



## Full wwPDB EM Validation Report ⓘ

Apr 22, 2026 – 12:36 am BST

PDB ID : 9QW9 / pdb\_00009qw9  
EMDB ID : EMD-53415  
Title : Human vault protein - primed conformation  
Authors : Lapenta, F.; Marechal, N.; Durand, A.; Aupic, J.; Cassetta, A.  
Deposited on : 2025-04-14  
Resolution : 3.09 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:

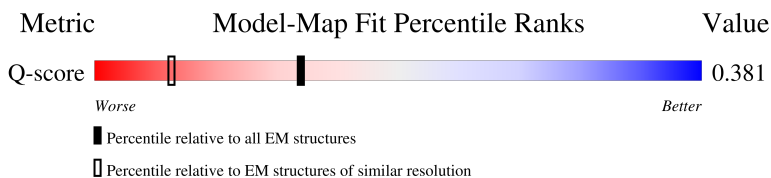
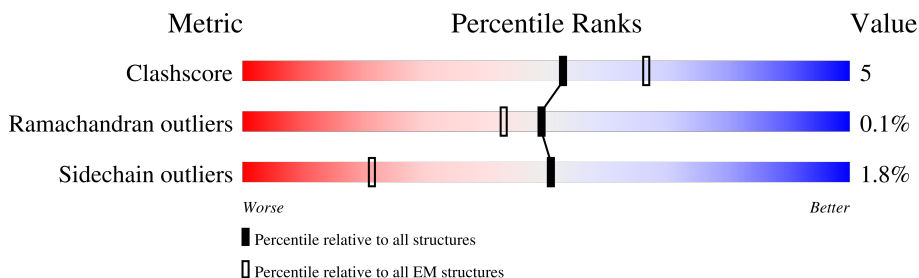
EMDB validation analysis : 0.0.1.dev132  
MolProbity : 4-5-2 with Phenix2.0  
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)  
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)  
MapQ : 1.9.13  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.49

# 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 3.09 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.









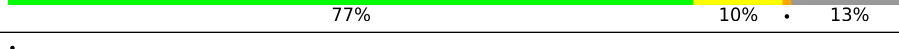
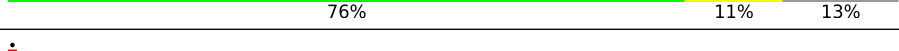
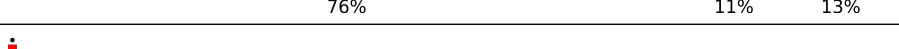
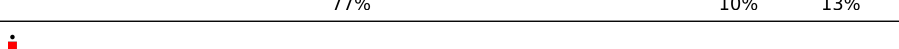
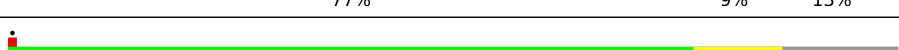

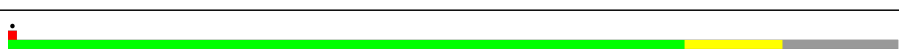

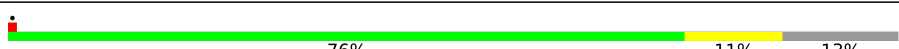





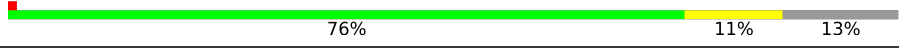
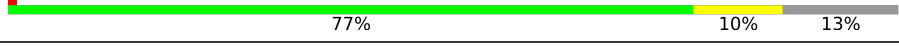



| Metric                | Whole archive<br>(#Entries) | EM structures<br>(#Entries) | Similar EM resolution<br>(#Entries, resolution range(Å)) |
|-----------------------|-----------------------------|-----------------------------|--|
| Clashscore            | 229148                      | 23984                       | -  |
| Ramachandran outliers | 224038                      | 23583                       | -  |
| Sidechain outliers    | 223484                      | 23102                       | -  |
| Q-score               | -                           | 25397                       | 14003 ( 2.59 - 3.59 )                                    |

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   | A     | 893    |                  |
| 1   | AA    | 893    |                  |
| 1   | AB    | 893    |                  |
| 1   | AC    | 893    |                  |




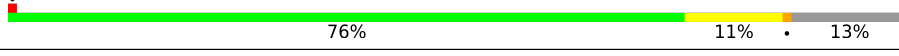
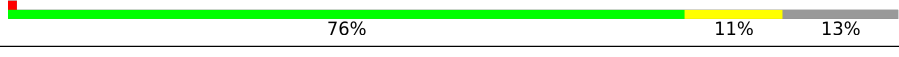



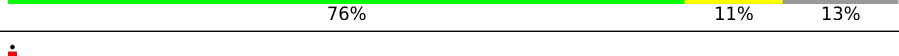
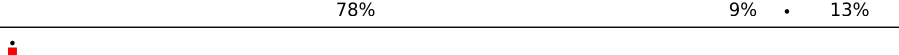
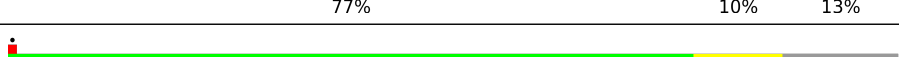
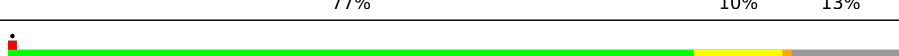

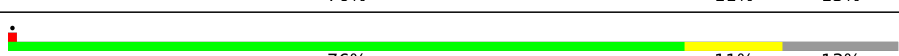
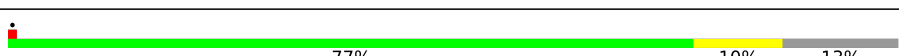
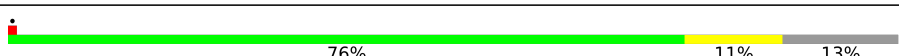





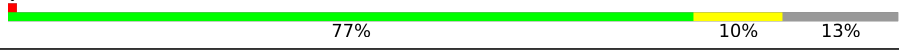



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| Mol | Chain | Length | Quality of chain   |
|-----|-------|--------|--|
| 1   | B     | 893    |  76% 11% 13%   |
| 1   | BA    | 893    |  76% 11% 13%   |
| 1   | BB    | 893    |  76% 11% 13%   |
| 1   | C     | 893    |  77% 10% 13%   |
| 1   | CA    | 893    |  77% 10% 13%   |
| 1   | CB    | 893    |  76% 11% 13%   |
| 1   | D     | 893    |  77% 10% 13%   |
| 1   | DA    | 893    |  76% 11% 13%   |
| 1   | DB    | 893    |  76% 11% 13%   |
| 1   | E     | 893    |  77% 10% 13%   |
| 1   | EA    | 893    |  77% 9% 13%    |
| 1   | EB    | 893    |  77% 10% 13% |
| 1   | F     | 893    |  76% 11% 13% |
| 1   | FA    | 893    |  76% 11% 13% |
| 1   | FB    | 893    |  77% 10% 13% |
| 1   | G     | 893    |  76% 11% 13% |
| 1   | GA    | 893    |  77% 10% 13% |
| 1   | GB    | 893    |  77% 10% 13% |
| 1   | H     | 893    |  77% 10% 13% |
| 1   | HA    | 893    |  76% 11% 13% |
| 1   | HB    | 893    |  76% 11% 13% |
| 1   | I     | 893    |  76% 11% 13% |
| 1   | IA    | 893    |  77% 10% 13% |
| 1   | IB    | 893    |  76% 11% 13% |
| 1   | J     | 893    |  76% 11% 13% |



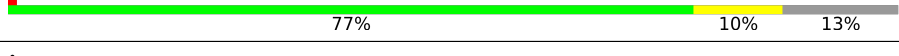
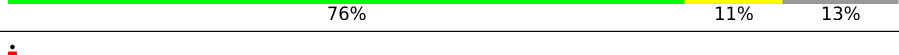
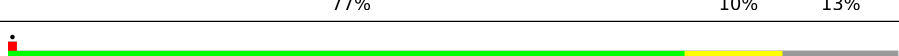
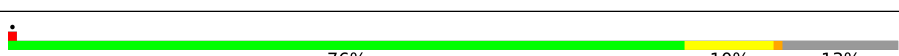
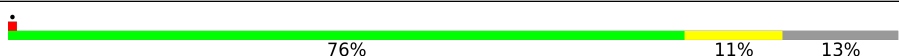



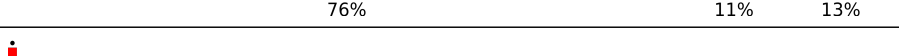

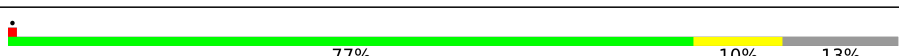





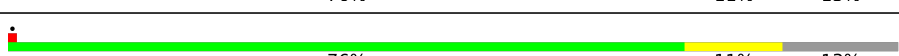





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| Mol | Chain | Length | Quality of chain   |
|-----|-------|--------|--|
| 1   | JA    | 893    |  77% 10% 13%   |
| 1   | JB    | 893    |  76% 11% 13%   |
| 1   | K     | 893    |  77% 9% 13%    |
| 1   | KA    | 893    |  76% 11% 13%   |
| 1   | KB    | 893    |  76% 11% 13%   |
| 1   | L     | 893    |  76% 10% 13%   |
| 1   | LA    | 893    |  77% 10% 13%   |
| 1   | LB    | 893    |  77% 10% 13%   |
| 1   | M     | 893    |  76% 11% 13%   |
| 1   | MA    | 893    |  78% 9% 13%    |
| 1   | MB    | 893    |  77% 10% 13%   |
| 1   | N     | 893    |  77% 10% 13% |
| 1   | NA    | 893    |  77% 10% 13% |
| 1   | NB    | 893    |  76% 11% 13% |
| 1   | O     | 893    |  76% 11% 13% |
| 1   | OA    | 893    |  77% 10% 13% |
| 1   | OB    | 893    |  76% 11% 13% |
| 1   | P     | 893    |  76% 11% 13% |
| 1   | PA    | 893    |  75% 12% 13% |
| 1   | PB    | 893    |  77% 10% 13% |
| 1   | Q     | 893    |  77% 10% 13% |
| 1   | QA    | 893    |  77% 9% 13%  |
| 1   | QB    | 893    |  77% 10% 13% |
| 1   | R     | 893    |  77% 10% 13% |
| 1   | RA    | 893    |  76% 10% 13% |

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| Mol | Chain | Length | Quality of chain   |
|-----|-------|--------|--|
| 1   | RB    | 893    |  77% 10% 13%   |
| 1   | S     | 893    |  77% 10% 13%   |
| 1   | SA    | 893    |  77% 10% 13%   |
| 1   | SB    | 893    |  76% 11% 13%   |
| 1   | T     | 893    |  77% 10% 13%   |
| 1   | TA    | 893    |  76% 11% 13%   |
| 1   | TB    | 893    |  76% 10% 13%   |
| 1   | UA    | 893    |  76% 11% 13%   |
| 1   | UB    | 893    |  76% 10% 13%   |
| 1   | V     | 893    |  76% 11% 13%   |
| 1   | VA    | 893    |  77% 10% 13%  |
| 1   | VB    | 893    |  76% 11% 13% |
| 1   | W     | 893    |  76% 11% 13% |
| 1   | WA    | 893    |  76% 11% 13% |
| 1   | WB    | 893    |  77% 10% 13% |
| 1   | X     | 893    |  76% 11% 13% |
| 1   | XA    | 893    |  76% 11% 13% |
| 1   | XB    | 893    |  76% 11% 13% |
| 1   | Y     | 893    |  76% 10% 13% |
| 1   | YA    | 893    |  77% 10% 13% |
| 1   | YB    | 893    |  76% 11% 13% |
| 1   | Z     | 893    |  76% 11% 13% |
| 1   | ZA    | 893    |  76% 11% 13% |
| 1   | ZB    | 893    |  77% 10% 13% |

## 2 Entry composition [i](#)

There is only 1 type of molecule in this entry. The entry contains 966108 atoms, of which 483990 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 Major vault protein.

| Mol | Chain | Residues | Atoms |      |      |      |      |    | AltConf | Trace |
|-----|-------|----------|-------|------|------|------|------|----|---------|-------|
|     |       |          | Total | C    | H    | N    | O    | S  |         |       |
| 1   | A     | 779      | 12386 | 3890 | 6205 | 1105 | 1176 | 10 | 0       | 0     |
| 1   | AA    | 779      | 12386 | 3890 | 6205 | 1105 | 1176 | 10 | 0       | 0     |
| 1   | AB    | 779      | 12386 | 3890 | 6205 | 1105 | 1176 | 10 | 0       | 0     |
| 1   | AC    | 779      | 12386 | 3890 | 6205 | 1105 | 1176 | 10 | 0       | 0     |
| 1   | B     | 779      | 12386 | 3890 | 6205 | 1105 | 1176 | 10 | 0       | 0     |
| 1   | BA    | 779      | 12386 | 3890 | 6205 | 1105 | 1176 | 10 | 0       | 0     |
| 1   | BB    | 779      | 12386 | 3890 | 6205 | 1105 | 1176 | 10 | 0       | 0     |
| 1   | C     | 779      | 12386 | 3890 | 6205 | 1105 | 1176 | 10 | 0       | 0     |
| 1   | CA    | 779      | 12386 | 3890 | 6205 | 1105 | 1176 | 10 | 0       | 0     |
| 1   | CB    | 779      | 12386 | 3890 | 6205 | 1105 | 1176 | 10 | 0       | 0     |
| 1   | D     | 779      | 12386 | 3890 | 6205 | 1105 | 1176 | 10 | 0       | 0     |
| 1   | DA    | 779      | 12386 | 3890 | 6205 | 1105 | 1176 | 10 | 0       | 0     |
| 1   | DB    | 779      | 12386 | 3890 | 6205 | 1105 | 1176 | 10 | 0       | 0     |
| 1   | E     | 779      | 12386 | 3890 | 6205 | 1105 | 1176 | 10 | 0       | 0     |
| 1   | EA    | 779      | 12386 | 3890 | 6205 | 1105 | 1176 | 10 | 0       | 0     |
| 1   | EB    | 779      | 12386 | 3890 | 6205 | 1105 | 1176 | 10 | 0       | 0     |
| 1   | F     | 779      | 12386 | 3890 | 6205 | 1105 | 1176 | 10 | 0       | 0     |

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| Mol | Chain | Residues | Atoms |      |      |      |      | AltConf | Trace |   |
|-----|-------|----------|-------|------|------|------|------|---------|-------|---|
| 1   | FA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | FB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | G     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | GA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | GB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | H     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | HA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | HB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | I     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | IA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | IB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | J     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | JA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | JB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | K     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | KA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | KB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | L     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | LA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | LB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | M     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |

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| Mol | Chain | Residues | Atoms |      |      |      |      | AltConf | Trace |   |
|-----|-------|----------|-------|------|------|------|------|---------|-------|---|
| 1   | MA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | MB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | N     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | NA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | NB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | O     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | OA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | OB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | P     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | PA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | PB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | Q     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | QA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | QB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | R     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | RA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
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| 1   | RB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | S     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | SA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | SB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | T     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |

*Continued on next page...*

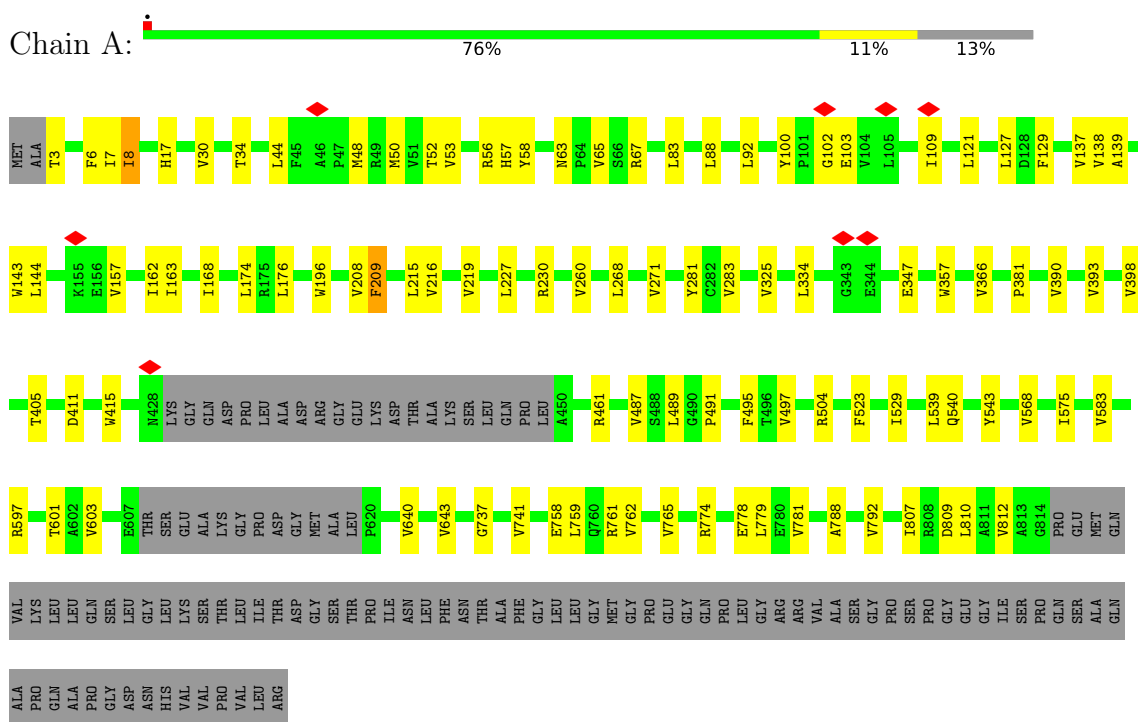
*Continued from previous page...*

| Mol | Chain | Residues | Atoms |      |      |      |      | AltConf | Trace |   |
|-----|-------|----------|-------|------|------|------|------|---------|-------|---|
| 1   | TA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
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| 1   | TB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | UA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | UB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | V     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | VA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | VB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | W     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | WA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | WB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | X     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | XA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | XB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | Y     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | YA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | YB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | Z     | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | ZA    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |
| 1   | ZB    | 779      | Total | C    | H    | N    | O    | S       | 0     | 0 |
|     |       |          | 12386 | 3890 | 6205 | 1105 | 1176 | 10      |       |   |

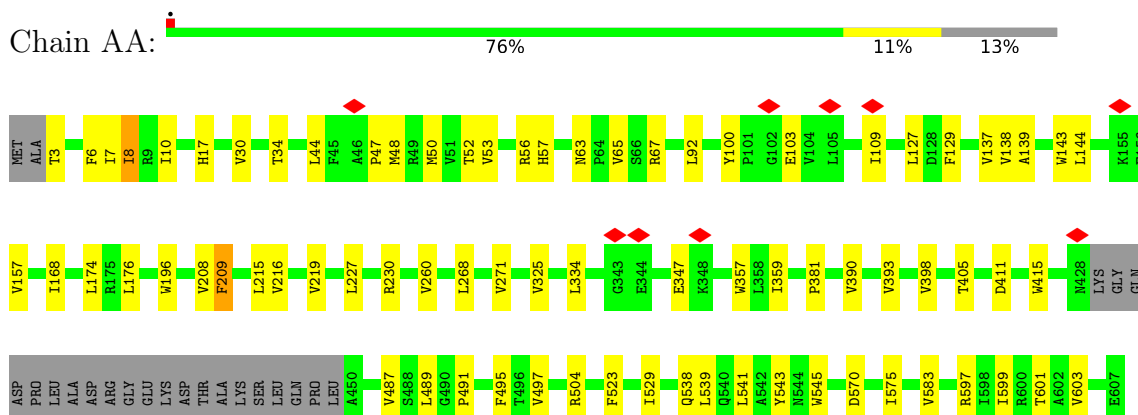
### 3 Residue-property plots [i](#)

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

- Molecule 1: Major vault protein



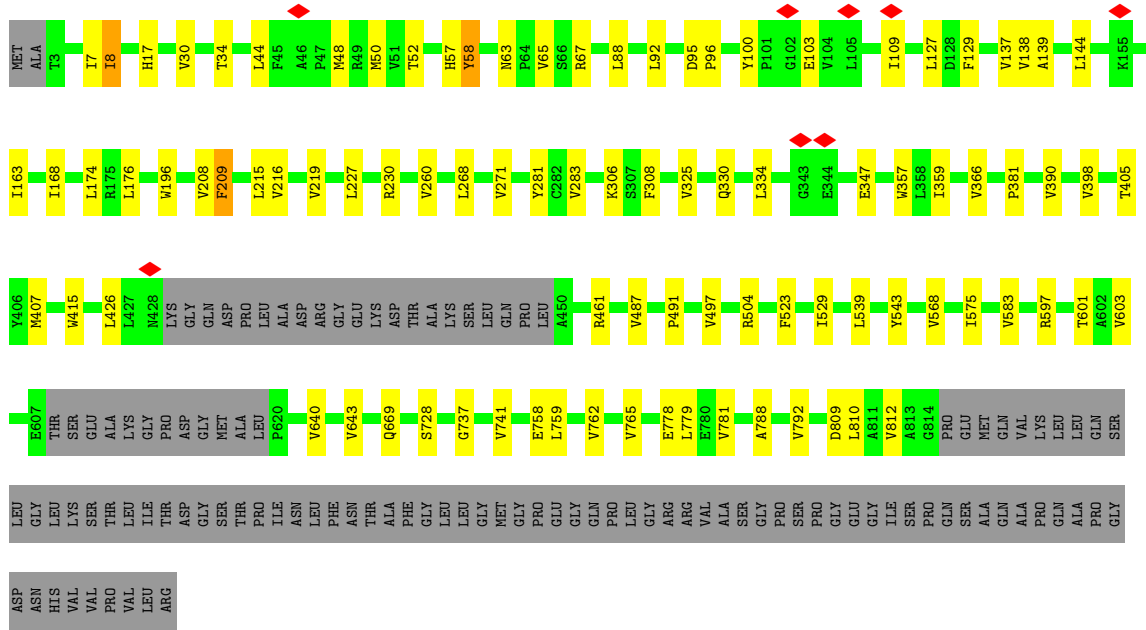
- Molecule 1: Major vault protein



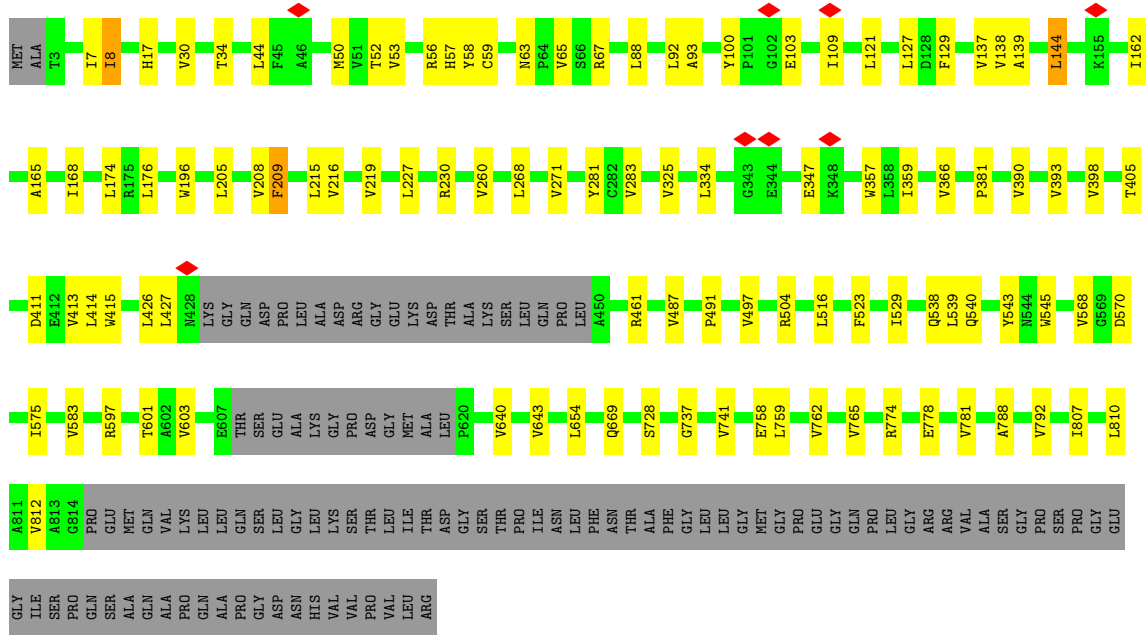
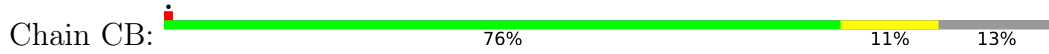




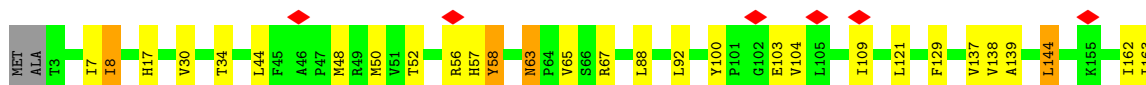
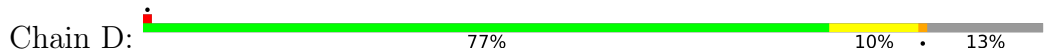




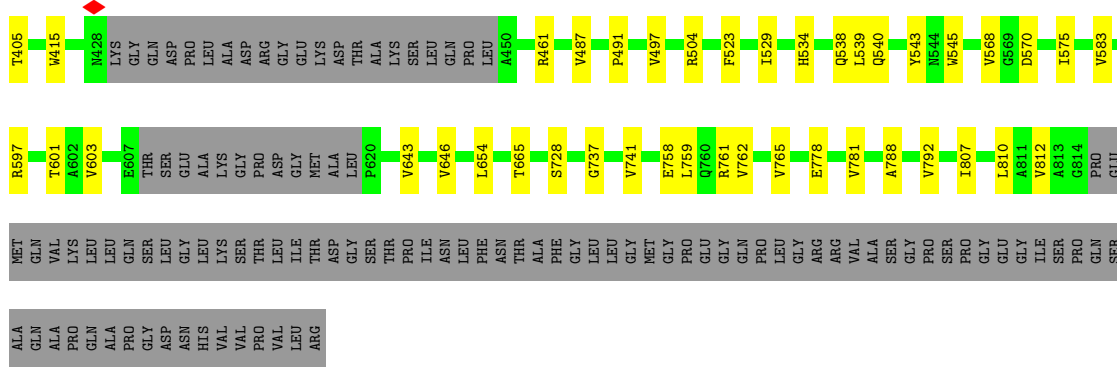
• Molecule 1: Major vault protein



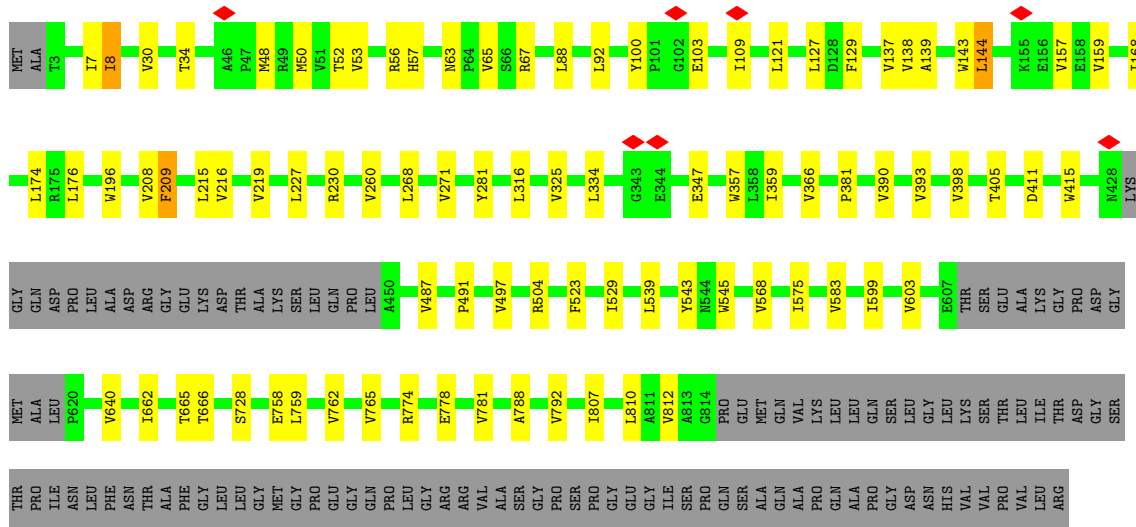
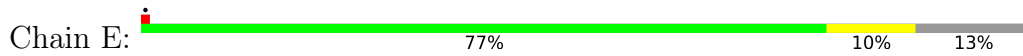
• Molecule 1: Major vault protein



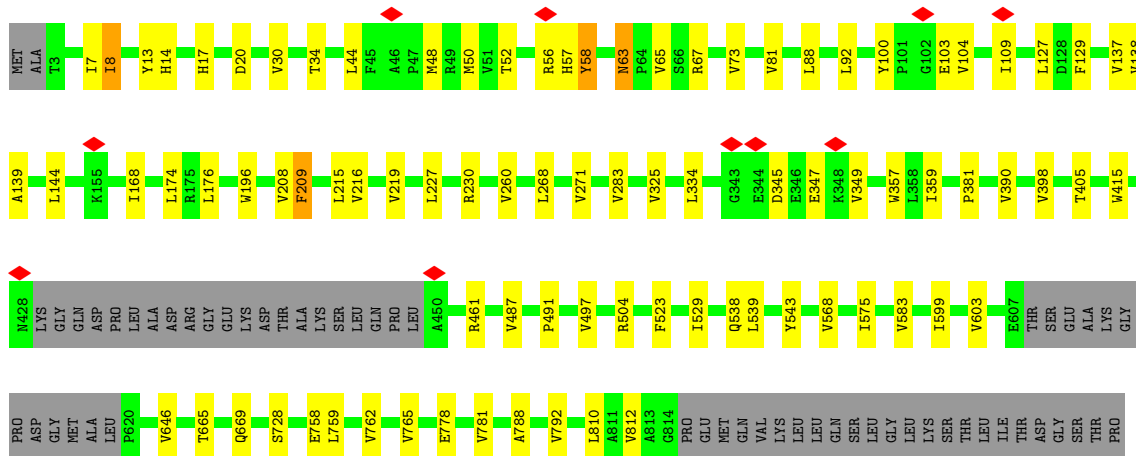
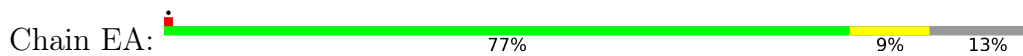




● Molecule 1: Major vault protein

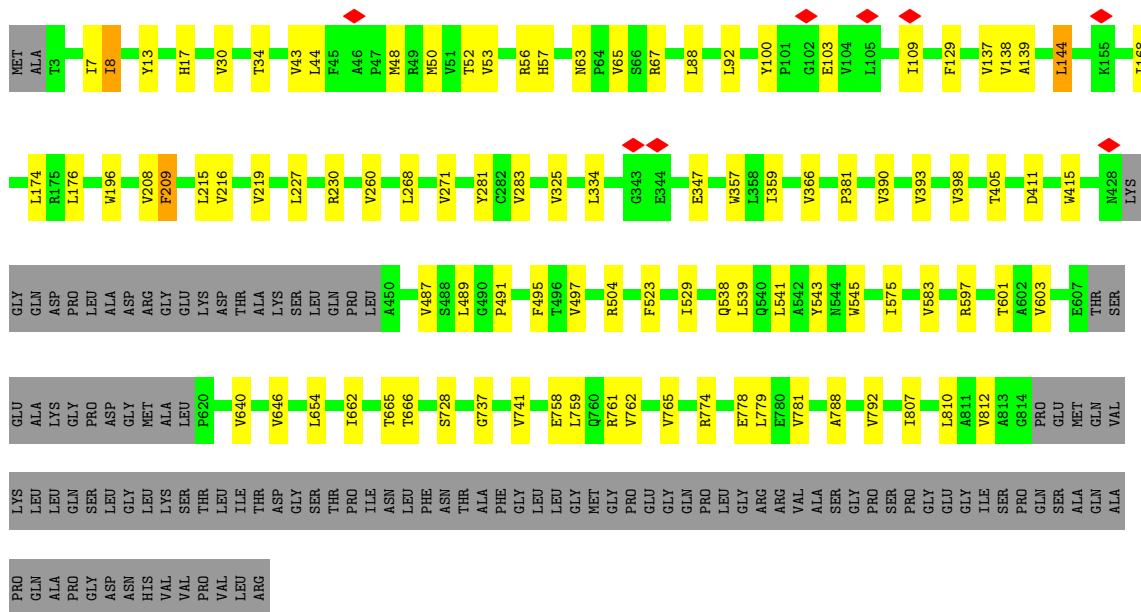


● Molecule 1: Major vault protein

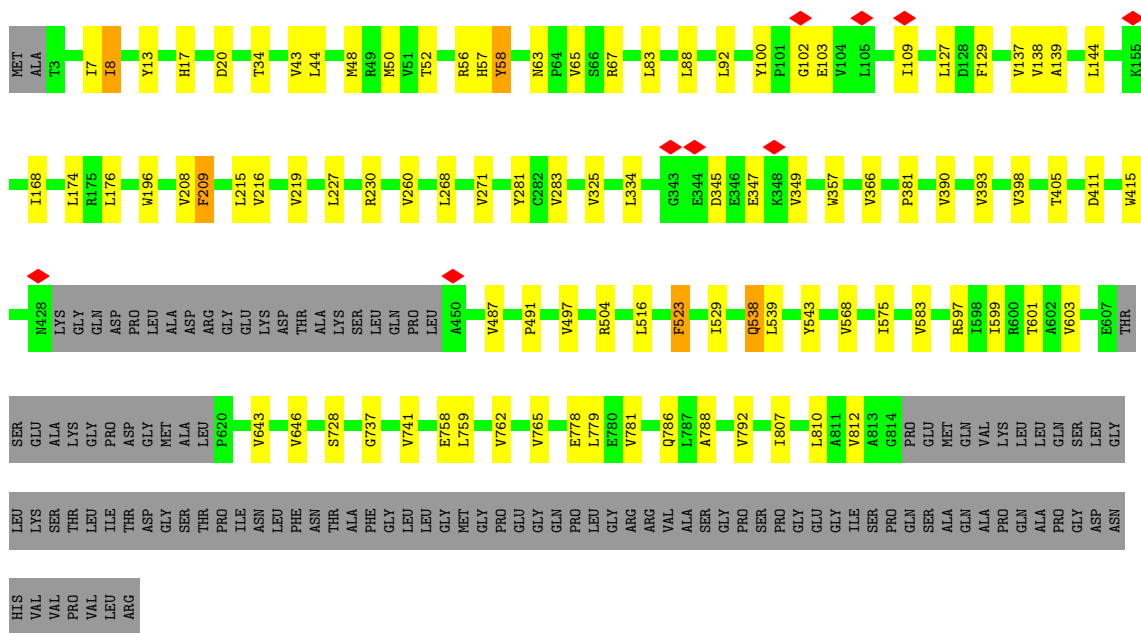
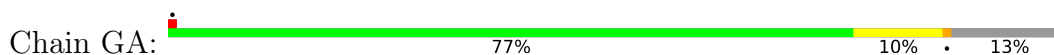




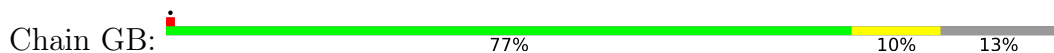


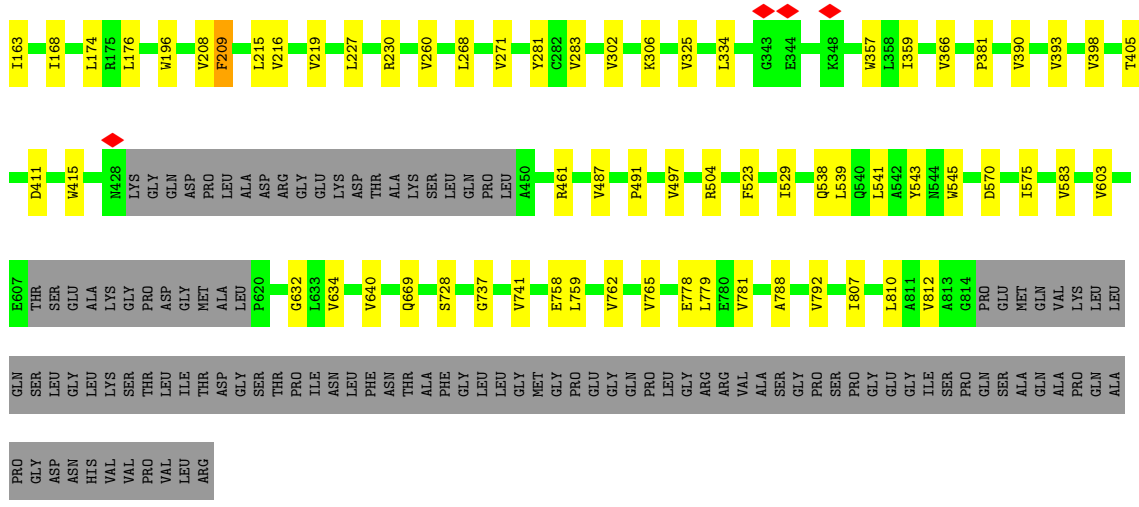


• Molecule 1: Major vault protein

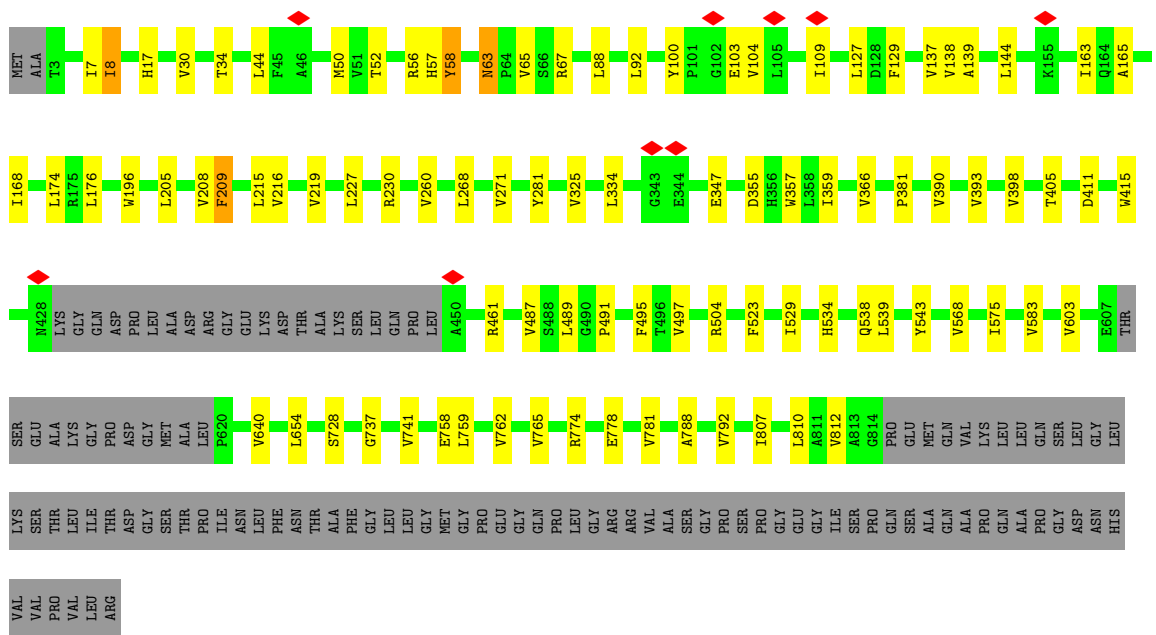
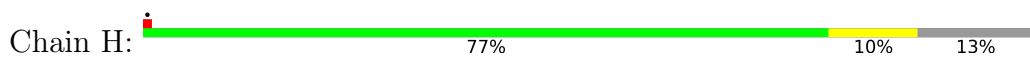


• Molecule 1: Major vault protein

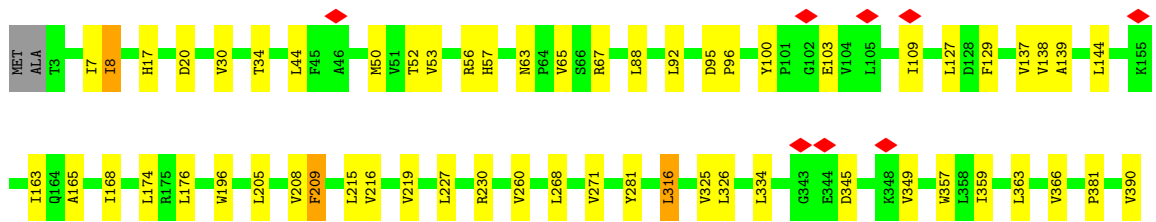
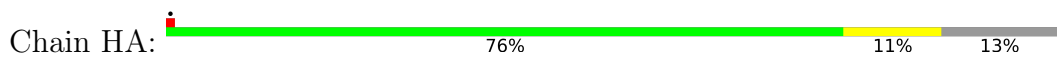


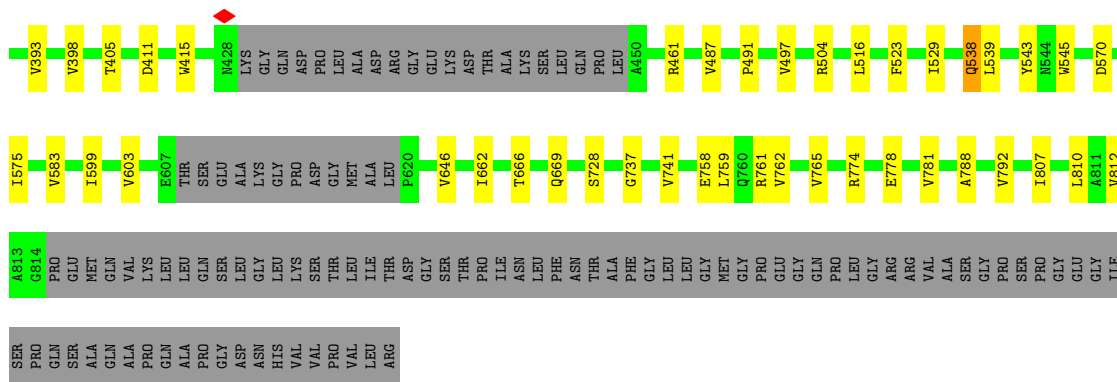


• Molecule 1: Major vault protein

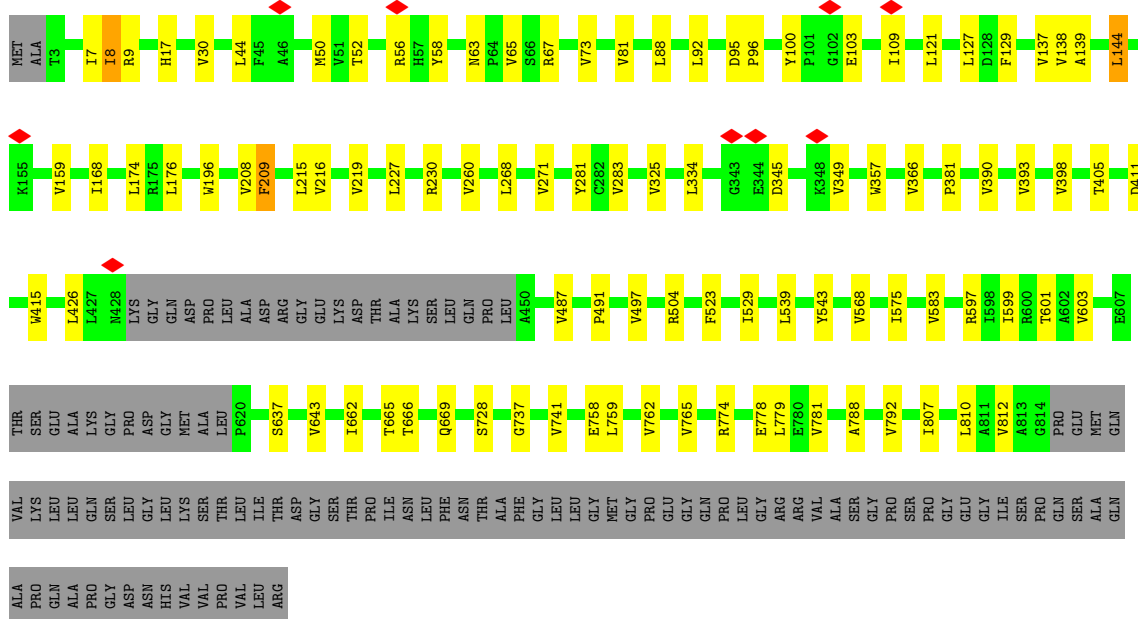
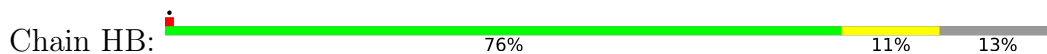


• Molecule 1: Major vault protein

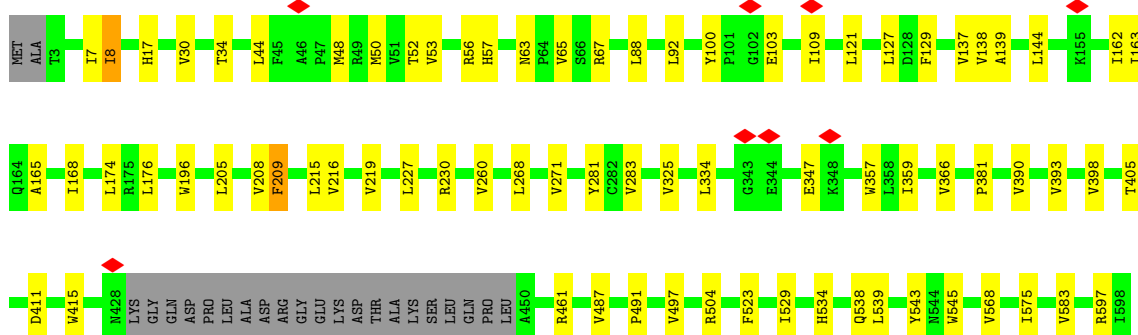
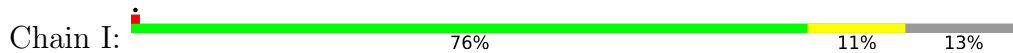


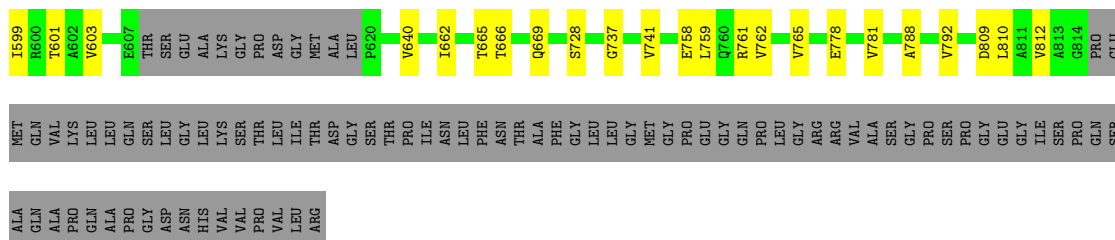


• Molecule 1: Major vault protein

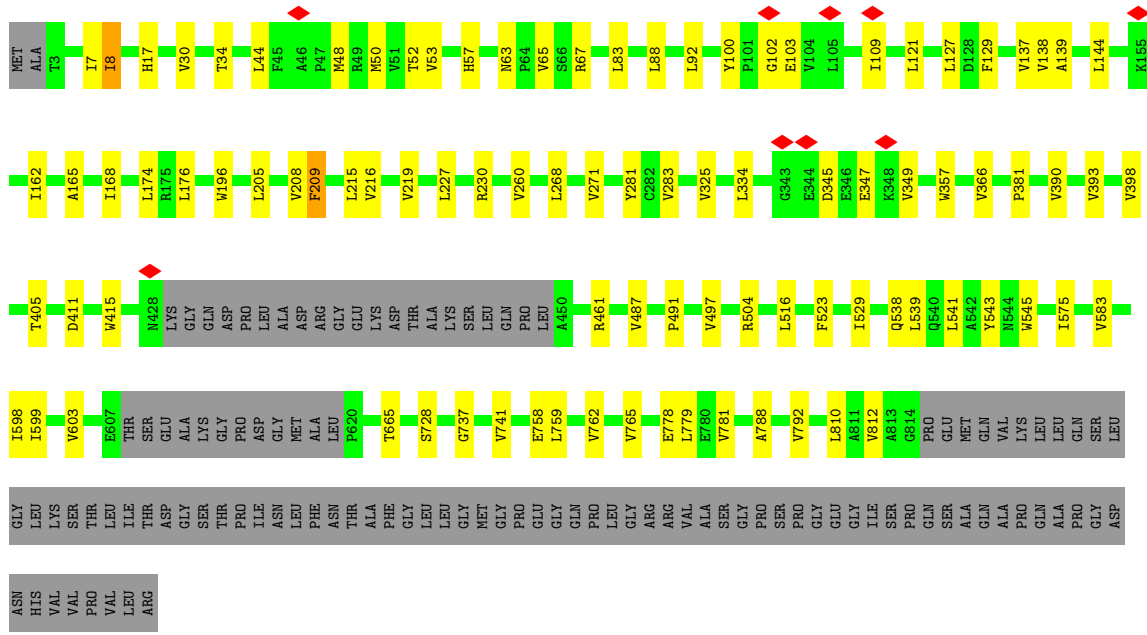
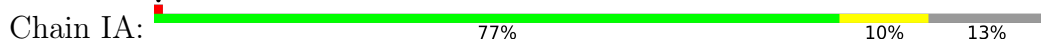


• Molecule 1: Major vault protein

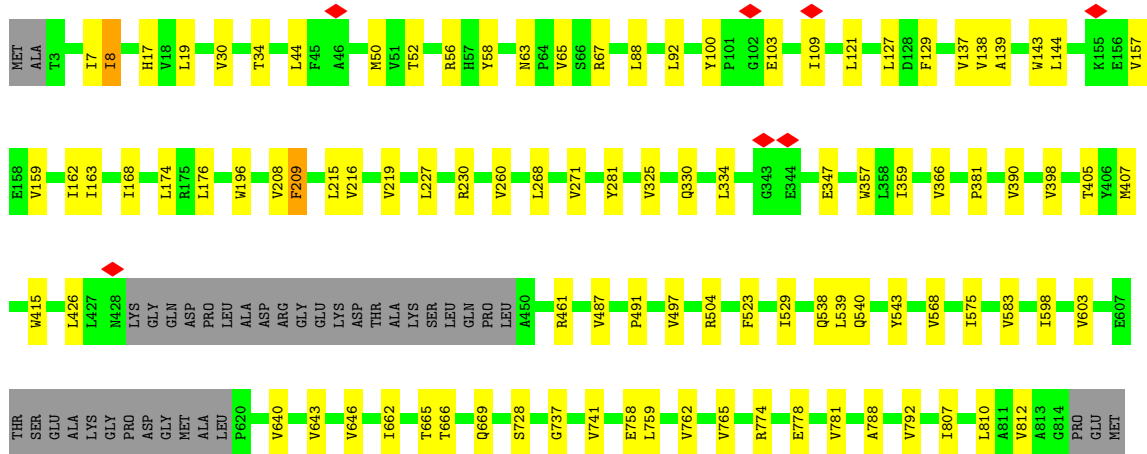
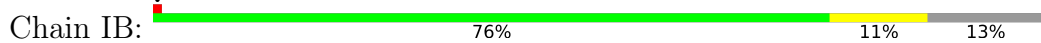




• Molecule 1: Major vault protein



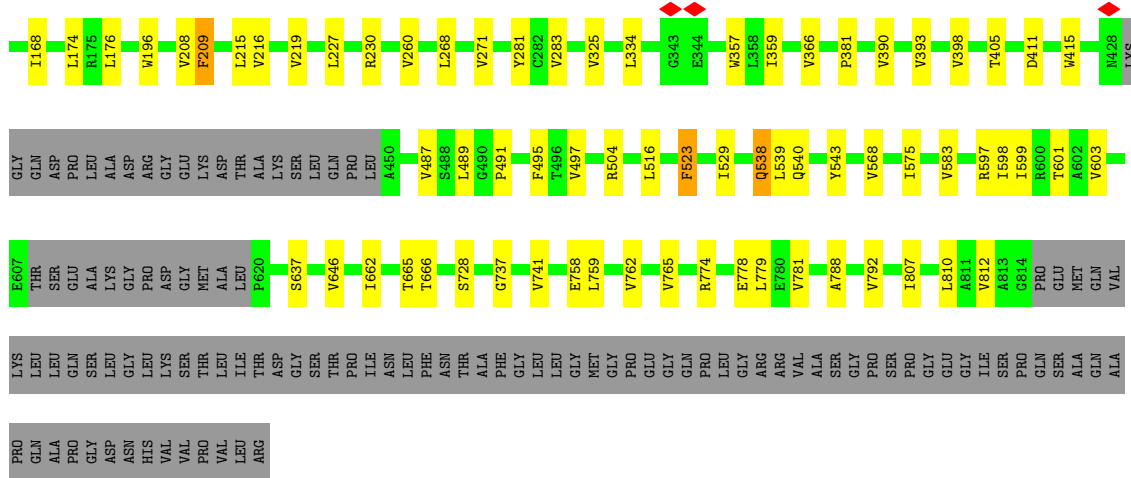
• Molecule 1: Major vault protein



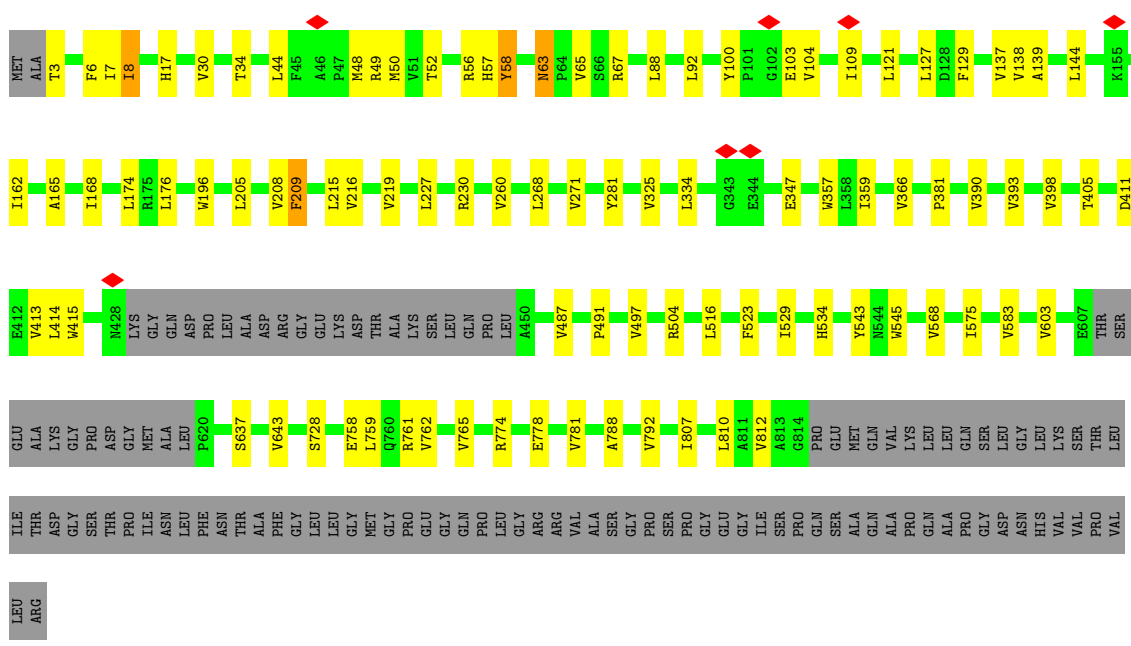
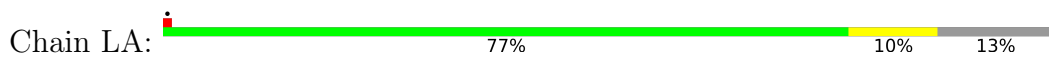




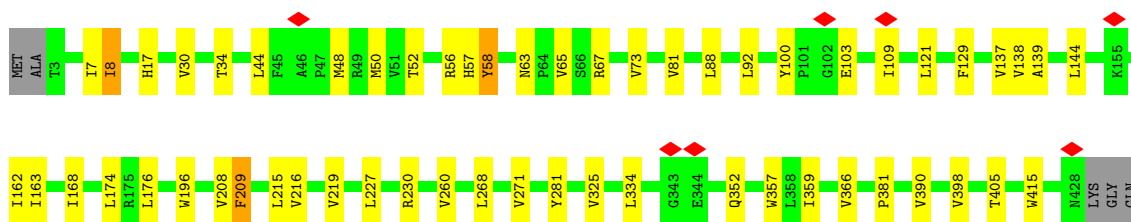
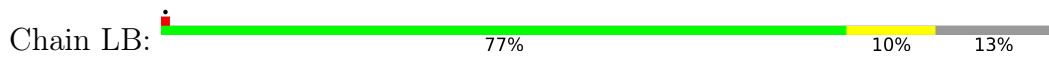


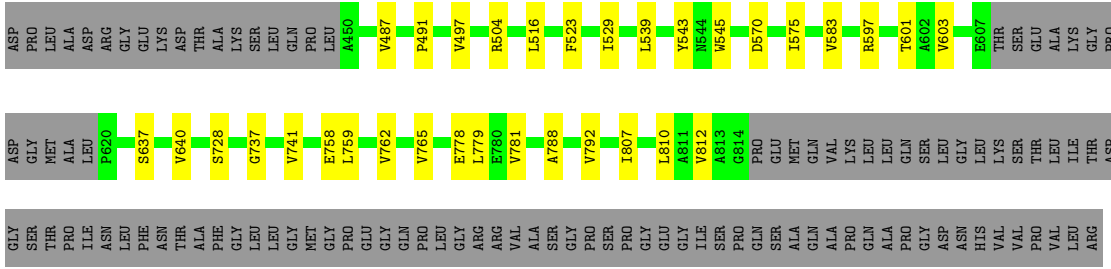


• Molecule 1: Major vault protein

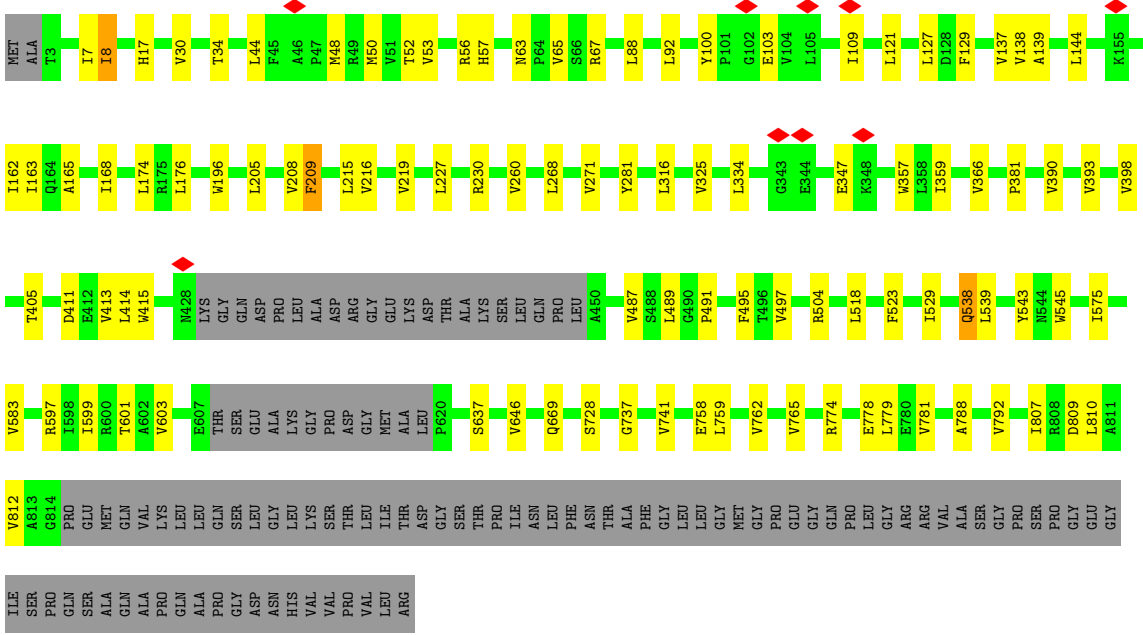
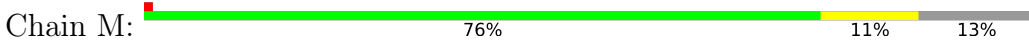


• Molecule 1: Major vault protein

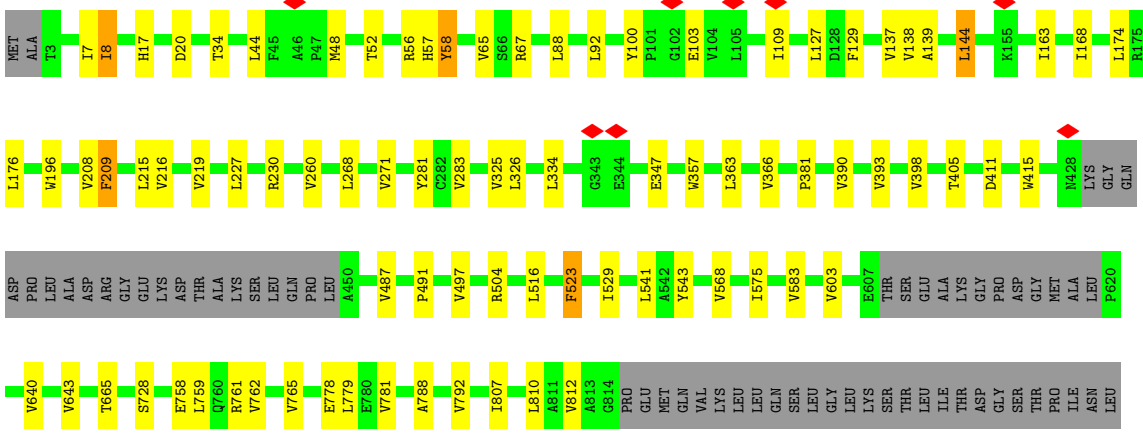
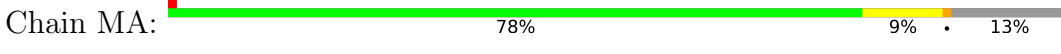




• Molecule 1: Major vault protein

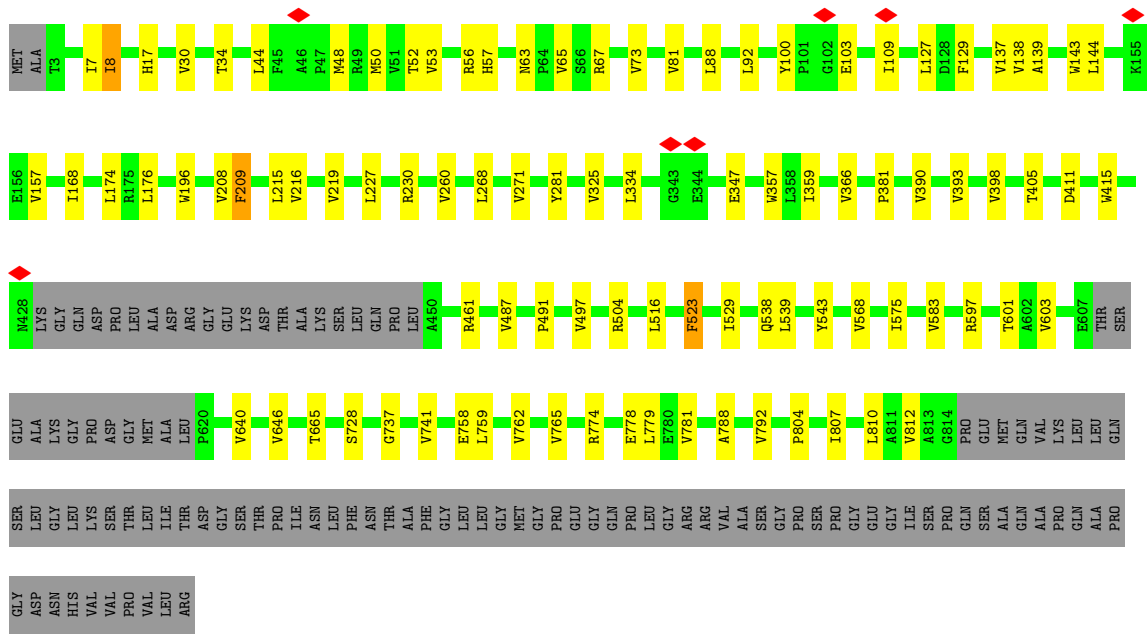
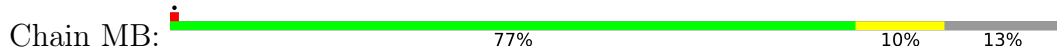


• Molecule 1: Major vault protein

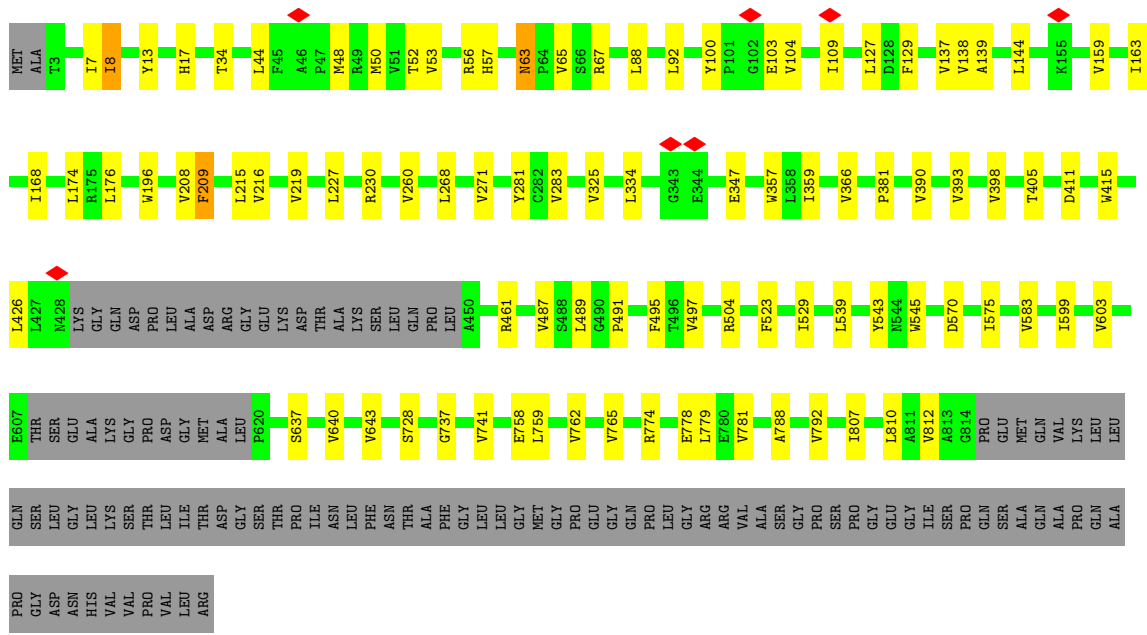


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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| PHE | ASN | THR | ALA | PHE | GLY | LEU | GLY | MET | GLY | PRO | GLY | GLY | GLN | PRO | LEU | GLY | ARG | ARG | VAL | ALA | GLY | GLY | PRO | ALA | GLN | ALA | PRO | GLN | ALA | PRO | GLY | ASP | ASN | HIS | VAL | VAL | PRO | VAL | LEU | ARG |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

• Molecule 1: Major vault protein



• Molecule 1: Major vault protein



• Molecule 1: Major vault protein





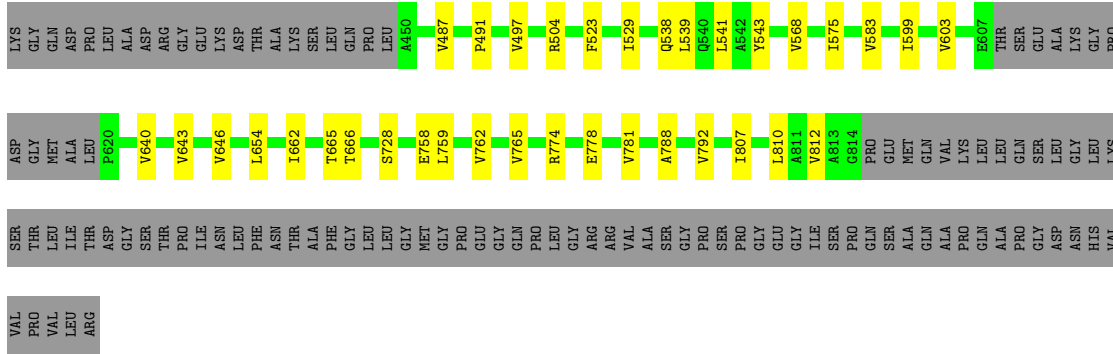




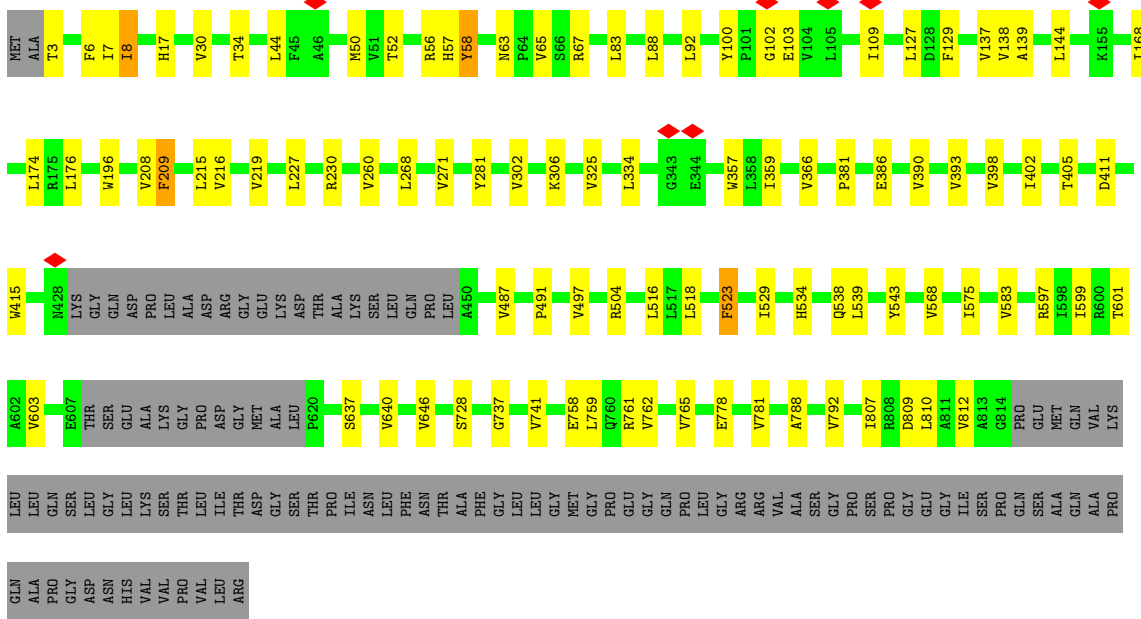
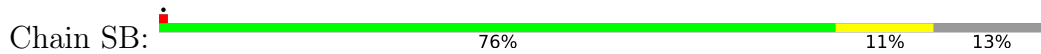




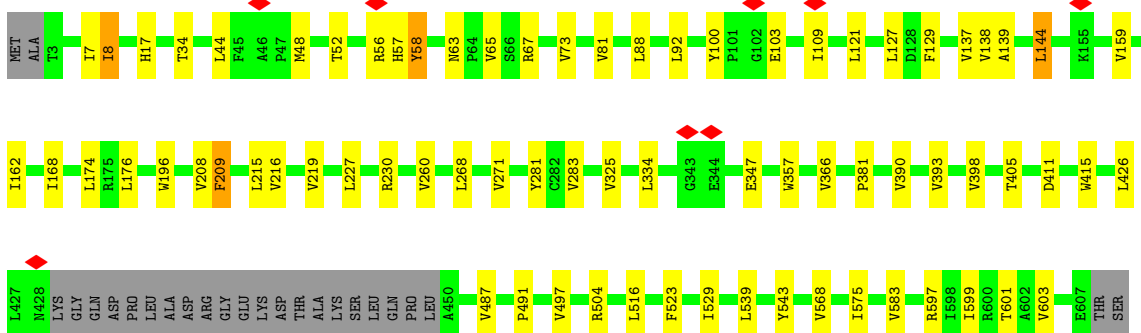
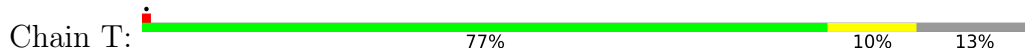




• Molecule 1: Major vault protein



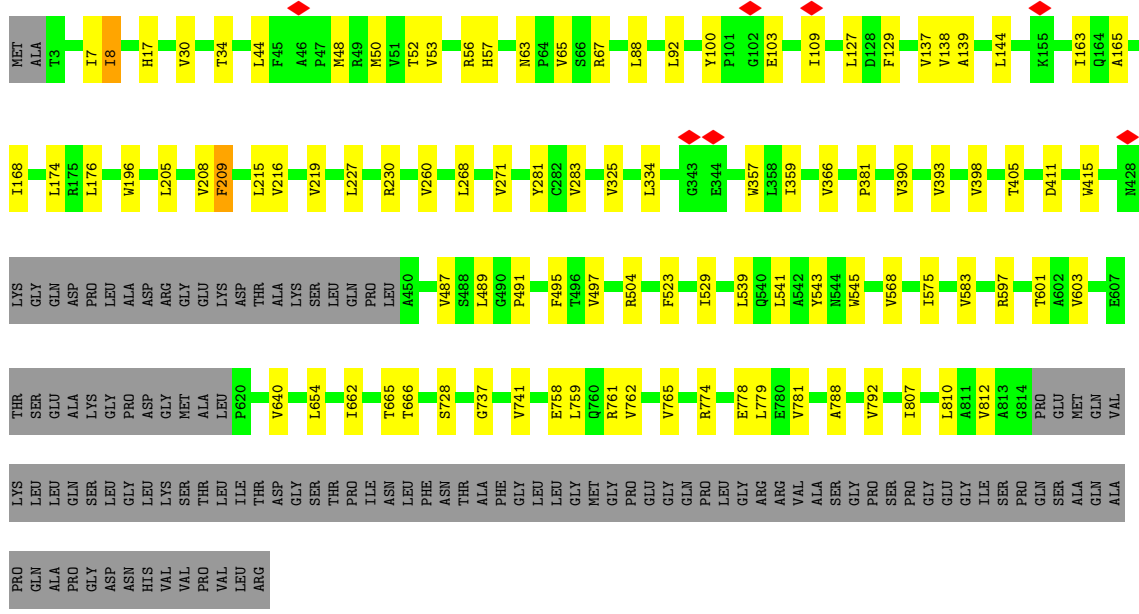
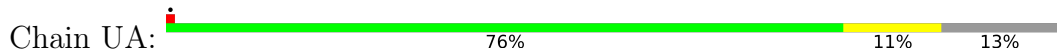
• Molecule 1: Major vault protein



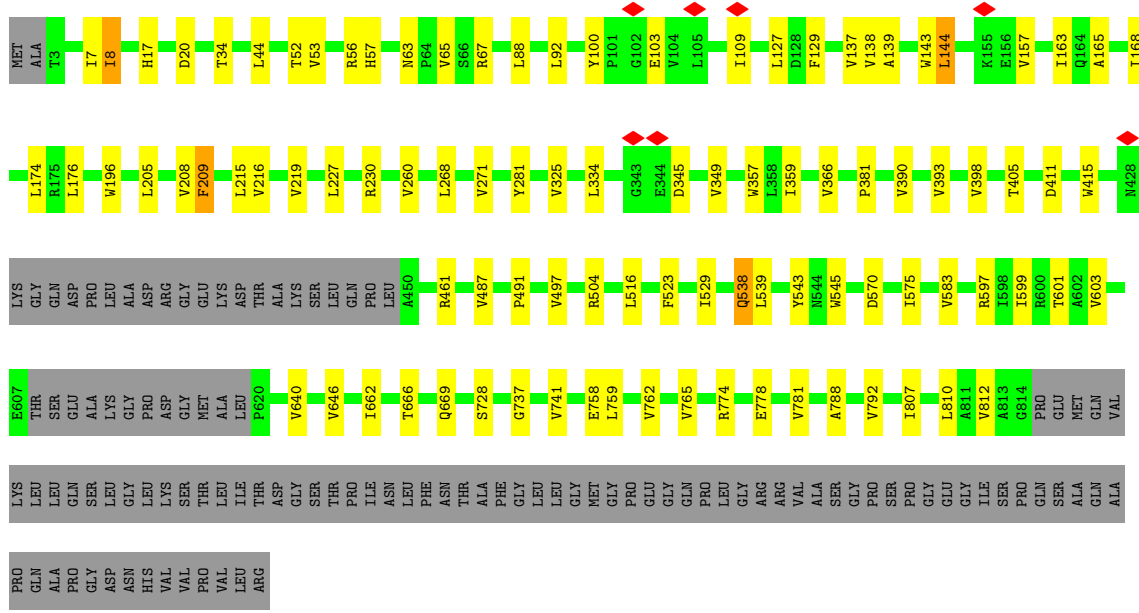
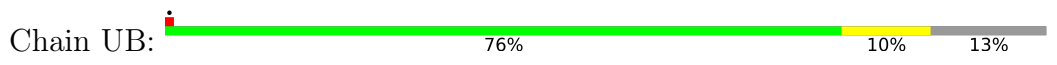




• Molecule 1: Major vault protein



• Molecule 1: Major vault protein

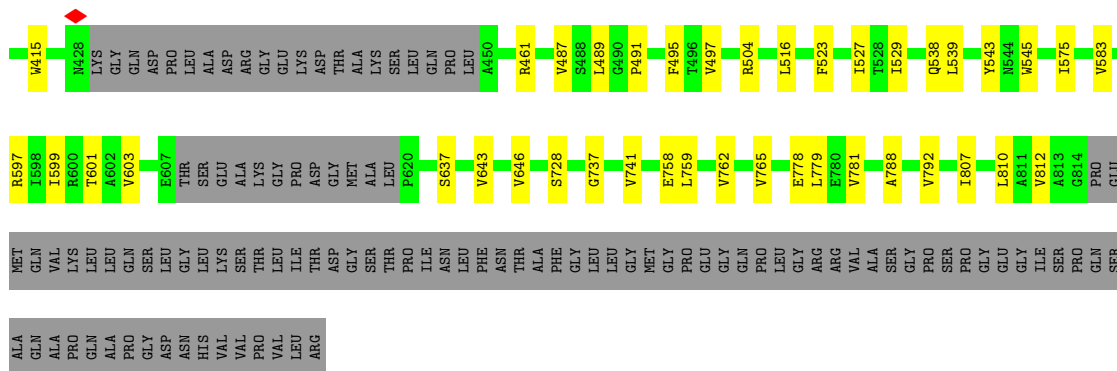


• Molecule 1: Major vault protein

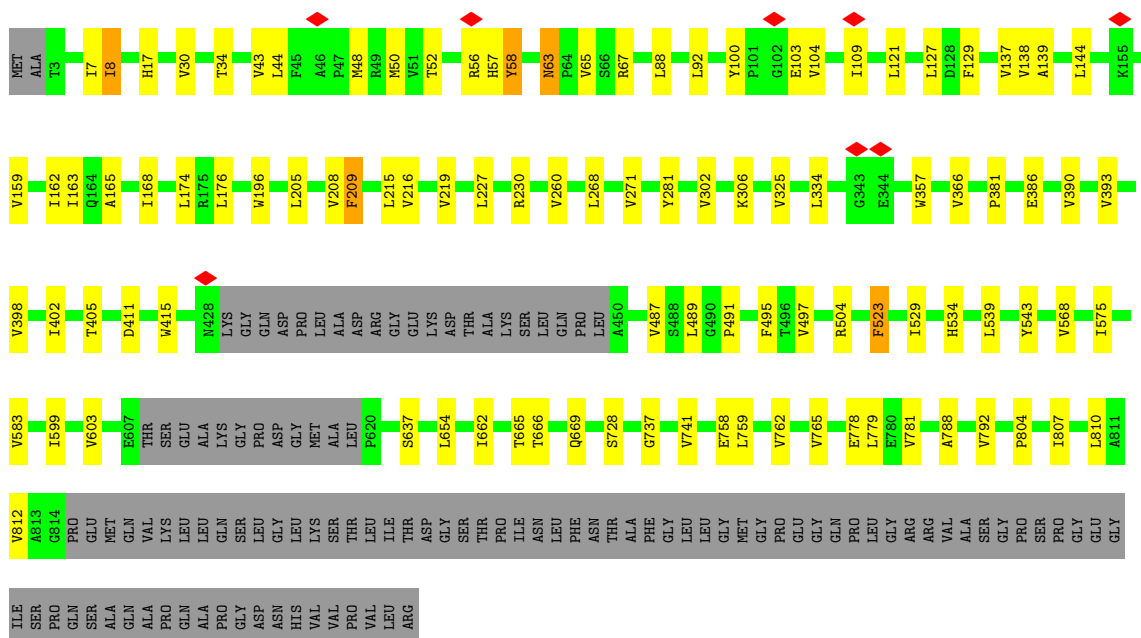
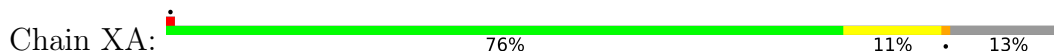




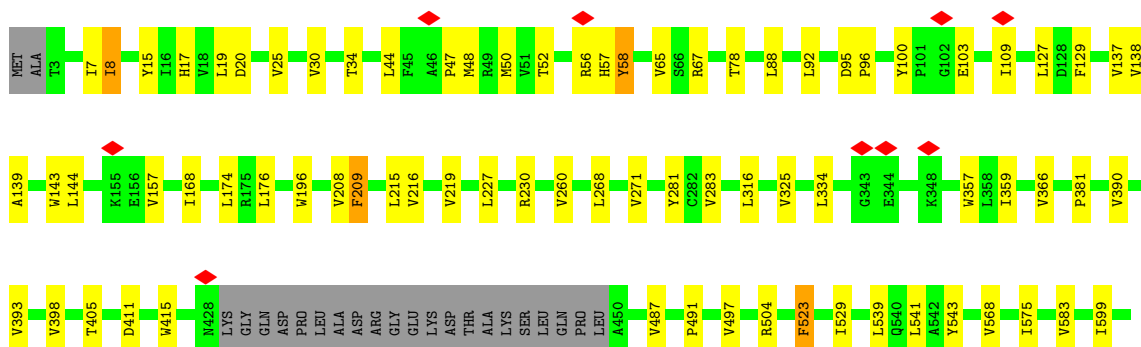
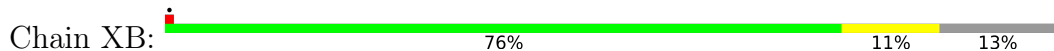




• Molecule 1: Major vault protein

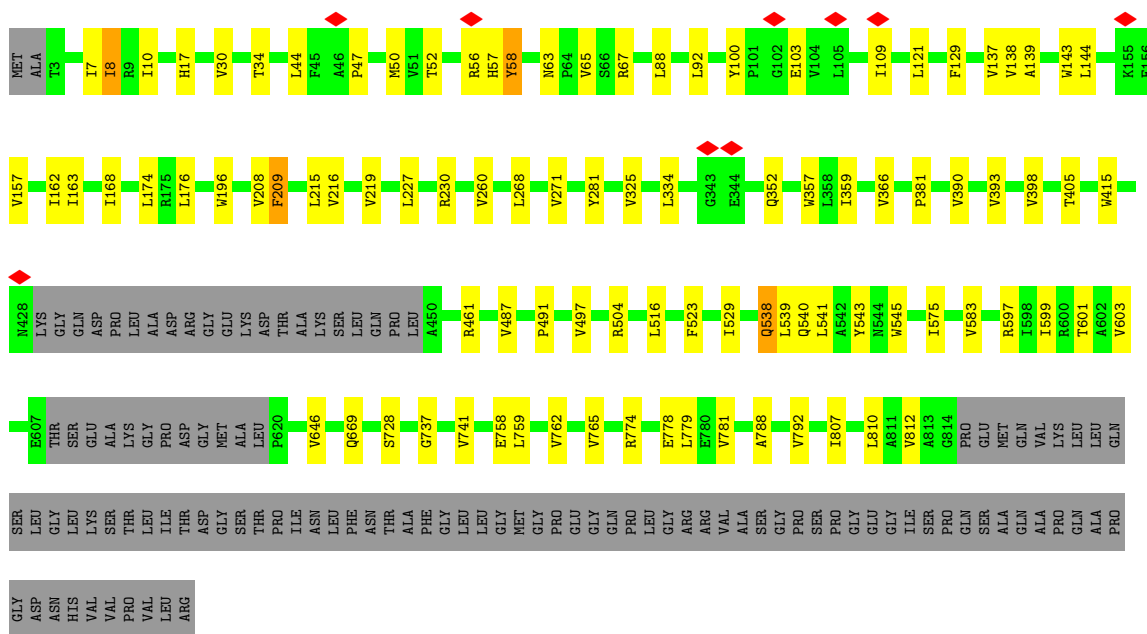
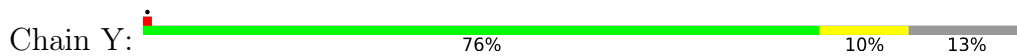


• Molecule 1: Major vault protein

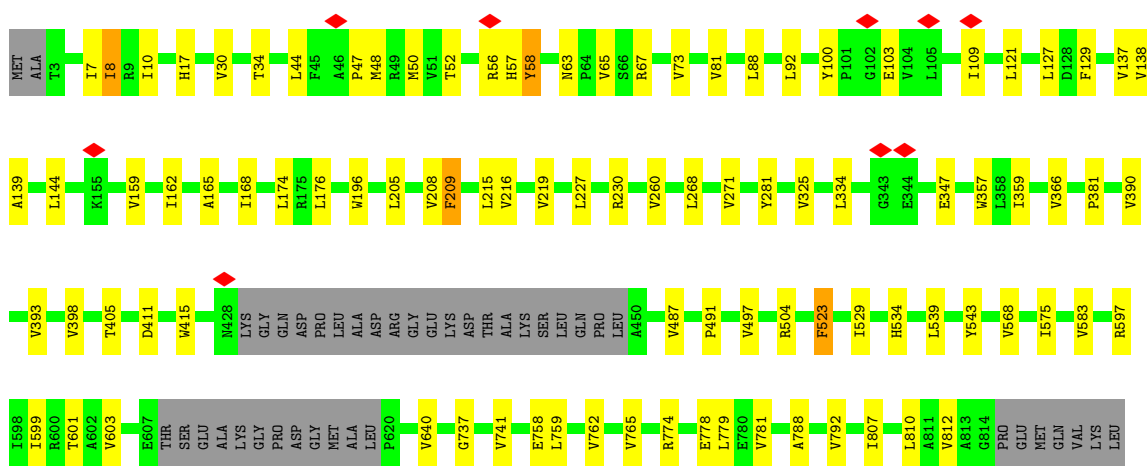
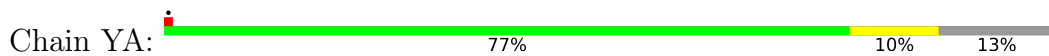




• Molecule 1: Major vault protein



• Molecule 1: Major vault protein







## 4 Experimental information

| Property                             | Value                                   | Source    |
|--------------------------------------|---|-----------|
| EM reconstruction method             | SINGLE PARTICLE                         | Depositor |
| Imposed symmetry                     | POINT, D39                              | Depositor |
| Number of particles used             | 11172                                   | 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 ( $e^-/\text{\AA}^2$ ) | 50.15                                   | Depositor |
| Minimum defocus (nm)                 | 551                                     | Depositor |
| Maximum defocus (nm)                 | 2330                                    | Depositor |
| Magnification                        | 81000                                   | Depositor |
| Image detector                       | GATAN K3 BIOQUANTUM (6k x 4k)           | Depositor |
| Maximum map value                    | 1.881                                   | Depositor |
| Minimum map value                    | -0.270                                  | Depositor |
| Average map value                    | 0.006                                   | Depositor |
| Map value standard deviation         | 0.099                                   | Depositor |
| Recommended contour level            | 0.6                                     | Depositor |
| Map size (Å)                         | 861.7984, 861.7984, 861.7984            | wwPDB     |
| Map dimensions                       | 1024, 1024, 1024                        | wwPDB     |
| Map angles (°)                       | 90.0, 90.0, 90.0                        | wwPDB     |
| Pixel spacing (Å)                    | 0.8416, 0.8416, 0.8416                  | Depositor |

## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

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   | A     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | AA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | AB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | AC    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | B     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | BA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | BB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | C     | 0.17         | 0/6291  | 0.39        | 0/8533  |
| 1   | CA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | CB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | D     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | DA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | DB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | E     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | EA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | EB    | 0.17         | 0/6291  | 0.39        | 0/8533  |
| 1   | F     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | FA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | FB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | G     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | GA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | GB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | H     | 0.17         | 0/6291  | 0.39        | 0/8533  |
| 1   | HA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | HB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | I     | 0.17         | 0/6291  | 0.39        | 0/8533  |
| 1   | IA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | IB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | J     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | JA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | JB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | K     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | KA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | KB    | 0.17         | 0/6291  | 0.40        | 0/8533  |

| Mol | Chain | Bond lengths |         | Bond angles |         |
|-----|-------|--------------|---------|-------------|---------|
|     |       | RMSZ         | # Z  >5 | RMSZ        | # Z  >5 |
| 1   | L     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | LA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | LB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | M     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | MA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | MB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | N     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | NA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | NB    | 0.17         | 0/6291  | 0.39        | 0/8533  |
| 1   | O     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | OA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | OB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | P     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | PA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | PB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | Q     | 0.17         | 0/6291  | 0.39        | 0/8533  |
| 1   | QA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | QB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | R     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | RA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | RB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | S     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | SA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | SB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | T     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | TA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | TB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | UA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | UB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | V     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | VA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | VB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | W     | 0.17         | 0/6291  | 0.39        | 0/8533  |
| 1   | WA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | WB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | X     | 0.17         | 0/6291  | 0.39        | 0/8533  |
| 1   | XA    | 0.17         | 0/6291  | 0.39        | 0/8533  |
| 1   | XB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | Y     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | YA    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | YB    | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | Z     | 0.17         | 0/6291  | 0.40        | 0/8533  |
| 1   | ZA    | 0.17         | 0/6291  | 0.40        | 0/8533  |

| Mol | Chain | Bond lengths |          | Bond angles |          |
|-----|-------|--------------|----------|-------------|----------|
|     |       | RMSZ         | # Z  >5  | RMSZ        | # Z  >5  |
| 1   | ZB    | 0.17         | 0/6291   | 0.40        | 0/8533   |
| All | All   | 0.17         | 0/490698 | 0.40        | 0/665574 |

There are no bond length outliers.

There are no bond angle outliers.

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   | A     | 6181  | 6205     | 6203     | 75      | 0            |
| 1   | AA    | 6181  | 6205     | 6203     | 66      | 0            |
| 1   | AB    | 6181  | 6205     | 6203     | 75      | 0            |
| 1   | AC    | 6181  | 6205     | 6203     | 74      | 0            |
| 1   | B     | 6181  | 6205     | 6203     | 71      | 0            |
| 1   | BA    | 6181  | 6205     | 6203     | 69      | 0            |
| 1   | BB    | 6181  | 6205     | 6203     | 76      | 0            |
| 1   | C     | 6181  | 6205     | 6203     | 65      | 0            |
| 1   | CA    | 6181  | 6205     | 6203     | 66      | 0            |
| 1   | CB    | 6181  | 6205     | 6203     | 76      | 0            |
| 1   | D     | 6181  | 6205     | 6203     | 65      | 0            |
| 1   | DA    | 6181  | 6205     | 6203     | 70      | 0            |
| 1   | DB    | 6181  | 6205     | 6203     | 75      | 0            |
| 1   | E     | 6181  | 6205     | 6203     | 65      | 0            |
| 1   | EA    | 6181  | 6205     | 6203     | 62      | 0            |
| 1   | EB    | 6181  | 6205     | 6203     | 71      | 0            |
| 1   | F     | 6181  | 6205     | 6203     | 70      | 0            |
| 1   | FA    | 6181  | 6205     | 6203     | 72      | 0            |
| 1   | FB    | 6181  | 6205     | 6203     | 69      | 0            |
| 1   | G     | 6181  | 6205     | 6203     | 66      | 0            |
| 1   | GA    | 6181  | 6205     | 6203     | 68      | 0            |
| 1   | GB    | 6181  | 6205     | 6203     | 67      | 0            |
| 1   | H     | 6181  | 6205     | 6203     | 67      | 0            |
| 1   | HA    | 6181  | 6205     | 6203     | 68      | 0            |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1   | HB    | 6181  | 6205     | 6203     | 70      | 0            |
| 1   | I     | 6181  | 6205     | 6203     | 69      | 0            |
| 1   | IA    | 6181  | 6205     | 6203     | 62      | 0            |
| 1   | IB    | 6181  | 6205     | 6203     | 73      | 0            |
| 1   | J     | 6181  | 6205     | 6203     | 73      | 0            |
| 1   | JA    | 6181  | 6205     | 6203     | 66      | 0            |
| 1   | JB    | 6181  | 6205     | 6203     | 68      | 0            |
| 1   | K     | 6181  | 6205     | 6203     | 70      | 0            |
| 1   | KA    | 6181  | 6205     | 6203     | 75      | 0            |
| 1   | KB    | 6181  | 6205     | 6203     | 66      | 0            |
| 1   | L     | 6181  | 6205     | 6203     | 69      | 0            |
| 1   | LA    | 6181  | 6205     | 6203     | 73      | 0            |
| 1   | LB    | 6181  | 6205     | 6203     | 62      | 0            |
| 1   | M     | 6181  | 6205     | 6203     | 74      | 0            |
| 1   | MA    | 6181  | 6205     | 6203     | 63      | 0            |
| 1   | MB    | 6181  | 6205     | 6203     | 70      | 0            |
| 1   | N     | 6181  | 6205     | 6203     | 70      | 0            |
| 1   | NA    | 6181  | 6205     | 6203     | 72      | 0            |
| 1   | NB    | 6181  | 6205     | 6203     | 68      | 0            |
| 1   | O     | 6181  | 6205     | 6203     | 74      | 0            |
| 1   | OA    | 6181  | 6205     | 6203     | 72      | 0            |
| 1   | OB    | 6181  | 6205     | 6203     | 68      | 0            |
| 1   | P     | 6181  | 6205     | 6203     | 74      | 0            |
| 1   | PA    | 6181  | 6205     | 6203     | 75      | 0            |
| 1   | PB    | 6181  | 6205     | 6203     | 67      | 0            |
| 1   | Q     | 6181  | 6205     | 6203     | 69      | 0            |
| 1   | QA    | 6181  | 6205     | 6203     | 64      | 0            |
| 1   | QB    | 6181  | 6205     | 6203     | 64      | 0            |
| 1   | R     | 6181  | 6205     | 6203     | 70      | 0            |
| 1   | RA    | 6181  | 6205     | 6203     | 66      | 0            |
| 1   | RB    | 6181  | 6205     | 6203     | 61      | 0            |
| 1   | S     | 6181  | 6205     | 6203     | 66      | 0            |
| 1   | SA    | 6181  | 6205     | 6203     | 69      | 0            |
| 1   | SB    | 6181  | 6205     | 6203     | 67      | 0            |
| 1   | T     | 6181  | 6205     | 6203     | 67      | 0            |
| 1   | TA    | 6181  | 6205     | 6203     | 72      | 0            |
| 1   | TB    | 6181  | 6205     | 6203     | 65      | 0            |
| 1   | UA    | 6181  | 6205     | 6203     | 71      | 0            |
| 1   | UB    | 6181  | 6205     | 6203     | 69      | 0            |
| 1   | V     | 6181  | 6205     | 6203     | 69      | 0            |
| 1   | VA    | 6181  | 6205     | 6203     | 69      | 0            |
| 1   | VB    | 6181  | 6205     | 6203     | 65      | 0            |

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| Mol | Chain | Non-H  | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|--------|----------|----------|---------|--------------|
| 1   | W     | 6181   | 6205     | 6203     | 64      | 0            |
| 1   | WA    | 6181   | 6205     | 6203     | 72      | 0            |
| 1   | WB    | 6181   | 6205     | 6203     | 70      | 0            |
| 1   | X     | 6181   | 6205     | 6203     | 70      | 0            |
| 1   | XA    | 6181   | 6205     | 6203     | 73      | 0            |
| 1   | XB    | 6181   | 6205     | 6203     | 76      | 0            |
| 1   | Y     | 6181   | 6205     | 6203     | 67      | 0            |
| 1   | YA    | 6181   | 6205     | 6203     | 75      | 0            |
| 1   | YB    | 6181   | 6205     | 6203     | 77      | 0            |
| 1   | Z     | 6181   | 6205     | 6203     | 70      | 0            |
| 1   | ZA    | 6181   | 6205     | 6203     | 71      | 0            |
| 1   | ZB    | 6181   | 6205     | 6203     | 67      | 0            |
| All | All   | 482118 | 483990   | 483834   | 5156    | 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 5.

All (5156) 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) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:O:168:ILE:HG22  | 1:O:215:LEU:HD21  | 1.64                     | 0.80              |
| 1:MB:168:ILE:HG22 | 1:MB:215:LEU:HD21 | 1.64                     | 0.79              |
| 1:Z:168:ILE:HG22  | 1:Z:215:LEU:HD21  | 1.64                     | 0.79              |
| 1:T:168:ILE:HG22  | 1:T:215:LEU:HD21  | 1.64                     | 0.79              |
| 1:VA:168:ILE:HG22 | 1:VA:215:LEU:HD21 | 1.63                     | 0.79              |
| 1:I:168:ILE:HG22  | 1:I:215:LEU:HD21  | 1.65                     | 0.79              |
| 1:H:168:ILE:HG22  | 1:H:215:LEU:HD21  | 1.65                     | 0.78              |
| 1:JB:168:ILE:HG22 | 1:JB:215:LEU:HD21 | 1.64                     | 0.78              |
| 1:W:168:ILE:HG22  | 1:W:215:LEU:HD21  | 1.66                     | 0.78              |
| 1:CB:168:ILE:HG22 | 1:CB:215:LEU:HD21 | 1.67                     | 0.77              |
| 1:E:48:MET:HA     | 1:E:48:MET:HE3    | 1.67                     | 0.77              |
| 1:S:13:TYR:HA     | 1:S:50:MET:HE3    | 1.69                     | 0.75              |
| 1:WB:13:TYR:HA    | 1:WB:50:MET:HE3   | 1.68                     | 0.75              |
| 1:F:168:ILE:HG22  | 1:F:215:LEU:HD21  | 1.67                     | 0.74              |
| 1:JA:13:TYR:HA    | 1:JA:50:MET:HE3   | 1.68                     | 0.74              |
| 1:RB:539:LEU:HD11 | 1:RB:599:ILE:HD11 | 1.70                     | 0.74              |
| 1:FB:168:ILE:HG22 | 1:FB:215:LEU:HD21 | 1.69                     | 0.73              |
| 1:C:168:ILE:HG22  | 1:C:215:LEU:HD21  | 1.70                     | 0.72              |
| 1:RA:168:ILE:HG22 | 1:RA:215:LEU:HD21 | 1.71                     | 0.72              |
| 1:PA:168:ILE:HG22 | 1:PA:215:LEU:HD21 | 1.71                     | 0.72              |
| 1:M:539:LEU:HD11  | 1:M:599:ILE:HD11  | 1.72                     | 0.72              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:VB:168:ILE:HG22 | 1:VB:215:LEU:HD21 | 1.70                     | 0.71              |
| 1:YB:168:ILE:HG22 | 1:YB:215:LEU:HD21 | 1.71                     | 0.71              |
| 1:OB:168:ILE:HG22 | 1:OB:215:LEU:HD21 | 1.72                     | 0.71              |
| 1:EA:539:LEU:HD11 | 1:EA:599:ILE:HD11 | 1.70                     | 0.71              |
| 1:GB:168:ILE:HG22 | 1:GB:215:LEU:HD21 | 1.73                     | 0.71              |
| 1:MA:168:ILE:HG22 | 1:MA:215:LEU:HD21 | 1.72                     | 0.71              |
| 1:Y:168:ILE:HG22  | 1:Y:215:LEU:HD21  | 1.73                     | 0.71              |
| 1:GA:168:ILE:HG22 | 1:GA:215:LEU:HD21 | 1.74                     | 0.70              |
| 1:AB:539:LEU:HD11 | 1:AB:599:ILE:HD11 | 1.71                     | 0.70              |
| 1:CA:168:ILE:HG22 | 1:CA:215:LEU:HD21 | 1.72                     | 0.70              |
| 1:QA:168:ILE:HG22 | 1:QA:215:LEU:HD21 | 1.71                     | 0.70              |
| 1:TA:168:ILE:HG22 | 1:TA:215:LEU:HD21 | 1.73                     | 0.70              |
| 1:IA:168:ILE:HG22 | 1:IA:215:LEU:HD21 | 1.72                     | 0.70              |
| 1:FA:168:ILE:HG22 | 1:FA:215:LEU:HD21 | 1.73                     | 0.70              |
| 1:WA:168:ILE:HG22 | 1:WA:215:LEU:HD21 | 1.74                     | 0.70              |
| 1:O:539:LEU:HD23  | 1:O:540:GLN:N     | 2.07                     | 0.70              |
| 1:BA:168:ILE:HG22 | 1:BA:215:LEU:HD21 | 1.72                     | 0.69              |
| 1:PB:168:ILE:HG22 | 1:PB:215:LEU:HD21 | 1.73                     | 0.69              |
| 1:Y:539:LEU:HD23  | 1:Y:540:GLN:N     | 2.07                     | 0.69              |
| 1:A:168:ILE:HG22  | 1:A:215:LEU:HD21  | 1.74                     | 0.69              |
| 1:HB:168:ILE:HG22 | 1:HB:215:LEU:HD21 | 1.74                     | 0.69              |
| 1:N:168:ILE:HG22  | 1:N:215:LEU:HD21  | 1.73                     | 0.69              |
| 1:KB:168:ILE:HG22 | 1:KB:215:LEU:HD21 | 1.75                     | 0.69              |
| 1:NA:168:ILE:HG22 | 1:NA:215:LEU:HD21 | 1.75                     | 0.69              |
| 1:KA:168:ILE:HG22 | 1:KA:215:LEU:HD21 | 1.75                     | 0.69              |
| 1:LA:168:ILE:HG22 | 1:LA:215:LEU:HD21 | 1.74                     | 0.69              |
| 1:JA:168:ILE:HG22 | 1:JA:215:LEU:HD21 | 1.74                     | 0.69              |
| 1:S:168:ILE:HG22  | 1:S:215:LEU:HD21  | 1.73                     | 0.69              |
| 1:TB:168:ILE:HG22 | 1:TB:215:LEU:HD21 | 1.73                     | 0.69              |
| 1:GA:13:TYR:HA    | 1:GA:50:MET:HE3   | 1.74                     | 0.69              |
| 1:R:168:ILE:HG22  | 1:R:215:LEU:HD21  | 1.74                     | 0.69              |
| 1:V:539:LEU:HD23  | 1:V:540:GLN:N     | 2.07                     | 0.69              |
| 1:ZB:168:ILE:HG22 | 1:ZB:215:LEU:HD21 | 1.73                     | 0.69              |
| 1:D:168:ILE:HG22  | 1:D:215:LEU:HD21  | 1.74                     | 0.69              |
| 1:G:168:ILE:HG22  | 1:G:215:LEU:HD21  | 1.74                     | 0.69              |
| 1:HA:168:ILE:HG22 | 1:HA:215:LEU:HD21 | 1.74                     | 0.68              |
| 1:WB:168:ILE:HG22 | 1:WB:215:LEU:HD21 | 1.75                     | 0.68              |
| 1:B:168:ILE:HG22  | 1:B:215:LEU:HD21  | 1.74                     | 0.68              |
| 1:N:13:TYR:HA     | 1:N:50:MET:HE3    | 1.76                     | 0.68              |
| 1:A:48:MET:HA     | 1:A:48:MET:HE3    | 1.75                     | 0.68              |
| 1:SB:168:ILE:HG22 | 1:SB:215:LEU:HD21 | 1.74                     | 0.68              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:BB:168:ILE:HG22 | 1:BB:215:LEU:HD21 | 1.75                     | 0.68              |
| 1:Q:168:ILE:HG22  | 1:Q:215:LEU:HD21  | 1.75                     | 0.68              |
| 1:TB:13:TYR:HA    | 1:TB:50:MET:HE3   | 1.75                     | 0.68              |
| 1:X:168:ILE:HG22  | 1:X:215:LEU:HD21  | 1.74                     | 0.68              |
| 1:QB:168:ILE:HG22 | 1:QB:215:LEU:HD21 | 1.74                     | 0.68              |
| 1:UB:168:ILE:HG22 | 1:UB:215:LEU:HD21 | 1.76                     | 0.68              |
| 1:D:48:MET:HA     | 1:D:48:MET:HE3    | 1.75                     | 0.67              |
| 1:XB:168:ILE:HG22 | 1:XB:215:LEU:HD21 | 1.75                     | 0.67              |
| 1:DB:168:ILE:HG22 | 1:DB:215:LEU:HD21 | 1.76                     | 0.67              |
| 1:P:168:ILE:HG22  | 1:P:215:LEU:HD21  | 1.74                     | 0.67              |
| 1:AC:168:ILE:HG22 | 1:AC:215:LEU:HD21 | 1.76                     | 0.67              |
| 1:AB:30:VAL:CG2   | 1:AB:50:MET:HE3   | 2.25                     | 0.67              |
| 1:D:30:VAL:HG21   | 1:D:50:MET:HE3    | 1.77                     | 0.67              |
| 1:JB:48:MET:HA    | 1:JB:48:MET:HE3   | 1.77                     | 0.67              |
| 1:ZA:168:ILE:HG22 | 1:ZA:215:LEU:HD21 | 1.77                     | 0.67              |
| 1:UA:168:ILE:HG22 | 1:UA:215:LEU:HD21 | 1.75                     | 0.67              |
| 1:V:168:ILE:HG22  | 1:V:215:LEU:HD21  | 1.75                     | 0.66              |
| 1:AA:168:ILE:HG22 | 1:AA:215:LEU:HD21 | 1.76                     | 0.66              |
| 1:EB:168:ILE:HG22 | 1:EB:215:LEU:HD21 | 1.76                     | 0.66              |
| 1:J:168:ILE:HG22  | 1:J:215:LEU:HD21  | 1.77                     | 0.66              |
| 1:AA:129:PHE:CZ   | 1:AA:137:VAL:HG21 | 2.31                     | 0.66              |
| 1:E:168:ILE:HG22  | 1:E:215:LEU:HD21  | 1.77                     | 0.66              |
| 1:LB:168:ILE:HG22 | 1:LB:215:LEU:HD21 | 1.77                     | 0.66              |
| 1:M:168:ILE:HG22  | 1:M:215:LEU:HD21  | 1.76                     | 0.66              |
| 1:XA:168:ILE:HG22 | 1:XA:215:LEU:HD21 | 1.76                     | 0.66              |
| 1:CA:129:PHE:CZ   | 1:CA:137:VAL:HG21 | 2.31                     | 0.66              |
| 1:EB:129:PHE:CZ   | 1:EB:137:VAL:HG21 | 2.31                     | 0.66              |
| 1:QB:129:PHE:CZ   | 1:QB:137:VAL:HG21 | 2.31                     | 0.66              |
| 1:TA:129:PHE:CZ   | 1:TA:137:VAL:HG21 | 2.31                     | 0.66              |
| 1:YB:539:LEU:HD11 | 1:YB:599:ILE:HD11 | 1.78                     | 0.66              |
| 1:DA:129:PHE:CZ   | 1:DA:137:VAL:HG21 | 2.31                     | 0.66              |
| 1:Y:30:VAL:HG21   | 1:Y:50:MET:HE3    | 1.77                     | 0.66              |
| 1:OB:129:PHE:CZ   | 1:OB:137:VAL:HG21 | 2.31                     | 0.66              |
| 1:NB:129:PHE:CZ   | 1:NB:137:VAL:HG21 | 2.31                     | 0.66              |
| 1:PA:129:PHE:CZ   | 1:PA:137:VAL:HG21 | 2.31                     | 0.66              |
| 1:Q:129:PHE:CZ    | 1:Q:137:VAL:HG21  | 2.31                     | 0.66              |
| 1:O:129:PHE:CZ    | 1:O:137:VAL:HG21  | 2.30                     | 0.66              |
| 1:OA:168:ILE:HG22 | 1:OA:215:LEU:HD21 | 1.78                     | 0.66              |
| 1:RB:168:ILE:HG22 | 1:RB:215:LEU:HD21 | 1.78                     | 0.66              |
| 1:WA:30:VAL:HG21  | 1:WA:50:MET:HE3   | 1.78                     | 0.66              |
| 1:AB:168:ILE:HG22 | 1:AB:215:LEU:HD21 | 1.78                     | 0.65              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:C:129:PHE:CZ    | 1:C:137:VAL:HG21  | 2.31                     | 0.65              |
| 1:CB:129:PHE:CZ   | 1:CB:137:VAL:HG21 | 2.31                     | 0.65              |
| 1:DA:168:ILE:HG22 | 1:DA:215:LEU:HD21 | 1.77                     | 0.65              |
| 1:W:129:PHE:CZ    | 1:W:137:VAL:HG21  | 2.31                     | 0.65              |
| 1:XB:129:PHE:CZ   | 1:XB:137:VAL:HG21 | 2.31                     | 0.65              |
| 1:B:129:PHE:CZ    | 1:B:137:VAL:HG21  | 2.31                     | 0.65              |
| 1:DB:129:PHE:CZ   | 1:DB:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:KA:129:PHE:CZ   | 1:KA:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:QA:129:PHE:CZ   | 1:QA:137:VAL:HG21 | 2.31                     | 0.65              |
| 1:W:30:VAL:HG21   | 1:W:50:MET:HE3    | 1.78                     | 0.65              |
| 1:AB:30:VAL:HG21  | 1:AB:50:MET:HE3   | 1.78                     | 0.65              |
| 1:EA:129:PHE:CZ   | 1:EA:137:VAL:HG21 | 2.31                     | 0.65              |
| 1:G:129:PHE:CZ    | 1:G:137:VAL:HG21  | 2.31                     | 0.65              |
| 1:YA:129:PHE:CZ   | 1:YA:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:BA:30:VAL:HG21  | 1:BA:50:MET:HE3   | 1.78                     | 0.65              |
| 1:P:129:PHE:CZ    | 1:P:137:VAL:HG21  | 2.32                     | 0.65              |
| 1:S:129:PHE:CZ    | 1:S:137:VAL:HG21  | 2.32                     | 0.65              |
| 1:TB:48:MET:HA    | 1:TB:48:MET:HE3   | 1.79                     | 0.65              |
| 1:UB:129:PHE:CZ   | 1:UB:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:CB:65:VAL:HG13  | 1:CB:103:GLU:OE2  | 1.97                     | 0.65              |
| 1:HA:810:LEU:O    | 1:HA:810:LEU:HD23 | 1.97                     | 0.65              |
| 1:SA:129:PHE:CZ   | 1:SA:137:VAL:HG21 | 2.31                     | 0.65              |
| 1:UA:129:PHE:CZ   | 1:UA:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:E:129:PHE:CZ    | 1:E:137:VAL:HG21  | 2.32                     | 0.65              |
| 1:HB:129:PHE:CZ   | 1:HB:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:L:810:LEU:O     | 1:L:810:LEU:HD23  | 1.97                     | 0.65              |
| 1:NB:168:ILE:HG22 | 1:NB:215:LEU:HD21 | 1.79                     | 0.65              |
| 1:UB:810:LEU:O    | 1:UB:810:LEU:HD23 | 1.97                     | 0.65              |
| 1:ZB:129:PHE:CZ   | 1:ZB:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:A:129:PHE:CZ    | 1:A:137:VAL:HG21  | 2.32                     | 0.65              |
| 1:JB:129:PHE:CZ   | 1:JB:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:K:168:ILE:HG22  | 1:K:215:LEU:HD21  | 1.78                     | 0.65              |
| 1:MA:129:PHE:CZ   | 1:MA:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:ZA:129:PHE:CZ   | 1:ZA:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:ZB:65:VAL:HG13  | 1:ZB:103:GLU:OE2  | 1.97                     | 0.65              |
| 1:GA:129:PHE:CZ   | 1:GA:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:L:129:PHE:CZ    | 1:L:137:VAL:HG21  | 2.32                     | 0.65              |
| 1:LA:129:PHE:CZ   | 1:LA:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:PB:129:PHE:CZ   | 1:PB:137:VAL:HG21 | 2.31                     | 0.65              |
| 1:Y:129:PHE:CZ    | 1:Y:137:VAL:HG21  | 2.32                     | 0.65              |
| 1:B:810:LEU:O     | 1:B:810:LEU:HD23  | 1.96                     | 0.65              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:BA:129:PHE:CZ   | 1:BA:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:HA:129:PHE:CZ   | 1:HA:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:SB:129:PHE:CZ   | 1:SB:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:D:30:VAL:CG2    | 1:D:50:MET:HE3    | 2.27                     | 0.65              |
| 1:EA:168:ILE:HG22 | 1:EA:215:LEU:HD21 | 1.78                     | 0.65              |
| 1:IA:129:PHE:CZ   | 1:IA:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:LB:129:PHE:CZ   | 1:LB:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:YB:129:PHE:CZ   | 1:YB:137:VAL:HG21 | 2.32                     | 0.65              |
| 1:Z:129:PHE:CZ    | 1:Z:137:VAL:HG21  | 2.31                     | 0.65              |
| 1:FA:129:PHE:CZ   | 1:FA:137:VAL:HG21 | 2.32                     | 0.64              |
| 1:J:65:VAL:HG13   | 1:J:103:GLU:OE2   | 1.97                     | 0.64              |
| 1:JA:129:PHE:CZ   | 1:JA:137:VAL:HG21 | 2.32                     | 0.64              |
| 1:AB:129:PHE:CZ   | 1:AB:137:VAL:HG21 | 2.32                     | 0.64              |
| 1:MB:129:PHE:CZ   | 1:MB:137:VAL:HG21 | 2.32                     | 0.64              |
| 1:M:810:LEU:O     | 1:M:810:LEU:HD23  | 1.97                     | 0.64              |
| 1:ZA:810:LEU:O    | 1:ZA:810:LEU:HD23 | 1.97                     | 0.64              |
| 1:FB:129:PHE:CZ   | 1:FB:137:VAL:HG21 | 2.33                     | 0.64              |
| 1:T:129:PHE:CZ    | 1:T:137:VAL:HG21  | 2.32                     | 0.64              |
| 1:VB:129:PHE:CZ   | 1:VB:137:VAL:HG21 | 2.33                     | 0.64              |
| 1:WB:129:PHE:CZ   | 1:WB:137:VAL:HG21 | 2.32                     | 0.64              |
| 1:F:129:PHE:CZ    | 1:F:137:VAL:HG21  | 2.32                     | 0.64              |
| 1:H:129:PHE:CZ    | 1:H:137:VAL:HG21  | 2.32                     | 0.64              |
| 1:RB:129:PHE:CZ   | 1:RB:137:VAL:HG21 | 2.32                     | 0.64              |
| 1:AC:129:PHE:CZ   | 1:AC:137:VAL:HG21 | 2.33                     | 0.64              |
| 1:J:129:PHE:CZ    | 1:J:137:VAL:HG21  | 2.33                     | 0.64              |
| 1:OA:129:PHE:CZ   | 1:OA:137:VAL:HG21 | 2.32                     | 0.64              |
| 1:TB:129:PHE:CZ   | 1:TB:137:VAL:HG21 | 2.32                     | 0.64              |
| 1:IB:129:PHE:CZ   | 1:IB:137:VAL:HG21 | 2.32                     | 0.64              |
| 1:N:129:PHE:CZ    | 1:N:137:VAL:HG21  | 2.33                     | 0.64              |
| 1:YA:30:VAL:HG21  | 1:YA:50:MET:HE3   | 1.79                     | 0.64              |
| 1:D:129:PHE:CZ    | 1:D:137:VAL:HG21  | 2.33                     | 0.64              |
| 1:EA:65:VAL:HG13  | 1:EA:103:GLU:OE2  | 1.98                     | 0.64              |
| 1:FA:810:LEU:HD23 | 1:FA:810:LEU:O    | 1.98                     | 0.64              |
| 1:KB:129:PHE:CZ   | 1:KB:137:VAL:HG21 | 2.33                     | 0.64              |
| 1:UB:65:VAL:HG13  | 1:UB:103:GLU:OE2  | 1.98                     | 0.64              |
| 1:V:65:VAL:HG13   | 1:V:103:GLU:OE2   | 1.98                     | 0.64              |
| 1:WA:129:PHE:CZ   | 1:WA:137:VAL:HG21 | 2.33                     | 0.64              |
| 1:GB:65:VAL:HG13  | 1:GB:103:GLU:OE2  | 1.98                     | 0.64              |
| 1:GB:129:PHE:CZ   | 1:GB:137:VAL:HG21 | 2.33                     | 0.64              |
| 1:HB:810:LEU:HD23 | 1:HB:810:LEU:O    | 1.98                     | 0.64              |
| 1:MA:65:VAL:HG13  | 1:MA:103:GLU:OE2  | 1.98                     | 0.64              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:QA:65:VAL:HG13  | 1:QA:103:GLU:OE2  | 1.98                     | 0.64              |
| 1:VA:129:PHE:CZ   | 1:VA:137:VAL:HG21 | 2.32                     | 0.64              |
| 1:XA:129:PHE:CZ   | 1:XA:137:VAL:HG21 | 2.32                     | 0.64              |
| 1:YA:65:VAL:HG13  | 1:YA:103:GLU:OE2  | 1.98                     | 0.64              |
| 1:BB:48:MET:HA    | 1:BB:48:MET:HE3   | 1.80                     | 0.64              |
| 1:J:30:VAL:HG21   | 1:J:50:MET:HE3    | 1.79                     | 0.64              |
| 1:NA:129:PHE:CZ   | 1:NA:137:VAL:HG21 | 2.33                     | 0.64              |
| 1:R:129:PHE:CZ    | 1:R:137:VAL:HG21  | 2.32                     | 0.64              |
| 1:RB:65:VAL:HG13  | 1:RB:103:GLU:OE2  | 1.97                     | 0.64              |
| 1:T:810:LEU:O     | 1:T:810:LEU:HD23  | 1.98                     | 0.64              |
| 1:W:810:LEU:O     | 1:W:810:LEU:HD23  | 1.98                     | 0.64              |
| 1:WA:65:VAL:HG13  | 1:WA:103:GLU:OE2  | 1.98                     | 0.64              |
| 1:D:810:LEU:O     | 1:D:810:LEU:HD23  | 1.98                     | 0.63              |
| 1:J:30:VAL:CG2    | 1:J:50:MET:HE3    | 2.28                     | 0.63              |
| 1:K:65:VAL:HG13   | 1:K:103:GLU:OE2   | 1.98                     | 0.63              |
| 1:LA:65:VAL:HG13  | 1:LA:103:GLU:OE2  | 1.98                     | 0.63              |
| 1:M:129:PHE:CZ    | 1:M:137:VAL:HG21  | 2.33                     | 0.63              |
| 1:S:65:VAL:HG13   | 1:S:103:GLU:OE2   | 1.98                     | 0.63              |
| 1:ZB:810:LEU:O    | 1:ZB:810:LEU:HD23 | 1.98                     | 0.63              |
| 1:BA:65:VAL:HG13  | 1:BA:103:GLU:OE2  | 1.98                     | 0.63              |
| 1:BB:129:PHE:CZ   | 1:BB:137:VAL:HG21 | 2.33                     | 0.63              |
| 1:H:810:LEU:O     | 1:H:810:LEU:HD23  | 1.98                     | 0.63              |
| 1:IA:810:LEU:HD23 | 1:IA:810:LEU:O    | 1.99                     | 0.63              |
| 1:IB:65:VAL:HG13  | 1:IB:103:GLU:OE2  | 1.98                     | 0.63              |
| 1:RA:810:LEU:O    | 1:RA:810:LEU:HD23 | 1.99                     | 0.63              |
| 1:SB:810:LEU:HD23 | 1:SB:810:LEU:O    | 1.99                     | 0.63              |
| 1:X:65:VAL:HG13   | 1:X:103:GLU:OE2   | 1.98                     | 0.63              |
| 1:AB:810:LEU:O    | 1:AB:810:LEU:HD23 | 1.98                     | 0.63              |
| 1:L:30:VAL:HG21   | 1:L:50:MET:HE3    | 1.81                     | 0.63              |
| 1:P:30:VAL:HG21   | 1:P:50:MET:HE3    | 1.80                     | 0.63              |
| 1:S:810:LEU:HD23  | 1:S:810:LEU:O     | 1.99                     | 0.63              |
| 1:X:129:PHE:CZ    | 1:X:137:VAL:HG21  | 2.33                     | 0.63              |
| 1:XA:65:VAL:HG13  | 1:XA:103:GLU:OE2  | 1.98                     | 0.63              |
| 1:BB:810:LEU:O    | 1:BB:810:LEU:HD23 | 1.99                     | 0.63              |
| 1:H:65:VAL:HG13   | 1:H:103:GLU:OE2   | 1.98                     | 0.63              |
| 1:K:129:PHE:CZ    | 1:K:137:VAL:HG21  | 2.33                     | 0.63              |
| 1:KA:810:LEU:O    | 1:KA:810:LEU:HD23 | 1.99                     | 0.63              |
| 1:M:30:VAL:HG21   | 1:M:50:MET:HE3    | 1.81                     | 0.63              |
| 1:OA:65:VAL:HG13  | 1:OA:103:GLU:OE2  | 1.99                     | 0.63              |
| 1:OB:65:VAL:HG13  | 1:OB:103:GLU:OE2  | 1.98                     | 0.63              |
| 1:V:129:PHE:CZ    | 1:V:137:VAL:HG21  | 2.33                     | 0.63              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:EA:810:LEU:O    | 1:EA:810:LEU:HD23 | 1.98                     | 0.63              |
| 1:EB:810:LEU:HD23 | 1:EB:810:LEU:O    | 1.99                     | 0.63              |
| 1:FB:65:VAL:HG13  | 1:FB:103:GLU:OE2  | 1.99                     | 0.63              |
| 1:KA:65:VAL:HG13  | 1:KA:103:GLU:OE2  | 1.99                     | 0.63              |
| 1:KB:48:MET:HA    | 1:KB:48:MET:HE3   | 1.79                     | 0.63              |
| 1:LA:810:LEU:HD23 | 1:LA:810:LEU:O    | 1.98                     | 0.63              |
| 1:N:810:LEU:HD23  | 1:N:810:LEU:O     | 1.99                     | 0.63              |
| 1:OA:810:LEU:HD23 | 1:OA:810:LEU:O    | 1.98                     | 0.63              |
| 1:Q:810:LEU:HD23  | 1:Q:810:LEU:O     | 1.99                     | 0.63              |
| 1:SA:168:ILE:HG22 | 1:SA:215:LEU:HD21 | 1.80                     | 0.63              |
| 1:VB:810:LEU:HD23 | 1:VB:810:LEU:O    | 1.99                     | 0.63              |
| 1:GB:810:LEU:O    | 1:GB:810:LEU:HD23 | 1.99                     | 0.63              |
| 1:I:129:PHE:CZ    | 1:I:137:VAL:HG21  | 2.33                     | 0.63              |
| 1:W:48:MET:HA     | 1:W:48:MET:HE3    | 1.80                     | 0.63              |
| 1:WB:48:MET:HE3   | 1:WB:48:MET:HA    | 1.79                     | 0.63              |
| 1:C:810:LEU:HD23  | 1:C:810:LEU:O     | 1.99                     | 0.63              |
| 1:DA:65:VAL:HG13  | 1:DA:103:GLU:OE2  | 1.99                     | 0.63              |
| 1:EA:48:MET:HE3   | 1:EA:48:MET:HA    | 1.81                     | 0.63              |
| 1:KB:65:VAL:HG13  | 1:KB:103:GLU:OE2  | 1.98                     | 0.63              |
| 1:L:168:ILE:HG22  | 1:L:215:LEU:HD21  | 1.80                     | 0.63              |
| 1:PA:65:VAL:HG13  | 1:PA:103:GLU:OE2  | 1.98                     | 0.63              |
| 1:QB:65:VAL:HG13  | 1:QB:103:GLU:OE2  | 1.99                     | 0.63              |
| 1:RA:129:PHE:CZ   | 1:RA:137:VAL:HG21 | 2.34                     | 0.63              |
| 1:TB:810:LEU:O    | 1:TB:810:LEU:HD23 | 1.99                     | 0.63              |
| 1:V:810:LEU:HD23  | 1:V:810:LEU:O     | 1.99                     | 0.63              |
| 1:VA:810:LEU:HD23 | 1:VA:810:LEU:O    | 1.98                     | 0.63              |
| 1:Z:65:VAL:HG13   | 1:Z:103:GLU:OE2   | 1.99                     | 0.63              |
| 1:A:810:LEU:HD23  | 1:A:810:LEU:O     | 1.99                     | 0.63              |
| 1:NA:65:VAL:HG13  | 1:NA:103:GLU:OE2  | 1.98                     | 0.63              |
| 1:SA:65:VAL:HG13  | 1:SA:103:GLU:OE2  | 1.99                     | 0.63              |
| 1:EB:65:VAL:HG13  | 1:EB:103:GLU:OE2  | 1.98                     | 0.63              |
| 1:I:65:VAL:HG13   | 1:I:103:GLU:OE2   | 1.98                     | 0.63              |
| 1:D:65:VAL:HG13   | 1:D:103:GLU:OE2   | 1.99                     | 0.62              |
| 1:M:65:VAL:HG13   | 1:M:103:GLU:OE2   | 1.99                     | 0.62              |
| 1:T:65:VAL:HG13   | 1:T:103:GLU:OE2   | 1.99                     | 0.62              |
| 1:C:65:VAL:HG13   | 1:C:103:GLU:OE2   | 1.98                     | 0.62              |
| 1:E:30:VAL:HG21   | 1:E:50:MET:HE3    | 1.80                     | 0.62              |
| 1:Q:65:VAL:HG13   | 1:Q:103:GLU:OE2   | 1.98                     | 0.62              |
| 1:TA:810:LEU:HD23 | 1:TA:810:LEU:O    | 1.98                     | 0.62              |
| 1:HB:65:VAL:HG13  | 1:HB:103:GLU:OE2  | 2.00                     | 0.62              |
| 1:TA:30:VAL:CG2   | 1:TA:50:MET:HE3   | 2.29                     | 0.62              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:XA:30:VAL:CG2   | 1:XA:50:MET:HE3   | 2.29                     | 0.62              |
| 1:XB:65:VAL:HG13  | 1:XB:103:GLU:OE2  | 1.99                     | 0.62              |
| 1:Y:30:VAL:CG2    | 1:Y:50:MET:HE3    | 2.29                     | 0.62              |
| 1:CA:810:LEU:O    | 1:CA:810:LEU:HD23 | 2.00                     | 0.62              |
| 1:VA:65:VAL:HG13  | 1:VA:103:GLU:OE2  | 1.99                     | 0.62              |
| 1:XB:810:LEU:HD23 | 1:XB:810:LEU:O    | 2.00                     | 0.62              |
| 1:AA:810:LEU:HD23 | 1:AA:810:LEU:O    | 2.00                     | 0.62              |
| 1:R:65:VAL:HG13   | 1:R:103:GLU:OE2   | 2.00                     | 0.62              |
| 1:RB:345:ASP:OD2  | 1:RB:349:VAL:HG13 | 2.00                     | 0.62              |
| 1:CA:65:VAL:HG13  | 1:CA:103:GLU:OE2  | 1.99                     | 0.62              |
| 1:G:65:VAL:HG13   | 1:G:103:GLU:OE2   | 1.99                     | 0.62              |
| 1:IB:30:VAL:HG21  | 1:IB:50:MET:HE3   | 1.80                     | 0.62              |
| 1:LB:48:MET:HE3   | 1:LB:48:MET:HA    | 1.80                     | 0.62              |
| 1:LB:65:VAL:HG13  | 1:LB:103:GLU:OE2  | 2.00                     | 0.62              |
| 1:NA:48:MET:HA    | 1:NA:48:MET:HE3   | 1.82                     | 0.62              |
| 1:UA:65:VAL:HG13  | 1:UA:103:GLU:OE2  | 2.00                     | 0.62              |
| 1:ZA:539:LEU:HD11 | 1:ZA:599:ILE:HD11 | 1.81                     | 0.62              |
| 1:F:810:LEU:HD23  | 1:F:810:LEU:O     | 1.99                     | 0.62              |
| 1:MA:810:LEU:O    | 1:MA:810:LEU:HD23 | 1.99                     | 0.62              |
| 1:MB:65:VAL:HG13  | 1:MB:103:GLU:OE2  | 1.99                     | 0.62              |
| 1:NB:65:VAL:HG13  | 1:NB:103:GLU:OE2  | 2.00                     | 0.62              |
| 1:PB:65:VAL:HG13  | 1:PB:103:GLU:OE2  | 1.99                     | 0.62              |
| 1:RA:65:VAL:HG13  | 1:RA:103:GLU:OE2  | 1.99                     | 0.62              |
| 1:Y:539:LEU:HD11  | 1:Y:599:ILE:HD11  | 1.81                     | 0.62              |
| 1:AC:65:VAL:HG13  | 1:AC:103:GLU:OE2  | 1.99                     | 0.62              |
| 1:B:65:VAL:HG13   | 1:B:103:GLU:OE2   | 1.99                     | 0.62              |
| 1:BB:65:VAL:HG13  | 1:BB:103:GLU:OE2  | 1.99                     | 0.62              |
| 1:GA:810:LEU:HD23 | 1:GA:810:LEU:O    | 1.99                     | 0.62              |
| 1:E:65:VAL:HG13   | 1:E:103:GLU:OE2   | 1.99                     | 0.62              |
| 1:F:65:VAL:HG13   | 1:F:103:GLU:OE2   | 2.00                     | 0.62              |
| 1:L:539:LEU:HD11  | 1:L:599:ILE:HD11  | 1.81                     | 0.62              |
| 1:N:65:VAL:HG13   | 1:N:103:GLU:OE2   | 2.00                     | 0.62              |
| 1:R:30:VAL:HG21   | 1:R:50:MET:HE3    | 1.82                     | 0.62              |
| 1:E:810:LEU:O     | 1:E:810:LEU:HD23  | 2.00                     | 0.62              |
| 1:G:48:MET:HA     | 1:G:48:MET:HE3    | 1.81                     | 0.62              |
| 1:HA:65:VAL:HG13  | 1:HA:103:GLU:OE2  | 1.99                     | 0.62              |
| 1:JA:810:LEU:O    | 1:JA:810:LEU:HD23 | 2.00                     | 0.62              |
| 1:NB:810:LEU:HD23 | 1:NB:810:LEU:O    | 2.00                     | 0.62              |
| 1:RB:48:MET:HA    | 1:RB:48:MET:HE3   | 1.81                     | 0.62              |
| 1:Y:810:LEU:HD23  | 1:Y:810:LEU:O     | 2.00                     | 0.62              |
| 1:PA:810:LEU:O    | 1:PA:810:LEU:HD23 | 2.00                     | 0.61              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:Y:65:VAL:HG13   | 1:Y:103:GLU:OE2   | 1.99                     | 0.61              |
| 1:DB:30:VAL:HG21  | 1:DB:50:MET:HE3   | 1.82                     | 0.61              |
| 1:MB:30:VAL:HG21  | 1:MB:50:MET:HE3   | 1.81                     | 0.61              |
| 1:IB:810:LEU:O    | 1:IB:810:LEU:HD23 | 1.99                     | 0.61              |
| 1:TA:65:VAL:HG13  | 1:TA:103:GLU:OE2  | 2.00                     | 0.61              |
| 1:WB:539:LEU:HD11 | 1:WB:599:ILE:HD11 | 1.82                     | 0.61              |
| 1:XB:30:VAL:HG21  | 1:XB:50:MET:HE3   | 1.82                     | 0.61              |
| 1:MA:48:MET:HE3   | 1:MA:48:MET:HA    | 1.82                     | 0.61              |
| 1:O:30:VAL:HG21   | 1:O:50:MET:HE3    | 1.81                     | 0.61              |
| 1:JA:48:MET:HA    | 1:JA:48:MET:HE3   | 1.81                     | 0.61              |
| 1:WB:810:LEU:O    | 1:WB:810:LEU:HD23 | 2.00                     | 0.61              |
| 1:RB:810:LEU:O    | 1:RB:810:LEU:HD23 | 1.99                     | 0.61              |
| 1:YB:65:VAL:HG13  | 1:YB:103:GLU:OE2  | 2.00                     | 0.61              |
| 1:KB:810:LEU:HD23 | 1:KB:810:LEU:O    | 2.01                     | 0.61              |
| 1:L:65:VAL:HG13   | 1:L:103:GLU:OE2   | 2.00                     | 0.61              |
| 1:LB:810:LEU:O    | 1:LB:810:LEU:HD23 | 2.00                     | 0.61              |
| 1:FB:30:VAL:HG21  | 1:FB:50:MET:HE3   | 1.83                     | 0.61              |
| 1:V:539:LEU:HD11  | 1:V:599:ILE:HD11  | 1.82                     | 0.61              |
| 1:ZA:65:VAL:HG13  | 1:ZA:103:GLU:OE2  | 2.00                     | 0.61              |
| 1:IB:168:ILE:HG22 | 1:IB:215:LEU:HD21 | 1.81                     | 0.61              |
| 1:JA:9:ARG:HH12   | 1:KA:19:LEU:HD11  | 1.64                     | 0.61              |
| 1:OB:810:LEU:O    | 1:OB:810:LEU:HD23 | 2.00                     | 0.61              |
| 1:P:810:LEU:O     | 1:P:810:LEU:HD23  | 2.01                     | 0.61              |
| 1:PB:810:LEU:HD23 | 1:PB:810:LEU:O    | 2.01                     | 0.61              |
| 1:UA:810:LEU:O    | 1:UA:810:LEU:HD23 | 2.01                     | 0.61              |
| 1:AC:810:LEU:O    | 1:AC:810:LEU:HD23 | 2.01                     | 0.60              |
| 1:BA:810:LEU:O    | 1:BA:810:LEU:HD23 | 2.00                     | 0.60              |
| 1:JA:539:LEU:HD11 | 1:JA:599:ILE:HD11 | 1.82                     | 0.60              |
| 1:QB:810:LEU:O    | 1:QB:810:LEU:HD23 | 2.02                     | 0.60              |
| 1:XA:30:VAL:HG21  | 1:XA:50:MET:HE3   | 1.81                     | 0.60              |
| 1:MB:48:MET:HA    | 1:MB:48:MET:HE3   | 1.83                     | 0.60              |
| 1:X:810:LEU:O     | 1:X:810:LEU:HD23  | 2.01                     | 0.60              |
| 1:YB:810:LEU:O    | 1:YB:810:LEU:HD23 | 2.01                     | 0.60              |
| 1:CB:810:LEU:HD23 | 1:CB:810:LEU:O    | 2.01                     | 0.60              |
| 1:NA:810:LEU:HD23 | 1:NA:810:LEU:O    | 2.01                     | 0.60              |
| 1:TA:30:VAL:HG21  | 1:TA:50:MET:HE3   | 1.81                     | 0.60              |
| 1:DA:810:LEU:HD23 | 1:DA:810:LEU:O    | 2.02                     | 0.60              |
| 1:K:30:VAL:HG21   | 1:K:50:MET:HE3    | 1.82                     | 0.60              |
| 1:QA:810:LEU:HD23 | 1:QA:810:LEU:O    | 2.00                     | 0.60              |
| 1:SA:810:LEU:O    | 1:SA:810:LEU:HD23 | 2.01                     | 0.60              |
| 1:J:529:ILE:CD1   | 1:J:583:VAL:HG11  | 2.32                     | 0.60              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:T:48:MET:HA     | 1:T:48:MET:HE3    | 1.82                     | 0.60              |
| 1:XA:529:ILE:CD1  | 1:XA:583:VAL:HG11 | 2.32                     | 0.60              |
| 1:AA:65:VAL:HG13  | 1:AA:103:GLU:OE2  | 2.01                     | 0.59              |
| 1:M:529:ILE:CD1   | 1:M:583:VAL:HG11  | 2.32                     | 0.59              |
| 1:O:65:VAL:HG13   | 1:O:103:GLU:OE2   | 2.02                     | 0.59              |
| 1:UA:30:VAL:HG21  | 1:UA:50:MET:HE3   | 1.85                     | 0.59              |
| 1:IA:529:ILE:CD1  | 1:IA:583:VAL:HG11 | 2.32                     | 0.59              |
| 1:JA:529:ILE:CD1  | 1:JA:583:VAL:HG11 | 2.33                     | 0.59              |
| 1:SA:529:ILE:CD1  | 1:SA:583:VAL:HG11 | 2.33                     | 0.59              |
| 1:WA:529:ILE:CD1  | 1:WA:583:VAL:HG11 | 2.33                     | 0.59              |
| 1:O:539:LEU:HD11  | 1:O:599:ILE:HD11  | 1.85                     | 0.59              |
| 1:TB:575:ILE:HD12 | 1:TB:603:VAL:HG13 | 1.84                     | 0.59              |
| 1:Y:575:ILE:HD12  | 1:Y:603:VAL:HG13  | 1.85                     | 0.59              |
| 1:E:529:ILE:CD1   | 1:E:583:VAL:HG11  | 2.33                     | 0.59              |
| 1:G:13:TYR:HA     | 1:G:50:MET:HE3    | 1.85                     | 0.59              |
| 1:K:575:ILE:HD12  | 1:K:603:VAL:HG13  | 1.84                     | 0.59              |
| 1:AC:529:ILE:HD13 | 1:AC:583:VAL:HG11 | 1.84                     | 0.59              |
| 1:EB:30:VAL:HG21  | 1:EB:50:MET:HE3   | 1.84                     | 0.59              |
| 1:VB:529:ILE:CD1  | 1:VB:583:VAL:HG11 | 2.33                     | 0.59              |
| 1:WB:9:ARG:HH12   | 1:XB:19:LEU:HD11  | 1.67                     | 0.59              |
| 1:X:539:LEU:HD11  | 1:X:599:ILE:HD11  | 1.83                     | 0.59              |
| 1:AB:529:ILE:CD1  | 1:AB:583:VAL:HG11 | 2.32                     | 0.59              |
| 1:D:529:ILE:CD1   | 1:D:583:VAL:HG11  | 2.33                     | 0.59              |
| 1:KA:30:VAL:HG21  | 1:KA:50:MET:HE3   | 1.83                     | 0.59              |
| 1:LA:529:ILE:CD1  | 1:LA:583:VAL:HG11 | 2.33                     | 0.59              |
| 1:Q:30:VAL:HG21   | 1:Q:50:MET:HE3    | 1.85                     | 0.59              |
| 1:XB:529:ILE:CD1  | 1:XB:583:VAL:HG11 | 2.32                     | 0.59              |
| 1:A:529:ILE:CD1   | 1:A:583:VAL:HG11  | 2.32                     | 0.59              |
| 1:BA:30:VAL:CG2   | 1:BA:50:MET:HE3   | 2.32                     | 0.59              |
| 1:KA:529:ILE:CD1  | 1:KA:583:VAL:HG11 | 2.32                     | 0.59              |
| 1:NA:529:ILE:HD13 | 1:NA:583:VAL:HG11 | 1.85                     | 0.59              |
| 1:RA:529:ILE:CD1  | 1:RA:583:VAL:HG11 | 2.33                     | 0.59              |
| 1:YB:529:ILE:CD1  | 1:YB:583:VAL:HG11 | 2.33                     | 0.59              |
| 1:E:30:VAL:CG2    | 1:E:50:MET:HE3    | 2.33                     | 0.59              |
| 1:OA:575:ILE:HD12 | 1:OA:603:VAL:HG13 | 1.85                     | 0.59              |
| 1:UA:575:ILE:HD12 | 1:UA:603:VAL:HG13 | 1.85                     | 0.59              |
| 1:W:529:ILE:CD1   | 1:W:583:VAL:HG11  | 2.33                     | 0.58              |
| 1:Z:48:MET:HE3    | 1:Z:48:MET:HA     | 1.84                     | 0.58              |
| 1:B:529:ILE:CD1   | 1:B:583:VAL:HG11  | 2.33                     | 0.58              |
| 1:PB:30:VAL:HG21  | 1:PB:50:MET:HE3   | 1.86                     | 0.58              |
| 1:PA:529:ILE:CD1  | 1:PA:583:VAL:HG11 | 2.33                     | 0.58              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:ZA:575:ILE:HD12 | 1:ZA:603:VAL:HG13 | 1.84                     | 0.58              |
| 1:O:575:ILE:HD12  | 1:O:603:VAL:HG13  | 1.85                     | 0.58              |
| 1:OA:529:ILE:CD1  | 1:OA:583:VAL:HG11 | 2.32                     | 0.58              |
| 1:SB:529:ILE:CD1  | 1:SB:583:VAL:HG11 | 2.34                     | 0.58              |
| 1:DA:30:VAL:HG21  | 1:DA:50:MET:HE3   | 1.86                     | 0.58              |
| 1:I:529:ILE:CD1   | 1:I:583:VAL:HG11  | 2.33                     | 0.58              |
| 1:JB:529:ILE:CD1  | 1:JB:583:VAL:HG11 | 2.33                     | 0.58              |
| 1:GA:48:MET:HA    | 1:GA:48:MET:HE3   | 1.85                     | 0.58              |
| 1:T:575:ILE:HD12  | 1:T:603:VAL:HG13  | 1.85                     | 0.58              |
| 1:UB:575:ILE:HD12 | 1:UB:603:VAL:HG13 | 1.85                     | 0.58              |
| 1:B:575:ILE:HD12  | 1:B:603:VAL:HG13  | 1.84                     | 0.58              |
| 1:CB:230:ARG:CB   | 1:CB:268:LEU:HD11 | 2.34                     | 0.58              |
| 1:D:230:ARG:CB    | 1:D:268:LEU:HD11  | 2.34                     | 0.58              |
| 1:EA:230:ARG:CB   | 1:EA:268:LEU:HD11 | 2.33                     | 0.58              |
| 1:EB:765:VAL:HG22 | 1:FB:759:LEU:HD21 | 1.86                     | 0.58              |
| 1:PA:575:ILE:HD12 | 1:PA:603:VAL:HG13 | 1.86                     | 0.58              |
| 1:CA:575:ILE:HD12 | 1:CA:603:VAL:HG13 | 1.86                     | 0.58              |
| 1:LB:575:ILE:HD12 | 1:LB:603:VAL:HG13 | 1.84                     | 0.58              |
| 1:RB:230:ARG:CB   | 1:RB:268:LEU:HD11 | 2.34                     | 0.58              |
| 1:XB:230:ARG:CB   | 1:XB:268:LEU:HD11 | 2.34                     | 0.58              |
| 1:ZB:575:ILE:HD12 | 1:ZB:603:VAL:HG13 | 1.86                     | 0.58              |
| 1:BA:230:ARG:CB   | 1:BA:268:LEU:HD11 | 2.34                     | 0.58              |
| 1:FB:810:LEU:HD23 | 1:FB:810:LEU:O    | 2.04                     | 0.58              |
| 1:M:230:ARG:CB    | 1:M:268:LEU:HD11  | 2.34                     | 0.58              |
| 1:Q:529:ILE:CD1   | 1:Q:583:VAL:HG11  | 2.34                     | 0.58              |
| 1:SA:575:ILE:HD12 | 1:SA:603:VAL:HG13 | 1.86                     | 0.58              |
| 1:WB:529:ILE:CD1  | 1:WB:583:VAL:HG11 | 2.33                     | 0.58              |
| 1:GB:230:ARG:CB   | 1:GB:268:LEU:HD11 | 2.34                     | 0.58              |
| 1:L:575:ILE:HD12  | 1:L:603:VAL:HG13  | 1.84                     | 0.58              |
| 1:QB:30:VAL:HG21  | 1:QB:50:MET:HE3   | 1.85                     | 0.58              |
| 1:S:230:ARG:CB    | 1:S:268:LEU:HD11  | 2.34                     | 0.58              |
| 1:TA:575:ILE:HD12 | 1:TA:603:VAL:HG13 | 1.86                     | 0.58              |
| 1:WA:575:ILE:HD12 | 1:WA:603:VAL:HG13 | 1.86                     | 0.58              |
| 1:YA:168:ILE:HG22 | 1:YA:215:LEU:HD21 | 1.85                     | 0.58              |
| 1:EB:529:ILE:CD1  | 1:EB:583:VAL:HG11 | 2.34                     | 0.57              |
| 1:FA:529:ILE:CD1  | 1:FA:583:VAL:HG11 | 2.34                     | 0.57              |
| 1:GA:529:ILE:HD13 | 1:GA:583:VAL:HG11 | 1.85                     | 0.57              |
| 1:NA:230:ARG:CB   | 1:NA:268:LEU:HD11 | 2.34                     | 0.57              |
| 1:S:575:ILE:HD12  | 1:S:603:VAL:HG13  | 1.86                     | 0.57              |
| 1:FA:230:ARG:CB   | 1:FA:268:LEU:HD11 | 2.34                     | 0.57              |
| 1:I:575:ILE:HD12  | 1:I:603:VAL:HG13  | 1.86                     | 0.57              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:KA:230:ARG:CB   | 1:KA:268:LEU:HD11 | 2.34                     | 0.57              |
| 1:P:230:ARG:CB    | 1:P:268:LEU:HD11  | 2.34                     | 0.57              |
| 1:R:575:ILE:HD12  | 1:R:603:VAL:HG13  | 1.87                     | 0.57              |
| 1:V:48:MET:HA     | 1:V:48:MET:HE3    | 1.86                     | 0.57              |
| 1:XA:523:PHE:CD2  | 1:XA:568:VAL:HG23 | 2.39                     | 0.57              |
| 1:XB:575:ILE:HD12 | 1:XB:603:VAL:HG13 | 1.86                     | 0.57              |
| 1:A:230:ARG:CB    | 1:A:268:LEU:HD11  | 2.34                     | 0.57              |
| 1:L:529:ILE:CD1   | 1:L:583:VAL:HG11  | 2.35                     | 0.57              |
| 1:SB:230:ARG:CB   | 1:SB:268:LEU:HD11 | 2.34                     | 0.57              |
| 1:T:230:ARG:CB    | 1:T:268:LEU:HD11  | 2.34                     | 0.57              |
| 1:Z:230:ARG:CB    | 1:Z:268:LEU:HD11  | 2.35                     | 0.57              |
| 1:CA:230:ARG:CB   | 1:CA:268:LEU:HD11 | 2.34                     | 0.57              |
| 1:DA:529:ILE:CD1  | 1:DA:583:VAL:HG11 | 2.35                     | 0.57              |
| 1:O:230:ARG:CB    | 1:O:268:LEU:HD11  | 2.34                     | 0.57              |
| 1:OA:230:ARG:CB   | 1:OA:268:LEU:HD11 | 2.34                     | 0.57              |
| 1:OB:230:ARG:CB   | 1:OB:268:LEU:HD11 | 2.34                     | 0.57              |
| 1:V:230:ARG:CB    | 1:V:268:LEU:HD11  | 2.35                     | 0.57              |
| 1:HA:575:ILE:HD12 | 1:HA:603:VAL:HG13 | 1.85                     | 0.57              |
| 1:J:523:PHE:CD2   | 1:J:568:VAL:HG23  | 2.39                     | 0.57              |
| 1:NB:575:ILE:HD12 | 1:NB:603:VAL:HG13 | 1.86                     | 0.57              |
| 1:P:65:VAL:HG13   | 1:P:103:GLU:OE2   | 2.04                     | 0.57              |
| 1:V:529:ILE:CD1   | 1:V:583:VAL:HG11  | 2.34                     | 0.57              |
| 1:WB:575:ILE:HD12 | 1:WB:603:VAL:HG13 | 1.87                     | 0.57              |
| 1:AC:230:ARG:CB   | 1:AC:268:LEU:HD11 | 2.34                     | 0.57              |
| 1:C:230:ARG:CB    | 1:C:268:LEU:HD11  | 2.35                     | 0.57              |
| 1:DB:230:ARG:CB   | 1:DB:268:LEU:HD11 | 2.35                     | 0.57              |
| 1:E:529:ILE:HD12  | 1:E:583:VAL:HG11  | 1.85                     | 0.57              |
| 1:JA:575:ILE:HD12 | 1:JA:603:VAL:HG13 | 1.86                     | 0.57              |
| 1:PB:230:ARG:CB   | 1:PB:268:LEU:HD11 | 2.35                     | 0.57              |
| 1:QA:575:ILE:HD12 | 1:QA:603:VAL:HG13 | 1.87                     | 0.57              |
| 1:SA:529:ILE:HD12 | 1:SA:583:VAL:HG11 | 1.86                     | 0.57              |
| 1:AB:230:ARG:CB   | 1:AB:268:LEU:HD11 | 2.34                     | 0.57              |
| 1:DA:230:ARG:CB   | 1:DA:268:LEU:HD11 | 2.35                     | 0.57              |
| 1:DB:65:VAL:HG13  | 1:DB:103:GLU:OE2  | 2.04                     | 0.57              |
| 1:EA:575:ILE:HD12 | 1:EA:603:VAL:HG13 | 1.87                     | 0.57              |
| 1:MB:230:ARG:CB   | 1:MB:268:LEU:HD11 | 2.35                     | 0.57              |
| 1:R:810:LEU:O     | 1:R:810:LEU:HD23  | 2.04                     | 0.57              |
| 1:RA:230:ARG:CB   | 1:RA:268:LEU:HD11 | 2.34                     | 0.57              |
| 1:VB:575:ILE:HD12 | 1:VB:603:VAL:HG13 | 1.86                     | 0.57              |
| 1:CB:575:ILE:HD12 | 1:CB:603:VAL:HG13 | 1.87                     | 0.57              |
| 1:GA:575:ILE:HD12 | 1:GA:603:VAL:HG13 | 1.86                     | 0.57              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:IA:65:VAL:HG13  | 1:IA:103:GLU:OE2  | 2.05                     | 0.57              |
| 1:JB:810:LEU:O    | 1:JB:810:LEU:HD23 | 2.05                     | 0.57              |
| 1:L:230:ARG:CB    | 1:L:268:LEU:HD11  | 2.35                     | 0.57              |
| 1:OB:529:ILE:CD1  | 1:OB:583:VAL:HG11 | 2.35                     | 0.57              |
| 1:W:575:ILE:HD12  | 1:W:603:VAL:HG13  | 1.87                     | 0.57              |
| 1:WA:810:LEU:HD23 | 1:WA:810:LEU:O    | 2.05                     | 0.57              |
| 1:AA:575:ILE:HD12 | 1:AA:603:VAL:HG13 | 1.86                     | 0.57              |
| 1:BA:529:ILE:CD1  | 1:BA:583:VAL:HG11 | 2.35                     | 0.57              |
| 1:FA:575:ILE:HD12 | 1:FA:603:VAL:HG13 | 1.87                     | 0.57              |
| 1:MB:529:ILE:CD1  | 1:MB:583:VAL:HG11 | 2.35                     | 0.57              |
| 1:Q:230:ARG:CB    | 1:Q:268:LEU:HD11  | 2.35                     | 0.57              |
| 1:ZA:230:ARG:CB   | 1:ZA:268:LEU:HD11 | 2.35                     | 0.57              |
| 1:HB:230:ARG:CB   | 1:HB:268:LEU:HD11 | 2.35                     | 0.57              |
| 1:VB:65:VAL:HG13  | 1:VB:103:GLU:OE2  | 2.05                     | 0.57              |
| 1:YA:810:LEU:HD23 | 1:YA:810:LEU:O    | 2.05                     | 0.57              |
| 1:A:575:ILE:HD12  | 1:A:603:VAL:HG13  | 1.86                     | 0.56              |
| 1:BA:575:ILE:HD12 | 1:BA:603:VAL:HG13 | 1.87                     | 0.56              |
| 1:DA:575:ILE:HD12 | 1:DA:603:VAL:HG13 | 1.87                     | 0.56              |
| 1:F:230:ARG:CB    | 1:F:268:LEU:HD11  | 2.35                     | 0.56              |
| 1:F:575:ILE:HD12  | 1:F:603:VAL:HG13  | 1.86                     | 0.56              |
| 1:FA:65:VAL:HG13  | 1:FA:103:GLU:OE2  | 2.05                     | 0.56              |
| 1:G:230:ARG:CB    | 1:G:268:LEU:HD11  | 2.35                     | 0.56              |
| 1:HB:575:ILE:HD12 | 1:HB:603:VAL:HG13 | 1.86                     | 0.56              |
| 1:KA:575:ILE:HD12 | 1:KA:603:VAL:HG13 | 1.86                     | 0.56              |
| 1:R:529:ILE:CD1   | 1:R:583:VAL:HG11  | 2.35                     | 0.56              |
| 1:VA:230:ARG:CB   | 1:VA:268:LEU:HD11 | 2.35                     | 0.56              |
| 1:X:529:ILE:CD1   | 1:X:583:VAL:HG11  | 2.35                     | 0.56              |
| 1:EA:529:ILE:CD1  | 1:EA:583:VAL:HG11 | 2.35                     | 0.56              |
| 1:GA:230:ARG:CB   | 1:GA:268:LEU:HD11 | 2.35                     | 0.56              |
| 1:HA:230:ARG:CB   | 1:HA:268:LEU:HD11 | 2.35                     | 0.56              |
| 1:IA:575:ILE:HD12 | 1:IA:603:VAL:HG13 | 1.86                     | 0.56              |
| 1:JA:65:VAL:HG13  | 1:JA:103:GLU:OE2  | 2.04                     | 0.56              |
| 1:QB:230:ARG:CB   | 1:QB:268:LEU:HD11 | 2.35                     | 0.56              |
| 1:VB:230:ARG:CB   | 1:VB:268:LEU:HD11 | 2.35                     | 0.56              |
| 1:X:230:ARG:CB    | 1:X:268:LEU:HD11  | 2.36                     | 0.56              |
| 1:ZA:529:ILE:CD1  | 1:ZA:583:VAL:HG11 | 2.34                     | 0.56              |
| 1:AB:65:VAL:HG13  | 1:AB:103:GLU:OE2  | 2.06                     | 0.56              |
| 1:DB:529:ILE:HD13 | 1:DB:583:VAL:HG11 | 1.87                     | 0.56              |
| 1:FB:230:ARG:CB   | 1:FB:268:LEU:HD11 | 2.36                     | 0.56              |
| 1:FB:529:ILE:CD1  | 1:FB:583:VAL:HG11 | 2.35                     | 0.56              |
| 1:G:575:ILE:HD12  | 1:G:603:VAL:HG13  | 1.86                     | 0.56              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:G:810:LEU:O     | 1:G:810:LEU:HD23  | 2.06                     | 0.56              |
| 1:H:230:ARG:CB    | 1:H:268:LEU:HD11  | 2.35                     | 0.56              |
| 1:HB:529:ILE:CD1  | 1:HB:583:VAL:HG11 | 2.35                     | 0.56              |
| 1:I:230:ARG:CB    | 1:I:268:LEU:HD11  | 2.35                     | 0.56              |
| 1:IB:529:ILE:CD1  | 1:IB:583:VAL:HG11 | 2.35                     | 0.56              |
| 1:P:575:ILE:HD12  | 1:P:603:VAL:HG13  | 1.87                     | 0.56              |
| 1:QA:230:ARG:CB   | 1:QA:268:LEU:HD11 | 2.35                     | 0.56              |
| 1:R:230:ARG:CB    | 1:R:268:LEU:HD11  | 2.36                     | 0.56              |
| 1:UB:230:ARG:CB   | 1:UB:268:LEU:HD11 | 2.35                     | 0.56              |
| 1:W:65:VAL:HG13   | 1:W:103:GLU:OE2   | 2.05                     | 0.56              |
| 1:W:230:ARG:CB    | 1:W:268:LEU:HD11  | 2.36                     | 0.56              |
| 1:WB:65:VAL:HG13  | 1:WB:103:GLU:OE2  | 2.05                     | 0.56              |
| 1:YA:575:ILE:HD12 | 1:YA:603:VAL:HG13 | 1.87                     | 0.56              |
| 1:YB:230:ARG:CB   | 1:YB:268:LEU:HD11 | 2.35                     | 0.56              |
| 1:YB:575:ILE:HD12 | 1:YB:603:VAL:HG13 | 1.87                     | 0.56              |
| 1:Z:529:ILE:CD1   | 1:Z:583:VAL:HG11  | 2.35                     | 0.56              |
| 1:A:83:LEU:HD21   | 1:A:102:GLY:O     | 2.06                     | 0.56              |
| 1:DB:575:ILE:HD12 | 1:DB:603:VAL:HG13 | 1.88                     | 0.56              |
| 1:IB:230:ARG:CB   | 1:IB:268:LEU:HD11 | 2.35                     | 0.56              |
| 1:J:230:ARG:CB    | 1:J:268:LEU:HD11  | 2.36                     | 0.56              |
| 1:JB:65:VAL:HG13  | 1:JB:103:GLU:OE2  | 2.06                     | 0.56              |
| 1:MA:230:ARG:CB   | 1:MA:268:LEU:HD11 | 2.35                     | 0.56              |
| 1:Q:575:ILE:HD12  | 1:Q:603:VAL:HG13  | 1.87                     | 0.56              |
| 1:AA:230:ARG:CB   | 1:AA:268:LEU:HD11 | 2.36                     | 0.56              |
| 1:DB:810:LEU:O    | 1:DB:810:LEU:HD23 | 2.05                     | 0.56              |
| 1:IA:230:ARG:CB   | 1:IA:268:LEU:HD11 | 2.35                     | 0.56              |
| 1:LA:230:ARG:CB   | 1:LA:268:LEU:HD11 | 2.35                     | 0.56              |
| 1:MB:810:LEU:HD23 | 1:MB:810:LEU:O    | 2.05                     | 0.56              |
| 1:N:529:ILE:CD1   | 1:N:583:VAL:HG11  | 2.35                     | 0.56              |
| 1:QB:529:ILE:CD1  | 1:QB:583:VAL:HG11 | 2.35                     | 0.56              |
| 1:RB:575:ILE:HD12 | 1:RB:603:VAL:HG13 | 1.87                     | 0.56              |
| 1:SB:65:VAL:HG13  | 1:SB:103:GLU:OE2  | 2.06                     | 0.56              |
| 1:Z:575:ILE:HD12  | 1:Z:603:VAL:HG13  | 1.88                     | 0.56              |
| 1:ZB:529:ILE:CD1  | 1:ZB:583:VAL:HG11 | 2.36                     | 0.56              |
| 1:C:529:ILE:HD13  | 1:C:583:VAL:HG11  | 1.87                     | 0.56              |
| 1:EB:575:ILE:HD12 | 1:EB:603:VAL:HG13 | 1.87                     | 0.56              |
| 1:FB:575:ILE:HD12 | 1:FB:603:VAL:HG13 | 1.87                     | 0.56              |
| 1:I:810:LEU:HD23  | 1:I:810:LEU:O     | 2.05                     | 0.56              |
| 1:N:230:ARG:CB    | 1:N:268:LEU:HD11  | 2.36                     | 0.56              |
| 1:RB:529:ILE:CD1  | 1:RB:583:VAL:HG11 | 2.35                     | 0.56              |
| 1:Y:230:ARG:CB    | 1:Y:268:LEU:HD11  | 2.36                     | 0.56              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:CA:30:VAL:HG21  | 1:CA:50:MET:HE3   | 1.88                     | 0.56              |
| 1:E:230:ARG:CB    | 1:E:268:LEU:HD11  | 2.36                     | 0.56              |
| 1:IB:30:VAL:CG2   | 1:IB:50:MET:HE3   | 2.36                     | 0.56              |
| 1:JA:230:ARG:CB   | 1:JA:268:LEU:HD11 | 2.36                     | 0.56              |
| 1:LA:48:MET:HE3   | 1:LA:49:ARG:H     | 1.71                     | 0.56              |
| 1:LB:230:ARG:CB   | 1:LB:268:LEU:HD11 | 2.35                     | 0.56              |
| 1:NB:230:ARG:CB   | 1:NB:268:LEU:HD11 | 2.36                     | 0.56              |
| 1:O:83:LEU:HD21   | 1:O:102:GLY:O     | 2.06                     | 0.56              |
| 1:RA:575:ILE:HD12 | 1:RA:603:VAL:HG13 | 1.87                     | 0.56              |
| 1:SB:575:ILE:HD12 | 1:SB:603:VAL:HG13 | 1.87                     | 0.56              |
| 1:UA:230:ARG:CB   | 1:UA:268:LEU:HD11 | 2.36                     | 0.56              |
| 1:Y:529:ILE:CD1   | 1:Y:583:VAL:HG11  | 2.36                     | 0.56              |
| 1:YA:30:VAL:CG2   | 1:YA:50:MET:HE3   | 2.35                     | 0.56              |
| 1:FA:83:LEU:HD21  | 1:FA:102:GLY:O    | 2.06                     | 0.56              |
| 1:JB:230:ARG:CB   | 1:JB:268:LEU:HD11 | 2.36                     | 0.56              |
| 1:VB:83:LEU:HD21  | 1:VB:102:GLY:O    | 2.06                     | 0.56              |
| 1:WA:230:ARG:CB   | 1:WA:268:LEU:HD11 | 2.35                     | 0.56              |
| 1:AC:575:ILE:HD12 | 1:AC:603:VAL:HG13 | 1.88                     | 0.56              |
| 1:E:575:ILE:HD12  | 1:E:603:VAL:HG13  | 1.86                     | 0.56              |
| 1:JA:83:LEU:HD21  | 1:JA:102:GLY:O    | 2.06                     | 0.56              |
| 1:P:30:VAL:CG2    | 1:P:50:MET:HE3    | 2.36                     | 0.56              |
| 1:V:523:PHE:CD2   | 1:V:568:VAL:HG23  | 2.41                     | 0.56              |
| 1:VA:575:ILE:HD12 | 1:VA:603:VAL:HG13 | 1.88                     | 0.56              |
| 1:XA:575:ILE:HD12 | 1:XA:603:VAL:HG13 | 1.88                     | 0.56              |
| 1:EB:230:ARG:CB   | 1:EB:268:LEU:HD11 | 2.35                     | 0.56              |
| 1:IB:575:ILE:HD12 | 1:IB:603:VAL:HG13 | 1.87                     | 0.56              |
| 1:KB:230:ARG:CB   | 1:KB:268:LEU:HD11 | 2.36                     | 0.56              |
| 1:KB:529:ILE:CD1  | 1:KB:583:VAL:HG11 | 2.36                     | 0.56              |
| 1:PB:575:ILE:HD12 | 1:PB:603:VAL:HG13 | 1.86                     | 0.56              |
| 1:S:529:ILE:HD12  | 1:S:583:VAL:HG11  | 1.88                     | 0.56              |
| 1:XA:230:ARG:CB   | 1:XA:268:LEU:HD11 | 2.36                     | 0.56              |
| 1:B:230:ARG:CB    | 1:B:268:LEU:HD11  | 2.35                     | 0.55              |
| 1:BB:529:ILE:CD1  | 1:BB:583:VAL:HG11 | 2.35                     | 0.55              |
| 1:GB:575:ILE:HD12 | 1:GB:603:VAL:HG13 | 1.86                     | 0.55              |
| 1:JB:83:LEU:HD21  | 1:JB:102:GLY:O    | 2.06                     | 0.55              |
| 1:K:810:LEU:HD23  | 1:K:810:LEU:O     | 2.06                     | 0.55              |
| 1:O:168:ILE:HG22  | 1:O:215:LEU:CD2   | 2.35                     | 0.55              |
| 1:SA:230:ARG:CB   | 1:SA:268:LEU:HD11 | 2.36                     | 0.55              |
| 1:T:529:ILE:CD1   | 1:T:583:VAL:HG11  | 2.35                     | 0.55              |
| 1:TA:529:ILE:CD1  | 1:TA:583:VAL:HG11 | 2.36                     | 0.55              |
| 1:A:65:VAL:HG13   | 1:A:103:GLU:OE2   | 2.07                     | 0.55              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:BB:575:ILE:HD12 | 1:BB:603:VAL:HG13 | 1.89                     | 0.55              |
| 1:F:529:ILE:CD1   | 1:F:583:VAL:HG11  | 2.36                     | 0.55              |
| 1:H:575:ILE:HD12  | 1:H:603:VAL:HG13  | 1.88                     | 0.55              |
| 1:IA:83:LEU:HD21  | 1:IA:102:GLY:O    | 2.06                     | 0.55              |
| 1:MA:529:ILE:CD1  | 1:MA:583:VAL:HG11 | 2.36                     | 0.55              |
| 1:MA:575:ILE:HD12 | 1:MA:603:VAL:HG13 | 1.87                     | 0.55              |
| 1:NA:575:ILE:HD12 | 1:NA:603:VAL:HG13 | 1.88                     | 0.55              |
| 1:PA:230:ARG:CB   | 1:PA:268:LEU:HD11 | 2.36                     | 0.55              |
| 1:QB:575:ILE:HD12 | 1:QB:603:VAL:HG13 | 1.87                     | 0.55              |
| 1:TA:65:VAL:HG11  | 1:TA:100:TYR:HB2  | 1.87                     | 0.55              |
| 1:TA:230:ARG:CB   | 1:TA:268:LEU:HD11 | 2.35                     | 0.55              |
| 1:XA:810:LEU:O    | 1:XA:810:LEU:HD23 | 2.06                     | 0.55              |
| 1:Z:810:LEU:O     | 1:Z:810:LEU:HD23  | 2.06                     | 0.55              |
| 1:IB:529:ILE:HD12 | 1:IB:583:VAL:HG11 | 1.88                     | 0.55              |
| 1:V:575:ILE:HD12  | 1:V:603:VAL:HG13  | 1.88                     | 0.55              |
| 1:VA:168:ILE:HG22 | 1:VA:215:LEU:CD2  | 2.36                     | 0.55              |
| 1:C:575:ILE:HD12  | 1:C:603:VAL:HG13  | 1.87                     | 0.55              |
| 1:G:529:ILE:CD1   | 1:G:583:VAL:HG11  | 2.36                     | 0.55              |
| 1:IB:523:PHE:CD2  | 1:IB:568:VAL:HG23 | 2.41                     | 0.55              |
| 1:JB:168:ILE:HG22 | 1:JB:215:LEU:CD2  | 2.35                     | 0.55              |
| 1:OB:575:ILE:HD12 | 1:OB:603:VAL:HG13 | 1.87                     | 0.55              |
| 1:UA:529:ILE:CD1  | 1:UA:583:VAL:HG11 | 2.36                     | 0.55              |
| 1:Z:523:PHE:CD2   | 1:Z:568:VAL:HG23  | 2.42                     | 0.55              |
| 1:DB:30:VAL:CG2   | 1:DB:50:MET:HE3   | 2.37                     | 0.55              |
| 1:K:230:ARG:CB    | 1:K:268:LEU:HD11  | 2.37                     | 0.55              |
| 1:P:529:ILE:HD13  | 1:P:583:VAL:HG11  | 1.87                     | 0.55              |
| 1:QA:65:VAL:HG11  | 1:QA:100:TYR:HB2  | 1.88                     | 0.55              |
| 1:S:529:ILE:CD1   | 1:S:583:VAL:HG11  | 2.37                     | 0.55              |
| 1:X:575:ILE:HD12  | 1:X:603:VAL:HG13  | 1.89                     | 0.55              |
| 1:BB:230:ARG:CB   | 1:BB:268:LEU:HD11 | 2.36                     | 0.55              |
| 1:H:523:PHE:CD2   | 1:H:568:VAL:HG23  | 2.41                     | 0.55              |
| 1:HB:230:ARG:HB2  | 1:HB:268:LEU:HD11 | 1.89                     | 0.55              |
| 1:MB:523:PHE:CD2  | 1:MB:568:VAL:HG23 | 2.42                     | 0.55              |
| 1:N:575:ILE:HD12  | 1:N:603:VAL:HG13  | 1.89                     | 0.55              |
| 1:O:810:LEU:O     | 1:O:810:LEU:HD23  | 2.06                     | 0.55              |
| 1:W:345:ASP:OD2   | 1:W:349:VAL:HG13  | 2.07                     | 0.55              |
| 1:GB:529:ILE:CD1  | 1:GB:583:VAL:HG11 | 2.37                     | 0.55              |
| 1:J:810:LEU:O     | 1:J:810:LEU:HD23  | 2.06                     | 0.55              |
| 1:LA:575:ILE:HD12 | 1:LA:603:VAL:HG13 | 1.87                     | 0.55              |
| 1:VA:523:PHE:CD2  | 1:VA:568:VAL:HG23 | 2.42                     | 0.55              |
| 1:AB:83:LEU:HD21  | 1:AB:102:GLY:O    | 2.07                     | 0.55              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:CA:65:VAL:HG11  | 1:CA:100:TYR:HB2  | 1.88                     | 0.55              |
| 1:J:575:ILE:HD12  | 1:J:603:VAL:HG13  | 1.88                     | 0.55              |
| 1:OB:48:MET:HE3   | 1:OB:48:MET:HA    | 1.88                     | 0.55              |
| 1:TB:83:LEU:HD21  | 1:TB:102:GLY:O    | 2.07                     | 0.55              |
| 1:TB:230:ARG:CB   | 1:TB:268:LEU:HD11 | 2.36                     | 0.55              |
| 1:X:529:ILE:HD12  | 1:X:583:VAL:HG11  | 1.89                     | 0.55              |
| 1:GA:65:VAL:HG13  | 1:GA:103:GLU:OE2  | 2.07                     | 0.55              |
| 1:GA:83:LEU:HD21  | 1:GA:102:GLY:O    | 2.07                     | 0.55              |
| 1:YA:230:ARG:CB   | 1:YA:268:LEU:HD11 | 2.37                     | 0.55              |
| 1:A:523:PHE:CD2   | 1:A:568:VAL:HG23  | 2.41                     | 0.55              |
| 1:D:230:ARG:HB2   | 1:D:268:LEU:HD11  | 1.89                     | 0.55              |
| 1:EA:271:VAL:HG23 | 1:EA:271:VAL:O    | 2.07                     | 0.55              |
| 1:NB:529:ILE:CD1  | 1:NB:583:VAL:HG11 | 2.37                     | 0.55              |
| 1:TB:529:ILE:CD1  | 1:TB:583:VAL:HG11 | 2.37                     | 0.55              |
| 1:VA:529:ILE:CD1  | 1:VA:583:VAL:HG11 | 2.36                     | 0.55              |
| 1:XA:48:MET:HE3   | 1:XA:48:MET:HA    | 1.89                     | 0.55              |
| 1:BB:30:VAL:HG21  | 1:BB:50:MET:HE3   | 1.89                     | 0.54              |
| 1:C:65:VAL:HG11   | 1:C:100:TYR:HB2   | 1.88                     | 0.54              |
| 1:D:575:ILE:HD12  | 1:D:603:VAL:HG13  | 1.88                     | 0.54              |
| 1:JB:271:VAL:O    | 1:JB:271:VAL:HG23 | 2.07                     | 0.54              |
| 1:T:230:ARG:HB2   | 1:T:268:LEU:HD11  | 1.89                     | 0.54              |
| 1:WB:83:LEU:HD21  | 1:WB:102:GLY:O    | 2.07                     | 0.54              |
| 1:YA:529:ILE:HD13 | 1:YA:583:VAL:HG11 | 1.88                     | 0.54              |
| 1:GB:529:ILE:HD12 | 1:GB:583:VAL:HG11 | 1.88                     | 0.54              |
| 1:K:529:ILE:HD13  | 1:K:583:VAL:HG11  | 1.88                     | 0.54              |
| 1:LA:381:PRO:HA   | 1:LA:405:THR:HG22 | 1.90                     | 0.54              |
| 1:PB:65:VAL:HG11  | 1:PB:100:TYR:HB2  | 1.88                     | 0.54              |
| 1:RA:230:ARG:HB2  | 1:RA:268:LEU:HD11 | 1.89                     | 0.54              |
| 1:Z:168:ILE:HG22  | 1:Z:215:LEU:CD2   | 2.36                     | 0.54              |
| 1:AB:381:PRO:HA   | 1:AB:405:THR:HG22 | 1.90                     | 0.54              |
| 1:CB:271:VAL:HG23 | 1:CB:271:VAL:O    | 2.08                     | 0.54              |
| 1:MB:65:VAL:HG11  | 1:MB:100:TYR:HB2  | 1.88                     | 0.54              |
| 1:MB:575:ILE:HD12 | 1:MB:603:VAL:HG13 | 1.88                     | 0.54              |
| 1:TA:523:PHE:CD2  | 1:TA:568:VAL:HG23 | 2.42                     | 0.54              |
| 1:WB:230:ARG:CB   | 1:WB:268:LEU:HD11 | 2.36                     | 0.54              |
| 1:Z:381:PRO:HA    | 1:Z:405:THR:HG22  | 1.90                     | 0.54              |
| 1:ZB:230:ARG:CB   | 1:ZB:268:LEU:HD11 | 2.36                     | 0.54              |
| 1:CB:529:ILE:CD1  | 1:CB:583:VAL:HG11 | 2.37                     | 0.54              |
| 1:DB:271:VAL:HG23 | 1:DB:271:VAL:O    | 2.08                     | 0.54              |
| 1:JB:737:GLY:O    | 1:JB:741:VAL:HG23 | 2.07                     | 0.54              |
| 1:Q:765:VAL:HG22  | 1:R:759:LEU:HD21  | 1.89                     | 0.54              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:RB:529:ILE:HD12 | 1:RB:583:VAL:HG11 | 1.90                     | 0.54              |
| 1:VB:271:VAL:HG23 | 1:VB:271:VAL:O    | 2.08                     | 0.54              |
| 1:XA:65:VAL:HG11  | 1:XA:100:TYR:HB2  | 1.89                     | 0.54              |
| 1:CB:230:ARG:HB2  | 1:CB:268:LEU:HD11 | 1.90                     | 0.54              |
| 1:EB:65:VAL:HG11  | 1:EB:100:TYR:HB2  | 1.89                     | 0.54              |
| 1:F:271:VAL:HG23  | 1:F:271:VAL:O     | 2.08                     | 0.54              |
| 1:G:65:VAL:HG11   | 1:G:100:TYR:HB2   | 1.88                     | 0.54              |
| 1:KA:230:ARG:HB2  | 1:KA:268:LEU:HD11 | 1.90                     | 0.54              |
| 1:KB:529:ILE:HD12 | 1:KB:583:VAL:HG11 | 1.89                     | 0.54              |
| 1:LB:271:VAL:HG23 | 1:LB:271:VAL:O    | 2.08                     | 0.54              |
| 1:LB:529:ILE:CD1  | 1:LB:583:VAL:HG11 | 2.37                     | 0.54              |
| 1:OA:523:PHE:CD2  | 1:OA:568:VAL:HG23 | 2.43                     | 0.54              |
| 1:OB:381:PRO:HA   | 1:OB:405:THR:HG22 | 1.89                     | 0.54              |
| 1:RB:271:VAL:O    | 1:RB:271:VAL:HG23 | 2.08                     | 0.54              |
| 1:W:271:VAL:HG23  | 1:W:271:VAL:O     | 2.07                     | 0.54              |
| 1:BA:381:PRO:HA   | 1:BA:405:THR:HG22 | 1.90                     | 0.54              |
| 1:CA:271:VAL:HG23 | 1:CA:271:VAL:O    | 2.07                     | 0.54              |
| 1:G:271:VAL:HG23  | 1:G:271:VAL:O     | 2.08                     | 0.54              |
| 1:JB:575:ILE:HD12 | 1:JB:603:VAL:HG13 | 1.88                     | 0.54              |
| 1:NA:271:VAL:HG23 | 1:NA:271:VAL:O    | 2.08                     | 0.54              |
| 1:OB:13:TYR:HA    | 1:OB:50:MET:HE3   | 1.89                     | 0.54              |
| 1:W:83:LEU:HD21   | 1:W:102:GLY:O     | 2.07                     | 0.54              |
| 1:ZB:523:PHE:CD2  | 1:ZB:568:VAL:HG23 | 2.43                     | 0.54              |
| 1:AB:230:ARG:HB2  | 1:AB:268:LEU:HD11 | 1.90                     | 0.54              |
| 1:BA:65:VAL:HG11  | 1:BA:100:TYR:HB2  | 1.89                     | 0.54              |
| 1:BB:144:LEU:HD12 | 1:BB:144:LEU:O    | 2.07                     | 0.54              |
| 1:JA:271:VAL:HG23 | 1:JA:271:VAL:O    | 2.08                     | 0.54              |
| 1:JB:65:VAL:HG11  | 1:JB:100:TYR:HB2  | 1.90                     | 0.54              |
| 1:KA:271:VAL:O    | 1:KA:271:VAL:HG23 | 2.08                     | 0.54              |
| 1:KB:271:VAL:HG23 | 1:KB:271:VAL:O    | 2.08                     | 0.54              |
| 1:MA:271:VAL:HG23 | 1:MA:271:VAL:O    | 2.08                     | 0.54              |
| 1:OB:65:VAL:HG11  | 1:OB:100:TYR:HB2  | 1.89                     | 0.54              |
| 1:SB:302:VAL:HG11 | 1:SB:306:LYS:HZ2  | 1.73                     | 0.54              |
| 1:UA:65:VAL:HG11  | 1:UA:100:TYR:HB2  | 1.88                     | 0.54              |
| 1:YA:271:VAL:HG23 | 1:YA:271:VAL:O    | 2.08                     | 0.54              |
| 1:AA:381:PRO:HA   | 1:AA:405:THR:HG22 | 1.90                     | 0.54              |
| 1:BB:271:VAL:HG23 | 1:BB:271:VAL:O    | 2.08                     | 0.54              |
| 1:D:65:VAL:HG11   | 1:D:100:TYR:HB2   | 1.90                     | 0.54              |
| 1:E:271:VAL:O     | 1:E:271:VAL:HG23  | 2.08                     | 0.54              |
| 1:EB:271:VAL:HG23 | 1:EB:271:VAL:O    | 2.08                     | 0.54              |
| 1:HA:230:ARG:HB2  | 1:HA:268:LEU:HD11 | 1.90                     | 0.54              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:IA:271:VAL:HG23 | 1:IA:271:VAL:O    | 2.08                     | 0.54              |
| 1:KB:575:ILE:HD12 | 1:KB:603:VAL:HG13 | 1.89                     | 0.54              |
| 1:LA:271:VAL:HG23 | 1:LA:271:VAL:O    | 2.08                     | 0.54              |
| 1:NB:271:VAL:HG23 | 1:NB:271:VAL:O    | 2.08                     | 0.54              |
| 1:AA:65:VAL:HG11  | 1:AA:100:TYR:HB2  | 1.89                     | 0.54              |
| 1:BA:271:VAL:HG23 | 1:BA:271:VAL:O    | 2.08                     | 0.54              |
| 1:C:230:ARG:HB2   | 1:C:268:LEU:HD11  | 1.90                     | 0.54              |
| 1:DA:271:VAL:HG23 | 1:DA:271:VAL:O    | 2.08                     | 0.54              |
| 1:DA:381:PRO:HA   | 1:DA:405:THR:HG22 | 1.90                     | 0.54              |
| 1:DB:83:LEU:HD21  | 1:DB:102:GLY:O    | 2.07                     | 0.54              |
| 1:FB:230:ARG:HB2  | 1:FB:268:LEU:HD11 | 1.90                     | 0.54              |
| 1:FB:271:VAL:HG23 | 1:FB:271:VAL:O    | 2.08                     | 0.54              |
| 1:GA:523:PHE:CD2  | 1:GA:568:VAL:HG23 | 2.43                     | 0.54              |
| 1:GB:230:ARG:HB2  | 1:GB:268:LEU:HD11 | 1.90                     | 0.54              |
| 1:IA:381:PRO:HA   | 1:IA:405:THR:HG22 | 1.90                     | 0.54              |
| 1:M:30:VAL:CG2    | 1:M:50:MET:HE3    | 2.38                     | 0.54              |
| 1:M:381:PRO:HA    | 1:M:405:THR:HG22  | 1.90                     | 0.54              |
| 1:N:144:LEU:HD12  | 1:N:144:LEU:O     | 2.07                     | 0.54              |
| 1:SB:83:LEU:HD21  | 1:SB:102:GLY:O    | 2.07                     | 0.54              |
| 1:TB:271:VAL:HG23 | 1:TB:271:VAL:O    | 2.08                     | 0.54              |
| 1:YB:381:PRO:HA   | 1:YB:405:THR:HG22 | 1.90                     | 0.54              |
| 1:BB:529:ILE:HD12 | 1:BB:583:VAL:HG11 | 1.90                     | 0.54              |
| 1:F:230:ARG:HB2   | 1:F:268:LEU:HD11  | 1.90                     | 0.54              |
| 1:FA:271:VAL:HG23 | 1:FA:271:VAL:O    | 2.08                     | 0.54              |
| 1:H:168:ILE:HG22  | 1:H:215:LEU:CD2   | 2.36                     | 0.54              |
| 1:IB:65:VAL:HG11  | 1:IB:100:TYR:HB2  | 1.90                     | 0.54              |
| 1:K:271:VAL:HG23  | 1:K:271:VAL:O     | 2.08                     | 0.54              |
| 1:MB:271:VAL:HG23 | 1:MB:271:VAL:O    | 2.08                     | 0.54              |
| 1:O:271:VAL:HG23  | 1:O:271:VAL:O     | 2.08                     | 0.54              |
| 1:PB:271:VAL:HG23 | 1:PB:271:VAL:O    | 2.08                     | 0.54              |
| 1:SB:30:VAL:HG21  | 1:SB:50:MET:HE3   | 1.89                     | 0.54              |
| 1:TA:812:VAL:O    | 1:TA:812:VAL:HG23 | 2.08                     | 0.54              |
| 1:ZA:381:PRO:HA   | 1:ZA:405:THR:HG22 | 1.90                     | 0.54              |
| 1:CB:381:PRO:HA   | 1:CB:405:THR:HG22 | 1.91                     | 0.53              |
| 1:D:271:VAL:HG23  | 1:D:271:VAL:O     | 2.08                     | 0.53              |
| 1:EA:65:VAL:HG11  | 1:EA:100:TYR:HB2  | 1.90                     | 0.53              |
| 1:HA:271:VAL:O    | 1:HA:271:VAL:HG23 | 2.07                     | 0.53              |
| 1:N:381:PRO:HA    | 1:N:405:THR:HG22  | 1.90                     | 0.53              |
| 1:AB:575:ILE:HD12 | 1:AB:603:VAL:HG13 | 1.90                     | 0.53              |
| 1:B:812:VAL:HG23  | 1:B:812:VAL:O     | 2.09                     | 0.53              |
| 1:C:271:VAL:HG23  | 1:C:271:VAL:O     | 2.08                     | 0.53              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:EB:230:ARG:HB2  | 1:EB:268:LEU:HD11 | 1.90                     | 0.53              |
| 1:EB:381:PRO:HA   | 1:EB:405:THR:HG22 | 1.90                     | 0.53              |
| 1:EB:812:VAL:HG23 | 1:EB:812:VAL:O    | 2.09                     | 0.53              |
| 1:FB:381:PRO:HA   | 1:FB:405:THR:HG22 | 1.90                     | 0.53              |
| 1:H:65:VAL:HG11   | 1:H:100:TYR:HB2   | 1.89                     | 0.53              |
| 1:I:765:VAL:HG22  | 1:J:759:LEU:HD21  | 1.91                     | 0.53              |
| 1:IA:812:VAL:HG23 | 1:IA:812:VAL:O    | 2.09                     | 0.53              |
| 1:MB:168:ILE:HG22 | 1:MB:215:LEU:CD2  | 2.35                     | 0.53              |
| 1:MB:230:ARG:HB2  | 1:MB:268:LEU:HD11 | 1.90                     | 0.53              |
| 1:NA:812:VAL:HG23 | 1:NA:812:VAL:O    | 2.09                     | 0.53              |
| 1:O:230:ARG:HB2   | 1:O:268:LEU:HD11  | 1.90                     | 0.53              |
| 1:P:83:LEU:HD21   | 1:P:102:GLY:O     | 2.07                     | 0.53              |
| 1:R:812:VAL:HG23  | 1:R:812:VAL:O     | 2.08                     | 0.53              |
| 1:UB:230:ARG:HB2  | 1:UB:268:LEU:HD11 | 1.90                     | 0.53              |
| 1:UB:271:VAL:HG23 | 1:UB:271:VAL:O    | 2.08                     | 0.53              |
| 1:WA:381:PRO:HA   | 1:WA:405:THR:HG22 | 1.90                     | 0.53              |
| 1:WA:737:GLY:O    | 1:WA:741:VAL:HG23 | 2.08                     | 0.53              |
| 1:X:538:GLN:HB2   | 1:X:646:VAL:HG22  | 1.90                     | 0.53              |
| 1:YA:381:PRO:HA   | 1:YA:405:THR:HG22 | 1.91                     | 0.53              |
| 1:BB:381:PRO:HA   | 1:BB:405:THR:HG22 | 1.90                     | 0.53              |
| 1:FB:65:VAL:HG11  | 1:FB:100:TYR:HB2  | 1.90                     | 0.53              |
| 1:I:812:VAL:O     | 1:I:812:VAL:HG23  | 2.09                     | 0.53              |
| 1:IB:271:VAL:HG23 | 1:IB:271:VAL:O    | 2.08                     | 0.53              |
| 1:JB:230:ARG:HB2  | 1:JB:268:LEU:HD11 | 1.91                     | 0.53              |
| 1:L:325:VAL:HG13  | 1:L:325:VAL:O     | 2.07                     | 0.53              |
| 1:LA:230:ARG:HB2  | 1:LA:268:LEU:HD11 | 1.91                     | 0.53              |
| 1:M:575:ILE:HD12  | 1:M:603:VAL:HG13  | 1.90                     | 0.53              |
| 1:MA:65:VAL:HG11  | 1:MA:100:TYR:HB2  | 1.91                     | 0.53              |
| 1:MA:381:PRO:HA   | 1:MA:405:THR:HG22 | 1.90                     | 0.53              |
| 1:O:529:ILE:CD1   | 1:O:583:VAL:HG11  | 2.38                     | 0.53              |
| 1:OB:230:ARG:HB2  | 1:OB:268:LEU:HD11 | 1.91                     | 0.53              |
| 1:QB:271:VAL:HG23 | 1:QB:271:VAL:O    | 2.08                     | 0.53              |
| 1:SB:271:VAL:HG23 | 1:SB:271:VAL:O    | 2.08                     | 0.53              |
| 1:UA:381:PRO:HA   | 1:UA:405:THR:HG22 | 1.91                     | 0.53              |
| 1:W:65:VAL:HG11   | 1:W:100:TYR:HB2   | 1.90                     | 0.53              |
| 1:WA:271:VAL:HG23 | 1:WA:271:VAL:O    | 2.08                     | 0.53              |
| 1:XA:812:VAL:HG23 | 1:XA:812:VAL:O    | 2.08                     | 0.53              |
| 1:YA:65:VAL:HG11  | 1:YA:100:TYR:HB2  | 1.90                     | 0.53              |
| 1:AC:230:ARG:HB2  | 1:AC:268:LEU:HD11 | 1.90                     | 0.53              |
| 1:CB:398:VAL:HG11 | 1:CB:415:TRP:CE3  | 2.44                     | 0.53              |
| 1:GA:271:VAL:HG23 | 1:GA:271:VAL:O    | 2.08                     | 0.53              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:MA:523:PHE:CD2  | 1:MA:568:VAL:HG23 | 2.43                     | 0.53              |
| 1:OA:812:VAL:O    | 1:OA:812:VAL:HG23 | 2.09                     | 0.53              |
| 1:PB:230:ARG:HB2  | 1:PB:268:LEU:HD11 | 1.91                     | 0.53              |
| 1:SA:381:PRO:HA   | 1:SA:405:THR:HG22 | 1.91                     | 0.53              |
| 1:VA:271:VAL:HG23 | 1:VA:271:VAL:O    | 2.08                     | 0.53              |
| 1:W:168:ILE:HG22  | 1:W:215:LEU:CD2   | 2.36                     | 0.53              |
| 1:WB:523:PHE:CD2  | 1:WB:568:VAL:HG23 | 2.43                     | 0.53              |
| 1:ZB:271:VAL:O    | 1:ZB:271:VAL:HG23 | 2.08                     | 0.53              |
| 1:AB:529:ILE:HD12 | 1:AB:583:VAL:HG11 | 1.90                     | 0.53              |
| 1:AC:381:PRO:HA   | 1:AC:405:THR:HG22 | 1.91                     | 0.53              |
| 1:B:230:ARG:HB2   | 1:B:268:LEU:HD11  | 1.91                     | 0.53              |
| 1:D:812:VAL:HG23  | 1:D:812:VAL:O     | 2.09                     | 0.53              |
| 1:DB:230:ARG:HB2  | 1:DB:268:LEU:HD11 | 1.91                     | 0.53              |
| 1:DB:381:PRO:HA   | 1:DB:405:THR:HG22 | 1.91                     | 0.53              |
| 1:FA:230:ARG:HB2  | 1:FA:268:LEU:HD11 | 1.91                     | 0.53              |
| 1:IA:737:GLY:O    | 1:IA:741:VAL:HG23 | 2.08                     | 0.53              |
| 1:L:812:VAL:HG23  | 1:L:812:VAL:O     | 2.09                     | 0.53              |
| 1:N:271:VAL:HG23  | 1:N:271:VAL:O     | 2.08                     | 0.53              |
| 1:NA:230:ARG:HB2  | 1:NA:268:LEU:HD11 | 1.91                     | 0.53              |
| 1:QB:812:VAL:HG23 | 1:QB:812:VAL:O    | 2.09                     | 0.53              |
| 1:RB:230:ARG:HB2  | 1:RB:268:LEU:HD11 | 1.90                     | 0.53              |
| 1:TA:271:VAL:HG23 | 1:TA:271:VAL:O    | 2.08                     | 0.53              |
| 1:VA:381:PRO:HA   | 1:VA:405:THR:HG22 | 1.91                     | 0.53              |
| 1:VB:737:GLY:O    | 1:VB:741:VAL:HG23 | 2.08                     | 0.53              |
| 1:W:381:PRO:HA    | 1:W:405:THR:HG22  | 1.91                     | 0.53              |
| 1:WA:812:VAL:O    | 1:WA:812:VAL:HG23 | 2.08                     | 0.53              |
| 1:XA:271:VAL:O    | 1:XA:271:VAL:HG23 | 2.08                     | 0.53              |
| 1:ZB:812:VAL:HG23 | 1:ZB:812:VAL:O    | 2.09                     | 0.53              |
| 1:AA:812:VAL:HG23 | 1:AA:812:VAL:O    | 2.09                     | 0.53              |
| 1:B:381:PRO:HA    | 1:B:405:THR:HG22  | 1.90                     | 0.53              |
| 1:E:812:VAL:HG23  | 1:E:812:VAL:O     | 2.09                     | 0.53              |
| 1:F:812:VAL:O     | 1:F:812:VAL:HG23  | 2.08                     | 0.53              |
| 1:FA:65:VAL:HG11  | 1:FA:100:TYR:HB2  | 1.91                     | 0.53              |
| 1:GA:812:VAL:O    | 1:GA:812:VAL:HG23 | 2.09                     | 0.53              |
| 1:GB:812:VAL:HG23 | 1:GB:812:VAL:O    | 2.09                     | 0.53              |
| 1:H:271:VAL:HG23  | 1:H:271:VAL:O     | 2.08                     | 0.53              |
| 1:HB:381:PRO:HA   | 1:HB:405:THR:HG22 | 1.91                     | 0.53              |
| 1:IB:765:VAL:HG22 | 1:JB:759:LEU:HD21 | 1.91                     | 0.53              |
| 1:JA:230:ARG:HB2  | 1:JA:268:LEU:HD11 | 1.91                     | 0.53              |
| 1:JA:523:PHE:CD2  | 1:JA:568:VAL:HG23 | 2.44                     | 0.53              |
| 1:LA:765:VAL:HG22 | 1:MA:759:LEU:HD21 | 1.91                     | 0.53              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:MA:230:ARG:HB2  | 1:MA:268:LEU:HD11 | 1.91                     | 0.53              |
| 1:MB:381:PRO:HA   | 1:MB:405:THR:HG22 | 1.90                     | 0.53              |
| 1:N:529:ILE:HD12  | 1:N:583:VAL:HG11  | 1.90                     | 0.53              |
| 1:Q:65:VAL:HG11   | 1:Q:100:TYR:HB2   | 1.89                     | 0.53              |
| 1:QA:271:VAL:HG23 | 1:QA:271:VAL:O    | 2.08                     | 0.53              |
| 1:QA:812:VAL:HG23 | 1:QA:812:VAL:O    | 2.09                     | 0.53              |
| 1:R:381:PRO:HA    | 1:R:405:THR:HG22  | 1.91                     | 0.53              |
| 1:S:271:VAL:HG23  | 1:S:271:VAL:O     | 2.08                     | 0.53              |
| 1:SB:812:VAL:O    | 1:SB:812:VAL:HG23 | 2.09                     | 0.53              |
| 1:T:168:ILE:HG22  | 1:T:215:LEU:CD2   | 2.36                     | 0.53              |
| 1:T:381:PRO:HA    | 1:T:405:THR:HG22  | 1.91                     | 0.53              |
| 1:TA:230:ARG:HB2  | 1:TA:268:LEU:HD11 | 1.90                     | 0.53              |
| 1:TB:65:VAL:HG13  | 1:TB:103:GLU:OE2  | 2.07                     | 0.53              |
| 1:VB:812:VAL:O    | 1:VB:812:VAL:HG23 | 2.09                     | 0.53              |
| 1:X:271:VAL:HG23  | 1:X:271:VAL:O     | 2.08                     | 0.53              |
| 1:A:271:VAL:HG23  | 1:A:271:VAL:O     | 2.08                     | 0.53              |
| 1:A:381:PRO:HA    | 1:A:405:THR:HG22  | 1.91                     | 0.53              |
| 1:AC:812:VAL:HG23 | 1:AC:812:VAL:O    | 2.09                     | 0.53              |
| 1:CA:230:ARG:HB2  | 1:CA:268:LEU:HD11 | 1.91                     | 0.53              |
| 1:DA:812:VAL:O    | 1:DA:812:VAL:HG23 | 2.09                     | 0.53              |
| 1:E:381:PRO:HA    | 1:E:405:THR:HG22  | 1.90                     | 0.53              |
| 1:FA:539:LEU:HD12 | 1:FA:540:GLN:H    | 1.74                     | 0.53              |
| 1:HA:381:PRO:HA   | 1:HA:405:THR:HG22 | 1.91                     | 0.53              |
| 1:KA:812:VAL:HG23 | 1:KA:812:VAL:O    | 2.09                     | 0.53              |
| 1:L:271:VAL:HG23  | 1:L:271:VAL:O     | 2.08                     | 0.53              |
| 1:LB:812:VAL:HG23 | 1:LB:812:VAL:O    | 2.09                     | 0.53              |
| 1:NA:65:VAL:HG11  | 1:NA:100:TYR:HB2  | 1.91                     | 0.53              |
| 1:NB:65:VAL:HG11  | 1:NB:100:TYR:HB2  | 1.91                     | 0.53              |
| 1:NB:812:VAL:O    | 1:NB:812:VAL:HG23 | 2.09                     | 0.53              |
| 1:Q:381:PRO:HA    | 1:Q:405:THR:HG22  | 1.91                     | 0.53              |
| 1:S:381:PRO:HA    | 1:S:405:THR:HG22  | 1.91                     | 0.53              |
| 1:SA:271:VAL:O    | 1:SA:271:VAL:HG23 | 2.07                     | 0.53              |
| 1:UA:271:VAL:HG23 | 1:UA:271:VAL:O    | 2.08                     | 0.53              |
| 1:X:812:VAL:HG23  | 1:X:812:VAL:O     | 2.09                     | 0.53              |
| 1:Z:230:ARG:HB2   | 1:Z:268:LEU:HD11  | 1.90                     | 0.53              |
| 1:AA:529:ILE:CD1  | 1:AA:583:VAL:HG11 | 2.38                     | 0.53              |
| 1:BA:230:ARG:HB2  | 1:BA:268:LEU:HD11 | 1.91                     | 0.53              |
| 1:EA:230:ARG:HB2  | 1:EA:268:LEU:HD11 | 1.91                     | 0.53              |
| 1:FA:325:VAL:O    | 1:FA:325:VAL:HG13 | 2.09                     | 0.53              |
| 1:FA:523:PHE:CD2  | 1:FA:568:VAL:HG23 | 2.44                     | 0.53              |
| 1:G:381:PRO:HA    | 1:G:405:THR:HG22  | 1.90                     | 0.53              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:HB:271:VAL:HG23 | 1:HB:271:VAL:O    | 2.08                     | 0.53              |
| 1:I:271:VAL:HG23  | 1:I:271:VAL:O     | 2.08                     | 0.53              |
| 1:IA:230:ARG:HB2  | 1:IA:268:LEU:HD11 | 1.91                     | 0.53              |
| 1:LA:812:VAL:O    | 1:LA:812:VAL:HG23 | 2.09                     | 0.53              |
| 1:M:230:ARG:HB2   | 1:M:268:LEU:HD11  | 1.90                     | 0.53              |
| 1:OB:812:VAL:HG23 | 1:OB:812:VAL:O    | 2.09                     | 0.53              |
| 1:P:271:VAL:HG23  | 1:P:271:VAL:O     | 2.08                     | 0.53              |
| 1:P:812:VAL:HG23  | 1:P:812:VAL:O     | 2.09                     | 0.53              |
| 1:PA:381:PRO:HA   | 1:PA:405:THR:HG22 | 1.91                     | 0.53              |
| 1:PA:737:GLY:O    | 1:PA:741:VAL:HG23 | 2.09                     | 0.53              |
| 1:PB:30:VAL:CG2   | 1:PB:50:MET:HE3   | 2.39                     | 0.53              |
| 1:PB:812:VAL:HG23 | 1:PB:812:VAL:O    | 2.09                     | 0.53              |
| 1:UB:812:VAL:HG23 | 1:UB:812:VAL:O    | 2.09                     | 0.53              |
| 1:VA:65:VAL:HG11  | 1:VA:100:TYR:HB2  | 1.89                     | 0.53              |
| 1:Y:381:PRO:HA    | 1:Y:405:THR:HG22  | 1.91                     | 0.53              |
| 1:YB:271:VAL:HG23 | 1:YB:271:VAL:O    | 2.08                     | 0.53              |
| 1:YB:516:LEU:O    | 1:YB:516:LEU:HD23 | 2.08                     | 0.53              |
| 1:Z:65:VAL:HG11   | 1:Z:100:TYR:HB2   | 1.89                     | 0.53              |
| 1:ZA:812:VAL:HG23 | 1:ZA:812:VAL:O    | 2.09                     | 0.53              |
| 1:AA:271:VAL:HG23 | 1:AA:271:VAL:O    | 2.08                     | 0.53              |
| 1:AB:271:VAL:HG23 | 1:AB:271:VAL:O    | 2.08                     | 0.53              |
| 1:EA:812:VAL:HG23 | 1:EA:812:VAL:O    | 2.09                     | 0.53              |
| 1:FA:381:PRO:HA   | 1:FA:405:THR:HG22 | 1.91                     | 0.53              |
| 1:FB:398:VAL:HG11 | 1:FB:415:TRP:CE3  | 2.44                     | 0.53              |
| 1:G:812:VAL:HG23  | 1:G:812:VAL:O     | 2.09                     | 0.53              |
| 1:GA:381:PRO:HA   | 1:GA:405:THR:HG22 | 1.91                     | 0.53              |
| 1:GB:381:PRO:HA   | 1:GB:405:THR:HG22 | 1.91                     | 0.53              |
| 1:J:92:LEU:HD12   | 1:J:92:LEU:N      | 2.24                     | 0.53              |
| 1:J:381:PRO:HA    | 1:J:405:THR:HG22  | 1.90                     | 0.53              |
| 1:JA:65:VAL:HG11  | 1:JA:100:TYR:HB2  | 1.91                     | 0.53              |
| 1:M:271:VAL:O     | 1:M:271:VAL:HG23  | 2.08                     | 0.53              |
| 1:N:812:VAL:HG23  | 1:N:812:VAL:O     | 2.09                     | 0.53              |
| 1:O:381:PRO:HA    | 1:O:405:THR:HG22  | 1.91                     | 0.53              |
| 1:OA:381:PRO:HA   | 1:OA:405:THR:HG22 | 1.91                     | 0.53              |
| 1:OB:271:VAL:O    | 1:OB:271:VAL:HG23 | 2.08                     | 0.53              |
| 1:Q:812:VAL:O     | 1:Q:812:VAL:HG23  | 2.09                     | 0.53              |
| 1:QA:230:ARG:HB2  | 1:QA:268:LEU:HD11 | 1.90                     | 0.53              |
| 1:SB:737:GLY:O    | 1:SB:741:VAL:HG23 | 2.09                     | 0.53              |
| 1:V:381:PRO:HA    | 1:V:405:THR:HG22  | 1.91                     | 0.53              |
| 1:V:812:VAL:HG23  | 1:V:812:VAL:O     | 2.09                     | 0.53              |
| 1:WB:812:VAL:HG23 | 1:WB:812:VAL:O    | 2.09                     | 0.53              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:XA:381:PRO:HA   | 1:XA:405:THR:HG22 | 1.91                     | 0.53              |
| 1:XB:230:ARG:HB2  | 1:XB:268:LEU:HD11 | 1.90                     | 0.53              |
| 1:Y:230:ARG:HB2   | 1:Y:268:LEU:HD11  | 1.91                     | 0.53              |
| 1:ZB:381:PRO:HA   | 1:ZB:405:THR:HG22 | 1.91                     | 0.53              |
| 1:BA:812:VAL:HG23 | 1:BA:812:VAL:O    | 2.09                     | 0.53              |
| 1:CA:812:VAL:HG23 | 1:CA:812:VAL:O    | 2.09                     | 0.53              |
| 1:F:65:VAL:HG11   | 1:F:100:TYR:HB2   | 1.90                     | 0.53              |
| 1:J:812:VAL:HG23  | 1:J:812:VAL:O     | 2.09                     | 0.53              |
| 1:OA:144:LEU:HD23 | 1:OA:144:LEU:N    | 2.24                     | 0.53              |
| 1:PA:271:VAL:O    | 1:PA:271:VAL:HG23 | 2.08                     | 0.53              |
| 1:Q:230:ARG:HB2   | 1:Q:268:LEU:HD11  | 1.90                     | 0.53              |
| 1:QA:381:PRO:HA   | 1:QA:405:THR:HG22 | 1.91                     | 0.53              |
| 1:RA:381:PRO:HA   | 1:RA:405:THR:HG22 | 1.91                     | 0.53              |
| 1:S:812:VAL:HG23  | 1:S:812:VAL:O     | 2.09                     | 0.53              |
| 1:T:765:VAL:HG22  | 1:V:759:LEU:HD21  | 1.91                     | 0.53              |
| 1:TA:381:PRO:HA   | 1:TA:405:THR:HG22 | 1.91                     | 0.53              |
| 1:VA:812:VAL:HG23 | 1:VA:812:VAL:O    | 2.09                     | 0.53              |
| 1:Y:271:VAL:HG23  | 1:Y:271:VAL:O     | 2.08                     | 0.53              |
| 1:AC:271:VAL:O    | 1:AC:271:VAL:HG23 | 2.08                     | 0.52              |
| 1:B:271:VAL:O     | 1:B:271:VAL:HG23  | 2.08                     | 0.52              |
| 1:C:812:VAL:HG23  | 1:C:812:VAL:O     | 2.09                     | 0.52              |
| 1:CB:168:ILE:HG22 | 1:CB:215:LEU:CD2  | 2.36                     | 0.52              |
| 1:EA:381:PRO:HA   | 1:EA:405:THR:HG22 | 1.91                     | 0.52              |
| 1:FB:737:GLY:O    | 1:FB:741:VAL:HG23 | 2.10                     | 0.52              |
| 1:K:812:VAL:HG23  | 1:K:812:VAL:O     | 2.09                     | 0.52              |
| 1:KA:381:PRO:HA   | 1:KA:405:THR:HG22 | 1.91                     | 0.52              |
| 1:KB:381:PRO:HA   | 1:KB:405:THR:HG22 | 1.91                     | 0.52              |
| 1:SB:230:ARG:HB2  | 1:SB:268:LEU:HD11 | 1.91                     | 0.52              |
| 1:TA:366:VAL:HG13 | 1:TA:366:VAL:O    | 2.09                     | 0.52              |
| 1:ZA:325:VAL:HG13 | 1:ZA:325:VAL:O    | 2.09                     | 0.52              |
| 1:A:230:ARG:HB2   | 1:A:268:LEU:HD11  | 1.92                     | 0.52              |
| 1:A:812:VAL:O     | 1:A:812:VAL:HG23  | 2.09                     | 0.52              |
| 1:CA:381:PRO:HA   | 1:CA:405:THR:HG22 | 1.91                     | 0.52              |
| 1:CB:812:VAL:O    | 1:CB:812:VAL:HG23 | 2.09                     | 0.52              |
| 1:H:529:ILE:CD1   | 1:H:583:VAL:HG11  | 2.39                     | 0.52              |
| 1:IB:812:VAL:HG23 | 1:IB:812:VAL:O    | 2.09                     | 0.52              |
| 1:JA:381:PRO:HA   | 1:JA:405:THR:HG22 | 1.91                     | 0.52              |
| 1:JB:381:PRO:HA   | 1:JB:405:THR:HG22 | 1.91                     | 0.52              |
| 1:K:575:ILE:HG23  | 1:K:603:VAL:HG22  | 1.90                     | 0.52              |
| 1:KA:65:VAL:HG11  | 1:KA:100:TYR:HB2  | 1.91                     | 0.52              |
| 1:KB:812:VAL:O    | 1:KB:812:VAL:HG23 | 2.09                     | 0.52              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:MA:812:VAL:HG23 | 1:MA:812:VAL:O    | 2.09                     | 0.52              |
| 1:NA:381:PRO:HA   | 1:NA:405:THR:HG22 | 1.91                     | 0.52              |
| 1:PA:812:VAL:HG23 | 1:PA:812:VAL:O    | 2.09                     | 0.52              |
| 1:SA:812:VAL:HG23 | 1:SA:812:VAL:O    | 2.09                     | 0.52              |
| 1:VB:230:ARG:HB2  | 1:VB:268:LEU:HD11 | 1.91                     | 0.52              |
| 1:VB:398:VAL:HG11 | 1:VB:415:TRP:CE3  | 2.45                     | 0.52              |
| 1:XB:812:VAL:HG23 | 1:XB:812:VAL:O    | 2.10                     | 0.52              |
| 1:EA:529:ILE:HD12 | 1:EA:583:VAL:HG11 | 1.90                     | 0.52              |
| 1:FA:812:VAL:HG23 | 1:FA:812:VAL:O    | 2.09                     | 0.52              |
| 1:GB:65:VAL:HG11  | 1:GB:100:TYR:HB2  | 1.92                     | 0.52              |
| 1:H:381:PRO:HA    | 1:H:405:THR:HG22  | 1.91                     | 0.52              |
| 1:HB:737:GLY:O    | 1:HB:741:VAL:HG23 | 2.10                     | 0.52              |
| 1:IA:575:ILE:HG23 | 1:IA:603:VAL:HG22 | 1.92                     | 0.52              |
| 1:J:271:VAL:O     | 1:J:271:VAL:HG23  | 2.08                     | 0.52              |
| 1:JB:812:VAL:HG23 | 1:JB:812:VAL:O    | 2.09                     | 0.52              |
| 1:K:65:VAL:HG11   | 1:K:100:TYR:HB2   | 1.90                     | 0.52              |
| 1:M:529:ILE:HD12  | 1:M:583:VAL:HG11  | 1.90                     | 0.52              |
| 1:N:575:ILE:HG23  | 1:N:603:VAL:HG22  | 1.91                     | 0.52              |
| 1:PB:529:ILE:CD1  | 1:PB:583:VAL:HG11 | 2.40                     | 0.52              |
| 1:QB:381:PRO:HA   | 1:QB:405:THR:HG22 | 1.91                     | 0.52              |
| 1:R:271:VAL:O     | 1:R:271:VAL:HG23  | 2.08                     | 0.52              |
| 1:R:737:GLY:O     | 1:R:741:VAL:HG23  | 2.10                     | 0.52              |
| 1:T:812:VAL:O     | 1:T:812:VAL:HG23  | 2.09                     | 0.52              |
| 1:TB:523:PHE:CD2  | 1:TB:568:VAL:HG23 | 2.43                     | 0.52              |
| 1:TB:812:VAL:HG23 | 1:TB:812:VAL:O    | 2.09                     | 0.52              |
| 1:W:812:VAL:HG23  | 1:W:812:VAL:O     | 2.09                     | 0.52              |
| 1:X:381:PRO:HA    | 1:X:405:THR:HG22  | 1.91                     | 0.52              |
| 1:YA:523:PHE:CD2  | 1:YA:568:VAL:HG23 | 2.45                     | 0.52              |
| 1:ZA:271:VAL:HG23 | 1:ZA:271:VAL:O    | 2.08                     | 0.52              |
| 1:B:737:GLY:O     | 1:B:741:VAL:HG23  | 2.09                     | 0.52              |
| 1:DB:812:VAL:HG23 | 1:DB:812:VAL:O    | 2.09                     | 0.52              |
| 1:HB:325:VAL:HG13 | 1:HB:325:VAL:O    | 2.09                     | 0.52              |
| 1:I:381:PRO:HA    | 1:I:405:THR:HG22  | 1.90                     | 0.52              |
| 1:IA:765:VAL:HG22 | 1:JA:759:LEU:HD21 | 1.92                     | 0.52              |
| 1:JA:812:VAL:HG23 | 1:JA:812:VAL:O    | 2.09                     | 0.52              |
| 1:K:381:PRO:HA    | 1:K:405:THR:HG22  | 1.91                     | 0.52              |
| 1:LA:65:VAL:HG11  | 1:LA:100:TYR:HB2  | 1.91                     | 0.52              |
| 1:LB:30:VAL:HG21  | 1:LB:50:MET:HE3   | 1.90                     | 0.52              |
| 1:MB:529:ILE:HD12 | 1:MB:583:VAL:HG11 | 1.91                     | 0.52              |
| 1:NB:381:PRO:HA   | 1:NB:405:THR:HG22 | 1.91                     | 0.52              |
| 1:OA:271:VAL:HG23 | 1:OA:271:VAL:O    | 2.08                     | 0.52              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:P:381:PRO:HA    | 1:P:405:THR:HG22  | 1.91                     | 0.52              |
| 1:R:230:ARG:HB2   | 1:R:268:LEU:HD11  | 1.91                     | 0.52              |
| 1:RA:812:VAL:HG23 | 1:RA:812:VAL:O    | 2.09                     | 0.52              |
| 1:SB:523:PHE:CD2  | 1:SB:568:VAL:HG23 | 2.44                     | 0.52              |
| 1:V:271:VAL:HG23  | 1:V:271:VAL:O     | 2.08                     | 0.52              |
| 1:WA:65:VAL:HG11  | 1:WA:100:TYR:HB2  | 1.91                     | 0.52              |
| 1:WB:381:PRO:HA   | 1:WB:405:THR:HG22 | 1.91                     | 0.52              |
| 1:Z:271:VAL:HG23  | 1:Z:271:VAL:O     | 2.08                     | 0.52              |
| 1:Z:325:VAL:O     | 1:Z:325:VAL:HG13  | 2.09                     | 0.52              |
| 1:ZA:230:ARG:HB2  | 1:ZA:268:LEU:HD11 | 1.92                     | 0.52              |
| 1:ZB:65:VAL:HG11  | 1:ZB:100:TYR:HB2  | 1.91                     | 0.52              |
| 1:AB:48:MET:HA    | 1:AB:48:MET:HE3   | 1.91                     | 0.52              |
| 1:B:575:ILE:HG23  | 1:B:603:VAL:HG22  | 1.91                     | 0.52              |
| 1:CA:30:VAL:CG2   | 1:CA:50:MET:HE3   | 2.40                     | 0.52              |
| 1:CB:144:LEU:HD12 | 1:CB:144:LEU:O    | 2.10                     | 0.52              |
| 1:D:381:PRO:HA    | 1:D:405:THR:HG22  | 1.91                     | 0.52              |
| 1:FB:168:ILE:HG22 | 1:FB:215:LEU:CD2  | 2.39                     | 0.52              |
| 1:FB:539:LEU:HD11 | 1:FB:541:LEU:HD21 | 1.92                     | 0.52              |
| 1:FB:812:VAL:O    | 1:FB:812:VAL:HG23 | 2.09                     | 0.52              |
| 1:G:230:ARG:HB2   | 1:G:268:LEU:HD11  | 1.92                     | 0.52              |
| 1:HB:65:VAL:HG11  | 1:HB:100:TYR:HB2  | 1.91                     | 0.52              |
| 1:IB:381:PRO:HA   | 1:IB:405:THR:HG22 | 1.91                     | 0.52              |
| 1:J:65:VAL:HG11   | 1:J:100:TYR:HB2   | 1.90                     | 0.52              |
| 1:LA:516:LEU:O    | 1:LA:516:LEU:HD23 | 2.08                     | 0.52              |
| 1:LB:65:VAL:HG11  | 1:LB:100:TYR:HB2  | 1.91                     | 0.52              |
| 1:LB:230:ARG:HB2  | 1:LB:268:LEU:HD11 | 1.92                     | 0.52              |
| 1:M:398:VAL:HG11  | 1:M:415:TRP:CE3   | 2.44                     | 0.52              |
| 1:MA:390:VAL:HG23 | 1:MA:390:VAL:O    | 2.10                     | 0.52              |
| 1:O:398:VAL:HG11  | 1:O:415:TRP:CE3   | 2.44                     | 0.52              |
| 1:Q:302:VAL:HG11  | 1:Q:306:LYS:HZ2   | 1.74                     | 0.52              |
| 1:R:65:VAL:HG11   | 1:R:100:TYR:HB2   | 1.90                     | 0.52              |
| 1:SA:523:PHE:CD2  | 1:SA:568:VAL:HG23 | 2.45                     | 0.52              |
| 1:V:529:ILE:HD12  | 1:V:583:VAL:HG11  | 1.91                     | 0.52              |
| 1:VB:381:PRO:HA   | 1:VB:405:THR:HG22 | 1.91                     | 0.52              |
| 1:WA:230:ARG:HB2  | 1:WA:268:LEU:HD11 | 1.91                     | 0.52              |
| 1:WA:575:ILE:HG23 | 1:WA:603:VAL:HG22 | 1.91                     | 0.52              |
| 1:YB:812:VAL:HG23 | 1:YB:812:VAL:O    | 2.09                     | 0.52              |
| 1:Z:30:VAL:HG22   | 1:Z:50:MET:HE2    | 1.92                     | 0.52              |
| 1:Z:529:ILE:HD12  | 1:Z:583:VAL:HG11  | 1.92                     | 0.52              |
| 1:AB:812:VAL:HG23 | 1:AB:812:VAL:O    | 2.09                     | 0.52              |
| 1:BB:65:VAL:HG11  | 1:BB:100:TYR:HB2  | 1.92                     | 0.52              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:CA:765:VAL:HG22 | 1:DA:759:LEU:HD21 | 1.92                     | 0.52              |
| 1:DA:65:VAL:HG11  | 1:DA:100:TYR:HB2  | 1.92                     | 0.52              |
| 1:F:398:VAL:HG11  | 1:F:415:TRP:CE3   | 2.45                     | 0.52              |
| 1:GB:271:VAL:O    | 1:GB:271:VAL:HG23 | 2.08                     | 0.52              |
| 1:JA:398:VAL:HG11 | 1:JA:415:TRP:CE3  | 2.45                     | 0.52              |
| 1:JB:529:ILE:HD12 | 1:JB:583:VAL:HG11 | 1.91                     | 0.52              |
| 1:K:523:PHE:CD2   | 1:K:568:VAL:HG23  | 2.44                     | 0.52              |
| 1:KB:390:VAL:HG23 | 1:KB:390:VAL:O    | 2.10                     | 0.52              |
| 1:KB:737:GLY:O    | 1:KB:741:VAL:HG23 | 2.09                     | 0.52              |
| 1:LB:381:PRO:HA   | 1:LB:405:THR:HG22 | 1.91                     | 0.52              |
| 1:PA:523:PHE:CD2  | 1:PA:568:VAL:HG23 | 2.45                     | 0.52              |
| 1:Q:271:VAL:HG23  | 1:Q:271:VAL:O     | 2.08                     | 0.52              |
| 1:RB:65:VAL:HG11  | 1:RB:100:TYR:HB2  | 1.90                     | 0.52              |
| 1:SB:65:VAL:HG11  | 1:SB:100:TYR:HB2  | 1.91                     | 0.52              |
| 1:SB:381:PRO:HA   | 1:SB:405:THR:HG22 | 1.91                     | 0.52              |
| 1:T:271:VAL:HG23  | 1:T:271:VAL:O     | 2.08                     | 0.52              |
| 1:VB:765:VAL:HG22 | 1:WB:759:LEU:HD21 | 1.91                     | 0.52              |
| 1:W:230:ARG:HB2   | 1:W:268:LEU:HD11  | 1.91                     | 0.52              |
| 1:XB:381:PRO:HA   | 1:XB:405:THR:HG22 | 1.91                     | 0.52              |
| 1:Y:398:VAL:HG11  | 1:Y:415:TRP:CE3   | 2.45                     | 0.52              |
| 1:YA:812:VAL:HG23 | 1:YA:812:VAL:O    | 2.09                     | 0.52              |
| 1:Z:812:VAL:HG23  | 1:Z:812:VAL:O     | 2.10                     | 0.52              |
| 1:AB:398:VAL:HG11 | 1:AB:415:TRP:CE3  | 2.44                     | 0.52              |
| 1:BB:812:VAL:HG23 | 1:BB:812:VAL:O    | 2.09                     | 0.52              |
| 1:CA:529:ILE:CD1  | 1:CA:583:VAL:HG11 | 2.40                     | 0.52              |
| 1:CB:65:VAL:HG11  | 1:CB:100:TYR:HB2  | 1.92                     | 0.52              |
| 1:DB:17:HIS:HB3   | 1:DB:44:LEU:HD23  | 1.91                     | 0.52              |
| 1:DB:65:VAL:HG11  | 1:DB:100:TYR:HB2  | 1.92                     | 0.52              |
| 1:GA:65:VAL:HG11  | 1:GA:100:TYR:HB2  | 1.92                     | 0.52              |
| 1:GA:230:ARG:HB2  | 1:GA:268:LEU:HD11 | 1.92                     | 0.52              |
| 1:I:65:VAL:HG11   | 1:I:100:TYR:HB2   | 1.90                     | 0.52              |
| 1:I:168:ILE:HG22  | 1:I:215:LEU:CD2   | 2.37                     | 0.52              |
| 1:JB:575:ILE:HG23 | 1:JB:603:VAL:HG22 | 1.92                     | 0.52              |
| 1:L:381:PRO:HA    | 1:L:405:THR:HG22  | 1.91                     | 0.52              |
| 1:NB:230:ARG:HB2  | 1:NB:268:LEU:HD11 | 1.92                     | 0.52              |
| 1:OA:765:VAL:HG22 | 1:PA:759:LEU:HD21 | 1.92                     | 0.52              |
| 1:R:398:VAL:HG11  | 1:R:415:TRP:CE3   | 2.44                     | 0.52              |
| 1:T:523:PHE:CD2   | 1:T:568:VAL:HG23  | 2.45                     | 0.52              |
| 1:TB:381:PRO:HA   | 1:TB:405:THR:HG22 | 1.91                     | 0.52              |
| 1:WB:65:VAL:HG11  | 1:WB:100:TYR:HB2  | 1.90                     | 0.52              |
| 1:XB:271:VAL:HG23 | 1:XB:271:VAL:O    | 2.08                     | 0.52              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:YA:398:VAL:HG11 | 1:YA:415:TRP:CE3  | 2.45                     | 0.52              |
| 1:YB:48:MET:HA    | 1:YB:48:MET:HE3   | 1.91                     | 0.52              |
| 1:YB:230:ARG:HB2  | 1:YB:268:LEU:HD11 | 1.91                     | 0.52              |
| 1:ZA:65:VAL:HG11  | 1:ZA:100:TYR:HB2  | 1.92                     | 0.52              |
| 1:ZB:390:VAL:HG23 | 1:ZB:390:VAL:O    | 2.10                     | 0.52              |
| 1:C:523:PHE:CD2   | 1:C:568:VAL:HG23  | 2.44                     | 0.52              |
| 1:G:529:ILE:HD12  | 1:G:583:VAL:HG11  | 1.92                     | 0.52              |
| 1:GB:30:VAL:HG21  | 1:GB:50:MET:HE3   | 1.91                     | 0.52              |
| 1:H:497:VAL:HG13  | 1:H:497:VAL:O     | 2.10                     | 0.52              |
| 1:HA:812:VAL:HG23 | 1:HA:812:VAL:O    | 2.09                     | 0.52              |
| 1:HB:812:VAL:HG23 | 1:HB:812:VAL:O    | 2.09                     | 0.52              |
| 1:I:230:ARG:HB2   | 1:I:268:LEU:HD11  | 1.92                     | 0.52              |
| 1:I:529:ILE:HD12  | 1:I:583:VAL:HG11  | 1.92                     | 0.52              |
| 1:IA:529:ILE:HD12 | 1:IA:583:VAL:HG11 | 1.91                     | 0.52              |
| 1:NA:523:PHE:CD2  | 1:NA:568:VAL:HG23 | 2.45                     | 0.52              |
| 1:P:523:PHE:CD2   | 1:P:568:VAL:HG23  | 2.45                     | 0.52              |
| 1:PA:230:ARG:HB2  | 1:PA:268:LEU:HD11 | 1.91                     | 0.52              |
| 1:QB:65:VAL:HG11  | 1:QB:100:TYR:HB2  | 1.91                     | 0.52              |
| 1:R:539:LEU:HD12  | 1:R:540:GLN:N     | 2.25                     | 0.52              |
| 1:RB:381:PRO:HA   | 1:RB:405:THR:HG22 | 1.91                     | 0.52              |
| 1:RB:812:VAL:HG23 | 1:RB:812:VAL:O    | 2.09                     | 0.52              |
| 1:TB:325:VAL:HG13 | 1:TB:325:VAL:O    | 2.10                     | 0.52              |
| 1:VB:529:ILE:HD12 | 1:VB:583:VAL:HG11 | 1.91                     | 0.52              |
| 1:Y:65:VAL:HG11   | 1:Y:100:TYR:HB2   | 1.91                     | 0.52              |
| 1:C:381:PRO:HA    | 1:C:405:THR:HG22  | 1.91                     | 0.52              |
| 1:E:765:VAL:HG22  | 1:F:759:LEU:HD21  | 1.92                     | 0.52              |
| 1:H:390:VAL:HG23  | 1:H:390:VAL:O     | 2.10                     | 0.52              |
| 1:H:812:VAL:HG23  | 1:H:812:VAL:O     | 2.09                     | 0.52              |
| 1:IA:398:VAL:HG11 | 1:IA:415:TRP:CE3  | 2.45                     | 0.52              |
| 1:J:230:ARG:HB2   | 1:J:268:LEU:HD11  | 1.92                     | 0.52              |
| 1:M:812:VAL:HG23  | 1:M:812:VAL:O     | 2.09                     | 0.52              |
| 1:TB:230:ARG:HB2  | 1:TB:268:LEU:HD11 | 1.91                     | 0.52              |
| 1:UA:812:VAL:HG23 | 1:UA:812:VAL:O    | 2.09                     | 0.52              |
| 1:VA:390:VAL:HG23 | 1:VA:390:VAL:O    | 2.10                     | 0.52              |
| 1:WB:230:ARG:HB2  | 1:WB:268:LEU:HD11 | 1.91                     | 0.52              |
| 1:WB:398:VAL:HG11 | 1:WB:415:TRP:CE3  | 2.45                     | 0.52              |
| 1:Y:812:VAL:O     | 1:Y:812:VAL:HG23  | 2.09                     | 0.52              |
| 1:AA:230:ARG:HB2  | 1:AA:268:LEU:HD11 | 1.92                     | 0.52              |
| 1:BA:144:LEU:O    | 1:BA:144:LEU:HD12 | 2.10                     | 0.52              |
| 1:DB:497:VAL:HG13 | 1:DB:497:VAL:O    | 2.10                     | 0.52              |
| 1:F:516:LEU:O     | 1:F:516:LEU:HD23  | 2.10                     | 0.52              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:HB:523:PHE:CD2  | 1:HB:568:VAL:HG23 | 2.45                     | 0.52              |
| 1:JB:497:VAL:HG13 | 1:JB:497:VAL:O    | 2.10                     | 0.52              |
| 1:K:398:VAL:HG11  | 1:K:415:TRP:CE3   | 2.45                     | 0.52              |
| 1:MB:390:VAL:HG23 | 1:MB:390:VAL:O    | 2.10                     | 0.52              |
| 1:N:65:VAL:HG11   | 1:N:100:TYR:HB2   | 1.91                     | 0.52              |
| 1:OA:398:VAL:HG11 | 1:OA:415:TRP:CE3  | 2.45                     | 0.52              |
| 1:QA:52:THR:O     | 1:QA:109:ILE:HD11 | 2.09                     | 0.52              |
| 1:RB:390:VAL:HG23 | 1:RB:390:VAL:O    | 2.10                     | 0.52              |
| 1:SA:765:VAL:HG22 | 1:TA:759:LEU:HD21 | 1.92                     | 0.52              |
| 1:TA:398:VAL:HG11 | 1:TA:415:TRP:CE3  | 2.45                     | 0.52              |
| 1:TA:516:LEU:O    | 1:TA:516:LEU:HD23 | 2.10                     | 0.52              |
| 1:V:65:VAL:HG11   | 1:V:100:TYR:HB2   | 1.91                     | 0.52              |
| 1:W:529:ILE:HD12  | 1:W:583:VAL:HG11  | 1.92                     | 0.52              |
| 1:WB:497:VAL:HG13 | 1:WB:497:VAL:O    | 2.10                     | 0.52              |
| 1:XA:230:ARG:HB2  | 1:XA:268:LEU:HD11 | 1.92                     | 0.52              |
| 1:ZB:230:ARG:HB2  | 1:ZB:268:LEU:HD11 | 1.91                     | 0.52              |
| 1:AB:765:VAL:HG22 | 1:BB:759:LEU:HD21 | 1.92                     | 0.51              |
| 1:CA:575:ILE:HG23 | 1:CA:603:VAL:HG22 | 1.92                     | 0.51              |
| 1:D:398:VAL:HG11  | 1:D:415:TRP:CE3   | 2.45                     | 0.51              |
| 1:DB:575:ILE:HG23 | 1:DB:603:VAL:HG22 | 1.92                     | 0.51              |
| 1:FA:30:VAL:HG21  | 1:FA:50:MET:HE3   | 1.92                     | 0.51              |
| 1:I:398:VAL:HG11  | 1:I:415:TRP:CE3   | 2.45                     | 0.51              |
| 1:IB:398:VAL:HG11 | 1:IB:415:TRP:CE3  | 2.45                     | 0.51              |
| 1:L:65:VAL:HG11   | 1:L:100:TYR:HB2   | 1.91                     | 0.51              |
| 1:MB:812:VAL:HG23 | 1:MB:812:VAL:O    | 2.09                     | 0.51              |
| 1:P:390:VAL:HG23  | 1:P:390:VAL:O     | 2.10                     | 0.51              |
| 1:PB:381:PRO:HA   | 1:PB:405:THR:HG22 | 1.91                     | 0.51              |
| 1:S:230:ARG:HB2   | 1:S:268:LEU:HD11  | 1.91                     | 0.51              |
| 1:TB:65:VAL:HG11  | 1:TB:100:TYR:HB2  | 1.92                     | 0.51              |
| 1:UB:381:PRO:HA   | 1:UB:405:THR:HG22 | 1.91                     | 0.51              |
| 1:VA:529:ILE:HD12 | 1:VA:583:VAL:HG11 | 1.92                     | 0.51              |
| 1:X:390:VAL:HG23  | 1:X:390:VAL:O     | 2.10                     | 0.51              |
| 1:Z:30:VAL:CG2    | 1:Z:50:MET:HE2    | 2.41                     | 0.51              |
| 1:BB:575:ILE:HG23 | 1:BB:603:VAL:HG22 | 1.91                     | 0.51              |
| 1:CB:575:ILE:HG23 | 1:CB:603:VAL:HG22 | 1.92                     | 0.51              |
| 1:EA:390:VAL:HG23 | 1:EA:390:VAL:O    | 2.10                     | 0.51              |
| 1:FB:497:VAL:O    | 1:FB:497:VAL:HG13 | 2.10                     | 0.51              |
| 1:L:390:VAL:O     | 1:L:390:VAL:HG23  | 2.10                     | 0.51              |
| 1:MB:325:VAL:O    | 1:MB:325:VAL:HG13 | 2.09                     | 0.51              |
| 1:PB:575:ILE:HG23 | 1:PB:603:VAL:HG22 | 1.92                     | 0.51              |
| 1:SB:325:VAL:HG13 | 1:SB:325:VAL:O    | 2.09                     | 0.51              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:WB:271:VAL:O    | 1:WB:271:VAL:HG23 | 2.08                     | 0.51              |
| 1:X:398:VAL:HG11  | 1:X:415:TRP:CE3   | 2.45                     | 0.51              |
| 1:YB:144:LEU:O    | 1:YB:144:LEU:HD12 | 2.10                     | 0.51              |
| 1:ZA:398:VAL:HG11 | 1:ZA:415:TRP:CE3  | 2.46                     | 0.51              |
| 1:ZA:523:PHE:CD2  | 1:ZA:568:VAL:HG23 | 2.46                     | 0.51              |
| 1:B:398:VAL:HG11  | 1:B:415:TRP:CE3   | 2.46                     | 0.51              |
| 1:BB:230:ARG:HB2  | 1:BB:268:LEU:HD11 | 1.92                     | 0.51              |
| 1:CA:144:LEU:HD12 | 1:CA:144:LEU:O    | 2.10                     | 0.51              |
| 1:F:381:PRO:HA    | 1:F:405:THR:HG22  | 1.92                     | 0.51              |
| 1:F:529:ILE:HD12  | 1:F:583:VAL:HG11  | 1.92                     | 0.51              |
| 1:HA:325:VAL:O    | 1:HA:325:VAL:HG13 | 2.10                     | 0.51              |
| 1:JA:144:LEU:O    | 1:JA:144:LEU:HD12 | 2.10                     | 0.51              |
| 1:MB:575:ILE:HG23 | 1:MB:603:VAL:HG22 | 1.91                     | 0.51              |
| 1:OB:778:GLU:HA   | 1:OB:781:VAL:HG22 | 1.92                     | 0.51              |
| 1:PA:575:ILE:HG23 | 1:PA:603:VAL:HG22 | 1.91                     | 0.51              |
| 1:PB:17:HIS:CB    | 1:PB:44:LEU:HD23  | 2.40                     | 0.51              |
| 1:QA:523:PHE:CD2  | 1:QA:568:VAL:HG23 | 2.44                     | 0.51              |
| 1:RA:398:VAL:HG11 | 1:RA:415:TRP:CE3  | 2.45                     | 0.51              |
| 1:TA:325:VAL:HG13 | 1:TA:325:VAL:O    | 2.09                     | 0.51              |
| 1:UA:230:ARG:HB2  | 1:UA:268:LEU:HD11 | 1.92                     | 0.51              |
| 1:W:575:ILE:HG23  | 1:W:603:VAL:HG22  | 1.91                     | 0.51              |
| 1:WA:529:ILE:HD12 | 1:WA:583:VAL:HG11 | 1.92                     | 0.51              |
| 1:YB:539:LEU:HD21 | 1:YB:541:LEU:HD21 | 1.92                     | 0.51              |
| 1:A:765:VAL:HG22  | 1:B:759:LEU:HD21  | 1.91                     | 0.51              |
| 1:AC:398:VAL:HG11 | 1:AC:415:TRP:CE3  | 2.46                     | 0.51              |
| 1:AC:523:PHE:CD2  | 1:AC:568:VAL:HG23 | 2.45                     | 0.51              |
| 1:JA:497:VAL:HG13 | 1:JA:497:VAL:O    | 2.11                     | 0.51              |
| 1:L:230:ARG:HB2   | 1:L:268:LEU:HD11  | 1.92                     | 0.51              |
| 1:L:737:GLY:O     | 1:L:741:VAL:HG23  | 2.11                     | 0.51              |
| 1:LB:390:VAL:HG23 | 1:LB:390:VAL:O    | 2.11                     | 0.51              |
| 1:LB:398:VAL:HG11 | 1:LB:415:TRP:CE3  | 2.45                     | 0.51              |
| 1:NA:398:VAL:HG11 | 1:NA:415:TRP:CE3  | 2.46                     | 0.51              |
| 1:NB:529:ILE:HD12 | 1:NB:583:VAL:HG11 | 1.92                     | 0.51              |
| 1:P:575:ILE:HG23  | 1:P:603:VAL:HG22  | 1.92                     | 0.51              |
| 1:PA:65:VAL:HG12  | 1:PA:83:LEU:CD2   | 2.40                     | 0.51              |
| 1:QB:398:VAL:HG11 | 1:QB:415:TRP:CE3  | 2.45                     | 0.51              |
| 1:T:325:VAL:HG13  | 1:T:325:VAL:O     | 2.11                     | 0.51              |
| 1:VA:398:VAL:HG11 | 1:VA:415:TRP:CE3  | 2.46                     | 0.51              |
| 1:W:325:VAL:HG13  | 1:W:325:VAL:O     | 2.09                     | 0.51              |
| 1:WA:398:VAL:HG11 | 1:WA:415:TRP:CE3  | 2.45                     | 0.51              |
| 1:XA:325:VAL:O    | 1:XA:325:VAL:HG13 | 2.11                     | 0.51              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:YA:230:ARG:HB2  | 1:YA:268:LEU:HD11 | 1.93                     | 0.51              |
| 1:ZA:737:GLY:O    | 1:ZA:741:VAL:HG23 | 2.11                     | 0.51              |
| 1:ZB:398:VAL:HG11 | 1:ZB:415:TRP:CE3  | 2.46                     | 0.51              |
| 1:A:575:ILE:HG23  | 1:A:603:VAL:HG22  | 1.92                     | 0.51              |
| 1:AC:144:LEU:HD12 | 1:AC:144:LEU:O    | 2.10                     | 0.51              |
| 1:BB:398:VAL:HG11 | 1:BB:415:TRP:CE3  | 2.46                     | 0.51              |
| 1:CA:737:GLY:O    | 1:CA:741:VAL:HG23 | 2.11                     | 0.51              |
| 1:CB:325:VAL:HG13 | 1:CB:325:VAL:O    | 2.10                     | 0.51              |
| 1:DB:523:PHE:CD2  | 1:DB:568:VAL:HG23 | 2.46                     | 0.51              |
| 1:FB:523:PHE:CD2  | 1:FB:568:VAL:HG23 | 2.46                     | 0.51              |
| 1:H:398:VAL:HG11  | 1:H:415:TRP:CE3   | 2.45                     | 0.51              |
| 1:HA:765:VAL:HG22 | 1:IA:759:LEU:HD21 | 1.93                     | 0.51              |
| 1:JB:325:VAL:O    | 1:JB:325:VAL:HG13 | 2.09                     | 0.51              |
| 1:M:144:LEU:HD12  | 1:M:144:LEU:O     | 2.10                     | 0.51              |
| 1:M:575:ILE:HG23  | 1:M:603:VAL:HG22  | 1.92                     | 0.51              |
| 1:M:765:VAL:HG22  | 1:N:759:LEU:HD21  | 1.93                     | 0.51              |
| 1:MB:765:VAL:HG22 | 1:NB:759:LEU:HD21 | 1.93                     | 0.51              |
| 1:PA:325:VAL:O    | 1:PA:325:VAL:HG13 | 2.09                     | 0.51              |
| 1:PB:737:GLY:O    | 1:PB:741:VAL:HG23 | 2.11                     | 0.51              |
| 1:QA:325:VAL:HG13 | 1:QA:325:VAL:O    | 2.11                     | 0.51              |
| 1:QA:737:GLY:O    | 1:QA:741:VAL:HG23 | 2.10                     | 0.51              |
| 1:R:575:ILE:HG23  | 1:R:603:VAL:HG22  | 1.92                     | 0.51              |
| 1:R:765:VAL:HG22  | 1:S:759:LEU:HD21  | 1.91                     | 0.51              |
| 1:RA:65:VAL:HG11  | 1:RA:100:TYR:HB2  | 1.91                     | 0.51              |
| 1:RA:271:VAL:HG23 | 1:RA:271:VAL:O    | 2.08                     | 0.51              |
| 1:TB:17:HIS:HB3   | 1:TB:44:LEU:HD23  | 1.92                     | 0.51              |
| 1:UB:529:ILE:CD1  | 1:UB:583:VAL:HG11 | 2.41                     | 0.51              |
| 1:V:325:VAL:HG13  | 1:V:325:VAL:O     | 2.11                     | 0.51              |
| 1:VA:144:LEU:HD12 | 1:VA:144:LEU:O    | 2.11                     | 0.51              |
| 1:AB:538:GLN:HB2  | 1:AB:646:VAL:HG22 | 1.93                     | 0.51              |
| 1:AC:30:VAL:HG21  | 1:AC:50:MET:HE3   | 1.92                     | 0.51              |
| 1:AC:65:VAL:HG11  | 1:AC:100:TYR:HB2  | 1.91                     | 0.51              |
| 1:AC:325:VAL:O    | 1:AC:325:VAL:HG13 | 2.11                     | 0.51              |
| 1:BB:17:HIS:HB3   | 1:BB:44:LEU:HD23  | 1.93                     | 0.51              |
| 1:C:390:VAL:HG23  | 1:C:390:VAL:O     | 2.11                     | 0.51              |
| 1:CA:523:PHE:CD2  | 1:CA:568:VAL:HG23 | 2.46                     | 0.51              |
| 1:DA:230:ARG:HB2  | 1:DA:268:LEU:HD11 | 1.93                     | 0.51              |
| 1:DA:398:VAL:HG11 | 1:DA:415:TRP:CE3  | 2.46                     | 0.51              |
| 1:EA:523:PHE:CD2  | 1:EA:568:VAL:HG23 | 2.46                     | 0.51              |
| 1:FB:529:ILE:HD12 | 1:FB:583:VAL:HG11 | 1.92                     | 0.51              |
| 1:GB:325:VAL:O    | 1:GB:325:VAL:HG13 | 2.09                     | 0.51              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:GB:398:VAL:HG11 | 1:GB:415:TRP:CE3  | 2.46                     | 0.51              |
| 1:HA:529:ILE:CD1  | 1:HA:583:VAL:HG11 | 2.41                     | 0.51              |
| 1:IB:230:ARG:HB2  | 1:IB:268:LEU:HD11 | 1.93                     | 0.51              |
| 1:JB:398:VAL:HG11 | 1:JB:415:TRP:CE3  | 2.46                     | 0.51              |
| 1:KB:65:VAL:HG11  | 1:KB:100:TYR:HB2  | 1.93                     | 0.51              |
| 1:L:523:PHE:CD2   | 1:L:568:VAL:HG23  | 2.46                     | 0.51              |
| 1:MA:398:VAL:HG11 | 1:MA:415:TRP:CE3  | 2.46                     | 0.51              |
| 1:MA:765:VAL:HG22 | 1:NA:759:LEU:HD21 | 1.93                     | 0.51              |
| 1:P:230:ARG:HB2   | 1:P:268:LEU:HD11  | 1.91                     | 0.51              |
| 1:P:497:VAL:HG13  | 1:P:497:VAL:O     | 2.10                     | 0.51              |
| 1:P:765:VAL:HG22  | 1:Q:759:LEU:HD21  | 1.93                     | 0.51              |
| 1:QB:230:ARG:HB2  | 1:QB:268:LEU:HD11 | 1.92                     | 0.51              |
| 1:R:48:MET:HE2    | 1:R:48:MET:HA     | 1.92                     | 0.51              |
| 1:SB:390:VAL:HG23 | 1:SB:390:VAL:O    | 2.11                     | 0.51              |
| 1:TA:529:ILE:HD12 | 1:TA:583:VAL:HG11 | 1.92                     | 0.51              |
| 1:TB:390:VAL:HG23 | 1:TB:390:VAL:O    | 2.11                     | 0.51              |
| 1:UA:529:ILE:HD12 | 1:UA:583:VAL:HG11 | 1.92                     | 0.51              |
| 1:UB:765:VAL:HG22 | 1:VB:759:LEU:HD21 | 1.92                     | 0.51              |
| 1:V:398:VAL:HG11  | 1:V:415:TRP:CE3   | 2.45                     | 0.51              |
| 1:XB:65:VAL:HG11  | 1:XB:100:TYR:HB2  | 1.92                     | 0.51              |
| 1:Y:390:VAL:HG23  | 1:Y:390:VAL:O     | 2.10                     | 0.51              |
| 1:CA:398:VAL:HG11 | 1:CA:415:TRP:CE3  | 2.46                     | 0.51              |
| 1:F:390:VAL:HG23  | 1:F:390:VAL:O     | 2.11                     | 0.51              |
| 1:GA:398:VAL:HG11 | 1:GA:415:TRP:CE3  | 2.46                     | 0.51              |
| 1:H:144:LEU:HD12  | 1:H:144:LEU:O     | 2.10                     | 0.51              |
| 1:H:230:ARG:HB2   | 1:H:268:LEU:HD11  | 1.93                     | 0.51              |
| 1:I:52:THR:O      | 1:I:109:ILE:HD11  | 2.10                     | 0.51              |
| 1:KB:398:VAL:HG11 | 1:KB:415:TRP:CE3  | 2.45                     | 0.51              |
| 1:OA:65:VAL:HG11  | 1:OA:100:TYR:HB2  | 1.92                     | 0.51              |
| 1:OA:230:ARG:HB2  | 1:OA:268:LEU:HD11 | 1.91                     | 0.51              |
| 1:PA:398:VAL:HG11 | 1:PA:415:TRP:CE3  | 2.46                     | 0.51              |
| 1:SB:529:ILE:HD12 | 1:SB:583:VAL:HG11 | 1.92                     | 0.51              |
| 1:WB:538:GLN:HB2  | 1:WB:646:VAL:HG22 | 1.92                     | 0.51              |
| 1:YB:398:VAL:HG11 | 1:YB:415:TRP:CE3  | 2.46                     | 0.51              |
| 1:Z:52:THR:O      | 1:Z:109:ILE:HD11  | 2.11                     | 0.51              |
| 1:A:398:VAL:HG11  | 1:A:415:TRP:CE3   | 2.45                     | 0.51              |
| 1:BA:778:GLU:HA   | 1:BA:781:VAL:HG22 | 1.92                     | 0.51              |
| 1:C:737:GLY:O     | 1:C:741:VAL:HG23  | 2.10                     | 0.51              |
| 1:EA:325:VAL:O    | 1:EA:325:VAL:HG13 | 2.11                     | 0.51              |
| 1:G:52:THR:O      | 1:G:109:ILE:HD11  | 2.10                     | 0.51              |
| 1:GA:529:ILE:CD1  | 1:GA:583:VAL:HG21 | 2.41                     | 0.51              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:HA:144:LEU:HD12 | 1:HA:144:LEU:O    | 2.11                     | 0.51              |
| 1:IA:65:VAL:HG11  | 1:IA:100:TYR:HB2  | 1.93                     | 0.51              |
| 1:KB:230:ARG:HB2  | 1:KB:268:LEU:HD11 | 1.93                     | 0.51              |
| 1:LB:529:ILE:HD12 | 1:LB:583:VAL:HG11 | 1.93                     | 0.51              |
| 1:OA:325:VAL:HG13 | 1:OA:325:VAL:O    | 2.11                     | 0.51              |
| 1:PB:144:LEU:HD12 | 1:PB:144:LEU:O    | 2.10                     | 0.51              |
| 1:RB:523:PHE:CD2  | 1:RB:568:VAL:HG23 | 2.46                     | 0.51              |
| 1:S:65:VAL:HG11   | 1:S:100:TYR:HB2   | 1.91                     | 0.51              |
| 1:TB:398:VAL:HG11 | 1:TB:415:TRP:CE3  | 2.46                     | 0.51              |
| 1:UB:516:LEU:HD23 | 1:UB:516:LEU:O    | 2.11                     | 0.51              |
| 1:V:92:LEU:N      | 1:V:92:LEU:HD12   | 2.26                     | 0.51              |
| 1:VA:325:VAL:O    | 1:VA:325:VAL:HG13 | 2.11                     | 0.51              |
| 1:W:497:VAL:HG13  | 1:W:497:VAL:O     | 2.10                     | 0.51              |
| 1:WB:144:LEU:HD12 | 1:WB:144:LEU:O    | 2.10                     | 0.51              |
| 1:X:737:GLY:O     | 1:X:741:VAL:HG23  | 2.11                     | 0.51              |
| 1:AA:529:ILE:HD12 | 1:AA:583:VAL:HG11 | 1.93                     | 0.51              |
| 1:BA:325:VAL:HG13 | 1:BA:325:VAL:O    | 2.11                     | 0.51              |
| 1:BA:575:ILE:HG23 | 1:BA:603:VAL:HG22 | 1.93                     | 0.51              |
| 1:CA:390:VAL:HG23 | 1:CA:390:VAL:O    | 2.10                     | 0.51              |
| 1:DA:575:ILE:HG23 | 1:DA:603:VAL:HG22 | 1.92                     | 0.51              |
| 1:FA:529:ILE:HD12 | 1:FA:583:VAL:HG11 | 1.92                     | 0.51              |
| 1:HB:575:ILE:HG23 | 1:HB:603:VAL:HG22 | 1.93                     | 0.51              |
| 1:I:575:ILE:HG23  | 1:I:603:VAL:HG22  | 1.91                     | 0.51              |
| 1:LA:325:VAL:HG13 | 1:LA:325:VAL:O    | 2.11                     | 0.51              |
| 1:LB:575:ILE:HG23 | 1:LB:603:VAL:HG22 | 1.91                     | 0.51              |
| 1:NA:144:LEU:HD12 | 1:NA:144:LEU:O    | 2.10                     | 0.51              |
| 1:NA:575:ILE:HG23 | 1:NA:603:VAL:HG22 | 1.93                     | 0.51              |
| 1:O:575:ILE:HG23  | 1:O:603:VAL:HG22  | 1.92                     | 0.51              |
| 1:P:65:VAL:HG11   | 1:P:100:TYR:HB2   | 1.92                     | 0.51              |
| 1:PB:325:VAL:HG13 | 1:PB:325:VAL:O    | 2.10                     | 0.51              |
| 1:PB:523:PHE:CD2  | 1:PB:568:VAL:HG23 | 2.46                     | 0.51              |
| 1:R:523:PHE:CD2   | 1:R:568:VAL:HG23  | 2.46                     | 0.51              |
| 1:RA:325:VAL:HG13 | 1:RA:325:VAL:O    | 2.11                     | 0.51              |
| 1:UA:48:MET:HA    | 1:UA:48:MET:HE3   | 1.93                     | 0.51              |
| 1:UA:325:VAL:HG13 | 1:UA:325:VAL:O    | 2.11                     | 0.51              |
| 1:UA:765:VAL:HG22 | 1:VA:759:LEU:HD21 | 1.93                     | 0.51              |
| 1:VA:497:VAL:O    | 1:VA:497:VAL:HG13 | 2.10                     | 0.51              |
| 1:VB:575:ILE:HG23 | 1:VB:603:VAL:HG22 | 1.91                     | 0.51              |
| 1:ZA:539:LEU:HD23 | 1:ZA:540:GLN:N    | 2.26                     | 0.51              |
| 1:B:325:VAL:O     | 1:B:325:VAL:HG13  | 2.11                     | 0.51              |
| 1:F:325:VAL:HG13  | 1:F:325:VAL:O     | 2.10                     | 0.51              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:G:390:VAL:HG23  | 1:G:390:VAL:O     | 2.11                     | 0.51              |
| 1:G:398:VAL:HG11  | 1:G:415:TRP:CE3   | 2.46                     | 0.51              |
| 1:H:17:HIS:CB     | 1:H:44:LEU:HD23   | 2.41                     | 0.51              |
| 1:HA:52:THR:O     | 1:HA:109:ILE:HD11 | 2.10                     | 0.51              |
| 1:L:398:VAL:HG11  | 1:L:415:TRP:CE3   | 2.46                     | 0.51              |
| 1:N:390:VAL:HG23  | 1:N:390:VAL:O     | 2.12                     | 0.51              |
| 1:N:398:VAL:HG11  | 1:N:415:TRP:CE3   | 2.46                     | 0.51              |
| 1:QB:390:VAL:O    | 1:QB:390:VAL:HG23 | 2.11                     | 0.51              |
| 1:R:529:ILE:HD12  | 1:R:583:VAL:HG11  | 1.92                     | 0.51              |
| 1:WB:529:ILE:HD12 | 1:WB:583:VAL:HG11 | 1.93                     | 0.51              |
| 1:X:144:LEU:HD12  | 1:X:144:LEU:O     | 2.11                     | 0.51              |
| 1:AA:92:LEU:N     | 1:AA:92:LEU:HD12  | 2.25                     | 0.50              |
| 1:AC:765:VAL:HG22 | 1:OA:759:LEU:HD21 | 1.93                     | 0.50              |
| 1:C:398:VAL:HG11  | 1:C:415:TRP:CE3   | 2.46                     | 0.50              |
| 1:D:529:ILE:HD12  | 1:D:583:VAL:HG11  | 1.92                     | 0.50              |
| 1:E:575:ILE:HG23  | 1:E:603:VAL:HG22  | 1.93                     | 0.50              |
| 1:FA:765:VAL:HG22 | 1:GA:759:LEU:HD21 | 1.94                     | 0.50              |
| 1:J:398:VAL:HG11  | 1:J:415:TRP:CE3   | 2.47                     | 0.50              |
| 1:L:539:LEU:HD23  | 1:L:540:GLN:N     | 2.26                     | 0.50              |
| 1:M:325:VAL:O     | 1:M:325:VAL:HG13  | 2.11                     | 0.50              |
| 1:MA:334:LEU:HD12 | 1:MA:357:TRP:NE1  | 2.27                     | 0.50              |
| 1:MB:497:VAL:O    | 1:MB:497:VAL:HG13 | 2.10                     | 0.50              |
| 1:OB:529:ILE:HD12 | 1:OB:583:VAL:HG11 | 1.94                     | 0.50              |
| 1:PA:65:VAL:HG11  | 1:PA:100:TYR:HB2  | 1.92                     | 0.50              |
| 1:PB:398:VAL:HG11 | 1:PB:415:TRP:CE3  | 2.46                     | 0.50              |
| 1:QA:398:VAL:HG11 | 1:QA:415:TRP:CE3  | 2.46                     | 0.50              |
| 1:QB:497:VAL:HG13 | 1:QB:497:VAL:O    | 2.12                     | 0.50              |
| 1:RA:497:VAL:HG13 | 1:RA:497:VAL:O    | 2.11                     | 0.50              |
| 1:RB:398:VAL:HG11 | 1:RB:415:TRP:CE3  | 2.46                     | 0.50              |
| 1:SB:497:VAL:O    | 1:SB:497:VAL:HG13 | 2.10                     | 0.50              |
| 1:SB:765:VAL:HG22 | 1:TB:759:LEU:HD21 | 1.93                     | 0.50              |
| 1:UB:92:LEU:HD12  | 1:UB:92:LEU:N     | 2.26                     | 0.50              |
| 1:UB:758:GLU:O    | 1:UB:762:VAL:HG22 | 2.11                     | 0.50              |
| 1:W:398:VAL:HG11  | 1:W:415:TRP:CE3   | 2.46                     | 0.50              |
| 1:YA:737:GLY:O    | 1:YA:741:VAL:HG23 | 2.11                     | 0.50              |
| 1:Z:334:LEU:HD12  | 1:Z:357:TRP:NE1   | 2.26                     | 0.50              |
| 1:A:325:VAL:HG13  | 1:A:325:VAL:O     | 2.11                     | 0.50              |
| 1:AA:759:LEU:HD21 | 1:Z:765:VAL:HG22  | 1.92                     | 0.50              |
| 1:B:65:VAL:HG11   | 1:B:100:TYR:HB2   | 1.93                     | 0.50              |
| 1:BA:398:VAL:HG11 | 1:BA:415:TRP:CE3  | 2.46                     | 0.50              |
| 1:CA:497:VAL:HG13 | 1:CA:497:VAL:O    | 2.11                     | 0.50              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:DA:52:THR:O     | 1:DA:109:ILE:HD11 | 2.11                     | 0.50              |
| 1:DB:390:VAL:HG23 | 1:DB:390:VAL:O    | 2.11                     | 0.50              |
| 1:E:65:VAL:HG11   | 1:E:100:TYR:HB2   | 1.93                     | 0.50              |
| 1:E:390:VAL:HG23  | 1:E:390:VAL:O     | 2.11                     | 0.50              |
| 1:F:765:VAL:HG22  | 1:G:759:LEU:HD21  | 1.93                     | 0.50              |
| 1:FA:497:VAL:O    | 1:FA:497:VAL:HG13 | 2.11                     | 0.50              |
| 1:G:765:VAL:HG22  | 1:H:759:LEU:HD21  | 1.93                     | 0.50              |
| 1:H:325:VAL:O     | 1:H:325:VAL:HG13  | 2.11                     | 0.50              |
| 1:IB:325:VAL:HG13 | 1:IB:325:VAL:O    | 2.11                     | 0.50              |
| 1:JB:390:VAL:HG23 | 1:JB:390:VAL:O    | 2.11                     | 0.50              |
| 1:K:230:ARG:HB2   | 1:K:268:LEU:HD11  | 1.93                     | 0.50              |
| 1:KA:390:VAL:HG23 | 1:KA:390:VAL:O    | 2.11                     | 0.50              |
| 1:KA:778:GLU:HA   | 1:KA:781:VAL:HG22 | 1.93                     | 0.50              |
| 1:MB:52:THR:O     | 1:MB:109:ILE:HD11 | 2.12                     | 0.50              |
| 1:N:497:VAL:O     | 1:N:497:VAL:HG13  | 2.11                     | 0.50              |
| 1:O:325:VAL:HG13  | 1:O:325:VAL:O     | 2.10                     | 0.50              |
| 1:O:778:GLU:HA    | 1:O:781:VAL:HG22  | 1.93                     | 0.50              |
| 1:O:812:VAL:HG23  | 1:O:812:VAL:O     | 2.09                     | 0.50              |
| 1:T:65:VAL:HG11   | 1:T:100:TYR:HB2   | 1.91                     | 0.50              |
| 1:T:398:VAL:HG11  | 1:T:415:TRP:CE3   | 2.46                     | 0.50              |
| 1:A:65:VAL:HG11   | 1:A:100:TYR:HB2   | 1.93                     | 0.50              |
| 1:AB:325:VAL:HG13 | 1:AB:325:VAL:O    | 2.11                     | 0.50              |
| 1:AB:334:LEU:HD12 | 1:AB:357:TRP:NE1  | 2.27                     | 0.50              |
| 1:BA:52:THR:O     | 1:BA:109:ILE:HD11 | 2.11                     | 0.50              |
| 1:D:390:VAL:O     | 1:D:390:VAL:HG23  | 2.11                     | 0.50              |
| 1:D:497:VAL:HG13  | 1:D:497:VAL:O     | 2.12                     | 0.50              |
| 1:EB:398:VAL:HG11 | 1:EB:415:TRP:CE3  | 2.46                     | 0.50              |
| 1:FB:390:VAL:O    | 1:FB:390:VAL:HG23 | 2.11                     | 0.50              |
| 1:FB:575:ILE:HG23 | 1:FB:603:VAL:HG22 | 1.92                     | 0.50              |
| 1:HA:65:VAL:HG11  | 1:HA:100:TYR:HB2  | 1.93                     | 0.50              |
| 1:KB:144:LEU:HD12 | 1:KB:144:LEU:O    | 2.11                     | 0.50              |
| 1:LA:144:LEU:HD12 | 1:LA:144:LEU:O    | 2.11                     | 0.50              |
| 1:LA:398:VAL:HG11 | 1:LA:415:TRP:CE3  | 2.45                     | 0.50              |
| 1:OB:52:THR:O     | 1:OB:109:ILE:HD11 | 2.12                     | 0.50              |
| 1:OB:144:LEU:HD12 | 1:OB:144:LEU:O    | 2.10                     | 0.50              |
| 1:PA:144:LEU:HD12 | 1:PA:144:LEU:O    | 2.11                     | 0.50              |
| 1:SA:398:VAL:HG11 | 1:SA:415:TRP:CE3  | 2.46                     | 0.50              |
| 1:XB:390:VAL:HG23 | 1:XB:390:VAL:O    | 2.11                     | 0.50              |
| 1:ZB:144:LEU:HD12 | 1:ZB:144:LEU:O    | 2.11                     | 0.50              |
| 1:AA:260:VAL:O    | 1:AA:260:VAL:HG13 | 2.12                     | 0.50              |
| 1:AC:48:MET:HA    | 1:AC:48:MET:HE3   | 1.93                     | 0.50              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AC:759:LEU:HD21 | 1:ZB:765:VAL:HG22 | 1.93                     | 0.50              |
| 1:CA:325:VAL:O    | 1:CA:325:VAL:HG13 | 2.12                     | 0.50              |
| 1:E:398:VAL:HG11  | 1:E:415:TRP:CE3   | 2.47                     | 0.50              |
| 1:IB:17:HIS:HB3   | 1:IB:44:LEU:HD23  | 1.94                     | 0.50              |
| 1:J:497:VAL:HG13  | 1:J:497:VAL:O     | 2.12                     | 0.50              |
| 1:JA:529:ILE:HD12 | 1:JA:583:VAL:HG11 | 1.93                     | 0.50              |
| 1:LB:144:LEU:HD12 | 1:LB:163:ILE:HD11 | 1.93                     | 0.50              |
| 1:NA:390:VAL:HG23 | 1:NA:390:VAL:O    | 2.12                     | 0.50              |
| 1:NB:390:VAL:O    | 1:NB:390:VAL:HG23 | 2.11                     | 0.50              |
| 1:OA:260:VAL:HG13 | 1:OA:260:VAL:O    | 2.12                     | 0.50              |
| 1:OB:398:VAL:HG11 | 1:OB:415:TRP:CE3  | 2.46                     | 0.50              |
| 1:OB:575:ILE:HG23 | 1:OB:603:VAL:HG22 | 1.93                     | 0.50              |
| 1:PB:390:VAL:HG23 | 1:PB:390:VAL:O    | 2.10                     | 0.50              |
| 1:PB:765:VAL:HG22 | 1:QB:759:LEU:HD21 | 1.94                     | 0.50              |
| 1:Q:325:VAL:HG13  | 1:Q:325:VAL:O     | 2.12                     | 0.50              |
| 1:RA:529:ILE:HD12 | 1:RA:583:VAL:HG11 | 1.92                     | 0.50              |
| 1:S:398:VAL:HG11  | 1:S:415:TRP:CE3   | 2.46                     | 0.50              |
| 1:SA:65:VAL:HG11  | 1:SA:100:TYR:HB2  | 1.91                     | 0.50              |
| 1:TB:529:ILE:HD12 | 1:TB:583:VAL:HG11 | 1.93                     | 0.50              |
| 1:UA:398:VAL:HG11 | 1:UA:415:TRP:CE3  | 2.47                     | 0.50              |
| 1:W:390:VAL:O     | 1:W:390:VAL:HG23  | 2.11                     | 0.50              |
| 1:XB:325:VAL:O    | 1:XB:325:VAL:HG13 | 2.12                     | 0.50              |
| 1:Y:325:VAL:HG13  | 1:Y:325:VAL:O     | 2.12                     | 0.50              |
| 1:YA:575:ILE:HG23 | 1:YA:603:VAL:HG22 | 1.92                     | 0.50              |
| 1:AB:52:THR:O     | 1:AB:109:ILE:HD11 | 2.12                     | 0.50              |
| 1:AC:390:VAL:HG23 | 1:AC:390:VAL:O    | 2.12                     | 0.50              |
| 1:DA:497:VAL:O    | 1:DA:497:VAL:HG13 | 2.12                     | 0.50              |
| 1:EB:325:VAL:O    | 1:EB:325:VAL:HG13 | 2.12                     | 0.50              |
| 1:EB:497:VAL:O    | 1:EB:497:VAL:HG13 | 2.12                     | 0.50              |
| 1:OA:575:ILE:HG23 | 1:OA:603:VAL:HG22 | 1.92                     | 0.50              |
| 1:OB:325:VAL:O    | 1:OB:325:VAL:HG13 | 2.11                     | 0.50              |
| 1:QA:497:VAL:O    | 1:QA:497:VAL:HG13 | 2.11                     | 0.50              |
| 1:QB:325:VAL:HG13 | 1:QB:325:VAL:O    | 2.11                     | 0.50              |
| 1:R:260:VAL:HG13  | 1:R:260:VAL:O     | 2.12                     | 0.50              |
| 1:R:325:VAL:O     | 1:R:325:VAL:HG13  | 2.11                     | 0.50              |
| 1:RA:144:LEU:O    | 1:RA:144:LEU:HD12 | 2.12                     | 0.50              |
| 1:RA:523:PHE:CD2  | 1:RA:568:VAL:HG23 | 2.47                     | 0.50              |
| 1:RB:325:VAL:O    | 1:RB:325:VAL:HG13 | 2.11                     | 0.50              |
| 1:S:325:VAL:O     | 1:S:325:VAL:HG13  | 2.11                     | 0.50              |
| 1:VA:230:ARG:HB2  | 1:VA:268:LEU:HD11 | 1.93                     | 0.50              |
| 1:W:737:GLY:O     | 1:W:741:VAL:HG23  | 2.11                     | 0.50              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:Z:390:VAL:HG23  | 1:Z:390:VAL:O     | 2.10                     | 0.50              |
| 1:B:144:LEU:HD12  | 1:B:144:LEU:O     | 2.12                     | 0.50              |
| 1:C:497:VAL:O     | 1:C:497:VAL:HG13  | 2.12                     | 0.50              |
| 1:D:144:LEU:O     | 1:D:144:LEU:HD12  | 2.11                     | 0.50              |
| 1:EA:765:VAL:HG22 | 1:FA:759:LEU:HD21 | 1.94                     | 0.50              |
| 1:G:325:VAL:HG13  | 1:G:325:VAL:O     | 2.11                     | 0.50              |
| 1:GA:325:VAL:HG13 | 1:GA:325:VAL:O    | 2.11                     | 0.50              |
| 1:GA:390:VAL:O    | 1:GA:390:VAL:HG23 | 2.11                     | 0.50              |
| 1:GA:539:LEU:HD21 | 1:GA:599:ILE:HD11 | 1.94                     | 0.50              |
| 1:GB:260:VAL:HG13 | 1:GB:260:VAL:O    | 2.12                     | 0.50              |
| 1:K:30:VAL:CG2    | 1:K:50:MET:HE3    | 2.42                     | 0.50              |
| 1:UB:325:VAL:O    | 1:UB:325:VAL:HG13 | 2.12                     | 0.50              |
| 1:XA:390:VAL:HG23 | 1:XA:390:VAL:O    | 2.10                     | 0.50              |
| 1:XA:497:VAL:HG13 | 1:XA:497:VAL:O    | 2.12                     | 0.50              |
| 1:XB:778:GLU:HA   | 1:XB:781:VAL:HG22 | 1.93                     | 0.50              |
| 1:YB:778:GLU:HA   | 1:YB:781:VAL:HG22 | 1.93                     | 0.50              |
| 1:Z:497:VAL:HG13  | 1:Z:497:VAL:O     | 2.10                     | 0.50              |
| 1:Z:575:ILE:HG23  | 1:Z:603:VAL:HG22  | 1.92                     | 0.50              |
| 1:AA:325:VAL:HG13 | 1:AA:325:VAL:O    | 2.11                     | 0.50              |
| 1:BB:302:VAL:HG11 | 1:BB:306:LYS:HZ2  | 1.76                     | 0.50              |
| 1:BB:325:VAL:O    | 1:BB:325:VAL:HG13 | 2.12                     | 0.50              |
| 1:GA:366:VAL:O    | 1:GA:366:VAL:HG13 | 2.10                     | 0.50              |
| 1:H:778:GLU:HA    | 1:H:781:VAL:HG22  | 1.94                     | 0.50              |
| 1:HB:398:VAL:HG11 | 1:HB:415:TRP:CE3  | 2.46                     | 0.50              |
| 1:J:529:ILE:HD12  | 1:J:583:VAL:HG11  | 1.93                     | 0.50              |
| 1:JA:390:VAL:O    | 1:JA:390:VAL:HG23 | 2.11                     | 0.50              |
| 1:LA:497:VAL:O    | 1:LA:497:VAL:HG13 | 2.12                     | 0.50              |
| 1:LB:65:VAL:HG23  | 1:LB:67:ARG:HG3   | 1.94                     | 0.50              |
| 1:MB:778:GLU:HA   | 1:MB:781:VAL:HG22 | 1.94                     | 0.50              |
| 1:NB:325:VAL:HG13 | 1:NB:325:VAL:O    | 2.11                     | 0.50              |
| 1:O:65:VAL:HG11   | 1:O:100:TYR:HB2   | 1.93                     | 0.50              |
| 1:PB:17:HIS:HB3   | 1:PB:44:LEU:HD23  | 1.94                     | 0.50              |
| 1:Q:398:VAL:HG11  | 1:Q:415:TRP:CE3   | 2.46                     | 0.50              |
| 1:QB:765:VAL:HG22 | 1:RB:759:LEU:HD21 | 1.93                     | 0.50              |
| 1:S:390:VAL:HG23  | 1:S:390:VAL:O     | 2.11                     | 0.50              |
| 1:TA:390:VAL:HG23 | 1:TA:390:VAL:O    | 2.11                     | 0.50              |
| 1:TB:366:VAL:O    | 1:TB:366:VAL:HG13 | 2.11                     | 0.50              |
| 1:TB:778:GLU:HA   | 1:TB:781:VAL:HG22 | 1.94                     | 0.50              |
| 1:UB:144:LEU:HD12 | 1:UB:144:LEU:O    | 2.10                     | 0.50              |
| 1:WB:390:VAL:HG23 | 1:WB:390:VAL:O    | 2.11                     | 0.50              |
| 1:X:230:ARG:HB2   | 1:X:268:LEU:HD11  | 1.93                     | 0.50              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:XA:398:VAL:HG11 | 1:XA:415:TRP:CE3  | 2.46                     | 0.50              |
| 1:Y:575:ILE:HG23  | 1:Y:603:VAL:HG22  | 1.92                     | 0.50              |
| 1:YB:765:VAL:HG22 | 1:ZB:759:LEU:HD21 | 1.92                     | 0.50              |
| 1:B:765:VAL:HG22  | 1:C:759:LEU:HD21  | 1.94                     | 0.50              |
| 1:BB:334:LEU:HD12 | 1:BB:357:TRP:NE1  | 2.26                     | 0.50              |
| 1:C:778:GLU:HA    | 1:C:781:VAL:HG22  | 1.93                     | 0.50              |
| 1:D:325:VAL:HG13  | 1:D:325:VAL:O     | 2.11                     | 0.50              |
| 1:DA:390:VAL:HG23 | 1:DA:390:VAL:O    | 2.11                     | 0.50              |
| 1:DB:17:HIS:CB    | 1:DB:44:LEU:HD23  | 2.42                     | 0.50              |
| 1:DB:92:LEU:HD12  | 1:DB:92:LEU:N     | 2.26                     | 0.50              |
| 1:FB:765:VAL:HG22 | 1:GB:759:LEU:HD21 | 1.94                     | 0.50              |
| 1:J:778:GLU:HA    | 1:J:781:VAL:HG22  | 1.94                     | 0.50              |
| 1:K:737:GLY:O     | 1:K:741:VAL:HG23  | 2.12                     | 0.50              |
| 1:L:65:VAL:HG23   | 1:L:67:ARG:HG3    | 1.94                     | 0.50              |
| 1:L:778:GLU:HA    | 1:L:781:VAL:HG22  | 1.94                     | 0.50              |
| 1:LB:778:GLU:HA   | 1:LB:781:VAL:HG22 | 1.93                     | 0.50              |
| 1:M:390:VAL:HG23  | 1:M:390:VAL:O     | 2.12                     | 0.50              |
| 1:M:538:GLN:HB2   | 1:M:646:VAL:HG22  | 1.93                     | 0.50              |
| 1:MA:325:VAL:O    | 1:MA:325:VAL:HG13 | 2.11                     | 0.50              |
| 1:N:230:ARG:HB2   | 1:N:268:LEU:HD11  | 1.93                     | 0.50              |
| 1:PA:529:ILE:HD12 | 1:PA:583:VAL:HG11 | 1.94                     | 0.50              |
| 1:QB:260:VAL:HG13 | 1:QB:260:VAL:O    | 2.12                     | 0.50              |
| 1:QB:778:GLU:HA   | 1:QB:781:VAL:HG22 | 1.94                     | 0.50              |
| 1:T:390:VAL:O     | 1:T:390:VAL:HG23  | 2.11                     | 0.50              |
| 1:TA:765:VAL:HG22 | 1:UA:759:LEU:HD21 | 1.93                     | 0.50              |
| 1:UB:398:VAL:HG11 | 1:UB:415:TRP:CE3  | 2.47                     | 0.50              |
| 1:X:260:VAL:O     | 1:X:260:VAL:HG13  | 2.12                     | 0.50              |
| 1:YA:260:VAL:O    | 1:YA:260:VAL:HG13 | 2.12                     | 0.50              |
| 1:YA:765:VAL:HG22 | 1:ZA:759:LEU:HD21 | 1.94                     | 0.50              |
| 1:ZB:334:LEU:HD12 | 1:ZB:357:TRP:NE1  | 2.27                     | 0.50              |
| 1:EA:398:VAL:HG11 | 1:EA:415:TRP:CE3  | 2.47                     | 0.50              |
| 1:EB:390:VAL:HG23 | 1:EB:390:VAL:O    | 2.12                     | 0.50              |
| 1:FB:325:VAL:HG13 | 1:FB:325:VAL:O    | 2.11                     | 0.50              |
| 1:JA:538:GLN:HB2  | 1:JA:646:VAL:HG22 | 1.93                     | 0.50              |
| 1:KA:260:VAL:O    | 1:KA:260:VAL:HG13 | 2.12                     | 0.50              |
| 1:KA:737:GLY:O    | 1:KA:741:VAL:HG23 | 2.12                     | 0.50              |
| 1:M:52:THR:O      | 1:M:109:ILE:HD11  | 2.12                     | 0.50              |
| 1:MA:144:LEU:HD12 | 1:MA:144:LEU:O    | 2.11                     | 0.50              |
| 1:PA:390:VAL:HG23 | 1:PA:390:VAL:O    | 2.11                     | 0.50              |
| 1:RB:778:GLU:HA   | 1:RB:781:VAL:HG22 | 1.94                     | 0.50              |
| 1:TA:575:ILE:HG23 | 1:TA:603:VAL:HG22 | 1.93                     | 0.50              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:V:390:VAL:HG23  | 1:V:390:VAL:O     | 2.12                     | 0.50              |
| 1:VA:17:HIS:CB    | 1:VA:44:LEU:HD23  | 2.42                     | 0.50              |
| 1:WB:325:VAL:O    | 1:WB:325:VAL:HG13 | 2.12                     | 0.50              |
| 1:X:92:LEU:HD12   | 1:X:92:LEU:N      | 2.27                     | 0.50              |
| 1:XA:529:ILE:HD12 | 1:XA:583:VAL:HG11 | 1.93                     | 0.50              |
| 1:XB:398:VAL:HG11 | 1:XB:415:TRP:CE3  | 2.47                     | 0.50              |
| 1:YA:325:VAL:O    | 1:YA:325:VAL:HG13 | 2.12                     | 0.50              |
| 1:YB:325:VAL:HG13 | 1:YB:325:VAL:O    | 2.11                     | 0.50              |
| 1:ZA:17:HIS:HB3   | 1:ZA:44:LEU:HD23  | 1.94                     | 0.50              |
| 1:ZA:497:VAL:HG13 | 1:ZA:497:VAL:O    | 2.12                     | 0.50              |
| 1:AA:737:GLY:O    | 1:AA:741:VAL:HG23 | 2.12                     | 0.49              |
| 1:DA:260:VAL:O    | 1:DA:260:VAL:HG13 | 2.12                     | 0.49              |
| 1:DA:325:VAL:HG13 | 1:DA:325:VAL:O    | 2.11                     | 0.49              |
| 1:E:48:MET:HA     | 1:E:48:MET:CE     | 2.41                     | 0.49              |
| 1:E:230:ARG:HB2   | 1:E:268:LEU:HD11  | 1.94                     | 0.49              |
| 1:GB:390:VAL:HG23 | 1:GB:390:VAL:O    | 2.11                     | 0.49              |
| 1:HA:334:LEU:HD12 | 1:HA:357:TRP:NE1  | 2.27                     | 0.49              |
| 1:IB:390:VAL:O    | 1:IB:390:VAL:HG23 | 2.12                     | 0.49              |
| 1:J:325:VAL:O     | 1:J:325:VAL:HG13  | 2.12                     | 0.49              |
| 1:JA:334:LEU:HD12 | 1:JA:357:TRP:NE1  | 2.27                     | 0.49              |
| 1:KA:30:VAL:CG2   | 1:KA:50:MET:HE3   | 2.42                     | 0.49              |
| 1:MB:398:VAL:HG11 | 1:MB:415:TRP:CE3  | 2.47                     | 0.49              |
| 1:N:325:VAL:HG13  | 1:N:325:VAL:O     | 2.12                     | 0.49              |
| 1:NB:737:GLY:O    | 1:NB:741:VAL:HG23 | 2.12                     | 0.49              |
| 1:OA:529:ILE:HD12 | 1:OA:583:VAL:HG11 | 1.93                     | 0.49              |
| 1:QA:575:ILE:HG23 | 1:QA:603:VAL:HG22 | 1.93                     | 0.49              |
| 1:QB:52:THR:O     | 1:QB:109:ILE:HD11 | 2.12                     | 0.49              |
| 1:V:230:ARG:HB2   | 1:V:268:LEU:HD11  | 1.93                     | 0.49              |
| 1:VB:497:VAL:O    | 1:VB:497:VAL:HG13 | 2.12                     | 0.49              |
| 1:XB:30:VAL:CG2   | 1:XB:50:MET:HE3   | 2.42                     | 0.49              |
| 1:Y:778:GLU:HA    | 1:Y:781:VAL:HG22  | 1.93                     | 0.49              |
| 1:ZA:575:ILE:HG23 | 1:ZA:603:VAL:HG22 | 1.93                     | 0.49              |
| 1:A:52:THR:O      | 1:A:109:ILE:HD11  | 2.12                     | 0.49              |
| 1:AC:575:ILE:HG23 | 1:AC:603:VAL:HG22 | 1.93                     | 0.49              |
| 1:B:778:GLU:HA    | 1:B:781:VAL:HG22  | 1.94                     | 0.49              |
| 1:BB:260:VAL:O    | 1:BB:260:VAL:HG13 | 2.13                     | 0.49              |
| 1:C:52:THR:O      | 1:C:109:ILE:HD11  | 2.12                     | 0.49              |
| 1:FB:52:THR:O     | 1:FB:109:ILE:HD11 | 2.12                     | 0.49              |
| 1:H:529:ILE:HD12  | 1:H:583:VAL:HG11  | 1.95                     | 0.49              |
| 1:JB:260:VAL:O    | 1:JB:260:VAL:HG13 | 2.12                     | 0.49              |
| 1:KB:778:GLU:HA   | 1:KB:781:VAL:HG22 | 1.95                     | 0.49              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:NB:260:VAL:HG13 | 1:NB:260:VAL:O    | 2.12                     | 0.49              |
| 1:OB:390:VAL:HG23 | 1:OB:390:VAL:O    | 2.11                     | 0.49              |
| 1:RA:260:VAL:HG13 | 1:RA:260:VAL:O    | 2.12                     | 0.49              |
| 1:S:260:VAL:O     | 1:S:260:VAL:HG13  | 2.12                     | 0.49              |
| 1:UA:52:THR:O     | 1:UA:109:ILE:HD11 | 2.12                     | 0.49              |
| 1:UB:737:GLY:O    | 1:UB:741:VAL:HG23 | 2.12                     | 0.49              |
| 1:Z:398:VAL:HG11  | 1:Z:415:TRP:CE3   | 2.47                     | 0.49              |
| 1:ZB:325:VAL:O    | 1:ZB:325:VAL:HG13 | 2.12                     | 0.49              |
| 1:AC:65:VAL:HG23  | 1:AC:67:ARG:HG3   | 1.94                     | 0.49              |
| 1:AC:737:GLY:O    | 1:AC:741:VAL:HG23 | 2.12                     | 0.49              |
| 1:B:529:ILE:HD12  | 1:B:583:VAL:HG11  | 1.94                     | 0.49              |
| 1:BA:765:VAL:HG22 | 1:CA:759:LEU:HD21 | 1.95                     | 0.49              |
| 1:D:778:GLU:HA    | 1:D:781:VAL:HG22  | 1.94                     | 0.49              |
| 1:EA:538:GLN:HB2  | 1:EA:646:VAL:HG22 | 1.95                     | 0.49              |
| 1:EB:260:VAL:O    | 1:EB:260:VAL:HG13 | 2.12                     | 0.49              |
| 1:F:30:VAL:HG22   | 1:F:50:MET:HE2    | 1.94                     | 0.49              |
| 1:FB:539:LEU:HD12 | 1:FB:540:GLN:H    | 1.76                     | 0.49              |
| 1:G:260:VAL:HG13  | 1:G:260:VAL:O     | 2.13                     | 0.49              |
| 1:H:44:LEU:H      | 1:H:44:LEU:HD22   | 1.77                     | 0.49              |
| 1:I:325:VAL:HG13  | 1:I:325:VAL:O     | 2.12                     | 0.49              |
| 1:I:737:GLY:O     | 1:I:741:VAL:HG23  | 2.12                     | 0.49              |
| 1:IA:260:VAL:O    | 1:IA:260:VAL:HG13 | 2.13                     | 0.49              |
| 1:J:390:VAL:HG23  | 1:J:390:VAL:O     | 2.11                     | 0.49              |
| 1:JA:575:ILE:HG23 | 1:JA:603:VAL:HG22 | 1.94                     | 0.49              |
| 1:K:260:VAL:O     | 1:K:260:VAL:HG13  | 2.12                     | 0.49              |
| 1:KB:65:VAL:HG23  | 1:KB:67:ARG:HG3   | 1.94                     | 0.49              |
| 1:KB:325:VAL:HG13 | 1:KB:325:VAL:O    | 2.12                     | 0.49              |
| 1:M:778:GLU:HA    | 1:M:781:VAL:HG22  | 1.94                     | 0.49              |
| 1:MB:30:VAL:CG2   | 1:MB:50:MET:HE3   | 2.42                     | 0.49              |
| 1:NA:737:GLY:O    | 1:NA:741:VAL:HG23 | 2.13                     | 0.49              |
| 1:NB:92:LEU:N     | 1:NB:92:LEU:HD12  | 2.27                     | 0.49              |
| 1:QB:523:PHE:CD2  | 1:QB:568:VAL:HG23 | 2.48                     | 0.49              |
| 1:T:778:GLU:HA    | 1:T:781:VAL:HG22  | 1.94                     | 0.49              |
| 1:TB:539:LEU:HD21 | 1:TB:599:ILE:HD11 | 1.93                     | 0.49              |
| 1:UA:778:GLU:HA   | 1:UA:781:VAL:HG22 | 1.94                     | 0.49              |
| 1:V:497:VAL:O     | 1:V:497:VAL:HG13  | 2.12                     | 0.49              |
| 1:VB:390:VAL:HG23 | 1:VB:390:VAL:O    | 2.11                     | 0.49              |
| 1:X:325:VAL:O     | 1:X:325:VAL:HG13  | 2.12                     | 0.49              |
| 1:ZA:390:VAL:O    | 1:ZA:390:VAL:HG23 | 2.10                     | 0.49              |
| 1:A:260:VAL:HG13  | 1:A:260:VAL:O     | 2.12                     | 0.49              |
| 1:BB:778:GLU:HA   | 1:BB:781:VAL:HG22 | 1.94                     | 0.49              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:E:497:VAL:HG13  | 1:E:497:VAL:O     | 2.12                     | 0.49              |
| 1:FA:17:HIS:HB3   | 1:FA:44:LEU:HD23  | 1.95                     | 0.49              |
| 1:FA:260:VAL:O    | 1:FA:260:VAL:HG13 | 2.13                     | 0.49              |
| 1:FA:390:VAL:HG23 | 1:FA:390:VAL:O    | 2.11                     | 0.49              |
| 1:FA:398:VAL:HG11 | 1:FA:415:TRP:CE3  | 2.48                     | 0.49              |
| 1:H:65:VAL:HG23   | 1:H:67:ARG:HG3    | 1.95                     | 0.49              |
| 1:IB:144:LEU:N    | 1:IB:144:LEU:HD23 | 2.27                     | 0.49              |
| 1:IB:778:GLU:HA   | 1:IB:781:VAL:HG22 | 1.95                     | 0.49              |
| 1:K:390:VAL:HG23  | 1:K:390:VAL:O     | 2.12                     | 0.49              |
| 1:KA:575:ILE:HG23 | 1:KA:603:VAL:HG22 | 1.94                     | 0.49              |
| 1:LA:778:GLU:HA   | 1:LA:781:VAL:HG22 | 1.93                     | 0.49              |
| 1:MA:778:GLU:HA   | 1:MA:781:VAL:HG22 | 1.95                     | 0.49              |
| 1:O:144:LEU:O     | 1:O:144:LEU:HD12  | 2.12                     | 0.49              |
| 1:P:398:VAL:HG11  | 1:P:415:TRP:CE3   | 2.47                     | 0.49              |
| 1:PB:497:VAL:O    | 1:PB:497:VAL:HG13 | 2.12                     | 0.49              |
| 1:PB:778:GLU:HA   | 1:PB:781:VAL:HG22 | 1.95                     | 0.49              |
| 1:QA:390:VAL:HG23 | 1:QA:390:VAL:O    | 2.11                     | 0.49              |
| 1:R:390:VAL:HG23  | 1:R:390:VAL:O     | 2.11                     | 0.49              |
| 1:TA:334:LEU:HD12 | 1:TA:357:TRP:NE1  | 2.27                     | 0.49              |
| 1:WA:30:VAL:CG2   | 1:WA:50:MET:HE3   | 2.43                     | 0.49              |
| 1:WA:334:LEU:HD12 | 1:WA:357:TRP:NE1  | 2.28                     | 0.49              |
| 1:YB:497:VAL:O    | 1:YB:497:VAL:HG13 | 2.12                     | 0.49              |
| 1:ZB:65:VAL:HG23  | 1:ZB:67:ARG:HG3   | 1.95                     | 0.49              |
| 1:AB:65:VAL:HG11  | 1:AB:100:TYR:HB2  | 1.95                     | 0.49              |
| 1:B:390:VAL:HG23  | 1:B:390:VAL:O     | 2.12                     | 0.49              |
| 1:BB:390:VAL:HG23 | 1:BB:390:VAL:O    | 2.12                     | 0.49              |
| 1:DA:778:GLU:HA   | 1:DA:781:VAL:HG22 | 1.94                     | 0.49              |
| 1:DB:778:GLU:HA   | 1:DB:781:VAL:HG22 | 1.94                     | 0.49              |
| 1:E:334:LEU:HD12  | 1:E:357:TRP:NE1   | 2.27                     | 0.49              |
| 1:GB:778:GLU:HA   | 1:GB:781:VAL:HG22 | 1.95                     | 0.49              |
| 1:HA:737:GLY:O    | 1:HA:741:VAL:HG23 | 2.13                     | 0.49              |
| 1:J:758:GLU:O     | 1:J:762:VAL:HG22  | 2.13                     | 0.49              |
| 1:K:65:VAL:HG23   | 1:K:67:ARG:HG3    | 1.94                     | 0.49              |
| 1:K:778:GLU:HA    | 1:K:781:VAL:HG22  | 1.94                     | 0.49              |
| 1:LB:325:VAL:O    | 1:LB:325:VAL:HG13 | 2.11                     | 0.49              |
| 1:NA:325:VAL:O    | 1:NA:325:VAL:HG13 | 2.11                     | 0.49              |
| 1:PB:44:LEU:H     | 1:PB:44:LEU:HD22  | 1.76                     | 0.49              |
| 1:Q:390:VAL:HG23  | 1:Q:390:VAL:O     | 2.12                     | 0.49              |
| 1:Q:778:GLU:HA    | 1:Q:781:VAL:HG22  | 1.94                     | 0.49              |
| 1:R:539:LEU:HD21  | 1:R:599:ILE:HD11  | 1.94                     | 0.49              |
| 1:SA:575:ILE:HG23 | 1:SA:603:VAL:HG22 | 1.93                     | 0.49              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:SB:260:VAL:O    | 1:SB:260:VAL:HG13 | 2.13                     | 0.49              |
| 1:T:575:ILE:HG23  | 1:T:603:VAL:HG22  | 1.93                     | 0.49              |
| 1:TA:260:VAL:O    | 1:TA:260:VAL:HG13 | 2.13                     | 0.49              |
| 1:UA:390:VAL:HG23 | 1:UA:390:VAL:O    | 2.12                     | 0.49              |
| 1:WA:260:VAL:HG13 | 1:WA:260:VAL:O    | 2.13                     | 0.49              |
| 1:YA:778:GLU:HA   | 1:YA:781:VAL:HG22 | 1.93                     | 0.49              |
| 1:YB:65:VAL:HG11  | 1:YB:100:TYR:HB2  | 1.93                     | 0.49              |
| 1:YB:529:ILE:HD12 | 1:YB:583:VAL:HG11 | 1.94                     | 0.49              |
| 1:A:529:ILE:HD12  | 1:A:583:VAL:HG11  | 1.93                     | 0.49              |
| 1:AB:260:VAL:HG13 | 1:AB:260:VAL:O    | 2.12                     | 0.49              |
| 1:AB:497:VAL:HG13 | 1:AB:497:VAL:O    | 2.12                     | 0.49              |
| 1:B:523:PHE:CD2   | 1:B:568:VAL:HG23  | 2.46                     | 0.49              |
| 1:CA:306:LYS:HZ3  | 1:CA:308:PHE:HB3  | 1.77                     | 0.49              |
| 1:CB:778:GLU:HA   | 1:CB:781:VAL:HG22 | 1.93                     | 0.49              |
| 1:FB:260:VAL:HG13 | 1:FB:260:VAL:O    | 2.12                     | 0.49              |
| 1:FB:778:GLU:HA   | 1:FB:781:VAL:HG22 | 1.94                     | 0.49              |
| 1:G:778:GLU:HA    | 1:G:781:VAL:HG22  | 1.93                     | 0.49              |
| 1:HB:9:ARG:NH1    | 1:IB:19:LEU:HD11  | 2.28                     | 0.49              |
| 1:I:48:MET:HA     | 1:I:48:MET:HE3    | 1.95                     | 0.49              |
| 1:IA:758:GLU:O    | 1:IA:762:VAL:HG22 | 2.13                     | 0.49              |
| 1:J:260:VAL:HG13  | 1:J:260:VAL:O     | 2.12                     | 0.49              |
| 1:KA:398:VAL:HG11 | 1:KA:415:TRP:CE3  | 2.47                     | 0.49              |
| 1:O:30:VAL:CG2    | 1:O:50:MET:HE3    | 2.43                     | 0.49              |
| 1:QA:778:GLU:HA   | 1:QA:781:VAL:HG22 | 1.94                     | 0.49              |
| 1:RB:765:VAL:HG22 | 1:SB:759:LEU:HD21 | 1.93                     | 0.49              |
| 1:SA:230:ARG:HB2  | 1:SA:268:LEU:HD11 | 1.93                     | 0.49              |
| 1:UA:575:ILE:HG23 | 1:UA:603:VAL:HG22 | 1.93                     | 0.49              |
| 1:UB:260:VAL:O    | 1:UB:260:VAL:HG13 | 2.12                     | 0.49              |
| 1:VA:765:VAL:HG22 | 1:WA:759:LEU:HD21 | 1.95                     | 0.49              |
| 1:VB:758:GLU:O    | 1:VB:762:VAL:HG22 | 2.12                     | 0.49              |
| 1:WA:765:VAL:HG22 | 1:XA:759:LEU:HD21 | 1.94                     | 0.49              |
| 1:A:759:LEU:HD21  | 1:NA:765:VAL:HG22 | 1.93                     | 0.49              |
| 1:AB:144:LEU:O    | 1:AB:144:LEU:HD12 | 2.11                     | 0.49              |
| 1:AB:575:ILE:HG23 | 1:AB:603:VAL:HG22 | 1.93                     | 0.49              |
| 1:AC:778:GLU:HA   | 1:AC:781:VAL:HG22 | 1.94                     | 0.49              |
| 1:B:260:VAL:HG13  | 1:B:260:VAL:O     | 2.13                     | 0.49              |
| 1:C:325:VAL:HG13  | 1:C:325:VAL:O     | 2.11                     | 0.49              |
| 1:DB:398:VAL:HG12 | 1:DB:491:PRO:HB3  | 1.93                     | 0.49              |
| 1:FA:778:GLU:HA   | 1:FA:781:VAL:HG22 | 1.94                     | 0.49              |
| 1:G:575:ILE:HG23  | 1:G:603:VAL:HG22  | 1.94                     | 0.49              |
| 1:GA:17:HIS:HB3   | 1:GA:44:LEU:HD23  | 1.95                     | 0.49              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:HB:390:VAL:HG23 | 1:HB:390:VAL:O    | 2.11                     | 0.49              |
| 1:IA:325:VAL:HG13 | 1:IA:325:VAL:O    | 2.12                     | 0.49              |
| 1:KA:325:VAL:O    | 1:KA:325:VAL:HG13 | 2.12                     | 0.49              |
| 1:L:575:ILE:HG23  | 1:L:603:VAL:HG22  | 1.94                     | 0.49              |
| 1:LB:765:VAL:HG22 | 1:MB:759:LEU:HD21 | 1.95                     | 0.49              |
| 1:NA:778:GLU:HA   | 1:NA:781:VAL:HG22 | 1.94                     | 0.49              |
| 1:NB:778:GLU:HA   | 1:NB:781:VAL:HG22 | 1.95                     | 0.49              |
| 1:O:334:LEU:HD12  | 1:O:357:TRP:NE1   | 2.28                     | 0.49              |
| 1:P:260:VAL:O     | 1:P:260:VAL:HG13  | 2.13                     | 0.49              |
| 1:P:325:VAL:O     | 1:P:325:VAL:HG13  | 2.13                     | 0.49              |
| 1:PA:260:VAL:HG13 | 1:PA:260:VAL:O    | 2.12                     | 0.49              |
| 1:UB:65:VAL:HG11  | 1:UB:100:TYR:HB2  | 1.93                     | 0.49              |
| 1:WB:778:GLU:HA   | 1:WB:781:VAL:HG22 | 1.94                     | 0.49              |
| 1:ZA:778:GLU:HA   | 1:ZA:781:VAL:HG22 | 1.94                     | 0.49              |
| 1:A:144:LEU:HD23  | 1:A:144:LEU:N     | 2.28                     | 0.49              |
| 1:BA:390:VAL:O    | 1:BA:390:VAL:HG23 | 2.11                     | 0.49              |
| 1:C:575:ILE:HG23  | 1:C:603:VAL:HG22  | 1.93                     | 0.49              |
| 1:CB:260:VAL:O    | 1:CB:260:VAL:HG13 | 2.12                     | 0.49              |
| 1:D:260:VAL:HG13  | 1:D:260:VAL:O     | 2.12                     | 0.49              |
| 1:DB:260:VAL:HG13 | 1:DB:260:VAL:O    | 2.13                     | 0.49              |
| 1:E:260:VAL:O     | 1:E:260:VAL:HG13  | 2.13                     | 0.49              |
| 1:FA:737:GLY:O    | 1:FA:741:VAL:HG23 | 2.12                     | 0.49              |
| 1:G:144:LEU:HD12  | 1:G:144:LEU:O     | 2.11                     | 0.49              |
| 1:HB:778:GLU:HA   | 1:HB:781:VAL:HG22 | 1.94                     | 0.49              |
| 1:IA:497:VAL:O    | 1:IA:497:VAL:HG13 | 2.12                     | 0.49              |
| 1:KB:260:VAL:O    | 1:KB:260:VAL:HG13 | 2.12                     | 0.49              |
| 1:L:765:VAL:HG22  | 1:M:759:LEU:HD21  | 1.95                     | 0.49              |
| 1:LB:737:GLY:O    | 1:LB:741:VAL:HG23 | 2.13                     | 0.49              |
| 1:M:65:VAL:HG11   | 1:M:100:TYR:HB2   | 1.94                     | 0.49              |
| 1:N:778:GLU:HA    | 1:N:781:VAL:HG22  | 1.94                     | 0.49              |
| 1:O:390:VAL:O     | 1:O:390:VAL:HG23  | 2.13                     | 0.49              |
| 1:OB:765:VAL:HG22 | 1:PB:759:LEU:HD21 | 1.95                     | 0.49              |
| 1:PA:334:LEU:HD12 | 1:PA:357:TRP:NE1  | 2.28                     | 0.49              |
| 1:QB:575:ILE:HG23 | 1:QB:603:VAL:HG22 | 1.93                     | 0.49              |
| 1:RA:390:VAL:O    | 1:RA:390:VAL:HG23 | 2.11                     | 0.49              |
| 1:SA:390:VAL:HG23 | 1:SA:390:VAL:O    | 2.11                     | 0.49              |
| 1:SA:497:VAL:HG13 | 1:SA:497:VAL:O    | 2.12                     | 0.49              |
| 1:SA:778:GLU:HA   | 1:SA:781:VAL:HG22 | 1.94                     | 0.49              |
| 1:SB:778:GLU:HA   | 1:SB:781:VAL:HG22 | 1.94                     | 0.49              |
| 1:TA:758:GLU:O    | 1:TA:762:VAL:HG22 | 2.12                     | 0.49              |
| 1:VB:65:VAL:HG11  | 1:VB:100:TYR:HB2  | 1.95                     | 0.49              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:VB:778:GLU:HA   | 1:VB:781:VAL:HG22 | 1.95                     | 0.49              |
| 1:WB:260:VAL:HG13 | 1:WB:260:VAL:O    | 2.13                     | 0.49              |
| 1:XB:737:GLY:O    | 1:XB:741:VAL:HG23 | 2.13                     | 0.49              |
| 1:ZB:17:HIS:HB3   | 1:ZB:44:LEU:HD23  | 1.95                     | 0.49              |
| 1:A:65:VAL:HG23   | 1:A:67:ARG:HG3    | 1.95                     | 0.49              |
| 1:C:260:VAL:O     | 1:C:260:VAL:HG13  | 2.13                     | 0.49              |
| 1:DA:144:LEU:HD23 | 1:DA:144:LEU:N    | 2.28                     | 0.49              |
| 1:E:65:VAL:HG23   | 1:E:67:ARG:HG3    | 1.95                     | 0.49              |
| 1:H:17:HIS:HB3    | 1:H:44:LEU:HD23   | 1.95                     | 0.49              |
| 1:HA:260:VAL:HG13 | 1:HA:260:VAL:O    | 2.13                     | 0.49              |
| 1:I:65:VAL:HG23   | 1:I:67:ARG:HG3    | 1.95                     | 0.49              |
| 1:K:765:VAL:HG22  | 1:L:759:LEU:HD21  | 1.93                     | 0.49              |
| 1:M:260:VAL:HG13  | 1:M:260:VAL:O     | 2.13                     | 0.49              |
| 1:N:48:MET:HA     | 1:N:48:MET:HE3    | 1.95                     | 0.49              |
| 1:N:260:VAL:O     | 1:N:260:VAL:HG13  | 2.13                     | 0.49              |
| 1:O:260:VAL:HG13  | 1:O:260:VAL:O     | 2.12                     | 0.49              |
| 1:P:92:LEU:HD12   | 1:P:92:LEU:N      | 2.28                     | 0.49              |
| 1:Q:575:ILE:HG23  | 1:Q:603:VAL:HG22  | 1.95                     | 0.49              |
| 1:QA:765:VAL:HG22 | 1:RA:759:LEU:HD21 | 1.95                     | 0.49              |
| 1:RA:48:MET:HA    | 1:RA:48:MET:HE3   | 1.94                     | 0.49              |
| 1:RA:765:VAL:HG22 | 1:SA:759:LEU:HD21 | 1.95                     | 0.49              |
| 1:S:334:LEU:HD12  | 1:S:357:TRP:NE1   | 2.28                     | 0.49              |
| 1:S:737:GLY:O     | 1:S:741:VAL:HG23  | 2.12                     | 0.49              |
| 1:SA:325:VAL:O    | 1:SA:325:VAL:HG13 | 2.12                     | 0.49              |
| 1:UB:390:VAL:HG23 | 1:UB:390:VAL:O    | 2.13                     | 0.49              |
| 1:XA:159:VAL:O    | 1:XA:159:VAL:HG12 | 2.13                     | 0.49              |
| 1:XB:260:VAL:O    | 1:XB:260:VAL:HG13 | 2.12                     | 0.49              |
| 1:ZA:260:VAL:HG13 | 1:ZA:260:VAL:O    | 2.13                     | 0.49              |
| 1:BB:497:VAL:HG13 | 1:BB:497:VAL:O    | 2.11                     | 0.49              |
| 1:C:398:VAL:HG12  | 1:C:491:PRO:HB3   | 1.94                     | 0.49              |
| 1:CB:30:VAL:HG21  | 1:CB:50:MET:HE3   | 1.95                     | 0.49              |
| 1:D:575:ILE:HG23  | 1:D:603:VAL:HG22  | 1.94                     | 0.49              |
| 1:DA:523:PHE:CD2  | 1:DA:568:VAL:HG23 | 2.48                     | 0.49              |
| 1:DA:765:VAL:HG22 | 1:EA:759:LEU:HD21 | 1.94                     | 0.49              |
| 1:DB:398:VAL:HG11 | 1:DB:415:TRP:CE3  | 2.47                     | 0.49              |
| 1:DB:529:ILE:CD1  | 1:DB:583:VAL:HG21 | 2.43                     | 0.49              |
| 1:F:334:LEU:HD12  | 1:F:357:TRP:NE1   | 2.28                     | 0.49              |
| 1:F:575:ILE:HG23  | 1:F:603:VAL:HG22  | 1.94                     | 0.49              |
| 1:F:778:GLU:HA    | 1:F:781:VAL:HG22  | 1.95                     | 0.49              |
| 1:GB:575:ILE:HG23 | 1:GB:603:VAL:HG22 | 1.95                     | 0.49              |
| 1:HA:398:VAL:HG11 | 1:HA:415:TRP:CE3  | 2.47                     | 0.49              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:HB:529:ILE:HD12 | 1:HB:583:VAL:HG11 | 1.94                     | 0.49              |
| 1:J:65:VAL:HG23   | 1:J:67:ARG:HG3    | 1.95                     | 0.49              |
| 1:J:737:GLY:O     | 1:J:741:VAL:HG23  | 2.13                     | 0.49              |
| 1:JA:52:THR:O     | 1:JA:109:ILE:HD11 | 2.13                     | 0.49              |
| 1:KA:523:PHE:CD2  | 1:KA:568:VAL:HG23 | 2.48                     | 0.49              |
| 1:LA:529:ILE:HD12 | 1:LA:583:VAL:HG11 | 1.94                     | 0.49              |
| 1:MA:17:HIS:HB3   | 1:MA:44:LEU:HD23  | 1.95                     | 0.49              |
| 1:PA:778:GLU:HA   | 1:PA:781:VAL:HG22 | 1.94                     | 0.49              |
| 1:QA:260:VAL:O    | 1:QA:260:VAL:HG13 | 2.13                     | 0.49              |
| 1:RA:778:GLU:HA   | 1:RA:781:VAL:HG22 | 1.94                     | 0.49              |
| 1:S:144:LEU:N     | 1:S:144:LEU:HD23  | 2.28                     | 0.49              |
| 1:SA:334:LEU:HD12 | 1:SA:357:TRP:NE1  | 2.28                     | 0.49              |
| 1:UA:260:VAL:HG13 | 1:UA:260:VAL:O    | 2.13                     | 0.49              |
| 1:UA:523:PHE:CD2  | 1:UA:568:VAL:HG23 | 2.48                     | 0.49              |
| 1:V:765:VAL:HG22  | 1:W:759:LEU:HD21  | 1.95                     | 0.49              |
| 1:WA:48:MET:HA    | 1:WA:48:MET:HE3   | 1.95                     | 0.49              |
| 1:WA:325:VAL:HG13 | 1:WA:325:VAL:O    | 2.12                     | 0.49              |
| 1:WA:497:VAL:O    | 1:WA:497:VAL:HG13 | 2.12                     | 0.49              |
| 1:X:65:VAL:HG11   | 1:X:100:TYR:HB2   | 1.94                     | 0.49              |
| 1:XB:65:VAL:HG23  | 1:XB:67:ARG:HG3   | 1.95                     | 0.49              |
| 1:YA:497:VAL:O    | 1:YA:497:VAL:HG13 | 2.13                     | 0.49              |
| 1:AA:390:VAL:HG23 | 1:AA:390:VAL:O    | 2.11                     | 0.48              |
| 1:AB:778:GLU:HA   | 1:AB:781:VAL:HG22 | 1.94                     | 0.48              |
| 1:D:523:PHE:CD2   | 1:D:568:VAL:HG23  | 2.48                     | 0.48              |
| 1:DB:765:VAL:HG22 | 1:EB:759:LEU:HD21 | 1.94                     | 0.48              |
| 1:F:497:VAL:O     | 1:F:497:VAL:HG13  | 2.12                     | 0.48              |
| 1:FB:366:VAL:O    | 1:FB:366:VAL:HG13 | 2.13                     | 0.48              |
| 1:GA:260:VAL:HG13 | 1:GA:260:VAL:O    | 2.13                     | 0.48              |
| 1:GA:778:GLU:HA   | 1:GA:781:VAL:HG22 | 1.94                     | 0.48              |
| 1:H:92:LEU:HD12   | 1:H:92:LEU:N      | 2.28                     | 0.48              |
| 1:HB:260:VAL:O    | 1:HB:260:VAL:HG13 | 2.13                     | 0.48              |
| 1:IA:390:VAL:HG23 | 1:IA:390:VAL:O    | 2.11                     | 0.48              |
| 1:JA:778:GLU:HA   | 1:JA:781:VAL:HG22 | 1.94                     | 0.48              |
| 1:MA:260:VAL:HG13 | 1:MA:260:VAL:O    | 2.13                     | 0.48              |
| 1:N:737:GLY:O     | 1:N:741:VAL:HG23  | 2.13                     | 0.48              |
| 1:O:65:VAL:HG23   | 1:O:67:ARG:HG3    | 1.95                     | 0.48              |
| 1:P:65:VAL:HG23   | 1:P:67:ARG:HG3    | 1.96                     | 0.48              |
| 1:P:398:VAL:HG12  | 1:P:491:PRO:HB3   | 1.94                     | 0.48              |
| 1:R:497:VAL:HG13  | 1:R:497:VAL:O     | 2.12                     | 0.48              |
| 1:R:778:GLU:HA    | 1:R:781:VAL:HG22  | 1.94                     | 0.48              |
| 1:RA:575:ILE:HG23 | 1:RA:603:VAL:HG22 | 1.94                     | 0.48              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:RB:30:VAL:HG22  | 1:RB:50:MET:HE2   | 1.95                     | 0.48              |
| 1:SB:398:VAL:HG11 | 1:SB:415:TRP:CE3  | 2.48                     | 0.48              |
| 1:UA:144:LEU:HD12 | 1:UA:144:LEU:O    | 2.12                     | 0.48              |
| 1:WB:334:LEU:HD12 | 1:WB:357:TRP:NE1  | 2.28                     | 0.48              |
| 1:X:52:THR:O      | 1:X:109:ILE:HD11  | 2.13                     | 0.48              |
| 1:XA:758:GLU:O    | 1:XA:762:VAL:HG22 | 2.13                     | 0.48              |
| 1:Y:260:VAL:O     | 1:Y:260:VAL:HG13  | 2.13                     | 0.48              |
| 1:Y:765:VAL:HG22  | 1:Z:759:LEU:HD21  | 1.95                     | 0.48              |
| 1:ZB:260:VAL:HG13 | 1:ZB:260:VAL:O    | 2.13                     | 0.48              |
| 1:AA:398:VAL:HG11 | 1:AA:415:TRP:CE3  | 2.48                     | 0.48              |
| 1:AB:65:VAL:HG23  | 1:AB:67:ARG:HG3   | 1.95                     | 0.48              |
| 1:AB:390:VAL:O    | 1:AB:390:VAL:HG23 | 2.12                     | 0.48              |
| 1:AB:759:LEU:HD21 | 1:ZA:765:VAL:HG22 | 1.94                     | 0.48              |
| 1:B:334:LEU:HD12  | 1:B:357:TRP:NE1   | 2.28                     | 0.48              |
| 1:BB:737:GLY:O    | 1:BB:741:VAL:HG23 | 2.13                     | 0.48              |
| 1:C:529:ILE:CD1   | 1:C:583:VAL:HG21  | 2.43                     | 0.48              |
| 1:DB:325:VAL:O    | 1:DB:325:VAL:HG13 | 2.12                     | 0.48              |
| 1:EB:778:GLU:HA   | 1:EB:781:VAL:HG22 | 1.95                     | 0.48              |
| 1:IA:778:GLU:HA   | 1:IA:781:VAL:HG22 | 1.95                     | 0.48              |
| 1:J:56:ARG:HE     | 1:K:127:LEU:HD21  | 1.78                     | 0.48              |
| 1:LA:260:VAL:O    | 1:LA:260:VAL:HG13 | 2.13                     | 0.48              |
| 1:LB:497:VAL:HG13 | 1:LB:497:VAL:O    | 2.14                     | 0.48              |
| 1:MB:334:LEU:HD12 | 1:MB:357:TRP:NE1  | 2.27                     | 0.48              |
| 1:NB:398:VAL:HG11 | 1:NB:415:TRP:CE3  | 2.48                     | 0.48              |
| 1:NB:497:VAL:O    | 1:NB:497:VAL:HG13 | 2.12                     | 0.48              |
| 1:P:529:ILE:CD1   | 1:P:583:VAL:HG21  | 2.43                     | 0.48              |
| 1:Q:92:LEU:N      | 1:Q:92:LEU:HD12   | 2.28                     | 0.48              |
| 1:SB:575:ILE:HG23 | 1:SB:603:VAL:HG22 | 1.94                     | 0.48              |
| 1:UB:17:HIS:HB3   | 1:UB:44:LEU:HD23  | 1.95                     | 0.48              |
| 1:UB:334:LEU:HD12 | 1:UB:357:TRP:NE1  | 2.28                     | 0.48              |
| 1:XA:92:LEU:HD12  | 1:XA:92:LEU:N     | 2.28                     | 0.48              |
| 1:XA:778:GLU:HA   | 1:XA:781:VAL:HG22 | 1.94                     | 0.48              |
| 1:YB:56:ARG:HE    | 1:ZB:127:LEU:HD21 | 1.78                     | 0.48              |
| 1:YB:539:LEU:HD23 | 1:YB:540:GLN:N    | 2.27                     | 0.48              |
| 1:ZB:758:GLU:O    | 1:ZB:762:VAL:HG22 | 2.13                     | 0.48              |
| 1:ZB:778:GLU:HA   | 1:ZB:781:VAL:HG22 | 1.94                     | 0.48              |
| 1:AC:529:ILE:CD1  | 1:AC:583:VAL:HG21 | 2.44                     | 0.48              |
| 1:BA:529:ILE:HD12 | 1:BA:583:VAL:HG11 | 1.93                     | 0.48              |
| 1:C:765:VAL:HG22  | 1:D:759:LEU:HD21  | 1.95                     | 0.48              |
| 1:CA:260:VAL:O    | 1:CA:260:VAL:HG13 | 2.13                     | 0.48              |
| 1:CB:334:LEU:HD12 | 1:CB:357:TRP:NE1  | 2.28                     | 0.48              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:DB:65:VAL:HG23  | 1:DB:67:ARG:HG3   | 1.95                     | 0.48              |
| 1:EA:778:GLU:HA   | 1:EA:781:VAL:HG22 | 1.94                     | 0.48              |
| 1:H:737:GLY:O     | 1:H:741:VAL:HG23  | 2.14                     | 0.48              |
| 1:IB:92:LEU:HD12  | 1:IB:92:LEU:N     | 2.28                     | 0.48              |
| 1:M:65:VAL:HG23   | 1:M:67:ARG:HG3    | 1.96                     | 0.48              |
| 1:MB:260:VAL:O    | 1:MB:260:VAL:HG13 | 2.13                     | 0.48              |
| 1:NA:260:VAL:O    | 1:NA:260:VAL:HG13 | 2.13                     | 0.48              |
| 1:PA:765:VAL:HG22 | 1:QA:759:LEU:HD21 | 1.94                     | 0.48              |
| 1:R:366:VAL:O     | 1:R:366:VAL:HG13  | 2.13                     | 0.48              |
| 1:SB:758:GLU:O    | 1:SB:762:VAL:HG22 | 2.14                     | 0.48              |
| 1:TA:330:GLN:C    | 1:TA:407:MET:HE1  | 2.39                     | 0.48              |
| 1:V:260:VAL:O     | 1:V:260:VAL:HG13  | 2.14                     | 0.48              |
| 1:VA:260:VAL:O    | 1:VA:260:VAL:HG13 | 2.13                     | 0.48              |
| 1:W:260:VAL:HG13  | 1:W:260:VAL:O     | 2.12                     | 0.48              |
| 1:WA:390:VAL:O    | 1:WA:390:VAL:HG23 | 2.12                     | 0.48              |
| 1:XA:260:VAL:HG13 | 1:XA:260:VAL:O    | 2.12                     | 0.48              |
| 1:YB:260:VAL:HG13 | 1:YB:260:VAL:O    | 2.13                     | 0.48              |
| 1:YB:788:ALA:O    | 1:YB:792:VAL:HG23 | 2.14                     | 0.48              |
| 1:A:758:GLU:O     | 1:A:762:VAL:HG22  | 2.13                     | 0.48              |
| 1:BA:92:LEU:HD12  | 1:BA:92:LEU:N     | 2.29                     | 0.48              |
| 1:BA:334:LEU:HD12 | 1:BA:357:TRP:NE1  | 2.29                     | 0.48              |
| 1:CB:390:VAL:HG23 | 1:CB:390:VAL:O    | 2.13                     | 0.48              |
| 1:EB:92:LEU:HD12  | 1:EB:92:LEU:N     | 2.28                     | 0.48              |
| 1:FB:539:LEU:HD12 | 1:FB:540:GLN:N    | 2.28                     | 0.48              |
| 1:GA:575:ILE:HG23 | 1:GA:603:VAL:HG22 | 1.95                     | 0.48              |
| 1:GB:398:VAL:HG12 | 1:GB:491:PRO:HB3  | 1.95                     | 0.48              |
| 1:I:497:VAL:O     | 1:I:497:VAL:HG13  | 2.14                     | 0.48              |
| 1:K:325:VAL:O     | 1:K:325:VAL:HG13  | 2.12                     | 0.48              |
| 1:L:260:VAL:HG13  | 1:L:260:VAL:O     | 2.13                     | 0.48              |
| 1:LA:788:ALA:O    | 1:LA:792:VAL:HG23 | 2.13                     | 0.48              |
| 1:LB:260:VAL:HG13 | 1:LB:260:VAL:O    | 2.13                     | 0.48              |
| 1:O:92:LEU:HD12   | 1:O:92:LEU:N      | 2.28                     | 0.48              |
| 1:O:737:GLY:O     | 1:O:741:VAL:HG23  | 2.14                     | 0.48              |
| 1:OA:52:THR:O     | 1:OA:109:ILE:HD11 | 2.12                     | 0.48              |
| 1:S:765:VAL:HG22  | 1:T:759:LEU:HD21  | 1.95                     | 0.48              |
| 1:S:778:GLU:HA    | 1:S:781:VAL:HG22  | 1.94                     | 0.48              |
| 1:VB:65:VAL:HG23  | 1:VB:67:ARG:HG3   | 1.96                     | 0.48              |
| 1:VB:325:VAL:HG13 | 1:VB:325:VAL:O    | 2.12                     | 0.48              |
| 1:WA:17:HIS:HB3   | 1:WA:44:LEU:HD23  | 1.96                     | 0.48              |
| 1:X:65:VAL:HG23   | 1:X:67:ARG:HG3    | 1.95                     | 0.48              |
| 1:XA:765:VAL:HG22 | 1:YA:759:LEU:HD21 | 1.95                     | 0.48              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:Z:260:VAL:HG13  | 1:Z:260:VAL:O     | 2.13                     | 0.48              |
| 1:A:17:HIS:HB3    | 1:A:44:LEU:HD23   | 1.95                     | 0.48              |
| 1:A:390:VAL:O     | 1:A:390:VAL:HG23  | 2.13                     | 0.48              |
| 1:AA:52:THR:O     | 1:AA:109:ILE:HD11 | 2.12                     | 0.48              |
| 1:BA:48:MET:HA    | 1:BA:48:MET:HE3   | 1.94                     | 0.48              |
| 1:CB:737:GLY:O    | 1:CB:741:VAL:HG23 | 2.13                     | 0.48              |
| 1:H:260:VAL:O     | 1:H:260:VAL:HG13  | 2.13                     | 0.48              |
| 1:H:765:VAL:HG22  | 1:I:759:LEU:HD21  | 1.95                     | 0.48              |
| 1:JA:765:VAL:HG22 | 1:KA:759:LEU:HD21 | 1.95                     | 0.48              |
| 1:LA:390:VAL:HG23 | 1:LA:390:VAL:O    | 2.13                     | 0.48              |
| 1:OA:390:VAL:O    | 1:OA:390:VAL:HG23 | 2.13                     | 0.48              |
| 1:OB:17:HIS:HB3   | 1:OB:44:LEU:HD23  | 1.95                     | 0.48              |
| 1:OB:92:LEU:HD12  | 1:OB:92:LEU:N     | 2.29                     | 0.48              |
| 1:P:334:LEU:HD12  | 1:P:357:TRP:NE1   | 2.28                     | 0.48              |
| 1:P:778:GLU:HA    | 1:P:781:VAL:HG22  | 1.94                     | 0.48              |
| 1:R:788:ALA:O     | 1:R:792:VAL:HG23  | 2.14                     | 0.48              |
| 1:TA:497:VAL:O    | 1:TA:497:VAL:HG13 | 2.12                     | 0.48              |
| 1:WB:575:ILE:HG23 | 1:WB:603:VAL:HG22 | 1.94                     | 0.48              |
| 1:Y:788:ALA:O     | 1:Y:792:VAL:HG23  | 2.14                     | 0.48              |
| 1:BA:398:VAL:HG12 | 1:BA:491:PRO:HB3  | 1.95                     | 0.48              |
| 1:DA:30:VAL:CG2   | 1:DA:50:MET:HE3   | 2.43                     | 0.48              |
| 1:E:778:GLU:HA    | 1:E:781:VAL:HG22  | 1.94                     | 0.48              |
| 1:EB:17:HIS:HB3   | 1:EB:44:LEU:HD23  | 1.96                     | 0.48              |
| 1:F:168:ILE:HG21  | 1:F:174:LEU:HB2   | 1.95                     | 0.48              |
| 1:GB:765:VAL:HG22 | 1:HB:759:LEU:HD21 | 1.94                     | 0.48              |
| 1:HA:575:ILE:HG23 | 1:HA:603:VAL:HG22 | 1.96                     | 0.48              |
| 1:I:334:LEU:HD12  | 1:I:357:TRP:NE1   | 2.29                     | 0.48              |
| 1:I:390:VAL:HG23  | 1:I:390:VAL:O     | 2.13                     | 0.48              |
| 1:J:168:ILE:HG21  | 1:J:174:LEU:HB2   | 1.95                     | 0.48              |
| 1:J:765:VAL:HG22  | 1:K:759:LEU:HD21  | 1.95                     | 0.48              |
| 1:OB:260:VAL:HG13 | 1:OB:260:VAL:O    | 2.14                     | 0.48              |
| 1:PA:56:ARG:HE    | 1:QA:127:LEU:HD21 | 1.77                     | 0.48              |
| 1:PB:65:VAL:HG23  | 1:PB:67:ARG:HG3   | 1.96                     | 0.48              |
| 1:QB:737:GLY:O    | 1:QB:741:VAL:HG23 | 2.13                     | 0.48              |
| 1:T:260:VAL:HG13  | 1:T:260:VAL:O     | 2.13                     | 0.48              |
| 1:T:737:GLY:O     | 1:T:741:VAL:HG23  | 2.14                     | 0.48              |
| 1:TB:765:VAL:HG22 | 1:UB:759:LEU:HD21 | 1.96                     | 0.48              |
| 1:WB:65:VAL:HG23  | 1:WB:67:ARG:HG3   | 1.96                     | 0.48              |
| 1:WB:758:GLU:O    | 1:WB:762:VAL:HG22 | 2.13                     | 0.48              |
| 1:XB:575:ILE:HG23 | 1:XB:603:VAL:HG22 | 1.93                     | 0.48              |
| 1:Y:334:LEU:HD12  | 1:Y:357:TRP:NE1   | 2.29                     | 0.48              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:YA:65:VAL:HG23  | 1:YA:67:ARG:HG3   | 1.94                     | 0.48              |
| 1:YA:788:ALA:O    | 1:YA:792:VAL:HG23 | 2.14                     | 0.48              |
| 1:D:92:LEU:N      | 1:D:92:LEU:HD12   | 2.28                     | 0.48              |
| 1:D:765:VAL:HG22  | 1:E:759:LEU:HD21  | 1.94                     | 0.48              |
| 1:E:325:VAL:O     | 1:E:325:VAL:HG13  | 2.12                     | 0.48              |
| 1:F:758:GLU:O     | 1:F:762:VAL:HG22  | 2.13                     | 0.48              |
| 1:GA:168:ILE:HG21 | 1:GA:174:LEU:HB2  | 1.95                     | 0.48              |
| 1:GA:765:VAL:HG22 | 1:HA:759:LEU:HD21 | 1.95                     | 0.48              |
| 1:GB:497:VAL:HG13 | 1:GB:497:VAL:O    | 2.14                     | 0.48              |
| 1:HA:758:GLU:O    | 1:HA:762:VAL:HG22 | 2.13                     | 0.48              |
| 1:HB:334:LEU:HD12 | 1:HB:357:TRP:NE1  | 2.29                     | 0.48              |
| 1:HB:765:VAL:HG22 | 1:IB:759:LEU:HD21 | 1.95                     | 0.48              |
| 1:JA:325:VAL:HG13 | 1:JA:325:VAL:O    | 2.13                     | 0.48              |
| 1:JA:758:GLU:O    | 1:JA:762:VAL:HG22 | 2.14                     | 0.48              |
| 1:KA:334:LEU:HD12 | 1:KA:357:TRP:NE1  | 2.29                     | 0.48              |
| 1:M:497:VAL:HG13  | 1:M:497:VAL:O     | 2.13                     | 0.48              |
| 1:RA:92:LEU:N     | 1:RA:92:LEU:HD12  | 2.29                     | 0.48              |
| 1:TA:92:LEU:N     | 1:TA:92:LEU:HD12  | 2.29                     | 0.48              |
| 1:TB:575:ILE:HG23 | 1:TB:603:VAL:HG22 | 1.94                     | 0.48              |
| 1:VB:260:VAL:HG13 | 1:VB:260:VAL:O    | 2.13                     | 0.48              |
| 1:XB:523:PHE:CD2  | 1:XB:568:VAL:HG23 | 2.49                     | 0.48              |
| 1:XB:765:VAL:HG22 | 1:YB:759:LEU:HD21 | 1.95                     | 0.48              |
| 1:AA:334:LEU:HD12 | 1:AA:357:TRP:NE1  | 2.29                     | 0.48              |
| 1:AB:523:PHE:CE1  | 1:AB:545:TRP:CD1  | 3.02                     | 0.48              |
| 1:BB:765:VAL:HG22 | 1:CB:759:LEU:HD21 | 1.96                     | 0.48              |
| 1:E:788:ALA:O     | 1:E:792:VAL:HG23  | 2.14                     | 0.48              |
| 1:FB:788:ALA:O    | 1:FB:792:VAL:HG23 | 2.14                     | 0.48              |
| 1:HA:92:LEU:HD12  | 1:HA:92:LEU:N     | 2.29                     | 0.48              |
| 1:HA:398:VAL:HG12 | 1:HA:491:PRO:HB3  | 1.96                     | 0.48              |
| 1:HA:539:LEU:HD21 | 1:HA:599:ILE:HD11 | 1.95                     | 0.48              |
| 1:IB:260:VAL:HG13 | 1:IB:260:VAL:O    | 2.13                     | 0.48              |
| 1:IB:497:VAL:HG13 | 1:IB:497:VAL:O    | 2.12                     | 0.48              |
| 1:JB:168:ILE:HG21 | 1:JB:174:LEU:HB2  | 1.95                     | 0.48              |
| 1:KA:65:VAL:HG23  | 1:KA:67:ARG:HG3   | 1.95                     | 0.48              |
| 1:LA:48:MET:HE3   | 1:LA:48:MET:HA    | 1.95                     | 0.48              |
| 1:MA:65:VAL:HG23  | 1:MA:67:ARG:HG3   | 1.95                     | 0.48              |
| 1:NA:497:VAL:O    | 1:NA:497:VAL:HG13 | 2.14                     | 0.48              |
| 1:NA:529:ILE:CD1  | 1:NA:583:VAL:HG21 | 2.44                     | 0.48              |
| 1:NB:52:THR:O     | 1:NB:109:ILE:HD11 | 2.14                     | 0.48              |
| 1:QB:30:VAL:CG2   | 1:QB:50:MET:HE3   | 2.44                     | 0.48              |
| 1:QB:529:ILE:HD12 | 1:QB:583:VAL:HG11 | 1.95                     | 0.48              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:RB:65:VAL:HG23  | 1:RB:67:ARG:HG3   | 1.95                     | 0.48              |
| 1:S:65:VAL:HG23   | 1:S:67:ARG:HG3    | 1.96                     | 0.48              |
| 1:SA:56:ARG:NE    | 1:SA:56:ARG:N     | 2.62                     | 0.48              |
| 1:SA:260:VAL:O    | 1:SA:260:VAL:HG13 | 2.13                     | 0.48              |
| 1:UA:30:VAL:CG2   | 1:UA:50:MET:HE3   | 2.43                     | 0.48              |
| 1:UB:65:VAL:HG23  | 1:UB:67:ARG:HG3   | 1.94                     | 0.48              |
| 1:UB:529:ILE:HD12 | 1:UB:583:VAL:HG11 | 1.95                     | 0.48              |
| 1:VB:52:THR:O     | 1:VB:109:ILE:HD11 | 2.14                     | 0.48              |
| 1:WB:765:VAL:HG22 | 1:XB:759:LEU:HD21 | 1.96                     | 0.48              |
| 1:YA:529:ILE:CD1  | 1:YA:583:VAL:HG21 | 2.44                     | 0.48              |
| 1:ZB:575:ILE:HG23 | 1:ZB:603:VAL:HG22 | 1.95                     | 0.48              |
| 1:E:144:LEU:HD12  | 1:E:144:LEU:O     | 2.14                     | 0.48              |
| 1:EA:398:VAL:HG12 | 1:EA:491:PRO:HB3  | 1.96                     | 0.48              |
| 1:EB:523:PHE:CD2  | 1:EB:568:VAL:HG23 | 2.49                     | 0.48              |
| 1:F:260:VAL:O     | 1:F:260:VAL:HG13  | 2.13                     | 0.48              |
| 1:F:330:GLN:C     | 1:F:407:MET:HE1   | 2.38                     | 0.48              |
| 1:FA:575:ILE:HG23 | 1:FA:603:VAL:HG22 | 1.93                     | 0.48              |
| 1:FB:92:LEU:N     | 1:FB:92:LEU:HD12  | 2.29                     | 0.48              |
| 1:GB:334:LEU:HD12 | 1:GB:357:TRP:NE1  | 2.28                     | 0.48              |
| 1:H:758:GLU:O     | 1:H:762:VAL:HG22  | 2.13                     | 0.48              |
| 1:HA:65:VAL:HG23  | 1:HA:67:ARG:HG3   | 1.95                     | 0.48              |
| 1:I:92:LEU:N      | 1:I:92:LEU:HD12   | 2.29                     | 0.48              |
| 1:I:260:VAL:HG13  | 1:I:260:VAL:O     | 2.13                     | 0.48              |
| 1:IB:65:VAL:HG23  | 1:IB:67:ARG:HG3   | 1.96                     | 0.48              |
| 1:JA:260:VAL:HG13 | 1:JA:260:VAL:O    | 2.13                     | 0.48              |
| 1:LB:334:LEU:HD12 | 1:LB:357:TRP:NE1  | 2.29                     | 0.48              |
| 1:M:737:GLY:O     | 1:M:741:VAL:HG23  | 2.14                     | 0.48              |
| 1:N:168:ILE:HG21  | 1:N:174:LEU:HB2   | 1.95                     | 0.48              |
| 1:NB:334:LEU:HD12 | 1:NB:357:TRP:NE1  | 2.29                     | 0.48              |
| 1:OA:737:GLY:O    | 1:OA:741:VAL:HG23 | 2.13                     | 0.48              |
| 1:Q:17:HIS:HB3    | 1:Q:44:LEU:HD23   | 1.96                     | 0.48              |
| 1:Q:523:PHE:CD2   | 1:Q:568:VAL:HG23  | 2.49                     | 0.48              |
| 1:R:92:LEU:HD12   | 1:R:92:LEU:N      | 2.29                     | 0.48              |
| 1:RB:497:VAL:HG13 | 1:RB:497:VAL:O    | 2.14                     | 0.48              |
| 1:RB:538:GLN:HB2  | 1:RB:646:VAL:HG22 | 1.94                     | 0.48              |
| 1:SB:65:VAL:HG23  | 1:SB:67:ARG:HG3   | 1.96                     | 0.48              |
| 1:TB:260:VAL:HG13 | 1:TB:260:VAL:O    | 2.13                     | 0.48              |
| 1:WA:144:LEU:HD23 | 1:WA:144:LEU:N    | 2.28                     | 0.48              |
| 1:WB:92:LEU:HD12  | 1:WB:92:LEU:N     | 2.29                     | 0.48              |
| 1:XA:65:VAL:HG23  | 1:XA:67:ARG:HG3   | 1.95                     | 0.48              |
| 1:Z:778:GLU:HA    | 1:Z:781:VAL:HG22  | 1.94                     | 0.48              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:497:VAL:O    | 1:AA:497:VAL:HG13 | 2.12                     | 0.48              |
| 1:BB:65:VAL:HG23  | 1:BB:67:ARG:HG3   | 1.95                     | 0.48              |
| 1:BB:92:LEU:HD12  | 1:BB:92:LEU:N     | 2.29                     | 0.48              |
| 1:D:398:VAL:HG12  | 1:D:491:PRO:HB3   | 1.96                     | 0.48              |
| 1:EA:575:ILE:HG23 | 1:EA:603:VAL:HG22 | 1.95                     | 0.48              |
| 1:F:92:LEU:N      | 1:F:92:LEU:HD12   | 2.28                     | 0.48              |
| 1:FA:92:LEU:HD12  | 1:FA:92:LEU:N     | 2.29                     | 0.48              |
| 1:GB:737:GLY:O    | 1:GB:741:VAL:HG23 | 2.13                     | 0.48              |
| 1:HA:778:GLU:HA   | 1:HA:781:VAL:HG22 | 1.95                     | 0.48              |
| 1:I:778:GLU:HA    | 1:I:781:VAL:HG22  | 1.95                     | 0.48              |
| 1:L:516:LEU:O     | 1:L:516:LEU:HD23  | 2.13                     | 0.48              |
| 1:N:144:LEU:HD22  | 1:N:163:ILE:HD11  | 1.96                     | 0.48              |
| 1:N:334:LEU:HD12  | 1:N:357:TRP:NE1   | 2.29                     | 0.48              |
| 1:OB:65:VAL:HG23  | 1:OB:67:ARG:HG3   | 1.96                     | 0.48              |
| 1:Q:260:VAL:O     | 1:Q:260:VAL:HG13  | 2.13                     | 0.48              |
| 1:UB:575:ILE:HG23 | 1:UB:603:VAL:HG22 | 1.95                     | 0.48              |
| 1:W:30:VAL:CG2    | 1:W:50:MET:HE3    | 2.42                     | 0.48              |
| 1:WA:523:PHE:CD2  | 1:WA:568:VAL:HG23 | 2.49                     | 0.48              |
| 1:WB:788:ALA:O    | 1:WB:792:VAL:HG23 | 2.14                     | 0.48              |
| 1:Y:497:VAL:O     | 1:Y:497:VAL:HG13  | 2.13                     | 0.48              |
| 1:Y:529:ILE:HD12  | 1:Y:583:VAL:HG11  | 1.95                     | 0.48              |
| 1:Y:737:GLY:O     | 1:Y:741:VAL:HG23  | 2.13                     | 0.48              |
| 1:YA:390:VAL:HG23 | 1:YA:390:VAL:O    | 2.12                     | 0.48              |
| 1:YB:390:VAL:O    | 1:YB:390:VAL:HG23 | 2.14                     | 0.48              |
| 1:AB:92:LEU:HD12  | 1:AB:92:LEU:N     | 2.29                     | 0.47              |
| 1:AC:804:PRO:O    | 1:AC:807:ILE:HG22 | 2.14                     | 0.47              |
| 1:B:56:ARG:HE     | 1:C:127:LEU:HD21  | 1.79                     | 0.47              |
| 1:B:65:VAL:HG23   | 1:B:67:ARG:HG3    | 1.96                     | 0.47              |
| 1:BB:168:ILE:HG21 | 1:BB:174:LEU:HB2  | 1.96                     | 0.47              |
| 1:DB:366:VAL:O    | 1:DB:366:VAL:HG13 | 2.14                     | 0.47              |
| 1:EA:260:VAL:HG13 | 1:EA:260:VAL:O    | 2.13                     | 0.47              |
| 1:GA:737:GLY:O    | 1:GA:741:VAL:HG23 | 2.14                     | 0.47              |
| 1:GB:65:VAL:HG23  | 1:GB:67:ARG:HG3   | 1.95                     | 0.47              |
| 1:GB:92:LEU:HD12  | 1:GB:92:LEU:N     | 2.29                     | 0.47              |
| 1:H:168:ILE:HG21  | 1:H:174:LEU:HB2   | 1.96                     | 0.47              |
| 1:HB:144:LEU:HD12 | 1:HB:144:LEU:O    | 2.14                     | 0.47              |
| 1:JA:92:LEU:HD12  | 1:JA:92:LEU:N     | 2.29                     | 0.47              |
| 1:JB:765:VAL:HG22 | 1:KB:759:LEU:HD21 | 1.96                     | 0.47              |
| 1:M:334:LEU:HD12  | 1:M:357:TRP:NE1   | 2.29                     | 0.47              |
| 1:MA:758:GLU:O    | 1:MA:762:VAL:HG22 | 2.13                     | 0.47              |
| 1:NA:65:VAL:HG23  | 1:NA:67:ARG:HG3   | 1.95                     | 0.47              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:QA:334:LEU:HD12 | 1:QA:357:TRP:NE1  | 2.29                     | 0.47              |
| 1:QA:529:ILE:CD1  | 1:QA:583:VAL:HG11 | 2.43                     | 0.47              |
| 1:QB:144:LEU:O    | 1:QB:144:LEU:HD12 | 2.14                     | 0.47              |
| 1:TB:65:VAL:HG23  | 1:TB:67:ARG:HG3   | 1.96                     | 0.47              |
| 1:UB:539:LEU:HD21 | 1:UB:599:ILE:HD11 | 1.95                     | 0.47              |
| 1:VA:52:THR:O     | 1:VA:109:ILE:HD11 | 2.14                     | 0.47              |
| 1:W:334:LEU:HD12  | 1:W:357:TRP:NE1   | 2.29                     | 0.47              |
| 1:Y:56:ARG:HE     | 1:Z:127:LEU:HD21  | 1.77                     | 0.47              |
| 1:Y:538:GLN:HB2   | 1:Y:646:VAL:HG22  | 1.95                     | 0.47              |
| 1:YA:52:THR:O     | 1:YA:109:ILE:HD11 | 2.14                     | 0.47              |
| 1:ZA:516:LEU:O    | 1:ZA:516:LEU:HD23 | 2.14                     | 0.47              |
| 1:AA:65:VAL:HG23  | 1:AA:67:ARG:HG3   | 1.95                     | 0.47              |
| 1:AA:778:GLU:HA   | 1:AA:781:VAL:HG22 | 1.95                     | 0.47              |
| 1:BA:17:HIS:HB3   | 1:BA:44:LEU:HD23  | 1.96                     | 0.47              |
| 1:BB:144:LEU:HD22 | 1:BB:163:ILE:HD11 | 1.96                     | 0.47              |
| 1:CA:778:GLU:HA   | 1:CA:781:VAL:HG22 | 1.94                     | 0.47              |
| 1:DB:737:GLY:O    | 1:DB:741:VAL:HG23 | 2.14                     | 0.47              |
| 1:E:398:VAL:HG12  | 1:E:491:PRO:HB3   | 1.96                     | 0.47              |
| 1:EB:398:VAL:HG12 | 1:EB:491:PRO:HB3  | 1.96                     | 0.47              |
| 1:F:17:HIS:HB3    | 1:F:44:LEU:HD23   | 1.96                     | 0.47              |
| 1:FB:65:VAL:HG23  | 1:FB:67:ARG:HG3   | 1.96                     | 0.47              |
| 1:GA:398:VAL:HG12 | 1:GA:491:PRO:HB3  | 1.96                     | 0.47              |
| 1:HA:529:ILE:HD12 | 1:HA:583:VAL:HG11 | 1.95                     | 0.47              |
| 1:I:144:LEU:HD23  | 1:I:144:LEU:N     | 2.28                     | 0.47              |
| 1:IA:92:LEU:N     | 1:IA:92:LEU:HD12  | 2.29                     | 0.47              |
| 1:J:334:LEU:HD12  | 1:J:357:TRP:NE1   | 2.29                     | 0.47              |
| 1:JB:778:GLU:HA   | 1:JB:781:VAL:HG22 | 1.95                     | 0.47              |
| 1:LA:65:VAL:HG23  | 1:LA:67:ARG:HG3   | 1.96                     | 0.47              |
| 1:LB:144:LEU:N    | 1:LB:144:LEU:HD23 | 2.29                     | 0.47              |
| 1:LB:788:ALA:O    | 1:LB:792:VAL:HG23 | 2.14                     | 0.47              |
| 1:N:765:VAL:HG22  | 1:O:759:LEU:HD21  | 1.95                     | 0.47              |
| 1:RB:575:ILE:HG23 | 1:RB:603:VAL:HG22 | 1.94                     | 0.47              |
| 1:SA:788:ALA:O    | 1:SA:792:VAL:HG23 | 2.14                     | 0.47              |
| 1:TA:52:THR:O     | 1:TA:109:ILE:HD11 | 2.14                     | 0.47              |
| 1:UB:52:THR:O     | 1:UB:109:ILE:HD11 | 2.14                     | 0.47              |
| 1:VA:17:HIS:HB3   | 1:VA:44:LEU:HD23  | 1.97                     | 0.47              |
| 1:VB:92:LEU:N     | 1:VB:92:LEU:HD12  | 2.29                     | 0.47              |
| 1:WA:778:GLU:HA   | 1:WA:781:VAL:HG22 | 1.95                     | 0.47              |
| 1:XA:17:HIS:HB3   | 1:XA:44:LEU:HD23  | 1.96                     | 0.47              |
| 1:XA:168:ILE:HG21 | 1:XA:174:LEU:HB2  | 1.96                     | 0.47              |
| 1:A:778:GLU:HA    | 1:A:781:VAL:HG22  | 1.96                     | 0.47              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AC:260:VAL:O    | 1:AC:260:VAL:HG13 | 2.13                     | 0.47              |
| 1:AC:788:ALA:O    | 1:AC:792:VAL:HG23 | 2.14                     | 0.47              |
| 1:D:65:VAL:HG23   | 1:D:67:ARG:HG3    | 1.96                     | 0.47              |
| 1:DB:334:LEU:HD12 | 1:DB:357:TRP:NE1  | 2.29                     | 0.47              |
| 1:E:52:THR:O      | 1:E:109:ILE:HD11  | 2.14                     | 0.47              |
| 1:E:56:ARG:HE     | 1:F:127:LEU:HD21  | 1.80                     | 0.47              |
| 1:FA:168:ILE:HG21 | 1:FA:174:LEU:HB2  | 1.96                     | 0.47              |
| 1:HA:390:VAL:HG23 | 1:HA:390:VAL:O    | 2.13                     | 0.47              |
| 1:IA:543:TYR:CE2  | 1:IA:575:ILE:HG21 | 2.50                     | 0.47              |
| 1:JB:539:LEU:HD11 | 1:JB:640:VAL:HG13 | 1.96                     | 0.47              |
| 1:MA:497:VAL:HG13 | 1:MA:497:VAL:O    | 2.14                     | 0.47              |
| 1:MB:758:GLU:O    | 1:MB:762:VAL:HG22 | 2.15                     | 0.47              |
| 1:N:52:THR:O      | 1:N:109:ILE:HD11  | 2.14                     | 0.47              |
| 1:PB:788:ALA:O    | 1:PB:792:VAL:HG23 | 2.15                     | 0.47              |
| 1:RB:260:VAL:O    | 1:RB:260:VAL:HG13 | 2.13                     | 0.47              |
| 1:T:144:LEU:O     | 1:T:144:LEU:HD12  | 2.14                     | 0.47              |
| 1:TA:788:ALA:O    | 1:TA:792:VAL:HG23 | 2.14                     | 0.47              |
| 1:UA:737:GLY:O    | 1:UA:741:VAL:HG23 | 2.15                     | 0.47              |
| 1:UB:778:GLU:HA   | 1:UB:781:VAL:HG22 | 1.95                     | 0.47              |
| 1:VA:168:ILE:HG21 | 1:VA:174:LEU:HB2  | 1.96                     | 0.47              |
| 1:VA:575:ILE:HG23 | 1:VA:603:VAL:HG22 | 1.96                     | 0.47              |
| 1:W:65:VAL:HG23   | 1:W:67:ARG:HG3    | 1.96                     | 0.47              |
| 1:AB:398:VAL:HG12 | 1:AB:491:PRO:HB3  | 1.96                     | 0.47              |
| 1:AB:737:GLY:O    | 1:AB:741:VAL:HG23 | 2.14                     | 0.47              |
| 1:CA:330:GLN:C    | 1:CA:407:MET:HE1  | 2.40                     | 0.47              |
| 1:EA:92:LEU:HD12  | 1:EA:92:LEU:N     | 2.29                     | 0.47              |
| 1:EA:497:VAL:HG13 | 1:EA:497:VAL:O    | 2.14                     | 0.47              |
| 1:EB:529:ILE:HD12 | 1:EB:583:VAL:HG11 | 1.96                     | 0.47              |
| 1:G:334:LEU:HD12  | 1:G:357:TRP:NE1   | 2.30                     | 0.47              |
| 1:GA:529:ILE:CD1  | 1:GA:583:VAL:HG11 | 2.44                     | 0.47              |
| 1:H:334:LEU:HD12  | 1:H:357:TRP:NE1   | 2.29                     | 0.47              |
| 1:K:497:VAL:O     | 1:K:497:VAL:HG13  | 2.14                     | 0.47              |
| 1:K:529:ILE:CD1   | 1:K:583:VAL:HG21  | 2.44                     | 0.47              |
| 1:MA:398:VAL:HG12 | 1:MA:491:PRO:HB3  | 1.96                     | 0.47              |
| 1:MA:575:ILE:HG23 | 1:MA:603:VAL:HG22 | 1.95                     | 0.47              |
| 1:OB:334:LEU:HD12 | 1:OB:357:TRP:NE1  | 2.29                     | 0.47              |
| 1:P:737:GLY:O     | 1:P:741:VAL:HG23  | 2.14                     | 0.47              |
| 1:PB:260:VAL:O    | 1:PB:260:VAL:HG13 | 2.13                     | 0.47              |
| 1:Q:497:VAL:O     | 1:Q:497:VAL:HG13  | 2.14                     | 0.47              |
| 1:QA:398:VAL:HG12 | 1:QA:491:PRO:HB3  | 1.94                     | 0.47              |
| 1:RA:65:VAL:HG23  | 1:RA:67:ARG:HG3   | 1.95                     | 0.47              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:SA:92:LEU:HD12  | 1:SA:92:LEU:N     | 2.29                     | 0.47              |
| 1:UB:497:VAL:HG13 | 1:UB:497:VAL:O    | 2.13                     | 0.47              |
| 1:V:52:THR:O      | 1:V:109:ILE:HD11  | 2.15                     | 0.47              |
| 1:V:144:LEU:N     | 1:V:144:LEU:HD23  | 2.28                     | 0.47              |
| 1:WB:737:GLY:O    | 1:WB:741:VAL:HG23 | 2.14                     | 0.47              |
| 1:XA:575:ILE:HG23 | 1:XA:603:VAL:HG22 | 1.96                     | 0.47              |
| 1:XA:804:PRO:O    | 1:XA:807:ILE:HG22 | 2.15                     | 0.47              |
| 1:Y:92:LEU:N      | 1:Y:92:LEU:HD12   | 2.29                     | 0.47              |
| 1:AA:779:LEU:HD21 | 1:BA:774:ARG:HG2  | 1.97                     | 0.47              |
| 1:AC:758:GLU:O    | 1:AC:762:VAL:HG22 | 2.15                     | 0.47              |
| 1:DA:737:GLY:O    | 1:DA:741:VAL:HG23 | 2.13                     | 0.47              |
| 1:F:52:THR:O      | 1:F:109:ILE:HD11  | 2.15                     | 0.47              |
| 1:F:65:VAL:HG23   | 1:F:67:ARG:HG3    | 1.97                     | 0.47              |
| 1:GA:65:VAL:HG23  | 1:GA:67:ARG:HG3   | 1.96                     | 0.47              |
| 1:GA:345:ASP:OD2  | 1:GA:349:VAL:HG13 | 2.14                     | 0.47              |
| 1:HB:65:VAL:HG23  | 1:HB:67:ARG:HG3   | 1.96                     | 0.47              |
| 1:JB:65:VAL:HG23  | 1:JB:67:ARG:HG3   | 1.96                     | 0.47              |
| 1:KA:758:GLU:O    | 1:KA:762:VAL:HG22 | 2.15                     | 0.47              |
| 1:NA:788:ALA:O    | 1:NA:792:VAL:HG23 | 2.15                     | 0.47              |
| 1:PB:330:GLN:C    | 1:PB:407:MET:HE1  | 2.39                     | 0.47              |
| 1:Q:65:VAL:HG23   | 1:Q:67:ARG:HG3    | 1.96                     | 0.47              |
| 1:QB:65:VAL:HG23  | 1:QB:67:ARG:HG3   | 1.96                     | 0.47              |
| 1:QB:92:LEU:N     | 1:QB:92:LEU:HD12  | 2.29                     | 0.47              |
| 1:S:575:ILE:HG23  | 1:S:603:VAL:HG22  | 1.95                     | 0.47              |
| 1:T:168:ILE:HG21  | 1:T:174:LEU:HB2   | 1.96                     | 0.47              |
| 1:TA:778:GLU:HA   | 1:TA:781:VAL:HG22 | 1.95                     | 0.47              |
| 1:TB:17:HIS:CB    | 1:TB:44:LEU:HD23  | 2.44                     | 0.47              |
| 1:TB:737:GLY:O    | 1:TB:741:VAL:HG23 | 2.14                     | 0.47              |
| 1:V:778:GLU:HA    | 1:V:781:VAL:HG22  | 1.95                     | 0.47              |
| 1:VA:44:LEU:H     | 1:VA:44:LEU:HD22  | 1.79                     | 0.47              |
| 1:W:778:GLU:HA    | 1:W:781:VAL:HG22  | 1.96                     | 0.47              |
| 1:X:778:GLU:HA    | 1:X:781:VAL:HG22  | 1.94                     | 0.47              |
| 1:YA:366:VAL:HG13 | 1:YA:366:VAL:O    | 2.15                     | 0.47              |
| 1:ZB:398:VAL:HG12 | 1:ZB:491:PRO:HB3  | 1.95                     | 0.47              |
| 1:A:56:ARG:HE     | 1:B:127:LEU:HD21  | 1.80                     | 0.47              |
| 1:A:127:LEU:HD21  | 1:NA:56:ARG:HE    | 1.80                     | 0.47              |
| 1:AC:17:HIS:HB3   | 1:AC:44:LEU:HD23  | 1.96                     | 0.47              |
| 1:B:92:LEU:HD12   | 1:B:92:LEU:N      | 2.30                     | 0.47              |
| 1:BA:260:VAL:HG13 | 1:BA:260:VAL:O    | 2.14                     | 0.47              |
| 1:CB:788:ALA:O    | 1:CB:792:VAL:HG23 | 2.14                     | 0.47              |
| 1:DB:788:ALA:O    | 1:DB:792:VAL:HG23 | 2.15                     | 0.47              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:E:92:LEU:HD12   | 1:E:92:LEU:N      | 2.29                     | 0.47              |
| 1:E:543:TYR:CE2   | 1:E:575:ILE:HG21  | 2.50                     | 0.47              |
| 1:FA:758:GLU:O    | 1:FA:762:VAL:HG22 | 2.13                     | 0.47              |
| 1:HB:92:LEU:N     | 1:HB:92:LEU:HD12  | 2.30                     | 0.47              |
| 1:JA:168:ILE:HG22 | 1:JA:215:LEU:CD2  | 2.42                     | 0.47              |
| 1:KB:788:ALA:O    | 1:KB:792:VAL:HG23 | 2.15                     | 0.47              |
| 1:L:497:VAL:O     | 1:L:497:VAL:HG13  | 2.13                     | 0.47              |
| 1:LA:92:LEU:N     | 1:LA:92:LEU:HD12  | 2.29                     | 0.47              |
| 1:N:56:ARG:HE     | 1:O:127:LEU:HD21  | 1.78                     | 0.47              |
| 1:N:65:VAL:HG23   | 1:N:67:ARG:HG3    | 1.96                     | 0.47              |
| 1:P:788:ALA:O     | 1:P:792:VAL:HG23  | 2.15                     | 0.47              |
| 1:PA:65:VAL:HG23  | 1:PA:67:ARG:HG3   | 1.96                     | 0.47              |
| 1:PA:497:VAL:HG13 | 1:PA:497:VAL:O    | 2.14                     | 0.47              |
| 1:Q:529:ILE:HD12  | 1:Q:583:VAL:HG11  | 1.95                     | 0.47              |
| 1:RA:334:LEU:HD12 | 1:RA:357:TRP:NE1  | 2.30                     | 0.47              |
| 1:RA:788:ALA:O    | 1:RA:792:VAL:HG23 | 2.14                     | 0.47              |
| 1:RB:56:ARG:HE    | 1:SB:127:LEU:HD21 | 1.80                     | 0.47              |
| 1:S:52:THR:O      | 1:S:109:ILE:HD11  | 2.14                     | 0.47              |
| 1:SA:219:VAL:HG11 | 1:SA:227:LEU:HD22 | 1.97                     | 0.47              |
| 1:VA:92:LEU:HD12  | 1:VA:92:LEU:N     | 2.29                     | 0.47              |
| 1:XA:168:ILE:HG22 | 1:XA:215:LEU:CD2  | 2.44                     | 0.47              |
| 1:Y:65:VAL:HG23   | 1:Y:67:ARG:HG3    | 1.95                     | 0.47              |
| 1:Y:144:LEU:HD12  | 1:Y:163:ILE:HD11  | 1.96                     | 0.47              |
| 1:ZA:398:VAL:HG12 | 1:ZA:491:PRO:HB3  | 1.97                     | 0.47              |
| 1:AB:281:TYR:CG   | 1:AB:366:VAL:HG23 | 2.50                     | 0.47              |
| 1:BA:65:VAL:HG23  | 1:BA:67:ARG:HG3   | 1.96                     | 0.47              |
| 1:CA:52:THR:O     | 1:CA:109:ILE:HD11 | 2.14                     | 0.47              |
| 1:CA:788:ALA:O    | 1:CA:792:VAL:HG23 | 2.15                     | 0.47              |
| 1:CB:529:ILE:HD12 | 1:CB:583:VAL:HG11 | 1.95                     | 0.47              |
| 1:EA:65:VAL:HG23  | 1:EA:67:ARG:HG3   | 1.96                     | 0.47              |
| 1:EB:30:VAL:CG2   | 1:EB:50:MET:HE3   | 2.44                     | 0.47              |
| 1:F:30:VAL:CG2    | 1:F:50:MET:HE2    | 2.44                     | 0.47              |
| 1:FA:539:LEU:HD12 | 1:FA:540:GLN:N    | 2.30                     | 0.47              |
| 1:FB:398:VAL:HG12 | 1:FB:491:PRO:HB3  | 1.97                     | 0.47              |
| 1:G:56:ARG:HE     | 1:H:127:LEU:HD21  | 1.79                     | 0.47              |
| 1:GB:144:LEU:N    | 1:GB:144:LEU:HD23 | 2.30                     | 0.47              |
| 1:GB:281:TYR:CG   | 1:GB:366:VAL:HG23 | 2.50                     | 0.47              |
| 1:HA:345:ASP:OD2  | 1:HA:349:VAL:HG13 | 2.14                     | 0.47              |
| 1:HA:497:VAL:HG13 | 1:HA:497:VAL:O    | 2.13                     | 0.47              |
| 1:HA:543:TYR:CE2  | 1:HA:575:ILE:HG21 | 2.50                     | 0.47              |
| 1:HB:497:VAL:O    | 1:HB:497:VAL:HG13 | 2.14                     | 0.47              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:IA:52:THR:O     | 1:IA:109:ILE:HD11 | 2.14                     | 0.47              |
| 1:IA:65:VAL:HG23  | 1:IA:67:ARG:HG3   | 1.96                     | 0.47              |
| 1:IA:168:ILE:HG21 | 1:IA:174:LEU:HB2  | 1.96                     | 0.47              |
| 1:IA:334:LEU:HD12 | 1:IA:357:TRP:NE1  | 2.30                     | 0.47              |
| 1:IB:575:ILE:HG23 | 1:IB:603:VAL:HG22 | 1.97                     | 0.47              |
| 1:J:788:ALA:O     | 1:J:792:VAL:HG23  | 2.15                     | 0.47              |
| 1:K:398:VAL:HG12  | 1:K:491:PRO:HB3   | 1.96                     | 0.47              |
| 1:K:788:ALA:O     | 1:K:792:VAL:HG23  | 2.14                     | 0.47              |
| 1:KA:92:LEU:HD12  | 1:KA:92:LEU:N     | 2.29                     | 0.47              |
| 1:KA:788:ALA:O    | 1:KA:792:VAL:HG23 | 2.14                     | 0.47              |
| 1:LA:758:GLU:O    | 1:LA:762:VAL:HG22 | 2.15                     | 0.47              |
| 1:MA:487:VAL:HG13 | 1:MA:487:VAL:O    | 2.15                     | 0.47              |
| 1:MB:92:LEU:HD12  | 1:MB:92:LEU:N     | 2.30                     | 0.47              |
| 1:N:92:LEU:N      | 1:N:92:LEU:HD12   | 2.29                     | 0.47              |
| 1:NA:543:TYR:CE2  | 1:NA:575:ILE:HG21 | 2.50                     | 0.47              |
| 1:NB:788:ALA:O    | 1:NB:792:VAL:HG23 | 2.15                     | 0.47              |
| 1:O:52:THR:O      | 1:O:109:ILE:HD11  | 2.15                     | 0.47              |
| 1:O:788:ALA:O     | 1:O:792:VAL:HG23  | 2.14                     | 0.47              |
| 1:OB:497:VAL:HG13 | 1:OB:497:VAL:O    | 2.13                     | 0.47              |
| 1:PB:168:ILE:HG21 | 1:PB:174:LEU:HB2  | 1.96                     | 0.47              |
| 1:RA:168:ILE:HG21 | 1:RA:174:LEU:HB2  | 1.96                     | 0.47              |
| 1:RB:92:LEU:HD12  | 1:RB:92:LEU:N     | 2.29                     | 0.47              |
| 1:S:398:VAL:HG12  | 1:S:491:PRO:HB3   | 1.95                     | 0.47              |
| 1:SB:92:LEU:N     | 1:SB:92:LEU:HD12  | 2.29                     | 0.47              |
| 1:T:529:ILE:HD12  | 1:T:583:VAL:HG11  | 1.96                     | 0.47              |
| 1:TA:63:ASN:OD1   | 1:TA:104:VAL:HG12 | 2.15                     | 0.47              |
| 1:TA:504:ARG:HA   | 1:TA:504:ARG:NE   | 2.30                     | 0.47              |
| 1:TB:168:ILE:HG21 | 1:TB:174:LEU:HB2  | 1.95                     | 0.47              |
| 1:UA:758:GLU:O    | 1:UA:762:VAL:HG22 | 2.15                     | 0.47              |
| 1:UB:788:ALA:O    | 1:UB:792:VAL:HG23 | 2.15                     | 0.47              |
| 1:V:65:VAL:HG23   | 1:V:67:ARG:HG3    | 1.96                     | 0.47              |
| 1:VA:65:VAL:HG23  | 1:VA:67:ARG:HG3   | 1.95                     | 0.47              |
| 1:VA:334:LEU:HD12 | 1:VA:357:TRP:NE1  | 2.30                     | 0.47              |
| 1:VA:737:GLY:O    | 1:VA:741:VAL:HG23 | 2.14                     | 0.47              |
| 1:VB:168:ILE:HG21 | 1:VB:174:LEU:HB2  | 1.96                     | 0.47              |
| 1:WA:65:VAL:HG23  | 1:WA:67:ARG:HG3   | 1.95                     | 0.47              |
| 1:WB:168:ILE:HG22 | 1:WB:215:LEU:CD2  | 2.42                     | 0.47              |
| 1:X:17:HIS:HB3    | 1:X:44:LEU:HD23   | 1.97                     | 0.47              |
| 1:X:788:ALA:O     | 1:X:792:VAL:HG23  | 2.15                     | 0.47              |
| 1:XA:334:LEU:HD12 | 1:XA:357:TRP:NE1  | 2.30                     | 0.47              |
| 1:XB:92:LEU:HD12  | 1:XB:92:LEU:N     | 2.29                     | 0.47              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:ZA:65:VAL:HG23  | 1:ZA:67:ARG:HG3   | 1.95                     | 0.47              |
| 1:ZA:543:TYR:CE2  | 1:ZA:575:ILE:HG21 | 2.50                     | 0.47              |
| 1:ZB:497:VAL:HG13 | 1:ZB:497:VAL:O    | 2.14                     | 0.47              |
| 1:A:168:ILE:HG21  | 1:A:174:LEU:HB2   | 1.96                     | 0.47              |
| 1:A:737:GLY:O     | 1:A:741:VAL:HG23  | 2.14                     | 0.47              |
| 1:AA:765:VAL:HG22 | 1:BA:759:LEU:HD21 | 1.96                     | 0.47              |
| 1:AB:366:VAL:O    | 1:AB:366:VAL:HG13 | 2.14                     | 0.47              |
| 1:DA:168:ILE:HG22 | 1:DA:215:LEU:CD2  | 2.45                     | 0.47              |
| 1:EA:334:LEU:HD12 | 1:EA:357:TRP:NE1  | 2.30                     | 0.47              |
| 1:EB:575:ILE:HG23 | 1:EB:603:VAL:HG22 | 1.95                     | 0.47              |
| 1:G:737:GLY:O     | 1:G:741:VAL:HG23  | 2.15                     | 0.47              |
| 1:G:758:GLU:O     | 1:G:762:VAL:HG22  | 2.15                     | 0.47              |
| 1:G:788:ALA:O     | 1:G:792:VAL:HG23  | 2.15                     | 0.47              |
| 1:HB:281:TYR:CG   | 1:HB:366:VAL:HG23 | 2.50                     | 0.47              |
| 1:J:575:ILE:HG23  | 1:J:603:VAL:HG22  | 1.96                     | 0.47              |
| 1:LA:56:ARG:HE    | 1:MA:127:LEU:HD21 | 1.80                     | 0.47              |
| 1:MB:65:VAL:HG23  | 1:MB:67:ARG:HG3   | 1.96                     | 0.47              |
| 1:N:504:ARG:HA    | 1:N:504:ARG:NE    | 2.30                     | 0.47              |
| 1:OA:788:ALA:O    | 1:OA:792:VAL:HG23 | 2.15                     | 0.47              |
| 1:OB:219:VAL:HG11 | 1:OB:227:LEU:HD22 | 1.97                     | 0.47              |
| 1:P:366:VAL:HG13  | 1:P:366:VAL:O     | 2.14                     | 0.47              |
| 1:PB:52:THR:O     | 1:PB:109:ILE:HD11 | 2.15                     | 0.47              |
| 1:RB:17:HIS:HB3   | 1:RB:44:LEU:HD23  | 1.97                     | 0.47              |
| 1:T:758:GLU:O     | 1:T:762:VAL:HG22  | 2.15                     | 0.47              |
| 1:T:788:ALA:O     | 1:T:792:VAL:HG23  | 2.15                     | 0.47              |
| 1:V:168:ILE:HG21  | 1:V:174:LEU:HB2   | 1.97                     | 0.47              |
| 1:XB:788:ALA:O    | 1:XB:792:VAL:HG23 | 2.14                     | 0.47              |
| 1:A:92:LEU:N      | 1:A:92:LEU:HD12   | 2.30                     | 0.47              |
| 1:B:497:VAL:HG13  | 1:B:497:VAL:O     | 2.14                     | 0.47              |
| 1:BB:17:HIS:CB    | 1:BB:44:LEU:HD23  | 2.45                     | 0.47              |
| 1:C:65:VAL:HG23   | 1:C:67:ARG:HG3    | 1.96                     | 0.47              |
| 1:CA:504:ARG:NE   | 1:CA:504:ARG:HA   | 2.30                     | 0.47              |
| 1:D:63:ASN:OD1    | 1:D:104:VAL:HG12  | 2.14                     | 0.47              |
| 1:DA:92:LEU:N     | 1:DA:92:LEU:HD12  | 2.30                     | 0.47              |
| 1:E:219:VAL:HG11  | 1:E:227:LEU:HD22  | 1.97                     | 0.47              |
| 1:H:575:ILE:HG23  | 1:H:603:VAL:HG22  | 1.96                     | 0.47              |
| 1:I:168:ILE:HG21  | 1:I:174:LEU:HB2   | 1.97                     | 0.47              |
| 1:IA:788:ALA:O    | 1:IA:792:VAL:HG23 | 2.15                     | 0.47              |
| 1:IB:788:ALA:O    | 1:IB:792:VAL:HG23 | 2.15                     | 0.47              |
| 1:JA:737:GLY:O    | 1:JA:741:VAL:HG23 | 2.15                     | 0.47              |
| 1:L:788:ALA:O     | 1:L:792:VAL:HG23  | 2.15                     | 0.47              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:NB:65:VAL:HG23  | 1:NB:67:ARG:HG3   | 1.96                     | 0.47              |
| 1:OA:92:LEU:N     | 1:OA:92:LEU:HD12  | 2.30                     | 0.47              |
| 1:P:56:ARG:HE     | 1:Q:127:LEU:HD21  | 1.79                     | 0.47              |
| 1:PB:334:LEU:HD12 | 1:PB:357:TRP:NE1  | 2.30                     | 0.47              |
| 1:T:65:VAL:HG23   | 1:T:67:ARG:HG3    | 1.97                     | 0.47              |
| 1:T:92:LEU:N      | 1:T:92:LEU:HD12   | 2.30                     | 0.47              |
| 1:TA:65:VAL:HG23  | 1:TA:67:ARG:HG3   | 1.96                     | 0.47              |
| 1:UB:543:TYR:CE2  | 1:UB:575:ILE:HG21 | 2.50                     | 0.47              |
| 1:VA:778:GLU:HA   | 1:VA:781:VAL:HG22 | 1.95                     | 0.47              |
| 1:VB:788:ALA:O    | 1:VB:792:VAL:HG23 | 2.15                     | 0.47              |
| 1:WA:56:ARG:HE    | 1:XA:127:LEU:HD21 | 1.80                     | 0.47              |
| 1:XA:56:ARG:HE    | 1:YA:127:LEU:HD21 | 1.78                     | 0.47              |
| 1:Y:504:ARG:HA    | 1:Y:504:ARG:NE    | 2.30                     | 0.47              |
| 1:AA:788:ALA:O    | 1:AA:792:VAL:HG23 | 2.15                     | 0.47              |
| 1:AB:788:ALA:O    | 1:AB:792:VAL:HG23 | 2.15                     | 0.47              |
| 1:B:504:ARG:NE    | 1:B:504:ARG:HA    | 2.30                     | 0.47              |
| 1:BA:516:LEU:HD23 | 1:BA:516:LEU:O    | 2.15                     | 0.47              |
| 1:C:788:ALA:O     | 1:C:792:VAL:HG23  | 2.15                     | 0.47              |
| 1:DA:529:ILE:HD12 | 1:DA:583:VAL:HG11 | 1.96                     | 0.47              |
| 1:EB:56:ARG:HE    | 1:FB:127:LEU:HD21 | 1.80                     | 0.47              |
| 1:EB:65:VAL:HG23  | 1:EB:67:ARG:HG3   | 1.97                     | 0.47              |
| 1:F:504:ARG:HA    | 1:F:504:ARG:NE    | 2.30                     | 0.47              |
| 1:FB:281:TYR:CG   | 1:FB:366:VAL:HG23 | 2.50                     | 0.47              |
| 1:J:52:THR:O      | 1:J:109:ILE:HD11  | 2.15                     | 0.47              |
| 1:J:398:VAL:HG12  | 1:J:491:PRO:HB3   | 1.96                     | 0.47              |
| 1:K:334:LEU:HD12  | 1:K:357:TRP:NE1   | 2.29                     | 0.47              |
| 1:KB:92:LEU:N     | 1:KB:92:LEU:HD12  | 2.29                     | 0.47              |
| 1:L:529:ILE:HD12  | 1:L:583:VAL:HG11  | 1.97                     | 0.47              |
| 1:LB:92:LEU:HD12  | 1:LB:92:LEU:N     | 2.30                     | 0.47              |
| 1:M:523:PHE:CE1   | 1:M:545:TRP:CD1   | 3.02                     | 0.47              |
| 1:MB:56:ARG:HE    | 1:NB:127:LEU:HD21 | 1.80                     | 0.47              |
| 1:MB:168:ILE:HG21 | 1:MB:174:LEU:HB2  | 1.97                     | 0.47              |
| 1:MB:543:TYR:CE2  | 1:MB:575:ILE:HG21 | 2.50                     | 0.47              |
| 1:NB:765:VAL:HG22 | 1:OB:759:LEU:HD21 | 1.96                     | 0.47              |
| 1:OA:30:VAL:HG21  | 1:OA:50:MET:HE3   | 1.97                     | 0.47              |
| 1:OA:65:VAL:HG23  | 1:OA:67:ARG:HG3   | 1.96                     | 0.47              |
| 1:PA:92:LEU:HD12  | 1:PA:92:LEU:N     | 2.30                     | 0.47              |
| 1:S:497:VAL:O     | 1:S:497:VAL:HG13  | 2.14                     | 0.47              |
| 1:S:504:ARG:HA    | 1:S:504:ARG:NE    | 2.30                     | 0.47              |
| 1:SA:65:VAL:HG23  | 1:SA:67:ARG:HG3   | 1.95                     | 0.47              |
| 1:SA:504:ARG:NE   | 1:SA:504:ARG:HA   | 2.30                     | 0.47              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:TA:168:ILE:HG21 | 1:TA:174:LEU:HB2  | 1.97                     | 0.47              |
| 1:UA:65:VAL:HG23  | 1:UA:67:ARG:HG3   | 1.96                     | 0.47              |
| 1:UA:334:LEU:HD12 | 1:UA:357:TRP:NE1  | 2.30                     | 0.47              |
| 1:VA:398:VAL:HG12 | 1:VA:491:PRO:HB3  | 1.96                     | 0.47              |
| 1:Y:144:LEU:HD23  | 1:Y:144:LEU:N     | 2.29                     | 0.47              |
| 1:YB:504:ARG:NE   | 1:YB:504:ARG:HA   | 2.30                     | 0.47              |
| 1:Z:17:HIS:HB3    | 1:Z:44:LEU:HD23   | 1.97                     | 0.47              |
| 1:A:334:LEU:HD12  | 1:A:357:TRP:NE1   | 2.30                     | 0.46              |
| 1:B:52:THR:O      | 1:B:109:ILE:HD11  | 2.15                     | 0.46              |
| 1:C:219:VAL:HG11  | 1:C:227:LEU:HD22  | 1.97                     | 0.46              |
| 1:DB:281:TYR:CG   | 1:DB:366:VAL:HG23 | 2.50                     | 0.46              |
| 1:FA:53:VAL:HG12  | 1:FA:93:ALA:HA    | 1.97                     | 0.46              |
| 1:GB:543:TYR:CE2  | 1:GB:575:ILE:HG21 | 2.50                     | 0.46              |
| 1:IB:543:TYR:CE2  | 1:IB:575:ILE:HG21 | 2.50                     | 0.46              |
| 1:KA:17:HIS:HB3   | 1:KA:44:LEU:HD23  | 1.97                     | 0.46              |
| 1:KA:765:VAL:HG22 | 1:LA:759:LEU:HD21 | 1.96                     | 0.46              |
| 1:LB:504:ARG:NE   | 1:LB:504:ARG:HA   | 2.30                     | 0.46              |
| 1:M:56:ARG:HE     | 1:N:127:LEU:HD21  | 1.80                     | 0.46              |
| 1:MA:92:LEU:HD12  | 1:MA:92:LEU:N     | 2.30                     | 0.46              |
| 1:MB:17:HIS:HB3   | 1:MB:44:LEU:HD23  | 1.97                     | 0.46              |
| 1:OA:778:GLU:HA   | 1:OA:781:VAL:HG22 | 1.96                     | 0.46              |
| 1:OB:737:GLY:O    | 1:OB:741:VAL:HG23 | 2.15                     | 0.46              |
| 1:PB:92:LEU:N     | 1:PB:92:LEU:HD12  | 2.30                     | 0.46              |
| 1:QA:65:VAL:HG23  | 1:QA:67:ARG:HG3   | 1.97                     | 0.46              |
| 1:QA:504:ARG:HA   | 1:QA:504:ARG:NE   | 2.31                     | 0.46              |
| 1:QB:56:ARG:HE    | 1:RB:127:LEU:HD21 | 1.80                     | 0.46              |
| 1:R:65:VAL:HG23   | 1:R:67:ARG:HG3    | 1.96                     | 0.46              |
| 1:R:398:VAL:HG12  | 1:R:491:PRO:HB3   | 1.97                     | 0.46              |
| 1:T:398:VAL:HG12  | 1:T:491:PRO:HB3   | 1.96                     | 0.46              |
| 1:UA:504:ARG:NE   | 1:UA:504:ARG:HA   | 2.30                     | 0.46              |
| 1:V:543:TYR:CE2   | 1:V:575:ILE:HG21  | 2.50                     | 0.46              |
| 1:V:788:ALA:O     | 1:V:792:VAL:HG23  | 2.15                     | 0.46              |
| 1:VB:543:TYR:CE2  | 1:VB:575:ILE:HG21 | 2.49                     | 0.46              |
| 1:W:765:VAL:HG22  | 1:X:759:LEU:HD21  | 1.96                     | 0.46              |
| 1:X:504:ARG:NE    | 1:X:504:ARG:HA    | 2.31                     | 0.46              |
| 1:Y:168:ILE:HG21  | 1:Y:174:LEU:HB2   | 1.97                     | 0.46              |
| 1:Y:779:LEU:HD21  | 1:Z:774:ARG:HG2   | 1.98                     | 0.46              |
| 1:YA:334:LEU:HD12 | 1:YA:357:TRP:NE1  | 2.29                     | 0.46              |
| 1:Z:398:VAL:HG12  | 1:Z:491:PRO:HB3   | 1.97                     | 0.46              |
| 1:AB:17:HIS:HB3   | 1:AB:44:LEU:HD23  | 1.98                     | 0.46              |
| 1:AC:398:VAL:HG12 | 1:AC:491:PRO:HB3  | 1.96                     | 0.46              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:BA:737:GLY:O    | 1:BA:741:VAL:HG23 | 2.15                     | 0.46              |
| 1:D:334:LEU:HD12  | 1:D:357:TRP:NE1   | 2.31                     | 0.46              |
| 1:DB:7:ILE:O      | 1:DB:8:ILE:C      | 2.58                     | 0.46              |
| 1:F:302:VAL:HG11  | 1:F:306:LYS:HZ2   | 1.80                     | 0.46              |
| 1:FA:65:VAL:HG23  | 1:FA:67:ARG:HG3   | 1.96                     | 0.46              |
| 1:FA:539:LEU:HD11 | 1:FA:541:LEU:HD21 | 1.97                     | 0.46              |
| 1:JA:65:VAL:HG23  | 1:JA:67:ARG:HG3   | 1.96                     | 0.46              |
| 1:K:63:ASN:OD1    | 1:K:104:VAL:HG12  | 2.15                     | 0.46              |
| 1:KB:398:VAL:HG12 | 1:KB:491:PRO:HB3  | 1.97                     | 0.46              |
| 1:L:52:THR:O      | 1:L:109:ILE:HD11  | 2.15                     | 0.46              |
| 1:NA:281:TYR:CG   | 1:NA:366:VAL:HG23 | 2.51                     | 0.46              |
| 1:OB:398:VAL:HG12 | 1:OB:491:PRO:HB3  | 1.95                     | 0.46              |
| 1:PA:504:ARG:NE   | 1:PA:504:ARG:HA   | 2.31                     | 0.46              |
| 1:PB:504:ARG:HA   | 1:PB:504:ARG:NE   | 2.30                     | 0.46              |
| 1:QA:92:LEU:N     | 1:QA:92:LEU:HD12  | 2.30                     | 0.46              |
| 1:R:504:ARG:NE    | 1:R:504:ARG:HA    | 2.30                     | 0.46              |
| 1:RA:504:ARG:NE   | 1:RA:504:ARG:HA   | 2.30                     | 0.46              |
| 1:RB:334:LEU:HD12 | 1:RB:357:TRP:NE1  | 2.30                     | 0.46              |
| 1:S:281:TYR:CG    | 1:S:366:VAL:HG23  | 2.50                     | 0.46              |
| 1:SA:398:VAL:HG12 | 1:SA:491:PRO:HB3  | 1.96                     | 0.46              |
| 1:T:497:VAL:O     | 1:T:497:VAL:HG13  | 2.14                     | 0.46              |
| 1:T:504:ARG:NE    | 1:T:504:ARG:HA    | 2.30                     | 0.46              |
| 1:VA:504:ARG:HA   | 1:VA:504:ARG:NE   | 2.30                     | 0.46              |
| 1:W:52:THR:O      | 1:W:109:ILE:HD11  | 2.14                     | 0.46              |
| 1:X:168:ILE:HG21  | 1:X:174:LEU:HB2   | 1.97                     | 0.46              |
| 1:ZB:487:VAL:HG13 | 1:ZB:487:VAL:O    | 2.15                     | 0.46              |
| 1:ZB:504:ARG:NE   | 1:ZB:504:ARG:HA   | 2.30                     | 0.46              |
| 1:AC:92:LEU:HD12  | 1:AC:92:LEU:N     | 2.30                     | 0.46              |
| 1:AC:497:VAL:HG13 | 1:AC:497:VAL:O    | 2.14                     | 0.46              |
| 1:AC:529:ILE:CD1  | 1:AC:583:VAL:HG11 | 2.44                     | 0.46              |
| 1:CA:92:LEU:HD12  | 1:CA:92:LEU:N     | 2.30                     | 0.46              |
| 1:CA:168:ILE:HG22 | 1:CA:215:LEU:CD2  | 2.43                     | 0.46              |
| 1:CB:56:ARG:HE    | 1:DB:127:LEU:HD21 | 1.80                     | 0.46              |
| 1:DA:65:VAL:HG23  | 1:DA:67:ARG:HG3   | 1.96                     | 0.46              |
| 1:EB:281:TYR:CG   | 1:EB:366:VAL:HG23 | 2.51                     | 0.46              |
| 1:GB:504:ARG:NE   | 1:GB:504:ARG:HA   | 2.30                     | 0.46              |
| 1:HB:758:GLU:O    | 1:HB:762:VAL:HG22 | 2.14                     | 0.46              |
| 1:J:144:LEU:N     | 1:J:144:LEU:HD23  | 2.30                     | 0.46              |
| 1:J:159:VAL:O     | 1:J:159:VAL:HG12  | 2.14                     | 0.46              |
| 1:J:168:ILE:HG22  | 1:J:215:LEU:CD2   | 2.43                     | 0.46              |
| 1:JA:398:VAL:HG12 | 1:JA:491:PRO:HB3  | 1.98                     | 0.46              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:JB:52:THR:O     | 1:JB:109:ILE:HD11 | 2.15                     | 0.46              |
| 1:KA:543:TYR:CE2  | 1:KA:575:ILE:HG21 | 2.50                     | 0.46              |
| 1:N:366:VAL:HG13  | 1:N:366:VAL:O     | 2.16                     | 0.46              |
| 1:NA:92:LEU:HD12  | 1:NA:92:LEU:N     | 2.30                     | 0.46              |
| 1:NB:779:LEU:HD21 | 1:OB:774:ARG:HG2  | 1.97                     | 0.46              |
| 1:OB:168:ILE:HG21 | 1:OB:174:LEU:HB2  | 1.97                     | 0.46              |
| 1:RA:56:ARG:HE    | 1:SA:127:LEU:HD21 | 1.79                     | 0.46              |
| 1:UA:788:ALA:O    | 1:UA:792:VAL:HG23 | 2.16                     | 0.46              |
| 1:WA:52:THR:O     | 1:WA:109:ILE:HD11 | 2.16                     | 0.46              |
| 1:X:386:GLU:O     | 1:X:402:ILE:HG23  | 2.16                     | 0.46              |
| 1:YA:92:LEU:HD12  | 1:YA:92:LEU:N     | 2.30                     | 0.46              |
| 1:YA:281:TYR:CG   | 1:YA:366:VAL:HG23 | 2.50                     | 0.46              |
| 1:YA:398:VAL:HG12 | 1:YA:491:PRO:HB3  | 1.97                     | 0.46              |
| 1:Z:758:GLU:O     | 1:Z:762:VAL:HG22  | 2.15                     | 0.46              |
| 1:ZA:281:TYR:CG   | 1:ZA:366:VAL:HG23 | 2.51                     | 0.46              |
| 1:A:788:ALA:O     | 1:A:792:VAL:HG23  | 2.15                     | 0.46              |
| 1:AB:7:ILE:O      | 1:AB:8:ILE:C      | 2.59                     | 0.46              |
| 1:BA:497:VAL:HG13 | 1:BA:497:VAL:O    | 2.14                     | 0.46              |
| 1:BB:504:ARG:NE   | 1:BB:504:ARG:HA   | 2.30                     | 0.46              |
| 1:C:92:LEU:N      | 1:C:92:LEU:HD12   | 2.31                     | 0.46              |
| 1:CB:17:HIS:HB3   | 1:CB:44:LEU:HD23  | 1.98                     | 0.46              |
| 1:D:504:ARG:NE    | 1:D:504:ARG:HA    | 2.30                     | 0.46              |
| 1:EA:56:ARG:HE    | 1:FA:127:LEU:HD21 | 1.79                     | 0.46              |
| 1:FA:398:VAL:HG12 | 1:FA:491:PRO:HB3  | 1.98                     | 0.46              |
| 1:G:65:VAL:HG23   | 1:G:67:ARG:HG3    | 1.96                     | 0.46              |
| 1:HA:168:ILE:HG21 | 1:HA:174:LEU:HB2  | 1.98                     | 0.46              |
| 1:HB:366:VAL:HG13 | 1:HB:366:VAL:O    | 2.16                     | 0.46              |
| 1:HB:543:TYR:CE2  | 1:HB:575:ILE:HG21 | 2.51                     | 0.46              |
| 1:KA:52:THR:O     | 1:KA:109:ILE:HD11 | 2.15                     | 0.46              |
| 1:KA:398:VAL:HG12 | 1:KA:491:PRO:HB3  | 1.98                     | 0.46              |
| 1:L:543:TYR:CE2   | 1:L:575:ILE:HG21  | 2.50                     | 0.46              |
| 1:O:504:ARG:NE    | 1:O:504:ARG:HA    | 2.31                     | 0.46              |
| 1:PA:788:ALA:O    | 1:PA:792:VAL:HG23 | 2.16                     | 0.46              |
| 1:QA:219:VAL:HG11 | 1:QA:227:LEU:HD22 | 1.97                     | 0.46              |
| 1:S:17:HIS:HB3    | 1:S:44:LEU:HD23   | 1.98                     | 0.46              |
| 1:TA:17:HIS:HB3   | 1:TA:44:LEU:HD23  | 1.97                     | 0.46              |
| 1:UB:398:VAL:HG12 | 1:UB:491:PRO:HB3  | 1.96                     | 0.46              |
| 1:UB:504:ARG:NE   | 1:UB:504:ARG:HA   | 2.31                     | 0.46              |
| 1:VB:539:LEU:HD21 | 1:VB:599:ILE:HD11 | 1.97                     | 0.46              |
| 1:W:504:ARG:NE    | 1:W:504:ARG:HA    | 2.30                     | 0.46              |
| 1:WA:543:TYR:CE2  | 1:WA:575:ILE:HG21 | 2.50                     | 0.46              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:XA:144:LEU:N    | 1:XA:144:LEU:HD23 | 2.30                     | 0.46              |
| 1:Y:539:LEU:HD21  | 1:Y:541:LEU:HD21  | 1.97                     | 0.46              |
| 1:ZA:92:LEU:N     | 1:ZA:92:LEU:HD12  | 2.31                     | 0.46              |
| 1:AC:543:TYR:CE2  | 1:AC:575:ILE:HG21 | 2.50                     | 0.46              |
| 1:BA:168:ILE:HG21 | 1:BA:174:LEU:HB2  | 1.97                     | 0.46              |
| 1:CB:65:VAL:HG23  | 1:CB:67:ARG:HG3   | 1.95                     | 0.46              |
| 1:CB:765:VAL:HG22 | 1:DB:759:LEU:HD21 | 1.97                     | 0.46              |
| 1:D:56:ARG:HE     | 1:E:127:LEU:HD21  | 1.80                     | 0.46              |
| 1:D:219:VAL:HG11  | 1:D:227:LEU:HD22  | 1.98                     | 0.46              |
| 1:DA:398:VAL:HG12 | 1:DA:491:PRO:HB3  | 1.97                     | 0.46              |
| 1:EB:334:LEU:HD12 | 1:EB:357:TRP:NE1  | 2.30                     | 0.46              |
| 1:GA:92:LEU:N     | 1:GA:92:LEU:HD12  | 2.30                     | 0.46              |
| 1:HA:487:VAL:HG13 | 1:HA:487:VAL:O    | 2.16                     | 0.46              |
| 1:HB:345:ASP:OD2  | 1:HB:349:VAL:HG13 | 2.15                     | 0.46              |
| 1:I:56:ARG:HE     | 1:J:127:LEU:HD21  | 1.80                     | 0.46              |
| 1:IA:168:ILE:HG22 | 1:IA:215:LEU:CD2  | 2.43                     | 0.46              |
| 1:JB:330:GLN:C    | 1:JB:407:MET:HE1  | 2.41                     | 0.46              |
| 1:K:281:TYR:CG    | 1:K:366:VAL:HG23  | 2.50                     | 0.46              |
| 1:MB:804:PRO:O    | 1:MB:807:ILE:HG22 | 2.15                     | 0.46              |
| 1:NB:504:ARG:NE   | 1:NB:504:ARG:HA   | 2.30                     | 0.46              |
| 1:NB:758:GLU:O    | 1:NB:762:VAL:HG22 | 2.16                     | 0.46              |
| 1:O:497:VAL:HG13  | 1:O:497:VAL:O     | 2.15                     | 0.46              |
| 1:O:765:VAL:HG22  | 1:P:759:LEU:HD21  | 1.96                     | 0.46              |
| 1:OA:168:ILE:HG21 | 1:OA:174:LEU:HB2  | 1.97                     | 0.46              |
| 1:OB:543:TYR:CE2  | 1:OB:575:ILE:HG21 | 2.51                     | 0.46              |
| 1:PB:529:ILE:HD12 | 1:PB:583:VAL:HG11 | 1.98                     | 0.46              |
| 1:PB:543:TYR:CE2  | 1:PB:575:ILE:HG21 | 2.51                     | 0.46              |
| 1:Q:398:VAL:HG12  | 1:Q:491:PRO:HB3   | 1.97                     | 0.46              |
| 1:QB:758:GLU:O    | 1:QB:762:VAL:HG22 | 2.15                     | 0.46              |
| 1:RB:398:VAL:HG12 | 1:RB:491:PRO:HB3  | 1.96                     | 0.46              |
| 1:UA:17:HIS:HB3   | 1:UA:44:LEU:HD23  | 1.98                     | 0.46              |
| 1:V:17:HIS:HB3    | 1:V:44:LEU:HD23   | 1.98                     | 0.46              |
| 1:V:538:GLN:HB2   | 1:V:646:VAL:HG22  | 1.97                     | 0.46              |
| 1:W:56:ARG:HE     | 1:X:127:LEU:HD21  | 1.80                     | 0.46              |
| 1:W:168:ILE:HG21  | 1:W:174:LEU:HB2   | 1.96                     | 0.46              |
| 1:WA:53:VAL:HG12  | 1:WA:93:ALA:HA    | 1.97                     | 0.46              |
| 1:XB:758:GLU:O    | 1:XB:762:VAL:HG22 | 2.15                     | 0.46              |
| 1:YA:17:HIS:HB3   | 1:YA:44:LEU:HD23  | 1.98                     | 0.46              |
| 1:ZA:504:ARG:NE   | 1:ZA:504:ARG:HA   | 2.30                     | 0.46              |
| 1:A:30:VAL:HG21   | 1:A:50:MET:HE3    | 1.98                     | 0.46              |
| 1:AA:219:VAL:HG11 | 1:AA:227:LEU:HD22 | 1.98                     | 0.46              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:BA:504:ARG:NE   | 1:BA:504:ARG:HA   | 2.31                     | 0.46              |
| 1:BB:788:ALA:O    | 1:BB:792:VAL:HG23 | 2.16                     | 0.46              |
| 1:DA:17:HIS:HB3   | 1:DA:44:LEU:HD23  | 1.98                     | 0.46              |
| 1:F:788:ALA:O     | 1:F:792:VAL:HG23  | 2.15                     | 0.46              |
| 1:GA:219:VAL:HG11 | 1:GA:227:LEU:HD13 | 1.98                     | 0.46              |
| 1:GA:788:ALA:O    | 1:GA:792:VAL:HG23 | 2.16                     | 0.46              |
| 1:HB:52:THR:O     | 1:HB:109:ILE:HD11 | 2.16                     | 0.46              |
| 1:JB:523:PHE:CE2  | 1:JB:545:TRP:CD1  | 3.04                     | 0.46              |
| 1:KB:219:VAL:HG11 | 1:KB:227:LEU:HD22 | 1.98                     | 0.46              |
| 1:L:56:ARG:HE     | 1:M:127:LEU:HD21  | 1.80                     | 0.46              |
| 1:M:504:ARG:NE    | 1:M:504:ARG:HA    | 2.30                     | 0.46              |
| 1:MA:504:ARG:NE   | 1:MA:504:ARG:HA   | 2.30                     | 0.46              |
| 1:NA:504:ARG:HA   | 1:NA:504:ARG:NE   | 2.30                     | 0.46              |
| 1:NB:575:ILE:HG23 | 1:NB:603:VAL:HG22 | 1.98                     | 0.46              |
| 1:OA:17:HIS:HB3   | 1:OA:44:LEU:HD23  | 1.98                     | 0.46              |
| 1:OA:281:TYR:CG   | 1:OA:366:VAL:HG23 | 2.50                     | 0.46              |
| 1:OB:758:GLU:O    | 1:OB:762:VAL:HG22 | 2.16                     | 0.46              |
| 1:PA:168:ILE:HG21 | 1:PA:174:LEU:HB2  | 1.97                     | 0.46              |
| 1:RA:17:HIS:HB3   | 1:RA:44:LEU:HD23  | 1.98                     | 0.46              |
| 1:RB:219:VAL:HG11 | 1:RB:227:LEU:HD22 | 1.98                     | 0.46              |
| 1:S:543:TYR:CE2   | 1:S:575:ILE:HG21  | 2.50                     | 0.46              |
| 1:SA:543:TYR:CE2  | 1:SA:575:ILE:HG21 | 2.50                     | 0.46              |
| 1:TA:804:PRO:O    | 1:TA:807:ILE:HG22 | 2.16                     | 0.46              |
| 1:W:330:GLN:C     | 1:W:407:MET:HE1   | 2.41                     | 0.46              |
| 1:X:219:VAL:HG11  | 1:X:227:LEU:HD22  | 1.98                     | 0.46              |
| 1:X:765:VAL:HG22  | 1:Y:759:LEU:HD21  | 1.97                     | 0.46              |
| 1:XB:504:ARG:HA   | 1:XB:504:ARG:NE   | 2.30                     | 0.46              |
| 1:YA:504:ARG:HA   | 1:YA:504:ARG:NE   | 2.31                     | 0.46              |
| 1:YA:543:TYR:CE2  | 1:YA:575:ILE:HG21 | 2.51                     | 0.46              |
| 1:YB:65:VAL:HG23  | 1:YB:67:ARG:HG3   | 1.97                     | 0.46              |
| 1:Z:65:VAL:HG23   | 1:Z:67:ARG:HG3    | 1.96                     | 0.46              |
| 1:Z:168:ILE:HG21  | 1:Z:174:LEU:HB2   | 1.97                     | 0.46              |
| 1:ZB:529:ILE:HD12 | 1:ZB:583:VAL:HG11 | 1.97                     | 0.46              |
| 1:AA:17:HIS:HB3   | 1:AA:44:LEU:HD23  | 1.98                     | 0.46              |
| 1:AA:127:LEU:HD21 | 1:Z:56:ARG:HE     | 1.80                     | 0.46              |
| 1:AC:504:ARG:NE   | 1:AC:504:ARG:HA   | 2.31                     | 0.46              |
| 1:B:543:TYR:CE2   | 1:B:575:ILE:HG21  | 2.51                     | 0.46              |
| 1:BA:281:TYR:CG   | 1:BA:366:VAL:HG23 | 2.51                     | 0.46              |
| 1:CA:334:LEU:HD12 | 1:CA:357:TRP:NE1  | 2.30                     | 0.46              |
| 1:DB:168:ILE:HG21 | 1:DB:174:LEU:HB2  | 1.98                     | 0.46              |
| 1:EA:219:VAL:HG11 | 1:EA:227:LEU:HD22 | 1.98                     | 0.46              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:FA:7:ILE:O      | 1:FA:8:ILE:C      | 2.59                     | 0.46              |
| 1:IA:7:ILE:O      | 1:IA:8:ILE:C      | 2.59                     | 0.46              |
| 1:JA:788:ALA:O    | 1:JA:792:VAL:HG23 | 2.16                     | 0.46              |
| 1:K:52:THR:O      | 1:K:109:ILE:HD11  | 2.16                     | 0.46              |
| 1:K:92:LEU:HD12   | 1:K:92:LEU:N      | 2.30                     | 0.46              |
| 1:KA:281:TYR:CG   | 1:KA:366:VAL:HG23 | 2.51                     | 0.46              |
| 1:KA:504:ARG:NE   | 1:KA:504:ARG:HA   | 2.31                     | 0.46              |
| 1:KB:52:THR:O     | 1:KB:109:ILE:HD11 | 2.16                     | 0.46              |
| 1:KB:504:ARG:HA   | 1:KB:504:ARG:NE   | 2.30                     | 0.46              |
| 1:L:92:LEU:N      | 1:L:92:LEU:HD12   | 2.31                     | 0.46              |
| 1:LB:543:TYR:CE2  | 1:LB:575:ILE:HG21 | 2.51                     | 0.46              |
| 1:M:281:TYR:CG    | 1:M:366:VAL:HG23  | 2.50                     | 0.46              |
| 1:MB:398:VAL:HG12 | 1:MB:491:PRO:HB3  | 1.97                     | 0.46              |
| 1:OA:144:LEU:HD12 | 1:OA:163:ILE:HD11 | 1.97                     | 0.46              |
| 1:OB:281:TYR:CG   | 1:OB:366:VAL:HG23 | 2.51                     | 0.46              |
| 1:P:168:ILE:HG21  | 1:P:174:LEU:HB2   | 1.97                     | 0.46              |
| 1:QA:788:ALA:O    | 1:QA:792:VAL:HG23 | 2.15                     | 0.46              |
| 1:RB:804:PRO:O    | 1:RB:807:ILE:HG22 | 2.15                     | 0.46              |
| 1:TB:538:GLN:HB2  | 1:TB:646:VAL:HG22 | 1.97                     | 0.46              |
| 1:TB:788:ALA:O    | 1:TB:792:VAL:HG23 | 2.16                     | 0.46              |
| 1:UA:7:ILE:O      | 1:UA:8:ILE:C      | 2.59                     | 0.46              |
| 1:YA:539:LEU:HD11 | 1:YA:640:VAL:HG13 | 1.97                     | 0.46              |
| 1:Z:7:ILE:O       | 1:Z:8:ILE:C       | 2.59                     | 0.46              |
| 1:AA:504:ARG:HA   | 1:AA:504:ARG:NE   | 2.30                     | 0.46              |
| 1:AA:758:GLU:O    | 1:AA:762:VAL:HG22 | 2.16                     | 0.46              |
| 1:C:168:ILE:HG21  | 1:C:174:LEU:HB2   | 1.97                     | 0.46              |
| 1:C:334:LEU:HD12  | 1:C:357:TRP:NE1   | 2.30                     | 0.46              |
| 1:C:543:TYR:CE2   | 1:C:575:ILE:HG21  | 2.51                     | 0.46              |
| 1:CA:168:ILE:HG21 | 1:CA:174:LEU:HB2  | 1.97                     | 0.46              |
| 1:CA:543:TYR:CE2  | 1:CA:575:ILE:HG21 | 2.51                     | 0.46              |
| 1:D:52:THR:O      | 1:D:109:ILE:HD11  | 2.15                     | 0.46              |
| 1:E:504:ARG:NE    | 1:E:504:ARG:HA    | 2.30                     | 0.46              |
| 1:E:523:PHE:CD2   | 1:E:568:VAL:HG23  | 2.50                     | 0.46              |
| 1:EA:543:TYR:CE2  | 1:EA:575:ILE:HG21 | 2.51                     | 0.46              |
| 1:G:92:LEU:HD12   | 1:G:92:LEU:N      | 2.30                     | 0.46              |
| 1:G:504:ARG:NE    | 1:G:504:ARG:HA    | 2.30                     | 0.46              |
| 1:GA:543:TYR:CE2  | 1:GA:575:ILE:HG21 | 2.51                     | 0.46              |
| 1:HB:9:ARG:HH12   | 1:IB:19:LEU:HD11  | 1.81                     | 0.46              |
| 1:IA:504:ARG:HA   | 1:IA:504:ARG:NE   | 2.30                     | 0.46              |
| 1:IB:281:TYR:CG   | 1:IB:366:VAL:HG23 | 2.51                     | 0.46              |
| 1:J:281:TYR:CG    | 1:J:366:VAL:HG23  | 2.51                     | 0.46              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:J:504:ARG:NE    | 1:J:504:ARG:HA    | 2.30                     | 0.46              |
| 1:JB:543:TYR:CE2  | 1:JB:575:ILE:HG21 | 2.51                     | 0.46              |
| 1:KA:345:ASP:OD2  | 1:KA:349:VAL:HG13 | 2.15                     | 0.46              |
| 1:P:281:TYR:CG    | 1:P:366:VAL:HG23  | 2.50                     | 0.46              |
| 1:PA:57:HIS:O     | 1:PA:58:TYR:HD1   | 1.99                     | 0.46              |
| 1:Q:30:VAL:CG2    | 1:Q:50:MET:HE3    | 2.44                     | 0.46              |
| 1:RA:398:VAL:HG12 | 1:RA:491:PRO:HB3  | 1.96                     | 0.46              |
| 1:S:63:ASN:OD1    | 1:S:104:VAL:HG12  | 2.16                     | 0.46              |
| 1:S:168:ILE:HG21  | 1:S:174:LEU:HB2   | 1.97                     | 0.46              |
| 1:T:366:VAL:O     | 1:T:366:VAL:HG13  | 2.16                     | 0.46              |
| 1:TB:334:LEU:HD12 | 1:TB:357:TRP:NE1  | 2.31                     | 0.46              |
| 1:TB:497:VAL:HG13 | 1:TB:497:VAL:O    | 2.16                     | 0.46              |
| 1:TB:504:ARG:NE   | 1:TB:504:ARG:HA   | 2.31                     | 0.46              |
| 1:UA:56:ARG:HE    | 1:VA:127:LEU:HD21 | 1.79                     | 0.46              |
| 1:VA:44:LEU:HD22  | 1:VA:44:LEU:N     | 2.31                     | 0.46              |
| 1:VA:281:TYR:CG   | 1:VA:366:VAL:HG23 | 2.51                     | 0.46              |
| 1:VB:504:ARG:NE   | 1:VB:504:ARG:HA   | 2.30                     | 0.46              |
| 1:WA:168:ILE:HG21 | 1:WA:174:LEU:HB2  | 1.98                     | 0.46              |
| 1:XA:398:VAL:HG12 | 1:XA:491:PRO:HB3  | 1.96                     | 0.46              |
| 1:ZA:788:ALA:O    | 1:ZA:792:VAL:HG23 | 2.15                     | 0.46              |
| 1:A:497:VAL:O     | 1:A:497:VAL:HG13  | 2.15                     | 0.46              |
| 1:AB:345:ASP:OD2  | 1:AB:349:VAL:HG13 | 2.16                     | 0.46              |
| 1:B:788:ALA:O     | 1:B:792:VAL:HG23  | 2.16                     | 0.46              |
| 1:BA:219:VAL:HG11 | 1:BA:227:LEU:HD22 | 1.98                     | 0.46              |
| 1:BB:398:VAL:HG12 | 1:BB:491:PRO:HB3  | 1.98                     | 0.46              |
| 1:CA:7:ILE:O      | 1:CA:8:ILE:C      | 2.59                     | 0.46              |
| 1:CA:65:VAL:HG23  | 1:CA:67:ARG:HG3   | 1.96                     | 0.46              |
| 1:D:758:GLU:O     | 1:D:762:VAL:HG22  | 2.16                     | 0.46              |
| 1:DA:281:TYR:CG   | 1:DA:366:VAL:HG23 | 2.51                     | 0.46              |
| 1:EB:366:VAL:HG13 | 1:EB:366:VAL:O    | 2.16                     | 0.46              |
| 1:FA:281:TYR:CG   | 1:FA:366:VAL:HG23 | 2.51                     | 0.46              |
| 1:JA:7:ILE:O      | 1:JA:8:ILE:C      | 2.59                     | 0.46              |
| 1:JB:92:LEU:HD12  | 1:JB:92:LEU:N     | 2.30                     | 0.46              |
| 1:L:30:VAL:CG2    | 1:L:50:MET:HE3    | 2.44                     | 0.46              |
| 1:LA:504:ARG:HA   | 1:LA:504:ARG:NE   | 2.30                     | 0.46              |
| 1:LA:575:ILE:HG23 | 1:LA:603:VAL:HG22 | 1.97                     | 0.46              |
| 1:M:788:ALA:O     | 1:M:792:VAL:HG23  | 2.15                     | 0.46              |
| 1:MA:168:ILE:HG21 | 1:MA:174:LEU:HB2  | 1.97                     | 0.46              |
| 1:N:788:ALA:O     | 1:N:792:VAL:HG23  | 2.16                     | 0.46              |
| 1:NA:487:VAL:HG13 | 1:NA:487:VAL:O    | 2.16                     | 0.46              |
| 1:OB:366:VAL:O    | 1:OB:366:VAL:HG13 | 2.16                     | 0.46              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:PA:17:HIS:HB3   | 1:PA:44:LEU:HD23  | 1.98                     | 0.46              |
| 1:Q:56:ARG:HE     | 1:R:127:LEU:HD21  | 1.80                     | 0.46              |
| 1:Q:334:LEU:HD12  | 1:Q:357:TRP:NE1   | 2.30                     | 0.46              |
| 1:Q:366:VAL:O     | 1:Q:366:VAL:HG13  | 2.16                     | 0.46              |
| 1:R:758:GLU:O     | 1:R:762:VAL:HG22  | 2.16                     | 0.46              |
| 1:RB:543:TYR:CE2  | 1:RB:575:ILE:HG21 | 2.51                     | 0.46              |
| 1:RB:788:ALA:O    | 1:RB:792:VAL:HG23 | 2.16                     | 0.46              |
| 1:SB:168:ILE:HG21 | 1:SB:174:LEU:HB2  | 1.97                     | 0.46              |
| 1:SB:788:ALA:O    | 1:SB:792:VAL:HG23 | 2.15                     | 0.46              |
| 1:TB:219:VAL:HG11 | 1:TB:227:LEU:HD13 | 1.97                     | 0.46              |
| 1:TB:543:TYR:CE2  | 1:TB:575:ILE:HG21 | 2.51                     | 0.46              |
| 1:UA:398:VAL:HG12 | 1:UA:491:PRO:HB3  | 1.97                     | 0.46              |
| 1:V:737:GLY:O     | 1:V:741:VAL:HG23  | 2.16                     | 0.46              |
| 1:WA:281:TYR:CG   | 1:WA:366:VAL:HG23 | 2.51                     | 0.46              |
| 1:XA:281:TYR:CG   | 1:XA:366:VAL:HG23 | 2.51                     | 0.46              |
| 1:XB:334:LEU:HD12 | 1:XB:357:TRP:NE1  | 2.30                     | 0.46              |
| 1:AA:543:TYR:CE2  | 1:AA:575:ILE:HG21 | 2.51                     | 0.46              |
| 1:AC:56:ARG:HE    | 1:OA:127:LEU:HD21 | 1.80                     | 0.46              |
| 1:AC:487:VAL:HG13 | 1:AC:487:VAL:O    | 2.16                     | 0.46              |
| 1:BA:543:TYR:CE2  | 1:BA:575:ILE:HG21 | 2.51                     | 0.46              |
| 1:BB:281:TYR:CG   | 1:BB:366:VAL:HG23 | 2.51                     | 0.46              |
| 1:BB:570:ASP:C    | 1:BB:570:ASP:OD1  | 2.59                     | 0.46              |
| 1:CB:53:VAL:HG12  | 1:CB:93:ALA:HA    | 1.98                     | 0.46              |
| 1:D:168:ILE:HG21  | 1:D:174:LEU:HB2   | 1.98                     | 0.46              |
| 1:FA:788:ALA:O    | 1:FA:792:VAL:HG23 | 2.16                     | 0.46              |
| 1:G:497:VAL:HG13  | 1:G:497:VAL:O     | 2.15                     | 0.46              |
| 1:GA:504:ARG:NE   | 1:GA:504:ARG:HA   | 2.30                     | 0.46              |
| 1:H:44:LEU:HD22   | 1:H:44:LEU:N      | 2.31                     | 0.46              |
| 1:HA:788:ALA:O    | 1:HA:792:VAL:HG23 | 2.15                     | 0.46              |
| 1:I:523:PHE:CD2   | 1:I:568:VAL:HG23  | 2.51                     | 0.46              |
| 1:I:543:TYR:CE2   | 1:I:575:ILE:HG21  | 2.50                     | 0.46              |
| 1:IB:758:GLU:O    | 1:IB:762:VAL:HG22 | 2.15                     | 0.46              |
| 1:JA:543:TYR:CE2  | 1:JA:575:ILE:HG21 | 2.51                     | 0.46              |
| 1:JB:7:ILE:O      | 1:JB:8:ILE:C      | 2.59                     | 0.46              |
| 1:K:17:HIS:HB3    | 1:K:44:LEU:HD23   | 1.97                     | 0.46              |
| 1:K:529:ILE:CD1   | 1:K:583:VAL:HG11  | 2.45                     | 0.46              |
| 1:K:539:LEU:HD11  | 1:K:640:VAL:HG13  | 1.98                     | 0.46              |
| 1:KA:219:VAL:HG11 | 1:KA:227:LEU:HD22 | 1.98                     | 0.46              |
| 1:LB:487:VAL:HG13 | 1:LB:487:VAL:O    | 2.16                     | 0.46              |
| 1:M:366:VAL:HG13  | 1:M:366:VAL:O     | 2.15                     | 0.46              |
| 1:NA:63:ASN:OD1   | 1:NA:104:VAL:HG12 | 2.15                     | 0.46              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:NB:543:TYR:CE2  | 1:NB:575:ILE:HG21 | 2.51                     | 0.46              |
| 1:OA:48:MET:HE2   | 1:OA:48:MET:HA    | 1.97                     | 0.46              |
| 1:PA:219:VAL:HG11 | 1:PA:227:LEU:HD22 | 1.98                     | 0.46              |
| 1:PB:398:VAL:HG12 | 1:PB:491:PRO:HB3  | 1.97                     | 0.46              |
| 1:Q:504:ARG:NE    | 1:Q:504:ARG:HA    | 2.31                     | 0.46              |
| 1:QA:7:ILE:O      | 1:QA:8:ILE:C      | 2.59                     | 0.46              |
| 1:S:7:ILE:O       | 1:S:8:ILE:C       | 2.59                     | 0.46              |
| 1:S:788:ALA:O     | 1:S:792:VAL:HG23  | 2.16                     | 0.46              |
| 1:TA:7:ILE:O      | 1:TA:8:ILE:C      | 2.59                     | 0.46              |
| 1:TB:92:LEU:HD12  | 1:TB:92:LEU:N     | 2.30                     | 0.46              |
| 1:UA:393:VAL:HG22 | 1:UA:411:ASP:C    | 2.41                     | 0.46              |
| 1:VB:219:VAL:HG11 | 1:VB:227:LEU:HD22 | 1.98                     | 0.46              |
| 1:WA:144:LEU:HD12 | 1:WA:163:ILE:HD11 | 1.97                     | 0.46              |
| 1:WA:788:ALA:O    | 1:WA:792:VAL:HG23 | 2.16                     | 0.46              |
| 1:YB:575:ILE:HG23 | 1:YB:603:VAL:HG22 | 1.98                     | 0.46              |
| 1:Z:543:TYR:CE2   | 1:Z:575:ILE:HG21  | 2.51                     | 0.46              |
| 1:A:144:LEU:HD12  | 1:A:163:ILE:HD11  | 1.97                     | 0.45              |
| 1:B:281:TYR:CG    | 1:B:366:VAL:HG23  | 2.52                     | 0.45              |
| 1:B:398:VAL:HG12  | 1:B:491:PRO:HB3   | 1.98                     | 0.45              |
| 1:DA:56:ARG:HE    | 1:EA:127:LEU:HD21 | 1.80                     | 0.45              |
| 1:DA:168:ILE:HG21 | 1:DA:174:LEU:HB2  | 1.98                     | 0.45              |
| 1:DA:504:ARG:NE   | 1:DA:504:ARG:HA   | 2.31                     | 0.45              |
| 1:EB:504:ARG:HA   | 1:EB:504:ARG:NE   | 2.31                     | 0.45              |
| 1:FB:543:TYR:CE2  | 1:FB:575:ILE:HG21 | 2.51                     | 0.45              |
| 1:I:281:TYR:CG    | 1:I:366:VAL:HG23  | 2.51                     | 0.45              |
| 1:I:504:ARG:NE    | 1:I:504:ARG:HA    | 2.31                     | 0.45              |
| 1:I:788:ALA:O     | 1:I:792:VAL:HG23  | 2.16                     | 0.45              |
| 1:IA:30:VAL:CG2   | 1:IA:50:MET:HE3   | 2.45                     | 0.45              |
| 1:IB:504:ARG:NE   | 1:IB:504:ARG:HA   | 2.31                     | 0.45              |
| 1:JB:504:ARG:NE   | 1:JB:504:ARG:HA   | 2.31                     | 0.45              |
| 1:K:504:ARG:HA    | 1:K:504:ARG:NE    | 2.30                     | 0.45              |
| 1:M:92:LEU:HD12   | 1:M:92:LEU:N      | 2.30                     | 0.45              |
| 1:NB:219:VAL:HG11 | 1:NB:227:LEU:HD22 | 1.98                     | 0.45              |
| 1:NB:523:PHE:CE2  | 1:NB:545:TRP:CD1  | 3.05                     | 0.45              |
| 1:OA:56:ARG:HE    | 1:PA:127:LEU:HD21 | 1.81                     | 0.45              |
| 1:PB:168:ILE:HG22 | 1:PB:215:LEU:CD2  | 2.43                     | 0.45              |
| 1:QA:168:ILE:HG21 | 1:QA:174:LEU:HB2  | 1.98                     | 0.45              |
| 1:QB:281:TYR:CG   | 1:QB:366:VAL:HG23 | 2.51                     | 0.45              |
| 1:QB:398:VAL:HG12 | 1:QB:491:PRO:HB3  | 1.97                     | 0.45              |
| 1:S:92:LEU:HD12   | 1:S:92:LEU:N      | 2.30                     | 0.45              |
| 1:T:281:TYR:CG    | 1:T:366:VAL:HG23  | 2.51                     | 0.45              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:UA:281:TYR:CG   | 1:UA:366:VAL:HG23 | 2.51                     | 0.45              |
| 1:V:758:GLU:O     | 1:V:762:VAL:HG22  | 2.16                     | 0.45              |
| 1:VA:56:ARG:HE    | 1:WA:127:LEU:HD21 | 1.80                     | 0.45              |
| 1:W:92:LEU:HD12   | 1:W:92:LEU:N      | 2.30                     | 0.45              |
| 1:XA:63:ASN:OD1   | 1:XA:104:VAL:HG12 | 2.15                     | 0.45              |
| 1:YB:168:ILE:HG21 | 1:YB:174:LEU:HB2  | 1.97                     | 0.45              |
| 1:YB:219:VAL:HG11 | 1:YB:227:LEU:HD22 | 1.98                     | 0.45              |
| 1:Z:13:TYR:HA     | 1:Z:50:MET:HE3    | 1.97                     | 0.45              |
| 1:Z:504:ARG:NE    | 1:Z:504:ARG:HA    | 2.31                     | 0.45              |
| 1:AA:398:VAL:HG12 | 1:AA:491:PRO:HB3  | 1.98                     | 0.45              |
| 1:AB:127:LEU:HD21 | 1:ZA:56:ARG:HE    | 1.80                     | 0.45              |
| 1:AB:504:ARG:NE   | 1:AB:504:ARG:HA   | 2.30                     | 0.45              |
| 1:AC:779:LEU:HD21 | 1:OA:774:ARG:HG2  | 1.98                     | 0.45              |
| 1:C:504:ARG:HA    | 1:C:504:ARG:NE    | 2.31                     | 0.45              |
| 1:DA:144:LEU:HD12 | 1:DA:163:ILE:HD11 | 1.97                     | 0.45              |
| 1:EA:788:ALA:O    | 1:EA:792:VAL:HG23 | 2.17                     | 0.45              |
| 1:FB:7:ILE:O      | 1:FB:8:ILE:C      | 2.59                     | 0.45              |
| 1:FB:168:ILE:HG21 | 1:FB:174:LEU:HB2  | 1.97                     | 0.45              |
| 1:GB:7:ILE:O      | 1:GB:8:ILE:C      | 2.60                     | 0.45              |
| 1:H:281:TYR:CG    | 1:H:366:VAL:HG23  | 2.51                     | 0.45              |
| 1:IA:398:VAL:HG12 | 1:IA:491:PRO:HB3  | 1.97                     | 0.45              |
| 1:KB:17:HIS:HB3   | 1:KB:44:LEU:HD23  | 1.98                     | 0.45              |
| 1:KB:765:VAL:HG22 | 1:LB:759:LEU:HD21 | 1.97                     | 0.45              |
| 1:L:398:VAL:HG12  | 1:L:491:PRO:HB3   | 1.97                     | 0.45              |
| 1:LA:7:ILE:O      | 1:LA:8:ILE:C      | 2.60                     | 0.45              |
| 1:LA:219:VAL:HG11 | 1:LA:227:LEU:HD22 | 1.98                     | 0.45              |
| 1:MB:281:TYR:CG   | 1:MB:366:VAL:HG23 | 2.51                     | 0.45              |
| 1:NA:7:ILE:O      | 1:NA:8:ILE:C      | 2.59                     | 0.45              |
| 1:O:219:VAL:HG11  | 1:O:227:LEU:HD13  | 1.98                     | 0.45              |
| 1:O:529:ILE:HD12  | 1:O:583:VAL:HG11  | 1.98                     | 0.45              |
| 1:OA:334:LEU:HD12 | 1:OA:357:TRP:NE1  | 2.31                     | 0.45              |
| 1:OA:504:ARG:NE   | 1:OA:504:ARG:HA   | 2.31                     | 0.45              |
| 1:OB:538:GLN:HB2  | 1:OB:646:VAL:HG22 | 1.98                     | 0.45              |
| 1:P:529:ILE:CD1   | 1:P:583:VAL:HG11  | 2.46                     | 0.45              |
| 1:R:281:TYR:CG    | 1:R:366:VAL:HG23  | 2.50                     | 0.45              |
| 1:T:334:LEU:HD12  | 1:T:357:TRP:NE1   | 2.31                     | 0.45              |
| 1:TB:398:VAL:HG12 | 1:TB:491:PRO:HB3  | 1.97                     | 0.45              |
| 1:V:30:VAL:HG21   | 1:V:50:MET:HE3    | 1.99                     | 0.45              |
| 1:V:144:LEU:HD12  | 1:V:163:ILE:HD11  | 1.97                     | 0.45              |
| 1:VA:758:GLU:O    | 1:VA:762:VAL:HG22 | 2.16                     | 0.45              |
| 1:W:539:LEU:HD11  | 1:W:640:VAL:HG13  | 1.96                     | 0.45              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:W:788:ALA:O     | 1:W:792:VAL:HG23  | 2.16                     | 0.45              |
| 1:WA:7:ILE:O      | 1:WA:8:ILE:C      | 2.59                     | 0.45              |
| 1:X:398:VAL:HG12  | 1:X:491:PRO:HB3   | 1.97                     | 0.45              |
| 1:XB:219:VAL:HG11 | 1:XB:227:LEU:HD22 | 1.98                     | 0.45              |
| 1:XB:366:VAL:HG13 | 1:XB:366:VAL:O    | 2.17                     | 0.45              |
| 1:YB:57:HIS:O     | 1:YB:58:TYR:HD1   | 2.00                     | 0.45              |
| 1:AA:7:ILE:O      | 1:AA:8:ILE:C      | 2.59                     | 0.45              |
| 1:AA:168:ILE:HG21 | 1:AA:174:LEU:HB2  | 1.98                     | 0.45              |
| 1:AC:281:TYR:CG   | 1:AC:366:VAL:HG23 | 2.51                     | 0.45              |
| 1:BB:52:THR:O     | 1:BB:109:ILE:HD11 | 2.16                     | 0.45              |
| 1:BB:366:VAL:HG13 | 1:BB:366:VAL:O    | 2.16                     | 0.45              |
| 1:CB:7:ILE:O      | 1:CB:8:ILE:C      | 2.60                     | 0.45              |
| 1:D:788:ALA:O     | 1:D:792:VAL:HG23  | 2.16                     | 0.45              |
| 1:DA:7:ILE:O      | 1:DA:8:ILE:C      | 2.59                     | 0.45              |
| 1:EA:13:TYR:HA    | 1:EA:50:MET:CE    | 2.46                     | 0.45              |
| 1:EB:219:VAL:HG11 | 1:EB:227:LEU:HD22 | 1.98                     | 0.45              |
| 1:FA:17:HIS:CB    | 1:FA:44:LEU:HD23  | 2.47                     | 0.45              |
| 1:FB:504:ARG:NE   | 1:FB:504:ARG:HA   | 2.30                     | 0.45              |
| 1:GA:583:VAL:O    | 1:GA:583:VAL:HG22 | 2.16                     | 0.45              |
| 1:HA:504:ARG:NE   | 1:HA:504:ARG:HA   | 2.31                     | 0.45              |
| 1:HB:398:VAL:HG12 | 1:HB:491:PRO:HB3  | 1.97                     | 0.45              |
| 1:HB:504:ARG:HA   | 1:HB:504:ARG:NE   | 2.30                     | 0.45              |
| 1:I:144:LEU:HD12  | 1:I:163:ILE:HD11  | 1.97                     | 0.45              |
| 1:IB:737:GLY:O    | 1:IB:741:VAL:HG23 | 2.16                     | 0.45              |
| 1:K:543:TYR:CE2   | 1:K:575:ILE:HG21  | 2.51                     | 0.45              |
| 1:MA:529:ILE:HD12 | 1:MA:583:VAL:HG11 | 1.97                     | 0.45              |
| 1:NA:529:ILE:CD1  | 1:NA:583:VAL:HG11 | 2.45                     | 0.45              |
| 1:P:504:ARG:NE    | 1:P:504:ARG:HA    | 2.31                     | 0.45              |
| 1:QA:487:VAL:O    | 1:QA:487:VAL:HG13 | 2.17                     | 0.45              |
| 1:RA:7:ILE:O      | 1:RA:8:ILE:C      | 2.59                     | 0.45              |
| 1:WA:504:ARG:NE   | 1:WA:504:ARG:HA   | 2.30                     | 0.45              |
| 1:XA:504:ARG:NE   | 1:XA:504:ARG:HA   | 2.31                     | 0.45              |
| 1:XB:168:ILE:HG21 | 1:XB:174:LEU:HB2  | 1.98                     | 0.45              |
| 1:XB:543:TYR:CE2  | 1:XB:575:ILE:HG21 | 2.50                     | 0.45              |
| 1:A:7:ILE:O       | 1:A:8:ILE:C       | 2.60                     | 0.45              |
| 1:A:281:TYR:CG    | 1:A:366:VAL:HG23  | 2.51                     | 0.45              |
| 1:A:543:TYR:CE2   | 1:A:575:ILE:HG21  | 2.52                     | 0.45              |
| 1:AC:7:ILE:O      | 1:AC:8:ILE:C      | 2.59                     | 0.45              |
| 1:CB:281:TYR:CG   | 1:CB:366:VAL:HG23 | 2.52                     | 0.45              |
| 1:CB:543:TYR:CE2  | 1:CB:575:ILE:HG21 | 2.52                     | 0.45              |
| 1:DB:758:GLU:O    | 1:DB:762:VAL:HG22 | 2.16                     | 0.45              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:EA:7:ILE:O      | 1:EA:8:ILE:C      | 2.59                     | 0.45              |
| 1:EB:788:ALA:O    | 1:EB:792:VAL:HG23 | 2.17                     | 0.45              |
| 1:G:281:TYR:CG    | 1:G:366:VAL:HG23  | 2.51                     | 0.45              |
| 1:GA:7:ILE:O      | 1:GA:8:ILE:C      | 2.59                     | 0.45              |
| 1:GA:334:LEU:HD12 | 1:GA:357:TRP:NE1  | 2.32                     | 0.45              |
| 1:HA:7:ILE:O      | 1:HA:8:ILE:C      | 2.59                     | 0.45              |
| 1:HB:788:ALA:O    | 1:HB:792:VAL:HG23 | 2.16                     | 0.45              |
| 1:IB:7:ILE:O      | 1:IB:8:ILE:C      | 2.59                     | 0.45              |
| 1:J:17:HIS:HB3    | 1:J:44:LEU:HD23   | 1.97                     | 0.45              |
| 1:J:63:ASN:OD1    | 1:J:104:VAL:HG12  | 2.16                     | 0.45              |
| 1:JB:788:ALA:O    | 1:JB:792:VAL:HG23 | 2.16                     | 0.45              |
| 1:LB:17:HIS:HB3   | 1:LB:44:LEU:HD23  | 1.98                     | 0.45              |
| 1:MA:7:ILE:O      | 1:MA:8:ILE:C      | 2.59                     | 0.45              |
| 1:MA:52:THR:O     | 1:MA:109:ILE:HD11 | 2.16                     | 0.45              |
| 1:NA:539:LEU:HD21 | 1:NA:599:ILE:HD11 | 1.98                     | 0.45              |
| 1:O:56:ARG:HE     | 1:P:127:LEU:HD21  | 1.80                     | 0.45              |
| 1:P:758:GLU:O     | 1:P:762:VAL:HG22  | 2.16                     | 0.45              |
| 1:PA:543:TYR:CE2  | 1:PA:575:ILE:HG21 | 2.51                     | 0.45              |
| 1:QB:504:ARG:NE   | 1:QB:504:ARG:HA   | 2.31                     | 0.45              |
| 1:QB:543:TYR:CE2  | 1:QB:575:ILE:HG21 | 2.51                     | 0.45              |
| 1:SB:334:LEU:HD12 | 1:SB:357:TRP:NE1  | 2.32                     | 0.45              |
| 1:SB:366:VAL:HG13 | 1:SB:366:VAL:O    | 2.17                     | 0.45              |
| 1:UA:92:LEU:HD12  | 1:UA:92:LEU:N     | 2.31                     | 0.45              |
| 1:UB:487:VAL:HG13 | 1:UB:487:VAL:O    | 2.16                     | 0.45              |
| 1:WB:7:ILE:O      | 1:WB:8:ILE:C      | 2.59                     | 0.45              |
| 1:XB:17:HIS:HB3   | 1:XB:44:LEU:HD23  | 1.97                     | 0.45              |
| 1:XB:497:VAL:O    | 1:XB:497:VAL:HG13 | 2.16                     | 0.45              |
| 1:Y:7:ILE:O       | 1:Y:8:ILE:C       | 2.59                     | 0.45              |
| 1:Y:487:VAL:O     | 1:Y:487:VAL:HG13  | 2.16                     | 0.45              |
| 1:ZA:7:ILE:O      | 1:ZA:8:ILE:C      | 2.60                     | 0.45              |
| 1:ZA:529:ILE:HD12 | 1:ZA:583:VAL:HG11 | 1.97                     | 0.45              |
| 1:ZB:92:LEU:HD12  | 1:ZB:92:LEU:N     | 2.30                     | 0.45              |
| 1:A:398:VAL:HG12  | 1:A:491:PRO:HB3   | 1.97                     | 0.45              |
| 1:A:504:ARG:NE    | 1:A:504:ARG:HA    | 2.31                     | 0.45              |
| 1:BB:56:ARG:HE    | 1:CB:127:LEU:HD21 | 1.81                     | 0.45              |
| 1:CA:398:VAL:HG12 | 1:CA:491:PRO:HB3  | 1.96                     | 0.45              |
| 1:CB:219:VAL:HG11 | 1:CB:227:LEU:HD13 | 1.99                     | 0.45              |
| 1:CB:497:VAL:O    | 1:CB:497:VAL:HG13 | 2.15                     | 0.45              |
| 1:FA:504:ARG:HA   | 1:FA:504:ARG:NE   | 2.31                     | 0.45              |
| 1:G:543:TYR:CE2   | 1:G:575:ILE:HG21  | 2.52                     | 0.45              |
| 1:GB:788:ALA:O    | 1:GB:792:VAL:HG23 | 2.16                     | 0.45              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:HB:7:ILE:O      | 1:HB:8:ILE:C      | 2.59                     | 0.45              |
| 1:K:56:ARG:HE     | 1:L:127:LEU:HD21  | 1.82                     | 0.45              |
| 1:KA:7:ILE:O      | 1:KA:8:ILE:C      | 2.59                     | 0.45              |
| 1:KA:168:ILE:HG21 | 1:KA:174:LEU:HB2  | 1.98                     | 0.45              |
| 1:KA:487:VAL:HG13 | 1:KA:487:VAL:O    | 2.17                     | 0.45              |
| 1:L:334:LEU:HD12  | 1:L:357:TRP:NE1   | 2.32                     | 0.45              |
| 1:L:504:ARG:NE    | 1:L:504:ARG:HA    | 2.30                     | 0.45              |
| 1:NA:17:HIS:HB3   | 1:NA:44:LEU:HD23  | 1.98                     | 0.45              |
| 1:NA:758:GLU:O    | 1:NA:762:VAL:HG22 | 2.16                     | 0.45              |
| 1:O:539:LEU:HD21  | 1:O:541:LEU:HD21  | 1.97                     | 0.45              |
| 1:Q:788:ALA:O     | 1:Q:792:VAL:HG23  | 2.17                     | 0.45              |
| 1:QA:539:LEU:HD21 | 1:QA:599:ILE:HD11 | 1.99                     | 0.45              |
| 1:RA:219:VAL:HG11 | 1:RA:227:LEU:HD22 | 1.98                     | 0.45              |
| 1:SA:47:PRO:O     | 1:SA:48:MET:HE2   | 2.17                     | 0.45              |
| 1:V:281:TYR:CG    | 1:V:366:VAL:HG23  | 2.51                     | 0.45              |
| 1:VA:30:VAL:HG21  | 1:VA:50:MET:HE3   | 1.99                     | 0.45              |
| 1:VA:489:LEU:HD21 | 1:VA:495:PHE:CZ   | 2.52                     | 0.45              |
| 1:VB:398:VAL:HG12 | 1:VB:491:PRO:HB3  | 1.97                     | 0.45              |
| 1:W:7:ILE:O       | 1:W:8:ILE:C       | 2.60                     | 0.45              |
| 1:XA:7:ILE:O      | 1:XA:8:ILE:C      | 2.60                     | 0.45              |
| 1:XA:788:ALA:O    | 1:XA:792:VAL:HG23 | 2.16                     | 0.45              |
| 1:XB:281:TYR:CG   | 1:XB:366:VAL:HG23 | 2.51                     | 0.45              |
| 1:YA:529:ILE:CD1  | 1:YA:583:VAL:HG11 | 2.45                     | 0.45              |
| 1:AC:168:ILE:HG21 | 1:AC:174:LEU:HB2  | 1.98                     | 0.45              |
| 1:C:758:GLU:O     | 1:C:762:VAL:HG22  | 2.17                     | 0.45              |
| 1:CB:504:ARG:HA   | 1:CB:504:ARG:NE   | 2.31                     | 0.45              |
| 1:DB:504:ARG:NE   | 1:DB:504:ARG:HA   | 2.31                     | 0.45              |
| 1:F:543:TYR:CE2   | 1:F:575:ILE:HG21  | 2.52                     | 0.45              |
| 1:F:804:PRO:O     | 1:F:807:ILE:HG22  | 2.15                     | 0.45              |
| 1:H:489:LEU:HD21  | 1:H:495:PHE:CZ    | 2.52                     | 0.45              |
| 1:HA:281:TYR:CG   | 1:HA:366:VAL:HG23 | 2.51                     | 0.45              |
| 1:HB:56:ARG:HE    | 1:IB:127:LEU:HD21 | 1.82                     | 0.45              |
| 1:I:758:GLU:O     | 1:I:762:VAL:HG22  | 2.16                     | 0.45              |
| 1:IB:398:VAL:HG12 | 1:IB:491:PRO:HB3  | 1.98                     | 0.45              |
| 1:JA:17:HIS:HB3   | 1:JA:44:LEU:HD23  | 1.99                     | 0.45              |
| 1:JB:398:VAL:HG12 | 1:JB:491:PRO:HB3  | 1.98                     | 0.45              |
| 1:KA:25:VAL:HG21  | 1:KA:78:THR:O     | 2.16                     | 0.45              |
| 1:KB:386:GLU:O    | 1:KB:402:ILE:HG23 | 2.16                     | 0.45              |
| 1:MB:7:ILE:O      | 1:MB:8:ILE:C      | 2.59                     | 0.45              |
| 1:NB:398:VAL:HG12 | 1:NB:491:PRO:HB3  | 1.98                     | 0.45              |
| 1:O:398:VAL:HG12  | 1:O:491:PRO:HB3   | 1.98                     | 0.45              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:OB:504:ARG:NE   | 1:OB:504:ARG:HA   | 2.31                     | 0.45              |
| 1:PA:53:VAL:HG21  | 1:PA:59:CYS:HB2   | 1.99                     | 0.45              |
| 1:PA:281:TYR:CG   | 1:PA:366:VAL:HG23 | 2.51                     | 0.45              |
| 1:QB:7:ILE:O      | 1:QB:8:ILE:C      | 2.59                     | 0.45              |
| 1:SB:504:ARG:HA   | 1:SB:504:ARG:NE   | 2.31                     | 0.45              |
| 1:T:543:TYR:CE2   | 1:T:575:ILE:HG21  | 2.51                     | 0.45              |
| 1:X:17:HIS:CB     | 1:X:44:LEU:HD23   | 2.47                     | 0.45              |
| 1:X:575:ILE:HG23  | 1:X:603:VAL:HG22  | 1.98                     | 0.45              |
| 1:XB:7:ILE:O      | 1:XB:8:ILE:C      | 2.59                     | 0.45              |
| 1:YA:7:ILE:O      | 1:YA:8:ILE:C      | 2.59                     | 0.45              |
| 1:Z:92:LEU:HD12   | 1:Z:92:LEU:N      | 2.31                     | 0.45              |
| 1:ZA:168:ILE:HG21 | 1:ZA:174:LEU:HB2  | 1.99                     | 0.45              |
| 1:ZB:168:ILE:HG21 | 1:ZB:174:LEU:HB2  | 1.98                     | 0.45              |
| 1:AA:575:ILE:HG23 | 1:AA:603:VAL:HG22 | 1.98                     | 0.45              |
| 1:BA:366:VAL:O    | 1:BA:366:VAL:HG13 | 2.16                     | 0.45              |
| 1:D:7:ILE:O       | 1:D:8:ILE:C       | 2.60                     | 0.45              |
| 1:DA:643:VAL:O    | 1:DA:643:VAL:HG12 | 2.17                     | 0.45              |
| 1:DB:583:VAL:O    | 1:DB:583:VAL:HG22 | 2.16                     | 0.45              |
| 1:EA:504:ARG:NE   | 1:EA:504:ARG:HA   | 2.31                     | 0.45              |
| 1:G:393:VAL:HG22  | 1:G:411:ASP:C     | 2.42                     | 0.45              |
| 1:KA:529:ILE:HD12 | 1:KA:583:VAL:HG11 | 1.98                     | 0.45              |
| 1:KB:543:TYR:CE2  | 1:KB:575:ILE:HG21 | 2.52                     | 0.45              |
| 1:KB:758:GLU:O    | 1:KB:762:VAL:HG22 | 2.17                     | 0.45              |
| 1:N:281:TYR:CG    | 1:N:366:VAL:HG23  | 2.51                     | 0.45              |
| 1:OA:497:VAL:O    | 1:OA:497:VAL:HG13 | 2.15                     | 0.45              |
| 1:P:583:VAL:HG22  | 1:P:583:VAL:O     | 2.16                     | 0.45              |
| 1:Q:281:TYR:CG    | 1:Q:366:VAL:HG23  | 2.51                     | 0.45              |
| 1:R:168:ILE:HG21  | 1:R:174:LEU:HB2   | 1.98                     | 0.45              |
| 1:S:366:VAL:HG13  | 1:S:366:VAL:O     | 2.17                     | 0.45              |
| 1:TA:219:VAL:HG11 | 1:TA:227:LEU:HD22 | 1.99                     | 0.45              |
| 1:TB:281:TYR:CG   | 1:TB:366:VAL:HG23 | 2.52                     | 0.45              |
| 1:W:543:TYR:CE2   | 1:W:575:ILE:HG21  | 2.51                     | 0.45              |
| 1:WB:504:ARG:NE   | 1:WB:504:ARG:HA   | 2.30                     | 0.45              |
| 1:Z:788:ALA:O     | 1:Z:792:VAL:HG23  | 2.17                     | 0.45              |
| 1:ZA:366:VAL:O    | 1:ZA:366:VAL:HG13 | 2.17                     | 0.45              |
| 1:AB:543:TYR:CE2  | 1:AB:575:ILE:HG21 | 2.52                     | 0.45              |
| 1:B:219:VAL:HG11  | 1:B:227:LEU:HD22  | 1.98                     | 0.45              |
| 1:DA:176:LEU:HD23 | 1:DA:176:LEU:H    | 1.82                     | 0.45              |
| 1:DA:543:TYR:CE2  | 1:DA:575:ILE:HG21 | 2.51                     | 0.45              |
| 1:E:7:ILE:O       | 1:E:8:ILE:C       | 2.60                     | 0.45              |
| 1:G:398:VAL:HG12  | 1:G:491:PRO:HB3   | 1.98                     | 0.45              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:GB:168:ILE:HG21 | 1:GB:174:LEU:HB2  | 1.98                     | 0.45              |
| 1:H:398:VAL:HG12  | 1:H:491:PRO:HB3   | 1.97                     | 0.45              |
| 1:HA:176:LEU:HD23 | 1:HA:176:LEU:H    | 1.82                     | 0.45              |
| 1:HB:30:VAL:HG21  | 1:HB:50:MET:HE3   | 1.99                     | 0.45              |
| 1:IB:121:LEU:HD23 | 1:IB:162:ILE:HG22 | 1.99                     | 0.45              |
| 1:K:366:VAL:HG13  | 1:K:366:VAL:O     | 2.17                     | 0.45              |
| 1:KB:575:ILE:HG23 | 1:KB:603:VAL:HG22 | 1.96                     | 0.45              |
| 1:LA:63:ASN:OD1   | 1:LA:104:VAL:HG12 | 2.16                     | 0.45              |
| 1:LA:168:ILE:HG21 | 1:LA:174:LEU:HB2  | 1.98                     | 0.45              |
| 1:LA:334:LEU:HD12 | 1:LA:357:TRP:NE1  | 2.32                     | 0.45              |
| 1:MB:366:VAL:HG13 | 1:MB:366:VAL:O    | 2.17                     | 0.45              |
| 1:MB:504:ARG:HA   | 1:MB:504:ARG:NE   | 2.31                     | 0.45              |
| 1:MB:788:ALA:O    | 1:MB:792:VAL:HG23 | 2.17                     | 0.45              |
| 1:OA:7:ILE:O      | 1:OA:8:ILE:C      | 2.59                     | 0.45              |
| 1:OA:758:GLU:O    | 1:OA:762:VAL:HG22 | 2.16                     | 0.45              |
| 1:R:539:LEU:HD12  | 1:R:540:GLN:H     | 1.80                     | 0.45              |
| 1:RB:758:GLU:O    | 1:RB:762:VAL:HG22 | 2.17                     | 0.45              |
| 1:UA:497:VAL:HG13 | 1:UA:497:VAL:O    | 2.15                     | 0.45              |
| 1:UB:7:ILE:O      | 1:UB:8:ILE:C      | 2.59                     | 0.45              |
| 1:V:504:ARG:HA    | 1:V:504:ARG:NE    | 2.31                     | 0.45              |
| 1:WA:758:GLU:O    | 1:WA:762:VAL:HG22 | 2.16                     | 0.45              |
| 1:WB:543:TYR:CE2  | 1:WB:575:ILE:HG21 | 2.51                     | 0.45              |
| 1:Z:219:VAL:HG11  | 1:Z:227:LEU:HD22  | 1.99                     | 0.45              |
| 1:AA:30:VAL:HG21  | 1:AA:50:MET:HE3   | 1.98                     | 0.45              |
| 1:AA:489:LEU:HD21 | 1:AA:495:PHE:CZ   | 2.52                     | 0.45              |
| 1:B:7:ILE:O       | 1:B:8:ILE:C       | 2.60                     | 0.45              |
| 1:B:176:LEU:HD23  | 1:B:176:LEU:H     | 1.82                     | 0.45              |
| 1:BA:7:ILE:O      | 1:BA:8:ILE:C      | 2.60                     | 0.45              |
| 1:BA:758:GLU:O    | 1:BA:762:VAL:HG22 | 2.16                     | 0.45              |
| 1:C:281:TYR:CG    | 1:C:366:VAL:HG23  | 2.52                     | 0.45              |
| 1:C:366:VAL:HG13  | 1:C:366:VAL:O     | 2.17                     | 0.45              |
| 1:D:302:VAL:HG11  | 1:D:306:LYS:HZ2   | 1.81                     | 0.45              |
| 1:DA:216:VAL:O    | 1:DA:216:VAL:HG13 | 2.17                     | 0.45              |
| 1:DB:487:VAL:O    | 1:DB:487:VAL:HG13 | 2.17                     | 0.45              |
| 1:E:281:TYR:CG    | 1:E:366:VAL:HG23  | 2.52                     | 0.45              |
| 1:FB:758:GLU:O    | 1:FB:762:VAL:HG22 | 2.17                     | 0.45              |
| 1:GB:52:THR:O     | 1:GB:109:ILE:HD11 | 2.16                     | 0.45              |
| 1:H:504:ARG:NE    | 1:H:504:ARG:HA    | 2.30                     | 0.45              |
| 1:HB:168:ILE:HG21 | 1:HB:174:LEU:HB2  | 1.98                     | 0.45              |
| 1:HB:176:LEU:HD23 | 1:HB:176:LEU:H    | 1.82                     | 0.45              |
| 1:IA:30:VAL:HG21  | 1:IA:50:MET:HE3   | 1.99                     | 0.45              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:IA:219:VAL:HG11 | 1:IA:227:LEU:HD22 | 1.98                     | 0.45              |
| 1:IB:56:ARG:HE    | 1:JB:127:LEU:CD2  | 2.30                     | 0.45              |
| 1:JA:504:ARG:NE   | 1:JA:504:ARG:HA   | 2.31                     | 0.45              |
| 1:JB:334:LEU:HD12 | 1:JB:357:TRP:NE1  | 2.31                     | 0.45              |
| 1:KB:497:VAL:O    | 1:KB:497:VAL:HG13 | 2.16                     | 0.45              |
| 1:L:281:TYR:CG    | 1:L:366:VAL:HG23  | 2.51                     | 0.45              |
| 1:O:7:ILE:O       | 1:O:8:ILE:C       | 2.60                     | 0.45              |
| 1:P:487:VAL:HG13  | 1:P:487:VAL:O     | 2.17                     | 0.45              |
| 1:RB:504:ARG:NE   | 1:RB:504:ARG:HA   | 2.31                     | 0.45              |
| 1:SB:17:HIS:HB3   | 1:SB:44:LEU:HD23  | 1.98                     | 0.45              |
| 1:SB:281:TYR:CG   | 1:SB:366:VAL:HG23 | 2.51                     | 0.45              |
| 1:T:7:ILE:O       | 1:T:8:ILE:C       | 2.59                     | 0.45              |
| 1:TB:7:ILE:O      | 1:TB:8:ILE:C      | 2.59                     | 0.45              |
| 1:Y:543:TYR:CE2   | 1:Y:575:ILE:HG21  | 2.51                     | 0.45              |
| 1:ZA:662:ILE:O    | 1:ZA:666:THR:HG23 | 2.17                     | 0.45              |
| 1:ZB:7:ILE:O      | 1:ZB:8:ILE:C      | 2.59                     | 0.45              |
| 1:AB:176:LEU:HD23 | 1:AB:176:LEU:H    | 1.82                     | 0.45              |
| 1:BA:788:ALA:O    | 1:BA:792:VAL:HG23 | 2.17                     | 0.45              |
| 1:BB:7:ILE:O      | 1:BB:8:ILE:C      | 2.60                     | 0.45              |
| 1:BB:543:TYR:CE2  | 1:BB:575:ILE:HG21 | 2.52                     | 0.45              |
| 1:CA:487:VAL:O    | 1:CA:487:VAL:HG13 | 2.17                     | 0.45              |
| 1:DA:788:ALA:O    | 1:DA:792:VAL:HG23 | 2.17                     | 0.45              |
| 1:DB:219:VAL:HG11 | 1:DB:227:LEU:HD22 | 1.99                     | 0.45              |
| 1:EB:176:LEU:HD23 | 1:EB:176:LEU:H    | 1.82                     | 0.45              |
| 1:FB:334:LEU:HD12 | 1:FB:357:TRP:NE1  | 2.32                     | 0.45              |
| 1:GB:17:HIS:HB3   | 1:GB:44:LEU:HD23  | 1.99                     | 0.45              |
| 1:H:52:THR:O      | 1:H:109:ILE:HD11  | 2.17                     | 0.45              |
| 1:I:7:ILE:O       | 1:I:8:ILE:C       | 2.59                     | 0.45              |
| 1:IB:176:LEU:HD23 | 1:IB:176:LEU:H    | 1.82                     | 0.45              |
| 1:IB:334:LEU:HD12 | 1:IB:357:TRP:NE1  | 2.32                     | 0.45              |
| 1:KB:334:LEU:HD12 | 1:KB:357:TRP:NE1  | 2.32                     | 0.45              |
| 1:L:17:HIS:HB3    | 1:L:44:LEU:HD23   | 1.97                     | 0.45              |
| 1:LB:7:ILE:O      | 1:LB:8:ILE:C      | 2.59                     | 0.45              |
| 1:N:219:VAL:HG11  | 1:N:227:LEU:HD22  | 1.99                     | 0.45              |
| 1:OA:398:VAL:HG12 | 1:OA:491:PRO:HB3  | 1.97                     | 0.45              |
| 1:P:17:HIS:HB3    | 1:P:44:LEU:HD23   | 1.99                     | 0.45              |
| 1:P:52:THR:O      | 1:P:109:ILE:HD11  | 2.17                     | 0.45              |
| 1:QA:366:VAL:HG13 | 1:QA:366:VAL:O    | 2.17                     | 0.45              |
| 1:R:7:ILE:O       | 1:R:8:ILE:C       | 2.59                     | 0.45              |
| 1:R:30:VAL:CG2    | 1:R:50:MET:HE3    | 2.46                     | 0.45              |
| 1:R:543:TYR:CE2   | 1:R:575:ILE:HG21  | 2.51                     | 0.45              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:SB:398:VAL:HG12 | 1:SB:491:PRO:HB3  | 1.98                     | 0.45              |
| 1:V:575:ILE:HG23  | 1:V:603:VAL:HG22  | 1.98                     | 0.45              |
| 1:W:219:VAL:HG11  | 1:W:227:LEU:HD22  | 1.99                     | 0.45              |
| 1:WB:281:TYR:CG   | 1:WB:366:VAL:HG23 | 2.52                     | 0.45              |
| 1:YB:334:LEU:HD12 | 1:YB:357:TRP:NE1  | 2.32                     | 0.45              |
| 1:Z:281:TYR:CG    | 1:Z:366:VAL:HG23  | 2.52                     | 0.45              |
| 1:ZA:219:VAL:HG11 | 1:ZA:227:LEU:HD22 | 1.99                     | 0.45              |
| 1:ZA:538:GLN:HB2  | 1:ZA:646:VAL:HG22 | 1.98                     | 0.45              |
| 1:ZB:543:TYR:CE2  | 1:ZB:575:ILE:HG21 | 2.52                     | 0.45              |
| 1:A:366:VAL:O     | 1:A:366:VAL:HG13  | 2.18                     | 0.44              |
| 1:AA:176:LEU:HD23 | 1:AA:176:LEU:H    | 1.82                     | 0.44              |
| 1:B:17:HIS:HB3    | 1:B:44:LEU:HD23   | 1.99                     | 0.44              |
| 1:CA:17:HIS:HB3   | 1:CA:44:LEU:HD23  | 1.99                     | 0.44              |
| 1:DA:334:LEU:HD12 | 1:DA:357:TRP:NE1  | 2.32                     | 0.44              |
| 1:DB:52:THR:O     | 1:DB:109:ILE:HD11 | 2.17                     | 0.44              |
| 1:EB:48:MET:HA    | 1:EB:48:MET:HE3   | 1.99                     | 0.44              |
| 1:G:366:VAL:O     | 1:G:366:VAL:HG13  | 2.17                     | 0.44              |
| 1:GA:497:VAL:O    | 1:GA:497:VAL:HG13 | 2.17                     | 0.44              |
| 1:H:56:ARG:HE     | 1:I:127:LEU:HD21  | 1.82                     | 0.44              |
| 1:IB:366:VAL:O    | 1:IB:366:VAL:HG13 | 2.16                     | 0.44              |
| 1:LA:281:TYR:CG   | 1:LA:366:VAL:HG23 | 2.52                     | 0.44              |
| 1:LB:176:LEU:HD23 | 1:LB:176:LEU:H    | 1.82                     | 0.44              |
| 1:MA:56:ARG:HE    | 1:NA:127:LEU:HD21 | 1.81                     | 0.44              |
| 1:NA:583:VAL:HG22 | 1:NA:583:VAL:O    | 2.17                     | 0.44              |
| 1:NB:7:ILE:O      | 1:NB:8:ILE:C      | 2.59                     | 0.44              |
| 1:NB:489:LEU:HD21 | 1:NB:495:PHE:CZ   | 2.52                     | 0.44              |
| 1:O:168:ILE:HG21  | 1:O:174:LEU:HB2   | 1.98                     | 0.44              |
| 1:PB:7:ILE:O      | 1:PB:8:ILE:C      | 2.59                     | 0.44              |
| 1:S:168:ILE:HG22  | 1:S:215:LEU:CD2   | 2.46                     | 0.44              |
| 1:SB:7:ILE:O      | 1:SB:8:ILE:C      | 2.59                     | 0.44              |
| 1:UA:168:ILE:HG21 | 1:UA:174:LEU:HB2  | 1.99                     | 0.44              |
| 1:UB:56:ARG:HE    | 1:VB:127:LEU:CD2  | 2.31                     | 0.44              |
| 1:V:398:VAL:HG12  | 1:V:491:PRO:HB3   | 1.98                     | 0.44              |
| 1:W:398:VAL:HG12  | 1:W:491:PRO:HB3   | 1.98                     | 0.44              |
| 1:WB:52:THR:O     | 1:WB:109:ILE:HD11 | 2.18                     | 0.44              |
| 1:XA:219:VAL:HG11 | 1:XA:227:LEU:HD22 | 1.99                     | 0.44              |
| 1:YA:56:ARG:HE    | 1:ZA:127:LEU:HD21 | 1.82                     | 0.44              |
| 1:YB:53:VAL:HG12  | 1:YB:93:ALA:HA    | 1.98                     | 0.44              |
| 1:ZA:52:THR:O     | 1:ZA:109:ILE:HD11 | 2.16                     | 0.44              |
| 1:ZA:334:LEU:HD12 | 1:ZA:357:TRP:NE1  | 2.32                     | 0.44              |
| 1:A:176:LEU:H     | 1:A:176:LEU:HD23  | 1.83                     | 0.44              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:774:ARG:HG2   | 1:NA:779:LEU:HD21 | 1.99                     | 0.44              |
| 1:AC:539:LEU:HD21 | 1:AC:599:ILE:HD11 | 1.99                     | 0.44              |
| 1:BA:53:VAL:HG12  | 1:BA:57:HIS:O     | 2.18                     | 0.44              |
| 1:CA:176:LEU:HD23 | 1:CA:176:LEU:H    | 1.82                     | 0.44              |
| 1:DA:208:VAL:HG23 | 1:DA:209:PHE:CD1  | 2.52                     | 0.44              |
| 1:DB:543:TYR:CE2  | 1:DB:575:ILE:HG21 | 2.53                     | 0.44              |
| 1:EA:17:HIS:HB3   | 1:EA:44:LEU:HD23  | 2.00                     | 0.44              |
| 1:EB:7:ILE:O      | 1:EB:8:ILE:C      | 2.59                     | 0.44              |
| 1:FA:57:HIS:O     | 1:FA:58:TYR:HD1   | 2.00                     | 0.44              |
| 1:FA:538:GLN:HB2  | 1:FA:646:VAL:HG22 | 1.97                     | 0.44              |
| 1:G:168:ILE:HG21  | 1:G:174:LEU:HB2   | 1.99                     | 0.44              |
| 1:G:523:PHE:CE2   | 1:G:545:TRP:CD1   | 3.05                     | 0.44              |
| 1:H:7:ILE:O       | 1:H:8:ILE:C       | 2.60                     | 0.44              |
| 1:IB:144:LEU:HD12 | 1:IB:163:ILE:HD11 | 1.98                     | 0.44              |
| 1:K:359:ILE:HG23  | 1:K:359:ILE:O     | 2.17                     | 0.44              |
| 1:KB:168:ILE:HG21 | 1:KB:174:LEU:HB2  | 1.99                     | 0.44              |
| 1:LA:30:VAL:HG21  | 1:LA:50:MET:HE3   | 2.00                     | 0.44              |
| 1:LA:176:LEU:HD23 | 1:LA:176:LEU:H    | 1.83                     | 0.44              |
| 1:LB:219:VAL:HG11 | 1:LB:227:LEU:HD13 | 1.99                     | 0.44              |
| 1:M:7:ILE:O       | 1:M:8:ILE:C       | 2.59                     | 0.44              |
| 1:NA:168:ILE:HG21 | 1:NA:174:LEU:HB2  | 1.98                     | 0.44              |
| 1:NA:334:LEU:HD12 | 1:NA:357:TRP:NE1  | 2.32                     | 0.44              |
| 1:NB:30:VAL:HG21  | 1:NB:50:MET:HE3   | 1.98                     | 0.44              |
| 1:PA:53:VAL:HG12  | 1:PA:93:ALA:HA    | 1.99                     | 0.44              |
| 1:Q:219:VAL:HG11  | 1:Q:227:LEU:HD22  | 1.98                     | 0.44              |
| 1:QA:543:TYR:CE2  | 1:QA:575:ILE:HG21 | 2.51                     | 0.44              |
| 1:R:219:VAL:HG11  | 1:R:227:LEU:HD13  | 2.00                     | 0.44              |
| 1:UA:543:TYR:CE2  | 1:UA:575:ILE:HG21 | 2.52                     | 0.44              |
| 1:V:7:ILE:O       | 1:V:8:ILE:C       | 2.60                     | 0.44              |
| 1:V:168:ILE:HG22  | 1:V:215:LEU:CD2   | 2.46                     | 0.44              |
| 1:V:208:VAL:HG23  | 1:V:209:PHE:CD1   | 2.52                     | 0.44              |
| 1:WA:176:LEU:HD23 | 1:WA:176:LEU:H    | 1.83                     | 0.44              |
| 1:WB:487:VAL:HG13 | 1:WB:487:VAL:O    | 2.17                     | 0.44              |
| 1:X:7:ILE:O       | 1:X:8:ILE:C       | 2.60                     | 0.44              |
| 1:X:121:LEU:HD23  | 1:X:162:ILE:HG22  | 1.99                     | 0.44              |
| 1:Y:52:THR:O      | 1:Y:109:ILE:HD11  | 2.16                     | 0.44              |
| 1:YB:281:TYR:CG   | 1:YB:366:VAL:HG23 | 2.52                     | 0.44              |
| 1:Z:366:VAL:O     | 1:Z:366:VAL:HG13  | 2.17                     | 0.44              |
| 1:ZB:63:ASN:OD1   | 1:ZB:104:VAL:HG12 | 2.17                     | 0.44              |
| 1:A:17:HIS:CB     | 1:A:44:LEU:HD23   | 2.47                     | 0.44              |
| 1:AA:523:PHE:CE2  | 1:AA:545:TRP:CD1  | 3.05                     | 0.44              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AC:774:ARG:HG2  | 1:ZB:779:LEU:HD21 | 2.00                     | 0.44              |
| 1:BB:487:VAL:HG13 | 1:BB:487:VAL:O    | 2.18                     | 0.44              |
| 1:CB:52:THR:O     | 1:CB:109:ILE:HD11 | 2.17                     | 0.44              |
| 1:D:543:TYR:CE2   | 1:D:575:ILE:HG21  | 2.52                     | 0.44              |
| 1:DA:758:GLU:O    | 1:DA:762:VAL:HG22 | 2.17                     | 0.44              |
| 1:DB:529:ILE:CD1  | 1:DB:583:VAL:HG11 | 2.46                     | 0.44              |
| 1:EA:168:ILE:HG21 | 1:EA:174:LEU:HB2  | 1.99                     | 0.44              |
| 1:EA:176:LEU:HD23 | 1:EA:176:LEU:H    | 1.82                     | 0.44              |
| 1:F:539:LEU:HD11  | 1:F:640:VAL:HG13  | 2.00                     | 0.44              |
| 1:GA:281:TYR:CG   | 1:GA:366:VAL:HG23 | 2.52                     | 0.44              |
| 1:H:30:VAL:HG21   | 1:H:50:MET:HE3    | 1.99                     | 0.44              |
| 1:I:366:VAL:O     | 1:I:366:VAL:HG13  | 2.18                     | 0.44              |
| 1:L:219:VAL:HG11  | 1:L:227:LEU:HD22  | 1.99                     | 0.44              |
| 1:L:662:ILE:O     | 1:L:666:THR:HG23  | 2.17                     | 0.44              |
| 1:LA:398:VAL:HG12 | 1:LA:491:PRO:HB3  | 1.99                     | 0.44              |
| 1:M:168:ILE:HG21  | 1:M:174:LEU:HB2   | 1.98                     | 0.44              |
| 1:OA:168:ILE:HG22 | 1:OA:215:LEU:CD2  | 2.45                     | 0.44              |
| 1:P:7:ILE:O       | 1:P:8:ILE:C       | 2.60                     | 0.44              |
| 1:QA:281:TYR:CG   | 1:QA:366:VAL:HG23 | 2.52                     | 0.44              |
| 1:RA:539:LEU:HD21 | 1:RA:599:ILE:HD11 | 2.00                     | 0.44              |
| 1:RB:30:VAL:CG2   | 1:RB:50:MET:HE2   | 2.47                     | 0.44              |
| 1:SA:7:ILE:O      | 1:SA:8:ILE:C      | 2.59                     | 0.44              |
| 1:SB:219:VAL:HG11 | 1:SB:227:LEU:HD22 | 1.99                     | 0.44              |
| 1:WA:57:HIS:O     | 1:WA:58:TYR:HD1   | 2.00                     | 0.44              |
| 1:XA:543:TYR:CE2  | 1:XA:575:ILE:HG21 | 2.52                     | 0.44              |
| 1:YA:176:LEU:HD23 | 1:YA:176:LEU:H    | 1.82                     | 0.44              |
| 1:ZA:487:VAL:O    | 1:ZA:487:VAL:HG13 | 2.17                     | 0.44              |
| 1:AC:583:VAL:HG22 | 1:AC:583:VAL:O    | 2.17                     | 0.44              |
| 1:BB:758:GLU:O    | 1:BB:762:VAL:HG22 | 2.17                     | 0.44              |
| 1:C:17:HIS:HB3    | 1:C:44:LEU:HD23   | 1.98                     | 0.44              |
| 1:C:583:VAL:HG22  | 1:C:583:VAL:O     | 2.17                     | 0.44              |
| 1:CA:219:VAL:HG11 | 1:CA:227:LEU:HD22 | 1.99                     | 0.44              |
| 1:CB:92:LEU:N     | 1:CB:92:LEU:HD12  | 2.32                     | 0.44              |
| 1:DB:168:ILE:HG22 | 1:DB:215:LEU:CD2  | 2.47                     | 0.44              |
| 1:DB:216:VAL:O    | 1:DB:216:VAL:HG13 | 2.18                     | 0.44              |
| 1:F:523:PHE:CD2   | 1:F:568:VAL:HG23  | 2.52                     | 0.44              |
| 1:FB:53:VAL:HG12  | 1:FB:57:HIS:O     | 2.18                     | 0.44              |
| 1:G:7:ILE:O       | 1:G:8:ILE:C       | 2.59                     | 0.44              |
| 1:GA:17:HIS:CB    | 1:GA:44:LEU:HD23  | 2.47                     | 0.44              |
| 1:IB:17:HIS:CB    | 1:IB:44:LEU:HD23  | 2.47                     | 0.44              |
| 1:K:168:ILE:HG21  | 1:K:174:LEU:HB2   | 1.99                     | 0.44              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:K:583:VAL:HG22  | 1:K:583:VAL:O     | 2.17                     | 0.44              |
| 1:KA:176:LEU:HD23 | 1:KA:176:LEU:H    | 1.83                     | 0.44              |
| 1:LA:17:His:HB3   | 1:LA:44:LEU:HD23  | 2.00                     | 0.44              |
| 1:LB:758:GLU:O    | 1:LB:762:VAL:HG22 | 2.18                     | 0.44              |
| 1:N:7:ILE:O       | 1:N:8:ILE:C       | 2.60                     | 0.44              |
| 1:O:281:TYR:CG    | 1:O:366:VAL:HG23  | 2.52                     | 0.44              |
| 1:OA:121:LEU:HD23 | 1:OA:162:ILE:HG22 | 1.99                     | 0.44              |
| 1:P:219:VAL:HG11  | 1:P:227:LEU:HD22  | 1.99                     | 0.44              |
| 1:PA:398:VAL:HG12 | 1:PA:491:PRO:HB3  | 1.97                     | 0.44              |
| 1:PA:779:LEU:HD21 | 1:QA:774:ARG:HG2  | 2.00                     | 0.44              |
| 1:Q:52:THR:O      | 1:Q:109:ILE:HD11  | 2.17                     | 0.44              |
| 1:RA:52:THR:O     | 1:RA:109:ILE:HD11 | 2.17                     | 0.44              |
| 1:RA:543:TYR:CE2  | 1:RA:575:ILE:HG21 | 2.52                     | 0.44              |
| 1:RB:63:ASN:OD1   | 1:RB:104:VAL:HG12 | 2.17                     | 0.44              |
| 1:S:779:LEU:HD21  | 1:T:774:ARG:HG2   | 2.00                     | 0.44              |
| 1:SA:281:TYR:CG   | 1:SA:366:VAL:HG23 | 2.52                     | 0.44              |
| 1:T:487:VAL:O     | 1:T:487:VAL:HG13  | 2.17                     | 0.44              |
| 1:T:779:LEU:HD21  | 1:V:774:ARG:HG2   | 2.00                     | 0.44              |
| 1:TA:176:LEU:HD23 | 1:TA:176:LEU:H    | 1.82                     | 0.44              |
| 1:UB:17:His:CB    | 1:UB:44:LEU:HD23  | 2.47                     | 0.44              |
| 1:UB:168:ILE:HG21 | 1:UB:174:LEU:HB2  | 1.98                     | 0.44              |
| 1:VA:7:ILE:O      | 1:VA:8:ILE:C      | 2.60                     | 0.44              |
| 1:X:487:VAL:HG13  | 1:X:487:VAL:O     | 2.18                     | 0.44              |
| 1:XA:176:LEU:HD23 | 1:XA:176:LEU:H    | 1.83                     | 0.44              |
| 1:XB:398:VAL:HG12 | 1:XB:491:PRO:HB3  | 1.98                     | 0.44              |
| 1:XB:529:ILE:HD12 | 1:XB:583:VAL:HG11 | 1.98                     | 0.44              |
| 1:YB:52:THR:O     | 1:YB:109:ILE:HD11 | 2.18                     | 0.44              |
| 1:Z:176:LEU:HD23  | 1:Z:176:LEU:H     | 1.82                     | 0.44              |
| 1:Z:487:VAL:HG13  | 1:Z:487:VAL:O     | 2.17                     | 0.44              |
| 1:AA:774:ARG:HG2  | 1:Z:779:LEU:HD21  | 1.99                     | 0.44              |
| 1:AB:56:ARG:HE    | 1:BB:127:LEU:HD21 | 1.81                     | 0.44              |
| 1:BB:219:VAL:HG11 | 1:BB:227:LEU:HD22 | 1.99                     | 0.44              |
| 1:D:176:LEU:H     | 1:D:176:LEU:HD23  | 1.81                     | 0.44              |
| 1:DB:56:ARG:HE    | 1:EB:127:LEU:HD21 | 1.80                     | 0.44              |
| 1:E:758:GLU:O     | 1:E:762:VAL:HG22  | 2.18                     | 0.44              |
| 1:EA:63:ASN:OD1   | 1:EA:104:VAL:HG12 | 2.17                     | 0.44              |
| 1:EB:17:His:CB    | 1:EB:44:LEU:HD23  | 2.48                     | 0.44              |
| 1:F:7:ILE:O       | 1:F:8:ILE:C       | 2.59                     | 0.44              |
| 1:FA:487:VAL:HG13 | 1:FA:487:VAL:O    | 2.18                     | 0.44              |
| 1:FB:176:LEU:H    | 1:FB:176:LEU:HD23 | 1.82                     | 0.44              |
| 1:G:219:VAL:HG11  | 1:G:227:LEU:HD22  | 2.00                     | 0.44              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:GA:176:LEU:H    | 1:GA:176:LEU:HD23 | 1.82                     | 0.44              |
| 1:JA:281:TYR:CG   | 1:JA:366:VAL:HG23 | 2.52                     | 0.44              |
| 1:JA:487:VAL:O    | 1:JA:487:VAL:HG13 | 2.17                     | 0.44              |
| 1:LB:398:VAL:HG12 | 1:LB:491:PRO:HB3  | 1.99                     | 0.44              |
| 1:LB:779:LEU:HD21 | 1:MB:774:ARG:HG2  | 1.98                     | 0.44              |
| 1:O:543:TYR:CE2   | 1:O:575:ILE:HG21  | 2.52                     | 0.44              |
| 1:OA:487:VAL:O    | 1:OA:487:VAL:HG13 | 2.18                     | 0.44              |
| 1:PA:7:ILE:O      | 1:PA:8:ILE:C      | 2.60                     | 0.44              |
| 1:QB:788:ALA:O    | 1:QB:792:VAL:HG23 | 2.17                     | 0.44              |
| 1:R:334:LEU:HD12  | 1:R:357:TRP:NE1   | 2.33                     | 0.44              |
| 1:SB:3:THR:HG22   | 1:SB:6:PHE:HA     | 2.00                     | 0.44              |
| 1:V:121:LEU:HD23  | 1:V:162:ILE:HG22  | 1.99                     | 0.44              |
| 1:V:487:VAL:O     | 1:V:487:VAL:HG13  | 2.18                     | 0.44              |
| 1:VA:63:ASN:OD1   | 1:VA:104:VAL:HG12 | 2.17                     | 0.44              |
| 1:VA:487:VAL:HG13 | 1:VA:487:VAL:O    | 2.18                     | 0.44              |
| 1:WA:219:VAL:HG11 | 1:WA:227:LEU:HD22 | 2.00                     | 0.44              |
| 1:WB:398:VAL:HG12 | 1:WB:491:PRO:HB3  | 1.98                     | 0.44              |
| 1:X:216:VAL:O     | 1:X:216:VAL:HG13  | 2.17                     | 0.44              |
| 1:X:543:TYR:CE2   | 1:X:575:ILE:HG21  | 2.52                     | 0.44              |
| 1:A:121:LEU:HD23  | 1:A:162:ILE:HG22  | 1.99                     | 0.44              |
| 1:A:208:VAL:HG23  | 1:A:209:PHE:CD1   | 2.53                     | 0.44              |
| 1:A:219:VAL:HG11  | 1:A:227:LEU:HD22  | 2.00                     | 0.44              |
| 1:AA:487:VAL:O    | 1:AA:487:VAL:HG13 | 2.18                     | 0.44              |
| 1:AB:168:ILE:HG21 | 1:AB:174:LEU:HB2  | 2.00                     | 0.44              |
| 1:AB:487:VAL:O    | 1:AB:487:VAL:HG13 | 2.17                     | 0.44              |
| 1:AC:127:LEU:HD21 | 1:ZB:56:ARG:HE    | 1.82                     | 0.44              |
| 1:C:7:ILE:O       | 1:C:8:ILE:C       | 2.59                     | 0.44              |
| 1:D:393:VAL:HG22  | 1:D:411:ASP:C     | 2.43                     | 0.44              |
| 1:GB:129:PHE:CE1  | 1:GB:137:VAL:HG11 | 2.53                     | 0.44              |
| 1:J:219:VAL:HG11  | 1:J:227:LEU:HD22  | 1.99                     | 0.44              |
| 1:JA:219:VAL:HG11 | 1:JA:227:LEU:HD22 | 1.99                     | 0.44              |
| 1:K:7:ILE:O       | 1:K:8:ILE:C       | 2.60                     | 0.44              |
| 1:K:159:VAL:O     | 1:K:159:VAL:HG12  | 2.17                     | 0.44              |
| 1:L:7:ILE:O       | 1:L:8:ILE:C       | 2.60                     | 0.44              |
| 1:L:529:ILE:HD13  | 1:L:583:VAL:HG11  | 2.00                     | 0.44              |
| 1:L:758:GLU:O     | 1:L:762:VAL:HG22  | 2.18                     | 0.44              |
| 1:LA:366:VAL:O    | 1:LA:366:VAL:HG13 | 2.18                     | 0.44              |
| 1:M:758:GLU:O     | 1:M:762:VAL:HG22  | 2.18                     | 0.44              |
| 1:NA:398:VAL:HG12 | 1:NA:491:PRO:HB3  | 1.98                     | 0.44              |
| 1:QA:17:HIS:HB3   | 1:QA:44:LEU:HD23  | 1.99                     | 0.44              |
| 1:QA:168:ILE:HG22 | 1:QA:215:LEU:CD2  | 2.45                     | 0.44              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:RA:758:GLU:O    | 1:RA:762:VAL:HG22 | 2.16                     | 0.44              |
| 1:VB:7:ILE:O      | 1:VB:8:ILE:C      | 2.59                     | 0.44              |
| 1:VB:17:HIS:HB3   | 1:VB:44:LEU:HD23  | 1.99                     | 0.44              |
| 1:W:121:LEU:HD22  | 1:W:159:VAL:HG13  | 2.00                     | 0.44              |
| 1:Y:398:VAL:HG12  | 1:Y:491:PRO:HB3   | 1.99                     | 0.44              |
| 1:YB:7:ILE:O      | 1:YB:8:ILE:C      | 2.59                     | 0.44              |
| 1:B:48:MET:HE2    | 1:B:48:MET:HA     | 1.99                     | 0.44              |
| 1:BA:538:GLN:HB2  | 1:BA:646:VAL:HG22 | 1.98                     | 0.44              |
| 1:CB:366:VAL:O    | 1:CB:366:VAL:HG13 | 2.18                     | 0.44              |
| 1:DB:176:LEU:HD23 | 1:DB:176:LEU:H    | 1.83                     | 0.44              |
| 1:E:176:LEU:HD23  | 1:E:176:LEU:H     | 1.83                     | 0.44              |
| 1:F:393:VAL:HG22  | 1:F:411:ASP:C     | 2.43                     | 0.44              |
| 1:FB:17:HIS:HB3   | 1:FB:44:LEU:HD23  | 2.00                     | 0.44              |
| 1:FB:216:VAL:HG13 | 1:FB:216:VAL:O    | 2.18                     | 0.44              |
| 1:IA:176:LEU:HD23 | 1:IA:176:LEU:H    | 1.82                     | 0.44              |
| 1:IB:176:LEU:HD21 | 1:IB:196:TRP:CE2  | 2.53                     | 0.44              |
| 1:IB:330:GLN:C    | 1:IB:407:MET:HE1  | 2.42                     | 0.44              |
| 1:KA:497:VAL:HG13 | 1:KA:497:VAL:O    | 2.16                     | 0.44              |
| 1:KB:7:ILE:O      | 1:KB:8:ILE:C      | 2.60                     | 0.44              |
| 1:KB:30:VAL:CG2   | 1:KB:50:MET:HE3   | 2.47                     | 0.44              |
| 1:N:398:VAL:HG12  | 1:N:491:PRO:HB3   | 1.98                     | 0.44              |
| 1:N:543:TYR:CE2   | 1:N:575:ILE:HG21  | 2.52                     | 0.44              |
| 1:O:366:VAL:O     | 1:O:366:VAL:HG13  | 2.18                     | 0.44              |
| 1:O:523:PHE:CD2   | 1:O:568:VAL:HG23  | 2.52                     | 0.44              |
| 1:OB:7:ILE:O      | 1:OB:8:ILE:C      | 2.60                     | 0.44              |
| 1:PA:44:LEU:N     | 1:PA:44:LEU:HD22  | 2.33                     | 0.44              |
| 1:PA:176:LEU:HD23 | 1:PA:176:LEU:H    | 1.83                     | 0.44              |
| 1:Q:17:HIS:CB     | 1:Q:44:LEU:HD23   | 2.48                     | 0.44              |
| 1:QB:168:ILE:HG21 | 1:QB:174:LEU:HB2  | 1.98                     | 0.44              |
| 1:RA:121:LEU:HD23 | 1:RA:162:ILE:HG22 | 2.00                     | 0.44              |
| 1:RA:393:VAL:HG22 | 1:RA:411:ASP:C    | 2.42                     | 0.44              |
| 1:RB:7:ILE:O      | 1:RB:8:ILE:C      | 2.59                     | 0.44              |
| 1:SB:219:VAL:HG11 | 1:SB:227:LEU:HD13 | 2.00                     | 0.44              |
| 1:V:334:LEU:HD12  | 1:V:357:TRP:NE1   | 2.33                     | 0.44              |
| 1:VB:168:ILE:HG22 | 1:VB:215:LEU:CD2  | 2.43                     | 0.44              |
| 1:W:281:TYR:CG    | 1:W:366:VAL:HG23  | 2.53                     | 0.44              |
| 1:ZA:758:GLU:O    | 1:ZA:762:VAL:HG22 | 2.17                     | 0.44              |
| 1:BB:176:LEU:HD23 | 1:BB:176:LEU:H    | 1.82                     | 0.44              |
| 1:CB:165:ALA:HB2  | 1:CB:205:LEU:HD13 | 2.00                     | 0.44              |
| 1:CB:398:VAL:HG12 | 1:CB:491:PRO:HB3  | 1.98                     | 0.44              |
| 1:E:366:VAL:HG13  | 1:E:366:VAL:O     | 2.18                     | 0.44              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:EA:44:LEU:HD22  | 1:EA:44:LEU:H     | 1.83                     | 0.44              |
| 1:EA:52:THR:O     | 1:EA:109:ILE:HD11 | 2.18                     | 0.44              |
| 1:FA:366:VAL:HG13 | 1:FA:366:VAL:O    | 2.18                     | 0.44              |
| 1:FB:176:LEU:HD21 | 1:FB:196:TRP:CE2  | 2.53                     | 0.44              |
| 1:IA:539:LEU:HD21 | 1:IA:599:ILE:HD11 | 1.99                     | 0.44              |
| 1:KB:393:VAL:HG22 | 1:KB:411:ASP:C    | 2.43                     | 0.44              |
| 1:L:176:LEU:H     | 1:L:176:LEU:HD23  | 1.82                     | 0.44              |
| 1:L:393:VAL:HG22  | 1:L:411:ASP:C     | 2.43                     | 0.44              |
| 1:M:398:VAL:HG12  | 1:M:491:PRO:HB3   | 1.98                     | 0.44              |
| 1:MB:219:VAL:HG11 | 1:MB:227:LEU:HD22 | 1.99                     | 0.44              |
| 1:OB:516:LEU:HD23 | 1:OB:516:LEU:O    | 2.18                     | 0.44              |
| 1:OB:788:ALA:O    | 1:OB:792:VAL:HG23 | 2.17                     | 0.44              |
| 1:QA:176:LEU:HD23 | 1:QA:176:LEU:H    | 1.82                     | 0.44              |
| 1:QB:643:VAL:O    | 1:QB:643:VAL:HG12 | 2.17                     | 0.44              |
| 1:RA:302:VAL:HG11 | 1:RA:306:LYS:HZ2  | 1.83                     | 0.44              |
| 1:SB:52:THR:O     | 1:SB:109:ILE:HD11 | 2.18                     | 0.44              |
| 1:TA:543:TYR:CE2  | 1:TA:575:ILE:HG21 | 2.52                     | 0.44              |
| 1:TB:345:ASP:OD2  | 1:TB:349:VAL:HG13 | 2.18                     | 0.44              |
| 1:UB:53:VAL:HG12  | 1:UB:57:HIS:O     | 2.17                     | 0.44              |
| 1:VA:53:VAL:HG12  | 1:VA:57:HIS:O     | 2.18                     | 0.44              |
| 1:VA:176:LEU:HD23 | 1:VA:176:LEU:H    | 1.83                     | 0.44              |
| 1:WA:366:VAL:O    | 1:WA:366:VAL:HG13 | 2.17                     | 0.44              |
| 1:X:176:LEU:HD23  | 1:X:176:LEU:H     | 1.83                     | 0.44              |
| 1:X:497:VAL:HG13  | 1:X:497:VAL:O     | 2.17                     | 0.44              |
| 1:YA:168:ILE:HG21 | 1:YA:174:LEU:HB2  | 2.00                     | 0.44              |
| 1:YA:487:VAL:O    | 1:YA:487:VAL:HG13 | 2.18                     | 0.44              |
| 1:AC:334:LEU:HD12 | 1:AC:357:TRP:NE1  | 2.33                     | 0.44              |
| 1:B:366:VAL:O     | 1:B:366:VAL:HG13  | 2.17                     | 0.44              |
| 1:B:779:LEU:HD21  | 1:C:774:ARG:HG2   | 1.99                     | 0.44              |
| 1:DA:219:VAL:HG11 | 1:DA:227:LEU:HD22 | 2.00                     | 0.44              |
| 1:DA:302:VAL:HG11 | 1:DA:306:LYS:HZ2  | 1.83                     | 0.44              |
| 1:EA:14:HIS:N     | 1:EA:50:MET:HE3   | 2.33                     | 0.44              |
| 1:H:176:LEU:HD23  | 1:H:176:LEU:H     | 1.82                     | 0.44              |
| 1:I:216:VAL:O     | 1:I:216:VAL:HG13  | 2.18                     | 0.44              |
| 1:IA:281:TYR:CG   | 1:IA:366:VAL:HG23 | 2.53                     | 0.44              |
| 1:J:10:ILE:HG22   | 1:J:47:PRO:HB3    | 2.00                     | 0.44              |
| 1:J:44:LEU:N      | 1:J:44:LEU:HD22   | 2.33                     | 0.44              |
| 1:J:543:TYR:CE2   | 1:J:575:ILE:HG21  | 2.53                     | 0.44              |
| 1:JA:176:LEU:HD23 | 1:JA:176:LEU:H    | 1.83                     | 0.44              |
| 1:K:176:LEU:HD21  | 1:K:196:TRP:CE2   | 2.53                     | 0.44              |
| 1:L:129:PHE:CE1   | 1:L:137:VAL:HG11  | 2.53                     | 0.44              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:L:366:VAL:O     | 1:L:366:VAL:HG13  | 2.18                     | 0.44              |
| 1:LA:523:PHE:CD2  | 1:LA:568:VAL:HG23 | 2.53                     | 0.44              |
| 1:NA:176:LEU:HD23 | 1:NA:176:LEU:H    | 1.82                     | 0.44              |
| 1:PA:366:VAL:HG13 | 1:PA:366:VAL:O    | 2.17                     | 0.44              |
| 1:PB:219:VAL:HG11 | 1:PB:227:LEU:HD22 | 1.99                     | 0.44              |
| 1:QA:758:GLU:O    | 1:QA:762:VAL:HG22 | 2.17                     | 0.44              |
| 1:RB:44:LEU:HD22  | 1:RB:44:LEU:N     | 2.33                     | 0.44              |
| 1:TA:44:LEU:HD22  | 1:TA:44:LEU:N     | 2.33                     | 0.44              |
| 1:UB:176:LEU:HD21 | 1:UB:196:TRP:CE2  | 2.53                     | 0.44              |
| 1:UB:393:VAL:HG22 | 1:UB:411:ASP:C    | 2.43                     | 0.44              |
| 1:UB:538:GLN:HB2  | 1:UB:646:VAL:HG22 | 2.00                     | 0.44              |
| 1:VA:165:ALA:HB2  | 1:VA:205:LEU:HD13 | 2.00                     | 0.44              |
| 1:X:334:LEU:HD12  | 1:X:357:TRP:NE1   | 2.33                     | 0.44              |
| 1:XA:386:GLU:O    | 1:XA:402:ILE:HG23 | 2.18                     | 0.44              |
| 1:XA:393:VAL:HG22 | 1:XA:411:ASP:C    | 2.43                     | 0.44              |
| 1:XA:737:GLY:O    | 1:XA:741:VAL:HG23 | 2.18                     | 0.44              |
| 1:Y:17:HIS:HB3    | 1:Y:44:LEU:HD23   | 2.00                     | 0.44              |
| 1:YA:583:VAL:HG22 | 1:YA:583:VAL:O    | 2.17                     | 0.44              |
| 1:ZA:176:LEU:H    | 1:ZA:176:LEU:HD23 | 1.83                     | 0.44              |
| 1:AC:176:LEU:HD23 | 1:AC:176:LEU:H    | 1.82                     | 0.43              |
| 1:CA:529:ILE:HD12 | 1:CA:583:VAL:HG11 | 1.98                     | 0.43              |
| 1:CB:57:HIS:O     | 1:CB:58:TYR:HD1   | 2.00                     | 0.43              |
| 1:E:168:ILE:HG21  | 1:E:174:LEU:HB2   | 2.00                     | 0.43              |
| 1:EA:176:LEU:HD21 | 1:EA:196:TRP:CE2  | 2.53                     | 0.43              |
| 1:EA:487:VAL:O    | 1:EA:487:VAL:HG13 | 2.18                     | 0.43              |
| 1:FB:219:VAL:HG11 | 1:FB:227:LEU:HD13 | 2.00                     | 0.43              |
| 1:GB:219:VAL:HG11 | 1:GB:227:LEU:HD13 | 2.00                     | 0.43              |
| 1:GB:366:VAL:HG13 | 1:GB:366:VAL:O    | 2.17                     | 0.43              |
| 1:GB:758:GLU:O    | 1:GB:762:VAL:HG22 | 2.17                     | 0.43              |
| 1:HA:176:LEU:HD21 | 1:HA:196:TRP:NE1  | 2.33                     | 0.43              |
| 1:HB:17:HIS:HB3   | 1:HB:44:LEU:HD23  | 2.00                     | 0.43              |
| 1:IA:345:ASP:OD2  | 1:IA:349:VAL:HG13 | 2.17                     | 0.43              |
| 1:K:44:LEU:HD22   | 1:K:44:LEU:N      | 2.33                     | 0.43              |
| 1:K:539:LEU:CD1   | 1:K:640:VAL:HG13  | 2.48                     | 0.43              |
| 1:KA:63:ASN:OD1   | 1:KA:104:VAL:HG12 | 2.17                     | 0.43              |
| 1:L:538:GLN:HB2   | 1:L:646:VAL:HG22  | 1.99                     | 0.43              |
| 1:LB:52:THR:O     | 1:LB:109:ILE:HD11 | 2.17                     | 0.43              |
| 1:MA:543:TYR:CE2  | 1:MA:575:ILE:HG21 | 2.53                     | 0.43              |
| 1:N:17:HIS:HB3    | 1:N:44:LEU:HD23   | 1.99                     | 0.43              |
| 1:O:121:LEU:HD23  | 1:O:162:ILE:HG22  | 2.00                     | 0.43              |
| 1:O:393:VAL:HG22  | 1:O:411:ASP:C     | 2.43                     | 0.43              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:OA:44:LEU:HD22  | 1:OA:44:LEU:N     | 2.33                     | 0.43              |
| 1:OA:176:LEU:HD21 | 1:OA:196:TRP:CE2  | 2.53                     | 0.43              |
| 1:OB:176:LEU:HD23 | 1:OB:176:LEU:H    | 1.83                     | 0.43              |
| 1:PB:487:VAL:O    | 1:PB:487:VAL:HG13 | 2.17                     | 0.43              |
| 1:Q:7:ILE:O       | 1:Q:8:ILE:C       | 2.59                     | 0.43              |
| 1:Q:393:VAL:HG22  | 1:Q:411:ASP:C     | 2.43                     | 0.43              |
| 1:QB:366:VAL:O    | 1:QB:366:VAL:HG13 | 2.18                     | 0.43              |
| 1:R:44:LEU:N      | 1:R:44:LEU:HD22   | 2.33                     | 0.43              |
| 1:S:17:HIS:CB     | 1:S:44:LEU:HD23   | 2.48                     | 0.43              |
| 1:SA:52:THR:O     | 1:SA:109:ILE:HD11 | 2.18                     | 0.43              |
| 1:TA:398:VAL:HG12 | 1:TA:491:PRO:HB3  | 2.00                     | 0.43              |
| 1:TB:758:GLU:O    | 1:TB:762:VAL:HG22 | 2.18                     | 0.43              |
| 1:V:219:VAL:HG11  | 1:V:227:LEU:HD22  | 2.00                     | 0.43              |
| 1:W:176:LEU:HD23  | 1:W:176:LEU:H     | 1.83                     | 0.43              |
| 1:WB:121:LEU:HD23 | 1:WB:162:ILE:HG22 | 2.00                     | 0.43              |
| 1:XB:487:VAL:O    | 1:XB:487:VAL:HG13 | 2.17                     | 0.43              |
| 1:Y:219:VAL:HG11  | 1:Y:227:LEU:HD13  | 1.99                     | 0.43              |
| 1:YB:761:ARG:HH21 | 1:YB:761:ARG:HG3  | 1.83                     | 0.43              |
| 1:AB:774:ARG:HG2  | 1:ZA:779:LEU:HD21 | 2.00                     | 0.43              |
| 1:BA:216:VAL:HG13 | 1:BA:216:VAL:O    | 2.18                     | 0.43              |
| 1:C:529:ILE:CD1   | 1:C:583:VAL:HG11  | 2.47                     | 0.43              |
| 1:C:539:LEU:HD21  | 1:C:599:ILE:HD11  | 1.99                     | 0.43              |
| 1:DA:366:VAL:O    | 1:DA:366:VAL:HG13 | 2.18                     | 0.43              |
| 1:DB:529:ILE:HD13 | 1:DB:583:VAL:HG21 | 2.01                     | 0.43              |
| 1:F:17:HIS:CB     | 1:F:44:LEU:HD23   | 2.48                     | 0.43              |
| 1:FA:168:ILE:HG22 | 1:FA:215:LEU:CD2  | 2.46                     | 0.43              |
| 1:FA:334:LEU:HD12 | 1:FA:357:TRP:NE1  | 2.33                     | 0.43              |
| 1:GA:538:GLN:HB2  | 1:GA:646:VAL:HG22 | 1.99                     | 0.43              |
| 1:HB:219:VAL:HG11 | 1:HB:227:LEU:HD13 | 2.00                     | 0.43              |
| 1:I:17:HIS:HB3    | 1:I:44:LEU:HD23   | 1.99                     | 0.43              |
| 1:IA:138:VAL:HG12 | 1:IA:139:ALA:N    | 2.34                     | 0.43              |
| 1:IB:52:THR:O     | 1:IB:109:ILE:HD11 | 2.18                     | 0.43              |
| 1:JA:168:ILE:HG21 | 1:JA:174:LEU:HB2  | 1.99                     | 0.43              |
| 1:JA:597:ARG:O    | 1:JA:601:THR:HG23 | 2.18                     | 0.43              |
| 1:JB:121:LEU:HD22 | 1:JB:159:VAL:HG13 | 1.99                     | 0.43              |
| 1:JB:219:VAL:HG11 | 1:JB:227:LEU:HD22 | 2.00                     | 0.43              |
| 1:JB:281:TYR:CG   | 1:JB:366:VAL:HG23 | 2.53                     | 0.43              |
| 1:KA:366:VAL:HG13 | 1:KA:366:VAL:O    | 2.17                     | 0.43              |
| 1:KB:176:LEU:HD23 | 1:KB:176:LEU:H    | 1.83                     | 0.43              |
| 1:KB:176:LEU:HD21 | 1:KB:196:TRP:NE1  | 2.33                     | 0.43              |
| 1:LB:56:ARG:HE    | 1:MB:127:LEU:CD2  | 2.32                     | 0.43              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:PA:30:VAL:HG21  | 1:PA:50:MET:HE3   | 2.01                     | 0.43              |
| 1:QB:53:VAL:HG12  | 1:QB:57:HIS:O     | 2.17                     | 0.43              |
| 1:QB:176:LEU:HD21 | 1:QB:196:TRP:CE2  | 2.53                     | 0.43              |
| 1:R:176:LEU:HD23  | 1:R:176:LEU:H     | 1.82                     | 0.43              |
| 1:RA:176:LEU:H    | 1:RA:176:LEU:HD23 | 1.82                     | 0.43              |
| 1:S:758:GLU:O     | 1:S:762:VAL:HG22  | 2.18                     | 0.43              |
| 1:UB:176:LEU:HD23 | 1:UB:176:LEU:H    | 1.82                     | 0.43              |
| 1:VA:543:TYR:CE2  | 1:VA:575:ILE:HG21 | 2.53                     | 0.43              |
| 1:VB:281:TYR:CG   | 1:VB:366:VAL:HG23 | 2.53                     | 0.43              |
| 1:WA:17:His:CB    | 1:WA:44:LEU:HD23  | 2.48                     | 0.43              |
| 1:WB:219:VAL:HG11 | 1:WB:227:LEU:HD22 | 1.99                     | 0.43              |
| 1:XB:359:ILE:O    | 1:XB:359:ILE:HG23 | 2.18                     | 0.43              |
| 1:YA:176:LEU:HD21 | 1:YA:196:TRP:CE2  | 2.53                     | 0.43              |
| 1:YB:176:LEU:HD21 | 1:YB:196:TRP:CE2  | 2.54                     | 0.43              |
| 1:B:393:VAL:HG22  | 1:B:411:ASP:C     | 2.43                     | 0.43              |
| 1:DA:176:LEU:HD21 | 1:DA:196:TRP:CE2  | 2.53                     | 0.43              |
| 1:FA:176:LEU:HD23 | 1:FA:176:LEU:H    | 1.83                     | 0.43              |
| 1:GA:487:VAL:O    | 1:GA:487:VAL:HG13 | 2.18                     | 0.43              |
| 1:GB:176:LEU:HD23 | 1:GB:176:LEU:H    | 1.83                     | 0.43              |
| 1:H:219:VAL:HG11  | 1:H:227:LEU:HD22  | 2.00                     | 0.43              |
| 1:HA:366:VAL:HG13 | 1:HA:366:VAL:O    | 2.17                     | 0.43              |
| 1:HA:523:PHE:CE2  | 1:HA:545:TRP:CD1  | 3.06                     | 0.43              |
| 1:IA:208:VAL:HG23 | 1:IA:209:PHE:CD1  | 2.54                     | 0.43              |
| 1:IB:168:ILE:HG21 | 1:IB:174:LEU:HB2  | 1.99                     | 0.43              |
| 1:L:44:LEU:HD22   | 1:L:44:LEU:N      | 2.34                     | 0.43              |
| 1:MA:176:LEU:HD23 | 1:MA:176:LEU:H    | 1.83                     | 0.43              |
| 1:MB:53:VAL:HG12  | 1:MB:57:HIS:O     | 2.18                     | 0.43              |
| 1:MB:216:VAL:O    | 1:MB:216:VAL:HG13 | 2.19                     | 0.43              |
| 1:N:487:VAL:O     | 1:N:487:VAL:HG13  | 2.17                     | 0.43              |
| 1:N:758:GLU:O     | 1:N:762:VAL:HG22  | 2.18                     | 0.43              |
| 1:NA:129:PHE:CE1  | 1:NA:137:VAL:HG11 | 2.53                     | 0.43              |
| 1:NB:176:LEU:H    | 1:NB:176:LEU:HD23 | 1.82                     | 0.43              |
| 1:P:44:LEU:HD22   | 1:P:44:LEU:N      | 2.34                     | 0.43              |
| 1:P:216:VAL:O     | 1:P:216:VAL:HG13  | 2.18                     | 0.43              |
| 1:QB:216:VAL:HG13 | 1:QB:216:VAL:O    | 2.18                     | 0.43              |
| 1:UA:487:VAL:HG13 | 1:UA:487:VAL:O    | 2.18                     | 0.43              |
| 1:UB:219:VAL:HG11 | 1:UB:227:LEU:HD22 | 2.00                     | 0.43              |
| 1:WA:487:VAL:O    | 1:WA:487:VAL:HG13 | 2.19                     | 0.43              |
| 1:WB:176:LEU:HD21 | 1:WB:196:TRP:CE2  | 2.54                     | 0.43              |
| 1:X:393:VAL:HG22  | 1:X:411:ASP:C     | 2.43                     | 0.43              |
| 1:Y:176:LEU:HD23  | 1:Y:176:LEU:H     | 1.82                     | 0.43              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:YB:523:PHE:CD2  | 1:YB:568:VAL:HG23 | 2.53                     | 0.43              |
| 1:Z:216:VAL:O     | 1:Z:216:VAL:HG13  | 2.18                     | 0.43              |
| 1:ZB:30:VAL:HG21  | 1:ZB:50:MET:HE3   | 1.99                     | 0.43              |
| 1:CB:17:HIS:CB    | 1:CB:44:LEU:HD23  | 2.49                     | 0.43              |
| 1:CB:393:VAL:HG22 | 1:CB:411:ASP:C    | 2.43                     | 0.43              |
| 1:EB:52:THR:O     | 1:EB:109:ILE:HD11 | 2.17                     | 0.43              |
| 1:EB:359:ILE:HG23 | 1:EB:359:ILE:O    | 2.18                     | 0.43              |
| 1:F:597:ARG:O     | 1:F:601:THR:HG23  | 2.19                     | 0.43              |
| 1:FA:52:THR:O     | 1:FA:109:ILE:HD11 | 2.18                     | 0.43              |
| 1:FA:543:TYR:CE2  | 1:FA:575:ILE:HG21 | 2.53                     | 0.43              |
| 1:FB:56:ARG:HE    | 1:GB:127:LEU:CD2  | 2.31                     | 0.43              |
| 1:H:216:VAL:O     | 1:H:216:VAL:HG13  | 2.19                     | 0.43              |
| 1:HB:779:LEU:HD21 | 1:IB:774:ARG:HG2  | 1.99                     | 0.43              |
| 1:IB:208:VAL:HG23 | 1:IB:209:PHE:CD1  | 2.54                     | 0.43              |
| 1:JB:17:HIS:HB3   | 1:JB:44:LEU:HD23  | 2.00                     | 0.43              |
| 1:JB:302:VAL:HG11 | 1:JB:306:LYS:HZ2  | 1.82                     | 0.43              |
| 1:K:758:GLU:O     | 1:K:762:VAL:HG22  | 2.19                     | 0.43              |
| 1:LA:516:LEU:HD23 | 1:LA:516:LEU:C    | 2.44                     | 0.43              |
| 1:LA:543:TYR:CE2  | 1:LA:575:ILE:HG21 | 2.53                     | 0.43              |
| 1:LB:168:ILE:HG21 | 1:LB:174:LEU:HB2  | 1.99                     | 0.43              |
| 1:M:121:LEU:HD23  | 1:M:162:ILE:HG22  | 2.00                     | 0.43              |
| 1:M:543:TYR:CE2   | 1:M:575:ILE:HG21  | 2.53                     | 0.43              |
| 1:MB:359:ILE:HG23 | 1:MB:359:ILE:O    | 2.18                     | 0.43              |
| 1:N:168:ILE:HG22  | 1:N:215:LEU:CD2   | 2.46                     | 0.43              |
| 1:OA:219:VAL:HG11 | 1:OA:227:LEU:HD22 | 2.00                     | 0.43              |
| 1:OB:216:VAL:O    | 1:OB:216:VAL:HG13 | 2.18                     | 0.43              |
| 1:PA:176:LEU:HD21 | 1:PA:196:TRP:CE2  | 2.53                     | 0.43              |
| 1:PB:176:LEU:HD21 | 1:PB:196:TRP:CE2  | 2.53                     | 0.43              |
| 1:QA:13:TYR:HA    | 1:QA:50:MET:HE3   | 2.00                     | 0.43              |
| 1:RB:176:LEU:HD21 | 1:RB:196:TRP:CE2  | 2.53                     | 0.43              |
| 1:SA:17:HIS:HB3   | 1:SA:44:LEU:HD23  | 2.00                     | 0.43              |
| 1:SA:176:LEU:HD23 | 1:SA:176:LEU:H    | 1.83                     | 0.43              |
| 1:SA:366:VAL:HG13 | 1:SA:366:VAL:O    | 2.18                     | 0.43              |
| 1:T:52:THR:O      | 1:T:109:ILE:HD11  | 2.19                     | 0.43              |
| 1:UA:53:VAL:HG12  | 1:UA:57:HIS:O     | 2.18                     | 0.43              |
| 1:V:129:PHE:CE1   | 1:V:137:VAL:HG11  | 2.53                     | 0.43              |
| 1:V:366:VAL:HG13  | 1:V:366:VAL:O     | 2.18                     | 0.43              |
| 1:VA:219:VAL:HG11 | 1:VA:227:LEU:HD22 | 2.00                     | 0.43              |
| 1:YB:208:VAL:HG23 | 1:YB:209:PHE:CD1  | 2.54                     | 0.43              |
| 1:YB:543:TYR:CE2  | 1:YB:575:ILE:HG21 | 2.53                     | 0.43              |
| 1:DA:53:VAL:HG12  | 1:DA:57:HIS:O     | 2.19                     | 0.43              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:DA:487:VAL:O    | 1:DA:487:VAL:HG13 | 2.19                     | 0.43              |
| 1:E:53:VAL:HG12   | 1:E:57:HIS:O      | 2.18                     | 0.43              |
| 1:EA:345:ASP:OD2  | 1:EA:349:VAL:HG13 | 2.18                     | 0.43              |
| 1:EA:758:GLU:O    | 1:EA:762:VAL:HG22 | 2.18                     | 0.43              |
| 1:EB:543:TYR:CE2  | 1:EB:575:ILE:HG21 | 2.53                     | 0.43              |
| 1:F:44:LEU:H      | 1:F:44:LEU:HD22   | 1.83                     | 0.43              |
| 1:F:219:VAL:HG11  | 1:F:227:LEU:HD22  | 2.00                     | 0.43              |
| 1:FA:219:VAL:HG11 | 1:FA:227:LEU:HD22 | 1.99                     | 0.43              |
| 1:H:788:ALA:O     | 1:H:792:VAL:HG23  | 2.19                     | 0.43              |
| 1:I:359:ILE:HG23  | 1:I:359:ILE:O     | 2.19                     | 0.43              |
| 1:J:7:ILE:O       | 1:J:8:ILE:C       | 2.59                     | 0.43              |
| 1:K:219:VAL:HG11  | 1:K:227:LEU:HD13  | 2.01                     | 0.43              |
| 1:L:779:LEU:HD21  | 1:M:774:ARG:HG2   | 2.00                     | 0.43              |
| 1:MB:17:HIS:CB    | 1:MB:44:LEU:HD23  | 2.49                     | 0.43              |
| 1:NA:219:VAL:HG11 | 1:NA:227:LEU:HD22 | 2.00                     | 0.43              |
| 1:NA:366:VAL:HG13 | 1:NA:366:VAL:O    | 2.18                     | 0.43              |
| 1:OA:543:TYR:CE2  | 1:OA:575:ILE:HG21 | 2.52                     | 0.43              |
| 1:QB:219:VAL:HG11 | 1:QB:227:LEU:HD22 | 2.00                     | 0.43              |
| 1:SA:30:VAL:HG21  | 1:SA:50:MET:HE3   | 2.00                     | 0.43              |
| 1:SB:56:ARG:HE    | 1:TB:127:LEU:CD2  | 2.31                     | 0.43              |
| 1:TA:597:ARG:O    | 1:TA:601:THR:HG23 | 2.19                     | 0.43              |
| 1:UB:165:ALA:HB2  | 1:UB:205:LEU:HD13 | 2.00                     | 0.43              |
| 1:V:330:GLN:C     | 1:V:407:MET:HE1   | 2.43                     | 0.43              |
| 1:WB:597:ARG:O    | 1:WB:601:THR:HG23 | 2.18                     | 0.43              |
| 1:X:121:LEU:HD22  | 1:X:159:VAL:HG13  | 2.01                     | 0.43              |
| 1:YB:92:LEU:N     | 1:YB:92:LEU:HD12  | 2.33                     | 0.43              |
| 1:ZB:44:LEU:HD22  | 1:ZB:44:LEU:N     | 2.34                     | 0.43              |
| 1:A:487:VAL:O     | 1:A:487:VAL:HG13  | 2.18                     | 0.43              |
| 1:AA:539:LEU:HD21 | 1:AA:599:ILE:HD11 | 2.01                     | 0.43              |
| 1:B:44:LEU:N      | 1:B:44:LEU:HD22   | 2.33                     | 0.43              |
| 1:BA:176:LEU:HD23 | 1:BA:176:LEU:H    | 1.83                     | 0.43              |
| 1:CB:168:ILE:HG21 | 1:CB:174:LEU:HB2  | 1.99                     | 0.43              |
| 1:EB:393:VAL:HG22 | 1:EB:411:ASP:C    | 2.43                     | 0.43              |
| 1:FA:541:LEU:CD2  | 1:FA:640:VAL:HG22 | 2.48                     | 0.43              |
| 1:G:216:VAL:HG13  | 1:G:216:VAL:O     | 2.19                     | 0.43              |
| 1:H:165:ALA:HB2   | 1:H:205:LEU:HD13  | 1.99                     | 0.43              |
| 1:H:366:VAL:HG13  | 1:H:366:VAL:O     | 2.18                     | 0.43              |
| 1:HA:176:LEU:HD21 | 1:HA:196:TRP:CE2  | 2.54                     | 0.43              |
| 1:I:44:LEU:HD22   | 1:I:44:LEU:N      | 2.34                     | 0.43              |
| 1:I:53:VAL:HG12   | 1:I:57:HIS:O      | 2.18                     | 0.43              |
| 1:IA:216:VAL:O    | 1:IA:216:VAL:HG13 | 2.18                     | 0.43              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:J:129:PHE:CE1   | 1:J:137:VAL:HG11  | 2.53                     | 0.43              |
| 1:J:366:VAL:O     | 1:J:366:VAL:HG13  | 2.19                     | 0.43              |
| 1:JA:366:VAL:O    | 1:JA:366:VAL:HG13 | 2.19                     | 0.43              |
| 1:K:219:VAL:HG11  | 1:K:227:LEU:HD22  | 2.01                     | 0.43              |
| 1:K:393:VAL:HG22  | 1:K:411:ASP:C     | 2.44                     | 0.43              |
| 1:KB:489:LEU:HD21 | 1:KB:495:PHE:CZ   | 2.54                     | 0.43              |
| 1:M:44:LEU:HD22   | 1:M:44:LEU:N      | 2.34                     | 0.43              |
| 1:MA:216:VAL:HG13 | 1:MA:216:VAL:O    | 2.19                     | 0.43              |
| 1:N:779:LEU:HD21  | 1:O:774:ARG:HG2   | 2.00                     | 0.43              |
| 1:NA:216:VAL:O    | 1:NA:216:VAL:HG13 | 2.19                     | 0.43              |
| 1:O:208:VAL:HG23  | 1:O:209:PHE:CD1   | 2.54                     | 0.43              |
| 1:OA:176:LEU:H    | 1:OA:176:LEU:HD23 | 1.82                     | 0.43              |
| 1:P:543:TYR:CE2   | 1:P:575:ILE:HG21  | 2.53                     | 0.43              |
| 1:Q:176:LEU:HD23  | 1:Q:176:LEU:H     | 1.82                     | 0.43              |
| 1:S:144:LEU:HD12  | 1:S:163:ILE:HD11  | 2.00                     | 0.43              |
| 1:S:176:LEU:HD23  | 1:S:176:LEU:H     | 1.83                     | 0.43              |
| 1:T:176:LEU:H     | 1:T:176:LEU:HD23  | 1.82                     | 0.43              |
| 1:TA:281:TYR:CG   | 1:TA:366:VAL:HG23 | 2.53                     | 0.43              |
| 1:TB:487:VAL:HG13 | 1:TB:487:VAL:O    | 2.17                     | 0.43              |
| 1:UB:44:LEU:HD22  | 1:UB:44:LEU:N     | 2.34                     | 0.43              |
| 1:V:176:LEU:HD21  | 1:V:196:TRP:CE2   | 2.54                     | 0.43              |
| 1:VB:334:LEU:HD12 | 1:VB:357:TRP:NE1  | 2.33                     | 0.43              |
| 1:W:523:PHE:CE2   | 1:W:545:TRP:CD1   | 3.06                     | 0.43              |
| 1:XA:176:LEU:HD21 | 1:XA:196:TRP:NE1  | 2.33                     | 0.43              |
| 1:XA:208:VAL:HG23 | 1:XA:209:PHE:CD1  | 2.54                     | 0.43              |
| 1:YA:359:ILE:HG23 | 1:YA:359:ILE:O    | 2.18                     | 0.43              |
| 1:YA:539:LEU:CD1  | 1:YA:640:VAL:HG13 | 2.48                     | 0.43              |
| 1:YB:176:LEU:H    | 1:YB:176:LEU:HD23 | 1.82                     | 0.43              |
| 1:Z:53:VAL:HG12   | 1:Z:57:HIS:O      | 2.18                     | 0.43              |
| 1:Z:129:PHE:CE1   | 1:Z:137:VAL:HG11  | 2.54                     | 0.43              |
| 1:ZA:216:VAL:O    | 1:ZA:216:VAL:HG13 | 2.18                     | 0.43              |
| 1:ZA:393:VAL:HG22 | 1:ZA:411:ASP:C    | 2.44                     | 0.43              |
| 1:ZB:219:VAL:HG11 | 1:ZB:227:LEU:HD22 | 2.01                     | 0.43              |
| 1:ZB:788:ALA:O    | 1:ZB:792:VAL:HG23 | 2.18                     | 0.43              |
| 1:AC:129:PHE:CE1  | 1:AC:137:VAL:HG11 | 2.54                     | 0.43              |
| 1:BA:345:ASP:OD2  | 1:BA:349:VAL:HG13 | 2.19                     | 0.43              |
| 1:C:176:LEU:HD23  | 1:C:176:LEU:H     | 1.82                     | 0.43              |
| 1:CB:523:PHE:CD2  | 1:CB:568:VAL:HG23 | 2.53                     | 0.43              |
| 1:F:176:LEU:HD21  | 1:F:196:TRP:NE1   | 2.33                     | 0.43              |
| 1:FA:3:THR:HG22   | 1:FA:6:PHE:HA     | 2.00                     | 0.43              |
| 1:FB:48:MET:HA    | 1:FB:48:MET:HE2   | 2.01                     | 0.43              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:G:487:VAL:O     | 1:G:487:VAL:HG13  | 2.18                     | 0.43              |
| 1:GA:208:VAL:HG23 | 1:GA:209:PHE:CD1  | 2.54                     | 0.43              |
| 1:H:543:TYR:CE2   | 1:H:575:ILE:HG21  | 2.54                     | 0.43              |
| 1:HA:17:HIS:HB3   | 1:HA:44:LEU:HD23  | 2.01                     | 0.43              |
| 1:HA:216:VAL:O    | 1:HA:216:VAL:HG13 | 2.19                     | 0.43              |
| 1:I:219:VAL:HG11  | 1:I:227:LEU:HD22  | 2.00                     | 0.43              |
| 1:I:398:VAL:HG12  | 1:I:491:PRO:HB3   | 1.99                     | 0.43              |
| 1:I:662:ILE:O     | 1:I:666:THR:HG23  | 2.18                     | 0.43              |
| 1:J:386:GLU:O     | 1:J:402:ILE:HG23  | 2.18                     | 0.43              |
| 1:J:393:VAL:HG22  | 1:J:411:ASP:C     | 2.43                     | 0.43              |
| 1:JA:44:LEU:HD22  | 1:JA:44:LEU:H     | 1.84                     | 0.43              |
| 1:K:597:ARG:O     | 1:K:601:THR:HG23  | 2.19                     | 0.43              |
| 1:L:216:VAL:O     | 1:L:216:VAL:HG13  | 2.18                     | 0.43              |
| 1:L:487:VAL:O     | 1:L:487:VAL:HG13  | 2.17                     | 0.43              |
| 1:LA:176:LEU:HD21 | 1:LA:196:TRP:CE2  | 2.54                     | 0.43              |
| 1:LA:208:VAL:HG23 | 1:LA:209:PHE:CD1  | 2.54                     | 0.43              |
| 1:MA:17:HIS:CB    | 1:MA:44:LEU:HD23  | 2.49                     | 0.43              |
| 1:MB:487:VAL:HG13 | 1:MB:487:VAL:O    | 2.17                     | 0.43              |
| 1:MB:779:LEU:HD21 | 1:NB:774:ARG:HG2  | 2.00                     | 0.43              |
| 1:N:176:LEU:HD23  | 1:N:176:LEU:H     | 1.83                     | 0.43              |
| 1:NA:44:LEU:H     | 1:NA:44:LEU:HD22  | 1.84                     | 0.43              |
| 1:NA:52:THR:O     | 1:NA:109:ILE:HD11 | 2.18                     | 0.43              |
| 1:O:176:LEU:HD23  | 1:O:176:LEU:H     | 1.83                     | 0.43              |
| 1:PB:176:LEU:HD23 | 1:PB:176:LEU:H    | 1.83                     | 0.43              |
| 1:RB:168:ILE:HG21 | 1:RB:174:LEU:HB2  | 2.00                     | 0.43              |
| 1:S:219:VAL:HG11  | 1:S:227:LEU:HD22  | 2.01                     | 0.43              |
| 1:S:345:ASP:OD2   | 1:S:349:VAL:HG13  | 2.18                     | 0.43              |
| 1:SB:543:TYR:CE2  | 1:SB:575:ILE:HG21 | 2.54                     | 0.43              |
| 1:T:219:VAL:HG11  | 1:T:227:LEU:HD13  | 2.01                     | 0.43              |
| 1:TA:176:LEU:HD21 | 1:TA:196:TRP:NE1  | 2.33                     | 0.43              |
| 1:TA:393:VAL:HG22 | 1:TA:411:ASP:C    | 2.44                     | 0.43              |
| 1:TA:487:VAL:O    | 1:TA:487:VAL:HG13 | 2.19                     | 0.43              |
| 1:TB:176:LEU:HD21 | 1:TB:196:TRP:CE2  | 2.54                     | 0.43              |
| 1:TB:208:VAL:HG23 | 1:TB:209:PHE:CD1  | 2.54                     | 0.43              |
| 1:WA:393:VAL:HG22 | 1:WA:411:ASP:C    | 2.44                     | 0.43              |
| 1:YB:366:VAL:O    | 1:YB:366:VAL:HG13 | 2.18                     | 0.43              |
| 1:YB:758:GLU:O    | 1:YB:762:VAL:HG22 | 2.19                     | 0.43              |
| 1:ZA:30:VAL:CG2   | 1:ZA:50:MET:HE3   | 2.49                     | 0.43              |
| 1:ZB:17:HIS:CB    | 1:ZB:44:LEU:HD23  | 2.48                     | 0.43              |
| 1:A:539:LEU:CD1   | 1:A:640:VAL:HG13  | 2.49                     | 0.43              |
| 1:AA:44:LEU:HD22  | 1:AA:44:LEU:N     | 2.34                     | 0.43              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:176:LEU:HD21 | 1:AA:196:TRP:CE2  | 2.54                     | 0.43              |
| 1:AC:176:LEU:HD21 | 1:AC:196:TRP:CE2  | 2.54                     | 0.43              |
| 1:AC:366:VAL:HG13 | 1:AC:366:VAL:O    | 2.19                     | 0.43              |
| 1:AC:643:VAL:O    | 1:AC:643:VAL:HG12 | 2.18                     | 0.43              |
| 1:B:570:ASP:OD1   | 1:B:570:ASP:C     | 2.62                     | 0.43              |
| 1:B:662:ILE:O     | 1:B:666:THR:HG23  | 2.19                     | 0.43              |
| 1:BB:168:ILE:HG22 | 1:BB:215:LEU:CD2  | 2.47                     | 0.43              |
| 1:C:487:VAL:O     | 1:C:487:VAL:HG13  | 2.17                     | 0.43              |
| 1:CB:216:VAL:O    | 1:CB:216:VAL:HG13 | 2.19                     | 0.43              |
| 1:CB:405:THR:HG21 | 1:DB:393:VAL:O    | 2.19                     | 0.43              |
| 1:D:539:LEU:CD1   | 1:D:640:VAL:HG13  | 2.49                     | 0.43              |
| 1:E:539:LEU:CD1   | 1:E:640:VAL:HG13  | 2.49                     | 0.43              |
| 1:FA:56:ARG:HE    | 1:GA:127:LEU:CD2  | 2.31                     | 0.43              |
| 1:FB:30:VAL:CG2   | 1:FB:50:MET:HE3   | 2.46                     | 0.43              |
| 1:G:129:PHE:CE1   | 1:G:137:VAL:HG11  | 2.53                     | 0.43              |
| 1:G:176:LEU:HD23  | 1:G:176:LEU:H     | 1.83                     | 0.43              |
| 1:GA:216:VAL:O    | 1:GA:216:VAL:HG13 | 2.19                     | 0.43              |
| 1:GA:643:VAL:O    | 1:GA:643:VAL:HG12 | 2.18                     | 0.43              |
| 1:HA:138:VAL:HG12 | 1:HA:139:ALA:N    | 2.34                     | 0.43              |
| 1:I:129:PHE:CE1   | 1:I:137:VAL:HG11  | 2.54                     | 0.43              |
| 1:I:176:LEU:HD23  | 1:I:176:LEU:H     | 1.83                     | 0.43              |
| 1:IA:121:LEU:HD23 | 1:IA:162:ILE:HG22 | 2.01                     | 0.43              |
| 1:IA:523:PHE:CE2  | 1:IA:545:TRP:CD1  | 3.07                     | 0.43              |
| 1:IB:487:VAL:O    | 1:IB:487:VAL:HG13 | 2.18                     | 0.43              |
| 1:J:121:LEU:HD23  | 1:J:162:ILE:HG22  | 2.01                     | 0.43              |
| 1:J:208:VAL:HG23  | 1:J:209:PHE:CD1   | 2.54                     | 0.43              |
| 1:K:121:LEU:HD23  | 1:K:162:ILE:HG22  | 2.00                     | 0.43              |
| 1:K:129:PHE:CE1   | 1:K:137:VAL:HG11  | 2.54                     | 0.43              |
| 1:K:176:LEU:HD23  | 1:K:176:LEU:H     | 1.82                     | 0.43              |
| 1:KB:487:VAL:O    | 1:KB:487:VAL:HG13 | 2.18                     | 0.43              |
| 1:LB:216:VAL:O    | 1:LB:216:VAL:HG13 | 2.19                     | 0.43              |
| 1:MA:138:VAL:HG12 | 1:MA:139:ALA:N    | 2.34                     | 0.43              |
| 1:MB:176:LEU:HD23 | 1:MB:176:LEU:H    | 1.82                     | 0.43              |
| 1:N:44:LEU:HD22   | 1:N:44:LEU:N      | 2.34                     | 0.43              |
| 1:N:523:PHE:CE2   | 1:N:545:TRP:CD1   | 3.07                     | 0.43              |
| 1:NB:168:ILE:HG21 | 1:NB:174:LEU:HB2  | 2.00                     | 0.43              |
| 1:O:17:HIS:HB3    | 1:O:44:LEU:HD23   | 2.00                     | 0.43              |
| 1:O:44:LEU:HD22   | 1:O:44:LEU:N      | 2.34                     | 0.43              |
| 1:O:165:ALA:HB2   | 1:O:205:LEU:HD13  | 2.00                     | 0.43              |
| 1:O:219:VAL:HG11  | 1:O:227:LEU:HD22  | 2.01                     | 0.43              |
| 1:O:426:LEU:HD23  | 1:O:427:LEU:HD22  | 2.00                     | 0.43              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:Q:168:ILE:HG21  | 1:Q:174:LEU:HB2   | 2.00                     | 0.43              |
| 1:Q:543:TYR:CE2   | 1:Q:575:ILE:HG21  | 2.54                     | 0.43              |
| 1:Q:758:GLU:O     | 1:Q:762:VAL:HG22  | 2.18                     | 0.43              |
| 1:QA:44:LEU:HD22  | 1:QA:44:LEU:N     | 2.34                     | 0.43              |
| 1:QB:208:VAL:HG23 | 1:QB:209:PHE:CD1  | 2.54                     | 0.43              |
| 1:R:176:LEU:HD21  | 1:R:196:TRP:CE2   | 2.53                     | 0.43              |
| 1:RA:44:LEU:HD22  | 1:RA:44:LEU:N     | 2.34                     | 0.43              |
| 1:RB:176:LEU:HD23 | 1:RB:176:LEU:H    | 1.82                     | 0.43              |
| 1:RB:487:VAL:O    | 1:RB:487:VAL:HG13 | 2.18                     | 0.43              |
| 1:S:44:LEU:HD22   | 1:S:44:LEU:N      | 2.34                     | 0.43              |
| 1:S:487:VAL:HG13  | 1:S:487:VAL:O     | 2.18                     | 0.43              |
| 1:SB:44:LEU:HD22  | 1:SB:44:LEU:N     | 2.33                     | 0.43              |
| 1:SB:176:LEU:HD23 | 1:SB:176:LEU:H    | 1.83                     | 0.43              |
| 1:SB:386:GLU:O    | 1:SB:402:ILE:HG23 | 2.19                     | 0.43              |
| 1:TB:216:VAL:O    | 1:TB:216:VAL:HG13 | 2.19                     | 0.43              |
| 1:TB:597:ARG:O    | 1:TB:601:THR:HG23 | 2.19                     | 0.43              |
| 1:TB:643:VAL:O    | 1:TB:643:VAL:HG12 | 2.19                     | 0.43              |
| 1:VB:208:VAL:HG23 | 1:VB:209:PHE:CD1  | 2.54                     | 0.43              |
| 1:WA:398:VAL:HG12 | 1:WA:491:PRO:HB3  | 1.99                     | 0.43              |
| 1:XA:216:VAL:HG13 | 1:XA:216:VAL:O    | 2.19                     | 0.43              |
| 1:XB:52:THR:O     | 1:XB:109:ILE:HD11 | 2.18                     | 0.43              |
| 1:XB:176:LEU:HD21 | 1:XB:196:TRP:CE2  | 2.54                     | 0.43              |
| 1:YA:44:LEU:HD22  | 1:YA:44:LEU:N     | 2.33                     | 0.43              |
| 1:YA:159:VAL:O    | 1:YA:159:VAL:HG12 | 2.18                     | 0.43              |
| 1:YB:219:VAL:HG11 | 1:YB:227:LEU:HD13 | 2.01                     | 0.43              |
| 1:A:176:LEU:HD21  | 1:A:196:TRP:CE2   | 2.54                     | 0.43              |
| 1:A:216:VAL:O     | 1:A:216:VAL:HG13  | 2.19                     | 0.43              |
| 1:AC:17:HIS:CB    | 1:AC:44:LEU:HD23  | 2.49                     | 0.43              |
| 1:AC:44:LEU:HD22  | 1:AC:44:LEU:N     | 2.34                     | 0.43              |
| 1:B:758:GLU:O     | 1:B:762:VAL:HG22  | 2.19                     | 0.43              |
| 1:BA:539:LEU:HD21 | 1:BA:599:ILE:HD11 | 2.01                     | 0.43              |
| 1:BB:539:LEU:CD1  | 1:BB:640:VAL:HG13 | 2.48                     | 0.43              |
| 1:C:786:GLN:OE1   | 1:D:781:VAL:HG11  | 2.19                     | 0.43              |
| 1:D:121:LEU:HD23  | 1:D:162:ILE:HG22  | 2.00                     | 0.43              |
| 1:D:216:VAL:HG13  | 1:D:216:VAL:O     | 2.19                     | 0.43              |
| 1:EB:216:VAL:O    | 1:EB:216:VAL:HG13 | 2.19                     | 0.43              |
| 1:F:129:PHE:CE1   | 1:F:137:VAL:HG11  | 2.54                     | 0.43              |
| 1:F:176:LEU:HD23  | 1:F:176:LEU:H     | 1.83                     | 0.43              |
| 1:FB:44:LEU:HD22  | 1:FB:44:LEU:N     | 2.33                     | 0.43              |
| 1:GA:176:LEU:HD21 | 1:GA:196:TRP:CE2  | 2.53                     | 0.43              |
| 1:H:63:ASN:OD1    | 1:H:104:VAL:HG12  | 2.18                     | 0.43              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:HA:208:VAL:HG23 | 1:HA:209:PHE:CD1  | 2.54                     | 0.43              |
| 1:HA:219:VAL:HG11 | 1:HA:227:LEU:HD22 | 2.01                     | 0.43              |
| 1:HA:326:LEU:HD12 | 1:HA:363:LEU:HD21 | 2.01                     | 0.43              |
| 1:HB:176:LEU:HD21 | 1:HB:196:TRP:CE2  | 2.54                     | 0.43              |
| 1:I:176:LEU:HD21  | 1:I:196:TRP:CE2   | 2.54                     | 0.43              |
| 1:I:208:VAL:HG23  | 1:I:209:PHE:CD1   | 2.54                     | 0.43              |
| 1:IB:219:VAL:HG11 | 1:IB:227:LEU:HD22 | 2.00                     | 0.43              |
| 1:JA:17:HIS:CB    | 1:JA:44:LEU:HD23  | 2.49                     | 0.43              |
| 1:KA:44:LEU:H     | 1:KA:44:LEU:HD22  | 1.84                     | 0.43              |
| 1:KB:216:VAL:O    | 1:KB:216:VAL:HG13 | 2.19                     | 0.43              |
| 1:KB:597:ARG:O    | 1:KB:601:THR:HG23 | 2.19                     | 0.43              |
| 1:KB:643:VAL:O    | 1:KB:643:VAL:HG12 | 2.19                     | 0.43              |
| 1:LA:52:THR:O     | 1:LA:109:ILE:HD11 | 2.18                     | 0.43              |
| 1:LB:208:VAL:HG23 | 1:LB:209:PHE:CD1  | 2.54                     | 0.43              |
| 1:M:17:HIS:HB3    | 1:M:44:LEU:HD23   | 1.99                     | 0.43              |
| 1:MA:779:LEU:HD21 | 1:NA:774:ARG:HG2  | 2.00                     | 0.43              |
| 1:MB:129:PHE:CE1  | 1:MB:137:VAL:HG11 | 2.54                     | 0.43              |
| 1:NA:643:VAL:O    | 1:NA:643:VAL:HG12 | 2.18                     | 0.43              |
| 1:OA:366:VAL:O    | 1:OA:366:VAL:HG13 | 2.18                     | 0.43              |
| 1:OB:53:VAL:HG12  | 1:OB:57:HIS:O     | 2.18                     | 0.43              |
| 1:P:176:LEU:HD23  | 1:P:176:LEU:H     | 1.83                     | 0.43              |
| 1:QA:529:ILE:HD12 | 1:QA:583:VAL:HG11 | 2.00                     | 0.43              |
| 1:QB:121:LEU:HD23 | 1:QB:162:ILE:HG22 | 2.00                     | 0.43              |
| 1:RA:176:LEU:HD21 | 1:RA:196:TRP:CE2  | 2.53                     | 0.43              |
| 1:RA:359:ILE:O    | 1:RA:359:ILE:HG23 | 2.19                     | 0.43              |
| 1:SA:168:ILE:HG21 | 1:SA:174:LEU:HB2  | 2.01                     | 0.43              |
| 1:T:216:VAL:O     | 1:T:216:VAL:HG13  | 2.17                     | 0.43              |
| 1:TA:539:LEU:HD11 | 1:TA:640:VAL:HG13 | 2.00                     | 0.43              |
| 1:UA:176:LEU:HD21 | 1:UA:196:TRP:NE1  | 2.34                     | 0.43              |
| 1:UA:176:LEU:HD23 | 1:UA:176:LEU:H    | 1.83                     | 0.43              |
| 1:UA:219:VAL:HG11 | 1:UA:227:LEU:HD22 | 2.00                     | 0.43              |
| 1:V:143:TRP:HH2   | 1:V:157:VAL:HG22  | 1.84                     | 0.43              |
| 1:WA:208:VAL:HG23 | 1:WA:209:PHE:CD1  | 2.54                     | 0.43              |
| 1:WA:216:VAL:O    | 1:WA:216:VAL:HG13 | 2.19                     | 0.43              |
| 1:WB:539:LEU:HD11 | 1:WB:599:ILE:CD1  | 2.49                     | 0.43              |
| 1:X:489:LEU:HD21  | 1:X:495:PHE:CZ    | 2.54                     | 0.43              |
| 1:XA:487:VAL:HG13 | 1:XA:487:VAL:O    | 2.18                     | 0.43              |
| 1:XB:529:ILE:HD13 | 1:XB:583:VAL:HG11 | 2.00                     | 0.43              |
| 1:Y:138:VAL:HG12  | 1:Y:139:ALA:N     | 2.33                     | 0.43              |
| 1:Y:208:VAL:HG23  | 1:Y:209:PHE:CD1   | 2.54                     | 0.43              |
| 1:YA:216:VAL:O    | 1:YA:216:VAL:HG13 | 2.19                     | 0.43              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:YB:516:LEU:HD23 | 1:YB:516:LEU:C    | 2.44                     | 0.43              |
| 1:ZA:129:PHE:CE1  | 1:ZA:137:VAL:HG11 | 2.54                     | 0.43              |
| 1:ZB:176:LEU:HD23 | 1:ZB:176:LEU:H    | 1.83                     | 0.43              |
| 1:ZB:219:VAL:HG11 | 1:ZB:227:LEU:HD13 | 2.01                     | 0.43              |
| 1:AB:758:GLU:O    | 1:AB:762:VAL:HG22 | 2.18                     | 0.43              |
| 1:B:168:ILE:HG21  | 1:B:174:LEU:HB2   | 2.00                     | 0.43              |
| 1:BA:523:PHE:CE2  | 1:BA:545:TRP:CD1  | 3.07                     | 0.43              |
| 1:BB:523:PHE:CE2  | 1:BB:545:TRP:CD1  | 3.07                     | 0.43              |
| 1:BB:643:VAL:O    | 1:BB:643:VAL:HG12 | 2.19                     | 0.43              |
| 1:C:138:VAL:HG12  | 1:C:139:ALA:N     | 2.34                     | 0.43              |
| 1:CB:176:LEU:HD23 | 1:CB:176:LEU:H    | 1.83                     | 0.43              |
| 1:D:138:VAL:HG12  | 1:D:139:ALA:N     | 2.34                     | 0.43              |
| 1:DA:138:VAL:HG12 | 1:DA:139:ALA:N    | 2.34                     | 0.43              |
| 1:G:662:ILE:O     | 1:G:666:THR:HG23  | 2.19                     | 0.43              |
| 1:GA:44:LEU:HD22  | 1:GA:44:LEU:N     | 2.33                     | 0.43              |
| 1:GB:208:VAL:HG23 | 1:GB:209:PHE:CD1  | 2.54                     | 0.43              |
| 1:GB:779:LEU:HD21 | 1:HB:774:ARG:HG2  | 2.00                     | 0.43              |
| 1:H:208:VAL:HG23  | 1:H:209:PHE:CD1   | 2.54                     | 0.43              |
| 1:IA:165:ALA:HB2  | 1:IA:205:LEU:HD13 | 2.00                     | 0.43              |
| 1:IB:643:VAL:O    | 1:IB:643:VAL:HG12 | 2.19                     | 0.43              |
| 1:J:176:LEU:HD21  | 1:J:196:TRP:NE1   | 2.33                     | 0.43              |
| 1:JA:53:VAL:HG12  | 1:JA:57:HIS:O     | 2.19                     | 0.43              |
| 1:JA:176:LEU:HD21 | 1:JA:196:TRP:CE2  | 2.54                     | 0.43              |
| 1:JA:216:VAL:HG13 | 1:JA:216:VAL:O    | 2.19                     | 0.43              |
| 1:K:208:VAL:HG23  | 1:K:209:PHE:CD1   | 2.54                     | 0.43              |
| 1:LA:138:VAL:HG12 | 1:LA:139:ALA:N    | 2.34                     | 0.43              |
| 1:LA:216:VAL:O    | 1:LA:216:VAL:HG13 | 2.19                     | 0.43              |
| 1:M:53:VAL:HG12   | 1:M:57:HIS:O      | 2.18                     | 0.43              |
| 1:M:208:VAL:HG23  | 1:M:209:PHE:CD1   | 2.54                     | 0.43              |
| 1:MB:208:VAL:HG23 | 1:MB:209:PHE:CD1  | 2.54                     | 0.43              |
| 1:NA:138:VAL:HG12 | 1:NA:139:ALA:N    | 2.34                     | 0.43              |
| 1:NB:208:VAL:HG23 | 1:NB:209:PHE:CD1  | 2.54                     | 0.43              |
| 1:NB:359:ILE:O    | 1:NB:359:ILE:HG23 | 2.18                     | 0.43              |
| 1:OA:219:VAL:HG11 | 1:OA:227:LEU:HD13 | 2.01                     | 0.43              |
| 1:OB:44:LEU:N     | 1:OB:44:LEU:HD22  | 2.34                     | 0.43              |
| 1:P:529:ILE:HD13  | 1:P:583:VAL:HG21  | 2.00                     | 0.43              |
| 1:PA:345:ASP:OD2  | 1:PA:349:VAL:HG13 | 2.18                     | 0.43              |
| 1:PA:393:VAL:HG22 | 1:PA:411:ASP:C    | 2.44                     | 0.43              |
| 1:Q:359:ILE:O     | 1:Q:359:ILE:HG23  | 2.18                     | 0.43              |
| 1:QB:176:LEU:H    | 1:QB:176:LEU:HD23 | 1.82                     | 0.43              |
| 1:RB:17:HIS:CB    | 1:RB:44:LEU:HD23  | 2.49                     | 0.43              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:RB:44:LEU:HD22  | 1:RB:44:LEU:H     | 1.83                     | 0.43              |
| 1:SA:758:GLU:O    | 1:SA:762:VAL:HG22 | 2.18                     | 0.43              |
| 1:SB:539:LEU:HD21 | 1:SB:599:ILE:HD11 | 1.99                     | 0.43              |
| 1:UA:366:VAL:O    | 1:UA:366:VAL:HG13 | 2.18                     | 0.43              |
| 1:UB:216:VAL:O    | 1:UB:216:VAL:HG13 | 2.19                     | 0.43              |
| 1:W:539:LEU:HD21  | 1:W:599:ILE:HD11  | 2.00                     | 0.43              |
| 1:WA:92:LEU:N     | 1:WA:92:LEU:HD12  | 2.34                     | 0.43              |
| 1:X:44:LEU:HD22   | 1:X:44:LEU:N      | 2.34                     | 0.43              |
| 1:XA:52:THR:O     | 1:XA:109:ILE:HD11 | 2.19                     | 0.43              |
| 1:XB:25:VAL:HG21  | 1:XB:78:THR:O     | 2.18                     | 0.43              |
| 1:XB:176:LEU:HD23 | 1:XB:176:LEU:H    | 1.83                     | 0.43              |
| 1:YA:208:VAL:HG23 | 1:YA:209:PHE:CD1  | 2.54                     | 0.43              |
| 1:YB:398:VAL:HG12 | 1:YB:491:PRO:HB3  | 2.00                     | 0.43              |
| 1:Z:359:ILE:O     | 1:Z:359:ILE:HG23  | 2.19                     | 0.43              |
| 1:ZA:176:LEU:HD21 | 1:ZA:196:TRP:NE1  | 2.34                     | 0.43              |
| 1:ZA:529:ILE:HD13 | 1:ZA:583:VAL:HG11 | 1.99                     | 0.43              |
| 1:A:143:TRP:HH2   | 1:A:157:VAL:HG22  | 1.84                     | 0.42              |
| 1:A:168:ILE:HG22  | 1:A:215:LEU:CD2   | 2.45                     | 0.42              |
| 1:AB:176:LEU:HD21 | 1:AB:196:TRP:CE2  | 2.54                     | 0.42              |
| 1:AB:219:VAL:HG11 | 1:AB:227:LEU:HD22 | 2.01                     | 0.42              |
| 1:CB:44:LEU:HD22  | 1:CB:44:LEU:H     | 1.84                     | 0.42              |
| 1:CB:176:LEU:HD21 | 1:CB:196:TRP:NE1  | 2.34                     | 0.42              |
| 1:CB:426:LEU:HD23 | 1:CB:427:LEU:HD22 | 2.00                     | 0.42              |
| 1:D:129:PHE:CE1   | 1:D:137:VAL:HG11  | 2.54                     | 0.42              |
| 1:D:359:ILE:O     | 1:D:359:ILE:HG23  | 2.19                     | 0.42              |
| 1:D:539:LEU:HD21  | 1:D:599:ILE:HD11  | 2.00                     | 0.42              |
| 1:EA:44:LEU:HD22  | 1:EA:44:LEU:N     | 2.34                     | 0.42              |
| 1:EB:570:ASP:OD1  | 1:EB:570:ASP:C    | 2.62                     | 0.42              |
| 1:F:208:VAL:HG23  | 1:F:209:PHE:CD1   | 2.54                     | 0.42              |
| 1:F:216:VAL:O     | 1:F:216:VAL:HG13  | 2.19                     | 0.42              |
| 1:FA:216:VAL:O    | 1:FA:216:VAL:HG13 | 2.19                     | 0.42              |
| 1:GB:44:LEU:N     | 1:GB:44:LEU:HD22  | 2.33                     | 0.42              |
| 1:GB:176:LEU:HD21 | 1:GB:196:TRP:NE1  | 2.34                     | 0.42              |
| 1:GB:523:PHE:CE2  | 1:GB:545:TRP:CD1  | 3.07                     | 0.42              |
| 1:HA:44:LEU:N     | 1:HA:44:LEU:HD22  | 2.33                     | 0.42              |
| 1:IA:17:HIS:HB3   | 1:IA:44:LEU:HD23  | 2.01                     | 0.42              |
| 1:IA:176:LEU:HD21 | 1:IA:196:TRP:CE2  | 2.54                     | 0.42              |
| 1:IB:539:LEU:CD1  | 1:IB:640:VAL:HG13 | 2.49                     | 0.42              |
| 1:JA:138:VAL:HG12 | 1:JA:139:ALA:N    | 2.34                     | 0.42              |
| 1:KA:176:LEU:HD21 | 1:KA:196:TRP:NE1  | 2.34                     | 0.42              |
| 1:KB:121:LEU:HD23 | 1:KB:162:ILE:HG22 | 2.00                     | 0.42              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:LA:487:VAL:O    | 1:LA:487:VAL:HG13 | 2.18                     | 0.42              |
| 1:M:129:PHE:CE1   | 1:M:137:VAL:HG11  | 2.54                     | 0.42              |
| 1:M:487:VAL:O     | 1:M:487:VAL:HG13  | 2.18                     | 0.42              |
| 1:MA:219:VAL:HG11 | 1:MA:227:LEU:HD13 | 2.00                     | 0.42              |
| 1:MB:44:LEU:HD22  | 1:MB:44:LEU:N     | 2.34                     | 0.42              |
| 1:MB:138:VAL:HG12 | 1:MB:139:ALA:N    | 2.34                     | 0.42              |
| 1:N:216:VAL:O     | 1:N:216:VAL:HG13  | 2.19                     | 0.42              |
| 1:OA:779:LEU:HD21 | 1:PA:774:ARG:HG2  | 2.01                     | 0.42              |
| 1:PA:539:LEU:HD21 | 1:PA:599:ILE:HD11 | 2.01                     | 0.42              |
| 1:PB:44:LEU:HD22  | 1:PB:44:LEU:N     | 2.34                     | 0.42              |
| 1:Q:48:MET:HA     | 1:Q:48:MET:HE3    | 2.00                     | 0.42              |
| 1:R:17:HIS:HB3    | 1:R:44:LEU:HD23   | 2.01                     | 0.42              |
| 1:S:208:VAL:HG23  | 1:S:209:PHE:CD1   | 2.54                     | 0.42              |
| 1:S:523:PHE:CE2   | 1:S:545:TRP:CD1   | 3.07                     | 0.42              |
| 1:TB:52:THR:O     | 1:TB:109:ILE:HD11 | 2.19                     | 0.42              |
| 1:UA:17:HIS:CB    | 1:UA:44:LEU:HD23  | 2.49                     | 0.42              |
| 1:VA:208:VAL:HG23 | 1:VA:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:VA:216:VAL:O    | 1:VA:216:VAL:HG13 | 2.19                     | 0.42              |
| 1:VA:366:VAL:HG13 | 1:VA:366:VAL:O    | 2.19                     | 0.42              |
| 1:VB:165:ALA:HB2  | 1:VB:205:LEU:HD13 | 2.00                     | 0.42              |
| 1:VB:176:LEU:HD23 | 1:VB:176:LEU:H    | 1.83                     | 0.42              |
| 1:VB:216:VAL:HG13 | 1:VB:216:VAL:O    | 2.19                     | 0.42              |
| 1:WA:662:ILE:O    | 1:WA:666:THR:HG23 | 2.19                     | 0.42              |
| 1:X:758:GLU:O     | 1:X:762:VAL:HG22  | 2.18                     | 0.42              |
| 1:XB:44:LEU:HD22  | 1:XB:44:LEU:N     | 2.34                     | 0.42              |
| 1:ZA:17:HIS:CB    | 1:ZA:44:LEU:HD23  | 2.49                     | 0.42              |
| 1:ZA:570:ASP:C    | 1:ZA:570:ASP:OD1  | 2.62                     | 0.42              |
| 1:A:489:LEU:HD21  | 1:A:495:PHE:CZ    | 2.54                     | 0.42              |
| 1:AA:359:ILE:HG23 | 1:AA:359:ILE:O    | 2.18                     | 0.42              |
| 1:AB:53:VAL:HG12  | 1:AB:57:HIS:O     | 2.18                     | 0.42              |
| 1:AB:138:VAL:HG12 | 1:AB:139:ALA:N    | 2.35                     | 0.42              |
| 1:AB:208:VAL:HG23 | 1:AB:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:AC:359:ILE:O    | 1:AC:359:ILE:HG23 | 2.19                     | 0.42              |
| 1:BA:643:VAL:O    | 1:BA:643:VAL:HG12 | 2.19                     | 0.42              |
| 1:BB:176:LEU:HD21 | 1:BB:196:TRP:CE2  | 2.54                     | 0.42              |
| 1:BB:216:VAL:O    | 1:BB:216:VAL:HG13 | 2.19                     | 0.42              |
| 1:CB:208:VAL:HG23 | 1:CB:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:CB:359:ILE:O    | 1:CB:359:ILE:HG23 | 2.19                     | 0.42              |
| 1:CB:523:PHE:CE2  | 1:CB:545:TRP:CD1  | 3.07                     | 0.42              |
| 1:D:168:ILE:HG22  | 1:D:215:LEU:CD2   | 2.44                     | 0.42              |
| 1:D:208:VAL:HG23  | 1:D:209:PHE:CD1   | 2.54                     | 0.42              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:DA:121:LEU:HD23 | 1:DA:162:ILE:HG22 | 2.00                     | 0.42              |
| 1:DA:129:PHE:CE1  | 1:DA:137:VAL:HG11 | 2.54                     | 0.42              |
| 1:E:216:VAL:O     | 1:E:216:VAL:HG13  | 2.19                     | 0.42              |
| 1:EA:208:VAL:HG23 | 1:EA:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:EB:487:VAL:O    | 1:EB:487:VAL:HG13 | 2.19                     | 0.42              |
| 1:G:138:VAL:HG12  | 1:G:139:ALA:N     | 2.34                     | 0.42              |
| 1:G:176:LEU:HD21  | 1:G:196:TRP:NE1   | 2.34                     | 0.42              |
| 1:G:541:LEU:CD2   | 1:G:640:VAL:HG22  | 2.49                     | 0.42              |
| 1:GB:121:LEU:HD23 | 1:GB:162:ILE:HG22 | 2.00                     | 0.42              |
| 1:GB:216:VAL:O    | 1:GB:216:VAL:HG13 | 2.19                     | 0.42              |
| 1:GB:302:VAL:HG11 | 1:GB:306:LYS:HZ2  | 1.84                     | 0.42              |
| 1:HB:487:VAL:O    | 1:HB:487:VAL:HG13 | 2.18                     | 0.42              |
| 1:IA:53:VAL:HG12  | 1:IA:57:HIS:O     | 2.19                     | 0.42              |
| 1:IA:176:LEU:HD21 | 1:IA:196:TRP:NE1  | 2.34                     | 0.42              |
| 1:JA:208:VAL:HG23 | 1:JA:209:PHE:CD1  | 2.55                     | 0.42              |
| 1:JB:138:VAL:HG12 | 1:JB:139:ALA:N    | 2.35                     | 0.42              |
| 1:JB:176:LEU:HD23 | 1:JB:176:LEU:H    | 1.83                     | 0.42              |
| 1:JB:208:VAL:HG23 | 1:JB:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:KB:53:VAL:HG12  | 1:KB:57:HIS:O     | 2.19                     | 0.42              |
| 1:KB:138:VAL:HG12 | 1:KB:139:ALA:N    | 2.34                     | 0.42              |
| 1:L:208:VAL:HG23  | 1:L:209:PHE:CD1   | 2.55                     | 0.42              |
| 1:MA:208:VAL:HG23 | 1:MA:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:NB:138:VAL:HG12 | 1:NB:139:ALA:N    | 2.34                     | 0.42              |
| 1:O:216:VAL:HG13  | 1:O:216:VAL:O     | 2.19                     | 0.42              |
| 1:OA:208:VAL:HG23 | 1:OA:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:OA:489:LEU:HD21 | 1:OA:495:PHE:CZ   | 2.54                     | 0.42              |
| 1:OB:138:VAL:HG12 | 1:OB:139:ALA:N    | 2.34                     | 0.42              |
| 1:PA:63:ASN:OD1   | 1:PA:104:VAL:HG12 | 2.19                     | 0.42              |
| 1:RB:359:ILE:O    | 1:RB:359:ILE:HG23 | 2.19                     | 0.42              |
| 1:S:138:VAL:HG12  | 1:S:139:ALA:N     | 2.34                     | 0.42              |
| 1:SA:56:ARG:N     | 1:SA:56:ARG:HE    | 2.17                     | 0.42              |
| 1:SB:216:VAL:O    | 1:SB:216:VAL:HG13 | 2.19                     | 0.42              |
| 1:TA:208:VAL:HG23 | 1:TA:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:UA:44:LEU:HD22  | 1:UA:44:LEU:N     | 2.34                     | 0.42              |
| 1:UA:216:VAL:HG13 | 1:UA:216:VAL:O    | 2.19                     | 0.42              |
| 1:V:176:LEU:HD23  | 1:V:176:LEU:H     | 1.82                     | 0.42              |
| 1:WA:138:VAL:HG12 | 1:WA:139:ALA:N    | 2.34                     | 0.42              |
| 1:WA:359:ILE:HG23 | 1:WA:359:ILE:O    | 2.19                     | 0.42              |
| 1:WB:168:ILE:HG21 | 1:WB:174:LEU:HB2  | 2.00                     | 0.42              |
| 1:WB:176:LEU:HD23 | 1:WB:176:LEU:H    | 1.83                     | 0.42              |
| 1:XA:176:LEU:HD21 | 1:XA:196:TRP:CE2  | 2.54                     | 0.42              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:XA:662:ILE:O    | 1:XA:666:THR:HG23 | 2.19                     | 0.42              |
| 1:Z:176:LEU:HD21  | 1:Z:196:TRP:CE2   | 2.54                     | 0.42              |
| 1:ZA:138:VAL:HG12 | 1:ZA:139:ALA:N    | 2.34                     | 0.42              |
| 1:A:176:LEU:HD21  | 1:A:196:TRP:NE1   | 2.35                     | 0.42              |
| 1:A:597:ARG:O     | 1:A:601:THR:HG23  | 2.19                     | 0.42              |
| 1:BB:44:LEU:HD22  | 1:BB:44:LEU:N     | 2.34                     | 0.42              |
| 1:BB:393:VAL:HG22 | 1:BB:411:ASP:C    | 2.44                     | 0.42              |
| 1:C:529:ILE:HD13  | 1:C:583:VAL:HG21  | 2.00                     | 0.42              |
| 1:CA:44:LEU:H     | 1:CA:44:LEU:HD22  | 1.84                     | 0.42              |
| 1:DA:529:ILE:HD13 | 1:DA:583:VAL:HG11 | 2.01                     | 0.42              |
| 1:DB:654:LEU:HD22 | 1:EB:534:HIS:CG   | 2.54                     | 0.42              |
| 1:EA:216:VAL:HG13 | 1:EA:216:VAL:O    | 2.19                     | 0.42              |
| 1:EB:176:LEU:HD21 | 1:EB:196:TRP:CE2  | 2.55                     | 0.42              |
| 1:F:44:LEU:HD22   | 1:F:44:LEU:N      | 2.34                     | 0.42              |
| 1:F:359:ILE:O     | 1:F:359:ILE:HG23  | 2.19                     | 0.42              |
| 1:F:398:VAL:HG12  | 1:F:491:PRO:HB3   | 1.99                     | 0.42              |
| 1:F:539:LEU:CD1   | 1:F:640:VAL:HG13  | 2.49                     | 0.42              |
| 1:G:539:LEU:HD11  | 1:G:640:VAL:HG13  | 2.01                     | 0.42              |
| 1:GA:393:VAL:HG22 | 1:GA:411:ASP:C    | 2.44                     | 0.42              |
| 1:GA:597:ARG:O    | 1:GA:601:THR:HG23 | 2.18                     | 0.42              |
| 1:H:487:VAL:HG13  | 1:H:487:VAL:O     | 2.18                     | 0.42              |
| 1:HA:393:VAL:HG22 | 1:HA:411:ASP:C    | 2.43                     | 0.42              |
| 1:HB:208:VAL:HG23 | 1:HB:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:I:597:ARG:O     | 1:I:601:THR:HG23  | 2.20                     | 0.42              |
| 1:IB:129:PHE:CE1  | 1:IB:137:VAL:HG11 | 2.55                     | 0.42              |
| 1:K:165:ALA:HB2   | 1:K:205:LEU:HD13  | 2.00                     | 0.42              |
| 1:KA:216:VAL:O    | 1:KA:216:VAL:HG13 | 2.19                     | 0.42              |
| 1:KB:208:VAL:HG23 | 1:KB:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:KB:523:PHE:CE2  | 1:KB:545:TRP:CD1  | 3.07                     | 0.42              |
| 1:LA:359:ILE:HG23 | 1:LA:359:ILE:O    | 2.19                     | 0.42              |
| 1:LB:523:PHE:CE2  | 1:LB:545:TRP:CD1  | 3.08                     | 0.42              |
| 1:MA:326:LEU:HD12 | 1:MA:363:LEU:HD21 | 2.00                     | 0.42              |
| 1:MB:176:LEU:HD21 | 1:MB:196:TRP:CE2  | 2.54                     | 0.42              |
| 1:NA:176:LEU:HD21 | 1:NA:196:TRP:NE1  | 2.34                     | 0.42              |
| 1:NB:176:LEU:HD21 | 1:NB:196:TRP:NE1  | 2.34                     | 0.42              |
| 1:NB:216:VAL:HG13 | 1:NB:216:VAL:O    | 2.19                     | 0.42              |
| 1:OB:359:ILE:O    | 1:OB:359:ILE:HG23 | 2.20                     | 0.42              |
| 1:Q:426:LEU:HD23  | 1:Q:427:LEU:HD22  | 2.02                     | 0.42              |
| 1:QA:208:VAL:HG23 | 1:QA:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:R:57:HIS:O      | 1:R:58:TYR:HD1    | 2.02                     | 0.42              |
| 1:R:539:LEU:HD11  | 1:R:640:VAL:HG13  | 2.01                     | 0.42              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:RA:539:LEU:CD1  | 1:RA:640:VAL:HG13 | 2.48                     | 0.42              |
| 1:RA:779:LEU:HD21 | 1:SA:774:ARG:HG2  | 2.01                     | 0.42              |
| 1:SB:208:VAL:HG23 | 1:SB:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:T:176:LEU:HD21  | 1:T:196:TRP:CE2   | 2.54                     | 0.42              |
| 1:UA:541:LEU:CD2  | 1:UA:640:VAL:HG22 | 2.49                     | 0.42              |
| 1:UB:345:ASP:OD2  | 1:UB:349:VAL:HG13 | 2.19                     | 0.42              |
| 1:UB:523:PHE:CE2  | 1:UB:545:TRP:CD1  | 3.07                     | 0.42              |
| 1:V:17:HIS:CB     | 1:V:44:LEU:HD23   | 2.49                     | 0.42              |
| 1:VA:144:LEU:HD22 | 1:VA:163:ILE:HD11 | 2.02                     | 0.42              |
| 1:VB:44:LEU:HD22  | 1:VB:44:LEU:N     | 2.34                     | 0.42              |
| 1:VB:121:LEU:HD23 | 1:VB:162:ILE:HG22 | 2.01                     | 0.42              |
| 1:VB:138:VAL:HG12 | 1:VB:139:ALA:N    | 2.34                     | 0.42              |
| 1:W:359:ILE:O     | 1:W:359:ILE:HG23  | 2.19                     | 0.42              |
| 1:WA:539:LEU:HD21 | 1:WA:599:ILE:HD11 | 2.01                     | 0.42              |
| 1:X:168:ILE:HG22  | 1:X:215:LEU:CD2   | 2.45                     | 0.42              |
| 1:X:176:LEU:HD21  | 1:X:196:TRP:NE1   | 2.33                     | 0.42              |
| 1:XA:129:PHE:CE1  | 1:XA:137:VAL:HG11 | 2.54                     | 0.42              |
| 1:Y:758:GLU:O     | 1:Y:762:VAL:HG22  | 2.18                     | 0.42              |
| 1:YA:597:ARG:O    | 1:YA:601:THR:HG23 | 2.19                     | 0.42              |
| 1:YA:758:GLU:O    | 1:YA:762:VAL:HG22 | 2.19                     | 0.42              |
| 1:YB:539:LEU:CD2  | 1:YB:541:LEU:HG   | 2.49                     | 0.42              |
| 1:ZB:57:HIS:O     | 1:ZB:58:TYR:HD1   | 2.02                     | 0.42              |
| 1:AA:176:LEU:HD21 | 1:AA:196:TRP:NE1  | 2.34                     | 0.42              |
| 1:AB:44:LEU:HD22  | 1:AB:44:LEU:N     | 2.34                     | 0.42              |
| 1:AB:176:LEU:HD21 | 1:AB:196:TRP:NE1  | 2.34                     | 0.42              |
| 1:B:30:VAL:HG21   | 1:B:50:MET:HE3    | 2.01                     | 0.42              |
| 1:B:53:VAL:HG12   | 1:B:57:HIS:O      | 2.19                     | 0.42              |
| 1:B:208:VAL:HG23  | 1:B:209:PHE:CD1   | 2.55                     | 0.42              |
| 1:B:216:VAL:O     | 1:B:216:VAL:HG13  | 2.19                     | 0.42              |
| 1:BA:176:LEU:HD21 | 1:BA:196:TRP:NE1  | 2.34                     | 0.42              |
| 1:BA:208:VAL:HG23 | 1:BA:209:PHE:CD1  | 2.55                     | 0.42              |
| 1:BA:359:ILE:O    | 1:BA:359:ILE:HG23 | 2.20                     | 0.42              |
| 1:C:30:VAL:HG21   | 1:C:50:MET:HE3    | 2.01                     | 0.42              |
| 1:C:53:VAL:HG12   | 1:C:57:HIS:O      | 2.19                     | 0.42              |
| 1:CB:487:VAL:O    | 1:CB:487:VAL:HG13 | 2.19                     | 0.42              |
| 1:DA:219:VAL:HG11 | 1:DA:227:LEU:HD13 | 2.01                     | 0.42              |
| 1:DB:44:LEU:HD22  | 1:DB:44:LEU:H     | 1.84                     | 0.42              |
| 1:DB:176:LEU:HD21 | 1:DB:196:TRP:NE1  | 2.35                     | 0.42              |
| 1:DB:208:VAL:HG23 | 1:DB:209:PHE:CD1  | 2.55                     | 0.42              |
| 1:E:316:LEU:HD12  | 1:E:316:LEU:HA    | 1.94                     | 0.42              |
| 1:EB:758:GLU:O    | 1:EB:762:VAL:HG22 | 2.19                     | 0.42              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:FB:208:VAL:HG23 | 1:FB:209:PHE:CD1  | 2.55                     | 0.42              |
| 1:G:44:LEU:HD22   | 1:G:44:LEU:N      | 2.34                     | 0.42              |
| 1:GB:138:VAL:HG12 | 1:GB:139:ALA:N    | 2.34                     | 0.42              |
| 1:GB:219:VAL:HG11 | 1:GB:227:LEU:HD22 | 2.01                     | 0.42              |
| 1:GB:359:ILE:HG23 | 1:GB:359:ILE:O    | 2.19                     | 0.42              |
| 1:HA:129:PHE:CE1  | 1:HA:137:VAL:HG11 | 2.54                     | 0.42              |
| 1:HB:138:VAL:HG12 | 1:HB:139:ALA:N    | 2.34                     | 0.42              |
| 1:HB:219:VAL:HG11 | 1:HB:227:LEU:HD22 | 2.01                     | 0.42              |
| 1:I:138:VAL:HG12  | 1:I:139:ALA:N     | 2.34                     | 0.42              |
| 1:IA:129:PHE:CE1  | 1:IA:137:VAL:HG11 | 2.55                     | 0.42              |
| 1:J:176:LEU:HD23  | 1:J:176:LEU:H     | 1.83                     | 0.42              |
| 1:KB:44:LEU:HD22  | 1:KB:44:LEU:N     | 2.34                     | 0.42              |
| 1:KB:129:PHE:CE1  | 1:KB:137:VAL:HG11 | 2.55                     | 0.42              |
| 1:KB:165:ALA:HB2  | 1:KB:205:LEU:HD13 | 2.01                     | 0.42              |
| 1:LB:138:VAL:HG12 | 1:LB:139:ALA:N    | 2.34                     | 0.42              |
| 1:MA:44:LEU:HD22  | 1:MA:44:LEU:N     | 2.34                     | 0.42              |
| 1:N:208:VAL:HG23  | 1:N:209:PHE:CD1   | 2.54                     | 0.42              |
| 1:N:539:LEU:CD1   | 1:N:640:VAL:HG13  | 2.48                     | 0.42              |
| 1:NA:144:LEU:HD22 | 1:NA:163:ILE:HD11 | 2.01                     | 0.42              |
| 1:NA:393:VAL:HG22 | 1:NA:411:ASP:C    | 2.45                     | 0.42              |
| 1:OA:597:ARG:O    | 1:OA:601:THR:HG23 | 2.20                     | 0.42              |
| 1:P:208:VAL:HG23  | 1:P:209:PHE:CD1   | 2.54                     | 0.42              |
| 1:PB:597:ARG:O    | 1:PB:601:THR:HG23 | 2.20                     | 0.42              |
| 1:QA:144:LEU:HD12 | 1:QA:144:LEU:O    | 2.19                     | 0.42              |
| 1:RA:129:PHE:CE1  | 1:RA:137:VAL:HG11 | 2.55                     | 0.42              |
| 1:TA:779:LEU:HD21 | 1:UA:774:ARG:HG2  | 2.02                     | 0.42              |
| 1:TB:44:LEU:HD22  | 1:TB:44:LEU:N     | 2.35                     | 0.42              |
| 1:V:53:VAL:HG12   | 1:V:57:HIS:O      | 2.20                     | 0.42              |
| 1:VB:10:ILE:HG22  | 1:VB:47:PRO:HB3   | 2.02                     | 0.42              |
| 1:VB:129:PHE:CE1  | 1:VB:137:VAL:HG11 | 2.55                     | 0.42              |
| 1:VB:523:PHE:CE2  | 1:VB:545:TRP:CD1  | 3.07                     | 0.42              |
| 1:WA:44:LEU:HD22  | 1:WA:44:LEU:N     | 2.34                     | 0.42              |
| 1:WA:176:LEU:HD21 | 1:WA:196:TRP:CE2  | 2.54                     | 0.42              |
| 1:XA:121:LEU:HD23 | 1:XA:162:ILE:HG22 | 2.00                     | 0.42              |
| 1:XB:138:VAL:HG12 | 1:XB:139:ALA:N    | 2.34                     | 0.42              |
| 1:YA:176:LEU:HD21 | 1:YA:196:TRP:NE1  | 2.34                     | 0.42              |
| 1:YB:17:HIS:HB3   | 1:YB:44:LEU:HD23  | 2.00                     | 0.42              |
| 1:Z:17:HIS:CB     | 1:Z:44:LEU:HD23   | 2.50                     | 0.42              |
| 1:ZA:208:VAL:HG23 | 1:ZA:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:ZB:176:LEU:HD21 | 1:ZB:196:TRP:CE2  | 2.55                     | 0.42              |
| 1:A:138:VAL:HG12  | 1:A:139:ALA:N     | 2.34                     | 0.42              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:53:VAL:HG12  | 1:AA:57:HIS:O     | 2.20                     | 0.42              |
| 1:AC:144:LEU:HD22 | 1:AC:163:ILE:HD11 | 2.02                     | 0.42              |
| 1:AC:489:LEU:HD21 | 1:AC:495:PHE:CZ   | 2.55                     | 0.42              |
| 1:B:176:LEU:HD21  | 1:B:196:TRP:CE2   | 2.55                     | 0.42              |
| 1:BA:176:LEU:HD21 | 1:BA:196:TRP:CE2  | 2.55                     | 0.42              |
| 1:C:144:LEU:HD12  | 1:C:144:LEU:O     | 2.19                     | 0.42              |
| 1:CB:138:VAL:HG12 | 1:CB:139:ALA:N    | 2.34                     | 0.42              |
| 1:E:176:LEU:HD21  | 1:E:196:TRP:CE2   | 2.54                     | 0.42              |
| 1:EB:208:VAL:HG23 | 1:EB:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:F:643:VAL:O     | 1:F:643:VAL:HG12  | 2.20                     | 0.42              |
| 1:FA:44:LEU:HD22  | 1:FA:44:LEU:N     | 2.34                     | 0.42              |
| 1:I:393:VAL:HG22  | 1:I:411:ASP:C     | 2.44                     | 0.42              |
| 1:IB:44:LEU:HD22  | 1:IB:44:LEU:H     | 1.85                     | 0.42              |
| 1:J:662:ILE:O     | 1:J:666:THR:HG23  | 2.19                     | 0.42              |
| 1:JB:216:VAL:O    | 1:JB:216:VAL:HG13 | 2.19                     | 0.42              |
| 1:KA:44:LEU:HD22  | 1:KA:44:LEU:N     | 2.33                     | 0.42              |
| 1:KA:208:VAL:HG23 | 1:KA:209:PHE:CD1  | 2.55                     | 0.42              |
| 1:LA:121:LEU:HD23 | 1:LA:162:ILE:HG22 | 2.00                     | 0.42              |
| 1:M:176:LEU:HD21  | 1:M:196:TRP:CE2   | 2.54                     | 0.42              |
| 1:M:216:VAL:O     | 1:M:216:VAL:HG13  | 2.19                     | 0.42              |
| 1:M:359:ILE:O     | 1:M:359:ILE:HG23  | 2.19                     | 0.42              |
| 1:MA:44:LEU:HD22  | 1:MA:44:LEU:H     | 1.85                     | 0.42              |
| 1:MA:129:PHE:CE1  | 1:MA:137:VAL:HG11 | 2.55                     | 0.42              |
| 1:MB:597:ARG:O    | 1:MB:601:THR:HG23 | 2.20                     | 0.42              |
| 1:N:393:VAL:HG22  | 1:N:411:ASP:C     | 2.44                     | 0.42              |
| 1:NB:30:VAL:CG2   | 1:NB:50:MET:HE3   | 2.50                     | 0.42              |
| 1:NB:570:ASP:OD1  | 1:NB:570:ASP:C    | 2.61                     | 0.42              |
| 1:O:47:PRO:C      | 1:O:48:MET:HE2    | 2.45                     | 0.42              |
| 1:O:523:PHE:CE2   | 1:O:545:TRP:CD1   | 3.08                     | 0.42              |
| 1:OA:56:ARG:HE    | 1:PA:127:LEU:CD2  | 2.33                     | 0.42              |
| 1:OA:539:LEU:CD1  | 1:OA:640:VAL:HG13 | 2.49                     | 0.42              |
| 1:OB:56:ARG:HE    | 1:PB:127:LEU:CD2  | 2.33                     | 0.42              |
| 1:OB:523:PHE:CE2  | 1:OB:545:TRP:CD1  | 3.07                     | 0.42              |
| 1:P:17:HIS:CB     | 1:P:44:LEU:HD23   | 2.50                     | 0.42              |
| 1:P:359:ILE:O     | 1:P:359:ILE:HG23  | 2.20                     | 0.42              |
| 1:PA:138:VAL:HG12 | 1:PA:139:ALA:N    | 2.34                     | 0.42              |
| 1:PB:144:LEU:HD22 | 1:PB:163:ILE:HD11 | 2.02                     | 0.42              |
| 1:Q:208:VAL:HG23  | 1:Q:209:PHE:CD1   | 2.54                     | 0.42              |
| 1:R:208:VAL:HG23  | 1:R:209:PHE:CD1   | 2.55                     | 0.42              |
| 1:S:359:ILE:O     | 1:S:359:ILE:HG23  | 2.19                     | 0.42              |
| 1:SA:176:LEU:HD21 | 1:SA:196:TRP:CE2  | 2.54                     | 0.42              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:SB:138:VAL:HG12 | 1:SB:139:ALA:N    | 2.34                     | 0.42              |
| 1:T:121:LEU:HD22  | 1:T:159:VAL:HG13  | 2.01                     | 0.42              |
| 1:UA:129:PHE:CE1  | 1:UA:137:VAL:HG11 | 2.54                     | 0.42              |
| 1:V:138:VAL:HG12  | 1:V:139:ALA:N     | 2.34                     | 0.42              |
| 1:V:359:ILE:HG23  | 1:V:359:ILE:O     | 2.19                     | 0.42              |
| 1:VA:138:VAL:HG12 | 1:VA:139:ALA:N    | 2.34                     | 0.42              |
| 1:WB:44:LEU:N     | 1:WB:44:LEU:HD22  | 2.33                     | 0.42              |
| 1:X:359:ILE:HG23  | 1:X:359:ILE:O     | 2.20                     | 0.42              |
| 1:XA:17:HIS:CB    | 1:XA:44:LEU:HD23  | 2.49                     | 0.42              |
| 1:XB:539:LEU:HD21 | 1:XB:599:ILE:HD11 | 2.01                     | 0.42              |
| 1:Y:129:PHE:CE1   | 1:Y:137:VAL:HG11  | 2.55                     | 0.42              |
| 1:Y:176:LEU:HD21  | 1:Y:196:TRP:CE2   | 2.55                     | 0.42              |
| 1:YA:393:VAL:HG22 | 1:YA:411:ASP:C    | 2.45                     | 0.42              |
| 1:Z:393:VAL:HG22  | 1:Z:411:ASP:C     | 2.45                     | 0.42              |
| 1:AA:541:LEU:CD2  | 1:AA:640:VAL:HG22 | 2.50                     | 0.42              |
| 1:AB:121:LEU:HD23 | 1:AB:162:ILE:HG22 | 2.00                     | 0.42              |
| 1:BA:44:LEU:HD22  | 1:BA:44:LEU:N     | 2.35                     | 0.42              |
| 1:CA:17:HIS:CB    | 1:CA:44:LEU:HD23  | 2.50                     | 0.42              |
| 1:CB:121:LEU:HD23 | 1:CB:162:ILE:HG22 | 2.00                     | 0.42              |
| 1:DB:56:ARG:HE    | 1:EB:127:LEU:CD2  | 2.33                     | 0.42              |
| 1:E:208:VAL:HG23  | 1:E:209:PHE:CD1   | 2.54                     | 0.42              |
| 1:E:359:ILE:HG23  | 1:E:359:ILE:O     | 2.20                     | 0.42              |
| 1:EA:138:VAL:HG12 | 1:EA:139:ALA:N    | 2.35                     | 0.42              |
| 1:EA:359:ILE:HG23 | 1:EA:359:ILE:O    | 2.19                     | 0.42              |
| 1:EB:44:LEU:H     | 1:EB:44:LEU:HD22  | 1.84                     | 0.42              |
| 1:EB:168:ILE:HG21 | 1:EB:174:LEU:HB2  | 2.01                     | 0.42              |
| 1:F:487:VAL:O     | 1:F:487:VAL:HG13  | 2.18                     | 0.42              |
| 1:FA:208:VAL:HG23 | 1:FA:209:PHE:CD1  | 2.55                     | 0.42              |
| 1:G:359:ILE:O     | 1:G:359:ILE:HG23  | 2.20                     | 0.42              |
| 1:GA:176:LEU:HD21 | 1:GA:196:TRP:NE1  | 2.35                     | 0.42              |
| 1:H:144:LEU:HD22  | 1:H:163:ILE:HD11  | 2.02                     | 0.42              |
| 1:HA:53:VAL:HG12  | 1:HA:57:HIS:O     | 2.20                     | 0.42              |
| 1:I:165:ALA:HB2   | 1:I:205:LEU:HD13  | 2.00                     | 0.42              |
| 1:IB:44:LEU:HD22  | 1:IB:44:LEU:N     | 2.34                     | 0.42              |
| 1:JA:359:ILE:O    | 1:JA:359:ILE:HG23 | 2.19                     | 0.42              |
| 1:JB:165:ALA:HB2  | 1:JB:205:LEU:HD13 | 2.02                     | 0.42              |
| 1:JB:359:ILE:HG23 | 1:JB:359:ILE:O    | 2.19                     | 0.42              |
| 1:JB:487:VAL:O    | 1:JB:487:VAL:HG13 | 2.18                     | 0.42              |
| 1:JB:539:LEU:HD21 | 1:JB:599:ILE:HD11 | 2.02                     | 0.42              |
| 1:KA:359:ILE:HG23 | 1:KA:359:ILE:O    | 2.19                     | 0.42              |
| 1:LA:219:VAL:HG11 | 1:LA:227:LEU:HD13 | 2.02                     | 0.42              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:LB:176:LEU:HD21 | 1:LB:196:TRP:CE2  | 2.55                     | 0.42              |
| 1:M:176:LEU:HD23  | 1:M:176:LEU:H     | 1.83                     | 0.42              |
| 1:MA:788:ALA:O    | 1:MA:792:VAL:HG23 | 2.19                     | 0.42              |
| 1:MB:539:LEU:HD11 | 1:MB:640:VAL:HG13 | 2.02                     | 0.42              |
| 1:N:53:VAL:HG12   | 1:N:57:HIS:O      | 2.19                     | 0.42              |
| 1:NA:359:ILE:HG23 | 1:NA:359:ILE:O    | 2.19                     | 0.42              |
| 1:NB:53:VAL:HG12  | 1:NB:57:HIS:O     | 2.19                     | 0.42              |
| 1:O:176:LEU:HD21  | 1:O:196:TRP:CE2   | 2.54                     | 0.42              |
| 1:O:597:ARG:O     | 1:O:601:THR:HG23  | 2.20                     | 0.42              |
| 1:PA:208:VAL:HG23 | 1:PA:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:PA:487:VAL:HG13 | 1:PA:487:VAL:O    | 2.19                     | 0.42              |
| 1:PA:643:VAL:HG12 | 1:PA:643:VAL:O    | 2.20                     | 0.42              |
| 1:QA:597:ARG:O    | 1:QA:601:THR:HG23 | 2.19                     | 0.42              |
| 1:QB:17:HIS:HB3   | 1:QB:44:LEU:HD23  | 2.00                     | 0.42              |
| 1:R:143:TRP:HH2   | 1:R:157:VAL:HG22  | 1.84                     | 0.42              |
| 1:R:219:VAL:HG11  | 1:R:227:LEU:HD22  | 2.02                     | 0.42              |
| 1:RA:57:HIS:O     | 1:RA:58:TYR:HD1   | 2.03                     | 0.42              |
| 1:RB:216:VAL:O    | 1:RB:216:VAL:HG13 | 2.19                     | 0.42              |
| 1:T:57:HIS:O      | 1:T:58:TYR:HD1    | 2.03                     | 0.42              |
| 1:T:539:LEU:HD21  | 1:T:599:ILE:HD11  | 2.02                     | 0.42              |
| 1:TA:359:ILE:O    | 1:TA:359:ILE:HG23 | 2.20                     | 0.42              |
| 1:TA:539:LEU:CD1  | 1:TA:640:VAL:HG13 | 2.49                     | 0.42              |
| 1:TB:176:LEU:HD23 | 1:TB:176:LEU:H    | 1.83                     | 0.42              |
| 1:UA:138:VAL:HG12 | 1:UA:139:ALA:N    | 2.34                     | 0.42              |
| 1:UA:208:VAL:HG23 | 1:UA:209:PHE:CD1  | 2.55                     | 0.42              |
| 1:UA:489:LEU:HD21 | 1:UA:495:PHE:CZ   | 2.55                     | 0.42              |
| 1:VA:788:ALA:O    | 1:VA:792:VAL:HG23 | 2.19                     | 0.42              |
| 1:VB:176:LEU:HD21 | 1:VB:196:TRP:CE2  | 2.55                     | 0.42              |
| 1:VB:345:ASP:OD2  | 1:VB:349:VAL:HG13 | 2.19                     | 0.42              |
| 1:W:176:LEU:HD21  | 1:W:196:TRP:CE2   | 2.54                     | 0.42              |
| 1:W:487:VAL:O     | 1:W:487:VAL:HG13  | 2.18                     | 0.42              |
| 1:W:597:ARG:O     | 1:W:601:THR:HG23  | 2.19                     | 0.42              |
| 1:WB:208:VAL:HG23 | 1:WB:209:PHE:CD1  | 2.55                     | 0.42              |
| 1:WB:359:ILE:O    | 1:WB:359:ILE:HG23 | 2.19                     | 0.42              |
| 1:X:523:PHE:CE2   | 1:X:545:TRP:CD1   | 3.08                     | 0.42              |
| 1:X:539:LEU:CD1   | 1:X:599:ILE:HD11  | 2.50                     | 0.42              |
| 1:XA:44:LEU:N     | 1:XA:44:LEU:HD22  | 2.35                     | 0.42              |
| 1:XA:302:VAL:HG11 | 1:XA:306:LYS:HZ2  | 1.85                     | 0.42              |
| 1:XA:539:LEU:HD21 | 1:XA:599:ILE:HD11 | 2.01                     | 0.42              |
| 1:XB:779:LEU:HD21 | 1:YB:774:ARG:HG2  | 2.01                     | 0.42              |
| 1:YA:56:ARG:HE    | 1:ZA:127:LEU:CD2  | 2.33                     | 0.42              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:YB:44:LEU:HD22  | 1:YB:44:LEU:N     | 2.35                     | 0.42              |
| 1:ZB:138:VAL:HG12 | 1:ZB:139:ALA:N    | 2.34                     | 0.42              |
| 1:A:219:VAL:HG11  | 1:A:227:LEU:HD13  | 2.01                     | 0.42              |
| 1:AA:208:VAL:HG23 | 1:AA:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:AB:56:ARG:HE    | 1:BB:127:LEU:CD2  | 2.33                     | 0.42              |
| 1:AC:216:VAL:O    | 1:AC:216:VAL:HG13 | 2.19                     | 0.42              |
| 1:BB:44:LEU:HD22  | 1:BB:44:LEU:H     | 1.84                     | 0.42              |
| 1:C:597:ARG:O     | 1:C:601:THR:HG23  | 2.19                     | 0.42              |
| 1:CB:56:ARG:HE    | 1:DB:127:LEU:CD2  | 2.33                     | 0.42              |
| 1:DA:176:LEU:HD21 | 1:DA:196:TRP:NE1  | 2.35                     | 0.42              |
| 1:E:138:VAL:HG12  | 1:E:139:ALA:N     | 2.34                     | 0.42              |
| 1:EB:539:LEU:HD11 | 1:EB:640:VAL:HG13 | 2.02                     | 0.42              |
| 1:FA:176:LEU:HD21 | 1:FA:196:TRP:NE1  | 2.35                     | 0.42              |
| 1:G:208:VAL:HG23  | 1:G:209:PHE:CD1   | 2.55                     | 0.42              |
| 1:GA:57:HIS:O     | 1:GA:58:TYR:HD1   | 2.03                     | 0.42              |
| 1:GA:138:VAL:HG12 | 1:GA:139:ALA:N    | 2.34                     | 0.42              |
| 1:HA:316:LEU:HD12 | 1:HA:316:LEU:HA   | 1.94                     | 0.42              |
| 1:HB:643:VAL:O    | 1:HB:643:VAL:HG12 | 2.20                     | 0.42              |
| 1:I:487:VAL:O     | 1:I:487:VAL:HG13  | 2.19                     | 0.42              |
| 1:IA:487:VAL:O    | 1:IA:487:VAL:HG13 | 2.20                     | 0.42              |
| 1:IB:216:VAL:HG13 | 1:IB:216:VAL:O    | 2.19                     | 0.42              |
| 1:J:176:LEU:HD21  | 1:J:196:TRP:CE2   | 2.55                     | 0.42              |
| 1:J:216:VAL:HG13  | 1:J:216:VAL:O     | 2.19                     | 0.42              |
| 1:JA:176:LEU:HD21 | 1:JA:196:TRP:NE1  | 2.35                     | 0.42              |
| 1:JB:176:LEU:HD21 | 1:JB:196:TRP:CE2  | 2.55                     | 0.42              |
| 1:JB:597:ARG:O    | 1:JB:601:THR:HG23 | 2.20                     | 0.42              |
| 1:K:216:VAL:O     | 1:K:216:VAL:HG13  | 2.19                     | 0.42              |
| 1:KB:63:ASN:OD1   | 1:KB:104:VAL:HG12 | 2.19                     | 0.42              |
| 1:KB:539:LEU:HD21 | 1:KB:599:ILE:HD11 | 2.01                     | 0.42              |
| 1:L:597:ARG:O     | 1:L:601:THR:HG23  | 2.20                     | 0.42              |
| 1:LA:57:HIS:O     | 1:LA:58:TYR:HD1   | 2.02                     | 0.42              |
| 1:M:176:LEU:HD21  | 1:M:196:TRP:NE1   | 2.34                     | 0.42              |
| 1:MA:529:ILE:HD13 | 1:MA:583:VAL:HG11 | 2.02                     | 0.42              |
| 1:NA:44:LEU:HD22  | 1:NA:44:LEU:N     | 2.33                     | 0.42              |
| 1:NA:489:LEU:HD21 | 1:NA:495:PHE:CZ   | 2.55                     | 0.42              |
| 1:NA:529:ILE:HD13 | 1:NA:583:VAL:HG21 | 2.02                     | 0.42              |
| 1:NB:539:LEU:HD21 | 1:NB:599:ILE:HD11 | 2.01                     | 0.42              |
| 1:OB:176:LEU:HD21 | 1:OB:196:TRP:NE1  | 2.34                     | 0.42              |
| 1:P:44:LEU:HD22   | 1:P:44:LEU:H      | 1.84                     | 0.42              |
| 1:PA:662:ILE:O    | 1:PA:666:THR:HG23 | 2.19                     | 0.42              |
| 1:PA:758:GLU:O    | 1:PA:762:VAL:HG22 | 2.19                     | 0.42              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:PB:208:VAL:HG23 | 1:PB:209:PHE:CD1  | 2.55                     | 0.42              |
| 1:PB:281:TYR:CG   | 1:PB:366:VAL:HG23 | 2.55                     | 0.42              |
| 1:Q:539:LEU:HD21  | 1:Q:599:ILE:HD11  | 2.02                     | 0.42              |
| 1:Q:597:ARG:O     | 1:Q:601:THR:HG23  | 2.20                     | 0.42              |
| 1:QB:219:VAL:HG11 | 1:QB:227:LEU:HD13 | 2.01                     | 0.42              |
| 1:RA:208:VAL:HG23 | 1:RA:209:PHE:CD1  | 2.55                     | 0.42              |
| 1:RB:52:THR:O     | 1:RB:109:ILE:HD11 | 2.19                     | 0.42              |
| 1:RB:57:HIS:O     | 1:RB:58:TYR:HD1   | 2.02                     | 0.42              |
| 1:S:219:VAL:HG11  | 1:S:227:LEU:HD13  | 2.00                     | 0.42              |
| 1:SA:208:VAL:HG23 | 1:SA:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:T:208:VAL:HG23  | 1:T:209:PHE:CD1   | 2.54                     | 0.42              |
| 1:TB:393:VAL:HG22 | 1:TB:411:ASP:C    | 2.44                     | 0.42              |
| 1:WA:129:PHE:CE1  | 1:WA:137:VAL:HG11 | 2.55                     | 0.42              |
| 1:WA:597:ARG:O    | 1:WA:601:THR:HG23 | 2.20                     | 0.42              |
| 1:WB:44:LEU:HD22  | 1:WB:44:LEU:H     | 1.84                     | 0.42              |
| 1:WB:129:PHE:CE1  | 1:WB:137:VAL:HG11 | 2.55                     | 0.42              |
| 1:Y:44:LEU:HD22   | 1:Y:44:LEU:N      | 2.35                     | 0.42              |
| 1:YA:165:ALA:HB2  | 1:YA:205:LEU:HD13 | 2.00                     | 0.42              |
| 1:Z:44:LEU:HD22   | 1:Z:44:LEU:N      | 2.34                     | 0.42              |
| 1:Z:138:VAL:HG12  | 1:Z:139:ALA:N     | 2.34                     | 0.42              |
| 1:Z:208:VAL:HG23  | 1:Z:209:PHE:CD1   | 2.54                     | 0.42              |
| 1:ZB:208:VAL:HG23 | 1:ZB:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:AC:138:VAL:HG12 | 1:AC:139:ALA:N    | 2.34                     | 0.42              |
| 1:AC:393:VAL:HG22 | 1:AC:411:ASP:C    | 2.44                     | 0.42              |
| 1:B:487:VAL:O     | 1:B:487:VAL:HG13  | 2.20                     | 0.42              |
| 1:BB:208:VAL:HG23 | 1:BB:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:C:176:LEU:HD21  | 1:C:196:TRP:CE2   | 2.55                     | 0.42              |
| 1:CA:44:LEU:HD22  | 1:CA:44:LEU:N     | 2.34                     | 0.42              |
| 1:CA:48:MET:HA    | 1:CA:48:MET:HE3   | 2.02                     | 0.42              |
| 1:CA:208:VAL:HG23 | 1:CA:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:D:17:HIS:HB3    | 1:D:44:LEU:HD23   | 2.01                     | 0.42              |
| 1:EB:138:VAL:HG12 | 1:EB:139:ALA:N    | 2.35                     | 0.42              |
| 1:FA:138:VAL:HG12 | 1:FA:139:ALA:N    | 2.34                     | 0.42              |
| 1:FA:219:VAL:HG11 | 1:FA:227:LEU:HD13 | 2.00                     | 0.42              |
| 1:GB:487:VAL:O    | 1:GB:487:VAL:HG13 | 2.20                     | 0.42              |
| 1:J:779:LEU:HD21  | 1:K:774:ARG:HG2   | 2.02                     | 0.42              |
| 1:JA:129:PHE:CE1  | 1:JA:137:VAL:HG11 | 2.54                     | 0.42              |
| 1:JB:758:GLU:O    | 1:JB:762:VAL:HG22 | 2.20                     | 0.42              |
| 1:K:487:VAL:O     | 1:K:487:VAL:HG13  | 2.19                     | 0.42              |
| 1:LA:523:PHE:CE2  | 1:LA:545:TRP:CD1  | 3.08                     | 0.42              |
| 1:LB:359:ILE:HG23 | 1:LB:359:ILE:O    | 2.19                     | 0.42              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:N:489:LEU:HD21  | 1:N:495:PHE:CZ    | 2.55                     | 0.42              |
| 1:N:643:VAL:O     | 1:N:643:VAL:HG12  | 2.20                     | 0.42              |
| 1:NA:208:VAL:HG23 | 1:NA:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:NB:176:LEU:HD21 | 1:NB:196:TRP:CE2  | 2.54                     | 0.42              |
| 1:O:758:GLU:O     | 1:O:762:VAL:HG22  | 2.20                     | 0.42              |
| 1:PA:359:ILE:HG23 | 1:PA:359:ILE:O    | 2.20                     | 0.42              |
| 1:Q:529:ILE:HD13  | 1:Q:583:VAL:HG11  | 2.02                     | 0.42              |
| 1:QA:53:VAL:HG12  | 1:QA:57:HIS:O     | 2.19                     | 0.42              |
| 1:QA:176:LEU:HD21 | 1:QA:196:TRP:CE2  | 2.55                     | 0.42              |
| 1:QA:216:VAL:O    | 1:QA:216:VAL:HG13 | 2.19                     | 0.42              |
| 1:QB:334:LEU:HD12 | 1:QB:357:TRP:NE1  | 2.34                     | 0.42              |
| 1:R:216:VAL:HG13  | 1:R:216:VAL:O     | 2.18                     | 0.42              |
| 1:R:487:VAL:O     | 1:R:487:VAL:HG13  | 2.19                     | 0.42              |
| 1:RA:138:VAL:HG12 | 1:RA:139:ALA:N    | 2.34                     | 0.42              |
| 1:S:129:PHE:CE1   | 1:S:137:VAL:HG11  | 2.55                     | 0.42              |
| 1:SB:176:LEU:HD21 | 1:SB:196:TRP:CE2  | 2.55                     | 0.42              |
| 1:T:56:ARG:HE     | 1:V:127:LEU:CD2   | 2.33                     | 0.42              |
| 1:T:393:VAL:HG22  | 1:T:411:ASP:C     | 2.45                     | 0.42              |
| 1:TB:57:HIS:O     | 1:TB:58:TYR:HD1   | 2.03                     | 0.42              |
| 1:TB:138:VAL:HG12 | 1:TB:139:ALA:N    | 2.34                     | 0.42              |
| 1:UA:779:LEU:HD21 | 1:VA:774:ARG:HG2  | 2.02                     | 0.42              |
| 1:VA:359:ILE:HG23 | 1:VA:359:ILE:O    | 2.20                     | 0.42              |
| 1:WA:56:ARG:HE    | 1:XA:127:LEU:CD2  | 2.33                     | 0.42              |
| 1:WB:17:HIS:HB3   | 1:WB:44:LEU:HD23  | 2.02                     | 0.42              |
| 1:X:208:VAL:HG23  | 1:X:209:PHE:CD1   | 2.54                     | 0.42              |
| 1:X:597:ARG:O     | 1:X:601:THR:HG23  | 2.20                     | 0.42              |
| 1:XA:57:HIS:O     | 1:XA:58:TYR:HD1   | 2.03                     | 0.42              |
| 1:XB:316:LEU:HD12 | 1:XB:316:LEU:HA   | 1.94                     | 0.42              |
| 1:YA:779:LEU:HD21 | 1:ZA:774:ARG:HG2  | 2.01                     | 0.42              |
| 1:YB:3:THR:HG22   | 1:YB:6:PHE:HA     | 2.02                     | 0.42              |
| 1:YB:138:VAL:HG12 | 1:YB:139:ALA:N    | 2.34                     | 0.42              |
| 1:ZB:52:THR:O     | 1:ZB:109:ILE:HD11 | 2.19                     | 0.42              |
| 1:AB:216:VAL:O    | 1:AB:216:VAL:HG13 | 2.19                     | 0.42              |
| 1:AC:127:LEU:CD2  | 1:ZB:56:ARG:HE    | 2.33                     | 0.42              |
| 1:AC:219:VAL:HG11 | 1:AC:227:LEU:HD22 | 2.01                     | 0.42              |
| 1:C:208:VAL:HG23  | 1:C:209:PHE:CD1   | 2.54                     | 0.42              |
| 1:CA:176:LEU:HD21 | 1:CA:196:TRP:CE2  | 2.55                     | 0.42              |
| 1:CB:643:VAL:O    | 1:CB:643:VAL:HG12 | 2.19                     | 0.42              |
| 1:EA:176:LEU:HD21 | 1:EA:196:TRP:NE1  | 2.35                     | 0.42              |
| 1:F:57:HIS:O      | 1:F:58:TYR:HD1    | 2.03                     | 0.42              |
| 1:F:779:LEU:HD21  | 1:G:774:ARG:HG2   | 2.01                     | 0.42              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:G:53:VAL:HG12   | 1:G:57:HIS:O      | 2.19                     | 0.42              |
| 1:G:489:LEU:HD21  | 1:G:495:PHE:CZ    | 2.55                     | 0.42              |
| 1:HA:359:ILE:O    | 1:HA:359:ILE:HG23 | 2.20                     | 0.42              |
| 1:HB:73:VAL:HG11  | 1:HB:81:VAL:HG23  | 2.01                     | 0.42              |
| 1:IB:138:VAL:HG12 | 1:IB:139:ALA:N    | 2.35                     | 0.42              |
| 1:IB:159:VAL:O    | 1:IB:159:VAL:HG12 | 2.20                     | 0.42              |
| 1:J:541:LEU:CD2   | 1:J:640:VAL:HG22  | 2.50                     | 0.42              |
| 1:KA:393:VAL:HG22 | 1:KA:411:ASP:C    | 2.45                     | 0.42              |
| 1:KA:539:LEU:HD21 | 1:KA:599:ILE:HD11 | 2.01                     | 0.42              |
| 1:LA:3:THR:HG22   | 1:LA:6:PHE:HA     | 2.02                     | 0.42              |
| 1:LA:176:LEU:HD21 | 1:LA:196:TRP:NE1  | 2.35                     | 0.42              |
| 1:MA:176:LEU:HD21 | 1:MA:196:TRP:CE2  | 2.55                     | 0.42              |
| 1:MA:393:VAL:HG22 | 1:MA:411:ASP:C    | 2.45                     | 0.42              |
| 1:MB:44:LEU:HD22  | 1:MB:44:LEU:H     | 1.84                     | 0.42              |
| 1:NA:57:HIS:O     | 1:NA:58:TYR:HD1   | 2.03                     | 0.42              |
| 1:NA:176:LEU:HD21 | 1:NA:196:TRP:CE2  | 2.54                     | 0.42              |
| 1:O:56:ARG:HE     | 1:P:127:LEU:CD2   | 2.33                     | 0.42              |
| 1:OA:143:TRP:HH2  | 1:OA:157:VAL:HG22 | 1.84                     | 0.42              |
| 1:OB:208:VAL:HG23 | 1:OB:209:PHE:CD1  | 2.55                     | 0.42              |
| 1:OB:393:VAL:HG22 | 1:OB:411:ASP:C    | 2.45                     | 0.42              |
| 1:P:129:PHE:CE1   | 1:P:137:VAL:HG11  | 2.55                     | 0.42              |
| 1:PB:643:VAL:O    | 1:PB:643:VAL:HG12 | 2.20                     | 0.42              |
| 1:QB:138:VAL:HG12 | 1:QB:139:ALA:N    | 2.34                     | 0.42              |
| 1:QB:529:ILE:HD13 | 1:QB:583:VAL:HG11 | 2.02                     | 0.42              |
| 1:R:52:THR:O      | 1:R:109:ILE:HD11  | 2.20                     | 0.42              |
| 1:TA:57:HIS:O     | 1:TA:58:TYR:HD1   | 2.03                     | 0.42              |
| 1:TA:516:LEU:HD23 | 1:TA:516:LEU:C    | 2.44                     | 0.42              |
| 1:TB:44:LEU:HD22  | 1:TB:44:LEU:H     | 1.84                     | 0.42              |
| 1:UA:662:ILE:O    | 1:UA:666:THR:HG23 | 2.19                     | 0.42              |
| 1:UB:208:VAL:HG23 | 1:UB:209:PHE:CD1  | 2.54                     | 0.42              |
| 1:UB:219:VAL:HG11 | 1:UB:227:LEU:HD13 | 2.02                     | 0.42              |
| 1:VA:129:PHE:CE1  | 1:VA:137:VAL:HG11 | 2.55                     | 0.42              |
| 1:VB:44:LEU:HD22  | 1:VB:44:LEU:H     | 1.84                     | 0.42              |
| 1:VB:53:VAL:HG12  | 1:VB:57:HIS:O     | 2.19                     | 0.42              |
| 1:VB:393:VAL:HG22 | 1:VB:411:ASP:C    | 2.45                     | 0.42              |
| 1:W:216:VAL:O     | 1:W:216:VAL:HG13  | 2.19                     | 0.42              |
| 1:WB:57:HIS:O     | 1:WB:58:TYR:HD1   | 2.03                     | 0.42              |
| 1:X:129:PHE:CE1   | 1:X:137:VAL:HG11  | 2.54                     | 0.42              |
| 1:XA:489:LEU:HD21 | 1:XA:495:PHE:CZ   | 2.55                     | 0.42              |
| 1:XB:57:HIS:O     | 1:XB:58:TYR:HD1   | 2.03                     | 0.42              |
| 1:Y:523:PHE:CE2   | 1:Y:545:TRP:CD1   | 3.08                     | 0.42              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:YA:121:LEU:HD23 | 1:YA:162:ILE:HG22 | 2.00                     | 0.42              |
| 1:YA:219:VAL:HG11 | 1:YA:227:LEU:HD22 | 2.01                     | 0.42              |
| 1:YB:144:LEU:HD22 | 1:YB:163:ILE:HD11 | 2.02                     | 0.42              |
| 1:ZB:216:VAL:HG13 | 1:ZB:216:VAL:O    | 2.19                     | 0.42              |
| 1:AA:56:ARG:HE    | 1:BA:127:LEU:HD21 | 1.85                     | 0.42              |
| 1:AA:127:LEU:CD2  | 1:Z:56:ARG:HE     | 2.33                     | 0.42              |
| 1:AC:176:LEU:HD21 | 1:AC:196:TRP:NE1  | 2.34                     | 0.42              |
| 1:B:597:ARG:O     | 1:B:601:THR:HG23  | 2.20                     | 0.42              |
| 1:BA:17:HIS:CB    | 1:BA:44:LEU:HD23  | 2.50                     | 0.42              |
| 1:CA:539:LEU:CD1  | 1:CA:640:VAL:HG13 | 2.50                     | 0.42              |
| 1:G:654:LEU:HD22  | 1:H:534:HIS:CG    | 2.55                     | 0.42              |
| 1:GA:758:GLU:O    | 1:GA:762:VAL:HG22 | 2.18                     | 0.42              |
| 1:HA:538:GLN:HB2  | 1:HA:646:VAL:HG22 | 2.01                     | 0.42              |
| 1:HA:570:ASP:OD1  | 1:HA:570:ASP:C    | 2.62                     | 0.42              |
| 1:HA:662:ILE:O    | 1:HA:666:THR:HG23 | 2.20                     | 0.42              |
| 1:HB:216:VAL:O    | 1:HB:216:VAL:HG13 | 2.19                     | 0.42              |
| 1:HB:393:VAL:HG22 | 1:HB:411:ASP:C    | 2.44                     | 0.42              |
| 1:J:144:LEU:HD12  | 1:J:163:ILE:HD11  | 2.02                     | 0.42              |
| 1:J:539:LEU:HD11  | 1:J:640:VAL:HG13  | 2.01                     | 0.42              |
| 1:K:176:LEU:HD21  | 1:K:196:TRP:NE1   | 2.34                     | 0.42              |
| 1:K:779:LEU:HD21  | 1:L:774:ARG:HG2   | 2.01                     | 0.42              |
| 1:KA:583:VAL:O    | 1:KA:583:VAL:HG12 | 2.19                     | 0.42              |
| 1:L:138:VAL:HG12  | 1:L:139:ALA:N     | 2.34                     | 0.42              |
| 1:MA:57:HIS:O     | 1:MA:58:TYR:HD1   | 2.02                     | 0.42              |
| 1:N:63:ASN:OD1    | 1:N:104:VAL:HG12  | 2.20                     | 0.42              |
| 1:NB:281:TYR:CG   | 1:NB:366:VAL:HG23 | 2.55                     | 0.42              |
| 1:NB:643:VAL:O    | 1:NB:643:VAL:HG12 | 2.20                     | 0.42              |
| 1:O:413:VAL:HG22  | 1:O:414:LEU:N     | 2.35                     | 0.42              |
| 1:OA:53:VAL:HG12  | 1:OA:57:HIS:O     | 2.20                     | 0.42              |
| 1:OA:216:VAL:O    | 1:OA:216:VAL:HG13 | 2.19                     | 0.42              |
| 1:OB:129:PHE:CE1  | 1:OB:137:VAL:HG11 | 2.55                     | 0.42              |
| 1:OB:643:VAL:HG12 | 1:OB:643:VAL:O    | 2.19                     | 0.42              |
| 1:PA:52:THR:O     | 1:PA:109:ILE:HD11 | 2.20                     | 0.42              |
| 1:PA:570:ASP:OD1  | 1:PA:570:ASP:C    | 2.62                     | 0.42              |
| 1:PB:216:VAL:O    | 1:PB:216:VAL:HG13 | 2.19                     | 0.42              |
| 1:S:143:TRP:HH2   | 1:S:157:VAL:HG22  | 1.85                     | 0.42              |
| 1:SA:539:LEU:HD21 | 1:SA:599:ILE:HD11 | 2.02                     | 0.42              |
| 1:TA:643:VAL:O    | 1:TA:643:VAL:HG12 | 2.20                     | 0.42              |
| 1:UA:523:PHE:CE2  | 1:UA:545:TRP:CD1  | 3.07                     | 0.42              |
| 1:WA:165:ALA:HB2  | 1:WA:205:LEU:HD13 | 2.00                     | 0.42              |
| 1:WB:216:VAL:O    | 1:WB:216:VAL:HG13 | 2.19                     | 0.42              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:XB:393:VAL:HG22 | 1:XB:411:ASP:C    | 2.44                     | 0.42              |
| 1:Z:516:LEU:HD23  | 1:Z:516:LEU:O     | 2.20                     | 0.42              |
| 1:A:53:VAL:HG12   | 1:A:57:HIS:O      | 2.19                     | 0.41              |
| 1:AA:393:VAL:HG22 | 1:AA:411:ASP:C    | 2.45                     | 0.41              |
| 1:AB:129:PHE:CE1  | 1:AB:137:VAL:HG11 | 2.55                     | 0.41              |
| 1:AB:359:ILE:O    | 1:AB:359:ILE:HG23 | 2.19                     | 0.41              |
| 1:B:138:VAL:HG12  | 1:B:139:ALA:N     | 2.35                     | 0.41              |
| 1:B:326:LEU:HD12  | 1:B:363:LEU:HD21  | 2.01                     | 0.41              |
| 1:BA:129:PHE:CE1  | 1:BA:137:VAL:HG11 | 2.55                     | 0.41              |
| 1:BB:159:VAL:O    | 1:BB:159:VAL:HG12 | 2.19                     | 0.41              |
| 1:C:216:VAL:O     | 1:C:216:VAL:HG13  | 2.19                     | 0.41              |
| 1:CA:281:TYR:CG   | 1:CA:366:VAL:HG23 | 2.55                     | 0.41              |
| 1:D:737:GLY:O     | 1:D:741:VAL:HG23  | 2.20                     | 0.41              |
| 1:D:779:LEU:HD21  | 1:E:774:ARG:HG2   | 2.01                     | 0.41              |
| 1:DA:662:ILE:O    | 1:DA:666:THR:HG23 | 2.19                     | 0.41              |
| 1:DB:643:VAL:HG12 | 1:DB:643:VAL:O    | 2.20                     | 0.41              |
| 1:F:538:GLN:HB2   | 1:F:646:VAL:HG22  | 2.02                     | 0.41              |
| 1:FB:138:VAL:HG12 | 1:FB:139:ALA:N    | 2.35                     | 0.41              |
| 1:GA:44:LEU:HD22  | 1:GA:44:LEU:H     | 1.85                     | 0.41              |
| 1:GA:219:VAL:HG11 | 1:GA:227:LEU:HD22 | 2.02                     | 0.41              |
| 1:GA:779:LEU:HD21 | 1:HA:774:ARG:HG2  | 2.02                     | 0.41              |
| 1:H:359:ILE:O     | 1:H:359:ILE:HG23  | 2.20                     | 0.41              |
| 1:HB:176:LEU:HD21 | 1:HB:196:TRP:NE1  | 2.35                     | 0.41              |
| 1:J:487:VAL:HG13  | 1:J:487:VAL:O     | 2.18                     | 0.41              |
| 1:JB:662:ILE:O    | 1:JB:666:THR:HG23 | 2.20                     | 0.41              |
| 1:K:17:HIS:CB     | 1:K:44:LEU:HD23   | 2.50                     | 0.41              |
| 1:L:17:HIS:CB     | 1:L:44:LEU:HD23   | 2.50                     | 0.41              |
| 1:LB:129:PHE:CE1  | 1:LB:137:VAL:HG11 | 2.55                     | 0.41              |
| 1:M:138:VAL:HG12  | 1:M:139:ALA:N     | 2.34                     | 0.41              |
| 1:N:570:ASP:OD1   | 1:N:570:ASP:C     | 2.62                     | 0.41              |
| 1:NB:17:HIS:HB3   | 1:NB:44:LEU:HD23  | 2.01                     | 0.41              |
| 1:O:138:VAL:HG12  | 1:O:139:ALA:N     | 2.34                     | 0.41              |
| 1:OA:539:LEU:HD21 | 1:OA:599:ILE:HD11 | 2.02                     | 0.41              |
| 1:P:57:HIS:O      | 1:P:58:TYR:HD1    | 2.03                     | 0.41              |
| 1:PB:129:PHE:CE1  | 1:PB:137:VAL:HG11 | 2.55                     | 0.41              |
| 1:PB:138:VAL:HG12 | 1:PB:139:ALA:N    | 2.34                     | 0.41              |
| 1:QA:359:ILE:O    | 1:QA:359:ILE:HG23 | 2.19                     | 0.41              |
| 1:R:129:PHE:CE1   | 1:R:137:VAL:HG11  | 2.54                     | 0.41              |
| 1:RA:30:VAL:CG2   | 1:RA:50:MET:HE3   | 2.50                     | 0.41              |
| 1:RA:95:ASP:O     | 1:RA:96:PRO:C     | 2.63                     | 0.41              |
| 1:RB:208:VAL:HG23 | 1:RB:209:PHE:CD1  | 2.55                     | 0.41              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:S:57:HIS:O      | 1:S:58:TYR:HD1    | 2.03                     | 0.41              |
| 1:S:216:VAL:O     | 1:S:216:VAL:HG13  | 2.19                     | 0.41              |
| 1:S:393:VAL:HG22  | 1:S:411:ASP:C     | 2.45                     | 0.41              |
| 1:SA:44:LEU:HD22  | 1:SA:44:LEU:N     | 2.35                     | 0.41              |
| 1:SA:95:ASP:O     | 1:SA:96:PRO:C     | 2.62                     | 0.41              |
| 1:SA:393:VAL:HG22 | 1:SA:411:ASP:C    | 2.45                     | 0.41              |
| 1:SA:654:LEU:HD22 | 1:TA:534:HIS:CG   | 2.55                     | 0.41              |
| 1:SB:57:HIS:O     | 1:SB:58:TYR:HD1   | 2.03                     | 0.41              |
| 1:SB:597:ARG:O    | 1:SB:601:THR:HG23 | 2.20                     | 0.41              |
| 1:T:73:VAL:HG11   | 1:T:81:VAL:HG23   | 2.02                     | 0.41              |
| 1:T:138:VAL:HG12  | 1:T:139:ALA:N     | 2.34                     | 0.41              |
| 1:TB:779:LEU:HD21 | 1:UB:774:ARG:HG2  | 2.01                     | 0.41              |
| 1:UA:359:ILE:HG23 | 1:UA:359:ILE:O    | 2.20                     | 0.41              |
| 1:UB:44:LEU:HD22  | 1:UB:44:LEU:H     | 1.84                     | 0.41              |
| 1:W:138:VAL:HG12  | 1:W:139:ALA:N     | 2.34                     | 0.41              |
| 1:X:138:VAL:HG12  | 1:X:139:ALA:N     | 2.34                     | 0.41              |
| 1:XA:144:LEU:HD12 | 1:XA:163:ILE:HD11 | 2.01                     | 0.41              |
| 1:XB:143:TRP:HH2  | 1:XB:157:VAL:HG22 | 1.85                     | 0.41              |
| 1:Y:216:VAL:O     | 1:Y:216:VAL:HG13  | 2.19                     | 0.41              |
| 1:YB:643:VAL:O    | 1:YB:643:VAL:HG12 | 2.19                     | 0.41              |
| 1:ZA:44:LEU:HD22  | 1:ZA:44:LEU:N     | 2.35                     | 0.41              |
| 1:A:44:LEU:HD22   | 1:A:44:LEU:N      | 2.34                     | 0.41              |
| 1:A:56:ARG:HE     | 1:B:127:LEU:CD2   | 2.33                     | 0.41              |
| 1:A:129:PHE:CE1   | 1:A:137:VAL:HG11  | 2.55                     | 0.41              |
| 1:A:779:LEU:HD21  | 1:B:774:ARG:HG2   | 2.01                     | 0.41              |
| 1:AA:48:MET:HE2   | 1:AA:48:MET:HA    | 2.02                     | 0.41              |
| 1:AB:144:LEU:HD22 | 1:AB:163:ILE:HD11 | 2.02                     | 0.41              |
| 1:AC:208:VAL:HG23 | 1:AC:209:PHE:CD1  | 2.55                     | 0.41              |
| 1:AC:541:LEU:CD2  | 1:AC:640:VAL:HG22 | 2.51                     | 0.41              |
| 1:BA:662:ILE:O    | 1:BA:666:THR:HG23 | 2.20                     | 0.41              |
| 1:BB:779:LEU:HD21 | 1:CB:774:ARG:HG2  | 2.01                     | 0.41              |
| 1:C:359:ILE:O     | 1:C:359:ILE:HG23  | 2.20                     | 0.41              |
| 1:CA:57:HIS:O     | 1:CA:58:TYR:HD1   | 2.03                     | 0.41              |
| 1:CA:216:VAL:O    | 1:CA:216:VAL:HG13 | 2.19                     | 0.41              |
| 1:CB:44:LEU:HD22  | 1:CB:44:LEU:N     | 2.33                     | 0.41              |
| 1:CB:176:LEU:HD21 | 1:CB:196:TRP:CE2  | 2.55                     | 0.41              |
| 1:CB:219:VAL:HG11 | 1:CB:227:LEU:HD22 | 2.01                     | 0.41              |
| 1:CB:597:ARG:O    | 1:CB:601:THR:HG23 | 2.20                     | 0.41              |
| 1:D:44:LEU:HD22   | 1:D:44:LEU:N      | 2.34                     | 0.41              |
| 1:DB:129:PHE:CE1  | 1:DB:137:VAL:HG11 | 2.55                     | 0.41              |
| 1:E:129:PHE:CE1   | 1:E:137:VAL:HG11  | 2.54                     | 0.41              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:EA:57:HIS:O     | 1:EA:58:TYR:HD1   | 2.02                     | 0.41              |
| 1:EB:176:LEU:HD21 | 1:EB:196:TRP:NE1  | 2.35                     | 0.41              |
| 1:EB:426:LEU:HD23 | 1:EB:427:LEU:HD22 | 2.01                     | 0.41              |
| 1:F:138:VAL:HG12  | 1:F:139:ALA:N     | 2.34                     | 0.41              |
| 1:F:176:LEU:HD21  | 1:F:196:TRP:CE2   | 2.55                     | 0.41              |
| 1:FA:129:PHE:CE1  | 1:FA:137:VAL:HG11 | 2.54                     | 0.41              |
| 1:FA:176:LEU:HD21 | 1:FA:196:TRP:CE2  | 2.55                     | 0.41              |
| 1:FB:129:PHE:CE1  | 1:FB:137:VAL:HG11 | 2.54                     | 0.41              |
| 1:H:138:VAL:HG12  | 1:H:139:ALA:N     | 2.35                     | 0.41              |
| 1:IB:662:ILE:O    | 1:IB:666:THR:HG23 | 2.21                     | 0.41              |
| 1:J:489:LEU:HD21  | 1:J:495:PHE:CZ    | 2.56                     | 0.41              |
| 1:KA:17:HIS:CB    | 1:KA:44:LEU:HD23  | 2.51                     | 0.41              |
| 1:KA:176:LEU:HD21 | 1:KA:196:TRP:CE2  | 2.55                     | 0.41              |
| 1:LB:219:VAL:HG11 | 1:LB:227:LEU:HD22 | 2.02                     | 0.41              |
| 1:LB:539:LEU:CD1  | 1:LB:640:VAL:HG13 | 2.50                     | 0.41              |
| 1:M:489:LEU:HD21  | 1:M:495:PHE:CZ    | 2.56                     | 0.41              |
| 1:MB:176:LEU:HD21 | 1:MB:196:TRP:NE1  | 2.35                     | 0.41              |
| 1:MB:737:GLY:O    | 1:MB:741:VAL:HG23 | 2.20                     | 0.41              |
| 1:N:176:LEU:HD21  | 1:N:196:TRP:CE2   | 2.55                     | 0.41              |
| 1:N:359:ILE:O     | 1:N:359:ILE:HG23  | 2.20                     | 0.41              |
| 1:O:176:LEU:HD21  | 1:O:196:TRP:NE1   | 2.34                     | 0.41              |
| 1:O:359:ILE:O     | 1:O:359:ILE:HG23  | 2.19                     | 0.41              |
| 1:OB:539:LEU:HD21 | 1:OB:599:ILE:HD11 | 2.01                     | 0.41              |
| 1:PA:216:VAL:HG13 | 1:PA:216:VAL:O    | 2.19                     | 0.41              |
| 1:PB:758:GLU:O    | 1:PB:762:VAL:HG22 | 2.20                     | 0.41              |
| 1:Q:539:LEU:HD11  | 1:Q:640:VAL:HG13  | 2.02                     | 0.41              |
| 1:RA:487:VAL:O    | 1:RA:487:VAL:HG13 | 2.21                     | 0.41              |
| 1:RB:138:VAL:HG12 | 1:RB:139:ALA:N    | 2.35                     | 0.41              |
| 1:SA:359:ILE:HG23 | 1:SA:359:ILE:O    | 2.20                     | 0.41              |
| 1:SB:129:PHE:CE1  | 1:SB:137:VAL:HG11 | 2.55                     | 0.41              |
| 1:T:219:VAL:HG11  | 1:T:227:LEU:HD22  | 2.01                     | 0.41              |
| 1:T:643:VAL:O     | 1:T:643:VAL:HG12  | 2.20                     | 0.41              |
| 1:TA:10:ILE:HG22  | 1:TA:47:PRO:HB3   | 2.03                     | 0.41              |
| 1:TA:138:VAL:HG12 | 1:TA:139:ALA:N    | 2.34                     | 0.41              |
| 1:UB:138:VAL:HG12 | 1:UB:139:ALA:N    | 2.34                     | 0.41              |
| 1:UB:570:ASP:OD1  | 1:UB:570:ASP:C    | 2.62                     | 0.41              |
| 1:V:643:VAL:O     | 1:V:643:VAL:HG12  | 2.20                     | 0.41              |
| 1:VA:176:LEU:HD21 | 1:VA:196:TRP:CE2  | 2.54                     | 0.41              |
| 1:VB:779:LEU:HD21 | 1:WB:774:ARG:HG2  | 2.02                     | 0.41              |
| 1:XA:366:VAL:O    | 1:XA:366:VAL:HG13 | 2.19                     | 0.41              |
| 1:XB:654:LEU:HD22 | 1:YB:534:HIS:CG   | 2.55                     | 0.41              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:YA:48:MET:HE2   | 1:YA:48:MET:HA    | 2.02                     | 0.41              |
| 1:YB:216:VAL:HG13 | 1:YB:216:VAL:O    | 2.19                     | 0.41              |
| 1:Z:597:ARG:O     | 1:Z:601:THR:HG23  | 2.20                     | 0.41              |
| 1:ZB:359:ILE:O    | 1:ZB:359:ILE:HG23 | 2.20                     | 0.41              |
| 1:AB:219:VAL:HG11 | 1:AB:227:LEU:HD13 | 2.02                     | 0.41              |
| 1:BA:393:VAL:HG22 | 1:BA:411:ASP:C    | 2.45                     | 0.41              |
| 1:BB:138:VAL:HG12 | 1:BB:139:ALA:N    | 2.35                     | 0.41              |
| 1:BB:489:LEU:HD21 | 1:BB:495:PHE:CZ   | 2.55                     | 0.41              |
| 1:C:44:LEU:HD22   | 1:C:44:LEU:N      | 2.34                     | 0.41              |
| 1:CB:413:VAL:HG22 | 1:CB:414:LEU:N    | 2.36                     | 0.41              |
| 1:D:176:LEU:HD21  | 1:D:196:TRP:CE2   | 2.55                     | 0.41              |
| 1:EB:56:ARG:HE    | 1:FB:127:LEU:CD2  | 2.34                     | 0.41              |
| 1:EB:529:ILE:HD13 | 1:EB:583:VAL:HG11 | 2.02                     | 0.41              |
| 1:F:121:LEU:HD23  | 1:F:162:ILE:HG22  | 2.02                     | 0.41              |
| 1:FA:597:ARG:O    | 1:FA:601:THR:HG23 | 2.20                     | 0.41              |
| 1:FB:359:ILE:O    | 1:FB:359:ILE:HG23 | 2.20                     | 0.41              |
| 1:GB:393:VAL:HG22 | 1:GB:411:ASP:C    | 2.45                     | 0.41              |
| 1:H:393:VAL:HG22  | 1:H:411:ASP:C     | 2.46                     | 0.41              |
| 1:HB:44:LEU:HD22  | 1:HB:44:LEU:N     | 2.34                     | 0.41              |
| 1:HB:56:ARG:HE    | 1:IB:127:LEU:CD2  | 2.33                     | 0.41              |
| 1:I:539:LEU:CD1   | 1:I:640:VAL:HG13  | 2.51                     | 0.41              |
| 1:IB:176:LEU:HD21 | 1:IB:196:TRP:NE1  | 2.35                     | 0.41              |
| 1:IB:359:ILE:O    | 1:IB:359:ILE:HG23 | 2.20                     | 0.41              |
| 1:J:48:MET:HE2    | 1:J:48:MET:HA     | 2.02                     | 0.41              |
| 1:JA:44:LEU:HD22  | 1:JA:44:LEU:N     | 2.35                     | 0.41              |
| 1:JA:121:LEU:HD23 | 1:JA:162:ILE:HG22 | 2.00                     | 0.41              |
| 1:JB:176:LEU:HD21 | 1:JB:196:TRP:NE1  | 2.36                     | 0.41              |
| 1:K:57:HIS:O      | 1:K:58:TYR:HD1    | 2.03                     | 0.41              |
| 1:KB:359:ILE:O    | 1:KB:359:ILE:HG23 | 2.20                     | 0.41              |
| 1:L:63:ASN:OD1    | 1:L:104:VAL:HG12  | 2.19                     | 0.41              |
| 1:LA:129:PHE:CE1  | 1:LA:137:VAL:HG11 | 2.55                     | 0.41              |
| 1:LB:570:ASP:OD1  | 1:LB:570:ASP:C    | 2.63                     | 0.41              |
| 1:M:219:VAL:HG11  | 1:M:227:LEU:HD13  | 2.02                     | 0.41              |
| 1:M:219:VAL:HG11  | 1:M:227:LEU:HD22  | 2.01                     | 0.41              |
| 1:MA:643:VAL:HG12 | 1:MA:643:VAL:O    | 2.20                     | 0.41              |
| 1:OA:138:VAL:HG12 | 1:OA:139:ALA:N    | 2.34                     | 0.41              |
| 1:OB:176:LEU:HD21 | 1:OB:196:TRP:CE2  | 2.55                     | 0.41              |
| 1:P:177:ARG:NH1   | 1:P:213:LEU:HD11  | 2.35                     | 0.41              |
| 1:Q:44:LEU:HD22   | 1:Q:44:LEU:N      | 2.35                     | 0.41              |
| 1:QB:129:PHE:CE1  | 1:QB:137:VAL:HG11 | 2.55                     | 0.41              |
| 1:R:359:ILE:O     | 1:R:359:ILE:HG23  | 2.21                     | 0.41              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:RA:17:HIS:CB    | 1:RA:44:LEU:HD23  | 2.51                     | 0.41              |
| 1:SB:359:ILE:O    | 1:SB:359:ILE:HG23 | 2.20                     | 0.41              |
| 1:T:129:PHE:CE1   | 1:T:137:VAL:HG11  | 2.56                     | 0.41              |
| 1:UB:144:LEU:HD22 | 1:UB:163:ILE:HD11 | 2.03                     | 0.41              |
| 1:UB:176:LEU:HD21 | 1:UB:196:TRP:NE1  | 2.34                     | 0.41              |
| 1:VB:176:LEU:HD21 | 1:VB:196:TRP:NE1  | 2.34                     | 0.41              |
| 1:WB:28:VAL:O     | 1:WB:28:VAL:HG13  | 2.21                     | 0.41              |
| 1:X:53:VAL:HG12   | 1:X:57:HIS:O      | 2.19                     | 0.41              |
| 1:XB:176:LEU:HD21 | 1:XB:196:TRP:NE1  | 2.35                     | 0.41              |
| 1:XB:208:VAL:HG23 | 1:XB:209:PHE:CD1  | 2.55                     | 0.41              |
| 1:YA:73:VAL:HG11  | 1:YA:81:VAL:HG23  | 2.02                     | 0.41              |
| 1:YA:219:VAL:HG11 | 1:YA:227:LEU:HD13 | 2.01                     | 0.41              |
| 1:YB:359:ILE:O    | 1:YB:359:ILE:HG23 | 2.20                     | 0.41              |
| 1:YB:523:PHE:CE2  | 1:YB:545:TRP:CD1  | 3.08                     | 0.41              |
| 1:YB:538:GLN:HB2  | 1:YB:646:VAL:HG22 | 2.01                     | 0.41              |
| 1:ZB:129:PHE:CE1  | 1:ZB:137:VAL:HG11 | 2.55                     | 0.41              |
| 1:ZB:643:VAL:O    | 1:ZB:643:VAL:HG12 | 2.20                     | 0.41              |
| 1:AA:216:VAL:O    | 1:AA:216:VAL:HG13 | 2.19                     | 0.41              |
| 1:AA:538:GLN:HB2  | 1:AA:646:VAL:HG22 | 2.02                     | 0.41              |
| 1:B:44:LEU:HD22   | 1:B:44:LEU:H      | 1.86                     | 0.41              |
| 1:BA:56:ARG:HE    | 1:CA:127:LEU:CD2  | 2.33                     | 0.41              |
| 1:BB:56:ARG:HE    | 1:CB:127:LEU:CD2  | 2.34                     | 0.41              |
| 1:BB:73:VAL:HG11  | 1:BB:81:VAL:HG23  | 2.02                     | 0.41              |
| 1:BB:129:PHE:CE1  | 1:BB:137:VAL:HG11 | 2.55                     | 0.41              |
| 1:CA:144:LEU:HD22 | 1:CA:163:ILE:HD11 | 2.03                     | 0.41              |
| 1:CB:53:VAL:HG21  | 1:CB:59:CYS:HB2   | 2.03                     | 0.41              |
| 1:D:144:LEU:HD22  | 1:D:163:ILE:HD11  | 2.02                     | 0.41              |
| 1:DA:3:THR:HG22   | 1:DA:6:PHE:HA     | 2.02                     | 0.41              |
| 1:DB:177:ARG:NH1  | 1:DB:213:LEU:HD11 | 2.35                     | 0.41              |
| 1:DB:538:GLN:HB2  | 1:DB:646:VAL:HG22 | 2.02                     | 0.41              |
| 1:FA:44:LEU:HD22  | 1:FA:44:LEU:H     | 1.85                     | 0.41              |
| 1:GB:539:LEU:CD1  | 1:GB:640:VAL:HG13 | 2.50                     | 0.41              |
| 1:H:56:ARG:HE     | 1:I:127:LEU:CD2   | 2.32                     | 0.41              |
| 1:H:57:HIS:O      | 1:H:58:TYR:HD1    | 2.03                     | 0.41              |
| 1:H:129:PHE:CE1   | 1:H:137:VAL:HG11  | 2.56                     | 0.41              |
| 1:H:176:LEU:HD21  | 1:H:196:TRP:CE2   | 2.55                     | 0.41              |
| 1:HA:165:ALA:HB2  | 1:HA:205:LEU:HD13 | 2.00                     | 0.41              |
| 1:HB:168:ILE:HG22 | 1:HB:215:LEU:CD2  | 2.48                     | 0.41              |
| 1:IA:779:LEU:HD21 | 1:JA:774:ARG:HG2  | 2.02                     | 0.41              |
| 1:KA:56:ARG:HE    | 1:LA:127:LEU:CD2  | 2.34                     | 0.41              |
| 1:KA:529:ILE:HD13 | 1:KA:583:VAL:HG11 | 2.00                     | 0.41              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:L:57:HIS:O      | 1:L:58:TYR:HD1    | 2.03                     | 0.41              |
| 1:LB:44:LEU:HD22  | 1:LB:44:LEU:N     | 2.35                     | 0.41              |
| 1:M:144:LEU:HD22  | 1:M:163:ILE:HD11  | 2.02                     | 0.41              |
| 1:M:316:LEU:HD12  | 1:M:316:LEU:HA    | 1.95                     | 0.41              |
| 1:NB:219:VAL:HG11 | 1:NB:227:LEU:HD13 | 2.03                     | 0.41              |
| 1:O:47:PRO:O      | 1:O:48:MET:HE2    | 2.19                     | 0.41              |
| 1:O:129:PHE:CE1   | 1:O:137:VAL:HG11  | 2.56                     | 0.41              |
| 1:OB:523:PHE:CD2  | 1:OB:568:VAL:HG23 | 2.55                     | 0.41              |
| 1:P:176:LEU:HD21  | 1:P:196:TRP:NE1   | 2.35                     | 0.41              |
| 1:PA:17:HIS:CB    | 1:PA:44:LEU:HD23  | 2.50                     | 0.41              |
| 1:PA:489:LEU:HD21 | 1:PA:495:PHE:CZ   | 2.56                     | 0.41              |
| 1:PB:48:MET:HA    | 1:PB:48:MET:HE3   | 2.02                     | 0.41              |
| 1:Q:44:LEU:HD22   | 1:Q:44:LEU:H      | 1.84                     | 0.41              |
| 1:Q:138:VAL:HG12  | 1:Q:139:ALA:N     | 2.35                     | 0.41              |
| 1:Q:176:LEU:HD21  | 1:Q:196:TRP:CE2   | 2.54                     | 0.41              |
| 1:QB:44:LEU:HD22  | 1:QB:44:LEU:N     | 2.35                     | 0.41              |
| 1:R:539:LEU:CD1   | 1:R:640:VAL:HG13  | 2.49                     | 0.41              |
| 1:SB:538:GLN:HB2  | 1:SB:646:VAL:HG22 | 2.03                     | 0.41              |
| 1:TA:121:LEU:HD23 | 1:TA:162:ILE:HG22 | 2.02                     | 0.41              |
| 1:UA:176:LEU:HD21 | 1:UA:196:TRP:CE2  | 2.55                     | 0.41              |
| 1:UA:539:LEU:HD11 | 1:UA:640:VAL:HG13 | 2.01                     | 0.41              |
| 1:V:216:VAL:O     | 1:V:216:VAL:HG13  | 2.19                     | 0.41              |
| 1:VB:48:MET:HE2   | 1:VB:48:MET:HA    | 2.02                     | 0.41              |
| 1:W:208:VAL:HG23  | 1:W:209:PHE:CD1   | 2.55                     | 0.41              |
| 1:WA:176:LEU:HD21 | 1:WA:196:TRP:NE1  | 2.35                     | 0.41              |
| 1:WA:523:PHE:CE2  | 1:WA:545:TRP:CD1  | 3.09                     | 0.41              |
| 1:WB:529:ILE:HD13 | 1:WB:583:VAL:HG11 | 2.03                     | 0.41              |
| 1:X:176:LEU:HD21  | 1:X:196:TRP:CE2   | 2.55                     | 0.41              |
| 1:Y:10:ILE:HG22   | 1:Y:47:PRO:HB3    | 2.02                     | 0.41              |
| 1:YB:393:VAL:HG22 | 1:YB:411:ASP:C    | 2.46                     | 0.41              |
| 1:ZB:529:ILE:HD13 | 1:ZB:583:VAL:HG11 | 2.02                     | 0.41              |
| 1:AB:405:THR:HG21 | 1:BB:393:VAL:O    | 2.21                     | 0.41              |
| 1:AC:219:VAL:HG11 | 1:AC:227:LEU:HD13 | 2.02                     | 0.41              |
| 1:B:129:PHE:CE1   | 1:B:137:VAL:HG11  | 2.56                     | 0.41              |
| 1:B:359:ILE:O     | 1:B:359:ILE:HG23  | 2.20                     | 0.41              |
| 1:B:643:VAL:HG12  | 1:B:643:VAL:O     | 2.20                     | 0.41              |
| 1:BA:487:VAL:O    | 1:BA:487:VAL:HG13 | 2.20                     | 0.41              |
| 1:BB:359:ILE:O    | 1:BB:359:ILE:HG23 | 2.20                     | 0.41              |
| 1:CA:129:PHE:CE1  | 1:CA:137:VAL:HG11 | 2.55                     | 0.41              |
| 1:CA:758:GLU:O    | 1:CA:762:VAL:HG22 | 2.20                     | 0.41              |
| 1:DA:44:LEU:HD22  | 1:DA:44:LEU:N     | 2.35                     | 0.41              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:DA:326:LEU:HD12 | 1:DA:363:LEU:HD21 | 2.02                     | 0.41              |
| 1:DB:138:VAL:HG12 | 1:DB:139:ALA:N    | 2.35                     | 0.41              |
| 1:DB:143:TRP:HH2  | 1:DB:157:VAL:HG22 | 1.85                     | 0.41              |
| 1:DB:176:LEU:HD21 | 1:DB:196:TRP:CE2  | 2.55                     | 0.41              |
| 1:F:516:LEU:HD23  | 1:F:516:LEU:C     | 2.45                     | 0.41              |
| 1:GA:129:PHE:CE1  | 1:GA:137:VAL:HG11 | 2.56                     | 0.41              |
| 1:I:176:LEU:HD21  | 1:I:196:TRP:NE1   | 2.35                     | 0.41              |
| 1:IA:393:VAL:HG22 | 1:IA:411:ASP:C    | 2.45                     | 0.41              |
| 1:KA:779:LEU:HD21 | 1:LA:774:ARG:HG2  | 2.01                     | 0.41              |
| 1:KB:541:LEU:CD2  | 1:KB:640:VAL:HG22 | 2.50                     | 0.41              |
| 1:LB:17:HIS:CB    | 1:LB:44:LEU:HD23  | 2.50                     | 0.41              |
| 1:LB:57:HIS:O     | 1:LB:58:TYR:HD1   | 2.04                     | 0.41              |
| 1:LB:121:LEU:HD23 | 1:LB:162:ILE:HG22 | 2.02                     | 0.41              |
| 1:LB:597:ARG:O    | 1:LB:601:THR:HG23 | 2.21                     | 0.41              |
| 1:MA:176:LEU:HD21 | 1:MA:196:TRP:NE1  | 2.35                     | 0.41              |
| 1:MA:219:VAL:HG11 | 1:MA:227:LEU:HD22 | 2.01                     | 0.41              |
| 1:MB:143:TRP:HH2  | 1:MB:157:VAL:HG22 | 1.85                     | 0.41              |
| 1:MB:516:LEU:O    | 1:MB:516:LEU:HD23 | 2.20                     | 0.41              |
| 1:MB:538:GLN:HB2  | 1:MB:646:VAL:HG22 | 2.02                     | 0.41              |
| 1:NA:219:VAL:HG11 | 1:NA:227:LEU:HD13 | 2.03                     | 0.41              |
| 1:OB:143:TRP:HH2  | 1:OB:157:VAL:HG22 | 1.84                     | 0.41              |
| 1:P:176:LEU:HD21  | 1:P:196:TRP:CE2   | 2.55                     | 0.41              |
| 1:P:643:VAL:O     | 1:P:643:VAL:HG12  | 2.20                     | 0.41              |
| 1:PA:144:LEU:HD22 | 1:PA:163:ILE:HD11 | 2.03                     | 0.41              |
| 1:PB:539:LEU:HD11 | 1:PB:640:VAL:HG13 | 2.03                     | 0.41              |
| 1:Q:176:LEU:HD21  | 1:Q:196:TRP:NE1   | 2.35                     | 0.41              |
| 1:Q:216:VAL:O     | 1:Q:216:VAL:HG13  | 2.19                     | 0.41              |
| 1:Q:487:VAL:O     | 1:Q:487:VAL:HG13  | 2.19                     | 0.41              |
| 1:QA:138:VAL:HG12 | 1:QA:139:ALA:N    | 2.34                     | 0.41              |
| 1:QB:487:VAL:O    | 1:QB:487:VAL:HG13 | 2.19                     | 0.41              |
| 1:R:165:ALA:HB2   | 1:R:205:LEU:HD13  | 2.02                     | 0.41              |
| 1:RB:643:VAL:O    | 1:RB:643:VAL:HG12 | 2.21                     | 0.41              |
| 1:S:539:LEU:CD1   | 1:S:640:VAL:HG13  | 2.50                     | 0.41              |
| 1:SB:168:ILE:HG22 | 1:SB:215:LEU:CD2  | 2.47                     | 0.41              |
| 1:SB:393:VAL:HG22 | 1:SB:411:ASP:C    | 2.46                     | 0.41              |
| 1:T:529:ILE:HD13  | 1:T:583:VAL:HG11  | 2.03                     | 0.41              |
| 1:UA:654:LEU:HD22 | 1:VA:534:HIS:CG   | 2.55                     | 0.41              |
| 1:V:44:LEU:HD22   | 1:V:44:LEU:N      | 2.36                     | 0.41              |
| 1:VA:56:ARG:HE    | 1:WA:127:LEU:CD2  | 2.33                     | 0.41              |
| 1:W:56:ARG:HE     | 1:X:127:LEU:CD2   | 2.34                     | 0.41              |
| 1:WB:176:LEU:HD21 | 1:WB:196:TRP:NE1  | 2.35                     | 0.41              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:X:165:ALA:HB2   | 1:X:205:LEU:HD13  | 2.01                     | 0.41              |
| 1:XB:47:PRO:O     | 1:XB:48:MET:HE2   | 2.21                     | 0.41              |
| 1:XB:541:LEU:CD2  | 1:XB:640:VAL:HG22 | 2.50                     | 0.41              |
| 1:Y:57:HIS:O      | 1:Y:58:TYR:HD1    | 2.03                     | 0.41              |
| 1:Y:359:ILE:HG23  | 1:Y:359:ILE:O     | 2.20                     | 0.41              |
| 1:YA:57:HIS:O     | 1:YA:58:TYR:HD1   | 2.04                     | 0.41              |
| 1:Z:539:LEU:HD21  | 1:Z:599:ILE:HD11  | 2.03                     | 0.41              |
| 1:ZA:57:HIS:O     | 1:ZA:58:TYR:HD1   | 2.04                     | 0.41              |
| 1:AB:489:LEU:HD21 | 1:AB:495:PHE:CZ   | 2.55                     | 0.41              |
| 1:AB:809:ASP:HA   | 1:AB:812:VAL:HG22 | 2.03                     | 0.41              |
| 1:B:17:HIS:CB     | 1:B:44:LEU:HD23   | 2.50                     | 0.41              |
| 1:BA:523:PHE:CD2  | 1:BA:568:VAL:HG23 | 2.55                     | 0.41              |
| 1:CA:138:VAL:HG12 | 1:CA:139:ALA:N    | 2.35                     | 0.41              |
| 1:CA:176:LEU:HD21 | 1:CA:196:TRP:NE1  | 2.36                     | 0.41              |
| 1:CA:597:ARG:O    | 1:CA:601:THR:HG23 | 2.20                     | 0.41              |
| 1:DB:57:HIS:O     | 1:DB:58:TYR:HD1   | 2.03                     | 0.41              |
| 1:FB:17:HIS:CB    | 1:FB:44:LEU:HD23  | 2.50                     | 0.41              |
| 1:GA:52:THR:O     | 1:GA:109:ILE:HD11 | 2.19                     | 0.41              |
| 1:HA:219:VAL:HG11 | 1:HA:227:LEU:HD13 | 2.02                     | 0.41              |
| 1:I:539:LEU:HD21  | 1:I:599:ILE:HD11  | 2.02                     | 0.41              |
| 1:J:44:LEU:HD22   | 1:J:44:LEU:H      | 1.85                     | 0.41              |
| 1:J:57:HIS:O      | 1:J:58:TYR:HD1    | 2.03                     | 0.41              |
| 1:KB:176:LEU:HD21 | 1:KB:196:TRP:CE2  | 2.55                     | 0.41              |
| 1:LA:643:VAL:O    | 1:LA:643:VAL:HG12 | 2.20                     | 0.41              |
| 1:M:393:VAL:HG22  | 1:M:411:ASP:C     | 2.45                     | 0.41              |
| 1:MB:56:ARG:HE    | 1:NB:127:LEU:CD2  | 2.33                     | 0.41              |
| 1:NB:56:ARG:HE    | 1:OB:127:LEU:HD21 | 1.85                     | 0.41              |
| 1:NB:393:VAL:HG22 | 1:NB:411:ASP:C    | 2.46                     | 0.41              |
| 1:NB:487:VAL:O    | 1:NB:487:VAL:HG13 | 2.20                     | 0.41              |
| 1:OA:17:HIS:CB    | 1:OA:44:LEU:HD23  | 2.50                     | 0.41              |
| 1:OB:662:ILE:O    | 1:OB:666:THR:HG23 | 2.20                     | 0.41              |
| 1:P:538:GLN:HB2   | 1:P:646:VAL:HG22  | 2.02                     | 0.41              |
| 1:P:597:ARG:O     | 1:P:601:THR:HG23  | 2.21                     | 0.41              |
| 1:PA:3:THR:HG22   | 1:PA:6:PHE:HA     | 2.03                     | 0.41              |
| 1:Q:56:ARG:HE     | 1:R:127:LEU:CD2   | 2.34                     | 0.41              |
| 1:Q:95:ASP:O      | 1:Q:96:PRO:C      | 2.63                     | 0.41              |
| 1:QA:30:VAL:HG22  | 1:QA:50:MET:HE2   | 2.03                     | 0.41              |
| 1:SA:129:PHE:CE1  | 1:SA:137:VAL:HG11 | 2.56                     | 0.41              |
| 1:SA:143:TRP:HH2  | 1:SA:157:VAL:HG22 | 1.85                     | 0.41              |
| 1:TA:176:LEU:HD21 | 1:TA:196:TRP:CE2  | 2.56                     | 0.41              |
| 1:VA:393:VAL:HG22 | 1:VA:411:ASP:C    | 2.46                     | 0.41              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:WB:138:VAL:HG12 | 1:WB:139:ALA:N    | 2.34                     | 0.41              |
| 1:WB:539:LEU:CD1  | 1:WB:599:ILE:HD11 | 2.50                     | 0.41              |
| 1:XB:168:ILE:HG22 | 1:XB:215:LEU:CD2  | 2.49                     | 0.41              |
| 1:XB:583:VAL:O    | 1:XB:583:VAL:HG12 | 2.20                     | 0.41              |
| 1:Y:219:VAL:HG11  | 1:Y:227:LEU:HD22  | 2.02                     | 0.41              |
| 1:YA:17:HIS:CB    | 1:YA:44:LEU:HD23  | 2.51                     | 0.41              |
| 1:YB:129:PHE:CE1  | 1:YB:137:VAL:HG11 | 2.55                     | 0.41              |
| 1:YB:168:ILE:HG22 | 1:YB:215:LEU:CD2  | 2.45                     | 0.41              |
| 1:A:643:VAL:O     | 1:A:643:VAL:HG12  | 2.21                     | 0.41              |
| 1:AA:10:ILE:HG22  | 1:AA:47:PRO:HB3   | 2.03                     | 0.41              |
| 1:AA:138:VAL:HG12 | 1:AA:139:ALA:N    | 2.35                     | 0.41              |
| 1:AB:597:ARG:O    | 1:AB:601:THR:HG23 | 2.20                     | 0.41              |
| 1:C:541:LEU:CD2   | 1:C:640:VAL:HG22  | 2.50                     | 0.41              |
| 1:CA:643:VAL:O    | 1:CA:643:VAL:HG12 | 2.20                     | 0.41              |
| 1:DA:47:PRO:C     | 1:DA:48:MET:HE2   | 2.46                     | 0.41              |
| 1:DB:165:ALA:HB2  | 1:DB:205:LEU:HD13 | 2.02                     | 0.41              |
| 1:DB:391:GLN:HB2  | 1:DB:398:VAL:HG22 | 2.02                     | 0.41              |
| 1:E:143:TRP:HH2   | 1:E:157:VAL:HG22  | 1.85                     | 0.41              |
| 1:E:176:LEU:HD21  | 1:E:196:TRP:NE1   | 2.36                     | 0.41              |
| 1:EA:73:VAL:HG11  | 1:EA:81:VAL:HG23  | 2.03                     | 0.41              |
| 1:EB:57:HIS:O     | 1:EB:58:TYR:HD1   | 2.03                     | 0.41              |
| 1:FA:359:ILE:O    | 1:FA:359:ILE:HG23 | 2.20                     | 0.41              |
| 1:FA:393:VAL:HG22 | 1:FA:411:ASP:C    | 2.45                     | 0.41              |
| 1:FB:143:TRP:HH2  | 1:FB:157:VAL:HG22 | 1.85                     | 0.41              |
| 1:G:538:GLN:HB2   | 1:G:646:VAL:HG22  | 2.03                     | 0.41              |
| 1:JB:219:VAL:HG11 | 1:JB:227:LEU:HD13 | 2.03                     | 0.41              |
| 1:K:168:ILE:HG22  | 1:K:215:LEU:CD2   | 2.48                     | 0.41              |
| 1:KA:56:ARG:HE    | 1:LA:127:LEU:HD21 | 1.85                     | 0.41              |
| 1:KA:539:LEU:HD11 | 1:KA:640:VAL:HG13 | 2.02                     | 0.41              |
| 1:LA:168:ILE:HG22 | 1:LA:215:LEU:CD2  | 2.48                     | 0.41              |
| 1:M:809:ASP:HA    | 1:M:812:VAL:HG22  | 2.02                     | 0.41              |
| 1:N:129:PHE:CE1   | 1:N:137:VAL:HG11  | 2.55                     | 0.41              |
| 1:N:138:VAL:HG12  | 1:N:139:ALA:N     | 2.35                     | 0.41              |
| 1:N:176:LEU:HD21  | 1:N:196:TRP:NE1   | 2.35                     | 0.41              |
| 1:OA:176:LEU:HD21 | 1:OA:196:TRP:NE1  | 2.35                     | 0.41              |
| 1:PB:57:HIS:O     | 1:PB:58:TYR:HD1   | 2.03                     | 0.41              |
| 1:PB:359:ILE:O    | 1:PB:359:ILE:HG23 | 2.20                     | 0.41              |
| 1:Q:57:HIS:O      | 1:Q:58:TYR:HD1    | 2.03                     | 0.41              |
| 1:QA:541:LEU:CD2  | 1:QA:640:VAL:HG22 | 2.50                     | 0.41              |
| 1:RA:737:GLY:O    | 1:RA:741:VAL:HG23 | 2.21                     | 0.41              |
| 1:RB:129:PHE:CE1  | 1:RB:137:VAL:HG11 | 2.56                     | 0.41              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:S:176:LEU:HD21  | 1:S:196:TRP:CE2   | 2.55                     | 0.41              |
| 1:S:176:LEU:HD21  | 1:S:196:TRP:NE1   | 2.34                     | 0.41              |
| 1:TA:73:VAL:HG11  | 1:TA:81:VAL:HG23  | 2.03                     | 0.41              |
| 1:TA:143:TRP:HH2  | 1:TA:157:VAL:HG22 | 1.85                     | 0.41              |
| 1:TB:219:VAL:HG11 | 1:TB:227:LEU:HD22 | 2.02                     | 0.41              |
| 1:UB:662:ILE:O    | 1:UB:666:THR:HG23 | 2.20                     | 0.41              |
| 1:WA:95:ASP:O     | 1:WA:96:PRO:C     | 2.64                     | 0.41              |
| 1:XA:165:ALA:HB2  | 1:XA:205:LEU:HD13 | 2.03                     | 0.41              |
| 1:YA:129:PHE:CE1  | 1:YA:137:VAL:HG11 | 2.55                     | 0.41              |
| 1:ZB:144:LEU:HD22 | 1:ZB:163:ILE:HD11 | 2.03                     | 0.41              |
| 1:ZB:391:GLN:HB2  | 1:ZB:398:VAL:HG22 | 2.03                     | 0.41              |
| 1:ZB:539:LEU:HD21 | 1:ZB:599:ILE:HD11 | 2.03                     | 0.41              |
| 1:AA:643:VAL:O    | 1:AA:643:VAL:HG12 | 2.21                     | 0.41              |
| 1:AB:17:HIS:CB    | 1:AB:44:LEU:HD23  | 2.51                     | 0.41              |
| 1:AC:56:ARG:HE    | 1:OA:127:LEU:CD2  | 2.34                     | 0.41              |
| 1:AC:579:VAL:O    | 1:AC:583:VAL:HG12 | 2.21                     | 0.41              |
| 1:B:405:THR:HG21  | 1:C:393:VAL:O     | 2.21                     | 0.41              |
| 1:D:57:HIS:O      | 1:D:58:TYR:HD1    | 2.03                     | 0.41              |
| 1:D:539:LEU:HD11  | 1:D:640:VAL:HG13  | 2.03                     | 0.41              |
| 1:DA:359:ILE:O    | 1:DA:359:ILE:HG23 | 2.21                     | 0.41              |
| 1:DA:597:ARG:O    | 1:DA:601:THR:HG23 | 2.20                     | 0.41              |
| 1:DB:539:LEU:HD12 | 1:DB:540:GLN:N    | 2.36                     | 0.41              |
| 1:E:393:VAL:HG22  | 1:E:411:ASP:C     | 2.45                     | 0.41              |
| 1:EA:129:PHE:CE1  | 1:EA:137:VAL:HG11 | 2.56                     | 0.41              |
| 1:EB:597:ARG:O    | 1:EB:601:THR:HG23 | 2.20                     | 0.41              |
| 1:F:541:LEU:CD2   | 1:F:640:VAL:HG22  | 2.51                     | 0.41              |
| 1:FA:47:PRO:C     | 1:FA:48:MET:HE2   | 2.46                     | 0.41              |
| 1:FB:165:ALA:HB2  | 1:FB:205:LEU:HD13 | 2.03                     | 0.41              |
| 1:FB:176:LEU:HD21 | 1:FB:196:TRP:NE1  | 2.36                     | 0.41              |
| 1:G:597:ARG:O     | 1:G:601:THR:HG23  | 2.21                     | 0.41              |
| 1:G:779:LEU:HD21  | 1:H:774:ARG:HG2   | 2.02                     | 0.41              |
| 1:HB:121:LEU:HD22 | 1:HB:159:VAL:HG13 | 2.02                     | 0.41              |
| 1:HB:662:ILE:O    | 1:HB:666:THR:HG23 | 2.21                     | 0.41              |
| 1:IB:539:LEU:HD11 | 1:IB:640:VAL:HG13 | 2.03                     | 0.41              |
| 1:J:138:VAL:HG12  | 1:J:139:ALA:N     | 2.35                     | 0.41              |
| 1:J:529:ILE:HD13  | 1:J:583:VAL:HG11  | 2.03                     | 0.41              |
| 1:JA:56:ARG:HE    | 1:KA:127:LEU:HD21 | 1.85                     | 0.41              |
| 1:JB:56:ARG:HE    | 1:KB:127:LEU:HD21 | 1.85                     | 0.41              |
| 1:KA:541:LEU:CD2  | 1:KA:640:VAL:HG22 | 2.51                     | 0.41              |
| 1:KB:144:LEU:HD22 | 1:KB:163:ILE:HD11 | 2.03                     | 0.41              |
| 1:LA:44:LEU:HD22  | 1:LA:44:LEU:N     | 2.35                     | 0.41              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:MA:541:LEU:CD2  | 1:MA:640:VAL:HG22 | 2.51                     | 0.41              |
| 1:MB:807:ILE:HD12 | 1:MB:807:ILE:HA   | 1.98                     | 0.41              |
| 1:NB:143:TRP:HH2  | 1:NB:157:VAL:HG22 | 1.85                     | 0.41              |
| 1:NB:165:ALA:HB2  | 1:NB:205:LEU:HD13 | 2.02                     | 0.41              |
| 1:NB:538:GLN:HB2  | 1:NB:646:VAL:HG22 | 2.03                     | 0.41              |
| 1:OB:17:HIS:CB    | 1:OB:44:LEU:HD23  | 2.50                     | 0.41              |
| 1:P:47:PRO:C      | 1:P:48:MET:HE2    | 2.46                     | 0.41              |
| 1:P:138:VAL:HG12  | 1:P:139:ALA:N     | 2.35                     | 0.41              |
| 1:P:219:VAL:HG11  | 1:P:227:LEU:HD13  | 2.03                     | 0.41              |
| 1:PB:176:LEU:HD21 | 1:PB:196:TRP:NE1  | 2.35                     | 0.41              |
| 1:PB:539:LEU:CD1  | 1:PB:640:VAL:HG13 | 2.50                     | 0.41              |
| 1:QB:393:VAL:HG22 | 1:QB:411:ASP:C    | 2.46                     | 0.41              |
| 1:QB:597:ARG:O    | 1:QB:601:THR:HG23 | 2.21                     | 0.41              |
| 1:R:17:HIS:CB     | 1:R:44:LEU:HD23   | 2.51                     | 0.41              |
| 1:SA:216:VAL:O    | 1:SA:216:VAL:HG13 | 2.19                     | 0.41              |
| 1:T:176:LEU:HD21  | 1:T:196:TRP:NE1   | 2.35                     | 0.41              |
| 1:TA:216:VAL:O    | 1:TA:216:VAL:HG13 | 2.19                     | 0.41              |
| 1:TB:56:ARG:HE    | 1:UB:127:LEU:CD2  | 2.33                     | 0.41              |
| 1:TB:176:LEU:HD21 | 1:TB:196:TRP:NE1  | 2.35                     | 0.41              |
| 1:UB:143:TRP:HH2  | 1:UB:157:VAL:HG22 | 1.85                     | 0.41              |
| 1:VB:597:ARG:O    | 1:VB:601:THR:HG23 | 2.21                     | 0.41              |
| 1:W:662:ILE:O     | 1:W:666:THR:HG23  | 2.20                     | 0.41              |
| 1:WB:366:VAL:O    | 1:WB:366:VAL:HG13 | 2.20                     | 0.41              |
| 1:WB:405:THR:HG21 | 1:XB:393:VAL:O    | 2.21                     | 0.41              |
| 1:X:144:LEU:HD22  | 1:X:163:ILE:HD11  | 2.03                     | 0.41              |
| 1:X:405:THR:HG21  | 1:Y:393:VAL:O     | 2.21                     | 0.41              |
| 1:X:643:VAL:O     | 1:X:643:VAL:HG12  | 2.20                     | 0.41              |
| 1:XB:95:ASP:O     | 1:XB:96:PRO:C     | 2.63                     | 0.41              |
| 1:YA:44:LEU:HD22  | 1:YA:44:LEU:H     | 1.86                     | 0.41              |
| 1:YB:330:GLN:C    | 1:YB:407:MET:HE1  | 2.46                     | 0.41              |
| 1:Z:176:LEU:HD21  | 1:Z:196:TRP:NE1   | 2.35                     | 0.41              |
| 1:Z:539:LEU:HD11  | 1:Z:640:VAL:HG13  | 2.02                     | 0.41              |
| 1:Z:737:GLY:O     | 1:Z:741:VAL:HG23  | 2.21                     | 0.41              |
| 1:A:529:ILE:HD13  | 1:A:583:VAL:HG11  | 2.03                     | 0.41              |
| 1:AA:143:TRP:HH2  | 1:AA:157:VAL:HG22 | 1.85                     | 0.41              |
| 1:AB:527:ILE:HD11 | 1:AB:539:LEU:HD22 | 2.03                     | 0.41              |
| 1:AC:57:HIS:O     | 1:AC:58:TYR:HD1   | 2.04                     | 0.41              |
| 1:B:144:LEU:HD22  | 1:B:163:ILE:HD11  | 2.03                     | 0.41              |
| 1:BA:143:TRP:HH2  | 1:BA:157:VAL:HG22 | 1.85                     | 0.41              |
| 1:BB:57:HIS:O     | 1:BB:58:TYR:HD1   | 2.03                     | 0.41              |
| 1:CA:809:ASP:HA   | 1:CA:812:VAL:HG22 | 2.03                     | 0.41              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:D:44:LEU:HD22   | 1:D:44:LEU:H      | 1.86                     | 0.41              |
| 1:D:643:VAL:O     | 1:D:643:VAL:HG12  | 2.21                     | 0.41              |
| 1:DA:17:HIS:CB    | 1:DA:44:LEU:HD23  | 2.51                     | 0.41              |
| 1:E:121:LEU:HD22  | 1:E:159:VAL:HG13  | 2.02                     | 0.41              |
| 1:EB:44:LEU:HD22  | 1:EB:44:LEU:N     | 2.35                     | 0.41              |
| 1:EB:129:PHE:CE1  | 1:EB:137:VAL:HG11 | 2.56                     | 0.41              |
| 1:EB:539:LEU:HD21 | 1:EB:599:ILE:HD11 | 2.02                     | 0.41              |
| 1:F:523:PHE:CE2   | 1:F:545:TRP:CD1   | 3.08                     | 0.41              |
| 1:FB:159:VAL:O    | 1:FB:159:VAL:HG12 | 2.20                     | 0.41              |
| 1:FB:393:VAL:HG22 | 1:FB:411:ASP:C    | 2.46                     | 0.41              |
| 1:FB:539:LEU:HD11 | 1:FB:541:LEU:CD2  | 2.50                     | 0.41              |
| 1:G:176:LEU:HD21  | 1:G:196:TRP:CE2   | 2.56                     | 0.41              |
| 1:GA:56:ARG:HE    | 1:HA:127:LEU:CD2  | 2.33                     | 0.41              |
| 1:GB:17:HIS:CB    | 1:GB:44:LEU:HD23  | 2.51                     | 0.41              |
| 1:GB:56:ARG:HE    | 1:HB:127:LEU:HD21 | 1.85                     | 0.41              |
| 1:GB:57:HIS:O     | 1:GB:58:TYR:HD1   | 2.04                     | 0.41              |
| 1:GB:176:LEU:HD21 | 1:GB:196:TRP:CE2  | 2.55                     | 0.41              |
| 1:GB:570:ASP:OD1  | 1:GB:570:ASP:C    | 2.64                     | 0.41              |
| 1:HA:30:VAL:CG2   | 1:HA:50:MET:HE3   | 2.51                     | 0.41              |
| 1:HB:539:LEU:HD21 | 1:HB:599:ILE:HD11 | 2.02                     | 0.41              |
| 1:HB:597:ARG:O    | 1:HB:601:THR:HG23 | 2.21                     | 0.41              |
| 1:I:121:LEU:HD23  | 1:I:162:ILE:HG22  | 2.03                     | 0.41              |
| 1:I:523:PHE:CE2   | 1:I:545:TRP:CD1   | 3.08                     | 0.41              |
| 1:IA:44:LEU:HD22  | 1:IA:44:LEU:N     | 2.35                     | 0.41              |
| 1:IB:168:ILE:HG22 | 1:IB:215:LEU:CD2  | 2.51                     | 0.41              |
| 1:IB:539:LEU:HD12 | 1:IB:540:GLN:N    | 2.36                     | 0.41              |
| 1:JB:44:LEU:HD22  | 1:JB:44:LEU:N     | 2.35                     | 0.41              |
| 1:JB:57:HIS:O     | 1:JB:58:TYR:HD1   | 2.03                     | 0.41              |
| 1:JB:129:PHE:CE1  | 1:JB:137:VAL:HG11 | 2.55                     | 0.41              |
| 1:JB:143:TRP:HH2  | 1:JB:157:VAL:HG22 | 1.85                     | 0.41              |
| 1:KA:138:VAL:HG12 | 1:KA:139:ALA:N    | 2.35                     | 0.41              |
| 1:KA:143:TRP:HH2  | 1:KA:157:VAL:HG22 | 1.85                     | 0.41              |
| 1:KA:662:ILE:O    | 1:KA:666:THR:HG23 | 2.20                     | 0.41              |
| 1:KB:281:TYR:CG   | 1:KB:366:VAL:HG23 | 2.56                     | 0.41              |
| 1:L:168:ILE:HG21  | 1:L:174:LEU:HB2   | 2.02                     | 0.41              |
| 1:L:176:LEU:HD21  | 1:L:196:TRP:NE1   | 2.36                     | 0.41              |
| 1:LA:48:MET:HE3   | 1:LA:48:MET:CA    | 2.51                     | 0.41              |
| 1:LA:393:VAL:HG22 | 1:LA:411:ASP:C    | 2.46                     | 0.41              |
| 1:LB:73:VAL:HG11  | 1:LB:81:VAL:HG23  | 2.03                     | 0.41              |
| 1:LB:176:LEU:HD21 | 1:LB:196:TRP:NE1  | 2.36                     | 0.41              |
| 1:M:539:LEU:HD11  | 1:M:599:ILE:CD1   | 2.48                     | 0.41              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:M:597:ARG:O     | 1:M:601:THR:HG23  | 2.21                     | 0.41              |
| 1:MA:168:ILE:HG22 | 1:MA:215:LEU:CD2  | 2.46                     | 0.41              |
| 1:NB:541:LEU:CD2  | 1:NB:640:VAL:HG22 | 2.51                     | 0.41              |
| 1:O:405:THR:HG21  | 1:P:393:VAL:O     | 2.20                     | 0.41              |
| 1:OA:129:PHE:CE1  | 1:OA:137:VAL:HG11 | 2.56                     | 0.41              |
| 1:OA:643:VAL:O    | 1:OA:643:VAL:HG12 | 2.21                     | 0.41              |
| 1:OB:44:LEU:HD22  | 1:OB:44:LEU:H     | 1.86                     | 0.41              |
| 1:OB:487:VAL:O    | 1:OB:487:VAL:HG13 | 2.19                     | 0.41              |
| 1:P:539:LEU:HD12  | 1:P:540:GLN:N     | 2.36                     | 0.41              |
| 1:PA:56:ARG:HE    | 1:QA:127:LEU:CD2  | 2.34                     | 0.41              |
| 1:PA:143:TRP:HH2  | 1:PA:157:VAL:HG22 | 1.85                     | 0.41              |
| 1:PA:529:ILE:HD13 | 1:PA:583:VAL:HG11 | 2.03                     | 0.41              |
| 1:PA:597:ARG:O    | 1:PA:601:THR:HG23 | 2.21                     | 0.41              |
| 1:PB:56:ARG:HE    | 1:QB:127:LEU:CD2  | 2.34                     | 0.41              |
| 1:PB:809:ASP:HA   | 1:PB:812:VAL:HG22 | 2.03                     | 0.41              |
| 1:Q:570:ASP:OD1   | 1:Q:570:ASP:C     | 2.64                     | 0.41              |
| 1:QA:176:LEU:HD21 | 1:QA:196:TRP:NE1  | 2.35                     | 0.41              |
| 1:QB:165:ALA:HB2  | 1:QB:205:LEU:HD13 | 2.03                     | 0.41              |
| 1:QB:662:ILE:O    | 1:QB:666:THR:HG23 | 2.21                     | 0.41              |
| 1:R:53:VAL:HG12   | 1:R:93:ALA:HA     | 2.03                     | 0.41              |
| 1:R:138:VAL:HG12  | 1:R:139:ALA:N     | 2.35                     | 0.41              |
| 1:R:159:VAL:O     | 1:R:159:VAL:HG12  | 2.20                     | 0.41              |
| 1:RA:168:ILE:HG22 | 1:RA:215:LEU:CD2  | 2.45                     | 0.41              |
| 1:RA:216:VAL:O    | 1:RA:216:VAL:HG13 | 2.19                     | 0.41              |
| 1:RA:643:VAL:O    | 1:RA:643:VAL:HG12 | 2.21                     | 0.41              |
| 1:S:56:ARG:HE     | 1:T:127:LEU:HD21  | 1.86                     | 0.41              |
| 1:SA:47:PRO:C     | 1:SA:48:MET:HE2   | 2.45                     | 0.41              |
| 1:SA:176:LEU:HD21 | 1:SA:196:TRP:NE1  | 2.36                     | 0.41              |
| 1:SA:539:LEU:CD1  | 1:SA:640:VAL:HG13 | 2.49                     | 0.41              |
| 1:SB:176:LEU:HD21 | 1:SB:196:TRP:NE1  | 2.35                     | 0.41              |
| 1:SB:487:VAL:O    | 1:SB:487:VAL:HG13 | 2.20                     | 0.41              |
| 1:T:44:LEU:HD22   | 1:T:44:LEU:N      | 2.36                     | 0.41              |
| 1:T:121:LEU:HD23  | 1:T:162:ILE:HG22  | 2.03                     | 0.41              |
| 1:T:597:ARG:O     | 1:T:601:THR:HG23  | 2.21                     | 0.41              |
| 1:TB:129:PHE:CE1  | 1:TB:137:VAL:HG11 | 2.56                     | 0.41              |
| 1:UA:144:LEU:HD22 | 1:UA:163:ILE:HD11 | 2.03                     | 0.41              |
| 1:UB:281:TYR:CG   | 1:UB:366:VAL:HG23 | 2.56                     | 0.41              |
| 1:UB:359:ILE:O    | 1:UB:359:ILE:HG23 | 2.20                     | 0.41              |
| 1:UB:539:LEU:HD11 | 1:UB:640:VAL:HG13 | 2.03                     | 0.41              |
| 1:VA:176:LEU:HD21 | 1:VA:196:TRP:NE1  | 2.36                     | 0.41              |
| 1:W:129:PHE:CE1   | 1:W:137:VAL:HG11  | 2.55                     | 0.41              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:X:527:ILE:HD11  | 1:X:539:LEU:HD22  | 2.03                     | 0.41              |
| 1:XA:654:LEU:HD22 | 1:YA:534:HIS:CG   | 2.56                     | 0.41              |
| 1:XA:779:LEU:HD21 | 1:YA:774:ARG:HG2  | 2.03                     | 0.41              |
| 1:XB:17:HIS:CB    | 1:XB:44:LEU:HD23  | 2.51                     | 0.41              |
| 1:XB:56:ARG:HE    | 1:YB:127:LEU:HD21 | 1.86                     | 0.41              |
| 1:XB:216:VAL:O    | 1:XB:216:VAL:HG13 | 2.19                     | 0.41              |
| 1:XB:662:ILE:O    | 1:XB:666:THR:HG23 | 2.20                     | 0.41              |
| 1:Y:17:HIS:CB     | 1:Y:44:LEU:HD23   | 2.50                     | 0.41              |
| 1:YA:10:ILE:HG22  | 1:YA:47:PRO:HB3   | 2.03                     | 0.41              |
| 1:YB:597:ARG:O    | 1:YB:601:THR:HG23 | 2.21                     | 0.41              |
| 1:Z:73:VAL:HG11   | 1:Z:81:VAL:HG23   | 2.02                     | 0.41              |
| 1:Z:489:LEU:HD21  | 1:Z:495:PHE:CZ    | 2.56                     | 0.41              |
| 1:ZA:44:LEU:HD22  | 1:ZA:44:LEU:H     | 1.86                     | 0.41              |
| 1:ZA:597:ARG:O    | 1:ZA:601:THR:HG23 | 2.20                     | 0.41              |
| 1:ZB:44:LEU:HD22  | 1:ZB:44:LEU:H     | 1.85                     | 0.41              |
| 1:ZB:176:LEU:HD21 | 1:ZB:196:TRP:NE1  | 2.35                     | 0.41              |
| 1:A:44:LEU:HD22   | 1:A:44:LEU:H      | 1.86                     | 0.41              |
| 1:A:393:VAL:HG22  | 1:A:411:ASP:C     | 2.45                     | 0.41              |
| 1:A:809:ASP:HA    | 1:A:812:VAL:HG22  | 2.03                     | 0.41              |
| 1:AA:3:THR:HG22   | 1:AA:6:PHE:HA     | 2.03                     | 0.41              |
| 1:AB:393:VAL:HG22 | 1:AB:411:ASP:C    | 2.46                     | 0.41              |
| 1:AC:52:THR:O     | 1:AC:109:ILE:HD11 | 2.21                     | 0.41              |
| 1:B:176:LEU:HD21  | 1:B:196:TRP:NE1   | 2.36                     | 0.41              |
| 1:B:539:LEU:HD21  | 1:B:599:ILE:HD11  | 2.02                     | 0.41              |
| 1:C:48:MET:HE2    | 1:C:48:MET:HA     | 2.02                     | 0.41              |
| 1:CA:359:ILE:HG23 | 1:CA:359:ILE:O    | 2.20                     | 0.41              |
| 1:CB:758:GLU:O    | 1:CB:762:VAL:HG22 | 2.20                     | 0.41              |
| 1:E:219:VAL:HG11  | 1:E:227:LEU:HD13  | 2.03                     | 0.41              |
| 1:E:662:ILE:O     | 1:E:666:THR:HG23  | 2.20                     | 0.41              |
| 1:EA:30:VAL:CG2   | 1:EA:50:MET:HE2   | 2.51                     | 0.41              |
| 1:EB:95:ASP:O     | 1:EB:96:PRO:C     | 2.63                     | 0.41              |
| 1:F:13:TYR:HA     | 1:F:50:MET:HE3    | 2.03                     | 0.41              |
| 1:FB:487:VAL:O    | 1:FB:487:VAL:HG13 | 2.20                     | 0.41              |
| 1:GA:529:ILE:HD13 | 1:GA:583:VAL:HG21 | 2.03                     | 0.41              |
| 1:GB:144:LEU:HD12 | 1:GB:163:ILE:HD11 | 2.02                     | 0.41              |
| 1:J:17:HIS:CB     | 1:J:44:LEU:HD23   | 2.50                     | 0.41              |
| 1:J:165:ALA:HB2   | 1:J:205:LEU:HD13  | 2.03                     | 0.41              |
| 1:JA:28:VAL:O     | 1:JA:28:VAL:HG13  | 2.20                     | 0.41              |
| 1:KA:48:MET:HE2   | 1:KA:48:MET:HA    | 2.02                     | 0.41              |
| 1:L:56:ARG:HE     | 1:M:127:LEU:CD2   | 2.33                     | 0.41              |
| 1:L:359:ILE:O     | 1:L:359:ILE:HG23  | 2.20                     | 0.41              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:LA:165:ALA:HB2  | 1:LA:205:LEU:HD13 | 2.03                     | 0.41              |
| 1:LB:281:TYR:CG   | 1:LB:366:VAL:HG23 | 2.56                     | 0.41              |
| 1:M:779:LEU:HD21  | 1:N:774:ARG:HG2   | 2.03                     | 0.41              |
| 1:MA:144:LEU:HD22 | 1:MA:163:ILE:HD11 | 2.03                     | 0.41              |
| 1:MA:281:TYR:CG   | 1:MA:366:VAL:HG23 | 2.55                     | 0.41              |
| 1:N:539:LEU:HD21  | 1:N:599:ILE:HD11  | 2.03                     | 0.41              |
| 1:O:487:VAL:O     | 1:O:487:VAL:HG13  | 2.19                     | 0.41              |
| 1:OA:359:ILE:O    | 1:OA:359:ILE:HG23 | 2.21                     | 0.41              |
| 1:P:143:TRP:HH2   | 1:P:157:VAL:HG22  | 1.86                     | 0.41              |
| 1:PA:405:THR:HG21 | 1:QA:393:VAL:O    | 2.21                     | 0.41              |
| 1:RA:144:LEU:HD22 | 1:RA:163:ILE:HD11 | 2.03                     | 0.41              |
| 1:RA:489:LEU:HD21 | 1:RA:495:PHE:CZ   | 2.56                     | 0.41              |
| 1:S:44:LEU:HD22   | 1:S:44:LEU:H      | 1.85                     | 0.41              |
| 1:SA:487:VAL:O    | 1:SA:487:VAL:HG13 | 2.20                     | 0.41              |
| 1:SB:539:LEU:CD1  | 1:SB:640:VAL:HG13 | 2.51                     | 0.41              |
| 1:UA:597:ARG:O    | 1:UA:601:THR:HG23 | 2.21                     | 0.41              |
| 1:UB:516:LEU:HD23 | 1:UB:516:LEU:C    | 2.45                     | 0.41              |
| 1:UB:597:ARG:O    | 1:UB:601:THR:HG23 | 2.21                     | 0.41              |
| 1:W:57:HIS:O      | 1:W:58:TYR:HD1    | 2.04                     | 0.41              |
| 1:W:538:GLN:HB2   | 1:W:646:VAL:HG22  | 2.02                     | 0.41              |
| 1:W:758:GLU:O     | 1:W:762:VAL:HG22  | 2.20                     | 0.41              |
| 1:WA:654:LEU:HD22 | 1:XA:534:HIS:CG   | 2.56                     | 0.41              |
| 1:XA:138:VAL:HG12 | 1:XA:139:ALA:N    | 2.35                     | 0.41              |
| 1:XB:56:ARG:HE    | 1:YB:127:LEU:CD2  | 2.34                     | 0.41              |
| 1:Y:281:TYR:CG    | 1:Y:366:VAL:HG23  | 2.55                     | 0.41              |
| 1:YA:138:VAL:HG12 | 1:YA:139:ALA:N    | 2.35                     | 0.41              |
| 1:Z:143:TRP:HH2   | 1:Z:157:VAL:HG22  | 1.85                     | 0.41              |
| 1:ZA:10:ILE:HG22  | 1:ZA:47:PRO:HB3   | 2.02                     | 0.41              |
| 1:ZB:165:ALA:HB2  | 1:ZB:205:LEU:HD13 | 2.02                     | 0.41              |
| 1:ZB:281:TYR:CG   | 1:ZB:366:VAL:HG23 | 2.55                     | 0.41              |
| 1:B:489:LEU:HD21  | 1:B:495:PHE:CZ    | 2.56                     | 0.40              |
| 1:BA:138:VAL:HG12 | 1:BA:139:ALA:N    | 2.35                     | 0.40              |
| 1:BB:176:LEU:HD21 | 1:BB:196:TRP:NE1  | 2.35                     | 0.40              |
| 1:C:44:LEU:HD22   | 1:C:44:LEU:H      | 1.86                     | 0.40              |
| 1:CB:129:PHE:CE1  | 1:CB:137:VAL:HG11 | 2.56                     | 0.40              |
| 1:E:539:LEU:HD21  | 1:E:599:ILE:HD11  | 2.02                     | 0.40              |
| 1:EA:17:HIS:CB    | 1:EA:44:LEU:HD23  | 2.51                     | 0.40              |
| 1:EB:165:ALA:HB2  | 1:EB:205:LEU:HD13 | 2.03                     | 0.40              |
| 1:EB:541:LEU:CD2  | 1:EB:640:VAL:HG22 | 2.51                     | 0.40              |
| 1:FA:95:ASP:O     | 1:FA:96:PRO:C     | 2.64                     | 0.40              |
| 1:FB:539:LEU:CD1  | 1:FB:640:VAL:HG13 | 2.51                     | 0.40              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:G:17:HIS:HB3    | 1:G:44:LEU:HD23   | 2.02                     | 0.40              |
| 1:G:30:VAL:HG22   | 1:G:50:MET:HE2    | 2.03                     | 0.40              |
| 1:GA:786:GLN:OE1  | 1:HA:781:VAL:HG11 | 2.20                     | 0.40              |
| 1:GB:632:GLY:O    | 1:GB:634:VAL:HG23 | 2.22                     | 0.40              |
| 1:HA:144:LEU:HD22 | 1:HA:163:ILE:HD11 | 2.03                     | 0.40              |
| 1:I:539:LEU:HD11  | 1:I:640:VAL:HG13  | 2.03                     | 0.40              |
| 1:I:809:ASP:HA    | 1:I:812:VAL:HG22  | 2.03                     | 0.40              |
| 1:IB:538:GLN:HB2  | 1:IB:646:VAL:HG22 | 2.03                     | 0.40              |
| 1:J:539:LEU:HD21  | 1:J:599:ILE:HD11  | 2.01                     | 0.40              |
| 1:JA:529:ILE:HD13 | 1:JA:583:VAL:HG11 | 2.02                     | 0.40              |
| 1:JB:541:LEU:CD2  | 1:JB:640:VAL:HG22 | 2.51                     | 0.40              |
| 1:KA:129:PHE:CE1  | 1:KA:137:VAL:HG11 | 2.57                     | 0.40              |
| 1:KB:168:ILE:HG22 | 1:KB:215:LEU:CD2  | 2.48                     | 0.40              |
| 1:LA:413:VAL:HG22 | 1:LA:414:LEU:N    | 2.36                     | 0.40              |
| 1:M:405:THR:HG21  | 1:N:393:VAL:O     | 2.21                     | 0.40              |
| 1:M:413:VAL:HG22  | 1:M:414:LEU:N     | 2.36                     | 0.40              |
| 1:MB:393:VAL:HG22 | 1:MB:411:ASP:C    | 2.46                     | 0.40              |
| 1:N:539:LEU:HD11  | 1:N:640:VAL:HG13  | 2.03                     | 0.40              |
| 1:O:17:HIS:CB     | 1:O:44:LEU:HD23   | 2.51                     | 0.40              |
| 1:OA:523:PHE:CE2  | 1:OA:545:TRP:CD1  | 3.09                     | 0.40              |
| 1:OB:539:LEU:HD12 | 1:OB:540:GLN:N    | 2.37                     | 0.40              |
| 1:PA:176:LEU:HD21 | 1:PA:196:TRP:NE1  | 2.35                     | 0.40              |
| 1:Q:541:LEU:CD2   | 1:Q:640:VAL:HG22  | 2.52                     | 0.40              |
| 1:QB:176:LEU:HD21 | 1:QB:196:TRP:NE1  | 2.35                     | 0.40              |
| 1:QB:359:ILE:O    | 1:QB:359:ILE:HG23 | 2.22                     | 0.40              |
| 1:RA:176:LEU:HD21 | 1:RA:196:TRP:NE1  | 2.35                     | 0.40              |
| 1:RA:405:THR:HG21 | 1:SA:393:VAL:O    | 2.21                     | 0.40              |
| 1:RB:393:VAL:HG22 | 1:RB:411:ASP:C    | 2.47                     | 0.40              |
| 1:SA:57:HIS:O     | 1:SA:58:TYR:HD1   | 2.04                     | 0.40              |
| 1:SA:219:VAL:HG11 | 1:SA:227:LEU:HD13 | 2.03                     | 0.40              |
| 1:T:17:HIS:HB3    | 1:T:44:LEU:HD23   | 2.02                     | 0.40              |
| 1:TA:48:MET:HA    | 1:TA:48:MET:HE2   | 2.03                     | 0.40              |
| 1:TA:538:GLN:HB2  | 1:TA:646:VAL:HG22 | 2.02                     | 0.40              |
| 1:TB:143:TRP:HH2  | 1:TB:157:VAL:HG22 | 1.86                     | 0.40              |
| 1:UB:129:PHE:CE1  | 1:UB:137:VAL:HG11 | 2.56                     | 0.40              |
| 1:V:597:ARG:O     | 1:V:601:THR:HG23  | 2.22                     | 0.40              |
| 1:W:143:TRP:HH2   | 1:W:157:VAL:HG22  | 1.86                     | 0.40              |
| 1:WA:539:LEU:CD1  | 1:WA:640:VAL:HG13 | 2.50                     | 0.40              |
| 1:X:281:TYR:CG    | 1:X:366:VAL:HG23  | 2.57                     | 0.40              |
| 1:XB:405:THR:HG21 | 1:YB:393:VAL:O    | 2.21                     | 0.40              |
| 1:Y:597:ARG:O     | 1:Y:601:THR:HG23  | 2.21                     | 0.40              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:YB:487:VAL:O    | 1:YB:487:VAL:HG13 | 2.20                     | 0.40              |
| 1:ZA:359:ILE:O    | 1:ZA:359:ILE:HG23 | 2.21                     | 0.40              |
| 1:AA:597:ARG:O    | 1:AA:601:THR:HG23 | 2.22                     | 0.40              |
| 1:BB:539:LEU:HD11 | 1:BB:640:VAL:HG13 | 2.03                     | 0.40              |
| 1:CA:95:ASP:O     | 1:CA:96:PRO:C     | 2.65                     | 0.40              |
| 1:CB:570:ASP:OD1  | 1:CB:570:ASP:C    | 2.65                     | 0.40              |
| 1:DA:56:ARG:HE    | 1:EA:127:LEU:CD2  | 2.34                     | 0.40              |
| 1:DB:570:ASP:OD1  | 1:DB:570:ASP:C    | 2.64                     | 0.40              |
| 1:E:523:PHE:CE2   | 1:E:545:TRP:CD1   | 3.09                     | 0.40              |
| 1:I:30:VAL:CG2    | 1:I:50:MET:HE3    | 2.51                     | 0.40              |
| 1:IA:366:VAL:HG13 | 1:IA:366:VAL:O    | 2.21                     | 0.40              |
| 1:IB:219:VAL:HG11 | 1:IB:227:LEU:HD13 | 2.03                     | 0.40              |
| 1:JB:121:LEU:HD23 | 1:JB:162:ILE:HG22 | 2.03                     | 0.40              |
| 1:K:138:VAL:HG12  | 1:K:139:ALA:N     | 2.35                     | 0.40              |
| 1:KA:57:HIS:O     | 1:KA:58:TYR:HD1   | 2.03                     | 0.40              |
| 1:KA:95:ASP:O     | 1:KA:96:PRO:C     | 2.64                     | 0.40              |
| 1:KA:219:VAL:HG11 | 1:KA:227:LEU:HD13 | 2.03                     | 0.40              |
| 1:KA:654:LEU:HD22 | 1:LA:534:HIS:CG   | 2.55                     | 0.40              |
| 1:L:73:VAL:HG11   | 1:L:81:VAL:HG23   | 2.02                     | 0.40              |
| 1:NB:129:PHE:CE1  | 1:NB:137:VAL:HG11 | 2.56                     | 0.40              |
| 1:OB:144:LEU:HD22 | 1:OB:163:ILE:HD11 | 2.04                     | 0.40              |
| 1:P:10:ILE:HG22   | 1:P:47:PRO:HB3    | 2.03                     | 0.40              |
| 1:P:654:LEU:HD22  | 1:Q:534:HIS:CG    | 2.56                     | 0.40              |
| 1:QA:30:VAL:CG2   | 1:QA:50:MET:HE2   | 2.52                     | 0.40              |
| 1:R:597:ARG:O     | 1:R:601:THR:HG23  | 2.21                     | 0.40              |
| 1:R:643:VAL:HG12  | 1:R:643:VAL:O     | 2.21                     | 0.40              |
| 1:S:541:LEU:CD2   | 1:S:640:VAL:HG22  | 2.51                     | 0.40              |
| 1:SA:138:VAL:HG12 | 1:SA:139:ALA:N    | 2.35                     | 0.40              |
| 1:SB:809:ASP:HA   | 1:SB:812:VAL:HG22 | 2.04                     | 0.40              |
| 1:V:176:LEU:HD21  | 1:V:196:TRP:NE1   | 2.35                     | 0.40              |
| 1:WB:56:ARG:HE    | 1:XB:127:LEU:CD2  | 2.34                     | 0.40              |
| 1:Y:176:LEU:HD21  | 1:Y:196:TRP:NE1   | 2.36                     | 0.40              |
| 1:YA:168:ILE:HG22 | 1:YA:215:LEU:CD2  | 2.51                     | 0.40              |
| 1:YA:539:LEU:HD21 | 1:YA:599:ILE:HD11 | 2.03                     | 0.40              |
| 1:YB:121:LEU:HD23 | 1:YB:162:ILE:HG22 | 2.04                     | 0.40              |
| 1:ZB:539:LEU:HD12 | 1:ZB:540:GLN:N    | 2.37                     | 0.40              |
| 1:A:3:THR:HG22    | 1:A:6:PHE:HA      | 2.03                     | 0.40              |
| 1:AA:570:ASP:OD1  | 1:AA:570:ASP:C    | 2.64                     | 0.40              |
| 1:AC:529:ILE:HD13 | 1:AC:583:VAL:HG21 | 2.02                     | 0.40              |
| 1:BA:539:LEU:HD12 | 1:BA:540:GLN:N    | 2.36                     | 0.40              |
| 1:BA:541:LEU:CD2  | 1:BA:640:VAL:HG22 | 2.51                     | 0.40              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:BB:95:ASP:O     | 1:BB:96:PRO:C     | 2.64                     | 0.40              |
| 1:BB:539:LEU:HD12 | 1:BB:540:GLN:N    | 2.37                     | 0.40              |
| 1:BB:601:THR:O    | 1:BB:605:GLY:HA2  | 2.22                     | 0.40              |
| 1:C:65:VAL:HG12   | 1:C:83:LEU:CD2    | 2.51                     | 0.40              |
| 1:C:90:ILE:HD11   | 1:C:155:LYS:N     | 2.37                     | 0.40              |
| 1:DA:541:LEU:CD2  | 1:DA:640:VAL:HG22 | 2.51                     | 0.40              |
| 1:E:230:ARG:HB3   | 1:E:268:LEU:HD11  | 2.03                     | 0.40              |
| 1:EB:539:LEU:CD1  | 1:EB:640:VAL:HG13 | 2.51                     | 0.40              |
| 1:F:281:TYR:CG    | 1:F:366:VAL:HG23  | 2.56                     | 0.40              |
| 1:FA:48:MET:HE2   | 1:FA:48:MET:HA    | 2.03                     | 0.40              |
| 1:FB:597:ARG:O    | 1:FB:601:THR:HG23 | 2.22                     | 0.40              |
| 1:G:56:ARG:HE     | 1:H:127:LEU:CD2   | 2.33                     | 0.40              |
| 1:H:654:LEU:HD22  | 1:I:534:HIS:CG    | 2.57                     | 0.40              |
| 1:HB:129:PHE:CE1  | 1:HB:137:VAL:HG11 | 2.56                     | 0.40              |
| 1:IB:143:TRP:HH2  | 1:IB:157:VAL:HG22 | 1.85                     | 0.40              |
| 1:JB:17:HIS:CB    | 1:JB:44:LEU:HD23  | 2.51                     | 0.40              |
| 1:LA:56:ARG:HE    | 1:MA:127:LEU:CD2  | 2.34                     | 0.40              |
| 1:NA:809:ASP:HA   | 1:NA:812:VAL:HG22 | 2.03                     | 0.40              |
| 1:NB:44:LEU:N     | 1:NB:44:LEU:HD22  | 2.35                     | 0.40              |
| 1:NB:539:LEU:HD11 | 1:NB:640:VAL:HG13 | 2.04                     | 0.40              |
| 1:O:57:HIS:O      | 1:O:58:TYR:HD1    | 2.04                     | 0.40              |
| 1:OA:3:THR:HG22   | 1:OA:6:PHE:HA     | 2.03                     | 0.40              |
| 1:P:165:ALA:HB2   | 1:P:205:LEU:HD13  | 2.02                     | 0.40              |
| 1:PB:219:VAL:HG11 | 1:PB:227:LEU:HD13 | 2.03                     | 0.40              |
| 1:Q:129:PHE:CE1   | 1:Q:137:VAL:HG11  | 2.56                     | 0.40              |
| 1:QA:48:MET:HE2   | 1:QA:48:MET:HA    | 2.02                     | 0.40              |
| 1:RA:143:TRP:HH2  | 1:RA:157:VAL:HG22 | 1.86                     | 0.40              |
| 1:RB:654:LEU:HD22 | 1:SB:534:HIS:CG   | 2.57                     | 0.40              |
| 1:S:539:LEU:HD21  | 1:S:599:ILE:HD11  | 2.04                     | 0.40              |
| 1:SA:643:VAL:O    | 1:SA:643:VAL:HG12 | 2.21                     | 0.40              |
| 1:TA:17:HIS:CB    | 1:TA:44:LEU:HD23  | 2.52                     | 0.40              |
| 1:TA:56:ARG:HE    | 1:UA:127:LEU:HD21 | 1.87                     | 0.40              |
| 1:TA:168:ILE:HG22 | 1:TA:215:LEU:CD2  | 2.48                     | 0.40              |
| 1:TA:541:LEU:CD2  | 1:TA:640:VAL:HG22 | 2.52                     | 0.40              |
| 1:V:56:ARG:HE     | 1:W:127:LEU:HD21  | 1.87                     | 0.40              |
| 1:VB:643:VAL:HG12 | 1:VB:643:VAL:O    | 2.21                     | 0.40              |
| 1:VB:809:ASP:HA   | 1:VB:812:VAL:HG22 | 2.03                     | 0.40              |
| 1:X:779:LEU:HD21  | 1:Y:774:ARG:HG2   | 2.03                     | 0.40              |
| 1:XB:539:LEU:CD1  | 1:XB:640:VAL:HG13 | 2.51                     | 0.40              |
| 1:Y:121:LEU:HD23  | 1:Y:162:ILE:HG22  | 2.03                     | 0.40              |
| 1:Y:143:TRP:HH2   | 1:Y:157:VAL:HG22  | 1.86                     | 0.40              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:YB:176:LEU:HD21 | 1:YB:196:TRP:NE1  | 2.35                     | 0.40              |
| 1:YB:413:VAL:HG22 | 1:YB:414:LEU:N    | 2.37                     | 0.40              |
| 1:ZA:47:PRO:C     | 1:ZA:48:MET:HE2   | 2.46                     | 0.40              |
| 1:ZA:176:LEU:HD21 | 1:ZA:196:TRP:CE2  | 2.56                     | 0.40              |
| 1:ZB:95:ASP:O     | 1:ZB:96:PRO:C     | 2.65                     | 0.40              |
| 1:AB:127:LEU:CD2  | 1:ZA:56:ARG:HE    | 2.34                     | 0.40              |
| 1:BB:523:PHE:CD2  | 1:BB:568:VAL:HG23 | 2.56                     | 0.40              |
| 1:C:176:LEU:HD21  | 1:C:196:TRP:NE1   | 2.35                     | 0.40              |
| 1:CA:779:LEU:HD21 | 1:DA:774:ARG:HG2  | 2.04                     | 0.40              |
| 1:CB:539:LEU:CD1  | 1:CB:640:VAL:HG13 | 2.51                     | 0.40              |
| 1:D:489:LEU:HD21  | 1:D:495:PHE:CZ    | 2.57                     | 0.40              |
| 1:DB:597:ARG:O    | 1:DB:601:THR:HG23 | 2.21                     | 0.40              |
| 1:E:487:VAL:O     | 1:E:487:VAL:HG13  | 2.20                     | 0.40              |
| 1:F:539:LEU:HD21  | 1:F:599:ILE:HD11  | 2.03                     | 0.40              |
| 1:GB:541:LEU:CD2  | 1:GB:640:VAL:HG22 | 2.51                     | 0.40              |
| 1:HA:56:ARG:HE    | 1:IA:127:LEU:CD2  | 2.35                     | 0.40              |
| 1:HA:95:ASP:O     | 1:HA:96:PRO:C     | 2.65                     | 0.40              |
| 1:JB:393:VAL:HG22 | 1:JB:411:ASP:C    | 2.47                     | 0.40              |
| 1:L:489:LEU:HD21  | 1:L:495:PHE:CZ    | 2.57                     | 0.40              |
| 1:M:48:MET:HE2    | 1:M:48:MET:HA     | 2.03                     | 0.40              |
| 1:M:165:ALA:HB2   | 1:M:205:LEU:HD13  | 2.03                     | 0.40              |
| 1:N:159:VAL:O     | 1:N:159:VAL:HG12  | 2.20                     | 0.40              |
| 1:NA:539:LEU:HD11 | 1:NA:640:VAL:HG13 | 2.03                     | 0.40              |
| 1:NB:597:ARG:O    | 1:NB:601:THR:HG23 | 2.21                     | 0.40              |
| 1:PB:779:LEU:HD21 | 1:QB:774:ARG:HG2  | 2.03                     | 0.40              |
| 1:QA:13:TYR:HA    | 1:QA:50:MET:CE    | 2.52                     | 0.40              |
| 1:QA:570:ASP:OD1  | 1:QA:570:ASP:C    | 2.64                     | 0.40              |
| 1:R:44:LEU:HD22   | 1:R:44:LEU:H      | 1.86                     | 0.40              |
| 1:R:393:VAL:HG22  | 1:R:411:ASP:C     | 2.46                     | 0.40              |
| 1:SA:15:TYR:CD1   | 1:SA:15:TYR:C     | 3.00                     | 0.40              |
| 1:SA:538:GLN:HB2  | 1:SA:646:VAL:HG22 | 2.02                     | 0.40              |
| 1:SA:541:LEU:CD2  | 1:SA:640:VAL:HG22 | 2.52                     | 0.40              |
| 1:SB:17:HIS:CB    | 1:SB:44:LEU:HD23  | 2.51                     | 0.40              |
| 1:T:516:LEU:O     | 1:T:516:LEU:HD23  | 2.21                     | 0.40              |
| 1:T:539:LEU:CD1   | 1:T:640:VAL:HG13  | 2.51                     | 0.40              |
| 1:UA:165:ALA:HB2  | 1:UA:205:LEU:HD13 | 2.03                     | 0.40              |
| 1:V:393:VAL:HG22  | 1:V:411:ASP:C     | 2.46                     | 0.40              |
| 1:V:539:LEU:HD23  | 1:V:540:GLN:H     | 1.83                     | 0.40              |
| 1:VA:230:ARG:HB3  | 1:VA:268:LEU:HD11 | 2.02                     | 0.40              |
| 1:W:95:ASP:O      | 1:W:96:PRO:C      | 2.64                     | 0.40              |
| 1:WA:168:ILE:HG22 | 1:WA:215:LEU:CD2  | 2.48                     | 0.40              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:WB:56:ARG:HE    | 1:XB:127:LEU:HD21 | 1.87                     | 0.40              |
| 1:WB:65:VAL:HG12  | 1:WB:83:LEU:CD1   | 2.52                     | 0.40              |
| 1:X:539:LEU:HD11  | 1:X:599:ILE:CD1   | 2.50                     | 0.40              |
| 1:XB:539:LEU:HD11 | 1:XB:640:VAL:HG13 | 2.03                     | 0.40              |
| 1:A:127:LEU:CD2   | 1:NA:56:ARG:HE    | 2.34                     | 0.40              |
| 1:A:539:LEU:HD12  | 1:A:540:GLN:N     | 2.37                     | 0.40              |
| 1:AA:17:HIS:CB    | 1:AA:44:LEU:HD23  | 2.52                     | 0.40              |
| 1:AB:316:LEU:HD12 | 1:AB:316:LEU:HA   | 1.95                     | 0.40              |
| 1:AB:570:ASP:OD1  | 1:AB:570:ASP:C    | 2.64                     | 0.40              |
| 1:AC:95:ASP:O     | 1:AC:96:PRO:C     | 2.64                     | 0.40              |
| 1:AC:539:LEU:CD1  | 1:AC:640:VAL:HG13 | 2.52                     | 0.40              |
| 1:B:219:VAL:HG11  | 1:B:227:LEU:HD13  | 2.04                     | 0.40              |
| 1:CB:539:LEU:HD12 | 1:CB:540:GLN:N    | 2.37                     | 0.40              |
| 1:CB:654:LEU:HD22 | 1:DB:534:HIS:CG   | 2.56                     | 0.40              |
| 1:DB:359:ILE:O    | 1:DB:359:ILE:HG23 | 2.21                     | 0.40              |
| 1:DB:523:PHE:CE2  | 1:DB:545:TRP:CD1  | 3.10                     | 0.40              |
| 1:EA:56:ARG:HE    | 1:FA:127:LEU:CD2  | 2.34                     | 0.40              |
| 1:EB:219:VAL:HG11 | 1:EB:227:LEU:HD13 | 2.04                     | 0.40              |
| 1:FA:121:LEU:HD23 | 1:FA:162:ILE:HG22 | 2.03                     | 0.40              |
| 1:FB:219:VAL:HG11 | 1:FB:227:LEU:HD22 | 2.02                     | 0.40              |
| 1:GB:44:LEU:HD22  | 1:GB:44:LEU:H     | 1.87                     | 0.40              |
| 1:GB:143:TRP:HH2  | 1:GB:157:VAL:HG22 | 1.85                     | 0.40              |
| 1:H:539:LEU:CD1   | 1:H:640:VAL:HG13  | 2.52                     | 0.40              |
| 1:HB:17:HIS:CB    | 1:HB:44:LEU:HD23  | 2.51                     | 0.40              |
| 1:HB:95:ASP:O     | 1:HB:96:PRO:C     | 2.65                     | 0.40              |
| 1:HB:529:ILE:HD13 | 1:HB:583:VAL:HG11 | 2.04                     | 0.40              |
| 1:IA:48:MET:HA    | 1:IA:48:MET:HE2   | 2.03                     | 0.40              |
| 1:IA:539:LEU:HD11 | 1:IA:541:LEU:HD21 | 2.04                     | 0.40              |
| 1:K:56:ARG:HE     | 1:L:127:LEU:CD2   | 2.34                     | 0.40              |
| 1:KA:405:THR:HG21 | 1:LA:393:VAL:O    | 2.21                     | 0.40              |
| 1:KB:17:HIS:CB    | 1:KB:44:LEU:HD23  | 2.51                     | 0.40              |
| 1:M:56:ARG:HE     | 1:N:127:LEU:CD2   | 2.33                     | 0.40              |
| 1:MB:73:VAL:HG11  | 1:MB:81:VAL:HG23  | 2.02                     | 0.40              |
| 1:NA:17:HIS:CB    | 1:NA:44:LEU:HD23  | 2.52                     | 0.40              |
| 1:NA:601:THR:O    | 1:NA:605:GLY:HA2  | 2.22                     | 0.40              |
| 1:P:15:TYR:C      | 1:P:15:TYR:CD1    | 3.00                     | 0.40              |
| 1:Q:168:ILE:HG22  | 1:Q:215:LEU:CD2   | 2.49                     | 0.40              |
| 1:R:176:LEU:HD21  | 1:R:196:TRP:NE1   | 2.35                     | 0.40              |
| 1:SA:662:ILE:O    | 1:SA:666:THR:HG23 | 2.20                     | 0.40              |
| 1:UA:44:LEU:HD22  | 1:UA:44:LEU:H     | 1.86                     | 0.40              |
| 1:UA:56:ARG:HE    | 1:VA:127:LEU:CD2  | 2.34                     | 0.40              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:VA:48:MET:HE2   | 1:VA:48:MET:HA    | 2.04                     | 0.40              |
| 1:VA:539:LEU:CD1  | 1:VA:640:VAL:HG13 | 2.51                     | 0.40              |
| 1:VB:17:HIS:CB    | 1:VB:44:LEU:HD23  | 2.51                     | 0.40              |
| 1:VB:359:ILE:O    | 1:VB:359:ILE:HG23 | 2.22                     | 0.40              |
| 1:VB:487:VAL:O    | 1:VB:487:VAL:HG13 | 2.20                     | 0.40              |
| 1:WA:121:LEU:HD23 | 1:WA:162:ILE:HG22 | 2.03                     | 0.40              |
| 1:XB:15:TYR:CD1   | 1:XB:15:TYR:C     | 3.00                     | 0.40              |
| 1:Z:538:GLN:HB2   | 1:Z:646:VAL:HG22  | 2.02                     | 0.40              |
| 1:ZA:73:VAL:HG11  | 1:ZA:81:VAL:HG23  | 2.03                     | 0.40              |
| 1:ZB:539:LEU:CD1  | 1:ZB:640:VAL:HG13 | 2.51                     | 0.40              |

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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

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

| Mol | Chain | Analysed      | Favoured  | Allowed | Outliers | Percentiles |     |
|-----|-------|---------------|-----------|---------|----------|-------------|-----|
| 1   | A     | 773/893 (87%) | 721 (93%) | 51 (7%) | 1 (0%)   | 48          | 78  |
| 1   | AA    | 773/893 (87%) | 715 (92%) | 57 (7%) | 1 (0%)   | 48          | 78  |
| 1   | AB    | 773/893 (87%) | 721 (93%) | 52 (7%) | 0        | 100         | 100 |
| 1   | AC    | 773/893 (87%) | 718 (93%) | 54 (7%) | 1 (0%)   | 48          | 78  |
| 1   | B     | 773/893 (87%) | 720 (93%) | 53 (7%) | 0        | 100         | 100 |
| 1   | BA    | 773/893 (87%) | 718 (93%) | 55 (7%) | 0        | 100         | 100 |
| 1   | BB    | 773/893 (87%) | 716 (93%) | 57 (7%) | 0        | 100         | 100 |
| 1   | C     | 773/893 (87%) | 720 (93%) | 53 (7%) | 0        | 100         | 100 |
| 1   | CA    | 773/893 (87%) | 721 (93%) | 51 (7%) | 1 (0%)   | 48          | 78  |
| 1   | CB    | 773/893 (87%) | 718 (93%) | 54 (7%) | 1 (0%)   | 48          | 78  |
| 1   | D     | 773/893 (87%) | 720 (93%) | 52 (7%) | 1 (0%)   | 48          | 78  |
| 1   | DA    | 773/893 (87%) | 719 (93%) | 53 (7%) | 1 (0%)   | 48          | 78  |

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| Mol | Chain | Analysed      | Favoured  | Allowed | Outliers | Percentiles |     |
|-----|-------|---------------|-----------|---------|----------|-------------|-----|
| 1   | DB    | 773/893 (87%) | 722 (93%) | 51 (7%) | 0        | 100         | 100 |
| 1   | E     | 773/893 (87%) | 719 (93%) | 53 (7%) | 1 (0%)   | 48          | 78  |
| 1   | EA    | 773/893 (87%) | 723 (94%) | 49 (6%) | 1 (0%)   | 48          | 78  |
| 1   | EB    | 773/893 (87%) | 716 (93%) | 56 (7%) | 1 (0%)   | 48          | 78  |
| 1   | F     | 773/893 (87%) | 720 (93%) | 53 (7%) | 0        | 100         | 100 |
| 1   | FA    | 773/893 (87%) | 719 (93%) | 53 (7%) | 1 (0%)   | 48          | 78  |
| 1   | FB    | 773/893 (87%) | 717 (93%) | 56 (7%) | 0        | 100         | 100 |
| 1   | G     | 773/893 (87%) | 720 (93%) | 52 (7%) | 1 (0%)   | 48          | 78  |
| 1   | GA    | 773/893 (87%) | 723 (94%) | 49 (6%) | 1 (0%)   | 48          | 78  |
| 1   | GB    | 773/893 (87%) | 719 (93%) | 54 (7%) | 0        | 100         | 100 |
| 1   | H     | 773/893 (87%) | 719 (93%) | 53 (7%) | 1 (0%)   | 48          | 78  |
| 1   | HA    | 773/893 (87%) | 722 (93%) | 51 (7%) | 0        | 100         | 100 |
| 1   | HB    | 773/893 (87%) | 720 (93%) | 53 (7%) | 0        | 100         | 100 |
| 1   | I     | 773/893 (87%) | 718 (93%) | 54 (7%) | 1 (0%)   | 48          | 78  |
| 1   | IA    | 773/893 (87%) | 717 (93%) | 55 (7%) | 1 (0%)   | 48          | 78  |
| 1   | IB    | 773/893 (87%) | 716 (93%) | 56 (7%) | 1 (0%)   | 48          | 78  |
| 1   | J     | 773/893 (87%) | 718 (93%) | 55 (7%) | 0        | 100         | 100 |
| 1   | JA    | 773/893 (87%) | 722 (93%) | 50 (6%) | 1 (0%)   | 48          | 78  |
| 1   | JB    | 773/893 (87%) | 720 (93%) | 52 (7%) | 1 (0%)   | 48          | 78  |
| 1   | K     | 773/893 (87%) | 719 (93%) | 53 (7%) | 1 (0%)   | 48          | 78  |
| 1   | KA    | 773/893 (87%) | 716 (93%) | 56 (7%) | 1 (0%)   | 48          | 78  |
| 1   | KB    | 773/893 (87%) | 719 (93%) | 53 (7%) | 1 (0%)   | 48          | 78  |
| 1   | L     | 773/893 (87%) | 720 (93%) | 53 (7%) | 0        | 100         | 100 |
| 1   | LA    | 773/893 (87%) | 719 (93%) | 53 (7%) | 1 (0%)   | 48          | 78  |
| 1   | LB    | 773/893 (87%) | 720 (93%) | 53 (7%) | 0        | 100         | 100 |
| 1   | M     | 773/893 (87%) | 721 (93%) | 51 (7%) | 1 (0%)   | 48          | 78  |
| 1   | MA    | 773/893 (87%) | 719 (93%) | 53 (7%) | 1 (0%)   | 48          | 78  |
| 1   | MB    | 773/893 (87%) | 720 (93%) | 52 (7%) | 1 (0%)   | 48          | 78  |
| 1   | N     | 773/893 (87%) | 719 (93%) | 53 (7%) | 1 (0%)   | 48          | 78  |
| 1   | NA    | 773/893 (87%) | 719 (93%) | 53 (7%) | 1 (0%)   | 48          | 78  |
| 1   | NB    | 773/893 (87%) | 715 (92%) | 57 (7%) | 1 (0%)   | 48          | 78  |

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| Mol | Chain | Analysed      | Favoured  | Allowed | Outliers | Percentiles |     |
|-----|-------|---------------|-----------|---------|----------|-------------|-----|
| 1   | O     | 773/893 (87%) | 720 (93%) | 52 (7%) | 1 (0%)   | 48          | 78  |
| 1   | OA    | 773/893 (87%) | 718 (93%) | 54 (7%) | 1 (0%)   | 48          | 78  |
| 1   | OB    | 773/893 (87%) | 719 (93%) | 53 (7%) | 1 (0%)   | 48          | 78  |
| 1   | P     | 773/893 (87%) | 716 (93%) | 57 (7%) | 0        | 100         | 100 |
| 1   | PA    | 773/893 (87%) | 719 (93%) | 53 (7%) | 1 (0%)   | 48          | 78  |
| 1   | PB    | 773/893 (87%) | 723 (94%) | 49 (6%) | 1 (0%)   | 48          | 78  |
| 1   | Q     | 773/893 (87%) | 717 (93%) | 55 (7%) | 1 (0%)   | 48          | 78  |
| 1   | QA    | 773/893 (87%) | 720 (93%) | 53 (7%) | 0        | 100         | 100 |
| 1   | QB    | 773/893 (87%) | 723 (94%) | 49 (6%) | 1 (0%)   | 48          | 78  |
| 1   | R     | 773/893 (87%) | 717 (93%) | 56 (7%) | 0        | 100         | 100 |
| 1   | RA    | 773/893 (87%) | 719 (93%) | 53 (7%) | 1 (0%)   | 48          | 78  |
| 1   | RB    | 773/893 (87%) | 722 (93%) | 50 (6%) | 1 (0%)   | 48          | 78  |
| 1   | S     | 773/893 (87%) | 718 (93%) | 55 (7%) | 0        | 100         | 100 |
| 1   | SA    | 773/893 (87%) | 717 (93%) | 56 (7%) | 0        | 100         | 100 |
| 1   | SB    | 773/893 (87%) | 718 (93%) | 55 (7%) | 0        | 100         | 100 |
| 1   | T     | 773/893 (87%) | 719 (93%) | 53 (7%) | 1 (0%)   | 48          | 78  |
| 1   | TA    | 773/893 (87%) | 718 (93%) | 55 (7%) | 0        | 100         | 100 |
| 1   | TB    | 773/893 (87%) | 725 (94%) | 47 (6%) | 1 (0%)   | 48          | 78  |
| 1   | UA    | 773/893 (87%) | 721 (93%) | 52 (7%) | 0        | 100         | 100 |
| 1   | UB    | 773/893 (87%) | 719 (93%) | 54 (7%) | 0        | 100         | 100 |
| 1   | V     | 773/893 (87%) | 719 (93%) | 53 (7%) | 1 (0%)   | 48          | 78  |
| 1   | VA    | 773/893 (87%) | 722 (93%) | 50 (6%) | 1 (0%)   | 48          | 78  |
| 1   | VB    | 773/893 (87%) | 722 (93%) | 50 (6%) | 1 (0%)   | 48          | 78  |
| 1   | W     | 773/893 (87%) | 723 (94%) | 50 (6%) | 0        | 100         | 100 |
| 1   | WA    | 773/893 (87%) | 720 (93%) | 52 (7%) | 1 (0%)   | 48          | 78  |
| 1   | WB    | 773/893 (87%) | 720 (93%) | 52 (7%) | 1 (0%)   | 48          | 78  |
| 1   | X     | 773/893 (87%) | 722 (93%) | 51 (7%) | 0        | 100         | 100 |
| 1   | XA    | 773/893 (87%) | 718 (93%) | 55 (7%) | 0        | 100         | 100 |
| 1   | XB    | 773/893 (87%) | 719 (93%) | 54 (7%) | 0        | 100         | 100 |
| 1   | Y     | 773/893 (87%) | 722 (93%) | 51 (7%) | 0        | 100         | 100 |
| 1   | YA    | 773/893 (87%) | 719 (93%) | 53 (7%) | 1 (0%)   | 48          | 78  |

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| Mol | Chain | Analysed          | Favoured    | Allowed   | Outliers | Percentiles |     |
|-----|-------|-------------------|-------------|-----------|----------|-------------|-----|
| 1   | YB    | 773/893 (87%)     | 719 (93%)   | 53 (7%)   | 1 (0%)   | 48          | 78  |
| 1   | Z     | 773/893 (87%)     | 719 (93%)   | 53 (7%)   | 1 (0%)   | 48          | 78  |
| 1   | ZA    | 773/893 (87%)     | 723 (94%)   | 49 (6%)   | 1 (0%)   | 48          | 78  |
| 1   | ZB    | 773/893 (87%)     | 718 (93%)   | 55 (7%)   | 0        | 100         | 100 |
| All | All   | 60294/69654 (87%) | 56116 (93%) | 4129 (7%) | 49 (0%)  | 49          | 78  |

All (49) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | M     | 347 | GLU  |
| 1   | CB    | 347 | GLU  |
| 1   | E     | 347 | GLU  |
| 1   | LA    | 347 | GLU  |
| 1   | MA    | 347 | GLU  |
| 1   | NA    | 347 | GLU  |
| 1   | QB    | 347 | GLU  |
| 1   | T     | 347 | GLU  |
| 1   | TB    | 347 | GLU  |
| 1   | YB    | 347 | GLU  |
| 1   | A     | 347 | GLU  |
| 1   | AA    | 347 | GLU  |
| 1   | AC    | 347 | GLU  |
| 1   | CA    | 347 | GLU  |
| 1   | D     | 347 | GLU  |
| 1   | DA    | 347 | GLU  |
| 1   | EA    | 347 | GLU  |
| 1   | EB    | 347 | GLU  |
| 1   | FA    | 347 | GLU  |
| 1   | G     | 347 | GLU  |
| 1   | GA    | 347 | GLU  |
| 1   | H     | 347 | GLU  |
| 1   | I     | 347 | GLU  |
| 1   | IA    | 347 | GLU  |
| 1   | IB    | 347 | GLU  |
| 1   | JA    | 347 | GLU  |
| 1   | JB    | 347 | GLU  |
| 1   | K     | 347 | GLU  |
| 1   | KA    | 347 | GLU  |
| 1   | KB    | 347 | GLU  |
| 1   | MB    | 347 | GLU  |
| 1   | N     | 347 | GLU  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | NB    | 347 | GLU  |
| 1   | O     | 347 | GLU  |
| 1   | OA    | 347 | GLU  |
| 1   | OB    | 347 | GLU  |
| 1   | PA    | 347 | GLU  |
| 1   | PB    | 347 | GLU  |
| 1   | Q     | 347 | GLU  |
| 1   | RA    | 347 | GLU  |
| 1   | RB    | 347 | GLU  |
| 1   | V     | 347 | GLU  |
| 1   | VA    | 347 | GLU  |
| 1   | VB    | 347 | GLU  |
| 1   | WA    | 347 | GLU  |
| 1   | WB    | 347 | GLU  |
| 1   | YA    | 347 | GLU  |
| 1   | Z     | 347 | GLU  |
| 1   | ZA    | 347 | GLU  |

### 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   | A     | 666/755 (88%) | 656 (98%) | 10 (2%)  | 57 75       |
| 1   | AA    | 666/755 (88%) | 656 (98%) | 10 (2%)  | 57 75       |
| 1   | AB    | 666/755 (88%) | 653 (98%) | 13 (2%)  | 48 72       |
| 1   | AC    | 666/755 (88%) | 654 (98%) | 12 (2%)  | 51 73       |
| 1   | B     | 666/755 (88%) | 655 (98%) | 11 (2%)  | 53 74       |
| 1   | BA    | 666/755 (88%) | 652 (98%) | 14 (2%)  | 47 71       |
| 1   | BB    | 666/755 (88%) | 657 (99%) | 9 (1%)   | 59 76       |
| 1   | C     | 666/755 (88%) | 654 (98%) | 12 (2%)  | 51 73       |
| 1   | CA    | 666/755 (88%) | 655 (98%) | 11 (2%)  | 53 74       |
| 1   | CB    | 666/755 (88%) | 653 (98%) | 13 (2%)  | 48 72       |
| 1   | D     | 666/755 (88%) | 653 (98%) | 13 (2%)  | 48 72       |

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| Mol | Chain | Analysed      | Rotameric | Outliers | Percentiles |    |
|-----|-------|---------------|-----------|----------|-------------|----|
| 1   | DA    | 666/755 (88%) | 653 (98%) | 13 (2%)  | 48          | 72 |
| 1   | DB    | 666/755 (88%) | 653 (98%) | 13 (2%)  | 48          | 72 |
| 1   | E     | 666/755 (88%) | 657 (99%) | 9 (1%)   | 59          | 76 |
| 1   | EA    | 666/755 (88%) | 653 (98%) | 13 (2%)  | 48          | 72 |
| 1   | EB    | 666/755 (88%) | 654 (98%) | 12 (2%)  | 51          | 73 |
| 1   | F     | 666/755 (88%) | 655 (98%) | 11 (2%)  | 53          | 74 |
| 1   | FA    | 666/755 (88%) | 653 (98%) | 13 (2%)  | 48          | 72 |
| 1   | FB    | 666/755 (88%) | 654 (98%) | 12 (2%)  | 51          | 73 |
| 1   | G     | 666/755 (88%) | 654 (98%) | 12 (2%)  | 51          | 73 |
| 1   | GA    | 666/755 (88%) | 651 (98%) | 15 (2%)  | 44          | 70 |
| 1   | GB    | 666/755 (88%) | 654 (98%) | 12 (2%)  | 51          | 73 |
| 1   | H     | 666/755 (88%) | 655 (98%) | 11 (2%)  | 53          | 74 |
| 1   | HA    | 666/755 (88%) | 652 (98%) | 14 (2%)  | 47          | 71 |
| 1   | HB    | 666/755 (88%) | 653 (98%) | 13 (2%)  | 48          | 72 |
| 1   | I     | 666/755 (88%) | 654 (98%) | 12 (2%)  | 51          | 73 |
| 1   | IA    | 666/755 (88%) | 653 (98%) | 13 (2%)  | 48          | 72 |
| 1   | IB    | 666/755 (88%) | 653 (98%) | 13 (2%)  | 48          | 72 |
| 1   | J     | 666/755 (88%) | 655 (98%) | 11 (2%)  | 53          | 74 |
| 1   | JA    | 666/755 (88%) | 656 (98%) | 10 (2%)  | 57          | 75 |
| 1   | JB    | 666/755 (88%) | 652 (98%) | 14 (2%)  | 47          | 71 |
| 1   | K     | 666/755 (88%) | 657 (99%) | 9 (1%)   | 59          | 76 |
| 1   | KA    | 666/755 (88%) | 652 (98%) | 14 (2%)  | 47          | 71 |
| 1   | KB    | 666/755 (88%) | 655 (98%) | 11 (2%)  | 53          | 74 |
| 1   | L     | 666/755 (88%) | 650 (98%) | 16 (2%)  | 43          | 69 |
| 1   | LA    | 666/755 (88%) | 656 (98%) | 10 (2%)  | 57          | 75 |
| 1   | LB    | 666/755 (88%) | 655 (98%) | 11 (2%)  | 53          | 74 |
| 1   | M     | 666/755 (88%) | 655 (98%) | 11 (2%)  | 53          | 74 |
| 1   | MA    | 666/755 (88%) | 652 (98%) | 14 (2%)  | 47          | 71 |
| 1   | MB    | 666/755 (88%) | 656 (98%) | 10 (2%)  | 57          | 75 |
| 1   | N     | 666/755 (88%) | 655 (98%) | 11 (2%)  | 53          | 74 |
| 1   | NA    | 666/755 (88%) | 656 (98%) | 10 (2%)  | 57          | 75 |

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| Mol | Chain | Analysed      | Rotameric | Outliers | Percentiles |    |
|-----|-------|---------------|-----------|----------|-------------|----|
| 1   | NB    | 666/755 (88%) | 653 (98%) | 13 (2%)  | 48          | 72 |
| 1   | O     | 666/755 (88%) | 655 (98%) | 11 (2%)  | 53          | 74 |
| 1   | OA    | 666/755 (88%) | 659 (99%) | 7 (1%)   | 65          | 78 |
| 1   | OB    | 666/755 (88%) | 653 (98%) | 13 (2%)  | 48          | 72 |
| 1   | P     | 666/755 (88%) | 654 (98%) | 12 (2%)  | 51          | 73 |
| 1   | PA    | 666/755 (88%) | 654 (98%) | 12 (2%)  | 51          | 73 |
| 1   | PB    | 666/755 (88%) | 655 (98%) | 11 (2%)  | 53          | 74 |
| 1   | Q     | 666/755 (88%) | 654 (98%) | 12 (2%)  | 51          | 73 |
| 1   | QA    | 666/755 (88%) | 654 (98%) | 12 (2%)  | 51          | 73 |
| 1   | QB    | 666/755 (88%) | 655 (98%) | 11 (2%)  | 53          | 74 |
| 1   | R     | 666/755 (88%) | 655 (98%) | 11 (2%)  | 53          | 74 |
| 1   | RA    | 666/755 (88%) | 650 (98%) | 16 (2%)  | 43          | 69 |
| 1   | RB    | 666/755 (88%) | 654 (98%) | 12 (2%)  | 51          | 73 |
| 1   | S     | 666/755 (88%) | 652 (98%) | 14 (2%)  | 47          | 71 |
| 1   | SA    | 666/755 (88%) | 656 (98%) | 10 (2%)  | 57          | 75 |
| 1   | SB    | 666/755 (88%) | 652 (98%) | 14 (2%)  | 47          | 71 |
| 1   | T     | 666/755 (88%) | 652 (98%) | 14 (2%)  | 47          | 71 |
| 1   | TA    | 666/755 (88%) | 654 (98%) | 12 (2%)  | 51          | 73 |
| 1   | TB    | 666/755 (88%) | 651 (98%) | 15 (2%)  | 44          | 70 |
| 1   | UA    | 666/755 (88%) | 656 (98%) | 10 (2%)  | 57          | 75 |
| 1   | UB    | 666/755 (88%) | 654 (98%) | 12 (2%)  | 51          | 73 |
| 1   | V     | 666/755 (88%) | 652 (98%) | 14 (2%)  | 47          | 71 |
| 1   | VA    | 666/755 (88%) | 659 (99%) | 7 (1%)   | 65          | 78 |
| 1   | VB    | 666/755 (88%) | 654 (98%) | 12 (2%)  | 51          | 73 |
| 1   | W     | 666/755 (88%) | 653 (98%) | 13 (2%)  | 48          | 72 |
| 1   | WA    | 666/755 (88%) | 654 (98%) | 12 (2%)  | 51          | 73 |
| 1   | WB    | 666/755 (88%) | 655 (98%) | 11 (2%)  | 53          | 74 |
| 1   | X     | 666/755 (88%) | 653 (98%) | 13 (2%)  | 48          | 72 |
| 1   | XA    | 666/755 (88%) | 654 (98%) | 12 (2%)  | 51          | 73 |
| 1   | XB    | 666/755 (88%) | 653 (98%) | 13 (2%)  | 48          | 72 |
| 1   | Y     | 666/755 (88%) | 653 (98%) | 13 (2%)  | 48          | 72 |

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| Mol | Chain | Analysed          | Rotameric   | Outliers | Percentiles |    |
|-----|-------|-------------------|-------------|----------|-------------|----|
| 1   | YA    | 666/755 (88%)     | 657 (99%)   | 9 (1%)   | 59          | 76 |
| 1   | YB    | 666/755 (88%)     | 657 (99%)   | 9 (1%)   | 59          | 76 |
| 1   | Z     | 666/755 (88%)     | 653 (98%)   | 13 (2%)  | 48          | 72 |
| 1   | ZA    | 666/755 (88%)     | 650 (98%)   | 16 (2%)  | 43          | 69 |
| 1   | ZB    | 666/755 (88%)     | 652 (98%)   | 14 (2%)  | 47          | 71 |
| All | All   | 51948/58890 (88%) | 51012 (98%) | 936 (2%) | 51          | 73 |

All (936) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | A     | 8   | ILE  |
| 1   | A     | 34  | THR  |
| 1   | A     | 58  | TYR  |
| 1   | A     | 63  | ASN  |
| 1   | A     | 88  | LEU  |
| 1   | A     | 209 | PHE  |
| 1   | A     | 283 | VAL  |
| 1   | A     | 461 | ARG  |
| 1   | A     | 761 | ARG  |
| 1   | A     | 807 | ILE  |
| 1   | AA    | 8   | ILE  |
| 1   | AA    | 34  | THR  |
| 1   | AA    | 63  | ASN  |
| 1   | AA    | 144 | LEU  |
| 1   | AA    | 209 | PHE  |
| 1   | AA    | 665 | THR  |
| 1   | AA    | 669 | GLN  |
| 1   | AA    | 728 | SER  |
| 1   | AA    | 761 | ARG  |
| 1   | AA    | 807 | ILE  |
| 1   | AB    | 8   | ILE  |
| 1   | AB    | 34  | THR  |
| 1   | AB    | 43  | VAL  |
| 1   | AB    | 63  | ASN  |
| 1   | AB    | 88  | LEU  |
| 1   | AB    | 144 | LEU  |
| 1   | AB    | 209 | PHE  |
| 1   | AB    | 518 | LEU  |
| 1   | AB    | 538 | GLN  |
| 1   | AB    | 637 | SER  |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | AB           | 669        | GLN         |
| 1          | AB           | 728        | SER         |
| 1          | AB           | 807        | ILE         |
| 1          | AC           | 8          | ILE         |
| 1          | AC           | 34         | THR         |
| 1          | AC           | 43         | VAL         |
| 1          | AC           | 58         | TYR         |
| 1          | AC           | 63         | ASN         |
| 1          | AC           | 88         | LEU         |
| 1          | AC           | 209        | PHE         |
| 1          | AC           | 283        | VAL         |
| 1          | AC           | 461        | ARG         |
| 1          | AC           | 523        | PHE         |
| 1          | AC           | 669        | GLN         |
| 1          | AC           | 728        | SER         |
| 1          | B            | 8          | ILE         |
| 1          | B            | 34         | THR         |
| 1          | B            | 63         | ASN         |
| 1          | B            | 88         | LEU         |
| 1          | B            | 209        | PHE         |
| 1          | B            | 283        | VAL         |
| 1          | B            | 461        | ARG         |
| 1          | B            | 637        | SER         |
| 1          | B            | 665        | THR         |
| 1          | B            | 728        | SER         |
| 1          | B            | 807        | ILE         |
| 1          | BA           | 8          | ILE         |
| 1          | BA           | 20         | ASP         |
| 1          | BA           | 34         | THR         |
| 1          | BA           | 43         | VAL         |
| 1          | BA           | 63         | ASN         |
| 1          | BA           | 88         | LEU         |
| 1          | BA           | 144        | LEU         |
| 1          | BA           | 209        | PHE         |
| 1          | BA           | 283        | VAL         |
| 1          | BA           | 461        | ARG         |
| 1          | BA           | 637        | SER         |
| 1          | BA           | 665        | THR         |
| 1          | BA           | 728        | SER         |
| 1          | BA           | 807        | ILE         |
| 1          | BB           | 8          | ILE         |
| 1          | BB           | 34         | THR         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | BB           | 58         | TYR         |
| 1          | BB           | 63         | ASN         |
| 1          | BB           | 209        | PHE         |
| 1          | BB           | 283        | VAL         |
| 1          | BB           | 637        | SER         |
| 1          | BB           | 728        | SER         |
| 1          | BB           | 807        | ILE         |
| 1          | C            | 8          | ILE         |
| 1          | C            | 20         | ASP         |
| 1          | C            | 34         | THR         |
| 1          | C            | 63         | ASN         |
| 1          | C            | 88         | LEU         |
| 1          | C            | 144        | LEU         |
| 1          | C            | 209        | PHE         |
| 1          | C            | 516        | LEU         |
| 1          | C            | 523        | PHE         |
| 1          | C            | 637        | SER         |
| 1          | C            | 728        | SER         |
| 1          | C            | 807        | ILE         |
| 1          | CA           | 8          | ILE         |
| 1          | CA           | 34         | THR         |
| 1          | CA           | 58         | TYR         |
| 1          | CA           | 63         | ASN         |
| 1          | CA           | 88         | LEU         |
| 1          | CA           | 209        | PHE         |
| 1          | CA           | 283        | VAL         |
| 1          | CA           | 426        | LEU         |
| 1          | CA           | 461        | ARG         |
| 1          | CA           | 669        | GLN         |
| 1          | CA           | 728        | SER         |
| 1          | CB           | 8          | ILE         |
| 1          | CB           | 34         | THR         |
| 1          | CB           | 63         | ASN         |
| 1          | CB           | 88         | LEU         |
| 1          | CB           | 144        | LEU         |
| 1          | CB           | 209        | PHE         |
| 1          | CB           | 283        | VAL         |
| 1          | CB           | 461        | ARG         |
| 1          | CB           | 516        | LEU         |
| 1          | CB           | 538        | GLN         |
| 1          | CB           | 669        | GLN         |
| 1          | CB           | 728        | SER         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | CB           | 807        | ILE         |
| 1          | D            | 8          | ILE         |
| 1          | D            | 34         | THR         |
| 1          | D            | 58         | TYR         |
| 1          | D            | 63         | ASN         |
| 1          | D            | 88         | LEU         |
| 1          | D            | 144        | LEU         |
| 1          | D            | 209        | PHE         |
| 1          | D            | 283        | VAL         |
| 1          | D            | 516        | LEU         |
| 1          | D            | 523        | PHE         |
| 1          | D            | 637        | SER         |
| 1          | D            | 728        | SER         |
| 1          | D            | 807        | ILE         |
| 1          | DA           | 8          | ILE         |
| 1          | DA           | 34         | THR         |
| 1          | DA           | 63         | ASN         |
| 1          | DA           | 88         | LEU         |
| 1          | DA           | 127        | LEU         |
| 1          | DA           | 209        | PHE         |
| 1          | DA           | 461        | ARG         |
| 1          | DA           | 516        | LEU         |
| 1          | DA           | 523        | PHE         |
| 1          | DA           | 637        | SER         |
| 1          | DA           | 665        | THR         |
| 1          | DA           | 728        | SER         |
| 1          | DA           | 807        | ILE         |
| 1          | DB           | 8          | ILE         |
| 1          | DB           | 20         | ASP         |
| 1          | DB           | 34         | THR         |
| 1          | DB           | 58         | TYR         |
| 1          | DB           | 88         | LEU         |
| 1          | DB           | 144        | LEU         |
| 1          | DB           | 209        | PHE         |
| 1          | DB           | 283        | VAL         |
| 1          | DB           | 461        | ARG         |
| 1          | DB           | 665        | THR         |
| 1          | DB           | 728        | SER         |
| 1          | DB           | 761        | ARG         |
| 1          | DB           | 807        | ILE         |
| 1          | E            | 8          | ILE         |
| 1          | E            | 34         | THR         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | E            | 63         | ASN         |
| 1          | E            | 88         | LEU         |
| 1          | E            | 144        | LEU         |
| 1          | E            | 209        | PHE         |
| 1          | E            | 665        | THR         |
| 1          | E            | 728        | SER         |
| 1          | E            | 807        | ILE         |
| 1          | EA           | 8          | ILE         |
| 1          | EA           | 20         | ASP         |
| 1          | EA           | 34         | THR         |
| 1          | EA           | 58         | TYR         |
| 1          | EA           | 63         | ASN         |
| 1          | EA           | 88         | LEU         |
| 1          | EA           | 144        | LEU         |
| 1          | EA           | 209        | PHE         |
| 1          | EA           | 283        | VAL         |
| 1          | EA           | 461        | ARG         |
| 1          | EA           | 665        | THR         |
| 1          | EA           | 669        | GLN         |
| 1          | EA           | 728        | SER         |
| 1          | EB           | 8          | ILE         |
| 1          | EB           | 34         | THR         |
| 1          | EB           | 58         | TYR         |
| 1          | EB           | 63         | ASN         |
| 1          | EB           | 88         | LEU         |
| 1          | EB           | 144        | LEU         |
| 1          | EB           | 209        | PHE         |
| 1          | EB           | 283        | VAL         |
| 1          | EB           | 523        | PHE         |
| 1          | EB           | 637        | SER         |
| 1          | EB           | 728        | SER         |
| 1          | EB           | 807        | ILE         |
| 1          | F            | 8          | ILE         |
| 1          | F            | 34         | THR         |
| 1          | F            | 58         | TYR         |
| 1          | F            | 63         | ASN         |
| 1          | F            | 144        | LEU         |
| 1          | F            | 209        | PHE         |
| 1          | F            | 283        | VAL         |
| 1          | F            | 461        | ARG         |
| 1          | F            | 665        | THR         |
| 1          | F            | 728        | SER         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | F            | 761        | ARG         |
| 1          | FA           | 8          | ILE         |
| 1          | FA           | 34         | THR         |
| 1          | FA           | 63         | ASN         |
| 1          | FA           | 88         | LEU         |
| 1          | FA           | 144        | LEU         |
| 1          | FA           | 209        | PHE         |
| 1          | FA           | 516        | LEU         |
| 1          | FA           | 518        | LEU         |
| 1          | FA           | 523        | PHE         |
| 1          | FA           | 637        | SER         |
| 1          | FA           | 728        | SER         |
| 1          | FA           | 761        | ARG         |
| 1          | FA           | 807        | ILE         |
| 1          | FB           | 8          | ILE         |
| 1          | FB           | 20         | ASP         |
| 1          | FB           | 34         | THR         |
| 1          | FB           | 63         | ASN         |
| 1          | FB           | 88         | LEU         |
| 1          | FB           | 144        | LEU         |
| 1          | FB           | 209        | PHE         |
| 1          | FB           | 283        | VAL         |
| 1          | FB           | 669        | GLN         |
| 1          | FB           | 728        | SER         |
| 1          | FB           | 798        | MET         |
| 1          | FB           | 807        | ILE         |
| 1          | G            | 8          | ILE         |
| 1          | G            | 34         | THR         |
| 1          | G            | 43         | VAL         |
| 1          | G            | 63         | ASN         |
| 1          | G            | 88         | LEU         |
| 1          | G            | 144        | LEU         |
| 1          | G            | 209        | PHE         |
| 1          | G            | 283        | VAL         |
| 1          | G            | 665        | THR         |
| 1          | G            | 728        | SER         |
| 1          | G            | 761        | ARG         |
| 1          | G            | 807        | ILE         |
| 1          | GA           | 8          | ILE         |
| 1          | GA           | 20         | ASP         |
| 1          | GA           | 34         | THR         |
| 1          | GA           | 43         | VAL         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | GA           | 58         | TYR         |
| 1          | GA           | 63         | ASN         |
| 1          | GA           | 88         | LEU         |
| 1          | GA           | 144        | LEU         |
| 1          | GA           | 209        | PHE         |
| 1          | GA           | 283        | VAL         |
| 1          | GA           | 516        | LEU         |
| 1          | GA           | 523        | PHE         |
| 1          | GA           | 538        | GLN         |
| 1          | GA           | 728        | SER         |
| 1          | GA           | 807        | ILE         |
| 1          | GB           | 8          | ILE         |
| 1          | GB           | 34         | THR         |
| 1          | GB           | 58         | TYR         |
| 1          | GB           | 63         | ASN         |
| 1          | GB           | 88         | LEU         |
| 1          | GB           | 209        | PHE         |
| 1          | GB           | 283        | VAL         |
| 1          | GB           | 461        | ARG         |
| 1          | GB           | 538        | GLN         |
| 1          | GB           | 669        | GLN         |
| 1          | GB           | 728        | SER         |
| 1          | GB           | 807        | ILE         |
| 1          | H            | 8          | ILE         |
| 1          | H            | 34         | THR         |
| 1          | H            | 58         | TYR         |
| 1          | H            | 63         | ASN         |
| 1          | H            | 88         | LEU         |
| 1          | H            | 209        | PHE         |
| 1          | H            | 355        | ASP         |
| 1          | H            | 461        | ARG         |
| 1          | H            | 538        | GLN         |
| 1          | H            | 728        | SER         |
| 1          | H            | 807        | ILE         |
| 1          | HA           | 8          | ILE         |
| 1          | HA           | 20         | ASP         |
| 1          | HA           | 34         | THR         |
| 1          | HA           | 63         | ASN         |
| 1          | HA           | 88         | LEU         |
| 1          | HA           | 209        | PHE         |
| 1          | HA           | 316        | LEU         |
| 1          | HA           | 461        | ARG         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | HA           | 516        | LEU         |
| 1          | HA           | 538        | GLN         |
| 1          | HA           | 669        | GLN         |
| 1          | HA           | 728        | SER         |
| 1          | HA           | 761        | ARG         |
| 1          | HA           | 807        | ILE         |
| 1          | HB           | 8          | ILE         |
| 1          | HB           | 58         | TYR         |
| 1          | HB           | 63         | ASN         |
| 1          | HB           | 88         | LEU         |
| 1          | HB           | 144        | LEU         |
| 1          | HB           | 209        | PHE         |
| 1          | HB           | 283        | VAL         |
| 1          | HB           | 426        | LEU         |
| 1          | HB           | 637        | SER         |
| 1          | HB           | 665        | THR         |
| 1          | HB           | 669        | GLN         |
| 1          | HB           | 728        | SER         |
| 1          | HB           | 807        | ILE         |
| 1          | I            | 8          | ILE         |
| 1          | I            | 34         | THR         |
| 1          | I            | 63         | ASN         |
| 1          | I            | 88         | LEU         |
| 1          | I            | 209        | PHE         |
| 1          | I            | 283        | VAL         |
| 1          | I            | 461        | ARG         |
| 1          | I            | 538        | GLN         |
| 1          | I            | 665        | THR         |
| 1          | I            | 669        | GLN         |
| 1          | I            | 728        | SER         |
| 1          | I            | 761        | ARG         |
| 1          | IA           | 8          | ILE         |
| 1          | IA           | 34         | THR         |
| 1          | IA           | 63         | ASN         |
| 1          | IA           | 88         | LEU         |
| 1          | IA           | 144        | LEU         |
| 1          | IA           | 209        | PHE         |
| 1          | IA           | 283        | VAL         |
| 1          | IA           | 461        | ARG         |
| 1          | IA           | 516        | LEU         |
| 1          | IA           | 538        | GLN         |
| 1          | IA           | 598        | ILE         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | IA           | 665        | THR         |
| 1          | IA           | 728        | SER         |
| 1          | IB           | 8          | ILE         |
| 1          | IB           | 34         | THR         |
| 1          | IB           | 58         | TYR         |
| 1          | IB           | 63         | ASN         |
| 1          | IB           | 88         | LEU         |
| 1          | IB           | 209        | PHE         |
| 1          | IB           | 426        | LEU         |
| 1          | IB           | 461        | ARG         |
| 1          | IB           | 598        | ILE         |
| 1          | IB           | 665        | THR         |
| 1          | IB           | 669        | GLN         |
| 1          | IB           | 728        | SER         |
| 1          | IB           | 807        | ILE         |
| 1          | J            | 8          | ILE         |
| 1          | J            | 34         | THR         |
| 1          | J            | 58         | TYR         |
| 1          | J            | 63         | ASN         |
| 1          | J            | 88         | LEU         |
| 1          | J            | 209        | PHE         |
| 1          | J            | 523        | PHE         |
| 1          | J            | 637        | SER         |
| 1          | J            | 665        | THR         |
| 1          | J            | 728        | SER         |
| 1          | J            | 807        | ILE         |
| 1          | JA           | 8          | ILE         |
| 1          | JA           | 34         | THR         |
| 1          | JA           | 209        | PHE         |
| 1          | JA           | 426        | LEU         |
| 1          | JA           | 516        | LEU         |
| 1          | JA           | 518        | LEU         |
| 1          | JA           | 538        | GLN         |
| 1          | JA           | 637        | SER         |
| 1          | JA           | 728        | SER         |
| 1          | JA           | 807        | ILE         |
| 1          | JB           | 8          | ILE         |
| 1          | JB           | 20         | ASP         |
| 1          | JB           | 34         | THR         |
| 1          | JB           | 58         | TYR         |
| 1          | JB           | 63         | ASN         |
| 1          | JB           | 88         | LEU         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | JB           | 144        | LEU         |
| 1          | JB           | 209        | PHE         |
| 1          | JB           | 283        | VAL         |
| 1          | JB           | 461        | ARG         |
| 1          | JB           | 516        | LEU         |
| 1          | JB           | 637        | SER         |
| 1          | JB           | 728        | SER         |
| 1          | JB           | 807        | ILE         |
| 1          | K            | 8          | ILE         |
| 1          | K            | 34         | THR         |
| 1          | K            | 58         | TYR         |
| 1          | K            | 63         | ASN         |
| 1          | K            | 88         | LEU         |
| 1          | K            | 144        | LEU         |
| 1          | K            | 209        | PHE         |
| 1          | K            | 523        | PHE         |
| 1          | K            | 807        | ILE         |
| 1          | KA           | 8          | ILE         |
| 1          | KA           | 34         | THR         |
| 1          | KA           | 58         | TYR         |
| 1          | KA           | 63         | ASN         |
| 1          | KA           | 88         | LEU         |
| 1          | KA           | 144        | LEU         |
| 1          | KA           | 209        | PHE         |
| 1          | KA           | 283        | VAL         |
| 1          | KA           | 306        | LYS         |
| 1          | KA           | 523        | PHE         |
| 1          | KA           | 665        | THR         |
| 1          | KA           | 728        | SER         |
| 1          | KA           | 761        | ARG         |
| 1          | KA           | 807        | ILE         |
| 1          | KB           | 8          | ILE         |
| 1          | KB           | 34         | THR         |
| 1          | KB           | 43         | VAL         |
| 1          | KB           | 63         | ASN         |
| 1          | KB           | 209        | PHE         |
| 1          | KB           | 283        | VAL         |
| 1          | KB           | 461        | ARG         |
| 1          | KB           | 516        | LEU         |
| 1          | KB           | 637        | SER         |
| 1          | KB           | 728        | SER         |
| 1          | KB           | 807        | ILE         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | L            | 8          | ILE         |
| 1          | L            | 20         | ASP         |
| 1          | L            | 34         | THR         |
| 1          | L            | 58         | TYR         |
| 1          | L            | 63         | ASN         |
| 1          | L            | 88         | LEU         |
| 1          | L            | 144        | LEU         |
| 1          | L            | 209        | PHE         |
| 1          | L            | 283        | VAL         |
| 1          | L            | 523        | PHE         |
| 1          | L            | 538        | GLN         |
| 1          | L            | 598        | ILE         |
| 1          | L            | 637        | SER         |
| 1          | L            | 665        | THR         |
| 1          | L            | 728        | SER         |
| 1          | L            | 807        | ILE         |
| 1          | LA           | 8          | ILE         |
| 1          | LA           | 34         | THR         |
| 1          | LA           | 58         | TYR         |
| 1          | LA           | 63         | ASN         |
| 1          | LA           | 88         | LEU         |
| 1          | LA           | 209        | PHE         |
| 1          | LA           | 637        | SER         |
| 1          | LA           | 728        | SER         |
| 1          | LA           | 761        | ARG         |
| 1          | LA           | 807        | ILE         |
| 1          | LB           | 8          | ILE         |
| 1          | LB           | 34         | THR         |
| 1          | LB           | 58         | TYR         |
| 1          | LB           | 63         | ASN         |
| 1          | LB           | 88         | LEU         |
| 1          | LB           | 209        | PHE         |
| 1          | LB           | 352        | GLN         |
| 1          | LB           | 516        | LEU         |
| 1          | LB           | 637        | SER         |
| 1          | LB           | 728        | SER         |
| 1          | LB           | 807        | ILE         |
| 1          | M            | 8          | ILE         |
| 1          | M            | 34         | THR         |
| 1          | M            | 63         | ASN         |
| 1          | M            | 88         | LEU         |
| 1          | M            | 209        | PHE         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | M            | 518        | LEU         |
| 1          | M            | 538        | GLN         |
| 1          | M            | 637        | SER         |
| 1          | M            | 669        | GLN         |
| 1          | M            | 728        | SER         |
| 1          | M            | 807        | ILE         |
| 1          | MA           | 8          | ILE         |
| 1          | MA           | 20         | ASP         |
| 1          | MA           | 34         | THR         |
| 1          | MA           | 58         | TYR         |
| 1          | MA           | 88         | LEU         |
| 1          | MA           | 144        | LEU         |
| 1          | MA           | 209        | PHE         |
| 1          | MA           | 283        | VAL         |
| 1          | MA           | 516        | LEU         |
| 1          | MA           | 523        | PHE         |
| 1          | MA           | 665        | THR         |
| 1          | MA           | 728        | SER         |
| 1          | MA           | 761        | ARG         |
| 1          | MA           | 807        | ILE         |
| 1          | MB           | 8          | ILE         |
| 1          | MB           | 34         | THR         |
| 1          | MB           | 63         | ASN         |
| 1          | MB           | 88         | LEU         |
| 1          | MB           | 144        | LEU         |
| 1          | MB           | 209        | PHE         |
| 1          | MB           | 461        | ARG         |
| 1          | MB           | 523        | PHE         |
| 1          | MB           | 665        | THR         |
| 1          | MB           | 728        | SER         |
| 1          | N            | 8          | ILE         |
| 1          | N            | 34         | THR         |
| 1          | N            | 63         | ASN         |
| 1          | N            | 88         | LEU         |
| 1          | N            | 209        | PHE         |
| 1          | N            | 283        | VAL         |
| 1          | N            | 426        | LEU         |
| 1          | N            | 461        | ARG         |
| 1          | N            | 637        | SER         |
| 1          | N            | 728        | SER         |
| 1          | N            | 807        | ILE         |
| 1          | NA           | 8          | ILE         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | NA           | 34         | THR         |
| 1          | NA           | 58         | TYR         |
| 1          | NA           | 63         | ASN         |
| 1          | NA           | 88         | LEU         |
| 1          | NA           | 209        | PHE         |
| 1          | NA           | 461        | ARG         |
| 1          | NA           | 523        | PHE         |
| 1          | NA           | 669        | GLN         |
| 1          | NA           | 728        | SER         |
| 1          | NB           | 8          | ILE         |
| 1          | NB           | 20         | ASP         |
| 1          | NB           | 34         | THR         |
| 1          | NB           | 63         | ASN         |
| 1          | NB           | 88         | LEU         |
| 1          | NB           | 144        | LEU         |
| 1          | NB           | 209        | PHE         |
| 1          | NB           | 283        | VAL         |
| 1          | NB           | 665        | THR         |
| 1          | NB           | 669        | GLN         |
| 1          | NB           | 728        | SER         |
| 1          | NB           | 761        | ARG         |
| 1          | NB           | 807        | ILE         |
| 1          | O            | 8          | ILE         |
| 1          | O            | 34         | THR         |
| 1          | O            | 58         | TYR         |
| 1          | O            | 88         | LEU         |
| 1          | O            | 209        | PHE         |
| 1          | O            | 283        | VAL         |
| 1          | O            | 461        | ARG         |
| 1          | O            | 516        | LEU         |
| 1          | O            | 669        | GLN         |
| 1          | O            | 728        | SER         |
| 1          | O            | 807        | ILE         |
| 1          | OA           | 8          | ILE         |
| 1          | OA           | 34         | THR         |
| 1          | OA           | 63         | ASN         |
| 1          | OA           | 209        | PHE         |
| 1          | OA           | 283        | VAL         |
| 1          | OA           | 461        | ARG         |
| 1          | OA           | 807        | ILE         |
| 1          | OB           | 8          | ILE         |
| 1          | OB           | 20         | ASP         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | OB           | 34         | THR         |
| 1          | OB           | 43         | VAL         |
| 1          | OB           | 63         | ASN         |
| 1          | OB           | 88         | LEU         |
| 1          | OB           | 209        | PHE         |
| 1          | OB           | 283        | VAL         |
| 1          | OB           | 461        | ARG         |
| 1          | OB           | 637        | SER         |
| 1          | OB           | 665        | THR         |
| 1          | OB           | 728        | SER         |
| 1          | OB           | 807        | ILE         |
| 1          | P            | 8          | ILE         |
| 1          | P            | 34         | THR         |
| 1          | P            | 58         | TYR         |
| 1          | P            | 63         | ASN         |
| 1          | P            | 88         | LEU         |
| 1          | P            | 144        | LEU         |
| 1          | P            | 209        | PHE         |
| 1          | P            | 461        | ARG         |
| 1          | P            | 665        | THR         |
| 1          | P            | 728        | SER         |
| 1          | P            | 761        | ARG         |
| 1          | P            | 807        | ILE         |
| 1          | PA           | 8          | ILE         |
| 1          | PA           | 34         | THR         |
| 1          | PA           | 63         | ASN         |
| 1          | PA           | 88         | LEU         |
| 1          | PA           | 209        | PHE         |
| 1          | PA           | 283        | VAL         |
| 1          | PA           | 426        | LEU         |
| 1          | PA           | 461        | ARG         |
| 1          | PA           | 637        | SER         |
| 1          | PA           | 665        | THR         |
| 1          | PA           | 728        | SER         |
| 1          | PA           | 807        | ILE         |
| 1          | PB           | 8          | ILE         |
| 1          | PB           | 34         | THR         |
| 1          | PB           | 58         | TYR         |
| 1          | PB           | 63         | ASN         |
| 1          | PB           | 88         | LEU         |
| 1          | PB           | 209        | PHE         |
| 1          | PB           | 283        | VAL         |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | PB    | 426 | LEU  |
| 1   | PB    | 461 | ARG  |
| 1   | PB    | 669 | GLN  |
| 1   | PB    | 728 | SER  |
| 1   | Q     | 8   | ILE  |
| 1   | Q     | 34  | THR  |
| 1   | Q     | 58  | TYR  |
| 1   | Q     | 63  | ASN  |
| 1   | Q     | 88  | LEU  |
| 1   | Q     | 144 | LEU  |
| 1   | Q     | 209 | PHE  |
| 1   | Q     | 283 | VAL  |
| 1   | Q     | 523 | PHE  |
| 1   | Q     | 637 | SER  |
| 1   | Q     | 728 | SER  |
| 1   | Q     | 807 | ILE  |
| 1   | QA    | 8   | ILE  |
| 1   | QA    | 34  | THR  |
| 1   | QA    | 63  | ASN  |
| 1   | QA    | 88  | LEU  |
| 1   | QA    | 144 | LEU  |
| 1   | QA    | 209 | PHE  |
| 1   | QA    | 426 | LEU  |
| 1   | QA    | 516 | LEU  |
| 1   | QA    | 523 | PHE  |
| 1   | QA    | 637 | SER  |
| 1   | QA    | 728 | SER  |
| 1   | QA    | 807 | ILE  |
| 1   | QB    | 8   | ILE  |
| 1   | QB    | 34  | THR  |
| 1   | QB    | 63  | ASN  |
| 1   | QB    | 88  | LEU  |
| 1   | QB    | 144 | LEU  |
| 1   | QB    | 209 | PHE  |
| 1   | QB    | 461 | ARG  |
| 1   | QB    | 523 | PHE  |
| 1   | QB    | 637 | SER  |
| 1   | QB    | 728 | SER  |
| 1   | QB    | 807 | ILE  |
| 1   | R     | 8   | ILE  |
| 1   | R     | 34  | THR  |
| 1   | R     | 63  | ASN  |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | R            | 88         | LEU         |
| 1          | R            | 144        | LEU         |
| 1          | R            | 209        | PHE         |
| 1          | R            | 283        | VAL         |
| 1          | R            | 669        | GLN         |
| 1          | R            | 728        | SER         |
| 1          | R            | 798        | MET         |
| 1          | R            | 807        | ILE         |
| 1          | RA           | 8          | ILE         |
| 1          | RA           | 34         | THR         |
| 1          | RA           | 43         | VAL         |
| 1          | RA           | 58         | TYR         |
| 1          | RA           | 63         | ASN         |
| 1          | RA           | 88         | LEU         |
| 1          | RA           | 144        | LEU         |
| 1          | RA           | 209        | PHE         |
| 1          | RA           | 283        | VAL         |
| 1          | RA           | 426        | LEU         |
| 1          | RA           | 516        | LEU         |
| 1          | RA           | 518        | LEU         |
| 1          | RA           | 523        | PHE         |
| 1          | RA           | 637        | SER         |
| 1          | RA           | 728        | SER         |
| 1          | RA           | 807        | ILE         |
| 1          | RB           | 8          | ILE         |
| 1          | RB           | 34         | THR         |
| 1          | RB           | 58         | TYR         |
| 1          | RB           | 63         | ASN         |
| 1          | RB           | 88         | LEU         |
| 1          | RB           | 144        | LEU         |
| 1          | RB           | 209        | PHE         |
| 1          | RB           | 283        | VAL         |
| 1          | RB           | 426        | LEU         |
| 1          | RB           | 461        | ARG         |
| 1          | RB           | 665        | THR         |
| 1          | RB           | 728        | SER         |
| 1          | S            | 8          | ILE         |
| 1          | S            | 34         | THR         |
| 1          | S            | 58         | TYR         |
| 1          | S            | 63         | ASN         |
| 1          | S            | 88         | LEU         |
| 1          | S            | 205        | LEU         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | S            | 209        | PHE         |
| 1          | S            | 283        | VAL         |
| 1          | S            | 461        | ARG         |
| 1          | S            | 538        | GLN         |
| 1          | S            | 665        | THR         |
| 1          | S            | 669        | GLN         |
| 1          | S            | 728        | SER         |
| 1          | S            | 807        | ILE         |
| 1          | SA           | 8          | ILE         |
| 1          | SA           | 20         | ASP         |
| 1          | SA           | 34         | THR         |
| 1          | SA           | 58         | TYR         |
| 1          | SA           | 63         | ASN         |
| 1          | SA           | 144        | LEU         |
| 1          | SA           | 209        | PHE         |
| 1          | SA           | 665        | THR         |
| 1          | SA           | 728        | SER         |
| 1          | SA           | 807        | ILE         |
| 1          | SB           | 8          | ILE         |
| 1          | SB           | 34         | THR         |
| 1          | SB           | 58         | TYR         |
| 1          | SB           | 63         | ASN         |
| 1          | SB           | 88         | LEU         |
| 1          | SB           | 144        | LEU         |
| 1          | SB           | 209        | PHE         |
| 1          | SB           | 516        | LEU         |
| 1          | SB           | 518        | LEU         |
| 1          | SB           | 523        | PHE         |
| 1          | SB           | 637        | SER         |
| 1          | SB           | 728        | SER         |
| 1          | SB           | 761        | ARG         |
| 1          | SB           | 807        | ILE         |
| 1          | T            | 8          | ILE         |
| 1          | T            | 34         | THR         |
| 1          | T            | 58         | TYR         |
| 1          | T            | 63         | ASN         |
| 1          | T            | 88         | LEU         |
| 1          | T            | 144        | LEU         |
| 1          | T            | 209        | PHE         |
| 1          | T            | 283        | VAL         |
| 1          | T            | 426        | LEU         |
| 1          | T            | 637        | SER         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | T            | 665        | THR         |
| 1          | T            | 669        | GLN         |
| 1          | T            | 728        | SER         |
| 1          | T            | 807        | ILE         |
| 1          | TA           | 8          | ILE         |
| 1          | TA           | 20         | ASP         |
| 1          | TA           | 34         | THR         |
| 1          | TA           | 58         | TYR         |
| 1          | TA           | 63         | ASN         |
| 1          | TA           | 144        | LEU         |
| 1          | TA           | 209        | PHE         |
| 1          | TA           | 283        | VAL         |
| 1          | TA           | 461        | ARG         |
| 1          | TA           | 665        | THR         |
| 1          | TA           | 728        | SER         |
| 1          | TA           | 761        | ARG         |
| 1          | TB           | 8          | ILE         |
| 1          | TB           | 20         | ASP         |
| 1          | TB           | 34         | THR         |
| 1          | TB           | 43         | VAL         |
| 1          | TB           | 58         | TYR         |
| 1          | TB           | 63         | ASN         |
| 1          | TB           | 88         | LEU         |
| 1          | TB           | 144        | LEU         |
| 1          | TB           | 209        | PHE         |
| 1          | TB           | 283        | VAL         |
| 1          | TB           | 516        | LEU         |
| 1          | TB           | 523        | PHE         |
| 1          | TB           | 538        | GLN         |
| 1          | TB           | 728        | SER         |
| 1          | TB           | 807        | ILE         |
| 1          | UA           | 8          | ILE         |
| 1          | UA           | 34         | THR         |
| 1          | UA           | 63         | ASN         |
| 1          | UA           | 88         | LEU         |
| 1          | UA           | 209        | PHE         |
| 1          | UA           | 283        | VAL         |
| 1          | UA           | 665        | THR         |
| 1          | UA           | 728        | SER         |
| 1          | UA           | 761        | ARG         |
| 1          | UA           | 807        | ILE         |
| 1          | UB           | 8          | ILE         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | UB           | 20         | ASP         |
| 1          | UB           | 34         | THR         |
| 1          | UB           | 63         | ASN         |
| 1          | UB           | 88         | LEU         |
| 1          | UB           | 144        | LEU         |
| 1          | UB           | 209        | PHE         |
| 1          | UB           | 461        | ARG         |
| 1          | UB           | 538        | GLN         |
| 1          | UB           | 669        | GLN         |
| 1          | UB           | 728        | SER         |
| 1          | UB           | 807        | ILE         |
| 1          | V            | 8          | ILE         |
| 1          | V            | 20         | ASP         |
| 1          | V            | 34         | THR         |
| 1          | V            | 63         | ASN         |
| 1          | V            | 205        | LEU         |
| 1          | V            | 209        | PHE         |
| 1          | V            | 461        | ARG         |
| 1          | V            | 523        | PHE         |
| 1          | V            | 538        | GLN         |
| 1          | V            | 549        | VAL         |
| 1          | V            | 598        | ILE         |
| 1          | V            | 665        | THR         |
| 1          | V            | 728        | SER         |
| 1          | V            | 807        | ILE         |
| 1          | VA           | 8          | ILE         |
| 1          | VA           | 34         | THR         |
| 1          | VA           | 63         | ASN         |
| 1          | VA           | 88         | LEU         |
| 1          | VA           | 209        | PHE         |
| 1          | VA           | 461        | ARG         |
| 1          | VA           | 807        | ILE         |
| 1          | VB           | 8          | ILE         |
| 1          | VB           | 34         | THR         |
| 1          | VB           | 63         | ASN         |
| 1          | VB           | 88         | LEU         |
| 1          | VB           | 144        | LEU         |
| 1          | VB           | 209        | PHE         |
| 1          | VB           | 283        | VAL         |
| 1          | VB           | 516        | LEU         |
| 1          | VB           | 538        | GLN         |
| 1          | VB           | 598        | ILE         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | VB           | 665        | THR         |
| 1          | VB           | 728        | SER         |
| 1          | W            | 8          | ILE         |
| 1          | W            | 34         | THR         |
| 1          | W            | 58         | TYR         |
| 1          | W            | 63         | ASN         |
| 1          | W            | 88         | LEU         |
| 1          | W            | 144        | LEU         |
| 1          | W            | 209        | PHE         |
| 1          | W            | 283        | VAL         |
| 1          | W            | 461        | ARG         |
| 1          | W            | 516        | LEU         |
| 1          | W            | 637        | SER         |
| 1          | W            | 728        | SER         |
| 1          | W            | 807        | ILE         |
| 1          | WA           | 8          | ILE         |
| 1          | WA           | 34         | THR         |
| 1          | WA           | 43         | VAL         |
| 1          | WA           | 63         | ASN         |
| 1          | WA           | 88         | LEU         |
| 1          | WA           | 209        | PHE         |
| 1          | WA           | 283        | VAL         |
| 1          | WA           | 461        | ARG         |
| 1          | WA           | 538        | GLN         |
| 1          | WA           | 665        | THR         |
| 1          | WA           | 669        | GLN         |
| 1          | WA           | 728        | SER         |
| 1          | WB           | 8          | ILE         |
| 1          | WB           | 34         | THR         |
| 1          | WB           | 58         | TYR         |
| 1          | WB           | 63         | ASN         |
| 1          | WB           | 209        | PHE         |
| 1          | WB           | 516        | LEU         |
| 1          | WB           | 518        | LEU         |
| 1          | WB           | 538        | GLN         |
| 1          | WB           | 637        | SER         |
| 1          | WB           | 728        | SER         |
| 1          | WB           | 807        | ILE         |
| 1          | X            | 8          | ILE         |
| 1          | X            | 20         | ASP         |
| 1          | X            | 34         | THR         |
| 1          | X            | 63         | ASN         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | X            | 88         | LEU         |
| 1          | X            | 144        | LEU         |
| 1          | X            | 209        | PHE         |
| 1          | X            | 283        | VAL         |
| 1          | X            | 461        | ARG         |
| 1          | X            | 516        | LEU         |
| 1          | X            | 637        | SER         |
| 1          | X            | 728        | SER         |
| 1          | X            | 807        | ILE         |
| 1          | XA           | 8          | ILE         |
| 1          | XA           | 34         | THR         |
| 1          | XA           | 43         | VAL         |
| 1          | XA           | 58         | TYR         |
| 1          | XA           | 63         | ASN         |
| 1          | XA           | 88         | LEU         |
| 1          | XA           | 209        | PHE         |
| 1          | XA           | 523        | PHE         |
| 1          | XA           | 637        | SER         |
| 1          | XA           | 665        | THR         |
| 1          | XA           | 669        | GLN         |
| 1          | XA           | 728        | SER         |
| 1          | XB           | 8          | ILE         |
| 1          | XB           | 20         | ASP         |
| 1          | XB           | 34         | THR         |
| 1          | XB           | 58         | TYR         |
| 1          | XB           | 88         | LEU         |
| 1          | XB           | 144        | LEU         |
| 1          | XB           | 209        | PHE         |
| 1          | XB           | 283        | VAL         |
| 1          | XB           | 523        | PHE         |
| 1          | XB           | 665        | THR         |
| 1          | XB           | 728        | SER         |
| 1          | XB           | 761        | ARG         |
| 1          | XB           | 807        | ILE         |
| 1          | Y            | 8          | ILE         |
| 1          | Y            | 34         | THR         |
| 1          | Y            | 58         | TYR         |
| 1          | Y            | 63         | ASN         |
| 1          | Y            | 88         | LEU         |
| 1          | Y            | 209        | PHE         |
| 1          | Y            | 352        | GLN         |
| 1          | Y            | 461        | ARG         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | Y            | 516        | LEU         |
| 1          | Y            | 538        | GLN         |
| 1          | Y            | 669        | GLN         |
| 1          | Y            | 728        | SER         |
| 1          | Y            | 807        | ILE         |
| 1          | YA           | 8          | ILE         |
| 1          | YA           | 34         | THR         |
| 1          | YA           | 58         | TYR         |
| 1          | YA           | 63         | ASN         |
| 1          | YA           | 88         | LEU         |
| 1          | YA           | 144        | LEU         |
| 1          | YA           | 209        | PHE         |
| 1          | YA           | 523        | PHE         |
| 1          | YA           | 807        | ILE         |
| 1          | YB           | 8          | ILE         |
| 1          | YB           | 20         | ASP         |
| 1          | YB           | 34         | THR         |
| 1          | YB           | 63         | ASN         |
| 1          | YB           | 88         | LEU         |
| 1          | YB           | 209        | PHE         |
| 1          | YB           | 637        | SER         |
| 1          | YB           | 728        | SER         |
| 1          | YB           | 807        | ILE         |
| 1          | Z            | 8          | ILE         |
| 1          | Z            | 20         | ASP         |
| 1          | Z            | 34         | THR         |
| 1          | Z            | 63         | ASN         |
| 1          | Z            | 88         | LEU         |
| 1          | Z            | 144        | LEU         |
| 1          | Z            | 209        | PHE         |
| 1          | Z            | 461        | ARG         |
| 1          | Z            | 523        | PHE         |
| 1          | Z            | 598        | ILE         |
| 1          | Z            | 665        | THR         |
| 1          | Z            | 728        | SER         |
| 1          | Z            | 807        | ILE         |
| 1          | ZA           | 8          | ILE         |
| 1          | ZA           | 20         | ASP         |
| 1          | ZA           | 34         | THR         |
| 1          | ZA           | 58         | TYR         |
| 1          | ZA           | 63         | ASN         |
| 1          | ZA           | 88         | LEU         |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | ZA    | 144 | LEU  |
| 1   | ZA    | 209 | PHE  |
| 1   | ZA    | 283 | VAL  |
| 1   | ZA    | 461 | ARG  |
| 1   | ZA    | 523 | PHE  |
| 1   | ZA    | 538 | GLN  |
| 1   | ZA    | 598 | ILE  |
| 1   | ZA    | 665 | THR  |
| 1   | ZA    | 728 | SER  |
| 1   | ZA    | 807 | ILE  |
| 1   | ZB    | 8   | ILE  |
| 1   | ZB    | 34  | THR  |
| 1   | ZB    | 43  | VAL  |
| 1   | ZB    | 58  | TYR  |
| 1   | ZB    | 63  | ASN  |
| 1   | ZB    | 88  | LEU  |
| 1   | ZB    | 209 | PHE  |
| 1   | ZB    | 283 | VAL  |
| 1   | ZB    | 322 | ASP  |
| 1   | ZB    | 516 | LEU  |
| 1   | ZB    | 523 | PHE  |
| 1   | ZB    | 665 | THR  |
| 1   | ZB    | 728 | SER  |
| 1   | ZB    | 807 | ILE  |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (386) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | A     | 85  | HIS  |
| 1   | A     | 118 | ASN  |
| 1   | A     | 329 | GLN  |
| 1   | A     | 378 | GLN  |
| 1   | A     | 592 | HIS  |
| 1   | A     | 630 | GLN  |
| 1   | A     | 797 | GLN  |
| 1   | AA    | 329 | GLN  |
| 1   | AA    | 592 | HIS  |
| 1   | AA    | 630 | GLN  |
| 1   | AA    | 797 | GLN  |
| 1   | AB    | 85  | HIS  |
| 1   | AB    | 118 | ASN  |
| 1   | AB    | 329 | GLN  |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | AB           | 351        | HIS         |
| 1          | AB           | 534        | HIS         |
| 1          | AB           | 630        | GLN         |
| 1          | AC           | 118        | ASN         |
| 1          | AC           | 329        | GLN         |
| 1          | AC           | 592        | HIS         |
| 1          | AC           | 630        | GLN         |
| 1          | B            | 85         | HIS         |
| 1          | B            | 118        | ASN         |
| 1          | B            | 329        | GLN         |
| 1          | BA           | 85         | HIS         |
| 1          | BA           | 118        | ASN         |
| 1          | BA           | 329        | GLN         |
| 1          | BA           | 464        | HIS         |
| 1          | BA           | 534        | HIS         |
| 1          | BA           | 592        | HIS         |
| 1          | BA           | 630        | GLN         |
| 1          | BA           | 797        | GLN         |
| 1          | BB           | 85         | HIS         |
| 1          | BB           | 118        | ASN         |
| 1          | BB           | 329        | GLN         |
| 1          | BB           | 464        | HIS         |
| 1          | BB           | 592        | HIS         |
| 1          | BB           | 630        | GLN         |
| 1          | C            | 329        | GLN         |
| 1          | C            | 546        | HIS         |
| 1          | C            | 592        | HIS         |
| 1          | C            | 797        | GLN         |
| 1          | CA           | 85         | HIS         |
| 1          | CA           | 118        | ASN         |
| 1          | CA           | 329        | GLN         |
| 1          | CA           | 592        | HIS         |
| 1          | CA           | 630        | GLN         |
| 1          | CA           | 797        | GLN         |
| 1          | CB           | 85         | HIS         |
| 1          | CB           | 329        | GLN         |
| 1          | CB           | 630        | GLN         |
| 1          | CB           | 797        | GLN         |
| 1          | D            | 85         | HIS         |
| 1          | D            | 118        | ASN         |
| 1          | D            | 329        | GLN         |
| 1          | D            | 464        | HIS         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | D            | 534        | HIS         |
| 1          | D            | 592        | HIS         |
| 1          | D            | 630        | GLN         |
| 1          | D            | 797        | GLN         |
| 1          | DA           | 85         | HIS         |
| 1          | DA           | 329        | GLN         |
| 1          | DA           | 592        | HIS         |
| 1          | DA           | 797        | GLN         |
| 1          | DB           | 85         | HIS         |
| 1          | DB           | 630        | GLN         |
| 1          | DB           | 749        | GLN         |
| 1          | E            | 118        | ASN         |
| 1          | E            | 329        | GLN         |
| 1          | E            | 534        | HIS         |
| 1          | E            | 592        | HIS         |
| 1          | E            | 630        | GLN         |
| 1          | EA           | 85         | HIS         |
| 1          | EA           | 329        | GLN         |
| 1          | EA           | 464        | HIS         |
| 1          | EA           | 534        | HIS         |
| 1          | EA           | 630        | GLN         |
| 1          | EA           | 797        | GLN         |
| 1          | EB           | 85         | HIS         |
| 1          | EB           | 329        | GLN         |
| 1          | EB           | 592        | HIS         |
| 1          | EB           | 630        | GLN         |
| 1          | EB           | 797        | GLN         |
| 1          | F            | 118        | ASN         |
| 1          | F            | 329        | GLN         |
| 1          | F            | 534        | HIS         |
| 1          | F            | 630        | GLN         |
| 1          | FA           | 85         | HIS         |
| 1          | FA           | 329        | GLN         |
| 1          | FA           | 592        | HIS         |
| 1          | FA           | 630        | GLN         |
| 1          | FA           | 797        | GLN         |
| 1          | FB           | 85         | HIS         |
| 1          | FB           | 118        | ASN         |
| 1          | FB           | 329        | GLN         |
| 1          | FB           | 592        | HIS         |
| 1          | FB           | 630        | GLN         |
| 1          | FB           | 797        | GLN         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | G            | 118        | ASN         |
| 1          | G            | 329        | GLN         |
| 1          | G            | 630        | GLN         |
| 1          | GA           | 85         | HIS         |
| 1          | GA           | 118        | ASN         |
| 1          | GA           | 329        | GLN         |
| 1          | GA           | 534        | HIS         |
| 1          | GA           | 592        | HIS         |
| 1          | GA           | 630        | GLN         |
| 1          | GA           | 797        | GLN         |
| 1          | GB           | 85         | HIS         |
| 1          | GB           | 329        | GLN         |
| 1          | GB           | 378        | GLN         |
| 1          | GB           | 534        | HIS         |
| 1          | GB           | 630        | GLN         |
| 1          | H            | 118        | ASN         |
| 1          | H            | 329        | GLN         |
| 1          | H            | 592        | HIS         |
| 1          | H            | 630        | GLN         |
| 1          | HA           | 118        | ASN         |
| 1          | HA           | 329        | GLN         |
| 1          | HA           | 592        | HIS         |
| 1          | HA           | 630        | GLN         |
| 1          | HA           | 797        | GLN         |
| 1          | HB           | 118        | ASN         |
| 1          | HB           | 329        | GLN         |
| 1          | HB           | 630        | GLN         |
| 1          | HB           | 797        | GLN         |
| 1          | I            | 118        | ASN         |
| 1          | I            | 329        | GLN         |
| 1          | I            | 592        | HIS         |
| 1          | IA           | 85         | HIS         |
| 1          | IA           | 118        | ASN         |
| 1          | IA           | 329        | GLN         |
| 1          | IA           | 464        | HIS         |
| 1          | IA           | 534        | HIS         |
| 1          | IA           | 592        | HIS         |
| 1          | IA           | 630        | GLN         |
| 1          | IA           | 797        | GLN         |
| 1          | IB           | 118        | ASN         |
| 1          | IB           | 329        | GLN         |
| 1          | IB           | 464        | HIS         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | IB           | 592        | HIS         |
| 1          | IB           | 630        | GLN         |
| 1          | J            | 85         | HIS         |
| 1          | J            | 118        | ASN         |
| 1          | J            | 329        | GLN         |
| 1          | J            | 592        | HIS         |
| 1          | J            | 630        | GLN         |
| 1          | JA           | 85         | HIS         |
| 1          | JA           | 118        | ASN         |
| 1          | JA           | 329        | GLN         |
| 1          | JA           | 534        | HIS         |
| 1          | JA           | 630        | GLN         |
| 1          | JA           | 797        | GLN         |
| 1          | JB           | 85         | HIS         |
| 1          | JB           | 118        | ASN         |
| 1          | JB           | 329        | GLN         |
| 1          | JB           | 534        | HIS         |
| 1          | JB           | 592        | HIS         |
| 1          | JB           | 630        | GLN         |
| 1          | K            | 85         | HIS         |
| 1          | K            | 118        | ASN         |
| 1          | K            | 329        | GLN         |
| 1          | K            | 464        | HIS         |
| 1          | K            | 592        | HIS         |
| 1          | KA           | 329        | GLN         |
| 1          | KA           | 546        | HIS         |
| 1          | KA           | 592        | HIS         |
| 1          | KA           | 749        | GLN         |
| 1          | KA           | 797        | GLN         |
| 1          | KB           | 85         | HIS         |
| 1          | KB           | 329        | GLN         |
| 1          | KB           | 592        | HIS         |
| 1          | KB           | 630        | GLN         |
| 1          | KB           | 797        | GLN         |
| 1          | L            | 85         | HIS         |
| 1          | L            | 329        | GLN         |
| 1          | L            | 592        | HIS         |
| 1          | LA           | 85         | HIS         |
| 1          | LA           | 118        | ASN         |
| 1          | LA           | 329        | GLN         |
| 1          | LA           | 378        | GLN         |
| 1          | LA           | 464        | HIS         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | LA           | 592        | HIS         |
| 1          | LA           | 749        | GLN         |
| 1          | LB           | 85         | HIS         |
| 1          | LB           | 118        | ASN         |
| 1          | LB           | 329        | GLN         |
| 1          | LB           | 534        | HIS         |
| 1          | LB           | 546        | HIS         |
| 1          | LB           | 592        | HIS         |
| 1          | LB           | 630        | GLN         |
| 1          | LB           | 797        | GLN         |
| 1          | M            | 85         | HIS         |
| 1          | M            | 329        | GLN         |
| 1          | M            | 534        | HIS         |
| 1          | M            | 592        | HIS         |
| 1          | M            | 630        | GLN         |
| 1          | MA           | 329        | GLN         |
| 1          | MA           | 592        | HIS         |
| 1          | MB           | 118        | ASN         |
| 1          | MB           | 329        | GLN         |
| 1          | MB           | 378        | GLN         |
| 1          | MB           | 534        | HIS         |
| 1          | MB           | 592        | HIS         |
| 1          | MB           | 630        | GLN         |
| 1          | MB           | 797        | GLN         |
| 1          | N            | 118        | ASN         |
| 1          | N            | 329        | GLN         |
| 1          | N            | 464        | HIS         |
| 1          | N            | 592        | HIS         |
| 1          | N            | 630        | GLN         |
| 1          | NA           | 85         | HIS         |
| 1          | NA           | 118        | ASN         |
| 1          | NA           | 329        | GLN         |
| 1          | NA           | 592        | HIS         |
| 1          | NA           | 630        | GLN         |
| 1          | NB           | 118        | ASN         |
| 1          | NB           | 329        | GLN         |
| 1          | NB           | 546        | HIS         |
| 1          | NB           | 592        | HIS         |
| 1          | NB           | 630        | GLN         |
| 1          | O            | 85         | HIS         |
| 1          | O            | 118        | ASN         |
| 1          | O            | 329        | GLN         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | O            | 534        | HIS         |
| 1          | O            | 592        | HIS         |
| 1          | O            | 630        | GLN         |
| 1          | O            | 797        | GLN         |
| 1          | OA           | 118        | ASN         |
| 1          | OA           | 329        | GLN         |
| 1          | OA           | 534        | HIS         |
| 1          | OA           | 592        | HIS         |
| 1          | OA           | 630        | GLN         |
| 1          | OA           | 797        | GLN         |
| 1          | OB           | 118        | ASN         |
| 1          | OB           | 329        | GLN         |
| 1          | OB           | 534        | HIS         |
| 1          | OB           | 592        | HIS         |
| 1          | OB           | 630        | GLN         |
| 1          | P            | 85         | HIS         |
| 1          | P            | 329        | GLN         |
| 1          | P            | 534        | HIS         |
| 1          | P            | 592        | HIS         |
| 1          | P            | 630        | GLN         |
| 1          | PA           | 85         | HIS         |
| 1          | PA           | 329        | GLN         |
| 1          | PA           | 630        | GLN         |
| 1          | PA           | 797        | GLN         |
| 1          | PB           | 118        | ASN         |
| 1          | PB           | 329        | GLN         |
| 1          | PB           | 592        | HIS         |
| 1          | PB           | 797        | GLN         |
| 1          | Q            | 329        | GLN         |
| 1          | Q            | 592        | HIS         |
| 1          | Q            | 630        | GLN         |
| 1          | Q            | 797        | GLN         |
| 1          | QA           | 329        | GLN         |
| 1          | QA           | 592        | HIS         |
| 1          | QA           | 630        | GLN         |
| 1          | QA           | 797        | GLN         |
| 1          | QB           | 118        | ASN         |
| 1          | QB           | 329        | GLN         |
| 1          | QB           | 592        | HIS         |
| 1          | QB           | 797        | GLN         |
| 1          | R            | 118        | ASN         |
| 1          | R            | 329        | GLN         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | R            | 797        | GLN         |
| 1          | RA           | 63         | ASN         |
| 1          | RA           | 118        | ASN         |
| 1          | RA           | 329        | GLN         |
| 1          | RA           | 464        | HIS         |
| 1          | RA           | 534        | HIS         |
| 1          | RA           | 592        | HIS         |
| 1          | RA           | 630        | GLN         |
| 1          | RA           | 797        | GLN         |
| 1          | RB           | 85         | HIS         |
| 1          | RB           | 118        | ASN         |
| 1          | RB           | 329        | GLN         |
| 1          | RB           | 534        | HIS         |
| 1          | RB           | 592        | HIS         |
| 1          | RB           | 630        | GLN         |
| 1          | S            | 85         | HIS         |
| 1          | S            | 329        | GLN         |
| 1          | S            | 378        | GLN         |
| 1          | S            | 534        | HIS         |
| 1          | S            | 592        | HIS         |
| 1          | S            | 630        | GLN         |
| 1          | SA           | 118        | ASN         |
| 1          | SA           | 329        | GLN         |
| 1          | SA           | 534        | HIS         |
| 1          | SA           | 630        | GLN         |
| 1          | SA           | 797        | GLN         |
| 1          | SB           | 118        | ASN         |
| 1          | SB           | 329        | GLN         |
| 1          | SB           | 592        | HIS         |
| 1          | SB           | 797        | GLN         |
| 1          | T            | 118        | ASN         |
| 1          | T            | 329        | GLN         |
| 1          | T            | 534        | HIS         |
| 1          | T            | 797        | GLN         |
| 1          | TA           | 85         | HIS         |
| 1          | TA           | 118        | ASN         |
| 1          | TA           | 329        | GLN         |
| 1          | TA           | 464        | HIS         |
| 1          | TB           | 85         | HIS         |
| 1          | TB           | 118        | ASN         |
| 1          | TB           | 329        | GLN         |
| 1          | TB           | 630        | GLN         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | UA           | 118        | ASN         |
| 1          | UA           | 329        | GLN         |
| 1          | UB           | 118        | ASN         |
| 1          | UB           | 329        | GLN         |
| 1          | UB           | 464        | HIS         |
| 1          | UB           | 592        | HIS         |
| 1          | UB           | 630        | GLN         |
| 1          | V            | 118        | ASN         |
| 1          | V            | 329        | GLN         |
| 1          | V            | 630        | GLN         |
| 1          | VA           | 85         | HIS         |
| 1          | VA           | 118        | ASN         |
| 1          | VA           | 329        | GLN         |
| 1          | VA           | 592        | HIS         |
| 1          | VA           | 797        | GLN         |
| 1          | VB           | 118        | ASN         |
| 1          | VB           | 329        | GLN         |
| 1          | VB           | 534        | HIS         |
| 1          | VB           | 592        | HIS         |
| 1          | VB           | 630        | GLN         |
| 1          | W            | 85         | HIS         |
| 1          | W            | 118        | ASN         |
| 1          | W            | 329        | GLN         |
| 1          | W            | 534        | HIS         |
| 1          | W            | 592        | HIS         |
| 1          | W            | 797        | GLN         |
| 1          | WA           | 85         | HIS         |
| 1          | WA           | 329        | GLN         |
| 1          | WA           | 534        | HIS         |
| 1          | WB           | 85         | HIS         |
| 1          | WB           | 118        | ASN         |
| 1          | WB           | 329        | GLN         |
| 1          | WB           | 534        | HIS         |
| 1          | WB           | 592        | HIS         |
| 1          | X            | 329        | GLN         |
| 1          | X            | 592        | HIS         |
| 1          | X            | 797        | GLN         |
| 1          | XA           | 85         | HIS         |
| 1          | XA           | 118        | ASN         |
| 1          | XA           | 329        | GLN         |
| 1          | XA           | 630        | GLN         |
| 1          | XB           | 329        | GLN         |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | XB    | 534 | HIS  |
| 1   | XB    | 546 | HIS  |
| 1   | XB    | 592 | HIS  |
| 1   | XB    | 749 | GLN  |
| 1   | XB    | 797 | GLN  |
| 1   | Y     | 329 | GLN  |
| 1   | Y     | 351 | HIS  |
| 1   | Y     | 534 | HIS  |
| 1   | Y     | 592 | HIS  |
| 1   | Y     | 797 | GLN  |
| 1   | YA    | 85  | HIS  |
| 1   | YA    | 329 | GLN  |
| 1   | YA    | 378 | GLN  |
| 1   | YA    | 464 | HIS  |
| 1   | YA    | 592 | HIS  |
| 1   | YA    | 630 | GLN  |
| 1   | YA    | 797 | GLN  |
| 1   | YB    | 118 | ASN  |
| 1   | YB    | 329 | GLN  |
| 1   | YB    | 378 | GLN  |
| 1   | YB    | 464 | HIS  |
| 1   | YB    | 630 | GLN  |
| 1   | YB    | 749 | GLN  |
| 1   | Z     | 118 | ASN  |
| 1   | Z     | 329 | GLN  |
| 1   | Z     | 630 | GLN  |
| 1   | Z     | 797 | GLN  |
| 1   | ZA    | 85  | HIS  |
| 1   | ZA    | 118 | ASN  |
| 1   | ZA    | 329 | GLN  |
| 1   | ZA    | 592 | HIS  |
| 1   | ZA    | 797 | GLN  |
| 1   | ZB    | 85  | HIS  |
| 1   | ZB    | 329 | GLN  |
| 1   | ZB    | 592 | HIS  |
| 1   | ZB    | 630 | GLN  |

### 5.3.3 RNA

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](#)

There are no ligands in this entry.

#### 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-53415. These allow visual inspection of the internal detail of the map and identification of artifacts.

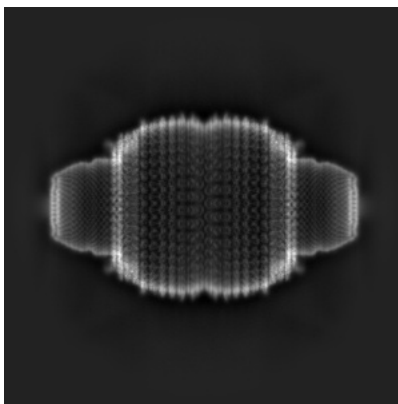
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

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

#### 6.1.1 Primary map



X

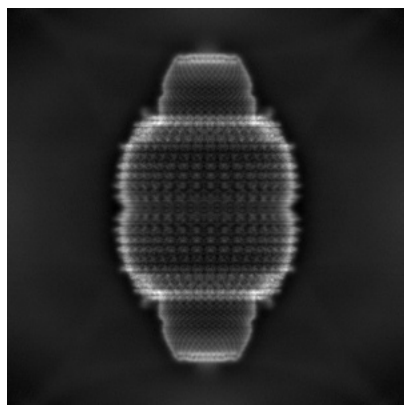


Y

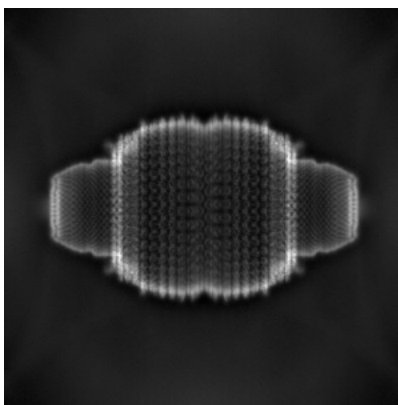


Z

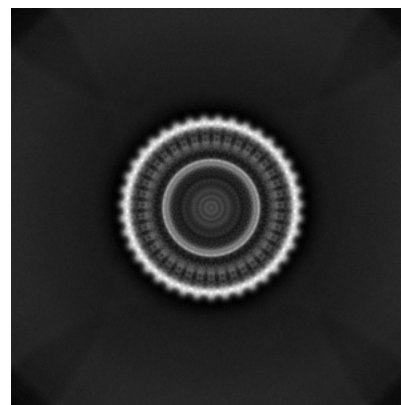
#### 6.1.2 Raw map



X



Y

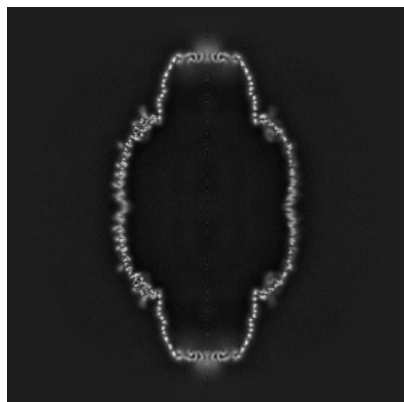


Z

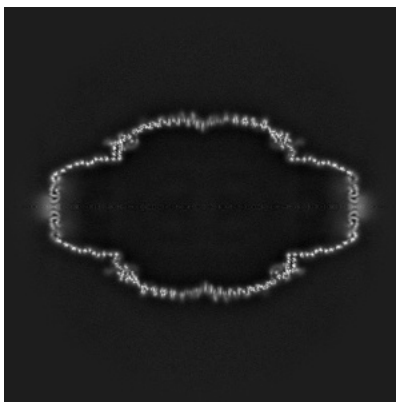
The images above show the map projected in three orthogonal directions.

## 6.2 Central slices [i](#)

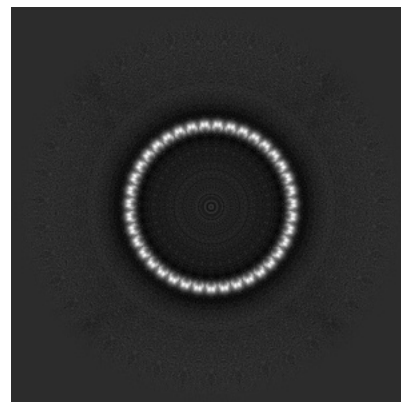
### 6.2.1 Primary map



X Index: 512

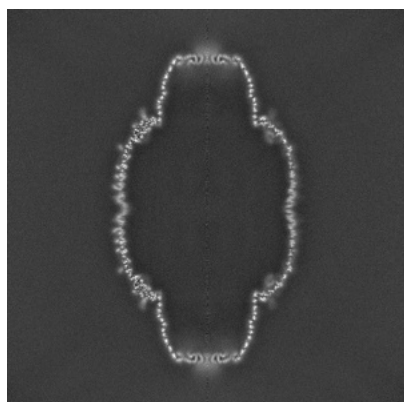


Y Index: 512

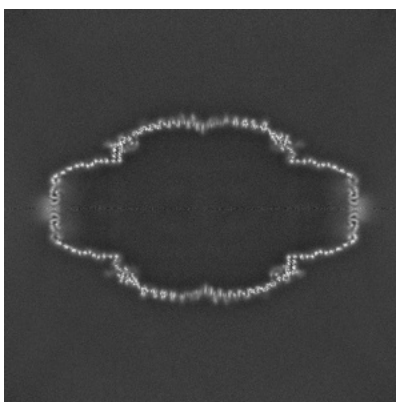


Z Index: 512

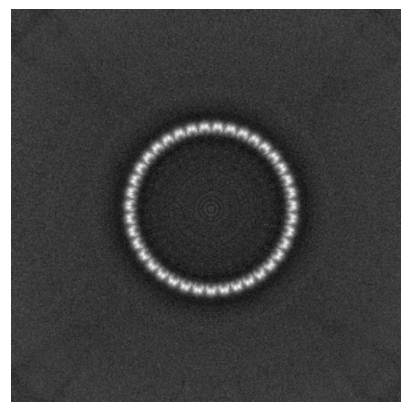
### 6.2.2 Raw map



X Index: 512



Y Index: 512

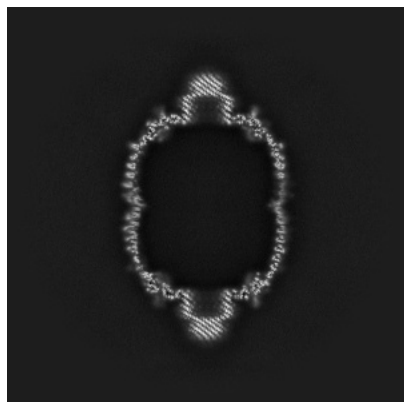


Z Index: 512

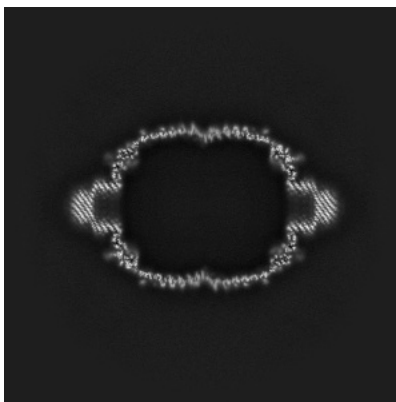
The images above show central slices of the map in three orthogonal directions.

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

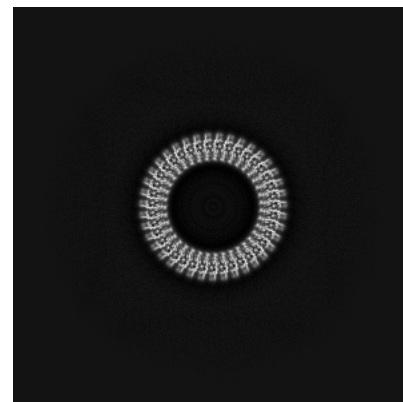
### 6.3.1 Primary map



X Index: 402

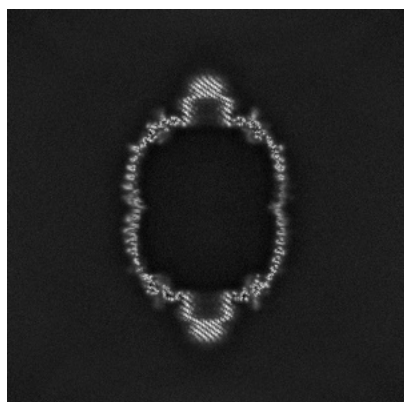


Y Index: 622

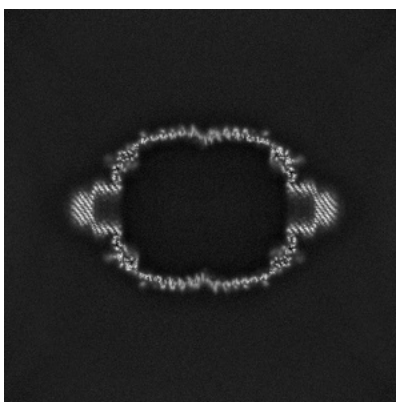


Z Index: 728

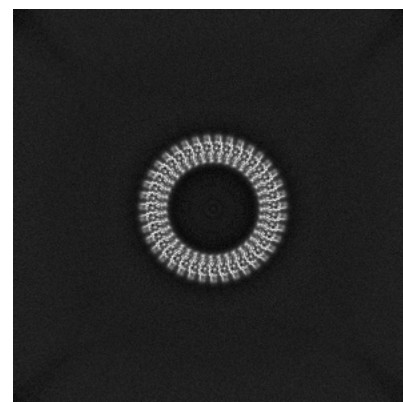
### 6.3.2 Raw map



X Index: 402



Y Index: 622

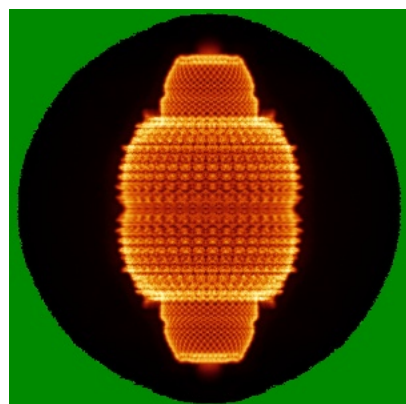


Z Index: 296

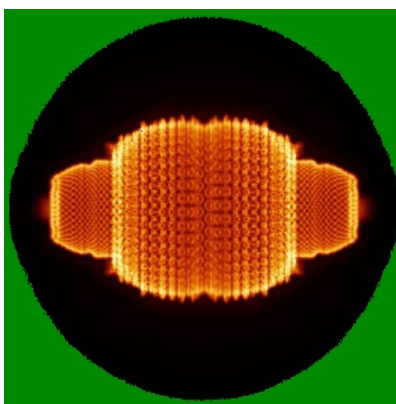
The images above show the largest variance slices of the map in three orthogonal directions.

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

### 6.4.1 Primary map



X

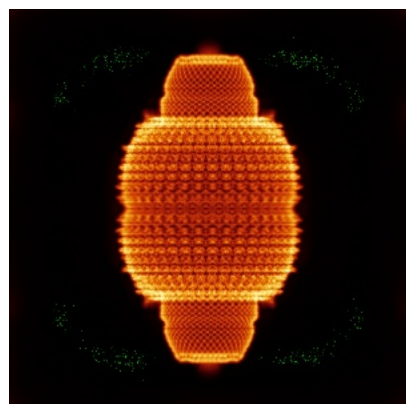


Y

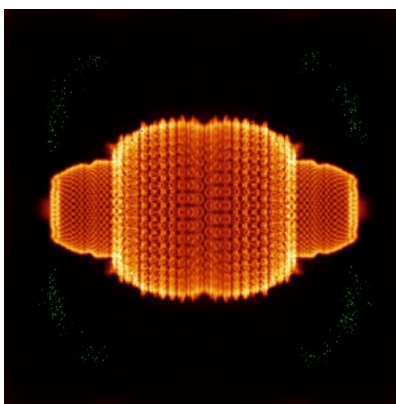


Z

### 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 0.6. 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.

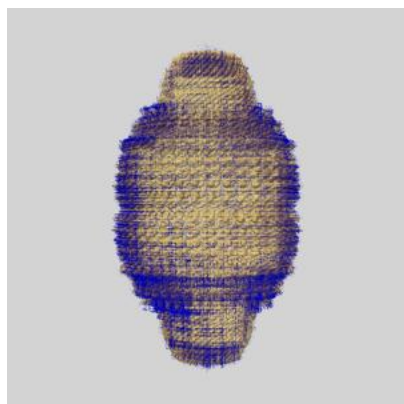
## 6.6 Mask visualisation [i](#)

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

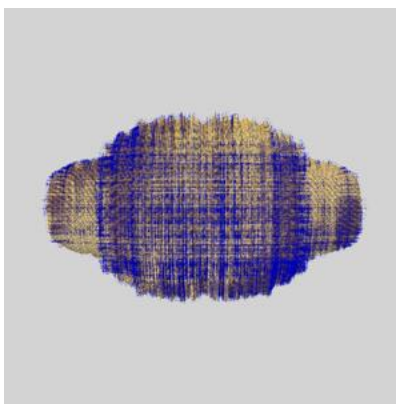
A mask typically either:

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

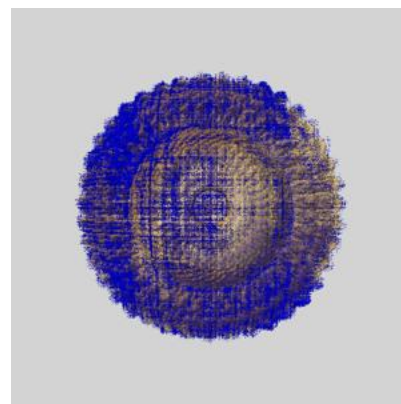
### 6.6.1 emd\_53415\_msk\_1.map [i](#)



X



Y

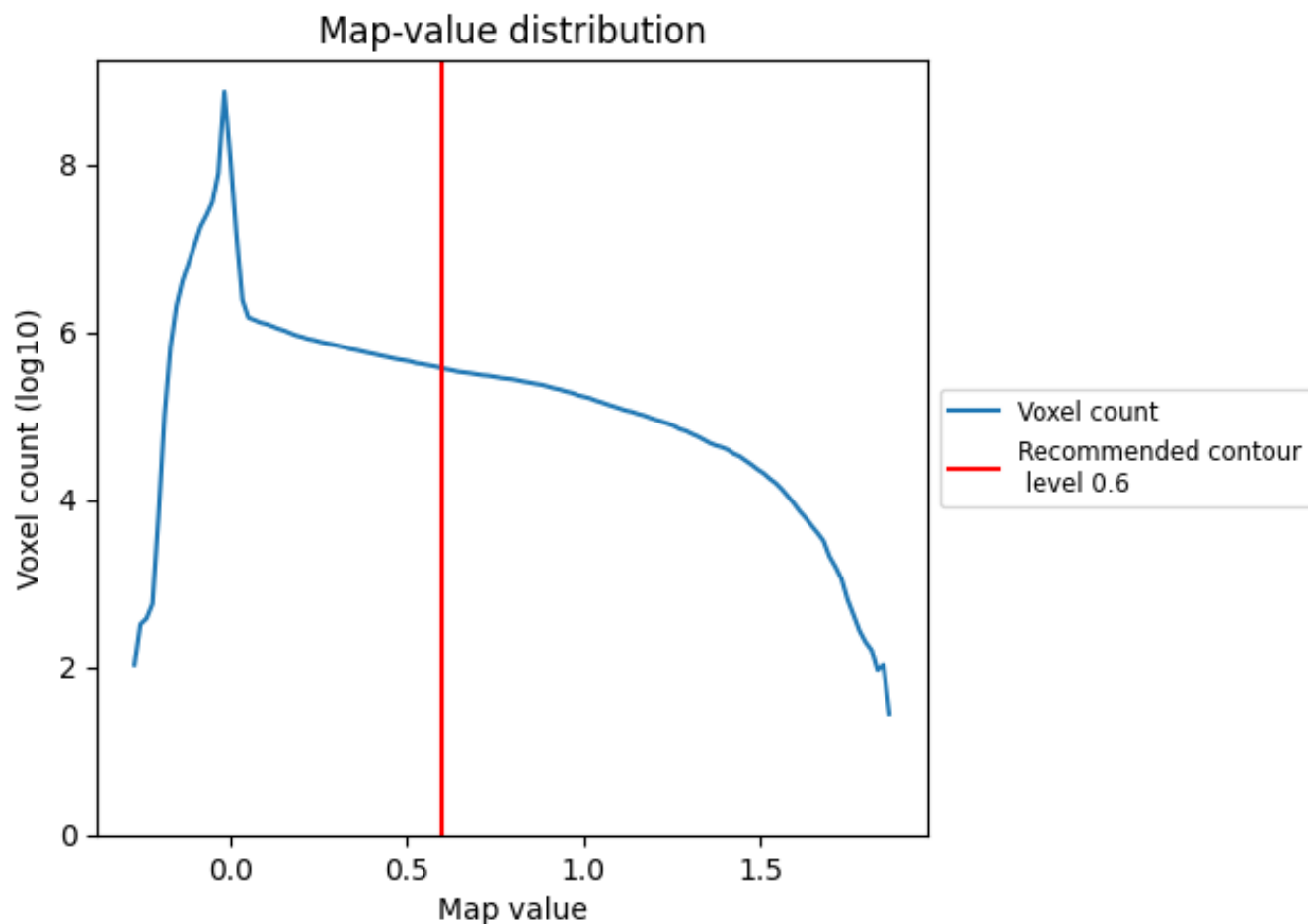


Z

## 7 Map analysis [i](#)

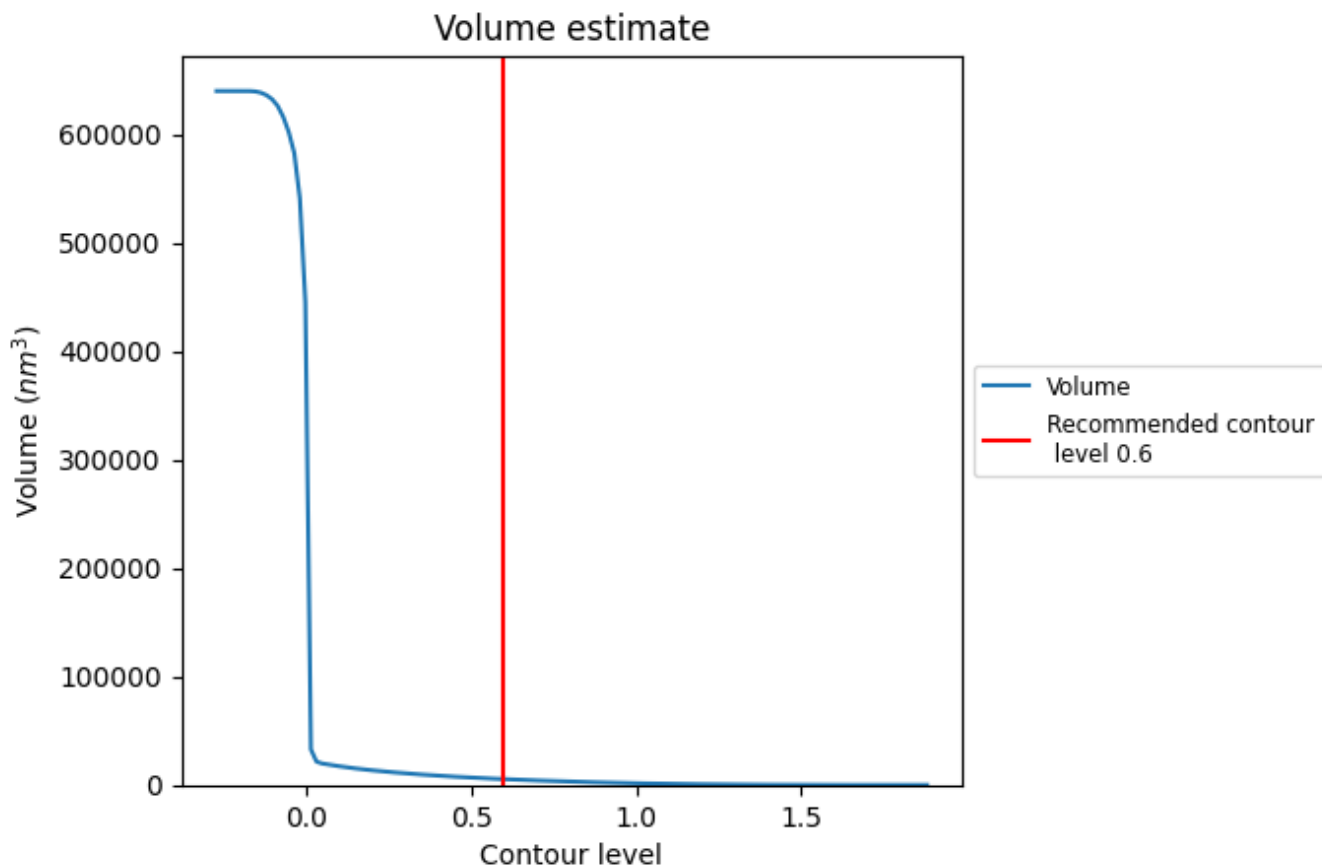
This section contains the results of statistical analysis of the map.

### 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.

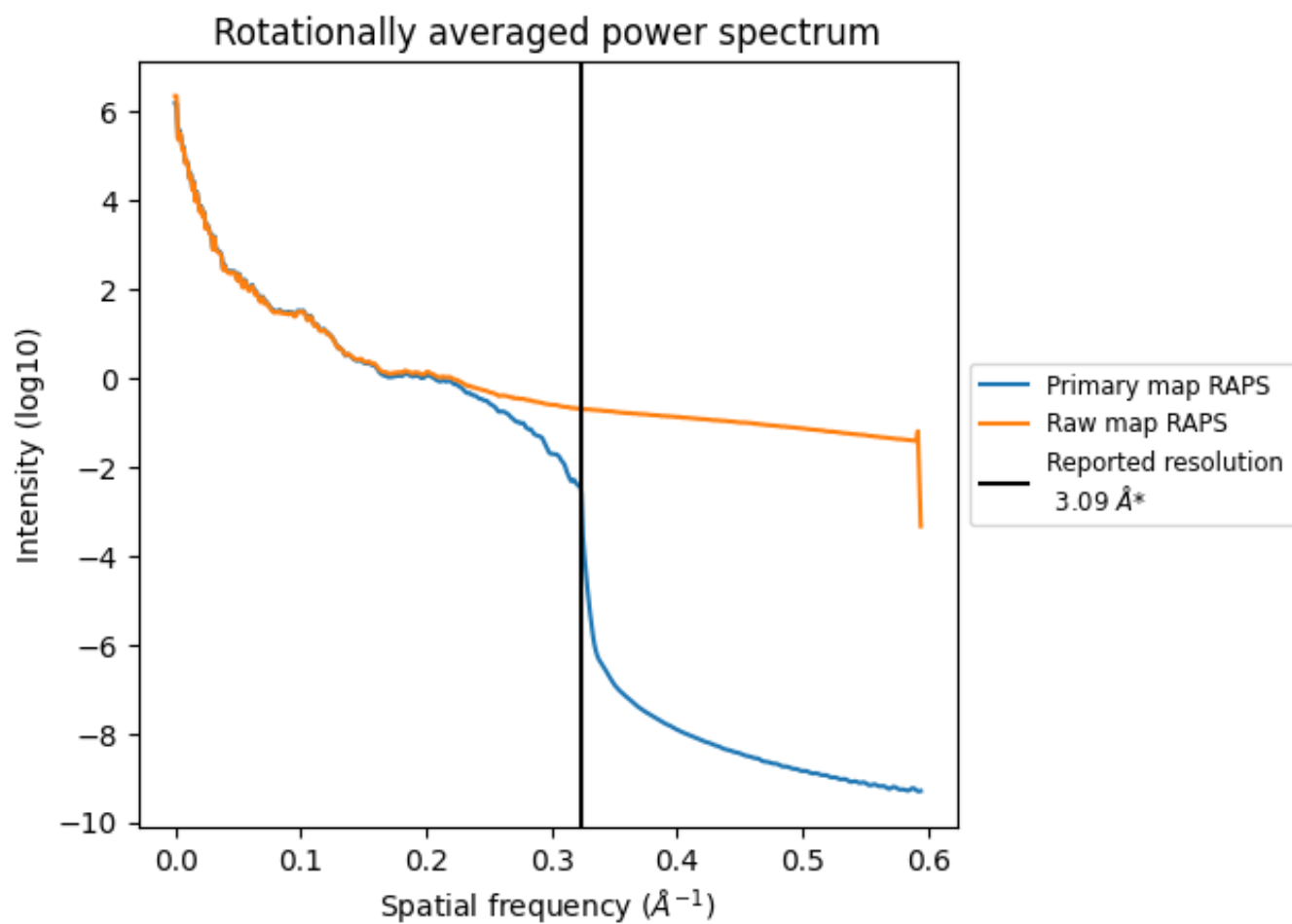
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 5349 nm<sup>3</sup>; this corresponds to an approximate mass of 4832 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

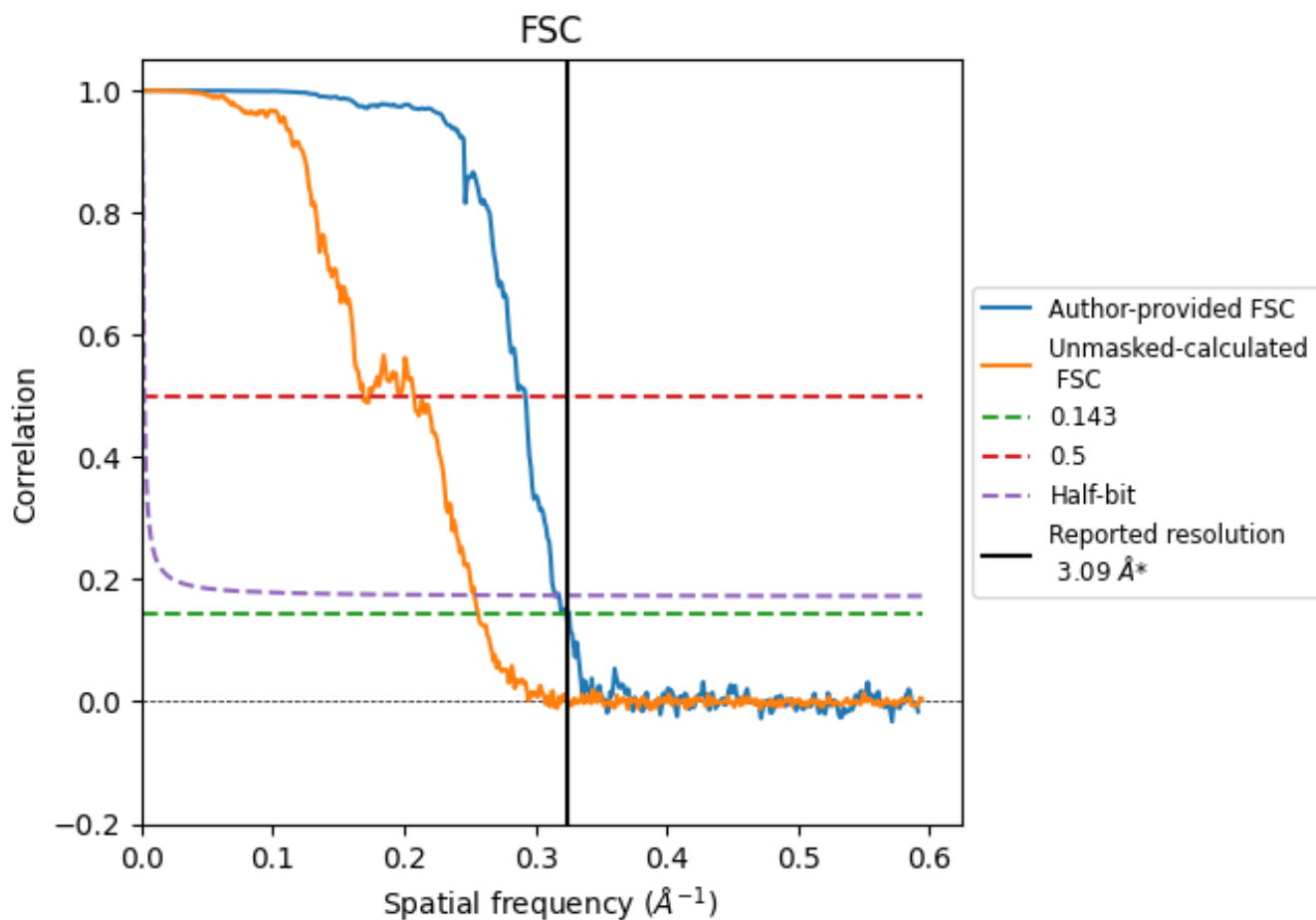


\*Reported resolution corresponds to spatial frequency of 0.324 Å<sup>-1</sup>

## 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 0.324 Å<sup>-1</sup>

## 8.2 Resolution estimates [i](#)

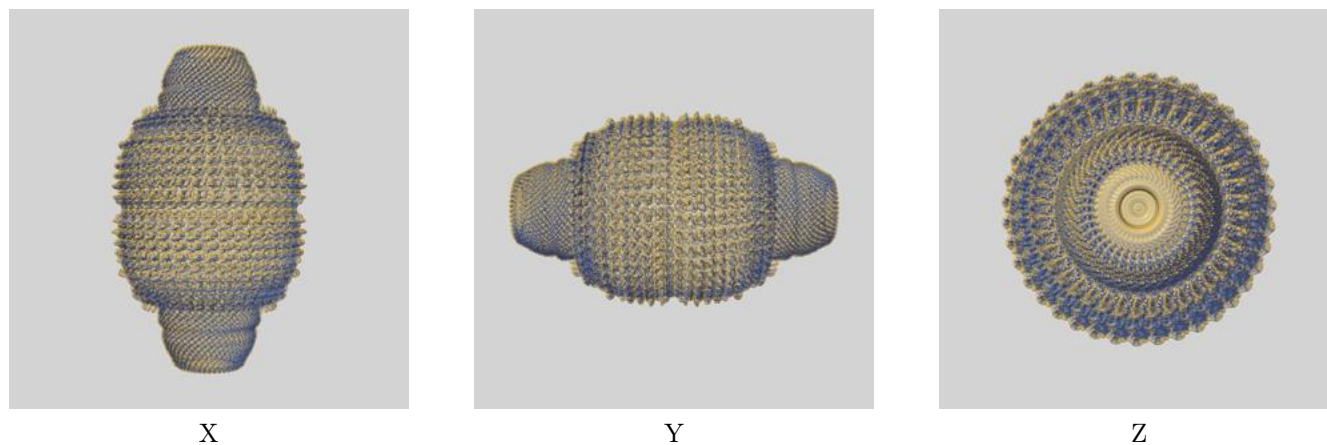
| Resolution estimate (Å)   | Estimation criterion (FSC cut-off) |      |          |
|---------------------------|------------------------------------|------|----------|
|                           | 0.143                              | 0.5  | Half-bit |
| Reported by author        | 3.09                               | -    | -        |
| Author-provided FSC curve | 3.09                               | 3.42 | 3.18     |
| Unmasked-calculated*      | 3.90                               | 5.91 | 3.94     |

\*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 3.90 differs from the reported value 3.09 by more than 10 %

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

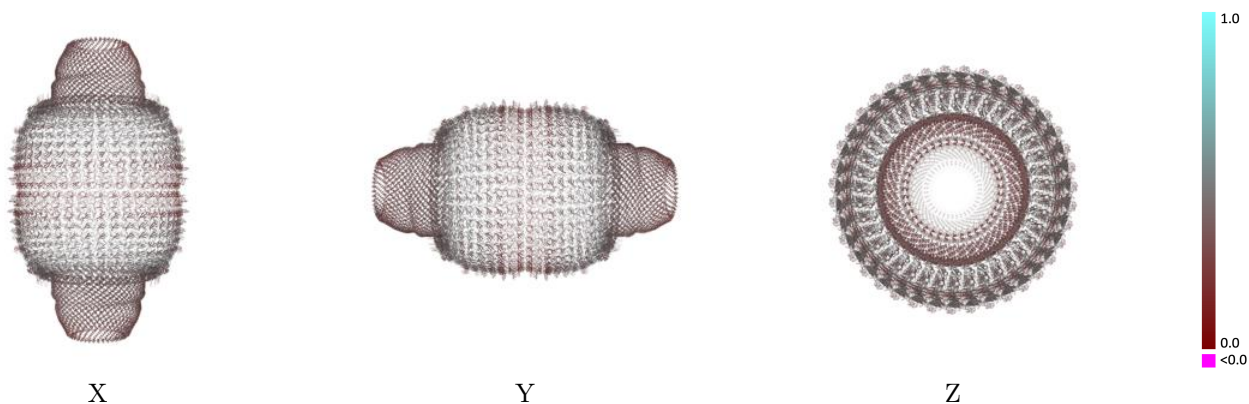
This section contains information regarding the fit between EMDB map EMD-53415 and PDB model 9QW9. Per-residue inclusion information can be found in section [3](#) on page [10](#).

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



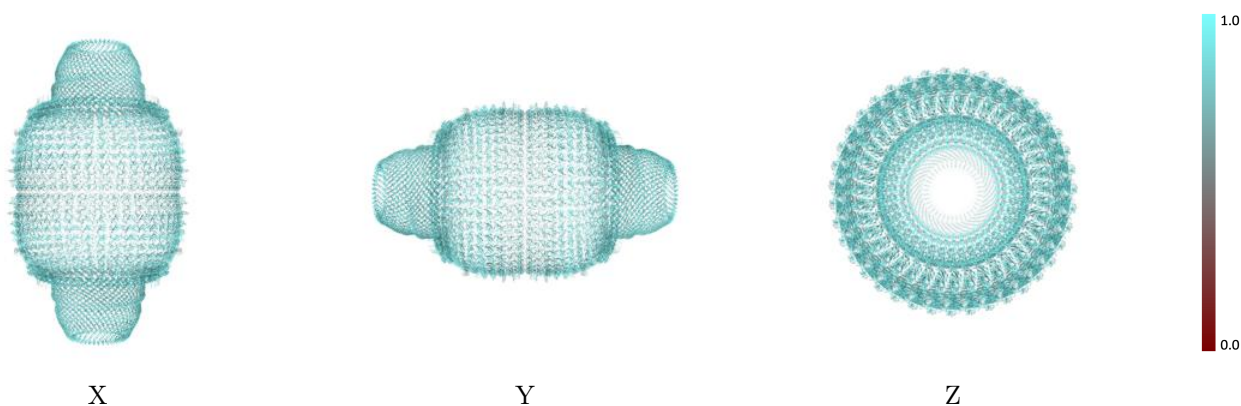
The images above show the 3D surface view of the map at the recommended contour level 0.6 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



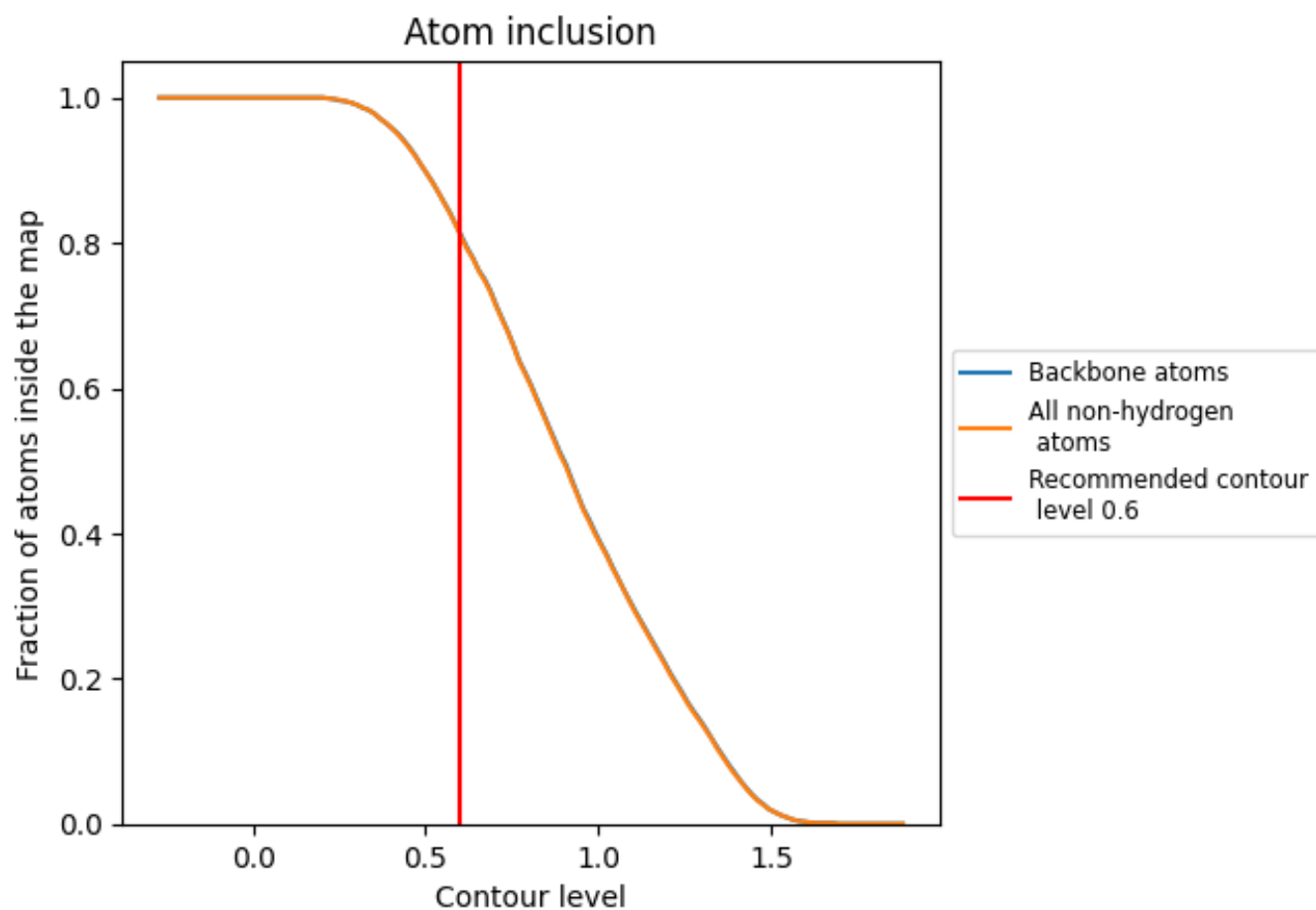
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.6).







































































## 9.4 Atom inclusion [i](#)



At the recommended contour level, 81% of all backbone atoms, 81% 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 (0.6) and Q-score for the entire model and for each chain.

| Chain | Atom inclusion   | Q-score  |
|-------|--|--|
| All   |  0.8120   |  0.3810   |
| A     |  0.8240   |  0.3810   |
| AA    |  0.8250   |  0.3800   |
| AB    |  0.8240   |  0.3820   |
| AC    |  0.8220   |  0.3810   |
| B     |  0.8250   |  0.3810   |
| BA    |  0.8240   |  0.3800   |
| BB    |  0.8260   |  0.3820   |
| C     |  0.8240   |  0.3810   |
| CA    |  0.8250   |  0.3800   |
| CB    |  0.8250   |  0.3810   |
| D     |  0.8230   |  0.3810   |
| DA    |  0.8250   |  0.3810   |
| DB    |  0.8260   |  0.3800   |
| E     |  0.8250  |  0.3810  |
| EA    |  0.8250 |  0.3810 |
| EB    |  0.8240 |  0.3800 |
| F     |  0.8250 |  0.3820 |
| FA    |  0.8230 |  0.3810 |
| FB    |  0.8260 |  0.3800 |
| G     |  0.8240 |  0.3820 |
| GA    |  0.8260 |  0.3810 |
| GB    |  0.8240 |  0.3810 |
| H     |  0.8240 |  0.3820 |
| HA    |  0.8250 |  0.3810 |
| HB    |  0.8250 |  0.3810 |
| I     |  0.8250 |  0.3810 |
| IA    |  0.8240 |  0.3810 |
| IB    |  0.8260 |  0.3810 |
| J     |  0.8250 |  0.3800 |
| JA    |  0.8240 |  0.3800 |
| JB    |  0.8240 |  0.3800 |
| K     |  0.8250 |  0.3800 |
| KA    |  0.8240 |  0.3800 |
| KB    |  0.8250 |  0.3800 |






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| Chain | Atom inclusion   | Q-score  |
|-------|--|--|
| L     |  0.8240   |  0.3800   |
| LA    |  0.8240   |  0.3810   |
| LB    |  0.8250   |  0.3800   |
| M     |  0.8250   |  0.3800   |
| MA    |  0.8230   |  0.3810   |
| MB    |  0.8260   |  0.3800   |
| N     |  0.8250   |  0.3800   |
| NA    |  0.8230   |  0.3810   |
| NB    |  0.8250   |  0.3800   |
| O     |  0.8250   |  0.3800   |
| OA    |  0.8230   |  0.3820   |
| OB    |  0.8250   |  0.3810   |
| P     |  0.8250   |  0.3800   |
| PA    |  0.8250   |  0.3820   |
| PB    |  0.8250   |  0.3810   |
| Q     |  0.8230   |  0.3800   |
| QA    |  0.8260   |  0.3820   |
| QB    |  0.8260  |  0.3810  |
| R     |  0.8250 |  0.3800 |
| RA    |  0.8230 |  0.3820 |
| RB    |  0.8260 |  0.3810 |
| S     |  0.8250 |  0.3810 |
| SA    |  0.8240 |  0.3820 |
| SB    |  0.8230 |  0.3810 |
| T     |  0.8250 |  0.3810 |
| TA    |  0.8260 |  0.3820 |
| TB    |  0.8260 |  0.3810 |
| UA    |  0.8250 |  0.3820 |
| UB    |  0.8260 |  0.3810 |
| V     |  0.8250 |  0.3810 |
| VA    |  0.8240 |  0.3810 |
| VB    |  0.8240 |  0.3810 |
| W     |  0.8250 |  0.3800 |
| WA    |  0.8250 |  0.3810 |
| WB    |  0.8240 |  0.3810 |
| X     |  0.8250 |  0.3800 |
| XA    |  0.8250 |  0.3810 |
| XB    |  0.8250 |  0.3810 |
| Y     |  0.8250 |  0.3790 |
| YA    |  0.8250 |  0.3810 |
| YB    |  0.8250 |  0.3820 |
| Z     |  0.8250 |  0.3800 |

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| Chain | Atom inclusion   | Q-score  |
|-------|--|--|
| ZA    |  0.8240 |  0.3820 |
| ZB    |  0.8250 |  0.3820 |