



## Full wwPDB EM Validation Report ⓘ

Oct 14, 2024 – 08:48 AM EDT

PDB ID : 7SC9  
EMDB ID : EMD-25030  
Title : Synechocystis PCC 6803 Phycobilisome core, complex with OCP  
Authors : Sauer, P.V.; Sutter, M.; Dominguez-Martin, M.A.; Kirst, H.; Kerfeld, C.A.  
Deposited on : 2021-09-27  
Resolution : 2.60 Å (reported)

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

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev113  
Mogul : 2022.3.0, CSD as543be (2022)  
MolProbity : 4.02b-467  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)  
MapQ : 1.9.13  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.39

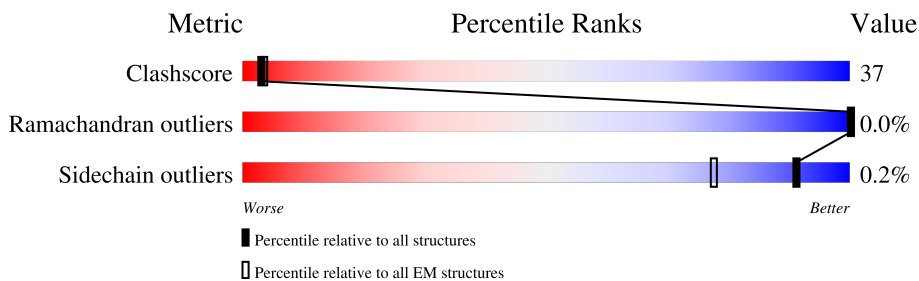
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 2.60 Å.

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



| Metric                | Whole archive (#Entries) | EM structures (#Entries) |
|-----------------------|--------------------------|--------------------------|
| Clashscore            | 210492                   | 15764                    |
| Ramachandran outliers | 207382                   | 16835                    |
| Sidechain outliers    | 206894                   | 16415                    |

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

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1   | AA    | 161    |                  |
| 1   | AC    | 161    |                  |
| 1   | AH    | 161    |                  |
| 1   | AJ    | 161    |                  |
| 1   | AN    | 161    |                  |
| 1   | AP    | 161    |                  |
| 1   | AR    | 161    |                  |
| 1   | AV    | 161    |                  |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1   | AX    | 161    | 48% 52%          |
| 1   | AZ    | 161    | 38% 61%          |
| 1   | BI    | 161    | 60% 50%          |
| 1   | BK    | 161    | 61% 39%          |
| 1   | BP    | 161    | 48% 51%          |
| 1   | BR    | 161    | 50% 50%          |
| 1   | BV    | 161    | 42% 57%          |
| 1   | BX    | 161    | 53% 47%          |
| 1   | BZ    | 161    | 46% 53%          |
| 1   | CC    | 161    | 39% 60%          |
| 1   | CE    | 161    | 34% 66%          |
| 1   | CG    | 161    | 47% 52%          |
| 1   | CR    | 161    | 6% 37% 63%       |
| 1   | CT    | 161    | 48% 51%          |
| 1   | CV    | 161    | 47% 52%          |
| 1   | CY    | 161    | 11% 27% 73%      |
| 1   | DA    | 161    | 47% 52%          |
| 1   | DC    | 161    | 54% 45%          |
| 1   | DJ    | 161    | 8% 32% 66%       |
| 1   | DL    | 161    | 39% 60%          |
| 1   | DN    | 161    | 50% 48%          |
| 1   | DQ    | 161    | 7% 32% 68%       |
| 1   | DS    | 161    | 43% 56%          |
| 1   | DU    | 161    | 49% 50%          |
| 2   | AB    | 161    | 93% 50%          |

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| Mol | Chain | Length | Quality of chain |     |
|-----|-------|--------|------------------|-----|
| 2   | AD    | 161    | 37%              | 92% |
| 2   | AF    | 161    | 39%              | 96% |
| 2   | AI    | 161    | 60%              | 40% |
| 2   | AL    | 161    | 45%              | 55% |
| 2   | AO    | 161    | 48%              | 52% |
| 2   | AQ    | 161    | 59%              | 41% |
| 2   | AS    | 161    | 42%              | 58% |
| 2   | AU    | 161    | 48%              | 52% |
| 2   | AW    | 161    | 46%              | 54% |
| 2   | AY    | 161    | 51%              | 49% |
| 2   | BJ    | 161    | 58%              | 50% |
| 2   | BL    | 161    | 37%              | 62% |
| 2   | BN    | 161    | 41%              | 60% |
| 2   | BQ    | 161    | 57%              | 43% |
| 2   | BT    | 161    | 45%              | 55% |
| 2   | BW    | 161    | 50%              | 50% |
| 2   | BY    | 161    | 57%              | 43% |
| 2   | CA    | 161    | 50%              | 50% |
| 2   | CD    | 161    | 48%              | 52% |
| 2   | CF    | 161    | 45%              | 55% |
| 2   | CH    | 161    | 50%              | 50% |
| 2   | CS    | 161    | 5%               | 35% |
| 2   | CU    | 161    | 6%               | 49% |
| 2   | CW    | 161    | 43%              | 57% |
| 2   | CZ    | 161    | 8%               | 32% |



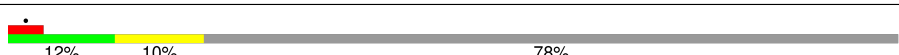
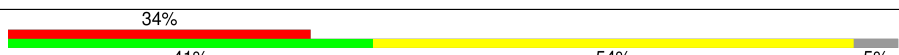
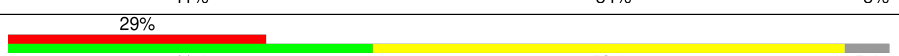
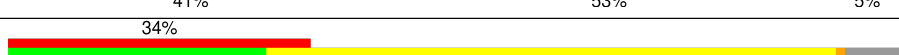
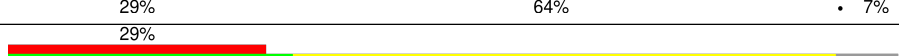
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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 2   | DB    | 161    | 47% 53%          |
| 2   | DD    | 161    | 45% 55%          |
| 2   | DK    | 161    | 7% 40% 60%       |
| 2   | DM    | 161    | 49% 51%          |
| 2   | DO    | 161    | 51% 49%          |
| 2   | DR    | 161    | 7% 32% 68%       |
| 2   | DT    | 161    | 40% 60%          |
| 2   | DV    | 161    | 33% 67%          |
| 3   | AE    | 161    | 84% 40% 60%      |
| 3   | BM    | 161    | 46% 39% 60%      |
| 4   | AK    | 169    | 42% 58%          |
| 4   | BS    | 169    | 48% 52%          |
| 5   | BA    | 67     | 84% 34% 64%      |
| 5   | BB    | 67     | 9% 42% 58%       |
| 5   | CJ    | 67     | 31% 45% 55%      |
| 5   | CK    | 67     | 7% 55% 45%       |
| 5   | DF    | 67     | 49% 51%          |
| 5   | DX    | 67     | 46% 54%          |
| 6   | BD    | 896    | 45% 49% 5%       |
| 6   | CM    | 896    | 43% 52% 5%       |
| 7   | BF    | 121    | 10% 20% 70%      |
| 7   | CO    | 121    | 13% 17% 70%      |
| 8   | BG    | 249    | 11% 12% 77%      |
| 8   | CP    | 249    | 12% 10% 77%      |
| 8   | DG    | 249    | 8% 12% 9% 78%    |

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| Mol | Chain | Length | Quality of chain   |
|-----|-------|--------|--|
| 8   | DH    | 249    |  |
| 8   | DY    | 249    |  |
| 8   | DZ    | 249    |  |
| 9   | BH    | 317    |  |
| 9   | CQ    | 317    |  |
| 9   | DI    | 317    |  |
| 9   | EA    | 317    |  |

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 |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 10  | CYC  | AV    | 200 | -         | -        | X       | -                |
| 10  | CYC  | DD    | 200 | -         | -        | X       | -                |

## 2 Entry composition [i](#)

There are 11 unique types of molecules in this entry. The entry contains 117470 atoms, of which 208 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Allophycocyanin alpha chain.

| Mol | Chain | Residues | Atoms |     |     |     |   | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
|     |       |          | Total | C   | N   | O   | S |         |       |
| 1   | AA    | 160      | 1210  | 754 | 207 | 242 | 7 | 0       | 0     |
| 1   | AC    | 160      | 1210  | 754 | 207 | 242 | 7 | 0       | 0     |
| 1   | AH    | 160      | 1210  | 754 | 207 | 242 | 7 | 0       | 0     |
| 1   | AJ    | 160      | 1210  | 754 | 207 | 242 | 7 | 0       | 0     |
| 1   | AN    | 160      | 1210  | 754 | 207 | 242 | 7 | 0       | 0     |
| 1   | AP    | 160      | 1210  | 754 | 207 | 242 | 7 | 0       | 0     |
| 1   | AR    | 160      | 1210  | 754 | 207 | 242 | 7 | 0       | 0     |
| 1   | AV    | 160      | 1210  | 754 | 207 | 242 | 7 | 0       | 0     |
| 1   | AX    | 160      | 1210  | 754 | 207 | 242 | 7 | 0       | 0     |
| 1   | AZ    | 160      | 1210  | 754 | 207 | 242 | 7 | 0       | 0     |
| 1   | BI    | 160      | 1210  | 754 | 207 | 242 | 7 | 0       | 0     |
| 1   | BK    | 160      | 1210  | 754 | 207 | 242 | 7 | 0       | 0     |
| 1   | BP    | 160      | 1210  | 754 | 207 | 242 | 7 | 0       | 0     |
| 1   | BR    | 160      | 1210  | 754 | 207 | 242 | 7 | 0       | 0     |
| 1   | BV    | 160      | 1210  | 754 | 207 | 242 | 7 | 0       | 0     |
| 1   | BX    | 160      | 1210  | 754 | 207 | 242 | 7 | 0       | 0     |
| 1   | BZ    | 160      | 1210  | 754 | 207 | 242 | 7 | 0       | 0     |

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| Mol | Chain | Residues | Atoms |     |     |     |   | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 1   | CC    | 160      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1210  | 754 | 207 | 242 | 7 |         |       |
| 1   | CE    | 160      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1210  | 754 | 207 | 242 | 7 |         |       |
| 1   | CG    | 160      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1210  | 754 | 207 | 242 | 7 |         |       |
| 1   | CR    | 160      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1210  | 754 | 207 | 242 | 7 |         |       |
| 1   | CT    | 160      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1210  | 754 | 207 | 242 | 7 |         |       |
| 1   | CV    | 160      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1210  | 754 | 207 | 242 | 7 |         |       |
| 1   | CY    | 160      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1210  | 754 | 207 | 242 | 7 |         |       |
| 1   | DA    | 160      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1210  | 754 | 207 | 242 | 7 |         |       |
| 1   | DC    | 160      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1210  | 754 | 207 | 242 | 7 |         |       |
| 1   | DJ    | 160      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1210  | 754 | 207 | 242 | 7 |         |       |
| 1   | DL    | 160      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1210  | 754 | 207 | 242 | 7 |         |       |
| 1   | DN    | 160      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1210  | 754 | 207 | 242 | 7 |         |       |
| 1   | DQ    | 160      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1210  | 754 | 207 | 242 | 7 |         |       |
| 1   | DS    | 160      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1210  | 754 | 207 | 242 | 7 |         |       |
| 1   | DU    | 160      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1210  | 754 | 207 | 242 | 7 |         |       |

- Molecule 2 is a protein called Allophycocyanin beta chain.

| Mol | Chain | Residues | Atoms |     |     |     |   | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 2   | AB    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | AD    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | AF    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | AI    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |

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| Mol | Chain | Residues | Atoms |     |     |     |   | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 2   | AL    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | AO    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | AQ    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | AS    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | AU    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | AW    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | AY    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | BJ    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | BL    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | BN    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | BQ    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | BT    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | BW    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | BY    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | CA    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | CD    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | CF    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | CH    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | CS    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | CU    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | CW    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |

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| Mol | Chain | Residues | Atoms |     |     |     |   | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 2   | CZ    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | DB    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | DD    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | DK    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | DM    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | DO    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | DR    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | DT    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |
| 2   | DV    | 161      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1206  | 757 | 202 | 240 | 7 |         |       |

- Molecule 3 is a protein called Allophycocyanin subunit alpha-B.

| Mol | Chain | Residues | Atoms |     |     |     |   | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 3   | AE    | 160      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1254  | 797 | 212 | 241 | 4 |         |       |
| 3   | BM    | 160      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1254  | 797 | 212 | 241 | 4 |         |       |

- Molecule 4 is a protein called Allophycocyanin subunit beta-18.

| Mol | Chain | Residues | Atoms |     |     |     |   | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 4   | AK    | 169      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1322  | 825 | 229 | 259 | 9 |         |       |
| 4   | BS    | 169      | Total | C   | N   | O   | S | 0       | 0     |
|     |       |          | 1322  | 825 | 229 | 259 | 9 |         |       |

- Molecule 5 is a protein called Phycobilisome 7.8 kDa linker polypeptide, allophycocyanin-associated, core.

| Mol | Chain | Residues | Atoms |     |     |    |   | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|----|---|---------|-------|
| 5   | BA    | 67       | Total | C   | N   | O  | S | 0       | 0     |
|     |       |          | 546   | 343 | 104 | 94 | 5 |         |       |

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| Mol | Chain | Residues | Atoms |     |     |    |   | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|----|---|---------|-------|
| 5   | BB    | 67       | Total | C   | N   | O  | S | 0       | 0     |
|     |       |          | 546   | 343 | 104 | 94 | 5 |         |       |
| 5   | CJ    | 67       | Total | C   | N   | O  | S | 0       | 0     |
|     |       |          | 546   | 343 | 104 | 94 | 5 |         |       |
| 5   | CK    | 67       | Total | C   | N   | O  | S | 0       | 0     |
|     |       |          | 546   | 343 | 104 | 94 | 5 |         |       |
| 5   | DF    | 67       | Total | C   | N   | O  | S | 0       | 0     |
|     |       |          | 546   | 343 | 104 | 94 | 5 |         |       |
| 5   | DX    | 67       | Total | C   | N   | O  | S | 0       | 0     |
|     |       |          | 546   | 343 | 104 | 94 | 5 |         |       |

There are 6 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment  | Reference  |
|-------|---------|----------|--------|----------|------------|
| BA    | 36      | TRP      | SER    | conflict | UNP Q01950 |
| BB    | 36      | TRP      | SER    | conflict | UNP Q01950 |
| CJ    | 36      | TRP      | SER    | conflict | UNP Q01950 |
| CK    | 36      | TRP      | SER    | conflict | UNP Q01950 |
| DF    | 36      | TRP      | SER    | conflict | UNP Q01950 |
| DX    | 36      | TRP      | SER    | conflict | UNP Q01950 |

- Molecule 6 is a protein called Phycobiliprotein ApcE.

| Mol | Chain | Residues | Atoms |      |      |      |    | AltConf | Trace |
|-----|-------|----------|-------|------|------|------|----|---------|-------|
| 6   | BD    | 850      | Total | C    | N    | O    | S  | 0       | 0     |
|     |       |          | 6761  | 4299 | 1183 | 1262 | 17 |         |       |
| 6   | CM    | 850      | Total | C    | N    | O    | S  | 0       | 0     |
|     |       |          | 6761  | 4299 | 1183 | 1262 | 17 |         |       |

- Molecule 7 is a protein called Sll1873 protein.

| Mol | Chain | Residues | Atoms |     |    |    |   | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| 7   | BF    | 36       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 277   | 172 | 55 | 49 | 1 |         |       |
| 7   | CO    | 36       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 277   | 172 | 55 | 49 | 1 |         |       |

- Molecule 8 is a protein called Phycobilisome rod-core linker polypeptide CpcG.

| Mol | Chain | Residues | Atoms |     |    |    |   | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| 8   | BG    | 57       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 451   | 282 | 87 | 80 | 2 |         |       |

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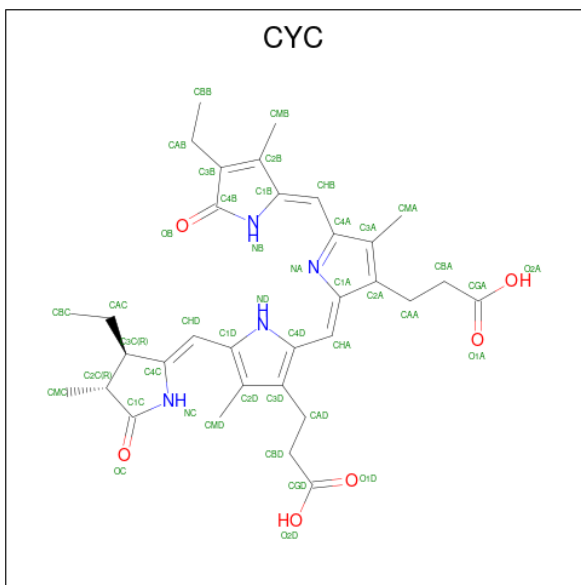
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| Mol | Chain | Residues | Atoms |     |    |    |   | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| 8   | CP    | 57       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 451   | 282 | 87 | 80 | 2 |         |       |
| 8   | DG    | 54       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 426   | 266 | 83 | 75 | 2 |         |       |
| 8   | DH    | 54       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 426   | 266 | 83 | 75 | 2 |         |       |
| 8   | DY    | 54       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 426   | 266 | 83 | 75 | 2 |         |       |
| 8   | DZ    | 54       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 426   | 266 | 83 | 75 | 2 |         |       |

- Molecule 9 is a protein called Orange carotenoid-binding protein.

| Mol | Chain | Residues | Atoms |      |     |     |    | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 9   | BH    | 300      | Total | C    | N   | O   | S  | 0       | 0     |
|     |       |          | 2302  | 1474 | 388 | 429 | 11 |         |       |
| 9   | CQ    | 300      | Total | C    | N   | O   | S  | 0       | 0     |
|     |       |          | 2302  | 1474 | 388 | 429 | 11 |         |       |
| 9   | DI    | 296      | Total | C    | N   | O   | S  | 0       | 0     |
|     |       |          | 2280  | 1459 | 387 | 423 | 11 |         |       |
| 9   | EA    | 296      | Total | C    | N   | O   | S  | 0       | 0     |
|     |       |          | 2280  | 1459 | 387 | 423 | 11 |         |       |

- Molecule 10 is PHYCOCYANOBILIN (three-letter code: CYC) (formula:  $C_{33}H_{40}N_4O_6$ ) (labeled as "Ligand of Interest" by depositor).



| Mol | Chain | Residues | Atoms       |         |        |        | AltConf |
|-----|-------|----------|-------------|---------|--------|--------|---------|
| 10  | AA    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AB    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AC    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AD    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AE    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AF    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AH    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AI    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AJ    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AK    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AL    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AN    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AO    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AP    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AQ    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AR    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AU    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AV    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AW    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AX    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AY    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | AZ    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |

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| Mol | Chain | Residues | Atoms       |         |        |        | AltConf |
|-----|-------|----------|-------------|---------|--------|--------|---------|
|     |       |          | Total       | C       | N      | O      |         |
| 10  | BD    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | BD    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | BI    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | BJ    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | BK    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | BL    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | BM    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | BN    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | BP    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | BQ    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | BR    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | BS    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | BT    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | BV    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | BW    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | BX    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | BY    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | BZ    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | CC    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | CD    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | CE    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |

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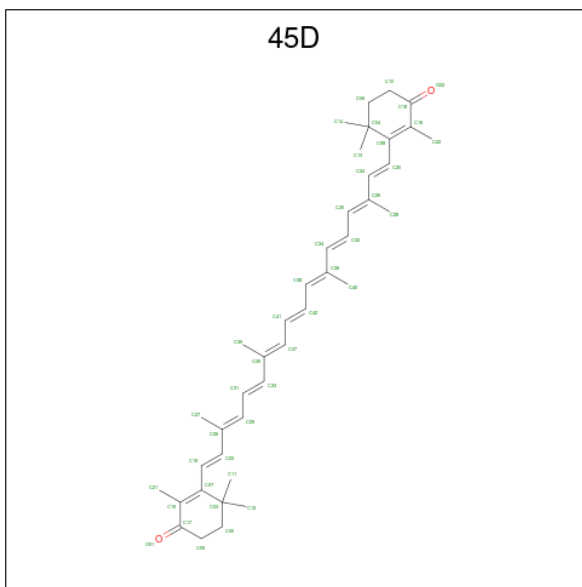
| Mol | Chain | Residues | Atoms       |         |        |        | AltConf |
|-----|-------|----------|-------------|---------|--------|--------|---------|
|     |       |          | Total       | C       | N      | O      |         |
| 10  | CF    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | CG    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | CH    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | CM    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | CM    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | CR    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | CS    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | CT    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | CU    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | CV    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | CW    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | CY    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | CZ    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | DA    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | DB    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | DC    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | DD    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | DJ    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | DK    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | DL    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | DM    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |

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| Mol | Chain | Residues | Atoms       |         |        |        | AltConf |
|-----|-------|----------|-------------|---------|--------|--------|---------|
|     |       |          | Total       | C       | N      | O      |         |
| 10  | DN    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | DO    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | DQ    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | DR    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | DS    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | DT    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | DU    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |
| 10  | DV    | 1        | Total<br>43 | C<br>33 | N<br>4 | O<br>6 | 0       |

- Molecule 11 is beta,beta-carotene-4,4'-dione (three-letter code: 45D) (formula: C<sub>40</sub>H<sub>52</sub>O<sub>2</sub>) (labeled as "Ligand of Interest" by depositor).



| Mol | Chain | Residues | Atoms       |         |         |        | AltConf |
|-----|-------|----------|-------------|---------|---------|--------|---------|
|     |       |          | Total       | C       | H       | O      |         |
| 11  | BH    | 1        | Total<br>94 | C<br>40 | H<br>52 | O<br>2 | 0       |
| 11  | CQ    | 1        | Total<br>94 | C<br>40 | H<br>52 | O<br>2 | 0       |
| 11  | DI    | 1        | Total<br>94 | C<br>40 | H<br>52 | O<br>2 | 0       |

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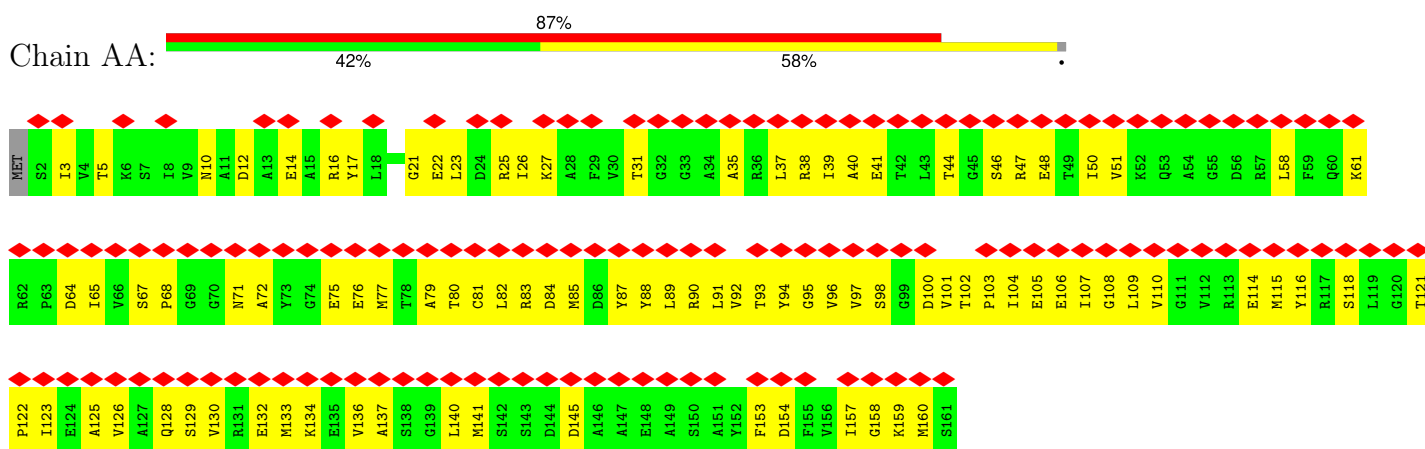
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| Mol | Chain | Residues | Atoms |    |    |   | AltConf |
|-----|-------|----------|-------|----|----|---|---------|
|     |       |          | Total | C  | H  | O |         |
| 11  | EA    | 1        | 94    | 40 | 52 | 2 | 0       |

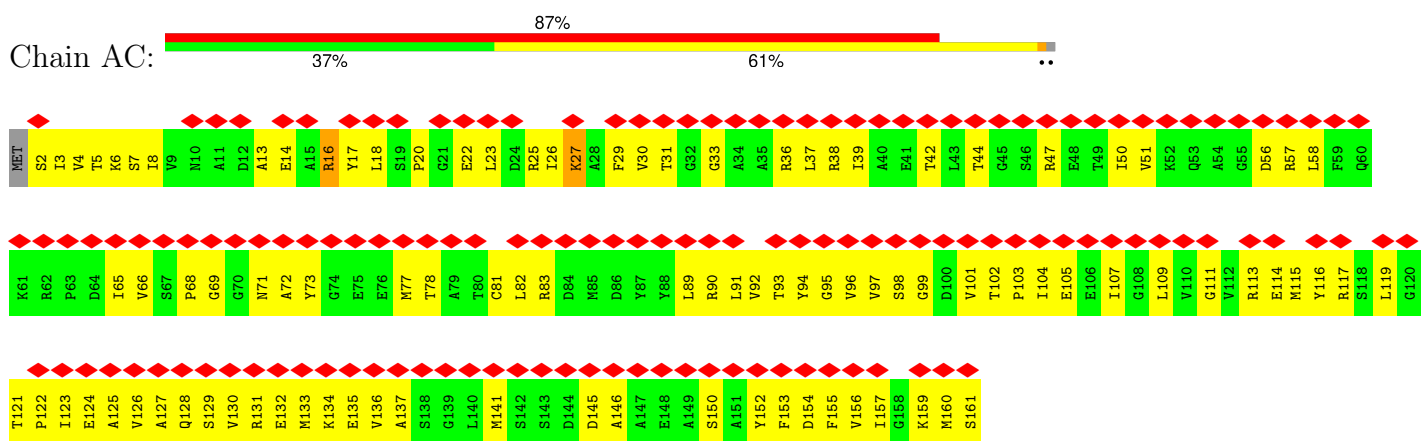
### 3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

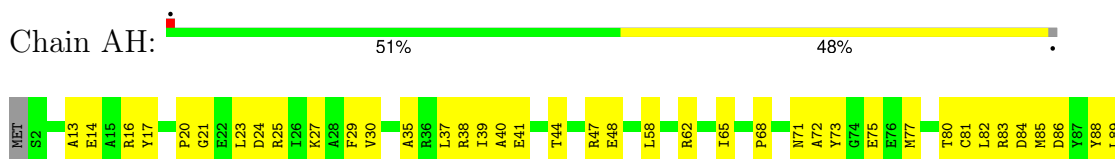
- Molecule 1: Allophycocyanin alpha chain



- Molecule 1: Allophycocyanin alpha chain

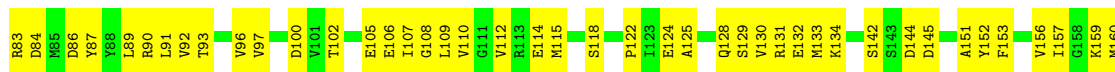
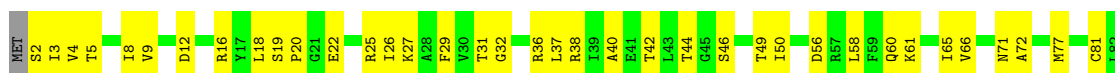


- Molecule 1: Allophycocyanin alpha chain

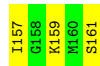
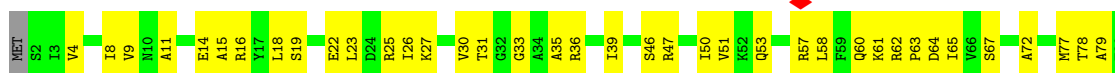




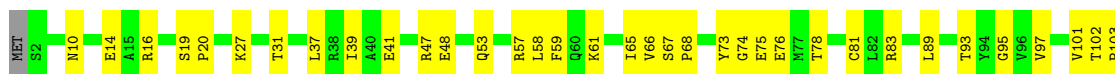
• Molecule 1: Allophycocyanin alpha chain



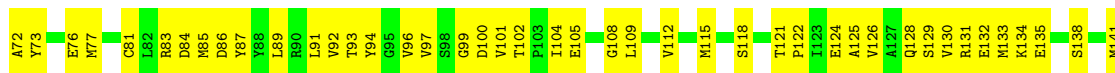
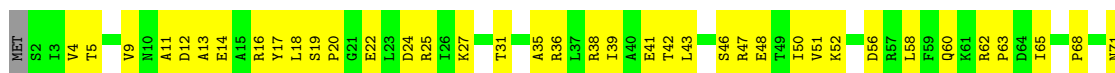
• Molecule 1: Allophycocyanin alpha chain



• Molecule 1: Allophycocyanin alpha chain

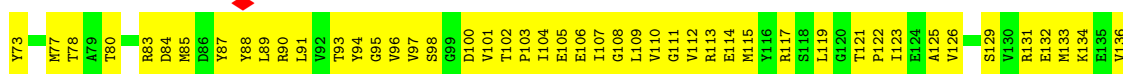
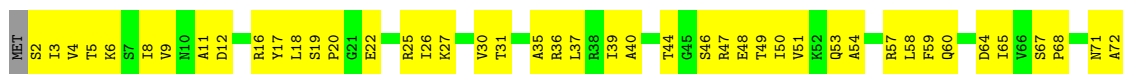


• Molecule 1: Allophycocyanin alpha chain

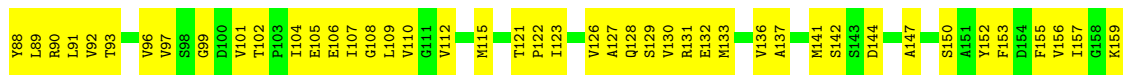




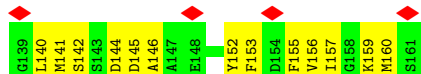
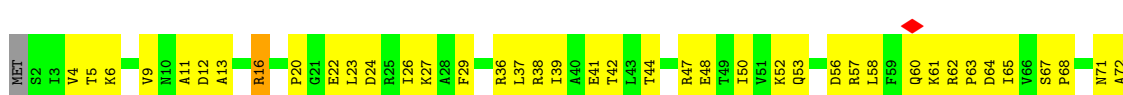
• Molecule 1: Allophycocyanin alpha chain



• Molecule 1: Allophycocyanin alpha chain

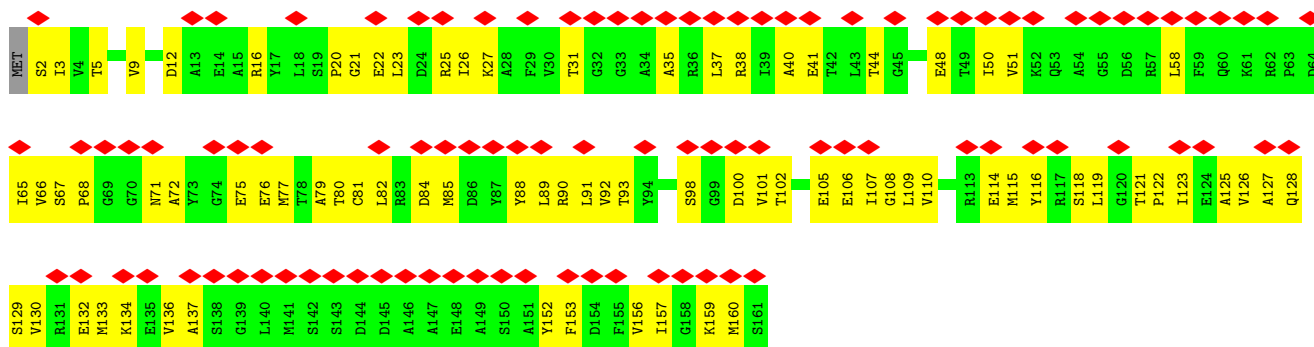


• Molecule 1: Allophycocyanin alpha chain



• Molecule 1: Allophycocyanin alpha chain

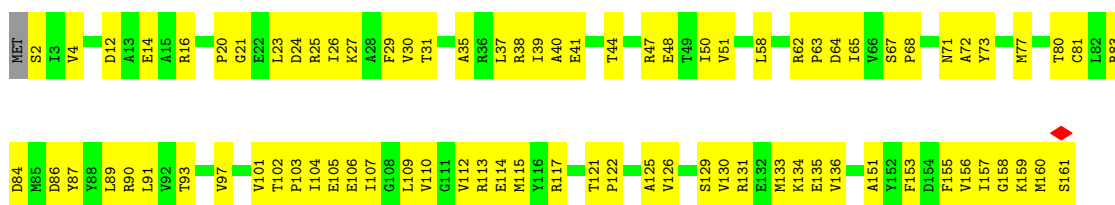




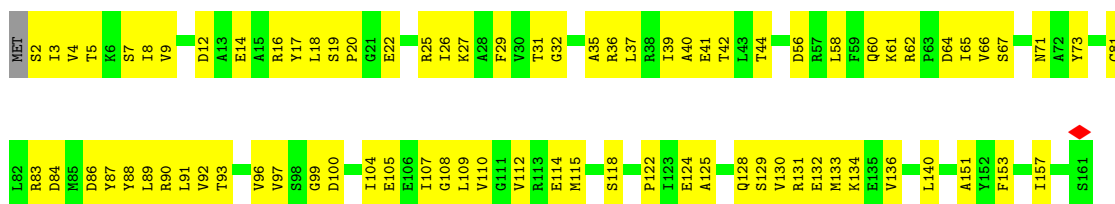
- Molecule 1: Allophycocyanin alpha chain



- Molecule 1: Allophycocyanin alpha chain

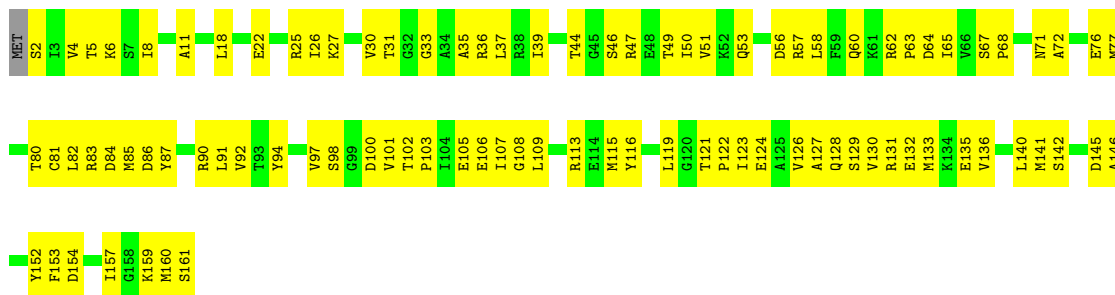


- Molecule 1: Allophycocyanin alpha chain

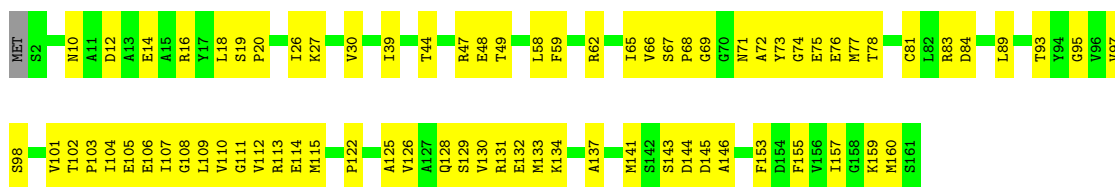


- Molecule 1: Allophycocyanin alpha chain

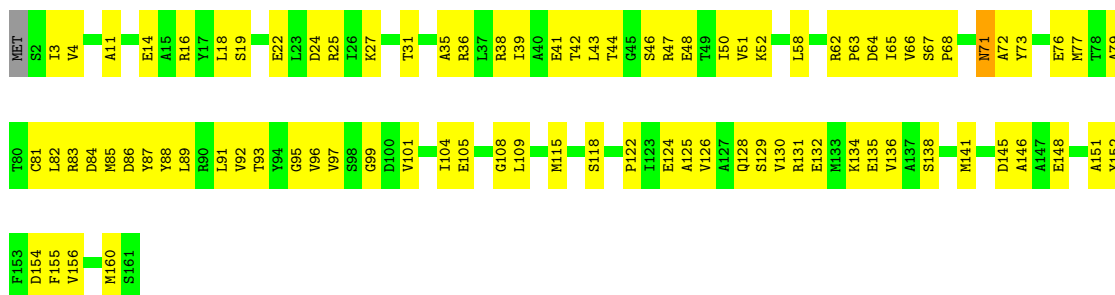




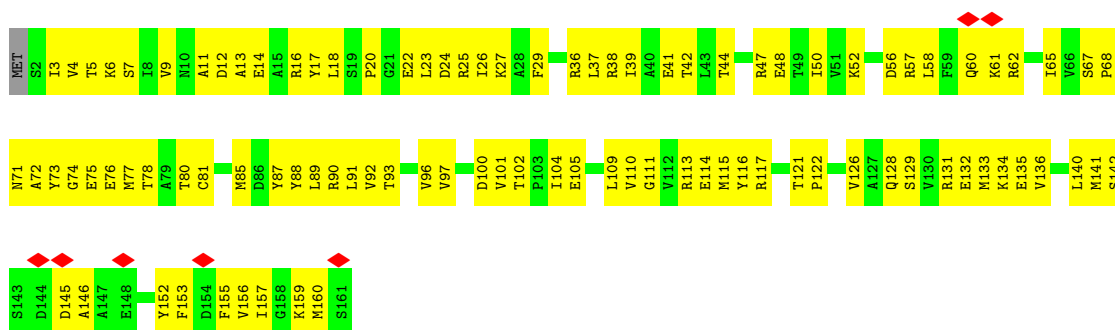
• Molecule 1: Allophycocyanin alpha chain



• Molecule 1: Allophycocyanin alpha chain

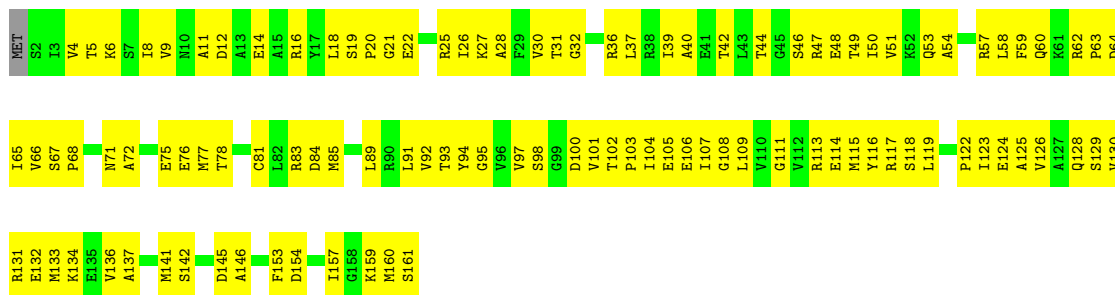


• Molecule 1: Allophycocyanin alpha chain

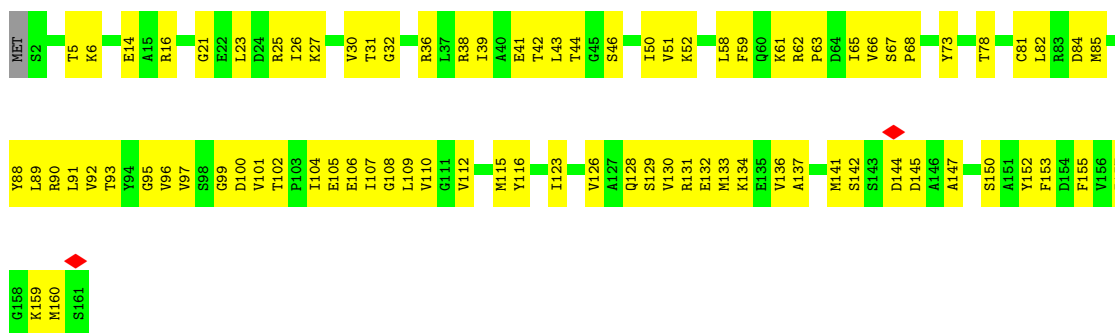


• Molecule 1: Allophycocyanin alpha chain





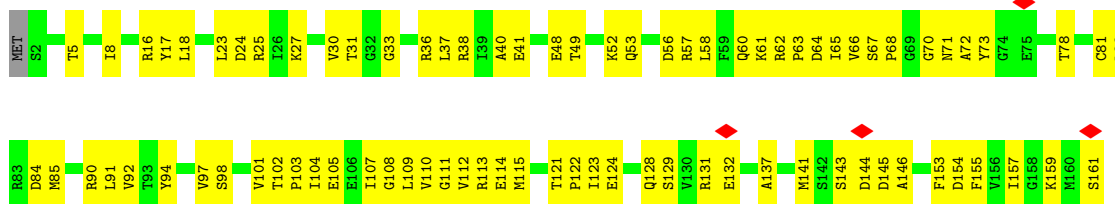
• Molecule 1: Allophycocyanin alpha chain



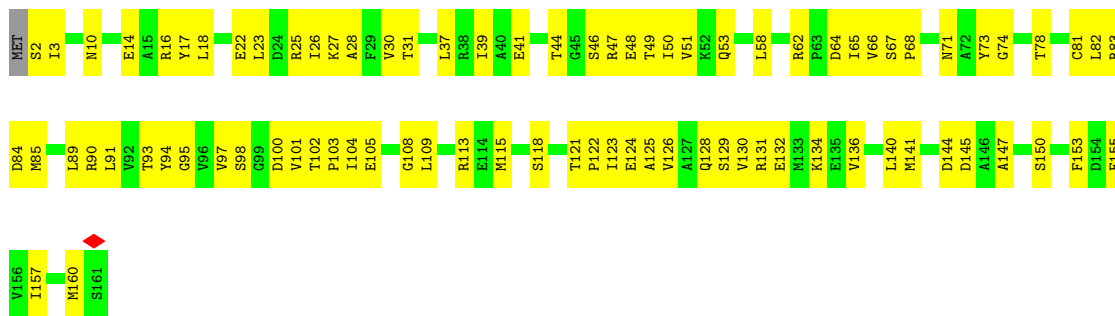
• Molecule 1: Allophycocyanin alpha chain



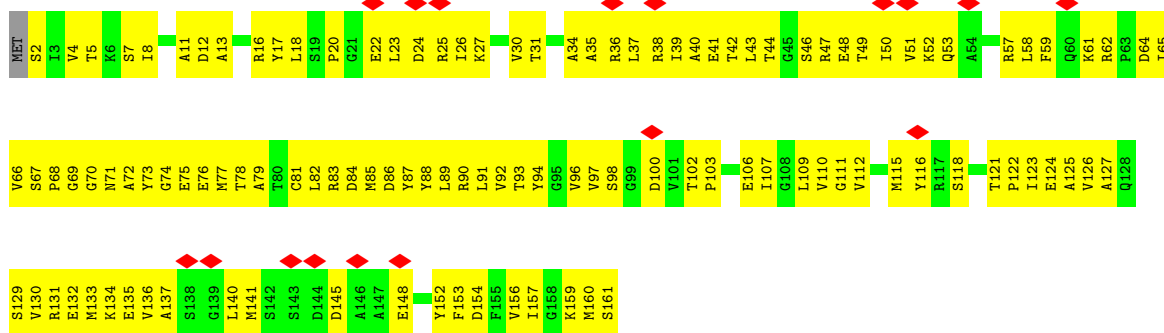
• Molecule 1: Allophycocyanin alpha chain



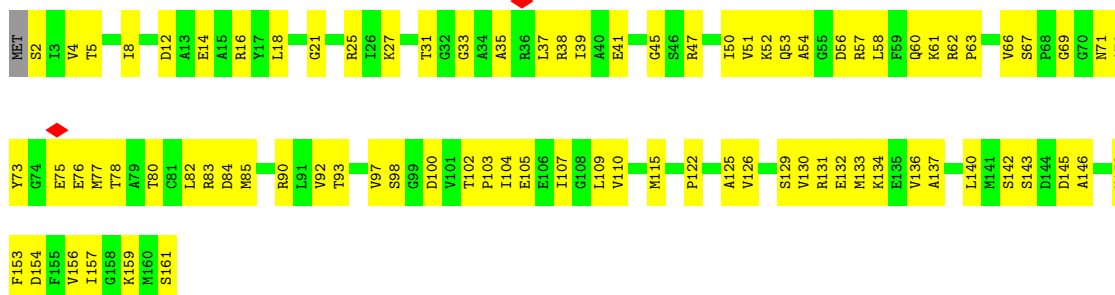
• Molecule 1: Allophycocyanin alpha chain



• Molecule 1: Allophycocyanin alpha chain



• Molecule 1: Allophycocyanin alpha chain



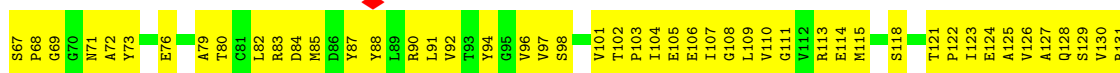
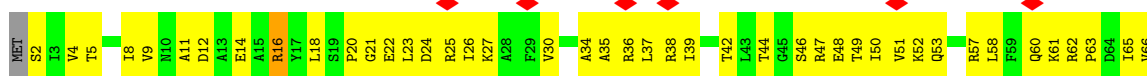
• Molecule 1: Allophycocyanin alpha chain



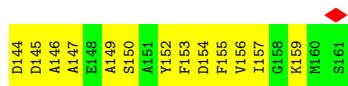
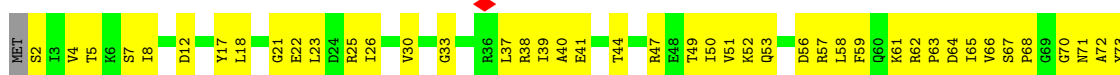




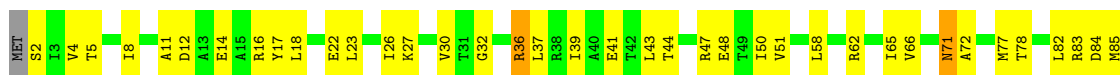
• Molecule 1: Allophycocyanin alpha chain



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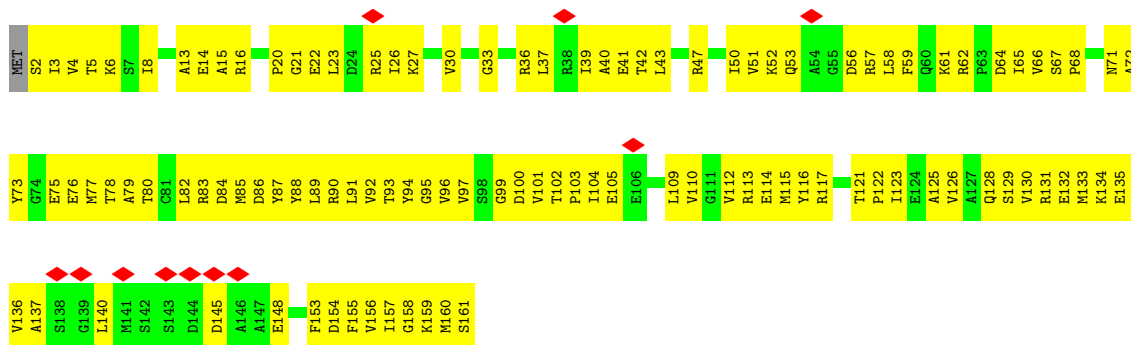


• Molecule 1: Allophycocyanin alpha chain

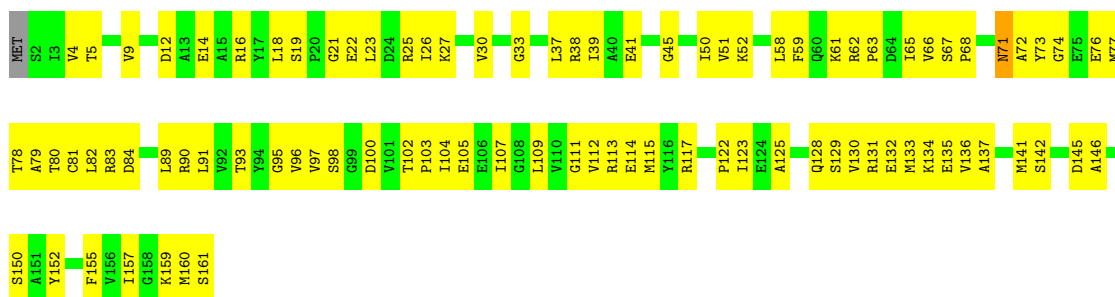


• Molecule 1: Allophycocyanin alpha chain

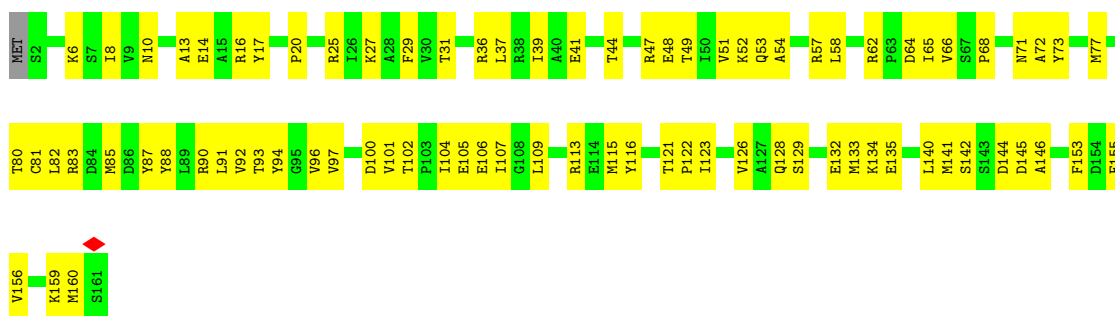




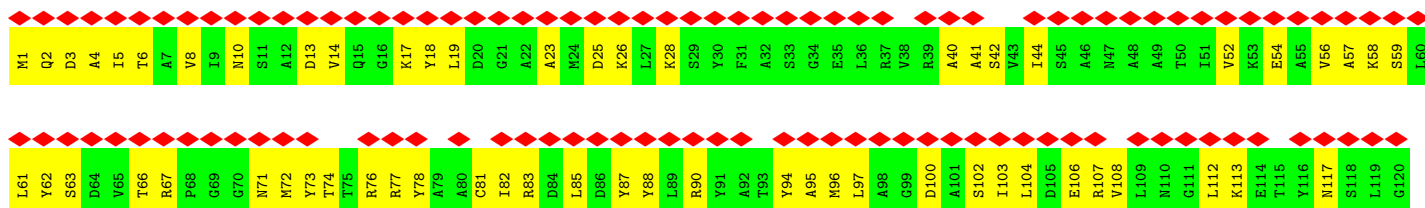
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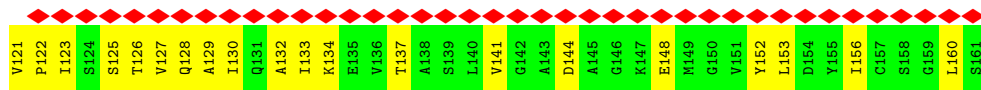


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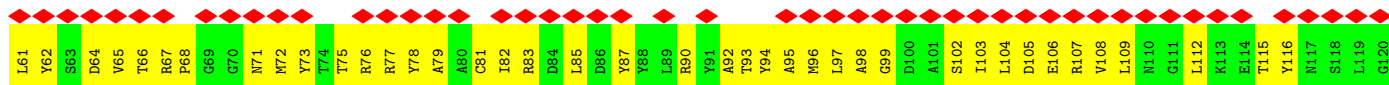
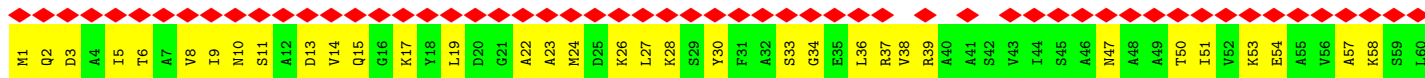
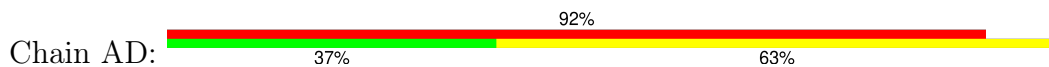


• Molecule 2: Allophycocyanin beta chain

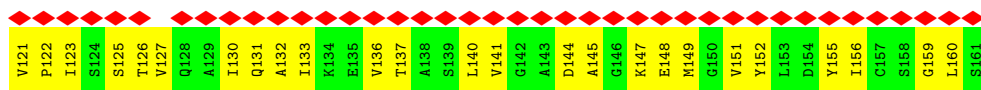
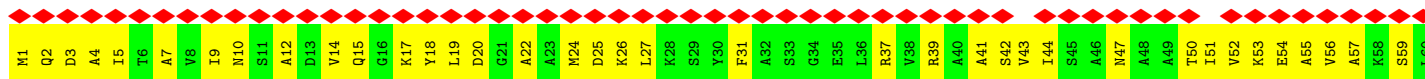




• Molecule 2: Allophycocyanin beta chain



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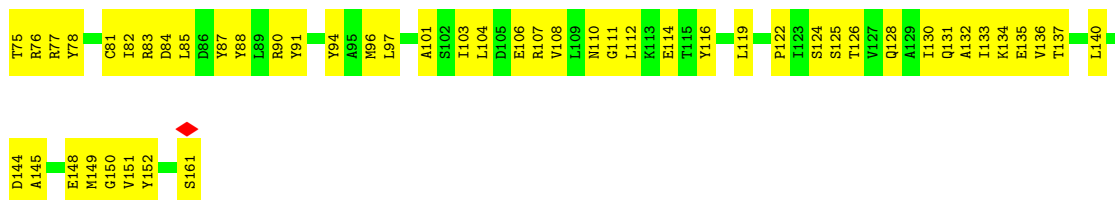


• Molecule 2: Allophycocyanin beta chain

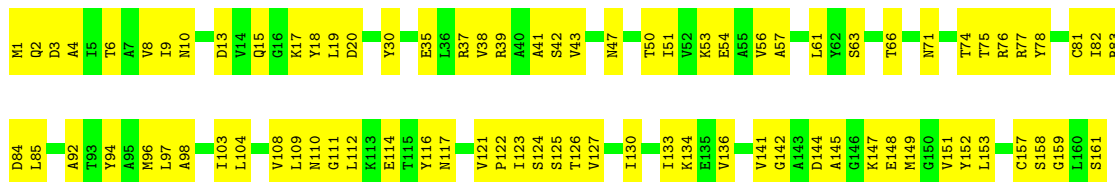


• Molecule 2: Allophycocyanin beta chain

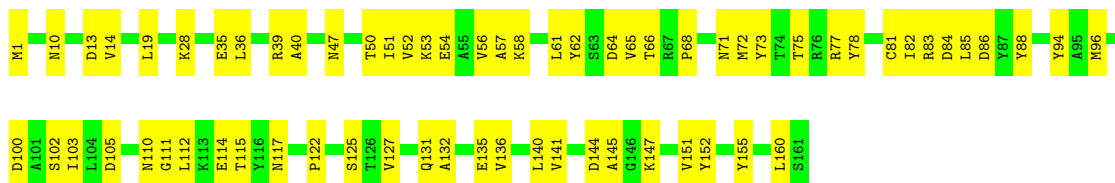




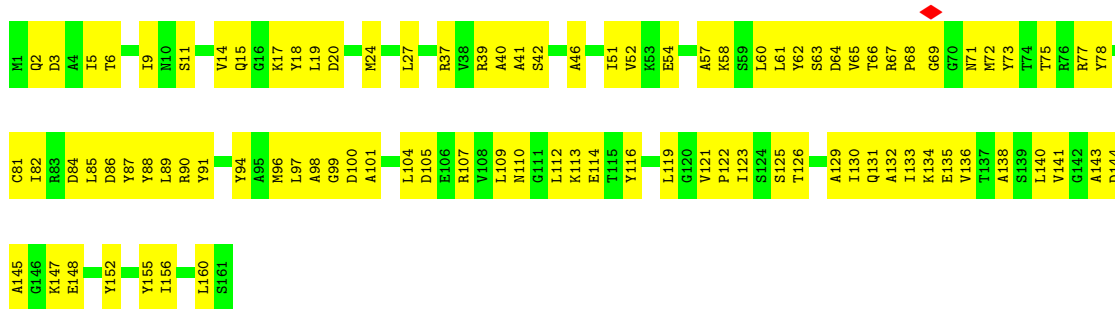
• Molecule 2: Allophycocyanin beta chain



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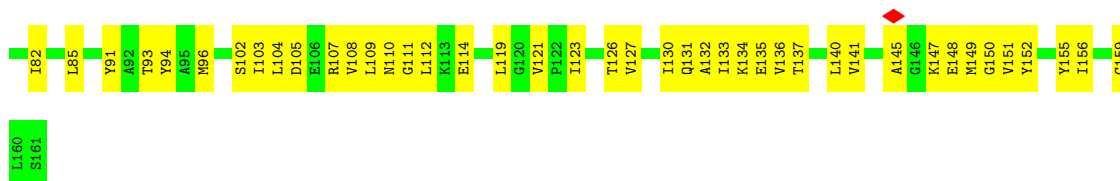


• Molecule 2: Allophycocyanin beta chain

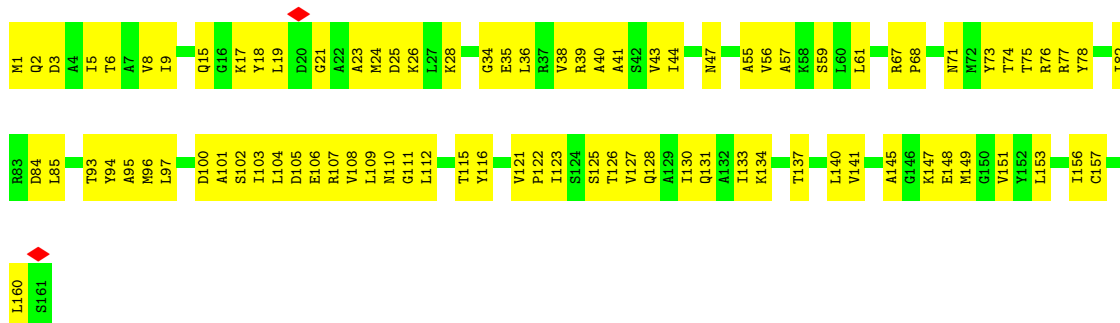


• Molecule 2: Allophycocyanin beta chain

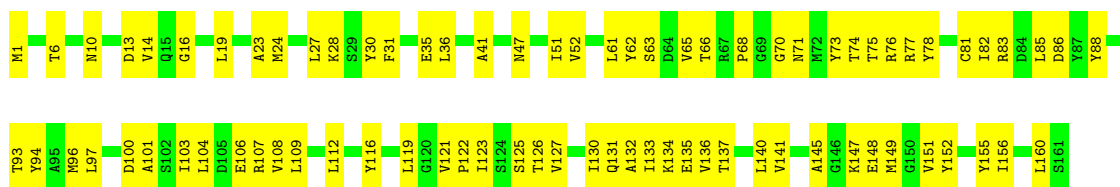




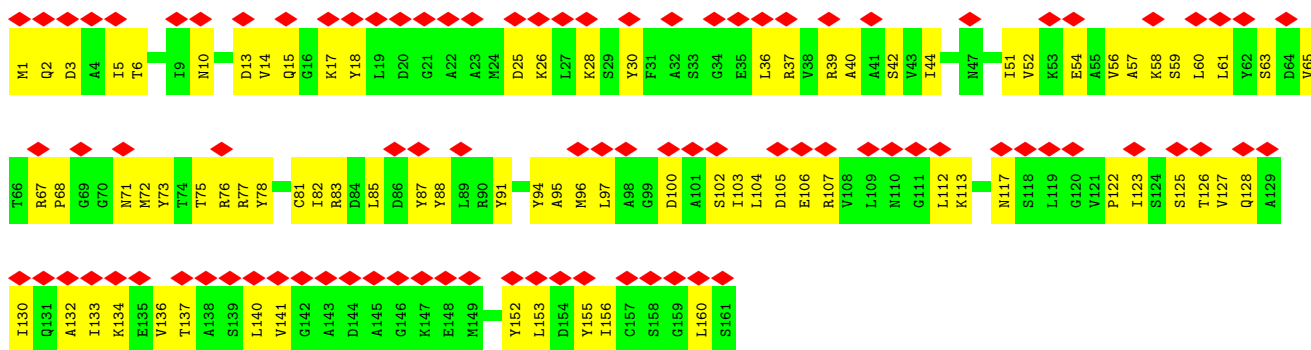
- Molecule 2: Allophycocyanin beta chain



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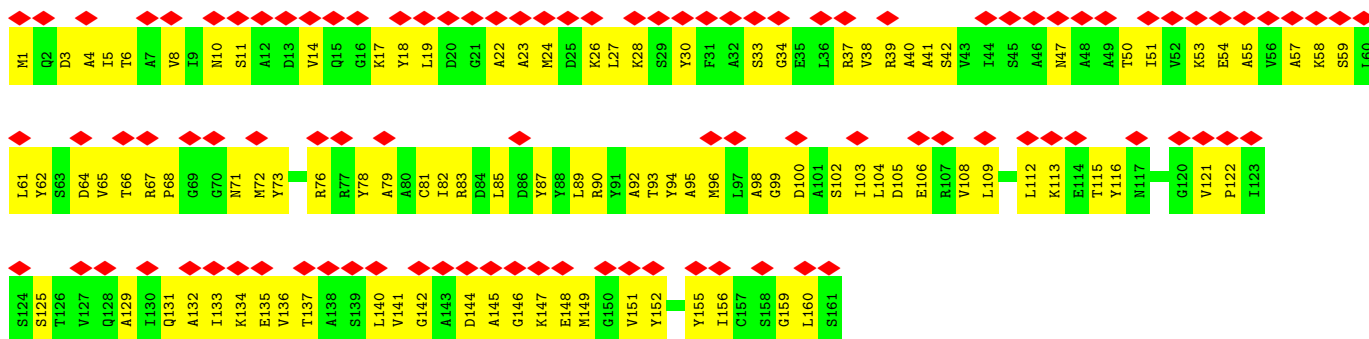


- Molecule 2: Allophycocyanin beta chain

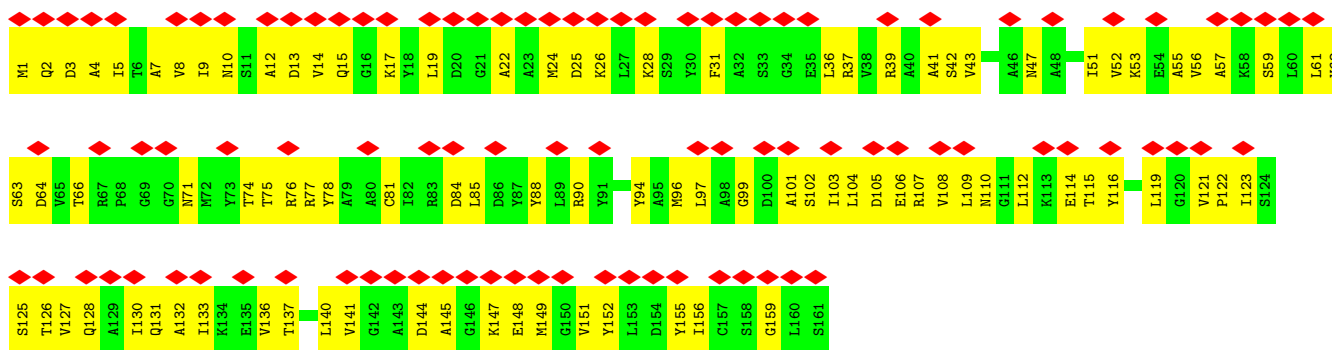
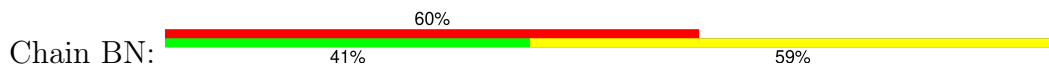


- Molecule 2: Allophycocyanin beta chain

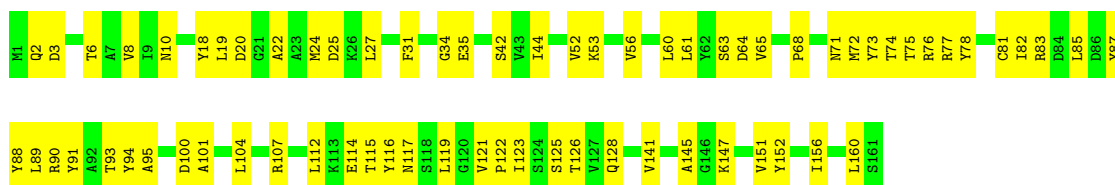




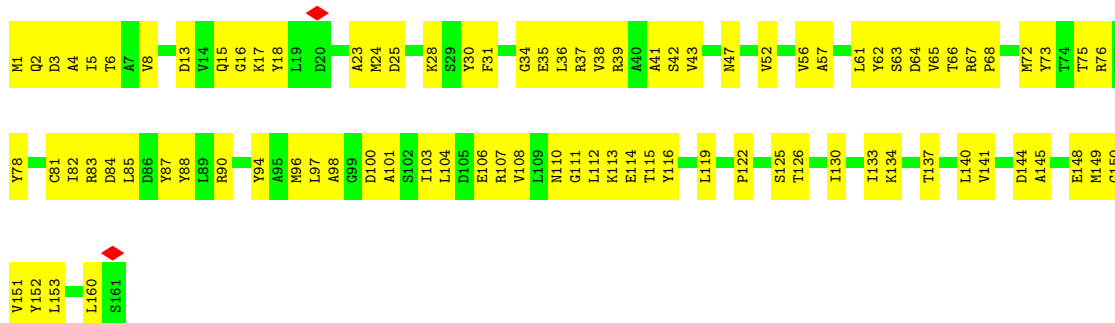
• Molecule 2: Allophycocyanin beta chain



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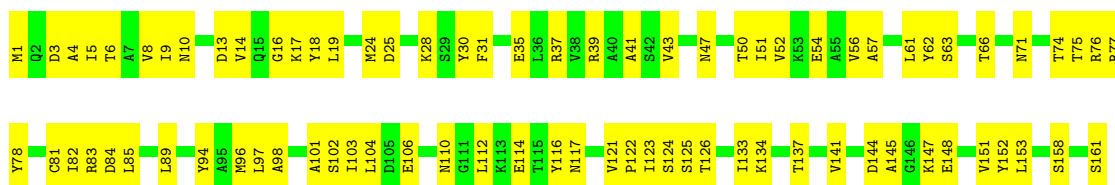


• Molecule 2: Allophycocyanin beta chain



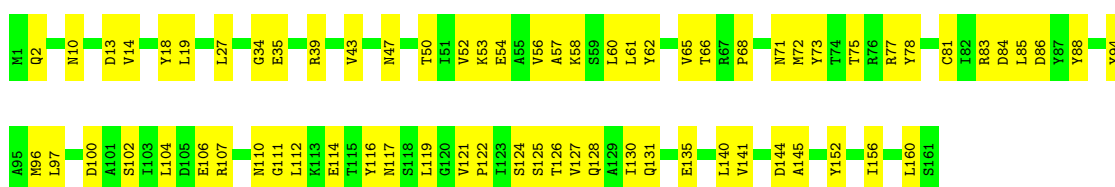
- Molecule 2: Allophycocyanin beta chain

Chain BW:  50% 50%



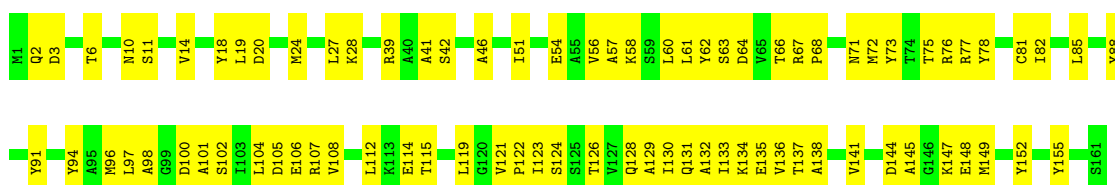
- Molecule 2: Allophycocyanin beta chain

Chain BY:  57% 43%



- Molecule 2: Allophycocyanin beta chain

Chain CA:  50% 50%



- Molecule 2: Allophycocyanin beta chain

Chain CD:  48% 52%

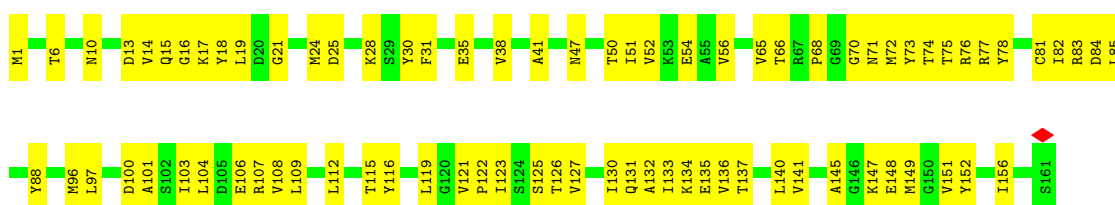


- Molecule 2: Allophycocyanin beta chain

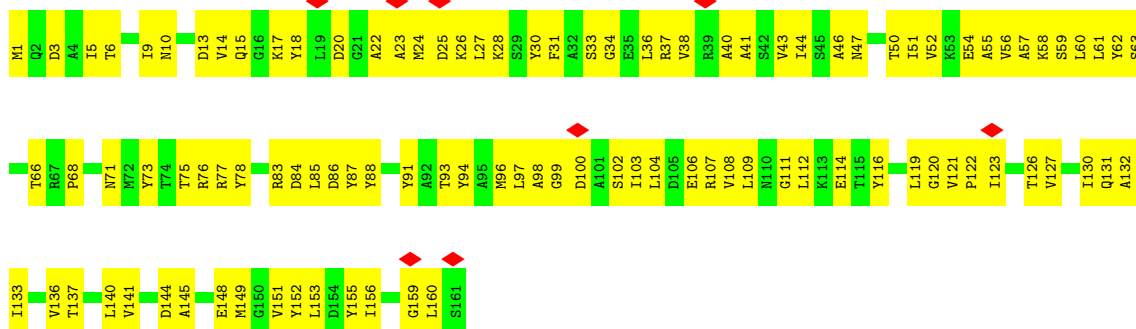
Chain CF:  45% 55%



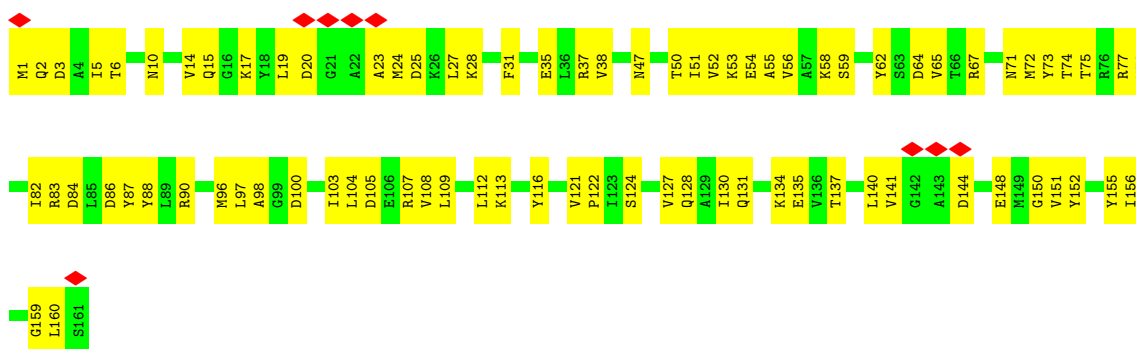
• Molecule 2: Allophycocyanin beta chain



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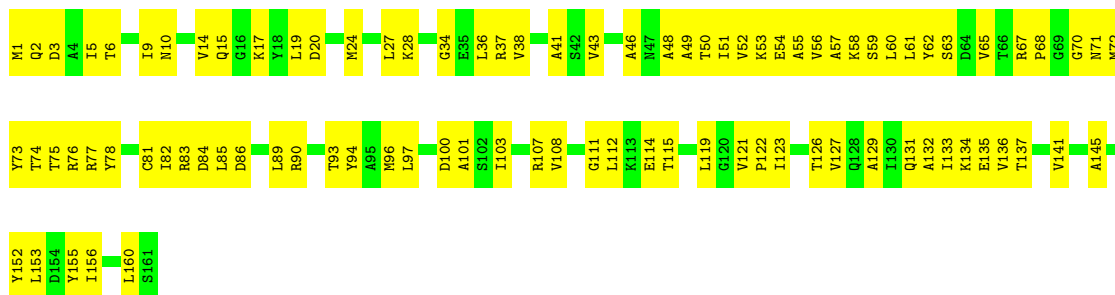
• Molecule 2: Allophycocyanin beta chain





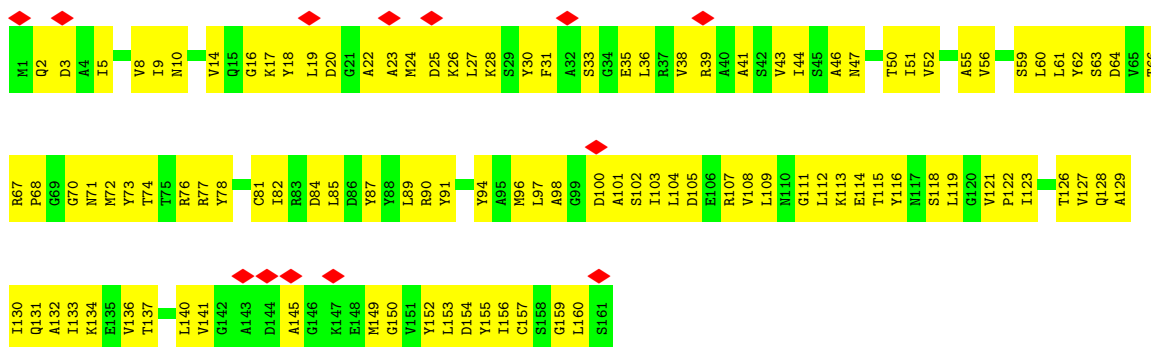
- Molecule 2: Allophycocyanin beta chain

Chain CW:  43% 57%



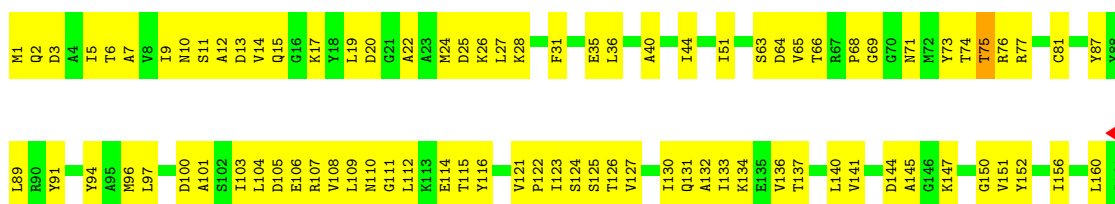
- Molecule 2: Allophycocyanin beta chain

Chain CZ:  8% 32% 68%



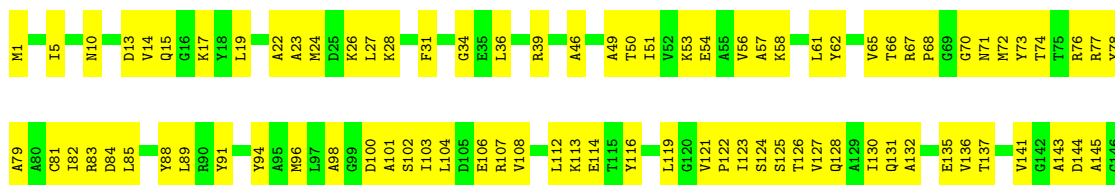
- Molecule 2: Allophycocyanin beta chain

Chain DB:  47% 53%



- Molecule 2: Allophycocyanin beta chain

Chain DD:  45% 55%

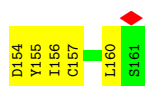
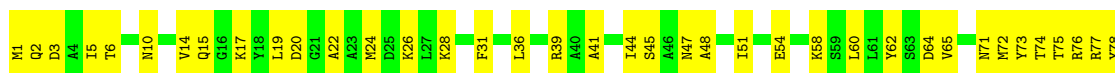




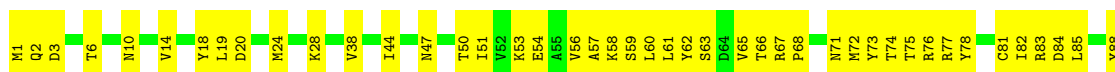
• Molecule 2: Allophycocyanin beta chain



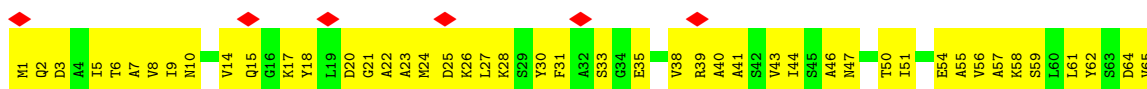
• Molecule 2: Allophycocyanin beta chain

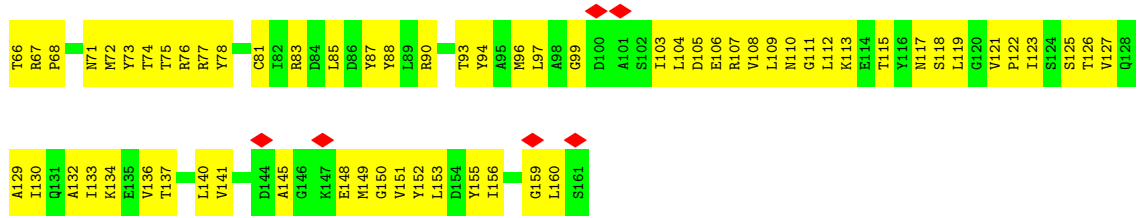


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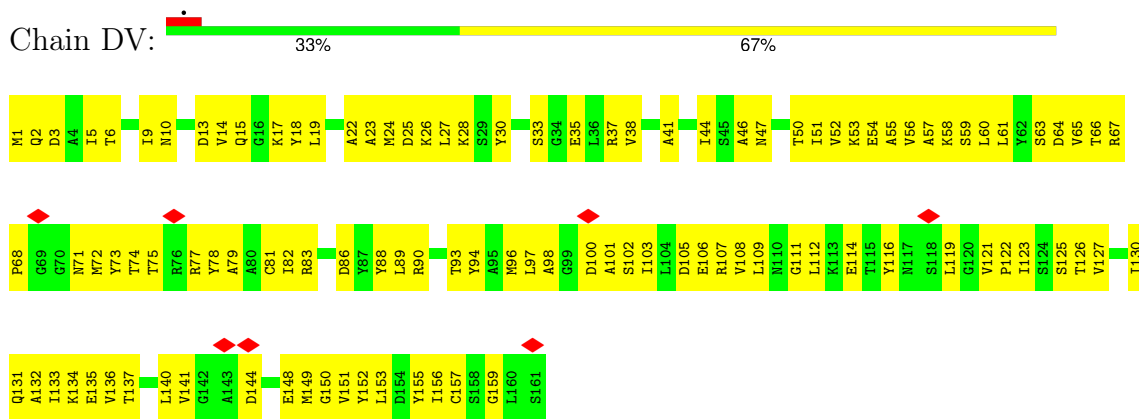




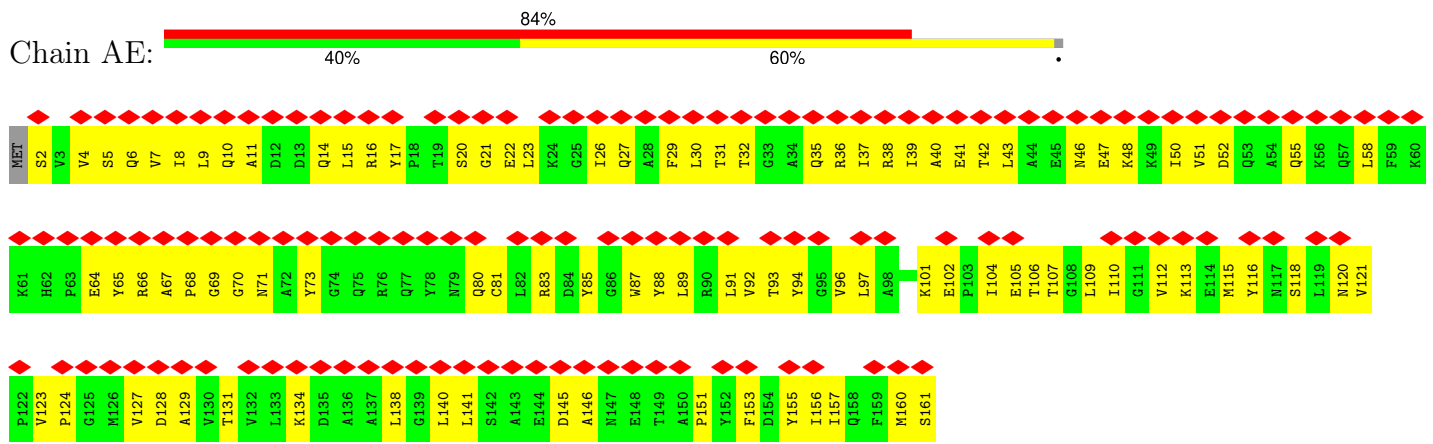
• Molecule 2: Allophycocyanin beta chain



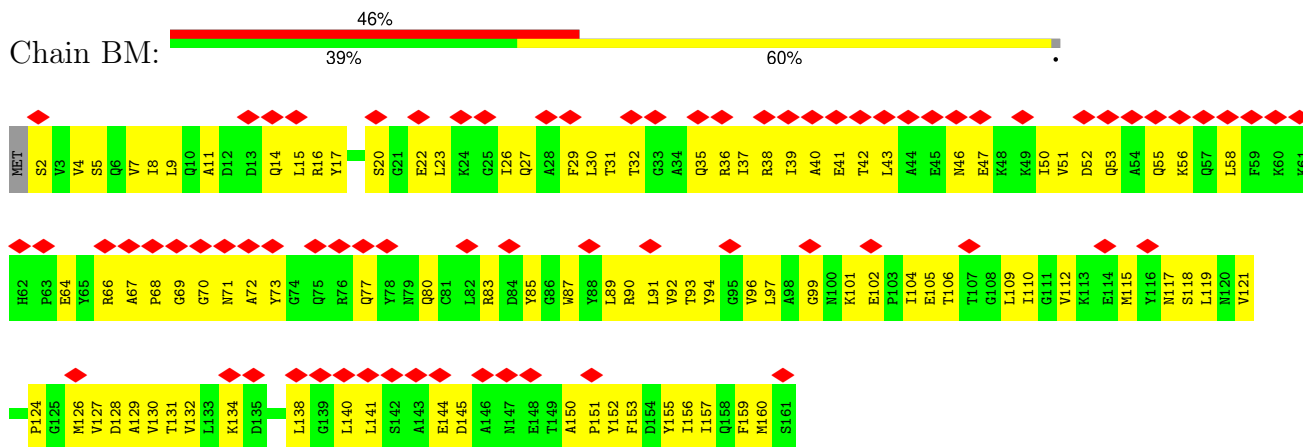
• Molecule 2: Allophycocyanin beta chain



• Molecule 3: Allophycocyanin subunit alpha-B



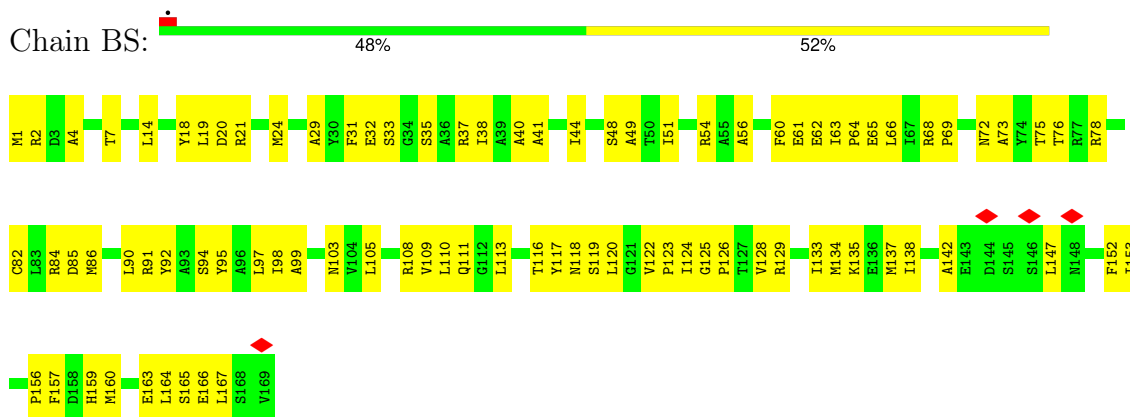
- Molecule 3: Allophycocyanin subunit alpha-B



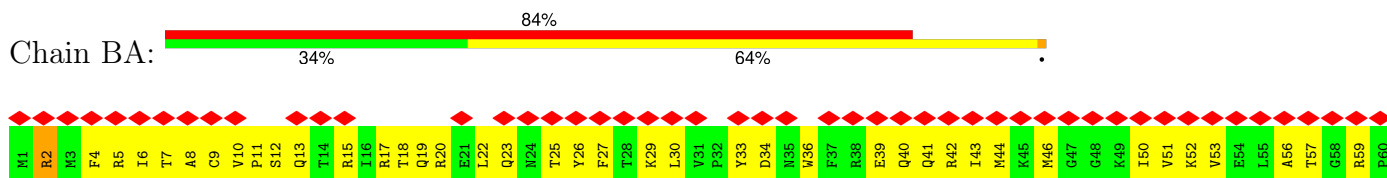
- Molecule 4: Allophycocyanin subunit beta-18

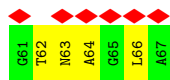


- Molecule 4: Allophycocyanin subunit beta-18



- Molecule 5: Phycobilisome 7.8 kDa linker polypeptide, allophycocyanin-associated, core





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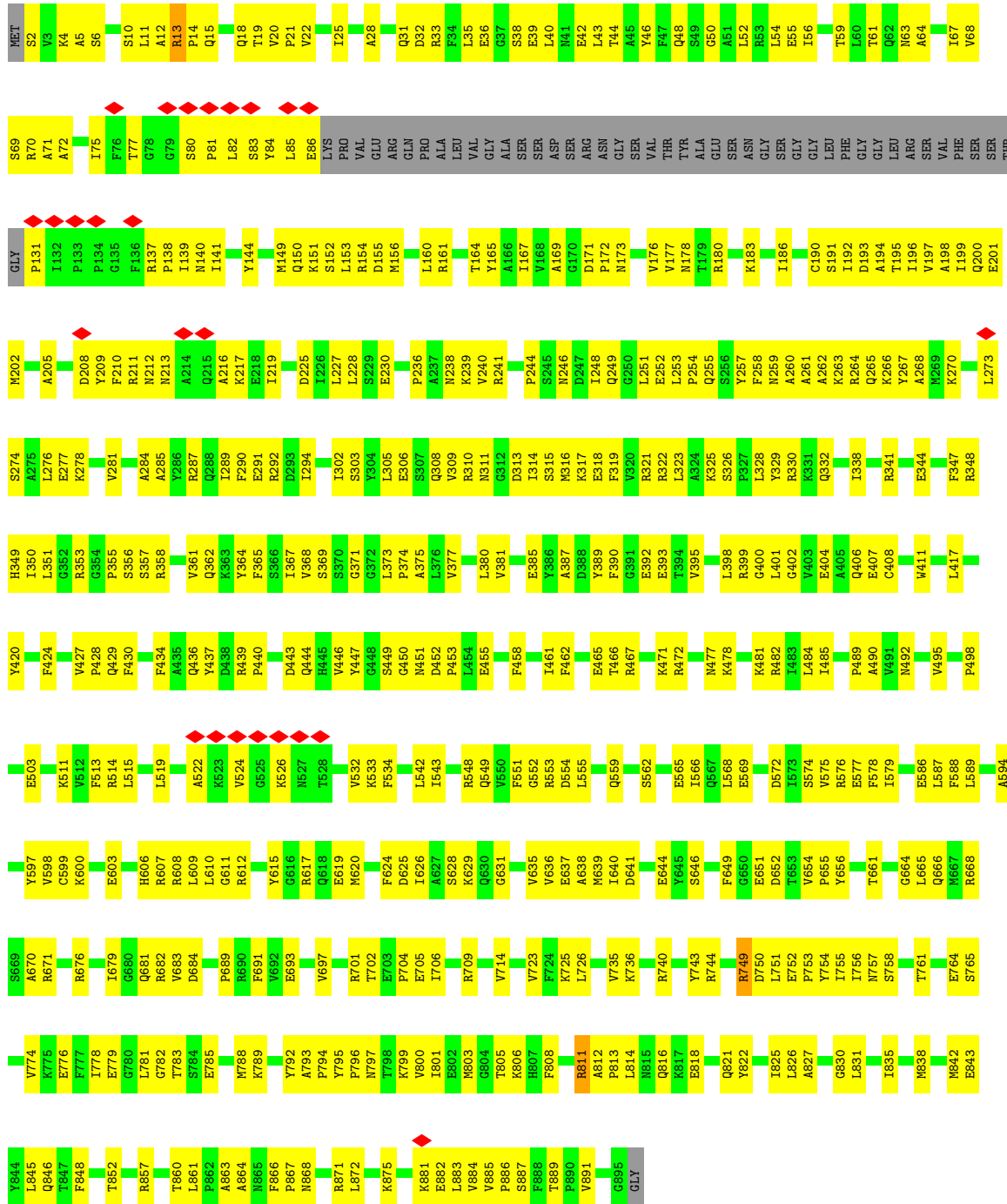


- Molecule 5: Phycobilisome 7.8 kDa linker polypeptide, allophycocyanin-associated, core

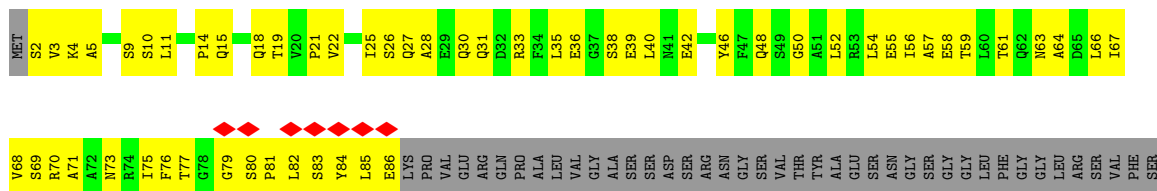


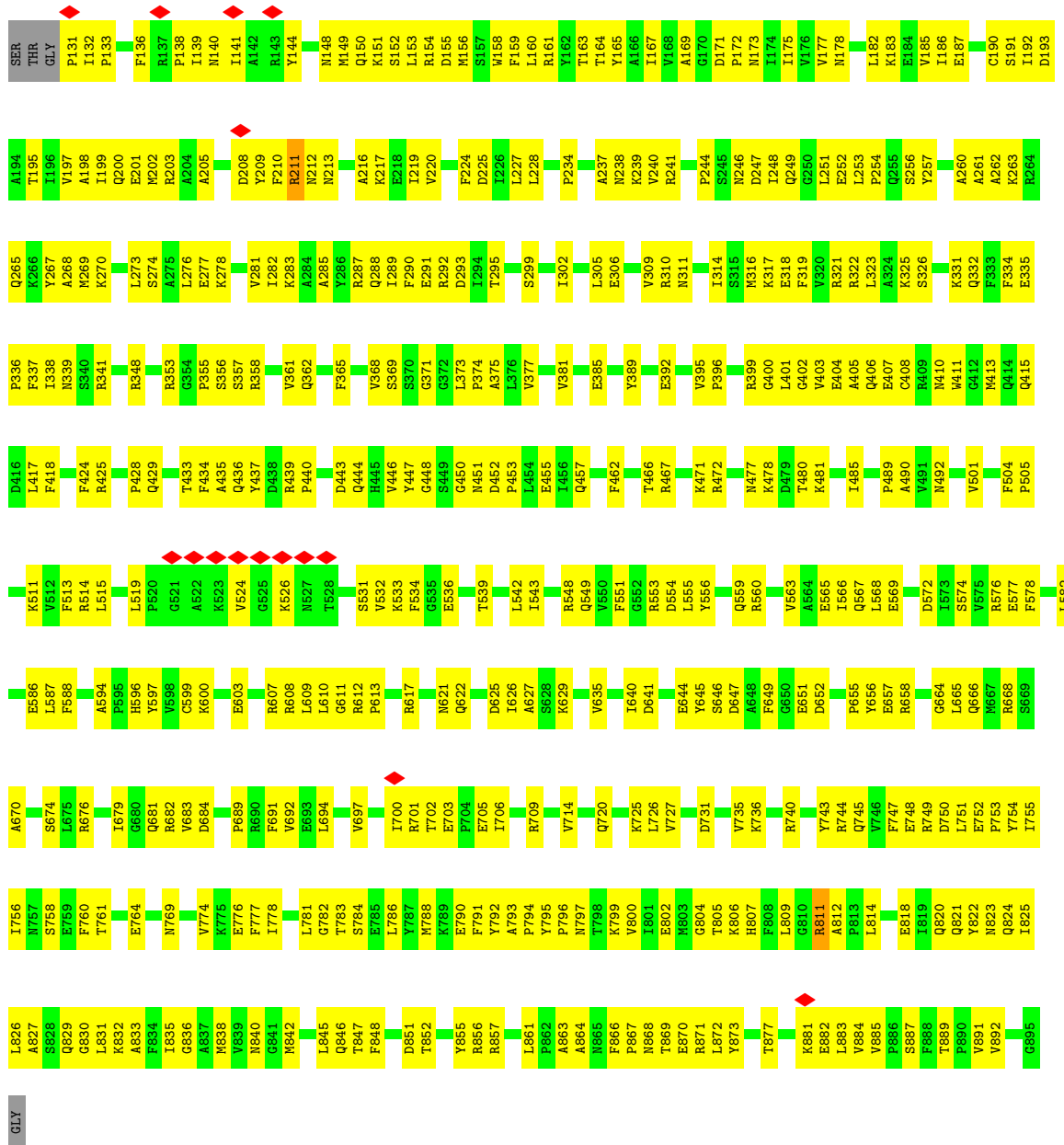
- Molecule 6: Phycobiliprotein ApcE





• Molecule 6: Phycobiliprotein ApcE





• Molecule 7: Sll1873 protein



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|
| MET | LEU | LYS | LYS | VAL | GLU | THR | PRO | ALA | ALA | LYS | LYS | LYS | ALA | GLU | GLU | ASP | GLU | GLN | GLN | ALA | ALA | VAL | VAL | ASP | ASP | P83 | S84 | Q85 | V86 | A89 | P93 | P95 | Q96 | N97 | V98 | A99 | P86 | P87 | R100 | R101 | T102 | P103 | G104 | P105 | S106 | L107 | N108 | R109 | F110 | K111 | E112 | M113 | A114 | R115 | Q116 | V117 | K118 | VAL | LYS | ARG |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|

• Molecule 7: Sll1873 protein









• Molecule 8: Phycobilisome rod-core linker polypeptide CpcG

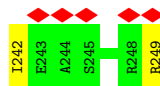


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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| MET | ALA | LEU | PRO | LEU | LEU | ASN | TYR | ALA | PRO | LYS | SER | GLN | ASN | VAL | ARG | GLU | GLY | TYR  | GLU  | ILE  | LEU  | SER  | LYS  | PRO  | VAL  | PHE  | THR  | THR  | GLU  | ASN  | ILE  | LEU  | SER  | ASP  | MET  | ASP  | ASN  | LEU  | ASN  | LEU  | ILE  | GLY  | CYS  | VAL  | ALA  | ALA  | TYR  | ARG  | GLN  | ILE | LEU | GLY | PHE | ASP | VAL | HIS | ALA | PHE | TYR | SER | GLU | PRO | TRP |     |     |
| ASP | ARG | GLY | LYS | VAL | LEU | GLU | SER | GLN | LEU | ARG | ASN | GLY | GLN | ILE | THR | VAL | ARG | ASP  | PHE  | VAL  | LEU  | ARG  | GLY  | SER  | LEU  | ASP  | LEU  | LEU  | LEU  | ASN  | THR  | VAL  | PHE  | ARG  | ASN  | THR  | PHE  | VAL  | ASN  | ASN  | TYR  | ARG  | ASP  | PHE  | VAL  | GLY  | HIS  | VAL  | ALA  | GLN | TYR | ILE | LEU | GLY | ILE | PRO | PHE | ARG | ASP | VAL | TYR | SER | GLU | PRO | ARG |
| GLU | LYS | ILE | ALA | TRP | LEU | ILE | VAL | VAL | VAL | ALA | LEU | THR | LYS | GLY | TYR | GLN | GLY | ASP  | ASP  | LEU  | ASN  | ASN  | GLY  | ASP  | GLU  | TYR  | ASP  | PRO  | GLN  | TYR  | THR  | THR  | ASP  | THR  | GLY  | THR  | ASP  | ARG  | ARG  | ASN  | ASN  | PRO  | GLN  | ARG  | GLY  | GLY  | VAL  | ALA  | ALA  | GLY | LEU | PRO | PHE | ASN | ILE | LYS | SER | PRO | ARG |     |     |     |     |     |     |
| TYR | ASP | ALA | TYR | HIS | ARG | ARG | GLN | LEU | VAL | VAL | GLY | PHE | LYS | PRO | GLY | ILE | VAL | Q196 | Q197 | M198 | E199 | V200 | R201 | R202 | F203 | I204 | P205 | Q206 | M216 | L219 | G220 | M221 | A222 | P227 | N230 | T231 | I232 | P233 | S236 | A237 | Q238 | N239 | I240 | N241 | I242 | E243 | A244 | S245 | R249 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

• Molecule 8: Phycobilisome rod-core linker polypeptide CpcG



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|
| MET | ALA | LEU | PRO | LEU | LEU | ASN | TYR | ALA | PRO | LYS | SER | GLN | ASN | VAL | ARG | GLU | GLY | TYR  | GLU  | ILE  | LEU  | SER  | LYS  | PRO  | VAL  | PHE  | THR  | THR  | GLU  | ASN  | ILE  | LEU  | SER  | ASP  | MET  | ASP  | ASN  | LEU  | ASN  | LEU  | ILE  | GLY  | CYS  | VAL  | ALA  | ALA  | TYR  | ARG  | GLN  | ILE  | LEU  | GLY  | PHE  | ASP  | VAL  | HIS  | ALA  | PHE  | TYR  | SER  | GLU | PRO | TRP |     |     |
| ASP | ARG | GLY | LYS | VAL | LEU | GLU | SER | GLN | LEU | ARG | ASN | GLY | GLN | ILE | THR | VAL | ARG | ASP  | PHE  | VAL  | LEU  | ARG  | GLY  | SER  | LEU  | ASP  | LEU  | LEU  | LEU  | ASN  | THR  | VAL  | PHE  | ARG  | ASN  | THR  | PHE  | VAL  | ASN  | ASN  | TYR  | ARG  | ASP  | PHE  | VAL  | GLY  | HIS  | VAL  | GLN  | LYS  | TYR  | ILE  | LEU  | GLY  | ILE  | PRO  | PHE  | ARG  | ASP  | VAL  | TYR | SER | GLU | PRO | ARG |
| GLU | LYS | ILE | ALA | TRP | LEU | ILE | VAL | VAL | VAL | ALA | LEU | THR | LYS | GLY | TYR | GLN | GLY | ASP  | ASP  | LEU  | ASN  | ASN  | GLY  | ASP  | GLU  | TYR  | ASP  | PRO  | GLN  | TYR  | THR  | THR  | ASP  | THR  | GLY  | THR  | ASP  | ARG  | ARG  | ASN  | ASN  | PRO  | GLN  | ARG  | GLY  | GLY  | VAL  | ALA  | ALA  | GLY  | LEU  | PRO  | PHE  | ASN  | ILE  | LYS  | SER  | PRO  | ARG  |      |     |     |     |     |     |
| TYR | ASP | ALA | TYR | HIS | ARG | ARG | GLN | LEU | VAL | VAL | GLY | PHE | LYS | PRO | GLY | ILE | VAL | Q196 | Q197 | H198 | E199 | V200 | R201 | R202 | F203 | I204 | P205 | Q206 | E207 | R208 | T211 | A212 | G213 | N214 | P215 | M216 | N217 | F218 | L219 | G220 | A222 | R223 | S224 | I225 | N226 | P227 | A228 | A229 | N230 | T231 | I232 | P233 | R234 | V235 | S236 | A237 | Q238 | N239 | I240 | N241 |     |     |     |     |     |



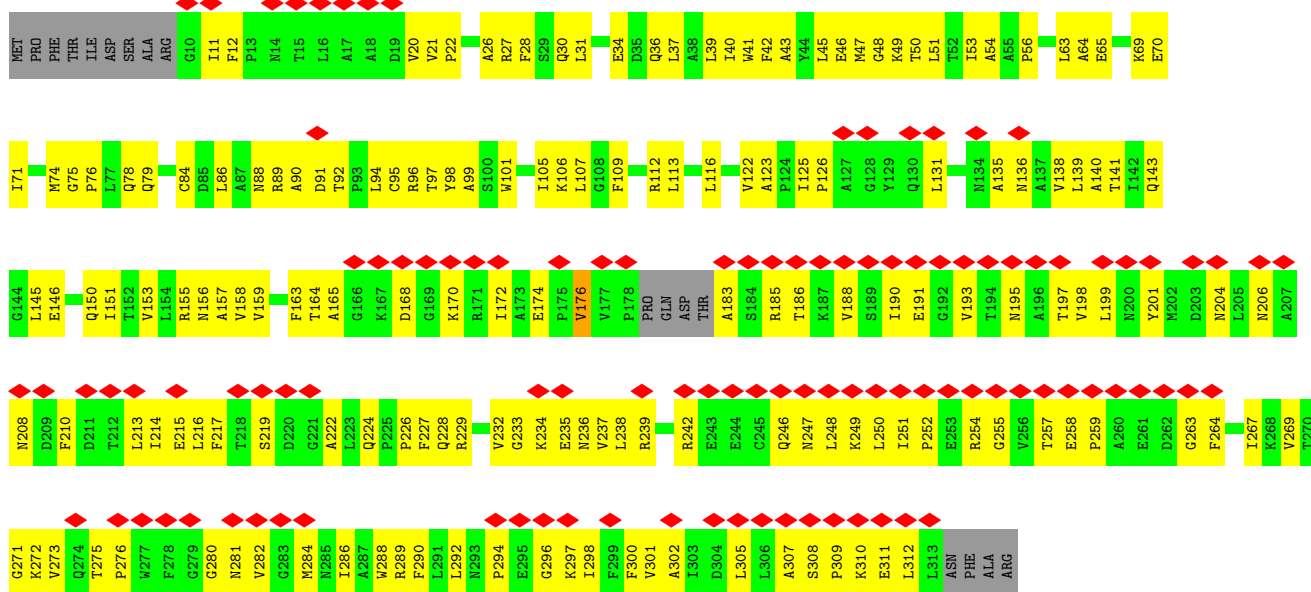
• Molecule 8: Phycobilisome rod-core linker polypeptide CpcG



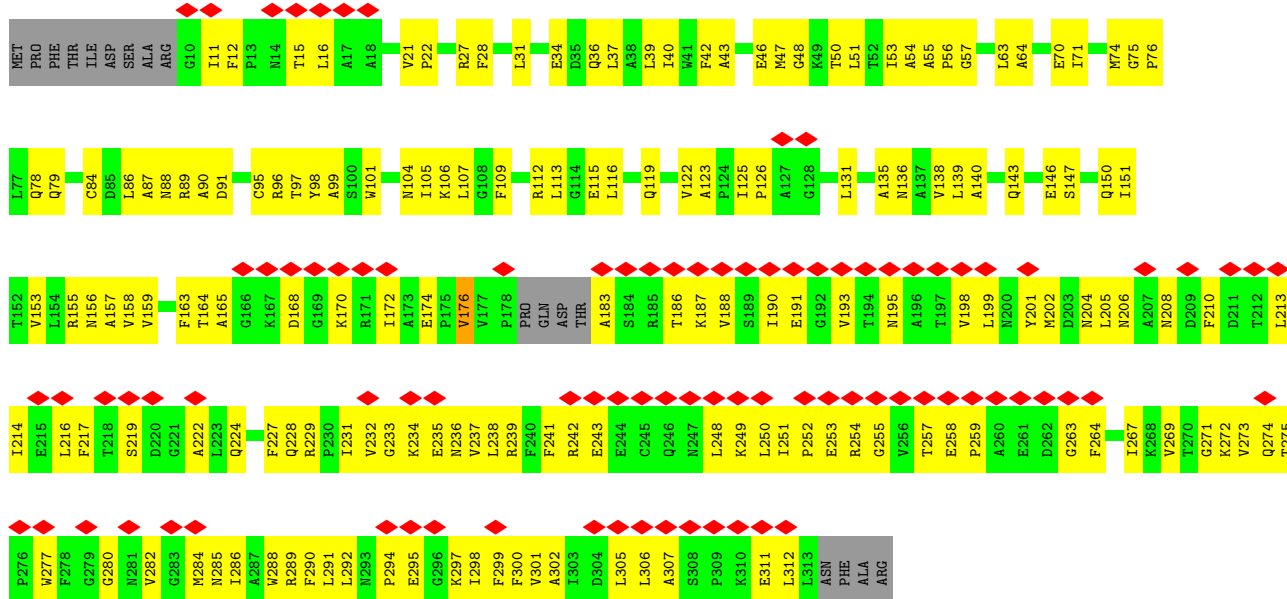
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| MET | ALA | LEU | PRO | LEU | LEU | ASN | TYR | ALA | PRO | LYS | SER | GLN | ASN | VAL | ARG | GLU | GLY | TYR | GLU | ILE | LEU | SER | LYS | PRO | VAL | PHE | THR | THR | GLU | ASN | ILE | LEU | SER | ASP | MET | ASP | ASN | LEU | ASN | LEU | ILE | GLY | CYS | VAL | ALA | ALA | TYR | ARG | GLN | ILE | LEU | GLY | PHE | ASP | VAL | HIS | ALA | PHE | TYR | SER | GLU | PRO | TRP |     |     |     |
| ASP | ARG | GLY | LYS | VAL | LEU | GLU | SER | GLN | LEU | ARG | ASN | GLY | GLN | ILE | THR | VAL | ARG | ASP | PHE | VAL | LEU | ARG | GLY | SER | LEU | ASP | LEU | LEU | LEU | ASN | THR | VAL | PHE | ARG | ASN | THR | PHE | VAL | ASN | ASN | TYR | ARG | ASP | PHE | VAL | GLY | HIS | VAL | ALA | GLN | LYS | TYR | ILE | LEU | GLY | ILE | PRO | PHE | ARG | ASP | VAL | TYR | SER | GLU | PRO | ARG |
| GLU | LYS | ILE | ALA | TRP | LEU | ILE | VAL | VAL | VAL | ALA | LEU | THR | LYS | GLY | TYR | GLN | GLY | ASP | ASP | LEU | ASN | ASN | GLY | ASP | GLU | TYR | ASP | PRO | GLN | TYR | THR | THR | ASP | THR | GLY | THR | ASP | ARG | ARG | ASN | ASN | PRO | GLN | ARG | GLY | GLY | VAL | ALA | ALA | GLY | LEU | PRO | PHE | ASN | ILE | LYS | SER | PRO | ARG |     |     |     |     |     |     |     |



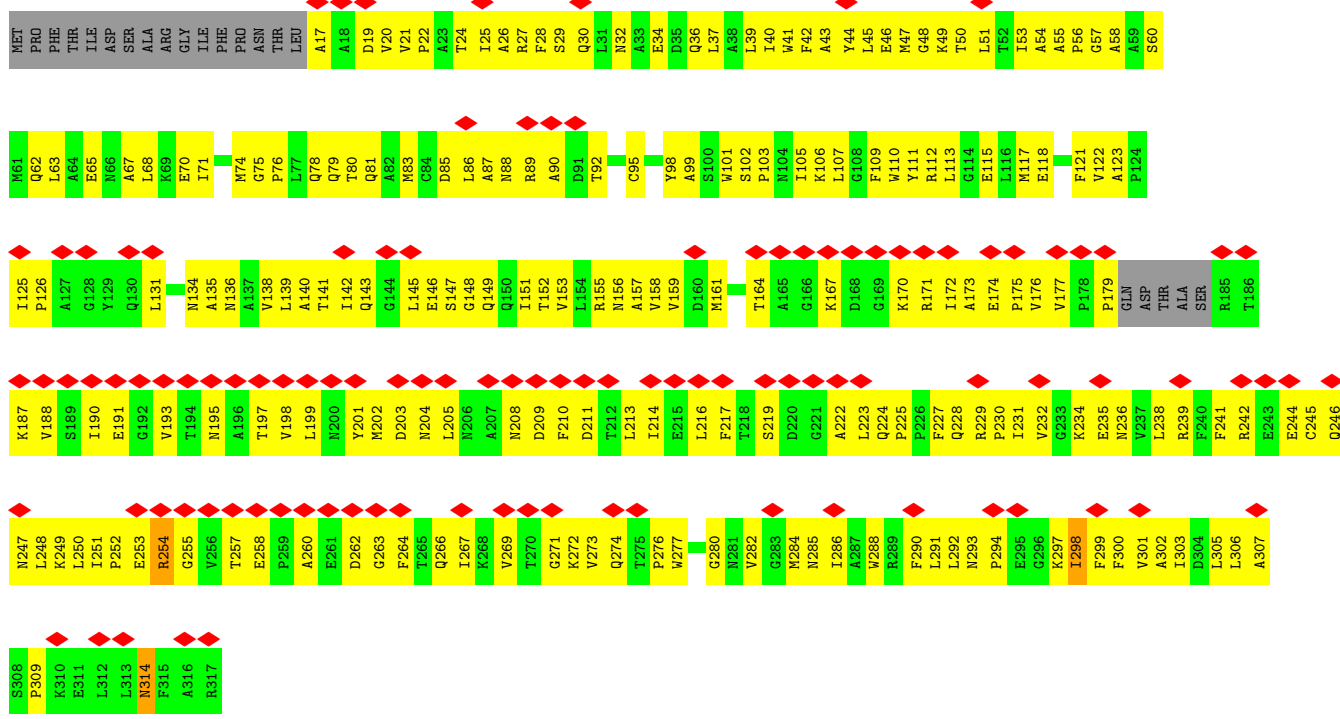
• Molecule 9: Orange carotenoid-binding protein



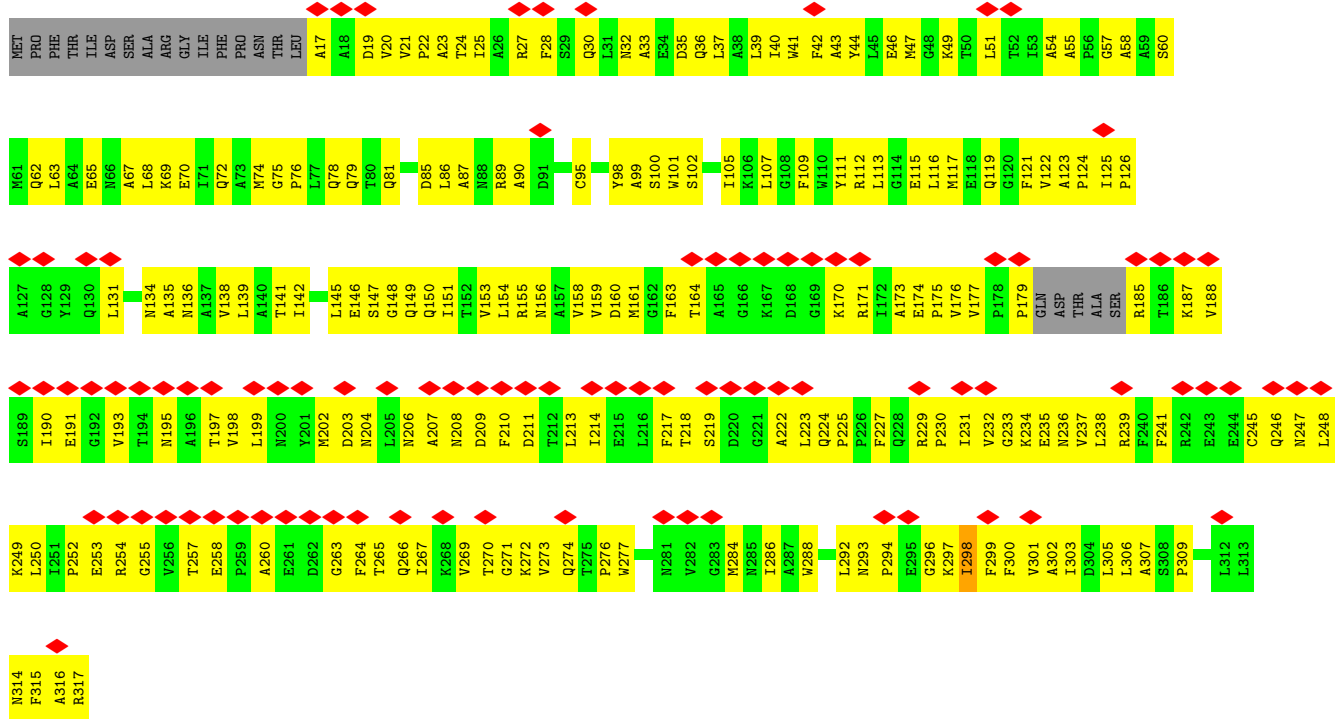
• Molecule 9: Orange carotenoid-binding protein



• Molecule 9: Orange carotenoid-binding protein



• Molecule 9: Orange carotenoid-binding protein



## 4 Experimental information

| Property                             | Value                                   | Source    |
|--------------------------------------|---|-----------|
| EM reconstruction method             | SINGLE PARTICLE                         | Depositor |
| Imposed symmetry                     | POINT, C1                               | Depositor |
| Number of particles used             | 340839                                  | Depositor |
| Resolution determination method      | FSC 0.143 CUT-OFF                       | Depositor |
| CTF correction method                | PHASE FLIPPING AND AMPLITUDE CORRECTION | Depositor |
| Microscope                           | TFS KRIOS                               | Depositor |
| Voltage (kV)                         | 300                                     | Depositor |
| Electron dose ( $e^-/\text{\AA}^2$ ) | 50                                      | Depositor |
| Minimum defocus (nm)                 | 500                                     | Depositor |
| Maximum defocus (nm)                 | 1600                                    | Depositor |
| Magnification                        | Not provided                            |           |
| Image detector                       | GATAN K3 (6k x 4k)                      | Depositor |
| Maximum map value                    | 2.199                                   | Depositor |
| Minimum map value                    | -0.742                                  | Depositor |
| Average map value                    | 0.021                                   | Depositor |
| Map value standard deviation         | 0.113                                   | Depositor |
| Recommended contour level            | 0.437                                   | Depositor |
| Map size (Å)                         | 377.99997, 377.99997, 377.99997         | wwPDB     |
| Map dimensions                       | 360, 360, 360                           | wwPDB     |
| Map angles (°)                       | 90.0, 90.0, 90.0                        | wwPDB     |
| Pixel spacing (Å)                    | 1.05, 1.05, 1.05                        | Depositor |

## 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: CYC, 45D

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   | AA    | 0.25         | 0/1225      | 0.47        | 0/1652      |
| 1   | AC    | 0.26         | 0/1225      | 0.50        | 0/1652      |
| 1   | AH    | 0.28         | 0/1225      | 0.48        | 0/1652      |
| 1   | AJ    | 0.31         | 0/1225      | 0.49        | 0/1652      |
| 1   | AN    | 0.28         | 0/1225      | 0.50        | 0/1652      |
| 1   | AP    | 0.30         | 0/1225      | 0.48        | 0/1652      |
| 1   | AR    | 0.28         | 0/1225      | 0.48        | 0/1652      |
| 1   | AV    | 0.26         | 0/1225      | 0.49        | 0/1652      |
| 1   | AX    | 0.27         | 0/1225      | 0.48        | 0/1652      |
| 1   | AZ    | 0.27         | 0/1225      | 0.47        | 0/1652      |
| 1   | BI    | 0.25         | 0/1225      | 0.47        | 0/1652      |
| 1   | BK    | 0.27         | 0/1225      | 0.51        | 0/1652      |
| 1   | BP    | 0.29         | 0/1225      | 0.48        | 0/1652      |
| 1   | BR    | 0.31         | 0/1225      | 0.49        | 0/1652      |
| 1   | BV    | 0.29         | 0/1225      | 0.50        | 0/1652      |
| 1   | BX    | 0.30         | 0/1225      | 0.48        | 0/1652      |
| 1   | BZ    | 0.29         | 0/1225      | 0.48        | 0/1652      |
| 1   | CC    | 0.27         | 0/1225      | 0.47        | 0/1652      |
| 1   | CE    | 0.27         | 0/1225      | 0.48        | 0/1652      |
| 1   | CG    | 0.28         | 0/1225      | 0.49        | 0/1652      |
| 1   | CR    | 0.28         | 0/1225      | 0.49        | 0/1652      |
| 1   | CT    | 0.27         | 0/1225      | 0.50        | 0/1652      |
| 1   | CV    | 0.28         | 0/1225      | 0.49        | 0/1652      |
| 1   | CY    | 0.28         | 0/1225      | 0.52        | 0/1652      |
| 1   | DA    | 0.28         | 0/1225      | 0.53        | 0/1652      |
| 1   | DC    | 0.31         | 0/1225      | 0.49        | 0/1652      |
| 1   | DJ    | 0.27         | 0/1225      | 0.49        | 0/1652      |
| 1   | DL    | 0.27         | 0/1225      | 0.49        | 0/1652      |
| 1   | DN    | 0.28         | 0/1225      | 0.48        | 0/1652      |
| 1   | DQ    | 0.27         | 0/1225      | 0.51        | 0/1652      |
| 1   | DS    | 0.29         | 0/1225      | 0.50        | 0/1652      |
| 1   | DU    | 0.31         | 0/1225      | 0.49        | 0/1652      |

| Mol | Chain | Bond lengths |         | Bond angles |               |
|-----|-------|--------------|---------|-------------|---------------|
|     |       | RMSZ         | # Z  >5 | RMSZ        | # Z  >5       |
| 2   | AB    | 0.25         | 0/1220  | 0.44        | 0/1650        |
| 2   | AD    | 0.26         | 0/1220  | 0.46        | 0/1650        |
| 2   | AF    | 0.25         | 0/1220  | 0.43        | 0/1650        |
| 2   | AI    | 0.32         | 0/1220  | 0.46        | 0/1650        |
| 2   | AL    | 0.29         | 0/1220  | 0.46        | 0/1650        |
| 2   | AO    | 0.32         | 0/1220  | 0.46        | 0/1650        |
| 2   | AQ    | 0.31         | 0/1220  | 0.45        | 0/1650        |
| 2   | AS    | 0.30         | 0/1220  | 0.47        | 0/1650        |
| 2   | AU    | 0.28         | 0/1220  | 0.49        | 1/1650 (0.1%) |
| 2   | AW    | 0.27         | 0/1220  | 0.45        | 0/1650        |
| 2   | AY    | 0.29         | 0/1220  | 0.45        | 0/1650        |
| 2   | BJ    | 0.25         | 0/1220  | 0.45        | 0/1650        |
| 2   | BL    | 0.27         | 0/1220  | 0.47        | 0/1650        |
| 2   | BN    | 0.26         | 0/1220  | 0.44        | 0/1650        |
| 2   | BQ    | 0.32         | 0/1220  | 0.46        | 0/1650        |
| 2   | BT    | 0.30         | 0/1220  | 0.46        | 0/1650        |
| 2   | BW    | 0.32         | 0/1220  | 0.45        | 0/1650        |
| 2   | BY    | 0.31         | 0/1220  | 0.45        | 0/1650        |
| 2   | CA    | 0.31         | 0/1220  | 0.47        | 0/1650        |
| 2   | CD    | 0.28         | 0/1220  | 0.49        | 1/1650 (0.1%) |
| 2   | CF    | 0.28         | 0/1220  | 0.45        | 0/1650        |
| 2   | CH    | 0.28         | 0/1220  | 0.44        | 0/1650        |
| 2   | CS    | 0.27         | 0/1220  | 0.46        | 0/1650        |
| 2   | CU    | 0.30         | 0/1220  | 0.45        | 0/1650        |
| 2   | CW    | 0.28         | 0/1220  | 0.45        | 0/1650        |
| 2   | CZ    | 0.29         | 0/1220  | 0.48        | 0/1650        |
| 2   | DB    | 0.31         | 0/1220  | 0.46        | 0/1650        |
| 2   | DD    | 0.28         | 0/1220  | 0.45        | 0/1650        |
| 2   | DK    | 0.27         | 0/1220  | 0.45        | 0/1650        |
| 2   | DM    | 0.30         | 0/1220  | 0.45        | 0/1650        |
| 2   | DO    | 0.27         | 0/1220  | 0.45        | 0/1650        |
| 2   | DR    | 0.28         | 0/1220  | 0.46        | 0/1650        |
| 2   | DT    | 0.31         | 0/1220  | 0.46        | 0/1650        |
| 2   | DV    | 0.29         | 0/1220  | 0.49        | 0/1650        |
| 3   | AE    | 0.26         | 0/1277  | 0.45        | 0/1730        |
| 3   | BM    | 0.29         | 0/1277  | 0.47        | 0/1730        |
| 4   | AK    | 0.29         | 0/1341  | 0.50        | 0/1813        |
| 4   | BS    | 0.30         | 0/1341  | 0.50        | 0/1813        |
| 5   | BA    | 0.26         | 0/555   | 0.55        | 0/743         |
| 5   | BB    | 0.26         | 0/555   | 0.56        | 0/743         |
| 5   | CJ    | 0.26         | 0/555   | 0.54        | 0/743         |
| 5   | CK    | 0.26         | 0/555   | 0.57        | 0/743         |
| 5   | DF    | 0.28         | 0/555   | 0.57        | 0/743         |

| Mol | Chain | Bond lengths |          | Bond angles |                 |
|-----|-------|--------------|----------|-------------|-----------------|
|     |       | RMSZ         | # Z  >5  | RMSZ        | # Z  >5         |
| 5   | DX    | 0.27         | 0/555    | 0.56        | 0/743           |
| 6   | BD    | 0.30         | 0/6907   | 0.50        | 1/9337 (0.0%)   |
| 6   | CM    | 0.30         | 0/6907   | 0.50        | 0/9337          |
| 7   | BF    | 0.25         | 0/283    | 0.51        | 0/381           |
| 7   | CO    | 0.27         | 0/283    | 0.50        | 0/381           |
| 8   | BG    | 0.27         | 0/459    | 0.50        | 0/620           |
| 8   | CP    | 0.27         | 0/459    | 0.51        | 0/620           |
| 8   | DG    | 0.26         | 0/434    | 0.53        | 0/587           |
| 8   | DH    | 0.26         | 0/434    | 0.52        | 0/587           |
| 8   | DY    | 0.26         | 0/434    | 0.53        | 0/587           |
| 8   | DZ    | 0.28         | 0/434    | 0.52        | 0/587           |
| 9   | BH    | 0.26         | 0/2349   | 0.48        | 0/3195          |
| 9   | CQ    | 0.26         | 0/2349   | 0.48        | 0/3195          |
| 9   | DI    | 0.26         | 0/2327   | 0.47        | 0/3164          |
| 9   | EA    | 0.26         | 0/2327   | 0.47        | 0/3164          |
| All | All   | 0.28         | 0/115632 | 0.48        | 3/156250 (0.0%) |

There are no bond length outliers.

All (3) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 2   | CD    | 25  | ASP  | CB-CG-OD1 | 6.17  | 123.85      | 118.30   |
| 2   | AU    | 25  | ASP  | CB-CG-OD1 | 5.54  | 123.28      | 118.30   |
| 6   | BD    | 503 | GLU  | C-N-CA    | -5.41 | 108.19      | 121.70   |

There are no chirality outliers.

There are no planarity outliers.

## 5.2 Too-close contacts [i](#)

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

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1   | AA    | 1210  | 0        | 1210     | 100     | 0            |
| 1   | AC    | 1210  | 0        | 1210     | 137     | 0            |
| 1   | AH    | 1210  | 0        | 1210     | 99      | 0            |
| 1   | AJ    | 1210  | 0        | 1210     | 89      | 0            |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1   | AN    | 1210  | 0        | 1210     | 115     | 0            |
| 1   | AP    | 1210  | 0        | 1210     | 79      | 0            |
| 1   | AR    | 1210  | 0        | 1211     | 91      | 0            |
| 1   | AV    | 1210  | 0        | 1210     | 125     | 0            |
| 1   | AX    | 1210  | 0        | 1210     | 98      | 0            |
| 1   | AZ    | 1210  | 0        | 1210     | 104     | 0            |
| 1   | BI    | 1210  | 0        | 1210     | 82      | 0            |
| 1   | BK    | 1210  | 0        | 1210     | 139     | 0            |
| 1   | BP    | 1210  | 0        | 1210     | 95      | 0            |
| 1   | BR    | 1210  | 0        | 1210     | 89      | 0            |
| 1   | BV    | 1210  | 0        | 1210     | 116     | 0            |
| 1   | BX    | 1210  | 0        | 1210     | 72      | 0            |
| 1   | BZ    | 1210  | 0        | 1210     | 94      | 0            |
| 1   | CC    | 1210  | 0        | 1210     | 108     | 0            |
| 1   | CE    | 1210  | 0        | 1210     | 129     | 0            |
| 1   | CG    | 1210  | 0        | 1210     | 107     | 0            |
| 1   | CR    | 1210  | 0        | 1210     | 146     | 0            |
| 1   | CT    | 1210  | 0        | 1210     | 97      | 0            |
| 1   | CV    | 1210  | 0        | 1210     | 93      | 0            |
| 1   | CY    | 1210  | 0        | 1210     | 180     | 0            |
| 1   | DA    | 1210  | 0        | 1210     | 132     | 0            |
| 1   | DC    | 1210  | 0        | 1210     | 77      | 0            |
| 1   | DJ    | 1210  | 0        | 1210     | 146     | 0            |
| 1   | DL    | 1210  | 0        | 1210     | 131     | 0            |
| 1   | DN    | 1210  | 0        | 1210     | 83      | 0            |
| 1   | DQ    | 1210  | 0        | 1210     | 167     | 0            |
| 1   | DS    | 1210  | 0        | 1210     | 113     | 0            |
| 1   | DU    | 1210  | 0        | 1210     | 99      | 0            |
| 2   | AB    | 1206  | 0        | 1218     | 84      | 0            |
| 2   | AD    | 1206  | 0        | 1218     | 122     | 0            |
| 2   | AF    | 1206  | 0        | 1218     | 116     | 0            |
| 2   | AI    | 1206  | 0        | 1218     | 72      | 0            |
| 2   | AL    | 1206  | 0        | 1218     | 100     | 0            |
| 2   | AO    | 1206  | 0        | 1218     | 87      | 0            |
| 2   | AQ    | 1206  | 0        | 1218     | 59      | 0            |
| 2   | AS    | 1206  | 0        | 1218     | 108     | 0            |
| 2   | AU    | 1206  | 0        | 1218     | 91      | 0            |
| 2   | AW    | 1206  | 0        | 1218     | 105     | 0            |
| 2   | AY    | 1206  | 0        | 1218     | 87      | 0            |
| 2   | BJ    | 1206  | 0        | 1218     | 80      | 0            |
| 2   | BL    | 1206  | 0        | 1218     | 115     | 0            |
| 2   | BN    | 1206  | 0        | 1218     | 115     | 0            |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 2   | BQ    | 1206  | 0        | 1218     | 81      | 0            |
| 2   | BT    | 1206  | 0        | 1218     | 100     | 0            |
| 2   | BW    | 1206  | 0        | 1218     | 92      | 0            |
| 2   | BY    | 1206  | 0        | 1218     | 74      | 0            |
| 2   | CA    | 1206  | 0        | 1218     | 96      | 0            |
| 2   | CD    | 1206  | 0        | 1218     | 93      | 0            |
| 2   | CF    | 1206  | 0        | 1218     | 119     | 0            |
| 2   | CH    | 1206  | 0        | 1218     | 87      | 0            |
| 2   | CS    | 1206  | 0        | 1218     | 131     | 0            |
| 2   | CU    | 1206  | 0        | 1218     | 83      | 0            |
| 2   | CW    | 1206  | 0        | 1218     | 117     | 0            |
| 2   | CZ    | 1206  | 0        | 1218     | 142     | 0            |
| 2   | DB    | 1206  | 0        | 1218     | 109     | 0            |
| 2   | DD    | 1206  | 0        | 1218     | 105     | 0            |
| 2   | DK    | 1206  | 0        | 1218     | 122     | 0            |
| 2   | DM    | 1206  | 0        | 1218     | 99      | 0            |
| 2   | DO    | 1206  | 0        | 1218     | 86      | 0            |
| 2   | DR    | 1206  | 0        | 1218     | 140     | 0            |
| 2   | DT    | 1206  | 0        | 1218     | 107     | 0            |
| 2   | DV    | 1206  | 0        | 1218     | 125     | 0            |
| 3   | AE    | 1254  | 0        | 1250     | 122     | 0            |
| 3   | BM    | 1254  | 0        | 1250     | 123     | 0            |
| 4   | AK    | 1322  | 0        | 1311     | 131     | 0            |
| 4   | BS    | 1322  | 0        | 1311     | 123     | 0            |
| 5   | BA    | 546   | 0        | 568      | 76      | 0            |
| 5   | BB    | 546   | 0        | 568      | 43      | 0            |
| 5   | CJ    | 546   | 0        | 568      | 66      | 0            |
| 5   | CK    | 546   | 0        | 568      | 33      | 0            |
| 5   | DF    | 546   | 0        | 568      | 49      | 0            |
| 5   | DX    | 546   | 0        | 568      | 46      | 0            |
| 6   | BD    | 6761  | 0        | 6739     | 521     | 0            |
| 6   | CM    | 6761  | 0        | 6739     | 526     | 0            |
| 7   | BF    | 277   | 0        | 283      | 36      | 0            |
| 7   | CO    | 277   | 0        | 283      | 36      | 0            |
| 8   | BG    | 451   | 0        | 465      | 33      | 0            |
| 8   | CP    | 451   | 0        | 465      | 26      | 0            |
| 8   | DG    | 426   | 0        | 437      | 45      | 0            |
| 8   | DH    | 426   | 0        | 437      | 46      | 0            |
| 8   | DY    | 426   | 0        | 437      | 39      | 0            |
| 8   | DZ    | 426   | 0        | 437      | 48      | 0            |
| 9   | BH    | 2302  | 0        | 2310     | 199     | 0            |
| 9   | CQ    | 2302  | 0        | 2310     | 195     | 0            |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 9   | DI    | 2280  | 0        | 2286     | 257     | 0            |
| 9   | EA    | 2280  | 0        | 2286     | 217     | 0            |
| 10  | AA    | 43    | 0        | 37       | 14      | 0            |
| 10  | AB    | 43    | 0        | 37       | 14      | 0            |
| 10  | AC    | 43    | 0        | 37       | 15      | 0            |
| 10  | AD    | 43    | 0        | 37       | 17      | 0            |
| 10  | AE    | 43    | 0        | 37       | 9       | 0            |
| 10  | AF    | 43    | 0        | 37       | 13      | 0            |
| 10  | AH    | 43    | 0        | 37       | 18      | 0            |
| 10  | AI    | 43    | 0        | 37       | 12      | 0            |
| 10  | AJ    | 43    | 0        | 37       | 11      | 0            |
| 10  | AK    | 43    | 0        | 37       | 20      | 0            |
| 10  | AL    | 43    | 0        | 37       | 11      | 0            |
| 10  | AN    | 43    | 0        | 37       | 10      | 0            |
| 10  | AO    | 43    | 0        | 37       | 8       | 0            |
| 10  | AP    | 43    | 0        | 37       | 10      | 0            |
| 10  | AQ    | 43    | 0        | 37       | 12      | 0            |
| 10  | AR    | 43    | 0        | 38       | 11      | 0            |
| 10  | AU    | 43    | 0        | 37       | 14      | 0            |
| 10  | AV    | 43    | 0        | 37       | 21      | 0            |
| 10  | AW    | 43    | 0        | 37       | 10      | 0            |
| 10  | AX    | 43    | 0        | 37       | 15      | 0            |
| 10  | AY    | 43    | 0        | 37       | 15      | 0            |
| 10  | AZ    | 43    | 0        | 37       | 14      | 0            |
| 10  | BD    | 86    | 0        | 74       | 25      | 0            |
| 10  | BI    | 43    | 0        | 37       | 15      | 0            |
| 10  | BJ    | 43    | 0        | 37       | 13      | 0            |
| 10  | BK    | 43    | 0        | 37       | 17      | 0            |
| 10  | BL    | 43    | 0        | 37       | 17      | 0            |
| 10  | BM    | 43    | 0        | 37       | 9       | 0            |
| 10  | BN    | 43    | 0        | 37       | 16      | 0            |
| 10  | BP    | 43    | 0        | 37       | 17      | 0            |
| 10  | BQ    | 43    | 0        | 37       | 17      | 0            |
| 10  | BR    | 43    | 0        | 37       | 7       | 0            |
| 10  | BS    | 43    | 0        | 37       | 16      | 0            |
| 10  | BT    | 43    | 0        | 37       | 10      | 0            |
| 10  | BV    | 43    | 0        | 37       | 14      | 0            |
| 10  | BW    | 43    | 0        | 37       | 10      | 0            |
| 10  | BX    | 43    | 0        | 37       | 14      | 0            |
| 10  | BY    | 43    | 0        | 37       | 13      | 0            |
| 10  | BZ    | 43    | 0        | 37       | 12      | 0            |
| 10  | CC    | 43    | 0        | 37       | 10      | 0            |

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| Mol | Chain | Non-H  | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|--------|----------|----------|---------|--------------|
| 10  | CD    | 43     | 0        | 37       | 9       | 0            |
| 10  | CE    | 43     | 0        | 37       | 15      | 0            |
| 10  | CF    | 43     | 0        | 37       | 12      | 0            |
| 10  | CG    | 43     | 0        | 37       | 15      | 0            |
| 10  | CH    | 43     | 0        | 37       | 15      | 0            |
| 10  | CM    | 86     | 0        | 74       | 23      | 0            |
| 10  | CR    | 43     | 0        | 37       | 12      | 0            |
| 10  | CS    | 43     | 0        | 37       | 8       | 0            |
| 10  | CT    | 43     | 0        | 37       | 14      | 0            |
| 10  | CU    | 43     | 0        | 37       | 9       | 0            |
| 10  | CV    | 43     | 0        | 37       | 14      | 0            |
| 10  | CW    | 43     | 0        | 37       | 12      | 0            |
| 10  | CY    | 43     | 0        | 37       | 13      | 0            |
| 10  | CZ    | 43     | 0        | 37       | 11      | 0            |
| 10  | DA    | 43     | 0        | 37       | 11      | 0            |
| 10  | DB    | 43     | 0        | 37       | 11      | 0            |
| 10  | DC    | 43     | 0        | 37       | 16      | 0            |
| 10  | DD    | 43     | 0        | 37       | 21      | 0            |
| 10  | DJ    | 43     | 0        | 37       | 14      | 0            |
| 10  | DK    | 43     | 0        | 37       | 13      | 0            |
| 10  | DL    | 43     | 0        | 37       | 13      | 0            |
| 10  | DM    | 43     | 0        | 37       | 11      | 0            |
| 10  | DN    | 43     | 0        | 37       | 15      | 0            |
| 10  | DO    | 43     | 0        | 37       | 7       | 0            |
| 10  | DQ    | 43     | 0        | 37       | 12      | 0            |
| 10  | DR    | 43     | 0        | 37       | 17      | 0            |
| 10  | DS    | 43     | 0        | 37       | 12      | 0            |
| 10  | DT    | 43     | 0        | 37       | 13      | 0            |
| 10  | DU    | 43     | 0        | 37       | 14      | 0            |
| 10  | DV    | 43     | 0        | 37       | 13      | 0            |
| 11  | BH    | 42     | 52       | 52       | 4       | 0            |
| 11  | CQ    | 42     | 52       | 52       | 6       | 0            |
| 11  | DI    | 42     | 52       | 52       | 14      | 0            |
| 11  | EA    | 42     | 52       | 52       | 12      | 0            |
| All | All   | 117262 | 208      | 117450   | 8770    | 0            |

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 37.

All (8770) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 9:BH:214:ILE:HD13 | 9:BH:238:LEU:HD22  | 1.27                     | 1.12              |
| 9:CQ:214:ILE:HD13 | 9:CQ:238:LEU:HD22  | 1.28                     | 1.12              |
| 6:CM:700:ILE:HG21 | 2:DB:147:LYS:HE2   | 1.36                     | 1.06              |
| 2:DV:41:ALA:HB2   | 2:DV:97:LEU:HD21   | 1.37                     | 1.04              |
| 1:CR:50:ILE:HD13  | 1:CR:136:VAL:HG12  | 1.39                     | 1.04              |
| 6:CM:85:LEU:HG    | 6:CM:153:LEU:HD21  | 1.38                     | 1.04              |
| 5:BA:6:ILE:HG22   | 5:BA:53:VAL:HG23   | 1.40                     | 1.03              |
| 9:DI:224:GLN:HB3  | 9:DI:302:ALA:HA    | 1.41                     | 1.00              |
| 9:EA:224:GLN:HB3  | 9:EA:302:ALA:HA    | 1.41                     | 1.00              |
| 9:CQ:191:GLU:HB3  | 9:CQ:254:ARG:HG3   | 1.42                     | 1.00              |
| 10:CW:200:CYC:HB  | 10:CW:200:CYC:HMA1 | 1.27                     | 1.00              |
| 2:CA:137:THR:HG21 | 2:CA:149:MET:HG2   | 1.44                     | 0.99              |
| 1:DJ:58:LEU:HD22  | 1:DJ:129:SER:HB2   | 1.45                     | 0.99              |
| 2:CZ:66:THR:HA    | 2:CZ:72:MET:HB3    | 1.45                     | 0.99              |
| 1:AX:107:ILE:HD11 | 6:BD:532:VAL:HG22  | 1.45                     | 0.98              |
| 1:BP:105:GLU:HA   | 1:BP:109:LEU:HB2   | 1.41                     | 0.98              |
| 1:DN:23:LEU:HD12  | 2:DO:38:VAL:HG13   | 1.43                     | 0.98              |
| 1:CY:98:SER:HA    | 2:CZ:5:ILE:HD11    | 1.43                     | 0.98              |
| 9:DI:252:PRO:HA   | 9:DI:271:GLY:HA3   | 1.43                     | 0.97              |
| 1:DQ:95:GLY:HA3   | 1:DQ:104:ILE:HD11  | 1.45                     | 0.97              |
| 1:BK:66:VAL:HA    | 1:BK:72:ALA:HB3    | 1.45                     | 0.96              |
| 2:DK:119:LEU:HD13 | 10:DK:200:CYC:HBD1 | 1.46                     | 0.96              |
| 10:CD:200:CYC:HB  | 10:CD:200:CYC:HMA1 | 1.27                     | 0.96              |
| 6:CM:195:THR:HG22 | 10:CM:902:CYC:H2C  | 1.44                     | 0.96              |
| 1:CR:37:LEU:HD13  | 2:CS:28:LYS:HE3    | 1.47                     | 0.96              |
| 1:CR:58:LEU:HD22  | 1:CR:129:SER:HB2   | 1.47                     | 0.96              |
| 6:BD:756:ILE:HG21 | 1:CY:159:LYS:HG3   | 1.45                     | 0.96              |
| 1:AX:85:MET:HB3   | 1:AX:133:MET:HE3   | 1.46                     | 0.95              |
| 6:BD:273:LEU:HD22 | 6:BD:277:GLU:HG3   | 1.47                     | 0.95              |
| 5:DF:6:ILE:HG22   | 5:DF:53:VAL:HG23   | 1.48                     | 0.95              |
| 1:BK:109:LEU:HD21 | 1:BK:159:LYS:HG3   | 1.47                     | 0.95              |
| 2:CZ:130:ILE:HG23 | 2:CZ:153:LEU:HD12  | 1.46                     | 0.95              |
| 9:DI:25:ILE:HD11  | 9:DI:153:VAL:HA    | 1.45                     | 0.95              |
| 9:EA:292:LEU:HG   | 9:EA:298:ILE:H     | 1.30                     | 0.95              |
| 2:AI:8:VAL:HG21   | 2:AI:27:LEU:HD11   | 1.45                     | 0.95              |
| 9:EA:76:PRO:HB3   | 9:EA:123:ALA:HB2   | 1.49                     | 0.95              |
| 1:CE:30:VAL:HG21  | 2:CF:34:GLY:HA3    | 1.47                     | 0.95              |
| 10:BQ:200:CYC:HB  | 10:BQ:200:CYC:HMA1 | 1.30                     | 0.95              |
| 5:DX:6:ILE:HG22   | 5:DX:53:VAL:HG23   | 1.47                     | 0.95              |
| 1:AA:105:GLU:HA   | 1:AA:109:LEU:HB3   | 1.49                     | 0.94              |
| 1:AH:58:LEU:HD22  | 1:AH:129:SER:HB2   | 1.49                     | 0.94              |
| 1:AR:115:MET:HE1  | 10:AR:200:CYC:HMB3 | 1.49                     | 0.94              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 6:CM:273:LEU:HD22 | 6:CM:277:GLU:HG3   | 1.46                     | 0.94              |
| 2:DB:112:LEU:HD13 | 10:DB:200:CYC:HMB3 | 1.46                     | 0.94              |
| 1:DU:58:LEU:HD22  | 1:DU:129:SER:HB2   | 1.50                     | 0.94              |
| 2:AI:77:ARG:HG2   | 10:AI:200:CYC:HMD1 | 1.48                     | 0.94              |
| 1:BR:8:ILE:HD11   | 4:BS:95:TYR:HB3    | 1.47                     | 0.94              |
| 10:CM:901:CYC:HB  | 10:CM:901:CYC:HMA1 | 1.29                     | 0.94              |
| 2:DK:64:ASP:HA    | 2:DK:67:ARG:HB2    | 1.49                     | 0.94              |
| 6:BD:455:GLU:HG3  | 6:BD:664:GLY:HA3   | 1.48                     | 0.93              |
| 1:BK:7:SER:HB3    | 1:BK:25:ARG:HH12   | 1.32                     | 0.93              |
| 1:BI:105:GLU:HA   | 1:BI:109:LEU:HB3   | 1.51                     | 0.93              |
| 10:AU:200:CYC:HB  | 10:AU:200:CYC:HMA1 | 1.34                     | 0.93              |
| 6:CM:69:SER:HA    | 6:CM:82:LEU:HD21   | 1.48                     | 0.93              |
| 1:DJ:130:VAL:HG13 | 1:DJ:157:ILE:HG12  | 1.49                     | 0.93              |
| 6:BD:244:PRO:HG2  | 6:BD:248:ILE:HD13  | 1.50                     | 0.93              |
| 9:DI:204:ASN:HB3  | 9:DI:209:ASP:HB3   | 1.50                     | 0.93              |
| 2:BN:104:LEU:HD22 | 2:BN:156:ILE:HD11  | 1.48                     | 0.92              |
| 2:DK:51:ILE:HG23  | 2:DK:136:VAL:HB    | 1.51                     | 0.92              |
| 1:DQ:23:LEU:HD22  | 2:DR:38:VAL:HG23   | 1.52                     | 0.92              |
| 2:DB:66:THR:HG21  | 10:DC:200:CYC:HBA1 | 1.51                     | 0.92              |
| 2:DT:112:LEU:HD13 | 10:DT:200:CYC:HMB3 | 1.50                     | 0.92              |
| 2:AY:51:ILE:HD11  | 2:AY:140:LEU:HD23  | 1.52                     | 0.92              |
| 1:BP:58:LEU:HD22  | 1:BP:129:SER:HB2   | 1.50                     | 0.92              |
| 9:EA:25:ILE:HD11  | 9:EA:153:VAL:HA    | 1.49                     | 0.92              |
| 6:CM:177:VAL:HG21 | 6:CM:260:ALA:HB2   | 1.52                     | 0.92              |
| 2:CW:41:ALA:HB2   | 2:CW:97:LEU:HD21   | 1.50                     | 0.92              |
| 1:DQ:130:VAL:HG13 | 1:DQ:157:ILE:HG22  | 1.52                     | 0.92              |
| 9:BH:89:ARG:HB2   | 9:BH:170:LYS:HE3   | 1.53                     | 0.91              |
| 2:AW:108:VAL:HG11 | 2:AW:156:ILE:HD11  | 1.48                     | 0.91              |
| 1:CY:27:LYS:HD3   | 2:CZ:38:VAL:HG11   | 1.50                     | 0.91              |
| 4:AK:113:LEU:HD13 | 4:AK:164:LEU:HD22  | 1.51                     | 0.91              |
| 6:CM:455:GLU:HG3  | 6:CM:664:GLY:HA3   | 1.53                     | 0.91              |
| 1:BZ:101:VAL:HG23 | 1:BZ:104:ILE:HD12  | 1.51                     | 0.91              |
| 6:BD:701:ARG:HB3  | 6:BD:706:ILE:HD11  | 1.53                     | 0.91              |
| 2:CF:57:ALA:HA    | 2:CF:61:LEU:HD12   | 1.49                     | 0.91              |
| 1:CR:76:GLU:HB3   | 8:DZ:247:PRO:HG3   | 1.50                     | 0.91              |
| 1:AC:66:VAL:HA    | 1:AC:72:ALA:HB3    | 1.53                     | 0.91              |
| 9:DI:219:SER:HA   | 9:DI:234:LYS:HE2   | 1.52                     | 0.91              |
| 2:DB:124:SER:HB2  | 2:DT:124:SER:HB2   | 1.53                     | 0.90              |
| 1:DJ:37:LEU:HD23  | 2:DK:28:LYS:HE2    | 1.49                     | 0.90              |
| 1:DU:72:ALA:HA    | 1:DU:77:MET:HB3    | 1.53                     | 0.90              |
| 2:CZ:119:LEU:HD13 | 10:CZ:200:CYC:HBD1 | 1.53                     | 0.90              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:DJ:115:MET:HE1  | 10:DJ:200:CYC:HMB3 | 1.51                     | 0.90              |
| 1:AX:105:GLU:HA   | 1:AX:109:LEU:HB3   | 1.51                     | 0.90              |
| 1:DJ:50:ILE:HD11  | 1:DJ:140:LEU:HD11  | 1.54                     | 0.90              |
| 1:AC:7:SER:HB3    | 1:AC:25:ARG:HH12   | 1.37                     | 0.90              |
| 6:BD:788:MET:HA   | 6:BD:792:TYR:HB3   | 1.53                     | 0.90              |
| 9:BH:191:GLU:HB3  | 9:BH:254:ARG:HG3   | 1.54                     | 0.90              |
| 2:BJ:57:ALA:HA    | 2:BJ:61:LEU:HD12   | 1.53                     | 0.90              |
| 9:CQ:252:PRO:HA   | 9:CQ:271:GLY:HA3   | 1.52                     | 0.90              |
| 1:AR:101:VAL:HG23 | 1:AR:104:ILE:HD12  | 1.52                     | 0.90              |
| 2:CZ:36:LEU:HD11  | 2:CZ:145:ALA:HB2   | 1.54                     | 0.90              |
| 1:CV:105:GLU:HA   | 1:CV:109:LEU:HB2   | 1.54                     | 0.89              |
| 2:DD:112:LEU:HG   | 2:DD:160:LEU:HD13  | 1.54                     | 0.89              |
| 3:AE:105:GLU:HA   | 3:AE:109:LEU:HB2   | 1.54                     | 0.89              |
| 6:CM:806:LYS:HD2  | 6:CM:872:LEU:HB3   | 1.53                     | 0.89              |
| 2:AQ:54:GLU:HG3   | 9:BH:63:LEU:HD11   | 1.53                     | 0.89              |
| 9:DI:292:LEU:HG   | 9:DI:298:ILE:H     | 1.36                     | 0.89              |
| 6:BD:69:SER:HA    | 6:BD:82:LEU:HD21   | 1.54                     | 0.89              |
| 1:BV:105:GLU:HA   | 1:BV:109:LEU:HB2   | 1.55                     | 0.89              |
| 2:AB:112:LEU:HD13 | 10:AB:200:CYC:HMB3 | 1.53                     | 0.89              |
| 3:AE:39:ILE:HG21  | 3:AE:96:VAL:HG11   | 1.51                     | 0.89              |
| 1:CY:109:LEU:HD21 | 1:CY:159:LYS:HB3   | 1.55                     | 0.88              |
| 2:AW:67:ARG:HG3   | 2:AW:68:PRO:HD2    | 1.54                     | 0.88              |
| 1:CR:23:LEU:HD12  | 2:CS:38:VAL:HG13   | 1.53                     | 0.88              |
| 1:CE:58:LEU:HD22  | 1:CE:129:SER:HB3   | 1.54                     | 0.88              |
| 1:CY:26:ILE:HD13  | 2:CZ:97:LEU:HD21   | 1.53                     | 0.88              |
| 4:AK:113:LEU:HD21 | 10:AK:200:CYC:HMB3 | 1.52                     | 0.88              |
| 6:BD:85:LEU:HG    | 6:BD:153:LEU:HD21  | 1.53                     | 0.88              |
| 1:CR:105:GLU:HA   | 1:CR:109:LEU:HB2   | 1.54                     | 0.88              |
| 2:AY:71:ASN:HD22  | 2:AY:122:PRO:HD3   | 1.39                     | 0.88              |
| 6:BD:19:THR:HG22  | 6:BD:169:ALA:HB1   | 1.56                     | 0.87              |
| 1:CR:131:ARG:HG2  | 1:CR:157:ILE:HD13  | 1.55                     | 0.87              |
| 1:DC:72:ALA:HA    | 1:DC:77:MET:HB3    | 1.54                     | 0.87              |
| 1:AJ:105:GLU:HA   | 1:AJ:109:LEU:HB2   | 1.55                     | 0.87              |
| 9:CQ:238:LEU:HD12 | 9:CQ:242:ARG:HH21  | 1.38                     | 0.87              |
| 9:EA:21:VAL:HG23  | 9:EA:22:PRO:HD3    | 1.55                     | 0.87              |
| 1:AV:30:VAL:HG21  | 2:AW:34:GLY:HA3    | 1.55                     | 0.87              |
| 8:DZ:237:ALA:HA   | 8:DZ:240:ILE:HD13  | 1.55                     | 0.87              |
| 6:BD:439:ARG:HG2  | 6:BD:440:PRO:HD2   | 1.56                     | 0.87              |
| 6:BD:801:ILE:HD12 | 6:BD:822:TYR:HB3   | 1.53                     | 0.86              |
| 9:EA:219:SER:HA   | 9:EA:234:LYS:HE2   | 1.55                     | 0.86              |
| 1:AA:85:MET:HB3   | 1:AA:133:MET:HE3   | 1.53                     | 0.86              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:BY:54:GLU:HG3   | 9:CQ:63:LEU:HD11   | 1.53                     | 0.86              |
| 2:CD:137:THR:HG21 | 2:CD:149:MET:HG2   | 1.55                     | 0.86              |
| 1:DQ:105:GLU:HA   | 1:DQ:109:LEU:HB2   | 1.55                     | 0.86              |
| 6:CM:439:ARG:HG2  | 6:CM:440:PRO:HD2   | 1.57                     | 0.86              |
| 2:DM:104:LEU:HD13 | 2:DM:156:ILE:HG13  | 1.57                     | 0.86              |
| 2:CH:15:GLN:HG3   | 2:CH:17:LYS:HE2    | 1.58                     | 0.85              |
| 1:CE:113:ARG:HD3  | 1:CE:123:ILE:HD13  | 1.58                     | 0.85              |
| 2:DK:51:ILE:HG21  | 2:DK:137:THR:HG23  | 1.56                     | 0.85              |
| 2:CH:51:ILE:HD11  | 2:CH:140:LEU:HD23  | 1.59                     | 0.85              |
| 2:BJ:112:LEU:HD13 | 10:BJ:200:CYC:HMB3 | 1.58                     | 0.85              |
| 7:BF:113:MET:HA   | 7:BF:116:GLN:HE21  | 1.42                     | 0.85              |
| 1:CT:131:ARG:HG3  | 1:CT:157:ILE:HD12  | 1.59                     | 0.85              |
| 1:BK:113:ARG:HH22 | 1:BP:117:ARG:HD3   | 1.41                     | 0.85              |
| 6:CM:240:VAL:HG22 | 6:CM:252:GLU:HG3   | 1.58                     | 0.84              |
| 1:DJ:50:ILE:HG13  | 1:DJ:140:LEU:HD21  | 1.59                     | 0.84              |
| 9:BH:252:PRO:HA   | 9:BH:271:GLY:HA3   | 1.60                     | 0.84              |
| 3:BM:97:LEU:HD13  | 2:BN:19:LEU:HD12   | 1.59                     | 0.84              |
| 1:CV:65:ILE:HD12  | 10:CV:200:CYC:HBC2 | 1.57                     | 0.84              |
| 2:CH:112:LEU:HD13 | 10:CH:200:CYC:HMB3 | 1.58                     | 0.84              |
| 2:DK:85:LEU:HD22  | 2:DK:133:ILE:HD11  | 1.57                     | 0.84              |
| 1:DQ:72:ALA:HA    | 1:DQ:77:MET:HB3    | 1.59                     | 0.84              |
| 2:DR:65:VAL:HG12  | 2:DR:72:MET:HB2    | 1.58                     | 0.84              |
| 1:AV:58:LEU:HD22  | 1:AV:129:SER:HB3   | 1.59                     | 0.84              |
| 1:DQ:8:ILE:HD11   | 2:DR:94:TYR:HB3    | 1.59                     | 0.84              |
| 1:CR:91:LEU:HD11  | 1:CR:104:ILE:HA    | 1.59                     | 0.84              |
| 1:CV:131:ARG:HG2  | 1:CV:157:ILE:HD13  | 1.57                     | 0.84              |
| 9:DI:284:MET:HG2  | 9:DI:305:LEU:HD23  | 1.59                     | 0.84              |
| 1:AZ:4:VAL:HG22   | 1:AZ:26:ILE:HD12   | 1.60                     | 0.84              |
| 1:BZ:141:MET:HB2  | 1:BZ:146:ALA:HB2   | 1.60                     | 0.84              |
| 2:AQ:14:VAL:HG12  | 6:BD:683:VAL:HG11  | 1.59                     | 0.84              |
| 1:BV:113:ARG:HG2  | 1:BV:123:ILE:HD13  | 1.58                     | 0.84              |
| 6:CM:353:ARG:HG2  | 6:CM:399:ARG:HH21  | 1.43                     | 0.84              |
| 9:DI:195:ASN:HB3  | 9:DI:198:VAL:HG12  | 1.60                     | 0.84              |
| 6:BD:676:ARG:HB2  | 6:BD:679:ILE:HG12  | 1.60                     | 0.84              |
| 2:BN:107:ARG:HE   | 5:CJ:45:LYS:HG2    | 1.43                     | 0.83              |
| 10:BD:901:CYC:HB  | 10:BD:901:CYC:HMA1 | 1.43                     | 0.83              |
| 1:CY:8:ILE:HD13   | 1:CY:18:LEU:HD21   | 1.59                     | 0.83              |
| 6:BD:845:LEU:HG   | 5:DF:42:ARG:HD2    | 1.61                     | 0.83              |
| 1:CR:95:GLY:HA3   | 1:CR:104:ILE:HD11  | 1.59                     | 0.83              |
| 1:DC:105:GLU:HA   | 1:DC:109:LEU:HB2   | 1.59                     | 0.83              |
| 9:DI:121:PHE:HA   | 9:DI:276:PRO:HG2   | 1.59                     | 0.83              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:AW:112:LEU:HD11 | 10:AW:200:CYC:HMB3 | 1.59                     | 0.83              |
| 8:BG:237:ALA:HA   | 8:BG:240:ILE:HD12  | 1.58                     | 0.83              |
| 1:BZ:58:LEU:HD22  | 1:BZ:129:SER:HB3   | 1.60                     | 0.83              |
| 6:CM:756:ILE:HG21 | 1:DQ:159:LYS:HG3   | 1.59                     | 0.83              |
| 2:DT:66:THR:HG21  | 10:DU:200:CYC:HBA1 | 1.59                     | 0.83              |
| 9:EA:195:ASN:HB3  | 9:EA:198:VAL:HG12  | 1.59                     | 0.83              |
| 9:BH:248:LEU:HA   | 9:BH:275:THR:HG21  | 1.59                     | 0.83              |
| 2:BL:66:THR:HG21  | 10:BM:200:CYC:HBA1 | 1.61                     | 0.83              |
| 2:BW:85:LEU:HD22  | 2:BW:133:ILE:HD11  | 1.61                     | 0.83              |
| 6:CM:5:ALA:HB2    | 6:CM:436:GLN:HG3   | 1.59                     | 0.83              |
| 2:DM:65:VAL:HG12  | 2:DM:72:MET:HB2    | 1.61                     | 0.83              |
| 1:CG:105:GLU:HA   | 1:CG:109:LEU:HB3   | 1.59                     | 0.83              |
| 5:CJ:19:GLN:HB2   | 6:CM:239:LYS:HG2   | 1.61                     | 0.83              |
| 6:CM:703:GLU:HA   | 6:CM:706:ILE:HD12  | 1.61                     | 0.83              |
| 1:AN:105:GLU:HA   | 1:AN:109:LEU:HB2   | 1.59                     | 0.83              |
| 9:BH:50:THR:HG21  | 9:BH:143:GLN:HE21  | 1.44                     | 0.83              |
| 2:CW:52:VAL:HA    | 2:CW:133:ILE:HD11  | 1.61                     | 0.83              |
| 6:BD:75:ILE:HD12  | 6:BD:197:VAL:HG23  | 1.59                     | 0.82              |
| 1:BI:65:ILE:HG22  | 1:BI:72:ALA:HB3    | 1.61                     | 0.82              |
| 6:CM:75:ILE:HD12  | 6:CM:197:VAL:HG23  | 1.59                     | 0.82              |
| 6:CM:676:ARG:HB2  | 6:CM:679:ILE:HG12  | 1.61                     | 0.82              |
| 1:DN:131:ARG:HG2  | 1:DN:157:ILE:HD13  | 1.61                     | 0.82              |
| 10:DO:200:CYC:HB  | 10:DO:200:CYC:HMA1 | 1.43                     | 0.82              |
| 9:EA:252:PRO:HA   | 9:EA:271:GLY:HA3   | 1.61                     | 0.82              |
| 2:CS:119:LEU:HD13 | 10:CS:200:CYC:HBD1 | 1.61                     | 0.82              |
| 9:EA:147:SER:HA   | 9:EA:150:GLN:HE21  | 1.43                     | 0.82              |
| 1:AC:102:THR:HG23 | 6:BD:276:LEU:HD22  | 1.61                     | 0.82              |
| 6:CM:872:LEU:HG   | 6:CM:884:VAL:HG11  | 1.61                     | 0.82              |
| 8:DH:240:ILE:HD11 | 1:DJ:79:ALA:HB2    | 1.62                     | 0.82              |
| 2:DD:57:ALA:HA    | 2:DD:61:LEU:HD12   | 1.59                     | 0.82              |
| 2:DR:66:THR:HG22  | 2:DR:72:MET:HG2    | 1.59                     | 0.82              |
| 2:AF:104:LEU:HD22 | 2:AF:156:ILE:HD11  | 1.61                     | 0.82              |
| 2:CZ:130:ILE:HA   | 2:CZ:133:ILE:HD12  | 1.61                     | 0.82              |
| 2:DK:104:LEU:HD21 | 2:DK:156:ILE:HG13  | 1.61                     | 0.82              |
| 5:BA:11:PRO:HA    | 5:BA:25:THR:HG21   | 1.59                     | 0.82              |
| 6:BD:240:VAL:HG22 | 6:BD:252:GLU:HG3   | 1.60                     | 0.82              |
| 2:BN:74:THR:HG23  | 2:BN:77:ARG:HH21   | 1.45                     | 0.82              |
| 2:BN:77:ARG:HG2   | 10:BN:200:CYC:HAD1 | 1.60                     | 0.82              |
| 2:BT:85:LEU:HD22  | 2:BT:133:ILE:HD11  | 1.60                     | 0.82              |
| 9:CQ:188:VAL:HG11 | 9:CQ:202:MET:HE3   | 1.59                     | 0.82              |
| 1:AR:58:LEU:HD22  | 1:AR:129:SER:HB3   | 1.61                     | 0.82              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 3:BM:39:ILE:HG21   | 3:BM:96:VAL:HG11   | 1.60                     | 0.82              |
| 1:DJ:5:THR:HG23    | 2:DK:1:MET:HE3     | 1.61                     | 0.82              |
| 2:AD:5:ILE:HG22    | 2:AD:27:LEU:HD22   | 1.59                     | 0.82              |
| 1:AN:102:THR:HA    | 1:AN:105:GLU:HG2   | 1.62                     | 0.82              |
| 6:CM:845:LEU:HG    | 5:DX:42:ARG:HD2    | 1.59                     | 0.82              |
| 2:AU:110:ASN:HD21  | 5:BB:49:LYS:HA     | 1.44                     | 0.81              |
| 1:AN:50:ILE:HA     | 1:AN:136:VAL:HG11  | 1.61                     | 0.81              |
| 9:BH:204:ASN:HB3   | 9:BH:213:LEU:HB2   | 1.62                     | 0.81              |
| 1:AA:58:LEU:HD22   | 1:AA:129:SER:HB3   | 1.59                     | 0.81              |
| 5:BA:29:LYS:HZ1    | 6:BD:318:GLU:H     | 1.28                     | 0.81              |
| 1:BZ:18:LEU:HD12   | 2:CA:97:LEU:HD13   | 1.61                     | 0.81              |
| 2:CF:77:ARG:HG2    | 10:CF:200:CYC:HAD1 | 1.62                     | 0.81              |
| 8:DG:242:ILE:HD12  | 1:DL:82:LEU:HB2    | 1.63                     | 0.81              |
| 1:DN:58:LEU:HD22   | 1:DN:129:SER:HB3   | 1.61                     | 0.81              |
| 4:AK:88:TYR:OH     | 6:BD:252:GLU:N     | 2.13                     | 0.81              |
| 2:BJ:106:GLU:HB2   | 5:CJ:57:THR:HG23   | 1.60                     | 0.81              |
| 2:AD:83:ARG:HD2    | 5:BA:22:LEU:HD11   | 1.61                     | 0.81              |
| 2:AW:76:ARG:HB2    | 1:AX:110:VAL:HG13  | 1.63                     | 0.81              |
| 9:CQ:248:LEU:HA    | 9:CQ:275:THR:HG21  | 1.62                     | 0.81              |
| 2:DV:112:LEU:HD13  | 10:DV:200:CYC:HMB3 | 1.63                     | 0.81              |
| 1:CE:62:ARG:HH12   | 1:CE:124:GLU:HG2   | 1.45                     | 0.81              |
| 2:CU:104:LEU:HD22  | 2:CU:156:ILE:HD11  | 1.62                     | 0.81              |
| 4:AK:105:LEU:HD21  | 4:AK:160:MET:HG3   | 1.62                     | 0.81              |
| 1:DJ:50:ILE:HA     | 1:DJ:136:VAL:HG11  | 1.62                     | 0.81              |
| 2:AB:106:GLU:HB2   | 5:BA:57:THR:HG23   | 1.61                     | 0.81              |
| 1:BK:2:SER:HB3     | 1:BK:5:THR:HG23    | 1.62                     | 0.81              |
| 6:CM:75:ILE:HG13   | 6:CM:198:ALA:HB2   | 1.61                     | 0.81              |
| 1:DA:51:VAL:HG22   | 1:DA:133:MET:HE1   | 1.63                     | 0.81              |
| 9:DI:92:THR:HG1    | 9:DI:95:CYS:HG     | 1.28                     | 0.81              |
| 2:DM:51:ILE:HD11   | 2:DM:140:LEU:HD23  | 1.62                     | 0.81              |
| 10:AQ:200:CYC:HMA1 | 10:AQ:200:CYC:HB   | 1.45                     | 0.80              |
| 2:DV:108:VAL:HG12  | 2:DV:109:LEU:HD23  | 1.63                     | 0.80              |
| 5:CK:10:VAL:HG12   | 5:CK:48:GLY:HA3    | 1.63                     | 0.80              |
| 1:AC:131:ARG:HG2   | 1:AC:157:ILE:HD13  | 1.63                     | 0.80              |
| 6:BD:75:ILE:HG13   | 6:BD:198:ALA:HB2   | 1.62                     | 0.80              |
| 1:DA:8:ILE:HD13    | 1:DA:18:LEU:HD11   | 1.63                     | 0.80              |
| 9:DI:140:ALA:HA    | 9:DI:143:GLN:HE21  | 1.46                     | 0.80              |
| 1:CE:97:VAL:HG21   | 2:CF:19:LEU:HD11   | 1.63                     | 0.80              |
| 9:CQ:50:THR:HG21   | 9:CQ:143:GLN:HE21  | 1.46                     | 0.80              |
| 2:DR:71:ASN:HD22   | 2:DR:122:PRO:HD3   | 1.45                     | 0.80              |
| 3:AE:97:LEU:HD13   | 2:AF:19:LEU:HD12   | 1.61                     | 0.80              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:DQ:58:LEU:HD22   | 1:DQ:129:SER:HB3   | 1.61                     | 0.80              |
| 1:AN:85:MET:SD     | 1:AN:129:SER:OG    | 2.40                     | 0.80              |
| 2:CH:24:MET:HG3    | 2:CH:28:LYS:HE2    | 1.64                     | 0.80              |
| 2:DV:44:ILE:HD11   | 2:DV:89:LEU:HD11   | 1.63                     | 0.80              |
| 1:AC:2:SER:HB3     | 1:AC:5:THR:HG23    | 1.63                     | 0.80              |
| 1:CY:37:LEU:HD22   | 2:CZ:28:LYS:HE3    | 1.63                     | 0.80              |
| 4:AK:123:PRO:HB2   | 4:AK:126:PRO:HD2   | 1.62                     | 0.80              |
| 2:AL:56:VAL:HG12   | 2:AL:61:LEU:HG     | 1.63                     | 0.80              |
| 2:BJ:103:ILE:HD11  | 2:BJ:107:ARG:HD2   | 1.63                     | 0.80              |
| 2:DV:58:LYS:HA     | 8:DZ:206:GLN:HG3   | 1.62                     | 0.80              |
| 1:AR:18:LEU:HD12   | 2:AS:97:LEU:HD13   | 1.64                     | 0.80              |
| 4:AK:64:PRO:HG2    | 7:BF:105:PRO:HB2   | 1.64                     | 0.80              |
| 5:BB:38:ARG:HE     | 6:BD:641:ASP:HB3   | 1.46                     | 0.80              |
| 10:BY:200:CYC:HB   | 10:BY:200:CYC:HMA1 | 1.46                     | 0.80              |
| 2:AW:8:VAL:HG13    | 2:AW:23:ALA:HB1    | 1.64                     | 0.79              |
| 10:BT:200:CYC:HAA1 | 6:CM:424:PHE:HZ    | 1.48                     | 0.79              |
| 1:DL:58:LEU:HD22   | 1:DL:129:SER:HB3   | 1.63                     | 0.79              |
| 2:DT:57:ALA:HA     | 2:DT:61:LEU:HD12   | 1.63                     | 0.79              |
| 1:AR:4:VAL:HG11    | 2:AS:98:ALA:HA     | 1.63                     | 0.79              |
| 2:AW:57:ALA:HA     | 2:AW:61:LEU:HD12   | 1.62                     | 0.79              |
| 2:CS:104:LEU:HD23  | 2:CS:155:TYR:HD2   | 1.47                     | 0.79              |
| 3:AE:71:ASN:HD21   | 3:AE:121:VAL:HG22  | 1.47                     | 0.79              |
| 2:AL:57:ALA:HA     | 2:AL:61:LEU:HD12   | 1.63                     | 0.79              |
| 2:AQ:110:ASN:HD22  | 6:BD:668:ARG:HG2   | 1.47                     | 0.79              |
| 2:DR:112:LEU:HD13  | 10:DR:200:CYC:HMB3 | 1.64                     | 0.79              |
| 2:AS:60:LEU:HD13   | 2:AS:72:MET:HE1    | 1.64                     | 0.79              |
| 1:BZ:105:GLU:HA    | 1:BZ:109:LEU:HB2   | 1.63                     | 0.79              |
| 3:AE:58:LEU:HD22   | 3:AE:129:ALA:HB2   | 1.64                     | 0.79              |
| 1:BK:58:LEU:HD22   | 1:BK:129:SER:HB3   | 1.62                     | 0.79              |
| 3:BM:151:PRO:HB2   | 1:BR:20:PRO:HB3    | 1.64                     | 0.79              |
| 2:CU:112:LEU:HD13  | 10:CU:200:CYC:HMB3 | 1.63                     | 0.79              |
| 2:CZ:59:SER:HB3    | 2:CZ:128:GLN:HG2   | 1.63                     | 0.79              |
| 2:DK:106:GLU:HG3   | 5:DX:57:THR:HG23   | 1.63                     | 0.79              |
| 2:DK:104:LEU:HD23  | 2:DK:155:TYR:HD2   | 1.47                     | 0.79              |
| 4:AK:129:ARG:HH21  | 4:AK:133:ILE:HG13  | 1.47                     | 0.79              |
| 1:AH:105:GLU:HA    | 1:AH:109:LEU:HB3   | 1.64                     | 0.79              |
| 1:DA:61:LYS:HE3    | 9:DI:56:PRO:HB2    | 1.64                     | 0.79              |
| 10:AI:200:CYC:HB   | 10:AI:200:CYC:HMA1 | 1.48                     | 0.79              |
| 9:EA:37:LEU:HD12   | 9:EA:40:ILE:HD11   | 1.65                     | 0.79              |
| 1:BK:102:THR:HG23  | 6:CM:276:LEU:HD22  | 1.64                     | 0.79              |
| 1:AC:18:LEU:HD12   | 2:AD:97:LEU:HD13   | 1.65                     | 0.78              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:AS:130:ILE:HA   | 2:AS:133:ILE:HD12  | 1.64                     | 0.78              |
| 1:CG:109:LEU:HD21 | 1:CG:159:LYS:HG3   | 1.65                     | 0.78              |
| 1:AA:72:ALA:HA    | 1:AA:77:MET:HB3    | 1.64                     | 0.78              |
| 1:DJ:131:ARG:HG2  | 1:DJ:157:ILE:HD13  | 1.65                     | 0.78              |
| 5:DX:5:ARG:HG2    | 5:DX:56:ALA:HB2    | 1.66                     | 0.78              |
| 2:AU:57:ALA:HA    | 2:AU:61:LEU:HB2    | 1.64                     | 0.78              |
| 4:BS:51:ILE:HG23  | 4:BS:137:MET:HE2   | 1.66                     | 0.78              |
| 6:CM:751:LEU:HD13 | 6:CM:755:ILE:HG21  | 1.64                     | 0.78              |
| 1:DL:50:ILE:HA    | 1:DL:136:VAL:HG11  | 1.65                     | 0.78              |
| 1:AJ:109:LEU:HD13 | 1:AJ:159:LYS:HG3   | 1.63                     | 0.78              |
| 1:AC:95:GLY:HA3   | 1:AC:104:ILE:HD11  | 1.63                     | 0.78              |
| 1:AR:39:ILE:HD13  | 1:AR:149:ALA:HB2   | 1.64                     | 0.78              |
| 3:BM:71:ASN:HD21  | 3:BM:121:VAL:HG22  | 1.48                     | 0.78              |
| 1:AX:58:LEU:HD22  | 1:AX:129:SER:HB3   | 1.66                     | 0.78              |
| 2:BT:106:GLU:HG3  | 2:BT:107:ARG:HG2   | 1.64                     | 0.78              |
| 2:CF:108:VAL:HG11 | 2:CF:156:ILE:HD11  | 1.66                     | 0.78              |
| 2:DV:51:ILE:HG22  | 2:DV:133:ILE:HD11  | 1.66                     | 0.78              |
| 4:BS:135:LYS:HD3  | 4:BS:157:PHE:HB2   | 1.66                     | 0.78              |
| 1:BX:105:GLU:HA   | 1:BX:109:LEU:HB2   | 1.65                     | 0.78              |
| 2:DD:15:GLN:HB3   | 2:DD:17:LYS:HE3    | 1.64                     | 0.78              |
| 1:DS:107:ILE:HG22 | 10:DS:200:CYC:HBB1 | 1.65                     | 0.78              |
| 2:AO:77:ARG:HG2   | 10:AO:200:CYC:HAD1 | 1.66                     | 0.77              |
| 6:BD:756:ILE:HD12 | 1:CY:109:LEU:HG    | 1.65                     | 0.77              |
| 2:BW:77:ARG:HG2   | 10:BW:200:CYC:HAD1 | 1.67                     | 0.77              |
| 1:AZ:109:LEU:HG   | 1:AZ:159:LYS:HG2   | 1.66                     | 0.77              |
| 6:BD:519:LEU:HG   | 6:BD:522:ALA:HB2   | 1.66                     | 0.77              |
| 1:BZ:11:ALA:HB2   | 1:BZ:18:LEU:HD23   | 1.66                     | 0.77              |
| 1:CE:72:ALA:HA    | 1:CE:77:MET:HB3    | 1.66                     | 0.77              |
| 1:DA:109:LEU:HD13 | 1:DA:159:LYS:HG3   | 1.64                     | 0.77              |
| 4:AK:88:TYR:HH    | 6:BD:252:GLU:H     | 1.33                     | 0.77              |
| 2:AS:15:GLN:HB3   | 2:AS:17:LYS:HE2    | 1.66                     | 0.77              |
| 1:BK:20:PRO:HG2   | 6:CM:172:PRO:HD3   | 1.67                     | 0.77              |
| 1:AR:105:GLU:HA   | 1:AR:109:LEU:HB2   | 1.66                     | 0.77              |
| 9:BH:47:MET:HE1   | 9:BH:54:ALA:HB2    | 1.66                     | 0.77              |
| 2:BL:5:ILE:HG22   | 2:BL:27:LEU:HD22   | 1.66                     | 0.77              |
| 2:CD:2:GLN:HE21   | 2:CD:7:ALA:HA      | 1.50                     | 0.77              |
| 9:CQ:248:LEU:HD13 | 9:CQ:250:LEU:HD21  | 1.67                     | 0.77              |
| 1:CT:82:LEU:HB2   | 8:DY:242:ILE:HD12  | 1.67                     | 0.77              |
| 2:DD:112:LEU:HD13 | 10:DD:200:CYC:HMB3 | 1.65                     | 0.77              |
| 2:DD:126:THR:HG22 | 10:DD:200:CYC:H3C  | 1.65                     | 0.77              |
| 2:DK:130:ILE:HA   | 2:DK:133:ILE:HD12  | 1.65                     | 0.77              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 8:DH:242:ILE:HD11  | 1:DJ:82:LEU:HB3    | 1.66                     | 0.77              |
| 9:DI:17:ALA:HB3    | 9:DI:20:VAL:HG13   | 1.66                     | 0.77              |
| 1:AC:134:LYS:HE3   | 1:AC:150:SER:HB2   | 1.66                     | 0.77              |
| 2:AS:51:ILE:HG23   | 2:AS:136:VAL:HG12  | 1.65                     | 0.77              |
| 1:AP:105:GLU:HA    | 1:AP:109:LEU:HB2   | 1.65                     | 0.76              |
| 9:BH:183:ALA:N     | 9:BH:186:THR:HG1   | 1.82                     | 0.76              |
| 9:BH:232:VAL:HG11  | 9:EA:314:ASN:HD22  | 1.50                     | 0.76              |
| 6:CM:782:GLY:HA3   | 6:CM:835:ILE:HG21  | 1.67                     | 0.76              |
| 2:DR:134:LYS:HG3   | 2:DR:150:GLY:HA2   | 1.67                     | 0.76              |
| 1:CE:50:ILE:HD13   | 1:CE:136:VAL:HG12  | 1.65                     | 0.76              |
| 6:CM:410:ASN:HA    | 6:CM:413:MET:HE2   | 1.67                     | 0.76              |
| 2:DB:104:LEU:HD22  | 2:DB:156:ILE:HD11  | 1.67                     | 0.76              |
| 10:DU:200:CYC:HB   | 10:DU:200:CYC:HMA1 | 1.50                     | 0.76              |
| 2:AB:57:ALA:HA     | 2:AB:61:LEU:HD12   | 1.68                     | 0.76              |
| 10:AL:200:CYC:HBC3 | 10:AL:200:CYC:HHD  | 1.68                     | 0.76              |
| 6:BD:597:TYR:HB3   | 6:BD:600:LYS:HD2   | 1.68                     | 0.76              |
| 8:CP:232:ILE:HD12  | 8:CP:233:PRO:HD2   | 1.67                     | 0.76              |
| 1:DL:115:MET:HE1   | 10:DL:200:CYC:HMB2 | 1.66                     | 0.76              |
| 2:CZ:51:ILE:HA     | 2:CZ:136:VAL:HG11  | 1.67                     | 0.76              |
| 10:DC:200:CYC:HB   | 10:DC:200:CYC:HMA1 | 1.50                     | 0.76              |
| 2:AW:71:ASN:HD22   | 2:AW:122:PRO:HD3   | 1.49                     | 0.76              |
| 8:CP:226:ASN:HD21  | 9:CQ:146:GLU:HG3   | 1.50                     | 0.76              |
| 4:AK:123:PRO:HB3   | 2:AS:64:ASP:HB3    | 1.66                     | 0.76              |
| 6:BD:549:GLN:O     | 6:BD:608:ARG:HD2   | 1.85                     | 0.76              |
| 2:BT:57:ALA:HA     | 2:BT:61:LEU:HD12   | 1.66                     | 0.76              |
| 1:CG:131:ARG:HG3   | 1:CG:157:ILE:HD12  | 1.67                     | 0.76              |
| 2:CS:57:ALA:HA     | 2:CS:61:LEU:HD12   | 1.67                     | 0.76              |
| 1:DQ:58:LEU:HD21   | 10:DQ:200:CYC:HBC3 | 1.68                     | 0.76              |
| 1:DQ:65:ILE:HG22   | 1:DQ:72:ALA:HB3    | 1.67                     | 0.76              |
| 1:DU:105:GLU:HA    | 1:DU:109:LEU:HB2   | 1.67                     | 0.76              |
| 4:AK:74:TYR:OH     | 6:BD:161:ARG:NH2   | 2.18                     | 0.76              |
| 1:AN:123:ILE:HD12  | 1:AV:117:ARG:HH12  | 1.51                     | 0.76              |
| 2:DO:85:LEU:HG     | 10:DO:200:CYC:HBC1 | 1.68                     | 0.76              |
| 10:BT:200:CYC:HBC3 | 10:BT:200:CYC:HHD  | 1.68                     | 0.76              |
| 1:CC:109:LEU:HG    | 1:CC:159:LYS:HG2   | 1.67                     | 0.76              |
| 1:DS:39:ILE:HD12   | 1:DS:141:MET:HE3   | 1.66                     | 0.76              |
| 4:AK:72:ASN:HD21   | 4:AK:122:VAL:HG22  | 1.49                     | 0.75              |
| 2:AW:36:LEU:HD23   | 2:AW:39:ARG:HH12   | 1.50                     | 0.75              |
| 1:AX:109:LEU:HD21  | 1:AX:159:LYS:HG3   | 1.67                     | 0.75              |
| 5:BB:3:MET:N       | 5:BB:57:THR:OG1    | 2.19                     | 0.75              |
| 9:CQ:214:ILE:HD11  | 9:CQ:237:VAL:HB    | 1.67                     | 0.75              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 9:CQ:292:LEU:HD23  | 9:CQ:298:ILE:HA    | 1.66                     | 0.75              |
| 9:DI:142:ILE:HD11  | 9:DI:153:VAL:HG11  | 1.68                     | 0.75              |
| 2:DV:57:ALA:HA     | 2:DV:61:LEU:HD12   | 1.68                     | 0.75              |
| 2:AD:51:ILE:HD11   | 2:AD:140:LEU:HD23  | 1.67                     | 0.75              |
| 2:AL:85:LEU:HD22   | 2:AL:133:ILE:HD11  | 1.69                     | 0.75              |
| 1:AZ:115:MET:HE1   | 10:AZ:200:CYC:HMB3 | 1.68                     | 0.75              |
| 10:CM:902:CYC:HB   | 10:CM:902:CYC:HMA1 | 1.51                     | 0.75              |
| 2:DK:51:ILE:HA     | 2:DK:136:VAL:HG11  | 1.68                     | 0.75              |
| 10:DQ:200:CYC:HBB2 | 2:DV:74:THR:HA     | 1.67                     | 0.75              |
| 2:BN:114:GLU:HG3   | 5:CJ:53:VAL:HG22   | 1.68                     | 0.75              |
| 6:CM:401:LEU:HD13  | 6:CM:411:TRP:HH2   | 1.52                     | 0.75              |
| 1:CY:16:ARG:O      | 2:CZ:94:TYR:OH     | 2.04                     | 0.75              |
| 1:AC:109:LEU:HD21  | 1:AC:159:LYS:HG3   | 1.69                     | 0.75              |
| 1:BK:65:ILE:HG21   | 10:BK:200:CYC:HBC2 | 1.68                     | 0.75              |
| 1:CR:130:VAL:HG13  | 1:CR:157:ILE:HG12  | 1.68                     | 0.75              |
| 1:DL:105:GLU:HA    | 1:DL:109:LEU:HB2   | 1.67                     | 0.75              |
| 10:CD:200:CYC:HMA1 | 10:CD:200:CYC:NB   | 2.01                     | 0.75              |
| 9:EA:121:PHE:HA    | 9:EA:276:PRO:HG2   | 1.67                     | 0.75              |
| 1:AN:64:ASP:HA     | 1:AN:67:SER:HB2    | 1.67                     | 0.75              |
| 1:AV:101:VAL:HA    | 1:AV:104:ILE:HD12  | 1.67                     | 0.75              |
| 1:BV:50:ILE:HA     | 1:BV:136:VAL:HG11  | 1.68                     | 0.75              |
| 1:CG:6:LYS:HG2     | 6:CM:534:PHE:HZ    | 1.52                     | 0.75              |
| 2:AS:46:ALA:HB2    | 1:AV:154:ASP:HB3   | 1.68                     | 0.75              |
| 2:AS:123:ILE:HA    | 2:AS:126:THR:HG22  | 1.68                     | 0.75              |
| 1:BV:72:ALA:HA     | 1:BV:77:MET:HB3    | 1.69                     | 0.75              |
| 1:CV:16:ARG:O      | 2:CW:94:TYR:OH     | 2.04                     | 0.75              |
| 6:CM:19:THR:HG22   | 6:CM:169:ALA:HB1   | 1.68                     | 0.75              |
| 6:CM:199:ILE:HD13  | 6:CM:227:LEU:HD21  | 1.69                     | 0.75              |
| 6:CM:597:TYR:HB3   | 6:CM:600:LYS:HD2   | 1.69                     | 0.75              |
| 1:AA:81:CYS:HA     | 10:AA:200:CYC:HHD  | 1.68                     | 0.74              |
| 1:AC:141:MET:HG3   | 1:AC:146:ALA:HB2   | 1.68                     | 0.74              |
| 6:BD:186:ILE:HG13  | 6:BD:190:CYS:HB3   | 1.67                     | 0.74              |
| 2:DV:81:CYS:HA     | 10:DV:200:CYC:HHD  | 1.68                     | 0.74              |
| 1:CG:58:LEU:HD22   | 1:CG:129:SER:HB3   | 1.69                     | 0.74              |
| 6:CM:84:TYR:O      | 6:CM:150:GLN:NE2   | 2.20                     | 0.74              |
| 9:BH:76:PRO:HB3    | 9:BH:123:ALA:HB2   | 1.70                     | 0.74              |
| 6:BD:353:ARG:HG2   | 6:BD:399:ARG:HH21  | 1.50                     | 0.74              |
| 1:DS:105:GLU:HA    | 1:DS:109:LEU:HB2   | 1.68                     | 0.74              |
| 1:AX:131:ARG:HG3   | 1:AX:157:ILE:HD12  | 1.68                     | 0.74              |
| 2:BL:51:ILE:HD11   | 2:BL:140:LEU:HD23  | 1.69                     | 0.74              |
| 10:CM:901:CYC:HMA1 | 10:CM:901:CYC:NB   | 2.01                     | 0.74              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 3:AE:20:SER:HB3    | 1:AJ:151:ALA:HB1   | 1.69                     | 0.74              |
| 6:BD:726:LEU:HD11  | 6:BD:735:VAL:HG22  | 1.69                     | 0.74              |
| 1:CY:122:PRO:HG2   | 1:CY:125:ALA:HB3   | 1.68                     | 0.74              |
| 2:DK:104:LEU:HD11  | 2:DK:156:ILE:HD11  | 1.68                     | 0.74              |
| 1:DQ:84:ASP:OD2    | 10:DQ:200:CYC:ND   | 2.21                     | 0.74              |
| 6:BD:52:LEU:HD21   | 6:BD:216:ALA:HA    | 1.70                     | 0.74              |
| 2:BY:14:VAL:HG12   | 6:CM:683:VAL:HG11  | 1.68                     | 0.74              |
| 10:CW:200:CYC:HMA1 | 10:CW:200:CYC:NB   | 2.02                     | 0.74              |
| 1:DN:51:VAL:HG12   | 1:DN:82:LEU:HD12   | 1.69                     | 0.74              |
| 1:AC:105:GLU:HG2   | 1:AC:109:LEU:HD23  | 1.69                     | 0.74              |
| 2:CW:71:ASN:HD21   | 2:CW:121:VAL:HG22  | 1.52                     | 0.74              |
| 1:DA:84:ASP:OD2    | 10:DA:200:CYC:ND   | 2.21                     | 0.74              |
| 5:CJ:19:GLN:NE2    | 6:CM:237:ALA:O     | 2.21                     | 0.74              |
| 2:DD:51:ILE:HD13   | 2:DD:137:THR:HG22  | 1.70                     | 0.74              |
| 2:CA:46:ALA:HB2    | 1:CE:154:ASP:HB3   | 1.70                     | 0.73              |
| 2:CF:84:ASP:OD2    | 2:CF:116:TYR:OH    | 2.06                     | 0.73              |
| 2:AB:104:LEU:HD22  | 2:AB:156:ILE:HD11  | 1.70                     | 0.73              |
| 2:AF:74:THR:HG23   | 2:AF:77:ARG:HH21   | 1.52                     | 0.73              |
| 6:BD:18:GLN:HB2    | 6:BD:173:ASN:HD22  | 1.51                     | 0.73              |
| 9:BH:257:THR:HG23  | 9:BH:267:ILE:HG12  | 1.71                     | 0.73              |
| 1:CG:36:ARG:NH1    | 1:CG:96:VAL:O      | 2.21                     | 0.73              |
| 1:DS:23:LEU:HD12   | 2:DT:38:VAL:HG13   | 1.69                     | 0.73              |
| 2:AF:109:LEU:HD13  | 2:AF:159:GLY:HA3   | 1.69                     | 0.73              |
| 2:AF:122:PRO:HB2   | 2:AF:125:SER:HB2   | 1.71                     | 0.73              |
| 2:AI:77:ARG:HG3    | 10:AI:200:CYC:HAD1 | 1.71                     | 0.73              |
| 1:AZ:81:CYS:HA     | 10:AZ:200:CYC:HHD  | 1.70                     | 0.73              |
| 4:BS:116:THR:HG21  | 10:BS:200:CYC:HMA2 | 1.70                     | 0.73              |
| 1:CY:83:ARG:NH1    | 1:CY:84:ASP:OD1    | 2.21                     | 0.73              |
| 1:CG:97:VAL:HG21   | 2:CH:19:LEU:HD12   | 1.71                     | 0.73              |
| 5:CJ:39:GLU:OE2    | 5:CJ:42:ARG:NH2    | 2.22                     | 0.73              |
| 1:AH:16:ARG:O      | 2:AI:94:TYR:OH     | 2.07                     | 0.73              |
| 10:AU:200:CYC:HMA1 | 10:AU:200:CYC:NB   | 2.03                     | 0.73              |
| 10:BD:901:CYC:HMA1 | 10:BD:901:CYC:NB   | 2.04                     | 0.73              |
| 8:BG:232:ILE:HD12  | 8:BG:233:PRO:HD2   | 1.70                     | 0.73              |
| 10:BP:200:CYC:HBC3 | 10:BP:200:CYC:HHD  | 1.70                     | 0.73              |
| 4:BS:54:ARG:HB2    | 4:BS:137:MET:HE1   | 1.69                     | 0.73              |
| 1:DJ:4:VAL:HG12    | 1:DJ:26:ILE:HD12   | 1.70                     | 0.73              |
| 6:BD:195:THR:HG22  | 10:BD:902:CYC:H2C  | 1.71                     | 0.73              |
| 1:BK:131:ARG:HG2   | 1:BK:157:ILE:HD13  | 1.70                     | 0.73              |
| 10:BQ:200:CYC:HMA1 | 10:BQ:200:CYC:NB   | 2.04                     | 0.73              |
| 4:BS:44:ILE:HG22   | 4:BS:138:ILE:HD12  | 1.69                     | 0.73              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:BT:88:TYR:OH     | 2:BT:116:TYR:OH    | 2.05                     | 0.73              |
| 1:BZ:16:ARG:O      | 2:CA:94:TYR:OH     | 2.06                     | 0.73              |
| 2:CS:1:MET:HG3     | 2:CS:103:ILE:HB    | 1.70                     | 0.73              |
| 2:CS:66:THR:HG21   | 10:CT:200:CYC:HMA3 | 1.71                     | 0.73              |
| 8:DG:210:LEU:HD13  | 8:DG:216:MET:HB3   | 1.70                     | 0.73              |
| 3:AE:30:LEU:HD13   | 2:AF:31:PHE:HD1    | 1.54                     | 0.73              |
| 10:AH:200:CYC:HBC3 | 10:AH:200:CYC:HHD  | 1.70                     | 0.73              |
| 1:BV:106:GLU:OE1   | 6:CM:478:LYS:NZ    | 2.20                     | 0.73              |
| 2:DK:105:ASP:HA    | 2:DK:109:LEU:HB2   | 1.70                     | 0.73              |
| 1:AA:109:LEU:HG    | 1:AA:159:LYS:HG2   | 1.71                     | 0.73              |
| 5:BA:29:LYS:HE3    | 6:BD:318:GLU:HG2   | 1.68                     | 0.73              |
| 2:BL:131:GLN:NE2   | 2:BL:135:GLU:OE2   | 2.22                     | 0.73              |
| 10:CH:200:CYC:HC   | 10:CH:200:CYC:HMD2 | 1.54                     | 0.73              |
| 7:CO:114:ALA:HA    | 7:CO:117:VAL:HG12  | 1.70                     | 0.73              |
| 1:CR:19:SER:OG     | 1:CR:22:GLU:OE1    | 2.05                     | 0.73              |
| 2:CU:65:VAL:HG12   | 2:CU:72:MET:HB2    | 1.69                     | 0.73              |
| 2:CW:71:ASN:O      | 2:CW:77:ARG:NE     | 2.22                     | 0.73              |
| 9:EA:260:ALA:N     | 9:EA:264:PHE:O     | 2.19                     | 0.73              |
| 9:EA:288:TRP:HD1   | 9:EA:303:ILE:HG12  | 1.54                     | 0.73              |
| 1:BI:5:THR:OG1     | 2:BJ:1:MET:SD      | 2.45                     | 0.73              |
| 1:CY:50:ILE:HD13   | 1:CY:140:LEU:HD21  | 1.69                     | 0.73              |
| 1:DA:50:ILE:HD13   | 1:DA:140:LEU:HD21  | 1.71                     | 0.73              |
| 1:BR:26:ILE:HG22   | 4:BS:38:ILE:HD11   | 1.71                     | 0.73              |
| 1:DC:109:LEU:HD13  | 1:DC:159:LYS:HG2   | 1.71                     | 0.73              |
| 10:AL:200:CYC:HC   | 10:AL:200:CYC:HMD2 | 1.54                     | 0.72              |
| 1:BR:115:MET:HE3   | 10:BR:200:CYC:HMB3 | 1.70                     | 0.72              |
| 6:CM:740:ARG:NH2   | 6:CM:750:ASP:OD2   | 2.22                     | 0.72              |
| 9:CQ:204:ASN:HB3   | 9:CQ:213:LEU:HB2   | 1.71                     | 0.72              |
| 1:DA:61:LYS:HA     | 9:DI:56:PRO:HD2    | 1.71                     | 0.72              |
| 2:DV:65:VAL:HG12   | 2:DV:72:MET:HB2    | 1.70                     | 0.72              |
| 2:AL:106:GLU:O     | 2:AL:110:ASN:ND2   | 2.21                     | 0.72              |
| 2:AQ:117:ASN:O     | 6:BD:467:ARG:NH2   | 2.22                     | 0.72              |
| 6:BD:236:PRO:HB2   | 6:BD:255:GLN:HB3   | 1.69                     | 0.72              |
| 9:DI:208:ASN:HD21  | 9:DI:247:ASN:HA    | 1.54                     | 0.72              |
| 10:DN:200:CYC:HMA1 | 10:DN:200:CYC:HB   | 1.53                     | 0.72              |
| 2:BW:30:TYR:OH     | 2:BW:97:LEU:O      | 2.07                     | 0.72              |
| 9:DI:76:PRO:HB3    | 9:DI:123:ALA:HB2   | 1.71                     | 0.72              |
| 1:BV:102:THR:HA    | 1:BV:105:GLU:HG2   | 1.70                     | 0.72              |
| 2:CA:85:LEU:HD22   | 2:CA:133:ILE:HD11  | 1.72                     | 0.72              |
| 1:DJ:16:ARG:O      | 2:DK:94:TYR:OH     | 2.08                     | 0.72              |
| 1:DJ:84:ASP:OD2    | 10:DJ:200:CYC:ND   | 2.22                     | 0.72              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 9:BH:214:ILE:HD11 | 9:BH:237:VAL:HB    | 1.71                     | 0.72              |
| 8:DH:227:PRO:HB2  | 1:DS:66:VAL:HG21   | 1.69                     | 0.72              |
| 1:DU:16:ARG:O     | 2:DV:94:TYR:OH     | 2.08                     | 0.72              |
| 10:AD:200:CYC:HC  | 10:AD:200:CYC:HMD2 | 1.54                     | 0.72              |
| 1:AR:76:GLU:HG3   | 9:BH:11:ILE:HG21   | 1.72                     | 0.72              |
| 9:CQ:224:GLN:NE2  | 9:CQ:228:GLN:O     | 2.22                     | 0.72              |
| 2:DO:71:ASN:HD21  | 2:DO:121:VAL:HG22  | 1.53                     | 0.72              |
| 2:AF:85:LEU:HG    | 10:AF:200:CYC:HBC1 | 1.72                     | 0.72              |
| 2:AY:81:CYS:HA    | 10:AY:200:CYC:HHD  | 1.69                     | 0.72              |
| 1:BK:73:TYR:H     | 1:BK:77:MET:HB2    | 1.55                     | 0.72              |
| 3:BM:94:TYR:OH    | 2:BN:17:LYS:O      | 2.06                     | 0.72              |
| 1:BZ:65:ILE:HG22  | 1:BZ:72:ALA:HB3    | 1.72                     | 0.72              |
| 1:BZ:86:ASP:OD1   | 2:CA:18:TYR:OH     | 2.07                     | 0.72              |
| 2:AD:76:ARG:NH1   | 3:AE:106:THR:O     | 2.23                     | 0.72              |
| 2:AL:106:GLU:HG3  | 2:AL:107:ARG:HG2   | 1.70                     | 0.72              |
| 2:AY:41:ALA:HB2   | 2:AY:96:MET:HE1    | 1.72                     | 0.72              |
| 10:AY:200:CYC:HC  | 10:AY:200:CYC:HMD2 | 1.55                     | 0.72              |
| 2:BT:106:GLU:O    | 2:BT:110:ASN:ND2   | 2.21                     | 0.72              |
| 6:CM:183:LYS:HG2  | 6:CM:192:ILE:HD12  | 1.70                     | 0.72              |
| 1:AJ:9:VAL:HG11   | 6:BD:246:ASN:HB3   | 1.70                     | 0.72              |
| 2:BJ:104:LEU:HD22 | 2:BJ:156:ILE:HD11  | 1.71                     | 0.72              |
| 1:BV:39:ILE:HG12  | 1:BV:145:ASP:HB2   | 1.70                     | 0.72              |
| 1:DU:109:LEU:HD13 | 1:DU:159:LYS:HG3   | 1.72                     | 0.72              |
| 2:CD:134:LYS:HG3  | 2:CD:150:GLY:HA2   | 1.72                     | 0.72              |
| 2:CH:81:CYS:HA    | 10:CH:200:CYC:HHD  | 1.71                     | 0.72              |
| 6:BD:154:ARG:NH1  | 6:BD:155:ASP:OD1   | 2.23                     | 0.71              |
| 1:CY:84:ASP:OD2   | 10:CY:200:CYC:ND   | 2.22                     | 0.71              |
| 9:DI:32:ASN:HB3   | 9:DI:171:ARG:HH21  | 1.53                     | 0.71              |
| 2:AY:24:MET:HG3   | 2:AY:28:LYS:HE2    | 1.71                     | 0.71              |
| 2:BQ:60:LEU:O     | 2:BQ:63:SER:OG     | 2.08                     | 0.71              |
| 1:BR:105:GLU:HA   | 1:BR:109:LEU:HB2   | 1.71                     | 0.71              |
| 2:CF:103:ILE:HD11 | 2:CF:107:ARG:HD2   | 1.72                     | 0.71              |
| 9:CQ:257:THR:HG23 | 9:CQ:267:ILE:HG12  | 1.72                     | 0.71              |
| 2:DO:65:VAL:HG12  | 2:DO:72:MET:HB2    | 1.70                     | 0.71              |
| 6:BD:292:ARG:NH2  | 6:BD:332:GLN:OE1   | 2.22                     | 0.71              |
| 6:BD:749:ARG:NH1  | 10:DD:200:CYC:O2A  | 2.23                     | 0.71              |
| 9:BH:206:ASN:O    | 9:BH:249:LYS:NZ    | 2.24                     | 0.71              |
| 2:CZ:64:ASP:HA    | 2:CZ:67:ARG:HB2    | 1.71                     | 0.71              |
| 2:DO:57:ALA:HA    | 2:DO:61:LEU:HD12   | 1.72                     | 0.71              |
| 1:BK:16:ARG:O     | 2:BL:94:TYR:OH     | 2.08                     | 0.71              |
| 2:BQ:75:THR:HG21  | 1:BR:112:VAL:HG12  | 1.72                     | 0.71              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 4:BS:92:TYR:OH     | 6:CM:249:GLN:OE1   | 2.07                     | 0.71              |
| 2:DD:65:VAL:HG12   | 2:DD:72:MET:HB2    | 1.72                     | 0.71              |
| 1:DJ:11:ALA:HB2    | 1:DJ:18:LEU:HD23   | 1.71                     | 0.71              |
| 2:CU:15:GLN:HB3    | 2:CU:17:LYS:HE3    | 1.72                     | 0.71              |
| 9:DI:85:ASP:HB3    | 9:DI:90:ALA:HB3    | 1.73                     | 0.71              |
| 1:AR:100:ASP:OD2   | 1:AR:102:THR:OG1   | 2.06                     | 0.71              |
| 1:AV:113:ARG:HD3   | 1:AV:123:ILE:HD13  | 1.72                     | 0.71              |
| 2:CZ:51:ILE:HG21   | 2:CZ:137:THR:HG23  | 1.72                     | 0.71              |
| 1:AV:72:ALA:HA     | 1:AV:77:MET:HB3    | 1.73                     | 0.71              |
| 2:BN:57:ALA:HA     | 2:BN:61:LEU:HD12   | 1.72                     | 0.71              |
| 1:BZ:128:GLN:OE1   | 1:BZ:131:ARG:NH1   | 2.24                     | 0.71              |
| 2:CD:119:LEU:HD21  | 5:CK:33:TYR:HE2    | 1.56                     | 0.71              |
| 1:CR:36:ARG:NH1    | 1:CR:96:VAL:O      | 2.22                     | 0.71              |
| 2:AO:114:GLU:OE2   | 6:BD:443:ASP:N     | 2.23                     | 0.71              |
| 2:AU:64:ASP:OD1    | 2:AU:67:ARG:NH1    | 2.23                     | 0.71              |
| 1:BI:109:LEU:HG    | 1:BI:159:LYS:HG2   | 1.73                     | 0.71              |
| 2:BJ:81:CYS:HA     | 10:BJ:200:CYC:HHD  | 1.73                     | 0.71              |
| 3:BM:58:LEU:HD22   | 3:BM:129:ALA:HB2   | 1.72                     | 0.71              |
| 2:DK:19:LEU:HB3    | 2:DK:24:MET:HE3    | 1.73                     | 0.71              |
| 1:DN:12:ASP:OD1    | 2:DO:90:ARG:NH2    | 2.23                     | 0.71              |
| 1:AC:113:ARG:NH2   | 1:AC:161:SER:OXT   | 2.24                     | 0.71              |
| 1:AR:65:ILE:HG22   | 1:AR:72:ALA:HB3    | 1.71                     | 0.71              |
| 6:BD:875:LYS:NZ    | 6:BD:882:GLU:OE2   | 2.24                     | 0.71              |
| 9:BH:224:GLN:NE2   | 9:BH:228:GLN:O     | 2.24                     | 0.71              |
| 1:BR:16:ARG:O      | 4:BS:95:TYR:OH     | 2.07                     | 0.71              |
| 6:CM:292:ARG:NH2   | 6:CM:332:GLN:OE1   | 2.23                     | 0.71              |
| 2:CS:62:TYR:OH     | 10:CT:200:CYC:O2D  | 2.08                     | 0.71              |
| 1:AA:154:ASP:HA    | 1:AA:157:ILE:HG12  | 1.73                     | 0.71              |
| 5:BB:10:VAL:HG12   | 5:BB:48:GLY:HA3    | 1.73                     | 0.71              |
| 8:BG:216:MET:HE3   | 9:BH:12:PHE:HB2    | 1.73                     | 0.71              |
| 1:CR:7:SER:OG      | 1:CR:25:ARG:NH1    | 2.22                     | 0.71              |
| 10:CS:200:CYC:HC   | 10:CS:200:CYC:HMD2 | 1.56                     | 0.71              |
| 1:DA:52:LYS:HE2    | 8:DZ:221:MET:HG3   | 1.71                     | 0.71              |
| 1:DJ:71:ASN:ND2    | 1:DJ:121:THR:OG1   | 2.24                     | 0.71              |
| 1:AH:47:ARG:NH2    | 1:AH:86:ASP:OD2    | 2.24                     | 0.70              |
| 9:BH:280:GLY:HA3   | 9:BH:284:MET:HG2   | 1.73                     | 0.70              |
| 2:CD:110:ASN:HD21  | 5:CK:49:LYS:HA     | 1.55                     | 0.70              |
| 6:CM:14:PRO:HG3    | 6:CM:401:LEU:HD21  | 1.72                     | 0.70              |
| 2:CZ:71:ASN:HD22   | 2:CZ:122:PRO:HD3   | 1.56                     | 0.70              |
| 9:EA:202:MET:HE1   | 9:EA:269:VAL:HG21  | 1.73                     | 0.70              |
| 10:AL:200:CYC:HAA1 | 6:BD:424:PHE:HZ    | 1.55                     | 0.70              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 6:BD:278:LYS:HD3   | 6:BD:310:ARG:HG3   | 1.73                     | 0.70              |
| 6:BD:714:VAL:N     | 10:DB:200:CYC:O1D  | 2.23                     | 0.70              |
| 1:DJ:91:LEU:HD21   | 1:DJ:107:ILE:HG22  | 1.73                     | 0.70              |
| 1:DN:128:GLN:OE1   | 1:DN:131:ARG:NH1   | 2.24                     | 0.70              |
| 1:AJ:12:ASP:OD1    | 4:AK:91:ARG:NH1    | 2.23                     | 0.70              |
| 2:AW:21:GLY:HA2    | 2:AW:24:MET:HB3    | 1.72                     | 0.70              |
| 2:BT:13:ASP:OD1    | 6:CM:161:ARG:NH2   | 2.25                     | 0.70              |
| 2:CZ:51:ILE:HG23   | 2:CZ:136:VAL:HB    | 1.73                     | 0.70              |
| 1:DL:65:ILE:O      | 1:DL:72:ALA:N      | 2.22                     | 0.70              |
| 2:AD:107:ARG:HD2   | 6:BD:270:LYS:HE3   | 1.74                     | 0.70              |
| 10:BP:200:CYC:HC   | 10:BP:200:CYC:HMD2 | 1.56                     | 0.70              |
| 1:CG:85:MET:HB3    | 1:CG:133:MET:HE3   | 1.73                     | 0.70              |
| 10:AH:200:CYC:HC   | 10:AH:200:CYC:HMD2 | 1.55                     | 0.70              |
| 2:AI:61:LEU:O      | 6:BD:682:ARG:NH1   | 2.23                     | 0.70              |
| 2:AY:73:TYR:OH     | 1:AZ:90:ARG:NH2    | 2.24                     | 0.70              |
| 10:BT:200:CYC:HC   | 10:BT:200:CYC:HMD2 | 1.56                     | 0.70              |
| 1:CE:131:ARG:HG2   | 1:CE:157:ILE:HD13  | 1.73                     | 0.70              |
| 2:CF:76:ARG:HB2    | 1:CG:110:VAL:HG13  | 1.74                     | 0.70              |
| 10:CH:200:CYC:O1A  | 5:CK:17:ARG:NH2    | 2.24                     | 0.70              |
| 1:CR:3:ILE:HD12    | 1:CR:25:ARG:HG2    | 1.72                     | 0.70              |
| 1:CR:73:TYR:HH     | 9:DI:147:SER:HG    | 1.33                     | 0.70              |
| 10:DL:200:CYC:HBB3 | 10:DL:200:CYC:HMB1 | 1.72                     | 0.70              |
| 1:DQ:59:PHE:HE1    | 10:DQ:200:CYC:HBC1 | 1.56                     | 0.70              |
| 2:BJ:1:MET:HE2     | 2:BJ:103:ILE:HD13  | 1.73                     | 0.70              |
| 10:CT:200:CYC:HMB1 | 10:CT:200:CYC:HBB3 | 1.74                     | 0.70              |
| 2:CZ:35:GLU:HA     | 2:CZ:38:VAL:HG12   | 1.74                     | 0.70              |
| 1:DA:97:VAL:HG11   | 2:DB:19:LEU:HD13   | 1.73                     | 0.70              |
| 2:DK:71:ASN:HD22   | 2:DK:121:VAL:HA    | 1.57                     | 0.70              |
| 1:AC:73:TYR:H      | 1:AC:77:MET:HB2    | 1.54                     | 0.70              |
| 2:AW:84:ASP:OD2    | 2:AW:116:TYR:OH    | 2.08                     | 0.70              |
| 1:AX:36:ARG:NH1    | 1:AX:96:VAL:O      | 2.24                     | 0.70              |
| 1:BK:134:LYS:HE3   | 1:BK:150:SER:HB2   | 1.73                     | 0.70              |
| 3:BM:69:GLY:N      | 3:BM:73:TYR:OH     | 2.20                     | 0.70              |
| 1:DC:16:ARG:O      | 2:DD:94:TYR:OH     | 2.10                     | 0.70              |
| 10:DO:200:CYC:HC   | 10:DO:200:CYC:HMD2 | 1.56                     | 0.70              |
| 2:DV:106:GLU:HG3   | 2:DV:107:ARG:HG3   | 1.71                     | 0.70              |
| 2:AL:13:ASP:OD1    | 6:BD:161:ARG:NH2   | 2.24                     | 0.70              |
| 1:BK:39:ILE:HD12   | 1:BK:145:ASP:OD1   | 1.92                     | 0.70              |
| 1:CC:16:ARG:O      | 2:CD:94:TYR:OH     | 2.10                     | 0.70              |
| 9:DI:45:LEU:O      | 9:DI:49:LYS:NZ     | 2.24                     | 0.70              |
| 9:EA:208:ASN:HD21  | 9:EA:247:ASN:HA    | 1.56                     | 0.70              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:AW:103:ILE:HD11  | 2:AW:107:ARG:HD2   | 1.72                     | 0.70              |
| 2:BN:71:ASN:HD22   | 2:BN:122:PRO:HD3   | 1.56                     | 0.70              |
| 2:BQ:8:VAL:HG21    | 2:BQ:27:LEU:HD11   | 1.72                     | 0.70              |
| 2:BY:60:LEU:HB3    | 2:BY:72:MET:HE1    | 1.72                     | 0.70              |
| 5:BA:2:ARG:NH2     | 5:BA:34:ASP:OD1    | 2.21                     | 0.69              |
| 1:CC:6:LYS:NZ      | 1:CC:100:ASP:OD2   | 2.24                     | 0.69              |
| 1:CC:37:LEU:HD13   | 2:CD:28:LYS:HD3    | 1.74                     | 0.69              |
| 2:CZ:3:ASP:HB3     | 2:CZ:98:ALA:HB1    | 1.74                     | 0.69              |
| 1:DS:72:ALA:HA     | 1:DS:77:MET:HB3    | 1.73                     | 0.69              |
| 1:AC:58:LEU:HD22   | 1:AC:129:SER:HB3   | 1.73                     | 0.69              |
| 1:AC:81:CYS:HA     | 10:AC:200:CYC:HHD  | 1.74                     | 0.69              |
| 2:AU:57:ALA:HB2    | 2:AU:61:LEU:HD12   | 1.75                     | 0.69              |
| 2:AU:75:THR:HG23   | 1:AV:108:GLY:HA2   | 1.74                     | 0.69              |
| 2:AU:94:TYR:OH     | 1:AZ:16:ARG:O      | 2.09                     | 0.69              |
| 6:BD:447:TYR:OH    | 10:BD:901:CYC:O2A  | 2.09                     | 0.69              |
| 1:BR:29:PHE:HA     | 1:BR:36:ARG:HH21   | 1.58                     | 0.69              |
| 2:CA:54:GLU:O      | 2:CA:58:LYS:HG2    | 1.92                     | 0.69              |
| 2:CW:81:CYS:HA     | 10:CW:200:CYC:HHD  | 1.74                     | 0.69              |
| 10:AF:200:CYC:HMA1 | 10:AF:200:CYC:HB   | 1.56                     | 0.69              |
| 1:AJ:128:GLN:OE1   | 1:AJ:131:ARG:NH1   | 2.24                     | 0.69              |
| 2:AU:107:ARG:NH1   | 1:AZ:12:ASP:OD2    | 2.25                     | 0.69              |
| 9:BH:204:ASN:HB2   | 9:BH:213:LEU:HD13  | 1.74                     | 0.69              |
| 10:BN:200:CYC:HC   | 10:BN:200:CYC:HMD2 | 1.57                     | 0.69              |
| 1:BZ:151:ALA:HB1   | 1:CE:20:PRO:HB3    | 1.74                     | 0.69              |
| 2:DM:112:LEU:HD13  | 10:DM:200:CYC:HMB3 | 1.73                     | 0.69              |
| 10:DO:200:CYC:HMA1 | 10:DO:200:CYC:NB   | 2.06                     | 0.69              |
| 9:EA:284:MET:HG2   | 9:EA:305:LEU:HD23  | 1.74                     | 0.69              |
| 2:BT:83:ARG:NH2    | 2:BT:84:ASP:OD1    | 2.26                     | 0.69              |
| 1:BV:51:VAL:HG12   | 1:BV:85:MET:HG3    | 1.74                     | 0.69              |
| 1:CC:128:GLN:NE2   | 1:CC:132:GLU:OE2   | 2.26                     | 0.69              |
| 9:DI:235:GLU:OE1   | 9:DI:239:ARG:NH1   | 2.26                     | 0.69              |
| 9:DI:269:VAL:HG23  | 9:DI:288:TRP:HE3   | 1.57                     | 0.69              |
| 1:DJ:38:ARG:NH1    | 1:DJ:145:ASP:OD2   | 2.22                     | 0.69              |
| 2:DK:108:VAL:HG23  | 10:DK:200:CYC:HAB1 | 1.74                     | 0.69              |
| 2:DR:40:ALA:HB2    | 2:DR:145:ALA:HB1   | 1.73                     | 0.69              |
| 3:AE:85:TYR:HE1    | 3:AE:129:ALA:HB1   | 1.58                     | 0.69              |
| 1:AR:25:ARG:HG3    | 1:AV:25:ARG:HD3    | 1.73                     | 0.69              |
| 2:AU:137:THR:HG21  | 2:AU:149:MET:HG2   | 1.74                     | 0.69              |
| 1:CC:115:MET:HE1   | 10:CC:200:CYC:HMB3 | 1.73                     | 0.69              |
| 2:CD:44:ILE:HD11   | 2:CD:137:THR:HG23  | 1.74                     | 0.69              |
| 1:DJ:113:ARG:NH2   | 1:DJ:161:SER:O     | 2.25                     | 0.69              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:DS:14:GLU:OE1   | 1:DS:16:ARG:NE     | 2.26                     | 0.69              |
| 10:DV:200:CYC:HC  | 10:DV:200:CYC:HMD2 | 1.57                     | 0.69              |
| 2:AD:131:GLN:NE2  | 2:AD:135:GLU:OE2   | 2.25                     | 0.69              |
| 1:AH:115:MET:HE1  | 10:AH:200:CYC:HNB  | 1.74                     | 0.69              |
| 1:AN:81:CYS:HA    | 10:AN:200:CYC:HND  | 1.73                     | 0.69              |
| 2:DB:71:ASN:HD22  | 2:DB:122:PRO:HD3   | 1.57                     | 0.69              |
| 8:DH:238:GLN:HA   | 1:DJ:52:LYS:HE3    | 1.74                     | 0.69              |
| 2:DM:73:TYR:OH    | 1:DN:90:ARG:NH2    | 2.25                     | 0.69              |
| 1:BK:117:ARG:HD2  | 1:BP:161:SER:HB2   | 1.74                     | 0.69              |
| 2:CD:75:THR:HG23  | 1:CE:108:GLY:HA2   | 1.75                     | 0.69              |
| 6:CM:714:VAL:N    | 10:DT:200:CYC:O1D  | 2.23                     | 0.69              |
| 1:CY:76:GLU:HA    | 8:DH:203:PHE:CZ    | 2.28                     | 0.69              |
| 2:CZ:84:ASP:OD2   | 2:CZ:116:TYR:OH    | 2.08                     | 0.69              |
| 2:AL:148:GLU:OE2  | 7:BF:89:ALA:N      | 2.23                     | 0.69              |
| 9:BH:289:ARG:NH2  | 9:EA:307:ALA:O     | 2.26                     | 0.69              |
| 3:BM:110:ILE:HG22 | 5:CJ:16:ILE:HD11   | 1.74                     | 0.69              |
| 2:BW:114:GLU:OE2  | 6:CM:443:ASP:N     | 2.25                     | 0.69              |
| 1:BZ:72:ALA:HA    | 1:BZ:77:MET:HB3    | 1.75                     | 0.69              |
| 1:CC:4:VAL:HG22   | 1:CC:26:ILE:HD12   | 1.75                     | 0.69              |
| 2:CD:85:LEU:HG    | 10:CD:200:CYC:HBC1 | 1.73                     | 0.69              |
| 9:CQ:47:MET:HE1   | 9:CQ:54:ALA:HB2    | 1.73                     | 0.69              |
| 1:DJ:12:ASP:OD2   | 2:DK:107:ARG:NE    | 2.26                     | 0.69              |
| 1:DN:16:ARG:O     | 2:DO:94:TYR:OH     | 2.10                     | 0.69              |
| 1:DQ:94:TYR:HD1   | 2:DR:9:ILE:HD12    | 1.58                     | 0.69              |
| 9:EA:235:GLU:OE1  | 9:EA:239:ARG:NH1   | 2.26                     | 0.69              |
| 1:AV:98:SER:HA    | 2:AW:5:ILE:HG21    | 1.74                     | 0.69              |
| 2:BT:16:GLY:O     | 6:CM:161:ARG:NH1   | 2.25                     | 0.69              |
| 2:CD:57:ALA:HB2   | 2:CD:61:LEU:HD12   | 1.75                     | 0.69              |
| 2:CW:85:LEU:HG    | 10:CW:200:CYC:HBC1 | 1.73                     | 0.69              |
| 1:CY:83:ARG:NH2   | 10:CY:200:CYC:O2A  | 2.25                     | 0.69              |
| 1:DA:41:GLU:HG3   | 2:DB:24:MET:HE2    | 1.75                     | 0.69              |
| 1:DJ:105:GLU:HA   | 1:DJ:109:LEU:HB2   | 1.75                     | 0.69              |
| 10:DS:200:CYC:HB  | 10:DS:200:CYC:HMA1 | 1.58                     | 0.69              |
| 2:AO:158:SER:O    | 2:AO:161:SER:OG    | 2.06                     | 0.69              |
| 2:AU:73:TYR:OH    | 1:AV:90:ARG:NH2    | 2.25                     | 0.69              |
| 2:AY:83:ARG:NH2   | 10:AY:200:CYC:O2A  | 2.26                     | 0.69              |
| 1:BP:65:ILE:HG22  | 1:BP:72:ALA:HB3    | 1.74                     | 0.69              |
| 2:AQ:57:ALA:HA    | 2:AQ:61:LEU:HD12   | 1.74                     | 0.68              |
| 10:AW:200:CYC:HC  | 10:AW:200:CYC:HMD2 | 1.58                     | 0.68              |
| 8:BG:221:MET:O    | 8:BG:225:ILE:HG22  | 1.93                     | 0.68              |
| 10:BV:200:CYC:O1A | 2:CA:62:TYR:N      | 2.25                     | 0.68              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:BI:85:MET:HB3    | 1:BI:133:MET:HE1   | 1.74                     | 0.68              |
| 10:BN:200:CYC:HB   | 10:BN:200:CYC:HMA1 | 1.58                     | 0.68              |
| 10:BY:200:CYC:HMA1 | 10:BY:200:CYC:NB   | 2.08                     | 0.68              |
| 10:CM:902:CYC:HMA1 | 10:CM:902:CYC:NB   | 2.07                     | 0.68              |
| 8:DG:221:MET:HE3   | 1:DQ:51:VAL:HG13   | 1.75                     | 0.68              |
| 1:DS:95:GLY:HA3    | 1:DS:104:ILE:HD11  | 1.75                     | 0.68              |
| 3:AE:94:TYR:OH     | 2:AF:17:LYS:O      | 2.09                     | 0.68              |
| 4:AK:47:ASN:ND2    | 4:AK:141:MET:SD    | 2.67                     | 0.68              |
| 2:AL:88:TYR:OH     | 2:AL:116:TYR:OH    | 2.12                     | 0.68              |
| 6:BD:84:TYR:O      | 6:BD:150:GLN:NE2   | 2.26                     | 0.68              |
| 7:BF:114:ALA:HA    | 7:BF:117:VAL:HG12  | 1.76                     | 0.68              |
| 9:BH:46:GLU:HB3    | 9:BH:50:THR:HG22   | 1.73                     | 0.68              |
| 3:BM:16:ARG:O      | 2:BN:94:TYR:OH     | 2.11                     | 0.68              |
| 1:BX:65:ILE:HG13   | 1:BX:66:VAL:HG23   | 1.75                     | 0.68              |
| 2:CA:61:LEU:O      | 7:CO:101:ARG:HG2   | 1.93                     | 0.68              |
| 2:CF:76:ARG:NH1    | 10:CF:200:CYC:O2D  | 2.26                     | 0.68              |
| 6:CM:805:THR:HA    | 6:CM:838:MET:HE3   | 1.75                     | 0.68              |
| 8:DG:219:LEU:HD13  | 8:DZ:203:PHE:HE2   | 1.57                     | 0.68              |
| 1:AR:131:ARG:O     | 1:AR:135:GLU:HG2   | 1.94                     | 0.68              |
| 1:BR:153:PHE:O     | 1:BR:157:ILE:HG12  | 1.93                     | 0.68              |
| 10:BR:200:CYC:HC   | 10:BR:200:CYC:HMD2 | 1.57                     | 0.68              |
| 1:BV:62:ARG:NH2    | 1:BV:124:GLU:OE2   | 2.26                     | 0.68              |
| 8:CP:241:ASN:O     | 8:CP:245:SER:OG    | 2.07                     | 0.68              |
| 2:CS:60:LEU:O      | 2:CS:63:SER:OG     | 2.10                     | 0.68              |
| 1:CV:58:LEU:HD22   | 1:CV:129:SER:HB3   | 1.75                     | 0.68              |
| 10:DN:200:CYC:HMA1 | 10:DN:200:CYC:NB   | 2.08                     | 0.68              |
| 1:DS:76:GLU:HG3    | 8:DY:202:ARG:HA    | 1.75                     | 0.68              |
| 5:BA:9:CYS:HB2     | 5:BA:26:TYR:HD1    | 1.58                     | 0.68              |
| 1:CC:71:ASN:ND2    | 1:CC:121:THR:OG1   | 2.26                     | 0.68              |
| 6:CM:889:THR:HG22  | 2:DR:118:SER:HB2   | 1.75                     | 0.68              |
| 9:CQ:191:GLU:O     | 9:CQ:255:GLY:N     | 2.27                     | 0.68              |
| 1:CY:39:ILE:HA     | 1:CY:42:THR:HG22   | 1.76                     | 0.68              |
| 1:DU:128:GLN:NE2   | 1:DU:132:GLU:OE2   | 2.27                     | 0.68              |
| 9:EA:188:VAL:N     | 9:EA:203:ASP:OD1   | 2.24                     | 0.68              |
| 5:BB:19:GLN:OE1    | 6:BD:514:ARG:NH1   | 2.27                     | 0.68              |
| 6:CM:36:GLU:N      | 6:CM:39:GLU:OE1    | 2.27                     | 0.68              |
| 2:AQ:83:ARG:NH2    | 10:AQ:200:CYC:O2A  | 2.26                     | 0.68              |
| 6:BD:868:ASN:OD1   | 6:BD:871:ARG:NH2   | 2.26                     | 0.68              |
| 1:BX:16:ARG:O      | 2:BY:94:TYR:OH     | 2.11                     | 0.68              |
| 6:CM:28:ALA:HB2    | 6:CM:35:LEU:HD23   | 1.75                     | 0.68              |
| 9:CQ:88:ASN:HD21   | 9:CQ:174:GLU:HB3   | 1.57                     | 0.68              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:CS:104:LEU:O    | 2:CS:108:VAL:HG12  | 1.94                     | 0.68              |
| 2:DK:51:ILE:HG13  | 2:DK:136:VAL:HG12  | 1.74                     | 0.68              |
| 1:AA:25:ARG:HH21  | 1:AH:29:PHE:HD1    | 1.42                     | 0.68              |
| 2:AD:8:VAL:HG11   | 2:AD:27:LEU:HD21   | 1.75                     | 0.68              |
| 1:AV:87:TYR:HD2   | 10:AV:200:CYC:HMB2 | 1.58                     | 0.68              |
| 2:BY:83:ARG:NH1   | 2:BY:84:ASP:OD1    | 2.27                     | 0.68              |
| 2:CA:119:LEU:HD11 | 10:CM:901:CYC:HAA2 | 1.76                     | 0.68              |
| 2:CD:57:ALA:HA    | 2:CD:61:LEU:HB2    | 1.76                     | 0.68              |
| 1:DJ:76:GLU:OE2   | 9:EA:155:ARG:NH1   | 2.26                     | 0.68              |
| 2:AS:114:GLU:OE2  | 6:BD:449:SER:N     | 2.27                     | 0.68              |
| 1:DN:105:GLU:HA   | 1:DN:109:LEU:HB2   | 1.75                     | 0.68              |
| 1:AJ:60:GLN:HB3   | 1:CC:61:LYS:HZ3    | 1.59                     | 0.68              |
| 10:BD:902:CYC:HB  | 10:BD:902:CYC:HMA1 | 1.59                     | 0.68              |
| 9:BH:191:GLU:O    | 9:BH:255:GLY:N     | 2.27                     | 0.68              |
| 1:CC:81:CYS:HA    | 10:CC:200:CYC:HHD  | 1.74                     | 0.68              |
| 6:CM:702:THR:O    | 6:CM:705:GLU:HG3   | 1.94                     | 0.68              |
| 9:EA:54:ALA:HA    | 11:EA:400:45D:H221 | 1.75                     | 0.68              |
| 2:AB:100:ASP:OD2  | 2:AB:102:SER:OG    | 2.10                     | 0.67              |
| 2:AL:94:TYR:OH    | 6:BD:33:ARG:O      | 2.12                     | 0.67              |
| 1:CC:89:LEU:HB2   | 1:CC:133:MET:HE2   | 1.74                     | 0.67              |
| 9:DI:224:GLN:NE2  | 9:DI:228:GLN:O     | 2.26                     | 0.67              |
| 9:EA:89:ARG:HH21  | 9:EA:160:ASP:HB3   | 1.59                     | 0.67              |
| 10:AQ:200:CYC:HC  | 10:AQ:200:CYC:HMD2 | 1.59                     | 0.67              |
| 2:BJ:77:ARG:HG2   | 10:BJ:200:CYC:HAD1 | 1.75                     | 0.67              |
| 2:BN:88:TYR:OH    | 2:BN:116:TYR:OH    | 2.12                     | 0.67              |
| 10:CF:200:CYC:HC  | 10:CF:200:CYC:HMD2 | 1.57                     | 0.67              |
| 9:CQ:76:PRO:HB3   | 9:CQ:123:ALA:HB2   | 1.75                     | 0.67              |
| 2:DR:104:LEU:HD13 | 2:DR:156:ILE:HG13  | 1.76                     | 0.67              |
| 1:AA:44:THR:OG1   | 1:AA:47:ARG:NH2    | 2.26                     | 0.67              |
| 2:AY:108:VAL:HG12 | 2:AY:109:LEU:HD23  | 1.77                     | 0.67              |
| 6:BD:792:TYR:OH   | 1:CY:12:ASP:O      | 2.12                     | 0.67              |
| 9:BH:292:LEU:HD23 | 9:BH:298:ILE:HA    | 1.75                     | 0.67              |
| 1:BP:122:PRO:HG2  | 1:BP:125:ALA:HB3   | 1.76                     | 0.67              |
| 10:CF:200:CYC:HHA | 10:CF:200:CYC:HBA2 | 1.75                     | 0.67              |
| 8:CP:237:ALA:HA   | 8:CP:240:ILE:HD12  | 1.76                     | 0.67              |
| 1:CR:106:GLU:HG3  | 5:DF:66:LEU:HD22   | 1.76                     | 0.67              |
| 1:CV:83:ARG:NH1   | 10:CV:200:CYC:O2A  | 2.24                     | 0.67              |
| 1:CY:94:TYR:OH    | 2:CZ:17:LYS:O      | 2.09                     | 0.67              |
| 1:DN:84:ASP:OD2   | 10:DN:200:CYC:ND   | 2.27                     | 0.67              |
| 1:AH:122:PRO:HG2  | 1:AH:125:ALA:HB3   | 1.76                     | 0.67              |
| 1:AR:76:GLU:OE2   | 9:BH:155:ARG:NH2   | 2.24                     | 0.67              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:BK:7:SER:HB3     | 1:BK:25:ARG:NH1    | 2.07                     | 0.67              |
| 10:BQ:200:CYC:HC   | 10:BQ:200:CYC:HMD2 | 1.59                     | 0.67              |
| 2:BT:30:TYR:OH     | 2:BT:97:LEU:O      | 2.13                     | 0.67              |
| 2:CS:94:TYR:HB3    | 2:CS:103:ILE:HD13  | 1.76                     | 0.67              |
| 2:CW:2:GLN:OE1     | 2:CW:10:ASN:ND2    | 2.27                     | 0.67              |
| 2:CZ:61:LEU:HD11   | 10:DA:200:CYC:CAA  | 2.24                     | 0.67              |
| 1:DA:97:VAL:HG21   | 2:DB:9:ILE:HD11    | 1.76                     | 0.67              |
| 1:AP:41:GLU:OE2    | 2:DT:143:ALA:N     | 2.25                     | 0.67              |
| 10:AX:200:CYC:HC   | 10:AX:200:CYC:HMD2 | 1.58                     | 0.67              |
| 1:BI:58:LEU:HD22   | 1:BI:129:SER:HB3   | 1.76                     | 0.67              |
| 2:BJ:76:ARG:NH1    | 10:BJ:200:CYC:O1D  | 2.27                     | 0.67              |
| 2:BL:76:ARG:NH1    | 3:BM:106:THR:O     | 2.28                     | 0.67              |
| 1:BX:128:GLN:NE2   | 1:BX:132:GLU:OE2   | 2.26                     | 0.67              |
| 2:BY:83:ARG:NH2    | 10:BY:200:CYC:O2A  | 2.27                     | 0.67              |
| 6:CM:697:VAL:HG21  | 6:CM:701:ARG:HE    | 1.60                     | 0.67              |
| 9:CQ:264:PHE:HD1   | 9:CQ:294:PRO:HD3   | 1.59                     | 0.67              |
| 2:CU:77:ARG:NH1    | 10:CU:200:CYC:O1D  | 2.27                     | 0.67              |
| 2:CW:41:ALA:CB     | 2:CW:97:LEU:HD21   | 2.24                     | 0.67              |
| 10:CW:200:CYC:HC   | 10:CW:200:CYC:HMD2 | 1.59                     | 0.67              |
| 5:BA:19:GLN:HB2    | 6:BD:239:LYS:HG2   | 1.75                     | 0.67              |
| 6:BD:323:LEU:O     | 6:BD:326:SER:OG    | 2.09                     | 0.67              |
| 9:BH:84:CYS:O      | 9:BH:88:ASN:ND2    | 2.21                     | 0.67              |
| 2:CS:77:ARG:HB2    | 10:CS:200:CYC:HMD1 | 1.77                     | 0.67              |
| 2:DM:113:LYS:NZ    | 2:DM:160:LEU:O     | 2.28                     | 0.67              |
| 1:DS:66:VAL:HA     | 1:DS:72:ALA:O      | 1.93                     | 0.67              |
| 1:AC:117:ARG:HD2   | 1:AH:161:SER:HB2   | 1.75                     | 0.67              |
| 1:AC:122:PRO:HG2   | 1:AC:125:ALA:HB3   | 1.76                     | 0.67              |
| 10:AK:200:CYC:HC   | 10:AK:200:CYC:HMD2 | 1.59                     | 0.67              |
| 1:AN:106:GLU:OE1   | 6:BD:478:LYS:NZ    | 2.24                     | 0.67              |
| 1:AR:81:CYS:HA     | 10:AR:200:CYC:HHD  | 1.75                     | 0.67              |
| 6:BD:799:LYS:HB2   | 6:BD:883:LEU:HD21  | 1.75                     | 0.67              |
| 1:BP:14:GLU:OE1    | 1:BP:16:ARG:NE     | 2.22                     | 0.67              |
| 2:BQ:104:LEU:HD22  | 2:BQ:156:ILE:HD11  | 1.75                     | 0.67              |
| 10:BW:200:CYC:HC   | 10:BW:200:CYC:HMD2 | 1.59                     | 0.67              |
| 1:CG:61:LYS:HG3    | 9:CQ:56:PRO:HG2    | 1.75                     | 0.67              |
| 6:CM:400:GLY:O     | 6:CM:406:GLN:NE2   | 2.28                     | 0.67              |
| 2:CZ:134:LYS:NZ    | 2:CZ:154:ASP:OD1   | 2.26                     | 0.67              |
| 9:DI:223:LEU:HD23  | 9:DI:225:PRO:HD3   | 1.77                     | 0.67              |
| 2:DM:60:LEU:HD13   | 2:DM:72:MET:HE1    | 1.75                     | 0.67              |
| 1:DS:76:GLU:HB2    | 8:DY:203:PHE:CD2   | 2.30                     | 0.67              |
| 10:DU:200:CYC:HMA1 | 10:DU:200:CYC:NB   | 2.09                     | 0.67              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AV:44:THR:O     | 1:AV:47:ARG:NH1    | 2.27                     | 0.67              |
| 1:BP:113:ARG:HG2  | 1:BP:117:ARG:HH21  | 1.60                     | 0.67              |
| 1:CE:44:THR:O     | 1:CE:47:ARG:NH1    | 2.26                     | 0.67              |
| 1:DJ:125:ALA:HB3  | 10:DJ:200:CYC:HMC2 | 1.76                     | 0.67              |
| 1:DN:11:ALA:HB2   | 1:DN:18:LEU:HD23   | 1.75                     | 0.67              |
| 1:DS:83:ARG:NH1   | 1:DS:84:ASP:OD1    | 2.22                     | 0.67              |
| 2:AI:128:GLN:NE2  | 6:BD:681:GLN:OE1   | 2.28                     | 0.67              |
| 1:AV:12:ASP:OD2   | 2:AW:107:ARG:NH1   | 2.28                     | 0.67              |
| 1:AV:16:ARG:NH1   | 1:AV:17:TYR:O      | 2.27                     | 0.67              |
| 1:BK:50:ILE:HD13  | 1:BK:136:VAL:HG12  | 1.75                     | 0.67              |
| 2:BQ:128:GLN:NE2  | 6:CM:681:GLN:OE1   | 2.27                     | 0.67              |
| 6:CM:247:ASP:HB2  | 6:CM:248:ILE:HD12  | 1.75                     | 0.67              |
| 6:CM:285:ALA:HB2  | 6:CM:316:MET:HE1   | 1.77                     | 0.67              |
| 9:CQ:222:ALA:HB2  | 9:CQ:232:VAL:HG12  | 1.76                     | 0.67              |
| 1:AC:50:ILE:HD13  | 1:AC:136:VAL:HG12  | 1.76                     | 0.67              |
| 2:AO:30:TYR:OH    | 2:AO:97:LEU:O      | 2.12                     | 0.67              |
| 1:AV:122:PRO:HG2  | 1:AV:125:ALA:HB3   | 1.77                     | 0.67              |
| 1:CE:84:ASP:OD2   | 1:CE:116:TYR:OH    | 2.09                     | 0.67              |
| 2:CH:106:GLU:OE2  | 2:CH:107:ARG:NH1   | 2.28                     | 0.67              |
| 2:DD:83:ARG:NH2   | 2:DD:84:ASP:OD1    | 2.25                     | 0.67              |
| 1:DJ:126:VAL:HG22 | 10:DJ:200:CYC:HMC3 | 1.77                     | 0.67              |
| 9:EA:267:ILE:HG22 | 9:EA:269:VAL:HG13  | 1.77                     | 0.67              |
| 3:AE:81:CYS:HA    | 10:AE:200:CYC:HHD  | 1.77                     | 0.66              |
| 1:BK:68:PRO:HA    | 1:BK:73:TYR:HE1    | 1.60                     | 0.66              |
| 1:BP:47:ARG:NH2   | 1:BP:86:ASP:OD2    | 2.28                     | 0.66              |
| 1:DC:58:LEU:HD22  | 1:DC:129:SER:HB2   | 1.76                     | 0.66              |
| 1:DL:137:ALA:HB1  | 1:DL:141:MET:HE1   | 1.77                     | 0.66              |
| 1:DQ:39:ILE:HD11  | 1:DQ:145:ASP:HB3   | 1.77                     | 0.66              |
| 2:AB:76:ARG:NH1   | 10:AB:200:CYC:O1D  | 2.23                     | 0.66              |
| 1:BR:128:GLN:OE1  | 1:BR:131:ARG:NH1   | 2.29                     | 0.66              |
| 2:BT:18:TYR:CD2   | 6:CM:61:THR:HG22   | 2.30                     | 0.66              |
| 2:BT:37:ARG:NH1   | 2:BT:96:MET:O      | 2.27                     | 0.66              |
| 2:CA:58:LYS:HB3   | 7:CO:98:VAL:HG11   | 1.77                     | 0.66              |
| 2:CF:8:VAL:HG13   | 2:CF:23:ALA:HB1    | 1.77                     | 0.66              |
| 2:CF:112:LEU:HD11 | 10:CF:200:CYC:HMB3 | 1.76                     | 0.66              |
| 1:CG:51:VAL:HG22  | 1:CG:133:MET:HE2   | 1.78                     | 0.66              |
| 1:AX:107:ILE:HG22 | 10:AX:200:CYC:HBB1 | 1.76                     | 0.66              |
| 1:AZ:71:ASN:ND2   | 1:AZ:121:THR:OG1   | 2.28                     | 0.66              |
| 6:BD:152:SER:CB   | 10:BD:902:CYC:H3C  | 2.26                     | 0.66              |
| 2:BL:108:VAL:O    | 2:BL:112:LEU:HD23  | 1.96                     | 0.66              |
| 6:CM:50:GLY:O     | 6:CM:54:LEU:HG     | 1.95                     | 0.66              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 6:CM:210:PHE:O     | 6:CM:211:ARG:HD3   | 1.96                     | 0.66              |
| 1:CT:17:TYR:CE1    | 2:CU:90:ARG:HD3    | 2.31                     | 0.66              |
| 9:DI:190:ILE:HG21  | 9:DI:193:VAL:HB    | 1.78                     | 0.66              |
| 2:DT:105:ASP:OD2   | 2:DT:155:TYR:OH    | 2.11                     | 0.66              |
| 1:AC:8:ILE:HD11    | 2:AD:98:ALA:HB2    | 1.77                     | 0.66              |
| 9:BH:264:PHE:HD1   | 9:BH:294:PRO:HD3   | 1.60                     | 0.66              |
| 10:BY:200:CYC:HC   | 10:BY:200:CYC:HMD2 | 1.60                     | 0.66              |
| 6:CM:278:LYS:HD3   | 6:CM:310:ARG:HG3   | 1.77                     | 0.66              |
| 10:DC:200:CYC:HMA1 | 10:DC:200:CYC:NB   | 2.09                     | 0.66              |
| 1:AC:83:ARG:NH2    | 10:AC:200:CYC:O2A  | 2.28                     | 0.66              |
| 3:AE:67:ALA:HB1    | 3:AE:68:PRO:HD2    | 1.76                     | 0.66              |
| 10:AF:200:CYC:HC   | 10:AF:200:CYC:HMD2 | 1.60                     | 0.66              |
| 10:AI:200:CYC:HMA1 | 10:AI:200:CYC:NB   | 2.09                     | 0.66              |
| 1:AJ:16:ARG:O      | 4:AK:95:TYR:OH     | 2.11                     | 0.66              |
| 6:BD:576:ARG:NH2   | 6:BD:640:ILE:O     | 2.22                     | 0.66              |
| 2:BL:57:ALA:HA     | 2:BL:61:LEU:HG     | 1.76                     | 0.66              |
| 2:BN:84:ASP:OD2    | 2:BN:116:TYR:OH    | 2.11                     | 0.66              |
| 1:CR:87:TYR:HA     | 1:CR:90:ARG:HH12   | 1.60                     | 0.66              |
| 2:CS:152:TYR:O     | 2:CS:156:ILE:HD12  | 1.96                     | 0.66              |
| 1:CV:71:ASN:OD1    | 1:CV:121:THR:OG1   | 2.05                     | 0.66              |
| 1:DQ:85:MET:HG3    | 1:DQ:133:MET:HE2   | 1.78                     | 0.66              |
| 1:AA:39:ILE:HG12   | 1:AA:145:ASP:HB3   | 1.76                     | 0.66              |
| 2:AU:67:ARG:HG3    | 2:AU:68:PRO:HD2    | 1.78                     | 0.66              |
| 2:AU:85:LEU:HD22   | 2:AU:133:ILE:HD11  | 1.76                     | 0.66              |
| 1:AV:19:SER:N      | 1:AV:22:GLU:OE1    | 2.24                     | 0.66              |
| 10:AY:200:CYC:O1A  | 5:BB:17:ARG:NH2    | 2.26                     | 0.66              |
| 2:CF:21:GLY:HA2    | 2:CF:24:MET:HB3    | 1.76                     | 0.66              |
| 6:CM:892:VAL:HG21  | 2:DT:2:GLN:HB2     | 1.77                     | 0.66              |
| 1:CT:91:LEU:HD11   | 1:CT:107:ILE:HG21  | 1.76                     | 0.66              |
| 2:CW:70:GLY:O      | 2:CW:77:ARG:NH2    | 2.28                     | 0.66              |
| 1:CY:36:ARG:NH1    | 1:CY:148:GLU:OE2   | 2.28                     | 0.66              |
| 2:DD:73:TYR:O      | 2:DD:77:ARG:HB2    | 1.96                     | 0.66              |
| 1:DJ:2:SER:OG      | 2:DK:3:ASP:OD2     | 2.10                     | 0.66              |
| 1:DJ:80:THR:HG23   | 1:DJ:83:ARG:HH21   | 1.59                     | 0.66              |
| 1:DJ:128:GLN:OE1   | 1:DJ:131:ARG:NH1   | 2.28                     | 0.66              |
| 2:DM:83:ARG:NH2    | 10:DM:200:CYC:O1A  | 2.29                     | 0.66              |
| 1:AJ:66:VAL:HG11   | 1:BX:68:PRO:HG2    | 1.78                     | 0.66              |
| 2:AS:58:LYS:HD3    | 7:BF:100:ARG:HA    | 1.78                     | 0.66              |
| 6:BD:400:GLY:O     | 6:BD:406:GLN:NE2   | 2.29                     | 0.66              |
| 3:BM:47:GLU:HG2    | 3:BM:89:LEU:HD23   | 1.78                     | 0.66              |
| 1:BV:90:ARG:NH2    | 2:BW:13:ASP:OD1    | 2.27                     | 0.66              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:CS:10:ASN:ND2    | 5:DF:64:ALA:O      | 2.29                     | 0.66              |
| 2:CS:112:LEU:HD13  | 10:CS:200:CYC:HMB3 | 1.76                     | 0.66              |
| 1:DJ:50:ILE:HG13   | 1:DJ:136:VAL:HG12  | 1.76                     | 0.66              |
| 1:DQ:50:ILE:HD12   | 1:DQ:136:VAL:HG12  | 1.77                     | 0.66              |
| 2:DR:35:GLU:HA     | 2:DR:38:VAL:HG12   | 1.77                     | 0.66              |
| 1:DS:91:LEU:HD11   | 1:DS:107:ILE:HG21  | 1.78                     | 0.66              |
| 2:AB:81:CYS:HA     | 10:AB:200:CYC:HHD  | 1.76                     | 0.66              |
| 10:AB:200:CYC:HMD2 | 10:AB:200:CYC:HC   | 1.59                     | 0.66              |
| 10:AN:200:CYC:HC   | 10:AN:200:CYC:HMD2 | 1.60                     | 0.66              |
| 10:AQ:200:CYC:HMA1 | 10:AQ:200:CYC:NB   | 2.09                     | 0.66              |
| 2:AS:63:SER:H      | 2:AS:66:THR:HG22   | 1.60                     | 0.66              |
| 2:AS:71:ASN:HD22   | 2:AS:122:PRO:HD3   | 1.60                     | 0.66              |
| 5:BA:40:GLN:O      | 5:BA:44:MET:HG3    | 1.96                     | 0.66              |
| 2:BJ:51:ILE:HG22   | 2:BJ:133:ILE:HD11  | 1.78                     | 0.66              |
| 2:BQ:77:ARG:CG     | 10:BQ:200:CYC:HMD1 | 2.25                     | 0.66              |
| 6:CM:649:PHE:CE1   | 6:CM:655:PRO:HA    | 2.31                     | 0.66              |
| 1:DA:142:SER:O     | 1:DA:146:ALA:N     | 2.25                     | 0.66              |
| 9:DI:21:VAL:HG23   | 9:DI:153:VAL:HG23  | 1.76                     | 0.66              |
| 9:DI:37:LEU:HD12   | 9:DI:40:ILE:HD11   | 1.78                     | 0.66              |
| 9:DI:250:LEU:HD22  | 9:DI:288:TRP:HZ2   | 1.59                     | 0.66              |
| 1:DL:5:THR:OG1     | 2:DM:3:ASP:OD1     | 2.14                     | 0.66              |
| 2:DR:112:LEU:CD1   | 10:DR:200:CYC:HMB3 | 2.26                     | 0.66              |
| 3:AE:80:GLN:OE1    | 3:AE:83:ARG:NH2    | 2.29                     | 0.66              |
| 2:AO:114:GLU:OE1   | 6:BD:439:ARG:NH2   | 2.29                     | 0.66              |
| 2:AU:36:LEU:HD21   | 2:AU:145:ALA:HB2   | 1.78                     | 0.66              |
| 4:BS:85:ASP:OD2    | 4:BS:117:TYR:OH    | 2.12                     | 0.66              |
| 1:BV:83:ARG:NH2    | 10:BV:200:CYC:O2A  | 2.29                     | 0.66              |
| 1:CY:38:ARG:NH1    | 1:CY:145:ASP:OD2   | 2.29                     | 0.66              |
| 1:DA:37:LEU:HD11   | 2:DB:27:LEU:HD22   | 1.78                     | 0.66              |
| 2:AB:8:VAL:HG13    | 2:AB:23:ALA:HB1    | 1.78                     | 0.66              |
| 2:AD:93:THR:O      | 2:AD:96:MET:HG3    | 1.96                     | 0.66              |
| 1:AR:128:GLN:OE1   | 1:AR:131:ARG:NH1   | 2.29                     | 0.66              |
| 1:BK:25:ARG:CD     | 6:CM:42:GLU:HG3    | 2.26                     | 0.66              |
| 2:BL:8:VAL:HG11    | 2:BL:27:LEU:HD21   | 1.76                     | 0.66              |
| 10:BP:200:CYC:O2D  | 2:BT:62:TYR:OH     | 2.09                     | 0.66              |
| 2:CD:112:LEU:HD21  | 10:CD:200:CYC:C1B  | 2.26                     | 0.66              |
| 6:CM:302:ILE:HG22  | 6:CM:305:LEU:H     | 1.61                     | 0.66              |
| 6:CM:436:GLN:NE2   | 6:CM:440:PRO:O     | 2.26                     | 0.66              |
| 2:CS:51:ILE:HG21   | 2:CS:137:THR:HG23  | 1.77                     | 0.66              |
| 2:CZ:104:LEU:O     | 2:CZ:108:VAL:N     | 2.28                     | 0.66              |
| 1:DA:72:ALA:HB2    | 10:DA:200:CYC:HMD3 | 1.78                     | 0.66              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:DU:6:LYS:NZ     | 1:DU:102:THR:OG1   | 2.28                     | 0.66              |
| 2:AF:71:ASN:HD22  | 2:AF:121:VAL:HA    | 1.61                     | 0.65              |
| 1:AN:62:ARG:NH2   | 1:AN:124:GLU:OE2   | 2.29                     | 0.65              |
| 10:AO:200:CYC:HC  | 10:AO:200:CYC:HMD2 | 1.61                     | 0.65              |
| 2:AS:85:LEU:HD22  | 2:AS:133:ILE:HD11  | 1.77                     | 0.65              |
| 1:BZ:38:ARG:NH1   | 1:BZ:145:ASP:OD2   | 2.29                     | 0.65              |
| 2:CA:85:LEU:HG    | 10:CM:901:CYC:HBC1 | 1.78                     | 0.65              |
| 2:CF:14:VAL:HG12  | 5:CK:63:ASN:HD22   | 1.60                     | 0.65              |
| 1:DQ:86:ASP:O     | 1:DQ:90:ARG:HG3    | 1.96                     | 0.65              |
| 2:DR:85:LEU:HD13  | 2:DR:88:TYR:HD2    | 1.60                     | 0.65              |
| 1:DS:98:SER:HA    | 2:DT:5:ILE:HG21    | 1.78                     | 0.65              |
| 9:EA:86:LEU:HD21  | 9:EA:95:CYS:HA     | 1.78                     | 0.65              |
| 9:EA:112:ARG:NH1  | 9:EA:115:GLU:OE1   | 2.28                     | 0.65              |
| 4:AK:84:ARG:NH2   | 10:AK:200:CYC:O1A  | 2.29                     | 0.65              |
| 1:AV:44:THR:HG22  | 2:AW:18:TYR:HD2    | 1.61                     | 0.65              |
| 9:CQ:63:LEU:HD12  | 9:CQ:105:ILE:HD13  | 1.78                     | 0.65              |
| 9:CQ:206:ASN:O    | 9:CQ:249:LYS:NZ    | 2.29                     | 0.65              |
| 1:DN:107:ILE:HG22 | 10:DN:200:CYC:HBB1 | 1.77                     | 0.65              |
| 1:AN:50:ILE:HG12  | 1:AN:136:VAL:HG12  | 1.77                     | 0.65              |
| 6:BD:52:LEU:HD11  | 6:BD:216:ALA:HB2   | 1.76                     | 0.65              |
| 3:BM:105:GLU:HA   | 3:BM:109:LEU:HB2   | 1.78                     | 0.65              |
| 1:BV:86:ASP:OD2   | 7:CO:109:ARG:NH2   | 2.29                     | 0.65              |
| 2:BY:85:LEU:HG    | 10:BY:200:CYC:HBC1 | 1.79                     | 0.65              |
| 1:CC:128:GLN:OE1  | 1:CC:131:ARG:NH1   | 2.29                     | 0.65              |
| 6:CM:213:ASN:O    | 6:CM:217:LYS:N     | 2.30                     | 0.65              |
| 1:CR:101:VAL:HA   | 1:CR:104:ILE:HD13  | 1.78                     | 0.65              |
| 2:DM:106:GLU:O    | 2:DM:110:ASN:ND2   | 2.29                     | 0.65              |
| 1:DN:4:VAL:HG22   | 1:DN:26:ILE:HD12   | 1.77                     | 0.65              |
| 9:EA:191:GLU:O    | 9:EA:255:GLY:N     | 2.29                     | 0.65              |
| 4:AK:116:THR:HG21 | 10:AK:200:CYC:HMA2 | 1.77                     | 0.65              |
| 1:AR:14:GLU:OE1   | 1:AR:16:ARG:NE     | 2.23                     | 0.65              |
| 1:AZ:128:GLN:OE1  | 1:AZ:131:ARG:NH1   | 2.29                     | 0.65              |
| 9:BH:219:SER:HA   | 9:BH:234:LYS:HD2   | 1.79                     | 0.65              |
| 1:BI:21:GLY:O     | 1:BI:25:ARG:HG2    | 1.96                     | 0.65              |
| 1:BR:40:ALA:O     | 1:BR:44:THR:HG23   | 1.97                     | 0.65              |
| 1:BZ:131:ARG:O    | 1:BZ:135:GLU:HG2   | 1.97                     | 0.65              |
| 2:CF:24:MET:HE3   | 2:CF:28:LYS:HD3    | 1.79                     | 0.65              |
| 6:CM:52:LEU:HD21  | 6:CM:216:ALA:HA    | 1.78                     | 0.65              |
| 1:DL:131:ARG:NH2  | 2:DV:47:ASN:OD1    | 2.28                     | 0.65              |
| 10:AJ:200:CYC:HC  | 10:AJ:200:CYC:HMD2 | 1.61                     | 0.65              |
| 4:AK:65:GLU:OE1   | 4:AK:65:GLU:N      | 2.30                     | 0.65              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 10:AU:200:CYC:HAA1 | 5:BB:36:TRP:HD1    | 1.60                     | 0.65              |
| 2:AY:76:ARG:HB2    | 1:AZ:110:VAL:HG13  | 1.78                     | 0.65              |
| 6:BD:302:ILE:HG22  | 6:BD:305:LEU:H     | 1.60                     | 0.65              |
| 3:BM:124:PRO:HA    | 3:BM:127:VAL:HG12  | 1.78                     | 0.65              |
| 2:BT:15:GLN:NE2    | 7:CO:97:ASN:O      | 2.30                     | 0.65              |
| 9:EA:269:VAL:HG23  | 9:EA:288:TRP:HE3   | 1.59                     | 0.65              |
| 1:BK:69:GLY:N      | 1:BK:73:TYR:OH     | 2.23                     | 0.65              |
| 1:BK:105:GLU:HA    | 1:BK:109:LEU:HB2   | 1.79                     | 0.65              |
| 6:CM:323:LEU:O     | 6:CM:326:SER:OG    | 2.13                     | 0.65              |
| 2:CU:73:TYR:OH     | 1:CV:90:ARG:NH2    | 2.30                     | 0.65              |
| 2:AB:106:GLU:HG3   | 2:AB:107:ARG:HG3   | 1.79                     | 0.65              |
| 3:BM:20:SER:HB3    | 1:BR:151:ALA:HB1   | 1.78                     | 0.65              |
| 1:CC:65:ILE:HG22   | 1:CC:72:ALA:HB3    | 1.78                     | 0.65              |
| 10:CC:200:CYC:HMB1 | 10:CC:200:CYC:HBB3 | 1.79                     | 0.65              |
| 2:DT:137:THR:O     | 2:DT:141:VAL:HG22  | 1.97                     | 0.65              |
| 1:AC:29:PHE:HE1    | 1:AC:99:GLY:HA3    | 1.61                     | 0.65              |
| 2:AD:122:PRO:HG2   | 10:AD:200:CYC:HMC2 | 1.78                     | 0.65              |
| 2:AW:76:ARG:NH1    | 10:AW:200:CYC:O2D  | 2.29                     | 0.65              |
| 2:AW:95:ALA:HB2    | 2:AW:104:LEU:HD21  | 1.78                     | 0.65              |
| 6:BD:861:LEU:HD11  | 2:DB:87:TYR:CE2    | 2.32                     | 0.65              |
| 2:BQ:61:LEU:O      | 6:CM:682:ARG:NH1   | 2.26                     | 0.65              |
| 2:CD:71:ASN:HD22   | 2:CD:121:VAL:HA    | 1.62                     | 0.65              |
| 2:CF:63:SER:O      | 2:CF:67:ARG:HG3    | 1.97                     | 0.65              |
| 2:CS:126:THR:O     | 2:CS:130:ILE:HG12  | 1.96                     | 0.65              |
| 2:CW:51:ILE:HA     | 2:CW:136:VAL:HG11  | 1.77                     | 0.65              |
| 8:DG:238:GLN:HA    | 1:DL:52:LYS:HD2    | 1.79                     | 0.65              |
| 2:DR:129:ALA:O     | 2:DR:133:ILE:HD12  | 1.97                     | 0.65              |
| 1:AJ:153:PHE:O     | 1:AJ:157:ILE:HG12  | 1.96                     | 0.65              |
| 6:BD:736:LYS:HE3   | 6:BD:740:ARG:HD2   | 1.76                     | 0.65              |
| 1:CG:6:LYS:HG3     | 1:CG:100:ASP:OD2   | 1.97                     | 0.65              |
| 1:CV:14:GLU:OE1    | 1:CV:16:ARG:NE     | 2.30                     | 0.65              |
| 1:CY:40:ALA:HB2    | 1:CY:97:VAL:HG22   | 1.76                     | 0.65              |
| 1:DJ:21:GLY:O      | 1:DJ:25:ARG:HG3    | 1.97                     | 0.65              |
| 1:DJ:50:ILE:HG23   | 1:DJ:136:VAL:HB    | 1.78                     | 0.65              |
| 1:DL:98:SER:HA     | 2:DM:5:ILE:HG21    | 1.78                     | 0.65              |
| 2:DM:127:VAL:O     | 2:DM:131:GLN:HG2   | 1.97                     | 0.65              |
| 4:AK:68:ARG:HB3    | 4:AK:69:PRO:HD2    | 1.78                     | 0.65              |
| 2:AS:114:GLU:HG3   | 6:BD:471:LYS:HB2   | 1.78                     | 0.65              |
| 1:AZ:105:GLU:HA    | 1:AZ:109:LEU:HB3   | 1.79                     | 0.65              |
| 4:BS:123:PRO:HB2   | 4:BS:126:PRO:HD2   | 1.79                     | 0.65              |
| 9:CQ:204:ASN:HB2   | 9:CQ:213:LEU:HD13  | 1.79                     | 0.65              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 10:CR:200:CYC:NB  | 10:CR:200:CYC:HMA1 | 2.12                     | 0.65              |
| 2:CZ:61:LEU:HD11  | 10:DA:200:CYC:HAA1 | 1.78                     | 0.65              |
| 1:DC:128:GLN:NE2  | 1:DC:132:GLU:OE2   | 2.30                     | 0.65              |
| 2:DT:55:ALA:O     | 2:DT:59:SER:OG     | 2.08                     | 0.65              |
| 1:AC:97:VAL:HG11  | 2:AD:19:LEU:HD12   | 1.79                     | 0.64              |
| 1:AZ:65:ILE:HG22  | 1:AZ:72:ALA:HB3    | 1.80                     | 0.64              |
| 7:BF:104:GLY:O    | 7:BF:111:LYS:NZ    | 2.24                     | 0.64              |
| 2:BN:22:ALA:O     | 2:BN:26:LYS:NZ     | 2.29                     | 0.64              |
| 2:CW:90:ARG:NH1   | 2:CW:94:TYR:OH     | 2.29                     | 0.64              |
| 8:DH:232:ILE:HD12 | 8:DH:233:PRO:HD2   | 1.79                     | 0.64              |
| 9:DI:111:TYR:HB2  | 11:DI:400:45D:H301 | 1.77                     | 0.64              |
| 1:DQ:90:ARG:HG2   | 2:DR:18:TYR:CZ     | 2.32                     | 0.64              |
| 1:DQ:154:ASP:HA   | 1:DQ:157:ILE:HG12  | 1.79                     | 0.64              |
| 2:DR:123:ILE:HG23 | 2:DR:160:LEU:HD23  | 1.78                     | 0.64              |
| 2:AI:65:VAL:HG12  | 2:AI:72:MET:HB2    | 1.79                     | 0.64              |
| 1:AZ:129:SER:O    | 1:AZ:133:MET:HG3   | 1.97                     | 0.64              |
| 2:BL:33:SER:O     | 2:BL:37:ARG:HG3    | 1.97                     | 0.64              |
| 2:BL:83:ARG:NH1   | 10:BL:200:CYC:O2A  | 2.31                     | 0.64              |
| 4:BS:84:ARG:NH2   | 10:BS:200:CYC:O1A  | 2.30                     | 0.64              |
| 2:BY:110:ASN:HD22 | 6:CM:668:ARG:HG2   | 1.62                     | 0.64              |
| 1:CG:52:LYS:NZ    | 8:CP:240:ILE:O     | 2.30                     | 0.64              |
| 2:CZ:30:TYR:O     | 2:CZ:33:SER:OG     | 2.13                     | 0.64              |
| 1:DL:138:SER:HA   | 1:DL:146:ALA:HB1   | 1.79                     | 0.64              |
| 1:DQ:76:GLU:HA    | 8:DZ:203:PHE:CZ    | 2.31                     | 0.64              |
| 2:DR:5:ILE:O      | 2:DR:9:ILE:HG12    | 1.96                     | 0.64              |
| 1:DU:71:ASN:ND2   | 1:DU:121:THR:OG1   | 2.30                     | 0.64              |
| 9:EA:111:TYR:HB2  | 11:EA:400:45D:H301 | 1.78                     | 0.64              |
| 2:BJ:100:ASP:OD2  | 2:BJ:102:SER:OG    | 2.12                     | 0.64              |
| 2:BT:2:GLN:HB2    | 2:BT:6:THR:CG2     | 2.28                     | 0.64              |
| 1:BX:58:LEU:HD22  | 1:BX:129:SER:HB3   | 1.78                     | 0.64              |
| 1:BZ:97:VAL:HG21  | 2:CA:19:LEU:HD12   | 1.78                     | 0.64              |
| 1:CG:107:ILE:HG22 | 10:CG:200:CYC:HBB1 | 1.80                     | 0.64              |
| 9:CQ:46:GLU:HB3   | 9:CQ:50:THR:HG22   | 1.78                     | 0.64              |
| 1:CV:39:ILE:HG12  | 1:CV:145:ASP:HB3   | 1.80                     | 0.64              |
| 1:CV:50:ILE:HA    | 1:CV:136:VAL:HG11  | 1.77                     | 0.64              |
| 5:DF:42:ARG:NH1   | 5:DF:46:MET:SD     | 2.70                     | 0.64              |
| 1:DQ:58:LEU:HD22  | 1:DQ:129:SER:CB    | 2.28                     | 0.64              |
| 1:DQ:122:PRO:HG2  | 1:DQ:125:ALA:HB3   | 1.78                     | 0.64              |
| 2:DR:126:THR:HG23 | 10:DR:200:CYC:HBC3 | 1.78                     | 0.64              |
| 10:AI:200:CYC:HC  | 10:AI:200:CYC:HMD2 | 1.62                     | 0.64              |
| 4:AK:108:ARG:HD3  | 6:BD:249:GLN:HB3   | 1.80                     | 0.64              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 6:BD:676:ARG:HB2   | 6:BD:679:ILE:CG1   | 2.27                     | 0.64              |
| 1:CC:110:VAL:HG13  | 2:CH:76:ARG:HB2    | 1.79                     | 0.64              |
| 1:CE:19:SER:N      | 1:CE:22:GLU:OE1    | 2.25                     | 0.64              |
| 6:CM:603:GLU:OE2   | 6:CM:607:ARG:NE    | 2.23                     | 0.64              |
| 6:CM:748:GLU:OE1   | 6:CM:877:THR:OG1   | 2.12                     | 0.64              |
| 6:CM:792:TYR:CD1   | 6:CM:831:LEU:HD13  | 2.32                     | 0.64              |
| 6:CM:868:ASN:OD1   | 6:CM:871:ARG:NH2   | 2.29                     | 0.64              |
| 9:CQ:84:CYS:O      | 9:CQ:88:ASN:ND2    | 2.21                     | 0.64              |
| 1:CT:68:PRO:HD2    | 8:DY:230:ASN:HD21  | 1.61                     | 0.64              |
| 1:CV:37:LEU:HD22   | 2:CW:24:MET:HE3    | 1.80                     | 0.64              |
| 2:DB:122:PRO:HB2   | 2:DB:125:SER:HB2   | 1.77                     | 0.64              |
| 8:DH:221:MET:HE2   | 1:DS:51:VAL:HG12   | 1.80                     | 0.64              |
| 1:DL:44:THR:O      | 1:DL:47:ARG:NH1    | 2.30                     | 0.64              |
| 2:DM:104:LEU:HD22  | 2:DM:156:ILE:HD11  | 1.79                     | 0.64              |
| 1:DQ:78:THR:O      | 1:DQ:82:LEU:HG     | 1.98                     | 0.64              |
| 10:AA:200:CYC:HC   | 10:AA:200:CYC:HMD2 | 1.62                     | 0.64              |
| 1:AC:7:SER:HB3     | 1:AC:25:ARG:NH1    | 2.12                     | 0.64              |
| 10:AC:200:CYC:HMB1 | 10:AC:200:CYC:HBB3 | 1.80                     | 0.64              |
| 2:AI:75:THR:HG21   | 1:AJ:112:VAL:HG12  | 1.78                     | 0.64              |
| 1:AJ:40:ALA:O      | 1:AJ:44:THR:HG23   | 1.98                     | 0.64              |
| 2:AL:30:TYR:OH     | 2:AL:97:LEU:O      | 2.12                     | 0.64              |
| 6:BD:28:ALA:HB2    | 6:BD:35:LEU:HD23   | 1.79                     | 0.64              |
| 6:BD:137:ARG:NH1   | 6:BD:138:PRO:O     | 2.31                     | 0.64              |
| 2:BL:93:THR:O      | 2:BL:96:MET:HG3    | 1.98                     | 0.64              |
| 1:CC:29:PHE:O      | 1:CC:36:ARG:NH1    | 2.30                     | 0.64              |
| 6:CM:814:LEU:N     | 6:CM:818:GLU:OE1   | 2.27                     | 0.64              |
| 1:AC:16:ARG:O      | 2:AD:94:TYR:OH     | 2.15                     | 0.64              |
| 2:AS:3:ASP:OD1     | 2:AS:6:THR:OG1     | 2.08                     | 0.64              |
| 1:AV:137:ALA:O     | 1:AV:141:MET:HG3   | 1.98                     | 0.64              |
| 2:CH:112:LEU:CD1   | 10:CH:200:CYC:HMB3 | 2.28                     | 0.64              |
| 6:CM:609:LEU:HD13  | 6:CM:640:ILE:HD11  | 1.80                     | 0.64              |
| 1:CV:22:GLU:O      | 1:CV:26:ILE:HD12   | 1.98                     | 0.64              |
| 1:CV:128:GLN:OE1   | 1:CV:131:ARG:NH1   | 2.29                     | 0.64              |
| 9:DI:250:LEU:HD23  | 9:DI:273:VAL:HG22  | 1.79                     | 0.64              |
| 2:DR:73:TYR:OH     | 1:DS:90:ARG:NH2    | 2.30                     | 0.64              |
| 1:AJ:58:LEU:HD22   | 1:AJ:129:SER:HB3   | 1.79                     | 0.64              |
| 1:AR:62:ARG:HG2    | 1:AR:65:ILE:HG12   | 1.79                     | 0.64              |
| 2:AU:48:ALA:HA     | 2:AU:51:ILE:HD13   | 1.79                     | 0.64              |
| 2:CF:1:MET:N       | 5:CK:67:ALA:O      | 2.31                     | 0.64              |
| 10:CG:200:CYC:HC   | 10:CG:200:CYC:HMD2 | 1.61                     | 0.64              |
| 2:CH:71:ASN:HD22   | 2:CH:122:PRO:HD3   | 1.61                     | 0.64              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:DA:100:ASP:OD2  | 1:DA:102:THR:HG23  | 1.97                     | 0.64              |
| 2:DB:137:THR:O    | 2:DB:141:VAL:HG12  | 1.98                     | 0.64              |
| 9:DI:39:LEU:HD12  | 9:DI:139:LEU:HD12  | 1.80                     | 0.64              |
| 1:DQ:65:ILE:HG21  | 10:DQ:200:CYC:HBC2 | 1.80                     | 0.64              |
| 1:DU:27:LYS:HZ3   | 2:DV:35:GLU:HA     | 1.62                     | 0.64              |
| 1:AC:20:PRO:HG2   | 6:BD:172:PRO:HD3   | 1.80                     | 0.64              |
| 4:AK:135:LYS:HD3  | 4:AK:157:PHE:HB2   | 1.79                     | 0.64              |
| 10:BJ:200:CYC:HC  | 10:BJ:200:CYC:HMD2 | 1.62                     | 0.64              |
| 2:CF:108:VAL:HG11 | 2:CF:156:ILE:CD1   | 2.28                     | 0.64              |
| 1:CG:81:CYS:HA    | 10:CG:200:CYC:HHD  | 1.80                     | 0.64              |
| 6:CM:726:LEU:HD11 | 6:CM:735:VAL:HG22  | 1.78                     | 0.64              |
| 10:DK:200:CYC:HC  | 10:DK:200:CYC:HMD2 | 1.62                     | 0.64              |
| 2:DR:62:TYR:OH    | 10:DS:200:CYC:O2D  | 2.08                     | 0.64              |
| 2:DV:47:ASN:HB2   | 2:DV:51:ILE:HD11   | 1.78                     | 0.64              |
| 2:AU:54:GLU:OE1   | 2:AU:136:VAL:HG21  | 1.98                     | 0.64              |
| 1:AV:11:ALA:HB2   | 1:AV:18:LEU:HD23   | 1.80                     | 0.64              |
| 6:BD:609:LEU:HD13 | 6:BD:640:ILE:HD11  | 1.79                     | 0.64              |
| 1:CC:141:MET:HE2  | 1:CC:146:ALA:HA    | 1.80                     | 0.64              |
| 6:CM:52:LEU:HD11  | 6:CM:216:ALA:HB2   | 1.79                     | 0.64              |
| 2:DK:60:LEU:O     | 2:DK:63:SER:OG     | 2.15                     | 0.64              |
| 1:DN:58:LEU:HD22  | 1:DN:129:SER:CB    | 2.28                     | 0.64              |
| 2:DR:85:LEU:CD2   | 10:DR:200:CYC:HBC1 | 2.27                     | 0.64              |
| 1:AA:5:THR:OG1    | 2:AB:1:MET:SD      | 2.53                     | 0.64              |
| 4:AK:131:ILE:HA   | 4:AK:134:MET:HE2   | 1.80                     | 0.64              |
| 1:AR:84:ASP:OD2   | 10:AR:200:CYC:ND   | 2.28                     | 0.64              |
| 10:AR:200:CYC:HC  | 10:AR:200:CYC:HMD2 | 1.63                     | 0.64              |
| 6:BD:377:VAL:O    | 6:BD:381:VAL:HG22  | 1.98                     | 0.64              |
| 2:BL:24:MET:O     | 2:BL:28:LYS:HG2    | 1.98                     | 0.64              |
| 1:BR:9:VAL:HG11   | 6:CM:246:ASN:HB3   | 1.80                     | 0.64              |
| 10:BZ:200:CYC:HC  | 10:BZ:200:CYC:HMD2 | 1.62                     | 0.64              |
| 2:CD:130:ILE:HA   | 2:CD:133:ILE:HD12  | 1.80                     | 0.64              |
| 5:CJ:17:ARG:HG3   | 6:CM:240:VAL:HB    | 1.80                     | 0.64              |
| 9:CQ:205:LEU:HA   | 9:CQ:210:PHE:HE1   | 1.63                     | 0.64              |
| 9:CQ:210:PHE:HA   | 9:CQ:213:LEU:HB3   | 1.79                     | 0.64              |
| 5:DF:43:ILE:HG21  | 5:DF:50:ILE:HD11   | 1.80                     | 0.64              |
| 9:DI:204:ASN:HB2  | 9:DI:213:LEU:HD21  | 1.80                     | 0.64              |
| 1:DU:48:GLU:O     | 1:DU:52:LYS:HG2    | 1.98                     | 0.64              |
| 3:AE:37:ILE:O     | 3:AE:41:GLU:HG2    | 1.98                     | 0.63              |
| 1:AJ:65:ILE:HG13  | 1:AJ:66:VAL:HG23   | 1.80                     | 0.63              |
| 2:AW:75:THR:HG23  | 10:AX:200:CYC:HAB2 | 1.79                     | 0.63              |
| 5:BB:38:ARG:NH2   | 6:BD:641:ASP:O     | 2.24                     | 0.63              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 10:BD:902:CYC:HMA1 | 10:BD:902:CYC:NB   | 2.13                     | 0.63              |
| 1:BK:77:MET:SD     | 10:BK:200:CYC:O2D  | 2.55                     | 0.63              |
| 2:BL:109:LEU:HD23  | 2:BL:159:GLY:HA3   | 1.79                     | 0.63              |
| 2:BT:101:ALA:HB1   | 2:BT:104:LEU:HD12  | 1.80                     | 0.63              |
| 1:CC:129:SER:O     | 1:CC:133:MET:HG3   | 1.98                     | 0.63              |
| 5:CJ:9:CYS:HB2     | 5:CJ:26:TYR:HD1    | 1.62                     | 0.63              |
| 1:CY:85:MET:HB3    | 1:CY:133:MET:HE2   | 1.79                     | 0.63              |
| 9:DI:68:LEU:HD13   | 9:DI:112:ARG:HG2   | 1.78                     | 0.63              |
| 9:DI:87:ALA:O      | 9:DI:89:ARG:NH1    | 2.32                     | 0.63              |
| 1:DL:50:ILE:HG13   | 1:DL:136:VAL:CG1   | 2.29                     | 0.63              |
| 10:AF:200:CYC:OB   | 5:BA:41:GLN:NE2    | 2.31                     | 0.63              |
| 6:BD:5:ALA:HB2     | 6:BD:436:GLN:HG3   | 1.79                     | 0.63              |
| 6:BD:199:ILE:HD13  | 6:BD:227:LEU:CD2   | 2.29                     | 0.63              |
| 2:BN:109:LEU:HD13  | 2:BN:159:GLY:HA3   | 1.78                     | 0.63              |
| 4:BS:72:ASN:HD22   | 4:BS:122:VAL:HA    | 1.63                     | 0.63              |
| 2:BW:1:MET:SD      | 2:BW:103:ILE:HD12  | 2.38                     | 0.63              |
| 1:CE:137:ALA:O     | 1:CE:141:MET:HG3   | 1.98                     | 0.63              |
| 6:CM:225:ASP:O     | 6:CM:228:LEU:HG    | 1.99                     | 0.63              |
| 2:AI:60:LEU:O      | 2:AI:63:SER:OG     | 2.12                     | 0.63              |
| 1:AP:58:LEU:HD22   | 1:AP:129:SER:HB3   | 1.79                     | 0.63              |
| 1:AX:81:CYS:HA     | 10:AX:200:CYC:HHD  | 1.79                     | 0.63              |
| 1:BP:93:THR:O      | 1:BP:97:VAL:HG23   | 1.98                     | 0.63              |
| 1:BR:97:VAL:HG21   | 4:BS:19:LEU:HD12   | 1.81                     | 0.63              |
| 2:CF:127:VAL:O     | 2:CF:131:GLN:HG2   | 1.99                     | 0.63              |
| 2:CU:37:ARG:NH1    | 2:CU:148:GLU:OE2   | 2.31                     | 0.63              |
| 9:DI:155:ARG:O     | 9:DI:159:VAL:HG23  | 1.97                     | 0.63              |
| 1:AA:12:ASP:OD2    | 2:AB:107:ARG:NH1   | 2.26                     | 0.63              |
| 1:AX:142:SER:OG    | 1:AX:144:ASP:OD1   | 2.10                     | 0.63              |
| 2:BJ:2:GLN:HG2     | 5:CJ:65:GLY:HA3    | 1.80                     | 0.63              |
| 10:BM:200:CYC:HC   | 10:BM:200:CYC:HMD2 | 1.62                     | 0.63              |
| 10:BN:200:CYC:HMA1 | 10:BN:200:CYC:NB   | 2.13                     | 0.63              |
| 1:BV:35:ALA:O      | 1:BV:39:ILE:HD12   | 1.98                     | 0.63              |
| 2:BW:4:ALA:O       | 2:BW:8:VAL:HG23    | 1.99                     | 0.63              |
| 2:BW:158:SER:O     | 2:BW:161:SER:OG    | 2.12                     | 0.63              |
| 1:CG:109:LEU:HD21  | 1:CG:159:LYS:CG    | 2.28                     | 0.63              |
| 6:CM:867:PRO:HB3   | 2:DT:114:GLU:OE1   | 1.98                     | 0.63              |
| 2:CZ:20:ASP:O      | 2:CZ:24:MET:HG2    | 1.99                     | 0.63              |
| 1:DJ:96:VAL:HG22   | 1:DJ:152:TYR:HD2   | 1.63                     | 0.63              |
| 10:DJ:200:CYC:HMB1 | 10:DJ:200:CYC:HBB3 | 1.79                     | 0.63              |
| 10:AF:200:CYC:HMA1 | 10:AF:200:CYC:NB   | 2.13                     | 0.63              |
| 4:AK:72:ASN:HD22   | 4:AK:123:PRO:HD2   | 1.63                     | 0.63              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:CC:92:VAL:O      | 1:CC:96:VAL:HG13   | 1.99                     | 0.63              |
| 8:CP:221:MET:O     | 8:CP:225:ILE:HG22  | 1.99                     | 0.63              |
| 1:CR:75:GLU:HA     | 1:CR:78:THR:HG22   | 1.81                     | 0.63              |
| 2:CU:71:ASN:HB3    | 10:CU:200:CYC:OC   | 1.99                     | 0.63              |
| 2:CZ:96:MET:HA     | 2:CZ:152:TYR:HE2   | 1.63                     | 0.63              |
| 1:DN:122:PRO:HD2   | 10:DN:200:CYC:OC   | 1.99                     | 0.63              |
| 2:DT:66:THR:HG21   | 10:DU:200:CYC:CBA  | 2.28                     | 0.63              |
| 9:EA:224:GLN:HE22  | 9:EA:230:PRO:HG3   | 1.62                     | 0.63              |
| 1:AV:97:VAL:HG11   | 2:AW:19:LEU:CD1    | 2.29                     | 0.63              |
| 1:AV:109:LEU:HD22  | 1:AV:159:LYS:HB3   | 1.81                     | 0.63              |
| 1:BK:10:ASN:ND2    | 6:CM:27:GLN:OE1    | 2.32                     | 0.63              |
| 1:BK:105:GLU:HA    | 1:BK:109:LEU:CB    | 2.29                     | 0.63              |
| 1:BK:105:GLU:HG2   | 1:BK:109:LEU:HD23  | 1.81                     | 0.63              |
| 4:BS:64:PRO:HG2    | 7:CO:105:PRO:HB2   | 1.80                     | 0.63              |
| 6:CM:15:GLN:HB3    | 6:CM:260:ALA:O     | 1.99                     | 0.63              |
| 6:CM:489:PRO:HD2   | 6:CM:492:ASN:HD22  | 1.63                     | 0.63              |
| 2:CS:37:ARG:HH12   | 2:CS:99:GLY:HA2    | 1.62                     | 0.63              |
| 1:CY:44:THR:HG22   | 2:CZ:18:TYR:HD2    | 1.64                     | 0.63              |
| 2:DB:20:ASP:O      | 2:DB:24:MET:HG2    | 1.99                     | 0.63              |
| 9:DI:62:GLN:HA     | 9:DI:65:GLU:OE1    | 1.99                     | 0.63              |
| 1:DU:57:ARG:HH22   | 1:DU:135:GLU:HB3   | 1.63                     | 0.63              |
| 2:AD:36:LEU:HD11   | 2:AD:144:ASP:HB2   | 1.80                     | 0.63              |
| 2:AD:83:ARG:HD2    | 5:BA:22:LEU:CD1    | 2.29                     | 0.63              |
| 1:AR:138:SER:HA    | 1:AR:146:ALA:HB1   | 1.80                     | 0.63              |
| 2:AU:74:THR:HA     | 10:AV:200:CYC:HBB2 | 1.81                     | 0.63              |
| 1:AV:54:ALA:CB     | 1:AV:133:MET:HG2   | 2.28                     | 0.63              |
| 6:BD:347:PHE:CE1   | 6:BD:380:LEU:HD21  | 2.34                     | 0.63              |
| 1:BI:98:SER:HA     | 2:BJ:5:ILE:HG21    | 1.79                     | 0.63              |
| 2:BJ:15:GLN:OE1    | 2:BJ:17:LYS:NZ     | 2.31                     | 0.63              |
| 1:BK:2:SER:HA      | 1:BK:100:ASP:HB3   | 1.79                     | 0.63              |
| 2:BT:37:ARG:HG3    | 7:CO:86:VAL:HG23   | 1.81                     | 0.63              |
| 2:BY:116:TYR:HE2   | 2:BY:160:LEU:HD21  | 1.64                     | 0.63              |
| 2:CH:83:ARG:NH2    | 10:CH:200:CYC:O2A  | 2.32                     | 0.63              |
| 10:CR:200:CYC:HMA1 | 10:CR:200:CYC:HB   | 1.62                     | 0.63              |
| 2:CS:83:ARG:NH2    | 2:CS:84:ASP:OD1    | 2.29                     | 0.63              |
| 2:CU:62:TYR:OH     | 10:CV:200:CYC:O2D  | 2.13                     | 0.63              |
| 2:CW:15:GLN:HG2    | 2:CW:17:LYS:HG2    | 1.81                     | 0.63              |
| 1:DL:50:ILE:HG13   | 1:DL:136:VAL:HB    | 1.81                     | 0.63              |
| 2:DO:81:CYS:HA     | 10:DO:200:CYC:HHD  | 1.81                     | 0.63              |
| 2:DT:20:ASP:O      | 2:DT:24:MET:HG2    | 1.99                     | 0.63              |
| 3:AE:37:ILE:HG23   | 2:AF:24:MET:CE     | 2.29                     | 0.63              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AH:68:PRO:HA     | 1:AH:73:TYR:CD2    | 2.33                     | 0.63              |
| 2:AI:71:ASN:ND2    | 2:AI:121:VAL:HA    | 2.14                     | 0.63              |
| 2:AS:63:SER:O      | 2:AS:67:ARG:HG3    | 1.99                     | 0.63              |
| 1:AV:71:ASN:OD1    | 1:AV:121:THR:OG1   | 2.16                     | 0.63              |
| 2:AW:73:TYR:OH     | 1:AX:90:ARG:NH2    | 2.30                     | 0.63              |
| 1:AZ:92:VAL:O      | 1:AZ:96:VAL:HG13   | 1.99                     | 0.63              |
| 9:BH:89:ARG:HD3    | 9:BH:170:LYS:HD2   | 1.80                     | 0.63              |
| 1:BK:83:ARG:NH1    | 10:BK:200:CYC:O2A  | 2.32                     | 0.63              |
| 1:BK:141:MET:HG3   | 1:BK:146:ALA:HB2   | 1.80                     | 0.63              |
| 10:BK:200:CYC:HBB3 | 10:BK:200:CYC:HMB1 | 1.81                     | 0.63              |
| 1:BP:68:PRO:HA     | 1:BP:73:TYR:CD2    | 2.33                     | 0.63              |
| 1:BR:12:ASP:OD1    | 4:BS:91:ARG:NH1    | 2.27                     | 0.63              |
| 1:BZ:115:MET:HE3   | 10:BZ:200:CYC:HMB3 | 1.80                     | 0.63              |
| 2:DK:84:ASP:OD2    | 2:DK:116:TYR:OH    | 2.11                     | 0.63              |
| 1:DQ:77:MET:CE     | 8:DZ:201:ARG:HB2   | 2.28                     | 0.63              |
| 2:DR:24:MET:O      | 2:DR:28:LYS:HG2    | 1.99                     | 0.63              |
| 1:AA:105:GLU:HG3   | 1:AA:110:VAL:HG23  | 1.79                     | 0.63              |
| 1:AA:115:MET:HG3   | 2:AF:78:TYR:CD1    | 2.34                     | 0.63              |
| 2:AF:57:ALA:HA     | 2:AF:61:LEU:HD12   | 1.79                     | 0.63              |
| 1:AN:113:ARG:HG2   | 1:AN:123:ILE:HD13  | 1.81                     | 0.63              |
| 10:AP:200:CYC:HMD2 | 10:AP:200:CYC:HC   | 1.64                     | 0.63              |
| 6:BD:316:MET:HE2   | 6:BD:395:VAL:HG22  | 1.80                     | 0.63              |
| 9:BH:236:ASN:OD1   | 9:BH:239:ARG:NH2   | 2.32                     | 0.63              |
| 1:BR:86:ASP:OD1    | 4:BS:18:TYR:OH     | 2.11                     | 0.63              |
| 2:BY:71:ASN:O      | 2:BY:77:ARG:HD3    | 1.98                     | 0.63              |
| 2:CF:75:THR:HG23   | 10:CG:200:CYC:HAB2 | 1.80                     | 0.63              |
| 2:CH:108:VAL:HG12  | 2:CH:109:LEU:HD23  | 1.81                     | 0.63              |
| 6:CM:447:TYR:OH    | 10:CM:901:CYC:O2A  | 2.10                     | 0.63              |
| 9:CQ:239:ARG:NH2   | 1:DA:41:GLU:HB3    | 2.14                     | 0.63              |
| 2:DB:51:ILE:HD11   | 2:DB:140:LEU:HD23  | 1.81                     | 0.63              |
| 1:DQ:105:GLU:O     | 1:DQ:110:VAL:HG23  | 1.98                     | 0.63              |
| 1:AH:109:LEU:HG    | 1:AH:159:LYS:HG2   | 1.81                     | 0.62              |
| 1:AR:11:ALA:HB2    | 1:AR:18:LEU:HD23   | 1.79                     | 0.62              |
| 1:BX:122:PRO:HG2   | 1:BX:125:ALA:HB3   | 1.80                     | 0.62              |
| 1:CC:68:PRO:HG2    | 1:CV:66:VAL:HG21   | 1.81                     | 0.62              |
| 1:CE:12:ASP:OD2    | 2:CF:107:ARG:NH1   | 2.31                     | 0.62              |
| 1:DA:66:VAL:HA     | 1:DA:72:ALA:O      | 1.98                     | 0.62              |
| 2:DM:78:TYR:CD1    | 1:DN:115:MET:HG3   | 2.34                     | 0.62              |
| 2:DO:127:VAL:O     | 2:DO:131:GLN:HG2   | 1.99                     | 0.62              |
| 2:DV:88:TYR:OH     | 2:DV:112:LEU:HD21  | 1.99                     | 0.62              |
| 2:AO:74:THR:HG23   | 1:AP:107:ILE:HA    | 1.78                     | 0.62              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:AU:2:GLN:NE2    | 2:AU:10:ASN:OD1    | 2.24                     | 0.62              |
| 2:AY:76:ARG:HB2   | 1:AZ:110:VAL:CG1   | 2.29                     | 0.62              |
| 6:BD:152:SER:HB2  | 10:BD:902:CYC:H3C  | 1.80                     | 0.62              |
| 2:BN:55:ALA:O     | 2:BN:59:SER:OG     | 2.14                     | 0.62              |
| 4:BS:44:ILE:HD12  | 4:BS:94:SER:HB2    | 1.80                     | 0.62              |
| 2:CA:51:ILE:HG23  | 2:CA:136:VAL:HG12  | 1.80                     | 0.62              |
| 1:CE:54:ALA:CB    | 1:CE:133:MET:HG2   | 2.29                     | 0.62              |
| 1:CR:14:GLU:OE1   | 1:CR:16:ARG:NE     | 2.27                     | 0.62              |
| 1:CY:4:VAL:HG13   | 2:CZ:97:LEU:HD23   | 1.81                     | 0.62              |
| 1:CY:118:SER:O    | 2:DD:53:LYS:NZ     | 2.24                     | 0.62              |
| 2:CZ:2:GLN:N      | 2:CZ:102:SER:OG    | 2.25                     | 0.62              |
| 2:CZ:108:VAL:HG12 | 2:CZ:109:LEU:HD23  | 1.81                     | 0.62              |
| 1:DA:38:ARG:NH1   | 1:DA:145:ASP:OD2   | 2.32                     | 0.62              |
| 1:DL:8:ILE:HD13   | 1:DL:18:LEU:HD11   | 1.79                     | 0.62              |
| 2:DO:58:LYS:NZ    | 9:EA:100:SER:O     | 2.29                     | 0.62              |
| 1:DS:41:GLU:HG3   | 2:DT:24:MET:HE2    | 1.81                     | 0.62              |
| 2:DT:104:LEU:HD22 | 2:DT:156:ILE:HD11  | 1.81                     | 0.62              |
| 2:AQ:105:ASP:OD2  | 2:AQ:155:TYR:OH    | 2.10                     | 0.62              |
| 5:BA:13:GLN:NE2   | 5:BA:46:MET:O      | 2.32                     | 0.62              |
| 5:BB:39:GLU:O     | 5:BB:43:ILE:HG12   | 2.00                     | 0.62              |
| 6:BD:706:ILE:HG13 | 2:DD:15:GLN:HE21   | 1.64                     | 0.62              |
| 6:BD:797:ASN:HB2  | 10:CZ:200:CYC:OB   | 2.00                     | 0.62              |
| 1:BI:12:ASP:OD2   | 2:BJ:107:ARG:NH1   | 2.29                     | 0.62              |
| 1:BP:16:ARG:O     | 2:BQ:94:TYR:OH     | 2.16                     | 0.62              |
| 1:CC:38:ARG:O     | 1:CC:42:THR:HG23   | 1.99                     | 0.62              |
| 1:CC:110:VAL:CG1  | 2:CH:76:ARG:HB2    | 2.30                     | 0.62              |
| 1:CE:53:GLN:O     | 1:CE:57:ARG:HD3    | 1.98                     | 0.62              |
| 6:CM:621:ASN:ND2  | 10:CM:901:CYC:O1A  | 2.32                     | 0.62              |
| 1:CY:100:ASP:OD2  | 1:CY:102:THR:OG1   | 2.10                     | 0.62              |
| 2:DB:134:LYS:HG3  | 2:DB:150:GLY:HA2   | 1.80                     | 0.62              |
| 8:DG:218:PHE:HE1  | 1:DQ:83:ARG:HH11   | 1.46                     | 0.62              |
| 1:AC:105:GLU:HA   | 1:AC:109:LEU:CB    | 2.29                     | 0.62              |
| 2:AI:104:LEU:HD11 | 2:AI:152:TYR:HB3   | 1.82                     | 0.62              |
| 1:AV:134:LYS:HD3  | 1:AV:153:PHE:HB3   | 1.81                     | 0.62              |
| 2:BL:62:TYR:HE2   | 3:BM:80:GLN:HG3    | 1.65                     | 0.62              |
| 2:BN:37:ARG:NH1   | 2:BN:148:GLU:OE2   | 2.33                     | 0.62              |
| 2:BN:122:PRO:HB2  | 2:BN:125:SER:HB2   | 1.81                     | 0.62              |
| 2:BT:81:CYS:HA    | 10:BT:200:CYC:HBC3 | 1.80                     | 0.62              |
| 2:BW:134:LYS:HB2  | 2:BW:153:LEU:HD13  | 1.80                     | 0.62              |
| 1:CC:114:GLU:HG3  | 1:CC:117:ARG:HH21  | 1.65                     | 0.62              |
| 1:CG:84:ASP:OD2   | 10:CG:200:CYC:ND   | 2.32                     | 0.62              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:CY:90:ARG:HG2    | 2:CZ:18:TYR:CZ     | 2.33                     | 0.62              |
| 2:DR:76:ARG:NH2    | 10:DR:200:CYC:O1D  | 2.27                     | 0.62              |
| 2:AW:74:THR:OG1    | 2:AW:77:ARG:NH2    | 2.27                     | 0.62              |
| 1:BK:122:PRO:HG2   | 1:BK:125:ALA:HB3   | 1.79                     | 0.62              |
| 2:CD:64:ASP:OD1    | 2:CD:67:ARG:NH1    | 2.31                     | 0.62              |
| 2:CF:2:GLN:O       | 2:CF:102:SER:OG    | 2.18                     | 0.62              |
| 6:CM:749:ARG:HH12  | 10:DV:200:CYC:HBA1 | 1.63                     | 0.62              |
| 10:CY:200:CYC:HMD2 | 10:CY:200:CYC:HC   | 1.64                     | 0.62              |
| 2:DB:126:THR:O     | 2:DB:130:ILE:HG13  | 2.00                     | 0.62              |
| 1:DQ:39:ILE:HA     | 1:DQ:42:THR:HG22   | 1.82                     | 0.62              |
| 5:DX:42:ARG:NH1    | 5:DX:46:MET:SD     | 2.73                     | 0.62              |
| 10:AD:200:CYC:HAA2 | 5:BA:11:PRO:HB3    | 1.81                     | 0.62              |
| 3:AE:69:GLY:N      | 3:AE:73:TYR:OH     | 2.26                     | 0.62              |
| 1:AH:40:ALA:HB2    | 1:AH:97:VAL:HG22   | 1.81                     | 0.62              |
| 1:AR:83:ARG:NH2    | 10:AR:200:CYC:O2A  | 2.32                     | 0.62              |
| 1:BI:115:MET:HG3   | 2:BN:78:TYR:CD1    | 2.34                     | 0.62              |
| 1:BK:96:VAL:HA     | 1:BK:152:TYR:HE2   | 1.65                     | 0.62              |
| 2:BQ:77:ARG:HG2    | 10:BQ:200:CYC:HMD1 | 1.81                     | 0.62              |
| 10:BS:200:CYC:HC   | 10:BS:200:CYC:HMD2 | 1.63                     | 0.62              |
| 2:BT:17:LYS:O      | 6:CM:165:TYR:OH    | 2.18                     | 0.62              |
| 2:CA:67:ARG:O      | 2:CA:73:TYR:HB2    | 1.99                     | 0.62              |
| 1:CC:7:SER:HB2     | 1:CC:18:LEU:HD11   | 1.80                     | 0.62              |
| 6:CM:754:TYR:OH    | 2:DV:83:ARG:NH1    | 2.33                     | 0.62              |
| 9:EA:253:GLU:OE2   | 9:EA:272:LYS:NZ    | 2.30                     | 0.62              |
| 1:AC:8:ILE:CD1     | 2:AD:98:ALA:HB2    | 2.30                     | 0.62              |
| 1:AP:95:GLY:HA3    | 1:AP:104:ILE:HD11  | 1.82                     | 0.62              |
| 1:AX:27:LYS:HZ3    | 2:AY:35:GLU:HA     | 1.65                     | 0.62              |
| 1:AX:109:LEU:HD21  | 1:AX:159:LYS:CG    | 2.29                     | 0.62              |
| 6:BD:827:ALA:HB2   | 2:CZ:87:TYR:OH     | 1.99                     | 0.62              |
| 9:BH:235:GLU:CG    | 1:DS:45:GLY:HA2    | 2.30                     | 0.62              |
| 1:BK:35:ALA:O      | 1:BK:39:ILE:HG12   | 1.98                     | 0.62              |
| 2:BQ:85:LEU:HG     | 10:BQ:200:CYC:HBC1 | 1.81                     | 0.62              |
| 1:BR:18:LEU:HD13   | 4:BS:98:ILE:HD12   | 1.80                     | 0.62              |
| 4:BS:76:THR:HG23   | 10:CM:902:CYC:OB   | 1.99                     | 0.62              |
| 4:BS:142:ALA:HB1   | 4:BS:147:LEU:HD12  | 1.81                     | 0.62              |
| 1:BV:154:ASP:HB3   | 2:CD:46:ALA:HB2    | 1.82                     | 0.62              |
| 1:CC:105:GLU:HA    | 1:CC:109:LEU:HB3   | 1.82                     | 0.62              |
| 2:CH:71:ASN:HD22   | 2:CH:121:VAL:HA    | 1.64                     | 0.62              |
| 2:CH:71:ASN:ND2    | 2:CH:121:VAL:HA    | 2.14                     | 0.62              |
| 9:CQ:289:ARG:NH2   | 9:DI:307:ALA:O     | 2.33                     | 0.62              |
| 1:CR:77:MET:HA     | 1:CR:80:THR:HG22   | 1.81                     | 0.62              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:DA:50:ILE:HD11   | 1:DA:136:VAL:HG13  | 1.82                     | 0.62              |
| 1:DA:98:SER:HA     | 2:DB:5:ILE:CD1     | 2.29                     | 0.62              |
| 10:DS:200:CYC:HMA1 | 10:DS:200:CYC:NB   | 2.14                     | 0.62              |
| 3:AE:29:PHE:HA     | 3:AE:32:THR:HG22   | 1.82                     | 0.62              |
| 3:AE:85:TYR:CE1    | 3:AE:129:ALA:HB1   | 2.35                     | 0.62              |
| 4:AK:44:ILE:HG22   | 4:AK:138:ILE:HD12  | 1.80                     | 0.62              |
| 1:AN:19:SER:HB3    | 1:AN:22:GLU:HG3    | 1.81                     | 0.62              |
| 1:AN:108:GLY:HA2   | 2:AS:75:THR:HG23   | 1.82                     | 0.62              |
| 2:AQ:71:ASN:O      | 2:AQ:77:ARG:HD3    | 2.00                     | 0.62              |
| 1:CC:89:LEU:O      | 1:CC:93:THR:HG23   | 2.00                     | 0.62              |
| 2:DB:71:ASN:HB3    | 10:DB:200:CYC:OC   | 2.00                     | 0.62              |
| 10:DD:200:CYC:HC   | 10:DD:200:CYC:HMD2 | 1.65                     | 0.62              |
| 9:DI:260:ALA:N     | 9:DI:264:PHE:O     | 2.21                     | 0.62              |
| 9:EA:188:VAL:HG11  | 9:EA:252:PRO:HG2   | 1.81                     | 0.62              |
| 4:AK:51:ILE:HD13   | 4:AK:138:ILE:CD1   | 2.30                     | 0.62              |
| 4:AK:64:PRO:CG     | 7:BF:105:PRO:HB2   | 2.30                     | 0.62              |
| 6:BD:612:ARG:NH2   | 6:BD:644:GLU:OE1   | 2.33                     | 0.62              |
| 2:BL:112:LEU:HA    | 2:BL:115:THR:HG22  | 1.82                     | 0.62              |
| 2:BT:94:TYR:OH     | 6:CM:33:ARG:O      | 2.17                     | 0.62              |
| 1:BV:84:ASP:OD2    | 10:BV:200:CYC:ND   | 2.33                     | 0.62              |
| 10:CE:200:CYC:HC   | 10:CE:200:CYC:HMD2 | 1.64                     | 0.62              |
| 2:CS:91:TYR:HE1    | 2:CS:107:ARG:HD3   | 1.65                     | 0.62              |
| 1:CV:18:LEU:HD12   | 1:CV:22:GLU:HB3    | 1.81                     | 0.62              |
| 1:CY:92:VAL:HG11   | 1:CY:153:PHE:CD1   | 2.34                     | 0.62              |
| 1:DL:115:MET:CE    | 10:DL:200:CYC:HMB2 | 2.29                     | 0.62              |
| 1:DL:143:SER:OG    | 1:DL:144:ASP:N     | 2.29                     | 0.62              |
| 2:DM:62:TYR:OH     | 10:DN:200:CYC:O2D  | 2.16                     | 0.62              |
| 1:DS:104:ILE:HG22  | 1:DS:109:LEU:HD23  | 1.82                     | 0.62              |
| 2:DT:3:ASP:H       | 2:DT:6:THR:HG1     | 1.47                     | 0.62              |
| 2:DT:123:ILE:HG23  | 2:DT:160:LEU:HG    | 1.81                     | 0.62              |
| 2:AQ:83:ARG:NH1    | 2:AQ:84:ASP:OD1    | 2.32                     | 0.62              |
| 1:AV:83:ARG:NH1    | 10:AV:200:CYC:O1A  | 2.23                     | 0.62              |
| 4:BS:92:TYR:CE2    | 10:BS:200:CYC:HBB1 | 2.35                     | 0.62              |
| 1:BV:56:ASP:OD1    | 7:CO:117:VAL:HG23  | 2.00                     | 0.62              |
| 10:BV:200:CYC:HC   | 10:BV:200:CYC:HMD2 | 1.65                     | 0.62              |
| 6:CM:71:ALA:O      | 6:CM:75:ILE:HG12   | 2.00                     | 0.62              |
| 6:CM:861:LEU:HD23  | 10:DT:200:CYC:OB   | 1.99                     | 0.62              |
| 2:CS:104:LEU:HD21  | 2:CS:156:ILE:CD1   | 2.30                     | 0.62              |
| 1:CY:115:MET:SD    | 2:DD:78:TYR:HB3    | 2.40                     | 0.62              |
| 1:DA:58:LEU:HD22   | 1:DA:129:SER:HB3   | 1.82                     | 0.62              |
| 1:DJ:37:LEU:HD11   | 2:DK:24:MET:CE     | 2.30                     | 0.62              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:DK:41:ALA:HB2    | 2:DK:97:LEU:HD21   | 1.82                     | 0.62              |
| 3:AE:131:THR:HG22  | 3:AE:157:ILE:HD13  | 1.82                     | 0.61              |
| 1:AR:101:VAL:HG21  | 1:AR:155:PHE:CD2   | 2.35                     | 0.61              |
| 1:AR:122:PRO:HG2   | 1:AR:125:ALA:HB3   | 1.82                     | 0.61              |
| 1:AR:151:ALA:HB1   | 1:AV:20:PRO:HB3    | 1.82                     | 0.61              |
| 6:BD:225:ASP:O     | 6:BD:228:LEU:HG    | 1.99                     | 0.61              |
| 6:BD:385:GLU:OE2   | 6:BD:399:ARG:NH2   | 2.33                     | 0.61              |
| 6:BD:702:THR:HB    | 2:DT:151:VAL:HG22  | 1.82                     | 0.61              |
| 6:BD:801:ILE:CD1   | 6:BD:822:TYR:HB3   | 2.29                     | 0.61              |
| 10:BI:200:CYC:HMB1 | 10:BI:200:CYC:HBB3 | 1.80                     | 0.61              |
| 2:BJ:1:MET:CE      | 2:BJ:103:ILE:HD13  | 2.30                     | 0.61              |
| 3:BM:109:LEU:HD22  | 3:BM:159:PHE:HB3   | 1.81                     | 0.61              |
| 6:CM:182:LEU:HD12  | 6:CM:185:VAL:HG23  | 1.81                     | 0.61              |
| 9:DI:107:LEU:HD22  | 9:DI:155:ARG:HG2   | 1.82                     | 0.61              |
| 2:DK:36:LEU:HA     | 2:DK:39:ARG:HG2    | 1.81                     | 0.61              |
| 2:DR:35:GLU:HA     | 2:DR:38:VAL:CG1    | 2.30                     | 0.61              |
| 1:DS:134:LYS:HE3   | 1:DS:150:SER:OG    | 1.99                     | 0.61              |
| 9:EA:25:ILE:HD13   | 9:EA:153:VAL:HG13  | 1.82                     | 0.61              |
| 1:AC:25:ARG:CD     | 6:BD:42:GLU:HG3    | 2.30                     | 0.61              |
| 1:AZ:38:ARG:O      | 1:AZ:42:THR:HG23   | 2.00                     | 0.61              |
| 6:BD:792:TYR:HE2   | 1:CY:13:ALA:HA     | 1.65                     | 0.61              |
| 1:BK:33:GLY:HA2    | 1:BK:36:ARG:HE     | 1.65                     | 0.61              |
| 2:BQ:71:ASN:ND2    | 2:BQ:121:VAL:HA    | 2.14                     | 0.61              |
| 1:BV:64:ASP:HA     | 1:BV:67:SER:HB2    | 1.83                     | 0.61              |
| 1:BV:94:TYR:OH     | 2:BW:17:LYS:O      | 2.17                     | 0.61              |
| 2:CH:51:ILE:HD13   | 2:CH:137:THR:HG22  | 1.83                     | 0.61              |
| 5:CJ:9:CYS:HB2     | 5:CJ:26:TYR:CD1    | 2.35                     | 0.61              |
| 1:CY:124:GLU:OE1   | 1:CY:124:GLU:N     | 2.31                     | 0.61              |
| 2:DB:2:GLN:NE2     | 2:DB:7:ALA:HA      | 2.15                     | 0.61              |
| 8:DH:237:ALA:O     | 8:DH:240:ILE:HG22  | 1.99                     | 0.61              |
| 1:DQ:5:THR:HA      | 1:DQ:8:ILE:HG22    | 1.82                     | 0.61              |
| 9:EA:37:LEU:HG     | 11:EA:400:45D:H291 | 1.83                     | 0.61              |
| 9:EA:223:LEU:HB3   | 9:EA:231:ILE:HG22  | 1.82                     | 0.61              |
| 1:AX:81:CYS:O      | 1:AX:85:MET:HG2    | 2.01                     | 0.61              |
| 6:BD:702:THR:O     | 6:BD:706:ILE:HG12  | 2.00                     | 0.61              |
| 1:BK:115:MET:HE1   | 10:BK:200:CYC:HMB3 | 1.80                     | 0.61              |
| 2:CD:111:GLY:HA2   | 2:CD:114:GLU:OE2   | 1.99                     | 0.61              |
| 2:CH:76:ARG:NH2    | 10:CH:200:CYC:O2D  | 2.31                     | 0.61              |
| 6:CM:377:VAL:O     | 6:CM:381:VAL:HG22  | 2.00                     | 0.61              |
| 6:CM:576:ARG:NH2   | 6:CM:640:ILE:O     | 2.26                     | 0.61              |
| 2:CW:57:ALA:HA     | 2:CW:61:LEU:HD12   | 1.81                     | 0.61              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:CY:77:MET:CE    | 8:DH:201:ARG:HB2   | 2.30                     | 0.61              |
| 10:CY:200:CYC:CBA | 2:DD:61:LEU:HD22   | 2.30                     | 0.61              |
| 1:DA:27:LYS:HE3   | 2:DB:35:GLU:OE1    | 2.01                     | 0.61              |
| 9:DI:223:LEU:HB3  | 9:DI:231:ILE:HG22  | 1.82                     | 0.61              |
| 2:DM:6:THR:HG22   | 2:DM:10:ASN:HD21   | 1.65                     | 0.61              |
| 2:DR:72:MET:HE3   | 2:DR:78:TYR:HA     | 1.81                     | 0.61              |
| 9:EA:142:ILE:HD11 | 9:EA:153:VAL:HG11  | 1.81                     | 0.61              |
| 1:AC:113:ARG:HH22 | 1:AH:117:ARG:HD3   | 1.66                     | 0.61              |
| 1:AH:105:GLU:HA   | 1:AH:109:LEU:CB    | 2.30                     | 0.61              |
| 2:AI:8:VAL:HG21   | 2:AI:27:LEU:CD1    | 2.26                     | 0.61              |
| 1:AJ:32:GLY:O     | 1:AJ:36:ARG:HG3    | 2.00                     | 0.61              |
| 4:AK:61:GLU:OE1   | 4:AK:61:GLU:N      | 2.33                     | 0.61              |
| 4:AK:97:LEU:CD2   | 4:AK:153:ILE:HA    | 2.30                     | 0.61              |
| 1:AP:81:CYS:HA    | 10:AP:200:CYC:HHD  | 1.82                     | 0.61              |
| 6:BD:195:THR:CG2  | 10:BD:902:CYC:H2C  | 2.29                     | 0.61              |
| 2:BQ:114:GLU:HG3  | 6:CM:472:ARG:NH1   | 2.15                     | 0.61              |
| 10:BS:200:CYC:HB  | 10:BS:200:CYC:HMA1 | 1.65                     | 0.61              |
| 2:CA:63:SER:O     | 2:CA:67:ARG:HG3    | 2.00                     | 0.61              |
| 1:CR:95:GLY:CA    | 1:CR:104:ILE:HD11  | 2.30                     | 0.61              |
| 1:CY:116:TYR:HB2  | 1:CY:123:ILE:HD11  | 1.81                     | 0.61              |
| 2:CZ:127:VAL:O    | 2:CZ:131:GLN:HG2   | 1.99                     | 0.61              |
| 8:DG:210:LEU:HD22 | 8:DG:216:MET:HG3   | 1.82                     | 0.61              |
| 2:DR:85:LEU:HD21  | 10:DR:200:CYC:HBC1 | 1.80                     | 0.61              |
| 1:DS:27:LYS:NZ    | 2:DT:35:GLU:OE1    | 2.33                     | 0.61              |
| 9:EA:21:VAL:O     | 9:EA:25:ILE:HG12   | 1.99                     | 0.61              |
| 1:AC:68:PRO:HA    | 1:AC:73:TYR:CE1    | 2.36                     | 0.61              |
| 1:AC:115:MET:HE1  | 10:AC:200:CYC:HMB3 | 1.82                     | 0.61              |
| 2:AD:108:VAL:O    | 2:AD:112:LEU:HD23  | 2.00                     | 0.61              |
| 3:AE:35:GLN:O     | 3:AE:39:ILE:HG12   | 2.01                     | 0.61              |
| 1:AP:128:GLN:NE2  | 1:AP:132:GLU:OE2   | 2.28                     | 0.61              |
| 5:BB:35:ASN:ND2   | 6:BD:637:GLU:OE2   | 2.33                     | 0.61              |
| 6:BD:14:PRO:HG3   | 6:BD:401:LEU:CD2   | 2.31                     | 0.61              |
| 6:BD:35:LEU:HD22  | 6:BD:39:GLU:HB3    | 1.83                     | 0.61              |
| 6:BD:792:TYR:CE2  | 1:CY:13:ALA:HA     | 2.36                     | 0.61              |
| 1:BK:123:ILE:HG13 | 1:BK:160:MET:O     | 2.00                     | 0.61              |
| 4:BS:119:SER:OG   | 6:CM:10:SER:O      | 2.10                     | 0.61              |
| 2:BT:97:LEU:HD13  | 6:CM:35:LEU:HD12   | 1.82                     | 0.61              |
| 1:BZ:38:ARG:O     | 1:BZ:42:THR:HG23   | 2.00                     | 0.61              |
| 1:CC:90:ARG:NH2   | 2:CH:73:TYR:OH     | 2.33                     | 0.61              |
| 2:DM:20:ASP:O     | 2:DM:24:MET:HG2    | 2.01                     | 0.61              |
| 1:DS:78:THR:O     | 1:DS:82:LEU:HG     | 2.00                     | 0.61              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:DT:131:GLN:O     | 2:DT:135:GLU:HG2   | 2.00                     | 0.61              |
| 1:AR:24:ASP:HA     | 1:AR:27:LYS:HG2    | 1.83                     | 0.61              |
| 2:AU:71:ASN:HD22   | 2:AU:121:VAL:HA    | 1.65                     | 0.61              |
| 2:AY:112:LEU:CD1   | 10:AY:200:CYC:HMB3 | 2.31                     | 0.61              |
| 2:BJ:78:TYR:O      | 2:BJ:82:ILE:HG12   | 2.00                     | 0.61              |
| 1:BK:121:THR:HG23  | 10:BK:200:CYC:HMC3 | 1.83                     | 0.61              |
| 3:BM:50:ILE:HD11   | 3:BM:140:LEU:HB2   | 1.80                     | 0.61              |
| 10:BS:200:CYC:HMA1 | 10:BS:200:CYC:NB   | 2.15                     | 0.61              |
| 1:BZ:97:VAL:HG11   | 2:CA:27:LEU:HD13   | 1.83                     | 0.61              |
| 1:CC:128:GLN:O     | 1:CC:132:GLU:HG2   | 2.00                     | 0.61              |
| 1:CG:128:GLN:NE2   | 1:CG:132:GLU:OE2   | 2.33                     | 0.61              |
| 2:CS:1:MET:N       | 5:DF:67:ALA:O      | 2.23                     | 0.61              |
| 1:CT:105:GLU:HA    | 1:CT:109:LEU:HB2   | 1.81                     | 0.61              |
| 2:CU:131:GLN:O     | 2:CU:135:GLU:HG2   | 2.00                     | 0.61              |
| 1:DC:46:SER:O      | 1:DC:50:ILE:HG12   | 1.99                     | 0.61              |
| 2:DR:71:ASN:HD22   | 2:DR:121:VAL:HA    | 1.65                     | 0.61              |
| 9:EA:21:VAL:CG2    | 9:EA:22:PRO:HD3    | 2.27                     | 0.61              |
| 9:EA:293:ASN:OD1   | 9:EA:299:PHE:HB2   | 2.01                     | 0.61              |
| 1:AA:79:ALA:O      | 1:AA:82:LEU:HG     | 2.00                     | 0.61              |
| 2:AL:8:VAL:CG1     | 2:AL:23:ALA:HB1    | 2.31                     | 0.61              |
| 1:AR:86:ASP:OD1    | 2:AS:18:TYR:OH     | 2.10                     | 0.61              |
| 9:BH:288:TRP:HB3   | 9:BH:290:PHE:CE1   | 2.35                     | 0.61              |
| 10:BJ:200:CYC:HAA1 | 6:CM:311:ASN:HB3   | 1.83                     | 0.61              |
| 1:BV:46:SER:HB3    | 1:BV:50:ILE:HG13   | 1.81                     | 0.61              |
| 1:CG:128:GLN:O     | 1:CG:132:GLU:HG2   | 2.01                     | 0.61              |
| 6:CM:274:SER:N     | 6:CM:277:GLU:OE2   | 2.33                     | 0.61              |
| 6:CM:769:ASN:HB2   | 10:DK:200:CYC:HBA1 | 1.82                     | 0.61              |
| 6:CM:774:VAL:O     | 6:CM:778:ILE:HG12  | 2.01                     | 0.61              |
| 1:CR:92:VAL:HG11   | 1:CR:153:PHE:CE1   | 2.36                     | 0.61              |
| 2:CZ:126:THR:O     | 2:CZ:130:ILE:HD12  | 2.00                     | 0.61              |
| 1:DQ:94:TYR:CD1    | 2:DR:9:ILE:HD12    | 2.34                     | 0.61              |
| 1:DQ:105:GLU:HA    | 1:DQ:109:LEU:HD12  | 1.81                     | 0.61              |
| 2:AB:78:TYR:O      | 2:AB:82:ILE:HG12   | 2.01                     | 0.61              |
| 1:AC:38:ARG:O      | 1:AC:42:THR:HG23   | 2.01                     | 0.61              |
| 1:AV:72:ALA:HB2    | 10:AV:200:CYC:HMD3 | 1.82                     | 0.61              |
| 1:AX:5:THR:HG23    | 2:AY:1:MET:SD      | 2.40                     | 0.61              |
| 1:AZ:134:LYS:HD3   | 1:AZ:153:PHE:HB3   | 1.81                     | 0.61              |
| 2:BN:104:LEU:HD11  | 2:BN:152:TYR:HB3   | 1.82                     | 0.61              |
| 4:BS:97:LEU:HD21   | 4:BS:153:ILE:HA    | 1.82                     | 0.61              |
| 6:CM:191:SER:O     | 6:CM:195:THR:HG23  | 2.00                     | 0.61              |
| 6:CM:751:LEU:CD1   | 6:CM:755:ILE:HD13  | 2.30                     | 0.61              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 9:CQ:191:GLU:H    | 9:CQ:254:ARG:HA    | 1.66                     | 0.61              |
| 9:CQ:238:LEU:O    | 9:CQ:242:ARG:HG2   | 2.01                     | 0.61              |
| 1:DJ:129:SER:O    | 1:DJ:133:MET:HG3   | 2.01                     | 0.61              |
| 1:DN:65:ILE:HD12  | 10:DN:200:CYC:HBC2 | 1.80                     | 0.61              |
| 1:DQ:132:GLU:O    | 1:DQ:136:VAL:HG23  | 2.00                     | 0.61              |
| 2:AB:106:GLU:HB2  | 5:BA:57:THR:CG2    | 2.31                     | 0.61              |
| 2:AO:50:THR:O     | 2:AO:54:GLU:HG3    | 2.01                     | 0.61              |
| 2:AY:71:ASN:ND2   | 2:AY:121:VAL:HA    | 2.16                     | 0.61              |
| 1:AZ:91:LEU:HB3   | 1:AZ:104:ILE:HG23  | 1.82                     | 0.61              |
| 1:AZ:131:ARG:HA   | 1:AZ:157:ILE:HD11  | 1.83                     | 0.61              |
| 3:BM:52:ASP:O     | 3:BM:55:GLN:HG3    | 2.01                     | 0.61              |
| 2:BQ:77:ARG:HG3   | 10:BQ:200:CYC:HAD1 | 1.81                     | 0.61              |
| 6:CM:208:ASP:O    | 6:CM:211:ARG:HD2   | 1.99                     | 0.61              |
| 6:CM:244:PRO:HG2  | 6:CM:248:ILE:HD13  | 1.81                     | 0.61              |
| 1:DA:56:ASP:OD1   | 1:DA:60:GLN:NE2    | 2.33                     | 0.61              |
| 2:DB:1:MET:HE3    | 2:DB:103:ILE:HD12  | 1.83                     | 0.61              |
| 9:DI:205:LEU:HG   | 9:DI:210:PHE:CE1   | 2.35                     | 0.61              |
| 2:DO:104:LEU:HD13 | 2:DO:156:ILE:HG13  | 1.82                     | 0.61              |
| 10:AI:200:CYC:O2A | 6:BD:358:ARG:NH1   | 2.30                     | 0.61              |
| 2:AL:18:TYR:CD2   | 6:BD:61:THR:HG22   | 2.36                     | 0.61              |
| 2:AL:50:THR:O     | 2:AL:54:GLU:HG2    | 1.99                     | 0.61              |
| 2:AO:4:ALA:O      | 2:AO:8:VAL:HG23    | 2.00                     | 0.61              |
| 6:BD:2:SER:O      | 6:BD:4:LYS:NZ      | 2.33                     | 0.61              |
| 6:BD:797:ASN:O    | 6:BD:801:ILE:HG12  | 2.01                     | 0.61              |
| 7:BF:114:ALA:O    | 7:BF:118:LYS:HG2   | 2.01                     | 0.61              |
| 1:BI:105:GLU:HG3  | 1:BI:110:VAL:HG23  | 1.82                     | 0.61              |
| 2:BL:103:ILE:HG23 | 2:BL:104:LEU:HD22  | 1.83                     | 0.61              |
| 3:BM:5:SER:HB3    | 2:BN:3:ASP:OD2     | 2.01                     | 0.61              |
| 4:BS:97:LEU:CD2   | 4:BS:153:ILE:HA    | 2.31                     | 0.61              |
| 2:BW:62:TYR:OH    | 10:BX:200:CYC:O2D  | 2.15                     | 0.61              |
| 1:CG:38:ARG:HA    | 1:CG:41:GLU:OE1    | 2.00                     | 0.61              |
| 7:CO:105:PRO:HA   | 7:CO:108:ASN:OD1   | 2.00                     | 0.61              |
| 9:CQ:84:CYS:SG    | 9:CQ:176:VAL:HG12  | 2.40                     | 0.61              |
| 1:CT:48:GLU:O     | 1:CT:52:LYS:HG2    | 2.00                     | 0.61              |
| 1:CT:143:SER:OG   | 1:CT:144:ASP:N     | 2.31                     | 0.61              |
| 2:CU:47:ASN:ND2   | 2:CU:140:LEU:HD21  | 2.16                     | 0.61              |
| 1:DA:98:SER:HA    | 2:DB:5:ILE:HD11    | 1.83                     | 0.61              |
| 2:DD:112:LEU:HD13 | 10:DD:200:CYC:CMB  | 2.31                     | 0.61              |
| 1:DS:50:ILE:HD11  | 1:DS:137:ALA:HB2   | 1.82                     | 0.61              |
| 2:AB:1:MET:HG3    | 2:AB:103:ILE:HB    | 1.83                     | 0.60              |
| 3:AE:65:TYR:HA    | 3:AE:70:GLY:HA3    | 1.83                     | 0.60              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 3:AE:92:VAL:HG21  | 3:AE:153:PHE:CE1   | 2.36                     | 0.60              |
| 1:AR:129:SER:O    | 1:AR:133:MET:HG3   | 2.01                     | 0.60              |
| 2:AS:87:TYR:OH    | 6:BD:628:SER:HB2   | 2.00                     | 0.60              |
| 1:AV:4:VAL:O      | 1:AV:8:ILE:HG12    | 2.00                     | 0.60              |
| 9:BH:188:VAL:HG21 | 9:BH:252:PRO:HG2   | 1.83                     | 0.60              |
| 9:BH:273:VAL:HB   | 9:BH:286:ILE:HD12  | 1.83                     | 0.60              |
| 1:BI:125:ALA:HB3  | 10:BI:200:CYC:HMC2 | 1.83                     | 0.60              |
| 1:BZ:4:VAL:HG11   | 2:CA:98:ALA:HA     | 1.83                     | 0.60              |
| 6:CM:131:PRO:HD2  | 6:CM:200:GLN:HG2   | 1.81                     | 0.60              |
| 1:CR:154:ASP:HB3  | 2:CZ:46:ALA:HB2    | 1.82                     | 0.60              |
| 2:CU:122:PRO:HG2  | 10:CU:200:CYC:HMC2 | 1.83                     | 0.60              |
| 1:CY:58:LEU:HD22  | 1:CY:129:SER:HB3   | 1.83                     | 0.60              |
| 2:DK:73:TYR:O     | 2:DK:77:ARG:HB2    | 2.02                     | 0.60              |
| 10:DM:200:CYC:O2A | 5:DX:17:ARG:NH2    | 2.28                     | 0.60              |
| 5:DX:2:ARG:H      | 5:DX:57:THR:HG22   | 1.65                     | 0.60              |
| 2:AD:112:LEU:HA   | 2:AD:115:THR:HG22  | 1.83                     | 0.60              |
| 1:AH:115:MET:HG3  | 2:AL:78:TYR:CD1    | 2.36                     | 0.60              |
| 2:AL:126:THR:O    | 2:AL:130:ILE:HG13  | 2.01                     | 0.60              |
| 1:AP:48:GLU:OE1   | 1:AP:48:GLU:N      | 2.29                     | 0.60              |
| 1:BR:128:GLN:O    | 1:BR:132:GLU:HG3   | 2.00                     | 0.60              |
| 1:BV:98:SER:HB3   | 2:BW:9:ILE:CD1     | 2.31                     | 0.60              |
| 2:CH:15:GLN:HG3   | 2:CH:17:LYS:CE     | 2.30                     | 0.60              |
| 2:CU:20:ASP:O     | 2:CU:24:MET:HG2    | 1.99                     | 0.60              |
| 2:DR:113:LYS:O    | 2:DR:117:ASN:ND2   | 2.28                     | 0.60              |
| 1:DU:39:ILE:HG12  | 1:DU:145:ASP:HB3   | 1.82                     | 0.60              |
| 1:DU:97:VAL:HG21  | 2:DV:19:LEU:HD12   | 1.83                     | 0.60              |
| 2:DV:109:LEU:HD13 | 2:DV:159:GLY:HA3   | 1.83                     | 0.60              |
| 2:DV:127:VAL:O    | 2:DV:131:GLN:HG3   | 1.99                     | 0.60              |
| 1:AZ:116:TYR:HE2  | 1:AZ:126:VAL:HG11  | 1.65                     | 0.60              |
| 5:BA:2:ARG:NH1    | 5:BA:33:TYR:HB3    | 2.15                     | 0.60              |
| 9:BH:116:LEU:HB3  | 9:BH:122:VAL:HG23  | 1.83                     | 0.60              |
| 1:CE:4:VAL:HG12   | 1:CE:26:ILE:HG23   | 1.84                     | 0.60              |
| 6:CM:18:GLN:HB2   | 6:CM:173:ASN:HD22  | 1.66                     | 0.60              |
| 1:CR:68:PRO:HA    | 1:CR:73:TYR:CD2    | 2.37                     | 0.60              |
| 1:CY:96:VAL:HG22  | 1:CY:152:TYR:CD2   | 2.36                     | 0.60              |
| 2:DT:61:LEU:HD22  | 10:DU:200:CYC:HBA2 | 1.82                     | 0.60              |
| 1:AJ:89:LEU:O     | 1:AJ:93:THR:HG23   | 2.00                     | 0.60              |
| 4:AK:105:LEU:HD11 | 4:AK:160:MET:CE    | 2.31                     | 0.60              |
| 2:AW:74:THR:HG23  | 1:AX:107:ILE:HA    | 1.83                     | 0.60              |
| 1:AZ:68:PRO:HG2   | 1:DN:66:VAL:HG21   | 1.84                     | 0.60              |
| 5:BA:9:CYS:HB2    | 5:BA:26:TYR:CD1    | 2.36                     | 0.60              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 6:BD:843:GLU:OE2   | 6:BD:857:ARG:NH2   | 2.35                     | 0.60              |
| 1:BP:115:MET:CE    | 10:BP:200:CYC:HMB3 | 2.32                     | 0.60              |
| 1:BR:122:PRO:HG2   | 1:BR:125:ALA:HB3   | 1.82                     | 0.60              |
| 6:CM:796:PRO:CG    | 2:DR:110:ASN:HB3   | 2.31                     | 0.60              |
| 6:CM:836:GLY:O     | 6:CM:840:ASN:ND2   | 2.34                     | 0.60              |
| 1:CV:50:ILE:HG12   | 1:CV:136:VAL:HG12  | 1.83                     | 0.60              |
| 1:CY:127:ALA:CB    | 1:CY:161:SER:HB2   | 2.32                     | 0.60              |
| 1:CY:129:SER:O     | 1:CY:133:MET:HG3   | 2.02                     | 0.60              |
| 2:CZ:51:ILE:HA     | 2:CZ:136:VAL:CG1   | 2.30                     | 0.60              |
| 1:DJ:88:TYR:O      | 1:DJ:92:VAL:HG23   | 2.02                     | 0.60              |
| 2:DK:37:ARG:HD2    | 2:DK:96:MET:O      | 2.00                     | 0.60              |
| 1:DL:66:VAL:HG12   | 1:DL:78:THR:HG22   | 1.84                     | 0.60              |
| 1:DQ:22:GLU:O      | 1:DQ:26:ILE:HG12   | 2.01                     | 0.60              |
| 2:DR:41:ALA:N      | 2:DR:96:MET:HE1    | 2.15                     | 0.60              |
| 2:DV:51:ILE:HG12   | 2:DV:140:LEU:HD13  | 1.83                     | 0.60              |
| 9:EA:214:ILE:O     | 9:EA:234:LYS:NZ    | 2.26                     | 0.60              |
| 3:AE:101:LYS:HD2   | 3:AE:155:TYR:CZ    | 2.37                     | 0.60              |
| 4:AK:76:THR:HG23   | 10:BD:902:CYC:OB   | 2.02                     | 0.60              |
| 2:AW:96:MET:HG2    | 2:AW:148:GLU:OE1   | 2.01                     | 0.60              |
| 1:BK:14:GLU:OE2    | 6:CM:263:LYS:HB2   | 2.01                     | 0.60              |
| 2:BT:114:GLU:HA    | 6:CM:466:THR:O     | 2.02                     | 0.60              |
| 1:BZ:122:PRO:HG2   | 1:BZ:125:ALA:HB3   | 1.83                     | 0.60              |
| 2:CA:147:LYS:HE3   | 7:CO:93:PRO:HG3    | 1.82                     | 0.60              |
| 1:CE:94:TYR:OH     | 2:CF:17:LYS:O      | 2.20                     | 0.60              |
| 2:CS:71:ASN:ND2    | 2:CS:120:GLY:O     | 2.34                     | 0.60              |
| 1:CV:104:ILE:HG22  | 1:CV:109:LEU:HD23  | 1.81                     | 0.60              |
| 1:DA:58:LEU:HD22   | 1:DA:129:SER:CB    | 2.32                     | 0.60              |
| 1:DA:78:THR:O      | 1:DA:82:LEU:HG     | 2.01                     | 0.60              |
| 9:DI:21:VAL:HG23   | 9:DI:153:VAL:CG2   | 2.31                     | 0.60              |
| 1:AC:94:TYR:OH     | 2:AD:17:LYS:O      | 2.18                     | 0.60              |
| 10:AC:200:CYC:HC   | 10:AC:200:CYC:HMD2 | 1.67                     | 0.60              |
| 10:AD:200:CYC:HMA2 | 5:BA:25:THR:HG23   | 1.83                     | 0.60              |
| 2:AF:126:THR:O     | 2:AF:130:ILE:HG12  | 2.01                     | 0.60              |
| 4:AK:97:LEU:HD21   | 4:AK:153:ILE:HA    | 1.82                     | 0.60              |
| 1:AZ:128:GLN:O     | 1:AZ:132:GLU:HG2   | 2.02                     | 0.60              |
| 6:BD:458:PHE:HB3   | 6:BD:552:GLY:HA3   | 1.83                     | 0.60              |
| 6:BD:551:PHE:CE2   | 6:BD:555:LEU:HD11  | 2.37                     | 0.60              |
| 9:BH:222:ALA:HB2   | 9:BH:232:VAL:HG12  | 1.82                     | 0.60              |
| 1:BI:58:LEU:HD22   | 1:BI:129:SER:CB    | 2.31                     | 0.60              |
| 1:BV:33:GLY:HA2    | 1:BV:36:ARG:CD     | 2.32                     | 0.60              |
| 1:BZ:83:ARG:NH2    | 10:BZ:200:CYC:O2A  | 2.29                     | 0.60              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:BZ:156:VAL:O    | 1:BZ:160:MET:HG3   | 2.01                     | 0.60              |
| 6:CM:195:THR:CG2  | 10:CM:902:CYC:H2C  | 2.25                     | 0.60              |
| 9:CQ:219:SER:HA   | 9:CQ:234:LYS:HD2   | 1.84                     | 0.60              |
| 2:DB:3:ASP:OD1    | 2:DB:6:THR:OG1     | 2.12                     | 0.60              |
| 1:DC:50:ILE:HD11  | 1:DC:140:LEU:HD21  | 1.84                     | 0.60              |
| 1:DQ:112:VAL:O    | 1:DQ:115:MET:HB2   | 2.02                     | 0.60              |
| 2:AD:61:LEU:HD22  | 10:AE:200:CYC:HBA2 | 1.82                     | 0.60              |
| 2:AL:65:VAL:HG12  | 2:AL:72:MET:HB3    | 1.83                     | 0.60              |
| 1:AN:92:VAL:HG21  | 1:AN:153:PHE:CE1   | 2.36                     | 0.60              |
| 1:AR:38:ARG:O     | 1:AR:42:THR:HG23   | 2.02                     | 0.60              |
| 2:AU:126:THR:O    | 2:AU:130:ILE:HG13  | 2.00                     | 0.60              |
| 2:BL:105:ASP:HA   | 2:BL:109:LEU:HB2   | 1.83                     | 0.60              |
| 2:BW:71:ASN:HD22  | 2:BW:121:VAL:HA    | 1.65                     | 0.60              |
| 1:CG:107:ILE:HG13 | 6:CM:531:SER:HB2   | 1.83                     | 0.60              |
| 9:CQ:74:MET:O     | 9:CQ:79:GLN:NE2    | 2.34                     | 0.60              |
| 1:CV:26:ILE:O     | 1:CV:30:VAL:HG22   | 2.02                     | 0.60              |
| 1:DA:76:GLU:OE1   | 8:DG:202:ARG:HA    | 2.00                     | 0.60              |
| 1:DC:12:ASP:OD2   | 2:DD:107:ARG:NH1   | 2.34                     | 0.60              |
| 9:DI:205:LEU:HG   | 9:DI:210:PHE:HE1   | 1.66                     | 0.60              |
| 2:DK:148:GLU:O    | 2:DK:151:VAL:HG12  | 2.00                     | 0.60              |
| 2:AI:89:LEU:O     | 2:AI:93:THR:HG23   | 2.02                     | 0.60              |
| 2:AU:19:LEU:CD1   | 1:AZ:97:VAL:HG21   | 2.31                     | 0.60              |
| 10:AU:200:CYC:HC  | 10:AU:200:CYC:HMD2 | 1.64                     | 0.60              |
| 10:AV:200:CYC:HC  | 10:AV:200:CYC:HMD2 | 1.67                     | 0.60              |
| 1:BI:122:PRO:HD2  | 10:BI:200:CYC:OC   | 2.02                     | 0.60              |
| 2:BL:109:LEU:CD2  | 2:BL:159:GLY:HA3   | 2.31                     | 0.60              |
| 3:BM:92:VAL:HG21  | 3:BM:153:PHE:CE1   | 2.37                     | 0.60              |
| 1:BR:58:LEU:N     | 1:BR:132:GLU:OE1   | 2.34                     | 0.60              |
| 2:BT:141:VAL:HG12 | 2:BT:145:ALA:HB3   | 1.84                     | 0.60              |
| 1:CC:134:LYS:HD3  | 1:CC:153:PHE:HB3   | 1.83                     | 0.60              |
| 2:CD:105:ASP:OD2  | 2:CD:155:TYR:OH    | 2.14                     | 0.60              |
| 1:CE:11:ALA:HB2   | 1:CE:18:LEU:HD23   | 1.84                     | 0.60              |
| 2:CH:30:TYR:OH    | 2:CH:97:LEU:O      | 2.18                     | 0.60              |
| 1:CY:81:CYS:O     | 1:CY:85:MET:HG3    | 2.02                     | 0.60              |
| 1:DJ:50:ILE:CG1   | 1:DJ:140:LEU:HD21  | 2.31                     | 0.60              |
| 10:DR:200:CYC:HC  | 10:DR:200:CYC:HMD3 | 1.66                     | 0.60              |
| 1:AA:3:ILE:CG2    | 1:AH:25:ARG:HD3    | 2.32                     | 0.60              |
| 2:AB:8:VAL:CG1    | 2:AB:23:ALA:HB1    | 2.32                     | 0.60              |
| 1:AC:69:GLY:N     | 1:AC:73:TYR:OH     | 2.24                     | 0.60              |
| 3:AE:46:ASN:ND2   | 3:AE:140:LEU:HD11  | 2.17                     | 0.60              |
| 2:AW:108:VAL:HG11 | 2:AW:156:ILE:CD1   | 2.28                     | 0.60              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AX:97:VAL:HG21  | 2:AY:19:LEU:HD12   | 1.83                     | 0.60              |
| 6:BD:173:ASN:HD21 | 6:BD:260:ALA:HA    | 1.67                     | 0.60              |
| 6:BD:754:TYR:OH   | 2:DD:83:ARG:NH1    | 2.34                     | 0.60              |
| 1:BI:72:ALA:HA    | 1:BI:77:MET:HB3    | 1.84                     | 0.60              |
| 1:BI:134:LYS:HD3  | 1:BI:153:PHE:HB3   | 1.83                     | 0.60              |
| 3:BM:38:ARG:O     | 3:BM:42:THR:HG22   | 2.01                     | 0.60              |
| 3:BM:71:ASN:ND2   | 3:BM:121:VAL:HG22  | 2.16                     | 0.60              |
| 1:BP:2:SER:OG     | 2:BQ:3:ASP:OD2     | 2.15                     | 0.60              |
| 1:BZ:62:ARG:HG2   | 1:BZ:65:ILE:HG12   | 1.83                     | 0.60              |
| 2:CD:60:LEU:HD23  | 2:CD:72:MET:HE1    | 1.84                     | 0.60              |
| 6:CM:447:TYR:HB2  | 6:CM:451:ASN:HD22  | 1.67                     | 0.60              |
| 1:DC:50:ILE:HD13  | 1:DC:136:VAL:HG12  | 1.84                     | 0.60              |
| 1:DJ:14:GLU:HB3   | 1:DJ:16:ARG:CD     | 2.32                     | 0.60              |
| 2:DK:96:MET:HA    | 2:DK:152:TYR:HE2   | 1.65                     | 0.60              |
| 2:DR:77:ARG:HD2   | 10:DR:200:CYC:HMD1 | 1.84                     | 0.60              |
| 1:DU:29:PHE:O     | 1:DU:36:ARG:NH2    | 2.27                     | 0.60              |
| 2:DV:148:GLU:O    | 2:DV:151:VAL:HG12  | 2.02                     | 0.60              |
| 9:EA:68:LEU:HD13  | 9:EA:112:ARG:HG2   | 1.84                     | 0.60              |
| 9:EA:223:LEU:HD23 | 9:EA:225:PRO:HD3   | 1.83                     | 0.60              |
| 1:AJ:97:VAL:HG21  | 4:AK:19:LEU:CD1    | 2.32                     | 0.60              |
| 2:AS:57:ALA:HA    | 2:AS:61:LEU:HG     | 1.84                     | 0.60              |
| 6:BD:84:TYR:HD1   | 6:BD:150:GLN:HE21  | 1.50                     | 0.60              |
| 9:BH:84:CYS:SG    | 9:BH:176:VAL:HG12  | 2.41                     | 0.60              |
| 1:BK:122:PRO:HD2  | 10:BK:200:CYC:OC   | 2.01                     | 0.60              |
| 1:BK:123:ILE:HA   | 1:BK:126:VAL:HG22  | 1.84                     | 0.60              |
| 2:BN:147:LYS:O    | 2:BN:151:VAL:HG23  | 2.02                     | 0.60              |
| 2:BT:65:VAL:HG12  | 2:BT:72:MET:HB3    | 1.82                     | 0.60              |
| 1:CE:122:PRO:HG2  | 1:CE:125:ALA:HB3   | 1.82                     | 0.60              |
| 2:CF:56:VAL:HG12  | 2:CF:61:LEU:HG     | 1.84                     | 0.60              |
| 9:CQ:288:TRP:HB3  | 9:CQ:290:PHE:CE1   | 2.37                     | 0.60              |
| 1:CR:89:LEU:O     | 1:CR:93:THR:HG23   | 2.02                     | 0.60              |
| 2:CS:15:GLN:HB2   | 2:CS:17:LYS:HE3    | 1.84                     | 0.60              |
| 10:CU:200:CYC:HC  | 10:CU:200:CYC:HMD2 | 1.66                     | 0.60              |
| 1:CY:62:ARG:NH2   | 1:CY:64:ASP:OD2    | 2.34                     | 0.60              |
| 1:DA:50:ILE:CD1   | 1:DA:136:VAL:HG13  | 2.32                     | 0.60              |
| 9:DI:54:ALA:HA    | 11:DI:400:45D:H221 | 1.83                     | 0.60              |
| 9:DI:134:ASN:O    | 9:DI:138:VAL:HG23  | 2.01                     | 0.60              |
| 2:DM:127:VAL:HG13 | 2:DM:157:CYS:SG    | 2.41                     | 0.60              |
| 1:DU:14:GLU:OE1   | 1:DU:16:ARG:NE     | 2.33                     | 0.60              |
| 1:DU:27:LYS:HE2   | 2:DV:38:VAL:HG11   | 1.84                     | 0.60              |
| 2:DV:111:GLY:HA2  | 2:DV:114:GLU:OE2   | 2.01                     | 0.60              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AJ:58:LEU:N     | 1:AJ:132:GLU:OE1   | 2.34                     | 0.59              |
| 1:AN:85:MET:HG3   | 1:AN:133:MET:SD    | 2.42                     | 0.59              |
| 1:AV:44:THR:HG22  | 2:AW:18:TYR:CD2    | 2.37                     | 0.59              |
| 1:AV:104:ILE:HG22 | 1:AV:109:LEU:HD12  | 1.84                     | 0.59              |
| 1:AX:128:GLN:O    | 1:AX:132:GLU:HG2   | 2.02                     | 0.59              |
| 6:BD:14:PRO:HG3   | 6:BD:401:LEU:HD23  | 1.84                     | 0.59              |
| 9:BH:21:VAL:HG13  | 9:BH:153:VAL:HG23  | 1.83                     | 0.59              |
| 3:BM:40:ALA:HB2   | 3:BM:97:LEU:HD11   | 1.83                     | 0.59              |
| 1:BV:65:ILE:HD12  | 10:BV:200:CYC:OC   | 2.01                     | 0.59              |
| 2:CD:61:LEU:HD21  | 2:CD:78:TYR:OH     | 2.02                     | 0.59              |
| 6:CM:574:SER:HB2  | 6:CM:651:GLU:O     | 2.02                     | 0.59              |
| 9:CQ:193:VAL:HG21 | 9:CQ:269:VAL:HG22  | 1.84                     | 0.59              |
| 2:CS:47:ASN:O     | 2:CS:51:ILE:HD12   | 2.02                     | 0.59              |
| 2:CU:127:VAL:O    | 2:CU:131:GLN:HG2   | 2.01                     | 0.59              |
| 1:CY:126:VAL:HG13 | 1:CY:160:MET:SD    | 2.41                     | 0.59              |
| 1:DC:85:MET:HB3   | 1:DC:133:MET:CE    | 2.32                     | 0.59              |
| 1:DJ:101:VAL:HB   | 1:DJ:155:PHE:CE2   | 2.37                     | 0.59              |
| 1:DL:33:GLY:O     | 1:DL:37:LEU:HG     | 2.02                     | 0.59              |
| 1:DQ:131:ARG:O    | 1:DQ:135:GLU:HG3   | 2.02                     | 0.59              |
| 2:DV:90:ARG:NH1   | 2:DV:94:TYR:OH     | 2.34                     | 0.59              |
| 5:DX:2:ARG:O      | 5:DX:33:TYR:HB2    | 2.02                     | 0.59              |
| 1:AC:68:PRO:HA    | 1:AC:73:TYR:HE1    | 1.67                     | 0.59              |
| 2:AD:105:ASP:HA   | 2:AD:109:LEU:HB2   | 1.84                     | 0.59              |
| 2:AF:51:ILE:HD11  | 2:AF:140:LEU:HD23  | 1.84                     | 0.59              |
| 4:AK:20:ASP:O     | 4:AK:24:MET:HG2    | 2.01                     | 0.59              |
| 2:AU:85:LEU:HG    | 10:AU:200:CYC:HBC1 | 1.84                     | 0.59              |
| 2:BL:64:ASP:OD1   | 2:BL:67:ARG:NH1    | 2.33                     | 0.59              |
| 10:BL:200:CYC:CAA | 5:CJ:11:PRO:HB3    | 2.32                     | 0.59              |
| 2:BQ:89:LEU:O     | 2:BQ:93:THR:HG23   | 2.02                     | 0.59              |
| 2:BQ:114:GLU:N    | 2:BQ:114:GLU:OE1   | 2.35                     | 0.59              |
| 2:BT:98:ALA:HB2   | 6:CM:25:ILE:HD13   | 1.84                     | 0.59              |
| 1:BZ:101:VAL:HG21 | 1:BZ:155:PHE:CD2   | 2.37                     | 0.59              |
| 1:CC:16:ARG:NH1   | 1:CC:22:GLU:OE1    | 2.26                     | 0.59              |
| 2:CD:67:ARG:HG3   | 2:CD:68:PRO:HD2    | 1.82                     | 0.59              |
| 1:CR:106:GLU:HG3  | 5:DF:66:LEU:CD2    | 2.33                     | 0.59              |
| 1:CY:18:LEU:HD12  | 1:CY:22:GLU:HB3    | 1.85                     | 0.59              |
| 1:DA:67:SER:OG    | 8:DZ:230:ASN:HB2   | 2.02                     | 0.59              |
| 1:DL:17:TYR:CE1   | 2:DM:90:ARG:HD3    | 2.37                     | 0.59              |
| 2:DR:20:ASP:O     | 2:DR:24:MET:HG2    | 2.01                     | 0.59              |
| 3:AE:26:ILE:O     | 3:AE:30:LEU:HD23   | 2.03                     | 0.59              |
| 2:AF:55:ALA:O     | 2:AF:59:SER:OG     | 2.16                     | 0.59              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AH:93:THR:O      | 1:AH:97:VAL:HG23   | 2.02                     | 0.59              |
| 2:AO:134:LYS:HA    | 2:AO:153:LEU:HD13  | 1.84                     | 0.59              |
| 2:AY:30:TYR:OH     | 2:AY:97:LEU:O      | 2.18                     | 0.59              |
| 9:BH:251:ILE:N     | 9:BH:272:LYS:O     | 2.33                     | 0.59              |
| 2:BJ:122:PRO:HB2   | 2:BJ:125:SER:OG    | 2.02                     | 0.59              |
| 2:BL:71:ASN:HD22   | 2:BL:121:VAL:HA    | 1.66                     | 0.59              |
| 1:CG:97:VAL:HG21   | 2:CH:19:LEU:CD1    | 2.33                     | 0.59              |
| 6:CM:35:LEU:HD22   | 6:CM:39:GLU:CB     | 2.31                     | 0.59              |
| 6:CM:758:SER:O     | 6:CM:761:THR:OG1   | 2.18                     | 0.59              |
| 6:CM:823:ASN:ND2   | 10:DR:200:CYC:O2A  | 2.24                     | 0.59              |
| 2:CW:55:ALA:O      | 2:CW:59:SER:OG     | 2.13                     | 0.59              |
| 1:CY:44:THR:HG22   | 2:CZ:18:TYR:CD2    | 2.37                     | 0.59              |
| 1:DA:50:ILE:HD12   | 1:DA:136:VAL:HG22  | 1.84                     | 0.59              |
| 2:DB:36:LEU:HD11   | 2:DB:144:ASP:HB2   | 1.84                     | 0.59              |
| 2:DV:71:ASN:O      | 2:DV:77:ARG:HD3    | 2.01                     | 0.59              |
| 1:AJ:5:THR:HG23    | 4:AK:1:MET:SD      | 2.43                     | 0.59              |
| 4:AK:29:ALA:O      | 4:AK:32:GLU:HG3    | 2.03                     | 0.59              |
| 2:AL:15:GLN:NE2    | 7:BF:97:ASN:O      | 2.36                     | 0.59              |
| 1:AR:152:TYR:O     | 1:AR:156:VAL:HG23  | 2.03                     | 0.59              |
| 10:BL:200:CYC:HMB1 | 10:BL:200:CYC:HBB3 | 1.83                     | 0.59              |
| 2:BN:96:MET:HA     | 2:BN:152:TYR:HE2   | 1.67                     | 0.59              |
| 1:BV:5:THR:HA      | 2:BW:1:MET:HE3     | 1.84                     | 0.59              |
| 1:BZ:48:GLU:OE1    | 1:BZ:48:GLU:N      | 2.30                     | 0.59              |
| 1:CE:65:ILE:CG2    | 1:CE:72:ALA:HB3    | 2.33                     | 0.59              |
| 1:CE:105:GLU:HA    | 1:CE:109:LEU:HB2   | 1.85                     | 0.59              |
| 9:CQ:21:VAL:HG13   | 9:CQ:153:VAL:HG23  | 1.84                     | 0.59              |
| 2:CW:111:GLY:O     | 5:DF:40:GLN:NE2    | 2.35                     | 0.59              |
| 9:DI:21:VAL:CG1    | 9:DI:22:PRO:HD3    | 2.31                     | 0.59              |
| 1:DL:154:ASP:CG    | 2:DV:46:ALA:HB2    | 2.22                     | 0.59              |
| 2:DO:71:ASN:O      | 2:DO:77:ARG:NE     | 2.28                     | 0.59              |
| 2:DR:109:LEU:CD1   | 2:DR:159:GLY:HA3   | 2.33                     | 0.59              |
| 1:AA:132:GLU:O     | 1:AA:136:VAL:HG23  | 2.02                     | 0.59              |
| 4:AK:113:LEU:HD21  | 10:AK:200:CYC:CMB  | 2.30                     | 0.59              |
| 9:BH:229:ARG:HG2   | 9:EA:227:PHE:HB3   | 1.84                     | 0.59              |
| 3:BM:67:ALA:HB1    | 3:BM:68:PRO:HD2    | 1.84                     | 0.59              |
| 4:BS:64:PRO:CB     | 7:CO:105:PRO:HB2   | 2.32                     | 0.59              |
| 2:BW:96:MET:HG3    | 2:BW:148:GLU:OE1   | 2.01                     | 0.59              |
| 2:CA:88:TYR:OH     | 2:CA:112:LEU:HD21  | 2.02                     | 0.59              |
| 1:CE:44:THR:HG22   | 2:CF:18:TYR:CD2    | 2.37                     | 0.59              |
| 5:CK:39:GLU:O      | 5:CK:43:ILE:HG12   | 2.02                     | 0.59              |
| 6:CM:612:ARG:NE    | 6:CM:644:GLU:OE2   | 2.35                     | 0.59              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 6:CM:806:LYS:NZ   | 6:CM:872:LEU:O     | 2.27                     | 0.59              |
| 2:CW:53:LYS:NZ    | 2:CW:54:GLU:OE2    | 2.36                     | 0.59              |
| 1:DJ:108:GLY:HA2  | 2:DO:75:THR:HG23   | 1.84                     | 0.59              |
| 2:DK:112:LEU:HG   | 10:DK:200:CYC:HMB3 | 1.85                     | 0.59              |
| 1:DL:78:THR:O     | 1:DL:82:LEU:HG     | 2.02                     | 0.59              |
| 1:DQ:71:ASN:HD22  | 1:DQ:121:THR:HA    | 1.68                     | 0.59              |
| 8:DZ:242:ILE:HG23 | 8:DZ:246:VAL:CG2   | 2.31                     | 0.59              |
| 9:EA:224:GLN:NE2  | 9:EA:230:PRO:HG3   | 2.18                     | 0.59              |
| 2:AB:1:MET:HE2    | 2:AB:103:ILE:HD13  | 1.84                     | 0.59              |
| 2:AD:66:THR:HG21  | 10:AE:200:CYC:HBA1 | 1.85                     | 0.59              |
| 3:AE:32:THR:O     | 3:AE:36:ARG:HG2    | 2.03                     | 0.59              |
| 1:AR:35:ALA:O     | 1:AR:39:ILE:HG13   | 2.02                     | 0.59              |
| 1:AR:89:LEU:O     | 1:AR:93:THR:HG23   | 2.03                     | 0.59              |
| 2:AU:112:LEU:HD21 | 10:AU:200:CYC:C4B  | 2.33                     | 0.59              |
| 5:BA:2:ARG:HA     | 5:BA:57:THR:O      | 2.03                     | 0.59              |
| 6:BD:70:ARG:HG2   | 6:BD:201:GLU:OE2   | 2.02                     | 0.59              |
| 6:BD:253:LEU:HD12 | 6:BD:254:PRO:HD2   | 1.85                     | 0.59              |
| 3:BM:30:LEU:CD1   | 2:BN:31:PHE:HA     | 2.33                     | 0.59              |
| 1:BV:80:THR:O     | 1:BV:83:ARG:HG2    | 2.03                     | 0.59              |
| 1:BX:95:GLY:HA3   | 1:BX:104:ILE:HD11  | 1.84                     | 0.59              |
| 1:BX:102:THR:O    | 1:BX:106:GLU:HG2   | 2.03                     | 0.59              |
| 1:CC:72:ALA:HA    | 1:CC:77:MET:HB3    | 1.85                     | 0.59              |
| 9:CQ:27:ARG:O     | 9:CQ:31:LEU:HG     | 2.02                     | 0.59              |
| 2:CS:23:ALA:O     | 2:CS:27:LEU:HG     | 2.02                     | 0.59              |
| 2:CW:3:ASP:H      | 2:CW:6:THR:HG1     | 1.48                     | 0.59              |
| 2:CZ:94:TYR:HB3   | 2:CZ:103:ILE:HD13  | 1.83                     | 0.59              |
| 8:DG:215:PRO:HG2  | 1:DQ:80:THR:HG22   | 1.84                     | 0.59              |
| 9:DI:250:LEU:CD2  | 9:DI:273:VAL:HG22  | 2.33                     | 0.59              |
| 1:DJ:22:GLU:O     | 1:DJ:26:ILE:HG12   | 2.02                     | 0.59              |
| 2:DT:71:ASN:HD22  | 2:DT:122:PRO:HD3   | 1.66                     | 0.59              |
| 2:AB:77:ARG:HD2   | 10:AB:200:CYC:HMD1 | 1.84                     | 0.59              |
| 2:AD:24:MET:O     | 2:AD:28:LYS:HG2    | 2.01                     | 0.59              |
| 2:AD:131:GLN:O    | 2:AD:134:LYS:HB2   | 2.03                     | 0.59              |
| 3:AE:52:ASP:O     | 3:AE:55:GLN:HG3    | 2.02                     | 0.59              |
| 2:AI:104:LEU:HD22 | 2:AI:156:ILE:HD11  | 1.84                     | 0.59              |
| 2:AL:1:MET:SD     | 2:AL:103:ILE:HD13  | 2.43                     | 0.59              |
| 1:AP:89:LEU:O     | 1:AP:93:THR:HG23   | 2.02                     | 0.59              |
| 1:AV:89:LEU:O     | 1:AV:93:THR:HG23   | 2.03                     | 0.59              |
| 1:AX:97:VAL:HG21  | 2:AY:19:LEU:CD1    | 2.31                     | 0.59              |
| 9:BH:286:ILE:HG12 | 9:BH:305:LEU:HD23  | 1.85                     | 0.59              |
| 1:BK:47:ARG:O     | 1:BK:51:VAL:HG23   | 2.03                     | 0.59              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:BP:83:ARG:NH2   | 10:BP:200:CYC:O2A  | 2.36                     | 0.59              |
| 1:BP:89:LEU:HB2   | 1:BP:133:MET:CE    | 2.33                     | 0.59              |
| 1:BV:108:GLY:HA2  | 2:CA:75:THR:CG2    | 2.32                     | 0.59              |
| 2:BY:75:THR:HG23  | 1:BZ:108:GLY:HA2   | 1.84                     | 0.59              |
| 2:CA:91:TYR:OH    | 2:CA:107:ARG:NE    | 2.36                     | 0.59              |
| 1:CC:56:ASP:O     | 1:CC:60:GLN:HG2    | 2.03                     | 0.59              |
| 1:CC:76:GLU:O     | 1:CC:80:THR:HG23   | 2.03                     | 0.59              |
| 1:CT:17:TYR:HE1   | 2:CU:90:ARG:HD3    | 1.67                     | 0.59              |
| 1:DL:72:ALA:O     | 1:DL:78:THR:HG23   | 2.03                     | 0.59              |
| 1:DQ:14:GLU:OE1   | 1:DQ:16:ARG:NE     | 2.25                     | 0.59              |
| 2:AB:103:ILE:CD1  | 2:AB:107:ARG:HD2   | 2.33                     | 0.59              |
| 1:AH:41:GLU:HA    | 1:AH:44:THR:HG22   | 1.83                     | 0.59              |
| 2:AS:119:LEU:HB3  | 2:AS:121:VAL:HG23  | 1.85                     | 0.59              |
| 1:AV:53:GLN:O     | 1:AV:57:ARG:HD3    | 2.02                     | 0.59              |
| 6:BD:35:LEU:HD22  | 6:BD:39:GLU:CB     | 2.32                     | 0.59              |
| 6:BD:611:GLY:HA3  | 6:BD:656:TYR:O     | 2.02                     | 0.59              |
| 2:BJ:63:SER:O     | 2:BJ:67:ARG:HD3    | 2.03                     | 0.59              |
| 3:BM:97:LEU:CD1   | 2:BN:19:LEU:HD12   | 2.31                     | 0.59              |
| 2:BT:1:MET:SD     | 2:BT:103:ILE:HD13  | 2.42                     | 0.59              |
| 2:CA:71:ASN:HD22  | 2:CA:121:VAL:HA    | 1.68                     | 0.59              |
| 2:CD:10:ASN:O     | 2:CD:14:VAL:HG23   | 2.03                     | 0.59              |
| 1:CG:5:THR:HG23   | 2:CH:1:MET:SD      | 2.42                     | 0.59              |
| 6:CM:210:PHE:CE2  | 6:CM:212:ASN:HB2   | 2.38                     | 0.59              |
| 6:CM:551:PHE:CE2  | 6:CM:555:LEU:HD11  | 2.38                     | 0.59              |
| 6:CM:797:ASN:HB2  | 10:DR:200:CYC:OB   | 2.02                     | 0.59              |
| 1:CR:82:LEU:CD1   | 8:DZ:242:ILE:HD11  | 2.33                     | 0.59              |
| 2:CW:20:ASP:O     | 2:CW:24:MET:HG2    | 2.03                     | 0.59              |
| 1:CY:136:VAL:HG12 | 1:CY:140:LEU:HD23  | 1.84                     | 0.59              |
| 2:DB:66:THR:HG21  | 10:DC:200:CYC:CBA  | 2.30                     | 0.59              |
| 2:DB:75:THR:HG23  | 10:DC:200:CYC:HBB2 | 1.83                     | 0.59              |
| 2:DM:15:GLN:HG3   | 2:DM:17:LYS:NZ     | 2.17                     | 0.59              |
| 1:DN:39:ILE:HG12  | 1:DN:145:ASP:HB3   | 1.85                     | 0.59              |
| 2:DO:60:LEU:HD13  | 2:DO:72:MET:SD     | 2.43                     | 0.59              |
| 1:DQ:130:VAL:CG1  | 1:DQ:157:ILE:HG22  | 2.29                     | 0.59              |
| 5:DX:19:GLN:O     | 5:DX:21:GLU:HG2    | 2.03                     | 0.59              |
| 1:AC:96:VAL:HA    | 1:AC:152:TYR:HE2   | 1.67                     | 0.59              |
| 2:AL:144:ASP:OD1  | 2:AL:145:ALA:N     | 2.36                     | 0.59              |
| 2:AO:83:ARG:HH21  | 6:BD:490:ALA:HB1   | 1.68                     | 0.59              |
| 2:AU:61:LEU:HD22  | 10:AV:200:CYC:HBA1 | 1.84                     | 0.59              |
| 1:AZ:89:LEU:O     | 1:AZ:93:THR:HG23   | 2.02                     | 0.59              |
| 4:BS:76:THR:HG21  | 6:CM:182:LEU:HB2   | 1.85                     | 0.59              |

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| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:CC:67:SER:O      | 1:CC:73:TYR:HB2   | 2.03                     | 0.59              |
| 1:CE:89:LEU:O      | 1:CE:93:THR:HG23  | 2.03                     | 0.59              |
| 2:CH:65:VAL:HA     | 2:CH:70:GLY:HA3   | 1.84                     | 0.59              |
| 8:DG:204:ILE:HD11  | 8:DZ:216:MET:SD   | 2.43                     | 0.59              |
| 2:DM:71:ASN:ND2    | 2:DM:121:VAL:HA   | 2.18                     | 0.59              |
| 1:DQ:79:ALA:HB3    | 8:DZ:203:PHE:CE1  | 2.38                     | 0.59              |
| 1:DS:72:ALA:HA     | 1:DS:77:MET:CB    | 2.33                     | 0.59              |
| 1:DU:85:MET:CB     | 1:DU:133:MET:HE2  | 2.33                     | 0.59              |
| 10:AU:200:CYC:O2A  | 5:BB:37:PHE:HB2   | 2.02                     | 0.59              |
| 1:AX:38:ARG:HA     | 1:AX:41:GLU:OE1   | 2.03                     | 0.59              |
| 6:BD:139:ILE:HD11  | 6:BD:191:SER:HB3  | 1.83                     | 0.59              |
| 9:BH:107:LEU:HG    | 11:BH:400:45D:C30 | 2.33                     | 0.59              |
| 1:BK:38:ARG:O      | 1:BK:42:THR:HG23  | 2.03                     | 0.59              |
| 2:BN:126:THR:O     | 2:BN:130:ILE:HG12 | 2.03                     | 0.59              |
| 10:BN:200:CYC:HBA1 | 5:CJ:33:TYR:CZ    | 2.38                     | 0.59              |
| 1:BP:110:VAL:CG1   | 2:BT:76:ARG:HG3   | 2.33                     | 0.59              |
| 4:BS:75:THR:HB     | 6:CM:178:ASN:OD1  | 2.03                     | 0.59              |
| 4:BS:105:LEU:HD11  | 4:BS:160:MET:CG   | 2.33                     | 0.59              |
| 2:BW:110:ASN:ND2   | 6:CM:481:LYS:O    | 2.34                     | 0.59              |
| 2:CF:108:VAL:HG12  | 2:CF:109:LEU:HD23 | 1.84                     | 0.59              |
| 1:CR:3:ILE:HD12    | 1:CR:25:ARG:CG    | 2.32                     | 0.59              |
| 1:CR:68:PRO:HG2    | 8:DZ:230:ASN:HD21 | 1.67                     | 0.59              |
| 10:CV:200:CYC:HMA1 | 10:CV:200:CYC:NB  | 2.18                     | 0.59              |
| 2:CW:68:PRO:HA     | 2:CW:73:TYR:CD2   | 2.38                     | 0.59              |
| 8:DG:215:PRO:CG    | 1:DQ:80:THR:HG22  | 2.33                     | 0.59              |
| 1:DJ:92:VAL:O      | 1:DJ:96:VAL:HG23  | 2.03                     | 0.59              |
| 2:DT:96:MET:HA     | 2:DT:152:TYR:CE2  | 2.38                     | 0.59              |
| 9:EA:134:ASN:O     | 9:EA:138:VAL:HG23 | 2.03                     | 0.59              |
| 9:EA:202:MET:CE    | 9:EA:269:VAL:HG21 | 2.33                     | 0.59              |
| 1:AH:71:ASN:OD1    | 10:AH:200:CYC:NC  | 2.35                     | 0.58              |
| 1:AH:112:VAL:CG2   | 2:AL:75:THR:HG21  | 2.32                     | 0.58              |
| 1:AR:85:MET:CB     | 1:AR:133:MET:HE2  | 2.33                     | 0.58              |
| 1:AX:131:ARG:HG3   | 1:AX:157:ILE:CD1  | 2.33                     | 0.58              |
| 1:AZ:67:SER:O      | 1:AZ:73:TYR:HB2   | 2.03                     | 0.58              |
| 1:AZ:156:VAL:O     | 1:AZ:160:MET:HG2  | 2.03                     | 0.58              |
| 9:BH:21:VAL:HG13   | 9:BH:153:VAL:CG2  | 2.33                     | 0.58              |
| 2:BL:113:LYS:HD2   | 2:BL:160:LEU:O    | 2.02                     | 0.58              |
| 3:BM:30:LEU:HD13   | 2:BN:31:PHE:HD1   | 1.68                     | 0.58              |
| 1:BV:26:ILE:O      | 1:BV:30:VAL:HG13  | 2.03                     | 0.58              |
| 6:CM:317:LYS:HD3   | 6:CM:392:GLU:OE2  | 2.03                     | 0.58              |
| 6:CM:709:ARG:HD3   | 2:DT:69:GLY:O     | 2.03                     | 0.58              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 9:CQ:300:PHE:CZ    | 9:CQ:302:ALA:HB2   | 2.39                     | 0.58              |
| 2:CW:123:ILE:HG23  | 2:CW:160:LEU:HG    | 1.85                     | 0.58              |
| 1:DA:122:PRO:HG2   | 1:DA:125:ALA:HB3   | 1.84                     | 0.58              |
| 1:DJ:50:ILE:HA     | 1:DJ:136:VAL:CG1   | 2.33                     | 0.58              |
| 2:DM:73:TYR:O      | 2:DM:77:ARG:HB2    | 2.03                     | 0.58              |
| 2:DO:61:LEU:HD21   | 2:DO:78:TYR:OH     | 2.03                     | 0.58              |
| 2:DR:22:ALA:O      | 2:DR:26:LYS:HE3    | 2.03                     | 0.58              |
| 2:DT:3:ASP:N       | 2:DT:6:THR:OG1     | 2.29                     | 0.58              |
| 1:AX:14:GLU:OE1    | 1:AX:16:ARG:NE     | 2.27                     | 0.58              |
| 6:BD:543:ILE:HG21  | 6:BD:565:GLU:HG2   | 1.85                     | 0.58              |
| 2:BN:114:GLU:OE1   | 5:CJ:52:LYS:HA     | 2.03                     | 0.58              |
| 4:BS:65:GLU:OE1    | 4:BS:65:GLU:N      | 2.36                     | 0.58              |
| 2:CA:58:LYS:HB3    | 7:CO:98:VAL:CG1    | 2.33                     | 0.58              |
| 2:CF:74:THR:HG23   | 1:CG:107:ILE:HA    | 1.84                     | 0.58              |
| 2:CH:10:ASN:O      | 2:CH:14:VAL:HG23   | 2.04                     | 0.58              |
| 2:CS:33:SER:O      | 2:CS:37:ARG:HG2    | 2.03                     | 0.58              |
| 2:CS:153:LEU:HA    | 2:CS:156:ILE:HD13  | 1.85                     | 0.58              |
| 2:CU:78:TYR:CD1    | 1:CV:115:MET:HG3   | 2.37                     | 0.58              |
| 10:CY:200:CYC:HBA2 | 2:DD:61:LEU:HD22   | 1.84                     | 0.58              |
| 9:DI:188:VAL:N     | 9:DI:203:ASP:OD1   | 2.30                     | 0.58              |
| 2:DM:88:TYR:CD2    | 2:DM:130:ILE:HD11  | 2.38                     | 0.58              |
| 1:DS:33:GLY:O      | 1:DS:37:LEU:HD23   | 2.02                     | 0.58              |
| 8:DZ:242:ILE:HG23  | 8:DZ:246:VAL:HG21  | 1.85                     | 0.58              |
| 9:EA:249:LYS:O     | 9:EA:274:GLN:N     | 2.36                     | 0.58              |
| 2:AB:10:ASN:O      | 2:AB:14:VAL:HG23   | 2.03                     | 0.58              |
| 1:AC:2:SER:HB3     | 1:AC:5:THR:CG2     | 2.33                     | 0.58              |
| 2:AD:33:SER:O      | 2:AD:37:ARG:HG3    | 2.03                     | 0.58              |
| 2:AI:2:GLN:HG2     | 2:AI:6:THR:HG22    | 1.85                     | 0.58              |
| 2:AU:111:GLY:HA2   | 2:AU:114:GLU:OE2   | 2.02                     | 0.58              |
| 2:AW:47:ASN:OD1    | 2:AW:140:LEU:HD21  | 2.03                     | 0.58              |
| 1:BK:68:PRO:HA     | 1:BK:73:TYR:CE1    | 2.38                     | 0.58              |
| 2:BL:85:LEU:HG     | 10:BL:200:CYC:HBC1 | 1.85                     | 0.58              |
| 3:BM:50:ILE:HD11   | 3:BM:140:LEU:CB    | 2.33                     | 0.58              |
| 3:BM:101:LYS:HD2   | 3:BM:155:TYR:CZ    | 2.37                     | 0.58              |
| 1:BV:64:ASP:HB2    | 1:CE:64:ASP:HB2    | 1.85                     | 0.58              |
| 2:BW:71:ASN:HD22   | 2:BW:122:PRO:HD3   | 1.68                     | 0.58              |
| 1:BZ:81:CYS:HA     | 10:BZ:200:CYC:HHD  | 1.85                     | 0.58              |
| 1:BZ:84:ASP:OD2    | 10:BZ:200:CYC:ND   | 2.32                     | 0.58              |
| 2:CA:123:ILE:HA    | 2:CA:126:THR:HG22  | 1.84                     | 0.58              |
| 1:CG:62:ARG:O      | 1:CG:65:ILE:HG12   | 2.03                     | 0.58              |
| 6:CM:309:VAL:HG21  | 6:CM:319:PHE:CG    | 2.38                     | 0.58              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:CR:148:GLU:OE1  | 1:CR:148:GLU:N     | 2.37                     | 0.58              |
| 1:CY:77:MET:HE2   | 8:DH:201:ARG:HB2   | 1.83                     | 0.58              |
| 2:CZ:91:TYR:CE2   | 10:CZ:200:CYC:HBB1 | 2.39                     | 0.58              |
| 1:DC:8:ILE:CD1    | 2:DD:98:ALA:HB2    | 2.33                     | 0.58              |
| 9:DI:223:LEU:HG   | 9:DI:301:VAL:HG13  | 1.85                     | 0.58              |
| 1:DN:41:GLU:HG3   | 2:DO:24:MET:HE2    | 1.84                     | 0.58              |
| 9:EA:250:LEU:CD2  | 9:EA:273:VAL:HG22  | 2.33                     | 0.58              |
| 4:AK:54:ARG:HB2   | 4:AK:137:MET:HE1   | 1.84                     | 0.58              |
| 4:AK:108:ARG:HB3  | 6:BD:249:GLN:OE1   | 2.03                     | 0.58              |
| 2:AS:58:LYS:HB3   | 7:BF:98:VAL:HG11   | 1.85                     | 0.58              |
| 1:AX:107:ILE:HD11 | 6:BD:532:VAL:CG2   | 2.29                     | 0.58              |
| 9:BH:298:ILE:HD11 | 9:BH:300:PHE:O     | 2.03                     | 0.58              |
| 2:BT:122:PRO:HB2  | 2:BT:125:SER:HB2   | 1.85                     | 0.58              |
| 6:CM:154:ARG:NH1  | 6:CM:155:ASP:OD1   | 2.37                     | 0.58              |
| 6:CM:485:ILE:HD12 | 6:CM:665:LEU:HD13  | 1.85                     | 0.58              |
| 1:CR:134:LYS:NZ   | 1:CR:154:ASP:OD1   | 2.27                     | 0.58              |
| 2:DD:61:LEU:HA    | 2:DD:66:THR:HG21   | 1.86                     | 0.58              |
| 2:DK:2:GLN:N      | 2:DK:102:SER:OG    | 2.35                     | 0.58              |
| 2:DR:112:LEU:HA   | 2:DR:115:THR:HG22  | 1.85                     | 0.58              |
| 1:DS:58:LEU:HD22  | 1:DS:129:SER:CB    | 2.34                     | 0.58              |
| 10:DT:200:CYC:NB  | 10:DT:200:CYC:HMA1 | 2.19                     | 0.58              |
| 9:EA:218:THR:HG23 | 9:EA:297:LYS:O     | 2.02                     | 0.58              |
| 2:AD:96:MET:HB2   | 2:AD:148:GLU:OE1   | 2.03                     | 0.58              |
| 1:AH:89:LEU:HB2   | 1:AH:133:MET:CE    | 2.33                     | 0.58              |
| 2:AU:61:LEU:HD21  | 2:AU:78:TYR:OH     | 2.04                     | 0.58              |
| 6:BD:860:THR:OG1  | 10:DB:200:CYC:O1A  | 2.21                     | 0.58              |
| 2:BJ:137:THR:O    | 2:BJ:141:VAL:HG12  | 2.04                     | 0.58              |
| 2:BL:10:ASN:O     | 2:BL:14:VAL:HG13   | 2.03                     | 0.58              |
| 1:BP:87:TYR:HB3   | 10:BP:200:CYC:HBB3 | 1.85                     | 0.58              |
| 1:BV:37:LEU:HG    | 2:BW:24:MET:HG3    | 1.84                     | 0.58              |
| 2:CA:104:LEU:HD12 | 2:CA:155:TYR:HD2   | 1.69                     | 0.58              |
| 2:CD:75:THR:CG2   | 1:CE:108:GLY:HA2   | 2.33                     | 0.58              |
| 6:CM:555:LEU:HD22 | 6:CM:587:LEU:HD21  | 1.84                     | 0.58              |
| 9:CQ:250:LEU:CD2  | 9:CQ:273:VAL:HG23  | 2.34                     | 0.58              |
| 2:CW:84:ASP:OD2   | 10:CW:200:CYC:ND   | 2.36                     | 0.58              |
| 2:DD:57:ALA:HA    | 2:DD:61:LEU:CD1    | 2.31                     | 0.58              |
| 2:DD:127:VAL:O    | 2:DD:131:GLN:HG2   | 2.04                     | 0.58              |
| 2:DT:122:PRO:HB2  | 2:DT:125:SER:HB2   | 1.84                     | 0.58              |
| 2:DT:124:SER:O    | 2:DT:128:GLN:HG2   | 2.04                     | 0.58              |
| 1:DU:27:LYS:HD2   | 2:DV:35:GLU:OE1    | 2.04                     | 0.58              |
| 3:AE:97:LEU:CD1   | 2:AF:19:LEU:HD12   | 2.33                     | 0.58              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 10:AE:200:CYC:HC   | 10:AE:200:CYC:HMD2 | 1.69                     | 0.58              |
| 1:AJ:109:LEU:HD13  | 1:AJ:159:LYS:CG    | 2.34                     | 0.58              |
| 2:AL:2:GLN:HB2     | 2:AL:6:THR:CG2     | 2.33                     | 0.58              |
| 1:AP:122:PRO:HG2   | 1:AP:125:ALA:HB3   | 1.85                     | 0.58              |
| 1:AR:101:VAL:HG22  | 1:AR:104:ILE:HB    | 1.85                     | 0.58              |
| 2:AW:76:ARG:HB2    | 1:AX:110:VAL:CG1   | 2.32                     | 0.58              |
| 1:BP:81:CYS:HA     | 10:BP:200:CYC:HHD  | 1.85                     | 0.58              |
| 1:BR:32:GLY:O      | 1:BR:36:ARG:HG3    | 2.03                     | 0.58              |
| 2:BT:113:LYS:NZ    | 2:CA:105:ASP:OD2   | 2.30                     | 0.58              |
| 1:BV:122:PRO:O     | 1:BV:126:VAL:HG23  | 2.04                     | 0.58              |
| 10:CE:200:CYC:HHA  | 10:CE:200:CYC:HBD1 | 1.86                     | 0.58              |
| 2:CF:41:ALA:HB2    | 2:CF:96:MET:HE1    | 1.84                     | 0.58              |
| 1:CG:51:VAL:HG22   | 1:CG:133:MET:CE    | 2.33                     | 0.58              |
| 1:CG:105:GLU:HA    | 1:CG:109:LEU:CB    | 2.30                     | 0.58              |
| 6:CM:253:LEU:HD12  | 6:CM:254:PRO:HD2   | 1.85                     | 0.58              |
| 6:CM:477:ASN:O     | 6:CM:617:ARG:HD3   | 2.03                     | 0.58              |
| 1:CR:85:MET:HB3    | 1:CR:133:MET:CE    | 2.34                     | 0.58              |
| 1:DC:121:THR:HG23  | 10:DC:200:CYC:C1C  | 2.32                     | 0.58              |
| 1:DJ:76:GLU:OE1    | 1:DJ:76:GLU:N      | 2.32                     | 0.58              |
| 1:DL:57:ARG:O      | 1:DL:61:LYS:HG2    | 2.03                     | 0.58              |
| 1:DL:141:MET:CE    | 1:DL:146:ALA:HA    | 2.33                     | 0.58              |
| 10:DM:200:CYC:HC   | 10:DM:200:CYC:HMD2 | 1.69                     | 0.58              |
| 1:DQ:58:LEU:CD2    | 10:DQ:200:CYC:HBC3 | 2.33                     | 0.58              |
| 1:DQ:76:GLU:O      | 1:DQ:80:THR:HG23   | 2.03                     | 0.58              |
| 1:DS:113:ARG:HH11  | 1:DS:123:ILE:HD13  | 1.69                     | 0.58              |
| 5:DX:2:ARG:HA      | 5:DX:57:THR:O      | 2.04                     | 0.58              |
| 1:AA:115:MET:HE3   | 10:AA:200:CYC:HMB3 | 1.86                     | 0.58              |
| 3:AE:30:LEU:CD1    | 2:AF:31:PHE:HA     | 2.34                     | 0.58              |
| 3:AE:65:TYR:HA     | 3:AE:71:ASN:H      | 1.67                     | 0.58              |
| 9:BH:63:LEU:HD12   | 9:BH:105:ILE:CD1   | 2.34                     | 0.58              |
| 3:BM:112:VAL:O     | 3:BM:115:MET:HB3   | 2.04                     | 0.58              |
| 2:BY:127:VAL:O     | 2:BY:131:GLN:HG2   | 2.04                     | 0.58              |
| 1:CC:131:ARG:HG3   | 1:CC:157:ILE:HD13  | 1.85                     | 0.58              |
| 10:CH:200:CYC:HBD2 | 10:CH:200:CYC:HHA  | 1.83                     | 0.58              |
| 6:CM:225:ASP:HA    | 6:CM:228:LEU:CD2   | 2.34                     | 0.58              |
| 2:CS:54:GLU:O      | 2:CS:58:LYS:HG2    | 2.04                     | 0.58              |
| 2:CS:148:GLU:O     | 2:CS:151:VAL:HG12  | 2.02                     | 0.58              |
| 1:CT:102:THR:OG1   | 1:CT:103:PRO:HD3   | 2.03                     | 0.58              |
| 1:CY:17:TYR:OH     | 2:CZ:89:LEU:HD22   | 2.03                     | 0.58              |
| 2:DB:68:PRO:HD3    | 1:DC:87:TYR:OH     | 2.04                     | 0.58              |
| 8:DG:219:LEU:HD13  | 8:DZ:203:PHE:CE2   | 2.38                     | 0.58              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 9:EA:99:ALA:HB1    | 9:EA:164:THR:HG22  | 1.86                     | 0.58              |
| 1:AC:115:MET:CE    | 10:AC:200:CYC:HMB3 | 2.33                     | 0.58              |
| 1:AJ:66:VAL:CG1    | 1:BX:68:PRO:HG2    | 2.33                     | 0.58              |
| 6:BD:5:ALA:HB3     | 6:BD:437:TYR:CD1   | 2.39                     | 0.58              |
| 6:BD:160:LEU:O     | 6:BD:164:THR:HG23  | 2.04                     | 0.58              |
| 2:BL:112:LEU:HD21  | 10:BL:200:CYC:CAB  | 2.34                     | 0.58              |
| 2:CA:71:ASN:ND2    | 2:CA:121:VAL:HA    | 2.19                     | 0.58              |
| 1:CG:131:ARG:HG3   | 1:CG:157:ILE:CD1   | 2.34                     | 0.58              |
| 6:CM:14:PRO:HG3    | 6:CM:401:LEU:CD2   | 2.32                     | 0.58              |
| 6:CM:152:SER:CB    | 10:CM:902:CYC:H3C  | 2.34                     | 0.58              |
| 6:CM:198:ALA:O     | 6:CM:202:MET:HG3   | 2.03                     | 0.58              |
| 6:CM:318:GLU:OE1   | 6:CM:321:ARG:NE    | 2.30                     | 0.58              |
| 6:CM:826:LEU:HD23  | 6:CM:830:GLY:O     | 2.03                     | 0.58              |
| 6:CM:882:GLU:N     | 6:CM:882:GLU:OE1   | 2.36                     | 0.58              |
| 9:CQ:187:LYS:HE2   | 9:CQ:199:LEU:HD21  | 1.86                     | 0.58              |
| 2:CW:60:LEU:O      | 2:CW:63:SER:OG     | 2.10                     | 0.58              |
| 2:DB:104:LEU:O     | 2:DB:108:VAL:HB    | 2.04                     | 0.58              |
| 2:DD:65:VAL:HA     | 2:DD:70:GLY:HA3    | 1.86                     | 0.58              |
| 5:DF:6:ILE:HG21    | 5:DF:36:TRP:CZ3    | 2.39                     | 0.58              |
| 10:DV:200:CYC:HMB1 | 10:DV:200:CYC:HBB3 | 1.85                     | 0.58              |
| 1:AA:134:LYS:HD3   | 1:AA:153:PHE:HB3   | 1.86                     | 0.58              |
| 2:AB:13:ASP:OD2    | 5:BA:63:ASN:ND2    | 2.34                     | 0.58              |
| 2:AB:122:PRO:HB2   | 2:AB:125:SER:OG    | 2.04                     | 0.58              |
| 3:AE:104:ILE:HG22  | 3:AE:109:LEU:HG    | 1.86                     | 0.58              |
| 2:AI:114:GLU:OE1   | 2:AI:114:GLU:N     | 2.36                     | 0.58              |
| 4:AK:21:ARG:HE     | 4:BS:21:ARG:HE     | 1.51                     | 0.58              |
| 1:AR:12:ASP:OD2    | 2:AS:91:TYR:OH     | 2.19                     | 0.58              |
| 2:AS:71:ASN:ND2    | 2:AS:121:VAL:HA    | 2.19                     | 0.58              |
| 2:AW:127:VAL:O     | 2:AW:131:GLN:HG2   | 2.04                     | 0.58              |
| 5:BA:39:GLU:OE2    | 5:BA:42:ARG:NH2    | 2.25                     | 0.58              |
| 6:BD:75:ILE:HG13   | 6:BD:198:ALA:CB    | 2.33                     | 0.58              |
| 6:BD:709:ARG:HD3   | 2:DB:69:GLY:O      | 2.03                     | 0.58              |
| 3:BM:134:LYS:HD3   | 3:BM:153:PHE:HB3   | 1.85                     | 0.58              |
| 4:BS:111:GLN:NE2   | 6:CM:437:TYR:HB3   | 2.19                     | 0.58              |
| 1:BV:4:VAL:O       | 1:BV:8:ILE:HG12    | 2.03                     | 0.58              |
| 1:BZ:19:SER:OG     | 1:BZ:22:GLU:HG3    | 2.04                     | 0.58              |
| 9:CQ:289:ARG:NH1   | 9:DI:306:LEU:HD12  | 2.19                     | 0.58              |
| 1:DC:62:ARG:O      | 1:DC:65:ILE:HG12   | 2.03                     | 0.58              |
| 8:DG:215:PRO:HB2   | 8:DZ:203:PHE:CD1   | 2.39                     | 0.58              |
| 9:DI:107:LEU:HB3   | 11:DI:400:45D:H141 | 1.86                     | 0.58              |
| 2:DK:2:GLN:HB3     | 2:DK:7:ALA:HB2     | 1.84                     | 0.58              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:DT:2:GLN:NE2    | 2:DT:7:ALA:HA      | 2.19                     | 0.58              |
| 2:DT:63:SER:O     | 2:DT:67:ARG:HG3    | 2.04                     | 0.58              |
| 1:AC:27:LYS:O     | 1:AC:31:THR:HG23   | 2.03                     | 0.58              |
| 3:AE:27:GLN:O     | 3:AE:31:THR:HG23   | 2.04                     | 0.58              |
| 3:AE:104:ILE:HG21 | 3:AE:156:ILE:HD11  | 1.86                     | 0.58              |
| 10:AH:200:CYC:O2D | 2:AL:62:TYR:OH     | 2.12                     | 0.58              |
| 4:AK:51:ILE:HD13  | 4:AK:138:ILE:HD13  | 1.86                     | 0.58              |
| 1:AN:53:GLN:O     | 1:AN:57:ARG:HD3    | 2.04                     | 0.58              |
| 1:AN:91:LEU:HD21  | 1:AN:107:ILE:HB    | 1.85                     | 0.58              |
| 2:AW:147:LYS:O    | 2:AW:151:VAL:HG23  | 2.04                     | 0.58              |
| 1:AX:50:ILE:HG13  | 1:AX:136:VAL:CG1   | 2.34                     | 0.58              |
| 1:AZ:76:GLU:O     | 1:AZ:80:THR:HG23   | 2.03                     | 0.58              |
| 6:BD:85:LEU:CG    | 6:BD:153:LEU:HD21  | 2.29                     | 0.58              |
| 2:BL:57:ALA:HA    | 2:BL:61:LEU:CG     | 2.33                     | 0.58              |
| 2:BL:131:GLN:O    | 2:BL:134:LYS:HB2   | 2.03                     | 0.58              |
| 4:BS:68:ARG:HD2   | 7:CO:105:PRO:HG2   | 1.86                     | 0.58              |
| 1:BV:39:ILE:CG1   | 1:BV:145:ASP:HB2   | 2.34                     | 0.58              |
| 10:BX:200:CYC:HC  | 10:BX:200:CYC:HMD2 | 1.68                     | 0.58              |
| 2:BY:65:VAL:HG12  | 2:BY:72:MET:HB2    | 1.84                     | 0.58              |
| 1:CG:14:GLU:OE1   | 1:CG:16:ARG:NE     | 2.24                     | 0.58              |
| 9:CQ:311:GLU:OE1  | 9:CQ:312:LEU:HD22  | 2.04                     | 0.58              |
| 2:CU:55:ALA:O     | 2:CU:59:SER:OG     | 2.10                     | 0.58              |
| 2:DD:85:LEU:HG    | 10:DD:200:CYC:HBC1 | 1.85                     | 0.58              |
| 1:DL:97:VAL:HG21  | 2:DM:19:LEU:HD11   | 1.86                     | 0.58              |
| 1:DL:154:ASP:OD2  | 2:DV:46:ALA:HB2    | 2.03                     | 0.58              |
| 1:DU:39:ILE:HG22  | 1:DU:96:VAL:HG11   | 1.84                     | 0.58              |
| 1:AC:123:ILE:HA   | 1:AC:126:VAL:HG22  | 1.85                     | 0.57              |
| 2:AD:109:LEU:CD2  | 2:AD:159:GLY:HA3   | 2.34                     | 0.57              |
| 2:AS:107:ARG:HD3  | 6:BD:594:ALA:O     | 2.04                     | 0.57              |
| 9:BH:70:GLU:O     | 9:BH:74:MET:HG3    | 2.04                     | 0.57              |
| 1:BI:22:GLU:O     | 1:BI:26:ILE:HG12   | 2.04                     | 0.57              |
| 2:BJ:51:ILE:HG22  | 2:BJ:133:ILE:CD1   | 2.33                     | 0.57              |
| 2:BQ:107:ARG:HG2  | 6:CM:337:PHE:O     | 2.04                     | 0.57              |
| 1:BV:22:GLU:O     | 1:BV:26:ILE:HG13   | 2.04                     | 0.57              |
| 6:CM:199:ILE:HD13 | 6:CM:227:LEU:CD2   | 2.34                     | 0.57              |
| 1:CV:125:ALA:HB3  | 10:CV:200:CYC:HMC2 | 1.86                     | 0.57              |
| 2:DD:71:ASN:O     | 2:DD:77:ARG:HD3    | 2.04                     | 0.57              |
| 4:AK:113:LEU:HA   | 6:BD:408:CYS:SG    | 2.44                     | 0.57              |
| 1:AN:92:VAL:HG11  | 1:AN:153:PHE:CE2   | 2.38                     | 0.57              |
| 1:AV:39:ILE:HG12  | 1:AV:145:ASP:HB3   | 1.86                     | 0.57              |
| 2:AW:93:THR:N     | 2:AW:149:MET:HE1   | 2.20                     | 0.57              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AX:62:ARG:O     | 1:AX:65:ILE:HG12   | 2.04                     | 0.57              |
| 5:BB:15:ARG:NH1   | 5:BB:17:ARG:HG2    | 2.19                     | 0.57              |
| 9:BH:26:ALA:O     | 9:BH:30:GLN:HG2    | 2.03                     | 0.57              |
| 1:BI:84:ASP:OD2   | 10:BI:200:CYC:ND   | 2.37                     | 0.57              |
| 2:BQ:76:ARG:CZ    | 1:BR:110:VAL:HG11  | 2.35                     | 0.57              |
| 1:BV:33:GLY:HA2   | 1:BV:36:ARG:HD2    | 1.85                     | 0.57              |
| 2:CD:85:LEU:HD22  | 2:CD:133:ILE:HD11  | 1.84                     | 0.57              |
| 2:CS:84:ASP:OD2   | 2:CS:116:TYR:OH    | 2.15                     | 0.57              |
| 2:CS:137:THR:O    | 2:CS:141:VAL:HG22  | 2.04                     | 0.57              |
| 1:CT:68:PRO:HD2   | 8:DY:230:ASN:ND2   | 2.18                     | 0.57              |
| 2:CU:148:GLU:O    | 2:CU:151:VAL:HG12  | 2.04                     | 0.57              |
| 8:DH:238:GLN:HA   | 1:DJ:52:LYS:CE     | 2.33                     | 0.57              |
| 9:DI:102:SER:OG   | 9:DI:105:ILE:HG12  | 2.04                     | 0.57              |
| 9:DI:191:GLU:HB2  | 9:DI:254:ARG:CB    | 2.34                     | 0.57              |
| 1:DJ:20:PRO:HA    | 1:DJ:23:LEU:HD21   | 1.86                     | 0.57              |
| 1:DJ:96:VAL:HA    | 1:DJ:152:TYR:CE2   | 2.39                     | 0.57              |
| 2:DM:71:ASN:HB3   | 10:DM:200:CYC:OC   | 2.04                     | 0.57              |
| 2:DO:110:ASN:HD22 | 5:DX:49:LYS:HA     | 1.68                     | 0.57              |
| 1:DQ:37:LEU:HD12  | 2:DR:24:MET:CE     | 2.34                     | 0.57              |
| 1:AJ:84:ASP:OD2   | 10:AJ:200:CYC:ND   | 2.35                     | 0.57              |
| 1:AR:141:MET:HB2  | 1:AR:146:ALA:HB2   | 1.86                     | 0.57              |
| 9:BH:75:GLY:O     | 9:BH:79:GLN:HG3    | 2.03                     | 0.57              |
| 1:BI:153:PHE:O    | 1:BI:157:ILE:HD12  | 2.04                     | 0.57              |
| 2:BJ:88:TYR:OH    | 2:BJ:112:LEU:HD21  | 2.04                     | 0.57              |
| 1:CG:38:ARG:O     | 1:CG:42:THR:HG23   | 2.04                     | 0.57              |
| 6:CM:63:ASN:O     | 6:CM:67:ILE:HG12   | 2.05                     | 0.57              |
| 6:CM:70:ARG:HG2   | 6:CM:201:GLU:OE2   | 2.05                     | 0.57              |
| 9:CQ:188:VAL:HG11 | 9:CQ:202:MET:CE    | 2.31                     | 0.57              |
| 1:CV:58:LEU:HD22  | 1:CV:129:SER:CB    | 2.33                     | 0.57              |
| 2:DB:96:MET:HA    | 2:DB:152:TYR:CE2   | 2.39                     | 0.57              |
| 1:DN:50:ILE:CG1   | 1:DN:140:LEU:HD21  | 2.34                     | 0.57              |
| 1:DQ:37:LEU:HD12  | 2:DR:24:MET:HE3    | 1.86                     | 0.57              |
| 2:DV:57:ALA:HA    | 2:DV:61:LEU:CD1    | 2.35                     | 0.57              |
| 1:AV:50:ILE:CD1   | 1:AV:136:VAL:HG12  | 2.35                     | 0.57              |
| 6:BD:321:ARG:O    | 6:BD:325:LYS:HG2   | 2.04                     | 0.57              |
| 6:BD:447:TYR:CZ   | 10:BD:901:CYC:HAA1 | 2.40                     | 0.57              |
| 6:BD:519:LEU:HD13 | 6:BD:569:GLU:O     | 2.04                     | 0.57              |
| 6:BD:793:ALA:O    | 2:CZ:107:ARG:HD3   | 2.04                     | 0.57              |
| 9:BH:289:ARG:HB3  | 9:BH:302:ALA:HB3   | 1.86                     | 0.57              |
| 2:BQ:2:GLN:HG2    | 2:BQ:6:THR:HG22    | 1.86                     | 0.57              |
| 5:CK:6:ILE:HD13   | 5:CK:36:TRP:HZ3    | 1.69                     | 0.57              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 6:CM:702:THR:HB    | 2:DB:151:VAL:HG22  | 1.85                     | 0.57              |
| 2:CS:57:ALA:O      | 8:DY:249:ARG:NH1   | 2.38                     | 0.57              |
| 1:CT:91:LEU:HD21   | 1:CT:107:ILE:HG22  | 1.87                     | 0.57              |
| 1:CY:58:LEU:HD22   | 1:CY:129:SER:CB    | 2.34                     | 0.57              |
| 2:CZ:108:VAL:O     | 2:CZ:112:LEU:HB2   | 2.04                     | 0.57              |
| 10:DA:200:CYC:NB   | 10:DA:200:CYC:HMA1 | 2.20                     | 0.57              |
| 1:DC:107:ILE:HG22  | 10:DC:200:CYC:HBB1 | 1.85                     | 0.57              |
| 1:DQ:94:TYR:CD1    | 2:DR:9:ILE:HG23    | 2.40                     | 0.57              |
| 2:DR:57:ALA:HA     | 2:DR:61:LEU:HB2    | 1.86                     | 0.57              |
| 2:DR:71:ASN:ND2    | 2:DR:121:VAL:HA    | 2.18                     | 0.57              |
| 2:DR:122:PRO:HB2   | 2:DR:125:SER:HB2   | 1.86                     | 0.57              |
| 2:DT:15:GLN:HG3    | 2:DT:17:LYS:HG3    | 1.87                     | 0.57              |
| 8:DZ:210:LEU:HD11  | 8:DZ:214:ASN:HB3   | 1.84                     | 0.57              |
| 2:AB:61:LEU:HD22   | 10:AC:200:CYC:HAA1 | 1.87                     | 0.57              |
| 1:AC:25:ARG:HB3    | 6:BD:42:GLU:HA     | 1.86                     | 0.57              |
| 3:AE:124:PRO:HA    | 3:AE:127:VAL:HG12  | 1.86                     | 0.57              |
| 10:AN:200:CYC:O1D  | 7:BF:100:ARG:NH2   | 2.37                     | 0.57              |
| 1:AR:48:GLU:OE1    | 1:AR:48:GLU:N      | 2.33                     | 0.57              |
| 1:AV:87:TYR:CD2    | 10:AV:200:CYC:HMB2 | 2.38                     | 0.57              |
| 2:AW:78:TYR:O      | 2:AW:82:ILE:HG12   | 2.05                     | 0.57              |
| 3:BM:85:TYR:CE1    | 3:BM:129:ALA:HB1   | 2.40                     | 0.57              |
| 10:BM:200:CYC:HMA1 | 10:BM:200:CYC:NB   | 2.19                     | 0.57              |
| 2:BN:71:ASN:ND2    | 2:BN:121:VAL:HA    | 2.19                     | 0.57              |
| 1:BP:41:GLU:HA     | 1:BP:44:THR:HG22   | 1.85                     | 0.57              |
| 1:BR:97:VAL:HG21   | 4:BS:19:LEU:CD1    | 2.34                     | 0.57              |
| 10:CD:200:CYC:HC   | 10:CD:200:CYC:HMD2 | 1.68                     | 0.57              |
| 6:CM:549:GLN:O     | 6:CM:608:ARG:HD2   | 2.04                     | 0.57              |
| 9:CQ:46:GLU:HB3    | 9:CQ:50:THR:CG2    | 2.34                     | 0.57              |
| 9:CQ:75:GLY:O      | 9:CQ:79:GLN:HG3    | 2.04                     | 0.57              |
| 9:CQ:205:LEU:HD12  | 9:CQ:210:PHE:CE1   | 2.38                     | 0.57              |
| 9:CQ:264:PHE:CD1   | 9:CQ:294:PRO:HD3   | 2.38                     | 0.57              |
| 2:CU:15:GLN:CB     | 2:CU:17:LYS:HE3    | 2.34                     | 0.57              |
| 2:CZ:5:ILE:O       | 2:CZ:9:ILE:HG12    | 2.03                     | 0.57              |
| 1:DA:85:MET:HG2    | 1:DA:133:MET:HE3   | 1.86                     | 0.57              |
| 1:DJ:44:THR:O      | 1:DJ:47:ARG:HG2    | 2.04                     | 0.57              |
| 2:DV:65:VAL:HG12   | 2:DV:72:MET:CB     | 2.35                     | 0.57              |
| 1:AA:21:GLY:O      | 1:AA:25:ARG:HG2    | 2.05                     | 0.57              |
| 1:AA:64:ASP:OD1    | 1:AA:65:ILE:HD12   | 2.05                     | 0.57              |
| 1:AC:25:ARG:CG     | 6:BD:42:GLU:HG3    | 2.34                     | 0.57              |
| 2:AD:93:THR:N      | 2:AD:149:MET:HE1   | 2.19                     | 0.57              |
| 2:AF:112:LEU:CD1   | 10:AF:200:CYC:HMB3 | 2.35                     | 0.57              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AH:112:VAL:HG22 | 2:AL:75:THR:HG21   | 1.86                     | 0.57              |
| 4:AK:85:ASP:OD2   | 10:AK:200:CYC:ND   | 2.35                     | 0.57              |
| 4:AK:109:VAL:O    | 4:AK:113:LEU:HG    | 2.04                     | 0.57              |
| 1:AR:72:ALA:HA    | 1:AR:77:MET:HB3    | 1.86                     | 0.57              |
| 1:AV:27:LYS:HD2   | 2:AW:35:GLU:OE1    | 2.04                     | 0.57              |
| 1:AX:105:GLU:HA   | 1:AX:109:LEU:CB    | 2.29                     | 0.57              |
| 1:AZ:87:TYR:O     | 1:AZ:91:LEU:HG     | 2.04                     | 0.57              |
| 6:BD:11:LEU:HD23  | 6:BD:13:ARG:HD2    | 1.86                     | 0.57              |
| 6:BD:348:ARG:NH2  | 6:BD:398:LEU:HD11  | 2.19                     | 0.57              |
| 6:BD:736:LYS:HE3  | 6:BD:740:ARG:CG    | 2.35                     | 0.57              |
| 6:BD:806:LYS:HB2  | 6:BD:872:LEU:HD13  | 1.86                     | 0.57              |
| 3:BM:27:GLN:O     | 3:BM:31:THR:HG23   | 2.04                     | 0.57              |
| 1:BP:71:ASN:OD1   | 10:BP:200:CYC:NC   | 2.38                     | 0.57              |
| 2:BW:75:THR:HG23  | 10:BX:200:CYC:HAB2 | 1.86                     | 0.57              |
| 1:CE:83:ARG:NH1   | 10:CE:200:CYC:O1A  | 2.31                     | 0.57              |
| 1:CT:85:MET:HE2   | 1:CT:129:SER:HB2   | 1.86                     | 0.57              |
| 2:CZ:22:ALA:HA    | 2:CZ:25:ASP:OD2    | 2.05                     | 0.57              |
| 2:CZ:134:LYS:HG3  | 2:CZ:150:GLY:HA2   | 1.85                     | 0.57              |
| 9:DI:213:LEU:HD13 | 9:DI:216:LEU:HB3   | 1.86                     | 0.57              |
| 1:DN:32:GLY:O     | 1:DN:36:ARG:HD3    | 2.05                     | 0.57              |
| 2:DO:88:TYR:OH    | 2:DO:112:LEU:HD21  | 2.04                     | 0.57              |
| 1:DS:22:GLU:O     | 1:DS:26:ILE:HG12   | 2.05                     | 0.57              |
| 1:DS:76:GLU:OE1   | 1:DS:76:GLU:N      | 2.32                     | 0.57              |
| 1:DS:131:ARG:O    | 1:DS:135:GLU:HG2   | 2.04                     | 0.57              |
| 2:AD:3:ASP:OD1    | 2:AD:98:ALA:HB1    | 2.05                     | 0.57              |
| 3:AE:47:GLU:HG2   | 3:AE:89:LEU:HD23   | 1.86                     | 0.57              |
| 1:AN:154:ASP:HB3  | 2:AU:46:ALA:HB2    | 1.85                     | 0.57              |
| 9:BH:201:TYR:CD1  | 9:BH:213:LEU:HD11  | 2.40                     | 0.57              |
| 1:BI:126:VAL:O    | 1:BI:130:VAL:HG23  | 2.05                     | 0.57              |
| 2:BL:50:THR:O     | 2:BL:54:GLU:HG2    | 2.05                     | 0.57              |
| 3:BM:4:VAL:HG13   | 2:BN:97:LEU:CD2    | 2.33                     | 0.57              |
| 2:BN:85:LEU:HG    | 10:BN:200:CYC:HBC1 | 1.87                     | 0.57              |
| 2:BQ:76:ARG:HD3   | 6:CM:362:GLN:OE1   | 2.04                     | 0.57              |
| 2:BT:148:GLU:O    | 2:BT:151:VAL:HG22  | 2.05                     | 0.57              |
| 1:BV:108:GLY:HA2  | 2:CA:75:THR:HG23   | 1.85                     | 0.57              |
| 2:CA:123:ILE:HD12 | 6:CM:9:SER:O       | 2.05                     | 0.57              |
| 2:CF:71:ASN:HD22  | 2:CF:122:PRO:HD3   | 1.70                     | 0.57              |
| 5:CJ:18:THR:HG22  | 6:CM:240:VAL:O     | 2.03                     | 0.57              |
| 9:CQ:188:VAL:HG21 | 9:CQ:252:PRO:HG2   | 1.87                     | 0.57              |
| 2:DD:143:ALA:O    | 2:DD:147:LYS:HG2   | 2.05                     | 0.57              |
| 2:DM:47:ASN:ND2   | 2:DM:140:LEU:HD21  | 2.20                     | 0.57              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:DR:87:TYR:CD2   | 10:DR:200:CYC:HBB3 | 2.39                     | 0.57              |
| 1:DS:41:GLU:HG3   | 2:DT:24:MET:CE     | 2.35                     | 0.57              |
| 8:DY:211:THR:O    | 8:DY:217:ASN:ND2   | 2.38                     | 0.57              |
| 1:AC:128:GLN:OE1  | 1:AC:131:ARG:HD2   | 2.05                     | 0.57              |
| 3:AE:92:VAL:HG11  | 3:AE:153:PHE:CE2   | 2.38                     | 0.57              |
| 2:AI:2:GLN:NE2    | 2:AI:10:ASN:OD1    | 2.38                     | 0.57              |
| 2:AO:1:MET:SD     | 2:AO:103:ILE:HD12  | 2.45                     | 0.57              |
| 1:AR:126:VAL:O    | 1:AR:130:VAL:HG23  | 2.04                     | 0.57              |
| 2:AS:100:ASP:OD1  | 2:AS:101:ALA:N     | 2.37                     | 0.57              |
| 2:AW:112:LEU:CD1  | 10:AW:200:CYC:HMB3 | 2.32                     | 0.57              |
| 1:AZ:58:LEU:HD22  | 1:AZ:129:SER:CB    | 2.35                     | 0.57              |
| 5:BA:2:ARG:CZ     | 5:BA:33:TYR:HB3    | 2.35                     | 0.57              |
| 9:BH:190:ILE:HD13 | 9:BH:252:PRO:CB    | 2.35                     | 0.57              |
| 1:BI:132:GLU:O    | 1:BI:136:VAL:HG23  | 2.04                     | 0.57              |
| 1:BK:50:ILE:CD1   | 1:BK:136:VAL:HG12  | 2.35                     | 0.57              |
| 1:BV:8:ILE:HD12   | 2:BW:94:TYR:HD1    | 1.69                     | 0.57              |
| 1:BV:90:ARG:NH1   | 2:BW:16:GLY:O      | 2.38                     | 0.57              |
| 1:BX:66:VAL:HG12  | 1:DC:68:PRO:HG2    | 1.87                     | 0.57              |
| 1:BX:89:LEU:O     | 1:BX:93:THR:HG23   | 2.05                     | 0.57              |
| 2:CA:68:PRO:HA    | 2:CA:73:TYR:CG     | 2.39                     | 0.57              |
| 6:CM:625:ASP:OD1  | 6:CM:629:LYS:HE2   | 2.05                     | 0.57              |
| 1:CR:101:VAL:HA   | 1:CR:104:ILE:CD1   | 2.35                     | 0.57              |
| 2:CW:68:PRO:HA    | 2:CW:73:TYR:CG     | 2.39                     | 0.57              |
| 2:DD:113:LYS:NZ   | 2:DD:160:LEU:O     | 2.37                     | 0.57              |
| 5:DF:2:ARG:O      | 5:DF:33:TYR:HB2    | 2.04                     | 0.57              |
| 5:DF:59:ARG:HD2   | 5:DF:60:PRO:HD2    | 1.87                     | 0.57              |
| 1:DJ:25:ARG:HG2   | 1:DQ:25:ARG:NE     | 2.19                     | 0.57              |
| 2:DK:137:THR:O    | 2:DK:141:VAL:HG22  | 2.05                     | 0.57              |
| 2:DT:113:LYS:HE2  | 2:DT:160:LEU:O     | 2.04                     | 0.57              |
| 2:DV:132:ALA:O    | 2:DV:136:VAL:HG23  | 2.04                     | 0.57              |
| 1:AA:25:ARG:HE    | 1:AH:29:PHE:HB2    | 1.70                     | 0.57              |
| 1:AP:66:VAL:HG12  | 1:DU:68:PRO:HG2    | 1.86                     | 0.57              |
| 2:AW:110:ASN:HD21 | 5:BB:56:ALA:HB1    | 1.69                     | 0.57              |
| 1:AX:32:GLY:O     | 1:AX:36:ARG:HG3    | 2.04                     | 0.57              |
| 1:AX:38:ARG:O     | 1:AX:42:THR:HG23   | 2.04                     | 0.57              |
| 1:AX:39:ILE:HG23  | 1:AX:141:MET:SD    | 2.45                     | 0.57              |
| 6:BD:248:ILE:HG12 | 6:BD:356:SER:HB2   | 1.86                     | 0.57              |
| 9:BH:63:LEU:HD12  | 9:BH:105:ILE:HD13  | 1.87                     | 0.57              |
| 9:BH:229:ARG:HG2  | 9:EA:227:PHE:CB    | 2.35                     | 0.57              |
| 2:BJ:10:ASN:O     | 2:BJ:14:VAL:HG23   | 2.04                     | 0.57              |
| 4:BS:113:LEU:HD23 | 6:CM:408:CYS:SG    | 2.45                     | 0.57              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:BT:56:VAL:O     | 2:BT:61:LEU:HG     | 2.03                     | 0.57              |
| 2:BY:100:ASP:OD1  | 2:BY:102:SER:OG    | 2.13                     | 0.57              |
| 1:CC:96:VAL:HG12  | 1:CC:152:TYR:CD2   | 2.40                     | 0.57              |
| 2:CF:122:PRO:O    | 2:CF:126:THR:HG23  | 2.04                     | 0.57              |
| 2:CH:50:THR:O     | 2:CH:54:GLU:HG3    | 2.05                     | 0.57              |
| 6:CM:847:THR:HG21 | 6:CM:857:ARG:CZ    | 2.35                     | 0.57              |
| 8:CP:197:GLN:OE1  | 8:CP:197:GLN:N     | 2.36                     | 0.57              |
| 1:CY:43:LEU:HD21  | 1:CY:137:ALA:HB1   | 1.87                     | 0.57              |
| 2:CZ:73:TYR:OH    | 1:DA:90:ARG:NH2    | 2.31                     | 0.57              |
| 9:DI:24:THR:HG21  | 9:DI:142:ILE:HD11  | 1.86                     | 0.57              |
| 2:DM:15:GLN:CG    | 2:DM:17:LYS:HG2    | 2.35                     | 0.57              |
| 2:DM:60:LEU:HD13  | 2:DM:72:MET:CE     | 2.34                     | 0.57              |
| 1:DN:125:ALA:HB3  | 10:DN:200:CYC:HMC2 | 1.86                     | 0.57              |
| 1:DQ:89:LEU:O     | 1:DQ:93:THR:HG23   | 2.05                     | 0.57              |
| 2:DR:123:ILE:HG23 | 2:DR:160:LEU:CD2   | 2.35                     | 0.57              |
| 1:DS:90:ARG:NH1   | 2:DT:16:GLY:O      | 2.38                     | 0.57              |
| 1:AA:16:ARG:O     | 2:AB:94:TYR:OH     | 2.23                     | 0.57              |
| 4:AK:84:ARG:HD2   | 6:BD:252:GLU:O     | 2.04                     | 0.57              |
| 4:AK:123:PRO:HB3  | 2:AS:64:ASP:CB     | 2.33                     | 0.57              |
| 1:AX:147:ALA:O    | 1:AX:150:SER:OG    | 2.19                     | 0.57              |
| 1:AZ:88:TYR:O     | 1:AZ:92:VAL:HG23   | 2.05                     | 0.57              |
| 10:AZ:200:CYC:HC  | 10:AZ:200:CYC:HMD2 | 1.70                     | 0.57              |
| 5:BA:15:ARG:HD2   | 5:BA:22:LEU:HD12   | 1.85                     | 0.57              |
| 5:BA:46:MET:HE3   | 6:BD:387:ALA:HB3   | 1.87                     | 0.57              |
| 6:BD:199:ILE:HD13 | 6:BD:227:LEU:HD21  | 1.87                     | 0.57              |
| 6:BD:225:ASP:HA   | 6:BD:228:LEU:CD2   | 2.35                     | 0.57              |
| 9:BH:42:PHE:HD2   | 9:BH:131:LEU:HD13  | 1.69                     | 0.57              |
| 9:BH:246:GLN:NE2  | 9:BH:247:ASN:OD1   | 2.30                     | 0.57              |
| 3:BM:90:ARG:NH1   | 2:BN:13:ASP:OD1    | 2.36                     | 0.57              |
| 2:BQ:88:TYR:OH    | 2:BQ:116:TYR:OH    | 2.23                     | 0.57              |
| 2:BQ:123:ILE:HA   | 2:BQ:126:THR:HG22  | 1.87                     | 0.57              |
| 2:BT:84:ASP:OD2   | 2:BT:116:TYR:OH    | 2.23                     | 0.57              |
| 2:BY:75:THR:CG2   | 1:BZ:108:GLY:HA2   | 2.35                     | 0.57              |
| 2:CF:36:LEU:HA    | 2:CF:39:ARG:HH12   | 1.69                     | 0.57              |
| 5:CK:6:ILE:HG21   | 5:CK:36:TRP:CZ3    | 2.40                     | 0.57              |
| 9:CQ:70:GLU:O     | 9:CQ:74:MET:HG3    | 2.04                     | 0.57              |
| 2:CS:20:ASP:O     | 2:CS:24:MET:HG2    | 2.05                     | 0.57              |
| 2:CS:22:ALA:HA    | 2:CS:25:ASP:OD2    | 2.05                     | 0.57              |
| 1:CY:72:ALA:HA    | 1:CY:77:MET:HB3    | 1.86                     | 0.57              |
| 1:CY:88:TYR:O     | 1:CY:92:VAL:HG23   | 2.05                     | 0.57              |
| 2:CZ:61:LEU:HG    | 2:CZ:62:TYR:CD2    | 2.39                     | 0.57              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:CZ:87:TYR:CD2   | 10:CZ:200:CYC:HBB3 | 2.39                     | 0.57              |
| 2:DD:132:ALA:O    | 2:DD:136:VAL:HG23  | 2.05                     | 0.57              |
| 9:DI:276:PRO:HA   | 9:DI:280:GLY:O     | 2.05                     | 0.57              |
| 2:DM:85:LEU:HD22  | 2:DM:133:ILE:HD11  | 1.87                     | 0.57              |
| 1:DQ:101:VAL:HA   | 1:DQ:104:ILE:CD1   | 2.35                     | 0.57              |
| 1:DQ:123:ILE:HD12 | 1:DQ:123:ILE:H     | 1.69                     | 0.57              |
| 1:DS:91:LEU:HD21  | 1:DS:107:ILE:HG22  | 1.85                     | 0.57              |
| 1:AA:65:ILE:CG2   | 1:AA:72:ALA:HB3    | 2.35                     | 0.56              |
| 2:AD:116:TYR:HB3  | 2:AD:121:VAL:HB    | 1.86                     | 0.56              |
| 2:AQ:52:VAL:HG21  | 2:AQ:86:ASP:OD1    | 2.05                     | 0.56              |
| 2:AQ:85:LEU:HG    | 10:AQ:200:CYC:HBC1 | 1.87                     | 0.56              |
| 1:AR:134:LYS:NZ   | 1:AR:154:ASP:OD1   | 2.26                     | 0.56              |
| 6:BD:401:LEU:HD13 | 6:BD:411:TRP:HH2   | 1.69                     | 0.56              |
| 9:BH:37:LEU:HD12  | 9:BH:40:ILE:HD11   | 1.87                     | 0.56              |
| 3:BM:80:GLN:OE1   | 3:BM:83:ARG:NH2    | 2.37                     | 0.56              |
| 4:BS:109:VAL:O    | 4:BS:113:LEU:HG    | 2.05                     | 0.56              |
| 1:BV:63:PRO:HG2   | 1:CE:68:PRO:O      | 2.05                     | 0.56              |
| 2:CD:57:ALA:CB    | 2:CD:61:LEU:HD12   | 2.35                     | 0.56              |
| 6:CM:290:PHE:O    | 6:CM:292:ARG:NH1   | 2.38                     | 0.56              |
| 5:DF:2:ARG:HG2    | 5:DF:55:LEU:HD11   | 1.87                     | 0.56              |
| 9:DI:42:PHE:HD2   | 9:DI:131:LEU:HD13  | 1.70                     | 0.56              |
| 9:DI:43:ALA:O     | 9:DI:51:LEU:HD12   | 2.05                     | 0.56              |
| 2:DM:96:MET:HA    | 2:DM:152:TYR:CE2   | 2.40                     | 0.56              |
| 1:DQ:8:ILE:HD11   | 2:DR:94:TYR:CB     | 2.31                     | 0.56              |
| 1:DQ:100:ASP:OD2  | 1:DQ:102:THR:OG1   | 2.17                     | 0.56              |
| 9:EA:146:GLU:O    | 9:EA:150:GLN:HG3   | 2.05                     | 0.56              |
| 1:AA:3:ILE:HG23   | 1:AH:25:ARG:HD3    | 1.86                     | 0.56              |
| 2:AB:85:LEU:HD21  | 10:AB:200:CYC:HBC1 | 1.88                     | 0.56              |
| 2:AD:87:TYR:HE2   | 5:BA:22:LEU:HD13   | 1.70                     | 0.56              |
| 2:AI:85:LEU:HG    | 10:AI:200:CYC:HBC1 | 1.86                     | 0.56              |
| 2:AS:138:ALA:HA   | 2:AS:141:VAL:HG12  | 1.87                     | 0.56              |
| 6:BD:886:PRO:HG3  | 2:CZ:114:GLU:OE1   | 2.05                     | 0.56              |
| 9:BH:217:PHE:HA   | 9:BH:298:ILE:HG23  | 1.86                     | 0.56              |
| 9:BH:311:GLU:OE1  | 9:BH:312:LEU:HD22  | 2.05                     | 0.56              |
| 2:BJ:130:ILE:HA   | 2:BJ:133:ILE:HG22  | 1.86                     | 0.56              |
| 1:BK:100:ASP:OD2  | 1:BK:102:THR:OG1   | 2.14                     | 0.56              |
| 2:BN:63:SER:H     | 2:BN:66:THR:HG22   | 1.70                     | 0.56              |
| 2:BT:85:LEU:HD22  | 2:BT:133:ILE:CD1   | 2.33                     | 0.56              |
| 1:BV:8:ILE:HD12   | 2:BW:94:TYR:CD1    | 2.39                     | 0.56              |
| 2:CA:107:ARG:O    | 6:CM:597:TYR:HA    | 2.05                     | 0.56              |
| 10:CE:200:CYC:NB  | 10:CE:200:CYC:HMA1 | 2.20                     | 0.56              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 6:CM:727:VAL:CG1  | 5:DX:20:ARG:HD3    | 2.35                     | 0.56              |
| 9:CQ:210:PHE:CD2  | 9:CQ:241:PHE:HB3   | 2.40                     | 0.56              |
| 2:CS:3:ASP:N      | 2:CS:6:THR:OG1     | 2.37                     | 0.56              |
| 2:CS:66:THR:CG2   | 10:CT:200:CYC:HMA3 | 2.35                     | 0.56              |
| 2:CS:127:VAL:O    | 2:CS:131:GLN:HG2   | 2.04                     | 0.56              |
| 2:CW:93:THR:O     | 2:CW:97:LEU:HD23   | 2.05                     | 0.56              |
| 1:CY:110:VAL:CG1  | 2:DD:76:ARG:HB2    | 2.35                     | 0.56              |
| 5:DF:5:ARG:HB3    | 5:DF:30:LEU:HD23   | 1.87                     | 0.56              |
| 5:DF:6:ILE:O      | 5:DF:28:THR:HA     | 2.05                     | 0.56              |
| 8:DH:240:ILE:HD11 | 8:DH:245:SER:HB2   | 1.87                     | 0.56              |
| 2:DK:39:ARG:O     | 2:DK:43:VAL:HG23   | 2.04                     | 0.56              |
| 1:DQ:39:ILE:HD11  | 1:DQ:145:ASP:CB    | 2.35                     | 0.56              |
| 1:DQ:116:TYR:CE2  | 1:DQ:126:VAL:HG11  | 2.41                     | 0.56              |
| 2:DR:43:VAL:O     | 2:DR:46:ALA:HB3    | 2.05                     | 0.56              |
| 1:DS:62:ARG:HG2   | 9:EA:57:GLY:HA3    | 1.86                     | 0.56              |
| 2:DV:54:GLU:O     | 2:DV:58:LYS:HG2    | 2.05                     | 0.56              |
| 9:EA:210:PHE:CG   | 9:EA:241:PHE:HB3   | 2.39                     | 0.56              |
| 1:AA:65:ILE:HG22  | 1:AA:72:ALA:HB3    | 1.86                     | 0.56              |
| 1:AA:71:ASN:HD22  | 1:AA:121:THR:HA    | 1.69                     | 0.56              |
| 3:AE:9:LEU:HG     | 2:AF:1:MET:SD      | 2.45                     | 0.56              |
| 1:AH:81:CYS:HA    | 10:AH:200:CYC:HHD  | 1.88                     | 0.56              |
| 1:AH:113:ARG:HG2  | 1:AH:117:ARG:HH21  | 1.68                     | 0.56              |
| 2:AI:76:ARG:CZ    | 1:AJ:110:VAL:HG11  | 2.36                     | 0.56              |
| 2:AI:141:VAL:HG12 | 2:AI:145:ALA:HB3   | 1.87                     | 0.56              |
| 1:AJ:128:GLN:O    | 1:AJ:132:GLU:HG3   | 2.05                     | 0.56              |
| 2:AQ:65:VAL:HG12  | 2:AQ:72:MET:HB2    | 1.87                     | 0.56              |
| 2:AQ:78:TYR:O     | 2:AQ:82:ILE:HG12   | 2.05                     | 0.56              |
| 1:AR:19:SER:OG    | 1:AR:22:GLU:HG3    | 2.05                     | 0.56              |
| 1:AR:36:ARG:NH1   | 1:AR:99:GLY:HA2    | 2.21                     | 0.56              |
| 1:AR:87:TYR:O     | 1:AR:91:LEU:HG     | 2.05                     | 0.56              |
| 2:AS:91:TYR:OH    | 2:AS:107:ARG:NE    | 2.33                     | 0.56              |
| 2:AU:68:PRO:HG3   | 2:AU:73:TYR:CE1    | 2.41                     | 0.56              |
| 2:AU:147:LYS:O    | 2:AU:151:VAL:HG23  | 2.04                     | 0.56              |
| 1:AV:12:ASP:OD2   | 2:AW:107:ARG:HD3   | 2.05                     | 0.56              |
| 1:AZ:53:GLN:HE22  | 1:AZ:57:ARG:HH21   | 1.53                     | 0.56              |
| 5:BA:30:LEU:HD23  | 6:BD:313:ASP:O     | 2.05                     | 0.56              |
| 6:BD:555:LEU:HD22 | 6:BD:587:LEU:HD21  | 1.87                     | 0.56              |
| 4:BS:135:LYS:HB2  | 4:BS:157:PHE:CG    | 2.41                     | 0.56              |
| 2:BW:3:ASP:OD1    | 2:BW:6:THR:OG1     | 2.13                     | 0.56              |
| 1:BX:115:MET:HE3  | 10:BX:200:CYC:HHD  | 1.87                     | 0.56              |
| 1:BZ:152:TYR:O    | 1:BZ:156:VAL:HG23  | 2.05                     | 0.56              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:CG:27:LYS:HZ3   | 2:CH:35:GLU:HG3    | 1.70                     | 0.56              |
| 6:CM:574:SER:OG   | 6:CM:577:GLU:OE1   | 2.22                     | 0.56              |
| 6:CM:586:GLU:OE1  | 6:CM:586:GLU:N     | 2.38                     | 0.56              |
| 8:CP:214:ASN:O    | 8:CP:217:ASN:ND2   | 2.27                     | 0.56              |
| 8:CP:232:ILE:HD12 | 8:CP:233:PRO:CD    | 2.35                     | 0.56              |
| 1:CR:76:GLU:HA    | 8:DZ:245:SER:O     | 2.06                     | 0.56              |
| 1:CR:127:ALA:O    | 1:CR:131:ARG:HG3   | 2.06                     | 0.56              |
| 2:CS:104:LEU:HD23 | 2:CS:155:TYR:CD2   | 2.35                     | 0.56              |
| 1:CY:82:LEU:HD22  | 8:DY:218:PHE:HB3   | 1.87                     | 0.56              |
| 1:CY:93:THR:O     | 1:CY:97:VAL:HG23   | 2.05                     | 0.56              |
| 1:CY:111:GLY:O    | 1:CY:115:MET:HG2   | 2.05                     | 0.56              |
| 1:CY:126:VAL:O    | 1:CY:130:VAL:HG23  | 2.05                     | 0.56              |
| 2:CZ:28:LYS:HE2   | 2:CZ:28:LYS:HA     | 1.87                     | 0.56              |
| 2:DB:15:GLN:HG3   | 2:DB:17:LYS:NZ     | 2.21                     | 0.56              |
| 1:DC:37:LEU:HD13  | 2:DD:28:LYS:HG2    | 1.86                     | 0.56              |
| 9:DI:39:LEU:CD1   | 9:DI:139:LEU:HB2   | 2.36                     | 0.56              |
| 9:DI:245:CYS:O    | 9:DI:246:GLN:NE2   | 2.38                     | 0.56              |
| 2:DM:122:PRO:HG2  | 10:DM:200:CYC:HMC2 | 1.87                     | 0.56              |
| 2:DR:15:GLN:HB3   | 2:DR:17:LYS:HE3    | 1.86                     | 0.56              |
| 2:DR:62:TYR:OH    | 10:DS:200:CYC:HAD2 | 2.04                     | 0.56              |
| 1:DS:38:ARG:HD2   | 1:DS:41:GLU:OE1    | 2.05                     | 0.56              |
| 1:DS:77:MET:O     | 1:DS:80:THR:OG1    | 2.19                     | 0.56              |
| 2:DT:1:MET:SD     | 2:DT:103:ILE:HD12  | 2.46                     | 0.56              |
| 2:DT:74:THR:O     | 2:DT:77:ARG:N      | 2.35                     | 0.56              |
| 8:DY:222:ALA:HA   | 8:DY:225:ILE:HD12  | 1.88                     | 0.56              |
| 9:EA:190:ILE:HD11 | 9:EA:202:MET:SD    | 2.45                     | 0.56              |
| 9:EA:245:CYS:O    | 9:EA:246:GLN:NE2   | 2.37                     | 0.56              |
| 2:AD:68:PRO:HG3   | 2:AD:73:TYR:CE1    | 2.40                     | 0.56              |
| 2:AS:67:ARG:O     | 2:AS:73:TYR:HB2    | 2.06                     | 0.56              |
| 6:BD:309:VAL:HG21 | 6:BD:319:PHE:CG    | 2.40                     | 0.56              |
| 6:BD:489:PRO:HD2  | 6:BD:492:ASN:HD22  | 1.70                     | 0.56              |
| 6:BD:871:ARG:HE   | 6:BD:884:VAL:HG23  | 1.71                     | 0.56              |
| 9:BH:89:ARG:HD3   | 9:BH:170:LYS:CD    | 2.35                     | 0.56              |
| 9:BH:98:TYR:HA    | 9:BH:101:TRP:CE3   | 2.40                     | 0.56              |
| 2:BJ:106:GLU:HG3  | 2:BJ:107:ARG:HG3   | 1.87                     | 0.56              |
| 3:BM:29:PHE:HA    | 3:BM:32:THR:HG22   | 1.85                     | 0.56              |
| 3:BM:101:LYS:HD2  | 3:BM:155:TYR:CE2   | 2.40                     | 0.56              |
| 2:BQ:60:LEU:HD13  | 2:BQ:72:MET:SD     | 2.46                     | 0.56              |
| 1:BX:76:GLU:OE1   | 1:BX:76:GLU:N      | 2.37                     | 0.56              |
| 2:CA:78:TYR:O     | 2:CA:82:ILE:HG12   | 2.04                     | 0.56              |
| 2:CF:76:ARG:HB2   | 1:CG:110:VAL:CG1   | 2.35                     | 0.56              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 6:CM:239:LYS:NZ    | 6:CM:403:VAL:O     | 2.37                     | 0.56              |
| 9:CQ:21:VAL:HG13   | 9:CQ:153:VAL:CG2   | 2.36                     | 0.56              |
| 9:CQ:285:ASN:HB2   | 9:CQ:306:LEU:HB2   | 1.87                     | 0.56              |
| 1:CR:67:SER:HB3    | 8:DZ:230:ASN:ND2   | 2.20                     | 0.56              |
| 1:DC:50:ILE:CD1    | 1:DC:140:LEU:HD21  | 2.35                     | 0.56              |
| 9:DI:195:ASN:HB3   | 9:DI:198:VAL:CG1   | 2.34                     | 0.56              |
| 1:DQ:145:ASP:O     | 1:DQ:148:GLU:HG3   | 2.04                     | 0.56              |
| 1:DS:128:GLN:O     | 1:DS:132:GLU:HG2   | 2.06                     | 0.56              |
| 2:AB:1:MET:CE      | 2:AB:103:ILE:HD13  | 2.36                     | 0.56              |
| 2:AF:76:ARG:NH2    | 5:BA:62:THR:O      | 2.38                     | 0.56              |
| 1:AJ:86:ASP:OD1    | 4:AK:18:TYR:OH     | 2.20                     | 0.56              |
| 1:AN:9:VAL:HG23    | 2:AO:1:MET:HE2     | 1.87                     | 0.56              |
| 1:AN:92:VAL:HG11   | 1:AN:153:PHE:CZ    | 2.41                     | 0.56              |
| 1:AR:52:LYS:HE2    | 8:BG:225:ILE:HB    | 1.86                     | 0.56              |
| 2:AU:28:LYS:HD3    | 1:AZ:37:LEU:HD13   | 1.87                     | 0.56              |
| 6:BD:753:PRO:HB3   | 2:DD:79:ALA:HB1    | 1.87                     | 0.56              |
| 9:BH:216:LEU:HA    | 9:BH:297:LYS:HD3   | 1.87                     | 0.56              |
| 1:BK:8:ILE:CD1     | 2:BL:98:ALA:HB2    | 2.36                     | 0.56              |
| 1:BK:115:MET:CE    | 10:BK:200:CYC:HMB3 | 2.35                     | 0.56              |
| 3:BM:131:THR:HG22  | 3:BM:157:ILE:HD13  | 1.87                     | 0.56              |
| 2:BQ:112:LEU:HG    | 2:BQ:160:LEU:HD21  | 1.87                     | 0.56              |
| 2:BT:15:GLN:OE1    | 7:CO:99:ALA:N      | 2.35                     | 0.56              |
| 2:BW:112:LEU:CD1   | 10:BW:200:CYC:HMB3 | 2.36                     | 0.56              |
| 1:BX:115:MET:CE    | 10:BX:200:CYC:HMB3 | 2.34                     | 0.56              |
| 1:CC:23:LEU:HD22   | 2:CD:38:VAL:HG13   | 1.88                     | 0.56              |
| 1:CC:87:TYR:O      | 1:CC:91:LEU:HG     | 2.06                     | 0.56              |
| 1:CC:116:TYR:HE2   | 1:CC:126:VAL:HG11  | 1.71                     | 0.56              |
| 1:CE:91:LEU:HD21   | 1:CE:107:ILE:HG21  | 1.87                     | 0.56              |
| 6:CM:5:ALA:HB3     | 6:CM:437:TYR:CD1   | 2.41                     | 0.56              |
| 6:CM:745:GLN:NE2   | 6:CM:807:HIS:O     | 2.30                     | 0.56              |
| 1:CR:3:ILE:HG22    | 1:CR:100:ASP:HB3   | 1.87                     | 0.56              |
| 1:DC:97:VAL:HG21   | 2:DD:19:LEU:HD12   | 1.88                     | 0.56              |
| 2:DD:57:ALA:HB1    | 8:DH:201:ARG:HH22  | 1.71                     | 0.56              |
| 1:DJ:46:SER:O      | 1:DJ:49:THR:OG1    | 2.19                     | 0.56              |
| 2:DM:106:GLU:HG2   | 2:DM:107:ARG:HG3   | 1.86                     | 0.56              |
| 9:EA:87:ALA:HA     | 9:EA:161:MET:CE    | 2.35                     | 0.56              |
| 1:AA:97:VAL:HG21   | 2:AB:19:LEU:CD1    | 2.36                     | 0.56              |
| 10:AB:200:CYC:O2A  | 6:BD:310:ARG:HD2   | 2.06                     | 0.56              |
| 2:AD:10:ASN:O      | 2:AD:14:VAL:HG13   | 2.06                     | 0.56              |
| 2:AD:144:ASP:OD1   | 2:AD:145:ALA:N     | 2.39                     | 0.56              |
| 10:AE:200:CYC:HBD2 | 10:AE:200:CYC:HMD1 | 1.87                     | 0.56              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:AI:76:ARG:HD3    | 6:BD:362:GLN:OE1   | 2.05                     | 0.56              |
| 1:AJ:58:LEU:HD22   | 1:AJ:129:SER:CB    | 2.35                     | 0.56              |
| 2:AO:109:LEU:HD13  | 2:AO:159:GLY:HA3   | 1.86                     | 0.56              |
| 1:AP:58:LEU:HD22   | 1:AP:129:SER:CB    | 2.36                     | 0.56              |
| 2:AW:8:VAL:CG1     | 2:AW:23:ALA:HB1    | 2.34                     | 0.56              |
| 1:AZ:65:ILE:HG22   | 1:AZ:72:ALA:CB     | 2.35                     | 0.56              |
| 9:BH:45:LEU:O      | 9:BH:49:LYS:NZ     | 2.37                     | 0.56              |
| 9:BH:46:GLU:HB3    | 9:BH:50:THR:CG2    | 2.35                     | 0.56              |
| 10:BJ:200:CYC:HBD1 | 10:BJ:200:CYC:HHA  | 1.86                     | 0.56              |
| 1:BK:37:LEU:HD23   | 2:BL:28:LYS:HD3    | 1.88                     | 0.56              |
| 1:BP:91:LEU:HD21   | 1:BP:107:ILE:HG21  | 1.88                     | 0.56              |
| 1:BZ:50:ILE:HA     | 1:BZ:136:VAL:HG11  | 1.87                     | 0.56              |
| 1:CE:97:VAL:HG11   | 2:CF:19:LEU:HD12   | 1.87                     | 0.56              |
| 2:CF:112:LEU:CD1   | 10:CF:200:CYC:HMB3 | 2.35                     | 0.56              |
| 6:CM:560:ARG:NH2   | 6:CM:565:GLU:OE1   | 2.36                     | 0.56              |
| 9:CQ:227:PHE:CD1   | 9:DI:229:ARG:HA    | 2.40                     | 0.56              |
| 2:CS:93:THR:N      | 2:CS:149:MET:HE1   | 2.19                     | 0.56              |
| 1:CT:8:ILE:HG12    | 1:CT:18:LEU:HD11   | 1.88                     | 0.56              |
| 1:CV:81:CYS:O      | 1:CV:85:MET:HG2    | 2.05                     | 0.56              |
| 1:DA:61:LYS:HB3    | 9:DI:57:GLY:CA     | 2.36                     | 0.56              |
| 1:DJ:92:VAL:HG11   | 1:DJ:153:PHE:CD2   | 2.40                     | 0.56              |
| 2:DR:65:VAL:HG12   | 2:DR:72:MET:CB     | 2.34                     | 0.56              |
| 2:DR:104:LEU:HD12  | 2:DR:155:TYR:HD2   | 1.71                     | 0.56              |
| 2:AB:137:THR:O     | 2:AB:141:VAL:HG12  | 2.06                     | 0.56              |
| 1:AV:58:LEU:HD22   | 1:AV:129:SER:CB    | 2.33                     | 0.56              |
| 6:BD:612:ARG:NE    | 6:BD:644:GLU:OE2   | 2.39                     | 0.56              |
| 8:BG:196:TRP:O     | 8:BG:200:VAL:HG23  | 2.06                     | 0.56              |
| 1:BK:4:VAL:HG23    | 2:BL:3:ASP:OD2     | 2.06                     | 0.56              |
| 2:BL:68:PRO:HG3    | 2:BL:73:TYR:CE1    | 2.41                     | 0.56              |
| 1:BR:58:LEU:HD22   | 1:BR:129:SER:HB3   | 1.88                     | 0.56              |
| 1:BV:47:ARG:O      | 1:BV:51:VAL:HG22   | 2.05                     | 0.56              |
| 10:CD:200:CYC:O2A  | 5:CK:37:PHE:HB2    | 2.06                     | 0.56              |
| 6:CM:357:SER:O     | 6:CM:361:VAL:HG23  | 2.06                     | 0.56              |
| 2:CU:137:THR:O     | 2:CU:141:VAL:HG22  | 2.05                     | 0.56              |
| 1:CV:126:VAL:HG12  | 1:CV:160:MET:CE    | 2.36                     | 0.56              |
| 1:CY:39:ILE:O      | 1:CY:42:THR:HG22   | 2.04                     | 0.56              |
| 1:CY:65:ILE:HD12   | 10:CY:200:CYC:OC   | 2.05                     | 0.56              |
| 9:DI:81:GLN:HA     | 9:DI:176:VAL:HG21  | 1.86                     | 0.56              |
| 9:DI:141:THR:O     | 9:DI:145:LEU:HG    | 2.05                     | 0.56              |
| 9:DI:232:VAL:O     | 9:DI:236:ASN:ND2   | 2.30                     | 0.56              |
| 9:DI:258:GLU:OE1   | 9:DI:266:GLN:HG3   | 2.06                     | 0.56              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:DM:101:ALA:HB2   | 2:DM:152:TYR:CD1   | 2.40                     | 0.56              |
| 2:DM:131:GLN:O     | 2:DM:135:GLU:HG2   | 2.05                     | 0.56              |
| 1:DQ:66:VAL:HG12   | 1:DQ:72:ALA:O      | 2.06                     | 0.56              |
| 1:DU:27:LYS:O      | 1:DU:31:THR:HG23   | 2.06                     | 0.56              |
| 2:DV:60:LEU:HD13   | 2:DV:72:MET:HE1    | 1.88                     | 0.56              |
| 9:EA:272:LYS:HA    | 9:EA:284:MET:O     | 2.06                     | 0.56              |
| 2:AF:77:ARG:HG2    | 10:AF:200:CYC:HAD1 | 1.87                     | 0.56              |
| 1:AP:113:ARG:NH1   | 1:AP:160:MET:O     | 2.38                     | 0.56              |
| 1:AP:145:ASP:HB2   | 2:DT:39:ARG:HH22   | 1.69                     | 0.56              |
| 2:AQ:105:ASP:OD1   | 6:BD:671:ARG:HD3   | 2.06                     | 0.56              |
| 1:AR:85:MET:HB3    | 1:AR:133:MET:HE2   | 1.88                     | 0.56              |
| 1:AV:50:ILE:HD11   | 1:AV:140:LEU:HD22  | 1.87                     | 0.56              |
| 2:AW:74:THR:HG1    | 2:AW:77:ARG:HH21   | 1.52                     | 0.56              |
| 6:BD:453:PRO:HG3   | 6:BD:462:PHE:CZ    | 2.40                     | 0.56              |
| 2:BL:83:ARG:HD2    | 5:CJ:22:LEU:HG     | 1.87                     | 0.56              |
| 3:BM:43:LEU:HD12   | 3:BM:93:THR:HG22   | 1.87                     | 0.56              |
| 2:BN:104:LEU:O     | 2:BN:108:VAL:HB    | 2.06                     | 0.56              |
| 10:BQ:200:CYC:HBB2 | 6:CM:338:ILE:CD1   | 2.35                     | 0.56              |
| 2:BT:3:ASP:H       | 2:BT:6:THR:HG22    | 1.71                     | 0.56              |
| 1:BV:50:ILE:HG12   | 1:BV:136:VAL:HG12  | 1.87                     | 0.56              |
| 2:BW:101:ALA:HB1   | 2:BW:104:LEU:HD12  | 1.88                     | 0.56              |
| 1:BX:39:ILE:HG12   | 1:BX:145:ASP:HB3   | 1.87                     | 0.56              |
| 2:CF:39:ARG:O      | 2:CF:43:VAL:HG23   | 2.06                     | 0.56              |
| 1:CG:153:PHE:O     | 1:CG:157:ILE:HG12  | 2.05                     | 0.56              |
| 5:CJ:2:ARG:NH1     | 5:CJ:66:LEU:HD22   | 2.21                     | 0.56              |
| 6:CM:75:ILE:HD12   | 6:CM:197:VAL:CG2   | 2.33                     | 0.56              |
| 6:CM:747:PHE:HA    | 6:CM:791:PHE:CE2   | 2.41                     | 0.56              |
| 6:CM:796:PRO:HG3   | 2:DR:110:ASN:HB3   | 1.86                     | 0.56              |
| 9:CQ:116:LEU:HB3   | 9:CQ:122:VAL:HG23  | 1.88                     | 0.56              |
| 2:CS:51:ILE:HG21   | 2:CS:137:THR:CG2   | 2.35                     | 0.56              |
| 1:CV:104:ILE:HG22  | 1:CV:109:LEU:CD2   | 2.36                     | 0.56              |
| 1:CV:128:GLN:O     | 1:CV:132:GLU:HG2   | 2.06                     | 0.56              |
| 2:CW:83:ARG:NH1    | 10:CW:200:CYC:O1A  | 2.30                     | 0.56              |
| 1:DA:33:GLY:O      | 1:DA:37:LEU:HD23   | 2.05                     | 0.56              |
| 2:DD:61:LEU:HD21   | 2:DD:78:TYR:OH     | 2.06                     | 0.56              |
| 1:DL:131:ARG:HG3   | 1:DL:157:ILE:HD12  | 1.88                     | 0.56              |
| 1:DQ:50:ILE:HD11   | 1:DQ:137:ALA:N     | 2.21                     | 0.56              |
| 1:DQ:153:PHE:HA    | 1:DQ:156:VAL:HG12  | 1.86                     | 0.56              |
| 2:DR:54:GLU:O      | 2:DR:58:LYS:HG2    | 2.06                     | 0.56              |
| 2:DR:96:MET:HA     | 2:DR:152:TYR:CE2   | 2.40                     | 0.56              |
| 10:DR:200:CYC:NB   | 10:DR:200:CYC:HMA1 | 2.21                     | 0.56              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:DV:122:PRO:O     | 2:DV:126:THR:HG23  | 2.06                     | 0.56              |
| 9:EA:131:LEU:HG    | 9:EA:135:ALA:HB3   | 1.88                     | 0.56              |
| 2:AB:61:LEU:HD22   | 10:AC:200:CYC:CAA  | 2.36                     | 0.56              |
| 1:AC:33:GLY:HA2    | 1:AC:36:ARG:HG2    | 1.87                     | 0.56              |
| 2:AI:25:ASP:OD2    | 9:BH:165:ALA:HB1   | 2.06                     | 0.56              |
| 4:AK:72:ASN:HB3    | 10:AK:200:CYC:OC   | 2.06                     | 0.56              |
| 2:AS:132:ALA:O     | 2:AS:136:VAL:HG23  | 2.06                     | 0.56              |
| 2:AW:55:ALA:O      | 2:AW:59:SER:OG     | 2.14                     | 0.56              |
| 2:AW:122:PRO:O     | 2:AW:126:THR:HG23  | 2.06                     | 0.56              |
| 10:AZ:200:CYC:HBB3 | 10:AZ:200:CYC:HMB1 | 1.87                     | 0.56              |
| 6:BD:701:ARG:HB3   | 6:BD:706:ILE:CD1   | 2.32                     | 0.56              |
| 1:BK:27:LYS:O      | 1:BK:31:THR:HG23   | 2.05                     | 0.56              |
| 2:BN:115:THR:CG2   | 5:CJ:53:VAL:HG21   | 2.36                     | 0.56              |
| 2:BT:87:TYR:CD2    | 10:BT:200:CYC:HBB3 | 2.40                     | 0.56              |
| 1:BZ:115:MET:CE    | 10:BZ:200:CYC:HMB3 | 2.36                     | 0.56              |
| 5:CJ:2:ARG:HH12    | 5:CJ:66:LEU:HD22   | 1.71                     | 0.56              |
| 6:CM:35:LEU:HD22   | 6:CM:39:GLU:HB3    | 1.88                     | 0.56              |
| 6:CM:805:THR:HG22  | 6:CM:811:ARG:O     | 2.06                     | 0.56              |
| 1:CR:68:PRO:HA     | 1:CR:73:TYR:CG     | 2.40                     | 0.56              |
| 2:CU:73:TYR:O      | 2:CU:77:ARG:HB2    | 2.05                     | 0.56              |
| 2:DD:50:THR:O      | 2:DD:54:GLU:HG2    | 2.06                     | 0.56              |
| 9:DI:46:GLU:HB3    | 9:DI:50:THR:HB     | 1.87                     | 0.56              |
| 9:DI:190:ILE:CG2   | 9:DI:193:VAL:HB    | 2.35                     | 0.56              |
| 9:DI:288:TRP:HD1   | 9:DI:303:ILE:HG12  | 1.71                     | 0.56              |
| 2:DK:43:VAL:HG12   | 2:DK:140:LEU:HG    | 1.88                     | 0.56              |
| 2:DO:126:THR:O     | 2:DO:130:ILE:HG12  | 2.05                     | 0.56              |
| 2:DV:23:ALA:O      | 2:DV:27:LEU:HD13   | 2.06                     | 0.56              |
| 2:DV:51:ILE:HG12   | 2:DV:140:LEU:CD1   | 2.36                     | 0.56              |
| 1:AH:65:ILE:HG22   | 1:AH:72:ALA:HB3    | 1.87                     | 0.56              |
| 2:AL:122:PRO:HB2   | 2:AL:125:SER:HB2   | 1.87                     | 0.56              |
| 2:AS:131:GLN:O     | 2:AS:134:LYS:HB2   | 2.06                     | 0.56              |
| 2:AW:39:ARG:O      | 2:AW:43:VAL:HG23   | 2.05                     | 0.56              |
| 2:AY:112:LEU:HD13  | 10:AY:200:CYC:HMB3 | 1.88                     | 0.56              |
| 5:BB:6:ILE:HG21    | 5:BB:36:TRP:CZ3    | 2.41                     | 0.56              |
| 1:BK:58:LEU:HD22   | 1:BK:129:SER:CB    | 2.34                     | 0.56              |
| 10:BL:200:CYC:HMB2 | 5:CJ:22:LEU:HD13   | 1.87                     | 0.56              |
| 3:BM:104:ILE:HG22  | 3:BM:109:LEU:HG    | 1.88                     | 0.56              |
| 4:BS:73:ALA:HA     | 4:BS:78:ARG:HB3    | 1.86                     | 0.56              |
| 2:BW:56:VAL:HG12   | 2:BW:61:LEU:HG     | 1.88                     | 0.56              |
| 2:CA:39:ARG:HA     | 2:CA:39:ARG:NH1    | 2.21                     | 0.56              |
| 2:CA:119:LEU:HD12  | 10:CM:901:CYC:HBD1 | 1.88                     | 0.56              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 6:CM:15:GLN:NE2    | 6:CM:262:ALA:HB2   | 2.21                     | 0.56              |
| 6:CM:751:LEU:HD12  | 6:CM:755:ILE:HD13  | 1.86                     | 0.56              |
| 1:CR:37:LEU:CD1    | 2:CS:28:LYS:HE3    | 2.29                     | 0.56              |
| 2:CS:43:VAL:CG1    | 2:CS:141:VAL:HG12  | 2.36                     | 0.56              |
| 1:DC:4:VAL:HG22    | 1:DC:26:ILE:HD12   | 1.88                     | 0.56              |
| 2:DO:137:THR:O     | 2:DO:141:VAL:HG22  | 2.05                     | 0.56              |
| 2:DR:51:ILE:HG22   | 2:DR:133:ILE:HG23  | 1.86                     | 0.56              |
| 5:DX:5:ARG:HB3     | 5:DX:30:LEU:HD23   | 1.87                     | 0.56              |
| 9:EA:214:ILE:HA    | 9:EA:217:PHE:CE1   | 2.41                     | 0.56              |
| 2:AD:5:ILE:HG23    | 2:AD:30:TYR:HD2    | 1.71                     | 0.55              |
| 2:AD:57:ALA:HA     | 2:AD:61:LEU:HD12   | 1.89                     | 0.55              |
| 3:AE:48:LYS:HA     | 3:AE:51:VAL:HG12   | 1.87                     | 0.55              |
| 3:AE:50:ILE:HG12   | 3:AE:140:LEU:HD13  | 1.88                     | 0.55              |
| 2:AO:57:ALA:HA     | 2:AO:61:LEU:HD12   | 1.87                     | 0.55              |
| 1:AP:105:GLU:O     | 1:AP:110:VAL:HG23  | 2.06                     | 0.55              |
| 2:AQ:115:THR:HG23  | 6:BD:461:ILE:HG13  | 1.88                     | 0.55              |
| 2:AS:68:PRO:HA     | 2:AS:73:TYR:CG     | 2.42                     | 0.55              |
| 5:BB:30:LEU:HD12   | 6:BD:572:ASP:HB3   | 1.88                     | 0.55              |
| 6:BD:210:PHE:CE2   | 6:BD:212:ASN:HB2   | 2.40                     | 0.55              |
| 9:BH:227:PHE:CD1   | 9:EA:229:ARG:HA    | 2.41                     | 0.55              |
| 3:BM:26:ILE:O      | 3:BM:30:LEU:HD23   | 2.06                     | 0.55              |
| 4:BS:33:SER:O      | 4:BS:37:ARG:HG3    | 2.05                     | 0.55              |
| 1:CC:97:VAL:HG21   | 2:CD:19:LEU:CD1    | 2.36                     | 0.55              |
| 1:CE:104:ILE:HG22  | 1:CE:109:LEU:HD12  | 1.88                     | 0.55              |
| 2:CF:62:TYR:N      | 10:CG:200:CYC:O1A  | 2.32                     | 0.55              |
| 2:CF:131:GLN:O     | 2:CF:135:GLU:HG2   | 2.06                     | 0.55              |
| 1:CG:112:VAL:HG21  | 1:CG:160:MET:HE1   | 1.89                     | 0.55              |
| 1:CR:106:GLU:OE1   | 5:DF:64:ALA:HA     | 2.06                     | 0.55              |
| 10:DD:200:CYC:HMB1 | 10:DD:200:CYC:HBB3 | 1.87                     | 0.55              |
| 9:DI:41:TRP:NE1    | 9:DI:45:LEU:HD11   | 2.22                     | 0.55              |
| 1:DQ:87:TYR:O      | 1:DQ:91:LEU:HG     | 2.06                     | 0.55              |
| 2:DR:148:GLU:O     | 2:DR:151:VAL:HG12  | 2.06                     | 0.55              |
| 2:DT:15:GLN:CG     | 2:DT:17:LYS:HG3    | 2.35                     | 0.55              |
| 8:DY:211:THR:N     | 8:DY:214:ASN:OD1   | 2.39                     | 0.55              |
| 9:EA:248:LEU:HD11  | 9:EA:277:TRP:CZ3   | 2.41                     | 0.55              |
| 1:AA:118:SER:O     | 2:AF:53:LYS:HD3    | 2.06                     | 0.55              |
| 1:AC:50:ILE:CD1    | 1:AC:136:VAL:HG12  | 2.36                     | 0.55              |
| 2:AF:15:GLN:HB3    | 2:AF:17:LYS:NZ     | 2.21                     | 0.55              |
| 1:AJ:2:SER:N       | 1:AJ:100:ASP:OD2   | 2.39                     | 0.55              |
| 1:AR:92:VAL:HG11   | 1:AR:153:PHE:CZ    | 2.42                     | 0.55              |
| 2:AS:107:ARG:O     | 6:BD:597:TYR:HA    | 2.06                     | 0.55              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:AW:101:ALA:HB1   | 2:AW:104:LEU:HD12  | 1.88                     | 0.55              |
| 5:BA:2:ARG:HE      | 5:BA:66:LEU:HD12   | 1.71                     | 0.55              |
| 5:BB:29:LYS:HG3    | 5:BB:31:VAL:HG13   | 1.88                     | 0.55              |
| 5:BB:40:GLN:HG2    | 5:BB:44:MET:HE3    | 1.88                     | 0.55              |
| 6:BD:329:TYR:OH    | 6:BD:349:HIS:ND1   | 2.26                     | 0.55              |
| 9:BH:39:LEU:CD1    | 9:BH:139:LEU:HB2   | 2.36                     | 0.55              |
| 10:BJ:200:CYC:O2A  | 6:CM:310:ARG:HD2   | 2.06                     | 0.55              |
| 2:BL:87:TYR:CE2    | 5:CJ:22:LEU:HB2    | 2.41                     | 0.55              |
| 2:BL:142:GLY:O     | 2:BL:146:GLY:N     | 2.39                     | 0.55              |
| 4:BS:41:ALA:HB1    | 4:BS:98:ILE:HD11   | 1.88                     | 0.55              |
| 2:CF:122:PRO:HB2   | 2:CF:125:SER:HB2   | 1.86                     | 0.55              |
| 9:CQ:190:ILE:HD13  | 9:CQ:252:PRO:HB2   | 1.88                     | 0.55              |
| 2:CU:78:TYR:O      | 2:CU:82:ILE:HG12   | 2.06                     | 0.55              |
| 9:DI:68:LEU:HD22   | 9:DI:112:ARG:HG2   | 1.86                     | 0.55              |
| 9:DI:267:ILE:HG22  | 9:DI:269:VAL:HG13  | 1.89                     | 0.55              |
| 9:DI:272:LYS:HA    | 9:DI:284:MET:O     | 2.05                     | 0.55              |
| 2:DK:33:SER:O      | 2:DK:37:ARG:HG2    | 2.06                     | 0.55              |
| 1:DL:102:THR:OG1   | 1:DL:103:PRO:HD3   | 2.06                     | 0.55              |
| 1:DN:141:MET:HG2   | 1:DN:145:ASP:HB2   | 1.88                     | 0.55              |
| 2:DR:137:THR:HG21  | 2:DR:149:MET:HG2   | 1.88                     | 0.55              |
| 2:DT:103:ILE:HG13  | 2:DT:107:ARG:HD2   | 1.89                     | 0.55              |
| 10:DT:200:CYC:HBD1 | 10:DT:200:CYC:HHA  | 1.87                     | 0.55              |
| 2:DV:56:VAL:HA     | 2:DV:59:SER:OG     | 2.06                     | 0.55              |
| 2:DV:71:ASN:ND2    | 2:DV:121:VAL:HA    | 2.21                     | 0.55              |
| 9:EA:141:THR:O     | 9:EA:145:LEU:HG    | 2.05                     | 0.55              |
| 2:AI:83:ARG:HD2    | 6:BD:369:SER:CB    | 2.37                     | 0.55              |
| 4:AK:88:TYR:CD2    | 10:AK:200:CYC:HBB3 | 2.41                     | 0.55              |
| 1:AP:134:LYS:HD3   | 1:AP:153:PHE:HB3   | 1.87                     | 0.55              |
| 1:AV:37:LEU:HD11   | 2:AW:24:MET:SD     | 2.47                     | 0.55              |
| 1:AV:90:ARG:HG2    | 1:AV:94:TYR:CZ     | 2.41                     | 0.55              |
| 1:AZ:93:THR:O      | 1:AZ:97:VAL:HG23   | 2.06                     | 0.55              |
| 9:BH:276:PRO:HA    | 9:BH:281:ASN:OD1   | 2.05                     | 0.55              |
| 2:BN:71:ASN:HD22   | 2:BN:121:VAL:HA    | 1.70                     | 0.55              |
| 1:BP:89:LEU:O      | 1:BP:93:THR:HG23   | 2.06                     | 0.55              |
| 2:BQ:104:LEU:HD11  | 2:BQ:152:TYR:HB3   | 1.88                     | 0.55              |
| 4:BS:2:ARG:HB2     | 4:BS:103:ASN:HD22  | 1.71                     | 0.55              |
| 1:BV:77:MET:SD     | 10:BV:200:CYC:O2D  | 2.64                     | 0.55              |
| 1:CE:47:ARG:O      | 1:CE:51:VAL:HG22   | 2.06                     | 0.55              |
| 1:CE:113:ARG:CD    | 1:CE:123:ILE:HD13  | 2.35                     | 0.55              |
| 2:CF:96:MET:HG2    | 2:CF:148:GLU:OE1   | 2.06                     | 0.55              |
| 1:CG:107:ILE:HD11  | 6:CM:532:VAL:CG2   | 2.37                     | 0.55              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:CH:122:PRO:HB2  | 2:CH:125:SER:OG    | 2.06                     | 0.55              |
| 2:CS:68:PRO:HA    | 2:CS:73:TYR:CG     | 2.40                     | 0.55              |
| 1:DA:77:MET:HG3   | 8:DG:201:ARG:HB2   | 1.88                     | 0.55              |
| 1:DA:85:MET:HG2   | 1:DA:133:MET:CE    | 2.36                     | 0.55              |
| 2:DD:106:GLU:HG3  | 2:DD:107:ARG:HG2   | 1.87                     | 0.55              |
| 1:DJ:38:ARG:O     | 1:DJ:42:THR:HG23   | 2.07                     | 0.55              |
| 2:DK:51:ILE:HG21  | 2:DK:137:THR:CG2   | 2.32                     | 0.55              |
| 1:AA:114:GLU:OE1  | 1:AA:114:GLU:N     | 2.40                     | 0.55              |
| 1:AC:65:ILE:HD11  | 1:AC:122:PRO:HG3   | 1.88                     | 0.55              |
| 1:AC:105:GLU:HA   | 1:AC:109:LEU:HB3   | 1.88                     | 0.55              |
| 2:AI:123:ILE:HA   | 2:AI:126:THR:HG22  | 1.88                     | 0.55              |
| 1:AN:98:SER:HB3   | 2:AO:9:ILE:CD1     | 2.37                     | 0.55              |
| 1:AN:109:LEU:HD11 | 1:AN:156:VAL:HG22  | 1.88                     | 0.55              |
| 1:AP:102:THR:O    | 1:AP:106:GLU:HG2   | 2.06                     | 0.55              |
| 2:AY:119:LEU:HD11 | 10:AY:200:CYC:HAA2 | 1.88                     | 0.55              |
| 6:BD:63:ASN:O     | 6:BD:67:ILE:HG12   | 2.06                     | 0.55              |
| 6:BD:213:ASN:O    | 6:BD:217:LYS:N     | 2.39                     | 0.55              |
| 4:BS:118:ASN:HB3  | 2:CA:122:PRO:HA    | 1.87                     | 0.55              |
| 2:BT:110:ASN:OD1  | 2:BT:111:GLY:N     | 2.39                     | 0.55              |
| 1:BZ:44:THR:O     | 1:BZ:47:ARG:HD3    | 2.07                     | 0.55              |
| 2:CF:36:LEU:HA    | 2:CF:39:ARG:NH1    | 2.22                     | 0.55              |
| 1:CR:71:ASN:OD1   | 10:CR:200:CYC:HBD2 | 2.06                     | 0.55              |
| 2:CU:87:TYR:OH    | 5:DF:19:GLN:O      | 2.23                     | 0.55              |
| 1:CV:122:PRO:HD2  | 10:CV:200:CYC:OC   | 2.06                     | 0.55              |
| 2:DB:104:LEU:HD13 | 2:DB:156:ILE:HG13  | 1.87                     | 0.55              |
| 1:DL:91:LEU:HD11  | 1:DL:107:ILE:HG21  | 1.88                     | 0.55              |
| 2:DM:124:SER:O    | 2:DM:128:GLN:HG3   | 2.06                     | 0.55              |
| 1:DQ:72:ALA:HA    | 1:DQ:77:MET:CB     | 2.34                     | 0.55              |
| 1:DU:122:PRO:O    | 1:DU:126:VAL:HG23  | 2.06                     | 0.55              |
| 2:DV:22:ALA:HA    | 2:DV:25:ASP:OD2    | 2.06                     | 0.55              |
| 1:AA:126:VAL:O    | 1:AA:130:VAL:HG23  | 2.06                     | 0.55              |
| 2:AB:3:ASP:N      | 2:AB:6:THR:OG1     | 2.39                     | 0.55              |
| 1:AH:44:THR:O     | 1:AH:47:ARG:HG2    | 2.06                     | 0.55              |
| 4:AK:33:SER:O     | 4:AK:37:ARG:HG3    | 2.06                     | 0.55              |
| 1:AN:47:ARG:O     | 1:AN:51:VAL:HG22   | 2.05                     | 0.55              |
| 2:AS:78:TYR:O     | 2:AS:82:ILE:HG12   | 2.07                     | 0.55              |
| 1:AV:27:LYS:O     | 1:AV:30:VAL:HG12   | 2.06                     | 0.55              |
| 6:BD:350:ILE:HD12 | 6:BD:380:LEU:CD1   | 2.36                     | 0.55              |
| 9:BH:214:ILE:HG21 | 9:BH:238:LEU:CD2   | 2.36                     | 0.55              |
| 9:BH:300:PHE:CZ   | 9:BH:302:ALA:HB2   | 2.41                     | 0.55              |
| 2:BJ:61:LEU:HD22  | 10:BK:200:CYC:HAA1 | 1.88                     | 0.55              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 3:BM:127:VAL:O    | 3:BM:131:THR:HG23  | 2.06                     | 0.55              |
| 1:BP:89:LEU:HB2   | 1:BP:133:MET:HE2   | 1.89                     | 0.55              |
| 1:BV:91:LEU:HD21  | 1:BV:107:ILE:HB    | 1.88                     | 0.55              |
| 1:BZ:134:LYS:NZ   | 1:BZ:154:ASP:OD1   | 2.33                     | 0.55              |
| 2:CD:123:ILE:HA   | 2:CD:126:THR:HG22  | 1.89                     | 0.55              |
| 2:CF:71:ASN:ND2   | 2:CF:122:PRO:HD3   | 2.21                     | 0.55              |
| 6:CM:452:ASP:OD1  | 6:CM:607:ARG:NH2   | 2.40                     | 0.55              |
| 9:CQ:107:LEU:HD23 | 11:CQ:400:45D:H141 | 1.87                     | 0.55              |
| 9:CQ:198:VAL:HG12 | 9:CQ:202:MET:CE    | 2.37                     | 0.55              |
| 1:CR:38:ARG:O     | 1:CR:42:THR:HG23   | 2.07                     | 0.55              |
| 1:CT:62:ARG:O     | 1:CT:65:ILE:HG12   | 2.05                     | 0.55              |
| 1:DA:77:MET:HE3   | 8:DG:201:ARG:HB3   | 1.89                     | 0.55              |
| 1:DC:71:ASN:HB3   | 10:DC:200:CYC:OC   | 2.06                     | 0.55              |
| 1:DL:67:SER:O     | 1:DL:73:TYR:HB2    | 2.06                     | 0.55              |
| 2:DO:104:LEU:HD13 | 2:DO:156:ILE:CG1   | 2.37                     | 0.55              |
| 1:DU:62:ARG:O     | 1:DU:65:ILE:HG12   | 2.06                     | 0.55              |
| 2:DV:73:TYR:O     | 2:DV:77:ARG:HB2    | 2.07                     | 0.55              |
| 2:DV:123:ILE:O    | 2:DV:127:VAL:HG23  | 2.06                     | 0.55              |
| 9:EA:33:ALA:HB3   | 9:EA:174:GLU:HB2   | 1.89                     | 0.55              |
| 9:EA:42:PHE:HD2   | 9:EA:131:LEU:HD13  | 1.72                     | 0.55              |
| 9:EA:146:GLU:HB3  | 9:EA:149:GLN:OE1   | 2.07                     | 0.55              |
| 3:AE:127:VAL:O    | 3:AE:131:THR:HG23  | 2.07                     | 0.55              |
| 2:AI:109:LEU:HD13 | 2:AI:159:GLY:HA3   | 1.89                     | 0.55              |
| 1:AJ:115:MET:CE   | 10:AJ:200:CYC:HMB3 | 2.36                     | 0.55              |
| 10:AQ:200:CYC:HHA | 10:AQ:200:CYC:HBA2 | 1.88                     | 0.55              |
| 2:AW:24:MET:HG3   | 2:AW:28:LYS:NZ     | 2.21                     | 0.55              |
| 2:AW:105:ASP:OD1  | 2:AW:109:LEU:HD12  | 2.07                     | 0.55              |
| 1:AX:153:PHE:O    | 1:AX:157:ILE:HG12  | 2.07                     | 0.55              |
| 6:BD:481:LYS:NZ   | 6:BD:495:VAL:HG22  | 2.21                     | 0.55              |
| 6:BD:626:ILE:HG22 | 6:BD:635:VAL:HG22  | 1.88                     | 0.55              |
| 9:BH:250:LEU:HD22 | 9:BH:286:ILE:HD12  | 1.88                     | 0.55              |
| 4:BS:113:LEU:HA   | 6:CM:408:CYS:SG    | 2.47                     | 0.55              |
| 2:CA:138:ALA:HA   | 2:CA:141:VAL:HG12  | 1.88                     | 0.55              |
| 1:CG:112:VAL:HG21 | 1:CG:160:MET:CE    | 2.36                     | 0.55              |
| 6:CM:261:ALA:HB1  | 6:CM:402:GLY:HA3   | 1.87                     | 0.55              |
| 9:CQ:295:GLU:OE1  | 9:CQ:297:LYS:HG2   | 2.06                     | 0.55              |
| 10:CU:200:CYC:OB  | 5:DF:20:ARG:HA     | 2.07                     | 0.55              |
| 1:CY:30:VAL:HA    | 2:CZ:31:PHE:CD1    | 2.42                     | 0.55              |
| 1:CY:67:SER:O     | 1:CY:73:TYR:HB2    | 2.05                     | 0.55              |
| 1:CY:110:VAL:HG13 | 2:DD:76:ARG:HB2    | 1.89                     | 0.55              |
| 2:CZ:62:TYR:OH    | 10:DA:200:CYC:HAD2 | 2.05                     | 0.55              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:DK:43:VAL:HG11  | 2:DK:141:VAL:HA    | 1.86                     | 0.55              |
| 1:DL:50:ILE:HD11  | 1:DL:137:ALA:HB2   | 1.88                     | 0.55              |
| 2:DR:51:ILE:CG2   | 2:DR:133:ILE:HG23  | 2.36                     | 0.55              |
| 2:DV:152:TYR:O    | 2:DV:156:ILE:HG13  | 2.06                     | 0.55              |
| 1:AC:130:VAL:HA   | 1:AC:133:MET:CE    | 2.37                     | 0.55              |
| 2:AD:3:ASP:H      | 2:AD:6:THR:HB      | 1.72                     | 0.55              |
| 3:AE:134:LYS:HD3  | 3:AE:153:PHE:HB3   | 1.89                     | 0.55              |
| 1:AJ:122:PRO:HG2  | 1:AJ:125:ALA:HB3   | 1.88                     | 0.55              |
| 4:AK:64:PRO:CB    | 7:BF:105:PRO:HB2   | 2.36                     | 0.55              |
| 1:AN:8:ILE:HB     | 2:AO:1:MET:HE3     | 1.88                     | 0.55              |
| 1:AN:22:GLU:O     | 1:AN:26:ILE:HG13   | 2.07                     | 0.55              |
| 2:AQ:14:VAL:CG1   | 6:BD:683:VAL:HG11  | 2.34                     | 0.55              |
| 2:AU:110:ASN:ND2  | 5:BB:49:LYS:HA     | 2.20                     | 0.55              |
| 1:AV:113:ARG:NH2  | 1:AV:161:SER:O     | 2.38                     | 0.55              |
| 9:BH:288:TRP:HB3  | 9:BH:290:PHE:HE1   | 1.71                     | 0.55              |
| 1:BI:20:PRO:HG3   | 1:BP:151:ALA:HB1   | 1.89                     | 0.55              |
| 1:BI:115:MET:HE3  | 10:BI:200:CYC:HMB3 | 1.87                     | 0.55              |
| 1:BK:25:ARG:HD3   | 6:CM:42:GLU:HG3    | 1.89                     | 0.55              |
| 2:BL:132:ALA:O    | 2:BL:136:VAL:HG23  | 2.07                     | 0.55              |
| 2:BN:15:GLN:HB3   | 2:BN:17:LYS:NZ     | 2.22                     | 0.55              |
| 4:BS:20:ASP:O     | 4:BS:24:MET:HG2    | 2.07                     | 0.55              |
| 4:BS:68:ARG:HB3   | 4:BS:69:PRO:HD2    | 1.87                     | 0.55              |
| 2:BW:85:LEU:HD22  | 2:BW:133:ILE:CD1   | 2.35                     | 0.55              |
| 1:CC:37:LEU:HD13  | 2:CD:28:LYS:CD     | 2.35                     | 0.55              |
| 1:CE:12:ASP:OD2   | 2:CF:107:ARG:HD3   | 2.06                     | 0.55              |
| 6:CM:316:MET:CE   | 6:CM:395:VAL:HG22  | 2.37                     | 0.55              |
| 9:CQ:34:GLU:HG2   | 9:CQ:174:GLU:HG2   | 1.89                     | 0.55              |
| 2:CU:96:MET:HA    | 2:CU:152:TYR:CE2   | 2.42                     | 0.55              |
| 1:CY:20:PRO:HA    | 1:CY:23:LEU:HD21   | 1.89                     | 0.55              |
| 2:CZ:91:TYR:HB3   | 2:CZ:104:LEU:CD2   | 2.37                     | 0.55              |
| 1:DA:115:MET:SD   | 10:DA:200:CYC:HMB3 | 2.46                     | 0.55              |
| 9:DI:202:MET:SD   | 9:DI:252:PRO:HG2   | 2.46                     | 0.55              |
| 9:EA:24:THR:HG21  | 9:EA:142:ILE:HD11  | 1.88                     | 0.55              |
| 2:AF:144:ASP:OD1  | 2:AF:144:ASP:N     | 2.40                     | 0.55              |
| 2:AO:71:ASN:ND2   | 2:AO:121:VAL:HA    | 2.21                     | 0.55              |
| 1:AX:101:VAL:HB   | 1:AX:155:PHE:CE2   | 2.42                     | 0.55              |
| 1:AZ:141:MET:HE3  | 1:AZ:146:ALA:HA    | 1.89                     | 0.55              |
| 6:BD:71:ALA:O     | 6:BD:75:ILE:HG12   | 2.06                     | 0.55              |
| 6:BD:199:ILE:HG21 | 6:BD:227:LEU:HD22  | 1.89                     | 0.55              |
| 6:BD:689:PRO:O    | 6:BD:693:GLU:HG3   | 2.06                     | 0.55              |
| 2:BJ:106:GLU:HB2  | 5:CJ:57:THR:CG2    | 2.33                     | 0.55              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:BL:22:ALA:O      | 2:BL:26:LYS:HG3    | 2.07                     | 0.55              |
| 3:BM:66:ARG:NH2    | 3:BM:73:TYR:O      | 2.37                     | 0.55              |
| 2:CH:112:LEU:HD11  | 2:CH:116:TYR:CZ    | 2.42                     | 0.55              |
| 5:CJ:2:ARG:HG2     | 5:CJ:58:GLY:HA3    | 1.89                     | 0.55              |
| 2:CU:88:TYR:CD2    | 2:CU:130:ILE:HD11  | 2.42                     | 0.55              |
| 1:DC:39:ILE:HG12   | 1:DC:145:ASP:HB3   | 1.87                     | 0.55              |
| 1:DC:116:TYR:HD2   | 1:DC:123:ILE:HD12  | 1.70                     | 0.55              |
| 9:DI:50:THR:HG21   | 9:DI:143:GLN:OE1   | 2.06                     | 0.55              |
| 9:DI:98:TYR:HH     | 9:DI:110:TRP:HE1   | 1.54                     | 0.55              |
| 1:DJ:118:SER:O     | 2:DO:53:LYS:NZ     | 2.27                     | 0.55              |
| 2:DK:112:LEU:CD1   | 10:DK:200:CYC:HMB3 | 2.37                     | 0.55              |
| 1:DQ:122:PRO:HD2   | 10:DQ:200:CYC:OC   | 2.07                     | 0.55              |
| 2:DR:30:TYR:O      | 2:DR:33:SER:OG     | 2.18                     | 0.55              |
| 2:DV:50:THR:O      | 2:DV:53:LYS:HB3    | 2.07                     | 0.55              |
| 9:EA:190:ILE:CG2   | 9:EA:193:VAL:HB    | 2.36                     | 0.55              |
| 1:AC:33:GLY:HA2    | 1:AC:36:ARG:CD     | 2.36                     | 0.55              |
| 1:AH:62:ARG:HG2    | 1:AH:65:ILE:HG12   | 1.87                     | 0.55              |
| 1:AH:109:LEU:CG    | 1:AH:159:LYS:HG2   | 2.37                     | 0.55              |
| 2:AL:8:VAL:HG13    | 2:AL:23:ALA:HB1    | 1.87                     | 0.55              |
| 1:AN:116:TYR:OH    | 10:AN:200:CYC:HMB  | 2.06                     | 0.55              |
| 2:AO:85:LEU:HD22   | 2:AO:133:ILE:CD1   | 2.36                     | 0.55              |
| 1:AV:72:ALA:HB2    | 10:AV:200:CYC:CMD  | 2.36                     | 0.55              |
| 2:AW:56:VAL:HG12   | 2:AW:61:LEU:HG     | 1.87                     | 0.55              |
| 1:AX:67:SER:O      | 1:AX:73:TYR:HB2    | 2.07                     | 0.55              |
| 5:BB:5:ARG:NE      | 5:BB:54:GLU:OE2    | 2.29                     | 0.55              |
| 6:BD:765:SER:OG    | 10:CS:200:CYC:NB   | 2.30                     | 0.55              |
| 1:BI:66:VAL:HA     | 1:BI:72:ALA:O      | 2.07                     | 0.55              |
| 3:BM:7:VAL:HG11    | 3:BM:26:ILE:HD11   | 1.89                     | 0.55              |
| 10:BM:200:CYC:HBD2 | 10:BM:200:CYC:HMD1 | 1.89                     | 0.55              |
| 1:BP:83:ARG:HD2    | 8:CP:206:GLN:NE2   | 2.21                     | 0.55              |
| 2:BT:39:ARG:O      | 2:BT:43:VAL:HG23   | 2.06                     | 0.55              |
| 2:BT:134:LYS:HB2   | 2:BT:153:LEU:HD13  | 1.87                     | 0.55              |
| 1:BV:27:LYS:O      | 1:BV:31:THR:HG23   | 2.07                     | 0.55              |
| 1:BV:90:ARG:HG3    | 2:BW:18:TYR:CE1    | 2.42                     | 0.55              |
| 2:CA:57:ALA:HA     | 2:CA:61:LEU:HD12   | 1.89                     | 0.55              |
| 1:CE:4:VAL:O       | 1:CE:8:ILE:HG12    | 2.07                     | 0.55              |
| 9:CQ:107:LEU:HG    | 11:CQ:400:45D:C30  | 2.37                     | 0.55              |
| 1:CT:154:ASP:HB2   | 2:DD:46:ALA:CB     | 2.37                     | 0.55              |
| 1:CV:62:ARG:O      | 1:CV:65:ILE:HG12   | 2.07                     | 0.55              |
| 1:CY:57:ARG:O      | 1:CY:61:LYS:HG2    | 2.07                     | 0.55              |
| 2:CZ:73:TYR:O      | 2:CZ:77:ARG:HB2    | 2.07                     | 0.55              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:DA:61:LYS:CE    | 9:DI:56:PRO:HB2    | 2.37                     | 0.55              |
| 2:DB:2:GLN:NE2    | 2:DB:10:ASN:OD1    | 2.37                     | 0.55              |
| 1:DC:101:VAL:HB   | 1:DC:155:PHE:CE2   | 2.42                     | 0.55              |
| 1:DJ:25:ARG:CD    | 1:DQ:25:ARG:HG3    | 2.37                     | 0.55              |
| 2:DK:10:ASN:O     | 2:DK:14:VAL:HG13   | 2.07                     | 0.55              |
| 2:DT:2:GLN:HE21   | 2:DT:10:ASN:HD22   | 1.55                     | 0.55              |
| 2:DV:1:MET:HG3    | 2:DV:103:ILE:HB    | 1.87                     | 0.55              |
| 1:AA:85:MET:CE    | 1:AA:129:SER:HB2   | 2.36                     | 0.55              |
| 1:AC:116:TYR:CE2  | 1:AC:126:VAL:HG21  | 2.42                     | 0.55              |
| 2:AF:115:THR:HG23 | 5:BA:53:VAL:HG11   | 1.88                     | 0.55              |
| 1:AJ:19:SER:OG    | 1:AJ:22:GLU:HG3    | 2.06                     | 0.55              |
| 1:AJ:56:ASP:O     | 1:AJ:60:GLN:HG2    | 2.07                     | 0.55              |
| 2:AY:122:PRO:HB2  | 2:AY:125:SER:OG    | 2.07                     | 0.55              |
| 6:BD:481:LYS:HE3  | 6:BD:615:TYR:CE2   | 2.41                     | 0.55              |
| 9:BH:71:ILE:HD11  | 9:BH:94:LEU:CD2    | 2.36                     | 0.55              |
| 9:BH:190:ILE:CG2  | 9:BH:193:VAL:HB    | 2.37                     | 0.55              |
| 2:BQ:147:LYS:O    | 2:BQ:151:VAL:HG23  | 2.07                     | 0.55              |
| 1:BR:83:ARG:NH2   | 1:BR:84:ASP:OD1    | 2.33                     | 0.55              |
| 4:BS:51:ILE:HD13  | 4:BS:138:ILE:HD13  | 1.89                     | 0.55              |
| 2:BT:56:VAL:HG12  | 2:BT:61:LEU:HG     | 1.89                     | 0.55              |
| 1:BX:12:ASP:OD2   | 2:BY:107:ARG:NE    | 2.39                     | 0.55              |
| 1:BX:89:LEU:HB2   | 1:BX:133:MET:CE    | 2.37                     | 0.55              |
| 1:CC:50:ILE:HG12  | 1:CC:136:VAL:HG12  | 1.89                     | 0.55              |
| 1:CC:65:ILE:HG22  | 1:CC:72:ALA:CB     | 2.37                     | 0.55              |
| 1:CE:27:LYS:O     | 1:CE:30:VAL:HG12   | 2.06                     | 0.55              |
| 9:CQ:242:ARG:HG3  | 9:CQ:243:GLU:OE1   | 2.07                     | 0.55              |
| 1:CT:64:ASP:OD2   | 1:CY:70:GLY:HA2    | 2.06                     | 0.55              |
| 1:CV:102:THR:OG1  | 1:CV:103:PRO:HD3   | 2.06                     | 0.55              |
| 1:CY:75:GLU:OE2   | 8:DY:223:ARG:HG2   | 2.07                     | 0.55              |
| 10:DA:200:CYC:HC  | 10:DA:200:CYC:HMD2 | 1.72                     | 0.55              |
| 2:DD:61:LEU:O     | 8:DH:205:PRO:HB3   | 2.07                     | 0.55              |
| 9:DI:19:ASP:C     | 9:DI:22:PRO:HD2    | 2.26                     | 0.55              |
| 9:DI:190:ILE:HB   | 9:DI:193:VAL:O     | 2.07                     | 0.55              |
| 1:DQ:50:ILE:HD12  | 1:DQ:136:VAL:CG1   | 2.36                     | 0.55              |
| 2:DR:64:ASP:HA    | 2:DR:67:ARG:HB2    | 1.88                     | 0.55              |
| 2:DR:109:LEU:HD13 | 2:DR:159:GLY:HA3   | 1.89                     | 0.55              |
| 1:DU:113:ARG:NH2  | 1:DU:160:MET:O     | 2.39                     | 0.55              |
| 2:DV:90:ARG:HG2   | 2:DV:94:TYR:CZ     | 2.42                     | 0.55              |
| 9:EA:292:LEU:HD23 | 9:EA:293:ASN:O     | 2.07                     | 0.55              |
| 1:AA:116:TYR:CE2  | 1:AA:126:VAL:HG21  | 2.42                     | 0.54              |
| 2:AD:57:ALA:HA    | 2:AD:61:LEU:CD1    | 2.36                     | 0.54              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:AI:111:GLY:HA2   | 6:BD:427:VAL:HG22  | 1.90                     | 0.54              |
| 4:AK:50:THR:HB     | 4:AK:54:ARG:NH1    | 2.22                     | 0.54              |
| 6:BD:261:ALA:HB1   | 6:BD:402:GLY:HA3   | 1.87                     | 0.54              |
| 2:BN:10:ASN:O      | 2:BN:14:VAL:HG23   | 2.07                     | 0.54              |
| 2:BT:36:LEU:CD1    | 7:CO:85:GLN:HB2    | 2.36                     | 0.54              |
| 2:BT:97:LEU:CD1    | 6:CM:35:LEU:HD12   | 2.38                     | 0.54              |
| 2:BW:84:ASP:OD2    | 10:BW:200:CYC:ND   | 2.40                     | 0.54              |
| 1:CC:39:ILE:HG23   | 1:CC:141:MET:SD    | 2.47                     | 0.54              |
| 1:CG:81:CYS:O      | 1:CG:85:MET:HG2    | 2.07                     | 0.54              |
| 6:CM:131:PRO:O     | 6:CM:132:ILE:HD13  | 2.07                     | 0.54              |
| 6:CM:706:ILE:HG12  | 2:DV:15:GLN:HE21   | 1.71                     | 0.54              |
| 6:CM:796:PRO:O     | 6:CM:800:VAL:HG23  | 2.07                     | 0.54              |
| 9:CQ:48:GLY:HA2    | 9:CQ:53:ILE:HG22   | 1.89                     | 0.54              |
| 9:CQ:190:ILE:HD13  | 9:CQ:252:PRO:CB    | 2.37                     | 0.54              |
| 1:CR:122:PRO:HG2   | 10:CR:200:CYC:HMC2 | 1.90                     | 0.54              |
| 1:DA:62:ARG:HD3    | 9:DI:58:ALA:CA     | 2.37                     | 0.54              |
| 2:DB:112:LEU:HD11  | 2:DB:116:TYR:CE2   | 2.43                     | 0.54              |
| 9:DI:41:TRP:NE1    | 9:DI:125:ILE:HD13  | 2.22                     | 0.54              |
| 2:DR:104:LEU:HD13  | 2:DR:156:ILE:CG1   | 2.37                     | 0.54              |
| 1:DU:104:ILE:HG21  | 1:DU:156:VAL:HG22  | 1.89                     | 0.54              |
| 2:DV:77:ARG:O      | 10:DV:200:CYC:HMD3 | 2.07                     | 0.54              |
| 2:DV:126:THR:O     | 2:DV:130:ILE:HG13  | 2.07                     | 0.54              |
| 2:DV:131:GLN:O     | 2:DV:134:LYS:HB3   | 2.06                     | 0.54              |
| 2:AF:127:VAL:O     | 2:AF:131:GLN:HG2   | 2.07                     | 0.54              |
| 2:AI:62:TYR:OH     | 10:AJ:200:CYC:HAD2 | 2.07                     | 0.54              |
| 10:AO:200:CYC:HAA1 | 6:BD:485:ILE:HG23  | 1.89                     | 0.54              |
| 2:AS:62:TYR:CE2    | 7:BF:103:PRO:HG3   | 2.42                     | 0.54              |
| 2:AU:57:ALA:CB     | 2:AU:61:LEU:HD12   | 2.36                     | 0.54              |
| 1:AV:83:ARG:NH2    | 1:AV:84:ASP:OD1    | 2.30                     | 0.54              |
| 5:BA:26:TYR:OH     | 5:BA:51:VAL:HG21   | 2.07                     | 0.54              |
| 6:BD:5:ALA:HB3     | 6:BD:437:TYR:HD1   | 1.72                     | 0.54              |
| 6:BD:799:LYS:HE2   | 6:BD:803:MET:SD    | 2.47                     | 0.54              |
| 1:BK:92:VAL:O      | 1:BK:96:VAL:HG23   | 2.07                     | 0.54              |
| 3:BM:89:LEU:O      | 3:BM:93:THR:HG23   | 2.07                     | 0.54              |
| 3:BM:112:VAL:HG21  | 3:BM:160:MET:HE1   | 1.88                     | 0.54              |
| 2:BN:96:MET:HA     | 2:BN:152:TYR:CE2   | 2.42                     | 0.54              |
| 2:BN:112:LEU:CD1   | 10:BN:200:CYC:HMB3 | 2.37                     | 0.54              |
| 2:BT:63:SER:O      | 2:BT:67:ARG:HG3    | 2.06                     | 0.54              |
| 1:BV:83:ARG:HA     | 7:CO:110:PHE:CZ    | 2.42                     | 0.54              |
| 1:BV:123:ILE:HD12  | 1:CE:117:ARG:HH22  | 1.71                     | 0.54              |
| 1:BX:58:LEU:HD22   | 1:BX:129:SER:CB    | 2.36                     | 0.54              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:BZ:89:LEU:O     | 1:BZ:93:THR:HG23   | 2.07                     | 0.54              |
| 1:CG:58:LEU:HD22  | 1:CG:129:SER:CB    | 2.35                     | 0.54              |
| 6:CM:501:VAL:HG21 | 6:CM:647:ASP:HB3   | 1.89                     | 0.54              |
| 6:CM:526:LYS:HE2  | 6:CM:533:LYS:HB2   | 1.89                     | 0.54              |
| 1:CV:95:GLY:HA3   | 1:CV:104:ILE:HD11  | 1.88                     | 0.54              |
| 2:CW:114:GLU:HG2  | 5:DF:53:VAL:HG12   | 1.87                     | 0.54              |
| 1:CY:92:VAL:O     | 1:CY:96:VAL:HG23   | 2.07                     | 0.54              |
| 1:DC:51:VAL:HG12  | 1:DC:133:MET:CE    | 2.37                     | 0.54              |
| 9:DI:107:LEU:HB3  | 11:DI:400:45D:C14  | 2.37                     | 0.54              |
| 9:DI:117:MET:CE   | 11:DI:400:45D:H273 | 2.37                     | 0.54              |
| 2:DK:43:VAL:CG1   | 2:DK:140:LEU:HG    | 2.38                     | 0.54              |
| 1:DU:121:THR:HG23 | 10:DU:200:CYC:C1C  | 2.37                     | 0.54              |
| 1:AA:79:ALA:HA    | 1:AA:82:LEU:CD2    | 2.38                     | 0.54              |
| 2:AB:123:ILE:O    | 2:AB:127:VAL:HG23  | 2.06                     | 0.54              |
| 2:AD:64:ASP:HA    | 2:AD:67:ARG:NH1    | 2.23                     | 0.54              |
| 2:AF:96:MET:HA    | 2:AF:152:TYR:CE2   | 2.43                     | 0.54              |
| 1:AH:101:VAL:HB   | 1:AH:155:PHE:CE2   | 2.42                     | 0.54              |
| 1:AN:39:ILE:HG12  | 1:AN:145:ASP:HB2   | 1.88                     | 0.54              |
| 2:AO:74:THR:HG22  | 2:AO:76:ARG:HG2    | 1.90                     | 0.54              |
| 2:AO:75:THR:HG22  | 1:AP:115:MET:HE1   | 1.88                     | 0.54              |
| 1:AR:122:PRO:O    | 1:AR:126:VAL:HG23  | 2.07                     | 0.54              |
| 1:AX:85:MET:CE    | 1:AX:129:SER:HB2   | 2.37                     | 0.54              |
| 2:BJ:123:ILE:O    | 2:BJ:127:VAL:HG23  | 2.06                     | 0.54              |
| 2:CA:71:ASN:HD22  | 2:CA:122:PRO:HD3   | 1.71                     | 0.54              |
| 1:CC:116:TYR:CE2  | 1:CC:126:VAL:HG21  | 2.42                     | 0.54              |
| 6:CM:777:PHE:CE1  | 6:CM:781:LEU:HD11  | 2.42                     | 0.54              |
| 6:CM:795:TYR:HB3  | 6:CM:799:LYS:HB3   | 1.89                     | 0.54              |
| 6:CM:820:GLN:HG2  | 10:DR:200:CYC:O1A  | 2.08                     | 0.54              |
| 9:CQ:273:VAL:HB   | 9:CQ:286:ILE:CD1   | 2.38                     | 0.54              |
| 1:CV:67:SER:O     | 1:CV:73:TYR:HB2    | 2.07                     | 0.54              |
| 1:CV:121:THR:HG23 | 10:CV:200:CYC:C1C  | 2.38                     | 0.54              |
| 2:CW:71:ASN:HA    | 2:CW:77:ARG:HH21   | 1.72                     | 0.54              |
| 2:CW:103:ILE:O    | 2:CW:107:ARG:HB2   | 2.07                     | 0.54              |
| 2:CZ:51:ILE:HG21  | 2:CZ:137:THR:CG2   | 2.37                     | 0.54              |
| 1:DC:85:MET:O     | 1:DC:133:MET:HE1   | 2.07                     | 0.54              |
| 1:DC:128:GLN:OE1  | 1:DC:131:ARG:NH1   | 2.40                     | 0.54              |
| 5:DF:19:GLN:O     | 5:DF:21:GLU:HG2    | 2.07                     | 0.54              |
| 5:DF:66:LEU:H     | 5:DF:66:LEU:HD23   | 1.71                     | 0.54              |
| 9:DI:68:LEU:O     | 9:DI:71:ILE:HG22   | 2.08                     | 0.54              |
| 1:DJ:20:PRO:HA    | 1:DJ:23:LEU:CD2    | 2.37                     | 0.54              |
| 2:DO:73:TYR:O     | 2:DO:77:ARG:HB2    | 2.06                     | 0.54              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:DR:30:TYR:HE1   | 2:DR:99:GLY:HA3    | 1.73                     | 0.54              |
| 9:EA:257:THR:HG23 | 9:EA:267:ILE:HG12  | 1.89                     | 0.54              |
| 1:AC:122:PRO:HG2  | 1:AC:125:ALA:CB    | 2.37                     | 0.54              |
| 2:AD:132:ALA:O    | 2:AD:136:VAL:HG23  | 2.08                     | 0.54              |
| 2:AF:39:ARG:NE    | 1:CC:142:SER:HA    | 2.22                     | 0.54              |
| 10:AF:200:CYC:O2A | 5:BA:33:TYR:O      | 2.25                     | 0.54              |
| 2:AI:144:ASP:OD1  | 2:AI:145:ALA:N     | 2.41                     | 0.54              |
| 4:AK:72:ASN:ND2   | 4:AK:122:VAL:HA    | 2.22                     | 0.54              |
| 2:AS:54:GLU:O     | 2:AS:58:LYS:HG2    | 2.07                     | 0.54              |
| 2:AS:58:LYS:HB3   | 7:BF:98:VAL:CG1    | 2.38                     | 0.54              |
| 6:BD:198:ALA:O    | 6:BD:202:MET:HG3   | 2.08                     | 0.54              |
| 6:BD:348:ARG:HH21 | 6:BD:398:LEU:HD11  | 1.73                     | 0.54              |
| 6:BD:797:ASN:OD1  | 6:BD:826:LEU:HD13  | 2.07                     | 0.54              |
| 9:BH:99:ALA:HB1   | 9:BH:164:THR:HG22  | 1.88                     | 0.54              |
| 9:BH:289:ARG:NH1  | 9:EA:306:LEU:HD12  | 2.23                     | 0.54              |
| 1:BR:81:CYS:HA    | 10:BR:200:CYC:HHD  | 1.90                     | 0.54              |
| 2:BW:85:LEU:HD21  | 10:BW:200:CYC:HBC1 | 1.90                     | 0.54              |
| 2:BW:114:GLU:HA   | 2:BW:117:ASN:HB2   | 1.90                     | 0.54              |
| 1:CG:89:LEU:O     | 1:CG:93:THR:HG23   | 2.07                     | 0.54              |
| 5:CJ:6:ILE:HG21   | 5:CJ:36:TRP:CZ3    | 2.42                     | 0.54              |
| 6:CM:450:GLY:O    | 6:CM:600:LYS:HE3   | 2.08                     | 0.54              |
| 7:CO:103:PRO:HB3  | 7:CO:107:LEU:HD12  | 1.90                     | 0.54              |
| 2:CS:108:VAL:HG13 | 2:CS:109:LEU:HG    | 1.89                     | 0.54              |
| 1:CT:85:MET:CE    | 1:CT:129:SER:HB2   | 2.37                     | 0.54              |
| 1:CY:20:PRO:HA    | 1:CY:23:LEU:HG     | 1.87                     | 0.54              |
| 2:CZ:47:ASN:HB2   | 2:CZ:50:THR:HB     | 1.88                     | 0.54              |
| 2:DD:68:PRO:HG3   | 2:DD:73:TYR:CE1    | 2.42                     | 0.54              |
| 5:DF:6:ILE:HD13   | 5:DF:36:TRP:HZ3    | 1.72                     | 0.54              |
| 1:DL:18:LEU:HD23  | 1:DL:22:GLU:OE1    | 2.07                     | 0.54              |
| 1:DL:104:ILE:HG21 | 1:DL:156:VAL:HG22  | 1.88                     | 0.54              |
| 1:DS:97:VAL:HG21  | 2:DT:9:ILE:HD11    | 1.90                     | 0.54              |
| 2:DT:112:LEU:CD1  | 10:DT:200:CYC:HMB3 | 2.32                     | 0.54              |
| 2:DV:44:ILE:HD11  | 2:DV:89:LEU:CD1    | 2.34                     | 0.54              |
| 8:DY:197:GLN:OE1  | 8:DY:199:GLU:HB2   | 2.07                     | 0.54              |
| 9:EA:269:VAL:CG2  | 9:EA:288:TRP:HB2   | 2.37                     | 0.54              |
| 2:AF:71:ASN:ND2   | 2:AF:121:VAL:HA    | 2.22                     | 0.54              |
| 2:AL:83:ARG:NH2   | 2:AL:84:ASP:OD1    | 2.36                     | 0.54              |
| 1:AN:72:ALA:HA    | 1:AN:77:MET:HB3    | 1.88                     | 0.54              |
| 2:AO:84:ASP:OD2   | 10:AO:200:CYC:ND   | 2.41                     | 0.54              |
| 2:AO:141:VAL:HG12 | 2:AO:145:ALA:HB3   | 1.90                     | 0.54              |
| 2:AU:85:LEU:HD22  | 2:AU:133:ILE:CD1   | 2.38                     | 0.54              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:AU:132:ALA:HA    | 2:AU:135:GLU:OE1   | 2.07                     | 0.54              |
| 10:AX:200:CYC:HMA1 | 10:AX:200:CYC:NB   | 2.22                     | 0.54              |
| 1:AZ:13:ALA:HA     | 5:BB:45:LYS:NZ     | 2.22                     | 0.54              |
| 1:AZ:142:SER:HB2   | 2:BN:39:ARG:CZ     | 2.38                     | 0.54              |
| 6:BD:792:TYR:CG    | 6:BD:831:LEU:HD22  | 2.43                     | 0.54              |
| 8:BG:232:ILE:HD12  | 8:BG:233:PRO:CD    | 2.37                     | 0.54              |
| 9:BH:208:ASN:HA    | 9:BH:210:PHE:CE1   | 2.42                     | 0.54              |
| 1:BK:22:GLU:HA     | 1:BK:25:ARG:HG2    | 1.90                     | 0.54              |
| 3:BM:50:ILE:HG12   | 3:BM:140:LEU:HD13  | 1.89                     | 0.54              |
| 2:BQ:77:ARG:HG3    | 10:BQ:200:CYC:HMD1 | 1.89                     | 0.54              |
| 1:BR:115:MET:CE    | 10:BR:200:CYC:HMB3 | 2.35                     | 0.54              |
| 1:BR:136:VAL:O     | 1:BR:140:LEU:HG    | 2.08                     | 0.54              |
| 1:BV:115:MET:HG3   | 2:CA:78:TYR:HB3    | 1.88                     | 0.54              |
| 2:BW:71:ASN:ND2    | 2:BW:121:VAL:HA    | 2.22                     | 0.54              |
| 2:BY:126:THR:O     | 2:BY:130:ILE:HG13  | 2.08                     | 0.54              |
| 1:BZ:46:SER:O      | 1:BZ:50:ILE:HD12   | 2.07                     | 0.54              |
| 1:CE:37:LEU:HD11   | 2:CF:24:MET:SD     | 2.47                     | 0.54              |
| 2:CH:88:TYR:OH     | 2:CH:112:LEU:HD21  | 2.07                     | 0.54              |
| 5:CJ:14:THR:O      | 5:CJ:18:THR:HG23   | 2.07                     | 0.54              |
| 6:CM:131:PRO:HG2   | 6:CM:200:GLN:HG2   | 1.90                     | 0.54              |
| 6:CM:321:ARG:O     | 6:CM:325:LYS:HG2   | 2.06                     | 0.54              |
| 6:CM:752:GLU:HB2   | 6:CM:753:PRO:HD3   | 1.90                     | 0.54              |
| 1:CT:72:ALA:O      | 1:CT:78:THR:HG23   | 2.08                     | 0.54              |
| 2:CW:65:VAL:HG12   | 2:CW:72:MET:CB     | 2.37                     | 0.54              |
| 1:CY:20:PRO:HA     | 1:CY:23:LEU:CD2    | 2.38                     | 0.54              |
| 2:CZ:96:MET:HA     | 2:CZ:152:TYR:CE2   | 2.42                     | 0.54              |
| 9:DI:25:ILE:HD13   | 9:DI:153:VAL:HG13  | 1.89                     | 0.54              |
| 9:DI:48:GLY:HA2    | 9:DI:53:ILE:HG22   | 1.89                     | 0.54              |
| 1:DQ:57:ARG:O      | 1:DQ:61:LYS:HG2    | 2.07                     | 0.54              |
| 10:DQ:200:CYC:HBB3 | 2:DV:73:TYR:CE1    | 2.42                     | 0.54              |
| 2:DT:36:LEU:HD21   | 2:DT:145:ALA:HA    | 1.90                     | 0.54              |
| 1:AJ:124:GLU:OE1   | 1:AJ:124:GLU:N     | 2.37                     | 0.54              |
| 2:AL:87:TYR:CD2    | 10:AL:200:CYC:HBB3 | 2.42                     | 0.54              |
| 2:AQ:75:THR:CG2    | 1:AR:108:GLY:HA2   | 2.38                     | 0.54              |
| 2:AW:24:MET:HG3    | 2:AW:28:LYS:HZ3    | 1.72                     | 0.54              |
| 1:AX:84:ASP:OD2    | 10:AX:200:CYC:ND   | 2.38                     | 0.54              |
| 1:AX:90:ARG:NH1    | 2:AY:16:GLY:HA2    | 2.23                     | 0.54              |
| 1:AX:96:VAL:HG12   | 1:AX:152:TYR:CD2   | 2.43                     | 0.54              |
| 1:AX:107:ILE:HG12  | 2:AY:13:ASP:OD2    | 2.07                     | 0.54              |
| 9:BH:75:GLY:O      | 9:BH:78:GLN:HG2    | 2.08                     | 0.54              |
| 9:BH:250:LEU:HD23  | 9:BH:273:VAL:HG23  | 1.89                     | 0.54              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:BI:121:THR:HG23 | 10:BI:200:CYC:C1C  | 2.37                     | 0.54              |
| 1:BK:25:ARG:HB3   | 6:CM:42:GLU:HA     | 1.89                     | 0.54              |
| 2:BN:109:LEU:CD1  | 2:BN:159:GLY:HA3   | 2.38                     | 0.54              |
| 4:BS:29:ALA:O     | 4:BS:32:GLU:HG3    | 2.07                     | 0.54              |
| 4:BS:37:ARG:HH12  | 4:BS:152:PHE:HB2   | 1.73                     | 0.54              |
| 4:BS:129:ARG:HH21 | 4:BS:133:ILE:HG13  | 1.73                     | 0.54              |
| 1:BZ:138:SER:HA   | 1:BZ:146:ALA:HB1   | 1.88                     | 0.54              |
| 10:CC:200:CYC:HC  | 10:CC:200:CYC:HMD2 | 1.73                     | 0.54              |
| 2:CF:147:LYS:O    | 2:CF:151:VAL:HG23  | 2.07                     | 0.54              |
| 6:CM:577:GLU:OE1  | 6:CM:577:GLU:N     | 2.40                     | 0.54              |
| 9:CQ:36:GLN:O     | 9:CQ:40:ILE:HG23   | 2.08                     | 0.54              |
| 1:CR:71:ASN:HD22  | 1:CR:121:THR:HA    | 1.71                     | 0.54              |
| 2:CZ:63:SER:H     | 2:CZ:66:THR:HG22   | 1.73                     | 0.54              |
| 1:DC:14:GLU:OE1   | 1:DC:16:ARG:NE     | 2.41                     | 0.54              |
| 8:DH:203:PHE:CD1  | 8:DY:215:PRO:HB2   | 2.43                     | 0.54              |
| 9:DI:151:ILE:HD11 | 11:DI:400:45D:H201 | 1.89                     | 0.54              |
| 9:DI:292:LEU:HD23 | 9:DI:293:ASN:O     | 2.07                     | 0.54              |
| 2:DK:73:TYR:O     | 2:DK:74:THR:OG1    | 2.25                     | 0.54              |
| 2:DK:75:THR:HA    | 1:DL:115:MET:HE1   | 1.89                     | 0.54              |
| 1:DQ:71:ASN:ND2   | 1:DQ:121:THR:HA    | 2.23                     | 0.54              |
| 1:DU:129:SER:O    | 1:DU:133:MET:HG3   | 2.08                     | 0.54              |
| 2:DV:5:ILE:O      | 2:DV:9:ILE:HG12    | 2.08                     | 0.54              |
| 9:EA:75:GLY:O     | 9:EA:78:GLN:HG2    | 2.08                     | 0.54              |
| 3:AE:124:PRO:O    | 3:AE:127:VAL:HG12  | 2.08                     | 0.54              |
| 2:AF:84:ASP:OD2   | 2:AF:116:TYR:OH    | 2.17                     | 0.54              |
| 2:AF:104:LEU:O    | 2:AF:108:VAL:HB    | 2.08                     | 0.54              |
| 2:AF:114:GLU:HG3  | 5:BA:53:VAL:HG12   | 1.88                     | 0.54              |
| 1:AH:156:VAL:O    | 1:AH:160:MET:HG3   | 2.08                     | 0.54              |
| 2:AL:96:MET:HA    | 2:AL:152:TYR:CE2   | 2.43                     | 0.54              |
| 2:AU:1:MET:HE2    | 2:AU:103:ILE:HD12  | 1.89                     | 0.54              |
| 2:AU:41:ALA:N     | 2:AU:96:MET:HE1    | 2.22                     | 0.54              |
| 1:AV:50:ILE:HD11  | 1:AV:140:LEU:CD2   | 2.38                     | 0.54              |
| 2:AW:122:PRO:HB2  | 2:AW:125:SER:HB2   | 1.88                     | 0.54              |
| 1:AX:58:LEU:HD22  | 1:AX:129:SER:CB    | 2.36                     | 0.54              |
| 1:AZ:131:ARG:HG3  | 1:AZ:157:ILE:HD13  | 1.90                     | 0.54              |
| 1:BK:128:GLN:OE1  | 1:BK:131:ARG:HD2   | 2.08                     | 0.54              |
| 2:BL:64:ASP:HA    | 2:BL:67:ARG:NH1    | 2.23                     | 0.54              |
| 3:BM:30:LEU:HD13  | 2:BN:31:PHE:CD1    | 2.42                     | 0.54              |
| 3:BM:68:PRO:HA    | 3:BM:73:TYR:CE1    | 2.43                     | 0.54              |
| 1:CE:72:ALA:CA    | 1:CE:77:MET:HB3    | 2.38                     | 0.54              |
| 1:CG:107:ILE:HG12 | 2:CH:13:ASP:OD2    | 2.07                     | 0.54              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 6:CM:193:ASP:O     | 6:CM:197:VAL:HG22  | 2.08                     | 0.54              |
| 6:CM:826:LEU:HA    | 6:CM:830:GLY:O     | 2.06                     | 0.54              |
| 6:CM:848:PHE:O     | 6:CM:852:THR:HB    | 2.08                     | 0.54              |
| 1:CR:28:ALA:O      | 1:CR:31:THR:HG22   | 2.07                     | 0.54              |
| 1:CR:113:ARG:NH2   | 1:CR:161:SER:O     | 2.35                     | 0.54              |
| 2:CU:53:LYS:HD3    | 1:CV:118:SER:O     | 2.08                     | 0.54              |
| 1:CY:37:LEU:O      | 1:CY:40:ALA:HB3    | 2.07                     | 0.54              |
| 2:CZ:39:ARG:HH12   | 2:CZ:141:VAL:HA    | 1.73                     | 0.54              |
| 1:DA:50:ILE:HD11   | 1:DA:137:ALA:N     | 2.23                     | 0.54              |
| 1:DA:53:GLN:HB2    | 1:DA:57:ARG:NH1    | 2.22                     | 0.54              |
| 9:DI:210:PHE:CG    | 9:DI:241:PHE:HB3   | 2.42                     | 0.54              |
| 1:DJ:47:ARG:O      | 1:DJ:51:VAL:HG12   | 2.08                     | 0.54              |
| 9:EA:233:GLY:O     | 9:EA:237:VAL:HG23  | 2.08                     | 0.54              |
| 2:AB:40:ALA:O      | 2:AB:44:ILE:HG12   | 2.07                     | 0.54              |
| 2:AB:104:LEU:HD13  | 2:AB:156:ILE:HG13  | 1.88                     | 0.54              |
| 2:AD:5:ILE:HG23    | 2:AD:30:TYR:CD2    | 2.43                     | 0.54              |
| 2:AD:83:ARG:NE     | 5:BA:22:LEU:HD21   | 2.22                     | 0.54              |
| 3:AE:11:ALA:HB1    | 3:AE:16:ARG:O      | 2.08                     | 0.54              |
| 1:AN:134:LYS:NZ    | 1:AN:154:ASP:OD1   | 2.26                     | 0.54              |
| 2:AO:147:LYS:O     | 2:AO:151:VAL:HG23  | 2.07                     | 0.54              |
| 1:AX:21:GLY:O      | 1:AX:25:ARG:HG3    | 2.07                     | 0.54              |
| 2:AY:65:VAL:HA     | 2:AY:70:GLY:HA3    | 1.90                     | 0.54              |
| 10:AY:200:CYC:HBD2 | 10:AY:200:CYC:HHA  | 1.90                     | 0.54              |
| 6:BD:355:PRO:HB3   | 6:BD:361:VAL:HG22  | 1.90                     | 0.54              |
| 1:BP:30:VAL:HG11   | 2:BQ:34:GLY:HA3    | 1.88                     | 0.54              |
| 1:BP:101:VAL:HB    | 1:BP:155:PHE:CE2   | 2.42                     | 0.54              |
| 1:BZ:63:PRO:HG2    | 8:CP:230:ASN:HD21  | 1.73                     | 0.54              |
| 1:CE:65:ILE:HG23   | 1:CE:72:ALA:HB3    | 1.90                     | 0.54              |
| 9:CQ:31:LEU:HD11   | 9:CQ:138:VAL:HG21  | 1.90                     | 0.54              |
| 9:CQ:39:LEU:CD1    | 9:CQ:139:LEU:HB2   | 2.38                     | 0.54              |
| 9:CQ:217:PHE:HA    | 9:CQ:298:ILE:CG2   | 2.38                     | 0.54              |
| 1:CR:8:ILE:HG21    | 2:CS:1:MET:CE      | 2.37                     | 0.54              |
| 2:CS:100:ASP:OD2   | 2:CS:102:SER:HB3   | 2.08                     | 0.54              |
| 1:CT:84:ASP:OD2    | 10:CT:200:CYC:ND   | 2.41                     | 0.54              |
| 2:CW:52:VAL:HA     | 2:CW:133:ILE:CD1   | 2.36                     | 0.54              |
| 1:CY:85:MET:CB     | 1:CY:133:MET:HE2   | 2.38                     | 0.54              |
| 8:DG:249:ARG:HB2   | 2:DK:62:TYR:HB2    | 1.90                     | 0.54              |
| 8:DH:227:PRO:HB3   | 1:DS:59:PHE:CD2    | 2.42                     | 0.54              |
| 9:DI:25:ILE:CD1    | 9:DI:156:ASN:HB2   | 2.38                     | 0.54              |
| 1:DJ:109:LEU:HD12  | 1:DJ:159:LYS:HB3   | 1.88                     | 0.54              |
| 2:DK:62:TYR:OH     | 10:DL:200:CYC:HAD2 | 2.08                     | 0.54              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:DL:2:SER:OG      | 2:DM:3:ASP:OD1     | 2.26                     | 0.54              |
| 1:DN:102:THR:OG1   | 1:DN:103:PRO:HD3   | 2.07                     | 0.54              |
| 2:DO:20:ASP:O      | 2:DO:24:MET:HG2    | 2.06                     | 0.54              |
| 1:DQ:27:LYS:HZ3    | 2:DR:39:ARG:HG2    | 1.72                     | 0.54              |
| 1:DQ:92:VAL:HG21   | 1:DQ:153:PHE:CE1   | 2.43                     | 0.54              |
| 1:AC:91:LEU:HD21   | 1:AC:107:ILE:HG21  | 1.89                     | 0.54              |
| 3:AE:66:ARG:NH2    | 3:AE:73:TYR:O      | 2.41                     | 0.54              |
| 1:AJ:97:VAL:HG21   | 4:AK:19:LEU:HD12   | 1.90                     | 0.54              |
| 1:AN:33:GLY:HA2    | 1:AN:36:ARG:HD2    | 1.90                     | 0.54              |
| 1:AN:108:GLY:HA2   | 2:AS:75:THR:CG2    | 2.37                     | 0.54              |
| 1:AR:56:ASP:CA     | 8:BG:225:ILE:HD11  | 2.37                     | 0.54              |
| 1:AZ:22:GLU:O      | 1:AZ:26:ILE:HG12   | 2.07                     | 0.54              |
| 1:AZ:68:PRO:HA     | 1:AZ:73:TYR:CG     | 2.43                     | 0.54              |
| 6:BD:371:GLY:HA3   | 6:BD:375:ALA:HB2   | 1.89                     | 0.54              |
| 6:BD:889:THR:HG22  | 2:CZ:118:SER:HB2   | 1.89                     | 0.54              |
| 9:BH:156:ASN:O     | 9:BH:159:VAL:HG12  | 2.08                     | 0.54              |
| 1:BI:81:CYS:O      | 1:BI:85:MET:HG2    | 2.07                     | 0.54              |
| 1:BK:22:GLU:HG2    | 6:CM:42:GLU:OE2    | 2.08                     | 0.54              |
| 1:BK:132:GLU:O     | 1:BK:136:VAL:HG23  | 2.08                     | 0.54              |
| 3:BM:119:LEU:HD13  | 10:BM:200:CYC:CHA  | 2.38                     | 0.54              |
| 2:BT:52:VAL:HG11   | 2:BT:82:ILE:HG23   | 1.89                     | 0.54              |
| 2:BW:39:ARG:O      | 2:BW:43:VAL:HG23   | 2.07                     | 0.54              |
| 2:CA:85:LEU:HD22   | 2:CA:133:ILE:CD1   | 2.38                     | 0.54              |
| 1:CC:58:LEU:HD22   | 1:CC:129:SER:CB    | 2.38                     | 0.54              |
| 1:CC:93:THR:O      | 1:CC:97:VAL:HG23   | 2.08                     | 0.54              |
| 1:CE:39:ILE:HG12   | 1:CE:145:ASP:HB3   | 1.89                     | 0.54              |
| 2:CF:15:GLN:HB2    | 2:CF:17:LYS:NZ     | 2.23                     | 0.54              |
| 1:CG:115:MET:CE    | 10:CG:200:CYC:HMB3 | 2.38                     | 0.54              |
| 2:CS:75:THR:HG22   | 1:CT:108:GLY:HA2   | 1.90                     | 0.54              |
| 1:CT:53:GLN:O      | 1:CT:57:ARG:HG3    | 2.08                     | 0.54              |
| 1:DA:97:VAL:CG2    | 2:DB:9:ILE:HD11    | 2.38                     | 0.54              |
| 2:DD:116:TYR:HE2   | 2:DD:160:LEU:HD21  | 1.73                     | 0.54              |
| 1:DJ:25:ARG:NE     | 1:DQ:25:ARG:HG3    | 2.23                     | 0.54              |
| 1:DQ:115:MET:HG3   | 2:DV:75:THR:HG22   | 1.90                     | 0.54              |
| 10:AA:200:CYC:HAA1 | 2:AF:61:LEU:HD22   | 1.90                     | 0.54              |
| 2:AD:57:ALA:HA     | 2:AD:61:LEU:HG     | 1.89                     | 0.54              |
| 3:AE:30:LEU:HD12   | 2:AF:31:PHE:O      | 2.08                     | 0.54              |
| 3:AE:37:ILE:HG23   | 2:AF:24:MET:HE2    | 1.88                     | 0.54              |
| 2:AF:109:LEU:CD1   | 2:AF:159:GLY:HA3   | 2.37                     | 0.54              |
| 2:AF:147:LYS:O     | 2:AF:151:VAL:HG23  | 2.08                     | 0.54              |
| 6:BD:274:SER:N     | 6:BD:277:GLU:OE2   | 2.36                     | 0.54              |

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| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 6:BD:350:ILE:HD12  | 6:BD:380:LEU:HD13 | 1.90                     | 0.54              |
| 9:BH:227:PHE:CE1   | 9:EA:230:PRO:HD3  | 2.43                     | 0.54              |
| 2:BL:83:ARG:NH1    | 5:CJ:22:LEU:HD21  | 2.23                     | 0.54              |
| 1:BR:26:ILE:HD13   | 4:BS:98:ILE:HG21  | 1.90                     | 0.54              |
| 10:BV:200:CYC:HBB2 | 2:CA:73:TYR:CE1   | 2.43                     | 0.54              |
| 2:BW:25:ASP:HA     | 2:BW:28:LYS:NZ    | 2.23                     | 0.54              |
| 2:BW:74:THR:HG22   | 2:BW:76:ARG:HG2   | 1.90                     | 0.54              |
| 2:CA:147:LYS:HE3   | 7:CO:93:PRO:CG    | 2.38                     | 0.54              |
| 2:CD:41:ALA:N      | 2:CD:96:MET:HE1   | 2.23                     | 0.54              |
| 1:CE:109:LEU:HD22  | 1:CE:159:LYS:HB3  | 1.90                     | 0.54              |
| 9:CQ:98:TYR:HA     | 9:CQ:101:TRP:CE3  | 2.43                     | 0.54              |
| 2:CS:145:ALA:HA    | 2:CS:148:GLU:OE1  | 2.08                     | 0.54              |
| 1:CY:20:PRO:HA     | 1:CY:23:LEU:CG    | 2.38                     | 0.54              |
| 1:DA:132:GLU:O     | 1:DA:136:VAL:HG12 | 2.08                     | 0.54              |
| 2:DM:104:LEU:HD12  | 2:DM:155:TYR:HD2  | 1.72                     | 0.54              |
| 1:DQ:64:ASP:HA     | 1:DQ:67:SER:OG    | 2.08                     | 0.54              |
| 2:DR:75:THR:HG22   | 1:DS:115:MET:SD   | 2.48                     | 0.54              |
| 2:DR:137:THR:O     | 2:DR:141:VAL:HG22 | 2.08                     | 0.54              |
| 2:DV:47:ASN:O      | 2:DV:51:ILE:HG13  | 2.08                     | 0.54              |
| 8:DZ:243:GLU:OE1   | 8:DZ:243:GLU:N    | 2.41                     | 0.54              |
| 1:AC:96:VAL:HA     | 1:AC:152:TYR:CE2  | 2.43                     | 0.53              |
| 1:AH:35:ALA:O      | 1:AH:39:ILE:HG13  | 2.07                     | 0.53              |
| 2:AL:81:CYS:HA     | 10:AL:200:CYC:HHD | 1.90                     | 0.53              |
| 1:AV:91:LEU:HD21   | 1:AV:107:ILE:CG2  | 2.38                     | 0.53              |
| 1:AX:6:LYS:HG2     | 6:BD:534:PHE:HZ   | 1.72                     | 0.53              |
| 6:BD:210:PHE:CZ    | 6:BD:212:ASN:HB2  | 2.43                     | 0.53              |
| 6:BD:248:ILE:HG12  | 6:BD:356:SER:CB   | 2.38                     | 0.53              |
| 2:BL:3:ASP:OD1     | 2:BL:98:ALA:HB1   | 2.09                     | 0.53              |
| 1:BR:89:LEU:HB2    | 1:BR:133:MET:CE   | 2.37                     | 0.53              |
| 1:BV:2:SER:O       | 1:BV:5:THR:OG1    | 2.17                     | 0.53              |
| 2:CF:23:ALA:HA     | 2:CF:26:LYS:HG2   | 1.89                     | 0.53              |
| 1:CG:26:ILE:O      | 1:CG:30:VAL:HG23  | 2.08                     | 0.53              |
| 2:CH:25:ASP:HA     | 2:CH:28:LYS:HE3   | 1.90                     | 0.53              |
| 5:CJ:40:GLN:HG2    | 5:CJ:44:MET:CE    | 2.38                     | 0.53              |
| 6:CM:736:LYS:O     | 6:CM:740:ARG:HG3  | 2.08                     | 0.53              |
| 9:CQ:42:PHE:HD2    | 9:CQ:131:LEU:HD13 | 1.74                     | 0.53              |
| 1:CR:8:ILE:CD1     | 2:CS:98:ALA:HB2   | 2.38                     | 0.53              |
| 1:CR:73:TYR:O      | 1:CR:77:MET:HB2   | 2.08                     | 0.53              |
| 1:CR:131:ARG:HG2   | 1:CR:157:ILE:CD1  | 2.33                     | 0.53              |
| 2:CS:47:ASN:HB3    | 2:CS:50:THR:HB    | 1.90                     | 0.53              |
| 2:CW:54:GLU:HG3    | 9:DI:63:LEU:CD2   | 2.38                     | 0.53              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:CY:85:MET:HE3   | 1:CY:129:SER:HB2  | 1.90                     | 0.53              |
| 2:CZ:5:ILE:O      | 2:CZ:8:VAL:HG22   | 2.08                     | 0.53              |
| 2:CZ:8:VAL:HG21   | 2:CZ:27:LEU:HD21  | 1.89                     | 0.53              |
| 2:CZ:19:LEU:HD12  | 2:CZ:23:ALA:HB1   | 1.90                     | 0.53              |
| 2:CZ:41:ALA:N     | 2:CZ:96:MET:HE1   | 2.23                     | 0.53              |
| 2:CZ:149:MET:O    | 2:CZ:153:LEU:HD23 | 2.08                     | 0.53              |
| 1:DA:102:THR:OG1  | 1:DA:103:PRO:HD3  | 2.07                     | 0.53              |
| 8:DH:227:PRO:CB   | 1:DS:66:VAL:HG21  | 2.38                     | 0.53              |
| 1:DS:104:ILE:HG22 | 1:DS:109:LEU:CD2  | 2.38                     | 0.53              |
| 2:DT:83:ARG:NH1   | 10:DT:200:CYC:O1A | 2.41                     | 0.53              |
| 5:DX:62:THR:O     | 5:DX:66:LEU:HD11  | 2.08                     | 0.53              |
| 1:AH:62:ARG:NH2   | 1:AH:124:GLU:OE1  | 2.38                     | 0.53              |
| 2:AI:8:VAL:CG2    | 2:AI:27:LEU:HD11  | 2.30                     | 0.53              |
| 1:AJ:115:MET:HE3  | 10:AJ:200:CYC:CHB | 2.38                     | 0.53              |
| 4:AK:60:PHE:O     | 4:AK:64:PRO:HA    | 2.08                     | 0.53              |
| 1:AV:72:ALA:CA    | 1:AV:77:MET:HB3   | 2.38                     | 0.53              |
| 2:AW:1:MET:N      | 5:BB:67:ALA:O     | 2.41                     | 0.53              |
| 6:BD:864:ALA:C    | 6:BD:867:PRO:HD2  | 2.28                     | 0.53              |
| 9:BH:190:ILE:HD11 | 9:BH:254:ARG:O    | 2.09                     | 0.53              |
| 2:BJ:103:ILE:CD1  | 2:BJ:107:ARG:HD2  | 2.35                     | 0.53              |
| 2:BL:39:ARG:NH1   | 2:BL:39:ARG:HA    | 2.23                     | 0.53              |
| 3:BM:104:ILE:HD13 | 3:BM:156:ILE:HD11 | 1.88                     | 0.53              |
| 2:BQ:78:TYR:O     | 2:BQ:82:ILE:HG12  | 2.08                     | 0.53              |
| 2:BQ:117:ASN:O    | 6:CM:439:ARG:NH1  | 2.40                     | 0.53              |
| 4:BS:64:PRO:HB2   | 7:CO:105:PRO:HB2  | 1.89                     | 0.53              |
| 1:BX:97:VAL:HG21  | 2:BY:19:LEU:HD13  | 1.91                     | 0.53              |
| 1:CG:142:SER:OG   | 1:CG:144:ASP:OD1  | 2.19                     | 0.53              |
| 5:CK:41:GLN:HG3   | 5:CK:45:LYS:HD2   | 1.91                     | 0.53              |
| 6:CM:77:THR:O     | 6:CM:140:ASN:HA   | 2.08                     | 0.53              |
| 6:CM:160:LEU:O    | 6:CM:164:THR:HG23 | 2.08                     | 0.53              |
| 6:CM:701:ARG:O    | 6:CM:706:ILE:HD11 | 2.09                     | 0.53              |
| 1:CR:75:GLU:HG3   | 9:DI:152:THR:OG1  | 2.07                     | 0.53              |
| 2:CS:96:MET:HA    | 2:CS:152:TYR:CE2  | 2.43                     | 0.53              |
| 1:CV:134:LYS:HE3  | 1:CV:150:SER:CB   | 2.38                     | 0.53              |
| 1:CY:86:ASP:O     | 1:CY:90:ARG:HG3   | 2.09                     | 0.53              |
| 1:CY:102:THR:O    | 1:CY:106:GLU:HG2  | 2.08                     | 0.53              |
| 1:DA:14:GLU:OE1   | 1:DA:16:ARG:NE    | 2.29                     | 0.53              |
| 8:DH:219:LEU:HD22 | 1:DS:79:ALA:CB    | 2.39                     | 0.53              |
| 2:DM:112:LEU:HD11 | 2:DM:116:TYR:CZ   | 2.43                     | 0.53              |
| 2:DR:68:PRO:HA    | 2:DR:73:TYR:CG    | 2.42                     | 0.53              |
| 2:DV:105:ASP:OD1  | 2:DV:155:TYR:OH   | 2.12                     | 0.53              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AC:89:LEU:O     | 1:AC:93:THR:HG23   | 2.08                     | 0.53              |
| 3:AE:4:VAL:HG13   | 2:AF:97:LEU:HD23   | 1.91                     | 0.53              |
| 3:AE:71:ASN:ND2   | 3:AE:121:VAL:HG22  | 2.21                     | 0.53              |
| 1:AH:82:LEU:HD13  | 8:BG:203:PHE:HB2   | 1.90                     | 0.53              |
| 2:AL:96:MET:SD    | 2:AL:149:MET:HG2   | 2.49                     | 0.53              |
| 2:AS:96:MET:HA    | 2:AS:152:TYR:CE2   | 2.43                     | 0.53              |
| 2:AU:36:LEU:CD2   | 2:AU:145:ALA:HB2   | 2.38                     | 0.53              |
| 1:AZ:41:GLU:HA    | 1:AZ:44:THR:HG22   | 1.91                     | 0.53              |
| 6:BD:268:ALA:HB3  | 6:BD:270:LYS:NZ    | 2.24                     | 0.53              |
| 6:BD:353:ARG:HG2  | 6:BD:399:ARG:NH2   | 2.22                     | 0.53              |
| 6:BD:682:ARG:NH2  | 6:BD:684:ASP:OD2   | 2.32                     | 0.53              |
| 6:BD:861:LEU:HG   | 10:DB:200:CYC:OB   | 2.08                     | 0.53              |
| 1:BI:116:TYR:CE2  | 1:BI:126:VAL:HG21  | 2.43                     | 0.53              |
| 2:BJ:3:ASP:N      | 2:BJ:6:THR:OG1     | 2.42                     | 0.53              |
| 2:BL:47:ASN:O     | 2:BL:51:ILE:HD12   | 2.08                     | 0.53              |
| 1:BP:110:VAL:HG11 | 2:BT:76:ARG:HG3    | 1.91                     | 0.53              |
| 2:BT:47:ASN:OD1   | 2:BT:140:LEU:HD21  | 2.08                     | 0.53              |
| 2:BY:61:LEU:HD22  | 10:BZ:200:CYC:HAA1 | 1.90                     | 0.53              |
| 10:BY:200:CYC:HHA | 10:BY:200:CYC:HBA2 | 1.89                     | 0.53              |
| 2:CA:119:LEU:HB3  | 2:CA:121:VAL:HG23  | 1.89                     | 0.53              |
| 2:CH:1:MET:CE     | 2:CH:103:ILE:HB    | 2.38                     | 0.53              |
| 6:CM:748:GLU:C    | 6:CM:749:ARG:HD3   | 2.29                     | 0.53              |
| 1:CR:82:LEU:HD13  | 8:DZ:242:ILE:HD11  | 1.90                     | 0.53              |
| 2:CS:51:ILE:HG23  | 2:CS:136:VAL:HB    | 1.91                     | 0.53              |
| 2:CU:3:ASP:OD1    | 2:CU:6:THR:N       | 2.27                     | 0.53              |
| 1:CV:89:LEU:O     | 1:CV:93:THR:HG23   | 2.09                     | 0.53              |
| 2:CW:96:MET:HA    | 2:CW:152:TYR:CE2   | 2.44                     | 0.53              |
| 1:DA:47:ARG:O     | 1:DA:50:ILE:HG22   | 2.08                     | 0.53              |
| 1:DA:159:LYS:HE2  | 1:DA:159:LYS:HA    | 1.90                     | 0.53              |
| 5:DF:2:ARG:HA     | 5:DF:57:THR:O      | 2.08                     | 0.53              |
| 9:DI:201:TYR:HA   | 9:DI:213:LEU:HD11  | 1.89                     | 0.53              |
| 2:DM:1:MET:SD     | 2:DM:103:ILE:HD12  | 2.48                     | 0.53              |
| 2:DM:122:PRO:HG2  | 10:DM:200:CYC:CMC  | 2.38                     | 0.53              |
| 1:DQ:113:ARG:NH2  | 1:DQ:161:SER:O     | 2.33                     | 0.53              |
| 2:AD:71:ASN:HB3   | 10:AD:200:CYC:OC   | 2.08                     | 0.53              |
| 1:AH:115:MET:CE   | 10:AH:200:CYC:HMB3 | 2.37                     | 0.53              |
| 2:AI:2:GLN:HG2    | 2:AI:6:THR:CG2     | 2.39                     | 0.53              |
| 1:AN:27:LYS:O     | 1:AN:31:THR:HG23   | 2.08                     | 0.53              |
| 2:AQ:50:THR:O     | 2:AQ:54:GLU:HG2    | 2.09                     | 0.53              |
| 1:AR:56:ASP:HA    | 8:BG:225:ILE:HD11  | 1.90                     | 0.53              |
| 1:AX:26:ILE:O     | 1:AX:30:VAL:HG23   | 2.09                     | 0.53              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AX:109:LEU:HD11 | 1:AX:159:LYS:CB    | 2.38                     | 0.53              |
| 1:AZ:96:VAL:HG12  | 1:AZ:152:TYR:CD2   | 2.43                     | 0.53              |
| 6:BD:72:ALA:HB1   | 6:BD:81:PRO:CB     | 2.39                     | 0.53              |
| 6:BD:351:LEU:O    | 6:BD:399:ARG:NH2   | 2.41                     | 0.53              |
| 6:BD:353:ARG:NH2  | 6:BD:385:GLU:OE1   | 2.38                     | 0.53              |
| 6:BD:553:ARG:HG3  | 6:BD:554:ASP:O     | 2.08                     | 0.53              |
| 1:BI:115:MET:CE   | 10:BI:200:CYC:HMB3 | 2.39                     | 0.53              |
| 1:BK:111:GLY:HA2  | 1:BK:114:GLU:OE2   | 2.08                     | 0.53              |
| 2:BN:41:ALA:N     | 2:BN:96:MET:HE1    | 2.23                     | 0.53              |
| 2:BN:114:GLU:CG   | 5:CJ:53:VAL:HG22   | 2.37                     | 0.53              |
| 4:BS:66:LEU:HD13  | 10:BS:200:CYC:HMC2 | 1.90                     | 0.53              |
| 2:CA:3:ASP:OD1    | 2:CA:6:THR:OG1     | 2.12                     | 0.53              |
| 1:CC:11:ALA:HB1   | 1:CC:16:ARG:O      | 2.08                     | 0.53              |
| 1:CC:131:ARG:O    | 1:CC:135:GLU:HG2   | 2.08                     | 0.53              |
| 2:CF:8:VAL:CG1    | 2:CF:23:ALA:HB1    | 2.36                     | 0.53              |
| 1:CG:36:ARG:NH2   | 1:CG:99:GLY:HA2    | 2.23                     | 0.53              |
| 7:CO:114:ALA:O    | 7:CO:117:VAL:HG12  | 2.08                     | 0.53              |
| 1:CR:104:ILE:H    | 1:CR:104:ILE:HD12  | 1.72                     | 0.53              |
| 1:DC:134:LYS:HD3  | 1:DC:153:PHE:HB3   | 1.91                     | 0.53              |
| 2:DD:124:SER:O    | 2:DD:128:GLN:HG3   | 2.08                     | 0.53              |
| 5:DF:2:ARG:CG     | 5:DF:55:LEU:HD11   | 2.38                     | 0.53              |
| 8:DH:232:ILE:CD1  | 8:DH:233:PRO:HD2   | 2.37                     | 0.53              |
| 9:DI:99:ALA:HB1   | 9:DI:164:THR:CG2   | 2.38                     | 0.53              |
| 1:DQ:95:GLY:CA    | 1:DQ:104:ILE:HD11  | 2.31                     | 0.53              |
| 1:DS:61:LYS:HG2   | 9:EA:57:GLY:CA     | 2.39                     | 0.53              |
| 2:DV:10:ASN:O     | 2:DV:14:VAL:HG23   | 2.08                     | 0.53              |
| 2:DV:41:ALA:CB    | 2:DV:97:LEU:HD21   | 2.25                     | 0.53              |
| 9:EA:211:ASP:O    | 9:EA:214:ILE:HG22  | 2.09                     | 0.53              |
| 1:AA:37:LEU:O     | 1:AA:41:GLU:HG3    | 2.09                     | 0.53              |
| 2:AD:53:LYS:NZ    | 3:AE:120:ASN:OD1   | 2.29                     | 0.53              |
| 3:AE:4:VAL:HG13   | 2:AF:97:LEU:CD2    | 2.39                     | 0.53              |
| 4:AK:52:VAL:HG13  | 4:AK:86:MET:HG2    | 1.90                     | 0.53              |
| 2:AL:42:SER:OG    | 6:BD:40:LEU:HD13   | 2.07                     | 0.53              |
| 1:AR:41:GLU:OE2   | 2:AS:24:MET:HG3    | 2.08                     | 0.53              |
| 2:AU:1:MET:SD     | 1:AZ:5:THR:HG23    | 2.49                     | 0.53              |
| 1:BI:88:TYR:CZ    | 1:BI:160:MET:HE2   | 2.44                     | 0.53              |
| 2:BL:144:ASP:OD1  | 2:BL:145:ALA:N     | 2.41                     | 0.53              |
| 3:BM:4:VAL:HG13   | 2:BN:97:LEU:HD23   | 1.91                     | 0.53              |
| 2:BT:87:TYR:CG    | 10:BT:200:CYC:HBB3 | 2.44                     | 0.53              |
| 2:CD:2:GLN:HB3    | 2:CD:102:SER:HB3   | 1.91                     | 0.53              |
| 6:CM:353:ARG:HB3  | 6:CM:399:ARG:HE    | 1.74                     | 0.53              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 6:CM:776:GLU:OE1  | 6:CM:776:GLU:N     | 2.41                     | 0.53              |
| 9:CQ:277:TRP:HD1  | 9:CQ:305:LEU:HD21  | 1.73                     | 0.53              |
| 9:CQ:292:LEU:HD23 | 9:CQ:298:ILE:CA    | 2.36                     | 0.53              |
| 1:CT:71:ASN:HB3   | 10:CT:200:CYC:OC   | 2.07                     | 0.53              |
| 2:CW:123:ILE:HA   | 2:CW:126:THR:HG22  | 1.91                     | 0.53              |
| 1:CY:71:ASN:HD21  | 1:CY:121:THR:HG22  | 1.72                     | 0.53              |
| 2:DD:22:ALA:O     | 2:DD:26:LYS:HG3    | 2.07                     | 0.53              |
| 9:DI:224:GLN:OE1  | 9:DI:230:PRO:HG3   | 2.09                     | 0.53              |
| 1:DJ:25:ARG:HG2   | 1:DQ:25:ARG:HE     | 1.72                     | 0.53              |
| 2:DK:47:ASN:O     | 2:DK:51:ILE:HD12   | 2.08                     | 0.53              |
| 2:DM:44:ILE:O     | 2:DM:48:ALA:HB2    | 2.09                     | 0.53              |
| 2:DM:73:TYR:O     | 2:DM:74:THR:OG1    | 2.25                     | 0.53              |
| 1:DU:10:ASN:O     | 1:DU:14:GLU:HG3    | 2.08                     | 0.53              |
| 9:EA:125:ILE:HG22 | 11:EA:400:45D:C25  | 2.39                     | 0.53              |
| 10:AA:200:CYC:CAA | 2:AF:61:LEU:HD22   | 2.38                     | 0.53              |
| 1:AC:47:ARG:O     | 1:AC:51:VAL:HG23   | 2.08                     | 0.53              |
| 1:AC:137:ALA:O    | 1:AC:141:MET:HG2   | 2.08                     | 0.53              |
| 3:AE:6:GLN:O      | 3:AE:10:GLN:HG2    | 2.09                     | 0.53              |
| 1:AN:122:PRO:HB2  | 1:AN:125:ALA:CB    | 2.39                     | 0.53              |
| 5:BB:19:GLN:O     | 5:BB:21:GLU:HG2    | 2.08                     | 0.53              |
| 8:BG:214:ASN:O    | 8:BG:217:ASN:ND2   | 2.31                     | 0.53              |
| 9:BH:239:ARG:HA   | 9:BH:242:ARG:HG2   | 1.90                     | 0.53              |
| 1:BI:71:ASN:HD22  | 1:BI:121:THR:HA    | 1.74                     | 0.53              |
| 2:BL:1:MET:SD     | 2:BL:103:ILE:HD13  | 2.48                     | 0.53              |
| 2:BN:59:SER:O     | 2:BN:128:GLN:NE2   | 2.42                     | 0.53              |
| 2:BQ:71:ASN:HD22  | 2:BQ:122:PRO:HD2   | 1.73                     | 0.53              |
| 1:BV:71:ASN:ND2   | 1:BV:119:LEU:O     | 2.41                     | 0.53              |
| 1:BX:68:PRO:HG3   | 1:BX:73:TYR:CE1    | 2.43                     | 0.53              |
| 1:BX:131:ARG:HA   | 1:BX:157:ILE:HD11  | 1.90                     | 0.53              |
| 2:CD:96:MET:HA    | 2:CD:152:TYR:CE2   | 2.43                     | 0.53              |
| 2:CF:24:MET:HG3   | 2:CF:28:LYS:HZ3    | 1.74                     | 0.53              |
| 2:CF:24:MET:HG3   | 2:CF:28:LYS:NZ     | 2.23                     | 0.53              |
| 9:CQ:300:PHE:CE2  | 9:CQ:302:ALA:HB2   | 2.43                     | 0.53              |
| 1:DJ:85:MET:HA    | 1:DJ:133:MET:HE1   | 1.90                     | 0.53              |
| 1:DJ:90:ARG:NH2   | 2:DO:73:TYR:OH     | 2.39                     | 0.53              |
| 2:DM:54:GLU:O     | 2:DM:58:LYS:HG2    | 2.09                     | 0.53              |
| 2:DO:111:GLY:HA2  | 2:DO:114:GLU:OE2   | 2.08                     | 0.53              |
| 2:DT:123:ILE:O    | 2:DT:127:VAL:HG23  | 2.07                     | 0.53              |
| 1:AA:35:ALA:HA    | 1:AA:38:ARG:NH1    | 2.23                     | 0.53              |
| 2:AI:61:LEU:HD21  | 2:AI:78:TYR:OH     | 2.08                     | 0.53              |
| 4:AK:92:TYR:CE2   | 10:AK:200:CYC:HBB1 | 2.44                     | 0.53              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AN:23:LEU:HD13   | 2:AO:42:SER:HB2    | 1.90                     | 0.53              |
| 2:AS:39:ARG:NH1    | 2:AS:39:ARG:HA     | 2.23                     | 0.53              |
| 2:AS:60:LEU:HD13   | 2:AS:72:MET:CE     | 2.35                     | 0.53              |
| 1:AX:102:THR:HG21  | 6:BD:534:PHE:CE1   | 2.44                     | 0.53              |
| 5:BB:26:TYR:HE1    | 5:BB:51:VAL:HG21   | 1.73                     | 0.53              |
| 6:BD:664:GLY:O     | 6:BD:668:ARG:HG3   | 2.08                     | 0.53              |
| 1:BI:80:THR:HG21   | 2:BN:62:TYR:HE1    | 1.73                     | 0.53              |
| 3:BM:47:GLU:HG2    | 3:BM:89:LEU:CD2    | 2.38                     | 0.53              |
| 3:BM:128:ASP:O     | 3:BM:131:THR:OG1   | 2.25                     | 0.53              |
| 1:BR:114:GLU:OE1   | 1:BR:114:GLU:N     | 2.41                     | 0.53              |
| 2:BT:96:MET:HA     | 2:BT:152:TYR:CE2   | 2.44                     | 0.53              |
| 10:BZ:200:CYC:HMA1 | 10:BZ:200:CYC:NB   | 2.24                     | 0.53              |
| 1:CC:41:GLU:HA     | 1:CC:44:THR:HG22   | 1.90                     | 0.53              |
| 1:CC:90:ARG:NH1    | 2:CD:16:GLY:O      | 2.41                     | 0.53              |
| 1:CC:93:THR:O      | 1:CC:96:VAL:HG22   | 2.09                     | 0.53              |
| 1:CG:92:VAL:HG21   | 1:CG:153:PHE:CE1   | 2.44                     | 0.53              |
| 2:CH:47:ASN:O      | 2:CH:51:ILE:HG13   | 2.07                     | 0.53              |
| 9:CQ:198:VAL:HG12  | 9:CQ:202:MET:HE1   | 1.90                     | 0.53              |
| 1:CY:37:LEU:HD21   | 2:CZ:24:MET:HB3    | 1.90                     | 0.53              |
| 1:DA:12:ASP:OD2    | 2:DB:107:ARG:HD3   | 2.08                     | 0.53              |
| 1:DA:85:MET:CE     | 1:DA:129:SER:HB2   | 2.39                     | 0.53              |
| 9:DI:202:MET:HE3   | 9:DI:269:VAL:HG21  | 1.91                     | 0.53              |
| 2:DK:126:THR:HG21  | 2:DK:160:LEU:HD13  | 1.90                     | 0.53              |
| 1:DL:122:PRO:HD2   | 10:DL:200:CYC:OC   | 2.07                     | 0.53              |
| 1:DN:121:THR:HG23  | 10:DN:200:CYC:HMC3 | 1.91                     | 0.53              |
| 9:EA:195:ASN:HB3   | 9:EA:198:VAL:CG1   | 2.32                     | 0.53              |
| 1:AC:105:GLU:HA    | 1:AC:109:LEU:HB2   | 1.91                     | 0.53              |
| 2:AD:1:MET:SD      | 2:AD:103:ILE:HD13  | 2.49                     | 0.53              |
| 2:AI:68:PRO:O      | 2:AO:124:SER:HB2   | 2.09                     | 0.53              |
| 10:AL:200:CYC:HAA1 | 6:BD:424:PHE:CZ    | 2.39                     | 0.53              |
| 1:AN:9:VAL:HG23    | 2:AO:1:MET:CE      | 2.38                     | 0.53              |
| 2:AQ:147:LYS:O     | 2:AQ:151:VAL:HG23  | 2.09                     | 0.53              |
| 1:AV:91:LEU:HD21   | 1:AV:107:ILE:HG21  | 1.91                     | 0.53              |
| 2:AW:23:ALA:HA     | 2:AW:26:LYS:HG2    | 1.90                     | 0.53              |
| 2:AY:88:TYR:CE2    | 2:AY:130:ILE:HD11  | 2.44                     | 0.53              |
| 1:AZ:75:GLU:OE2    | 1:AZ:76:GLU:HG2    | 2.09                     | 0.53              |
| 5:BA:6:ILE:HG21    | 5:BA:36:TRP:CZ3    | 2.43                     | 0.53              |
| 2:BL:66:THR:HG21   | 10:BM:200:CYC:CBA  | 2.37                     | 0.53              |
| 2:BN:101:ALA:HB1   | 2:BN:104:LEU:HD12  | 1.91                     | 0.53              |
| 1:BR:14:GLU:OE1    | 1:BR:16:ARG:NE     | 2.26                     | 0.53              |
| 2:BW:74:THR:CG2    | 2:BW:76:ARG:HG2    | 2.38                     | 0.53              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 10:CF:200:CYC:HHA | 10:CF:200:CYC:CBA  | 2.38                     | 0.53              |
| 2:CW:15:GLN:HG3   | 2:CW:17:LYS:NZ     | 2.24                     | 0.53              |
| 2:CZ:59:SER:CB    | 2:CZ:128:GLN:HG2   | 2.35                     | 0.53              |
| 2:DB:101:ALA:HB2  | 2:DB:152:TYR:CD1   | 2.44                     | 0.53              |
| 2:DD:116:TYR:CD2  | 2:DD:160:LEU:HD11  | 2.44                     | 0.53              |
| 8:DG:221:MET:CE   | 1:DQ:51:VAL:HG13   | 2.39                     | 0.53              |
| 9:DI:36:GLN:O     | 9:DI:40:ILE:HG23   | 2.08                     | 0.53              |
| 9:DI:44:TYR:OH    | 9:DI:118:GLU:OE1   | 2.16                     | 0.53              |
| 9:DI:75:GLY:O     | 9:DI:78:GLN:HG2    | 2.08                     | 0.53              |
| 9:DI:214:ILE:HD13 | 9:DI:238:LEU:HB2   | 1.90                     | 0.53              |
| 1:DJ:51:VAL:HG23  | 1:DJ:85:MET:HB3    | 1.89                     | 0.53              |
| 2:DM:71:ASN:O     | 2:DM:77:ARG:HD3    | 2.09                     | 0.53              |
| 2:DR:105:ASP:OD2  | 2:DR:155:TYR:OH    | 2.25                     | 0.53              |
| 2:DV:109:LEU:HD21 | 2:DV:156:ILE:HG23  | 1.91                     | 0.53              |
| 8:DZ:214:ASN:OD1  | 8:DZ:216:MET:HG2   | 2.09                     | 0.53              |
| 9:EA:36:GLN:O     | 9:EA:40:ILE:HG23   | 2.09                     | 0.53              |
| 1:AC:58:LEU:HD22  | 1:AC:129:SER:CB    | 2.37                     | 0.53              |
| 1:AZ:56:ASP:O     | 1:AZ:60:GLN:HG2    | 2.09                     | 0.53              |
| 6:BD:314:ILE:HG21 | 6:BD:322:ARG:HH12  | 1.74                     | 0.53              |
| 6:BD:620:MET:O    | 6:BD:624:PHE:HB2   | 2.08                     | 0.53              |
| 1:BK:96:VAL:HA    | 1:BK:152:TYR:CE2   | 2.42                     | 0.53              |
| 3:BM:85:TYR:HE1   | 3:BM:129:ALA:HB1   | 1.74                     | 0.53              |
| 2:BN:76:ARG:NE    | 5:CJ:66:LEU:HD11   | 2.24                     | 0.53              |
| 2:BN:127:VAL:O    | 2:BN:131:GLN:HG2   | 2.09                     | 0.53              |
| 2:BQ:83:ARG:HD2   | 6:CM:369:SER:CB    | 2.39                     | 0.53              |
| 1:BX:105:GLU:OE2  | 1:BX:159:LYS:NZ    | 2.41                     | 0.53              |
| 1:CC:5:THR:HG23   | 2:CD:1:MET:SD      | 2.49                     | 0.53              |
| 10:CG:200:CYC:NB  | 10:CG:200:CYC:HMA1 | 2.23                     | 0.53              |
| 6:CM:543:ILE:HG12 | 6:CM:568:LEU:HD23  | 1.91                     | 0.53              |
| 6:CM:597:TYR:HD2  | 6:CM:600:LYS:HG3   | 1.74                     | 0.53              |
| 9:CQ:258:GLU:HB2  | 9:CQ:259:PRO:HD2   | 1.91                     | 0.53              |
| 1:CT:101:VAL:HB   | 1:CT:155:PHE:CE2   | 2.44                     | 0.53              |
| 2:CU:113:LYS:NZ   | 2:CU:160:LEU:O     | 2.25                     | 0.53              |
| 1:CV:16:ARG:O     | 2:CW:90:ARG:HD2    | 2.09                     | 0.53              |
| 1:CY:50:ILE:HD12  | 1:CY:136:VAL:CG1   | 2.39                     | 0.53              |
| 2:DD:122:PRO:HG2  | 10:DD:200:CYC:CMC  | 2.39                     | 0.53              |
| 9:DI:211:ASP:O    | 9:DI:214:ILE:HG22  | 2.08                     | 0.53              |
| 2:DK:56:VAL:HG12  | 2:DK:61:LEU:HG     | 1.91                     | 0.53              |
| 2:DO:73:TYR:O     | 2:DO:74:THR:OG1    | 2.23                     | 0.53              |
| 2:DR:40:ALA:CB    | 2:DR:145:ALA:HB1   | 2.39                     | 0.53              |
| 1:DS:115:MET:HE3  | 10:DS:200:CYC:HHB  | 1.90                     | 0.53              |

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| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 9:EA:33:ALA:CB     | 9:EA:174:GLU:HB2  | 2.39                     | 0.53              |
| 2:AD:22:ALA:O      | 2:AD:26:LYS:HG3   | 2.09                     | 0.53              |
| 2:AF:10:ASN:O      | 2:AF:14:VAL:HG23  | 2.09                     | 0.53              |
| 1:AJ:3:ILE:HG21    | 1:AJ:25:ARG:CZ    | 2.39                     | 0.53              |
| 1:AJ:115:MET:HE3   | 10:AJ:200:CYC:HHB | 1.91                     | 0.53              |
| 4:AK:105:LEU:HD11  | 4:AK:160:MET:HE2  | 1.89                     | 0.53              |
| 1:AP:153:PHE:O     | 1:AP:157:ILE:HG13 | 2.08                     | 0.53              |
| 1:AR:73:TYR:CD2    | 9:BH:151:ILE:HD13 | 2.44                     | 0.53              |
| 1:AV:65:ILE:CG2    | 1:AV:72:ALA:HB3   | 2.39                     | 0.53              |
| 1:AZ:116:TYR:CE2   | 1:AZ:126:VAL:HG21 | 2.44                     | 0.53              |
| 6:BD:50:GLY:O      | 6:BD:54:LEU:HG    | 2.09                     | 0.53              |
| 6:BD:273:LEU:O     | 6:BD:278:LYS:NZ   | 2.31                     | 0.53              |
| 9:BH:90:ALA:O      | 9:BH:163:PHE:HB2  | 2.09                     | 0.53              |
| 10:BL:200:CYC:HMB2 | 5:CJ:22:LEU:CD1   | 2.39                     | 0.53              |
| 4:BS:64:PRO:CG     | 7:CO:105:PRO:HB2  | 2.39                     | 0.53              |
| 2:BT:144:ASP:HB2   | 7:CO:86:VAL:CG1   | 2.39                     | 0.53              |
| 2:BY:60:LEU:HB3    | 2:BY:72:MET:CE    | 2.38                     | 0.53              |
| 1:BZ:101:VAL:HG22  | 1:BZ:104:ILE:HB   | 1.91                     | 0.53              |
| 1:BZ:151:ALA:CB    | 1:CE:20:PRO:HB3   | 2.39                     | 0.53              |
| 1:CC:131:ARG:HA    | 1:CC:157:ILE:HD11 | 1.91                     | 0.53              |
| 6:CM:821:GLN:O     | 6:CM:825:ILE:HG13 | 2.09                     | 0.53              |
| 9:CQ:28:PHE:CD1    | 9:CQ:157:ALA:HB1  | 2.44                     | 0.53              |
| 1:CT:122:PRO:HD2   | 10:CT:200:CYC:OC  | 2.08                     | 0.53              |
| 5:DF:59:ARG:CD     | 5:DF:60:PRO:HD2   | 2.39                     | 0.53              |
| 8:DG:221:MET:CE    | 1:DQ:52:LYS:HG2   | 2.39                     | 0.53              |
| 9:DI:187:LYS:HD3   | 9:DI:203:ASP:OD2  | 2.09                     | 0.53              |
| 2:DM:104:LEU:O     | 2:DM:108:VAL:HB   | 2.09                     | 0.53              |
| 1:DU:134:LYS:HD3   | 1:DU:153:PHE:HB3  | 1.91                     | 0.53              |
| 2:DV:68:PRO:HG3    | 2:DV:73:TYR:CE1   | 2.44                     | 0.53              |
| 2:AD:131:GLN:HA    | 2:AD:134:LYS:HD3  | 1.91                     | 0.52              |
| 3:AE:89:LEU:O      | 3:AE:93:THR:HG23  | 2.09                     | 0.52              |
| 3:AE:92:VAL:HG11   | 3:AE:153:PHE:CZ   | 2.45                     | 0.52              |
| 2:AI:78:TYR:CD1    | 1:AJ:115:MET:HG3  | 2.43                     | 0.52              |
| 1:AN:97:VAL:HG21   | 2:AO:19:LEU:HD12  | 1.91                     | 0.52              |
| 1:AP:114:GLU:HG3   | 1:AP:117:ARG:NH2  | 2.24                     | 0.52              |
| 1:AR:52:LYS:CE     | 8:BG:225:ILE:HB   | 2.40                     | 0.52              |
| 1:AZ:58:LEU:HD22   | 1:AZ:129:SER:HB3  | 1.91                     | 0.52              |
| 6:BD:795:TYR:HB3   | 6:BD:799:LYS:HB3  | 1.90                     | 0.52              |
| 9:BH:190:ILE:HD13  | 9:BH:252:PRO:HB2  | 1.90                     | 0.52              |
| 2:BL:3:ASP:H       | 2:BL:6:THR:HB     | 1.73                     | 0.52              |
| 2:BT:36:LEU:HD12   | 7:CO:85:GLN:HB2   | 1.91                     | 0.52              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:BV:98:SER:HA    | 2:BW:5:ILE:HG21    | 1.91                     | 0.52              |
| 2:BW:112:LEU:HD13 | 10:BW:200:CYC:HMB3 | 1.91                     | 0.52              |
| 1:CE:98:SER:HA    | 2:CF:5:ILE:HG21    | 1.91                     | 0.52              |
| 1:CG:39:ILE:HG23  | 1:CG:141:MET:SD    | 2.49                     | 0.52              |
| 6:CM:69:SER:CA    | 6:CM:82:LEU:HD21   | 2.32                     | 0.52              |
| 9:CQ:63:LEU:HD12  | 9:CQ:105:ILE:CD1   | 2.38                     | 0.52              |
| 9:CQ:75:GLY:O     | 9:CQ:78:GLN:HG2    | 2.09                     | 0.52              |
| 9:CQ:264:PHE:CD2  | 9:DI:309:PRO:HG3   | 2.44                     | 0.52              |
| 2:CS:46:ALA:HB2   | 1:CY:154:ASP:OD2   | 2.08                     | 0.52              |
| 1:CT:68:PRO:HA    | 1:CT:73:TYR:CG     | 2.45                     | 0.52              |
| 1:DA:61:LYS:HD2   | 9:DI:56:PRO:HD2    | 1.91                     | 0.52              |
| 1:DA:72:ALA:HA    | 1:DA:77:MET:HB3    | 1.91                     | 0.52              |
| 9:DI:131:LEU:HG   | 9:DI:135:ALA:HB3   | 1.91                     | 0.52              |
| 1:DL:96:VAL:HA    | 1:DL:152:TYR:CZ    | 2.44                     | 0.52              |
| 1:DN:14:GLU:OE1   | 1:DN:16:ARG:NE     | 2.38                     | 0.52              |
| 1:DQ:102:THR:O    | 1:DQ:105:GLU:HG2   | 2.10                     | 0.52              |
| 2:DT:57:ALA:HA    | 2:DT:61:LEU:CD1    | 2.38                     | 0.52              |
| 2:DT:73:TYR:O     | 2:DT:77:ARG:HB2    | 2.09                     | 0.52              |
| 9:EA:258:GLU:OE1  | 9:EA:266:GLN:HG3   | 2.09                     | 0.52              |
| 1:AA:89:LEU:O     | 1:AA:93:THR:HG23   | 2.09                     | 0.52              |
| 1:AC:128:GLN:O    | 1:AC:131:ARG:HB2   | 2.10                     | 0.52              |
| 3:AE:151:PRO:HB2  | 1:AJ:20:PRO:HB3    | 1.92                     | 0.52              |
| 2:AF:115:THR:CG2  | 5:BA:53:VAL:HG11   | 2.40                     | 0.52              |
| 1:AH:89:LEU:O     | 1:AH:93:THR:HG23   | 2.08                     | 0.52              |
| 1:AH:110:VAL:CG1  | 2:AL:76:ARG:HG3    | 2.39                     | 0.52              |
| 1:AJ:4:VAL:HG12   | 1:AJ:8:ILE:HD12    | 1.92                     | 0.52              |
| 4:AK:142:ALA:HB1  | 4:AK:147:LEU:HD12  | 1.90                     | 0.52              |
| 2:AL:2:GLN:HB2    | 2:AL:6:THR:HG23    | 1.90                     | 0.52              |
| 1:AP:68:PRO:HG3   | 1:AP:73:TYR:CE1    | 2.44                     | 0.52              |
| 1:AP:76:GLU:OE1   | 1:AP:76:GLU:N      | 2.39                     | 0.52              |
| 2:AU:44:ILE:HG21  | 2:AU:93:THR:OG1    | 2.08                     | 0.52              |
| 2:AY:63:SER:H     | 2:AY:66:THR:HG22   | 1.74                     | 0.52              |
| 6:BD:316:MET:CE   | 6:BD:395:VAL:HG22  | 2.40                     | 0.52              |
| 9:BH:31:LEU:HD11  | 9:BH:138:VAL:HG21  | 1.92                     | 0.52              |
| 1:BK:33:GLY:O     | 1:BK:36:ARG:HG2    | 2.09                     | 0.52              |
| 1:BK:97:VAL:HG21  | 2:BL:19:LEU:HD11   | 1.90                     | 0.52              |
| 2:BL:96:MET:HB2   | 2:BL:148:GLU:OE1   | 2.09                     | 0.52              |
| 2:BL:105:ASP:OD2  | 2:BL:155:TYR:OH    | 2.25                     | 0.52              |
| 3:BM:87:TRP:O     | 3:BM:91:LEU:HD13   | 2.10                     | 0.52              |
| 1:BP:27:LYS:HG3   | 2:BQ:35:GLU:OE1    | 2.09                     | 0.52              |
| 2:BW:37:ARG:O     | 2:BW:96:MET:HE3    | 2.10                     | 0.52              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:BZ:76:GLU:HG3    | 9:CQ:11:ILE:HG21   | 1.91                     | 0.52              |
| 1:CE:30:VAL:HA     | 2:CF:31:PHE:CD1    | 2.44                     | 0.52              |
| 1:CE:44:THR:HG22   | 2:CF:18:TYR:HD2    | 1.74                     | 0.52              |
| 1:CE:50:ILE:CD1    | 1:CE:136:VAL:HG12  | 2.37                     | 0.52              |
| 1:CE:93:THR:O      | 1:CE:97:VAL:HG13   | 2.09                     | 0.52              |
| 1:CG:85:MET:O      | 1:CG:133:MET:HE1   | 2.10                     | 0.52              |
| 1:CG:109:LEU:HD11  | 1:CG:159:LYS:CB    | 2.39                     | 0.52              |
| 6:CM:183:LYS:O     | 6:CM:186:ILE:HG22  | 2.10                     | 0.52              |
| 2:CS:10:ASN:O      | 2:CS:14:VAL:HG23   | 2.08                     | 0.52              |
| 1:CV:101:VAL:HB    | 1:CV:155:PHE:CE2   | 2.44                     | 0.52              |
| 10:CV:200:CYC:HMA1 | 10:CV:200:CYC:HB   | 1.73                     | 0.52              |
| 1:DA:53:GLN:CG     | 1:DA:136:VAL:HG21  | 2.40                     | 0.52              |
| 9:DI:117:MET:HE1   | 11:DI:400:45D:H273 | 1.91                     | 0.52              |
| 1:DJ:25:ARG:HG2    | 1:DQ:25:ARG:HG3    | 1.90                     | 0.52              |
| 1:DJ:124:GLU:OE1   | 1:DJ:124:GLU:N     | 2.34                     | 0.52              |
| 2:DK:75:THR:HA     | 1:DL:115:MET:CE    | 2.40                     | 0.52              |
| 10:DQ:200:CYC:CBB  | 2:DV:74:THR:HA     | 2.38                     | 0.52              |
| 2:DR:57:ALA:HA     | 2:DR:61:LEU:CB     | 2.38                     | 0.52              |
| 1:DS:38:ARG:HA     | 1:DS:41:GLU:OE1    | 2.09                     | 0.52              |
| 2:DT:147:LYS:O     | 2:DT:151:VAL:HG23  | 2.10                     | 0.52              |
| 5:DX:5:ARG:CG      | 5:DX:56:ALA:HB2    | 2.37                     | 0.52              |
| 8:DZ:239:ASN:OD1   | 8:DZ:240:ILE:HD12  | 2.09                     | 0.52              |
| 9:EA:288:TRP:CD1   | 9:EA:303:ILE:HG12  | 2.39                     | 0.52              |
| 3:AE:101:LYS:HE3   | 1:AJ:16:ARG:HE     | 1.73                     | 0.52              |
| 10:AK:200:CYC:HMA1 | 10:AK:200:CYC:NB   | 2.24                     | 0.52              |
| 10:AN:200:CYC:HBB2 | 2:AS:73:TYR:CE1    | 2.44                     | 0.52              |
| 1:AV:102:THR:HB    | 1:AV:103:PRO:HD3   | 1.91                     | 0.52              |
| 1:AX:109:LEU:HD11  | 1:AX:159:LYS:HB3   | 1.92                     | 0.52              |
| 2:AY:47:ASN:O      | 2:AY:51:ILE:HG13   | 2.09                     | 0.52              |
| 6:BD:481:LYS:HE3   | 6:BD:615:TYR:CD2   | 2.44                     | 0.52              |
| 6:BD:691:PHE:CG    | 1:DC:82:LEU:HB3    | 2.45                     | 0.52              |
| 1:BK:16:ARG:HG2    | 1:BK:17:TYR:O      | 2.09                     | 0.52              |
| 1:BK:152:TYR:O     | 1:BK:156:VAL:HG23  | 2.10                     | 0.52              |
| 2:BL:112:LEU:HD21  | 10:BL:200:CYC:HAB1 | 1.91                     | 0.52              |
| 3:BM:14:GLN:HB3    | 3:BM:16:ARG:HG2    | 1.90                     | 0.52              |
| 2:BT:31:PHE:CD1    | 6:CM:50:GLY:HA3    | 2.44                     | 0.52              |
| 1:BV:97:VAL:HG21   | 2:BW:19:LEU:HD12   | 1.90                     | 0.52              |
| 2:BY:52:VAL:O      | 2:BY:56:VAL:HG13   | 2.09                     | 0.52              |
| 1:CC:12:ASP:OD2    | 2:CD:107:ARG:NH1   | 2.43                     | 0.52              |
| 2:CD:24:MET:O      | 2:CD:28:LYS:HG2    | 2.09                     | 0.52              |
| 2:CF:55:ALA:O      | 2:CF:59:SER:OG     | 2.13                     | 0.52              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:CH:96:MET:HG3    | 2:CH:148:GLU:CD    | 2.30                     | 0.52              |
| 6:CM:171:ASP:OD2   | 6:CM:173:ASN:HB2   | 2.09                     | 0.52              |
| 6:CM:282:ILE:HG21  | 6:CM:306:GLU:HG2   | 1.91                     | 0.52              |
| 6:CM:794:PRO:HA    | 2:DR:106:GLU:HG3   | 1.91                     | 0.52              |
| 2:CS:30:TYR:HE1    | 2:CS:99:GLY:HA3    | 1.73                     | 0.52              |
| 2:CS:88:TYR:OH     | 2:CS:116:TYR:OH    | 2.28                     | 0.52              |
| 2:CU:122:PRO:HG2   | 10:CU:200:CYC:CMC  | 2.40                     | 0.52              |
| 10:CY:200:CYC:HAB2 | 2:DD:74:THR:HA     | 1.92                     | 0.52              |
| 1:DA:83:ARG:HG2    | 8:DZ:218:PHE:CE2   | 2.44                     | 0.52              |
| 2:DD:137:THR:O     | 2:DD:141:VAL:HG22  | 2.10                     | 0.52              |
| 8:DG:215:PRO:HB2   | 8:DZ:203:PHE:CE1   | 2.44                     | 0.52              |
| 1:DJ:67:SER:O      | 1:DJ:73:TYR:HB2    | 2.09                     | 0.52              |
| 2:DK:85:LEU:HG     | 10:DK:200:CYC:HBC1 | 1.91                     | 0.52              |
| 1:DL:33:GLY:HA3    | 2:DM:31:PHE:CE2    | 2.44                     | 0.52              |
| 1:DL:50:ILE:HG13   | 1:DL:136:VAL:CB    | 2.38                     | 0.52              |
| 1:DL:66:VAL:HA     | 1:DL:72:ALA:HB3    | 1.91                     | 0.52              |
| 2:DM:123:ILE:O     | 2:DM:127:VAL:HG23  | 2.08                     | 0.52              |
| 1:DN:97:VAL:HG11   | 2:DO:19:LEU:HD12   | 1.91                     | 0.52              |
| 1:DQ:92:VAL:HG11   | 1:DQ:153:PHE:CZ    | 2.44                     | 0.52              |
| 2:DR:55:ALA:CB     | 2:DR:133:ILE:HG13  | 2.39                     | 0.52              |
| 3:AE:105:GLU:HA    | 3:AE:109:LEU:CB    | 2.34                     | 0.52              |
| 1:AH:126:VAL:O     | 1:AH:130:VAL:HG23  | 2.09                     | 0.52              |
| 2:AQ:53:LYS:HE3    | 2:AQ:54:GLU:OE2    | 2.10                     | 0.52              |
| 6:BD:347:PHE:CD1   | 6:BD:380:LEU:HD21  | 2.44                     | 0.52              |
| 6:BD:551:PHE:HE1   | 6:BD:588:PHE:HB2   | 1.74                     | 0.52              |
| 6:BD:631:GLY:O     | 6:BD:635:VAL:HG23  | 2.09                     | 0.52              |
| 6:BD:801:ILE:O     | 6:BD:805:THR:HG22  | 2.09                     | 0.52              |
| 7:BF:113:MET:HA    | 7:BF:116:GLN:NE2   | 2.20                     | 0.52              |
| 9:BH:65:GLU:OE1    | 9:BH:69:LYS:HE2    | 2.10                     | 0.52              |
| 2:BL:37:ARG:HH21   | 2:BL:99:GLY:HA2    | 1.73                     | 0.52              |
| 10:BP:200:CYC:NB   | 10:BP:200:CYC:HMA1 | 2.25                     | 0.52              |
| 4:BS:166:GLU:HB3   | 2:CA:77:ARG:HH22   | 1.74                     | 0.52              |
| 1:BX:111:GLY:HA2   | 1:BX:114:GLU:OE1   | 2.10                     | 0.52              |
| 1:BZ:39:ILE:HG23   | 1:BZ:141:MET:SD    | 2.49                     | 0.52              |
| 2:CF:103:ILE:CD1   | 2:CF:107:ARG:HD2   | 2.40                     | 0.52              |
| 1:CG:21:GLY:O      | 1:CG:25:ARG:HG3    | 2.08                     | 0.52              |
| 1:CG:50:ILE:HG13   | 1:CG:136:VAL:CG1   | 2.38                     | 0.52              |
| 2:CS:55:ALA:O      | 2:CS:59:SER:OG     | 2.07                     | 0.52              |
| 1:CT:27:LYS:NZ     | 2:CU:38:VAL:HB     | 2.24                     | 0.52              |
| 1:CV:37:LEU:HD22   | 2:CW:24:MET:CE     | 2.38                     | 0.52              |
| 1:CY:47:ARG:HD2    | 2:CZ:18:TYR:CE1    | 2.44                     | 0.52              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:CY:115:MET:HE3  | 2:DD:79:ALA:HB2    | 1.92                     | 0.52              |
| 2:DB:123:ILE:O    | 2:DB:127:VAL:HG23  | 2.09                     | 0.52              |
| 9:DI:25:ILE:HD12  | 9:DI:156:ASN:HB2   | 1.89                     | 0.52              |
| 10:DM:200:CYC:OB  | 5:DX:20:ARG:HA     | 2.08                     | 0.52              |
| 2:DO:3:ASP:H      | 2:DO:6:THR:HG1     | 1.56                     | 0.52              |
| 2:DO:83:ARG:NH2   | 2:DO:84:ASP:OD1    | 2.28                     | 0.52              |
| 9:EA:19:ASP:C     | 9:EA:22:PRO:HD2    | 2.30                     | 0.52              |
| 9:EA:40:ILE:HG13  | 11:EA:400:45D:H371 | 1.91                     | 0.52              |
| 2:AB:66:THR:CG2   | 10:AC:200:CYC:HMA3 | 2.39                     | 0.52              |
| 1:AC:111:GLY:HA2  | 1:AC:114:GLU:OE2   | 2.09                     | 0.52              |
| 2:AD:142:GLY:O    | 2:AD:146:GLY:N     | 2.43                     | 0.52              |
| 3:AE:121:VAL:CG1  | 10:AE:200:CYC:HMC3 | 2.39                     | 0.52              |
| 1:AR:63:PRO:HG2   | 8:BG:230:ASN:HD21  | 1.73                     | 0.52              |
| 2:AS:84:ASP:OD2   | 2:AS:116:TYR:OH    | 2.13                     | 0.52              |
| 2:AY:75:THR:HG22  | 1:AZ:107:ILE:O     | 2.09                     | 0.52              |
| 1:AZ:89:LEU:HB2   | 1:AZ:133:MET:HE1   | 1.92                     | 0.52              |
| 1:BV:132:GLU:HA   | 1:BV:135:GLU:OE1   | 2.08                     | 0.52              |
| 2:BY:117:ASN:O    | 6:CM:467:ARG:NH2   | 2.42                     | 0.52              |
| 1:CC:6:LYS:NZ     | 1:CC:102:THR:OG1   | 2.43                     | 0.52              |
| 1:CC:88:TYR:O     | 1:CC:92:VAL:HG23   | 2.09                     | 0.52              |
| 5:CK:19:GLN:O     | 5:CK:21:GLU:HG2    | 2.08                     | 0.52              |
| 6:CM:273:LEU:HB3  | 6:CM:277:GLU:HG2   | 1.90                     | 0.52              |
| 6:CM:401:LEU:HD13 | 6:CM:411:TRP:CH2   | 2.39                     | 0.52              |
| 1:CR:154:ASP:CB   | 2:CZ:46:ALA:HB2    | 2.38                     | 0.52              |
| 1:CT:18:LEU:HD13  | 2:CU:97:LEU:HD23   | 1.91                     | 0.52              |
| 1:CT:56:ASP:OD1   | 8:DY:237:ALA:HB3   | 2.10                     | 0.52              |
| 1:CT:65:ILE:O     | 1:CT:72:ALA:N      | 2.38                     | 0.52              |
| 2:CW:127:VAL:O    | 2:CW:131:GLN:HG3   | 2.10                     | 0.52              |
| 2:CZ:52:VAL:HG23  | 2:CZ:85:LEU:HD13   | 1.92                     | 0.52              |
| 1:DA:105:GLU:O    | 1:DA:110:VAL:HG23  | 2.09                     | 0.52              |
| 9:DI:32:ASN:O     | 9:DI:36:GLN:HG3    | 2.10                     | 0.52              |
| 2:DK:3:ASP:H      | 2:DK:6:THR:HG1     | 1.57                     | 0.52              |
| 1:DL:141:MET:HE3  | 1:DL:146:ALA:HA    | 1.91                     | 0.52              |
| 1:DQ:92:VAL:O     | 1:DQ:96:VAL:HG13   | 2.09                     | 0.52              |
| 1:DS:102:THR:OG1  | 1:DS:103:PRO:HD3   | 2.10                     | 0.52              |
| 2:DT:10:ASN:O     | 2:DT:14:VAL:HG13   | 2.09                     | 0.52              |
| 9:EA:89:ARG:NE    | 9:EA:160:ASP:OD1   | 2.43                     | 0.52              |
| 3:AE:4:VAL:O      | 3:AE:8:ILE:HG12    | 2.09                     | 0.52              |
| 1:AJ:105:GLU:O    | 1:AJ:110:VAL:HG23  | 2.08                     | 0.52              |
| 1:AN:132:GLU:HA   | 1:AN:135:GLU:OE1   | 2.10                     | 0.52              |
| 2:AO:39:ARG:O     | 2:AO:43:VAL:HG23   | 2.10                     | 0.52              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AR:18:LEU:HD12  | 2:AS:97:LEU:CD1    | 2.36                     | 0.52              |
| 1:AX:115:MET:CE   | 10:AX:200:CYC:HMB3 | 2.39                     | 0.52              |
| 5:BB:23:GLN:OE1   | 5:BB:23:GLN:N      | 2.38                     | 0.52              |
| 6:BD:244:PRO:HD2  | 6:BD:248:ILE:HB    | 1.92                     | 0.52              |
| 9:BH:131:LEU:HG   | 9:BH:135:ALA:HB3   | 1.92                     | 0.52              |
| 3:BM:2:SER:O      | 3:BM:5:SER:OG      | 2.28                     | 0.52              |
| 1:BV:58:LEU:HD13  | 1:BV:129:SER:CA    | 2.39                     | 0.52              |
| 1:BV:101:VAL:HG12 | 1:BV:152:TYR:HD1   | 1.75                     | 0.52              |
| 1:BZ:35:ALA:O     | 1:BZ:39:ILE:HG13   | 2.10                     | 0.52              |
| 1:CC:89:LEU:HB2   | 1:CC:133:MET:CE    | 2.39                     | 0.52              |
| 2:CD:63:SER:H     | 2:CD:66:THR:HG22   | 1.75                     | 0.52              |
| 1:CE:113:ARG:NH2  | 1:CE:161:SER:OXT   | 2.37                     | 0.52              |
| 2:CF:123:ILE:O    | 2:CF:127:VAL:HG23  | 2.10                     | 0.52              |
| 6:CM:186:ILE:O    | 6:CM:190:CYS:HB3   | 2.09                     | 0.52              |
| 6:CM:453:PRO:HG3  | 6:CM:462:PHE:CE1   | 2.45                     | 0.52              |
| 1:CT:113:ARG:HD3  | 1:CT:123:ILE:HD13  | 1.91                     | 0.52              |
| 2:CW:15:GLN:CG    | 2:CW:17:LYS:HG2    | 2.40                     | 0.52              |
| 1:CY:38:ARG:HA    | 1:CY:41:GLU:OE1    | 2.09                     | 0.52              |
| 1:DA:92:VAL:HG11  | 1:DA:153:PHE:CE2   | 2.44                     | 0.52              |
| 2:DD:23:ALA:O     | 2:DD:27:LEU:HG     | 2.09                     | 0.52              |
| 9:DI:67:ALA:HB3   | 9:DI:101:TRP:HH2   | 1.75                     | 0.52              |
| 2:DK:71:ASN:ND2   | 2:DK:121:VAL:HA    | 2.24                     | 0.52              |
| 1:DL:128:GLN:O    | 1:DL:132:GLU:HG2   | 2.08                     | 0.52              |
| 1:DQ:126:VAL:HG13 | 1:DQ:160:MET:SD    | 2.49                     | 0.52              |
| 5:DX:6:ILE:HG22   | 5:DX:53:VAL:CG2    | 2.30                     | 0.52              |
| 1:AC:132:GLU:O    | 1:AC:136:VAL:HG23  | 2.09                     | 0.52              |
| 3:AE:14:GLN:HB3   | 3:AE:16:ARG:HG2    | 1.91                     | 0.52              |
| 2:AF:71:ASN:O     | 2:AF:77:ARG:HD2    | 2.10                     | 0.52              |
| 1:AH:109:LEU:CD2  | 1:AH:159:LYS:HG2   | 2.39                     | 0.52              |
| 1:AH:131:ARG:HG3  | 1:AH:157:ILE:HD13  | 1.92                     | 0.52              |
| 2:AL:25:ASP:HA    | 2:AL:28:LYS:NZ     | 2.25                     | 0.52              |
| 1:AN:8:ILE:HD11   | 2:AO:97:LEU:HD13   | 1.92                     | 0.52              |
| 2:AQ:122:PRO:HB2  | 2:AQ:125:SER:HB2   | 1.92                     | 0.52              |
| 10:AQ:200:CYC:HHA | 10:AQ:200:CYC:HBD1 | 1.91                     | 0.52              |
| 1:AR:81:CYS:SG    | 10:AR:200:CYC:HAC2 | 2.50                     | 0.52              |
| 2:AU:123:ILE:HA   | 2:AU:126:THR:HG22  | 1.91                     | 0.52              |
| 2:AW:2:GLN:O      | 2:AW:102:SER:OG    | 2.27                     | 0.52              |
| 2:AY:10:ASN:O     | 2:AY:14:VAL:HG23   | 2.10                     | 0.52              |
| 7:BF:112:GLU:O    | 7:BF:116:GLN:HG2   | 2.09                     | 0.52              |
| 8:BG:226:ASN:HD21 | 9:BH:146:GLU:HG3   | 1.75                     | 0.52              |
| 9:BH:210:PHE:HA   | 9:BH:213:LEU:HB3   | 1.90                     | 0.52              |

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| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 9:BH:233:GLY:O     | 9:BH:237:VAL:HG23 | 2.10                     | 0.52              |
| 1:BI:100:ASP:CG    | 1:BP:21:GLY:HA3   | 2.30                     | 0.52              |
| 2:BL:112:LEU:HD21  | 10:BL:200:CYC:C3B | 2.40                     | 0.52              |
| 2:BN:5:ILE:O       | 2:BN:8:VAL:HG22   | 2.10                     | 0.52              |
| 1:BP:109:LEU:HD22  | 1:BP:159:LYS:HG2  | 1.90                     | 0.52              |
| 6:CM:52:LEU:HA     | 6:CM:55:GLU:OE1   | 2.09                     | 0.52              |
| 6:CM:607:ARG:HG2   | 6:CM:613:PRO:HA   | 1.92                     | 0.52              |
| 6:CM:745:GLN:OE1   | 6:CM:855:TYR:HA   | 2.10                     | 0.52              |
| 1:CT:61:LYS:NZ     | 1:CT:132:GLU:OE2  | 2.43                     | 0.52              |
| 1:CV:46:SER:HB2    | 1:CV:140:LEU:HD23 | 1.91                     | 0.52              |
| 1:CV:58:LEU:HD13   | 1:CV:129:SER:N    | 2.25                     | 0.52              |
| 1:CY:127:ALA:HB2   | 1:CY:161:SER:HB2  | 1.92                     | 0.52              |
| 1:CY:137:ALA:HB1   | 1:CY:141:MET:CE   | 2.38                     | 0.52              |
| 1:DJ:83:ARG:NH2    | 10:DJ:200:CYC:O2A | 2.42                     | 0.52              |
| 1:DJ:115:MET:HE1   | 10:DJ:200:CYC:CMB | 2.33                     | 0.52              |
| 2:DK:91:TYR:CD2    | 2:DK:108:VAL:HB   | 2.43                     | 0.52              |
| 1:DL:71:ASN:HB3    | 10:DL:200:CYC:OC  | 2.09                     | 0.52              |
| 1:DN:22:GLU:O      | 1:DN:26:ILE:HG12  | 2.10                     | 0.52              |
| 1:DQ:116:TYR:HD2   | 1:DQ:123:ILE:HG13 | 1.74                     | 0.52              |
| 2:DR:15:GLN:CB     | 2:DR:17:LYS:HE3   | 2.40                     | 0.52              |
| 2:DV:96:MET:HA     | 2:DV:152:TYR:CE2  | 2.45                     | 0.52              |
| 1:AC:4:VAL:HG23    | 2:AD:3:ASP:OD2    | 2.09                     | 0.52              |
| 2:AD:109:LEU:HD23  | 2:AD:159:GLY:HA3  | 1.92                     | 0.52              |
| 3:AE:7:VAL:HG13    | 3:AE:22:GLU:HB3   | 1.91                     | 0.52              |
| 2:AO:85:LEU:HD22   | 2:AO:133:ILE:HD11 | 1.92                     | 0.52              |
| 1:AR:39:ILE:HD11   | 1:AR:148:GLU:OE2  | 2.09                     | 0.52              |
| 6:BD:177:VAL:HG21  | 6:BD:260:ALA:HB2  | 1.91                     | 0.52              |
| 6:BD:290:PHE:O     | 6:BD:292:ARG:NH1  | 2.43                     | 0.52              |
| 1:BI:27:LYS:O      | 1:BI:31:THR:HG23  | 2.10                     | 0.52              |
| 1:BI:90:ARG:HD3    | 2:BJ:18:TYR:CD1   | 2.45                     | 0.52              |
| 2:BJ:40:ALA:O      | 2:BJ:44:ILE:HG12  | 2.10                     | 0.52              |
| 2:BJ:61:LEU:HD21   | 2:BJ:78:TYR:OH    | 2.09                     | 0.52              |
| 1:BK:71:ASN:ND2    | 10:BK:200:CYC:OC  | 2.33                     | 0.52              |
| 3:BM:110:ILE:HG22  | 5:CJ:16:ILE:CD1   | 2.37                     | 0.52              |
| 2:BN:4:ALA:HB2     | 2:BN:99:GLY:O     | 2.10                     | 0.52              |
| 1:BR:2:SER:N       | 1:BR:100:ASP:OD2  | 2.43                     | 0.52              |
| 10:BX:200:CYC:HMA1 | 10:BX:200:CYC:NB  | 2.25                     | 0.52              |
| 2:BY:116:TYR:CD2   | 2:BY:160:LEU:HD11 | 2.44                     | 0.52              |
| 1:CE:102:THR:O     | 1:CE:106:GLU:HG2  | 2.10                     | 0.52              |
| 10:CF:200:CYC:HB   | 6:CM:566:ILE:HD12 | 1.74                     | 0.52              |
| 5:CJ:12:SER:CB     | 5:CJ:15:ARG:HG3   | 2.40                     | 0.52              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 6:CM:291:GLU:HG2  | 6:CM:348:ARG:NH1   | 2.24                     | 0.52              |
| 6:CM:365:PHE:HA   | 6:CM:368:VAL:HG12  | 1.92                     | 0.52              |
| 2:CS:43:VAL:HG11  | 2:CS:141:VAL:HG12  | 1.91                     | 0.52              |
| 1:CT:63:PRO:HG2   | 1:CY:68:PRO:O      | 2.09                     | 0.52              |
| 1:CY:112:VAL:HA   | 1:CY:115:MET:CG    | 2.40                     | 0.52              |
| 2:DD:108:VAL:HG22 | 10:DD:200:CYC:CBB  | 2.40                     | 0.52              |
| 1:DJ:53:GLN:O     | 1:DJ:57:ARG:HG3    | 2.09                     | 0.52              |
| 2:DM:85:LEU:HD22  | 2:DM:133:ILE:CD1   | 2.40                     | 0.52              |
| 2:DR:59:SER:OG    | 2:DR:132:ALA:HB2   | 2.10                     | 0.52              |
| 3:AE:47:GLU:OE1   | 2:AF:18:TYR:OH     | 2.24                     | 0.52              |
| 2:AF:96:MET:HA    | 2:AF:152:TYR:HE2   | 1.74                     | 0.52              |
| 4:AK:52:VAL:HG13  | 4:AK:86:MET:CG     | 2.40                     | 0.52              |
| 4:AK:161:THR:O    | 4:AK:165:SER:CB    | 2.57                     | 0.52              |
| 2:AL:52:VAL:O     | 2:AL:56:VAL:HG23   | 2.10                     | 0.52              |
| 1:AN:127:ALA:HB1  | 1:AN:161:SER:HB3   | 1.91                     | 0.52              |
| 1:AR:46:SER:O     | 1:AR:50:ILE:HD12   | 2.08                     | 0.52              |
| 1:AR:156:VAL:O    | 1:AR:160:MET:HG3   | 2.10                     | 0.52              |
| 2:AW:125:SER:HA   | 2:AW:128:GLN:CD    | 2.30                     | 0.52              |
| 1:AZ:131:ARG:O    | 1:AZ:135:GLU:HG2   | 2.10                     | 0.52              |
| 9:BH:91:ASP:OD1   | 9:BH:96:ARG:NH2    | 2.38                     | 0.52              |
| 9:BH:264:PHE:CD1  | 9:BH:294:PRO:HD3   | 2.42                     | 0.52              |
| 1:BK:117:ARG:HD2  | 1:BP:161:SER:CB    | 2.40                     | 0.52              |
| 1:BP:38:ARG:HA    | 1:BP:41:GLU:OE1    | 2.10                     | 0.52              |
| 4:BS:124:ILE:HD11 | 4:BS:164:LEU:HD12  | 1.91                     | 0.52              |
| 1:BZ:97:VAL:HG21  | 2:CA:19:LEU:CD1    | 2.39                     | 0.52              |
| 1:CC:113:ARG:NH1  | 1:CC:160:MET:O     | 2.42                     | 0.52              |
| 6:CM:269:MET:CE   | 6:CM:309:VAL:HG12  | 2.39                     | 0.52              |
| 6:CM:749:ARG:NH1  | 10:DV:200:CYC:HBA1 | 2.25                     | 0.52              |
| 9:CQ:217:PHE:HA   | 9:CQ:298:ILE:HG23  | 1.91                     | 0.52              |
| 9:CQ:227:PHE:CE1  | 9:DI:230:PRO:HD3   | 2.45                     | 0.52              |
| 2:CS:1:MET:CG     | 2:CS:103:ILE:HB    | 2.39                     | 0.52              |
| 2:CS:41:ALA:N     | 2:CS:96:MET:HE1    | 2.25                     | 0.52              |
| 1:CT:27:LYS:NZ    | 2:CU:35:GLU:HA     | 2.25                     | 0.52              |
| 1:CT:154:ASP:HB2  | 2:DD:46:ALA:HB1    | 1.92                     | 0.52              |
| 1:CY:23:LEU:O     | 1:CY:27:LYS:HG2    | 2.10                     | 0.52              |
| 2:DD:71:ASN:HD22  | 2:DD:121:VAL:HA    | 1.75                     | 0.52              |
| 2:DD:123:ILE:O    | 2:DD:127:VAL:HG23  | 2.10                     | 0.52              |
| 9:DI:27:ARG:HA    | 9:DI:30:GLN:OE1    | 2.10                     | 0.52              |
| 1:DJ:65:ILE:HG22  | 1:DJ:72:ALA:HB3    | 1.92                     | 0.52              |
| 1:DU:57:ARG:NH2   | 1:DU:135:GLU:HB3   | 2.24                     | 0.52              |
| 5:DX:3:MET:H      | 5:DX:57:THR:HB     | 1.75                     | 0.52              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 9:EA:42:PHE:CD2   | 9:EA:131:LEU:HD13  | 2.45                     | 0.52              |
| 10:AD:200:CYC:CHB | 5:BA:22:LEU:HD23   | 2.39                     | 0.52              |
| 1:AH:13:ALA:HB2   | 6:BD:330:ARG:HD2   | 1.91                     | 0.52              |
| 1:AJ:89:LEU:HB2   | 1:AJ:133:MET:CE    | 2.40                     | 0.52              |
| 2:AL:63:SER:O     | 2:AL:67:ARG:HG3    | 2.10                     | 0.52              |
| 1:AN:33:GLY:HA2   | 1:AN:36:ARG:CD     | 2.40                     | 0.52              |
| 2:AO:74:THR:CG2   | 2:AO:76:ARG:HG2    | 2.40                     | 0.52              |
| 2:AY:41:ALA:HB2   | 2:AY:96:MET:CE     | 2.38                     | 0.52              |
| 5:BA:29:LYS:HE2   | 6:BD:392:GLU:OE1   | 2.10                     | 0.52              |
| 6:BD:52:LEU:HA    | 6:BD:55:GLU:OE1    | 2.09                     | 0.52              |
| 6:BD:183:LYS:HG2  | 6:BD:192:ILE:HD12  | 1.92                     | 0.52              |
| 9:BH:300:PHE:CE2  | 9:BH:302:ALA:HB2   | 2.45                     | 0.52              |
| 1:BI:118:SER:O    | 2:BN:53:LYS:HD3    | 2.10                     | 0.52              |
| 4:BS:138:ILE:HG22 | 4:BS:153:ILE:HG21  | 1.92                     | 0.52              |
| 1:BV:2:SER:OG     | 2:BW:3:ASP:OD2     | 2.24                     | 0.52              |
| 1:BZ:73:TYR:CD2   | 9:CQ:151:ILE:HD13  | 2.45                     | 0.52              |
| 2:CF:34:GLY:O     | 2:CF:38:VAL:HG23   | 2.10                     | 0.52              |
| 2:CH:119:LEU:HD11 | 10:CH:200:CYC:HAA2 | 1.91                     | 0.52              |
| 8:CP:196:TRP:O    | 8:CP:200:VAL:HG23  | 2.10                     | 0.52              |
| 1:CR:116:TYR:HD2  | 1:CR:123:ILE:HG22  | 1.74                     | 0.52              |
| 1:CT:105:GLU:HG2  | 1:CT:110:VAL:HG23  | 1.92                     | 0.52              |
| 1:DA:72:ALA:HB2   | 10:DA:200:CYC:CMD  | 2.39                     | 0.52              |
| 5:DF:5:ARG:HD2    | 5:DF:54:GLU:OE2    | 2.09                     | 0.52              |
| 9:DI:34:GLU:HB2   | 9:DI:174:GLU:CG    | 2.40                     | 0.52              |
| 1:DL:104:ILE:HG22 | 1:DL:109:LEU:CD1   | 2.40                     | 0.52              |
| 1:DN:128:GLN:O    | 1:DN:132:GLU:HG2   | 2.10                     | 0.52              |
| 1:DQ:89:LEU:HD22  | 2:DR:18:TYR:OH     | 2.10                     | 0.52              |
| 1:DS:26:ILE:O     | 1:DS:30:VAL:HG22   | 2.09                     | 0.52              |
| 10:DS:200:CYC:O1D | 8:DY:201:ARG:NE    | 2.42                     | 0.52              |
| 2:AF:90:ARG:HG2   | 2:AF:94:TYR:CZ     | 2.45                     | 0.51              |
| 2:AL:91:TYR:CE2   | 10:AL:200:CYC:HBB1 | 2.45                     | 0.51              |
| 1:AR:97:VAL:HG11  | 2:AS:27:LEU:HD13   | 1.92                     | 0.51              |
| 2:AW:71:ASN:ND2   | 2:AW:121:VAL:HA    | 2.25                     | 0.51              |
| 1:AZ:93:THR:O     | 1:AZ:96:VAL:HG22   | 2.10                     | 0.51              |
| 6:BD:444:GLN:NE2  | 6:BD:472:ARG:O     | 2.20                     | 0.51              |
| 6:BD:736:LYS:HE3  | 6:BD:740:ARG:CD    | 2.39                     | 0.51              |
| 9:BH:74:MET:O     | 9:BH:79:GLN:NE2    | 2.43                     | 0.51              |
| 3:BM:36:ARG:HD2   | 3:BM:96:VAL:O      | 2.09                     | 0.51              |
| 2:BQ:8:VAL:HG21   | 2:BQ:27:LEU:CD1    | 2.37                     | 0.51              |
| 4:BS:40:ALA:O     | 4:BS:44:ILE:HG12   | 2.10                     | 0.51              |
| 2:BW:5:ILE:HD11   | 2:BW:31:PHE:CE1    | 2.45                     | 0.51              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:BX:97:VAL:HG21  | 2:BY:19:LEU:CD1   | 2.40                     | 0.51              |
| 1:BX:143:SER:OG   | 1:CV:147:ALA:HB2  | 2.10                     | 0.51              |
| 2:BY:104:LEU:HD22 | 2:BY:156:ILE:HD11 | 1.92                     | 0.51              |
| 2:CD:2:GLN:HB3    | 2:CD:102:SER:CB   | 2.40                     | 0.51              |
| 2:CD:68:PRO:HG3   | 2:CD:73:TYR:CE1   | 2.45                     | 0.51              |
| 6:CM:210:PHE:CZ   | 6:CM:212:ASN:HB2  | 2.45                     | 0.51              |
| 6:CM:210:PHE:HZ   | 6:CM:216:ALA:HB1  | 1.74                     | 0.51              |
| 6:CM:371:GLY:HA3  | 6:CM:375:ALA:HB2  | 1.92                     | 0.51              |
| 9:CQ:42:PHE:CD2   | 9:CQ:131:LEU:HD13 | 2.45                     | 0.51              |
| 9:CQ:195:ASN:O    | 9:CQ:199:LEU:HG   | 2.10                     | 0.51              |
| 1:DA:41:GLU:HG3   | 2:DB:24:MET:CE    | 2.41                     | 0.51              |
| 2:DB:112:LEU:HD11 | 2:DB:116:TYR:CZ   | 2.45                     | 0.51              |
| 9:DI:214:ILE:O    | 9:DI:234:LYS:NZ   | 2.31                     | 0.51              |
| 1:DQ:128:GLN:O    | 1:DQ:132:GLU:HG2  | 2.10                     | 0.51              |
| 1:AA:22:GLU:O     | 1:AA:26:ILE:HG12  | 2.11                     | 0.51              |
| 3:AE:35:GLN:HG3   | 3:AE:38:ARG:NH2   | 2.26                     | 0.51              |
| 1:AH:105:GLU:O    | 1:AH:110:VAL:HG23 | 2.10                     | 0.51              |
| 2:AL:36:LEU:CD1   | 7:BF:85:GLN:HB2   | 2.40                     | 0.51              |
| 2:AS:51:ILE:HG12  | 2:AS:140:LEU:HD12 | 1.93                     | 0.51              |
| 2:AS:105:ASP:OD1  | 2:AS:109:LEU:HD12 | 2.10                     | 0.51              |
| 2:AW:78:TYR:CE1   | 1:AX:115:MET:HG3  | 2.46                     | 0.51              |
| 1:AX:91:LEU:CD1   | 1:AX:108:GLY:HA3  | 2.40                     | 0.51              |
| 6:BD:15:GLN:HB3   | 6:BD:260:ALA:O    | 2.10                     | 0.51              |
| 6:BD:167:ILE:CD1  | 6:BD:219:ILE:HG22 | 2.40                     | 0.51              |
| 6:BD:303:SER:HA   | 6:BD:306:GLU:HB2  | 1.92                     | 0.51              |
| 6:BD:774:VAL:O    | 6:BD:778:ILE:HG12 | 2.10                     | 0.51              |
| 6:BD:788:MET:CA   | 6:BD:792:TYR:HB3  | 2.32                     | 0.51              |
| 9:BH:264:PHE:CE2  | 9:EA:309:PRO:HG3  | 2.45                     | 0.51              |
| 3:BM:38:ARG:HA    | 3:BM:41:GLU:CD    | 2.31                     | 0.51              |
| 2:BQ:81:CYS:HA    | 10:BQ:200:CYC:CHD | 2.40                     | 0.51              |
| 1:BR:56:ASP:O     | 1:BR:60:GLN:HG2   | 2.10                     | 0.51              |
| 4:BS:62:GLU:OE1   | 4:BS:133:ILE:HD11 | 2.11                     | 0.51              |
| 2:CA:115:THR:O    | 2:CA:119:LEU:HD23 | 2.10                     | 0.51              |
| 6:CM:551:PHE:HE1  | 6:CM:588:PHE:HB2  | 1.75                     | 0.51              |
| 8:CP:216:MET:HE3  | 9:CQ:12:PHE:HB2   | 1.92                     | 0.51              |
| 9:CQ:250:LEU:HD22 | 9:CQ:286:ILE:CD1  | 2.41                     | 0.51              |
| 1:CR:114:GLU:OE1  | 1:CR:114:GLU:N    | 2.43                     | 0.51              |
| 1:CV:2:SER:N      | 1:CV:100:ASP:OD2  | 2.44                     | 0.51              |
| 1:CY:76:GLU:HG2   | 8:DH:202:ARG:HA   | 1.92                     | 0.51              |
| 1:DA:51:VAL:HA    | 1:DA:133:MET:CE   | 2.41                     | 0.51              |
| 1:DA:126:VAL:O    | 1:DA:130:VAL:HG23 | 2.10                     | 0.51              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:DB:2:GLN:O      | 2:DB:100:ASP:HB3   | 2.10                     | 0.51              |
| 8:DG:210:LEU:HD22 | 8:DG:216:MET:CG    | 2.39                     | 0.51              |
| 9:DI:24:THR:HG21  | 9:DI:142:ILE:CD1   | 2.40                     | 0.51              |
| 9:DI:70:GLU:O     | 9:DI:74:MET:HG3    | 2.10                     | 0.51              |
| 2:DK:60:LEU:HD22  | 2:DK:65:VAL:HG11   | 1.92                     | 0.51              |
| 2:DK:96:MET:HA    | 2:DK:152:TYR:CE2   | 2.45                     | 0.51              |
| 2:DR:3:ASP:N      | 2:DR:6:THR:OG1     | 2.43                     | 0.51              |
| 2:DR:145:ALA:HA   | 2:DR:148:GLU:OE1   | 2.10                     | 0.51              |
| 1:DU:47:ARG:O     | 1:DU:51:VAL:HG22   | 2.10                     | 0.51              |
| 1:DU:71:ASN:HB3   | 10:DU:200:CYC:OC   | 2.09                     | 0.51              |
| 9:EA:107:LEU:HG   | 11:EA:400:45D:C30  | 2.40                     | 0.51              |
| 1:AA:27:LYS:O     | 1:AA:31:THR:HG23   | 2.09                     | 0.51              |
| 2:AF:37:ARG:NH1   | 2:AF:99:GLY:HA2    | 2.25                     | 0.51              |
| 2:AL:37:ARG:HG3   | 7:BF:86:VAL:CG2    | 2.39                     | 0.51              |
| 10:AO:200:CYC:NB  | 10:AO:200:CYC:HMA1 | 2.25                     | 0.51              |
| 1:AP:128:GLN:O    | 1:AP:132:GLU:HG2   | 2.10                     | 0.51              |
| 2:AQ:71:ASN:HB3   | 10:AQ:200:CYC:OC   | 2.10                     | 0.51              |
| 2:AU:47:ASN:O     | 2:AU:51:ILE:HD12   | 2.11                     | 0.51              |
| 1:AZ:44:THR:O     | 1:AZ:47:ARG:HG2    | 2.10                     | 0.51              |
| 6:BD:697:VAL:CG2  | 6:BD:701:ARG:HE    | 2.23                     | 0.51              |
| 6:BD:860:THR:HG22 | 6:BD:861:LEU:HD12  | 1.91                     | 0.51              |
| 1:BK:22:GLU:O     | 1:BK:26:ILE:HG12   | 2.10                     | 0.51              |
| 2:BN:96:MET:CB    | 2:BN:149:MET:HE1   | 2.40                     | 0.51              |
| 2:BN:141:VAL:HG12 | 2:BN:145:ALA:HB3   | 1.91                     | 0.51              |
| 1:BR:89:LEU:HB2   | 1:BR:133:MET:HE2   | 1.91                     | 0.51              |
| 4:BS:92:TYR:HE2   | 10:BS:200:CYC:HBB1 | 1.75                     | 0.51              |
| 1:CC:48:GLU:O     | 1:CC:52:LYS:HD3    | 2.11                     | 0.51              |
| 1:CC:122:PRO:O    | 1:CC:126:VAL:HG23  | 2.10                     | 0.51              |
| 1:CE:123:ILE:HG12 | 1:CE:160:MET:O     | 2.09                     | 0.51              |
| 1:CE:128:GLN:NE2  | 1:CE:132:GLU:OE2   | 2.43                     | 0.51              |
| 6:CM:253:LEU:HD11 | 6:CM:257:TYR:CD2   | 2.45                     | 0.51              |
| 6:CM:273:LEU:O    | 6:CM:278:LYS:NZ    | 2.23                     | 0.51              |
| 6:CM:532:VAL:O    | 6:CM:532:VAL:HG12  | 2.10                     | 0.51              |
| 6:CM:760:PHE:HE1  | 6:CM:784:SER:HB2   | 1.76                     | 0.51              |
| 9:CQ:126:PRO:HD3  | 11:CQ:400:45D:H211 | 1.92                     | 0.51              |
| 9:CQ:250:LEU:O    | 9:CQ:251:ILE:HD13  | 2.11                     | 0.51              |
| 1:CR:8:ILE:HD12   | 2:CS:98:ALA:HB2    | 1.92                     | 0.51              |
| 1:CR:85:MET:HB3   | 1:CR:133:MET:HE1   | 1.92                     | 0.51              |
| 1:CY:123:ILE:HA   | 1:CY:126:VAL:HG12  | 1.90                     | 0.51              |
| 2:CZ:112:LEU:HA   | 2:CZ:115:THR:HG22  | 1.91                     | 0.51              |
| 1:DA:77:MET:CG    | 8:DG:201:ARG:HB2   | 2.41                     | 0.51              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:DA:104:ILE:HG22 | 1:DA:109:LEU:HD12  | 1.91                     | 0.51              |
| 2:DB:133:ILE:O    | 2:DB:137:THR:HG22  | 2.11                     | 0.51              |
| 2:DD:65:VAL:HG12  | 2:DD:72:MET:CB     | 2.38                     | 0.51              |
| 8:DH:219:LEU:HD21 | 8:DY:203:PHE:CZ    | 2.44                     | 0.51              |
| 9:DI:171:ARG:HG3  | 9:DI:172:ILE:HG12  | 1.92                     | 0.51              |
| 2:DR:10:ASN:O     | 2:DR:14:VAL:HG23   | 2.10                     | 0.51              |
| 2:DR:66:THR:HA    | 2:DR:72:MET:HB3    | 1.92                     | 0.51              |
| 2:DT:74:THR:HG1   | 2:DT:77:ARG:HB2    | 1.75                     | 0.51              |
| 9:EA:85:ASP:HB3   | 9:EA:90:ALA:HB3    | 1.93                     | 0.51              |
| 1:AC:26:ILE:O     | 1:AC:30:VAL:HG23   | 2.11                     | 0.51              |
| 1:AC:44:THR:O     | 1:AC:47:ARG:HG2    | 2.10                     | 0.51              |
| 2:AF:141:VAL:HG12 | 2:AF:145:ALA:HB3   | 1.92                     | 0.51              |
| 2:AI:52:VAL:O     | 2:AI:56:VAL:HG23   | 2.10                     | 0.51              |
| 2:AI:53:LYS:HG3   | 1:AJ:118:SER:O     | 2.11                     | 0.51              |
| 2:AI:75:THR:HG23  | 1:AJ:108:GLY:HA2   | 1.91                     | 0.51              |
| 1:AR:5:THR:O      | 1:AR:9:VAL:HG23    | 2.09                     | 0.51              |
| 2:AU:112:LEU:HD21 | 10:AU:200:CYC:NB   | 2.26                     | 0.51              |
| 1:AV:95:GLY:HA3   | 1:AV:104:ILE:HD11  | 1.91                     | 0.51              |
| 1:AZ:6:LYS:NZ     | 1:AZ:100:ASP:OD2   | 2.26                     | 0.51              |
| 3:BM:11:ALA:HB1   | 3:BM:16:ARG:O      | 2.11                     | 0.51              |
| 2:BN:101:ALA:CB   | 2:BN:104:LEU:HD12  | 2.40                     | 0.51              |
| 1:BP:130:VAL:HG21 | 1:BP:160:MET:HE3   | 1.92                     | 0.51              |
| 1:BR:87:TYR:O     | 1:BR:91:LEU:HG     | 2.11                     | 0.51              |
| 2:BY:57:ALA:HA    | 2:BY:61:LEU:HD12   | 1.93                     | 0.51              |
| 1:BZ:124:GLU:OE1  | 1:BZ:124:GLU:N     | 2.36                     | 0.51              |
| 2:CD:119:LEU:O    | 5:CK:60:PRO:HB3    | 2.11                     | 0.51              |
| 1:CE:85:MET:CE    | 1:CE:129:SER:HB2   | 2.41                     | 0.51              |
| 2:CF:44:ILE:HD13  | 2:CF:149:MET:CE    | 2.41                     | 0.51              |
| 1:CG:85:MET:HB3   | 1:CG:133:MET:CE    | 2.38                     | 0.51              |
| 6:CM:205:ALA:HA   | 6:CM:208:ASP:OD2   | 2.11                     | 0.51              |
| 6:CM:353:ARG:HG2  | 6:CM:399:ARG:NH2   | 2.20                     | 0.51              |
| 6:CM:385:GLU:OE2  | 6:CM:399:ARG:NH2   | 2.44                     | 0.51              |
| 7:CO:104:GLY:O    | 7:CO:111:LYS:NZ    | 2.35                     | 0.51              |
| 2:CS:112:LEU:CD1  | 10:CS:200:CYC:HMB3 | 2.40                     | 0.51              |
| 1:CT:131:ARG:HE   | 1:CT:157:ILE:HG21  | 1.75                     | 0.51              |
| 2:CU:105:ASP:OD2  | 2:CU:155:TYR:OH    | 2.27                     | 0.51              |
| 1:CV:10:ASN:O     | 1:CV:14:GLU:HG3    | 2.10                     | 0.51              |
| 1:CV:134:LYS:HD3  | 1:CV:153:PHE:CB    | 2.41                     | 0.51              |
| 2:DK:2:GLN:HE21   | 2:DK:7:ALA:HA      | 1.76                     | 0.51              |
| 2:DK:83:ARG:NH2   | 2:DK:84:ASP:OD1    | 2.43                     | 0.51              |
| 1:DL:58:LEU:HD22  | 1:DL:129:SER:CB    | 2.36                     | 0.51              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:DM:101:ALA:HB2   | 2:DM:152:TYR:HD1   | 1.73                     | 0.51              |
| 1:DQ:64:ASP:OD1    | 1:DQ:65:ILE:HD12   | 2.09                     | 0.51              |
| 2:DR:1:MET:SD      | 2:DR:103:ILE:HD12  | 2.50                     | 0.51              |
| 2:DR:134:LYS:HA    | 2:DR:153:LEU:HD13  | 1.92                     | 0.51              |
| 10:DT:200:CYC:HMA1 | 10:DT:200:CYC:HB   | 1.75                     | 0.51              |
| 2:DV:93:THR:O      | 2:DV:97:LEU:HD23   | 2.10                     | 0.51              |
| 9:EA:89:ARG:NE     | 9:EA:160:ASP:O     | 2.42                     | 0.51              |
| 1:AC:17:TYR:CE1    | 2:AD:90:ARG:HA     | 2.45                     | 0.51              |
| 2:AD:71:ASN:HD22   | 2:AD:121:VAL:HA    | 1.76                     | 0.51              |
| 2:AF:81:CYS:HA     | 10:AF:200:CYC:HHD  | 1.92                     | 0.51              |
| 10:AF:200:CYC:HAB2 | 5:BA:41:GLN:NE2    | 2.26                     | 0.51              |
| 4:AK:84:ARG:HD3    | 6:BD:254:PRO:HD3   | 1.92                     | 0.51              |
| 2:AL:85:LEU:HD22   | 2:AL:133:ILE:CD1   | 2.37                     | 0.51              |
| 1:AN:127:ALA:CB    | 1:AN:161:SER:HB3   | 2.40                     | 0.51              |
| 2:AO:83:ARG:NH2    | 6:BD:490:ALA:HB1   | 2.26                     | 0.51              |
| 1:AP:97:VAL:HG21   | 2:AQ:19:LEU:HD13   | 1.92                     | 0.51              |
| 2:AS:58:LYS:HD2    | 7:BF:98:VAL:HG12   | 1.93                     | 0.51              |
| 10:AU:200:CYC:HBD2 | 10:AU:200:CYC:HMD1 | 1.92                     | 0.51              |
| 1:AV:119:LEU:HD12  | 10:AV:200:CYC:HBD1 | 1.92                     | 0.51              |
| 2:AY:1:MET:CE      | 2:AY:103:ILE:HB    | 2.40                     | 0.51              |
| 9:BH:71:ILE:HD13   | 9:BH:74:MET:SD     | 2.50                     | 0.51              |
| 1:BI:116:TYR:HD2   | 1:BI:123:ILE:HD12  | 1.73                     | 0.51              |
| 1:BK:128:GLN:O     | 1:BK:131:ARG:HB2   | 2.10                     | 0.51              |
| 1:BP:105:GLU:O     | 1:BP:110:VAL:HG23  | 2.11                     | 0.51              |
| 1:BP:109:LEU:HD22  | 1:BP:159:LYS:CG    | 2.41                     | 0.51              |
| 1:BR:27:LYS:O      | 1:BR:31:THR:HG23   | 2.09                     | 0.51              |
| 2:BY:71:ASN:HD21   | 2:BY:121:VAL:HG22  | 1.76                     | 0.51              |
| 2:CA:39:ARG:HH12   | 2:CA:42:SER:HB3    | 1.75                     | 0.51              |
| 1:CG:101:VAL:HB    | 1:CG:155:PHE:CE2   | 2.45                     | 0.51              |
| 6:CM:691:PHE:HB3   | 1:DU:82:LEU:HB2    | 1.92                     | 0.51              |
| 6:CM:794:PRO:HG2   | 6:CM:795:TYR:CE2   | 2.46                     | 0.51              |
| 6:CM:804:GLY:O     | 6:CM:838:MET:HE1   | 2.10                     | 0.51              |
| 1:CT:30:VAL:HG23   | 2:CU:31:PHE:HA     | 1.91                     | 0.51              |
| 2:CW:131:GLN:O     | 2:CW:135:GLU:HG2   | 2.10                     | 0.51              |
| 1:DA:52:LYS:HD3    | 8:DZ:225:ILE:HD11  | 1.92                     | 0.51              |
| 2:DB:10:ASN:O      | 2:DB:14:VAL:HG13   | 2.10                     | 0.51              |
| 9:DI:191:GLU:O     | 9:DI:255:GLY:N     | 2.38                     | 0.51              |
| 9:DI:250:LEU:HD22  | 9:DI:288:TRP:CZ2   | 2.43                     | 0.51              |
| 1:DL:22:GLU:O      | 1:DL:26:ILE:HG13   | 2.10                     | 0.51              |
| 1:DQ:2:SER:O       | 1:DQ:5:THR:HG22    | 2.11                     | 0.51              |
| 2:DR:126:THR:O     | 2:DR:130:ILE:HG13  | 2.11                     | 0.51              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:DU:8:ILE:CD1     | 2:DV:98:ALA:HB2    | 2.41                     | 0.51              |
| 9:EA:264:PHE:CD1   | 9:EA:294:PRO:HD3   | 2.46                     | 0.51              |
| 1:AA:115:MET:CE    | 10:AA:200:CYC:HMB3 | 2.40                     | 0.51              |
| 2:AD:39:ARG:NH1    | 2:AD:39:ARG:HA     | 2.26                     | 0.51              |
| 2:AD:124:SER:O     | 2:AD:128:GLN:HG2   | 2.10                     | 0.51              |
| 2:AF:123:ILE:O     | 2:AF:127:VAL:HG23  | 2.11                     | 0.51              |
| 1:AJ:18:LEU:HD12   | 1:AJ:18:LEU:H      | 1.76                     | 0.51              |
| 1:AN:27:LYS:HD3    | 2:AO:38:VAL:HG11   | 1.91                     | 0.51              |
| 2:AO:92:ALA:CB     | 2:AO:149:MET:HE3   | 2.41                     | 0.51              |
| 1:AP:115:MET:CE    | 10:AP:200:CYC:HMB3 | 2.40                     | 0.51              |
| 1:AV:39:ILE:HG23   | 1:AV:141:MET:HE3   | 1.92                     | 0.51              |
| 1:AZ:83:ARG:NH2    | 10:AZ:200:CYC:O2A  | 2.43                     | 0.51              |
| 1:AZ:111:GLY:HA2   | 1:AZ:114:GLU:OE1   | 2.11                     | 0.51              |
| 1:AZ:142:SER:HB2   | 2:BN:39:ARG:NE     | 2.26                     | 0.51              |
| 6:BD:261:ALA:CB    | 6:BD:402:GLY:HA3   | 2.41                     | 0.51              |
| 6:BD:316:MET:SD    | 6:BD:395:VAL:HG22  | 2.50                     | 0.51              |
| 6:BD:752:GLU:HB2   | 6:BD:753:PRO:HD3   | 1.92                     | 0.51              |
| 6:BD:779:GLU:O     | 6:BD:783:THR:HG23  | 2.10                     | 0.51              |
| 9:BH:28:PHE:CD1    | 9:BH:157:ALA:HB1   | 2.46                     | 0.51              |
| 9:BH:42:PHE:CD2    | 9:BH:131:LEU:HD13  | 2.45                     | 0.51              |
| 9:BH:217:PHE:HA    | 9:BH:298:ILE:CG2   | 2.41                     | 0.51              |
| 1:BK:129:SER:HA    | 1:BK:132:GLU:OE1   | 2.10                     | 0.51              |
| 2:BL:92:ALA:C      | 2:BL:149:MET:HE3   | 2.31                     | 0.51              |
| 2:BL:95:ALA:HB2    | 2:BL:104:LEU:CD2   | 2.41                     | 0.51              |
| 10:BL:200:CYC:HMA1 | 10:BL:200:CYC:NB   | 2.25                     | 0.51              |
| 2:BN:56:VAL:O      | 2:BN:61:LEU:HG     | 2.09                     | 0.51              |
| 2:BN:81:CYS:HA     | 10:BN:200:CYC:HHD  | 1.91                     | 0.51              |
| 4:BS:41:ALA:CB     | 4:BS:98:ILE:HD11   | 2.41                     | 0.51              |
| 4:BS:105:LEU:HD11  | 4:BS:160:MET:HG3   | 1.91                     | 0.51              |
| 1:BV:27:LYS:HE3    | 2:BW:35:GLU:OE1    | 2.11                     | 0.51              |
| 2:CF:3:ASP:OD1     | 2:CF:6:THR:OG1     | 2.12                     | 0.51              |
| 2:CF:71:ASN:ND2    | 2:CF:121:VAL:HA    | 2.26                     | 0.51              |
| 1:CG:32:GLY:O      | 1:CG:36:ARG:HG3    | 2.11                     | 0.51              |
| 2:CH:131:GLN:O     | 2:CH:134:LYS:HB3   | 2.11                     | 0.51              |
| 6:CM:830:GLY:HA2   | 1:DQ:15:ALA:HB2    | 1.93                     | 0.51              |
| 9:CQ:99:ALA:HB1    | 9:CQ:164:THR:HG22  | 1.92                     | 0.51              |
| 2:CS:5:ILE:HD12    | 2:CS:27:LEU:HD22   | 1.91                     | 0.51              |
| 2:CW:54:GLU:HG3    | 9:DI:63:LEU:HD21   | 1.92                     | 0.51              |
| 2:CZ:3:ASP:HB2     | 2:CZ:98:ALA:O      | 2.11                     | 0.51              |
| 1:DA:66:VAL:O      | 1:DA:73:TYR:HA     | 2.11                     | 0.51              |
| 2:DB:105:ASP:HA    | 2:DB:109:LEU:HB2   | 1.92                     | 0.51              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 8:DG:210:LEU:HD22 | 8:DG:216:MET:CB    | 2.40                     | 0.51              |
| 9:DI:125:ILE:HB   | 9:DI:126:PRO:HD2   | 1.93                     | 0.51              |
| 1:DL:50:ILE:HG13  | 1:DL:136:VAL:HG12  | 1.93                     | 0.51              |
| 2:DM:41:ALA:CB    | 2:DM:97:LEU:HD12   | 2.40                     | 0.51              |
| 1:DQ:153:PHE:O    | 1:DQ:157:ILE:HG23  | 2.11                     | 0.51              |
| 2:DR:24:MET:HE3   | 2:DR:28:LYS:HZ1    | 1.76                     | 0.51              |
| 2:DR:43:VAL:CG1   | 2:DR:141:VAL:HG12  | 2.41                     | 0.51              |
| 2:DT:71:ASN:ND2   | 2:DT:121:VAL:HA    | 2.26                     | 0.51              |
| 2:DT:126:THR:O    | 2:DT:130:ILE:HG13  | 2.11                     | 0.51              |
| 8:DZ:210:LEU:CD1  | 8:DZ:216:MET:HB2   | 2.41                     | 0.51              |
| 2:AB:103:ILE:HD11 | 2:AB:107:ARG:HD2   | 1.91                     | 0.51              |
| 2:AD:37:ARG:NH2   | 2:AD:99:GLY:HA2    | 2.25                     | 0.51              |
| 2:AO:20:ASP:OD1   | 2:AO:20:ASP:N      | 2.42                     | 0.51              |
| 1:AP:97:VAL:HG21  | 2:AQ:19:LEU:CD1    | 2.41                     | 0.51              |
| 2:AS:63:SER:H     | 2:AS:66:THR:CG2    | 2.24                     | 0.51              |
| 6:BD:144:TYR:OH   | 10:BD:902:CYC:HAC1 | 2.10                     | 0.51              |
| 9:BH:208:ASN:OD1  | 9:BH:247:ASN:HA    | 2.11                     | 0.51              |
| 2:BJ:13:ASP:OD2   | 5:CJ:63:ASN:ND2    | 2.36                     | 0.51              |
| 2:BL:93:THR:N     | 2:BL:149:MET:HE3   | 2.26                     | 0.51              |
| 2:BL:137:THR:O    | 2:BL:141:VAL:HG22  | 2.11                     | 0.51              |
| 1:BP:68:PRO:HA    | 1:BP:73:TYR:CE2    | 2.46                     | 0.51              |
| 1:BP:115:MET:HG3  | 2:BT:78:TYR:CD1    | 2.45                     | 0.51              |
| 2:BQ:107:ARG:NH1  | 6:CM:334:PHE:O     | 2.43                     | 0.51              |
| 2:BT:18:TYR:OH    | 6:CM:160:LEU:HD23  | 2.10                     | 0.51              |
| 2:BT:41:ALA:CB    | 2:BT:97:LEU:HD11   | 2.41                     | 0.51              |
| 1:BZ:24:ASP:HA    | 1:BZ:27:LYS:HG2    | 1.93                     | 0.51              |
| 2:CA:96:MET:HA    | 2:CA:152:TYR:CE2   | 2.45                     | 0.51              |
| 1:CC:58:LEU:HD22  | 1:CC:129:SER:HB3   | 1.92                     | 0.51              |
| 2:CD:54:GLU:OE1   | 2:CD:136:VAL:HG21  | 2.10                     | 0.51              |
| 2:CF:125:SER:HA   | 2:CF:128:GLN:CD    | 2.31                     | 0.51              |
| 2:CH:96:MET:HA    | 2:CH:152:TYR:CE2   | 2.46                     | 0.51              |
| 9:CQ:172:ILE:H    | 9:CQ:172:ILE:HD12  | 1.76                     | 0.51              |
| 1:CR:72:ALA:HA    | 1:CR:77:MET:HB3    | 1.92                     | 0.51              |
| 2:CU:112:LEU:HD11 | 2:CU:116:TYR:CZ    | 2.45                     | 0.51              |
| 2:CW:73:TYR:O     | 2:CW:77:ARG:HB2    | 2.10                     | 0.51              |
| 2:CZ:112:LEU:HD22 | 2:CZ:160:LEU:HD13  | 1.93                     | 0.51              |
| 1:DA:66:VAL:HG21  | 8:DZ:227:PRO:CG    | 2.40                     | 0.51              |
| 2:DB:156:ILE:O    | 2:DB:160:LEU:HD23  | 2.10                     | 0.51              |
| 5:DF:27:PHE:CE2   | 5:DF:29:LYS:HE3    | 2.46                     | 0.51              |
| 9:DI:291:LEU:HD23 | 9:DI:299:PHE:HD2   | 1.75                     | 0.51              |
| 2:DK:43:VAL:HB    | 2:DK:141:VAL:HG12  | 1.92                     | 0.51              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:DM:2:GLN:O       | 2:DM:100:ASP:HB3   | 2.11                     | 0.51              |
| 2:DM:65:VAL:HG12   | 2:DM:72:MET:CB     | 2.36                     | 0.51              |
| 2:DM:104:LEU:HD13  | 2:DM:156:ILE:CG1   | 2.36                     | 0.51              |
| 2:DR:15:GLN:HB2    | 2:DR:17:LYS:HG2    | 1.93                     | 0.51              |
| 1:DS:50:ILE:HG13   | 1:DS:136:VAL:HG13  | 1.93                     | 0.51              |
| 1:DS:113:ARG:NH2   | 1:DS:161:SER:O     | 2.33                     | 0.51              |
| 9:EA:102:SER:OG    | 9:EA:105:ILE:HG12  | 2.11                     | 0.51              |
| 2:AD:75:THR:HG22   | 3:AE:107:THR:O     | 2.11                     | 0.51              |
| 2:AI:77:ARG:CG     | 10:AI:200:CYC:HAD1 | 2.40                     | 0.51              |
| 4:AK:41:ALA:HA     | 4:AK:44:ILE:HD11   | 1.93                     | 0.51              |
| 4:AK:50:THR:HB     | 4:AK:54:ARG:HH12   | 1.76                     | 0.51              |
| 2:AL:5:ILE:O       | 2:AL:9:ILE:HG13    | 2.11                     | 0.51              |
| 2:AO:3:ASP:HA      | 2:AO:98:ALA:HB1    | 1.93                     | 0.51              |
| 1:AV:96:VAL:HG12   | 1:AV:152:TYR:CD2   | 2.46                     | 0.51              |
| 5:BA:29:LYS:NZ     | 6:BD:315:SER:OG    | 2.22                     | 0.51              |
| 6:BD:788:MET:HB2   | 6:BD:792:TYR:HD2   | 1.76                     | 0.51              |
| 9:BH:36:GLN:O      | 9:BH:40:ILE:HG23   | 2.10                     | 0.51              |
| 1:BI:3:ILE:CG2     | 1:BP:25:ARG:HD3    | 2.41                     | 0.51              |
| 3:BM:40:ALA:CB     | 3:BM:97:LEU:HD11   | 2.40                     | 0.51              |
| 2:BN:144:ASP:OD1   | 2:BN:144:ASP:N     | 2.43                     | 0.51              |
| 1:BP:35:ALA:O      | 1:BP:39:ILE:HG13   | 2.10                     | 0.51              |
| 10:BQ:200:CYC:HBB2 | 6:CM:338:ILE:HD11  | 1.93                     | 0.51              |
| 1:BR:18:LEU:HD13   | 4:BS:98:ILE:CD1    | 2.40                     | 0.51              |
| 1:BV:53:GLN:O      | 1:BV:57:ARG:HD3    | 2.10                     | 0.51              |
| 1:CC:18:LEU:HD12   | 1:CC:22:GLU:HB3    | 1.93                     | 0.51              |
| 1:CE:81:CYS:HA     | 10:CE:200:CYC:HHD  | 1.93                     | 0.51              |
| 1:CE:97:VAL:HG11   | 2:CF:19:LEU:CD1    | 2.39                     | 0.51              |
| 1:CV:91:LEU:O      | 1:CV:104:ILE:HG12  | 2.10                     | 0.51              |
| 1:CV:126:VAL:CG2   | 10:CV:200:CYC:HMC3 | 2.40                     | 0.51              |
| 1:DA:130:VAL:HB    | 1:DA:157:ILE:CD1   | 2.41                     | 0.51              |
| 8:DG:230:ASN:ND2   | 1:DL:68:PRO:HD2    | 2.26                     | 0.51              |
| 1:DJ:5:THR:HG23    | 2:DK:1:MET:CE      | 2.37                     | 0.51              |
| 1:DJ:90:ARG:HD2    | 2:DK:17:LYS:C      | 2.31                     | 0.51              |
| 1:DQ:62:ARG:NH2    | 1:DQ:64:ASP:OD2    | 2.44                     | 0.51              |
| 5:DX:54:GLU:N      | 5:DX:54:GLU:OE1    | 2.44                     | 0.51              |
| 2:AI:88:TYR:OH     | 2:AI:112:LEU:HD21  | 2.10                     | 0.51              |
| 2:AL:97:LEU:CD1    | 6:BD:35:LEU:HD12   | 2.41                     | 0.51              |
| 1:AN:8:ILE:HD12    | 2:AO:94:TYR:CD1    | 2.46                     | 0.51              |
| 2:AW:15:GLN:HB2    | 2:AW:17:LYS:NZ     | 2.26                     | 0.51              |
| 2:AY:96:MET:HG3    | 2:AY:148:GLU:CD    | 2.31                     | 0.51              |
| 6:BD:811:ARG:NH2   | 6:BD:814:LEU:HG    | 2.26                     | 0.51              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 9:BH:20:VAL:HG22  | 9:BH:145:LEU:HD21  | 1.92                     | 0.51              |
| 9:BH:21:VAL:HB    | 9:BH:22:PRO:HD3    | 1.92                     | 0.51              |
| 9:BH:42:PHE:CE2   | 9:BH:131:LEU:HB2   | 2.46                     | 0.51              |
| 1:BI:114:GLU:OE1  | 1:BI:114:GLU:N     | 2.41                     | 0.51              |
| 2:BN:96:MET:HG2   | 2:BN:148:GLU:OE1   | 2.11                     | 0.51              |
| 1:BP:114:GLU:OE2  | 6:CM:299:SER:OG    | 2.16                     | 0.51              |
| 1:BP:126:VAL:O    | 1:BP:130:VAL:HG23  | 2.11                     | 0.51              |
| 1:BR:8:ILE:CD1    | 4:BS:95:TYR:HB3    | 2.30                     | 0.51              |
| 2:BY:62:TYR:CE2   | 9:CQ:11:ILE:HA     | 2.45                     | 0.51              |
| 1:CE:98:SER:HB3   | 2:CF:9:ILE:CD1     | 2.41                     | 0.51              |
| 1:CG:59:PHE:CZ    | 1:CG:78:THR:HG23   | 2.46                     | 0.51              |
| 1:CG:85:MET:SD    | 1:CG:129:SER:HB2   | 2.51                     | 0.51              |
| 9:CQ:90:ALA:O     | 9:CQ:163:PHE:HB2   | 2.10                     | 0.51              |
| 9:CQ:195:ASN:OD1  | 9:CQ:198:VAL:HB    | 2.11                     | 0.51              |
| 1:CV:134:LYS:HD3  | 1:CV:153:PHE:HB3   | 1.93                     | 0.51              |
| 2:CZ:113:LYS:HG2  | 2:CZ:160:LEU:O     | 2.11                     | 0.51              |
| 9:DI:41:TRP:CZ2   | 9:DI:45:LEU:HD21   | 2.46                     | 0.51              |
| 1:DL:63:PRO:O     | 1:DL:67:SER:OG     | 2.23                     | 0.51              |
| 2:DO:78:TYR:O     | 2:DO:82:ILE:HG12   | 2.11                     | 0.51              |
| 9:EA:126:PRO:HD3  | 11:EA:400:45D:H211 | 1.93                     | 0.51              |
| 3:AE:58:LEU:HD22  | 3:AE:129:ALA:CB    | 2.36                     | 0.51              |
| 1:AH:27:LYS:HG3   | 2:AI:35:GLU:OE1    | 2.11                     | 0.51              |
| 1:AX:122:PRO:O    | 1:AX:126:VAL:HG23  | 2.11                     | 0.51              |
| 1:AZ:71:ASN:HD22  | 1:AZ:121:THR:HA    | 1.76                     | 0.51              |
| 6:BD:137:ARG:HD3  | 6:BD:138:PRO:O     | 2.10                     | 0.51              |
| 1:BI:89:LEU:O     | 1:BI:93:THR:HG23   | 2.11                     | 0.51              |
| 2:BL:79:ALA:HA    | 2:BL:82:ILE:HG12   | 1.91                     | 0.51              |
| 1:BR:18:LEU:CD1   | 4:BS:98:ILE:HD12   | 2.41                     | 0.51              |
| 1:BR:88:TYR:O     | 1:BR:92:VAL:HG23   | 2.11                     | 0.51              |
| 1:BX:128:GLN:O    | 1:BX:132:GLU:HG2   | 2.11                     | 0.51              |
| 1:BZ:71:ASN:HD21  | 10:BZ:200:CYC:HBD2 | 1.76                     | 0.51              |
| 1:CC:126:VAL:HG22 | 10:CC:200:CYC:HMC3 | 1.92                     | 0.51              |
| 6:CM:268:ALA:HB3  | 6:CM:270:LYS:NZ    | 2.26                     | 0.51              |
| 6:CM:447:TYR:CE1  | 10:CM:901:CYC:HAA1 | 2.46                     | 0.51              |
| 9:CQ:21:VAL:HB    | 9:CQ:22:PRO:HD3    | 1.93                     | 0.51              |
| 9:CQ:274:GLN:HA   | 9:CQ:282:VAL:HA    | 1.92                     | 0.51              |
| 9:CQ:284:MET:SD   | 9:CQ:307:ALA:HA    | 2.51                     | 0.51              |
| 2:CS:28:LYS:HE2   | 2:CS:28:LYS:HA     | 1.93                     | 0.51              |
| 2:CS:109:LEU:CD1  | 2:CS:159:GLY:HA3   | 2.41                     | 0.51              |
| 1:CY:85:MET:HG2   | 10:CY:200:CYC:HBC1 | 1.93                     | 0.51              |
| 1:DA:47:ARG:O     | 1:DA:51:VAL:HG23   | 2.11                     | 0.51              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 9:DI:266:GLN:HA   | 9:DI:290:PHE:O     | 2.10                     | 0.51              |
| 1:DJ:104:ILE:HG22 | 1:DJ:109:LEU:HD23  | 1.93                     | 0.51              |
| 2:DK:20:ASP:O     | 2:DK:24:MET:HG2    | 2.11                     | 0.51              |
| 2:DK:51:ILE:HG23  | 2:DK:136:VAL:CB    | 2.34                     | 0.51              |
| 2:DT:52:VAL:HA    | 2:DT:133:ILE:HD11  | 1.93                     | 0.51              |
| 1:AA:23:LEU:HD13  | 2:AB:42:SER:OG     | 2.11                     | 0.50              |
| 1:AA:98:SER:HA    | 2:AB:5:ILE:HG21    | 1.92                     | 0.50              |
| 2:AD:137:THR:O    | 2:AD:141:VAL:HG22  | 2.11                     | 0.50              |
| 2:AF:63:SER:H     | 2:AF:66:THR:CG2    | 2.24                     | 0.50              |
| 6:BD:597:TYR:CB   | 6:BD:600:LYS:HD2   | 2.39                     | 0.50              |
| 7:BF:111:LYS:O    | 7:BF:115:ARG:HG3   | 2.11                     | 0.50              |
| 9:BH:248:LEU:HD13 | 9:BH:250:LEU:HD21  | 1.93                     | 0.50              |
| 10:BL:200:CYC:O1A | 5:CJ:12:SER:N      | 2.31                     | 0.50              |
| 1:BP:44:THR:O     | 1:BP:47:ARG:HG2    | 2.11                     | 0.50              |
| 1:BR:89:LEU:O     | 1:BR:93:THR:HG23   | 2.11                     | 0.50              |
| 4:BS:72:ASN:ND2   | 4:BS:122:VAL:HA    | 2.24                     | 0.50              |
| 2:BY:52:VAL:HG21  | 2:BY:86:ASP:OD1    | 2.11                     | 0.50              |
| 1:BZ:82:LEU:HD13  | 8:CP:221:MET:SD    | 2.51                     | 0.50              |
| 2:CF:3:ASP:CB     | 2:CF:98:ALA:HB1    | 2.41                     | 0.50              |
| 6:CM:799:LYS:HB2  | 6:CM:883:LEU:HD21  | 1.92                     | 0.50              |
| 2:CS:61:LEU:HD22  | 10:CT:200:CYC:HBA1 | 1.93                     | 0.50              |
| 1:CT:137:ALA:O    | 1:CT:141:MET:HG2   | 2.11                     | 0.50              |
| 2:CZ:129:ALA:O    | 2:CZ:133:ILE:HG13  | 2.11                     | 0.50              |
| 1:DL:68:PRO:HA    | 1:DL:73:TYR:CG     | 2.45                     | 0.50              |
| 2:DM:36:LEU:HD13  | 2:DM:144:ASP:OD2   | 2.11                     | 0.50              |
| 1:DN:141:MET:HE2  | 1:DN:146:ALA:HA    | 1.94                     | 0.50              |
| 2:DR:50:THR:HG22  | 2:DR:54:GLU:OE1    | 2.10                     | 0.50              |
| 2:AF:96:MET:CB    | 2:AF:149:MET:HE1   | 2.41                     | 0.50              |
| 1:AN:11:ALA:HB2   | 1:AN:18:LEU:HD23   | 1.93                     | 0.50              |
| 1:AP:53:GLN:O     | 1:AP:57:ARG:HG3    | 2.10                     | 0.50              |
| 2:AS:20:ASP:O     | 2:AS:24:MET:HG2    | 2.11                     | 0.50              |
| 1:AV:105:GLU:HA   | 1:AV:109:LEU:HB2   | 1.94                     | 0.50              |
| 1:AV:122:PRO:HG2  | 1:AV:125:ALA:CB    | 2.41                     | 0.50              |
| 2:AW:56:VAL:O     | 2:AW:61:LEU:HG     | 2.11                     | 0.50              |
| 2:AW:127:VAL:HG22 | 2:AW:157:CYS:SG    | 2.51                     | 0.50              |
| 1:AZ:101:VAL:HG12 | 1:AZ:152:TYR:HD1   | 1.77                     | 0.50              |
| 6:BD:20:VAL:HB    | 6:BD:21:PRO:HD3    | 1.93                     | 0.50              |
| 6:BD:33:ARG:NH1   | 6:BD:36:GLU:HG2    | 2.26                     | 0.50              |
| 6:BD:401:LEU:HD13 | 6:BD:411:TRP:CH2   | 2.46                     | 0.50              |
| 6:BD:526:LYS:HD3  | 6:BD:533:LYS:HE2   | 1.93                     | 0.50              |
| 6:BD:574:SER:HB2  | 6:BD:651:GLU:O     | 2.11                     | 0.50              |

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| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:BI:23:LEU:HD13   | 2:BJ:42:SER:OG    | 2.11                     | 0.50              |
| 1:BI:152:TYR:O     | 1:BI:156:VAL:HG23 | 2.11                     | 0.50              |
| 1:BK:76:GLU:O      | 1:BK:80:THR:HG23  | 2.11                     | 0.50              |
| 1:BK:105:GLU:HG2   | 1:BK:109:LEU:CD2  | 2.41                     | 0.50              |
| 1:BR:92:VAL:O      | 1:BR:96:VAL:HG23  | 2.11                     | 0.50              |
| 1:BX:18:LEU:HD22   | 2:BY:97:LEU:HD13  | 1.93                     | 0.50              |
| 1:BZ:39:ILE:HD11   | 1:BZ:148:GLU:OE2  | 2.10                     | 0.50              |
| 1:CG:90:ARG:NH1    | 2:CH:16:GLY:HA2   | 2.26                     | 0.50              |
| 6:CM:515:LEU:HD11  | 6:CM:568:LEU:HD11 | 1.94                     | 0.50              |
| 6:CM:743:TYR:OH    | 6:CM:760:PHE:HB2  | 2.10                     | 0.50              |
| 6:CM:881:LYS:NZ    | 2:DR:106:GLU:OE2  | 2.43                     | 0.50              |
| 9:CQ:229:ARG:HG2   | 9:DI:227:PHE:CB   | 2.41                     | 0.50              |
| 1:CR:82:LEU:HB2    | 8:DZ:242:ILE:HG12 | 1.93                     | 0.50              |
| 2:CS:61:LEU:HD22   | 10:CT:200:CYC:CBA | 2.41                     | 0.50              |
| 1:CT:5:THR:HG23    | 2:CU:1:MET:CE     | 2.41                     | 0.50              |
| 1:CV:128:GLN:NE2   | 1:CV:132:GLU:OE2  | 2.39                     | 0.50              |
| 2:CW:43:VAL:O      | 2:CW:46:ALA:HB3   | 2.12                     | 0.50              |
| 2:CW:119:LEU:HD21  | 5:DF:33:TYR:HE2   | 1.76                     | 0.50              |
| 1:DA:103:PRO:O     | 1:DA:107:ILE:HG13 | 2.11                     | 0.50              |
| 2:DB:64:ASP:OD1    | 2:DB:64:ASP:N     | 2.45                     | 0.50              |
| 8:DH:203:PHE:CZ    | 8:DY:219:LEU:HD13 | 2.46                     | 0.50              |
| 8:DH:216:MET:CE    | 8:DY:204:ILE:HD11 | 2.41                     | 0.50              |
| 1:DL:137:ALA:O     | 1:DL:141:MET:HE2  | 2.10                     | 0.50              |
| 1:DN:37:LEU:HD23   | 2:DO:28:LYS:HE3   | 1.93                     | 0.50              |
| 10:DQ:200:CYC:HBA2 | 2:DV:61:LEU:HD22  | 1.93                     | 0.50              |
| 2:DR:73:TYR:O      | 2:DR:74:THR:OG1   | 2.24                     | 0.50              |
| 2:DR:94:TYR:HB3    | 2:DR:103:ILE:HD13 | 1.93                     | 0.50              |
| 2:DV:55:ALA:HB2    | 2:DV:133:ILE:HD13 | 1.93                     | 0.50              |
| 5:DX:3:MET:HG2     | 5:DX:32:PRO:HA    | 1.92                     | 0.50              |
| 2:AB:95:ALA:HB2    | 2:AB:104:LEU:HG   | 1.94                     | 0.50              |
| 2:AF:44:ILE:HG21   | 2:AF:93:THR:OG1   | 2.12                     | 0.50              |
| 1:AH:89:LEU:HB2    | 1:AH:133:MET:HE1  | 1.93                     | 0.50              |
| 4:AK:40:ALA:O      | 4:AK:44:ILE:HG12  | 2.10                     | 0.50              |
| 2:AL:3:ASP:H       | 2:AL:6:THR:HG22   | 1.76                     | 0.50              |
| 2:AS:90:ARG:NH1    | 2:AS:94:TYR:OH    | 2.37                     | 0.50              |
| 2:AS:119:LEU:CB    | 2:AS:121:VAL:HG23 | 2.41                     | 0.50              |
| 1:AZ:144:ASP:H     | 2:BN:39:ARG:NH2   | 2.09                     | 0.50              |
| 5:BA:5:ARG:HB2     | 5:BA:56:ALA:HB2   | 1.93                     | 0.50              |
| 9:BH:216:LEU:O     | 9:BH:298:ILE:HG22 | 2.11                     | 0.50              |
| 9:BH:280:GLY:HA3   | 9:BH:284:MET:CG   | 2.41                     | 0.50              |
| 1:BI:35:ALA:HA     | 1:BI:38:ARG:NH1   | 2.25                     | 0.50              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:BK:132:GLU:HA   | 1:BK:135:GLU:OE1   | 2.11                     | 0.50              |
| 3:BM:35:GLN:O     | 3:BM:39:ILE:HG12   | 2.11                     | 0.50              |
| 1:BR:8:ILE:HD13   | 4:BS:1:MET:HE3     | 1.93                     | 0.50              |
| 1:BV:92:VAL:HG11  | 1:BV:153:PHE:CE2   | 2.46                     | 0.50              |
| 1:CC:23:LEU:CD2   | 2:CD:38:VAL:HG13   | 2.42                     | 0.50              |
| 1:CE:98:SER:HB3   | 2:CF:9:ILE:HD11    | 1.94                     | 0.50              |
| 2:CF:78:TYR:CD1   | 1:CG:115:MET:HG3   | 2.46                     | 0.50              |
| 1:CT:153:PHE:O    | 1:CT:157:ILE:HG12  | 2.10                     | 0.50              |
| 2:CW:36:LEU:HD21  | 2:CW:145:ALA:HB2   | 1.91                     | 0.50              |
| 2:CW:114:GLU:CG   | 5:DF:53:VAL:HG12   | 2.41                     | 0.50              |
| 1:CY:49:THR:O     | 1:CY:53:GLN:HG3    | 2.11                     | 0.50              |
| 1:CY:79:ALA:HB3   | 8:DH:203:PHE:CE1   | 2.47                     | 0.50              |
| 2:CZ:47:ASN:ND2   | 2:CZ:140:LEU:HD13  | 2.27                     | 0.50              |
| 1:DA:5:THR:HG23   | 2:DB:1:MET:SD      | 2.52                     | 0.50              |
| 2:DD:148:GLU:O    | 2:DD:151:VAL:HG12  | 2.11                     | 0.50              |
| 5:DF:59:ARG:O     | 5:DF:62:THR:HG23   | 2.12                     | 0.50              |
| 9:DI:40:ILE:HG13  | 11:DI:400:45D:H371 | 1.92                     | 0.50              |
| 1:DJ:126:VAL:CG2  | 10:DJ:200:CYC:HMC3 | 2.41                     | 0.50              |
| 1:DS:18:LEU:HD22  | 2:DT:97:LEU:CD2    | 2.41                     | 0.50              |
| 1:DS:63:PRO:HD2   | 9:EA:55:ALA:HB1    | 1.93                     | 0.50              |
| 2:DV:123:ILE:O    | 2:DV:126:THR:OG1   | 2.24                     | 0.50              |
| 9:EA:248:LEU:O    | 9:EA:249:LYS:HE2   | 2.10                     | 0.50              |
| 1:AA:90:ARG:HD3   | 2:AB:18:TYR:CD1    | 2.46                     | 0.50              |
| 2:AD:61:LEU:HB3   | 2:AD:62:TYR:CD1    | 2.47                     | 0.50              |
| 2:AF:119:LEU:HG   | 5:BA:4:PHE:HZ      | 1.75                     | 0.50              |
| 1:AH:110:VAL:HG11 | 2:AL:76:ARG:HG3    | 1.92                     | 0.50              |
| 2:AI:63:SER:HB3   | 6:BD:682:ARG:HB2   | 1.93                     | 0.50              |
| 2:AL:97:LEU:HD13  | 6:BD:43:LEU:CD1    | 2.41                     | 0.50              |
| 1:AN:83:ARG:HA    | 7:BF:110:PHE:CZ    | 2.47                     | 0.50              |
| 2:AY:85:LEU:HG    | 10:AY:200:CYC:HBC1 | 1.93                     | 0.50              |
| 2:AY:96:MET:HG3   | 2:AY:148:GLU:OE1   | 2.12                     | 0.50              |
| 1:AZ:6:LYS:NZ     | 1:AZ:102:THR:OG1   | 2.44                     | 0.50              |
| 6:BD:452:ASP:OD1  | 6:BD:607:ARG:NH2   | 2.45                     | 0.50              |
| 9:BH:248:LEU:HA   | 9:BH:275:THR:CG2   | 2.37                     | 0.50              |
| 1:BK:20:PRO:HD2   | 6:CM:171:ASP:OD1   | 2.12                     | 0.50              |
| 1:BR:84:ASP:OD2   | 10:BR:200:CYC:ND   | 2.42                     | 0.50              |
| 2:BY:50:THR:O     | 2:BY:54:GLU:HG2    | 2.11                     | 0.50              |
| 1:CC:7:SER:HB2    | 1:CC:18:LEU:CD1    | 2.41                     | 0.50              |
| 2:CD:132:ALA:HA   | 2:CD:135:GLU:OE1   | 2.12                     | 0.50              |
| 1:CG:67:SER:O     | 1:CG:73:TYR:HB2    | 2.11                     | 0.50              |
| 6:CM:86:GLU:OE1   | 6:CM:154:ARG:HB2   | 2.11                     | 0.50              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 6:CM:156:MET:HB3   | 6:CM:202:MET:CE    | 2.41                     | 0.50              |
| 6:CM:238:ASN:HB2   | 6:CM:252:GLU:OE2   | 2.11                     | 0.50              |
| 7:CO:114:ALA:HA    | 7:CO:117:VAL:CG1   | 2.42                     | 0.50              |
| 1:CR:87:TYR:HA     | 1:CR:90:ARG:NH1    | 2.26                     | 0.50              |
| 1:CR:105:GLU:HG3   | 1:CR:155:PHE:HZ    | 1.77                     | 0.50              |
| 1:CT:91:LEU:HD21   | 1:CT:107:ILE:CG2   | 2.42                     | 0.50              |
| 1:CV:131:ARG:O     | 1:CV:134:LYS:HB3   | 2.12                     | 0.50              |
| 2:CZ:2:GLN:O       | 2:CZ:100:ASP:HB3   | 2.12                     | 0.50              |
| 2:DB:36:LEU:HD21   | 2:DB:145:ALA:HA    | 1.93                     | 0.50              |
| 1:DC:71:ASN:HD21   | 10:DC:200:CYC:HBD2 | 1.76                     | 0.50              |
| 9:DI:148:GLY:O     | 9:DI:151:ILE:HG22  | 2.11                     | 0.50              |
| 2:DM:64:ASP:OD1    | 2:DM:64:ASP:N      | 2.45                     | 0.50              |
| 1:DQ:101:VAL:HG21  | 1:DQ:155:PHE:CZ    | 2.46                     | 0.50              |
| 2:DR:1:MET:HE3     | 2:DR:103:ILE:HB    | 1.92                     | 0.50              |
| 1:DS:130:VAL:HA    | 1:DS:133:MET:CE    | 2.41                     | 0.50              |
| 2:DT:71:ASN:HB3    | 10:DT:200:CYC:OC   | 2.10                     | 0.50              |
| 9:EA:63:LEU:HD11   | 9:EA:105:ILE:HG21  | 1.92                     | 0.50              |
| 9:EA:223:LEU:HB3   | 9:EA:231:ILE:CG2   | 2.41                     | 0.50              |
| 1:AC:132:GLU:HA    | 1:AC:135:GLU:OE1   | 2.12                     | 0.50              |
| 2:AD:105:ASP:OD1   | 2:AD:109:LEU:HD22  | 2.12                     | 0.50              |
| 2:AD:107:ARG:CD    | 6:BD:270:LYS:HE3   | 2.40                     | 0.50              |
| 4:AK:68:ARG:HD2    | 7:BF:105:PRO:HG2   | 1.94                     | 0.50              |
| 2:AL:81:CYS:HA     | 10:AL:200:CYC:HBC3 | 1.92                     | 0.50              |
| 1:AN:87:TYR:HB3    | 10:AN:200:CYC:HBB3 | 1.94                     | 0.50              |
| 1:AN:90:ARG:NH2    | 2:AS:73:TYR:OH     | 2.45                     | 0.50              |
| 1:AN:102:THR:HA    | 1:AN:105:GLU:CG    | 2.40                     | 0.50              |
| 2:AO:134:LYS:CA    | 2:AO:153:LEU:HD13  | 2.42                     | 0.50              |
| 2:AW:44:ILE:HG21   | 2:AW:93:THR:OG1    | 2.12                     | 0.50              |
| 1:AX:27:LYS:O      | 1:AX:31:THR:HG23   | 2.12                     | 0.50              |
| 1:BK:131:ARG:HE    | 1:BK:157:ILE:HG21  | 1.75                     | 0.50              |
| 2:BL:37:ARG:NH2    | 2:BL:99:GLY:HA2    | 2.26                     | 0.50              |
| 10:BQ:200:CYC:OB   | 6:CM:339:ASN:HB2   | 2.11                     | 0.50              |
| 4:BS:51:ILE:HD13   | 4:BS:138:ILE:CD1   | 2.41                     | 0.50              |
| 2:BT:1:MET:HE3     | 6:CM:25:ILE:HB     | 1.94                     | 0.50              |
| 2:BY:100:ASP:OD1   | 2:BY:102:SER:N     | 2.44                     | 0.50              |
| 10:CD:200:CYC:HMD1 | 10:CD:200:CYC:HBD2 | 1.94                     | 0.50              |
| 2:CF:73:TYR:OH     | 1:CG:90:ARG:NH2    | 2.43                     | 0.50              |
| 2:CH:78:TYR:O      | 2:CH:82:ILE:HG12   | 2.11                     | 0.50              |
| 6:CM:152:SER:OG    | 10:CM:902:CYC:H3C  | 2.12                     | 0.50              |
| 6:CM:691:PHE:CB    | 1:DU:82:LEU:HB2    | 2.41                     | 0.50              |
| 9:CQ:290:PHE:CD2   | 9:CQ:298:ILE:HD13  | 2.47                     | 0.50              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:CR:132:GLU:HA   | 1:CR:135:GLU:OE1   | 2.11                     | 0.50              |
| 2:CU:50:THR:O     | 2:CU:53:LYS:HB3    | 2.12                     | 0.50              |
| 2:CU:103:ILE:CD1  | 2:CU:107:ARG:HG3   | 2.42                     | 0.50              |
| 1:CY:134:LYS:HB2  | 1:CY:153:PHE:HB3   | 1.93                     | 0.50              |
| 2:CZ:87:TYR:CG    | 10:CZ:200:CYC:HBB3 | 2.46                     | 0.50              |
| 1:DA:33:GLY:HA3   | 2:DB:31:PHE:CE2    | 2.47                     | 0.50              |
| 9:DI:28:PHE:CD2   | 9:DI:39:LEU:HD23   | 2.47                     | 0.50              |
| 1:DL:68:PRO:HG3   | 1:DL:73:TYR:CE1    | 2.46                     | 0.50              |
| 1:DL:141:MET:HB2  | 1:DL:146:ALA:HB2   | 1.92                     | 0.50              |
| 2:DM:10:ASN:O     | 2:DM:14:VAL:HG13   | 2.10                     | 0.50              |
| 2:DM:126:THR:O    | 2:DM:130:ILE:HG12  | 2.12                     | 0.50              |
| 1:DN:83:ARG:NH1   | 10:DN:200:CYC:O2A  | 2.40                     | 0.50              |
| 1:DQ:27:LYS:HD3   | 2:DR:38:VAL:HG11   | 1.94                     | 0.50              |
| 1:DQ:33:GLY:O     | 1:DQ:37:LEU:HD23   | 2.12                     | 0.50              |
| 2:DR:8:VAL:CG1    | 2:DR:23:ALA:HB1    | 2.40                     | 0.50              |
| 2:AD:3:ASP:HB3    | 2:AD:98:ALA:O      | 2.12                     | 0.50              |
| 2:AD:50:THR:O     | 2:AD:54:GLU:HG2    | 2.10                     | 0.50              |
| 1:AJ:29:PHE:HA    | 1:AJ:36:ARG:HH21   | 1.76                     | 0.50              |
| 1:AN:26:ILE:O     | 1:AN:30:VAL:HG13   | 2.11                     | 0.50              |
| 1:AN:87:TYR:CD2   | 10:AN:200:CYC:HBB3 | 2.47                     | 0.50              |
| 1:AP:142:SER:HB2  | 2:DT:39:ARG:NH1    | 2.27                     | 0.50              |
| 2:AU:104:LEU:HD13 | 2:AU:156:ILE:HG13  | 1.94                     | 0.50              |
| 1:AV:50:ILE:HD13  | 1:AV:136:VAL:HG12  | 1.93                     | 0.50              |
| 1:AV:132:GLU:O    | 1:AV:136:VAL:HG23  | 2.12                     | 0.50              |
| 5:BA:9:CYS:HA     | 5:BA:25:THR:O      | 2.11                     | 0.50              |
| 6:BD:826:LEU:HD23 | 6:BD:830:GLY:O     | 2.11                     | 0.50              |
| 6:BD:891:VAL:HG21 | 2:DB:105:ASP:OD1   | 2.12                     | 0.50              |
| 9:BH:193:VAL:CG2  | 9:BH:255:GLY:HA3   | 2.42                     | 0.50              |
| 9:BH:273:VAL:O    | 9:BH:282:VAL:HA    | 2.12                     | 0.50              |
| 1:BK:87:TYR:O     | 1:BK:91:LEU:HG     | 2.12                     | 0.50              |
| 3:BM:92:VAL:HG11  | 3:BM:153:PHE:CE2   | 2.47                     | 0.50              |
| 2:BT:2:GLN:HB2    | 2:BT:6:THR:HG21    | 1.93                     | 0.50              |
| 2:BT:8:VAL:CG1    | 2:BT:23:ALA:HB1    | 2.41                     | 0.50              |
| 2:BT:42:SER:OG    | 6:CM:40:LEU:HD13   | 2.12                     | 0.50              |
| 1:BZ:87:TYR:O     | 1:BZ:91:LEU:HG     | 2.11                     | 0.50              |
| 1:CC:13:ALA:HA    | 5:CK:45:LYS:NZ     | 2.26                     | 0.50              |
| 1:CC:156:VAL:O    | 1:CC:160:MET:HG2   | 2.12                     | 0.50              |
| 2:CD:147:LYS:O    | 2:CD:151:VAL:HG23  | 2.12                     | 0.50              |
| 1:CE:27:LYS:O     | 1:CE:31:THR:HG23   | 2.11                     | 0.50              |
| 1:CE:30:VAL:HA    | 2:CF:31:PHE:HD1    | 1.76                     | 0.50              |
| 2:CF:126:THR:O    | 2:CF:130:ILE:HG13  | 2.11                     | 0.50              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:CH:72:MET:HG3   | 2:CH:78:TYR:HA    | 1.94                     | 0.50              |
| 2:CH:137:THR:O    | 2:CH:141:VAL:HG22 | 2.12                     | 0.50              |
| 6:CM:277:GLU:O    | 6:CM:281:VAL:HG23 | 2.12                     | 0.50              |
| 6:CM:612:ARG:NH2  | 6:CM:644:GLU:OE1  | 2.44                     | 0.50              |
| 9:CQ:280:GLY:HA3  | 9:CQ:284:MET:CG   | 2.41                     | 0.50              |
| 2:CS:5:ILE:O      | 2:CS:9:ILE:HG12   | 2.12                     | 0.50              |
| 2:CS:47:ASN:HB2   | 2:CS:51:ILE:HD11  | 1.92                     | 0.50              |
| 1:CY:18:LEU:HD12  | 1:CY:22:GLU:CB    | 2.41                     | 0.50              |
| 1:CY:53:GLN:HB3   | 1:CY:57:ARG:HH22  | 1.76                     | 0.50              |
| 5:DF:27:PHE:HE2   | 5:DF:29:LYS:HE3   | 1.75                     | 0.50              |
| 1:DN:50:ILE:HG12  | 1:DN:140:LEU:HD21 | 1.93                     | 0.50              |
| 1:DS:62:ARG:O     | 1:DS:65:ILE:HG12  | 2.11                     | 0.50              |
| 1:DS:76:GLU:HB2   | 8:DY:203:PHE:HD2  | 1.77                     | 0.50              |
| 1:DU:85:MET:HB3   | 1:DU:133:MET:HE2  | 1.93                     | 0.50              |
| 2:DV:64:ASP:O     | 2:DV:67:ARG:HG2   | 2.11                     | 0.50              |
| 9:EA:25:ILE:HD12  | 9:EA:156:ASN:HB2  | 1.92                     | 0.50              |
| 9:EA:214:ILE:HD13 | 9:EA:238:LEU:HB2  | 1.93                     | 0.50              |
| 3:AE:47:GLU:HG2   | 3:AE:89:LEU:CD2   | 2.42                     | 0.50              |
| 2:AF:96:MET:HB2   | 2:AF:149:MET:HE1  | 1.92                     | 0.50              |
| 10:AH:200:CYC:CAA | 2:AL:61:LEU:HD22  | 2.42                     | 0.50              |
| 2:AL:106:GLU:CG   | 2:AL:107:ARG:HG2  | 2.41                     | 0.50              |
| 2:AQ:110:ASN:ND2  | 6:BD:668:ARG:HG2  | 2.22                     | 0.50              |
| 2:AY:96:MET:HG3   | 2:AY:148:GLU:OE2  | 2.12                     | 0.50              |
| 5:BA:7:THR:HB     | 5:BA:52:LYS:HB3   | 1.93                     | 0.50              |
| 5:BB:30:LEU:N     | 6:BD:572:ASP:O    | 2.42                     | 0.50              |
| 6:BD:782:GLY:HA3  | 6:BD:835:ILE:HG21 | 1.94                     | 0.50              |
| 6:BD:788:MET:O    | 6:BD:793:ALA:N    | 2.36                     | 0.50              |
| 6:BD:842:MET:O    | 6:BD:846:GLN:HG2  | 2.10                     | 0.50              |
| 9:BH:76:PRO:CB    | 9:BH:123:ALA:HB2  | 2.40                     | 0.50              |
| 1:BK:5:THR:HG22   | 2:BL:3:ASP:OD2    | 2.11                     | 0.50              |
| 1:BK:39:ILE:HG23  | 1:BK:145:ASP:OD1  | 2.12                     | 0.50              |
| 2:BL:57:ALA:HA    | 2:BL:61:LEU:CD1   | 2.42                     | 0.50              |
| 10:BN:200:CYC:CGA | 5:CJ:37:PHE:HB2   | 2.41                     | 0.50              |
| 2:BQ:53:LYS:HG3   | 1:BR:118:SER:O    | 2.12                     | 0.50              |
| 2:BQ:65:VAL:HG12  | 2:BQ:72:MET:HB2   | 1.93                     | 0.50              |
| 1:BV:92:VAL:HG21  | 1:BV:153:PHE:CE1  | 2.46                     | 0.50              |
| 1:CE:64:ASP:HA    | 1:CE:67:SER:HB2   | 1.94                     | 0.50              |
| 1:CG:61:LYS:HG2   | 9:CQ:57:GLY:CA    | 2.42                     | 0.50              |
| 6:CM:269:MET:HE3  | 6:CM:309:VAL:HG12 | 1.92                     | 0.50              |
| 6:CM:689:PRO:HB2  | 6:CM:692:VAL:HG23 | 1.93                     | 0.50              |
| 9:CQ:298:ILE:HD11 | 9:CQ:300:PHE:O    | 2.12                     | 0.50              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:CR:77:MET:HA     | 1:CR:80:THR:CG2    | 2.42                     | 0.50              |
| 2:CS:78:TYR:CE1    | 1:CT:115:MET:HG3   | 2.47                     | 0.50              |
| 2:CU:23:ALA:O      | 2:CU:27:LEU:HD23   | 2.12                     | 0.50              |
| 2:CU:73:TYR:O      | 2:CU:74:THR:OG1    | 2.23                     | 0.50              |
| 1:CV:126:VAL:HG23  | 10:CV:200:CYC:HMC3 | 1.94                     | 0.50              |
| 2:CW:46:ALA:HB2    | 1:DA:154:ASP:OD2   | 2.11                     | 0.50              |
| 1:CY:47:ARG:HA     | 1:CY:50:ILE:HG22   | 1.94                     | 0.50              |
| 1:CY:115:MET:HE1   | 2:DD:79:ALA:CA     | 2.42                     | 0.50              |
| 9:DI:99:ALA:HB1    | 9:DI:164:THR:HG22  | 1.94                     | 0.50              |
| 1:DL:81:CYS:O      | 1:DL:85:MET:HG3    | 2.11                     | 0.50              |
| 1:DS:76:GLU:HB2    | 8:DY:203:PHE:CE2   | 2.47                     | 0.50              |
| 9:EA:42:PHE:O      | 9:EA:46:GLU:HG2    | 2.12                     | 0.50              |
| 9:EA:138:VAL:O     | 9:EA:142:ILE:HG12  | 2.11                     | 0.50              |
| 9:EA:177:VAL:HG23  | 11:EA:400:45D:O01  | 2.12                     | 0.50              |
| 9:EA:213:LEU:HB3   | 9:EA:217:PHE:CE2   | 2.47                     | 0.50              |
| 9:EA:286:ILE:HD11  | 9:EA:303:ILE:CG2   | 2.41                     | 0.50              |
| 2:AB:96:MET:HA     | 2:AB:152:TYR:CE2   | 2.47                     | 0.50              |
| 2:AD:47:ASN:O      | 2:AD:51:ILE:HD12   | 2.11                     | 0.50              |
| 3:AE:2:SER:OG      | 2:AF:3:ASP:OD2     | 2.30                     | 0.50              |
| 3:AE:112:VAL:O     | 3:AE:115:MET:HB3   | 2.12                     | 0.50              |
| 2:AF:76:ARG:NH2    | 5:BA:66:LEU:HD21   | 2.27                     | 0.50              |
| 10:AJ:200:CYC:HMA1 | 10:AJ:200:CYC:NB   | 2.25                     | 0.50              |
| 4:AK:73:ALA:HA     | 4:AK:78:ARG:HB3    | 1.94                     | 0.50              |
| 1:AN:105:GLU:HA    | 1:AN:109:LEU:CB    | 2.36                     | 0.50              |
| 1:AN:126:VAL:O     | 1:AN:130:VAL:HG23  | 2.11                     | 0.50              |
| 2:AO:37:ARG:NH1    | 2:AO:148:GLU:OE2   | 2.45                     | 0.50              |
| 1:AP:14:GLU:HA     | 6:BD:548:ARG:NH2   | 2.27                     | 0.50              |
| 2:AQ:127:VAL:O     | 2:AQ:131:GLN:HG2   | 2.11                     | 0.50              |
| 1:AR:68:PRO:HA     | 1:AR:73:TYR:CD2    | 2.46                     | 0.50              |
| 2:AW:77:ARG:HG2    | 10:AW:200:CYC:HAD1 | 1.94                     | 0.50              |
| 2:AW:123:ILE:O     | 2:AW:127:VAL:HG23  | 2.12                     | 0.50              |
| 6:BD:36:GLU:O      | 6:BD:40:LEU:HG     | 2.12                     | 0.50              |
| 1:BI:128:GLN:O     | 1:BI:132:GLU:HG2   | 2.12                     | 0.50              |
| 2:BJ:60:LEU:HD13   | 2:BJ:72:MET:SD     | 2.51                     | 0.50              |
| 2:BL:11:SER:O      | 2:BL:14:VAL:HG22   | 2.11                     | 0.50              |
| 2:BL:78:TYR:O      | 2:BL:82:ILE:HG23   | 2.12                     | 0.50              |
| 2:BN:112:LEU:HD11  | 2:BN:116:TYR:CZ    | 2.47                     | 0.50              |
| 1:BP:90:ARG:O      | 1:BP:93:THR:OG1    | 2.26                     | 0.50              |
| 1:BP:112:VAL:CG2   | 2:BT:75:THR:HG21   | 2.42                     | 0.50              |
| 4:BS:165:SER:OG    | 2:BW:14:VAL:HG11   | 2.11                     | 0.50              |
| 1:BX:67:SER:O      | 1:BX:73:TYR:HB2    | 2.10                     | 0.50              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:CA:132:ALA:HA    | 2:CA:135:GLU:OE1   | 2.12                     | 0.50              |
| 1:CC:44:THR:O      | 1:CC:47:ARG:HG2    | 2.12                     | 0.50              |
| 2:CD:127:VAL:O     | 2:CD:131:GLN:HG3   | 2.12                     | 0.50              |
| 1:CE:62:ARG:NH1    | 1:CE:124:GLU:HG2   | 2.22                     | 0.50              |
| 1:CE:62:ARG:NH2    | 1:CE:124:GLU:OE2   | 2.44                     | 0.50              |
| 1:CE:91:LEU:HD21   | 1:CE:107:ILE:CG2   | 2.41                     | 0.50              |
| 2:CF:134:LYS:HB2   | 2:CF:153:LEU:HD13  | 1.94                     | 0.50              |
| 6:CM:241:ARG:HG3   | 6:CM:389:TYR:OH    | 2.11                     | 0.50              |
| 6:CM:611:GLY:HA3   | 6:CM:656:TYR:O     | 2.12                     | 0.50              |
| 2:CS:22:ALA:O      | 2:CS:26:LYS:HG2    | 2.12                     | 0.50              |
| 2:DD:58:LYS:HE3    | 2:DD:132:ALA:HB1   | 1.94                     | 0.50              |
| 9:DI:34:GLU:HB2    | 9:DI:174:GLU:HG3   | 1.92                     | 0.50              |
| 9:DI:51:LEU:HD22   | 9:DI:142:ILE:HG22  | 1.94                     | 0.50              |
| 1:DJ:65:ILE:HG22   | 1:DJ:72:ALA:CB     | 2.42                     | 0.50              |
| 1:DL:18:LEU:O      | 1:DL:23:LEU:HG     | 2.12                     | 0.50              |
| 1:AC:56:ASP:OD1    | 1:AC:57:ARG:N      | 2.44                     | 0.50              |
| 2:AF:2:GLN:HB3     | 2:AF:102:SER:OG    | 2.11                     | 0.50              |
| 2:AF:25:ASP:OD1    | 2:AF:26:LYS:N      | 2.45                     | 0.50              |
| 10:AN:200:CYC:HMA1 | 10:AN:200:CYC:NB   | 2.27                     | 0.50              |
| 1:AP:65:ILE:HG13   | 1:AP:66:VAL:HG23   | 1.93                     | 0.50              |
| 1:AR:121:THR:CG2   | 10:AR:200:CYC:HMC3 | 2.41                     | 0.50              |
| 1:AV:37:LEU:HD21   | 2:AW:24:MET:SD     | 2.52                     | 0.50              |
| 6:BD:285:ALA:O     | 6:BD:289:ILE:HG12  | 2.12                     | 0.50              |
| 6:BD:364:TYR:HA    | 6:BD:367:ILE:HD12  | 1.92                     | 0.50              |
| 9:BH:195:ASN:ND2   | 9:BH:267:ILE:HD13  | 2.27                     | 0.50              |
| 1:BK:131:ARG:CG    | 1:BK:157:ILE:HD13  | 2.39                     | 0.50              |
| 2:BN:63:SER:H      | 2:BN:66:THR:CG2    | 2.24                     | 0.50              |
| 2:BQ:2:GLN:HG2     | 2:BQ:6:THR:CG2     | 2.42                     | 0.50              |
| 10:BR:200:CYC:HMA1 | 10:BR:200:CYC:NB   | 2.27                     | 0.50              |
| 2:BT:111:GLY:O     | 2:BT:115:THR:HG22  | 2.12                     | 0.50              |
| 2:BW:50:THR:O      | 2:BW:54:GLU:HG3    | 2.12                     | 0.50              |
| 1:BZ:41:GLU:OE2    | 2:CA:24:MET:HG3    | 2.11                     | 0.50              |
| 2:CA:100:ASP:OD1   | 2:CA:101:ALA:N     | 2.45                     | 0.50              |
| 6:CM:694:LEU:HB3   | 1:DU:83:ARG:HD3    | 1.94                     | 0.50              |
| 8:CP:219:LEU:O     | 8:CP:223:ARG:HG3   | 2.12                     | 0.50              |
| 9:CQ:86:LEU:HD23   | 9:CQ:95:CYS:SG     | 2.52                     | 0.50              |
| 9:CQ:267:ILE:HD12  | 9:CQ:292:LEU:HD12  | 1.94                     | 0.50              |
| 10:CR:200:CYC:HC   | 10:CR:200:CYC:HMD2 | 1.76                     | 0.50              |
| 2:CS:1:MET:SD      | 2:CS:103:ILE:HB    | 2.52                     | 0.50              |
| 1:CY:65:ILE:HG22   | 1:CY:72:ALA:HB3    | 1.94                     | 0.50              |
| 1:CY:79:ALA:HB3    | 8:DH:203:PHE:HE1   | 1.77                     | 0.50              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:CZ:104:LEU:HD13  | 2:CZ:156:ILE:HG13  | 1.94                     | 0.50              |
| 1:DA:61:LYS:O      | 9:DI:57:GLY:N      | 2.42                     | 0.50              |
| 1:DC:84:ASP:OD2    | 10:DC:200:CYC:ND   | 2.44                     | 0.50              |
| 9:DI:222:ALA:O     | 9:DI:300:PHE:HA    | 2.12                     | 0.50              |
| 2:DM:24:MET:O      | 2:DM:28:LYS:HG3    | 2.12                     | 0.50              |
| 2:DV:122:PRO:HG2   | 10:DV:200:CYC:HMC2 | 1.93                     | 0.50              |
| 2:AB:125:SER:HA    | 2:AB:128:GLN:OE1   | 2.12                     | 0.49              |
| 1:AC:117:ARG:HD2   | 1:AH:161:SER:CB    | 2.42                     | 0.49              |
| 2:AD:51:ILE:HA     | 2:AD:136:VAL:HG11  | 1.93                     | 0.49              |
| 3:AE:116:TYR:HD2   | 3:AE:121:VAL:HB    | 1.77                     | 0.49              |
| 1:AH:23:LEU:HD13   | 2:AI:42:SER:OG     | 2.13                     | 0.49              |
| 1:AN:87:TYR:CG     | 10:AN:200:CYC:HBB3 | 2.46                     | 0.49              |
| 1:AN:97:VAL:HG21   | 2:AO:19:LEU:CD1    | 2.41                     | 0.49              |
| 1:AP:57:ARG:O      | 1:AP:61:LYS:HG3    | 2.12                     | 0.49              |
| 10:AP:200:CYC:HMA1 | 10:AP:200:CYC:NB   | 2.26                     | 0.49              |
| 2:AU:127:VAL:O     | 2:AU:131:GLN:HG3   | 2.12                     | 0.49              |
| 2:AW:34:GLY:O      | 2:AW:38:VAL:HG23   | 2.12                     | 0.49              |
| 1:AX:115:MET:HE3   | 10:AX:200:CYC:HMB3 | 1.94                     | 0.49              |
| 2:AY:74:THR:HB     | 2:AY:77:ARG:HG3    | 1.94                     | 0.49              |
| 9:BH:263:GLY:O     | 9:BH:294:PRO:HG3   | 2.12                     | 0.49              |
| 1:BI:75:GLU:OE1    | 1:BI:75:GLU:N      | 2.45                     | 0.49              |
| 1:BK:92:VAL:HG21   | 1:BK:153:PHE:CE1   | 2.47                     | 0.49              |
| 2:BL:65:VAL:C      | 2:BL:72:MET:HB3    | 2.31                     | 0.49              |
| 2:BL:105:ASP:OD1   | 2:BL:109:LEU:HD22  | 2.12                     | 0.49              |
| 2:BN:1:MET:HE2     | 2:BN:103:ILE:HD12  | 1.94                     | 0.49              |
| 2:BN:15:GLN:HB3    | 2:BN:17:LYS:HZ3    | 1.75                     | 0.49              |
| 1:BP:27:LYS:O      | 1:BP:31:THR:HG23   | 2.11                     | 0.49              |
| 1:BV:8:ILE:HB      | 2:BW:1:MET:CE      | 2.42                     | 0.49              |
| 1:BZ:141:MET:CB    | 1:BZ:146:ALA:HB2   | 2.39                     | 0.49              |
| 1:CE:8:ILE:HD12    | 2:CF:94:TYR:CD1    | 2.47                     | 0.49              |
| 1:CE:32:GLY:O      | 1:CE:36:ARG:HG3    | 2.12                     | 0.49              |
| 2:CF:127:VAL:HG22  | 2:CF:157:CYS:SG    | 2.52                     | 0.49              |
| 6:CM:485:ILE:HG21  | 6:CM:665:LEU:HD13  | 1.94                     | 0.49              |
| 6:CM:791:PHE:HA    | 6:CM:795:TYR:HE2   | 1.76                     | 0.49              |
| 8:CP:198:ASN:HA    | 8:CP:201:ARG:NH2   | 2.26                     | 0.49              |
| 2:DB:44:ILE:HG23   | 2:DB:89:LEU:HD21   | 1.94                     | 0.49              |
| 2:DD:85:LEU:CG     | 10:DD:200:CYC:HBC1 | 2.41                     | 0.49              |
| 9:DI:314:ASN:O     | 9:DI:314:ASN:ND2   | 2.41                     | 0.49              |
| 1:DS:50:ILE:HD11   | 1:DS:137:ALA:CA    | 2.42                     | 0.49              |
| 1:DS:111:GLY:HA2   | 1:DS:114:GLU:OE1   | 2.12                     | 0.49              |
| 1:DU:47:ARG:HG3    | 2:DV:18:TYR:CZ     | 2.47                     | 0.49              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:DV:58:LYS:HA    | 8:DZ:206:GLN:CG    | 2.38                     | 0.49              |
| 9:EA:62:GLN:HA    | 9:EA:65:GLU:OE1    | 2.11                     | 0.49              |
| 3:AE:50:ILE:HD11  | 3:AE:140:LEU:CB    | 2.42                     | 0.49              |
| 3:AE:101:LYS:HE3  | 1:AJ:16:ARG:NE     | 2.27                     | 0.49              |
| 1:AJ:81:CYS:HA    | 10:AJ:200:CYC:HHD  | 1.94                     | 0.49              |
| 2:AL:65:VAL:HG12  | 2:AL:72:MET:CB     | 2.42                     | 0.49              |
| 2:AL:87:TYR:CG    | 10:AL:200:CYC:HBB3 | 2.47                     | 0.49              |
| 2:AL:97:LEU:HD12  | 6:BD:35:LEU:HD12   | 1.94                     | 0.49              |
| 1:AP:111:GLY:HA2  | 1:AP:114:GLU:OE1   | 2.12                     | 0.49              |
| 2:AQ:75:THR:HG23  | 1:AR:108:GLY:HA2   | 1.93                     | 0.49              |
| 1:AR:17:TYR:OH    | 2:AS:89:LEU:HG     | 2.11                     | 0.49              |
| 1:AX:27:LYS:HZ3   | 2:AY:35:GLU:HG3    | 1.77                     | 0.49              |
| 2:AY:132:ALA:HA   | 2:AY:135:GLU:OE1   | 2.12                     | 0.49              |
| 6:BD:751:LEU:O    | 6:BD:755:ILE:HG12  | 2.12                     | 0.49              |
| 9:BH:43:ALA:O     | 9:BH:51:LEU:HD12   | 2.12                     | 0.49              |
| 4:BS:113:LEU:HD21 | 10:BS:200:CYC:HMB3 | 1.92                     | 0.49              |
| 2:BY:10:ASN:O     | 2:BY:14:VAL:HG23   | 2.12                     | 0.49              |
| 2:CD:57:ALA:CA    | 2:CD:61:LEU:HD12   | 2.42                     | 0.49              |
| 5:CJ:15:ARG:HH12  | 5:CJ:23:GLN:HE21   | 1.60                     | 0.49              |
| 6:CM:743:TYR:OH   | 6:CM:764:GLU:OE2   | 2.19                     | 0.49              |
| 1:CR:109:LEU:O    | 1:CR:112:VAL:HG12  | 2.12                     | 0.49              |
| 1:CT:78:THR:O     | 1:CT:82:LEU:HG     | 2.12                     | 0.49              |
| 1:DA:63:PRO:O     | 1:DA:67:SER:N      | 2.43                     | 0.49              |
| 2:DB:15:GLN:HG3   | 2:DB:17:LYS:HZ1    | 1.75                     | 0.49              |
| 8:DG:196:TRP:CE3  | 8:DZ:232:ILE:HG21  | 2.47                     | 0.49              |
| 1:DJ:5:THR:HA     | 1:DJ:8:ILE:HG12    | 1.93                     | 0.49              |
| 2:DO:112:LEU:CD2  | 2:DO:160:LEU:HD13  | 2.42                     | 0.49              |
| 2:DR:41:ALA:HB1   | 2:DR:97:LEU:HD11   | 1.94                     | 0.49              |
| 1:DS:89:LEU:O     | 1:DS:93:THR:HG23   | 2.12                     | 0.49              |
| 9:EA:131:LEU:HD23 | 9:EA:136:ASN:HA    | 1.93                     | 0.49              |
| 9:EA:232:VAL:O    | 9:EA:236:ASN:ND2   | 2.31                     | 0.49              |
| 1:AA:51:VAL:HG23  | 1:AA:85:MET:HB3    | 1.93                     | 0.49              |
| 1:AA:76:GLU:O     | 1:AA:80:THR:HG23   | 2.12                     | 0.49              |
| 2:AD:96:MET:HA    | 2:AD:152:TYR:CE2   | 2.48                     | 0.49              |
| 3:AE:7:VAL:CG1    | 3:AE:22:GLU:HB3    | 2.41                     | 0.49              |
| 2:AF:123:ILE:HG23 | 2:AF:160:LEU:CD2   | 2.42                     | 0.49              |
| 2:AU:2:GLN:NE2    | 2:AU:6:THR:HG22    | 2.27                     | 0.49              |
| 2:AU:96:MET:HA    | 2:AU:152:TYR:CE2   | 2.47                     | 0.49              |
| 2:AW:24:MET:HE3   | 2:AW:28:LYS:HD3    | 1.93                     | 0.49              |
| 2:AW:71:ASN:ND2   | 2:AW:122:PRO:HD3   | 2.22                     | 0.49              |
| 1:AX:61:LYS:HG2   | 9:BH:56:PRO:HG2    | 1.94                     | 0.49              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AZ:125:ALA:CB    | 10:AZ:200:CYC:HMC2 | 2.43                     | 0.49              |
| 5:BA:20:ARG:HH21   | 6:BD:389:TYR:HA    | 1.76                     | 0.49              |
| 9:BH:107:LEU:HD23  | 11:BH:400:45D:H141 | 1.94                     | 0.49              |
| 2:BJ:104:LEU:CD1   | 2:BJ:152:TYR:HB3   | 2.43                     | 0.49              |
| 1:BR:65:ILE:HG13   | 1:BR:66:VAL:HG23   | 1.94                     | 0.49              |
| 2:BT:101:ALA:CB    | 2:BT:104:LEU:HD12  | 2.42                     | 0.49              |
| 1:BV:103:PRO:O     | 1:BV:107:ILE:HG12  | 2.13                     | 0.49              |
| 2:BW:74:THR:HG23   | 1:BX:107:ILE:O     | 2.13                     | 0.49              |
| 1:CE:59:PHE:CZ     | 1:CE:78:THR:HG23   | 2.47                     | 0.49              |
| 2:CF:74:THR:OG1    | 2:CF:77:ARG:NH2    | 2.32                     | 0.49              |
| 10:CF:200:CYC:HMA1 | 10:CF:200:CYC:NB   | 2.27                     | 0.49              |
| 6:CM:248:ILE:HG12  | 6:CM:356:SER:HB2   | 1.94                     | 0.49              |
| 1:CR:115:MET:HE1   | 2:CW:75:THR:HG22   | 1.94                     | 0.49              |
| 2:CS:36:LEU:HD21   | 2:CS:145:ALA:HB2   | 1.94                     | 0.49              |
| 2:CZ:35:GLU:O      | 2:CZ:38:VAL:HG12   | 2.13                     | 0.49              |
| 1:DA:61:LYS:HB3    | 9:DI:57:GLY:HA3    | 1.95                     | 0.49              |
| 1:DA:61:LYS:O      | 1:DA:62:ARG:HG2    | 2.12                     | 0.49              |
| 2:DB:66:THR:CG2    | 10:DC:200:CYC:HMA3 | 2.41                     | 0.49              |
| 5:DF:6:ILE:HD13    | 5:DF:36:TRP:CZ3    | 2.46                     | 0.49              |
| 9:DI:248:LEU:O     | 9:DI:249:LYS:HE2   | 2.12                     | 0.49              |
| 2:DK:123:ILE:O     | 2:DK:127:VAL:HG23  | 2.12                     | 0.49              |
| 1:DN:101:VAL:HB    | 1:DN:155:PHE:CE2   | 2.48                     | 0.49              |
| 1:DQ:79:ALA:HB3    | 8:DZ:203:PHE:HE1   | 1.77                     | 0.49              |
| 2:DT:24:MET:O      | 2:DT:28:LYS:HG3    | 2.12                     | 0.49              |
| 1:DU:27:LYS:NZ     | 2:DV:38:VAL:HB     | 2.27                     | 0.49              |
| 9:EA:27:ARG:HA     | 9:EA:30:GLN:OE1    | 2.12                     | 0.49              |
| 9:EA:86:LEU:CD2    | 9:EA:95:CYS:HA     | 2.40                     | 0.49              |
| 2:AB:4:ALA:O       | 2:AB:8:VAL:HG23    | 2.12                     | 0.49              |
| 10:AD:200:CYC:CGA  | 5:BA:12:SER:HB3    | 2.42                     | 0.49              |
| 3:AE:23:LEU:HD13   | 2:AF:42:SER:OG     | 2.12                     | 0.49              |
| 1:AH:102:THR:O     | 1:AH:106:GLU:HG2   | 2.12                     | 0.49              |
| 1:AH:122:PRO:O     | 1:AH:126:VAL:HG23  | 2.11                     | 0.49              |
| 1:AP:89:LEU:HB2    | 1:AP:133:MET:HE1   | 1.94                     | 0.49              |
| 1:AP:115:MET:HE3   | 10:AP:200:CYC:HMB3 | 1.94                     | 0.49              |
| 1:AX:36:ARG:NH2    | 1:AX:99:GLY:HA2    | 2.26                     | 0.49              |
| 1:AX:51:VAL:HG22   | 1:AX:133:MET:CE    | 2.42                     | 0.49              |
| 2:AY:63:SER:O      | 2:AY:66:THR:HG22   | 2.12                     | 0.49              |
| 6:BD:15:GLN:NE2    | 6:BD:18:GLN:HA     | 2.27                     | 0.49              |
| 6:BD:251:LEU:HD11  | 6:BD:407:GLU:HB3   | 1.93                     | 0.49              |
| 7:BF:107:LEU:O     | 7:BF:111:LYS:HG3   | 2.12                     | 0.49              |
| 1:BI:16:ARG:O      | 2:BJ:94:TYR:OH     | 2.30                     | 0.49              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:BJ:61:LEU:HD22   | 10:BK:200:CYC:CAA  | 2.43                     | 0.49              |
| 3:BM:38:ARG:HA     | 3:BM:41:GLU:OE1    | 2.11                     | 0.49              |
| 1:BR:64:ASP:OD1    | 1:BR:64:ASP:N      | 2.43                     | 0.49              |
| 1:BV:49:THR:O      | 1:BV:53:GLN:HG3    | 2.12                     | 0.49              |
| 1:BV:87:TYR:CD2    | 10:BV:200:CYC:HBB3 | 2.47                     | 0.49              |
| 2:CD:44:ILE:CD1    | 2:CD:137:THR:HG23  | 2.40                     | 0.49              |
| 2:CD:64:ASP:HA     | 2:CD:67:ARG:HH11   | 1.77                     | 0.49              |
| 6:CM:55:GLU:O      | 6:CM:59:THR:HG23   | 2.13                     | 0.49              |
| 6:CM:86:GLU:OE2    | 6:CM:150:GLN:HB3   | 2.12                     | 0.49              |
| 6:CM:749:ARG:HH12  | 10:DV:200:CYC:CGA  | 2.25                     | 0.49              |
| 6:CM:791:PHE:HA    | 6:CM:795:TYR:CE2   | 2.47                     | 0.49              |
| 1:CV:41:GLU:HG3    | 2:CW:24:MET:HE2    | 1.94                     | 0.49              |
| 2:CZ:134:LYS:HG3   | 2:CZ:150:GLY:CA    | 2.43                     | 0.49              |
| 1:DA:134:LYS:HD3   | 1:DA:153:PHE:HB3   | 1.94                     | 0.49              |
| 2:DB:22:ALA:O      | 2:DB:26:LYS:HG3    | 2.13                     | 0.49              |
| 2:DB:124:SER:CB    | 2:DT:124:SER:HB2   | 2.36                     | 0.49              |
| 2:DD:5:ILE:HD11    | 2:DD:31:PHE:HE1    | 1.76                     | 0.49              |
| 1:DJ:65:ILE:O      | 1:DJ:72:ALA:HB3    | 2.12                     | 0.49              |
| 1:DJ:118:SER:O     | 2:DO:53:LYS:HG3    | 2.11                     | 0.49              |
| 2:DK:36:LEU:O      | 2:DK:39:ARG:HG3    | 2.12                     | 0.49              |
| 1:DL:64:ASP:O      | 1:DL:70:GLY:HA3    | 2.11                     | 0.49              |
| 1:DN:78:THR:O      | 1:DN:82:LEU:HD23   | 2.11                     | 0.49              |
| 1:DQ:36:ARG:NH1    | 1:DQ:99:GLY:HA2    | 2.27                     | 0.49              |
| 2:DT:115:THR:O     | 2:DT:119:LEU:HD23  | 2.12                     | 0.49              |
| 9:EA:68:LEU:CD1    | 9:EA:112:ARG:HG2   | 2.43                     | 0.49              |
| 9:EA:107:LEU:HD21  | 11:EA:400:45D:H283 | 1.94                     | 0.49              |
| 9:EA:223:LEU:HG    | 9:EA:301:VAL:HG13  | 1.93                     | 0.49              |
| 1:AA:58:LEU:HD22   | 1:AA:129:SER:CB    | 2.37                     | 0.49              |
| 1:AC:127:ALA:O     | 1:AC:131:ARG:HG3   | 2.13                     | 0.49              |
| 2:AI:2:GLN:O       | 2:AI:100:ASP:HB3   | 2.12                     | 0.49              |
| 1:AJ:27:LYS:O      | 1:AJ:31:THR:HG23   | 2.12                     | 0.49              |
| 1:AR:38:ARG:NH1    | 1:AR:145:ASP:OD2   | 2.44                     | 0.49              |
| 2:AS:65:VAL:HG12   | 2:AS:72:MET:HB3    | 1.95                     | 0.49              |
| 2:AU:39:ARG:O      | 2:AU:43:VAL:HG23   | 2.13                     | 0.49              |
| 6:BD:308:GLN:HB3   | 6:BD:314:ILE:HG12  | 1.93                     | 0.49              |
| 6:BD:649:PHE:CE1   | 6:BD:655:PRO:HA    | 2.48                     | 0.49              |
| 2:BJ:68:PRO:HA     | 2:BJ:73:TYR:CG     | 2.48                     | 0.49              |
| 1:BK:71:ASN:O      | 1:BK:77:MET:HB3    | 2.12                     | 0.49              |
| 10:BL:200:CYC:HMA2 | 5:CJ:25:THR:HG23   | 1.95                     | 0.49              |
| 2:BN:96:MET:HB2    | 2:BN:149:MET:HE1   | 1.94                     | 0.49              |
| 2:BT:96:MET:SD     | 2:BT:149:MET:HG2   | 2.53                     | 0.49              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:BV:76:GLU:HB3   | 7:CO:103:PRO:HG2  | 1.94                     | 0.49              |
| 1:BV:127:ALA:CB   | 1:BV:161:SER:HB3  | 2.43                     | 0.49              |
| 2:BW:10:ASN:O     | 2:BW:14:VAL:HG22  | 2.12                     | 0.49              |
| 2:BW:83:ARG:HH21  | 6:CM:490:ALA:HB1  | 1.77                     | 0.49              |
| 1:CG:46:SER:O     | 1:CG:50:ILE:HG22  | 2.13                     | 0.49              |
| 1:CR:33:GLY:HA3   | 2:CS:31:PHE:CD2   | 2.48                     | 0.49              |
| 2:CU:65:VAL:HG12  | 2:CU:72:MET:CB    | 2.40                     | 0.49              |
| 2:DB:126:THR:HG22 | 10:DB:200:CYC:H3C | 1.95                     | 0.49              |
| 9:DI:86:LEU:HD21  | 9:DI:95:CYS:HA    | 1.95                     | 0.49              |
| 1:DJ:98:SER:HA    | 2:DK:5:ILE:HG21   | 1.93                     | 0.49              |
| 2:DK:40:ALA:O     | 2:DK:44:ILE:HG13  | 2.12                     | 0.49              |
| 2:DK:41:ALA:CB    | 2:DK:97:LEU:HD21  | 2.42                     | 0.49              |
| 1:DL:109:LEU:HD13 | 1:DL:159:LYS:HG3  | 1.94                     | 0.49              |
| 2:DO:71:ASN:ND2   | 2:DO:121:VAL:HA   | 2.28                     | 0.49              |
| 2:DT:88:TYR:OH    | 2:DT:112:LEU:HD21 | 2.11                     | 0.49              |
| 1:AA:128:GLN:O    | 1:AA:132:GLU:HG2  | 2.13                     | 0.49              |
| 2:AD:23:ALA:O     | 2:AD:27:LEU:HG    | 2.12                     | 0.49              |
| 3:AE:42:THR:HG21  | 3:AE:141:LEU:HD21 | 1.94                     | 0.49              |
| 1:AH:152:TYR:O    | 1:AH:156:VAL:HG23 | 2.12                     | 0.49              |
| 2:AI:44:ILE:HG21  | 2:AI:93:THR:CG2   | 2.41                     | 0.49              |
| 4:AK:113:LEU:HD23 | 6:BD:408:CYS:SG   | 2.53                     | 0.49              |
| 2:AO:74:THR:HG23  | 1:AP:107:ILE:O    | 2.12                     | 0.49              |
| 2:AS:68:PRO:HA    | 2:AS:73:TYR:CD1   | 2.48                     | 0.49              |
| 2:AU:2:GLN:HB2    | 2:AU:102:SER:HB3  | 1.94                     | 0.49              |
| 1:AV:68:PRO:HA    | 1:AV:73:TYR:CD1   | 2.48                     | 0.49              |
| 6:BD:86:GLU:OE2   | 6:BD:150:GLN:HB3  | 2.12                     | 0.49              |
| 6:BD:626:ILE:HD13 | 6:BD:638:ALA:CB   | 2.42                     | 0.49              |
| 9:BH:217:PHE:CE2  | 9:BH:237:VAL:HG11 | 2.47                     | 0.49              |
| 1:BK:134:LYS:HE3  | 1:BK:150:SER:CB   | 2.41                     | 0.49              |
| 2:BL:67:ARG:HG3   | 2:BL:68:PRO:HD2   | 1.95                     | 0.49              |
| 3:BM:134:LYS:O    | 3:BM:138:LEU:HG   | 2.12                     | 0.49              |
| 2:BT:133:ILE:O    | 2:BT:137:THR:HG23 | 2.12                     | 0.49              |
| 2:BY:53:LYS:HE3   | 2:BY:54:GLU:OE2   | 2.12                     | 0.49              |
| 1:CE:14:GLU:HB2   | 1:CE:16:ARG:HG2   | 1.94                     | 0.49              |
| 1:CE:39:ILE:CD1   | 1:CE:145:ASP:HB3  | 2.42                     | 0.49              |
| 2:CF:3:ASP:HB3    | 2:CF:98:ALA:HB1   | 1.94                     | 0.49              |
| 5:CJ:18:THR:HA    | 6:CM:240:VAL:H    | 1.77                     | 0.49              |
| 5:CK:2:ARG:NH2    | 5:CK:66:LEU:HD13  | 2.28                     | 0.49              |
| 6:CM:151:LYS:CD   | 6:CM:154:ARG:HH21 | 2.25                     | 0.49              |
| 6:CM:793:ALA:HB3  | 6:CM:794:PRO:HD3  | 1.94                     | 0.49              |
| 9:CQ:273:VAL:HB   | 9:CQ:286:ILE:HD11 | 1.94                     | 0.49              |

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| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 9:CQ:289:ARG:HB3 | 9:CQ:302:ALA:HB3  | 1.95                     | 0.49              |
| 1:CR:8:ILE:HG21  | 2:CS:1:MET:HE3    | 1.93                     | 0.49              |
| 1:CR:34:ALA:HA   | 2:CS:28:LYS:NZ    | 2.28                     | 0.49              |
| 2:CS:78:TYR:HE1  | 1:CT:115:MET:HA   | 1.77                     | 0.49              |
| 1:CY:115:MET:HE1 | 2:DD:79:ALA:HA    | 1.93                     | 0.49              |
| 2:DB:74:THR:O    | 2:DB:77:ARG:N     | 2.38                     | 0.49              |
| 2:DD:132:ALA:HA  | 2:DD:135:GLU:OE1  | 2.12                     | 0.49              |
| 8:DG:221:MET:HE3 | 1:DQ:52:LYS:HG2   | 1.95                     | 0.49              |
| 9:DI:44:TYR:HA   | 9:DI:47:MET:HE3   | 1.93                     | 0.49              |
| 9:DI:204:ASN:O   | 9:DI:209:ASP:N    | 2.26                     | 0.49              |
| 9:DI:274:GLN:HA  | 9:DI:282:VAL:O    | 2.13                     | 0.49              |
| 2:DO:93:THR:OG1  | 2:DO:149:MET:HE1  | 2.12                     | 0.49              |
| 2:DO:107:ARG:NH2 | 5:DX:45:LYS:HG2   | 2.27                     | 0.49              |
| 1:DS:50:ILE:HD11 | 1:DS:137:ALA:CB   | 2.42                     | 0.49              |
| 1:DS:58:LEU:HD22 | 1:DS:129:SER:HB3  | 1.95                     | 0.49              |
| 9:EA:222:ALA:HB3 | 9:EA:299:PHE:O    | 2.12                     | 0.49              |
| 1:AA:122:PRO:HB2 | 1:AA:125:ALA:HB3  | 1.95                     | 0.49              |
| 1:AC:92:VAL:O    | 1:AC:96:VAL:HG23  | 2.13                     | 0.49              |
| 2:AD:147:LYS:O   | 2:AD:151:VAL:HG23 | 2.12                     | 0.49              |
| 1:AN:33:GLY:HA2  | 1:AN:36:ARG:HG2   | 1.95                     | 0.49              |
| 1:AN:86:ASP:OD2  | 7:BF:109:ARG:NH2  | 2.46                     | 0.49              |
| 2:AO:3:ASP:N     | 2:AO:6:THR:OG1    | 2.46                     | 0.49              |
| 9:BH:140:ALA:HA  | 9:BH:143:GLN:OE1  | 2.12                     | 0.49              |
| 1:BP:62:ARG:HG2  | 1:BP:65:ILE:HG12  | 1.94                     | 0.49              |
| 1:BR:3:ILE:HD11  | 1:BR:99:GLY:O     | 2.13                     | 0.49              |
| 1:BX:75:GLU:OE1  | 1:BX:75:GLU:N     | 2.44                     | 0.49              |
| 2:CA:71:ASN:HD21 | 2:CA:121:VAL:HG22 | 1.77                     | 0.49              |
| 1:CC:71:ASN:HD22 | 1:CC:121:THR:HA   | 1.78                     | 0.49              |
| 9:CQ:183:ALA:N   | 9:CQ:186:THR:HG1  | 2.11                     | 0.49              |
| 1:CR:57:ARG:O    | 1:CR:61:LYS:HG2   | 2.13                     | 0.49              |
| 1:CY:75:GLU:O    | 1:CY:78:THR:OG1   | 2.27                     | 0.49              |
| 2:DD:96:MET:HA   | 2:DD:152:TYR:CE2  | 2.48                     | 0.49              |
| 5:DF:6:ILE:HG22  | 5:DF:53:VAL:CG2   | 2.33                     | 0.49              |
| 1:DJ:131:ARG:CG  | 1:DJ:157:ILE:HD13 | 2.39                     | 0.49              |
| 2:DO:62:TYR:H    | 2:DO:66:THR:HG21  | 1.76                     | 0.49              |
| 2:DR:47:ASN:HB2  | 2:DR:50:THR:HB    | 1.94                     | 0.49              |
| 8:DY:237:ALA:HA  | 8:DY:240:ILE:HD13 | 1.95                     | 0.49              |
| 9:EA:210:PHE:HB3 | 9:EA:241:PHE:HB3  | 1.94                     | 0.49              |
| 1:AC:65:ILE:HD11 | 1:AC:122:PRO:CG   | 2.43                     | 0.49              |
| 1:AC:131:ARG:HA  | 1:AC:157:ILE:HD11 | 1.95                     | 0.49              |
| 3:AE:50:ILE:CD1  | 3:AE:140:LEU:HD13 | 2.43                     | 0.49              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:AL:1:MET:HB3    | 2:AL:106:GLU:OE2   | 2.13                     | 0.49              |
| 2:AL:78:TYR:O     | 2:AL:82:ILE:HG12   | 2.12                     | 0.49              |
| 1:AN:58:LEU:HD22  | 1:AN:129:SER:HB2   | 1.95                     | 0.49              |
| 1:AN:107:ILE:HD12 | 2:AO:13:ASP:OD2    | 2.12                     | 0.49              |
| 2:AO:134:LYS:HB2  | 2:AO:153:LEU:HD13  | 1.95                     | 0.49              |
| 1:AP:59:PHE:CD1   | 1:AP:66:VAL:HG21   | 2.48                     | 0.49              |
| 1:AX:92:VAL:O     | 1:AX:96:VAL:HG13   | 2.13                     | 0.49              |
| 1:AZ:81:CYS:O     | 1:AZ:85:MET:HG2    | 2.13                     | 0.49              |
| 6:BD:542:LEU:HD11 | 6:BD:654:VAL:HG23  | 1.94                     | 0.49              |
| 6:BD:885:VAL:HG13 | 6:BD:885:VAL:O     | 2.13                     | 0.49              |
| 9:BH:235:GLU:HG2  | 1:DS:45:GLY:HA2    | 1.94                     | 0.49              |
| 1:BI:127:ALA:HB1  | 1:BI:157:ILE:HG23  | 1.94                     | 0.49              |
| 2:BJ:77:ARG:O     | 10:BJ:200:CYC:HMD3 | 2.11                     | 0.49              |
| 1:BK:33:GLY:HA2   | 1:BK:36:ARG:NE     | 2.28                     | 0.49              |
| 1:BK:122:PRO:HG2  | 1:BK:125:ALA:CB    | 2.43                     | 0.49              |
| 2:BL:23:ALA:O     | 2:BL:27:LEU:HG     | 2.13                     | 0.49              |
| 1:BP:156:VAL:O    | 1:BP:160:MET:HG3   | 2.13                     | 0.49              |
| 1:BX:89:LEU:HB2   | 1:BX:133:MET:HE1   | 1.94                     | 0.49              |
| 2:CA:60:LEU:HD13  | 2:CA:72:MET:HE1    | 1.94                     | 0.49              |
| 2:CD:65:VAL:HG12  | 2:CD:72:MET:HB2    | 1.94                     | 0.49              |
| 1:CE:58:LEU:CD2   | 1:CE:129:SER:HB3   | 2.36                     | 0.49              |
| 1:CE:115:MET:O    | 1:CE:119:LEU:HD23  | 2.13                     | 0.49              |
| 1:CG:102:THR:HG21 | 6:CM:534:PHE:CE1   | 2.47                     | 0.49              |
| 2:CH:41:ALA:HB2   | 2:CH:96:MET:CE     | 2.43                     | 0.49              |
| 6:CM:793:ALA:O    | 2:DR:107:ARG:HD3   | 2.12                     | 0.49              |
| 6:CM:864:ALA:C    | 6:CM:867:PRO:HD2   | 2.33                     | 0.49              |
| 1:CY:2:SER:HB3    | 1:CY:5:THR:HG22    | 1.94                     | 0.49              |
| 1:CY:11:ALA:HA    | 1:CY:16:ARG:CZ     | 2.43                     | 0.49              |
| 1:CY:30:VAL:HA    | 2:CZ:31:PHE:HD1    | 1.76                     | 0.49              |
| 1:CY:52:LYS:HG2   | 8:DY:225:ILE:HG12  | 1.95                     | 0.49              |
| 1:CY:112:VAL:HA   | 1:CY:115:MET:HG2   | 1.95                     | 0.49              |
| 2:CZ:47:ASN:O     | 2:CZ:51:ILE:HD12   | 2.12                     | 0.49              |
| 1:DA:4:VAL:O      | 1:DA:8:ILE:HG12    | 2.13                     | 0.49              |
| 1:DC:22:GLU:O     | 1:DC:26:ILE:HG12   | 2.12                     | 0.49              |
| 9:DI:80:THR:HG22  | 9:DI:176:VAL:HG22  | 1.94                     | 0.49              |
| 9:DI:248:LEU:HD21 | 9:DI:277:TRP:CE3   | 2.48                     | 0.49              |
| 1:DJ:102:THR:HB   | 1:DJ:103:PRO:HD3   | 1.95                     | 0.49              |
| 1:DN:62:ARG:O     | 1:DN:65:ILE:HG12   | 2.12                     | 0.49              |
| 1:AC:25:ARG:NE    | 6:BD:42:GLU:OE2    | 2.42                     | 0.49              |
| 1:AC:103:PRO:O    | 1:AC:107:ILE:HG12  | 2.13                     | 0.49              |
| 2:AD:82:ILE:HA    | 2:AD:85:LEU:HD12   | 1.95                     | 0.49              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 3:AE:138:LEU:HD22  | 3:AE:146:ALA:HB1   | 1.95                     | 0.49              |
| 2:AF:12:ALA:HB1    | 2:AF:17:LYS:O      | 2.13                     | 0.49              |
| 1:AH:68:PRO:HA     | 1:AH:73:TYR:CE2    | 2.47                     | 0.49              |
| 10:AH:200:CYC:HMA1 | 10:AH:200:CYC:NB   | 2.28                     | 0.49              |
| 1:AJ:26:ILE:HD13   | 4:AK:98:ILE:HG21   | 1.95                     | 0.49              |
| 4:AK:67:ILE:HG21   | 10:BD:902:CYC:CBA  | 2.42                     | 0.49              |
| 4:AK:125:GLY:O     | 4:AK:128:VAL:HG22  | 2.13                     | 0.49              |
| 2:AO:2:GLN:OE1     | 2:AO:10:ASN:ND2    | 2.28                     | 0.49              |
| 2:AU:36:LEU:HA     | 2:AU:39:ARG:HG2    | 1.94                     | 0.49              |
| 1:AX:39:ILE:O      | 1:AX:43:LEU:HG     | 2.13                     | 0.49              |
| 5:BA:4:PHE:HE1     | 5:BA:33:TYR:HD1    | 1.61                     | 0.49              |
| 5:BA:8:ALA:HB2     | 5:BA:50:ILE:HG22   | 1.94                     | 0.49              |
| 5:BA:43:ILE:HG21   | 5:BA:50:ILE:HG23   | 1.94                     | 0.49              |
| 6:BD:44:THR:O      | 6:BD:48:GLN:HG3    | 2.13                     | 0.49              |
| 6:BD:205:ALA:HA    | 6:BD:208:ASP:OD2   | 2.13                     | 0.49              |
| 9:BH:290:PHE:CD2   | 9:BH:298:ILE:HD13  | 2.48                     | 0.49              |
| 2:BJ:78:TYR:OH     | 1:BK:119:LEU:HD11  | 2.11                     | 0.49              |
| 2:BJ:125:SER:HA    | 2:BJ:128:GLN:OE1   | 2.12                     | 0.49              |
| 1:CC:101:VAL:HG12  | 1:CC:152:TYR:HD1   | 1.78                     | 0.49              |
| 2:CF:67:ARG:O      | 2:CF:73:TYR:HB2    | 2.13                     | 0.49              |
| 2:CH:147:LYS:O     | 2:CH:151:VAL:HG23  | 2.12                     | 0.49              |
| 5:CJ:12:SER:OG     | 5:CJ:15:ARG:HG3    | 2.13                     | 0.49              |
| 6:CM:863:ALA:HB2   | 2:DT:107:ARG:O     | 2.12                     | 0.49              |
| 9:CQ:43:ALA:O      | 9:CQ:51:LEU:HD12   | 2.13                     | 0.49              |
| 9:CQ:263:GLY:O     | 9:CQ:294:PRO:HG3   | 2.13                     | 0.49              |
| 10:CR:200:CYC:HMD2 | 10:CR:200:CYC:NC   | 2.28                     | 0.49              |
| 1:CY:47:ARG:O      | 1:CY:51:VAL:HG12   | 2.12                     | 0.49              |
| 1:CY:66:VAL:HA     | 1:CY:73:TYR:HA     | 1.95                     | 0.49              |
| 1:CY:109:LEU:HD21  | 1:CY:159:LYS:CB    | 2.35                     | 0.49              |
| 2:CZ:23:ALA:HA     | 2:CZ:26:LYS:HE3    | 1.93                     | 0.49              |
| 1:DJ:26:ILE:O      | 1:DJ:30:VAL:HG13   | 2.13                     | 0.49              |
| 2:DO:63:SER:H      | 2:DO:66:THR:HG22   | 1.77                     | 0.49              |
| 1:DQ:87:TYR:OH     | 2:DV:68:PRO:HD3    | 2.12                     | 0.49              |
| 10:DR:200:CYC:HC   | 10:DR:200:CYC:CMD  | 2.26                     | 0.49              |
| 1:DS:12:ASP:OD2    | 2:DT:107:ARG:HD3   | 2.12                     | 0.49              |
| 1:DS:113:ARG:NH1   | 1:DS:160:MET:O     | 2.46                     | 0.49              |
| 1:DS:115:MET:CE    | 10:DS:200:CYC:HMB3 | 2.43                     | 0.49              |
| 2:DT:62:TYR:OH     | 10:DU:200:CYC:O2D  | 2.17                     | 0.49              |
| 2:DV:79:ALA:HA     | 2:DV:82:ILE:HG12   | 1.94                     | 0.49              |
| 2:DV:130:ILE:HA    | 2:DV:133:ILE:HG22  | 1.94                     | 0.49              |
| 2:DV:134:LYS:HG3   | 2:DV:150:GLY:HA2   | 1.94                     | 0.49              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 9:EA:24:THR:HG21  | 9:EA:142:ILE:CD1  | 2.43                     | 0.49              |
| 1:AC:123:ILE:HA   | 1:AC:126:VAL:CG2  | 2.43                     | 0.49              |
| 2:AD:87:TYR:CE2   | 5:BA:22:LEU:HD13  | 2.47                     | 0.49              |
| 2:AD:103:ILE:HG23 | 2:AD:104:LEU:HD22 | 1.95                     | 0.49              |
| 2:AF:132:ALA:O    | 2:AF:136:VAL:HG23 | 2.13                     | 0.49              |
| 1:AJ:134:LYS:HD3  | 1:AJ:153:PHE:HB3  | 1.94                     | 0.49              |
| 1:AV:131:ARG:HG2  | 1:AV:157:ILE:HD13 | 1.95                     | 0.49              |
| 2:AW:36:LEU:HD23  | 2:AW:39:ARG:NH1   | 2.24                     | 0.49              |
| 6:BD:155:ASP:OD1  | 10:BD:902:CYC:HHB | 2.13                     | 0.49              |
| 6:BD:455:GLU:HG3  | 6:BD:664:GLY:CA   | 2.34                     | 0.49              |
| 2:BJ:122:PRO:HB2  | 2:BJ:125:SER:HG   | 1.78                     | 0.49              |
| 1:BK:44:THR:O     | 1:BK:47:ARG:HG2   | 2.12                     | 0.49              |
| 2:BL:4:ALA:HB3    | 2:BL:30:TYR:CD2   | 2.48                     | 0.49              |
| 1:BV:33:GLY:O     | 1:BV:37:LEU:HD13  | 2.13                     | 0.49              |
| 2:BY:124:SER:O    | 2:BY:128:GLN:HG3  | 2.13                     | 0.49              |
| 1:BZ:97:VAL:CG1   | 2:CA:27:LEU:HD13  | 2.42                     | 0.49              |
| 2:CF:21:GLY:O     | 2:CF:24:MET:HB3   | 2.13                     | 0.49              |
| 1:CG:27:LYS:O     | 1:CG:31:THR:HG23  | 2.12                     | 0.49              |
| 6:CM:247:ASP:HB3  | 6:CM:357:SER:OG   | 2.13                     | 0.49              |
| 6:CM:251:LEU:HD11 | 6:CM:407:GLU:HB3  | 1.93                     | 0.49              |
| 6:CM:864:ALA:HB2  | 2:DT:110:ASN:O    | 2.13                     | 0.49              |
| 1:CR:131:ARG:O    | 1:CR:134:LYS:HB3  | 2.13                     | 0.49              |
| 2:CW:14:VAL:HG23  | 2:CW:15:GLN:OE1   | 2.13                     | 0.49              |
| 2:CW:50:THR:O     | 2:CW:54:GLU:HG2   | 2.12                     | 0.49              |
| 1:CY:122:PRO:HG2  | 1:CY:125:ALA:CB   | 2.41                     | 0.49              |
| 1:DA:109:LEU:HD13 | 1:DA:159:LYS:CG   | 2.37                     | 0.49              |
| 1:DC:85:MET:HB3   | 1:DC:133:MET:HE1  | 1.93                     | 0.49              |
| 5:DF:40:GLN:O     | 5:DF:44:MET:HG3   | 2.13                     | 0.49              |
| 9:DI:214:ILE:CD1  | 9:DI:238:LEU:HB2  | 2.42                     | 0.49              |
| 1:DJ:20:PRO:HA    | 1:DJ:23:LEU:HG    | 1.93                     | 0.49              |
| 1:DJ:48:GLU:HA    | 1:DJ:51:VAL:HG12  | 1.95                     | 0.49              |
| 1:DL:17:TYR:CD1   | 2:DM:90:ARG:HD3   | 2.48                     | 0.49              |
| 2:DM:15:GLN:HG3   | 2:DM:17:LYS:HZ2   | 1.78                     | 0.49              |
| 1:DN:39:ILE:HD11  | 1:DN:145:ASP:HA   | 1.95                     | 0.49              |
| 1:DQ:72:ALA:HB2   | 10:DQ:200:CYC:CMD | 2.42                     | 0.49              |
| 2:DT:78:TYR:CD1   | 1:DU:115:MET:HG3  | 2.47                     | 0.49              |
| 1:DU:90:ARG:O     | 1:DU:93:THR:OG1   | 2.27                     | 0.49              |
| 1:AC:25:ARG:HD3   | 6:BD:42:GLU:HG3   | 1.95                     | 0.48              |
| 1:AC:97:VAL:HG11  | 2:AD:19:LEU:CD1   | 2.41                     | 0.48              |
| 1:AC:129:SER:HA   | 1:AC:132:GLU:OE1  | 2.13                     | 0.48              |
| 1:AH:16:ARG:NH1   | 1:AH:17:TYR:O     | 2.45                     | 0.48              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 4:AK:151:ASP:OD1  | 4:AK:151:ASP:N     | 2.46                     | 0.48              |
| 2:AL:31:PHE:CE1   | 6:BD:50:GLY:HA3    | 2.48                     | 0.48              |
| 1:AN:65:ILE:HD11  | 1:AN:122:PRO:HG2   | 1.95                     | 0.48              |
| 2:AQ:47:ASN:CB    | 2:AQ:140:LEU:HD21  | 2.42                     | 0.48              |
| 2:AS:123:ILE:HA   | 2:AS:126:THR:CG2   | 2.40                     | 0.48              |
| 2:AU:137:THR:CG2  | 2:AU:149:MET:HG2   | 2.43                     | 0.48              |
| 2:AW:103:ILE:CD1  | 2:AW:107:ARG:HD2   | 2.40                     | 0.48              |
| 6:BD:285:ALA:HA   | 6:BD:395:VAL:HG11  | 1.93                     | 0.48              |
| 6:BD:744:ARG:HG3  | 6:BD:750:ASP:OD1   | 2.13                     | 0.48              |
| 6:BD:751:LEU:HD13 | 6:BD:755:ILE:HD13  | 1.95                     | 0.48              |
| 1:BR:37:LEU:HD11  | 4:BS:31:PHE:HE2    | 1.78                     | 0.48              |
| 4:BS:109:VAL:HG12 | 4:BS:113:LEU:HD11  | 1.95                     | 0.48              |
| 1:BV:113:ARG:HD3  | 1:CE:117:ARG:NH2   | 2.28                     | 0.48              |
| 2:CD:71:ASN:ND2   | 2:CD:121:VAL:HA    | 2.26                     | 0.48              |
| 1:CE:66:VAL:HA    | 1:CE:72:ALA:O      | 2.12                     | 0.48              |
| 1:CE:119:LEU:HD12 | 10:CE:200:CYC:HBD1 | 1.94                     | 0.48              |
| 1:CG:30:VAL:HG13  | 2:CH:31:PHE:HA     | 1.95                     | 0.48              |
| 6:CM:136:PHE:CD1  | 6:CM:197:VAL:HG11  | 2.48                     | 0.48              |
| 6:CM:513:PHE:HB3  | 6:CM:542:LEU:HD13  | 1.94                     | 0.48              |
| 1:CR:25:ARG:HA    | 1:CY:25:ARG:NE     | 2.28                     | 0.48              |
| 1:CR:79:ALA:C     | 8:DZ:246:VAL:HG22  | 2.33                     | 0.48              |
| 1:CR:134:LYS:HA   | 1:CR:153:PHE:CD2   | 2.48                     | 0.48              |
| 2:CS:24:MET:O     | 2:CS:28:LYS:HG2    | 2.13                     | 0.48              |
| 2:CS:68:PRO:HA    | 2:CS:73:TYR:CD2    | 2.47                     | 0.48              |
| 2:CW:57:ALA:CB    | 2:CW:61:LEU:HD12   | 2.42                     | 0.48              |
| 8:DH:230:ASN:HB2  | 1:DS:67:SER:OG     | 2.13                     | 0.48              |
| 9:DI:149:GLN:O    | 9:DI:153:VAL:HG23  | 2.13                     | 0.48              |
| 1:DJ:20:PRO:HA    | 1:DJ:23:LEU:CG     | 2.43                     | 0.48              |
| 1:DJ:144:ASP:OD1  | 1:DJ:145:ASP:N     | 2.46                     | 0.48              |
| 1:DN:98:SER:OG    | 1:DN:100:ASP:OD1   | 2.18                     | 0.48              |
| 1:DS:5:THR:O      | 1:DS:9:VAL:HG23    | 2.12                     | 0.48              |
| 2:DT:68:PRO:HD3   | 1:DU:87:TYR:OH     | 2.13                     | 0.48              |
| 9:EA:115:GLU:O    | 9:EA:119:GLN:HG3   | 2.13                     | 0.48              |
| 1:AA:10:ASN:O     | 1:AA:14:GLU:HG3    | 2.13                     | 0.48              |
| 1:AA:92:VAL:O     | 1:AA:96:VAL:HG23   | 2.13                     | 0.48              |
| 10:AA:200:CYC:NB  | 10:AA:200:CYC:HMA1 | 2.28                     | 0.48              |
| 2:AF:39:ARG:NH2   | 1:CC:142:SER:HA    | 2.27                     | 0.48              |
| 2:AL:134:LYS:HD2  | 2:AL:150:GLY:HA3   | 1.95                     | 0.48              |
| 2:AO:142:GLY:HA2  | 1:BR:41:GLU:OE1    | 2.13                     | 0.48              |
| 2:AS:65:VAL:HG12  | 2:AS:72:MET:CB     | 2.42                     | 0.48              |
| 2:AS:113:LYS:NZ   | 6:BD:10:SER:OG     | 2.26                     | 0.48              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:AU:28:LYS:CD    | 1:AZ:37:LEU:HD13  | 2.42                     | 0.48              |
| 1:AV:71:ASN:ND2   | 1:AV:119:LEU:O    | 2.31                     | 0.48              |
| 1:AX:51:VAL:HG22  | 1:AX:133:MET:HE1  | 1.94                     | 0.48              |
| 2:AY:36:LEU:HD21  | 2:AY:145:ALA:HB2  | 1.93                     | 0.48              |
| 2:AY:123:ILE:HA   | 2:AY:126:THR:HG22 | 1.96                     | 0.48              |
| 5:BB:41:GLN:HG3   | 5:BB:45:LYS:HD2   | 1.94                     | 0.48              |
| 6:BD:264:ARG:O    | 6:BD:266:LYS:NZ   | 2.26                     | 0.48              |
| 1:BK:76:GLU:HG2   | 1:BK:77:MET:CE    | 2.44                     | 0.48              |
| 1:BK:78:THR:O     | 1:BK:82:LEU:HD23  | 2.13                     | 0.48              |
| 2:BL:5:ILE:HG23   | 2:BL:30:TYR:HD2   | 1.78                     | 0.48              |
| 1:BP:12:ASP:OD1   | 2:BQ:91:TYR:OH    | 2.27                     | 0.48              |
| 1:BV:33:GLY:O     | 1:BV:36:ARG:HG2   | 2.12                     | 0.48              |
| 2:BW:5:ILE:HD11   | 2:BW:31:PHE:HE1   | 1.78                     | 0.48              |
| 1:BX:101:VAL:HB   | 1:BX:155:PHE:CE2  | 2.48                     | 0.48              |
| 1:BZ:52:LYS:HD3   | 8:CP:221:MET:HG3  | 1.95                     | 0.48              |
| 1:BZ:52:LYS:HE3   | 8:CP:224:SER:OG   | 2.14                     | 0.48              |
| 2:CA:123:ILE:HA   | 2:CA:126:THR:CG2  | 2.42                     | 0.48              |
| 6:CM:251:LEU:HB3  | 6:CM:405:ALA:HB1  | 1.95                     | 0.48              |
| 6:CM:597:TYR:CE2  | 6:CM:599:CYS:HB2  | 2.48                     | 0.48              |
| 1:CR:155:PHE:O    | 1:CR:159:LYS:HG2  | 2.13                     | 0.48              |
| 1:CT:33:GLY:O     | 1:CT:37:LEU:HD23  | 2.13                     | 0.48              |
| 1:CV:39:ILE:HG23  | 1:CV:141:MET:SD   | 2.53                     | 0.48              |
| 2:CW:65:VAL:HG12  | 2:CW:72:MET:HB2   | 1.95                     | 0.48              |
| 1:CY:26:ILE:CD1   | 2:CZ:97:LEU:HD21  | 2.35                     | 0.48              |
| 1:CY:134:LYS:HA   | 1:CY:153:PHE:CD2  | 2.47                     | 0.48              |
| 1:DA:12:ASP:OD2   | 2:DB:107:ARG:NH1  | 2.35                     | 0.48              |
| 1:DC:49:THR:HG22  | 1:DC:53:GLN:OE1   | 2.13                     | 0.48              |
| 2:DD:122:PRO:HG2  | 2:DD:125:SER:HB2  | 1.95                     | 0.48              |
| 9:DI:190:ILE:HD11 | 9:DI:202:MET:SD   | 2.53                     | 0.48              |
| 1:DJ:62:ARG:HB3   | 1:DJ:65:ILE:HG12  | 1.96                     | 0.48              |
| 2:DM:90:ARG:O     | 2:DM:93:THR:HG22  | 2.12                     | 0.48              |
| 1:DQ:76:GLU:HA    | 8:DZ:203:PHE:CE1  | 2.48                     | 0.48              |
| 1:DS:90:ARG:HG3   | 2:DT:18:TYR:CD1   | 2.48                     | 0.48              |
| 1:DS:130:VAL:HA   | 1:DS:133:MET:HE2  | 1.95                     | 0.48              |
| 1:AC:13:ALA:HB1   | 6:BD:265:GLN:HB3  | 1.96                     | 0.48              |
| 2:AD:112:LEU:HD21 | 10:AD:200:CYC:C4B | 2.43                     | 0.48              |
| 1:AH:62:ARG:NH1   | 1:AH:124:GLU:OE2  | 2.44                     | 0.48              |
| 1:AH:109:LEU:HD21 | 1:AH:159:LYS:HG2  | 1.94                     | 0.48              |
| 1:AN:105:GLU:CA   | 1:AN:109:LEU:HB2  | 2.37                     | 0.48              |
| 2:AQ:96:MET:HA    | 2:AQ:152:TYR:CE2  | 2.49                     | 0.48              |
| 1:AX:19:SER:HB3   | 1:AX:22:GLU:HG3   | 1.94                     | 0.48              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AZ:113:ARG:NH1   | 1:AZ:160:MET:O     | 2.46                     | 0.48              |
| 5:BB:23:GLN:O      | 5:BB:27:PHE:HB3    | 2.12                     | 0.48              |
| 9:BH:195:ASN:O     | 9:BH:199:LEU:HG    | 2.14                     | 0.48              |
| 2:BJ:126:THR:O     | 2:BJ:130:ILE:HG12  | 2.12                     | 0.48              |
| 3:BM:51:VAL:HG23   | 3:BM:85:TYR:HB3    | 1.95                     | 0.48              |
| 2:BN:77:ARG:HG2    | 10:BN:200:CYC:HMD1 | 1.96                     | 0.48              |
| 1:BV:65:ILE:HG22   | 1:BV:72:ALA:HB3    | 1.94                     | 0.48              |
| 1:BV:82:LEU:O      | 1:BV:85:MET:HB3    | 2.13                     | 0.48              |
| 2:BW:147:LYS:O     | 2:BW:151:VAL:HG23  | 2.14                     | 0.48              |
| 1:BZ:88:TYR:O      | 1:BZ:92:VAL:HG23   | 2.12                     | 0.48              |
| 1:BZ:122:PRO:O     | 1:BZ:126:VAL:HG23  | 2.14                     | 0.48              |
| 1:CC:71:ASN:OD1    | 10:CC:200:CYC:HBD2 | 2.13                     | 0.48              |
| 1:CE:65:ILE:HD11   | 1:CE:125:ALA:HB1   | 1.95                     | 0.48              |
| 1:CE:75:GLU:OE2    | 1:CE:76:GLU:HG3    | 2.13                     | 0.48              |
| 1:CG:115:MET:HE3   | 10:CG:200:CYC:HMB3 | 1.93                     | 0.48              |
| 6:CM:155:ASP:OD1   | 10:CM:902:CYC:HHB  | 2.13                     | 0.48              |
| 9:CQ:288:TRP:HB3   | 9:CQ:290:PHE:HE1   | 1.75                     | 0.48              |
| 2:CW:54:GLU:O      | 2:CW:58:LYS:HG2    | 2.12                     | 0.48              |
| 9:DI:224:GLN:HB2   | 9:DI:300:PHE:CE1   | 2.48                     | 0.48              |
| 9:DI:314:ASN:HD22  | 9:DI:314:ASN:C     | 2.12                     | 0.48              |
| 1:DJ:34:ALA:HA     | 2:DK:28:LYS:NZ     | 2.28                     | 0.48              |
| 1:DJ:57:ARG:HA     | 1:DJ:60:GLN:OE1    | 2.13                     | 0.48              |
| 1:DJ:65:ILE:HG21   | 10:DJ:200:CYC:H2C  | 1.96                     | 0.48              |
| 9:EA:173:ALA:O     | 9:EA:175:PRO:HD3   | 2.14                     | 0.48              |
| 9:EA:190:ILE:HG21  | 9:EA:193:VAL:HB    | 1.95                     | 0.48              |
| 2:AB:77:ARG:HG2    | 10:AB:200:CYC:HAD1 | 1.96                     | 0.48              |
| 2:AD:92:ALA:C      | 2:AD:149:MET:HE1   | 2.34                     | 0.48              |
| 3:AE:94:TYR:CG     | 2:AF:9:ILE:HG23    | 2.49                     | 0.48              |
| 4:AK:107:GLU:HA    | 4:AK:111:GLN:OE1   | 2.13                     | 0.48              |
| 2:AO:47:ASN:O      | 2:AO:51:ILE:HG13   | 2.13                     | 0.48              |
| 2:AU:57:ALA:CA     | 2:AU:61:LEU:HD12   | 2.42                     | 0.48              |
| 10:AV:200:CYC:HMA1 | 10:AV:200:CYC:NB   | 2.28                     | 0.48              |
| 1:AX:36:ARG:NH2    | 1:AX:152:TYR:OH    | 2.47                     | 0.48              |
| 6:BD:55:GLU:O      | 6:BD:59:THR:HG23   | 2.14                     | 0.48              |
| 6:BD:167:ILE:HD12  | 6:BD:219:ILE:HG22  | 1.95                     | 0.48              |
| 6:BD:811:ARG:NH1   | 6:BD:812:ALA:O     | 2.47                     | 0.48              |
| 9:BH:28:PHE:CD2    | 9:BH:39:LEU:HD23   | 2.47                     | 0.48              |
| 9:BH:311:GLU:CD    | 9:BH:312:LEU:H     | 2.17                     | 0.48              |
| 2:BJ:52:VAL:O      | 2:BJ:56:VAL:HG23   | 2.13                     | 0.48              |
| 2:BJ:71:ASN:HB3    | 10:BJ:200:CYC:OC   | 2.12                     | 0.48              |
| 2:BJ:130:ILE:O     | 2:BJ:133:ILE:HG22  | 2.13                     | 0.48              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:BK:121:THR:HG23  | 10:BK:200:CYC:C1C  | 2.43                     | 0.48              |
| 10:BQ:200:CYC:O1A  | 6:CM:358:ARG:NH2   | 2.39                     | 0.48              |
| 2:BT:18:TYR:HD2    | 6:CM:61:THR:HG22   | 1.73                     | 0.48              |
| 10:BT:200:CYC:HAA1 | 6:CM:424:PHE:CZ    | 2.37                     | 0.48              |
| 1:BV:8:ILE:HG23    | 2:BW:94:TYR:CD1    | 2.49                     | 0.48              |
| 10:BV:200:CYC:NB   | 10:BV:200:CYC:HMA1 | 2.28                     | 0.48              |
| 2:BY:122:PRO:HB2   | 2:BY:125:SER:HB2   | 1.95                     | 0.48              |
| 2:CF:78:TYR:CE1    | 1:CG:115:MET:HG3   | 2.47                     | 0.48              |
| 2:CH:68:PRO:HG3    | 2:CH:73:TYR:CE1    | 2.49                     | 0.48              |
| 6:CM:77:THR:CG2    | 6:CM:138:PRO:HB2   | 2.44                     | 0.48              |
| 6:CM:399:ARG:HA    | 6:CM:403:VAL:HG11  | 1.95                     | 0.48              |
| 6:CM:751:LEU:HD12  | 6:CM:751:LEU:O     | 2.14                     | 0.48              |
| 6:CM:829:GLN:HB2   | 6:CM:833:ALA:HB3   | 1.95                     | 0.48              |
| 2:CS:111:GLY:O     | 2:CS:114:GLU:HG3   | 2.14                     | 0.48              |
| 10:CT:200:CYC:NC   | 10:CT:200:CYC:HMD2 | 2.28                     | 0.48              |
| 2:CW:2:GLN:HB2     | 2:CW:100:ASP:OD2   | 2.13                     | 0.48              |
| 2:CW:50:THR:HG21   | 9:DI:62:GLN:HE21   | 1.79                     | 0.48              |
| 2:CW:76:ARG:NH2    | 5:DF:62:THR:O      | 2.46                     | 0.48              |
| 2:CZ:111:GLY:O     | 2:CZ:115:THR:HG22  | 2.14                     | 0.48              |
| 2:DB:68:PRO:HA     | 2:DB:73:TYR:CD1    | 2.49                     | 0.48              |
| 9:DI:262:ASP:O     | 9:DI:294:PRO:HG3   | 2.13                     | 0.48              |
| 1:DL:159:LYS:HE2   | 1:DL:159:LYS:HA    | 1.95                     | 0.48              |
| 1:DN:37:LEU:CD2    | 2:DO:28:LYS:HE3    | 2.43                     | 0.48              |
| 2:DR:2:GLN:OE1     | 2:DR:7:ALA:HB2     | 2.13                     | 0.48              |
| 2:DR:81:CYS:O      | 2:DR:85:LEU:HD23   | 2.12                     | 0.48              |
| 1:DS:96:VAL:HA     | 1:DS:152:TYR:CE2   | 2.49                     | 0.48              |
| 1:DS:122:PRO:HD2   | 10:DS:200:CYC:OC   | 2.13                     | 0.48              |
| 5:DX:6:ILE:O       | 5:DX:28:THR:HA     | 2.13                     | 0.48              |
| 9:EA:21:VAL:HG13   | 9:EA:149:GLN:HG3   | 1.95                     | 0.48              |
| 9:EA:25:ILE:CD1    | 9:EA:156:ASN:HB2   | 2.44                     | 0.48              |
| 9:EA:185:ARG:NH1   | 9:EA:207:ALA:HB1   | 2.28                     | 0.48              |
| 9:EA:206:ASN:OD1   | 9:EA:250:LEU:N     | 2.31                     | 0.48              |
| 1:AA:84:ASP:OD2    | 10:AA:200:CYC:ND   | 2.40                     | 0.48              |
| 1:AC:33:GLY:O      | 1:AC:36:ARG:HG2    | 2.13                     | 0.48              |
| 1:AC:65:ILE:HD12   | 10:AC:200:CYC:OC   | 2.13                     | 0.48              |
| 2:AL:90:ARG:HD3    | 6:BD:33:ARG:C      | 2.34                     | 0.48              |
| 1:AN:33:GLY:HA2    | 1:AN:36:ARG:CG     | 2.44                     | 0.48              |
| 1:AN:57:ARG:O      | 1:AN:60:GLN:HG3    | 2.13                     | 0.48              |
| 2:AY:137:THR:O     | 2:AY:141:VAL:HG22  | 2.13                     | 0.48              |
| 9:BH:273:VAL:HB    | 9:BH:286:ILE:CD1   | 2.42                     | 0.48              |
| 10:BS:200:CYC:HBA2 | 6:CM:401:LEU:HD11  | 1.95                     | 0.48              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:BV:115:MET:HG2  | 2:CA:78:TYR:CD1   | 2.48                     | 0.48              |
| 1:CC:75:GLU:OE2   | 1:CC:76:GLU:HG2   | 2.13                     | 0.48              |
| 1:CG:116:TYR:HD2  | 1:CG:123:ILE:HD12 | 1.78                     | 0.48              |
| 6:CM:5:ALA:HB3    | 6:CM:437:TYR:HD1  | 1.78                     | 0.48              |
| 6:CM:244:PRO:HD2  | 6:CM:248:ILE:HB   | 1.96                     | 0.48              |
| 6:CM:519:LEU:HD13 | 6:CM:569:GLU:O    | 2.13                     | 0.48              |
| 6:CM:872:LEU:CG   | 6:CM:884:VAL:HG11 | 2.39                     | 0.48              |
| 9:CQ:109:PHE:CZ   | 9:CQ:113:LEU:HD11 | 2.48                     | 0.48              |
| 9:CQ:204:ASN:HD22 | 9:CQ:213:LEU:HA   | 1.79                     | 0.48              |
| 9:CQ:249:LYS:O    | 9:CQ:250:LEU:HD23 | 2.14                     | 0.48              |
| 2:CS:47:ASN:HB2   | 2:CS:51:ILE:CD1   | 2.42                     | 0.48              |
| 1:CT:128:GLN:O    | 1:CT:132:GLU:HG2  | 2.14                     | 0.48              |
| 1:CY:87:TYR:O     | 1:CY:91:LEU:HG    | 2.14                     | 0.48              |
| 9:DI:146:GLU:H    | 9:DI:149:GLN:NE2  | 2.12                     | 0.48              |
| 2:DM:22:ALA:O     | 2:DM:26:LYS:HG3   | 2.13                     | 0.48              |
| 2:DO:124:SER:O    | 2:DO:128:GLN:HG3  | 2.13                     | 0.48              |
| 1:DQ:21:GLY:O     | 1:DQ:25:ARG:HG2   | 2.13                     | 0.48              |
| 1:DQ:104:ILE:H    | 1:DQ:104:ILE:HD12 | 1.77                     | 0.48              |
| 9:EA:117:MET:HE1  | 9:EA:125:ILE:HG23 | 1.96                     | 0.48              |
| 2:AQ:62:TYR:CE2   | 9:BH:11:ILE:HA    | 2.48                     | 0.48              |
| 2:AS:71:ASN:O     | 2:AS:77:ARG:HD3   | 2.13                     | 0.48              |
| 1:AV:102:THR:O    | 1:AV:106:GLU:HG2  | 2.13                     | 0.48              |
| 1:AV:105:GLU:OE2  | 1:AV:159:LYS:HE2  | 2.13                     | 0.48              |
| 2:AW:125:SER:HA   | 2:AW:128:GLN:OE1  | 2.12                     | 0.48              |
| 2:AY:6:THR:HG23   | 6:BD:532:VAL:CG1  | 2.44                     | 0.48              |
| 6:BD:141:ILE:HG23 | 6:BD:149:MET:CE   | 2.44                     | 0.48              |
| 9:BH:27:ARG:O     | 9:BH:31:LEU:HG    | 2.13                     | 0.48              |
| 1:BK:63:PRO:O     | 1:BK:67:SER:N     | 2.40                     | 0.48              |
| 3:BM:4:VAL:HG22   | 3:BM:26:ILE:HG23  | 1.96                     | 0.48              |
| 2:BN:1:MET:SD     | 2:BN:1:MET:N      | 2.81                     | 0.48              |
| 2:BN:39:ARG:O     | 2:BN:43:VAL:HG23  | 2.13                     | 0.48              |
| 1:BP:91:LEU:HB3   | 1:BP:104:ILE:HG23 | 1.96                     | 0.48              |
| 10:BP:200:CYC:CGA | 2:BT:66:THR:HG21  | 2.43                     | 0.48              |
| 1:BV:27:LYS:O     | 1:BV:30:VAL:HG22  | 2.14                     | 0.48              |
| 2:BW:3:ASP:HA     | 2:BW:98:ALA:HB1   | 1.95                     | 0.48              |
| 2:BW:52:VAL:O     | 2:BW:56:VAL:HG23  | 2.14                     | 0.48              |
| 2:BW:96:MET:HG3   | 2:BW:148:GLU:CD   | 2.34                     | 0.48              |
| 2:CA:76:ARG:HH21  | 6:CM:478:LYS:HD3  | 1.78                     | 0.48              |
| 2:CD:52:VAL:O     | 2:CD:56:VAL:HG22  | 2.13                     | 0.48              |
| 2:CF:14:VAL:HG12  | 5:CK:63:ASN:ND2   | 2.27                     | 0.48              |
| 2:CF:21:GLY:CA    | 2:CF:24:MET:HB3   | 2.43                     | 0.48              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:CG:81:CYS:HA    | 10:CG:200:CYC:CHD  | 2.43                     | 0.48              |
| 6:CM:651:GLU:OE1  | 6:CM:651:GLU:N     | 2.46                     | 0.48              |
| 1:CR:11:ALA:HA    | 1:CR:16:ARG:CZ     | 2.43                     | 0.48              |
| 2:CS:112:LEU:HG   | 2:CS:160:LEU:HD21  | 1.94                     | 0.48              |
| 1:CT:33:GLY:HA3   | 2:CU:31:PHE:CE2    | 2.49                     | 0.48              |
| 2:CW:51:ILE:HG12  | 2:CW:136:VAL:HG12  | 1.96                     | 0.48              |
| 2:CW:71:ASN:ND2   | 2:CW:121:VAL:HA    | 2.29                     | 0.48              |
| 2:DD:68:PRO:HG3   | 2:DD:73:TYR:CZ     | 2.49                     | 0.48              |
| 2:DD:144:ASP:OD1  | 2:DD:145:ALA:N     | 2.44                     | 0.48              |
| 8:DH:237:ALA:O    | 1:DJ:52:LYS:HE2    | 2.12                     | 0.48              |
| 2:DK:19:LEU:HD12  | 2:DK:23:ALA:HB1    | 1.96                     | 0.48              |
| 2:DK:122:PRO:HG2  | 2:DK:125:SER:HB2   | 1.94                     | 0.48              |
| 2:DO:84:ASP:OD2   | 2:DO:116:TYR:OH    | 2.16                     | 0.48              |
| 2:DR:85:LEU:HD12  | 2:DR:133:ILE:HD13  | 1.95                     | 0.48              |
| 9:EA:30:GLN:O     | 9:EA:171:ARG:NH1   | 2.47                     | 0.48              |
| 9:EA:286:ILE:HD11 | 9:EA:303:ILE:HG23  | 1.95                     | 0.48              |
| 2:AB:71:ASN:HB3   | 10:AB:200:CYC:OC   | 2.14                     | 0.48              |
| 2:AB:104:LEU:HD11 | 2:AB:152:TYR:HB3   | 1.96                     | 0.48              |
| 2:AF:71:ASN:HD22  | 2:AF:122:PRO:HD3   | 1.77                     | 0.48              |
| 1:AH:38:ARG:HA    | 1:AH:41:GLU:OE1    | 2.13                     | 0.48              |
| 1:AP:105:GLU:OE2  | 1:AP:159:LYS:NZ    | 2.46                     | 0.48              |
| 1:AV:100:ASP:OD1  | 1:AV:101:VAL:N     | 2.46                     | 0.48              |
| 2:AY:61:LEU:HD22  | 10:AZ:200:CYC:HAA1 | 1.96                     | 0.48              |
| 2:AY:93:THR:HA    | 2:AY:149:MET:CE    | 2.43                     | 0.48              |
| 5:BB:3:MET:N      | 5:BB:57:THR:HG1    | 2.10                     | 0.48              |
| 6:BD:543:ILE:HG23 | 6:BD:578:PHE:CE2   | 2.49                     | 0.48              |
| 6:BD:555:LEU:HB3  | 6:BD:559:GLN:HB2   | 1.95                     | 0.48              |
| 9:BH:98:TYR:O     | 9:BH:106:LYS:HE3   | 2.14                     | 0.48              |
| 2:BL:100:ASP:OD2  | 2:BL:102:SER:HB3   | 2.14                     | 0.48              |
| 2:BN:76:ARG:CZ    | 5:CJ:66:LEU:HD11   | 2.44                     | 0.48              |
| 2:BQ:52:VAL:O     | 2:BQ:56:VAL:HG23   | 2.13                     | 0.48              |
| 2:BQ:71:ASN:HD22  | 2:BQ:121:VAL:HA    | 1.78                     | 0.48              |
| 4:BS:66:LEU:HD11  | 4:BS:126:PRO:HB3   | 1.96                     | 0.48              |
| 1:CC:24:ASP:HA    | 1:CC:27:LYS:HG2    | 1.96                     | 0.48              |
| 2:CF:24:MET:CE    | 2:CF:28:LYS:HD3    | 2.43                     | 0.48              |
| 2:CF:77:ARG:HB3   | 10:CF:200:CYC:HMD1 | 1.95                     | 0.48              |
| 6:CM:526:LYS:HD3  | 6:CM:533:LYS:HE2   | 1.96                     | 0.48              |
| 6:CM:856:ARG:NH2  | 6:CM:870:GLU:OE1   | 2.46                     | 0.48              |
| 9:CQ:187:LYS:HD3  | 9:CQ:188:VAL:O     | 2.13                     | 0.48              |
| 9:CQ:249:LYS:H    | 9:CQ:275:THR:HG1   | 1.60                     | 0.48              |
| 1:CR:113:ARG:HH11 | 1:CR:123:ILE:HD12  | 1.77                     | 0.48              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:CT:92:VAL:HA    | 1:CT:104:ILE:HD11  | 1.96                     | 0.48              |
| 2:CU:2:GLN:O      | 2:CU:100:ASP:HB3   | 2.14                     | 0.48              |
| 2:CW:10:ASN:O     | 2:CW:14:VAL:HG13   | 2.13                     | 0.48              |
| 2:CW:112:LEU:CD2  | 2:CW:160:LEU:HD13  | 2.43                     | 0.48              |
| 1:CY:7:SER:HB3    | 1:CY:18:LEU:HD11   | 1.95                     | 0.48              |
| 2:DB:9:ILE:HD13   | 2:DB:19:LEU:HD21   | 1.96                     | 0.48              |
| 2:DD:102:SER:O    | 2:DD:106:GLU:HG2   | 2.13                     | 0.48              |
| 9:DI:250:LEU:O    | 9:DI:251:ILE:HD13  | 2.13                     | 0.48              |
| 1:DJ:152:TYR:HE1  | 1:DQ:20:PRO:HB2    | 1.79                     | 0.48              |
| 2:DM:36:LEU:HA    | 2:DM:39:ARG:HG2    | 1.95                     | 0.48              |
| 1:DS:100:ASP:OD2  | 1:DS:102:THR:HG23  | 2.13                     | 0.48              |
| 1:DU:107:ILE:HG12 | 2:DV:13:ASP:OD2    | 2.14                     | 0.48              |
| 9:EA:43:ALA:O     | 9:EA:51:LEU:HD12   | 2.12                     | 0.48              |
| 1:AC:29:PHE:CE1   | 1:AC:99:GLY:HA3    | 2.45                     | 0.48              |
| 2:AO:123:ILE:O    | 2:AO:127:VAL:HG23  | 2.14                     | 0.48              |
| 10:AR:200:CYC:NB  | 10:AR:200:CYC:HMA1 | 2.28                     | 0.48              |
| 1:AV:8:ILE:HD12   | 2:AW:94:TYR:CD1    | 2.49                     | 0.48              |
| 1:AX:115:MET:HE3  | 10:AX:200:CYC:HMB  | 1.96                     | 0.48              |
| 1:AZ:39:ILE:HD11  | 1:AZ:145:ASP:OD1   | 2.14                     | 0.48              |
| 5:BA:10:VAL:HG12  | 5:BA:27:PHE:HE2    | 1.78                     | 0.48              |
| 6:BD:86:GLU:OE1   | 6:BD:154:ARG:HB2   | 2.13                     | 0.48              |
| 6:BD:776:GLU:OE2  | 5:DF:29:LYS:HD3    | 2.13                     | 0.48              |
| 6:BD:792:TYR:HA   | 6:BD:800:VAL:HG22  | 1.94                     | 0.48              |
| 1:BK:94:TYR:OH    | 2:BL:17:LYS:O      | 2.31                     | 0.48              |
| 3:BM:141:LEU:HD13 | 3:BM:145:ASP:OD2   | 2.14                     | 0.48              |
| 1:BR:124:GLU:OE1  | 1:BR:124:GLU:N     | 2.39                     | 0.48              |
| 2:BW:75:THR:HG23  | 10:BX:200:CYC:CAB  | 2.43                     | 0.48              |
| 2:BY:111:GLY:HA2  | 2:BY:114:GLU:OE1   | 2.14                     | 0.48              |
| 2:BY:116:TYR:CE2  | 2:BY:160:LEU:HD21  | 2.47                     | 0.48              |
| 2:CA:76:ARG:NH2   | 6:CM:478:LYS:HD3   | 2.28                     | 0.48              |
| 2:CA:107:ARG:HD3  | 6:CM:594:ALA:O     | 2.14                     | 0.48              |
| 2:CF:8:VAL:HG22   | 2:CF:26:LYS:CD     | 2.44                     | 0.48              |
| 2:CF:61:LEU:HD22  | 10:CG:200:CYC:CAA  | 2.44                     | 0.48              |
| 1:CG:101:VAL:HG12 | 1:CG:152:TYR:HD1   | 1.78                     | 0.48              |
| 5:CK:3:MET:O      | 5:CK:55:LEU:HD12   | 2.14                     | 0.48              |
| 6:CM:75:ILE:HG13  | 6:CM:198:ALA:CB    | 2.38                     | 0.48              |
| 6:CM:131:PRO:CD   | 6:CM:200:GLN:HG2   | 2.43                     | 0.48              |
| 6:CM:799:LYS:HB2  | 6:CM:883:LEU:CD2   | 2.43                     | 0.48              |
| 6:CM:891:VAL:CG1  | 2:DT:106:GLU:HB3   | 2.44                     | 0.48              |
| 9:CQ:131:LEU:HG   | 9:CQ:135:ALA:HB3   | 1.94                     | 0.48              |
| 9:CQ:201:TYR:HA   | 9:CQ:213:LEU:CD1   | 2.44                     | 0.48              |

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| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 2:CW:111:GLY:O   | 2:CW:115:THR:OG1   | 2.15                     | 0.48              |
| 1:CY:66:VAL:HG12 | 1:CY:72:ALA:O      | 2.14                     | 0.48              |
| 1:DC:6:LYS:NZ    | 1:DC:100:ASP:OD2   | 2.47                     | 0.48              |
| 2:DD:10:ASN:O    | 2:DD:14:VAL:HG23   | 2.12                     | 0.48              |
| 2:DD:67:ARG:HD3  | 8:DY:214:ASN:ND2   | 2.28                     | 0.48              |
| 9:DI:213:LEU:HA  | 9:DI:216:LEU:HB3   | 1.96                     | 0.48              |
| 1:DJ:57:ARG:NE   | 1:DJ:132:GLU:OE1   | 2.47                     | 0.48              |
| 2:DK:23:ALA:HA   | 2:DK:26:LYS:HG2    | 1.96                     | 0.48              |
| 2:DR:47:ASN:O    | 2:DR:51:ILE:HD12   | 2.13                     | 0.48              |
| 1:DU:14:GLU:HB2  | 1:DU:16:ARG:HG2    | 1.96                     | 0.48              |
| 1:DU:49:THR:HG22 | 1:DU:53:GLN:OE1    | 2.14                     | 0.48              |
| 1:DU:66:VAL:O    | 1:DU:73:TYR:HA     | 2.14                     | 0.48              |
| 1:AA:100:ASP:CG  | 1:AH:21:GLY:HA3    | 2.33                     | 0.48              |
| 2:AD:87:TYR:CD2  | 5:BA:22:LEU:HD22   | 2.49                     | 0.48              |
| 1:AH:37:LEU:HD22 | 2:AI:24:MET:SD     | 2.53                     | 0.48              |
| 1:AN:4:VAL:O     | 1:AN:8:ILE:HG12    | 2.13                     | 0.48              |
| 2:AO:63:SER:H    | 2:AO:66:THR:HG22   | 1.78                     | 0.48              |
| 2:AQ:10:ASN:O    | 2:AQ:14:VAL:HG23   | 2.14                     | 0.48              |
| 2:AW:41:ALA:N    | 2:AW:96:MET:HE1    | 2.28                     | 0.48              |
| 1:AZ:128:GLN:NE2 | 1:AZ:132:GLU:OE2   | 2.43                     | 0.48              |
| 5:BA:10:VAL:HG13 | 5:BA:10:VAL:O      | 2.14                     | 0.48              |
| 6:BD:866:PHE:HD2 | 2:DB:115:THR:HG23  | 1.79                     | 0.48              |
| 9:BH:48:GLY:HA2  | 9:BH:53:ILE:HG22   | 1.96                     | 0.48              |
| 9:BH:74:MET:HE2  | 9:BH:78:GLN:HB2    | 1.96                     | 0.48              |
| 9:BH:168:ASP:OD1 | 9:BH:168:ASP:N     | 2.46                     | 0.48              |
| 9:BH:290:PHE:CE1 | 9:BH:301:VAL:HG23  | 2.49                     | 0.48              |
| 2:BJ:1:MET:N     | 5:CJ:67:ALA:OXT    | 2.46                     | 0.48              |
| 1:BK:16:ARG:NH1  | 1:BK:17:TYR:O      | 2.47                     | 0.48              |
| 1:BK:126:VAL:O   | 1:BK:130:VAL:HG23  | 2.13                     | 0.48              |
| 3:BM:58:LEU:HD13 | 3:BM:129:ALA:CA    | 2.44                     | 0.48              |
| 2:BN:76:ARG:NH1  | 10:BN:200:CYC:O2D  | 2.46                     | 0.48              |
| 2:BQ:68:PRO:O    | 2:BW:124:SER:HB2   | 2.14                     | 0.48              |
| 4:BS:63:ILE:CG2  | 4:BS:66:LEU:HG     | 2.43                     | 0.48              |
| 1:CC:116:TYR:CE2 | 1:CC:126:VAL:HG11  | 2.48                     | 0.48              |
| 2:CD:109:LEU:CD2 | 2:CD:159:GLY:HA3   | 2.44                     | 0.48              |
| 1:CE:37:LEU:HD21 | 2:CF:24:MET:SD     | 2.54                     | 0.48              |
| 1:CE:65:ILE:HD11 | 10:CE:200:CYC:HMC2 | 1.96                     | 0.48              |
| 2:CH:132:ALA:HA  | 2:CH:135:GLU:OE1   | 2.14                     | 0.48              |
| 6:CM:553:ARG:HG3 | 6:CM:554:ASP:O     | 2.13                     | 0.48              |
| 6:CM:603:GLU:O   | 6:CM:607:ARG:HG3   | 2.14                     | 0.48              |
| 9:CQ:187:LYS:HG2 | 9:CQ:199:LEU:HD22  | 1.95                     | 0.48              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:CR:27:LYS:NZ     | 2:CS:38:VAL:HB     | 2.29                     | 0.48              |
| 2:CS:62:TYR:OH     | 10:CT:200:CYC:HAD2 | 2.14                     | 0.48              |
| 2:CU:112:LEU:CD1   | 10:CU:200:CYC:HMB3 | 2.37                     | 0.48              |
| 1:CY:107:ILE:O     | 2:DD:74:THR:HB     | 2.14                     | 0.48              |
| 2:CZ:81:CYS:O      | 2:CZ:85:LEU:HG     | 2.14                     | 0.48              |
| 2:CZ:133:ILE:O     | 2:CZ:137:THR:HG23  | 2.14                     | 0.48              |
| 2:DB:76:ARG:NH2    | 1:DC:106:GLU:OE1   | 2.47                     | 0.48              |
| 2:DD:122:PRO:O     | 2:DD:126:THR:HG23  | 2.13                     | 0.48              |
| 1:DJ:5:THR:O       | 1:DJ:9:VAL:HG23    | 2.13                     | 0.48              |
| 2:DK:121:VAL:HG13  | 2:DK:122:PRO:HD2   | 1.96                     | 0.48              |
| 2:DM:15:GLN:HG2    | 2:DM:17:LYS:HG2    | 1.96                     | 0.48              |
| 1:DN:131:ARG:O     | 1:DN:134:LYS:HB3   | 2.13                     | 0.48              |
| 2:DO:103:ILE:HG13  | 2:DO:107:ARG:HD3   | 1.96                     | 0.48              |
| 1:DS:97:VAL:CG2    | 2:DT:9:ILE:HD11    | 2.44                     | 0.48              |
| 2:DT:40:ALA:O      | 2:DT:44:ILE:HG13   | 2.13                     | 0.48              |
| 2:DT:132:ALA:O     | 2:DT:136:VAL:HG23  | 2.13                     | 0.48              |
| 2:DV:102:SER:HA    | 2:DV:105:ASP:OD2   | 2.13                     | 0.48              |
| 5:DX:5:ARG:HB3     | 5:DX:30:LEU:CD2    | 2.43                     | 0.48              |
| 9:EA:204:ASN:HB3   | 9:EA:209:ASP:HB3   | 1.96                     | 0.48              |
| 1:AA:157:ILE:HG13  | 1:AA:158:GLY:N     | 2.28                     | 0.48              |
| 2:AD:133:ILE:O     | 2:AD:137:THR:HG22  | 2.13                     | 0.48              |
| 3:AE:141:LEU:HD13  | 3:AE:145:ASP:OD2   | 2.14                     | 0.48              |
| 10:AE:200:CYC:HMA1 | 10:AE:200:CYC:NB   | 2.28                     | 0.48              |
| 1:AH:30:VAL:HG11   | 2:AI:34:GLY:HA3    | 1.96                     | 0.48              |
| 1:AH:129:SER:O     | 1:AH:133:MET:HG3   | 2.14                     | 0.48              |
| 2:AI:73:TYR:HH     | 1:AJ:90:ARG:HH22   | 1.55                     | 0.48              |
| 1:AJ:108:GLY:O     | 1:AJ:109:LEU:HD23  | 2.14                     | 0.48              |
| 4:AK:66:LEU:CD1    | 10:AK:200:CYC:HMC2 | 2.44                     | 0.48              |
| 1:AN:105:GLU:HA    | 1:AN:109:LEU:HD12  | 1.96                     | 0.48              |
| 2:AU:75:THR:CG2    | 1:AV:108:GLY:HA2   | 2.42                     | 0.48              |
| 2:AU:134:LYS:HG3   | 2:AU:150:GLY:HA2   | 1.96                     | 0.48              |
| 1:AV:3:ILE:HD12    | 1:AV:6:LYS:HE3     | 1.96                     | 0.48              |
| 1:AV:97:VAL:HG11   | 2:AW:19:LEU:HD11   | 1.96                     | 0.48              |
| 2:AY:132:ALA:O     | 2:AY:136:VAL:HG23  | 2.13                     | 0.48              |
| 6:BD:788:MET:HB3   | 6:BD:831:LEU:HD23  | 1.95                     | 0.48              |
| 1:BI:130:VAL:HG12  | 1:BI:157:ILE:HD11  | 1.95                     | 0.48              |
| 10:BK:200:CYC:HBC2 | 10:BK:200:CYC:H2C  | 1.75                     | 0.48              |
| 3:BM:4:VAL:O       | 3:BM:8:ILE:HG12    | 2.14                     | 0.48              |
| 2:BN:71:ASN:O      | 2:BN:77:ARG:HD2    | 2.14                     | 0.48              |
| 1:BR:17:TYR:OH     | 4:BS:90:LEU:HD23   | 2.14                     | 0.48              |
| 4:BS:86:MET:HG2    | 4:BS:134:MET:SD    | 2.54                     | 0.48              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 4:BS:105:LEU:O    | 4:BS:109:VAL:HB   | 2.14                     | 0.48              |
| 2:BY:88:TYR:OH    | 2:BY:112:LEU:HD21 | 2.14                     | 0.48              |
| 1:BZ:39:ILE:O     | 1:BZ:43:LEU:HG    | 2.13                     | 0.48              |
| 2:CD:39:ARG:O     | 2:CD:43:VAL:HG23  | 2.14                     | 0.48              |
| 2:CD:78:TYR:O     | 2:CD:82:ILE:HG22  | 2.14                     | 0.48              |
| 2:CF:125:SER:HA   | 2:CF:128:GLN:OE1  | 2.14                     | 0.48              |
| 1:CG:109:LEU:HD11 | 1:CG:159:LYS:HB3  | 1.94                     | 0.48              |
| 2:CH:132:ALA:O    | 2:CH:136:VAL:HG23 | 2.13                     | 0.48              |
| 5:CJ:15:ARG:NH2   | 5:CJ:23:GLN:HB2   | 2.29                     | 0.48              |
| 6:CM:133:PRO:HB3  | 6:CM:136:PHE:CE1  | 2.49                     | 0.48              |
| 6:CM:278:LYS:CD   | 6:CM:310:ARG:HG3  | 2.42                     | 0.48              |
| 6:CM:335:GLU:HB3  | 6:CM:336:PRO:HD3  | 1.96                     | 0.48              |
| 6:CM:348:ARG:HB3  | 6:CM:417:LEU:HD21 | 1.95                     | 0.48              |
| 1:CR:75:GLU:OE2   | 9:DI:152:THR:HG21 | 2.13                     | 0.48              |
| 1:CR:107:ILE:HD13 | 2:CS:13:ASP:OD2   | 2.14                     | 0.48              |
| 2:CS:106:GLU:HG3  | 5:DF:57:THR:CG2   | 2.44                     | 0.48              |
| 2:CU:52:VAL:HG21  | 2:CU:86:ASP:OD1   | 2.14                     | 0.48              |
| 2:CW:57:ALA:CA    | 2:CW:61:LEU:HD12  | 2.44                     | 0.48              |
| 1:DA:51:VAL:CG2   | 1:DA:133:MET:HE1  | 2.39                     | 0.48              |
| 1:DC:85:MET:C     | 1:DC:133:MET:HE1  | 2.34                     | 0.48              |
| 9:DI:80:THR:HA    | 9:DI:83:MET:HE3   | 1.95                     | 0.48              |
| 1:DJ:39:ILE:HG23  | 1:DJ:141:MET:SD   | 2.54                     | 0.48              |
| 1:DJ:104:ILE:HG21 | 1:DJ:156:VAL:HG22 | 1.95                     | 0.48              |
| 2:DK:104:LEU:O    | 2:DK:108:VAL:HG12 | 2.14                     | 0.48              |
| 2:DK:127:VAL:O    | 2:DK:131:GLN:HG2  | 2.12                     | 0.48              |
| 2:DO:50:THR:HG21  | 9:EA:62:GLN:NE2   | 2.29                     | 0.48              |
| 2:DO:88:TYR:CD2   | 2:DO:130:ILE:HD11 | 2.48                     | 0.48              |
| 2:DO:114:GLU:CG   | 5:DX:53:VAL:HG12  | 2.44                     | 0.48              |
| 2:DR:112:LEU:HA   | 2:DR:115:THR:CG2  | 2.44                     | 0.48              |
| 2:DV:2:GLN:OE1    | 2:DV:2:GLN:N      | 2.47                     | 0.48              |
| 9:EA:44:TYR:HA    | 9:EA:47:MET:HG3   | 1.96                     | 0.48              |
| 1:AA:103:PRO:HA   | 1:AA:106:GLU:HG2  | 1.96                     | 0.47              |
| 2:AB:88:TYR:OH    | 2:AB:112:LEU:HD21 | 2.13                     | 0.47              |
| 2:AF:123:ILE:HD12 | 2:AF:160:LEU:HD21 | 1.96                     | 0.47              |
| 1:AN:39:ILE:HG23  | 1:AN:141:MET:CE   | 2.43                     | 0.47              |
| 2:AO:114:GLU:HG3  | 6:BD:443:ASP:HB3  | 1.96                     | 0.47              |
| 1:AP:67:SER:O     | 1:AP:73:TYR:HB2   | 2.13                     | 0.47              |
| 2:AS:144:ASP:OD1  | 2:AS:145:ALA:N    | 2.46                     | 0.47              |
| 1:AV:11:ALA:CB    | 1:AV:18:LEU:HD23  | 2.44                     | 0.47              |
| 1:AZ:72:ALA:HA    | 1:AZ:77:MET:HB3   | 1.95                     | 0.47              |
| 6:BD:291:GLU:HG2  | 6:BD:348:ARG:NH1  | 2.29                     | 0.47              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 6:BD:743:TYR:HE1  | 6:BD:781:LEU:HD21  | 1.78                     | 0.47              |
| 9:BH:215:GLU:OE1  | 9:BH:215:GLU:N     | 2.46                     | 0.47              |
| 10:BI:200:CYC:O2A | 2:BN:62:TYR:N      | 2.32                     | 0.47              |
| 1:BK:125:ALA:HB3  | 10:BK:200:CYC:HMC2 | 1.96                     | 0.47              |
| 2:BL:54:GLU:O     | 2:BL:58:LYS:HG2    | 2.13                     | 0.47              |
| 3:BM:101:LYS:HE3  | 1:BR:16:ARG:CD     | 2.44                     | 0.47              |
| 2:CD:1:MET:HE2    | 2:CD:103:ILE:HD12  | 1.95                     | 0.47              |
| 1:CE:30:VAL:HG23  | 2:CF:31:PHE:HA     | 1.96                     | 0.47              |
| 2:CF:137:THR:O    | 2:CF:141:VAL:HG22  | 2.13                     | 0.47              |
| 6:CM:77:THR:O     | 6:CM:141:ILE:HD12  | 2.12                     | 0.47              |
| 6:CM:744:ARG:NH2  | 1:DU:13:ALA:O      | 2.45                     | 0.47              |
| 6:CM:786:LEU:O    | 6:CM:790:GLU:HG2   | 2.13                     | 0.47              |
| 6:CM:805:THR:HA   | 6:CM:838:MET:CE    | 2.41                     | 0.47              |
| 9:CQ:89:ARG:HD3   | 9:CQ:170:LYS:HG2   | 1.96                     | 0.47              |
| 9:CQ:233:GLY:O    | 9:CQ:237:VAL:HG23  | 2.13                     | 0.47              |
| 1:CR:69:GLY:HA3   | 9:DI:55:ALA:HB3    | 1.96                     | 0.47              |
| 1:CR:80:THR:HG21  | 10:CR:200:CYC:HAD1 | 1.95                     | 0.47              |
| 2:CS:104:LEU:HD21 | 2:CS:156:ILE:HD12  | 1.95                     | 0.47              |
| 1:CV:3:ILE:CD1    | 1:CV:25:ARG:HE     | 2.27                     | 0.47              |
| 1:CV:98:SER:OG    | 1:CV:100:ASP:OD1   | 2.24                     | 0.47              |
| 2:CW:85:LEU:CG    | 10:CW:200:CYC:HBC1 | 2.42                     | 0.47              |
| 2:CW:101:ALA:HB1  | 2:CW:155:TYR:CE2   | 2.49                     | 0.47              |
| 1:DC:67:SER:O     | 1:DC:73:TYR:HB2    | 2.13                     | 0.47              |
| 2:DD:116:TYR:CE2  | 2:DD:160:LEU:HD21  | 2.49                     | 0.47              |
| 5:DF:5:ARG:HA     | 5:DF:29:LYS:O      | 2.13                     | 0.47              |
| 5:DF:23:GLN:OE1   | 5:DF:23:GLN:N      | 2.42                     | 0.47              |
| 9:DI:21:VAL:O     | 9:DI:25:ILE:HG12   | 2.14                     | 0.47              |
| 9:DI:28:PHE:CE1   | 9:DI:157:ALA:HB1   | 2.48                     | 0.47              |
| 1:DJ:127:ALA:HA   | 1:DJ:130:VAL:HG12  | 1.95                     | 0.47              |
| 2:DK:43:VAL:CG1   | 2:DK:141:VAL:HG12  | 2.44                     | 0.47              |
| 1:DL:85:MET:HE1   | 1:DL:129:SER:HB2   | 1.95                     | 0.47              |
| 1:DL:103:PRO:O    | 1:DL:107:ILE:HG12  | 2.13                     | 0.47              |
| 2:DM:137:THR:O    | 2:DM:141:VAL:HG22  | 2.13                     | 0.47              |
| 1:DQ:115:MET:SD   | 2:DV:78:TYR:HB3    | 2.54                     | 0.47              |
| 1:DQ:122:PRO:HG2  | 1:DQ:125:ALA:CB    | 2.44                     | 0.47              |
| 2:DT:54:GLU:O     | 2:DT:58:LYS:HG2    | 2.13                     | 0.47              |
| 9:EA:293:ASN:HB2  | 9:EA:296:GLY:CA    | 2.43                     | 0.47              |
| 1:AA:153:PHE:O    | 1:AA:157:ILE:HG23  | 2.15                     | 0.47              |
| 2:AB:83:ARG:HG2   | 2:AB:87:TYR:CE2    | 2.49                     | 0.47              |
| 1:AC:3:ILE:HG22   | 1:AC:26:ILE:HD13   | 1.96                     | 0.47              |
| 2:AF:122:PRO:HB2  | 2:AF:125:SER:CB    | 2.42                     | 0.47              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 4:AK:114:ARG:HE   | 4:AK:124:ILE:HD13  | 1.80                     | 0.47              |
| 1:AN:101:VAL:HG12 | 1:AN:152:TYR:HD1   | 1.79                     | 0.47              |
| 1:AP:81:CYS:HA    | 10:AP:200:CYC:CHD  | 2.43                     | 0.47              |
| 1:AP:141:MET:HG3  | 1:AP:146:ALA:HB2   | 1.96                     | 0.47              |
| 2:AU:109:LEU:HD22 | 2:AU:159:GLY:HA3   | 1.97                     | 0.47              |
| 2:AW:71:ASN:O     | 2:AW:77:ARG:HD2    | 2.13                     | 0.47              |
| 1:AZ:122:PRO:O    | 1:AZ:126:VAL:HG23  | 2.14                     | 0.47              |
| 6:BD:80:SER:HB3   | 6:BD:83:SER:OG     | 2.14                     | 0.47              |
| 6:BD:180:ARG:HB2  | 6:BD:230:GLU:OE1   | 2.14                     | 0.47              |
| 6:BD:355:PRO:HD2  | 6:BD:430:PHE:CE1   | 2.49                     | 0.47              |
| 6:BD:609:LEU:C    | 6:BD:610:LEU:HD12  | 2.34                     | 0.47              |
| 6:BD:705:GLU:HB2  | 2:DT:154:ASP:OD2   | 2.14                     | 0.47              |
| 8:BG:216:MET:CE   | 9:BH:12:PHE:HB2    | 2.44                     | 0.47              |
| 9:BH:204:ASN:CB   | 9:BH:213:LEU:HB2   | 2.40                     | 0.47              |
| 9:BH:290:PHE:HD2  | 9:BH:292:LEU:HD21  | 1.78                     | 0.47              |
| 2:BJ:85:LEU:HD21  | 10:BJ:200:CYC:HBC1 | 1.96                     | 0.47              |
| 1:BK:56:ASP:OD1   | 1:BK:57:ARG:N      | 2.47                     | 0.47              |
| 2:BN:51:ILE:HD11  | 2:BN:140:LEU:HD23  | 1.95                     | 0.47              |
| 1:BR:4:VAL:HG11   | 4:BS:99:ALA:HA     | 1.96                     | 0.47              |
| 1:BX:122:PRO:O    | 1:BX:126:VAL:HG23  | 2.14                     | 0.47              |
| 2:BY:60:LEU:HD13  | 2:BY:72:MET:HE1    | 1.97                     | 0.47              |
| 2:BY:110:ASN:ND2  | 6:CM:668:ARG:HG2   | 2.29                     | 0.47              |
| 1:CC:3:ILE:HG12   | 1:CC:25:ARG:HG3    | 1.95                     | 0.47              |
| 1:CE:134:LYS:HD3  | 1:CE:153:PHE:HB3   | 1.96                     | 0.47              |
| 1:CG:102:THR:O    | 1:CG:106:GLU:HG2   | 2.14                     | 0.47              |
| 2:CH:106:GLU:HG3  | 2:CH:107:ARG:HG3   | 1.94                     | 0.47              |
| 9:CQ:156:ASN:O    | 9:CQ:159:VAL:HG12  | 2.13                     | 0.47              |
| 9:CQ:214:ILE:O    | 9:CQ:217:PHE:HB2   | 2.14                     | 0.47              |
| 9:CQ:311:GLU:CD   | 9:CQ:312:LEU:H     | 2.17                     | 0.47              |
| 1:CT:18:LEU:HD13  | 2:CU:97:LEU:CD2    | 2.43                     | 0.47              |
| 1:CT:141:MET:SD   | 1:CT:146:ALA:HA    | 2.54                     | 0.47              |
| 1:CV:84:ASP:OD2   | 10:CV:200:CYC:ND   | 2.45                     | 0.47              |
| 2:CW:52:VAL:HG21  | 2:CW:86:ASP:OD1    | 2.14                     | 0.47              |
| 2:CW:121:VAL:HG13 | 2:CW:122:PRO:HD2   | 1.96                     | 0.47              |
| 1:CY:66:VAL:HG12  | 1:CY:78:THR:HG22   | 1.95                     | 0.47              |
| 1:DC:104:ILE:HG21 | 1:DC:156:VAL:HG22  | 1.96                     | 0.47              |
| 5:DF:6:ILE:HG21   | 5:DF:36:TRP:CH2    | 2.49                     | 0.47              |
| 9:DI:264:PHE:CE2  | 9:DI:293:ASN:HA    | 2.50                     | 0.47              |
| 1:DJ:4:VAL:HG12   | 1:DJ:26:ILE:CD1    | 2.40                     | 0.47              |
| 1:DL:87:TYR:HB3   | 10:DL:200:CYC:HAB2 | 1.97                     | 0.47              |
| 1:DL:105:GLU:O    | 1:DL:110:VAL:HG23  | 2.14                     | 0.47              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:DN:5:THR:HA      | 2:DO:1:MET:HE1     | 1.94                     | 0.47              |
| 1:DS:4:VAL:HG22    | 1:DS:26:ILE:HD12   | 1.96                     | 0.47              |
| 2:DV:2:GLN:HB2     | 2:DV:6:THR:OG1     | 2.14                     | 0.47              |
| 2:DV:68:PRO:HA     | 2:DV:73:TYR:CG     | 2.49                     | 0.47              |
| 1:AA:95:GLY:HA3    | 1:AA:104:ILE:HD11  | 1.95                     | 0.47              |
| 2:AD:2:GLN:HB2     | 2:AD:6:THR:HB      | 1.96                     | 0.47              |
| 1:AJ:61:LYS:HD2    | 1:AJ:132:GLU:OE2   | 2.15                     | 0.47              |
| 10:AK:200:CYC:HBD2 | 10:AK:200:CYC:HMD1 | 1.96                     | 0.47              |
| 1:AN:14:GLU:OE1    | 1:AN:16:ARG:NE     | 2.34                     | 0.47              |
| 1:AP:68:PRO:HG2    | 1:BR:66:VAL:HG11   | 1.96                     | 0.47              |
| 2:AU:50:THR:O      | 2:AU:54:GLU:HG3    | 2.14                     | 0.47              |
| 1:AV:84:ASP:OD2    | 10:AV:200:CYC:ND   | 2.43                     | 0.47              |
| 1:AZ:29:PHE:O      | 1:AZ:36:ARG:NH1    | 2.47                     | 0.47              |
| 6:BD:31:GLN:HG2    | 6:BD:267:TYR:OH    | 2.13                     | 0.47              |
| 6:BD:85:LEU:HA     | 6:BD:153:LEU:CD1   | 2.44                     | 0.47              |
| 6:BD:482:ARG:HG3   | 6:BD:615:TYR:O     | 2.14                     | 0.47              |
| 7:BF:109:ARG:HG3   | 7:BF:110:PHE:N     | 2.28                     | 0.47              |
| 1:BR:39:ILE:O      | 1:BR:42:THR:OG1    | 2.30                     | 0.47              |
| 1:BX:107:ILE:HD13  | 2:BY:13:ASP:OD2    | 2.15                     | 0.47              |
| 2:CA:63:SER:H      | 2:CA:66:THR:CG2    | 2.26                     | 0.47              |
| 2:CD:23:ALA:O      | 2:CD:27:LEU:HG     | 2.15                     | 0.47              |
| 2:CH:108:VAL:HG12  | 2:CH:109:LEU:CD2   | 2.44                     | 0.47              |
| 6:CM:70:ARG:HH22   | 6:CM:205:ALA:HB1   | 1.79                     | 0.47              |
| 6:CM:141:ILE:HG23  | 6:CM:149:MET:HE2   | 1.96                     | 0.47              |
| 6:CM:389:TYR:OH    | 6:CM:404:GLU:OE1   | 2.16                     | 0.47              |
| 9:CQ:291:LEU:HD23  | 9:CQ:299:PHE:CE2   | 2.49                     | 0.47              |
| 1:CT:63:PRO:O      | 1:CT:66:VAL:HG12   | 2.14                     | 0.47              |
| 2:CW:126:THR:CG2   | 2:CW:160:LEU:HD21  | 2.43                     | 0.47              |
| 1:CY:72:ALA:HA     | 1:CY:77:MET:CB     | 2.45                     | 0.47              |
| 1:CY:131:ARG:O     | 1:CY:135:GLU:HG3   | 2.14                     | 0.47              |
| 2:DD:108:VAL:HG22  | 10:DD:200:CYC:HBB1 | 1.95                     | 0.47              |
| 5:DF:59:ARG:HB3    | 5:DF:62:THR:CG2    | 2.44                     | 0.47              |
| 9:DI:42:PHE:CD2    | 9:DI:131:LEU:HD13  | 2.47                     | 0.47              |
| 9:DI:167:LYS:HE2   | 9:DI:167:LYS:HA    | 1.96                     | 0.47              |
| 1:DL:37:LEU:O      | 1:DL:40:ALA:HB3    | 2.15                     | 0.47              |
| 1:DN:141:MET:CE    | 1:DN:146:ALA:HA    | 2.44                     | 0.47              |
| 1:DQ:88:TYR:CD1    | 1:DQ:91:LEU:HD12   | 2.50                     | 0.47              |
| 1:DS:96:VAL:HA     | 1:DS:152:TYR:HE2   | 1.78                     | 0.47              |
| 2:DT:51:ILE:HG22   | 2:DT:133:ILE:HD13  | 1.96                     | 0.47              |
| 2:DT:134:LYS:HG3   | 2:DT:150:GLY:HA2   | 1.95                     | 0.47              |
| 1:DU:80:THR:CG2    | 1:DU:83:ARG:HH21   | 2.28                     | 0.47              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 9:EA:19:ASP:O     | 9:EA:22:PRO:HD2    | 2.15                     | 0.47              |
| 2:AD:57:ALA:HA    | 2:AD:61:LEU:CG     | 2.44                     | 0.47              |
| 3:AE:92:VAL:HA    | 3:AE:104:ILE:HD11  | 1.95                     | 0.47              |
| 2:AF:63:SER:H     | 2:AF:66:THR:HG22   | 1.79                     | 0.47              |
| 2:AI:68:PRO:HG3   | 2:AI:73:TYR:CE1    | 2.50                     | 0.47              |
| 1:AJ:38:ARG:O     | 1:AJ:42:THR:HG23   | 2.14                     | 0.47              |
| 2:AO:53:LYS:HD2   | 1:AP:118:SER:O     | 2.14                     | 0.47              |
| 1:AP:89:LEU:HB2   | 1:AP:133:MET:CE    | 2.44                     | 0.47              |
| 2:AS:143:ALA:O    | 2:AS:147:LYS:HG2   | 2.13                     | 0.47              |
| 1:AV:54:ALA:HB1   | 1:AV:133:MET:HG2   | 1.95                     | 0.47              |
| 6:BD:776:GLU:N    | 6:BD:776:GLU:OE1   | 2.47                     | 0.47              |
| 6:BD:845:LEU:CG   | 5:DF:42:ARG:HD2    | 2.39                     | 0.47              |
| 10:BT:200:CYC:HC  | 10:BT:200:CYC:CMD  | 2.25                     | 0.47              |
| 1:CC:17:TYR:OH    | 2:CD:89:LEU:HD22   | 2.14                     | 0.47              |
| 2:CD:65:VAL:HG12  | 2:CD:72:MET:CB     | 2.45                     | 0.47              |
| 2:CH:52:VAL:O     | 2:CH:56:VAL:HG22   | 2.14                     | 0.47              |
| 2:CH:112:LEU:HA   | 2:CH:115:THR:HG22  | 1.96                     | 0.47              |
| 5:CJ:10:VAL:HG12  | 5:CJ:27:PHE:HE2    | 1.79                     | 0.47              |
| 6:CM:3:VAL:HG12   | 6:CM:5:ALA:H       | 1.78                     | 0.47              |
| 9:CQ:125:ILE:HG13 | 11:CQ:400:45D:H191 | 1.95                     | 0.47              |
| 9:CQ:187:LYS:HE2  | 9:CQ:199:LEU:CD2   | 2.44                     | 0.47              |
| 9:CQ:224:GLN:HB3  | 9:CQ:302:ALA:HA    | 1.97                     | 0.47              |
| 2:CU:5:ILE:HG23   | 2:CU:27:LEU:HD11   | 1.96                     | 0.47              |
| 1:CY:103:PRO:O    | 1:CY:107:ILE:HG12  | 2.14                     | 0.47              |
| 2:CZ:19:LEU:HB3   | 2:CZ:24:MET:SD     | 2.55                     | 0.47              |
| 2:CZ:51:ILE:HG13  | 2:CZ:136:VAL:HG12  | 1.97                     | 0.47              |
| 1:DA:35:ALA:O     | 1:DA:39:ILE:HG12   | 2.14                     | 0.47              |
| 1:DC:108:GLY:O    | 1:DC:109:LEU:HD23  | 2.14                     | 0.47              |
| 2:DD:119:LEU:HD13 | 10:DD:200:CYC:HBD1 | 1.96                     | 0.47              |
| 8:DG:247:PRO:HB2  | 2:DK:62:TYR:CG     | 2.49                     | 0.47              |
| 9:DI:117:MET:HE1  | 11:DI:400:45D:H311 | 1.95                     | 0.47              |
| 9:DI:170:LYS:NZ   | 9:DI:173:ALA:HB2   | 2.29                     | 0.47              |
| 9:DI:201:TYR:O    | 9:DI:205:LEU:HD13  | 2.14                     | 0.47              |
| 1:DJ:46:SER:O     | 1:DJ:50:ILE:HD12   | 2.15                     | 0.47              |
| 2:DK:52:VAL:O     | 2:DK:56:VAL:HG23   | 2.14                     | 0.47              |
| 2:DK:88:TYR:CD2   | 2:DK:130:ILE:HD11  | 2.50                     | 0.47              |
| 1:DL:97:VAL:HG11  | 2:DM:19:LEU:CD1    | 2.44                     | 0.47              |
| 1:DN:122:PRO:HG2  | 1:DN:125:ALA:HB3   | 1.96                     | 0.47              |
| 2:DO:63:SER:O     | 2:DO:67:ARG:HG3    | 2.14                     | 0.47              |
| 2:DO:112:LEU:HD23 | 2:DO:160:LEU:HD13  | 1.95                     | 0.47              |
| 1:DQ:77:MET:HE2   | 8:DZ:201:ARG:HB2   | 1.96                     | 0.47              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 5:DX:15:ARG:NH1   | 5:DX:17:ARG:HG2    | 2.30                     | 0.47              |
| 9:EA:32:ASN:O     | 9:EA:36:GLN:HG3    | 2.15                     | 0.47              |
| 9:EA:43:ALA:O     | 9:EA:47:MET:HG3    | 2.13                     | 0.47              |
| 1:AA:122:PRO:HB2  | 1:AA:125:ALA:CB    | 2.45                     | 0.47              |
| 2:AB:72:MET:HG3   | 10:AB:200:CYC:OC   | 2.14                     | 0.47              |
| 3:AE:104:ILE:HD13 | 3:AE:156:ILE:HD11  | 1.95                     | 0.47              |
| 1:AH:38:ARG:NH1   | 1:AH:145:ASP:OD2   | 2.35                     | 0.47              |
| 1:AJ:60:GLN:HB3   | 1:CC:61:LYS:NZ     | 2.28                     | 0.47              |
| 1:AJ:109:LEU:HA   | 1:AJ:112:VAL:HG11  | 1.96                     | 0.47              |
| 2:AL:5:ILE:HG21   | 6:BD:169:ALA:HA    | 1.95                     | 0.47              |
| 1:AR:115:MET:HE1  | 10:AR:200:CYC:CMB  | 2.33                     | 0.47              |
| 1:AV:5:THR:O      | 1:AV:9:VAL:HG13    | 2.13                     | 0.47              |
| 1:AV:109:LEU:HD13 | 1:AV:159:LYS:HG3   | 1.96                     | 0.47              |
| 2:AW:8:VAL:HG22   | 2:AW:26:LYS:HD2    | 1.96                     | 0.47              |
| 2:AY:131:GLN:O    | 2:AY:134:LYS:HB3   | 2.13                     | 0.47              |
| 9:BH:193:VAL:HG23 | 9:BH:255:GLY:HA3   | 1.97                     | 0.47              |
| 2:BL:53:LYS:HG3   | 3:BM:118:SER:O     | 2.13                     | 0.47              |
| 2:BL:104:LEU:HD12 | 2:BL:156:ILE:HG12  | 1.96                     | 0.47              |
| 2:BQ:141:VAL:HG12 | 2:BQ:145:ALA:HB3   | 1.96                     | 0.47              |
| 2:BT:108:VAL:O    | 2:BT:112:LEU:HB2   | 2.15                     | 0.47              |
| 1:BV:57:ARG:HA    | 1:BV:60:GLN:HE21   | 1.79                     | 0.47              |
| 1:CG:95:GLY:HA3   | 1:CG:104:ILE:HD11  | 1.96                     | 0.47              |
| 5:CJ:4:PHE:O      | 5:CJ:31:VAL:HG12   | 2.14                     | 0.47              |
| 6:CM:318:GLU:O    | 6:CM:322:ARG:HG3   | 2.13                     | 0.47              |
| 6:CM:749:ARG:HH12 | 10:DV:200:CYC:CBA  | 2.26                     | 0.47              |
| 6:CM:751:LEU:HD22 | 6:CM:760:PHE:HE2   | 1.80                     | 0.47              |
| 1:CR:18:LEU:HD22  | 2:CS:97:LEU:HD13   | 1.97                     | 0.47              |
| 1:CR:157:ILE:O    | 1:CR:161:SER:HB2   | 2.15                     | 0.47              |
| 1:CT:109:LEU:HD12 | 1:CT:159:LYS:HB3   | 1.97                     | 0.47              |
| 2:CU:108:VAL:O    | 2:CU:112:LEU:HB2   | 2.14                     | 0.47              |
| 10:CY:200:CYC:HHA | 10:CY:200:CYC:HBD1 | 1.97                     | 0.47              |
| 1:DA:75:GLU:N     | 1:DA:75:GLU:OE1    | 2.46                     | 0.47              |
| 2:DB:81:CYS:HB3   | 10:DB:200:CYC:HBC1 | 1.64                     | 0.47              |
| 2:DD:24:MET:O     | 2:DD:28:LYS:HG3    | 2.15                     | 0.47              |
| 8:DG:237:ALA:HB3  | 1:DL:56:ASP:OD1    | 2.15                     | 0.47              |
| 2:DO:2:GLN:OE1    | 2:DO:10:ASN:ND2    | 2.48                     | 0.47              |
| 2:DO:76:ARG:HH22  | 5:DX:63:ASN:HA     | 1.79                     | 0.47              |
| 1:DQ:47:ARG:O     | 1:DQ:50:ILE:HG22   | 2.15                     | 0.47              |
| 1:DQ:116:TYR:CD2  | 1:DQ:123:ILE:HG13  | 2.49                     | 0.47              |
| 2:DR:8:VAL:HG11   | 2:DR:27:LEU:CD1    | 2.44                     | 0.47              |
| 1:DS:76:GLU:HG3   | 8:DY:202:ARG:HD2   | 1.97                     | 0.47              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 9:EA:155:ARG:O    | 9:EA:159:VAL:HG13  | 2.14                     | 0.47              |
| 1:AC:14:GLU:OE2   | 6:BD:263:LYS:HB2   | 2.14                     | 0.47              |
| 2:AF:15:GLN:HB3   | 2:AF:17:LYS:HZ3    | 1.78                     | 0.47              |
| 2:AL:110:ASN:OD1  | 2:AL:111:GLY:N     | 2.47                     | 0.47              |
| 1:AV:47:ARG:HB2   | 1:AV:89:LEU:HD23   | 1.96                     | 0.47              |
| 6:BD:171:ASP:OD2  | 6:BD:173:ASN:HB2   | 2.15                     | 0.47              |
| 6:BD:453:PRO:HD2  | 6:BD:607:ARG:CZ    | 2.45                     | 0.47              |
| 9:BH:238:LEU:HD12 | 9:BH:242:ARG:HH21  | 1.80                     | 0.47              |
| 1:BI:130:VAL:HB   | 1:BI:157:ILE:HG13  | 1.96                     | 0.47              |
| 2:BJ:88:TYR:CD2   | 2:BJ:130:ILE:HD11  | 2.50                     | 0.47              |
| 1:BP:102:THR:O    | 1:BP:106:GLU:HG2   | 2.15                     | 0.47              |
| 1:BP:115:MET:HE1  | 10:BP:200:CYC:HMB3 | 1.95                     | 0.47              |
| 1:BV:116:TYR:OH   | 10:BV:200:CYC:HHB  | 2.14                     | 0.47              |
| 6:CM:186:ILE:HD11 | 10:CM:902:CYC:NC   | 2.30                     | 0.47              |
| 6:CM:331:LYS:HA   | 6:CM:335:GLU:OE1   | 2.15                     | 0.47              |
| 9:CQ:37:LEU:HD12  | 9:CQ:40:ILE:HD11   | 1.97                     | 0.47              |
| 1:CR:19:SER:O     | 1:CR:23:LEU:HD23   | 2.15                     | 0.47              |
| 2:CU:71:ASN:HD22  | 2:CU:121:VAL:HA    | 1.79                     | 0.47              |
| 1:CY:34:ALA:HA    | 2:CZ:28:LYS:NZ     | 2.30                     | 0.47              |
| 1:CY:39:ILE:HA    | 1:CY:42:THR:CG2    | 2.44                     | 0.47              |
| 1:CY:50:ILE:HD12  | 1:CY:136:VAL:HB    | 1.96                     | 0.47              |
| 2:CZ:44:ILE:CG2   | 2:CZ:89:LEU:HD21   | 2.45                     | 0.47              |
| 2:DB:123:ILE:H    | 2:DB:123:ILE:HD12  | 1.79                     | 0.47              |
| 10:DB:200:CYC:HHA | 10:DB:200:CYC:HBD1 | 1.96                     | 0.47              |
| 9:DI:222:ALA:HB3  | 9:DI:299:PHE:O     | 2.14                     | 0.47              |
| 9:DI:292:LEU:HG   | 9:DI:298:ILE:N     | 2.17                     | 0.47              |
| 1:DL:93:THR:HA    | 1:DL:96:VAL:HG12   | 1.97                     | 0.47              |
| 1:DL:121:THR:HG23 | 10:DL:200:CYC:C1C  | 2.44                     | 0.47              |
| 1:DL:132:GLU:O    | 1:DL:136:VAL:HG23  | 2.15                     | 0.47              |
| 1:DU:94:TYR:CG    | 2:DV:9:ILE:HG23    | 2.49                     | 0.47              |
| 2:DV:132:ALA:HA   | 2:DV:135:GLU:OE1   | 2.15                     | 0.47              |
| 5:DX:41:GLN:O     | 5:DX:45:LYS:HG3    | 2.14                     | 0.47              |
| 8:DZ:210:LEU:HD11 | 8:DZ:216:MET:HB2   | 1.96                     | 0.47              |
| 1:AA:50:ILE:HD12  | 1:AA:136:VAL:CG1   | 2.45                     | 0.47              |
| 2:AB:73:TYR:OH    | 2:AD:13:ASP:OD1    | 2.22                     | 0.47              |
| 2:AB:133:ILE:O    | 2:AB:137:THR:HG22  | 2.15                     | 0.47              |
| 10:AB:200:CYC:HHA | 10:AB:200:CYC:HBD1 | 1.95                     | 0.47              |
| 1:AC:22:GLU:HA    | 1:AC:25:ARG:HG2    | 1.96                     | 0.47              |
| 3:AE:102:GLU:O    | 3:AE:106:THR:HG23  | 2.15                     | 0.47              |
| 2:AF:5:ILE:HG13   | 2:AF:27:LEU:CD1    | 2.44                     | 0.47              |
| 2:AF:39:ARG:HE    | 1:CC:142:SER:HA    | 1.78                     | 0.47              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:AI:71:ASN:HD22   | 2:AI:122:PRO:CD    | 2.28                     | 0.47              |
| 2:AI:83:ARG:HD2    | 6:BD:369:SER:HB3   | 1.97                     | 0.47              |
| 4:AK:4:ALA:O       | 4:AK:7:THR:HG22    | 2.13                     | 0.47              |
| 2:AL:112:LEU:HD13  | 10:AL:200:CYC:HMB3 | 1.97                     | 0.47              |
| 1:AP:68:PRO:HG2    | 1:BR:66:VAL:CG1    | 2.44                     | 0.47              |
| 1:AP:144:ASP:N     | 1:AP:144:ASP:OD1   | 2.48                     | 0.47              |
| 1:AR:27:LYS:O      | 1:AR:31:THR:HG23   | 2.15                     | 0.47              |
| 2:AS:147:LYS:HE3   | 7:BF:93:PRO:HD3    | 1.97                     | 0.47              |
| 2:AU:24:MET:CE     | 1:AZ:41:GLU:HB2    | 2.44                     | 0.47              |
| 1:AV:37:LEU:HD21   | 2:AW:24:MET:CE     | 2.45                     | 0.47              |
| 1:AV:65:ILE:HG22   | 1:AV:72:ALA:HB3    | 1.96                     | 0.47              |
| 1:AX:82:LEU:HB2    | 8:BG:242:ILE:HD12  | 1.95                     | 0.47              |
| 1:AX:102:THR:O     | 1:AX:106:GLU:HG2   | 2.15                     | 0.47              |
| 2:AY:1:MET:HE3     | 2:AY:103:ILE:HD12  | 1.95                     | 0.47              |
| 2:AY:75:THR:HG23   | 1:AZ:110:VAL:O     | 2.15                     | 0.47              |
| 1:AZ:5:THR:O       | 1:AZ:9:VAL:HG23    | 2.15                     | 0.47              |
| 1:AZ:64:ASP:HA     | 1:AZ:67:SER:HB2    | 1.95                     | 0.47              |
| 1:AZ:77:MET:SD     | 10:AZ:200:CYC:HAD1 | 2.55                     | 0.47              |
| 6:BD:72:ALA:HB1    | 6:BD:81:PRO:HB2    | 1.95                     | 0.47              |
| 6:BD:399:ARG:HD2   | 6:BD:404:GLU:OE2   | 2.14                     | 0.47              |
| 6:BD:612:ARG:NH2   | 6:BD:619:GLU:OE2   | 2.30                     | 0.47              |
| 9:BH:97:THR:HG22   | 9:BH:101:TRP:CZ2   | 2.50                     | 0.47              |
| 9:BH:214:ILE:HG21  | 9:BH:238:LEU:HD21  | 1.96                     | 0.47              |
| 9:BH:280:GLY:O     | 9:BH:284:MET:HG2   | 2.15                     | 0.47              |
| 1:BI:116:TYR:HE2   | 1:BI:126:VAL:HG11  | 1.80                     | 0.47              |
| 1:BI:126:VAL:HG12  | 1:BI:160:MET:SD    | 2.55                     | 0.47              |
| 2:BJ:37:ARG:HD3    | 2:BJ:96:MET:O      | 2.14                     | 0.47              |
| 1:BK:121:THR:CG2   | 10:BK:200:CYC:HMC3 | 2.44                     | 0.47              |
| 2:BL:87:TYR:HE2    | 5:CJ:22:LEU:HB2    | 1.80                     | 0.47              |
| 2:BL:133:ILE:O     | 2:BL:137:THR:HG22  | 2.14                     | 0.47              |
| 1:BR:58:LEU:HD22   | 1:BR:129:SER:CB    | 2.44                     | 0.47              |
| 4:BS:44:ILE:HG22   | 4:BS:138:ILE:CD1   | 2.43                     | 0.47              |
| 4:BS:56:ALA:HB1    | 4:BS:60:PHE:CE2    | 2.49                     | 0.47              |
| 2:BT:90:ARG:HG2    | 2:BT:94:TYR:CZ     | 2.50                     | 0.47              |
| 2:BW:96:MET:HA     | 2:BW:152:TYR:CE2   | 2.50                     | 0.47              |
| 1:BZ:64:ASP:HA     | 1:BZ:67:SER:HB2    | 1.97                     | 0.47              |
| 2:CA:63:SER:H      | 2:CA:66:THR:HG22   | 1.80                     | 0.47              |
| 10:CE:200:CYC:HMA1 | 10:CE:200:CYC:HB   | 1.79                     | 0.47              |
| 2:CH:74:THR:HB     | 2:CH:77:ARG:HG3    | 1.96                     | 0.47              |
| 2:CH:88:TYR:CE2    | 2:CH:130:ILE:HD11  | 2.49                     | 0.47              |
| 5:CK:6:ILE:HD13    | 5:CK:36:TRP:CZ3    | 2.49                     | 0.47              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 6:CM:80:SER:HB3   | 6:CM:83:SER:OG     | 2.15                     | 0.47              |
| 6:CM:152:SER:O    | 6:CM:156:MET:HG3   | 2.14                     | 0.47              |
| 6:CM:285:ALA:CB   | 6:CM:316:MET:HE1   | 2.42                     | 0.47              |
| 6:CM:513:PHE:HB3  | 6:CM:542:LEU:CD1   | 2.45                     | 0.47              |
| 6:CM:666:GLN:O    | 6:CM:670:ALA:HB3   | 2.15                     | 0.47              |
| 6:CM:847:THR:HG21 | 6:CM:857:ARG:NH2   | 2.30                     | 0.47              |
| 6:CM:867:PRO:HG3  | 2:DT:115:THR:OG1   | 2.15                     | 0.47              |
| 1:CR:91:LEU:CD1   | 1:CR:104:ILE:HA    | 2.37                     | 0.47              |
| 1:CR:101:VAL:HG13 | 1:CY:20:PRO:HG2    | 1.96                     | 0.47              |
| 2:CS:91:TYR:CE1   | 2:CS:107:ARG:HD3   | 2.47                     | 0.47              |
| 2:CS:109:LEU:HD13 | 2:CS:159:GLY:HA3   | 1.96                     | 0.47              |
| 1:CT:25:ARG:HH11  | 1:DC:25:ARG:HG2    | 1.79                     | 0.47              |
| 2:CW:126:THR:HB   | 10:CW:200:CYC:HMC1 | 1.97                     | 0.47              |
| 1:DC:5:THR:O      | 1:DC:9:VAL:HG23    | 2.14                     | 0.47              |
| 1:DC:66:VAL:HA    | 1:DC:72:ALA:O      | 2.14                     | 0.47              |
| 2:DD:108:VAL:HA   | 10:DD:200:CYC:CBB  | 2.45                     | 0.47              |
| 8:DH:216:MET:HE1  | 8:DH:219:LEU:HG    | 1.97                     | 0.47              |
| 9:DI:19:ASP:O     | 9:DI:22:PRO:HD2    | 2.14                     | 0.47              |
| 2:DK:2:GLN:H      | 2:DK:102:SER:CB    | 2.27                     | 0.47              |
| 1:DL:8:ILE:CD1    | 1:DL:18:LEU:HD11   | 2.45                     | 0.47              |
| 2:DM:60:LEU:HD11  | 2:DM:129:ALA:HB2   | 1.96                     | 0.47              |
| 1:DN:97:VAL:HG21  | 2:DO:19:LEU:HD11   | 1.96                     | 0.47              |
| 2:DR:105:ASP:OD1  | 2:DR:109:LEU:HD12  | 2.15                     | 0.47              |
| 1:DS:123:ILE:HG12 | 1:DS:160:MET:HG3   | 1.96                     | 0.47              |
| 1:AC:157:ILE:O    | 1:AC:161:SER:OG    | 2.22                     | 0.47              |
| 2:AD:54:GLU:O     | 2:AD:58:LYS:HG2    | 2.15                     | 0.47              |
| 2:AI:101:ALA:HB2  | 2:AI:152:TYR:CD1   | 2.50                     | 0.47              |
| 2:AQ:144:ASP:OD1  | 2:AQ:144:ASP:N     | 2.48                     | 0.47              |
| 2:AS:90:ARG:HG2   | 2:AS:94:TYR:CZ     | 2.49                     | 0.47              |
| 1:AV:47:ARG:O     | 1:AV:51:VAL:HG22   | 2.14                     | 0.47              |
| 2:AW:57:ALA:O     | 8:BG:249:ARG:NH2   | 2.47                     | 0.47              |
| 1:AX:121:THR:HG23 | 10:AX:200:CYC:C1C  | 2.44                     | 0.47              |
| 2:AY:116:TYR:HB3  | 2:AY:123:ILE:HD11  | 1.96                     | 0.47              |
| 9:BH:40:ILE:HG13  | 11:BH:400:45D:H371 | 1.96                     | 0.47              |
| 1:BI:48:GLU:O     | 1:BI:51:VAL:HG12   | 2.15                     | 0.47              |
| 1:BK:17:TYR:CE1   | 2:BL:90:ARG:HG3    | 2.50                     | 0.47              |
| 2:BL:57:ALA:HA    | 2:BL:61:LEU:HD12   | 1.97                     | 0.47              |
| 3:BM:46:ASN:ND2   | 3:BM:140:LEU:HD21  | 2.30                     | 0.47              |
| 2:BQ:119:LEU:HD23 | 6:CM:435:ALA:HB2   | 1.96                     | 0.47              |
| 4:BS:113:LEU:CD2  | 10:BS:200:CYC:HMB3 | 2.44                     | 0.47              |
| 2:BT:18:TYR:CE2   | 6:CM:161:ARG:HA    | 2.50                     | 0.47              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:BY:78:TYR:CD1   | 1:BZ:115:MET:HG3   | 2.49                     | 0.47              |
| 5:CJ:10:VAL:O     | 5:CJ:10:VAL:HG13   | 2.14                     | 0.47              |
| 6:CM:682:ARG:NH2  | 6:CM:684:ASP:OD2   | 2.47                     | 0.47              |
| 6:CM:842:MET:O    | 6:CM:846:GLN:HG3   | 2.15                     | 0.47              |
| 9:CQ:115:GLU:HG2  | 9:CQ:119:GLN:HE22  | 1.79                     | 0.47              |
| 9:CQ:204:ASN:CB   | 9:CQ:213:LEU:HB2   | 2.41                     | 0.47              |
| 1:CR:90:ARG:O     | 1:CR:93:THR:OG1    | 2.28                     | 0.47              |
| 1:CR:141:MET:HE1  | 1:CR:145:ASP:O     | 2.14                     | 0.47              |
| 10:CR:200:CYC:CAA | 2:CW:61:LEU:HD22   | 2.44                     | 0.47              |
| 2:CS:85:LEU:HD23  | 2:CS:88:TYR:CD2    | 2.50                     | 0.47              |
| 1:CV:17:TYR:OH    | 2:CW:89:LEU:HG     | 2.15                     | 0.47              |
| 1:CV:27:LYS:O     | 1:CV:31:THR:HG23   | 2.15                     | 0.47              |
| 2:DB:71:ASN:ND2   | 2:DB:121:VAL:HA    | 2.30                     | 0.47              |
| 2:DD:84:ASP:OD2   | 10:DD:200:CYC:ND   | 2.47                     | 0.47              |
| 2:DD:126:THR:HG23 | 10:DD:200:CYC:HMC3 | 1.97                     | 0.47              |
| 9:DI:21:VAL:HG13  | 9:DI:22:PRO:HD3    | 1.95                     | 0.47              |
| 1:DJ:16:ARG:HA    | 2:DK:90:ARG:HD2    | 1.97                     | 0.47              |
| 1:DJ:35:ALA:O     | 1:DJ:39:ILE:HG13   | 2.14                     | 0.47              |
| 1:DJ:102:THR:O    | 1:DJ:106:GLU:HG3   | 2.14                     | 0.47              |
| 1:DJ:113:ARG:NH1  | 1:DS:117:ARG:HD2   | 2.29                     | 0.47              |
| 2:DK:106:GLU:HG3  | 5:DX:57:THR:CG2    | 2.41                     | 0.47              |
| 1:DL:39:ILE:HD11  | 1:DL:145:ASP:HB3   | 1.97                     | 0.47              |
| 1:DL:53:GLN:O     | 1:DL:57:ARG:HD3    | 2.15                     | 0.47              |
| 1:DL:61:LYS:O     | 1:DL:62:ARG:HG2    | 2.15                     | 0.47              |
| 8:DY:202:ARG:NH2  | 8:DY:204:ILE:HB    | 2.30                     | 0.47              |
| 9:EA:17:ALA:O     | 9:EA:20:VAL:HG22   | 2.14                     | 0.47              |
| 9:EA:21:VAL:CG1   | 9:EA:149:GLN:HG3   | 2.45                     | 0.47              |
| 1:AA:85:MET:HE1   | 1:AA:129:SER:HB2   | 1.96                     | 0.47              |
| 1:AC:102:THR:HB   | 1:AC:103:PRO:HD3   | 1.96                     | 0.47              |
| 2:AD:106:GLU:HG3  | 2:AD:107:ARG:HD3   | 1.97                     | 0.47              |
| 1:AH:71:ASN:HB3   | 10:AH:200:CYC:OC   | 2.14                     | 0.47              |
| 1:AN:102:THR:HB   | 1:AN:103:PRO:HD3   | 1.96                     | 0.47              |
| 2:AQ:88:TYR:OH    | 2:AQ:112:LEU:HD21  | 2.15                     | 0.47              |
| 2:AW:78:TYR:CD1   | 1:AX:115:MET:HG3   | 2.50                     | 0.47              |
| 2:AY:108:VAL:HG12 | 2:AY:109:LEU:CD2   | 2.43                     | 0.47              |
| 1:AZ:20:PRO:HA    | 1:AZ:23:LEU:HD12   | 1.97                     | 0.47              |
| 6:BD:477:ASN:O    | 6:BD:617:ARG:HD3   | 2.15                     | 0.47              |
| 6:BD:543:ILE:HG12 | 6:BD:568:LEU:HD23  | 1.97                     | 0.47              |
| 2:BN:132:ALA:O    | 2:BN:136:VAL:HG23  | 2.15                     | 0.47              |
| 1:BP:40:ALA:HB2   | 1:BP:97:VAL:HG22   | 1.96                     | 0.47              |
| 2:BQ:2:GLN:NE2    | 2:BQ:10:ASN:OD1    | 2.47                     | 0.47              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:BQ:101:ALA:HB2   | 2:BQ:152:TYR:CD1   | 2.49                     | 0.47              |
| 1:BX:68:PRO:HA     | 1:BX:73:TYR:CG     | 2.50                     | 0.47              |
| 1:BX:115:MET:HE3   | 10:BX:200:CYC:HMB3 | 1.95                     | 0.47              |
| 2:CA:148:GLU:HG3   | 2:CA:152:TYR:CE2   | 2.50                     | 0.47              |
| 1:CG:63:PRO:HB2    | 8:CP:232:ILE:HD13  | 1.97                     | 0.47              |
| 2:CS:119:LEU:HD13  | 10:CS:200:CYC: CBD | 2.41                     | 0.47              |
| 1:CT:161:SER:OG    | 2:DD:49:ALA:HB3    | 2.15                     | 0.47              |
| 1:DA:37:LEU:HD12   | 2:DB:24:MET:HE1    | 1.97                     | 0.47              |
| 2:DK:2:GLN:OE1     | 5:DX:65:GLY:HA3    | 2.14                     | 0.47              |
| 1:DL:2:SER:HG      | 1:DL:5:THR:HG1     | 1.63                     | 0.47              |
| 1:DU:37:LEU:HD13   | 2:DV:28:LYS:HG3    | 1.97                     | 0.47              |
| 2:AB:73:TYR:HB3    | 2:AB:77:ARG:NH2    | 2.30                     | 0.47              |
| 1:AC:25:ARG:HG3    | 1:AC:26:ILE:N      | 2.29                     | 0.47              |
| 2:AD:95:ALA:HB2    | 2:AD:104:LEU:CD2   | 2.44                     | 0.47              |
| 3:AE:36:ARG:HD2    | 3:AE:96:VAL:O      | 2.15                     | 0.47              |
| 3:AE:68:PRO:HA     | 3:AE:73:TYR:OH     | 2.15                     | 0.47              |
| 4:AK:113:LEU:CD1   | 4:AK:164:LEU:HD22  | 2.36                     | 0.47              |
| 2:AQ:58:LYS:HE2    | 2:AQ:135:GLU:OE1   | 2.14                     | 0.47              |
| 2:AS:40:ALA:CB     | 2:AS:96:MET:HE2    | 2.44                     | 0.47              |
| 1:AX:89:LEU:O      | 1:AX:93:THR:HG23   | 2.15                     | 0.47              |
| 6:BD:31:GLN:HB3    | 6:BD:33:ARG:HE     | 1.79                     | 0.47              |
| 6:BD:626:ILE:HG21  | 6:BD:635:VAL:HA    | 1.96                     | 0.47              |
| 6:BD:891:VAL:HG11  | 2:DB:105:ASP:OD1   | 2.15                     | 0.47              |
| 1:BI:40:ALA:O      | 1:BI:44:THR:HG22   | 2.14                     | 0.47              |
| 10:BJ:200:CYC:HMA2 | 6:CM:311:ASN:ND2   | 2.29                     | 0.47              |
| 2:BL:40:ALA:HB3    | 2:BL:96:MET:CE     | 2.45                     | 0.47              |
| 2:BL:72:MET:HE1    | 2:BL:81:CYS:SG     | 2.55                     | 0.47              |
| 3:BM:112:VAL:HA    | 3:BM:115:MET:CB    | 2.45                     | 0.47              |
| 4:BS:167:LEU:HD12  | 2:BW:10:ASN:ND2    | 2.30                     | 0.47              |
| 2:BT:34:GLY:O      | 2:BT:38:VAL:HG23   | 2.14                     | 0.47              |
| 1:BV:11:ALA:HB2    | 1:BV:18:LEU:HD23   | 1.97                     | 0.47              |
| 1:BV:101:VAL:HG11  | 1:CC:20:PRO:HG2    | 1.96                     | 0.47              |
| 1:BX:72:ALA:HA     | 1:BX:77:MET:HB3    | 1.97                     | 0.47              |
| 1:CE:141:MET:HE2   | 1:CE:145:ASP:HB2   | 1.97                     | 0.47              |
| 1:CG:66:VAL:HG21   | 8:CP:235:VAL:HG21  | 1.96                     | 0.47              |
| 5:CK:40:GLN:HG2    | 5:CK:44:MET:HE3    | 1.97                     | 0.47              |
| 6:CM:273:LEU:HB3   | 6:CM:277:GLU:CG    | 2.44                     | 0.47              |
| 6:CM:444:GLN:HE21  | 6:CM:448:GLY:HA2   | 1.80                     | 0.47              |
| 2:CW:56:VAL:HG12   | 2:CW:85:LEU:HD12   | 1.97                     | 0.47              |
| 2:CW:60:LEU:HD11   | 2:CW:129:ALA:HB2   | 1.97                     | 0.47              |
| 2:CZ:55:ALA:HA     | 2:CZ:132:ALA:HB1   | 1.97                     | 0.47              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:CZ:123:ILE:H     | 2:CZ:123:ILE:HD12  | 1.80                     | 0.47              |
| 2:DB:106:GLU:OE1   | 2:DB:107:ARG:HG3   | 2.14                     | 0.47              |
| 1:DC:97:VAL:HG21   | 2:DD:19:LEU:CD1    | 2.45                     | 0.47              |
| 8:DH:222:ALA:HB1   | 1:DS:78:THR:OG1    | 2.15                     | 0.47              |
| 9:DI:21:VAL:HG12   | 9:DI:22:PRO:HD3    | 1.97                     | 0.47              |
| 9:DI:191:GLU:HB2   | 9:DI:254:ARG:HA    | 1.97                     | 0.47              |
| 1:DL:141:MET:SD    | 1:DL:146:ALA:HA    | 2.55                     | 0.47              |
| 1:DU:81:CYS:O      | 1:DU:85:MET:HG3    | 2.15                     | 0.47              |
| 2:DV:52:VAL:HG21   | 2:DV:86:ASP:OD1    | 2.15                     | 0.47              |
| 1:AA:88:TYR:O      | 1:AA:92:VAL:HG23   | 2.15                     | 0.46              |
| 1:AC:92:VAL:HG11   | 1:AC:153:PHE:CZ    | 2.50                     | 0.46              |
| 2:AD:11:SER:O      | 2:AD:14:VAL:HG22   | 2.16                     | 0.46              |
| 2:AD:65:VAL:C      | 2:AD:72:MET:HB3    | 2.36                     | 0.46              |
| 3:AE:50:ILE:HD11   | 3:AE:140:LEU:HD13  | 1.97                     | 0.46              |
| 2:AF:88:TYR:OH     | 2:AF:116:TYR:OH    | 2.30                     | 0.46              |
| 1:AH:91:LEU:HB3    | 1:AH:104:ILE:HG23  | 1.97                     | 0.46              |
| 1:AJ:19:SER:HB2    | 1:AJ:20:PRO:HD2    | 1.96                     | 0.46              |
| 4:AK:78:ARG:NE     | 10:AK:200:CYC:O1D  | 2.48                     | 0.46              |
| 2:AL:74:THR:OG1    | 2:AL:77:ARG:HG3    | 2.15                     | 0.46              |
| 1:AN:8:ILE:HG23    | 2:AO:94:TYR:CD1    | 2.49                     | 0.46              |
| 1:AP:10:ASN:OD1    | 6:BD:511:LYS:HE3   | 2.15                     | 0.46              |
| 1:AR:39:ILE:O      | 1:AR:43:LEU:HG     | 2.16                     | 0.46              |
| 10:AU:200:CYC:HAA1 | 5:BB:36:TRP:CD1    | 2.45                     | 0.46              |
| 1:AV:57:ARG:O      | 1:AV:60:GLN:NE2    | 2.48                     | 0.46              |
| 1:AV:123:ILE:HG12  | 1:AV:160:MET:O     | 2.15                     | 0.46              |
| 2:AY:93:THR:HA     | 2:AY:149:MET:HE2   | 1.97                     | 0.46              |
| 2:AY:96:MET:HA     | 2:AY:152:TYR:CE2   | 2.50                     | 0.46              |
| 6:BD:19:THR:OG1    | 6:BD:22:VAL:HG23   | 2.14                     | 0.46              |
| 6:BD:543:ILE:HG23  | 6:BD:578:PHE:CZ    | 2.50                     | 0.46              |
| 9:BH:126:PRO:HD3   | 11:BH:400:45D:H211 | 1.96                     | 0.46              |
| 1:BK:39:ILE:HD12   | 1:BK:145:ASP:CG    | 2.35                     | 0.46              |
| 2:BL:152:TYR:O     | 2:BL:156:ILE:HG13  | 2.15                     | 0.46              |
| 3:BM:71:ASN:ND2    | 10:BM:200:CYC:HMD2 | 2.30                     | 0.46              |
| 2:BT:31:PHE:CE1    | 6:CM:50:GLY:HA3    | 2.50                     | 0.46              |
| 2:BY:112:LEU:HG    | 2:BY:160:LEU:CD1   | 2.45                     | 0.46              |
| 1:CE:37:LEU:HD21   | 2:CF:24:MET:CE     | 2.45                     | 0.46              |
| 1:CG:96:VAL:HG12   | 1:CG:152:TYR:CD2   | 2.50                     | 0.46              |
| 6:CM:10:SER:HB2    | 6:CM:415:GLN:NE2   | 2.29                     | 0.46              |
| 6:CM:187:GLU:OE1   | 6:CM:192:ILE:HG12  | 2.15                     | 0.46              |
| 6:CM:274:SER:OG    | 6:CM:277:GLU:OE1   | 2.33                     | 0.46              |
| 6:CM:515:LEU:HG    | 6:CM:542:LEU:CD2   | 2.45                     | 0.46              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:CR:26:ILE:O      | 1:CR:30:VAL:HG13   | 2.14                     | 0.46              |
| 1:CT:49:THR:HG22   | 1:CT:53:GLN:OE1    | 2.15                     | 0.46              |
| 1:CT:62:ARG:NH1    | 1:CT:124:GLU:OE2   | 2.44                     | 0.46              |
| 1:CV:123:ILE:HG12  | 1:CV:160:MET:O     | 2.15                     | 0.46              |
| 1:CV:126:VAL:HG12  | 1:CV:160:MET:HE1   | 1.97                     | 0.46              |
| 1:DC:109:LEU:HD13  | 1:DC:159:LYS:CG    | 2.42                     | 0.46              |
| 8:DG:248:ARG:NH1   | 2:DK:67:ARG:HD3    | 2.30                     | 0.46              |
| 1:DL:38:ARG:HA     | 1:DL:41:GLU:OE1    | 2.15                     | 0.46              |
| 10:DL:200:CYC:HMD2 | 10:DL:200:CYC:NC   | 2.30                     | 0.46              |
| 2:DM:93:THR:HA     | 2:DM:149:MET:SD    | 2.55                     | 0.46              |
| 1:DN:72:ALA:HA     | 1:DN:77:MET:HB3    | 1.97                     | 0.46              |
| 1:DN:107:ILE:CG2   | 10:DN:200:CYC:HBB1 | 2.45                     | 0.46              |
| 2:DR:56:VAL:O      | 2:DR:61:LEU:HB2    | 2.14                     | 0.46              |
| 9:EA:79:GLN:CD     | 9:EA:122:VAL:HG23  | 2.35                     | 0.46              |
| 2:AF:4:ALA:HB2     | 2:AF:99:GLY:O      | 2.15                     | 0.46              |
| 2:AF:123:ILE:HD12  | 2:AF:160:LEU:CD2   | 2.45                     | 0.46              |
| 1:AH:91:LEU:O      | 1:AH:104:ILE:HG12  | 2.16                     | 0.46              |
| 4:AK:41:ALA:CB     | 4:AK:98:ILE:HD11   | 2.45                     | 0.46              |
| 1:AN:91:LEU:O      | 1:AN:104:ILE:HG12  | 2.16                     | 0.46              |
| 1:AV:93:THR:HA     | 1:AV:96:VAL:HG22   | 1.97                     | 0.46              |
| 2:AY:68:PRO:HG3    | 2:AY:73:TYR:CE1    | 2.49                     | 0.46              |
| 1:AZ:71:ASN:OD1    | 10:AZ:200:CYC:HBD2 | 2.15                     | 0.46              |
| 6:BD:244:PRO:CG    | 6:BD:248:ILE:HD13  | 2.34                     | 0.46              |
| 6:BD:365:PHE:HA    | 6:BD:368:VAL:HG12  | 1.97                     | 0.46              |
| 2:BL:3:ASP:HA      | 2:BL:100:ASP:HB3   | 1.96                     | 0.46              |
| 3:BM:131:THR:HG22  | 3:BM:157:ILE:CD1   | 2.45                     | 0.46              |
| 2:BQ:90:ARG:O      | 2:BQ:93:THR:OG1    | 2.27                     | 0.46              |
| 1:BR:134:LYS:HB2   | 1:BR:153:PHE:HB3   | 1.98                     | 0.46              |
| 1:BV:65:ILE:HG23   | 10:BV:200:CYC:OC   | 2.15                     | 0.46              |
| 1:BX:115:MET:HE1   | 10:BX:200:CYC:HMB3 | 1.97                     | 0.46              |
| 2:BY:85:LEU:CG     | 10:BY:200:CYC:HBC1 | 2.44                     | 0.46              |
| 1:CC:17:TYR:CE2    | 2:CD:90:ARG:HG3    | 2.50                     | 0.46              |
| 2:CF:74:THR:HG1    | 2:CF:77:ARG:HH21   | 1.55                     | 0.46              |
| 6:CM:175:ILE:HD12  | 6:CM:227:LEU:HD12  | 1.96                     | 0.46              |
| 6:CM:283:LYS:O     | 6:CM:287:ARG:HG3   | 2.14                     | 0.46              |
| 7:CO:111:LYS:O     | 7:CO:115:ARG:HG3   | 2.15                     | 0.46              |
| 9:CQ:140:ALA:HA    | 9:CQ:143:GLN:OE1   | 2.16                     | 0.46              |
| 9:CQ:248:LEU:CA    | 9:CQ:275:THR:HG21  | 2.40                     | 0.46              |
| 1:CR:36:ARG:NH1    | 1:CR:99:GLY:HA2    | 2.30                     | 0.46              |
| 1:CR:108:GLY:HA2   | 2:CW:75:THR:HG23   | 1.97                     | 0.46              |
| 1:CR:140:LEU:HD23  | 1:CR:140:LEU:O     | 2.15                     | 0.46              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:CT:111:GLY:HA2   | 1:CT:114:GLU:OE1   | 2.15                     | 0.46              |
| 2:CZ:109:LEU:CD2   | 2:CZ:159:GLY:HA3   | 2.44                     | 0.46              |
| 1:DJ:20:PRO:O      | 1:DJ:23:LEU:HG     | 2.15                     | 0.46              |
| 10:DM:200:CYC:HBB2 | 5:DX:20:ARG:HG3    | 1.96                     | 0.46              |
| 1:DN:132:GLU:HA    | 1:DN:135:GLU:OE1   | 2.16                     | 0.46              |
| 2:DO:68:PRO:HG3    | 2:DO:73:TYR:CE1    | 2.51                     | 0.46              |
| 1:DS:63:PRO:HD2    | 9:EA:55:ALA:CB     | 2.45                     | 0.46              |
| 1:DS:113:ARG:HG2   | 1:DS:123:ILE:CD1   | 2.45                     | 0.46              |
| 1:DS:122:PRO:HG2   | 1:DS:125:ALA:HB3   | 1.98                     | 0.46              |
| 1:DU:116:TYR:HD2   | 1:DU:123:ILE:HD12  | 1.79                     | 0.46              |
| 1:DU:142:SER:O     | 1:DU:146:ALA:N     | 2.46                     | 0.46              |
| 2:DV:15:GLN:HB3    | 2:DV:17:LYS:HG3    | 1.96                     | 0.46              |
| 9:EA:260:ALA:HB3   | 9:EA:264:PHE:CB    | 2.46                     | 0.46              |
| 9:EA:265:THR:HG22  | 9:EA:267:ILE:HG13  | 1.98                     | 0.46              |
| 1:AC:130:VAL:HA    | 1:AC:133:MET:HE3   | 1.97                     | 0.46              |
| 2:AD:68:PRO:HA     | 2:AD:73:TYR:CG     | 2.50                     | 0.46              |
| 2:AF:50:THR:O      | 2:AF:54:GLU:HG2    | 2.15                     | 0.46              |
| 1:AH:37:LEU:O      | 1:AH:40:ALA:HB3    | 2.15                     | 0.46              |
| 2:AQ:51:ILE:HD11   | 2:AQ:140:LEU:HD23  | 1.96                     | 0.46              |
| 2:AQ:52:VAL:O      | 2:AQ:56:VAL:HG13   | 2.15                     | 0.46              |
| 1:AR:126:VAL:O     | 1:AR:129:SER:OG    | 2.28                     | 0.46              |
| 1:AV:4:VAL:HG12    | 1:AV:26:ILE:HG23   | 1.96                     | 0.46              |
| 10:AV:200:CYC:HHA  | 10:AV:200:CYC:HBA2 | 1.96                     | 0.46              |
| 2:AY:68:PRO:HA     | 2:AY:73:TYR:CG     | 2.50                     | 0.46              |
| 5:BB:38:ARG:HE     | 6:BD:641:ASP:CB    | 2.24                     | 0.46              |
| 6:BD:177:VAL:HG22  | 6:BD:259:ASN:HB2   | 1.96                     | 0.46              |
| 6:BD:186:ILE:O     | 6:BD:190:CYS:HB3   | 2.15                     | 0.46              |
| 6:BD:199:ILE:CG2   | 6:BD:227:LEU:HD22  | 2.45                     | 0.46              |
| 6:BD:513:PHE:HB3   | 6:BD:542:LEU:CD1   | 2.46                     | 0.46              |
| 6:BD:606:HIS:HB2   | 6:BD:639:MET:CE    | 2.45                     | 0.46              |
| 6:BD:811:ARG:NE    | 6:BD:843:GLU:OE2   | 2.42                     | 0.46              |
| 9:BH:131:LEU:HD23  | 9:BH:136:ASN:HA    | 1.96                     | 0.46              |
| 1:BI:125:ALA:CB    | 10:BI:200:CYC:HMC2 | 2.45                     | 0.46              |
| 2:BJ:51:ILE:HD11   | 2:BJ:140:LEU:HD23  | 1.97                     | 0.46              |
| 1:BK:113:ARG:NH2   | 1:BP:117:ARG:HD3   | 2.21                     | 0.46              |
| 2:BL:112:LEU:HA    | 2:BL:115:THR:CG2   | 2.45                     | 0.46              |
| 2:BL:112:LEU:HD11  | 10:BL:200:CYC:C1B  | 2.46                     | 0.46              |
| 1:BP:71:ASN:HB3    | 10:BP:200:CYC:OC   | 2.15                     | 0.46              |
| 1:BP:84:ASP:HB2    | 10:BP:200:CYC:HBC3 | 1.97                     | 0.46              |
| 2:BQ:71:ASN:OD1    | 2:BQ:77:ARG:HD3    | 2.15                     | 0.46              |
| 2:BY:141:VAL:HG12  | 2:BY:145:ALA:HB3   | 1.97                     | 0.46              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:BZ:27:LYS:O     | 1:BZ:31:THR:HG23   | 2.15                     | 0.46              |
| 2:CD:112:LEU:HD23 | 2:CD:112:LEU:HA    | 1.66                     | 0.46              |
| 1:CE:5:THR:O      | 1:CE:9:VAL:HG13    | 2.15                     | 0.46              |
| 2:CF:111:GLY:O    | 2:CF:115:THR:OG1   | 2.27                     | 0.46              |
| 1:CG:27:LYS:NZ    | 2:CH:35:GLU:HA     | 2.31                     | 0.46              |
| 1:CG:50:ILE:HD11  | 1:CG:137:ALA:HB2   | 1.98                     | 0.46              |
| 1:CG:107:ILE:HD11 | 6:CM:532:VAL:HG22  | 1.96                     | 0.46              |
| 1:CG:115:MET:HE3  | 10:CG:200:CYC:HNB  | 1.96                     | 0.46              |
| 1:CG:116:TYR:CE2  | 1:CG:126:VAL:HG21  | 2.50                     | 0.46              |
| 2:CH:123:ILE:HA   | 2:CH:126:THR:HG22  | 1.97                     | 0.46              |
| 6:CM:348:ARG:HD2  | 6:CM:417:LEU:HG    | 1.98                     | 0.46              |
| 9:CQ:28:PHE:CD2   | 9:CQ:39:LEU:HD23   | 2.50                     | 0.46              |
| 9:CQ:147:SER:HA   | 9:CQ:150:GLN:OE1   | 2.15                     | 0.46              |
| 2:CU:1:MET:SD     | 2:CU:103:ILE:HD13  | 2.56                     | 0.46              |
| 2:CW:126:THR:HG21 | 2:CW:160:LEU:HD21  | 1.96                     | 0.46              |
| 2:CZ:24:MET:O     | 2:CZ:28:LYS:HG2    | 2.14                     | 0.46              |
| 9:DI:286:ILE:HD11 | 9:DI:303:ILE:CG2   | 2.45                     | 0.46              |
| 1:DL:117:ARG:HD3  | 1:DQ:113:ARG:NH1   | 2.30                     | 0.46              |
| 2:DM:15:GLN:HG3   | 2:DM:17:LYS:HG2    | 1.98                     | 0.46              |
| 2:DO:10:ASN:O     | 2:DO:14:VAL:HG13   | 2.15                     | 0.46              |
| 9:EA:177:VAL:HG12 | 9:EA:179:PRO:HD2   | 1.97                     | 0.46              |
| 9:EA:248:LEU:HD11 | 9:EA:277:TRP:CE3   | 2.49                     | 0.46              |
| 1:AA:40:ALA:O     | 1:AA:44:THR:HG22   | 2.15                     | 0.46              |
| 3:AE:30:LEU:HD13  | 2:AF:31:PHE:CD1    | 2.43                     | 0.46              |
| 2:AF:39:ARG:O     | 2:AF:43:VAL:HG23   | 2.15                     | 0.46              |
| 1:AH:121:THR:CG2  | 10:AH:200:CYC:HMC3 | 2.45                     | 0.46              |
| 2:AL:56:VAL:HG12  | 2:AL:61:LEU:CG     | 2.38                     | 0.46              |
| 2:AQ:100:ASP:OD1  | 2:AQ:102:SER:OG    | 2.12                     | 0.46              |
| 1:AR:97:VAL:HG21  | 2:AS:19:LEU:HD12   | 1.97                     | 0.46              |
| 1:AV:37:LEU:HD21  | 2:AW:24:MET:HE1    | 1.98                     | 0.46              |
| 6:BD:450:GLY:O    | 6:BD:600:LYS:HE3   | 2.16                     | 0.46              |
| 6:BD:736:LYS:O    | 6:BD:740:ARG:HG3   | 2.15                     | 0.46              |
| 1:BP:91:LEU:O     | 1:BP:104:ILE:HG12  | 2.15                     | 0.46              |
| 1:BR:19:SER:OG    | 1:BR:22:GLU:HG3    | 2.15                     | 0.46              |
| 2:CA:20:ASP:O     | 2:CA:24:MET:HG2    | 2.16                     | 0.46              |
| 1:CC:91:LEU:O     | 1:CC:104:ILE:HG12  | 2.15                     | 0.46              |
| 1:CE:83:ARG:NH2   | 1:CE:84:ASP:OD1    | 2.32                     | 0.46              |
| 2:CH:68:PRO:HA    | 2:CH:73:TYR:CG     | 2.51                     | 0.46              |
| 2:CH:96:MET:HG3   | 2:CH:148:GLU:OE2   | 2.16                     | 0.46              |
| 5:CK:6:ILE:O      | 5:CK:28:THR:HA     | 2.14                     | 0.46              |
| 9:CQ:250:LEU:HD22 | 9:CQ:273:VAL:HG23  | 1.96                     | 0.46              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:CW:48:ALA:O      | 2:CW:52:VAL:HG23   | 2.16                     | 0.46              |
| 1:DC:116:TYR:HE2   | 1:DC:126:VAL:HG11  | 1.79                     | 0.46              |
| 8:DH:216:MET:CE    | 8:DH:216:MET:HA    | 2.46                     | 0.46              |
| 9:DI:81:GLN:HA     | 9:DI:176:VAL:CG2   | 2.45                     | 0.46              |
| 9:DI:146:GLU:HG2   | 8:DZ:234:LYS:NZ    | 2.31                     | 0.46              |
| 9:DI:146:GLU:HA    | 8:DZ:234:LYS:HZ2   | 1.81                     | 0.46              |
| 9:DI:238:LEU:HD21  | 9:DI:242:ARG:NH2   | 2.31                     | 0.46              |
| 10:DJ:200:CYC:O2D  | 2:DO:62:TYR:OH     | 2.23                     | 0.46              |
| 10:DJ:200:CYC:HAA1 | 2:DO:61:LEU:HD22   | 1.98                     | 0.46              |
| 2:DK:78:TYR:HE1    | 1:DL:115:MET:HA    | 1.80                     | 0.46              |
| 2:DK:104:LEU:HD23  | 2:DK:155:TYR:CD2   | 2.38                     | 0.46              |
| 1:DN:17:TYR:CZ     | 2:DO:90:ARG:HG3    | 2.51                     | 0.46              |
| 10:DO:200:CYC:HAD2 | 5:DX:33:TYR:OH     | 2.16                     | 0.46              |
| 2:DR:40:ALA:HB2    | 2:DR:145:ALA:CB    | 2.42                     | 0.46              |
| 2:DT:68:PRO:HA     | 2:DT:73:TYR:CD1    | 2.50                     | 0.46              |
| 1:DU:44:THR:HG23   | 2:DV:18:TYR:CD2    | 2.50                     | 0.46              |
| 1:DU:71:ASN:HD22   | 1:DU:121:THR:HA    | 1.81                     | 0.46              |
| 9:EA:187:LYS:HE2   | 9:EA:187:LYS:HA    | 1.98                     | 0.46              |
| 9:EA:231:ILE:CG1   | 9:EA:236:ASN:HB3   | 2.46                     | 0.46              |
| 9:EA:248:LEU:HD21  | 9:EA:277:TRP:CE3   | 2.50                     | 0.46              |
| 10:AD:200:CYC:NB   | 10:AD:200:CYC:HMA1 | 2.31                     | 0.46              |
| 2:AF:39:ARG:CZ     | 1:CC:142:SER:HA    | 2.46                     | 0.46              |
| 1:AH:134:LYS:HB2   | 1:AH:153:PHE:HB3   | 1.96                     | 0.46              |
| 1:AJ:109:LEU:HD13  | 1:AJ:159:LYS:CB    | 2.46                     | 0.46              |
| 1:AJ:115:MET:HE3   | 10:AJ:200:CYC:HMB3 | 1.96                     | 0.46              |
| 4:AK:44:ILE:CG2    | 4:AK:138:ILE:HD12  | 2.46                     | 0.46              |
| 1:AN:46:SER:HB3    | 1:AN:50:ILE:HG13   | 1.98                     | 0.46              |
| 1:AP:110:VAL:HG11  | 6:BD:489:PRO:HB3   | 1.98                     | 0.46              |
| 2:AS:2:GLN:HG3     | 2:AS:100:ASP:OD2   | 2.16                     | 0.46              |
| 6:BD:666:GLN:O     | 6:BD:670:ALA:HB3   | 2.15                     | 0.46              |
| 6:BD:743:TYR:OH    | 6:BD:764:GLU:OE2   | 2.23                     | 0.46              |
| 6:BD:866:PHE:HB3   | 6:BD:867:PRO:HD3   | 1.98                     | 0.46              |
| 9:BH:20:VAL:CG2    | 9:BH:145:LEU:HD21  | 2.45                     | 0.46              |
| 9:BH:86:LEU:HD23   | 9:BH:95:CYS:SG     | 2.56                     | 0.46              |
| 1:BK:26:ILE:O      | 1:BK:30:VAL:HG23   | 2.14                     | 0.46              |
| 2:BL:122:PRO:HG2   | 2:BL:125:SER:OG    | 2.16                     | 0.46              |
| 3:BM:144:GLU:OE1   | 3:BM:144:GLU:N     | 2.40                     | 0.46              |
| 2:BN:25:ASP:OD1    | 2:BN:26:LYS:N      | 2.48                     | 0.46              |
| 2:BN:37:ARG:NH1    | 2:BN:99:GLY:HA2    | 2.30                     | 0.46              |
| 2:BQ:78:TYR:CD1    | 1:BR:115:MET:HG3   | 2.51                     | 0.46              |
| 1:BR:18:LEU:HD11   | 4:BS:95:TYR:HD1    | 1.79                     | 0.46              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:BV:113:ARG:CG   | 1:BV:123:ILE:HD13  | 2.38                     | 0.46              |
| 2:CD:25:ASP:OD1   | 2:CD:26:LYS:N      | 2.48                     | 0.46              |
| 1:CG:67:SER:HB3   | 1:CG:68:PRO:HD2    | 1.97                     | 0.46              |
| 2:CH:145:ALA:O    | 2:CH:148:GLU:HG3   | 2.15                     | 0.46              |
| 5:CJ:12:SER:HB3   | 5:CJ:15:ARG:HG3    | 1.96                     | 0.46              |
| 6:CM:559:GLN:HB3  | 6:CM:587:LEU:HD22  | 1.96                     | 0.46              |
| 6:CM:727:VAL:HG13 | 5:DX:20:ARG:HD3    | 1.96                     | 0.46              |
| 9:CQ:273:VAL:HG22 | 9:CQ:275:THR:H     | 1.80                     | 0.46              |
| 2:CS:71:ASN:ND2   | 2:CS:122:PRO:HD3   | 2.30                     | 0.46              |
| 2:CS:71:ASN:CB    | 2:CS:122:PRO:HD3   | 2.46                     | 0.46              |
| 1:CT:122:PRO:HG2  | 10:CT:200:CYC:HMC2 | 1.97                     | 0.46              |
| 1:CY:76:GLU:HG3   | 8:DH:203:PHE:CE2   | 2.50                     | 0.46              |
| 2:CZ:132:ALA:O    | 2:CZ:136:VAL:HG23  | 2.16                     | 0.46              |
| 1:DA:18:LEU:HD22  | 2:DB:97:LEU:CD2    | 2.46                     | 0.46              |
| 1:DA:27:LYS:O     | 1:DA:31:THR:HG23   | 2.15                     | 0.46              |
| 5:DF:9:CYS:HA     | 5:DF:25:THR:O      | 2.15                     | 0.46              |
| 5:DF:29:LYS:NZ    | 5:DF:39:GLU:OE2    | 2.48                     | 0.46              |
| 9:DI:177:VAL:HG12 | 9:DI:179:PRO:HD2   | 1.97                     | 0.46              |
| 9:DI:263:GLY:C    | 9:DI:294:PRO:HB3   | 2.36                     | 0.46              |
| 1:DJ:110:VAL:CG1  | 2:DO:76:ARG:HB2    | 2.45                     | 0.46              |
| 1:DL:80:THR:HG21  | 10:DL:200:CYC:HAD2 | 1.98                     | 0.46              |
| 2:DM:6:THR:HG22   | 2:DM:10:ASN:ND2    | 2.29                     | 0.46              |
| 1:DN:109:LEU:HD22 | 1:DN:159:LYS:CG    | 2.45                     | 0.46              |
| 1:DQ:71:ASN:HD21  | 1:DQ:122:PRO:HD2   | 1.79                     | 0.46              |
| 2:DR:51:ILE:HG21  | 2:DR:137:THR:OG1   | 2.16                     | 0.46              |
| 2:DR:78:TYR:CE1   | 1:DS:115:MET:HA    | 2.51                     | 0.46              |
| 2:DT:122:PRO:O    | 2:DT:126:THR:HG23  | 2.16                     | 0.46              |
| 8:DY:207:GLU:HG2  | 8:DY:207:GLU:O     | 2.15                     | 0.46              |
| 9:EA:28:PHE:CD2   | 9:EA:39:LEU:HD23   | 2.51                     | 0.46              |
| 9:EA:76:PRO:CB    | 9:EA:123:ALA:HB2   | 2.35                     | 0.46              |
| 9:EA:252:PRO:HA   | 9:EA:271:GLY:CA    | 2.37                     | 0.46              |
| 3:AE:39:ILE:CG2   | 3:AE:96:VAL:HG11   | 2.34                     | 0.46              |
| 3:AE:131:THR:HG22 | 3:AE:157:ILE:CD1   | 2.45                     | 0.46              |
| 2:AL:18:TYR:HD2   | 6:BD:61:THR:HG22   | 1.77                     | 0.46              |
| 2:AL:90:ARG:NH1   | 6:BD:32:ASP:OD1    | 2.48                     | 0.46              |
| 2:AO:123:ILE:O    | 2:AO:126:THR:HG22  | 2.16                     | 0.46              |
| 1:AR:97:VAL:CG1   | 2:AS:27:LEU:HD13   | 2.46                     | 0.46              |
| 2:AU:61:LEU:HD22  | 10:AV:200:CYC:CAA  | 2.46                     | 0.46              |
| 2:AW:21:GLY:CA    | 2:AW:24:MET:HB3    | 2.42                     | 0.46              |
| 6:BD:821:GLN:O    | 6:BD:825:ILE:HG13  | 2.15                     | 0.46              |
| 9:BH:190:ILE:HG21 | 9:BH:193:VAL:HB    | 1.98                     | 0.46              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:BI:85:MET:HB3   | 1:BI:133:MET:CE    | 2.43                     | 0.46              |
| 1:BI:126:VAL:CG2  | 10:BI:200:CYC:HMC3 | 2.44                     | 0.46              |
| 2:BJ:83:ARG:HG2   | 2:BJ:87:TYR:CE2    | 2.50                     | 0.46              |
| 1:BK:90:ARG:O     | 1:BK:93:THR:OG1    | 2.29                     | 0.46              |
| 3:BM:43:LEU:CD1   | 3:BM:93:THR:HG22   | 2.45                     | 0.46              |
| 2:BQ:2:GLN:O      | 2:BQ:100:ASP:HB3   | 2.15                     | 0.46              |
| 2:BW:78:TYR:CD1   | 1:BX:115:MET:HG3   | 2.51                     | 0.46              |
| 2:CA:62:TYR:CE2   | 7:CO:103:PRO:HG3   | 2.51                     | 0.46              |
| 2:CA:102:SER:O    | 2:CA:106:GLU:HG2   | 2.16                     | 0.46              |
| 2:CD:88:TYR:OH    | 2:CD:112:LEU:HD13  | 2.15                     | 0.46              |
| 1:CR:134:LYS:HA   | 1:CR:153:PHE:CE2   | 2.51                     | 0.46              |
| 2:CU:3:ASP:HB2    | 2:CU:98:ALA:O      | 2.15                     | 0.46              |
| 1:CV:49:THR:O     | 1:CV:53:GLN:HG3    | 2.16                     | 0.46              |
| 1:CY:74:GLY:O     | 1:CY:78:THR:HG23   | 2.15                     | 0.46              |
| 2:DB:111:GLY:O    | 2:DB:115:THR:OG1   | 2.28                     | 0.46              |
| 10:DC:200:CYC:NC  | 10:DC:200:CYC:HMD2 | 2.30                     | 0.46              |
| 9:DI:26:ALA:O     | 9:DI:29:SER:HB3    | 2.15                     | 0.46              |
| 1:DJ:48:GLU:HA    | 1:DJ:51:VAL:CG1    | 2.46                     | 0.46              |
| 1:DJ:88:TYR:HE2   | 1:DJ:160:MET:HE1   | 1.79                     | 0.46              |
| 1:DJ:153:PHE:O    | 1:DJ:157:ILE:HG13  | 2.15                     | 0.46              |
| 2:DK:19:LEU:HB3   | 2:DK:24:MET:CE     | 2.45                     | 0.46              |
| 2:DK:112:LEU:CG   | 10:DK:200:CYC:HMB3 | 2.45                     | 0.46              |
| 1:DL:4:VAL:HG23   | 2:DM:97:LEU:HD23   | 1.97                     | 0.46              |
| 2:DO:44:ILE:HG21  | 2:DO:93:THR:OG1    | 2.16                     | 0.46              |
| 1:DQ:101:VAL:HA   | 1:DQ:104:ILE:HD13  | 1.97                     | 0.46              |
| 1:DS:50:ILE:CG1   | 1:DS:136:VAL:HG13  | 2.45                     | 0.46              |
| 1:DU:52:LYS:HE2   | 1:DU:52:LYS:HA     | 1.96                     | 0.46              |
| 1:DU:128:GLN:O    | 1:DU:132:GLU:HG2   | 2.15                     | 0.46              |
| 2:DV:15:GLN:CB    | 2:DV:17:LYS:HG3    | 2.45                     | 0.46              |
| 8:DY:214:ASN:HB2  | 8:DY:217:ASN:ND2   | 2.31                     | 0.46              |
| 8:DZ:210:LEU:HD21 | 8:DZ:217:ASN:N     | 2.31                     | 0.46              |
| 9:EA:46:GLU:O     | 9:EA:49:LYS:HG2    | 2.15                     | 0.46              |
| 9:EA:117:MET:CE   | 9:EA:124:PRO:HA    | 2.46                     | 0.46              |
| 2:AB:62:TYR:OH    | 10:AC:200:CYC:O2D  | 2.26                     | 0.46              |
| 1:AC:25:ARG:HD3   | 6:BD:38:SER:O      | 2.15                     | 0.46              |
| 1:AC:73:TYR:H     | 1:AC:77:MET:CB     | 2.26                     | 0.46              |
| 2:AD:34:GLY:O     | 2:AD:38:VAL:HG23   | 2.16                     | 0.46              |
| 3:AE:43:LEU:O     | 3:AE:47:GLU:HG3    | 2.16                     | 0.46              |
| 1:AH:21:GLY:O     | 1:AH:25:ARG:HG3    | 2.16                     | 0.46              |
| 1:AN:79:ALA:HB1   | 7:BF:110:PHE:HB3   | 1.98                     | 0.46              |
| 1:AN:128:GLN:NE2  | 1:AN:132:GLU:OE2   | 2.49                     | 0.46              |

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| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 10:AW:200:CYC:HB   | 6:BD:566:ILE:HD12 | 1.78                     | 0.46              |
| 2:AY:62:TYR:H      | 2:AY:66:THR:HG21  | 1.81                     | 0.46              |
| 10:AY:200:CYC:HMA2 | 5:BB:25:THR:HG21  | 1.98                     | 0.46              |
| 6:BD:241:ARG:HG3   | 6:BD:389:TYR:OH   | 2.16                     | 0.46              |
| 6:BD:347:PHE:O     | 6:BD:351:LEU:N    | 2.37                     | 0.46              |
| 6:BD:754:TYR:HH    | 10:DD:200:CYC:CGA | 2.26                     | 0.46              |
| 1:BI:37:LEU:HD13   | 2:BJ:28:LYS:NZ    | 2.30                     | 0.46              |
| 1:BK:76:GLU:HG2    | 1:BK:77:MET:HE3   | 1.97                     | 0.46              |
| 1:BP:4:VAL:HG22    | 1:BP:26:ILE:HG23  | 1.98                     | 0.46              |
| 1:BP:97:VAL:HG21   | 2:BQ:19:LEU:CD1   | 2.46                     | 0.46              |
| 1:BP:97:VAL:HG21   | 2:BQ:19:LEU:HD13  | 1.97                     | 0.46              |
| 2:BQ:53:LYS:HE2    | 1:BR:118:SER:O    | 2.16                     | 0.46              |
| 4:BS:51:ILE:HA     | 4:BS:137:MET:HE1  | 1.97                     | 0.46              |
| 4:BS:109:VAL:CG1   | 4:BS:113:LEU:HD11 | 2.46                     | 0.46              |
| 1:BV:116:TYR:HD1   | 1:BV:121:THR:HB   | 1.80                     | 0.46              |
| 2:CA:91:TYR:CE1    | 2:CA:107:ARG:HG3  | 2.51                     | 0.46              |
| 2:CF:116:TYR:CE2   | 2:CF:160:LEU:HD21 | 2.51                     | 0.46              |
| 6:CM:731:ASP:O     | 6:CM:735:VAL:HG23 | 2.15                     | 0.46              |
| 6:CM:756:ILE:HB    | 1:DQ:159:LYS:HZ1  | 1.81                     | 0.46              |
| 6:CM:799:LYS:HD3   | 6:CM:883:LEU:CD2  | 2.45                     | 0.46              |
| 1:CR:122:PRO:HG2   | 1:CR:125:ALA:HB3  | 1.98                     | 0.46              |
| 2:CS:15:GLN:CB     | 2:CS:17:LYS:HE3   | 2.46                     | 0.46              |
| 2:CS:51:ILE:CG1    | 2:CS:140:LEU:HD12 | 2.46                     | 0.46              |
| 1:CT:109:LEU:HD12  | 1:CT:159:LYS:CB   | 2.46                     | 0.46              |
| 2:CU:52:VAL:O      | 2:CU:56:VAL:HG12  | 2.16                     | 0.46              |
| 2:CU:109:LEU:CD1   | 2:CU:159:GLY:HA3  | 2.45                     | 0.46              |
| 2:CW:85:LEU:HD11   | 2:CW:129:ALA:HB1  | 1.97                     | 0.46              |
| 1:CY:4:VAL:O       | 1:CY:8:ILE:HG12   | 2.16                     | 0.46              |
| 1:CY:7:SER:HB3     | 1:CY:18:LEU:CD1   | 2.46                     | 0.46              |
| 1:CY:57:ARG:HD2    | 1:CY:132:GLU:OE1  | 2.15                     | 0.46              |
| 1:CY:83:ARG:HA     | 8:DY:218:PHE:CE2  | 2.51                     | 0.46              |
| 1:CY:106:GLU:O     | 2:DD:76:ARG:NH1   | 2.48                     | 0.46              |
| 2:CZ:97:LEU:HD23   | 2:CZ:97:LEU:O     | 2.15                     | 0.46              |
| 1:DA:93:THR:HG22   | 2:DB:19:LEU:HD12  | 1.98                     | 0.46              |
| 5:DF:4:PHE:O       | 5:DF:31:VAL:N     | 2.23                     | 0.46              |
| 9:DI:121:PHE:CA    | 9:DI:276:PRO:HG2  | 2.40                     | 0.46              |
| 9:DI:146:GLU:HA    | 8:DZ:234:LYS:NZ   | 2.30                     | 0.46              |
| 2:DK:2:GLN:O       | 2:DK:100:ASP:HB3  | 2.15                     | 0.46              |
| 1:DL:12:ASP:OD1    | 2:DM:107:ARG:NH1  | 2.48                     | 0.46              |
| 1:DL:109:LEU:HD22  | 1:DL:159:LYS:CB   | 2.45                     | 0.46              |
| 1:DQ:47:ARG:O      | 1:DQ:51:VAL:HG12  | 2.16                     | 0.46              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:DV:51:ILE:HG22   | 2:DV:133:ILE:CD1   | 2.40                     | 0.46              |
| 1:AA:93:THR:O      | 1:AA:97:VAL:HG23   | 2.15                     | 0.46              |
| 1:AA:123:ILE:HG13  | 1:AA:160:MET:O     | 2.15                     | 0.46              |
| 2:AB:66:THR:HG23   | 10:AC:200:CYC:HMA3 | 1.96                     | 0.46              |
| 2:AF:105:ASP:HB2   | 2:AF:155:TYR:OH    | 2.16                     | 0.46              |
| 2:AI:91:TYR:HB3    | 2:AI:104:LEU:HD23  | 1.98                     | 0.46              |
| 4:AK:123:PRO:HG3   | 2:AS:64:ASP:OD2    | 2.16                     | 0.46              |
| 2:AL:161:SER:O     | 2:AS:155:TYR:OH    | 2.28                     | 0.46              |
| 1:AN:94:TYR:CG     | 2:AO:9:ILE:HG23    | 2.50                     | 0.46              |
| 2:AO:77:ARG:HB3    | 10:AO:200:CYC:HMD1 | 1.97                     | 0.46              |
| 1:AP:126:VAL:HG22  | 10:AP:200:CYC:HMC3 | 1.98                     | 0.46              |
| 2:AU:108:VAL:O     | 2:AU:112:LEU:HG    | 2.16                     | 0.46              |
| 1:AV:27:LYS:O      | 1:AV:31:THR:HG23   | 2.15                     | 0.46              |
| 1:AV:36:ARG:HG2    | 1:AV:148:GLU:OE2   | 2.16                     | 0.46              |
| 6:BD:447:TYR:OH    | 10:BD:901:CYC:HAA1 | 2.16                     | 0.46              |
| 6:BD:485:ILE:HD12  | 6:BD:665:LEU:HD13  | 1.98                     | 0.46              |
| 6:BD:796:PRO:O     | 6:BD:800:VAL:HG23  | 2.16                     | 0.46              |
| 1:BK:123:ILE:HD12  | 1:BK:126:VAL:HG21  | 1.98                     | 0.46              |
| 3:BM:99:GLY:O      | 3:BM:152:TYR:OH    | 2.30                     | 0.46              |
| 2:BQ:20:ASP:OD1    | 2:BQ:22:ALA:N      | 2.49                     | 0.46              |
| 2:BQ:71:ASN:HD22   | 2:BQ:122:PRO:CD    | 2.29                     | 0.46              |
| 1:BV:115:MET:CG    | 2:CA:78:TYR:HB3    | 2.46                     | 0.46              |
| 2:BW:63:SER:H      | 2:BW:66:THR:HG22   | 1.80                     | 0.46              |
| 1:BX:26:ILE:O      | 1:BX:30:VAL:HG23   | 2.16                     | 0.46              |
| 1:BZ:81:CYS:O      | 1:BZ:85:MET:HG3    | 2.16                     | 0.46              |
| 2:CD:123:ILE:HA    | 2:CD:126:THR:CG2   | 2.45                     | 0.46              |
| 2:CH:119:LEU:CD1   | 10:CH:200:CYC:HAA2 | 2.46                     | 0.46              |
| 10:CH:200:CYC:HMA1 | 10:CH:200:CYC:NB   | 2.31                     | 0.46              |
| 6:CM:210:PHE:C     | 6:CM:211:ARG:HD3   | 2.36                     | 0.46              |
| 6:CM:576:ARG:NH1   | 6:CM:646:SER:OG    | 2.43                     | 0.46              |
| 6:CM:806:LYS:HD3   | 6:CM:872:LEU:HD22  | 1.98                     | 0.46              |
| 8:CP:233:PRO:O     | 8:CP:235:VAL:HG13  | 2.16                     | 0.46              |
| 8:CP:234:LYS:HE2   | 8:CP:234:LYS:HA    | 1.97                     | 0.46              |
| 9:CQ:40:ILE:HG13   | 11:CQ:400:45D:H371 | 1.97                     | 0.46              |
| 1:CR:50:ILE:CD1    | 1:CR:136:VAL:HG12  | 2.27                     | 0.46              |
| 1:CR:101:VAL:CG1   | 1:CY:20:PRO:HG2    | 2.45                     | 0.46              |
| 1:CT:23:LEU:HD22   | 2:CU:38:VAL:HG13   | 1.96                     | 0.46              |
| 1:CT:66:VAL:HG13   | 8:DY:233:PRO:HG3   | 1.98                     | 0.46              |
| 2:CU:75:THR:HG23   | 1:CV:108:GLY:HA2   | 1.98                     | 0.46              |
| 1:CV:113:ARG:HG2   | 1:CV:123:ILE:CD1   | 2.46                     | 0.46              |
| 1:CY:37:LEU:CD2    | 2:CZ:28:LYS:HE3    | 2.42                     | 0.46              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:CZ:76:ARG:HB2    | 1:DA:110:VAL:HB    | 1.98                     | 0.46              |
| 8:DG:230:ASN:HD21  | 1:DL:68:PRO:HD2    | 1.80                     | 0.46              |
| 8:DH:197:GLN:HG2   | 8:DH:198:ASN:N     | 2.31                     | 0.46              |
| 1:DQ:2:SER:OG      | 1:DQ:4:VAL:HG12    | 2.15                     | 0.46              |
| 1:DQ:50:ILE:HG21   | 1:DQ:89:LEU:HD11   | 1.97                     | 0.46              |
| 1:DQ:76:GLU:HG2    | 8:DZ:203:PHE:H     | 1.81                     | 0.46              |
| 1:DU:37:LEU:HD22   | 2:DV:24:MET:HE3    | 1.97                     | 0.46              |
| 9:EA:223:LEU:HA    | 9:EA:301:VAL:CG1   | 2.45                     | 0.46              |
| 1:AA:137:ALA:O     | 1:AA:141:MET:HG2   | 2.16                     | 0.46              |
| 1:AC:90:ARG:O      | 1:AC:93:THR:OG1    | 2.28                     | 0.46              |
| 1:AC:94:TYR:HA     | 1:AC:97:VAL:HG22   | 1.98                     | 0.46              |
| 2:AD:15:GLN:CB     | 2:AD:17:LYS:HE2    | 2.46                     | 0.46              |
| 2:AI:64:ASP:OD1    | 2:AO:124:SER:OG    | 2.08                     | 0.46              |
| 1:AZ:61:LYS:HG3    | 1:AZ:62:ARG:HG2    | 1.98                     | 0.46              |
| 6:BD:284:ALA:HA    | 6:BD:287:ARG:CZ    | 2.46                     | 0.46              |
| 6:BD:636:VAL:O     | 6:BD:640:ILE:HG12  | 2.15                     | 0.46              |
| 6:BD:848:PHE:O     | 6:BD:852:THR:HB    | 2.16                     | 0.46              |
| 9:BH:280:GLY:HA2   | 9:BH:310:LYS:NZ    | 2.31                     | 0.46              |
| 1:BK:17:TYR:OH     | 2:BL:89:LEU:HD22   | 2.16                     | 0.46              |
| 10:BL:200:CYC:HC   | 10:BL:200:CYC:HMD2 | 1.81                     | 0.46              |
| 3:BM:7:VAL:HG13    | 3:BM:22:GLU:HB3    | 1.98                     | 0.46              |
| 3:BM:94:TYR:CG     | 2:BN:9:ILE:HG23    | 2.51                     | 0.46              |
| 2:BN:25:ASP:HA     | 2:BN:28:LYS:HE3    | 1.98                     | 0.46              |
| 2:BN:52:VAL:O      | 2:BN:56:VAL:HG23   | 2.16                     | 0.46              |
| 1:BP:64:ASP:HA     | 1:BP:67:SER:OG     | 2.16                     | 0.46              |
| 1:BP:103:PRO:HA    | 1:BP:106:GLU:HG2   | 1.97                     | 0.46              |
| 2:BQ:68:PRO:HG3    | 2:BQ:73:TYR:CE1    | 2.51                     | 0.46              |
| 4:BS:14:LEU:HD13   | 2:BW:161:SER:HB3   | 1.97                     | 0.46              |
| 1:BV:98:SER:HB3    | 2:BW:9:ILE:HD12    | 1.98                     | 0.46              |
| 1:BX:27:LYS:HG3    | 2:BY:35:GLU:OE2    | 2.16                     | 0.46              |
| 2:BY:107:ARG:HB3   | 6:CM:457:GLN:NE2   | 2.31                     | 0.46              |
| 2:CF:85:LEU:HG     | 10:CF:200:CYC:HBC1 | 1.98                     | 0.46              |
| 2:CH:6:THR:HG23    | 6:CM:532:VAL:CG1   | 2.46                     | 0.46              |
| 6:CM:2:SER:O       | 6:CM:4:LYS:NZ      | 2.41                     | 0.46              |
| 6:CM:86:GLU:H      | 6:CM:153:LEU:CD2   | 2.29                     | 0.46              |
| 6:CM:831:LEU:O     | 6:CM:835:ILE:HD12  | 2.16                     | 0.46              |
| 10:CM:901:CYC:HBD1 | 10:CM:901:CYC:HHA  | 1.98                     | 0.46              |
| 9:CQ:229:ARG:HG2   | 9:DI:227:PHE:HB3   | 1.98                     | 0.46              |
| 1:CT:108:GLY:O     | 1:CT:109:LEU:HD22  | 2.16                     | 0.46              |
| 1:CV:23:LEU:O      | 1:CV:27:LYS:HG2    | 2.16                     | 0.46              |
| 1:CV:98:SER:HA     | 2:CW:5:ILE:HG21    | 1.97                     | 0.46              |

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| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 2:CZ:68:PRO:HG3    | 2:CZ:73:TYR:CZ    | 2.50                     | 0.46              |
| 2:DB:12:ALA:O      | 2:DB:15:GLN:HG2   | 2.15                     | 0.46              |
| 2:DK:62:TYR:OH     | 10:DL:200:CYC:O2D | 2.14                     | 0.46              |
| 2:DO:71:ASN:HD22   | 2:DO:122:PRO:HD2  | 1.81                     | 0.46              |
| 1:DQ:3:ILE:O       | 1:DQ:6:LYS:HG2    | 2.16                     | 0.46              |
| 1:DQ:68:PRO:HA     | 1:DQ:73:TYR:CD2   | 2.50                     | 0.46              |
| 1:DQ:105:GLU:CA    | 1:DQ:109:LEU:HD12 | 2.45                     | 0.46              |
| 1:DQ:114:GLU:OE1   | 1:DQ:117:ARG:NE   | 2.40                     | 0.46              |
| 1:DS:131:ARG:HA    | 1:DS:157:ILE:HD11 | 1.97                     | 0.46              |
| 1:DU:39:ILE:CG2    | 1:DU:96:VAL:HG11  | 2.46                     | 0.46              |
| 9:EA:39:LEU:HD13   | 9:EA:139:LEU:HB2  | 1.97                     | 0.46              |
| 9:EA:112:ARG:O     | 9:EA:116:LEU:HG   | 2.16                     | 0.46              |
| 1:AA:116:TYR:HE2   | 1:AA:126:VAL:HG11 | 1.80                     | 0.46              |
| 1:AC:126:VAL:O     | 1:AC:130:VAL:HG23 | 2.15                     | 0.46              |
| 3:AE:110:ILE:HG12  | 5:BA:17:ARG:HH11  | 1.81                     | 0.46              |
| 2:AI:71:ASN:HD22   | 2:AI:121:VAL:HA   | 1.81                     | 0.46              |
| 1:AP:27:LYS:HG3    | 2:AQ:35:GLU:OE2   | 2.16                     | 0.46              |
| 1:AP:66:VAL:CG1    | 1:DU:68:PRO:HG2   | 2.46                     | 0.46              |
| 2:AU:60:LEU:HD23   | 2:AU:72:MET:HE1   | 1.97                     | 0.46              |
| 2:AU:75:THR:OG1    | 1:AV:110:VAL:O    | 2.28                     | 0.46              |
| 10:AU:200:CYC:HAD2 | 5:BB:33:TYR:OH    | 2.16                     | 0.46              |
| 1:AV:27:LYS:HZ3    | 2:AW:38:VAL:HB    | 1.80                     | 0.46              |
| 2:AW:108:VAL:HG12  | 2:AW:109:LEU:HD23 | 1.97                     | 0.46              |
| 1:AX:30:VAL:HG13   | 2:AY:31:PHE:HA    | 1.98                     | 0.46              |
| 2:AY:1:MET:HE3     | 2:AY:103:ILE:HB   | 1.97                     | 0.46              |
| 2:AY:147:LYS:O     | 2:AY:151:VAL:HG23 | 2.16                     | 0.46              |
| 1:AZ:132:GLU:O     | 1:AZ:136:VAL:HG23 | 2.15                     | 0.46              |
| 5:BA:59:ARG:O      | 5:BA:62:THR:HG23  | 2.16                     | 0.46              |
| 6:BD:484:LEU:HD12  | 6:BD:615:TYR:HE1  | 1.81                     | 0.46              |
| 7:BF:105:PRO:HA    | 7:BF:108:ASN:OD1  | 2.16                     | 0.46              |
| 9:BH:89:ARG:HD3    | 9:BH:170:LYS:CE   | 2.46                     | 0.46              |
| 9:BH:286:ILE:HG12  | 9:BH:305:LEU:CD2  | 2.45                     | 0.46              |
| 1:BK:117:ARG:HD2   | 1:BP:161:SER:CA   | 2.46                     | 0.46              |
| 1:BP:86:ASP:OD1    | 2:BQ:18:TYR:OH    | 2.30                     | 0.46              |
| 4:BS:108:ARG:HB3   | 6:CM:249:GLN:OE1  | 2.16                     | 0.46              |
| 1:BV:90:ARG:HG3    | 2:BW:18:TYR:CD1   | 2.51                     | 0.46              |
| 1:BX:74:GLY:O      | 1:BX:78:THR:HG23  | 2.16                     | 0.46              |
| 2:CA:24:MET:O      | 2:CA:28:LYS:HG3   | 2.16                     | 0.46              |
| 1:CE:134:LYS:HE2   | 1:CE:154:ASP:OD1  | 2.16                     | 0.46              |
| 6:CM:453:PRO:HD2   | 6:CM:607:ARG:CZ   | 2.46                     | 0.46              |
| 6:CM:611:GLY:O     | 6:CM:658:ARG:N    | 2.46                     | 0.46              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 6:CM:681:GLN:HG2  | 6:CM:682:ARG:N     | 2.30                     | 0.46              |
| 6:CM:845:LEU:CG   | 5:DX:42:ARG:HD2    | 2.37                     | 0.46              |
| 6:CM:891:VAL:CG2  | 2:DT:106:GLU:HB3   | 2.46                     | 0.46              |
| 9:CQ:170:LYS:HD3  | 9:CQ:170:LYS:HA    | 1.77                     | 0.46              |
| 1:CR:25:ARG:HB2   | 1:CY:25:ARG:HG3    | 1.96                     | 0.46              |
| 2:CW:34:GLY:O     | 2:CW:38:VAL:HG23   | 2.16                     | 0.46              |
| 2:CZ:130:ILE:CG2  | 2:CZ:153:LEU:HD12  | 2.33                     | 0.46              |
| 2:DB:111:GLY:HA2  | 2:DB:114:GLU:CD    | 2.36                     | 0.46              |
| 1:DC:85:MET:HB3   | 1:DC:133:MET:HE3   | 1.98                     | 0.46              |
| 2:DD:114:GLU:OE1  | 2:DD:114:GLU:N     | 2.43                     | 0.46              |
| 9:DI:44:TYR:HA    | 9:DI:47:MET:CE     | 2.46                     | 0.46              |
| 9:DI:74:MET:CE    | 9:DI:78:GLN:HB2    | 2.46                     | 0.46              |
| 1:DJ:36:ARG:NH1   | 1:DJ:152:TYR:OH    | 2.49                     | 0.46              |
| 1:DL:72:ALA:C     | 1:DL:77:MET:HB2    | 2.36                     | 0.46              |
| 1:DN:85:MET:CE    | 1:DN:129:SER:HB2   | 2.46                     | 0.46              |
| 1:DN:96:VAL:HA    | 1:DN:152:TYR:CE2   | 2.51                     | 0.46              |
| 2:DR:5:ILE:HD11   | 2:DR:31:PHE:HE1    | 1.80                     | 0.46              |
| 2:DR:73:TYR:O     | 2:DR:77:ARG:HB2    | 2.16                     | 0.46              |
| 1:DS:39:ILE:HD11  | 1:DS:145:ASP:CG    | 2.37                     | 0.46              |
| 2:DV:111:GLY:HA2  | 2:DV:114:GLU:CD    | 2.36                     | 0.46              |
| 2:DV:133:ILE:O    | 2:DV:137:THR:HG22  | 2.15                     | 0.46              |
| 9:EA:107:LEU:CD1  | 9:EA:158:VAL:HG11  | 2.45                     | 0.46              |
| 2:AB:126:THR:O    | 2:AB:130:ILE:HG12  | 2.15                     | 0.45              |
| 2:AD:104:LEU:HB3  | 2:AD:109:LEU:HD13  | 1.98                     | 0.45              |
| 3:AE:87:TRP:O     | 3:AE:91:LEU:HD13   | 2.16                     | 0.45              |
| 2:AF:47:ASN:HB2   | 2:AF:140:LEU:HD21  | 1.97                     | 0.45              |
| 1:AJ:38:ARG:NH1   | 1:AJ:145:ASP:OD2   | 2.46                     | 0.45              |
| 2:AL:108:VAL:O    | 6:BD:420:TYR:OH    | 2.29                     | 0.45              |
| 1:AN:115:MET:HG2  | 2:AS:78:TYR:HB3    | 1.96                     | 0.45              |
| 1:AP:101:VAL:HB   | 1:AP:155:PHE:CE2   | 2.51                     | 0.45              |
| 2:AU:148:GLU:HG3  | 2:AU:152:TYR:CE2   | 2.50                     | 0.45              |
| 6:BD:597:TYR:HB3  | 6:BD:600:LYS:CD    | 2.43                     | 0.45              |
| 1:BK:88:TYR:O     | 1:BK:92:VAL:HG23   | 2.16                     | 0.45              |
| 2:BL:95:ALA:HB2   | 2:BL:104:LEU:HD21  | 1.98                     | 0.45              |
| 3:BM:43:LEU:O     | 3:BM:47:GLU:HG3    | 2.16                     | 0.45              |
| 1:BR:3:ILE:HG21   | 1:BR:25:ARG:CZ     | 2.46                     | 0.45              |
| 2:BT:56:VAL:HG21  | 2:BT:82:ILE:CD1    | 2.46                     | 0.45              |
| 1:BV:130:VAL:HA   | 1:BV:133:MET:HE2   | 1.97                     | 0.45              |
| 1:BX:59:PHE:CD1   | 1:BX:66:VAL:HG21   | 2.50                     | 0.45              |
| 2:BY:119:LEU:HD11 | 10:BY:200:CYC:HAA2 | 1.98                     | 0.45              |
| 1:BZ:36:ARG:NH1   | 1:BZ:99:GLY:HA2    | 2.30                     | 0.45              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:CC:81:CYS:HA     | 10:CC:200:CYC:CHD  | 2.41                     | 0.45              |
| 1:CE:95:GLY:HA3    | 1:CE:104:ILE:HD11  | 1.97                     | 0.45              |
| 1:CE:100:ASP:OD1   | 1:CE:101:VAL:N     | 2.49                     | 0.45              |
| 2:CF:77:ARG:O      | 10:CF:200:CYC:HMD3 | 2.16                     | 0.45              |
| 2:CF:96:MET:HA     | 2:CF:152:TYR:CE2   | 2.51                     | 0.45              |
| 6:CM:64:ALA:O      | 6:CM:68:VAL:HG22   | 2.16                     | 0.45              |
| 6:CM:514:ARG:HA    | 6:CM:652:ASP:O     | 2.16                     | 0.45              |
| 6:CM:777:PHE:O     | 6:CM:781:LEU:HG    | 2.14                     | 0.45              |
| 9:CQ:51:LEU:HD23   | 9:CQ:150:GLN:NE2   | 2.30                     | 0.45              |
| 9:CQ:252:PRO:HA    | 9:CQ:271:GLY:CA    | 2.33                     | 0.45              |
| 1:CY:137:ALA:HB1   | 1:CY:141:MET:HE3   | 1.97                     | 0.45              |
| 1:DA:39:ILE:CD1    | 1:DA:145:ASP:HB3   | 2.46                     | 0.45              |
| 2:DD:126:THR:O     | 2:DD:130:ILE:HG13  | 2.15                     | 0.45              |
| 8:DH:203:PHE:CE2   | 8:DY:219:LEU:HD22  | 2.51                     | 0.45              |
| 9:DI:40:ILE:O      | 11:DI:400:45D:H401 | 2.16                     | 0.45              |
| 1:DJ:39:ILE:HG12   | 1:DJ:145:ASP:CG    | 2.37                     | 0.45              |
| 10:DJ:200:CYC:HHA  | 10:DJ:200:CYC:HBD1 | 1.99                     | 0.45              |
| 1:DL:126:VAL:O     | 1:DL:130:VAL:HG23  | 2.16                     | 0.45              |
| 2:DV:51:ILE:HA     | 2:DV:54:GLU:OE2    | 2.16                     | 0.45              |
| 5:DX:7:THR:HA      | 5:DX:27:PHE:O      | 2.16                     | 0.45              |
| 1:AA:102:THR:HB    | 1:AA:103:PRO:HD3   | 1.99                     | 0.45              |
| 2:AB:96:MET:HG3    | 2:AB:148:GLU:HG3   | 1.98                     | 0.45              |
| 2:AD:83:ARG:CZ     | 5:BA:22:LEU:HD21   | 2.46                     | 0.45              |
| 10:AD:200:CYC:HAA1 | 5:BA:25:THR:HG21   | 1.97                     | 0.45              |
| 2:AI:117:ASN:O     | 6:BD:439:ARG:NH1   | 2.49                     | 0.45              |
| 1:AJ:87:TYR:O      | 1:AJ:91:LEU:HG     | 2.16                     | 0.45              |
| 1:AN:15:ALA:HB3    | 6:BD:498:PRO:HG3   | 1.98                     | 0.45              |
| 1:AN:91:LEU:CD2    | 1:AN:107:ILE:HB    | 2.45                     | 0.45              |
| 1:AP:102:THR:HB    | 1:AP:103:PRO:HD3   | 1.98                     | 0.45              |
| 2:AU:91:TYR:HE2    | 10:AU:200:CYC:HBB1 | 1.81                     | 0.45              |
| 2:AU:123:ILE:HA    | 2:AU:126:THR:CG2   | 2.46                     | 0.45              |
| 2:AW:36:LEU:HA     | 2:AW:39:ARG:NH1    | 2.30                     | 0.45              |
| 1:AX:109:LEU:HD21  | 1:AX:159:LYS:CB    | 2.46                     | 0.45              |
| 10:BL:200:CYC:HBD2 | 10:BL:200:CYC:HMD1 | 1.96                     | 0.45              |
| 3:BM:2:SER:N       | 3:BM:5:SER:HG      | 2.14                     | 0.45              |
| 3:BM:72:ALA:HA     | 3:BM:77:GLN:CB     | 2.45                     | 0.45              |
| 3:BM:124:PRO:O     | 3:BM:127:VAL:HG12  | 2.16                     | 0.45              |
| 1:BP:50:ILE:HA     | 1:BP:136:VAL:HG11  | 1.97                     | 0.45              |
| 2:BT:25:ASP:HA     | 2:BT:28:LYS:NZ     | 2.32                     | 0.45              |
| 1:BV:57:ARG:O      | 1:BV:60:GLN:HG3    | 2.17                     | 0.45              |
| 2:CD:47:ASN:O      | 2:CD:51:ILE:HD12   | 2.16                     | 0.45              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:CD:137:THR:CG2  | 2:CD:149:MET:HG2  | 2.38                     | 0.45              |
| 1:CE:111:GLY:HA2  | 1:CE:114:GLU:OE1  | 2.15                     | 0.45              |
| 2:CH:84:ASP:OD2   | 2:CH:116:TYR:OH   | 2.17                     | 0.45              |
| 6:CM:84:TYR:HD2   | 6:CM:150:GLN:HE21 | 1.63                     | 0.45              |
| 6:CM:210:PHE:CZ   | 6:CM:216:ALA:HB1  | 2.51                     | 0.45              |
| 6:CM:355:PRO:HB3  | 6:CM:361:VAL:HG22 | 1.98                     | 0.45              |
| 9:CQ:168:ASP:N    | 9:CQ:168:ASP:OD1  | 2.49                     | 0.45              |
| 2:CS:75:THR:HG23  | 1:CT:110:VAL:O    | 2.15                     | 0.45              |
| 2:CU:25:ASP:HA    | 2:CU:28:LYS:NZ    | 2.30                     | 0.45              |
| 2:CU:71:ASN:ND2   | 2:CU:121:VAL:HA   | 2.31                     | 0.45              |
| 1:CV:113:ARG:HG2  | 1:CV:123:ILE:HD13 | 1.98                     | 0.45              |
| 2:CW:49:ALA:HB3   | 1:DA:161:SER:OG   | 2.17                     | 0.45              |
| 1:DA:85:MET:HE1   | 1:DA:129:SER:HB2  | 1.98                     | 0.45              |
| 2:DD:56:VAL:HG21  | 2:DD:82:ILE:CD1   | 2.46                     | 0.45              |
| 9:DI:103:PRO:HB3  | 9:DI:159:VAL:HG22 | 1.98                     | 0.45              |
| 9:DI:140:ALA:HA   | 9:DI:143:GLN:NE2  | 2.23                     | 0.45              |
| 9:DI:188:VAL:O    | 9:DI:199:LEU:HD22 | 2.17                     | 0.45              |
| 2:DK:124:SER:O    | 2:DK:128:GLN:HG3  | 2.16                     | 0.45              |
| 1:DQ:40:ALA:HB2   | 1:DQ:97:VAL:CG2   | 2.46                     | 0.45              |
| 1:DQ:88:TYR:HD1   | 1:DQ:91:LEU:HD12  | 1.79                     | 0.45              |
| 2:DV:122:PRO:HG2  | 10:DV:200:CYC:CMC | 2.46                     | 0.45              |
| 1:AC:16:ARG:HG2   | 1:AC:17:TYR:O     | 2.15                     | 0.45              |
| 2:AD:79:ALA:HA    | 2:AD:82:ILE:HG12  | 1.98                     | 0.45              |
| 10:AD:200:CYC:CAA | 5:BA:11:PRO:HB3   | 2.45                     | 0.45              |
| 3:AE:50:ILE:CG1   | 3:AE:140:LEU:HD13 | 2.46                     | 0.45              |
| 2:AF:2:GLN:HE22   | 2:AF:7:ALA:HB2    | 1.81                     | 0.45              |
| 2:AL:18:TYR:OH    | 6:BD:160:LEU:HD23 | 2.16                     | 0.45              |
| 2:AL:37:ARG:HD2   | 2:AL:96:MET:O     | 2.15                     | 0.45              |
| 1:AP:27:LYS:O     | 1:AP:31:THR:HG23  | 2.16                     | 0.45              |
| 1:AP:122:PRO:HG2  | 1:AP:125:ALA:CB   | 2.46                     | 0.45              |
| 2:AS:88:TYR:OH    | 2:AS:112:LEU:HD21 | 2.17                     | 0.45              |
| 2:AS:132:ALA:HA   | 2:AS:135:GLU:OE1  | 2.15                     | 0.45              |
| 2:AW:125:SER:HA   | 2:AW:128:GLN:NE2  | 2.31                     | 0.45              |
| 1:AZ:101:VAL:HB   | 1:AZ:155:PHE:CE2  | 2.51                     | 0.45              |
| 1:AZ:116:TYR:CD2  | 1:AZ:126:VAL:HG21 | 2.52                     | 0.45              |
| 1:AZ:126:VAL:O    | 1:AZ:130:VAL:HG23 | 2.16                     | 0.45              |
| 5:BA:23:GLN:NE2   | 6:BD:390:PHE:O    | 2.35                     | 0.45              |
| 6:BD:77:THR:CG2   | 6:BD:138:PRO:HB2  | 2.45                     | 0.45              |
| 6:BD:151:LYS:CD   | 6:BD:154:ARG:HH21 | 2.29                     | 0.45              |
| 6:BD:597:TYR:CE2  | 6:BD:599:CYS:HB2  | 2.51                     | 0.45              |
| 9:BH:308:SER:HB2  | 9:BH:309:PRO:HD2  | 1.98                     | 0.45              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:BK:14:GLU:HG3    | 1:BK:16:ARG:HD2    | 1.98                     | 0.45              |
| 2:BL:96:MET:HA     | 2:BL:152:TYR:CE2   | 2.52                     | 0.45              |
| 10:BL:200:CYC:OB   | 5:CJ:24:ASN:HA     | 2.15                     | 0.45              |
| 3:BM:30:LEU:HD12   | 2:BN:31:PHE:HA     | 1.96                     | 0.45              |
| 2:BN:2:GLN:NE2     | 2:BN:7:ALA:HA      | 2.31                     | 0.45              |
| 10:BV:200:CYC:HBD1 | 10:BV:200:CYC:HHA  | 1.97                     | 0.45              |
| 1:CC:111:GLY:HA2   | 1:CC:114:GLU:OE1   | 2.16                     | 0.45              |
| 1:CE:92:VAL:HG11   | 1:CE:153:PHE:CE2   | 2.51                     | 0.45              |
| 2:CF:25:ASP:HA     | 2:CF:28:LYS:HZ1    | 1.82                     | 0.45              |
| 6:CM:21:PRO:O      | 6:CM:25:ILE:HD12   | 2.17                     | 0.45              |
| 6:CM:73:ASN:OD1    | 6:CM:81:PRO:HD2    | 2.16                     | 0.45              |
| 9:CQ:79:GLN:OE1    | 9:CQ:122:VAL:HA    | 2.17                     | 0.45              |
| 2:CS:44:ILE:HG21   | 2:CS:93:THR:OG1    | 2.17                     | 0.45              |
| 1:DA:153:PHE:O     | 1:DA:157:ILE:HG12  | 2.16                     | 0.45              |
| 1:DC:41:GLU:OE2    | 2:DD:24:MET:HG2    | 2.16                     | 0.45              |
| 8:DH:221:MET:HE3   | 1:DS:52:LYS:HA     | 1.98                     | 0.45              |
| 9:DI:253:GLU:OE1   | 9:DI:254:ARG:NH1   | 2.49                     | 0.45              |
| 9:DI:300:PHE:CZ    | 9:DI:302:ALA:HB2   | 2.52                     | 0.45              |
| 2:DM:47:ASN:CG     | 2:DM:140:LEU:HD21  | 2.37                     | 0.45              |
| 2:DT:51:ILE:HG22   | 2:DT:133:ILE:CD1   | 2.46                     | 0.45              |
| 10:DU:200:CYC:HBA1 | 10:DU:200:CYC:HMA3 | 1.98                     | 0.45              |
| 10:DU:200:CYC:HMD2 | 10:DU:200:CYC:NC   | 2.31                     | 0.45              |
| 2:DV:64:ASP:HA     | 2:DV:67:ARG:HE     | 1.81                     | 0.45              |
| 2:DV:68:PRO:HG3    | 2:DV:73:TYR:CZ     | 2.51                     | 0.45              |
| 1:AA:48:GLU:O      | 1:AA:51:VAL:HG12   | 2.16                     | 0.45              |
| 1:AA:61:LYS:HE2    | 1:DC:57:ARG:NH2    | 2.32                     | 0.45              |
| 1:AA:109:LEU:CG    | 1:AA:159:LYS:HG2   | 2.45                     | 0.45              |
| 2:AD:68:PRO:HD3    | 3:AE:87:TRP:CH2    | 2.51                     | 0.45              |
| 3:AE:81:CYS:HA     | 10:AE:200:CYC:HAC1 | 1.86                     | 0.45              |
| 10:AH:200:CYC:CGA  | 2:AL:66:THR:HG21   | 2.46                     | 0.45              |
| 2:AI:74:THR:OG1    | 2:AI:77:ARG:HB2    | 2.16                     | 0.45              |
| 4:AK:142:ALA:CB    | 4:AK:147:LEU:HD12  | 2.47                     | 0.45              |
| 10:AK:200:CYC:HBA1 | 10:AK:200:CYC:HMA3 | 1.97                     | 0.45              |
| 2:AS:62:TYR:O      | 7:BF:101:ARG:NH2   | 2.49                     | 0.45              |
| 2:AW:106:GLU:OE1   | 2:AW:107:ARG:HG3   | 2.16                     | 0.45              |
| 1:AX:82:LEU:HD13   | 8:BG:242:ILE:HD11  | 1.99                     | 0.45              |
| 2:AY:10:ASN:OD1    | 6:BD:532:VAL:HG23  | 2.16                     | 0.45              |
| 2:AY:51:ILE:HG21   | 2:AY:137:THR:HG22  | 1.98                     | 0.45              |
| 2:AY:133:ILE:O     | 2:AY:137:THR:HG23  | 2.17                     | 0.45              |
| 5:BA:8:ALA:CB      | 5:BA:50:ILE:HG22   | 2.45                     | 0.45              |
| 6:BD:240:VAL:HG22  | 6:BD:252:GLU:CG    | 2.39                     | 0.45              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 6:BD:294:ILE:HD12  | 6:BD:328:LEU:HD21  | 1.98                     | 0.45              |
| 6:BD:598:VAL:H     | 10:BD:901:CYC:HBB3 | 1.81                     | 0.45              |
| 6:BD:863:ALA:HB2   | 2:DB:107:ARG:O     | 2.16                     | 0.45              |
| 2:BJ:113:LYS:HE2   | 2:BJ:117:ASN:OD1   | 2.17                     | 0.45              |
| 2:BL:41:ALA:HB2    | 2:BL:96:MET:SD     | 2.56                     | 0.45              |
| 2:BQ:44:ILE:HG21   | 2:BQ:93:THR:CG2    | 2.46                     | 0.45              |
| 2:BT:34:GLY:HA2    | 2:BT:37:ARG:HH21   | 1.80                     | 0.45              |
| 2:BW:56:VAL:HG21   | 2:BW:82:ILE:CD1    | 2.46                     | 0.45              |
| 1:CC:115:MET:CE    | 10:CC:200:CYC:HMB3 | 2.41                     | 0.45              |
| 10:CD:200:CYC:HAA1 | 5:CK:36:TRP:HD1    | 1.82                     | 0.45              |
| 1:CE:102:THR:HB    | 1:CE:103:PRO:HD3   | 1.99                     | 0.45              |
| 2:CF:36:LEU:HD22   | 2:CF:39:ARG:HH12   | 1.81                     | 0.45              |
| 1:CR:22:GLU:HG3    | 1:CR:25:ARG:NH1    | 2.32                     | 0.45              |
| 1:CR:61:LYS:HE2    | 1:CR:61:LYS:HA     | 1.98                     | 0.45              |
| 1:CR:141:MET:CE    | 1:CR:146:ALA:HA    | 2.46                     | 0.45              |
| 2:CS:126:THR:HG21  | 2:CS:160:LEU:HD13  | 1.99                     | 0.45              |
| 1:CT:38:ARG:HA     | 1:CT:41:GLU:OE1    | 2.16                     | 0.45              |
| 1:CV:130:VAL:HG21  | 1:CV:160:MET:HE1   | 1.99                     | 0.45              |
| 2:CZ:73:TYR:O      | 2:CZ:74:THR:OG1    | 2.24                     | 0.45              |
| 9:DI:17:ALA:HB3    | 9:DI:20:VAL:CG1    | 2.41                     | 0.45              |
| 9:DI:37:LEU:HA     | 9:DI:40:ILE:HG12   | 1.99                     | 0.45              |
| 9:DI:42:PHE:CD1    | 9:DI:45:LEU:HD12   | 2.52                     | 0.45              |
| 9:DI:103:PRO:HB3   | 9:DI:159:VAL:CG2   | 2.47                     | 0.45              |
| 2:DO:114:GLU:HG2   | 5:DX:53:VAL:HG12   | 1.98                     | 0.45              |
| 9:EA:117:MET:SD    | 11:EA:400:45D:H392 | 2.57                     | 0.45              |
| 2:AD:95:ALA:HB2    | 2:AD:104:LEU:HD23  | 1.98                     | 0.45              |
| 1:AH:80:THR:HG23   | 1:AH:83:ARG:HH21   | 1.82                     | 0.45              |
| 4:AK:51:ILE:HD13   | 4:AK:138:ILE:HD11  | 1.97                     | 0.45              |
| 2:AL:124:SER:O     | 2:AL:128:GLN:HG3   | 2.16                     | 0.45              |
| 2:AO:116:TYR:HB3   | 2:AO:121:VAL:HB    | 1.99                     | 0.45              |
| 1:AP:19:SER:OG     | 1:AP:20:PRO:HD2    | 2.17                     | 0.45              |
| 1:AR:134:LYS:HB2   | 1:AR:153:PHE:HB3   | 1.98                     | 0.45              |
| 2:AU:25:ASP:OD1    | 2:AU:26:LYS:N      | 2.49                     | 0.45              |
| 2:AW:137:THR:O     | 2:AW:141:VAL:HG22  | 2.16                     | 0.45              |
| 1:AZ:57:ARG:HD2    | 1:AZ:132:GLU:OE1   | 2.16                     | 0.45              |
| 5:BA:6:ILE:HD13    | 5:BA:36:TRP:HZ3    | 1.80                     | 0.45              |
| 6:BD:131:PRO:HD2   | 6:BD:200:GLN:HB3   | 1.98                     | 0.45              |
| 6:BD:191:SER:HB3   | 6:BD:194:ALA:HB3   | 1.98                     | 0.45              |
| 8:BG:234:LYS:HA    | 8:BG:234:LYS:HE2   | 1.97                     | 0.45              |
| 8:BG:237:ALA:HA    | 8:BG:240:ILE:CD1   | 2.38                     | 0.45              |
| 9:BH:74:MET:CE     | 9:BH:78:GLN:HB2    | 2.45                     | 0.45              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 9:BH:238:LEU:HD12 | 9:BH:242:ARG:NH2   | 2.32                     | 0.45              |
| 1:BK:116:TYR:CE2  | 1:BK:126:VAL:HG11  | 2.52                     | 0.45              |
| 2:BL:34:GLY:O     | 2:BL:38:VAL:HG23   | 2.16                     | 0.45              |
| 2:BL:95:ALA:HB1   | 2:BL:152:TYR:CD1   | 2.51                     | 0.45              |
| 3:BM:32:THR:O     | 3:BM:36:ARG:HG2    | 2.16                     | 0.45              |
| 2:BN:77:ARG:O     | 10:BN:200:CYC:HMD3 | 2.16                     | 0.45              |
| 2:BQ:83:ARG:HD2   | 6:CM:369:SER:HB3   | 1.99                     | 0.45              |
| 1:BR:108:GLY:O    | 1:BR:112:VAL:HG11  | 2.17                     | 0.45              |
| 2:BY:60:LEU:CB    | 2:BY:72:MET:HE1    | 2.41                     | 0.45              |
| 1:BZ:36:ARG:NH1   | 1:BZ:96:VAL:O      | 2.44                     | 0.45              |
| 1:BZ:79:ALA:HB2   | 8:CP:219:LEU:HA    | 1.98                     | 0.45              |
| 2:CA:131:GLN:O    | 2:CA:134:LYS:HB2   | 2.17                     | 0.45              |
| 1:CG:130:VAL:HG12 | 1:CG:157:ILE:HD11  | 1.98                     | 0.45              |
| 6:CM:355:PRO:CB   | 6:CM:361:VAL:HG22  | 2.47                     | 0.45              |
| 6:CM:446:VAL:HB   | 6:CM:617:ARG:HG3   | 1.98                     | 0.45              |
| 9:CQ:71:ILE:HD13  | 9:CQ:74:MET:SD     | 2.57                     | 0.45              |
| 9:CQ:91:ASP:OD1   | 9:CQ:96:ARG:NH2    | 2.46                     | 0.45              |
| 9:CQ:97:THR:HG22  | 9:CQ:101:TRP:CZ2   | 2.50                     | 0.45              |
| 9:CQ:139:LEU:HD23 | 9:CQ:143:GLN:OE1   | 2.17                     | 0.45              |
| 9:CQ:201:TYR:CD2  | 9:CQ:213:LEU:HD11  | 2.52                     | 0.45              |
| 9:CQ:239:ARG:HH21 | 1:DA:41:GLU:HB3    | 1.80                     | 0.45              |
| 1:CR:23:LEU:CD1   | 2:CS:38:VAL:HG13   | 2.36                     | 0.45              |
| 1:CT:109:LEU:O    | 1:CT:112:VAL:HG12  | 2.17                     | 0.45              |
| 2:CW:126:THR:HB   | 10:CW:200:CYC:CMC  | 2.46                     | 0.45              |
| 1:CY:23:LEU:HD12  | 1:CY:24:ASP:N      | 2.32                     | 0.45              |
| 1:CY:130:VAL:HB   | 1:CY:157:ILE:HG12  | 1.98                     | 0.45              |
| 2:DD:122:PRO:HG2  | 10:DD:200:CYC:HMC2 | 1.98                     | 0.45              |
| 2:DK:149:MET:O    | 2:DK:153:LEU:HG    | 2.17                     | 0.45              |
| 1:DL:21:GLY:O     | 1:DL:25:ARG:HG2    | 2.15                     | 0.45              |
| 1:DN:2:SER:N      | 1:DN:100:ASP:OD2   | 2.49                     | 0.45              |
| 2:DO:1:MET:CG     | 2:DO:103:ILE:HB    | 2.46                     | 0.45              |
| 2:DR:21:GLY:HA2   | 2:DR:24:MET:HB2    | 1.99                     | 0.45              |
| 2:DR:44:ILE:HG21  | 2:DR:93:THR:OG1    | 2.16                     | 0.45              |
| 1:DS:91:LEU:HD21  | 1:DS:107:ILE:CG2   | 2.47                     | 0.45              |
| 1:DU:27:LYS:NZ    | 2:DV:35:GLU:HA     | 2.31                     | 0.45              |
| 2:DV:2:GLN:H      | 2:DV:102:SER:HG    | 1.63                     | 0.45              |
| 1:AA:75:GLU:OE1   | 1:AA:75:GLU:N      | 2.45                     | 0.45              |
| 1:AC:134:LYS:NZ   | 1:AC:154:ASP:HB3   | 2.31                     | 0.45              |
| 2:AD:125:SER:OG   | 10:AD:200:CYC:HMC2 | 2.16                     | 0.45              |
| 3:AE:37:ILE:HG23  | 2:AF:24:MET:HE1    | 1.98                     | 0.45              |
| 3:AE:104:ILE:HG22 | 3:AE:109:LEU:CD1   | 2.47                     | 0.45              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:AF:61:LEU:HD21   | 2:AF:78:TYR:OH     | 2.16                     | 0.45              |
| 1:AH:77:MET:SD     | 10:AH:200:CYC:HAD1 | 2.57                     | 0.45              |
| 1:AJ:108:GLY:O     | 1:AJ:112:VAL:HG11  | 2.17                     | 0.45              |
| 4:AK:52:VAL:HG13   | 4:AK:86:MET:HB3    | 1.99                     | 0.45              |
| 1:AV:83:ARG:HD2    | 1:AV:87:TYR:OH     | 2.17                     | 0.45              |
| 1:AV:93:THR:O      | 1:AV:97:VAL:HG13   | 2.16                     | 0.45              |
| 5:BB:55:LEU:HG     | 5:BB:57:THR:O      | 2.17                     | 0.45              |
| 6:BD:253:LEU:HD11  | 6:BD:257:TYR:CG    | 2.51                     | 0.45              |
| 6:BD:305:LEU:O     | 6:BD:309:VAL:HG23  | 2.17                     | 0.45              |
| 6:BD:462:PHE:CZ    | 6:BD:600:LYS:HB3   | 2.52                     | 0.45              |
| 6:BD:725:LYS:HG2   | 6:BD:852:THR:OG1   | 2.17                     | 0.45              |
| 9:BH:37:LEU:CD1    | 9:BH:40:ILE:HD11   | 2.46                     | 0.45              |
| 1:BI:119:LEU:HD23  | 2:BN:53:LYS:HZ2    | 1.82                     | 0.45              |
| 10:BI:200:CYC:HBC2 | 10:BI:200:CYC:H2C  | 1.67                     | 0.45              |
| 2:BJ:54:GLU:O      | 2:BJ:58:LYS:HG2    | 2.17                     | 0.45              |
| 2:BJ:102:SER:O     | 2:BJ:106:GLU:HG2   | 2.17                     | 0.45              |
| 1:BK:90:ARG:HB2    | 2:BL:18:TYR:CE1    | 2.50                     | 0.45              |
| 2:BN:55:ALA:CB     | 2:BN:133:ILE:HD13  | 2.46                     | 0.45              |
| 1:BP:65:ILE:HG23   | 10:BP:200:CYC:OC   | 2.17                     | 0.45              |
| 10:BS:200:CYC:HMD1 | 10:BS:200:CYC:HBD2 | 1.98                     | 0.45              |
| 2:BT:106:GLU:CG    | 2:BT:107:ARG:HG2   | 2.40                     | 0.45              |
| 1:BX:44:THR:HG23   | 2:BY:18:TYR:HB3    | 1.98                     | 0.45              |
| 1:BX:98:SER:OG     | 1:BX:103:PRO:HG2   | 2.17                     | 0.45              |
| 1:BX:134:LYS:HD3   | 1:BX:153:PHE:HB3   | 1.98                     | 0.45              |
| 1:CE:126:VAL:O     | 1:CE:129:SER:OG    | 2.29                     | 0.45              |
| 2:CH:96:MET:HG3    | 2:CH:148:GLU:OE1   | 2.17                     | 0.45              |
| 6:CM:18:GLN:CB     | 6:CM:173:ASN:HD22  | 2.28                     | 0.45              |
| 9:CQ:88:ASN:OD1    | 9:CQ:174:GLU:N     | 2.50                     | 0.45              |
| 1:CR:94:TYR:O      | 1:CR:97:VAL:HG12   | 2.17                     | 0.45              |
| 10:CR:200:CYC:HAD2 | 2:CW:62:TYR:OH     | 2.17                     | 0.45              |
| 2:CS:76:ARG:HH22   | 10:CS:200:CYC:CGD  | 2.30                     | 0.45              |
| 1:CV:23:LEU:HB3    | 2:CW:38:VAL:HG13   | 1.99                     | 0.45              |
| 2:CW:57:ALA:HA     | 2:CW:61:LEU:HB2    | 1.98                     | 0.45              |
| 2:CZ:78:TYR:CE2    | 1:DA:115:MET:HG3   | 2.51                     | 0.45              |
| 1:DA:97:VAL:HG11   | 2:DB:19:LEU:CD1    | 2.45                     | 0.45              |
| 9:DI:55:ALA:H      | 11:DI:400:45D:H221 | 1.81                     | 0.45              |
| 9:DI:217:PHE:CB    | 9:DI:298:ILE:HB    | 2.47                     | 0.45              |
| 1:DJ:156:VAL:O     | 1:DJ:160:MET:HG2   | 2.16                     | 0.45              |
| 2:DM:6:THR:O       | 2:DM:10:ASN:ND2    | 2.50                     | 0.45              |
| 2:DO:134:LYS:HG3   | 2:DO:150:GLY:HA2   | 1.97                     | 0.45              |
| 1:DQ:75:GLU:O      | 1:DQ:78:THR:OG1    | 2.27                     | 0.45              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:DR:103:ILE:O     | 2:DR:107:ARG:HB2   | 2.16                     | 0.45              |
| 1:DS:155:PHE:O     | 1:DS:159:LYS:HG2   | 2.17                     | 0.45              |
| 2:DT:78:TYR:O      | 2:DT:82:ILE:HG12   | 2.17                     | 0.45              |
| 1:DU:87:TYR:O      | 1:DU:91:LEU:HG     | 2.17                     | 0.45              |
| 9:EA:149:GLN:O     | 9:EA:153:VAL:HG23  | 2.16                     | 0.45              |
| 9:EA:274:GLN:N     | 9:EA:274:GLN:OE1   | 2.50                     | 0.45              |
| 1:AA:67:SER:HB3    | 1:AA:68:PRO:HD2    | 1.99                     | 0.45              |
| 1:AC:23:LEU:HD22   | 2:AD:38:VAL:HG13   | 1.99                     | 0.45              |
| 1:AH:80:THR:CG2    | 1:AH:83:ARG:HH21   | 2.29                     | 0.45              |
| 4:AK:41:ALA:HB1    | 4:AK:98:ILE:HD11   | 1.97                     | 0.45              |
| 4:AK:64:PRO:HB2    | 7:BF:105:PRO:HB2   | 1.98                     | 0.45              |
| 4:AK:67:ILE:HG21   | 10:BD:902:CYC:HBA1 | 1.99                     | 0.45              |
| 2:AL:31:PHE:HD2    | 6:BD:54:LEU:HD11   | 1.82                     | 0.45              |
| 1:AX:46:SER:O      | 1:AX:50:ILE:HG22   | 2.16                     | 0.45              |
| 1:AX:121:THR:CG2   | 10:AX:200:CYC:HMC3 | 2.47                     | 0.45              |
| 6:BD:515:LEU:HG    | 6:BD:542:LEU:CD2   | 2.46                     | 0.45              |
| 6:BD:575:VAL:O     | 6:BD:579:ILE:HG12  | 2.15                     | 0.45              |
| 6:BD:625:ASP:OD1   | 6:BD:629:LYS:HE2   | 2.17                     | 0.45              |
| 6:BD:785:GLU:HB3   | 6:BD:789:LYS:NZ    | 2.32                     | 0.45              |
| 6:BD:818:GLU:HG2   | 6:BD:822:TYR:CE2   | 2.52                     | 0.45              |
| 9:BH:139:LEU:HD23  | 9:BH:143:GLN:OE1   | 2.17                     | 0.45              |
| 1:BI:51:VAL:HG23   | 1:BI:133:MET:CE    | 2.47                     | 0.45              |
| 1:BI:119:LEU:HA    | 2:BN:53:LYS:NZ     | 2.30                     | 0.45              |
| 1:BK:126:VAL:HG13  | 10:BK:200:CYC:HMC3 | 1.99                     | 0.45              |
| 1:BP:89:LEU:HB2    | 1:BP:133:MET:HE1   | 1.99                     | 0.45              |
| 4:BS:116:THR:HG21  | 10:BS:200:CYC:CMA  | 2.42                     | 0.45              |
| 1:BV:65:ILE:CG2    | 1:BV:72:ALA:HB3    | 2.45                     | 0.45              |
| 2:BW:78:TYR:CE1    | 1:BX:115:MET:HG3   | 2.52                     | 0.45              |
| 10:BW:200:CYC:HMA1 | 10:BW:200:CYC:NB   | 2.31                     | 0.45              |
| 1:CC:85:MET:SD     | 1:CC:129:SER:HB2   | 2.57                     | 0.45              |
| 2:CD:13:ASP:OD1    | 2:CH:73:TYR:OH     | 2.30                     | 0.45              |
| 1:CE:122:PRO:HG2   | 1:CE:125:ALA:CB    | 2.47                     | 0.45              |
| 1:CE:129:SER:O     | 1:CE:133:MET:HG3   | 2.15                     | 0.45              |
| 2:CF:64:ASP:HA     | 2:CF:67:ARG:HD2    | 1.99                     | 0.45              |
| 6:CM:576:ARG:HG3   | 6:CM:645:TYR:HE1   | 1.80                     | 0.45              |
| 1:CR:126:VAL:C     | 1:CR:160:MET:HE1   | 2.37                     | 0.45              |
| 1:DA:56:ASP:O      | 1:DA:60:GLN:HG3    | 2.16                     | 0.45              |
| 1:DA:83:ARG:NH2    | 1:DA:84:ASP:OD1    | 2.27                     | 0.45              |
| 2:DB:127:VAL:CG1   | 2:DB:131:GLN:HE22  | 2.30                     | 0.45              |
| 2:DD:119:LEU:CD1   | 10:DD:200:CYC:HBD1 | 2.47                     | 0.45              |
| 9:DI:223:LEU:HB3   | 9:DI:231:ILE:CG2   | 2.46                     | 0.45              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:DL:59:PHE:CE1    | 1:DL:65:ILE:HD11   | 2.52                     | 0.45              |
| 1:DQ:37:LEU:HG     | 2:DR:28:LYS:CE     | 2.47                     | 0.45              |
| 1:DQ:157:ILE:HG13  | 1:DQ:158:GLY:N     | 2.31                     | 0.45              |
| 8:DZ:237:ALA:HA    | 8:DZ:240:ILE:CD1   | 2.39                     | 0.45              |
| 10:AD:200:CYC:HMA3 | 10:AD:200:CYC:O1A  | 2.17                     | 0.45              |
| 1:AH:84:ASP:HB2    | 10:AH:200:CYC:HBC3 | 1.99                     | 0.45              |
| 4:AK:76:THR:HG23   | 10:BD:902:CYC:C4B  | 2.47                     | 0.45              |
| 4:AK:105:LEU:O     | 4:AK:109:VAL:HB    | 2.17                     | 0.45              |
| 1:AN:115:MET:CG    | 2:AS:78:TYR:HB3    | 2.46                     | 0.45              |
| 2:AO:78:TYR:CD1    | 1:AP:115:MET:HG3   | 2.51                     | 0.45              |
| 1:AR:124:GLU:OE1   | 1:AR:124:GLU:N     | 2.40                     | 0.45              |
| 2:AU:51:ILE:HG22   | 2:AU:133:ILE:HG23  | 1.99                     | 0.45              |
| 1:AV:113:ARG:CD    | 1:AV:123:ILE:HD13  | 2.41                     | 0.45              |
| 2:AW:57:ALA:HA     | 2:AW:61:LEU:CD1    | 2.40                     | 0.45              |
| 10:AW:200:CYC:NB   | 10:AW:200:CYC:HMA1 | 2.32                     | 0.45              |
| 2:AY:88:TYR:OH     | 2:AY:112:LEU:HD21  | 2.17                     | 0.45              |
| 2:AY:126:THR:HB    | 10:AY:200:CYC:HMC3 | 1.98                     | 0.45              |
| 1:AZ:11:ALA:HA     | 1:AZ:16:ARG:NH1    | 2.32                     | 0.45              |
| 5:BB:6:ILE:O       | 5:BB:28:THR:HA     | 2.16                     | 0.45              |
| 6:BD:139:ILE:HD11  | 6:BD:191:SER:CB    | 2.47                     | 0.45              |
| 6:BD:351:LEU:HG    | 6:BD:380:LEU:HD22  | 1.99                     | 0.45              |
| 6:BD:559:GLN:HB3   | 6:BD:587:LEU:HD22  | 1.97                     | 0.45              |
| 6:BD:577:GLU:OE1   | 6:BD:577:GLU:N     | 2.49                     | 0.45              |
| 1:BI:79:ALA:O      | 1:BI:82:LEU:HG     | 2.17                     | 0.45              |
| 2:BL:65:VAL:O      | 2:BL:72:MET:HB3    | 2.16                     | 0.45              |
| 1:BP:121:THR:CG2   | 10:BP:200:CYC:HMC3 | 2.46                     | 0.45              |
| 4:BS:153:ILE:O     | 4:BS:156:PRO:HD2   | 2.16                     | 0.45              |
| 1:BV:6:LYS:HG2     | 1:BV:100:ASP:OD2   | 2.17                     | 0.45              |
| 2:BW:123:ILE:O     | 2:BW:126:THR:HG22  | 2.17                     | 0.45              |
| 1:BX:107:ILE:HG22  | 10:BX:200:CYC:HBB1 | 1.99                     | 0.45              |
| 1:BZ:76:GLU:HG2    | 1:BZ:77:MET:N      | 2.31                     | 0.45              |
| 6:CM:597:TYR:CD2   | 6:CM:600:LYS:HG3   | 2.52                     | 0.45              |
| 1:CR:47:ARG:O      | 1:CR:51:VAL:HG12   | 2.17                     | 0.45              |
| 1:CR:65:ILE:O      | 1:CR:72:ALA:HB3    | 2.17                     | 0.45              |
| 1:DA:12:ASP:OD1    | 2:DB:91:TYR:OH     | 2.22                     | 0.45              |
| 1:DC:101:VAL:HB    | 1:DC:155:PHE:CD2   | 2.52                     | 0.45              |
| 8:DG:242:ILE:HG23  | 8:DG:242:ILE:O     | 2.17                     | 0.45              |
| 9:DI:89:ARG:CZ     | 9:DI:161:MET:HA    | 2.46                     | 0.45              |
| 9:DI:209:ASP:O     | 9:DI:213:LEU:HD23  | 2.17                     | 0.45              |
| 2:DR:43:VAL:HG13   | 2:DR:141:VAL:HG12  | 1.99                     | 0.45              |
| 1:DU:104:ILE:HG21  | 1:DU:156:VAL:CG2   | 2.47                     | 0.45              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 9:EA:60:SER:OG     | 9:EA:105:ILE:HD11  | 2.17                     | 0.45              |
| 9:EA:107:LEU:HB3   | 11:EA:400:45D:H141 | 1.98                     | 0.45              |
| 9:EA:187:LYS:HD3   | 9:EA:203:ASP:OD2   | 2.17                     | 0.45              |
| 1:AC:39:ILE:HD11   | 1:AC:145:ASP:CG    | 2.38                     | 0.45              |
| 1:AC:130:VAL:HA    | 1:AC:133:MET:HE2   | 1.99                     | 0.45              |
| 2:AD:87:TYR:CE2    | 5:BA:22:LEU:HD22   | 2.51                     | 0.45              |
| 3:AE:5:SER:N       | 2:AF:3:ASP:OD2     | 2.50                     | 0.45              |
| 3:AE:88:TYR:O      | 3:AE:92:VAL:HG23   | 2.17                     | 0.45              |
| 2:AF:111:GLY:O     | 2:AF:115:THR:HG23  | 2.17                     | 0.45              |
| 1:AH:30:VAL:HG13   | 2:AI:31:PHE:HA     | 1.99                     | 0.45              |
| 1:AJ:83:ARG:NH1    | 10:AJ:200:CYC:O2A  | 2.47                     | 0.45              |
| 4:AK:51:ILE:HA     | 4:AK:137:MET:CE    | 2.47                     | 0.45              |
| 4:AK:82:CYS:HA     | 10:AK:200:CYC:HHD  | 1.98                     | 0.45              |
| 4:AK:135:LYS:HD2   | 4:AK:154:ALA:HA    | 1.98                     | 0.45              |
| 2:AL:17:LYS:HG3    | 2:AL:18:TYR:O      | 2.15                     | 0.45              |
| 2:AO:126:THR:O     | 2:AO:130:ILE:HG13  | 2.16                     | 0.45              |
| 2:AS:88:TYR:CD2    | 2:AS:130:ILE:HD11  | 2.52                     | 0.45              |
| 2:AW:127:VAL:HG13  | 2:AW:157:CYS:SG    | 2.57                     | 0.45              |
| 2:AY:119:LEU:CD1   | 10:AY:200:CYC:HAA2 | 2.47                     | 0.45              |
| 10:AY:200:CYC:HMA1 | 10:AY:200:CYC:NB   | 2.32                     | 0.45              |
| 6:BD:15:GLN:OE1    | 6:BD:262:ALA:HB2   | 2.16                     | 0.45              |
| 6:BD:69:SER:CA     | 6:BD:82:LEU:HD21   | 2.35                     | 0.45              |
| 6:BD:455:GLU:OE2   | 6:BD:661:THR:OG1   | 2.23                     | 0.45              |
| 9:BH:109:PHE:CZ    | 9:BH:113:LEU:HD11  | 2.52                     | 0.45              |
| 9:BH:195:ASN:OD1   | 9:BH:198:VAL:HB    | 2.17                     | 0.45              |
| 1:BK:93:THR:O      | 1:BK:97:VAL:HG22   | 2.16                     | 0.45              |
| 2:BQ:25:ASP:OD2    | 9:CQ:165:ALA:HB1   | 2.16                     | 0.45              |
| 2:BT:4:ALA:O       | 2:BT:8:VAL:HG23    | 2.17                     | 0.45              |
| 2:BW:122:PRO:HB2   | 2:BW:125:SER:HB2   | 1.99                     | 0.45              |
| 2:BY:106:GLU:OE2   | 6:CM:674:SER:HB2   | 2.16                     | 0.45              |
| 1:CC:4:VAL:HA      | 1:CC:26:ILE:HD11   | 1.98                     | 0.45              |
| 2:CF:10:ASN:O      | 2:CF:14:VAL:HG22   | 2.17                     | 0.45              |
| 2:CF:66:THR:HG21   | 10:CG:200:CYC:O1A  | 2.16                     | 0.45              |
| 1:CG:82:LEU:HB2    | 8:CP:242:ILE:HD12  | 1.99                     | 0.45              |
| 1:CG:155:PHE:O     | 1:CG:159:LYS:HG2   | 2.16                     | 0.45              |
| 5:CJ:40:GLN:HG3    | 5:CJ:50:ILE:HD11   | 1.99                     | 0.45              |
| 6:CM:144:TYR:CE2   | 6:CM:148:ASN:HB3   | 2.51                     | 0.45              |
| 6:CM:291:GLU:HG2   | 6:CM:348:ARG:HH12  | 1.82                     | 0.45              |
| 6:CM:477:ASN:OD1   | 6:CM:480:THR:OG1   | 2.34                     | 0.45              |
| 9:CQ:87:ALA:O      | 9:CQ:170:LYS:NZ    | 2.42                     | 0.45              |
| 1:CV:28:ALA:O      | 1:CV:31:THR:OG1    | 2.29                     | 0.45              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 8:DG:238:GLN:OE1  | 1:DL:52:LYS:HG2    | 2.17                     | 0.45              |
| 9:DI:20:VAL:HB    | 9:DI:145:LEU:HD21  | 1.98                     | 0.45              |
| 9:DI:151:ILE:O    | 9:DI:155:ARG:HG3   | 2.16                     | 0.45              |
| 1:DL:4:VAL:HG23   | 2:DM:97:LEU:CD2    | 2.47                     | 0.45              |
| 1:DQ:41:GLU:HG2   | 2:DR:24:MET:HE1    | 1.99                     | 0.45              |
| 1:DS:73:TYR:HD2   | 8:DY:200:VAL:HG23  | 1.82                     | 0.45              |
| 2:DT:81:CYS:HB3   | 10:DT:200:CYC:HBC1 | 1.77                     | 0.45              |
| 1:DU:17:TYR:OH    | 2:DV:89:LEU:HG     | 2.17                     | 0.45              |
| 1:AA:102:THR:O    | 1:AA:106:GLU:HG2   | 2.16                     | 0.45              |
| 3:AE:16:ARG:O     | 2:AF:94:TYR:OH     | 2.28                     | 0.45              |
| 3:AE:50:ILE:HD11  | 3:AE:140:LEU:HB2   | 1.99                     | 0.45              |
| 2:AF:22:ALA:O     | 2:AF:26:LYS:NZ     | 2.25                     | 0.45              |
| 2:AI:58:LYS:HZ1   | 2:AI:132:ALA:HA    | 1.82                     | 0.45              |
| 1:AJ:102:THR:O    | 1:AJ:106:GLU:HG2   | 2.17                     | 0.45              |
| 1:AJ:142:SER:OG   | 1:AJ:144:ASP:OD1   | 2.27                     | 0.45              |
| 2:AL:56:VAL:O     | 2:AL:61:LEU:HG     | 2.17                     | 0.45              |
| 2:AO:112:LEU:HD13 | 10:AO:200:CYC:HMB3 | 1.99                     | 0.45              |
| 2:AS:129:ALA:O    | 2:AS:133:ILE:HG13  | 2.17                     | 0.45              |
| 1:AV:129:SER:O    | 1:AV:133:MET:HG3   | 2.17                     | 0.45              |
| 1:AZ:24:ASP:HA    | 1:AZ:27:LYS:HG2    | 1.99                     | 0.45              |
| 9:BH:250:LEU:O    | 9:BH:251:ILE:HD13  | 2.17                     | 0.45              |
| 1:BI:37:LEU:CD1   | 2:BJ:28:LYS:HD3    | 2.46                     | 0.45              |
| 2:BJ:112:LEU:CD2  | 2:BJ:160:LEU:HD21  | 2.46                     | 0.45              |
| 1:BK:105:GLU:HA   | 1:BK:109:LEU:HB3   | 1.99                     | 0.45              |
| 3:BM:37:ILE:O     | 3:BM:40:ALA:HB3    | 2.17                     | 0.45              |
| 3:BM:117:ASN:HB3  | 6:CM:234:PRO:HG2   | 1.98                     | 0.45              |
| 4:BS:60:PHE:O     | 4:BS:64:PRO:HA     | 2.17                     | 0.45              |
| 2:BT:81:CYS:HA    | 10:BT:200:CYC:HHD  | 1.98                     | 0.45              |
| 2:BW:134:LYS:HA   | 2:BW:153:LEU:HD13  | 1.99                     | 0.45              |
| 1:BZ:87:TYR:CD2   | 10:BZ:200:CYC:HBB3 | 2.51                     | 0.45              |
| 1:BZ:87:TYR:CG    | 10:BZ:200:CYC:HBB3 | 2.52                     | 0.45              |
| 1:CC:5:THR:O      | 1:CC:9:VAL:HG23    | 2.17                     | 0.45              |
| 1:CC:134:LYS:HB2  | 1:CC:153:PHE:CG    | 2.52                     | 0.45              |
| 2:CF:153:LEU:O    | 2:CF:156:ILE:HG22  | 2.16                     | 0.45              |
| 1:CG:61:LYS:HG2   | 9:CQ:57:GLY:N      | 2.32                     | 0.45              |
| 1:CG:109:LEU:HD21 | 1:CG:159:LYS:CB    | 2.47                     | 0.45              |
| 6:CM:63:ASN:HB2   | 6:CM:66:LEU:HB3    | 1.99                     | 0.45              |
| 6:CM:338:ILE:CG2  | 6:CM:341:ARG:H     | 2.30                     | 0.45              |
| 6:CM:866:PHE:O    | 6:CM:870:GLU:HG2   | 2.17                     | 0.45              |
| 9:CQ:216:LEU:O    | 9:CQ:298:ILE:HG22  | 2.17                     | 0.45              |
| 1:CR:104:ILE:HG22 | 1:CR:109:LEU:HD23  | 1.98                     | 0.45              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:CS:56:VAL:HG12   | 2:CS:61:LEU:HG     | 1.99                     | 0.45              |
| 1:CT:108:GLY:C     | 1:CT:109:LEU:HD22  | 2.37                     | 0.45              |
| 2:CU:144:ASP:OD1   | 2:CU:144:ASP:N     | 2.48                     | 0.45              |
| 1:CV:44:THR:O      | 1:CV:47:ARG:HG2    | 2.17                     | 0.45              |
| 2:CW:122:PRO:O     | 2:CW:126:THR:HG22  | 2.17                     | 0.45              |
| 1:DA:37:LEU:CD1    | 2:DB:24:MET:HE1    | 2.47                     | 0.45              |
| 2:DD:57:ALA:HB1    | 8:DH:201:ARG:NH2   | 2.31                     | 0.45              |
| 1:DJ:115:MET:HG3   | 2:DO:78:TYR:CD1    | 2.52                     | 0.45              |
| 1:DN:47:ARG:O      | 1:DN:51:VAL:HG23   | 2.17                     | 0.45              |
| 2:DO:50:THR:HG21   | 9:EA:60:SER:HB2    | 1.99                     | 0.45              |
| 1:DQ:37:LEU:HG     | 2:DR:28:LYS:HE3    | 1.99                     | 0.45              |
| 1:DS:133:MET:HA    | 1:DS:136:VAL:HG12  | 1.99                     | 0.45              |
| 2:DT:66:THR:CG2    | 10:DU:200:CYC:HMA3 | 2.47                     | 0.45              |
| 1:DU:17:TYR:CZ     | 2:DV:90:ARG:HA     | 2.52                     | 0.45              |
| 1:DU:80:THR:HG23   | 1:DU:83:ARG:HH21   | 1.81                     | 0.45              |
| 2:DV:41:ALA:HA     | 2:DV:44:ILE:HG22   | 1.99                     | 0.45              |
| 3:AE:8:ILE:HG13    | 2:AF:1:MET:CE      | 2.47                     | 0.44              |
| 2:AF:20:ASP:O      | 2:AF:24:MET:HG3    | 2.17                     | 0.44              |
| 2:AF:104:LEU:HD11  | 2:AF:152:TYR:HB3   | 1.99                     | 0.44              |
| 2:AL:36:LEU:HD12   | 7:BF:85:GLN:HB2    | 1.99                     | 0.44              |
| 1:AN:8:ILE:CD1     | 1:AN:18:LEU:HD11   | 2.47                     | 0.44              |
| 1:AP:61:LYS:HE2    | 1:AP:128:GLN:NE2   | 2.32                     | 0.44              |
| 10:AX:200:CYC:HMA1 | 10:AX:200:CYC:HB   | 1.81                     | 0.44              |
| 2:AY:127:VAL:O     | 2:AY:131:GLN:HG3   | 2.16                     | 0.44              |
| 6:BD:453:PRO:HG3   | 6:BD:462:PHE:CE1   | 2.52                     | 0.44              |
| 6:BD:551:PHE:CD2   | 6:BD:555:LEU:HD21  | 2.52                     | 0.44              |
| 6:BD:793:ALA:HB3   | 6:BD:794:PRO:HD3   | 1.98                     | 0.44              |
| 9:BH:311:GLU:O     | 9:BH:312:LEU:HB2   | 2.17                     | 0.44              |
| 2:BL:66:THR:CG2    | 10:BM:200:CYC:HMA3 | 2.47                     | 0.44              |
| 1:BP:24:ASP:OD1    | 1:BP:25:ARG:N      | 2.50                     | 0.44              |
| 2:BW:81:CYS:HA     | 10:BW:200:CYC:HHD  | 1.99                     | 0.44              |
| 2:BW:96:MET:HG3    | 2:BW:148:GLU:OE2   | 2.17                     | 0.44              |
| 1:BX:71:ASN:OD1    | 10:BX:200:CYC:HMD2 | 2.17                     | 0.44              |
| 1:BX:122:PRO:HG2   | 1:BX:125:ALA:CB    | 2.45                     | 0.44              |
| 1:BZ:18:LEU:HD12   | 2:CA:97:LEU:CD1    | 2.41                     | 0.44              |
| 1:CE:58:LEU:HD13   | 1:CE:129:SER:N     | 2.31                     | 0.44              |
| 6:CM:167:ILE:CD1   | 6:CM:219:ILE:HG22  | 2.47                     | 0.44              |
| 6:CM:285:ALA:O     | 6:CM:289:ILE:HG12  | 2.16                     | 0.44              |
| 6:CM:358:ARG:HB2   | 6:CM:434:PHE:HB3   | 1.99                     | 0.44              |
| 1:CT:104:ILE:HG22  | 1:CT:109:LEU:HD23  | 1.98                     | 0.44              |
| 1:CT:143:SER:O     | 1:CT:146:ALA:HB3   | 2.17                     | 0.44              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:CW:37:ARG:HD3    | 2:CW:96:MET:O      | 2.17                     | 0.44              |
| 1:CY:90:ARG:NH2    | 2:CZ:16:GLY:HA2    | 2.32                     | 0.44              |
| 2:CZ:72:MET:O      | 2:CZ:72:MET:HG3    | 2.18                     | 0.44              |
| 1:DA:131:ARG:N     | 1:DA:157:ILE:HD11  | 2.32                     | 0.44              |
| 1:DC:122:PRO:HB2   | 1:DC:125:ALA:CB    | 2.47                     | 0.44              |
| 9:DI:109:PHE:CZ    | 9:DI:113:LEU:HD11  | 2.52                     | 0.44              |
| 1:DJ:23:LEU:HD12   | 1:DJ:24:ASP:N      | 2.32                     | 0.44              |
| 1:DJ:58:LEU:HD22   | 1:DJ:129:SER:CB    | 2.32                     | 0.44              |
| 1:DL:81:CYS:SG     | 10:DL:200:CYC:HMD3 | 2.57                     | 0.44              |
| 10:DM:200:CYC:HMD2 | 10:DM:200:CYC:NC   | 2.32                     | 0.44              |
| 1:DQ:40:ALA:HB2    | 1:DQ:97:VAL:HG22   | 1.99                     | 0.44              |
| 1:DU:41:GLU:CD     | 2:DV:24:MET:HE2    | 2.37                     | 0.44              |
| 9:EA:67:ALA:HA     | 9:EA:70:GLU:OE1    | 2.16                     | 0.44              |
| 9:EA:90:ALA:O      | 9:EA:163:PHE:HB2   | 2.17                     | 0.44              |
| 1:AA:17:TYR:CE2    | 2:AB:90:ARG:HA     | 2.52                     | 0.44              |
| 1:AA:50:ILE:HD11   | 1:AA:137:ALA:N     | 2.32                     | 0.44              |
| 1:AA:91:LEU:O      | 1:AA:104:ILE:HG12  | 2.17                     | 0.44              |
| 2:AB:113:LYS:HE2   | 2:AB:117:ASN:OD1   | 2.17                     | 0.44              |
| 1:AC:37:LEU:HD11   | 2:AD:24:MET:SD     | 2.58                     | 0.44              |
| 1:AC:101:VAL:HA    | 1:AC:104:ILE:HD12  | 2.00                     | 0.44              |
| 3:AE:42:THR:CG2    | 3:AE:141:LEU:HD21  | 2.47                     | 0.44              |
| 2:AI:76:ARG:HB2    | 1:AJ:110:VAL:CG1   | 2.47                     | 0.44              |
| 1:AJ:115:MET:HE1   | 10:AJ:200:CYC:HMB3 | 1.98                     | 0.44              |
| 2:AL:58:LYS:HB3    | 2:AL:58:LYS:HE2    | 1.65                     | 0.44              |
| 1:AN:100:ASP:OD2   | 1:AN:102:THR:OG1   | 2.28                     | 0.44              |
| 1:AN:122:PRO:HB2   | 1:AN:125:ALA:HB3   | 1.99                     | 0.44              |
| 2:AO:85:LEU:HB3    | 2:AO:133:ILE:HD11  | 1.99                     | 0.44              |
| 2:AO:112:LEU:HD11  | 2:AO:116:TYR:CZ    | 2.52                     | 0.44              |
| 1:AP:75:GLU:OE1    | 1:AP:75:GLU:N      | 2.44                     | 0.44              |
| 2:AU:72:MET:HG2    | 2:AU:78:TYR:CD2    | 2.53                     | 0.44              |
| 2:AW:40:ALA:HB2    | 2:AW:145:ALA:HB1   | 1.99                     | 0.44              |
| 1:AX:88:TYR:CZ     | 1:AX:160:MET:HE3   | 2.52                     | 0.44              |
| 1:AX:104:ILE:HG21  | 1:AX:156:VAL:HG22  | 1.99                     | 0.44              |
| 1:AZ:125:ALA:HB3   | 10:AZ:200:CYC:HMC2 | 1.99                     | 0.44              |
| 6:BD:18:GLN:O      | 6:BD:171:ASP:HB3   | 2.17                     | 0.44              |
| 6:BD:75:ILE:HD12   | 6:BD:197:VAL:CG2   | 2.39                     | 0.44              |
| 6:BD:691:PHE:HE2   | 1:DC:52:LYS:HE3    | 1.82                     | 0.44              |
| 9:BH:258:GLU:HB2   | 9:BH:259:PRO:HD2   | 1.98                     | 0.44              |
| 9:BH:263:GLY:C     | 9:BH:294:PRO:HG3   | 2.37                     | 0.44              |
| 9:BH:292:LEU:HD23  | 9:BH:298:ILE:CD1   | 2.47                     | 0.44              |
| 1:BI:101:VAL:HG13  | 1:BP:20:PRO:HG2    | 1.98                     | 0.44              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:BK:25:ARG:HD3   | 6:CM:38:SER:O      | 2.17                     | 0.44              |
| 2:BL:121:VAL:HG13 | 10:BL:200:CYC:NC   | 2.32                     | 0.44              |
| 1:BP:156:VAL:HG12 | 1:BP:160:MET:HE3   | 1.98                     | 0.44              |
| 2:BQ:81:CYS:HA    | 10:BQ:200:CYC:HHD  | 1.98                     | 0.44              |
| 1:BV:123:ILE:CD1  | 1:CE:117:ARG:HH22  | 2.30                     | 0.44              |
| 1:BV:159:LYS:HB3  | 1:BV:159:LYS:HE3   | 1.78                     | 0.44              |
| 1:BX:105:GLU:O    | 1:BX:110:VAL:HG23  | 2.17                     | 0.44              |
| 2:CD:113:LYS:HD3  | 2:CD:160:LEU:O     | 2.17                     | 0.44              |
| 2:CD:148:GLU:HG3  | 2:CD:152:TYR:CE2   | 2.52                     | 0.44              |
| 2:CF:25:ASP:HA    | 2:CF:28:LYS:NZ     | 2.31                     | 0.44              |
| 5:CK:6:ILE:O      | 5:CK:6:ILE:HG13    | 2.17                     | 0.44              |
| 7:CO:114:ALA:O    | 7:CO:118:LYS:HG2   | 2.17                     | 0.44              |
| 9:CQ:205:LEU:HA   | 9:CQ:210:PHE:CE1   | 2.49                     | 0.44              |
| 1:CT:27:LYS:O     | 1:CT:31:THR:HG23   | 2.17                     | 0.44              |
| 1:CV:71:ASN:HB3   | 10:CV:200:CYC:OC   | 2.17                     | 0.44              |
| 2:CW:63:SER:O     | 2:CW:67:ARG:HG3    | 2.16                     | 0.44              |
| 2:DB:73:TYR:O     | 2:DB:77:ARG:HB2    | 2.17                     | 0.44              |
| 2:DB:101:ALA:HB2  | 2:DB:152:TYR:HD1   | 1.81                     | 0.44              |
| 1:DS:71:ASN:HB3   | 10:DS:200:CYC:OC   | 2.17                     | 0.44              |
| 1:DS:109:LEU:O    | 1:DS:112:VAL:HG12  | 2.17                     | 0.44              |
| 1:DU:116:TYR:CE2  | 1:DU:126:VAL:HG11  | 2.52                     | 0.44              |
| 9:EA:253:GLU:HG3  | 9:EA:271:GLY:HA2   | 2.00                     | 0.44              |
| 1:AC:3:ILE:HG22   | 1:AC:26:ILE:CD1    | 2.47                     | 0.44              |
| 1:AC:101:VAL:HB   | 1:AC:155:PHE:CE2   | 2.51                     | 0.44              |
| 2:AD:71:ASN:O     | 2:AD:77:ARG:HB3    | 2.17                     | 0.44              |
| 2:AF:1:MET:HE2    | 2:AF:103:ILE:HD12  | 1.99                     | 0.44              |
| 4:AK:166:GLU:HG3  | 2:AS:69:GLY:O      | 2.17                     | 0.44              |
| 1:AN:86:ASP:OD1   | 2:AO:18:TYR:OH     | 2.17                     | 0.44              |
| 1:AN:94:TYR:OH    | 2:AO:17:LYS:O      | 2.32                     | 0.44              |
| 2:AS:57:ALA:HA    | 2:AS:61:LEU:CG     | 2.45                     | 0.44              |
| 1:AV:2:SER:OG     | 1:AV:98:SER:HB2    | 2.16                     | 0.44              |
| 1:AV:85:MET:HG3   | 10:AV:200:CYC:HBC1 | 1.98                     | 0.44              |
| 2:AW:85:LEU:HD21  | 10:AW:200:CYC:HBC1 | 2.00                     | 0.44              |
| 2:AY:52:VAL:HG21  | 2:AY:86:ASP:OD1    | 2.18                     | 0.44              |
| 1:AZ:48:GLU:O     | 1:AZ:52:LYS:HD3    | 2.17                     | 0.44              |
| 6:BD:238:ASN:HB2  | 6:BD:252:GLU:OE2   | 2.17                     | 0.44              |
| 6:BD:373:LEU:HB3  | 6:BD:374:PRO:HD3   | 2.00                     | 0.44              |
| 9:BH:47:MET:HA    | 9:BH:51:LEU:HB2    | 1.99                     | 0.44              |
| 9:BH:257:THR:CG2  | 9:BH:267:ILE:HG12  | 2.45                     | 0.44              |
| 1:BI:88:TYR:O     | 1:BI:92:VAL:HG23   | 2.16                     | 0.44              |
| 3:BM:58:LEU:HD22  | 3:BM:85:TYR:OH     | 2.18                     | 0.44              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:BN:61:LEU:HD21  | 2:BN:78:TYR:OH     | 2.17                     | 0.44              |
| 6:CM:19:THR:OG1   | 6:CM:22:VAL:HG23   | 2.17                     | 0.44              |
| 6:CM:183:LYS:HG2  | 6:CM:192:ILE:CD1   | 2.44                     | 0.44              |
| 9:CQ:112:ARG:NH2  | 9:CQ:116:LEU:HD21  | 2.31                     | 0.44              |
| 1:CR:127:ALA:HA   | 1:CR:130:VAL:HG12  | 1.98                     | 0.44              |
| 2:CS:3:ASP:HB2    | 2:CS:98:ALA:O      | 2.17                     | 0.44              |
| 1:CT:66:VAL:HA    | 1:CT:72:ALA:HB3    | 1.99                     | 0.44              |
| 2:CU:10:ASN:O     | 2:CU:14:VAL:HG13   | 2.17                     | 0.44              |
| 1:CV:64:ASP:OD1   | 1:CV:64:ASP:N      | 2.47                     | 0.44              |
| 2:CW:78:TYR:O     | 2:CW:82:ILE:HG12   | 2.17                     | 0.44              |
| 2:DB:87:TYR:HB3   | 10:DB:200:CYC:HBB2 | 1.98                     | 0.44              |
| 1:DC:81:CYS:HB3   | 10:DC:200:CYC:HBC1 | 1.33                     | 0.44              |
| 9:DI:17:ALA:O     | 9:DI:20:VAL:HG22   | 2.18                     | 0.44              |
| 2:DK:3:ASP:HB2    | 2:DK:98:ALA:O      | 2.16                     | 0.44              |
| 1:DL:17:TYR:HE1   | 2:DM:90:ARG:HD3    | 1.81                     | 0.44              |
| 1:DL:152:TYR:O    | 1:DL:156:VAL:HG23  | 2.17                     | 0.44              |
| 2:DM:76:ARG:HG3   | 1:DN:110:VAL:HG11  | 2.00                     | 0.44              |
| 2:DM:85:LEU:HD13  | 2:DM:133:ILE:HD11  | 1.98                     | 0.44              |
| 1:DN:14:GLU:HB2   | 1:DN:16:ARG:HG2    | 1.97                     | 0.44              |
| 10:DS:200:CYC:NC  | 10:DS:200:CYC:HMD2 | 2.32                     | 0.44              |
| 1:DU:92:VAL:HG21  | 1:DU:153:PHE:CE1   | 2.52                     | 0.44              |
| 1:AC:33:GLY:HA2   | 1:AC:36:ARG:CG     | 2.47                     | 0.44              |
| 2:AD:53:LYS:HG3   | 3:AE:118:SER:O     | 2.17                     | 0.44              |
| 2:AF:133:ILE:O    | 2:AF:137:THR:HG22  | 2.18                     | 0.44              |
| 1:AH:47:ARG:HG3   | 1:AH:48:GLU:N      | 2.33                     | 0.44              |
| 2:AI:4:ALA:O      | 2:AI:8:VAL:HG22    | 2.18                     | 0.44              |
| 4:AK:62:GLU:CD    | 4:AK:133:ILE:HD11  | 2.38                     | 0.44              |
| 2:AL:34:GLY:O     | 2:AL:38:VAL:HG23   | 2.17                     | 0.44              |
| 1:AN:81:CYS:HA    | 10:AN:200:CYC:CHD  | 2.44                     | 0.44              |
| 2:AO:81:CYS:HA    | 10:AO:200:CYC:HHD  | 1.99                     | 0.44              |
| 2:AS:71:ASN:O     | 2:AS:77:ARG:HB3    | 2.18                     | 0.44              |
| 2:AU:119:LEU:HD11 | 10:AU:200:CYC:HAA2 | 1.98                     | 0.44              |
| 1:AV:35:ALA:O     | 1:AV:39:ILE:HG13   | 2.18                     | 0.44              |
| 1:AX:85:MET:HE1   | 1:AX:129:SER:HB2   | 1.99                     | 0.44              |
| 6:BD:52:LEU:HD11  | 6:BD:216:ALA:CB    | 2.44                     | 0.44              |
| 6:BD:597:TYR:HD2  | 6:BD:600:LYS:HG3   | 1.82                     | 0.44              |
| 6:BD:751:LEU:O    | 6:BD:751:LEU:HD12  | 2.18                     | 0.44              |
| 1:BK:102:THR:HB   | 1:BK:103:PRO:HD3   | 1.98                     | 0.44              |
| 2:BL:54:GLU:O     | 2:BL:58:LYS:HE3    | 2.17                     | 0.44              |
| 1:BR:18:LEU:HD22  | 4:BS:98:ILE:HD13   | 2.00                     | 0.44              |
| 4:BS:4:ALA:HA     | 4:BS:7:THR:HG22    | 2.00                     | 0.44              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:BV:80:THR:HG23  | 1:BV:83:ARG:HE     | 1.82                     | 0.44              |
| 2:BY:77:ARG:HG2   | 10:BY:200:CYC:HAD1 | 1.98                     | 0.44              |
| 1:BZ:68:PRO:HA    | 1:BZ:73:TYR:CD2    | 2.53                     | 0.44              |
| 1:BZ:128:GLN:O    | 1:BZ:132:GLU:HG2   | 2.18                     | 0.44              |
| 2:CA:72:MET:HB2   | 2:CA:72:MET:HE2    | 1.79                     | 0.44              |
| 2:CA:107:ARG:NH1  | 6:CM:596:HIS:O     | 2.48                     | 0.44              |
| 2:CA:124:SER:HA   | 6:CM:11:LEU:HD11   | 1.99                     | 0.44              |
| 6:CM:30:GLN:OE1   | 6:CM:265:GLN:HG3   | 2.17                     | 0.44              |
| 6:CM:182:LEU:HD12 | 6:CM:185:VAL:CG2   | 2.47                     | 0.44              |
| 6:CM:451:ASN:OD1  | 6:CM:600:LYS:HA    | 2.16                     | 0.44              |
| 6:CM:453:PRO:HG3  | 6:CM:462:PHE:CZ    | 2.53                     | 0.44              |
| 9:CQ:263:GLY:C    | 9:CQ:294:PRO:HG3   | 2.37                     | 0.44              |
| 1:CR:71:ASN:ND2   | 1:CR:121:THR:OG1   | 2.50                     | 0.44              |
| 2:CS:121:VAL:HG13 | 2:CS:122:PRO:HD2   | 1.98                     | 0.44              |
| 1:CT:33:GLY:HA2   | 1:CT:36:ARG:HD2    | 2.00                     | 0.44              |
| 1:CT:37:LEU:O     | 1:CT:40:ALA:HB3    | 2.17                     | 0.44              |
| 1:CV:144:ASP:OD1  | 1:CV:145:ASP:N     | 2.50                     | 0.44              |
| 2:CZ:22:ALA:O     | 2:CZ:26:LYS:HG3    | 2.18                     | 0.44              |
| 2:DB:40:ALA:HB2   | 2:DB:145:ALA:HB1   | 1.99                     | 0.44              |
| 2:DD:81:CYS:HA    | 10:DD:200:CYC:CHD  | 2.47                     | 0.44              |
| 2:DK:154:ASP:HA   | 2:DK:157:CYS:SG    | 2.58                     | 0.44              |
| 2:DT:133:ILE:O    | 2:DT:137:THR:HG22  | 2.17                     | 0.44              |
| 1:DU:85:MET:SD    | 1:DU:129:SER:OG    | 2.70                     | 0.44              |
| 2:DV:144:ASP:N    | 2:DV:144:ASP:OD1   | 2.50                     | 0.44              |
| 9:EA:74:MET:HE3   | 9:EA:78:GLN:HB2    | 1.98                     | 0.44              |
| 9:EA:185:ARG:CZ   | 9:EA:207:ALA:HB1   | 2.47                     | 0.44              |
| 1:AA:25:ARG:HB3   | 1:AH:25:ARG:HD2    | 2.00                     | 0.44              |
| 2:AB:2:GLN:O      | 2:AB:100:ASP:HB3   | 2.18                     | 0.44              |
| 2:AB:57:ALA:HA    | 2:AB:61:LEU:CD1    | 2.44                     | 0.44              |
| 1:AC:111:GLY:HA2  | 1:AC:114:GLU:CD    | 2.38                     | 0.44              |
| 1:AC:121:THR:HG23 | 10:AC:200:CYC:C1C  | 2.48                     | 0.44              |
| 3:AE:113:LYS:HZ1  | 3:AE:123:VAL:HG11  | 1.82                     | 0.44              |
| 1:AH:24:ASP:OD1   | 1:AH:25:ARG:N      | 2.50                     | 0.44              |
| 1:AN:11:ALA:CB    | 1:AN:18:LEU:HD23   | 2.47                     | 0.44              |
| 1:AN:57:ARG:HA    | 1:AN:60:GLN:HG3    | 2.00                     | 0.44              |
| 1:AN:157:ILE:O    | 1:AN:161:SER:OG    | 2.28                     | 0.44              |
| 2:AQ:47:ASN:HB2   | 2:AQ:140:LEU:HD21  | 1.99                     | 0.44              |
| 2:AS:52:VAL:HG21  | 2:AS:86:ASP:OD1    | 2.17                     | 0.44              |
| 2:AU:72:MET:HG2   | 2:AU:78:TYR:HD2    | 1.83                     | 0.44              |
| 1:AV:144:ASP:OD1  | 1:AV:145:ASP:N     | 2.51                     | 0.44              |
| 1:AZ:140:LEU:HD23 | 1:AZ:140:LEU:O     | 2.18                     | 0.44              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 5:BB:3:MET:SD      | 5:BB:32:PRO:HA     | 2.57                     | 0.44              |
| 6:BD:761:THR:HG22  | 2:CS:87:TYR:OH     | 2.18                     | 0.44              |
| 7:BF:114:ALA:O     | 7:BF:117:VAL:HG12  | 2.18                     | 0.44              |
| 9:BH:201:TYR:HA    | 9:BH:213:LEU:CD1   | 2.48                     | 0.44              |
| 1:BI:76:GLU:O      | 1:BI:80:THR:HG23   | 2.17                     | 0.44              |
| 1:BI:102:THR:O     | 1:BI:106:GLU:HG2   | 2.18                     | 0.44              |
| 1:BI:130:VAL:HG21  | 1:BI:160:MET:SD    | 2.56                     | 0.44              |
| 2:BN:85:LEU:CG     | 10:BN:200:CYC:HBC1 | 2.47                     | 0.44              |
| 4:BS:72:ASN:HD21   | 4:BS:122:VAL:HG22  | 1.82                     | 0.44              |
| 2:BT:144:ASP:N     | 2:BT:144:ASP:OD1   | 2.49                     | 0.44              |
| 1:BV:160:MET:HE3   | 1:BV:160:MET:HB2   | 1.66                     | 0.44              |
| 1:BZ:11:ALA:HA     | 1:BZ:16:ARG:NH1    | 2.33                     | 0.44              |
| 1:CE:72:ALA:HB2    | 10:CE:200:CYC:CMD  | 2.48                     | 0.44              |
| 2:CF:64:ASP:N      | 2:CF:64:ASP:OD1    | 2.50                     | 0.44              |
| 5:CJ:31:VAL:HG11   | 5:CJ:36:TRP:CE3    | 2.53                     | 0.44              |
| 9:CQ:64:ALA:HA     | 9:CQ:101:TRP:CZ2   | 2.52                     | 0.44              |
| 9:CQ:98:TYR:OH     | 9:CQ:158:VAL:HG22  | 2.17                     | 0.44              |
| 9:CQ:273:VAL:HG12  | 9:CQ:284:MET:O     | 2.18                     | 0.44              |
| 2:CZ:102:SER:HA    | 2:CZ:105:ASP:OD1   | 2.18                     | 0.44              |
| 2:DB:51:ILE:HG21   | 2:DB:89:LEU:HD11   | 1.99                     | 0.44              |
| 1:DC:122:PRO:HB2   | 1:DC:125:ALA:HB3   | 1.98                     | 0.44              |
| 8:DH:230:ASN:ND2   | 1:DJ:67:SER:HB3    | 2.33                     | 0.44              |
| 9:DI:101:TRP:HB3   | 9:DI:105:ILE:HB    | 1.99                     | 0.44              |
| 2:DK:1:MET:SD      | 2:DK:103:ILE:HB    | 2.58                     | 0.44              |
| 1:DL:47:ARG:O      | 1:DL:51:VAL:HG12   | 2.17                     | 0.44              |
| 2:DM:73:TYR:HH     | 1:DN:90:ARG:HH2    | 1.60                     | 0.44              |
| 1:DN:41:GLU:CG     | 2:DO:24:MET:HE2    | 2.47                     | 0.44              |
| 1:DQ:57:ARG:HH12   | 1:DQ:136:VAL:HG22  | 1.81                     | 0.44              |
| 1:DS:62:ARG:HD3    | 9:EA:58:ALA:N      | 2.32                     | 0.44              |
| 1:AA:83:ARG:NH2    | 10:AA:200:CYC:O1A  | 2.48                     | 0.44              |
| 2:AB:25:ASP:OD1    | 2:AB:26:LYS:N      | 2.51                     | 0.44              |
| 2:AB:85:LEU:HD22   | 2:AB:133:ILE:HD11  | 1.99                     | 0.44              |
| 1:AC:98:SER:CB     | 1:AC:103:PRO:HG2   | 2.48                     | 0.44              |
| 2:AD:2:GLN:HB2     | 2:AD:6:THR:CG2     | 2.46                     | 0.44              |
| 2:AF:85:LEU:CG     | 10:AF:200:CYC:HBC1 | 2.43                     | 0.44              |
| 2:AF:122:PRO:O     | 2:AF:126:THR:HG23  | 2.17                     | 0.44              |
| 10:AK:200:CYC:HBA2 | 6:BD:401:LEU:CD1   | 2.48                     | 0.44              |
| 1:AN:46:SER:OG     | 1:AN:140:LEU:HD23  | 2.18                     | 0.44              |
| 1:AP:110:VAL:CG1   | 6:BD:489:PRO:HB3   | 2.48                     | 0.44              |
| 2:AQ:111:GLY:HA2   | 2:AQ:114:GLU:OE1   | 2.17                     | 0.44              |
| 2:AU:79:ALA:HA     | 2:AU:82:ILE:HG22   | 1.99                     | 0.44              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AV:64:ASP:HA    | 1:AV:67:SER:HB2   | 2.00                     | 0.44              |
| 1:AV:109:LEU:O    | 1:AV:112:VAL:HG12 | 2.17                     | 0.44              |
| 2:AW:41:ALA:CB    | 2:AW:97:LEU:HD21  | 2.48                     | 0.44              |
| 5:BB:26:TYR:CE1   | 5:BB:51:VAL:HG21  | 2.52                     | 0.44              |
| 6:BD:18:GLN:CB    | 6:BD:173:ASN:HD22 | 2.26                     | 0.44              |
| 6:BD:77:THR:HG21  | 6:BD:138:PRO:HB2  | 2.00                     | 0.44              |
| 6:BD:186:ILE:HG13 | 6:BD:190:CYS:CB   | 2.44                     | 0.44              |
| 6:BD:348:ARG:HD2  | 6:BD:417:LEU:HG   | 1.99                     | 0.44              |
| 6:BD:551:PHE:HE2  | 6:BD:555:LEU:HD11 | 1.83                     | 0.44              |
| 6:BD:681:GLN:HG2  | 6:BD:682:ARG:N    | 2.32                     | 0.44              |
| 8:BG:233:PRO:O    | 8:BG:235:VAL:HG13 | 2.18                     | 0.44              |
| 9:BH:193:VAL:HG21 | 9:BH:269:VAL:HG22 | 1.99                     | 0.44              |
| 9:BH:249:LYS:H    | 9:BH:275:THR:CB   | 2.30                     | 0.44              |
| 2:BJ:96:MET:HA    | 2:BJ:152:TYR:CE2  | 2.53                     | 0.44              |
| 1:BK:65:ILE:HG21  | 10:BK:200:CYC:H2C | 1.98                     | 0.44              |
| 1:BK:111:GLY:HA2  | 1:BK:114:GLU:CD   | 2.38                     | 0.44              |
| 1:BP:134:LYS:HB2  | 1:BP:153:PHE:HB3  | 1.99                     | 0.44              |
| 1:BR:19:SER:HB2   | 1:BR:20:PRO:HD2   | 1.99                     | 0.44              |
| 1:BR:35:ALA:O     | 1:BR:39:ILE:HG13  | 2.17                     | 0.44              |
| 1:BV:81:CYS:HA    | 10:BV:200:CYC:CHD | 2.48                     | 0.44              |
| 2:BW:25:ASP:HA    | 2:BW:28:LYS:HZ3   | 1.83                     | 0.44              |
| 2:CA:68:PRO:HA    | 2:CA:73:TYR:CD1   | 2.53                     | 0.44              |
| 1:CC:4:VAL:HA     | 1:CC:26:ILE:CD1   | 2.47                     | 0.44              |
| 1:CE:4:VAL:CG1    | 1:CE:26:ILE:HG23  | 2.46                     | 0.44              |
| 1:CE:83:ARG:HH12  | 10:CE:200:CYC:CGA | 2.27                     | 0.44              |
| 1:CG:91:LEU:CD1   | 1:CG:108:GLY:HA3  | 2.47                     | 0.44              |
| 6:CM:5:ALA:HB2    | 6:CM:436:GLN:CG   | 2.39                     | 0.44              |
| 6:CM:56:ILE:HD11  | 6:CM:216:ALA:O    | 2.18                     | 0.44              |
| 6:CM:697:VAL:CG2  | 6:CM:701:ARG:HE   | 2.28                     | 0.44              |
| 9:CQ:47:MET:HA    | 9:CQ:51:LEU:HB2   | 2.00                     | 0.44              |
| 9:CQ:104:ASN:OD1  | 9:CQ:155:ARG:HD3  | 2.17                     | 0.44              |
| 9:CQ:311:GLU:O    | 9:CQ:312:LEU:HB2  | 2.18                     | 0.44              |
| 2:CS:85:LEU:HD23  | 2:CS:85:LEU:HA    | 1.80                     | 0.44              |
| 1:CV:74:GLY:O     | 1:CV:78:THR:HG23  | 2.18                     | 0.44              |
| 1:CY:27:LYS:O     | 1:CY:31:THR:HG23  | 2.18                     | 0.44              |
| 1:DC:109:LEU:HD23 | 1:DC:109:LEU:HA   | 1.78                     | 0.44              |
| 9:DI:224:GLN:N    | 9:DI:301:VAL:O    | 2.50                     | 0.44              |
| 1:DQ:5:THR:HA     | 1:DQ:8:ILE:CG2    | 2.46                     | 0.44              |
| 2:DT:144:ASP:OD1  | 2:DT:145:ALA:N    | 2.47                     | 0.44              |
| 1:DU:144:ASP:N    | 1:DU:144:ASP:OD1  | 2.51                     | 0.44              |
| 8:DZ:221:MET:O    | 8:DZ:225:ILE:HG12 | 2.18                     | 0.44              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:25:ARG:NE     | 1:AH:29:PHE:HB2    | 2.32                     | 0.44              |
| 2:AB:77:ARG:O      | 10:AB:200:CYC:HMD3 | 2.18                     | 0.44              |
| 10:AB:200:CYC:HMA2 | 6:BD:311:ASN:ND2   | 2.32                     | 0.44              |
| 1:AC:16:ARG:NH1    | 1:AC:17:TYR:O      | 2.51                     | 0.44              |
| 1:AC:94:TYR:O      | 1:AC:97:VAL:HG22   | 2.18                     | 0.44              |
| 1:AC:116:TYR:CD2   | 1:AC:126:VAL:HG21  | 2.53                     | 0.44              |
| 2:AO:75:THR:HG23   | 10:AP:200:CYC:CAB  | 2.48                     | 0.44              |
| 1:AR:77:MET:SD     | 10:AR:200:CYC:HAD1 | 2.57                     | 0.44              |
| 2:AS:85:LEU:HG     | 10:BD:901:CYC:HBC1 | 1.99                     | 0.44              |
| 2:AU:51:ILE:HD12   | 2:AU:51:ILE:H      | 1.82                     | 0.44              |
| 1:AV:50:ILE:HD12   | 1:AV:136:VAL:HG12  | 1.99                     | 0.44              |
| 2:AW:153:LEU:O     | 2:AW:156:ILE:HG22  | 2.17                     | 0.44              |
| 6:BD:56:ILE:HD11   | 6:BD:216:ALA:O     | 2.18                     | 0.44              |
| 6:BD:788:MET:HB3   | 6:BD:831:LEU:CD2   | 2.47                     | 0.44              |
| 9:BH:249:LYS:O     | 9:BH:273:VAL:HG23  | 2.17                     | 0.44              |
| 1:BI:25:ARG:HH21   | 1:BP:29:PHE:HD1    | 1.65                     | 0.44              |
| 1:BI:58:LEU:CD2    | 10:BI:200:CYC:HBC3 | 2.48                     | 0.44              |
| 10:BI:200:CYC:HMA1 | 10:BI:200:CYC:NB   | 2.33                     | 0.44              |
| 2:BL:82:ILE:HA     | 2:BL:85:LEU:HD12   | 1.99                     | 0.44              |
| 3:BM:104:ILE:HG22  | 3:BM:109:LEU:CD1   | 2.47                     | 0.44              |
| 2:BN:119:LEU:HG    | 5:CJ:4:PHE:HZ      | 1.83                     | 0.44              |
| 1:BV:154:ASP:HB3   | 2:CD:46:ALA:CB     | 2.47                     | 0.44              |
| 10:CG:200:CYC:HMA1 | 10:CG:200:CYC:HB   | 1.83                     | 0.44              |
| 6:CM:177:VAL:HG13  | 6:CM:256:SER:O     | 2.17                     | 0.44              |
| 1:CR:105:GLU:O     | 1:CR:110:VAL:HG23  | 2.18                     | 0.44              |
| 2:CU:54:GLU:O      | 2:CU:58:LYS:HG2    | 2.18                     | 0.44              |
| 2:CW:123:ILE:O     | 2:CW:127:VAL:HG23  | 2.18                     | 0.44              |
| 1:CY:26:ILE:O      | 1:CY:30:VAL:HG13   | 2.18                     | 0.44              |
| 1:CY:85:MET:CE     | 1:CY:129:SER:HB2   | 2.47                     | 0.44              |
| 2:DB:73:TYR:O      | 2:DB:74:THR:OG1    | 2.32                     | 0.44              |
| 2:DD:73:TYR:O      | 2:DD:74:THR:OG1    | 2.24                     | 0.44              |
| 9:DI:32:ASN:HB3    | 9:DI:171:ARG:NH2   | 2.28                     | 0.44              |
| 9:DI:60:SER:OG     | 9:DI:105:ILE:HD11  | 2.18                     | 0.44              |
| 2:DK:17:LYS:HB3    | 2:DK:17:LYS:HE3    | 1.79                     | 0.44              |
| 2:DK:44:ILE:HG21   | 2:DK:93:THR:OG1    | 2.17                     | 0.44              |
| 1:DL:26:ILE:O      | 1:DL:30:VAL:HG13   | 2.18                     | 0.44              |
| 1:DL:91:LEU:HD21   | 1:DL:107:ILE:CG2   | 2.48                     | 0.44              |
| 2:DM:144:ASP:N     | 2:DM:144:ASP:OD1   | 2.50                     | 0.44              |
| 1:DQ:93:THR:O      | 1:DQ:96:VAL:HG22   | 2.17                     | 0.44              |
| 2:DR:1:MET:CE      | 2:DR:103:ILE:HB    | 2.47                     | 0.44              |
| 1:DS:142:SER:O     | 1:DS:146:ALA:N     | 2.40                     | 0.44              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 9:EA:39:LEU:CD1    | 9:EA:139:LEU:HB2   | 2.48                     | 0.44              |
| 1:AA:37:LEU:CD1    | 2:AB:28:LYS:HD3    | 2.47                     | 0.44              |
| 2:AB:85:LEU:CD2    | 10:AB:200:CYC:HBC1 | 2.47                     | 0.44              |
| 2:AB:104:LEU:O     | 2:AB:108:VAL:HB    | 2.17                     | 0.44              |
| 1:AC:33:GLY:HA2    | 1:AC:36:ARG:HE     | 1.83                     | 0.44              |
| 2:AD:39:ARG:HA     | 2:AD:39:ARG:HH11   | 1.82                     | 0.44              |
| 2:AD:78:TYR:HB3    | 3:AE:115:MET:SD    | 2.57                     | 0.44              |
| 10:AD:200:CYC:HBA1 | 5:BA:12:SER:N      | 2.33                     | 0.44              |
| 2:AF:112:LEU:HD11  | 2:AF:116:TYR:CZ    | 2.52                     | 0.44              |
| 2:AI:75:THR:OG1    | 1:AJ:110:VAL:O     | 2.27                     | 0.44              |
| 1:AJ:152:TYR:O     | 1:AJ:156:VAL:HG23  | 2.17                     | 0.44              |
| 2:AL:112:LEU:HD11  | 2:AL:116:TYR:CE2   | 2.53                     | 0.44              |
| 1:AN:39:ILE:HG23   | 1:AN:141:MET:HE1   | 1.99                     | 0.44              |
| 2:AO:111:GLY:HA2   | 2:AO:114:GLU:OE2   | 2.18                     | 0.44              |
| 2:AU:44:ILE:HD11   | 2:AU:137:THR:HG23  | 2.00                     | 0.44              |
| 2:AU:57:ALA:HA     | 2:AU:61:LEU:CB     | 2.42                     | 0.44              |
| 1:AV:64:ASP:O      | 1:AV:67:SER:HB2    | 2.18                     | 0.44              |
| 2:AY:83:ARG:NH1    | 5:BB:17:ARG:O      | 2.46                     | 0.44              |
| 6:BD:273:LEU:HB3   | 6:BD:277:GLU:HG2   | 2.00                     | 0.44              |
| 6:BD:761:THR:HG22  | 2:CS:83:ARG:HD2    | 1.99                     | 0.44              |
| 7:BF:114:ALA:CA    | 7:BF:117:VAL:HG12  | 2.47                     | 0.44              |
| 8:BG:219:LEU:O     | 8:BG:223:ARG:HG3   | 2.17                     | 0.44              |
| 1:BK:141:MET:CE    | 1:BK:146:ALA:HA    | 2.48                     | 0.44              |
| 3:BM:68:PRO:HA     | 3:BM:73:TYR:HE1    | 1.82                     | 0.44              |
| 3:BM:102:GLU:O     | 3:BM:106:THR:HG23  | 2.17                     | 0.44              |
| 2:BN:47:ASN:HB2    | 2:BN:140:LEU:HD21  | 2.00                     | 0.44              |
| 2:BQ:76:ARG:HB2    | 1:BR:110:VAL:CG1   | 2.48                     | 0.44              |
| 2:BQ:95:ALA:HB2    | 2:BQ:104:LEU:HG    | 2.00                     | 0.44              |
| 4:BS:167:LEU:HD12  | 2:BW:10:ASN:HD21   | 1.83                     | 0.44              |
| 1:BV:81:CYS:HA     | 10:BV:200:CYC:HHD  | 1.98                     | 0.44              |
| 1:BZ:52:LYS:HE2    | 8:CP:225:ILE:HB    | 2.00                     | 0.44              |
| 1:BZ:58:LEU:HD22   | 1:BZ:129:SER:CB    | 2.39                     | 0.44              |
| 1:BZ:65:ILE:HD11   | 1:BZ:122:PRO:HG3   | 2.00                     | 0.44              |
| 5:CK:12:SER:HB3    | 5:CK:17:ARG:NH2    | 2.32                     | 0.44              |
| 6:CM:159:PHE:CE1   | 10:CM:902:CYC:HBB2 | 2.53                     | 0.44              |
| 6:CM:749:ARG:NH2   | 6:CM:877:THR:HG21  | 2.33                     | 0.44              |
| 6:CM:809:LEU:O     | 6:CM:857:ARG:NH2   | 2.51                     | 0.44              |
| 6:CM:866:PHE:HE2   | 2:DT:119:LEU:HD21  | 1.83                     | 0.44              |
| 1:CT:27:LYS:HZ3    | 2:CU:35:GLU:HA     | 1.83                     | 0.44              |
| 1:CY:92:VAL:HG11   | 1:CY:153:PHE:CE1   | 2.51                     | 0.44              |
| 10:CY:200:CYC:O1D  | 2:DD:62:TYR:OH     | 2.32                     | 0.44              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 9:DI:173:ALA:O    | 9:DI:175:PRO:HD3  | 2.17                     | 0.44              |
| 9:DI:223:LEU:HG   | 9:DI:301:VAL:CG1  | 2.48                     | 0.44              |
| 9:DI:288:TRP:CD1  | 9:DI:303:ILE:HG12 | 2.51                     | 0.44              |
| 9:DI:291:LEU:HD23 | 9:DI:299:PHE:CD2  | 2.53                     | 0.44              |
| 1:DJ:11:ALA:HA    | 1:DJ:16:ARG:NH1   | 2.33                     | 0.44              |
| 2:DM:156:ILE:O    | 2:DM:160:LEU:HD23 | 2.18                     | 0.44              |
| 2:DT:50:THR:HG22  | 2:DT:54:GLU:OE1   | 2.18                     | 0.44              |
| 2:DV:137:THR:O    | 2:DV:141:VAL:HG22 | 2.17                     | 0.44              |
| 9:EA:87:ALA:HA    | 9:EA:161:MET:HE3  | 2.00                     | 0.44              |
| 9:EA:142:ILE:CD1  | 9:EA:153:VAL:HG11 | 2.46                     | 0.44              |
| 3:AE:20:SER:CB    | 1:AJ:151:ALA:HB1  | 2.45                     | 0.44              |
| 2:AF:114:GLU:CG   | 5:BA:53:VAL:HG12  | 2.47                     | 0.44              |
| 1:AJ:130:VAL:HB   | 1:AJ:157:ILE:CD1  | 2.48                     | 0.44              |
| 1:AN:27:LYS:HE3   | 2:AO:35:GLU:OE1   | 2.17                     | 0.44              |
| 1:AN:83:ARG:HD3   | 7:BF:107:LEU:HD21 | 1.98                     | 0.44              |
| 2:AO:144:ASP:OD1  | 2:AO:144:ASP:N    | 2.50                     | 0.44              |
| 1:AP:107:ILE:HD13 | 2:AQ:13:ASP:OD2   | 2.17                     | 0.44              |
| 2:AW:101:ALA:CB   | 2:AW:104:LEU:HD12 | 2.48                     | 0.44              |
| 2:AW:134:LYS:HB2  | 2:AW:153:LEU:HD13 | 1.98                     | 0.44              |
| 1:AZ:4:VAL:HA     | 1:AZ:26:ILE:CD1   | 2.48                     | 0.44              |
| 6:BD:626:ILE:HG22 | 6:BD:635:VAL:CG2  | 2.48                     | 0.44              |
| 9:BH:214:ILE:O    | 9:BH:217:PHE:HB2  | 2.18                     | 0.44              |
| 1:BI:65:ILE:CG2   | 1:BI:72:ALA:HB3   | 2.41                     | 0.44              |
| 1:BK:92:VAL:HG11  | 1:BK:153:PHE:CE1  | 2.53                     | 0.44              |
| 3:BM:141:LEU:HD22 | 3:BM:145:ASP:OD2  | 2.18                     | 0.44              |
| 1:BP:122:PRO:HG2  | 1:BP:125:ALA:CB   | 2.47                     | 0.44              |
| 4:BS:37:ARG:HD3   | 4:BS:97:LEU:O     | 2.18                     | 0.44              |
| 4:BS:110:LEU:HD13 | 4:BS:163:GLU:CB   | 2.48                     | 0.44              |
| 2:BT:34:GLY:HA2   | 2:BT:37:ARG:NH2   | 2.33                     | 0.44              |
| 1:BX:153:PHE:O    | 1:BX:157:ILE:HG13 | 2.18                     | 0.44              |
| 2:CA:63:SER:HB3   | 7:CO:101:ARG:HH12 | 1.82                     | 0.44              |
| 2:CA:114:GLU:HG3  | 6:CM:471:LYS:HB2  | 2.00                     | 0.44              |
| 2:CD:51:ILE:HD12  | 2:CD:51:ILE:H     | 1.83                     | 0.44              |
| 2:CF:44:ILE:HD13  | 2:CF:149:MET:HE1  | 1.99                     | 0.44              |
| 2:CF:125:SER:HA   | 2:CF:128:GLN:NE2  | 2.33                     | 0.44              |
| 1:CG:134:LYS:HD3  | 1:CG:153:PHE:HB3  | 2.00                     | 0.44              |
| 2:CH:1:MET:O      | 6:CM:534:PHE:HB2  | 2.18                     | 0.44              |
| 5:CK:10:VAL:HG12  | 5:CK:48:GLY:CA    | 2.41                     | 0.44              |
| 6:CM:248:ILE:CG1  | 6:CM:356:SER:HB2  | 2.47                     | 0.44              |
| 6:CM:792:TYR:HD1  | 6:CM:800:VAL:HG11 | 1.83                     | 0.44              |
| 9:CQ:233:GLY:HA3  | 9:CQ:236:ASN:HD22 | 1.83                     | 0.44              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:CT:16:ARG:O      | 2:CU:90:ARG:HD2    | 2.18                     | 0.44              |
| 1:CV:78:THR:O      | 1:CV:82:LEU:HG     | 2.18                     | 0.44              |
| 2:CW:111:GLY:HA2   | 2:CW:114:GLU:OE2   | 2.17                     | 0.44              |
| 10:CW:200:CYC:HAD2 | 5:DF:33:TYR:OH     | 2.17                     | 0.44              |
| 2:CZ:60:LEU:HD13   | 2:CZ:72:MET:CE     | 2.47                     | 0.44              |
| 1:DA:100:ASP:O     | 1:DA:103:PRO:HD2   | 2.17                     | 0.44              |
| 2:DK:108:VAL:CG2   | 10:DK:200:CYC:HMB1 | 2.48                     | 0.44              |
| 1:DL:109:LEU:HD22  | 1:DL:159:LYS:HB2   | 1.99                     | 0.44              |
| 1:DL:154:ASP:OD1   | 2:DV:46:ALA:HB2    | 2.18                     | 0.44              |
| 2:DO:71:ASN:ND2    | 2:DO:121:VAL:HG22  | 2.25                     | 0.44              |
| 1:DQ:115:MET:HA    | 1:DQ:115:MET:HE3   | 2.00                     | 0.44              |
| 1:DQ:131:ARG:NH1   | 1:DQ:157:ILE:HD12  | 2.33                     | 0.44              |
| 2:DR:67:ARG:O      | 2:DR:73:TYR:HB2    | 2.18                     | 0.44              |
| 2:DR:78:TYR:CD1    | 1:DS:115:MET:HG3   | 2.51                     | 0.44              |
| 1:DU:66:VAL:HA     | 1:DU:72:ALA:O      | 2.18                     | 0.44              |
| 1:DU:85:MET:CG     | 1:DU:133:MET:HE2   | 2.48                     | 0.44              |
| 2:DV:130:ILE:HB    | 2:DV:157:CYS:SG    | 2.58                     | 0.44              |
| 8:DZ:200:VAL:HG23  | 8:DZ:200:VAL:O     | 2.18                     | 0.44              |
| 9:EA:191:GLU:HB2   | 9:EA:254:ARG:HA    | 2.00                     | 0.44              |
| 1:AA:94:TYR:OH     | 2:AB:17:LYS:O      | 2.36                     | 0.43              |
| 1:AA:100:ASP:OD1   | 1:AA:101:VAL:N     | 2.49                     | 0.43              |
| 1:AA:107:ILE:HD11  | 5:BA:64:ALA:HB2    | 1.99                     | 0.43              |
| 1:AC:4:VAL:HG12    | 1:AC:26:ILE:HD12   | 2.00                     | 0.43              |
| 1:AC:33:GLY:HA2    | 1:AC:36:ARG:NE     | 2.32                     | 0.43              |
| 1:AC:115:MET:O     | 1:AC:119:LEU:HD13  | 2.18                     | 0.43              |
| 2:AD:51:ILE:HD11   | 2:AD:140:LEU:CD2   | 2.40                     | 0.43              |
| 10:AI:200:CYC:OB   | 6:BD:338:ILE:HG22  | 2.18                     | 0.43              |
| 2:AO:78:TYR:O      | 2:AO:82:ILE:HG12   | 2.18                     | 0.43              |
| 1:AR:19:SER:HB2    | 1:AR:20:PRO:HD2    | 2.00                     | 0.43              |
| 1:AR:94:TYR:OH     | 2:AS:17:LYS:O      | 2.35                     | 0.43              |
| 2:AS:5:ILE:HG22    | 2:AS:9:ILE:CD1     | 2.48                     | 0.43              |
| 10:AU:200:CYC:O2D  | 5:BB:33:TYR:OH     | 2.15                     | 0.43              |
| 1:AX:12:ASP:OD2    | 2:AY:107:ARG:NE    | 2.51                     | 0.43              |
| 6:BD:14:PRO:HG3    | 6:BD:401:LEU:HD21  | 1.99                     | 0.43              |
| 6:BD:429:GLN:HG2   | 6:BD:429:GLN:O     | 2.18                     | 0.43              |
| 6:BD:519:LEU:CG    | 6:BD:522:ALA:HB2   | 2.41                     | 0.43              |
| 6:BD:702:THR:OG1   | 6:BD:704:PRO:HD2   | 2.17                     | 0.43              |
| 9:BH:298:ILE:HG12  | 9:BH:301:VAL:HB    | 2.00                     | 0.43              |
| 3:BM:7:VAL:CG1     | 3:BM:22:GLU:HB3    | 2.48                     | 0.43              |
| 3:BM:9:LEU:HD23    | 3:BM:9:LEU:HA      | 1.89                     | 0.43              |
| 2:BQ:85:LEU:CG     | 10:BQ:200:CYC:HBC1 | 2.47                     | 0.43              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 10:BQ:200:CYC:HMD2 | 10:BQ:200:CYC:NC   | 2.29                     | 0.43              |
| 2:BY:60:LEU:HD13   | 2:BY:72:MET:CE     | 2.48                     | 0.43              |
| 2:BY:83:ARG:HG2    | 2:BY:83:ARG:HH11   | 1.83                     | 0.43              |
| 1:BZ:25:ARG:HH21   | 1:CE:21:GLY:HA3    | 1.82                     | 0.43              |
| 1:CC:110:VAL:O     | 2:CH:75:THR:HG23   | 2.18                     | 0.43              |
| 1:CG:109:LEU:HD11  | 1:CG:159:LYS:HB2   | 2.00                     | 0.43              |
| 1:CR:27:LYS:HD3    | 2:CS:38:VAL:HG11   | 2.00                     | 0.43              |
| 1:CR:91:LEU:CD2    | 1:CR:104:ILE:HG23  | 2.47                     | 0.43              |
| 2:CS:51:ILE:HG13   | 2:CS:140:LEU:HD12  | 1.99                     | 0.43              |
| 2:CS:71:ASN:ND2    | 2:CS:121:VAL:HA    | 2.33                     | 0.43              |
| 2:CS:133:ILE:O     | 2:CS:137:THR:HG23  | 2.18                     | 0.43              |
| 1:CV:68:PRO:HA     | 1:CV:73:TYR:CG     | 2.53                     | 0.43              |
| 2:CZ:137:THR:O     | 2:CZ:141:VAL:HG22  | 2.17                     | 0.43              |
| 1:DA:63:PRO:HD2    | 9:DI:55:ALA:HB1    | 2.00                     | 0.43              |
| 9:DI:217:PHE:HA    | 9:DI:297:LYS:O     | 2.18                     | 0.43              |
| 1:DJ:113:ARG:CZ    | 1:DS:117:ARG:HD2   | 2.48                     | 0.43              |
| 1:DJ:150:SER:O     | 1:DJ:154:ASP:HB2   | 2.18                     | 0.43              |
| 2:DK:78:TYR:CE1    | 1:DL:115:MET:HG3   | 2.52                     | 0.43              |
| 1:DL:93:THR:O      | 1:DL:97:VAL:HG13   | 2.19                     | 0.43              |
| 1:DN:18:LEU:HD12   | 2:DO:97:LEU:HD13   | 1.99                     | 0.43              |
| 1:DQ:43:LEU:CD2    | 1:DQ:93:THR:HG22   | 2.48                     | 0.43              |
| 1:DS:19:SER:O      | 1:DS:23:LEU:HD23   | 2.18                     | 0.43              |
| 2:DV:81:CYS:HA     | 10:DV:200:CYC:CHD  | 2.45                     | 0.43              |
| 8:DY:202:ARG:HH22  | 8:DY:204:ILE:HB    | 1.83                     | 0.43              |
| 9:EA:223:LEU:CD2   | 9:EA:225:PRO:HD3   | 2.48                     | 0.43              |
| 1:AA:87:TYR:CD2    | 10:AA:200:CYC:HBB3 | 2.52                     | 0.43              |
| 2:AI:71:ASN:HD22   | 2:AI:122:PRO:HD2   | 1.82                     | 0.43              |
| 4:AK:51:ILE:HG23   | 4:AK:137:MET:HE2   | 1.98                     | 0.43              |
| 4:AK:72:ASN:ND2    | 4:AK:123:PRO:HD2   | 2.30                     | 0.43              |
| 1:AP:131:ARG:HA    | 1:AP:157:ILE:HD11  | 1.99                     | 0.43              |
| 2:AQ:40:ALA:HB2    | 2:AQ:145:ALA:HB1   | 2.00                     | 0.43              |
| 1:AV:39:ILE:CD1    | 1:AV:145:ASP:HB3   | 2.48                     | 0.43              |
| 1:AV:126:VAL:O     | 1:AV:129:SER:OG    | 2.27                     | 0.43              |
| 1:AX:50:ILE:HD11   | 1:AX:137:ALA:HB2   | 1.99                     | 0.43              |
| 1:AX:93:THR:O      | 1:AX:96:VAL:HG22   | 2.18                     | 0.43              |
| 2:BJ:25:ASP:OD1    | 2:BJ:26:LYS:N      | 2.52                     | 0.43              |
| 2:BJ:95:ALA:HB2    | 2:BJ:104:LEU:HG    | 2.00                     | 0.43              |
| 1:BK:153:PHE:O     | 1:BK:157:ILE:HG13  | 2.18                     | 0.43              |
| 3:BM:17:TYR:CE1    | 2:BN:90:ARG:HG3    | 2.52                     | 0.43              |
| 1:BX:144:ASP:N     | 1:BX:144:ASP:OD1   | 2.52                     | 0.43              |
| 10:BX:200:CYC:HMA1 | 10:BX:200:CYC:HB   | 1.82                     | 0.43              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:BY:112:LEU:CD1  | 10:BY:200:CYC:HMB3 | 2.48                     | 0.43              |
| 1:CE:28:ALA:O     | 1:CE:31:THR:OG1    | 2.30                     | 0.43              |
| 6:CM:31:GLN:HB3   | 6:CM:33:ARG:HE     | 1.82                     | 0.43              |
| 6:CM:57:ALA:O     | 6:CM:61:THR:HG23   | 2.18                     | 0.43              |
| 6:CM:86:GLU:H     | 6:CM:153:LEU:HD22  | 1.82                     | 0.43              |
| 6:CM:563:VAL:O    | 6:CM:567:GLN:HG3   | 2.18                     | 0.43              |
| 6:CM:609:LEU:C    | 6:CM:610:LEU:HD12  | 2.39                     | 0.43              |
| 6:CM:702:THR:O    | 6:CM:706:ILE:HG13  | 2.18                     | 0.43              |
| 6:CM:788:MET:O    | 6:CM:792:TYR:HB3   | 2.18                     | 0.43              |
| 6:CM:824:GLN:HG3  | 2:DR:83:ARG:NH1    | 2.33                     | 0.43              |
| 9:CQ:190:ILE:HD12 | 9:CQ:253:GLU:C     | 2.38                     | 0.43              |
| 9:CQ:264:PHE:CE2  | 9:DI:309:PRO:HG3   | 2.52                     | 0.43              |
| 1:CR:154:ASP:O    | 2:CZ:46:ALA:HA     | 2.17                     | 0.43              |
| 1:CV:124:GLU:OE1  | 1:CV:124:GLU:N     | 2.45                     | 0.43              |
| 2:CW:59:SER:HB3   | 2:CW:132:ALA:HB2   | 2.00                     | 0.43              |
| 1:CY:59:PHE:CE2   | 8:DY:227:PRO:HG3   | 2.53                     | 0.43              |
| 1:DA:21:GLY:O     | 1:DA:25:ARG:HG2    | 2.18                     | 0.43              |
| 1:DC:37:LEU:CD1   | 2:DD:28:LYS:HG2    | 2.47                     | 0.43              |
| 9:DI:42:PHE:CE2   | 9:DI:131:LEU:HB2   | 2.53                     | 0.43              |
| 9:DI:193:VAL:HG22 | 9:DI:257:THR:OG1   | 2.18                     | 0.43              |
| 9:DI:264:PHE:CD1  | 9:DI:294:PRO:HD3   | 2.53                     | 0.43              |
| 2:DM:104:LEU:HD12 | 2:DM:155:TYR:CD2   | 2.52                     | 0.43              |
| 1:DN:47:ARG:HB2   | 1:DN:89:LEU:HD23   | 2.00                     | 0.43              |
| 1:DN:71:ASN:HB3   | 10:DN:200:CYC:OC   | 2.18                     | 0.43              |
| 2:DO:47:ASN:O     | 2:DO:51:ILE:HG13   | 2.17                     | 0.43              |
| 2:DT:2:GLN:NE2    | 2:DT:10:ASN:HD22   | 2.14                     | 0.43              |
| 2:DT:68:PRO:HA    | 2:DT:73:TYR:CG     | 2.52                     | 0.43              |
| 9:EA:197:THR:HG21 | 9:EA:292:LEU:HD11  | 2.00                     | 0.43              |
| 1:AA:130:VAL:HB   | 1:AA:157:ILE:HG22  | 2.00                     | 0.43              |
| 1:AC:131:ARG:HE   | 1:AC:157:ILE:CG2   | 2.31                     | 0.43              |
| 3:AE:101:LYS:HD2  | 3:AE:155:TYR:OH    | 2.18                     | 0.43              |
| 2:AF:87:TYR:HB3   | 10:AF:200:CYC:CBB  | 2.48                     | 0.43              |
| 4:AK:161:THR:O    | 4:AK:165:SER:HB3   | 2.19                     | 0.43              |
| 2:AU:15:GLN:HB2   | 2:AU:17:LYS:NZ     | 2.33                     | 0.43              |
| 1:AV:6:LYS:O      | 1:AV:9:VAL:HG22    | 2.17                     | 0.43              |
| 2:AW:36:LEU:HA    | 2:AW:39:ARG:HH12   | 1.83                     | 0.43              |
| 2:AY:123:ILE:O    | 2:AY:127:VAL:HG23  | 2.18                     | 0.43              |
| 6:BD:278:LYS:CD   | 6:BD:310:ARG:HG3   | 2.44                     | 0.43              |
| 6:BD:866:PHE:CD2  | 2:DB:115:THR:HG23  | 2.53                     | 0.43              |
| 9:BH:34:GLU:HG2   | 9:BH:174:GLU:CG    | 2.48                     | 0.43              |
| 9:BH:41:TRP:CZ2   | 9:BH:45:LEU:HD21   | 2.54                     | 0.43              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:BJ:75:THR:OG1   | 1:BK:108:GLY:HA2   | 2.18                     | 0.43              |
| 2:BL:147:LYS:O    | 2:BL:151:VAL:HG23  | 2.19                     | 0.43              |
| 1:BP:47:ARG:HG3   | 1:BP:48:GLU:N      | 2.33                     | 0.43              |
| 4:BS:41:ALA:HA    | 4:BS:44:ILE:HG12   | 2.00                     | 0.43              |
| 4:BS:113:LEU:HD21 | 10:BS:200:CYC:CMB  | 2.48                     | 0.43              |
| 2:BT:144:ASP:HB2  | 7:CO:86:VAL:HG12   | 1.99                     | 0.43              |
| 1:BV:33:GLY:HA2   | 1:BV:36:ARG:HG2    | 1.99                     | 0.43              |
| 2:BW:77:ARG:HB3   | 10:BW:200:CYC:HMD1 | 2.00                     | 0.43              |
| 2:BY:53:LYS:HD2   | 1:BZ:118:SER:O     | 2.17                     | 0.43              |
| 2:BY:144:ASP:OD1  | 2:BY:144:ASP:N     | 2.51                     | 0.43              |
| 2:CA:60:LEU:HD11  | 2:CA:129:ALA:HB2   | 2.00                     | 0.43              |
| 1:CE:11:ALA:CB    | 1:CE:18:LEU:HD23   | 2.47                     | 0.43              |
| 1:CE:42:THR:HG21  | 1:CE:141:MET:HB3   | 1.99                     | 0.43              |
| 1:CE:58:LEU:HD22  | 1:CE:129:SER:CB    | 2.38                     | 0.43              |
| 2:CH:51:ILE:HG21  | 2:CH:137:THR:HG22  | 2.01                     | 0.43              |
| 5:CJ:40:GLN:O     | 5:CJ:44:MET:HG2    | 2.19                     | 0.43              |
| 6:CM:556:TYR:HB2  | 6:CM:559:GLN:HG3   | 1.99                     | 0.43              |
| 6:CM:627:ALA:HB2  | 6:CM:635:VAL:HG21  | 2.01                     | 0.43              |
| 6:CM:806:LYS:HG3  | 6:CM:873:TYR:CE2   | 2.53                     | 0.43              |
| 6:CM:887:SER:OG   | 2:DR:119:LEU:HD21  | 2.18                     | 0.43              |
| 1:CR:39:ILE:HD11  | 1:CR:145:ASP:CB    | 2.48                     | 0.43              |
| 1:CR:57:ARG:HB3   | 1:CR:132:GLU:OE2   | 2.18                     | 0.43              |
| 1:CR:94:TYR:OH    | 2:CS:17:LYS:O      | 2.29                     | 0.43              |
| 1:CV:141:MET:HG2  | 1:CV:145:ASP:HB2   | 1.99                     | 0.43              |
| 2:CW:96:MET:SD    | 2:CW:97:LEU:HD22   | 2.57                     | 0.43              |
| 2:DD:58:LYS:HA    | 8:DH:206:GLN:OE1   | 2.18                     | 0.43              |
| 9:DI:155:ARG:HA   | 9:DI:158:VAL:HG22  | 2.00                     | 0.43              |
| 9:DI:191:GLU:HB2  | 9:DI:254:ARG:HB2   | 2.00                     | 0.43              |
| 1:DJ:25:ARG:HG2   | 1:DQ:25:ARG:CD     | 2.47                     | 0.43              |
| 10:DJ:200:CYC:H2C | 10:DJ:200:CYC:HBC2 | 1.74                     | 0.43              |
| 1:DL:21:GLY:HA3   | 1:DU:25:ARG:NH2    | 2.34                     | 0.43              |
| 1:DL:75:GLU:HA    | 1:DL:78:THR:OG1    | 2.18                     | 0.43              |
| 1:DU:87:TYR:HB3   | 10:DU:200:CYC:CBB  | 2.48                     | 0.43              |
| 1:AA:85:MET:CB    | 1:AA:133:MET:HE3   | 2.38                     | 0.43              |
| 2:AB:71:ASN:ND2   | 2:AB:121:VAL:HA    | 2.33                     | 0.43              |
| 2:AB:123:ILE:H    | 2:AB:123:ILE:HD12  | 1.83                     | 0.43              |
| 2:AD:1:MET:HA     | 2:AD:102:SER:OG    | 2.18                     | 0.43              |
| 2:AF:114:GLU:HG3  | 5:BA:53:VAL:CG1    | 2.48                     | 0.43              |
| 2:AI:122:PRO:HG2  | 2:AI:125:SER:OG    | 2.18                     | 0.43              |
| 1:AJ:37:LEU:HD11  | 4:AK:31:PHE:CE2    | 2.54                     | 0.43              |
| 4:AK:113:LEU:HB3  | 4:AK:164:LEU:HD13  | 2.01                     | 0.43              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:AO:114:GLU:HA   | 2:AO:117:ASN:HB2   | 2.01                     | 0.43              |
| 2:AQ:100:ASP:OD1  | 2:AQ:102:SER:N     | 2.47                     | 0.43              |
| 2:AS:148:GLU:HG3  | 2:AS:152:TYR:CE2   | 2.54                     | 0.43              |
| 1:AV:115:MET:O    | 1:AV:119:LEU:HD23  | 2.19                     | 0.43              |
| 2:AW:116:TYR:CE2  | 2:AW:160:LEU:HD21  | 2.54                     | 0.43              |
| 2:AY:71:ASN:HD21  | 2:AY:121:VAL:HG22  | 1.83                     | 0.43              |
| 6:BD:514:ARG:HA   | 6:BD:652:ASP:O     | 2.18                     | 0.43              |
| 6:BD:755:ILE:HD12 | 6:BD:757:ASN:C     | 2.39                     | 0.43              |
| 1:BI:91:LEU:HD21  | 1:BI:107:ILE:HG21  | 2.01                     | 0.43              |
| 1:BI:126:VAL:HG22 | 10:BI:200:CYC:HMC3 | 1.99                     | 0.43              |
| 2:BJ:36:LEU:HD13  | 2:BJ:39:ARG:HH22   | 1.82                     | 0.43              |
| 1:BK:89:LEU:O     | 1:BK:93:THR:HG23   | 2.17                     | 0.43              |
| 2:BL:64:ASP:O     | 2:BL:67:ARG:HB3    | 2.18                     | 0.43              |
| 4:BS:120:LEU:HD21 | 10:BS:200:CYC:HAA2 | 2.00                     | 0.43              |
| 2:BT:52:VAL:O     | 2:BT:56:VAL:HG23   | 2.19                     | 0.43              |
| 2:BT:68:PRO:HA    | 2:BT:73:TYR:CD1    | 2.53                     | 0.43              |
| 2:BT:90:ARG:HD3   | 6:CM:33:ARG:O      | 2.18                     | 0.43              |
| 1:BX:83:ARG:NH2   | 1:BX:84:ASP:OD1    | 2.35                     | 0.43              |
| 1:CG:6:LYS:HG2    | 6:CM:534:PHE:CZ    | 2.42                     | 0.43              |
| 5:CJ:4:PHE:HB2    | 5:CJ:31:VAL:HG13   | 1.99                     | 0.43              |
| 6:CM:163:THR:HG21 | 6:CM:224:PHE:CZ    | 2.54                     | 0.43              |
| 1:CR:18:LEU:H     | 1:CR:18:LEU:HD12   | 1.83                     | 0.43              |
| 1:CR:90:ARG:NH1   | 1:CR:90:ARG:HB3    | 2.33                     | 0.43              |
| 2:CS:52:VAL:HG21  | 2:CS:86:ASP:OD1    | 2.18                     | 0.43              |
| 2:CU:122:PRO:HD2  | 10:CU:200:CYC:C1C  | 2.48                     | 0.43              |
| 1:CV:37:LEU:CD1   | 2:CW:28:LYS:HE3    | 2.48                     | 0.43              |
| 2:CW:123:ILE:HA   | 2:CW:126:THR:CG2   | 2.47                     | 0.43              |
| 1:CY:77:MET:HE2   | 8:DH:201:ARG:O     | 2.18                     | 0.43              |
| 1:CY:132:GLU:O    | 1:CY:136:VAL:HG23  | 2.18                     | 0.43              |
| 2:CZ:81:CYS:HA    | 10:CZ:200:CYC:HAC1 | 1.76                     | 0.43              |
| 1:DC:109:LEU:HB3  | 1:DC:159:LYS:HG2   | 2.01                     | 0.43              |
| 1:DC:143:SER:O    | 1:DC:146:ALA:HB3   | 2.18                     | 0.43              |
| 9:DI:39:LEU:HD11  | 9:DI:139:LEU:HB2   | 1.99                     | 0.43              |
| 9:DI:219:SER:HA   | 9:DI:234:LYS:CE    | 2.36                     | 0.43              |
| 2:DK:76:ARG:NH2   | 10:DK:200:CYC:O2D  | 2.29                     | 0.43              |
| 2:DK:108:VAL:HG23 | 10:DK:200:CYC:HMB1 | 2.00                     | 0.43              |
| 1:DL:7:SER:HB3    | 1:DL:18:LEU:CD2    | 2.49                     | 0.43              |
| 2:DM:112:LEU:CD2  | 2:DM:160:LEU:HD21  | 2.49                     | 0.43              |
| 1:DQ:39:ILE:HD11  | 1:DQ:145:ASP:CG    | 2.38                     | 0.43              |
| 10:DR:200:CYC:HHA | 10:DR:200:CYC:HBD1 | 2.01                     | 0.43              |
| 2:DV:30:TYR:OH    | 2:DV:97:LEU:O      | 2.32                     | 0.43              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:DV:116:TYR:CD1   | 2:DV:121:VAL:HG21  | 2.54                     | 0.43              |
| 9:EA:248:LEU:HD21  | 9:EA:277:TRP:HB2   | 2.00                     | 0.43              |
| 9:EA:316:ALA:O     | 9:EA:317:ARG:HG2   | 2.18                     | 0.43              |
| 1:AA:105:GLU:OE1   | 1:AA:109:LEU:HD23  | 2.19                     | 0.43              |
| 2:AD:53:LYS:HD3    | 3:AE:120:ASN:ND2   | 2.34                     | 0.43              |
| 2:AD:67:ARG:HG3    | 2:AD:68:PRO:HD2    | 2.00                     | 0.43              |
| 2:AF:41:ALA:N      | 2:AF:96:MET:HE1    | 2.33                     | 0.43              |
| 1:AH:137:ALA:O     | 1:AH:141:MET:HE2   | 2.19                     | 0.43              |
| 10:AH:200:CYC:HAA1 | 2:AL:61:LEU:HD22   | 2.01                     | 0.43              |
| 1:AJ:27:LYS:HB2    | 4:AK:38:ILE:HD13   | 1.99                     | 0.43              |
| 4:AK:119:SER:OG    | 6:BD:10:SER:O      | 2.32                     | 0.43              |
| 2:AL:148:GLU:O     | 2:AL:151:VAL:HG22  | 2.18                     | 0.43              |
| 1:AN:57:ARG:HA     | 1:AN:60:GLN:CG     | 2.48                     | 0.43              |
| 1:AN:154:ASP:HB3   | 2:AU:46:ALA:CB     | 2.48                     | 0.43              |
| 1:AP:116:TYR:CD1   | 1:AP:121:THR:HB    | 2.54                     | 0.43              |
| 1:AR:13:ALA:HB2    | 6:BD:589:LEU:HD11  | 1.99                     | 0.43              |
| 1:AV:46:SER:O      | 1:AV:50:ILE:HG12   | 2.18                     | 0.43              |
| 10:AX:200:CYC:HBD2 | 10:AX:200:CYC:HMD1 | 2.01                     | 0.43              |
| 1:AZ:90:ARG:HG2    | 1:AZ:94:TYR:CE2    | 2.53                     | 0.43              |
| 6:BD:321:ARG:HG2   | 6:BD:325:LYS:HE3   | 2.00                     | 0.43              |
| 9:BH:125:ILE:HG13  | 9:BH:126:PRO:HD2   | 2.00                     | 0.43              |
| 9:BH:146:GLU:O     | 9:BH:150:GLN:N     | 2.45                     | 0.43              |
| 9:BH:172:ILE:H     | 9:BH:172:ILE:HD12  | 1.83                     | 0.43              |
| 1:BI:50:ILE:HD12   | 1:BI:136:VAL:CG1   | 2.49                     | 0.43              |
| 2:BJ:105:ASP:OD2   | 2:BJ:155:TYR:OH    | 2.36                     | 0.43              |
| 2:BJ:133:ILE:O     | 2:BJ:137:THR:HG22  | 2.19                     | 0.43              |
| 2:BL:8:VAL:CG1     | 2:BL:27:LEU:HD21   | 2.46                     | 0.43              |
| 2:BN:56:VAL:HG12   | 2:BN:61:LEU:HG     | 2.00                     | 0.43              |
| 2:BQ:104:LEU:CD1   | 2:BQ:152:TYR:HB3   | 2.48                     | 0.43              |
| 2:BQ:123:ILE:O     | 2:BQ:126:THR:HG22  | 2.18                     | 0.43              |
| 4:BS:63:ILE:HD13   | 4:BS:126:PRO:HG3   | 2.01                     | 0.43              |
| 4:BS:63:ILE:HG22   | 4:BS:66:LEU:HG     | 2.00                     | 0.43              |
| 1:BX:30:VAL:HG11   | 2:BY:34:GLY:HA3    | 2.01                     | 0.43              |
| 1:BX:141:MET:HG3   | 1:BX:146:ALA:HB2   | 2.01                     | 0.43              |
| 1:CG:23:LEU:HD22   | 2:CH:38:VAL:HG13   | 2.00                     | 0.43              |
| 2:CH:122:PRO:O     | 2:CH:126:THR:HG22  | 2.18                     | 0.43              |
| 5:CJ:6:ILE:HD13    | 5:CJ:36:TRP:CZ3    | 2.54                     | 0.43              |
| 6:CM:269:MET:HB2   | 6:CM:281:VAL:HG11  | 2.00                     | 0.43              |
| 2:CS:59:SER:HB3    | 2:CS:132:ALA:HB2   | 2.00                     | 0.43              |
| 1:CT:68:PRO:HG3    | 1:CT:73:TYR:CE2    | 2.54                     | 0.43              |
| 2:CU:65:VAL:HG12   | 2:CU:72:MET:CG     | 2.49                     | 0.43              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:CW:73:TYR:O      | 2:CW:74:THR:OG1    | 2.23                     | 0.43              |
| 1:CY:39:ILE:CA     | 1:CY:42:THR:HG22   | 2.46                     | 0.43              |
| 1:DA:58:LEU:HD22   | 1:DA:129:SER:HB2   | 2.01                     | 0.43              |
| 1:DJ:69:GLY:O      | 9:EA:58:ALA:HB2    | 2.18                     | 0.43              |
| 2:DK:51:ILE:HD12   | 2:DK:51:ILE:H      | 1.83                     | 0.43              |
| 1:DL:91:LEU:HD21   | 1:DL:107:ILE:HG22  | 2.00                     | 0.43              |
| 2:DO:54:GLU:HG3    | 9:EA:63:LEU:CD2    | 2.49                     | 0.43              |
| 2:DO:122:PRO:HG2   | 2:DO:125:SER:HB2   | 2.01                     | 0.43              |
| 10:DQ:200:CYC:HBC2 | 10:DQ:200:CYC:H2C  | 1.70                     | 0.43              |
| 2:DT:3:ASP:HB3     | 2:DT:98:ALA:HB1    | 2.01                     | 0.43              |
| 1:DU:53:GLN:O      | 1:DU:57:ARG:HG3    | 2.18                     | 0.43              |
| 5:DX:4:PHE:O       | 5:DX:30:LEU:HA     | 2.18                     | 0.43              |
| 9:EA:250:LEU:HD23  | 9:EA:273:VAL:HG22  | 2.00                     | 0.43              |
| 1:AC:128:GLN:NE2   | 1:AC:132:GLU:OE2   | 2.47                     | 0.43              |
| 3:AE:47:GLU:CG     | 3:AE:89:LEU:HD23   | 2.48                     | 0.43              |
| 1:AH:130:VAL:HG21  | 1:AH:160:MET:HE3   | 2.00                     | 0.43              |
| 10:AK:200:CYC:HBA2 | 6:BD:401:LEU:HD11  | 1.99                     | 0.43              |
| 2:AL:31:PHE:CD1    | 6:BD:50:GLY:HA3    | 2.53                     | 0.43              |
| 1:AN:8:ILE:HD13    | 1:AN:18:LEU:HD21   | 2.00                     | 0.43              |
| 1:AN:58:LEU:HD13   | 1:AN:129:SER:N     | 2.34                     | 0.43              |
| 2:AS:122:PRO:HB2   | 2:AS:125:SER:HB2   | 2.00                     | 0.43              |
| 1:AX:93:THR:HA     | 1:AX:96:VAL:HG22   | 2.01                     | 0.43              |
| 1:AZ:61:LYS:HZ1    | 1:BR:60:GLN:HB3    | 1.84                     | 0.43              |
| 1:AZ:116:TYR:CE2   | 1:AZ:126:VAL:HG11  | 2.50                     | 0.43              |
| 5:BA:5:ARG:HE      | 5:BA:30:LEU:HD21   | 1.82                     | 0.43              |
| 5:BA:18:THR:HG22   | 6:BD:240:VAL:O     | 2.19                     | 0.43              |
| 6:BD:309:VAL:HG21  | 6:BD:319:PHE:CD1   | 2.53                     | 0.43              |
| 9:BH:257:THR:HG23  | 9:BH:267:ILE:CG1   | 2.46                     | 0.43              |
| 2:BJ:77:ARG:HD2    | 10:BJ:200:CYC:HMD1 | 2.00                     | 0.43              |
| 2:BJ:104:LEU:HD11  | 2:BJ:152:TYR:HB3   | 2.00                     | 0.43              |
| 1:BK:6:LYS:HD2     | 1:BK:6:LYS:HA      | 1.84                     | 0.43              |
| 1:BP:30:VAL:HG13   | 2:BQ:31:PHE:HA     | 2.00                     | 0.43              |
| 2:BQ:64:ASP:OD1    | 2:BW:124:SER:OG    | 2.11                     | 0.43              |
| 2:BQ:75:THR:HG23   | 1:BR:108:GLY:HA2   | 2.00                     | 0.43              |
| 2:BQ:119:LEU:HD23  | 6:CM:435:ALA:CB    | 2.49                     | 0.43              |
| 1:BR:5:THR:HG23    | 4:BS:1:MET:SD      | 2.58                     | 0.43              |
| 1:BR:5:THR:HG23    | 4:BS:1:MET:HG3     | 2.01                     | 0.43              |
| 2:BT:112:LEU:HD21  | 2:BT:160:LEU:CD2   | 2.49                     | 0.43              |
| 1:BV:76:GLU:OE1    | 7:CO:111:LYS:HE3   | 2.19                     | 0.43              |
| 2:BW:137:THR:O     | 2:BW:141:VAL:HG23  | 2.18                     | 0.43              |
| 2:CD:54:GLU:CD     | 2:CD:136:VAL:HG21  | 2.39                     | 0.43              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:CD:71:ASN:O      | 2:CD:77:ARG:HD2    | 2.19                     | 0.43              |
| 2:CF:68:PRO:HA     | 2:CF:73:TYR:CG     | 2.53                     | 0.43              |
| 2:CH:133:ILE:O     | 2:CH:137:THR:HG23  | 2.19                     | 0.43              |
| 5:CK:30:LEU:HD12   | 6:CM:572:ASP:HB3   | 2.00                     | 0.43              |
| 6:CM:141:ILE:HD12  | 6:CM:141:ILE:H     | 1.83                     | 0.43              |
| 6:CM:156:MET:HB3   | 6:CM:202:MET:HE2   | 2.00                     | 0.43              |
| 1:CT:66:VAL:HG21   | 8:DY:235:VAL:HG11  | 2.00                     | 0.43              |
| 1:CY:20:PRO:O      | 1:CY:23:LEU:HG     | 2.17                     | 0.43              |
| 1:CY:126:VAL:C     | 1:CY:160:MET:HE1   | 2.38                     | 0.43              |
| 1:DJ:115:MET:HG3   | 2:DO:78:TYR:CE1    | 2.53                     | 0.43              |
| 1:DJ:130:VAL:CG1   | 1:DJ:157:ILE:HG12  | 2.36                     | 0.43              |
| 1:DQ:26:ILE:O      | 1:DQ:30:VAL:HG13   | 2.18                     | 0.43              |
| 1:DQ:79:ALA:HB3    | 8:DZ:203:PHE:CZ    | 2.54                     | 0.43              |
| 10:DT:200:CYC:HMD2 | 10:DT:200:CYC:NC   | 2.34                     | 0.43              |
| 9:EA:101:TRP:HB3   | 9:EA:105:ILE:HB    | 1.99                     | 0.43              |
| 9:EA:155:ARG:HA    | 9:EA:158:VAL:HG22  | 2.00                     | 0.43              |
| 2:AD:109:LEU:HD21  | 2:AD:159:GLY:HA3   | 2.00                     | 0.43              |
| 3:AE:21:GLY:HA3    | 1:AJ:3:ILE:HD11    | 2.01                     | 0.43              |
| 2:AF:52:VAL:O      | 2:AF:56:VAL:HG23   | 2.19                     | 0.43              |
| 1:AH:81:CYS:HA     | 10:AH:200:CYC:HBC3 | 2.00                     | 0.43              |
| 4:AK:1:MET:HB2     | 4:AK:104:VAL:HB    | 2.01                     | 0.43              |
| 2:AL:3:ASP:OD1     | 2:AL:6:THR:HG22    | 2.18                     | 0.43              |
| 2:AQ:1:MET:SD      | 2:AQ:103:ILE:HD12  | 2.58                     | 0.43              |
| 2:AU:16:GLY:O      | 1:AZ:90:ARG:NH1    | 2.48                     | 0.43              |
| 2:AU:62:TYR:N      | 10:AV:200:CYC:O2A  | 2.50                     | 0.43              |
| 6:BD:85:LEU:HA     | 6:BD:153:LEU:CD2   | 2.48                     | 0.43              |
| 6:BD:485:ILE:HG21  | 6:BD:665:LEU:HD13  | 1.99                     | 0.43              |
| 6:BD:598:VAL:HB    | 10:BD:901:CYC:HBB3 | 2.00                     | 0.43              |
| 6:BD:795:TYR:CE1   | 6:BD:881:LYS:HE3   | 2.54                     | 0.43              |
| 9:BH:98:TYR:OH     | 9:BH:158:VAL:HG22  | 2.19                     | 0.43              |
| 2:BJ:60:LEU:HD22   | 2:BJ:65:VAL:HG21   | 2.01                     | 0.43              |
| 2:BL:129:ALA:O     | 2:BL:133:ILE:HG13  | 2.18                     | 0.43              |
| 3:BM:72:ALA:HA     | 3:BM:77:GLN:HB3    | 2.00                     | 0.43              |
| 4:BS:61:GLU:OE1    | 4:BS:61:GLU:N      | 2.51                     | 0.43              |
| 4:BS:82:CYS:HA     | 10:BS:200:CYC:HAC1 | 1.73                     | 0.43              |
| 2:BT:31:PHE:HD2    | 6:CM:54:LEU:HD11   | 1.84                     | 0.43              |
| 1:BV:39:ILE:HG23   | 1:BV:141:MET:HE1   | 2.01                     | 0.43              |
| 1:BV:101:VAL:HG12  | 1:BV:152:TYR:CD1   | 2.52                     | 0.43              |
| 1:BV:128:GLN:HA    | 1:BV:131:ARG:HD2   | 1.99                     | 0.43              |
| 1:BX:19:SER:OG     | 1:BX:20:PRO:HD2    | 2.18                     | 0.43              |
| 2:BY:68:PRO:HG3    | 2:BY:73:TYR:CE1    | 2.53                     | 0.43              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:BZ:126:VAL:O    | 1:BZ:130:VAL:HG23  | 2.18                     | 0.43              |
| 2:CA:126:THR:O    | 2:CA:130:ILE:HG13  | 2.18                     | 0.43              |
| 1:CC:140:LEU:O    | 1:CC:140:LEU:HD23  | 2.19                     | 0.43              |
| 2:CD:75:THR:HG22  | 10:CE:200:CYC:C4B  | 2.49                     | 0.43              |
| 1:CG:39:ILE:O     | 1:CG:43:LEU:HG     | 2.18                     | 0.43              |
| 2:CH:1:MET:HE3    | 2:CH:103:ILE:HB    | 1.99                     | 0.43              |
| 6:CM:353:ARG:HA   | 6:CM:418:PHE:HZ    | 1.83                     | 0.43              |
| 7:CO:114:ALA:CA   | 7:CO:117:VAL:HG12  | 2.41                     | 0.43              |
| 9:CQ:112:ARG:HD2  | 9:CQ:112:ARG:HA    | 1.85                     | 0.43              |
| 1:CR:126:VAL:HG12 | 1:CR:160:MET:CE    | 2.49                     | 0.43              |
| 1:CR:142:SER:O    | 1:CR:146:ALA:HB2   | 2.19                     | 0.43              |
| 1:CT:63:PRO:HD2   | 1:CY:69:GLY:HA3    | 2.00                     | 0.43              |
| 2:CU:160:LEU:HD23 | 2:CU:160:LEU:HA    | 1.86                     | 0.43              |
| 2:CZ:85:LEU:HG    | 10:CZ:200:CYC:HBC1 | 2.00                     | 0.43              |
| 2:CZ:101:ALA:HB1  | 2:CZ:155:TYR:CE2   | 2.53                     | 0.43              |
| 1:DA:53:GLN:HG2   | 1:DA:136:VAL:HG21  | 1.99                     | 0.43              |
| 2:DD:91:TYR:HB3   | 2:DD:104:LEU:HD23  | 2.00                     | 0.43              |
| 9:DI:204:ASN:CB   | 9:DI:209:ASP:HB3   | 2.36                     | 0.43              |
| 1:DJ:4:VAL:O      | 1:DJ:8:ILE:HG23    | 2.19                     | 0.43              |
| 1:DJ:11:ALA:CB    | 1:DJ:18:LEU:HD23   | 2.44                     | 0.43              |
| 1:DJ:50:ILE:CD1   | 1:DJ:140:LEU:HD21  | 2.48                     | 0.43              |
| 1:DQ:33:GLY:HA3   | 2:DR:31:PHE:CD2    | 2.54                     | 0.43              |
| 2:DR:74:THR:OG1   | 2:DR:77:ARG:HG3    | 2.19                     | 0.43              |
| 1:DS:58:LEU:HD22  | 1:DS:129:SER:HB2   | 2.00                     | 0.43              |
| 2:DT:60:LEU:O     | 2:DT:63:SER:OG     | 2.29                     | 0.43              |
| 1:DU:39:ILE:HG23  | 1:DU:141:MET:HE1   | 2.01                     | 0.43              |
| 5:DX:6:ILE:HD13   | 5:DX:36:TRP:CZ3    | 2.53                     | 0.43              |
| 9:EA:23:ALA:O     | 9:EA:27:ARG:HG3    | 2.18                     | 0.43              |
| 1:AC:4:VAL:O      | 1:AC:8:ILE:HG13    | 2.19                     | 0.43              |
| 2:AD:37:ARG:HH21  | 2:AD:99:GLY:HA2    | 1.84                     | 0.43              |
| 1:AH:131:ARG:HA   | 1:AH:157:ILE:HD11  | 2.00                     | 0.43              |
| 1:AJ:130:VAL:HG21 | 1:AJ:160:MET:SD    | 2.59                     | 0.43              |
| 2:AL:91:TYR:O     | 2:AL:104:LEU:HD21  | 2.19                     | 0.43              |
| 1:AN:131:ARG:CG   | 1:AN:157:ILE:HD13  | 2.49                     | 0.43              |
| 2:AS:119:LEU:HD21 | 6:BD:447:TYR:CD1   | 2.54                     | 0.43              |
| 1:AX:109:LEU:O    | 1:AX:112:VAL:HG12  | 2.19                     | 0.43              |
| 1:AZ:50:ILE:HG12  | 1:AZ:136:VAL:HG12  | 2.00                     | 0.43              |
| 1:AZ:91:LEU:O     | 1:AZ:104:ILE:HG12  | 2.18                     | 0.43              |
| 6:BD:141:ILE:HD12 | 6:BD:141:ILE:H     | 1.84                     | 0.43              |
| 6:BD:785:GLU:O    | 6:BD:788:MET:HG3   | 2.19                     | 0.43              |
| 6:BD:864:ALA:HB2  | 2:DB:110:ASN:O     | 2.19                     | 0.43              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 8:BG:198:ASN:HA    | 8:BG:201:ARG:NH2   | 2.33                     | 0.43              |
| 1:BI:67:SER:HB3    | 1:BI:68:PRO:HD2    | 1.99                     | 0.43              |
| 2:BJ:134:LYS:HB2   | 2:BJ:153:LEU:HD13  | 2.01                     | 0.43              |
| 2:BL:141:VAL:HG23  | 2:BL:145:ALA:HB3   | 2.00                     | 0.43              |
| 1:BP:37:LEU:O      | 1:BP:40:ALA:HB3    | 2.18                     | 0.43              |
| 4:BS:66:LEU:O      | 4:BS:73:ALA:HB3    | 2.18                     | 0.43              |
| 1:CE:126:VAL:O     | 1:CE:130:VAL:HG23  | 2.19                     | 0.43              |
| 6:CM:79:GLY:N      | 6:CM:141:ILE:HD13  | 2.33                     | 0.43              |
| 6:CM:203:ARG:HG3   | 6:CM:224:PHE:CB    | 2.48                     | 0.43              |
| 1:CR:154:ASP:CG    | 2:CZ:46:ALA:HB2    | 2.39                     | 0.43              |
| 2:CS:51:ILE:HD12   | 2:CS:51:ILE:H      | 1.83                     | 0.43              |
| 1:CT:121:THR:HG23  | 10:CT:200:CYC:C1C  | 2.49                     | 0.43              |
| 2:CU:47:ASN:CG     | 2:CU:140:LEU:HD21  | 2.39                     | 0.43              |
| 1:CV:41:GLU:HG3    | 2:CW:24:MET:CE     | 2.48                     | 0.43              |
| 10:CV:200:CYC:HMA3 | 10:CV:200:CYC:O1A  | 2.18                     | 0.43              |
| 1:CY:51:VAL:HG22   | 1:CY:82:LEU:HG     | 2.00                     | 0.43              |
| 2:CZ:36:LEU:CD1    | 2:CZ:145:ALA:HB2   | 2.36                     | 0.43              |
| 1:DA:75:GLU:HA     | 1:DA:78:THR:OG1    | 2.19                     | 0.43              |
| 2:DB:51:ILE:HD11   | 2:DB:140:LEU:CD2   | 2.45                     | 0.43              |
| 2:DD:112:LEU:CG    | 2:DD:160:LEU:HD13  | 2.36                     | 0.43              |
| 9:DI:98:TYR:OH     | 9:DI:106:LYS:HB3   | 2.18                     | 0.43              |
| 1:DJ:71:ASN:HD22   | 1:DJ:121:THR:HA    | 1.83                     | 0.43              |
| 1:DJ:111:GLY:HA2   | 1:DJ:114:GLU:OE1   | 2.19                     | 0.43              |
| 2:DK:91:TYR:CE2    | 2:DK:108:VAL:HB    | 2.53                     | 0.43              |
| 2:DM:22:ALA:HB1    | 2:DM:26:LYS:NZ     | 2.34                     | 0.43              |
| 2:DO:2:GLN:HB2     | 2:DO:102:SER:OG    | 2.19                     | 0.43              |
| 2:DR:136:VAL:O     | 2:DR:140:LEU:HD23  | 2.19                     | 0.43              |
| 1:DS:33:GLY:HA3    | 2:DT:31:PHE:CE2    | 2.54                     | 0.43              |
| 1:DS:90:ARG:HG3    | 2:DT:18:TYR:CE1    | 2.53                     | 0.43              |
| 2:DT:103:ILE:O     | 2:DT:107:ARG:HB2   | 2.18                     | 0.43              |
| 1:DU:116:TYR:HE2   | 1:DU:126:VAL:HG11  | 1.84                     | 0.43              |
| 1:AC:14:GLU:HG2    | 1:AC:16:ARG:HE     | 1.83                     | 0.43              |
| 1:AC:78:THR:O      | 1:AC:82:LEU:HD23   | 2.18                     | 0.43              |
| 1:AH:40:ALA:CB     | 1:AH:97:VAL:HG22   | 2.49                     | 0.43              |
| 1:AN:113:ARG:NH2   | 1:AN:161:SER:O     | 2.52                     | 0.43              |
| 1:AP:116:TYR:HD1   | 1:AP:121:THR:HB    | 1.84                     | 0.43              |
| 1:AR:47:ARG:O      | 1:AR:51:VAL:HG23   | 2.19                     | 0.43              |
| 2:AU:62:TYR:OH     | 1:AV:80:THR:HG21   | 2.19                     | 0.43              |
| 1:AV:107:ILE:HG22  | 10:AV:200:CYC:HBB1 | 2.01                     | 0.43              |
| 1:AX:68:PRO:HA     | 1:AX:73:TYR:CG     | 2.54                     | 0.43              |
| 6:BD:161:ARG:HG2   | 6:BD:165:TYR:CZ    | 2.54                     | 0.43              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 6:BD:208:ASP:OD1   | 6:BD:209:TYR:N     | 2.52                     | 0.43              |
| 6:BD:524:VAL:O     | 6:BD:524:VAL:HG12  | 2.18                     | 0.43              |
| 6:BD:889:THR:HG22  | 2:CZ:118:SER:O     | 2.19                     | 0.43              |
| 1:BK:97:VAL:HG11   | 2:BL:19:LEU:CD1    | 2.49                     | 0.43              |
| 3:BM:47:GLU:CG     | 3:BM:89:LEU:HD23   | 2.48                     | 0.43              |
| 2:BN:2:GLN:HB3     | 2:BN:102:SER:CB    | 2.48                     | 0.43              |
| 1:BP:23:LEU:HD13   | 2:BQ:42:SER:OG     | 2.18                     | 0.43              |
| 1:BP:81:CYS:HA     | 10:BP:200:CYC:CHD  | 2.49                     | 0.43              |
| 1:BR:67:SER:O      | 1:BR:73:TYR:HB2    | 2.18                     | 0.43              |
| 4:BS:44:ILE:CG2    | 4:BS:138:ILE:HD12  | 2.43                     | 0.43              |
| 1:BV:8:ILE:HD13    | 1:BV:18:LEU:HD21   | 1.99                     | 0.43              |
| 1:BV:107:ILE:O     | 2:CA:75:THR:HG23   | 2.18                     | 0.43              |
| 2:CA:51:ILE:HG23   | 2:CA:136:VAL:CG1   | 2.48                     | 0.43              |
| 2:CA:147:LYS:HE3   | 7:CO:93:PRO:HD3    | 2.01                     | 0.43              |
| 1:CE:46:SER:O      | 1:CE:50:ILE:HG12   | 2.19                     | 0.43              |
| 2:CF:41:ALA:HB2    | 2:CF:96:MET:CE     | 2.47                     | 0.43              |
| 6:CM:485:ILE:CD1   | 6:CM:665:LEU:HD13  | 2.47                     | 0.43              |
| 1:CR:122:PRO:HD2   | 10:CR:200:CYC:OC   | 2.19                     | 0.43              |
| 1:CT:66:VAL:HG23   | 1:CT:78:THR:CG2    | 2.48                     | 0.43              |
| 2:CU:1:MET:SD      | 2:CU:103:ILE:HB    | 2.58                     | 0.43              |
| 1:DA:39:ILE:HD12   | 1:DA:145:ASP:HB3   | 2.01                     | 0.43              |
| 1:DA:77:MET:O      | 1:DA:80:THR:OG1    | 2.31                     | 0.43              |
| 10:DB:200:CYC:HMA1 | 10:DB:200:CYC:NB   | 2.34                     | 0.43              |
| 8:DG:213:GLY:HA2   | 1:DQ:83:ARG:HE     | 1.84                     | 0.43              |
| 9:DI:260:ALA:HB3   | 9:DI:264:PHE:CB    | 2.49                     | 0.43              |
| 2:DK:15:GLN:HG3    | 2:DK:17:LYS:HG2    | 2.01                     | 0.43              |
| 1:DL:59:PHE:HE1    | 1:DL:65:ILE:HD11   | 1.84                     | 0.43              |
| 1:DL:101:VAL:HB    | 1:DL:155:PHE:CE2   | 2.54                     | 0.43              |
| 2:DM:71:ASN:HD22   | 2:DM:122:PRO:CD    | 2.32                     | 0.43              |
| 1:DN:124:GLU:HG2   | 1:DN:125:ALA:N     | 2.34                     | 0.43              |
| 2:DO:50:THR:O      | 2:DO:54:GLU:HG2    | 2.19                     | 0.43              |
| 2:DO:116:TYR:HE2   | 2:DO:160:LEU:HD21  | 1.84                     | 0.43              |
| 2:DR:123:ILE:O     | 2:DR:127:VAL:HG23  | 2.19                     | 0.43              |
| 2:DT:41:ALA:N      | 2:DT:96:MET:HE1    | 2.34                     | 0.43              |
| 9:EA:49:LYS:HE3    | 9:EA:49:LYS:HB3    | 1.80                     | 0.43              |
| 9:EA:223:LEU:HA    | 9:EA:301:VAL:HG12  | 2.01                     | 0.43              |
| 2:AI:44:ILE:HG21   | 2:AI:93:THR:HG21   | 2.00                     | 0.43              |
| 4:AK:72:ASN:ND2    | 4:AK:122:VAL:HG13  | 2.33                     | 0.43              |
| 1:AN:8:ILE:HB      | 2:AO:1:MET:CE      | 2.49                     | 0.43              |
| 1:AN:8:ILE:HD12    | 2:AO:94:TYR:HD1    | 1.83                     | 0.43              |
| 2:AQ:112:LEU:CD1   | 10:AQ:200:CYC:HMB3 | 2.49                     | 0.43              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:AS:110:ASN:O    | 6:BD:465:GLU:HB2   | 2.18                     | 0.43              |
| 2:AY:125:SER:OG   | 10:AY:200:CYC:HMC2 | 2.18                     | 0.43              |
| 6:BD:799:LYS:CB   | 6:BD:883:LEU:HD21  | 2.47                     | 0.43              |
| 1:BI:3:ILE:HG21   | 1:BP:25:ARG:HD3    | 2.00                     | 0.43              |
| 1:BP:26:ILE:O     | 1:BP:30:VAL:HG23   | 2.19                     | 0.43              |
| 2:BW:116:TYR:HB3  | 2:BW:121:VAL:HB    | 2.01                     | 0.43              |
| 2:BW:144:ASP:OD1  | 2:BW:145:ALA:N     | 2.52                     | 0.43              |
| 1:BX:97:VAL:HG11  | 2:BY:27:LEU:HD13   | 2.00                     | 0.43              |
| 2:CA:124:SER:O    | 2:CA:128:GLN:HG2   | 2.19                     | 0.43              |
| 1:CC:109:LEU:HD21 | 1:CC:159:LYS:HB3   | 2.01                     | 0.43              |
| 2:CD:72:MET:HG2   | 2:CD:78:TYR:HD2    | 1.84                     | 0.43              |
| 2:CD:148:GLU:HG3  | 2:CD:152:TYR:HE2   | 1.82                     | 0.43              |
| 5:CK:21:GLU:OE1   | 5:CK:24:ASN:ND2    | 2.41                     | 0.43              |
| 6:CM:151:LYS:HD3  | 6:CM:154:ARG:HH21  | 1.84                     | 0.43              |
| 6:CM:208:ASP:OD1  | 6:CM:209:TYR:N     | 2.52                     | 0.43              |
| 6:CM:371:GLY:HA3  | 6:CM:375:ALA:CB    | 2.48                     | 0.43              |
| 6:CM:725:LYS:HG2  | 6:CM:852:THR:OG1   | 2.19                     | 0.43              |
| 9:CQ:76:PRO:CB    | 9:CQ:123:ALA:HB2   | 2.46                     | 0.43              |
| 1:CT:17:TYR:CD1   | 2:CU:90:ARG:HD3    | 2.54                     | 0.43              |
| 1:CT:81:CYS:HB3   | 10:CT:200:CYC:HBC1 | 1.88                     | 0.43              |
| 1:CT:97:VAL:HG21  | 2:CU:19:LEU:HD11   | 2.00                     | 0.43              |
| 1:CY:48:GLU:HG2   | 1:CY:49:THR:N      | 2.34                     | 0.43              |
| 1:CY:65:ILE:HG23  | 10:CY:200:CYC:OC   | 2.19                     | 0.43              |
| 1:DA:105:GLU:HA   | 1:DA:109:LEU:HB2   | 2.01                     | 0.43              |
| 9:DI:248:LEU:HD11 | 9:DI:277:TRP:CE3   | 2.53                     | 0.43              |
| 9:DI:285:ASN:CG   | 9:DI:306:LEU:HB2   | 2.39                     | 0.43              |
| 1:DL:4:VAL:CG2    | 2:DM:97:LEU:HD23   | 2.49                     | 0.43              |
| 2:DM:71:ASN:HD22  | 2:DM:121:VAL:HA    | 1.82                     | 0.43              |
| 2:DM:71:ASN:HD22  | 2:DM:122:PRO:HD2   | 1.83                     | 0.43              |
| 2:DM:87:TYR:OH    | 5:DX:19:GLN:O      | 2.34                     | 0.43              |
| 1:DU:102:THR:O    | 1:DU:106:GLU:HG2   | 2.19                     | 0.43              |
| 5:DX:27:PHE:HE1   | 5:DX:29:LYS:HE3    | 1.84                     | 0.43              |
| 10:AA:200:CYC:O2A | 2:AF:62:TYR:N      | 2.41                     | 0.42              |
| 1:AC:14:GLU:HB3   | 1:AC:16:ARG:CD     | 2.49                     | 0.42              |
| 1:AC:124:GLU:HG2  | 1:AC:125:ALA:N     | 2.34                     | 0.42              |
| 2:AD:15:GLN:HB3   | 2:AD:17:LYS:HE2    | 2.01                     | 0.42              |
| 2:AD:112:LEU:HA   | 2:AD:115:THR:CG2   | 2.48                     | 0.42              |
| 1:AN:27:LYS:O     | 1:AN:30:VAL:HG22   | 2.19                     | 0.42              |
| 1:AP:16:ARG:O     | 2:AQ:94:TYR:OH     | 2.32                     | 0.42              |
| 2:AY:23:ALA:O     | 2:AY:27:LEU:HG     | 2.18                     | 0.42              |
| 6:BD:210:PHE:HZ   | 6:BD:216:ALA:HB1   | 1.84                     | 0.42              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 6:BD:532:VAL:O    | 6:BD:532:VAL:HG12  | 2.18                     | 0.42              |
| 6:BD:603:GLU:OE2  | 6:BD:607:ARG:NE    | 2.24                     | 0.42              |
| 1:BK:131:ARG:O    | 1:BK:134:LYS:HB3   | 2.19                     | 0.42              |
| 2:BL:112:LEU:CA   | 2:BL:115:THR:HG22  | 2.48                     | 0.42              |
| 2:BN:36:LEU:HD11  | 2:BN:145:ALA:HB2   | 2.00                     | 0.42              |
| 2:BQ:87:TYR:CD2   | 10:BQ:200:CYC:HAB1 | 2.54                     | 0.42              |
| 2:BT:1:MET:HE1    | 6:CM:26:SER:N      | 2.34                     | 0.42              |
| 2:BW:102:SER:O    | 2:BW:106:GLU:HG3   | 2.19                     | 0.42              |
| 1:BX:10:ASN:OD1   | 6:CM:511:LYS:HE3   | 2.19                     | 0.42              |
| 1:BZ:95:GLY:HA3   | 1:BZ:104:ILE:HD11  | 2.01                     | 0.42              |
| 2:CA:11:SER:O     | 2:CA:14:VAL:HG12   | 2.19                     | 0.42              |
| 1:CC:68:PRO:HA    | 1:CC:73:TYR:CG     | 2.54                     | 0.42              |
| 1:CE:57:ARG:O     | 1:CE:60:GLN:NE2    | 2.52                     | 0.42              |
| 1:CE:85:MET:HG3   | 10:CE:200:CYC:HBC1 | 2.01                     | 0.42              |
| 1:CE:142:SER:O    | 1:CE:146:ALA:N     | 2.51                     | 0.42              |
| 2:CH:123:ILE:O    | 2:CH:127:VAL:HG23  | 2.19                     | 0.42              |
| 5:CJ:15:ARG:HH12  | 5:CJ:23:GLN:NE2    | 2.16                     | 0.42              |
| 6:CM:238:ASN:HB3  | 6:CM:253:LEU:O     | 2.19                     | 0.42              |
| 6:CM:811:ARG:HG2  | 6:CM:812:ALA:O     | 2.19                     | 0.42              |
| 6:CM:818:GLU:HG2  | 6:CM:822:TYR:CE2   | 2.53                     | 0.42              |
| 1:CR:131:ARG:HA   | 1:CR:157:ILE:HD11  | 2.01                     | 0.42              |
| 2:CS:57:ALA:HA    | 2:CS:61:LEU:CD1    | 2.44                     | 0.42              |
| 2:CU:64:ASP:OD1   | 2:CU:67:ARG:NH2    | 2.33                     | 0.42              |
| 2:CU:109:LEU:HD13 | 2:CU:159:GLY:HA3   | 2.01                     | 0.42              |
| 1:CV:37:LEU:HD21  | 2:CW:27:LEU:CD1    | 2.49                     | 0.42              |
| 1:CY:71:ASN:HD22  | 1:CY:122:PRO:HD2   | 1.84                     | 0.42              |
| 2:CZ:126:THR:HG22 | 10:CZ:200:CYC:H3C  | 2.00                     | 0.42              |
| 1:DA:97:VAL:O     | 2:DB:5:ILE:HD11    | 2.19                     | 0.42              |
| 8:DG:242:ILE:HD11 | 1:DL:83:ARG:HB2    | 2.00                     | 0.42              |
| 8:DH:219:LEU:HD21 | 8:DY:203:PHE:HZ    | 1.83                     | 0.42              |
| 8:DH:240:ILE:CD1  | 1:DJ:79:ALA:HB2    | 2.42                     | 0.42              |
| 9:DI:28:PHE:CE2   | 9:DI:39:LEU:HD23   | 2.53                     | 0.42              |
| 9:DI:197:THR:HG21 | 9:DI:292:LEU:HD11  | 2.01                     | 0.42              |
| 9:DI:201:TYR:HD1  | 9:DI:213:LEU:CD1   | 2.32                     | 0.42              |
| 1:DL:122:PRO:HG2  | 10:DL:200:CYC:HMC2 | 2.01                     | 0.42              |
| 1:DN:116:TYR:HE2  | 1:DN:126:VAL:HG11  | 1.84                     | 0.42              |
| 2:DR:134:LYS:HA   | 2:DR:153:LEU:CD1   | 2.48                     | 0.42              |
| 1:DS:21:GLY:O     | 1:DS:25:ARG:HG2    | 2.18                     | 0.42              |
| 10:DT:200:CYC:HHA | 10:DT:200:CYC:O2A  | 2.19                     | 0.42              |
| 1:DU:100:ASP:OD1  | 1:DU:101:VAL:N     | 2.50                     | 0.42              |
| 1:DU:141:MET:CE   | 1:DU:145:ASP:HB3   | 2.49                     | 0.42              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 9:EA:32:ASN:HA     | 9:EA:170:LYS:HZ3   | 1.83                     | 0.42              |
| 2:AB:41:ALA:CB     | 2:AB:97:LEU:HD21   | 2.50                     | 0.42              |
| 3:AE:17:TYR:CE1    | 2:AF:90:ARG:HA     | 2.54                     | 0.42              |
| 1:AH:41:GLU:HA     | 1:AH:44:THR:CG2    | 2.47                     | 0.42              |
| 1:AH:75:GLU:HG2    | 8:BG:194:ILE:HD11  | 2.01                     | 0.42              |
| 1:AJ:46:SER:HB2    | 1:AJ:50:ILE:HD11   | 2.00                     | 0.42              |
| 2:AL:33:SER:OG     | 2:AL:37:ARG:NH2    | 2.50                     | 0.42              |
| 1:AN:105:GLU:HG3   | 1:AN:106:GLU:N     | 2.33                     | 0.42              |
| 2:AO:96:MET:HA     | 2:AO:152:TYR:CE2   | 2.54                     | 0.42              |
| 2:AO:104:LEU:HD23  | 2:AO:108:VAL:HG21  | 2.01                     | 0.42              |
| 2:AQ:112:LEU:HG    | 2:AQ:160:LEU:CD1   | 2.49                     | 0.42              |
| 1:AR:24:ASP:O      | 1:AR:27:LYS:HG2    | 2.20                     | 0.42              |
| 1:AR:52:LYS:HD3    | 8:BG:221:MET:HG3   | 2.02                     | 0.42              |
| 2:AS:11:SER:O      | 2:AS:14:VAL:HG12   | 2.19                     | 0.42              |
| 2:AS:41:ALA:HB1    | 2:AS:97:LEU:HD11   | 2.01                     | 0.42              |
| 2:AU:61:LEU:HD22   | 10:AV:200:CYC:CBA  | 2.49                     | 0.42              |
| 2:AU:141:VAL:HG12  | 2:AU:145:ALA:HB3   | 2.02                     | 0.42              |
| 1:AV:101:VAL:HB    | 1:AV:155:PHE:CE1   | 2.53                     | 0.42              |
| 2:AW:77:ARG:O      | 10:AW:200:CYC:HMD3 | 2.20                     | 0.42              |
| 1:AX:75:GLU:OE2    | 8:BG:240:ILE:HG23  | 2.18                     | 0.42              |
| 1:AZ:115:MET:CE    | 10:AZ:200:CYC:HMB3 | 2.43                     | 0.42              |
| 5:BA:7:THR:O       | 5:BA:51:VAL:HG22   | 2.18                     | 0.42              |
| 6:BD:287:ARG:HA    | 6:BD:292:ARG:O     | 2.19                     | 0.42              |
| 6:BD:355:PRO:HD2   | 6:BD:430:PHE:CZ    | 2.54                     | 0.42              |
| 10:BD:901:CYC:HC   | 10:BD:901:CYC:HMD2 | 1.84                     | 0.42              |
| 1:BK:73:TYR:H      | 1:BK:77:MET:CB     | 2.29                     | 0.42              |
| 1:BK:124:GLU:HG2   | 1:BK:125:ALA:N     | 2.34                     | 0.42              |
| 3:BM:53:GLN:O      | 3:BM:56:LYS:HG2    | 2.18                     | 0.42              |
| 10:BM:200:CYC:HMA1 | 10:BM:200:CYC:HB   | 1.83                     | 0.42              |
| 1:BV:46:SER:OG     | 1:BV:140:LEU:HD23  | 2.19                     | 0.42              |
| 1:BV:131:ARG:HG3   | 1:BV:157:ILE:HD13  | 2.00                     | 0.42              |
| 2:BW:134:LYS:CA    | 2:BW:153:LEU:HD13  | 2.49                     | 0.42              |
| 2:BW:134:LYS:CB    | 2:BW:153:LEU:HD13  | 2.48                     | 0.42              |
| 2:BY:81:CYS:HA     | 10:BY:200:CYC:HHD  | 2.01                     | 0.42              |
| 2:CA:2:GLN:HG3     | 2:CA:100:ASP:OD2   | 2.19                     | 0.42              |
| 1:CC:24:ASP:HA     | 1:CC:27:LYS:NZ     | 2.33                     | 0.42              |
| 2:CD:126:THR:O     | 2:CD:130:ILE:HG13  | 2.19                     | 0.42              |
| 2:CD:131:GLN:O     | 2:CD:134:LYS:HB3   | 2.19                     | 0.42              |
| 1:CE:103:PRO:O     | 1:CE:107:ILE:HD12  | 2.19                     | 0.42              |
| 9:CQ:74:MET:HE2    | 9:CQ:78:GLN:HB2    | 2.00                     | 0.42              |
| 2:CS:40:ALA:HB2    | 2:CS:145:ALA:HB1   | 2.01                     | 0.42              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:CT:98:SER:HA    | 2:CU:5:ILE:HG21    | 2.01                     | 0.42              |
| 1:CY:57:ARG:CZ    | 1:CY:57:ARG:HB2    | 2.49                     | 0.42              |
| 1:DA:77:MET:HE2   | 8:DG:201:ARG:O     | 2.19                     | 0.42              |
| 2:DB:28:LYS:HB2   | 2:DB:28:LYS:HE2    | 1.92                     | 0.42              |
| 1:DC:17:TYR:OH    | 2:DD:89:LEU:HG     | 2.19                     | 0.42              |
| 1:DC:102:THR:O    | 1:DC:106:GLU:HG2   | 2.19                     | 0.42              |
| 8:DG:225:ILE:HG23 | 1:DQ:56:ASP:OD1    | 2.19                     | 0.42              |
| 8:DH:227:PRO:HG3  | 1:DS:78:THR:HG21   | 2.00                     | 0.42              |
| 9:DI:213:LEU:CD1  | 9:DI:216:LEU:HD22  | 2.49                     | 0.42              |
| 1:DJ:122:PRO:HD2  | 10:DJ:200:CYC:OC   | 2.19                     | 0.42              |
| 2:DO:62:TYR:N     | 2:DO:66:THR:HG21   | 2.35                     | 0.42              |
| 2:DO:105:ASP:HA   | 2:DO:109:LEU:HD12  | 2.00                     | 0.42              |
| 1:DU:39:ILE:HG23  | 1:DU:141:MET:CE    | 2.49                     | 0.42              |
| 2:AB:129:ALA:O    | 2:AB:133:ILE:HG13  | 2.19                     | 0.42              |
| 1:AC:71:ASN:HB3   | 10:AC:200:CYC:HMD2 | 2.02                     | 0.42              |
| 1:AC:71:ASN:O     | 1:AC:77:MET:HB3    | 2.20                     | 0.42              |
| 1:AH:47:ARG:HA    | 1:AH:89:LEU:HD21   | 2.01                     | 0.42              |
| 1:AJ:72:ALA:HA    | 1:AJ:77:MET:HB3    | 2.01                     | 0.42              |
| 4:AK:110:LEU:HD13 | 4:AK:163:GLU:HG3   | 2.00                     | 0.42              |
| 2:AO:92:ALA:HB3   | 2:AO:149:MET:HE3   | 2.00                     | 0.42              |
| 2:AQ:36:LEU:HD13  | 2:AQ:39:ARG:HH21   | 1.84                     | 0.42              |
| 2:AS:112:LEU:HD21 | 2:AS:160:LEU:HD21  | 2.00                     | 0.42              |
| 5:BA:59:ARG:HB2   | 5:BA:62:THR:CG2    | 2.49                     | 0.42              |
| 6:BD:192:ILE:O    | 6:BD:196:ILE:HG12  | 2.20                     | 0.42              |
| 6:BD:562:SER:O    | 6:BD:566:ILE:HG23  | 2.19                     | 0.42              |
| 6:BD:755:ILE:O    | 6:BD:755:ILE:HG13  | 2.19                     | 0.42              |
| 1:BK:25:ARG:CG    | 6:CM:42:GLU:HG3    | 2.49                     | 0.42              |
| 3:BM:58:LEU:HD13  | 3:BM:129:ALA:N     | 2.34                     | 0.42              |
| 2:BN:112:LEU:HD13 | 10:BN:200:CYC:HMB3 | 2.00                     | 0.42              |
| 2:BW:47:ASN:O     | 2:BW:51:ILE:HG13   | 2.20                     | 0.42              |
| 2:BW:57:ALA:HA    | 2:BW:61:LEU:HD12   | 2.02                     | 0.42              |
| 2:CH:126:THR:HB   | 10:CH:200:CYC:CMC  | 2.49                     | 0.42              |
| 6:CM:85:LEU:HA    | 6:CM:153:LEU:CD1   | 2.48                     | 0.42              |
| 6:CM:543:ILE:HG23 | 6:CM:578:PHE:CZ    | 2.54                     | 0.42              |
| 2:CS:85:LEU:HD23  | 2:CS:88:TYR:HD2    | 1.83                     | 0.42              |
| 1:CT:30:VAL:CG2   | 2:CU:31:PHE:HA     | 2.49                     | 0.42              |
| 1:CT:144:ASP:OD1  | 1:CT:145:ASP:N     | 2.50                     | 0.42              |
| 1:CY:47:ARG:O     | 1:CY:50:ILE:HG22   | 2.19                     | 0.42              |
| 1:CY:81:CYS:HA    | 10:CY:200:CYC:CHD  | 2.49                     | 0.42              |
| 2:CZ:62:TYR:CG    | 8:DG:203:PHE:HB2   | 2.55                     | 0.42              |
| 2:CZ:76:ARG:NH2   | 10:CZ:200:CYC:O1D  | 2.46                     | 0.42              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:DJ:101:VAL:CG1   | 1:DQ:20:PRO:HG2    | 2.49                     | 0.42              |
| 2:DK:126:THR:OG1   | 10:DK:200:CYC:HMC3 | 2.20                     | 0.42              |
| 1:DL:49:THR:O      | 1:DL:53:GLN:HG2    | 2.19                     | 0.42              |
| 2:DM:14:VAL:HG23   | 2:DM:15:GLN:OE1    | 2.19                     | 0.42              |
| 1:DN:121:THR:HG23  | 10:DN:200:CYC:C1C  | 2.49                     | 0.42              |
| 1:DN:121:THR:CG2   | 10:DN:200:CYC:HMC3 | 2.48                     | 0.42              |
| 1:DQ:33:GLY:HA3    | 2:DR:31:PHE:CE2    | 2.54                     | 0.42              |
| 1:DQ:131:ARG:HH12  | 1:DQ:157:ILE:HD12  | 1.84                     | 0.42              |
| 2:DR:126:THR:HG23  | 10:DR:200:CYC:CBC  | 2.48                     | 0.42              |
| 2:DT:47:ASN:O      | 2:DT:51:ILE:HG13   | 2.19                     | 0.42              |
| 1:AH:71:ASN:OD1    | 10:AH:200:CYC:HMD2 | 2.19                     | 0.42              |
| 4:AK:4:ALA:HB2     | 4:AK:100:ALA:O     | 2.20                     | 0.42              |
| 2:AQ:77:ARG:HG2    | 10:AQ:200:CYC:HAD1 | 2.01                     | 0.42              |
| 2:AQ:141:VAL:HG12  | 2:AQ:145:ALA:HB3   | 2.00                     | 0.42              |
| 2:AS:39:ARG:HA     | 2:AS:39:ARG:HH11   | 1.85                     | 0.42              |
| 1:AV:111:GLY:HA2   | 1:AV:114:GLU:OE1   | 2.19                     | 0.42              |
| 2:AW:3:ASP:N       | 2:AW:6:THR:OG1     | 2.50                     | 0.42              |
| 2:AW:126:THR:O     | 2:AW:130:ILE:HG13  | 2.20                     | 0.42              |
| 1:AX:130:VAL:HG12  | 1:AX:157:ILE:HD11  | 2.01                     | 0.42              |
| 1:AZ:126:VAL:HG22  | 10:AZ:200:CYC:HMC3 | 2.01                     | 0.42              |
| 9:BH:229:ARG:HD2   | 9:EA:315:PHE:CD2   | 2.54                     | 0.42              |
| 1:BK:90:ARG:HD2    | 1:BK:94:TYR:OH     | 2.18                     | 0.42              |
| 3:BM:58:LEU:HD13   | 3:BM:129:ALA:HA    | 2.00                     | 0.42              |
| 10:BN:200:CYC:HBA1 | 5:CJ:33:TYR:CE2    | 2.55                     | 0.42              |
| 1:BR:27:LYS:NZ     | 4:BS:35:SER:HA     | 2.34                     | 0.42              |
| 1:BR:130:VAL:HB    | 1:BR:157:ILE:HD13  | 2.01                     | 0.42              |
| 1:BV:33:GLY:HA2    | 1:BV:36:ARG:CG     | 2.49                     | 0.42              |
| 1:BV:127:ALA:HB1   | 1:BV:161:SER:HB3   | 2.02                     | 0.42              |
| 2:CA:56:VAL:HG13   | 2:CA:60:LEU:HB2    | 2.00                     | 0.42              |
| 1:CC:39:ILE:HD11   | 1:CC:145:ASP:OD1   | 2.18                     | 0.42              |
| 1:CE:40:ALA:O      | 1:CE:44:THR:HG23   | 2.18                     | 0.42              |
| 6:CM:866:PHE:HB3   | 6:CM:867:PRO:HD3   | 2.02                     | 0.42              |
| 1:CR:90:ARG:HB2    | 2:CS:18:TYR:CZ     | 2.54                     | 0.42              |
| 1:CT:27:LYS:HD2    | 2:CU:35:GLU:OE1    | 2.18                     | 0.42              |
| 1:CT:58:LEU:HD22   | 1:CT:129:SER:HB3   | 2.00                     | 0.42              |
| 1:CV:37:LEU:HD12   | 2:CW:28:LYS:HE3    | 2.01                     | 0.42              |
| 1:CV:94:TYR:CG     | 2:CW:9:ILE:HG23    | 2.53                     | 0.42              |
| 1:CY:39:ILE:CD1    | 1:CY:145:ASP:HA    | 2.49                     | 0.42              |
| 2:CZ:43:VAL:CG1    | 2:CZ:141:VAL:HG12  | 2.50                     | 0.42              |
| 1:DA:72:ALA:HA     | 1:DA:77:MET:CB     | 2.49                     | 0.42              |
| 1:DC:125:ALA:HB3   | 10:DC:200:CYC:HMC2 | 2.01                     | 0.42              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 9:DI:131:LEU:HD23 | 9:DI:136:ASN:HA    | 2.01                     | 0.42              |
| 1:DJ:16:ARG:C     | 2:DK:90:ARG:HD2    | 2.39                     | 0.42              |
| 2:DK:81:CYS:HA    | 10:DK:200:CYC:HAC1 | 1.78                     | 0.42              |
| 1:DQ:85:MET:SD    | 1:DQ:133:MET:HE3   | 2.59                     | 0.42              |
| 2:DR:71:ASN:O     | 2:DR:77:ARG:NE     | 2.50                     | 0.42              |
| 1:DU:134:LYS:HB2  | 1:DU:153:PHE:HB3   | 2.00                     | 0.42              |
| 9:EA:32:ASN:HB3   | 9:EA:171:ARG:NH2   | 2.35                     | 0.42              |
| 9:EA:72:GLN:HG2   | 9:EA:116:LEU:HD13  | 2.01                     | 0.42              |
| 9:EA:210:PHE:CB   | 9:EA:241:PHE:HB3   | 2.50                     | 0.42              |
| 2:AB:52:VAL:O     | 2:AB:56:VAL:HG23   | 2.19                     | 0.42              |
| 2:AB:54:GLU:O     | 2:AB:58:LYS:HG2    | 2.19                     | 0.42              |
| 3:AE:156:ILE:O    | 3:AE:160:MET:HG2   | 2.19                     | 0.42              |
| 2:AF:78:TYR:O     | 2:AF:82:ILE:HG12   | 2.19                     | 0.42              |
| 2:AF:141:VAL:CG1  | 2:AF:145:ALA:HB3   | 2.49                     | 0.42              |
| 1:AH:13:ALA:HB2   | 6:BD:330:ARG:CD    | 2.50                     | 0.42              |
| 1:AJ:49:THR:HG21  | 2:BW:54:GLU:OE2    | 2.19                     | 0.42              |
| 4:AK:47:ASN:O     | 4:AK:51:ILE:HG13   | 2.19                     | 0.42              |
| 4:AK:113:LEU:CD2  | 10:AK:200:CYC:HMB3 | 2.37                     | 0.42              |
| 2:AL:36:LEU:HD11  | 7:BF:85:GLN:HB2    | 2.01                     | 0.42              |
| 1:AP:122:PRO:O    | 1:AP:126:VAL:HG23  | 2.19                     | 0.42              |
| 1:AR:101:VAL:HG11 | 1:AR:155:PHE:CZ    | 2.55                     | 0.42              |
| 2:AS:105:ASP:O    | 2:AS:110:ASN:HB2   | 2.20                     | 0.42              |
| 2:AS:123:ILE:CA   | 2:AS:126:THR:HG22  | 2.45                     | 0.42              |
| 2:AU:105:ASP:OD2  | 2:AU:155:TYR:OH    | 2.26                     | 0.42              |
| 1:AV:59:PHE:CE2   | 1:AV:78:THR:HG23   | 2.55                     | 0.42              |
| 1:AZ:109:LEU:HA   | 1:AZ:112:VAL:HG21  | 2.02                     | 0.42              |
| 6:BD:357:SER:O    | 6:BD:361:VAL:HG23  | 2.20                     | 0.42              |
| 8:BG:197:GLN:OE1  | 8:BG:197:GLN:N     | 2.44                     | 0.42              |
| 9:BH:289:ARG:CZ   | 9:EA:306:LEU:HD12  | 2.50                     | 0.42              |
| 3:BM:129:ALA:O    | 3:BM:132:VAL:HG22  | 2.20                     | 0.42              |
| 2:BN:115:THR:HG23 | 5:CJ:53:VAL:HG21   | 2.02                     | 0.42              |
| 1:BP:97:VAL:CG1   | 2:BQ:27:LEU:HD22   | 2.49                     | 0.42              |
| 2:BQ:74:THR:HG23  | 2:BQ:77:ARG:HH12   | 1.85                     | 0.42              |
| 2:BT:119:LEU:HD21 | 6:CM:424:PHE:HE1   | 1.84                     | 0.42              |
| 2:BW:56:VAL:HG21  | 2:BW:82:ILE:HD11   | 2.01                     | 0.42              |
| 1:BZ:64:ASP:HA    | 1:BZ:67:SER:CB     | 2.50                     | 0.42              |
| 1:CE:6:LYS:O      | 1:CE:9:VAL:HG22    | 2.18                     | 0.42              |
| 1:CE:39:ILE:CG1   | 1:CE:145:ASP:HB3   | 2.50                     | 0.42              |
| 2:CF:57:ALA:CA    | 2:CF:61:LEU:HD12   | 2.34                     | 0.42              |
| 2:CF:99:GLY:HA2   | 2:CF:152:TYR:OH    | 2.19                     | 0.42              |
| 1:CG:82:LEU:O     | 1:CG:85:MET:HB2    | 2.19                     | 0.42              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:CG:88:TYR:CZ     | 1:CG:160:MET:HE3   | 2.54                     | 0.42              |
| 5:CJ:2:ARG:HH12    | 5:CJ:66:LEU:HD13   | 1.84                     | 0.42              |
| 6:CM:455:GLU:OE2   | 6:CM:607:ARG:NH1   | 2.52                     | 0.42              |
| 6:CM:524:VAL:O     | 6:CM:524:VAL:HG12  | 2.20                     | 0.42              |
| 6:CM:809:LEU:HD23  | 6:CM:809:LEU:HA    | 1.85                     | 0.42              |
| 6:CM:851:ASP:OD1   | 6:CM:851:ASP:N     | 2.52                     | 0.42              |
| 2:CW:3:ASP:OD1     | 2:CW:6:THR:OG1     | 2.38                     | 0.42              |
| 2:CW:133:ILE:O     | 2:CW:137:THR:HG22  | 2.20                     | 0.42              |
| 2:CW:137:THR:O     | 2:CW:141:VAL:HG22  | 2.19                     | 0.42              |
| 10:CW:200:CYC:HMB1 | 10:CW:200:CYC:HBB3 | 2.01                     | 0.42              |
| 1:CY:17:TYR:CE2    | 2:CZ:90:ARG:HG2    | 2.55                     | 0.42              |
| 1:CY:46:SER:O      | 1:CY:50:ILE:HG22   | 2.20                     | 0.42              |
| 1:CY:76:GLU:HB2    | 8:DH:201:ARG:O     | 2.20                     | 0.42              |
| 2:CZ:52:VAL:O      | 2:CZ:56:VAL:HG23   | 2.20                     | 0.42              |
| 1:DA:51:VAL:HG22   | 1:DA:133:MET:CE    | 2.42                     | 0.42              |
| 1:DA:51:VAL:HA     | 1:DA:133:MET:HE1   | 2.01                     | 0.42              |
| 9:DI:27:ARG:NH1    | 9:DI:141:THR:HG21  | 2.34                     | 0.42              |
| 9:DI:41:TRP:O      | 9:DI:45:LEU:HG     | 2.19                     | 0.42              |
| 9:DI:80:THR:HA     | 9:DI:83:MET:CE     | 2.48                     | 0.42              |
| 9:DI:107:LEU:HD13  | 9:DI:158:VAL:HG21  | 2.02                     | 0.42              |
| 1:DJ:58:LEU:HD13   | 1:DJ:128:GLN:HB3   | 2.01                     | 0.42              |
| 1:DL:4:VAL:O       | 1:DL:8:ILE:HG12    | 2.20                     | 0.42              |
| 2:DM:112:LEU:HD11  | 2:DM:116:TYR:CE2   | 2.54                     | 0.42              |
| 2:DO:59:SER:HB3    | 2:DO:132:ALA:HB2   | 2.00                     | 0.42              |
| 1:DQ:85:MET:HG3    | 1:DQ:133:MET:CE    | 2.47                     | 0.42              |
| 1:DQ:100:ASP:O     | 1:DQ:103:PRO:HD2   | 2.19                     | 0.42              |
| 1:DU:81:CYS:HB3    | 10:DU:200:CYC:HBC1 | 1.32                     | 0.42              |
| 9:EA:214:ILE:CD1   | 9:EA:238:LEU:HB2   | 2.50                     | 0.42              |
| 1:AA:101:VAL:HG13  | 1:AH:20:PRO:HG2    | 2.02                     | 0.42              |
| 2:AB:88:TYR:CD2    | 2:AB:130:ILE:HD11  | 2.54                     | 0.42              |
| 2:AB:122:PRO:HB2   | 2:AB:125:SER:HG    | 1.85                     | 0.42              |
| 1:AH:88:TYR:O      | 1:AH:92:VAL:HG23   | 2.19                     | 0.42              |
| 1:AH:109:LEU:HA    | 1:AH:112:VAL:HG21  | 2.01                     | 0.42              |
| 2:AI:81:CYS:HA     | 10:AI:200:CYC:CHD  | 2.50                     | 0.42              |
| 2:AI:160:LEU:HD23  | 2:AI:160:LEU:HA    | 1.92                     | 0.42              |
| 4:AK:1:MET:HE2     | 4:AK:104:VAL:HB    | 2.00                     | 0.42              |
| 4:AK:62:GLU:OE1    | 4:AK:133:ILE:HD11  | 2.20                     | 0.42              |
| 2:AL:114:GLU:HA    | 6:BD:466:THR:O     | 2.18                     | 0.42              |
| 1:AN:78:THR:O      | 1:AN:82:LEU:HG     | 2.19                     | 0.42              |
| 1:AN:128:GLN:O     | 1:AN:132:GLU:HG2   | 2.20                     | 0.42              |
| 1:AP:74:GLY:O      | 1:AP:78:THR:HG23   | 2.18                     | 0.42              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:AQ:53:LYS:HD2    | 1:AR:118:SER:O     | 2.19                     | 0.42              |
| 5:BA:6:ILE:HD13    | 5:BA:36:TRP:CZ3    | 2.54                     | 0.42              |
| 6:BD:77:THR:O      | 6:BD:140:ASN:HA    | 2.19                     | 0.42              |
| 9:BH:34:GLU:HG2    | 9:BH:174:GLU:HG2   | 2.02                     | 0.42              |
| 9:BH:249:LYS:N     | 9:BH:275:THR:OG1   | 2.40                     | 0.42              |
| 1:BI:12:ASP:OD1    | 2:BJ:91:TYR:OH     | 2.33                     | 0.42              |
| 1:BK:113:ARG:HD3   | 1:BK:123:ILE:HG12  | 2.02                     | 0.42              |
| 2:BN:4:ALA:HB2     | 2:BN:99:GLY:C      | 2.40                     | 0.42              |
| 2:BN:106:GLU:O     | 2:BN:110:ASN:HB2   | 2.19                     | 0.42              |
| 2:BQ:107:ARG:O     | 6:CM:338:ILE:HD12  | 2.18                     | 0.42              |
| 2:BT:64:ASP:OD1    | 2:BT:64:ASP:N      | 2.52                     | 0.42              |
| 2:BT:72:MET:HE3    | 2:BT:81:CYS:HB3    | 2.02                     | 0.42              |
| 2:BW:41:ALA:HB2    | 2:BW:96:MET:CE     | 2.49                     | 0.42              |
| 6:CM:314:ILE:HG21  | 6:CM:322:ARG:HH11  | 1.85                     | 0.42              |
| 1:CR:14:GLU:HB3    | 1:CR:16:ARG:HG3    | 2.02                     | 0.42              |
| 1:CR:108:GLY:HA2   | 2:CW:75:THR:CG2    | 2.49                     | 0.42              |
| 1:CR:144:ASP:OD1   | 1:CR:145:ASP:N     | 2.52                     | 0.42              |
| 2:CU:103:ILE:HD11  | 2:CU:107:ARG:HG3   | 2.01                     | 0.42              |
| 2:CW:67:ARG:O      | 2:CW:73:TYR:HB2    | 2.19                     | 0.42              |
| 1:CY:43:LEU:HD11   | 1:CY:141:MET:HE1   | 2.02                     | 0.42              |
| 1:DA:140:LEU:HD12  | 1:DA:140:LEU:O     | 2.19                     | 0.42              |
| 2:DB:36:LEU:HD21   | 2:DB:145:ALA:CA    | 2.49                     | 0.42              |
| 2:DB:68:PRO:HA     | 2:DB:73:TYR:CG     | 2.55                     | 0.42              |
| 10:DC:200:CYC:HBA1 | 10:DC:200:CYC:HMA3 | 2.02                     | 0.42              |
| 8:DH:197:GLN:HG3   | 8:DH:199:GLU:OE2   | 2.19                     | 0.42              |
| 2:DK:36:LEU:HA     | 2:DK:39:ARG:CG     | 2.47                     | 0.42              |
| 2:DK:75:THR:HG23   | 1:DL:108:GLY:HA2   | 2.01                     | 0.42              |
| 1:DL:37:LEU:HD22   | 2:DM:24:MET:HE1    | 2.00                     | 0.42              |
| 2:DM:76:ARG:HG3    | 1:DN:110:VAL:CG1   | 2.48                     | 0.42              |
| 1:DQ:126:VAL:HG13  | 1:DQ:160:MET:HE1   | 2.02                     | 0.42              |
| 2:DR:35:GLU:CA     | 2:DR:38:VAL:HG12   | 2.48                     | 0.42              |
| 1:DS:74:GLY:O      | 1:DS:78:THR:HG23   | 2.19                     | 0.42              |
| 1:DU:54:ALA:HB3    | 1:DU:85:MET:HE1    | 2.01                     | 0.42              |
| 9:EA:41:TRP:NE1    | 9:EA:125:ILE:HD13  | 2.35                     | 0.42              |
| 9:EA:154:LEU:O     | 9:EA:158:VAL:HG22  | 2.20                     | 0.42              |
| 9:EA:222:ALA:O     | 9:EA:300:PHE:HA    | 2.20                     | 0.42              |
| 2:AD:134:LYS:NZ    | 2:AD:154:ASP:OD1   | 2.37                     | 0.42              |
| 4:AK:8:LEU:HD23    | 4:AK:27:LEU:HD21   | 2.02                     | 0.42              |
| 4:AK:93:ALA:O      | 4:AK:97:LEU:HG     | 2.19                     | 0.42              |
| 2:AL:25:ASP:HA     | 2:AL:28:LYS:HZ3    | 1.85                     | 0.42              |
| 2:AS:130:ILE:HD13  | 2:AS:156:ILE:CG2   | 2.50                     | 0.42              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AZ:62:ARG:HH12   | 1:AZ:124:GLU:HG3   | 1.85                     | 0.42              |
| 5:BA:29:LYS:NZ     | 6:BD:318:GLU:H     | 2.08                     | 0.42              |
| 6:BD:845:LEU:HG    | 5:DF:42:ARG:NH1    | 2.35                     | 0.42              |
| 9:BH:51:LEU:HD23   | 9:BH:150:GLN:NE2   | 2.35                     | 0.42              |
| 3:BM:15:LEU:HA     | 2:BN:90:ARG:NH1    | 2.35                     | 0.42              |
| 2:BN:105:ASP:HB2   | 2:BN:155:TYR:OH    | 2.19                     | 0.42              |
| 1:BR:62:ARG:O      | 1:BR:65:ILE:HG12   | 2.19                     | 0.42              |
| 1:BR:90:ARG:O      | 1:BR:93:THR:OG1    | 2.27                     | 0.42              |
| 4:BS:2:ARG:CB      | 4:BS:103:ASN:HD22  | 2.31                     | 0.42              |
| 4:BS:66:LEU:HD11   | 4:BS:126:PRO:CB    | 2.49                     | 0.42              |
| 4:BS:110:LEU:HA    | 4:BS:113:LEU:HD12  | 2.02                     | 0.42              |
| 2:BT:134:LYS:CB    | 2:BT:153:LEU:HD13  | 2.47                     | 0.42              |
| 1:BV:91:LEU:CD2    | 1:BV:107:ILE:HB    | 2.49                     | 0.42              |
| 2:BY:112:LEU:HD11  | 10:BY:200:CYC:HMB3 | 2.02                     | 0.42              |
| 1:CC:50:ILE:HA     | 1:CC:136:VAL:HG11  | 2.01                     | 0.42              |
| 1:CC:57:ARG:HD2    | 1:CC:132:GLU:OE1   | 2.20                     | 0.42              |
| 2:CD:57:ALA:HA     | 2:CD:61:LEU:HD12   | 2.01                     | 0.42              |
| 1:CE:54:ALA:HB1    | 1:CE:133:MET:HG2   | 2.00                     | 0.42              |
| 1:CE:65:ILE:CD1    | 10:CE:200:CYC:HMC2 | 2.50                     | 0.42              |
| 2:CF:2:GLN:OE1     | 2:CF:7:ALA:HA      | 2.20                     | 0.42              |
| 6:CM:144:TYR:HB3   | 6:CM:149:MET:HG2   | 2.01                     | 0.42              |
| 6:CM:158:TRP:HB3   | 10:CM:902:CYC:HMB1 | 2.02                     | 0.42              |
| 6:CM:795:TYR:CE1   | 6:CM:881:LYS:HE3   | 2.54                     | 0.42              |
| 1:CR:85:MET:HB3    | 1:CR:133:MET:HE3   | 2.01                     | 0.42              |
| 1:CR:134:LYS:HG3   | 1:CR:153:PHE:HD2   | 1.84                     | 0.42              |
| 2:CS:83:ARG:HD2    | 2:CS:87:TYR:OH     | 2.19                     | 0.42              |
| 1:CV:47:ARG:O      | 1:CV:51:VAL:HG23   | 2.19                     | 0.42              |
| 2:CW:36:LEU:CD2    | 2:CW:145:ALA:HB2   | 2.50                     | 0.42              |
| 1:CY:35:ALA:O      | 1:CY:39:ILE:HG13   | 2.19                     | 0.42              |
| 1:DA:62:ARG:HD3    | 9:DI:58:ALA:N      | 2.35                     | 0.42              |
| 2:DD:1:MET:N       | 2:DD:106:GLU:OE1   | 2.27                     | 0.42              |
| 9:DI:191:GLU:H     | 9:DI:254:ARG:HA    | 1.83                     | 0.42              |
| 2:DM:3:ASP:HB2     | 2:DM:98:ALA:O      | 2.20                     | 0.42              |
| 1:DQ:50:ILE:CG2    | 1:DQ:89:LEU:HD11   | 2.49                     | 0.42              |
| 1:DQ:61:LYS:HE2    | 1:DQ:61:LYS:HA     | 2.01                     | 0.42              |
| 2:DR:90:ARG:HG2    | 2:DR:94:TYR:CE2    | 2.55                     | 0.42              |
| 2:DR:111:GLY:O     | 2:DR:115:THR:HG22  | 2.19                     | 0.42              |
| 10:DR:200:CYC:HMA1 | 10:DR:200:CYC:HB   | 1.83                     | 0.42              |
| 2:DT:56:VAL:HG12   | 2:DT:61:LEU:HG     | 2.01                     | 0.42              |
| 9:EA:44:TYR:O      | 9:EA:47:MET:HB2    | 2.20                     | 0.42              |
| 9:EA:107:LEU:HG    | 11:EA:400:45D:C26  | 2.50                     | 0.42              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:88:TYR:CZ    | 1:AA:160:MET:HE2   | 2.55                     | 0.42              |
| 2:AB:63:SER:O     | 2:AB:67:ARG:HD3    | 2.19                     | 0.42              |
| 2:AB:74:THR:HB    | 1:AC:107:ILE:O     | 2.19                     | 0.42              |
| 2:AD:81:CYS:HA    | 10:AD:200:CYC:HAC1 | 1.90                     | 0.42              |
| 3:AE:113:LYS:NZ   | 3:AE:123:VAL:HG11  | 2.35                     | 0.42              |
| 1:AH:108:GLY:HA2  | 2:AL:75:THR:OG1    | 2.19                     | 0.42              |
| 1:AJ:4:VAL:HG12   | 1:AJ:8:ILE:CD1     | 2.50                     | 0.42              |
| 1:AJ:18:LEU:HD11  | 4:AK:95:TYR:HD1    | 1.85                     | 0.42              |
| 4:AK:129:ARG:NH2  | 4:AK:133:ILE:HG13  | 2.26                     | 0.42              |
| 1:AP:142:SER:H    | 2:DT:39:ARG:NH2    | 2.18                     | 0.42              |
| 2:AW:104:LEU:O    | 2:AW:108:VAL:HB    | 2.20                     | 0.42              |
| 10:AW:200:CYC:OB  | 6:BD:566:ILE:HD11  | 2.20                     | 0.42              |
| 1:AX:76:GLU:HB3   | 8:BG:247:PRO:HG3   | 2.01                     | 0.42              |
| 2:AY:100:ASP:OD1  | 2:AY:101:ALA:N     | 2.51                     | 0.42              |
| 2:AY:104:LEU:HD22 | 2:AY:156:ILE:HD11  | 2.02                     | 0.42              |
| 6:BD:31:GLN:CB    | 6:BD:33:ARG:HE     | 2.33                     | 0.42              |
| 6:BD:808:PHE:HB2  | 6:BD:838:MET:SD    | 2.60                     | 0.42              |
| 8:BG:225:ILE:O    | 8:BG:227:PRO:HD3   | 2.20                     | 0.42              |
| 9:BH:112:ARG:HD2  | 9:BH:112:ARG:HA    | 1.84                     | 0.42              |
| 9:BH:190:ILE:HG23 | 9:BH:193:VAL:HB    | 2.01                     | 0.42              |
| 1:BI:50:ILE:HD11  | 1:BI:137:ALA:N     | 2.34                     | 0.42              |
| 2:BL:51:ILE:HA    | 2:BL:136:VAL:HG11  | 2.02                     | 0.42              |
| 3:BM:101:LYS:HE3  | 1:BR:16:ARG:NE     | 2.34                     | 0.42              |
| 4:BS:124:ILE:HD11 | 4:BS:164:LEU:CD1   | 2.50                     | 0.42              |
| 1:BV:25:ARG:NE    | 1:BV:25:ARG:HA     | 2.34                     | 0.42              |
| 1:BV:44:THR:O     | 1:BV:47:ARG:HG2    | 2.20                     | 0.42              |
| 2:BY:14:VAL:CG1   | 6:CM:683:VAL:HG11  | 2.44                     | 0.42              |
| 2:CA:41:ALA:N     | 2:CA:96:MET:HE1    | 2.35                     | 0.42              |
| 1:CC:134:LYS:HD3  | 1:CC:153:PHE:CB    | 2.47                     | 0.42              |
| 2:CD:52:VAL:HG11  | 2:CD:82:ILE:HG13   | 2.02                     | 0.42              |
| 1:CE:48:GLU:HG2   | 1:CE:49:THR:N      | 2.35                     | 0.42              |
| 2:CH:21:GLY:O     | 2:CH:24:MET:HB3    | 2.19                     | 0.42              |
| 6:CM:625:ASP:CG   | 6:CM:629:LYS:HE2   | 2.40                     | 0.42              |
| 9:CQ:39:LEU:HD12  | 9:CQ:139:LEU:HD12  | 2.00                     | 0.42              |
| 9:CQ:89:ARG:HD3   | 9:CQ:170:LYS:HE3   | 2.01                     | 0.42              |
| 9:CQ:115:GLU:CG   | 9:CQ:119:GLN:HE22  | 2.33                     | 0.42              |
| 9:CQ:131:LEU:HD23 | 9:CQ:136:ASN:HA    | 2.01                     | 0.42              |
| 1:CR:101:VAL:HB   | 1:CR:155:PHE:CE2   | 2.54                     | 0.42              |
| 1:CR:126:VAL:O    | 1:CR:160:MET:HE1   | 2.20                     | 0.42              |
| 2:CS:36:LEU:HD11  | 2:CS:144:ASP:CG    | 2.40                     | 0.42              |
| 1:CT:5:THR:HG23   | 2:CU:1:MET:HE2     | 2.01                     | 0.42              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:DA:54:ALA:HB1   | 1:DA:133:MET:HG2   | 2.01                     | 0.42              |
| 1:DA:90:ARG:NH2   | 2:DB:13:ASP:OD1    | 2.52                     | 0.42              |
| 10:DA:200:CYC:O1D | 8:DG:201:ARG:NH2   | 2.53                     | 0.42              |
| 2:DB:111:GLY:O    | 2:DB:114:GLU:HG2   | 2.19                     | 0.42              |
| 9:DI:86:LEU:CD2   | 9:DI:95:CYS:HA     | 2.50                     | 0.42              |
| 1:DN:92:VAL:O     | 1:DN:96:VAL:HG23   | 2.20                     | 0.42              |
| 1:DQ:140:LEU:HD23 | 1:DQ:140:LEU:O     | 2.20                     | 0.42              |
| 1:DU:88:TYR:O     | 1:DU:92:VAL:HG23   | 2.19                     | 0.42              |
| 2:DV:53:LYS:O     | 2:DV:56:VAL:HG12   | 2.20                     | 0.42              |
| 9:EA:39:LEU:HD12  | 9:EA:139:LEU:HD12  | 2.02                     | 0.42              |
| 9:EA:148:GLY:HA2  | 9:EA:151:ILE:HG22  | 2.02                     | 0.42              |
| 9:EA:263:GLY:C    | 9:EA:294:PRO:HB3   | 2.40                     | 0.42              |
| 1:AC:39:ILE:HD11  | 1:AC:145:ASP:OD1   | 2.20                     | 0.42              |
| 2:AD:129:ALA:O    | 2:AD:133:ILE:HG13  | 2.20                     | 0.42              |
| 3:AE:15:LEU:HA    | 2:AF:90:ARG:NH1    | 2.35                     | 0.42              |
| 4:AK:82:CYS:HA    | 10:AK:200:CYC:CHD  | 2.49                     | 0.42              |
| 1:AR:87:TYR:CD2   | 10:AR:200:CYC:HBB3 | 2.55                     | 0.42              |
| 1:AX:144:ASP:OD1  | 1:AX:144:ASP:N     | 2.53                     | 0.42              |
| 2:BJ:59:SER:HB3   | 2:BJ:132:ALA:CB    | 2.50                     | 0.42              |
| 3:BM:8:ILE:HG13   | 2:BN:1:MET:CE      | 2.50                     | 0.42              |
| 3:BM:26:ILE:HD13  | 2:BN:97:LEU:HD21   | 2.02                     | 0.42              |
| 3:BM:105:GLU:HG3  | 3:BM:110:ILE:HD11  | 2.01                     | 0.42              |
| 4:BS:48:SER:OG    | 4:BS:49:ALA:N      | 2.53                     | 0.42              |
| 2:BW:89:LEU:HD12  | 2:BW:89:LEU:HA     | 1.94                     | 0.42              |
| 1:BX:14:GLU:HA    | 6:CM:548:ARG:NH2   | 2.35                     | 0.42              |
| 1:BZ:25:ARG:NH2   | 1:CE:21:GLY:HA3    | 2.35                     | 0.42              |
| 2:CA:144:ASP:OD1  | 2:CA:145:ALA:N     | 2.53                     | 0.42              |
| 2:CD:61:LEU:HD22  | 10:CE:200:CYC:CAA  | 2.50                     | 0.42              |
| 2:CD:72:MET:HG2   | 2:CD:78:TYR:CD2    | 2.54                     | 0.42              |
| 2:CD:109:LEU:HD22 | 2:CD:159:GLY:HA3   | 2.02                     | 0.42              |
| 1:CE:14:GLU:CB    | 1:CE:16:ARG:HG2    | 2.50                     | 0.42              |
| 1:CE:30:VAL:HG22  | 2:CF:31:PHE:O      | 2.19                     | 0.42              |
| 1:CG:134:LYS:HG3  | 1:CG:153:PHE:CD2   | 2.55                     | 0.42              |
| 2:CH:1:MET:HE2    | 2:CH:103:ILE:HB    | 2.02                     | 0.42              |
| 2:CH:100:ASP:OD1  | 2:CH:101:ALA:N     | 2.52                     | 0.42              |
| 2:CH:122:PRO:HB2  | 2:CH:125:SER:HG    | 1.83                     | 0.42              |
| 6:CM:152:SER:HA   | 10:CM:902:CYC:C4C  | 2.50                     | 0.42              |
| 9:CQ:34:GLU:CG    | 9:CQ:174:GLU:HG2   | 2.49                     | 0.42              |
| 2:CS:71:ASN:HB3   | 2:CS:122:PRO:HD3   | 2.01                     | 0.42              |
| 2:CS:75:THR:CG2   | 1:CT:108:GLY:HA2   | 2.50                     | 0.42              |
| 1:DA:16:ARG:O     | 2:DB:94:TYR:OH     | 2.31                     | 0.42              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:DA:53:GLN:HE21  | 1:DA:136:VAL:CG2   | 2.33                     | 0.42              |
| 1:DC:128:GLN:O    | 1:DC:132:GLU:HG2   | 2.20                     | 0.42              |
| 2:DD:88:TYR:OH    | 2:DD:112:LEU:HD21  | 2.20                     | 0.42              |
| 2:DD:125:SER:HB2  | 10:DD:200:CYC:HMC2 | 2.01                     | 0.42              |
| 2:DK:50:THR:HG22  | 2:DK:54:GLU:OE1    | 2.20                     | 0.42              |
| 2:DK:71:ASN:O     | 2:DK:77:ARG:HD3    | 2.20                     | 0.42              |
| 1:DL:39:ILE:CD1   | 1:DL:145:ASP:HB3   | 2.50                     | 0.42              |
| 1:DL:104:ILE:HG22 | 1:DL:109:LEU:HD12  | 2.01                     | 0.42              |
| 1:DU:109:LEU:HD13 | 1:DU:159:LYS:CG    | 2.45                     | 0.42              |
| 2:AB:40:ALA:HA    | 2:AB:141:VAL:CG2   | 2.49                     | 0.42              |
| 2:AB:106:GLU:HG3  | 2:AB:107:ARG:CG    | 2.49                     | 0.42              |
| 1:AC:152:TYR:O    | 1:AC:156:VAL:HG23  | 2.19                     | 0.42              |
| 3:AE:128:ASP:O    | 3:AE:131:THR:OG1   | 2.30                     | 0.42              |
| 2:AF:100:ASP:OD1  | 2:AF:101:ALA:N     | 2.52                     | 0.42              |
| 2:AF:111:GLY:HA3  | 5:BA:50:ILE:CD1    | 2.50                     | 0.42              |
| 1:AN:25:ARG:NE    | 1:AN:25:ARG:HA     | 2.35                     | 0.42              |
| 2:AQ:132:ALA:O    | 2:AQ:136:VAL:HG23  | 2.19                     | 0.42              |
| 2:AS:148:GLU:HG3  | 2:AS:152:TYR:HE2   | 1.85                     | 0.42              |
| 2:AY:96:MET:HA    | 2:AY:152:TYR:HE2   | 1.85                     | 0.42              |
| 6:BD:152:SER:O    | 6:BD:156:MET:HG3   | 2.20                     | 0.42              |
| 6:BD:314:ILE:HG21 | 6:BD:322:ARG:NH1   | 2.35                     | 0.42              |
| 6:BD:458:PHE:HB3  | 6:BD:552:GLY:CA    | 2.50                     | 0.42              |
| 6:BD:806:LYS:HD2  | 6:BD:872:LEU:HB3   | 2.02                     | 0.42              |
| 9:BH:216:LEU:O    | 9:BH:298:ILE:N     | 2.45                     | 0.42              |
| 2:BJ:132:ALA:O    | 2:BJ:136:VAL:HG23  | 2.19                     | 0.42              |
| 3:BM:50:ILE:CG1   | 3:BM:140:LEU:HD13  | 2.48                     | 0.42              |
| 3:BM:126:MET:O    | 3:BM:130:VAL:HG23  | 2.19                     | 0.42              |
| 2:BN:62:TYR:H     | 2:BN:66:THR:HG21   | 1.85                     | 0.42              |
| 1:BP:153:PHE:O    | 1:BP:157:ILE:HG13  | 2.20                     | 0.42              |
| 2:BQ:63:SER:HB3   | 6:CM:682:ARG:HB2   | 2.02                     | 0.42              |
| 1:BR:5:THR:O      | 1:BR:8:ILE:HG22    | 2.20                     | 0.42              |
| 10:BT:200:CYC:NB  | 10:BT:200:CYC:HMA1 | 2.34                     | 0.42              |
| 1:BV:36:ARG:CZ    | 1:BV:36:ARG:HB3    | 2.50                     | 0.42              |
| 2:BW:74:THR:HG23  | 1:BX:107:ILE:HA    | 2.01                     | 0.42              |
| 2:CF:106:GLU:OE1  | 2:CF:107:ARG:HG3   | 2.20                     | 0.42              |
| 1:CG:50:ILE:HA    | 1:CG:136:VAL:HG11  | 2.00                     | 0.42              |
| 2:CH:104:LEU:HD13 | 2:CH:156:ILE:HG13  | 2.02                     | 0.42              |
| 6:CM:133:PRO:HB3  | 6:CM:136:PHE:CD1   | 2.55                     | 0.42              |
| 6:CM:806:LYS:HB2  | 6:CM:872:LEU:HD13  | 2.01                     | 0.42              |
| 9:CQ:55:ALA:N     | 11:CQ:400:45D:H221 | 2.35                     | 0.42              |
| 9:CQ:74:MET:CE    | 9:CQ:78:GLN:HB2    | 2.50                     | 0.42              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 9:CQ:277:TRP:CD1  | 9:CQ:305:LEU:HD11  | 2.55                     | 0.42              |
| 1:CR:85:MET:O     | 1:CR:133:MET:HE1   | 2.20                     | 0.42              |
| 2:CS:51:ILE:HD11  | 2:CS:140:LEU:HD12  | 2.02                     | 0.42              |
| 1:CT:56:ASP:O     | 1:CT:60:GLN:HG2    | 2.19                     | 0.42              |
| 2:CU:47:ASN:O     | 2:CU:51:ILE:HG13   | 2.20                     | 0.42              |
| 1:CV:97:VAL:HG11  | 2:CW:19:LEU:HD12   | 2.01                     | 0.42              |
| 2:CW:153:LEU:HD23 | 2:CW:156:ILE:HD12  | 2.01                     | 0.42              |
| 1:DA:83:ARG:HD3   | 8:DZ:213:GLY:O     | 2.20                     | 0.42              |
| 2:DB:144:ASP:O    | 2:DB:147:LYS:HB3   | 2.19                     | 0.42              |
| 5:DF:5:ARG:HB3    | 5:DF:30:LEU:CD2    | 2.49                     | 0.42              |
| 8:DG:248:ARG:HH12 | 2:DK:67:ARG:HD3    | 1.83                     | 0.42              |
| 9:DI:126:PRO:HG3  | 11:DI:400:45D:H092 | 2.01                     | 0.42              |
| 9:DI:126:PRO:HG3  | 11:DI:400:45D:C17  | 2.50                     | 0.42              |
| 9:DI:269:VAL:HG23 | 9:DI:288:TRP:CE3   | 2.46                     | 0.42              |
| 1:DL:130:VAL:HB   | 1:DL:157:ILE:CD1   | 2.50                     | 0.42              |
| 1:DQ:39:ILE:CD1   | 1:DQ:145:ASP:HB3   | 2.49                     | 0.42              |
| 1:DS:68:PRO:HG3   | 1:DS:73:TYR:CE1    | 2.55                     | 0.42              |
| 2:DV:119:LEU:HD11 | 10:DV:200:CYC:CAA  | 2.50                     | 0.42              |
| 1:AA:108:GLY:HA2  | 2:AF:75:THR:OG1    | 2.20                     | 0.41              |
| 1:AC:126:VAL:HG13 | 10:AC:200:CYC:HMC3 | 2.01                     | 0.41              |
| 2:AD:54:GLU:O     | 2:AD:58:LYS:HE3    | 2.20                     | 0.41              |
| 3:AE:22:GLU:O     | 3:AE:26:ILE:HG13   | 2.20                     | 0.41              |
| 3:AE:40:ALA:CB    | 3:AE:97:LEU:HD11   | 2.49                     | 0.41              |
| 4:AK:115:GLU:OE2  | 6:BD:6:SER:OG      | 2.21                     | 0.41              |
| 2:AL:51:ILE:HD13  | 2:AL:137:THR:HG22  | 2.01                     | 0.41              |
| 1:AP:95:GLY:HA3   | 1:AP:104:ILE:CD1   | 2.50                     | 0.41              |
| 1:AP:128:GLN:OE1  | 1:AP:131:ARG:NH1   | 2.53                     | 0.41              |
| 2:AU:23:ALA:O     | 2:AU:27:LEU:HG     | 2.19                     | 0.41              |
| 6:BD:317:LYS:HD3  | 6:BD:392:GLU:OE2   | 2.20                     | 0.41              |
| 6:BD:399:ARG:H    | 6:BD:399:ARG:HG2   | 1.65                     | 0.41              |
| 6:BD:586:GLU:OE1  | 6:BD:586:GLU:N     | 2.53                     | 0.41              |
| 6:BD:813:PRO:HD2  | 6:BD:885:VAL:HG11  | 2.02                     | 0.41              |
| 1:BI:2:SER:OG     | 1:BI:5:THR:HG22    | 2.20                     | 0.41              |
| 1:BK:46:SER:O     | 1:BK:50:ILE:HG12   | 2.19                     | 0.41              |
| 1:BK:134:LYS:NZ   | 1:BK:154:ASP:HB3   | 2.35                     | 0.41              |
| 2:BL:62:TYR:CE2   | 3:BM:80:GLN:HG3    | 2.48                     | 0.41              |
| 2:BW:101:ALA:CB   | 2:BW:104:LEU:HD12  | 2.48                     | 0.41              |
| 2:BY:53:LYS:O     | 2:BY:56:VAL:HG22   | 2.19                     | 0.41              |
| 2:BY:66:THR:HA    | 2:BY:72:MET:O      | 2.20                     | 0.41              |
| 1:BZ:76:GLU:OE2   | 9:CQ:155:ARG:NH2   | 2.39                     | 0.41              |
| 1:CC:14:GLU:OE1   | 1:CC:16:ARG:NH2    | 2.51                     | 0.41              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:CE:94:TYR:O      | 1:CE:97:VAL:HG22   | 2.19                     | 0.41              |
| 2:CH:104:LEU:HD22  | 2:CH:156:ILE:HD11  | 2.02                     | 0.41              |
| 6:CM:155:ASP:OD2   | 10:CM:902:CYC:ND   | 2.53                     | 0.41              |
| 6:CM:536:GLU:O     | 6:CM:539:THR:HG22  | 2.20                     | 0.41              |
| 6:CM:703:GLU:CA    | 6:CM:706:ILE:HD12  | 2.42                     | 0.41              |
| 1:CR:3:ILE:HD11    | 1:CR:29:PHE:CB     | 2.49                     | 0.41              |
| 2:CS:106:GLU:OE2   | 5:DF:57:THR:HG22   | 2.19                     | 0.41              |
| 1:DA:62:ARG:HD3    | 9:DI:58:ALA:HB2    | 2.02                     | 0.41              |
| 2:DD:100:ASP:OD1   | 2:DD:101:ALA:N     | 2.53                     | 0.41              |
| 8:DG:213:GLY:HA2   | 1:DQ:87:TYR:OH     | 2.20                     | 0.41              |
| 8:DG:218:PHE:CE1   | 1:DQ:83:ARG:HD2    | 2.55                     | 0.41              |
| 9:DI:244:GLU:OE1   | 9:DI:244:GLU:N     | 2.51                     | 0.41              |
| 2:DK:133:ILE:O     | 2:DK:137:THR:HG23  | 2.20                     | 0.41              |
| 1:DN:44:THR:O      | 1:DN:47:ARG:HG2    | 2.20                     | 0.41              |
| 1:DN:131:ARG:HG2   | 1:DN:157:ILE:CD1   | 2.42                     | 0.41              |
| 2:DO:3:ASP:OD1     | 2:DO:6:THR:OG1     | 2.11                     | 0.41              |
| 2:DO:100:ASP:OD1   | 2:DO:101:ALA:N     | 2.52                     | 0.41              |
| 1:DQ:53:GLN:HG2    | 1:DQ:57:ARG:HH12   | 1.85                     | 0.41              |
| 2:DR:85:LEU:HD12   | 2:DR:133:ILE:CD1   | 2.50                     | 0.41              |
| 1:DS:18:LEU:HD22   | 2:DT:97:LEU:HD23   | 2.02                     | 0.41              |
| 1:DS:109:LEU:HD12  | 1:DS:159:LYS:CB    | 2.49                     | 0.41              |
| 2:DT:44:ILE:HD11   | 2:DT:149:MET:HG3   | 2.02                     | 0.41              |
| 2:DV:63:SER:O      | 2:DV:66:THR:HG22   | 2.19                     | 0.41              |
| 9:EA:81:GLN:HA     | 9:EA:176:VAL:HG21  | 2.02                     | 0.41              |
| 1:AA:77:MET:SD     | 10:AA:200:CYC:HAD1 | 2.60                     | 0.41              |
| 1:AA:109:LEU:HD11  | 1:AA:159:LYS:HB3   | 2.01                     | 0.41              |
| 2:AD:106:GLU:HG3   | 2:AD:107:ARG:CD    | 2.49                     | 0.41              |
| 2:AI:81:CYS:HA     | 10:AI:200:CYC:HHD  | 2.02                     | 0.41              |
| 4:AK:14:LEU:HD21   | 2:AO:157:CYS:O     | 2.20                     | 0.41              |
| 2:AU:68:PRO:HA     | 2:AU:73:TYR:CG     | 2.54                     | 0.41              |
| 2:AU:77:ARG:NH2    | 5:BB:63:ASN:OD1    | 2.53                     | 0.41              |
| 2:AY:71:ASN:HD22   | 2:AY:121:VAL:HA    | 1.83                     | 0.41              |
| 2:AY:116:TYR:CD2   | 2:AY:160:LEU:HD11  | 2.54                     | 0.41              |
| 5:BB:6:ILE:O       | 5:BB:6:ILE:HG13    | 2.20                     | 0.41              |
| 6:BD:267:TYR:HB3   | 6:BD:281:VAL:HG22  | 2.02                     | 0.41              |
| 6:BD:576:ARG:NH2   | 6:BD:641:ASP:HA    | 2.35                     | 0.41              |
| 6:BD:576:ARG:NH1   | 6:BD:646:SER:OG    | 2.45                     | 0.41              |
| 10:BD:901:CYC:HMD2 | 10:BD:901:CYC:NC   | 2.35                     | 0.41              |
| 9:BH:141:THR:O     | 9:BH:145:LEU:HG    | 2.20                     | 0.41              |
| 1:BK:131:ARG:HE    | 1:BK:157:ILE:CG2   | 2.34                     | 0.41              |
| 1:BR:8:ILE:HD13    | 4:BS:1:MET:CE      | 2.50                     | 0.41              |

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| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 4:BS:14:LEU:HD13 | 2:BW:161:SER:CB    | 2.51                     | 0.41              |
| 4:BS:41:ALA:HA   | 4:BS:44:ILE:HD11   | 2.02                     | 0.41              |
| 1:BV:68:PRO:O    | 1:CE:63:PRO:HG2    | 2.20                     | 0.41              |
| 1:BV:108:GLY:HA2 | 2:CA:75:THR:HG21   | 2.01                     | 0.41              |
| 2:BW:66:THR:HG21 | 10:BX:200:CYC:O1A  | 2.20                     | 0.41              |
| 1:CC:61:LYS:HG3  | 1:CC:62:ARG:HG2    | 2.02                     | 0.41              |
| 1:CE:132:GLU:O   | 1:CE:136:VAL:HG23  | 2.20                     | 0.41              |
| 2:CF:36:LEU:CD2  | 2:CF:39:ARG:HH12   | 2.33                     | 0.41              |
| 2:CH:41:ALA:HB2  | 2:CH:96:MET:HE1    | 2.02                     | 0.41              |
| 5:CK:23:GLN:HG2  | 5:CK:24:ASN:N      | 2.34                     | 0.41              |
| 6:CM:802:GLU:OE2 | 6:CM:885:VAL:N     | 2.43                     | 0.41              |
| 6:CM:811:ARG:HB2 | 6:CM:869:THR:OG1   | 2.19                     | 0.41              |
| 9:CQ:42:PHE:CE2  | 9:CQ:131:LEU:HB2   | 2.55                     | 0.41              |
| 1:CR:62:ARG:NE   | 1:DA:69:GLY:O      | 2.53                     | 0.41              |
| 2:CW:15:GLN:HG3  | 2:CW:17:LYS:HZ3    | 1.83                     | 0.41              |
| 2:CW:108:VAL:O   | 2:CW:112:LEU:HD13  | 2.19                     | 0.41              |
| 1:CY:87:TYR:OH   | 8:DY:213:GLY:HA3   | 2.19                     | 0.41              |
| 1:CY:97:VAL:CG1  | 2:CZ:27:LEU:HD13   | 2.51                     | 0.41              |
| 2:CZ:64:ASP:O    | 2:CZ:70:GLY:HA3    | 2.20                     | 0.41              |
| 1:DA:8:ILE:HD12  | 2:DB:94:TYR:CD1    | 2.55                     | 0.41              |
| 1:DA:143:SER:O   | 1:DA:146:ALA:HB3   | 2.20                     | 0.41              |
| 2:DB:132:ALA:O   | 2:DB:136:VAL:HG23  | 2.20                     | 0.41              |
| 10:DB:200:CYC:HC | 10:DB:200:CYC:HMD2 | 1.85                     | 0.41              |
| 1:DC:66:VAL:O    | 1:DC:73:TYR:HA     | 2.20                     | 0.41              |
| 9:DI:20:VAL:HB   | 9:DI:145:LEU:CD2   | 2.50                     | 0.41              |
| 1:DL:92:VAL:HG11 | 1:DL:153:PHE:CE2   | 2.55                     | 0.41              |
| 2:DM:75:THR:HG23 | 1:DN:108:GLY:HA2   | 2.01                     | 0.41              |
| 1:DN:50:ILE:HA   | 1:DN:136:VAL:HG11  | 2.02                     | 0.41              |
| 1:DS:39:ILE:HG23 | 1:DS:141:MET:CE    | 2.50                     | 0.41              |
| 2:DV:3:ASP:N     | 2:DV:6:THR:OG1     | 2.52                     | 0.41              |
| 9:EA:37:LEU:HA   | 9:EA:40:ILE:HG12   | 2.01                     | 0.41              |
| 9:EA:188:VAL:O   | 9:EA:199:LEU:HD22  | 2.19                     | 0.41              |
| 1:AA:37:LEU:HD13 | 2:AB:28:LYS:NZ     | 2.35                     | 0.41              |
| 1:AA:46:SER:O    | 1:AA:50:ILE:HG22   | 2.20                     | 0.41              |
| 1:AC:6:LYS:HD2   | 1:AC:6:LYS:HA      | 1.86                     | 0.41              |
| 3:AE:64:GLU:O    | 3:AE:70:GLY:HA3    | 2.20                     | 0.41              |
| 2:AF:116:TYR:CD1 | 2:AF:121:VAL:HG21  | 2.54                     | 0.41              |
| 2:AF:123:ILE:O   | 2:AF:126:THR:OG1   | 2.34                     | 0.41              |
| 1:AH:90:ARG:O    | 1:AH:93:THR:OG1    | 2.30                     | 0.41              |
| 1:AH:150:SER:HA  | 1:AH:153:PHE:HB2   | 2.02                     | 0.41              |
| 2:AI:91:TYR:HB3  | 2:AI:104:LEU:CD2   | 2.49                     | 0.41              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AJ:3:ILE:HG13   | 1:AJ:25:ARG:NH2    | 2.35                     | 0.41              |
| 4:AK:75:THR:HB    | 6:BD:178:ASN:ND2   | 2.34                     | 0.41              |
| 4:AK:161:THR:O    | 4:AK:165:SER:HB2   | 2.19                     | 0.41              |
| 4:AK:167:LEU:CD2  | 6:BD:477:ASN:HB2   | 2.50                     | 0.41              |
| 2:AL:5:ILE:HD13   | 6:BD:46:TYR:OH     | 2.21                     | 0.41              |
| 2:AQ:68:PRO:HD2   | 8:BG:213:GLY:HA3   | 2.02                     | 0.41              |
| 1:AV:91:LEU:HD21  | 1:AV:107:ILE:HB    | 2.02                     | 0.41              |
| 1:AZ:81:CYS:HA    | 10:AZ:200:CYC:CHD  | 2.45                     | 0.41              |
| 9:BH:284:MET:SD   | 9:BH:307:ALA:HA    | 2.60                     | 0.41              |
| 2:BJ:30:TYR:OH    | 2:BJ:97:LEU:O      | 2.25                     | 0.41              |
| 2:BJ:112:LEU:HG   | 2:BJ:160:LEU:HD21  | 2.02                     | 0.41              |
| 2:BL:5:ILE:O      | 2:BL:8:VAL:HG12    | 2.21                     | 0.41              |
| 3:BM:150:ALA:N    | 3:BM:151:PRO:HD2   | 2.36                     | 0.41              |
| 2:BN:123:ILE:HD13 | 2:BN:123:ILE:HA    | 1.90                     | 0.41              |
| 1:BP:112:VAL:HA   | 2:BT:75:THR:HG21   | 2.02                     | 0.41              |
| 1:BR:134:LYS:HD3  | 1:BR:153:PHE:HB3   | 2.02                     | 0.41              |
| 4:BS:125:GLY:O    | 4:BS:128:VAL:HG22  | 2.19                     | 0.41              |
| 2:BY:2:GLN:O      | 2:BY:100:ASP:HB3   | 2.21                     | 0.41              |
| 2:BY:71:ASN:ND2   | 2:BY:121:VAL:HA    | 2.35                     | 0.41              |
| 1:BZ:77:MET:SD    | 10:BZ:200:CYC:HAD1 | 2.60                     | 0.41              |
| 2:CA:39:ARG:NH1   | 2:CA:42:SER:HB3    | 2.35                     | 0.41              |
| 2:CD:119:LEU:HD21 | 5:CK:33:TYR:CE2    | 2.45                     | 0.41              |
| 2:CF:1:MET:HB3    | 2:CF:103:ILE:HD13  | 2.01                     | 0.41              |
| 2:CH:81:CYS:HA    | 10:CH:200:CYC:CHD  | 2.48                     | 0.41              |
| 5:CK:2:ARG:HH21   | 5:CK:66:LEU:HD13   | 1.85                     | 0.41              |
| 6:CM:341:ARG:HD2  | 6:CM:341:ARG:HA    | 1.90                     | 0.41              |
| 1:CT:27:LYS:HZ2   | 2:CU:35:GLU:CD     | 2.24                     | 0.41              |
| 1:CY:102:THR:HB   | 1:CY:103:PRO:HD3   | 2.02                     | 0.41              |
| 1:DA:51:VAL:HG12  | 8:DZ:221:MET:HE2   | 2.03                     | 0.41              |
| 8:DH:245:SER:HB2  | 1:DJ:79:ALA:HB2    | 2.03                     | 0.41              |
| 9:DI:213:LEU:HA   | 9:DI:216:LEU:CB    | 2.49                     | 0.41              |
| 1:DJ:57:ARG:O     | 1:DJ:61:LYS:HD3    | 2.20                     | 0.41              |
| 1:DJ:62:ARG:O     | 1:DJ:65:ILE:HG12   | 2.21                     | 0.41              |
| 2:DK:131:GLN:O    | 2:DK:134:LYS:HB3   | 2.21                     | 0.41              |
| 1:DL:143:SER:O    | 1:DL:146:ALA:HB3   | 2.19                     | 0.41              |
| 2:DM:96:MET:HG3   | 2:DM:149:MET:HG2   | 2.02                     | 0.41              |
| 1:DN:5:THR:HG23   | 2:DO:1:MET:HE3     | 2.02                     | 0.41              |
| 2:DT:127:VAL:O    | 2:DT:131:GLN:HG2   | 2.20                     | 0.41              |
| 5:DX:6:ILE:HD13   | 5:DX:36:TRP:HZ3    | 1.85                     | 0.41              |
| 9:EA:109:PHE:CZ   | 9:EA:113:LEU:HD11  | 2.56                     | 0.41              |
| 1:AA:116:TYR:CE2  | 1:AA:126:VAL:HG11  | 2.56                     | 0.41              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AC:97:VAL:HG23  | 2:AD:9:ILE:HD11    | 2.03                     | 0.41              |
| 1:AC:126:VAL:HG23 | 1:AC:160:MET:HE2   | 2.02                     | 0.41              |
| 2:AD:112:LEU:HD21 | 10:AD:200:CYC:C3B  | 2.50                     | 0.41              |
| 3:AE:160:MET:O    | 3:AE:161:SER:OG    | 2.35                     | 0.41              |
| 2:AF:107:ARG:HA   | 5:BA:44:MET:HB3    | 2.02                     | 0.41              |
| 1:AH:14:GLU:OE1   | 1:AH:16:ARG:NE     | 2.50                     | 0.41              |
| 1:AH:112:VAL:HA   | 2:AL:75:THR:HG21   | 2.02                     | 0.41              |
| 1:AJ:18:LEU:HD13  | 4:AK:98:ILE:HD12   | 2.02                     | 0.41              |
| 4:AK:129:ARG:NH1  | 2:AO:15:GLN:OE1    | 2.53                     | 0.41              |
| 4:AK:132:GLN:O    | 4:AK:136:GLU:HG3   | 2.21                     | 0.41              |
| 4:AK:154:ALA:O    | 4:AK:158:ASP:HB2   | 2.21                     | 0.41              |
| 2:AL:1:MET:CE     | 6:BD:25:ILE:HB     | 2.50                     | 0.41              |
| 1:AN:63:PRO:O     | 1:AN:67:SER:N      | 2.52                     | 0.41              |
| 1:AR:96:VAL:HG22  | 1:AR:152:TYR:CD2   | 2.55                     | 0.41              |
| 1:AR:128:GLN:NE2  | 1:AR:132:GLU:OE2   | 2.53                     | 0.41              |
| 2:AS:37:ARG:NH1   | 2:AS:99:GLY:HA2    | 2.35                     | 0.41              |
| 2:AS:39:ARG:HH12  | 2:AS:42:SER:HB3    | 1.85                     | 0.41              |
| 2:AS:71:ASN:HD22  | 2:AS:121:VAL:HA    | 1.85                     | 0.41              |
| 2:AS:81:CYS:HA    | 10:BD:901:CYC:HAC1 | 1.91                     | 0.41              |
| 2:AU:10:ASN:O     | 2:AU:14:VAL:HG23   | 2.21                     | 0.41              |
| 1:AV:121:THR:HG23 | 10:AV:200:CYC:C1C  | 2.50                     | 0.41              |
| 2:AW:68:PRO:HA    | 2:AW:73:TYR:CD1    | 2.55                     | 0.41              |
| 1:AX:27:LYS:NZ    | 2:AY:35:GLU:HA     | 2.35                     | 0.41              |
| 1:AX:85:MET:SD    | 1:AX:129:SER:HB2   | 2.61                     | 0.41              |
| 6:BD:193:ASP:O    | 6:BD:197:VAL:HG22  | 2.20                     | 0.41              |
| 6:BD:889:THR:CG2  | 2:CZ:118:SER:HB2   | 2.50                     | 0.41              |
| 9:BH:131:LEU:HD11 | 9:BH:135:ALA:HB1   | 2.02                     | 0.41              |
| 9:BH:238:LEU:O    | 9:BH:242:ARG:HG2   | 2.20                     | 0.41              |
| 2:BL:106:GLU:OE1  | 6:CM:273:LEU:HA    | 2.20                     | 0.41              |
| 1:BR:130:VAL:HB   | 1:BR:157:ILE:CD1   | 2.51                     | 0.41              |
| 1:BV:25:ARG:HH11  | 1:BV:25:ARG:HG2    | 1.85                     | 0.41              |
| 1:BV:102:THR:HB   | 1:BV:103:PRO:HD3   | 2.02                     | 0.41              |
| 2:BY:58:LYS:HE2   | 2:BY:135:GLU:OE1   | 2.20                     | 0.41              |
| 1:BZ:92:VAL:O     | 1:BZ:96:VAL:HG23   | 2.20                     | 0.41              |
| 2:CD:15:GLN:HB2   | 2:CD:17:LYS:NZ     | 2.35                     | 0.41              |
| 2:CD:54:GLU:CD    | 2:CD:136:VAL:HG11  | 2.40                     | 0.41              |
| 2:CH:148:GLU:OE2  | 2:CH:149:MET:HG2   | 2.21                     | 0.41              |
| 5:CK:12:SER:HB3   | 5:CK:17:ARG:CZ     | 2.50                     | 0.41              |
| 6:CM:156:MET:HB3  | 6:CM:202:MET:HE1   | 2.03                     | 0.41              |
| 6:CM:353:ARG:HA   | 6:CM:418:PHE:CZ    | 2.56                     | 0.41              |
| 6:CM:783:THR:HB   | 6:CM:832:LYS:HG2   | 2.02                     | 0.41              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 9:CQ:98:TYR:O      | 9:CQ:106:LYS:HE3   | 2.20                     | 0.41              |
| 9:CQ:280:GLY:HA3   | 9:CQ:284:MET:HG3   | 2.02                     | 0.41              |
| 1:CR:27:LYS:O      | 1:CR:30:VAL:HG22   | 2.21                     | 0.41              |
| 1:CT:90:ARG:HD2    | 2:CU:17:LYS:C      | 2.41                     | 0.41              |
| 2:CZ:130:ILE:HB    | 2:CZ:157:CYS:SG    | 2.60                     | 0.41              |
| 1:DA:66:VAL:HG23   | 1:DA:78:THR:CG2    | 2.50                     | 0.41              |
| 2:DB:25:ASP:HA     | 2:DB:28:LYS:HE2    | 2.03                     | 0.41              |
| 2:DB:74:THR:HG1    | 2:DB:77:ARG:HB2    | 1.85                     | 0.41              |
| 2:DD:122:PRO:HG2   | 10:DD:200:CYC:HMC3 | 2.02                     | 0.41              |
| 9:DI:88:ASN:HB2    | 9:DI:170:LYS:HD2   | 2.02                     | 0.41              |
| 1:DL:50:ILE:HD11   | 1:DL:137:ALA:CA    | 2.50                     | 0.41              |
| 1:DL:123:ILE:HA    | 1:DL:126:VAL:HG23  | 2.02                     | 0.41              |
| 2:DR:2:GLN:HB2     | 2:DR:6:THR:OG1     | 2.19                     | 0.41              |
| 1:DS:50:ILE:HD11   | 1:DS:137:ALA:HA    | 2.03                     | 0.41              |
| 1:DU:17:TYR:CE2    | 2:DV:90:ARG:HA     | 2.56                     | 0.41              |
| 3:AE:14:GLN:CB     | 3:AE:16:ARG:HG2    | 2.50                     | 0.41              |
| 1:AJ:56:ASP:HA     | 1:BX:69:GLY:HA2    | 2.02                     | 0.41              |
| 2:AL:134:LYS:HD2   | 2:AL:150:GLY:CA    | 2.50                     | 0.41              |
| 1:AN:51:VAL:HG12   | 1:AN:133:MET:SD    | 2.60                     | 0.41              |
| 2:AQ:68:PRO:HG3    | 2:AQ:73:TYR:CE1    | 2.56                     | 0.41              |
| 2:AQ:77:ARG:O      | 10:AQ:200:CYC:HMD3 | 2.20                     | 0.41              |
| 2:AQ:81:CYS:HA     | 10:AQ:200:CYC:HHD  | 2.03                     | 0.41              |
| 2:AS:57:ALA:HA     | 2:AS:61:LEU:CD1    | 2.51                     | 0.41              |
| 2:AY:96:MET:SD     | 2:AY:149:MET:HE3   | 2.60                     | 0.41              |
| 2:AY:106:GLU:HG3   | 2:AY:107:ARG:HG3   | 2.02                     | 0.41              |
| 1:AZ:85:MET:SD     | 1:AZ:129:SER:HB2   | 2.59                     | 0.41              |
| 10:AZ:200:CYC:NB   | 10:AZ:200:CYC:HMA1 | 2.35                     | 0.41              |
| 6:BD:751:LEU:CD1   | 6:BD:755:ILE:HD13  | 2.51                     | 0.41              |
| 6:BD:805:THR:HA    | 6:BD:838:MET:SD    | 2.61                     | 0.41              |
| 6:BD:872:LEU:CD2   | 6:BD:884:VAL:HG11  | 2.50                     | 0.41              |
| 9:BH:204:ASN:HD22  | 9:BH:213:LEU:HA    | 1.85                     | 0.41              |
| 9:BH:267:ILE:HD12  | 9:BH:292:LEU:HD12  | 2.02                     | 0.41              |
| 2:BN:1:MET:CE      | 2:BN:103:ILE:HD12  | 2.50                     | 0.41              |
| 2:BQ:122:PRO:HG2   | 2:BQ:125:SER:OG    | 2.20                     | 0.41              |
| 2:BY:96:MET:HA     | 2:BY:152:TYR:CE2   | 2.55                     | 0.41              |
| 1:BZ:91:LEU:O      | 1:BZ:104:ILE:HG12  | 2.20                     | 0.41              |
| 2:CA:81:CYS:HA     | 10:CM:901:CYC:HAC1 | 1.95                     | 0.41              |
| 1:CC:109:LEU:HD12  | 1:CC:109:LEU:HA    | 1.89                     | 0.41              |
| 10:CC:200:CYC:HMA1 | 10:CC:200:CYC:NB   | 2.36                     | 0.41              |
| 2:CF:122:PRO:HB2   | 2:CF:125:SER:CB    | 2.51                     | 0.41              |
| 1:CG:85:MET:C      | 1:CG:133:MET:HE1   | 2.40                     | 0.41              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:CG:88:TYR:OH    | 1:CG:160:MET:HE3   | 2.20                     | 0.41              |
| 1:CG:93:THR:HA    | 1:CG:96:VAL:HG22   | 2.02                     | 0.41              |
| 1:CG:109:LEU:O    | 1:CG:112:VAL:HG12  | 2.21                     | 0.41              |
| 5:CJ:6:ILE:HG13   | 5:CJ:6:ILE:O       | 2.20                     | 0.41              |
| 5:CK:38:ARG:HE    | 6:CM:641:ASP:HB3   | 1.85                     | 0.41              |
| 6:CM:186:ILE:HG13 | 6:CM:190:CYS:HB3   | 2.01                     | 0.41              |
| 6:CM:811:ARG:NH2  | 6:CM:814:LEU:HG    | 2.35                     | 0.41              |
| 1:CR:121:THR:HG23 | 10:CR:200:CYC:C1C  | 2.50                     | 0.41              |
| 1:CV:47:ARG:HG3   | 1:CV:48:GLU:N      | 2.35                     | 0.41              |
| 2:CZ:81:CYS:O     | 10:CZ:200:CYC:HBC1 | 2.21                     | 0.41              |
| 1:DA:2:SER:HB3    | 2:DB:3:ASP:OD2     | 2.20                     | 0.41              |
| 2:DB:11:SER:O     | 2:DB:14:VAL:HG22   | 2.20                     | 0.41              |
| 2:DB:73:TYR:OH    | 1:DC:90:ARG:NH2    | 2.33                     | 0.41              |
| 9:DI:79:GLN:CD    | 9:DI:122:VAL:HG23  | 2.41                     | 0.41              |
| 9:DI:86:LEU:HD21  | 9:DI:98:TYR:HB3    | 2.02                     | 0.41              |
| 9:DI:117:MET:HE1  | 11:DI:400:45D:H392 | 2.03                     | 0.41              |
| 1:DJ:91:LEU:HD21  | 1:DJ:107:ILE:CG2   | 2.47                     | 0.41              |
| 1:DL:101:VAL:HG11 | 1:DU:20:PRO:HG2    | 2.01                     | 0.41              |
| 10:DO:200:CYC:OB  | 5:DX:44:MET:HE3    | 2.19                     | 0.41              |
| 1:DU:39:ILE:HD11  | 1:DU:145:ASP:OD1   | 2.21                     | 0.41              |
| 5:DX:6:ILE:HG21   | 5:DX:36:TRP:CZ3    | 2.56                     | 0.41              |
| 2:AB:134:LYS:HB2  | 2:AB:153:LEU:HD13  | 2.02                     | 0.41              |
| 2:AD:65:VAL:HB    | 2:AD:72:MET:HB2    | 2.02                     | 0.41              |
| 2:AD:81:CYS:HA    | 10:AD:200:CYC:HHD  | 2.02                     | 0.41              |
| 1:AJ:114:GLU:OE1  | 1:AJ:114:GLU:N     | 2.51                     | 0.41              |
| 2:AL:43:VAL:HG12  | 2:AL:140:LEU:HD21  | 2.02                     | 0.41              |
| 1:AN:115:MET:HG2  | 2:AS:78:TYR:CD1    | 2.56                     | 0.41              |
| 1:AN:159:LYS:HE3  | 1:AN:159:LYS:HB3   | 1.85                     | 0.41              |
| 2:AO:75:THR:HG23  | 10:AP:200:CYC:HAB1 | 2.02                     | 0.41              |
| 1:AR:153:PHE:O    | 1:AR:157:ILE:HG13  | 2.19                     | 0.41              |
| 1:AV:65:ILE:CD1   | 10:AV:200:CYC:HMC2 | 2.51                     | 0.41              |
| 1:AV:104:ILE:HG22 | 1:AV:109:LEU:CD1   | 2.50                     | 0.41              |
| 2:AW:110:ASN:HD21 | 5:BB:56:ALA:CB     | 2.32                     | 0.41              |
| 1:AX:66:VAL:HG21  | 8:BG:235:VAL:HG21  | 2.03                     | 0.41              |
| 1:AX:109:LEU:HD11 | 1:AX:159:LYS:HB2   | 2.02                     | 0.41              |
| 2:AY:1:MET:HB3    | 2:AY:106:GLU:OE2   | 2.21                     | 0.41              |
| 1:AZ:63:PRO:O     | 1:AZ:67:SER:N      | 2.54                     | 0.41              |
| 5:BA:43:ILE:HG21  | 5:BA:50:ILE:CG2    | 2.50                     | 0.41              |
| 6:BD:211:ARG:HD2  | 6:BD:211:ARG:O     | 2.20                     | 0.41              |
| 6:BD:258:PHE:CE1  | 6:BD:263:LYS:HG3   | 2.56                     | 0.41              |
| 2:BJ:68:PRO:HA    | 2:BJ:73:TYR:CD1    | 2.55                     | 0.41              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:BJ:78:TYR:CE1   | 2:BJ:82:ILE:HD11   | 2.56                     | 0.41              |
| 1:BK:17:TYR:CE1   | 2:BL:90:ARG:HA     | 2.56                     | 0.41              |
| 2:BL:55:ALA:O     | 2:BL:59:SER:CB     | 2.68                     | 0.41              |
| 1:BP:80:THR:CG2   | 1:BP:83:ARG:HH21   | 2.34                     | 0.41              |
| 1:BP:134:LYS:HB2  | 1:BP:153:PHE:CG    | 2.56                     | 0.41              |
| 4:BS:72:ASN:ND2   | 4:BS:122:VAL:HG22  | 2.36                     | 0.41              |
| 4:BS:138:ILE:CG2  | 4:BS:153:ILE:HG21  | 2.51                     | 0.41              |
| 1:BV:39:ILE:HG23  | 1:BV:141:MET:CE    | 2.51                     | 0.41              |
| 1:BV:101:VAL:CG1  | 1:CC:20:PRO:HG2    | 2.50                     | 0.41              |
| 1:BX:108:GLY:O    | 1:BX:112:VAL:HG21  | 2.21                     | 0.41              |
| 1:BZ:73:TYR:OH    | 9:CQ:147:SER:HB3   | 2.21                     | 0.41              |
| 1:CE:57:ARG:CA    | 1:CE:60:GLN:HE21   | 2.34                     | 0.41              |
| 2:CH:125:SER:OG   | 10:CH:200:CYC:HMC2 | 2.20                     | 0.41              |
| 6:CM:720:GLN:NE2  | 2:DV:1:MET:O       | 2.54                     | 0.41              |
| 6:CM:838:MET:HB3  | 6:CM:838:MET:HE2   | 1.73                     | 0.41              |
| 9:CQ:208:ASN:HA   | 9:CQ:210:PHE:CE1   | 2.56                     | 0.41              |
| 2:CS:43:VAL:HG13  | 2:CS:141:VAL:HG12  | 2.02                     | 0.41              |
| 1:CT:24:ASP:OD1   | 1:CT:25:ARG:N      | 2.53                     | 0.41              |
| 1:CV:85:MET:CE    | 1:CV:129:SER:HB2   | 2.51                     | 0.41              |
| 1:DA:90:ARG:HD2   | 2:DB:17:LYS:O      | 2.20                     | 0.41              |
| 2:DB:112:LEU:CD2  | 2:DB:160:LEU:HD21  | 2.50                     | 0.41              |
| 1:DJ:87:TYR:O     | 1:DJ:91:LEU:HD13   | 2.20                     | 0.41              |
| 1:DL:72:ALA:HA    | 1:DL:77:MET:HB3    | 2.03                     | 0.41              |
| 1:DN:90:ARG:HA    | 2:DO:18:TYR:CE2    | 2.56                     | 0.41              |
| 1:DN:104:ILE:HG21 | 1:DN:156:VAL:HG22  | 2.03                     | 0.41              |
| 1:DQ:6:LYS:HD2    | 1:DQ:100:ASP:OD1   | 2.21                     | 0.41              |
| 1:DQ:134:LYS:HB2  | 1:DQ:153:PHE:HB3   | 2.01                     | 0.41              |
| 1:DU:97:VAL:HG11  | 2:DV:27:LEU:CD2    | 2.51                     | 0.41              |
| 1:DU:101:VAL:HB   | 1:DU:155:PHE:CE2   | 2.56                     | 0.41              |
| 2:DV:25:ASP:OD1   | 2:DV:26:LYS:N      | 2.54                     | 0.41              |
| 5:DX:8:ALA:HB2    | 5:DX:50:ILE:HA     | 2.03                     | 0.41              |
| 8:DY:207:GLU:OE1  | 8:DY:207:GLU:N     | 2.39                     | 0.41              |
| 9:EA:223:LEU:HD23 | 9:EA:224:GLN:N     | 2.35                     | 0.41              |
| 1:AA:105:GLU:HG3  | 1:AA:110:VAL:CG2   | 2.48                     | 0.41              |
| 2:AB:59:SER:HB3   | 2:AB:132:ALA:CB    | 2.51                     | 0.41              |
| 1:AC:98:SER:OG    | 1:AC:103:PRO:HG2   | 2.21                     | 0.41              |
| 2:AD:8:VAL:CG1    | 2:AD:27:LEU:HD21   | 2.49                     | 0.41              |
| 1:AH:62:ARG:CG    | 1:AH:65:ILE:HG12   | 2.50                     | 0.41              |
| 1:AJ:18:LEU:CD1   | 4:AK:98:ILE:HD12   | 2.51                     | 0.41              |
| 2:AL:1:MET:HE2    | 6:BD:22:VAL:HG13   | 2.03                     | 0.41              |
| 2:AL:101:ALA:HB1  | 2:AL:104:LEU:HD12  | 2.03                     | 0.41              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AN:25:ARG:HG2   | 1:AN:25:ARG:HH11   | 1.85                     | 0.41              |
| 1:AP:37:LEU:HD23  | 2:AQ:28:LYS:NZ     | 2.36                     | 0.41              |
| 1:AP:83:ARG:NH1   | 10:AP:200:CYC:O2A  | 2.43                     | 0.41              |
| 2:AQ:64:ASP:OD1   | 2:AQ:64:ASP:N      | 2.53                     | 0.41              |
| 2:AU:47:ASN:OD1   | 2:AU:140:LEU:HD13  | 2.20                     | 0.41              |
| 2:AW:133:ILE:O    | 2:AW:137:THR:HG23  | 2.20                     | 0.41              |
| 1:AZ:89:LEU:HB2   | 1:AZ:133:MET:CE    | 2.50                     | 0.41              |
| 6:BD:176:VAL:HG22 | 6:BD:230:GLU:OE2   | 2.20                     | 0.41              |
| 6:BD:268:ALA:HA   | 6:BD:393:GLU:O     | 2.20                     | 0.41              |
| 6:BD:458:PHE:CB   | 6:BD:552:GLY:HA3   | 2.50                     | 0.41              |
| 9:BH:226:PRO:HG3  | 9:BH:305:LEU:HG    | 2.03                     | 0.41              |
| 1:BK:130:VAL:HA   | 1:BK:133:MET:CE    | 2.50                     | 0.41              |
| 2:BL:104:LEU:HB3  | 2:BL:109:LEU:HD13  | 2.01                     | 0.41              |
| 2:BN:133:ILE:O    | 2:BN:137:THR:HG22  | 2.20                     | 0.41              |
| 1:BR:107:ILE:HG22 | 10:BR:200:CYC:HBB1 | 2.01                     | 0.41              |
| 4:BS:105:LEU:HD23 | 4:BS:159:HIS:CD2   | 2.55                     | 0.41              |
| 2:BT:100:ASP:OD1  | 2:BT:101:ALA:N     | 2.54                     | 0.41              |
| 2:BT:126:THR:O    | 2:BT:130:ILE:HG13  | 2.21                     | 0.41              |
| 1:BX:48:GLU:HG2   | 1:BX:49:THR:N      | 2.35                     | 0.41              |
| 1:BX:81:CYS:HA    | 10:BX:200:CYC:HHD  | 2.02                     | 0.41              |
| 2:BY:39:ARG:O     | 2:BY:43:VAL:HG23   | 2.20                     | 0.41              |
| 2:BY:160:LEU:HD12 | 2:BY:160:LEU:HA    | 1.91                     | 0.41              |
| 1:BZ:3:ILE:HD11   | 1:BZ:25:ARG:HD3    | 2.02                     | 0.41              |
| 1:BZ:47:ARG:O     | 1:BZ:51:VAL:HG23   | 2.20                     | 0.41              |
| 1:BZ:66:VAL:HG21  | 8:CP:227:PRO:HB2   | 2.02                     | 0.41              |
| 2:CA:108:VAL:O    | 2:CA:112:LEU:HB2   | 2.20                     | 0.41              |
| 1:CE:30:VAL:CG2   | 2:CF:31:PHE:HA     | 2.50                     | 0.41              |
| 1:CG:101:VAL:HG12 | 1:CG:152:TYR:CD1   | 2.55                     | 0.41              |
| 2:CH:56:VAL:CG1   | 2:CH:85:LEU:HD12   | 2.50                     | 0.41              |
| 6:CM:788:MET:HG2  | 6:CM:792:TYR:HB3   | 2.03                     | 0.41              |
| 2:CU:124:SER:O    | 2:CU:128:GLN:HG3   | 2.21                     | 0.41              |
| 1:CY:48:GLU:HG2   | 1:CY:49:THR:H      | 1.86                     | 0.41              |
| 1:CY:50:ILE:HG21  | 1:CY:89:LEU:HD11   | 2.03                     | 0.41              |
| 1:CY:100:ASP:O    | 1:CY:103:PRO:HD2   | 2.21                     | 0.41              |
| 1:DC:30:VAL:HG21  | 2:DD:34:GLY:HA3    | 2.03                     | 0.41              |
| 1:DC:113:ARG:NH2  | 1:DC:161:SER:OXT   | 2.53                     | 0.41              |
| 8:DG:221:MET:HG3  | 1:DQ:52:LYS:HD3    | 2.02                     | 0.41              |
| 2:DK:129:ALA:O    | 2:DK:133:ILE:HG13  | 2.20                     | 0.41              |
| 1:DN:58:LEU:CD1   | 1:DN:128:GLN:HB3   | 2.51                     | 0.41              |
| 1:DQ:5:THR:CA     | 1:DQ:8:ILE:HG22    | 2.50                     | 0.41              |
| 1:DQ:23:LEU:HD22  | 2:DR:38:VAL:CG2    | 2.36                     | 0.41              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:DQ:47:ARG:HA    | 1:DQ:50:ILE:HG22   | 2.03                     | 0.41              |
| 2:DT:50:THR:O     | 2:DT:53:LYS:HB3    | 2.20                     | 0.41              |
| 1:DU:37:LEU:HD22  | 2:DV:24:MET:CE     | 2.50                     | 0.41              |
| 1:DU:85:MET:HB3   | 1:DU:85:MET:HE2    | 1.51                     | 0.41              |
| 2:DV:71:ASN:CB    | 2:DV:122:PRO:HD3   | 2.50                     | 0.41              |
| 5:DX:12:SER:HB2   | 5:DX:17:ARG:NH2    | 2.36                     | 0.41              |
| 9:EA:98:TYR:CE1   | 9:EA:161:MET:HB2   | 2.55                     | 0.41              |
| 2:AB:81:CYS:O     | 2:AB:85:LEU:HG     | 2.20                     | 0.41              |
| 2:AB:144:ASP:N    | 2:AB:144:ASP:OD1   | 2.52                     | 0.41              |
| 2:AD:105:ASP:OD2  | 2:AD:155:TYR:OH    | 2.37                     | 0.41              |
| 3:AE:58:LEU:CD2   | 3:AE:129:ALA:HB2   | 2.43                     | 0.41              |
| 4:AK:1:MET:HE3    | 4:AK:104:VAL:HG21  | 2.03                     | 0.41              |
| 4:AK:50:THR:O     | 4:AK:54:ARG:HG3    | 2.21                     | 0.41              |
| 4:AK:66:LEU:HD13  | 10:AK:200:CYC:HMC2 | 2.03                     | 0.41              |
| 2:AO:41:ALA:HB2   | 2:AO:96:MET:HE3    | 2.02                     | 0.41              |
| 2:AO:110:ASN:ND2  | 6:BD:481:LYS:O     | 2.52                     | 0.41              |
| 1:AR:131:ARG:HG3  | 1:AR:157:ILE:HD13  | 2.01                     | 0.41              |
| 2:AU:54:GLU:CD    | 2:AU:136:VAL:HG21  | 2.41                     | 0.41              |
| 2:AU:57:ALA:HA    | 2:AU:61:LEU:HD12   | 2.03                     | 0.41              |
| 1:AV:40:ALA:O     | 1:AV:44:THR:HG23   | 2.20                     | 0.41              |
| 2:AY:78:TYR:O     | 2:AY:82:ILE:HG12   | 2.21                     | 0.41              |
| 6:BD:253:LEU:HD12 | 6:BD:254:PRO:CD    | 2.49                     | 0.41              |
| 6:BD:358:ARG:HB2  | 6:BD:434:PHE:HB3   | 2.03                     | 0.41              |
| 9:BH:64:ALA:HA    | 9:BH:101:TRP:CZ2   | 2.55                     | 0.41              |
| 1:BK:130:VAL:HA   | 1:BK:133:MET:HE3   | 2.02                     | 0.41              |
| 2:BL:58:LYS:HE2   | 2:BL:58:LYS:HB3    | 1.89                     | 0.41              |
| 2:BL:83:ARG:NE    | 5:CJ:22:LEU:HD11   | 2.36                     | 0.41              |
| 3:BM:39:ILE:CG2   | 3:BM:96:VAL:HG11   | 2.43                     | 0.41              |
| 3:BM:64:GLU:O     | 3:BM:70:GLY:HA3    | 2.20                     | 0.41              |
| 3:BM:105:GLU:O    | 3:BM:110:ILE:HG13  | 2.21                     | 0.41              |
| 2:BN:12:ALA:HB1   | 2:BN:17:LYS:O      | 2.21                     | 0.41              |
| 2:BT:5:ILE:HG21   | 6:CM:169:ALA:HA    | 2.02                     | 0.41              |
| 2:BT:24:MET:SD    | 6:CM:58:GLU:HB2    | 2.61                     | 0.41              |
| 2:BT:113:LYS:NZ   | 2:CA:155:TYR:OH    | 2.51                     | 0.41              |
| 1:BX:62:ARG:O     | 1:BX:65:ILE:HG12   | 2.20                     | 0.41              |
| 1:BX:126:VAL:O    | 1:BX:130:VAL:HG23  | 2.21                     | 0.41              |
| 1:BZ:14:GLU:OE1   | 1:BZ:16:ARG:NE     | 2.35                     | 0.41              |
| 1:BZ:25:ARG:HG3   | 1:CE:25:ARG:HD3    | 2.02                     | 0.41              |
| 1:CC:101:VAL:HB   | 1:CC:155:PHE:CE2   | 2.55                     | 0.41              |
| 2:CD:79:ALA:HA    | 2:CD:82:ILE:HG22   | 2.02                     | 0.41              |
| 2:CF:100:ASP:OD1  | 2:CF:101:ALA:N     | 2.54                     | 0.41              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:CG:107:ILE:CG2  | 10:CG:200:CYC:HBB1 | 2.47                     | 0.41              |
| 6:CM:31:GLN:HG2   | 6:CM:267:TYR:OH    | 2.21                     | 0.41              |
| 6:CM:52:LEU:HD11  | 6:CM:216:ALA:CB    | 2.47                     | 0.41              |
| 9:CQ:131:LEU:HD11 | 9:CQ:135:ALA:HB1   | 2.01                     | 0.41              |
| 9:CQ:235:GLU:HG3  | 1:DA:45:GLY:HA2    | 2.03                     | 0.41              |
| 2:CS:123:ILE:O    | 2:CS:127:VAL:HG23  | 2.20                     | 0.41              |
| 1:CV:48:GLU:HG2   | 1:CV:49:THR:N      | 2.36                     | 0.41              |
| 2:CZ:66:THR:CA    | 2:CZ:72:MET:HB3    | 2.33                     | 0.41              |
| 2:DB:36:LEU:HD11  | 2:DB:144:ASP:CB    | 2.51                     | 0.41              |
| 1:DC:50:ILE:CD1   | 1:DC:136:VAL:HG12  | 2.49                     | 0.41              |
| 8:DH:203:PHE:HZ   | 8:DY:219:LEU:HD13  | 1.86                     | 0.41              |
| 1:DL:131:ARG:N    | 1:DL:157:ILE:HD11  | 2.36                     | 0.41              |
| 2:DR:43:VAL:HG11  | 2:DR:141:VAL:HG12  | 2.03                     | 0.41              |
| 1:DS:77:MET:HE2   | 1:DS:77:MET:HA     | 2.02                     | 0.41              |
| 2:DT:73:TYR:O     | 2:DT:74:THR:OG1    | 2.33                     | 0.41              |
| 1:DU:140:LEU:HD12 | 1:DU:140:LEU:O     | 2.21                     | 0.41              |
| 5:DX:27:PHE:CE1   | 5:DX:29:LYS:HE3    | 2.56                     | 0.41              |
| 9:EA:32:ASN:OD1   | 9:EA:35:ASP:HB2    | 2.21                     | 0.41              |
| 9:EA:151:ILE:O    | 9:EA:155:ARG:HG3   | 2.19                     | 0.41              |
| 9:EA:269:VAL:HG23 | 9:EA:288:TRP:CE3   | 2.49                     | 0.41              |
| 1:AA:50:ILE:HD12  | 1:AA:136:VAL:HG12  | 2.03                     | 0.41              |
| 1:AA:71:ASN:OD1   | 10:AA:200:CYC:HBD2 | 2.20                     | 0.41              |
| 1:AC:91:LEU:HD21  | 1:AC:107:ILE:CG2   | 2.51                     | 0.41              |
| 1:AC:123:ILE:HG13 | 1:AC:160:MET:O     | 2.21                     | 0.41              |
| 2:AD:66:THR:HG21  | 10:AE:200:CYC:CBA  | 2.49                     | 0.41              |
| 1:AH:65:ILE:HG23  | 10:AH:200:CYC:OC   | 2.21                     | 0.41              |
| 2:AL:119:LEU:HD23 | 2:AL:119:LEU:HA    | 1.95                     | 0.41              |
| 2:AL:131:GLN:O    | 2:AL:135:GLU:HG2   | 2.20                     | 0.41              |
| 1:AN:61:LYS:HG2   | 1:AN:62:ARG:HG2    | 2.03                     | 0.41              |
| 1:AN:141:MET:HE3  | 1:AN:141:MET:HB2   | 1.97                     | 0.41              |
| 2:AO:122:PRO:HB2  | 2:AO:125:SER:HB2   | 2.02                     | 0.41              |
| 1:AP:89:LEU:HD12  | 1:AP:89:LEU:HA     | 1.91                     | 0.41              |
| 1:AP:108:GLY:O    | 1:AP:112:VAL:HG21  | 2.21                     | 0.41              |
| 1:AP:143:SER:HB2  | 1:DN:147:ALA:HB2   | 2.02                     | 0.41              |
| 1:AR:47:ARG:HD2   | 2:AS:18:TYR:CZ     | 2.56                     | 0.41              |
| 1:AR:109:LEU:O    | 1:AR:112:VAL:HG12  | 2.20                     | 0.41              |
| 2:AS:91:TYR:HB3   | 2:AS:104:LEU:HD23  | 2.03                     | 0.41              |
| 2:AU:60:LEU:HD23  | 2:AU:65:VAL:HG11   | 2.02                     | 0.41              |
| 1:AV:48:GLU:HG2   | 1:AV:49:THR:N      | 2.36                     | 0.41              |
| 1:AV:65:ILE:HD13  | 10:AV:200:CYC:HMC2 | 2.02                     | 0.41              |
| 1:AV:88:TYR:OH    | 1:AV:112:VAL:HG21  | 2.21                     | 0.41              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AV:98:SER:HB3    | 2:AW:9:ILE:HD11    | 2.03                     | 0.41              |
| 2:AW:111:GLY:O     | 2:AW:115:THR:OG1   | 2.15                     | 0.41              |
| 1:AX:2:SER:HB2     | 1:AX:5:THR:HB      | 2.01                     | 0.41              |
| 1:AX:121:THR:HG22  | 10:AX:200:CYC:HMC3 | 2.03                     | 0.41              |
| 1:AX:123:ILE:HD11  | 1:AX:160:MET:SD    | 2.61                     | 0.41              |
| 1:AX:127:ALA:HB2   | 1:AX:160:MET:HB3   | 2.03                     | 0.41              |
| 2:AY:62:TYR:N      | 2:AY:66:THR:HG21   | 2.36                     | 0.41              |
| 5:BA:6:ILE:O       | 5:BA:6:ILE:HG13    | 2.20                     | 0.41              |
| 6:BD:274:SER:OG    | 6:BD:277:GLU:OE1   | 2.38                     | 0.41              |
| 6:BD:755:ILE:HD12  | 6:BD:758:SER:N     | 2.36                     | 0.41              |
| 10:BD:901:CYC:HBD1 | 10:BD:901:CYC:HHA  | 2.03                     | 0.41              |
| 9:BH:88:ASN:HD21   | 9:BH:174:GLU:HB3   | 1.86                     | 0.41              |
| 9:BH:112:ARG:NH2   | 9:BH:116:LEU:HD21  | 2.36                     | 0.41              |
| 1:BI:37:LEU:O      | 1:BI:41:GLU:HG3    | 2.20                     | 0.41              |
| 1:BI:109:LEU:HD12  | 1:BI:109:LEU:HA    | 1.94                     | 0.41              |
| 1:BK:2:SER:OG      | 1:BK:4:VAL:HG22    | 2.20                     | 0.41              |
| 1:BK:25:ARG:HG3    | 1:BK:26:ILE:N      | 2.36                     | 0.41              |
| 2:BL:39:ARG:HH12   | 2:BL:42:SER:HB3    | 1.86                     | 0.41              |
| 2:BL:116:TYR:HB3   | 2:BL:121:VAL:HB    | 2.03                     | 0.41              |
| 3:BM:23:LEU:HD13   | 2:BN:42:SER:OG     | 2.21                     | 0.41              |
| 2:BN:64:ASP:N      | 2:BN:64:ASP:OD1    | 2.54                     | 0.41              |
| 2:BN:116:TYR:CD1   | 2:BN:121:VAL:HG21  | 2.56                     | 0.41              |
| 1:BP:41:GLU:HA     | 1:BP:44:THR:CG2    | 2.51                     | 0.41              |
| 1:BP:158:GLY:HA2   | 1:BP:161:SER:O     | 2.21                     | 0.41              |
| 1:BR:91:LEU:O      | 1:BR:104:ILE:HG12  | 2.21                     | 0.41              |
| 4:BS:123:PRO:HB3   | 2:CA:64:ASP:HB3    | 2.03                     | 0.41              |
| 4:BS:129:ARG:HE    | 4:BS:133:ILE:HG13  | 1.86                     | 0.41              |
| 2:BT:35:GLU:OE2    | 6:CM:48:GLN:HG3    | 2.21                     | 0.41              |
| 2:BT:81:CYS:O      | 2:BT:85:LEU:HG     | 2.20                     | 0.41              |
| 1:BX:102:THR:HB    | 1:BX:103:PRO:HD3   | 2.02                     | 0.41              |
| 1:BX:113:ARG:NH1   | 1:BX:160:MET:O     | 2.51                     | 0.41              |
| 1:CC:74:GLY:O      | 1:CC:78:THR:HG23   | 2.20                     | 0.41              |
| 2:CD:121:VAL:HG13  | 10:CD:200:CYC:NC   | 2.36                     | 0.41              |
| 1:CE:57:ARG:O      | 1:CE:60:GLN:HG3    | 2.21                     | 0.41              |
| 1:CE:71:ASN:OD1    | 10:CE:200:CYC:HMD2 | 2.21                     | 0.41              |
| 1:CG:147:ALA:HA    | 1:CG:150:SER:OG    | 2.20                     | 0.41              |
| 2:CH:116:TYR:HB3   | 2:CH:123:ILE:HD11  | 2.02                     | 0.41              |
| 5:CJ:17:ARG:NE     | 6:CM:240:VAL:HG21  | 2.36                     | 0.41              |
| 6:CM:701:ARG:HD2   | 6:CM:705:GLU:OE2   | 2.20                     | 0.41              |
| 6:CM:760:PHE:O     | 6:CM:764:GLU:HG3   | 2.21                     | 0.41              |
| 6:CM:827:ALA:HB2   | 2:DR:87:TYR:OH     | 2.20                     | 0.41              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:CS:47:ASN:O     | 2:CS:50:THR:HB     | 2.21                     | 0.41              |
| 1:CT:70:GLY:N     | 1:CY:64:ASP:HB3    | 2.35                     | 0.41              |
| 2:CU:83:ARG:NH2   | 2:CU:84:ASP:OD1    | 2.44                     | 0.41              |
| 2:CW:50:THR:HG21  | 9:DI:62:GLN:NE2    | 2.36                     | 0.41              |
| 1:CY:152:TYR:O    | 1:CY:156:VAL:HG12  | 2.21                     | 0.41              |
| 2:CZ:35:GLU:CA    | 2:CZ:38:VAL:HG12   | 2.47                     | 0.41              |
| 2:CZ:112:LEU:HA   | 2:CZ:115:THR:CG2   | 2.51                     | 0.41              |
| 1:DC:116:TYR:CE2  | 1:DC:126:VAL:HG21  | 2.56                     | 0.41              |
| 1:DC:124:GLU:OE1  | 1:DC:124:GLU:N     | 2.39                     | 0.41              |
| 8:DG:227:PRO:HG3  | 1:DQ:59:PHE:CE2    | 2.55                     | 0.41              |
| 8:DG:238:GLN:HA   | 1:DL:52:LYS:CD     | 2.50                     | 0.41              |
| 9:DI:88:ASN:HB2   | 9:DI:170:LYS:CD    | 2.50                     | 0.41              |
| 9:DI:286:ILE:HD13 | 9:DI:288:TRP:CZ2   | 2.55                     | 0.41              |
| 1:DL:37:LEU:HB3   | 2:DM:24:MET:HE3    | 2.03                     | 0.41              |
| 1:DL:147:ALA:HA   | 1:DL:150:SER:HB3   | 2.02                     | 0.41              |
| 1:DN:109:LEU:HD13 | 1:DN:159:LYS:HG2   | 2.03                     | 0.41              |
| 1:DN:159:LYS:HD3  | 1:DN:159:LYS:HA    | 1.92                     | 0.41              |
| 1:DU:92:VAL:HG11  | 1:DU:153:PHE:CZ    | 2.56                     | 0.41              |
| 2:DV:33:SER:HB3   | 2:DV:37:ARG:HE     | 1.85                     | 0.41              |
| 2:DV:149:MET:HE2  | 2:DV:153:LEU:HD11  | 2.01                     | 0.41              |
| 9:EA:69:LYS:HB3   | 9:EA:69:LYS:HE3    | 1.82                     | 0.41              |
| 2:AD:64:ASP:OD1   | 2:AD:67:ARG:NH1    | 2.48                     | 0.41              |
| 4:AK:67:ILE:HG21  | 10:BD:902:CYC:HBA2 | 2.02                     | 0.41              |
| 2:AO:56:VAL:HG12  | 2:AO:61:LEU:HG     | 2.02                     | 0.41              |
| 1:AP:109:LEU:HA   | 1:AP:112:VAL:CG2   | 2.50                     | 0.41              |
| 2:AQ:61:LEU:HA    | 2:AQ:66:THR:HG21   | 2.03                     | 0.41              |
| 2:AS:141:VAL:HG22 | 2:AS:145:ALA:HB3   | 2.03                     | 0.41              |
| 2:AU:73:TYR:CE1   | 10:AV:200:CYC:HBB3 | 2.56                     | 0.41              |
| 2:AU:119:LEU:HD21 | 5:BB:4:PHE:HZ      | 1.85                     | 0.41              |
| 1:AX:36:ARG:NH1   | 1:AX:36:ARG:HB3    | 2.35                     | 0.41              |
| 2:AY:81:CYS:HA    | 10:AY:200:CYC:HAC1 | 1.88                     | 0.41              |
| 6:BD:153:LEU:HA   | 6:BD:156:MET:SD    | 2.61                     | 0.41              |
| 6:BD:489:PRO:HD2  | 6:BD:492:ASN:ND2   | 2.34                     | 0.41              |
| 6:BD:816:GLN:HE22 | 6:BD:887:SER:HB3   | 1.86                     | 0.41              |
| 9:BH:281:ASN:O    | 9:BH:282:VAL:HB    | 2.21                     | 0.41              |
| 1:BI:5:THR:O      | 1:BI:9:VAL:HG23    | 2.21                     | 0.41              |
| 1:BK:25:ARG:NH1   | 1:BK:26:ILE:HD11   | 2.36                     | 0.41              |
| 3:BM:37:ILE:HA    | 3:BM:97:LEU:HD21   | 2.03                     | 0.41              |
| 1:BP:131:ARG:O    | 1:BP:135:GLU:HG2   | 2.21                     | 0.41              |
| 2:BQ:115:THR:CG2  | 6:CM:428:PRO:HG2   | 2.51                     | 0.41              |
| 10:CC:200:CYC:O1A | 2:CH:66:THR:HG21   | 2.21                     | 0.41              |

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| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 2:CF:116:TYR:CD2   | 2:CF:160:LEU:HD21  | 2.55                     | 0.41              |
| 2:CF:144:ASP:N     | 2:CF:144:ASP:OD1   | 2.54                     | 0.41              |
| 1:CG:144:ASP:OD1   | 1:CG:145:ASP:N     | 2.52                     | 0.41              |
| 6:CM:182:LEU:HD12  | 6:CM:182:LEU:O     | 2.20                     | 0.41              |
| 6:CM:748:GLU:O     | 6:CM:749:ARG:HD3   | 2.20                     | 0.41              |
| 9:CQ:277:TRP:CD1   | 9:CQ:305:LEU:HD21  | 2.55                     | 0.41              |
| 1:CR:116:TYR:CD2   | 1:CR:123:ILE:HG22  | 2.55                     | 0.41              |
| 10:CR:200:CYC:HAA1 | 2:CW:61:LEU:HD22   | 2.03                     | 0.41              |
| 2:CW:134:LYS:HA    | 2:CW:137:THR:HG22  | 2.03                     | 0.41              |
| 1:CY:82:LEU:HD21   | 8:DY:221:MET:HE3   | 2.03                     | 0.41              |
| 1:CY:90:ARG:HG2    | 2:CZ:18:TYR:CE1    | 2.56                     | 0.41              |
| 2:CZ:71:ASN:ND2    | 2:CZ:121:VAL:HA    | 2.36                     | 0.41              |
| 10:DA:200:CYC:HMA1 | 10:DA:200:CYC:HB   | 1.84                     | 0.41              |
| 8:DG:237:ALA:HA    | 8:DG:240:ILE:CD1   | 2.51                     | 0.41              |
| 9:DI:248:LEU:HD11  | 9:DI:277:TRP:CZ3   | 2.56                     | 0.41              |
| 1:DJ:37:LEU:HD11   | 2:DK:24:MET:HE2    | 2.01                     | 0.41              |
| 1:DL:17:TYR:HB3    | 2:DM:45:SER:HB2    | 2.03                     | 0.41              |
| 2:DM:134:LYS:HE2   | 2:DM:154:ASP:OD1   | 2.21                     | 0.41              |
| 10:DM:200:CYC:HMA1 | 10:DM:200:CYC:NB   | 2.36                     | 0.41              |
| 1:DQ:93:THR:O      | 1:DQ:97:VAL:HG23   | 2.21                     | 0.41              |
| 2:DT:3:ASP:OD1     | 2:DT:6:THR:OG1     | 2.27                     | 0.41              |
| 9:EA:86:LEU:HD23   | 9:EA:95:CYS:SG     | 2.61                     | 0.41              |
| 9:EA:223:LEU:HG    | 9:EA:301:VAL:CG1   | 2.50                     | 0.41              |
| 1:AA:81:CYS:HA     | 10:AA:200:CYC:HAC1 | 1.98                     | 0.40              |
| 1:AA:81:CYS:O      | 1:AA:85:MET:HG2    | 2.21                     | 0.40              |
| 3:AE:17:TYR:CE1    | 2:AF:90:ARG:HG3    | 2.56                     | 0.40              |
| 4:AK:65:GLU:O      | 4:AK:71:GLY:HA3    | 2.21                     | 0.40              |
| 2:AL:132:ALA:O     | 2:AL:136:VAL:HG23  | 2.21                     | 0.40              |
| 1:AN:88:TYR:HD1    | 1:AN:91:LEU:HD12   | 1.86                     | 0.40              |
| 2:AO:51:ILE:HG23   | 2:AO:136:VAL:HG12  | 2.03                     | 0.40              |
| 1:AP:68:PRO:HA     | 1:AP:73:TYR:CG     | 2.55                     | 0.40              |
| 1:AR:76:GLU:HG2    | 1:AR:77:MET:N      | 2.36                     | 0.40              |
| 1:AV:39:ILE:HG23   | 1:AV:141:MET:CE    | 2.51                     | 0.40              |
| 1:AV:58:LEU:CD2    | 1:AV:129:SER:HB3   | 2.41                     | 0.40              |
| 1:AZ:58:LEU:HD22   | 1:AZ:129:SER:HB2   | 2.04                     | 0.40              |
| 5:BB:1:MET:CE      | 5:BB:32:PRO:HB3    | 2.51                     | 0.40              |
| 6:BD:446:VAL:HB    | 6:BD:617:ARG:HG3   | 2.03                     | 0.40              |
| 9:BH:92:THR:O      | 9:BH:96:ARG:HG2    | 2.21                     | 0.40              |
| 9:BH:197:THR:HG21  | 9:BH:296:GLY:O     | 2.21                     | 0.40              |
| 9:BH:232:VAL:CG1   | 9:EA:314:ASN:HD22  | 2.28                     | 0.40              |
| 1:BK:63:PRO:HA     | 1:BK:66:VAL:HG12   | 2.02                     | 0.40              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:BQ:85:LEU:HD23  | 2:BQ:85:LEU:HA     | 1.84                     | 0.40              |
| 4:BS:4:ALA:O      | 4:BS:7:THR:HG22    | 2.21                     | 0.40              |
| 2:BT:3:ASP:OD1    | 2:BT:6:THR:HG22    | 2.20                     | 0.40              |
| 2:BT:134:LYS:HD2  | 2:BT:150:GLY:HA3   | 2.03                     | 0.40              |
| 1:CC:105:GLU:OE1  | 1:CC:159:LYS:NZ    | 2.54                     | 0.40              |
| 2:CD:64:ASP:HA    | 2:CD:67:ARG:NH1    | 2.36                     | 0.40              |
| 1:CE:27:LYS:HD2   | 2:CF:35:GLU:OE1    | 2.21                     | 0.40              |
| 7:CO:83:PRO:O     | 7:CO:86:VAL:HG12   | 2.21                     | 0.40              |
| 9:CQ:250:LEU:HD22 | 9:CQ:286:ILE:HD12  | 2.03                     | 0.40              |
| 9:CQ:291:LEU:HD23 | 9:CQ:299:PHE:HE2   | 1.86                     | 0.40              |
| 1:CR:36:ARG:CZ    | 1:CR:99:GLY:HA2    | 2.51                     | 0.40              |
| 1:CV:46:SER:CB    | 1:CV:140:LEU:HD23  | 2.50                     | 0.40              |
| 1:CY:47:ARG:CA    | 1:CY:50:ILE:HG22   | 2.52                     | 0.40              |
| 1:CY:50:ILE:CD1   | 1:CY:136:VAL:HB    | 2.51                     | 0.40              |
| 1:CY:68:PRO:HA    | 1:CY:73:TYR:CD1    | 2.56                     | 0.40              |
| 1:CY:77:MET:HE3   | 8:DH:201:ARG:HB2   | 2.00                     | 0.40              |
| 2:CZ:71:ASN:ND2   | 2:CZ:122:PRO:HD3   | 2.31                     | 0.40              |
| 1:DA:152:TYR:O    | 1:DA:156:VAL:HG23  | 2.20                     | 0.40              |
| 1:DC:68:PRO:HG3   | 1:DC:73:TYR:CE1    | 2.56                     | 0.40              |
| 9:DI:112:ARG:NH1  | 9:DI:115:GLU:OE1   | 2.54                     | 0.40              |
| 1:DJ:27:LYS:O     | 1:DJ:30:VAL:HG22   | 2.22                     | 0.40              |
| 1:DJ:50:ILE:HD11  | 1:DJ:140:LEU:CD1   | 2.36                     | 0.40              |
| 1:DJ:123:ILE:HG12 | 1:DJ:160:MET:O     | 2.21                     | 0.40              |
| 2:DK:39:ARG:NH1   | 2:DK:40:ALA:HB2    | 2.37                     | 0.40              |
| 2:DK:100:ASP:OD2  | 2:DK:102:SER:HB3   | 2.21                     | 0.40              |
| 1:DL:141:MET:CE   | 1:DL:149:ALA:HB3   | 2.50                     | 0.40              |
| 1:DN:27:LYS:HA    | 1:DN:30:VAL:HG22   | 2.02                     | 0.40              |
| 2:DO:108:VAL:O    | 2:DO:112:LEU:HD22  | 2.21                     | 0.40              |
| 1:DQ:47:ARG:C     | 1:DQ:50:ILE:HG22   | 2.42                     | 0.40              |
| 2:DR:104:LEU:O    | 2:DR:108:VAL:N     | 2.43                     | 0.40              |
| 1:DS:39:ILE:CD1   | 1:DS:145:ASP:HB3   | 2.51                     | 0.40              |
| 1:DS:81:CYS:HB3   | 10:DS:200:CYC:HBC1 | 1.88                     | 0.40              |
| 2:DV:71:ASN:HA    | 2:DV:77:ARG:HH11   | 1.85                     | 0.40              |
| 3:AE:7:VAL:HG11   | 3:AE:26:ILE:HD11   | 2.02                     | 0.40              |
| 1:AH:83:ARG:HD2   | 8:BG:206:GLN:NE2   | 2.37                     | 0.40              |
| 2:AI:56:VAL:HG21  | 2:AI:82:ILE:CD1    | 2.51                     | 0.40              |
| 2:AI:88:TYR:OH    | 2:AI:116:TYR:OH    | 2.28                     | 0.40              |
| 2:AI:112:LEU:CD1  | 10:AI:200:CYC:HMB3 | 2.52                     | 0.40              |
| 4:AK:102:ASN:O    | 4:AK:105:LEU:HB3   | 2.21                     | 0.40              |
| 2:AL:71:ASN:OD1   | 10:AL:200:CYC:HMD2 | 2.21                     | 0.40              |
| 1:AV:27:LYS:HE2   | 2:AW:38:VAL:HG11   | 2.02                     | 0.40              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AV:57:ARG:O     | 1:AV:60:GLN:HG3    | 2.20                     | 0.40              |
| 1:AX:85:MET:SD    | 10:AX:200:CYC:HBC1 | 2.61                     | 0.40              |
| 1:AX:131:ARG:N    | 1:AX:157:ILE:HD11  | 2.37                     | 0.40              |
| 2:AY:10:ASN:ND2   | 6:BD:532:VAL:HB    | 2.36                     | 0.40              |
| 6:BD:12:ALA:C     | 6:BD:13:ARG:HD3    | 2.42                     | 0.40              |
| 6:BD:210:PHE:C    | 6:BD:211:ARG:HG3   | 2.42                     | 0.40              |
| 6:BD:447:TYR:HB2  | 6:BD:451:ASN:HD22  | 1.86                     | 0.40              |
| 6:BD:756:ILE:HG22 | 6:BD:757:ASN:ND2   | 2.37                     | 0.40              |
| 6:BD:785:GLU:O    | 6:BD:789:LYS:HG3   | 2.20                     | 0.40              |
| 1:BI:79:ALA:HA    | 1:BI:82:LEU:HG     | 2.02                     | 0.40              |
| 10:BI:200:CYC:O2A | 2:BN:66:THR:HG21   | 2.20                     | 0.40              |
| 2:BJ:123:ILE:H    | 2:BJ:123:ILE:HD12  | 1.86                     | 0.40              |
| 1:BP:109:LEU:HA   | 1:BP:112:VAL:CG2   | 2.52                     | 0.40              |
| 1:BR:7:SER:HA     | 1:BR:22:GLU:OE2    | 2.22                     | 0.40              |
| 1:BX:44:THR:O     | 1:BX:47:ARG:HG2    | 2.22                     | 0.40              |
| 2:BY:71:ASN:ND2   | 2:BY:122:PRO:HD3   | 2.37                     | 0.40              |
| 2:CA:6:THR:HG22   | 2:CA:10:ASN:OD1    | 2.21                     | 0.40              |
| 2:CD:47:ASN:OD1   | 2:CD:140:LEU:HD13  | 2.21                     | 0.40              |
| 1:CG:44:THR:HG23  | 2:CH:18:TYR:HB3    | 2.03                     | 0.40              |
| 2:CH:126:THR:HB   | 10:CH:200:CYC:HMC3 | 2.02                     | 0.40              |
| 6:CM:76:PHE:CE1   | 6:CM:139:ILE:HD12  | 2.56                     | 0.40              |
| 6:CM:253:LEU:HD12 | 6:CM:254:PRO:CD    | 2.51                     | 0.40              |
| 6:CM:293:ASP:OD1  | 6:CM:295:THR:HG22  | 2.22                     | 0.40              |
| 9:CQ:231:ILE:CG2  | 9:CQ:236:ASN:HB3   | 2.52                     | 0.40              |
| 1:CR:62:ARG:O     | 1:CR:65:ILE:HG12   | 2.21                     | 0.40              |
| 1:CR:66:VAL:HG22  | 1:CR:66:VAL:O      | 2.22                     | 0.40              |
| 1:CR:76:GLU:HB3   | 8:DZ:247:PRO:CG    | 2.35                     | 0.40              |
| 1:CR:115:MET:HG3  | 2:CW:78:TYR:CE1    | 2.55                     | 0.40              |
| 2:CS:34:GLY:O     | 2:CS:38:VAL:HG23   | 2.21                     | 0.40              |
| 2:CS:40:ALA:O     | 2:CS:44:ILE:HG12   | 2.20                     | 0.40              |
| 1:CV:3:ILE:HD11   | 1:CV:25:ARG:HE     | 1.86                     | 0.40              |
| 1:CV:108:GLY:C    | 1:CV:109:LEU:HD22  | 2.42                     | 0.40              |
| 1:CV:124:GLU:HG2  | 1:CV:125:ALA:N     | 2.36                     | 0.40              |
| 2:CW:56:VAL:CG1   | 2:CW:85:LEU:HD12   | 2.51                     | 0.40              |
| 1:CY:34:ALA:HA    | 2:CZ:28:LYS:HZ2    | 1.84                     | 0.40              |
| 2:CZ:10:ASN:O     | 2:CZ:14:VAL:HG22   | 2.21                     | 0.40              |
| 2:CZ:39:ARG:NH1   | 2:CZ:141:VAL:O     | 2.55                     | 0.40              |
| 2:CZ:82:ILE:HD13  | 2:CZ:85:LEU:HD12   | 2.03                     | 0.40              |
| 1:DC:116:TYR:HD1  | 1:DC:116:TYR:HA    | 1.76                     | 0.40              |
| 1:DC:121:THR:CG2  | 10:DC:200:CYC:HMC3 | 2.51                     | 0.40              |
| 2:DD:94:TYR:HB3   | 2:DD:103:ILE:HD13  | 2.03                     | 0.40              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 9:DI:187:LYS:HA   | 9:DI:203:ASP:OD1   | 2.21                     | 0.40              |
| 1:DJ:63:PRO:HG2   | 1:DS:68:PRO:O      | 2.20                     | 0.40              |
| 1:DN:43:LEU:HD23  | 1:DN:43:LEU:HA     | 1.85                     | 0.40              |
| 1:DN:87:TYR:O     | 1:DN:91:LEU:HG     | 2.22                     | 0.40              |
| 2:DO:57:ALA:CA    | 2:DO:61:LEU:HD12   | 2.45                     | 0.40              |
| 2:DT:84:ASP:OD2   | 10:DT:200:CYC:ND   | 2.54                     | 0.40              |
| 1:DU:64:ASP:OD1   | 1:DU:64:ASP:N      | 2.50                     | 0.40              |
| 9:EA:248:LEU:HD21 | 9:EA:277:TRP:CD2   | 2.56                     | 0.40              |
| 1:AC:7:SER:CB     | 1:AC:25:ARG:HH22   | 2.33                     | 0.40              |
| 2:AF:112:LEU:HD13 | 10:AF:200:CYC:HMB3 | 2.03                     | 0.40              |
| 1:AJ:107:ILE:HD13 | 4:AK:13:ASP:CG     | 2.41                     | 0.40              |
| 4:AK:41:ALA:HA    | 4:AK:44:ILE:CD1    | 2.51                     | 0.40              |
| 4:AK:114:ARG:HG2  | 4:AK:118:ASN:ND2   | 2.35                     | 0.40              |
| 1:AN:104:ILE:HG21 | 1:AN:156:VAL:CG2   | 2.51                     | 0.40              |
| 1:AP:39:ILE:HG12  | 1:AP:145:ASP:HB3   | 2.02                     | 0.40              |
| 1:AP:47:ARG:HG3   | 1:AP:48:GLU:N      | 2.36                     | 0.40              |
| 1:AR:56:ASP:OD1   | 1:AR:60:GLN:NE2    | 2.54                     | 0.40              |
| 2:AU:104:LEU:O    | 2:AU:108:VAL:HG22  | 2.22                     | 0.40              |
| 2:AU:108:VAL:HG23 | 2:AU:109:LEU:N     | 2.36                     | 0.40              |
| 2:AW:25:ASP:HA    | 2:AW:28:LYS:NZ     | 2.36                     | 0.40              |
| 2:AW:100:ASP:OD1  | 2:AW:101:ALA:N     | 2.54                     | 0.40              |
| 2:AW:112:LEU:HD12 | 2:AW:112:LEU:HA    | 1.72                     | 0.40              |
| 1:AZ:131:ARG:CA   | 1:AZ:157:ILE:HD11  | 2.50                     | 0.40              |
| 6:BD:344:GLU:OE2  | 6:BD:428:PRO:HB3   | 2.22                     | 0.40              |
| 6:BD:574:SER:OG   | 6:BD:577:GLU:OE1   | 2.40                     | 0.40              |
| 6:BD:702:THR:CB   | 2:DT:151:VAL:HG22  | 2.48                     | 0.40              |
| 7:BF:93:PRO:O     | 7:BF:95:PRO:HD3    | 2.22                     | 0.40              |
| 1:BK:83:ARG:NH2   | 1:BK:84:ASP:OD1    | 2.36                     | 0.40              |
| 2:BL:106:GLU:CD   | 6:CM:273:LEU:HD23  | 2.41                     | 0.40              |
| 3:BM:110:ILE:CG2  | 5:CJ:16:ILE:HD11   | 2.49                     | 0.40              |
| 1:BP:63:PRO:O     | 1:BP:67:SER:N      | 2.54                     | 0.40              |
| 1:BP:77:MET:SD    | 10:BP:200:CYC:HAD1 | 2.61                     | 0.40              |
| 1:BR:8:ILE:HG21   | 4:BS:1:MET:CE      | 2.52                     | 0.40              |
| 1:BR:61:LYS:HD2   | 1:BR:132:GLU:OE2   | 2.21                     | 0.40              |
| 2:BT:5:ILE:HD13   | 6:CM:46:TYR:OH     | 2.21                     | 0.40              |
| 1:BV:142:SER:O    | 1:BV:146:ALA:HB2   | 2.22                     | 0.40              |
| 2:CF:20:ASP:OD1   | 2:CF:21:GLY:N      | 2.47                     | 0.40              |
| 5:CJ:4:PHE:HE1    | 5:CJ:33:TYR:HD1    | 1.69                     | 0.40              |
| 5:CJ:15:ARG:CD    | 5:CJ:22:LEU:HD23   | 2.52                     | 0.40              |
| 5:CJ:18:THR:O     | 6:CM:239:LYS:HG2   | 2.21                     | 0.40              |
| 6:CM:56:ILE:HD12  | 6:CM:220:VAL:HG21  | 2.03                     | 0.40              |

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| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 6:CM:167:ILE:HD12  | 6:CM:219:ILE:HG22 | 2.03                     | 0.40              |
| 6:CM:413:MET:SD    | 6:CM:433:THR:HB   | 2.61                     | 0.40              |
| 6:CM:425:ARG:HD3   | 6:CM:429:GLN:HB2  | 2.03                     | 0.40              |
| 9:CQ:290:PHE:CE1   | 9:CQ:301:VAL:HG23 | 2.57                     | 0.40              |
| 10:CV:200:CYC:HBC2 | 10:CV:200:CYC:H2C | 1.72                     | 0.40              |
| 1:CY:64:ASP:HA     | 1:CY:67:SER:OG    | 2.21                     | 0.40              |
| 1:CY:71:ASN:ND2    | 1:CY:121:THR:HA   | 2.36                     | 0.40              |
| 1:CY:131:ARG:HA    | 1:CY:157:ILE:HD11 | 2.03                     | 0.40              |
| 2:CZ:61:LEU:HD12   | 2:CZ:61:LEU:HA    | 1.88                     | 0.40              |
| 2:CZ:111:GLY:O     | 2:CZ:114:GLU:HG3  | 2.21                     | 0.40              |
| 10:CZ:200:CYC:HMA1 | 10:CZ:200:CYC:NB  | 2.35                     | 0.40              |
| 1:DC:71:ASN:O      | 1:DC:71:ASN:ND2   | 2.51                     | 0.40              |
| 2:DD:36:LEU:O      | 2:DD:39:ARG:HG2   | 2.21                     | 0.40              |
| 9:DI:76:PRO:HB3    | 9:DI:123:ALA:CB   | 2.47                     | 0.40              |
| 1:DJ:66:VAL:O      | 1:DJ:73:TYR:HD1   | 2.05                     | 0.40              |
| 2:DK:64:ASP:N      | 2:DK:64:ASP:OD1   | 2.51                     | 0.40              |
| 1:DN:8:ILE:HG21    | 2:DO:1:MET:HE2    | 2.04                     | 0.40              |
| 10:DN:200:CYC:HBC2 | 10:DN:200:CYC:H2C | 1.76                     | 0.40              |
| 2:DR:25:ASP:OD1    | 2:DR:25:ASP:N     | 2.53                     | 0.40              |
| 2:DT:61:LEU:HD22   | 10:DU:200:CYC:CBA | 2.49                     | 0.40              |
| 1:DU:91:LEU:O      | 1:DU:104:ILE:HG12 | 2.21                     | 0.40              |
| 2:DV:100:ASP:OD1   | 2:DV:101:ALA:N    | 2.55                     | 0.40              |
| 2:DV:122:PRO:HG2   | 2:DV:125:SER:OG   | 2.21                     | 0.40              |
| 5:DX:34:ASP:N      | 5:DX:34:ASP:OD1   | 2.53                     | 0.40              |
| 1:AA:46:SER:CB     | 1:AA:140:LEU:HD21 | 2.52                     | 0.40              |
| 1:AC:159:LYS:HD2   | 1:AC:159:LYS:HA   | 1.94                     | 0.40              |
| 3:AE:40:ALA:HB2    | 3:AE:97:LEU:HD11  | 2.04                     | 0.40              |
| 2:AF:4:ALA:HB2     | 2:AF:99:GLY:C     | 2.42                     | 0.40              |
| 2:AF:37:ARG:NH1    | 2:AF:148:GLU:OE2  | 2.55                     | 0.40              |
| 2:AI:24:MET:O      | 2:AI:28:LYS:HG3   | 2.21                     | 0.40              |
| 2:AI:53:LYS:HE2    | 1:AJ:118:SER:O    | 2.21                     | 0.40              |
| 1:AJ:92:VAL:O      | 1:AJ:96:VAL:HG23  | 2.22                     | 0.40              |
| 2:AL:18:TYR:CE2    | 6:BD:161:ARG:HA   | 2.57                     | 0.40              |
| 2:AO:78:TYR:CE1    | 1:AP:115:MET:HG3  | 2.56                     | 0.40              |
| 6:BD:64:ALA:O      | 6:BD:68:VAL:HG22  | 2.20                     | 0.40              |
| 6:BD:867:PRO:HG3   | 2:DB:115:THR:OG1  | 2.22                     | 0.40              |
| 1:BI:108:GLY:HA2   | 2:BN:75:THR:OG1   | 2.22                     | 0.40              |
| 1:BK:51:VAL:HG12   | 1:BK:82:LEU:HD12  | 2.02                     | 0.40              |
| 3:BM:112:VAL:HA    | 3:BM:115:MET:HB3  | 2.02                     | 0.40              |
| 1:BP:37:LEU:HD22   | 2:BQ:24:MET:SD    | 2.61                     | 0.40              |
| 1:BP:47:ARG:O      | 1:BP:51:VAL:HG23  | 2.21                     | 0.40              |

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| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:BW:83:ARG:NH2   | 10:BW:200:CYC:O2A  | 2.54                     | 0.40              |
| 1:BX:137:ALA:O    | 1:BX:141:MET:HG2   | 2.21                     | 0.40              |
| 10:BY:200:CYC:HHA | 10:BY:200:CYC:HBD1 | 2.02                     | 0.40              |
| 1:BZ:67:SER:HB3   | 1:BZ:68:PRO:HD2    | 2.03                     | 0.40              |
| 1:CG:36:ARG:NH2   | 1:CG:152:TYR:OH    | 2.55                     | 0.40              |
| 1:CG:82:LEU:HA    | 1:CG:85:MET:HG3    | 2.02                     | 0.40              |
| 5:CK:31:VAL:HG11  | 5:CK:39:GLU:HG2    | 2.03                     | 0.40              |
| 6:CM:373:LEU:HB3  | 6:CM:374:PRO:HD3   | 2.04                     | 0.40              |
| 6:CM:504:PHE:HA   | 6:CM:505:PRO:HD3   | 1.92                     | 0.40              |
| 6:CM:578:PHE:O    | 6:CM:582:LEU:HG    | 2.21                     | 0.40              |
| 6:CM:622:GLN:O    | 6:CM:626:ILE:HG13  | 2.22                     | 0.40              |
| 6:CM:657:GLU:OE2  | 6:CM:668:ARG:NH2   | 2.54                     | 0.40              |
| 1:CR:92:VAL:HG21  | 1:CR:153:PHE:HE1   | 1.86                     | 0.40              |
| 1:CT:67:SER:O     | 1:CT:73:TYR:HB2    | 2.21                     | 0.40              |
| 1:CT:94:TYR:O     | 1:CT:97:VAL:HG22   | 2.22                     | 0.40              |
| 2:CU:134:LYS:HG3  | 2:CU:150:GLY:HA2   | 2.03                     | 0.40              |
| 10:CY:200:CYC:CAB | 2:DD:74:THR:HA     | 2.51                     | 0.40              |
| 9:DI:223:LEU:HA   | 9:DI:301:VAL:CG1   | 2.51                     | 0.40              |
| 1:DJ:16:ARG:CA    | 2:DK:90:ARG:HD2    | 2.51                     | 0.40              |
| 1:DQ:65:ILE:HD12  | 1:DQ:65:ILE:H      | 1.86                     | 0.40              |
| 9:EA:39:LEU:HD12  | 9:EA:39:LEU:O      | 2.21                     | 0.40              |
| 2:AB:59:SER:HB3   | 2:AB:132:ALA:HB2   | 2.02                     | 0.40              |
| 2:AB:112:LEU:CD2  | 2:AB:160:LEU:HD21  | 2.51                     | 0.40              |
| 1:AC:71:ASN:OD1   | 1:AC:121:THR:HA    | 2.21                     | 0.40              |
| 1:AH:85:MET:HG2   | 1:AH:129:SER:OG    | 2.21                     | 0.40              |
| 1:AH:153:PHE:O    | 1:AH:157:ILE:HG13  | 2.22                     | 0.40              |
| 2:AL:106:GLU:HG3  | 2:AL:107:ARG:CG    | 2.47                     | 0.40              |
| 1:AN:35:ALA:O     | 1:AN:39:ILE:HG13   | 2.21                     | 0.40              |
| 2:AO:56:VAL:O     | 2:AO:61:LEU:HG     | 2.21                     | 0.40              |
| 2:AO:85:LEU:HD22  | 2:AO:133:ILE:HD12  | 2.02                     | 0.40              |
| 1:AV:6:LYS:HA     | 1:AV:9:VAL:HG22    | 2.03                     | 0.40              |
| 1:AX:16:ARG:O     | 2:AY:94:TYR:OH     | 2.39                     | 0.40              |
| 2:AY:101:ALA:HB1  | 2:AY:155:TYR:CE2   | 2.56                     | 0.40              |
| 6:BD:210:PHE:CZ   | 6:BD:216:ALA:HB1   | 2.56                     | 0.40              |
| 6:BD:341:ARG:HD2  | 6:BD:341:ARG:HA    | 1.89                     | 0.40              |
| 6:BD:691:PHE:CZ   | 1:DC:51:VAL:HG21   | 2.56                     | 0.40              |
| 6:BD:723:VAL:HG13 | 6:BD:852:THR:HG23  | 2.03                     | 0.40              |
| 8:BG:211:THR:OG1  | 8:BG:212:ALA:N     | 2.53                     | 0.40              |
| 1:BK:64:ASP:OD1   | 1:BK:64:ASP:N      | 2.55                     | 0.40              |
| 3:BM:37:ILE:HG23  | 2:BN:24:MET:SD     | 2.62                     | 0.40              |
| 2:BN:123:ILE:O    | 2:BN:127:VAL:HG23  | 2.22                     | 0.40              |

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| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 10:BN:200:CYC:HAD2 | 5:CJ:33:TYR:OH    | 2.21                     | 0.40              |
| 2:BT:36:LEU:HD11   | 7:CO:85:GLN:HB2   | 2.04                     | 0.40              |
| 2:BY:47:ASN:CB     | 2:BY:140:LEU:HD21 | 2.51                     | 0.40              |
| 2:CD:53:LYS:HG3    | 1:CE:118:SER:O    | 2.21                     | 0.40              |
| 2:CD:60:LEU:HB3    | 2:CD:72:MET:HE3   | 2.03                     | 0.40              |
| 2:CD:160:LEU:HD23  | 2:CD:160:LEU:HA   | 1.96                     | 0.40              |
| 2:CF:3:ASP:H       | 2:CF:6:THR:HG1    | 1.70                     | 0.40              |
| 5:CK:31:VAL:HG21   | 5:CK:36:TRP:HE3   | 1.86                     | 0.40              |
| 6:CM:288:GLN:HG2   | 6:CM:396:PRO:O    | 2.20                     | 0.40              |
| 6:CM:691:PHE:CZ    | 1:DU:51:VAL:HG21  | 2.56                     | 0.40              |
| 6:CM:792:TYR:CE2   | 1:DQ:13:ALA:HA    | 2.57                     | 0.40              |
| 9:CQ:15:THR:HG23   | 9:CQ:16:LEU:N     | 2.37                     | 0.40              |
| 9:CQ:253:GLU:OE2   | 9:CQ:272:LYS:HG3  | 2.20                     | 0.40              |
| 1:CR:54:ALA:CB     | 1:CR:133:MET:HG3  | 2.52                     | 0.40              |
| 1:CR:78:THR:O      | 1:CR:82:LEU:HG    | 2.22                     | 0.40              |
| 1:CV:97:VAL:HG21   | 2:CW:19:LEU:HD11  | 2.04                     | 0.40              |
| 1:CV:134:LYS:HE3   | 1:CV:150:SER:HA   | 2.03                     | 0.40              |
| 2:CW:1:MET:CE      | 2:CW:103:ILE:HB   | 2.51                     | 0.40              |
| 1:CY:8:ILE:HD12    | 2:CZ:94:TYR:CD1   | 2.57                     | 0.40              |
| 1:DA:130:VAL:HB    | 1:DA:157:ILE:HD11 | 2.03                     | 0.40              |
| 2:DB:63:SER:OG     | 2:DB:65:VAL:HG22  | 2.20                     | 0.40              |
| 1:DC:107:ILE:HD12  | 2:DD:13:ASP:OD2   | 2.20                     | 0.40              |
| 8:DG:227:PRO:HG2   | 1:DQ:78:THR:HG21  | 2.03                     | 0.40              |
| 9:DI:264:PHE:HB3   | 9:DI:291:LEU:CD1  | 2.51                     | 0.40              |
| 1:DJ:30:VAL:HG11   | 2:DK:34:GLY:HA3   | 2.04                     | 0.40              |
| 1:DJ:37:LEU:HD11   | 2:DK:24:MET:SD    | 2.61                     | 0.40              |
| 1:DJ:68:PRO:HA     | 1:DJ:73:TYR:CG    | 2.57                     | 0.40              |
| 1:DJ:94:TYR:O      | 1:DJ:97:VAL:HG22  | 2.22                     | 0.40              |
| 1:DL:142:SER:OG    | 1:DL:145:ASP:OD2  | 2.39                     | 0.40              |
| 1:DN:47:ARG:HG3    | 1:DN:48:GLU:N     | 2.37                     | 0.40              |
| 2:DO:56:VAL:CG2    | 2:DO:85:LEU:HD12  | 2.52                     | 0.40              |
| 1:DQ:101:VAL:HG11  | 1:DQ:155:PHE:CD2  | 2.57                     | 0.40              |
| 2:DR:23:ALA:HA     | 2:DR:26:LYS:HG2   | 2.04                     | 0.40              |
| 2:DR:85:LEU:HA     | 2:DR:88:TYR:CD2   | 2.57                     | 0.40              |
| 9:EA:54:ALA:HB3    | 9:EA:111:TYR:CZ   | 2.55                     | 0.40              |
| 9:EA:254:ARG:HG2   | 9:EA:270:THR:OG1  | 2.20                     | 0.40              |

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone

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

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

| Mol | Chain | Analysed      | Favoured   | Allowed | Outliers | Percentiles |     |
|-----|-------|---------------|------------|---------|----------|-------------|-----|
| 1   | AA    | 158/161 (98%) | 157 (99%)  | 1 (1%)  | 0        | 100         | 100 |
| 1   | AC    | 158/161 (98%) | 153 (97%)  | 5 (3%)  | 0        | 100         | 100 |
| 1   | AH    | 158/161 (98%) | 157 (99%)  | 1 (1%)  | 0        | 100         | 100 |
| 1   | AJ    | 158/161 (98%) | 158 (100%) | 0       | 0        | 100         | 100 |
| 1   | AN    | 158/161 (98%) | 155 (98%)  | 3 (2%)  | 0        | 100         | 100 |
| 1   | AP    | 158/161 (98%) | 156 (99%)  | 2 (1%)  | 0        | 100         | 100 |
| 1   | AR    | 158/161 (98%) | 156 (99%)  | 2 (1%)  | 0        | 100         | 100 |
| 1   | AV    | 158/161 (98%) | 156 (99%)  | 2 (1%)  | 0        | 100         | 100 |
| 1   | AX    | 158/161 (98%) | 158 (100%) | 0       | 0        | 100         | 100 |
| 1   | AZ    | 158/161 (98%) | 157 (99%)  | 1 (1%)  | 0        | 100         | 100 |
| 1   | BI    | 158/161 (98%) | 158 (100%) | 0       | 0        | 100         | 100 |
| 1   | BK    | 158/161 (98%) | 152 (96%)  | 6 (4%)  | 0        | 100         | 100 |
| 1   | BP    | 158/161 (98%) | 157 (99%)  | 1 (1%)  | 0        | 100         | 100 |
| 1   | BR    | 158/161 (98%) | 157 (99%)  | 1 (1%)  | 0        | 100         | 100 |
| 1   | BV    | 158/161 (98%) | 154 (98%)  | 4 (2%)  | 0        | 100         | 100 |
| 1   | BX    | 158/161 (98%) | 156 (99%)  | 2 (1%)  | 0        | 100         | 100 |
| 1   | BZ    | 158/161 (98%) | 155 (98%)  | 3 (2%)  | 0        | 100         | 100 |
| 1   | CC    | 158/161 (98%) | 157 (99%)  | 1 (1%)  | 0        | 100         | 100 |
| 1   | CE    | 158/161 (98%) | 156 (99%)  | 2 (1%)  | 0        | 100         | 100 |
| 1   | CG    | 158/161 (98%) | 156 (99%)  | 2 (1%)  | 0        | 100         | 100 |
| 1   | CR    | 158/161 (98%) | 157 (99%)  | 1 (1%)  | 0        | 100         | 100 |
| 1   | CT    | 158/161 (98%) | 153 (97%)  | 5 (3%)  | 0        | 100         | 100 |
| 1   | CV    | 158/161 (98%) | 156 (99%)  | 2 (1%)  | 0        | 100         | 100 |
| 1   | CY    | 158/161 (98%) | 156 (99%)  | 2 (1%)  | 0        | 100         | 100 |
| 1   | DA    | 158/161 (98%) | 154 (98%)  | 4 (2%)  | 0        | 100         | 100 |

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| Mol | Chain | Analysed      | Favoured   | Allowed | Outliers | Percentiles |     |
|-----|-------|---------------|------------|---------|----------|-------------|-----|
| 1   | DC    | 158/161 (98%) | 156 (99%)  | 2 (1%)  | 0        | 100         | 100 |
| 1   | DJ    | 158/161 (98%) | 157 (99%)  | 1 (1%)  | 0        | 100         | 100 |
| 1   | DL    | 158/161 (98%) | 151 (96%)  | 6 (4%)  | 1 (1%)   | 22          | 43  |
| 1   | DN    | 158/161 (98%) | 157 (99%)  | 1 (1%)  | 0        | 100         | 100 |
| 1   | DQ    | 158/161 (98%) | 156 (99%)  | 2 (1%)  | 0        | 100         | 100 |
| 1   | DS    | 158/161 (98%) | 157 (99%)  | 1 (1%)  | 0        | 100         | 100 |
| 1   | DU    | 158/161 (98%) | 153 (97%)  | 5 (3%)  | 0        | 100         | 100 |
| 2   | AB    | 159/161 (99%) | 159 (100%) | 0       | 0        | 100         | 100 |
| 2   | AD    | 159/161 (99%) | 155 (98%)  | 4 (2%)  | 0        | 100         | 100 |
| 2   | AF    | 159/161 (99%) | 158 (99%)  | 1 (1%)  | 0        | 100         | 100 |
| 2   | AI    | 159/161 (99%) | 154 (97%)  | 5 (3%)  | 0        | 100         | 100 |
| 2   | AL    | 159/161 (99%) | 155 (98%)  | 4 (2%)  | 0        | 100         | 100 |
| 2   | AO    | 159/161 (99%) | 156 (98%)  | 3 (2%)  | 0        | 100         | 100 |
| 2   | AQ    | 159/161 (99%) | 154 (97%)  | 5 (3%)  | 0        | 100         | 100 |
| 2   | AS    | 159/161 (99%) | 156 (98%)  | 3 (2%)  | 0        | 100         | 100 |
| 2   | AU    | 159/161 (99%) | 153 (96%)  | 6 (4%)  | 0        | 100         | 100 |
| 2   | AW    | 159/161 (99%) | 156 (98%)  | 3 (2%)  | 0        | 100         | 100 |
| 2   | AY    | 159/161 (99%) | 159 (100%) | 0       | 0        | 100         | 100 |
| 2   | BJ    | 159/161 (99%) | 159 (100%) | 0       | 0        | 100         | 100 |
| 2   | BL    | 159/161 (99%) | 155 (98%)  | 4 (2%)  | 0        | 100         | 100 |
| 2   | BN    | 159/161 (99%) | 157 (99%)  | 2 (1%)  | 0        | 100         | 100 |
| 2   | BQ    | 159/161 (99%) | 156 (98%)  | 3 (2%)  | 0        | 100         | 100 |
| 2   | BT    | 159/161 (99%) | 155 (98%)  | 4 (2%)  | 0        | 100         | 100 |
| 2   | BW    | 159/161 (99%) | 157 (99%)  | 2 (1%)  | 0        | 100         | 100 |
| 2   | BY    | 159/161 (99%) | 153 (96%)  | 6 (4%)  | 0        | 100         | 100 |
| 2   | CA    | 159/161 (99%) | 154 (97%)  | 5 (3%)  | 0        | 100         | 100 |
| 2   | CD    | 159/161 (99%) | 157 (99%)  | 2 (1%)  | 0        | 100         | 100 |
| 2   | CF    | 159/161 (99%) | 157 (99%)  | 2 (1%)  | 0        | 100         | 100 |
| 2   | CH    | 159/161 (99%) | 158 (99%)  | 1 (1%)  | 0        | 100         | 100 |
| 2   | CS    | 159/161 (99%) | 156 (98%)  | 3 (2%)  | 0        | 100         | 100 |
| 2   | CU    | 159/161 (99%) | 154 (97%)  | 5 (3%)  | 0        | 100         | 100 |

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| Mol | Chain | Analysed      | Favoured  | Allowed | Outliers | Percentiles |     |
|-----|-------|---------------|-----------|---------|----------|-------------|-----|
| 2   | CW    | 159/161 (99%) | 153 (96%) | 6 (4%)  | 0        | 100         | 100 |
| 2   | CZ    | 159/161 (99%) | 147 (92%) | 12 (8%) | 0        | 100         | 100 |
| 2   | DB    | 159/161 (99%) | 149 (94%) | 9 (6%)  | 1 (1%)   | 22          | 43  |
| 2   | DD    | 159/161 (99%) | 154 (97%) | 5 (3%)  | 0        | 100         | 100 |
| 2   | DK    | 159/161 (99%) | 156 (98%) | 3 (2%)  | 0        | 100         | 100 |
| 2   | DM    | 159/161 (99%) | 156 (98%) | 3 (2%)  | 0        | 100         | 100 |
| 2   | DO    | 159/161 (99%) | 156 (98%) | 3 (2%)  | 0        | 100         | 100 |
| 2   | DR    | 159/161 (99%) | 151 (95%) | 8 (5%)  | 0        | 100         | 100 |
| 2   | DT    | 159/161 (99%) | 150 (94%) | 8 (5%)  | 1 (1%)   | 22          | 43  |
| 2   | DV    | 159/161 (99%) | 156 (98%) | 3 (2%)  | 0        | 100         | 100 |
| 3   | AE    | 158/161 (98%) | 157 (99%) | 1 (1%)  | 0        | 100         | 100 |
| 3   | BM    | 158/161 (98%) | 157 (99%) | 1 (1%)  | 0        | 100         | 100 |
| 4   | AK    | 167/169 (99%) | 164 (98%) | 3 (2%)  | 0        | 100         | 100 |
| 4   | BS    | 167/169 (99%) | 161 (96%) | 6 (4%)  | 0        | 100         | 100 |
| 5   | BA    | 65/67 (97%)   | 64 (98%)  | 1 (2%)  | 0        | 100         | 100 |
| 5   | BB    | 65/67 (97%)   | 65 (100%) | 0       | 0        | 100         | 100 |
| 5   | CJ    | 65/67 (97%)   | 64 (98%)  | 1 (2%)  | 0        | 100         | 100 |
| 5   | CK    | 65/67 (97%)   | 65 (100%) | 0       | 0        | 100         | 100 |
| 5   | DF    | 65/67 (97%)   | 62 (95%)  | 3 (5%)  | 0        | 100         | 100 |
| 5   | DX    | 65/67 (97%)   | 63 (97%)  | 2 (3%)  | 0        | 100         | 100 |
| 6   | BD    | 846/896 (94%) | 803 (95%) | 43 (5%) | 0        | 100         | 100 |
| 6   | CM    | 846/896 (94%) | 794 (94%) | 52 (6%) | 0        | 100         | 100 |
| 7   | BF    | 34/121 (28%)  | 30 (88%)  | 4 (12%) | 0        | 100         | 100 |
| 7   | CO    | 34/121 (28%)  | 34 (100%) | 0       | 0        | 100         | 100 |
| 8   | BG    | 55/249 (22%)  | 52 (94%)  | 3 (6%)  | 0        | 100         | 100 |
| 8   | CP    | 55/249 (22%)  | 51 (93%)  | 4 (7%)  | 0        | 100         | 100 |
| 8   | DG    | 52/249 (21%)  | 45 (86%)  | 7 (14%) | 0        | 100         | 100 |
| 8   | DH    | 52/249 (21%)  | 47 (90%)  | 5 (10%) | 0        | 100         | 100 |
| 8   | DY    | 52/249 (21%)  | 45 (86%)  | 7 (14%) | 0        | 100         | 100 |
| 8   | DZ    | 52/249 (21%)  | 46 (88%)  | 6 (12%) | 0        | 100         | 100 |
| 9   | BH    | 296/317 (93%) | 283 (96%) | 12 (4%) | 1 (0%)   | 37          | 59  |

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| Mol | Chain | Analysed          | Favoured    | Allowed  | Outliers | Percentiles |     |
|-----|-------|-------------------|-------------|----------|----------|-------------|-----|
| 9   | CQ    | 296/317 (93%)     | 282 (95%)   | 13 (4%)  | 1 (0%)   | 37          | 59  |
| 9   | DI    | 292/317 (92%)     | 279 (96%)   | 12 (4%)  | 1 (0%)   | 37          | 59  |
| 9   | EA    | 292/317 (92%)     | 279 (96%)   | 12 (4%)  | 1 (0%)   | 37          | 59  |
| All | All   | 14756/16484 (90%) | 14347 (97%) | 402 (3%) | 7 (0%)   | 100         | 100 |

All (7) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 9   | BH    | 176 | VAL  |
| 9   | CQ    | 176 | VAL  |
| 1   | DL    | 143 | SER  |
| 2   | DB    | 75  | THR  |
| 2   | DT    | 75  | THR  |
| 9   | DI    | 298 | ILE  |
| 9   | EA    | 298 | ILE  |

### 5.3.2 Protein sidechains [i](#)

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

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

| Mol | Chain | Analysed      | Rotameric  | Outliers | Percentiles |     |
|-----|-------|---------------|------------|----------|-------------|-----|
| 1   | AA    | 128/129 (99%) | 128 (100%) | 0        | 100         | 100 |
| 1   | AC    | 128/129 (99%) | 126 (98%)  | 2 (2%)   | 58          | 79  |
| 1   | AH    | 128/129 (99%) | 128 (100%) | 0        | 100         | 100 |
| 1   | AJ    | 128/129 (99%) | 127 (99%)  | 1 (1%)   | 79          | 91  |
| 1   | AN    | 128/129 (99%) | 128 (100%) | 0        | 100         | 100 |
| 1   | AP    | 128/129 (99%) | 128 (100%) | 0        | 100         | 100 |
| 1   | AR    | 128/129 (99%) | 127 (99%)  | 1 (1%)   | 79          | 91  |
| 1   | AV    | 128/129 (99%) | 128 (100%) | 0        | 100         | 100 |
| 1   | AX    | 128/129 (99%) | 128 (100%) | 0        | 100         | 100 |
| 1   | AZ    | 128/129 (99%) | 127 (99%)  | 1 (1%)   | 79          | 91  |
| 1   | BI    | 128/129 (99%) | 128 (100%) | 0        | 100         | 100 |

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| Mol | Chain | Analysed       | Rotameric  | Outliers | Percentiles |     |
|-----|-------|----------------|------------|----------|-------------|-----|
| 1   | BK    | 128/129 (99%)  | 126 (98%)  | 2 (2%)   | 58          | 79  |
| 1   | BP    | 128/129 (99%)  | 128 (100%) | 0        | 100         | 100 |
| 1   | BR    | 128/129 (99%)  | 127 (99%)  | 1 (1%)   | 79          | 91  |
| 1   | BV    | 128/129 (99%)  | 128 (100%) | 0        | 100         | 100 |
| 1   | BX    | 128/129 (99%)  | 128 (100%) | 0        | 100         | 100 |
| 1   | BZ    | 128/129 (99%)  | 127 (99%)  | 1 (1%)   | 79          | 91  |
| 1   | CC    | 128/129 (99%)  | 128 (100%) | 0        | 100         | 100 |
| 1   | CE    | 128/129 (99%)  | 128 (100%) | 0        | 100         | 100 |
| 1   | CG    | 128/129 (99%)  | 128 (100%) | 0        | 100         | 100 |
| 1   | CR    | 128/129 (99%)  | 128 (100%) | 0        | 100         | 100 |
| 1   | CT    | 128/129 (99%)  | 128 (100%) | 0        | 100         | 100 |
| 1   | CV    | 128/129 (99%)  | 128 (100%) | 0        | 100         | 100 |
| 1   | CY    | 128/129 (99%)  | 128 (100%) | 0        | 100         | 100 |
| 1   | DA    | 128/129 (99%)  | 127 (99%)  | 1 (1%)   | 79          | 91  |
| 1   | DC    | 128/129 (99%)  | 127 (99%)  | 1 (1%)   | 79          | 91  |
| 1   | DJ    | 128/129 (99%)  | 127 (99%)  | 1 (1%)   | 79          | 91  |
| 1   | DL    | 128/129 (99%)  | 128 (100%) | 0        | 100         | 100 |
| 1   | DN    | 128/129 (99%)  | 126 (98%)  | 2 (2%)   | 58          | 79  |
| 1   | DQ    | 128/129 (99%)  | 128 (100%) | 0        | 100         | 100 |
| 1   | DS    | 128/129 (99%)  | 127 (99%)  | 1 (1%)   | 79          | 91  |
| 1   | DU    | 128/129 (99%)  | 128 (100%) | 0        | 100         | 100 |
| 2   | AB    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | AD    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | AF    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | AI    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | AL    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | AO    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | AQ    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | AS    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | AU    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | AW    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |

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| Mol | Chain | Analysed       | Rotameric  | Outliers | Percentiles |     |
|-----|-------|----------------|------------|----------|-------------|-----|
| 2   | AY    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | BJ    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | BL    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | BN    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | BQ    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | BT    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | BW    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | BY    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | CA    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | CD    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | CF    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | CH    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | CS    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | CU    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | CW    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | CZ    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | DB    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | DD    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | DK    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | DM    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | DO    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | DR    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | DT    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 2   | DV    | 125/125 (100%) | 125 (100%) | 0        | 100         | 100 |
| 3   | AE    | 132/133 (99%)  | 132 (100%) | 0        | 100         | 100 |
| 3   | BM    | 132/133 (99%)  | 132 (100%) | 0        | 100         | 100 |
| 4   | AK    | 140/140 (100%) | 140 (100%) | 0        | 100         | 100 |
| 4   | BS    | 140/140 (100%) | 140 (100%) | 0        | 100         | 100 |
| 5   | BA    | 58/58 (100%)   | 57 (98%)   | 1 (2%)   | 56          | 78  |
| 5   | BB    | 58/58 (100%)   | 58 (100%)  | 0        | 100         | 100 |
| 5   | CJ    | 58/58 (100%)   | 58 (100%)  | 0        | 100         | 100 |

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| Mol | Chain | Analysed          | Rotameric    | Outliers | Percentiles |     |
|-----|-------|-------------------|--------------|----------|-------------|-----|
| 5   | CK    | 58/58 (100%)      | 58 (100%)    | 0        | 100         | 100 |
| 5   | DF    | 58/58 (100%)      | 58 (100%)    | 0        | 100         | 100 |
| 5   | DX    | 58/58 (100%)      | 58 (100%)    | 0        | 100         | 100 |
| 6   | BD    | 719/753 (96%)     | 716 (100%)   | 3 (0%)   | 89          | 96  |
| 6   | CM    | 719/753 (96%)     | 717 (100%)   | 2 (0%)   | 91          | 97  |
| 7   | BF    | 30/98 (31%)       | 30 (100%)    | 0        | 100         | 100 |
| 7   | CO    | 30/98 (31%)       | 30 (100%)    | 0        | 100         | 100 |
| 8   | BG    | 49/221 (22%)      | 49 (100%)    | 0        | 100         | 100 |
| 8   | CP    | 49/221 (22%)      | 49 (100%)    | 0        | 100         | 100 |
| 8   | DG    | 46/221 (21%)      | 45 (98%)     | 1 (2%)   | 47          | 72  |
| 8   | DH    | 46/221 (21%)      | 46 (100%)    | 0        | 100         | 100 |
| 8   | DY    | 46/221 (21%)      | 46 (100%)    | 0        | 100         | 100 |
| 8   | DZ    | 46/221 (21%)      | 46 (100%)    | 0        | 100         | 100 |
| 9   | BH    | 242/257 (94%)     | 241 (100%)   | 1 (0%)   | 89          | 96  |
| 9   | CQ    | 242/257 (94%)     | 242 (100%)   | 0        | 100         | 100 |
| 9   | DI    | 239/257 (93%)     | 237 (99%)    | 2 (1%)   | 79          | 91  |
| 9   | EA    | 239/257 (93%)     | 239 (100%)   | 0        | 100         | 100 |
| All | All   | 11980/13328 (90%) | 11955 (100%) | 25 (0%)  | 91          | 98  |

All (25) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | AC    | 16  | ARG  |
| 1   | AC    | 27  | LYS  |
| 1   | AJ    | 71  | ASN  |
| 1   | AR    | 71  | ASN  |
| 1   | AZ    | 16  | ARG  |
| 5   | BA    | 2   | ARG  |
| 6   | BD    | 13  | ARG  |
| 6   | BD    | 749 | ARG  |
| 6   | BD    | 811 | ARG  |
| 9   | BH    | 185 | ARG  |
| 1   | BK    | 16  | ARG  |
| 1   | BK    | 27  | LYS  |
| 1   | BR    | 71  | ASN  |
| 1   | BZ    | 71  | ASN  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 6   | CM    | 211 | ARG  |
| 6   | CM    | 811 | ARG  |
| 1   | DA    | 71  | ASN  |
| 1   | DC    | 71  | ASN  |
| 8   | DG    | 209 | LYS  |
| 9   | DI    | 254 | ARG  |
| 9   | DI    | 314 | ASN  |
| 1   | DJ    | 16  | ARG  |
| 1   | DN    | 36  | ARG  |
| 1   | DN    | 71  | ASN  |
| 1   | DS    | 71  | ASN  |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (66) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | AA    | 71  | ASN  |
| 3   | AE    | 71  | ASN  |
| 2   | AF    | 71  | ASN  |
| 2   | AI    | 71  | ASN  |
| 4   | AK    | 47  | ASN  |
| 4   | AK    | 72  | ASN  |
| 2   | AL    | 117 | ASN  |
| 2   | AO    | 71  | ASN  |
| 2   | AQ    | 71  | ASN  |
| 2   | AS    | 71  | ASN  |
| 1   | AV    | 60  | GLN  |
| 2   | AW    | 71  | ASN  |
| 2   | AY    | 71  | ASN  |
| 1   | AZ    | 71  | ASN  |
| 5   | BA    | 13  | GLN  |
| 6   | BD    | 48  | GLN  |
| 6   | BD    | 173 | ASN  |
| 7   | BF    | 116 | GLN  |
| 1   | BI    | 71  | ASN  |
| 2   | BJ    | 2   | GLN  |
| 1   | BK    | 10  | ASN  |
| 3   | BM    | 71  | ASN  |
| 2   | BN    | 71  | ASN  |
| 2   | BN    | 128 | GLN  |
| 2   | BQ    | 71  | ASN  |
| 4   | BS    | 103 | ASN  |
| 2   | BW    | 71  | ASN  |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 2          | BY           | 71         | ASN         |
| 2          | CA           | 71         | ASN         |
| 1          | CC           | 71         | ASN         |
| 2          | CD           | 2          | GLN         |
| 2          | CD           | 71         | ASN         |
| 1          | CE           | 60         | GLN         |
| 2          | CF           | 71         | ASN         |
| 2          | CH           | 71         | ASN         |
| 6          | CM           | 173        | ASN         |
| 6          | CM           | 415        | GLN         |
| 6          | CM           | 451        | ASN         |
| 6          | CM           | 492        | ASN         |
| 6          | CM           | 621        | ASN         |
| 8          | CP           | 226        | ASN         |
| 8          | CP           | 230        | ASN         |
| 9          | CQ           | 204        | ASN         |
| 1          | CR           | 71         | ASN         |
| 2          | CS           | 71         | ASN         |
| 2          | CW           | 71         | ASN         |
| 1          | CY           | 71         | ASN         |
| 2          | DB           | 2          | GLN         |
| 2          | DB           | 10         | ASN         |
| 2          | DB           | 71         | ASN         |
| 2          | DD           | 15         | GLN         |
| 1          | DJ           | 71         | ASN         |
| 2          | DK           | 2          | GLN         |
| 2          | DK           | 71         | ASN         |
| 2          | DM           | 10         | ASN         |
| 2          | DM           | 71         | ASN         |
| 2          | DO           | 71         | ASN         |
| 2          | DR           | 71         | ASN         |
| 2          | DT           | 2          | GLN         |
| 2          | DT           | 71         | ASN         |
| 1          | DU           | 71         | ASN         |
| 2          | DV           | 15         | GLN         |
| 2          | DV           | 71         | ASN         |
| 8          | DZ           | 230        | ASN         |
| 9          | EA           | 150        | GLN         |
| 9          | EA           | 224        | GLN         |

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

## 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 oligosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

76 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 10  | CYC  | AL    | 200 | 2    | 42,46,46     | 0.47 | 1 (2%)   | 52,67,67    | 0.79 | 3 (5%)   |
| 10  | CYC  | DO    | 200 | 2    | 42,46,46     | 0.53 | 1 (2%)   | 52,67,67    | 1.03 | 4 (7%)   |
| 10  | CYC  | DK    | 200 | 2    | 42,46,46     | 0.52 | 1 (2%)   | 52,67,67    | 0.75 | 3 (5%)   |
| 10  | CYC  | CV    | 200 | 1    | 42,46,46     | 0.51 | 1 (2%)   | 52,67,67    | 0.76 | 3 (5%)   |
| 10  | CYC  | DL    | 200 | 1    | 42,46,46     | 0.57 | 1 (2%)   | 52,67,67    | 0.84 | 2 (3%)   |
| 10  | CYC  | BK    | 200 | 1    | 42,46,46     | 0.51 | 1 (2%)   | 52,67,67    | 0.60 | 2 (3%)   |
| 10  | CYC  | BP    | 200 | 1    | 42,46,46     | 0.52 | 1 (2%)   | 52,67,67    | 0.87 | 4 (7%)   |
| 10  | CYC  | AE    | 200 | 3    | 42,46,46     | 0.53 | 1 (2%)   | 52,67,67    | 0.80 | 3 (5%)   |
| 10  | CYC  | DC    | 200 | 1    | 42,46,46     | 0.45 | 1 (2%)   | 52,67,67    | 0.87 | 3 (5%)   |
| 10  | CYC  | CG    | 200 | 1    | 42,46,46     | 0.49 | 1 (2%)   | 52,67,67    | 0.86 | 4 (7%)   |
| 10  | CYC  | AF    | 200 | 2    | 42,46,46     | 0.57 | 1 (2%)   | 52,67,67    | 1.07 | 4 (7%)   |
| 10  | CYC  | CE    | 200 | 1    | 42,46,46     | 0.53 | 1 (2%)   | 52,67,67    | 0.92 | 4 (7%)   |
| 10  | CYC  | DV    | 200 | 2    | 42,46,46     | 0.47 | 1 (2%)   | 52,67,67    | 0.70 | 3 (5%)   |
| 10  | CYC  | CW    | 200 | 2    | 42,46,46     | 0.58 | 1 (2%)   | 52,67,67    | 1.09 | 4 (7%)   |

| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 10  | CYC  | AO    | 200 | 2    | 42,46,46     | 0.48 | 1 (2%)   | 52,67,67    | 1.02 | 4 (7%)   |
| 10  | CYC  | CF    | 200 | 2    | 42,46,46     | 0.60 | 1 (2%)   | 52,67,67    | 1.10 | 5 (9%)   |
| 10  | CYC  | CC    | 200 | 1    | 42,46,46     | 0.52 | 1 (2%)   | 52,67,67    | 0.71 | 3 (5%)   |
| 10  | CYC  | CM    | 902 | 6    | 42,46,46     | 0.60 | 1 (2%)   | 52,67,67    | 0.89 | 3 (5%)   |
| 10  | CYC  | DU    | 200 | 1    | 42,46,46     | 0.47 | 1 (2%)   | 52,67,67    | 0.88 | 3 (5%)   |
| 10  | CYC  | BV    | 200 | 1    | 42,46,46     | 0.52 | 1 (2%)   | 52,67,67    | 0.85 | 3 (5%)   |
| 10  | CYC  | DA    | 200 | 1    | 42,46,46     | 0.62 | 1 (2%)   | 52,67,67    | 0.91 | 3 (5%)   |
| 10  | CYC  | AY    | 200 | 2    | 42,46,46     | 0.52 | 1 (2%)   | 52,67,67    | 0.73 | 3 (5%)   |
| 10  | CYC  | DJ    | 200 | 1    | 42,46,46     | 0.54 | 1 (2%)   | 52,67,67    | 0.57 | 2 (3%)   |
| 10  | CYC  | AR    | 200 | -    | 42,46,46     | 0.51 | 1 (2%)   | 52,67,67    | 0.74 | 2 (3%)   |
| 10  | CYC  | BT    | 200 | 2    | 42,46,46     | 0.43 | 1 (2%)   | 52,67,67    | 0.97 | 3 (5%)   |
| 10  | CYC  | BM    | 200 | 3    | 42,46,46     | 0.55 | 1 (2%)   | 52,67,67    | 0.91 | 4 (7%)   |
| 10  | CYC  | BN    | 200 | 2    | 42,46,46     | 0.57 | 1 (2%)   | 52,67,67    | 1.08 | 4 (7%)   |
| 10  | CYC  | BI    | 200 | 1    | 42,46,46     | 0.51 | 1 (2%)   | 52,67,67    | 0.61 | 2 (3%)   |
| 10  | CYC  | AN    | 200 | 1    | 42,46,46     | 0.56 | 1 (2%)   | 52,67,67    | 0.89 | 4 (7%)   |
| 10  | CYC  | AQ    | 200 | 2    | 42,46,46     | 0.49 | 1 (2%)   | 52,67,67    | 1.01 | 4 (7%)   |
| 10  | CYC  | BJ    | 200 | 2    | 42,46,46     | 0.48 | 1 (2%)   | 52,67,67    | 0.78 | 3 (5%)   |
| 10  | CYC  | CY    | 200 | 1    | 42,46,46     | 0.52 | 1 (2%)   | 52,67,67    | 0.83 | 3 (5%)   |
| 10  | CYC  | BW    | 200 | 2    | 42,46,46     | 0.46 | 1 (2%)   | 52,67,67    | 0.95 | 3 (5%)   |
| 10  | CYC  | CU    | 200 | 2    | 42,46,46     | 0.50 | 1 (2%)   | 52,67,67    | 0.99 | 4 (7%)   |
| 10  | CYC  | AZ    | 200 | 1    | 42,46,46     | 0.52 | 1 (2%)   | 52,67,67    | 0.69 | 3 (5%)   |
| 10  | CYC  | AH    | 200 | 1    | 42,46,46     | 0.47 | 1 (2%)   | 52,67,67    | 0.83 | 4 (7%)   |
| 10  | CYC  | BD    | 901 | 2    | 42,46,46     | 0.45 | 1 (2%)   | 52,67,67    | 1.04 | 4 (7%)   |
| 10  | CYC  | BD    | 902 | 6    | 42,46,46     | 0.55 | 1 (2%)   | 52,67,67    | 0.85 | 3 (5%)   |
| 10  | CYC  | BL    | 200 | 2    | 42,46,46     | 0.51 | 1 (2%)   | 52,67,67    | 1.03 | 4 (7%)   |
| 10  | CYC  | CM    | 901 | 2    | 42,46,46     | 0.53 | 1 (2%)   | 52,67,67    | 1.14 | 4 (7%)   |
| 10  | CYC  | CZ    | 200 | 2    | 42,46,46     | 0.46 | 1 (2%)   | 52,67,67    | 1.03 | 3 (5%)   |
| 10  | CYC  | DD    | 200 | 2    | 42,46,46     | 0.49 | 1 (2%)   | 52,67,67    | 0.71 | 3 (5%)   |
| 10  | CYC  | CR    | 200 | 1    | 42,46,46     | 0.51 | 1 (2%)   | 52,67,67    | 0.86 | 4 (7%)   |
| 10  | CYC  | AX    | 200 | 1    | 42,46,46     | 0.51 | 1 (2%)   | 52,67,67    | 0.88 | 4 (7%)   |
| 10  | CYC  | AK    | 200 | 4    | 42,46,46     | 0.49 | 1 (2%)   | 52,67,67    | 1.00 | 4 (7%)   |
| 10  | CYC  | AW    | 200 | 2    | 42,46,46     | 0.57 | 1 (2%)   | 52,67,67    | 1.10 | 3 (5%)   |
| 10  | CYC  | DM    | 200 | 2    | 42,46,46     | 0.48 | 1 (2%)   | 52,67,67    | 0.89 | 4 (7%)   |
| 10  | CYC  | CS    | 200 | 2    | 42,46,46     | 0.53 | 1 (2%)   | 52,67,67    | 0.83 | 3 (5%)   |
| 10  | CYC  | AC    | 200 | 1    | 42,46,46     | 0.55 | 1 (2%)   | 52,67,67    | 0.73 | 2 (3%)   |

| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 10  | CYC  | DR    | 200 | 2    | 42,46,46     | 0.48 | 1 (2%)   | 52,67,67    | 1.15 | 4 (7%)   |
| 10  | CYC  | BS    | 200 | 4    | 42,46,46     | 0.39 | 0        | 52,67,67    | 1.08 | 4 (7%)   |
| 10  | CYC  | AU    | 200 | 2    | 42,46,46     | 0.51 | 1 (2%)   | 52,67,67    | 1.32 | 4 (7%)   |
| 10  | CYC  | AI    | 200 | 2    | 42,46,46     | 0.45 | 1 (2%)   | 52,67,67    | 0.97 | 4 (7%)   |
| 10  | CYC  | CH    | 200 | 2    | 42,46,46     | 0.51 | 1 (2%)   | 52,67,67    | 0.80 | 3 (5%)   |
| 10  | CYC  | CT    | 200 | 1    | 42,46,46     | 0.51 | 1 (2%)   | 52,67,67    | 0.87 | 3 (5%)   |
| 10  | CYC  | DN    | 200 | 1    | 42,46,46     | 0.53 | 1 (2%)   | 52,67,67    | 0.85 | 3 (5%)   |
| 10  | CYC  | BY    | 200 | 2    | 42,46,46     | 0.53 | 1 (2%)   | 52,67,67    | 1.03 | 4 (7%)   |
| 10  | CYC  | AD    | 200 | 2    | 42,46,46     | 0.49 | 1 (2%)   | 52,67,67    | 0.79 | 3 (5%)   |
| 10  | CYC  | AV    | 200 | 1    | 42,46,46     | 0.48 | 1 (2%)   | 52,67,67    | 0.87 | 3 (5%)   |
| 10  | CYC  | BR    | 200 | 1    | 42,46,46     | 0.47 | 1 (2%)   | 52,67,67    | 0.83 | 4 (7%)   |
| 10  | CYC  | BZ    | 200 | 1    | 42,46,46     | 0.50 | 1 (2%)   | 52,67,67    | 0.88 | 4 (7%)   |
| 10  | CYC  | DQ    | 200 | 1    | 42,46,46     | 0.53 | 1 (2%)   | 52,67,67    | 0.63 | 2 (3%)   |
| 10  | CYC  | AJ    | 200 | 1    | 42,46,46     | 0.49 | 1 (2%)   | 52,67,67    | 0.83 | 4 (7%)   |
| 10  | CYC  | BQ    | 200 | 2    | 42,46,46     | 0.51 | 1 (2%)   | 52,67,67    | 1.09 | 4 (7%)   |
| 10  | CYC  | AB    | 200 | 2    | 42,46,46     | 0.50 | 1 (2%)   | 52,67,67    | 0.82 | 3 (5%)   |
| 10  | CYC  | DS    | 200 | 1    | 42,46,46     | 0.54 | 1 (2%)   | 52,67,67    | 0.89 | 3 (5%)   |
| 10  | CYC  | DT    | 200 | 2    | 42,46,46     | 0.56 | 1 (2%)   | 52,67,67    | 0.94 | 5 (9%)   |
| 11  | 45D  | DI    | 400 | -    | 43,43,43     | 0.96 | 2 (4%)   | 54,60,60    | 1.50 | 12 (22%) |
| 10  | CYC  | AA    | 200 | 1    | 42,46,46     | 0.53 | 1 (2%)   | 52,67,67    | 0.78 | 4 (7%)   |
| 10  | CYC  | CD    | 200 | 2    | 42,46,46     | 0.52 | 1 (2%)   | 52,67,67    | 1.32 | 4 (7%)   |
| 10  | CYC  | DB    | 200 | 2    | 42,46,46     | 0.55 | 1 (2%)   | 52,67,67    | 1.03 | 5 (9%)   |
| 11  | 45D  | EA    | 400 | -    | 43,43,43     | 1.00 | 3 (6%)   | 54,60,60    | 1.49 | 10 (18%) |
| 10  | CYC  | AP    | 200 | 1    | 42,46,46     | 0.53 | 1 (2%)   | 52,67,67    | 0.84 | 4 (7%)   |
| 10  | CYC  | BX    | 200 | 1    | 42,46,46     | 0.52 | 1 (2%)   | 52,67,67    | 0.89 | 4 (7%)   |
| 11  | 45D  | CQ    | 400 | -    | 43,43,43     | 0.97 | 1 (2%)   | 54,60,60    | 1.50 | 14 (25%) |
| 11  | 45D  | BH    | 400 | -    | 43,43,43     | 0.97 | 2 (4%)   | 54,60,60    | 1.57 | 12 (22%) |

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   |
|-----|------|-------|-----|------|---------|------------|---------|
| 10  | CYC  | AL    | 200 | 2    | -       | 9/25/74/74 | 0/4/4/4 |
| 10  | CYC  | DO    | 200 | 2    | -       | 7/25/74/74 | 0/4/4/4 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions    | Rings   |
|-----|------|-------|-----|------|---------|-------------|---------|
| 10  | CYC  | DK    | 200 | 2    | -       | 7/25/74/74  | 0/4/4/4 |
| 10  | CYC  | CV    | 200 | 1    | -       | 3/25/74/74  | 0/4/4/4 |
| 10  | CYC  | DL    | 200 | 1    | -       | 10/25/74/74 | 0/4/4/4 |
| 10  | CYC  | BK    | 200 | 1    | -       | 6/25/74/74  | 0/4/4/4 |
| 10  | CYC  | BP    | 200 | 1    | -       | 7/25/74/74  | 0/4/4/4 |
| 10  | CYC  | AE    | 200 | 3    | -       | 12/25/74/74 | 0/4/4/4 |
| 10  | CYC  | DC    | 200 | 1    | -       | 10/25/74/74 | 0/4/4/4 |
| 10  | CYC  | CG    | 200 | 1    | -       | 8/25/74/74  | 0/4/4/4 |
| 10  | CYC  | AF    | 200 | 2    | -       | 5/25/74/74  | 0/4/4/4 |
| 10  | CYC  | CE    | 200 | 1    | -       | 8/25/74/74  | 0/4/4/4 |
| 10  | CYC  | DV    | 200 | 2    | -       | 8/25/74/74  | 0/4/4/4 |
| 10  | CYC  | CW    | 200 | 2    | -       | 9/25/74/74  | 0/4/4/4 |
| 10  | CYC  | AO    | 200 | 2    | -       | 7/25/74/74  | 0/4/4/4 |
| 10  | CYC  | CF    | 200 | 2    | -       | 9/25/74/74  | 0/4/4/4 |
| 10  | CYC  | CC    | 200 | 1    | -       | 6/25/74/74  | 0/4/4/4 |
| 10  | CYC  | CM    | 902 | 6    | -       | 7/25/74/74  | 0/4/4/4 |
| 10  | CYC  | DU    | 200 | 1    | -       | 9/25/74/74  | 0/4/4/4 |
| 10  | CYC  | BV    | 200 | 1    | -       | 11/25/74/74 | 0/4/4/4 |
| 10  | CYC  | DA    | 200 | 1    | -       | 6/25/74/74  | 0/4/4/4 |
| 10  | CYC  | AY    | 200 | 2    | -       | 9/25/74/74  | 0/4/4/4 |
| 10  | CYC  | DJ    | 200 | 1    | -       | 10/25/74/74 | 0/4/4/4 |
| 10  | CYC  | AR    | 200 | -    | -       | 11/25/74/74 | 0/4/4/4 |
| 10  | CYC  | BT    | 200 | 2    | -       | 13/25/74/74 | 0/4/4/4 |
| 10  | CYC  | BM    | 200 | 3    | -       | 7/25/74/74  | 0/4/4/4 |
| 10  | CYC  | BN    | 200 | 2    | -       | 5/25/74/74  | 0/4/4/4 |
| 10  | CYC  | BI    | 200 | 1    | -       | 10/25/74/74 | 0/4/4/4 |
| 10  | CYC  | AN    | 200 | 1    | -       | 8/25/74/74  | 0/4/4/4 |
| 10  | CYC  | AQ    | 200 | 2    | -       | 11/25/74/74 | 0/4/4/4 |
| 10  | CYC  | BJ    | 200 | 2    | -       | 5/25/74/74  | 0/4/4/4 |
| 10  | CYC  | CY    | 200 | 1    | -       | 12/25/74/74 | 0/4/4/4 |
| 10  | CYC  | BW    | 200 | 2    | -       | 8/25/74/74  | 0/4/4/4 |
| 10  | CYC  | CU    | 200 | 2    | -       | 10/25/74/74 | 0/4/4/4 |
| 10  | CYC  | AZ    | 200 | 1    | -       | 8/25/74/74  | 0/4/4/4 |
| 10  | CYC  | AH    | 200 | 1    | -       | 10/25/74/74 | 0/4/4/4 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions    | Rings   |
|-----|------|-------|-----|------|---------|-------------|---------|
| 10  | CYC  | BD    | 901 | 2    | -       | 10/25/74/74 | 0/4/4/4 |
| 10  | CYC  | BD    | 902 | 6    | -       | 8/25/74/74  | 0/4/4/4 |
| 10  | CYC  | BL    | 200 | 2    | -       | 14/25/74/74 | 0/4/4/4 |
| 10  | CYC  | CM    | 901 | 2    | -       | 13/25/74/74 | 0/4/4/4 |
| 10  | CYC  | CZ    | 200 | 2    | -       | 12/25/74/74 | 0/4/4/4 |
| 10  | CYC  | DD    | 200 | 2    | -       | 5/25/74/74  | 0/4/4/4 |
| 10  | CYC  | CR    | 200 | 1    | -       | 10/25/74/74 | 0/4/4/4 |
| 10  | CYC  | AX    | 200 | 1    | -       | 7/25/74/74  | 0/4/4/4 |
| 10  | CYC  | AK    | 200 | 4    | -       | 8/25/74/74  | 0/4/4/4 |
| 10  | CYC  | AW    | 200 | 2    | -       | 11/25/74/74 | 0/4/4/4 |
| 10  | CYC  | DM    | 200 | 2    | -       | 9/25/74/74  | 0/4/4/4 |
| 10  | CYC  | CS    | 200 | 2    | -       | 7/25/74/74  | 0/4/4/4 |
| 10  | CYC  | AC    | 200 | 1    | -       | 7/25/74/74  | 0/4/4/4 |
| 10  | CYC  | DR    | 200 | 2    | -       | 10/25/74/74 | 0/4/4/4 |
| 10  | CYC  | BS    | 200 | 4    | -       | 9/25/74/74  | 0/4/4/4 |
| 10  | CYC  | AU    | 200 | 2    | -       | 8/25/74/74  | 0/4/4/4 |
| 10  | CYC  | AI    | 200 | 2    | -       | 6/25/74/74  | 0/4/4/4 |
| 10  | CYC  | CH    | 200 | 2    | -       | 8/25/74/74  | 0/4/4/4 |
| 10  | CYC  | CT    | 200 | 1    | -       | 12/25/74/74 | 0/4/4/4 |
| 10  | CYC  | DN    | 200 | 1    | -       | 7/25/74/74  | 0/4/4/4 |
| 10  | CYC  | BY    | 200 | 2    | -       | 9/25/74/74  | 0/4/4/4 |
| 10  | CYC  | AD    | 200 | 2    | -       | 9/25/74/74  | 0/4/4/4 |
| 10  | CYC  | AV    | 200 | 1    | -       | 6/25/74/74  | 0/4/4/4 |
| 10  | CYC  | BR    | 200 | 1    | -       | 7/25/74/74  | 0/4/4/4 |
| 10  | CYC  | BZ    | 200 | 1    | -       | 7/25/74/74  | 0/4/4/4 |
| 10  | CYC  | DQ    | 200 | 1    | -       | 13/25/74/74 | 0/4/4/4 |
| 10  | CYC  | AJ    | 200 | 1    | -       | 8/25/74/74  | 0/4/4/4 |
| 10  | CYC  | BQ    | 200 | 2    | -       | 7/25/74/74  | 0/4/4/4 |
| 10  | CYC  | AB    | 200 | 2    | -       | 7/25/74/74  | 0/4/4/4 |
| 10  | CYC  | DS    | 200 | 1    | -       | 7/25/74/74  | 0/4/4/4 |
| 10  | CYC  | DT    | 200 | 2    | -       | 10/25/74/74 | 0/4/4/4 |
| 11  | 45D  | DI    | 400 | -    | -       | 15/29/69/69 | 0/2/2/2 |
| 10  | CYC  | AA    | 200 | 1    | -       | 7/25/74/74  | 0/4/4/4 |
| 10  | CYC  | CD    | 200 | 2    | -       | 12/25/74/74 | 0/4/4/4 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions    | Rings   |
|-----|------|-------|-----|------|---------|-------------|---------|
| 10  | CYC  | DB    | 200 | 2    | -       | 10/25/74/74 | 0/4/4/4 |
| 11  | 45D  | EA    | 400 | -    | -       | 16/29/69/69 | 0/2/2/2 |
| 10  | CYC  | AP    | 200 | 1    | -       | 7/25/74/74  | 0/4/4/4 |
| 10  | CYC  | BX    | 200 | 1    | -       | 7/25/74/74  | 0/4/4/4 |
| 11  | 45D  | CQ    | 400 | -    | -       | 15/29/69/69 | 0/2/2/2 |
| 11  | 45D  | BH    | 400 | -    | -       | 16/29/69/69 | 0/2/2/2 |

All (79) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms   | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|------|-------------|----------|
| 11  | EA    | 400 | 45D  | C34-C36 | 3.69 | 1.53        | 1.46     |
| 10  | DA    | 200 | CYC  | CHA-C1A | 3.52 | 1.38        | 1.35     |
| 11  | DI    | 400 | 45D  | C34-C36 | 3.51 | 1.53        | 1.46     |
| 11  | BH    | 400 | 45D  | C34-C36 | 3.50 | 1.53        | 1.46     |
| 10  | CF    | 200 | CYC  | CHA-C1A | 3.49 | 1.38        | 1.35     |
| 11  | CQ    | 400 | 45D  | C34-C36 | 3.47 | 1.53        | 1.46     |
| 10  | CM    | 902 | CYC  | CHA-C1A | 3.39 | 1.38        | 1.35     |
| 10  | DL    | 200 | CYC  | CHA-C1A | 3.35 | 1.38        | 1.35     |
| 10  | AW    | 200 | CYC  | CHA-C1A | 3.26 | 1.38        | 1.35     |
| 10  | AF    | 200 | CYC  | CHA-C1A | 3.19 | 1.38        | 1.35     |
| 10  | BN    | 200 | CYC  | CHA-C1A | 3.14 | 1.38        | 1.35     |
| 10  | AC    | 200 | CYC  | CHA-C1A | 3.14 | 1.38        | 1.35     |
| 10  | AN    | 200 | CYC  | CHA-C1A | 3.12 | 1.38        | 1.35     |
| 10  | CW    | 200 | CYC  | CHA-C1A | 3.12 | 1.38        | 1.35     |
| 10  | DJ    | 200 | CYC  | CHA-C1A | 3.06 | 1.38        | 1.35     |
| 10  | BM    | 200 | CYC  | CHA-C1A | 3.03 | 1.38        | 1.35     |
| 10  | CS    | 200 | CYC  | CHA-C1A | 3.02 | 1.38        | 1.35     |
| 10  | BD    | 902 | CYC  | CHA-C1A | 3.01 | 1.38        | 1.35     |
| 10  | AP    | 200 | CYC  | CHA-C1A | 3.00 | 1.38        | 1.35     |
| 10  | DT    | 200 | CYC  | CHA-C1A | 2.99 | 1.38        | 1.35     |
| 10  | AY    | 200 | CYC  | CHA-C1A | 2.99 | 1.38        | 1.35     |
| 10  | CE    | 200 | CYC  | CHA-C1A | 2.97 | 1.38        | 1.35     |
| 10  | DB    | 200 | CYC  | CHA-C1A | 2.97 | 1.38        | 1.35     |
| 10  | AA    | 200 | CYC  | CHA-C1A | 2.96 | 1.38        | 1.35     |
| 10  | AE    | 200 | CYC  | CHA-C1A | 2.95 | 1.38        | 1.35     |
| 10  | DK    | 200 | CYC  | CHA-C1A | 2.95 | 1.38        | 1.35     |
| 10  | DO    | 200 | CYC  | CHA-C1A | 2.94 | 1.38        | 1.35     |
| 10  | BV    | 200 | CYC  | CHA-C1A | 2.92 | 1.38        | 1.35     |
| 10  | CY    | 200 | CYC  | CHA-C1A | 2.92 | 1.38        | 1.35     |
| 10  | CC    | 200 | CYC  | CHA-C1A | 2.92 | 1.38        | 1.35     |
| 10  | AZ    | 200 | CYC  | CHA-C1A | 2.91 | 1.38        | 1.35     |

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| Mol | Chain | Res | Type | Atoms   | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|------|-------------|----------|
| 10  | CT    | 200 | CYC  | CHA-C1A | 2.91 | 1.38        | 1.35     |
| 10  | BK    | 200 | CYC  | CHA-C1A | 2.91 | 1.38        | 1.35     |
| 10  | BX    | 200 | CYC  | CHA-C1A | 2.89 | 1.38        | 1.35     |
| 10  | BP    | 200 | CYC  | CHA-C1A | 2.89 | 1.38        | 1.35     |
| 10  | DQ    | 200 | CYC  | CHA-C1A | 2.88 | 1.37        | 1.35     |
| 10  | DS    | 200 | CYC  | CHA-C1A | 2.88 | 1.37        | 1.35     |
| 10  | CH    | 200 | CYC  | CHA-C1A | 2.87 | 1.37        | 1.35     |
| 10  | AX    | 200 | CYC  | CHA-C1A | 2.87 | 1.37        | 1.35     |
| 10  | BI    | 200 | CYC  | CHA-C1A | 2.84 | 1.37        | 1.35     |
| 10  | AR    | 200 | CYC  | CHA-C1A | 2.83 | 1.37        | 1.35     |
| 10  | BL    | 200 | CYC  | CHA-C1A | 2.82 | 1.37        | 1.35     |
| 10  | AB    | 200 | CYC  | CHA-C1A | 2.82 | 1.37        | 1.35     |
| 10  | BY    | 200 | CYC  | CHA-C1A | 2.81 | 1.37        | 1.35     |
| 10  | DD    | 200 | CYC  | CHA-C1A | 2.80 | 1.37        | 1.35     |
| 10  | BZ    | 200 | CYC  | CHA-C1A | 2.79 | 1.37        | 1.35     |
| 10  | DN    | 200 | CYC  | CHA-C1A | 2.76 | 1.37        | 1.35     |
| 10  | CV    | 200 | CYC  | CHA-C1A | 2.76 | 1.37        | 1.35     |
| 10  | AJ    | 200 | CYC  | CHA-C1A | 2.73 | 1.37        | 1.35     |
| 10  | CD    | 200 | CYC  | CHA-C1A | 2.72 | 1.37        | 1.35     |
| 10  | AD    | 200 | CYC  | CHA-C1A | 2.71 | 1.37        | 1.35     |
| 10  | CM    | 901 | CYC  | CHA-C1A | 2.71 | 1.37        | 1.35     |
| 10  | AK    | 200 | CYC  | CHA-C1A | 2.69 | 1.37        | 1.35     |
| 10  | AU    | 200 | CYC  | CHA-C1A | 2.68 | 1.37        | 1.35     |
| 10  | BQ    | 200 | CYC  | CHA-C1A | 2.68 | 1.37        | 1.35     |
| 10  | CU    | 200 | CYC  | CHA-C1A | 2.66 | 1.37        | 1.35     |
| 10  | CG    | 200 | CYC  | CHA-C1A | 2.64 | 1.37        | 1.35     |
| 10  | BJ    | 200 | CYC  | CHA-C1A | 2.64 | 1.37        | 1.35     |
| 10  | AV    | 200 | CYC  | CHA-C1A | 2.62 | 1.37        | 1.35     |
| 10  | AQ    | 200 | CYC  | CHA-C1A | 2.62 | 1.37        | 1.35     |
| 10  | AL    | 200 | CYC  | CHA-C1A | 2.61 | 1.37        | 1.35     |
| 10  | AO    | 200 | CYC  | CHA-C1A | 2.60 | 1.37        | 1.35     |
| 10  | AH    | 200 | CYC  | CHA-C1A | 2.59 | 1.37        | 1.35     |
| 10  | BR    | 200 | CYC  | CHA-C1A | 2.58 | 1.37        | 1.35     |
| 10  | DV    | 200 | CYC  | CHA-C1A | 2.58 | 1.37        | 1.35     |
| 10  | CR    | 200 | CYC  | CHA-C1A | 2.56 | 1.37        | 1.35     |
| 10  | DM    | 200 | CYC  | CHA-C1A | 2.55 | 1.37        | 1.35     |
| 10  | CZ    | 200 | CYC  | CHA-C1A | 2.52 | 1.37        | 1.35     |
| 10  | DR    | 200 | CYC  | CHA-C1A | 2.51 | 1.37        | 1.35     |
| 10  | BW    | 200 | CYC  | CHA-C1A | 2.50 | 1.37        | 1.35     |
| 10  | BT    | 200 | CYC  | CHA-C1A | 2.31 | 1.37        | 1.35     |
| 10  | BD    | 901 | CYC  | CHA-C1A | 2.28 | 1.37        | 1.35     |
| 11  | BH    | 400 | 45D  | C09-C17 | 2.17 | 1.53        | 1.50     |

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| Mol | Chain | Res | Type | Atoms   | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|------|-------------|----------|
| 10  | AI    | 200 | CYC  | CHA-C1A | 2.17 | 1.37        | 1.35     |
| 10  | DU    | 200 | CYC  | CHA-C1A | 2.14 | 1.37        | 1.35     |
| 10  | DC    | 200 | CYC  | CHA-C1A | 2.07 | 1.37        | 1.35     |
| 11  | EA    | 400 | 45D  | C27-C25 | 2.06 | 1.55        | 1.50     |
| 11  | DI    | 400 | 45D  | C09-C17 | 2.05 | 1.53        | 1.50     |
| 11  | EA    | 400 | 45D  | C24-C20 | 2.00 | 1.39        | 1.33     |

All (296) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms       | Z    | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|------|-------------|----------|
| 10  | AU    | 200 | CYC  | C1D-CHD-C4C | 6.61 | 137.54      | 128.47   |
| 10  | CD    | 200 | CYC  | C1D-CHD-C4C | 6.59 | 137.52      | 128.47   |
| 10  | DR    | 200 | CYC  | C1D-CHD-C4C | 6.52 | 137.42      | 128.47   |
| 10  | AW    | 200 | CYC  | C1D-CHD-C4C | 5.95 | 136.63      | 128.47   |
| 10  | BL    | 200 | CYC  | C1D-CHD-C4C | 5.82 | 136.46      | 128.47   |
| 10  | CZ    | 200 | CYC  | C1D-CHD-C4C | 5.54 | 136.07      | 128.47   |
| 10  | BT    | 200 | CYC  | C1D-CHD-C4C | 5.50 | 136.02      | 128.47   |
| 10  | BS    | 200 | CYC  | C1D-CHD-C4C | 5.44 | 135.94      | 128.47   |
| 10  | AO    | 200 | CYC  | C1D-CHD-C4C | 5.35 | 135.81      | 128.47   |
| 10  | CW    | 200 | CYC  | C1B-CHB-C4A | 5.34 | 141.17      | 128.06   |
| 10  | CM    | 901 | CYC  | C1B-CHB-C4A | 5.23 | 140.90      | 128.06   |
| 10  | CD    | 200 | CYC  | C1B-CHB-C4A | 5.18 | 140.78      | 128.06   |
| 10  | AK    | 200 | CYC  | C1D-CHD-C4C | 5.15 | 135.54      | 128.47   |
| 10  | BN    | 200 | CYC  | C1D-CHD-C4C | 5.06 | 135.42      | 128.47   |
| 10  | AU    | 200 | CYC  | C1B-CHB-C4A | 5.03 | 140.41      | 128.06   |
| 10  | BW    | 200 | CYC  | C1D-CHD-C4C | 5.00 | 135.33      | 128.47   |
| 10  | CU    | 200 | CYC  | C1D-CHD-C4C | 4.94 | 135.25      | 128.47   |
| 10  | BQ    | 200 | CYC  | C1B-CHB-C4A | 4.94 | 140.17      | 128.06   |
| 10  | AF    | 200 | CYC  | C1D-CHD-C4C | 4.88 | 135.16      | 128.47   |
| 10  | BD    | 901 | CYC  | C1B-CHB-C4A | 4.83 | 139.93      | 128.06   |
| 10  | DO    | 200 | CYC  | C1B-CHB-C4A | 4.83 | 139.90      | 128.06   |
| 10  | CM    | 902 | CYC  | C1B-CHB-C4A | 4.67 | 139.52      | 128.06   |
| 10  | CF    | 200 | CYC  | C1D-CHD-C4C | 4.66 | 134.87      | 128.47   |
| 10  | CM    | 901 | CYC  | C1D-CHD-C4C | 4.59 | 134.77      | 128.47   |
| 10  | CS    | 200 | CYC  | C1D-CHD-C4C | 4.47 | 134.61      | 128.47   |
| 10  | CY    | 200 | CYC  | C1D-CHD-C4C | 4.45 | 134.58      | 128.47   |
| 10  | DA    | 200 | CYC  | C1D-CHD-C4C | 4.45 | 134.58      | 128.47   |
| 10  | DB    | 200 | CYC  | C1D-CHD-C4C | 4.36 | 134.45      | 128.47   |
| 10  | DU    | 200 | CYC  | C1B-CHB-C4A | 4.34 | 138.72      | 128.06   |
| 10  | AN    | 200 | CYC  | C1D-CHD-C4C | 4.26 | 134.31      | 128.47   |
| 10  | DC    | 200 | CYC  | C1B-CHB-C4A | 4.25 | 138.48      | 128.06   |
| 10  | BY    | 200 | CYC  | C1D-CHD-C4C | 4.25 | 134.30      | 128.47   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 10  | BY    | 200 | CYC  | C1B-CHB-C4A | 4.24  | 138.47      | 128.06   |
| 10  | DN    | 200 | CYC  | C1B-CHB-C4A | 4.20  | 138.37      | 128.06   |
| 10  | BV    | 200 | CYC  | C1D-CHD-C4C | 4.19  | 134.22      | 128.47   |
| 10  | AV    | 200 | CYC  | C1D-CHD-C4C | 4.18  | 134.21      | 128.47   |
| 10  | AB    | 200 | CYC  | C1D-CHD-C4C | 4.14  | 134.15      | 128.47   |
| 10  | AQ    | 200 | CYC  | C1B-CHB-C4A | 4.13  | 138.20      | 128.06   |
| 10  | BM    | 200 | CYC  | C1D-CHD-C4C | 4.11  | 134.11      | 128.47   |
| 10  | AQ    | 200 | CYC  | C1D-CHD-C4C | 4.08  | 134.08      | 128.47   |
| 10  | DM    | 200 | CYC  | C1D-CHD-C4C | 4.06  | 134.04      | 128.47   |
| 10  | AI    | 200 | CYC  | C1B-CHB-C4A | 4.03  | 137.94      | 128.06   |
| 10  | AI    | 200 | CYC  | C1D-CHD-C4C | 3.96  | 133.91      | 128.47   |
| 10  | BD    | 902 | CYC  | C1B-CHB-C4A | 3.94  | 137.73      | 128.06   |
| 10  | AL    | 200 | CYC  | C1D-CHD-C4C | 3.92  | 133.85      | 128.47   |
| 10  | DS    | 200 | CYC  | C1B-CHB-C4A | 3.90  | 137.63      | 128.06   |
| 10  | AX    | 200 | CYC  | C1D-CHD-C4C | 3.89  | 133.81      | 128.47   |
| 10  | CG    | 200 | CYC  | C1D-CHD-C4C | 3.88  | 133.79      | 128.47   |
| 10  | CH    | 200 | CYC  | C1D-CHD-C4C | 3.85  | 133.76      | 128.47   |
| 10  | AF    | 200 | CYC  | C1B-CHB-C4A | 3.84  | 137.49      | 128.06   |
| 10  | CF    | 200 | CYC  | CHA-C1A-NA  | -3.78 | 123.63      | 128.76   |
| 10  | BJ    | 200 | CYC  | C1D-CHD-C4C | 3.77  | 133.65      | 128.47   |
| 10  | BP    | 200 | CYC  | C1D-CHD-C4C | 3.76  | 133.63      | 128.47   |
| 10  | BN    | 200 | CYC  | C1B-CHB-C4A | 3.75  | 137.26      | 128.06   |
| 10  | BQ    | 200 | CYC  | C1D-CHD-C4C | 3.73  | 133.59      | 128.47   |
| 10  | BZ    | 200 | CYC  | C1D-CHD-C4C | 3.71  | 133.57      | 128.47   |
| 11  | EA    | 400 | 45D  | C05-C03-C07 | 3.71  | 115.83      | 110.44   |
| 10  | CE    | 200 | CYC  | C1D-CHD-C4C | 3.70  | 133.54      | 128.47   |
| 10  | BD    | 901 | CYC  | C1D-CHD-C4C | 3.69  | 133.54      | 128.47   |
| 10  | DL    | 200 | CYC  | C4D-CHA-C1A | 3.69  | 133.67      | 128.73   |
| 10  | AD    | 200 | CYC  | C1D-CHD-C4C | 3.67  | 133.51      | 128.47   |
| 11  | BH    | 400 | 45D  | C32-C30-C26 | -3.66 | 122.14      | 127.28   |
| 10  | AH    | 200 | CYC  | C1D-CHD-C4C | 3.66  | 133.50      | 128.47   |
| 10  | CW    | 200 | CYC  | C1D-CHD-C4C | 3.59  | 133.40      | 128.47   |
| 10  | DK    | 200 | CYC  | C1D-CHD-C4C | 3.59  | 133.40      | 128.47   |
| 10  | BX    | 200 | CYC  | C1D-CHD-C4C | 3.56  | 133.36      | 128.47   |
| 10  | CR    | 200 | CYC  | C1B-CHB-C4A | 3.52  | 136.70      | 128.06   |
| 10  | CT    | 200 | CYC  | C4D-CHA-C1A | 3.51  | 133.43      | 128.73   |
| 10  | BR    | 200 | CYC  | C1D-CHD-C4C | 3.50  | 133.28      | 128.47   |
| 11  | DI    | 400 | 45D  | C19-C23-C25 | -3.48 | 121.08      | 126.23   |
| 10  | BS    | 200 | CYC  | C1B-CHB-C4A | 3.39  | 136.38      | 128.06   |
| 11  | BH    | 400 | 45D  | C19-C23-C25 | -3.39 | 121.22      | 126.23   |
| 10  | AJ    | 200 | CYC  | C1D-CHD-C4C | 3.37  | 133.10      | 128.47   |
| 10  | AP    | 200 | CYC  | C1D-CHD-C4C | 3.32  | 133.02      | 128.47   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 10  | DD    | 200 | CYC  | C1D-CHD-C4C | 3.31  | 133.01      | 128.47   |
| 10  | AW    | 200 | CYC  | CHA-C1A-NA  | -3.28 | 124.31      | 128.76   |
| 10  | CV    | 200 | CYC  | C1B-CHB-C4A | 3.25  | 136.04      | 128.06   |
| 10  | DT    | 200 | CYC  | C1B-CHB-C4A | 3.21  | 135.92      | 128.06   |
| 10  | DV    | 200 | CYC  | C1D-CHD-C4C | 3.20  | 132.87      | 128.47   |
| 10  | AE    | 200 | CYC  | C1D-CHD-C4C | 3.20  | 132.86      | 128.47   |
| 10  | AY    | 200 | CYC  | C1D-CHD-C4C | 3.17  | 132.82      | 128.47   |
| 10  | AA    | 200 | CYC  | C1D-CHD-C4C | 3.17  | 132.81      | 128.47   |
| 11  | EA    | 400 | 45D  | C19-C23-C25 | -3.14 | 121.59      | 126.23   |
| 11  | BH    | 400 | 45D  | C32-C34-C36 | -3.11 | 117.84      | 126.36   |
| 10  | CZ    | 200 | CYC  | CHA-C1A-NA  | -3.10 | 124.56      | 128.76   |
| 10  | DO    | 200 | CYC  | C1D-CHD-C4C | 3.10  | 132.72      | 128.47   |
| 10  | AC    | 200 | CYC  | C1D-CHD-C4C | 3.09  | 132.71      | 128.47   |
| 10  | CE    | 200 | CYC  | CHA-C1A-NA  | -3.09 | 124.57      | 128.76   |
| 11  | CQ    | 400 | 45D  | C32-C30-C26 | -3.07 | 122.97      | 127.28   |
| 10  | DO    | 200 | CYC  | CHA-C1A-NA  | -3.03 | 124.64      | 128.76   |
| 11  | CQ    | 400 | 45D  | C23-C19-C07 | -3.01 | 118.96      | 127.00   |
| 11  | EA    | 400 | 45D  | C32-C30-C26 | -3.00 | 123.07      | 127.28   |
| 11  | CQ    | 400 | 45D  | C32-C34-C36 | -2.98 | 118.18      | 126.36   |
| 10  | DB    | 200 | CYC  | CAC-C3C-C4C | -2.98 | 105.02      | 112.67   |
| 10  | CE    | 200 | CYC  | C1B-CHB-C4A | 2.97  | 135.35      | 128.06   |
| 10  | BX    | 200 | CYC  | CHA-C1A-NA  | -2.97 | 124.73      | 128.76   |
| 11  | CQ    | 400 | 45D  | C19-C23-C25 | -2.96 | 121.85      | 126.23   |
| 10  | AP    | 200 | CYC  | CHA-C1A-NA  | -2.93 | 124.79      | 128.76   |
| 10  | BN    | 200 | CYC  | CHA-C1A-NA  | -2.92 | 124.80      | 128.76   |
| 10  | BR    | 200 | CYC  | CHA-C1A-NA  | -2.92 | 124.80      | 128.76   |
| 10  | AU    | 200 | CYC  | CHA-C1A-NA  | -2.91 | 124.81      | 128.76   |
| 10  | DB    | 200 | CYC  | CHA-C1A-NA  | -2.91 | 124.81      | 128.76   |
| 10  | CT    | 200 | CYC  | C1B-CHB-C4A | 2.90  | 135.19      | 128.06   |
| 10  | AV    | 200 | CYC  | CHA-C1A-NA  | -2.89 | 124.83      | 128.76   |
| 11  | EA    | 400 | 45D  | C32-C34-C36 | -2.88 | 118.48      | 126.36   |
| 10  | AX    | 200 | CYC  | CHA-C1A-NA  | -2.88 | 124.86      | 128.76   |
| 10  | BM    | 200 | CYC  | C1B-CHB-C4A | 2.87  | 135.11      | 128.06   |
| 11  | BH    | 400 | 45D  | C09-C17-C15 | 2.86  | 121.21      | 118.64   |
| 10  | DT    | 200 | CYC  | C1D-CHD-C4C | 2.84  | 132.37      | 128.47   |
| 10  | AJ    | 200 | CYC  | CHA-C1A-NA  | -2.84 | 124.90      | 128.76   |
| 10  | BX    | 200 | CYC  | C1B-CHB-C4A | 2.84  | 135.03      | 128.06   |
| 11  | BH    | 400 | 45D  | C23-C19-C07 | -2.83 | 119.43      | 127.00   |
| 11  | DI    | 400 | 45D  | C22-C16-C18 | 2.82  | 119.77      | 115.49   |
| 10  | BZ    | 200 | CYC  | CHA-C1A-NA  | -2.82 | 124.93      | 128.76   |
| 10  | DT    | 200 | CYC  | CHA-C1A-NA  | -2.80 | 124.96      | 128.76   |
| 10  | DC    | 200 | CYC  | C2C-C3C-C4C | 2.80  | 105.53      | 101.34   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 10  | AE    | 200 | CYC  | CHA-C1A-NA  | -2.80 | 124.97      | 128.76   |
| 11  | DI    | 400 | 45D  | C23-C19-C07 | -2.79 | 119.54      | 127.00   |
| 10  | DB    | 200 | CYC  | C2C-C3C-C4C | 2.79  | 105.52      | 101.34   |
| 10  | AF    | 200 | CYC  | CHA-C1A-NA  | -2.79 | 124.97      | 128.76   |
| 10  | DT    | 200 | CYC  | C2C-C3C-C4C | 2.79  | 105.51      | 101.34   |
| 10  | DA    | 200 | CYC  | C1B-CHB-C4A | 2.77  | 134.87      | 128.06   |
| 10  | AC    | 200 | CYC  | CHA-C1A-NA  | -2.77 | 125.00      | 128.76   |
| 10  | AK    | 200 | CYC  | CHA-C1A-NA  | -2.77 | 125.00      | 128.76   |
| 10  | CC    | 200 | CYC  | CHA-C1A-NA  | -2.77 | 125.00      | 128.76   |
| 10  | BQ    | 200 | CYC  | CHA-C1A-NA  | -2.77 | 125.00      | 128.76   |
| 10  | BS    | 200 | CYC  | CHA-C1A-NA  | -2.76 | 125.01      | 128.76   |
| 10  | DU    | 200 | CYC  | C2C-C3C-C4C | 2.76  | 105.47      | 101.34   |
| 10  | AZ    | 200 | CYC  | CHA-C1A-NA  | -2.76 | 125.02      | 128.76   |
| 10  | AR    | 200 | CYC  | CHA-C1A-NA  | -2.76 | 125.02      | 128.76   |
| 10  | BK    | 200 | CYC  | CHA-C1A-NA  | -2.75 | 125.03      | 128.76   |
| 10  | BW    | 200 | CYC  | CHA-C1A-NA  | -2.75 | 125.03      | 128.76   |
| 10  | CG    | 200 | CYC  | CHA-C1A-NA  | -2.74 | 125.05      | 128.76   |
| 10  | CU    | 200 | CYC  | C2C-C3C-C4C | 2.73  | 105.43      | 101.34   |
| 10  | DQ    | 200 | CYC  | CHA-C1A-NA  | -2.71 | 125.08      | 128.76   |
| 10  | CR    | 200 | CYC  | C2C-C3C-C4C | 2.71  | 105.40      | 101.34   |
| 10  | CU    | 200 | CYC  | CHA-C1A-NA  | -2.71 | 125.08      | 128.76   |
| 10  | DR    | 200 | CYC  | C2C-C3C-C4C | 2.71  | 105.40      | 101.34   |
| 10  | BP    | 200 | CYC  | CHA-C1A-NA  | -2.71 | 125.08      | 128.76   |
| 10  | DS    | 200 | CYC  | CHA-C1A-NA  | -2.70 | 125.09      | 128.76   |
| 10  | AA    | 200 | CYC  | CHA-C1A-NA  | -2.70 | 125.09      | 128.76   |
| 10  | DK    | 200 | CYC  | CHA-C1A-NA  | -2.70 | 125.10      | 128.76   |
| 10  | CD    | 200 | CYC  | CHA-C1A-NA  | -2.70 | 125.10      | 128.76   |
| 10  | AO    | 200 | CYC  | CHA-C1A-NA  | -2.69 | 125.11      | 128.76   |
| 10  | AH    | 200 | CYC  | CHA-C1A-NA  | -2.69 | 125.11      | 128.76   |
| 10  | BD    | 901 | CYC  | CHA-C1A-NA  | -2.68 | 125.12      | 128.76   |
| 10  | BV    | 200 | CYC  | CHA-C1A-NA  | -2.68 | 125.12      | 128.76   |
| 10  | AQ    | 200 | CYC  | CHA-C1A-NA  | -2.68 | 125.13      | 128.76   |
| 11  | EA    | 400 | 45D  | C22-C16-C08 | -2.67 | 119.81      | 124.11   |
| 11  | DI    | 400 | 45D  | C22-C16-C08 | -2.67 | 119.82      | 124.11   |
| 10  | CW    | 200 | CYC  | CHA-C1A-NA  | -2.66 | 125.15      | 128.76   |
| 11  | DI    | 400 | 45D  | C21-C15-C07 | -2.66 | 119.83      | 124.11   |
| 10  | AX    | 200 | CYC  | C1B-CHB-C4A | 2.65  | 134.56      | 128.06   |
| 10  | BY    | 200 | CYC  | CHA-C1A-NA  | -2.65 | 125.17      | 128.76   |
| 10  | CV    | 200 | CYC  | CHA-C1A-NA  | -2.64 | 125.17      | 128.76   |
| 10  | BM    | 200 | CYC  | CHA-C1A-NA  | -2.64 | 125.17      | 128.76   |
| 10  | AR    | 200 | CYC  | C1D-CHD-C4C | 2.64  | 132.10      | 128.47   |
| 10  | DS    | 200 | CYC  | C2C-C3C-C4C | 2.64  | 105.30      | 101.34   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 10  | DM    | 200 | CYC  | C2C-C3C-C4C | 2.64  | 105.29      | 101.34   |
| 10  | DU    | 200 | CYC  | CHA-C1A-NA  | -2.63 | 125.18      | 128.76   |
| 10  | BP    | 200 | CYC  | C1B-CHB-C4A | 2.63  | 134.52      | 128.06   |
| 10  | CT    | 200 | CYC  | C2C-C3C-C4C | 2.63  | 105.28      | 101.34   |
| 10  | AN    | 200 | CYC  | CHA-C1A-NA  | -2.62 | 125.21      | 128.76   |
| 10  | CC    | 200 | CYC  | C1D-CHD-C4C | 2.61  | 132.06      | 128.47   |
| 10  | BZ    | 200 | CYC  | C1B-CHB-C4A | 2.61  | 134.47      | 128.06   |
| 10  | BD    | 902 | CYC  | CHA-C1A-NA  | -2.61 | 125.22      | 128.76   |
| 11  | EA    | 400 | 45D  | C23-C19-C07 | -2.61 | 120.03      | 127.00   |
| 11  | DI    | 400 | 45D  | C32-C30-C26 | -2.60 | 123.63      | 127.28   |
| 10  | CY    | 200 | CYC  | CHA-C1A-NA  | -2.60 | 125.23      | 128.76   |
| 11  | DI    | 400 | 45D  | C32-C34-C36 | -2.59 | 119.26      | 126.36   |
| 10  | DC    | 200 | CYC  | CHA-C1A-NA  | -2.59 | 125.25      | 128.76   |
| 10  | AD    | 200 | CYC  | CHA-C1A-NA  | -2.57 | 125.27      | 128.76   |
| 10  | DM    | 200 | CYC  | CHA-C1A-NA  | -2.56 | 125.28      | 128.76   |
| 10  | BI    | 200 | CYC  | CHA-C1A-NA  | -2.55 | 125.31      | 128.76   |
| 10  | BL    | 200 | CYC  | CHA-C1A-NA  | -2.54 | 125.31      | 128.76   |
| 10  | DR    | 200 | CYC  | C1B-CHB-C4A | 2.53  | 134.28      | 128.06   |
| 10  | CG    | 200 | CYC  | C1B-CHB-C4A | 2.53  | 134.27      | 128.06   |
| 11  | CQ    | 400 | 45D  | C20-C24-C26 | -2.51 | 122.53      | 126.23   |
| 10  | CR    | 200 | CYC  | CHA-C1A-NA  | -2.49 | 125.38      | 128.76   |
| 11  | BH    | 400 | 45D  | C21-C15-C07 | -2.49 | 120.11      | 124.11   |
| 10  | DL    | 200 | CYC  | C2C-C3C-C4C | 2.49  | 105.06      | 101.34   |
| 10  | AO    | 200 | CYC  | C1B-CHB-C4A | 2.49  | 134.16      | 128.06   |
| 10  | BJ    | 200 | CYC  | CHA-C1A-NA  | -2.48 | 125.39      | 128.76   |
| 10  | CM    | 902 | CYC  | CHA-C1A-NA  | -2.48 | 125.39      | 128.76   |
| 10  | DD    | 200 | CYC  | CHA-C1A-NA  | -2.48 | 125.39      | 128.76   |
| 10  | AB    | 200 | CYC  | CHA-C1A-NA  | -2.48 | 125.40      | 128.76   |
| 10  | DN    | 200 | CYC  | CHA-C1A-NA  | -2.47 | 125.40      | 128.76   |
| 10  | AI    | 200 | CYC  | CHA-C1A-NA  | -2.45 | 125.43      | 128.76   |
| 10  | AY    | 200 | CYC  | CHA-C1A-NA  | -2.45 | 125.44      | 128.76   |
| 10  | CV    | 200 | CYC  | C2C-C3C-C4C | 2.44  | 105.00      | 101.34   |
| 10  | CM    | 901 | CYC  | CHA-C1A-NA  | -2.43 | 125.46      | 128.76   |
| 10  | BP    | 200 | CYC  | C2C-C3C-C4C | 2.43  | 104.97      | 101.34   |
| 10  | DR    | 200 | CYC  | CHA-C1A-NA  | -2.42 | 125.47      | 128.76   |
| 10  | AP    | 200 | CYC  | C1B-CHB-C4A | 2.41  | 133.98      | 128.06   |
| 10  | CU    | 200 | CYC  | CAC-C3C-C4C | -2.41 | 106.48      | 112.67   |
| 10  | AJ    | 200 | CYC  | C1B-CHB-C4A | 2.40  | 133.96      | 128.06   |
| 10  | BT    | 200 | CYC  | C2C-C3C-C4C | 2.40  | 104.93      | 101.34   |
| 11  | CQ    | 400 | 45D  | C05-C03-C07 | 2.40  | 113.92      | 110.44   |
| 10  | AH    | 200 | CYC  | C2C-C3C-C4C | 2.39  | 104.92      | 101.34   |
| 10  | DV    | 200 | CYC  | CHA-C1A-NA  | -2.39 | 125.52      | 128.76   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 10  | CZ    | 200 | CYC  | C2C-C3C-C4C | 2.37  | 104.89      | 101.34   |
| 10  | CH    | 200 | CYC  | CHA-C1A-NA  | -2.37 | 125.55      | 128.76   |
| 10  | BR    | 200 | CYC  | C2C-C3C-C4C | 2.36  | 104.88      | 101.34   |
| 10  | CF    | 200 | CYC  | CAA-C2A-C1A | 2.36  | 129.16      | 125.02   |
| 10  | DM    | 200 | CYC  | CAC-C3C-C4C | -2.36 | 106.62      | 112.67   |
| 11  | BH    | 400 | 45D  | C28-C26-C24 | 2.36  | 121.69      | 118.09   |
| 11  | BH    | 400 | 45D  | C22-C16-C08 | -2.35 | 120.33      | 124.11   |
| 10  | AO    | 200 | CYC  | C2C-C3C-C4C | 2.35  | 104.86      | 101.34   |
| 11  | BH    | 400 | 45D  | C24-C20-C08 | -2.35 | 120.73      | 127.00   |
| 10  | BD    | 902 | CYC  | C2C-C3C-C4C | 2.34  | 104.84      | 101.34   |
| 10  | DQ    | 200 | CYC  | C2C-C3C-C4C | 2.33  | 104.83      | 101.34   |
| 10  | CS    | 200 | CYC  | CHA-C1A-NA  | -2.33 | 125.59      | 128.76   |
| 10  | AZ    | 200 | CYC  | C1D-CHD-C4C | 2.33  | 131.67      | 128.47   |
| 11  | DI    | 400 | 45D  | C24-C20-C08 | -2.31 | 120.83      | 127.00   |
| 10  | CM    | 902 | CYC  | C2C-C3C-C4C | 2.31  | 104.80      | 101.34   |
| 10  | DN    | 200 | CYC  | C2C-C3C-C4C | 2.31  | 104.80      | 101.34   |
| 10  | BS    | 200 | CYC  | C2C-C3C-C4C | 2.31  | 104.80      | 101.34   |
| 10  | BW    | 200 | CYC  | C2C-C3C-C4C | 2.31  | 104.79      | 101.34   |
| 10  | BZ    | 200 | CYC  | C2C-C3C-C4C | 2.30  | 104.79      | 101.34   |
| 10  | BQ    | 200 | CYC  | C2C-C3C-C4C | 2.30  | 104.78      | 101.34   |
| 10  | BT    | 200 | CYC  | CHA-C1A-NA  | -2.29 | 125.65      | 128.76   |
| 10  | AL    | 200 | CYC  | C2C-C3C-C4C | 2.29  | 104.77      | 101.34   |
| 11  | CQ    | 400 | 45D  | C28-C26-C24 | 2.29  | 121.58      | 118.09   |
| 10  | AK    | 200 | CYC  | C1B-CHB-C4A | 2.28  | 133.66      | 128.06   |
| 10  | AH    | 200 | CYC  | C1B-CHB-C4A | 2.28  | 133.64      | 128.06   |
| 10  | AK    | 200 | CYC  | C2C-C3C-C4C | 2.27  | 104.74      | 101.34   |
| 11  | DI    | 400 | 45D  | C21-C15-C17 | 2.27  | 118.93      | 115.49   |
| 11  | DI    | 400 | 45D  | C20-C24-C26 | -2.25 | 122.90      | 126.23   |
| 10  | BK    | 200 | CYC  | C2C-C3C-C4C | 2.25  | 104.71      | 101.34   |
| 10  | AJ    | 200 | CYC  | C2C-C3C-C4C | 2.25  | 104.70      | 101.34   |
| 10  | AW    | 200 | CYC  | C2C-C3C-C4C | 2.24  | 104.69      | 101.34   |
| 11  | EA    | 400 | 45D  | C28-C26-C24 | 2.24  | 121.51      | 118.09   |
| 10  | AF    | 200 | CYC  | C2C-C3C-C4C | 2.23  | 104.68      | 101.34   |
| 10  | AP    | 200 | CYC  | C2C-C3C-C4C | 2.22  | 104.67      | 101.34   |
| 10  | CH    | 200 | CYC  | C2C-C3C-C4C | 2.22  | 104.66      | 101.34   |
| 10  | AQ    | 200 | CYC  | C2C-C3C-C4C | 2.21  | 104.65      | 101.34   |
| 10  | BY    | 200 | CYC  | C2C-C3C-C4C | 2.21  | 104.65      | 101.34   |
| 10  | DT    | 200 | CYC  | CAC-C3C-C4C | -2.21 | 107.00      | 112.67   |
| 10  | BX    | 200 | CYC  | C2C-C3C-C4C | 2.21  | 104.65      | 101.34   |
| 10  | AL    | 200 | CYC  | CHA-C1A-NA  | -2.20 | 125.77      | 128.76   |
| 10  | CD    | 200 | CYC  | C2C-C3C-C4C | 2.20  | 104.63      | 101.34   |
| 10  | CW    | 200 | CYC  | C2C-C3C-C4C | 2.20  | 104.63      | 101.34   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 11  | CQ    | 400 | 45D  | C21-C15-C17 | 2.20  | 118.82      | 115.49   |
| 11  | BH    | 400 | 45D  | C05-C03-C07 | 2.20  | 113.63      | 110.44   |
| 10  | BN    | 200 | CYC  | C2C-C3C-C4C | 2.19  | 104.62      | 101.34   |
| 11  | CQ    | 400 | 45D  | C22-C16-C08 | -2.19 | 120.59      | 124.11   |
| 10  | CS    | 200 | CYC  | C2C-C3C-C4C | 2.18  | 104.61      | 101.34   |
| 10  | BI    | 200 | CYC  | C2C-C3C-C4C | 2.18  | 104.61      | 101.34   |
| 10  | AX    | 200 | CYC  | C2C-C3C-C4C | 2.18  | 104.60      | 101.34   |
| 10  | AY    | 200 | CYC  | C2C-C3C-C4C | 2.18  | 104.60      | 101.34   |
| 10  | CR    | 200 | CYC  | C1D-CHD-C4C | 2.18  | 131.46      | 128.47   |
| 10  | DJ    | 200 | CYC  | C2C-C3C-C4C | 2.18  | 104.60      | 101.34   |
| 10  | AD    | 200 | CYC  | C2C-C3C-C4C | 2.17  | 104.59      | 101.34   |
| 10  | CF    | 200 | CYC  | C2C-C3C-C4C | 2.17  | 104.59      | 101.34   |
| 11  | EA    | 400 | 45D  | C21-C15-C07 | -2.17 | 120.62      | 124.11   |
| 10  | AZ    | 200 | CYC  | C2C-C3C-C4C | 2.17  | 104.59      | 101.34   |
| 10  | BL    | 200 | CYC  | C2C-C3C-C4C | 2.17  | 104.58      | 101.34   |
| 10  | DJ    | 200 | CYC  | CHA-C1A-NA  | -2.16 | 125.83      | 128.76   |
| 11  | CQ    | 400 | 45D  | C06-C04-C08 | 2.16  | 113.58      | 110.44   |
| 10  | AE    | 200 | CYC  | C2C-C3C-C4C | 2.16  | 104.58      | 101.34   |
| 11  | CQ    | 400 | 45D  | C40-C36-C34 | 2.15  | 121.37      | 118.09   |
| 10  | CE    | 200 | CYC  | C2C-C3C-C4C | 2.15  | 104.55      | 101.34   |
| 11  | CQ    | 400 | 45D  | C24-C20-C08 | -2.14 | 121.28      | 127.00   |
| 10  | DD    | 200 | CYC  | C2C-C3C-C4C | 2.14  | 104.54      | 101.34   |
| 10  | CM    | 901 | CYC  | C2C-C3C-C4C | 2.13  | 104.53      | 101.34   |
| 11  | BH    | 400 | 45D  | C21-C15-C17 | 2.13  | 118.72      | 115.49   |
| 10  | AB    | 200 | CYC  | C2C-C3C-C4C | 2.13  | 104.53      | 101.34   |
| 10  | CG    | 200 | CYC  | C2C-C3C-C4C | 2.13  | 104.53      | 101.34   |
| 10  | AA    | 200 | CYC  | C1B-CHB-C4A | 2.12  | 133.27      | 128.06   |
| 10  | BJ    | 200 | CYC  | C2C-C3C-C4C | 2.12  | 104.52      | 101.34   |
| 10  | DB    | 200 | CYC  | C1B-CHB-C4A | 2.12  | 133.26      | 128.06   |
| 10  | BL    | 200 | CYC  | C1B-CHB-C4A | 2.11  | 133.24      | 128.06   |
| 10  | CC    | 200 | CYC  | C2C-C3C-C4C | 2.10  | 104.49      | 101.34   |
| 10  | DA    | 200 | CYC  | CHA-C1A-NA  | -2.10 | 125.91      | 128.76   |
| 10  | CY    | 200 | CYC  | C2C-C3C-C4C | 2.09  | 104.47      | 101.34   |
| 10  | DO    | 200 | CYC  | C2C-C3C-C4C | 2.09  | 104.47      | 101.34   |
| 10  | CF    | 200 | CYC  | C1B-CHB-C4A | 2.09  | 133.18      | 128.06   |
| 10  | AU    | 200 | CYC  | C2C-C3C-C4C | 2.08  | 104.46      | 101.34   |
| 11  | EA    | 400 | 45D  | C22-C16-C18 | 2.08  | 118.64      | 115.49   |
| 10  | AV    | 200 | CYC  | C2C-C3C-C4C | 2.07  | 104.44      | 101.34   |
| 10  | DV    | 200 | CYC  | C2C-C3C-C4C | 2.07  | 104.44      | 101.34   |
| 10  | BM    | 200 | CYC  | C2C-C3C-C4C | 2.07  | 104.43      | 101.34   |
| 10  | AN    | 200 | CYC  | C1B-CHB-C4A | 2.06  | 133.12      | 128.06   |
| 11  | CQ    | 400 | 45D  | C41-C42-C38 | -2.05 | 119.32      | 123.52   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 11  | DI    | 400 | 45D  | C28-C26-C24 | 2.04  | 121.20      | 118.09   |
| 10  | BR    | 200 | CYC  | C1B-CHB-C4A | 2.04  | 133.06      | 128.06   |
| 10  | AA    | 200 | CYC  | C2C-C3C-C4C | 2.04  | 104.39      | 101.34   |
| 11  | BH    | 400 | 45D  | C42-C41-C37 | -2.04 | 119.35      | 123.52   |
| 11  | CQ    | 400 | 45D  | C22-C16-C18 | 2.04  | 118.58      | 115.49   |
| 10  | AN    | 200 | CYC  | C2C-C3C-C4C | 2.03  | 104.38      | 101.34   |
| 10  | BD    | 901 | CYC  | C2C-C3C-C4C | 2.02  | 104.37      | 101.34   |
| 11  | EA    | 400 | 45D  | C24-C20-C08 | -2.02 | 121.60      | 127.00   |
| 11  | DI    | 400 | 45D  | C41-C42-C38 | -2.02 | 119.39      | 123.52   |
| 10  | AI    | 200 | CYC  | C2C-C3C-C4C | 2.01  | 104.34      | 101.34   |
| 10  | DK    | 200 | CYC  | C2C-C3C-C4C | 2.00  | 104.34      | 101.34   |
| 10  | BV    | 200 | CYC  | C1B-CHB-C4A | 2.00  | 132.97      | 128.06   |

There are no chirality outliers.

All (677) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 10  | AA    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AA    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AB    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AB    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AB    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | AC    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AC    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AC    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | AD    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AD    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AE    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AE    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AE    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | AE    | 200 | CYC  | C2D-C1D-CHD-C4C |
| 10  | AF    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AH    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AH    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AI    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AI    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | AJ    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AJ    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AK    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AK    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AL    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AL    | 200 | CYC  | C3A-C4A-CHB-C1B |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 10  | AN    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AN    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AO    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AO    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AO    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | AP    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AP    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AQ    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AR    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AR    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AR    | 200 | CYC  | C2C-C3C-CAC-CBC |
| 10  | AR    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | AR    | 200 | CYC  | C2D-C1D-CHD-C4C |
| 10  | AU    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | AU    | 200 | CYC  | C2D-C1D-CHD-C4C |
| 10  | AV    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AV    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AW    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AW    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AW    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | AW    | 200 | CYC  | C2D-C1D-CHD-C4C |
| 10  | AX    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AX    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AY    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AY    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AY    | 200 | CYC  | C2D-C3D-CAD-CBD |
| 10  | AZ    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AZ    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AZ    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | BD    | 901 | CYC  | C2B-C3B-CAB-CBB |
| 10  | BD    | 901 | CYC  | ND-C1D-CHD-C4C  |
| 10  | BD    | 901 | CYC  | C2D-C1D-CHD-C4C |
| 10  | BD    | 902 | CYC  | NA-C4A-CHB-C1B  |
| 10  | BD    | 902 | CYC  | ND-C1D-CHD-C4C  |
| 10  | BD    | 902 | CYC  | C2D-C1D-CHD-C4C |
| 10  | BI    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | BI    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | BI    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | BI    | 200 | CYC  | C2C-C3C-CAC-CBC |
| 10  | BI    | 200 | CYC  | C4C-C3C-CAC-CBC |
| 10  | BJ    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | BJ    | 200 | CYC  | C3A-C4A-CHB-C1B |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 10  | BJ    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | BJ    | 200 | CYC  | C2D-C3D-CAD-CBD |
| 10  | BK    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | BK    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | BK    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | BL    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | BL    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | BL    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | BL    | 200 | CYC  | C2C-C3C-CAC-CBC |
| 10  | BL    | 200 | CYC  | C4C-C3C-CAC-CBC |
| 10  | BL    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | BL    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | BL    | 200 | CYC  | C2D-C1D-CHD-C4C |
| 10  | BM    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | BM    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | BM    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | BN    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | BP    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | BP    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | BQ    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | BR    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | BR    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | BS    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | BS    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | BS    | 200 | CYC  | C4C-C3C-CAC-CBC |
| 10  | BS    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | BS    | 200 | CYC  | C2D-C1D-CHD-C4C |
| 10  | BT    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | BT    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | BT    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | BV    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | BV    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | BW    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | BW    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | BW    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | BX    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | BX    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | BZ    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | BZ    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | CC    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | CC    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | CC    | 200 | CYC  | C4B-C3B-CAB-CBB |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 10  | CD    | 200 | CYC  | C4C-C3C-CAC-CBC |
| 10  | CD    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | CD    | 200 | CYC  | C2D-C1D-CHD-C4C |
| 10  | CE    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | CE    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | CE    | 200 | CYC  | C2D-C3D-CAD-CBD |
| 10  | CE    | 200 | CYC  | C4D-C3D-CAD-CBD |
| 10  | CF    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | CF    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 10  | CF    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | CF    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | CF    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | CG    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | CG    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | CH    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | CH    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | CH    | 200 | CYC  | C2D-C3D-CAD-CBD |
| 10  | CH    | 200 | CYC  | C4D-C3D-CAD-CBD |
| 10  | CM    | 901 | CYC  | NA-C4A-CHB-C1B  |
| 10  | CM    | 901 | CYC  | C2B-C3B-CAB-CBB |
| 10  | CM    | 901 | CYC  | C4C-C3C-CAC-CBC |
| 10  | CM    | 901 | CYC  | NC-C4C-CHD-C1D  |
| 10  | CM    | 901 | CYC  | ND-C1D-CHD-C4C  |
| 10  | CM    | 901 | CYC  | C2D-C1D-CHD-C4C |
| 10  | CM    | 902 | CYC  | ND-C1D-CHD-C4C  |
| 10  | CM    | 902 | CYC  | C2D-C1D-CHD-C4C |
| 10  | CR    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | CR    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | CR    | 200 | CYC  | C2D-C1D-CHD-C4C |
| 10  | CS    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | CS    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | CT    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 10  | CT    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | CT    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | CT    | 200 | CYC  | C2D-C1D-CHD-C4C |
| 10  | CU    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | CU    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | CU    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | CU    | 200 | CYC  | C2D-C1D-CHD-C4C |
| 10  | CV    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | CV    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | CW    | 200 | CYC  | C3A-C4A-CHB-C1B |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 10  | CY    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 10  | CY    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | CY    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | CY    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | CZ    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | CZ    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | CZ    | 200 | CYC  | C2C-C3C-CAC-CBC |
| 10  | CZ    | 200 | CYC  | C4C-C3C-CAC-CBC |
| 10  | CZ    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | CZ    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | CZ    | 200 | CYC  | C2D-C1D-CHD-C4C |
| 10  | DA    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | DA    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | DB    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | DB    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | DB    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | DB    | 200 | CYC  | C2D-C1D-CHD-C4C |
| 10  | DC    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | DC    | 200 | CYC  | C4C-C3C-CAC-CBC |
| 10  | DD    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | DD    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | DD    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | DJ    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | DJ    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | DJ    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | DK    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | DK    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | DL    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | DL    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 10  | DL    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | DL    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | DL    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | DL    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | DL    | 200 | CYC  | C2D-C1D-CHD-C4C |
| 10  | DM    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | DM    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | DM    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | DM    | 200 | CYC  | C2D-C1D-CHD-C4C |
| 10  | DQ    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | DQ    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 10  | DQ    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | DQ    | 200 | CYC  | C3A-C4A-CHB-C1B |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 10  | DQ    | 200 | CYC  | C2C-C3C-CAC-CBC |
| 10  | DQ    | 200 | CYC  | C4C-C3C-CAC-CBC |
| 10  | DR    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | DR    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | DR    | 200 | CYC  | C4C-C3C-CAC-CBC |
| 10  | DR    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | DR    | 200 | CYC  | C2D-C1D-CHD-C4C |
| 10  | DS    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | DS    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | DS    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | DS    | 200 | CYC  | C2D-C1D-CHD-C4C |
| 10  | DT    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | DT    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | DT    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | DT    | 200 | CYC  | C2D-C1D-CHD-C4C |
| 10  | DT    | 200 | CYC  | C2D-C3D-CAD-CBD |
| 10  | DT    | 200 | CYC  | C4D-C3D-CAD-CBD |
| 10  | DU    | 200 | CYC  | C4C-C3C-CAC-CBC |
| 10  | DU    | 200 | CYC  | ND-C1D-CHD-C4C  |
| 10  | DV    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | DV    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | DV    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 11  | BH    | 400 | 45D  | C16-C08-C20-C24 |
| 11  | BH    | 400 | 45D  | C20-C24-C26-C28 |
| 11  | BH    | 400 | 45D  | C20-C24-C26-C30 |
| 11  | BH    | 400 | 45D  | C26-C30-C32-C34 |
| 11  | BH    | 400 | 45D  | C31-C33-C35-C37 |
| 11  | BH    | 400 | 45D  | C31-C33-C35-C39 |
| 11  | CQ    | 400 | 45D  | C16-C08-C20-C24 |
| 11  | CQ    | 400 | 45D  | C19-C23-C25-C29 |
| 11  | CQ    | 400 | 45D  | C20-C24-C26-C28 |
| 11  | CQ    | 400 | 45D  | C26-C30-C32-C34 |
| 11  | CQ    | 400 | 45D  | C31-C33-C35-C37 |
| 11  | CQ    | 400 | 45D  | C31-C33-C35-C39 |
| 11  | DI    | 400 | 45D  | C15-C07-C19-C23 |
| 11  | DI    | 400 | 45D  | C16-C08-C20-C24 |
| 11  | DI    | 400 | 45D  | C26-C30-C32-C34 |
| 11  | EA    | 400 | 45D  | C16-C08-C20-C24 |
| 11  | EA    | 400 | 45D  | C19-C23-C25-C27 |
| 11  | EA    | 400 | 45D  | C20-C24-C26-C28 |
| 11  | EA    | 400 | 45D  | C20-C24-C26-C30 |
| 11  | EA    | 400 | 45D  | C26-C30-C32-C34 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 10  | AB    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AW    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | CF    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | CU    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | DC    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | DK    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | DM    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AX    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | CG    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AO    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | BX    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | CW    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | DQ    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | DO    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | DT    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | BN    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | DB    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | DS    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | DU    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | BY    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | CV    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | DC    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 10  | DU    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 10  | CT    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | CY    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | DC    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | DU    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | DR    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | BY    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | AY    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | CZ    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | BD    | 902 | CYC  | C3A-C4A-CHB-C1B |
| 10  | BN    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | CR    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | DL    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AK    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | CS    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 11  | BH    | 400 | 45D  | C19-C23-C25-C27 |
| 11  | BH    | 400 | 45D  | C32-C34-C36-C40 |
| 11  | CQ    | 400 | 45D  | C19-C23-C25-C27 |
| 11  | CQ    | 400 | 45D  | C32-C34-C36-C40 |
| 11  | DI    | 400 | 45D  | C20-C24-C26-C28 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 11  | DI    | 400 | 45D  | C31-C33-C35-C39 |
| 11  | DI    | 400 | 45D  | C32-C34-C36-C40 |
| 11  | EA    | 400 | 45D  | C31-C33-C35-C39 |
| 11  | EA    | 400 | 45D  | C32-C34-C36-C40 |
| 11  | BH    | 400 | 45D  | C19-C23-C25-C29 |
| 11  | BH    | 400 | 45D  | C32-C34-C36-C38 |
| 11  | CQ    | 400 | 45D  | C20-C24-C26-C30 |
| 11  | CQ    | 400 | 45D  | C32-C34-C36-C38 |
| 11  | DI    | 400 | 45D  | C20-C24-C26-C30 |
| 11  | DI    | 400 | 45D  | C31-C33-C35-C37 |
| 11  | DI    | 400 | 45D  | C32-C34-C36-C38 |
| 11  | EA    | 400 | 45D  | C19-C23-C25-C29 |
| 11  | EA    | 400 | 45D  | C31-C33-C35-C37 |
| 11  | EA    | 400 | 45D  | C32-C34-C36-C38 |
| 10  | AF    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AA    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | AD    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | AH    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | AI    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | AJ    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | AK    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | AL    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | AN    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | AR    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | BD    | 902 | CYC  | C4B-C3B-CAB-CBB |
| 10  | BQ    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | BS    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | BT    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | BV    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | BZ    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | CD    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | CR    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | DR    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | AK    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 10  | AW    | 200 | CYC  | C2A-CAA-CBA-CGA |
| 10  | BS    | 200 | CYC  | C2A-CAA-CBA-CGA |
| 10  | AL    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | CM    | 901 | CYC  | C3A-C4A-CHB-C1B |
| 10  | CR    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AR    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | BM    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 10  | BT    | 200 | CYC  | C2B-C3B-CAB-CBB |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 10  | BR    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AU    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | BD    | 901 | CYC  | NA-C4A-CHB-C1B  |
| 10  | BQ    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | CD    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | CM    | 902 | CYC  | NA-C4A-CHB-C1B  |
| 10  | CW    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | DN    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | DO    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 10  | DU    | 200 | CYC  | NA-C4A-CHB-C1B  |
| 11  | DI    | 400 | 45D  | C19-C23-C25-C27 |
| 10  | CE    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AW    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 11  | DI    | 400 | 45D  | C19-C23-C25-C29 |
| 10  | BV    | 200 | CYC  | C2A-CAA-CBA-CGA |
| 10  | BM    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | AF    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AI    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AQ    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AU    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | BD    | 901 | CYC  | C3A-C4A-CHB-C1B |
| 10  | BQ    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | BY    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | CD    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | CM    | 902 | CYC  | C3A-C4A-CHB-C1B |
| 10  | DC    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | DN    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | DO    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | DU    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AV    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | CM    | 901 | CYC  | C4B-C3B-CAB-CBB |
| 10  | CZ    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | DA    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 11  | BH    | 400 | 45D  | C03-C07-C19-C23 |
| 11  | BH    | 400 | 45D  | C15-C07-C19-C23 |
| 11  | BH    | 400 | 45D  | C04-C08-C20-C24 |
| 11  | CQ    | 400 | 45D  | C03-C07-C19-C23 |
| 11  | DI    | 400 | 45D  | C03-C07-C19-C23 |
| 11  | DI    | 400 | 45D  | C04-C08-C20-C24 |
| 11  | EA    | 400 | 45D  | C03-C07-C19-C23 |
| 11  | EA    | 400 | 45D  | C15-C07-C19-C23 |
| 10  | BV    | 200 | CYC  | C2B-C3B-CAB-CBB |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 10  | BZ    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | DA    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AE    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | CT    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AQ    | 200 | CYC  | C2D-C3D-CAD-CBD |
| 10  | BV    | 200 | CYC  | C2D-C3D-CAD-CBD |
| 10  | DB    | 200 | CYC  | C2D-C3D-CAD-CBD |
| 10  | DL    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AN    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | BJ    | 200 | CYC  | C4D-C3D-CAD-CBD |
| 10  | AP    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AI    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AA    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | AD    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | AN    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | AY    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | CH    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | CW    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | DO    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | DR    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | DV    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | AW    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | AV    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | BS    | 200 | CYC  | C2C-C3C-CAC-CBC |
| 10  | DC    | 200 | CYC  | C2C-C3C-CAC-CBC |
| 10  | DU    | 200 | CYC  | C2C-C3C-CAC-CBC |
| 10  | AE    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 10  | AK    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | BT    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | BT    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 10  | AQ    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | BY    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | BS    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AJ    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AL    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | BN    | 200 | CYC  | C2A-CAA-CBA-CGA |
| 10  | DQ    | 200 | CYC  | C2A-CAA-CBA-CGA |
| 10  | DV    | 200 | CYC  | C2A-CAA-CBA-CGA |
| 10  | BD    | 901 | CYC  | C4B-C3B-CAB-CBB |
| 10  | BP    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 11  | BH    | 400 | 45D  | C25-C29-C31-C33 |
| 11  | CQ    | 400 | 45D  | C25-C29-C31-C33 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 10  | AL    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 10  | AA    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 11  | CQ    | 400 | 45D  | C04-C08-C20-C24 |
| 11  | EA    | 400 | 45D  | C04-C08-C20-C24 |
| 10  | DL    | 200 | CYC  | C2A-CAA-CBA-CGA |
| 10  | BL    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AR    | 200 | CYC  | C4C-C3C-CAC-CBC |
| 10  | AU    | 200 | CYC  | C4C-C3C-CAC-CBC |
| 10  | DN    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AQ    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | CW    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | AH    | 200 | CYC  | C2A-CAA-CBA-CGA |
| 10  | AB    | 200 | CYC  | C2D-C3D-CAD-CBD |
| 10  | AE    | 200 | CYC  | C2D-C3D-CAD-CBD |
| 10  | BD    | 901 | CYC  | C2D-C3D-CAD-CBD |
| 10  | CM    | 901 | CYC  | C2D-C3D-CAD-CBD |
| 10  | CY    | 200 | CYC  | C2D-C3D-CAD-CBD |
| 10  | AB    | 200 | CYC  | C4D-C3D-CAD-CBD |
| 10  | AE    | 200 | CYC  | C4D-C3D-CAD-CBD |
| 10  | AQ    | 200 | CYC  | C4D-C3D-CAD-CBD |
| 10  | AU    | 200 | CYC  | C4D-C3D-CAD-CBD |
| 10  | AY    | 200 | CYC  | C4D-C3D-CAD-CBD |
| 10  | BM    | 200 | CYC  | C4D-C3D-CAD-CBD |
| 10  | BV    | 200 | CYC  | C4D-C3D-CAD-CBD |
| 10  | CD    | 200 | CYC  | C4D-C3D-CAD-CBD |
| 10  | CY    | 200 | CYC  | C4D-C3D-CAD-CBD |
| 10  | DB    | 200 | CYC  | C4D-C3D-CAD-CBD |
| 10  | AX    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | BN    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | BT    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | BZ    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | DB    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | DQ    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | BY    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 10  | DJ    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | CH    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AC    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AW    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | CF    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | DC    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | CC    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | CM    | 901 | CYC  | C2C-C3C-CAC-CBC |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 10  | AH    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | BI    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | BW    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 11  | DI    | 400 | 45D  | C25-C29-C31-C33 |
| 11  | EA    | 400 | 45D  | C25-C29-C31-C33 |
| 10  | AQ    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 11  | BH    | 400 | 45D  | C36-C38-C42-C41 |
| 10  | BK    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | CU    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | DO    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 11  | EA    | 400 | 45D  | C36-C38-C42-C41 |
| 10  | BL    | 200 | CYC  | C4D-C3D-CAD-CBD |
| 10  | DJ    | 200 | CYC  | C4D-C3D-CAD-CBD |
| 10  | CY    | 200 | CYC  | C2A-CAA-CBA-CGA |
| 10  | CU    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | AQ    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | AC    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | AH    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | BD    | 901 | CYC  | NC-C4C-CHD-C1D  |
| 10  | CE    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 10  | CT    | 200 | CYC  | NC-C4C-CHD-C1D  |
| 11  | CQ    | 400 | 45D  | C36-C38-C42-C41 |
| 11  | DI    | 400 | 45D  | C35-C37-C41-C42 |
| 10  | AO    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | AY    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | BD    | 902 | CYC  | CAA-CBA-CGA-O2A |
| 10  | CU    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 10  | BV    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | CT    | 200 | CYC  | C3A-C4A-CHB-C1B |
| 10  | AQ    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | BI    | 200 | CYC  | CAD-CBD-CGD-O1D |
| 10  | BP    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | DV    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | DV    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | AC    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | BX    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | BZ    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | AL    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | AR    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | BI    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | BR    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | AP    | 200 | CYC  | CAD-CBD-CGD-O1D |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> | <b>Atoms</b>    |
|------------|--------------|------------|-------------|-----------------|
| 10         | BY           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | CC           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | CC           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | CM           | 902        | CYC         | CAA-CBA-CGA-O2A |
| 10         | DJ           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | AC           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | AP           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | AZ           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | BP           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | CR           | 200        | CYC         | CAD-CBD-CGD-O1D |
| 10         | DC           | 200        | CYC         | CAD-CBD-CGD-O1D |
| 10         | AX           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | BR           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | CH           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | BW           | 200        | CYC         | CAD-CBD-CGD-O2D |
| 10         | AJ           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | AQ           | 200        | CYC         | CAD-CBD-CGD-O1D |
| 10         | AR           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | CR           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | CS           | 200        | CYC         | CAD-CBD-CGD-O1D |
| 10         | DT           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | DV           | 200        | CYC         | C2B-C3B-CAB-CBB |
| 10         | AP           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | BP           | 200        | CYC         | CAD-CBD-CGD-O1D |
| 10         | BV           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | BY           | 200        | CYC         | CAD-CBD-CGD-O1D |
| 10         | DK           | 200        | CYC         | C4B-C3B-CAB-CBB |
| 10         | AX           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | AZ           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | BK           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | BW           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | DN           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | DN           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | DN           | 200        | CYC         | CAD-CBD-CGD-O1D |
| 10         | AH           | 200        | CYC         | CAD-CBD-CGD-O1D |
| 10         | AJ           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | AL           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | AN           | 200        | CYC         | CAD-CBD-CGD-O1D |
| 10         | CG           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | CM           | 901        | CYC         | CAA-CBA-CGA-O1A |
| 10         | DR           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | BR           | 200        | CYC         | CAA-CBA-CGA-O1A |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> | <b>Atoms</b>    |
|------------|--------------|------------|-------------|-----------------|
| 10         | BT           | 200        | CYC         | CAD-CBD-CGD-O2D |
| 10         | CW           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | DJ           | 200        | CYC         | CAD-CBD-CGD-O1D |
| 10         | AJ           | 200        | CYC         | CAD-CBD-CGD-O1D |
| 10         | BX           | 200        | CYC         | CAD-CBD-CGD-O1D |
| 10         | BZ           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | CH           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | AD           | 200        | CYC         | CAD-CBD-CGD-O2D |
| 10         | AY           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | BD           | 902        | CYC         | CAA-CBA-CGA-O1A |
| 10         | BR           | 200        | CYC         | CAD-CBD-CGD-O1D |
| 10         | BX           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | CM           | 902        | CYC         | CAA-CBA-CGA-O1A |
| 10         | DJ           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | BW           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | BW           | 200        | CYC         | CAD-CBD-CGD-O1D |
| 10         | BY           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | CW           | 200        | CYC         | CAD-CBD-CGD-O2D |
| 10         | CZ           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | CT           | 200        | CYC         | NA-C4A-CHB-C1B  |
| 10         | AN           | 200        | CYC         | CAD-CBD-CGD-O2D |
| 10         | BP           | 200        | CYC         | CAD-CBD-CGD-O2D |
| 10         | CW           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | BY           | 200        | CYC         | CAD-CBD-CGD-O2D |
| 10         | CT           | 200        | CYC         | C2A-CAA-CBA-CGA |
| 10         | AJ           | 200        | CYC         | CAD-CBD-CGD-O2D |
| 10         | AQ           | 200        | CYC         | CAD-CBD-CGD-O2D |
| 10         | DJ           | 200        | CYC         | CAD-CBD-CGD-O2D |
| 10         | BD           | 901        | CYC         | C4C-C3C-CAC-CBC |
| 10         | AA           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | AD           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | AP           | 200        | CYC         | CAD-CBD-CGD-O2D |
| 10         | AW           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | BL           | 200        | CYC         | CAD-CBD-CGD-O2D |
| 10         | BV           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | BX           | 200        | CYC         | CAD-CBD-CGD-O2D |
| 10         | CF           | 200        | CYC         | CAA-CBA-CGA-O2A |
| 10         | CM           | 901        | CYC         | CAA-CBA-CGA-O2A |
| 10         | CR           | 200        | CYC         | CAD-CBD-CGD-O2D |
| 10         | CS           | 200        | CYC         | CAD-CBD-CGD-O2D |
| 10         | AO           | 200        | CYC         | CAA-CBA-CGA-O1A |
| 10         | BK           | 200        | CYC         | CAA-CBA-CGA-O2A |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 10  | CU    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | DN    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | CS    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | DQ    | 200 | CYC  | CAD-CBD-CGD-O1D |
| 10  | AF    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | BL    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | BT    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | BT    | 200 | CYC  | CAD-CBD-CGD-O1D |
| 10  | CS    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | DK    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | DT    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | AH    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | BQ    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | AD    | 200 | CYC  | CAD-CBD-CGD-O1D |
| 10  | AE    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | AH    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | AV    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | CR    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | DC    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | DU    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | BQ    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | CG    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | CU    | 200 | CYC  | CAD-CBD-CGD-O1D |
| 10  | DK    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | AH    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | BL    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | CW    | 200 | CYC  | CAD-CBD-CGD-O1D |
| 10  | CZ    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | BM    | 200 | CYC  | C2D-C3D-CAD-CBD |
| 10  | DJ    | 200 | CYC  | C2D-C3D-CAD-CBD |
| 10  | BI    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | BT    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | AW    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | BL    | 200 | CYC  | CAD-CBD-CGD-O1D |
| 10  | AD    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | CY    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | DA    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | DR    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | AA    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | CF    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | DS    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | BD    | 901 | CYC  | C4D-C3D-CAD-CBD |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 10  | CM    | 901 | CYC  | C4D-C3D-CAD-CBD |
| 10  | AF    | 200 | CYC  | CAD-CBD-CGD-O1D |
| 10  | AX    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | BI    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | DA    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | DS    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | CT    | 200 | CYC  | CAD-CBD-CGD-O1D |
| 10  | CY    | 200 | CYC  | CAD-CBD-CGD-O1D |
| 10  | DM    | 200 | CYC  | CAD-CBD-CGD-O1D |
| 11  | EA    | 400 | 45D  | C35-C37-C41-C42 |
| 10  | AE    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | AV    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | DM    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 10  | DO    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 11  | CQ    | 400 | 45D  | C15-C07-C19-C23 |
| 10  | DQ    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | CE    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | AD    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | CY    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | CD    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | CY    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | CG    | 200 | CYC  | CAD-CBD-CGD-O1D |
| 10  | DB    | 200 | CYC  | CAD-CBD-CGD-O1D |
| 10  | DQ    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | CD    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | DQ    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | AZ    | 200 | CYC  | CAD-CBD-CGD-O1D |
| 10  | CD    | 200 | CYC  | CAD-CBD-CGD-O1D |
| 11  | BH    | 400 | 45D  | C35-C37-C41-C42 |
| 10  | CG    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | CT    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | DM    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | AZ    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | CD    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | CE    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | DM    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | DD    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | DB    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | AL    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | AE    | 200 | CYC  | C2B-C3B-CAB-CBB |
| 10  | AZ    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | DD    | 200 | CYC  | CAD-CBD-CGD-O2D |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 10  | AN    | 200 | CYC  | CAA-CBA-CGA-O1A |
| 10  | BQ    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | DO    | 200 | CYC  | C1A-C2A-CAA-CBA |
| 10  | AK    | 200 | CYC  | C2D-C3D-CAD-CBD |
| 10  | CD    | 200 | CYC  | C2D-C3D-CAD-CBD |
| 10  | AO    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | AU    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | CM    | 902 | CYC  | CAD-CBD-CGD-O2D |
| 10  | BD    | 902 | CYC  | CAD-CBD-CGD-O2D |
| 10  | DK    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | CZ    | 200 | CYC  | C3A-C2A-CAA-CBA |
| 10  | BT    | 200 | CYC  | C2A-CAA-CBA-CGA |
| 10  | AI    | 200 | CYC  | CAA-CBA-CGA-O2A |
| 10  | AY    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | AB    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | AU    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | CG    | 200 | CYC  | C4B-C3B-CAB-CBB |
| 10  | AE    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | DT    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | AK    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | AR    | 200 | CYC  | CAD-CBD-CGD-O2D |
| 10  | BV    | 200 | CYC  | CAD-CBD-CGD-O2D |

There are no ring outliers.

76 monomers are involved in 977 short contacts:

| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 10  | AL    | 200 | CYC  | 11      | 0            |
| 10  | DO    | 200 | CYC  | 7       | 0            |
| 10  | DK    | 200 | CYC  | 13      | 0            |
| 10  | CV    | 200 | CYC  | 14      | 0            |
| 10  | DL    | 200 | CYC  | 13      | 0            |
| 10  | BK    | 200 | CYC  | 17      | 0            |
| 10  | BP    | 200 | CYC  | 17      | 0            |
| 10  | AE    | 200 | CYC  | 9       | 0            |
| 10  | DC    | 200 | CYC  | 16      | 0            |
| 10  | CG    | 200 | CYC  | 15      | 0            |
| 10  | AF    | 200 | CYC  | 13      | 0            |
| 10  | CE    | 200 | CYC  | 15      | 0            |
| 10  | DV    | 200 | CYC  | 13      | 0            |
| 10  | CW    | 200 | CYC  | 12      | 0            |
| 10  | AO    | 200 | CYC  | 8       | 0            |

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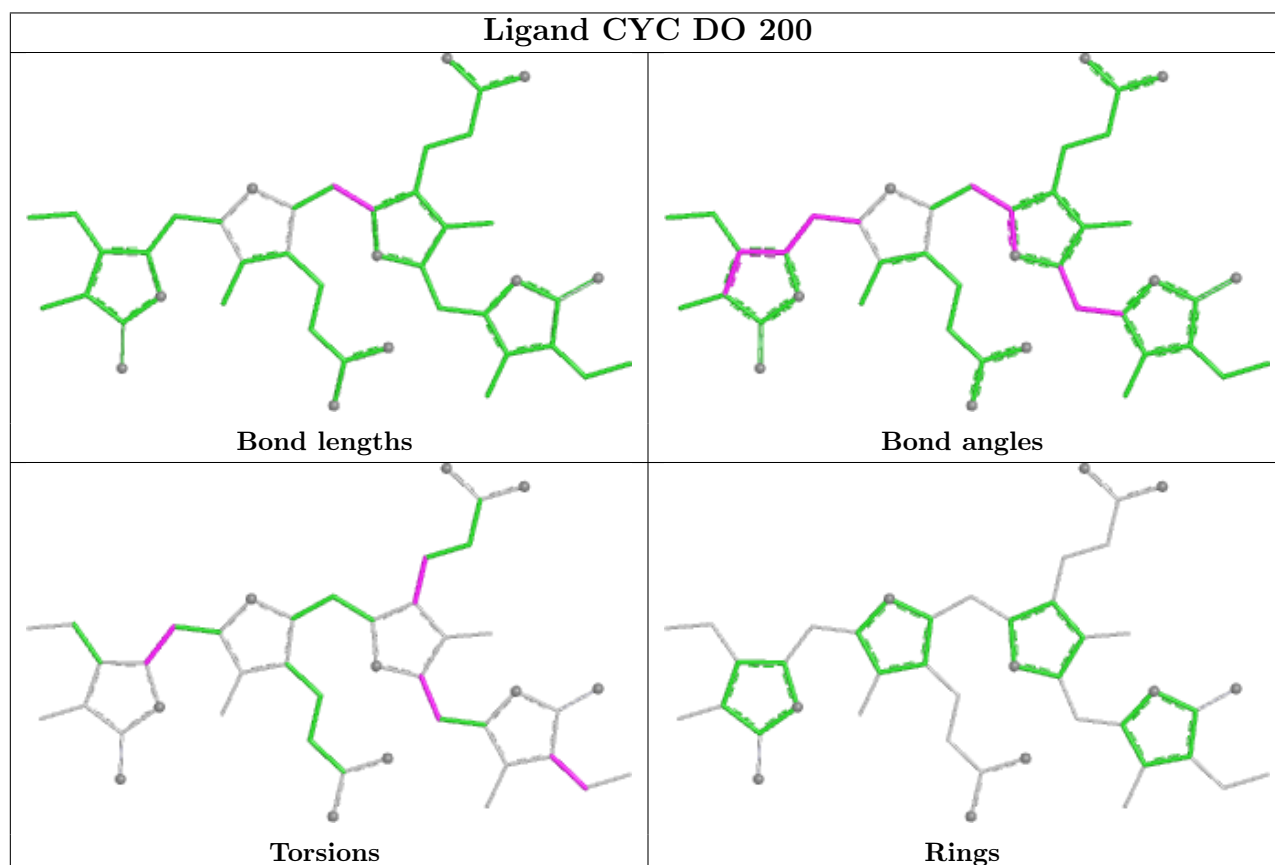
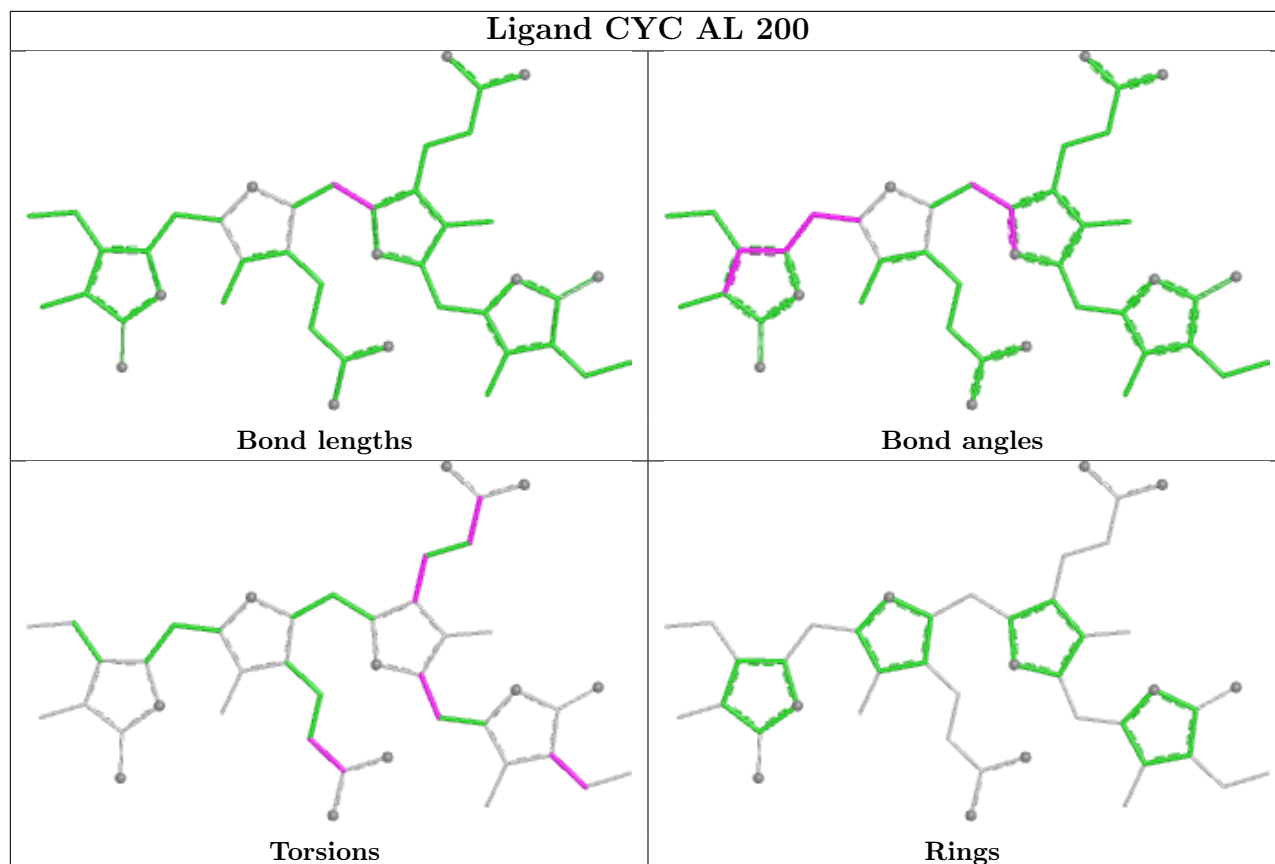
| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 10  | CF    | 200 | CYC  | 12      | 0            |
| 10  | CC    | 200 | CYC  | 10      | 0            |
| 10  | CM    | 902 | CYC  | 13      | 0            |
| 10  | DU    | 200 | CYC  | 14      | 0            |
| 10  | BV    | 200 | CYC  | 14      | 0            |
| 10  | DA    | 200 | CYC  | 11      | 0            |
| 10  | AY    | 200 | CYC  | 15      | 0            |
| 10  | DJ    | 200 | CYC  | 14      | 0            |
| 10  | AR    | 200 | CYC  | 11      | 0            |
| 10  | BT    | 200 | CYC  | 10      | 0            |
| 10  | BM    | 200 | CYC  | 9       | 0            |
| 10  | BN    | 200 | CYC  | 16      | 0            |
| 10  | BI    | 200 | CYC  | 15      | 0            |
| 10  | AN    | 200 | CYC  | 10      | 0            |
| 10  | AQ    | 200 | CYC  | 12      | 0            |
| 10  | BJ    | 200 | CYC  | 13      | 0            |
| 10  | CY    | 200 | CYC  | 13      | 0            |
| 10  | BW    | 200 | CYC  | 10      | 0            |
| 10  | CU    | 200 | CYC  | 9       | 0            |
| 10  | AZ    | 200 | CYC  | 14      | 0            |
| 10  | AH    | 200 | CYC  | 18      | 0            |
| 10  | BD    | 901 | CYC  | 12      | 0            |
| 10  | BD    | 902 | CYC  | 13      | 0            |
| 10  | BL    | 200 | CYC  | 17      | 0            |
| 10  | CM    | 901 | CYC  | 10      | 0            |
| 10  | CZ    | 200 | CYC  | 11      | 0            |
| 10  | DD    | 200 | CYC  | 21      | 0            |
| 10  | CR    | 200 | CYC  | 12      | 0            |
| 10  | AX    | 200 | CYC  | 15      | 0            |
| 10  | AK    | 200 | CYC  | 20      | 0            |
| 10  | AW    | 200 | CYC  | 10      | 0            |
| 10  | DM    | 200 | CYC  | 11      | 0            |
| 10  | CS    | 200 | CYC  | 8       | 0            |
| 10  | AC    | 200 | CYC  | 15      | 0            |
| 10  | DR    | 200 | CYC  | 17      | 0            |
| 10  | BS    | 200 | CYC  | 16      | 0            |
| 10  | AU    | 200 | CYC  | 14      | 0            |
| 10  | AI    | 200 | CYC  | 12      | 0            |
| 10  | CH    | 200 | CYC  | 15      | 0            |
| 10  | CT    | 200 | CYC  | 14      | 0            |
| 10  | DN    | 200 | CYC  | 15      | 0            |
| 10  | BY    | 200 | CYC  | 13      | 0            |

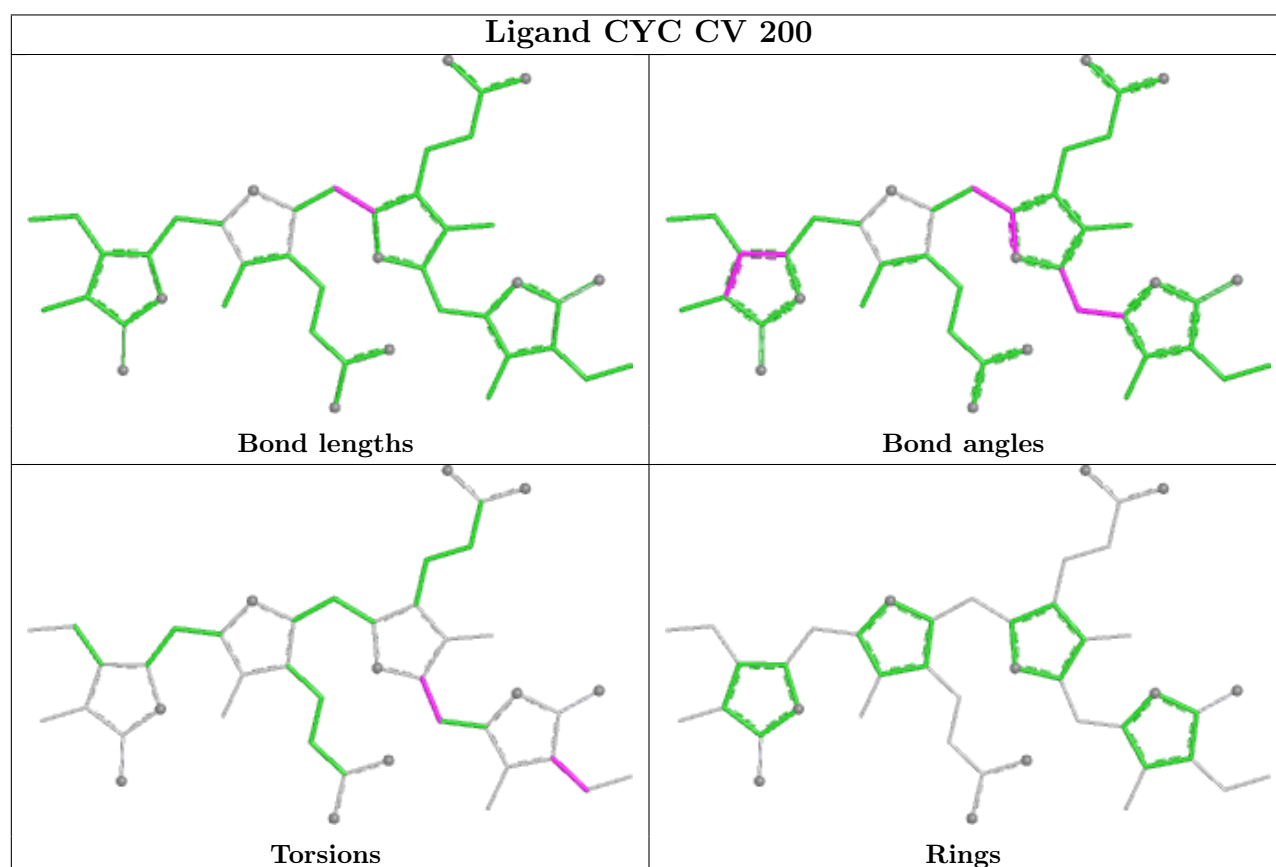
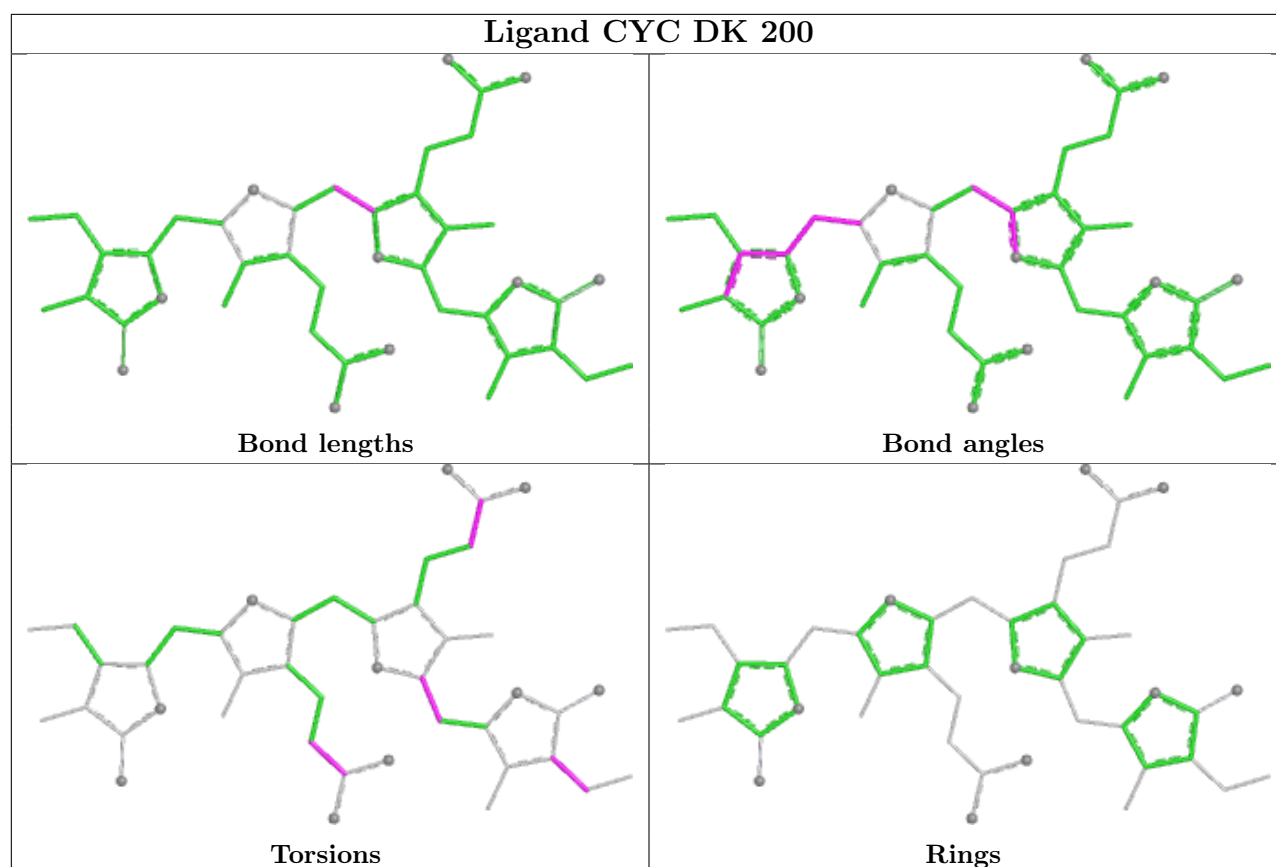
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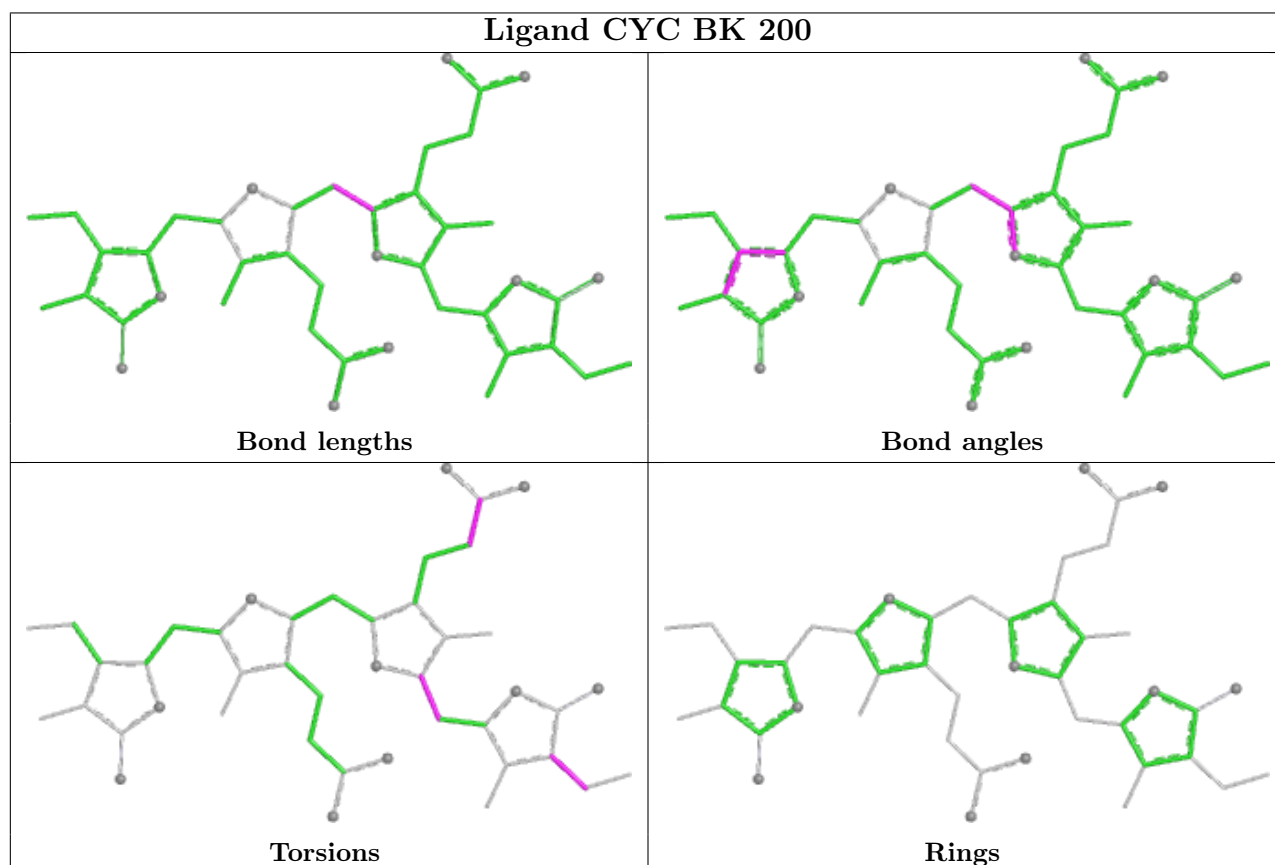
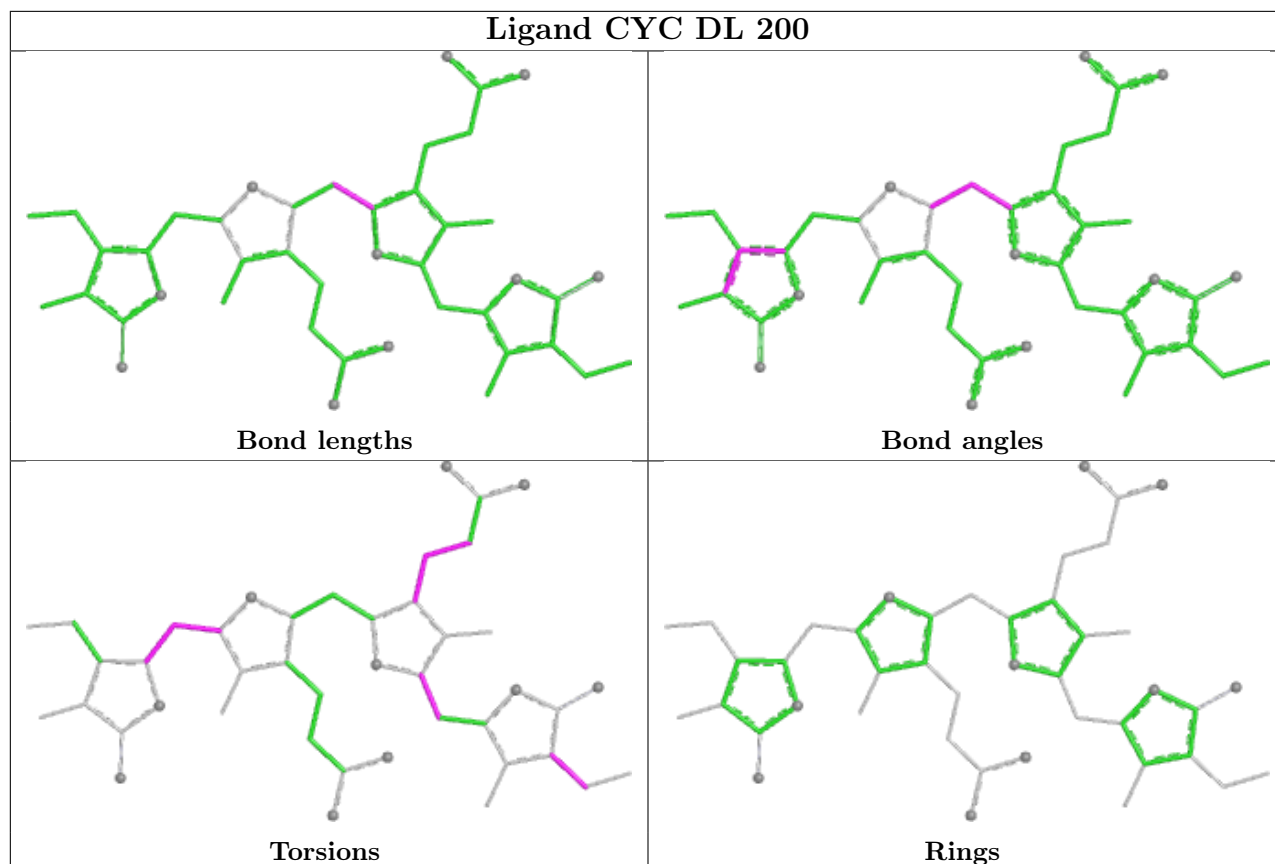
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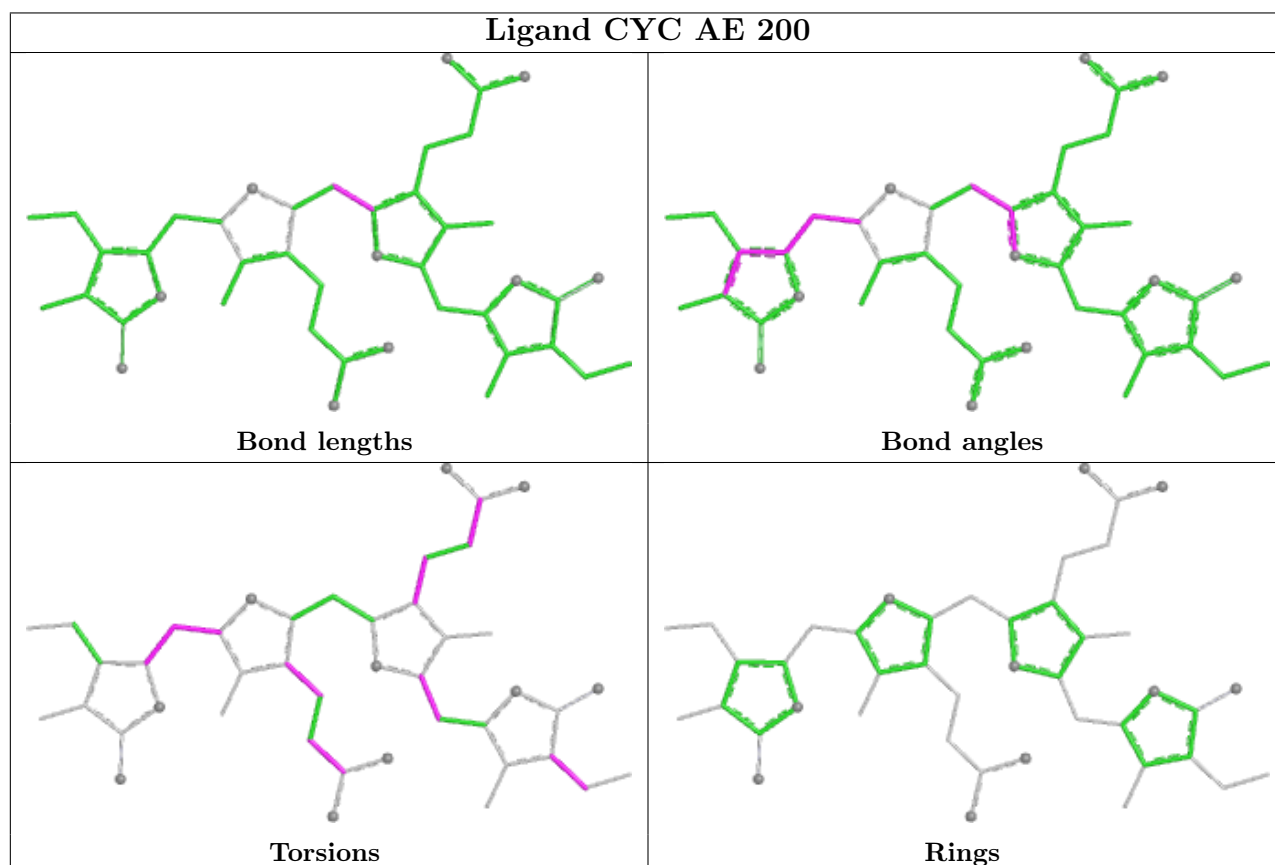
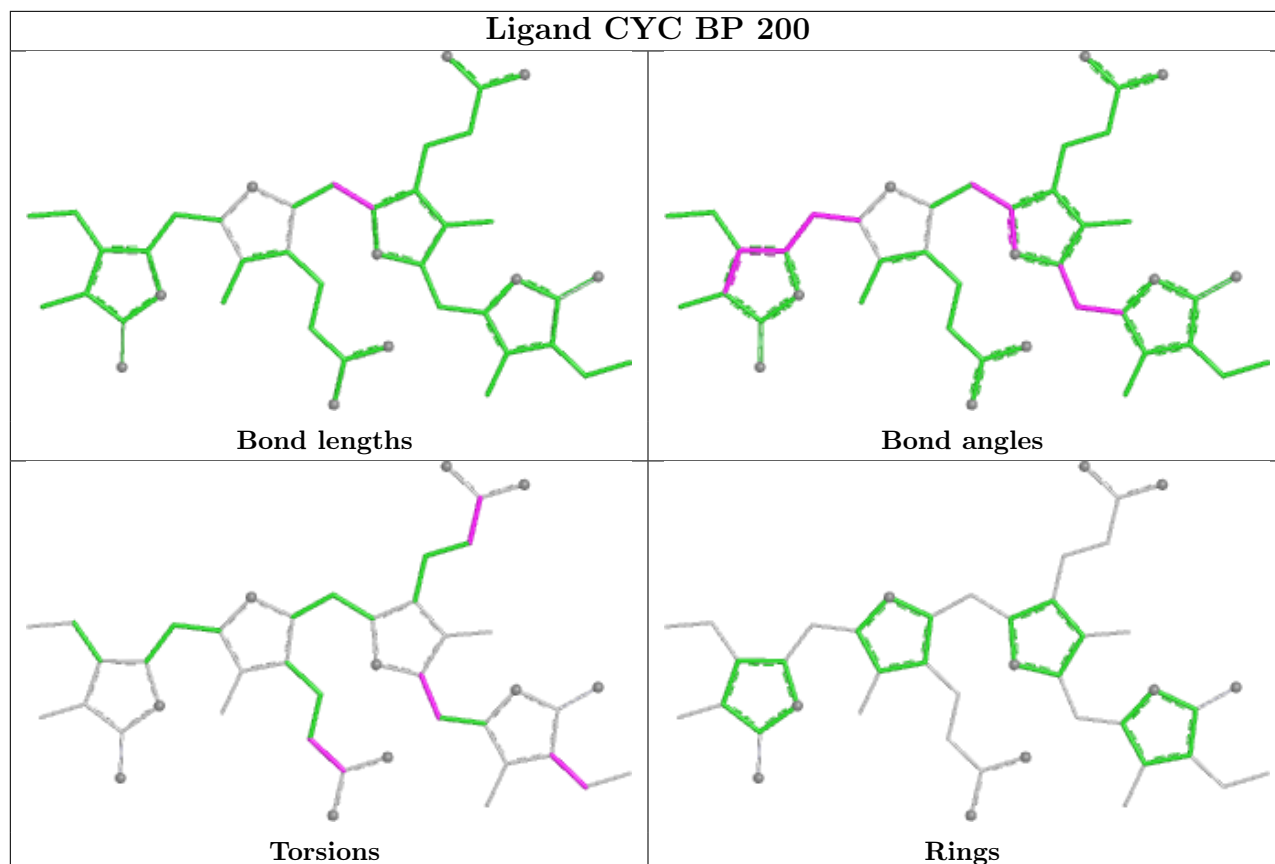
| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 10  | AD    | 200 | CYC  | 17      | 0            |
| 10  | AV    | 200 | CYC  | 21      | 0            |
| 10  | BR    | 200 | CYC  | 7       | 0            |
| 10  | BZ    | 200 | CYC  | 12      | 0            |
| 10  | DQ    | 200 | CYC  | 12      | 0            |
| 10  | AJ    | 200 | CYC  | 11      | 0            |
| 10  | BQ    | 200 | CYC  | 17      | 0            |
| 10  | AB    | 200 | CYC  | 14      | 0            |
| 10  | DS    | 200 | CYC  | 12      | 0            |
| 10  | DT    | 200 | CYC  | 13      | 0            |
| 11  | DI    | 400 | 45D  | 14      | 0            |
| 10  | AA    | 200 | CYC  | 14      | 0            |
| 10  | CD    | 200 | CYC  | 9       | 0            |
| 10  | DB    | 200 | CYC  | 11      | 0            |
| 11  | EA    | 400 | 45D  | 12      | 0            |
| 10  | AP    | 200 | CYC  | 10      | 0            |
| 10  | BX    | 200 | CYC  | 14      | 0            |
| 11  | CQ    | 400 | 45D  | 6       | 0            |
| 11  | BH    | 400 | 45D  | 4       | 0            |

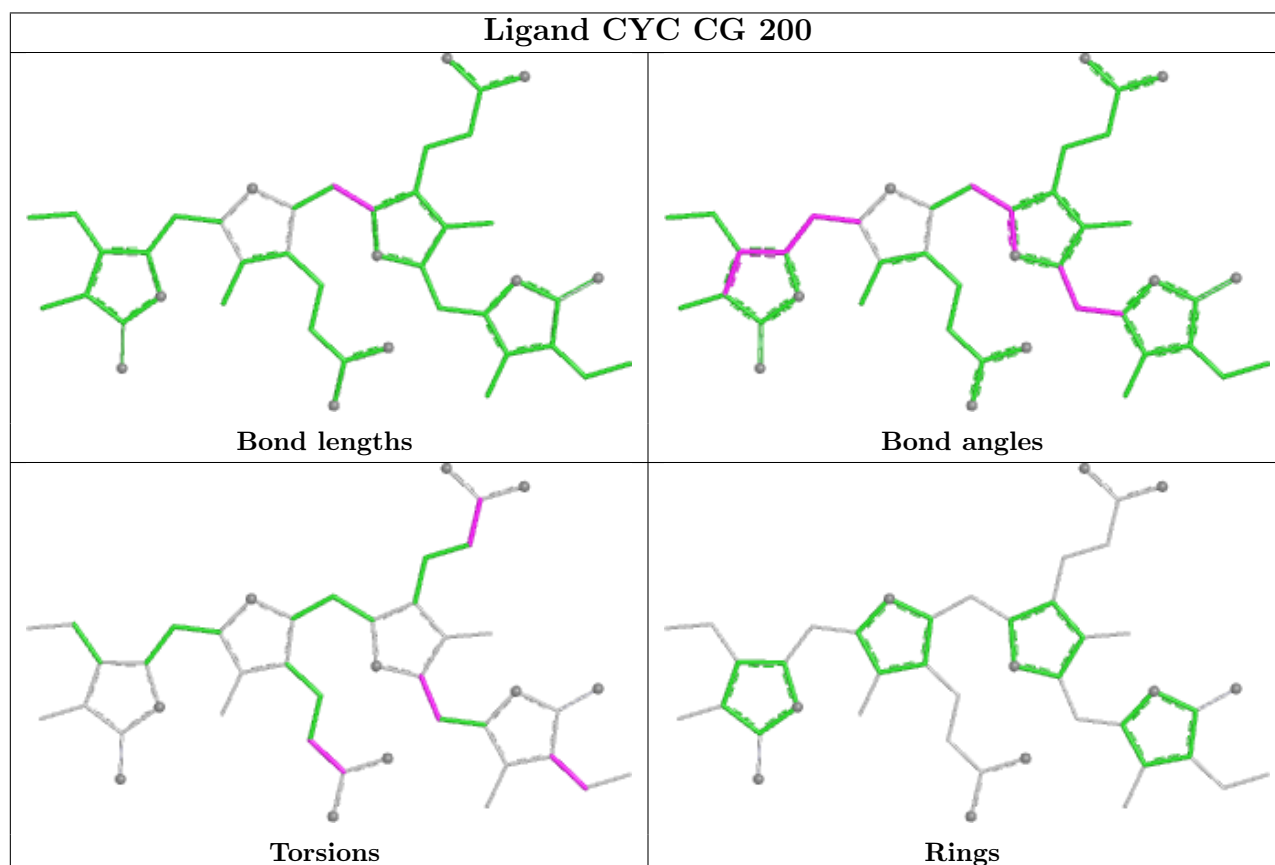
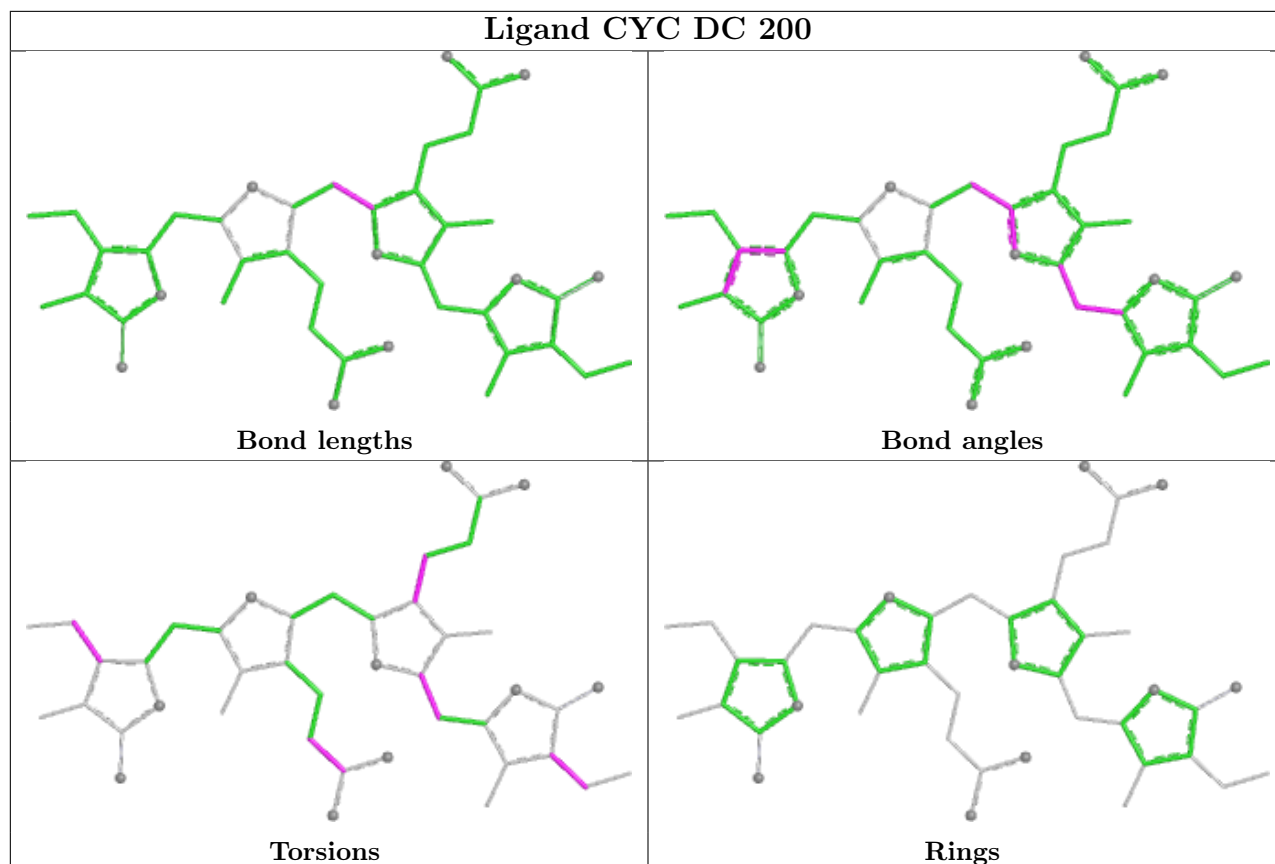
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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



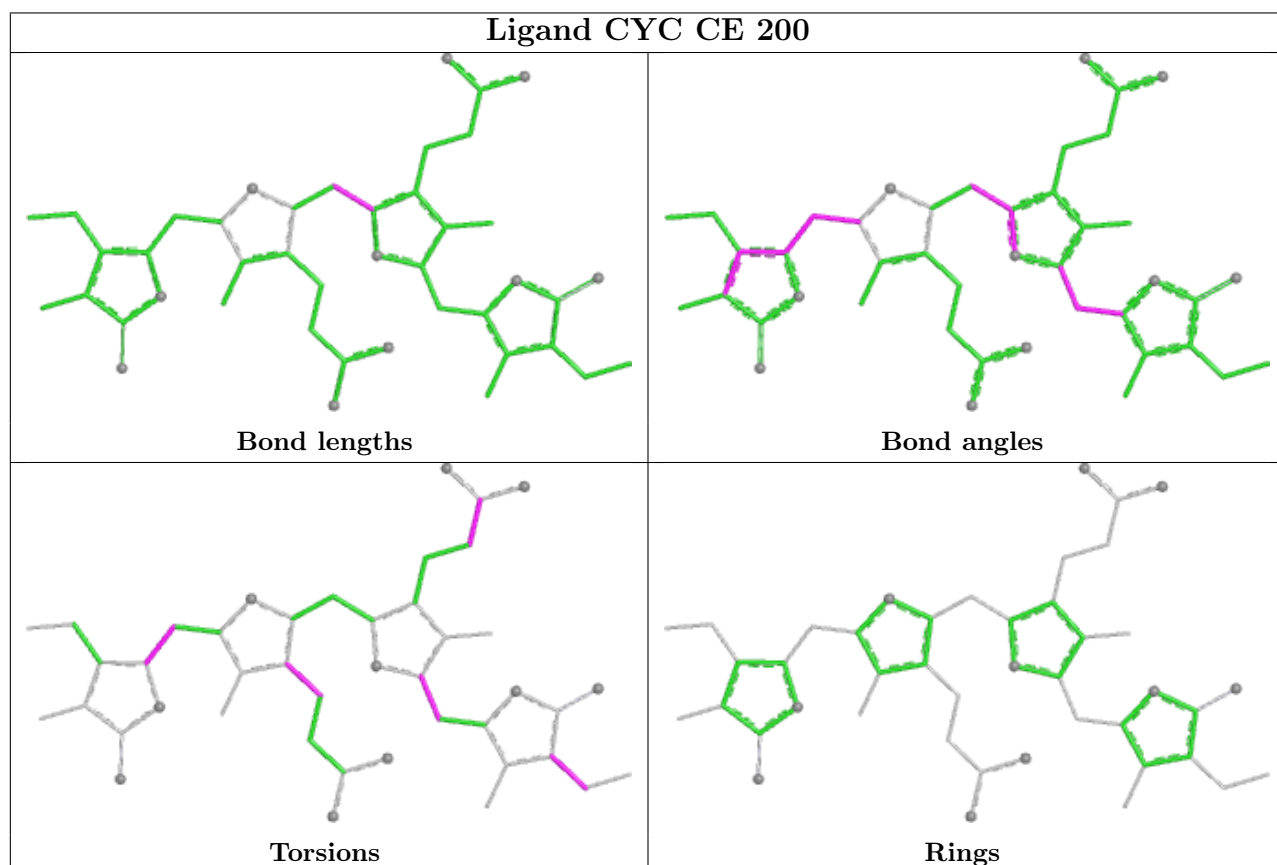
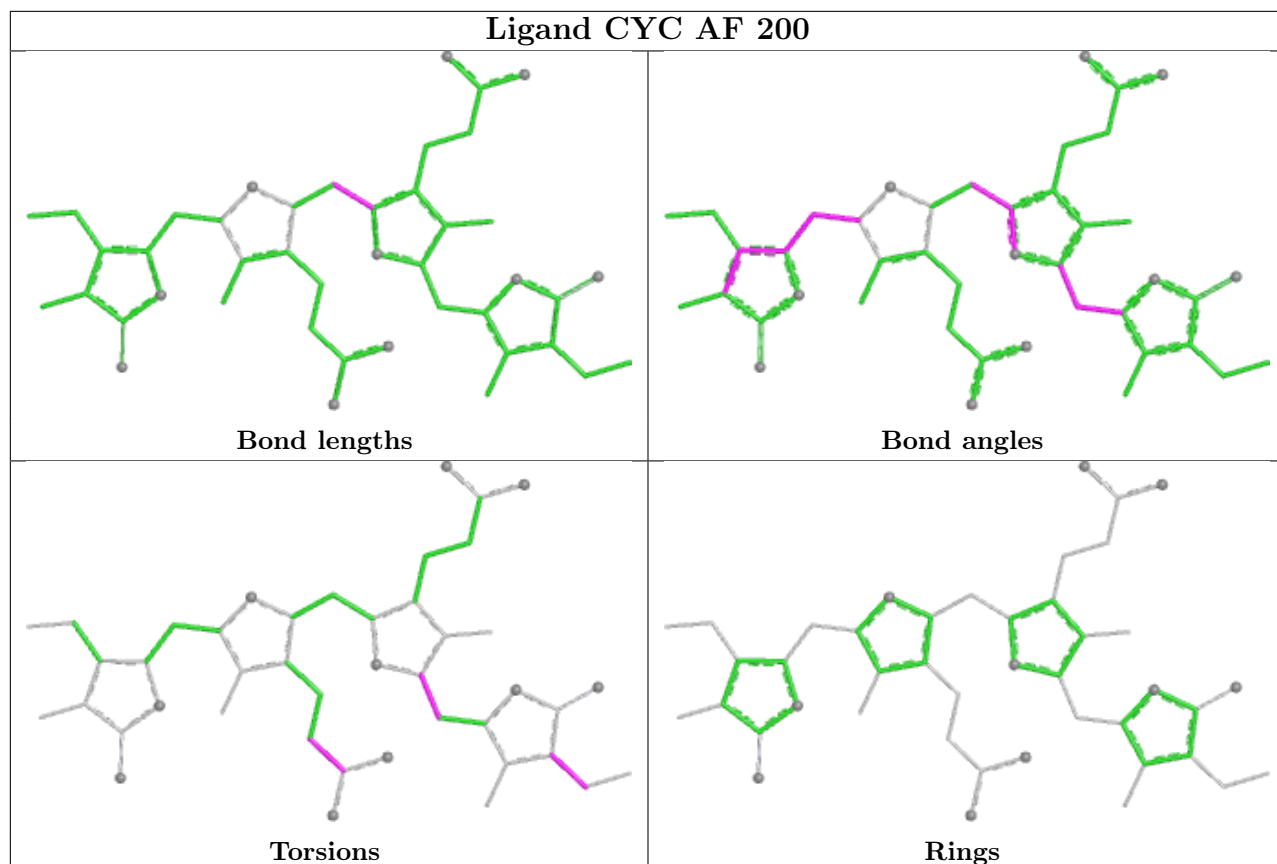


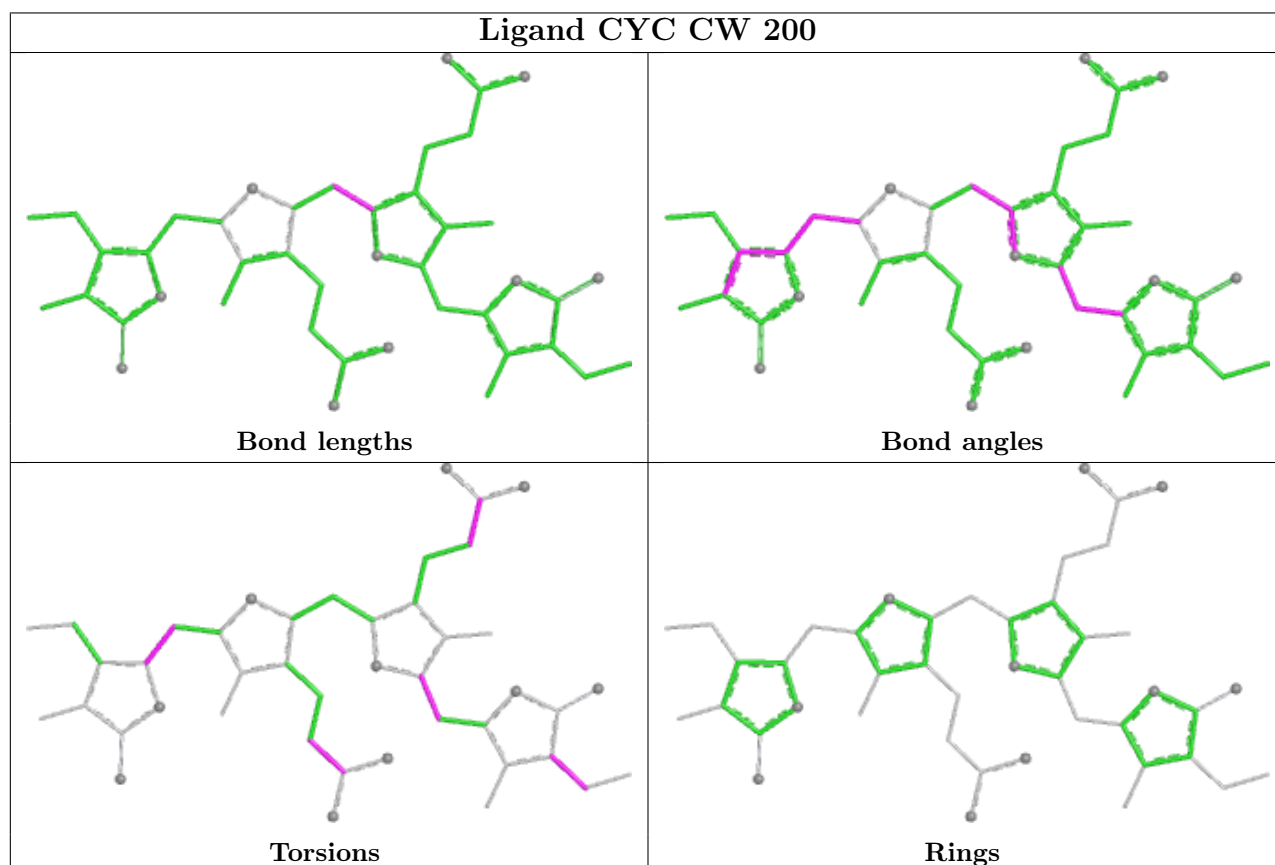
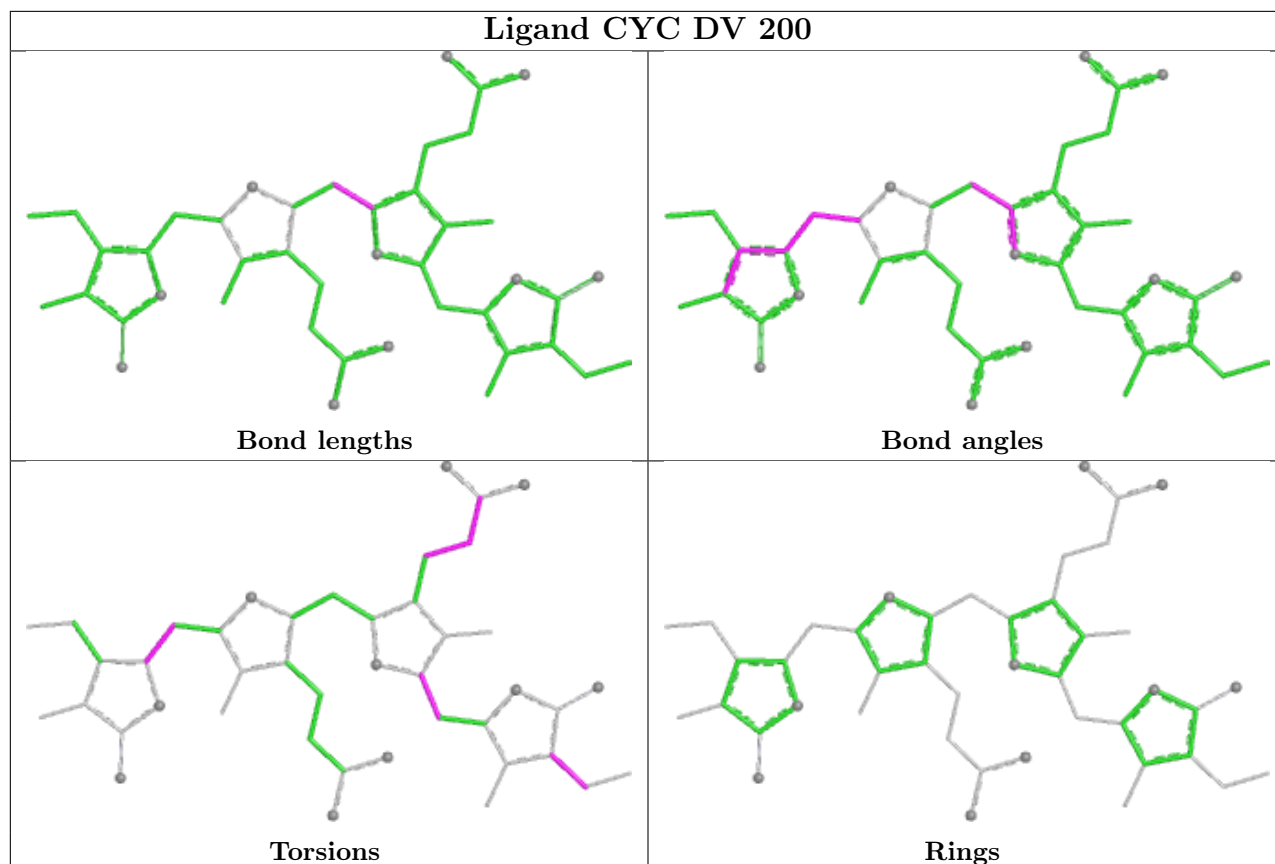


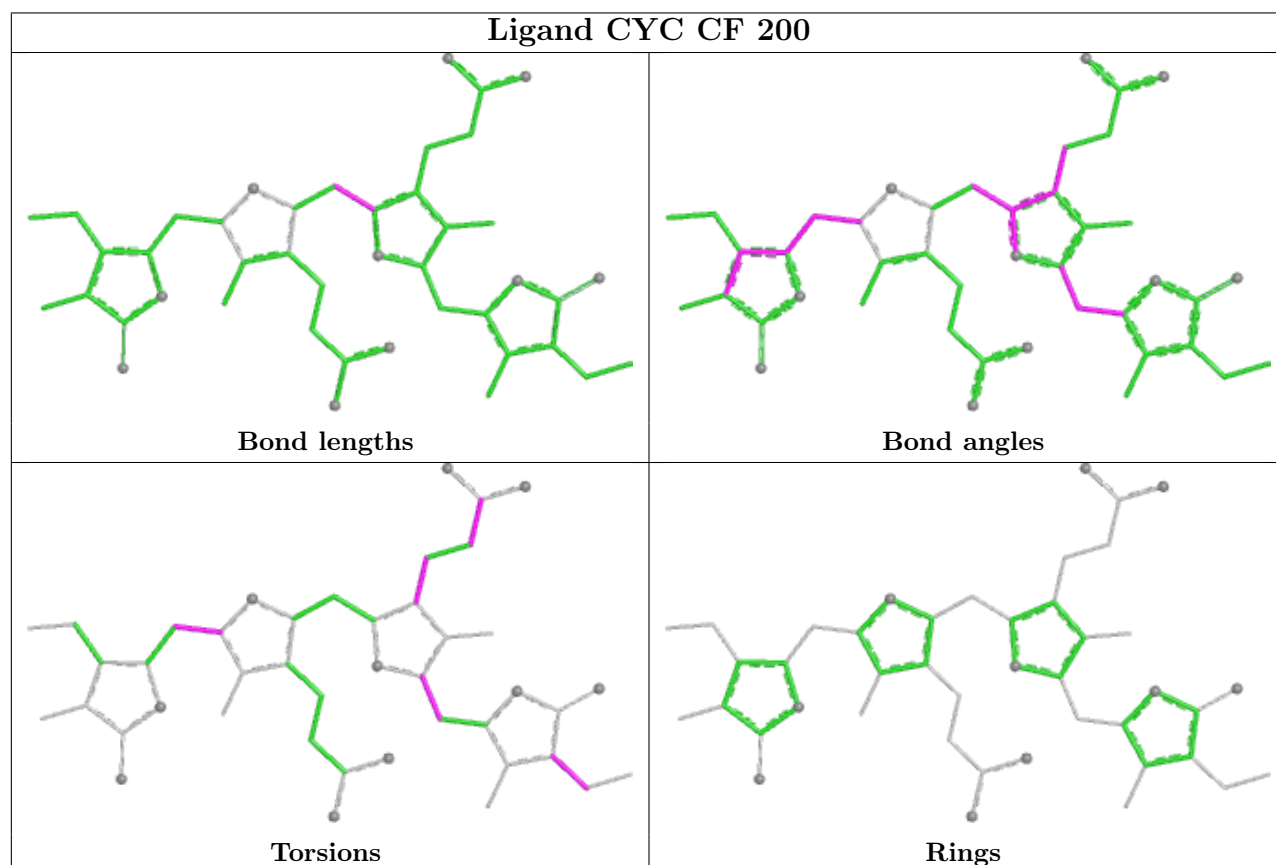
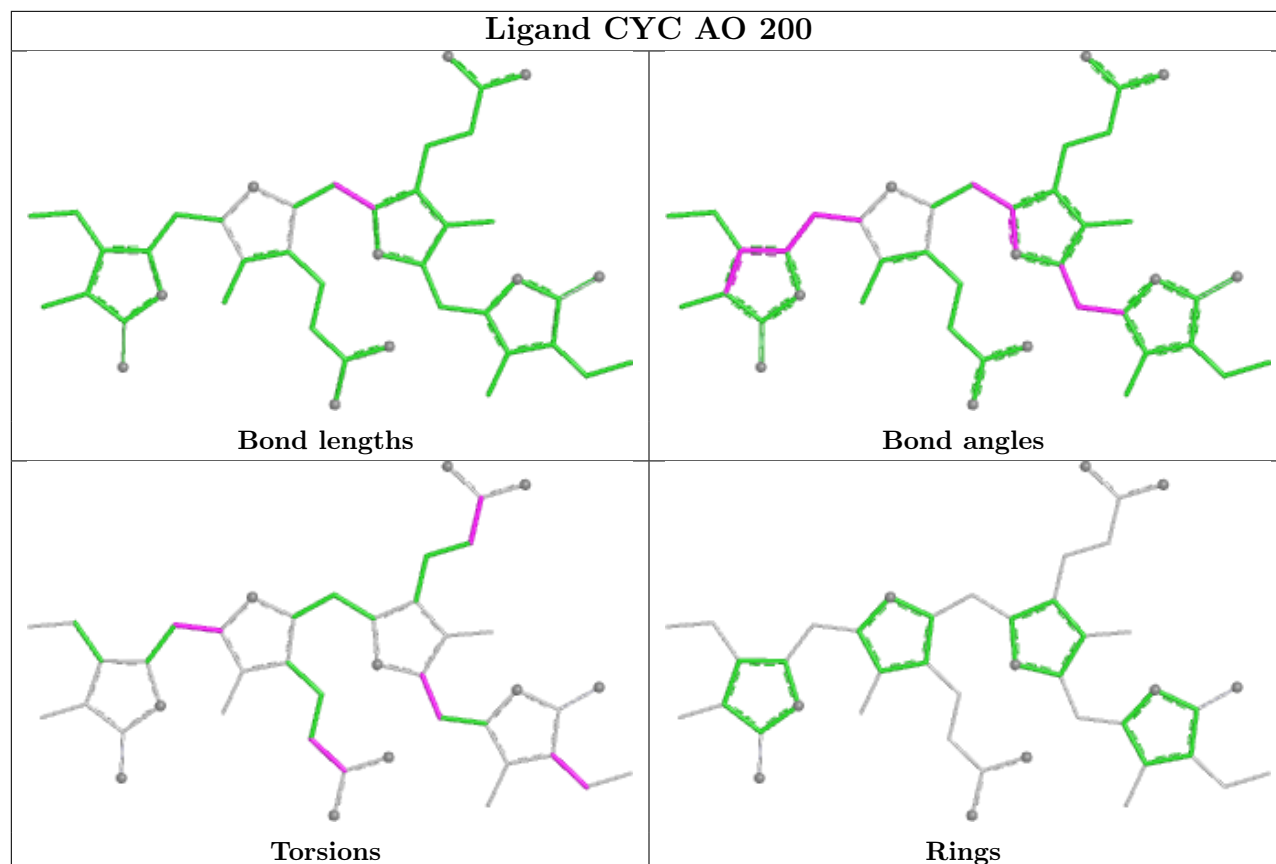


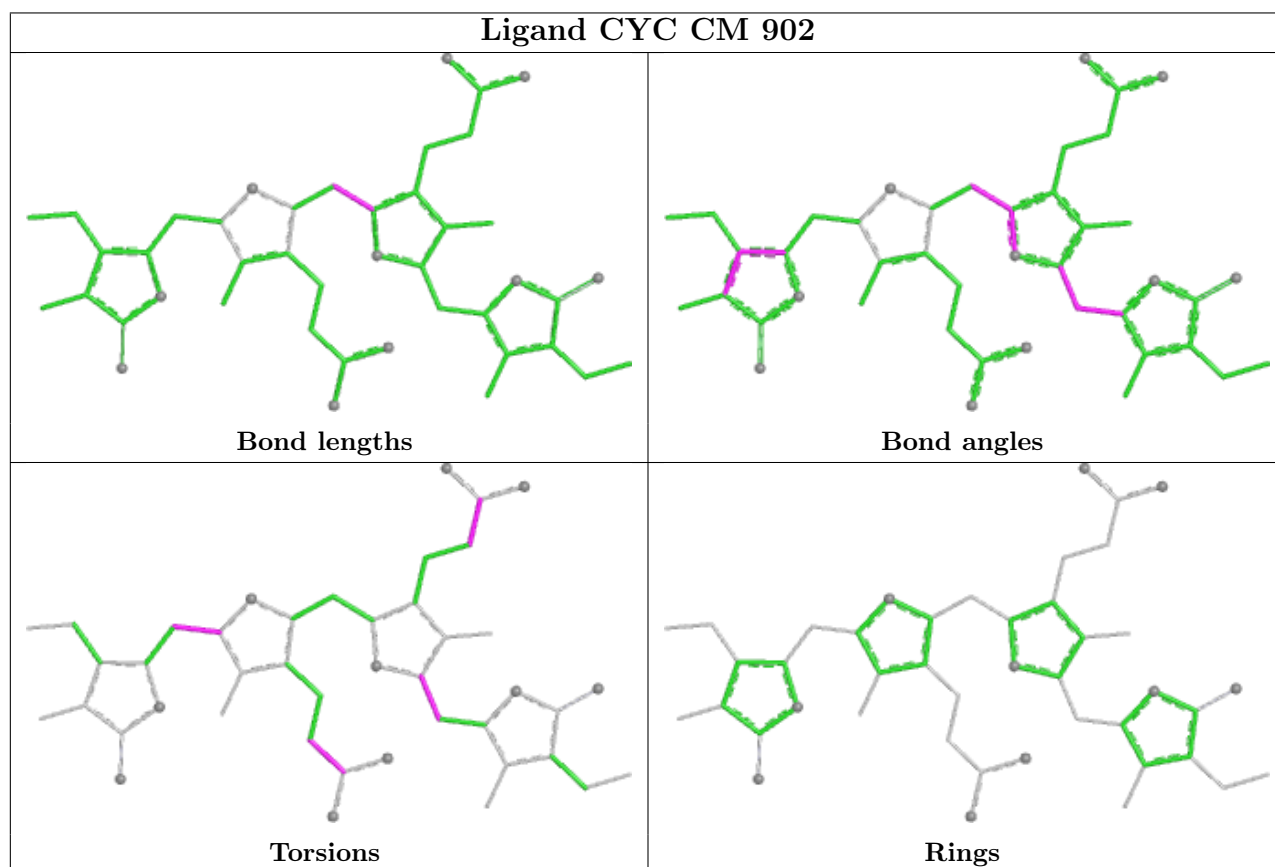
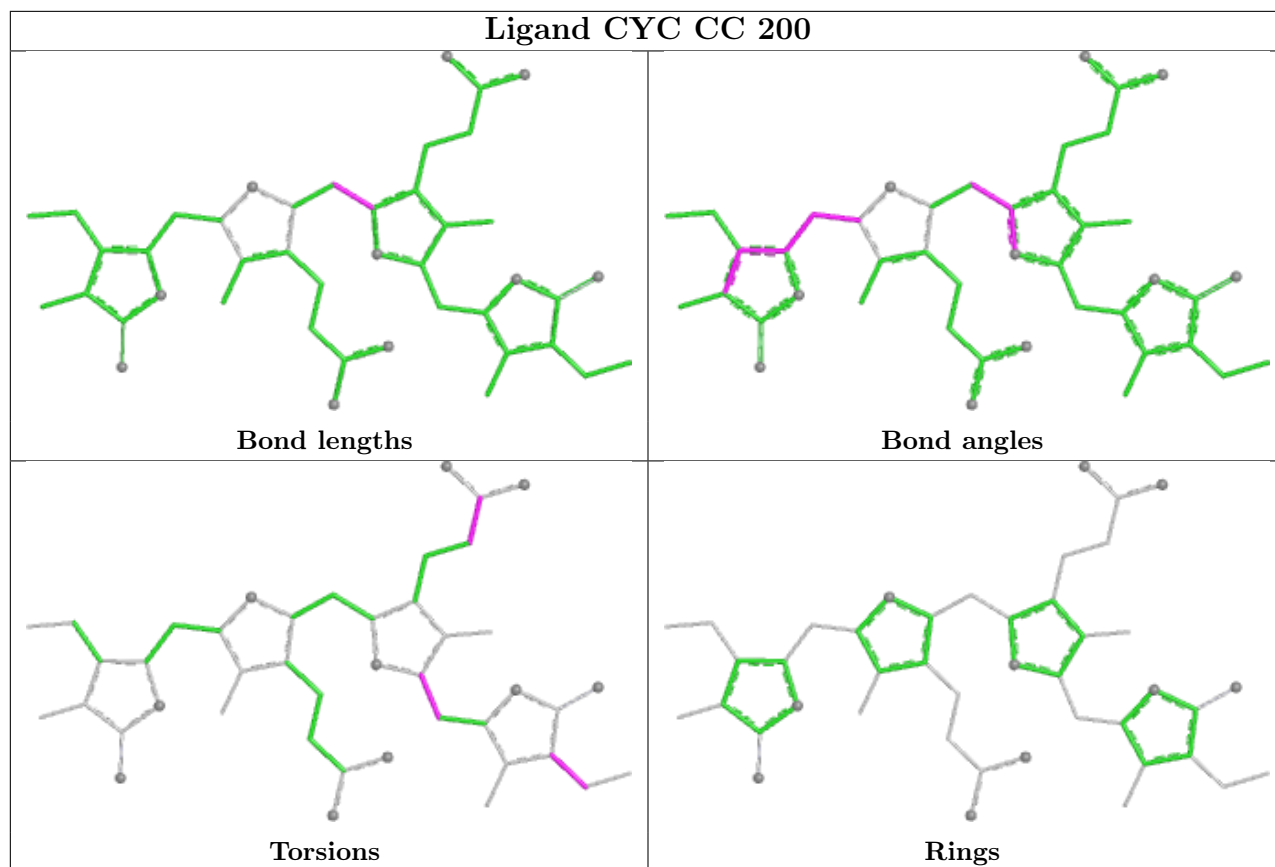


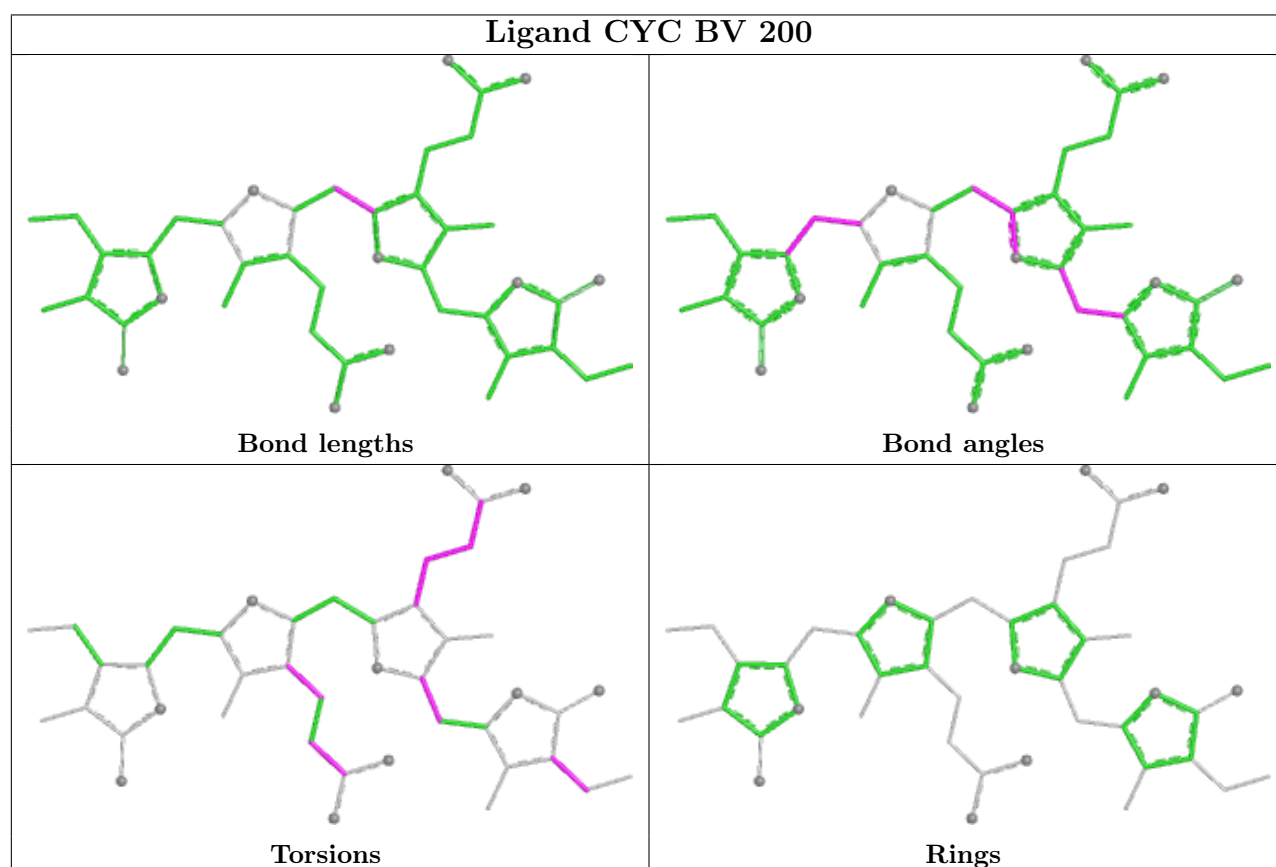
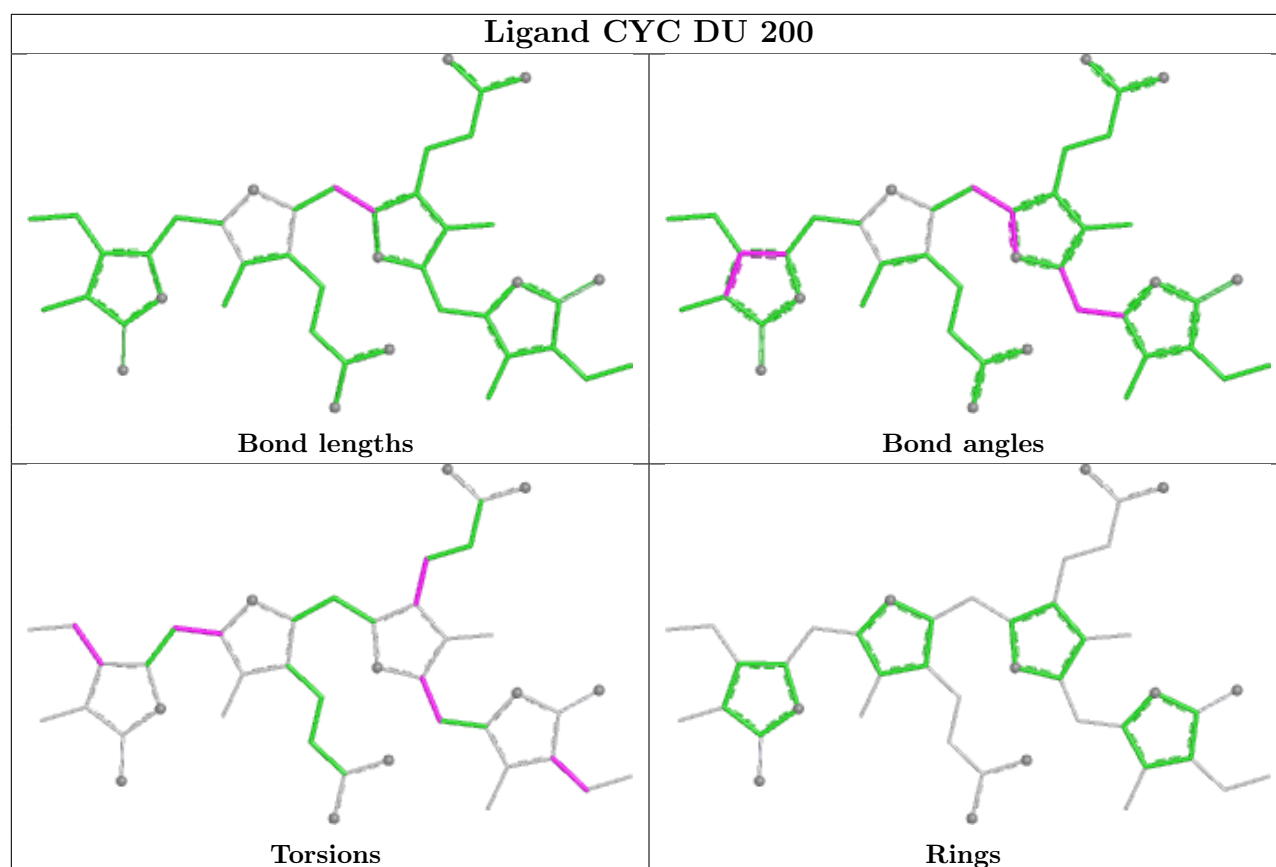


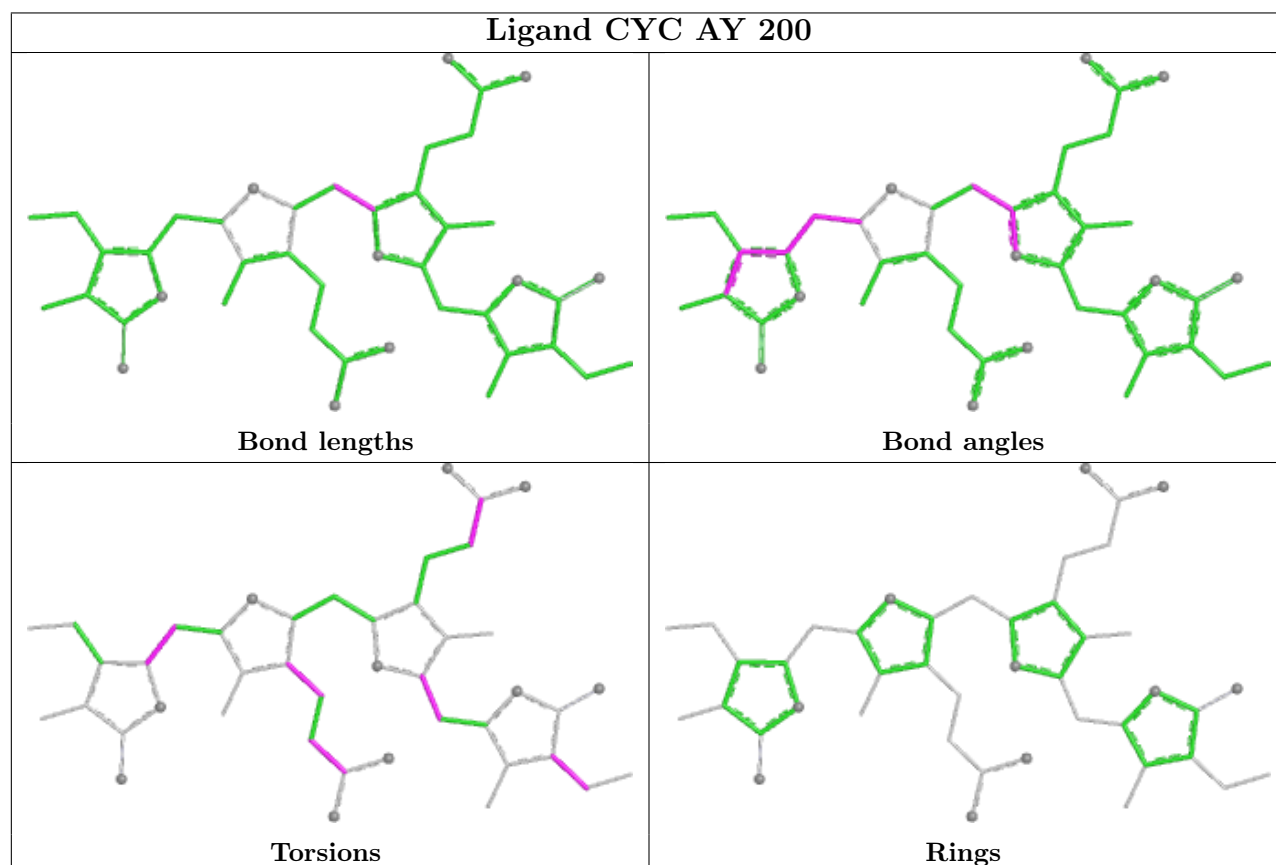
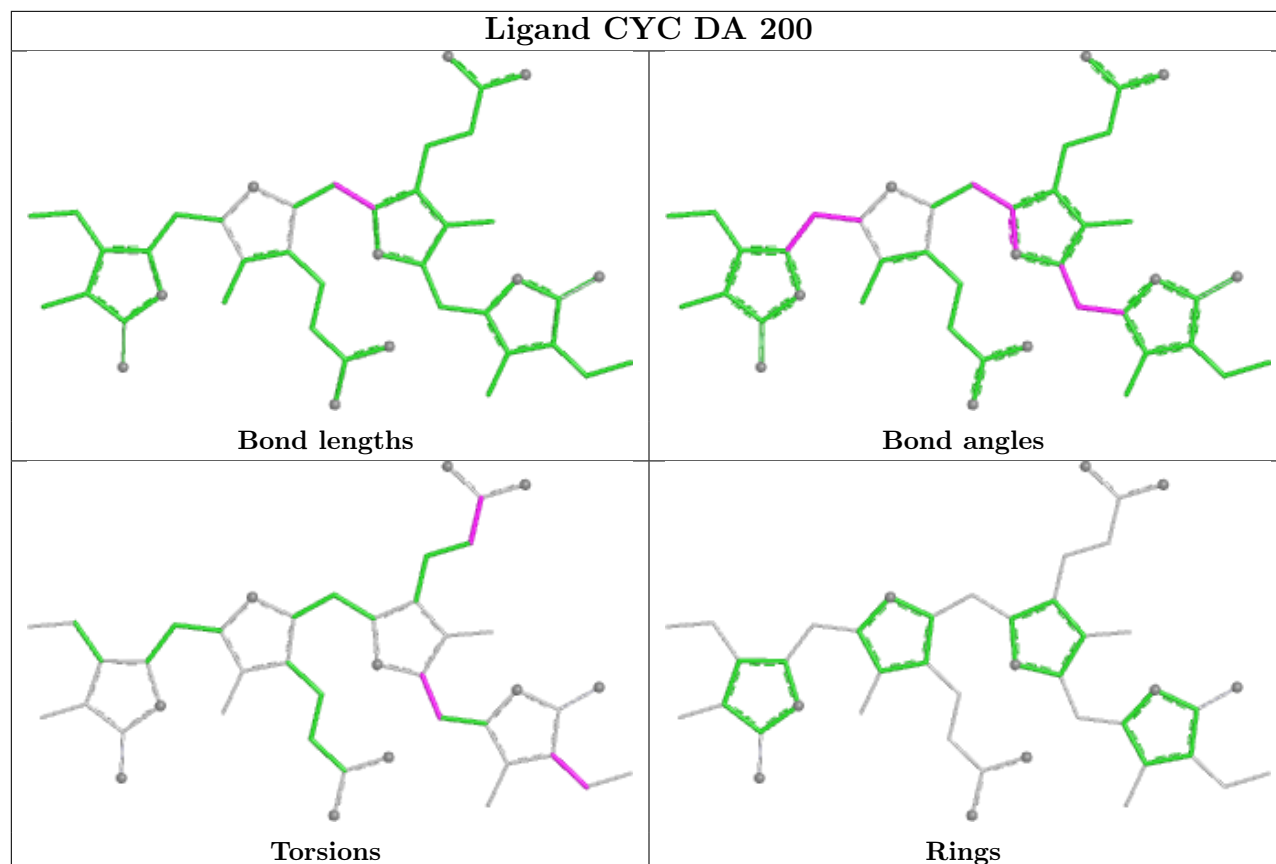


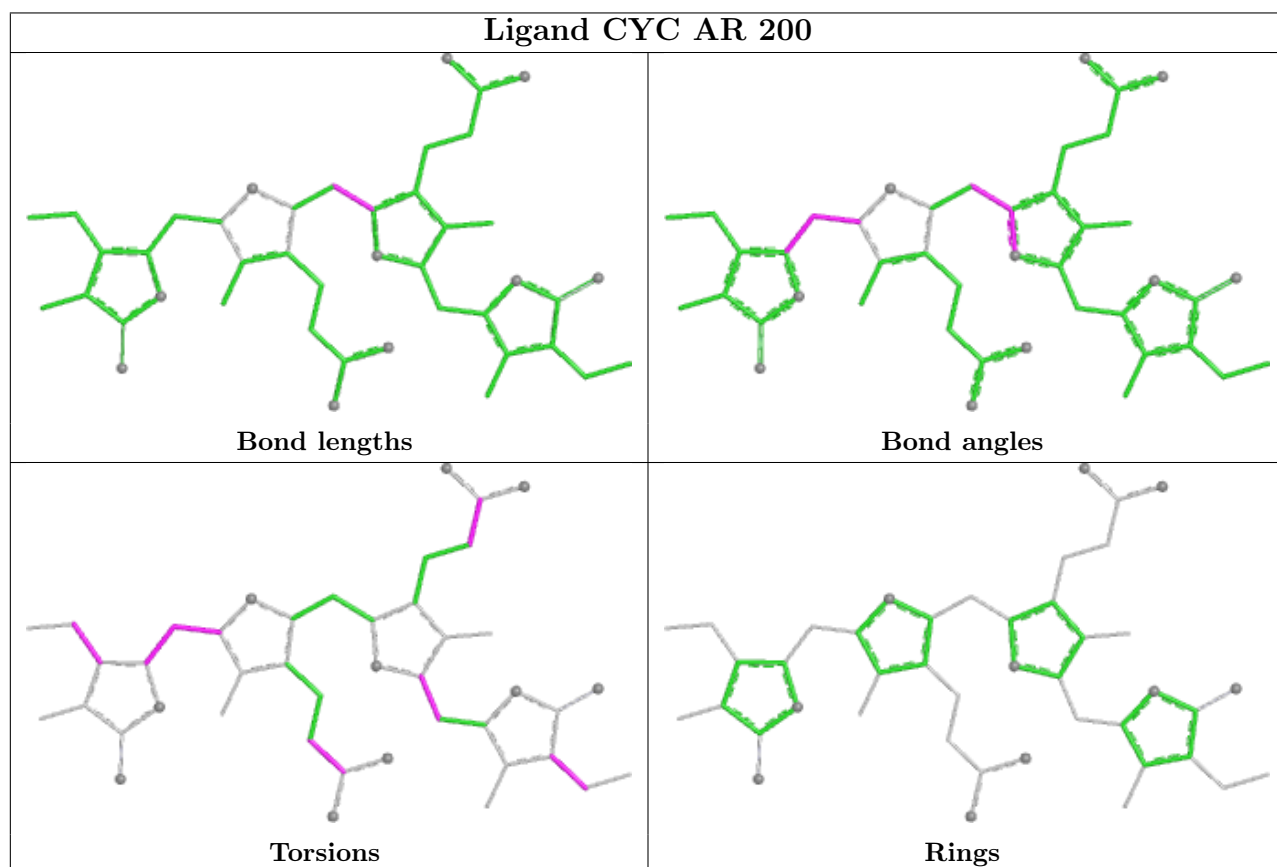
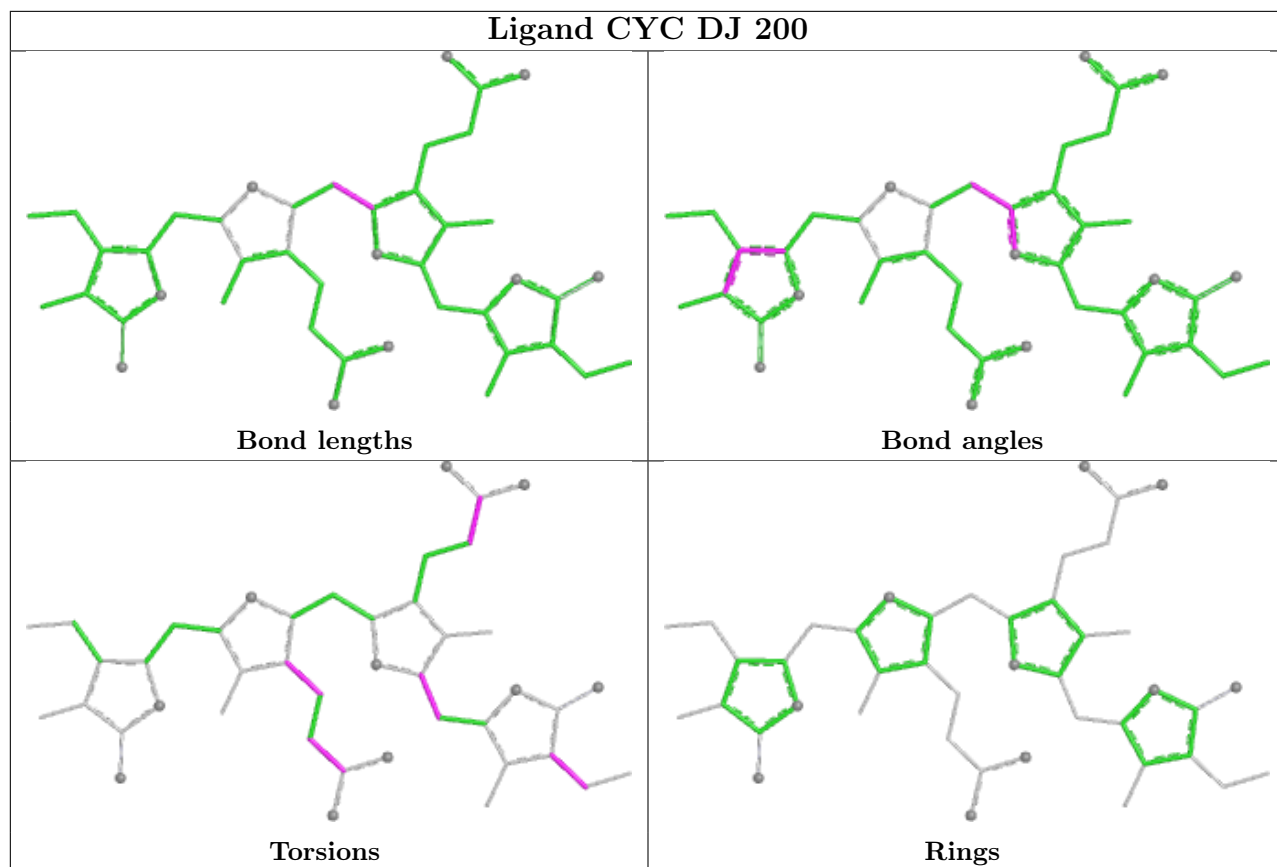


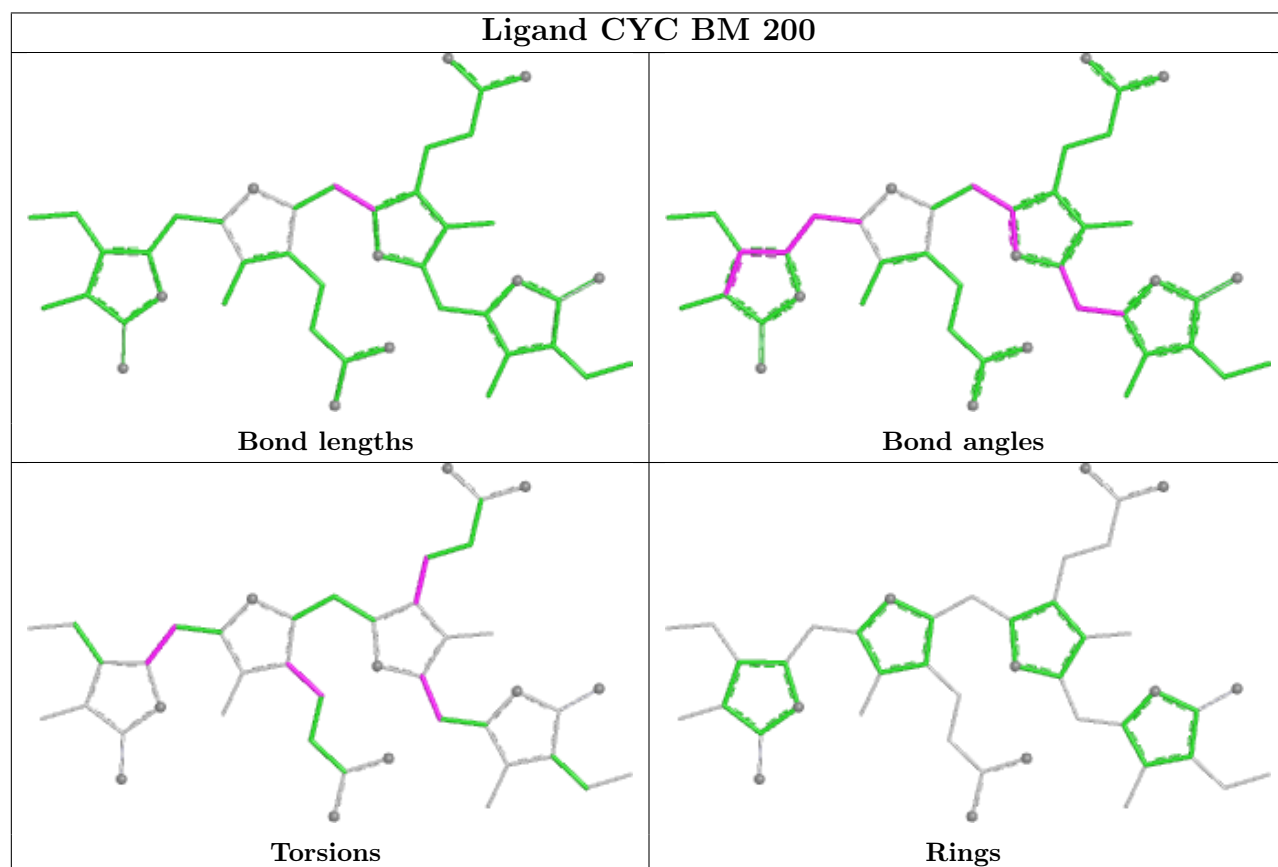
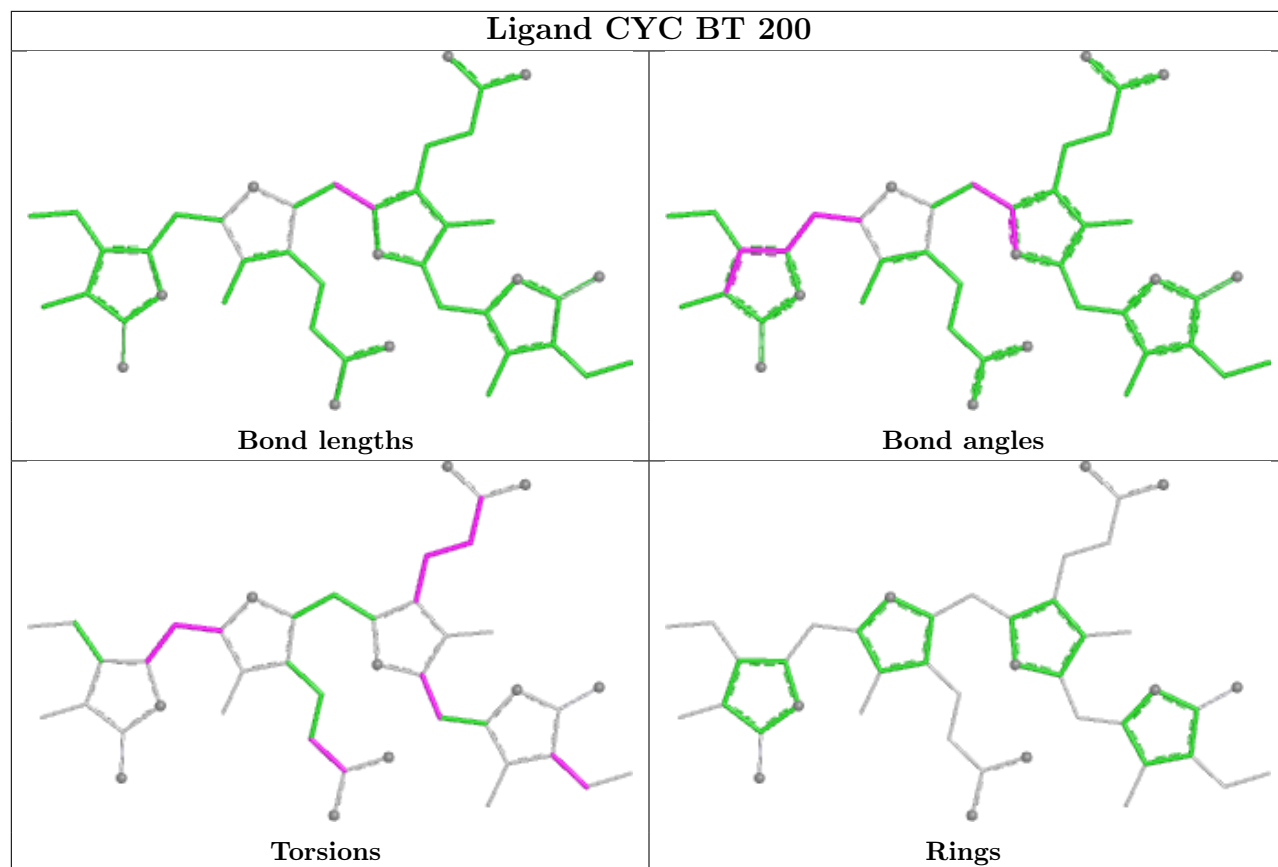




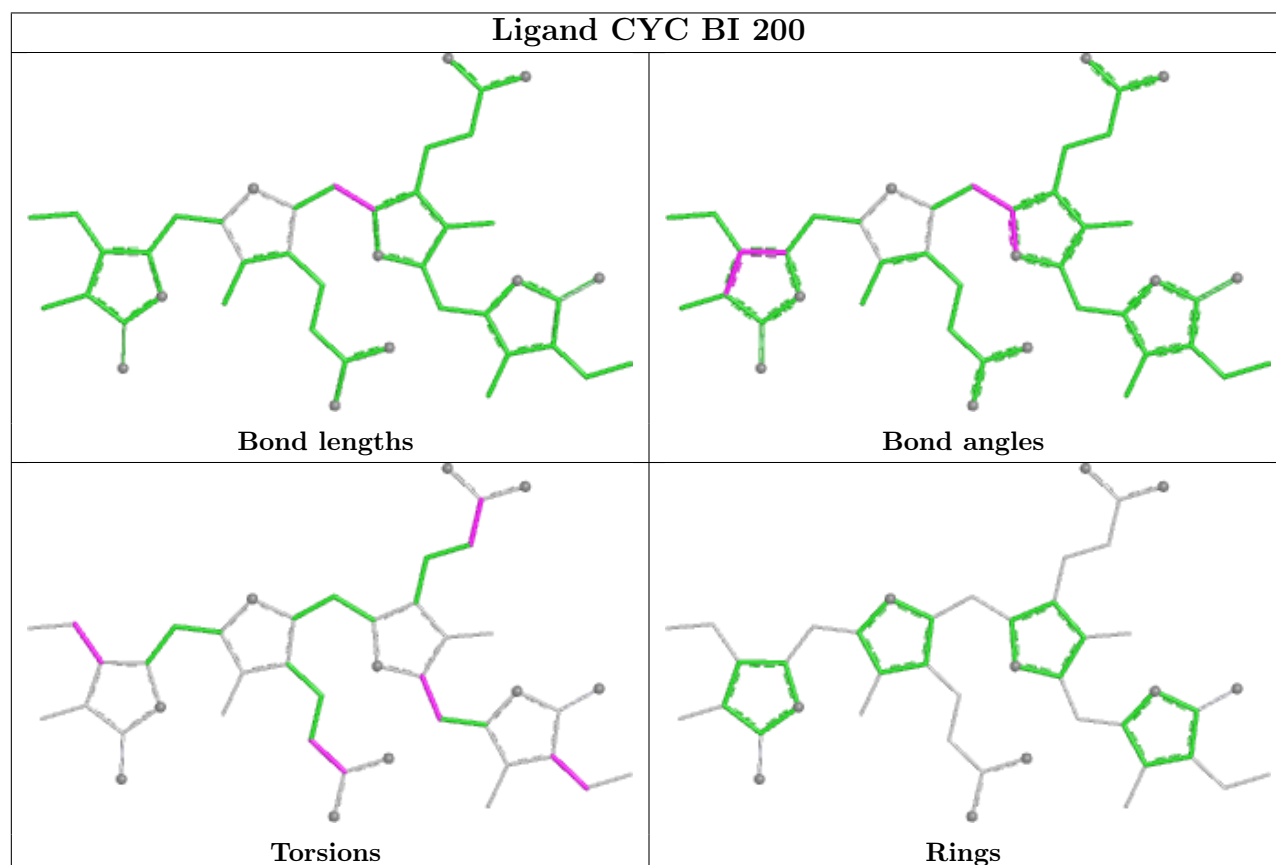
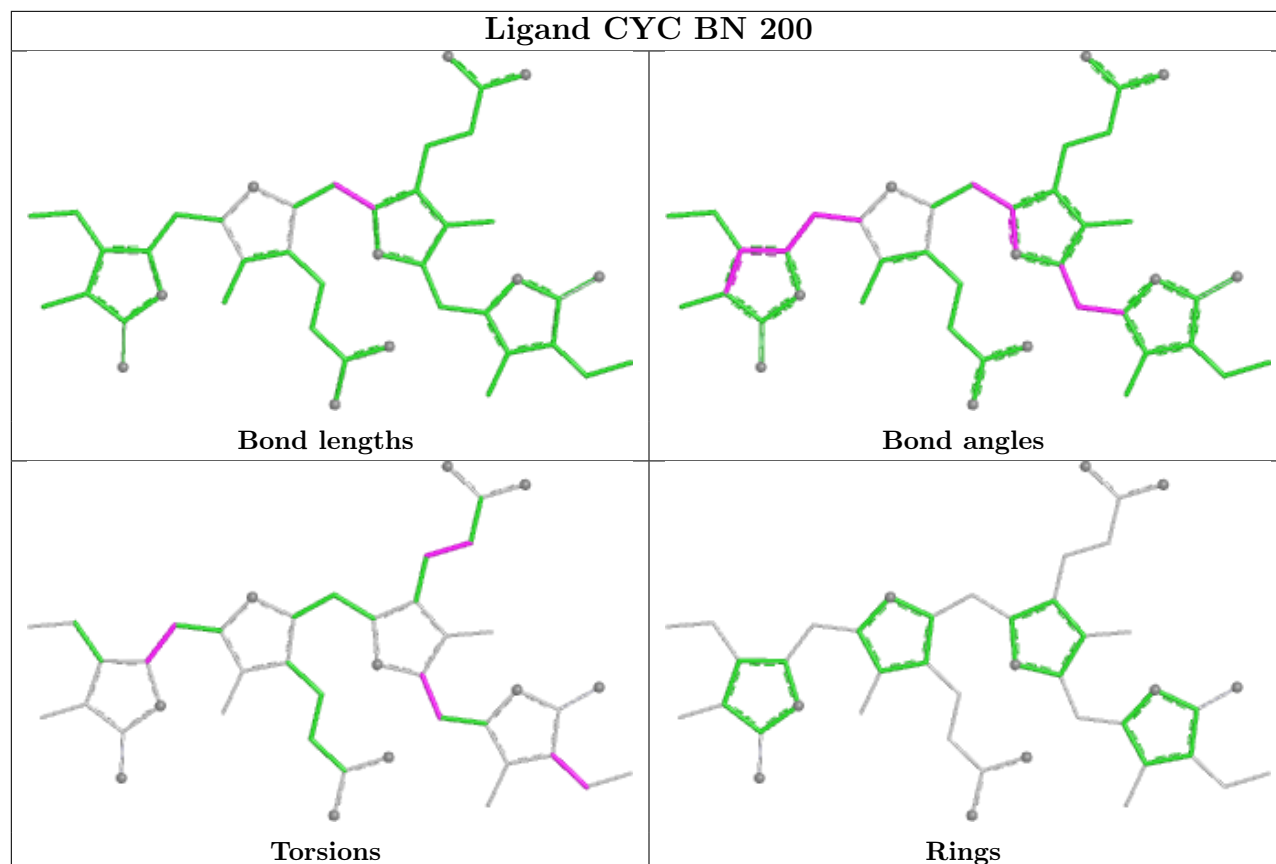


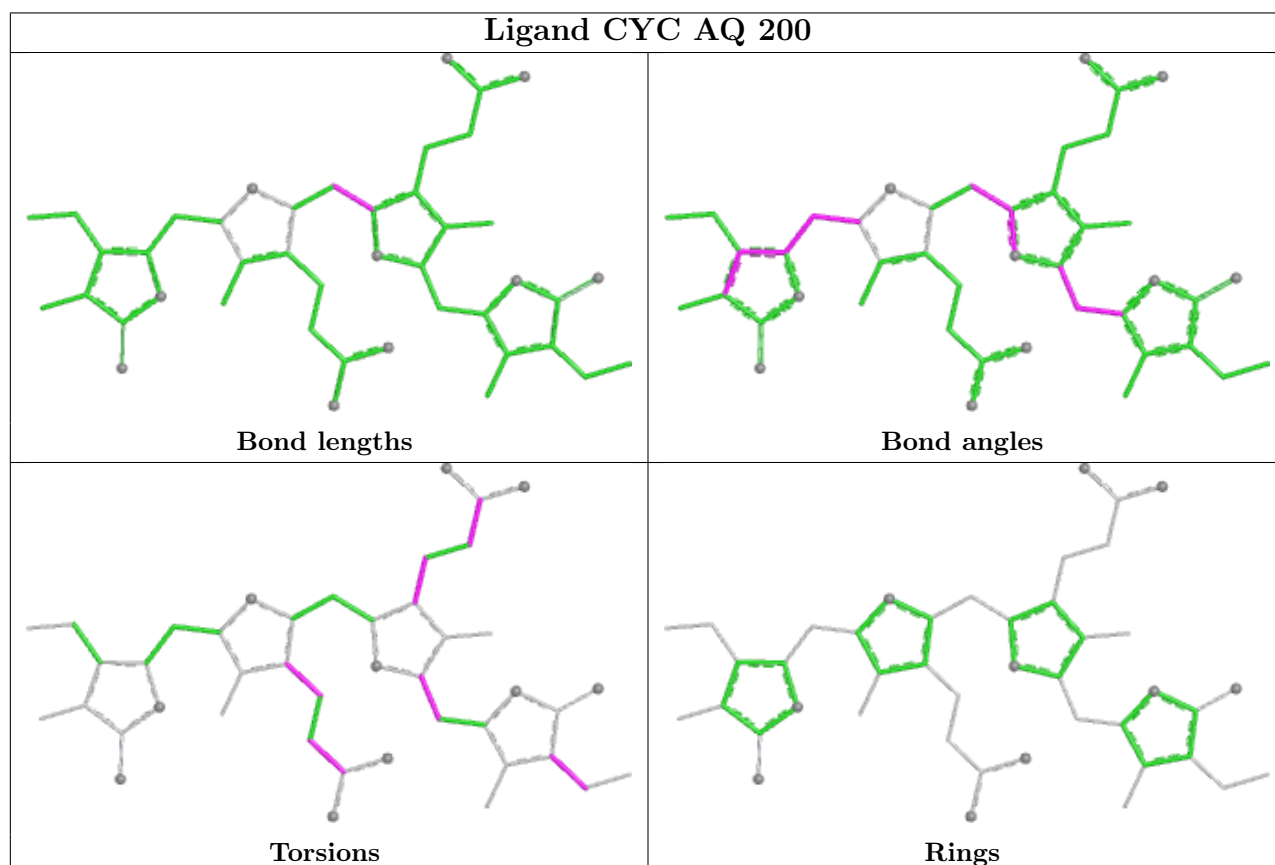
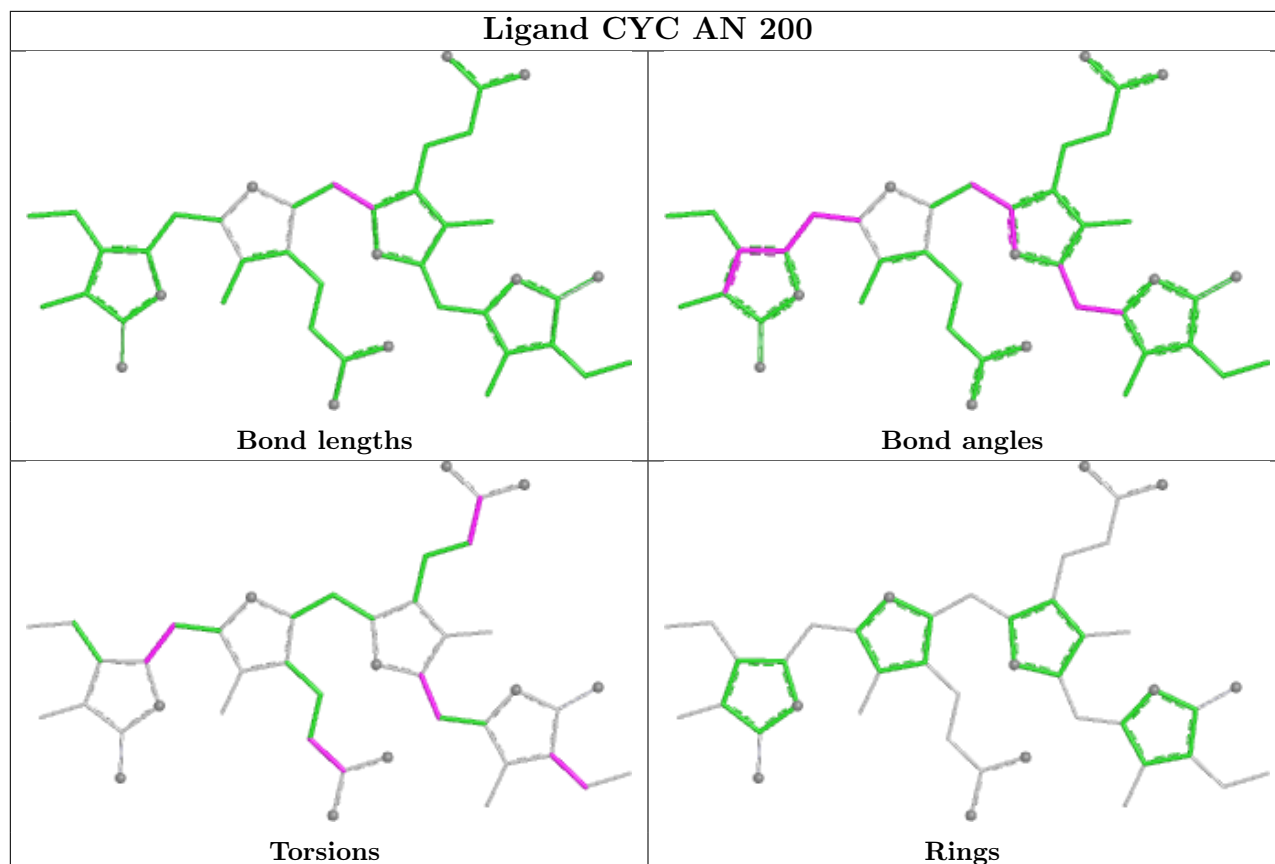


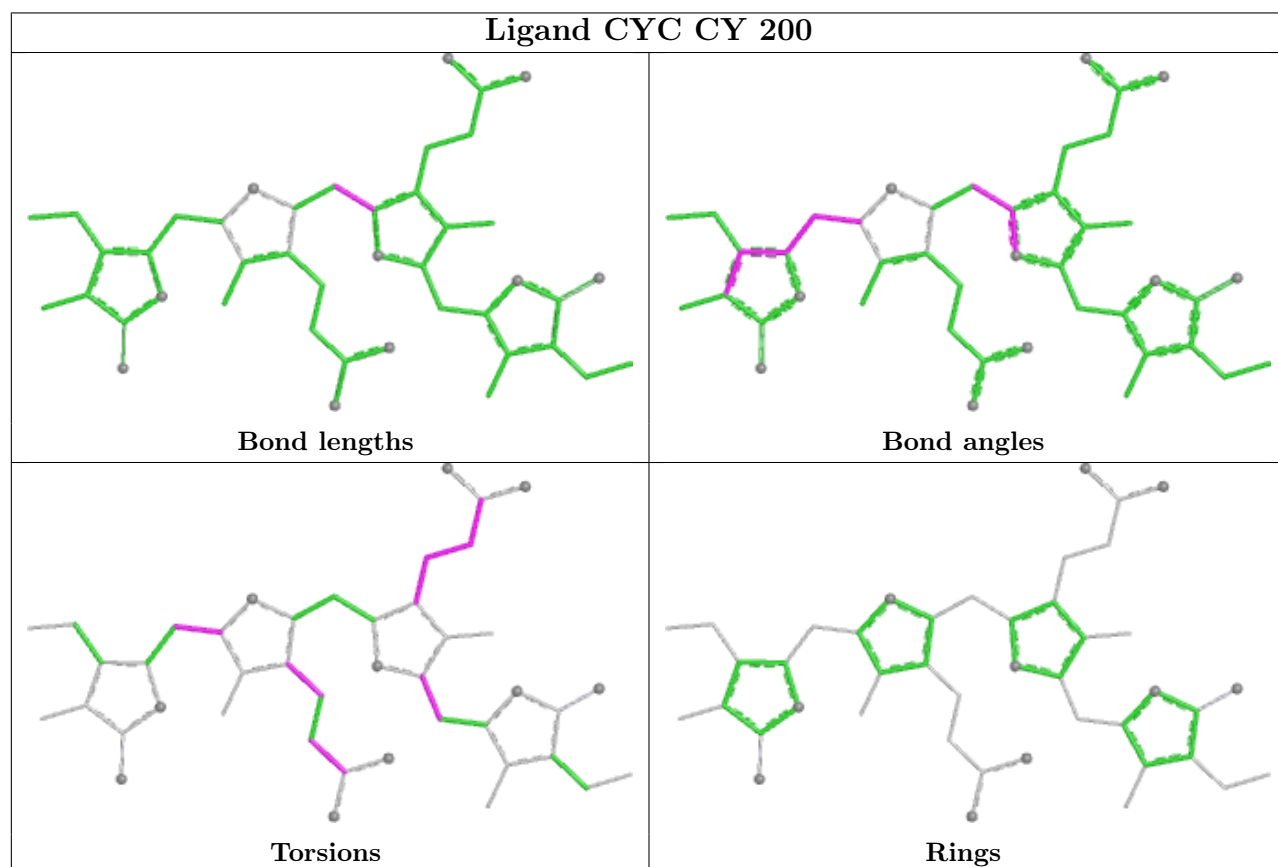
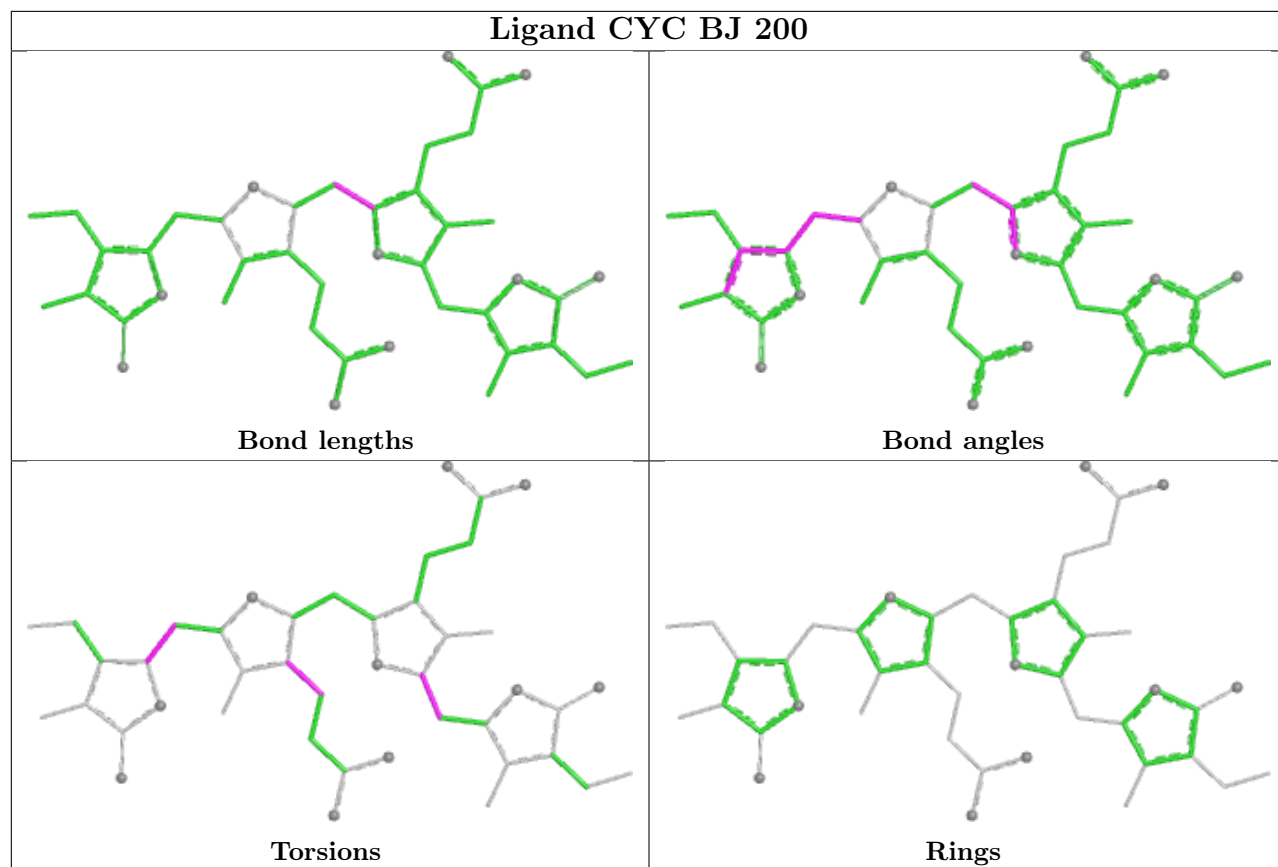


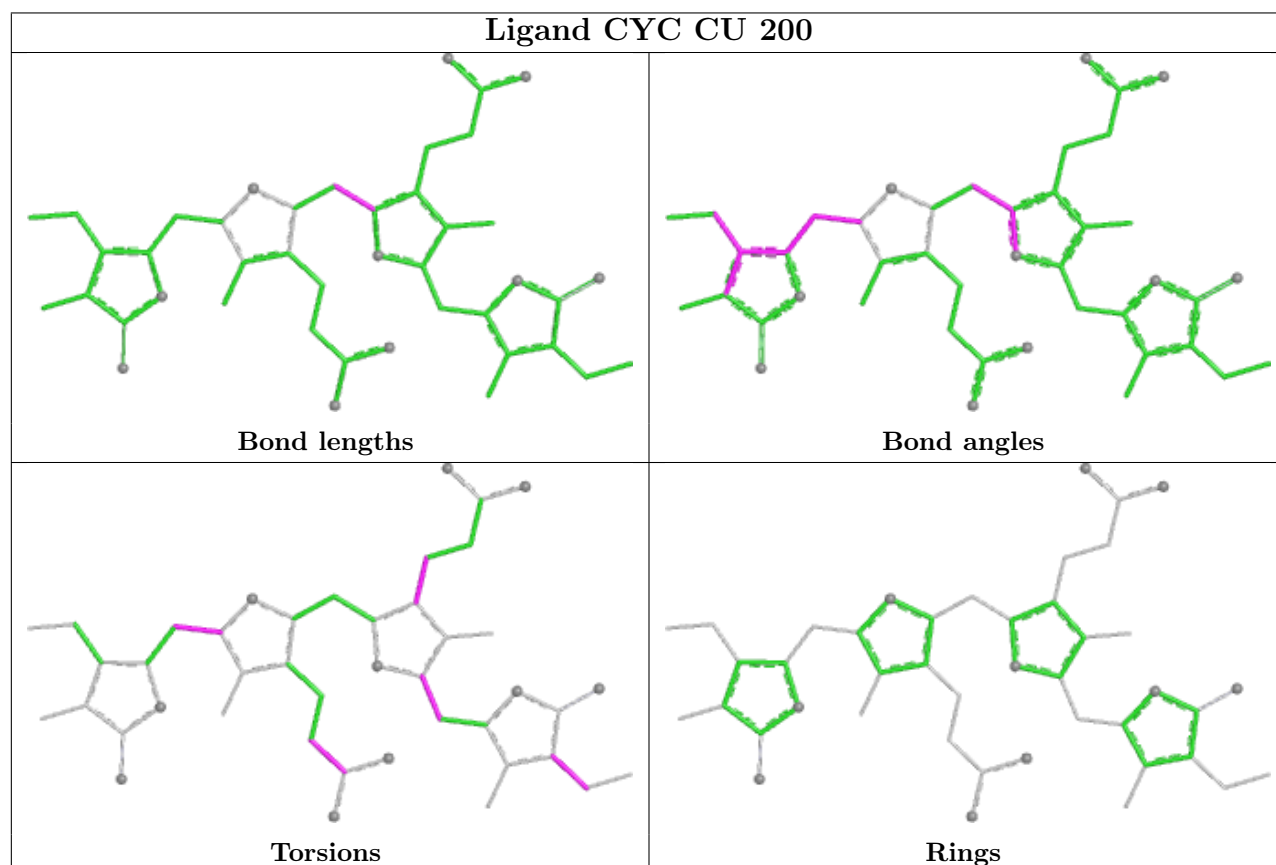
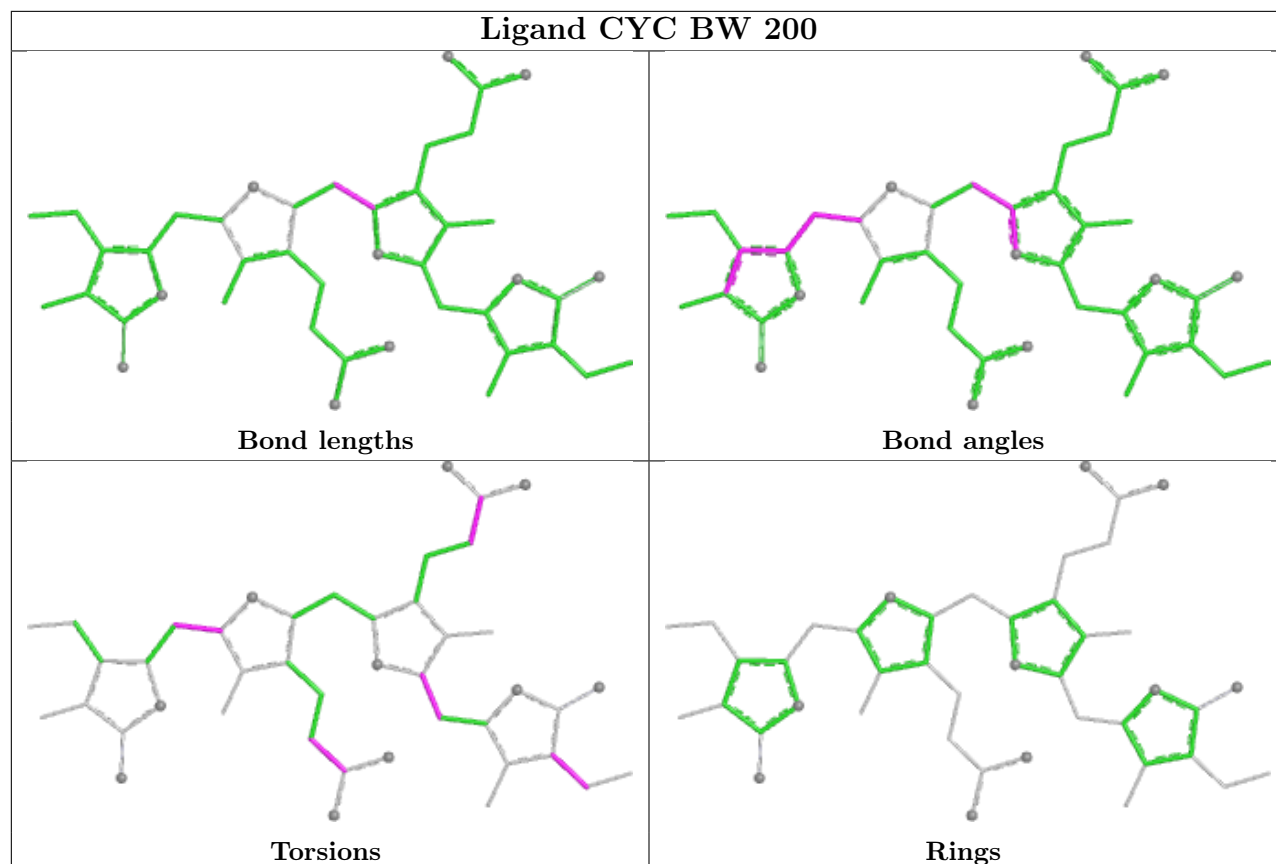


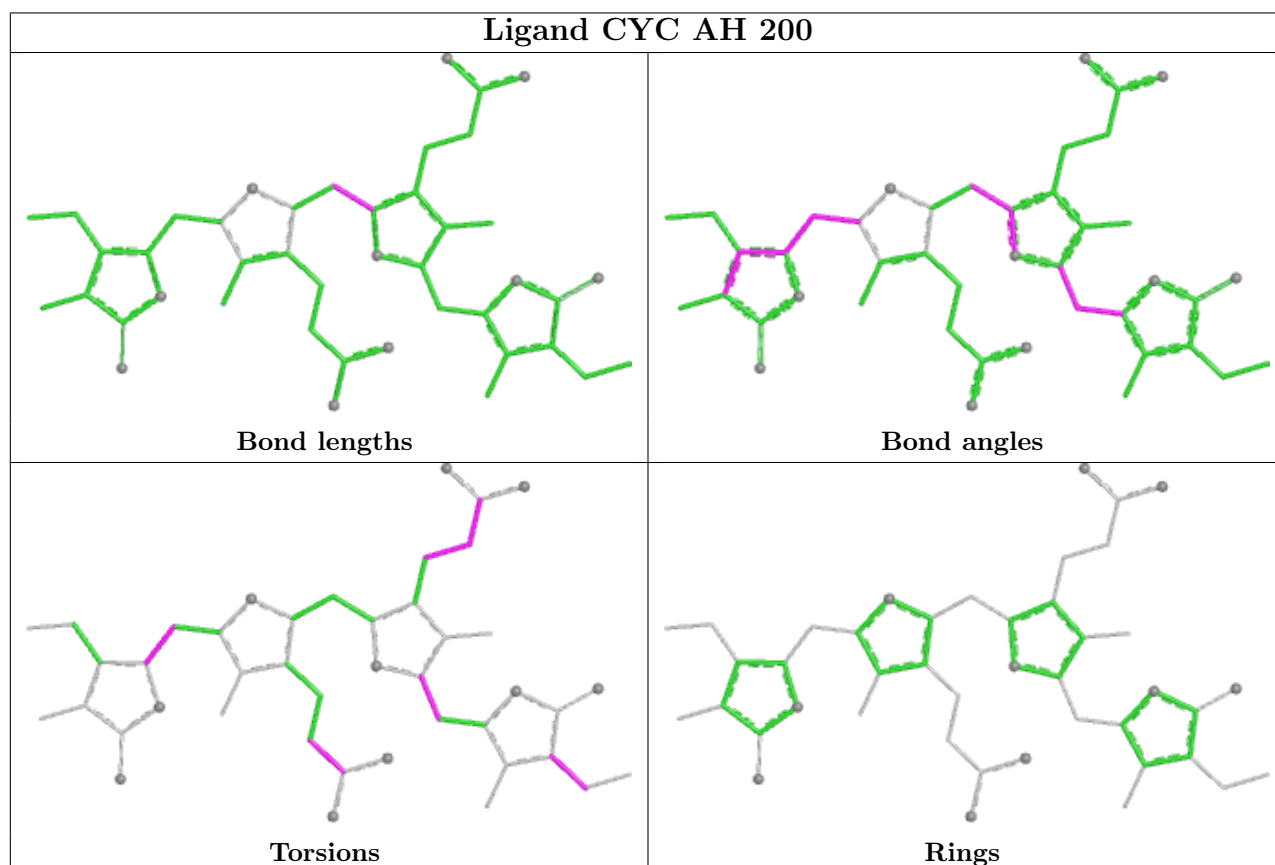
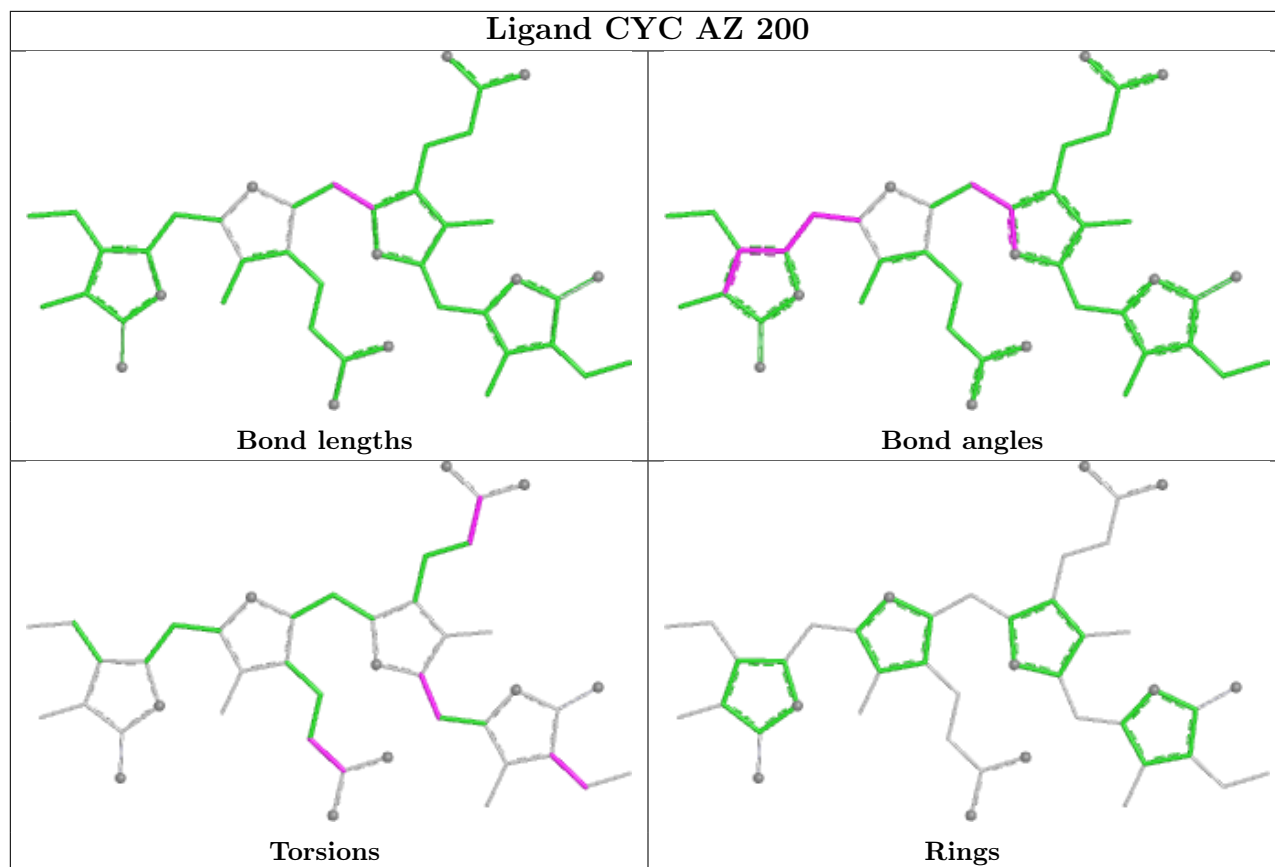


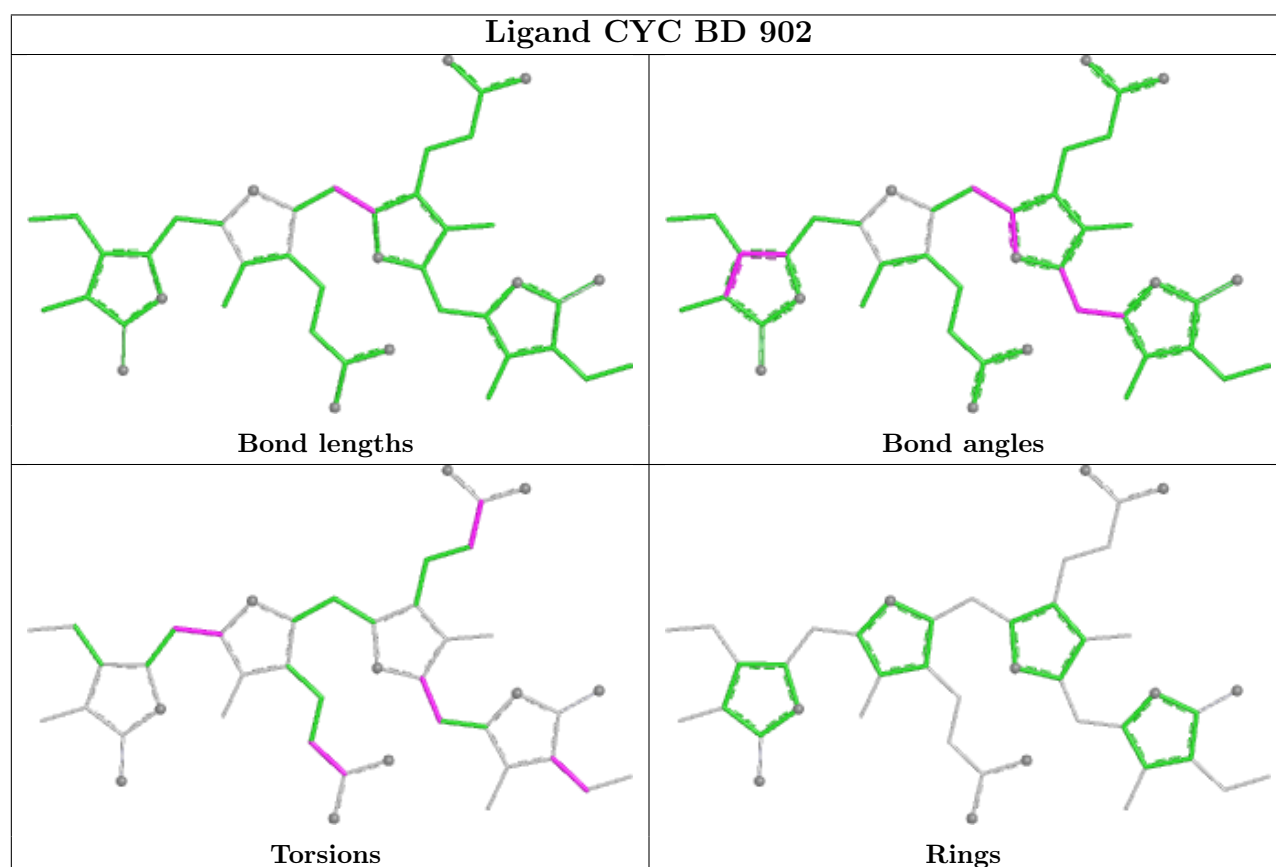
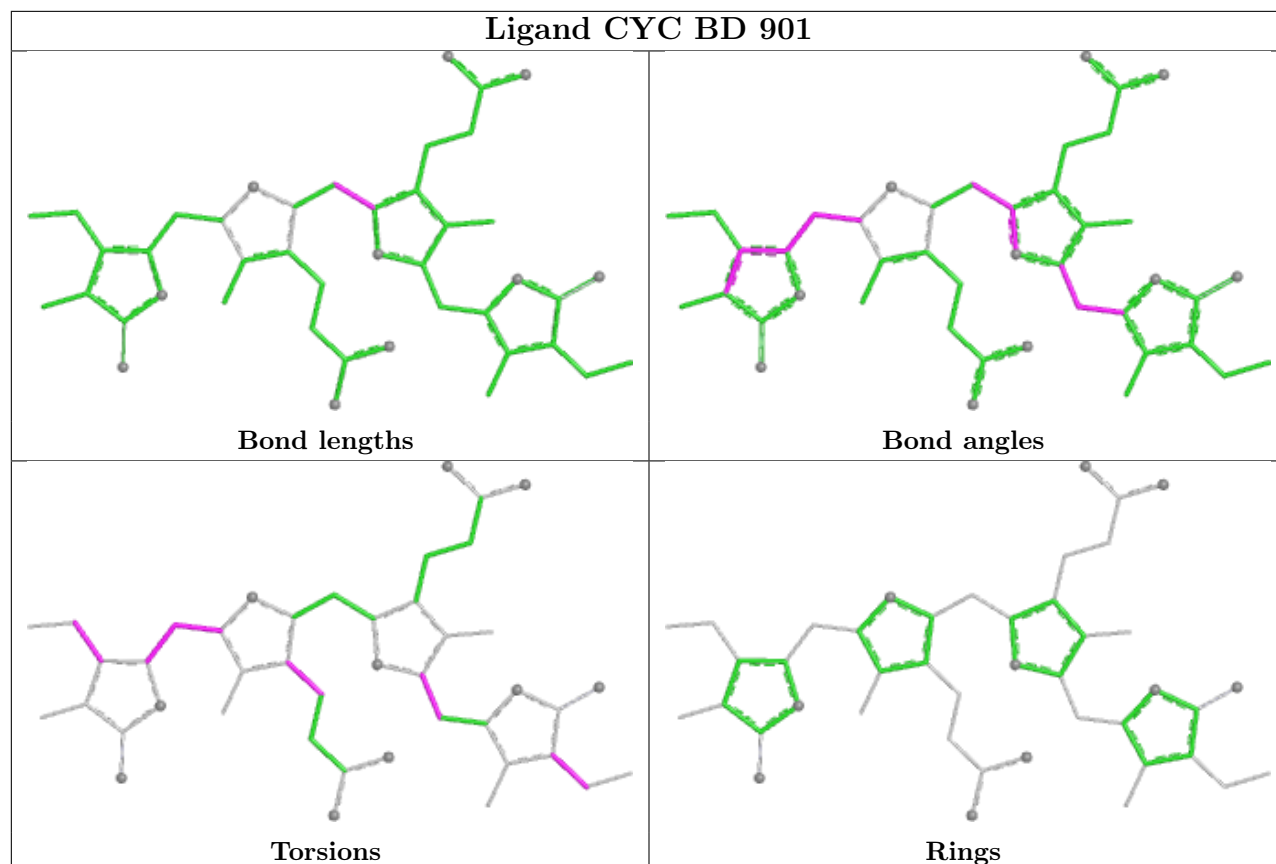


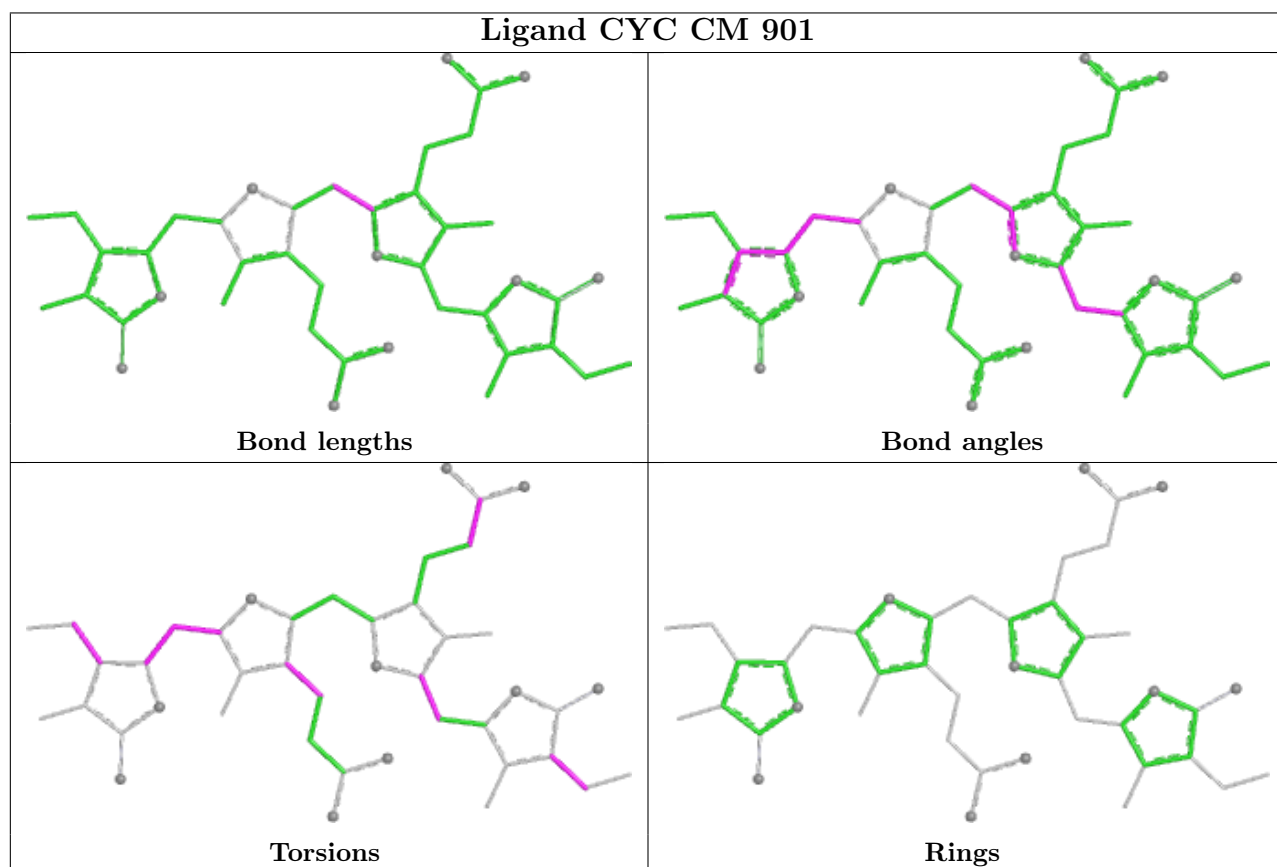
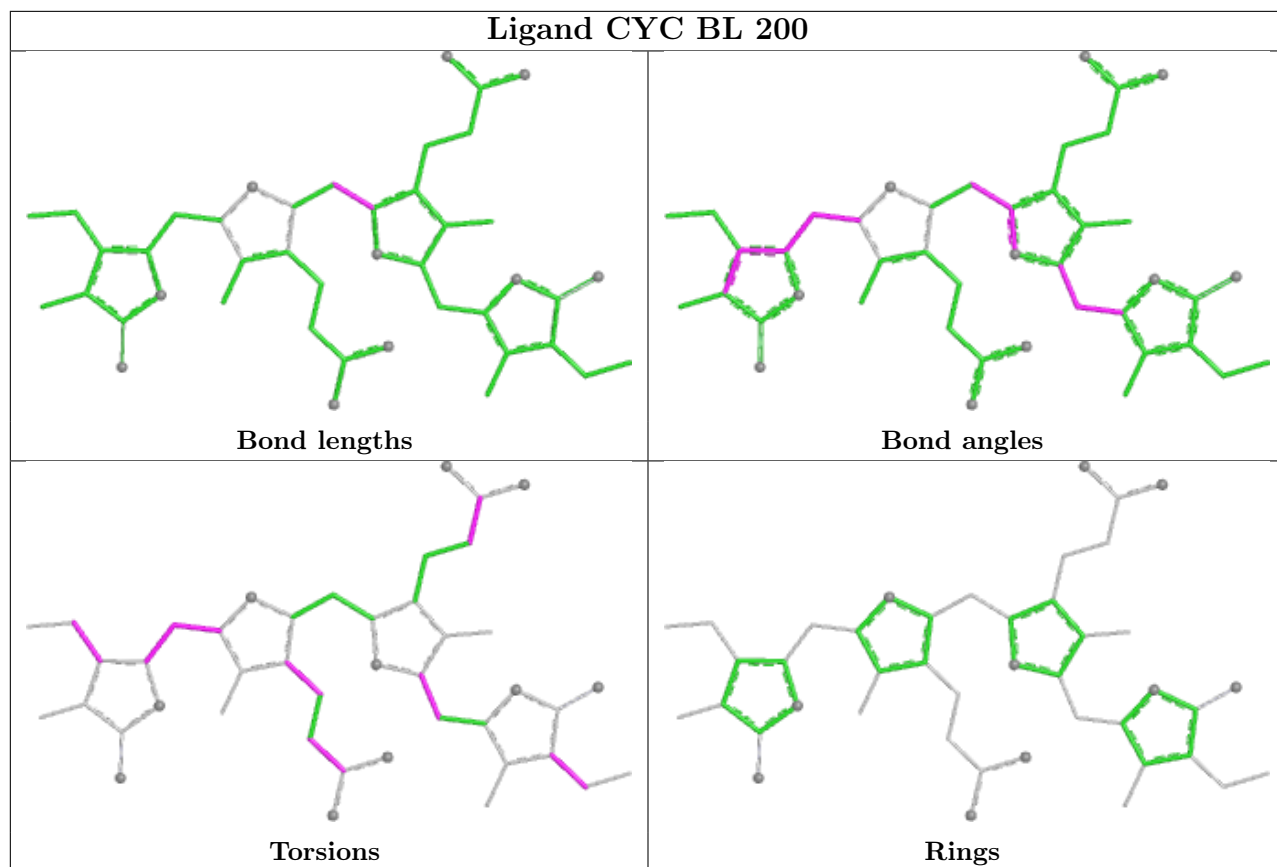


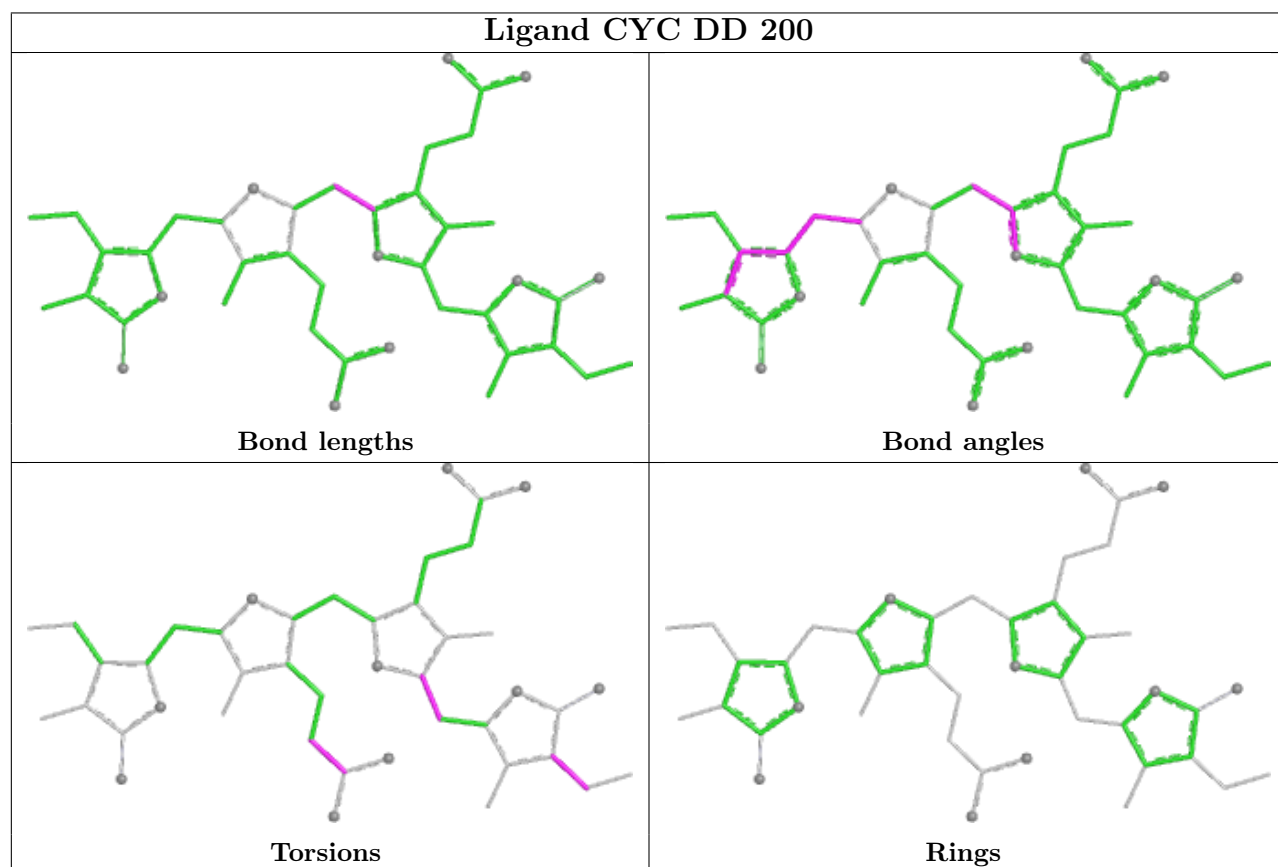
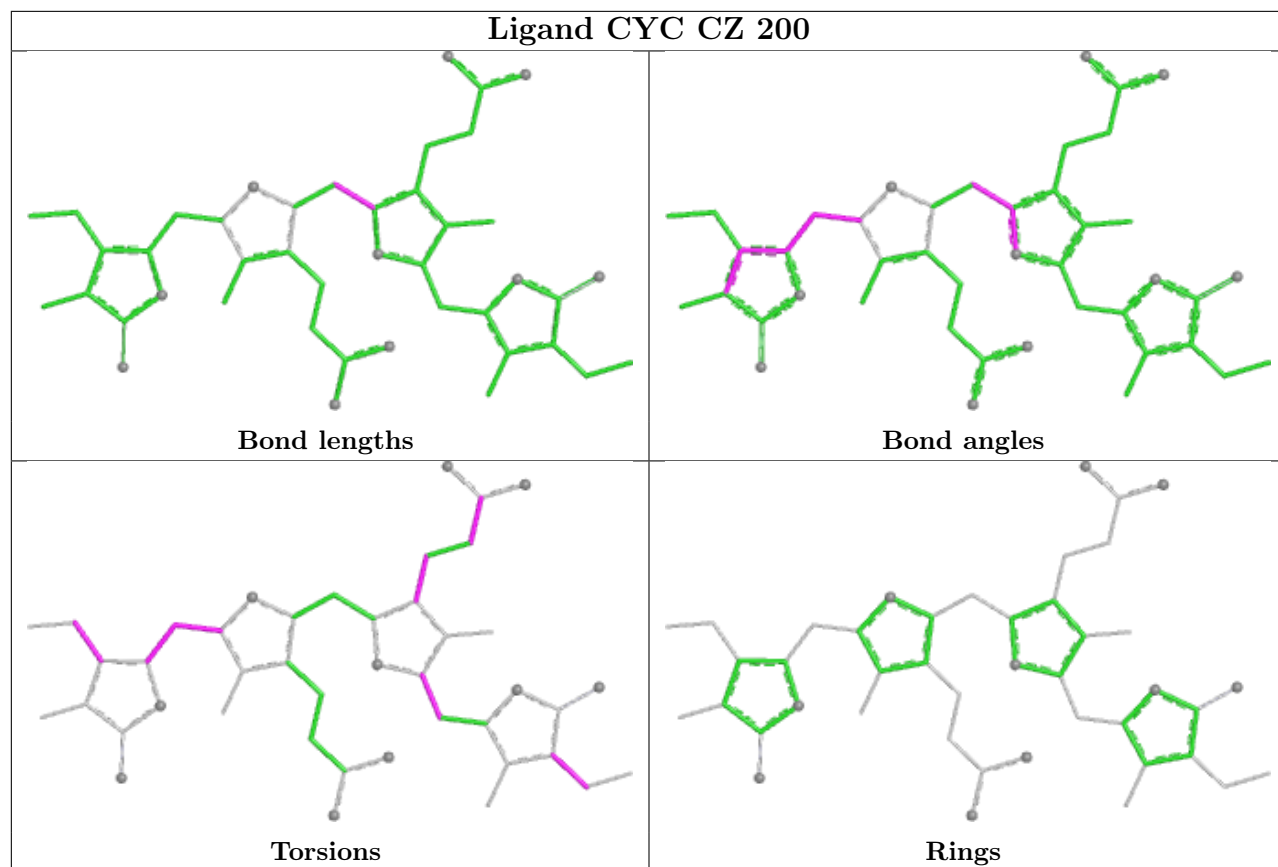




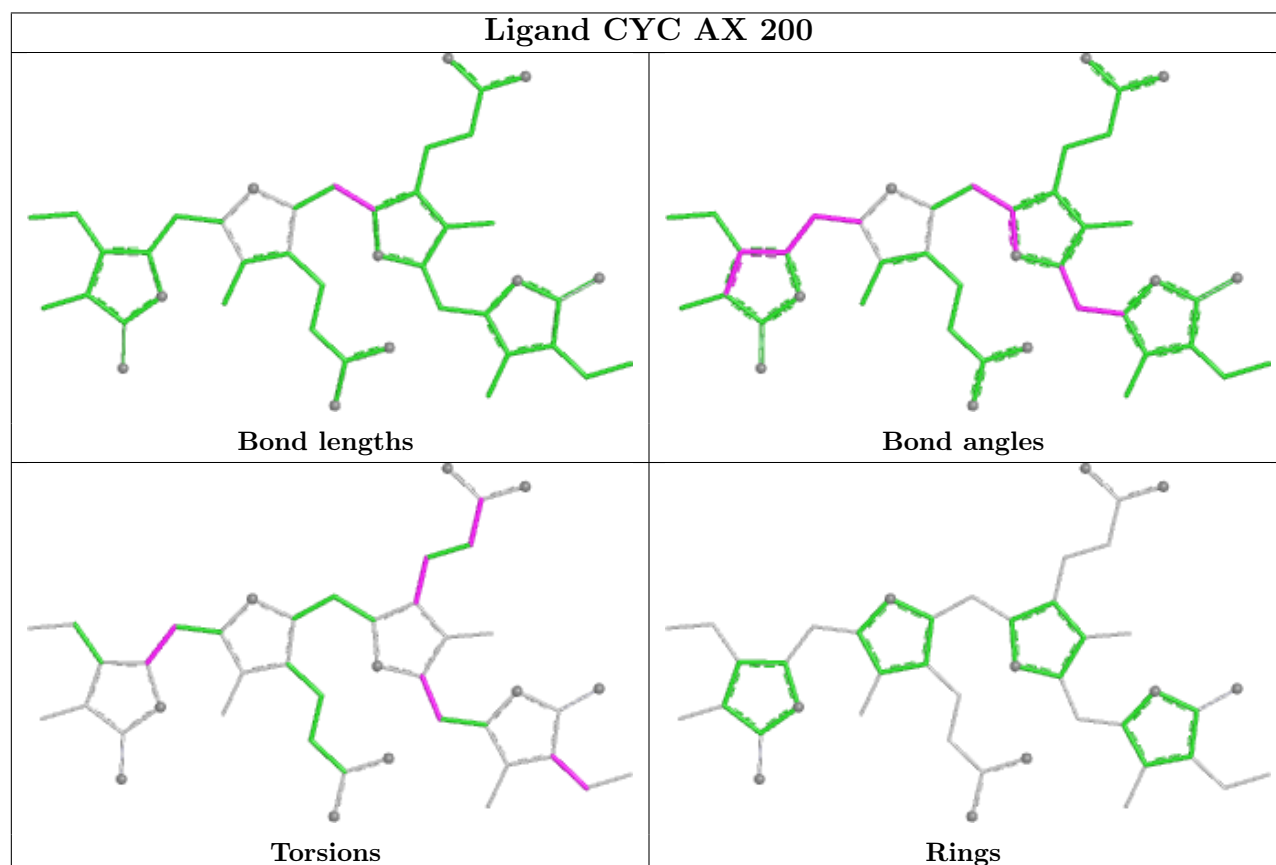
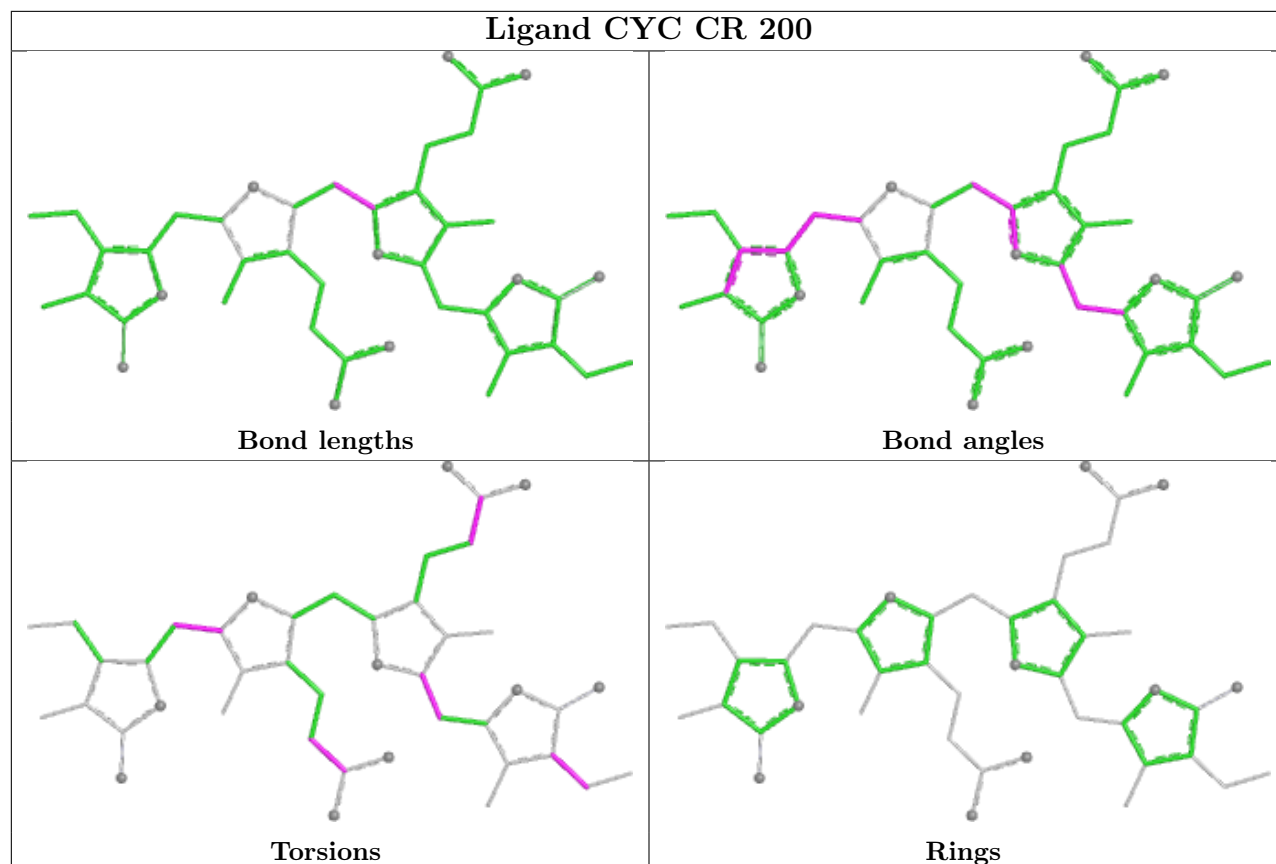


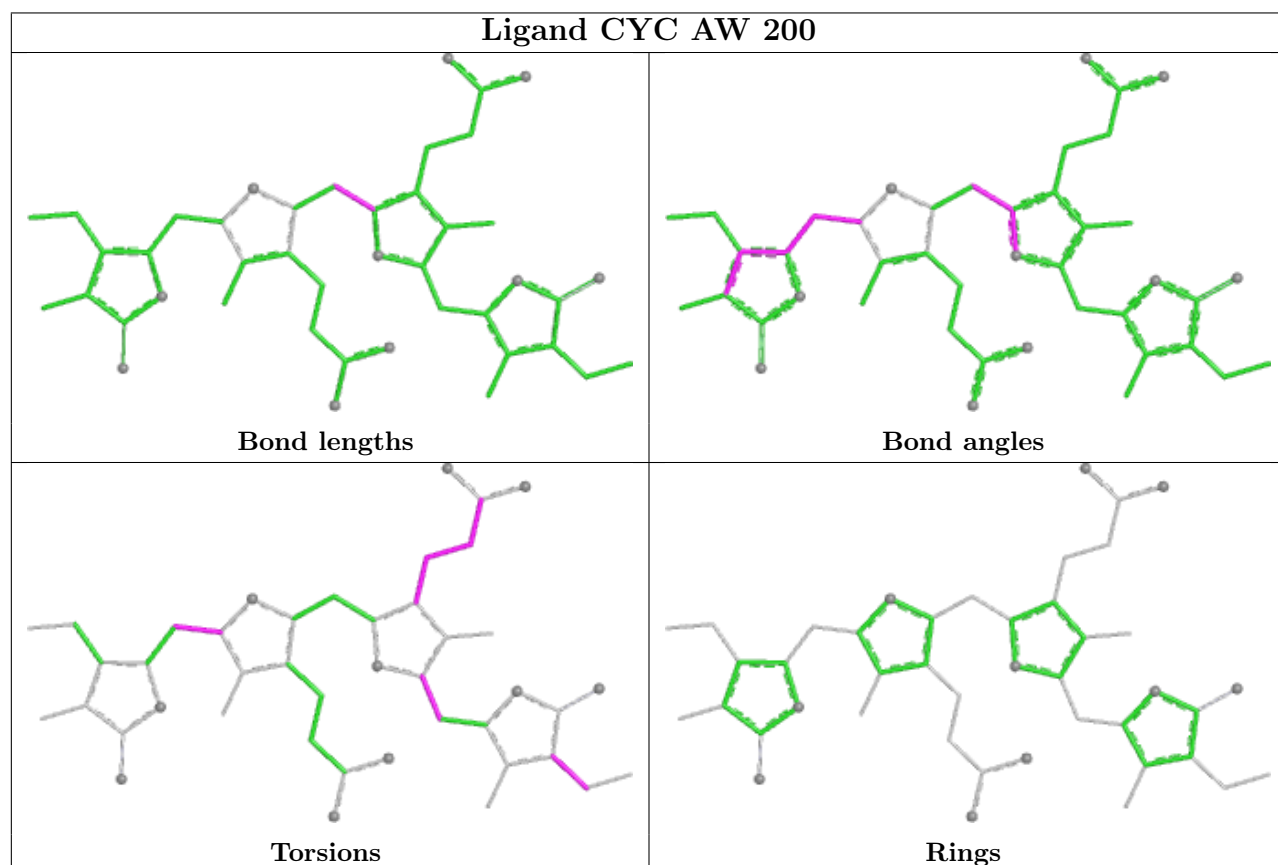
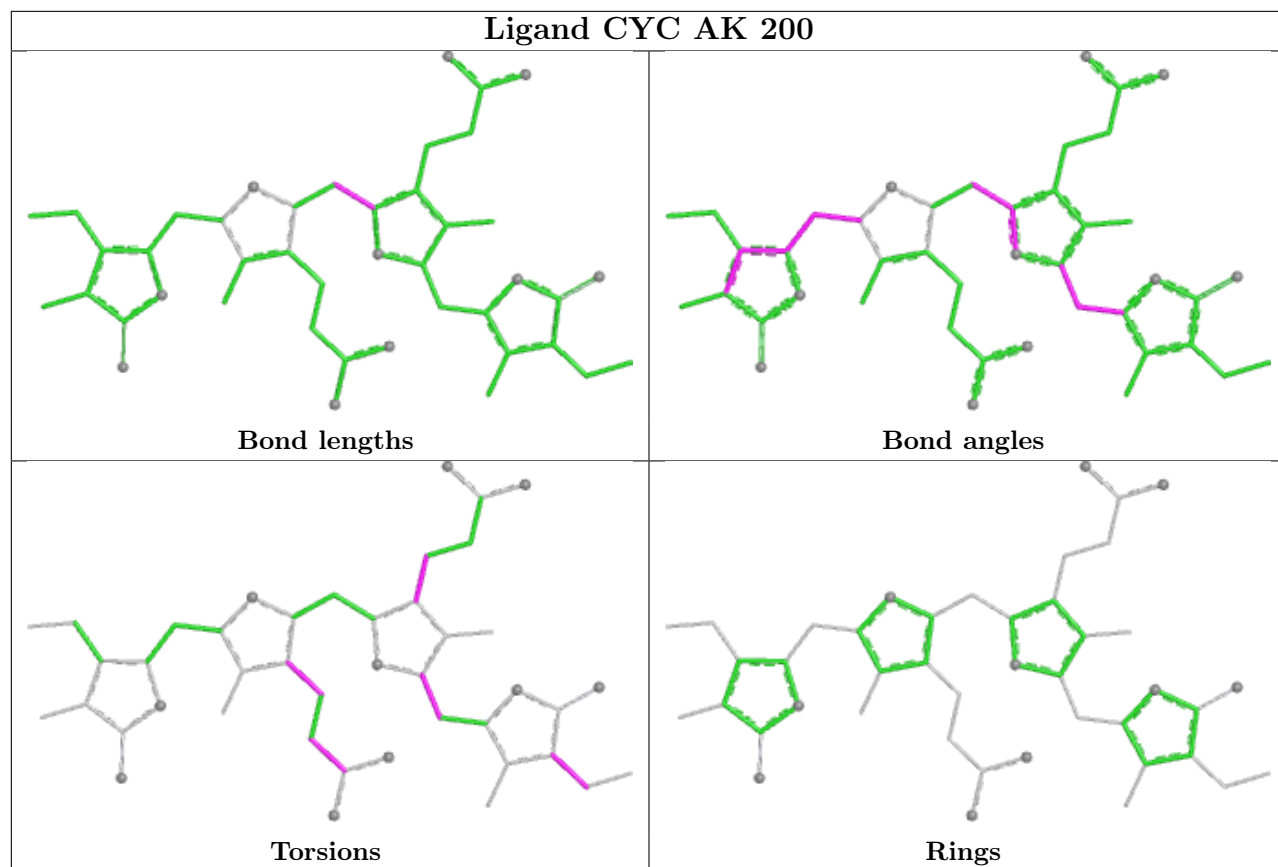


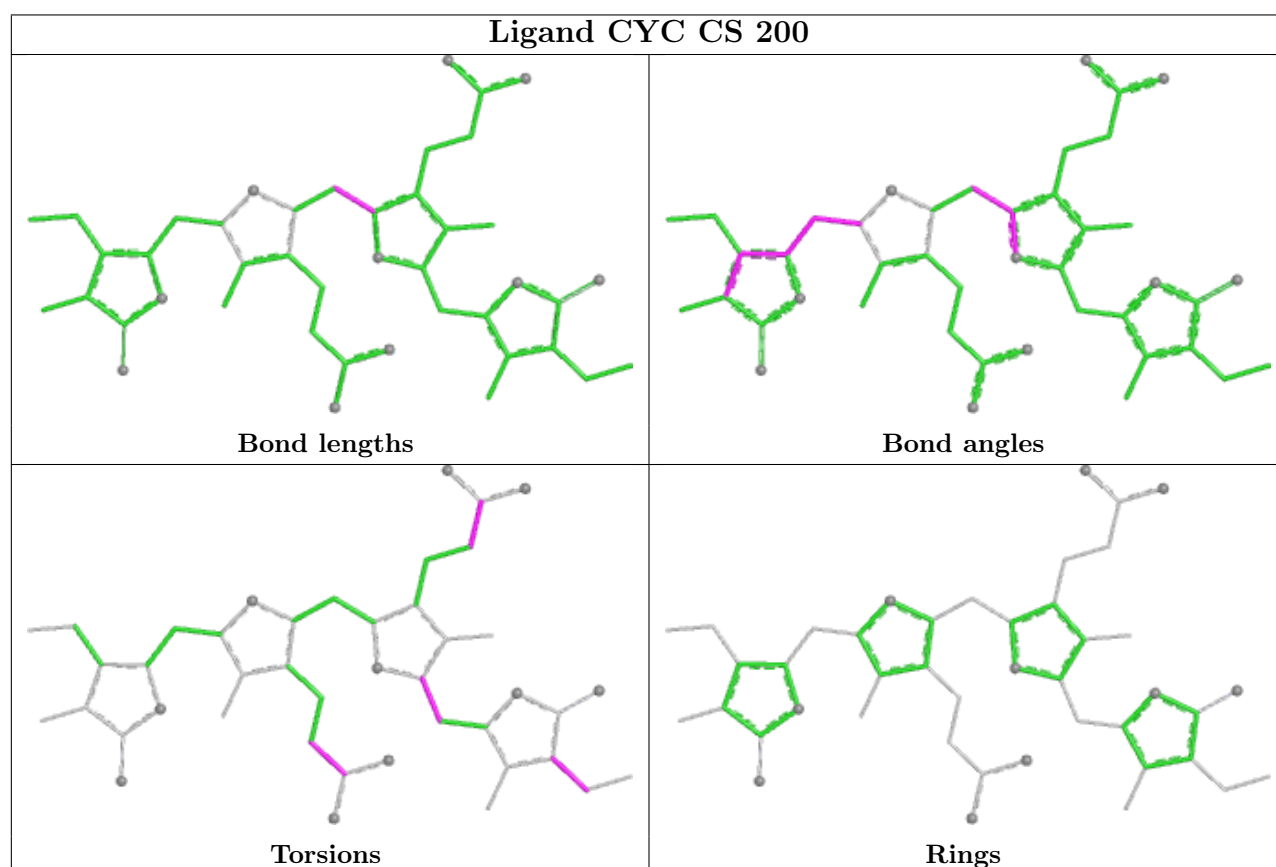
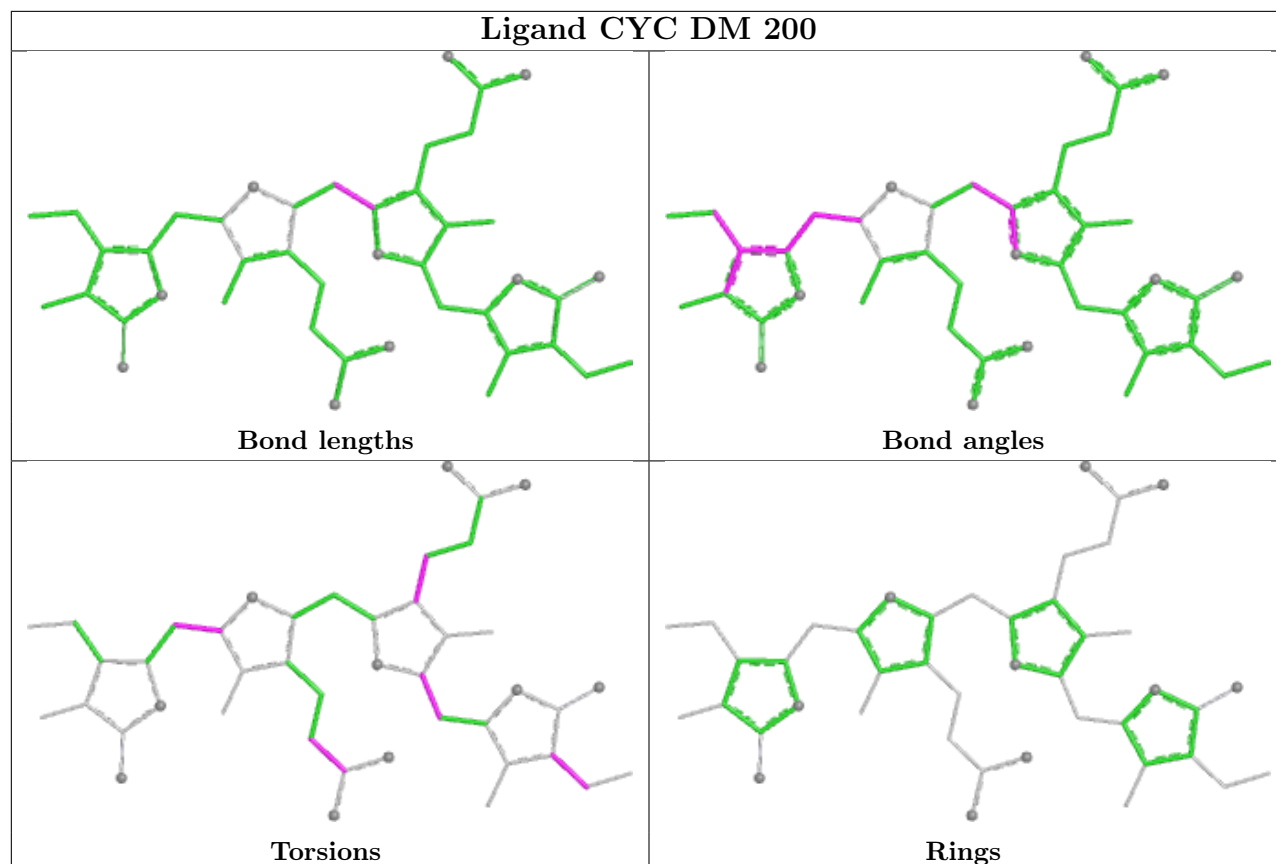


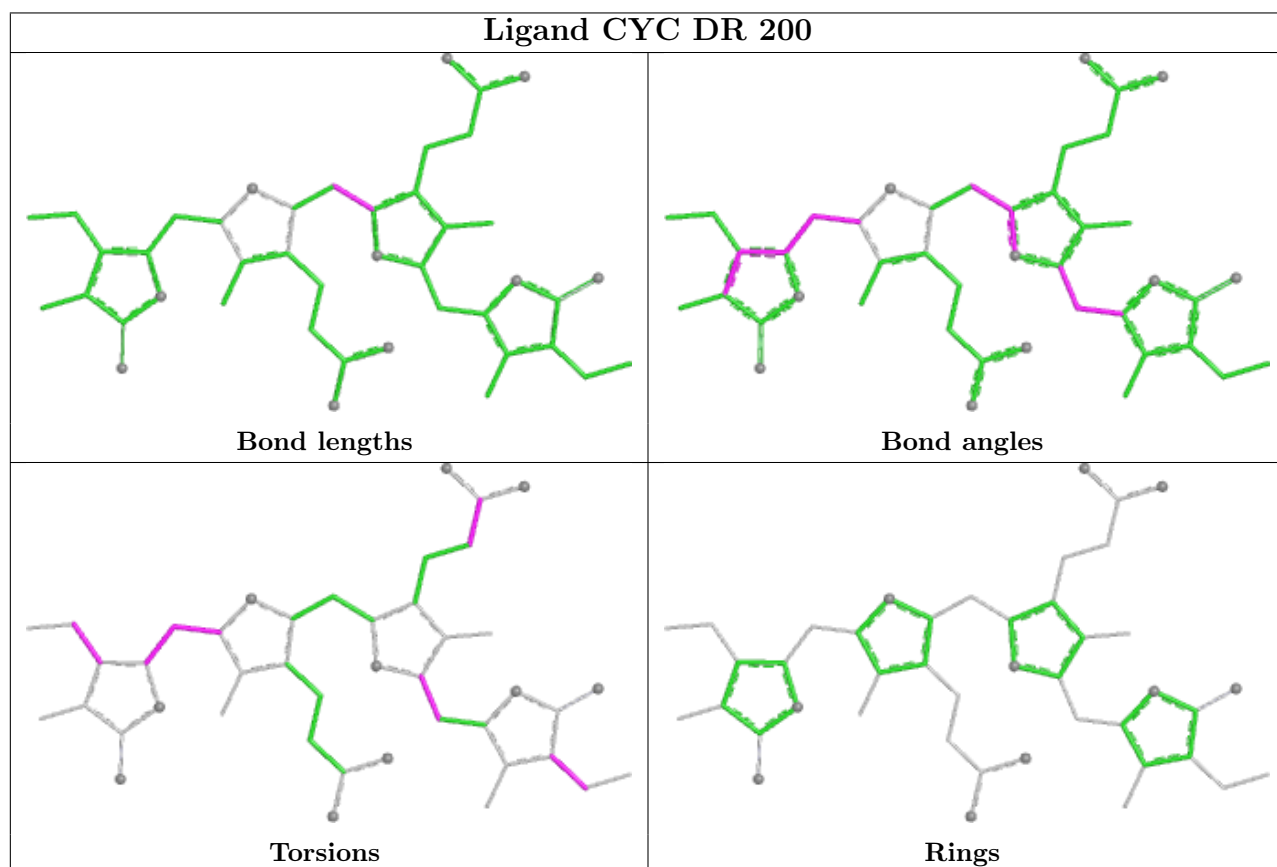
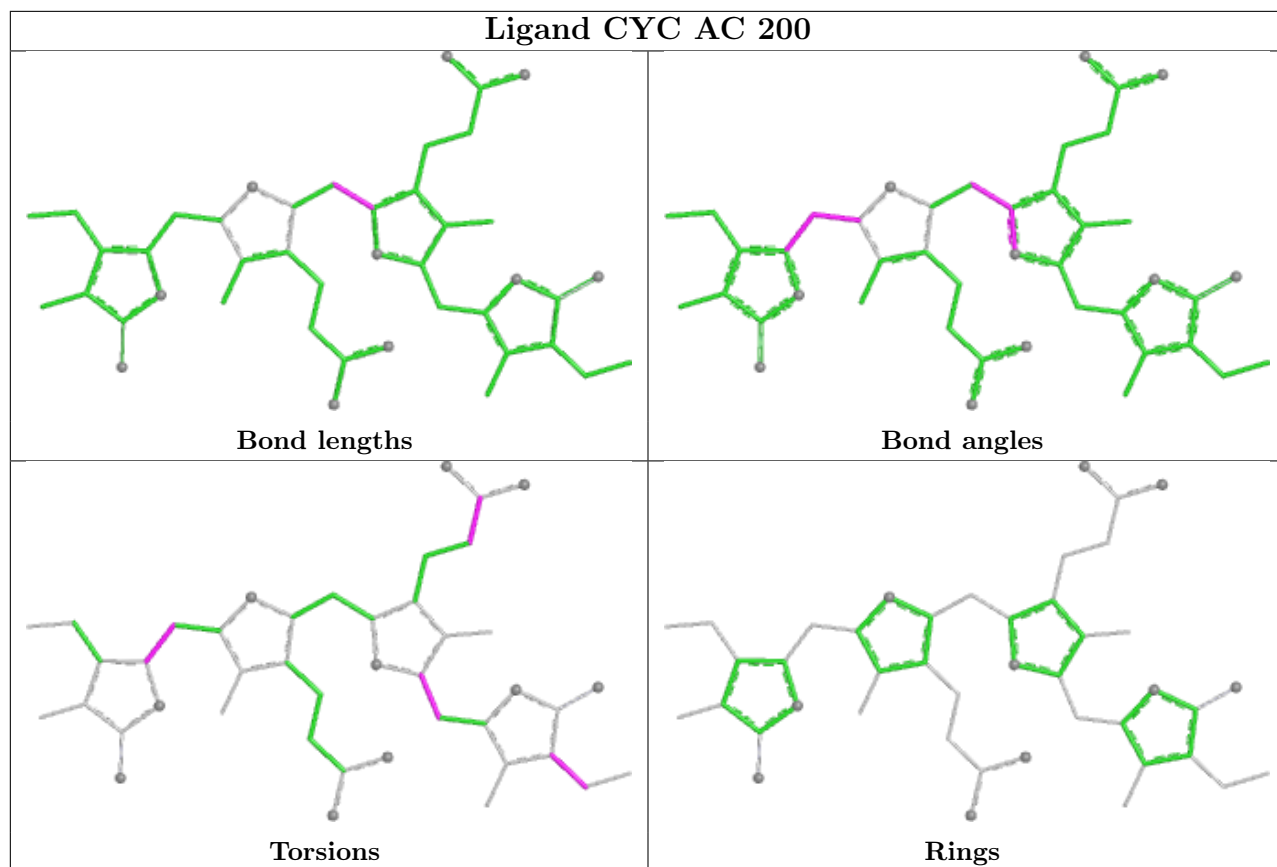


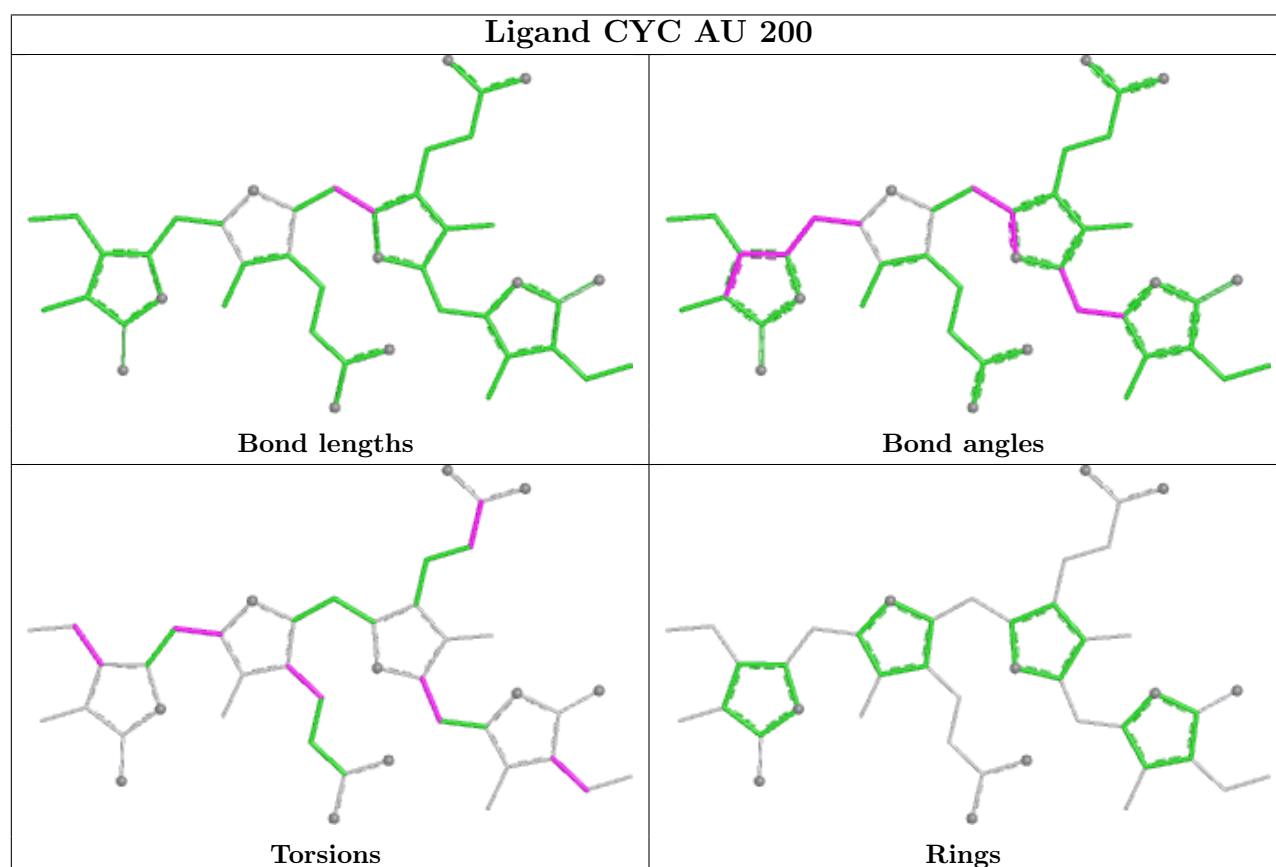
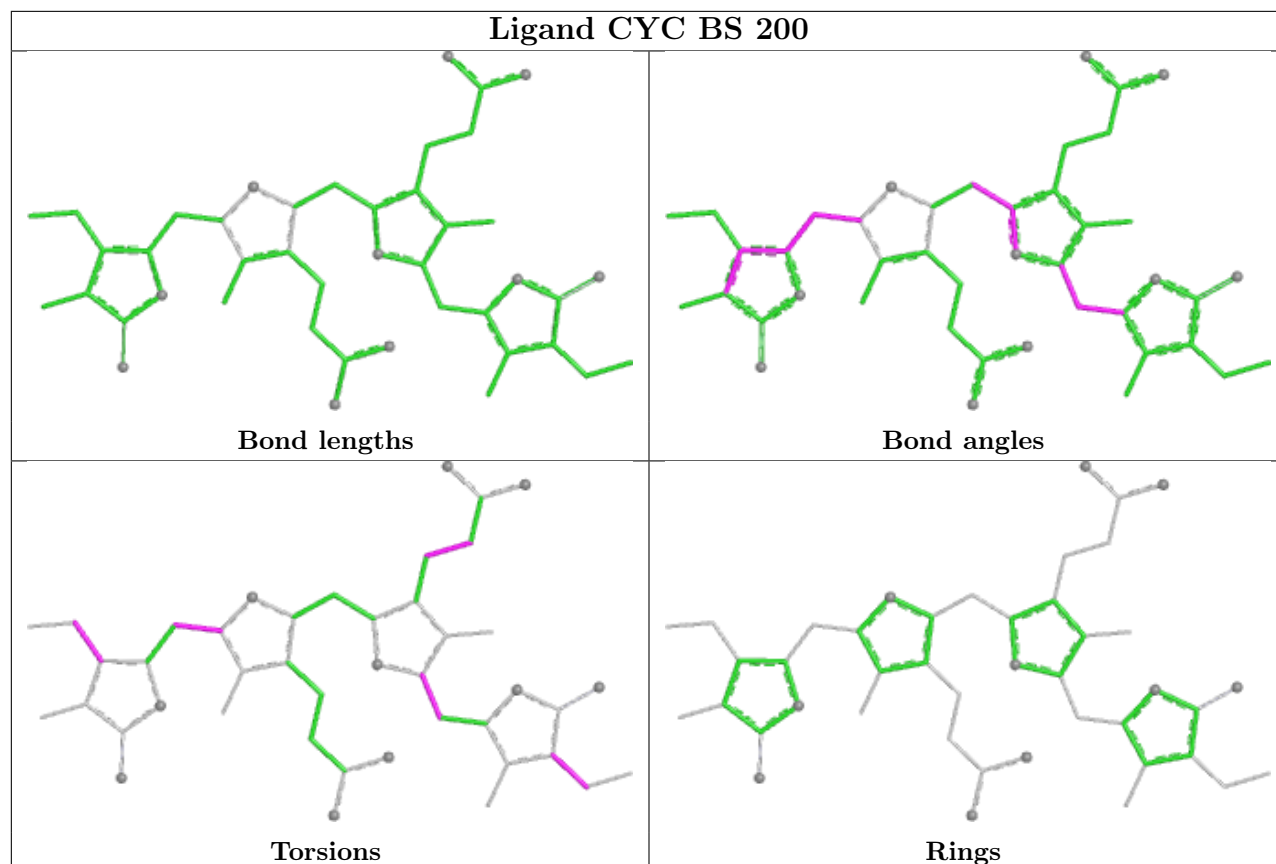


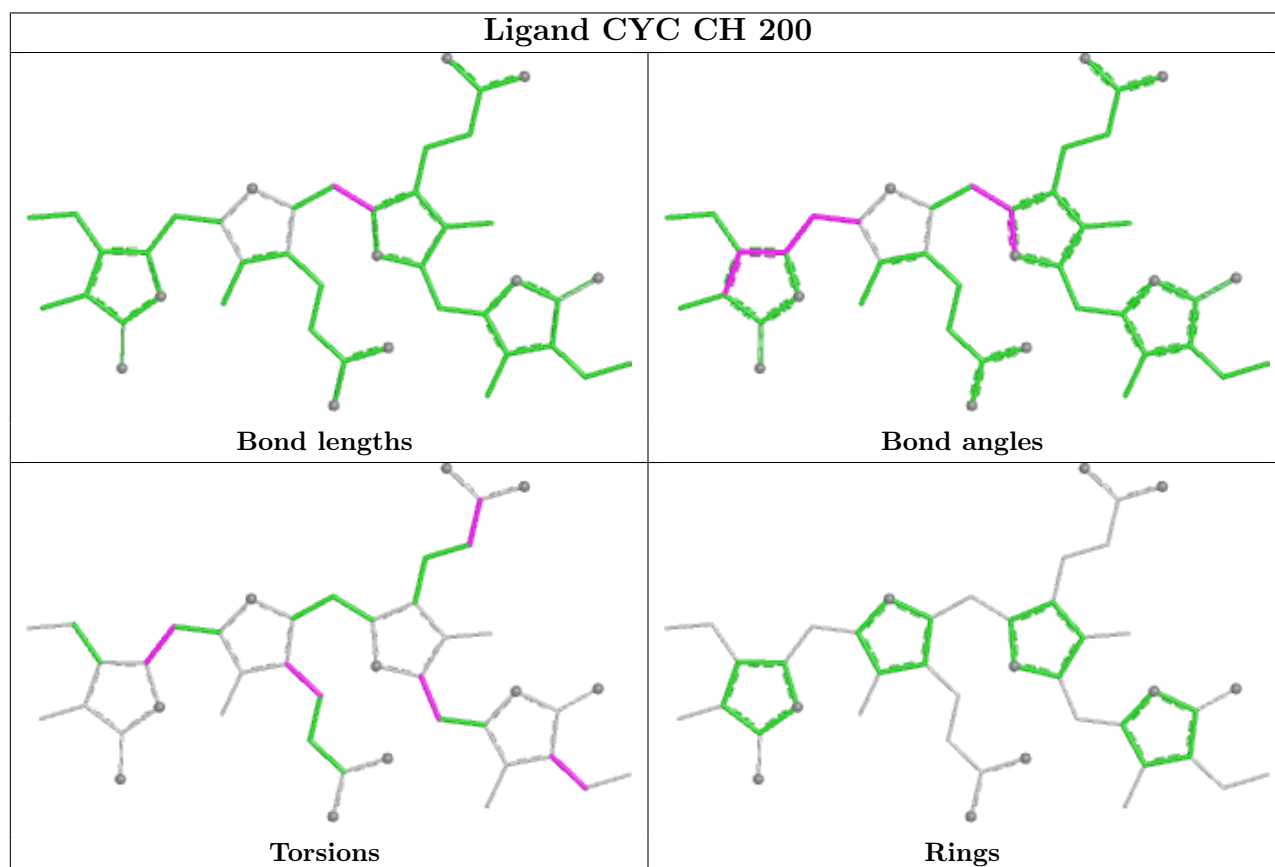
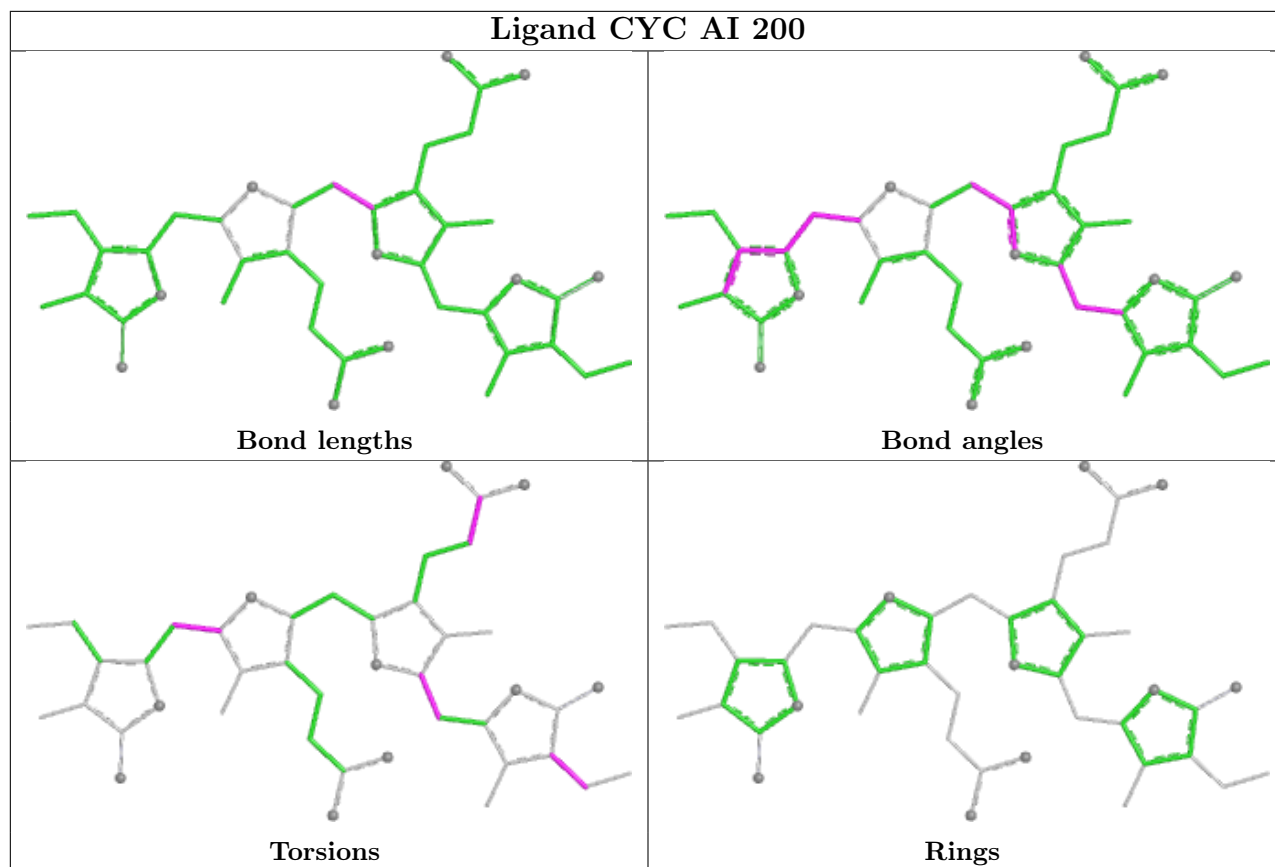


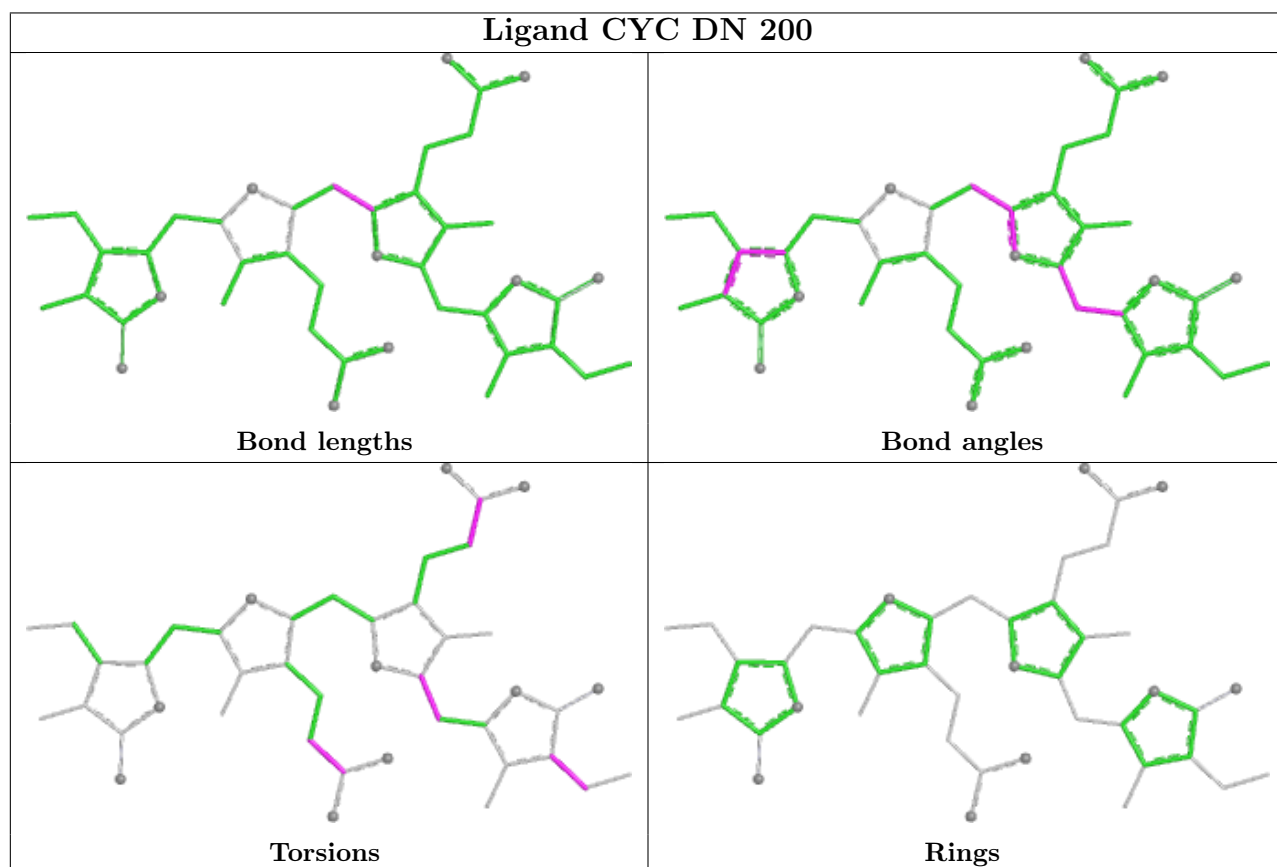
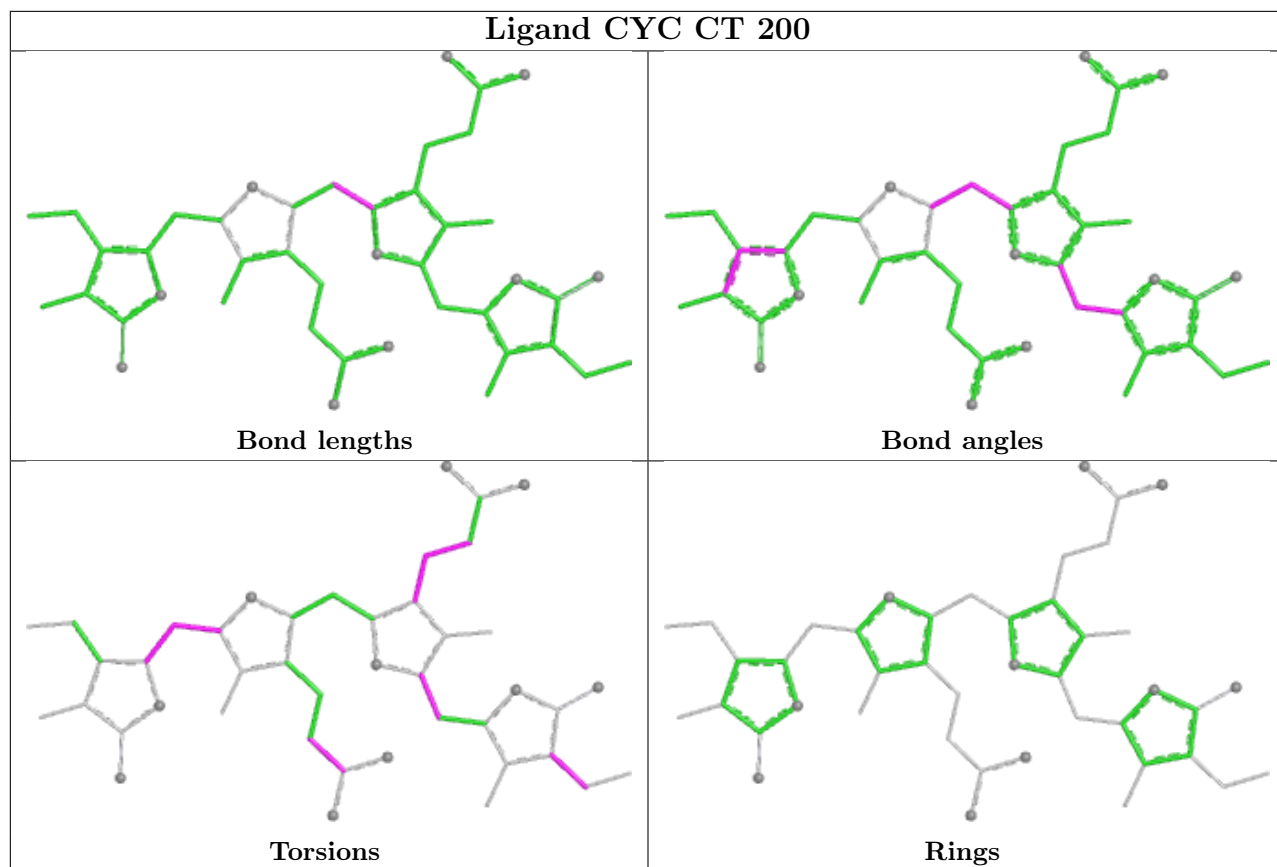


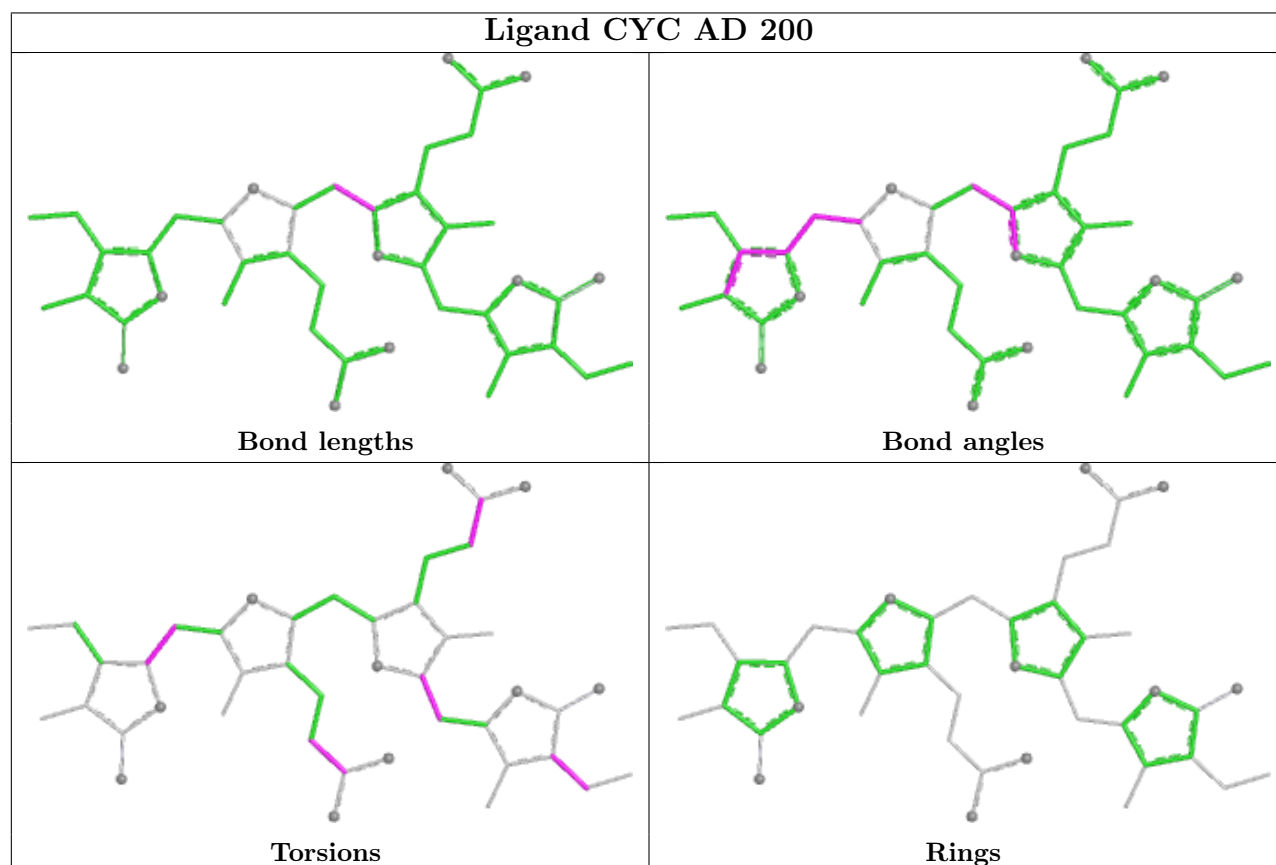
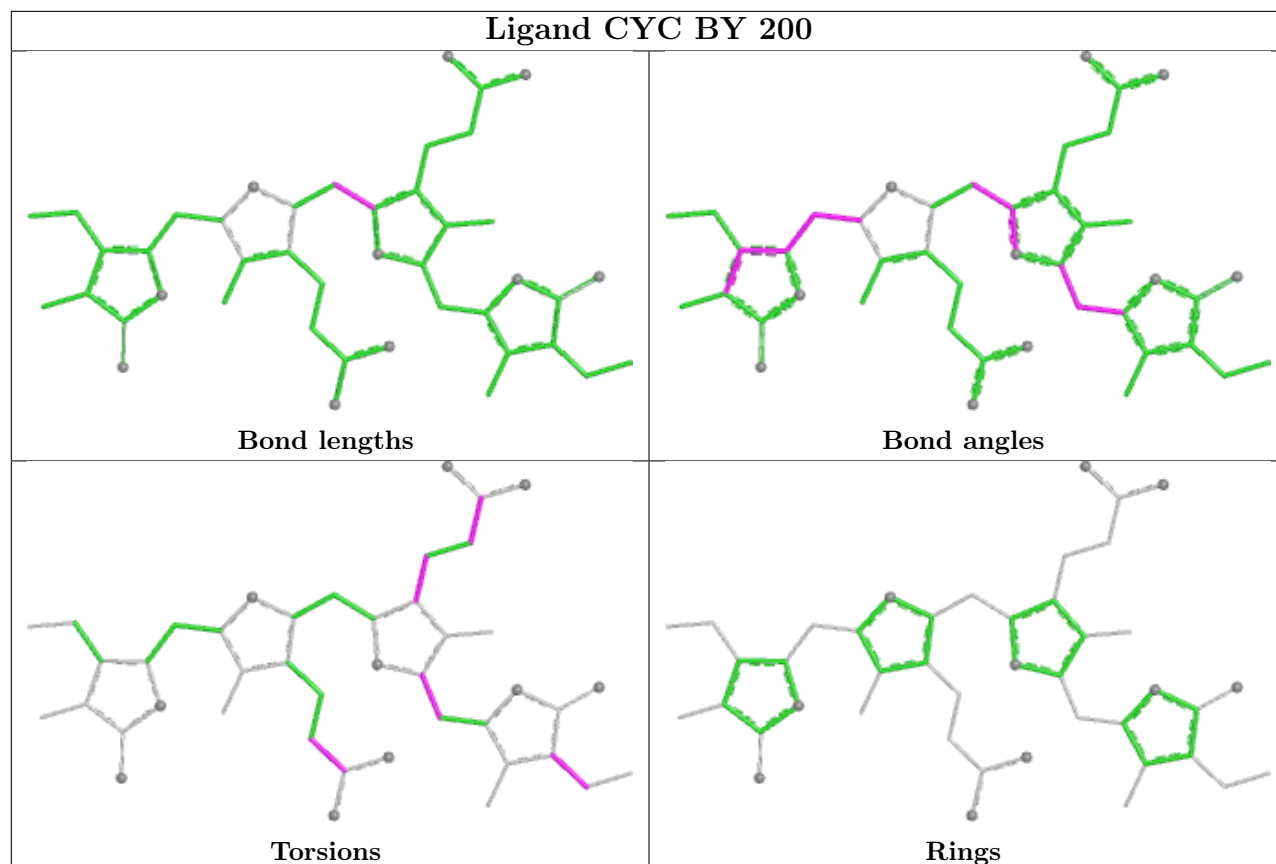




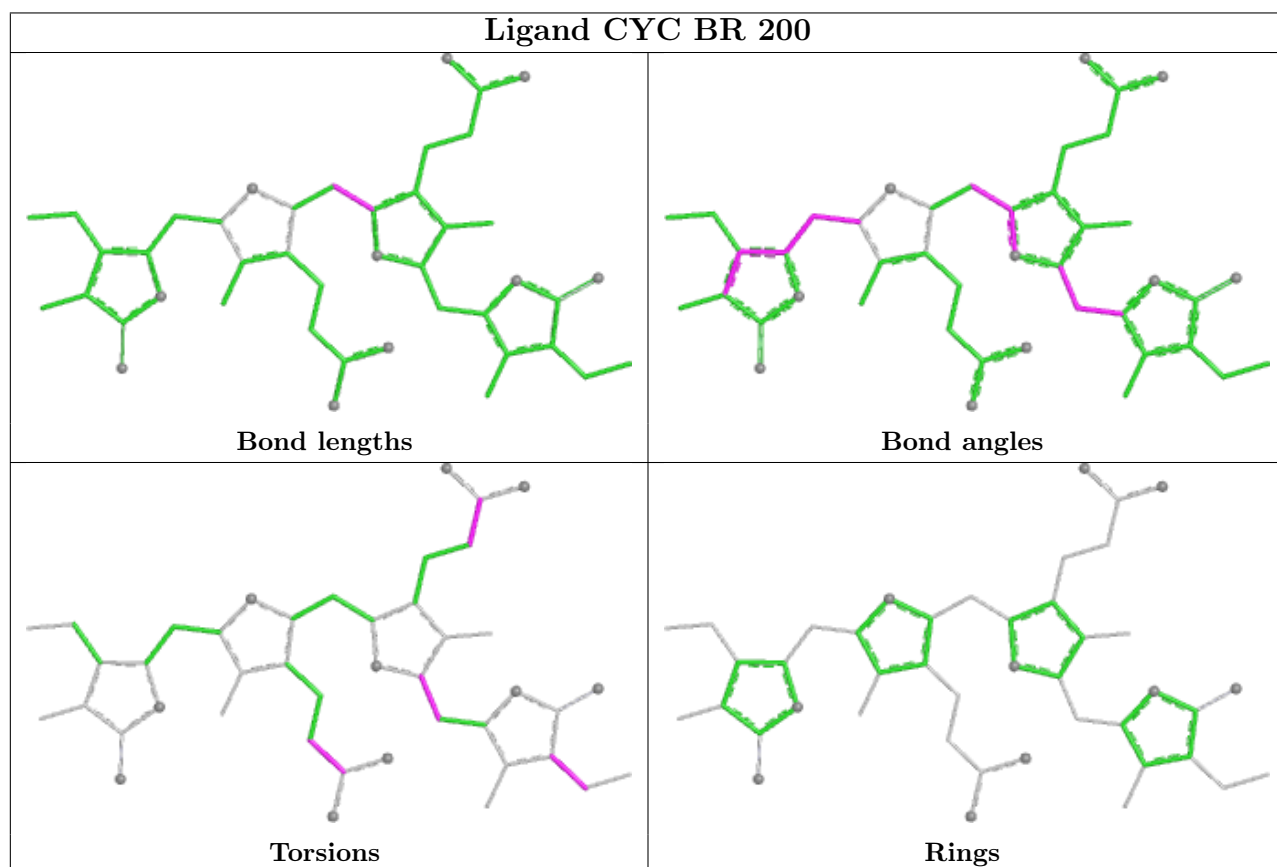
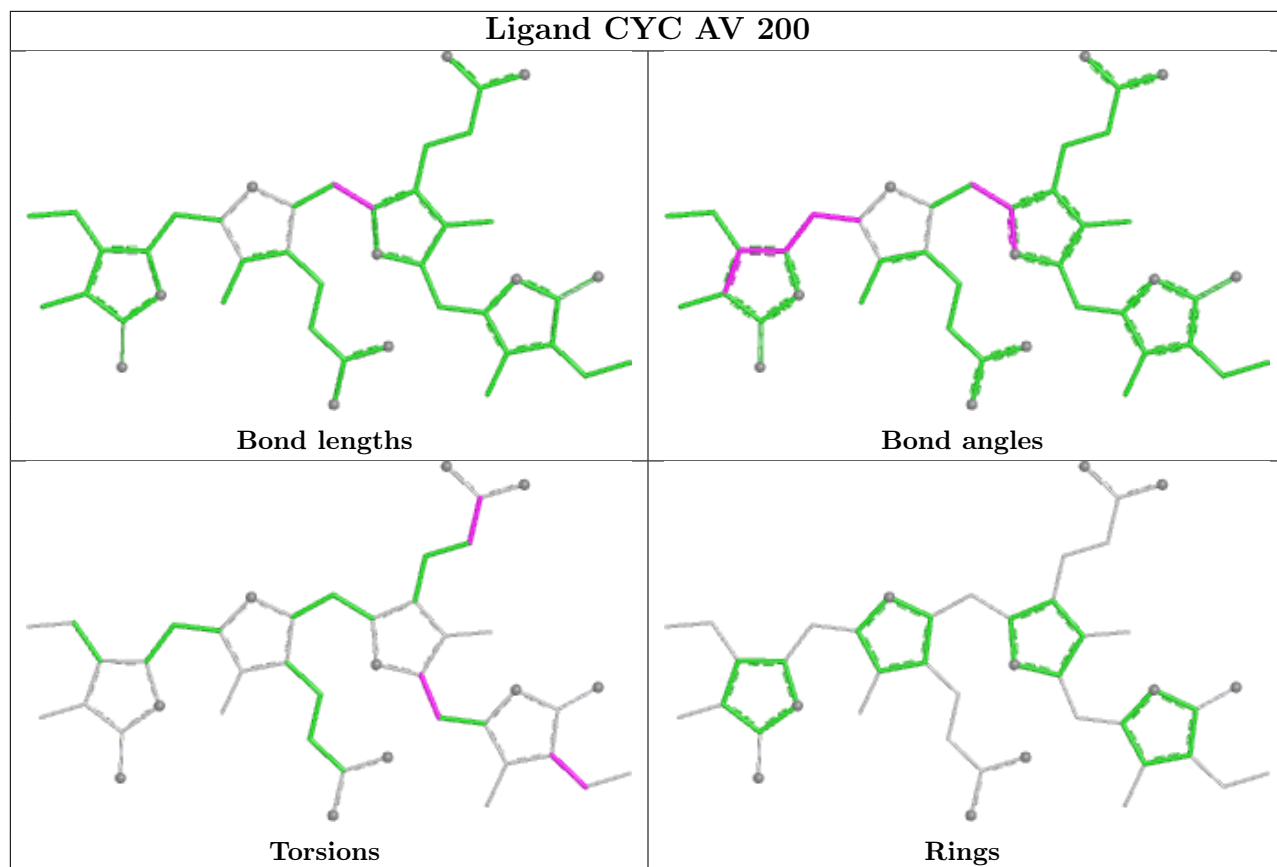


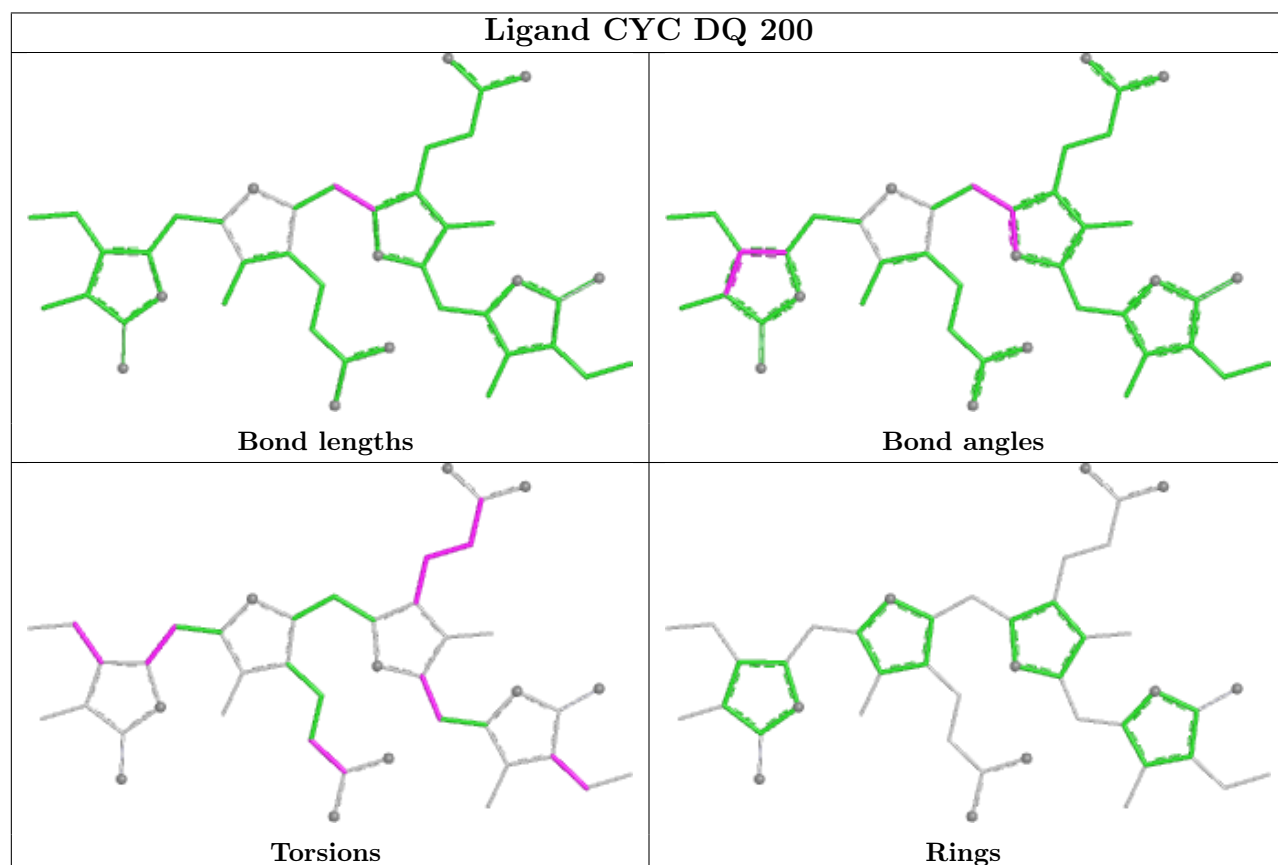
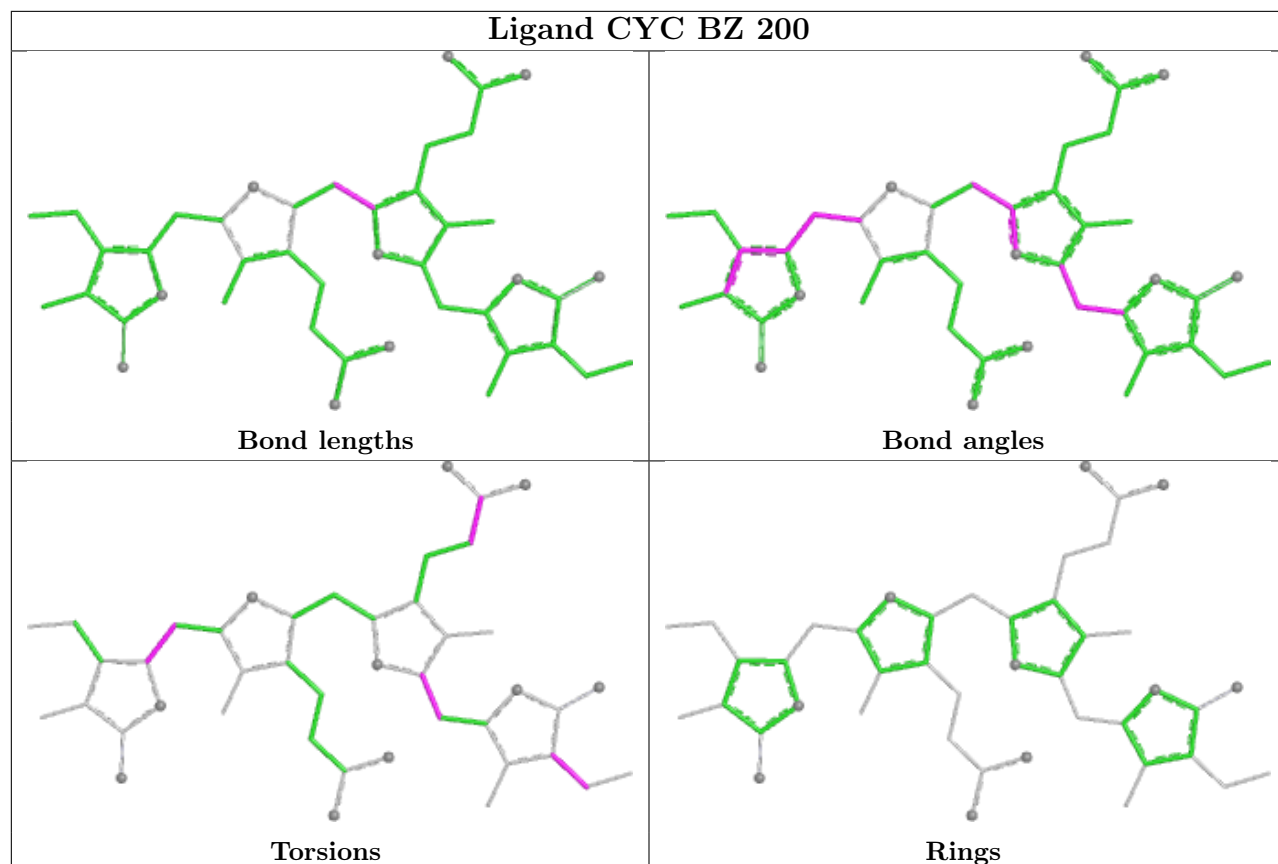


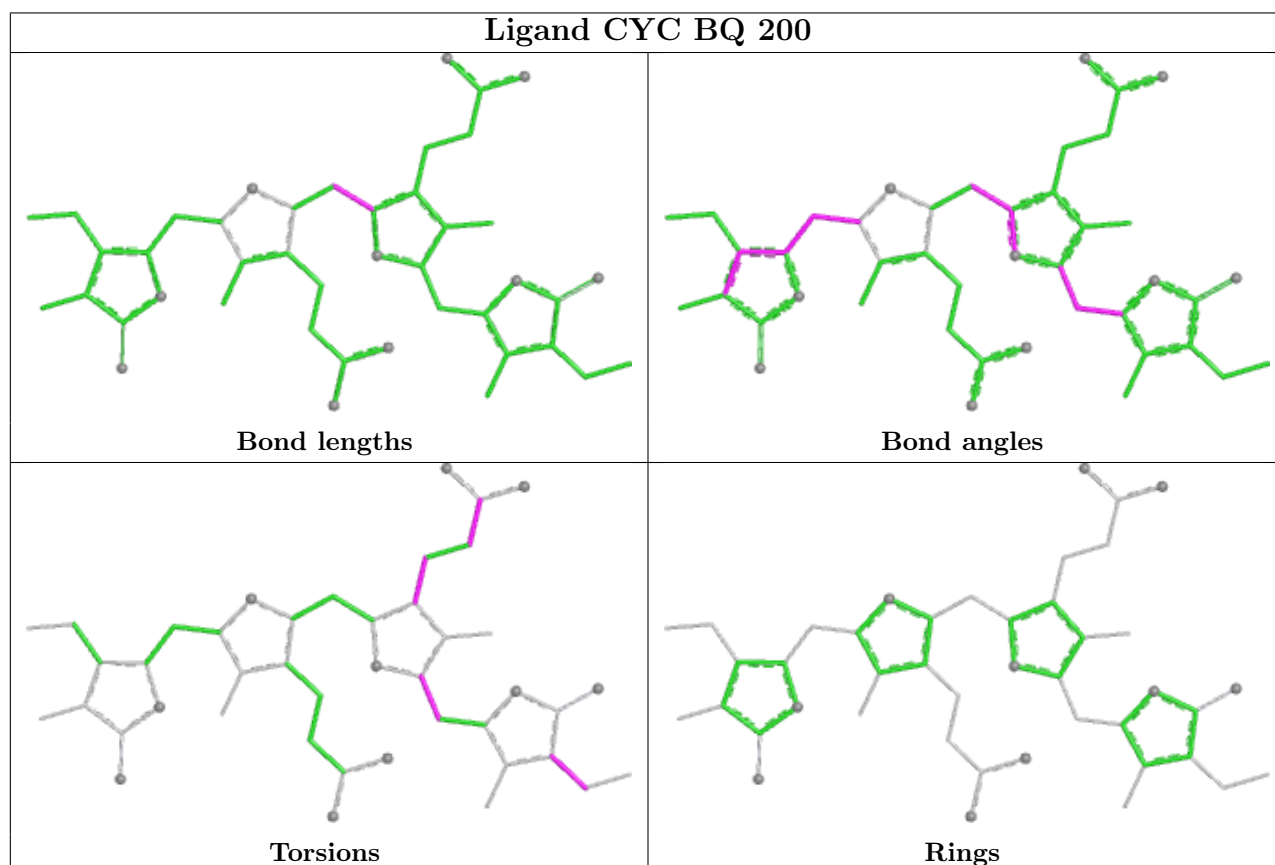
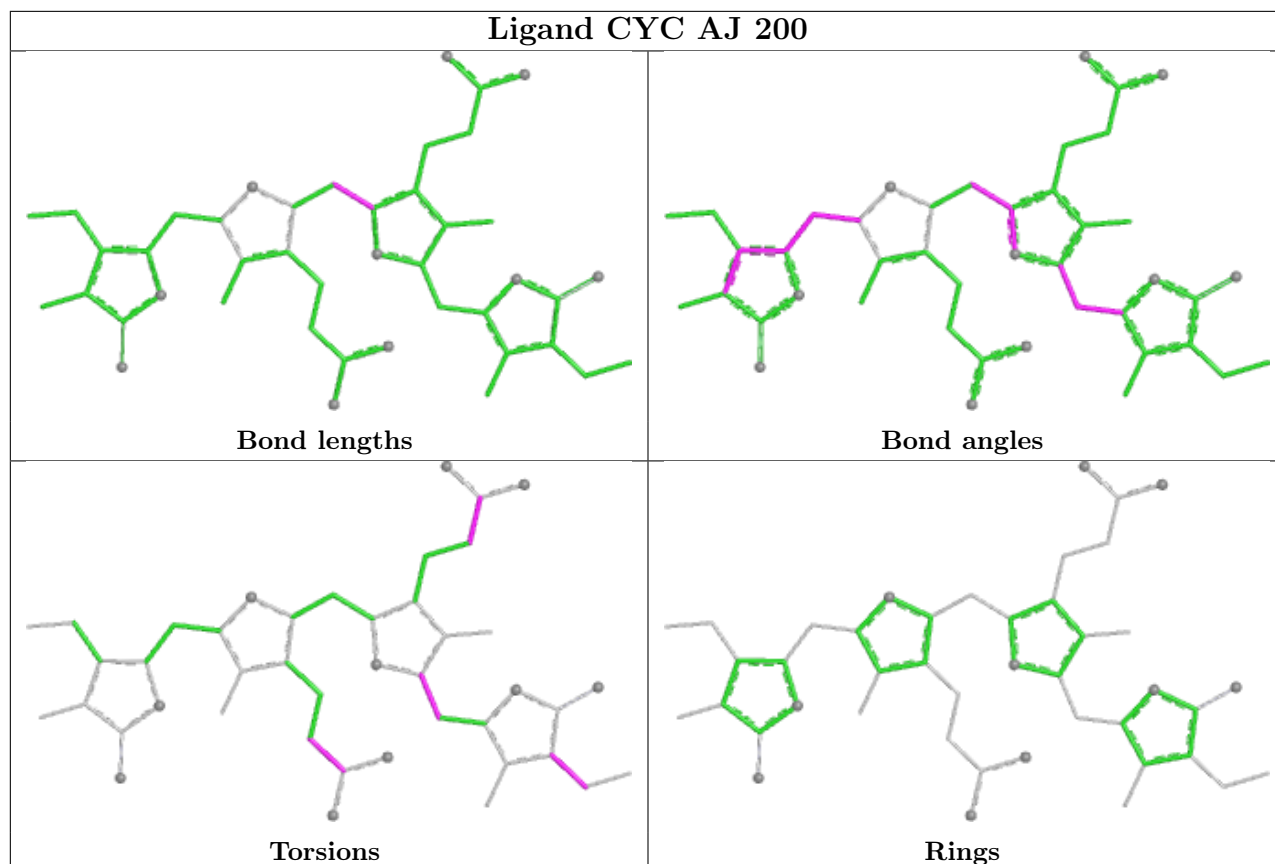


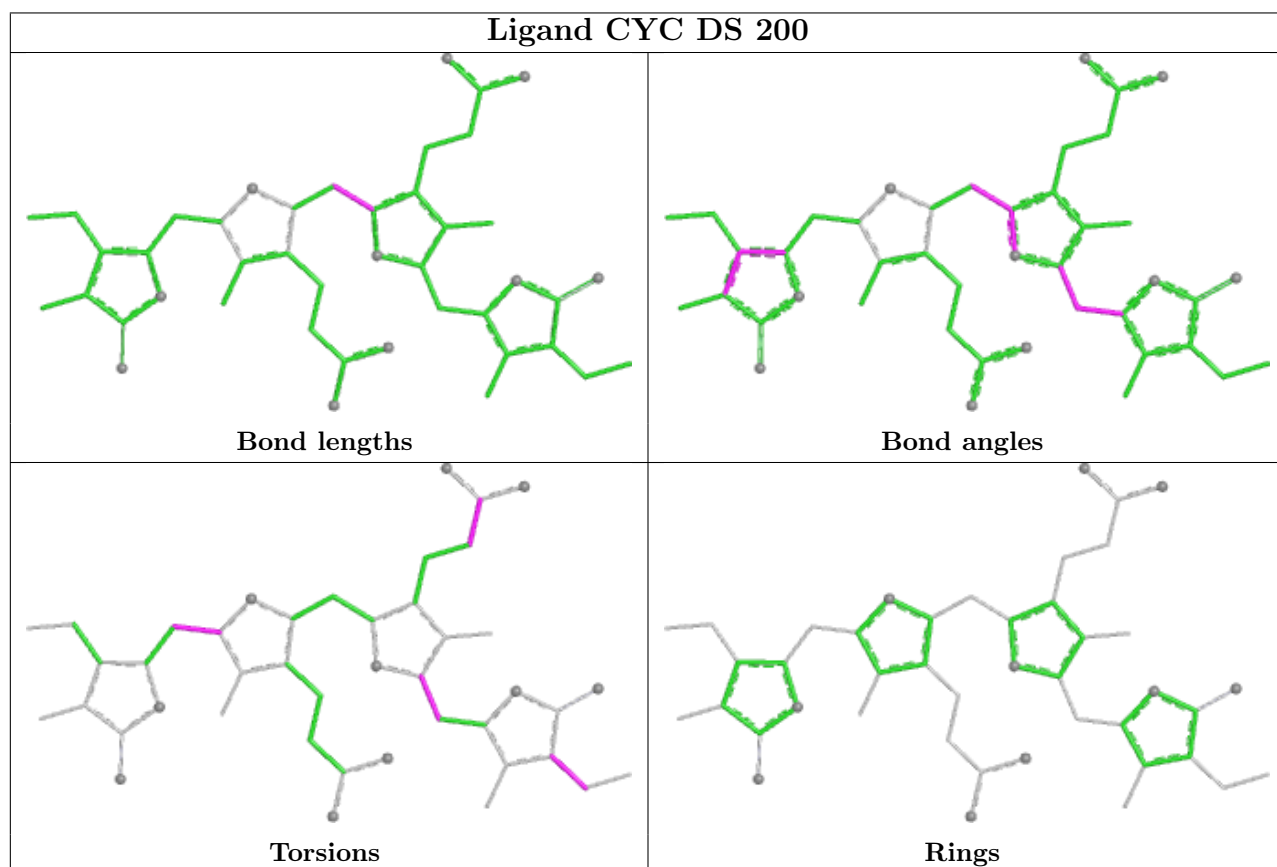
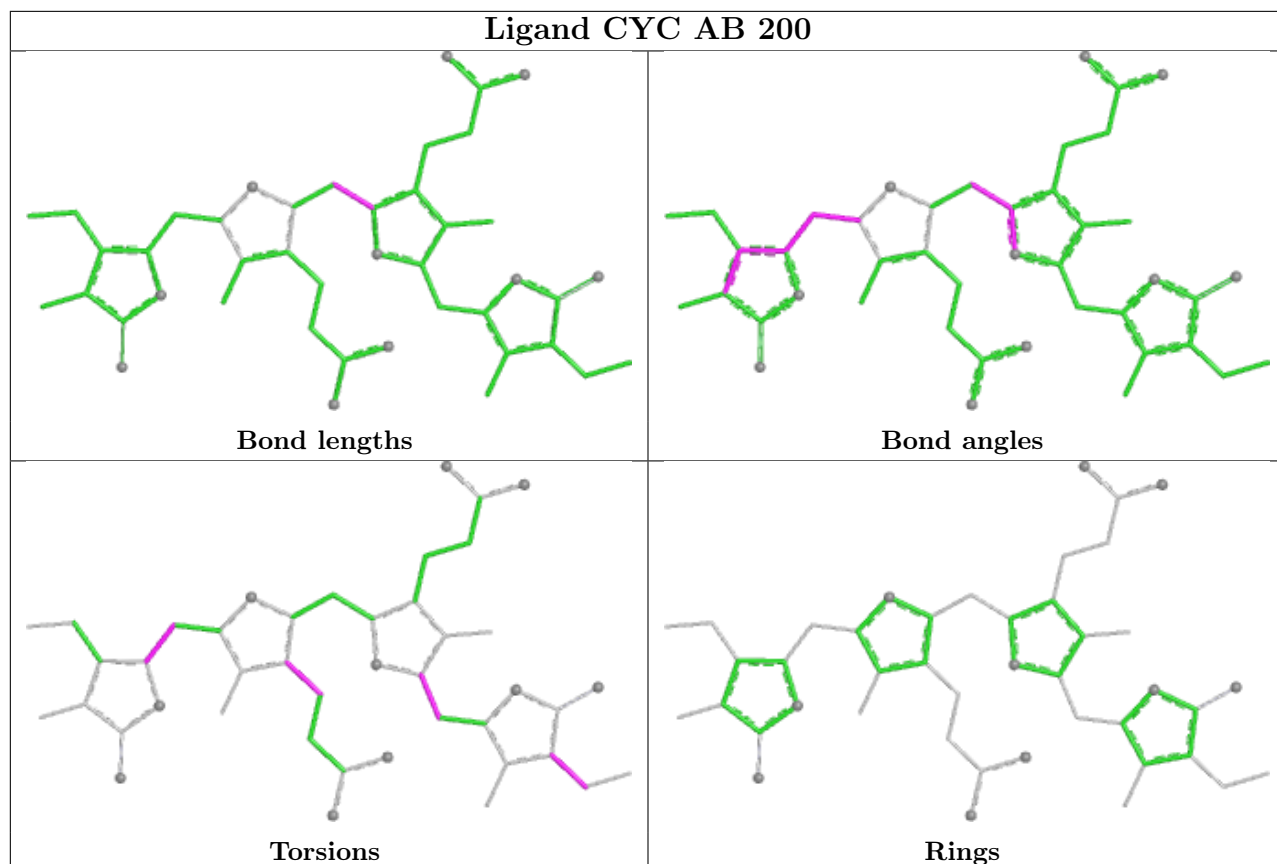


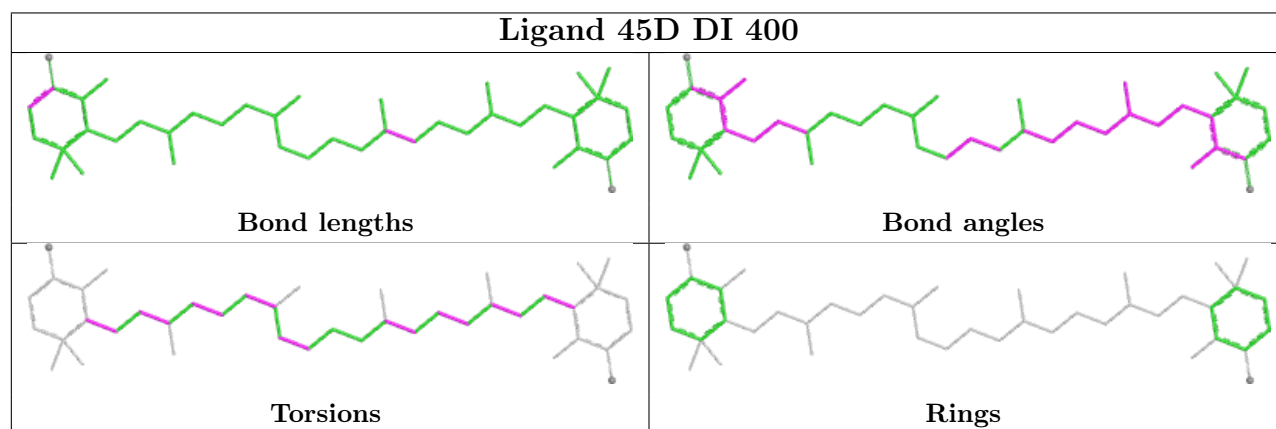
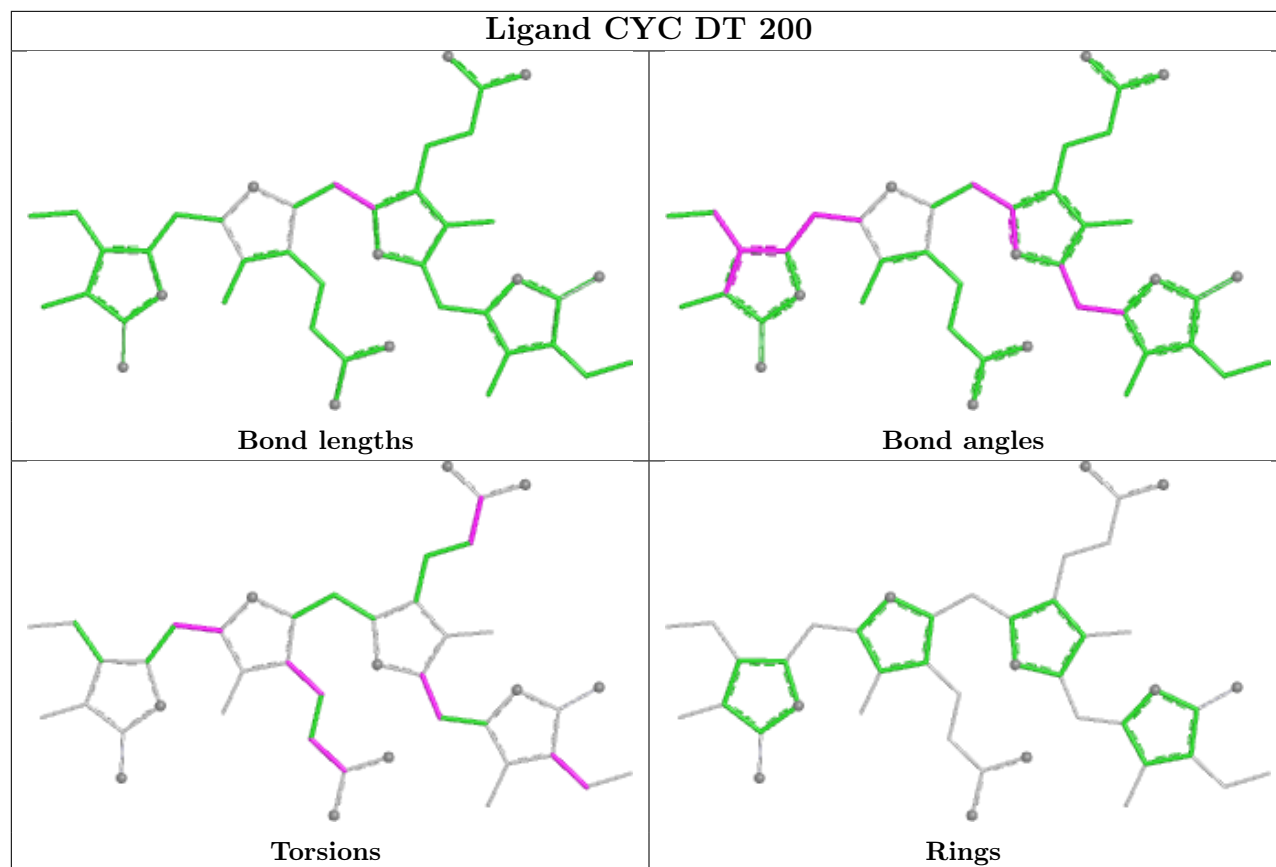


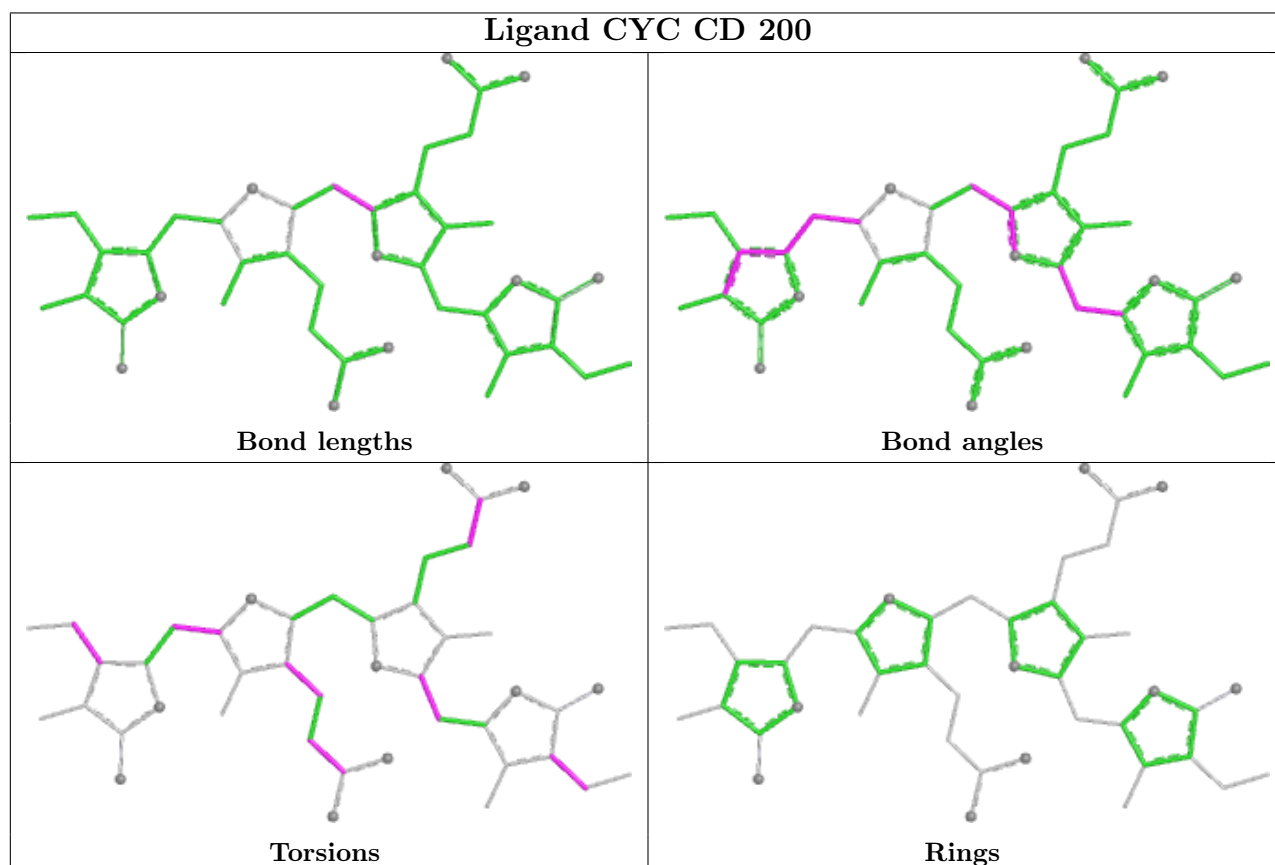
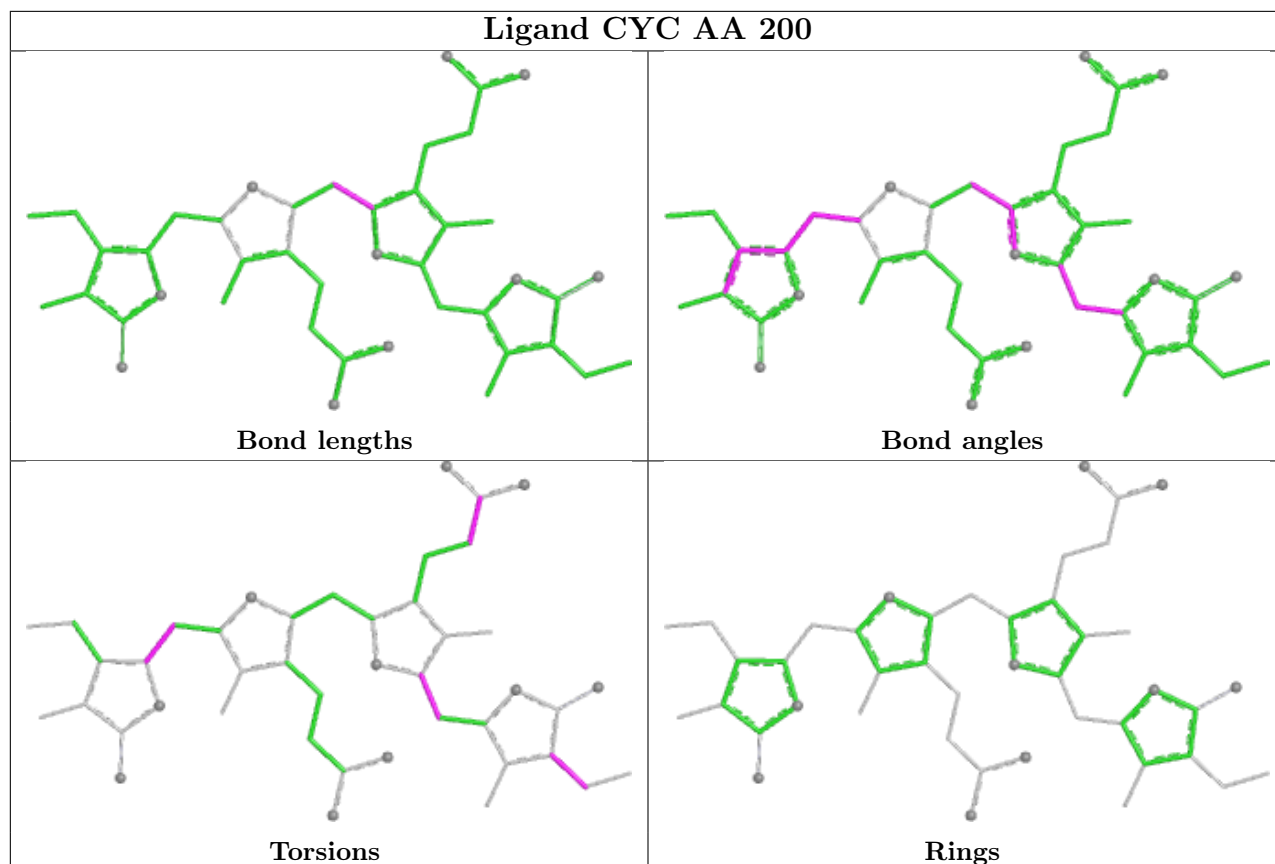


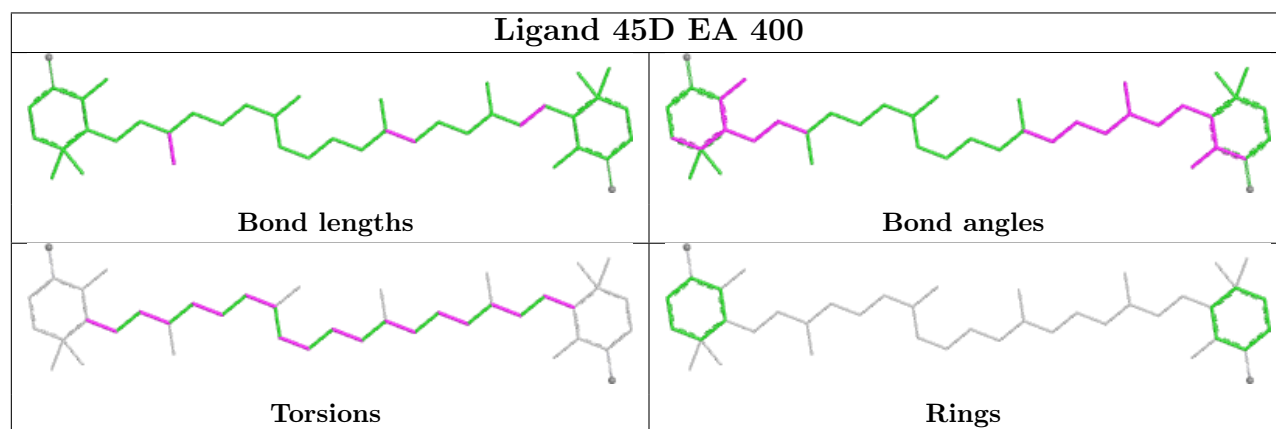
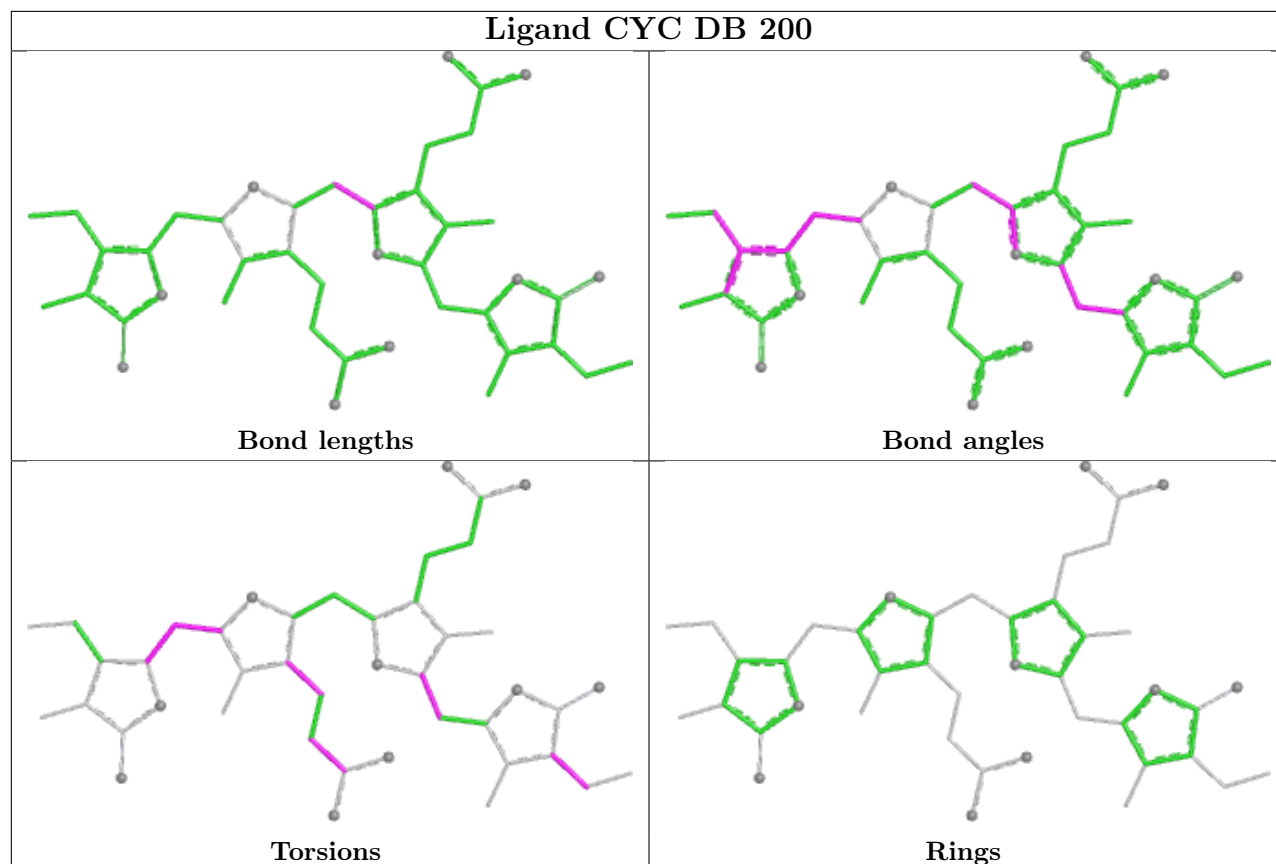


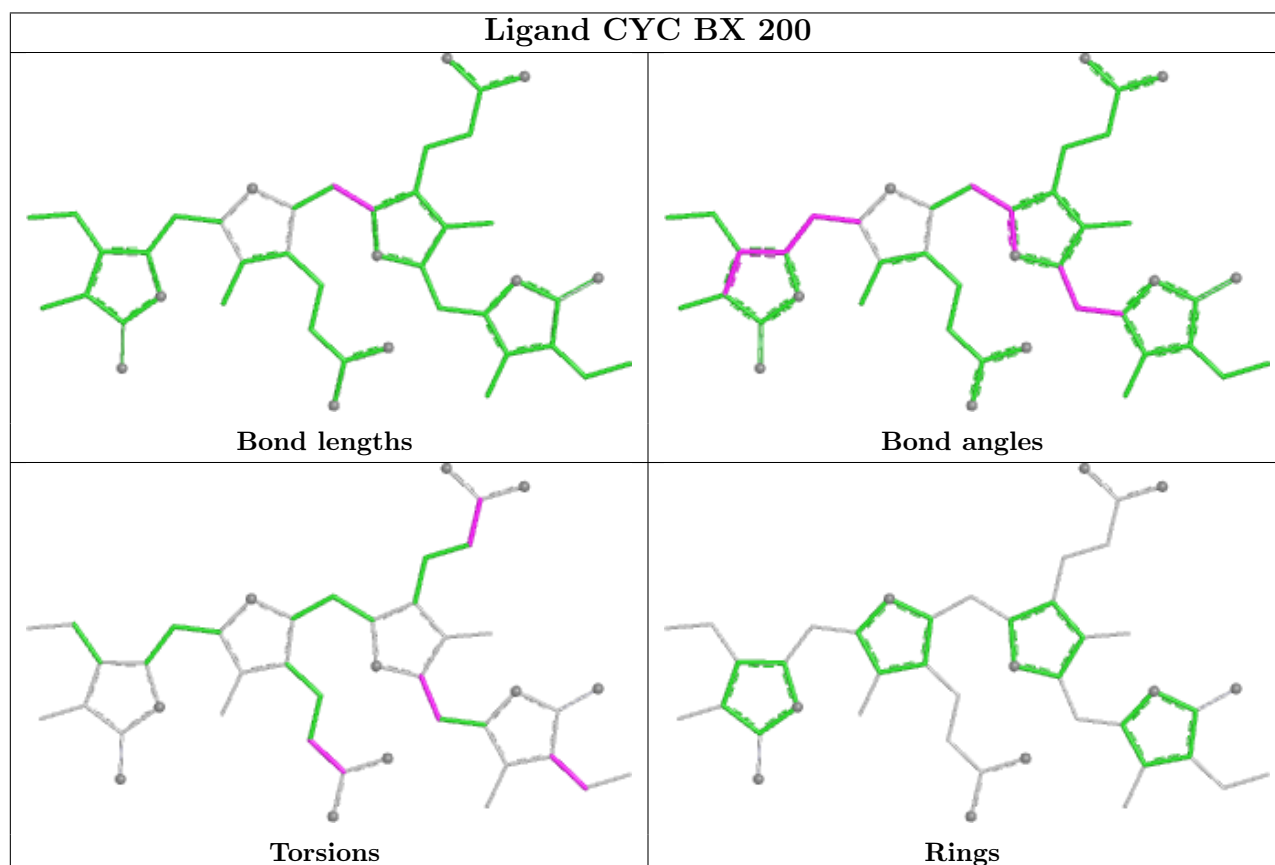
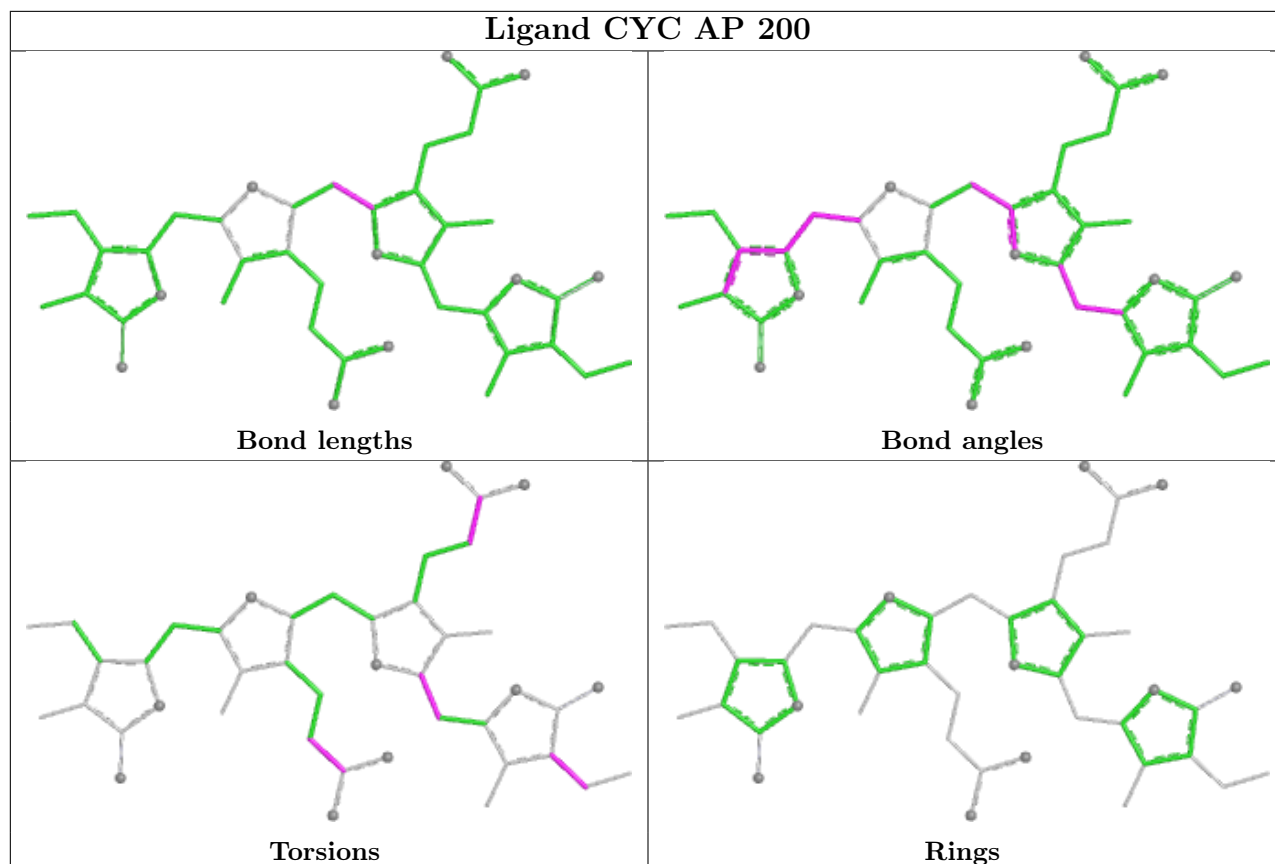




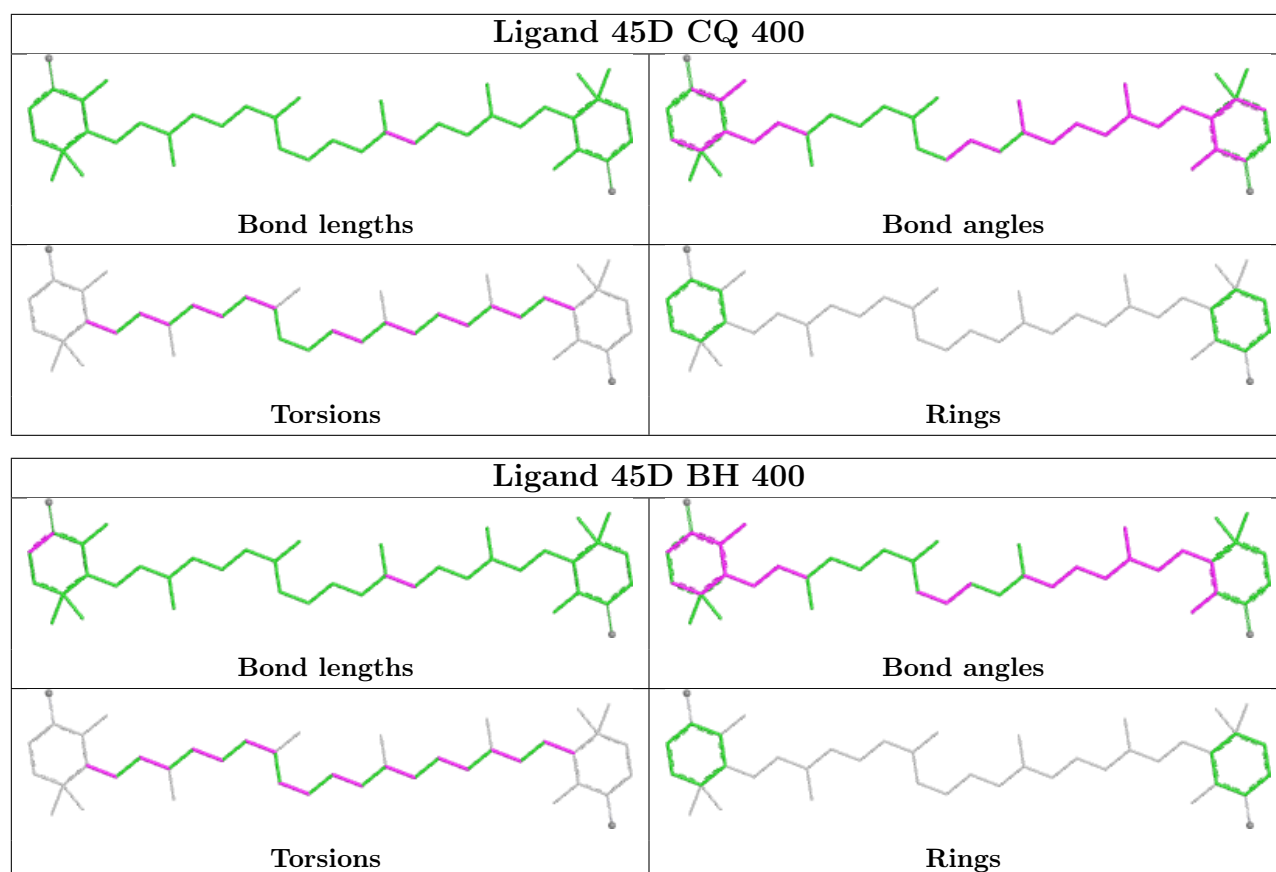












## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

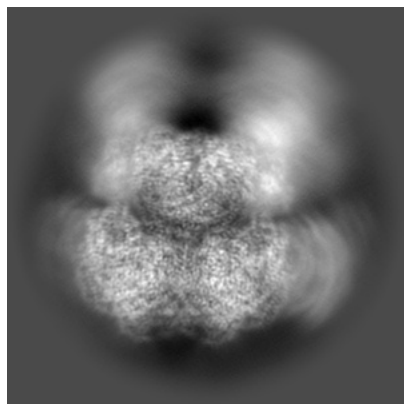
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-25030. These allow visual inspection of the internal detail of the map and identification of artifacts.

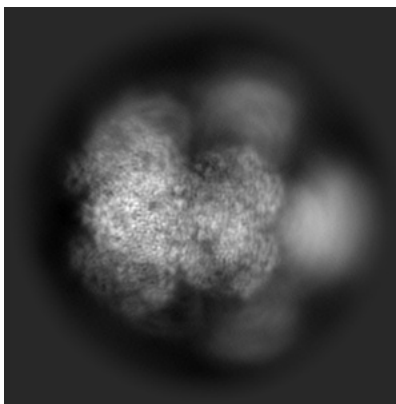
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

### 6.1 Orthogonal projections [i](#)

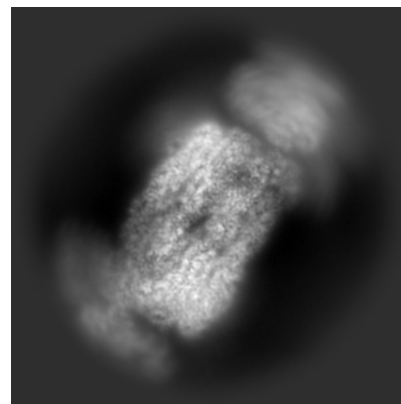
#### 6.1.1 Primary map



X

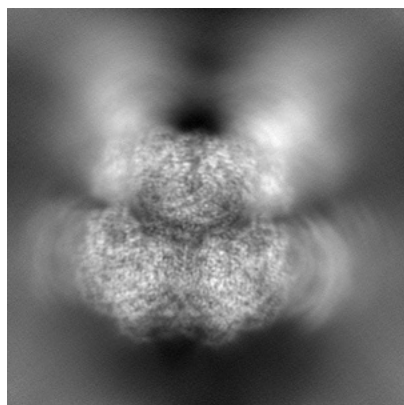


Y

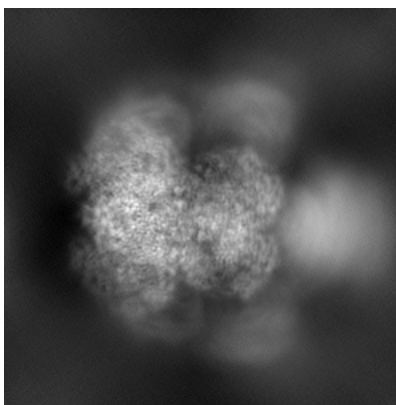


Z

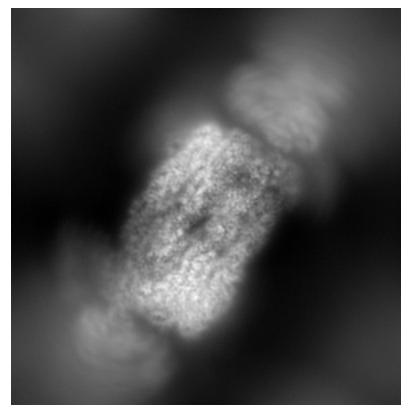
#### 6.1.2 Raw map



X



Y

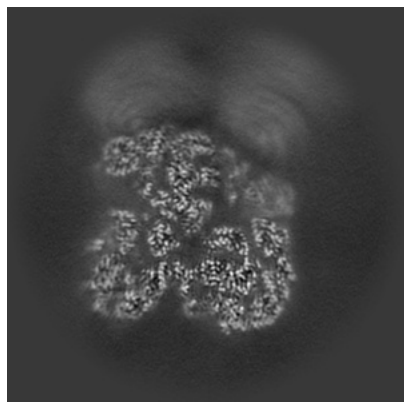


Z

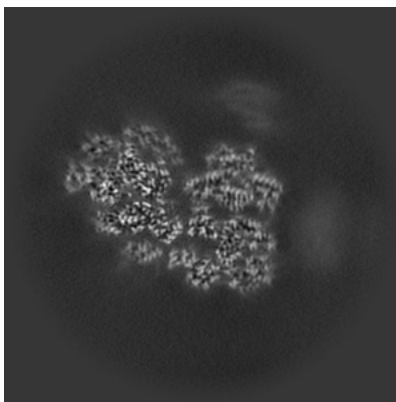
The images above show the map projected in three orthogonal directions.

## 6.2 Central slices [i](#)

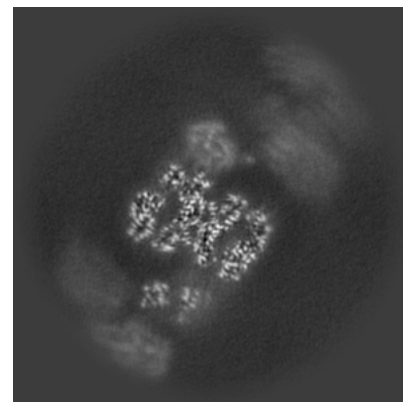
### 6.2.1 Primary map



X Index: 180

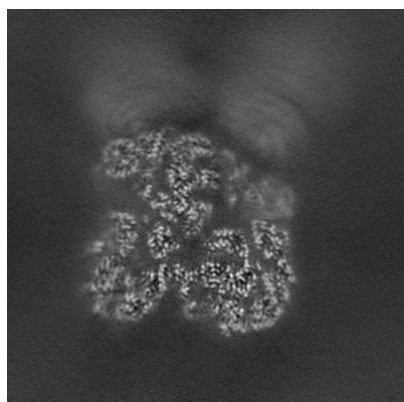


Y Index: 180

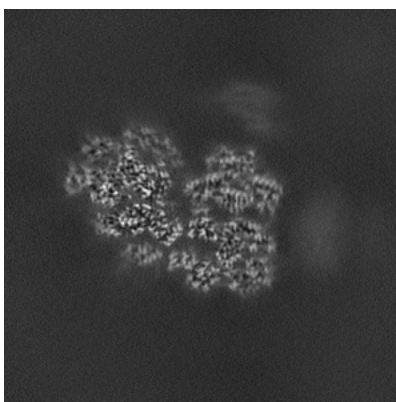


Z Index: 180

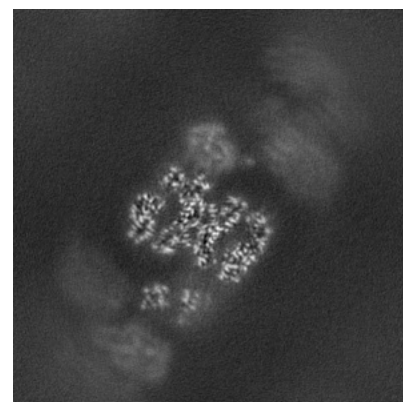
### 6.2.2 Raw map



X Index: 180



Y Index: 180

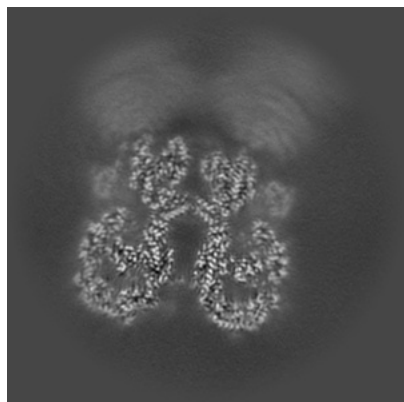


Z Index: 180

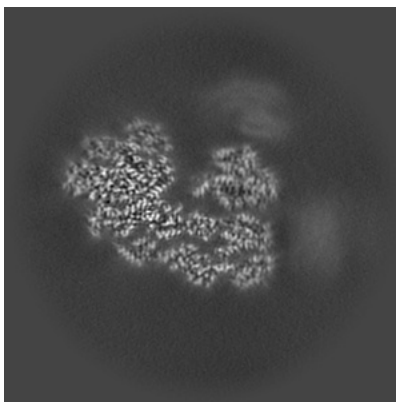
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

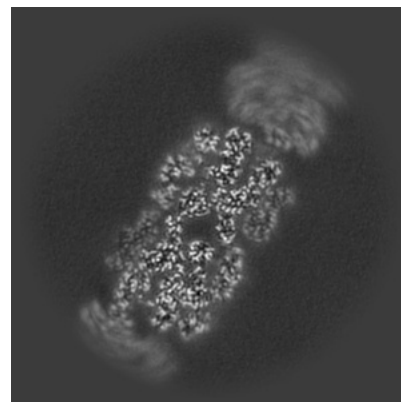
### 6.3.1 Primary map



X Index: 168

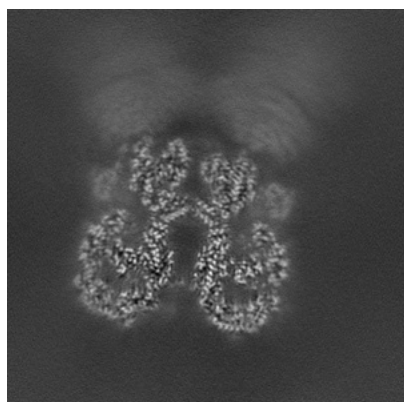


Y Index: 186

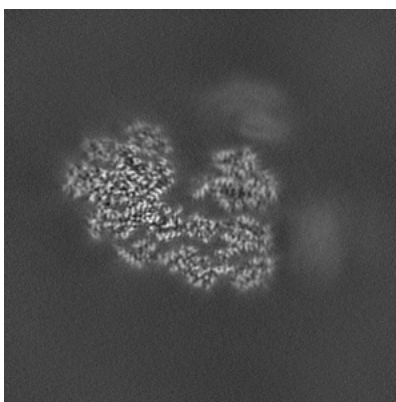


Z Index: 139

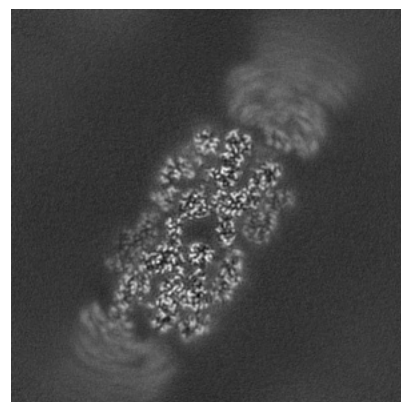
### 6.3.2 Raw map



X Index: 168



Y Index: 186

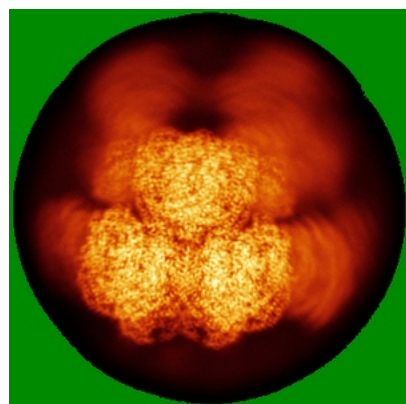


Z Index: 139

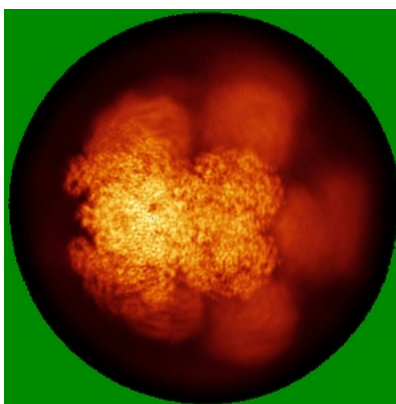
The images above show the largest variance slices of the map in three orthogonal directions.

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

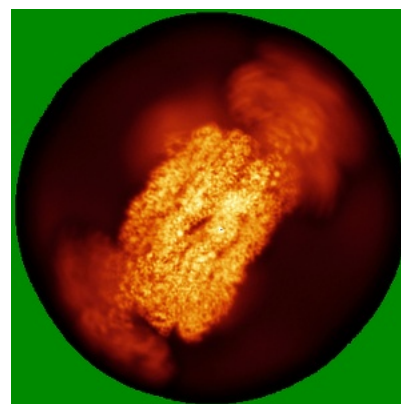
### 6.4.1 Primary map



X

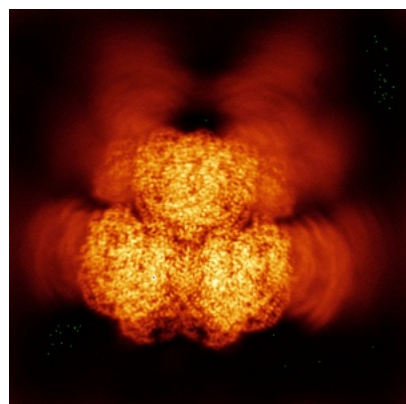


Y

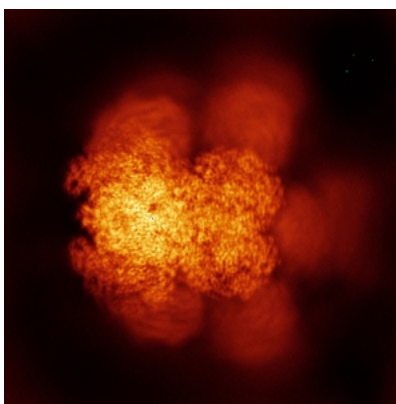


Z

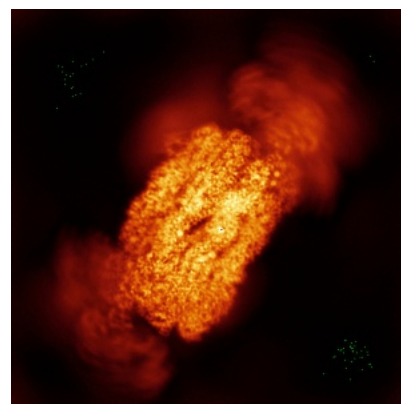
### 6.4.2 Raw map



X



Y

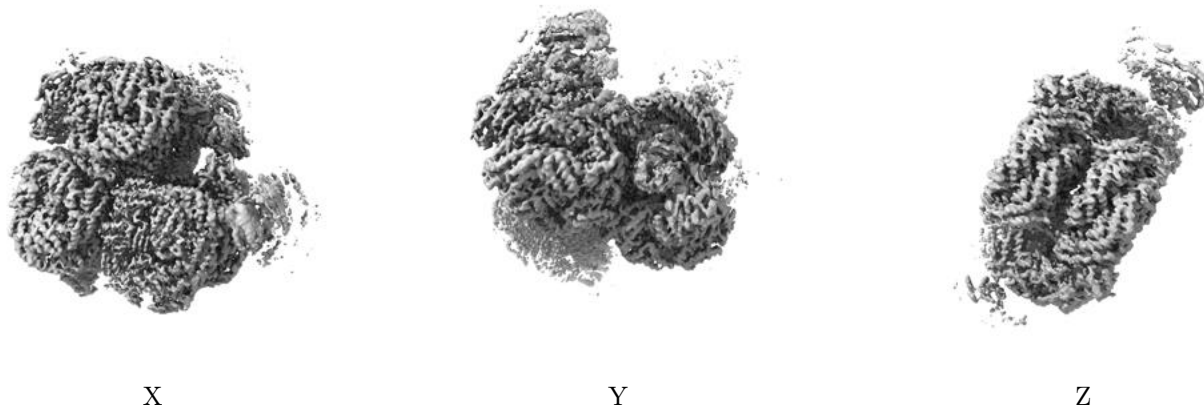


Z

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

## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.437. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

### 6.5.2 Raw map



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

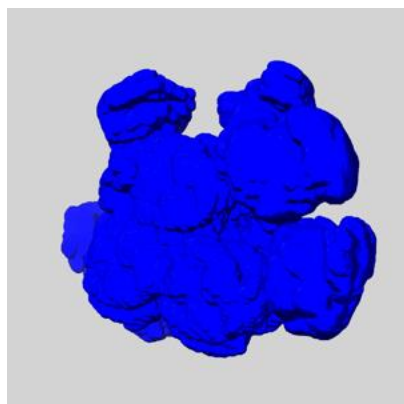
## 6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

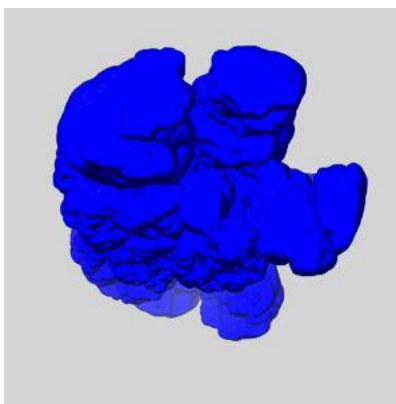
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

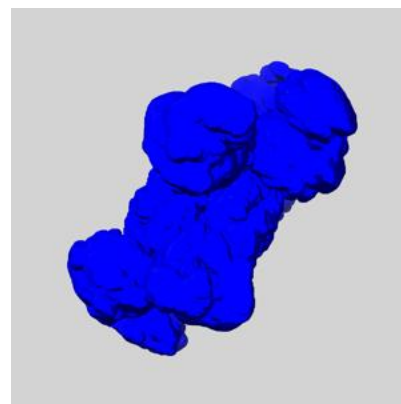
### 6.6.1 emd\_25030\_msk\_1.map [i](#)



X



Y

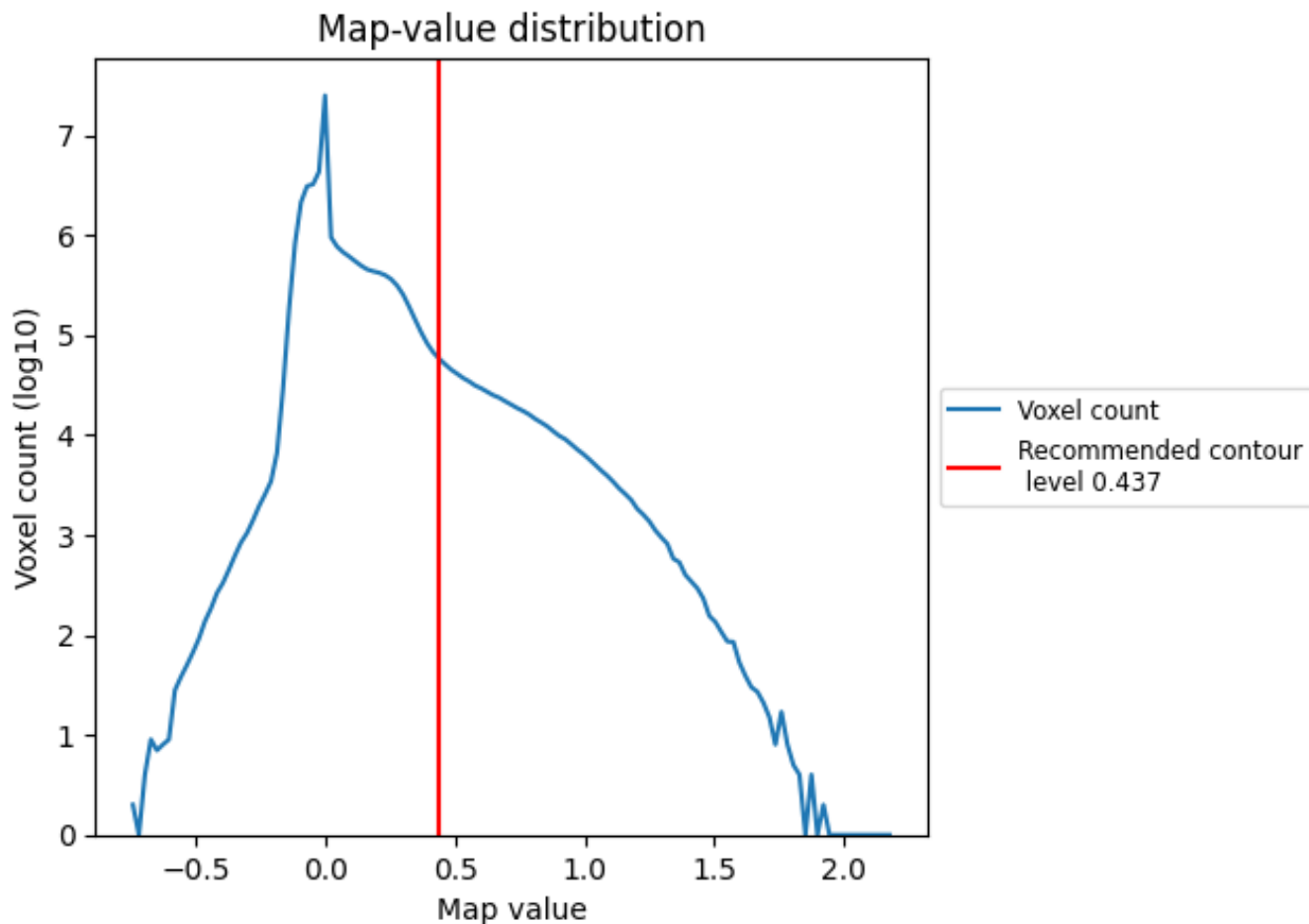


Z

## 7 Map analysis [i](#)

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

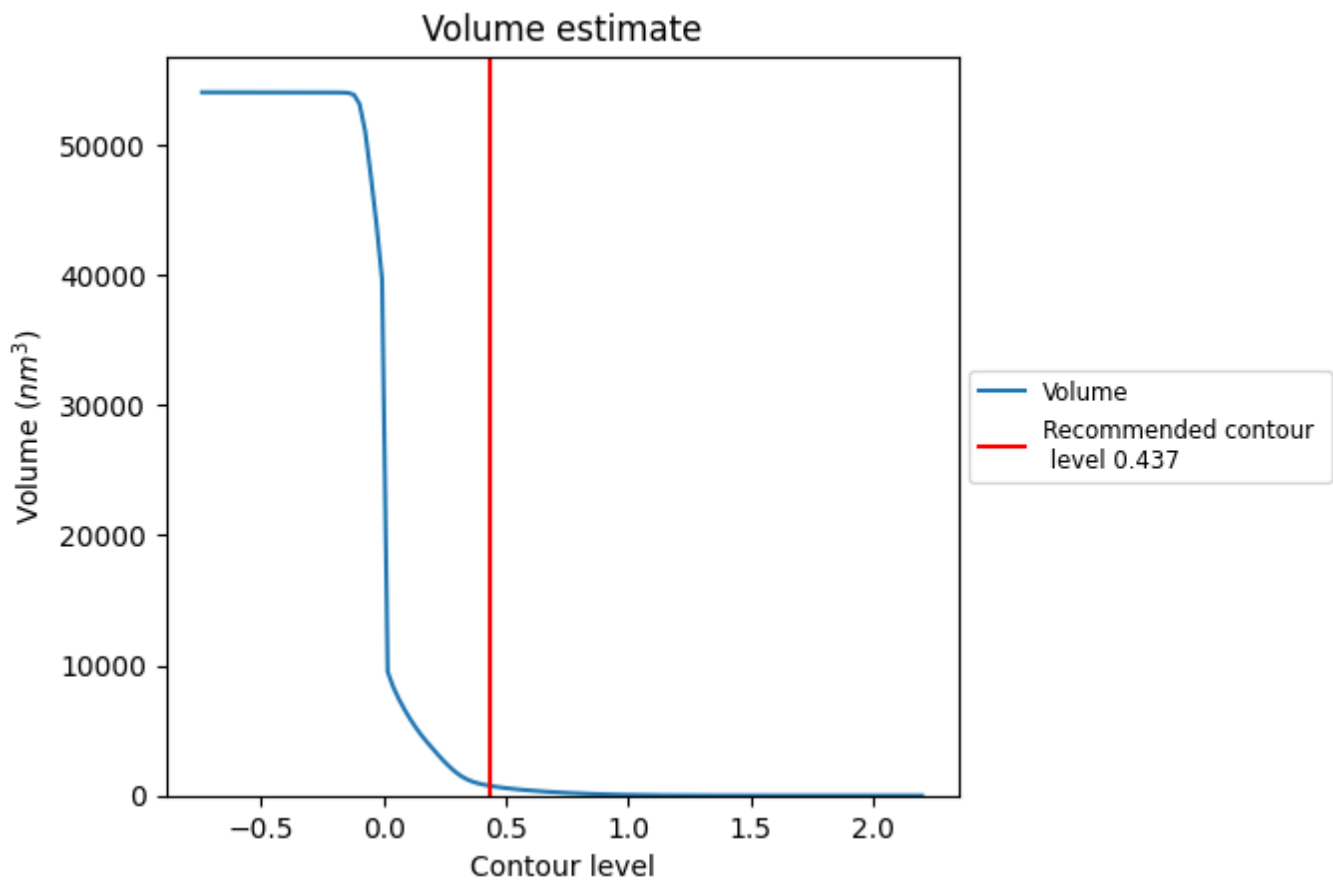
### 7.1 Map-value distribution [i](#)



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



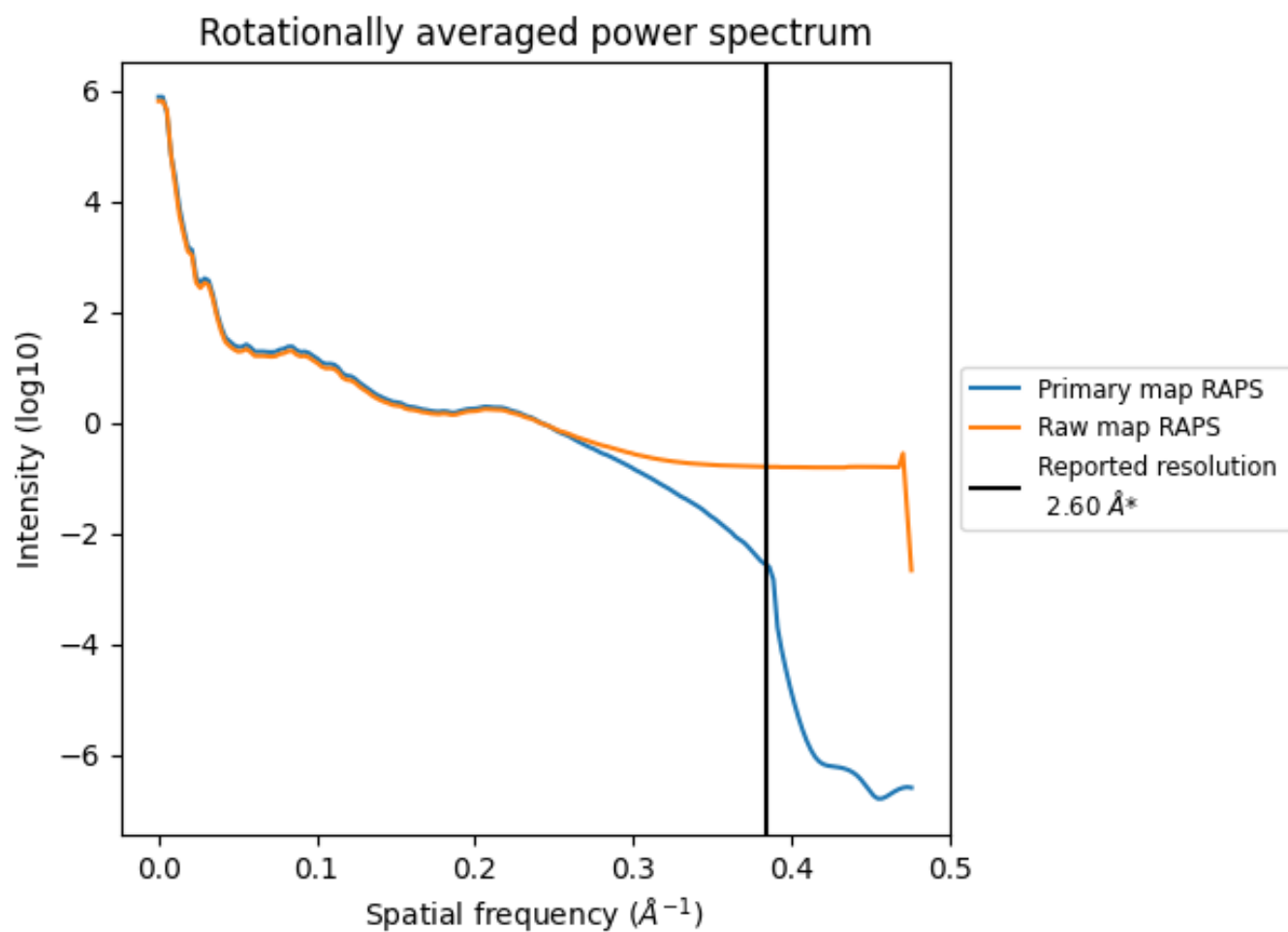
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 737  $\text{nm}^3$ ; this corresponds to an approximate mass of 666 kDa.

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

### 7.3 Rotationally averaged power spectrum i

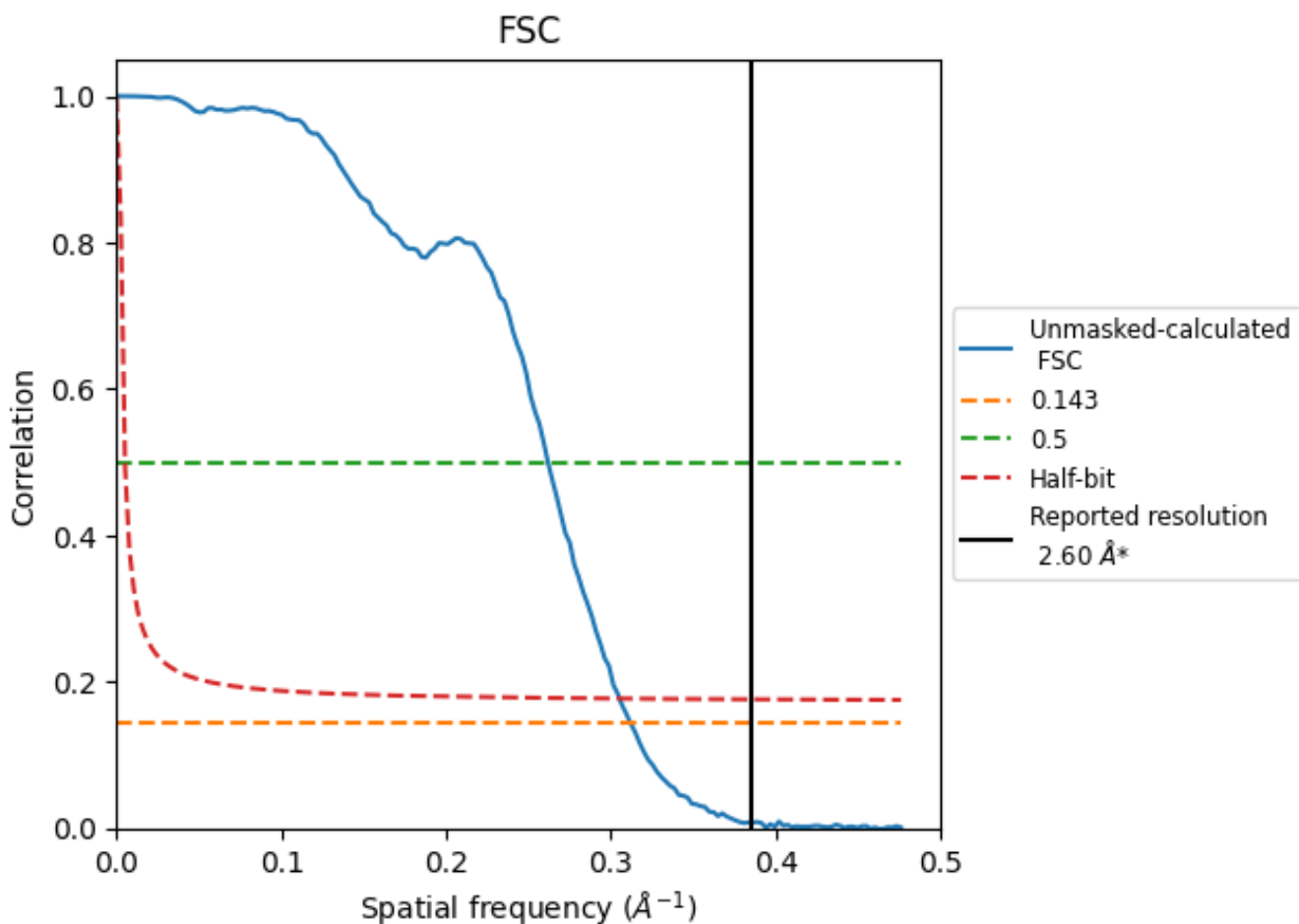


\*Reported resolution corresponds to spatial frequency of  $0.385 \text{ \AA}^{-1}$

## 8 Fourier-Shell correlation [i](#)

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

### 8.1 FSC [i](#)



\*Reported resolution corresponds to spatial frequency of 0.385 Å<sup>-1</sup>

## 8.2 Resolution estimates [i](#)

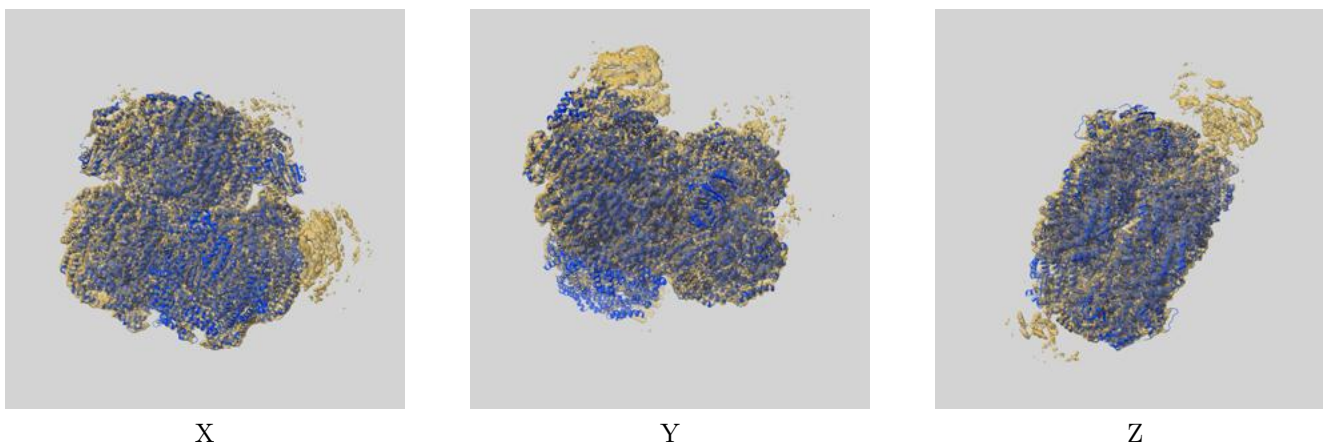
| Resolution estimate (Å)   | Estimation criterion (FSC cut-off) |      |          |
|---------------------------|------------------------------------|------|----------|
|                           | 0.143                              | 0.5  | Half-bit |
| Reported by author        | 2.60                               | -    | -        |
| Author-provided FSC curve | -                                  | -    | -        |
| Unmasked-calculated*      | 3.21                               | 3.82 | 3.28     |

\*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.21 differs from the reported value 2.6 by more than 10 %

## 9 Map-model fit [i](#)

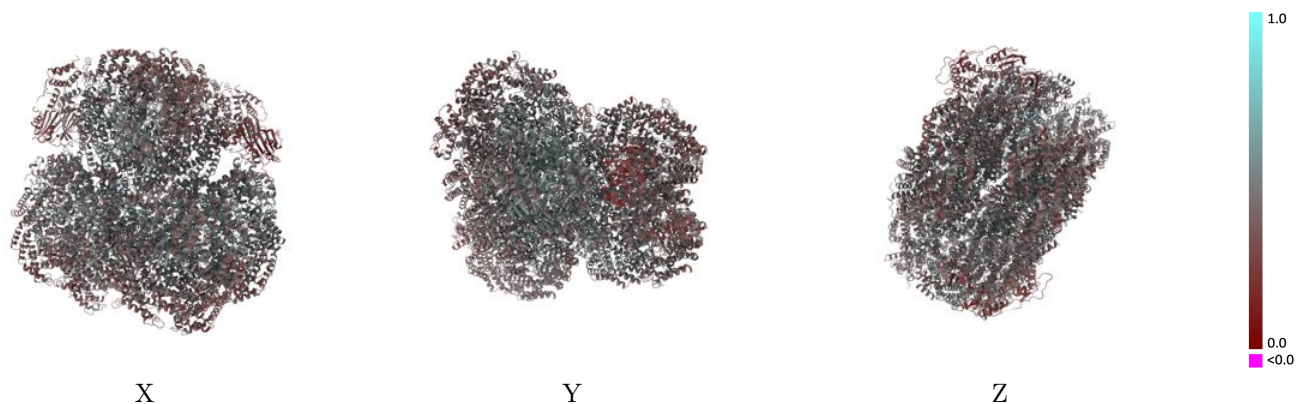
This section contains information regarding the fit between EMDB map EMD-25030 and PDB model 7SC9. Per-residue inclusion information can be found in section 3 on page 18.

### 9.1 Map-model overlay [i](#)



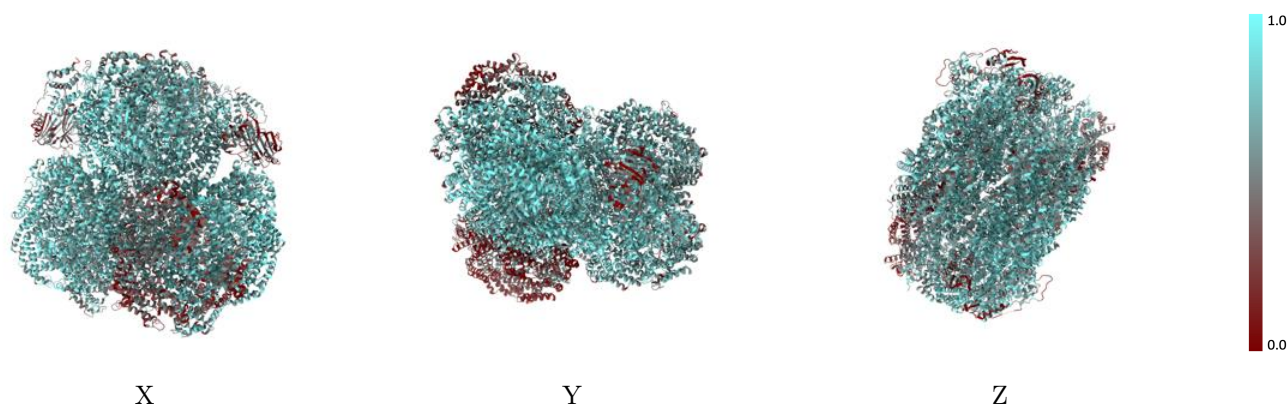
The images above show the 3D surface view of the map at the recommended contour level 0.437 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



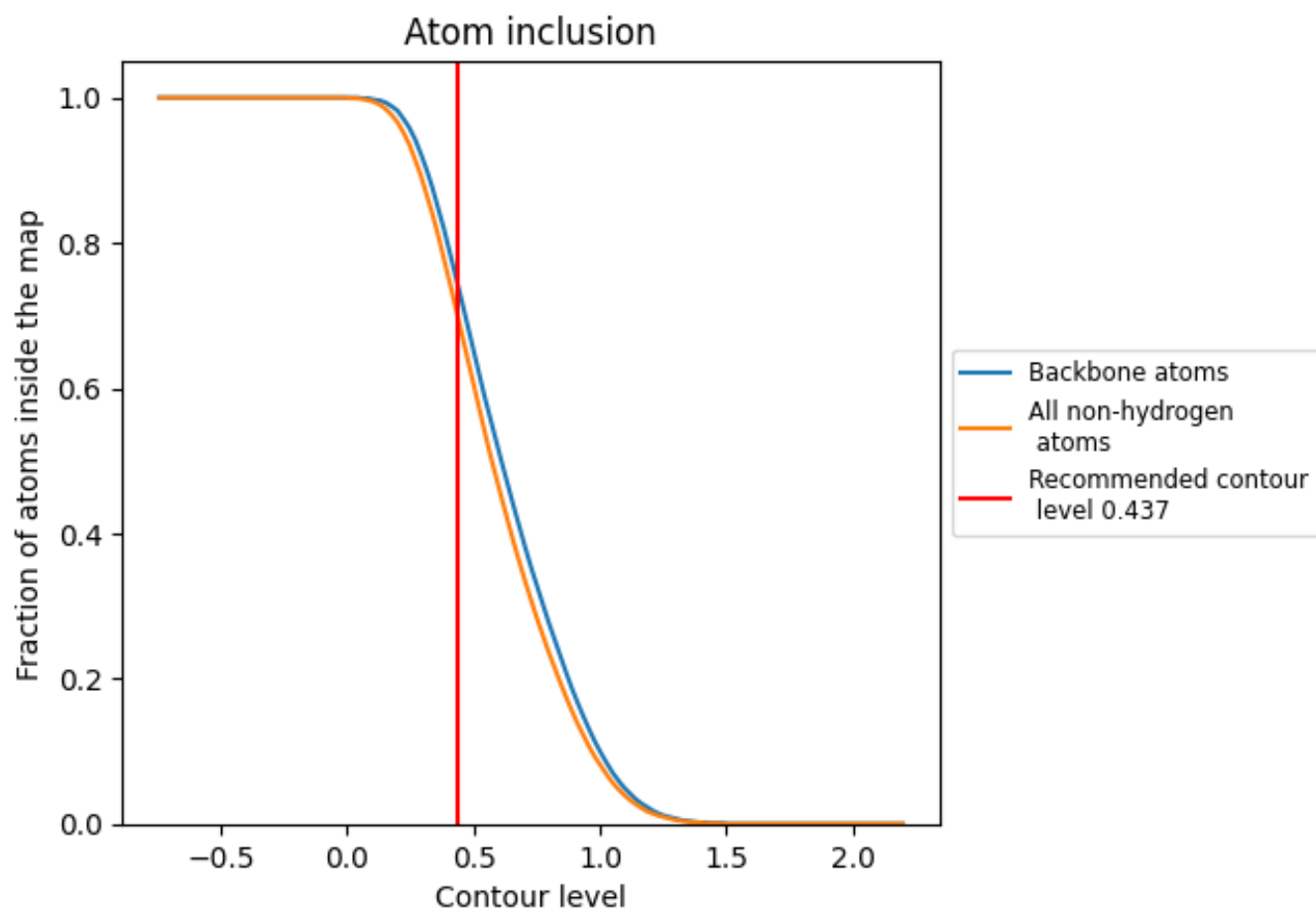
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.437).







































































## 9.4 Atom inclusion [i](#)



At the recommended contour level, 74% of all backbone atoms, 70% of all non-hydrogen atoms, are inside the map.

## 9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.437) and Q-score for the entire model and for each chain.





















































































| Chain | Atom inclusion   | Q-score  |
|-------|--|--|
| All   |  0.7000   |  0.4490   |
| AA    |  0.1520   |  0.4250   |
| AB    |  0.1360   |  0.4150   |
| AC    |  0.1510   |  0.3650   |
| AD    |  0.1330   |  0.3650   |
| AE    |  0.1950   |  0.3820   |
| AF    |  0.1110   |  0.4160   |
| AH    |  0.7940   |  0.4590   |
| AI    |  0.8780   |  0.5300   |
| AJ    |  0.8590   |  0.5140   |
| AK    |  0.8170   |  0.4500   |
| AL    |  0.8520   |  0.4480   |
| AN    |  0.8150   |  0.4280   |
| AO    |  0.8740   |  0.5150   |
| AP    |  0.8640  |  0.5240  |
| AQ    |  0.8760 |  0.5290 |
| AR    |  0.8240 |  0.4710 |
| AS    |  0.8470 |  0.4560 |
| AU    |  0.7730 |  0.4120 |
| AV    |  0.7770 |  0.3790 |
| AW    |  0.8360 |  0.4240 |
| AX    |  0.8320 |  0.4630 |
| AY    |  0.8430 |  0.4670 |
| AZ    |  0.7550 |  0.4430 |
| BA    |  0.2260 |  0.4480 |
| BB    |  0.6910 |  0.4870 |
| BD    |  0.8150 |  0.4770 |
| BF    |  0.7100 |  0.4110 |
| BG    |  0.7790 |  0.4650 |
| BH    |  0.4920 |  0.3840 |
| BI    |  0.3540 |  0.4400 |
| BJ    |  0.3880 |  0.4340 |
| BK    |  0.3630 |  0.3980 |
| BL    |  0.3660 |  0.3950 |
| BM    |  0.4280 |  0.4030 |



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



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| Chain | Atom inclusion   | Q-score  |
|-------|--|--|
| BN    |  0.3660   |  0.4290   |
| BP    |  0.8290   |  0.4820   |
| BQ    |  0.8910   |  0.5340   |
| BR    |  0.8610   |  0.5150   |
| BS    |  0.8450   |  0.4730   |
| BT    |  0.8600   |  0.4790   |
| BV    |  0.8430   |  0.4430   |
| BW    |  0.8770   |  0.5250   |
| BX    |  0.8760   |  0.5350   |
| BY    |  0.8810   |  0.5450   |
| BZ    |  0.8640   |  0.5050   |
| CA    |  0.8620   |  0.4900   |
| CC    |  0.7390   |  0.4680   |
| CD    |  0.7860   |  0.4440   |
| CE    |  0.8190   |  0.4310   |
| CF    |  0.8330   |  0.4530   |
| CG    |  0.8620   |  0.4790   |
| CH    |  0.8350  |  0.4820  |
| CJ    |  0.4930 |  0.4900 |
| CK    |  0.7020 |  0.5160 |
| CM    |  0.8370 |  0.4890 |
| CO    |  0.7360 |  0.4290 |
| CP    |  0.7950 |  0.4820 |
| CQ    |  0.5480 |  0.3920 |
| CR    |  0.7290 |  0.3970 |
| CS    |  0.7170 |  0.4240 |
| CT    |  0.6720 |  0.4280 |
| CU    |  0.7300 |  0.4660 |
| CV    |  0.8490 |  0.4910 |
| CW    |  0.8240 |  0.4460 |
| CY    |  0.6870 |  0.4010 |
| CZ    |  0.6930 |  0.4120 |
| DA    |  0.8000 |  0.4400 |
| DB    |  0.8350 |  0.4930 |
| DC    |  0.8360 |  0.5030 |
| DD    |  0.7940 |  0.4570 |
| DF    |  0.8370 |  0.5040 |
| DG    |  0.4650 |  0.3670 |
| DH    |  0.6460 |  0.4310 |
| DI    |  0.4850 |  0.3140 |
| DJ    |  0.7160 |  0.4080 |
| DK    |  0.6920 |  0.4030 |

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| Chain | Atom inclusion   | Q-score  |
|-------|--|--|
| DL    |  0.7080 |  0.3920 |
| DM    |  0.7990 |  0.4600 |
| DN    |  0.8510 |  0.4840 |
| DO    |  0.8420 |  0.4730 |
| DQ    |  0.6830 |  0.3800 |
| DR    |  0.7130 |  0.4220 |
| DS    |  0.8300 |  0.4720 |
| DT    |  0.8240 |  0.4920 |
| DU    |  0.8310 |  0.4930 |
| DV    |  0.7550 |  0.4100 |
| DX    |  0.8290 |  0.5090 |
| DY    |  0.4460 |  0.4080 |
| DZ    |  0.6390 |  0.4060 |
| EA    |  0.5100 |  0.3400 |