 | 116 | VAL | 2.3 |
| 18 | c6 | 78 | VAL | 2.3 |
| 21 | C9 | 132 | LEU | 2.3 |
| 69 | o3 | 7 | LEU | 2.3 |
| 71 | O5 | 73 | LYS | 2.3 |
| 22 | d0 | 62 | VAL | 2.3 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 3 | S1 | 122 | GLU | 2.3 |
| 17 | C5 | 109 | PRO | 2.3 |
| 36 | 5 | 1631 | C | 2.3 |
| 38 | 8 | 110 | C | 2.3 |
| 78 | q2 | 22 | GLN | 2.3 |
| 2 | S0 | 25 | GLY | 2.3 |
| 4 | S2 | 91 | ARG | 2.3 |
| 67 | O1 | 39 | PHE | 2.3 |
| 10 | S8 | 143 | TRP | 2.3 |
| 6 | S4 | 56 | LEU | 2.3 |
| 26 | D4 | 96 | LEU | 2.3 |
| 33 | E1 | 115 | THR | 2.3 |
| 39 | l2 | 156 | LYS | 2.3 |
| 42 | L5 | 43 | LYS | 2.3 |
| 45 | l8 | 96 | LYS | 2.3 |
| 32 | E0 | 40 | TYR | 2.3 |
| 68 | O2 | 76 | VAL | 2.3 |
| 11 | S9 | 48 | GLN | 2.3 |
| 35 | sM | 41 | SER | 2.3 |
| 42 | l5 | 133 | GLU | 2.3 |
| 45 | L8 | 167 | PRO | 2.3 |
| 64 | N8 | 64 | GLN | 2.3 |
| 13 | C1 | 11 | ARG | 2.3 |
| 25 | D3 | 4 | GLY | 2.3 |
| 66 | O0 | 26 | GLY | 2.3 |
| 21 | c9 | 59 | ALA | 2.3 |
| 1 | 6 | 237 | C | 2.3 |
| 9 | s7 | 41 | LEU | 2.3 |
| 70 | o4 | 29 | ILE | 2.3 |
| 21 | c9 | 34 | VAL | 2.3 |
| 13 | C1 | 53 | TYR | 2.3 |
| 42 | L5 | 79 | TYR | 2.3 |
| 49 | M3 | 89 | TYR | 2.3 |
| 8 | s6 | 186 | ARG | 2.2 |
| 9 | s7 | 5 | GLN | 2.2 |
| 36 | 5 | 813 | G | 2.2 |
| 2 | S0 | 159 | ALA | 2.2 |
| 11 | s9 | 40 | LYS | 2.2 |
| 7 | s5 | 199 | ILE | 2.2 |
| 14 | c2 | 112 | ALA | 2.2 |
| 24 | d2 | 60 | LYS | 2.2 |
| 34 | SR | 62 | LYS | 2.2 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 61 | N5 | 121 | LYS | 2.2 |
| 66 | o0 | 100 | ILE | 2.2 |
| 67 | o1 | 71 | LEU | 2.2 |
| 68 | O2 | 75 | LEU | 2.2 |
| 76 | Q0 | 90 | ASN | 2.2 |
| 77 | q1 | 5 | TRP | 2.2 |
| 7 | s5 | 185 | ARG | 2.2 |
| 63 | N7 | 92 | PHE | 2.2 |
| 65 | n9 | 40 | ARG | 2.2 |
| 32 | E0 | 30 | PRO | 2.2 |
| 45 | L8 | 133 | LYS | 2.2 |
| 45 | l8 | 231 | LYS | 2.2 |
| 8 | s6 | 76 | LEU | 2.2 |
| 9 | S7 | 77 | LEU | 2.2 |
| 14 | c2 | 36 | LEU | 2.2 |
| 51 | M5 | 142 | ILE | 2.2 |
| 61 | N5 | 122 | ALA | 2.2 |
| 62 | N6 | 59 | VAL | 2.2 |
| 63 | N7 | 96 | VAL | 2.2 |
| 1 | 2 | 193 | U | 2.2 |
| 3 | s1 | 205 | PHE | 2.2 |
| 3 | s1 | 213 | ARG | 2.2 |
| 16 | c4 | 135 | ARG | 2.2 |
| 42 | L5 | 172 | TYR | 2.2 |
| 42 | l5 | 226 | TYR | 2.2 |
| 40 | L3 | 5 | LYS | 2.2 |
| 65 | N9 | 36 | ASP | 2.2 |
| 74 | o8 | 36 | LYS | 2.2 |
| 3 | S1 | 139 | ALA | 2.2 |
| 3 | s1 | 188 | LEU | 2.2 |
| 18 | c6 | 118 | ILE | 2.2 |
| 19 | C7 | 17 | ILE | 2.2 |
| 30 | D8 | 28 | VAL | 2.2 |
| 34 | SR | 34 | LEU | 2.2 |
| 42 | L5 | 75 | LEU | 2.2 |
| 43 | L6 | 11 | PRO | 2.2 |
| 68 | O2 | 128 | LEU | 2.2 |
| 11 | s9 | 146 | PHE | 2.2 |
| 24 | D2 | 37 | PHE | 2.2 |
| 51 | m5 | 4 | TYR | 2.2 |
| 58 | n2 | 52 | ASN | 2.2 |
| 42 | l5 | 34 | LYS | 2.2 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 48 | M1 | 145 | LYS | 2.2 |
| 63 | n7 | 60 | LYS | 2.2 |
| 67 | O1 | 102 | LYS | 2.2 |
| 7 | s5 | 29 | ILE | 2.2 |
| 11 | s9 | 131 | GLN | 2.2 |
| 34 | SR | 130 | THR | 2.2 |
| 27 | d5 | 76 | ALA | 2.2 |
| 35 | sM | 26 | VAL | 2.2 |
| 45 | l8 | 203 | VAL | 2.2 |
| 58 | N2 | 11 | ILE | 2.2 |
| 59 | N3 | 101 | VAL | 2.2 |
| 63 | N7 | 42 | LEU | 2.2 |
| 40 | L3 | 46 | PHE | 2.2 |
| 42 | L5 | 54 | ARG | 2.2 |
| 36 | 5 | 800 | G | 2.2 |
| 3 | s1 | 120 | LEU | 2.2 |
| 7 | s5 | 68 | ILE | 2.2 |
| 14 | C2 | 69 | ALA | 2.2 |
| 22 | D0 | 17 | GLN | 2.2 |
| 27 | d5 | 88 | ILE | 2.2 |
| 35 | sM | 54 | PRO | 2.2 |
| 45 | l8 | 167 | PRO | 2.2 |
| 47 | M0 | 219 | ALA | 2.2 |
| 1 | 6 | 1379 | C | 2.2 |
| 40 | L3 | 6 | TYR | 2.2 |
| 62 | N6 | 115 | ARG | 2.2 |
| 55 | M9 | 53 | LYS | 2.2 |
| 60 | n4 | 129 | LYS | 2.2 |
| 67 | o1 | 76 | SER | 2.2 |
| 24 | d2 | 27 | ILE | 2.2 |
| 28 | d6 | 14 | GLY | 2.2 |
| 64 | N8 | 73 | LEU | 2.2 |
| 74 | O8 | 32 | ASN | 2.2 |
| 74 | O8 | 45 | VAL | 2.2 |
| 76 | q0 | 90 | ASN | 2.2 |
| 59 | N3 | 76 | ALA | 2.2 |
| 74 | o8 | 10 | GLN | 2.2 |
| 10 | S8 | 21 | PHE | 2.2 |
| 55 | m9 | 81 | ARG | 2.2 |
| 1 | 2 | 1011 | G | 2.2 |
| 27 | D5 | 101 | TYR | 2.2 |
| 45 | L8 | 122 | LYS | 2.2 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 76 | q0 | 128 | LYS | 2.2 |
| 22 | D0 | 83 | GLU | 2.2 |
| 7 | s5 | 134 | VAL | 2.2 |
| 8 | S6 | 49 | VAL | 2.2 |
| 36 | 5 | 362 | U | 2.2 |
| 67 | O1 | 16 | LEU | 2.2 |
| 80 | p0 | 210 | VAL | 2.2 |
| 30 | d8 | 45 | LYS | 2.2 |
| 45 | l8 | 98 | ARG | 2.2 |
| 66 | o0 | 105 | ALA | 2.2 |
| 11 | s9 | 154 | LYS | 2.2 |
| 12 | C0 | 66 | TYR | 2.2 |
| 64 | N8 | 111 | LYS | 2.2 |
| 8 | S6 | 109 | LEU | 2.2 |
| 42 | L5 | 65 | ILE | 2.2 |
| 74 | O8 | 5 | ILE | 2.2 |
| 20 | c8 | 56 | LYS | 2.2 |
| 42 | l5 | 296 | GLN | 2.2 |
| 44 | L7 | 135 | ALA | 2.2 |
| 1 | 2 | 837 | G | 2.2 |
| 7 | s5 | 140 | THR | 2.2 |
| 34 | sR | 165 | ASP | 2.2 |
| 36 | 1 | 1026 | A | 2.2 |
| 36 | 5 | 906 | A | 2.2 |
| 36 | 5 | 1564 | U | 2.2 |
| 12 | c0 | 76 | LEU | 2.2 |
| 20 | C8 | 119 | ILE | 2.2 |
| 21 | c9 | 42 | GLY | 2.2 |
| 34 | sR | 210 | LEU | 2.2 |
| 45 | L8 | 190 | VAL | 2.2 |
| 6 | S4 | 155 | LYS | 2.2 |
| 51 | m5 | 59 | PHE | 2.2 |
| 6 | S4 | 29 | PRO | 2.2 |
| 15 | c3 | 23 | PRO | 2.2 |
| 3 | s1 | 160 | HIS | 2.2 |
| 18 | c6 | 39 | VAL | 2.2 |
| 34 | sR | 211 | ILE | 2.2 |
| 42 | l5 | 52 | VAL | 2.2 |
| 42 | l5 | 169 | GLY | 2.2 |
| 48 | M1 | 91 | LEU | 2.2 |
| 63 | N7 | 57 | HIS | 2.2 |
| 8 | S6 | 186 | ARG | 2.2 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 1 | 6 | 194 | U | 2.2 |
| 14 | C2 | 90 | LYS | 2.2 |
| 33 | E1 | 152 | ALA | 2.2 |
| 36 | 1 | 318 | A | 2.2 |
| 36 | 5 | 329 | U | 2.2 |
| 46 | L9 | 90 | MET | 2.2 |
| 48 | m1 | 142 | LYS | 2.2 |
| 51 | M5 | 118 | SER | 2.2 |
| 72 | O6 | 78 | GLY | 2.2 |
| 13 | C1 | 16 | GLN | 2.2 |
| 34 | sR | 313 | TRP | 2.2 |
| 2 | s0 | 98 | ILE | 2.2 |
| 9 | S7 | 167 | GLU | 2.2 |
| 30 | D8 | 67 | ARG | 2.2 |
| 33 | e1 | 120 | GLU | 2.2 |
| 33 | e1 | 90 | LYS | 2.2 |
| 42 | L5 | 147 | ASP | 2.2 |
| 49 | M3 | 51 | LEU | 2.2 |
| 51 | m5 | 178 | HIS | 2.2 |
| 63 | n7 | 89 | VAL | 2.2 |
| 9 | s7 | 47 | ARG | 2.2 |
| 10 | S8 | 141 | ARG | 2.2 |
| 18 | c6 | 128 | LYS | 2.2 |
| 23 | D1 | 54 | ALA | 2.2 |
| 26 | D4 | 119 | PHE | 2.2 |
| 42 | L5 | 180 | PHE | 2.2 |
| 70 | O4 | 37 | LYS | 2.2 |
| 55 | M9 | 7 | GLN | 2.2 |
| 3 | s1 | 124 | ASN | 2.2 |
| 5 | S3 | 223 | LYS | 2.2 |
| 6 | S4 | 25 | GLY | 2.2 |
| 6 | S4 | 146 | THR | 2.2 |
| 7 | S5 | 190 | ILE | 2.2 |
| 10 | s8 | 104 | ILE | 2.2 |
| 14 | c2 | 46 | ARG | 2.2 |
| 18 | c6 | 5 | PRO | 2.2 |
| 26 | d4 | 27 | VAL | 2.2 |
| 34 | SR | 90 | ARG | 2.2 |
| 26 | d4 | 3 | ASP | 2.2 |
| 31 | D9 | 55 | PHE | 2.2 |
| 34 | SR | 61 | PHE | 2.2 |
| 67 | O1 | 15 | ASN | 2.2 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 34 | SR | 171 | SER | 2.2 |
| 3 | s1 | 155 | TYR | 2.2 |
| 38 | 4 | 110 | C | 2.2 |
| 2 | S0 | 54 | TRP | 2.2 |
| 6 | S4 | 136 | VAL | 2.2 |
| 8 | S6 | 74 | LYS | 2.2 |
| 19 | c7 | 24 | LEU | 2.2 |
| 49 | M3 | 58 | VAL | 2.2 |
| 9 | s7 | 60 | ILE | 2.2 |
| 16 | c4 | 27 | PHE | 2.2 |
| 24 | d2 | 125 | ILE | 2.2 |
| 61 | N5 | 109 | LYS | 2.2 |
| 62 | N6 | 50 | ILE | 2.2 |
| 63 | N7 | 15 | ARG | 2.2 |
| 24 | d2 | 128 | PHE | 2.2 |
| 63 | n7 | 131 | PHE | 2.2 |
| 9 | S7 | 59 | ALA | 2.2 |
| 19 | C7 | 55 | THR | 2.2 |
| 21 | C9 | 131 | ASP | 2.2 |
| 28 | D6 | 72 | HIS | 2.2 |
| 34 | SR | 319 | ASN | 2.2 |
| 63 | N7 | 79 | HIS | 2.2 |
| 72 | o6 | 69 | ALA | 2.2 |
| 14 | C2 | 88 | LEU | 2.2 |
| 21 | c9 | 114 | VAL | 2.2 |
| 24 | d2 | 126 | LEU | 2.2 |
| 32 | e0 | 45 | VAL | 2.2 |
| 45 | l8 | 200 | LEU | 2.2 |
| 55 | m9 | 173 | ARG | 2.2 |
| 57 | N1 | 151 | LEU | 2.2 |
| 6 | s4 | 251 | GLU | 2.2 |
| 62 | N6 | 3 | LYS | 2.2 |
| 64 | N8 | 54 | GLY | 2.2 |
| 11 | S9 | 130 | THR | 2.2 |
| 51 | m5 | 3 | ALA | 2.2 |
| 66 | O0 | 30 | THR | 2.2 |
| 3 | s1 | 218 | LEU | 2.2 |
| 1 | 6 | 238 | U | 2.2 |
| 6 | s4 | 18 | TRP | 2.2 |
| 6 | s4 | 191 | ARG | 2.2 |
| 33 | E1 | 139 | LEU | 2.2 |
| 48 | m1 | 133 | ARG | 2.2 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 61 | N5 | 22 | LYS | 2.2 |
| 62 | n6 | 57 | LEU | 2.2 |
| 14 | c2 | 76 | GLU | 2.2 |
| 34 | SR | 54 | PHE | 2.2 |
| 63 | n7 | 108 | GLU | 2.2 |
| 63 | N7 | 70 | PRO | 2.1 |
| 3 | S1 | 141 | ALA | 2.1 |
| 34 | SR | 284 | ALA | 2.1 |
| 47 | m0 | 218 | ALA | 2.1 |
| 59 | n3 | 60 | ALA | 2.1 |
| 3 | s1 | 26 | ARG | 2.1 |
| 11 | S9 | 133 | HIS | 2.1 |
| 11 | s9 | 85 | VAL | 2.1 |
| 31 | D9 | 36 | LEU | 2.1 |
| 51 | M5 | 65 | ARG | 2.1 |
| 51 | M5 | 126 | THR | 2.1 |
| 62 | N6 | 109 | LEU | 2.1 |
| 20 | c8 | 136 | GLN | 2.1 |
| 24 | D2 | 51 | GLU | 2.1 |
| 34 | SR | 251 | TRP | 2.1 |
| 38 | 4 | 142 | C | 2.1 |
| 71 | o5 | 118 | ILE | 2.1 |
| 14 | c2 | 51 | ALA | 2.1 |
| 42 | L5 | 181 | PRO | 2.1 |
| 3 | s1 | 231 | LEU | 2.1 |
| 11 | s9 | 68 | LYS | 2.1 |
| 12 | c0 | 56 | LYS | 2.1 |
| 5 | s3 | 174 | HIS | 2.1 |
| 6 | s4 | 254 | ARG | 2.1 |
| 42 | l5 | 5 | LYS | 2.1 |
| 45 | l8 | 69 | LEU | 2.1 |
| 57 | N1 | 20 | ARG | 2.1 |
| 59 | N3 | 93 | LEU | 2.1 |
| 34 | SR | 188 | ILE | 2.1 |
| 34 | sR | 54 | PHE | 2.1 |
| 42 | L5 | 142 | PHE | 2.1 |
| 60 | n4 | 90 | ILE | 2.1 |
| 10 | S8 | 51 | GLY | 2.1 |
| 33 | E1 | 112 | GLY | 2.1 |
| 42 | L5 | 295 | GLY | 2.1 |
| 80 | p0 | 40 | GLU | 2.1 |
| 1 | 6 | 511 | A | 2.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 34 | SR | 158 | PRO | 2.1 |
| 36 | 5 | 52 | A | 2.1 |
| 59 | N3 | 51 | ALA | 2.1 |
| 2 | s0 | 74 | VAL | 2.1 |
| 8 | S6 | 159 | ARG | 2.1 |
| 10 | s8 | 192 | TYR | 2.1 |
| 11 | s9 | 62 | ARG | 2.1 |
| 27 | D5 | 60 | VAL | 2.1 |
| 32 | e0 | 40 | TYR | 2.1 |
| 39 | l2 | 247 | ARG | 2.1 |
| 48 | M1 | 19 | LEU | 2.1 |
| 49 | M3 | 139 | LEU | 2.1 |
| 57 | n1 | 89 | LEU | 2.1 |
| 63 | N7 | 95 | VAL | 2.1 |
| 16 | c4 | 112 | ILE | 2.1 |
| 29 | d7 | 32 | PHE | 2.1 |
| 48 | M1 | 127 | PHE | 2.1 |
| 33 | e1 | 127 | GLY | 2.1 |
| 34 | sR | 181 | TRP | 2.1 |
| 59 | N3 | 22 | ILE | 2.1 |
| 36 | 1 | 3059 | G | 2.1 |
| 36 | 5 | 1586 | G | 2.1 |
| 38 | 4 | 102 | U | 2.1 |
| 45 | L8 | 228 | GLU | 2.1 |
| 80 | p0 | 189 | GLN | 2.1 |
| 11 | s9 | 108 | ARG | 2.1 |
| 45 | L8 | 149 | LYS | 2.1 |
| 16 | C4 | 14 | PHE | 2.1 |
| 21 | C9 | 18 | TYR | 2.1 |
| 26 | D4 | 18 | LEU | 2.1 |
| 67 | O1 | 33 | VAL | 2.1 |
| 72 | O6 | 77 | LEU | 2.1 |
| 2 | s0 | 157 | ASP | 2.1 |
| 18 | c6 | 6 | SER | 2.1 |
| 19 | C7 | 70 | SER | 2.1 |
| 34 | sR | 65 | SER | 2.1 |
| 42 | l5 | 151 | GLN | 2.1 |
| 45 | l8 | 90 | THR | 2.1 |
| 60 | n4 | 92 | GLU | 2.1 |
| 41 | L4 | 185 | LYS | 2.1 |
| 42 | L5 | 34 | LYS | 2.1 |
| 78 | Q2 | 22 | GLN | 2.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 1 | 6 | 25 | C | 2.1 |
| 5 | s3 | 3 | ALA | 2.1 |
| 11 | S9 | 174 | ARG | 2.1 |
| 34 | SR | 154 | VAL | 2.1 |
| 45 | l8 | 127 | PRO | 2.1 |
| 57 | n1 | 33 | VAL | 2.1 |
| 61 | N5 | 38 | LEU | 2.1 |
| 72 | O6 | 48 | ALA | 2.1 |
| 78 | q2 | 104 | LEU | 2.1 |
| 61 | n5 | 60 | TYR | 2.1 |
| 66 | O0 | 58 | TYR | 2.1 |
| 67 | o1 | 75 | ILE | 2.1 |
| 11 | S9 | 20 | GLU | 2.1 |
| 36 | 1 | 902 | G | 2.1 |
| 36 | 5 | 353 | G | 2.1 |
| 39 | l2 | 143 | GLU | 2.1 |
| 5 | S3 | 12 | VAL | 2.1 |
| 5 | S3 | 86 | LEU | 2.1 |
| 6 | s4 | 12 | LEU | 2.1 |
| 15 | c3 | 60 | VAL | 2.1 |
| 20 | c8 | 133 | VAL | 2.1 |
| 21 | c9 | 131 | ASP | 2.1 |
| 32 | e0 | 20 | LYS | 2.1 |
| 34 | sR | 246 | SER | 2.1 |
| 29 | d7 | 8 | LEU | 2.1 |
| 30 | D8 | 49 | ARG | 2.1 |
| 48 | m1 | 50 | ALA | 2.1 |
| 61 | N5 | 24 | LEU | 2.1 |
| 3 | S1 | 23 | PRO | 2.1 |
| 14 | c2 | 72 | ILE | 2.1 |
| 22 | D0 | 82 | TYR | 2.1 |
| 25 | D3 | 29 | TYR | 2.1 |
| 42 | L5 | 174 | PRO | 2.1 |
| 11 | s9 | 10 | LYS | 2.1 |
| 36 | 1 | 2541 | U | 2.1 |
| 41 | l4 | 192 | GLY | 2.1 |
| 5 | s3 | 149 | ALA | 2.1 |
| 6 | S4 | 36 | HIS | 2.1 |
| 6 | S4 | 220 | THR | 2.1 |
| 39 | l2 | 157 | VAL | 2.1 |
| 42 | L5 | 22 | ARG | 2.1 |
| 42 | L5 | 42 | ALA | 2.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 42 | l5 | 37 | VAL | 2.1 |
| 45 | L8 | 196 | ALA | 2.1 |
| 49 | m3 | 186 | ARG | 2.1 |
| 70 | O4 | 23 | VAL | 2.1 |
| 70 | o4 | 32 | ALA | 2.1 |
| 15 | C3 | 78 | ASN | 2.1 |
| 1 | 2 | 1778 | G | 2.1 |
| 12 | C0 | 11 | ILE | 2.1 |
| 22 | D0 | 90 | TYR | 2.1 |
| 36 | 5 | 1113 | G | 2.1 |
| 7 | s5 | 196 | GLU | 2.1 |
| 8 | S6 | 93 | LYS | 2.1 |
| 11 | s9 | 41 | GLU | 2.1 |
| 1 | 6 | 1226 | A | 2.1 |
| 1 | 6 | 1411 | A | 2.1 |
| 5 | s3 | 189 | MET | 2.1 |
| 6 | S4 | 84 | ALA | 2.1 |
| 20 | c8 | 52 | VAL | 2.1 |
| 31 | D9 | 56 | ARG | 2.1 |
| 31 | d9 | 56 | ARG | 2.1 |
| 54 | M8 | 76 | ALA | 2.1 |
| 80 | p0 | 202 | LEU | 2.1 |
| 72 | O6 | 27 | SER | 2.1 |
| 2 | s0 | 162 | CYS | 2.1 |
| 42 | l5 | 172 | TYR | 2.1 |
| 55 | M9 | 78 | TYR | 2.1 |
| 26 | D4 | 31 | ASN | 2.1 |
| 45 | L8 | 230 | LYS | 2.1 |
| 3 | s1 | 215 | VAL | 2.1 |
| 10 | S8 | 77 | ARG | 2.1 |
| 10 | S8 | 178 | ARG | 2.1 |
| 21 | C9 | 6 | VAL | 2.1 |
| 21 | c9 | 19 | ALA | 2.1 |
| 40 | l3 | 387 | LEU | 2.1 |
| 42 | l5 | 4 | GLN | 2.1 |
| 66 | O0 | 91 | SER | 2.1 |
| 74 | o8 | 11 | PHE | 2.1 |
| 11 | S9 | 43 | TYR | 2.1 |
| 7 | s5 | 84 | LYS | 2.1 |
| 7 | s5 | 106 | LYS | 2.1 |
| 12 | c0 | 35 | ILE | 2.1 |
| 27 | d5 | 102 | THR | 2.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 31 | D9 | 50 | ILE | 2.1 |
| 36 | 5 | 1354 | G | 2.1 |
| 52 | m6 | 184 | THR | 2.1 |
| 14 | C2 | 125 | ASN | 2.1 |
| 2 | S0 | 50 | VAL | 2.1 |
| 40 | L3 | 369 | ARG | 2.1 |
| 45 | L8 | 118 | GLU | 2.1 |
| 60 | N4 | 106 | GLU | 2.1 |
| 62 | N6 | 57 | LEU | 2.1 |
| 67 | O1 | 60 | TRP | 2.1 |
| 9 | s7 | 94 | ALA | 2.1 |
| 80 | p0 | 73 | PHE | 2.1 |
| 10 | S8 | 103 | GLN | 2.1 |
| 35 | sM | 39 | PRO | 2.1 |
| 42 | l5 | 38 | THR | 2.1 |
| 34 | SR | 290 | VAL | 2.1 |
| 34 | sR | 311 | ARG | 2.1 |
| 80 | p0 | 186 | THR | 2.1 |
| 18 | C6 | 44 | LEU | 2.1 |
| 19 | C7 | 57 | LEU | 2.1 |
| 27 | D5 | 42 | LEU | 2.1 |
| 42 | L5 | 125 | VAL | 2.1 |
| 42 | L5 | 169 | GLY | 2.1 |
| 47 | m0 | 152 | LEU | 2.1 |
| 66 | O0 | 88 | GLY | 2.1 |
| 74 | O8 | 31 | LEU | 2.1 |
| 80 | p0 | 44 | GLU | 2.1 |
| 80 | p0 | 74 | GLU | 2.1 |
| 6 | S4 | 54 | TYR | 2.1 |
| 14 | C2 | 89 | ILE | 2.1 |
| 21 | C9 | 75 | LYS | 2.1 |
| 36 | 1 | 2522 | G | 2.1 |
| 62 | n6 | 45 | ILE | 2.1 |
| 68 | O2 | 90 | LYS | 2.1 |
| 3 | S1 | 144 | ARG | 2.1 |
| 3 | s1 | 101 | HIS | 2.1 |
| 27 | D5 | 93 | SER | 2.1 |
| 36 | 1 | 3077 | A | 2.1 |
| 2 | s0 | 87 | LEU | 2.1 |
| 7 | S5 | 153 | GLY | 2.1 |
| 8 | S6 | 36 | VAL | 2.1 |
| 10 | S8 | 114 | GLU | 2.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 10 | S8 | 181 | GLY | 2.1 |
| 17 | c5 | 125 | PRO | 2.1 |
| 31 | d9 | 17 | GLY | 2.1 |
| 39 | L2 | 73 | GLU | 2.1 |
| 39 | l2 | 241 | ARG | 2.1 |
| 45 | l8 | 185 | ARG | 2.1 |
| 42 | L5 | 29 | ASP | 2.1 |
| 49 | m3 | 98 | ASP | 2.1 |
| 55 | m9 | 22 | VAL | 2.1 |
| 8 | S6 | 171 | LYS | 2.1 |
| 11 | s9 | 147 | MET | 2.1 |
| 35 | sM | 60 | ALA | 2.1 |
| 18 | c6 | 106 | LYS | 2.1 |
| 33 | e1 | 81 | LYS | 2.1 |
| 60 | N4 | 127 | LYS | 2.1 |
| 6 | s4 | 49 | ARG | 2.1 |
| 12 | C0 | 58 | GLN | 2.1 |
| 8 | S6 | 135 | PRO | 2.1 |
| 10 | s8 | 165 | LEU | 2.1 |
| 19 | C7 | 120 | SER | 2.1 |
| 25 | D3 | 42 | PRO | 2.1 |
| 27 | d5 | 63 | SER | 2.1 |
| 34 | sR | 25 | THR | 2.1 |
| 45 | l8 | 238 | LEU | 2.1 |
| 1 | 2 | 214 | G | 2.1 |
| 1 | 6 | 1225 | U | 2.1 |
| 3 | S1 | 94 | LYS | 2.1 |
| 3 | s1 | 50 | LYS | 2.1 |
| 36 | 1 | 2538 | U | 2.1 |
| 21 | C9 | 15 | ILE | 2.1 |
| 63 | N7 | 68 | ILE | 2.1 |
| 69 | O3 | 51 | TYR | 2.1 |
| 18 | C6 | 114 | ARG | 2.1 |
| 5 | s3 | 138 | VAL | 2.1 |
| 27 | D5 | 65 | LEU | 2.1 |
| 31 | d9 | 25 | SER | 2.1 |
| 41 | l4 | 190 | GLY | 2.1 |
| 45 | l8 | 93 | LEU | 2.1 |
| 21 | C9 | 14 | PHE | 2.1 |
| 10 | S8 | 53 | LYS | 2.1 |
| 45 | L8 | 70 | LYS | 2.1 |
| 51 | M5 | 136 | ASP | 2.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 55 | m9 | 49 | THR | 2.1 |
| 10 | S8 | 104 | ILE | 2.1 |
| 74 | O8 | 66 | ILE | 2.1 |
| 10 | S8 | 35 | ASN | 2.1 |
| 23 | D1 | 87 | ARG | 2.1 |
| 34 | SR | 102 | ARG | 2.1 |
| 49 | m3 | 91 | ARG | 2.1 |
| 2 | s0 | 158 | VAL | 2.1 |
| 7 | S5 | 133 | VAL | 2.1 |
| 3 | S1 | 154 | SER | 2.0 |
| 17 | C5 | 72 | LYS | 2.0 |
| 18 | C6 | 130 | GLY | 2.1 |
| 63 | n7 | 81 | LEU | 2.1 |
| 34 | sR | 158 | PRO | 2.0 |
| 36 | 5 | 361 | A | 2.0 |
| 58 | n2 | 71 | PHE | 2.1 |
| 63 | N7 | 94 | SER | 2.0 |
| 1 | 2 | 1486 | G | 2.0 |
| 6 | s4 | 249 | ALA | 2.0 |
| 36 | 1 | 330 | G | 2.0 |
| 67 | O1 | 17 | HIS | 2.0 |
| 34 | sR | 102 | ARG | 2.0 |
| 8 | s6 | 133 | LEU | 2.0 |
| 34 | SR | 315 | VAL | 2.0 |
| 3 | s1 | 235 | GLY | 2.0 |
| 45 | L8 | 111 | LYS | 2.0 |
| 72 | O6 | 46 | GLU | 2.0 |
| 8 | S6 | 86 | PRO | 2.0 |
| 14 | c2 | 87 | PRO | 2.0 |
| 17 | c5 | 53 | PRO | 2.0 |
| 19 | c7 | 120 | SER | 2.0 |
| 63 | n7 | 83 | THR | 2.0 |
| 36 | 5 | 357 | A | 2.0 |
| 48 | M1 | 148 | VAL | 2.0 |
| 67 | o1 | 109 | VAL | 2.0 |
| 7 | S5 | 204 | GLY | 2.0 |
| 7 | s5 | 48 | PHE | 2.0 |
| 45 | l8 | 91 | PHE | 2.0 |
| 51 | M5 | 130 | PHE | 2.0 |
| 53 | m7 | 80 | LYS | 2.0 |
| 1 | 6 | 648 | G | 2.0 |
| 1 | 6 | 1534 | G | 2.0 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 33 | e1 | 152 | ALA | 2.0 |
| 36 | 1 | 1538 | G | 2.0 |
| 36 | 5 | 1538 | G | 2.0 |
| 9 | s7 | 49 | ILE | 2.0 |
| 22 | D0 | 20 | ILE | 2.0 |
| 39 | L2 | 239 | ALA | 2.0 |
| 11 | s9 | 43 | TYR | 2.0 |
| 43 | l6 | 2 | SER | 2.0 |
| 57 | n1 | 65 | TYR | 2.0 |
| 62 | N6 | 16 | ARG | 2.0 |
| 17 | c5 | 124 | THR | 2.0 |
| 3 | s1 | 151 | LYS | 2.0 |
| 8 | s6 | 77 | LEU | 2.0 |
| 47 | M0 | 217 | PHE | 2.0 |
| 62 | n6 | 78 | PHE | 2.0 |
| 65 | N9 | 44 | LYS | 2.0 |
| 18 | c6 | 27 | GLY | 2.0 |
| 3 | S1 | 103 | MET | 2.0 |
| 6 | S4 | 145 | ARG | 2.0 |
| 7 | S5 | 29 | ILE | 2.0 |
| 7 | S5 | 102 | ARG | 2.0 |
| 22 | d0 | 22 | ILE | 2.0 |
| 33 | e1 | 146 | SER | 2.0 |
| 34 | sR | 294 | TRP | 2.0 |
| 49 | M3 | 50 | PRO | 2.0 |
| 57 | n1 | 88 | ARG | 2.0 |
| 7 | s5 | 42 | LEU | 2.0 |
| 9 | S7 | 16 | LEU | 2.0 |
| 33 | e1 | 139 | LEU | 2.0 |
| 34 | SR | 210 | LEU | 2.0 |
| 35 | sM | 87 | THR | 2.0 |
| 47 | m0 | 217 | PHE | 2.0 |
| 63 | n7 | 64 | LYS | 2.0 |
| 36 | 1 | 224 | C | 2.0 |
| 36 | 1 | 1541 | G | 2.0 |
| 36 | 5 | 2442 | G | 2.0 |
| 21 | c9 | 94 | ILE | 2.0 |
| 44 | L7 | 112 | ASN | 2.0 |
| 60 | n4 | 51 | TRP | 2.0 |
| 63 | n7 | 68 | ILE | 2.0 |
| 78 | Q2 | 33 | ALA | 2.0 |
| 3 | S1 | 160 | HIS | 2.0 |

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| Mol | Chain | Res | Type | RSRZ |
|-----|-------|------|------|------|
| 42 | l5 | 75 | LEU | 2.0 |
| 66 | O0 | 41 | LEU | 2.0 |
| 66 | O0 | 66 | LYS | 2.0 |
| 1 | 2 | 119 | A | 2.0 |
| 4 | s2 | 250 | GLN | 2.0 |
| 70 | O4 | 89 | ILE | 2.0 |
| 2 | S0 | 47 | VAL | 2.0 |
| 6 | S4 | 38 | LEU | 2.0 |
| 18 | C6 | 52 | LEU | 2.0 |
| 27 | d5 | 66 | VAL | 2.0 |
| 74 | O8 | 54 | LEU | 2.0 |
| 74 | o8 | 30 | LYS | 2.0 |
| 13 | C1 | 143 | SER | 2.0 |
| 19 | C7 | 13 | SER | 2.0 |
| 1 | 2 | 1100 | G | 2.0 |
| 1 | 6 | 261 | U | 2.0 |
| 8 | S6 | 35 | GLU | 2.0 |
| 26 | D4 | 39 | GLU | 2.0 |
| 36 | 5 | 1536 | G | 2.0 |
| 42 | l5 | 177 | GLU | 2.0 |
| 7 | s5 | 138 | THR | 2.0 |
| 29 | D7 | 52 | THR | 2.0 |
| 54 | M8 | 99 | THR | 2.0 |
| 68 | O2 | 63 | THR | 2.0 |
| 14 | c2 | 22 | VAL | 2.0 |
| 14 | c2 | 124 | LYS | 2.0 |
| 58 | N2 | 99 | LYS | 2.0 |
| 3 | s1 | 24 | PHE | 2.0 |
| 71 | o5 | 41 | LEU | 2.0 |
| 78 | q2 | 70 | LEU | 2.0 |
| 26 | d4 | 34 | ASN | 2.0 |
| 1 | 2 | 993 | A | 2.0 |
| 10 | S8 | 146 | ARG | 2.0 |
| 34 | sR | 35 | SER | 2.0 |
| 36 | 5 | 817 | A | 2.0 |

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

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates i

There are no monosaccharides in this entry.

6.4 Ligands i

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

| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|-------|------|----------------------------|-------|
| 81 | MG | 1 | 3802 | 1/1 | -0.00 | 0.59 | 133,133,133,133 | 0 |
| 81 | MG | 1 | 3804 | 1/1 | 0.15 | 0.82 | 128,128,128,128 | 0 |
| 81 | MG | 2 | 1985 | 1/1 | 0.26 | 0.83 | 133,133,133,133 | 0 |
| 81 | MG | 3 | 201 | 1/1 | 0.32 | 1.44 | 102,102,102,102 | 0 |
| 81 | MG | 1 | 3723 | 1/1 | 0.33 | 0.79 | 119,119,119,119 | 0 |
| 81 | MG | 2 | 1986 | 1/1 | 0.41 | 0.93 | 139,139,139,139 | 0 |
| 81 | MG | 5 | 3807 | 1/1 | 0.41 | 0.76 | 145,145,145,145 | 0 |
| 81 | MG | 5 | 3673 | 1/1 | 0.42 | 0.34 | 132,132,132,132 | 0 |
| 81 | MG | 5 | 3792 | 1/1 | 0.43 | 0.42 | 108,108,108,108 | 0 |
| 81 | MG | 5 | 3713 | 1/1 | 0.46 | 0.54 | 89,89,89,89 | 0 |
| 81 | MG | 4 | 215 | 1/1 | 0.47 | 0.66 | 133,133,133,133 | 0 |
| 81 | MG | 2 | 1995 | 1/1 | 0.48 | 1.15 | 123,123,123,123 | 0 |
| 81 | MG | 5 | 3805 | 1/1 | 0.49 | 0.28 | 161,161,161,161 | 0 |
| 81 | MG | 13 | 403 | 1/1 | 0.49 | 0.83 | 106,106,106,106 | 0 |
| 81 | MG | 6 | 1966 | 1/1 | 0.50 | 0.15 | 140,140,140,140 | 0 |
| 81 | MG | 1 | 3780 | 1/1 | 0.50 | 0.68 | 104,104,104,104 | 0 |
| 81 | MG | 5 | 3838 | 1/1 | 0.51 | 0.59 | 101,101,101,101 | 0 |
| 81 | MG | 5 | 3677 | 1/1 | 0.51 | 1.34 | 112,112,112,112 | 0 |
| 81 | MG | 3 | 202 | 1/1 | 0.51 | 0.78 | 133,133,133,133 | 0 |
| 81 | MG | 5 | 3822 | 1/1 | 0.53 | 0.51 | 105,105,105,105 | 0 |
| 81 | MG | 6 | 1951 | 1/1 | 0.54 | 0.08 | 224,224,224,224 | 0 |
| 81 | MG | 6 | 1997 | 1/1 | 0.54 | 1.23 | 111,111,111,111 | 0 |
| 81 | MG | 1 | 3612 | 1/1 | 0.55 | 0.51 | 91,91,91,91 | 0 |
| 81 | MG | 4 | 202 | 1/1 | 0.56 | 1.44 | 131,131,131,131 | 0 |
| 81 | MG | 1 | 3691 | 1/1 | 0.57 | 0.38 | 152,152,152,152 | 0 |
| 81 | MG | 1 | 3769 | 1/1 | 0.58 | 0.52 | 115,115,115,115 | 0 |
| 81 | MG | 5 | 3789 | 1/1 | 0.59 | 1.25 | 102,102,102,102 | 0 |
| 81 | MG | 6 | 2009 | 1/1 | 0.59 | 0.59 | 98,98,98,98 | 0 |
| 81 | MG | 5 | 3769 | 1/1 | 0.59 | 0.33 | 106,106,106,106 | 0 |
| 81 | MG | 5 | 3834 | 1/1 | 0.61 | 0.42 | 98,98,98,98 | 0 |
| 81 | MG | 5 | 3522 | 1/1 | 0.62 | 0.21 | 132,132,132,132 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 81 | MG | 5 | 3724 | 1/1 | 0.62 | 0.42 | 98,98,98,98 | 0 |
| 81 | MG | 5 | 3779 | 1/1 | 0.63 | 0.52 | 106,106,106,106 | 0 |
| 81 | MG | 7 | 207 | 1/1 | 0.64 | 1.17 | 99,99,99,99 | 0 |
| 81 | MG | 4 | 222 | 1/1 | 0.67 | 0.67 | 123,123,123,123 | 0 |
| 81 | MG | 5 | 3519 | 1/1 | 0.68 | 0.38 | 122,122,122,122 | 0 |
| 81 | MG | 1 | 3578 | 1/1 | 0.68 | 0.62 | 109,109,109,109 | 0 |
| 81 | MG | 2 | 1999 | 1/1 | 0.68 | 0.97 | 104,104,104,104 | 0 |
| 81 | MG | 2 | 1937 | 1/1 | 0.69 | 1.36 | 120,120,120,120 | 0 |
| 81 | MG | 1 | 3671 | 1/1 | 0.69 | 0.24 | 118,118,118,118 | 0 |
| 81 | MG | 5 | 3812 | 1/1 | 0.69 | 2.21 | 90,90,90,90 | 0 |
| 81 | MG | 1 | 3689 | 1/1 | 0.70 | 0.30 | 141,141,141,141 | 0 |
| 81 | MG | 1 | 3663 | 1/1 | 0.70 | 0.41 | 101,101,101,101 | 0 |
| 81 | MG | 1 | 3514 | 1/1 | 0.71 | 0.19 | 144,144,144,144 | 0 |
| 81 | MG | 1 | 3700 | 1/1 | 0.71 | 0.89 | 97,97,97,97 | 0 |
| 81 | MG | 1 | 3733 | 1/1 | 0.71 | 0.60 | 110,110,110,110 | 0 |
| 81 | MG | 1 | 3791 | 1/1 | 0.71 | 0.99 | 107,107,107,107 | 0 |
| 81 | MG | 1 | 3441 | 1/1 | 0.71 | 0.50 | 108,108,108,108 | 0 |
| 81 | MG | 5 | 3525 | 1/1 | 0.72 | 0.35 | 128,128,128,128 | 0 |
| 81 | MG | 1 | 3721 | 1/1 | 0.72 | 0.93 | 86,86,86,86 | 0 |
| 81 | MG | M7 | 205 | 1/1 | 0.72 | 0.64 | 101,101,101,101 | 0 |
| 81 | MG | 5 | 3804 | 1/1 | 0.72 | 0.32 | 168,168,168,168 | 0 |
| 81 | MG | 5 | 3491 | 1/1 | 0.72 | 0.41 | 108,108,108,108 | 0 |
| 81 | MG | 1 | 3744 | 1/1 | 0.72 | 0.49 | 111,111,111,111 | 0 |
| 81 | MG | 1 | 3579 | 1/1 | 0.73 | 0.54 | 120,120,120,120 | 0 |
| 81 | MG | 6 | 1972 | 1/1 | 0.73 | 0.46 | 136,136,136,136 | 0 |
| 81 | MG | 5 | 3684 | 1/1 | 0.74 | 0.44 | 125,125,125,125 | 0 |
| 81 | MG | 4 | 206 | 1/1 | 0.74 | 0.78 | 97,97,97,97 | 0 |
| 81 | MG | 1 | 3553 | 1/1 | 0.74 | 1.69 | 97,97,97,97 | 0 |
| 81 | MG | 5 | 3786 | 1/1 | 0.75 | 0.38 | 110,110,110,110 | 0 |
| 81 | MG | 1 | 3609 | 1/1 | 0.75 | 0.75 | 98,98,98,98 | 0 |
| 81 | MG | 5 | 3617 | 1/1 | 0.75 | 0.43 | 127,127,127,127 | 0 |
| 81 | MG | 1 | 3523 | 1/1 | 0.76 | 0.56 | 114,114,114,114 | 0 |
| 81 | MG | 5 | 3716 | 1/1 | 0.76 | 0.90 | 66,66,66,66 | 0 |
| 81 | MG | 5 | 3672 | 1/1 | 0.76 | 0.92 | 119,119,119,119 | 0 |
| 81 | MG | 1 | 3630 | 1/1 | 0.76 | 0.64 | 78,78,78,78 | 0 |
| 81 | MG | 5 | 3693 | 1/1 | 0.76 | 1.60 | 95,95,95,95 | 0 |
| 81 | MG | 5 | 3777 | 1/1 | 0.77 | 0.26 | 91,91,91,91 | 0 |
| 81 | MG | 5 | 3637 | 1/1 | 0.77 | 0.27 | 122,122,122,122 | 0 |
| 81 | MG | 1 | 3783 | 1/1 | 0.77 | 0.68 | 140,140,140,140 | 0 |
| 81 | MG | 1 | 3771 | 1/1 | 0.77 | 0.54 | 82,82,82,82 | 0 |
| 81 | MG | O3 | 201 | 1/1 | 0.77 | 0.75 | 88,88,88,88 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 81 | MG | 5 | 3468 | 1/1 | 0.77 | 0.37 | 96,96,96,96 | 0 |
| 81 | MG | 5 | 3840 | 1/1 | 0.77 | 0.52 | 98,98,98,98 | 0 |
| 81 | MG | 2 | 1966 | 1/1 | 0.78 | 0.21 | 152,152,152,152 | 0 |
| 81 | MG | 1 | 3732 | 1/1 | 0.79 | 0.35 | 91,91,91,91 | 0 |
| 81 | MG | 5 | 3465 | 1/1 | 0.79 | 0.50 | 83,83,83,83 | 0 |
| 81 | MG | 5 | 3567 | 1/1 | 0.79 | 0.43 | 88,88,88,88 | 0 |
| 81 | MG | 1 | 3748 | 1/1 | 0.79 | 0.41 | 102,102,102,102 | 0 |
| 81 | MG | 5 | 3798 | 1/1 | 0.80 | 1.05 | 88,88,88,88 | 0 |
| 81 | MG | M4 | 201 | 1/1 | 0.80 | 0.18 | 135,135,135,135 | 0 |
| 81 | MG | 5 | 3824 | 1/1 | 0.81 | 1.49 | 98,98,98,98 | 0 |
| 81 | MG | 1 | 3517 | 1/1 | 0.81 | 0.73 | 124,124,124,124 | 0 |
| 81 | MG | 5 | 3813 | 1/1 | 0.81 | 0.54 | 104,104,104,104 | 0 |
| 81 | MG | 5 | 3764 | 1/1 | 0.81 | 0.28 | 114,114,114,114 | 0 |
| 81 | MG | 5 | 3632 | 1/1 | 0.81 | 0.37 | 118,118,118,118 | 0 |
| 81 | MG | Q2 | 502 | 1/1 | 0.81 | 0.38 | 122,122,122,122 | 0 |
| 81 | MG | 5 | 3604 | 1/1 | 0.81 | 1.15 | 96,96,96,96 | 0 |
| 81 | MG | m7 | 205 | 1/1 | 0.81 | 0.35 | 77,77,77,77 | 0 |
| 81 | MG | 1 | 3798 | 1/1 | 0.81 | 0.38 | 85,85,85,85 | 0 |
| 81 | MG | 5 | 3714 | 1/1 | 0.81 | 0.45 | 134,134,134,134 | 0 |
| 81 | MG | 1 | 3713 | 1/1 | 0.82 | 0.69 | 133,133,133,133 | 0 |
| 81 | MG | 5 | 3513 | 1/1 | 0.82 | 0.84 | 85,85,85,85 | 0 |
| 81 | MG | C4 | 201 | 1/1 | 0.82 | 0.06 | 176,176,176,176 | 0 |
| 81 | MG | 5 | 3467 | 1/1 | 0.82 | 0.81 | 106,106,106,106 | 0 |
| 81 | MG | 5 | 3613 | 1/1 | 0.82 | 0.33 | 105,105,105,105 | 0 |
| 81 | MG | 6 | 1901 | 1/1 | 0.82 | 0.49 | 122,122,122,122 | 0 |
| 81 | MG | 1 | 3513 | 1/1 | 0.82 | 0.71 | 139,139,139,139 | 0 |
| 81 | MG | 5 | 3766 | 1/1 | 0.82 | 0.42 | 103,103,103,103 | 0 |
| 81 | MG | 6 | 1963 | 1/1 | 0.82 | 0.12 | 197,197,197,197 | 0 |
| 81 | MG | 6 | 1953 | 1/1 | 0.82 | 0.33 | 171,171,171,171 | 0 |
| 81 | MG | 1 | 3622 | 1/1 | 0.82 | 0.41 | 80,80,80,80 | 0 |
| 81 | MG | 2 | 2009 | 1/1 | 0.82 | 1.25 | 110,110,110,110 | 0 |
| 81 | MG | 5 | 3691 | 1/1 | 0.82 | 0.52 | 91,91,91,91 | 0 |
| 81 | MG | 5 | 3829 | 1/1 | 0.83 | 0.48 | 124,124,124,124 | 0 |
| 81 | MG | M7 | 203 | 1/1 | 0.83 | 0.38 | 85,85,85,85 | 0 |
| 81 | MG | 1 | 3701 | 1/1 | 0.84 | 1.50 | 96,96,96,96 | 0 |
| 81 | MG | 5 | 3433 | 1/1 | 0.84 | 0.33 | 83,83,83,83 | 0 |
| 81 | MG | 5 | 3768 | 1/1 | 0.84 | 0.54 | 115,115,115,115 | 0 |
| 81 | MG | o3 | 202 | 1/1 | 0.84 | 0.32 | 102,102,102,102 | 0 |
| 81 | MG | 1 | 3586 | 1/1 | 0.84 | 0.26 | 145,145,145,145 | 0 |
| 81 | MG | 5 | 3642 | 1/1 | 0.84 | 0.23 | 116,116,116,116 | 0 |
| 81 | MG | 5 | 3785 | 1/1 | 0.84 | 0.12 | 144,144,144,144 | 0 |
| 81 | MG | 1 | 3658 | 1/1 | 0.84 | 0.11 | 204,204,204,204 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 81 | MG | 5 | 3633 | 1/1 | 0.85 | 0.24 | 98,98,98,98 | 0 |
| 81 | MG | 1 | 3479 | 1/1 | 0.85 | 0.34 | 122,122,122,122 | 0 |
| 81 | MG | 2 | 1912 | 1/1 | 0.85 | 0.26 | 147,147,147,147 | 0 |
| 81 | MG | 1 | 3500 | 1/1 | 0.85 | 0.45 | 102,102,102,102 | 0 |
| 81 | MG | 5 | 3753 | 1/1 | 0.85 | 0.68 | 117,117,117,117 | 0 |
| 81 | MG | 2 | 1934 | 1/1 | 0.85 | 0.62 | 128,128,128,128 | 0 |
| 81 | MG | 2 | 1993 | 1/1 | 0.85 | 0.28 | 121,121,121,121 | 0 |
| 81 | MG | 5 | 3774 | 1/1 | 0.85 | 0.20 | 98,98,98,98 | 0 |
| 81 | MG | O2 | 203 | 1/1 | 0.85 | 0.30 | 92,92,92,92 | 0 |
| 81 | MG | 1 | 3750 | 1/1 | 0.85 | 0.23 | 169,169,169,169 | 0 |
| 81 | MG | 1 | 3737 | 1/1 | 0.86 | 0.34 | 143,143,143,143 | 0 |
| 81 | MG | l3 | 402 | 1/1 | 0.86 | 0.34 | 91,91,91,91 | 0 |
| 81 | MG | 2 | 1979 | 1/1 | 0.86 | 0.44 | 147,147,147,147 | 0 |
| 81 | MG | 2 | 1925 | 1/1 | 0.86 | 0.26 | 141,141,141,141 | 0 |
| 81 | MG | 5 | 3698 | 1/1 | 0.86 | 0.39 | 80,80,80,80 | 0 |
| 81 | MG | 5 | 3579 | 1/1 | 0.86 | 0.68 | 102,102,102,102 | 0 |
| 81 | MG | 6 | 1969 | 1/1 | 0.86 | 0.06 | 181,181,181,181 | 0 |
| 81 | MG | 1 | 3677 | 1/1 | 0.86 | 0.44 | 97,97,97,97 | 0 |
| 81 | MG | 5 | 3751 | 1/1 | 0.86 | 0.46 | 87,87,87,87 | 0 |
| 81 | MG | 5 | 3739 | 1/1 | 0.87 | 0.50 | 83,83,83,83 | 0 |
| 81 | MG | 8 | 211 | 1/1 | 0.87 | 0.53 | 110,110,110,110 | 0 |
| 81 | MG | 8 | 214 | 1/1 | 0.87 | 0.43 | 113,113,113,113 | 0 |
| 81 | MG | 2 | 2011 | 1/1 | 0.87 | 0.32 | 93,93,93,93 | 0 |
| 81 | MG | 4 | 214 | 1/1 | 0.87 | 0.76 | 147,147,147,147 | 0 |
| 81 | MG | o7 | 506 | 1/1 | 0.87 | 0.47 | 104,104,104,104 | 0 |
| 81 | MG | 1 | 3550 | 1/1 | 0.87 | 1.51 | 94,94,94,94 | 0 |
| 81 | MG | 6 | 1940 | 1/1 | 0.87 | 0.45 | 115,115,115,115 | 0 |
| 81 | MG | 5 | 3640 | 1/1 | 0.87 | 0.23 | 84,84,84,84 | 0 |
| 81 | MG | 2 | 1914 | 1/1 | 0.88 | 0.17 | 195,195,195,195 | 0 |
| 81 | MG | 1 | 3654 | 1/1 | 0.88 | 0.43 | 95,95,95,95 | 0 |
| 81 | MG | 2 | 1935 | 1/1 | 0.88 | 0.27 | 147,147,147,147 | 0 |
| 81 | MG | l7 | 302 | 1/1 | 0.88 | 0.44 | 93,93,93,93 | 0 |
| 81 | MG | 1 | 3598 | 1/1 | 0.88 | 0.37 | 101,101,101,101 | 0 |
| 82 | GET | 6 | 2015 | 34/34 | 0.88 | 0.28 | 145,145,145,145 | 0 |
| 81 | MG | 6 | 1986 | 1/1 | 0.88 | 0.85 | 91,91,91,91 | 0 |
| 81 | MG | 5 | 3527 | 1/1 | 0.88 | 0.40 | 116,116,116,116 | 0 |
| 81 | MG | 1 | 3717 | 1/1 | 0.88 | 0.14 | 116,116,116,116 | 0 |
| 81 | MG | 1 | 3710 | 1/1 | 0.88 | 0.43 | 118,118,118,118 | 0 |
| 81 | MG | 6 | 1932 | 1/1 | 0.88 | 0.29 | 120,120,120,120 | 0 |
| 81 | MG | 2 | 1920 | 1/1 | 0.88 | 0.43 | 162,162,162,162 | 0 |
| 81 | MG | 6 | 1991 | 1/1 | 0.88 | 0.13 | 198,198,198,198 | 0 |
| 81 | MG | 1 | 3653 | 1/1 | 0.88 | 0.71 | 98,98,98,98 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 81 | MG | 2 | 1996 | 1/1 | 0.89 | 1.19 | 103,103,103,103 | 0 |
| 81 | MG | 6 | 1924 | 1/1 | 0.89 | 0.42 | 109,109,109,109 | 0 |
| 81 | MG | 2 | 1974 | 1/1 | 0.89 | 0.27 | 137,137,137,137 | 0 |
| 81 | MG | 5 | 3589 | 1/1 | 0.89 | 0.44 | 88,88,88,88 | 0 |
| 81 | MG | 5 | 3428 | 1/1 | 0.89 | 0.37 | 93,93,93,93 | 0 |
| 81 | MG | 6 | 1994 | 1/1 | 0.89 | 0.10 | 175,175,175,175 | 0 |
| 81 | MG | 1 | 3681 | 1/1 | 0.89 | 0.75 | 128,128,128,128 | 0 |
| 81 | MG | 1 | 3615 | 1/1 | 0.89 | 0.38 | 93,93,93,93 | 0 |
| 81 | MG | 5 | 3799 | 1/1 | 0.89 | 0.34 | 91,91,91,91 | 0 |
| 81 | MG | 1 | 3716 | 1/1 | 0.89 | 1.18 | 104,104,104,104 | 0 |
| 81 | MG | 1 | 3422 | 1/1 | 0.89 | 0.33 | 129,129,129,129 | 0 |
| 81 | MG | 1 | 3456 | 1/1 | 0.89 | 0.36 | 78,78,78,78 | 0 |
| 81 | MG | 1 | 3699 | 1/1 | 0.89 | 0.43 | 126,126,126,126 | 0 |
| 81 | MG | 5 | 3430 | 1/1 | 0.89 | 0.28 | 100,100,100,100 | 0 |
| 81 | MG | 2 | 1959 | 1/1 | 0.90 | 0.27 | 151,151,151,151 | 0 |
| 81 | MG | 1 | 3793 | 1/1 | 0.90 | 0.36 | 111,111,111,111 | 1 |
| 81 | MG | 5 | 3556 | 1/1 | 0.90 | 0.10 | 106,106,106,106 | 1 |
| 81 | MG | 5 | 3520 | 1/1 | 0.90 | 0.12 | 144,144,144,144 | 0 |
| 81 | MG | 2 | 1906 | 1/1 | 0.90 | 0.27 | 155,155,155,155 | 0 |
| 81 | MG | 6 | 2004 | 1/1 | 0.90 | 0.83 | 124,124,124,124 | 0 |
| 81 | MG | L3 | 402 | 1/1 | 0.90 | 0.23 | 128,128,128,128 | 0 |
| 81 | MG | 2 | 2001 | 1/1 | 0.90 | 0.52 | 109,109,109,109 | 0 |
| 81 | MG | 4 | 212 | 1/1 | 0.90 | 0.30 | 142,142,142,142 | 0 |
| 81 | MG | 5 | 3574 | 1/1 | 0.90 | 0.46 | 107,107,107,107 | 0 |
| 81 | MG | 2 | 1931 | 1/1 | 0.90 | 0.47 | 140,140,140,140 | 0 |
| 81 | MG | 7 | 205 | 1/1 | 0.90 | 0.29 | 154,154,154,154 | 0 |
| 81 | MG | 2 | 1903 | 1/1 | 0.91 | 0.19 | 201,201,201,201 | 0 |
| 82 | GET | 1 | 3809 | 34/34 | 0.91 | 0.43 | 101,101,101,101 | 0 |
| 82 | GET | n6 | 201 | 34/34 | 0.91 | 0.23 | 128,128,128,128 | 0 |
| 81 | MG | 5 | 3815 | 1/1 | 0.91 | 0.79 | 85,85,85,85 | 0 |
| 81 | MG | 6 | 1999 | 1/1 | 0.91 | 0.63 | 206,206,206,206 | 0 |
| 81 | MG | 1 | 3770 | 1/1 | 0.91 | 0.35 | 135,135,135,135 | 0 |
| 81 | MG | 5 | 3508 | 1/1 | 0.91 | 0.20 | 107,107,107,107 | 0 |
| 81 | MG | O7 | 102 | 1/1 | 0.91 | 0.30 | 121,121,121,121 | 0 |
| 82 | GET | 6 | 2014 | 34/34 | 0.91 | 0.24 | 132,132,132,132 | 0 |
| 82 | GET | 5 | 3851 | 34/34 | 0.91 | 0.28 | 154,154,154,154 | 0 |
| 81 | MG | 5 | 3731 | 1/1 | 0.92 | 0.34 | 97,97,97,97 | 0 |
| 81 | MG | 1 | 3474 | 1/1 | 0.92 | 0.45 | 136,136,136,136 | 0 |
| 81 | MG | 1 | 3599 | 1/1 | 0.92 | 0.26 | 87,87,87,87 | 0 |
| 81 | MG | 1 | 3734 | 1/1 | 0.92 | 0.17 | 120,120,120,120 | 0 |
| 81 | MG | 1 | 3805 | 1/1 | 0.92 | 0.56 | 154,154,154,154 | 0 |
| 81 | MG | 5 | 3538 | 1/1 | 0.92 | 0.50 | 99,99,99,99 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 81 | MG | 6 | 1941 | 1/1 | 0.92 | 0.10 | 145,145,145,145 | 0 |
| 81 | MG | 5 | 3650 | 1/1 | 0.92 | 0.30 | 79,79,79,79 | 0 |
| 81 | MG | 2 | 2008 | 1/1 | 0.92 | 1.13 | 117,117,117,117 | 0 |
| 81 | MG | 1 | 3542 | 1/1 | 0.92 | 0.23 | 127,127,127,127 | 0 |
| 81 | MG | 5 | 3576 | 1/1 | 0.92 | 0.15 | 125,125,125,125 | 0 |
| 81 | MG | 1 | 3537 | 1/1 | 0.92 | 0.18 | 143,143,143,143 | 0 |
| 82 | GET | 2 | 2012 | 34/34 | 0.92 | 0.23 | 131,131,131,131 | 0 |
| 81 | MG | 1 | 3452 | 1/1 | 0.92 | 0.35 | 93,93,93,93 | 0 |
| 81 | MG | 1 | 3667 | 1/1 | 0.92 | 0.16 | 110,110,110,110 | 0 |
| 83 | ZN | e1 | 501 | 1/1 | 0.92 | 0.22 | 282,282,282,282 | 0 |
| 81 | MG | 6 | 1917 | 1/1 | 0.92 | 0.46 | 122,122,122,122 | 0 |
| 81 | MG | 4 | 207 | 1/1 | 0.93 | 0.44 | 132,132,132,132 | 0 |
| 81 | MG | 5 | 3536 | 1/1 | 0.93 | 0.34 | 89,89,89,89 | 0 |
| 81 | MG | 6 | 1943 | 1/1 | 0.93 | 0.14 | 157,157,157,157 | 0 |
| 81 | MG | 7 | 202 | 1/1 | 0.93 | 0.12 | 152,152,152,152 | 0 |
| 81 | MG | 1 | 3604 | 1/1 | 0.93 | 0.20 | 94,94,94,94 | 0 |
| 81 | MG | 2 | 1932 | 1/1 | 0.93 | 0.27 | 137,137,137,137 | 0 |
| 81 | MG | 5 | 3584 | 1/1 | 0.93 | 0.30 | 88,88,88,88 | 0 |
| 81 | MG | 1 | 3649 | 1/1 | 0.93 | 0.39 | 92,92,92,92 | 0 |
| 81 | MG | 2 | 1984 | 1/1 | 0.93 | 0.08 | 192,192,192,192 | 0 |
| 81 | MG | 1 | 3515 | 1/1 | 0.93 | 0.16 | 147,147,147,147 | 0 |
| 81 | MG | 5 | 3757 | 1/1 | 0.93 | 0.20 | 115,115,115,115 | 0 |
| 81 | MG | 5 | 3630 | 1/1 | 0.93 | 0.33 | 86,86,86,86 | 0 |
| 81 | MG | 5 | 3658 | 1/1 | 0.93 | 0.12 | 117,117,117,117 | 0 |
| 81 | MG | 5 | 3477 | 1/1 | 0.93 | 0.23 | 95,95,95,95 | 0 |
| 83 | ZN | q2 | 501 | 1/1 | 0.93 | 0.10 | 167,167,167,167 | 0 |
| 81 | MG | 4 | 221 | 1/1 | 0.93 | 0.19 | 137,137,137,137 | 0 |
| 81 | MG | 1 | 3556 | 1/1 | 0.93 | 0.71 | 88,88,88,88 | 0 |
| 81 | MG | 2 | 1969 | 1/1 | 0.93 | 0.75 | 140,140,140,140 | 0 |
| 81 | MG | 5 | 3561 | 1/1 | 0.93 | 0.44 | 137,137,137,137 | 0 |
| 81 | MG | 5 | 3439 | 1/1 | 0.93 | 0.48 | 87,87,87,87 | 0 |
| 81 | MG | 1 | 3415 | 1/1 | 0.93 | 0.90 | 103,103,103,103 | 0 |
| 81 | MG | M7 | 206 | 1/1 | 0.93 | 0.31 | 93,93,93,93 | 0 |
| 81 | MG | 2 | 1956 | 1/1 | 0.94 | 0.12 | 130,130,130,130 | 0 |
| 81 | MG | 5 | 3727 | 1/1 | 0.94 | 0.57 | 103,103,103,103 | 0 |
| 81 | MG | 5 | 3689 | 1/1 | 0.94 | 0.91 | 89,89,89,89 | 0 |
| 81 | MG | 1 | 3594 | 1/1 | 0.94 | 0.42 | 89,89,89,89 | 0 |
| 81 | MG | 1 | 3705 | 1/1 | 0.94 | 0.41 | 114,114,114,114 | 0 |
| 81 | MG | 5 | 3518 | 1/1 | 0.94 | 0.32 | 128,128,128,128 | 0 |
| 81 | MG | 1 | 3483 | 1/1 | 0.94 | 0.23 | 150,150,150,150 | 0 |
| 81 | MG | 5 | 3577 | 1/1 | 0.94 | 0.22 | 129,129,129,129 | 0 |
| 81 | MG | 6 | 1970 | 1/1 | 0.94 | 0.31 | 123,123,123,123 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 81 | MG | 5 | 3649 | 1/1 | 0.94 | 0.53 | 151,151,151,151 | 0 |
| 81 | MG | 1 | 3475 | 1/1 | 0.94 | 0.56 | 139,139,139,139 | 0 |
| 81 | MG | 5 | 3694 | 1/1 | 0.94 | 0.38 | 89,89,89,89 | 0 |
| 81 | MG | 1 | 3522 | 1/1 | 0.94 | 0.19 | 104,104,104,104 | 1 |
| 81 | MG | 4 | 209 | 1/1 | 0.94 | 0.27 | 111,111,111,111 | 0 |
| 81 | MG | 1 | 3477 | 1/1 | 0.94 | 0.35 | 138,138,138,138 | 0 |
| 81 | MG | C8 | 201 | 1/1 | 0.94 | 0.10 | 161,161,161,161 | 0 |
| 81 | MG | 1 | 3600 | 1/1 | 0.94 | 0.19 | 87,87,87,87 | 0 |
| 81 | MG | 6 | 1959 | 1/1 | 0.94 | 0.65 | 165,165,165,165 | 0 |
| 81 | MG | 1 | 3624 | 1/1 | 0.94 | 0.17 | 86,86,86,86 | 0 |
| 81 | MG | 1 | 3528 | 1/1 | 0.94 | 0.35 | 105,105,105,105 | 0 |
| 81 | MG | 5 | 3541 | 1/1 | 0.94 | 0.26 | 91,91,91,91 | 0 |
| 81 | MG | 1 | 3538 | 1/1 | 0.94 | 0.38 | 153,153,153,153 | 0 |
| 81 | MG | 5 | 3631 | 1/1 | 0.94 | 0.43 | 99,99,99,99 | 0 |
| 81 | MG | 1 | 3406 | 1/1 | 0.94 | 0.11 | 110,110,110,110 | 0 |
| 81 | MG | 5 | 3599 | 1/1 | 0.94 | 0.23 | 95,95,95,95 | 0 |
| 81 | MG | 1 | 3577 | 1/1 | 0.94 | 0.36 | 109,109,109,109 | 0 |
| 81 | MG | 5 | 3651 | 1/1 | 0.94 | 0.39 | 91,91,91,91 | 0 |
| 81 | MG | 5 | 3610 | 1/1 | 0.95 | 0.13 | 106,106,106,106 | 0 |
| 81 | MG | 6 | 1987 | 1/1 | 0.95 | 0.12 | 169,169,169,169 | 0 |
| 81 | MG | 5 | 3475 | 1/1 | 0.95 | 0.13 | 107,107,107,107 | 0 |
| 81 | MG | 5 | 3730 | 1/1 | 0.95 | 0.61 | 98,98,98,98 | 1 |
| 81 | MG | 5 | 3703 | 1/1 | 0.95 | 0.41 | 110,110,110,110 | 0 |
| 81 | MG | 2 | 1994 | 1/1 | 0.95 | 0.66 | 136,136,136,136 | 0 |
| 81 | MG | 5 | 3816 | 1/1 | 0.95 | 0.37 | 111,111,111,111 | 0 |
| 81 | MG | 5 | 3692 | 1/1 | 0.95 | 0.26 | 88,88,88,88 | 0 |
| 82 | GET | 5 | 3846 | 34/34 | 0.95 | 0.17 | 138,138,138,138 | 0 |
| 81 | MG | 5 | 3528 | 1/1 | 0.95 | 0.35 | 105,105,105,105 | 0 |
| 81 | MG | 1 | 3617 | 1/1 | 0.95 | 0.52 | 88,88,88,88 | 0 |
| 81 | MG | 1 | 3757 | 1/1 | 0.95 | 0.32 | 123,123,123,123 | 0 |
| 81 | MG | o7 | 503 | 1/1 | 0.95 | 0.15 | 126,126,126,126 | 0 |
| 81 | MG | 2 | 1997 | 1/1 | 0.95 | 0.13 | 200,200,200,200 | 0 |
| 81 | MG | 1 | 3602 | 1/1 | 0.95 | 0.22 | 87,87,87,87 | 0 |
| 81 | MG | 5 | 3414 | 1/1 | 0.95 | 0.43 | 94,94,94,94 | 0 |
| 81 | MG | 6 | 1933 | 1/1 | 0.95 | 1.15 | 106,106,106,106 | 0 |
| 81 | MG | 1 | 3575 | 1/1 | 0.95 | 0.92 | 92,92,92,92 | 0 |
| 81 | MG | 2 | 1955 | 1/1 | 0.95 | 0.12 | 134,134,134,134 | 0 |
| 81 | MG | 5 | 3562 | 1/1 | 0.95 | 0.10 | 134,134,134,134 | 0 |
| 81 | MG | 5 | 3418 | 1/1 | 0.95 | 0.62 | 77,77,77,77 | 0 |
| 81 | MG | 5 | 3587 | 1/1 | 0.95 | 0.21 | 95,95,95,95 | 0 |
| 81 | MG | 5 | 3409 | 1/1 | 0.95 | 0.55 | 88,88,88,88 | 0 |
| 81 | MG | 5 | 3781 | 1/1 | 0.95 | 0.11 | 115,115,115,115 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 81 | MG | 12 | 302 | 1/1 | 0.95 | 0.12 | 95,95,95,95 | 0 |
| 81 | MG | 1 | 3735 | 1/1 | 0.96 | 0.32 | 98,98,98,98 | 0 |
| 81 | MG | 1 | 3570 | 1/1 | 0.96 | 0.23 | 92,92,92,92 | 0 |
| 81 | MG | 5 | 3662 | 1/1 | 0.96 | 0.27 | 114,114,114,114 | 0 |
| 81 | MG | 5 | 3401 | 1/1 | 0.96 | 0.36 | 76,76,76,76 | 0 |
| 81 | MG | 5 | 3496 | 1/1 | 0.96 | 0.35 | 102,102,102,102 | 0 |
| 81 | MG | 6 | 2002 | 1/1 | 0.96 | 0.40 | 121,121,121,121 | 0 |
| 81 | MG | 5 | 3543 | 1/1 | 0.96 | 0.33 | 97,97,97,97 | 0 |
| 81 | MG | 5 | 3685 | 1/1 | 0.96 | 0.20 | 126,126,126,126 | 0 |
| 81 | MG | 5 | 3668 | 1/1 | 0.96 | 0.34 | 86,86,86,86 | 0 |
| 81 | MG | 6 | 1955 | 1/1 | 0.96 | 0.17 | 171,171,171,171 | 0 |
| 81 | MG | 5 | 3733 | 1/1 | 0.96 | 0.30 | 88,88,88,88 | 0 |
| 81 | MG | 5 | 3502 | 1/1 | 0.96 | 0.41 | 83,83,83,83 | 0 |
| 81 | MG | 5 | 3664 | 1/1 | 0.96 | 0.13 | 111,111,111,111 | 0 |
| 81 | MG | 1 | 3439 | 1/1 | 0.96 | 0.15 | 117,117,117,117 | 0 |
| 81 | MG | 5 | 3776 | 1/1 | 0.96 | 0.17 | 93,93,93,93 | 0 |
| 81 | MG | 5 | 3471 | 1/1 | 0.96 | 0.15 | 99,99,99,99 | 0 |
| 81 | MG | 1 | 3448 | 1/1 | 0.96 | 0.25 | 90,90,90,90 | 0 |
| 81 | MG | 1 | 3751 | 1/1 | 0.96 | 0.09 | 181,181,181,181 | 0 |
| 81 | MG | 1 | 3709 | 1/1 | 0.96 | 0.43 | 114,114,114,114 | 0 |
| 81 | MG | D2 | 201 | 1/1 | 0.96 | 0.17 | 184,184,184,184 | 0 |
| 81 | MG | 5 | 3614 | 1/1 | 0.96 | 0.39 | 95,95,95,95 | 0 |
| 81 | MG | 1 | 3516 | 1/1 | 0.96 | 0.19 | 118,118,118,118 | 0 |
| 81 | MG | 5 | 3413 | 1/1 | 0.96 | 0.75 | 97,97,97,97 | 0 |
| 81 | MG | 1 | 3576 | 1/1 | 0.96 | 0.33 | 101,101,101,101 | 0 |
| 81 | MG | 5 | 3718 | 1/1 | 0.97 | 0.23 | 103,103,103,103 | 0 |
| 81 | MG | 6 | 1921 | 1/1 | 0.97 | 0.36 | 115,115,115,115 | 0 |
| 81 | MG | 5 | 3639 | 1/1 | 0.97 | 0.40 | 85,85,85,85 | 0 |
| 81 | MG | 5 | 3671 | 1/1 | 0.97 | 0.48 | 125,125,125,125 | 0 |
| 81 | MG | m7 | 201 | 1/1 | 0.97 | 0.17 | 84,84,84,84 | 0 |
| 81 | MG | 1 | 3453 | 1/1 | 0.97 | 0.22 | 98,98,98,98 | 0 |
| 81 | MG | 1 | 3508 | 1/1 | 0.97 | 0.10 | 98,98,98,98 | 0 |
| 81 | MG | 6 | 1946 | 1/1 | 0.97 | 0.12 | 163,163,163,163 | 0 |
| 81 | MG | 5 | 3616 | 1/1 | 0.97 | 0.67 | 104,104,104,104 | 0 |
| 81 | MG | 5 | 3582 | 1/1 | 0.97 | 0.52 | 88,88,88,88 | 0 |
| 81 | MG | 1 | 3662 | 1/1 | 0.97 | 0.17 | 114,114,114,114 | 0 |
| 83 | ZN | O4 | 500 | 1/1 | 0.97 | 0.08 | 192,192,192,192 | 0 |
| 81 | MG | 5 | 3453 | 1/1 | 0.97 | 0.23 | 112,112,112,112 | 0 |
| 81 | MG | 4 | 201 | 1/1 | 0.97 | 0.78 | 130,130,130,130 | 0 |
| 81 | MG | 1 | 3468 | 1/1 | 0.97 | 0.61 | 108,108,108,108 | 0 |
| 81 | MG | 5 | 3411 | 1/1 | 0.97 | 0.54 | 89,89,89,89 | 0 |
| 81 | MG | 5 | 3452 | 1/1 | 0.97 | 0.33 | 96,96,96,96 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 81 | MG | 6 | 1935 | 1/1 | 0.97 | 0.12 | 124,124,124,124 | 0 |
| 81 | MG | 1 | 3623 | 1/1 | 0.97 | 0.24 | 93,93,93,93 | 0 |
| 81 | MG | N2 | 201 | 1/1 | 0.97 | 0.38 | 193,193,193,193 | 0 |
| 81 | MG | 1 | 3631 | 1/1 | 0.97 | 0.16 | 100,100,100,100 | 0 |
| 81 | MG | 1 | 3436 | 1/1 | 0.97 | 0.18 | 104,104,104,104 | 0 |
| 81 | MG | 5 | 3622 | 1/1 | 0.97 | 0.14 | 106,106,106,106 | 0 |
| 81 | MG | 5 | 3419 | 1/1 | 0.97 | 0.52 | 86,86,86,86 | 0 |
| 81 | MG | 5 | 3479 | 1/1 | 0.97 | 0.32 | 93,93,93,93 | 0 |
| 81 | MG | 5 | 3659 | 1/1 | 0.97 | 0.31 | 107,107,107,107 | 0 |
| 81 | MG | 1 | 3461 | 1/1 | 0.97 | 0.48 | 104,104,104,104 | 0 |
| 81 | MG | 1 | 3640 | 1/1 | 0.97 | 0.14 | 105,105,105,105 | 0 |
| 81 | MG | 5 | 3533 | 1/1 | 0.98 | 0.31 | 91,91,91,91 | 0 |
| 81 | MG | 1 | 3629 | 1/1 | 0.98 | 0.21 | 86,86,86,86 | 0 |
| 81 | MG | 5 | 3421 | 1/1 | 0.98 | 0.27 | 90,90,90,90 | 0 |
| 81 | MG | 1 | 3755 | 1/1 | 0.98 | 0.13 | 111,111,111,111 | 0 |
| 81 | MG | 5 | 3437 | 1/1 | 0.98 | 0.38 | 91,91,91,91 | 0 |
| 81 | MG | 1 | 3595 | 1/1 | 0.98 | 0.39 | 86,86,86,86 | 0 |
| 81 | MG | 1 | 3444 | 1/1 | 0.98 | 0.29 | 104,104,104,104 | 0 |
| 81 | MG | 1 | 3519 | 1/1 | 0.98 | 0.27 | 94,94,94,94 | 0 |
| 81 | MG | 5 | 3705 | 1/1 | 0.98 | 0.20 | 116,116,116,116 | 0 |
| 81 | MG | 5 | 3560 | 1/1 | 0.98 | 0.21 | 133,133,133,133 | 0 |
| 81 | MG | 1 | 3747 | 1/1 | 0.98 | 0.34 | 101,101,101,101 | 0 |
| 81 | MG | 1 | 3506 | 1/1 | 0.98 | 0.15 | 96,96,96,96 | 0 |
| 81 | MG | 5 | 3443 | 1/1 | 0.98 | 0.22 | 89,89,89,89 | 0 |
| 81 | MG | 1 | 3566 | 1/1 | 0.98 | 0.35 | 80,80,80,80 | 0 |
| 81 | MG | 5 | 3524 | 1/1 | 0.98 | 0.26 | 132,132,132,132 | 0 |
| 81 | MG | 5 | 3738 | 1/1 | 0.98 | 0.38 | 76,76,76,76 | 0 |
| 81 | MG | 5 | 3504 | 1/1 | 0.98 | 0.57 | 88,88,88,88 | 0 |
| 81 | MG | 2 | 1942 | 1/1 | 0.98 | 0.17 | 123,123,123,123 | 0 |
| 81 | MG | 1 | 3493 | 1/1 | 0.98 | 0.16 | 106,106,106,106 | 0 |
| 81 | MG | 1 | 3753 | 1/1 | 0.98 | 0.28 | 129,129,129,129 | 0 |
| 81 | MG | 6 | 1938 | 1/1 | 0.98 | 0.26 | 115,115,115,115 | 0 |
| 81 | MG | 6 | 1937 | 1/1 | 0.98 | 0.19 | 120,120,120,120 | 0 |
| 81 | MG | 6 | 1945 | 1/1 | 0.98 | 0.34 | 153,153,153,153 | 0 |
| 81 | MG | 5 | 3645 | 1/1 | 0.98 | 0.16 | 93,93,93,93 | 0 |
| 81 | MG | 5 | 3663 | 1/1 | 0.98 | 0.30 | 95,95,95,95 | 0 |
| 81 | MG | 5 | 3571 | 1/1 | 0.98 | 0.17 | 87,87,87,87 | 0 |
| 81 | MG | 1 | 3637 | 1/1 | 0.98 | 0.36 | 89,89,89,89 | 0 |
| 83 | ZN | D9 | 101 | 1/1 | 0.99 | 0.12 | 124,124,124,124 | 0 |
| 81 | MG | 1 | 3459 | 1/1 | 0.99 | 0.48 | 100,100,100,100 | 0 |
| 81 | MG | 5 | 3415 | 1/1 | 0.99 | 0.43 | 89,89,89,89 | 0 |
| 81 | MG | 5 | 3583 | 1/1 | 0.99 | 0.24 | 90,90,90,90 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|-------|------|----------------------------|-------|
| 81 | MG | 1 | 3766 | 1/1 | 0.99 | 0.25 | 104,104,104,104 | 0 |
| 81 | MG | 1 | 3410 | 1/1 | 0.99 | 0.30 | 94,94,94,94 | 0 |
| 81 | MG | 2 | 1905 | 1/1 | 0.99 | 0.27 | 154,154,154,154 | 0 |
| 81 | MG | 5 | 3683 | 1/1 | 0.99 | 0.43 | 116,116,116,116 | 0 |
| 83 | ZN | Q0 | 500 | 1/1 | 0.99 | 0.13 | 98,98,98,98 | 0 |
| 81 | MG | 5 | 3539 | 1/1 | 0.99 | 0.30 | 93,93,93,93 | 0 |
| 81 | MG | 5 | 3447 | 1/1 | 0.99 | 0.20 | 92,92,92,92 | 0 |
| 81 | MG | 1 | 3403 | 1/1 | 0.99 | 0.18 | 99,99,99,99 | 0 |
| 81 | MG | 5 | 3595 | 1/1 | 0.99 | 0.32 | 94,94,94,94 | 0 |
| 81 | MG | 2 | 1949 | 1/1 | 0.99 | 0.09 | 176,176,176,176 | 0 |
| 81 | MG | 1 | 3759 | 1/1 | 0.99 | 0.14 | 112,112,112,112 | 0 |
| 81 | MG | 5 | 3473 | 1/1 | 0.99 | 0.19 | 109,109,109,109 | 0 |
| 83 | ZN | q0 | 500 | 1/1 | 0.99 | 0.14 | 100,100,100,100 | 0 |
| 81 | MG | 5 | 3682 | 1/1 | 0.99 | 0.66 | 95,95,95,95 | 0 |
| 81 | MG | 5 | 3406 | 1/1 | 0.99 | 0.39 | 86,86,86,86 | 0 |
| 81 | MG | 5 | 3569 | 1/1 | 0.99 | 0.19 | 85,85,85,85 | 0 |
| 81 | MG | 1 | 3428 | 1/1 | 0.99 | 0.10 | 140,140,140,140 | 0 |
| 81 | MG | 1 | 3621 | 1/1 | 0.99 | 0.13 | 96,96,96,96 | 0 |
| 81 | MG | 4 | 217 | 1/1 | - | - | 113,113,113,113 | 1 |
| 81 | MG | S1 | 301 | 1/1 | -0.22 | 0.41 | 193,193,193,193 | 0 |
| 81 | MG | 5 | 3728 | 1/1 | -0.01 | 1.77 | 98,98,98,98 | 0 |
| 81 | MG | 1 | 3582 | 1/1 | 0.02 | 0.42 | 100,100,100,100 | 0 |
| 81 | MG | 5 | 3647 | 1/1 | 0.03 | 1.03 | 143,143,143,143 | 0 |
| 81 | MG | 1 | 3720 | 1/1 | 0.07 | 1.52 | 122,122,122,122 | 0 |
| 81 | MG | 2 | 1970 | 1/1 | 0.15 | 1.17 | 145,145,145,145 | 0 |
| 81 | MG | 6 | 1918 | 1/1 | 0.23 | 1.48 | 123,123,123,123 | 0 |
| 81 | MG | 5 | 3793 | 1/1 | 0.28 | 0.47 | 128,128,128,128 | 0 |
| 81 | MG | 6 | 2011 | 1/1 | 0.30 | 1.51 | 111,111,111,111 | 0 |
| 81 | MG | 5 | 3811 | 1/1 | 0.31 | 1.09 | 115,115,115,115 | 0 |
| 81 | MG | 5 | 3740 | 1/1 | 0.32 | 0.73 | 98,98,98,98 | 0 |
| 81 | MG | 5 | 3806 | 1/1 | 0.33 | 0.71 | 118,118,118,118 | 0 |
| 81 | MG | 5 | 3722 | 1/1 | 0.42 | 1.03 | 84,84,84,84 | 0 |
| 81 | MG | 5 | 3794 | 1/1 | 0.43 | 0.96 | 122,122,122,122 | 0 |
| 81 | MG | 1 | 3745 | 1/1 | 0.44 | 0.77 | 133,133,133,133 | 0 |
| 81 | MG | 5 | 3601 | 1/1 | 0.44 | 0.42 | 95,95,95,95 | 0 |
| 81 | MG | 2 | 1915 | 1/1 | 0.45 | 0.75 | 125,125,125,125 | 0 |
| 81 | MG | 2 | 1951 | 1/1 | 0.45 | 0.48 | 127,127,127,127 | 0 |
| 81 | MG | 6 | 2000 | 1/1 | 0.46 | 1.12 | 123,123,123,123 | 0 |
| 81 | MG | 1 | 3404 | 1/1 | 0.47 | 0.68 | 91,91,91,91 | 0 |
| 81 | MG | q2 | 504 | 1/1 | 0.47 | 0.62 | 107,107,107,107 | 0 |
| 81 | MG | 5 | 3800 | 1/1 | 0.47 | 0.82 | 97,97,97,97 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 81 | MG | 5 | 3669 | 1/1 | 0.49 | 0.91 | 103,103,103,103 | 0 |
| 81 | MG | 5 | 3758 | 1/1 | 0.51 | 1.25 | 100,100,100,100 | 0 |
| 81 | MG | 5 | 3712 | 1/1 | 0.52 | 0.66 | 104,104,104,104 | 0 |
| 81 | MG | m6 | 201 | 1/1 | 0.52 | 0.74 | 92,92,92,92 | 0 |
| 81 | MG | C4 | 202 | 1/1 | 0.53 | 0.27 | 116,116,116,116 | 0 |
| 81 | MG | 1 | 3530 | 1/1 | 0.53 | 0.33 | 111,111,111,111 | 0 |
| 81 | MG | 1 | 3429 | 1/1 | 0.56 | 0.62 | 136,136,136,136 | 0 |
| 81 | MG | 2 | 1980 | 1/1 | 0.56 | 0.15 | 202,202,202,202 | 1 |
| 81 | MG | 8 | 205 | 1/1 | 0.56 | 0.71 | 102,102,102,102 | 0 |
| 81 | MG | 2 | 1992 | 1/1 | 0.56 | 0.14 | 130,130,130,130 | 0 |
| 81 | MG | 1 | 3584 | 1/1 | 0.57 | 0.25 | 109,109,109,109 | 0 |
| 81 | MG | 2 | 1907 | 1/1 | 0.57 | 0.67 | 145,145,145,145 | 0 |
| 81 | MG | 5 | 3597 | 1/1 | 0.58 | 0.33 | 151,151,151,151 | 0 |
| 81 | MG | 5 | 3455 | 1/1 | 0.58 | 0.14 | 133,133,133,133 | 0 |
| 81 | MG | 5 | 3559 | 1/1 | 0.59 | 0.20 | 139,139,139,139 | 0 |
| 81 | MG | 5 | 3796 | 1/1 | 0.60 | 0.37 | 124,124,124,124 | 0 |
| 81 | MG | 1 | 3773 | 1/1 | 0.62 | 0.51 | 89,89,89,89 | 0 |
| 81 | MG | 1 | 3806 | 1/1 | 0.63 | 1.03 | 141,141,141,141 | 0 |
| 81 | MG | 6 | 1910 | 1/1 | 0.64 | 1.58 | 94,94,94,94 | 0 |
| 81 | MG | O3 | 202 | 1/1 | 0.64 | 0.36 | 97,97,97,97 | 0 |
| 81 | MG | 5 | 3667 | 1/1 | 0.64 | 0.68 | 119,119,119,119 | 0 |
| 81 | MG | 1 | 3788 | 1/1 | 0.65 | 0.58 | 140,140,140,140 | 0 |
| 81 | MG | 8 | 213 | 1/1 | 0.65 | 0.54 | 118,118,118,118 | 0 |
| 81 | MG | 5 | 3516 | 1/1 | 0.66 | 1.25 | 99,99,99,99 | 0 |
| 81 | MG | o3 | 203 | 1/1 | 0.66 | 0.43 | 99,99,99,99 | 0 |
| 81 | MG | 5 | 3810 | 1/1 | 0.66 | 0.31 | 115,115,115,115 | 0 |
| 81 | MG | 6 | 1914 | 1/1 | 0.67 | 0.30 | 159,159,159,159 | 0 |
| 81 | MG | 6 | 1939 | 1/1 | 0.67 | 0.41 | 156,156,156,156 | 0 |
| 81 | MG | 1 | 3531 | 1/1 | 0.67 | 0.31 | 113,113,113,113 | 0 |
| 81 | MG | 5 | 3636 | 1/1 | 0.67 | 0.43 | 109,109,109,109 | 0 |
| 81 | MG | 6 | 1958 | 1/1 | 0.68 | 1.20 | 120,120,120,120 | 0 |
| 81 | MG | 1 | 3680 | 1/1 | 0.68 | 0.24 | 148,148,148,148 | 0 |
| 81 | MG | 1 | 3746 | 1/1 | 0.68 | 0.31 | 118,118,118,118 | 0 |
| 81 | MG | n0 | 202 | 1/1 | 0.69 | 1.24 | 103,103,103,103 | 0 |
| 81 | MG | 5 | 3634 | 1/1 | 0.69 | 0.74 | 102,102,102,102 | 0 |
| 81 | MG | 5 | 3708 | 1/1 | 0.69 | 0.76 | 134,134,134,134 | 0 |
| 81 | MG | 1 | 3431 | 1/1 | 0.70 | 0.68 | 75,75,75,75 | 0 |
| 81 | MG | 5 | 3765 | 1/1 | 0.70 | 0.49 | 91,91,91,91 | 0 |
| 81 | MG | l2 | 301 | 1/1 | 0.70 | 0.59 | 91,91,91,91 | 0 |
| 81 | MG | 8 | 206 | 1/1 | 0.70 | 0.44 | 97,97,97,97 | 0 |
| 81 | MG | 1 | 3668 | 1/1 | 0.70 | 1.07 | 131,131,131,131 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 81 | MG | 5 | 3837 | 1/1 | 0.70 | 0.53 | 96,96,96,96 | 0 |
| 81 | MG | 1 | 3660 | 1/1 | 0.71 | 0.73 | 108,108,108,108 | 0 |
| 81 | MG | 1 | 3724 | 1/1 | 0.71 | 0.49 | 125,125,125,125 | 0 |
| 81 | MG | 6 | 1922 | 1/1 | 0.71 | 0.54 | 113,113,113,113 | 0 |
| 81 | MG | 5 | 3572 | 1/1 | 0.71 | 0.32 | 87,87,87,87 | 1 |
| 81 | MG | 1 | 3782 | 1/1 | 0.71 | 0.47 | 123,123,123,123 | 0 |
| 81 | MG | 1 | 3673 | 1/1 | 0.72 | 0.42 | 110,110,110,110 | 0 |
| 81 | MG | 5 | 3839 | 1/1 | 0.72 | 0.54 | 105,105,105,105 | 0 |
| 81 | MG | n0 | 201 | 1/1 | 0.72 | 0.42 | 109,109,109,109 | 0 |
| 81 | MG | 2 | 1928 | 1/1 | 0.72 | 0.47 | 95,95,95,95 | 0 |
| 81 | MG | 1 | 3726 | 1/1 | 0.73 | 0.60 | 115,115,115,115 | 0 |
| 81 | MG | 2 | 1965 | 1/1 | 0.73 | 0.40 | 162,162,162,162 | 0 |
| 81 | MG | d3 | 201 | 1/1 | 0.73 | 0.59 | 107,107,107,107 | 0 |
| 81 | MG | 1 | 3486 | 1/1 | 0.73 | 0.47 | 151,151,151,151 | 0 |
| 81 | MG | 1 | 3676 | 1/1 | 0.73 | 0.60 | 97,97,97,97 | 0 |
| 81 | MG | 6 | 1911 | 1/1 | 0.74 | 1.28 | 108,108,108,108 | 0 |
| 81 | MG | 6 | 1992 | 1/1 | 0.74 | 0.11 | 164,164,164,164 | 0 |
| 81 | MG | 5 | 3761 | 1/1 | 0.74 | 0.48 | 88,88,88,88 | 0 |
| 81 | MG | L6 | 201 | 1/1 | 0.74 | 0.34 | 111,111,111,111 | 0 |
| 81 | MG | 2 | 1964 | 1/1 | 0.74 | 0.27 | 130,130,130,130 | 0 |
| 81 | MG | 6 | 1977 | 1/1 | 0.74 | 0.10 | 197,197,197,197 | 0 |
| 81 | MG | 2 | 1990 | 1/1 | 0.74 | 1.26 | 93,93,93,93 | 0 |
| 81 | MG | 1 | 3634 | 1/1 | 0.74 | 0.49 | 74,74,74,74 | 0 |
| 81 | MG | 5 | 3818 | 1/1 | 0.75 | 1.16 | 129,129,129,129 | 0 |
| 81 | MG | 1 | 3801 | 1/1 | 0.75 | 0.81 | 114,114,114,114 | 0 |
| 81 | MG | 5 | 3743 | 1/1 | 0.75 | 0.51 | 99,99,99,99 | 0 |
| 81 | MG | n5 | 201 | 1/1 | 0.75 | 0.48 | 98,98,98,98 | 0 |
| 81 | MG | 1 | 3715 | 1/1 | 0.75 | 0.34 | 108,108,108,108 | 0 |
| 81 | MG | O6 | 201 | 1/1 | 0.75 | 0.29 | 167,167,167,167 | 0 |
| 81 | MG | 5 | 3819 | 1/1 | 0.75 | 0.52 | 90,90,90,90 | 0 |
| 81 | MG | 6 | 2001 | 1/1 | 0.76 | 0.16 | 168,168,168,168 | 0 |
| 81 | MG | C0 | 201 | 1/1 | 0.76 | 0.30 | 126,126,126,126 | 0 |
| 81 | MG | 5 | 3803 | 1/1 | 0.76 | 0.81 | 81,81,81,81 | 0 |
| 81 | MG | 1 | 3401 | 1/1 | 0.76 | 0.33 | 97,97,97,97 | 0 |
| 81 | MG | 5 | 3762 | 1/1 | 0.77 | 1.17 | 100,100,100,100 | 0 |
| 81 | MG | 2 | 2006 | 1/1 | 0.77 | 0.88 | 105,105,105,105 | 0 |
| 81 | MG | 2 | 1968 | 1/1 | 0.77 | 0.18 | 132,132,132,132 | 0 |
| 81 | MG | 5 | 3493 | 1/1 | 0.77 | 0.65 | 102,102,102,102 | 0 |
| 81 | MG | 6 | 1978 | 1/1 | 0.77 | 0.56 | 158,158,158,158 | 0 |
| 81 | MG | 5 | 3754 | 1/1 | 0.77 | 0.42 | 98,98,98,98 | 0 |
| 81 | MG | o3 | 201 | 1/1 | 0.77 | 0.49 | 97,97,97,97 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 81 | MG | 5 | 3594 | 1/1 | 0.77 | 1.06 | 84,84,84,84 | 0 |
| 81 | MG | 2 | 1927 | 1/1 | 0.78 | 0.20 | 140,140,140,140 | 0 |
| 81 | MG | 5 | 3826 | 1/1 | 0.78 | 0.42 | 101,101,101,101 | 0 |
| 81 | MG | 1 | 3800 | 1/1 | 0.78 | 0.72 | 111,111,111,111 | 0 |
| 81 | MG | 5 | 3759 | 1/1 | 0.78 | 0.42 | 82,82,82,82 | 0 |
| 81 | MG | 7 | 204 | 1/1 | 0.78 | 0.23 | 171,171,171,171 | 0 |
| 81 | MG | 12 | 304 | 1/1 | 0.79 | 0.39 | 116,116,116,116 | 0 |
| 81 | MG | 1 | 3568 | 1/1 | 0.79 | 0.39 | 79,79,79,79 | 0 |
| 81 | MG | 5 | 3832 | 1/1 | 0.79 | 0.43 | 102,102,102,102 | 0 |
| 81 | MG | 5 | 3666 | 1/1 | 0.79 | 0.19 | 102,102,102,102 | 0 |
| 81 | MG | 1 | 3611 | 1/1 | 0.79 | 0.35 | 109,109,109,109 | 0 |
| 81 | MG | 6 | 1903 | 1/1 | 0.79 | 0.29 | 128,128,128,128 | 0 |
| 81 | MG | 1 | 3635 | 1/1 | 0.79 | 0.74 | 93,93,93,93 | 0 |
| 81 | MG | 5 | 3514 | 1/1 | 0.79 | 0.84 | 109,109,109,109 | 0 |
| 81 | MG | 5 | 3623 | 1/1 | 0.80 | 0.22 | 104,104,104,104 | 0 |
| 81 | MG | 2 | 1921 | 1/1 | 0.80 | 0.53 | 125,125,125,125 | 0 |
| 81 | MG | 5 | 3602 | 1/1 | 0.81 | 0.37 | 138,138,138,138 | 0 |
| 81 | MG | 1 | 3728 | 1/1 | 0.81 | 0.61 | 93,93,93,93 | 0 |
| 81 | MG | 1 | 3776 | 1/1 | 0.81 | 0.36 | 101,101,101,101 | 0 |
| 81 | MG | 2 | 2000 | 1/1 | 0.81 | 0.47 | 118,118,118,118 | 0 |
| 81 | MG | 1 | 3633 | 1/1 | 0.81 | 0.42 | 74,74,74,74 | 0 |
| 81 | MG | 2 | 1926 | 1/1 | 0.81 | 0.35 | 117,117,117,117 | 0 |
| 81 | MG | 5 | 3462 | 1/1 | 0.81 | 0.40 | 104,104,104,104 | 0 |
| 81 | MG | 1 | 3457 | 1/1 | 0.82 | 1.16 | 81,81,81,81 | 0 |
| 81 | MG | 1 | 3499 | 1/1 | 0.82 | 0.35 | 91,91,91,91 | 0 |
| 81 | MG | 5 | 3557 | 1/1 | 0.82 | 0.83 | 111,111,111,111 | 0 |
| 81 | MG | 6 | 1913 | 1/1 | 0.82 | 0.71 | 149,149,149,149 | 0 |
| 81 | MG | 5 | 3773 | 1/1 | 0.82 | 0.28 | 94,94,94,94 | 0 |
| 81 | MG | 5 | 3755 | 1/1 | 0.82 | 0.31 | 97,97,97,97 | 0 |
| 81 | MG | 1 | 3408 | 1/1 | 0.82 | 0.34 | 109,109,109,109 | 0 |
| 81 | MG | 5 | 3752 | 1/1 | 0.82 | 0.42 | 164,164,164,164 | 0 |
| 81 | MG | 5 | 3612 | 1/1 | 0.82 | 0.50 | 105,105,105,105 | 0 |
| 81 | MG | 6 | 1931 | 1/1 | 0.82 | 0.09 | 169,169,169,169 | 0 |
| 81 | MG | 1 | 3644 | 1/1 | 0.83 | 0.58 | 92,92,92,92 | 0 |
| 81 | MG | 1 | 3711 | 1/1 | 0.83 | 1.18 | 116,116,116,116 | 0 |
| 81 | MG | 6 | 1974 | 1/1 | 0.83 | 0.43 | 169,169,169,169 | 0 |
| 81 | MG | 1 | 3627 | 1/1 | 0.83 | 0.59 | 78,78,78,78 | 0 |
| 81 | MG | 5 | 3454 | 1/1 | 0.83 | 0.25 | 148,148,148,148 | 0 |
| 81 | MG | 2 | 1940 | 1/1 | 0.84 | 0.25 | 119,119,119,119 | 0 |
| 81 | MG | 5 | 3429 | 1/1 | 0.84 | 0.27 | 92,92,92,92 | 0 |
| 81 | MG | 5 | 3704 | 1/1 | 0.84 | 0.39 | 84,84,84,84 | 0 |
| 81 | MG | 1 | 3587 | 1/1 | 0.84 | 0.99 | 123,123,123,123 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 81 | MG | 6 | 2005 | 1/1 | 0.84 | 1.46 | 101,101,101,101 | 0 |
| 81 | MG | L2 | 303 | 1/1 | 0.84 | 0.95 | 115,115,115,115 | 0 |
| 81 | MG | 2 | 1971 | 1/1 | 0.85 | 0.42 | 123,123,123,123 | 0 |
| 81 | MG | 1 | 3614 | 1/1 | 0.85 | 0.27 | 91,91,91,91 | 0 |
| 81 | MG | 2 | 1943 | 1/1 | 0.85 | 0.67 | 97,97,97,97 | 0 |
| 81 | MG | 1 | 3719 | 1/1 | 0.85 | 0.47 | 86,86,86,86 | 0 |
| 81 | MG | 1 | 3675 | 1/1 | 0.85 | 0.46 | 112,112,112,112 | 0 |
| 81 | MG | 5 | 3540 | 1/1 | 0.85 | 0.33 | 89,89,89,89 | 0 |
| 81 | MG | 1 | 3473 | 1/1 | 0.85 | 0.41 | 131,131,131,131 | 0 |
| 81 | MG | 2 | 1976 | 1/1 | 0.85 | 0.25 | 152,152,152,152 | 0 |
| 81 | MG | M5 | 301 | 1/1 | 0.86 | 0.40 | 130,130,130,130 | 0 |
| 81 | MG | 2 | 2007 | 1/1 | 0.86 | 0.86 | 126,126,126,126 | 0 |
| 81 | MG | 6 | 1930 | 1/1 | 0.86 | 0.74 | 155,155,155,155 | 0 |
| 81 | MG | n3 | 202 | 1/1 | 0.86 | 0.29 | 93,93,93,93 | 0 |
| 81 | MG | 1 | 3490 | 1/1 | 0.86 | 0.72 | 103,103,103,103 | 0 |
| 81 | MG | 5 | 3835 | 1/1 | 0.86 | 0.10 | 157,157,157,157 | 0 |
| 81 | MG | 2 | 1916 | 1/1 | 0.86 | 0.23 | 158,158,158,158 | 0 |
| 81 | MG | 6 | 1975 | 1/1 | 0.86 | 0.14 | 161,161,161,161 | 0 |
| 81 | MG | 5 | 3747 | 1/1 | 0.86 | 0.17 | 112,112,112,112 | 0 |
| 81 | MG | 1 | 3589 | 1/1 | 0.86 | 0.10 | 139,139,139,139 | 1 |
| 81 | MG | 1 | 3518 | 1/1 | 0.86 | 0.43 | 126,126,126,126 | 0 |
| 81 | MG | 6 | 1983 | 1/1 | 0.86 | 0.20 | 152,152,152,152 | 0 |
| 81 | MG | 5 | 3767 | 1/1 | 0.86 | 0.42 | 91,91,91,91 | 0 |
| 81 | MG | 6 | 1944 | 1/1 | 0.86 | 0.14 | 190,190,190,190 | 0 |
| 81 | MG | 1 | 3601 | 1/1 | 0.87 | 0.31 | 95,95,95,95 | 0 |
| 81 | MG | 5 | 3828 | 1/1 | 0.87 | 0.38 | 103,103,103,103 | 0 |
| 81 | MG | 1 | 3764 | 1/1 | 0.87 | 0.37 | 110,110,110,110 | 0 |
| 81 | MG | 1 | 3618 | 1/1 | 0.87 | 0.71 | 90,90,90,90 | 0 |
| 81 | MG | 5 | 3480 | 1/1 | 0.87 | 0.21 | 90,90,90,90 | 0 |
| 81 | MG | 1 | 3591 | 1/1 | 0.87 | 0.36 | 97,97,97,97 | 0 |
| 81 | MG | 1 | 3767 | 1/1 | 0.87 | 0.40 | 88,88,88,88 | 0 |
| 81 | MG | s8 | 301 | 1/1 | 0.87 | 0.34 | 124,124,124,124 | 0 |
| 81 | MG | 5 | 3717 | 1/1 | 0.87 | 0.95 | 106,106,106,106 | 0 |
| 81 | MG | 2 | 1938 | 1/1 | 0.87 | 0.43 | 128,128,128,128 | 0 |
| 81 | MG | 5 | 3461 | 1/1 | 0.87 | 0.71 | 108,108,108,108 | 0 |
| 81 | MG | D2 | 202 | 1/1 | 0.88 | 0.17 | 180,180,180,180 | 0 |
| 81 | MG | 5 | 3830 | 1/1 | 0.88 | 0.41 | 131,131,131,131 | 0 |
| 81 | MG | 2 | 1998 | 1/1 | 0.88 | 0.07 | 224,224,224,224 | 0 |
| 81 | MG | 1 | 3706 | 1/1 | 0.88 | 1.12 | 107,107,107,107 | 0 |
| 81 | MG | 5 | 3701 | 1/1 | 0.88 | 0.80 | 121,121,121,121 | 0 |
| 81 | MG | 6 | 2007 | 1/1 | 0.88 | 0.13 | 148,148,148,148 | 0 |
| 81 | MG | 5 | 3737 | 1/1 | 0.88 | 0.23 | 112,112,112,112 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 81 | MG | 5 | 3512 | 1/1 | 0.88 | 0.15 | 121,121,121,121 | 0 |
| 81 | MG | 6 | 1957 | 1/1 | 0.88 | 0.15 | 175,175,175,175 | 0 |
| 81 | MG | 5 | 3436 | 1/1 | 0.88 | 0.26 | 83,83,83,83 | 0 |
| 81 | MG | o7 | 504 | 1/1 | 0.88 | 0.87 | 80,80,80,80 | 0 |
| 81 | MG | 5 | 3791 | 1/1 | 0.88 | 0.28 | 125,125,125,125 | 0 |
| 81 | MG | 5 | 3456 | 1/1 | 0.89 | 0.30 | 130,130,130,130 | 0 |
| 81 | MG | 5 | 3729 | 1/1 | 0.89 | 0.80 | 111,111,111,111 | 0 |
| 82 | GET | 1 | 3813 | 34/34 | 0.89 | 0.48 | 103,103,103,103 | 0 |
| 81 | MG | 1 | 3458 | 1/1 | 0.89 | 0.51 | 91,91,91,91 | 0 |
| 81 | MG | 1 | 3512 | 1/1 | 0.89 | 0.67 | 110,110,110,110 | 0 |
| 81 | MG | 1 | 3454 | 1/1 | 0.89 | 0.25 | 93,93,93,93 | 0 |
| 81 | MG | 5 | 3450 | 1/1 | 0.89 | 0.50 | 94,94,94,94 | 0 |
| 81 | MG | 5 | 3506 | 1/1 | 0.89 | 0.72 | 84,84,84,84 | 0 |
| 81 | MG | 6 | 1956 | 1/1 | 0.89 | 0.17 | 168,168,168,168 | 0 |
| 81 | MG | 1 | 3592 | 1/1 | 0.89 | 0.57 | 87,87,87,87 | 0 |
| 81 | MG | 6 | 1902 | 1/1 | 0.89 | 0.24 | 136,136,136,136 | 0 |
| 81 | MG | 5 | 3749 | 1/1 | 0.89 | 0.35 | 83,83,83,83 | 0 |
| 81 | MG | 5 | 3472 | 1/1 | 0.89 | 0.15 | 103,103,103,103 | 0 |
| 81 | MG | 6 | 1998 | 1/1 | 0.89 | 1.10 | 124,124,124,124 | 0 |
| 81 | MG | 1 | 3786 | 1/1 | 0.89 | 0.43 | 123,123,123,123 | 0 |
| 82 | GET | 1 | 3812 | 34/34 | 0.90 | 0.22 | 158,158,158,158 | 0 |
| 81 | MG | 2 | 1975 | 1/1 | 0.90 | 0.25 | 133,133,133,133 | 0 |
| 81 | MG | 8 | 203 | 1/1 | 0.90 | 0.20 | 112,112,112,112 | 0 |
| 81 | MG | 5 | 3476 | 1/1 | 0.90 | 0.10 | 108,108,108,108 | 1 |
| 81 | MG | 5 | 3501 | 1/1 | 0.90 | 0.52 | 96,96,96,96 | 0 |
| 81 | MG | 4 | 203 | 1/1 | 0.90 | 0.15 | 160,160,160,160 | 0 |
| 81 | MG | 5 | 3620 | 1/1 | 0.90 | 0.23 | 108,108,108,108 | 0 |
| 81 | MG | 1 | 3560 | 1/1 | 0.90 | 0.46 | 82,82,82,82 | 0 |
| 82 | GET | 1 | 3811 | 34/34 | 0.90 | 0.18 | 147,147,147,147 | 0 |
| 81 | MG | 5 | 3621 | 1/1 | 0.91 | 0.17 | 98,98,98,98 | 0 |
| 82 | GET | 1 | 3810 | 34/34 | 0.91 | 0.22 | 108,108,108,108 | 0 |
| 81 | MG | 2 | 1913 | 1/1 | 0.91 | 0.29 | 142,142,142,142 | 0 |
| 81 | MG | 6 | 1908 | 1/1 | 0.91 | 1.10 | 103,103,103,103 | 0 |
| 81 | MG | 1 | 3548 | 1/1 | 0.91 | 0.14 | 144,144,144,144 | 0 |
| 81 | MG | 5 | 3635 | 1/1 | 0.91 | 0.30 | 115,115,115,115 | 0 |
| 82 | GET | 2 | 2013 | 34/34 | 0.91 | 0.20 | 140,140,140,140 | 0 |
| 81 | MG | 1 | 3754 | 1/1 | 0.91 | 0.74 | 110,110,110,110 | 0 |
| 81 | MG | L2 | 302 | 1/1 | 0.91 | 0.42 | 99,99,99,99 | 0 |
| 81 | MG | 5 | 3580 | 1/1 | 0.91 | 0.34 | 111,111,111,111 | 0 |
| 81 | MG | 1 | 3625 | 1/1 | 0.91 | 0.43 | 89,89,89,89 | 1 |
| 81 | MG | sM | 301 | 1/1 | 0.91 | 0.18 | 147,147,147,147 | 0 |
| 81 | MG | 6 | 1996 | 1/1 | 0.91 | 0.17 | 125,125,125,125 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 81 | MG | 2 | 1950 | 1/1 | 0.91 | 0.15 | 126,126,126,126 | 0 |
| 81 | MG | 1 | 3437 | 1/1 | 0.91 | 0.29 | 104,104,104,104 | 0 |
| 81 | MG | 5 | 3449 | 1/1 | 0.91 | 0.60 | 95,95,95,95 | 0 |
| 81 | MG | 2 | 1962 | 1/1 | 0.91 | 0.09 | 164,164,164,164 | 0 |
| 82 | GET | 5 | 3850 | 34/34 | 0.92 | 0.30 | 110,110,110,110 | 0 |
| 81 | MG | 1 | 3510 | 1/1 | 0.92 | 0.69 | 105,105,105,105 | 0 |
| 81 | MG | 1 | 3729 | 1/1 | 0.92 | 0.09 | 171,171,171,171 | 0 |
| 81 | MG | 5 | 3661 | 1/1 | 0.92 | 0.79 | 97,97,97,97 | 0 |
| 81 | MG | 1 | 3684 | 1/1 | 0.92 | 0.30 | 101,101,101,101 | 0 |
| 81 | MG | 1 | 3807 | 1/1 | 0.92 | 0.30 | 173,173,173,173 | 0 |
| 81 | MG | 1 | 3419 | 1/1 | 0.92 | 0.13 | 161,161,161,161 | 0 |
| 81 | MG | 1 | 3722 | 1/1 | 0.92 | 0.24 | 92,92,92,92 | 0 |
| 81 | MG | 5 | 3466 | 1/1 | 0.92 | 0.45 | 88,88,88,88 | 0 |
| 81 | MG | 5 | 3687 | 1/1 | 0.92 | 1.06 | 89,89,89,89 | 0 |
| 81 | MG | 4 | 218 | 1/1 | 0.92 | 0.57 | 134,134,134,134 | 0 |
| 81 | MG | 2 | 1958 | 1/1 | 0.92 | 0.16 | 132,132,132,132 | 0 |
| 81 | MG | 3 | 203 | 1/1 | 0.92 | 0.10 | 142,142,142,142 | 0 |
| 82 | GET | 5 | 3845 | 34/34 | 0.92 | 0.26 | 119,119,119,119 | 0 |
| 81 | MG | 1 | 3597 | 1/1 | 0.92 | 0.18 | 105,105,105,105 | 0 |
| 81 | MG | 5 | 3487 | 1/1 | 0.93 | 0.45 | 84,84,84,84 | 0 |
| 81 | MG | 5 | 3652 | 1/1 | 0.93 | 0.65 | 88,88,88,88 | 0 |
| 81 | MG | M7 | 202 | 1/1 | 0.93 | 0.50 | 100,100,100,100 | 0 |
| 81 | MG | 5 | 3534 | 1/1 | 0.93 | 0.12 | 98,98,98,98 | 0 |
| 81 | MG | 5 | 3802 | 1/1 | 0.93 | 1.37 | 113,113,113,113 | 0 |
| 82 | GET | 5 | 3849 | 34/34 | 0.93 | 0.49 | 101,101,101,101 | 0 |
| 81 | MG | 1 | 3541 | 1/1 | 0.93 | 0.29 | 119,119,119,119 | 0 |
| 81 | MG | l4 | 401 | 1/1 | 0.93 | 0.72 | 95,95,95,95 | 0 |
| 81 | MG | 2 | 1908 | 1/1 | 0.93 | 0.16 | 163,163,163,163 | 0 |
| 81 | MG | q2 | 505 | 1/1 | 0.93 | 0.17 | 126,126,126,126 | 0 |
| 81 | MG | 2 | 1939 | 1/1 | 0.93 | 0.31 | 125,125,125,125 | 0 |
| 81 | MG | 5 | 3545 | 1/1 | 0.93 | 0.60 | 89,89,89,89 | 0 |
| 81 | MG | 6 | 1990 | 1/1 | 0.93 | 0.18 | 139,139,139,139 | 0 |
| 81 | MG | 5 | 3742 | 1/1 | 0.93 | 0.13 | 107,107,107,107 | 0 |
| 81 | MG | 1 | 3650 | 1/1 | 0.93 | 0.06 | 110,110,110,110 | 0 |
| 81 | MG | 5 | 3843 | 1/1 | 0.93 | 1.34 | 116,116,116,116 | 0 |
| 81 | MG | 5 | 3530 | 1/1 | 0.93 | 0.27 | 104,104,104,104 | 0 |
| 81 | MG | 2 | 1981 | 1/1 | 0.94 | 0.12 | 135,135,135,135 | 0 |
| 81 | MG | L3 | 401 | 1/1 | 0.94 | 0.24 | 81,81,81,81 | 0 |
| 81 | MG | 1 | 3451 | 1/1 | 0.94 | 0.33 | 89,89,89,89 | 0 |
| 81 | MG | 1 | 3564 | 1/1 | 0.94 | 0.24 | 88,88,88,88 | 0 |
| 81 | MG | 1 | 3466 | 1/1 | 0.94 | 0.42 | 111,111,111,111 | 0 |
| 81 | MG | 1 | 3739 | 1/1 | 0.94 | 0.22 | 114,114,114,114 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 81 | MG | 5 | 3441 | 1/1 | 0.94 | 0.51 | 82,82,82,82 | 0 |
| 81 | MG | 6 | 1960 | 1/1 | 0.94 | 0.15 | 169,169,169,169 | 0 |
| 81 | MG | 7 | 203 | 1/1 | 0.94 | 0.09 | 180,180,180,180 | 0 |
| 81 | MG | 1 | 3797 | 1/1 | 0.94 | 0.21 | 90,90,90,90 | 0 |
| 81 | MG | q2 | 502 | 1/1 | 0.94 | 0.38 | 107,107,107,107 | 0 |
| 81 | MG | 5 | 3715 | 1/1 | 0.94 | 0.51 | 86,86,86,86 | 0 |
| 81 | MG | o2 | 201 | 1/1 | 0.94 | 0.38 | 92,92,92,92 | 0 |
| 81 | MG | 1 | 3703 | 1/1 | 0.94 | 1.03 | 106,106,106,106 | 0 |
| 81 | MG | l2 | 303 | 1/1 | 0.94 | 0.28 | 91,91,91,91 | 0 |
| 83 | ZN | Q3 | 501 | 1/1 | 0.94 | 0.16 | 177,177,177,177 | 0 |
| 81 | MG | 5 | 3678 | 1/1 | 0.94 | 0.86 | 105,105,105,105 | 0 |
| 81 | MG | 6 | 1950 | 1/1 | 0.94 | 0.09 | 193,193,193,193 | 0 |
| 81 | MG | 1 | 3412 | 1/1 | 0.94 | 0.47 | 104,104,104,104 | 0 |
| 81 | MG | c3 | 200 | 1/1 | 0.94 | 0.37 | 127,127,127,127 | 0 |
| 81 | MG | 1 | 3655 | 1/1 | 0.94 | 0.50 | 106,106,106,106 | 0 |
| 81 | MG | 1 | 3685 | 1/1 | 0.94 | 0.16 | 113,113,113,113 | 0 |
| 81 | MG | 5 | 3585 | 1/1 | 0.94 | 0.37 | 69,69,69,69 | 0 |
| 81 | MG | 1 | 3421 | 1/1 | 0.94 | 0.20 | 144,144,144,144 | 0 |
| 81 | MG | 6 | 1942 | 1/1 | 0.94 | 0.05 | 146,146,146,146 | 0 |
| 81 | MG | 1 | 3581 | 1/1 | 0.94 | 0.14 | 113,113,113,113 | 0 |
| 81 | MG | 5 | 3656 | 1/1 | 0.94 | 0.10 | 96,96,96,96 | 0 |
| 81 | MG | 1 | 3426 | 1/1 | 0.95 | 0.34 | 126,126,126,126 | 0 |
| 81 | MG | 1 | 3559 | 1/1 | 0.95 | 0.28 | 90,90,90,90 | 0 |
| 81 | MG | 5 | 3434 | 1/1 | 0.95 | 0.32 | 85,85,85,85 | 0 |
| 81 | MG | 2 | 1909 | 1/1 | 0.95 | 0.23 | 160,160,160,160 | 0 |
| 81 | MG | 1 | 3521 | 1/1 | 0.95 | 0.37 | 101,101,101,101 | 0 |
| 81 | MG | 6 | 1912 | 1/1 | 0.95 | 0.27 | 127,127,127,127 | 0 |
| 81 | MG | 2 | 1952 | 1/1 | 0.95 | 0.35 | 145,145,145,145 | 0 |
| 81 | MG | 1 | 3471 | 1/1 | 0.95 | 0.19 | 147,147,147,147 | 0 |
| 81 | MG | 5 | 3707 | 1/1 | 0.95 | 0.14 | 132,132,132,132 | 0 |
| 81 | MG | 6 | 1976 | 1/1 | 0.95 | 0.16 | 149,149,149,149 | 0 |
| 81 | MG | O8 | 101 | 1/1 | 0.95 | 0.19 | 168,168,168,168 | 0 |
| 81 | MG | 5 | 3748 | 1/1 | 0.95 | 0.27 | 97,97,97,97 | 0 |
| 81 | MG | 1 | 3527 | 1/1 | 0.95 | 0.39 | 103,103,103,103 | 0 |
| 81 | MG | 5 | 3670 | 1/1 | 0.95 | 0.11 | 112,112,112,112 | 0 |
| 81 | MG | 1 | 3580 | 1/1 | 0.95 | 0.35 | 121,121,121,121 | 0 |
| 81 | MG | 2 | 1982 | 1/1 | 0.95 | 0.66 | 152,152,152,152 | 0 |
| 81 | MG | 6 | 1961 | 1/1 | 0.95 | 0.09 | 197,197,197,197 | 0 |
| 81 | MG | 1 | 3418 | 1/1 | 0.95 | 0.20 | 152,152,152,152 | 0 |
| 81 | MG | 2 | 1945 | 1/1 | 0.95 | 0.23 | 131,131,131,131 | 0 |
| 81 | MG | 5 | 3609 | 1/1 | 0.95 | 0.11 | 103,103,103,103 | 0 |
| 81 | MG | 1 | 3539 | 1/1 | 0.95 | 0.26 | 139,139,139,139 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 81 | MG | l3 | 404 | 1/1 | 0.95 | 0.41 | 85,85,85,85 | 0 |
| 81 | MG | 5 | 3510 | 1/1 | 0.95 | 0.36 | 109,109,109,109 | 0 |
| 81 | MG | 1 | 3772 | 1/1 | 0.95 | 0.25 | 122,122,122,122 | 0 |
| 81 | MG | 5 | 3568 | 1/1 | 0.95 | 0.14 | 89,89,89,89 | 0 |
| 81 | MG | M7 | 204 | 1/1 | 0.95 | 0.16 | 94,94,94,94 | 0 |
| 81 | MG | 1 | 3647 | 1/1 | 0.95 | 0.25 | 92,92,92,92 | 0 |
| 81 | MG | D9 | 102 | 1/1 | 0.95 | 0.22 | 126,126,126,126 | 0 |
| 81 | MG | 5 | 3719 | 1/1 | 0.96 | 0.30 | 88,88,88,88 | 0 |
| 81 | MG | 1 | 3447 | 1/1 | 0.96 | 0.59 | 90,90,90,90 | 0 |
| 81 | MG | 7 | 201 | 1/1 | 0.96 | 0.28 | 92,92,92,92 | 0 |
| 81 | MG | 4 | 205 | 1/1 | 0.96 | 0.15 | 118,118,118,118 | 0 |
| 81 | MG | 5 | 3711 | 1/1 | 0.96 | 0.42 | 86,86,86,86 | 0 |
| 81 | MG | 1 | 3632 | 1/1 | 0.96 | 0.51 | 62,62,62,62 | 0 |
| 81 | MG | 5 | 3817 | 1/1 | 0.96 | 0.36 | 105,105,105,105 | 0 |
| 81 | MG | 5 | 3575 | 1/1 | 0.96 | 0.73 | 97,97,97,97 | 0 |
| 81 | MG | 1 | 3520 | 1/1 | 0.96 | 0.16 | 103,103,103,103 | 0 |
| 81 | MG | 1 | 3464 | 1/1 | 0.96 | 0.30 | 102,102,102,102 | 0 |
| 81 | MG | 5 | 3625 | 1/1 | 0.96 | 0.12 | 99,99,99,99 | 0 |
| 81 | MG | 5 | 3827 | 1/1 | 0.96 | 0.29 | 81,81,81,81 | 0 |
| 81 | MG | m7 | 203 | 1/1 | 0.96 | 0.66 | 88,88,88,88 | 0 |
| 81 | MG | 5 | 3596 | 1/1 | 0.96 | 0.36 | 128,128,128,128 | 0 |
| 81 | MG | l9 | 201 | 1/1 | 0.96 | 0.25 | 113,113,113,113 | 0 |
| 81 | MG | 5 | 3554 | 1/1 | 0.96 | 0.21 | 103,103,103,103 | 0 |
| 81 | MG | 5 | 3721 | 1/1 | 0.96 | 0.24 | 93,93,93,93 | 0 |
| 81 | MG | 1 | 3503 | 1/1 | 0.96 | 0.13 | 97,97,97,97 | 0 |
| 81 | MG | N7 | 201 | 1/1 | 0.96 | 0.25 | 204,204,204,204 | 0 |
| 81 | MG | 4 | 225 | 1/1 | 0.96 | 0.18 | 156,156,156,156 | 0 |
| 81 | MG | 1 | 3608 | 1/1 | 0.96 | 0.21 | 100,100,100,100 | 0 |
| 81 | MG | 1 | 3420 | 1/1 | 0.96 | 0.41 | 137,137,137,137 | 0 |
| 81 | MG | 6 | 1989 | 1/1 | 0.96 | 0.13 | 125,125,125,125 | 0 |
| 81 | MG | 2 | 1924 | 1/1 | 0.96 | 0.27 | 141,141,141,141 | 0 |
| 81 | MG | 5 | 3657 | 1/1 | 0.96 | 0.26 | 91,91,91,91 | 0 |
| 81 | MG | 5 | 3546 | 1/1 | 0.96 | 0.71 | 87,87,87,87 | 0 |
| 81 | MG | 5 | 3448 | 1/1 | 0.96 | 0.68 | 97,97,97,97 | 0 |
| 81 | MG | 5 | 3486 | 1/1 | 0.96 | 0.42 | 92,92,92,92 | 0 |
| 81 | MG | 5 | 3627 | 1/1 | 0.96 | 0.22 | 103,103,103,103 | 0 |
| 81 | MG | 1 | 3758 | 1/1 | 0.96 | 0.25 | 92,92,92,92 | 0 |
| 81 | MG | O2 | 201 | 1/1 | 0.96 | 0.37 | 101,101,101,101 | 0 |
| 81 | MG | 5 | 3521 | 1/1 | 0.96 | 0.39 | 151,151,151,151 | 0 |
| 81 | MG | 1 | 3563 | 1/1 | 0.96 | 0.64 | 82,82,82,82 | 0 |
| 81 | MG | 2 | 1946 | 1/1 | 0.96 | 0.47 | 115,115,115,115 | 0 |
| 81 | MG | 1 | 3496 | 1/1 | 0.96 | 0.25 | 97,97,97,97 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 81 | MG | 5 | 3709 | 1/1 | 0.96 | 0.24 | 112,112,112,112 | 0 |
| 81 | MG | 1 | 3672 | 1/1 | 0.96 | 0.87 | 107,107,107,107 | 0 |
| 81 | MG | 1 | 3470 | 1/1 | 0.97 | 0.42 | 132,132,132,132 | 0 |
| 81 | MG | 1 | 3638 | 1/1 | 0.97 | 0.29 | 138,138,138,138 | 0 |
| 81 | MG | 1 | 3686 | 1/1 | 0.97 | 0.57 | 94,94,94,94 | 0 |
| 81 | MG | N8 | 201 | 1/1 | 0.97 | 0.18 | 119,119,119,119 | 0 |
| 81 | MG | 5 | 3451 | 1/1 | 0.97 | 0.23 | 97,97,97,97 | 0 |
| 81 | MG | 6 | 1973 | 1/1 | 0.97 | 0.19 | 107,107,107,107 | 0 |
| 81 | MG | 1 | 3666 | 1/1 | 0.97 | 0.27 | 107,107,107,107 | 0 |
| 81 | MG | n3 | 201 | 1/1 | 0.97 | 0.15 | 89,89,89,89 | 0 |
| 81 | MG | 5 | 3628 | 1/1 | 0.97 | 0.33 | 107,107,107,107 | 0 |
| 81 | MG | 6 | 1982 | 1/1 | 0.97 | 0.12 | 181,181,181,181 | 0 |
| 81 | MG | 6 | 1965 | 1/1 | 0.97 | 0.15 | 154,154,154,154 | 0 |
| 81 | MG | 1 | 3642 | 1/1 | 0.97 | 0.13 | 103,103,103,103 | 0 |
| 81 | MG | 1 | 3661 | 1/1 | 0.97 | 0.10 | 106,106,106,106 | 0 |
| 81 | MG | 5 | 3688 | 1/1 | 0.97 | 0.11 | 140,140,140,140 | 0 |
| 81 | MG | 5 | 3570 | 1/1 | 0.97 | 0.14 | 91,91,91,91 | 0 |
| 81 | MG | 1 | 3628 | 1/1 | 0.97 | 0.29 | 83,83,83,83 | 0 |
| 81 | MG | 1 | 3507 | 1/1 | 0.97 | 0.31 | 91,91,91,91 | 0 |
| 81 | MG | 1 | 3427 | 1/1 | 0.97 | 0.21 | 122,122,122,122 | 0 |
| 81 | MG | 5 | 3573 | 1/1 | 0.97 | 0.42 | 113,113,113,113 | 0 |
| 81 | MG | 1 | 3552 | 1/1 | 0.97 | 0.55 | 86,86,86,86 | 0 |
| 81 | MG | 6 | 1904 | 1/1 | 0.97 | 0.36 | 123,123,123,123 | 0 |
| 81 | MG | 5 | 3423 | 1/1 | 0.97 | 0.43 | 89,89,89,89 | 0 |
| 81 | MG | 1 | 3481 | 1/1 | 0.97 | 0.28 | 130,130,130,130 | 0 |
| 81 | MG | 5 | 3600 | 1/1 | 0.97 | 0.55 | 89,89,89,89 | 0 |
| 81 | MG | 5 | 3460 | 1/1 | 0.97 | 0.11 | 140,140,140,140 | 0 |
| 81 | MG | 5 | 3416 | 1/1 | 0.97 | 0.31 | 90,90,90,90 | 1 |
| 81 | MG | l3 | 401 | 1/1 | 0.97 | 0.19 | 84,84,84,84 | 0 |
| 81 | MG | 5 | 3505 | 1/1 | 0.97 | 0.39 | 85,85,85,85 | 0 |
| 81 | MG | 5 | 3422 | 1/1 | 0.97 | 0.27 | 91,91,91,91 | 0 |
| 81 | MG | 1 | 3460 | 1/1 | 0.97 | 0.55 | 99,99,99,99 | 0 |
| 81 | MG | 5 | 3736 | 1/1 | 0.97 | 0.31 | 157,157,157,157 | 0 |
| 81 | MG | 6 | 1981 | 1/1 | 0.97 | 0.20 | 133,133,133,133 | 0 |
| 83 | ZN | D6 | 500 | 1/1 | 0.97 | 0.15 | 149,149,149,149 | 0 |
| 81 | MG | 5 | 3440 | 1/1 | 0.97 | 0.33 | 83,83,83,83 | 0 |
| 81 | MG | m0 | 301 | 1/1 | 0.97 | 0.20 | 107,107,107,107 | 0 |
| 81 | MG | 6 | 1920 | 1/1 | 0.97 | 0.32 | 134,134,134,134 | 0 |
| 81 | MG | o7 | 502 | 1/1 | 0.97 | 0.56 | 100,100,100,100 | 0 |
| 81 | MG | 1 | 3619 | 1/1 | 0.97 | 0.25 | 92,92,92,92 | 0 |
| 81 | MG | 5 | 3532 | 1/1 | 0.97 | 0.66 | 93,93,93,93 | 0 |
| 81 | MG | 2 | 1977 | 1/1 | 0.97 | 0.16 | 134,134,134,134 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 81 | MG | 1 | 3411 | 1/1 | 0.97 | 0.21 | 106,106,106,106 | 0 |
| 81 | MG | 1 | 3407 | 1/1 | 0.97 | 0.09 | 109,109,109,109 | 1 |
| 81 | MG | 1 | 3665 | 1/1 | 0.97 | 0.38 | 109,109,109,109 | 0 |
| 81 | MG | 1 | 3446 | 1/1 | 0.97 | 0.32 | 102,102,102,102 | 0 |
| 81 | MG | 3 | 209 | 1/1 | 0.97 | 0.19 | 141,141,141,141 | 0 |
| 81 | MG | 6 | 1907 | 1/1 | 0.97 | 0.29 | 122,122,122,122 | 0 |
| 81 | MG | 1 | 3492 | 1/1 | 0.97 | 0.28 | 109,109,109,109 | 0 |
| 81 | MG | 1 | 3738 | 1/1 | 0.98 | 0.45 | 87,87,87,87 | 0 |
| 81 | MG | 5 | 3424 | 1/1 | 0.98 | 0.29 | 84,84,84,84 | 0 |
| 81 | MG | 1 | 3740 | 1/1 | 0.98 | 0.20 | 80,80,80,80 | 0 |
| 81 | MG | m7 | 202 | 1/1 | 0.98 | 0.47 | 94,94,94,94 | 0 |
| 81 | MG | 5 | 3626 | 1/1 | 0.98 | 0.59 | 106,106,106,106 | 0 |
| 81 | MG | 1 | 3465 | 1/1 | 0.98 | 0.51 | 99,99,99,99 | 0 |
| 81 | MG | 5 | 3444 | 1/1 | 0.98 | 0.29 | 87,87,87,87 | 0 |
| 81 | MG | 1 | 3480 | 1/1 | 0.98 | 0.19 | 127,127,127,127 | 1 |
| 81 | MG | 1 | 3488 | 1/1 | 0.98 | 0.23 | 108,108,108,108 | 0 |
| 83 | ZN | d6 | 500 | 1/1 | 0.98 | 0.14 | 147,147,147,147 | 0 |
| 81 | MG | 1 | 3562 | 1/1 | 0.98 | 0.34 | 92,92,92,92 | 0 |
| 81 | MG | 1 | 3596 | 1/1 | 0.98 | 0.54 | 107,107,107,107 | 0 |
| 81 | MG | 5 | 3498 | 1/1 | 0.98 | 0.23 | 94,94,94,94 | 0 |
| 81 | MG | 6 | 1906 | 1/1 | 0.98 | 0.35 | 119,119,119,119 | 0 |
| 81 | MG | 5 | 3653 | 1/1 | 0.98 | 0.17 | 94,94,94,94 | 0 |
| 81 | MG | 1 | 3610 | 1/1 | 0.98 | 0.20 | 100,100,100,100 | 0 |
| 81 | MG | 1 | 3567 | 1/1 | 0.98 | 0.38 | 81,81,81,81 | 0 |
| 81 | MG | 1 | 3449 | 1/1 | 0.98 | 0.30 | 100,100,100,100 | 0 |
| 81 | MG | 5 | 3741 | 1/1 | 0.98 | 0.33 | 92,92,92,92 | 0 |
| 81 | MG | 1 | 3545 | 1/1 | 0.98 | 0.17 | 114,114,114,114 | 0 |
| 81 | MG | 5 | 3690 | 1/1 | 0.98 | 0.32 | 100,100,100,100 | 0 |
| 81 | MG | 5 | 3588 | 1/1 | 0.98 | 0.20 | 88,88,88,88 | 0 |
| 81 | MG | 1 | 3571 | 1/1 | 0.98 | 0.45 | 80,80,80,80 | 0 |
| 81 | MG | 5 | 3408 | 1/1 | 0.98 | 0.39 | 86,86,86,86 | 0 |
| 81 | MG | 5 | 3420 | 1/1 | 0.98 | 0.29 | 88,88,88,88 | 0 |
| 81 | MG | 1 | 3435 | 1/1 | 0.98 | 0.19 | 102,102,102,102 | 0 |
| 81 | MG | 1 | 3606 | 1/1 | 0.98 | 0.19 | 92,92,92,92 | 0 |
| 81 | MG | 5 | 3427 | 1/1 | 0.98 | 0.29 | 85,85,85,85 | 0 |
| 81 | MG | 5 | 3531 | 1/1 | 0.98 | 0.25 | 99,99,99,99 | 0 |
| 81 | MG | 5 | 3485 | 1/1 | 0.98 | 0.50 | 89,89,89,89 | 0 |
| 81 | MG | 1 | 3652 | 1/1 | 0.98 | 0.30 | 102,102,102,102 | 0 |
| 81 | MG | 1 | 3445 | 1/1 | 0.98 | 0.23 | 105,105,105,105 | 0 |
| 81 | MG | 5 | 3695 | 1/1 | 0.98 | 0.61 | 86,86,86,86 | 0 |
| 81 | MG | 1 | 3524 | 1/1 | 0.98 | 0.49 | 130,130,130,130 | 0 |
| 81 | MG | 1 | 3756 | 1/1 | 0.98 | 0.40 | 94,94,94,94 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|-------|------|----------------------------|-------|
| 83 | ZN | Q2 | 501 | 1/1 | 0.98 | 0.07 | 170,170,170,170 | 0 |
| 81 | MG | 5 | 3503 | 1/1 | 0.98 | 0.32 | 93,93,93,93 | 0 |
| 81 | MG | 2 | 1923 | 1/1 | 0.98 | 0.40 | 134,134,134,134 | 0 |
| 81 | MG | 1 | 3787 | 1/1 | 0.98 | 0.37 | 157,157,157,157 | 0 |
| 83 | ZN | d9 | 101 | 1/1 | 0.98 | 0.09 | 184,184,184,184 | 0 |
| 81 | MG | 3 | 206 | 1/1 | 0.98 | 0.07 | 161,161,161,161 | 0 |
| 81 | MG | 1 | 3683 | 1/1 | 0.98 | 0.14 | 98,98,98,98 | 0 |
| 81 | MG | 5 | 3770 | 1/1 | 0.99 | 0.14 | 106,106,106,106 | 0 |
| 81 | MG | 1 | 3765 | 1/1 | 0.99 | 0.34 | 103,103,103,103 | 0 |
| 81 | MG | 1 | 3646 | 1/1 | 0.99 | 0.19 | 95,95,95,95 | 0 |
| 81 | MG | 5 | 3615 | 1/1 | 0.99 | 0.38 | 108,108,108,108 | 0 |
| 81 | MG | 1 | 3603 | 1/1 | 0.99 | 0.26 | 84,84,84,84 | 0 |
| 81 | MG | 8 | 209 | 1/1 | 0.99 | 0.20 | 111,111,111,111 | 0 |
| 81 | MG | 5 | 3403 | 1/1 | 0.99 | 0.28 | 94,94,94,94 | 0 |
| 81 | MG | 1 | 3502 | 1/1 | 0.99 | 0.22 | 92,92,92,92 | 0 |
| 81 | MG | 1 | 3558 | 1/1 | 0.99 | 0.46 | 90,90,90,90 | 0 |
| 81 | MG | 5 | 3431 | 1/1 | 0.99 | 0.13 | 101,101,101,101 | 0 |
| 81 | MG | 5 | 3699 | 1/1 | 0.99 | 0.26 | 107,107,107,107 | 1 |
| 81 | MG | 1 | 3438 | 1/1 | 0.99 | 0.20 | 109,109,109,109 | 0 |
| 81 | MG | M0 | 302 | 1/1 | 0.99 | 0.20 | 96,96,96,96 | 0 |
| 81 | MG | 2 | 1936 | 1/1 | 0.99 | 0.17 | 140,140,140,140 | 0 |
| 81 | MG | 8 | 201 | 1/1 | 0.99 | 0.25 | 99,99,99,99 | 0 |
| 81 | MG | 5 | 3470 | 1/1 | 0.99 | 0.20 | 96,96,96,96 | 0 |
| 81 | MG | 6 | 1927 | 1/1 | 0.99 | 0.08 | 123,123,123,123 | 0 |
| 81 | MG | 5 | 3783 | 1/1 | 0.99 | 0.10 | 105,105,105,105 | 0 |
| 81 | MG | 1 | 3561 | 1/1 | 0.99 | 0.47 | 87,87,87,87 | 0 |
| 81 | MG | 5 | 3410 | 1/1 | 0.99 | 0.55 | 84,84,84,84 | 0 |
| 81 | MG | 1 | 3494 | 1/1 | 0.99 | 0.29 | 102,102,102,102 | 0 |
| 83 | ZN | E1 | 501 | 1/1 | 0.99 | 0.06 | 209,209,209,209 | 0 |
| 81 | MG | 1 | 3626 | 1/1 | 0.99 | 0.42 | 78,78,78,78 | 0 |
| 81 | MG | 5 | 3593 | 1/1 | 0.99 | 0.18 | 102,102,102,102 | 0 |
| 81 | MG | 1 | 3572 | 1/1 | 0.99 | 0.30 | 87,87,87,87 | 0 |
| 83 | ZN | o7 | 501 | 1/1 | 1.00 | 0.32 | 115,115,115,115 | 0 |
| 81 | MG | 5 | 3578 | 1/1 | - | - | 120,120,120,120 | 1 |
| 81 | MG | 1 | 3674 | 1/1 | -0.04 | 0.28 | 115,115,115,115 | 0 |
| 81 | MG | 2 | 1988 | 1/1 | 0.21 | 0.22 | 202,202,202,202 | 0 |
| 81 | MG | 1 | 3794 | 1/1 | 0.24 | 0.37 | 117,117,117,117 | 0 |
| 81 | MG | 6 | 2012 | 1/1 | 0.26 | 2.03 | 116,116,116,116 | 0 |
| 81 | MG | 1 | 3777 | 1/1 | 0.27 | 0.27 | 117,117,117,117 | 0 |
| 81 | MG | 1 | 3727 | 1/1 | 0.27 | 0.73 | 123,123,123,123 | 0 |
| 81 | MG | 8 | 212 | 1/1 | 0.29 | 0.35 | 110,110,110,110 | 0 |
| 81 | MG | 5 | 3643 | 1/1 | 0.35 | 1.14 | 104,104,104,104 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 81 | MG | 1 | 3645 | 1/1 | 0.37 | 1.50 | 92,92,92,92 | 0 |
| 81 | MG | 5 | 3648 | 1/1 | 0.37 | 0.42 | 147,147,147,147 | 0 |
| 81 | MG | 5 | 3750 | 1/1 | 0.40 | 0.46 | 99,99,99,99 | 0 |
| 81 | MG | 1 | 3620 | 1/1 | 0.40 | 0.91 | 108,108,108,108 | 0 |
| 81 | MG | 1 | 3690 | 1/1 | 0.41 | 0.81 | 107,107,107,107 | 0 |
| 81 | MG | 1 | 3781 | 1/1 | 0.41 | 0.46 | 137,137,137,137 | 0 |
| 81 | MG | 1 | 3688 | 1/1 | 0.45 | 0.73 | 114,114,114,114 | 0 |
| 81 | MG | M7 | 201 | 1/1 | 0.47 | 0.64 | 105,105,105,105 | 0 |
| 81 | MG | 6 | 2003 | 1/1 | 0.48 | 0.85 | 119,119,119,119 | 0 |
| 81 | MG | N8 | 202 | 1/1 | 0.48 | 0.43 | 108,108,108,108 | 0 |
| 81 | MG | O9 | 101 | 1/1 | 0.48 | 0.45 | 124,124,124,124 | 0 |
| 81 | MG | 1 | 3423 | 1/1 | 0.49 | 0.54 | 159,159,159,159 | 0 |
| 81 | MG | 1 | 3785 | 1/1 | 0.50 | 0.56 | 120,120,120,120 | 0 |
| 81 | MG | 4 | 216 | 1/1 | 0.50 | 0.61 | 143,143,143,143 | 0 |
| 81 | MG | 2 | 1953 | 1/1 | 0.50 | 0.50 | 151,151,151,151 | 0 |
| 81 | MG | 1 | 3695 | 1/1 | 0.51 | 0.45 | 122,122,122,122 | 0 |
| 81 | MG | 3 | 205 | 1/1 | 0.51 | 0.62 | 149,149,149,149 | 0 |
| 81 | MG | 1 | 3693 | 1/1 | 0.52 | 0.90 | 116,116,116,116 | 0 |
| 81 | MG | 5 | 3825 | 1/1 | 0.53 | 0.45 | 107,107,107,107 | 0 |
| 81 | MG | 4 | 211 | 1/1 | 0.53 | 1.18 | 142,142,142,142 | 0 |
| 81 | MG | 5 | 3495 | 1/1 | 0.54 | 0.36 | 133,133,133,133 | 0 |
| 81 | MG | 5 | 3618 | 1/1 | 0.55 | 0.23 | 123,123,123,123 | 0 |
| 81 | MG | 7 | 206 | 1/1 | 0.55 | 1.25 | 100,100,100,100 | 0 |
| 81 | MG | 4 | 210 | 1/1 | 0.55 | 0.50 | 114,114,114,114 | 0 |
| 81 | MG | 2 | 1972 | 1/1 | 0.56 | 0.75 | 134,134,134,134 | 0 |
| 81 | MG | 1 | 3712 | 1/1 | 0.56 | 1.94 | 125,125,125,125 | 0 |
| 81 | MG | 1 | 3762 | 1/1 | 0.58 | 0.44 | 90,90,90,90 | 0 |
| 83 | ZN | d7 | 101 | 1/1 | 0.59 | 0.25 | 247,247,247,247 | 0 |
| 81 | MG | 5 | 3725 | 1/1 | 0.60 | 0.31 | 100,100,100,100 | 0 |
| 81 | MG | 1 | 3795 | 1/1 | 0.61 | 0.41 | 133,133,133,133 | 0 |
| 81 | MG | 5 | 3660 | 1/1 | 0.61 | 1.65 | 89,89,89,89 | 0 |
| 81 | MG | 5 | 3841 | 1/1 | 0.62 | 0.53 | 102,102,102,102 | 0 |
| 81 | MG | 5 | 3745 | 1/1 | 0.62 | 0.50 | 80,80,80,80 | 0 |
| 81 | MG | 2 | 1904 | 1/1 | 0.62 | 0.51 | 158,158,158,158 | 0 |
| 81 | MG | 1 | 3641 | 1/1 | 0.62 | 0.43 | 93,93,93,93 | 0 |
| 81 | MG | q2 | 503 | 1/1 | 0.63 | 0.80 | 106,106,106,106 | 0 |
| 81 | MG | 1 | 3761 | 1/1 | 0.63 | 0.67 | 96,96,96,96 | 0 |
| 81 | MG | 5 | 3706 | 1/1 | 0.63 | 0.34 | 93,93,93,93 | 0 |
| 81 | MG | 5 | 3457 | 1/1 | 0.63 | 0.23 | 141,141,141,141 | 0 |
| 81 | MG | M6 | 201 | 1/1 | 0.64 | 0.51 | 98,98,98,98 | 0 |
| 81 | MG | 6 | 1919 | 1/1 | 0.64 | 1.01 | 123,123,123,123 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 81 | MG | 1 | 3543 | 1/1 | 0.64 | 0.50 | 134,134,134,134 | 0 |
| 81 | MG | 1 | 3763 | 1/1 | 0.66 | 0.59 | 118,118,118,118 | 0 |
| 81 | MG | 5 | 3771 | 1/1 | 0.66 | 0.68 | 93,93,93,93 | 0 |
| 81 | MG | 5 | 3555 | 1/1 | 0.66 | 0.48 | 108,108,108,108 | 0 |
| 81 | MG | 8 | 210 | 1/1 | 0.67 | 1.82 | 103,103,103,103 | 0 |
| 81 | MG | 5 | 3710 | 1/1 | 0.67 | 0.96 | 114,114,114,114 | 0 |
| 81 | MG | 5 | 3549 | 1/1 | 0.67 | 1.28 | 83,83,83,83 | 0 |
| 81 | MG | 5 | 3488 | 1/1 | 0.68 | 1.40 | 82,82,82,82 | 0 |
| 81 | MG | 5 | 3790 | 1/1 | 0.68 | 0.68 | 105,105,105,105 | 0 |
| 81 | MG | 5 | 3836 | 1/1 | 0.68 | 0.23 | 128,128,128,128 | 0 |
| 81 | MG | 6 | 1985 | 1/1 | 0.69 | 0.90 | 127,127,127,127 | 0 |
| 81 | MG | 5 | 3842 | 1/1 | 0.69 | 2.13 | 105,105,105,105 | 0 |
| 81 | MG | 1 | 3425 | 1/1 | 0.69 | 1.59 | 122,122,122,122 | 0 |
| 81 | MG | 4 | 213 | 1/1 | 0.70 | 0.39 | 178,178,178,178 | 0 |
| 81 | MG | 4 | 223 | 1/1 | 0.70 | 0.37 | 99,99,99,99 | 0 |
| 81 | MG | 5 | 3787 | 1/1 | 0.70 | 0.80 | 109,109,109,109 | 0 |
| 81 | MG | 5 | 3820 | 1/1 | 0.71 | 0.81 | 123,123,123,123 | 0 |
| 81 | MG | 5 | 3606 | 1/1 | 0.72 | 0.45 | 107,107,107,107 | 0 |
| 81 | MG | 6 | 1916 | 1/1 | 0.72 | 0.57 | 121,121,121,121 | 0 |
| 81 | MG | 1 | 3540 | 1/1 | 0.72 | 1.31 | 115,115,115,115 | 0 |
| 81 | MG | 1 | 3547 | 1/1 | 0.73 | 0.48 | 92,92,92,92 | 0 |
| 81 | MG | 5 | 3500 | 1/1 | 0.73 | 0.50 | 87,87,87,87 | 0 |
| 81 | MG | 6 | 1967 | 1/1 | 0.73 | 0.40 | 152,152,152,152 | 0 |
| 81 | MG | 5 | 3702 | 1/1 | 0.73 | 0.27 | 109,109,109,109 | 0 |
| 81 | MG | 5 | 3676 | 1/1 | 0.73 | 0.49 | 106,106,106,106 | 0 |
| 81 | MG | 1 | 3643 | 1/1 | 0.73 | 0.77 | 89,89,89,89 | 0 |
| 81 | MG | O6 | 202 | 1/1 | 0.73 | 0.22 | 150,150,150,150 | 0 |
| 81 | MG | 5 | 3426 | 1/1 | 0.73 | 0.48 | 81,81,81,81 | 0 |
| 81 | MG | o7 | 505 | 1/1 | 0.74 | 0.52 | 111,111,111,111 | 0 |
| 81 | MG | d3 | 202 | 1/1 | 0.74 | 0.35 | 125,125,125,125 | 0 |
| 81 | MG | 5 | 3726 | 1/1 | 0.74 | 0.52 | 107,107,107,107 | 0 |
| 81 | MG | 8 | 204 | 1/1 | 0.74 | 0.85 | 108,108,108,108 | 0 |
| 81 | MG | 1 | 3565 | 1/1 | 0.74 | 0.66 | 86,86,86,86 | 0 |
| 81 | MG | 5 | 3675 | 1/1 | 0.74 | 0.77 | 90,90,90,90 | 0 |
| 81 | MG | S8 | 301 | 1/1 | 0.74 | 0.60 | 161,161,161,161 | 0 |
| 81 | MG | 5 | 3823 | 1/1 | 0.75 | 1.46 | 103,103,103,103 | 0 |
| 81 | MG | 6 | 1980 | 1/1 | 0.75 | 1.26 | 106,106,106,106 | 0 |
| 81 | MG | o2 | 202 | 1/1 | 0.75 | 0.83 | 92,92,92,92 | 0 |
| 81 | MG | 6 | 1952 | 1/1 | 0.75 | 0.49 | 175,175,175,175 | 0 |
| 81 | MG | O2 | 202 | 1/1 | 0.75 | 0.65 | 84,84,84,84 | 0 |
| 81 | MG | 5 | 3558 | 1/1 | 0.75 | 0.48 | 115,115,115,115 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 81 | MG | 5 | 3680 | 1/1 | 0.75 | 0.40 | 83,83,83,83 | 0 |
| 81 | MG | 1 | 3789 | 1/1 | 0.75 | 0.55 | 128,128,128,128 | 0 |
| 81 | MG | 5 | 3607 | 1/1 | 0.76 | 0.27 | 101,101,101,101 | 0 |
| 81 | MG | 1 | 3784 | 1/1 | 0.76 | 0.54 | 146,146,146,146 | 0 |
| 81 | MG | 5 | 3611 | 1/1 | 0.76 | 0.39 | 99,99,99,99 | 0 |
| 81 | MG | 1 | 3639 | 1/1 | 0.76 | 0.29 | 134,134,134,134 | 0 |
| 81 | MG | s8 | 302 | 1/1 | 0.76 | 0.47 | 112,112,112,112 | 0 |
| 81 | MG | 5 | 3412 | 1/1 | 0.77 | 0.43 | 97,97,97,97 | 0 |
| 81 | MG | 1 | 3505 | 1/1 | 0.77 | 0.45 | 92,92,92,92 | 0 |
| 81 | MG | 1 | 3775 | 1/1 | 0.77 | 0.36 | 98,98,98,98 | 0 |
| 81 | MG | 1 | 3487 | 1/1 | 0.77 | 1.03 | 105,105,105,105 | 0 |
| 81 | MG | 6 | 2006 | 1/1 | 0.78 | 0.98 | 126,126,126,126 | 0 |
| 81 | MG | 5 | 3566 | 1/1 | 0.78 | 0.46 | 93,93,93,93 | 0 |
| 81 | MG | 1 | 3485 | 1/1 | 0.78 | 0.41 | 143,143,143,143 | 0 |
| 81 | MG | o5 | 201 | 1/1 | 0.78 | 0.52 | 120,120,120,120 | 0 |
| 81 | MG | 2 | 1989 | 1/1 | 0.78 | 0.48 | 125,125,125,125 | 0 |
| 81 | MG | 1 | 3535 | 1/1 | 0.79 | 0.13 | 153,153,153,153 | 0 |
| 81 | MG | 1 | 3692 | 1/1 | 0.79 | 0.41 | 127,127,127,127 | 0 |
| 81 | MG | 1 | 3659 | 1/1 | 0.79 | 0.61 | 87,87,87,87 | 0 |
| 81 | MG | 6 | 2008 | 1/1 | 0.79 | 1.01 | 111,111,111,111 | 0 |
| 81 | MG | 5 | 3638 | 1/1 | 0.79 | 0.53 | 94,94,94,94 | 0 |
| 81 | MG | 4 | 208 | 1/1 | 0.79 | 1.87 | 130,130,130,130 | 0 |
| 81 | MG | 6 | 1984 | 1/1 | 0.79 | 0.36 | 135,135,135,135 | 0 |
| 81 | MG | 2 | 1967 | 1/1 | 0.79 | 0.56 | 175,175,175,175 | 0 |
| 81 | MG | 5 | 3788 | 1/1 | 0.79 | 0.45 | 98,98,98,98 | 0 |
| 81 | MG | 5 | 3833 | 1/1 | 0.79 | 1.20 | 103,103,103,103 | 0 |
| 81 | MG | 1 | 3704 | 1/1 | 0.79 | 0.70 | 195,195,195,195 | 0 |
| 81 | MG | 1 | 3725 | 1/1 | 0.80 | 0.48 | 111,111,111,111 | 0 |
| 81 | MG | 1 | 3803 | 1/1 | 0.80 | 0.28 | 115,115,115,115 | 0 |
| 81 | MG | 1 | 3687 | 1/1 | 0.80 | 1.16 | 79,79,79,79 | 0 |
| 81 | MG | 5 | 3744 | 1/1 | 0.80 | 0.51 | 94,94,94,94 | 0 |
| 81 | MG | 2 | 1954 | 1/1 | 0.80 | 0.30 | 128,128,128,128 | 0 |
| 81 | MG | 4 | 219 | 1/1 | 0.80 | 0.96 | 117,117,117,117 | 0 |
| 81 | MG | 1 | 3792 | 1/1 | 0.80 | 0.73 | 96,96,96,96 | 0 |
| 81 | MG | 6 | 1993 | 1/1 | 0.81 | 0.43 | 142,142,142,142 | 0 |
| 81 | MG | 1 | 3463 | 1/1 | 0.81 | 0.25 | 94,94,94,94 | 0 |
| 81 | MG | 5 | 3438 | 1/1 | 0.81 | 0.35 | 117,117,117,117 | 0 |
| 81 | MG | 1 | 3670 | 1/1 | 0.81 | 0.17 | 127,127,127,127 | 0 |
| 81 | MG | 1 | 3779 | 1/1 | 0.81 | 0.12 | 144,144,144,144 | 0 |
| 81 | MG | 1 | 3743 | 1/1 | 0.81 | 0.22 | 147,147,147,147 | 0 |
| 81 | MG | 1 | 3529 | 1/1 | 0.81 | 0.65 | 85,85,85,85 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 81 | MG | SM | 301 | 1/1 | 0.82 | 0.14 | 126,126,126,126 | 0 |
| 81 | MG | 5 | 3553 | 1/1 | 0.82 | 0.23 | 98,98,98,98 | 0 |
| 81 | MG | 1 | 3790 | 1/1 | 0.82 | 1.31 | 98,98,98,98 | 0 |
| 81 | MG | 6 | 1954 | 1/1 | 0.82 | 0.13 | 176,176,176,176 | 0 |
| 81 | MG | 5 | 3542 | 1/1 | 0.82 | 1.38 | 82,82,82,82 | 0 |
| 81 | MG | 6 | 1995 | 1/1 | 0.83 | 0.73 | 157,157,157,157 | 0 |
| 81 | MG | 2 | 1911 | 1/1 | 0.83 | 0.70 | 150,150,150,150 | 0 |
| 81 | MG | 6 | 2010 | 1/1 | 0.83 | 0.92 | 109,109,109,109 | 0 |
| 81 | MG | 1 | 3583 | 1/1 | 0.83 | 0.16 | 100,100,100,100 | 0 |
| 83 | ZN | D7 | 101 | 1/1 | 0.83 | 0.22 | 287,287,287,287 | 0 |
| 81 | MG | 6 | 1915 | 1/1 | 0.83 | 0.68 | 133,133,133,133 | 0 |
| 81 | MG | 5 | 3814 | 1/1 | 0.84 | 1.25 | 109,109,109,109 | 0 |
| 81 | MG | 2 | 2005 | 1/1 | 0.84 | 0.18 | 169,169,169,169 | 0 |
| 81 | MG | 5 | 3490 | 1/1 | 0.84 | 0.58 | 102,102,102,102 | 0 |
| 81 | MG | 5 | 3551 | 1/1 | 0.84 | 0.94 | 105,105,105,105 | 0 |
| 81 | MG | 5 | 3624 | 1/1 | 0.84 | 0.27 | 92,92,92,92 | 0 |
| 81 | MG | 1 | 3742 | 1/1 | 0.85 | 0.39 | 90,90,90,90 | 0 |
| 81 | MG | 7 | 208 | 1/1 | 0.85 | 1.10 | 132,132,132,132 | 0 |
| 81 | MG | 6 | 1923 | 1/1 | 0.85 | 0.27 | 119,119,119,119 | 0 |
| 81 | MG | 8 | 207 | 1/1 | 0.85 | 0.23 | 115,115,115,115 | 0 |
| 81 | MG | 5 | 3494 | 1/1 | 0.85 | 0.16 | 129,129,129,129 | 0 |
| 81 | MG | m7 | 204 | 1/1 | 0.86 | 0.55 | 86,86,86,86 | 0 |
| 81 | MG | 5 | 3831 | 1/1 | 0.86 | 0.40 | 76,76,76,76 | 0 |
| 81 | MG | 5 | 3808 | 1/1 | 0.86 | 0.26 | 84,84,84,84 | 0 |
| 81 | MG | 5 | 3821 | 1/1 | 0.86 | 0.29 | 92,92,92,92 | 0 |
| 81 | MG | 6 | 1947 | 1/1 | 0.86 | 0.10 | 165,165,165,165 | 0 |
| 81 | MG | 1 | 3799 | 1/1 | 0.86 | 1.29 | 112,112,112,112 | 0 |
| 81 | MG | 5 | 3603 | 1/1 | 0.86 | 0.50 | 143,143,143,143 | 0 |
| 81 | MG | n4 | 201 | 1/1 | 0.86 | 1.43 | 114,114,114,114 | 0 |
| 81 | MG | 5 | 3464 | 1/1 | 0.86 | 0.42 | 99,99,99,99 | 0 |
| 81 | MG | 1 | 3478 | 1/1 | 0.87 | 0.67 | 133,133,133,133 | 0 |
| 81 | MG | 5 | 3760 | 1/1 | 0.87 | 0.40 | 81,81,81,81 | 0 |
| 81 | MG | 5 | 3746 | 1/1 | 0.87 | 0.38 | 71,71,71,71 | 0 |
| 81 | MG | 1 | 3749 | 1/1 | 0.87 | 0.28 | 80,80,80,80 | 0 |
| 81 | MG | 5 | 3592 | 1/1 | 0.88 | 1.05 | 97,97,97,97 | 0 |
| 81 | MG | 5 | 3547 | 1/1 | 0.88 | 0.73 | 87,87,87,87 | 0 |
| 81 | MG | 6 | 1925 | 1/1 | 0.88 | 0.36 | 115,115,115,115 | 0 |
| 81 | MG | 5 | 3432 | 1/1 | 0.88 | 0.44 | 92,92,92,92 | 0 |
| 81 | MG | 5 | 3482 | 1/1 | 0.88 | 0.59 | 72,72,72,72 | 0 |
| 81 | MG | 2 | 1929 | 1/1 | 0.88 | 0.22 | 144,144,144,144 | 0 |
| 81 | MG | 1 | 3657 | 1/1 | 0.88 | 0.26 | 97,97,97,97 | 0 |
| 81 | MG | 5 | 3763 | 1/1 | 0.88 | 0.31 | 105,105,105,105 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 82 | GET | 2 | 2014 | 34/34 | 0.88 | 0.35 | 145,145,145,145 | 0 |
| 81 | MG | 3 | 208 | 1/1 | 0.89 | 0.10 | 162,162,162,162 | 0 |
| 81 | MG | 1 | 3574 | 1/1 | 0.89 | 0.71 | 87,87,87,87 | 0 |
| 81 | MG | 5 | 3489 | 1/1 | 0.89 | 0.57 | 91,91,91,91 | 0 |
| 81 | MG | 5 | 3474 | 1/1 | 0.89 | 0.24 | 104,104,104,104 | 0 |
| 81 | MG | 5 | 3463 | 1/1 | 0.89 | 0.38 | 99,99,99,99 | 0 |
| 81 | MG | 5 | 3778 | 1/1 | 0.89 | 0.14 | 96,96,96,96 | 0 |
| 81 | MG | 1 | 3656 | 1/1 | 0.89 | 0.54 | 96,96,96,96 | 0 |
| 81 | MG | 1 | 3760 | 1/1 | 0.89 | 0.35 | 147,147,147,147 | 0 |
| 81 | MG | 1 | 3778 | 1/1 | 0.89 | 0.69 | 91,91,91,91 | 0 |
| 81 | MG | 2 | 1944 | 1/1 | 0.90 | 0.29 | 127,127,127,127 | 0 |
| 81 | MG | 3 | 204 | 1/1 | 0.90 | 0.19 | 147,147,147,147 | 0 |
| 81 | MG | 5 | 3435 | 1/1 | 0.90 | 0.16 | 93,93,93,93 | 0 |
| 81 | MG | 2 | 2002 | 1/1 | 0.90 | 0.34 | 214,214,214,214 | 0 |
| 81 | MG | 6 | 1909 | 1/1 | 0.90 | 1.36 | 120,120,120,120 | 0 |
| 81 | MG | 1 | 3504 | 1/1 | 0.90 | 0.17 | 87,87,87,87 | 0 |
| 81 | MG | 2 | 1947 | 1/1 | 0.90 | 0.49 | 157,157,157,157 | 0 |
| 81 | MG | 5 | 3797 | 1/1 | 0.90 | 0.31 | 139,139,139,139 | 0 |
| 81 | MG | 1 | 3551 | 1/1 | 0.90 | 0.22 | 138,138,138,138 | 0 |
| 81 | MG | 5 | 3775 | 1/1 | 0.90 | 0.29 | 115,115,115,115 | 0 |
| 82 | GET | 5 | 3848 | 34/34 | 0.90 | 0.19 | 127,127,127,127 | 0 |
| 81 | MG | 2 | 1910 | 1/1 | 0.91 | 0.24 | 160,160,160,160 | 0 |
| 81 | MG | 5 | 3481 | 1/1 | 0.91 | 0.32 | 90,90,90,90 | 0 |
| 81 | MG | 2 | 1960 | 1/1 | 0.91 | 0.13 | 154,154,154,154 | 0 |
| 81 | MG | 1 | 3736 | 1/1 | 0.91 | 1.07 | 103,103,103,103 | 0 |
| 81 | MG | 1 | 3697 | 1/1 | 0.91 | 0.09 | 127,127,127,127 | 0 |
| 81 | MG | 5 | 3644 | 1/1 | 0.91 | 0.17 | 103,103,103,103 | 0 |
| 81 | MG | 2 | 1983 | 1/1 | 0.91 | 0.48 | 144,144,144,144 | 0 |
| 81 | MG | 5 | 3537 | 1/1 | 0.91 | 0.09 | 100,100,100,100 | 0 |
| 81 | MG | 6 | 1929 | 1/1 | 0.91 | 0.27 | 139,139,139,139 | 0 |
| 81 | MG | 5 | 3700 | 1/1 | 0.91 | 0.28 | 90,90,90,90 | 0 |
| 82 | GET | 5 | 3844 | 34/34 | 0.91 | 0.27 | 100,100,100,100 | 0 |
| 81 | MG | 5 | 3507 | 1/1 | 0.91 | 0.30 | 103,103,103,103 | 0 |
| 81 | MG | 6 | 1905 | 1/1 | 0.92 | 0.39 | 128,128,128,128 | 0 |
| 81 | MG | 2 | 1902 | 1/1 | 0.92 | 0.17 | 145,145,145,145 | 0 |
| 81 | MG | 5 | 3499 | 1/1 | 0.92 | 0.27 | 92,92,92,92 | 0 |
| 81 | MG | 5 | 3564 | 1/1 | 0.92 | 1.59 | 109,109,109,109 | 0 |
| 81 | MG | 1 | 3434 | 1/1 | 0.92 | 0.21 | 99,99,99,99 | 0 |
| 81 | MG | 5 | 3511 | 1/1 | 0.92 | 0.27 | 125,125,125,125 | 0 |
| 81 | MG | 2 | 1991 | 1/1 | 0.92 | 0.22 | 182,182,182,182 | 0 |
| 81 | MG | 5 | 3696 | 1/1 | 0.92 | 0.39 | 81,81,81,81 | 0 |
| 81 | MG | 5 | 3523 | 1/1 | 0.92 | 0.32 | 113,113,113,113 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 81 | MG | 2 | 1941 | 1/1 | 0.92 | 0.40 | 126,126,126,126 | 0 |
| 81 | MG | 2 | 2004 | 1/1 | 0.92 | 0.94 | 136,136,136,136 | 0 |
| 81 | MG | 1 | 3714 | 1/1 | 0.92 | 0.27 | 145,145,145,145 | 0 |
| 81 | MG | 6 | 1988 | 1/1 | 0.92 | 0.31 | 120,120,120,120 | 0 |
| 81 | MG | 1 | 3768 | 1/1 | 0.92 | 0.33 | 93,93,93,93 | 0 |
| 81 | MG | 3 | 207 | 1/1 | 0.92 | 0.16 | 159,159,159,159 | 0 |
| 81 | MG | 1 | 3511 | 1/1 | 0.92 | 0.57 | 113,113,113,113 | 0 |
| 81 | MG | 5 | 3598 | 1/1 | 0.92 | 0.49 | 137,137,137,137 | 0 |
| 81 | MG | 1 | 3585 | 1/1 | 0.92 | 0.64 | 102,102,102,102 | 0 |
| 81 | MG | 2 | 1918 | 1/1 | 0.92 | 0.51 | 181,181,181,181 | 0 |
| 81 | MG | 2 | 1963 | 1/1 | 0.92 | 0.10 | 141,141,141,141 | 0 |
| 81 | MG | 5 | 3756 | 1/1 | 0.93 | 0.33 | 90,90,90,90 | 0 |
| 81 | MG | 1 | 3708 | 1/1 | 0.93 | 0.84 | 83,83,83,83 | 0 |
| 81 | MG | 5 | 3619 | 1/1 | 0.93 | 0.21 | 89,89,89,89 | 0 |
| 81 | MG | 2 | 2010 | 1/1 | 0.93 | 0.26 | 139,139,139,139 | 0 |
| 81 | MG | 2 | 1957 | 1/1 | 0.93 | 0.35 | 126,126,126,126 | 0 |
| 81 | MG | 1 | 3544 | 1/1 | 0.93 | 0.15 | 116,116,116,116 | 0 |
| 82 | GET | 5 | 3847 | 34/34 | 0.93 | 0.40 | 101,101,101,101 | 0 |
| 81 | MG | 5 | 3492 | 1/1 | 0.93 | 0.36 | 111,111,111,111 | 0 |
| 83 | ZN | o4 | 500 | 1/1 | 0.93 | 0.18 | 143,143,143,143 | 0 |
| 81 | MG | 1 | 3409 | 1/1 | 0.93 | 0.11 | 103,103,103,103 | 0 |
| 81 | MG | 2 | 1901 | 1/1 | 0.93 | 0.33 | 140,140,140,140 | 0 |
| 81 | MG | 4 | 204 | 1/1 | 0.93 | 0.13 | 160,160,160,160 | 0 |
| 81 | MG | 6 | 1971 | 1/1 | 0.94 | 0.09 | 192,192,192,192 | 0 |
| 81 | MG | 5 | 3780 | 1/1 | 0.94 | 0.49 | 85,85,85,85 | 0 |
| 81 | MG | 6 | 1962 | 1/1 | 0.94 | 0.13 | 191,191,191,191 | 0 |
| 81 | MG | 1 | 3432 | 1/1 | 0.94 | 0.41 | 94,94,94,94 | 0 |
| 81 | MG | 2 | 2003 | 1/1 | 0.94 | 0.42 | 141,141,141,141 | 0 |
| 81 | MG | 2 | 1948 | 1/1 | 0.94 | 0.26 | 172,172,172,172 | 0 |
| 81 | MG | 1 | 3424 | 1/1 | 0.94 | 0.32 | 114,114,114,114 | 0 |
| 81 | MG | 1 | 3442 | 1/1 | 0.94 | 0.18 | 133,133,133,133 | 0 |
| 81 | MG | 1 | 3588 | 1/1 | 0.94 | 0.67 | 115,115,115,115 | 0 |
| 81 | MG | 1 | 3484 | 1/1 | 0.94 | 0.19 | 157,157,157,157 | 0 |
| 81 | MG | 5 | 3629 | 1/1 | 0.94 | 0.27 | 93,93,93,93 | 0 |
| 81 | MG | 5 | 3784 | 1/1 | 0.94 | 0.21 | 98,98,98,98 | 0 |
| 81 | MG | 1 | 3433 | 1/1 | 0.94 | 0.21 | 111,111,111,111 | 0 |
| 81 | MG | 1 | 3472 | 1/1 | 0.94 | 0.43 | 137,137,137,137 | 0 |
| 81 | MG | 1 | 3613 | 1/1 | 0.94 | 0.47 | 88,88,88,88 | 0 |
| 81 | MG | 5 | 3720 | 1/1 | 0.94 | 0.19 | 119,119,119,119 | 0 |
| 81 | MG | 5 | 3801 | 1/1 | 0.94 | 0.24 | 86,86,86,86 | 0 |
| 81 | MG | 1 | 3497 | 1/1 | 0.94 | 0.32 | 106,106,106,106 | 0 |
| 81 | MG | 1 | 3752 | 1/1 | 0.94 | 0.23 | 145,145,145,145 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 81 | MG | 5 | 3809 | 1/1 | 0.94 | 0.43 | 119,119,119,119 | 0 |
| 81 | MG | 1 | 3413 | 1/1 | 0.94 | 0.37 | 112,112,112,112 | 0 |
| 81 | MG | 1 | 3509 | 1/1 | 0.94 | 0.26 | 97,97,97,97 | 0 |
| 81 | MG | 6 | 1926 | 1/1 | 0.94 | 0.13 | 121,121,121,121 | 0 |
| 81 | MG | 2 | 1961 | 1/1 | 0.95 | 0.16 | 139,139,139,139 | 0 |
| 81 | MG | 1 | 3462 | 1/1 | 0.95 | 0.35 | 98,98,98,98 | 0 |
| 81 | MG | 6 | 1979 | 1/1 | 0.95 | 0.26 | 113,113,113,113 | 0 |
| 82 | GET | 1 | 3808 | 34/34 | 0.95 | 0.20 | 106,106,106,106 | 0 |
| 81 | MG | 2 | 1922 | 1/1 | 0.95 | 0.35 | 124,124,124,124 | 0 |
| 81 | MG | 6 | 1949 | 1/1 | 0.95 | 0.21 | 172,172,172,172 | 0 |
| 81 | MG | 5 | 3469 | 1/1 | 0.95 | 0.30 | 98,98,98,98 | 0 |
| 82 | GET | 6 | 2013 | 34/34 | 0.95 | 0.19 | 132,132,132,132 | 0 |
| 81 | MG | 2 | 1917 | 1/1 | 0.95 | 0.08 | 160,160,160,160 | 0 |
| 81 | MG | 1 | 3664 | 1/1 | 0.95 | 0.36 | 99,99,99,99 | 0 |
| 81 | MG | M0 | 301 | 1/1 | 0.95 | 0.15 | 101,101,101,101 | 0 |
| 81 | MG | 1 | 3774 | 1/1 | 0.95 | 0.24 | 148,148,148,148 | 0 |
| 81 | MG | 1 | 3533 | 1/1 | 0.95 | 0.17 | 110,110,110,110 | 0 |
| 81 | MG | 5 | 3458 | 1/1 | 0.95 | 0.71 | 117,117,117,117 | 0 |
| 81 | MG | 1 | 3414 | 1/1 | 0.95 | 0.28 | 119,119,119,119 | 0 |
| 81 | MG | 2 | 1978 | 1/1 | 0.95 | 0.34 | 138,138,138,138 | 0 |
| 81 | MG | 5 | 3605 | 1/1 | 0.95 | 0.38 | 98,98,98,98 | 0 |
| 81 | MG | L8 | 301 | 1/1 | 0.95 | 1.08 | 182,182,182,182 | 0 |
| 81 | MG | 2 | 1987 | 1/1 | 0.95 | 0.35 | 144,144,144,144 | 0 |
| 81 | MG | 5 | 3732 | 1/1 | 0.95 | 0.43 | 114,114,114,114 | 0 |
| 81 | MG | 1 | 3696 | 1/1 | 0.95 | 0.38 | 92,92,92,92 | 0 |
| 81 | MG | 6 | 1948 | 1/1 | 0.95 | 0.18 | 167,167,167,167 | 0 |
| 81 | MG | 5 | 3697 | 1/1 | 0.95 | 0.32 | 98,98,98,98 | 0 |
| 81 | MG | 1 | 3569 | 1/1 | 0.95 | 0.47 | 88,88,88,88 | 0 |
| 81 | MG | 1 | 3731 | 1/1 | 0.95 | 0.25 | 105,105,105,105 | 0 |
| 81 | MG | 6 | 1928 | 1/1 | 0.96 | 0.19 | 114,114,114,114 | 0 |
| 81 | MG | 5 | 3591 | 1/1 | 0.96 | 0.25 | 98,98,98,98 | 0 |
| 81 | MG | 1 | 3536 | 1/1 | 0.96 | 0.15 | 163,163,163,163 | 0 |
| 81 | MG | 5 | 3529 | 1/1 | 0.96 | 0.35 | 113,113,113,113 | 0 |
| 81 | MG | 1 | 3648 | 1/1 | 0.96 | 0.42 | 92,92,92,92 | 0 |
| 81 | MG | 1 | 3534 | 1/1 | 0.96 | 0.23 | 101,101,101,101 | 0 |
| 81 | MG | 8 | 208 | 1/1 | 0.96 | 0.20 | 123,123,123,123 | 0 |
| 81 | MG | 1 | 3605 | 1/1 | 0.96 | 0.29 | 85,85,85,85 | 0 |
| 81 | MG | 1 | 3416 | 1/1 | 0.96 | 0.38 | 121,121,121,121 | 0 |
| 81 | MG | 5 | 3417 | 1/1 | 0.96 | 0.34 | 87,87,87,87 | 0 |
| 81 | MG | 1 | 3718 | 1/1 | 0.96 | 0.22 | 83,83,83,83 | 0 |
| 81 | MG | 5 | 3665 | 1/1 | 0.96 | 0.29 | 92,92,92,92 | 0 |
| 81 | MG | 1 | 3707 | 1/1 | 0.96 | 0.40 | 86,86,86,86 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 81 | MG | 2 | 1919 | 1/1 | 0.96 | 0.15 | 184,184,184,184 | 0 |
| 81 | MG | 2 | 1933 | 1/1 | 0.96 | 0.37 | 135,135,135,135 | 0 |
| 81 | MG | 5 | 3407 | 1/1 | 0.96 | 0.41 | 87,87,87,87 | 0 |
| 81 | MG | 5 | 3782 | 1/1 | 0.96 | 0.26 | 85,85,85,85 | 0 |
| 81 | MG | 5 | 3526 | 1/1 | 0.96 | 0.39 | 119,119,119,119 | 0 |
| 81 | MG | 5 | 3497 | 1/1 | 0.96 | 0.30 | 93,93,93,93 | 0 |
| 81 | MG | 5 | 3478 | 1/1 | 0.96 | 0.28 | 95,95,95,95 | 0 |
| 81 | MG | 5 | 3402 | 1/1 | 0.96 | 0.27 | 88,88,88,88 | 0 |
| 81 | MG | 5 | 3483 | 1/1 | 0.97 | 0.35 | 94,94,94,94 | 0 |
| 81 | MG | 1 | 3678 | 1/1 | 0.97 | 0.24 | 89,89,89,89 | 0 |
| 81 | MG | 1 | 3525 | 1/1 | 0.97 | 0.40 | 161,161,161,161 | 0 |
| 81 | MG | L2 | 301 | 1/1 | 0.97 | 0.08 | 97,97,97,97 | 0 |
| 81 | MG | 1 | 3694 | 1/1 | 0.97 | 0.09 | 103,103,103,103 | 0 |
| 81 | MG | 5 | 3608 | 1/1 | 0.97 | 0.57 | 108,108,108,108 | 1 |
| 81 | MG | 1 | 3417 | 1/1 | 0.97 | 0.31 | 129,129,129,129 | 0 |
| 81 | MG | 5 | 3654 | 1/1 | 0.97 | 0.08 | 96,96,96,96 | 0 |
| 81 | MG | 1 | 3455 | 1/1 | 0.97 | 0.28 | 89,89,89,89 | 0 |
| 81 | MG | 5 | 3735 | 1/1 | 0.97 | 0.25 | 102,102,102,102 | 0 |
| 81 | MG | 5 | 3686 | 1/1 | 0.97 | 0.20 | 108,108,108,108 | 0 |
| 81 | MG | 1 | 3698 | 1/1 | 0.97 | 0.15 | 113,113,113,113 | 0 |
| 81 | MG | 5 | 3795 | 1/1 | 0.97 | 0.05 | 104,104,104,104 | 1 |
| 81 | MG | 1 | 3467 | 1/1 | 0.97 | 0.63 | 101,101,101,101 | 0 |
| 81 | MG | 6 | 1964 | 1/1 | 0.97 | 0.33 | 164,164,164,164 | 0 |
| 81 | MG | 1 | 3554 | 1/1 | 0.97 | 0.62 | 96,96,96,96 | 0 |
| 81 | MG | 5 | 3404 | 1/1 | 0.97 | 0.32 | 89,89,89,89 | 0 |
| 81 | MG | n7 | 201 | 1/1 | 0.97 | 0.90 | 148,148,148,148 | 1 |
| 81 | MG | 1 | 3430 | 1/1 | 0.97 | 0.38 | 92,92,92,92 | 0 |
| 81 | MG | 2 | 1930 | 1/1 | 0.97 | 0.34 | 149,149,149,149 | 0 |
| 81 | MG | 4 | 220 | 1/1 | 0.97 | 0.13 | 117,117,117,117 | 0 |
| 81 | MG | 1 | 3590 | 1/1 | 0.97 | 0.62 | 95,95,95,95 | 0 |
| 81 | MG | 5 | 3509 | 1/1 | 0.97 | 0.23 | 111,111,111,111 | 0 |
| 81 | MG | 1 | 3526 | 1/1 | 0.97 | 0.23 | 133,133,133,133 | 0 |
| 81 | MG | 5 | 3646 | 1/1 | 0.97 | 0.10 | 131,131,131,131 | 0 |
| 81 | MG | 6 | 1936 | 1/1 | 0.97 | 0.32 | 113,113,113,113 | 0 |
| 81 | MG | 1 | 3402 | 1/1 | 0.97 | 0.10 | 102,102,102,102 | 0 |
| 81 | MG | 5 | 3445 | 1/1 | 0.97 | 0.49 | 86,86,86,86 | 0 |
| 81 | MG | 5 | 3590 | 1/1 | 0.97 | 0.25 | 90,90,90,90 | 0 |
| 81 | MG | 1 | 3730 | 1/1 | 0.97 | 0.26 | 123,123,123,123 | 0 |
| 81 | MG | 5 | 3563 | 1/1 | 0.97 | 0.10 | 140,140,140,140 | 0 |
| 81 | MG | O5 | 201 | 1/1 | 0.97 | 0.14 | 165,165,165,165 | 0 |
| 81 | MG | 1 | 3549 | 1/1 | 0.97 | 0.13 | 145,145,145,145 | 0 |
| 81 | MG | 1 | 3489 | 1/1 | 0.97 | 0.38 | 114,114,114,114 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 81 | MG | 1 | 3476 | 1/1 | 0.97 | 0.18 | 194,194,194,194 | 0 |
| 81 | MG | 1 | 3501 | 1/1 | 0.97 | 0.42 | 95,95,95,95 | 0 |
| 81 | MG | 1 | 3651 | 1/1 | 0.98 | 0.74 | 86,86,86,86 | 0 |
| 81 | MG | 5 | 3681 | 1/1 | 0.98 | 0.63 | 96,96,96,96 | 0 |
| 81 | MG | 5 | 3586 | 1/1 | 0.98 | 0.30 | 80,80,80,80 | 0 |
| 81 | MG | 1 | 3491 | 1/1 | 0.98 | 0.35 | 108,108,108,108 | 0 |
| 81 | MG | 8 | 202 | 1/1 | 0.98 | 0.24 | 114,114,114,114 | 0 |
| 81 | MG | 5 | 3405 | 1/1 | 0.98 | 0.34 | 88,88,88,88 | 0 |
| 81 | MG | 5 | 3641 | 1/1 | 0.98 | 0.36 | 90,90,90,90 | 0 |
| 81 | MG | 5 | 3446 | 1/1 | 0.98 | 0.35 | 87,87,87,87 | 0 |
| 81 | MG | 1 | 3669 | 1/1 | 0.98 | 0.27 | 98,98,98,98 | 0 |
| 81 | MG | 5 | 3565 | 1/1 | 0.98 | 0.23 | 100,100,100,100 | 0 |
| 81 | MG | 5 | 3723 | 1/1 | 0.98 | 0.37 | 92,92,92,92 | 0 |
| 81 | MG | 1 | 3443 | 1/1 | 0.98 | 0.20 | 117,117,117,117 | 0 |
| 81 | MG | 1 | 3741 | 1/1 | 0.98 | 0.25 | 92,92,92,92 | 0 |
| 81 | MG | 5 | 3655 | 1/1 | 0.98 | 0.20 | 89,89,89,89 | 0 |
| 81 | MG | 1 | 3440 | 1/1 | 0.98 | 0.21 | 114,114,114,114 | 0 |
| 83 | ZN | O7 | 101 | 1/1 | 0.98 | 0.25 | 130,130,130,130 | 0 |
| 81 | MG | 6 | 1968 | 1/1 | 0.98 | 0.33 | 130,130,130,130 | 0 |
| 81 | MG | 1 | 3546 | 1/1 | 0.98 | 0.21 | 98,98,98,98 | 0 |
| 81 | MG | 5 | 3550 | 1/1 | 0.98 | 0.36 | 99,99,99,99 | 0 |
| 81 | MG | 1 | 3495 | 1/1 | 0.98 | 0.38 | 97,97,97,97 | 0 |
| 81 | MG | 5 | 3515 | 1/1 | 0.98 | 0.59 | 109,109,109,109 | 0 |
| 81 | MG | 5 | 3674 | 1/1 | 0.98 | 0.07 | 98,98,98,98 | 0 |
| 81 | MG | 1 | 3405 | 1/1 | 0.98 | 0.17 | 108,108,108,108 | 0 |
| 81 | MG | 1 | 3616 | 1/1 | 0.98 | 0.37 | 88,88,88,88 | 0 |
| 81 | MG | 1 | 3702 | 1/1 | 0.98 | 0.22 | 101,101,101,101 | 0 |
| 81 | MG | 5 | 3517 | 1/1 | 0.98 | 0.26 | 123,123,123,123 | 0 |
| 81 | MG | 2 | 1973 | 1/1 | 0.98 | 0.19 | 135,135,135,135 | 1 |
| 81 | MG | 5 | 3425 | 1/1 | 0.98 | 0.30 | 81,81,81,81 | 0 |
| 81 | MG | 1 | 3450 | 1/1 | 0.98 | 0.39 | 90,90,90,90 | 0 |
| 81 | MG | 1 | 3679 | 1/1 | 0.98 | 0.18 | 102,102,102,102 | 0 |
| 81 | MG | 1 | 3498 | 1/1 | 0.98 | 0.21 | 97,97,97,97 | 0 |
| 81 | MG | L5 | 301 | 1/1 | 0.98 | 0.16 | 135,135,135,135 | 0 |
| 81 | MG | 1 | 3796 | 1/1 | 0.98 | 0.22 | 100,100,100,100 | 0 |
| 81 | MG | 5 | 3581 | 1/1 | 0.98 | 0.17 | 112,112,112,112 | 0 |
| 81 | MG | 5 | 3679 | 1/1 | 0.98 | 0.22 | 98,98,98,98 | 0 |
| 81 | MG | 1 | 3573 | 1/1 | 0.98 | 0.21 | 92,92,92,92 | 0 |
| 81 | MG | 1 | 3593 | 1/1 | 0.99 | 0.21 | 91,91,91,91 | 0 |
| 81 | MG | 1 | 3469 | 1/1 | 0.99 | 0.41 | 120,120,120,120 | 0 |
| 81 | MG | 5 | 3548 | 1/1 | 0.99 | 0.28 | 90,90,90,90 | 0 |
| 81 | MG | 5 | 3552 | 1/1 | 0.99 | 0.27 | 95,95,95,95 | 0 |

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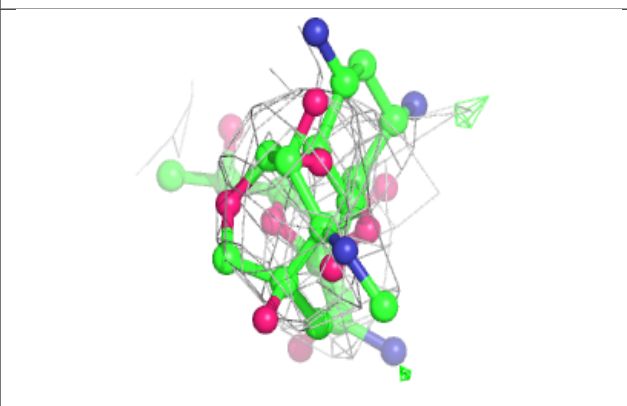
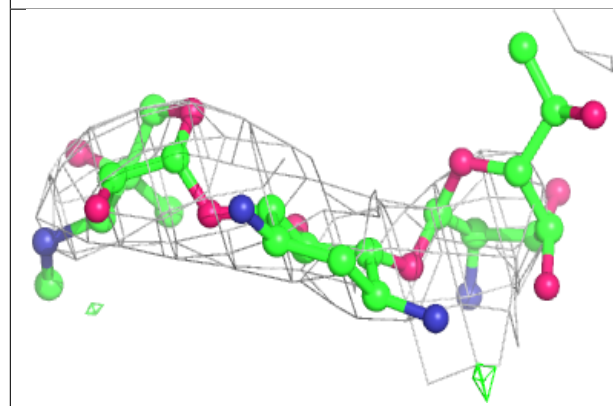
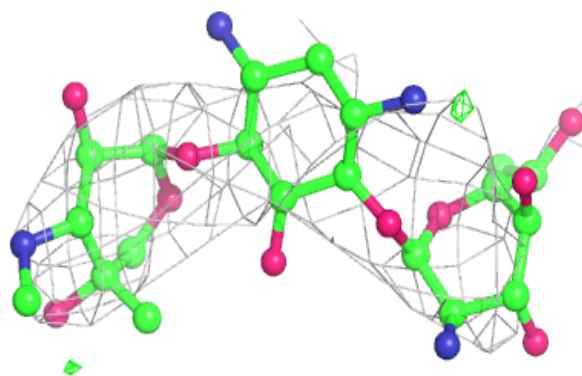
Continued from previous page...

| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 81 | MG | 5 | 3535 | 1/1 | 0.99 | 0.10 | 103,103,103,103 | 0 |
| 81 | MG | 17 | 301 | 1/1 | 0.99 | 0.30 | 92,92,92,92 | 0 |
| 81 | MG | 1 | 3557 | 1/1 | 0.99 | 0.21 | 108,108,108,108 | 0 |
| 81 | MG | 1 | 3532 | 1/1 | 0.99 | 0.09 | 113,113,113,113 | 0 |
| 81 | MG | 5 | 3734 | 1/1 | 0.99 | 0.24 | 88,88,88,88 | 0 |
| 81 | MG | 5 | 3484 | 1/1 | 0.99 | 0.59 | 85,85,85,85 | 0 |
| 81 | MG | 5 | 3772 | 1/1 | 0.99 | 0.63 | 97,97,97,97 | 0 |
| 81 | MG | 1 | 3555 | 1/1 | 0.99 | 0.41 | 96,96,96,96 | 0 |
| 83 | ZN | q3 | 501 | 1/1 | 0.99 | 0.18 | 138,138,138,138 | 0 |
| 81 | MG | 6 | 1934 | 1/1 | 0.99 | 0.19 | 124,124,124,124 | 0 |
| 81 | MG | 5 | 3544 | 1/1 | 0.99 | 0.35 | 81,81,81,81 | 0 |
| 81 | MG | 5 | 3442 | 1/1 | 0.99 | 0.20 | 88,88,88,88 | 0 |
| 81 | MG | 1 | 3636 | 1/1 | 0.99 | 0.44 | 85,85,85,85 | 0 |
| 81 | MG | 1 | 3682 | 1/1 | 0.99 | 0.35 | 130,130,130,130 | 0 |
| 81 | MG | 5 | 3459 | 1/1 | 0.99 | 0.42 | 124,124,124,124 | 0 |
| 81 | MG | 4 | 224 | 1/1 | 0.99 | 0.27 | 144,144,144,144 | 0 |
| 81 | MG | 1 | 3607 | 1/1 | 0.99 | 0.16 | 90,90,90,90 | 0 |
| 81 | MG | 1 | 3482 | 1/1 | 0.99 | 0.19 | 136,136,136,136 | 0 |

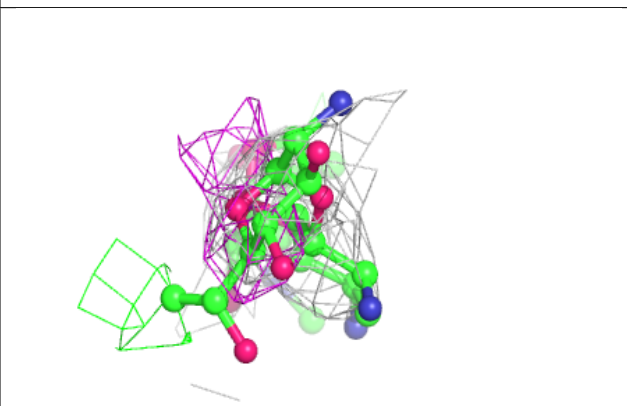
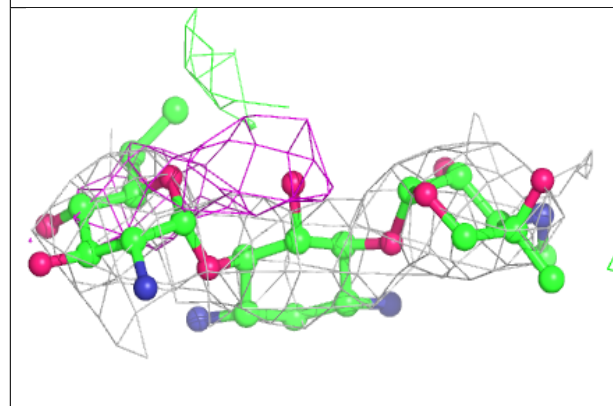
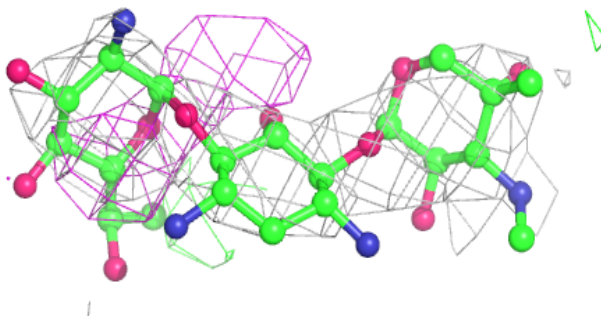
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around GET 6 2015:

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

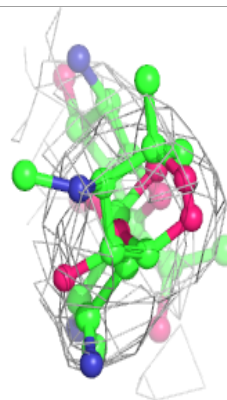
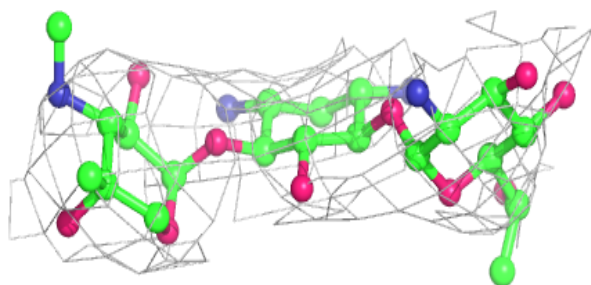
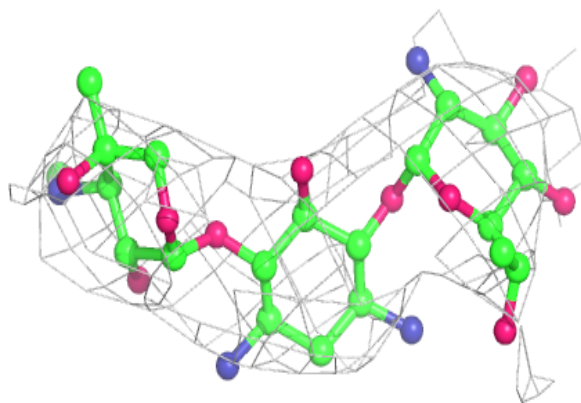
**Electron density around GET 1 3809:**

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

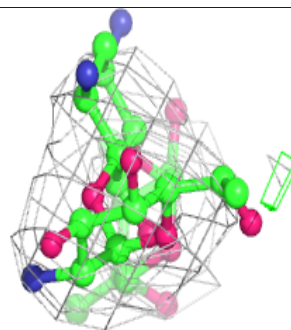
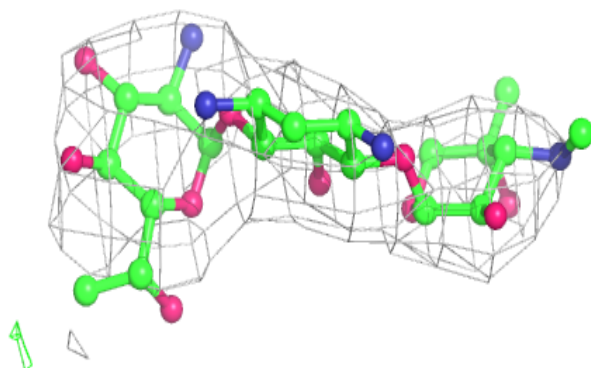
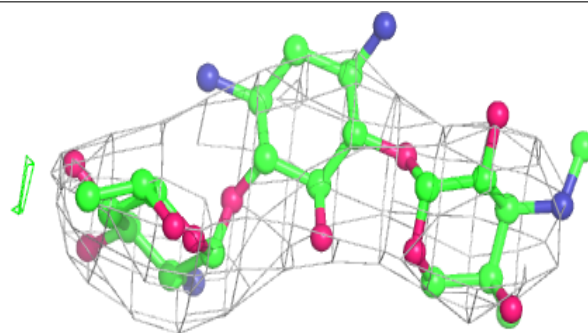


Electron density around GET n6 201:

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

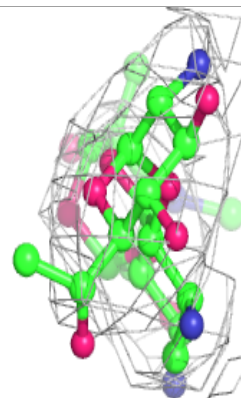
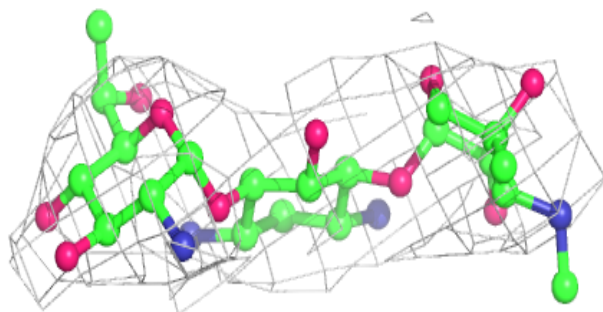
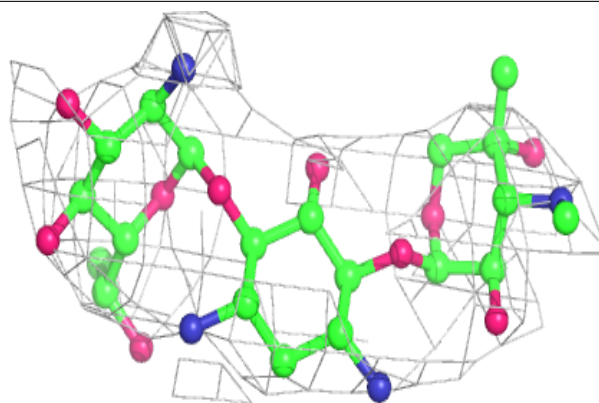
**Electron density around GET 6 2014:**

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

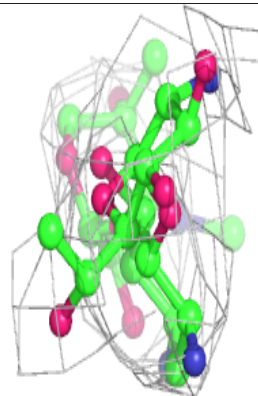
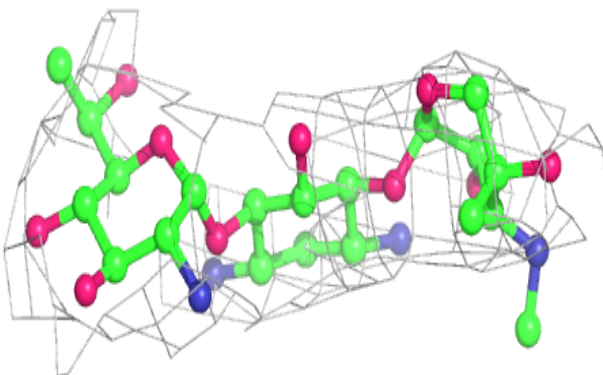
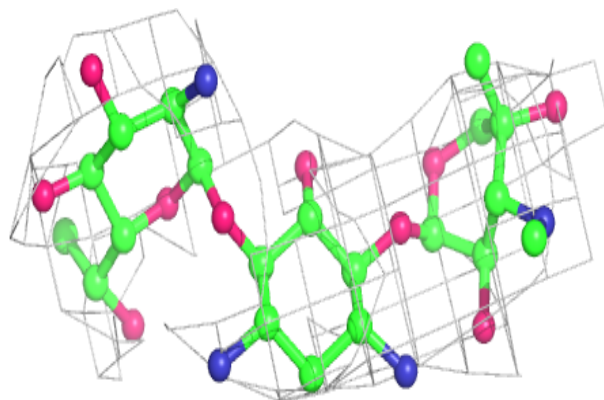


Electron density around GET 5 3851:

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

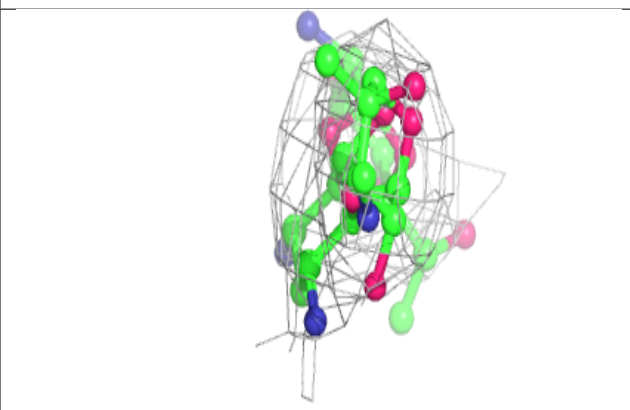
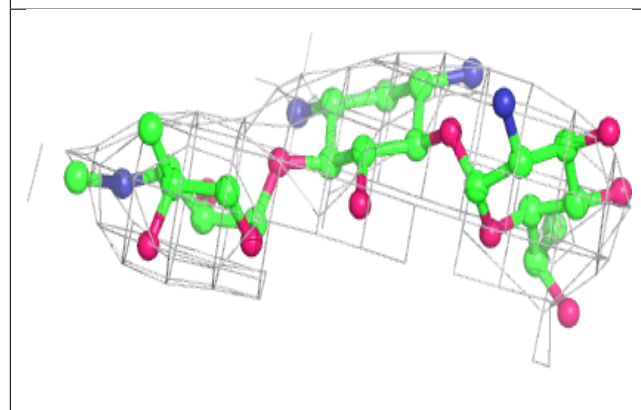
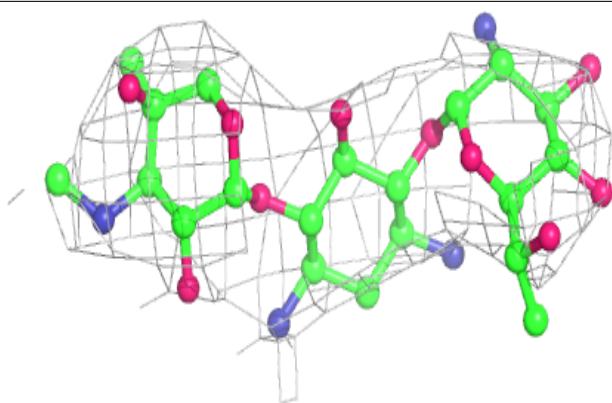
**Electron density around GET 2 2012:**

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

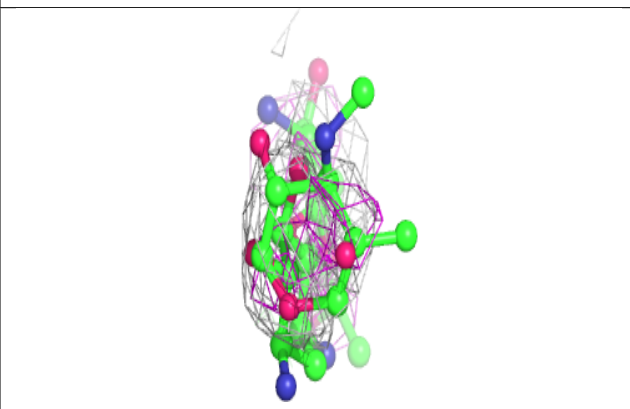
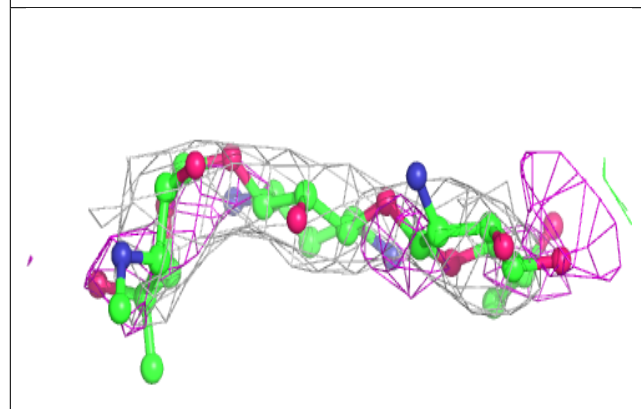
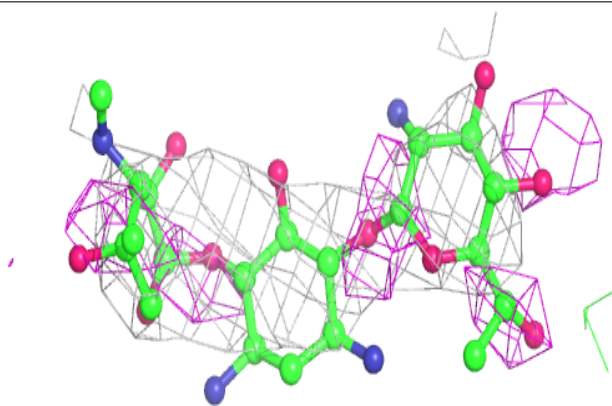


Electron density around GET 5 3846:

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

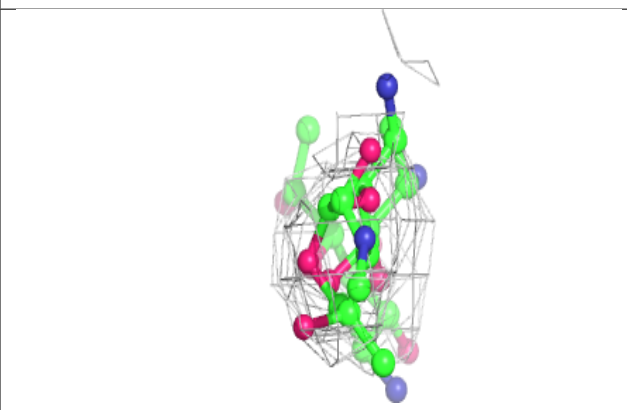
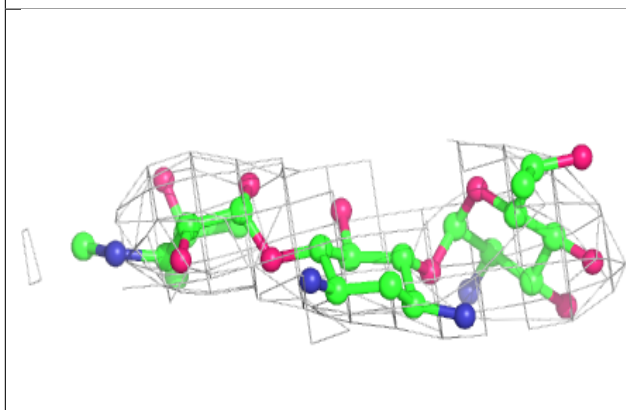
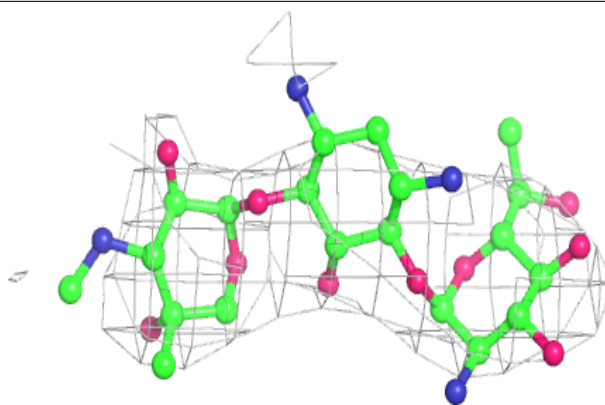
**Electron density around GET 1 3813:**

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

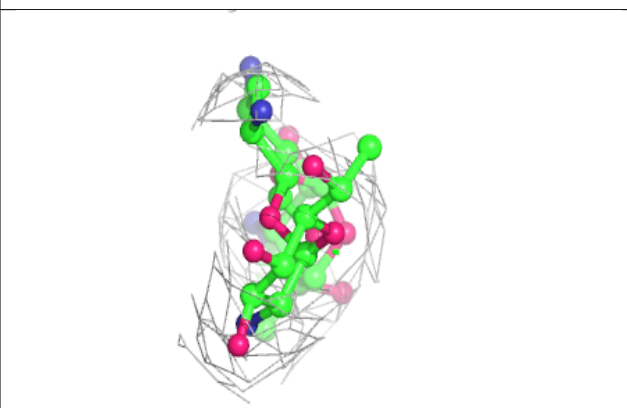
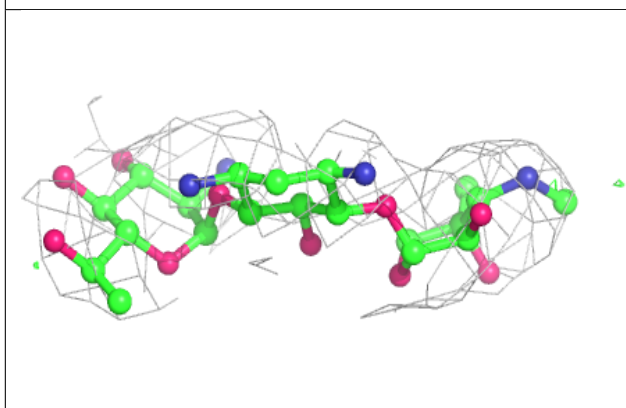
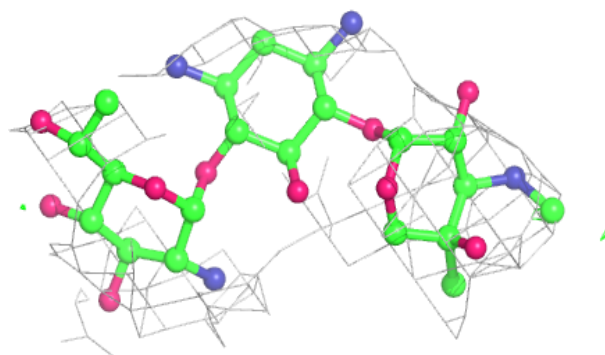


Electron density around GET 1 3812:

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

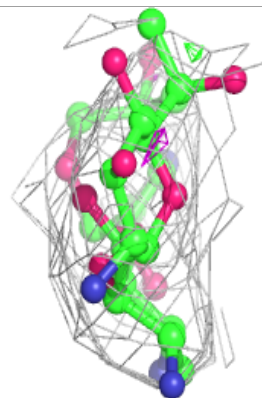
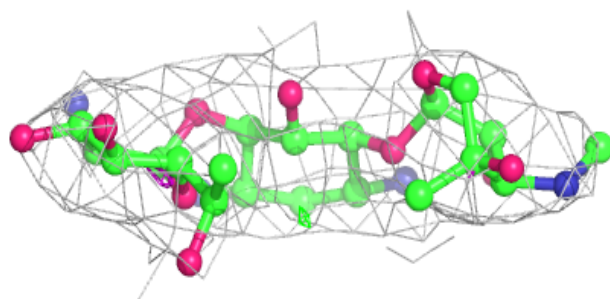
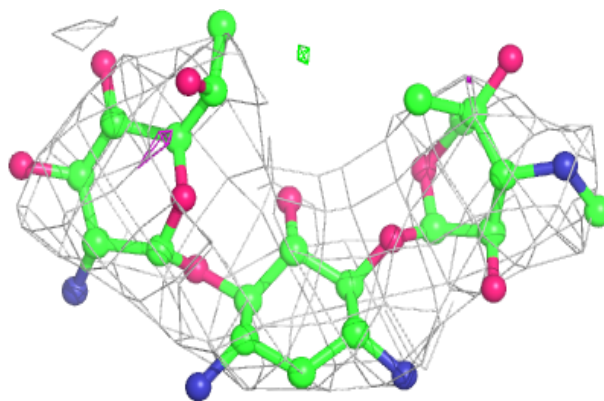
**Electron density around GET 1 3811:**

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

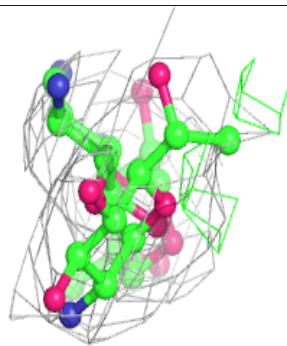
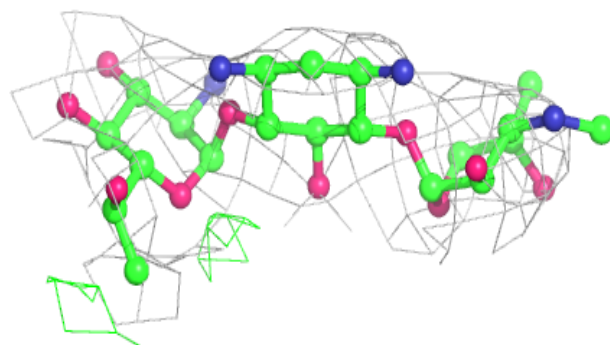
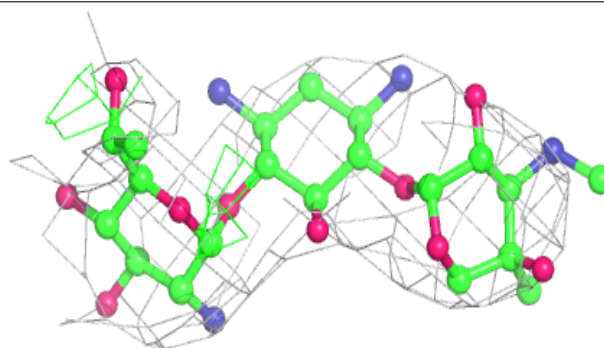


Electron density around GET 1 3810:

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

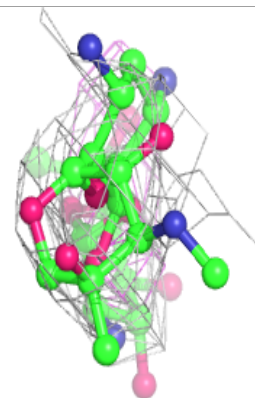
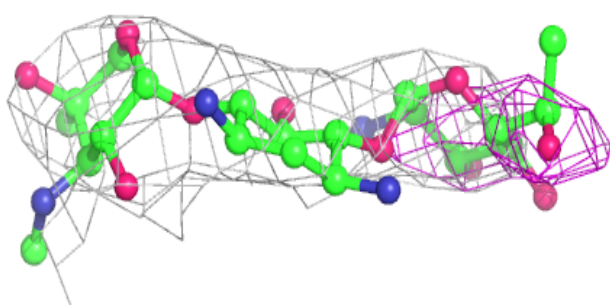
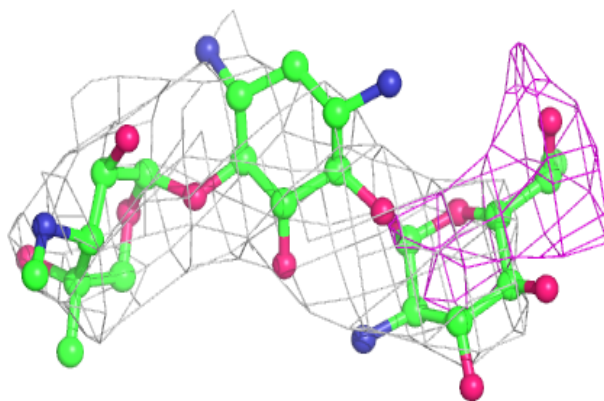
**Electron density around GET 2 2013:**

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

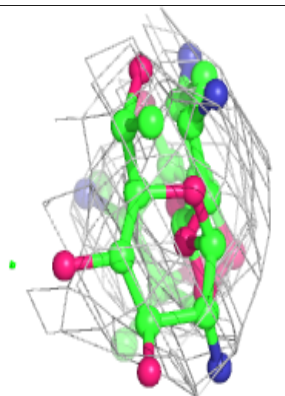
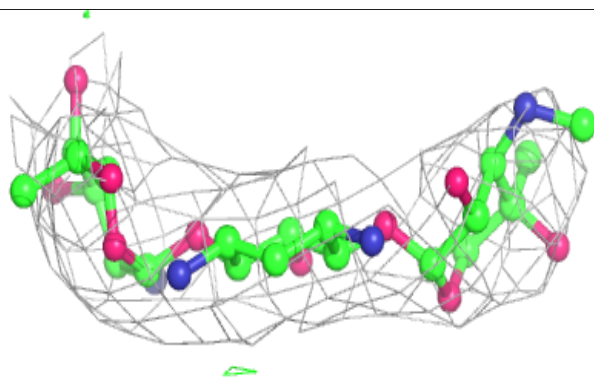
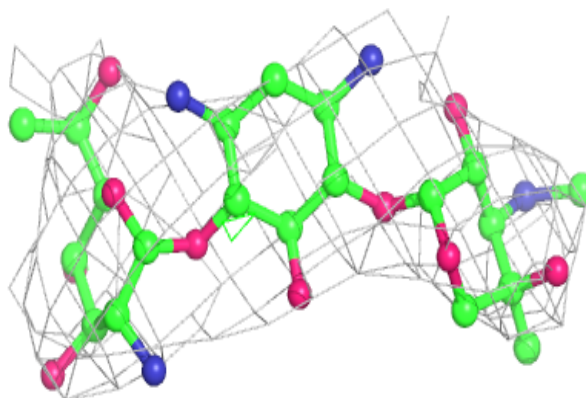


Electron density around GET 5 3850:

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

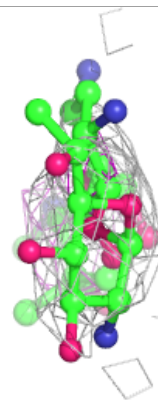
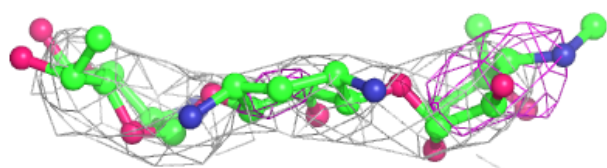
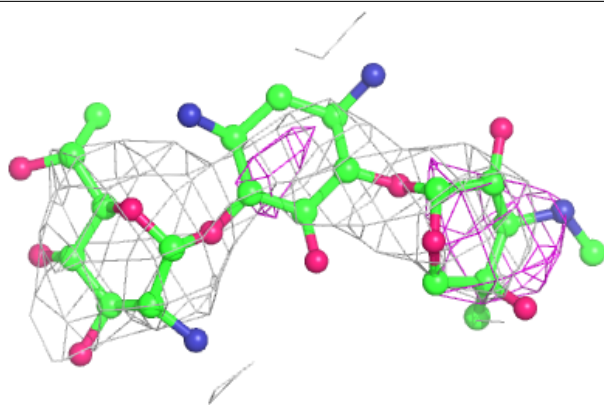
**Electron density around GET 5 3845:**

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

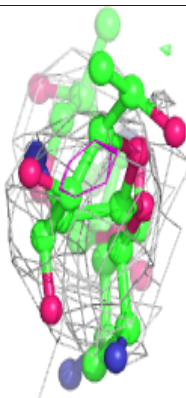
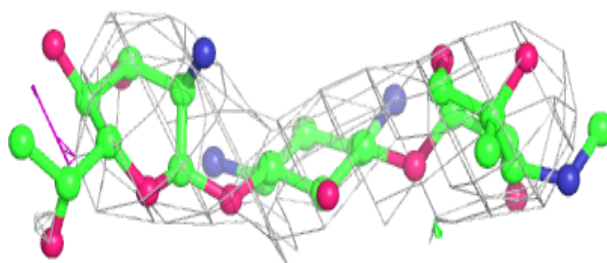
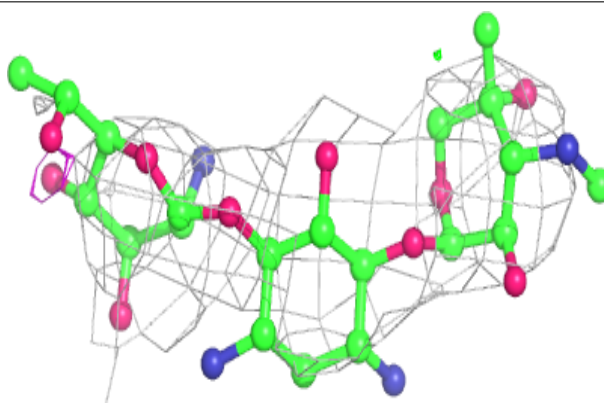


Electron density around GET 5 3849:

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

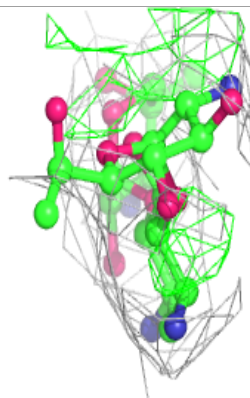
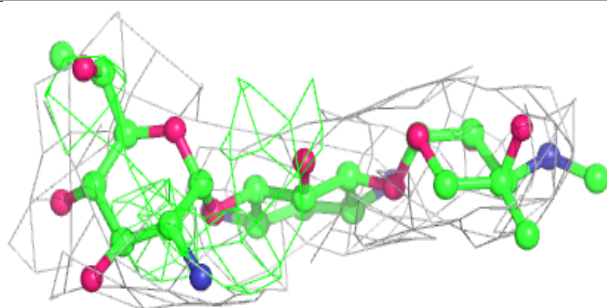
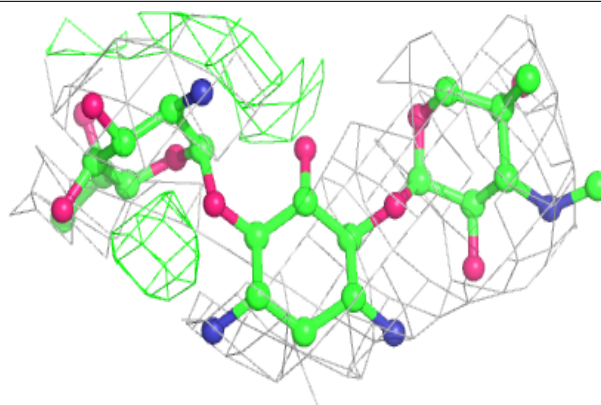
**Electron density around GET 2 2014:**

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

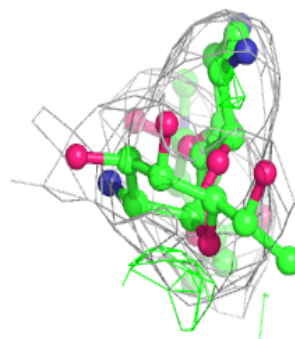
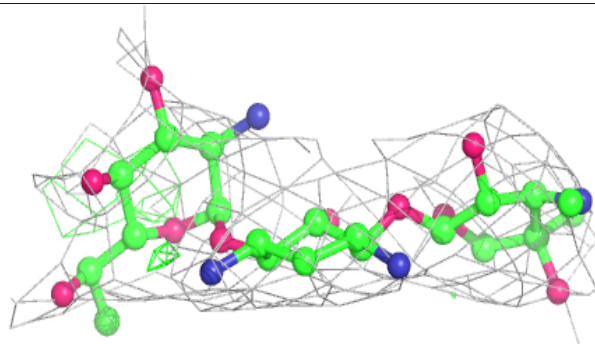
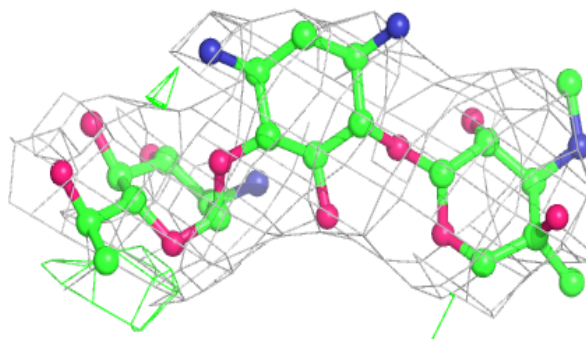


Electron density around GET 5 3848:

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

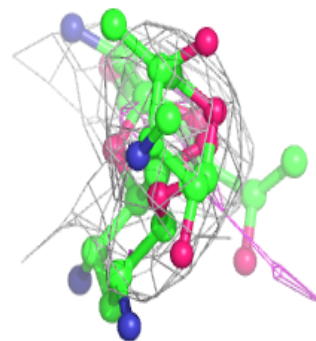
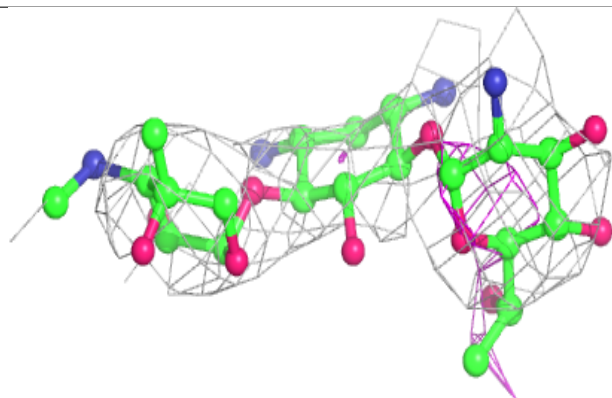
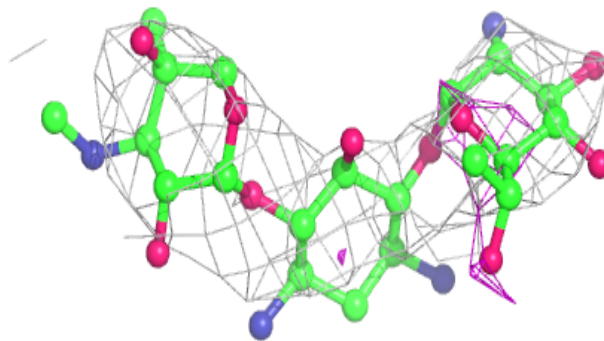
**Electron density around GET 5 3844:**

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

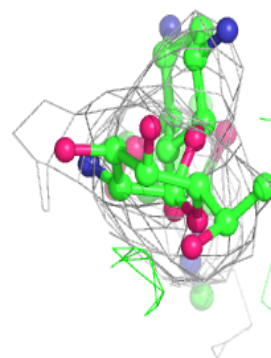
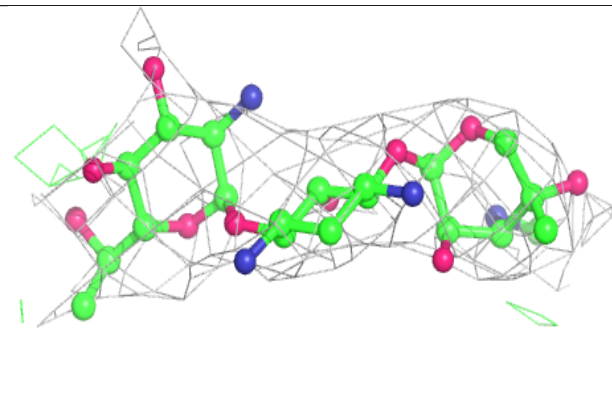
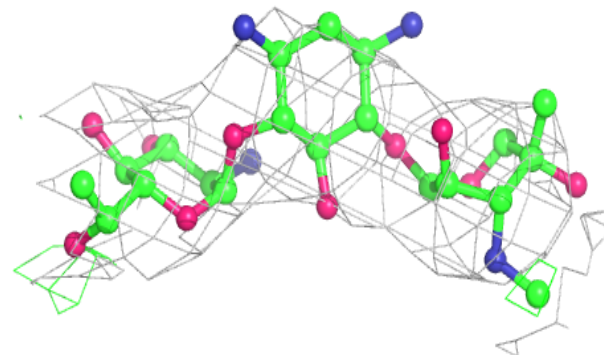


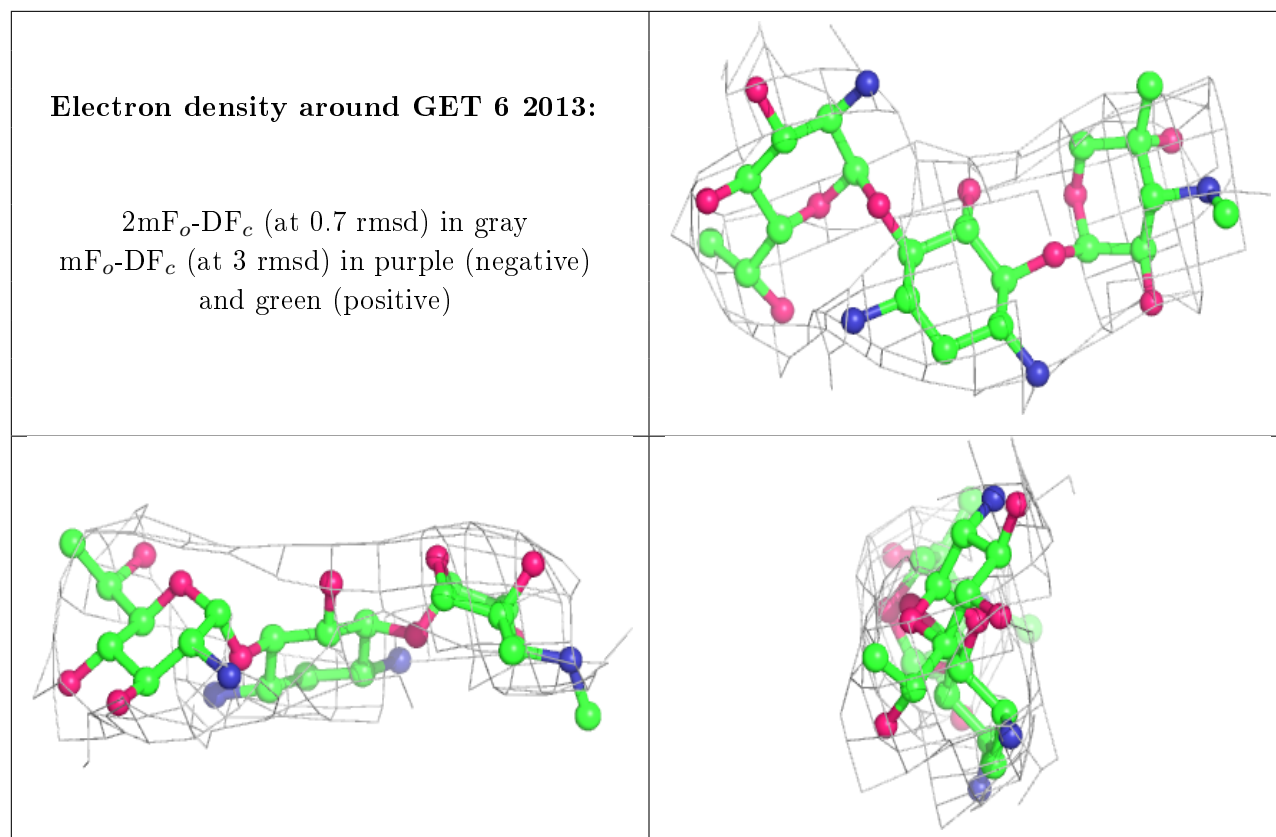
Electron density around GET 5 3847:

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

**Electron density around GET 1 3808:**

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





6.5 Other polymers [i](#)

There are no such residues in this entry.